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OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 234 - 235

JAN. - FEB.

1917

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CLEVELAND, OHIO

OFFICIAL GAZETTE

APR 16 1917

OF THE

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VOLUME CCXXXIV.

JANUARY,

1917.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1917.

10535

ERRATA.

1,210,495, page 41, fourth claim, lines 3–4, for the words "and a separate interlock between said keys and said group voting devices" read *independent of said actuating means.*

1,210,496, page 41, third claim, line 11, for the word "self-readjustment" read *self-readjusted.*

1,210,638, page 90, fifth claim, line 9, for the word "located" read *rotated.*

1,210,898, page 179, in heading, assignment, name of assignee, for "The Corning Manufacturing Company" read *The Coming Manufacturing Company.*

1,211,305, page 319, in heading, line 3, assignment, for "said Smallfield assignor to said Fehrenkamp" read *said Fehrenkamp assignor to said Smallfield.*

1,211,677, page 478, in heading, assignment, name of third-mentioned assignee, for "Henry A. Severson" read *Harry A. Severson.*

1,212,161, page 647, first claim, line 5, after the word "blades" insert the words *between the outer ends thereof;* same claim, line 6, after the word "blades" insert a period and strike out all to the end of the claim.

1,212,669, page 859, in heading, assignment, residence of assignee, for "Hartford, Conn." read *Bristol, Conn.*

1,212,989, page 970, third claim, line 5, after the word "carriage" insert the words *shift frame.*

1,212,990, page 970, in heading, assignment, for "said Pleister assignor to said Newhall" read *said Pleister assignor to Henry B. Newhall, Littleton, N. H.*

1,213,275, page 1101, in heading, assignment, State of incorporation, for "Illinois" read *New York.*

1,213,456, page 1165, in heading, assignment, name of assignee, for "Arthur L. Zwister" read *Arthur L. Zwisler.*

1,213,979, page 1373, in heading, after residence of patentee, insert *assignor to Arcade Manufacturing Company, Freeport, Ill., a Corporation of Illinois.*

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THE OFFICIAL GAZETTE OF THE United States Patent Office.

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Designs	28	No. 50,117 to No. 50,144, inclusive.
Trade-Marks	183	No. 114,666 to No. 114,853, inclusive.
Labels	None.	
Prints	None.	
Reissues	5	No. 14,238 to No. 14,242, inclusive.
Total	1213	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	9	4	North Carolina	4	....
Arizona	1	1	North Dakota	6	....
Arkansas	3	1	Ohio	72	16
California	48	10	Oklahoma	4	1
Colorado	14	2	Oregon	4	....
Connecticut	22	4	Pennsylvania	76	12
Delaware	1	....	Rhode Island	1	....
Florida	2	....	South Carolina	3	....
Georgia	4	1	South Dakota	3	....
Idaho	1	....	Tennessee	2	4
Illinois	80	14	Texas	19	3
Indiana	26	4	Utah	3	2
Iowa	15	2	Vermont	1	1
Kansas	11	2	Virginia	6	1
Kentucky	15	1	Washington	18	1
Louisiana	4	2	West Virginia	4	....
Maine	2	1	Wisconsin	27	5
Maryland	7	1	Wyoming	....	....
Massachusetts	64	9			
Michigan	38	5	Alaska Territory	1	....
Minnesota	16	5	Canal Zone	....	....
Mississippi	5	....	District of Columbia	6	....
Missouri	24	9	Hawaii Territory	....	....
Montana	4	1	Philippine Islands	1	....
Nebraska	12	3	Porto Rico	....	....
Nevada	....	....	U. S. Army	....	....
New Hampshire	5	....	U. S. Navy	....	....
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New York	171	46			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Natal	....	....
Austria-Hungary	2	....	Newfoundland	1	....
Belgium	1	....	New South Wales	2	....
Brazil	....	....	New Zealand	....	1
British West Indies	....	....	Norway	1	....
Canada	13	....	Portugal	....	....
Cape Colony	....	....	Queensland	....	....
China	....	....	Roumania	....	....
Costa Rica	....	....	Russia	1	....
Cuba	....	....	Scotland	4	....
Denmark	....	....	South Australia	....	....
England	20	1	Spain	....	....
Finland	....	....	Sweden	2	....
France	8	....	Switzerland	9	1
Germany	15	1	Transvaal, South Africa	....	....
Guatemala	....	....	Victoria	1	....
India	....	....	Wales	....	....
Ireland	2	....			
Italy	....	....	Total to residents of foreign countries	87	4
Japan	....	....			
Mexico	....	....			

Changes in Classification.

ORDER NO. 2,298.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 21, 1916.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 73, Measuring Instruments, (Division XXXVI,) abolish subclass—

Instruments—

152., Pivots and bearings.

The patents formerly contained in this subclass have been placed in class 74, Machine Elements, subclass 104, Rocker-bearings, hereinafter established.

In class 74, Machine Elements, (Division XII,) establish subclass—

104. Rocker-bearings.

The patents contained in this subclass have been taken from class 73, Measuring Instruments, subclass 152, Instruments, Pivots and bearings, hereinbefore abolished.

THOMAS EWING,
Commissioner.

Foreign Patents.

RULE 29. The receipt of Letters Patent from a foreign government will not prevent the inventor from obtaining a patent in the United States, unless *the application on which the foreign patent was granted was filed more than twelve months prior to the filing of the application in this country, in which case no patent shall be granted in this country.*

APPLICATIONS UNDER EXAMINATION.

Conditions at Close of Business December 29, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Oct. 16	Oct. 16	349
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	July 6	Oct. 26	637
176	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Dec. 7	Dec. 8	78
232	4. Conveyors; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Oct. 25	Dec. 15	219
167	5. Bookbinding; Harvesters; Jewelry; Music	Nov. 19	Nov. 29	310
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Aug 25	Nov 18	245
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Aug. 3	Oct. 16	514
121	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	June 2	Sept. 14	1300
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	June 21	Nov 28	572
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 7 Oct. 9	Dec. 2 Dec. 7	811 104
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Aug. 11	Dec. 15	578
320	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Aug. 18	Nov. 23	514
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Aug. 4	Nov. 29	263
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Nov. 25	Dec. 13	208
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	June 17	Oct. 12	592
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Oct. 10	Dec. 18	120
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Oct. 31	Nov. 22	153
286	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces: Domestic Cooking Vessels	Aug. 1	Sept. 5	444
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 2	Dec. 6	196
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Sept. 19	Nov. 9	300
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	July 26	Nov. 15	501
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	June 29	July 25	407
144	24. Apparel; Apparel Apparatus; Sewing-Machines	May 25	Oct. 14	408
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers. Gas Separation.	Oct. 23	Nov. 28	200
100	26. Electricity, Generation; Motive Power	Apr. 4	Sept 18	663
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Nov. 20	Dec. 1	284
65	28. Internal-Combustion Engines	Aug. 4	Sept. 26	599
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	July 13	Nov. 6	380
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Oct. 12	Dec. 9	332
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hided, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Aug. 2	Oct. 23	297
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	June 1	Nov. 22	869
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Aug. 28	Nov. 13	389
804	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	June 1	Oct. 23	356
87	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	May 2	Dec. 9	726
364	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Aug. 14	Nov. 25	785
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	May 18	Nov. 13	825
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Dec. 4	Dec. 5	151
221	39. Water Distribution	July 14	Nov. 13	315
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Aug. 26	Dec. 13	547
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Aug. 23	Nov. 9	509
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	June 5	Nov. 6	361
382	43. Baths and Closets, Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Oct. 31	Nov. 20	142

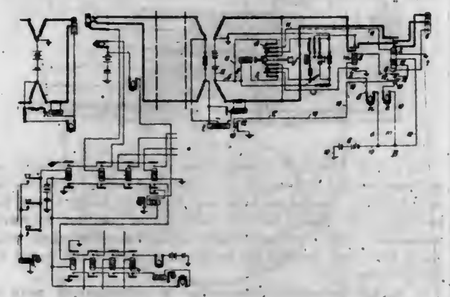
Oldest new case, Apr. 4; oldest amended, July 25.
Total number of applications awaiting action..... 18,535

161	TRADE MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Nov. 11	Dec. 5	333
	Designs	Nov. 8	Dec. 1	430
	Labels and Prints	Nov. 25	Nov. 27	126

PATENTS

GRANTED JANUARY 2, 1917.

1,210,389. MANUAL AND SEMI-AUTOMATIC TELEPHONE SYSTEM. WILLIAM AITKEN, London, England, assignor to The Relay Automatic Telephone Company, Limited, London, England. Filed Aug. 24, 1915. Serial No. 47,115. (Cl. 179—49.)



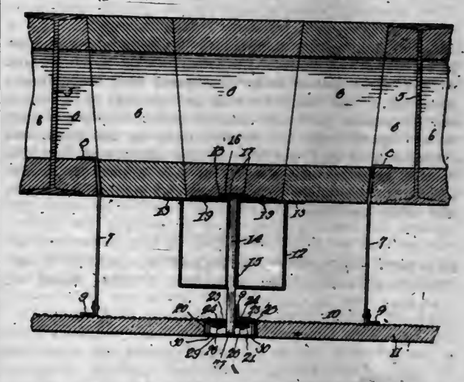
1. A telepohne system comprising a manual switchboard divided into sections, a group of outgoing lines allotted to each section of the board, a further group of outgoing lines common to a plurality of sections of the board, a number of lamps, a relay associated with the test wire of each outgoing line and adapted to connect up one side of a lamp associated with such line, means for energizing the relays of busy lines, a key associated with each section, means whereby on the depression of said keys the lamps are glowed on busy lines of the section group and means whereby lamps in the common group are glowed when all the lines of the section group are busy.

2. A telephone system comprising a manual switchboard divided into sections, a group of outgoing lines allotted to each section of the board, a further group of outgoing lines common to a plurality of sections of the board, a number of lamps, a relay associated with the test wire of each outgoing line and adapted to cut off a wire from the talking circuit, a key associated with each section, a switching relay adapted to be energized on the depression of a key, a number of tester relays, means whereby a tester relay is connected in parallel with each of the third conductor relays, means for energizing the tester relays and third conductor relays of busy lines to glow lamps in the section group and means whereby lamps in the common group are glowed when all the lines of the section group are busy.

3. A telephone system comprising a manual switchboard divided into sections, a group of outgoing lines allotted to each section of the board, a further group of outgoing lines common to a plurality of sections of the board, a number of lamps, a relay associated with the test wire of each outgoing line and adapted to cut off a wire from the talking circuit, a key associated with each section, a switching relay adapted to be energized on the depression of a key, a number of tester relays, means whereby a tester relay is connected in parallel with each of the third conductor relays, jacks at each end of the lines, plugs for said jacks and means for energizing the tester relays and third conductor relays of busy lines to glow lamps in the section group and means whereby lamps are glowed on busy lines after a plug has been removed from the outgoing jack of a line and until the plug is also removed from the jack at the far end of the line.

4. A telephone system comprising a manual switchboard divided into sections, a group of first choice junction lines allotted individually to each section, a group of second choice junction lines accessible in a plurality of sections, a number of lamps, keys for connecting said lamps to different sets of junction lines and means whereby, on the depression of said keys, the lamps are glowed on busy lines.

1,210,390. DAMPER. JOSEPH ALSPASSER, Chicago, Ill. Filed Oct. 7, 1915. Serial No. 54,495. (Cl. 126—295.)



1. In combination, a fixed member having recesses therein and a perforation through the central portion of each recess; a damper spindle journaled in the fixed member; a member secured on the spindle to rotate therewith and having arcuate slots concentric with the spindle and registering with the perforations of the fixed members; nuts in and substantially filling said recesses; means covering the open side of the recesses and holding said nuts in said recesses; and bolts passing through the arcuate slots, perforations of the fixed member and threaded in the nuts locking the spindle against rotation.

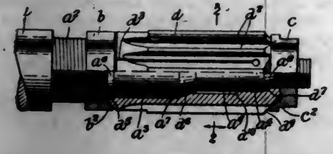
2. In combination, a floor construction; a ceiling spaced from the floor construction; a duct disposed between the floor construction and the ceiling; a cup embedded in the ceiling with its open side opening downwardly out of the ceiling; a damper spindle mounted in the duct with one end extending into the cup; a damper on the damper spindle in the duct; a member carried on the damper spindle in the cup; means in the cup engaging said member and locking the latter and the damper spindle against rotation; and a plate closing the cup and having its outer side plane and substantially flush with the outer surface of the ceiling.

3. In combination a duct; a damper in the duct; a spindle carrying the damper and having its ends extending through the duct; a washer on one of the extended ends of the damper spindle, the latter being riveted over the washer; and a plate disposed across the riveted end of the damper spindle, covering said washer and secured to the duct, said plate and washer coöperating to hold the damper spindle against longitudinal movement.

1,210,391. EXPANSION SHELL-REAMER AND ARBOR THEREFOR. ANDREW ALEXANDER, New York, N. Y. Filed July 8, 1916. Serial No. 108,169. (Cl. 77—76.)

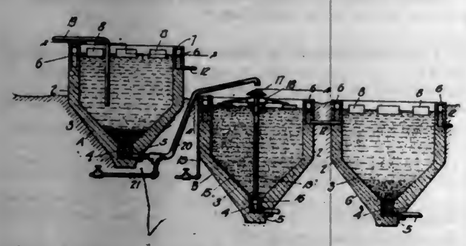
An apparatus of the class described, comprising an arbor provided with reduced cylindrical portions, the

outer end portion being smaller than the inner end portion and being connected therewith by a central beveled part, the inner end portion being provided at its inner end with an enlarged bevel and a screw-threaded member on which is mounted a collar provided in its outer face with an annular beveled groove, and the outer end portion of the arbor being provided at its outer end with a reduced bevel and a screw-threaded extension on which is mounted a nut provided in its inner face with an annular groove the wall of which is beveled, in combination with



an expansion reamer adapted to be mounted on the reduced cylindrical parts of the arbor and the bore of which is of different diameters to correspond with the different diameters of the reduced cylindrical portions of the arbor and the central part and ends of said bore being beveled to correspond with the beveled parts at the inner and outer ends of said portions of the arbor and centrally thereof, and the end portions of said reamer being also beveled to correspond with the annular beveled grooves in said collar and nut.

1,210,392. DECANTING APPARATUS. JULIUS H. ALPENFELS, Denver, Colo. Filed Feb. 5, 1916. Serial No. 76,424. (Cl. 23—31.)



1. In apparatus for settling solids out of liquid, a vat having an outlet for settling solids, a plurality of ports for the overflow of liquid rising out of the settling solids, a trough to receive liquid passing through said ports, and filters covering said ports.

2. In apparatus for settling solids out of liquid, a vat having an outlet for settling solids, a plurality of ports for the overflow of liquid rising out of the settling solids, a trough to receive liquid passing through said ports, and filters composed of screen-covered fabric, covering said ports.

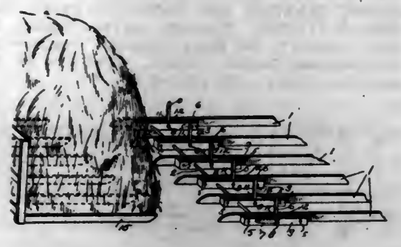
3. In apparatus for settling solids out of liquid, a vat having an outlet for settling solids, a plurality of ports for the overflow of liquid rising out of the settling solids, a trough to receive liquid passing through said ports, and removably disposed filters covering said ports.

4. In apparatus for settling solids out of liquid, a settling vat of plastic material, having an outlet for settling solids, a trough provided by a recess in the upper portion of its wall, and ports for the overflow of liquid rising out of settling solids, connecting its interior with said trough.

5. In apparatus for settling solids out of liquid, a settling vat of plastic material, having an outlet for settling solids, a trough provided by a recess formed in its wall and opening in the upper edge of the same, and ports for the overflow of liquid rising out of settling solids, connecting the interior of the vat with said trough.

[Claims 6 to 8 not printed in the Gazette.]

1,210,393. HAY-STACKER. ALBERT F. AMMAN, Napoonee, Nebr. Filed May 11, 1915. Serial No. 27,415. (Cl. 57—53.)



1. A hay retainer, comprising in combination with a stacker tooth, a housing, a retaining finger pivoted in said housing, means to hold said finger in normal vertical position and means to lock said finger against forward movement, said locking means being released when said tooth is raised to stacking position to permit the finger to swing forwardly.

2. A hay retainer, comprising in combination with a stacker tooth, a housing, a finger pivoted in said housing, means for holding said finger in normal vertical position, and means for locking said finger against forward movement, said locking means being released when the stacker tooth is elevated into stacking position to allow the finger to swing forwardly under the weight of the load.

3. A hay retainer, comprising in combination with a stacker tooth, a retainer finger, means for pivotally holding said finger in vertical position, with relation to said tooth, and means for positively locking said finger against forward movement, said locking means being released to allow said finger to swing forwardly when the tooth is raised to stacking position.

4. A hay retainer, comprising in combination with a stacker tooth, a retainer finger, means for pivotally holding said finger in vertical position, with relation to said tooth, and a locking-lever carried by said tooth and coupled with said finger to prevent forward movement of the latter until the tooth is raised to stacking position, said locking lever being released to permit the finger to swing forwardly when the tooth is raised to stacking position.

5. A hay retainer, comprising in combination with a stacker tooth, a retainer finger, means for pivotally holding said finger in vertical position, with relation to said tooth, and a locking-lever coupled to said finger and held in locking position when the tooth rests on the ground, said locking lever interlocking with said finger to permit the latter to swing forwardly when the tooth is elevated above the ground.

[Claim 6 not printed in the Gazette.]

1,210,394. PROCESS OF FINISHING ANIMAL FILAMENTS, FIBERS, OR THREADS. HANNS R. ANDERS, Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed Dec. 10, 1914. Serial No. 876,591. (Cl. 132—19.)

1. The process of changing the form of animal filaments, fibers or threads, consisting in giving the same the desired form and subsequently treating it with formaldehyde.

2. The process of changing the form of animal filaments, fibers or threads, consisting in giving the same the desired form and subsequently treating it in the wet state with formaldehyde.

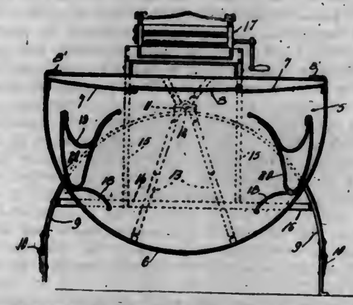
3. The process of changing the form of animal filaments, fibers or threads, consisting in giving the same the desired form and subsequently treating it with an aqueous solution of formaldehyde.

4. The process of curling human hair into lasting forms, consisting in giving the hair the desired form and subsequently treating it with formaldehyde.

5. The process of curling human hair into lasting forms, consisting in giving the hair the desired form and subsequently treating it in the wet state with formaldehyde.

[Claim 6 not printed in the Gazette.]

1,210,395. WASHING-MACHINE. CHARLIE W. ANTHES, Amherst, Nebr. Filed July 7, 1915. Serial No. 38,537. (Cl. 68—21.)



1. In a washing machine of the class described, the combination with a supporting frame, of an oscillatory clothes receptacle mounted therein having a rounded bottom, a cover for the receptacle, laterally extending arcuate plates disposed on opposite sides of the said bottom and each having their upper edges secured to the bottom, the body portion of each of said plates being curved inwardly, outwardly and downwardly with respect to the receptacle bottom to provide air pockets, substantially V-shaped laterally extending plates arranged above said air pockets and spaced from the end walls of the receptacle, and supporting braces for the said V-shaped plates mounted upon the arcuate plates whereby when the receptacle is rocked in one direction, water may pass up between the arcuate plate and the V-shaped plate above to be deflected into the latter by the end wall and cover of the receptacle.

2. In a washing machine of the class described, the combination with a supporting frame, of an oscillatory clothes receptacle mounted therein having a rounded bottom, a cover for the receptacle, laterally extending arcuate plates disposed on opposite sides of the said bottom to provide downwardly opening air pockets, substantially V-shaped laterally extending plates arranged above said air pockets and spaced from the end walls of the receptacle and from said arcuate plates.

1,210,396. RAIL-JOINT. PETAR BAČKO, Farrell, Pa. Filed Sept. 21, 1916. Serial No. 121,462. (Cl. 239—3.)



1. A rail joint comprising adjacent rail ends having the terminal portions of the treads thereof severed forming seats upon the tops of the adjacent webs, the said webs being provided with notches having laterally tapered end walls and with the end portions of the webs cut-away forming seats of less height than the tops of the webs, a connecting plate wedgingly arranged within the said notches, and a locking rail overlying the said plate.

2. A rail joint comprising adjacent rail ends having the terminal portions of the treads thereof severed forming seats upon the tops of the adjacent webs, the said webs being provided with notches having laterally tapered end walls and with the end portions of the webs cut-away forming seats of less height than the tops of the webs, a wedge plate having end portions laterally receivable within the said notches seated upon the end portions of the webs and having its upper face in alinement with the tops of the webs, and a locking rail between the treads of the said rails overlying the said plate.

3. A rail joint comprising adjacent rail ends having the terminal portions of the treads thereof severed forming seats upon the tops of the adjacent webs, the said webs being provided with notches having laterally tapered end walls and with the end portions of the webs cut-away forming seats of less height than the tops of the webs, a wedge plate having end portions laterally receivable within the said notches seated upon the end portions of the webs and having its upper face in alinement with the tops of the webs, an inverted U-shaped locking rail provided with a tread portion arranged in alinement between the treads of the adjacent rails when operatively arranged seated upon the upper faces of the webs of the said rails, the said locking rail restrainingly overlying the said wedge plate when operatively positioned and having opposite flanges overlying the base flanges of the connected rails.

4. A rail joint comprising in combination with the abutting ends of railway rails having severed tread and notched web portions, a wedge plate adapted for detachable connection with the said webs within the notched portions thereof, and a locking rail adapted for connecting the treads together completing the interrupted portions thereof when operatively arranged.

5. A rail joint comprising rail ends having the adjacent portions of their treads cut-away and with receiving notches in the adjacent portions of the webs thereof, a removable laterally insertible U-shaped wedge plate removably positioned within the said notches, and a locking rail for the said plate having a tread portion connecting the interrupted tread portions of the rails when operatively arranged.

1,210,397. CUSPIDOR. HERMAN H. BANG, Joice, Iowa. Filed Sept. 20, 1916. Serial No. 121,285. (Cl. 4—88.)



1. A cuspidor comprising a bowl having a receiving opening at the top thereof, and a flexible tube like member connected around said receiving opening to depend within the bowl and to thus hang normally in an open relation but arranged to fold over and close the opening as the cuspidor is tilted.

2. A cuspidor comprising a bowl having a receiving opening, a sleeve projecting downwardly within the bowl around the receiving opening, and a flexible tube like

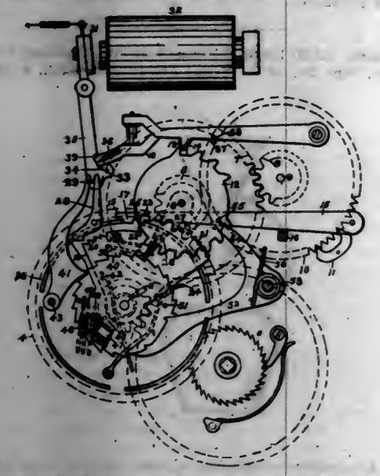
member connected with the inner end of the sleeve to normally hang in an open relation and to fold and close over the open inner end of the sleeve as the cuspidor is tilted.

3. A cuspidor comprising a bowl having a receiving opening at the top thereof, a sleeve formed around the receiving opening to project downwardly within the bowl, a flexible tube like member connected within the inner end of the sleeve to normally hang in a depending relation from the sleeve to leave the end thereof open, and means carried by said flexible member at the lower end thereof to weight the same to cause the sleeve to fall by gravity to a position to close over the open inner end of the sleeve as the cuspidor is tilted.

4. A cuspidor comprising a bowl having one end thereof open, a cap adapted to be fitted over the open top of the bowl to close the same and said cap provided with a receiving opening, a sleeve connected with the cap around the receiving opening to extend down into the bowl, and a flexible tube like member connected around the inner end of the sleeve and weighted at its free lower end to thus be held in an open relation when the cuspidor is standing upright and to be brought to a position of closing over the inner end of the sleeve when the cuspidor is tilted.

5. A cuspidor comprising a bowl having an open top, a cap adapted to be removably fitted over the open top of the cuspidor to establish a liquid tight connection and closure therefor, a receiving hopper connected with the cap and arranged with its lower open end communicating with the bowl, a sleeve connected around the open end of the receiving hopper to extend into the bowl, a flexible tube like member connected around said sleeve, and weights carried at the lower end of the flexible member to hold the same normally to depend from the sleeve in an open relation and to cause movement of the same by gravity to a position to close over the sleeve as the cuspidor is tilted.

1,210,398. SUCCESSIVE NON-INTERFERENCE SIGNAL-BOX. CLARENCE E. BEACH, Binghamton, N. Y., assignor, by mesne assignments, to The Gamewell Fire Alarm Telegraph Company, a Corporation of New York. Filed Aug. 11, 1913. Serial No. 784,226. (Cl. 177—361.)



1. In a signal box having three terminals, an electromagnet, and signaling contacts; means for opening and closing said contacts between two of said terminals, and means controlled by said magnet for connecting the third terminal to one of said two terminals during a part only of the duration of each of one or more of the closures of said contacts.

2. In a signal box having three terminals, an electromagnet, and signaling contacts; means for opening and closing said contacts between two of said terminals, and means for connecting the third terminal to one of said two terminals during a part only of the duration of each of one or more of the closures of said contacts, said means being so controlled by said magnet that said connection will be made only after the expiration of a time longer than the longest time between any two consecutive divided closures of any signal.

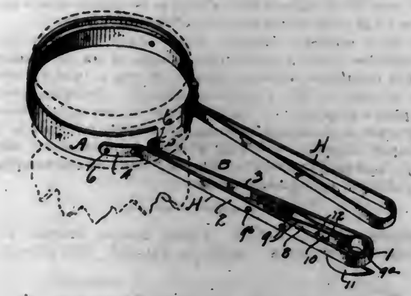
3. In a signal box having three terminals, an electromagnet, a train, and signaling contacts; means for opening and closing said contacts between two of said terminals, means controlled by said magnet for connecting the third terminal to one of said two terminals, and means operated by the train for arranging the duration of the periods of such connection so that during each of one or more of the closures of said contacts there shall be a period throughout which said connection will not be made and also a period throughout which it will be made.

4. In a signal box having three terminals, an electromagnet, a train, and signaling contacts; means for opening and closing said contacts between two of said terminals, means for connecting the third terminal to one of said two terminals, and means operated by the train for arranging the duration of the periods of such connection so as to divide each of one or more of the closures of said contacts so that during each of such divided closures there shall be a period throughout which said connection will not be made and also a period throughout which it will be made, said second named means being so controlled by said magnet that said connection will be made only after the expiration of a time longer than the longest time between any two consecutive divided closures of any signal.

5. In a signal box having three terminals, an electromagnet, signaling contacts, a train, and a detent therefor; means for opening and closing said contacts between two of said terminals, means controlled by said magnet for connecting the third terminal to said contacts during a part only of the duration of each of one or more of the closures of said contacts.

[Claims 6 to 42 not printed in the Gazette.]

1,210,399. CAP-OPENING TOOL. WILSON R. BEARCH and REES J. JONES, Sawtelle, Cal., assignors of one-third to Francesco Hammond, Casey, Ill. Filed Mar. 14, 1916. Serial No. 84,186. (Cl. 65—26.)



1. A metal handle construction for cap opening tools comprising a body strip doubled upon itself to provide a rounded end portion and convergently related side arm portions, oppositely disposed attaching feet formed at the ends of said side arm portions, and a reinforcing member interposed between the side arm portions and adjacent the rounded end portion of the body strip.

2. A metal handle construction for cap opening tools comprising a body strip doubled upon itself to provide a rounded end portion and convergently related side arm portions, oppositely disposed attaching feet formed at the ends of said side arm portions, and a reinforcing member comprising an enlarged open head adapted to fit snugly inside the rounded end portion of the body strip, and having rearwardly extending shank members lying between the side arm portions of the body strip.

3. A metal handle construction for cap opening tools comprising a body strip doubled upon itself to provide a rounded head portion, and convergently related side arm members, oppositely disposed attaching members formed at the end of each side arm member, and a reinforcing member including a rounded head portion adapted to fit within the rounded head portion of the body strip and be rigidly secured thereto, and rearwardly extending shank portions lying between and rigidly connected with the side arm portions of the body strip, said rearwardly extending shank portions having intermediate contracted portions, and a cutter blade rigidly clamped between the contracted portions of said shank members.

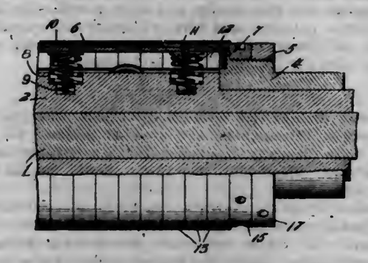
1,210,400. MARKING PHOTOGRAPHIC PAPER. REINHOLD S. BECKER, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed June 22, 1915. Serial No. 35,716. (Cl. 95—8.)



1. A photographically sensitized paper having an identifying mark thereon, comprising a paper of a given color, a sensitized emulsion on the front face and a designating mark on the rear face, said mark comprising a non-abrasive colored ink which is about the same color as the rear face of the paper and does not injuriously affect the emulsion, said mark being substantially invisible through the paper, and not readily noticeable on the same side thereof.

2. A photographically sensitized paper having an identifying designation on the back thereof comprising a thin paper of a given color, a sensitized emulsion on the front face and a printed mark on the back face, comprising a non-abrasive mixture of light colored ink and coloring matter, which does not injuriously affect the sensitized emulsion, the mark being of substantially the same color as the back of the paper, practically invisible from the front face of the paper and visible from the rear only by reflected light viewed within a limited angular range.

1,210,401. SPRING-ROLL FOR LEATHER-WORKING MACHINES. EDWIN N. BERGSTROM, East Lynn, Mass. Filed Aug. 8, 1916. Serial No. 113,805. (Cl. 149—12.)



1. A roll for leather working machinery comprising a central bearing and supporting structure having outstanding flange like portions adjacent to the ends thereof, spring strips mounted longitudinally of said supporting structure to be connected on the flange like portions and thus provide a resilient frame structure, a plurality of ring bands mounted on said frame structure to form a bearing portion for the roll and to be capable of independent movement through the resiliency of the spring strips, and a flexible covering mounted over said ring bands to form a surface bearing portion for the roll.

2. A roll for leather working machinery comprising a central bearing and supporting structure, spring strips mounted longitudinally of said supporting structure to provide a resilient frame structure, a plurality of ring bands mounted on said frame structure to form a bearing portion for the roll and through the resiliency of the spring strips to be capable of independent movement, and springs mounted between the supporting structure and the spring strips to give increased flexibility to the entire structure.

3. A roll for leather working machinery comprising a central bearing and supporting structure, spring strips mounted longitudinally of said supporting structure to provide a resilient frame structure, a plurality of ring bands mounted on said frame structure to form a bearing portion for the roll and through the resiliency of the spring strips to be capable of independent movement, springs mounted between the supporting structure and the spring strips to give increased flexibility to the entire structure, and a covering over the ring bands to hold the edges thereof from cutting into and leaving an impression on the hides being treated.

4. A roll for leather working machinery comprising a supporting and bearing structure, spring strips mounted longitudinally of said supporting structure to form a resilient frame work, ring bands mounted around the resilient frame work thus formed, means to hold the ring bands against displacement, said supporting structure being provided with bores and counter-bores, washers carried by the spring strips at points corresponding to the positioning of the bores and counter-bores, and bearing and compression springs mounted in said counter-bores and bores to bear against the washers to give added spring action to the spring strips.

5. A roll for leather working machinery comprising a supporting and bearing structure, spring strips mounted longitudinally of said supporting structure to form a resilient frame work, ring bands mounted around the resilient frame work thus formed, means to hold the ring bands against displacement, said supporting structure being provided with bores and counter-bores, washers carried by the spring strips at points cofresponding to the positioning of the bores and counter-bores, bearing and compression springs mounted in said bores and counter-bores to bear against the washers to give added spring action to the spring strips, and a covering mounted over the ring bands to prevent scoring and marking of the hides being treated through shifting of the ring bands to expose the edges thereof.

1,210,402. IRONING-MACHINE. GOTTLOB BINDER, Rochester, N. Y., assignor to American Laundry Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 6, 1914. Serial No. 870,561. (Cl. 68—9.)

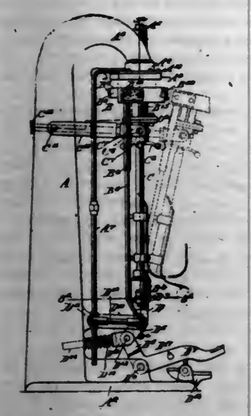
1. An ironing machine for pressing shirts including a stationary bed and a heated platen, the bed and platen having relative movement to engage the work, and the platen embodying a yoke supporting portion and a reduced neck band supporting portion carried thereby.

2. An ironing machine for pressing shirts including a stationary bed and a heated platen, the bed and platen having relative movement to engage the work, and the platen embodying a flat yoke supporting portion and a concave neck band supporting portion carried thereby.

3. An ironing machine for pressing shirts including a stationary bed and a heated platen, the bed and platen having relative movement to engage the work, and the platen embodying a flat yoke supporting portion and a concave reduced neck band supporting portion having rounded edges, and indicating means on the neck band supporting portion coöperating with the neck band to determine the position of the latter.

4. An ironing machine for pressing shirts including a stationary bed, a heated platen arranged beneath the bed and movable upwardly to engage the work between it and the bed, the platen embodying a yoke supporting portion and a reduced neck band supporting portion carried thereby.

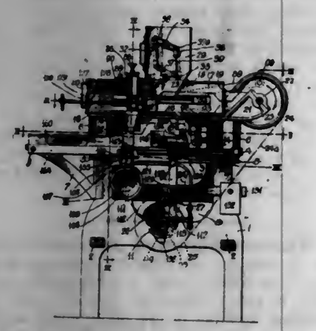
5. An ironing machine for pressing shirts including a stationary bed, and a heated platen arranged beneath the bed and movable upwardly to engage the work be-



tween it and the bed, the platen embodying a flat yoke supporting portion and a concave neck band supporting portion carried thereby.

[Claims 6 and 7 not printed in the Gazette.]

1,210,403. CAN-FILLING MACHINE. GEORGE W. BLAKE, Wyandotte, Mich. Filed Feb. 25, 1915. Serial No. 10,403. (Cl. 226—18.)



1. In a can filling machine, the combination with main frames, vibratory frames and means for vibrating said vibratory frames, of a box like structure carried by said vibratory frames, a reservoir carried by said structure, an agitator in said reservoir, measuring transfer fillers in said structure, means for moving said fillers beneath said reservoir, and means actuated by a movement of said filler moving means to operate said agitator.

2. In a can filling machine, the combination with main frames, vibratory frames, and means for vibrating said vibratory frames, of a box like structure carried by said vibratory frames, a reservoir carried by said structure, a rocking agitator in said reservoir, meansuring transfer fillers in said structure, individual capacity regulators for said fillers, and means for simultaneously rocking said agitator and moving said fillers beneath said reservoir.

3. In a can filling machine, the combination with main frames, vibratory frames, and means for vibrating said vibratory frames, of a box like structure carried by said vibratory frames, a reservoir carried by said structure, vertically reciprocating agitator plates in said reservoir, measuring transfer fillers in said structure, individual capacity regulators for said fillers, means extending through the front wall of said structure for adjusting said regulators, and means for simultaneously reciprocating said agitator plates and moving said fillers beneath said reservoir, said means allowing said fillers to move independently of said agitator plates at predetermined times.

4. In a can filling machine, the combination with main frames, vibratory frames, and means for vibrating said frames, of a structure carried by said vibrating frames, a reservoir carried by said structure, a rocking agitator in said reservoir, reciprocating agitator plates in said reservoir actuated by said rocking agitator, measuring transfer fillers in said structure, and means for simultaneously rocking said agitator and moving said fillers beneath said reservoir.

5. In a can filling machine, a vibratory box like structure, means for vibrating said structure, a reservoir carried by said structure, an agitator in said reservoir, measuring transfer fillers in said structure, means operable at an end of said box like structure for moving said fillers beneath said reservoir, and means actuated by a movement of said filler moving means for operating said agitator.

[Claims 6 to 20 not printed in the Gazette.]

1,210,404. TOBACCO-PIPE. SYDNEY DARA BLANDFORD, St. John's, Newfoundland. Filed Mar. 17, 1914. Serial No. 825,275. (Cl. 131—12.)



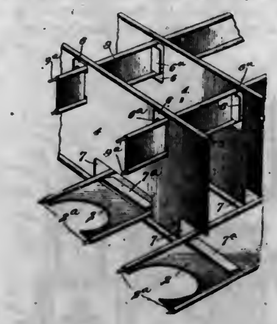
1. A tobacco pipe comprising a bowl portion having a stem, a separable mouthpiece therefor, said stem and mouthpiece having mating bores, the bore in the mouthpiece being forked at the exit thereof, a recessed shoulder within the mouthpiece at the end of the bore therein and between its bifurcations, a shoulder below the bowl and terminating the bore therein, a cleaner rod within said bores and extending their entire length, a scraping plug at the end of said rod abutting against the shoulder in the bowl portion, and a scraping plug at the other end received within the recessed shoulder in the mouthpiece.

2. In a tobacco pipe comprising a bowl portion and a mouthpiece having a bore therein and forked exit passages from said bore, a shoulder in said mouthpiece between said passages and terminating said bore, said shoulder having a recess opposite said bore, a cleaner rod extending through said bore, and a scraper plug terminating said rod and normally lodging within said recess.

1,210,405. DELIVERY CRATE OR CASE. THOMAS V. BOARDMAN, Birmingham, Ala., assignor to American Box and Crate Company, Knoxville, Tenn., a Corporation of Tennessee. Filed Mar. 11, 1916. Serial No. 83,554. (Cl. 217—22.)

1. In a crate of the character described, the combination of an inclosing frame, a plurality of metal bottom strips attached to the frame, and means for dividing the space within the frame, above the bottom strips, into a series of receptacles comprising two series of vertically extending metal members secured respectively to the sides and ends of the frame, one series of said members extending through slots in the other series and the slotted members alternately contacting with opposite faces of the members extending therethrough.

2. In a crate of the character described, the combination of an inclosing frame, a plurality of metal partitions extending from one side of the frame to the opposite side, metal bars connected with the ends of the box and each interlocked with all of the partitions, a plurality of metal bottom strips extending through alined openings in the partitions, and having their ends connected with the frame, each bottom strip being interlocked with each partition by a tongue on one of said parts extending through a slot in the other.



3. In a crate of the character described, the combination of an inclosing frame, a plurality of metal partitions extending from one side of the frame to the opposite side, metal bars connected with the ends of the box and each interlocked with all of the partitions, and a plurality of metal bottom strips extending through alined openings in the partitions and having their ends connected with the frame, each partition having a tongue extending through a slot in the bottom strip and bent over against a face of the strip.

4. In a crate of the character described, the combination with an inclosing frame, of two series of intersecting, vertically extending, metal partitions having their ends respectively secured to the ends and sides of the inclosing frame, and a plurality of metal bottom strips extending through slots formed in one of said series of partitions, above the lower edges thereof, and having their ends secured to the inclosing frame.

5. In a crate of the character described, the combination with an inclosing frame, and means for supporting articles therein, of means dividing the space within the frame into a series of compartments comprising a plurality of metal partitions secured at their ends to opposite sides of the frame and each provided with a substantially U-shaped slot or opening, said slots being reversely positioned in alternating partitions and so situated that the closed ends of the limb portions thereof are in alinement throughout the series, and a metal bar extending through the openings in the partitions and provided with slots receiving the tongues formed by said openings.

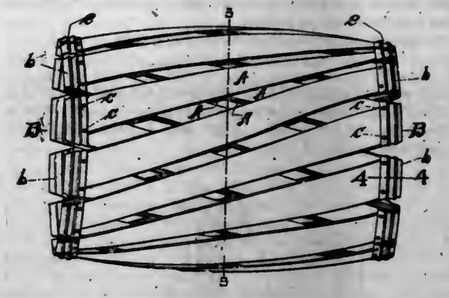
[Claims 6 to 12 not printed in the Gazette.]

1,210,406. PAPER BARREL. ROBERT S. BOLGER, Richmond Hill, N. Y., assignor of one-half to George F. Whistler, New York, N. Y. Filed Oct. 7, 1914. Serial No. 865,469. (Cl. 229—67.)

1. A barrel body composed of several superimposed series of obliquely extending strips arranged in parallel and spaced relation to each other, the strips of each series being inclined reversely to those of the adjacent series and intersecting or crossing the same, all of the strips being adhesively united throughout the whole of their contacting area.

2. A barrel body composed of superimposed series of obliquely extending strips, the strips of each series being inclined reversely to those of the adjacent series and intersecting or crossing the same, all of the strips being united throughout the whole area of the crossing and contacting portions to form a unitary body structure, an annular series of separated metal chine sections on the extremities of said strips and having depressions in their outer faces, and a hoop adapted to encircle said series of chine sections and be retained in said depressions.

3. A barrel body composed of superimposed series of obliquely extending strips, the strips of each series being inclined reversely to those of the adjacent series and intersecting or crossing the same, all of the strips being united throughout the whole area of the crossing and contacting portions to form a unitary body structure, an annular series of separated metal chine sections on the extremities of said strips having head receiving depressions in their inner faces, and hoop receiving depressions in their outer faces, and a hoop adapted to encircle said series of chine sections and be retained in the last named depressions.



4. A barrel head embodying outer and inner disk-shaped sections of double back corrugated paper, combined with an interposed disk-shaped spreader section arranged centrally thereof and of less diameter, the corrugations of said outer and inner sections extending at right angles to each other.

1,210,407. BODY-ARMOR. OTIS L. BOUCHER, Snyder, Okla. Filed Nov. 8, 1915. Serial No. 60,312. (Cl. 89—36.)



1. A suit of armor including a head piece and a body piece, the head piece at its rear being detachably and pivotally connected to the body piece.

2. An armor section comprising oppositely disposed side members, one of said side members being angularly bent at its forward edge and the other side member being hingedly connected to the angular bent margin of the first side member.

3. A suit of armor including a body and a thigh section, each section composed of hingedly connected side members normally disposed at an angle to each other, and means for limiting the movement of the side members into angular relation and to hold the side members disposed at an angle to each other, the side members of the body section being cut away to provide arm holes and the side members of the body section and of the thigh section extending

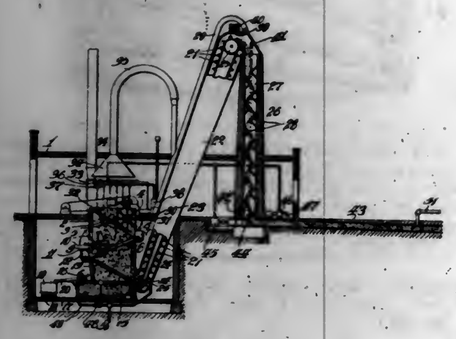
beyond the rear of the wearer whereby to permit the armor to be supported entirely upon the ground when the wearer is in a recumbent position.

4. A suit of armor comprising a head piece triangular in cross section opened at the rear, a body piece approximately triangular in cross section opened at the rear and detachably connected to the head piece, and a thigh piece approximately triangular in section opened at the rear and detachably connected to the body piece.

5. A suit of armor including a body piece composed of acutely angled side members, each side member being cut away to allow the projection of the arm of the wearer, and shields mounted upon the side members for adjustment across said openings.

[Claims 6 to 20 not printed in the Gazette.]

1,210,408. GARBAGE REDUCTION AND TRANSPORTATION SYSTEM. HENRY FREDERICK WILLIAM BROCKHAUSEN, St. Louis, Mo. Filed Apr. 4, 1914. Serial No. 829,499. (Cl. 71—1.)



1. In a garbage reduction system, a receiving hopper, a hot water discharging device located above said hopper, a washing apparatus located adjacent said hopper, a conveyer for conveying garbage from said hopper to said washing apparatus, and a conduit for receiving garbage from said washing apparatus.

2. In a garbage reduction system, a receiving hopper, a washing apparatus located adjacent said hopper, a conveyer for conveying garbage from said hopper to said washing apparatus, a conduit for receiving the garbage from said washing apparatus, and a garbage mashing device located in said hopper.

3. In a garbage reduction system, a receiving hopper, a hot water discharging device located above said hopper, a washing apparatus located adjacent said hopper, a conveyer for conveying garbage from said hopper to said washing apparatus, a conduit for receiving garbage from said washing apparatus, and a garbage mashing device located in said hopper.

4. In a garbage reduction system, a garbage receiving hopper, a mashing apparatus located in said hopper, an inverted funnel located above said hopper, and means for creating a vacuum in said funnel.

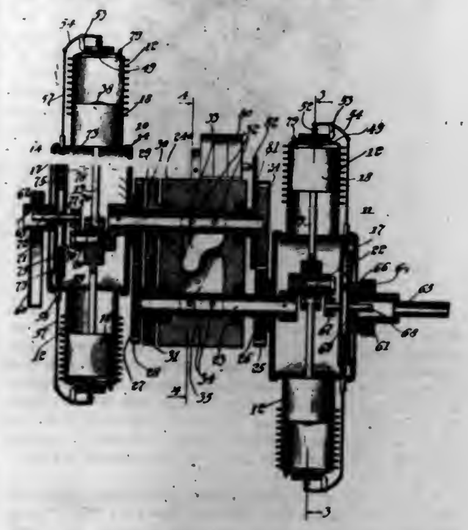
5. In a garbage reduction system, a garbage receiving hopper, a mashing apparatus located in said hopper, an inverted funnel located above said hopper, a hot water discharging device located between said hopper and said funnel, and means for creating a vacuum in said funnel.

[Claims 6 to 16 not printed in the Gazette.]

1,210,409. MOTOR. THOMAS P. BROOKE, Chicago, Ill. Filed Aug. 1, 1912. Serial No. 712,799. (Cl. 123—44.)

1. A motor comprising two sections of cylinders and pistons, one of the sections rotating in opposition to the other section, and provisions whereby the rotation of one of the said sections will actuate the pistons of the opposite section.

2. A motor comprising two sections of cylinders and pistons, one of the sections rotating in opposition to the other section, and provisions whereby the rotation of one of the said sections will actuate the pistons of the opposite section in opposition to the respective section but in the same direction as the actuating section.



3. A motor comprising two sections of cylinders and pistons, one of the sections rotating in opposition to the other section, and piston actuating means operating in opposition to the movement of the respective cylinders and pistons, the piston actuating means of each section being responsive in its action to the operation of the other section of cylinders.

4. A motor comprising two sections of cylinders rotatable in opposite directions and about different axes, each of said sections operating to counterbalance the gyrational effects of the other section.

5. A motor comprising two sections of cylinders having actuating pistons and rotatable in opposite directions and about different axes, said sections being operatively connected, and means for introducing an explosive mixture directly into each section.

[Claims 6 to 13 not printed in the Gazette.]

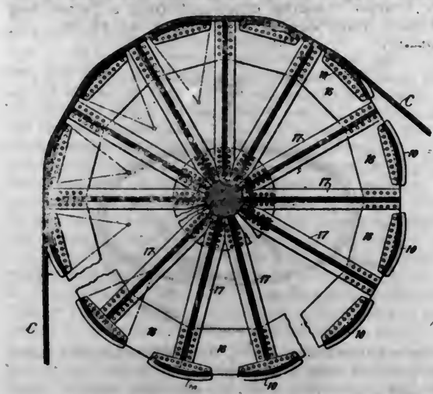
1,210,410. BASCULE-BRIDGE. THOMAS E. BROWN, New York, N. Y. Filed Oct. 28, 1915. Serial No. 58,324. (Cl. 14—36.)

1. In a bridge, the combination of a counterweight, tensional counterweight connections therefor and curved members forming supports for said connections, and said curved members consisting of a plurality of short saddles of a radius less than the radius of curvature of said curved members.

2. In a bridge, the combination of a counterweight, a tensional connection therefor and a plurality of curved supports adapted to support said tensional connection in a curve and each of said supports being of radius less than the radius of said curve and together forming said curve.

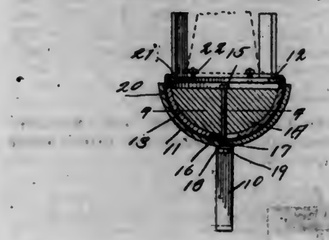
3. In a bridge, the combination of a counterweight, a tensional connection therefor, a curved structure adapted to support said connection, and having its supporting rim composed of short segments of a radius less than the radius of curvature of said structure.

4. In a bridge, the combination of a counterweight, a tensional connection therefor, a curved member to support said connection provided with a supporting surface consisting of short saddles, each saddle being of a radius



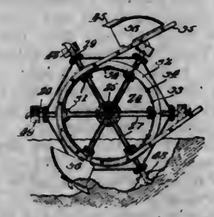
less than the radius of said member, and plates between which said saddles are secured.

1,210,411. LEVELING-BASE FOR CREAM-SEPARATORS. ELMER C. BRYHAN, Lancaster, Wis. Filed Apr. 12, 1916. Serial No. 90,755. (Cl. 248—47.)



In a device of the kind described, a tripod consisting of an upwardly opening semispherical bowl provided with a triplicity of legs fixed to its exterior adjacent its edge and projecting below its bottom, a semispherical packing lining said bowl, a second semispherical bowl resting on the lining and having a centrally disposed opening, the first bowl and packing being provided with similar smaller openings, a substantially semispherical member fitting the second bowl, a bolt passing through said member and said openings, a nut on said bolt to draw said member, bowls and lining together, and a retaining ring screwed to the edge of the second bowl and serving to prevent accidental separation of the member from the second bowl.

1,210,412. EXCAVATING-MACHINE. STANDISH S. BUDLONG, Rockford, Ill. Filed Oct. 12, 1914. Serial No. 866,345. (Cl. 37—27.)



1. In an excavating machine, the combination of a cylindrical rotatable frame, comprising inner and outer longitudinally extending pairs of clamping members arranged in radial alinement, the inner clamping members extending substantially the entire length of the frame and the outer clamping members being terminated short of the central portion of the frame, an endless conveyer trained over the central portion of the frame intermediate said outer members and provided with a series of excavating buckets, and radially extending implements clamped between said inner and outer members for moving material in the excavation axially of the frame to the central portion thereof as the frame is rotated.

2. In an excavating machine, the combination of an excavator frame, an excavating tool rotatably mounted in said frame, said tool comprising a cylindrical frame consisting of radial members carrying longitudinally disposed members, a plurality of individual digging devices adjustably and detachably mounted in spaced relation on said longitudinally extending members, and a plurality of blades mounted on said longitudinally extending members in spaced relation with said digging devices and with respect to each other, the blades at one side of the center of said tool being disposed diagonally to the axis of the tool and the blades at the other side of the center of the tool being disposed diagonally to the axis of the tool but in the opposite direction so that upon rotation of the tool said blades will transport the material loosened by said digging devices toward the longitudinal center of the tool, an endless bucket-conveyer trained over the central portion of the cylindrical member, and means for operating said conveyer.

3. In an excavating machine, the combination of a frame, a cylindrical cage rotatably carried by said frame, said cage consisting of radial and longitudinally disposed members, a plurality of sharpened digging devices and elongated blades adjustably and detachably mounted upon said longitudinally extending members in spaced relation longitudinally and circumferentially of said cage, the blades at opposite sides of the transverse axis of said cage being disposed diagonally with respect to the cage and with respect to the blades at the opposite end, an endless conveyer trained around the center of said cage, and means for operating said conveyer.

4. In an excavating machine, the combination of a cylindrical rotatable frame comprising a shaft, a plurality of groups of radial, axially alined spokes secured to the shaft, and inner and outer clamping members connecting the alined spokes, the inner clamping members extending substantially throughout the length of the frame and the outer members terminating short of the center of the frame whereby to provide a race-way, radially extending excavating implements held rigidly between said clamping members and constructed and arranged to excavate and move material toward the race-way by rotation of the frame, and an endless conveyer trained around the race-way of the frame and provided with a series of excavating buckets for receiving the material moved thereto by said implements.

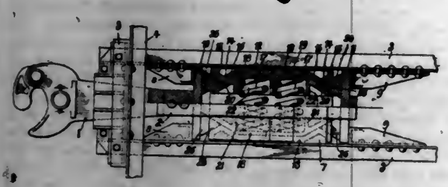
5. In an excavating machine, a cylindrical rotatable frame having inner and outer longitudinally extending pairs of clamping members arranged in radial alinement, a race-way disposed centrally between the ends of the frame within the outer clamping members, an endless conveyer trained over said race-way whereby to rotate the frame and equipped with a series of outwardly projecting buckets, and a plurality of radially extending implements clamped between the inner and outer pairs of clamping members and provided beyond the outer clamping members with means for excavating and moving material axially of the frame toward said buckets as the frame is rotated.

[Claim 6 not printed in the Gazette.]

1,210,413. FRICTION DRAFT-RIGGING. CYRUS L. BUNDY, East Orange, N. J., and JULIUS J. ACKER, Horton, Kans. Filed Feb. 27, 1913. Serial No. 751,058. (Cl. 213—64.)

1. A draft or buffer rigging, comprising a casing having at its opposite ends opposed internal projections pro-

vided with oblique friction faces, spring caps normally lying in the spaces intermediate said projections, springs confined therebetween, whereby the caps are held in said normal positions, oblique extensions on the caps coöperating with the aforesaid friction faces to form wedge shaped recesses, wedges lying in the recesses and follower blocks bearing against the bases of the wedges, said blocks being arranged to approach each other when the rigging sustains a draft or buffing strain, causing the wedges to force the caps from their normal positions in opposition to the springs, the wedges simultaneously sliding transversely on the blocks.



2. A draft or buffer rigging, comprising a longitudinally movable casing having friction faces, longitudinally movable transversely yielding resistance members within the casing, the casing and resistance members being normally centered but capable of longitudinal movement with reference to each other, the resistance members having friction faces which coöperate with the friction faces of the casing to form wedge shaped recesses, wedge blocks in the recesses, follower blocks bearing against the bases of the wedges and arranged to move toward each other during buffing and pulling strains and force the wedges deeper into the recesses, thereby moving the resistance members transversely in spite of their resistance and simultaneously moving the casing and resistance members longitudinally, and means for centering the casing and resistance members with reference to each other when the strain is relieved.

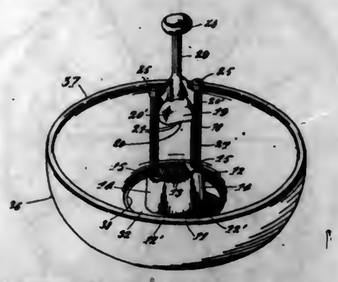
3. A draft or buffer rigging, comprising follower blocks, yieldingly separated transversely movable resistance members between the follower blocks having inwardly tapered ends, friction elements engaging a portion of the inwardly tapered ends of the transversely movable members and also the follower blocks, and a casing having internal projections at its ends, a portion of which normally engages the tapered ends of the transversely movable resistance members and another portion of which engages the friction elements.

4. A draft or buffer rigging, comprising a casing having inclined friction faces, transversely movable yielding resistance members having corresponding friction faces inclined oppositely from the inclination of the aforesaid faces, said casing and members provided with coöperating surfaces for retaining the same normally in a fixed relation to each other, wedge blocks interposed between the inclined faces of the casing, and the inclined faces of the resistance members, and a pressure transmitting member having friction faces coöperating with said wedge blocks.

5. In a device of the class described, the combination of two separated elements; a pair of follower blocks, one prevented from movement in one direction relative to said elements and the other prevented in the opposite direction relative thereto; transversely acting yielding means mounted between the follower blocks; longitudinally extending caps for the yielding means having inclined surfaces; pairs of elements having angularly disposed surfaces to frictionally engage the surfaces of the adjacent follower block and the inclined surfaces on the longitudinally extending caps; and a casing surrounding the caps and having inclined surfaces to also frictionally engage the pairs of elements and coöperate with the yielding means and the other coacting surfaces to yieldingly and frictionally resist approaching movement of the follower blocks.

[Claims 6 and 7 not printed in the Gazette.]

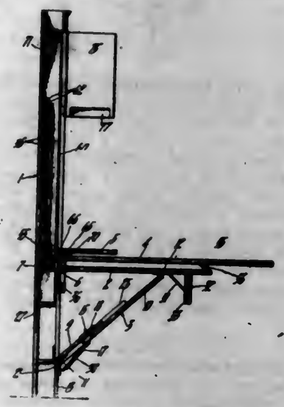
1,210,414. NUT-CRACKING DEVICE. FRANK J. BURKHARDT, Cincinnati, Ohio, assignor to The Automatic Nut Cracker Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 20, 1915. Serial No. 15,760. (Cl. 146—3.)



1. In a nut cracking device, the combination of a metal anvil provided with a surrounding plate-like base at its lower end and with a top nut-supporting surface, posts extending upwardly above said anvil, a hammer guided in up and down movement by said posts, means for normally retaining said hammer in upper position, and a nut-container surrounding said anvil and provided with a surrounding nut-retaining wall extending substantially above said nut-supporting surface.

2. In a nut cracking device, the combination of a container, and a nut-supporting anvil received in said container and provided with a surrounding plate-like base received under said container, and said container provided with a wall surrounding and extending above the horizontal plane of said anvil.

1,210,415. FOLDING-TABLE CABINET. JOHN K. CAMPBELL, Los Angeles, Cal. Filed Mar. 30, 1916. Serial No. 87,675. (Cl. 45—51.)



1. In a folding table cabinet, a table hinged within the cabinet, a brace comprising upper and lower brace members hinged respectively to said table and the cabinet base, legs on said upper brace member, extensions on said lower base member registering with said legs when the brace is extended, said brace being adapted to swing on its hinges as the table is swung out of or into the cabinet, said upper brace member being adapted to slide upon the lower brace member as the table is let down until said legs engage said base to brace the table in position for use, a shelf in the cabinet, a door hinged to the lower end of the upper brace member and covering the space between said legs, said brace members forming a closure for the cabinet with said door in front of the space above said shelf when the table is folded within the cabinet.

2. In a folding table cabinet, a table hinged within the cabinet to swing in a vertical plane, a table brace comprising upper and lower brace members arranged in slidable relation to each other, the upper member being hinged to said table and the lower member to the cabinet base, legs on said upper member, extensions on said lower member, said brace being adapted to swing in a vertical plane on its hinges as the table is swung out of or into the cabinet, the upper member being adapted to slide upon the lower member as the table is let down until the legs of said upper member engage said base to brace the table in position for use, a vertically swinging door hinged to the lower end of said upper member and covering the space between said legs, said members forming a closure for the cabinet when the table is folded within the cabinet, and means for locking said table in vertical position.

3. In a folding table cabinet, a table hinged within the cabinet and adapted to swing in a vertical plane, a flat brace comprising upper and lower members arranged in slidable relation to each other, said upper member being hinged to said table, and said lower member to the cabinet base, a recess in the lower end of said upper brace member, said brace being adapted to swing on its hinges when the table is swung out of or into the cabinet, said upper member being adapted to slide upon said lower member as the table is let down to engage said base to brace the table in position for use, a door covering said recess on said upper member, said brace members forming a closure for the cabinet when the table is folded within the cabinet, and means for locking said table in folded position.

4. In a folding table cabinet, a table hinged within the cabinet, a flat brace comprising upper and lower members arranged in slidable relation to each other; the upper member being hinged to said table and the lower member being hinged to the cabinet base, said brace being adapted to swing on its hinges as the table is swung out of or into the cabinet, the upper brace member being adapted to slide upon the lower brace member as the table is let down, until it engages said base to brace the table in position for use, said brace members forming a closure for the cabinet when said table is folded within the cabinet, and means for locking said table in folded position.

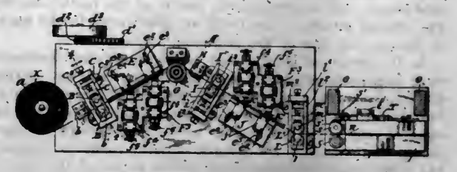
5. In a folding table cabinet, a table hinged within the cabinet and swinging in a vertical plane, a brace comprising upper and lower brace members arranged in slidable relation to each other and hinged respectively to said table and to the cabinet base, a pair of brackets arranged on opposite sides of the hinged end of the table, a bracket arranged on the under side of the free end of said table, said last named bracket comprising a pair of hinged end members adapted to swing in a horizontal plane and to project laterally on opposite sides of said table to form supports for a pair of table leaves, a pair of loose table leaves adapted to form lateral extensions of said table and to rest upon said brackets, and manually operated locking means mounted on said table for locking said leaves in position.

[Claim 6 not printed in the Gazette.]

1,210,416. MACHINE FOR PRODUCING CORRUGATED FASTENERS. SPENCER C. CARY and HERMAN H. BRAND, Brooklyn, N. Y., assignors to Cary Manufacturing Co., Brooklyn, N. Y., a Corporation of New York. Filed Dec. 31, 1913. Serial No. 809,617. (Cl. 10—28.)

1. In a machine for making saw-tooth corrugated fasteners, the combination with means for feeding a strip of corrugated stock material, of rotary milling cutters one of which is positioned for operation upon one face of the stock material and the other is positioned for operation upon the opposite face of the stock material, the axis of rotation of each milling cutter being inclined to the path of feed of the stock material.

2. In a machine for producing corrugated fasteners, the combination with beveling means for producing oppositely inclined surfaces upon corrugated stock adjacent an edge portion thereof, of reciprocating dies provided with corrugated surfaces conforming to said corrugated stock, said dies being operable upon the edge portion of the resulting saw teeth and upon the edge of the corrugated stock to produce bevels in the concave surfaces of said stock.



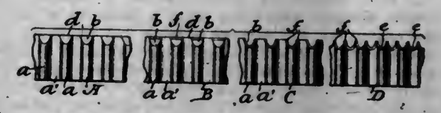
3. In a machine for producing corrugated fasteners, the combination with means for producing bevels upon the respective faces of corrugated stock adjacent an edge portion thereof, of reciprocating dies provided with corrugated faces, and means for presenting the dies and the corrugated stock at an angle relatively to each other said dies operating upon the edge portions of the resulting saw teeth produced on the stock, for eliminating roughnesses or burs upon said saw teeth.

4. In a machine for making saw-tooth corrugated fasteners, the combination with means for feeding a strip of corrugated stock material, of rotary milling cutters each having a cutting face rotating in a plane inclined to the surface of the stock material to be operated upon.

5. In a machine for making saw-tooth corrugated fasteners, the combination with means for feeding a strip of corrugated stock material, of milling cutters positioned for operation upon one face of the corrugated stock material, said cutters having cutting faces rotating in planes inclined to one surface of the stock material to be operated upon, and other milling cutters positioned for operation upon the opposite surface of said corrugated stock material, said second named cutters having cutting faces rotating in planes inclined to the opposite surface of the stock material.

[Claims 6 to 25 not printed in the Gazette.]

1,210,417. METHOD OF MAKING SAW-TOOTH FASTENERS. SPENCER C. CARY and HERMAN H. BRAND, Brooklyn, N. Y., assignors to Cary Manufacturing Co., Brooklyn, N. Y., a Corporation of New York. Original applications filed Dec. 31, 1913, Serial No. 809,617, and Oct. 8, 1914, Serial No. 865,678. Divided and this application filed Apr. 5, 1915. Serial No. 19,377. (Cl. 10—34.)



1. The improvement in the art of making saw tooth corrugated fasteners which consists in bending metal stock to impart corrugations thereto, swaging one edge of the corrugated stock for simultaneously producing reversed bevels upon the surfaces of the stock, removing the metal on definite lines from the swaged beveled edges of the stock and producing well defined saw teeth in said edge of the stock, and additionally swaging the edge of the stock for positioning said edge and the points of the resulting teeth in the plane of the medial line of the fastener to be produced.

2. The improvement in the art of making saw tooth corrugated fasteners which consists in compressing one edge portion of a corrugated length of metal stock by subjecting said edge to lateral pressure simultaneously applied to the respective surfaces of the corrugated stock, and subsequently cutting out the metal at the previously compressed edge of the corrugated stock to produce well defined saw teeth in said edge.

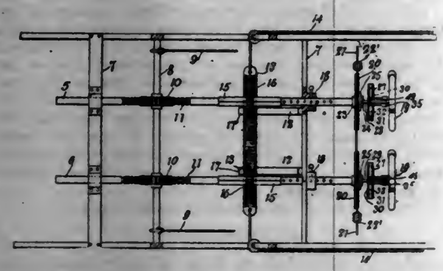
3. In the art of making saw tooth corrugated fasteners, that improvement which consists in successively cutting the edge portion of a length of corrugated metal stock in two directions each inclined to the medial line of the corrugated stock for producing well defined teeth on said stock, and in swaging the points of the teeth whereby the swaged points of the teeth are positioned in the plane of the medial line of the resulting fastener.

4. In the art of making saw tooth corrugated fasteners, that improvement which consists in successively cutting the edge portion of a length of corrugated metal stock in two directions each inclined to the medial line of the corrugated stock for producing well defined teeth on said stock, and swaging the points of said teeth to sharpen the same and centralize them in the plane of the medial line of the fastener.

5. In the art of making saw tooth corrugated fasteners, that improvement which consists in swaging the edge portion of a length of corrugated metal stock for producing opposite bevels on the respective concave and convex surfaces of the corrugated stock, and subsequently cutting out metal from the swaged edge of said corrugated stock on lines inclined to the corrugated stock.

[Claims 6 to 8 not printed in the Gazette.]

1,210,418. CONTROL FOR AERIAL VEHICLES. DENIS F. CASHMAN, Dayton, Ohio. Filed Apr. 24, 1916. Serial No. 93,068. (Cl. 244—29.)



1. In a control for aerial vehicles, a rotatable and axially movable controlling shaft, a plurality of devices for controlling the various steering and balancing elements actuated by the several movements of the shaft, and means for locking and unlocking certain of said devices to and from the shaft.

2. In a control for aerial vehicles, a rotatable and axially movable controlling shaft, a plurality of devices for controlling the various steering and balancing elements, certain of said devices being controlled by movement of said controlling shaft in one direction, and a plurality of said devices being controlled by the movement of said controlling shaft in a different direction, and means for locking and unlocking certain of said last-mentioned devices to and from the controlling shaft.

3. In a control for aerial vehicles, a pair of controlling shafts, a gear mounted on each shaft, a rack in engagement with said gears and adapted to be actuated by either of them, a pulley rotatably mounted upon each shaft, and locking means associated with each pulley to lock and unlock the same to and from its shaft, said rack and said pulleys being adapted to be connected to the various balancing and steering devices of the vehicle.

4. In a control for aerial vehicles, a controlling element provided with a hand wheel, a device for controlling the balancing or steering element of the vehicle, means for locking and unlocking said device to and from the controlling element, and a movable sleeve upon said wheel for actuating the locking means.

5. In a control for aerial vehicles, a rotatable shaft, a plurality of devices rotatable with said shaft and connected with the balancing and steering elements of the vehicle, means for locking and unlocking one of said devices to and from the shaft, and means for positively actuating by hand the locking and unlocking means.

[Claims 6 to 12 not printed in the Gazette.]

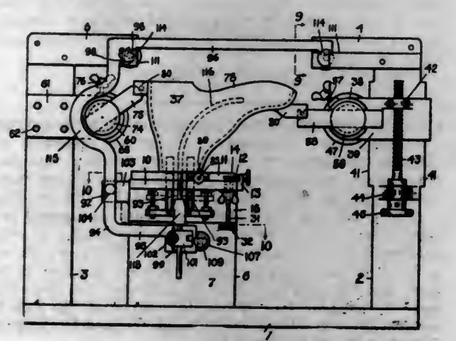
1,210,419. REST FOR TOILET-SEATS. JAMES CERNEY, Jefferson Barracks, Mo. Filed Feb. 28, 1916. Serial No. 80,981. (Cl. 4—18.)



1. The combination with a vertically swinging seat, of a substantially horseshoe-shaped arm support, means swingingly connecting the arm support medially thereof to a stationary part at a point elevated above the seat, a pair of plates fixed to the underside of the seat at opposite sides and having outwardly extending threaded shanks, a pair of braces loosely engaged on the shanks, pivot plates fixed to the underside of the arm support at opposite sides and loosely engaged with the pair of braces to hold said arm support in parallelism with the seat when in raised vertical or lowerd horizontal position and capped nuts detachably engaged on the threaded shanks.

2. The combination with a vertically swinging seat, of a substantially horseshoe shaped arm support, means swingingly connecting the arm support medially thereof to a stationary part at a point elevated above the seat, a pair of plates fixed to the underside of the seat at opposite sides and having outwardly extending threaded shanks, a pair of braces loosely engaged on the shanks, pivoted plates fixed to the underside of the arm support at opposite sides and loosely engaged with the pair of braces to hold said arm support in parallelism with the seat when in raised vertical or lowered horizontal position and capped nuts detachably engaged on the threaded shanks, said braces each being formed with a pair of bends for offsetting a major portion thereof with respect to the remaining portion of the same.

1,210,420. MOLDING APPARATUS. GEORGE C. CLARK, Mishawaka, Ind. Filed Dec. 2, 1915. Serial No. 64,770. (Cl. 22—10.)



1. A core molding machine, including a core box supporting element, a core carrier adapted for temporary fixed relation to the machine, and means for adjusting the element with respect to the carrier.

2. A core molding machine, including a core box supporting element, a core carrier adapted for temporary fixed relation to the machine, and means for adjusting the element with respect to the carrier, and core box supports beyond the element.

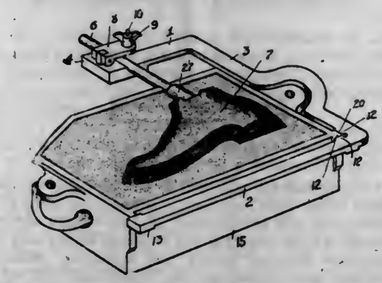
3. A core molding machine, a carrier adapted for temporarily fixed relation therewith, a core box supporting element, a core support secured by the carrier, and means for adjusting the element independently of the support.

4. A core molding machine, a carrier adapted for temporarily fixed relation therewith, a core box supporting element, a core support secured on the carrier, and means for adjusting the element independently of the support, and with particular relation to the carrier.

5. A molding apparatus including a mold box supporting element, a carrier for the molded article and having a removably fixed position with relation to the element, and means for adjusting the table to vary the position of the article molded thereon with respect to the carrier.

[Claims 6 to 16 not printed in the Gazette.]

1,210,421. MOLDING APPARATUS. GEORGE C. CLARK, Mishawaka, Ind. Filed Dec. 2, 1915. Serial No. 64,771. (Cl. 22—101.)



1. The combination with a drag member of a flask having spaced bearing points formed on the exterior walls thereof, of a core carrier comprising relatively angular sections adapted to engage said bearing points for the support and uniform positioning of the carrier on the drag member.

2. The combination with a flask member, of a carrier wholly disposed without and adapted to engage and register with said member exteriorly thereof, and a core arbor supported by the carrier adapted to extend into the flask member, whereby the application of the carrier in registration with the flask member will automatically dispose the core in the proper mold forming position.

3. The combination with a drag member of a flask formed on adjacent walls with supporting abutments, a carrier adapted to be positioned on said abutments to support the core in molding position.

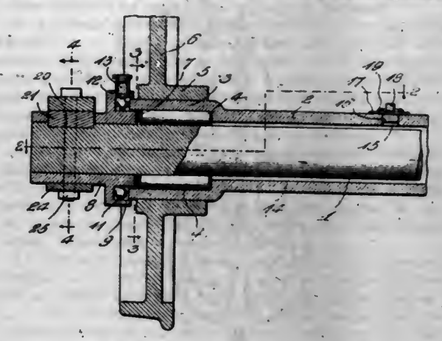
4. The combination with a drag member of a flask formed with supporting abutments and bearing surfaces on a plurality of its walls, of a carrier for the core provided with bearing points to coöperate with the abutments and bearing surfaces of the drag to accurately position the carrier with respect to the drag.

5. A core carrier including an approximately U-shaped frame, means carried thereby to engage the core arbor, and offset bearing points formed on a plurality of sections of the frame.

[Claims 6 to 15 not printed in the Gazette.]

1,210,422. BALL-BEARING AXLE. FRED J. COCHRAN, Mount Vernon, Ill. Filed July 12, 1916. Serial No. 108,807. (Cl. 64—39.)

1. A ball and roller bearing axle of the character specified comprising an inner stationary shaft, a hollow sleeve revolubly mounted thereon and provided at opposite ends with cylindrical enlargements, a circular series of bearing rollers arranged in the enlargement at each end of the sleeve, around said shaft, hollow caps mounted on opposite ends of the shaft and provided at their inner ends with annular ball races partly receiving the ends of the sleeve and bearing balls arranged in said ball races against the ends of the sleeve, for the purpose specified.



2. A ball and roller bearing axle of the character specified comprising an inner stationary shaft, a hollow sleeve revolubly mounted thereon, said sleeve provided at opposite ends with cylindrical enlargements, a circular series of bearing rollers arranged in the enlargement at each end of the sleeve around the shaft, hollow caps mounted on opposite ends of the shaft and provided at their inner ends with annular ball races partly receiving the ends of said sleeve, bearing balls arranged in said ball races against the ends of the sleeve and an annular ring or member, constituting a dust guard, arranged in the enlargement at each end of the sleeve adjacent the outer ends of the adjacent series of bearing rollers, the inside diameters of said annular rings and the revoluble sleeve being greater than that of the shaft.

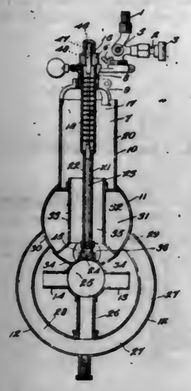
3. A ball and roller bearing axle of the character specified comprising an inner stationary shaft, a hollow sleeve revolubly mounted thereon, said sleeve provided at opposite ends with cylindrical enlargements, a circular series of bearing rollers arranged in the enlargement at each end of the sleeve around the shaft, hollow caps mounted on opposite ends of the shaft and provided at their inner ends with annular ball races partly receiving the ends of the sleeve, bearing balls arranged in said ball races against the ends of the sleeve, and means provided whereby a lubricant may be introduced through the sleeve into the annular space between the shaft and the latter.

4. A ball and roller bearing axle of the character specified, comprising a stationary shaft provided at each end in its top with a central longitudinal recess, a sleeve revolubly mounted on said shaft, bearing rollers between the ends of the sleeve and the shaft, caps on the ends of the shaft partially receiving the ends of the sleeve, bearing balls between the ends of the sleeve and the caps, upper and lower horizontal wings cast with and extending laterally of said caps, arch bars extending across the top of the shaft and fitting in the recesses thereof, base plates fitting against the bottoms of the caps, fastening bolts passing vertically through the arch bars, the wings of the caps and the base plates and nuts screwing on and bolts against the bottom of the base plates.

1,210,423. VAPOR-BURNER. HERSCHEL M. CONNOR, San Francisco, Cal., assignor to Standard Light Company, Savannah, Ga., a Corporation of Delaware. Filed May 29, 1916. Serial No. 100,641. (Cl. 67—43.)

1. In an oil vapor lamp the combination of an oil supply; a rod provided with disks having perforations in spaced relation to each other; a tube in which said disks fit provided with an extension; means carried by said rod for controlling the flow of fuel from said tube to its extension; an exit means associated with said tube ex-

tension; and a burner for heating said tube extension to vaporize the oil therein, substantially as described.



2. In an oil vapor lamp the combination of an oil supply; a rod provided with disks having staggered perforations in spaced relation to each other; a tube in which said disks fit provided with an extension; means carried by said rod for controlling the flow of fuel from said tube to its extension; means for reciprocating said rod lengthwise of said tube; an exit means associated with said extension; and a burner for heating said tube extension to vaporize the oil therein, substantially as described.

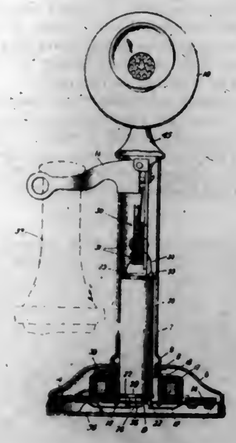
3. In an oil vapor lamp the combination of an oil supply; a rod provided with an extension and with disks having staggered perforations in spaced relation to each other; a tube in which said disks fit provided with an extension; means carried by said rod for controlling the flow of fuel from said tube to its extension; means for reciprocating said rod lengthwise of said tube; an exit means associated with said tube extension; means carried by said rod adapted to reciprocate through said exit means in order to clear the same; and a burner for heating said tube extension to vaporize the oil therein, substantially as described.

4. In an oil vapor lamp the combination of an oil supply; a rod provided with an extension and with disks having perforations in spaced relation to each other; a tube in which said disks fit provided with an extension; means carried by said rod for controlling the flow of fuel from said tube to its extension; an exit means associated with said tube extension; means carried by said rod extension adapted to enter and pass through said exit means; a rod provided with a handle and an eccentrically disposed pin adapted to reciprocate said rod and its extension; and a burner for heating said tube extension to vaporize the oil therein, substantially as described.

5. In an oil vapor generator for lamps the combination of an inclosing tube having an extension; a plurality of disks provided with perforations in said tube; means for restricting the passage between said tube and its extension; a rod in said extension along which oil from said tube may find its way; an exit for vapor carried by said tube extension; and means for heating said rod and said extension in order to vaporize the oil therein, substantially as described.

1,210,424. TELEPHONE DESK SET. EDWARD B. CRAFT, Hackensack, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 2, 1915. Serial No. 11,488. (Cl. 17—147.)

1. In a telephone desk set, a hollow base, a mounting plate inclosed within said base, a toroidal shaped induction coil clamped to said plate, a tubular and removable standard rising from said base, a transmitter element and switch-hook carried at the upper portion of said standard, a condenser inclosed within said standard, separable and mutually engaging contact members carried respectively by said mounting plate and said condenser, clamping means for drawing and holding said plate, condenser and contact members together, and means for securing said base and standard together.



2. In a telephone desk set, a hollow base, a tubular standard rising from said base, a transmitter element and switchhook carried at the upper portion of said standard, a toroidal shaped induction coil mounted within said base, a condenser inclosed within said standard, means for connecting said condenser and induction coil in the transmitter circuit, means for tightening and securing said elements in a given order within said standard and base, and a clamping means for fastening said base and standard together.

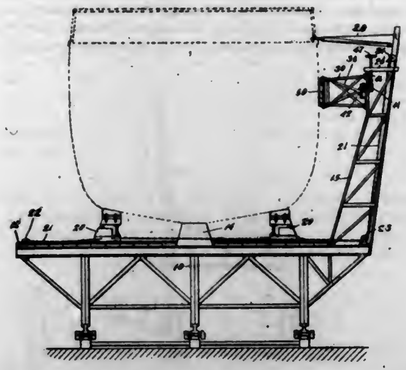
3. In telephone desk set, a hollow base, a mounting plate inclosed within said base, a toroidal shaped induction coil secured to said mounting plate, a tubular standard rising from said base, a transmitter element carried at the upper portion of said standard, means of connection between said induction coil and said transmitter, and means for tightening and holding said elements together when assembled in their proper order.

4. In a telephone desk set, a hollow base, a mounting plate inclosed within said base, a toroidal shaped induction coil clamped to said plate, a tubular standard rising from said base, a transmitter element and switchhook carried at the upper portion of said standard, a condenser inclosed within said standard, a plurality of metallic ribs passing longitudinally through the body of said condenser and terminating in contact members at each end thereof, said ribs serving as connecting links for connecting said condenser and induction coil in the transmitter circuit, and means for tightening and holding said elements together when assembled in their proper order.

5. In a telephone desk set, a hollow base, a mounting plate inclosed within said base, a toroidal shaped induction coil clamped to said plate, a tubular standard rising from said base, a transmitter element and switchhook carried at the upper portion of said standard, a condenser inclosed within said standard, a plurality of metallic ribs passing longitudinally through the body of said condenser and terminating in contact members at each end thereof, said ribs serving as connecting links for connecting said condenser and induction coil in the transmitter circuit, means for preventing the rotation of said condenser, and means for tightening and holding said elements together when assembled in their proper order.

[Claim 6 not printed in the Gazette.]

1,210,425. RAILWAY DRY-DOCK. JAMES L. CRANDALL, Malden, Mass., assignor to Crandall Engineering Company, East Boston, Mass., a Corporation of Maine. Filed June 30, 1916. Serial No. 106,933. (Cl. 61—11.)



1. In a railway dry dock, a cradle having an upright wing, and a thrust element arranged on said wing adapted for engagement with the side of the vessel, comprising two toggle-members, and a thrust-roll and operating-means for said members.

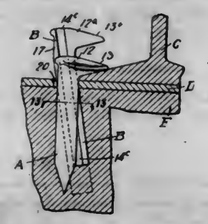
2. In a railway dry dock, a cradle having an upright wing, and a thrust element arranged on said wing adapted for engagement with the side of a vessel, comprising two toggle-members, and a thrust-roll, and a sliding-block, to which one of said members is pivotally connected, and means for sliding said block to operate the toggle-members.

3. In a railway dry dock, a cradle having an upright wing, and a thrust element arranged on said wing adapted for engagement with the side of a vessel, comprising two toggle-members, a thrust-roll and a sliding-block to which one of said members is pivotally connected, an endless chain connected with said block, and means to move said chain in opposite directions.

4. In a railway dry dock, a cradle having an upright wing, and a thrust element arranged on said wing adapted for engagement with the side of a vessel, comprising two toggle-members, a thrust-roll and operating-means including a worm-wheel and worm for moving said toggle-members in and out.

5. In a railway dry dock, a cradle having a single upright wing, and means arranged thereon adapted for connection with a vessel to exert a pulling force thereon, and means also arranged on said wing adapted for engagement with a vessel for exerting a pushing force thereon.

1,210,426. SPIKE. JAMES F. CRAVEN, Pittsburgh, Pa. Filed Nov. 3, 1915. Serial No. 59,395. (Cl. 85—23.)



1. A driven fastening device, comprising two members adapted to be driven in side by side and whose shanks lie at an angle to each other, said members having sliding locking engagement with each other and each having a head adapted to engage the part to be fastened.

2. A driven fastening device, comprising two members adapted to be driven in side by side and whose shanks lie at an angle to each other, said members being provided with locking connections adapted to prevent them from being together withdrawn but permitting one thereof to be withdrawn independently of the other and each having a head adapted to engage the part to be fastened.

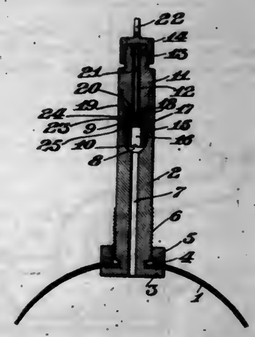
3. A driven fastening device, comprising two members adapted to be driven in side by side and provided with shanks lying at an angle to each other, one of said shanks being provided on one side with a longitudinal shoulder and the other with an abutting portion sliding over said shoulder, each of said members being provided with a head adapted to engage the part to be fastened.

4. A driven fastening device, comprising two members adapted to be driven in side by side and each provided with a shank and a head extending laterally into engagement with the part to be fastened, the shanks of said two members lying at an angle to each other, and sliding locking connections between said shanks.

5. A driven fastening device, comprising two members adapted to be driven in side by side and each provided with a shank and a head extending laterally into engagement with the part to be fastened, the shanks of said two members lying at an angle to each other, one of said shanks being provided on one side face with a longitudinal shoulder and the other on a coöperating side face with an abutting portion sliding over said shoulder.

[Claim 6 not printed in the Gazette.]

1,210,427. VALVE. THOMAS B. CREWS, Jr., St. Louis, Mo., assignor to Vulcan Valve Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 13, 1915. Serial No. 66,487. (Cl. 152—12.)



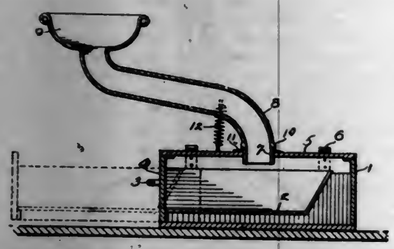
1. In a device of the class described, the combination of a member having a valve chamber formed therein, a valve having a limited longitudinal movement in said valve chamber, a valve seat at one end of said chamber having an opening therethrough, and having an annular protuberance surrounding said opening, the end of said valve adjacent to said valve seat having an elevated annular bearing face, and a compressible seat portion on the end of said valve portion projecting across said elevated annular bearing face so as to be pressed against said seat by said elevated annular bearing face, said valve seat having a depressed bearing face adjacent to said protuberance to engage and receive the pressure of said compressible seat portion when pressed thereagainst by said elevated annular bearing face, said elevated annular bearing face operating under the pressure to confine and distort the compressible seat portion, and cause the same to conform closely to the outline of said protuberance, said protuberance constructed with blunt edges whereby it impresses without cutting said compressible seat portion.

2. In a device of the class described, the combination of a member having a valve chamber formed therein, a valve having a limited longitudinal movement in said valve chamber, a valve seat at one end of said chamber having an opening therethrough, and having an annular protuberance surrounding said opening, and a depressed

bearing face adjacent said protuberance the end of said valve adjacent said valve seat having a relatively deep recess formed therein, and having an annular bearing face surrounding said recess, and a compressible cushion held in said recess and extending over said annular face, whereby the pressure on said valve toward said seat operates to compress said cushion against said depressed bearing face in an annular area around said opening, and thereby confines and effects compression and distortion of the middle portion of the cushion and presses the same against said protuberance.

3. In a device of the class described, the combination of a member having a valve chamber formed therein, a plug having a valve seat at the end of said valve-chamber and having a central bore therethrough forming an opening on said seat, said seat having an elevated annular protuberance surrounding said opening and a depressed bearing face adjacent said protuberance, a valve having a limited longitudinal movement in said valve-chamber, the end of said valve adjacent said valve seat having a relatively deep recess formed therein with a stem extending from the bottom of said recess longitudinally within said bore, said valve having an annular bearing face surrounding said recess and a compressible cushion surrounding said stem, held in said recess and extending over said annular face, whereby the pressure of said valve toward said seat operates to compress said cushion against said depressed bearing face in an annular area around said opening and thereby confines and effects compression of the middle portion of the cushion and distorts and presses the same against said protuberance, said stem operating to give the central portion of said cushion an increased resistance under the pressure of said protuberance.

1,210,428. CUSPIDOR. HORACE CRISLER, Doyleville, Ark., assignor of one-half to Joseph W. Sutherlin, Doyleville, Ark. Filed July 28, 1915. Serial No. 42,389. (Cl. 4—38.)

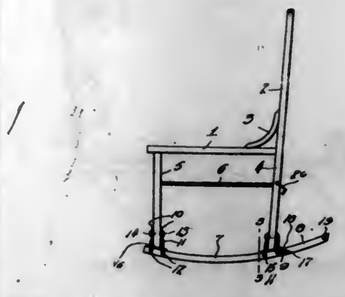


1. In a cuspidor, a container, a stem having a mouth on the free end thereof mounted for oscillatory movement in a horizontal plane above the top of the container, and opposed springs secured to the container and to said stem for yieldably maintaining the latter in a predetermined position and exerting a downward pull thereon whereby the stem will be securely held in engagement with the container.

2. In a cuspidor, a container having a mouth on the free end thereof mounted for oscillatory movement in a horizontal plane above the top of the container, an annular flange formed upon said stem in proximity of the lower end thereof, lugs formed upon the opposite sides of said stem intermediate the ends thereof, and opposed springs secured to the container and to said lugs for yieldably maintaining the stem in a predetermined position and exerting a downward pull thereon whereby the stem will be securely held in engagement with the container.

1,210,429. ROCKER ATTACHMENT. JAMES C. CURTIS, Cisco, Cal. Filed Dec. 3, 1915. Serial No. 64,898. (Cl. 155—18.)

1. A rocker attachment including, in combination with the legs of a stationary chair, a pair of rockers, means connected to the legs of the chair and to the rockers whereby the rockers may be swung into either an operative or an inoperative position with respect to the legs, and retaining means slidably mounted on the legs of the chair and held in an inoperative position by the rockers and arranged to slide down the legs and about the pivotal connecting means to prevent movement thereof and consequently maintain the rockers in an operative position.

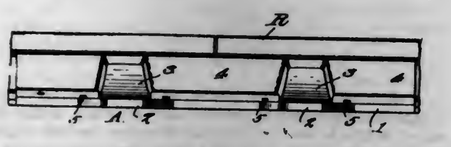


2. A rocker attachment including, in combination with the legs of a stationary chair, a pair of rockers, means for pivotally connecting the rockers to the legs of the chair to permit of the rockers being removably arranged in engagement with the lower surfaces of the legs of the chair, and rings slidably mounted on the chair legs for engagement with the securing means for removably holding the rockers in an operative position.

3. A rocker attachment including, in combination with the legs of a stationary chair, a pair of rockers, connecting elements each embodying a coil and spaced arms extending from the coil, means for pivotally connecting the coil and the elements upon opposite sides of each of the chair legs, means for pivotally connecting the outer end of the arms and the rockers, rings slidably mounted on the chair legs and supported in an inoperative position by the rockers when the rockers are swung and arranged against the sides of the chair legs and also arranged to slide down the chair legs and about the arms of the connecting elements subsequent to the swinging of the rockers into operative position beneath the chair legs to consequently prevent accidental disengagement of the rockers.

4. A rocker attachment including, in combination with the legs of a stationary chair, a pair of rockers, each of said rockers being formed of two pivotally connected sections, means for removably holding the rockers in an extended position, means for pivotally connecting the rockers to the legs of the chair to permit of the rockers being swung into engagement with the lower surfaces of the chair legs, retaining means slidably mounted on the chair legs and engageable with the pivotal connecting means to prevent movement of the connecting means to consequently removably maintain the rockers in position, and means for removably holding the rocker sections in engagement with the chair legs when in a folded or inoperative position.

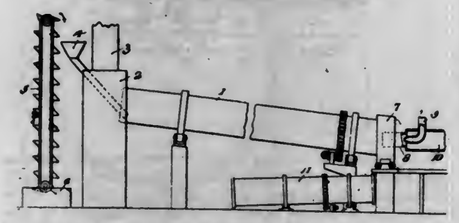
1,210,430. RAIL-JOINT. THOMAS M. DANIELS, Latrobe, Pa. Filed Jan. 19, 1915. Serial No. 3,137. (Cl. 239—9.)



The combination with alining rails, of opposed base plates for engagement with the ties supporting the rails, said base plates having their inner portions inclined and

bearing upon the base flanges of the rails, an upstanding longitudinal flange along the inner edge of each base plate and engaging one side of the rail webs, these flanges extending under and engaging the heads of the rails, wings extending laterally from the base plates, braces upon each of the base plates integral with the wings and base plates and substantially equal in width to the wings, said braces being integral with the upstanding flanges and having their upper faces disposed in a plane below the upper edges of the flanges, there being spike receiving openings close to the sides of the braces and at the outer end of each brace, the outer end of each brace being adapted for engagement by the head of a spike within the adjacent opening.

1,210,431. FURNACE-LINING. GEORGE S. DAVISON, Pittsburgh, Pa., assignor to Allen S. Davison Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 7, 1916. Serial No. 108,043. (Cl. 106—9.)



1. As a furnace lining, a mass of granular basic refractory material, the granules being impregnated with a relatively small amount of silicious material but having their faces free of any substantial layer of such silicious material.

2. As a furnace lining a mass of granular basic refractory material, the granules being impregnated with a relatively small amount of material containing iron and silica but having their faces substantially free of any substantial layer thereof.

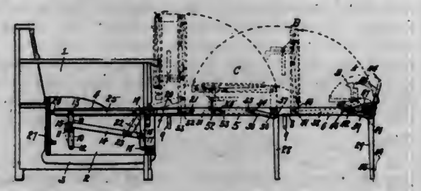
3. As a furnace lining a mass of granular basic refractory material, the granules being impregnated with a relatively small amount of basic slag but having their faces substantially free of any substantial layer thereof.

4. As a furnace lining a mass of granular basic refractory material, the granules having their pores substantially filled with a relatively small amount of silicious material but having their faces relatively free of such silicious material.

5. As a furnace lining, a mass of granular basic refractory material, the granules having their pores substantially filled with a relatively small amount of material containing iron and silica but having their faces substantially free thereof.

[Claims 6 to 20 not printed in the Gazette.]

1,210,432. SOFA-BED. PETER J. DE DOES, Toledo, Ohio, assignor to The Toledo Parlor Furniture Company, Toledo, Ohio, a Corporation of Ohio. Filed July 12, 1915. Serial No. 39,316. (Cl. 5—50.)



1. In a bed frame, a plurality of pivotally connected sections, a foot piece pivoted to the outer section, a catch member pivoted to the outer section adjacent to said foot piece and having direct connection with the foot piece and movable to operative position by a folding movement of the foot piece relative to its carrying section, and means on one of said sections with which said catch member has catch engagement when the catch member carrying section is folded thereover.

2. In a bed frame, a plurality of pivotally connected sections, a foot-piece pivoted to the outer section, a catch member pivoted to the outer section adjacent to said foot-piece, one of said member and foot-rest having a slot and the other having a pin projecting therefrom transversely of the bed-frame and into said slot, whereby pivotal movements are communicated to the catch member from pivotal movements of said foot-rest, and means on one of said sections with which said catch member has catch engagement when the catch member carrying section is folded thereover.

3. In combination, a supporting frame, a multiple section bed frame foldable with relation to said supporting frame, and mechanism foldably carrying the bed frame in the supporting frame, said mechanism comprising a pair of toggle links pivoted at one end to the supporting frame and at the other end to the inner section of the bed frame; and means pivoted to the supporting frame and having different members in connection with different sections of the bed frame, said means also having connection with said toggle links and operable upon a folding of the bed frame to collapse the toggle-links to effect a lowering of the inner bed frame section in the supporting frame and to effect a raising of said bed frame section when the bed frame is unfolded.

4. In combination, a supporting frame, a multiple section bed frame foldable with relation to said supporting frame, and mechanism foldably carrying the bed frame in the supporting frame, said mechanism comprising a pair of toggle links pivoted at one end to the supporting frame and at the other end to the inner section of the bed frame, means pivotally carried by the supporting frame and having connection with different sections of the bed frame and with said toggle links and operable upon a folding of the bed frame to collapse the toggle links to effect a lowering of the inner bed frame section in the supporting frame and to effect a raising of said bed frame section when the bed frame is unfolded, and means connecting said first means and supporting frame and operable to guide the raising and lowering movements of the inner bed frame section.

5. In a bed frame, a plurality of pivotally connected sections, a catch pin carried by an intermediate one of said sections, a catch finger carried by the outer one of said sections for engagement with said catch pin when said outer and intermediate sections are folded one over the other, a link extending lengthwise of said intermediate section and pivoted to the section to which the inner end of said intermediate section is pivoted, said link having its pivot offset from the section pivot and having a protuberant part which, is automatically moved by the link to coact with said catch finger and hold it in catch engagement with said catch pin when the intermediate section is folded relative to the inner section to which it is pivoted.

[Claims 6 to 12 not printed in the Gazette.]

1,210,433. HITCHING DEVICE. LOUIS S. DE FOREST, New Haven, Conn. Filed July 2, 1914. Serial No. 848,671. (Cl. 54—34.)

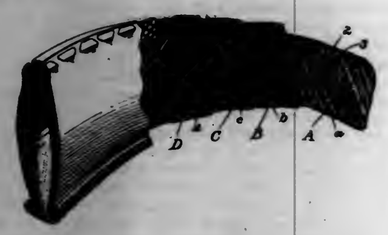
As a new article, a hitching device that comprises a fastener consisting of a body portion formed from a single wire strand bent upon itself midway its length and formed into a transversely closed loop, the two bent members being held lapped against each other, the lapped portions being curved and extended to form a long arm and then bent back upon the said long arm to form a short arm, the latter being curved in an arc concentric with the curvature of the long arm, and held in close proximity to

the said long arm, said long arm having its extremity formed with a closed transverse loop, and a flexible hitch-



ing line secured in the loop of the short arm and adapted to be passed through the loop of the long arm.

1,210,434. METHOD OF BUILDING CORD TIRE-CASINGS. WALTER R. DENMAN, Akron, Ohio, assignor to Miller Rubber Co., Akron, Ohio, a Corporation of Ohio. Filed Nov. 17, 1915. Serial No. 62,035. (Cl. 154—14.)



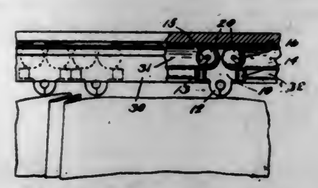
1. The process of making tire casings consisting of first forming a cord carcass by winding spirally about an annular former covered with a rubber envelop, a twisted rubber impregnated cord so as to embed the cord in the rubber envelop, the cord being so wound as to leave definite intervals of rubber between the spiral convolutions at the tread portions of the casing, then slitting the carcass along its inner periphery, inserting bead cores, adding side and tread portions and vulcanizing the whole to produce a finished casing.

2. The process of making tire casings consisting of first forming a cord carcass by winding spirally about an annular former covered with a rubber envelop, a plurality of plies of twisted rubber impregnated cord, the several plies being laid one upon another with layers or envelops of rubber interposed between, the cords of the several plies being arranged in reverse angles to each other, and the individual cords of each ply being definitely spaced apart in that part of their length disposed at the tread portion of the casing, then slitting the carcass along its inner periphery, inserting bead cores, adding side and tread portions and vulcanizing the whole to produce a finished casing.

3. The process of making tire casings consisting of first forming a cord carcass by winding spirally about an annular former covered with a rubber envelop, a twisted rubber impregnated coreless cord, so as to embed the cord in the rubber envelop, the cord being wound so as to leave spaced intervals of rubber between the cords at the tread portion of the casing, then slitting the carcass along its inner periphery, inserting bead cores, adding side and tread portions and vulcanizing the whole to produce a finished casing.

4. The process of making tire casings consisting of first forming a cord carcass by winding spirally about an annular former covered with a rubber envelop a twisted rubber impregnated cord of sufficiently small diameter to embed itself in the rubber envelop, the cord being wound so as to leave spaced intervals of rubber between the cords at the tread portion of the casing, then slitting the carcass along its inner periphery, inserting bead cores, adding side and tread portions and vulcanizing the whole to produce a finished casing.

1,210,435. FIXTURE FOR SLIDING CURTAINS. ADAM DICKEY, Boston, and ROBERT A. HOPE, Quincy, Mass. Filed Dec. 27, 1915. Serial No. 68,606. (Cl. 156—20.)



1. A fixture for sliding curtains comprising a molding strip having an internal guide-way throughout its length, circular in cross-section, and a guide-slot leading therefrom to the bottom of the strip, hangers supported by said strip, each comprising a support adapted to be connected with a curtain and one or more rolls journaled in said support adapted to be received in and to travel along said guide-way and front and rear bumpers arranged on the support below the rolls, which occupy positions in the guide-slots and which project beyond the peripheries of the rolls.

2. A fixture for sliding curtains comprising a molding strip having an internal guide-way throughout its length, circular in cross-section, and a guide-slot leading therefrom to the bottom of the strip, hangers supported by said strip, each comprising a support adapted to be connected with a curtain and one or more rolls journaled in said support adapted to be received in and to travel along said guide-way, the front and rear edges of said support having loop-formed projections with smooth sides to slide freely in the guide-slot the end-portions of said projections serving as abutments, said projections extending beyond the peripheries of the rolls.

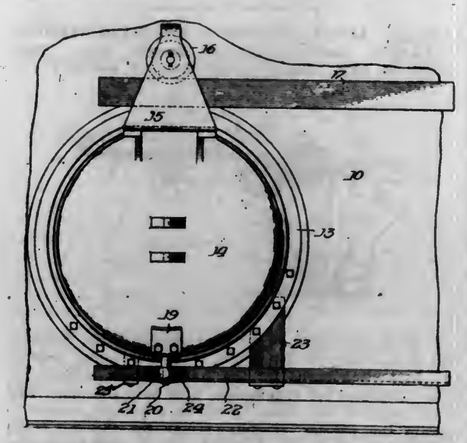
3. A fixture for sliding curtains comprising a molding strip having an internal guide-way throughout its length, circular in cross-section, and a guide-slot leading therefrom to the bottom of the strip, hangers supported by said strip, each comprising a supporting-plate adapted to be connected with a curtain and having slots in its front and rear edges and spherical rolls having journals at their centers arranged to enter said slots and means extending over the entrances of the slots to partially close the same for holding the rolls in place.

4. A fixture for sliding curtains comprising hangers, each having a supporting member adapted to be connected with the curtain, and having one or more spherical rolls, each roll comprising two hemispherical hollow portions having tubular center stems, arranged one within the other, to connect said portions together and serve as a journal for the roll, said hangers adapted to be supported by a molding-strip having an internal guide-way throughout its length, circular in cross section, and having a guide slot leading from said guide-way to the bottom of the strip.

1,210,436. CLEANING-DOOR FOR HOT-BLAST STOVES. JULIUS A. DYRLIE, Joliet, Ill. Filed Dec. 8, 1915. Serial No. 65,707. (Cl. 220—124.)

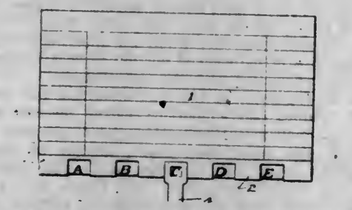
1. In a device of the class described, the combination of a furnace wall having an opening therein, a frame

bounding said opening, a straight track mounted above said opening, a track mounted below said opening, said latter track having a curved or deflected portion, a door mounted for sliding movement on said straight track, said door having a projection engaging said curved track, said latter track being so located as to positively retain said door in an inclined position when out of register with said opening, and packing material carried by said door and adapted to seal the same in its position over said opening, substantially as described.



2. In a hot blast stove, the combination of a wall providing an opening, a track mounted above said opening, a door adapted to be slid on said track and mounted for limited swinging movement from the bottom of said door outwardly, a track mounted below said opening and being provided with a laterally deflected portion for coöperation with said door to cause the same to swing away from said wall, and packing material carried by said door, the arrangement being such that as the door is moved in front of said opening it is permitted to swing on its point of support and bring the packing material into engagement with the wall surrounding said opening, substantially as described.

1,210,437. CARD FOR LOOSE-LEAF DEVICES. KENNETH L. EDDY, Chicago, Ill., assignor, by mesne assignments, to Automatic Utilities Co., a Corporation of Illinois. Filed Mar. 28, 1914. Serial No. 827,795. (Cl. 129—16.1.)

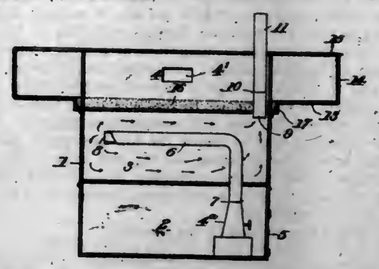


1. A card for loose leaf index devices provided with a metal edging, there being a plurality of perforations in said edging adapted to engage a metal clip pin to be detachably secured therein.

2. A card for loose leaf index devices having a metal clip pin frictionally secured to its lower edge, and metallic means carried by the card for holding the clip pin in a vertical position.

3. A card for loose leaf index devices having a metal clip pin frictionally engaging both sides of the card and adjustable longitudinally thereof, and an edging of suitable material provided with a plurality of perforations adapted to engage the edge of the clip pin and hold the same against lateral displacement.

1,210,438. CHICKEN-BROODER. ARTIST A. EDWARDS, New Wilson, Okla. Filed June 16, 1915. Serial No. 34,334. (Cl. 119—32.)



1. A brooder comprising a plurality of superimposed chambers, the upper chamber constituting the hover, a roving platform entirely surrounding the hover and provided with a trench filled with sand encircling the outer wall of said hover, said hover having an opening that leads from the hover to the platform, and means for heating the hover.

2. A brooder comprising a plurality of chambers superimposed upon one another, the lower chamber constituting the hover, the intermediate being the heating chamber, a running platform encircling the hover, a channel containing sand intermediate the hover and the said platform, and means for causing heat to circulate throughout the heating chamber for warming the hover.

1,210,439. VEHICLE-TOP. HENRY E. EDWARDS, Jackson, Mich. Filed Sept. 24, 1915. Serial No. 52,341. (Cl. 21—62.)



1. In a vehicle, the combination of a bow, a cloth top, a strip of fibrous material extending transversely to the top and to which the top is secured independently of the bow, a metal reinforcement for the strip, and fastening devices extending through the strip and reinforcement for securing the top and strip to the bow.

2. In a vehicle top, the combination of a tubular metal bow having a series of evenly spaced apertures in its outer side, a sheet of fabric, a strip of fibrous material extending transversely to the sheet, tacks driven through the sheet and strip to secure them together independently of the bow, and fastening devices extending through the sheet and strip and into the apertures in the bow to secure the parts together.

3. In a vehicle top, the combination of a tubular metal bow having a series of evenly spaced threaded apertures in its outer side, a sheet of fabric, a tacking-strip of fibrous material extending transversely to the sheet, tacks driven through the sheet into the strip to secure the sheet to the strip independently of the bow, a reinforcing channel of sheet metal in which the strip is mounted, and screws extending through the sheet, strip and channel into the apertures in the channel to secure the parts together, the

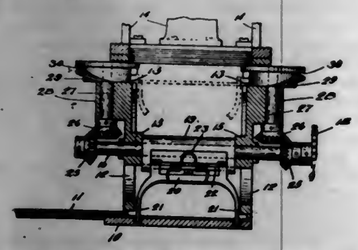
channel fitting tightly against the bow and surrounding all sides of the tacking-strip excepting that to which the sheet of fabric is secured.

4. In a vehicle, the combination of a bow, a cloth top, a strip of fibrous material extending transversely to the top and to which the top is secured independently of the bow, a strip of sheet metal in the form of a channel fitting tightly against the bow and surrounding all sides of the strip excepting that to which the top is secured, and fastening devices for securing the top and strip to the bow.

5. In a vehicle, the combination of a bow, a cloth top, a strip of fibrous material extending transversely to the top and to which the top is secured independently of the bow, a strip of sheet metal in the form of a channel fitting tightly against the bow and surrounding all sides of the strip excepting that to which the top is secured, and fastening devices for securing the top and strip to the bow, the edges of the channel extending laterally and together with the strip forming a cylindrical surface on which the top may be supported.

[Claim 6 not printed in the Gazette.]

1,210,440. ADDRESSING-MACHINE. STERLING ELLIOTT, Newton, Mass. Filed Jan. 4, 1915. Serial No. 481. (Cl. 101—1.)



1. In an addressing-machine, a guideway along which the address-plates are moved, an upright holding receptacle mounted adjacent said guide-way, in which the address-plates are adapted to be stacked, plate-lifting means associated therewith, a plate guide extending in a semi-circular path from said guideway to said receptacle, to reverse the plates while the plates are being moved along said plate guide, and a shifter rotatable about an axis in parallel relation with the guideway, adapted to engage a plate on the guide-way and move it along the plate guide into engagement with said lifting-means.

2. In an addressing-machine, a guide-way along which the address-plates are moved, a holding receptacle for the plates arranged adjacent said guide-way, plate-guiding means, a shifter associated therewith for moving the plates successively from the guide-way into alining position beneath said receptacle, and reversing their position while thus moving them, and lifting-means for lifting them into the receptacle.

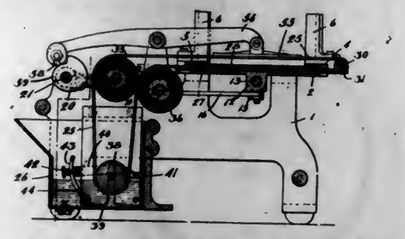
3. In an addressing-machine, a guide-way along which the address-plates are moved, a holding receptacle for the plates arranged adjacent said guide-way, plate guiding means, a shifter associated therewith for moving the plates successively from the guide-way into alining position beneath said receptacle, and reversing their position while thus moving them, and lifting-means for lifting them into and supporting them in the receptacle.

4. In an addressing-machine, a guide-way along which the address-plates are moved, a holding receptacle for the plates arranged adjacent said guide-way, plate-guiding means, a shifter associated therewith for moving the plates successively from the guide-way into alining position beneath said receptacle, and reversing their position while thus moving them, and lifting-means into engagement with which the plates are moved by the shifter, said lifting-means being arranged to move the plates in an upward direction into the receptacle.

5. In an addressing-machine, a guide-way along which the address-plates are moved, a holding receptacle for the plates arranged adjacent said guide-way, plate-guiding means, a shifter associated therewith for moving the plates successively from the guide-way into alining position beneath said receptacle, and reversing their position while thus moving them, and lifting-means into engagement with which the plates are moved by the shifter, said lifting-means being arranged to move the plates in an upward direction into the receptacle, and to support them therein in alined position.

[Claims 6 to 10 not printed in the Gazette.]

1,210,441. APPARATUS FOR MOISTENING STENCIL-BLANKS. STERLING ELLIOTT, Newton, Mass. Filed Sept. 16, 1915. Serial No. 51,096. (Cl. 91—47.)



1. In an apparatus of the kind described, the combination of a receptacle for a pile of stencil-blanks, guiding and supporting-means for the stencil-blanks, moistening-means arranged for engagement with both the upper and under sides of the blank, including a presser, means to operate the presser, receiving-means for the moistened stencil-blanks, and a feeding-device for feeding the blanks successively from the receptacle to the moistening-means, and thence to the receiving-means, said device being operatively connected with the means to operate the presser.

2. In an apparatus of the kind described, the combination of guiding and supporting-means for the stencil-blanks, water-absorbing means arranged above and below the stencil-blank held thereby, and means to press said water-absorbing means into engagement with the stencil-blank.

3. In an apparatus of the kind described, the combination of guiding and supporting-means for the stencil-blanks, water-absorbing means arranged above and below the stencil-blank held thereby, and means to press said water-absorbing means into engagement with the stencil-blank, a reservoir associated with said water-absorbing means, and intermittently operated means to move said water-absorbing means.

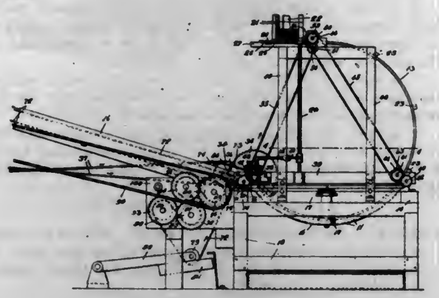
4. In an apparatus of the kind described, the combination of guiding and supporting-means for the stencil-blanks, an endless water-absorbing band arranged to extend over and under said means, thereby to engage a stencil-blank upon both its upper and under sides, and means for moving said band, and means for applying pressure to said band at a predetermined portion thereof, to press the band into engagement with the stencil-blank.

5. In an apparatus of the kind described, the combination of guiding and supporting means for the stencil-blanks, an endless water-absorbing band arranged to extend over and under said means, thereby to engage a stencil-blank upon both its upper and under sides, and means for moving said band, and means for applying pressure to said band at a predetermined portion thereof, to press the band into engagement with the stencil-blank, and a reservoir associated with said band.

[Claims 6 to 11 not printed in the Gazette.]

1,210,442. GLUING-MACHINE FOR STENCIL-FRAMES. STERLING ELLIOTT, Newton, Mass. Filed Jan. 15, 1916. Serial No. 72,343. (Cl. 91—31.)

1. A machine of the character described, the combination of means for gluing blanks, means for feeding the blanks to said gluing-means, means for stacking the glued blanks, and means for conveying the blanks from the gluing-means to the stacking-means, means associated with said conveying-means for turning over the blanks while *en route* to effect a thorough drying of both faces of the blanks.



2. A machine of the character described, the combination of a gluing-tank, means for feeding blanks into the tank, stacking-means for the glued blanks, a conveyer belt arranged to receive the blanks as they emerge from the gluing-tank, another conveyer belt arranged to convey the blanks from the terminal of the first belt to the stacking-means, said belts being arranged one above the other, and means for turning the blanks over as they pass from one belt to the other whereby both faces of the blanks will be exposed to the atmosphere for a period of time to admit of drying while *en route* from the gluing-tank to the stacking-means.

3. A machine of the character described, the combination of means for gluing blanks, means for feeding the blanks to said gluing-means, means for stacking the glued blanks, means for conveying the blanks from the gluing-means to the stacking-means, said means including complemental belts, and means for turning the blanks over as they pass from one belt onto the other, whereby the blanks are allowed to dry on both sides, while *en route* from the gluing-means to the stacking-means.

4. A machine of the character described, the combination of means for gluing blanks, means for feeding the blanks to said gluing-means, means for stacking the glued blanks, means for conveying the blanks from the gluing-means to the stacking-means, said conveying-means including complemental belts driven in opposite directions, and means for turning the blanks over and for guiding them as they pass from one belt to the other.

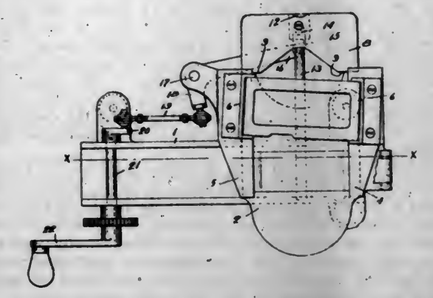
5. A machine of the character described, the combination of means for gluing blanks, means for feeding the blanks to said gluing-means, means for stacking the glued blanks, means for conveying the blanks from the gluing-means to the stacking means, said conveying-means including superimposed complemental belts having their corresponding ends located adjacent each other, and a curved chute leading from the upper belt to the lower belt for transferring the blanks from the upper belt to the lower belt and for turning them over during such transfer.

[Claims 6 to 35 not printed in the Gazette.]

1,210,443. FEEDING MECHANISM FOR STENCIL-BLANKS. STERLING ELLIOTT, Newton, Mass. Original application filed Sept. 16, 1915, Serial No. 51,096. Divided and this application filed Mar. 6, 1916. Serial No. 82,317. (Cl. 101—1.)

1. A receptacle for a pile of stencil blanks, and a pusher arranged to remove the lowermost blank edgewise from the pile, the blank and the engaging edge of the pusher being normally not in parallelism, but adapted to be brought into this position by the engagement of the blank at one corner by the pusher.

2. A receptacle for a pile of stencil-blanks, and a sliding pusher for removing the lowermost blank edgewise from the pile, the stencil-blanks being held out of parallel relation with the pusher, and adapted to be moved by the pusher into parallel relation therewith as the blank is being removed from the receptacle.



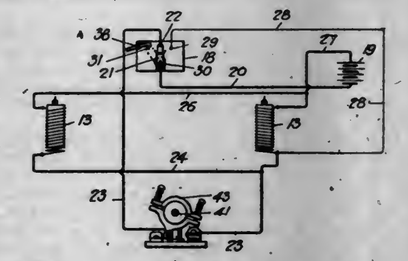
3. A receptacle for a pile of stencil-blanks, and a sliding pusher for removing the lowermost blank edgewise from the pile, the stencil-blanks being arranged at an angle other than a right angle with respect to the engaging edge of the pusher, and adapted to be moved into parallel relation therewith by the pusher while the latter is removing it from the receptacle.

4. A receptacle for a pile of stencil-blanks, and a sliding pusher for removing the lowermost blank from the pile, said receptacle being arranged to hold the stencil-blanks at an angle other than a right angle with respect to the path of movement of the pusher and said blanks being movable into right angular relation therewith by the pusher while being removed from the receptacle.

5. A receptacle for a pile of stencil-blanks, and means for removing the stencil-blanks edgewise therefrom, said means adapted to engage one end-portion in advance of the other end-portion.

[Claims 6 to 14 not printed in the Gazette.]

1,210,444. BRAKE SYSTEM. NATHAN FALLEK, Denver, Colo. Filed May 11, 1914. Serial No. 837,820. (Cl. 188—39.)



1. The combination with a rotary body and a brake for arresting the movement thereof, of electrical means for the operation of said brake in a normally open circuit, and means actuated by movement of said body in one direction to close the circuit for the operation of said means.

2. The combination with a rotary body and a brake for arresting the movement thereof, of an electric appliance for the operation of the brake in an electric circuit, a hand-switch controlling said circuit for the operation of said appliance, and a second switch actuated by movement of said body in one direction to close the circuit for the automatic operation of said appliance.

3. The combination with a rotary body and a brake for arresting the movement thereof, of an electric appliance for the operation of the brake in an electric circuit, a switch actuated by movement of said body in one direction, for closing said circuit to automatically operate the said appliance, and a hand-switch controlling said circuit and capable of preventing the closing of the circuit by

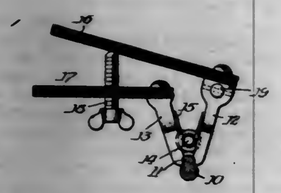
means of the first-mentioned switch during the said movement of the said body.

4. The combination with a rotary body and a brake for arresting the movement thereof, of an electric appliance for the operation of the brake in an electric circuit, a switch actuated by movement of said body in one direction for closing said circuit to automatically operate the said appliance, and a hand-switch controlling said circuit, and capable of preventing the closing of the circuit by means of the first-mentioned switch during the said movement of the said body, and of effecting the energization of said appliance independent of the operation of the first-mentioned switch.

5. The combination with a rotary body and a brake for arresting the movement thereof, of an electric appliance for the operation of the brake in an electric circuit, a switch actuated by movement of said body in one direction for closing said circuit to automatically operate the said appliance, and a hand-switch controlling said circuit and capable of effecting the operation of said appliance independent of the first-mentioned switch.

[Claims 6 to 18 not printed in the Gazette.]

1,210,445. MINING-MACHINE CABLE-CONNECTOR. THOMAS G. FEAR, Bayview, Ala. Filed Nov. 3, 1915. Serial No. 59,449. (Cl. 173—273.)



1. A conductor cable connector clamp comprising a pair of jaws pivoted intermediate their ends, handles for operating said jaws, said handles being constructed of non-conducting material, the conductor being connected to one of said jaws and combined resilient and positive means for maintaining said jaws in clamping engagement, substantially as described.

2. A conductor cable connector clamp comprising a pair of jaws, a spring for holding said jaws in clamping engagement with a wire, a conductor connected to said jaws, a pair of insulated handles and a set screw for spreading said handles and positively holding said jaws in clamping engagement, substantially as described.

3. In a conductor cable connector clamp, the combination with a wire of jaws pivoted intermediate their ends, the clamp adapted to adjustably engage said wire, a conductor connected to one of said jaws, a spring tending to hold said jaws in clamping engagement with said wire, a pair of handles of non-conducting material, a set screw operating to spread said handles apart and positively hold said jaws in clamping engagement with said wire.

4. In a device of the class described, the combination with a trolley wire of a slidably and removably adjustable conductor connector clamp, the clamp comprising a pair of jaws pivoted intermediate their ends, a conductor connected to one of said jaws, a spring tending to hold said jaws in clamping engagement with said wire, a pair of handles of non-conducting material, a set-screw operating to spread said handles apart and positively hold said jaws in clamping engagement with said wire, substantially as described.

5. In a device of the class described, the combination with a trolley wire of a clamp adapted for removable engagement therewith, said clamp comprising a pair of jaws pivoted intermediate their ends, handles for operating said jaws, said handles being constructed of non-conducting material, a spring tending to hold said jaws in engagement with said wire, and positive means for spreading said handles and holding said jaws in positive clamping engagement with said wire, substantially as described.

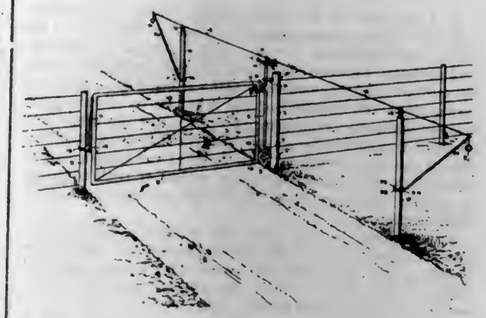
1,210,446. THREAD-COATING COMPOSITION. MORRIS FINKELSTEIN, SAMUEL H. FINKELSTEIN, HARRY L. FINKELSTEIN, and NATHAN FINKELSTEIN, Greenville, Miss. Filed Aug. 6, 1915. Serial No. 44,089. (Cl. 134—13.)

1. A wax composition including as ingredients white wax, turpentine and varnish, intimately mixed together substantially in or about the proportions set forth and in the manner and for the purpose described.

2. A wax composition consisting of white wax, turpentine, and a clear, light varnish mixed substantially in the proportions set forth and in a manner described.

3. A wax composition comprising an intimate mixture of white wax about 20 parts by weight, turpentine about 5 parts by weight, and 5 parts of a clear, light varnish by weight.

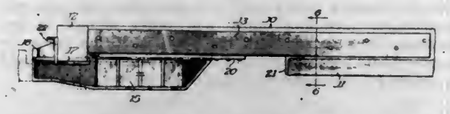
1,210,447. GATE-OPENING DEVICE. WILLIAM SHERMAN FLICK, Anderson, Ind., assignor of one-half to G. A. Lambert, Anderson, Ind. Filed Jan. 28, 1916. Serial No. 74,810. (Cl. 39—56.)



The combination with a hinge rod having oppositely disposed crank portions, and a gate attached to said crank portions, of a pull cable, means carried by said rod and cooperating with the cable to cause the hinge rod to rotate when the pull cable is moved longitudinally in either direction, a supporting post a distance on each side of the gate supporting post, a sheave mounted upon the upper end of each supporting post and in alinement with the upper end of said rod, the ends of said cable extending over said sheaves and a distance beyond the same, a keeper fixed to each supporting post a distance below the upper end thereof, a lever pivotally secured at one end to each keeper, said levers extending upwardly at an obtuse angle to said supporting posts and having their upper ends attached to the ends of the cable a distance from said sheaves, said levers being at a uniform angle from the posts when the gate is closed, and one of said levers resting substantially at right angles to the post and the other substantially parallel with its post when the gate is in open position, whereby the weight of said levers will exert tension on the cable at all times and hold the same taut, the ends of said cable projecting beyond the ends of the levers to form hand holes to be grasped when a downward pull is given to move the cable endwise in either direction for opening or closing the gate, the downward movement of one lever giving an endwise thrust to the cable.

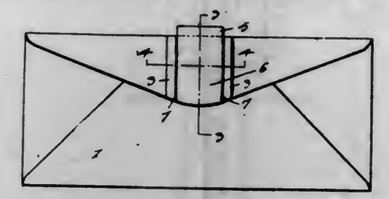
1,210,448. DRAFT-ARM. GEORGE G. FLOYD, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Dec. 8, 1915. Serial No. 65,643. (Cl. 105—76.)

In a device of the class described, the combination of a pair of longitudinally extending beams of bulb angle shape and adapted to lie alongside the longitudinal sills of a wooden underframe car and extending substantially equal distances on either side of the body bolster, a transverse plate uniting and spacing apart said beams at each side of said bolster and acting as an abutment therefor, and a pair of cast metal draft gear supporting plates rigidly se-



cured to the horizontal legs of said beams, said plates being formed in a single casting, substantially as described.

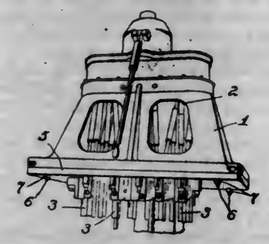
1,210,449. ENVELOP. CHRISTOPHER L. FOWLER, Clifton Station, Va. Filed Nov. 9, 1915. Serial No. 60,576. (Cl. 229—69.)



1. An envelop including a sealing flap and provided on the exterior thereof with a rear pocket forming piece secured at its side and outer edge to the sealing flap and provided at the inner or upper edge with an extension or flap projecting beyond the upper edge of the envelop and arranged to fold over the front of the envelop for closing the mouth of the pocket formed by the said piece.

2. An envelop including a sealing flap and provided on the exterior thereof with a rear pocket forming piece secured at its side and outer edge to the sealing flap and projecting at the inner or upper edge beyond the upper edge of the envelop to provide an extension or flap arranged to fold over the front of the envelop for closing the mouth of the pocket formed by the said piece, the latter being extended vertically across the flap and provided at opposite sides with rows of perforations terminating at the extension or flap and adapted to enable the strip or piece to be detached.

1,210,450. ATTACHMENT FOR MULTIPLE DRILLS. WILLIAM R. FOX, Grand Rapids, Mich. Filed Dec. 2, 1915. Serial No. 64,744. (Cl. 77—24.)



1. In combination with a multiple drill, having a spindle supporting head, a removable cluster plate secured thereto, and a plurality of drill spindles carried by said plate.

2. In combination with a multiple drill, having a spindle supporting head, a cluster plate detachably secured to the underside thereof, and a plurality of drill spindles carried by said plate.

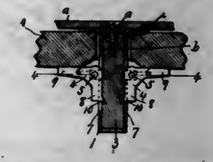
3. In combination with a multiple drill, having a spindle supporting head, a rectangular cluster plate, detachably secured to the underside of said head, means on said plate affording bearings for the spindles and a plurality of drill spindles carried by said means.

4. In combination with a multiple drill having a spindle supporting head, a rectangular perforated plate detachably secured to the underside of said head, a plurality of drill spindles projecting up through the perforations in said plate, and adjustable bearing brackets attached to said plate and supporting said drill spindles.

5. In combination with a multiple drill having a spindle supporting head, a rectangular perforated cluster plate detachably secured to the underside of said head, a plurality of drill spindles, and a plurality of supporting brackets secured to said cluster plates and supporting said drill spindles, said brackets being provided with means for varying the longitudinal adjustment of the spindles and also the lateral adjustment of same within the limits of the perforations through which the spindles pass.

[Claims 6 and 7 not printed in the Gazette.]

1,210,451. WALL-FASTENER. JASON G. FRANCE, Syracuse, N. Y. Filed May 20, 1916. Serial No. 98,780. (Cl. 72—105.)



1. A wall fastener comprising a hollow member adapted to be inserted in an opening in a wall, a gripping member movable in an opening in one side of the hollow member and adapted to engage a portion of the wall at one side of the opening therein, and a non-rotatable wood plug tightly fitted in the hollow member and engaging a portion of the gripping member to force the same into holding engagement with the wall, said gripping member having a tooth or spur adapted to embed itself in the wood plug as the latter is driven into the hollow member.

2. In a wall fastener, the combination of a tube open at its outer end and adapted to be inserted in an opening in a wall, gripping members pivoted to opposite sides of the tube and provided with wall-engaging portions and other portions projecting into the tube some distance from their pivots, and a wood plug slidably inserted in the tube against the inwardly projecting portions of the gripping members for forcing said members against the wall, said gripping members having teeth for engaging a wood plug and holding the latter against withdrawal.

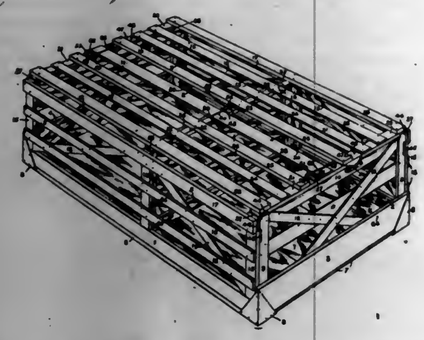
3. In a device of the character described, a hollow member adapted to be inserted in an opening in a wall and having an opening in one side, an angular gripping member pivoted to said hollow member and having one of its arms movable through said opening and provided with a toothed inner edge and its other arm adapted to engage the wall, and means slidably inserted in the hollow member for engaging the toothed arm of the gripping member for forcing the other arm into engagement with the wall.

1,210,452. COLLAPSIBLE POULTRY-CRATE. ERNEST FRANKFURT, Omaha, Nebr. Filed Jan. 23, 1915. Serial No. 4,015. (Cl. 217—47.)

1. A collapsible crate comprising a base-section having vertical side-pieces and end-pieces, end-sections hinged to the base-section within the end-pieces, side-sections hinged to the side-pieces of the base-section, top-sections hinged to the upper edges of the side-sections, a transverse partition-section hinged to the base-section, interengaging parts connecting the side-sections and top-sections with the end-sections, and interengaging means for connecting the partition-section with the top-sections to hold the latter is fixed vertical and lateral relation to the partition-section.

2. A collapsible crate comprising a base-section, end-sections hinged thereto and foldable thereagainst, side-sections hinged to the base-section, top-sections hinged to the side-sections, the side-sections and top-sections being

foldable inwardly so as to lie horizontally above the end-sections, means on the side-sections engageable with the end-sections to hold them in extended position, means on the top-sections engageable with the end-sections to prevent spreading of the top-sections and side-sections, means on the top-sections interengageable to prevent spreading thereof, and catches on the end-sections for engaging parts of the top-sections to prevent raising thereof.



3. In a collapsible crate, a base-section, end-sections and side-sections hinged to the base-section, top-sections hinged to the side-sections, all the latter sections being foldable into horizontal positions adjoining the base-section, latches having bolts for securing said sections in folded position, and means for automatically retracting the latch-bolts when the sections are disposed in extended position.

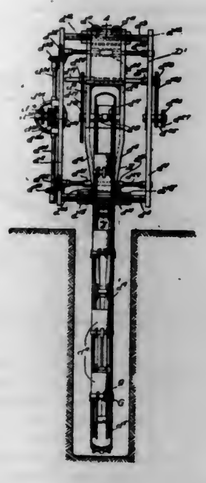
4. In a collapsible crate, a base-section having vertical end-pieces and side-pieces, end-sections hinged to the base-section and foldable inwardly onto the bottom thereof, side-sections hinged to the side-pieces of the base-section and foldable inwardly between the vertical end-pieces, top-sections hinged to the upper edges of the side-sections, flanges on the top-sections and side-sections for engaging the end-sections when the latter are in vertical position, said flanges being engaged and disengaged by movement of the top-sections and side-sections about their hinge-axes, flanged members on one of the top-sections adapted to overlap and interengage with parts of the other top-section, and catches on the end-sections for engaging said flanged members to hold the top-sections down against the end-sections.

5. In a collapsible crate, a base-section, end-sections and side-sections hinged to the base-section and foldable inwardly to positions adjacent to the bottom thereof, top-sections, means for connecting the same with the side-sections and end-sections, a transverse partition hinged to the base-section and swingable from vertical to horizontal position, members on the partition for holding down the top-sections, said members being engaged with and disengaged from the top-sections by and during the swinging of the partition between horizontal and vertical positions, and manually releasable means for holding the partition in vertical position.

1,210,453. TRENCHING-MACHINE. JAMES C. FRENCH, Kenosha, Wis., assignor to Frederick C. Austin, Chicago, Ill. Filed July 15, 1914. Serial No. 851,052. (Cl. 37—24.)

1. An excavating machine comprising a tilting digging beam, an endless series of excavating buckets carried on said beam, mechanism for supporting and reciprocating the beam and buckets from side to side, said mechanism and beam tilting together about a horizontal axis, and means for operating the buckets during said lateral motion thereof.

2. An excavating machine comprising a tilting digging beam, an endless series of excavating buckets carried on said beam, side cutters on said buckets, mechanism for reciprocating the beam and buckets from side to side while the buckets are in the ground, and means for operating the buckets during said lateral motion thereof, said mechanism including upper and lower screws having threaded engagement with the beam, a tilting frame to support said screws, means for rotating said screws, and a means for reversing the rotation of the screws.



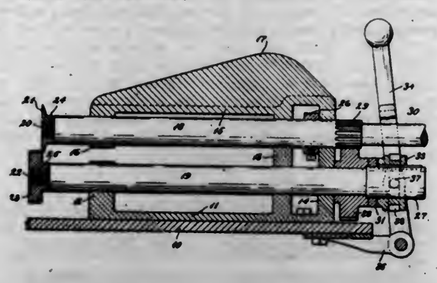
3. An excavating machine comprising a tilting digging beam, an endless series of excavating buckets carried on said beam, mechanism for reciprocating the beam and buckets from side to side, said mechanism and beam tilting together about a horizontal axis, and means for operating the buckets during said lateral motion thereof, said means including a shaft supported on the beam to rotate about said axis, movable endwise with the lateral movement of the beam and buckets, sprockets fixed on said shaft, and link belts attached to said buckets, engaging said sprockets.

4. An excavating machine comprising a tilting digging beam, an endless series of excavating buckets carried on said beam, mechanism for reciprocating the beam and buckets from side to side, and means for operating the buckets during said lateral motion thereof, said means including a shaft mounted to rotate about an axis coincident with the axis of tilting motion of the beam, sprockets fixed on said shaft, link belts attached to said buckets, engaging said sprockets, said shaft and sprockets being movable with said beam in the direction of said axis, and a power transmitting connection for driving said shaft, said connection having one axis of rotation coincident with said shaft and involving a counter shaft disposed a distance therefrom, and said mechanism having a frame which tilts about said axis and whereon said counter shaft is mounted.

5. An excavating machine comprising a tilting digging beam, an endless series of excavating buckets carried on said beam, tilting mechanism for reciprocating the beam and buckets from side to side, means to tilt said beam and mechanism about a transverse axis to raise and lower the buckets, and means for operating the buckets in the ground during said lateral motion thereof, said means including a driving shaft for said buckets, rotatable about an axis coincident with the axis of tilting motion of said beam, movable endwise with the beam, a counter shaft connected with said driving shaft, and a sliding connection supported on said counter shaft and movable back and forth thereon by the lateral motion of said beam.

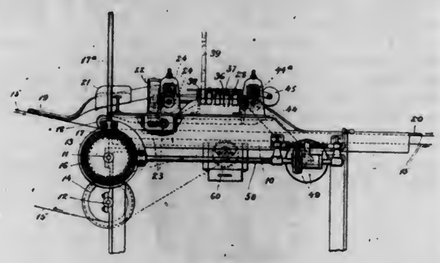
[Claims 6 to 13 not printed in the Gazette.]

1,210,454. LEATHER-CUTTING MACHINE. ARTHUR J. GAGNE, Minneapolis, Minn., assignor to Gussa Gagne, Portland, Oreg. Filed Mar. 20, 1916. Serial No. 85,518. (Cl. 164—60.)



A leather-cutting machine of the class described, which embodies a frame; two shafts rotatably mounted in said frame and disposed with their axes parallel with each other in different horizontal planes; a gear-wheel freely mounted on the lower one of said shafts; clutch mechanism associated with said gearwheel and with said lower shaft whereby said gearwheel may be permitted to rotate while said lower shaft is at rest and whereby said lower shaft may at desired times be caused to rotate in response to a rotation of said gearwheel; a pinion of smaller diameter than the diameter of said gearwheel mounted on the upper one of said shafts in a position to engage with said gearwheel, whereby said lower shaft normally shall revolve more slowly than said upper shaft; means for imparting rotary motion to said upper shaft; and two circular rotary cutters mounted one on each of corresponding ends of said shafts, said shafts being relatively disposed to cause an operative engagement of the circular cutting edges of said cutters.

1,210,455. MANUFACTURE OF RUBBER TUBING. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed May 2, 1916. Serial No. 94,893. (Cl. 154—42.)



1. The process of uniting edges of raw rubber which consists in heating and welding them by percussion.

2. The process of making a tube which consists in progressively uniting the edges of a rubber strip by percussion of such intensity as to develop a substantial degree of heat in the joint.

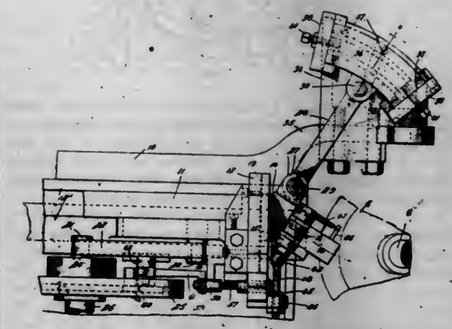
3. The process of making a butt-welded seam between two edges of unvulcanized rubber which consists in coating the edges with rubber solution, evaporating the solvent, bringing the edges together and exerting rapid percussion thereon progressively at a series of closely-adjacent points, said percussion being such as to develop a substantial degree of heat in the joint.

4. The process of making a rubber tube which consists in progressively butting together the edges of a longitudinally-moving doubled strip of raw rubber, and applying to the moving seam at a series of closely-adjacent points percussion of such intensity as to develop heat and cause the edges to weld.

5. In a machine for uniting edges of raw rubber, the combination of means for feeding the material, and a series of percussion hammers for acting on the edges to be joined.

[Claims 6 to 15 not printed in the Gazette.]

1,210,456. GEAR-CUTTING MACHINE. HENRY A. GARVEY, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed June 24, 1913. Serial No. 775,558. (Cl. 90—9.)



1. In a gear cutting machine, the combination of a frame, a reciprocating ram on the frame, a tool support slidably mounted on the ram, a link connected with a normally fixed pivot, and a pivotal connection between said link and said support.

2. In a gear cutting machine, the combination of a frame, a reciprocating ram on the frame, a tool support arranged to slide on the ram transversely of the line of movement thereof, a link connected with a normally fixed pivot, and a pivotal connection between said link and said support.

3. In a gear cutting machine, the combination of a frame, a reciprocating ram on the frame, a tool support arranged to slide on the ram at right angles to the direction of movement thereof, a link connected with a normally fixed pivot, and a pivotal connection between said link and said support.

4. In a gear cutting machine, the combination of a frame, a reciprocating ram on the frame, a tool support slidably mounted on the ram, an adjustable, normally fixed pivot, a link connected with said pivot, and a pivotal connection between said link and said support.

5. In a gear cutting machine, the combination of a frame, a reciprocating ram on the frame, a tool support arranged to slide on the ram at right angles to the line of movement thereof, an adjustable, normally fixed pivot, a link connected with said pivot, and a pivotal connection between said link and said support.

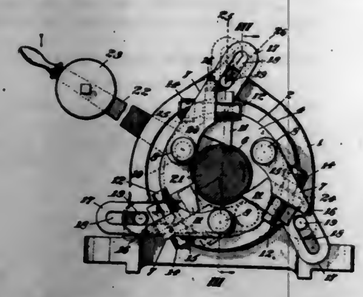
[Claims 6 to 16 not printed in the Gazette.]

1,210,457. CUTTING-TOOL. HARRY R. GEER, Johnstown, Pa. Filed Dec. 6, 1915. Serial No. 65,180. (Cl. 81—189.)

1. A cutting tool, comprising a fixed housing, a rotatable disk mounted in said housing, a plurality of tools mounted in holders, one end of each of which is pivotally mounted on said rotatable disk, said tool holders having portions adapted to contact with fixed portions on said housing, and means for relatively rotating the bar and the tools.

2. A cutting tool, comprising a fixed housing, a rotatable disk mounted thereon, provided with a central opening adapted to receive, while permitting the rotation of the bar to be cut, a plurality of tool holders pivoted to

said rotatable disk, said tool holders being provided with portions adapted to contact with and slide against fixed portions, and tools mounted in said holders adapted to contact with the bar.



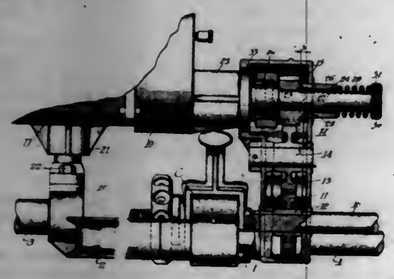
3. In combination, a fixed casing, a revoluble disk mounted therein, tool holders pivotally connected to said disk, and each contacting with a projection on the casing, and tools mounted in said holders with their cutting edges adapted to contact with the work forward of a radius parallel to the front surface of said tool.

4. A cutting tool, comprising a fixed housing, a rotatable disk mounted therein, means for rotating said disk, fixed stops on said housing, tools mounted in holders pivoted to said revoluble disk and contacting with the stops aforesaid, the cutting edge of the tool contacting with the bar to be cut forward of a radius parallel to the front surface of said tool whereby as the bar and tools relatively rotate, said disk is gradually rotated, whereby said stops automatically feed the tools into the work, due to the cutting resistance thereof.

5. A cutting tool, comprising a fixed housing mounted on a lathe, a rotatable disk mounted in said housing provided with a central opening adapted to receive a bar, tools mounted in holders which are pivotally secured to said disk, stops on said housing adapted to slidably contact with said tool holders, whereby as the bar rotates, the disk is gradually rotated as the tool holders move in contact with said stops, causing the tools to be gradually fed into the work, due to the cutting resistance thereof.

[Claims 6 to 8 not printed in the Gazette.]

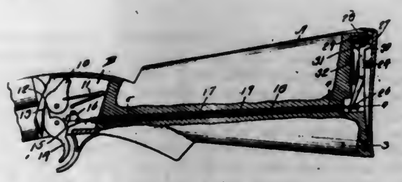
1,210,458. POWER-TRANSMISSION MECHANISM. CHARLES E. GIERDING, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Mar. 2, 1914. Serial No. 821,854. (Cl. 74—7.)



1. The combination of a frame, driven mechanism supported thereby, a sub-frame removably supported by said frame, a driving shaft, an automatic clutch interposed between said shaft and said driven mechanism for rendering said shaft effective to drive said driven mechanism in accordance with the load on said driven mechanism and removable with said sub-frame, and manually operated means for driving said shaft.

2. The combination of a main frame, a driven shaft supported thereby, gears for transmitting power to said driven shaft, a housing inclosing said gears, and an interchangeable self-contained driving unit removably supported by said frame and housing and embodying a horizontal driving shaft, an independent pinion carried by said driving shaft and connected with said gears, automatic means carried by said driving shaft for connecting and disconnecting said pinion with said driving shaft according to the load on said driven shaft, a vertically disposed shaft and intermediate gears connecting said vertical and driving shafts in driving relation, and a crank for actuating said vertical shaft.

1,210,459. SAFETY FOR FIREARMS. GLENN E. GILE, Franklinville, N. Y. Filed Jan. 10, 1916. Serial No. 71,299. (Cl. 42—70.)



In a safety for firearms, the combination of a receiver, a stock, a trigger pivoted in the receiver, a latch pivoted in the receiver and normally coöperating with the trigger to hold the latter against movement under the influence of a firing pull, a butt plate pivoted on the rear end of the stock, a spring lever pivoted in a recess in the rear end of the stock and coöperating at one end with the butt plate and having its other end provided with an opening, a rod slidably mounted in the stock and having one end pivotally connected to the latch and its other end slidably engaged through the opening in the lever, and a head adjustably mounted on the rear end of the rod engageable by the lever to move the rod longitudinally to disengage the latch from the trigger when the free end of the butt plate is moved toward the stock.

1,210,460. ARTIFICIAL TOOTH. THOMAS F. GLENN, Ardmore, Pa. Filed Aug. 2, 1915. Serial No. 43,068. (Cl. 32—9.)

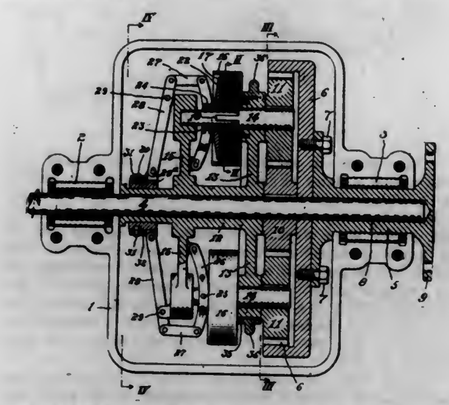


1. As an article of manufacture, an artificial tooth having its labial surface formed of a plurality of facets, arranged to localize the high lights and thereby in effect subdue the surrounding surface.

2. As an article of manufacture, an artificial tooth having its labial surface formed of a plurality of irregular facets, arranged to localize the high lights and thereby in effect subdue the surrounding surface.

1,210,461. POWER-TRANSMITTING DEVICE. EDWARD G. GLICK, Cleveland, Ohio. Filed July 20, 1914. Serial No. 852,066. (Cl. 74—34.)

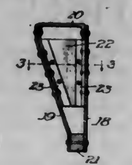
1. In a device of the character described, the combination of a driving shaft; a driven member rotatably mounted directly upon said shaft and including an internal gear; a pinion fixed to said shaft; planetary gearing connecting said pinion and internal gear; a frame rotattably mounted directly upon said shaft and carrying said planetary gearing; and manually operated means controlling the speed of rotation of said planetary gearing independently of said driving shaft.



2. In a device of the character described, the combination of a driving shaft; a driven member rotatably mounted upon said shaft and including an internal gear; a pinion fixed to said shaft; planetary gearing connecting said pinion and internal gear; a frame rotatably mounted upon said shaft and carrying said planetary gearing; two multiple disk clutches respectively connected with each of the members of said planetary gearing, one multiple member of each of such clutches being fixed with relation to its respective gear and the other of the multiple members of each clutch being fixed with relation to said frame; and manually operated means for actuating said clutches to increase or decrease the degree of friction between the members thereof, whereby the speed of rotation of said planetary gearing may be varied.

3. In a device of the character described, the combination of a driving shaft; a driven member rotatably mounted directly upon said shaft and including an internal gear; a pinion fixed to said shaft; planetary gearing connecting said pinion and internal gear; a frame rotatably mounted directly upon said shaft and carrying said planetary gearing; multiple disk clutches for controlling the speed of rotation of said planetary gearing; and manually operable means for operating said clutches.

1,210,462. DOOR FOR SIDE-DUMP CARS. ALEXANDER M. GOW, Duluth, Minn. Filed Feb. 17, 1916. Serial No. 78,909. (Cl. 105—191.)



1. In a car body adapted to be dumped sidewise, a door having maximum transverse strength at its top edge, and minimum transverse strength at its bottom edge, and of substantially triangular cross section, the base of the triangle being uppermost.

2. In a door of the class described, the combination of inner and outer plates, said inner plate being inclined with relation to the vertical, thereby forming a structure which is of greater transverse thickness at the top of the door than at the bottom, and interior stiffening means between said inner and outer plates, substantially as described.

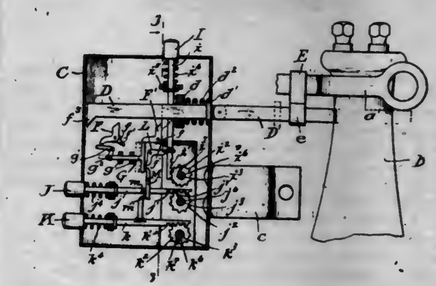
3. A skeleton door, substantially triangular in cross section and composed of inner and outer plates, said inner plates being inclined with relation to the vertical, and top and bottom members spacing said plates apart, said upper member having a transverse strength materially greater than said bottom member.

4. A dump car door, comprising a longitudinal top member, a longitudinal bottom member of less transverse strength than the top member, a longitudinal plate secured at its top and bottom edges to the members, and stiffening members secured to the plate between the top and bottom members, the whole forming a structure of substantially triangular shape, having the base uppermost.

5. A dump car door, comprising longitudinally extending top and bottom members, an uprightly disposed longitudinal plate secured to the members at its top and bottom edges, the transverse depth of the bottom member being less than the transverse depth of the top member, the whole forming a structure of substantially triangular shape, having the base uppermost.

[Claims 6 to 8 not printed in the Gazette.]

1,210,463. TELEPHONE-RECORDER. RUPERT H. GREENLAW, Lawrence, Mass. Filed Apr. 5, 1915. Serial No. 19,374. (Cl. 179—7.)



1. A telephone recorder embodying, in combination, a slidable rod adapted to close the open end of the telephone hook when the receiver is removed therefrom, means for locking said rod in such position, and means dependent upon the registering of the operation of the telephone for releasing said rod to allow of the replacement of the receiver upon the hook.

2. A telephone recorder embodying, in combination, a slidable rod adapted to close the open end of the telephone hook when the receiver is removed therefrom, means for locking said rod in such position, and means dependent upon the selective registration of the operations of the telephone for releasing said rod to allow of the replacement of the receiver upon the hook.

3. A telephone recorder embodying means for closing the open end of the telephone hook when the receiver is removed therefrom, means for locking said hook-closing means in such position, recording mechanism, and means for actuating said recording mechanism, said actuating means coöperating with the locking means for releasing the same upon the actuation of the recording means.

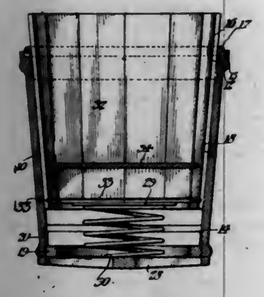
4. A telephone recorder embodying counting mechanism, means for actuating said counting mechanism, means for obstructing the open end of the telephone hook when the receiver is removed therefrom, mechanism for locking said obstructing means in its obstructing position, and means coöperating with the operating means and with the locking mechanism for releasing the obstructing means to allow of the positioning of the receiver upon the telephone hook after the counting mechanism has been operated.

5. A telephone recorder embodying recording mechanism, means for normally obstructing the open end of the hook of a telephone instrument, means for locking

said obstructing means in its normal position, and selective mechanism for actuating said recording mechanism, said selective mechanism coöperating with the obstructing means to unlock the same when any of the parts of the selective mechanism are actuated.

[Claims 6 to 17 not printed in the Gazette.]

1,210,464. PROCESS AND MACHINE FOR MAKING CONTAINERS. CHARLES E. GREGORY, New Rochelle, N. Y., assignor to Standard Pail & Package Co., Inc., a Corporation of New York. Filed June 14, 1915. Serial No. 33,924. (Cl. 147—3.)



1. A process of making containers which consists in supporting and properly positioning in respect to each other a series of hoops, assembling a series of staves in axially displaced position in respect to said hoops, each of said staves having a croze, assembling a bottom within said staves and axially displaced from said croze, forcing said bottom into said croze and then simultaneously forcing all of said staves endwise into said hoops.

2. A process of making containers which consists in supporting and properly positioning in respect to each other a series of hoops, assembling a series of flat staves in axially displaced position in respect to said hoops, each of said staves having a croze, assembling a bottom within said staves and axially displaced from said croze, forcing said bottom into said croze, and then simultaneously forcing all of said staves endwise into said hoops and comprising the staves and bending them to curved form.

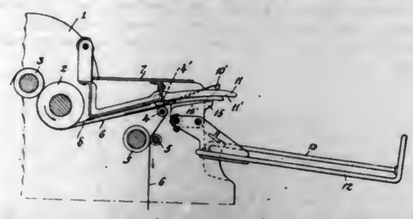
3. A process for making containers which consists in assembling a plurality of hoops of different sizes in spaced relationship and a series of staves, the staves and hoops being relatively displaced axially and said staves each having a croze, positioning a bottom with its periphery opposite the croze and moving said staves and hoops axially in respect to each other to reduce the diameter of the container, compress the staves and grip the bottom within the croze.

4. A process for making containers which consists in positioning a series of staves within a plurality of hoops of successively decreasing diameter and axially displaced in the direction of the larger hoop, each of said staves having a croze, positioning a bottom with its periphery opposite to said croze and simultaneously forcing said bottom and said staves axially to final position within said hoops and thereby compressing the staves, reducing the effective diameter of the container and gripping the bottom within the croze.

5. A process of making containers which consists in assembling a series of flat tapered staves within a pair of hoops, said staves each having a croze and said hoops being of slightly different diameter, the staves being axially displaced in the direction of the larger hoop, positioning a circular bottom with its periphery opposite said croze and simultaneously forcing said staves and bottom endwise within said hoops and in the direction of the smaller hoop to compress the staves, bend them to curved form and grip the bottom within the croze.

[Claims 6 to 15 not printed in the Gazette.]

1,210,465. ANTICURLING DEVICE FOR PAPER SHEETS. FREDERICK J. GUBELMAN, Englewood, N. J. Filed Jan. 7, 1916. Serial No. 70,721. (Cl. 101—29.)

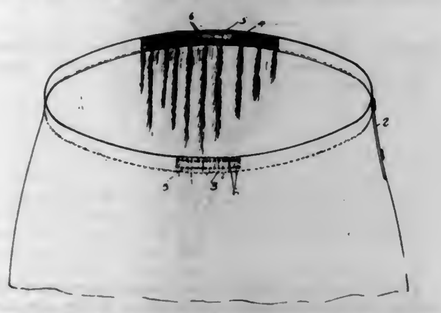


1. In a press, in combination with a roll around and from which a letter is adapted to be delivered, a plurality of guides adapted to receive the letter located in front of said roll and projecting at right angles thereto, one of said guides being disposed to engage the central part of the letter upon one surface thereof while others of said guides are disposed to engage the ends of the letter on the opposite surface thereof, the engaging parts of the end guides being in a different plane than that of the central guide and displaced therefrom in such a direction as to tend to give the latter a curvature opposite to that given it by roll.

2. In a press, in combination with a roll around and from beneath which a letter is adapted to be delivered, means for feeding the letter forwardly from the roll to and over a set of guides which lie in planes perpendicular to the axis of the roll, one of said guides having its upper edge arranged to engage the lower surface of the letter at its central part so as to push it upwardly and others of said guides having their lower edges arranged to engage the upper surface at the ends of the letter so as to push them downwardly.

3. In a press, in combination with a roll around and from beneath which a letter is adapted to be delivered, means for feeding the letter forwardly from the roll to and over a set of guides which lie in planes perpendicular to the axis of the roll, one of said guides having its upper edge arranged to engage the lower surface of the letter at its central part so as to push it upwardly and others of said guides having its lower edges arranged to engage the upper surface at the ends of the letter so as to push them downwardly, and a receiving tray provided with a central elevated rib.

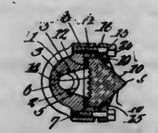
1,210,466. PETTICOAT. LOUIS GUTMAN and BENJAMIN GUTMAN, New York, N. Y. Filed Aug. 15, 1916. Serial No. 114,959. (Cl. 2—142.)



1. A petticoat having a waistband provided with a side placket and with an elastic section in the back and another elastic section in front, the front elastic section being materially shorter than the back section and being self conforming and retaining over the abdomen while the back section affords adjustability as to size.

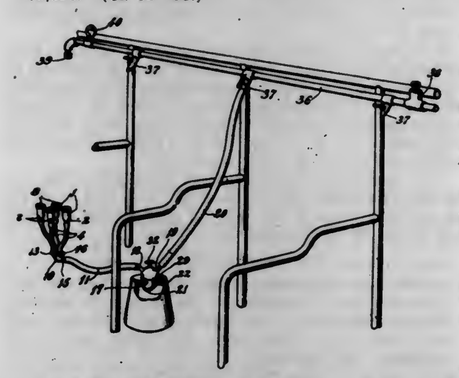
2. A petticoat having a waistband comprising separate elastics inserted in the back and in the front, said elastics being united to these portions of the waistband while stretched, and normally holding these portions in a puckered condition, the front elastic, however, being initially stretched substantially less than the back elastic, so that the puckering in front is slight as compared with that in the rear and tends to disappear when the garment is worn.

1,210,467. WATER-GAGE GLASS. WILLIAM A. HARDWICK and JAMES T. BRADLEY, Memphis, Tenn. Filed Sept. 17, 1915. Serial No. 51,226. (Cl. 73—54.)



In a device of the class described, a body having a channel and provided with a seat disposed about the channel and defining a shoulder and a marginal flange, the body having inlet and outlet openings communicating with the channel; a transparent member including a flat rear face coöperating with the shoulder, side faces coöperating with the marginal flange and disposed at right angles to the rear face, and front faces which converge to form an edge; a frame surrounding the transparent member and including beveled faces coacting with the front faces independently of the side faces; and means for securing the frame to the flange.

1,210,468. MILKING-MACHINE. SAMUEL B. HARNER, near Xenia, Ohio. Filed Feb. 21, 1916. Serial No. 79,496. (Cl. 31—98.)



1. In a milking apparatus, a teat cup comprising a substantially cylindrical, rigid body portion having its lower end tapered and adapted to be connected with a conduit, said body portion having at its upper end a shoulder, an apertured, flexible diaphragm resting on said shoulder, a top for said teat cup screwed into the upper end of said body portion to clamp said diaphragm onto said shoulder, said top extending above said diaphragm and being flared to receive and act upon the udder above the teat cup.

2. In a milking apparatus a claw comprising an integral body portion, having a chamber therein and a nipple communicating with one end of said chamber, the walls of said chamber converging toward and merging into said nipple, and a closure having a screw-threaded connection with that end of said body portion opposite said nipple, said closure having a plurality of nipples each communicating with said chamber.

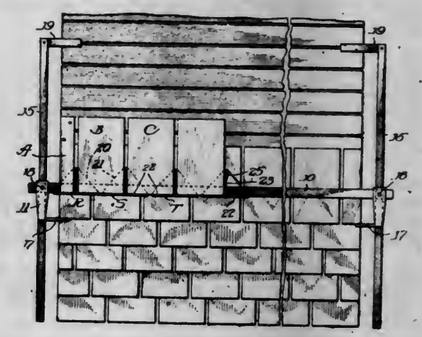
3. In a milking apparatus a structure having a milking chamber adapted to be connected with an air conduit and with teat cups, and having a milk discharge opening, an automatically operated valve to open and close said discharge opening, and a separable connection between said valve and said structure, said connection having means controlled by the movement of said valve to prevent the separation of the parts of said connection when said valve is in one position, and to permit such separation when said valve is in another position.

4. In a milking apparatus, a structure having a milking chamber adapted to be connected to an air conduit and with teat cups, and having a milk discharge opening, an automatically operated valve to open and close said discharge opening, and a pivotal connection between said valve and said structure comprising a bearing and a pivot pin removably mounted in said bearing, said bearing and said pivot pin having parts coöperating to prevent the removal of said pivot pin when said valve is in one position, and to permit such removal when said valve is in another position.

5. In a milking apparatus, the combination with an air conduit and a plurality of teat cups, of a structure interposed between said air conduit and said teat cups and having a milk chamber connected with said teat cups and with said air conduit, and an automatically operated valve to normally close the lower end of said chamber, said structure having a bearing and said valve having a pivot pin movable axially into and out of said bearing to connect said valve with or disconnect the same from said structure.

[Claims 6 to 16 not printed in the Gazette.]

1,210,469. DEVICE FOR FACILITATING SHINGLE-LAYING. NORMAN P. HARSHBERGER, Chicago, Ill., assignor to Barrett Manufacturing Company, New York, N. Y., a Corporation of West Virginia. Filed Feb. 25, 1915. Serial No. 10,399. (Cl. 33—188.)



1. In a structure of the character described, the combination of an alinement bar, and a gage member slidable thereon, having a portion acting as a gage for the lower edge of a shingle and a portion adapted to be received between and space apart adjacent shingles.

2. In a structure of the character described, the combination of an alinement or gage bar, and a gage member slidable thereon, and having a portion acting as a gage for the lower edge of a shingle, and a yielding means adapted to be received between and space apart adjacent shingles.

3. In a structure of the character described, the combination of an alinement bar, supporting bars, means adjustably securing said bars together, and gage members slidable on said alinement bar and provided with means for alining shingles or the like and spacing them apart.

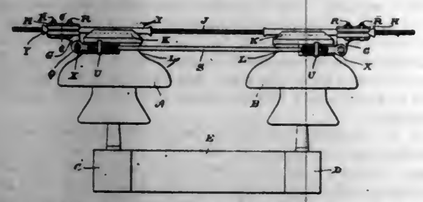
4. In a structure of the character described, the combination of an alinement bar, and a gage member having an apertured rib receiving said bar, and also having a flange coacting with the bar to prevent displacement of the parts and acting as an alining support for a shingle.

5. In a structure of the character described, the combination of an alinement bar, and a gage member slidable thereon and having an apertured rib receiving the bar, said gage member also having a flange coacting with the bar to prevent displacement of the parts and acting as an

alining support for a shingle, said rib also having one or more springs adapted to fit between adjacent shingles to space them apart.

[Claims 6 and 7 not printed in the Gazette.]

1,210,470. INSULATOR-CLAMP. EDWIN G. HATCH, Hoboken, N. J. Filed Jan. 19, 1915. Serial No. 3,030. (Cl. 173—28.)



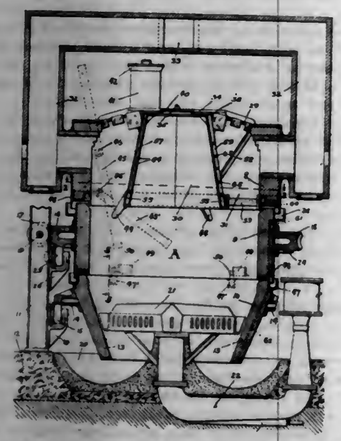
1. A clamping set for clamping a conductor to insulators, comprising two insulators, clamping means for each insulator, conductor gripping devices carried by the said clamping means, tie members connecting said clamping means, and means for adjusting said tie members in accordance with the distance between the axes of said insulators.

2. A clamping set for clamping a conductor to insulators, comprising two insulators, clamping means for each insulator, conductor gripping devices carried by said clamping means, tie members connecting said clamping means at each side, means for adjusting said tie members longitudinally to accommodate different distances between the centers of the insulators, and means for preventing transverse twisting of the insulators and clamping means.

3. A clamping set for clamping a conductor to insulators, comprising two insulators arranged side by side, clamping means embracing each insulator, conductor gripping devices carried by the said clamping means, projections at each side of the clamping means, and adjustable tie rods connecting the said projections at each side of the clamping means.

4. A clamping set for clamping a conductor to insulators, comprising two insulators arranged side by side, clamps partially encircling the outside of each insulator, conductor gripping devices carried by said clamps, and adjustable tie rods connecting the sides of said clamps.

1,210,471. GAS-PRODUCER. JAMES A. HERRICK, New Rochelle, N. Y. Filed Sept. 26, 1913. Serial No. 791,898. (Cl. 48—85.1.)



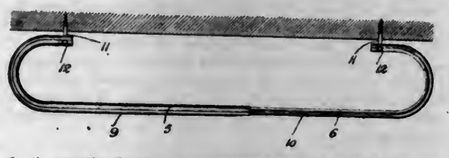
1. A gas producer, having two sections, both of which are rotatable, means for driving one of the sections, and means for coupling the two sections together at will.

2. A gas producer, having two sections, both of which are rotatable, means for driving one of the sections, means for coupling the two sections together at will, one of the sections inclosing the combustion zone and the other the ash zone.

3. A gas producer, having two sections, both of which are rotatable, means for driving one of the sections, means for coupling the two sections together at will, one of the sections inclosing the combustion zone and the other the ash zone, and a twyer-box extending into the ash zone.

4. A gas producer, having two sections, both of which are rotatable, means for driving one of the sections, means for coupling the two sections together at will, one of the sections inclosing the combustion zone and the other the ash zone, and a non-circular twyer-box extending into the ash zone.

1,210,472. CURTAIN-ROD. SIDNEY C. HILLS, Torrington, Conn., assignor to The Turner & Seymour Manufacturing Co., Torrington, Conn., a Corporation. Filed Nov. 17, 1914. Serial No. 872,508. (Cl. 156—19.)

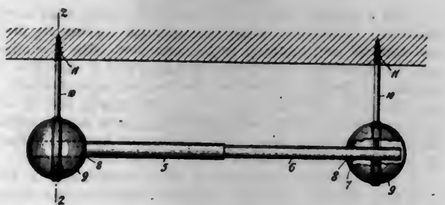


1. A curtain fixture comprising a substantially flat rod having its opposite edges formed into rolls the free edges of which project toward the front face of the rod and a rib extending lengthwise of the rod the combined diameters of the rolls and rib being substantially equal to the width of the rod.

2. A curtain fixture comprising two rod sections, rolls formed at the opposite edges of said sections arranged to slidably fit within each other and ribs extending substantially along the longitudinal median lines of said sections and arranged to slidably fit within each other the combined diameters of the rolls and rib of each section being substantially equal to the width thereof.

3. A curtain fixture comprising a substantially flat rod having its opposite edges formed into rolls and a rib extending lengthwise of the rod, the diameters of the rolls and of the rib being substantially equal.

1,210,473. CURTAIN-FIXTURE. SIDNEY C. HILLS, Torrington, Conn., assignor to The Turner & Seymour Manufacturing Co., Torrington, Conn., a Corporation of Connecticut. Filed Nov. 18, 1914. Serial No. 872,693. (Cl. 156—22.)

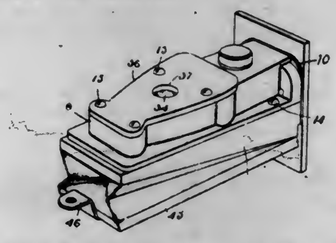


1. A curtain fixture comprising a hollow end member, a bracket having a portion secured within said end member and extending in contact with and along the inner surface thereof and having a continuing portion extending exteriorly of said end member to form an attaching stem whereby said bracket and end member are supported and a curtain rod connected with said end member.

2. A curtain fixture comprising a hollow end member, a bracket comprising a curved portion secured within said end member and having a diameter substantially the same as the internal diameter of said end member along the line of contact between said end member and said curved portion, said bracket further comprising a continuing stem extending exteriorly of the end member and whereby the latter and said bracket are supported and a curtain rod detachably connected with said end member.

3. A curtain fixture comprising a hollow end member having an internal annular recess, a bracket comprising an eyelet having approximately the same diameter as said recess and secured within the same and a continuing stem extending exteriorly of the end member whereby said bracket and end member are supported and a curtain rod detachably connected with said end member.

1,210,474. PLAYER-PIANO. JOHN E. HOARE, Toronto, Ontario, Canada. Filed June 1, 1915. Serial No. 31,393. (Cl. 84—178.)



1. In a piano player, the combination with the piano action, vacuum mechanism, tracker bar and action chest, of individual valve chests removably secured to said action chest and each formed with a vacuum chamber in the underside and a secondary valve chamber in the upper side, a bellows secured to the underside of said valve chest having its interior communicating with the upper chamber of said valve chest, a primary valve arranged in said vacuum chamber, a secondary valve arranged in said secondary valve chamber and extending into said vacuum chamber, an arm pivotally supported within said vacuum chamber and supporting said secondary valve and diaphragms for operating said primary and secondary valves.

2. In a piano player, the combination with the piano action, vacuum mechanism and tracker bar, of an action chest comprising a pair of metal plates spaced apart, a plurality of strips longitudinally arranged and sealed between said plates being spaced apart to form a plurality of vacuum channels connected with the vacuum mechanism, a plurality of individual pneumatics removably secured to the outer face of one of the plates of said action chest each having a vacuum chamber communicating with one of the longitudinal channels in said action chest through holes in the said plate, clamping screws extending through the plates and longitudinal strips of said action chest and into said pneumatics to hold them in position, openings extending through the plates and strips of said action chest communicating with the diaphragm chambers of the pneumatics, tubes connected with the tracker bar and extending into the holes in the action chest leading to the diaphragm chambers.

3. In a piano player, the combination with the piano action, vacuum mechanism and tracker bar, of an action chest comprising, a pair of metal plates spaced apart, a plurality of wood strips longitudinally arranged between and cemented to said metal plates, said plates and strips being clamped together and forming a plurality of longitudinal vacuum chambers connected to the vacuum mechanism, individual pneumatics having flanged faces abutting the outer face of one of said plates and secured in air tight contact therewith by fastening members extending through said plates and wood strips, said pneumatics having their vacuum chambers communicating with the vacuum chambers in said action chest, a plurality of tubes communicating with the tracker bar and placed in perpendicular arrangement outside of the action chest on the side opposite from the pneumatics and having their terminal ends extending through holes in said plates and strips and communicating with the valve operating mechanism in said pneumatics, the pneumatic fastening means being arranged between said perpendicularly arranged tubes.

1,210,475. GUN-SLING. JAMES P. HOOPER, Baltimore, Md. Filed Sept. 27, 1915. Serial No. 52,812. (Cl. 224—1.)



1. The combination with a gun having two spaced-apart links attached thereto said links having a definite spaced relation with respect to each other on the gun, of an imperforate strap having one end detachably secured to one of the spaced gun-links and threaded through both of said links to form at least two complete stretches between the spaced links and means at the other end of the strap for slidably engaging one of said stretches of the strap.

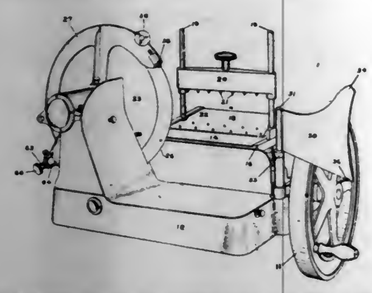
2. The combination with a gun having two definitely spaced-apart links thereon, of an imperforate strap provided at one end with a coupling of a width and thickness to pass through said definitely spaced links, said coupling detachably engaging one of said links and the imperforate strap having at least two complete stretches between said links, and means at the other end of said strap for slidably engaging one of said complete stretches of imperforate strap.

3. The combination with two definitely spaced-apart links, of an imperforate strap; a slotted frame attached to one end of the imperforate strap; a coupling device attached to the other end of the strap,—said coupling device being of a width and thickness to enable it to pass through both links and also to pass through the slots in said slotted frame and said coupling device detachably engaging one of said links, and the strap being threaded through the two definitely spaced links to provide at least two stretches between the links, and the slotted frame frictionally engaging one of said stretches of the imperforate strap between the links.

1,210,476. MEAT-SLICING MACHINE. JOSEPH HOPKINSON and CLINTON HOLT MALTBY, Dayton, Ohio, assignors to The Computing Scale Company, Dayton, Ohio, a Corporation of Ohio. Filed Aug. 6, 1915. Serial No. 43,913. (Cl. 17—24.)

1. In a device of the class described comprising in combination, a circular revoluble knife, a base having extending portions to support the knife, a post extending upward from the base and extending in a line perpendicular to a plane passing through the axis of the knife, a guard for the knife secured to the base and a plate guard mounted upon the post and extending to a point slightly beyond and to one side of the cutting edge of the knife, said guard being adapted to swing about said post as an axis, and

means for detachably securing the plate guard rigidly in said position and thereby preventing the swinging of the guard about its pivot.



2. In a meat slicer, in combination, a circular revoluble knife, a base supporting said knife and having extending portions to guard the knife, a post extending upward from the base in a direction perpendicular to a plane passing through the axis of the knife, and revolubly mounted in a bearing in said base, a plate guard rigidly secured to the post and adapted to swing therewith about the bearing in the base, said plate guard extending to a point slightly in the rear and to the side of the cutting edge of the knife and a spring catch for holding said guard in position to guard the knife and permitting the guard to be swung back at will for cleaning.

3. In a device of the class described, in combination a base, a revolubly mounted circular knife, a housing supported on the base and partially surrounding the periphery of the knife, a plate pivotally mounted on the base and extending upward to a point adjacent the housing, said plate having a lug thereon forming a meat support and coöperating with the housing to form a guard for the knife.

4. In a device of the class described, in combination, a circular rotating knife, a plate extending in a direction perpendicular to the axis of and terminating at one end within the periphery of the knife, said plate being also spaced laterally with respect to the knife, whereby said knife is guarded, a pivotal support for said plate remote from the knife whereby said plate may be swung back and the knife be exposed for cleaning, a meat plate adapted to advance meat to be engaged by the knife, and a lug on the beforementioned plate extending toward the meat plate and adapted to extend under the edge of the meat to coöperate with the meat plate and support the meat during the slicing operation.

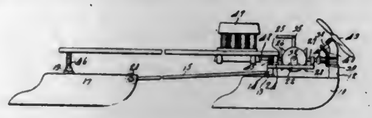
5. In a meat slicer, in combination a circular rotating knife, a housing partially surrounding the periphery of the knife and forming a guard therefor, a plate extending in a direction perpendicular to the axis and past the cutting periphery and terminating at one end within the periphery of the knife, said plate being also spaced laterally with respect to the knife and a pivoted support for the plate remote from the knife, said pivotal support extending substantially vertically and substantially parallel with the plane of the knife, whereby the said plate may be swung sidewise and the knife and the plate be exposed for cleaning, the said plate being adapted to form a guard for the periphery of the knife unguarded by the housing.

[Claims 6 to 19 not printed in the Gazette.]

1,210,477. MOTOR-SLEIGH. DEWEY HUFFMAN, Grano, N. D. Filed Mar. 14, 1916. Serial No. 84,151. (Cl. 21—47.)

1. A motor sleigh comprising front and rear bobs, a bolster pivoted on the front bob, connections between the bobs, a frame supported at its forward end on said bolster and at its rear end on the rear bob, a bracket pivoted on the front bob, a propeller rotatably mounted on said bracket, a motor on the frame, and connections between the motor and the propeller.

2. A motor sleigh comprising front and rear bobs, flexible connections between said bobs, a bolster pivoted on the fornt bob, a frame supported on the bolster and on the rear bob, a motor carried by the frame, a drive shaft, a driven shaft, a reverse gear between the drive shaft and the driven shaft, a bracket pivoted on the front bob, a



shaft rotatable on said bracket, a propeller fixed on said shaft, a second shaft rotatable on said bracket, connections between the shafts on the bracket, and a tubular shaft telescoping with the second named shaft on the bracket and having a universal connection with the driven shaft.

1,210,478. TRUCK-BOLSTER. CHARLES F. HUNTOON, Chicago, Ill. Filed July 3, 1916. Serial No. 107,313. (Cl. 105—107.)



1. In a trussed truck bolster, the combination of a channel shaped compression member, a strut, a tension member bent over said strut and having its end portions brought alongside the web portion and between the flanges of the compression member, said end portions being shouldered to overlap and engage the end surfaces of said web portion and flanges, means for securing said members together at their ends, and longitudinal ribs on the ends of said tension member for strengthening and reinforcing said shoulders.

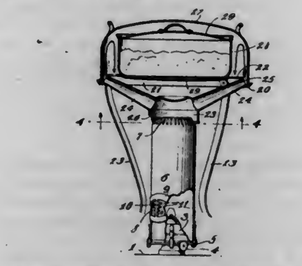
2. In a trussed truck bolster, the combination of a flanged compression member, a tension member having its end portions brought alongside the end portions of the compression member, upstanding shoulders on the end portions of said tension member adapted to overlap and engage the end surfaces of said compression member, means for securing said members together at their ends, and ribs disposed longitudinally of said tension member and on the upper surface thereof, for strengthening and reinforcing said shoulders.

3. In a trussed truck bolster, the combination of a compression member having a horizontally disposed web and depending marginal flanges, a tension member having its end portions brought alongside the web and between the flanges of the compression member, a strut for holding the medial parts of said members spaced apart, the end portions of said compression member being bent upwardly, transversely disposed upstanding shoulders on the ends of said tension member adapted to overlap and engage the end surfaces of said compression member, ribs disposed longitudinally of and on the upper surface of said tension member for strengthening and reinforcing said shoulders, and means for securing said members together at their ends, the end portions of said tension member being in alinement with the adjacent body part of the tension member.

4. In a trussed truck bolster, the combination of a channel-shaped compression member having its end portions bent upward, a strut, a tension member bent over said strut and having its end portions thickened and brought alongside the web portion and between the flanges of the bent-up end portions of the compression member, means extending through said thickened end portions of said tension member for securing said members together at their ends, and shoulders extending upward and sidewise from the outer ends of the thickened end portions of said tension member and adapted to overlap and abut against the end surfaces of said web portion and flanges.

5. In a trussed truck bolster, the combiantion, of a channel shaped compression member having its end portions bent upward, a strut, a tension member bent over said strut and having its end portions thickened and brought alongside the web portion and between the flanges of the bent up end portions of the compression member, at the outer ends of the thickened end portions of said tension member adapted to overlap and engage the end surfaces of said web portion and flanges, and means for securing said members together at their ends.

1,210,479. COOKING DEVICE. WILLIAM R. JEAVONS, Cleveland, Ohio. Filed Feb. 15, 1912. Serial No. 677,800. (Cl. 126—45.)



1. The combination, with the chimney of a lamp or stove, of a hood arranged to receive the heated air and products of combustion from said chimney, a plurality of tubes extending upwardly from and communicating with the interior of said hood, a vessel support carried by said tubes, and a hood removably applied to said vessel support and adapted to receive the gases discharged through said tubes, there being apertures provided in said support for the escape of such gases.

2. The combination, with the chimney of a lamp or stove, of an open bottom hood arranged to receive the gases arising from said chimney, a plurality of tubes extending upwardly and outwardly from said hood, a vessel support mounted on said tubes and provided with apertures for the discharge ends of said tubes, said support being provided with an annular seat located outside of said apertures and being provided with a series of discharge apertures located adjacent to the former apertures and between the same and the central portion of said support, and a hood removably applied to said seat.

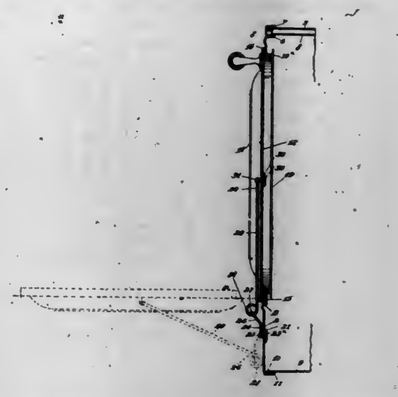
3. The combination, with the chimney of a lamp or stove, of a hood arranged to receive the gases arising from said chimney, a plurality of tubes extending upwardly and outwardly from said hood, a vessel support comprising a plate having a downwardly and outwardly inclined flange provided with apertures registering with the discharge ends of said tubes, there being an annular seat provided outside of said flange and said plate being provided with a series of discharge apertures located adjacent to the upper end of said flange, and a hood removably applied to said seat.

4. The combination, with a lamp or stove, of a hood arranged to receive the gases arising from said lamp or stove, a plurality of tubes extending from said hood, a vessel support comprising a plate provided with apertures registering with the discharge ends of said tubes, there being an annular seat provided outside of said apertures and said plate being provided with a series of discharge apertures located within said seat, and a hood removably applied to said seat.

5. The combination, with the chimney of a lamp or stove, of an open bottom hood having a portion of its lower end removed and arranged to receive the gases arising from said chimney, a plurality of tubes extending upwardly and outwardly from said hood, a vessel support provided with apertures with which the upper ends of said tubes register and with a series of discharge apertures, a hood removably applied to said support and adapted to receive the gases discharged from said tubes, and a base having an opening corresponding to the removed portion of the first mentioned hood for the insertion of a lamp or stove.

[Claims 6 to 16 not printed in the Gazette.]

1,210,480. OVEN-DOOR SUPPORT. WILLIAM R. JEAVONS and ARNOLD R. WHITTAKER, Cleveland, Ohio. Filed June 17, 1914. Serial No. 845,539. (Cl. 126—190.)



1. The combination, with an oven having an opening therein, of a door horizontally pivoted beneath the said opening and adapted to be swung upwardly to close the opening, and means for supporting said door when in open position, said means comprising a rod or wire having its upper end pivotally connected to the door and a link having its lower end pivotally connected to the oven beneath the door and having its upper end offset outwardly and pivotally connected to the lower end of the said rod or wire.

2. The combination, with an oven having an opening threin, of a door mounted on a horizontal pivot beneath the opening, a rod or wire having its upper end pivotally connected to the door and having a loop at its lower end, and a link pivotally connected to the oven beneath the door and in substantially vertical alinement with the rod or wire, said link having its upper portion offset outwardly and pivotally connected to the loop at the lower end of said rod or wire.

3. The combination, with an oven having a door opening, of a door pivoted to the oven and adapted to swing upwardly and downwardly thereby to close and open the oven, a pair of rods or wires, one of said rods or wires being pivotally connected at one end to the door and adapted to engage the oven beneath the door with its other end, the other rod or wire being pivotally connected at one end to the oven and pivotally connected to the oven-engaging end of the first mentioned rod or wire.

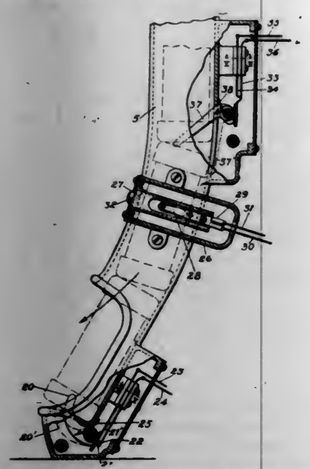
4. The combination, with an oven having an opening therein, of a door pivoted beneath the said opening and adapted to swing upwardly and downwardly thereby to close and open the oven, a pair of rods or wires at each side of the door, the rods or wires of each pair being pivotally connected, one rod or wire of each pair being pivotally connected to a side of the door and of such length as to engage the oven beneath the opening thereof with its other end when the door is open, and the other rod or wire of each pair having an end pivotally connected to the oven.

5. The combination, with an oven having a door opening, of a door pivoted to the oven and adapted to swing upwardly and downwardly thereby to close and open the oven, a rod or wire pivotally connected at one end to the door and of such length as to engage the oven beneath the door with its other end when the door is open, and a second rod or wire pivotally connected at one end to the

oven and having its other end pivotally connected to the oven-engaging end of the first mentioned rod or wire, the upper end of the second rod or wire being offset outwardly.

[Claims 6 and 7 not printed in the Gazette.]

1,210,481. MONITOR SYSTEM FOR CARRIER-DESPATCH APPARATUS. CHESTER S. JENNINGS, Boston, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Apr. 8, 1914. Serial No. 830,391. (Cl. 234—1.5.)



1. In a carrier despatch monitor system, in combination with pneumatic despatch tubes having a despatching and receiving station, means for recording delays in attending to carriers delivered to said station during any given unit of time, said means including material upon which a record of said delays is made and a device to mark said material, means for recording the number of carriers despatched from said station during the same unit of time, said recording means also including material to be marked and a second device to mark the same, the respective records made by said first and second mentioned means being adapted for comparison to show whether the delays were excusable on account of the press of work at said station, and means to synchronously move the material upon which delays are marked and that upon which the number of despatched carriers are marked, with respect to the corresponding devices aforesaid.

2. In a carrier despatch monitor system, in combination with pneumatic despatch tubes having a despatching and receiving station, time element mechanism, a record sheet displaced thereby in accordance with the timed movement of said mechanism, and means, controlled by carriers despatched to said station and subject to a determined delay in handling after their arrival thereat, for recording on said sheet said delays.

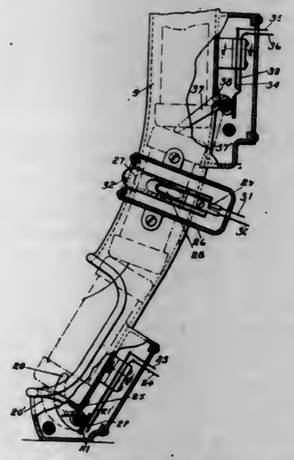
3. In a carrier despatch monitor system, in combination with pneumatic despatch tubes having a despatching and receiving station, time element mechanism, a record sheet displaced thereby in accordance with the timed movement of said mechanism, demerit mechanism for recording upon said record sheet demerits indicative of delays in handling carriers, and means to automatically actuate said demerit mechanism when a carrier which has arrived at said station remains thereat without attention for a period in excess of a determined time.

4. In a carrier despatch monitor system, in combination with pneumatic despatch tubes having a despatching and receiving station, time element mechanism, a record sheet displaced thereby in accordance with the timed movement of said mechanism, demerit mechanism for recording upon said record sheet demerits indicative of delays in handling carriers, and means to automatically actuate said demerit mechanism when a carrier which has arrived at said station remains thereat without attention for a period in excess of a determined time, said last mentioned means including an auxiliary time element mechanism which times said period and means for stopping the running of said auxiliary mechanism when the delayed carrier is attended to.

5. In a carrier despatch monitor system, in combination with pneumatic despatch tubes having a despatching and receiving station, time element mechanism, a record sheet displaced thereby in accordance with the timed movement of said mechanism, demerit mechanism for recording upon said record sheet demerits indicative of delays in handling carriers, means to automatically actuate said demerit mechanism when a carrier which has arrived at said station remains thereat without attention for a period in excess of a determined time, and co-acting means to record an additional demerit for a second carrier back of that first mentioned after said second carrier has remained undisturbed at said station in excess of a determined period.

[Claims 6 to 28 not printed in the Gazette.]

1,210,482. MONITOR SYSTEM FOR CARRIER-DESPATCH APPARATUS. CHESTER S. JENNINGS, Boston, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Original application filed Apr. 8, 1914, Serial No. 830,391. Divided and this application filed June 15, 1915. Serial No. 34,286. (Cl. 243—36.)



1. In a carrier despatching and receiving apparatus, the combination of means for guiding a plurality of carriers one after another, a station to which said carriers are delivered, means, including time element mechanism for rendering evident the continued presence of the first of said carriers at a part of said station, without attention on the part of the operative at said station and in excess of an allotted period within which said carrier should normally receive attention, and carrier controlled mechanism having a part thereof movable to render evident the presence of a second of said carriers at said station when neither said first nor second carriers have been attended to.

2. In a carrier despatching and receiving apparatus, the combination of means for guiding carriers in transit, a station to which said carriers are delivered, means for guiding carriers away from said station, means for rendering evident delays, in excess of a determined period, on the part of an operative at said station in attending to carriers delivered thereat by said first mentioned guiding means, and means for substantially co-incidentally rendering evident the number of carriers transmitted along said second mentioned guiding means, whereby to indicate whether any given delay was excusable, substantially as described.

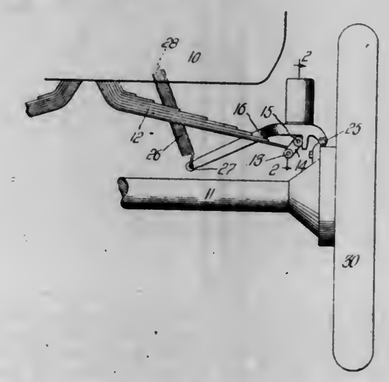
3. In carrier despatch apparatus, the combination of means for guiding carriers in transit, a station to which said carriers are delivered, and variably operative carrier controlled means, including time element mechanism for rendering evident the continued presence of a single carrier at a part of said station in excess of an alloted period of time during which said carrier should normally be removed from said part and for differently rendering evident at a detemined point the presence of a plurality of carriers when said plurality of carriers are present in said part of said station in excess of an allotted time running from said first period, said determined point being spaced from the path of travel of the carriers entering said station.

4. In carrier despatch apparatus, the combination of means for guiding carriers in transit, a station to which said carriers are delivered, and variably operative carrier controlled means, including time element mechanism for rendering evident the continued presence of a single carrier at a part of said station in excess of an allotted time during which said carrier should normally be removed from said part and for differently rendering evident at a determined point the presence of a plurality of delayed carriers at said station, said determined point being spaced from the path of travel of the carriers entering said station.

5. In carrier despatch apparatus, the combination of means for guiding carriers in transit, a station to which said carriers are delivered, delay indicating means, including signaling apparatus and time element mechanism controlling the same, for rendering evident by a determined signal the presence of a single carrier in a part of said station in excess of an allotted time, and co-acting means to differently signal the presence of a plurality of delayed carriers in said part.

[Claims 6 to 12 not printed in the Gazette.]

1,210,483. SHOCK-ABSORBER. ALBERT S. JOHNSON, San Diego, Cal. Filed July 12, 1916. Serial No. 108,865. (Cl. 267—19.)



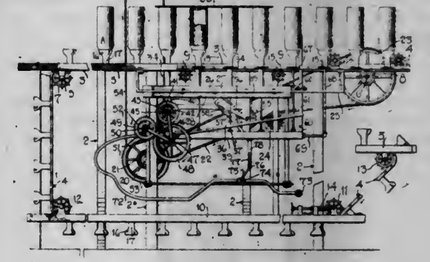
1. In combination with a vehicle running gear and body and suspension spring therefor, a lever pivoted to the running gear, a resilient connection between the lever and the body, and a resilient connection between the suspension spring and the lever.

2. In combination with a vehicle running gear and body and suspension spring therefor, a lever pivoted at one end to the running gear, a resilient connection between the other end of the lever and the body, and a resilient connection between the suspension spring and the lever intermediate its ends.

3. In combination with a vehicle running gear and body and suspension spring therefor, a lever pivoted at one end to the running gear, a resilient connection between the other end of the lever and the body, and a connection between the suspension spring and the lever intermediate its ends embodying a compression spring seated upon the lever, a vertical rod having a sliding bearing in the lever and carrying a member at its upper end bearing down on the compression spring, and a link connection between the lower end of the vertical rod and the end of the suspension spring.

4. In combination with a vehicle running gear and body and suspension spring therefor, a lever pivoted at one end to the running gear, a resilient connection between the other end of the lever and the body, and a connection between the suspension spring and the lever intermediate its ends embodying a compression spring seated upon the lever, a vertical rod having a sliding bearing in the lever and carrying a member at its upper end bearing down on the compression spring, and a link connection between the lower end of the vertical rod and the end of the suspension spring, said vertical rod carrying a cross trunnion at its lower end to which the links are attached and said cross trunnion adapted by bearing up against the lower side of the lever to limit the upward movement of the rod.

1,210,484. BOTTLE-WASHING MACHINE. JAMES A. JOHNSON, Norfolk, Va. Filed Nov. 8, 1915. Serial No. 60,430. (Cl. 141—7.)



1. In a machine of the character described, an endless carrier, a supporting member having movement parallel to the carrier and at right angles to its path of movement, operating implements carried upon the supporting member, means for shifting the supporting member toward or from the carrier, and means on the supporting member engageable with the carrier upon a movement of the supporting member toward the carrier and disengageable therefrom upon a reverse movement whereby to cause a longitudinal movement of the supporting member with the carrier for a predetermined distance.

2. An endless carrier including spaced links, a supporting member movable parallel to the carrier and toward and from the carrier, operating implements mounted thereon, and means in connection with the supporting member and movable therewith engageable with the links of the carrier upon a movement of the supporting member toward the carrier and disengageable therefrom upon a reverse movement whereby to cause a common longitudinal movement of the carrier and supporting member for a predetermined distance.

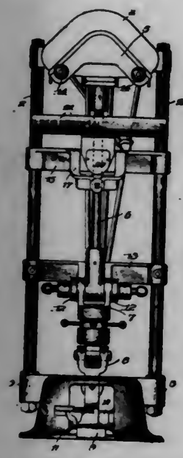
3. In a bottle cleaning machine, a bottle carrier movable in a closed path and having means thereon for supporting bottles, a carriage movable parallel to the carrier, a bottle cleaning member mounted upon the carriage for movement transverse to the movement of the carrier, and means for engaging the carriage with the carrier for common movement, then projecting the bottle cleaning member into the bottle, then retracting the bottle cleaning member and successively disengaging the carriage from the carrier and then shifting the carriage back to its initial position.

4. In a bottle cleaning machine, a bottle carrier movable in a closed path and having means thereon for supporting bottles, a carriage movable parallel to the carrier, a bottle cleaning member mounted upon the carriage for movement transverse to the movement of the carrier, means for engaging the carriage with the carrier for common movement, then projecting the bottle cleaning member into the bottle, then retracting the bottle cleaning member and successively disengaging the carriage from the carrier and then shifting the carriage back to its initial position, and means for rotating the bottle cleaning member.

5. In a bottle washing machine, a bottle carrier movable in a closed path and having means thereon for supporting bottles in an inverted position, a carriage movable beneath the carrier and parallel thereto, a rotatable cleaning member mounted upon the carriage, means for giving constant rotation to said cleaning member, means for engaging the carriage with the carrier for common movement and successively projecting the cleaning member upward into the bottles supported upon the carrier, means for ejecting water from the cleaning member, while it is in its projected position, and means for retracting said cleaning member from the bottle and successively disengaging the carriage from the carrier and returning the carriage to its initial position.

[Claims 6 to 15 not printed in the Gazette.]

1,210,485. IRONING-MACHINE. JOHN KANE and FORREST J. COUCH, Rochester, N. Y., assignors to American Laundry Machinery Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 4, 1915. Serial No. 65,119. (Cl. 68—9.)



1. In an ironing machine, the combination with a frame comprising a base, a pair of vertical standards one of which extends upwardly from each side of the base, an ironing member supported on the upper end of said standards, a supporting device attached to said vertical standards, a connecting frame swingingly mounted on the supporting device, a support pivotally associated with the connecting frame, an ironing member mounted on the support, and means for effecting movement of the last mentioned ironing member to bring it into ironing relation with the first named ironing member.

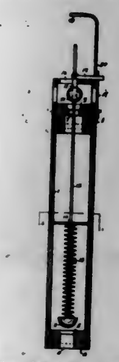
2. In an ironing machine, the combination with a frame comprising a base, a pair of vertical standards which extend upwardly from opposite sides of the base, an ironing member supported on the upper end of said standards, a horizontally arranged U-shaped supporting device attached to said vertical standards, a connecting frame swingingly mounted on the supporting device, a support pivotally associated with the connecting frame, an ironing member mounted on the support, and means for effecting movement of the last mentioned ironing member to bring it into ironing relation with the first named ironing member.

1,210,486. MAN'S SHIRT-WAIST. ARTHUR KAPLAN, Brooklyn, N. Y., assignor to Lucy Costabile, Brooklyn, N. Y. Filed July 27, 1916. Serial No. 111,577. (Cl. 2—98.)



A tailless shirt having its extreme lower border turned over to form an annular receptacle around the waist of the wearer, in combination with a belt inclosed in said receptacle, said belt and the annular side walls of said receptacle being provided with registering holes arranged at intervals around the circumference to permit the passage through these three parts of means of supporting trousers.

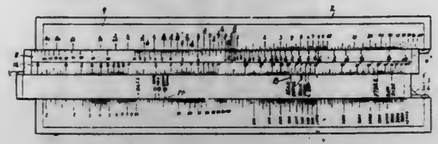
1,210,487. OIL-THIEF. WALTER H. KAUL, Humble, Tex. Filed Jan. 10, 1916. Serial No. 71,374. (Cl. 137—18.)



1. A device of the character described including a receptacle having opposing inlet passageways surrounded by seats, valves normally closing said passageways, a valve rod connecting said valves, a resilient member in operative connection with said rod and tending to hold said valves seated, a latch operatively connected with said rod, a hook, one end of which is pivoted to the device and the other of which engages with the latch and thereby holds said rod and valve elevated relative to said seats and a tripping device for disengaging said hook from said latch and thereby permitting the valves to seat.

2. A device of the character described, including a receptacle, having opposing inlet passageways surrounded by seats, valves normally closing said passageways, means connecting said valves, a resilient member in operative connection with said means and tending to hold said valves seated, a latch carried by said means, a mechanism pivoted to the device and engaging with said latch and holding the valves elevated relative to said seats, and a tripping device for disengaging said mechanism from said latch and permitting the valves to seat.

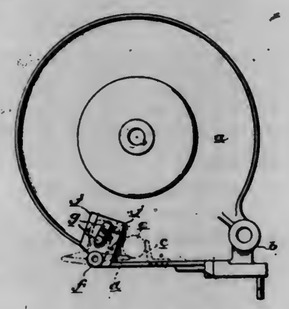
1,210,488. SLIDE-RULE. ANDREW W. KELLY and JOHN HORNYAK, Philadelphia, Pa. Filed Nov. 7, 1913. Serial No. 799,756. (Cl. 235—70.)



1. A slide rule comprising a body, a pair of slides mounted within said body, a scale on said body advancing toward the right, a similar scale advancing toward the left on one of said slides, coacting with the first named scale, another scale on said slide, another scale on the body, and a constant scale on the other slide coacting with the last two named scales.

2. A slide rule comprising a body, a pair of slides mounted within said body, a scale on said body advancing toward the right, a similar scale advancing toward the left on one of said slides coacting with the first named scale, another scale on said slide, a constant scale on the other slide, a Z line on said other scale, and another scale on the body coacting with the constant scale and with one end of said Z line.

1,210,489. BOBBIN-STAND FOR LOOM-MAGAZINES. WILLIAM FRANKLIN KING, Clinton, and JOHN SIDNEY WHITLOCK, Laurens, S. C., assignors, by direct and mesne assignments, of three-fourths to Clinton Cam Company, Clinton, S. C., a Corporation of South Carolina. Filed Jan. 24, 1916. Serial No. 73,839. (Cl. 139—85.)



1. A loom hopper stand or disk having a radial notch formed in the edge of the stand adjacent to the bobbin throat, a plate fitted into this notch and detachably fastened therein, this plate being provided with supporting and guiding means for the usual tiltable member of the bobbin throat.

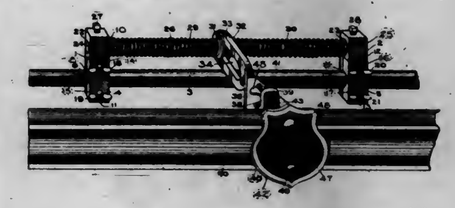
2. A patch for loom stands consisting of a plate adapted to fit into a notch formed in the stand of the bobbin magazine and provided with means for supporting the tiltable member of the bobbin throat.

3. A patch for loom magazine stands consisting of a plate flanged along the edges of its outer face and provided with an integral eye bearing at its outer end and with integral lugs on its outer face, for the purpose set forth.

4. A patch for loom magazine stands consisting of a plate formed with integral lateral flanges along the edges of its outer face and provided with an integral eye bearing at its outer end and with integral guide lugs on its outer face, whereby when said patch is inserted in a notch of similar shape formed in the edge of the stand the plate will bridge the notch and have its side edges abutting against the edge walls of the notch and its lateral flanges bearing against the outer face of the stand.

5. A loom hopper stand having a substantially radial notch formed in its edge adjacent to the bobbin throat, a plate inserted in this notch and having its side edges abutting the edge walls of the notch and its inner face flush with the inner face of the stand, said plate being provided along the edges of its outer face with lateral flanges which overlap upon the outer face of the stand, means being provided for securing the plate to the stand through the medium of said flanges, said plate being provided on its outer face with an integral eye bearing and with integral guide lugs.

1,210,490. AUTOMOBILE-STABILIZER. JOHN A. KITTLE, St. Louis, Mo. Filed Aug. 4, 1915. Serial No. 43,518. (Cl. 21—200.)



1. In a device of the class described, the combination with the steering rod and front axle of an automobile, of two upright blocks fitted in separated position upon the steering rod, a spring supporting bar extending between the upper portions of said blocks and in vertical parallelism with said steering rod; two duplicate coil springs loosely mounted on said bar, a guide head having a slot at one end through which the supporting bar extends, said guide head being adapted to be interposed between the inner ends of the springs, and a tubular opposite end adapted to engage the front axle, a front plate and means for clamping the tubular end of the guide head and the front plate upon opposite sides of the axle.

2. In a device of the class described, the combination with the steering rod and front axle of an automobile, of two upright blocks fitted in separated positions upon the steering rod, a spring supporting bar extending between the upper portions of said blocks and in vertical parallelism with said steering rod, said blocks being in separable portions with the lower portions fitted on the steering rod, means for detachably securing the portions of said blocks together, two duplicate coil springs loosely mounted on said bar, a guide head having a slot at one end through which the supporting bar extends, said guide head being adapted to be interposed between the inner ends of the springs, and a tubular opposite end adapted to engage the front axle, a front plate and means for clamping the tubular end of the guide head and the front plate upon opposite sides of the axle.

1,210,491. PROCESS OF ARTIFICIALLY SEASONING WOOD. MARTIN KLEINSTÜCK, Dresden, Germany. Filed Mar. 19, 1914. Serial No. 825,779. (Cl. 99—12.)

1. The process of artificially seasoning wood which comprises converting the unstable constituents of the wood into high-molecular compounds by subjecting the wood to the reaction of a chemical, in its gaseous form, such as is advantageously used in the organic synthesis to obtain high-molecular compounds, substantially as and for the purpose described.

2. The process of artificially seasoning wood which comprises transforming the tannins, albumins and carbohydrates into high-molecular compounds by treating the wood with a primary oxidation product of alcohols in

its gaseous form, substantially as and for the purpose described.

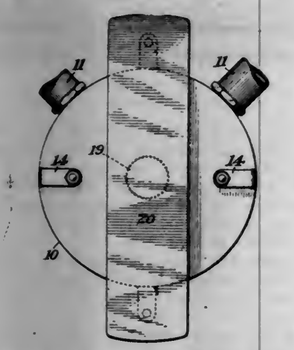
3. The process of artificially seasoning wood which comprises transforming the tannins, albumins and carbohydrates into high-molecular compounds by treating the wood with an aldehyde in its gaseous form, substantially as and for the purpose described.

4. The process of artificially seasoning wood which comprises transforming the tannins, albumins and carbohydrates into high-molecular compounds by treating the wood with a chemical, in its gaseous form, such as is advantageously used in the organic synthesis to obtain high-molecular compounds, and a catalytic agent, substantially as and for the purpose described.

5. The process of artificially seasoning wood which comprises transforming the tannins, albumins and carbohydrates into high-molecular compounds by treating the wood with a chemical, in its gaseous form, such as is advantageously used in the organic synthesis to obtain high-molecular compounds, and a volatile amin, substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

1,210,492. OUTLET-BOX. JULIAN GORDON KNIGHT, New York, N. Y., assignor to J. Gordon Knight Electric Company, Inc. Filed Aug. 24, 1912. Serial No. 716,885. (Cl. 247—5.)



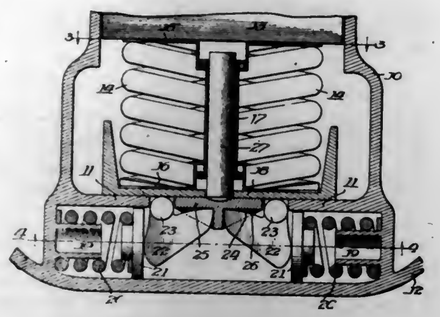
1. An outlet box having a perforated peripheral wall through which leading-in wires may extend, a detachable top wall, an anchoring bar resting upon said top wall and supported thereby and of a length materially greater than the diameter of said top wall, whereby the extremities project beyond the box to independently support the bar, and a fixture support carried by said bar and projecting through said top wall.

2. An outlet box having a perforated peripheral wall through which leading-in wires may extend, a top wall, an anchoring bar resting upon said top wall and supported thereby and of a length materially greater than the diameter of said top wall, whereby the extremities project beyond the box to independently support the bar, and a fixture support carried by said bar and projecting through said top wall.

3. An outlet box having a perforated peripheral wall through which leading-in wires may extend, a fixture support within said box and a member secured to said fixture support and detachable from said peripheral wall and supported thereby during the installation of the box and projecting materially beyond said peripheral wall whereby said member may sustain the weight of said fixture support independently of said peripheral wall when said box is covered over with concrete.

1,210,493. AUXILIARY SPRING FOR CAR-TRUCKS. JOHN A. LAMONT, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Sept. 11, 1916. Serial No. 119,465. (Cl. 105—243.)

1. In a car truck, the combination of a side frame, a bolster coöperating therewith, springs upon which said bolster directly bears, auxiliary springs, and motion multiplying means positively actuated by said bolster for transmitting force to said auxiliary springs, substantially as described.



2. In a car truck, the combination of a side frame, a bolster coöperating therewith, a shock-absorbing element between the bolster and frame, a second shock-absorbing element angularly disposed with relation to said first shock-absorbing element, and means separate from and actuated by said bolster for changing the direction of and transmitting force to said second shock-absorbing element.

3. In a car truck, the combination of a side frame, a bolster, vertical springs between said bolster and frame, horizontally-disposed auxiliary springs, and means actuated by said bolster for changing the vertically-directed force exerted by said bolster into a horizontally-directed force and applying said force to said auxiliary spring, substantially as described.

4. In a car truck, the combination of a frame, a bolster, shock-absorbing means between said bolster and frame, supplementary shock-absorbing means and means including a lever for multiplying the motion of said bolster relative to the compression of said supplementary shock-absorbing means.

5. In a car truck, the combination of a frame, a bolster, shock-absorbing means between said bolster and frame, supplementary shock-absorbing means, means for transmitting force from said bolster to the supplementary shock absorbing means and means for varying the compression of said supplementary shock-absorbing means relative to the travel of the bolster.

[Claims 6 to 12 not printed in the Gazette.]

1,210,494. TOOTH-FORM FOR WORM-GEAR. FREDERICK WILLIAM LANCHESTER, Edgbaston, Birmingham, England. Filed July 3, 1914. Serial No. 848,808. (Cl. 74—36.)



1. A form of worm gear tooth in which the teeth of the worm are thinner in the neck and also at the ends, than they are at the mean radial position.

2. A form of worm wheel of the hollow type, in which the working surfaces of the tooth are formed by a plurality of facets approximating to a continuous uniform curved surface.

1,210,495. PARTY-LEVER LOCKOUT FOR VOTING-MACHINES. WILLIAM J. LAUSTERER, Jamestown, N. Y., assignor, by mesne assignments, to Automatic Registering Machine Corporation, a Corporation of New York. Filed Oct. 18, 1913. Serial No. 795,932. (Cl. 235—54.)



1. In a voting machine, the combination of individual candidate voting means for each party, split ticket interlocking means controlled by said individual voting means, and means holding said interlocking means out of operation until individual voting means of more than one party have been actuated.

2. In a voting machine, the combination of individual candidate voting members in party groups, straight ticket voting means, and locking means for said straight ticket voting means directly actuated by said individual candidate voting members and rendered effective after the voting of a plurality of individual members constituting a split ticket.

3. In a voting machine, the combination of voting keys arranged in groups, group voting devices for voting the keys in certain of said groups, and an independent split ticket interlock whereby the actuation of any of said voting keys in more than one of said groups will render the group voting devices inoperative.

4. In a voting machine, individual keys arranged in groups, means for simultaneously actuating the keys of any group, and means and a separate interlock between said keys and said group voting devices whereby the operation of an individual key of any group will render the simultaneous actuating means of other groups inoperative.

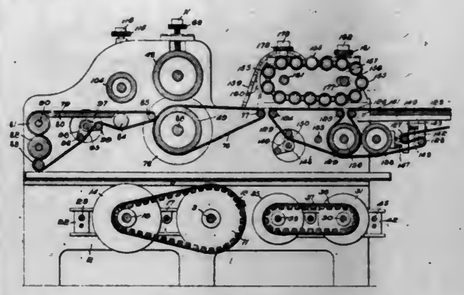
5. In a voting machine, voting keys arranged in groups, group voting devices for voting the keys in certain of said groups, and a separate interlock between said keys and said group voting devices whereby the voting of a key in one group will render the group voting devices of other groups inoperative and leave the group voting device of its own group operative to vote additional keys of said group.

[Claims 6 to 26 not printed in the Gazette.]

1,210,496. PROCESS OF PRODUCING CONTINUOUS SHEETS OF DOUGH FOR BISCUITS OR LIKE PRODUCTS. EDWARD E. LAWRENCE, Cambridge, Mass., assignor to Loose-Wiles Biscuit Company, Kansas City, Mo., a Corporation of Missouri. Original application filed Apr. 16, 1914. Serial No. 832,397. Divided and this application filed Jan. 8, 1915. Serial No. 1,219. (Cl. 107—54.)

1. That method of forming a continuous dough sheet and biscuits or like products therefrom which comprises forming a continuous sheet by pressure from a mass of dough, compressing said sheet in a transverse zone and simultaneously therewith effecting an onward movement of said sheet in undeformed and unbroken condition past said zone of compression, effecting a self-readjustment of the constituents of said continuous sheet by establishing a transverse zone thereof having free, opposite faces preventing free expansion of said sheet in its course of travel immediately in advance of said zone, and further feeding the sheet for severance of the biscuits or other products from said sheet after said self-readjustment.

2. That method of forming a continuous dough sheet and biscuits or like products therefrom which comprises forming a continuous sheet by pressure from a mass of dough, compressing said sheet in a transverse zone and simultaneously therewith effecting an onward movement of said sheet in undeformed and unbroken condition past said zone of compression, effecting a self-readjustment of the constituents of said continuous sheet by establishing a transverse zone thereof having free, opposite faces, maintaining a compressing pressure substantially constantly upon said self-readjusted sheet, thereby preventing reëxpansion thereof, and finally further feeding the sheet for severance of the biscuits or other products from said sheet.



3. That method of forming a continuous dough sheet and biscuits or like products therefrom which comprises forming a continuous sheet by pressure from a mass of dough, compressing said sheet in a transverse zone and simultaneously therewith effecting an onward movement of said sheet in undeformed and unbroken condition past said zone of compression, effecting a self-readjustment of the constituents of said continuous sheet by establishing a transverse zone thereof having free, opposite faces maintaining a compressing pressure substantially constantly upon said self-readjustment sheet, thereby preventing reëxpansion thereof, similarly effecting a second self-readjustment of the constituents of said continuous sheet and finally further feeding the sheet for severance of the biscuits or other products from said sheet.

4. In a process for producing a continuous sheet of dough for use in biscuit making and like machines, subjecting an unformed mass of dough to successive reductions in thickness conveying the dough mass at increased speeds at succeeding portions of its course, compressing the same successively and supporting the dough material by a moving surface or surfaces throughout the production of the said sheet and prolonged throughout the production of the sheet in the direction of travel of the said sheet and extending past said area of compression.

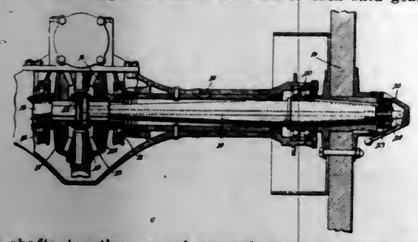
5. That method of forming a continuous dough sheet and biscuits or like products therefrom, which comprises forming a continuous sheet by pressure from a mass of dough, compressing a sheet in a transverse zone and simultaneously therewith effecting an onward movement of said sheet in undeformed and unbroken condition past said zone of compression by supporting the dough material upon a traveling surface or surfaces prolonged in the direction of travel of the said sheet past said zone of compression, effecting a self-readjustment of the constituents of said continuous sheet by establishing a transverse zone thereof having free, opposite faces, and simultaneously moving said dough sheet at successively increasing speeds upon said surface or surfaces.

[Claims 6 to 9 not printed in the Gazette.]

1,210,497. DIFFERENTIAL-GEAR LOCK. ARTHUR M. LAYCOCK, Kingston, Pa. Filed Dec. 4, 1915. Serial No. 65,097. (Cl. 74—34.)

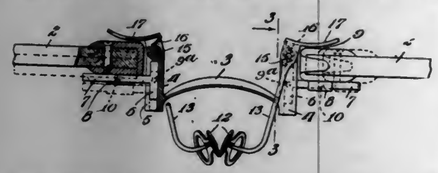
1. In a driving axle, the combination of two independent shafts for driving the wheels at the opposite ends of the axle, gears keyed to the inner ends of said shafts and provided with opposed clutch surfaces, a connecting member adapted to coöperate with said opposed clutch surfaces to lock said gears and shafts together, a rod secured to said member and slidably arranged in one of said shafts, and means at the outer end of the last mentioned shaft for actuating said rod and member.

2. In a driving axle, the combination of two independent shafts, wheels at the ends of said shafts and driven thereby, hub caps secured to said wheels, gears keyed to inner ends of said shafts and provided with opposed clutch surfaces, a connecting member adapted to coöperate with said opposed clutch surfaces to lock said gears



and shafts together, a rod secured to said member and slidably arranged in one of said shafts and projecting from the outer end thereof, and a lever connected with the outer end of said rod and pivoted to the surrounding hub cap and adapted to be actuated from the exterior of the hub cap to move said member.

1,210,498. EYEGLASSES AND SPECTACLES. ZOËL MARCEL LÉGER, Moncton, New Brunswick, Canada. Filed July 10, 1916. Serial No. 108,489. (Cl. 88—50.)



1. In eyeglasses and the like, the combination with a bridge-bar, lenses, sockets carried by the bridge-bar, lens supporting fingers slidably located in said sockets and sockets carried by the lenses, and slidably mounted upon said lens supporting fingers.

2. In eyeglasses and the like, the combination with a bridge-bar, lenses, sockets carried by the bridge-bar and having bores of angular cross-section, lens supporting fingers of angular cross-section slidably located in said sockets, and sockets carried by the lenses, slidably mounted upon said lens supporting fingers and having bores of angular cross-section.

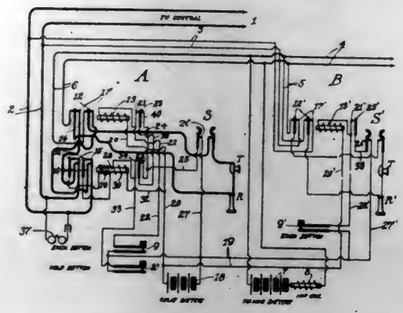
3. In eyeglasses and the like, the combination with a bridge-bar, lenses, transversely disposed sockets carried by the bridge-bar, lens supporting fingers slidably located in said sockets and sockets carried by the lenses and slidably mounted upon said lens supporting fingers, the sockets carried by the lens and the lens supporting fingers being disposed longitudinally with respect to the bridge-bar.

4. In eyeglasses and the like, the combination with a bridge-bar, lenses, sockets carried by the bridge-bar, lens supporting fingers slidably located in said sockets, sockets carried by the lenses and slidably mounted upon said lens supporting fingers, and spring-clip nose-pieces pivotally mounted upon the sockets of the bridge-bar.

5. In eyeglasses and the like, the combination with a bridge-bar, lenses, transversely extending sockets carried at the ends of the bridge-bar, such sockets being slotted at one side and having bores of angular cross-section, T-shaped lens supporting fingers of angular cross-section, each having one portion slidably located in one of said sockets and the other portion extending through the slot in the socket outwardly longitudinally with respect to the bridge-bar, set-screws for clamping the lens supporting fingers in their sockets, sockets carried by the lenses and slidably mounted upon the outwardly extending portions of the lens supporting fingers, such sockets having bores of angular cross-section, and set-screws for clamping the sockets of the lenses to the said lens supporting fingers.

[Claim 6 not printed in the Gazette.]

1,210,499. TELEPHONE SYSTEM. JOHN H. LEVIS, Jr., Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 7, 1916. Serial No. 76,622. (Cl. 179—36.)



1. In combination, a plurality of subscribers' telephone instruments, a telephone line leading from a central exchange to one of said subscribers' instruments, a relay corresponding to each of said instruments for connecting the corresponding instrument to said telephone line, and a circuit for each relay closed through the corresponding switch-hook.

2. In combination, a plurality of subscribers' telephone instruments, a telephone line leading from a central exchange, normally-inactive means corresponding to each instrument to connect the same to said telephone line, said means being under the control of the switch-hook to cause disconnection when the receiver is placed thereupon.

3. In combination, a plurality of telephone instruments, a telephone line leading from a central exchange, a common talking line extending to each of said instruments, switching means normally connecting said telephone instruments with the common talking line, and means to actuate each of said switches to connect the corresponding telephone instrument with the telephone line.

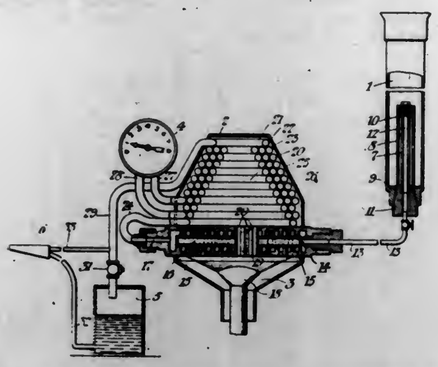
4. In combination, a plurality of subscribers' instruments, a telephone line leading from an exchange office, said line having a signal operable from central adjacent one of said instruments, a single common talking pair extending to each of said instruments, a holding relay adjacent said one instrument for holding said central line while the instrument is connected to the common talking pair and switches at each station for normally connecting the instrument to said common talking pair, said switches being operable to connect said instrument to said central telephone line.

5. In combination, a plurality of telephone instruments, a telephone line leading to a central exchange office and having terminals adjacent the terminals of each of said subscribers' instruments, a common talking pair having terminals adjacent the terminals of each of said instruments, a relay corresponding to each telephone instrument, and means to operate said relay to cause connection of the terminals of each telephone instrument with the central exchange line or the common talking pair, as desired.

[Claims 6 to 11 not printed in the Gazette.]

1,210,500. APPARATUS FOR SPRAYING OR ATOMIZING LIQUIDS OR LIQUID COMPOSITIONS SUCH AS PAINTS. FORTUNATO LEVY, Paris, France, assignor to General Carbonic Co., Brooklyn, N. Y., a Corporation of New York. Original application filed Dec. 21, 1914, Serial No. 878,309. Divided and this application filed Apr. 19, 1915. Serial No. 22,371. (Cl. 91—45.)

1. In an apparatus of the kind described, the combination of a receptacle for carbon dioxid, an atomizing tool, a receptacle for the substance to be atomized, means for feeding said substance to said tool, means for heating the carbon dioxid, means for reducing the pressure of the heated carbon dioxid, and means for supplying said carbon dioxid to said tool.



2. An apparatus of the kind described, comprising a receptacle for carbon dioxid; means for heating said carbon dioxid, means for reducing the pressure of the carbon dioxid thus heated, an atomizing means, means for leading the substance to be atomized to said atomizing means, and means for leading said carbon dioxid gas to said atomizing means.

3. An apparatus of the kind described, comprising a receptacle for carbon dioxid, heating means, means for reducing the pressure of the heated carbon dioxid, means for leading carbon dioxid from said receptacle to said heating and pressure-reducing means, an atomizing means, a receptacle for the substance to be atomized, means for feeding said substance from said receptacle to said atomizing means, and means for leading said carbon dioxid from said heating and pressure-reducing means to said atomizing means.

4. Apparatus of the kind described, comprising a receptacle for carbon dioxid, an outlet located below said receptacle, means for heating said carbon dioxid, means for reducing the pressure of the heated carbon dioxid, means for leading the carbon dioxid from said container to said heating means and pressure-reducing means, an atomizing means, means for leading the substance to be atomized to said atomizing means, and means for leading the carbon dioxid from said heating and pressure reducing means to said atomizing means.

5. An apparatus of the kind described, comprising a receptacle containing a liquefied gas, means for heating said liquefied gas, means for reducing the pressure of said gas after heating, an atomizing means, means for leading the substance to be atomized to said atomizing means, and means for leading said gas from said heating and pressure-reducing means to said atomizing means.

[Claims 6 to 15 not printed in the Gazette.]

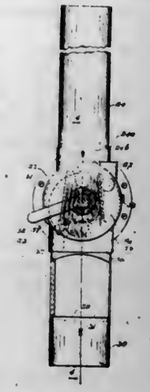
1,210,501. VENDING-MACHINE. LAWRENCE W. LUELLEN, Newton, Mass. Filed Apr. 2, 1908. Serial No. 424,732. (Cl. 225—21.)

1. A dispensing apparatus comprising receivers for merchandise and for merchandise-containers, and a single delivery member to which the merchandise and containers pass from the receivers, said delivery member having means whereby said merchandise and containers are temporarily held separately from one another.

2. A vending apparatus comprising separate receivers for merchandise and for containers, and a rotatable delivery member provided with means for controlling the delivery of both merchandise and a container from their respective receivers.

3. A vending apparatus for merchandise and merchandise-containers comprising a member at all times freely movable by the purchaser, and means actuated upon a single movement of said member whereby merchandise is supplied to a container and delivered to the purchaser.

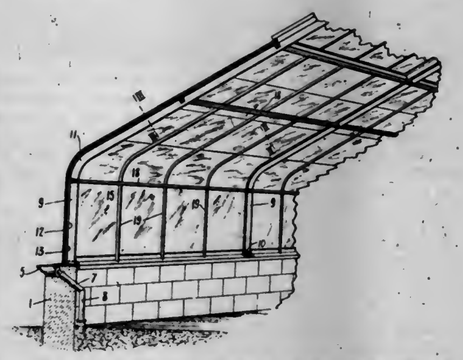
4. A vending apparatus comprising receivers for both merchandise and merchandise-containers, and a delivery member including a hollow container-holder adapted to serve as a merchandise-receptacle.



5. The combination with receivers for merchandise and for containers therefor, of a movable delivery-member for the merchandise, said delivery-member including a holder for the container.

[Claims 6 to 45 not printed in the Gazette.]

1,210,502. GREENHOUSE. WILLIAM H. LUTTON, Jersey City, N. J. Filed Feb. 3, 1914. Serial No. 816,193. (Cl. 47—27.)



1. In greenhouse construction, a curved rafter comprising a flat unitary metal bar arranged edgewise with respect to the glazed medium, an angle iron for supporting the glazed medium having its legs disposed at 45 degrees to the plane of the said medium, and relatively yielding means for supporting said angle from said rafter.

2. In greenhouse construction, a rafter comprising a flat unitary metal bar arranged edgewise with respect to the glazed medium, an angle for supporting the glazed medium having its legs disposed at 45 degrees to the plane of the said medium, and relatively yielding means for supporting said angle from said rafter comprising a metal backing strip of M-section.

3. In greenhouse construction, a rafter comprising a unitary metal bar arranged edgewise with respect to the glazed medium, and an angle for supporting the glazed medium having its legs disposed at 45 degrees to the plane of said medium, means for supporting said angle from said rafter, and a core mounted within the angle forming a seat for the glazing member.

4. In greenhouse construction, a rafter comprising a unitary metal bar arranged edgewise with respect to the

glazed medium, and an angle for supporting the glazed medium having its legs disposed at 45 degrees to the plane of said medium, means for supporting said angle from said rafter, and a core mounted within the angle forming a seat for the glazed member, the legs of the angle extending beyond said core to form condensation gutters between said core and said legs.

5. In greenhouse construction, a rafter comprising a unitary metal bar arranged edgewise with respect to the glazed medium, and an angle for supporting the glazed medium having its legs disposed at 45 degrees to the plane of said medium, means for supporting said angle from said rafter, and a core mounted within the angle forming a seat for the glazed member, said core having a shoulder adapted to project between adjacent panes of glass and space the same.

[Claims 6 to 16 not printed in the Gazette.]

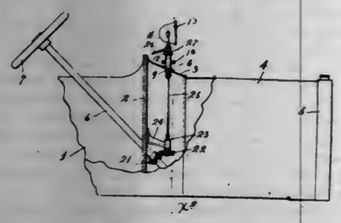
1,210,503. RAILWAY-SIGNAL. DANIEL G. LYZEN, Grand Rapids, Mich. Filed Nov. 2, 1914. Serial No. 869,987. (Cl. 246—36.)



1. In combination with a trolley system and a target system, containing boxes, temporary magnets in said boxes, angled levers pivotally mounted in said boxes, one arm of one of said levers in constant contact with the trolley wire and arranged to automatically close an electric circuit through the target system by the passing of the trolley wheel, the other lever arranged to break the electric circuit by the passing of the trolley wheel.

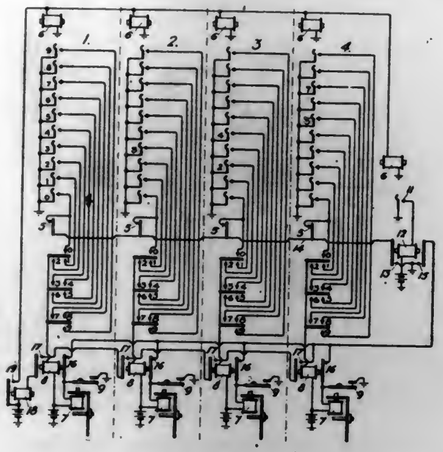
2. In combination with a trolley system, containing boxes, electromagnets in said boxes, a target electrically connected with said magnets, an angled lever pivotally mounted in one of said boxes with one arm in constant contact with the trolley wire and arranged to close an electric circuit through the target system by the passing of a trolley wheel, an angled lever pivotally mounted in the other containing box with one arm normally in contact with the magnet and having a ground connection, and the other arm so disposed that a passing trolley will automatically open the electric circuit that energizes the target system.

1,210,504. HEADLIGHT FOR AUTOMOBILES. LESTER A. LONGLEY, Little Falls, Minn. Filed Feb. 21, 1916. Serial No. 79,603. (Cl. 240—62.)



The combination with an automobile having a steering column, of a bracket mounted on the vehicle, a gear journaled on the bracket, connections from the steering column for oscillating the gear, a shaft, a headlight carried by the shaft, a clutch normally connecting said shaft and gear, and a cam lever for disconnecting said clutch, supporting the headlight and oscillating the shaft, at will.

1,210,505. POINT-FINDER SYSTEM. ALBEN E. LUNDELL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Nov. 28, 1914. Serial No. 874,419. (Cl. 179—90.)



1. The combination with a number keyboard comprising a plurality of series of point designating keys, each series representing several numerals and naught, of point finding registers one for each series of keys, means for controlling said registers to find points designated by actuated numeral keys and to find the point represented by the naught designation in each series provided no numeral key in that series is actuated.

2. In combination, a plurality of variously designated contacts, a switch movable into a plurality of positions designated in accordance with the designation of said contacts, actuating means for said contacts, means responsive to the actuation of any one of said contacts for moving the switch into a position designated by the actuated contacts, and separate means for moving said switch into a certain one of said positions.

3. In combination, an electromagnetic switch, a starting and a stopping circuit therefor, means for simultaneously closing said circuits, a series of contacts, means responsive to the actuation of any one of said contacts for rendering said stopping circuit ineffective, and means under the joint control of said switch and the actuated contact for rendering said stopping circuit effective.

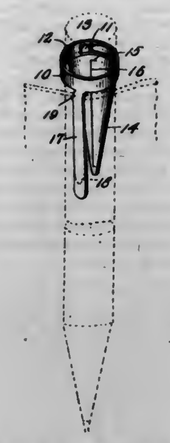
4. A series of contacts, a normally inactive switch having a plurality of operating positions, means for actuating one of said contacts, means operative thereupon for moving said switch into a certain position, and means operative provided none of said contacts is actuated for moving said switch into said certain position.

5. In combination, a switch having a plurality of operating positions, means for actuating said switch, a plurality of contacts, means for arresting said switch in certain operating positions depending on the contact actuated, and separate means for arresting said switch in one of said certain operating positions.

[Claims 6 to 13 not printed in the Gazette.]

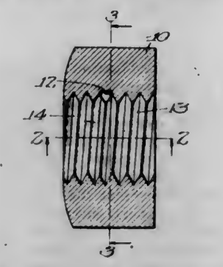
1,210,506. COMBINED PENCIL SHARPENER AND HOLDER. EUGENE V. MCDONALD, Rochester, N. Y. Filed June 9, 1916. Serial No. 102,706. (Cl. 120—84.)

1. A combined pencil sharpener and holder comprising a band adapted to be releasably secured around a pencil, a V-shaped lateral extension on said band having a slot therein, a knife along one edge of said slot, an arm extending laterally from the band, and a shoulder on said arm against which the outer end of the extension is adapted to engage when the free ends of the extension and arm are pressed together.



2. A combined pencil sharpener and holder formed from a metal blank and embodying a band adapted to be releasably secured around a pencil, a V-shaped lateral extension on said band having a slot therein, a knife along one edge of said slot, an arm extending laterally from the band, and a shoulder on said arm extending laterally from the band, and a shoulder on said arm against which the outer end of the extension is adapted to engage when the free ends of the extension and arm are pressed together.

1,210,507. NUT AND BOLT LOCK. CLIFFORD P. MARYE, South Whitley, Ind., assignor of one-third to William A. Rosenbaum, trustee, New Rochelle, N. Y. Filed Mar. 24, 1913, Serial No. 756,282. Renewed May 25, 1916. Serial No. 99,917. (Cl. 151—22.)



1. The herein described nut and bolt lock element having a non-spring body provided with a plurality of successive threaded sections, the threads of each of said sections being of uniform pitch throughout, and the pitch of the sections being the same, the said sections being so arranged that the thread of one section will be normally out of helical alinement with those of the next succeeding section.

2. The combination of a threaded bolt and a nut coöperating therewith, both of which have a non-spring body, one of the elements having a rotatively non-distorted body and being provided with a plurality of thread sections, the threads of each section being of uniform pitch throughout, the said sections being contiguous and so arranged with respect to each other that they will be normally out of helical alinement, and the other element being provided with a continuous thread of a size and pitch uniform with the said thread sections and adapted to simultaneously engage the thread sections.

3. The combination of a threaded bolt and a nut cooperating therewith, both of which have a non-spring body, one of the elements being provided with a plurality of immediately successive thread-sections, the threads of each section being of uniform pitch throughout, the said sections being so arranged with respect to each other that they will be normally out of helical alinement, there being a non-threaded space between the proximate ends of the thread sections, and the other element being provided with a continuous thread of a size and pitch uniform with the said thread sections and adapted to simultaneously engage the thread sections.

4. The herein described lock nut having a solid non-spring threaded body, the thread being cut in such a manner as to form two immediately successive sections of threads extending in directions from opposite faces of the nut toward each other, and so that the thread sections will be normally out of helical alinement, the threads of each section being of the same uniform pitch.

5. The herein described nut and bolt lock element having a non-spring body provided with a plurality of coaxial thread sections, the threads of each of said sections being of uniform pitch throughout, and the pitch of the sections being the same, the said sections immediately succeeding each other and being so arranged that the threads of the sections will be normally out of helical alinement with respect to each other.

[Claims 6 to 16 not printed in the Gazette.]

1,210,508. TAP. CLIFFORD P. MARYE, South Whitley, Ind., assignor of one-third to William A. Rosenbaum, trustee, New Rochelle, N. Y. Filed May 29, 1914, Serial No. 841,762. Renewed May 25, 1916. Serial No. 99,918. (Cl. 10—141.)

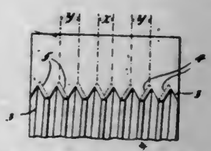


1. A tap provided with two sections of cutting threads arranged successively thereon, one section being bodily offset from the other a fraction of the width of one thread for the purpose set forth.

2. A tap provided with two sections of cutting threads each having the same pitch and arranged successively thereon, one section being bodily offset from the other a fraction of the width of one thread for the purpose set forth.

3. A tap provided with two sections of cutting threads arranged successively thereon, one section being bodily offset from the other a fraction of the width of one thread, the first section having convolutions of less diameter than that of the convolutions of the second section.

1,210,509. METHOD OF MANUFACTURING NUTS. CLIFFORD P. MARYE, South Whitley, Ind., assignor of one-third to William A. Rosenbaum, trustee, New Rochelle, N. Y. Filed May 29, 1914, Serial No. 841,763. Renewed May 25, 1916. Serial No. 99,919. (Cl. 10—86.)

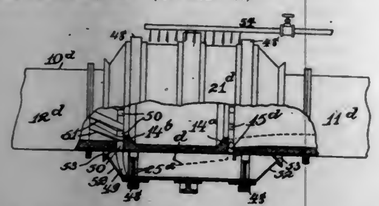


1. The method of forming a thread in a nut which consists in cutting an unfinished thread of uniform character throughout the bore of the nut, then cutting away one surface of the unfinished thread throughout a portion of

its length and finally cutting away the opposite surface of the remainder of the unfinished thread, for the purpose set forth.

2. The method of forming a thread in a nut which consists in cutting a thread of uniform character throughout the bore of the nut when cutting away one surface of said thread throughout a portion of its length.

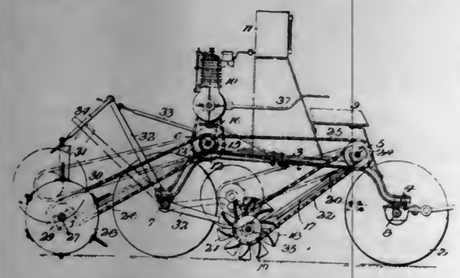
1,210,510. APPARATUS FOR THE MANUFACTURE OF PORTLAND CEMENT AND SIMILAR PRODUCTS. WILLIAM H. MASON, Easton, Pa. Filed May 21, 1914. Serial No. 840,032. (Cl. 222—7.)



1. In cement apparatus, a rotary kiln section for calcining unground cement forming material, a clinkering kiln section substantially in line therewith, and a rotary grinding mill intermediate the two kiln sections, there being an uninterrupted substantially straight closed passage through the kiln sections and the mill whereby the cement forming material is first calcined, then ground and then clinkered, and the products of combustion and gases pass continuously and directly through the apparatus in the opposite direction.

2. In cement apparatus, a rotary kiln section for calcining unground cement forming material, a rotary clinkering kiln section in line therewith, and a rotary grinding mill intermediate the two kiln sections and of a larger diameter, there being a continuous closed passage through the kiln sections and mill, and the kiln sections and mill being each separately rotatable, substantially as set forth.

1,210,511. MOTOR-CULTIVATOR. FRANK MATOUSHEK, Colome, S. D. Filed Nov. 8, 1915. Serial No. 60,310. (Cl. 97—71.)



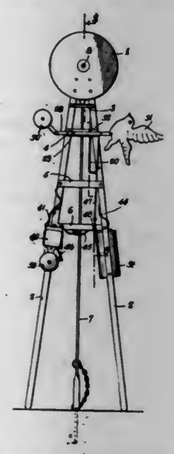
1. An agricultural implement comprising a truck, independent front and rear earth-treating devices suspended from the truck, a motor mounted upon the truck, operative connections between the motor and the earth-treating devices, and a lifter pivotally supported on the truck between the front and rear earth-treating devices and adapted to be operatively connected therewith whereby to hold both said devices elevated and be balanced by them.

2. In an implement of the character specified, the combination of a truck, frames connected with the truck and provided with earth-treating devices and adapted to be moved to effect a raising or a lowering of the earth-treating devices, a lifter pivotally mounted upon the frame and adapted to engage one of the frames to hold the same elevated, and connecting means between such lifter and the other one of the frames whereby the frames mutually counter-balance to hold one another in raised position with the earth-treating devices clear of the ground.

3. An implement of the character specified, a truck, a pivoted frame provided with earth-treating devices, a pivoted lifter adapted to engage the said frame, a second pivoted frame provided with earth-treating devices, and a connection attached to the second frame and adapted to engage the lifter for holding both frames in raised position with the earth-treating devices clear of the ground.

4. In an implement of the character described, a main frame, two pivoted frames provided with earth-treating devices, a lifter pivoted upon the main frame and adapted to engage one of the pivoted frames, adjustable connecting means between the lifter and main frame, connecting means carried by the other pivoted frame for engaging the lifter to hold both pivoted frames in raised position, and adjustable means connecting the lifter with the connection of the second pivoted frame.

1,210,512. TARGET. ALBERT MAURER, New York, N. Y. Filed Aug. 21, 1916. Serial No. 115,945. (Cl. 124—15.)



1. In a target, the combination of a support, a target thereon having an opening therein, a bull's-eye plate in alinement with the opening, a plunger to which said plate is secured, a bracket secured to said support, a cylinder carried thereby, in which said plunger extends, resilient means therein adapted to press said plate forward into the opening, an arm secured to said plunger at one end and pivoted to said support at the other, an arm pivoted to the front of said support, having a counterweight at one end and a signal device at the other, and a horizontal detent slidably mounted in said support, secured to said first named arm, and adapted to extend into coöperative relation to said signal arm to normally hold the same in depressed position, said detent being releasable by rearward impact on said bull's-eye plate, substantially as set forth.

2. In a target, the combination of a support, a target thereon having an opening therein, a bull's-eye plate adapted to be alined with said opening, a plunger to which said plate is secured, a rearwardly extending bracket secured to the upper portion of said support, a member carrying a cylinder, hinged to said bracket, and adapted to extend rearwardly or hang vertically therefrom, said plunger extending into said cylinder, said cylinder being arranged to resiliently resist rearward movement of said plunger therein, and means for securing said member in its upper, rearwardly extending position, with said bull's-eye plate alined with said opening, substantially as set forth.

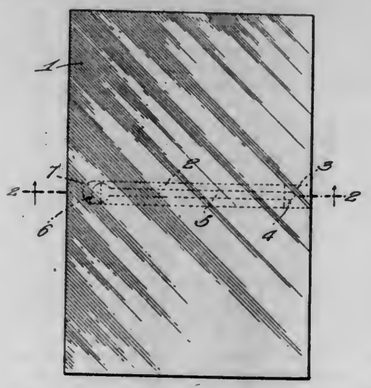
3. In a target, the combination of a pair of supporting legs, a target thereon having an opening therein, a bull's-eye plate adapted to be alined with said opening, a plunger to which said plate is secured, a rearwardly extending bracket secured to the upper ends of said legs, a member carrying a cylinder and having a horizontal base portion, hinged to said bracket and adapted to extend rearwardly or hang vertically therefrom, said plunger extending into said cylinder, said base portion having a strap thereon, and a third supporting leg adapted to extend to the rear, and having a bent upper portion removably inserted through said strap, when mounted in position, to hold said member and cylinder in its upper, rearwardly-extending position, substantially as set forth.

4. In a target, the combination of a support, a target thereon having an opening therein, a bull's-eye plate adapted to be alined with said opening, a plunger to which said plate is secured, a member hinged to said support, and having guiding means in which said plunger is carried, said member being adapted to extend rearwardly in operative, or hang vertically, in inoperative position, an arm secured to said plunger at its upper end and having an offset portion at its lower end, a strap pivotally mounted on said off-set portion, means for removably securing said strap to said support, a detent pin mounted on said arm, a bearing in the support for said pin, when said member is in its operative position, and a signal arm held in depressed position by said detent pin, and released thereby when said plunger and pin are moved rearwardly, substantially as set forth.

5. In a target, the combination of a pair of supporting legs, having upper and lower cross bars, a target above the same having an opening therein, a bull's-eye plate mounted in alinement with said opening, a horizontally-movable member carrying said plate, a vertical rod connected to said member and pivoted to one of said legs, a bearing tube in one of said cross bars, a detent pin on said rod extending through said tube, a counterweighted signal arm pivoted on said cross bar and normally held in depressed position by said detent pin, and means for sounding a signal when said arm is released, substantially as set forth.

[Claim 6 not printed in the Gazette.]

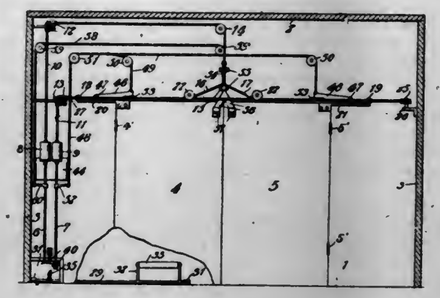
1,210,513. DENTAL MIXING-SLAB. EUGENE FRANCIS MEDEARIS, Quenemo, Kans. Filed May 29, 1916. Serial No. 100,580. (Cl. 73—52.)



1. A glass mixing slab having a bore extending from one edge across the greater portion of its length, said bore being open at one end and closed at its other, and inclined inwardly from its open toward its closed end, a thermometer disposed in said bore and having a scale visible through one face of said slab, and a removable closure for the open end of said bore.

2. A glass mixing slab having a bore extending inwardly from one edge thereof, a cushion disposed in the inner end of said bore and having an inwardly opening seat therein, a stopper for the open end of said bore having a seat in its inner end, and a thermometer arranged in said bore with its ends disposed in said seats and held against turning by said cushion and stopper.

1,210,514. DOOR-OPERATING DEVICE. ALBERT MILLER, Rochester, Minn. Filed Mar. 22, 1916. Serial No. 85,851. (Cl. 268—9.)

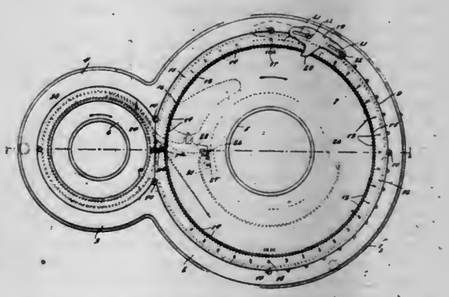


1. In a device of the class described, a pair of doors, arms carried thereby, an operating lever, a pair of cables connected therewith, said cables having their free ends connected with said arms, yieldable power-transmitting means in said cables, means for engagement with said arms to lock the doors in open position, and means engageable with the doors for locking the same in closed position, both of said locking means being operatively engaged with said cables to render said locking means at times inoperative.

2. In a device of the class described, power-transmitting means comprising a cylinder, said cylinder being connected to an object to be moved, a disk associated with said tubular member and a spring for connecting the same thereto, said disk being connected with a source of power, and a block for engagement with said disk when said disk is distended under action.

3. In a device of the class described, an operating lever, a pair of cables connected thereto, said cables being operatively connected to a pair of doors to move the same to open or closed position, yieldable power-transmitting means interposed in said cables comprising tubular members, springs in said tubular members, disks connected with said spring, a retaining block for engagement with said disk when said springs are distended under action, and means for locking said doors in open and closed positions.

1,210,515. TRAIN-RESISTANCE-COMPUTING MEANS. BERT B. MILNER, New York, N. Y. Filed Jan. 8, 1915. Serial No. 1,080. (Cl. 235—74.)

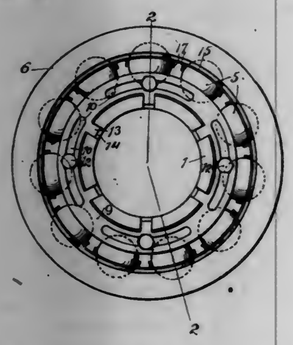


1. A device for computing adjusted train resistance or adjusted tonnage proportional thereto, comprising a rota-

table member having a plurality of equally spaced recesses therein, and two circumferential fixed scales cooperating therewith, one indicating car weights, and the other adjustment factors, said scales being numbered in opposite directions from a point common to both, a manually adjustable stop coöperating with the adjustment factor scale, and manually operated means for fixing said stop relative to the adjustment factor scale throughout an indeterminate number of operations of the rotatable member.

2. A device for computing adjusted train resistance or adjusted tonnage proportional thereto, comprising a rotatable disk having two hundred recesses therein, two circumferential scales of one hundred divisions each corresponding to the recesses on said disk, one indicating car weights and the other an adjustment factor, a manually adjustable stop coöperating with the adjustment factor scale, and manually operated means for fixing said stop relative to said adjustment factor scale throughout an indeterminate number of operations of said disk.

1,210,516. BALL-BEARING. JOSEPH L. MORRIS, Lawrence, Kans. Filed Mar. 9, 1916. Serial No. 83,087. (Cl. 64—59.)



1. In a ball bearing, a threaded supporting member, a locking member having interlocked engagement therewith for holding it against circumferential movement thereon and adjustable longitudinally of said supporting member, a bearing member having threaded engagement with the supporting member, and means for clamping the bearing member to the locking member by which the bearing member may be circumferentially adjusted to and held locked in any position relatively to the supporting member.

2. In a ball bearing, a threaded supporting member, a locking member adjustable longitudinally of said supporting member and having interlocked engagement therewith for holding it against circumferential movement thereon and provided with a slot concentric with the supporting member, a bearing member having threaded engagement with the supporting member and circumferentially adjustable relatively thereto and to the locking member, and clamping means secured to the bearing member and extending through and circumferentially adjustable in said slot for clamping the bearing member to the locking member.

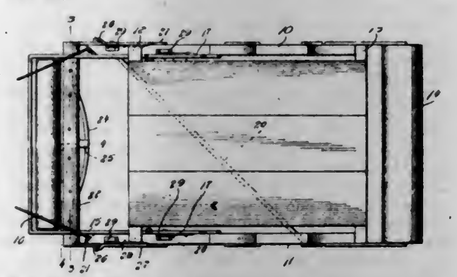
3. In a ball bearing, an externally threaded sleeve, a locking member adjustable lengthwise thereof and having interlocked engagement therewith for holding the locking member against circumferential movement thereon, a bearing member having threaded engagement with said sleeve, and circumferentially adjustable to any position relatively to the sleeve and locking member, and means for clamping the bearing member to the locking member by which the bearing member may be circumferentially adjusted to and held locked in any position relatively to the supporting member.

4. In a ball bearing, a threaded supporting member, a locking member longitudinally adjustable thereon and interlocked therewith against circumferential movement and having a slot concentric with said supporting member, a bearing member having threaded engagement with the supporting member and circumferentially adjustable thereon and provided with a threaded hole, and a clamping screw extending through said slot and fitted in said hole and adapted to releasably clamp the locking and bearing members together.

5. In a ball bearing, an externally threaded sleeve, a locking member longitudinally adjustable thereon and interlocked therewith against circumferential movement and having a slot concentric with said supporting member, a bearing member having threaded engagement with and circumferentially adjustable on said supporting member and provided with a threaded hole, and a screw extending through said slot and fitted in said hole and adapted to releasably clamp the locking and bearing members together.

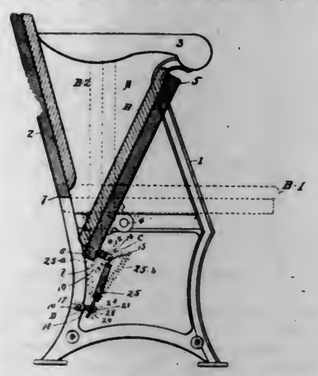
[Claims 6 to 15 not printed in the Gazette.]

1,210,517. ROAD-GRADER. JENS J. NILSON, Holmquist, S. D. Filed May 28, 1914. Serial No. 841,539. (Cl. 37—5.)



A road grading machine comprising a frame, a horizontally disposed and transversely extending cutting blade for cutting a slice from the surface of the road, and a depth gage consisting of a frame pivotally mounted on the first frame and extending forwardly of the said blade, a smooth cylindrical roller mounted on the forward end of the pivoted frame and disposed in front of and above the blade, and means for adjustably moving the pivoted frame on its pivots.

1,210,518. FOLDING DEVICE FOR THEATER-CHAIRS. HERBERT CLAYTON NOLAN, Winnipeg, Manitoba, Canada. Filed Sept. 27, 1915. Serial No. 52,882. (Cl. 155—13.)

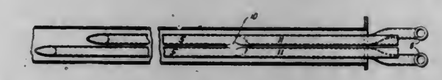


1. A chair having a back, a frame and a seat pivoted to the frame to fold against the back, a clip secured to the seat at the rear of its pivotal point, said clip having a portion adjustable as to the length of its projection below the seat, a second clip secured to the frame below the seat, and a spring secured to the adjustable portion of the first clip and having adjustable connection with the second clip whereby its tension may be regulated, the force of the spring being exerted to maintain the seat normally elevated at an angle above the horizontal and movement of the seat in either direction therefrom serving to increase the energy of the spring to return the seat to normal position.

2. A chair having a back, a seat pivoted to the frame to fold against the back, a clip secured to the seat at the rear of its pivotal point and projecting therebelow, a second clip secured to the frame below the seat and adjustable as to its projection therefrom, a spring extending between the clips on the seat and frame, and means to regulate the tension of the spring.

3. A chair having a back, a frame, a seat pivoted to fold against the back, a clip secured to the seat at the rear of its pivotal point and having a portion adjustable as to its projection below the seat, a second clip secured to the frame below the seat and having a portion adjustable as to its projection from the frame, and a spring secured to the first clip and having adjustable connection with the second clip whereby its tension may be regulated.

1,210,519. SUPERHEATER. HENRY B. OATLEY, Flushing, and NEAL T. MCKEE, Yonkers, N. Y., assignors to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 22, 1916. Serial No. 86,033. (Cl. 122—462.)



1. The combination of a flue, a superheater unit of the class described within said flue, said unit comprising means to change the direction of flow of steam through it at a point remote from the ends of the flue, and two tubes attached to said means, their interior however not communicating with the interior of the unit.

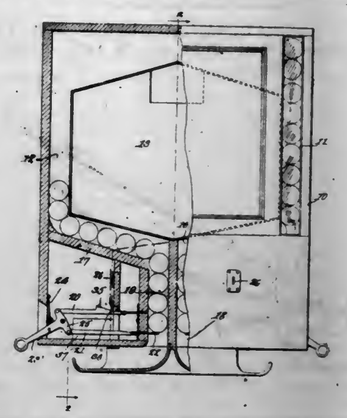
2. The combination of a flue, a header, a superheater unit located within said flue and comprising four tube lengths joined *seriatim* by three return bends, the middle return bend being remote from the front end of the flue, the first and the last tube lengths being connected directly to the header, and two pipe lengths extending forward from said middle return bend in such manner that their axes are in line respectively with the axes of the two tube lengths opening into said middle return bend.

3. In a boiler, the combination of a flue, a header, a superheater unit located within said flue, and comprising four tube lengths, means connecting the first to the second, the second to the third, and the third to the fourth length, the first and the fourth lengths being connected directly to the header, the means connecting the second to the third length being located at a point remote from the front end of the flue, and portions independent of the first and fourth lengths extending forward from said last mentioned means and each having the same cross-sectional outline as the tube lengths.

4. In a boiler, the combination of a flue, a header, a superheater unit of the class described located within said flue and comprising four lengths, two of said lengths communicating at one end directly with the header and at the other end with the remaining two lengths, said remaining two lengths communicating with each other at a point remote from the front end of the flue; and two pipe lengths united to the unit in such manner that their axes coincide with those of the tube length last mentioned, their interior however not communicating with the interior of the unit.

1,210,520. SOFT-DRINK-VENDING MACHINE. THOMAS L. OLIVER, Cedar Grove, N. C. Filed July 7, 1916. Serial No. 108,001. (Cl. 194—37.)

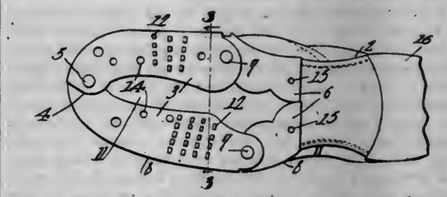
1. A vending machine having a storage compartment and supporting blades for alternate projection thereinto to intercept the objects in said compartment and connected for simultaneous movement in opposite directions, a locking latch normally engaged with one of said supporting blades and having a coin pocket, means for delivering a coin to said pocket, checking means for yieldingly limiting the movement of said locking latch, and means movable simultaneously with the supporting blades for displacing the locking latch to release the coin.



2. A vending machine having a runway, operatively connected supporting blades for alternately intersecting said runway, a locking latch normally in engagement with one of said supporting blades and provided with a coin pocket, a checking means for yieldingly limiting the movement of the locking latch when disengaged from said supporting blade, and a cam actuated by one of said supporting blades for further moving the locking latch to release the coin.

3. A vending machine having a runway, simultaneously movable supporting blades for alternate intersection of said runway, an intermediately pivoted locking latch having on one arm a coin pocket and having the other arm in engagement with a shoulder of one of said supporting blades, a pivotal checking member arranged in the path of the blade engaging arm of said locking latch for yielding limiting the movement of said latch, and a cam actuated by said supporting blade for further moving the latch to release the coin.

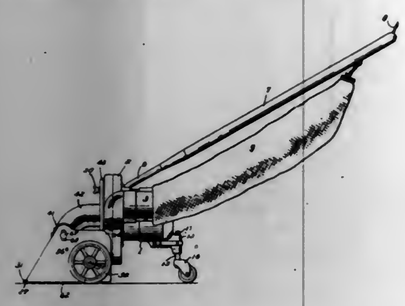
1,210,521. SHOE. JOHN STEVENS ORR, Augusta, Ky. Filed Sept. 23, 1915. Serial No. 52,241. (Cl. 36—62.)



In a device of the class described, a pair of forward plates adapted to be applied to the sole of a shoe and of sufficient length to extend unbrokenly from the toe of a shoe to the intermediate portion of the ball thereof, the forward ends of the plates being curved toward each other and being overlapped, the inner edges of the plates being spaced apart to the rear of the forward ends of the plates; a pivot element uniting the overlapped forward ends of the plates; and a pair of rear plates the forward ends of which are overlapped upon the rear ends of the forward plates and pivoted thereto for lateral swinging movement, the rear ends of the rear plates being free; all of the plates having upstanding flanges provided with

inwardly projecting sole-engaging lips, the flanges and the lips on the forward plates being spaced from the flanges and the lips on the rear plates, adjacent the points or pivotal connection between the rear plates and the forward plates, to permit lateral swinging movement of the rear plates, and to permit a vertical bending, in conformity to the bending of the sole wherewith the structure is assembled.

1,210,522. VACUUM CLEANING DEVICE. WILLIAM V. ORR, Cleveland, Ohio. Filed Apr. 19, 1912. Serial No. 691,966. (Cl. 15—60.)



1. In a suction sweeper, the combination, of a pair of end plates, a metallic casing plate of inverted V shape in cross section connecting said end plates and having an outlet opening at its top, an inner casing plate secured to the inner faces of said end plates and having its edges extending adjacent to the edges of said first casing plate so as to define a pair of narrow slits and diverging from said outer casing plate in the direction of said outlet to form passages from said slits to said opening, and deflecting plates secured in the space between said casing plates in said passages, each of said deflecting plates extending approximately from said slit to said outlet.

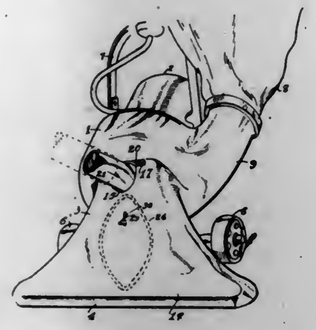
2. In a suction sweeper, in combination, a metallic casing plate of inverted V shape in cross section and having an outlet opening substantially midway of its top, an inner casing plate secured within and beneath said first plate and having its edges extending adjacent to the edges of said first plate so as to define a pair of narrow slits and diverging from said outer casing plate in the direction of said outlet to form passages from said slits to said opening, the ends of said passages being closed, and deflecting plates located in the space between said casing plates, each of said deflecting plates extending approximately from said slit to said outlet.

3. In a suction cleaner, a pair of end plates, a casing plate connecting said end plates a second casing plate spaced from said first casing plate and having one of its edges closely adjacent to the edge of the first casing plate so as to define a narrow slit, and the rest of its surface spaced from said first casing plate by an amount varying directly with the distance from said slit to form a passage, said plates together forming a head and said head having an outlet opening at a point removed from said slit, and a quadrilateral deflector located in the space between said casing plates substantially opposite to said outlet opening and dividing the air passageway.

1,210,523. SUCTION CLEANING DEVICE. WILLIAM V. ORR, Cleveland, Ohio. Filed July 9, 1915. Serial No. 38,843. (Cl. 15—60.)

1. In a suction cleaner, a casing having a fan chamber formed with an inlet opening in one of its sides, and a collecting nozzle carried by said casing and surrounding said opening, said nozzle having an aperture in one of its walls at a point adjacent to said casing, adapted to receive a hose connection, and means carried by said casing for securing said connection in place.

2. In a suction cleaner, a casing having a substantially cylindrical fan chamber formed with an inlet opening in one of its end walls and a fan shaped collecting nozzle projecting from said end wall and terminating in an inlet mouth whose plane is substantially parallel to the axis of said fan chamber, said nozzle surrounding said opening and having an aperture in its upper wall at a point adjacent to the end of said fan chamber, and adapted to receive a hose connection into said aperture and to surround said inlet opening.



3. In a suction cleaner, a casing having a fan chamber formed with an inlet opening in one of its sides and a collecting nozzle projecting from said chamber and surrounding said opening, said nozzle having an aperture in one of its side walls at a point adjacent to said casing, a plate adapted to be inserted into said aperture and to be secured against the side of said fan chamber, said plate carrying a hose receiving nipple adapted to register with said inlet opening.

4. In a suction cleaner, a casing having a fan chamber formed with an inlet opening in one of its sides and a collecting nozzle projecting from said chamber and surrounding said opening, said nozzle having a guideway inside each of its side walls at a point adjacent and parallel to the side of said fan chamber, a plate adapted to be slid along said guideways and to cover said opening, said plate carrying a hose receiving nipple adapted to register with said inlet opening, and means carried by said casing inside said nozzle for securing said plate in place.

5. In a suction cleaner, a casing having a fan chamber formed with an inlet opening in one of its walls and a collecting nozzle projecting from said wall and surrounding said opening, said nozzle having an elongated slot therein adjacent to the side of said casing and an aperture merging with said slot, a plate adapted to be slid edgewise into said nozzle through said slot, said plate carrying a hose connection adapted to register with said inlet opening, said connection when fully seated projecting through said aperture, and means for securing said plate to said casing.

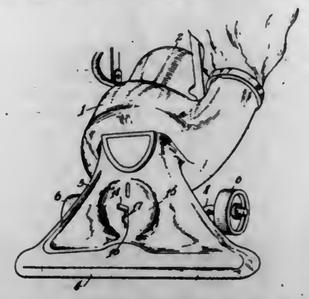
[Claims 6 to 10 not printed in the Gazette.]

1,210,524. SUCTION CLEANING DEVICE. WILLIAM V. ORR, Cleveland, Ohio. Filed July 9, 1915. Serial No. 38,844. (Cl. 15—60.)

1. In a suction cleaner, a nozzle having walls therein with a recess between said walls, an adjustable support for said nozzle, and an operating device connected to said support and projecting into the recess and adapted to adjust said support to raise or lower the nozzle.

2. In a suction cleaner, a nozzle, an adjustable support for said nozzle, adapted to support the same upon a floor, and an operating member connected to said support and extending through the nozzle and adapted to adjust said support to raise or lower the nozzle.

3. In a suction cleaner, a nozzle having a recess extending through the same, a wheeled crank axle under the nozzle and supporting the same, and an adjusting arm connected to said axle and projecting through said recess to the upper side of the nozzle.

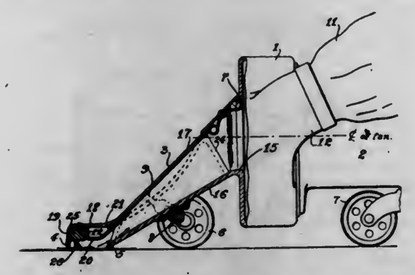


4. In a suction cleaner, a casing having a pump chamber and a fan shaped collecting nozzle projecting therefrom, a wall connecting the top and the bottom walls of said nozzle and spaced from both side walls, the top and bottom walls being discontinued within said partition whereby a recess is provided, a slotted web traversing said recess, an axle pivoted below said nozzle and having offset ends, rollers journaled on said ends, and an adjusting arm carried by said axle and projecting through the slot.

5. In a suction cleaner, a casing having a pump chamber and a fan shaped collecting nozzle projecting therefrom, a wall connecting the top and the bottom walls of said nozzle and spaced from both side walls, the top and bottom walls being discontinued within said partition whereby a recess is provided, an axle pivoted below said nozzle and having offset ends, rollers journaled on said ends, an adjusting arm carried by said axle and projecting through said recess, and means for securing said arm in different angular positions within said recess.

[Claim 6 not printed in the Gazette.]

1,210,525. SUCTION CLEANING DEVICE. WILLIAM V. ORR, Cleveland, Ohio. Filed Sept. 27, 1915. Serial No. 52,786. (Cl. 15—60.)



1. In a suction cleaner, a collecting nozzle having converging upper and lower walls, and diverging side walls, all terminating in an elongated mouth, and a symmetrical deflector extending between the upper and lower walls, behind said mouth, said deflector being shaped to form two passages in said nozzle, each passage being of substantially the same cross-sectional area throughout its length.

2. In a suction cleaner, a collecting nozzle comprising upper and lower converging walls terminating in a pair of spaced parallel lips defining an inlet mouth, one of said lips being lower than the other lip and having its upper surface inclined away from said other lip, in combination with a plate extending rearwardly from the upper lip, above said inlet mouth, said plate having a rearwardly and upwardly inclined portion projecting within said upper wall and forming a continuation thereof.

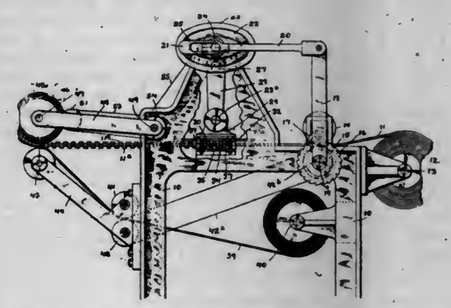
3. In a suction cleaner, a collecting nozzle terminating in a pair of spaced parallel lips defining an inlet and a wall located between said lips and parallel thereto, said wall being spaced from one lip to form a suction slot and from the other lip to form a brush receiving cavity, a portion of said wall being substantially parallel to and spaced inwardly from the plane of the mouth defined by the edges of said lips.

4. In a suction cleaner, a collecting nozzle terminating in upper and lower lips defining an inlet mouth, a dividing wall projecting from the upper lip over said mouth and spaced from the lower lip to form a suction slot and from the upper lip to define a brush chamber, said wall terminating at a point in the nozzle behind said inlet mouth, and a brush secured in said brush chamber and projecting downwardly beyond said wall, at the edge of said mouth.

5. In a suction cleaner, a nozzle having upper and lower walls terminating at one end in a narrow suction slot, and at the opposite end in an outlet opening, said walls diverging from each other as they recede from said slot and the sides of said nozzle transverse to said slot converging toward each other as they recede from said slot, and a hollow deflector located between said slot and the outlet from said nozzle and symmetrically about the longitudinal axis of said nozzle, said deflector having an angle presented toward said slot at substantially the middle point thereof and having at its opposite part an angle presented toward said outlet, the cross sectional area of the air passage within said nozzle remaining substantially constant from point to point, the axis of said air passage lying in a straight line which intersects the center of the outlet.

[Claim 6 not printed in the Gazette.]

1,210,526. BOOK-MATCH MACHINE. WILLIAM H. PARKER, Steilacoom, Wash. Filed Feb. 16, 1915. Serial No. 8,656. (Cl. 144—57.)

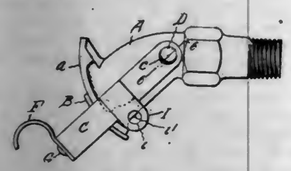


A match machine of the kind described comprising a stationary knife block having banks of knives arranged at both ends thereof and spaced apart from each other, a reciprocating knife block having knives arranged to intermesh with the knives of the aforesaid stationary knife block, means for feeding the stock between the knives, a stationary stripper having openings at both ends through which the cutting members of the movable knife block pass, and a reciprocating stripper connected to and movable with the reciprocating knife block, said reciprocating stripper having openings through which the cutting members of the stationary knife block pass.

1,210,527. FAUCET. FRANK E. PARR, Buffalo, N. Y. Filed Apr. 5, 1915. Serial No. 19,120. (Cl. 137—5.)

1. In a faucet, the combination with a barrel having a discharge opening, of a sliding gate adapted to be moved into and out of registration with said discharge opening, a swinging frame adapted to actuate said gate and having resilient side portions adapted to be bent toward and from each other, lugs on said barrel over which the side portions of the frame are adapted to be sprung and which have notches for retaining the side portions of said frame

against lateral movement, and a spring interposed between the gate and the frame and adapted to hold the frame in engagement in said notches.



2. The combination with a nozzle, of an integral U-shaped yoke swiveled thereto, and having cheek portions at the sides of the nozzle and an obturating portion at the end of the nozzle, one of said cheeks provided with a perforation, and a padlock having a shackle engaging said perforation and adapted to abut the under surface of the nozzle.

3. The combination with a barrel having a discharge opening, of a sliding gate adapted to be moved into and out of registration with the discharge opening, a swinging frame for actuating said gate comprising a strip of resilient metal bent substantially into U-shape and having holes in the ends of the side portions thereof, lugs on said barrel over which the side portions are sprung and which enter said holes, said lugs having notches into which portions of the frame enter, and a spring which presses the gate against the end of the barrel and which holds the frame in engagement in said notches.

4. In a faucet, the combination of a barrel having a discharge opening, of a frame adapted to be actuated for controlling the discharge of liquid through said opening, said frame having side portions pivoted on said barrel and an end portion connecting the side portions and formed integral therewith, one of said side portions having a part adjacent to said barrel and adapted to receive a part of a lock which is adapted to engage with a face of the barrel when the faucet is closed to prevent the frame from being moved about its pivot to open the faucet.

5. The combination with a barrel having a discharge opening, of a single piece pivoted frame adapted to be actuated for controlling the discharge of liquid through said opening, a downwardly extending portion on said frame adjacent to said barrel and having a hole which extends below the lower face of said barrel when the frame is in position to close the discharge opening, said hole being adapted to receive a part of a lock which engages with the lower face of the barrel to prevent the swinging of the frame to uncover the discharge opening.

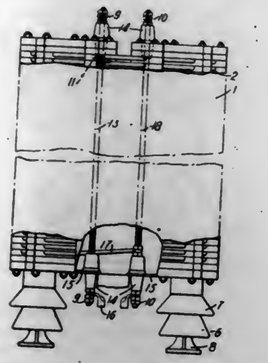
[Claim 6 not printed in the Gazette.]

1,210,528. CONNECTOR FOR REACTANCE-COILS. JOHN F. PETERS, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 3, 1914. Serial No. 864,729. (Cl. 175—356.)

1. A reactance coil comprising a pair of superposed and laterally extending members, one of which is disposed near the top portion of the coil and the other of which is disposed near its bottom portion, an insulated conducting rod supported by said inwardly extending members, means for electrically connecting the rod to one terminal of the coil, and terminals secured to the ends of said rod and projecting beyond the coil.

2. A reactance coil comprising superposed and inwardly extending members, an insulated conducting rod disposed in the opening of the coil and supported by said members, means for electrically connecting said rod to one terminal of the coil, and terminals secured to the end portions of said rod which project beyond the coil.

3. A reactance coil comprising superposed and laterally extending members, insulating bushings secured to the ends thereof, a conducting rod supported by said members and projecting through said bushings, means for electrically connecting said rod to one of the coil ends, and terminals secured to the ends of the rod which project beyond the coil.

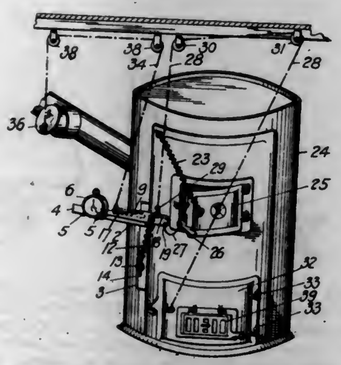


4. A reactance coil comprising two pairs of superposed and inwardly extending members, insulated bushings secured to the ends thereof, two conducting rods spaced from each other and disposed in the coil opening, each of said rods projecting through a pair of said superposed bushings, means for electrically connecting the coil ends to the rods, and terminals secured to the ends of the rod which project beyond the coil.

5. A coil comprising an electrical conductor wound in the form of a plurality of convolutions, spacing members engaging the conductor, means for holding said spacing members in rigid relationship, a longitudinally extending metallic member disposed in the coil opening, the metallic member being connected to said electrical conductor and provided at one of its extremities with an accessible terminal to which an electrical connection may be made with the coil.

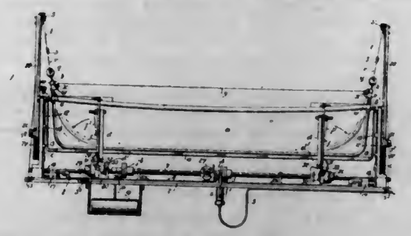
[Claims 6 to 8 not printed in the Gazette.]

1,210,529. DRAFT-REGULATING APPLIANCE. OSCAR J. PFEIFFER, Denver, Colo. Filed May 7, 1913. Serial No. 766,177. (Cl. 236—7.)



In combination, a support adapted to be secured to a wall or other upright surface, a lever fulcrumed thereon and having at points remote from its fulcrum, means for the attachment of flexible connections, a trip engaging an end of said lever for holding it in a substantially horizontal position, and a spring connected at one end to the support at a point beneath the fulcrum of the lever, and at its opposite end to the lever at a point disposed above the fulcrum when the lever is in its said horizontal position, said points of connection of the spring being under the same conditions, at opposite sides of a vertical passing through the fulcrum and in a straight line which closely approaches the same, and the spring being under said conditions expanded to move the lever to a substantially vertical position when released by the trip.

1,210,530. DAVIT AND MEANS FOR HOLDING AND RELEASING SHIPS' BOATS, RAFTS, AND THE LIKE. GERARD JOHN PHILLIPS and LOUIS ANTHONY KELLER, Sydney, New South Wales, Australia. Filed Feb. 28, 1916. Serial No. 80,866. (Cl. 9—22.)



1. In means for holding and releasing boats on board ships, the combination of boat holding side frames or chocks adapted to be displaced so as to release the boat davits, means adapted to suspend the boat from the davits means for pivotally supporting the boat at the bow and stern independently of said frames or chocks and suspending means when held in the side frames or chocks and means for putting out of action the said supporting means.

2. In means for holding and releasing boats on board ships, the combination of boat holding side frames or chocks adapted to be displaced so as to release the boat, means for pivotally supporting the boat at the bow and stern independently of the side frames or chocks when held in the said side frames or chocks, davits, means connecting the boat to the davits and means for conjointly releasing the side frames or chocks and the supporting means.

3. In means for holding and releasing boats on board ship, the combination of boat holding side frames or chocks adapted to be displaced so as to release the boat, means for pivotally supporting the boat at the bow and stern independently of the side frames or chocks when held in the said side frames or chocks, means for putting out of action said supporting means, fulcrumed davits having a tendency to swing outward when they take the weight of the boat, and means connecting the boat to the davits.

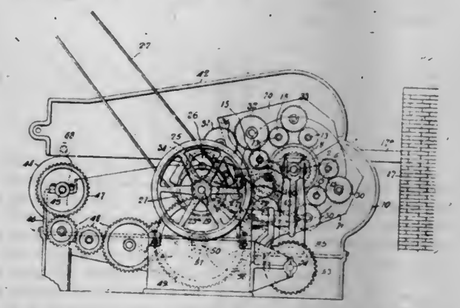
4. In means for holding and releasing boats on board ship, the combination of boat holding side frames or chocks adapted to be displaced so as to release the boat, means for pivotally supporting the boat at the bow and stern independently of the side frames or chocks when held in the said side frames or chocks, means for putting out of action said supporting means, means connecting the boat to the davits and means for releasing the side frames or chocks.

5. In means for holding and releasing boats on board ship, the combination of boat holding side frames or chocks adapted to be displaced so as to release the boat, means for pivotally supporting the boat at the bow and stern independently of the side frames or chocks when held in said side frames or chocks, means for putting out of action said supporting means, and means connecting the boat to the davits and adapted to automatically disengage the boat when it is water borne.

[Claims 6 to 19 not printed in the Gazette.]

1,210,531. APPARATUS FOR FORMING FLANGED ANNULAR BANDS OR SLEEVES. WILLIAM W. PRICE, Dayton, Ohio. Filed Feb. 23, 1911. Serial No. 610,201. (Cl. 78—88.)

1. In a machine of the character described, the combination, with a two part mandrel, each part comprising a cylindrical portion and a flange and the two parts thereof being capable of relative movement along the axis of said mandrel, and means for positively rotating said mandrel, of a series of positively driven forming rollers arranged about the periphery of said mandred, each roller having a part extending between the flanges of said mandrel and shaped to coöperate therewith to form and weld a flanged sleeve, a part of said rollers being capable of movement transversely to the axis of said mandrel, whereby the two parts of said mandrel may be withdrawn from the finished sleeve and the forming rollers spaced apart to permit said sleeve to be removed, means to control the operation of said machine as a whole, and other means for interrupting the rotation of said mandrel and said rollers while said sleeve is being removed.

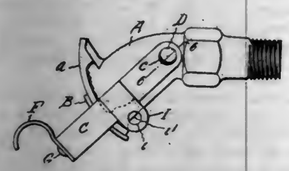


2. In a machine of the character described, the combination, with a two part mandrel, each part comprising a cylindrical portion and a flange and the two parts thereof being capable of relative movement along the axis of said mandrel, and means for positively rotating said mandrel, of a series of positively driven forming rollers arranged about the periphery of said mandrel, each roller having a part extending between the flanges of said mandrel and shaped to coöperate therewith to form and weld a flanged sleeve, a part of said rollers being capable of movement transversely to the axis of said mandrel, whereby the two parts of said mandrel may be withdrawn from the finished sleeve and the forming rollers spaced apart to permit said sleeve to be removed, means to control the operation of said machine as a whole, and means to interrupt the rotation of said forming rollers during the removal of said sleeve.

3. In a machine of the character described, the combination, with a two part mandrel, each part comprising a cylindrical portion and a flange, and the two parts thereof being capable of relative movement along the axis of said mandrel, of a series of forming rollers arranged about the periphery of said mandrel, each roller having a portion extending between the flanges of said mandrel and shaped to coöperate therewith to form and weld a flanged sleeve, the uppermost rollers being capable of substantially radial movement relatively to the axis of said mandrel, whereby the two parts of said mandrel may be withdrawn from the finished sleeve, the sleeve allowed to rest on the lower forming rollers and the upper forming rollers moved away from the lower forming rollers to permit the sleeve to be removed.

4. In a machine of the character described, the combination, with a two part mandrel, each part comprising a cylindrical portion and a flange and the two parts thereof being capable of relative movement along the axis of said mandrel, of a series of forming rollers arranged about the periphery of said mandrel, each roller having a portion extending between the flanges of said mandrel and shaped to coöperate therewith to form and weld a flanged sleeve, the uppermost rollers being capable of substantially radial movement relatively to the axis of said mandrel, whereby the two parts of said mandrel may be withdrawn from the finished sleeve, the sleeve allowed to rest on the lower forming rollers and the upper forming rollers moved away from the lower forming rollers to permit the sleeve to be removed, and means to interrupt the ro-

against lateral movement, and a spring interposed between the gate and the frame and adapted to hold the frame in engagement in said notches.



2. The combination with a nozzle, of an integral U-shaped yoke swiveled thereto, and having cheek portions at the sides of the nozzle and an obturating portion at the end of the nozzle, one of said cheeks provided with a perforation, and a padlock having a shackle engaging said perforation and adapted to abut the under surface of the nozzle.

3. The combination with a barrel having a discharge opening, of a sliding gate adapted to be moved into and out of registration with the discharge opening, a swinging frame for actuating said gate comprising a strip of resilient metal bent substantially into U-shape and having holes in the ends of the side portions thereof, lugs on said barrel over which the side portions are sprung and which enter said holes, said lugs having notches into which portions of the frame enter, and a spring which presses the gate against the end of the barrel and which holds the frame in engagement in said notches.

4. In a faucet, the combination of a barrel having a discharge opening, of a frame adapted to be actuated for controlling the discharge of liquid through said opening, said frame having side portions pivoted on said barrel and an end portion connecting the side portions and formed integral therewith, one of said side portions having a part adjacent to said barrel and adapted to receive a part of a lock which is adapted to engage with a face of the barrel when the faucet is closed to prevent the frame from being moved about its pivot to open the faucet.

5. The combination with a barrel having a discharge opening, of a single piece pivoted frame adapted to be actuated for controlling the discharge of liquid through said opening, a downwardly extending portion on said frame adjacent to said barrel and having a hole which extends below the lower face of said barrel when the frame is in position to close the discharge opening, said hole being adapted to receive a part of a lock which engages with the lower face of the barrel to prevent the swinging of the frame to uncover the discharge opening.

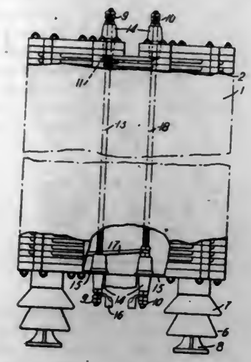
[Claim 6 not printed in the Gazette.]

1,210,528. CONNECTOR FOR REACTANCE-COILS. JOHN F. PETERS, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 3, 1914. Serial No. 864,729. (Cl. 175—356.)

1. A reactance coil comprising a pair of superposed and laterally extending members, one of which is disposed near the top portion of the coil and the other of which is disposed near its bottom portion, an insulated conducting rod supported by said inwardly extending members, means for electrically connecting the rod to one terminal of the coil, and terminals secured to the ends of said rod and projecting beyond the coil.

2. A reactance coil comprising superposed and inwardly extending members, an insulated conducting rod disposed in the opening of the coil and supported by said members, means for electrically connecting said rod to one terminal of the coil, and terminals secured to the end portions of said rod which project beyond the coil.

3. A reactance coil comprising superposed and laterally extending members, insulating bushings secured to the ends thereof, a conducting rod supported by said members and projecting through said bushings, means for electrically connecting said rod to one of the coil ends, and terminals secured to the ends of the rod which project beyond the coil.

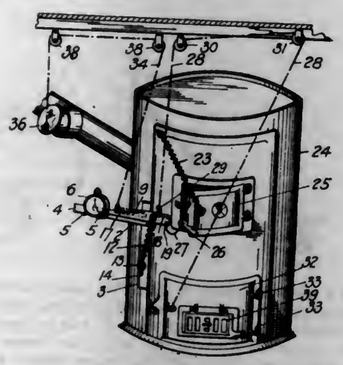


4. A reactance coil comprising two pairs of superposed and inwardly extending members, insulated bushings secured to the ends thereof, two conducting rods spaced from each other and disposed in the coil opening, each of said rods projecting through a pair of said superposed bushings, means for electrically connecting the coil ends to the rods, and terminals secured to the ends of the rod which project beyond the coil.

5. A coil comprising an electrical conductor wound in the form of a plurality of convolutions, spacing members engaging the conductor, means for holding said spacing members in rigid relationship, a longitudinally extending metallic member disposed in the coil opening, the metallic member being connected to said electrical conductor and provided at one of its extremities with an accessible terminal to which an electrical connection may be made with the coil.

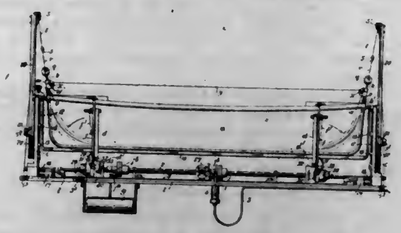
[Claims 6 to 8 not printed in the Gazette.]

1,210,529. DRAFT-REGULATING APPLIANCE. OSCAR J. PFEIFFER, Denver, Colo. Filed May 7, 1913. Serial No. 766,177. (Cl. 236—7.)



In combination, a support adapted to be secured to a wall or other upright surface, a lever fulcrumed thereon and having at points remote from its fulcrum, means for the attachment of flexible connections, a trip engaging an end of said lever for holding it in a substantially horizontal position, and a spring connected at one end to the support at a point beneath the fulcrum of the lever, and at its opposite end to the lever at a point disposed above the fulcrum when the lever is in its said horizontal position, said points of connection of the spring being under the same conditions, at opposite sides of a vertical passing through the fulcrum and in a straight line which closely approaches the same, and the spring being under said conditions expanded to move the lever to a substantially vertical position when released by the trip.

1,210,530. DAVIT AND MEANS FOR HOLDING AND RELEASING SHIPS' BOATS, RAFTS, AND THE LIKE. GERARD JOHN PHILLIPS and LOUIS ANTHONY KELLER, Sydney, New South Wales, Australia. Filed Feb. 28, 1916. Serial No. 80,866. (Cl. 9—22.)



1. In means for holding and releasing boats on board ships, the combination of boat holding side frames or chocks adapted to be displaced so as to release the boat davits, means adapted to suspend the boat from the davits means for pivotally supporting the boat at the bow and stern independently of said frames or chocks and suspending means when held in the side frames or chocks and means for putting out of action the said supporting means.

2. In means for holding and releasing boats on board ships, the combination of boat holding side frames or chocks adapted to be displaced so as to release the boat, means for pivotally supporting the boat at the bow and stern independently of the side frames or chocks when held in the said side frames or chocks, davits, means connecting the boat to the davits and means for conjointly releasing the side frames or chocks and the supporting means.

3. In means for holding and releasing boats on board ship, the combination of boat holding side frames or chocks adapted to be displaced so as to release the boat, means for pivotally supporting the boat at the bow and stern independently of the side frames or chocks when held in the said side frames or chocks, means for putting out of action said supporting means, fulcrumed davits having a tendency to swing outward when they take the weight of the boat, and means connecting the boat to the davits.

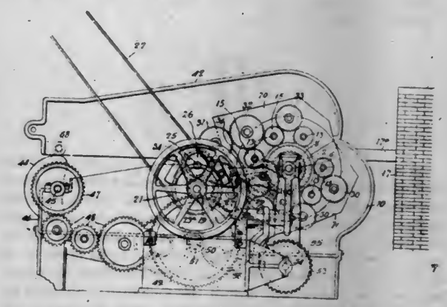
4. In means for holding and releasing boats on board ship, the combination of boat holding side frames or chocks adapted to be displaced so as to release the boat, means for pivotally supporting the boat at the bow and stern independently of the side frames or chocks when held in the said side frames or chocks, means for putting out of action said supporting means, means connecting the boat to the davits and means for releasing the side frames or chocks.

5. In means for holding and releasing boats on board ship, the combination of boat holding side frames or chocks adapted to be displaced so as to release the boat, means for pivotally supporting the boat at the bow and stern independently of the side frames or chocks when held in said side frames or chocks, means for putting out of action said supporting means, and means connecting the boat to the davits and adapted to automatically disengage the boat when it is water borne.

[Claims 6 to 19 not printed in the Gazette.]

1,210,531. APPARATUS FOR FORMING FLANGED ANNULAR BANDS OR SLEEVES. WILLIAM W. PRICE, Dayton, Ohio. Filed Feb. 23, 1911. Serial No. 610,201. (Cl. 78—88.)

1. In a machine of the character described, the combination, with a two part mandrel, each part comprising a cylindrical portion and a flange and the two parts thereof being capable of relative movement along the axis of said mandrel; and means for positively rotating said mandrel, of a series of positively driven forming rollers arranged about the periphery of said mandred, each roller having a part extending between the flanges of said mandrel and shaped to coöperate therewith to form and weld a flanged sleeve, a part of said rollers being capable of movement transversely to the axis of said mandrel, whereby the two parts of said mandrel may be withdrawn from the finished sleeve and the forming rollers spaced apart to permit said sleeve to be removed, means to control the operation of said machine as a whole, and other means for interrupting the rotation of said mandrel and said rollers while said sleeve is being removed.



2. In a machine of the character described, the combination, with a two part mandrel, each part comprising a cylindrical portion and a flange and the two parts thereof being capable of relative movement along the axis of said mandrel, and means for positively rotating said mandrel, of a series of positively driven forming rollers arranged about the periphery of said mandrel, each roller having a part extending between the flanges of said mandrel and shaped to coöperate therewith to form and weld a flanged sleeve, a part of said rollers being capable of movement transversely to the axis of said mandrel, whereby the two parts of said mandrel may be withdrawn from the finished sleeve and the forming rollers spaced apart to permit said sleeve to be removed, means to control the operation of said machine as a whole, and means to interrupt the rotation of said forming rollers during the removal of said sleeve.

3. In a machine of the character described, the combination, with a two part mandrel, each part comprising a cylindrical portion and a flange, and the two parts thereof being capable of relative movement along the axis of said mandrel, of a series of forming rollers arranged about the periphery of said mandrel, each roller having a portion extending between the flanges of said mandrel and shaped to coöperate therewith to form and weld a flanged sleeve, the uppermost rollers being capable of substantially radial movement relatively to the axis of said mandrel, whereby the two parts of said mandrel may be withdrawn from the finished sleeve, the sleeve allowed to rest on the lower forming rollers and the upper forming rollers moved away from the lower forming rollers to permit the sleeve to be removed.

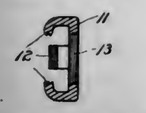
4. In a machine of the character described, the combination, with a two part mandrel, each part comprising a cylindrical portion and a flange and the two parts thereof being capable of relative movement along the axis of said mandrel, of a series of forming rollers arranged about the periphery of said mandrel, each roller having a portion extending between the flanges of said mandrel and shaped to coöperate therewith to form and weld a flanged sleeve, the uppermost rollers being capable of substantially radial movement relatively to the axis of said mandrel, whereby the two parts of said mandrel may be withdrawn from the finished sleeve, the sleeve allowed to rest on the lower forming rollers and the upper forming rollers moved away from the lower forming rollers to permit the sleeve to be removed, and means to interrupt the ro-

tation of said lower forming rollers after the completion of the sleeve and during its removal.

5. In a machine of the character described, a flanged mandrel, means for positively rotating the same, a forming roller coöperating with said mandrel and comprising a body portion extending between the flanges thereof, reduced portions on the opposite sides of said body portion, and collars loosely mounted on said reduced portions and engaging the respective flanges of said mandrel.

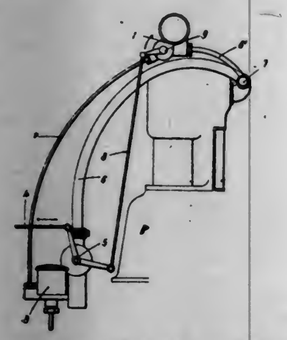
[Claims 6 to 19 not printed in the Gazette.]

1,210,532. LOCK-NUT. ADOLPH C. RECKER, Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed May 12, 1916. Serial No. 97,057. (Cl. 151—21.)



As a new article of manufacture, a wrought-metal self-locking bushing for the caps of incandescent-lamp sockets, the said bushing being formed in its face with a centrally threaded opening and being also formed with a plurality of integral arms separated from each other and having their ends bent inward at a right angle to the plane of the face of the bushing and then inward toward the plane thereof, the central opening in the face of the bushing and the ends of its arms being threaded with threads of the same lead, and one or more of the arms being deflected to carry its or their threads out of line with the threads of the said opening, whereby when the bushing is applied to a nipple, the thrusts produced by the disalinement of the threads will cause the bushing to bind and fasten itself in place.

1,210,533. CARBURATION DEVICE FOR INTERNAL-COMBUSTION ENGINES. LOUIS RENAULT, Billancourt, France. Filed July 21, 1913. Serial No. 780,332. (Cl. 123—127.)



1. The combination with a water-cooled internal combustion engine and one of the water-conducting pipes associated with the cooling system of a main carbureter for normal and high speeds, and a low speed carbureter supplied with fuel from the main carbureter and arranged to be heated by said water-conducting pipe.

2. A carbureting device for internal combustion engines, comprising a main carbureter for normal and high speeds, a low speed carbureter located at a higher level than said main carbureter and adjacent the intake manifold, means for controlling the supply of carbureted air from each of the carbureters to the engine, and connections between said means whereby both may be simultaneously actuated.

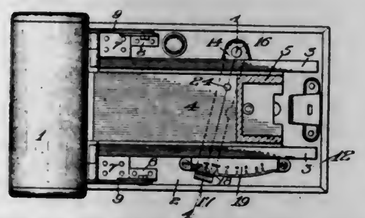
3. A carbureting device for internal combustion engines having a single fuel supply, comprising two separate carbureters one arranged below and the other above the fuel supply level, means for controlling the supply of carbureted air from each of the carbureters to the engine, and connections between said means whereby both may be simultaneously actuated.

4. A carbureting device for internal combustion engines having a single fuel supply, comprising a main carbureter for normal and high speeds arranged below the fuel supply level, a low speed carbureter positioned above the fuel supply level, means to control the supply of carbureted air from the main carbureter to the engine, means to control the supply of carbureted air from the low speed carbureter to the engine, said last-named means adapted to vary the degree of carburation of the air admitted to the low speed carbureter, and connections between both of said means.

5. A carbureting device for internal combustion engines, comprising two separate carbureters, one arranged below and the other above the intake manifold, and a common means for regulating both carbureters.

[Claim 6 not printed in the Gazette.]

1,210,534. FOCUSING DEVICE FOR CAMERAS. WILLIAM A. RIDDELL, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 20, 1915. Serial No. 56,947. (Cl. 95—45.)



1. In a focusing device for cameras, the combination with a camera bed having an opening therein, of a sliding lens carrying element mounted to rest against the top face of the bed and a lever arranged in the opening in the latter to vibrate in the same plane therewith and operatively connected to the lens carrying element to slide the same back and forth along the bed.

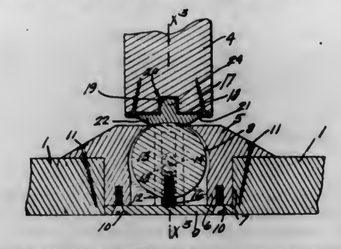
2. In a focusing device for cameras, the combination with a camera bed embodying a plate having an opening therein and carrying the camera attachments, of a cover plate fixed against the under side of the bed plate, a sliding lens carrying element mounted to rest against the top face of the bed plate, and a lever arranged in the opening in the latter to vibrate in the same plane therewith and operatively connected to the lens carrying element to slide the same back and forth along the bed.

3. In a focusing device for cameras, the combination with a camera bed embodying a plate having a segmental opening therein, of a sliding lens carrying element mounted to rest against the top face of the bed and a lever arranged in the opening in the latter to vibrate in the same plane therewith and to be limited in its movements by the walls of the opening, said lever being operatively connected to the lens carrying element to slide the same back and forth along the bed.

4. In a focusing device for cameras, the combination with a camera bed embodying a plate having an opening therein and an offset or embossed portion adjacent the opening, of a sliding lens carrying element mounted to rest against the top face of the bed and a lever arranged in the opening in the latter and pivoted to the embossed or offset portion thereof to vibrate in the plane of the bed plate, said lever being operatively connected to the lens carrying element to slide the same back and forth along the bed.

5. In a focusing device for cameras, the combination with a camera bed embodying a plate having a segmental opening therein and an offset or embossed portion adjacent to the narrow end of the opening, of a cover plate fixed against the under side of the bed plate, a sliding lens carrying element mounted to rest against the top face of the bed, and a lever arranged in the opening in the latter and pivoted beneath the embossed or offset portion thereof to vibrate in the plane of the bed plate between the cover plate and lens carrying element, said lever being operatively connected to the lens carrying element to slide the same back and forth along the bed.

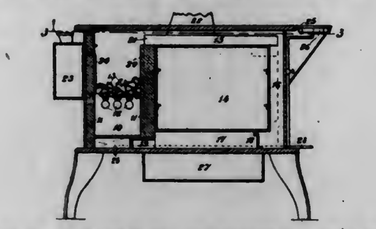
1,210,535. YIELDING JOINT-STRIP FOR THRESHOLDS. FRANK T. RILEY, Tappen, N. D. Filed June 18, 1915. Serial No. 34,821. (Cl. 20—64.)



1. A threshold extending above and below the floor line and having on its sides beveled flanges which overlie the floor, said threshold also having a recess with a contracted throat in the top thereof and a displaceable bottom, in combination with a radially movable roller mounted in the recess of said threshold, of springs yieldingly holding the roller in the contracted throat of the threshold.

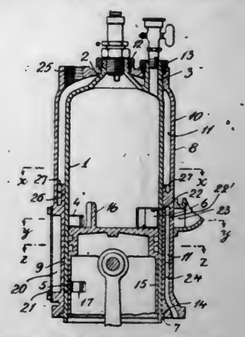
2. The combination with a door casing, a door mounted therein, and a threshold provided with a recess having a contracted throat extending the full distance between the uprights of the door casing, said threshold also having end extensions projecting under the uprights of the casing, of vertically movable bearings mounted in the end extensions of the threshold, a roller having trunnions mounted in the recess of the threshold with its trunnions journaled in said bearings, and springs compressed between said bearings and the bottom of the recess for yieldingly pressing the roller in engagement with the door when closed.

1,210,536. GAS STOVE OR RANGE AND ATTACHMENTS THEREFOR. CLAUDE ARNOLD RIPPER, Arncliffe, near Sydney, New South Wales, Australia. Filed Jan. 20, 1914. Serial No. 813,216. (Cl. 126—39.)



A gas stove having a fire box, burners positioned within the fire box, a quantity of incandescible material associated with the burners for direct contact with the flames issuing from the same, the vertical walls of the firebox being lined with refractory material, an oven positioned adjacent to one of said walls and being spaced from the stove top to afford a top flue in communication with the firebox, the stove having continuations of said flue extending around the sides and the bottom of the oven, diagonally beneath the firebox from one corner of the oven bottom, and upwardly in a diagonal direction past the firebox and oven, and an auxiliary top flue leading from the upper end of the last-mentioned flue continuation through the top flue and having walls separating it from direct communication with the latter.

1,210,537. CONSTRUCTION OF CYLINDERS OF INTERNAL-COMBUSTION ENGINES. EDMUND W. ROBERTS, Sandusky, Ohio, assignor, by mesne assignments, to The Roberts Motor Manufacturing Company, Sandusky, Ohio, a Corporation of Ohio. Filed Dec. 2, 1913. Serial No. 804,191. (Cl. 123—193.)



1. A jacketed cylinder comprising in combination a cylinder proper, having at one end a projecting boss and at the other end a shoulder, a separately formed jacket fitting over said cylinder and having at one end an aperture through which said boss projects, and at the other end a shoulder engaging the said shoulder of said cylinder, said jacket having, near its said shoulder, a long sleeve portion embracing and fitting tightly a corresponding portion of said cylinder and forming a tight joint therewith, and securing means on said boss securing the cylinder and jacket together.

2. A jacketed cylinder comprising in combination a cylinder proper and a separately formed jacket fitting thereover, one portion of said jacket being double-walled, with its inner wall fitting the cylinder closely, another portion of said jacket being single-walled, such single-wall spaced away from the cylinder, the space between such single-walled portion of the jacket and the cylinder constituting a jacket space, said single-walled and double-walled portions of the jacket being integral.

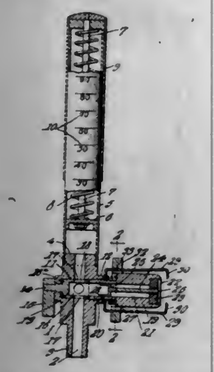
3. A jacketed cylinder comprising in combination a cylinder proper and a separately formed jacket fitting thereover, one portion of said jacket being double-walled, with its inner wall fitting the cylinder closely, another portion of said jacket being single-walled, such single-wall spaced away from the cylinder, the space between such single-walled portion of the jacket and the cylinder constituting a jacket space, said jacket space in communication with the space between the walls of the double-walled portion of the jacket, said single-walled and double-walled portions of the jacket being integral.

4. A jacketed cylinder comprising in combination a cylinder proper and a jacket fitting thereover, one portion of such jacket being double-walled and having between its walls a jacket space, the inner wall of such double-walled portion fitting the cylinder closely, another portion of such jacket being single-walled, and spaced away from said cylinder, the space between such single-wall and the cylinder constituting a jacket space, said jacket provided with webs connecting the inner and outer walls at points near the end of the inner wall of the double-walled portion of the jacket, said single-walled and double-walled portions of the jacket being integral.

5. A jacketed cylinder for two-cycle internal combustion engines, comprising in combination a cylinder proper having in its sides admission and exhaust ports and a separately formed jacket fitting over said cylinder and having admission and exhaust ports registering with the corresponding ports of said cylinder, a portion of said jacket being double-walled, with its inner wall fitting the cylinder closely, the said ports of the jacket being located in such double-walled portion of the jacket, said double-walled portion extending beyond the region of said ports a distance sufficient to insure a tight joint between the cylinder and

jacket, a further portion of said jacket being single-walled, and spaced away from the cylinder, said single-walled and double-walled portions of the jacket being integral.

1,210,538. AIR-GAGE FOR TIRES. ELIAS B. ROSE, Minneapolis, Minn. Filed Apr. 3, 1916. Serial No. 88,651. (Cl. 137—28.)



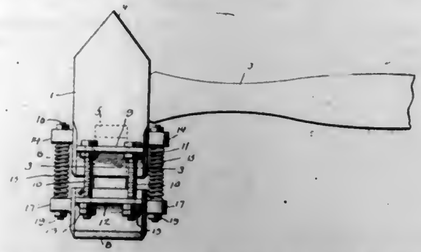
1. A device of the character described, comprising a body having a longitudinal bore and a transverse bore intersecting it, one end of the longtudinal bore being adapted to communicate with a source of air under pressure, a gage connected to one end of the body in communication with the other end of the longitudinal bore, and a rotatable valve within the transverse bore having a longitudinal bore extending from one end and adapted to communicate with a pneumatic tire, the other end of the valve having a stem projecting out of the body, the valve having apertures communicating with its bore adapted to register simultaneously with the longitudinal bore of the body, said valve having another aperture to be brought into communication with the gage while the opposite portion of the valve closes the respective portion of the longitudinal bore.

2. A device of the character described comprising a body having a longitudinal bore and a transverse bore intersecting it, one end of the longitudinal bore being adapted to communicate with a source of air under pressure, a cylinder attached to one end of the body in communication with the other end of the longitudinal bore, a piston working within the cylinder whereby it is moved by the air pressure to indicate the pressure, a member attachable to a valve barrel of a pneumatic tire and having a nipple threaded into the mouth of the transverse bore, said member having an outlet bore for the air, and a valve rotatable within the transverse bore and having one end closed and provided with a stem projecting out of the body to enable the valve to be rotated, the valve having a bore extending from its other end and communicating with the outlet bore continually, the valve having a pair of opposite apertures to register simultaneously with the longitudinal bore and having another aperture to register with that portion of the longitudinal bore communicating with said cylinder.

1,210,539. SLEDGE-HAMMER. JAMES F. RUDD, McComas, W. Va., assignor of one-half to G. S. Gladwell, McComas, W. Va. Filed Sept. 9, 1916. Serial No. 119,321. (Cl. 145—29.)

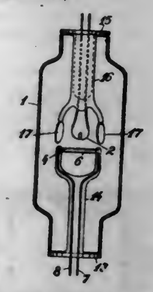
1. A sledge hammer comprising a body portion having a recess in one end thereof, a handle secured to said body portion, a shank slidable within said recess, a cushioning head formed on said shank, pairs of oppositely disposed rods rigidly secured to the body portion and slidably connected to the cushioning head, and tension means connected to the body portion and to the cushioning head.

2. A sledge hammer comprising a body portion having a recess in one end thereof, a handle secured to said body portion, pairs of oppositely disposed lugs formed on the sides of the body portion, rods rigidly secured to said lugs, a shank slidable within the recess, a cushioning head formed on said shank, means for slidably securing the rods to the head, and cushioning means secured to the body portion and to the head.



3. A sledge hammer comprising a body portion having a recess in one end thereof, a handle secured in said body portion, a shank slidable in said recess, a head formed on said shank, pairs of oppositely disposed rods rigidly secured to the body portion and slidably secured to the head, a pair of oppositely disposed lugs formed on the front and rear sides of the body portion, coil springs secured to the lugs, and pairs of lugs formed on the front and rear sides of the cushioning head and secured to the springs to form a cushioning means between the head and body portion.

1,210,540. CATHODE-RAY TUBE. HANS EWALD REINHOLD RUKOP and WILHELM KUNO MAX SCHLOEMILCH, Berlin, Germany, assignors to Gesellschaft für drahtlose Telegraphie M.-B.-H., Berlin, Germany, a Corporation of Germany. Filed Oct. 28, 1915. Serial No. 58,485. (Cl. 250—27.)



1. In a cathode ray tube having a high vacuum, an anode, an auxiliary anode, insulating blocks connecting said anode with said auxiliary anode, and a glowing cathode perpendicularly arranged to the plane of said auxiliary anode.

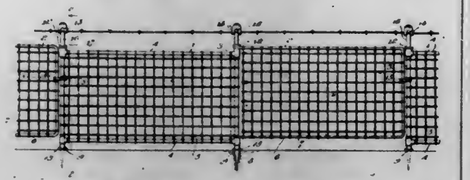
2. In a cathode ray tube having a high vacuum, an anode, a spiral forming an auxiliary anode, stiffening means for said auxiliary anode, and a glowing cathode perpendicularly arranged to the plane of said spiral.

3. In combination a glass tube, an anode and an auxiliary anode therein, a common support for said anode and auxiliary anode, attached to said tube, a glowing cathode perpendicularly arranged to the plane of said auxiliary anode and supporting means for said cathode independently of said common support.

4. In combination, a glass tube, an anode, an auxiliary anode therein, a common support for said anode and said auxiliary anode forming the bottom part of said tube, a glowing cathode perpendicularly arranged to the plane of said auxiliary anode and supported by a block forming the cover of said tube.

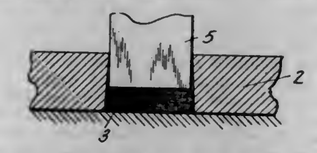
5. In combination, a glass tube, an anode, an auxiliary anode therein, a common support for said anode and said auxiliary anode forming the bottom part of said tube, a glowing cathode perpendicularly arranged to the plane of said auxiliary anode and supported by a block forming the cover of said tube, and means for strengthening the stream of electrons from said cathode to said anode.

1,210,541. PORTABLE FENCE. JARED A. RYKER, Galena, Ark. Filed Mar. 27, 1914. Serial No. 827,696. (Cl. 256—26.)



A device of the class described consisting of a pin, a shank of larger diameter than said pin formed integrally thereupon so as to provide a shoulder between said pin and shank, said shank being flattened out at one end and bent around to provide a hook shaped portion, said hook shaped portion of the shank being formed bifurcated so as to provide a pair of stems, one of said stems being bent upwardly and rearwardly to provide a hook, and the other being bent downwardly and rearwardly to provide another hook terminal, said hook terminals of said stems being in substantial alinement.

1,210,542. PROCESS OF FORMING CAKES FROM COFFEE. FREDERICK L. SAVAGEAU, Denver, Colo., assignor to The Independence Coffee and Spice Company, a Corporation of Colorado. Filed Apr. 21, 1916. Serial No. 92,733. (Cl. 99—11.)



1. The herein described process of forming coffee into cakes consisting in roasting coffee-beans to a degree sufficient to liberate their agglutinative constituents without exposing the same on the surface of the beans, grinding and sizing the coffee beans and removing the chaff from the ground product, then heating the ground coffee, expelling air from a measured quantity of the ground coffee, subjecting the said quantity of coffee to a pressure for reducing its volume over fifty per cent. and forming it into cakes, hardening the surface of the cake by the application of a protective coating, and finally relieving the cake from lateral pressure for its removal from the parts with which it was in contact while subjected to pressure.

2. The herein described process of forming coffee into cakes consisting in roasting coffee-beans to a degree sufficient to liberate their agglutinative constituents without exposing the same on the surface of the beans, grinding and sizing the coffee beans and removing the chaff from the ground product, heating the ground coffee, expelling air from a measured quantity of the ground coffee, subjecting the said quantity of coffee to a pressure for reducing its volume over fifty per cent. and forming it into cakes, and hardening the surface of the cake by the application of a protective coating.

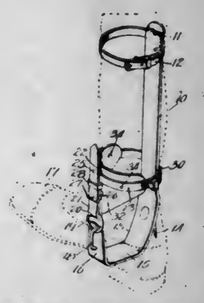
3. The herein described process of forming coffee into cakes consisting in roasting coffee-beans to a degree sufficient to liberate their agglutinative constituents without exposing the same on the surface of the beans, heating the roasted coffee, expelling air from a measured quantity of the roasted coffee, and subjecting the said quantity of coffee to a pressure for reducing its volume over fifty per cent. and forming it into cakes.

4. The herein described process of forming coffee into cakes consisting in roasting coffee-beans to a degree sufficient to liberate their agglutinative constituents without exposing the same on the surface of the beans, expelling air from a measured quantity of the roasted coffee and finally subjecting the said quantity of coffee to a pressure for reducing its volume over fifty per cent. and forming it into cakes.

5. The herein described process of forming coffee into cakes consisting in roasting coffee-beans to a degree sufficient to liberate their agglutinative constituents without exposing the same on the surface of the beans, and subjecting a quantity of the roasted coffee to a pressure for reducing its volume over fifty per cent. and forming it into cakes.

[Claims 6 to 9 not printed in the Gazette.]

1,210,543. POLE-CLIMBER. JOHN E. SCHANK, Chicago, Ill. Filed Apr. 17, 1916. Serial No. 91,680. (Cl. 36—60.)



1. In a device of the class described, the combination with the generally L-shaped leg iron having a spike at the angle thereof, of securing means at the top of the iron, and securing means toward the bottom of the iron consisting of flexible connections with the lower end of the iron opposite the spike extending up above the ankle, and a horizontally extending strap adapted to encircle the calf of the user and include the upright portion of the iron, said strap being secured to the upper end of the flexible connections.

2. In a device of the class described, the combination with the generally L-shaped leg iron having a spike at the angle thereof, of securing means at the top of the iron, an up-turned end of the horizontal portion of the iron, a staple projecting from the outer side of the up-turned end, a ring in the staple, a vertically extending strap connected to the ring, and a horizontally extending strap connected to the vertical strap to encircle the leg above the user's ankle.

3. In a device of the class described, the combination with the generally L-shaped leg iron having a spike at the angle thereof, of securing means at the top of the iron, an up-turned end of the horizontal portion of the iron, a staple projecting from the outer side of the up-turned end, a ring in the staple, a vertically extending strap having a loop by which it is connected to the ring, a buckle connecting both sides of the strap above the loop, said buckle serving to regulate the length of the loop, and a horizontally extending strap having a buckle at one end and holes at the other riveted to the inside upper end of the vertically extending strap.

1,210,544. KEYWAY-SLOTTING DEVICE. WILLIAM F. SCHMIDT, St. Louis, Mo. Filed Nov. 11, 1915. Serial No. 60,956. (Cl. 90—33.)

1. A slotting device comprising a bar having a longitudinal groove in its side, a cutter support arranged

lengthwise in said groove, one end of said cutter support being pivoted to said bar to permit the other end to swing transversely thereof, teeth on the free end of said cutter support, a cross slot in said bar across the end of said groove, a screw mounted for rotation in said cross slot, said screw engaging the teeth of said cutter support, and a cutter on the free end of said support projecting from said longitudinal groove.



2. A slotting device comprising a bar having a longitudinal groove in its side, a cutter support arranged lengthwise in said groove and held against longitudinal movement therein, one end of said cutter support being pivoted to said bar to permit the other end to swing transversely thereof, said cutter support having teeth on its free end and a projecting shoulder on its outer edge adjacent thereto, a cross slot in said bar across the end of said longitudinal groove, a screw mounted for rotation in said cross slot, said screw engaging the teeth of said cutter support, and a cutter pivotally secured on the free end of said support, said cutter bearing against said shoulder and projecting from said longitudinal groove.

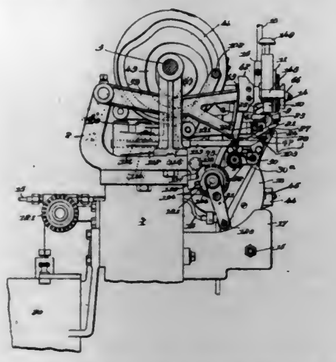
3. A slotting device comprising a bar having a longitudinal groove in its side, a cutter support arranged lengthwise in said groove, one end of said cutter support being pivoted to said bar to permit the other end to swing transversely thereof, a cross slot in said bar across the end of said groove, an adjusting screw mounted in said cross slot and engaging said cutter support, a cutter pivotally secured on the free end of said support for limited movement crosswise of said bar and projecting from said longitudinal groove, and a spring between said cutter and said cutter support for holding said cutter outwardly in cutting position.

4. In a slotting device, a bar having a narrow slot, a cutter holder mounted in said slot, a cutter pivotally mounted on said holder for inward and outward movement with respect to said slot, means for adjusting said holder and cutter crosswise of said slot, said holder having a shoulder engaging said cutter for limiting its outward pivotal movement, and a spring between said cutter and holder for holding said cutter out against said shoulder..

1,210,545. SEWING-MACHINE. AUGUST R. SCHOENKY, Somerville, Mass., assignor to The Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Sept. 25. 1912. Serial No. 722,300. (Cl. 112—20.)

1. In a sewing machine, the combination of a moving combined thread measure and take-up instrument, a thread clamp between said instrument and the thread supply, and a pair of coöperating parts, the first, as a cam, rotated by said instrument, and the second, as a bolt, actuated by said first part to move radially for clamping and unclamping said clamp, whereby said instrument first takes up thread and then after a given point measures off a further supply.

2. In a sewing machine, the combination of a swinging combined thread measure and take-up instrument, a thread clamp between said instrument and the thread supply, and a pair of coöperating parts, the first being a cam concentric with and rotated by said instrument, and the second a follower actuated by said cam to move radially for clamping and unclamping said clamp, whereby said instrument first takes up the thread and then after a given point measures off a further supply; together with means for adjusting said first part relatively to said instrument whereby the unclamping of the thread may be timed earlier or later.



3. In a sewing machine, the combination of a take-up arm swingable about a given axis, a thread-clamp wheel adapted to be rotated by the pull of the thread under the action of the take-up arm whereby thread may be drawn in measured quantities from a supply, a device for locking said wheel to clamp the thread during a part of each switch cycle, and a part or cam actuated by the take-up arm to unlock the wheel during the active stroke of said arm, whereby the thread is first taken up and then measured off.

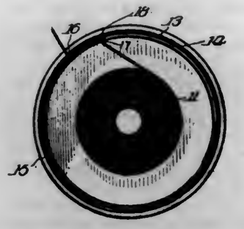
4. In a sewing machine, the combination of a take-up arm swingable about a given axis, a thread-clamp wheel adapted to be rotated by the pull of the thread under the action of the take-up arm whereby thread may be drawn in measured quantities from a supply, a device for locking said wheel to clamp the thread during a part of each stitch cycle, and a part or cam actuated by the take-up arm to unlock the wheel during the active stroke of said arm, whereby the thread is first taken up and then measured off; said wheel and cam being both concentric with the axis of take-up swinging.

5. In a sewing machine, the combination of a take-up arm swingable about a given axis, a thread-clamp wheel adapted to be rotated by the pull of the thread under the action of the take-up arm whereby thread may be drawn in measured quantities from a supply, a device for locking said wheel to clamp the thread during a part of each stitch cycle, and a part or cam actuated by the take-up arm to unlock the wheel during the active stroke of said arm, whereby the thread is first taken up and then measured off; said wheel and cam being both concentric with the axis of take-up swinging and said cam and device arranged so that the cam acts radially on said device for locking and unlocking the wheel.

[Claims 6 and 7 not printed in the Gazette.]

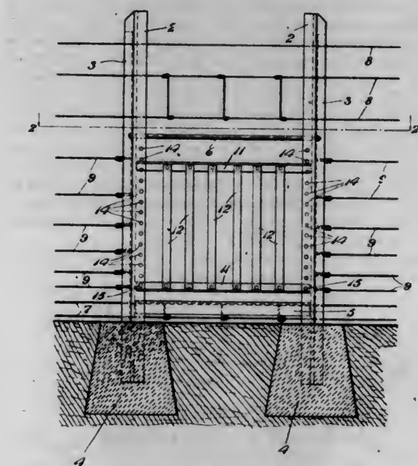
1,210,546. ADHESIVE-PLASTER CONTAINER. OTTO C. SCHULZ, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1914. Serial No. 809,876. (Cl. 206—52.)

The combination of an adhesive plaster roll and a container therefor consisting of a pair of side walls, each provided with a central opening and a hollow bead adjacent its periphery forming a circumferential groove, a hollow spindle disposed through said openings and arranged to prevent separating of said side walls, and a cylindrical end wall comprising two overlapping and relatively movable sections, one edge of each of said sections being secured to opposite side walls and the free



edges of said sections being flanged to interlockingly engage within the beads on the respective side walls.

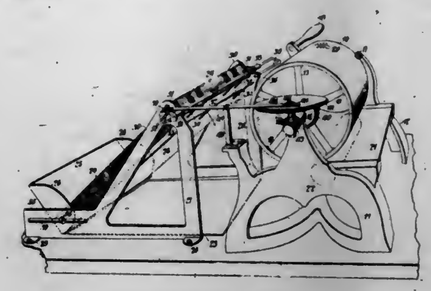
1,210,547. STOCK-SLIP. OWEN SCHUTT, Decatur, Mich. Filed Jan. 26, 1916. Serial No. 74,387. (Cl. 256—1.)



1. A device of the character described, comprised of spaced apart upright posts of Z-bar formation having the webs thereof located substantially parallel to each other with flanges at the front extending inwardly toward each other and at the rear away from each other, wire fencing secured to the posts, part of the upper line wires extending across the space between the posts while lower line wires terminate at and are secured at their ends to said posts, upper and lower transverse bars connected at their ends to and lying between the posts, a gate formed of upper and lower angle bars connected by vertical bars slidably mounted between the posts, the horizontal flanges of the angle bars having notches in the ends thereof to receive the inwardly extending flanges of the posts, and means to hold the gate at any of a plurality of positions with respect to the posts comprised of pins inserted through openings in the ends of an angle bar of the gate and any one of a plurality of openings formed in said inwardly extending flanges of the posts.

2. A device of the character described, comprised of spaced apart upright posts adapted to be interposed in the length of a fence, each post having a flange at the front extending inwardly toward the flange on the opposite post, upper and lower transverse bars connected at their ends to and lying between the posts, a gate slidably mounted between the posts, said gate including in its structure upper and lower horizontal angle bars, with the horizontal flanges of said angle bars having notches in the ends thereof to receive the said flanges of the posts, and means to hold the gate at any one of a plurality of positions with respect to the posts, substantially as described.

1,210,548. OFFSET-PREVENTING DEVICE FOR STENCILING-MACHINES. JAMES E. SHAVER, Jr., Philadelphia, Pa., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 17, 1915. Serial No. 45,895. (Cl. 34—1.)



1. The combination with a stencil carrier, of paper-feeding means, a magazine for blotters, an escapement device for releasing one blotter at a time from the magazine, means connecting said escapement device to the stencil carrier, so that, as a sheet is printed at the stencil, a blotter to cover the same is released from the magazine, and regulating means for changing the point in the cycle of movement of the stencil carrier at which the blotter is released.

2. The combination with a stencil carrier, of paper-feeding means, a magazine for blotters, an escapement mechanism for releasing one blotter at a time from the magazine, a crank for actuating the escapement mechanism, a gear by means of which the crank is driven from the stencil carrier, so that, as a sheet is printed at the stencil, a blotter to cover the same is released from the magazine, and means for disconnecting the crank from said gear and resetting it at another angular position with respect thereto to regulate the point in the cycle of movement of the stencil carrier at which the blotter is released.

3. The combination with a stencil carrier, of paper-feeding means, a magazine for blotters, means for feeding the blotters from the magazine one at a time and interleaving the same with printed sheets from the stencil, said blotter-feeding means comprising intermeshed bevel gears, one of which carries a crank pin, also forming part of said blotter-feeding means, and is shiftable out of mesh with the other gear to be turned independently thereof and again meshed therewith in effecting an adjustment of the angular position of the crank pin for a release of the blotter at any desired point in the cycle of movement of the stencil carrier.

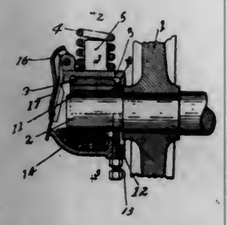
4. The combination with a stencil carrier, of paper-feeding means, a magazine for blotters, means for feeding the blotters from the magazine one at a time and interleaving the same with printed sheets from the stencil, said blotter-feeding means comprising intermeshed bevel gears, one of which carries a crank pin, also forming part of said blotter-feeding means, and is shiftable out of mesh with the other gear to be turned independently thereof and again meshed therewith in effecting an adjustment of the angular position of the crank pin for a release of the blotter at any desired point in the cycle of movement of the stencil carrier, and a spring which normally holds said gears in mesh but yields to permit a shift of the same apart for readjustment thereof.

5. The combination with a stenciling cylinder, of paper-feeding means, a magazine for separated blotting sheets, means for feeding a blotting sheet from the magazine onto

each printed sheet fed from the cylinder, and means for adjusting the size of the magazine to blotters of different lengths.

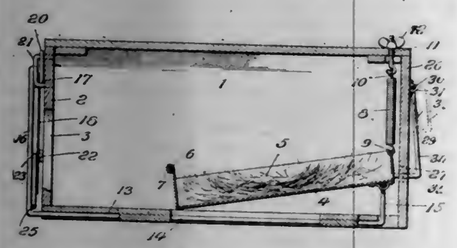
[Claim 6 not printed in the Gazette.]

1,210,549. JOURNAL-BOX. FRANK D. SHELDON, Milwaukee, Wis., assignor to Milwaukee Locomotive Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed June 10, 1912. Serial No. 702,681. (Cl. 64—24.)



In combination an axle for a car wheel, a journal box inclosing a portion of said axle, said axle having a wearing surface forming a finished bearing, a removable journal member lying inside the top of the box and engaging the finished bearing surface of the axle, said removable journal being held in place by the downward pressure of the box, a wedge member between the top of the box and the journal member, a retaining plate presented edgewise to the axle below the bearing surface but normally out of contact with the same, and means to support said retaining plate to prevent the journal member from being displaced, said journal box having an oil cellar in the lower portion thereof below said axle, said retaining plate lying adjacent one edge of said oil cellar and closing off the same to form a dust excluding means.

1,210,550. HEN'S NEST. JOHN C. SHIGLEY, Maxbass, N. D. Filed July 17, 1916. Serial No. 109,705. (Cl. 119—49.)



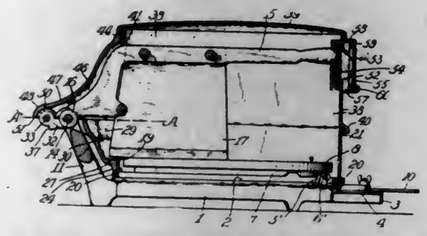
1. A hen's nest comprising a casing having an opening in its front, a tilting pan with one end normally elevated disposed in said casing, a rock shaft disposed beneath said casing, a crank on the rear end of said shaft engaging the elevated end of said pan, an arm on the front end of the shaft disposed across the front of the casing, a door loosely mounted on said arm and adapted to swing laterally and downwardly to close the opening in the casing upon depression of said pan, and guiding means for said door and arm.

2. A hen's nest comprising a casing having an opening in its front, a tilting pan with one end normally elevated disposed in said casing, a rock shaft disposed beneath said casing, a crank on the rear end of said shaft, an upright arm on the front end of said shaft disposed across the front of the casing, said arm being bent laterally adjacent its free end, a door loosely mounted on said bent portion and adapted to maintain an upright position upon movement of the arm, an arcuate guide for the free end of said arm spaced from the front of the casing, and a spaced guide for the swinging door disposed in different horizontal planes for disposition across the front of said door when the same is opened or closed.

3. A hen's nest comprising a casing having an opening in its front, a pan pivotally mounted in said casing and adapted to swing vertically, a rock shaft in the bottom of the casing, a crank at the rear end of said shaft operatively connected with the pan, an arm on the front end of the shaft disposed across said front of the casing, a door loosely pivoted on said arm and adapted to swing laterally and downwardly to close the opening in the casing, a guide for said arm and door, and a spring connected with said pan to hold the same normally elevated whereby the door will be held in open position.

4. A hen's nest comprising a casing, means to automatically open and close an opening in the same by the elevation or depression of a normally elevated hinged pan having its free end disposed adjacent the rear of the casing, said end of the casing having an opening therethrough normally closed by the elevated pan but opened upon the depression of the same, a latch including a horizontal portion slidably and hingedly mounted on said rear end having a lateral offset at one end with a handle depending therefrom, a downwardly bent portion at the opposite end of the latch member with a laterally bent extremity positioned in the opening in said casing and adapted to project therethrough to lock the pan when the same is depressed, and said extremity being movable out of alinement with the opening upon sliding movement of the horizontal portion of the latch member.

1,210,551. REMOVABLE CHEESE-CUTTER COVER. ELLIS T. SILVIUS, Indianapolis, Ind., assignor to Thomas S. Gettle, Greenfield, Ind. Filed Aug. 20, 1914. Serial No. 857,663. (Cl. 31—68.)



1. A cheese cutter cover including two hingedly connected parts, one of the parts being normally supported upon the remaining one of the parts.

2. A cheese cutter cover including two coöperating parts having each an offset portion, the offset portions being hingedly connected together.

3. A cheese cutter cover including two coöperating parts, one of the parts being annular and the other a crown part detachably hinged to and supported by the annular one of the parts.

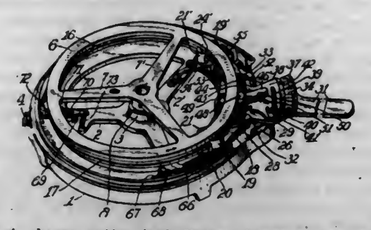
4. A cheese cutter cover including an annular part having an offset portion, and a crown part having an offset portion constructed to hingedly coöperate with the offset portion of the annular part and having detachable hinging connection therewith.

5. A cheese cutter cover including two coöperating parts, one of the parts being annular, the remaining one of the parts being a crown part and normally resting upon and covering the annular part, the two parts being detachably hinged together.

[Claims 6 to 14 not printed in the Gazette.]

1,210,552. COMPUTING CHEESE-CUTTER. ELLIS T. SILVIUS, Indianapolis, Ind., assignor to Thomas S. Gettle, Greenfield, Ind. Filed Oct. 17, 1914. Serial No. 867,061. (Cl. 31—68.)

1. A cheese cutter including a frame and a table rotatably mounted on the frame and provided with means for rotating and varying the extent of rotation of the table carried by the table.



2. A cheese cutter including a frame and a table rotatably mounted on the frame and provided with means for variably rotating the table and means for indicating the variability of rotation carried by the table.

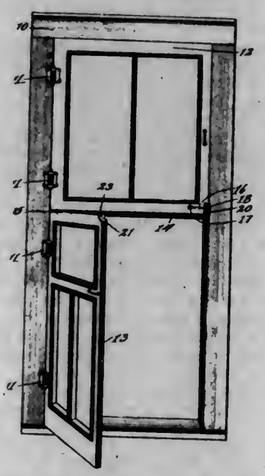
3. A cheese cutter including a frame, a table rotatably mounted on the frame and provided with means for variably rotating the table, and means for controlling the variability of rotation carried by the table.

4. A cheese cutter including a frame, a table rotatably mounted on the frame and provided with movable actuating means carried by the table, and means carried by the actuating means for locking the actuating means to the table.

5. A cheese cutter including a frame and a table rotatably mounted on the frame and provided with actuating means carried by the table, the actuating means being provided with means for enabling the actuating means to clutch and rotate the table.

[Claims 6 to 48 not printed in the Gazette.]

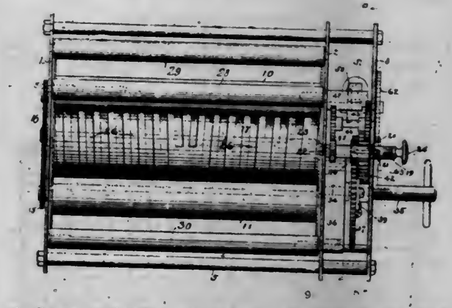
1,210,553. SCREEN-DOOR. ROBERT J. SINNOTT, Ottawa, Ill. Filed Dec. 4, 1914. Serial No. 875,411. (Cl. 20—16.)



1. The combination with a door-casing, of a door-section hinged in the upper part of the casing, a second section hinged in the lower part of the casing, and latching mechanism interposed between the two sections and the casing so that as soon as the two sections together move from their closed position in which they are unlocked they will be locked together and remain locked until they return to their closed position.

2. The combination with a door-casing, of a door-section hinged in the upper part of the casing, a second section hinged in the lower part of the casing, the upper section having a portion thereof projecting below the top of the lower section with which it coöperates so that both will open when the upper section is opened, leaving the lower section free to be opened separately, and latching mechanism interposed between the two sections and the casing so that as soon as they move together from their closed position they will be locked together and so remain locked together until they return to their closed position when they are automatically unlocked.

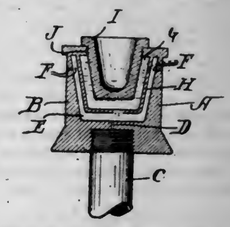
1,210,554. STREET-INDICATING MECHANISM. THOMAS W. SMALL, Cleveland, Ohio, assignor to The Acme Automatic Street Indicating Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 24, 1909. Serial No. 529,681. (Cl. 40—54.)



1. In an indicating mechanism, the combination, with a flexible name strip and a pair of rollers each having an end of said flexible band or strip operatively connected thereto, of a driving roller substantially parallel to said first rollers, said driving roller having on its outer surface a pair of flexible strips of adhesive material wound spirally thereon and extending in opposite directions from the center thereof, means for rotating said driving roller, and means for maintaining said strip in close contact with said driving roller whereby slipping is prevented.

2. In mechanism of the character set forth, the combination, with a longitudinally shiftable strip of flexible material, of a driving roller journaled transversely to the direction of said strip and having on its outer surface a pair of strips of adhesive material wound spirally thereon and extending in opposite directions from the center thereof, means for rotating said driving roller, and means yieldingly maintaining said shiftable strip in close driving engagement with the major part of the periphery of said driving roller.

1,210,555. PROCESS IN THE TEMPORARY RETARDING AND SUSPENDING THE SETTING OF DENTAL CEMENTS. JULIUS W. SMITH, Madison, Minn. Filed Feb. 23, 1916. Serial No. 79,966. (Cl. 106—6.)



1. The process of temporarily retarding and suspending the setting of dental cements, consisting in keeping the powder and cement liquid ingredients of the cement at a temperature below the chemical combining point while being mixed, substantially as described.

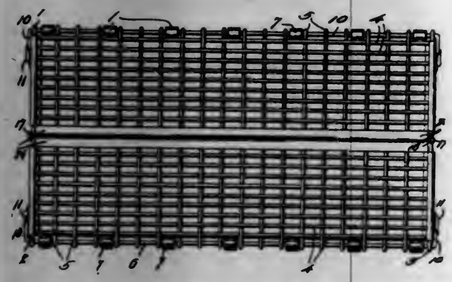
2. The process of temporarily retarding and suspending the setting of dental cements, consisting in mixing the

cement powder and liquid at a low temperature so as to prevent the chemical combination in the powder and liquid while being mixed and to be held at a low temperature until it is desired to be used in a tooth cavity, substantially as herein described.

3. The process of temporarily retarding and suspending the setting of dental cements, consisting in keeping the temperature below the normal chemical combining temperature, substantially as described.

4. The process of temporarily retarding and suspending the setting of dental cements, consisting in keeping the temperature of the ingredients of the cement below the normal combining temperature and keeping the said ingredients from being affected by the humidity or the temperature in the surrounding atmosphere.

1,210,556. COAL-CAR COVER. MARY SPRATLEN, Concordia, Kans. Filed Sept. 11, 1916. Serial No. 119,562. (Cl. 105—78.)



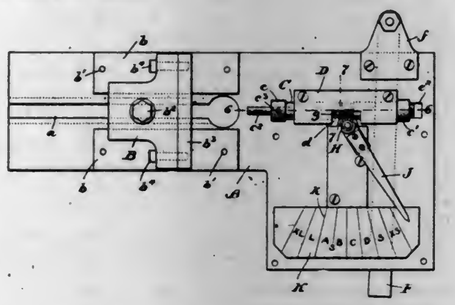
1. The combination of a car body, two cover sections extending half the width of the body and hingedly secured thereto at their outer sides, said sections being adapted to entirely close the top of the car body when in operative position, a supporting block mounted on the end of the car and adapted to support the cover sections when in closed position, guard plates extending in front of said block, and means for locking the block, the guard plates, and the cover sections against relative movement.

2. The combination of a car body, a cover section hingedly secured to the side of the body at its outer side, said sections being adapted to entirely close the top of the car body when in operative position, a supporting block detachably secured on the upper edge of the end of the car body adapted to support the cover sections when in closed position, guard plates carried by the cover sections and extending in front of the block when the cover is closed, and means for securing the block, the guard plates, and the cover sections in operative position.

3. The combination of a car body, a cover section hingedly secured to each side of the body at the upper edge thereof, at its outer side, said cover sections being adapted to entirely close the top of the car-body when in operative position, a supporting block detachably secured on the upper edge of each end of the car body, guard plates carried by the cover sections and extending, when in operative position, in front of said block, eyes carried by the plates and adapted to be in superposed relation when the plates are in operative position, a U-strap carried by the block and in vertical alinement with said eyes, a U-strap secured to the end of the car in vertical alinement with the U-strap carried by the block, and a securing member adapted to be secured to the alined eyes and straps.

1,210,557. MACHINE FOR SIZING TILES. GEORGE A. STANBERY, Zanesville, Ohio, assignor to American Encaustic Tiling Co., New York, N. Y., a Corporation of New York. Filed Jan. 5, 1905. Serial No. 239,816. (Cl. 33—147.)

1. In a machine for assorting tiles according to their sizes, the combination of a base having a surface upon which tiles are adapted to be placed, a tile-engaging member upon the base, said member having an edge for engagement with one edge of a tile, and said edge of the member being substantially perpendicular to the tile-engaging surface of the base, a plunger having a tile-engaging face positioned in opposing relation to said edge of the tile-engaging member, said plunger being slidable relative to the tile-engaging surfaces of the base and said member, means for retaining the plunger normally in a predetermined position relative to the edge of said member, and indicating means including a pointer and a gear segment, said plunger having circular teeth meshing with the gear segment and said plunger being rotatable for changing the points of contact between its circular teeth and the teeth of said gear segment.



2. In a tile measuring machine, a bed having a guide-channel, a head fitted to said channel, means for clamping the head laterally to the bed, a post fitted in the channel and clamped to the bed, an adjusting screw carried by the post and adapted for engagement with the head, a freely-movable member slidable on the base and movable endwise with respect to the head, and indicating means actuated by said slidable member.

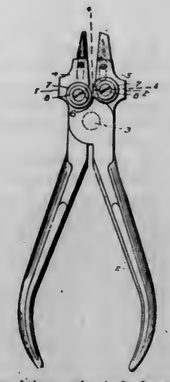
3. In a tile measuring machine, a bed having a guide channel, wear plates attached to said bed parallel to said channel, a jaw fitted to the channel and engaging with the wear plates, a headed stem working in the channel and having means for clamping the jaw to the bed and said wear plates, a member coöperating with the jaw, and an indicator mechanism controllable by said member.

4. In a machine for assorting tiles according to their sizes, the combination of a bed having a plane surface upon which the tiles to be measured are adapted to be positioned, a tile-engaging member fixed on the bed and provided with a tile-gaging straight edge positioned perpendicularly to said tile-engaging surface, a slidable and rotatable plunger provided with gear teeth, said plunger having a tile-engaging face in opposing relation to said edge of the member, a spring coöperating with the plunger for retaining it normally in a predetermined position relative to said edge of said member, means operable at will for moving the plunger relative to said edge of the member, a pivoted gear segment meshing with the gear of the plunger, a spring acting on said gear segment for retaining one tooth thereof in mesh with a gear tooth of the plunger, and a pointer carried by the gear segment.

5. In a machine for assorting tiles according to their sizes, the combination of a bed having a plane tile-engaging surface, a tile-engaging member thereon, said member having a straight edge positioned perpendicularly to the tile-engaging surface, a slidable and rotatable plunger, one end of which is in opposing relation to the edge of the tile-engaging member, means for moving the plunger normally in one direction, a lever disconnected from said plunger operable at will for moving the plunger in an opposite direction, said plunger being provided intermediate its ends with gear teeth, a toothed segment, a spring acting on said segment to retain at least one tooth in mesh with the gear teeth of the plunger, and a pointer carried by the gear segment.

[Claims 6 and 7 not printed in the Gazette.]

1,210,558. PLIERS. LAROY S. STARRETT, Athol, Mass., assignor to The L. S. Starrett Company, Athol, Mass., a Corporation of Massachusetts. Filed Feb. 6, 1915. Serial No. 6,606. (Cl. 164—81.)



1. Pliers comprising pivoted levers having hammer headed, opposed jaws with faces radial to the pivot, each jaw having a notch on its inner face adjacent to the pivot for said levers and said notches opposed to each other and defining, when the jaws are brought together, a wire receiving opening disposed transversely of the inner end of the pliers jaws, each jaw having an annular recess on its top face adjacent to said pivot and substantially opposite the recess of the coöperating jaw, and a pair of circular cutters overlying said opening and having each a depending hub seated in each recess and having peripheral cutting edges disposed substantially in contact with each other when the jaws are closed and said cutting edges adjustable relative to each other by rotation of the cutters, the cutters arranged within the hammer faces of the jaws.

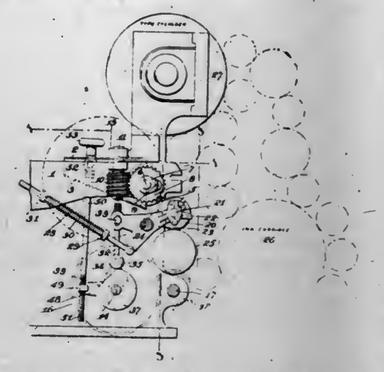
2. Pliers comprising pivoted levers having jaws, each jaw having a notch on its inner face adjacent to the pivot for said levers and said notches opposed to each other and defining when the jaws are brought together a wire receiving opening disposed transversely of the inner end of the pliers jaws, and at right angles to the longitudinal median line of the pliers, each jaw having an annular recess, with its wall normal to its top face, adjacent to said pivot and said recesses substantially opposite each other, a pair of circular cutters overlying said wire receiving opening and having depending hubs seated in said recesses and bearing against said walls, each hub having a bore therethrough terminating at its outer end in an enlarged annular recess in the top face of each cutter, and headed fastenings received in said bores with their heads disposed in said recesses flush with the top faces of the cutters, the pressure of the cutting actions being taken off said fastenings by said hubs and walls.

3. Pliers comprising crossed levers pivoted to each other at their intersection and terminating in opposed jaws, said jaws extended transversely beyond said pivot to provide opposed balanced hammer heads, and a pair of cutters mounted each on one of said jaws between said pivot and said heads and disposed in opposite coactive relation to each other, the lateral walls of said heads projecting beyond the outer sides of the cutters to protect the edges of the latter against injury when said faces are used to hammer.

1,210,559. ADJUSTABLE CAM. WARD B. STORY, Brooklyn, N. Y., assignor to Ward B. Story Company, Inc., New York, N. Y., a Corporation of New York. Filed Oct. 30, 1912. Serial No. 728,578. (Cl. 74—1.)

1. An adjustable cam comprising a fixed cam member and a movable cam member, an immovable element, and a screw carried by the element for adjusting the members to change the relative angles of the members.

2. An adjustable cam comprising a fixed cam member and a movable cam member, an immovable element, a device associated with the movable member, a nut carried by the device, and a screw supported on the element and engaging the nut whereby the relative angle of the members may be changed.



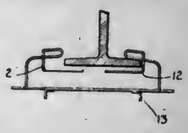
3. An adjustable cam comprising a fixed cam member and a movable cam member, an object moved in one direction by the cam, independent means for moving the object in the opposite direction, means for adjusting the initial position of the object relatively to the cam, an immovable element, and a screw carried by the element for adjusting the members to change the relative angles of the members.

4. An adjustable cam comprising a fixed cam member and a movable cam member, an object moved in one direction by the cam, independent means for moving the object in the opposite direction, means for adjusting the initial position of the object relatively to the cam, an immovable element, a device associated with the movable member, a nut carried by the device, and a screw supported on the element and engaging the nut whereby the relative angle of the members may be changed.

5. An adjustable cam comprising a fixed cam member and a movable cam member, an object moved in one direction by the cam, a spring for moving the object in the opposite direction, means for adjusting the initial position of the object relatively to the cam, an immovable element, and means stationary on the element for changing the relative angles of the members, said means being operable irrespective of the positions of the members.

[Claims 6 to 9 not printed in the Gazette.]

1,210,560. REINFORCEMENT FOR CONCRETE COVERINGS. ALEXANDER B. TAPPEN, Ossining, N. Y. Filed June 18, 1913. Serial No. 774,308. (Cl. 72—109.)



1. A reinforcement for a molded composition covering of structural members comprising a series of wire cross stays each connected near its respective ends to the adjacent cross stays of the series at opposite sides, the wire beyond one of said points of connection being bent to form a spacing portion and an inwardly facing holding socket, and the wires beyond the opposite points of connection being arranged to form members for spacing and determining the position of the mold in which the composition is to be formed.

2. A reinforcement for a molded composition covering of structural members comprising a series of wire cross stays each softened and welded near its respective ends to the adjacent cross stays of the series at opposite sides,

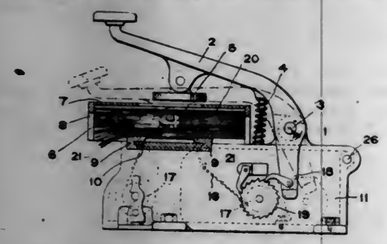
the wire beyond one of said points of connection being bent to form a spacing portion and an inwardly facing holding socket, and the wires beyond the opposite points of connection being arranged to form members for spacing and determining the position of the mold in which the composition is to be formed.

3. A reinforcement for a molded composition covering of structural members comprising a series of wire cross stays each connected near its respective ends to the adjacent cross stays of the series at opposite sides, the wires beyond one of said points of connection being bent to form a spacing portion and an inwardly facing holding socket comprising an upper holding loop and a lower finger of greater length than that of said loop, and the wires beyond the opposite points of connection being arranged to form members for spacing and determining the position of the mold in which the composition is to be formed.

4. A reinforcement for a molded composition covering of structural members comprising a series of wire cross stays each connected near its respective ends to the adjacent cross stays of the series at opposite sides, the wire beyond one of said points of connection being bent to form a spacing portion and an inwardly facing holding socket, the wire of some of the stays beyond the opposite point of connection being arranged to form spacing projections and the wire of others of the stays beyond said opposite point of connection being arranged to extend through the members of a mold in which the composition is to be formed and to be bent over to hold the mold members in desired position.

5. A reinforcement for a molded composition covering of structural members comprising a series of wire cross stays each softened and welded near its respective ends to the adjacent cross stays of the series at opposite sides, the wire beyond one of said points of connection being bent to form a spacing portion and an inwardly facing holding socket, the wire of the stays beyond the opposite point of connection being arranged to form spacing projections and the wire of others of the stays beyond said opposite point of connection being arranged to extend through the members of a mold in which the composition is to be formed and to be bent over to hold the mold members in desired position.

1,210,561. APPARATUS FOR PRINTING AND ISSUING TICKETS. ARNOLD J. TANNER, London, England. Filed May 5, 1913. Serial No. 765,435. (Cl. 101—187.)



1. In a ticket issuing and stamping apparatus, a stationary base, stamps mounted thereon and stationary relative thereto and each provided with a downward depressible actuating arm, and a plurality of ticket holders supported on said stationary base for movement with relation to said stamps.

2. In a ticket issuing and stamping apparatus, a stationary base, a plurality of separately actuatable stamps or printing devices mounted thereon and stationary relative thereto and each provided with a downward depressible actuating arm, a carriage mounted on said base for movement relative to said stamps or printing devices, and a plurality of ticket holders carried by said movable carriage.

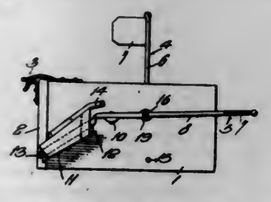
3. In a ticket issuing and stamping apparatus, a stationary base, having stamps mounted thereon and stationary relative thereto, each stamp having a downward depressible actuating arm, and a printing device carried by each arm, in combination with a carriage mounted on said base for movement past said stamps, and a plurality of ticket holders carried by said movable carriage.

4. In a ticket issuing and stamping apparatus, a stationary base portion, stamping devices carried thereby and stationary with respect thereto, each of said stamping devices being provided with a downward depressible actuating arm, a trackway extending past said stamping devices, a carriage mounted to move along said trackway, and a plurality of ticket holders mounted in line with each other on said carriage.

5. In a ticket issuing and stamping apparatus, a stationary base portion, stamping devices carried thereby and stationary with respect thereto, each of said stamping devices being provided with a downward depressible actuating arm, a trackway also carried by said base portion and extending rectilinearly past said stamping devices, a carriage mounted on said trackway and movable therealong to set positions with reference to said stamping devices, and a plurality of ticket holders mounted on said carriage.

[Claims 6 to 10 not printed in the Gazette.]

1,210,562. MAIL-BOX. JOHN W. TAYLOR, Pleasant Hill, Mo. Filed Apr. 13, 1916. Serial No. 90,947. (Cl. 232—35.)



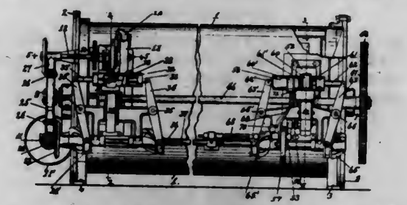
1. In a mail box signaling device, the combination of an owner's signal and a carrier's signal, the owner's signal having means for impelling it to extended position, while the carrier's signal is provided with means for impelling it to retracted position, and means for overcoming the impelling forces to sustain the owner's signal in a retracted position and the carrier's signal in an extended position, said means being adapted for connection to the door of the mail box to be released by opening of said door.

2. In a mail box signaling device, the combination of an owner's signal and a carrier's signal each comprising a pivotally mounted arm having a signal flag thereon, the owner's signal having means for impelling it to projected position while the carrier's signal is provided with means for impelling it to retracted position, and means for overcoming the impelling forces, said means being adapted for connection to the door of the mail box to be released by opening of said door.

3. In a mail box signaling device, the combination of an owner's signal including a straight pivotally mounted arm having an overbalanced end and equipped at its opposite end with a signaling flag, said overbalanced end serving to impel said arm to an upright position to project said signaling flag, a carrier's signal including an L-shaped arm pivotally mounted at its angle and having at one end a signaling flag, the other end of said L-shaped arm serving to impel this arm to such a position as to lower its signaling flag, and means for overcoming the aforesaid impelling forces to sustain the owner's signal with its signaling flag retracted and the carrier's signal with its signaling flag projected, said means being adapted for connection with the door of the box to be released by the opening of said door.

4. In a mail box signaling device, the combination of an owner's signal including a straight pivotally mounted arm having an overbalanced end and equipped at its opposite end with a signaling flag, said overbalanced end serving to impel said arm to an upright position to project said signaling flag, a carrier's signal including an L-shaped arm pivotally mounted at its angle and having at one end a signaling flag, the other end of said L-shaped arm serving to impel this arm to such a position as to lower its signaling flag, a pair of bolts adapted to cooperate with the arms of both signals to suspend the arm of the owner's signal in position to retract its signaling flag and to sustain the carrier's signal in position to project its signaling flag, said bolts being adapted for pivotal connection with the door of the box to be retracted by opening of said door, and guides for said bolts to be secured to the box.

1,210,563. PRESSURE-COOKER. ALBERT R. THOMPSON, San Jose, Cal., assignor to Anderson-Barngrover Mfg. Co., San Jose, Cal., a Corporation of California. Filed July 26, 1916. Serial No. 111,476. (Cl. 126—272.)



1. A pressure cooker comprising a cooking chamber provided with openings for the reception and discharge of the can; means within the chamber to advance the can therethrough; valves to control the can openings of the chamber; and a movable finger to positively eject the can from said valves.

2. A pressure cooker comprising a cooking chamber provided with openings for the reception and discharge of the can; means within the chamber to advance the can therethrough; can-carrying wheels in fluid tight communication with the chamber openings; and valves to control the feed of the can to one of said wheels and its discharge from the other.

3. A pressure cooker comprising a cooking chamber provided with openings for the reception and discharge of the can; means within the chamber to advance the can therethrough; can-carrying wheels in fluid tight communication with the chamber openings; valves to control the feed of the can to one of said wheels and its discharge from the other; and means for positively feeding and ejecting the can from said valves.

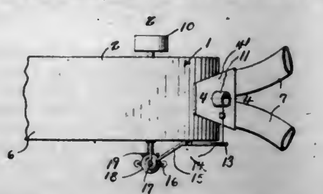
4. A pressure cooker comprising a cooking chamber provided with openings for the reception and discharge of the can; means within the chamber to advance the can therethrough; can-carrying wheels in fluid tight communication with the chamber openings; valves to control the feed of the can to one of said wheels and its discharge from the other; and a movable finger operating in connection with said last named wheel to positively discharge the can therefrom into the valve.

5. A pressure cooker comprising a cooking chamber provided with openings for the reception and discharge of the can; means within the chamber to advance the can therethrough; can-carrying wheels in fluid tight communication with the chamber openings; valves to control the feed of the can to one of said wheels and its discharge from the other; a movable finger operating in connection with said last named wheel to positively discharge the can therefrom into the valve; and a movable finger to positively eject the can from said valves.

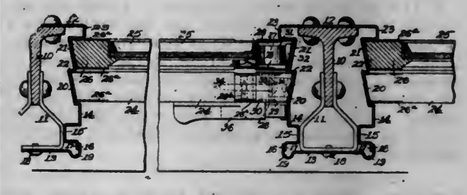
[Claims 6 to 20 not printed in the Gazette.]

1,210,564. PNEUMATIC FEEDER FOR THRESHING-MACHINES OR THE LIKE. EDDIE D. THORP, Dodge City, Kans. Filed Sept. 30, 1915. Serial No. 53,449. (Cl. 230—11.)

A suction feeder comprising a casing having fan chambers, and an intermediate chamber, a hood communicating with the intermediate chamber, fans rotatably mounted in the fan chambers, inlet pipes connected to the hood, a discharge pipe leading from the fan chambers, a pipe carried by the hood, a valve mounted in the pipe, means for rotating the fans, and means for operating the valve to relieve the suction created by the fans.



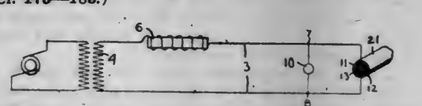
1,210,565. METAL CAR-WINDOW FRAME. CHARLES H. TURNER, Worcester, Mass., assignor to Osgood Bradley Car Company, Worcester, Mass., a Corporation of Massachusetts. Filed July 7, 1915. Serial No. 38,569. (Cl. 189—75.)



1. A post for a metal car window frame comprising a core member having a T-shaped section, a plurality of spacing clips secured to the web of said core member and having vertical space between them, a casing member having a substantially U-shaped section secured along its center to the flat outer face of said core member and engaging said clips near the ends of its side portions, and a cap detachably secured to and supported by said clips and forming the inside casing of said post, said cap having side flanges embracing and covering the ends of the side portions of said U-shaped casing member and being movable to expose the entire interior of the U-shaped section, said interior being open from front to back between the clips.

2. A post for a metal car window frame comprising a core member having portions extending at right angles to each other and having spacing clips spaced apart vertically secured to the center portion thereof, a sheet metal casing member having a substantially U-shaped section and having its center portion permanently secured to the outer face of said core member and its side portions engaging the sides of said separated clips, and a cover plate detachably secured to said clips to form the inner face of said post, embracing the free ends of said side portions of said casing member and adapted when detached to expose the entire interior of the U-shaped section so as to leave the interior open from front to back between the clips, said side portions being provided with outwardly-inclined sash-holding grooves.

1,210,566. METHOD OF AND APPARATUS FOR TESTING CONDUCTORS FOR FAULTS. JAMES A. VAHEY, Boston, Mass. Filed Apr. 28, 1915. Serial No. 24,393. (Cl. 175—183.)



1. In a device of the class described, the combination with a conductor, of a circuit connected thereto, an in-

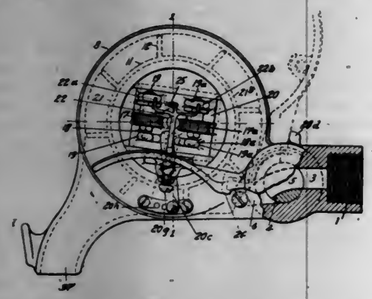
ductance in said circuit in series with the conductor, means to impress an alternating voltage on said circuit, and means to indicate the relation between the resulting charging and fault or leakage currents developed in said circuit thereby to determine the presence or absence of a fault in said conductor.

2. In a device of the class described, the combination with a cable having an insulated core and a sheath, of a circuit having one side connected to said core and the other to said sheath, an inductance in said circuit in series with said cable, means to impress an alternating voltage on said circuit, and a lamp connected to opposite sides of said circuit across the cable, the brilliancy of which determines the presence or absence of a fault.

3. The method of testing a conductor for faults or leakage which comprises connecting to said conductor a testing circuit having inductance therein, impressing an alternating voltage on said circuit by which a current is developed that is either a charging current or a fault or leakage current or both, depending on whether the conductor is faulty or intact, and placing a voltage indicator across said circuit between the conductor and inductance whereby the relation between the charging and fault currents can be ascertained by the indication of the voltage indicator.

4. In a device for testing for faults in a dielectric separating two conducting elements, the combination with a circuit connected either directly or inductively to said elements, an inductance in said circuit, means to impress an alternating voltage on said circuit, and means to indicate the relation between the resulting charging and fault or leakage currents developed in said conducting elements thereby to determine the presence or absence of a fault in said dielectric.

1,210,567. BEER-MEASURING DEVICE. JOHN VAN GERM, Erie, Pa. Filed Jan. 29, 1913. Serial No. 744,869. (Cl. 221—101.)



1. In a beer measuring device, the combination of a valve body having a valve passage, a plug valve having a way therethrough; a wheel driven by the liquid coming from the valve; and a body for the wheel having a passage connecting with the valve passage, the passages in the wheel body and valve body being arranged to drain to the discharge and the way in the valve connecting with said passages when the valve is closed.

2. In a beer measuring device, the combination of a valve; a wheel driven by the beer coming from the valve; a valve body in which the wheel is mounted; a worm driven by the wheel; a worm gear actuated by the worm; a cam rotating with the worm gear; a latch actuated by the cam; a handle for the valve; a catch on the handle operating in connection with the latch to lock the valve open; and a spring for closing the valve, said latch being operated by the cam to release the handle with a predetermined movement of the wheel.

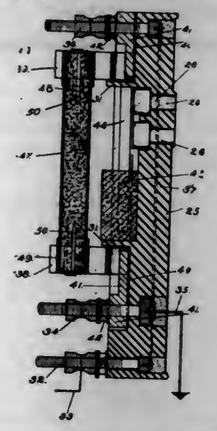
3. In a bear measuring device, the combination of a valve body having a valve passage; a plug valve having a way therethrough; a wheel driven by the liquid passing the valve; and a body for the wheel having a passage connecting with the valve passage, the passages leading from the valve being arranged to drain to the discharge, and the way in the valve connecting said discharge passage when the valve is closed.

4. In a beer measuring device, the combination of a plug valve having a way therethrough; a body for the valve having a discharge passage draining from the valve and connecting with the way in the valve when the valve is closed; a wheel driven by the liquid passing the valve; and automatic means for closing the valve controlled by the wheel.

5. In a beer measuring device, the combination of a plug valve having a way therethrough; a body for the valve having a discharge passage draining from the valve and connecting with the way in the valve when the valve is closed; a wheel driven by the liquid passing the valve; and automatic means for closing the valve controlled by the wheel, said valve body having a vent connected with the valve way with the valve closed.

[Claims 6 to 9 not printed in the Gazette.]

1,210,568. PROTECTIVE APPARATUS FOR ELECTRIC CIRCUITS. EUGENE W. VOGEL, Oak Park, Ill., assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill., a Corporation of Illinois. Filed May 1, 1914. Serial No. 835,606. (Cl. 175—30.)



1. In apparatus of the character described, the combination with a pair of electrodes, one connected with the line to be protected, and the other of which is grounded, of a porous septum of non-conducting, refractory material arranged between said electrodes, for the purpose described.

2. In apparatus of the character described, the combination with a pair of electrodes, one connected with the line to be protected, and the other of which is grounded, of a porous septum of non-conducting, refractory material arranged between said electrodes, said electrodes diverging from the point of separation by the septum so as to extinguish the arc between said electrodes.

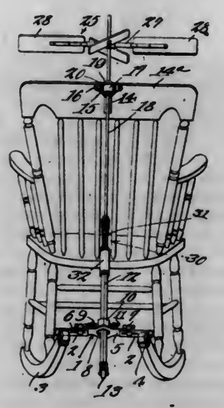
3. In apparatus of the character described, the combination with a pair of diverging electrodes, one connected with the line to be protected and the other grounded, of a porous septum of non-conducting, refractory material arranged between said electrodes and formed with channels on opposite sides in which said electrodes are received.

4. In apparatus of the character described, the combination with a pair of electrodes, one connected with the line to be protected and the other grounded, said electrodes spaced apart in fixed relation to form an air gap between them, of a lightning arrester unit, comprising terminals, one of which is grounded and one of which is connected to said line wire, providing a gap, the resistance of which to a static charge of high potential and short duration is less than the resistance of the aforesaid air gap.

5. In apparatus of the character described, the combination with a pair of electrodes, one of which is connected with the line to be protected, and the other grounded, said electrodes arranged with an air gap between them, of a porous septum of nonconducting, refractory material arranged in said air gap, and a lightning arrester unit, one terminal of which is connected with said line wire and the other grounded, providing a gap, the resistance of which to a static charge of high potential and short duration is less than the resistance of the aforesaid air gap.

[Claims 6 to 14 not printed in the Gazette.]

1,210,569. FAN ATTACHMENT FOR ROCKING-CHAIRS. MATHIAS WAGNER, Kokomo, Ind., assignor of thirty one-hundredths to Finis F. Hunt. Filed Feb. 2, 1915. Serial No. 5,752. (Cl. 230—7.)



A fan attachment for rocking chairs, embodying a bracket attachable to the back of a rocking chair and having a fork, a bearing trunnioned within said fork, a shaft journaled through said bearing to move vertically therewith, a fan carried by said shaft, a yoke having means for attaching it to the rear ends of the rockers of the chair, said yoke having an opening between its ends, a sleeve disposed within said opening and trunnioned to the yoke, a standard slidable through the sleeve to rest upon the floor, the standard and sleeve being of non-circular cross section to prevent the rotation of the standard, and a power transmitting device connecting the shaft and standard for transforming the reciprocatory movement of the shaft into a rotatory motion thereof, the trunnions of the bearing and sleeve being so arranged as to permit the bearing and sleeve to swing in a common vertical plane when the yoke is adjusted to the rockers.

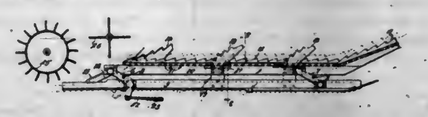
1,210,570. STABLE PRODUCT CONTAINING HYDROGEN PEROXID AND METHOD OF MAKING THE SAME. FRIEDRICH WILHELM WEBER, Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed May 8, 1915. Serial No. 26,710. (Cl. 23—10.)

1. The method of stabilizing a solid product containing hydrogen peroxid, consisting in dissolving hippuric acid in a solution of urea, evaporating the solution to dryness, adding the residue to hydrogen peroxid and separating the crystals of the double compound of urea and hydrogen peroxid from the liquor.

2. As a new composition of matter, a product containing hydrogen peroxid and hippuric acid.

3. As a new composition of matter a solid product consisting of urea, hydrogen peroxid and hippuric acid.

1,210,571. THRESHING-MACHINE. ALBERT B. WELTY, Racine, Wis., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed May 1, 1916. Serial No. 94,594. (Cl. 130—26.)

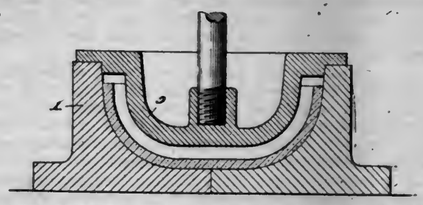


1. The combination, in a threshing machine, of a longitudinally and downwardly reciprocatory grain pan, fixedly secured serrated agitators mounted upon said grain pan and movable therewith, a longitudinally and upwardly reciprocatory straw-rack above said pan through which such agitators project and recede, a bell-crank connecting said pan and said rack, a link connecting said structures, and means for actuating said bell-crank to simultaneously reciprocate said pan in a longitudinal, downward and curvilinear direction and said rack in a longitudinal, upward and curvilinear direction and for imparting projecting and receding motion to said agitators.

2. The combination, in a threshing machine, of a longitudinally and downwardly reciprocatory grain pan, fixedly secured agitators mounted upon said grain pan and movable therewith, a longitudinally and upwardly reciprocatory straw-rack above said pan through which such agitators project and recede, an inclined forward grated extension communicating with said rack, agitators fixedly secured to said rack in the rear of said extension, means connecting said pan and said rack for imparting longitudinal and vertical reciprocation thereto in opposite directions, and means communicating with said connecting means for actuating the same.

3. The combination, in a threshing machine, of a longitudinally and downwardly reciprocatory grain pan, agitators fixedly secured therein comprising standards and inclined serrated members mounted thereon, a longitudinally and upwardly reciprocatory straw-rack above said pan through which said agitators project and recede, pivotally mountable links connecting said pan and rack near their rear opposite sides, pivotally mountable bell-cranks connecting said structures near their forward opposite sides, a pitman connected to an arm of said bell-crank, and a crank communicating with said pitman for actuating said bell-crank to longitudinally, vertically and curvilinearly reciprocate said pan and said rack.

1,210,572. METHOD OF FINISHING OR POLISHING GLASS ARTICLES. GEORGE R. WEST, Pittsburgh, Pa. Filed June 21, 1913. Serial No. 775,136. (Cl. 49—79.)



1. The method of making a glass article with a polished surface which consists in shaping the molten glass in a mold, and then polishing a face thereof by producing an inclosing cavity in which the face to be polished is subjected to heat radiation substantially throughout the article face.

2. The method of making a glass article with a polished surface which consists in shaping the molten glass in a mold, and then polishing a face thereof by producing an inclosing cavity in which the face to be polished is subjected to the action of a gradually diminishing temperature.

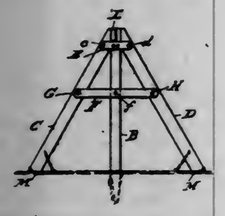
3. The method of making a glass article with a polished surface which consists in shaping the molten glass in a mold, and then polishing a face thereof by producing an inclosing cavity in which the face to be polished is in direct opposition to but spaced from a cavity wall formed to produce a heat radiation action within the cavity substantially uniform throughout the article face.

4. The method of making a glass article with a polished surface which consists in shaping the molten glass in a mold, and, while maintaining contact of article and mold on the portion of the article to be unacted upon, inclosing the article by producing a cavity in which the face to be polished is subjected to heat radiation substantially uniform throughout the article face.

5. The method of making a glass article with a polished surface which consists in shaping the molten glass in a mold, and, while maintaining contact of article and mold on the portion of the article to be unacted upon, inclosing the article by producing a cavity in which the face to be polished is free from flame contact and subjected to heat radiation substantially uniform throughout the article face.

[Claims 6 to 9 not printed in the Gazette.]

1,210,573. SUPPORT FOR MOSQUITO-NETS. FRED H. WHEELER, St. Louis, Mo. Filed Jan. 24, 1916. Serial No. 74,012. (Cl. 135—4.)



1. A support of the character described, comprising a ridge pole having a plate piece at each end with a bent-out lip, an A-frame at each end of said pole having a center post provided with a slot or recess matching said plate piece, and of a width corresponding to the distance said lip extends from the end of said pole, and slant side pieces jointed near the top of said center post, substantially as described.

2. A support of the character described, comprising a ridge pole having a plate piece extending out from each end with a lip bent sidewise, an A-frame at each end of said pole consisting of a center post having a vertical slot or recess matching said plate piece, slant pieces at each side of said center post, and pivoted near the top thereof, and a brace to keep said slant pieces in their adjusted position.

3. A support of the character described, comprising a ridge pole, and an A-frame at each end of said pole consisting of a center post, two slant side pieces pivoted to the center post near the top, bracing means for each slant piece mounted on said center post, and interlocking means between each A-frame and the ridge pole.

4. A support of the character described comprising a ridge-pole hinged in the middle, folding A-frame for each end of said pole consisting of a center post having two plates forming hinges near the top, slant side pieces pivotally mounted between said plate hinges having their upper ends beveled to bear on said center post, pivoted bracing means for said side pieces and means to secure detachably the ends of said pole to said end A-frames, substantially as and for the purpose described.

5. A support of the character described, comprising a ridge pole, a folding A-frame at each end of said pole consisting of a center post having a sharp end adapted for entering the ground, two slant side pieces pivoted near the top of said center post, pivoted bracing means for said side pieces and center post in their open position, and interlocking means between each end of said ridge pole and said A-frames.

[Claim 6 not printed in the Gazette.]

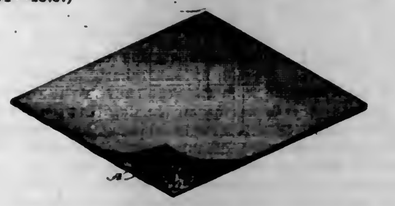
1,210,574. BUTTON-TAB END FOR HOSE-SUPPORTERS. CHARLES J. WHITE, New Britain, Conn., assignor to The C. J. White Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 28, 1916. Serial No. 80,851. (Cl. 24—245.)



1. In a button tab end, a button comprising a head and a base, a strip of flexible material folded to form two overlapping plies extending around the lower edge of said button base, said strip being perforated to permit the button head to pass therethrough, with means for causing the overlapped portion of said plies above said base to permanently adhere to each other, said adhesive means adding stiffness to said folded strip.

2. In a button tab end, a button comprising a head and a base, a strip of fabric comprising two overlapping plies enveloping said base, one ply of said strip being perforated to permit the button head to pass therethrough, with means for causing the overlapped portion of said plies above said base to permanently adhere to each other, said adhesive means adding stiffness to said strip.

1,210,575. JOINT-PACKING STRIP. JOHN F. WHITE, Chicago, Ill., assignor to Luella E. White, Chicago, Ill. Filed Sept. 6, 1916. Serial No. 118,646. (Cl. 154—45.5.)



1. A packing strip composed of superimposed layers of a fleeced surface fabric impregnated with frictionizing substance.

2. A packing strip comprising a fleeced surface fabric impregnated with a frictionizing substance folded with the fleeced surfaces innermost and compressed.

3. A packing strip composed of a strip of fleeced substance impregnated with an adhesive frictionizing substance and folded with the fleecy surfaces innermost.

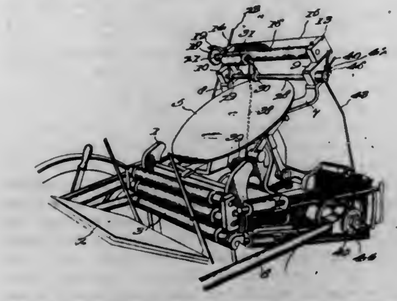
4. A packing strip composed of a folded strip of fleeced fabric impregnated with a substance containing asphaltum.

5. A packing strip comprising a strip of fabric having a fleecy surface, the edges of the fabric being folded inward toward the center of the strip and the strip being impregnated with a water-proof frictioning substance.

[Claims 6 to 9 not printed in the Gazette.]

1,210,576. INKING ATTACHMENT FOR PRESSES. FREDERICK A. WILLIAMS, North Yakima, Wash. Filed Dec. 27, 1915. Serial No. 68,853. (Cl. 101—79.)

1. The combination with a printing press having a movable form roller, of an inking attachment therefor including a fountain, a fountain roller associated with said fountain, a spindle journaled to rock between said fountain and form rollers, arms adjustably mounted on said spindle, a ductor roller carried in said arms and being of inferior length with respect to said fountain and form rollers, said ductor roller being adjustable through said arms longitudinally on said spindle to bring the same in position to contact with any predetermined longitudinal portion of the form roller whereby to supply an increased amount of ink for heavy perpendicular lining of the form, and means for rocking said spindle to swing the ductor roller between the fountain and form rollers, substantially as described.



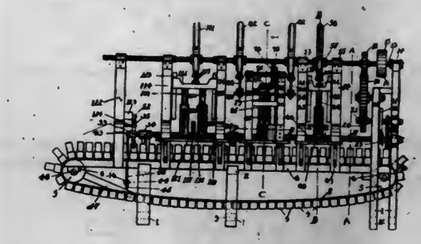
2. The combination with a printing press having a form roller, and a throw-off device, of an attachment therefor including an ink fountain, a ductor roller mounted to swing between said fountain and form roller, a spindle carrying said ductor roller, means for rocking said spindle, an arm on said spindle, a rod connected for operation to the throw-off device, and adjustable means on said rod for limiting the throw of said arm when the throw-off device is in off position to prevent engagement between said ductor roller and fountain, substantially as described.

3. The combination with a printing press having a form roller, and a throw-off device, of an attachment therefor including an ink fountain, a ductor roller mounted to swing between said ink fountain and form roller, a spindle for carrying said ductor roller, means for rocking said spindle, an arm on said spindle, a rod connected for operation to the throw-off device, a block slidable on said rod, means for adjusting said block on said rod, and a pin on said block for engaging said arm when the throw-off device is in off position to prevent engagement between said ductor roller and fountain, substantially as described.

4. The combination with a printing press having a form roller, a swinging carriage supporting said form roller, and a throw-off device, of an attachment for said press including an ink fountain, a fountain roller associated with said ink fountain, means for intermittently revolving said fountain roller, a rock spindle, arms adjustably mounted on said rock spindle, a ductor roller carried in said arms and adapted to swing between said fountain and form rollers, said ductor roller being of inferior length with respect to said fountain and form rollers and adjustable longitudinally of said spindle for bringing the same to any predetermined longitudinal portion of said fountain and form rollers, an arm on said spindle, a cam adapted to engage with said arm to rock said spindle, connections between said cam and the form roller carriage for automatically actuating the former, a second arm on said spindle, a rod connected for operation to the throw-off device, and means on said rod for limiting the throw of said arm when the throw-off device is in off position to prevent engagement between said ductor and fountain rollers, substantially as described.

5. The combination with a printing press having form rollers, and a throw-off device, of an attachment therefor comprising an ink fountain, a fountain roller associated with said ink fountain, means for intermittently revolving said fountain roller, a spindle, a ductor roller of lesser diameter than said form rollers adjustably mounted on said spindle to swing between the same and said fountain roller, a cam for rocking said spindle to operate the ductor roller, connections for operating said cam arranged between the latter and the movable parts of the press, an arm on said spindle, a rod connected for operation to the throw-off device, and adjustable means on said rod for limiting the throw of said arm when the throw-off device is in off position to prevent engagement between said ductor and fountain rollers, substantially as described.

1,210,577. APPARATUS FOR LINING DRY CELLS. LOUIS E. WILLIAMS, Fremont, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed May 10, 1913. Serial No. 766,894. (Cl. 93—55.)



1. In a can lining machine, a support for the can, a rotatable member for shaping the lining, concentric retaining means spaced from the shaping member a distance approximately equal to the thickness of the lining and means reciprocating between said first mentioned means and said shaping member for forcing the shaped lining from the shaper into the can.

2. In apparatus for forming sheets into tubes, a vertical cylinder having a groove, a member inclosing the cylinder having an opening and an outwardly flaring guide for admitting a sheet to the groove, means for intermittently rotating the cylinder to coil a sheet thereon, and vertically reciprocating means adapted to pass between the cylinder and the inclosing member to force the tube from the cylinder.

3. In a can lining machine, a horizontal conveyer for carrying cans, a vertical cylinder having a groove, a member inclosing the cylinder having an opening and an outwardly flaring guide for admitting a lining to the groove, means for intermittently rotating the cylinder to coil a lining thereon, and vertically reciprocating means adapted to pass between the cylinder and the inclosing member to force the lining from the cylinder into a can.

4. In a can lining machine, a rotatable member for shaping a lining, a guide surrounding the member and adapted to be reciprocated whereby it intermittently engages the can and means for pushing the lining through the guide into the can during the period when said can and guide are in engagement.

5. In a can lining machine, a member for shaping a lining, a flared guide to direct the lining into the can, means adapted to yieldingly support said guide, a plunger for removing the lining from the shaper, and means for simultaneously reciprocating the guide supports and the plunger.

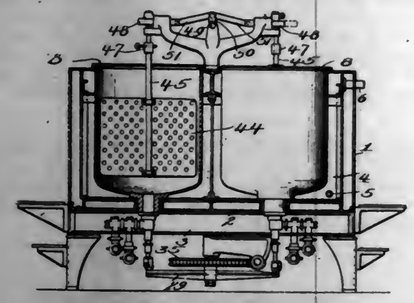
[Claims 6 to 21 not printed in the Gazette.]

1,210,578. PASTEURIZING APPARATUS. JOSEPH WILLMANN, Derby, Conn. Filed Apr. 18, 1912. Serial No. 691,602. (Cl. 257—108.)

1. Pasteurizing apparatus comprising a plurality of groups of tanks, means for each group operative to successively empty and fill each tank of the respective group, and operating mechanism for said means causing such means of each group to operate alternately.

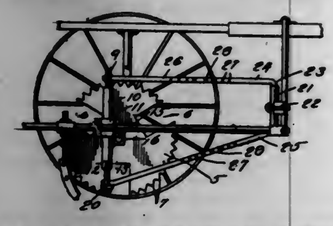
2. Pasteurizing apparatus embodying a group of tanks each having an inlet valve in the lower portion thereof to

conduct liquid to be treated to the tank, and an outlet valve also in the lower portion of the tank for emptying



the same, and means for operating said valves to successively fill and empty the tanks of the group.

1,210,579. COTTON-CHOPPER. SALADIN H. WILLS, Newlin, Tex. Filed Feb. 14, 1916. Serial No. 78,205. (Cl. 97—49.)



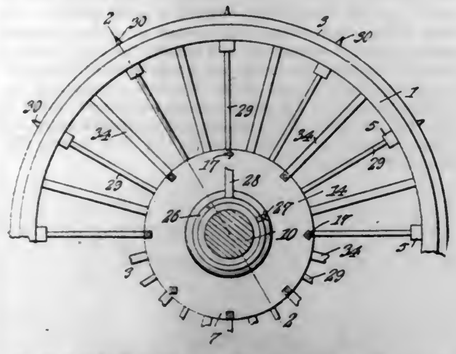
1. In a device of the class described, a masher wheel, a shaft projecting beyond the ends of said wheel, a boxing on each of said shaft ends, each of said boxings being provided with an angularly disposed opening, a frame, legs on the said frame extending through said openings, collars on said legs, springs interposed between said collars and said boxings, and means for attaching said frame to a cultivator, substantially as described.

2. In a device of the class described, a masher wheel, a shaft extending beyond the lateral ends of said wheel, and a boxing on each of said projecting ends, a U-frame adjacent each side of said wheel having one leg pivotally secured to a cultivator frame and its opposite leg loosely extending through said boxings, springs on said latter mentioned legs for exerting pressure upon said boxings, a bar secured to said cultivator frame in advance of said wheel and providing rearwardly extending arms, links connecting said frames at their upper and lower ends with said arms, and means for adjusting said links with relation to said arms, substantially as described.

3. In a device of the class described, the combination with a cultivator, of a masher wheel, a shaft extending beyond the lateral ends of the wheel, a boxing on each of said projecting ends, a U-frame adjacent each side of said wheel having one leg pivotally secured to the cultivator and its opposite leg loosely extending through the adjacent boxing, springs on the last mentioned legs for exerting pressure upon said boxing, links connecting said U-frame with the cultivator frame in advance of the said masher wheel, and means for extending or contracting the length of said links, substantially as described.

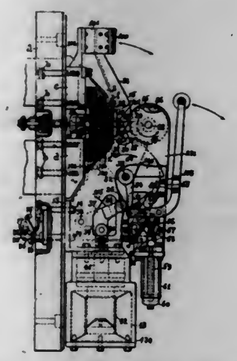
1,210,580. WHEEL. WILLIAM H. WELLSTEED, Sr., Brampton, Mich. Filed July 7, 1916. Serial No. 107,954. (Cl. 21—209.)

1. In a device of the class described, a wheel including a rim, and a hub having a chamber; a sleeve rotatable in the hub; means under the control of an operator for rotating the sleeve; shoes located in the chamber; links pivotally connecting the shoes with the sleeve; and traction members slidable in the rim and the hub and bearing at their inner ends on the shoes.



2. In a device of the class described, a wheel comprising a rim and a hub, the hub being provided with a chamber; a sleeve journaled in the hub; means under the control of an operator for rotating the sleeve; shoes located in the chamber; links pivoted to the shoes and to the sleeves; traction members slidable in the hub and in the rim and bearing on the shoes; and spring means assembled with the rim and coacting with the traction members, to move the traction members inwardly.

1,210,581. CIRCUIT-CONTROLLER. JOHAN M. ANDERSEN, Boston, Mass., assignor to Albert and J. M. Anderson Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed June 18, 1913. Serial No. 774,377. (Cl. 175—281.)



1. In an electric switch or circuit controller, in combination, a movable contact member, a gear having its center located in a substantially horizontal plane through the center of the said contact member when the latter is in its closed position, means for connecting said gear with said movable contact member and arranged to effect a connection between the gear and contact member substantially at right angles to the plane in which the ends of the contact member lie in the closed position of the latter, a segmental gear for rotating said gear, an arm on said segmental gear, an oscillating lever coöperating with said arm to move longitudinally thereof toward its free end to close the switch and remaining in the path of movement in the opposite direction of said arm so as to be moved thereby, and a solenoid having its core operatively connected with said oscillating lever.

2. In an electric switch or circuit controller, in combination, a movable contact member, mechanism for moving it into its closed and opened positions, an electromagnet for operating said mechanism to move said contact member into its closed position, a lever for locking said member in its closed position, a switch for controlling the circuit of said electromagnet, a rod, a toggle connecting said rod with the movable member of said switch, and a pin and slot connection between said rod and locking lever, substantially as described.

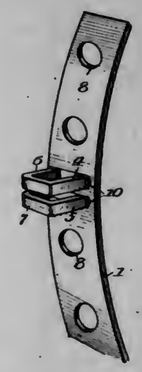
3. In an electric switch or circuit controller, in combination, a movable contact member, a rotatable device provided with an arm having a substantially straight face, means for operatively connecting said rotatable device with said contact member, an oscillating lever coöperating with the substantially straight face of said arm to turn said rotatable device in one direction and move said contact member into its closed position and to be moved by said arm when the contact member is moved into its open position, and means for moving said lever, substantially as described.

4. In an electric switch or circuit controller, in combination, a movable contact member, a rotatable device provided with an arm, means for operatively connecting said rotatable device with said contact arm, an oscillating lever coöperating with said arm and movable in one direction longitudinally of said arm to turn said rotatable device and move said contact member into its closed position and movable in the opposite direction into its starting position by said arm when the contact member is moved into its open position, and an electromagnet having its armature operatively connected with said oscillating lever for moving the latter in the first-mentioned direction.

5. In an electric switch or circuit controller, in combination, a movable contact member, a rotatable device provided with an arm, means for operatively connecting said rotatable device with said contact arm, an oscillating lever pivoted at its lower end and having its free end movable downwardly and coöperating with said arm on said downward movement to move the free end of the latter downwardly and effect rotation of the rotatable device to move the said contact member into its closed position, and having its free end remaining in the upward path of movement of said arm to be moved upwardly thereby in the opening movement of said contact member, and a solenoid having its core operatively connected with said oscillating lever.

[Claim 6 not printed in the Gazette.]

1,210,582. BRAKE-SHOE. CHARLES W. ARMBRUST, Chicago, Ill., assignor, by mesne assignments, to The American Brake-Shoe & Foundry Company, Wilmington, Del., a Corporation of Delaware. Original application filed Feb. 19, 1916, Serial No. 79,237. Divided and this application filed May 19, 1916. Serial No. 98,541. (Cl. 188—82.)



1. A back for a brake shoe provided with a key lug formed of two spaced tongues drawn transversely out of said back.

2. A back for a brake shoe provided with a key lug formed of two parallel tongues drawn transversely out of said back.

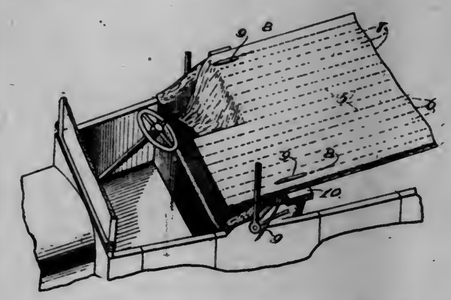
3. A back for a brake shoe provided with a key lug formed of a transversely slotted tongue drawn out of said back.

4. A back for a brake shoe provided with a sectional key lug formed of a slotted tongue drawn transversely out of the back.

5. A back for a brake shoe provided with a double continuous key lug formed of two parallel fingers drawn out of the back transversely.

[Claim 6 not printed in the Gazette.]

1,210,583. AUTOMOBILE-BED. JOHN D. AXTELL, La Jolla, Cal. Filed Feb. 10, 1916. Serial No. 77,447. (Cl. 21—43.)



1. A bed comprising a tick longitudinally divided into pockets and having one end open, and two series of long and short slats adapted to be inserted in said pockets in any desired arrangement, in combination with means for securing said bed in position on the backs of the seats of an automobile.

2. An automobile bed comprising a tick having an open end, means dividing said tick longitudinally into pockets and slats of different lengths adapted to be inserted in, and withdrawn from said pockets at will through their open ends, in combination with flexible means for securing said bed in position on the backs of the seats of an automobile.

3. An automobile bed comprised of a tick longitudinally divided for a part of its length and having an open end, means dividing said tick longitudinally into pockets and slats of different lengths adapted to be inserted in any desired arrangement in said pockets, all of said slats being of sufficient length to extend over the edges of the backs of the front and rear seats of an automobile, in combination with means for securing said bed in position.

4. An automobile bed adapted to be rolled up when not in use and comprising a tick, a plurality of slats of different lengths adapted to be inserted in said tick in any desired arrangement, and means for spacing said slats apart when thus inserted, in combination with means for securing said bed in position on the backs of the front and rear seats of an automobile.

5. An automobile bed adapted to be rolled up when not in use and comprising a tick, a plurality of slats of different lengths adapted to be inserted into said tick in any desired longitudinal arrangement, and means spacing said slats apart when thus inserted, in combination with means resting on the edge of the back of the front seat transversely of the bed for supporting the front portion of the latter and means for securing said bed in position.

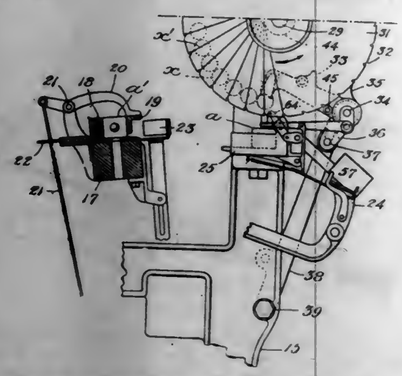
[Claims 6 to 8 not printed in the Gazette.]

1,210,584. SHUTTLE-THREADING MECHANISM. WILLIAM L. BARRELL, Lawrence, Mass. Filed Sept. 26, 1913. Serial No. 791,971. (Cl. 139—85.)

1. In a weft-replenishing loom, the combination with the shuttle box of the lay, a shuttle support other than the

lay, means for inserting a full bobbin into a shuttle on said support, and means for interchanging a filled shuttle on said support and a spent shuttle in said shuttle box; of a thread-engaging device arranged to move the bobbin thread laterally into the throat of the shuttle on said support, and means for causing said device to hold the bobbin thread in said throat while the other shuttle is operating.

2. In a weft-replenishing loom, the combination with the shuttle box of the lay, a shuttle support other than the lay, means for inserting a full bobbin into a shuttle on said support, and means for interchanging a filled shuttle on said support and a spent shuttle in said shuttle box; of a thread-engaging device arranged to move into the throat of a shuttle on said support to move the bobbin thread laterally into said throat, and means for causing said device to remain in said throat while the other shuttle is operating.



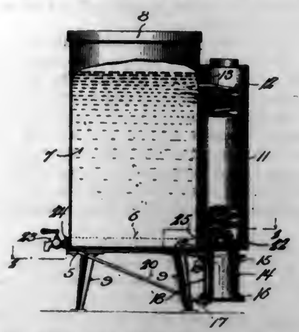
3. In a weft-replenishing loom, the combination with the shuttle box of the lay, a shuttle support other than the lay, means for inserting a full bobbin into a shuttle on said support, and means for interchanging a filled shuttle on said support and a spent shuttle in said shuttle box; of a thread-engaging device arranged to move the bobbin thread laterally into the throat of a shuttle on said support, means for holding said device in said throat while the other shuttle is operating, and means for causing said device to move out of said throat when an interchanging of shuttles is necessary.

4. In a weft-replenishing loom, the combination with the shuttle box of the lay, a shuttle support other than the lay, means for inserting a full bobbin into a shuttle on said support, and means for interchanging a filled shuttle on said support and a spent shuttle in said shuttle box; of a thread-engaging device arranged to move the bobbin thread laterally into the throat of a shuttle on said support, means for locking said device in said throat while the other shuttle is operating, means for actuating said locking means to release said device when an interchanging of shuttles is necessary, and a spring arranged to retract said device from the throat of the shuttle.

5. The combination with the shuttle box of a shuttle-changing loom, of means arranged to support a shuttle apart from such shuttle box, means arranged to put a filled bobbin into the shuttle on said support, means arranged to move the bobbin thread into the throat of the shuttle on said support, means arranged to lock said thread-moving means to keep the thread in the throat while the loom is weaving with another shuttle, means arranged to release said thread-moving means when new filling is required for weaving, and means arranged to interchange the threaded shuttle on said support and the spent shuttle in said shuttle box.

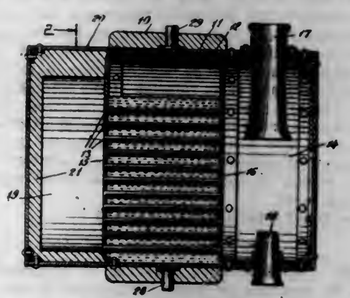
1,210,585. FLUID-FUEL WATER-HEATER. ARTHUR F. BEHL, Milwaukee, Wis. Filed Dec. 16, 1915. Serial No. 67,218. (Cl. 126—350.)

A water heater comprising a base portion, legs supporting said base portion, a tank detachably seated on the base portion, a vertically extended coil carried by the tank and communicating therewith at spaced points, and open bottom casing carried by the tank and surrounding the coil, a bracket depending from one side of the base portion adjacent the casing, a heater member pivotally



carried by the bracket and adapted to swing to extend into the bottom of the casing, one side of the casing being cut away to permit swinging movement of the burner member outwardly thereof and a door for closing said cut away portions.

1,210,586. BOILER. HARVEY W. BELL, Pittsburgh, Pa. Filed June 26, 1915. Serial No. 36,428. (Cl. 122—45.)

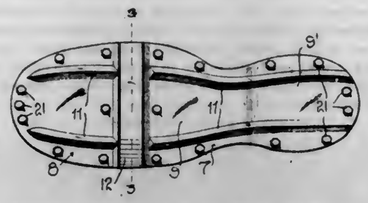


1. A steam generator comprising a relatively short cylindrical boiler, end heads positively closing the ends thereof, intermediate transverse heads dividing said boiler into a firebox, a water chamber and a smoke box, a plurality of fire tubes passing through said intermediate heads and forming a communication between the fire box and the smoke box, and a burner extending tangentially into the fire box and adapted to produce therein a whirling flame in a plane normal to the axes of the fire tubes.

2. A steam generator comprising a relatively short cylindrical boiler, end heads positively closing the ends thereof, intermediate transverse heads dividing said boiler into a comparatively flat firebox, a water chamber and a smoke box, a plurality of fire tubes passing through said intermediate heads and forming a communication between the fire box and the smoke box, and a burner extending tangentially into the fire box and adapted to produce therein a whirling flame in a plane normal to the axes of the fire tubes, a stack extending into the smoke box and having an enlarged inlet, and a contracted exhaust steam nozzle in alinement therewith.

3. A steam generator comprising a relatively short horizontal cylindrical boiler, intermediate transverse heads dividing said boiler into a comparatively flat firebox, lined with fire brick and having a flattened circular transverse section across the top thereof, a water chamber and a smoke box, a plurality of fire tubes passing through the lower and intermediate portions of said heads and forming a communication between the fire box and the smoke box, a burner extending tangentially into the bottom of the fire box and adapted to produce therein a whirling flame in a plane normal to the axes of the fire tubes, a stack extending into the top of the smoke box and having an enlarged inlet, and a contracted exhaust steam nozzle extending into the bottom of the fire box in alinement with said stack.

1,210,587. METAL SHOE-SOLE. ELMER A. BENSON, Peru, Ill. Filed Jan. 17, 1916. Serial No. 72,563. (Cl. 36—73.)



An auxiliary metallic sole for shoes consisting of two sections each having an offset rib on one end, the upper surface of the rib on one section being concave and the rib on the other section lapping upon the rib on the first section and having a convex face for sliding engagement upon said concave face, each of said sole sections having an upstanding continuous flange on its outer edge to lie exteriorily of the extended sole of a shoe, the extremities of the flange on one sole section having their upper edges bent inwardly and lapped over the upper edges of the flanges on the other sole section, the upper margins of the flanges adjacent the ribs of the sections being substantially concentric to the convexed upper surface of the rib of the second section, and means for detachably fastening said metal sole sections to the sole of a shoe.

1,210,588. BAKER'S MIXTURE. THOMAS G. BLACKLOCK, Brooklyn, N. Y., assignor to Blacklock Milling Company, Incorporated, a Corporation of New York. Filed Oct. 7, 1916. Serial No. 124,293. (Cl. 99—10.)

1. A substance for use in the manufacture of dough consisting of an intimate mixture of flour, dextrose and gelatinized starch.

2. A substance for use in the manufacture of dough consisting of an intimate mixture of 6 parts of flour, 3 parts of dextrose and 1½ parts of genatinized starch.

1,210,589. FOOD PRODUCT. ASHLEY V. BLACK, St. Louis, Mo., assignor to Grain Products Company, St. Louis, Mo., a Corporation of Delaware. Filed Aug. 18, 1916. Serial No. 115,592. (Cl. 99—11.)

1. As a new article of manufacture, the edible biscuit or cake herein described, the same being composed only of bran, a shredded cereal, and a syrup, intimately mixed together and compactly molded into cake or biscuit form.

2. A manufactured toasted food product composed of bran, a shredded cereal, and an edible syrup.

3. A manufactured toasted food product composed of bran, shredded wheat, and an edible syrup.

4. A manufactured toasted food product composed of bran, shredded wheat, honey, and molasses.

5. A manufactured toasted food product composed of bran, shredded wheat, and an edible syrup, all intimately mixed together in the proportions approximately of thirty-seven and one-half per cent. bran, twenty-five per cent. shredded wheat, and thirty-seven and one-half per cent. edible syrup.

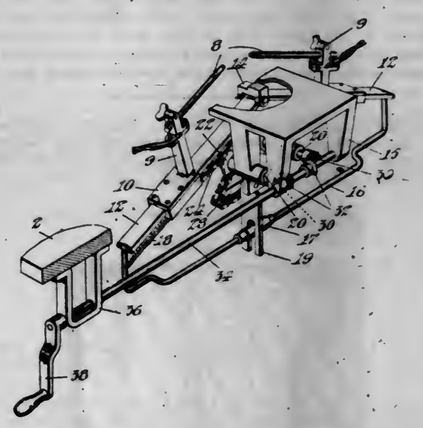
1,210,590. COFFEE-POT. NORINE BOLERATZ, Detroit, Mich. Filed Oct. 6, 1915. Serial No. 54,382. (Cl. 53—3.)

A device of the class described comprising a coffee boiler, a hinged lid upon said boiler, a retaining clasp for the said lid, a downwardly inclined outlet spout for the said boiler, a relatively heavy normally closed swinging closure disk for the said spout, a drip cup provided with a side opening having the said spout removably extending inwardly therethrough, the said drip cup being slightly



spaced from the boiler, a hinged cover for the said drip cup provided with a plurality of outlet perforations therethrough, and operating levers for the said cover and lid.

1,210,591. ELECTRIC HEATING APPARATUS. ALBERT R. BRADEN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 16, 1915. Serial No. 40,260. (Cl. 219—14.)



1. Electric heating apparatus comprising a support having a slot, a block of carborundum disposed adjacent to each side of the slot, said blocks having their upper surfaces disposed in a common plane for supporting the work, and carbons relatively movable in the slot and between the blocks of carborundum.

2. Electric heating apparatus comprising hinged guideways, a carbon carrier movable along each guideway, and an extensible bar connecting the guideways.

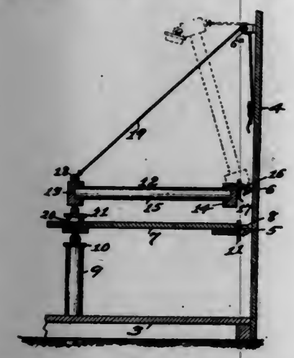
3. Electric heating apparatus comprising a work support, a pair of guideway bars hinged at their inner ends beneath the support, and an expansible bar extending between their outer ends.

4. Electric heating apparatus comprising a bench having a work support, carbons movable toward and from a point adjacent to the support, mechanism beneath the support for moving the carbons, and controlling means for said mechanism located at the edge of the bench.

5. Electric heating apparatus comprising a guideway, a carrier movable along the guideway, a sprocket wheel mounted adjacent to the guideway, a sprocket chain connected to the carrier and passing over the sprocket wheel, and manually operated means for turning the sprocket wheel to advance the carrier on its guideway.

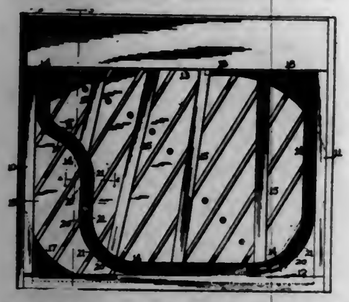
[Claim 6 not printed in the Gazette.]

1,210,592. CHICKEN-PERCH. HERBERT G. BRAHMAN, Reading, Mich. Filed Mar. 10, 1916. Serial No. 83,311. (Cl. 119—22.)



The combination with the floor and wall of a chicken house, of a perch, a hook-and-eye connection between said perch and wall, a floor for droppings thereunder, a hook-and-eye connection between said floor for droppings and said wall, legs for said last named floor, legs for said perch, and a disk impregnated with vermin resisting material at the inner ends of said perch and last named floor and at the upper ends of said legs for preventing the passage of vermin to said perch and last named floor.

1,210,593. UPRIGHT PIANO. STEPHEN BRAMBACH, New York, N. Y., assignor to Brambach Piano Company, New York, N. Y., a Corporation of New York. Filed Apr. 6, 1915. Serial No. 19,587. (Cl. 84—28.)



1. An upright piano having a rectangular back frame including a pin block as one member thereof, a continuous supplementary curved frame member disposed within said back frame and engaging said frame on the bottom and two sides thereof with the two ends of said member abutting against said pin block, and a plurality of spaced upwardly converging braces secured between said curved member and said pin block and each separately engaging said member and block, said frame, block, member and braces all lying in a single plane.

2. An upright piano, having, in combination a back frame comprising a pin block and a continuous curved member secured at its ends to said pin block adjacent the opposite ends thereof, a sounding board having a plurality of openings therein at a substantial distance from the edges thereof, a string plate secured to the pin block at its upper edge, and a series of separated sound posts each extending freely through one of said openings and fixed to said curved member, said posts and pin block constituting the entire support of said string plate.

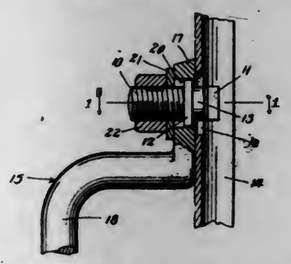
3. An upright piano having, in combination, a sounding board having a plurality of openings therein, a back frame including a pin block and a continuous curved member joined at its two ends to said pin block adjacent the opposite ends thereof, a plurality of upwardly converging braces secured in the plane of and between said curved member and said pin block, a string plate secured at its upper end to the pin block, and a plurality of sound posts extending freely through said openings in the sounding board and fixed to said curved member, said posts and pin block constituting the entire support of said string plate.

1,210,594. ARMOR FOR AUTOMOBILE-TIRES. ROBERT JOHNSON BROOKS and FELIX EMERY MARTIN, Malvern, Ark. Filed Dec. 28, 1915. Serial No. 69,079. (Cl. 152—16.)



A tire armor of the class described, comprising a plurality of outer plates, means for pivotally securing said outer plates together, said outer plates being curved so as to fit snugly upon the tread of a tire, side plates pivotally secured to said outer plates, said side plates being straight throughout their entire lengths, whereby only the portions of said side plates adjacent the ends secured to said outer plates will engage a tire, thereby causing the remaining ends of said side plates to project beyond the side surfaces of the tire, side plates pivotally secured to said first-mentioned side plates, hooks pivotally secured to said last-mentioned side plates, means engaging said hooks for holding said armor upon the tire, the projecting ends of said first-mentioned side plates holding the last-mentioned side plates, and said hooks spaced from the side of the tire, whereby as the tire is depressed or expanded said second-mentioned plates and said hooks will be held from wearing upon the sides of the tire.

1,210,595. BOLT. WILLIAM C. BRUBAKER, Chicago, Ill. Filed Apr. 5, 1916. Serial No. 89,019. (Cl. 85—1.)



1. The combination with two members adapted to be connected together, of a bolt provided with a head insertible through a registering aperture in one of said members and adapted to effect a locking engagement between said bolt and member by the partial rotation of the bolt, and a shank adapted to extend through an aperture in the other of said members, said bolt having means coacting with said last mentioned member for preventing the rotation of said bolt from locking engagement with said first mentioned member.

2. The combination with two members, each provided with an aperture, of a bolt adapted to connect said members together and comprising a shank provided at one end with a head insertible through the aperture of one of said members, said head and aperture being shaped to effect the locking engagement of said bolt and member by the partial rotation of the bolt out of position of insertion, said bolt having means, acting to prevent the shank of said bolt from passing through said aperture and coacting with the other of said members to prevent the rotation of said head from locking position.

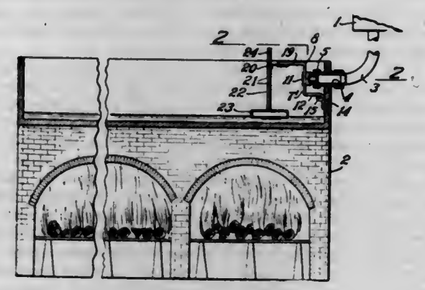
3. The combination of two members, each being provided with an aperture, of a bolt provided with a head insertible through the aperture of one of said members and shaped to effect the locking engagement of said bolt and member upon the partial rotation of said bolt from the position of insertion, and having a key integral with said bolt and registrable with the aperture of the other of said members, said key and last mentioned aperture having coacting surfaces, adapted to prevent the rotation of said bolt from locking position.

4. The combination with a supporting member provided with an aperture and a member adapted to be fastened thereto, of a bolt adapted to be secured to said supporting member by the insertion of said bolt head foremost through said aperture and the subsequent partial rotation thereof, said bolt being provided with a key located adjacent to said head, and non-insertible in said aperture, and adapted to coact with the other member to prevent the rotation of said bolt.

5. The combination with a supporting member and a member to be fastened thereto, of a bolt provided with an elongated head, said supporting member having a slot adapted to register with said head, said bolt being insertible head foremost through said slot and to become locked thereto upon the partial rotation of said bolt out of registering position, said bolt having means coacting with the other member for retaining the bolt in locking position.

[Claims 6 to 9 not printed in the Gazette.]

1,210,596. FLOAT-VALVE. WILLIAM E. BURT, Burlington, Vt., assignor to The Leader Evaporator Company, a Corporation of Vermont. Filed June 11, 1914. Serial No. 844,472. (Cl. 137—104.)



1. In combination with an evaporating tank having a supply pipe leading into it, a valve adapted to cover the pipe end, a horizontally disposed arm pivoted to the tank wall below said pipe and extending vertically across the face of the valve and terminating in a horizontally disposed extension and a float adjustably connected to said horizontal end in supporting relation thereto.

2. A valve for an evaporating tank or the like, comprising a vertically disposed seat, an arm pivoted below said seat and extended horizontally, then vertically, then horizontally, and a float member disposed in supporting relation to said horizontal extension last mentioned.

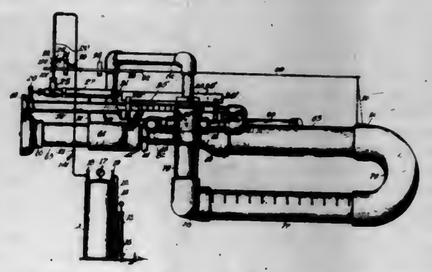
3. In a device of the class described, a tank, an intake discharging therein, a valve for the end of said intake, an axially movable float, and a one piece supporting member having a portion pivoted below said delivery, a portion disposed opposite said delivery and carrying said valve, and a portion disposed above said delivery and engaging said float.

4. In a valve of the class described, a valve and a valve supporting member comprising a pair of suitably bent rods united with each other for substantially their entire length.

5. In a valve of the class described, a valve, a valve supporting member comprising a pair of suitably bent rods united with each other for substantially their entire length, said rods bent away from each other at one end to form a yoke, and a support to which said yoke is pivoted.

[Claims 6 to 14 not printed in the Gazette.]

1,210,597. HYDROCARBON GENERATOR AND BURNER. WILLIAM F. CATHCART, Chicago, Ill. Filed Feb. 18, 1915. Serial No. 9,013. (Cl. 158—53.)



1. In a device of the character described, the combination of a casing comprising a box-like container having the box and cover fixed and spaced apart to provide a liquid container and a canopy; a generator tube, bent upon itself and contained within said canopy; a burner within said box in a plane parallel with the general direction of the tube; a mixing chamber communicating with said generator tube, from which said burner is supplied, and a warm air conduit and a regulable relatively cold air conduit communicating with said mixing chamber.

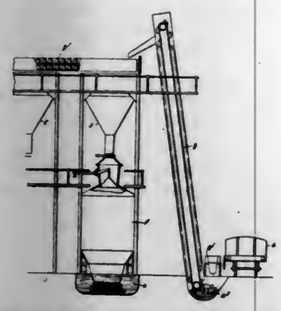
2. In combination, a mixing chamber, a fuel nozzle projecting into the chamber, a vapor tube in alinement with the nozzle and extending outwardly from said chamber, an air inlet tube communicating with said chamber, a secondary mixing chamber connected with the outer end of the vapor tube, a fuel supply pipe connected with the nozzle, a burner for heating the fuel supply pipe, and an independent burner for heating the secondary mixing chamber.

3. In combination, a mixing chamber, a fuel nozzle projecting into the chamber, a vapor tube in alinement with the nozzle and extending outwardly from said chamber, two air inlet tubes communicating with the said chamber on opposite sides thereof, a secondary mixing chamber connected with the outer end of said vapor tube, a fuel supply pipe connected with the nozzle, a burner for heating the fuel supply pipe, an independent burner for heating the secondary mixing chamber, a regulable valve for the free end of one of the air tubes, the other of said air tubes intermediate its ends extending into close proximity to the last mentioned burner.

1,210,598. METHOD OF WORKING GAS-PRODUCERS OF THE MOND TYPE. JOHN BROOKES CHADWICK and PETER HOLLINSHEAD, Runcorn, England, assignors to The Salt Union, Limited, Liverpool, England. Filed July 12, 1912. Serial No. 709,118. (Cl. 23—21.)

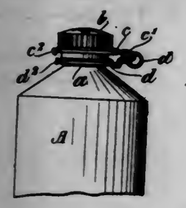
The method of increasing the ammonia and hydrogen output in the manufacture of producer gas including in-

timately mixing lime with the coal, burning the coal in a producer, and passing steam through the burning mixture



in such quantity as to reduce the temperature to a point below that of the breaking up of the ammonia.

1,210,599. CAP-RETAINER FOR DEFORMABLE TUBES, &c. CHARLES CLARK, New York, N. Y., assignor, by direct and mesne assignments, to Cap-Hold, Incorporated, New York, N. Y., a Corporation of New York. Filed Aug. 27, 1915. Serial No. 47,586. (Cl. 221—60.)



1. In combination with a vessel having a threaded neck and a threaded cap therefor, a retainer for the cap comprising a band encircling the neck of the vessel and loosely engaging the threads thereof below the cap, and a link secured to the cap to be non-rotatable with relation thereto and engaged loosely by the band whereby rotation of the cap causes rotation of the link and rotation of the band along the threads.

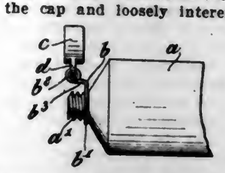
2. A retainer for the threaded cap of a vessel comprising a band secured to the cap to be non-rotatable with relation thereto, and another band encircling the neck of the vessel and loosely engaging the threads thereof below the cap, said bands having a pivotal engagement with each other whereby rotation of the cap causes rotation of both bands.

3. A retainer for the threaded cap of a vessel comprising a band secured to the cap to be non-rotatable with relation thereto, and another band encircling the neck of the vessel and loosely engaging the threads thereof below the cap, said bands having interengaging eyes formed therein respectively whereby rotation of the cap causes rotation of both of said bands.

1,210,600. CAP-RETAINER FOR DEFORMABLE TUBES. CHARLES CLARK, New York, N. Y., assignor, by direct and mesne assignments, to Cap-Hold, Incorporated, New York, N. Y., a Corporation of New York. Filed Oct. 22, 1915. Serial No. 57,230. (Cl. 221—60.)

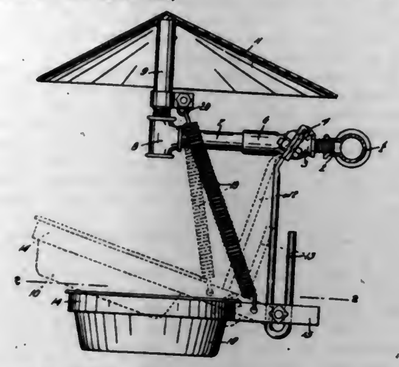
1. A retainer for the threaded cap of a vessel, comprising a link of spring wire having a loop formed therein of a diameter to engage yieldingly the threads on the neck of the vessel and rest loosely therein and eyes formed in the ends above the plane of the loop, and a lug formed integral with the cap and providing a pintle engaged loosely by the eyes to permit a hinged movement of the cap.

2. A retainer for the threaded cap of a vessel including a link of spring wire on the neck of the vessel, and a lug carried on the cap and loosely interengaged to permit



the hinged movement of the cap away from the neck, such link having eyes formed in its ends along a spiral twist to engage the lug, whereby the cap is held yieldingly away from the neck.

1,210,601. POULTRY DRINKING-FOUNTAIN. MORTON CLARK, Seattle, Wash. Filed Jan. 16, 1915. Serial No. 2,524. (Cl. 119—81.)

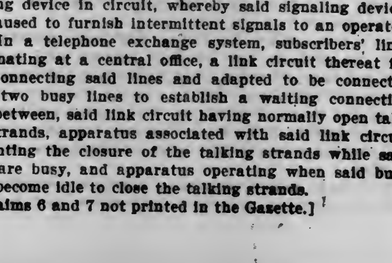


1. In a poultry drinking fountain, in combination a liquid receptacle, a source of liquid supply, a valve attached thereto, the outlet from said valve being positioned over said receptacle, a ring supporting said receptacle, an arm attached to the stem of said valve, said arm being bent back upon itself near its outer end, the ends of said ring being bent outward radially thereof and embracing both portions of said arm, means for clamping said arm between the ends of said ring at any selected height, said valve being so arranged that it is closed when said receptacle is full, and a spring attached to said arm tending to raise said arm to thereby open said valve.

2. In a poultry drinking fountain, in combination, a source of liquid supply, a valve having a rotatable member attached thereto and provided with a T-handle rigidly secured to said rotatable member, an extension pipe attached to said valve and terminating in a vertically directed cross-T, a vertical rod screwed into the upper end of said cross-T and supporting a guard, an arm fixedly secured to the T-handle of said valve and depending therefrom, said arm being bent backward upon itself near its free end, a resilient ring having its ends bent outward and adapted to embrace both portions of said arm, means for clamping said ring upon said arm in a selected position, a liquid receptacle supported by said ring and adapted to close said valve when the receptacle is full, a spring attached at one end to said ring and tending to raise said receptacle to open said valve, the other end of said spring being attached to a collar clamped upon said rod above said cross-T and adjustable thereon, whereby the force necessary to close said valve may be regulated.

1,210,602. TELEPHONE-EXCHANGE SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 8, 1915. Serial No. 49,476. (Cl. 179—58.)

1. In a telephone exchange system, subscribers' lines terminating in a plurality of switching terminals at a central office, a link circuit thereat having coöperating switching terminals connecting two of said lines, a second link circuit having switching terminals for connecting a third line and one of said connected lines and adapted to be connected therewith without altering the electrical condition of the switching terminals of said lines, a signaling device associated with the second link circuit, and apparatus associated with the second link circuit operating when the first link circuit is disconnected from said busy line to cause the operation of the signaling device.



2. In a telephone exchange system, subscribers' lines terminating at a central office, a link circuit thereat connecting two of said lines, a second link circuit for connecting a third line with either of said connected lines, said second link circuit having normally open talking strands, a signaling device for the second link circuit, apparatus associated with said second link circuit preventing the closure of the talking strands thereof when one end of the second link circuit is connected to a busy line, apparatus associated with the second link circuit operating to close the talking strands thereof when the busy line becomes idle, and means actuated upon the operation of the second mentioned apparatus for causing the operation of the signaling device.

3. In a telephone exchange system, subscribers' lines terminating in a plurality of switching terminals at a central office, a link circuit having coöperating switching terminals connecting two of said lines, a second link circuit having switching terminals for connecting a third line and one of said connected lines and adapted to be connected therewith without altering the electrical condition of the switching terminals of said lines, a supervisory signaling device associated with each end of said second link circuit, and apparatus associated with said second link circuit operating when said first link circuit is disconnected from said busy line to cause the operation of said supervisory signaling devices.

4. In a telephone exchange system, subscribers' lines terminating in a plurality of switching terminals at a central office, a link circuit having coöperating switching terminals connecting two of said lines, a second link circuit having switching terminals for connecting a third line and one of said connected lines and adapted to be connected therewith without altering the electrical condition of the switching terminals of said lines, a supervisory signaling device associated with each end of said second link circuit, a circuit-interrupting device, and apparatus associated with said second link circuit operating when said first link circuit is disconnected from said busy line to include said supervisory signaling devices and said circuit-interrupting device in circuit, whereby said signaling devices are caused to furnish intermittent signals to an operator.

5. In a telephone exchange system, subscribers' lines terminating at a central office, a link circuit thereat for interconnecting said lines and adapted to be connected with two busy lines to establish a waiting connection therebetween, said link circuit having normally open talking strands, apparatus associated with said link circuit preventing the closure of the talking strands while said lines are busy, and apparatus operating when said busy lines become idle to close the talking strands.

[Claims 6 and 7 not printed in the Gazette.]

1,210,603. CALLING DEVICE. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Aug. 30, 1916. Serial No. 117,621. (Cl. 179—90.)



1. In a calling device, a manually-operable member comprising a body portion, finger holds movably mounted thereon, and means for holding said finger holds unyieldingly upon the body portion in the direction of operative movement and yieldingly in the opposite direction.

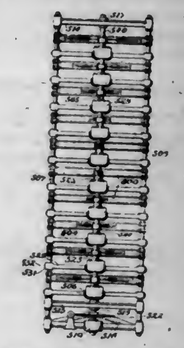
2. In a calling device, a manually-operable member comprising a body portion, finger holds pivotally mounted thereon, and means for holding said finger holds unyieldingly upon the body portion in the direction of operative movement and yieldingly in the opposite direction.

3. In a calling device, a manually-operable member comprising a rotatable body portion, finger holds pivotally mounted thereon, and means for holding said finger holds unyieldingly upon the body portion in the direction of operative movement and yieldingly in the opposite direction.

4. In a calling device, a manually-operable member comprising a body portion, finger holds pivotally mounted thereon, stops on said body portion coöperating with said finger holds and limiting their movement upon the body portion in the direction of operative movement of said body portion, and springs coöperating with said finger holds and yieldingly holding them in engagement with said stops.

5. In a calling device, a manually-operable member comprising a rotatable disk, finger holds pivotally mounted on said disk near the periphery thereof, stops on said disk coöperating with said finger holds and limiting their movement upon the disk in the direction of operative movement of said disk, and springs coöperating with said finger holds and yieldingly holding them in engagement with said stops.

1,210,604. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to James R. Garfield, trustee, Cleveland, Ohio. Filed July 12, 1912. Serial No. 709,097. (Cl. 179—27.)



1. In a telephone exchange system, a central station, substations, substation lines having terminals in the central station, primary selector switches adapted to seek and find calling lines, first selector switches connected therewith, and connecting links and switches adapted to complete the connection between the said first selectors

and called lines, said selector and connector switches being of the mechanically driven type but having primary and secondary movements whereby the group of lines or links may first be picked out and thereafter the individual line or link of the group, and an operator's sending machine connected with the first selector switches and directively controlling the primary movement of the first selector switches, and both the primary and the secondary movement of the connector switches, together with a testing relay controlling the secondary movement of the selector switch.

2. In a telephone exchange system, subscribers' lines and means to interconnect the same comprising a plurality of links and mechanically driven switches, said switches having both primary and secondary movements in a single determinate plane, a manually set impulse operated device to determine the extent of primary movement of the switch, driving means for said device having a circuit closed during the period of said primary movement, and means connected with the switch to produce variations of the current in the circuit of said driving means.

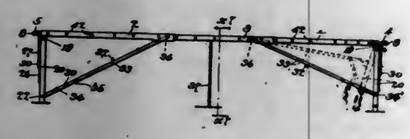
3. In a telephone exchange system, subscribers' lines, means for interconnecting the same comprising links and mechanically driven selector switches, step by step selective means manually set and operated from the switches to determine the extent of movement of the same, actuating means for said selective device the circuit of which is closed during the period of movement of the switch, a switch control magnet in said circuit, and means connected with said switch and operated during the movement thereof to vary the current in said circuit.

4. In a telephone exchange system, subscribers' lines, means to interconnect the same comprising links and mechanically driven selector switches, a manually set step by step device adapted to be actuated from the switches to determine the extent of movement thereof in accordance with the manual setting, an actuating magnet for said device and a control magnet for the switch in a series circuit closed during the period of connective movement of the switch, said control magnet of the switch being responsive to smaller current flow than said actuating magnet, and means connected with the switch to increase the flow of current in said circuit at determinate intervals during its movement.

5. In a telephone exchange system, subscribers' lines, means for interconnecting the same comprising links and mechanically driven selector switches and control relays therefor, an impulse operated device and control relay therefor, said control relays being energized in series in a single circuit, a circuit changing device associated with each of said switches, adapted to be included in said series circuit and a circuit changing device operated by said impulse operated device also included in said series circuit, the control relay of the impulse operated device being responsive to both of said circuit changing devices and the said switch control relay being responsive only to the circuit changing device operated by the impulse operated device.

[Claims 6 to 11 not printed in the Gazette.]

1,210,605. COMBINATION FOLDING COT AND TABLE. CHARLES W. CLOUGH, ALFRED N. CLOUGH, and WILLIAM O. SPRING, Los Angeles, Cal. Filed June 21, 1915. Serial No. 35,290. (Cl. 5—5.)



1. In combination, telescoping side rails, legs pivotally connected to the side rails, telescoping end rails pivotally connected at their ends to the legs, and provided intermediate their ends with links, said legs being foldable between said side rails and end rails when the end rails are folded, and a cover detachably fastened to the side rails.

2. In combination, telescoping side rails, legs pivotally connected to the side rails, telescoping end rails pivotally connected at their ends to the legs and provided intermediate their ends with hinges, a cover detachably fastened to the side rails, and means to extend the end rails to stretch the cover.

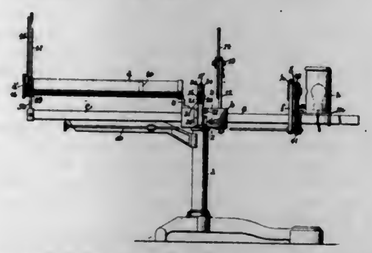
3. In combination, telescoping side rails, folding legs formed in two sections and pivotally connected to the side rails, telescoping end rails pivotally connected at their ends to the legs and provided intermediate their ends with links and foldable between said side rails, said legs being foldable between said side rails and end rails when the end rails are folded, folding braces pivoted to the legs and pivoted to the side rails, other folding braces pivoted to the legs and end rails and foldable between said legs and end rails, and a cover detachably fastened to the side rails.

4. In combination, side rails provided with holes, telescoping end rails, a cover provided along its side margins with strips, studs mounted on the strips to engage the holes when the end rails are shortened, side extensions on the cover provided with other strips, other studs mounted on said other strips to engage the holes when the end rails are extended, and means to hold the end rails against contraction.

5. In combination, telescoping side rails, links pivoted to the side rails, pivot studs extending from said links, end rails provided intermediate their ends with hinges and mounted on said studs, legs pivoted to the links, braces to hold the legs against folding, and a cover detachably fastened to the rails.

[Claims 6 and 7 not printed in the Gazette.]

1,210,606. INSTRUMENT FOR TESTING LENSES. JOHN W. COLLINSON, Greenwood, Mass., assignor to Andrew J. Lloyd Company, Boston, Mass., a Corporation of Massachusetts. Filed June 16, 1913. Serial No. 773,812. (Cl. 88—56.)

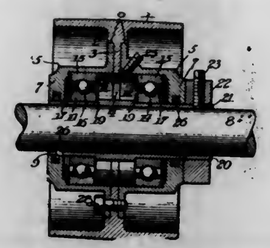


In an apparatus of the character described, in combination, a standard, a head supported thereby, a yoke-shaped frame straddling said head and provided on opposite sides thereof with rack bars, a shaft extended through said head and laterally therefrom and provided on opposite sides thereof with pinions in mesh with said rack bars, means for guiding said rack bars, and a holder for the lens to be tested supported by said frame.

1,210,607. LOOSE PULLEY. WILLIAM F. DAGGETT, Chicago, Ill. Filed Mar. 20, 1916. Serial No. 85,286. (Cl. 64—59.)

1. A loose pulley comprising relatively rotatable hub and rim portions, cup members between said portions, said cup members being fitted to the rim portion and rotating therewith and having central chamber portions forming a closed chamber, and ball bearing arrangements inclosed within said chamber of said cup members, said ball bearing arrangements being mounted upon said hub portion.

2. A loose pulley comprising relatively rotatable hub and rim portions, cup members between said portions, said cup members being fitted to the rim portion and rotating therewith and having central chamber portions, and ball bearing arrangements within the chamber portions of said cup members, said ball bearing arrangements being mounted upon said hub portion, said chamber portions of said cup members affording chambers or receptacles for lubricating material for said ball bearing arrangements.



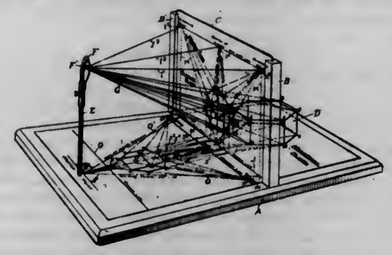
3. A loose pulley comprising relatively rotatable hub and rim portions, cup members between said portions, said cup members being fitted to the rim portion and rotating therewith and having central chamber portions, and ball bearing arrangements within the chamber portions of said cup members, said ball bearing arrangements being mounted upon said hub portion, said rim portion having a transversely extending web located between said cup members, said cup members being fitted and secured to said web.

4. A loose pulley comprising relatively rotatable hub and rim portions, cup members between said portions, said cup members being fitted to the rim portion and rotating therewith and having central chamber portions, and ball bearing arrangements within the chamber portions of said cup members, said ball bearing arrangements being mounted upon said hub portion, said rim portion having a transversely extending web located between said cup members, said cup members being fitted and secured to said web, said web having a central aperture affording communication between said cup chambers.

5. A loose pulley comprising relatively rotatable hub and rim portions, cup members between said portions, said cup members being fitted to the rim portion and rotating therewith and having central chamber portions, and ball bearing arrangements within the chamber portions of said cup members, said ball bearing arrangements being mounted upon said hub portion, said rim portion having a transversely extending web located between said cup members, said cup members being fitted and secured to said web, said hub portion being formed by a sleeve adapted to fit within said cup members and also within said ball bearing arrangements and being provided with means for holding the latter in position.

[Claims 6 to 10 not printed in the Gazette.]

1,210,608. DEMONSTRATING APPARATUS. FREDERICK M. DANNENFELSER, Muskegon, Mich. Filed Oct. 24, 1913. Serial No. 797,016. (Cl. 35—12.)



1. A demonstrating apparatus, comprising a base, a vertical screen mounted thereon, an object mounted on the base on one side of the screen and a sight mounted on the other side thereof, straight threads extending from the sight through said screen to points upon said object, and horizontal threads extending from said sight to points upon the screen and parallel to sides of the object, said base having a drawing covered by said object and corresponding in size and shape to the bottom thereof and lines corresponding to projections of said straight threads.

2. A demonstrating apparatus, comprising a base, a vertical screen mounted thereon, an object mounted on the base on one side of the screen and a sight mounted on the other side thereof, straight threads extending from the sight through said screen to points upon said object, and horizontal threads extending from said sight to points upon the screen and parallel to sides of the object, said screen having lines corresponding to edges of the object connecting the points of the screen where the threads pass through it and constituting a perspective drawing of the object, said base having a drawing covered by said object and corresponding in size and shape to the bottom thereof and lines corresponding to projections of said straight threads.

3. A demonstrating apparatus, comprising a base, a vertical screen mounted thereon, an object mounted on the base on one side of the screen and a sight mounted on the other side thereof, straight threads extending from the sight through said screen to points upon said object, horizontal threads extending from said sight to points upon the screen and parallel to sides of the object, said screen having lines corresponding to edges of the object connecting the points of the screen where the threads pass through it and constituting a perspective drawing of the object, and also vanishing traces connecting said points with the points where said horizontal threads meet the screen, and a horizon line in which said last mentioned points lie, said base having a drawing covered by said object and corresponding in size and shape to the bottom thereof and lines corresponding to projections of said straight threads.

4. A demonstrating apparatus, comprising a base, a vertical screen mounted thereon, an object mounted on the base on one side of the screen and a sight mounted on the other side thereof, straight threads extending from the sight through said screen to points upon said object, horizontal threads extending from said sight to points upon the screen and parallel to sides of the object, said screen having lines corresponding to edges of the object connecting the points of the screen where the threads pass through it and constituting a perspective drawing of the object, and also vanishing traces connecting said points with the points where said horizontal threads meet the screen, and a horizon line in which said last mentioned points lie, said base having an extended horizontal surface provided with points and lines similar to those upon the screen, the horizon line on the base being parallel to the horizon line upon the screen and between the baseboard drawing of the object and the screen.

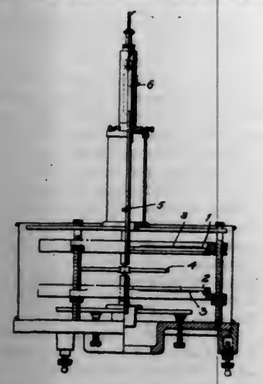
5. A demonstrating apparatus, comprising a base, a vertical screen mounted thereon, an object mounted on the base on one side of screen and a sight mounted on the other side thereof, straight threads extending from the sight through said screen to points upon said object, horizontal threads extending from said sight to points upon the screen and parallel to sides of the object, and a horizontal thread constituting an extension of one of the horizontal top edges of the object and connected to said object and the screen, said base having a drawing covered by said object and corresponding in size and shape to the bottom thereof and lines corresponding to projections of said straight threads.

[Claims 6 to 10 not printed in the Gazette.]

1,210,609. WATTMETER. CHARLES W. DAVIS, Edgeworth, Pa. Filed Oct. 19, 1914. Serial No. 867,272. (Cl. 171—95.)

1. In an apparatus for measuring the energy loss of an electric circuit, the combination with the circuit to be measured, of a resistance coil arranged in series in the

said circuit, an electrometer including two elements of which one is connected to the poles of the said resistance coil and the other is arranged opposite the first and impressed with the voltage of the circuit on the side of the load opposite that of the connection of the first element; and a needle arranged between said elements and impressed with a voltage of intermediate value.



2. In an apparatus for measuring the energy loss of an electric circuit, the combination, with the circuit to be measured, of a resistance coil arranged in series in the said circuit, an electrometer including two elements of which one is connected to the poles of the said resistance coil, and the other is arranged opposite the first and impressed with the voltage of the circuit on the side of the load opposite that of the connection of the first element, and a needle impressed with a voltage of intermediate value and arranged between the two said elements and spaced from them at relative distances corresponding to the voltage ratio.

3. In an apparatus for measuring the energy loss of an electric circuit the combination of a quadrant plate a homogeneous circular plate of conducting material arranged concentrically with and opposite to said quadrant plate, and a needle suspended between the two said plates.

4. In an apparatus for measuring the energy loss of an electric circuit the combination of a suspended double needle a plate extending between the two parts of the said needle, two plates extending parallel with the plate first named, one above the upper needle and the other beneath the lower, one type of plate being the quadrant type and the other a homogeneous circular plate of conducting material, and all of said plates being concentrically arranged.

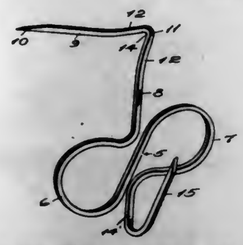
5. In an electrostatic watt meter the combination of a high-tension plate and a low-tension plate one of said plates consisting essentially of symmetrically disposed and individually insulated quadrants of conducting material, and of a needle suspended between said plates.

[Claims 6 to 8 not printed in the Gazette.]

1,210,610. PICTURE-HOOK. MARTIN DEHN, Buffalo, N. Y. Filed Jan. 18, 1916. Serial No. 72,788. (Cl. 40—145.1.)

1. A hook for suspending pictures or the like, formed of a flexible and relatively nonresilient metal and embodying a looped body portion carrying prongs at its opposite ends which are integral therewith, the metal at the point of connection between one prong and the body portion being bent and subjected to a degree of pressure such that it is rendered frangible and breakable upon the relative movement of the body portion with relation to the prong.

2. A hook for suspending pictures or the like, formed of a flexible and relatively nonresilient metal and embodying a looped body portion carrying prongs at its upper and lower ends which are integral therewith, the metal at the point of connections between the upper prong and body portion being bent and subjected to such a degree of pressure so that the bent portion is strained and bulges laterally and outwardly and is frangible, said locally bent portion being adapted to break upon the movement of the body portion with relation to the upper prong.



3. A hook for suspending pictures or the like, formed of a flexible and relatively non-resilient metal and embodying a looped body portion carrying prongs at its upper and lower ends which are integral therewith, the metal at the point of connection between the upper prong and body portion being bent and subjected to such a degree of pressure that it has a substantially greater degree of frangibility than the body portion, and said locally bent portion being adapted to be broken by a single upward movement of the body portion with respect to the upper prong.

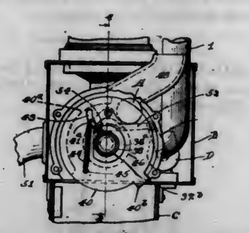
1,210,611. PROPELLER. ABRAHAM J. D'ENTREMONT, West Pubnico, Nova Scotia, Canada. Filed Sept. 20, 1915. Serial No. 51,703. (Cl. 170—171.)



A propeller comprising a hub, a pair of blades, each of said blades being connected directly to the hub by a pair of spaced arms lying in the same plane as the body of the blades, each of said arms having a flange extending from each side of the lower edge thereof in the direction of length of the arms, said flanges having a series of apertures therein whereby said blades may be detachably secured to said hub and also providing an unobstructed passage through the center of said blades whereby the water passing therethrough will not be churned.

1,210,612. LIQUID-DISPENSING APPARATUS. CHARLES DOERING, Jr., Chicago, Ill. Filed Apr. 26, 1915. Serial No. 23,929. (Cl. 194—72.)

1. In a liquid-dispensing apparatus, a valve-housing provided with a two-way valve rotatably mounted in the housing and provided with trunnions extending to the outside of the housing, one of the trunnions being provided with a flange having a segmental cut-out portion, an operating member loosely mounted on said trunnion and provided with a circumferential disk held in spaced relation to the valve-housing, a double ended pawl pivotally mounted on said disk with one end normally seated in the segmental cut-out portion of said flange whereby the valve may be rotated in one direction, and means for directing a coin onto the opposite end of said pawl whereby the pawl will be tilted through the action of a coin and said end brought into engagement with the opposite end of said segmental cut-out portion of the flange and thereby enable the valve to be rotated in the opposite direction.

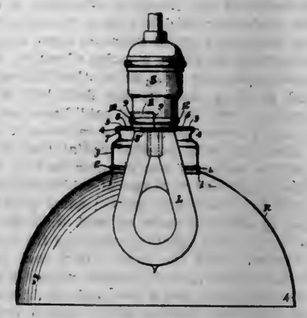


2. In a liquid-dispensing apparatus, a valve-housing, a plug-valve rotatably mounted in said housing, said valve being provided with a trunnion extending through to the outside of the housing, a flange secured to said trunnion and provided with a segmental cut-out portion, an operating member loosely mounted on the trunnion and provided with a disk held in spaced relation with the side of the valve-housing, said disk being provided with a segmental flange for closing the space between the disk and the valve-housing to a predetermined extent, a double ended pawl pivotally mounted on the disk so as to have one end of the pawl extending into a vertical plane beyond the vertical plane of one end of said segmental flange, while the other end of said pawl is normally seated in one end of the cut-out portion of the said flange whereby the valve may be moved in one direction through proper rotation of said operating member, and means for guiding a proper coin onto the first-mentioned end of said pawl whereby the latter may be oscillated and said coin engaged-end moved into the segmental cut-out portion of said flange while the other end is removed therefrom so that the valve may be rotated in the opposite direction through proper operation of said operating member.

3. In a liquid-dispensing apparatus, a valve-housing provided with a plurality of ports, a plug-valve rotatably mounted in said housing and provided with angularly disposed ports adapted to effect communication between any two selective ports of the plurality of ports in said housing, the end of said valve being provided with a flange having a pair of shoulders arranged in spaced relation, an operating member loosely mounted on the end of the valve and provided with a disk having a segmental flange adjacent its periphery for a predetermined distance, a spring-controlled double-ended pawl pivoted on the disk in proximity to one end of the segmental flange, one end of said pawl being normally held in engagement with one of the shoulders on said flange so that the valve may be rotated in one direction through proper operation of said operating member, and means for guiding a coin into the space between said disk and the wall of the valve-housing when said disk is rotated to a predetermined position so as to permit the coin to engage with the free end of the pawl and thereby move the latter into engagement with the other shoulder on the flange secured to the valve whereby the valve may be rotated in the opposite direction through proper rotation of the operating member.

4. In a liquid-dispensing apparatus, a valve-housing, a plug-valve rotatably mounted in said housing and provided with a trunnion, a flange secured on said trunnion and provided with a pair of engaging points, an operating member loosely mounted on the trunnion adjacent said flange, a disk secured to said member provided with a stop for limiting the rotation of said operating member and the valve in either direction, said disk being provided with a segmental flange for a predetermined extent adjacent the periphery thereof extending intermediate of the disks and the wall of the valve-housing, so as to close off the intervening space when the disk has been rotated in one direction, a two-ended spring-controlled pawl pivotally mounted on said disk in proximity to one end of said segmental flange, with one end of the pawl extending into a vertical plane beyond the end of the segmental flange, one end of the pawl being normally held in engagement with one of the engaging points, and a coin-receiving chute adapted to direct an inserted coin onto one end of said pawl when the disk is in normal position and said end of the pawl brought into engagement with the other engaging point on said flange through the action of the inserted coin so that movement of the operating member will rotate the valve in the opposite direction.

1,210,613. SHADE ATTACHMENT. HENRY D'OLIER, Jr., East Cleveland, Ohio. Filed Mar. 31, 1915. Serial No. 18,215. (Cl. 240—114.)



1. A shade or reflector attachment comprising socket engaging fingers of wire and ties integral with and connecting said fingers, and beads on said fingers adapted to register with the lamp socket bead.

2. A shade or reflector attachment comprising socket engaging fingers and ties integral with and connecting said fingers, and beads on said fingers adapted to register with the lamp socket bead, said ties being disposed above said beads.

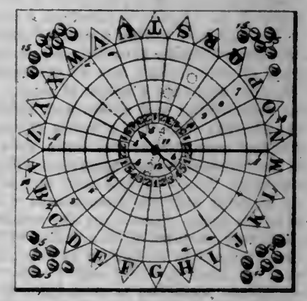
3. A shade or reflector attachment consisting of an integral piece, said piece comprising a plurality of pairs of socket engaging fingers and a tie for each pair integrally joining the fingers of said pair.

4. A shade or reflector attachment consisting of an integral piece, said piece comprising socket engaging fingers and a tie integrally joining said fingers, said fingers having beads adapted to engage a lamp socket bead.

5. A shade or reflector attachment comprising a shade or reflector engaging portion, portions integral therewith and extending inwardly therefrom, socket engaging fingers on the inner ends of and integral with said inwardly extending members, and a tie integral with and connecting said fingers.

[Claims 6 to 13 not printed in the Gazette.]

1,210,614. EDUCATIONAL GAME. EMMA K. DOREE, New York, N. Y. Filed July 27, 1916. Serial No. 111,736. (Cl. 46—63.)



1. In a device of the character described, a board provided with a circular field having a central circle and a plurality of concentric circles between said central circle

and the margin of the circular field to divide said field into a series of zones; a series of radial lines intersecting said circles and dividing that part of the circular field into a series of radial segments; game pieces designed to be moved to different zones in said segments identifying characters on the segments indicating the names of the different segments, and the zone within each segment to which the game piece is to be moved when a play is to be moved when a play is to be made on that segment; and a rotatable indicator mounted at the center of the board, adapted to be twirled to indicate the segments upon which the successive plays are to be made.

2. In a device of the character described, a board provided with a circular field having a plurality of concentric circles spaced an equal distance from each other to form said circular field into a series of zones; a series of radial lines equidistant from each other intersecting said circles and dividing the circular field into a series of radial segments; the number of said lines and segments being an even number, whereby to cause each radial line to be in alinement with another radial line at the opposite side of the center of the circular field; a heavy diametrical line coincident with two of said radial lines dividing said field into two equal parts; game pieces designed to be moved to different zones on said segments; identifying characters on the segments indicating the names of the different segments and the zone within each segment to which the game piece is to be moved when a play is to be made on that segment and a rotatable indicator mounted at the center of said circular field, adapted to be twirled to indicate the segments upon which the successive plays are to be made.

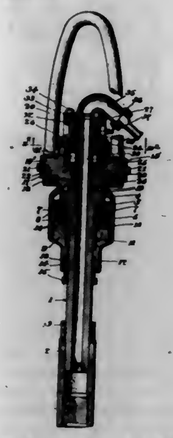
3. A game board provided with a circular field having a plurality of concentric circles spaced an equal distance from each other, to form said field into a series of zones; a diametrical line dividing said circular field into two equal parts; a series of radial lines equidistant from each other, said radial lines intersecting said circles and dividing the circular field into a series of equal radial segments; a letter of the alphabet at the outer end and a numeral at the inner end of each segment; and a rotatable indicator mounted at the center of said circular field.

4. In a device of the character described, a board provided with a circular field having a central circle and a plurality of concentric circles between said central circle and the margin of the circular field to divide said portion of the circular field into a series of zones; a series of radial lines intersecting said circles and dividing that portion of the circular field into a series of radial segments; numerical symbols on said segments, there being as many different symbols employed as there are zones surrounding said central circle, each symbol designating one of said zones; game pieces employed with said board and designed to be moved on said segments to the zones indicated by the respective numerals on the segments; and a rotatable indicator mounted at the center of said circular field and designed to be twirled by the players to cause the indicator to stop opposite different ones of said segments to indicate where each play is to be made.

5. In a device of the character described, a board provided with a circular field having a central circle and a plurality of concentric circles between said central circle and the margin of the circular field to divide said portion of the circular field into a series of zones; a series of radial lines intersecting said circles and dividing that portion of the circular field into a series of radial segments; identifying numerals at the inner ends of said segments, the numerals employed beginning with a given numeral designating the outer zone and increasing consecutively till as many different numerals have been employed as there are zones surrounding the central circle, a rotatable indicator mounted at the center of said circular field, and designed to be twirled by the players before each play, to cause the indicator to stop opposite different ones of said segments, to thus indicate the segment upon which each play is to be made; and game pieces employed with said board and designed to be moved on said segments, from the margin of the circular field toward the center thereof as many zones as indicated by the relative value of the numeral on the segment at which the arrow points when it stops after being twirled.

[Claim 6 not printed in the Gazette.]

1,210,615. OIL-TIGHT SWIVEL. EDWARD DOUBLE, Los Angeles, Cal. Filed July 20, 1916. Serial No. 110,266. (Cl. 255—25.)



1. In combination, a trunnion, a swivel stem having a shoulder, an antifriction device between the shoulder and the trunnion, a box surrounding one end of the swivel stem and connected to the trunnion, a gland for said box, and a goose neck fastened directly to the box and discharging directly into the swivel stem.

2. In combination a trunnion, a swivel stem having a shoulder, an antifriction device between the shoulder and the trunnion, a box surrounding one end of the swivel, and connected oy arms to the trunnion, and a gland for said box, said box and gland being accessible through the space between said arms.

3. In combination, a trunnion, a swivel stem having a shoulder, an antifriction device between the shoulder and the trunnion, a box surrounding one end of the swivel and connected to the trunnion, a gland to close one end of said box, a bushing between the box and swivel stem, means to hold the bushing in place, and a goose neck integral with the bushing.

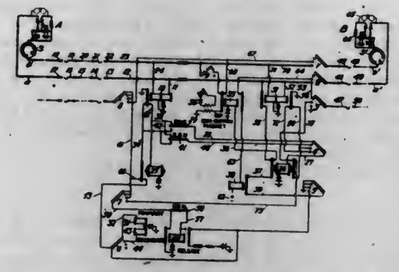
4. In combination, a trunnion, a swivel stem having a shoulder, an antifriction device between the shoulder and the trunnion, a box surrounding one end of the swivel and connected by arms to the trunnion, a gland to close one end of the box, said box and gland being accessible through the spaces between the arms, a bushing between the box and swivel stem, means to hold the bushing in place, and a goose neck integral with the bushing.

5. In combination, a trunnion, a swivel stem having a shoulder, an antifriction device between the shoulder and the trunnion, a box surrounding one end of the swivel and connected by arms to the trunnion, said trunnion forming a second box, and glands for the boxes respectively, said boxes and glands being accessible through the spaces between the arms.

[Claims 6 to 13 not printed in the Gazette.]

1,210,616. MACHINE-SWITCHING TELEPHONE-EXCHANGE SYSTEM. BERT G. DUNHAM, Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 14, 1915. Serial No. 50,589. (Cl. 179—18.)

1. In a telephone exchange system, the combination with an automatic selector switch, lines terminating therein, means for setting said switch on said lines, and a side-switch controlling said automatic switch, of a relay associated with said automatic switch, means for operating the same or not according to the condition of the selected line, said relay when operated being adapted to lock itself up, means for advancing the side-switch when connection is made with a selected line irrespective of the condition of such line, a generator, a busy back apparatus, and means controlled by said relay and adapted when the side-switch is advanced to connect said generator with the selected line or said busy back apparatus with the calling line, dependent upon the condition of said relay.



2. In a telephone exchange system, the combination with an automatic selector switch, lines terminating therein, means for setting said switch on said lines and a side-switch controlling said automatic switch, of a relay associated with said automatic switch, means for operating the same or not according to the condition of the selected line, said relay when operated being adapted to lock itself up, means for advancing the side-switch when connection is made with a selected line irrespective of the condition of such line, a generator, a busy back apparatus, a magnet controlled by said relay and adapted when said side-switch is advanced to apply ringing current to the selected line or to connect said busy-back apparatus with the calling line, dependent upon the condition of said relay.

3. In a telephone exchange system, the combination with an automatic selector switch, lines terminating therein, a stepping relay, a stepping magnet controlled thereby for setting said switch on said lines, a sender controlling said stepping relay, a side-switch controlling said automatic switch, an arm of said side-switch being adapted to connect said magnet to a contact of said stepping relay, of a relay associated with said automatic switch, means for operating the same or not according to the busy or idle condition of the selected line, said relay when operated being adapted to lock itself up, means for advancing said side-switch arm to disconnect said magnet from said stepping relay contact irrespective of the condition of the selected line, a generator, a busy back apparatus, and means controlled by said relay and adapted when the side switch is advanced to connect said generator with the selected line or said busy back apparatus with the calling line, dependent upon the condition of said relay.

4. In a telephone exchange system, the combination with an automatic selector switch having a test brush, lines terminating in said switch, multiple test terminals therefor, a stepping relay, a stepping magnet controlled thereby for setting said switch on said lines, means for grounding the test terminals of busy lines, a sender controlling said stepping relay, a side-switch controlling said automatic switch, and an arm of said side-switch being adapted to connect said magnet to a contact of said stepping relay, of a relay associated with said automatic switch, a circuit for said relay adapted to be closed when said test brush engages the test terminal of a busy selected line, a locking circuit for said relay, means for advancing said side-switch arm to disconnect said magnet from said stepping relay contact irrespective of the condition of the selected line, a generator, a busy-back apparatus, and means controlled by said relay and adapted when the said switch is advanced to connect said busy-back apparatus with the calling line or said generator with the selected line, depending upon the condition of said relay.

5. In a telephone exchange system, the combination with an automatic switch having a test brush, lines terminating therein, test terminals therefor, means for setting said switch on said lines, means for grounding the test terminals of busy lines, a side-switch controlling said automatic switch, a ringing generator, a busy-back apparatus, and a release circuit for said automatic switch, of a relay 51 connected to said test brush, a circuit for said relay adapted to be closed when said test brush engages the test terminal of a busy selected line, a locking circuit for said relay, means for advancing the side-switch when connection is made with a selected line irrespective of the condition of such line, a slow relay 26 adapted in such advanced position to be operated if relay 51 remains inert and controlling at its armature and back contact said release circuit, a relay 35 adapted to be operated by the energization of said relay 26, said relay 35 being adapted when energized to apply current from said generator to the selected line, means for advancing the side switch into the talking position upon the response of the called party and for including said relay 51 in circuit with the called line, and a circuit for said relay 26 controlled by said relay 51 in such position.

1,210,617. RELAY. BERT G. DUNHAM, Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Oct. 12, 1915. Serial No. 55,501. (Cl. 175—321.)

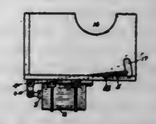


1. A relay comprising a core, an energizing winding thereon, a pivoted armature, and means for retracting said armature comprising a spring associated therewith and constructed and arranged to exert a minimum retractive force when the armature is in its attracted position.

2. In a relay, the combination with the frame, a core, a winding thereon, an armature pivoted to said frame, a retractile spring for said armature mounted on said frame, and a link connecting said spring and armature, the points of connection of said link with said spring and armature being substantially in line with each other and with the pivotal point of support of the armature when the same is attracted.

3. In a relay, the combination with the frame, a core, a winding thereon, an armature pivoted to said frame, a retractile spring for said armature mounted on said frame, and a link connecting said spring and armature, the points of connection of said link with said spring and armature and the pivot of said armature being so arranged that they approach alinement when the armature is attracted.

1,210,618. BAG-COUNTING MEANS. JAMES DUVALL, Camas, Wash. Filed Dec. 11, 1915. Serial No. 66,340. (Cl. 93—93.)



1. In a counting attachment for bag machines, a holder or box to receive the bags as they are delivered from the machine and stacked one on top of the other, a kicker arm in said box free to oscillate toward and away from the open side of the box, a bell crank to which the kicker arm is attached, a solenoid whose core is attached to the horizontal arm of said bell crank, a spring on said bell

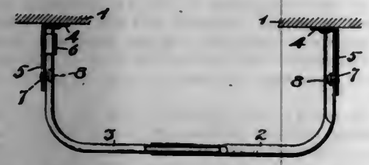
crank which restores the kicker arm and core into operative position when the solenoid is inactive, a worm and worm wheel which governs the time of rotation of an insulated piece of wire or metal, which at fixed intervals closes the electrical circuit controlling said solenoid.

2. In a counting attachment of the class described, a stationary receiver into which the units to be counted are stacked one on top of the other, a kicker arm in said receiver, a solenoid whose movable plunger is attached to said kicker arm and a moving contact that closes at fixed intervals the electric circuit controlling the solenoid, so that the bottom bunch of stacked units in the receiver is pushed out of alinement by the said kicker arm before any of the succeeding units are deposited on top of the said bottom bunch of units.

3. In a counting attachment for bag machines, a receptacle into which the bags as made are stacked one on top of the other, a kicker arm so mounted on the receptacle that its free end can oscillate toward and away from the open side of the receptacle and a suction magnet which operates at predetermined intervals to actuate said kicker arm, and move the bottom bunch of bags out of alinement with the direction of feed before any succeeding bags are deposited on top of the bottom bunch.

4. In a counting attachment for bag machines, the combination with a stationary receptacle for receiving the bags in superimposed relation, of a pusher arm which engages at fixed intervals a stack of units, pushing them slightly out of alinement with the direction of feed so that the succeeding units will be deposited in the line of feed on top of this bottom bunch of slightly displaced units.

1,210,619. CURTAIN ROD AND BRACKET. WILLIAM H. EDSALL, Wallingford, Conn., assignor to H. L. Judd Company, New York, N. Y., a Corporation of New York. Filed Aug. 2, 1916. Serial No. 112,698. (Cl. 156—22.)



1. In a curtain rod bracket, a base having a rod carrying arm, a laterally projecting pivot carried thereby, and a laterally projecting rod support carried thereby but at a different distance from the base than said pivot, said pivot and lateral supports coöperating to engage and hold the rod, and means carried by said pivot also cooperating with the rod to hold the same.

2. In a curtain rod bracket, a base having a rod carrying arm, a laterally projecting pivot carried thereby, and a laterally projecting rod support carried thereby but at a different distance from the base than said pivot, said pivot and lateral supports coöperating to engage and hold the rod, and means carried by said pivot also cooperating with the rod to hold the same, said means comprising a head on said pivot and a slot in the rod arranged to pass freely over said head when the rod is in one position, and to engage underneath the head when said rod is in another position.

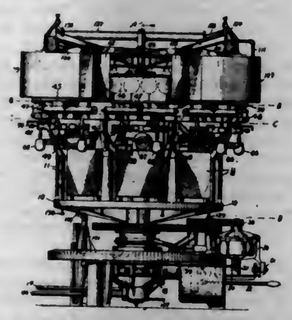
3. In a curtain rod bracket, a base having a rod carrying arm, a laterally projecting pivot carried thereby, and a laterally projecting rod support carried thereby but at a different distance from the base than said pivot, said pivot and lateral supports coöperating to engage and hold the rod, and means carried by said pivot also cooperating with the rod to hold the same, with means to frictionally hold said rod against accidental tilting movement when the same is in operative position on said bracket.

4. In a curtain rod bracket, a base having a rod carrying arm, a laterally projecting pivot carried thereby, and a laterally projecting rod support carried thereby but at a different distance from the base than said pivot, said pivot and lateral supports coöperating to engage and hold the rod, and means carried by said pivot also cooperating with the rod to hold the same, with means to frictionally hold said rod against accidental tilting movement when the same is in operative position on said bracket, said means comprising a yielding inturned extension at the end of said rod support.

5. In a curtain rod and bracket, a bracket element having a base, a rod carrying arm carried by said base, a laterally extending headed stud carried by said arm, a laterally projecting over-hanging rod support carried by said arm between said stud and pivot, and a rod element having a key-hole passage arranged longitudinally of the rod and near the end, the narrower end of said passage being nearest the end, the wider end of said passage being sufficiently large to pass over said head, the narrower end being of less width than the width of said head, the shank of said headed stud resting in the narrower part of said slot when the bracket element and rod element are in operative position.

[Claims 6 to 8 not printed in the Gazette.]

1,210,620. EXHAUSTING-MACHINE. JOHN T. FAGAN and CLEVELAND H. QUACKENBUSH, Cleveland, Ohio, assignors to General Electric Company, a Corporation of New York. Filed Dec. 2, 1914. Serial No. 875,194. (Cl. 176—2.)



1. An exhausting machine comprising movable means for holding an article to be exhausted, and a vacuum pump connected to said means and movable therewith.

2. An exhausting machine comprising a plurality of movable means for holding articles to be exhausted, and a plurality of vacuum pumps movable therewith, each of said pumps being connected to one of said holding means.

3. An exhausting machine comprising a means for holding an article to be exhausted, means for moving said holding means periodically past a predetermined point, and a vacuum pump connected to said holding means and movable therewith.

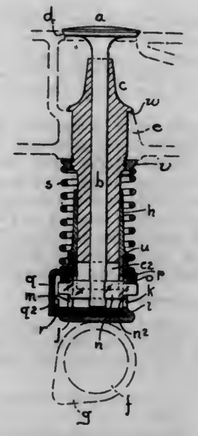
4. An exhausting machine comprising a plurality of means for holding articles to be exhausted, means for moving the said holding means periodically past a predetermined point, and a plurality of vacuum pumps each connected to one of said holding means and movable therewith.

5. An exhausting machine comprising a rotatable means for holding an article to be exhausted, and a vacuum pump connected to said holding means and rotatable therewith.

[Claims 6 to 17 not printed in the Gazette.]

1,210,621. ENGINE-VALVE. STEPHEN I. FEKETS, Detroit, Mich., assignor to Hudson Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 21, 1915. Serial No. 3,435. (Cl. 121—97.)

1. The combination of a valve having a valve stem, a guide piece for said valve stem having an aperture formed therethrough in which said valve stem engages so that the wall of said aperture forms a guide for said stem, a sleeve upon said guide piece secured to said stem so as to permit of relative lateral movement adapted to reciprocate on and be guided by said guide piece and having lateral apertures in its wall, said sleeve extending in front of the end of said stem so that it shall actuate said stem when said sleeve is reciprocated, and means for reciprocating said sleeve.

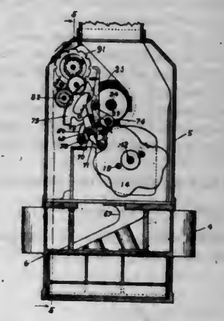


2. The combination of a valve having a valve stem, a guide piece for said valve stem having an aperture formed therethrough in which said stem engages so that the wall of said aperture forms a guide for said stem, a sleeve upon said guide piece secured to said stem so as to permit of relative lateral movement adapted to reciprocate on and be guided by said guide piece and having lateral apertures in its wall, said sleeve extending in front of the end of said stem so that it shall actuate said stem when said sleeve is reciprocated, said stem being provided with a part extending through said apertures, and a spring surrounding said sleeve and pressing against the part extending from the stem through said apertures.

3. The combination of a valve having a valve stem, a guide piece for said valve stem having an aperture formed therethrough in which said stem engages so that the wall of said aperture forms a guide for said stem, a sleeve upon said guide piece secured to said stem so as to permit of relative lateral movement adapted to reciprocate on and be guided by said guide piece and having lateral apertures in its wall, said sleeve extending in front of the end of said stem and having a contact engagement therewith, said stem being provided with a part extending through said apertures, and a spring surrounding said reciprocating part and pressing against the part extending from the stem through said apertures, said reciprocating part being adapted to receive and retain shims between the end of said valve stem and said reciprocating part, and a retaining part interposed between said spring and the part extending from the stem and extending in front of the ends of said shims so as to prevent the accidental removal thereof.

1,210,622. COIN COUNTING AND REGISTERING DEVICE. HENRY H. FEFELL and JOHN F. OHMER, Dayton, Ohio, assignors to Ohmer Fare Register Company, Dayton, Ohio, a Corporation of New York, (incorporated in 1902.) Filed Oct. 10, 1913. Serial No. 794,497. (Cl. 235—32.)

1. In a coin counting device, counting and indicating wheels rotatable through predetermined degrees for the counting and registering of coins of varying denominations, a hopper to receive coins of varying denominations, coin selector means comprising a wheel the peripheral surface of which moves in the path of the coins within said hopper, said peripheral surface having spaced flattened or straight-edged portions, pins embedded therein and projecting from said flattened surfaces a distance sufficient to retain on each flattened surface a single coin, the pins upon the surface designed for the reception and retention of the largest coin for which the machine is designed being spaced apart a distance less than the diameter of such coin but greater than the diameter of the coin next in size, the remaining pins being arranged in groups upon each flattened surface, each group comprising two straight lines of pins diverging in the direction of rotation of the wheel, the divergent end providing the entrance and the convergent end providing the exit for all coins save those designed to be retained thereon, the arrangement of pins being such as to select and retain upon the periphery of said wheel at least one coin of each of the denominations for which the machine is designed, a cam wheel adjacent said first mentioned wheel with cam surfaces corresponding in number and location to the coin selecting and retaining pins, the cam surfaces being each graduated in degree corresponding to the relative value of the coin to be retained in its adjacent coin selecting and retaining pins, a sector gear imparting movement to the counting and registering wheels and pivoted for varying degrees of movement in a single plane corresponding to the predetermined degrees of rotation required of the counting and registering wheels, a rocker arm on said sector gear arranged to be operated by said cam surfaces, a detent normally holding said rocker arm out of operating relation with said cam surfaces, said detent disposed in the path of the coins upon said coin wheel to release the rocker arm by contact with said coins, a locking mechanism automatically locking said counting and indicating wheels, means upon the sector gear releasing said locking mechanism upon movement of said sector gear to operate the counting and indicating wheels.



2. In a machine of the type specified, the combination of a hopper for the initial reception of coins of various denominations, a coin selector wheel movable in the path of the coins within said hopper, a cam wheel movable concurrently with said coin selector wheel, a counter, means interposed between said counter and said cam wheel and imparting to said counter varying degrees of movement by which the coin values are counted, a cam ring 52 attached to the frame of the machine, and means actuated by said cam ring 52 including a plunger adapted to be projected into said hopper to stir the coins within the hopper and thereby prevent any choking of the same.

3. In a machine of the type specified, a hopper for the initial reception of coins, a coin selector wheel movable in the path of the coins within said hopper, a cam wheel adjacent to said coin selector wheel, a counter, mechanism interposed between said counter and said cam wheel for operating said counter, mechanism arranged in the path of the coins on said coin selector wheel adapted to normally hold the counter, and to release said counter mechanism for operation, a cam ring 52, a reciprocating member 54 mounted on the coin selector wheel and adapted to be actuated from said cam ring 52, and a plunger

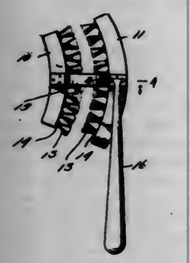
55 carried by said reciprocating member and adapted to agitate the coins within said hopper whereby said coins are prevented from becoming choked in their delivery to the coin selector wheel.

4. In a machine of the character specified, a hopper adapted to contain a collection of coin of different values, a selector wheel having its periphery provided with grooves and coin collecting pins movable below the discharge opening in said hopper and collecting the coins therefrom, a supporting member, a presser member mounted on said supporting member in a position to ride in the central groove of said selector wheel, and adapted to initially engage the coin thereon, and a metallic band supported by said supporting member and encircling the periphery of said coin selector wheel below said presser member, whereby the coin is maintained in position on the selector wheel during the continued rotation thereof.

5. In a coin counting and registering device, counting and printing wheels rotatable to varying degrees for the counting and registering of coins of varying denominations, a hopper to receive coins of varying denominations, a coin selector wheel rotating with its peripheral surface moving in the path of the coins within said hopper, spaced coin selecting and retaining means thereon separating and positioning the coins from said hopper upon the peripheral surface of said wheel in predetermined positions corresponding with the denomination of the coin, a supporting member, a presser member carried thereon in a position above the periphery of said coin selector wheel, a metallic band also carried by said supporting member whereby the coin is maintained in position on the coin selector wheel during a continued rotation thereof, a cam wheel adjacent said coin wheel with cam surfaces corresponding in number and location to the coin-selecting and retaining means, the cam surfaces being each graduated in degree corresponding to the relative value of the coin in its adjacent coin selecting and retaining means, counting and printing wheel rotating mechanism adapted for operation by the cam surfaces aforesaid, a trip mechanism disposed in the path of the coins upon said coin wheel, said trip mechanism normally holding the counting and printing wheel rotating mechanism out of operative position with said cam surfaces but adapted to release said mechanism for operation by said cam surfaces upon contact with a coin upon said coin wheel, together with means for obtaining an impression from said printing wheel.

[Claims 6 to 14 not printed in the Gazette.]

1,210,623. TOOTH-BRUSH. JOHN C. FESER, Brooklyn, N. Y. Filed Dec. 15, 1914. Serial No. 877,314. (Cl. 15—39.)



A tooth brush comprising a pair of arcuate members arranged concentrically in a common plane, the confronting faces of said members carrying bristle tufts, an arched bar connected at its ends to the respective members and bridging over the space therebetween, and a handle connected to the member carrying the bristles for operating on the outer surfaces of the teeth, said handle extending in a direction that is substantially tangential to said member.

1,210,624. JEWELRY. THEODORE H. FISHEL, New Rochelle, N. Y. Filed Oct. 30, 1915. Serial No. 58,774. (Cl. 59—78.)



1. An integral jewel setting having unbroken rectangular side walls, a tongue at one end of the setting, a socket underneath the tongue, a recess at the rear of the socket, the socket and recess being hidden by the side walls when the setting is in use, and a loop formed at the opposite end of the setting.

2. A non-expansible chain comprising a plurality of units having rectangular sides, each unit having a loop at one end, and a socket at the other, the socket being closed on its two sides by the walls of the unit, a recess provided at the rear of the socket, a tongue formed above the socket, and adapted to fit into the loop of the adjacent unit and be folded around it, the loop fitting into the socket below the said tongue, the end of the tongue fitting into the recess formed at the rear of the socket.

1,210,625. HIGH-SPEED STEEL. JOSEPH M. FLANNERY, Pittsburgh, Pa., assignor to Standard Chemical Company, Pittsburgh, Pa. Filed Feb. 19, 1916. Serial No. 79,430. (Cl. 75—1.)

1. High speed steel containing uranium as the sole added toughening agent.

2. Steel having uranium incorporated therein and constituting the sole added element necessary to form high speed steel.

3. High speed steel comprising steel having uranium alloyed therewith in the proportion approximately as specified.

4. High speed steel having alloyed therewith as the sole added toughening agent, a proportion of uranium as ranging from .05 per cent. to 5 per cent.

1,210,626. HIGH-SPEED STEEL. JOSEPH M. FLANNERY, Pittsburgh, Pa., assignor to Standard Chemical Company, Pittsburgh, Pa. Filed Feb. 19, 1916. Serial No. 79,431. (Cl. 75—1.)

1. High speed tungsten steel having uranium alloyed therewith, the uranium replacing a portion of the tungsten used in ordinary tungsten steel.

2. High speed steel containing tungsten and uranium in approximately the relative proportions specified.

3. High speed tungsten steel having uranium alloyed therewith in proportion less than the proportion of the tungsten content, the uranium replacing a portion of the tungsten used in ordinary tungsten steel.

4. High speed tungsten steel, having uranium alloyed in a proportion as high as three per cent. uranium, the uranium replacing a portion of the tungsten used in ordinary tungsten steel.

5. High speed tungsten steel, containing approximately eight per cent. tungsten and approximately three per cent. uranium.

[Claim 6 not printed in the Gazette.]

1,210,627. HIGH-SPEED STEEL. JOSEPH MICHAEL FLANNERY, Pittsburgh, Pa., assignor to Standard Chemical Company, Pittsburgh, Pa. Filed Sept. 7, 1916. Serial No. 118,877. (Cl. 75—1.)

1. High speed molybdenum steel having uranium alloyed therewith, the uranium replacing a portion of the molybdenum used in ordinary molybdenum steel.

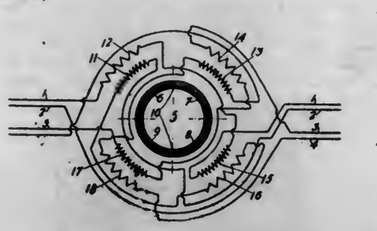
2. High speed steel containing molybdenum and uranium in approximately the relative proportions specified.

3. High speed molybdenum steel having uranium alloyed therewith in proportion less than the proportion of the molybdenum content, the uranium replacing a portion of the molybdenum used in ordinary molybdenum steel.

4. High speed molybdenum steel having uranium alloyed therewith in a proportion as high as three per cent. uranium as a maximum, the uranium replacing a portion of the molybdenum used in ordinary molybdenum steel.

5. High speed molybdenum steel, containing from three to ten per cent. molybdenum and approximately three per cent. uranium.

1,210,628. LOADING-COIL. WILLIAM FONDILLER, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed June 21, 1916. Serial No. 105,035. (Cl. 178—44.)



1. A loading coil having a magnetic core, line windings in a plurality of layers on a plurality of sections thereof, some of said sections being separated by non-magnetic gaps, each line conductor through the coil including windings in different layers on opposite core sections, the ratio of turns in said different layers being so proportioned that the mutual inductance between a winding of one layer on one section and a winding of a different layer on an adjacent section shall deviate from the mean of the mutual inductances between two windings of the first layer on said adjacent sections and the two windings of said different layer on said sections, by an amount which shall be the same, in absolute value, regardless of whether said adjacent sections are separated by a non-magnetic gap or not.

2. A loading coil having a magnetic core, inner and outer windings on a plurality of sections of said core, non-magnetic gaps separating some of said sections, each line conductor through the coil including an inner winding on one core section and an outer winding on the opposite core section, the ratio of turns in said inner and outer windings being such that the deviation of the mutual inductance between an inner winding of one section and an outer winding of a adjacent section from the mean of the mutual inductance of the two inner windings and the mutual inductance of the two outer windings of said sections is the same, in absolute value, regardless of whether said adjacent sections are separated by a non-magnetic gap or not.

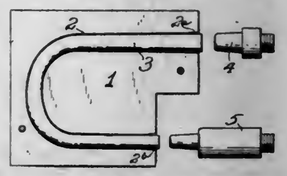
3. A loading coil having a magnetic core, line windings in a plurality of layers on a plurality of sections thereof, non-magnetic gaps dividing said sections, each line conductor through the coil including windings in different layers on opposite core sections, the ratio of turns in said different layers being so proportioned that the mutual inductance between the winding of one layer on one section, and the winding of a different layer on an adjacent section shall be equal to the mean of the mutual inductances between the two windings of the first layer on adjacent sections and the two windings of said different layer on said sections.

4. A loading coil having a magnetic core with non-magnetic gaps, inner and outer windings on a plurality of sections of said core, each line conductor through the coil including an inner winding on one core section and an outer winding on the opposite core section, the ratio of turns in said inner and outer windings being so proportioned that the mutual inductance between an inner winding of one section and an outer winding of an adjacent section in midway between the mutual inductance of the two outer windings of adjacent sections and the mutual inductance of the two inner windings of said adjacent sections.

5. In a loaded phantom line system, four line conductors comprising two physical circuits, a loading coil for adding inductance to said line conductors when phantom circuit current flows therein, said coil comprising an annular core, non-magnetic gaps dividing said core into equal sections of two quadrants each, an inner and an outer winding on each quadrant, each line conductor through the coil including an outer winding of one quadrant and an inner winding of the opposite quadrant, the four windings of one physical circuit being located on opposite quadrants, the four windings of the other physical circuit being located on the other two opposite quadrants, the ratio of turns in the inner winding to the turns in the outer windings being greater than unity.

[Claims 6 and 7 not printed in the Gazette.]

1,210,629. PROCESS OF CALIBRATING AND JUSTIFYING PARTS OF WIND MUSICAL INSTRUMENTS. EUGENE L. FOSTER, Elkhart, Ind., assignor to Charles G. Conn, Elkhart, Ind. Filed Apr. 16, 1914. Serial No. 832,286. (Cl. 113—44.)



1. The process of calibrating and justifying tubular parts of wind musical instruments which consists in introducing, into a mold accurately conforming to the dimensions and shape ultimately desired, a tubular work-piece approximating such shape and dimensions; firmly clamping and holding the ends of said work-piece relatively to the ends of the mold space; and then introducing into the work-piece a pressure medium under sufficient pressure to draw and stretch the metal of the work-piece and give to its walls a permanent set in close contact with the walls of the mold.

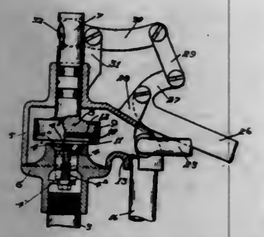
2. The process of calibrating and justifying curved tubular parts of wind musical instruments which consists in introducing, into a mold having a curved molding chamber accurately conforming to the dimensions and shape ultimately desired, a tubular work-piece approximating such shape and dimensions; forcing the end members of said work-piece toward the curve of the mold space; then firmly clamping and holding the ends of said work-piece relatively to the ends of the mold space; and then introducing into the work-piece a pressure medium under sufficient pressure to draw and stretch the metal of the work-piece and give to its walls a permanent set in close contact with the walls of the mold.

3. The process of calibrating and justifying uniformly tapered and intermediately curved tubular parts of wind musical instruments which consists in introducing, into a mold having a curved molding chamber accurately conforming to the dimensions and shape ultimately desired, a tubular work-piece approximating such shape and dimensions forcing the end members of said work-piece toward the curve of the mold space and then firmly clamping and holding the ends of said work-piece relatively to the ends of the mold space; and then introducing into the work-piece a pressure medium under sufficient pressure to draw and stretch the metal of the work-piece and give to its walls a permanent set in close contact with the walls of the mold.

1,210,630. DISCHARGE-NOZZLE AND CONTROLLING MEANS THEREFOR. BENJAMIN F. GABLE, San Francisco, Cal., assignor of one-half to John M. Lettich, San Francisco, Cal. Filed June 8, 1915. Serial No. 32,941. (Cl. 137—104.)

1. A water inlet for flushing tanks or the like, consisting of an inlet pipe extended within the tank and connected to a source of supply under pressure, a nozzle on

the discharge end of said pipe provided with a discharge orifice having an outwardly beveled interior end wall, a valve of greater diameter than the discharge orifice of said nozzle, and adapted to seat thereover to close the same, means for mounting said valve, a packing carried by said valve for contacting with the discharge end of said nozzle, a downwardly extending annular wall surrounding said packing and formed with an outwardly and downwardly beveled interior surface for directing the issuing stream, externally of the sides of said discharge opening, a diffuser in the outlet orifice of said nozzle for breaking the stream issuing therefrom and coöperating with the beveled wall of the discharge orifice for directing a portion of the same against the beveled surface of said ring, and means for raising and lowering said valve relative to the discharge end of said pipe.

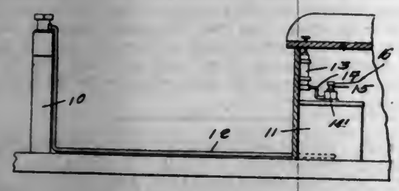


2. A valve structure of the class described, comprising a discharge nozzle having an inwardly beveled wall surrounding the outlet orifice therein, a valve for fitting over and closing the discharge end thereof and of a diameter to extend beyond the edges of the discharge nozzle, and means carried by the nozzle within the path of the issuing stream and coöperating with said beveled wall for directing the stream flow issuing from said nozzle onto said valve at an angle to the face thereof.

3. A valve structure of the class described, comprising a discharge nozzle, a diffuser within said nozzle comprising a shank positioned centrally of said nozzle and having at its outer end an enlarged head lying in substantially the same plane with the surface of the discharge end of the nozzle, and a valve for fitting over the end of the discharge nozzle and of a diameter larger than the nozzle for controlling the stream issuing therefrom.

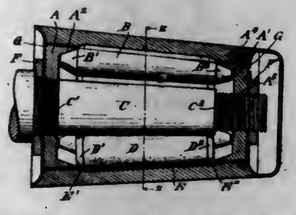
4. A valve structure of the class described, comprising a discharge nozzle having an outwardly flared discharge orifice, a diffuser within said nozzle comprising a shank removably positioned centrally of said nozzle and provided at its outer end with an enlarged head having a substantially flat under surface and lying in substantially the same plane with the surface of the discharge end of the nozzle, and a valve for fitting over the end of the discharge nozzle and of a diameter greater than the same for controlling the stream issuing therefrom.

1,210,631. WATER-SUPPLY SYSTEM FOR EXPLOSIVE-ENGINES. HARRY GAHAN, Victoria, British Columbia, Canada. Filed June 24, 1915. Serial No. 36,162. (Cl. 123—170.)



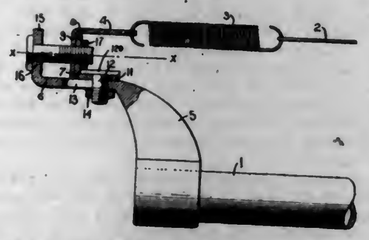
In a system of the class described, the combination of a radiator, a water supply tank, a pipe connecting the radiator and tank, a hollow plug threaded in an opening in the top of the tank, a tubular member secured to the top of the plug and in communication with the interior of the latter, said member having its bore shaped to form a valve seat, a valve coöperating with said seat and having a reduced upper end forming a shoulder, a cap threaded on the upper end of the member and having an opening in its top through which the reduced end of the valve is adapted to work and whereby the top of the cap will coöperate with the shoulder on the valve to force the latter to its seat when the cap is screwed home, an air pump, and a pipe connecting the pump with the interior of the plug.

1,210,632. ROLLER-BEARING. DAVID G. GALBRAITH, Mineral Wells, Tex., assignor to Ann-Lock Meriwether, Tulsa, Okla., and David Gladys Galbraith, Esther Amanda Galbraith, and Mary Elizabeth Galbraith, Mineral Wells, Tex. Filed July 27, 1916. Serial No. 111,065. (Cl. 64—61.)



A roller bearing comprising an outer casing having an interior bearing surface, an axle having an extended bearing surface thereon, load-carrying rollers interposed between the casing and the axle and contacting therewith, track members adjustably mounted on the axle, having beveled flange portions, spacing rollers alternating with the load carrying rollers and having beveled ends bearing on the beveled flange portion of the adjustable track members, and flexible disk washers secured to the axle by means of lock nuts substantially as described.

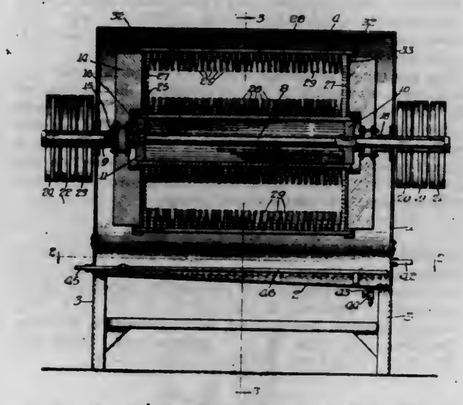
1,210,633. MATTRESS-FRAME. FRANCIS G. GALE, Waterville, Quebec, Canada. Filed July 13, 1914. Serial No. 850,561. (Cl. 5—69.)



1. In a mattress frame, the combination with side rails having risers at their ends, each provided with a flat supporting surface and an upturned flange at the outer end of said surface, of an angle-iron end rail to which the bed bottom fabric is connected, an angle-iron stiffening and guiding member secured to each end of the end rail and having its vertical leg overlying the vertical leg of the end rail and its horizontal leg resting on the supporting surface, the portion of each riser on which the guiding member rests being provided with a slot, a bolt extending through the horizontal legs of each guiding member and operating in the slot in the riser, an adjusting bolt extending through the vertical flange of the riser and the vertical legs of the end rail and guiding member, and a nut on the inner face of said guiding member which is held from turning by contact with the head of the first-named bolt.

2. In a mattress frame, the combination with side rails having risers at their ends, each provided with a flat supporting surface and an upturned flange at its outer end, of an end rail to which the bed bottom fabric is connected, a guiding member secured to each end of the end rail and resting on the supporting surface, the portion of each riser on which a guiding member rests being provided with a slot, a bolt extending through the guiding member and operating in said slot, an adjusting bolt extending through the vertical flange of the riser and through the end rail, and a nut on the inner end of said adjusting bolt which engages the head of the first-named bolt.

1,210,634. GLOVE-CLEANING MACHINE. MAURICE GALLET, Chicago, Ill., assignor of one-fourth to Adolph Salzman, one-fourth to Fred Salzman, and one-fourth to Henrietta Gallet, Chicago, Ill. Filed Apr. 15, 1916. Serial No. 91,461. (Cl. 68—18.)



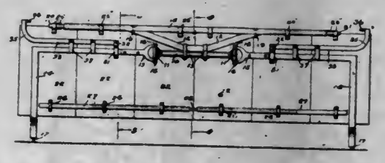
1. In a glove cleaning machine of the kind described and in combination, a suitable receptacle, a shaft projecting into said receptacle from one end to adjacent the other end, a second shaft projecting from the other end of said receptacle into the receptacle, and provided with means for supporting the inner end of the first mentioned shaft, a drum arranged on said first mentioned shaft, and provided with brushes extending from the face thereof, a second drum arranged within the receptacle and extending about the inner drum and provided with brushes extending inwardly, said second drum consisting of two end plates, one rotatably carried by said first mentioned shaft and the other carried by and secured to said second shaft, with means extending between said ends for carrying said brushes, and means for rotating said shafts as desired.

2. In a glove cleaning machine of the kind described and in combination, a rotatable drum comprising two ends, and means for supporting said ends, a plurality of strips arranged between and connecting said ends, each strip provided with brushes projecting from one face thereof, and means for securing said strips to said drum ends, consisting of a grooved ring member carried by each end, and means for detachably securing said grooved members to the ends.

3. In a glove cleaning machine of the kind described and in combination, a suitable receptacle for containing a cleansing fluid provided with an inlet and outlet for said fluid, shafts extending into the receptacle from each end, one shaft provided with a cylindrical brush, consisting of two end pieces secured to the shaft, connecting parts between said end pieces, a brush member carried by said connecting parts, said brushes extending outwardly and radially from the parts, a second cylindrical brush arranged within said receptacle, consisting of two end pieces, one end secured to the other shaft projecting into the other end of said receptacle, and provided with means for carrying the end of the first mentioned shaft, the other end piece rotatably arranged on said first-mentioned shaft at the outside of the brush on the other side of the receptacle, strips extending between said end pieces on said second shaft, each strip provided with brushes projecting inwardly toward the center of the device, and means for securing said strips to said end pieces, consisting of a pair of channeled members for each end piece, said members semi-cylindrical in shape and each suitably secured to the end pieces at its ends, said channel members flanged to overlie the inner faces of said end members, end plates carried by said first-mentioned cylindrical brush member, and lying substantially close to the end pieces of the second brush, means for driving either of said brushes as desired.

4. In a glove cleaning machine the combination with a casing, of a rotary receiving drum within the casing comprising two head members, channeled ring members supported at the periphery of the head members, a plurality of strips having brushes thereon arranged with their ends entering the channeled members, and means for rotating the drum.

1,210,635. COMBINED EXTENSIBLE AND FOLDABLE TABLE. ALONZO M. GANNAWAY, McCoy, Ky. Filed June 15, 1915. Serial No. 34,211. (Cl. 45—116.)



1. A table of the class described including a base member, a plurality of supporting legs movably connected with said base member, a brace member carried by said base member, a plurality of oppositely arranged half-leaves pivotally connected to said base member, whereby they may be moved to assume a substantially vertical position and means carried by said supporting legs to support said half-leaves in a substantially horizontal position as and for the purpose specified.

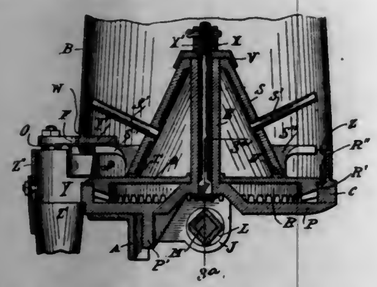
2. A table of the class described including a base member, a plurality of supporting legs having connection with said base member and movable horizontally with respect thereto, a hollow shaft supported above said base member, said hollow shaft carrying a plurality of stub shafts which project from each end thereof, a plurality of half-leaves, said half-leaves provided with brackets, certain of said brackets embracing said shaft, other of said brackets embracing said stub shafts, whereby said half-leaves may be moved to assume a substantially vertical position, and means carried by said supporting legs for supporting said half-leaves in a substantially horizontal position, as and for the purpose specified.

3. A table of the class described including a base member, a plurality of supporting legs movably attached thereto, a hollow shaft supported above said base member and extending longitudinally with respect thereto, stub shafts carried by said shaft and projecting from each end thereof, a plurality of oppositely arranged half-leaves, brackets carried by said half-leaves, certain of said brackets embracing said shaft, other of said brackets embracing said stub shafts, whereby said half-leaves may be moved relative to each other when assuming substantially vertical position, other brackets carried by said half-leaves adjacent their outer ends, hollow shafts supported by said last mentioned brackets, auxiliary shafts carried by said last mentioned hollow shafts, arms adjustably supported on said supporting legs, and lugs carried by said arms for reception in the outer ends of said last mentioned hollow shafts whereby said half-leaves may be supported in a substantially horizontal position, as and for the purpose specified.

4. A table of the character described including a base member provided with a plurality of vertically arranged sleeves, a plurality of supporting legs provided with means

for engagement with said sleeves whereby they may be moved relative to said base member, a brace member fixed to said base member, a hollow shaft carried by said brace member, stub shafts arranged in said hollow shaft and projecting from each end thereof, a plurality of oppositely arranged half-leaves, said half-leaves provided with brackets for engagement with said hollow shaft, other oppositely arranged half-leaves having brackets for engagement with said stub shafts, said half-leaves being oscillatable about said hollow shaft and said stub shafts whereby they may be folded to assume a substantially vertical position, other brackets carried by said half-leaves and supporting other hollow shafts, auxiliary shafts carried by said last mentioned hollow shafts, an arm adjustably mounted on each of said supporting legs, the outer ends of said arms being curved upwardly and provided with an inwardly projecting lug, said lugs entering the outer ends of said last mentioned hollow shafts whereby said half-leaves may be supported in a substantially horizontal position, as and for the purpose specified.

1,210,636. FERTILIZER-DISTRIBUTER. STEPHEN H. GARST, Moline, Ill. Filed May 7, 1915. Serial No. 26,459. (Cl. 111—34.)



1. In a fertilizer distributer, the combination of a hopper, a ring at the base of said hopper forming a support therefor, said ring having an annular groove in the upper horizontal surface thereof which lies within the circumference of the hopper and is adapted to receive fertilizer to form a seal, a rotatable bottom below said hopper having its circumference supported on said ring and extended over the groove therein and coöperating with said groove in forming said seal, substantially as specified.

2. In a fertilizer distributer, a hopper, a base member having an upturned annular margin upon which said hopper is supported and a tubular post extending vertically from the axis thereof, said upturned annular margin having a groove in the upper surface thereof, a rotatable bottom below said hopper having its margin extended over the upturned margin of the base member and coöperating with the groove in said base member in forming a seal, said rotatable bottom being supported on said base member at the base of said tubular post and on the upturned annular margin of the base member, and a conical shaped body mounted on said rotatable bottom and having a bearing on the upper end of said tubular post, substantially as specified.

3. In a fertilizer distributer, a seed hopper, a base member supporting said hopper consisting of a ring and a cross-bar dropped below said ring and extending across the opening therein, said ring having an annular groove in the upper surface thereof, a tubular column extending vertically from the middle portion of said bar, a rotatable bottom in said hopper having an axial bearing at the base of said tubular column, and a circumferential bearing on the ring portion of said base member, a conical body supported on said rotatable bottom and having a bearing on the upper portion of said tubular column, and a cap having a downwardly extended rim inclosing the upper end of the tubular column and the conical body, substantially as specified.

4. In a fertilizer distributer, the combination of a hopper, a base member supporting said hopper and consisting of an annular member C having a groove R'' in its upper side and a cross-bar P extending from opposite sides thereof, said crossbar terminating at its middle portion in a vertical tubular column E, a rotatable bottom Q supported on said tubular column at the base thereof and having its circumferential edge overlapping the ring C and inclosing the groove therein, a conical member S supported on said bottom Q and having a central bearing on the upper portion of said tubular column E, a cap V inclosing the upper ends of said tubular column and said conical member S, a bolt extending through said tubular column above said cap, and a nut engaging said bolt and maintaining said cap in a rigid position.

1,210,637. DECORATED METAL ORNAMENT AND PROCESS OF MAKING SAME. SETH H. GEER, Milwaukee, Wis. Filed June 17, 1914. Serial No. 845,710. (Cl. 41—31.)

The process of producing a lustrous ornamentation on a metal base, consisting in highly polishing that surface of the base designed to be ornamented, forming on said highly polished surface an outline of material having hardening properties, and depositing within the outline a viscous colored compound, the material deposited on the surface of the metal permitting the projection of the native luster of the metal therethrough.

1,210,638. DYNAMO-ELECTRIC MACHINE. JOHANN GEISSLINGER, Geneva, Switzerland, assignor, by direct and mesne assignments, of one-half to Fabrique Internationale d'Appareils à Magneto S. A. (F. I. A. M.), Geneva-Acacias, Switzerland, and one-half to Marburg Brothers, New York, N. Y., a Corporation. Filed May 23, 1912. Serial No. 699,099. (Cl. 171—209.)



1. In a magneto electric generator, a permanent field magnet of the horse-shoe type, a bearing member abutting the outer ends of the magnet arms, an armature rotatable between the poles of the magnet on an axis along the length of the magnet arms and having a shaft extending from one end only to entirely support the armature in overhung position from the bearing member, fastening means holding the bearing member rigidly against the magnet, and means on the shaft whereby the armature may be rotated.

2. In a magneto electric generator, a permanent field magnet of the horse-shoe type, a rotatable armature having its axis positioned along the length of the magnet arms; an armature bearing member located at the outer ends of the magnet arms and having a depending flange in smooth surface contact with the magnet arms, a plate fastened to the magnet and to the bearing member so that the latter holds the armature in centered position between the poles of the magnet, and means whereby the armature may be rotated.

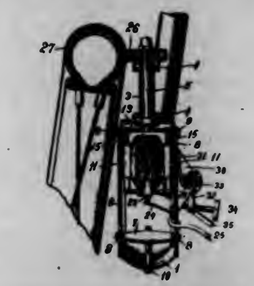
3. In a magneto electric generator, a permanent field magnet of the horse-shoe type having an inner cylindrical face with its axis of curvature along the length of the magnet arms, an armature having its axis coincident with said axis of curvature, an armature bearing member abutting the outer ends of the magnet arms and having a depending circular flange in smooth surface contact with side faces of the magnet arms, said bearing member forming a closure for the end of the magnet and positioning the armature in centered position between the poles of the magnet, plates fastened to the magnet over the space between the arms thereof forming side closures therefor and also fastened to the bearing member holding it rigidly in place, and means whereby the armature may be rotated.

4. In a magneto electric generator, a permanent field magnet of the horse-shoe type, a rotatable armature positioned within the magnet between the poles thereof, a bearing for supporting the armature in position, a transverse support located within and fastened to the magnet, members fastened to the support and to the bearing to thereby hold the bearing in position, and means whereby the armature may be rotated; substantially as described.

5. In a magneto electric generator, a permanent field magnet of the horse-shoe type, a rotatable armature positioned within the magnet between the poles thereof, an outboard bearing for supporting the armature in position and constituting an end closure for the magnet, a transverse support located within and fastened to the magnet, members fastened to the support and to the bearing to thereby hold the bearing in position, and means whereby the armature may be located; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,210,639. DYNAMO-ELECTRIC MACHINE. JOHANN GEISSLINGER, Geneva, Switzerland, assignor, by direct and mesne assignments, of one-half to Fabrique Internationale d'Appareils à Magneto S. A. (F. I. A. M.), Geneva-Acacias, Switzerland, and one-half to Marburg Brothers, New York, N. Y., a Corporation. Filed June 17, 1913. Serial No. 774,153. (Cl. 171—209.)



1. In a magneto electric generator, a permanent field magnet of the horse-shoe type, a rotatable armature having its axis positioned along the length of the magnet arms, an armature shaft extending in a single direction from the armature, an extended bearing member for the shaft abutting the outer ends of the magnet arms and being provided with ball bearings which are widely separated along the armature shaft so as to rigidly overhang the armature within the magnet between the poles thereof, means for supporting the bearing member from the magnet, and means on the outer end of the armature shaft whereby the armature may be rotated; substantially as described.

2. In a magneto electric generator, a permanent field magnet of the horse-shoe type, a rotatable shuttle-wound armature, a cap fastened to the armature core and being internally recessed to provide for the entrance thereinto of the ends of the armature coil, an armature shaft fastened to the cap, a bearing member for the shaft attached to the magnet so as to position the armature within the magnet between the poles thereof, and means on the shaft whereby the armature may be rotated; substantially as described.

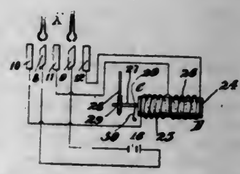
3. In a magneto electric generator, a permanent field magnet of the horse shoe type, a rotatable shuttle-wound armature having a circular ledge on the ends of the pole pieces, a cap having a circumferential offset coöperative with said ledge and being internally recessed to provide for the entrance thereinto of the ends of the armature coils, an armature shaft fastened to the cap, a bearing member for the shaft attached to the magnet so as to position the armature within the magnet between the poles thereof, and means on the shaft whereby the armature may be rotated; substantially as described.

4. In a magneto electric generator, a permanent field magnet of the horse-shoe type, a rotatable shuttle-wound armature, a bearing member which is attached to the magnet and which entirely supports the armature in overhung position between the poles of the magnet, an insulating member located at the unsupported end of the armature and fastened to the pole pieces thereof, a conducting button carried by the insulating member, a stationary brush in sliding engagement with the button, and means whereby the armature may be rotated, one terminal of the armature winding being grounded, and the other terminal of the armature winding being electrically connected to the conducting button to connect the armature winding to the outside; substantially as described.

5. In a magneto electric generator, a permanent field magnet of the horse-shoe type, a rotatable shuttle-wound armature, a bearing member which is attached to the magnet and which entirely supports the armature in overhung position between the poles of the magnet, an insulating member located at the unsupported end of the armature, a conducting support for fastening the insulating member to the pole pieces of the armature, a conducting button carried by the insulating member, a stationary brush in sliding engagement with the button, and means whereby the armature may be rotated, one terminal of the armature winding being electrically connected to the conducting support and therethrough to the armature core to ground the armature winding, and the other terminal of the armature winding being electrically connected to the conducting button to connect the armature winding to the outside, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,210,640. BRAKE-LOCK FOR AUTOMOBILES. LEON GOLDMERSTEIN, New York, N. Y. Filed Mar. 25, 1916. Serial No. 86,695. (Cl. 70—50.)



1. In an automobile having a brake, a lock member movable into and out of engagement with said brake when the latter is applied in service, electro-magnetic means to actuate said lock member, distributing circuits therefor, a commutator in said circuit having in and out paths of movement representing different directions of current flow, and a movable member to passingly close a circuit in each path.

2. In an automobile having a brake, a lock member movable into and out of engagement with said brake when the latter is applied in service, electro-magnetic means to actuate said lock member, distributing circuits therefor, a commutator in said circuits having in and out paths of movement representing different directions of current flow; a master switch, having among other functions, that of controlling said actuating means, and a movable member to passingly close a circuit in each path, to permit the flow of current in one direction as said switch is moved to its open circuit position, and to reverse the current as said switch is moved to its closed circuit position.

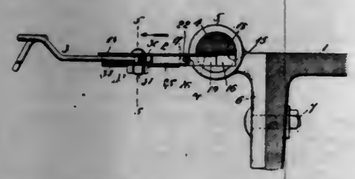
3. In an automobile having a brake, a lock member movable into and out of engagement with said brake when the latter is applied in service, electro-magnetic means to actuate said member in opposite directions, distribut-

ing circuits therefor, a commutator in said circuits having different forward and return paths of travel, representing different directions of current flow, each path including separated contacts, and a movable member to follow said paths and passingly bridge said contacts.

4. In an automobile having a brake, the combination of a lock member movable into and out of engagement with said brake when the latter is applied in service, a movable solenoid carrying said lock member, a stationary solenoid, a commutator having separated contacts included, respectively, in different paths of travel, in which, respectively, the direction of the current flowing through said solenoids is changed to alternately move said lock member into and out of engagement with said brake, a movable member to follow said paths and passingly bridge the separated contacts therein, a source of electrical energy, and distributing circuits including said solenoids, commutator, contacts and source of energy.

5. In an automobile having a brake, a lock member movable into and out of engagement with said brake when the latter is applied in service, solenoids for operating said lock member, a commutator to reverse the direction of the magnetic flux in said solenoids, said commutator comprising separate paths of movement, each including spaced contacts, and a pair of movable bridging members, to passingly close circuits with the spaced contacts in said paths.

1,210,641. THREAD-GUIDING MECHANISM. WILLIAM H. GOLDSMITH, Jr., Biddeford, Me., assignor to Saco-Lowell Shops, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 5, 1914. Serial No. 875,709. (Cl. 118—14.)



1. A thread-guiding mechanism comprising a back supporting member presenting an under side, a leaf of sheet metal secured to the under side of said member, a guide wire, a sheet metal holder for the guide wire having hinged connection with said leaf, said holder having a sheet metal extension projecting backward beyond the point of its hinged connection with the leaf to have bearing upwardly against the under side of the leaf for supporting the holder in an operative position.

2. A thread-guiding mechanism comprising a substantially half round bar, means for supporting said bar whereby the flattened side or face thereof will form the bottom side of the bar and lie in a substantially horizontal plane, a leaf of sheet metal secured to the under side of the bar, a guide wire, a holder of sheet metal bearing the guide wire and having hinged connection with said leaf, said holder being provided with a sheet metal extension projecting backward beyond the point of the hinged connection between the holder and the leaf and bearing upwardly against the under side of the leaf for supporting the holder in an operative position.

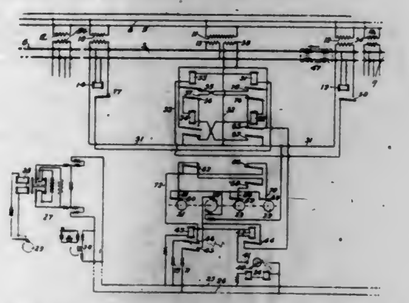
3. In a thread-guiding mechanism, the combination with a fixed primary support, of a secondary support comprising a bar presenting a flattened under side or face, bearings borne by the primary support within which the bar is turned, a sheet metal leaf secured to the under side of said bar, a guide wire, a sheet metal holder for the guide wire having hinged connection with the leaf, said holder being provided with a sheet metal extension projecting backward beyond the point of the hinged connection between the holder and the leaf to have bearing upwardly against the under side of the leaf for supporting the holder in an operative position.

4. A thread-guiding mechanism comprising a back supporting member presenting an under side or face, a sheet metal leaf secured to the under side of said member, a guide wire, a sheet metal holder for the guide wire having top and bottom plates, the top one of which plates makes hinged connection with said leaf and one of which plates is extended backward beyond the point of said hinged connection to bear upwardly against the under side of the leaf for supporting the holder in an operative position, and means for obtaining the hinged connection between said plate and leaf.

5. In a thread-guiding mechanism, the combination comprising a back supporting member presenting an under side or face, a sheet metal leaf secured to the under side of said member, said leaf having depending side flanges, a guide wire, a holder for the guide wire comprising a sheet metal plate having depending side flanges coöperating with the side flanges of said leaf, a hinge-pin extending through the depending flanges of said plate and leaf to form a hinged connection between the same, said plate extending in part beyond said hinged connection to have bearing upwardly against the under side of said leaf for supporting the holder in an operative position.

[Claims 6 to 8 not printed in the Gazette.]

1,210,642. SELECTIVE SIGNALING SYSTEM. JOHN BRAYTON HARLOW, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 6, 1915. Serial No. 26,258. (Cl. 246—30.)



1. In a signaling system for single track railways, a railway track divided into sections, an answer-back mechanism individual to each section including a plurality of interrupters, selectively operated means for controlling the operation of said answer-back mechanism, an answer-back circuit completed by the operation of said selectively operated means, and switching means conditioned by the presence of a train in the section and its direction of movement to include in said answer-back circuit one of two of the interrupters and by the absence of a train from the section to include a third one of said interrupters in said answer-back circuit.

2. In a signaling system for single track railways, a railway track divided into sections, an answer-back mechanism associated with each of said sections for producing a plurality of characteristic signals when operated, selectively operated means for controlling the operation of said answer-back mechanism, an answer-back circuit completed by the operation of said selectively operated means, and switching means controlled from said track to cause said answer-back mechanism to send over said answer-back circuit one or another of the signals depending upon the position and direction of movement of a train with respect to a particular section.

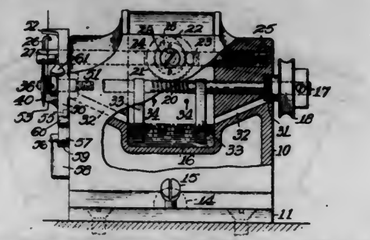
3. In a signaling system for single track railways, a railway track divided into sections, an answer-back mechanism individual to each section including a plurality of interrupters, selectively operated means for controlling the operation of said answer-back mechanism, an answer-back circuit completed by the operation of said selectively operated means, a track relay located at each end of each section, the track relay at one end of said section being operated by the entrance of a train in said section traveling in one direction and that at the other end of said section being operated by the entrance of a train in said section traveling in the opposite direction, and switching means separately controlled by the operation of said relays to include in said answer-back circuit one or the other of two interrupters of the answer-back mechanism, whereby an answer-back signal designating the position and direction of movement of a train may be obtained.

4. In a signaling system for single track railways, a railway track divided into sections, an answer-back mechanism individual to each of said sections and provided with interrupters, each adapted to give a signal different from the others, selectively operated means for controlling the operation of said answer-back mechanism, an answer-back circuit closed by the operation of said selectively operated means, a normally energized track magnet at each end of each of said sections adapted to be deënergized by the passage of a train through said section, switching means controlled by the track magnet first deënergized to connect one of said interrupters in said answer-back circuit and means for preventing the deënergization of the second magnet in response to the passing of the same train from connecting another of said interrupters in said answer-back circuit.

5. In a signaling system for single track railways, a single track railway divided into sections, an answer-back mechanism individual to each of said sections and provided with three interrupters, each adapted to give a signal different from the others, selectively operated means for controlling the operation of said answer-back mechanism, an answer-back circuit closed by the operation of said selectively operated means, switching means conditioned by the entrance into a section by a train from one direction to connect one of said interrupters in said answer-back circuit, by the entrance of a train into said section from an opposite direction to connect another of said interrupters in said answer-back circuit and by the absence of a train from said section to connect the third one of said interrupters in said answer-back circuit.

[Claims 6 and 7 not printed in the Gazette.]

1,210,643. BOBBIN-WINDING MACHINE. CHARLES E. HAYES, Worcester, Mass., assignor to Cranska Thread Company, Worcester, Mass., a Corporation of Massachusetts. Filed Nov. 8, 1915. Serial No. 60,178. (Cl. 242—21.)



1. In a bobbin winding machine, the combination of a shaft for supporting the bobbin to be wound, with a movable member having means thereon for engaging the thread and cutting it off and provided with an arm for engaging the body of wound thread on the bobbin, said movable member being provided with a nose, of an arm having an end adapted to engage said nose to hold the first named arm in contact with the thread on the bobbin until said movable member moves over said end on the second arm, and to then force the movable member in another direction to cause the thread to be cut.

2. In a bobbin winding machine, the combination of a shaft for supporting the bobbin to be wound, and a thread cutting lever, with means whereby said lever will be operated directly by the thread on the bobbin, an arm for preventing the operation of said lever to cut the thread until the thread on the bobbin fills up to a predetermined diameter and for then immediately allowing it to move back, and an eccentric pivot on which said arm is pivoted for adjusting the point at which the lever will act to regulate the diameter of the thread as wound on the bobbin.

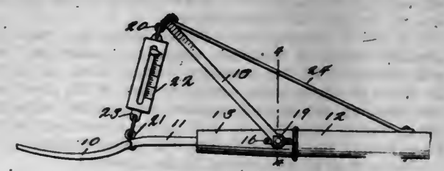
3. In a bobbin winding machine, the combination with a lever having means thereon for engaging the thread and cutting it off and provided with an arm for engaging the body of wound thread on the bobbin, said lever being pivoted to swing about a center and being provided with a sharp nose projection, of an arm having a sharp end adapted to engage said nose to hold the first named arm in contact with the thread on the bobbin until the arm positively pushes the nose on the lever over said end on the second arm and then force the lever in the opposite direction about its pivot to cause the thread to be cut.

4. In a bobbin winding machine, the combination with a shaft for supporting the bobbin to be wound, and a lever having means thereon for engaging the thread and cutting it off and provided with an arm for engaging the body of wound thread on the bobbin, said lever being pivoted to swing about a center and being provided with a sharp nose projection, of an arm having a sharp end adapted to engage said nose, and a spring for forcing the second arm into position against the nose whereby it will yieldingly hold the first named arm in contact with the thread on the bobbin until the arm positively pushes the nose on the lever over the projection on the second arm and will then force the lever in the opposite direction about its pivot to cause the thread to be cut.

5. In a bobbin winding machine, the combination of a lever having an edge thereon for engaging the thread and cutting it off and provided with means for engaging the body of wound thread on the bobbin, said lever being pivoted to swing about a center and being provided with a sharp nosed projection, with an arm having a sharp end adapted to engage said nose, yielding means for forcing the arm into position against the nose whereby it will yieldingly hold the lever in contact with the thread on the bobbin until it positively pushes the nose over the projection on the arm and will then force the lever in the opposite direction about its pivot, and an eccentric pivot on which the arm is pivoted whereby said arm can be adjusted longitudinally to vary the position in which the lever will act.

[Claims 6 to 9 not printed in the Gazette.]

1,210,644. WEIGHING DEVICE FOR FORKS OR SHOVELS. DAVID HEANEY, Troy, Pa. Filed Apr. 21, 1916. Serial No. 92,711. (Cl. 73—46.)



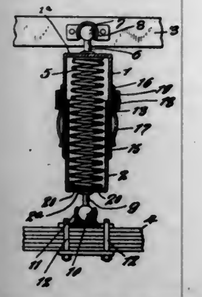
1. The combination with a fork, or like implement having a head formed with a resilient shank, a handle with which the shank is engaged, a member secured to the handle and extending over the shank, and a spring scale secured to the member and to the shank.

2. A weighing device comprising a fork or the like having a flexible attaching shank for the head thereof, a handle with which the shank is engaged, an arched member secured to the handle and inclining over the shank, means for preventing rocking movement of the arched member and a spring scale secured to and extending between the arched member and the shank.

1,210,645. SHOCK-ABSORBER FOR VEHICLES. HENRY C. HEBIG, New York, N. Y., assignor to William P. Hammond, Passaic, N. J. Filed Feb. 18, 1913. Serial No. 749,110. (Cl. 267—2.)

1. A shock absorber for vehicles including a pair of slidably-connected members, means for connecting said members with the respective vehicle parts, friction means carried by one of said members and engaging the oppo-

site member, said friction means including an annular member, one extremity of which is fixedly mounted to one of the members and having the opposite extremity terminating in bowed-spring fingers frictionally engaging the other of said members, and means for adjusting the tension of the spring fingers.



2. A shock absorber for vehicles including a pair of slidably connected members, means for connecting the said members with the respective vehicle parts, friction means comprising a cylindrical part provided with a series of spring arms carried by one of said members and engaging the opposite member, spring fingers engaging the said friction means and formed with a bowed portion, and means engaging the bowed portion of the spring fingers to regulate the tension therein.

3. A shock absorber for vehicles, including a pair of slidably connected cylindrical members, means for connecting the said members with the respective vehicle parts, a cylindrical part terminating in a plurality of spring arms carried by one of the said members and frictionally engaging the opposite member, spring fingers engaging the said spring arms, and means for adjusting the tension in the spring finger to increase or decrease the friction.

4. A shock absorber for vehicle parts including a pair of slidably connected members, means for connecting said members with the respective vehicle parts, a spring arm, one end of which is fixedly mounted upon one of said spring members, said spring arm being bowed intermediate of its extremities and a free extremity of said arm being in frictional engagement with the other member, and means engaging the bowed portion of the spring arm to regulate the tension thereof.

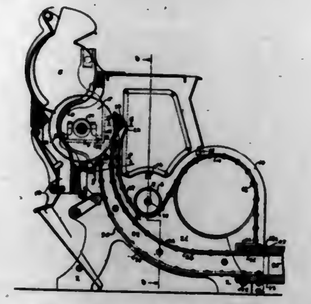
5. A shock absorber for vehicles including a pair of slidably connected members, means for connecting the said members with the respective vehicle parts, an annular series of spring arms carried by one of the members and engaging the opposite member, an annular series of spring fingers engaging the said spring arms, and means for adjusting the tension in the said spring fingers.

[Claims 6 to 11 not printed in the Gazette.]

1,210,646. GIN. NELSON B. HENRY, Dallas, Tex., assignor to The Murray Company, Dallas, Tex. Filed Jan. 5, 1915. Serial No. 613. (Cl. 13—9.)

1. In a machine of the character described in combination with the saws and legs of the machine supporting said saws, of an air blast pipe connected to said legs and forming a part of the frame work of the machine an inlet duct leading from the blast pipe directly to the saws, an outlet duct leading from the saws to the discharge, side closures for the ducts connected with the legs and forming part of the frame work of the machine, said blast pipe ducts and side closures forming an integral structure removably secured within and supported by the legs of said machine.

2. In a machine of the character described, in combination with the saws and the legs of the machine supporting said saws, of an air blast chamber, an inlet duct leading from the chamber to said saws and an outlet duct leading from the saws to the discharge, a sheathing inclosing the air blast chamber and forming one wall of the inlet duct, a sheathing forming one wall of the other duct, and a partition arranged between said walls to form the remaining wall for both ducts, combined with side closures for said ducts, said air blast chamber, ducts and side closures forming, with the legs, the framework of the machine.



3. In a machine of the character described, in combination with the saws and the legs of the machine supporting said saws, of an air blast device comprising an inlet duct leading to the saws and an outlet duct leading from the saws, the two ducts being formed of three walls, the intermediate wall separating the inlet from the outlet ducts and means for removably securing the walls of said ducts to the legs of the machine said securing means forming side closures for said ducts.

4. In a machine of the character described, in combination with the air blast chamber, the inlet and outlet ducts and means for removably securing said chamber and ducts within and to the legs of the machine, of a saw shaft and saws, bearings for said shaft supported by said legs and a means for adjusting said bearing in said legs to bring the saws toward or away from the air ducts.

1,210,647. METALLIC SPRING-TIRE. WILLIAM H. HENSCHEN, Indianapolis, Ind., assignor of one-half to John P. Collins, Chicago, Ill. Filed Dec. 13, 1915. Serial No. 66,589. (Cl. 152—8.)



A wheel rim, a series of overlapping springs secured to said rim and having one end of each spring engaging and resting on the adjacent spring, a second series of springs each secured at one end to said rim and having the other ends engaging the inner surfaces of said first mentioned springs, and means on said second mentioned springs for allowing dirt and the like to be removed from between said springs.

1,210,648. HORSESHOE-CALK. ARTHUR J. HERSEY, Duluth, Minn., assignor of one-fourth to Ralph F. McDougall, Duluth, Minn., and one-fourth to Clarence M. Kemp, St. Paul, Minn. Filed May 26, 1914. Serial No. 841,173. (Cl. 168—42.)

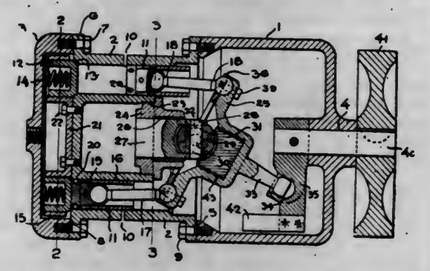
1. The combination with a horseshoe having an opening therein, of a calk having a tapered shank, said calk having a plurality of shoulders extending beyond the shank, some of said shoulders arranged at a greater distance from the end of the tapered shank than the others, the said tapered shank fitting within the opening so that the shoulders thereon nearest the end of the tapered shank lie against the shoe, whereby the other shoulders are spaced apart from the shoe for the purpose described.



2. The combination with a horseshoe having an opening therein, of a calk having a tapered shank, said calk having a plurality of radial portions extending beyond the shank forming shoulders, some of which are arranged at a greater distance from the end of the tapered shank than the others, the said tapered shank fitting within the opening so that the shoulders thereon nearest the end of the tapered shank lie against the shoe, whereby the other shoulders are spaced apart from the shoe for the purpose described.

3. A horseshoe calk having a shank portion composed of tapered radial portions to fit a corresponding opening in the horseshoe, the calk having a plurality of radially arranged arms of greater width than the arms of the shank to form shoulders, some of the shoulders being at a greater distance from the end of the shank than others and the shank so proportioned with respect to the opening in the horseshoe as to permit the shoulders nearer the end of the shank to abut against the shoe and space the remaining shoulders therefrom, for the purpose described.

1,210,649. MECHANICAL MOVEMENT. CLARENCE M. HOLLEY and CHARLES C. JENNINGS, Detroit, Mich., assignors, by direct and mesne assignments, to Utility Compressor Company, Detroit, Mich., a Corporation. Filed Jan. 22, 1913. Serial No. 743,455. (Cl. 230—27.)



1. In a device of the character set forth, a casing provided with a plurality of cylinders arranged in a circle each being provided with an inlet port substantially midway of its length, a piston for each cylinder reciprocatable therein controlling the inlet port, a discharge chamber into which all of said cylinders open, said open ends each being provided with a valve seat, a valve seating in said open end of each cylinder, and means for reciprocating the pistons in succession comprising a connecting rod for each piston having a ball and socket connection therewith, the opposite end of each connecting rod also being provided with a ball, a thrust ring provided with sockets for said balls, means for retaining the ball ends of the connecting rods in the said sockets, a universal joint connection between the thrust ring and the cylinder casing providing a support for the ring, an actuating arm extending at right angles to the plane of the ring and centrally thereof provided with a ball on the upper end, and a rotatable crank arm having a socket for said last named ball.

2. In a device of the character described, a casing provided with a plurality of cylinders arranged in a circle, pistons in said cylinders arranged to sweep the complete cylinder, a valve container having a plurality of cylindrical portions, said container being adapted to be secured to the cylinders so that the cylindrical portions are spaced from and register with the bores of the cylinders, valves contained in the cylindrical portions of the container and yieldably held against the compressor-cylinders, and an air tight inclosure for the valves, adjacent cylinder ends, and the valve container, substantially as described.

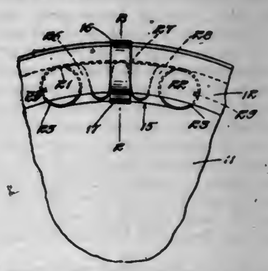
3. In a device of the character set forth, a casing provided with a plurality of cylinders open at each end and arranged in a circle, pistons reciprocatable therein for the compression of an elastic fluid, a discharge chamber common to all of said cylinders, a valve for each cylinder controlling the discharge end thereof, a valve retainer common to all said valves secured to the cylinder casing within the discharge chamber, a rotatable driving element, a wabbling thrust ring universally pivoted to the cylinder casing operated by the driving element, and connecting rods for each piston having a ball and socket contion with both the thrust ring and the piston.

4. The combination with a casing provided with a plurality of cylinders open at each end and arranged in a circle the discharge end thereof being formed with a valve seat, pistons reciprocatable therein for the compression of an elastic fluid, a valve for each cylinder seating in the discharge end thereof, and a fluid compression chamber common to all of said cylinders inclosing the said valves, of a thrust ring universally pivoted to the cylinder casing, a connecting rod for each piston having a ball and socket connection with both the piston and thrust ring, an actuating stem for the thrust ring extending substantially centrally therefrom at right angles to the plane of the ring, said stem terminating in a ball end, a casing inclosing said thrust ring provided with a bearing, a drive shaft rotatable in said bearing, and a crank on the said drive shaft having a socket for the ball on the actuating stem.

5. In a device of the character set forth, a casing provided with a plurality of circularly arranged cylinders open at each end, the discharge end of each being provided with a valve seat, pistons reciprocable therein for the compression of an elastic fluid, a head secured to the discharge end of the cylinder casing providing a discharge chamber common to all the cylinders, a valve retainer secured to the cylinder casing within the discharge chamber having a series of bores or cylinders in axial alinement with the pump cylinders, a spring controlled valve reciprocatable in each of said bores and seating in the discharge end of the pump cylinders, each of said valve bores or cylinders having a discharge port adjacent the valve seat of the pump cylinders and opening into the discharge chamber, a wabbling thrust ring for reciprocating the pistons in succession, and means for actuating the thrust ring.

[Claim 6 not printed in the Gazette.]

1,210,650. DISINFECTING APPARATUS. JOHN F. HUNT, Malden, Mass. Filed Feb. 9, 1915. Serial No. 7,113. (Cl. 4—30.)



A disinfecting device consisting of a receptacle adapted to contain disinfecting material and having an im-

perforate bottom with upwardly curved ends, and a partly open top provided with overhanging extensions, combined with means for detachably securing said receptacle to the underside of the rim of a closet bowl.

1,210,651. PROCESS OF MAKING PURE, HIGHLY-CONCENTRATED HYDROGEN PEROXID FROM THE PEROXID OF AN ALKALINE EARTH. ANTON JAHL, Linz, Germany. Filed Apr. 25, 1913. Serial No. 763,568. (Cl. 23—10.)

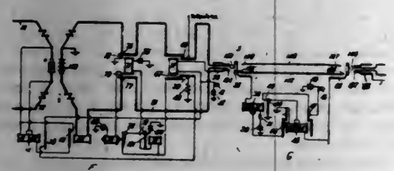
1. The process of making pure concentrated, stable hydrogen peroxid which consists in treating metal peroxids the metal of which gives difficultly soluble phosphates with a quantity of concentrated phosphoric acid sufficient for complete decomposition and separating the solution from the precipitate.

2. The process of making pure concentrated, stable hydrogen peroxid which consists in treating metal peroxids with a quantity of concentrated phosphoric acid and a quantity of an acid which yields with barium insoluble compounds or compounds soluble with difficulty, sufficient for complete decomposition of the metal peroxid and separating the solution from the precipitate.

3. The process of making pure concentrated, stable hydrogen peroxid which consists in first adding to concentrated phosphoric acid sufficient metal peroxid to cause the same to be entirely or almost entirely precipitated, then adding an acid which decomposes the precipitated phosphate and forms with the base of the peroxid an insoluble compound or a compound soluble with difficulty, and in adding additional metal peroxid in proportion as the free phosphoric acid forms.

4. The process of making pure concentrated, stable hydrogen peroxid which consists in treating metal peroxids, the metal of which gives difficultly soluble phosphates, with a quantity of concentrated phosphoric acid sufficient for complete decomposition while maintaining the temperature of the concentrated phosphoric acid below 70° C., and separating the liquid from the precipitate.

1,210,652. TELEPHONE-EXCHANGE SYSTEM. LEWIS H. JOHNSON, Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 10, 1915. Serial No. 13,460. (Cl. 179—49.)



1. A telephone exchange system comprising a trunk circuit extending from one switchboard section to a second section, a transfer circuit connected to and extending the trunk circuit to a third section, a link circuit at the first section, a signaling device for the transfer circuit located at the third section, and a relay in the trunk circuit responsive to the connection of the link circuit therewith for causing the operation of the signaling device.

2. A telephone exchange system comprising subscribers' lines terminating at a central office, a link circuit thereat, trunk and subscribers' boards at a second central office, a trunk circuit joining said first central office and said trunk board, a transfer circuit connected to and extending said trunk circuit to said subscribers' board, a signal for said transfer circuit at said subscribers' board, and apparatus in said trunk circuit actuated upon connection of said link circuit therewith for causing the operation of said signal.

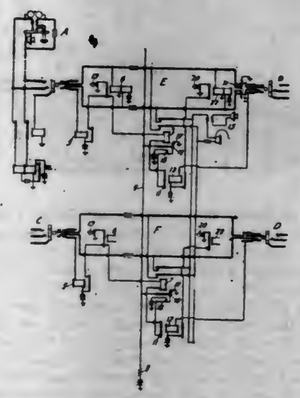
3. A telephone exchange system comprising subscribers' lines terminating at a central office, a link circuit thereat, trunk and subscribers' boards at a second central office, a trunk circuit joining said first central office and said trunk board, a transfer circuit connected to and extending said trunk circuit to said subscribers' board, a signal for said transfer circuit at said subscribers' board, a control relay for said signal normally unactuated when said trunk circuit is connected to said transfer circuit, and a relay associated with said trunk circuit controlling the actuation of said control relay and responsive to the connection of said link circuit with said trunk circuit to cause the operation of said signal.

4. A telephone exchange system comprising subscribers' lines terminating at a central office, a link circuit thereat, trunk and subscribers' boards at a second central office, a trunk circuit joining said first central office and said trunk board, a transfer circuit connected to and extending said trunk circuit to said subscribers' board, a signal for said transfer circuit at said subscribers' board, a relay associated with said trunk circuit responsive to the connection of said link circuit therewith to cause the operation of said signal, a link circuit at said subscribers' board, and a relay associated with said transfer circuit and responsive to the connection of said second link circuit therewith to render said signal inoperative.

5. A telephone exchange system comprising a telephone line terminating at a central office, trunk and subscribers' boards at a second central office, a transfer circuit joining said boards, a trunk circuit joining said first central office with said trunk board and connected to said transfer circuit, a link circuit connecting said telephone line with said trunk circuit, a telephone line terminatng at said subscribers' board; a link circuit thereat connecting said transfer circuit with said second telephone line, disconnect signals for said first link circuit operated upon restoration of the receivers at the connected substations, and disconnect signals for said second link circuit operated when said first link circuit is disconnected from said trunk circuit.

[Claim 6 not printed in the Gazette.]

1,210,653. TELEPHONE-EXCHANGE SYSTEM. LEWIS H. JOHNSON, Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 26, 1916. Serial No. 99,975. (Cl. 179—58.)



1. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting said lines, an operator's telephone set, a relay associated with each link circuit operating upon connection thereof with a calling line to include the operator's telephone set in circuit therewith, and a short circuit for all other relays established upon the energization of one of the relays, whereby the operator's telephone set can be connected to only one line at a time.

2. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting said lines, an operator's telephone set, a relay associated with each link circuit operating upon connection thereof with a calling line to include the operator's telephone set in circuit therewith, and a normally open circuit multipled to each of the relays completed by the operation of any one of the relays to establish a short circuit of all other relays.

1,210,654. GAS-BURNER. GEORGE KEITH, London, England, assignor of one-half to James Keith, London, England. Filed Sept. 19, 1916. Serial No. 121,029. (Cl. 158—114.)



1. A gas burner comprising, in combination, a tube having an outlet in the form of a continuous slot extending longitudinally thereof and means for controlling the delivery at different points along the length of the tube while maintaining a constant effective area of the outlet.

2. A gas burner comprising, in combination, a tube partitioned longitudinally into separate chambers, one such chamber being formed with an outlet in the form of a continuous slot extending longitudinally of the tube and the other chamber communicating with the first by way of apertures in the partition, and a valve device fitted to the tube adjacent to the inlet end and adjustable to control the distribution of the inflowing mixture so as to confine the mixture to enter the second chamber or to cause the same in part to by-pass such chamber in its passage to said first named chamber.

3. A gas burner comprising, in combination, a tube having an outlet in the form of a continuous slot extending longitudinally thereof, an apertured tubular partition fitted in said tube and means adjustable to direct the whole of a part only of the inflowing mixture into the interior of said tubular partition.

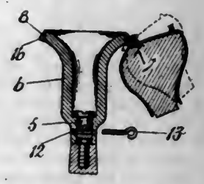
4. A gas burner comprising, in combination, a tube having an outlet in the form of a continuous slot extending longitudinally thereof, an apertured tubular partition of substantially D-shape fitted in said tube, screws disposed transversely of said tube and bearing on the plane face of said D-shaped partition, and means for directing inflowing mixture wholly or in part into the interior of said tubular partition.

5. A gas burner comprising a tube divided longitudinally into two chambers intercommunicating through a longitudinal series of apertures, one of said chambers having an outlet in the form of a longitudinal slot, and the other of said chambers having a gas inlet at one end thereof, and means adjacent to said inlet and adjustable to direct all of the gas entering said inlet into said last-named chamber or to divert a portion thereof into said first-named chamber.

1,210,655. DEVICE FOR BENDING THE TACKS OF LASTED SHOES. EUGENE L. KEYES, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 9, 1914. Serial No. 823,519. (Cl. 12—1.)

1. A device for use in bending inwardly upstanding tacks projecting from the bottom of a lasted shoe and comprising a support and a bending device rotatably mounted on the support, said device being shaped and arranged to extend inwardly over the margin of a welt shoe bottom and to present a tack engaging face adapted to bend inwardly the upstanding portions of the tacks successively as the shoe and the device are moved relatively in the direction of the length of the shoe.

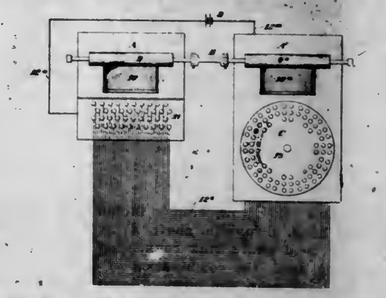
2. A device for use in bending inwardly upstanding tacks projecting from the bottom of a lasted shoe and comprising a support and a tack bending head presenting a continuous, comparatively wide upwardly and backwardly inclined tack engaging face which projects beyond the body portion of said head and is so shaped and so located, with respect to said body portion, that the tacks in a lasted welt shoe may be pressed successively into engagement with said face to bend them inwardly while the shoe is in inverted position, the projection of the face being such that the bulging portions of the side of the last are disposed beneath the said face.



3. A device for use in bending inwardly upstanding tacks projecting from the bottom of a lasted shoe and comprising a support and a tack bending head rotatably mounted on the support and presenting a continuous upwardly and backwardly inclined tack engaging face which is arranged to extend inwardly over the margin of a shoe bottom and first engage the upper and strip it down the tack stems and then bend inwardly the upstanding portions of said tacks successively as the shoe and the device are moved relatively in the direction of the length of the shoe.

4. A device for use in bending inwardly upstanding lasting tacks along the sides of a welt shoe and having operating faces comprising an outwardly extending face adapted to project inwardly over the margin of the shoe bottom, an edge adapted to engage the upper and strip it down the stems of the tacks, and an upwardly and backwardly inclined face arranged to extend up the tacks and engage the heads of the tacks for applying pressure against the heads of the tacks when the shoe is rocked upwardly whereby the upstanding tacks are bent inwardly.

1,210,656. APPARATUS FOR CODING AND DECODING. SAMUEL M. KINTNER, Pittsburgh, Pa. Filed Jan. 12, 1912. Serial No. 670,842. (Cl. 35—13.)



1. A coding and decoding mechanism comprising a keyboard and a printing mechanism, circuit makers provided each with two sets of differing contacts, electric means for operating the type bars of the printing machine, an electric contact member for each bar adapted to coact with the circuit maker, and keys on the board for establishing a circuit including the circuit maker and the said electrical operating means for the type bar.

2. A coding and decoding mechanism, comprising a keyboard and a plurality of printing devices, an operating mechanism for each said device, a circuit controlled by each key of the keyboard and arranged to control one of said operating mechanisms, and a circuit maker which includes a portion of each of said circuits and is provided with circuit completing contacts arranged according to a predetermined schedule, said circuit maker being adjustable to various positions for changing the operating mechanisms controlled by the several keys.

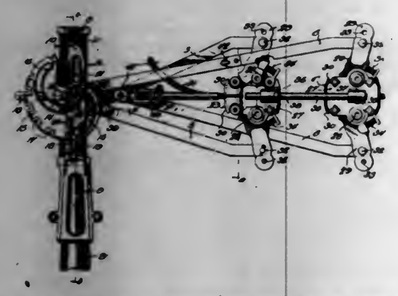
3. A coding and decoding mechanism, comprising a keyboard and two sets of printing mechanisms, one actuated directly from the keyboard and the other through a circuit maker having a set of contacts arranged according to a predetermined schedule, electric means for controlling actuation of the type bars of the second printing mechanism, an electric contact member for each type bar adapted to co-act with a contact of the circuit maker, and keys on the board for establishing a circuit including the circuit maker and said electric control means.

4. A coding and decoding mechanism, comprising a keyboard and two sets of printing mechanisms, one actuated directly from the keyboard and the other actuated by means controlled by a circuit maker having two sets of contacts arranged according to a predetermined schedule, one set differing from the other, electric means for controlling actuation of the type bars of the printing mechanism, an electric contact member for each bar adapted to co-act with a contact of the circuit maker, and keys on the board for establishing a circuit including the circuit maker and said electric control means.

5. A coding and decoding mechanism, comprising a keyboard and a printing mechanism, a circuit maker having two sets of contacts arranged according to a predetermined schedule, one set differing from the other and being reversely arranged so as to reverse the operation of the other, electric means for controlling actuation of type bars of the printing mechanism, an electric contact member for each bar adapted to co-act with the contact of the circuit maker, and keys on the board for establishing a circuit including the circuit maker and said electric control means.

[Claims 6 to 12 not printed in the Gazette.]

1,210,657. SLACK-TAKE-UP MECHANISM. ALFRED J. KIRSTIN, Escanaba, Mich., assignor to A. J. Kirstin Company, Escanaba, Mich. Filed Mar. 13, 1916. Serial No. 83,716. (Cl. 254—76.)



1. In a slack take-up mechanism including a lever head, a clamping head, a fulcrum shaft, a pivot shaft slidable in the lever head and a link connecting the pivot shaft and clamping head, the combination of a cam plate pivoted to the lever head and engaged with the pivot shaft, a peripheral portion of the cam plate being curved coincident with the arc of a circle having the cam pivot as its center, and provided with a series of notches, and a pawl carried by the lever head and selectively engageable in said notches.

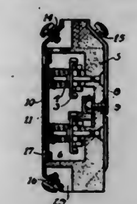
2. In a slack take-up mechanism including a lever, clamping heads pivotally connected at spaced portions therewith and a fulcrum member on the lever, the combination of a hook carried by the lever at one side of the fulcrum member, a rod connected with both clamping heads, a clevis member having its arms pivoted to the end of the rod adjacent the hook and a hook engaging member passed through the bight of the clevis member and adjustable therein.

3. In a slack take-up mechanism including a lever, clamping heads pivotally connected at spaced portions therewith and a fulcrum member on the lever, the combination of a hook carried by the lever at one side of the fulcrum member, a rod connected with both clamping heads, means for connecting the rod with the hook, and means for preventing pivotal movement of the lever relative to the clamping heads.

4. In a slack take-up mechanism including a lever, a fulcrum member on the lever, clamping heads, and links pivotally connecting the clamping heads to the lever at the sides of the fulcrum, the combination of a hook carried by the lever at one side of the fulcrum member, a rod connected with both clamping heads, means for connecting the rod with the hook, and a link adapted for securement to the lever and to one of the clamping head links to hold the lever against relative movement.

5. In a slack take-up mechanism including a lever, a fulcrum member on the lever, clamping heads, links pivotally connecting said heads to the lever at the sides of the fulcrum member, and a cam plate pivoted to the lever and connected with the links for adjusting their pivotal connections, a hook carried by the lever at one side of the fulcrum member, a rod connected with both clamping heads, and means for connecting the rod with the hook, the combination of a projection on the lever, a projection on one of the links, a hub carried by the cam member and a bar provided with a wrench aperture at one end adapted to engage either the cam member hub or the lever projection and said bar being adapted at its other end to engage the projection of the link.

1,210,658. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Aug. 26, 1912. Serial No. 717,065. (Cl. 175—287.)



1. In a multiple feed through switch unit, in combination, an insulating base having a recess in one face, a plurality of independently operable switch mechanisms carried in said recess for controlling various circuit connections to one side of the line, and conductive means carried by said base providing a common return conduit traversing said unit to the other side of the line.

2. A feed through switch comprising, in combination, an elongated insulating base, a plurality of snap switch mechanisms carried thereon in substantial alinement, stationary contacts for said switch mechanisms having one terminal common to all of the latter and separate terminals for each of the same, terminal connections for said contacts upon one face of said base and a separate conductor spanning said base and independent of the remaining conducting parts.

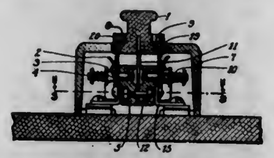
3. A feed through switch comprising, in combination, a substantially rectangular base having an open recess in one face, a plurality of push button operated switch mechanisms carried in said recess and having their operating members extending through side walls of said base, stationary contacts for said switch mechanisms mounted in said recess, an insulating plate for closing said recess, a conducting strip carried on one face of said base and holding said plate in position and terminal connections for said contacts and said strip adjacent the ends of said base.

4. In combination, an insulating base having a recess in one side thereof, a plurality of push button operated switch mechanisms carried in said recess and having their operating members extending through the walls of said base, a contact member adapted to be engaged by both of said switch mechanisms and positioned between the same, additional contacts carried by said base, each of said last mentioned contacts being adapted to be engaged by one of said switch mechanisms, terminal connections for said contacts upon the ends of said base, means for closing the recess in said base, and a conducting strip carrying said means and having terminal connections on its opposite ends.

5. In a feed through switch, in combination, an insulating base, a switch mechanism carried thereby, terminal connections for said switch mechanism carried on one face thereof, a conducting strip independent of said switch mechanism and carried by said base across the other face thereof, and conductor attaching means carried by the ends of said strip.

[Claims 6 and 7 not printed in the Gazette.]

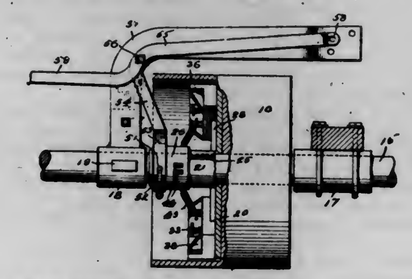
1,210,659. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 13, 1913. Serial No. 741,772. (Cl. 175—284.)



1. In a double pole switch device, in combination, a fixed insulating block, two separate snap switch mechanisms mounted on opposite faces thereof, a separate reciprocable actuating member for each of said mechanisms, and a common operating member for said actuating means.

2. In a double pole switch device, in combination, a fixed insulating block, separate snap switch mechanisms mounted on opposite faces thereof, separate reciprocable actuating members for said mechanisms, a common operating member for said actuating members and guiding means for said operating member extending into an intermediate face of said block and sliding therewithin.

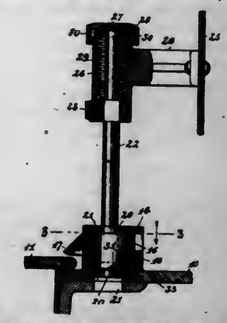
1,210,660. FRICTION-CLUTCH FOR PULLEYS. AUGUST E. KRAUSE, Phillipsburg, Kans. Filed Apr. 3, 1915. Serial No. 18,950. (Cl. 192—11.)



1. In a friction clutch for pulleys, the combination with a rotatable shaft and a pulley having a projecting rim loosely mounted for rotation thereon, of a circular base plate within the rim of said pulley, a hub formed upon one side of said base plate and keyed to said shaft, radiating outstanding ribs formed upon one face of said plate and having undercut parallel edges, a clutch segment having a transverse groove in its rear face slidable on each rib, resilient means holding each segment in limited frictional engagement with the base plate, a sleeve keyed to rotate with said base plate hub but slidable longitudinally thereon, adjustable connections between each segment and said sleeve, and means for longitudinally moving said sleeve.

2. In a friction clutch for pulleys, the combination with a rotatable shaft and a pulley having a projecting rim loosely mounted thereon, of a circular base plate within the rim of said pulley, a hub formed upon one side of said base plate and secured to said shaft for rotation therewith, radiating outstanding ribs formed upon one face of said base plate having under-cut edges, circular openings being formed through said base plate on opposite sides of each rib near its outer end, a clutch segment having a transverse groove in its rear face slidable on each rib, said segment having a slot formed therethrough on each side of said groove and parallel therewith, bolts extending through the openings in the base plate and through the slots in the clutch segment, a coil spring surrounding each of said bolts, an adjusting nut and washer for regulating the tension of each spring, a sleeve keyed to rotate with said base plate but slidable longitudinally thereon, adjustable connections between each segment and said sleeve, and means for moving the sleeve.

1,210,661. TRAP-DOOR LOCK. LEO F. MCNALLY, Brooklyn, N. Y., assignor to David W. Pye, Red Bank, N. J. Filed Nov. 7, 1916. Serial No. 129,924. (Cl. 105—84.)



1. A trap door lock consisting of a rotative part, with the axis thereof extending substantially at right angles to the plane of the door when the latter is in its closed position, a locking member, and an unseating member carried by said rotative part, arranged in different vertical planes and lying in different quadrants.

2. A trap door lock comprising a rotative bolt, and an unseating member rigid one with respect to the other, means rotatively mounting said locking and unseating members, said unseating member adapted to forcibly dislodge the door from its closed position after releasement from said locking member.

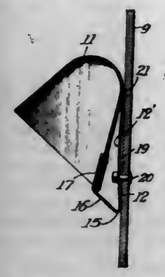
3. A lock of the character described comprising a casing, a locking member and a wedge member arranged in different planes and extending one in front of the other, said locking and unseating members formed as a unitary structure, and rotatively mounted within said casing, a shaft connected to said locking and unseating members and adapted to actuate the same, and a handle carried by said shaft.

4. A trap door lock comprising a rotative part with the axis thereof substantially at right angles to the plane of the door when the latter is in its closed position, said rotative part including locking and unseating members with beveled faces lying in different planes and spaced one in front of the other, and a shaft with a handle thereon engaging said rotative part for the forced actuation thereof.

5. A trap door lock comprising a rotative part with the axis thereof substantially at right angles to the plane of the door when the latter is in its closed position, said rotative part including locking and unseating members with beveled faces lying in different planes and spaced one in front of the other, a shaft with a handle thereon engaging said rotative part for the forced actuation thereof, and resilient means engaging said shaft and adapted to normally hold the said locking member in the path of movement of the said door.

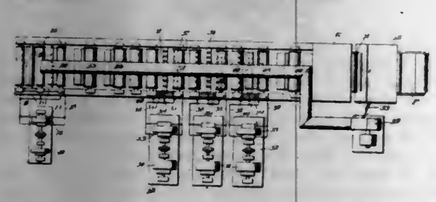
[Claims 6 to 8 not printed in the Gazette.]

1,210,662. ATTACHING-HANGER FOR ELEVATOR-BUCKETS. ARTHUR D. MCPHERSON, Oak Park, Ill. Filed Dec. 30, 1915. Serial No. 69,310. (Cl. 193—28.)



The combination with an elevator belt and bucket of a sheet metal hanger therefor comprising an upper edge portion adapted to engage an edge of the bucket, means for securing the bucket edge to the edge portion of the hanger, a portion extending outwardly from the bucket edge and then downwardly and inwardly for coöperation with the outer surface of the bucket near the bottom thereof, means for securing the lower edge of the downwardly and inwardly extending portion of the hanger to the bucket, and means for securing the downwardly and inwardly projecting portion of the hanger intermediate its end to the belt.

1,210,663. ELECTROPLATING AND LACQUERING APPARATUS. JOHN J. MACE and JOHN ROY MURR, York, Pa. Filed Oct. 9, 1915. Serial No. 55,038. (Cl. 204—11.)



1. An electro-plating apparatus comprising a plurality of separate electro-deposition tanks containing electro-plating solutions, said tanks being arranged in series and containing anodes, and means for supplying electro-plating current to said anodes and solutions in the separate tanks at the voltage or amperage desired for each tank.

2. An electro-plating apparatus comprising a plurality of separate serially arranged electro-plating tanks containing electro-plating solutions and provided with anodes and with means for guiding through the solutions in the tanks the material to be electro-plated, and a plurality of separate electric generating units connected with said anodes and arranged so as to furnish electro-plating current to the solutions in the different tanks at the voltage or amperage desired for each tank.

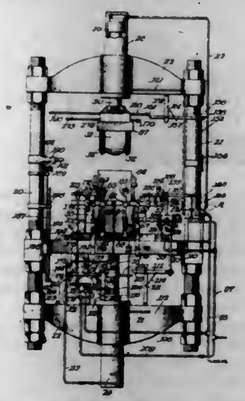
3. In a machine for electro-plating and lacquering flexible material, the combination with the electro-plating apparatus, of means adapted to lacquer the flexible material after it leaves the electro-plating apparatus and while the material is still wet.

4. In apparatus of the class described, the combination with a series of tanks containing solutions, of means for guiding a continuous web of flexible material through the solutions in said tanks, and means for removing from said web the excess solution carried by it out of said tanks, comprising a main fluid supply pipe extending longitudinally of the series of tanks, and branch pipes connected to said main pipe, said branch pipes terminating in nozzles extending across said web near the places where the web leaves the solutions and adapted to remove from said web the excess solution carried thereon out of said tanks.

5. In a machine for electro-plating and lacquering wire cloth, the combination of an electro-plating tank containing an electro-plating solution having anodes therein and provided with means for guiding wire cloth through the tank, a lacquer tank provided with means for guiding the wire cloth therethrough, and means for removing from the wire cloth the excess solution carried by it out of the electro-plating tank and the excess lacquer carried on it out of the lacquer tank.

[Claims 6 to 11 not printed in the Gazette.]

1,210,664. MOLDING-MACHINE. ANDREW MALINOVSZKY, Chicago, Ill., assignor to Harry H. Randolph, Chicago, Ill. Filed Oct. 5, 1912. Serial No. 724,009. (Cl. 25—101.)



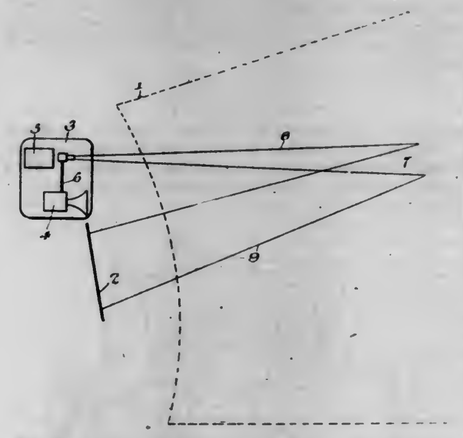
1. In a molding machine, the combination with a mold box having an open top, of a plunger adapted to enter the open top of said mold box, fluid-operated means for reciprocating said plunger, a valve for controlling said fluid-operated means, spring means for normally holding said valve in neutral position, locking means for holding said valve when the latter is moved to operative position, and means carried by said plunger for releasing said locking means, and thereby causing said valve to move to neutral position when said plunger reaches a predetermined position.

2. In a molding machine, the combination with a mold box having an open top, of a plunger adapted to enter the open top of said mold box, a cylinder, a piston within said cylinder and connected with said plunger, a valve for selectively controlling the admission of fluid to opposite sides of said piston, whereby said plunger may be reciprocated, spring means for normally holding said valve in neutral position, whereby the entrance of fluid to said cylinder is prevented, a pair of locking members for selectively holding said valve in position to admit fluid to said cylinder on either side of said piston, and a pair of members carried by said plunger for automatically releasing said locking members when said plunger reaches a predetermined position at either end of its stroke.

3. In a molding machine, the combination with a mold box having an open top and a movable bottom, of a plunger adapted to enter the open top of said mold box, means for reciprocating said plunger, means for moving the bottom of said mold box toward said plunger, means carried by said plunger for starting the operation of said mold box bottom moving means when said plunger reaches a predetermined position, automatic means for stopping the movement of said mold box bottom moving means, means carried by said plunger for again starting the operation of said mold box bottom moving means toward said plunger when said plunger reaches a second predetermined position, and auxiliary automatic means for stopping further movement of said mold box bottom movig means when said mold box bottom reaches a predetermined position.

4. In a molding machine, the combination with a mold box having an open top and a movable bottom, of a plunger adapted to enter the open top of said mold box, a cylinder, a piston within said cylinder and connected with said plunger, means for supplying fluid to said cylinder on each side of said piston, a valve for selectively controlling the entrance of fluid to said cylinder on either side of said piston, spring means for normally holding said valve in neutral position, locking means to selectively hold said valve in operative position, a second cylinder, a piston within said second cylinder, means connecting said piston with the movable bottom of said mold box, means for supplying fluid to said second cylinder on opposite sides of said piston, a second valve for controlling the entrance of fluid to either side of the piston in said second cylinder, means carried by said plunger for operating said second valve to admit fluid to said second cylinder to cause said movable bottom of said mold box to move toward said plunger when said plunger reaches a predetermined position, automatic means for moving said second valve to neutral position when said movable bottom has moved a predetermined distance, means carried by said plunger for again moving said second valve to operative position when said plunger has reached a second predetermined position, whereby said movable bottom will be again moved toward said plunger, and automatic means for again moving said second valve to neutral position when said movable bottom has reached a second predtermined position.

1,210,665. TALKING-MOVING-PICTURE APPARATUS. FREDERICK WEBSTER MATTHEWS, Los Angeles, Cal. Filed Aug. 20, 1914. Serial No. 857,651. (Cl. 88—16.2.)

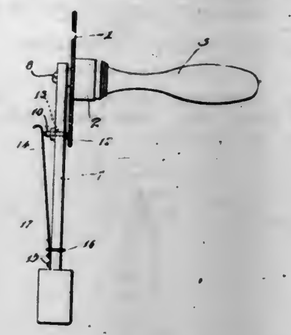


Talking moving picture apparatus comprising a projecting machine and a talking machine located adjacent to one another, means positively connecting the two for synchronous operation, a viewing screen adjacent to the two machines and a reflector remote from the machines for receiving the image and reflecting it to the screen.

1,210,666. TOY. FREDERICK W. MATTHEWS, Los Angeles, Cal. Filed Jan. 18, 1915. Serial No. 2,822. (Cl. 46—14.)

1. A toy comprising a relatively stationary member, a handle connected to the relatively stationary member, an abrasive element carried by the relatively stationary member, a pyrophoric element, and means carrying the pyrophoric element to cause it to travel over the abrasive element when the toy is swung in an arc.

2. A toy comprising a base, a handle mounted on said base, an abrasive element carried by the base, a weighted arm pivotally supported on the base and opposed to the abrasive element, a cartridge slidable through the arm to contact the abrasive element, and spring means engaging the cartridge to force the same toward the abrasive element.



3. A toy comprising a disk, an abrasive element carried on the periphery of said disk, an arm pivoted centrally of the disk, and a spring-pressed cartridge holder pivoted on the arm and adapted to support a cartridge in contact with the abrasive element.

1,210,667. PROCESS FOR THE MANUFACTURE OF ARTIFICIAL MILK, AND THE TREATMENT OF ITS RESIDUES. WILLIAM J. MELHUISH, Upper Parkstone, England. Filed Oct. 22, 1915. Serial No. 57,365. (Cl. 99—11.)

1. The herein described process of making a milk-like fluid by well cleaning and decolorizing arachis (pea) nuts, grinding same into a coarse flour and stirring the said flour in hot water containing dissolved alkaline salts and carbo-hydrate: straining the resultant mixture through fine meshed cloths and treating the clear liquor with further salts and fatty acids: blending same by vigorous stirring: culturing the liquor with lactic bacteria: pasteurizing and cooling ready for use as a milk, similar in its action, flavor and food value to cow's milk.

2. The herein described process of making a milk-like fluid by well cleaning and decolorizing arachis (pea) nuts, grinding same into a coarse flour and stirring the said flour in hot water containing dissolved alkaline salts and carbo-hydrate: straining the resultant mixture through fine meshed cloths and treating the clear liquor with further salts and fatty acids: blending same in a vacuum pan: culturing the liquor with lactic bacteria: pasteurizing and cooling ready for use as a milk, similar in its action, flavor, and food value to cow's milk.

3. The herein described process of making a milk-like fluid by well cleaning and decolorizing arachis (pea) nuts, grinding same into a coarse flour and stirring the said flour in hot water containing dissolved alkaline salts and carbo-hydrate: straining the resultant mixture through fine meshed cloths and treating the clear liquor with further salts and fatty acids: blending same by a vigorous stirring: culturing the liquor with lactic bacteria: evaporating more or less of the water to make a concentrated milk.

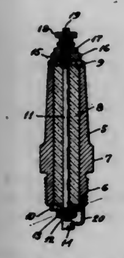
4. The herein described process of making a milk-like fluid by well cleaning and decolorizing arachis (pea) nuts, grinding same into a coarse flour and stirring said flour in hot water containing dissolved alkaline salts and carbo-hydrate: straining the resultant mixture through fine meshed cloths and treating the clear liquor with further salts and fatty acids: blending same in a vacuum pan: culturing the liquor with lactic basteria: evaporating more or less of the water to make a concentrated milk.

5. The herein described process of making a milk-like fluid by well cleaning and decolorizing arachis (pea) nuts,

grinding same into a coarse flour and stirring the said flour in hot water containing dissolved alkaline salts and carbo-hydrate: straining the resultant mixture through fine meshed cloths and treating the clear liquor with further salts and fatty acids: blending same by a vigorous stirring: culturing the milk with sufficient butter starter to insure its souring in a given time and thus fitting it for use in the manufacture of margarin and other butter substitutes.

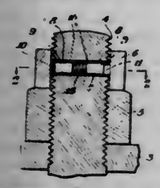
[Claims 6 to 11 not printed in the Gazette.]

1,210,668. ELECTRIC SPARK-PLUG. EARL H. M. MEYER, Seattle, Wash. Filed Jan. 28, 1916. Serial No. 74,893. (Cl. 123—169.)



A spark plug comprising a metal casing, an insulating tube positioned therein, an apertured insulating disk positioned at each end of the casing, a metal rod passing through said tube and disks, the outer end of the rod being threaded, lock nuts and a check nut mounted on said threaded end, the inner end of said rod being concentrically enlarged and externally threaded, a nut mounted on the threaded portion thereof, an eccentric enlargement constituting an electrode carried by the enlarged threaded end of the rod, the said electrode being movable relative to said casing, and a fixed electrode carried by said casing.

1,210,669. NUT-LOCK. STEPHEN MIKE and SAMUEL SOLTESZ, Cleveland, Ohio. Filed Dec. 30, 1915. Serial No. 69,376. (Cl. 151—9.)

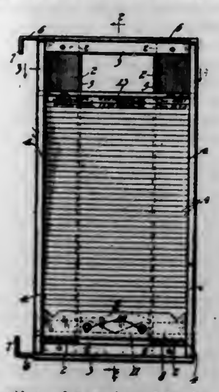


A nut lock comprising a bolt, a nut and a member to be fastened, one of said parts being provided with a notch, another being provided with a bore, a compression spring in such bore and having a right angled extremity, a pin provided with a slot adapted to seat such extremity, and a plug for securing the latter in place, said pin being adapted to engage said notch in the manner specified.

1,210,670. ADJUSTABLE-UNIT VISIBLE-CARD INDEX. HENRY MILLARD, Chicago, Ill. Filed Oct. 23, 1915. Serial No. 57,398. (Cl. 40—63.)

1. A card having a depending tongue and a slit a portion of the length of which is offset; the slit being located between the tongue and the upper edge of the card into which the tongue of a superimposed card is adapted to be inserted, and the offset portion of said slit being less in length than the distance between the ends thereof.

2. A card having a depending tongue and a slit; said tongue extending laterally from the body portion of the card and the portion formed in the card by the slit being narrower at its mouth than at its base to produce a lip which projects from the plane of the card when the tongue of a superimposed card is inserted within the slit.



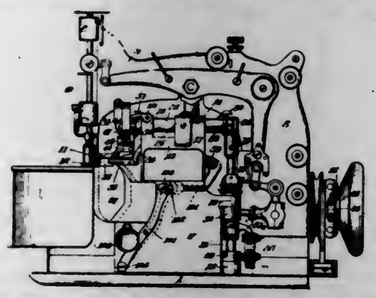
3. The combination of a series of horizontally disposed cards, in combination with a frame in which the same are mounted, and a lifter device which supports said cards and is arranged and has its ends confined in the same frame in which said cards are seated.

4. A card having a slit and a depending tongue; the slit being formed in the card between the tongue and the upper edge of the card; the uppermost portion of the slit forming a lip, and the tongue being produced by a depending portion of the card below the lip formed by the slit.

5. The combination with a series of horizontally disposed cards each having interlocking tongues and mouths or slits, in combination with a frame in which the same are mounted having means in which the ends of said cards are retained and adapted to bow the medial portion of said cards outward, and a flat strip of spring steel the ends of which are adapted to engage and be inserted in said guideways.

[Claims 6 to 8 not printed in the Gazette.]

1,210,671. RUFFLING-MACHINE. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 11, 1911. Serial No. 659,746. (Cl. 112—16.)



1. A ruffling machine including in combination, a ruffling member, means for operating said ruffling member, means for rendering said ruffling member inactive without stopping the machine, and for subsequently moving it laterally to inoperative position.

2. A sewing machine including in combination, stitch forming mechanism, a ruffling member adapted to engage the material in advance of the stitch forming mechanism, means for reciprocating said ruffling member, and means for moving said ruffling member bodily transversely of the path of reciprocation and in the direction of its length to inoperative position.

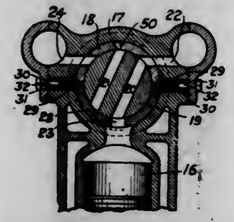
3. A sewing machine including in combination, stitch forming mechanism, a needle, a ruffling member, means for operating the ruffling member, means for manually moving said ruffling member laterally to a point in front of the needle, then forwardly in the direction of length of the ruffling member into operative relation with the needle, and automatic means under the control of the operator for moving said ruffling member laterally and in the direction of its length, to inoperative position.

4. A sewing machine including in combination, stitch forming mechanism including a needle, a ruffling member, means for operating the ruffling member, means for manually moving said ruffling member laterally and thence forwardly in the direction of the ruffling member, whereby said ruffling member is brought into operative relation relative to the needle and into active connection with the operating means.

5. A sewing machine including in combination, stitch forming mechanism including a needle, a ruffling member, means for operating the ruffling member, means for manually moving said ruffling member laterally and thence forwardly in the direction of the ruffling member, whereby said ruffling member is brought into operative relation relative to the needle, and into active connection with the operating means, and automatic means under the control of the operator for moving said ruffling member laterally and in the direction of its length, to inoperative position.

[Claims 6 to 66 not printed in the Gazette.]

1,210,672. VALVE MECHANISM FOR GAS-ENGINES. FRANK L. MORSE, Ithaca, N. Y. Filed May 11, 1915. Serial No. 27,309. (Cl. 123—80.)



1. In a valve mechanism for engines, the combination with a cylindrical rotary valve, of a bushing inclosing said valve and formed in separate sections, and sealing pieces engaging the longitudinal edges of said sections, one of the sections being adjustable and subject to the cylinder pressure for forcing said section against the valve.

2. In a valve mechanism for engines, the combination of a cylindrical rotary valve, a sectional bushing therefor, one of the sections being adjustable, and means for sealing the joint between the sections.

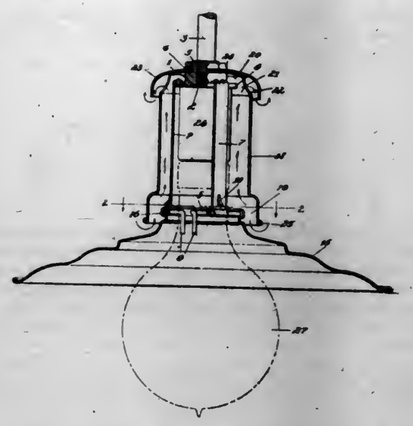
3. In a valve mechanism for engines, the combination of a cylindrical rotary valve, of a bushing inclosing said valve and formed in separate sections, one of the sections being adjustable, and an adjustable wedge engaging the edges of said sections for closing the joint between the same.

4. In a valve mechanism for engines, the combination of a cylindrical rotary valve having ports, a sectional bushing for said valve having supply and exhaust ports and sealing pieces between said sections, one of said sections being adjustable and subject to the cylinder pressure, said adjustable section also having a port communicating with the engine cylinder.

5. In a valve mechanism for engines, the combination of a cylindrical rotary valve, of a bushing inclosing said valve and formed in separate sections, one of the sections being adjustable, and subject to the cylinder pressure for forcing same against the valve, and adjustable wedges engaging the edges of said sections for closing the joint between the same.

[Claims 6 to 16 not printed in the Gazette.]

1,210,673. SHADE-HOLDER. EDMUND F. MOULD, Cleveland, Ohio, assignor to The Adams-Bagnall Electric Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 19, 1914. Serial No. 846,181. (Cl. 240—115.)



1. The combination with a shade having inwardly-facing abutment surfaces, an expansible and contractible holder thereof adapted to coöperate with said abutment surfaces comprising an expansible and contractible ring, and inwardly and outwardly flexible members to which said ring is connected.

2. The combination with a supporting member, of a plurality of depending flexible members the lower ends of which are capable of movement toward and away from each other, an expansible and contractible ring connected with said lower ends, and a casing connected with said supporting member and enveloping the depending flexible members and ring.

3. The combination with a shade having abutment surfaces, of a holder therefor comprising an expansible member for coöperation with said abutment surfaces, a supporting member having an extension, a plurality of flexible members connecting the supporting member and the expansible member, a casing for inclosing the supporting member, the connecting members and the expansible member and having an open bottom and a top wall that is provided with an aperture for the reception of the aforesaid extension, and means for retaining said extension within the aperture of the casing.

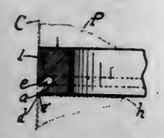
4. The combination with a shade having abutment surfaces, of a holder therefor comprising an expansible member for coöperation with said abutment surfaces, a supporting member having an extension, a plurality of flexible members connecting the supporting member and the expansible member, a casing for inclosing the supporting member, the connecting members and the expansible member and having an open bottom and a top wall that is provided with an aperture for the reception of the aforesaid extension, a cap for application to the upper end of the casing and having an aperture for the reception of the extension, and means for retaining the extension within the apertures of the cap and the casing.

5. The combination with a shade having a neck of inwardly opening channel formation, of a holder therefor comprising an expansible member that is adapted to occupy the neck of the shade, a supporting member having an extension at its upper end and a lateral flange adjacent its lower end, a plurality of flexible members that have their upper ends connected to the flange of the supporting member and their lower ends attached to the expansible member, a casing for inclosing the supporting member, the flexible members and the expansible member and having an open bottom and a top wall that is provided with

a substantially central aperture for the reception of the aforesaid extension, and means for retaining said extension within the aperture of the casing.

[Claims 6 to 11 not printed in the Gazette.]

1,210,674. PACKING-RING. ARDEN J. MUMMERT, St. Louis, Mo. Filed Mar. 18, 1915. Serial No. 15,322. (Cl. 121—108.)



1. A piston-head packing ring for engine cylinders comprising a resilient imperforate split band provided with an annular peripheral basin bounded on one side by a wall inclined to the axis of the ring and terminating in an edge disposed substantially in the plane of one side of the ring, said edge clearing the walls of the cylinder, and bounded on the opposite side by an inclined wall terminating in a cutting edge operating to scrape the oil from the cylinder walls into the basin with a forward stroke of the piston, the bottom of the basin being disposed in a transverse plane rearward of the cutting edges aforesaid.

2. A piston-head packing ring for engine cylinders comprising a resilient imperforate split band provided with an annular peripheral basin bounded on one side by a wall inclined to the axis of the ring and terminating in an edge disposed substantially in the plane of one side of the ring, said edge clearing the walls of the cylinder, and bounded on the opposite side by a similarly inclined wall terminating in a cutting edge operating to scrape the oil from the cylinder walls into the basin with a forward stroke of the piston, the bottom of the basin being disposed in a transverse plane rearward of the cutting edge aforesaid.

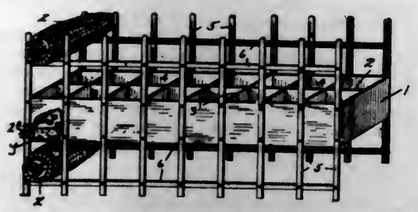
3. A piston-head packing ring for engine cylinders comprising a resilient imperforate split band provided with an annular peripheral basin bounded on one side by a wall inclined to the axis of the ring and terminating in an edge disposed substantially in the plane of one side of the ring, said edge being substantially coincident with the piston-head periphery and clearing the walls of the cylinder, and bounded on the opposite side by an inclined wall terminating in a cutting edge operating to scrape the oil from the cylinder walls into the basin with a forward stroke of the piston, the bottom of the basin being disposed in a transverse plane rearward of the cutting edge aforesaid.

4. A piston-head packing ring for engine cylinders comprising a resilient inperforate split band provided with an annular peripheral basin bounded on one side by a wall inclined to the axis of the ring and terminating in an edge disposed substantially in the plane of one side of the ring, said edge being substantially coincident with the piston-head periphery and clearing the walls of the cylinder, and bounded on the opposite side by a similarly inclined wall terminating in a cutting edge operating to scrape the oil from the cylinder walls into the basin with a forward stroke of the piston, the bottom of the basin being disposed in a transverse plane rearward of the cutting edge aforesaid.

1,210,675. SEED-TESTER. OSCAR M. MUNDALE, Frost, Minn. Filed July 20, 1916. Serial No. 110,315. (Cl. 47—30.)

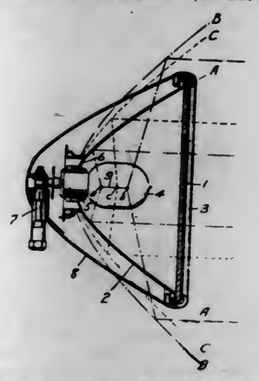
1. A seed corn tester comprising a tray having a plurality of compartments, and corn-cob holding racks located above and below said compartments, said racks comprising a plurality of upright bars and horizontal bars, said upright bars being intermediately secured to the sides of the tray and support the same in elevated position.

2. A seed corn tester comprising a tray having a plurality of compartments, and corn-cob holding racks located above and below said compartments, said racks comprising a plurality of upright bars and horizontal bars, said upright bars being secured to the sides of the



tray in alinement with the ends and transverse partitions thereof and projecting both above and below the tray, certain of said horizontal bars being secured to the upright bars above the tray and others thereof being secured thereto below the tray and on which horizontal bars the corn-cobs directly rest transversely of the tray.

1,210,676. PROJECTION-LAMP. JAMES MYRVEN NAUL, Plainfield, N. J., assignor to Bosch Magneto Company, New York, N. Y., a Corporation of New York. Filed May 12, 1915. Serial No. 27,698. (Cl. 240—41.)

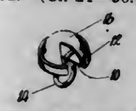


1. In a projection lamp, a reflecting surface made up of curves which are different along the intersection with planes containing the axis of projection and which have a plurality of foci, and a light giving medium containing said foci.

2. In a projection lamp, a reflecting surface made up of parabolas which, at the intersection with different planes containing the axis of projection, have different focal lengths, and a light giving medium containing the foci of said parabolas.

3. In a projection lamp, a reflecting surface in the form of an elliptic paraboloid, and a light giving medium containing the foci of the parabolas in said surface.

1,210,677. BUTTON. FRANKLIN G. NEUBERTH, Ansonia, Conn., assignor to The S. O. & C. Co., Ansonia, Conn., a Corporation of Connecticut. Filed Apr. 24, 1912. Serial No. 692,772. (Cl. 24—90.)



1. A button comprising a circular metallic base provided with an annular flange forming an acute angle with the base, a sheet metal body portion curved convexly at its margin and fitted into the angle between the base and the flange of the base, and plastic material covering the body portion and extending smoothly over the edge of said flange.

2. A button comprising a flanged disk, a shank set in the disk, a hollow metallic dome-shaped portion embraced at its edge by the flange of the disk, and plastic material covering the outer side of the flange of the disk and the surface of the dome-shaped portion.

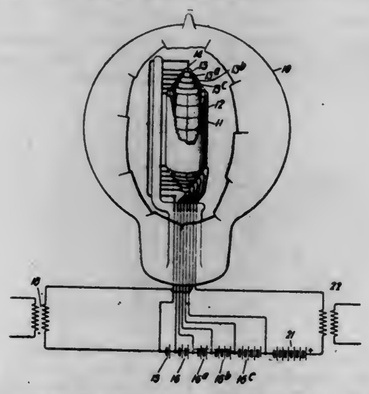
3. A fast color button comprising a base with an upturned flange, a convex body portion seated within the flange and forming therewith a continuous circular recess substantially V-shaped in cross section, and plastic material covering the outer surfaces of the body portion and flange and filling said recess.

4. A fast color button comprising two metallic portions, one shaped to surround and fit upon the other, said portions flaring away from each other thereby forming a channel of V-shaped cross section, and plastic material filling said channel and covering the upper and outer surfaces of the metallic portions.

5. A fast color button comprising a metallic blank having a convex portion of sheet material and a bottom portion having a flange shaped to embrace the edge of said convex portion, said flange having its edge disposed toward the apex of the convex portion and shaped to retain said portion in place, and plastic material covering the convex portion and the edge of the flange.

[Claims 6 and 7 not printed in the Gazette.]

1,210,678. THERMIONIC AMPLIFIER. ALEXANDER McLEAN NICOLSON, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 19, 1915. Serial No. 29,077. (Cl. 250—27.)



1. A thermionic amplifier having two cathode surfaces, one of which is rendered electronically active from bombardment by an electronic stream emanating from the other.

2. A thermionic amplifier having two cathode surfaces, one of which is rendered electronically active from bombardment by a thermionic stream emanating from the other.

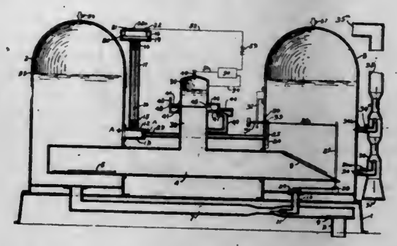
3. In a thermionic amplifier, a series of cathodes of successively increasing electron-emitting capacity, each of said cathodes being rendered electronically active by bombardment from the next preceding cathode of the series.

4. In a thermionic amplifier, a series of cathodes of successively increasing electron-emitting capacity, each of said cathodes being rendered electronically active by bombardment from the next preceding cathode of the series, and an input circuit including an input electrode and one of said cathodes for varying the electronic emissions from said cathode.

5. In a thermionic amplifier, a series of cathodes of successively increasing electron-emitting capacity, all but one of said cathodes being rendered electronically active by bombardment, and an input circuit including a plurality of input electrodes and a like number of said cathodes for varying the electronic emissions from said cathodes.

[Claims 6 and 7 not printed in the Gazette.]

1,210,679. INTERNAL-COMBUSTION METHOD OF FORCING OR COMPRESSING FLUIDS. PONTUS OSTENBERG, Los Gatos, Cal. Filed Jan. 24, 1916. Serial No. 73,920. (Cl. 160—1.)



1. The method which consists in forcing liquid into a cushion chamber containing a fixed elastic fluid cushion by means of internal combustion of air and fuel, maintaining liquid in said cushion chamber at an approximately uniform pressure by means of internal combustion of air and fuel, and utilizing the liquid in a continuous stream from said cushion chamber to force or compress fluids by means of a continuous jet or jets of said liquid.

2. The method which consists in utilizing liquid under pressure of two elastic cushions, utilizing one cushion to compress explosive mixtures and the second cushion to receive the liquid forced by the explosive mixture when ignited, utilizing energy of the generator to entrain liquid against the cushion utilized to compress the explosive mixture, and utilizing the liquid from the cushion receiving the liquid forced by the explosive mixture when ignited to force or compress fluids by means of a jet or jets of the liquid.

3. The method which consists in utilizing liquid under a high elastic fluid pressure to entrain liquid into a combustion chamber and compress explosive mixtures, utilizing the energy of the explosive mixtures when ignited to force liquid against the cushion which forced liquid to entrain liquid into the combustion chamber, and utilizing liquid under pressure of said cushion to compress or force liquids by means of a jet or jets of the liquid.

4. The method which consists in igniting and expanding a combustible mixture, causing said expanding mixture to force liquid to a high elastic fluid pressure, utilizing said high elastic fluid pressure for forcing or compressing fluids by means of a jet or jets, and for forcing liquid to a lower elastic fluid pressure and utilizing said lower elastic fluid pressure for compressing a combustible mixture.

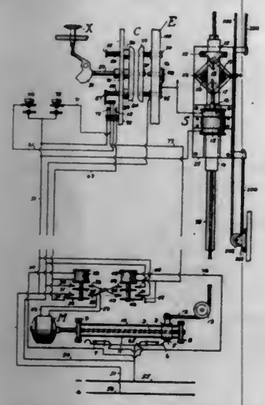
5. The method which consists in subjecting one body of liquid to a low elastic fluid pressure and a second body of liquid to a high elastic fluid pressure and utilizing the difference in said elastic pressures to expel liquid, to entrain more liquid, and to compress and ignite a combustible mixture and utilizing the expanding energy of said ignited combustible mixture for maintaining a difference of pressure in said bodies of liquid.

[Claims 6 to 9 not printed in the Gazette.]

1,210,680. ELEVATOR-DOOR-OPERATING APPARATUS. ARTHUR H. OTIS, Cleveland, Ohio. Filed Oct. 4, 1915. Serial No. 53,977. (Cl. 187—52.)

1. In an apparatus of the class described, an elevator-car, a plurality of doors arranged at different landings, a common controlling means extending to said landings, a motor for operating said common means, an electro-magnetic clutch for each door, means for operating said clutch to grip said common controlling means when the car is adjacent to the particular door to be operated, and means

for starting said motor in either direction to move the operated clutch to operate the particular door.



2. In an apparatus of the class described, an elevator-car, a plurality of doors arranged at different landings, a common controlling means extending to said landings, a motor for causing the operation of said common means, an electro-magnetic clutch for each door, means for operating said clutch to grip said common controlling means when the car is adjacent to the particular door to be operated, and means rendered operable after the operation of said clutch for controlling the direction of operation of said motor to move the operated clutch to open or close the particular door.

3. In an apparatus of the class described, an elevator-car, a plurality of doors arranged at different landings, a common controlling means extending to said landings, a motor for operating said common means, an electro-magnetic clutch for each door, means for operating said clutch to grip said common controlling means when the car is adjacent to the particular door to be operated, means comprising a contact device individual to said elevator car for thereafter starting said motor to operate the particular door, and means for automatically disabling the motor operating means after the particular door is operated, said disabling means being controlled by the operated door.

4. In an apparatus of the class described, an elevator-car, a plurality of doors arranged at different landings, a common controlling means extending to said landings, a motor for operating said common means, an electro-magnetic clutch for each door, means for operating said clutch to grip said common controlling means when the car is adjacent to the particular door to be operated, means for thereafter starting said motor in one direction to open said door, and means for operating said motor in a reverse direction to close said door.

5. In an apparatus of the class described, an elevator car, a plurality of doors arranged at different landings, a common controlling means extending to said landings, a motor for operating said common means, an electro-magnetic clutch for each door, means for operating said clutch to grip said common controlling means when the car is adjacent to the particular door to be operated, means for starting said motor to open said door, means for starting said motor in a reverse direction to close said door, and means for automatically closing said door in case of failure to operate said motor to close said door.

[Claims 6 to 14 not printed in the Gazette.]

1,210,681. HYDROGENIZING OLEFINIC TERPENE DERIVATIVES. CARL PAAL, Leipzig, Germany. Filed July 18, 1914. Serial No. 851,794. (Cl. 23—24.)

1. The process for preparing saturated aliphatic terpene derivatives containing oxygen-hydrogen groups which consists in mixing olefinic terpene derivatives containing oxygen-hydrogen groups with adhesion compounds of the platinum metal group free of acid and introducing hydrogen at ordinary temperature in a neutral medium into the said mixture.

2. The process for preparing saturated aliphatic terpene derivatives containing oxygen-hydrogen groups which consists in mixing olefinic terpene derivatives containing oxygen-hydrogen groups with adhesion compounds of the platinum metal group free of acid and introducing hydrogen at ordinary temperature under higher than atmospheric pressure in a neutral medium into the said mixture.

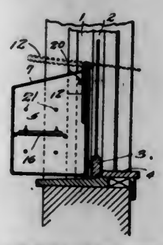
3. The process for preparing saturated aliphatic terpene derivatives containing oxygen-hydrogen groups which consists in dissolving olefinic terpene derivatives containing oxygen-hydrogen groups in organic solvents, mixing the said solution with adhesion compounds of the platinum metal group free of acid and introducing hydrogen at ordinary temperature in a neutral medium into the said mixture.

4. The process for preparing saturated aliphatic terpene derivatives containing oxygen-hydrogen groups which consists in mixing olefinic terpene derivatives containing oxygen-hydrogen groups with substances of the platinum metal group free of acid previously deposited on different pulverulent substances and introducing hydrogen at ordinary temperature into the said mixture.

5. The process for preparing half saturated aliphatic terpene derivatives containing oxygen-hydrogen groups which consists in mixing olefinic terpene derivatives containing oxygen-hydrogen groups and two-double linkages of carbon with adhesion compounds of the platinum metal group free of acid and introducing hydrogen only in sufficient amount for hydrogenizing one double linkage of carbon at ordinary temperature in a neutral medium into the said mixture.

[Claims 6 to 8 not printed in the Gazette.]

1,210,682. WINDOW-BOX. WILLIAM A. PAINTER and JOHN S. HALFAKER, Columbus, Ohio. Filed Jan. 11, 1916. Serial No. 71,489. (Cl. 45—104.)



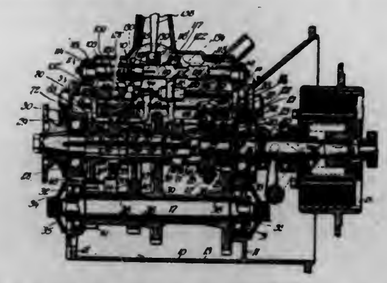
The combination with an open front box having a bead and bar extending across its upper edge and said bead having cut away portions leaving the ends of the bar free, of a vertically slidable door formed with an upper overhanging flange to engage the bead, a bent guide rod at each end of the door, each having its ends fixed to the door, and said rods suspended over the free ends of the bar for guiding the movement of the door.

1,210,683. TRANSMISSION-GEARING. CLARK W. PARKER, Detroit, Mich., assignor to Cadillac Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 22, 1916. Serial No. 121,698. (Cl. 74—39.)

1. In a transmission mechanism, the combination with a carrier member, of a shifting fork mounted for relative movement thereon, resilient means between said carrier and said fork, and means for shifting said carrier.

2. In a transmission mechanism, the combination with a shiftable carrier, of a shifting fork pivotally mounted thereon, a resilient connection between said fork and carrier, and means for shifting said carrier.

3. In a device of the class described, the combination with a shaft, and a slidable carrier mounted thereon, of a shifting fork pivotally mounted on said carrier, a resilient connection between said fork and said carrier, and means between said shaft and said carrier for positively moving said fork about its pivot with a relative sliding movement between said shaft and carrier.

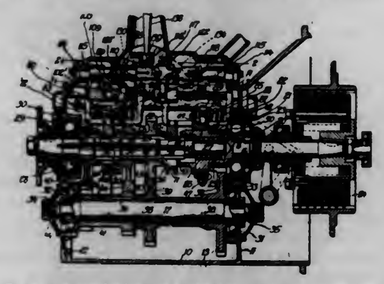


4. In a device of the class described, the combination with a shaft, and a slidable carrier mounted thereon, of a shifting fork pivotally mounted on said carrier, a resilient connection between said fork and said carrier, and cam means between said shaft and said carrier for positively moving said fork about its pivot with a relative sliding movement between said shaft and carrier.

5. In a transmission mechanism, the combination with a shiftable carrier, of a shifting fork pivotally mounted thereon, a cam on said fork, and a shaft for said carrier, said shaft being provided with a groove coöperating with said cam, as and for the purpose described.

[Claims 6 to 20 not printed in the Gazette.]

1,210,684. SHIFTING DEVICE. CLARK W. PARKER, Detroit, Mich., assignor to Cadillac Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 23, 1916. Serial No. 121,734. (Cl. 74—39.)



1. In a transmission mechanism, the combination with a pair of shifting arms, a fork connected with each of said arms, and a shifting lever, of means connecting said shifting lever with said arms whereby said lever may be connected with either of said arms by a lateral movement and will shift either of them by a forward and rearward movement of said lever, a third fork having an arm arranged thereon, said means having a cam arranged thereon, and a follower adapted to be actuated by said cam connected with said latter-mentioned arm, as and for the purpose set forth.

2. In a transmission mechanism, the combination with a pair of shifting forks provided with arms, a rotatable and axially shiftable shaft, and a finger on said shaft adapted to be connected with either of said arms by a rotational movement of the shaft, of cam means formed on said shaft, a cam follower adapted to be operated by an axial movement, another shifting fork provided with an arm connected with said follower, and means for imparting a rotational and axial movement to said shaft.

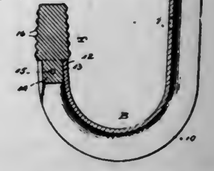
3. In a transmission mechanism, the combination with a pair of shifting forks provided with arms, a rotatable and axially shiftable shaft, and a finger on said shaft adapted to be connected with either of said arms by a rotational movement of the shaft, of a cam arranged on said shaft, provided with a plurality of operating faces, and a cam follower adapted to be operated by one of said faces by one rotational and axial movement of said shaft, to be operated by another of said cam faces by another rotational and axial movement of said shaft, and means connecting said follower with one of said forks.

4. In a transmission mechanism, the combination with a plurality of shiftable clutch members, arms connected thereto, a rotatable and axially shiftable shaft, and a finger arranged on said shaft and adapted to be connected with either of a pair of said arms by a rotational movement of the shaft, of a cam arranged on said shaft, and means connected with another of said arms and adapted to be actuated by said cam by an axial movement of said shaft.

5. In a transmission mechanism, the combination with a plurality of shiftable clutch members, arms connected thereto, a rotatable and axially shiftable shaft, and a finger arranged on said shaft and adapted to be connected with either of a pair of said arms by a rotation movement of the shaft, of a cam arranged on said shaft, means connected with another of said arms and adapted to be actuated by said cam by an axial movement of said shaft, and means for locking said shaft against axial movement.

[Claims 6 to 11 not printed in the Gazette.]

1,210,685. INSULATOR-SUPPORT. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 5, 1916. Serial No. 76,303. (Cl. 173—321.)



1. An insulator support consisting of a bracket member and an insulator receiving pin, said bracket member being formed up from a single band of sheet metal bent longitudinally and brought together at one end to form a circular clamping socket, said pin fitting at its lower end in said socket.

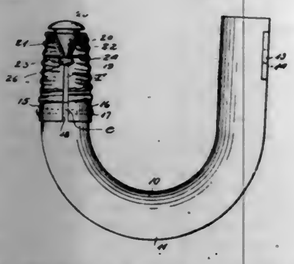
2. An insulator support consisting of a bracket member and an insulator receiving pin, said bracket member being formed from a single band of sheet metal bent longitudinally and brought together at one end to form a cylindrical clamping socket, said pin having a reduced lower end and a shoulder for fitting into said socket and abutting against the end of the socket respectively.

3. An insulator support consisting of a bracket member and an insulator receiving pin, said bracket member being formed from a single band of sheet metal bent longitudinally to arch section and the sides at one end brought together to form a cylindrical clamping socket, said pin being of wood and having a reduced cylindrical lower end and a shoulder for fitting respectively into said socket and abutting against the socket end, and a rivet extending through said socket to clamp the sides thereof against said pin end.

1,210,686. INSULATOR-SUPPORT. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 6, 1916. Serial No. 89,366. (Cl. 173—321.)

1. In an insulator support, the combination with an insulator receiving end divided longitudinally into sections having internal wedge abutments, a wedge member associated with said abutments, and a head for the wedge member overhanging the insulator receiving end to limit the downward movement of the wedge member between the abutments.

2. In an insulator support, the combination with an insulator receiving end divided longitudinally into sections having internal wedge abutments, a wedge member associated with said abutments, a head for the wedge member overhanging the insulator receiving end to limit the downward movement of the wedge member between the abutments, and an enlargement or knob at the lower end of said wedge member for limiting the upper movement thereof.



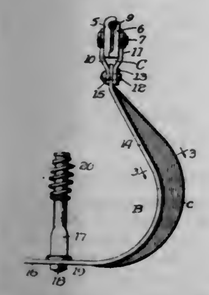
3. In an insulator support, the combination with a hollow radially expansible insulator receiving end having wedge abutments, a wedge between said abutments, and upper and lower stop abutments on said wedge for limiting the movement thereof, said upper stop abutment being in position to be engaged by the top of an insulator applied to said end and to be shifted downwardly with the insulator to exert wedging action on the wedge abutments.

4. In an insulator support, the combination with a yieldable sheet metal threaded insulator receiving end, sections of said sheet metal end being deflected diagonally inwardly to form opposed wedging surfaces, and a wedge member between said surfaces in the path of an insulator applied to said end to be forced between said wedging surfaces to cause the end to expand and clamp the insulator.

5. In an insulator support, the combination with a threaded sheet metal insulator receiving end sub-divided vertically into sections, tongues deflected diagonally inwardly from said sections to form wedging surfaces, and a wedge between said surfaces in the path of an insulator applied to said end to be shifted along said wedge surfaces to cause radial separation of the sections into clamping engagement with the insulator.

[Claim 6 not printed in the Gazette.]

1,210,687. INSULATOR-SUSPENSION BRACKET. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 17, 1916. Serial No. 98,033. (Cl. 173—251.)



1. A suspension bracket structure consisting of a one-piece bracket member comprising a horizontal part and a bend part and a diagonally extending vertical part, an insulator receiving pin supported in vertical position on the horizontal part, a fitting secured to the upper end of the vertical part for hanging the structure from a support, and a reinforcing web along the bend and vertical parts.

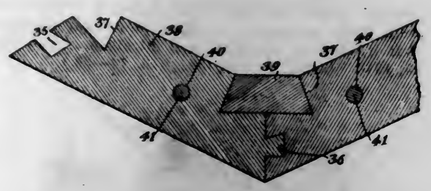
2. A suspension bracket comprising a clamp for engaging a suspension wire, an L-shaped bracket member of T-shaped cross-section suspended from said clamp, and an insulator receiving pin supported on the horizontal limb of said bracket member.

3. An L-shaped bracket formed by bending a length of T-bar with its web extending outwardly, an insulator receiving pin mounted on the horizontal limb of said bracket, and means secured to the ends of the vertical limb for suspending said bracket on a support.

4. An insulator supporting bracket formed by diagonally cutting away the web from a length of T-bar and then bending such bar to L-shape, the remaining web section forming a strengthening rib at the bend of the formed bracket, an insulator receiving pin mounted on the horizontal limb of said bracket, and means secured to the upper end of the bracket for securing it to a support.

5. An insulator supporting bracket formed by diagonally cutting away the web from a length of T-bar and then bending such bar to L-shape, the remaining web section forming a strengthining rib at the bend of the formed bracket, an insulator receiving pin mounted on the horizontal limb of said bracket, and a clamp secured to the upper end of said bracket for suspending the bracket member from a cable.

1,210,688. SILO. JAMES W. PEIRCE and CHARLES L. HANNAH, Orange, Tex.; said Peirce assignor to Oscar Simons Tam, Orange, Tex. Filed July 26, 1915. Serial No. 41,984. (Cl. 217—4.)



1. A silo of the class described comprising a body formed of a plurality of similarly constructed blocks, said blocks provided with interlocking dove-tailed portions, said blocks also provided with dove-tailed sockets upon the inner face thereof adjacent the abutting ends of said blocks, a dove-tailed corner strip fitting in said sockets, and vertically extending tie rods passing through said blocks for holding the same in vertical alinement.

2. A silo of the class described comprising a body formed of a plurality of similarly constructed blocks, each block provided with a dove-tailed tongue upon one end thereof and a dove-tailed socket upon the opposite end thereof, the abutting ends of said blocks being cut on an angle to the longitudinal axis thereof, each block provided with a substantially V-shaped notch formed upon the rear face adjacent each end thereof, an interlocking vertically extending bar fitting within the adjoining V-shaped notches of the abutting blocks and constituting an efficient seal for the inner corners of said blocks, and tie rods passing longitudinally of said blocks.

1,210,689. SCALE. ISADORE FRANCIS PFEIFFER, Altoona, Pa. Filed May 19, 1913. Serial No. 768,510. (Cl. 73—121.)

1. A railroad scales comprising in combination, a platform, a plurality of equal non-floating levers for supporting the platform, a polygonal lever, means for rotating the polygonal lever by the first mentioned levers, knife-edges arranged to recess in one of the edges of the lever and support the same, and means for supporting the knife-edges.

2. A railroad scales comprising in combination, a platform, a plurality of beams supporting the platform, non-floating levers supporting the beams, flexible members acted upon by said levers, a bar torsionally acted upon by said members, means for indicating loads actuated by said bar, and knife-edge means for supporting the bar and permitting the same to turn about its longitudinal axis.



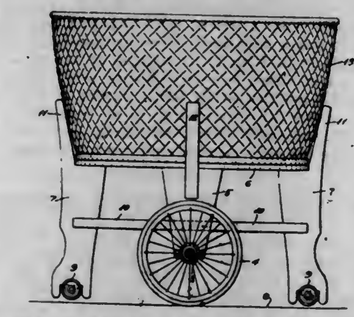
3. A railroad scales comprising in combination, a platform, a plurality of beams supporting the platform, non-floating levers supporting the beams, flexible members acted upon by said levers, a bar torsionally acted upon by said members, means for indicating loads actuated by slad bar, removable knife-edge means for supporting the bar and permitting the same to turn about its longitudinal axis, and means for securing said flexible members to the bar.

4. A scales comprising in combination, a platform, a plurality of beams supporting the platform, non-floating levers supporting the beams, means for indicating the loads on the platform actuated by the levers, blocks in the levers, knife-edges set in the blocks, and journal means for the knife-edges to engage in and be supported thereby.

5. A scales comprising in combination, a platform, a plurality of beams running under the platform and supporting the same, yokes mounted in the beams, levers, links flexibly connecting the yokes and levers together, said links, yokes and levers being arranged to move in a direction away from the platform when the platform is supporting a weight, a single weighing lever acted upon by said levers, means for supporting the beams independently of the levers, and journal members for said levers, links and yokes adapted to present a plurality of changeable bearing surfaces.

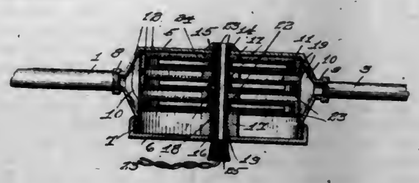
[Claims 6 to 22 not printed in the Gazette.]

1,210,690. PORTABLE SLEEPING-CRIB. JAMES PHILBIN, Seattle, Wash. Filed May 17, 1916. Serial No. 98,219. (Cl. 21—65.)



A portable sleeping crib of the class described, embodying an axle, two wheels rotatably mounted each on a different end portion of said axle; two studs clamped to said axle each adjacent to a different one of said wheels and disposed to extend upwardly from said axle; a platform rigidly secured to the top ends of said studs; two legs rigidly attached each to the underside of a different one of the opposite end portions of said platform to extend downwardly therefrom, a pair of rollers yieldingly attached to the bottom end of each of said legs; an integral arm disposed to extend obliquely upward from the upper end of each of said legs at a point adjacent to the edge of said platform; an arm secured to the outer side of each of said studs and disposed to extend obliquely upward to a plane higher than said platform; and a sleeping crib removably disposed on said platform in a position to be confined with respect to horizontal movements by said arms.

1,210,691. LIQUID-HEATER. FRED POOLE, Jewell City, Kans. Filed Feb. 9, 1915. Serial No. 7,171. (Cl. 219—39.)



1. A liquid heater, including a casing interposed in a fluid conduit, disk like heating elements detachably mounted in said casing, said heating elements being in spaced relation with their respective axes in alinement and at right angles to the flow of liquid through said casing to present relatively large heating surfaces, and an electric heating unit carried within each of said heating elements.

2. A liquid heater, including a casing interposed in a fluid conduit and having an open face, a cover for said open face, a plurality of heat chambers mounted in spaced relation in said casing and in the path of flow of liquid therethrough, the axes of said heat chambers being concentric and substantially at right angles to the flow of liquid therethrough, and an electric heating unit snugly receivable in each of said heat chambers and being detachably connected to a source of electric energy.

3. A liquid heater, including a casing having an open face, a cover for said open face, said casing being interposed in a fluid conduit, a plurality of heat chambers containing electric heating units therein, means for supporting said heat chambers in said casing, and means for maintaining said heat chambers in spaced relation carried by said supporting means, each of said heat chambers being independently movable as desired on said supporting means, and being independently or collectively controllable.

4. A liquid heater including a casing of substantially cylindrical configuration having inlet and outlet openings in the peripheral wall thereof, heat chambers receivable within said casing and in threaded engagement with the peripheral wall thereof, supporting means carried by the end walls of said casing and passing axially through and supporting said heat chambers, spacing members carried by said supporting means, and an electric heating unit receivable in each of said heat chambers and in substantially snug engagement with the respective walls thereof.

5. A liquid heater, including a casing interposed in a fluid conduit, a plurality of disk like heat unit receptacles concentrically mounted in spaced relation in said casing, said receptacles being peripherally and axially supported, and disposed with the respective faces thereof parallel with the flow of liquid through the casing, whereby to present a relatively large heating surface.

1,210,692. METHOD OF FORMING PIPE-TAPS. MINARD A. POSSONS, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 2, 1915. Serial No. 64,736. (Cl. 29—148.)

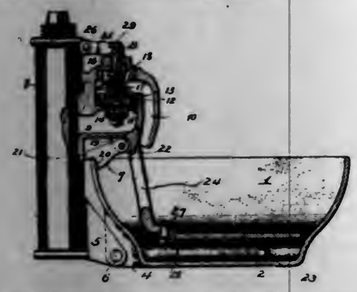
1. The method of providing a surface with a welded reinforcing piece with the outer surface of the piece approximately even with the outer face of the said surface, consisting in placing the reinforcing piece on the surface and subjecting the reinforcing piece and the surface to a welding heat and while so subjected to said heat simultaneously depressing the surface and forcing the piece

into the depression and welding the parts together, thereby simultaneously effecting the complete result in one operation for the purpose described.



2. The method of providing a pipe with a welded reinforcing piece with the outer surface of the piece approximately even with the outer contour of the pipe, consisting in placing a flat reinforcing piece on the outer surface of the pipe and subjecting the piece and the adjacent surface of the pipe to a welding heat to soften the pipe and piece and while so subjected to said heat simultaneously depressing the pipe and welding the piece in the depression, whereby the piece is simultaneously depressed into the pipe and welded thereto in a single operation, and finally finishing off the corners of the flat piece so as to make it conform with the contour of the pipe.

1,210,693. WATERING DEVICE FOR CATTLE. HUGO C. RASSMANN, Beaver Dam, Wis. Filed Oct. 19, 1916. Serial No. 126,550. (Cl. 119—75.)



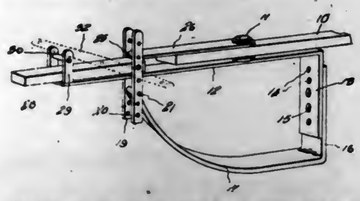
1. In a watering device for cattle, the combination with a bowl, a stand pipe, a valve casing carried by the stand pipe and provided with a discharge outlet over the bowl, and a valve having a vertical stem projecting above the casing, of a yoke pivoted to the stand pipe above the casing and embracing the latter, a pedal member secured to the lower end of the yoke within the bowl, and a cross bar between the members of the pivoted yoke at a point between the pivotal support of said yoke and the pedal member and disposed over the stem of the valve for operating the latter.

2. In a watering device for cattle, the combination with a stand pipe, a pivoted bowl, and a casing carried by the stand pipe and having a discharge outlet over said bowl, of a latch pivotally attached to the bottom of the casing and projecting rearwardly therefrom and adapted at its free end to engage the rear end of the bowl.

3. In a watering device for cattle, the combination with a stand pipe, and a casing carried by the stand pipe and having a water outlet disposed over the bowl, said casing having a lip at its lower end adjacent to said water outlet, of a latch having pivotal connection with the casing adjacent to said lip whereby said pivotal connection is protected by said lip, said latch projecting rearwardly from its pivotal connection with the casing and adapted to engage the rear end of the bowl.

1,210,694. RUNNER FOR DRAFT-TONGUES. WILLIAM H. S. RITCHIE, West Point, Ky. Filed Nov. 30, 1915. Serial No. 64,278. (Cl. 21—63.)

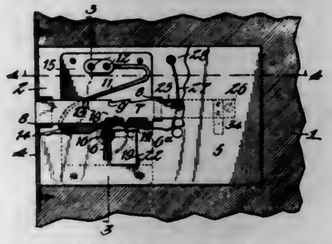
1. A device of the class described comprising a body plate, a draft tongue connected therewith, a runner secured to the rear extremity of the body plate, adjustable means connecting the forward extremity of said runner with said body plate, a short tongue, and means securing the short tongue to said adjustable means.



2. A device of the class described comprising a body plate having an angular rear end, a draft tongue connected therewith, a runner, means adjustably securing the rear extremity of said runner with the angular end of said body plate, adjustable means securing the forward extremity of said runner with said body plate, and a short tongue connected with said adjustable means.

3. A device of the class described comprising a body plate, a runner supporting said body plate, means for pivotally securing a draft tongue to said body plate, a short tongue connected with said body plate, and spring means connected with the rear extremity of the short tongue and connected with the draft tongue.

1,210,695. LOCK FOR DOORS, &c. CHARLES RIZZO, Buffalo, N. Y. Filed Feb. 14, 1916. Serial No. 78,112. (Cl. 70—75.)

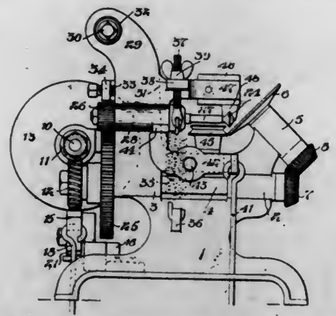


A lock, comprising a supporting plate having a key-hole provided with a branch-slot, a locking bolt provided with a series of detent teeth and a series of operating teeth, the latter adapted to be engaged by the bit of a key inserted in said hole, a detent pawl engaging said detent teeth and having a releasing member arranged adjacent to said key-hole in position to be engaged by the bit of the key, a catch arranged to interlock with said bolt in the fully-projected position of the bolt, a portion of said catch extending across said branch-slot to be engaged by the key-bit, and automatic means for partly retracting the bolt upon the disengagement of said catch therefrom.

1,210,696. MACHINE FOR APPLYING REINFORCEMENT TO INSOLES. GEORGE L. ROLLINS, Bridgewater, Mass., assignor to W. H. McElwain Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 28, 1911. Serial No. 668,257. (Cl. 12—20.)

1. A machine for applying a reinforcing strip to the angle within the lip of an insole, including a supporting and feeding table for the insole, an unyielding guide for the edge of the insole, and a setting wheel having a rim arranged in a plane making an acute angle with the plane of the table and located at such a distance from the guide as to enter the angle on the inner side of the lip, said wheel being also arranged to yield away from the sole edge.

2. A machine for applying a reinforcing strip to the angle within the lip of an insole, including a supporting and feeding table for the insole, a guide for the edge of the insole, a setting wheel having a rim arranged in a plane making an acute angle with the plane of the table and located at such a distance from the edge guide as to enter the angle on the inner side of the lip, and a strip guide having a discharge point adjacent to the rim of said wheel.



3. A machine for applying a reinforcing strip in the angle between the surface of an insole and a rib standing up from such surface, comprising a supporting and feeding member adapted to engage the surface of the insole opposite to that from which the rib projects, an insole guide arranged to control the direction of feeding of the insole, and a setting wheel having faces oblique to its axis meeting in a circular edge the plane of which is perpendicular to such axis, arranged with the plane of such rim at an acute angle to the insole-engaging element of said member.

4. A machine for applying a reinforcing strip in the angle between the surface of an insole and a rib standing up from such surface, comprising a supporting and feeding member adapted to engage the surface of the insole opposite to that from which the rib projects, an insole guide arranged in such relation to said member as to contact with the edge of an insole which is operatively engaged with the member, and constructed to leave the rib free, and a setting wheel having a rim shaped to enter the lip angle of an insole and located in a plane which makes acute angles with the work engaging elements of both the said member and the said guide.

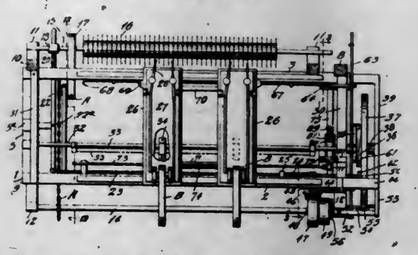
5. In a machine of the character described, the combination with a support for an insole, of a setting wheel having beveled faces meeting at an edge which is adapted to enter the angle between the lip and face of an insole, the face of the setting wheel which in use is nearest the surface of the insole being arranged at such an angle to the insole engaging element of said support as to recede from the surface of the insole, whereby the wheel engages the insole only at its rim.

[Claims 6 to 14 not printed in the Gazette.]

1,210,697. AUTOMATIC SHIFT FOR SAW-SHARPENING MACHINES. ALBERT ROSS, Dallas, Tex., assignor of one-third to Wm. M. Dugan and one-third to J. W. Carter, Tarrant county, Tex. Filed Feb. 23, 1915. Serial No. 9,796. (Cl. 76—32.)

1. In a device of the character described, the combination with a driving belt; of a sliding carriage, saw sharpeners carried by said carriage; a shaft with tight and loose pulleys thereon; connections whereby said sharpeners are reciprocated when said driving belt is on the tight pulley; a belt shifting device; and means set to operate when the belt shifting device shifts the belt to the loose pulley to lift the saw sharpeners from the saws, step the carriage to the next position, set the sharpeners to the saw and finally to operate the belt shifting device to shift the belt to the tight pulley and then come to rest.

2. In a device of the character described, the combination with a driving belt, a sliding saw carriage carrying saw sharpeners, tight and loose pulleys correlated with said belt, and connections whereby said sharpeners are reciprocated when said belt is on the tight pulley; of a belt shifting device, means for operating the belt shifting device, a master wheel set in motion when the belt is shifted to the loose pulley, a device for lifting the carriage operated by the wheel, a rocking member operated by the wheel, a rack bar connected with the rocking member and operated thereby to slide the saw carriage which it engages, a tripping device in the path of the wheel connected with the carriage lifting device for lowering the carriage after the same has been slid, and means set to operate by the wheel for operating the belt shifting device to restore the belt to the tight pulley.



3. In a device of the character described, the combination with the frame of a saw sharpening machine, a driving belt, a sliding saw carriage carrying saw sharpeners operated by said belt, tight and loose pulleys correlated with said belt, and connections between said belt and the sharpeners whereby said sharpeners are reciprocated when said belt is on the tight pulley; of a belt shifting device; means set to operate when said belt shifting device shifts the belt to the loose pulley to lift the saw sharpeners from the saws, step the carriage to the next position, set the sharpeners to the saws and finally to operate the belt shifting device to shift the belt to the tight pulley and then come to rest; and a stopping device mounted on the frame and in the path of the sliding carriage and constructed to throw the said operating means out of operation when encountered by said carriage.

4. In a device of the character described, the combination with a driving belt, a sliding carriage carrying saw sharpeners, tight and loose pulleys correlated with said belt, and connections whereby said sharpeners are reciprocated when said belt is on the tight pulley; of a belt shifting device, means for operating the belt shifting device, a master wheel having provision for operating component parts, said wheel being set in rotation by the shifting of the belt from the tight to the loose pulley, means for lifting the saw sharpeners operated by the wheel, means for stopping the carriage to its next position operated by the wheel, means for lowering the sharpeners operated by the wheel, and means carried by the belt shifter for restoring the same to its normal position and projecting into the path of the wheel when the belt is shifted from the tight to the loose pulley.

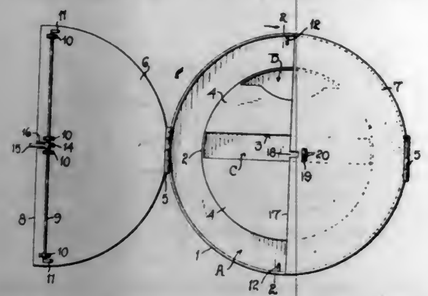
5. In a device of the character described, the combination with a driving belt, a sliding carriage carrying saw sharpeners, tight and loose pulleys correlated with said belt, and connections whereby said sharpeners are reciprocated when said belt is on the tight pulley; of a belt shifting device, means for operating the belt shifting device to shift the belt to the loose pulley, a master wheel revolved by the loose pulley, a lifting member operated by the wheel for elevating the saw sharpeners, a cam operated by the wheel, a rocker operated by the cam, a connection between the rocker and the carriage whereby the latter is stepped to its next position when the rocker is operated, and means for shifting the belt device to restore the belt to the tight pulley.

[Claims 6 to 9 not printed in the Gazette.]

1,210,698. TRUNK. EDWARD C. ROSS, Wolcott, Ind. Filed July 15, 1916. Serial No. 109,520. (Cl. 190—20.)

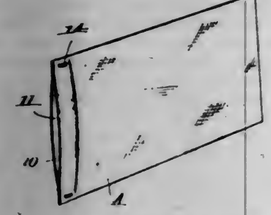
A trunk of the class described comprising a hollow body having one end open, an annular partition within the body concentric to the axial center of the body and coacting with the side walls of the body to afford a chamber, a

partition dividing the space confined by the annular partition and affording additional compartments, closure members hinged to the opposite side portions of the body at points substantially longitudinally alined with the second named partition, adjacent margins of said members overlapping when the members are in closed adjustment, said adjacent margins being provided with recesses adapted to register when in overlying relation to afford a



slot, a locking member carried by the inner face of the closure member which overlies the second closure member, said locking member coacting with the side walls of the body for maintaining the closure members in closed position, and an operating arm for the locking member extending exteriorly of the trunk through the slot afforded by the registering openings of the closure members when in overlapping relation.

1,210,699. ENVELOP. RÉGIS ROY, Ottawa, Ontario, Canada, assignor of one-fourth to Henry Ritchie, Ottawa, Ontario, Canada. Filed Apr. 14, 1916. Serial No. 91,110. (Cl. 229—62.)



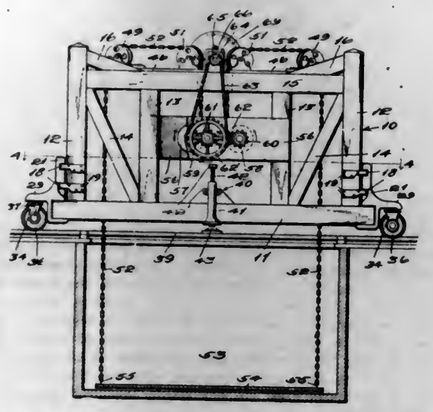
1. An envelop of the class described having the ends of the open end slit along each side and bent inwardly, a member embraced between the folded portion of the ends and secured therein by mucilage, the ends being then bent inwardly into the body of the envelop, and means for securing the said ends in fixed position.

2. An envelop of the class described having the ends of its opening slit along each edge and bent inwardly, a strip of flexible resilient material embraced by the bent portion of the edges and secured therein by mucilage, the ends being bent into the interior of the envelop, and means for securing the ends fixed within the envelop.

3. An envelop of the class described having the ends of its opening slit along each edge, the ends being bent inwardly, a strip of resilient material embraced by the bent portion of the edges and secured therein by mucilage, the ends being bent into the interior of the envelop, and metallic clips for securing the bent portions of the edge in the interior of the envelop.

1,210,700. MACHINE FOR HANDLING HIDES OR LEATHER IN BULK. CARLETON RUHE, Olean, N. Y. Filed July 8, 1915, Serial No. 38,834. Renewed May 29, 1916. Serial No. 100,699. (Cl. 254—4.)

1. In a machine for handling hides or leather in a pack or bulk, a traveling supporting frame having a main opening, a hide or leather support adapted to be moved into the main opening, pairs of substantially horizontally swinging arms carried by the upper portion of the supporting frame, pulleys carried by the inner free ends of the arms, a second set of pulleys carried by the outer ends of the arms, flexible elements attached to the support and passed about the pulleys, and winding mechanism carried by the supporting frame and having the flexible elements connected therewith.



2. In a machine for handling hides or leather in a pack or bulk, a traveling frame, a hide or leather support, pairs of substantially horizontally swinging arms having their outer ends pivotally connected with the sides of the frame, a set of pulleys carried by the free inner ends of the arms, a second set of pulleys carried by the outer pivoted ends of the arms, flexible elements attached to the support and passed about the pulleys, and winding mechanisms mounted upon the sides of the frame and connected with the flexible elements.

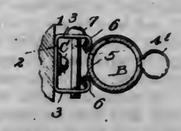
3. In a machine for handling hides or leather in a pack or bulk, a traveling supporting frame embodying side-members and having a main opening extending through its bottom, a hide or leather support adapted to be moved into the main opening, pairs of substantially horizontally swinging arms having their outer ends pivotally connected with the side-members of the supporting frame, a set of pulleys carried by the inner free ends of the arms, a second set of pulleys carried by the outer pivoted ends of the arms, flexible elements attached to the support and passed about the pulleys, winding mechanisms mounted upon the side-members of the supporting frame, a transverse driving shaft mounted upon the upper portion of the supporting frame, driving connecting means between the shaft and the winding mechanisms, and a motor mounted upon the supporting frame to drive the shaft.

4. In a machine of the character described, a wheeled frame having an opening extending through its bottom, tracks connected with the frame near its corners and extending inwardly toward the center of the frame, supports movably mounted upon the tracks, pulleys carried by the supports, flexible elements engaging the pulleys and extending downwardly below the same, a hide or leather support secured to the flexible elements to be moved thereby, and winding mechanism mounted upon the frame and connected with the flexible elements to move them.

5. In a machine for handling hides or leather in a pack or bulk, a traveling frame having an opening extending through its bottom, tracks connected with the frame near its corners and extending inwardly toward its center, supports movably mounted upon the tracks, a set of pulleys carried by the supports, a second set of pulleys arranged adjacent the sides of the frame and supported thereby, flexible elements engaging the sets of pulleys and extending downwardly below the first named set, a hide or leather support secured to the ends of the flexible elements, winding mechanisms arranged upon the sides of the frame and connected with corresponding ends of the flexible elements, and means to drive the winding mechanisms.

[Claims 6 and 7 not printed in the Gazette.]

1,210,701. CONDUIT-HANGER. AXEL RYDIN, Chicago, Ill., assignor to Appleton Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 21, 1915. Serial No. 22,726. (Cl. 248—36.)



1. A conduit hanger comprising two sections, one of said sections being a one-piece mount having a base adapted to rest against a support and be attached thereto, and two flanges extending outwardly a material distance from said mount and integral therewith, said flanges having their ends bent inwardly toward each other to form hooks, the other section being adapted to engage the conduit and comprising a main gripping portion having its ends bent outwardly to form hooks and a central loop integral with said main portion and approximately opposite said hooks whereby said main portion will have great resilience and the hooks thereon will frictionally engage the hooks of said mount-piece to support the clip and the conduit.

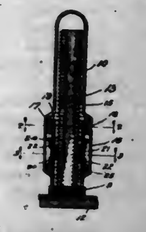
2. A conduit hanger comprising two sections, one of said sections being a one-piece mount having a flat base adapted to rest against a support and be attached thereto and two flanges extending outwardly a material distance from said base and integral therewith, said flanges having their ends bent inwardly toward each other to form hooks, means adapted to engage said flanges to draw said hooks and flanges together, the other section being adapted to engage the conduit and having end portions adapted to be engaged by said hooks.

3. A conduit hanger comprising two sections, one of said sections being a one-piece mount having a flat base adapted to rest against a support and be attached thereto by suitable means, said mount further comprising two flanges extending outwardly a material distance from said base and having their ends bent inwardly toward each other to form hooks, the other section being a clip adapted to embrace the conduit and having its end portions bent outwardly away from each other to form complementary hooks, whereby said complementary hooks engage said first mentioned hooks to secure said clip to said mount.

4. A conduit hanger comprising two sections, one of said sections being a one-piece mount having a base adapted to be attached to a support and two end portions extending outwardly from said base and integral therewith, the other section being adapted to encircle a conduit and having two end portions spaced from each other, the two end portions on one of said sections being adapted to interlock with the two end portions on the other section for securing the two sections together, and a screw engaging the two end portions of one of said sections only and arranged to draw said portions toward each other whereby to render the engagement between the interlocking parts of the two sections more secure and to tighten the conduit-encircling section about the conduit.

1,210,702. DUST-CAP FOR VALVES. ALBERT C. SAVIDGE, Indianapolis, Ind. Filed May 22, 1916. Serial No. 99,140. (Cl. 152—12.)

1. A dust cap for valve stems, comprising an outer shell provided with an internally threaded part movable therewith, an externally threaded sleeve threaded in said internally threaded part and shaped internally so that it is movable axially on the valve stem but is prevented from turning on the valve stem, and a split nut the parts of which are spring pressed inwardly into coöperative relation with the threads on the valve stem but are movable outwardly out of such coöperative relation by the axial movement of said sleeve relative to said shell.



2. A dust cap for valve stems, comprising an outer shell provided with an internally threaded part movable therewith, an externally threaded sleeve threaded in said internally threaded part and shaped internally so that it is movable axially on the valve stem but is prevented from turning on the valve stem, and a split nut the parts of which are spring-pressed radially in one direction but are movable radially in the other direction by the axial movement of said sleeve relative to said shell.

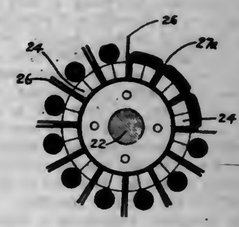
3. A dust cap for valve stems, comprising an outer shell, a sleeve shaped internally so that it is movable longitudinally of the valve stem but is prevented from turning thereon, said sleeve and said shell having a screw thread connection, and a split nut the parts of which are spring-pressed inwardly into coöperative relation with the threads on the valve stem but are movable outwardly out of said coöperative relation by the axial movement of said sleeve relative to said shell.

4. A dust cap for valve stems, comprising an outer shell, a sleeve shaped internally so that it is movable longitudinally of the valve stem but is prevented from turning thereon, said sleeve and said shell having a screw thread connection, and a split nut the parts of which are spring-pressed radially in one direction but are movable radially in the other direction by the axial movement of said sleeve relative to said shell.

5. A dust cap for valve stems, comprising an outer shell, a sleeve shaped internally so that it is movable longitudinally of the valve stem but is prevented from turning thereon, said sleeve and said shell having a screw thread connection, and a split nut the parts of which are spring-pressed inwardly into coöperative relation with the threads on the valve stem, said split nut having an inwardly tapered face at an axial end and said shell having an abutment between which and said sleeve said split nut is located, so that by turning said shell in one direction the resultant axial relative movement of said sleeve and abutment produces a cam action on said inwardly tapered face of a split nut between them to force the parts of said split nut out of coöperative relation with the threads on said valve stem.

[Claims 6 to 10 not printed in the Gazette.]

1,210,703. COMMUTATOR. CHARLES F. SCHNEIDER, Springfield, Ohio, assignor to The Robbins & Myers Company, a Corporation of Ohio. Filed July 21, 1914. Serial No. 852,321. (Cl. 200—12.)



1. A commutator having segments, each of which comprises a plurality of individual conductive elements,

and binding plates, intermediate of which said elements are positioned.

2. In an armature for electric machines, a commutator having segments each comprising conductive elements; binding plates positioned on either side of said conductive elements and having projections; and armature leads adapted to be secured by said projections and connected with the conductive elements.

3. In an armature for electric machines, provided with windings and leads therefor; a commutator having a segment comprising a plurality of conductive elements; and binding plates in contact with said conductive elements and having flexible projections between which the armature leads may be clamped securely in contact with the conductive elements.

4. In a commutator, a commutator bar comprising a plurality of individual elements having a plain contacting surface; and means adjacent thereto having provisions for holding lead wires in direct contact with the individual elements of the commutator bar.

5. In an armature for electric machines provided with windings and leads therefor; a commutator having segments each comprising conductive elements; and binding plates in contact with said conductive elements throughout the length thereof and having projections between which the armature leads are held in contact with said binding plates and the conductive elements.

[Claims 6 and 7 not printed in the Gazette.]

1,210,704. WELL-DRILLING TOOL. HERMANN F. SCHUBERT, Victoria, Tex. Filed Sept. 23, 1916. Serial No. 121,816. (Cl. 255—65.)



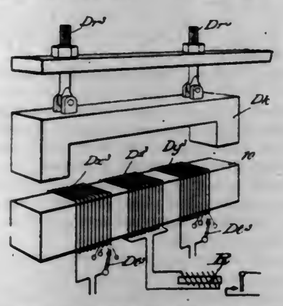
1. A device as specified, including a drill rod having an enlargement on one free end thereof, a second rod adjustably associated with the drill rod, a rigid jaw carried by said second rod, a second jaw yieldably carried by said second rod, and means interposed between said jaws and connected with said drill rod to separate the jaws, at times.

2. A device as specified, including a drill rod having an enlargement on one end thereof, said enlargement being provided with a threaded bore, a second rod having a threaded portion engageable with said bore, a jaw carried by the lower free end of said second rod, a second jaw yieldably associated with said second rod, an actuating rod extending from the drill rod to a point between said jaws, and an arm carried by one of the jaws and connected with said actuating rod to spread the jaws when said drill rod and second rod are relatively moved, and a spring member connected with one of the jaws and said actuating rod for the purpose specified.

3. A device as specified, including a drill rod, said drill rod having an enlargement on one end thereof provided with a threaded bore, a second rod threaded to engage said bore, a jaw rigidly carried by the free end of said second rod, a second jaw yieldably carried by said second rod, said first jaw embracing said second jaw to form a tapering tubular container, an actuating mechanism for separating said jaws including a rod connected with the drill rod, an arm pivoted on one of said jaws engaging the opposite jaw, said arm being pivotally connected at the lower end of said actuating rod, and a spring member connected with one of the jaws and said actuating rod for the purpose specified.

4. In a well drilling tool of the class described, the combination of a drill rod having an enlargement on the free end thereof provided with a threaded bore, a second rod threaded to engage in said bore, a rigid jaw carried by the free end of said second rod, a yieldable jaw carried by said second rod to coöperate with said first jaw, an arm pivoted on said first jaw to engage said second jaw for separating the same, an actuating rod connected with said arm and with said drill rod, and spring means connected with one of said jaws and said actuating rod to move said arm when said drill and said second rod are relatively moved whereby to expand or contract said jaws.

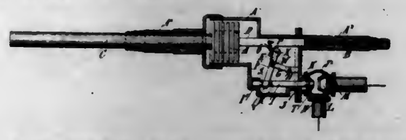
1,210,705. APPARATUS FOR POWER DISTRIBUTION. RUDOLPH F. SCHUCHARDT, Chicago, Ill. Filed Jan. 12, 1912. Serial No. 670,833. (Cl. 175—281.)



1. In an inductive differential relay, the combination of a core, differential windings mounted thereon, a secondary winding mounted thereon, a magnetic return path for said core, adjusting mechanism for moving one end of the return path farther from the core than the other end if desired and for moving the return path toward or away from both ends of the core as desired and translating devices connected with said secondary winding.

2. In an inductive differential relay, the combination of a core, differential windings mounted thereon, a secondary winding mounted thereon, a magnetic return path for said core, an adjusting device secured to each end of the return path for moving it toward or away from said core independently of the other end of said return path and translating devices connected with said secondary winding.

1,210,706. THERMOSTATIC VALVE. GERHARDT F. SCHWARTZ, St. Louis, Mo. Filed Oct. 30, 1915. Serial No. 58,926. (Cl. 236—5.)



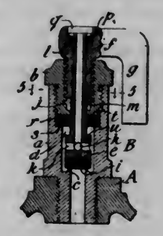
1. A thermostatic valve, comprising a thermostatic member, a valve, a valve stem, a tilting lever engaging said valve stem, a pivoted standard pivotally supporting said tilting lever, the pivot point of said lever being movable, a trip member adapted to be actuated by said thermostatic member, said trip member engaging one end of said tilting lever, the other end of said tilting lever engaging and adapted to actuate said valve stem.

2. A thermostatic valve, comprising a thermostatic member, a valve stem, a tilting lever engaging said valve stem, a pivoted standard pivotally supporting said tilting lever, the pivot point of said lever being movable, a trip member adapted to be reciprocated by said thermostatic member, a roller carried at one end of said tilting lever and engaging said trip, spring means adapted to maintain said roller in engagement with said trip, the other end of said tilting lever engaging and adapted to actuate said valve stem.

3. A thermostatic valve, comprising a thermostatic member, a valve stem, a tilting lever engaging said valve stem, said valve stem being provided with a slot having upper and lower knife-edges, a pivoted standard pivotally supporting said tilting lever, the pivot point of said lever being movable, a trip member adapted to be actuated by said thermostatic member, said trip member engaging the end of said tilting lever, the other end of said tilting lever engaging said slot of the valve stem and adapted to actuate the valve stem.

4. A thermostatic valve, comprising a thermostatic member, a valve stem, a tilting lever engaging said valve stem, a pivoted standard pivotally supporting said tilting lever, the pivot point of said lever being movable, a trip member carried directly by said thermostatic member, said trip member engaging one end of said tilting lever, the other end of said tilting lever engaging and adapted to actuate said valve stem.

1,210,707. VALVE. MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, N. J. Filed Mar. 8, 1913. Serial No. 753,066. (Cl. 137—4.)



1. A valve for fire extinguishers or the like comprising a casing having a seat at its lower end, a valve chamber above said seat, a valve proper in said chamber, a valve stem having a passage through it communicating with said valve chamber, a packing surrounding and fitting snugly to said valve stem, a cap screwing directly into said casing, said casing and cap having shoulders between which said packing is to be pressed, said cap having a screwthreaded bore through which said valve stem extends, a bushing threaded in said bore, said bushing and valve stem being connected to turn together and a handle connected to said bushing.

2. A valve for fire extinguishers or the like comprising a casing having a seat at its lower end, a valve chamber above said seat, a valve proper in said chamber, a valve stem having a passage through it communicating with said valve chamber, a packing surrounding and fitting snugly to said valve stem, a cap screwing directly into said casing, said casing and cap having shoulders between which said packing is to be pressed, and said cap having a screw-threaded bore through which said valve stem extends, a bushing threaded in said bore the threads of said bushing and cap being plural and of steep pitch, said bushing and valve stem being connected to turn together and a handle connected to said bushing.

3. A valve for fire extinguishers or the like, comprising a casing having a raised seat at its lower end, a valve chamber above said seat, a valve proper in said chamber, a compression disk thereon adapted to engage said seat, a valve stem having a passage through it communicating with said valve chamber, a packing surrounding and fitting snugly to said valve stem, a cap screwing directly into said casing, said casing and cap having shoulders between which said packing is to be pressed, said cap having a bore with multiple quick acting screw threads, a bushing screw-threaded in said bore, said valve stem passing through said bushing and being held therein against turning relatively thereto, and a handle for said bushing.

4. A valve for fire extinguishers or the like comprising a casing having a seat at its lower end, a valve chamber above said seat, a valve proper in said chamber, a valve stem having a passage through it communicating with said valve chamber, a packing surrounding and fitting snugly to said valve stem and constituting a valve seat, and said stem carrying a supplemental valve member contacting and making a tight connection with said seat when the valve is open, a cap screwing directly into said casing, said casing and cap having shoulders between which said packing is to be pressed, said cap having a bore with multiple quick acting screw threads, a bushing screw-threaded in said bore, said valve stem passing through said bushing and being held therein against turning relatively thereto, and a handle for said bushing.

1,210,708. WELDLESS BRAKE-ROD. FRANCIS E. SCHWENTLER, St. Louis, Mo., assignor to The American Brake Company, St. Louis, Mo., a Corporation of Missouri. Filed May 12, 1915. Serial No. 27,477. (Cl. 188—24.)



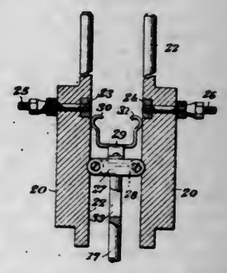
1. A brake rod formed of a uniform rolled metal section comprising two flanges forming side bars, joined by a thin web portion, the web being displaced at the ends to form jaws, said ends having pin holes through the side bars.

2. A brake rod formed of a uniform rolled metal section comprising two flanges forming side bars, joined by a thin web portion, the web being displaced at the ends, and the ends of the side bars being upset to form eye end jaws.

3. A brake rod formed of a uniform rolled metal section comprising two flanges forming side bars, joined by a thin web portion, the web being displaced at the ends, and the ends of the side bars being spread apart to form jaws.

4. A brake rod formed of a uniform rolled metal section comprising two flanges forming side bars, joined by a thin web portion, the web being displaced at the ends to form jaws, and the jaw at one end being twisted at an angle to the jaw at the other end.

1,210,709. SPEED-CONTROLLED ELECTRIC SWITCH. THOMAS W. SCOTT, Baltimore, Md., assignor to The American Train Control Company, Baltimore, Md., a Corporation of Maryland. Filed Apr. 17, 1914. Serial No. 832,441. (Cl. 200—27.)

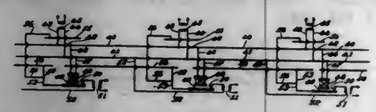


1. In a speed controlled electric switch for railway vehicles the combination with two vertical guide members

spaced with respect to each other and having guide edges of insulating material, of a stem movable vertically between the insulating guide edges; a contact plate embedded in each guide member and having its outer surface flush with the insulating guide edges of the spaced guide members and a contact device carried by and movable vertically with the stem and extending across the space between the guide members said contact device serving to simultaneously make contact with the plates in each guide member.

2. In a speed controlled electric switch for railway vehicles the combination with two vertical guide members spaced with respect to each other and having guide edges of insulating material, of a stem movable vertically between the insulating guide edges; a cross-head carried by the stem and having rollers to engage the spaced guide edges of the guide members; a contact device also carried by the stem and having yielding contact with said guide edges; contact plates embedded in and flush with the guide edges of said members and means for operating the stem.

1,210,710. CONTINUOUS CONTROLLING MECHANISM FOR VEHICLES. THOMAS W. SCOTT, Baltimore, Md., assignor to The American Train Control Company, Baltimore, Md., a Corporation of Maryland. Filed Mar. 23, 1915. Serial No. 16,504. (Cl. 246—58.)



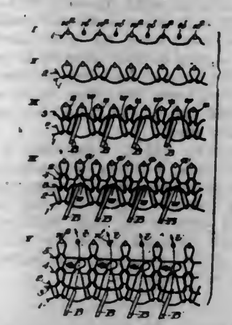
1. In a trackway controlling mechanism for vehicles the combination with the track rails formed into sections that are insulated from each other, of a separate current supply connection for each section; a main ramp rail and a bridging ramp rail both for the same insulated track-rail section,—the bridging ramp of one section extending over into the next insulated section but being electrically disconnected from the ramp rails of said next section, and means for connecting and disconnecting a main and a bridging ramp rail for one insulated track section with a current independently of the main and bridging ramp rails of the other track sections.

2. In a controlling mechanism for vehicles the combination with a vehicle having a controlling device, two contact shoes and means for holding the controlling device in an inoperative position, of track rails formed into sections that are insulated from each other; a separate current supply for each section; a main ramp rail and a bridging ramp rail along the trackway,—together being longer than the insulated section itself, the bridging ramp rail extending from one insulated section over into the next insulated section but electrically disconnected from said next section, and means for connecting and disconnecting a main ramp and a bridging ramp of each section with and from their current supply and independently of other ramp rails.

3. In a controlling mechanism for vehicles the combination with the track rails formed into sections that are insulated from each other, of a separate current supply for each section; a main ramp rail and a bridging ramp rail for each insulated trackway section,—the ramps of one section being disconnected from the ramps of other sections; means for simultaneously connecting and disconnecting one main ramp and one bridging ramp with and from a single source of current supply and independently of all other ramps; a vehicle having two contact shoes one to engage a main ramp and the other to engage a bridging ramp; controlling means on the vehicle including a vehicle current supply, and means controlled by current picked up from the main and bridging ramps for maintaining a connection between the controlling means and vehicle current supply.

4. In a controlling mechanism for vehicles the combination with a vehicle having a controlling device, of a current supply on the vehicle; two contact shoes on the vehicle; a shoe switch for each contact shoe; connections between the vehicle current supply and controlling device and independent of the shoe switches when one shoe is in an actuated position and connections from the current supply to the controlling device and including both shoe switches when both shoes are in the inoperative position.

1,210,711. WELTED KNIT ARTICLE AND METHOD OF KNITTING THE SAME. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Apr. 28, 1916. Serial No. 94,233. (Cl. 66—4.)



1. The method of knitting welted fabrics on a series of needles comprising forming a section of fabric, interknitting a uniting course therewith in recurrent wales only whereby to form bights of yarn at the intervening wales, knitting subsequent fabric continuing said recurrent and intervening wales; casting off the stitches in said intervening wales whereby to render said wales running or releasable wales, and subsequently transferring said bights to the needles.

2. The method of knitting welted fabrics on a series of needles comprising forming a section of fabric, interknitting a uniting course therewith in recurrent wales only whereby to form bights of yarn at the intervening wales, knitting subsequent fabric continuing said recurrent and intervening wales; casting off the stitches in said intervening wales whereby to render said wales running or releasable wales, and subsequently transferring said bights to needles upon which said intervening wales were formed.

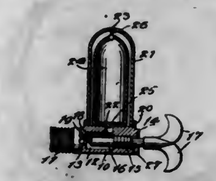
3. The method of knitting welted fabrics on a series of needles comprising forming a section of fabric, interknitting a uniting course therewith in recurrent wales only whereby to form bights of yarn at the intervening wales, knitting subsequent fabric continuing said recurrent and intervening wales; casting off the stitches in said intervening wales whereby to render said wales running or releasable wales, and subsequently transferring said bights to the needles; and thereafter knitting body fabric in continuation of the loops and bights of said uniting course.

4. The method of knitting welted fabrics on a series of needles comprising forming courses for a beginning selvage, interknitting a uniting course therewith in recurrent wales only, whereby to form bights of yarn at the intervening wales, knitting subsequent fabric continuing said recurrent and intervening wales; casting off the stitches in said intervening wales whereby to render said wales running or releasable wales, and subsequently transferring said bights to the needles.

5. The method of knitting welted fabrics on a series of needles comprising forming courses for a beginning selvage, interknitting a uniting course therewith in recurrent wales only, whereby to form bights of yarn at the intervening wales, knitting subsequent fabric continuing said recurrent and intervening wales; casting off the stitches in said intervening wales whereby to render said wales running or releasable wales, and subsequently transferring said bights to the needles; thereafter knitting body fabric in continuation of the loops and bights of said uniting course, and thereafter pulling away the selvage courses.

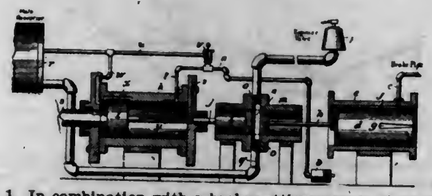
[Claims 6 to 11 not printed in the Gazette.]

1,210,712. ESCAPE-VALVE FOR STEAM-RADIATORS. ZACHARIAH T. SCOTT, Canton, Ill., assignor of one-half to Raymond Rynear Voorhees, Fairview, Ill. Filed Aug. 9, 1915. Serial No. 44,560. (Cl. 137—122.)



In a valve of the character described, a body portion carrying a longitudinal bore, a valve stem adjustably mounted in said bore, a handle to actuate said valve stem, a head at one end of said valve stem, a valve seat at one end of said bore to receive said head, a casing open at its lower end positioned on said body portion, said body provided with an opening communicating with said bore and said casing, one end of said casing being provided with an air vent, a float arranged in said casing, a nipple carried by one end of said float to normally close said opening, a pin carried at the other end of said float to close said air vent at certain times, and a pin arranged transversely in said body portion and coöperating with an enlargement on said valve stem to prevent the entire removal of the latter.

1,210,713. VENT-VALVE FOR TRAIN-STOPS. HIRAM G. SEDGWICK, Mill Valley, Cal., assignor to The National Safety Appliance Company, a Corporation of California. Filed Nov. 22, 1912, Serial No. 732,986. Renewed May 27, 1915. Serial No. 30,863. (Cl. 188—1.)



1. In combination with a brake setting means, of means for operating the same by fluid pressure, consisting of a cylinder, a differential piston working therein and provided with a piston rod which is connected to said brake setting means, a reservoir connected to the opposite ends of said cylinder so as to thereby normally hold the piston at one end of the cylinder, and means for venting the cylinder at the side of dominant pressure, whereby the differential pressure on the piston will be reversed and the piston will be thereby caused to move toward the other end of the cylinder, said venting means consisting of means for preliminarily venting the cylinder to obtain a quick action of the piston and for thereafter slowly venting the cylinder, for the purpose set forth.

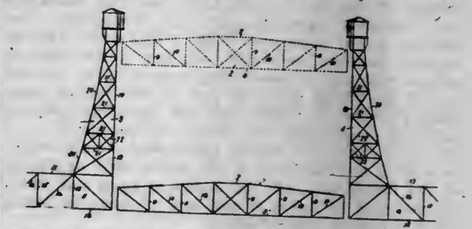
2. In combination with a brake setting means, of means for operating the same by fluid pressure, consisting of a cylinder, a differential piston working therein and provided with a piston rod which is connected to said brake setting means, a reservoir connected to the opposite ends of said cylinder so as to thereby normally hold the piston at one end of the cylinder, and means for venting the cylinder at the side of dominant pressure, whereby the differential pressure on the piston will be reversed and the piston will be thereby caused to move toward the other end of the cylinder, said venting means consisting of means for preliminarily venting the cylinder to obtain a quick action of the piston and for thereafter slowly venting the cylinder, means being provided for cutting off the reservoir pressure from the venting side of the piston by said preliminary quick action of the piston.

1,210,714. PROCESS FOR THE MANUFACTURE OF URANIUM OXID. HARVEY A. SEIL, Pittsburgh, Pa., assignor to Standard Chemical Company, Pittsburgh, Pa. Filed Apr. 20, 1916. Serial No. 92,543. (Cl. 23—13.)

1. The herein described process of manufacturing uranium oxid, consisting in moistening an alkali uranate with dilute sulfuric acid, subjecting the resultant product to heat sufficient to drive off excess acid and then render a product comprising an alkali sulfate and uranium oxid and finally treating this product to separate the alkali sulfate therefrom and recover as a final product, uranium oxid substantially free from alkali metals.

2. The herein described process of manufacturing uranium oxid from alkali uranates, consisting in moistening finely divided alkali uranate with dilute sulfuric acid, subjecting the resultant product to heat sufficient to drive off excess acid and render a product comprising an alkali sulfate and uranium oxid, allowing this product to cool, then crushing the same, then leaching with hot water to separate said sulfate, then successively filtering and washing, and finally recovering, as a final product, uranium oxid substantially free from alkali metals.

1,210,715. OPERATING MECHANISM FOR LIFT-BRIDGES. LOUIS H. SHOEMAKER, Pittsburgh, Pa. Filed Mar. 9, 1916. Serial No. 83,078. (Cl. 14—42.)



1. In a lift bridge, the combination with a vertically moving lifting span, towers at the ends of said lifting span, and a cable operating mechanism adjacent to one end of the lifting span, of a series of sets of lifting cables whereby said span is raised, said lifting cables being secured at one end to said cable operating mechanism and extending upwardly and then downwardly over sheaves on the upper end of the bridge tower adjacent to said operating mechanism, one end of the cables in part of said sets of cables being adjustably secured to the adjacent end of the lifting span and part of said sets of cables leading across the lifting span and extending upwardly and then downwardly over sheaves on the upper end of the other of the two towers, and having one end thereof adjustably secured to the other end of the lifting span, and a series of sheaves rotatably mounted on the lifting span and the towers to guide and change the direction of travel of said sets of cables in raising and lowering the lifting span.

2. In a lift bridge, the combination with a vertically moving lifting span, towers at the ends of said lifting span, and a cable operating mechanism adjacent to one end of the lifting span, of a series of sets of lifting cables whereby said span is raised, a series of sets of lowering cables whereby said span is positively moved into lowered position, said lifting cables being secured at one end to said cable operating mechanism and extending upwardly and then downwardly over sheaves on the upper end of the bridge tower adjacent to said operating mechanism, one end of the cables in part of said sets of cables being

adjustably secured to the adjacent end of the lifting span and part of said sets of cables leading across the lifting span and extending upwardly and then downwardly over sheaves on the upper end of the other of the two towers, said part of the sets of cables having one end thereof adjustably secured to the other end of the lifting span, and a series of sheaves rotatably mounted on the lifting span and towers to guide and change the direction of travel of said sets of cables in raising and lowering the lifting span.

3. In a lift bridge, the combination with a vertically moving lifting span, towers at the ends of said lifting span, and a cable operating mechanism adjacent to one end of said lifting span, of a series of sets of cables whereby said lifting span is raised and lowered, said cables being secured at one end to the cable operating mechanism and at least part thereof extending upwardly and then downwardly over rotatable sheaves on the upper end of the bridge tower adjacent to said operating mechanism, one end of the cables in part of said sets of cables being secured to the adjacent end of the lifting bridge span with at least part of said sets of cables leading across the lifting bridge span and extending upwardly and then downwardly over sheaves on the upper end of the other of the two towers, and having one end thereof secured to the other end of the lifting bridge span, a series of sheaves rotatably mounted on the lifting span and the towers to guide and change the direction of travel of said sets of cables in raising and lowering the lifting span, and counter-weighted levers pivoted on said tower and having sheaves rotatably mounted thereon adapted to engage the cables and equalize the tension thereof.

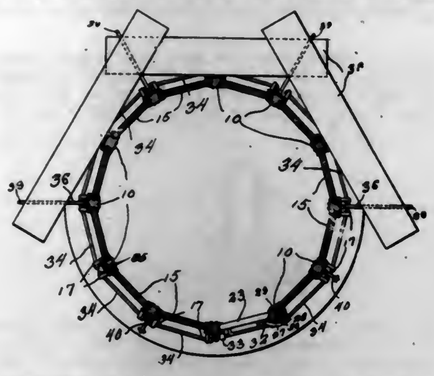
4. In a lift bridge, the combination with a vertically moving lifting span, towers at the ends of said lifting span, and a cable operating mechanism adjacent to one end of the lifting span, of a series of sets of lifting cables whereby said span is raised, said lifting cables being secured at one end to said cable operating mechanism and extending upwardly and then downwardly over sheaves on the upper end of the bridge tower adjacent to said operating mechanism, one end of the cables in part of said sets of cables being secured to the adjacent end of the lifting span and part of said sets of cables leading across the lifting span and extending upwardly and then downwardly over sheaves on the upper end of the other of the two towers, and having one end thereof secured to the other end of the lifting span, and means on the lifting span and towers to guide and change the direction of travel of said sets of cables in raising and lowering the lifting span.

5. In a lift bridge, the combinaation with a vertically moving lifting span, towers at the ends of said lifting span, and a cable operating mechanism adjacent to one end of the lifting span, of a series of sets of lifting cables whereby said span is raised, a series of sets of lowering cebles whereby said span is positively moved into lowered position, said lifting cables being secured at one end to said cable operating mechanism and extending upwardly and then downwardly over sheaves on the upper end of the bridge adjacent to said operating mechanism, one end of the cables in part of said sets of cables being secured to the adjacent end of the lifting span and part of said sets of cables leading across the lifting span and extending upwardly and then downwardly over sheaves on the upper end of the other of the towers, said part of the sets of cables having one end thereof secured to the other end of the lifting span, and means on the lifting span and towers to guide and change the direction of travel of said sets of cables in raising and lowering the lifting span.

[Claim 6 not printed in the Gazette.]

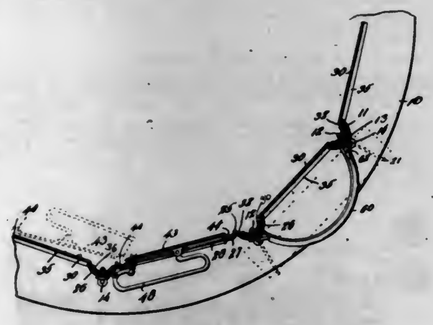
1,210,716. SILO CONSTRUCTION. CLYDE H. SNOW, Sr., Mason, Mich. Filed Nov. 18, 1914. Serial No. 872,767. (Cl. 217—4.)

A silo made up of vertical rib sections which have longitudinal grooves upon the opposite edges, concaved plates seated in said grooves and projecting beyond the ends of said ribs, the outer faces of the ribs being convexed and wider than the inner facess thereof, convexed plates secured to the outer convexed faces of said ribs, lugs projecting from the opposite edges of said convexed plates and having transverse apertures therein, rods pass-



ing through said apertures, nuts upon the rods and bearing against the lugs, superimposed panel sections having convexed ends engaging the concaved plates in said grooves, and a roof fitted over the uppermost of said panels and ribs.

1,210,717. METAL SILO. CLYDE H. SNOW, Sr., Onondaga, Mich. Filed Apr. 7, 1916. Serial No. 89,616. (Cl. 189—3.)

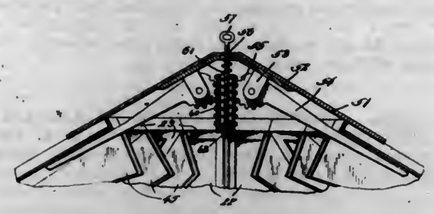


1. A structure of the character described comprising a series of uprights two adjacent ones serving as door frame elements means to fix the last named elements in a predetermined relation, a closure for the space between said frame elements, and vertically superposed series of panel elements between each other two adjacent uprights having curved side portions, the side portions of horizontal adjacent panels being overlapped for slidable adjustment to vary the angular relation of the panels, and means to secure the panels in adjusted positions and to the uprights.

2. A circular wall construction comprising uprights having curved faces, fastening elements thereon at intervals, panel sections comprising planiform body portions and vertical curved edge portions shaped to fit snugly in overlapped relation against the uprights, and having slots transversely thereof, and alined with said fastening elements, and means coöperating with the fastening elements to secure the panel sections in assembled relation.

1,210,718. ROOF AND CAP FOR SILOS. CLYDE H. SNOW, Sr., Aurelius, Mich. Filed May 16, 1916. Serial No. 97,978. (Cl. 20—1.41.)

1. A roof of the character described comprising a multiplicity of sections constructed and mounted for movement from open position into closed snugly abutting position in a relation to form a circular roof having an opening centrally thereof, a cap constructed to fit over the opening, means on the cap movable to engage the under side of the roof, means tending to operate the said means on the cap, including a manually operable element exteriorly of the cap.



2. A roof of the character described comprising a plurality of sections constructed and mounted for movement from open positions into a snugly abutting position in a relation to form a circular-outlined roof and provided with a central opening at the upper end thereof, a conical-shaped cap fitting over said opening, levers carried by said cap and having teeth upon corresponding ends thereof, said levers designed for engagement underneath the roof, a rack member having teeth engaged by the teeth upon said levers, and a plunger extending through said cap and adapted to raise said rack member.

3. A roof of the character described comprising a plurality of sections constructed and mounted for movement from open positions into a snugly abutting position in a relation to form a circular-outlined roof and provided with a central opening at the upper end thereof, a conical-shaped cap fitted over said opening, a similar shaped reinforcing plate secured to the under surface of said cap and having an aperture in registration with the aperture in the cap and provided with ears projecting therefrom, levers pivoted to said ears and having shank portions extending underneath the roof, teeth upon corresponding ends of said levers, a hollow rack member in mesh with said teeth, a plunger movable through registering openings in said plate and cap and extending through an aperture in the bottom of the rack member, a head upon the lower end of said plunger and bearing against the bottom of the latter, a spring upon the plunger and interposed between said cap and bottom of the rack member.

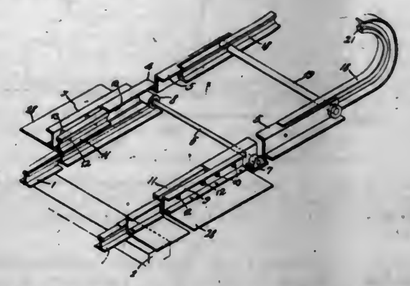
4. An extensible and collapsible roof comprising support elements constructed for engagement upon the upper edge of a wall, and including projecting fixed eave supports, and a multiplicity of roof sections pivoted on the supports, having a base edge portion disposed closely over the line of the wall, and separate stationary eave elements carried by the supports, and having a terminal inner portion located inwardly of the said base edge portions of the roof sections.

1,210,719. PORTABLE EXTENSION-TIPPLE. WILLIAM E. SPERRY, Raton, N. Mex. Filed Feb. 12, 1916. Serial No. 77,934. (Cl. 214—9.)

1. A dumping device embodying a pair of Z-shaped rails having upper inwardly projecting and lower outwardly projecting flanges, members secured to the webs of said rails and projecting beyond certain ends thereof, inclined rails attached to said members and alining with the upper inwardly projecting flanges of said rails, and wheels carried by the first mentioned rails to run upon a track.

2. A dumping device embodying a pair of Z-shaped rails having upper inwardly projecting and lower outwardly projecting flanges, members secured to the webs of said rails and projecting beyond certain ends thereof, inclined rails attached to said members and alining with the upper inwardly projecting flanges of said rails, wheels carried by the first mentioned rails to run upon a track, a tipple carried by the first mentioned rails remote from the inclined rails, and outstanding plates attached to said members for supporting ballast.

3. A dumping device embodying a pair of rails having upper inwardly projecting flanges to overlie the rails of a track, wheels carried by the first mentioned rails upon the inner sides thereof below said flanges to run upon the rails of the track, a rocking tipple carried by certain ends of the first mentioned rails, and inclined rails carried by the other ends thereof, said inclined rails extending to said flanges.



4. A dumping device embodying a pair of Z-shaped rails having upper inwardly projecting and lower outwardly projecting flanges, bearings secured upon the lower outwardly projecting flanges, transverse axles mounted in said bearings, wheels mounted upon said axles upon the inner sides of said rails below the upper inwardly projecting flanges, and inclined rails carried by certain ends of the aforesaid rails and extending to the upper inwardly projecting flanges thereof.

1,210,720. SURGICAL COTTON-POINT. EDITH WHITELAW STEPHAN, Cleveland, Ohio. Filed Sept. 30, 1914. Serial No. 864,259. (Cl. 128—28.)



1. A new article of manufacture comprising an elongated substantially projectile shaped surgical cotton point of sufficient stiffness to be used without a handle and composed of a plurality of superposed layers of thin flakes of cotton with the fibers intermeshing and compacted.

2. The method of forming an elongated projectile shaped cotton point of sufficient stiffness to be used without a handle, which comprises wrapping or winding about a spindle, loose cotton in the form of thin membranes or flakes and pressing the cotton toward the spindle and lengthwise thereof.

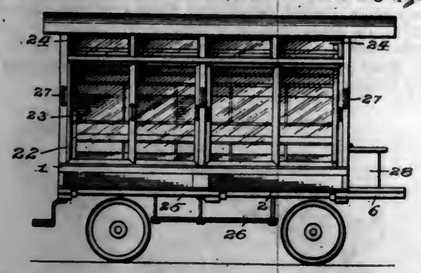
3. The method of forming an elongated projectile shaped surgical cotton point which comprises feeding a plurality of thin flakes of loose cotton upon a rotating spindle so that they will be wound thereon and pressing the flakes toward the spindle and lengthwise thereof so as to cause the fibers to intermesh and be compacted and to cause the body thus formed to assume the elongated shape and to have sufficient stiffness to be used without a handle.

1,210,721. HUCKSTER-WAGON. GEORGE J. STINZING, Port Chester, N. Y. Filed Apr. 14, 1913. Serial No. 91,129. (Cl. 21—7.)

1. In a huckster wagon, a body having side and end walls, one of said end walls being formed in two sections, said sections being hinged at their outer edges to the side walls, said sections having cut away portions at their meeting edges to form an opening, a door slidably mounted on one of said end sections adapted to close said opening, means to hold said end sections in closed position and a pair of frames removably mounted in said body, said frames having a passage therebetween in registration with said door opening.

2. In a huckster wagon, a body having side and end walls, one end wall being formed in two sections, said

sections being hinged to the side walls, laterally movable transparent sections in said side walls, a pair of frames removably mounted in said body, said frames being spaced



apart to form a passage, inclined compartments in said frames arranged in tiers, and racks formed at the top of said frames and above said tiers of compartments.

1,210,722. METHOD OF COATING CONDENSERS. MORTON SULTZER, Brooklyn, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed June 24, 1916. Serial No. 105,681. (Cl. 91—70.)

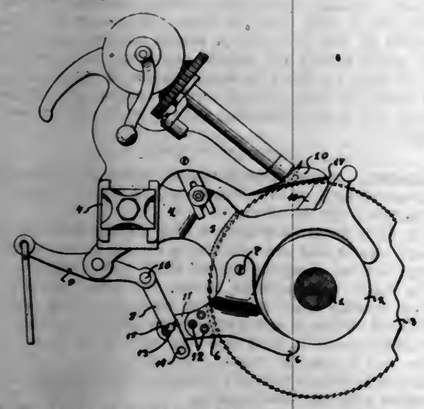
1. The method of coating with a high melting point compound, electrical apparatus containing a low melting point compound, which consists in precooling the apparatus and dipping it in and quickly removing it from the molten compound of high melting point.

2. The method of coating with a high melting point compound, electrical apparatus containing a low melting point compound, which consists in precooling the apparatus and dipping it in and so quickly removing it from the molten compound that the low melting point compound is not permanently affected.

3. The method of coating with a high melting point compound, a condenser impregnated with a low melting point compound, which consists in precooling the apparatus and dipping it in and so quickly removing it from the molten compound that the low melting point compound is not permanently affected.

4. The method of coating with a high melting point compound, a condenser impregnated with paraffin, which consists in precooling the condenser and dipping it in and so quickly removing it from the high melting point compound that the paraffin is not raised to a dangerous temperature.

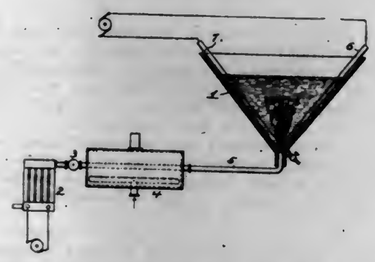
1,210,723. GIN-SAW-GUMMING MACHINE. JAMES E. TAYLOR, McKinney, Tex. Filed Mar. 19, 1915, Serial No. 15,442. Renewed May 26, 1916. Serial No. 100,156. (Cl. 76—37.)



1. In a saw gumming machine, the combination of a fixed and a movable clamping jaw, and a pivotal connection between said jaws, with a lever and link for operating the movable jaw said link being adjustably and pivotally connected with said movable jaw.

2. In a saw gumming machine, a main frame, a spanner carried by said frame and having its under spanning face notched, a fixed clamping jaw projecting from the main frame, a movable clamping jaw pivotally supported by said fixed jaw, an arm and pin projecting from the movable jaw, a link having a series of openings arranged to receive the pin on said arm, and a lever pivotally connected with one end of said link.

1,210,724. METHOD OF RECOVERING VALUABLE CONSTITUENTS OF ORES. HERMANN G. C. THOFEHRN, Pittsburgh, Pa. Filed Mar. 3, 1915. Serial No. 11,884. (Cl. 75—18.)



1. The herein described method, consisting in discharging pentoxid of nitrogen gas into an aqueous mixture of comminuted ore.

2. The herein described method consisting in setting up an electrical field between electrodes in an aqueous mixture of comminuted ore, and discharging nitrogen pentoxid gas into the aqueous mixture in the electrical field therein.

3. The herein described method, consisting in injecting into an aqueous mixture of comminuted ore, nitrogen pentoxid mixed with air under pressure.

4. The herein described method, consisting in injecting into an aqueous mixture of comminuted ore, nitrogen pentoxid gas, and subjecting said gas to pressure and utilizing said pressure to maintain a mechanical circulation and agitation of said mixture.

5. The herein described method, consisting in injecting a nitrogen pentoxid gas into an aqueous mixture of comminuted ore and causing all particles of said mixture to pass progressively through the zone of the reaction between said gas and the water of the mixture.

[Claims 6 to 9 not printed in the Gazette.]

1,210,725. SULFONATION OF HYDROCARBONS. DANIEL TYRER, Stockton, England. Filed May 22, 1916. Serial No. 99,252. (Cl. 23—24.)

1. A process of sulfonating hydrocarbons which boil at temperatures below 200° C., which process consists in heating the hydrocarbon with sulfuric acid and removing from the mass, while the reaction is proceeding, the water eliminated by the reaction.

2. A process of sulfonating hydrocarbons which boil at temperatures below 200° C., which process consists in passing the vapor of the hydrocarbon through sulfuric acid heated to a temperature exceeding 100° C.

3. A process of sulfonating benzene, which process consists in passing vapor of benzene through sulfuric acid heated to a temperature exceeding 100° C.

4. A process of sulfonating benzene to monosulfonic acid, which process consists in passing vapor of benzene through sulfuric acid heated to a temperature exceeding 100° C.

5. A process of sulfonating benzene to monosulfonic acid which process consists in heating strong sulfuric acid to about 100° C., and passing benzene vapor through the heated acid while the temperature of the latter is gradually raised to about 185° C., and maintained thereat until benzene vapor ceases to be absorbed.

[Claims 6 to 8 not printed in the Gazette.]

1,210,726. MANUFACTURE OF PHENOL. DANIEL TYRER, Stockton, England. Filed May 22, 1916. Serial No. 99,253. (Cl. 23—24.)

1. In a process of making phenol from benzenemonosulfonic acid, the step which consists in treating calcium benzenesulfonate with normal sodium sulfate to obtain sodium benzenesulfonate.

2. In a process of making phenol from benzenemonosulfonic acid the steps which consist in making normal sodium sulfate by treating a mixture of calcium carbonate and calcium sulfite with sodium bisulfate and in treating with the normal sodium sulfate thus obtained calcium benzenesulfonate so as to obtain sodium benzenesulfonate.

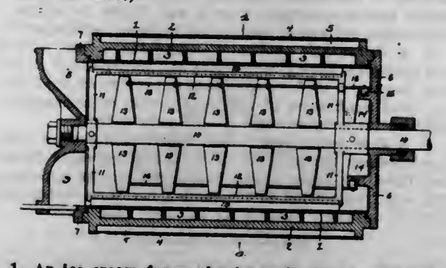
3. In a process of making phenol from benzenemonosulfonic acid the steps which consist in making normal sodium sulfate by treating calcium carbonate with sodium bisulfate and in treating with the normal sodium sulfate thus obtained calcium benzenesulfonate so as to obtain sodium benzenesulfonate.

4. In a process of making phenol from benzenemonosulfonic acid the combination of steps consisting in fusing a benzene monosulfonate with caustic soda, treating the melt with carbon dioxid, causticizing with lime the mixture of sodium carbonate and sulfite thus produced and treating with sodium bisulfate the mixture containing calcium carbonate and sulfite made by the causticizing.

5. In a process of making phenol from benzenemonosulfonic acid, the combination of steps consisting in treating with sodium bisulfate a mixture containing calcium carbonate and sulfite so as to obtain acid gases and normal sodium sulfate, passing the said acid gases through a solution of a melt made by fusing sodium benzenesulfonate with caustic soda, so as to obtain a solution of sodium carbonate and sulfite, treating calcium benzenesulfonate with the said normal sodium sulfate so as to obtain sodium benzenesulfonate, and causticizing with lime the said solution of sodium carbonate and sulfite so as to obtain caustic soda and a mixture containing calcium carbonate and calcium sulfite.

[Claims 6 to 9 not printed in the Gazette.]

1,210,727. ICE-CREAM FREEZER. FRANK TYSON, Canton, Ohio. Filed Mar. 23, 1915. Serial No. 16,383. (Cl. 259—109.)



1. An ice cream freezer having a freezing vessel and a pivoted beater blade therein, one rotatable in respect to the other, with means for automatically effecting a reversal in the angular position of said beater blade on each rotation of the rotating element of the freezer.

2. An ice-cream freezer having a freezing vessel and a pivoted row of beater blades therein, one of said elements being rotatable in respect to the other, and automatic means whereby, during each rotation of the rotatable element, reversal in the angular position of each of the beater blades of the row will be effected.

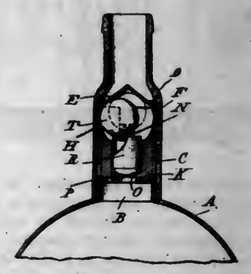
3. An ice cream freezer having a freezing vessel and a dasher therein, one rotatable in respect to the other, said dasher having longitudinal bars, pivotally mounted blades and automatic means whereby during the aforesaid rotative movement said beater blades will be caused to swing upon their axes.

4. An ice cream freezer having a freezing vessel and a dasher, one rotatable in respect to the other, and said dasher having longitudinal bars, with beater blades pivotally mounted in said longitudinal bars, and automatic means whereby, during the rotative movement, said beater blades are caused to swing upon their pivots.

5. An ice cream freezer having a freezing vessel and a dasher, one rotatable in respect to the other, said dasher having a central shaft, longitudinal bars, and swinging beaters pivotally mounted between the two, and automatic means whereby, during the aforesaid rotative movement, said blades are caused to swing upon their pivots.

[Claims 6 and 7 not printed in the Gazette.]

1,210,728. NON-REFILLABLE BOTTLE. JOHN C. UHLEIN, Watertown, N. Y. Filed Jan. 21, 1916. Serial No. 73,382. (Cl. 215—62.)



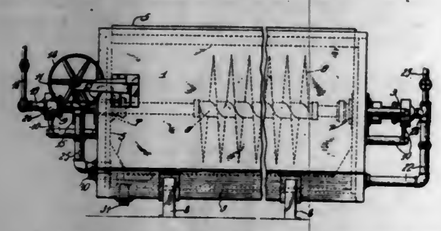
1. A non-refillable bottle having a neck with a shell therein, provided with a central aperture, the marginal edge of which forms a valve seat, said shell having arms projecting therefrom which are spaced apart and their opposite faces tapering, the upper end of each arm concaved, a hollow valve with a semi-spherical end adapted to seat on the marginal edge of the opening in the shell, a gravity valve-closing ball and a conical-shaped ball retaining member fitted within the neck and provided with arms which are concaved upon their inner faces and designed to cooperate with the curved portions of said arms upon the shell to cause the valve to be seated when the bottle is in an upright or horizontal position, a portion of the inner surface of the neck having a shoulder against which the legs of the ball retaining member are adapted to contact to retain the same within the neck.

2. In combination with a bottle having a stub neck, circumferentially threaded, a neck interiorly threaded and engaging said stub neck and shouldered upon its inner surface, an apertured washer resting upon the upper end of said stub neck, a shell resting upon said washer and provided with a central opening, said shell having legs projecting from its upper surface and spaced apart, said legs provided with inclined sides and their upper portions concaved, the upper end of each leg being notched, a conical-shaped ball retaining member provided with downwardly extending arms spaced apart and each terminating in a contracted portion adapted to rest in said notches, a hollow valve with a semi-spherical end designed to seat upon the marginal edge of the opening in said shell, and a weighted member confined between the valve and said conical-shaped member and normally holding the valve seated.

3. In combination with a bottle having a stub neck, circumferentially threaded, a neck interiorly threaded and engaging said stub neck and shouldered upon its inner surface, an apertured washer resting upon the upper end of said stub neck, a shell resting upon said washer and provided with a central opening, said shell having legs projecting from its upper surface and spaced apart, said legs provided with inclined sides and their upper portions concaved, the upper end of each leg being notched, a conical-shaped ball retaining member provided with down-

wardly extending arms which are spaced apart and provided with contracted ends engaging said notches, the upper ends of the arms upon said ball retaining member adapted to bear against the shoulder inside the neck, the inner face of each arm concaved, a hollow valve with its lower end semispherical-shaped and normally resting upon the marginal edge of the opening in the shell, and a ball guided by the concaved portions of said arms upon the shell toward the top of the outer end of the valve, said ball having a limited movement intermediate the valve and the conical-shaped end of said member.

1,210,729. APPARATUS FOR TREATING MILK OR CREAM. THEODORE L. VALERIUS, Fort Atkinson, Wis., assignor to Creamery Package Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 14, 1911. Serial No. 620,987. (Cl. 257—10.)



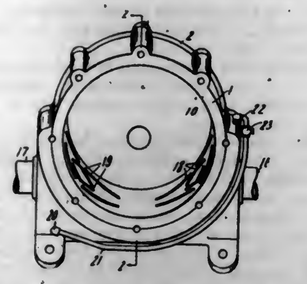
1. In a machine of the class described, the combination of a horizontally arranged vat containing a milk chamber and a water jacket for the bottom of said chamber, a hollow spiral tempering member mounted within said milk chamber for rotation on a horizontal axis, pipes connecting the opposite ends of said spiral member with the adjacent ends of said water jacket, a steam supply pipe and a water pipe communicating with the first mentioned pipes at one end of the machine, said steam pipe being adapted to inject a jet of steam into the other pipes to heat the water and cause a circulation thereof from end to end through the spiral member in one direction and through the pipes at one end of the machine, thence from end to end of said water jacket in the opposite direction and through the pipes at the opposite end of the machine.

2. In combination, a bank of batch pasteurizers each comprising a vat having therein a rotary spiral tempering member, means for supplying heating fluid to said tempering member, a supply pipe having branches arranged to convey milk to all of said pasteurizers, a continuous cooler, a pipe discharging into said cooler and having inlet branches connected with the discharge from the respective pasteurizers, and means whereby said pasteurizers may be maintained in different successive stages of operation with relation to each other for the purpose described.

3. In combination, a bank of batch pasteurizers each comprising a vat having therein a rotary spiral tempering member, means for supplying heating fluid to said tempering member, a supply pipe having branches arranged to convey milk to all of said pasteurizers, a continuous cooler, a pipe discharging into said cooler and having inlet branches connected with the discharge from the respective pasteurizers, each of the latter being constructed to independently perform the heating and holding operation, and means whereby said pasteurizers may be maintained in different successive stages of operation with relation to each other for the purpose described.

1,210,730. COMPRESSION AND SUCTION DEVICE. JAMES B. VERNON, Pittsburgh, Pa. Filed Dec. 29, 1913. Serial No. 809,381. (Cl. 230—30.)

1. A machine of the character described, comprising a casing provided with a chamber, a rotor eccentrically located in said chamber, piston blades movably mounted in said rotor and held with their free edges in contact with the walls of said chamber, the side wall of the casing being provided with induction and eduction ports, each of said ports comprising a plurality of elongated slots inclined to a plane normal to the rotor axis and converging in both directions circumferentially of the casing toward the ends of said ports.



2. A machine of the character described, comprising a casing provided with a pump chamber and side induction and eduction chambers, and a wall separating said pump chamber from said side chambers, a rotor eccentrically located in said pump chamber, piston blades movably mounted in said rotor and held with their free edges in contact with the wall of said pump chamber, said separating wall being provided with induction and eduction ports each comprising a plurality of elongated slots or openings lying at an incline to a plane normal to the rotor axis, some of said slots diverging from and others converging toward each other circumferentially of the casing, said ports extending from end to end of the induction and eduction chambers and being wider intermediate the ends than at the end thereof.

1,210,731. THERAPEUTIC APPLICATOR. CHARLES H. VIOL, Pittsburgh, Pa., assignor to Standard Chemical Company, Pittsburgh, Pa. Filed Jan. 13, 1916. Serial No. 71,915. (Cl. 167—9.)



1. A therapeutic applicator for local application, comprising a non-porous vitreous substance having radioactive salt incorporated therein and fused, to provide a radioactive surface of substantial uniform radio-intensity.

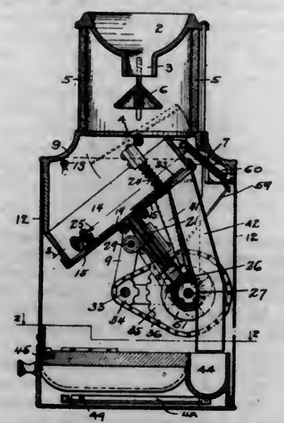
2. A therapeutic applicator comprising a base, a vitreous substance having radioactive salt incorporated therein and fused in a layer to said base to provide an applicator for local application of radioactive rays of substantially uniform intensity throughout the area thereof.

3. A therapeutic applicator comprising a base, a vitreous substance having a salt of radium incorporated therein and fused in a layer to said base to provide an applicator for local application of radioactive rays of substantially uniform intensity throughout the area thereof.

1,210,732. COIN SEPARATOR AND COUNTER. CLYDE C. VOGLESONG, Oakland, Cal., assignor to American Coin Register Company, a Corporation of California. Filed Nov. 6, 1913. Serial No. 799,508. (Cl. 235—32.)

1. In a coin separator and counter, a chute adapted to receive coins of one denomination, a wheel provided with radially disposed pockets mounted on a horizontal axis below said chute and adapted to receive the coins edgewise therefrom, said wheel being provided with an annular groove intersecting said pockets, and a guide attached to the chute and extending into said groove.

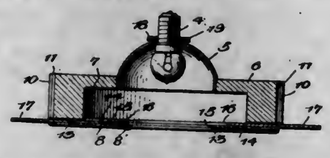
2. In a coin separator and counter, a chute adapted to receive coins of one denomination, a rotatable wheel provided with radially disposed coin receiving pockets arranged below said chute, said wheel being provided with an annular groove intersecting said pockets, a lever arranged in said groove adapted to be engaged by a coin in one of said pockets, a counter connected to said lever, and a guard plate overlying said wheel.



3. In a coin separator and counter, mechanism for segregating and counting the various sized coins, a gear wheel for driving said mechanism, a slidable drawer into which the coins are deposited, a toothed bar pivotally arranged adjacent said gear wheel and adapted to be moved into mesh therewith, a spring tending to move said bar into mesh with said gear and means on said drawer for moving said bar out of mesh with said gear when the drawer is completely shut.

4. In a coin separator and counter, a chute adapted to receive coins of one denomination and to discharge them edgewise therefrom, a wheel mounted on a horizontal axis arranged below said chute and provided with a pocket adapted to receive coins edgewise from said chute and means for rotating said wheel, the leading wall of said pocket in the direction of the rotation of the wheel being curved outwardly and forwardly in said direction of rotation, so that a pocket of gradually increasing depth is brought under the chute as the wheel rotates.

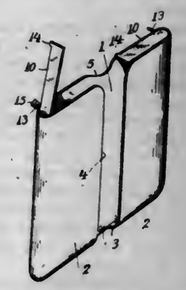
1,210,733. EGG-TESTER. CLAYTON VON CULIN, New York, N. Y., assignor of one-half to George Watson Beach, Saybrook, Conn. Filed July 12, 1915. Serial No. 39,867. (Cl. 99—6.)



1. An egg tester comprising a casing having in its front an egg receiving opening, a source of light in said casing in permanent alinement with the axis of said opening, and a pair of oppositely moving slides adjacent the rear side of said front of the casing, each of said slides having an opening, which openings are adapted for total or partial registration with each other and with said opening in the casing, whereby the active area of the latter may be varied to permit eggs of different sizes to be tested and to always aline the eggs with the source of light.

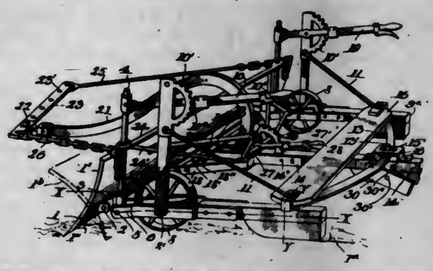
2. An egg tester comprising a rectangular block having in its front face a recess and having at substantially the center of said recess a source of light, a pair of flat rectangular overlapped slides extending over said recess in sliding engagement with the front face of the block, the outer upright edges of said slides having integral operating tabs projecting beyond the edges of the block while the upper and lower edges of said slides are disposed substantially flush with the corresponding edges of the block, a rectangular front plate in front of the slides and equipped with rearwardly extending flanges secured to the edges of the block, certain of said flanges extending above and below the aforesaid tabs, said plate having an egg receiving opening whose axis is permanently alined with the source of light, and said slides having openings for total or partial registration with each other and with the aforesaid opening to permit eggs of different sizes to be tested and to always aline said eggs with the source of light.

1,210,734. POCKET-LINING. ANDREW WALKER, Somerville, Mass., assignor to Margaret N. Ross, Boston, Mass. Filed Jan. 19, 1915. Serial No. 3,055. (Cl. 206—33.)



A pocket lining composed of a comparatively inflexible material and comprising a back, front, bottom and ends, the top being entirely open to form a mouth, and the front having a vertical slot extending from the bottom to the top midway of the ends, and two lids closing all but the central part of the open mouth, each lid having an ear at one end and a lug at the other end, and each ear having a pointed screw passing through it and the back, and each screw having a nut for fastening the pocket lining in place.

1,210,735. ROAD DRAG, GRADER, AND SCRAPER COMBINED. WALTER S. WALKER, Helena, Mo. Filed July 31, 1914. Serial No. 854,416. (Cl. 37—5.)



1. In a road drag, grader and scraper, combined, a blade adapted to scrape earth from and along the surface of said road; two outer runners and a central runner the rear ends of which are adapted to be dragged upon said surface; pivotal connecting means whereby said blade is pivotally connected with said outer runners for adjustment of their angle to each other in a horizontal plane; a pair of bounds for said central runner; pivotal connecting means whereby said bounds and central runner are connected for similar adjustment of the same; bound connecting means whereby the front ends of said bounds are connected with said blade; a draft beam the rear end of which is secured in the front end portion of said central runner; securing means whereby said central runner is secured in its said adjustments, rod and chain auxiliary

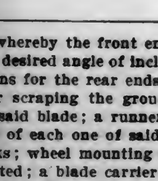
securing means whereby the front end of said draft beam is secured at any desired angle of inclination to said blade; and spacing means for the rear ends of said runners.

2. A blade for scraping the ground; an outer runner for each end of said blade; a runner fork rigidly secured on the front end of each one of said runners; a wheel in each of said forks; wheel mounting means on which said wheels are mounted; a blade carrier for each end of said blade the rear ends of said carriers being rotatably mounted on said wheel mounting means; a standard for each of said carriers the lower ends of which are pivotally connected with the front ends of said carriers; universal jointing means whereby the ends of said blade are universally jointed to the lower end portions of said standards; an upright rigidly secured on each one of said outer runners; lifting means on the upper ends of each of said uprights; and securing means for said lifting means whereby the same is detachably secured in various adjusted positions.

3. A scraper blade; a pair of outer runners; a central runner a pair of hounds for the front end of said central runner; a standard for each of said outer runners; a brace rod having its ends rotatably mounted on the central portions of said standards; hound braces whereby the same are rigidly connected with said brace rod; hound connecting means whereby the front ends of said hounds are pivotally connected with said blade; universal jointing means whereby said blade is universally jointed to said standards; blade oscillating means mounted on said hounds whereby said blade is oscillated; and holding means whereby said oscillating means is detachably held for tilting and detachably holding said blade at various angles of inclination to the ground.

4. A blade adapted to scrape the surface of the ground; a pair of outer runners; lifting means on the forward ends of said outer runners for lifting said blade; universal jointing means whereby said blade is universally jointed on the lower portions of said lifting means; a space bar; a foot board the ends of which rest upon the ends of said space bar; pivotal securing means whereby the ends of said bar and board are pivotally secured on the rear ends of said runners; a pair of hounds; hound connecting means whereby the front ends of said hounds are pivotally connected with said blade; a central runner extending backward from said hounds and being pivotally connected therewith; and guiding means whereby the rear end of said central runner is slidably guided at a point beneath said space bar.

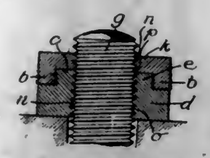
1,210,736. NUT-LOCK. DAVID T. WALLACE, Chicago, Ill., assignor of one-third to Frank M. Hood, Park Ridge, Ill. Filed Dec. 12, 1910. Serial No. 596,783. (Cl. 151—3.)



1. A device of the kind described comprising a threaded bolt having a slot extending longitudinally thereof and a nut of substantially uniform thickness and having a substantially flat bearing face coöperating with said bolt, in combination with means adapted to coöperate with the bearing face of said nut and provided with a part extending into said slot and through said nut with its free end of greater width and formed with a plurality of arms each adapted to bend over and engage an angular side at the periphery of said nut.

2. A device of the kind described, comprising a threaded bolt having a slot extending longitudinally thereof and a nut of substantially uniform thickness and having a substantially flat bearing face coöperating with said bolt, in combination with a washer having a tongue extending into said slot and through said nut, a forked part at the free end of said tongue adapted to bend over and engage the adjacent angular sides at the periphery of the nut.

1,210,737. LOCK-NUT. DANIEL O. WARD, Oak Park, Ill.; Nellie Lee Ward administratrix of said Daniel O. Ward, deceased. Filed May 27, 1912. Serial No. 699,863. (Cl. 151—21.)



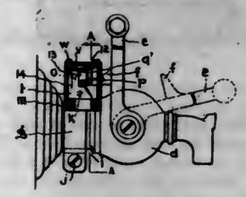
1. A lock nut comprising a recessed perforated member and a ribbed perforated member in binding engagement with each other, the perforated portions of said members being threaded and disposed in such relation to each other as to form a bolt-receiving aperture having circular offset threaded wall portions provided with offset thread portions.

2. A lock nut comprising a recessed member, provided with a threaded perforation, and a ribbed member provided with a threaded perforation and having a rib portion extending into said recess and in rigid engagement with the recessed member, said perforations being so disposed with relation to each other as to form offset threaded wall portions having thread portions in offset relation to each other at the point of engagement between the grooved member and ribbed member.

3. A lock nut comprising a recessed member and a ribbed member having a rib portion of greater width at its marginal edges than at its base extending into said recess and in dovetailed engagement with the recessed member, said recessed and ribbed members being provided with threaded perforations in offset relation to each other and forming a bolt-receiving aperture through the nut having offset threaded wall portions adapted to engage and lock the nut upon a bolt.

4. A lock nut comprising in its construction a recessed member and a ribbed member, having a rib portion extending into said recess and in rigid engagement with the recessed member, said members being provided with threaded perforations offset with relation to each other and in perpendicular relation to the inner engaging surfaces of said members and forming a bolt-receiving aperture through the nut having offset threaded wall portions adapted to engage and lock the nut in position upon a bolt.

1,210,738. INDICATOR FOR FAUCETS. JOSEPH E. WARD, Hanover, N. J., assignor of one-half to Williston Alvord Olmstead, Fort Salonga, Long Island, N. Y. Filed June 15, 1914. Serial No. 845,324. (Cl. 200—27.)



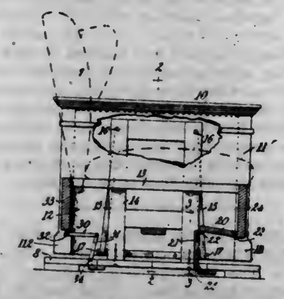
1. A bar fitting consisting of a faucet; means clamped upon the faucet and having mounted thereon a pair of circuit terminal contacts; a handle having a lug; and means acted upon by the lug whereby when the faucet is in one position the circuit is broken and when in another position the circuit is closed.

2. A bar fitting consisting of a faucet; means clamped upon the faucet and having mounted thereon a pair of circuit terminal contacts; a handle having a lug; and a member acted upon by the lug whereby, when the faucet is opened the circuit is closed.

3. A bar fitting consisting of a pair of clamping members having registering blocks forming integral parts thereof one of such blocks having a recess, a block of insulation secured to the other of the said first mentioned blocks, a fixed and a movable contact both carried by the block of insulation such movable contact being of resilient nature and extending across the fixed contact, a member adapted to have one end in bearing relation with the movable contact and its opposite end extending into the recess of the other block of the said pair, an insulating cap inclosing the contacts and secured to the said first mentioned blocks, a faucet having an operating handle with an integral part of wedge form, and means securing said clamping members upon the faucet in position to have the said integral part of the handle enter the said recess and operate the lever.

4. A bar fitting consisting of a pair of clamping members having registering blocks forming integral parts thereof one of such blocks having a recess, a block of insulation secured to the other of the said first mentioned blocks, a fixed and a movable contact both carried by the block of insulation such movable contact being of resilient nature and extending across the fixed contact, a plunger slidably mounted in one of the blocks of said pair and extending through the block of insulation into operative engagement with the resilient contact, the opposite end of such plunger extending into the recess of the other block of the said pair, an insulating cap inclosing the contacts and secured to the said first mentioned blocks, a faucet having an operating handle with an integral part of wedge form, and means securing said clamping members upon the faucet in position to have the said integral part of the handle enter the said recess and displace the plunger.

1,210,739. OSCILLATING-CHAIR GUIDE. ALBION L. WARNER, New York, N. Y., assignor to Charles Lyon Russell, New York, N. Y. Filed Dec. 15, 1915. Serial No. 67,037. (Cl. 155—36.)



1. The combination with a relatively stationary base, of a chair body, means for suspending the chair body above the base for oscillation relatively thereto, and means flexible in the direction of the path of oscillation and rigid transversely thereto for permitting freedom of such relative oscillation and preventing movements of the chair laterally of its predetermined path of oscillation.

2. The combination with a base, of a pair of upstanding supports, a chair body having dependent portions housing said supports, a pair of links pivoted to each said support and to the chair body whereby the chair body may oscillate relatively to the said base, a pair of guides for preventing movement of the chair body laterally of its path of oscillation and each comprising a pair of rigid planes articulated together, and one plane articulated to the said base and the other plane articulated to the said chair body.

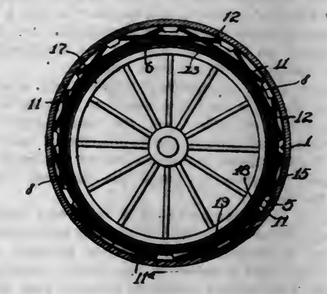
3. The combination with a relatively stationary base, a chair body and means for suspending the chair body above the base for oscillation relatively thereto, of a guide comprising a pair of rigid planes articulated together and respectively articulated to the said base and chair body, the relative proportions of the parts being such that the guide limits the oscillatory movement of the chair body relatively to the base and prevents overthrow thereof.

4. The combination with a relatively stationary base a chair body and means for suspending the chair body above the base whereby the chair body is adapted to oscillate in a path from front to rear, of a guide located at the front of said chair body and a guide located at the rear thereof, each of said guides comprising a pair of rigid planes articulated together and respectively articulated to the said base and chair body, the relative locations of the planes being such as to prevent movements of the chair body laterally of its predetermined path of oscillation, and the relative proportions of the parts being such that the guides limit the oscillatory movement of the chair body relatively to the base, one in one direction and the other in the other direction.

5. The combination with a relatively stationary base having a pair of upstanding supports, of a chair body having arms located above said supports and depending portions housing the same, a pair of links pivoted to each support and to the chair body whereby the same may oscillate relatively to the said support, and a guide between the chair body and base flexible in the direction of the path of oscillation and rigid transversely thereto.

[Claim 6 not printed in the Gazette.]

1,210,740. SHOCK-ABSORBING METALLIC TIRE FOR WHEELS. JAMES M. WAUGH, Chicago, Ill. Filed Nov. 14, 1912. Serial No. 731,359. (Cl. 152—38.)



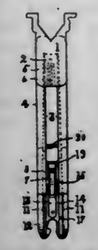
1. A metallic resilient tire for wheels, embracing an annular rim affording an inwardly facing channel having substantially parallel deep flanges, said flanges forming the outer sides of said tire, abutments on the inner sides thereof and having oppositely inclined faces, an inner rim comprising a channel having outwardly directed flanges adapted to slidably fit within the flanges of the outer rim and notched to afford shoulders to engage the inclined faces of said abutments, said abutments and said shoulders being so disposed relatively each other that in driving at least one abutment shall engage one of said shoulders at a point in advance of and above the point of road contact, and groups of spring friction plates engaged at their ends against said abutments and bearing centrally on the inner channel and movable in said tire under tension.

2. In a device of the class described, an annular channel rim, relatively short and low abutments integral with the flanges thereof and having oppositely inclined faces, an outwardly opening inner channel rim slidably fitted in the outer channel rim and having the edges of its flanges notched to loosely engage the abutments therein, groups of thin spring plates arranged in staggered relation between the rims at opposite sides thereof, and a filler band in the inner rim upon which the central portion of each spring group bears.

3. In a device of the class described, an outer flanged rim member, an inner flanged rim member fitting therewithin, coöperative relatively movable members on said respective flanges to engage one another to transmit the drive therebetween, and groups of unconnected resilient

friction members sprung into position in staggered relation within said outer rim member to receive the weight of said inner rim member thereon.

1,210,741. SPACE-BAND FOR LINE-CASTING MACHINES. JAMES L. WEBB, Tioga, Tex., assignor of one-fourth to Luther A. Glenn and one-fourth to E. C. Hunter and G. O. Hunter, Sherman, Tex. Filed Dec. 27, 1915. Serial No. 68,878. (Cl. 199—4.)



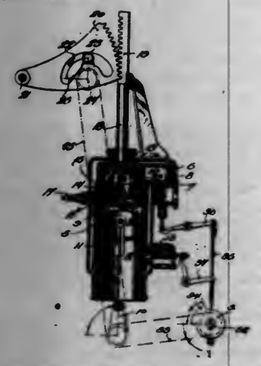
1. A space band composed of a relatively stationary part having channels, and a wedge shaped member adjustable and guided thereon, said member having a second wedge shaped member movable independently upon it, the two members being interlocking and guided independently of each other.

2. A space band composed of a relatively stationary part, having channels, and a wedge shaped member adjustable and guided thereon, said member having a second wedge shaped member movable independently upon it, both being arranged on the same side of the stationary part and guided independently of each other.

3. A space band, comprising a relatively stationary part having channels, and two members adjustable thereon independently of each other, the two members being wedge shaped, and guided independently of each other during such adjustment, the upper end of the lower wedge being curved inwardly to guide the matrices over the points of the wedge.

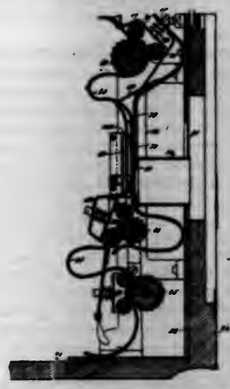
4. A space band composed of a relatively stationary part having a fixed wedge-shaped portion intersecting the casting line, a wedge shaped member movable on the stationary part, and a second wedge shaped member movable on the first named movable member and provided with a locking device, and the former member having a spring adapted to release the locking device; the two members being arranged on the same side of the stationary part and guided independently of each other, as herein shown and described.

1,210,742. TWO-CYCLE ENGINE. ELMER J. WEBER, Oconomowoc, Wis. Filed Feb. 14, 1916. Serial No. 78,092. (Cl. 123—66.)



An internal combustion engine of the class described including a cylinder, a work piston therein, a crank shaft connected with the work piston, a scavenger piston in the cylinder, a stem extending from the scavenger piston outwardly of that end of the cylinder farthest from the work piston, a pivoted plate in gear mesh with the stem and provided with an arcuate slot, a second shaft connected with the crank shaft, and a crank arm on the second shaft engaged in said slot.

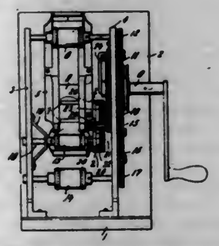
1,210,743. MOVING-PICTURE-FILM-PRINTING UNIT. JOHN T. WELLS, Newport, Ky., assignor to The Edwards Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Original application filed Oct. 5, 1914, Serial No. 865,129. Divided and this application filed Feb. 12, 1915. Serial No. 7,841. (Cl. 95—75.)



1. In a device of the class described, an apertured film guide, film feed rolls for moving the film over said guide, a correspondingly apertured member hinged to open and close vertically relative to said guide, film feed rolls on said hinged member coacting with the first-named film rolls, and a detachable tension plate for closing the aperture of the hinged member and adapted to hold two films in close contact adjacent said guide aperture for printing.

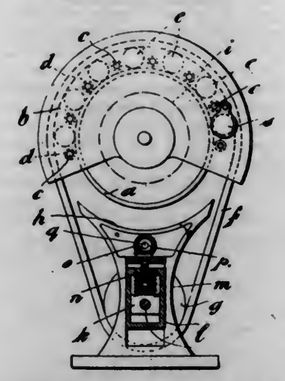
2. In a device of the class described, the combination of a fixed and a hinged film guide between which the film is fed, said guides having coincident focal apertures, a detachable film-tension plate for closing the aperture in the hinged guide member constituting a printing-back and means for intermittently advancing the film.

1,210,744. FILM-FEED MECHANISM FOR MOVING-PICTURE MACHINES. JOHN T. WELLS, Newport, Ky., assignor to The Edwards Mfg. Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 21, 1915. Serial No. 35,302. (Cl. 74—41.)



A device of the nature disclosed comprising a cupped driving disk having a peripheral flange provided with a notched inner periphery, an actuating projection extending from the disk flange adjacent the notch therein, a member to be intermittently rotated by said disk, pivoted within the periphery thereof and comprising a hub portion having segmental engaging surfaces adapted to engage the inner flange periphery, and a sprocket portion overlapping the disk flange and provided with a plurality of slots each approximately concentric with the cupped disk when in operative alinement with the actuating projection.

1,210,745. MACHINE FOR POLISHING NEEDLES AND THE LIKE. LIONEL ALFRED WHARRAD, Redditch, England, assignor to The Wharrad Engineering Company, Limited, Redditch, England. Filed July 9, 1914. Serial No. 849,985. (Cl. 51—10.)



1. A polishing machine of the character described comprising in combination, a drum, stationary annular plates, one on each side of said drum, means connecting said plates and adapted to receive one package of needles, and an endless belt encircling said packages, a second drum around which said belt is carried, means for tensioning said belt, means for operating said packages and their contents for effectively polishing the latter, and means for removing the packages from between the plates, substantially as described.

2. A polishing machine of the character described comprising in combination, a revoluble drum, stationary annular plates one on each side of said drum, rods connecting said plates, rollers upon said rods adapted to receive one package of needles between each pair of said rollers, and an endless belt encircling said packages, a second drum around which said belt is carried, means for tensioning said belt, means for operating said packages and their contents for effectively polishing the latter, and doors on said plates and a tray or chute below said drum between the branches of said belt for removing the packages from between the plates and for receiving them, substantially as described.

3. A polishing machine of the character described, comprising in combination, a drum, stationary annular plates, one on each side of said drum, means connecting said plates and adapted to receive one package of needles, and an endless belt encircling said packages, a second drum around which said belt is carried, a spring controlled vertically movable drum, a casing for the spring, stems for adjusting said casing and means for operating said stems for vertically displacing said casing and drum for tensioning said belt, means for operating said packages and their contents for effectively polishing the latter, and means for removing the packages from between the plates, substantially as described.

4. A polishing machine of the character described comprising in combination, a revoluble drum, stationary annular plates one on each side of said drum, rods connecting said plates, rollers upon said rods adapted to receive one packet of needles between each pair of said rollers, and an endless belt encircling said packages, a second drum around which said belt is carried, means for tensioning said belt, bevel wheels for collectively adjusting said tensioning means, means for submitting the packages and their contents to a kneading action for effectively polishing the latter, doors hinged to said plates and a tray or chute beneath the same for removing and receiving the polished articles, substantially as described.

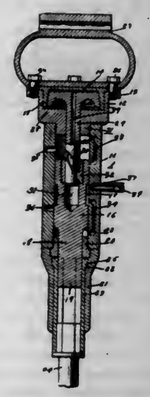
1,210,746. GARMENT-HANGER. ALICE T. WHYTE, East Orange, N. J. Filed Mar. 18, 1916. Serial No. 85,056. (Cl. 211—13.)



1. A garment-hanger having a hollow body of greater depth than width and made in one piece and having tubular edges and concaved sides, and a suspending eye having its shank secured in said body.

2. A garment hanger having a hollow body of much greater depth than width and made in one piece, and having tubular edges and concaved sides with reinforced seat at the middle of the top, a washer beneath the said seat, and a suspending eye having its shank secured in the said washer.

1,210,747. DRILL. FRANK R. WILLIAMS, Ottumwa, Iowa. Filed Aug. 24, 1914. Serial No. 858,404. (Cl. 121—20.)

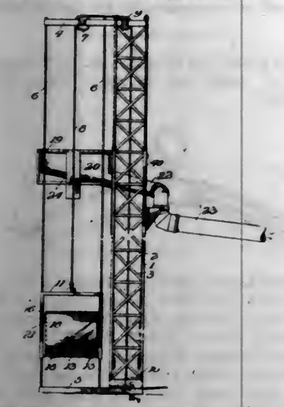


In a device of the class described, a hollow casing, a piston having a longitudinal opening in the upper end and adapted to reciprocate therein, means for reciprocating said piston, a clutch member fixed within the upper end of the casing, a second clutch member adapted to coact with the first and of such shape as to form an air chamber between said clutch members, a rifle bar fixed to and extending downwardly from the last described clutch member into the opening in the piston, said rifle bar having a passage therein connecting the air chamber and the upper end of the casing, a nut fixed within the opening in the piston and adapted to coact with the rifle on the bar, and means for yieldingly holding said clutch members in engagement.

1,210,748. HOISTING MECHANISM. JOSEPH S. WYLIE, Oklahoma, Okla. Filed Mar. 14, 1916. Serial No. 84,129. (Cl. 214—12.)

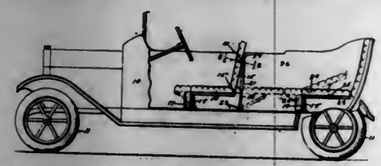
In an apparatus for the purpose set forth, the combination of a mast, a lateral extension projecting from one side of the mast, spaced vertical guides carried by said extension and extending the full height of the mast in spaced relation thereto, a hopper supported on a side of the mast intersecting the side from which the lateral extension projects, said hopper extending laterally from

the mast and past said guides parallel with the side of the mast on which it is supported, a bucket slidably



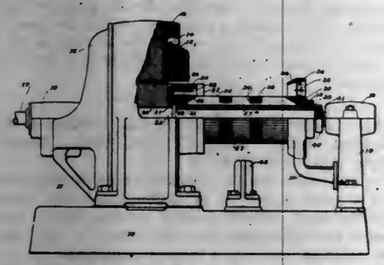
fitted to said guides, and means for raising and lowering the bucket to and from the hopper.

1,210,749. AUTOMOBILE AMBULANCE. MAX ZIEHLKE, Jefferson, Iowa. Filed Aug. 24, 1914. Serial No. 858,320. (Cl. 21—43.)



In an ambulance, a vehicle having two front seats one of said front seats having a seat cushioned member, a hinged downwardly depending cushioned member at the forward end of the seat member, means for securing said downwardly depending member in horizontal position, a back member arranged in hinged relation with said seat member and adapted to swing rearwardly and downwardly to horizontal position, a telescoping device connected with said back member and the floor of the vehicle, the parts thereof being arranged so that their collapsing movement is limited to position where said back member is horizontal, a bar secured to said back member having at its ends forward extensions, means on said vehicle arranged to overlap said forward extensions on the sides thereof adjacent to said back member when the back member is raised, so that said bar tends to hold the parts of the machine from spreading laterally.

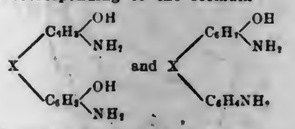
1,210,750. DYNAMO-ELECTRIC MACHINE. THOMAS S. ALLEN, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed July 14, 1909. Serial No. 507,654. (Cl. 200—12.)



In a dynamo-electric machine, a commutator comprising a support, a plurality of segments thereon, a member for retaining said segments in place on said support, fan means mounted on said retaining member, and a guide for said fan means held in position externally thereof by attachment to a fixed portion of said machine and effective to guide air discharged from said fan means along the commutator surface during the operation of said machine.

1,210,751. SUBSTANTIVE ORTHOOXYAZO DYESTUFFS AND A PROCESS OF MAKING SAME. EUGEN ANDERWERT, HERMAN FRITZSCHE, and HEINRICH SCHOBEL, Basel, Switzerland, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Oct. 8, 1915. Serial No. 54,891. (Cl. 8—1.)

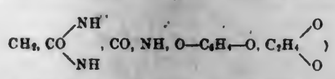
1. The described process for the manufacture of new substantive orthooxyazo dyestuffs consisting in combining the orthooxytetrazo derivatives of the orthoaminophenol derivatives corresponding to the formula



and

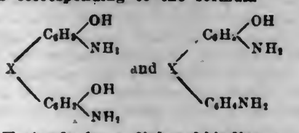


(wherein X stands for a diphenyl-binding or one of the groups



with 2:5:7-aminonaphtholsulfonic compound.

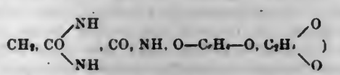
2. The described process for the manufacture of new substantive orthooxyazo dyestuffs consisting in combining the orthooxytetrazo derivatives of the orthoaminophenol derivatives corresponding to the formula



and

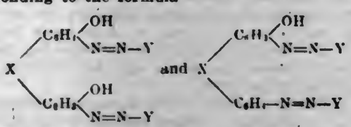


(wherein X stands for a diphenyl-binding or one of the groups



with a 2:5:1:7-aminonaphtholdisulfonic compound.

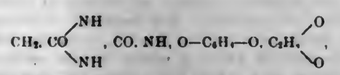
3. As new products, the described orthooxyazo dyestuffs corresponding to the formula



and



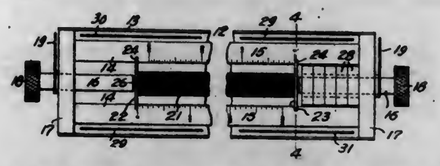
(wherein X stands for a diphenyl-binding or one of the groups



and Y for a sulfo derivative of 2:5-aminonaphthol containing a sulfo group in the 7-position), which constitute intensely colored powders yielding with concentrated sulfuric acid intensely colored solutions and dissolving in water with red and yellow to violet colorations which are intensively changed by addition of sodium carbonate or of soda-lye and dyeing cotton, wool, silk, mixed goods, straw, wood and paper various tints according to the methods used for the known substantive dyestuffs.

1,210,752. RECORDING SYSTEM AND APPARATUS. ABRAHAM AVRIN, Montreal, Quebec, Canada. Filed Jan. 20, 1916. Serial No. 73,170. (Cl. 235—61.)

1. In a device of the character described, a casing, a spindle revolubly mounted therein having a portion of its length threaded, a plurality of counters mounted on the unthreaded portions of the spindle and adapted for engagement with the thread, a scale past which said counters are moved by spindle revolution, and means for holding counters not in use out of engagement with the spindle thread.

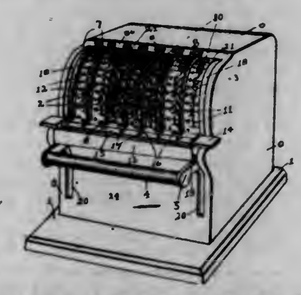


2. In a device of the character described, a casing, a spindle revolubly mounted therein, a thread formed in the central portion of said spindle, internally threaded counters slidable on the ends of the spindle into and out of engagement with the thread, and movable stops regulating the engagement and disengagement of the counters with the thread.

3. In a device of the character described, a casing, a spindle revolubly mounted therein, a thread formed on the central portion of said spindle, a plurality of counters internally threaded for engagement with the spindle thread slidable on the unthreaded end portions of the spindle, a guide parallel with the threaded portion of the spindle adapted to hold the counters against revolution whereby said counters may be moved on the thread only by spindle revolution, a scale for gaging spindle revolution, a scale adjacent the counter path being a multiple of the first scale, and means for limiting the engagement and disengagement of counters with the spindle thread.

4. In a device of the character described, a casing, a spindle revolubly mounted therein, a thread formed in the central portion of said spindle of larger diameter than the end portions, guides parallel with the spindle, a plurality of counters slidable on the unthreaded end portions of said spindle internally threaded for coöperation with the spindle thread, a stop at each end of the thread slotted to embrace the spindle and slidably mounted in the guides, a scale on one of said guides, a scale on the exterior of the casing, a pointer carried by the spindle traveling over said second scale, and means holding the spindle against longitudinal movement in the casing.

1,210,753. ADDING-MACHINE. JOSEPH H. BAIR, Philadelphia, Pa., assignor to Speed Adding Machine Company, Philadelphia, Pa., a Corporation of Delaware. Filed Nov. 15, 1913. Serial No. 801,254. (Cl. 235—80.)



1. A machine of substantially the class described having a segmental setting up area, a plurality of wheels, each bearing a series of figures, all of said figures being grouped in a bank coincident with the setting up area, said wheels being individually movable to cause their figures to traverse selective portions of said area in the setting up movements, and being adapted for actuation by corresponding manual movements, and an operating handle extending substantially parallel with the setting up area and in position to intercept the operator's hand moved in continuation of the setting up movements; said machine also having an arresting stop between said handle and the setting up area, and said arresting stop being adapted to traverse the setting up area in a direction opposite to the setting up movements and having means adapted to engage the wheels in its said movement for the purpose of resetting the counting elements of the machine.

2. In a machine of the class described, in combination, a plurality of toothed numeral-bearing wheels having every tenth tooth laterally elongated to form face pins, a transverse bar having end extensions hinged concentrically with said wheels, a cross plate provided with teeth and pivotally mounted on the end extensions and lying parallel and behind said transverse bar, so that, when said bar is lifted, said cross plate will swing inwardly and its teeth engage said face pins, thereby setting back said wheels so that "0's" show in the sight hole.

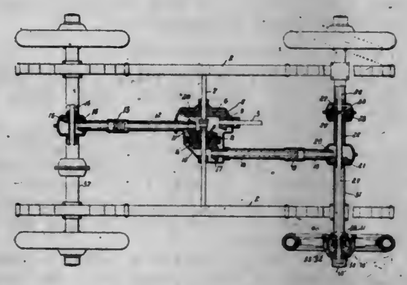
3. In a machine of the class described having a carrying mechanism and a clearing mechanism, in combination, a plurality of toothed numeral wheels, a plurality of projections on each wheel, said clearing mechanism being journaled concentrically with the numeral wheels, and a transverse bar hinged to, and comprising a part of, the clearing mechanism, said transverse hinged bar being adapted to move toward said numeral wheels and being provided with indentations for straddling the wheels, a member holding said hinged bar retracted when said hinged bar is in a position of rest; said projections being engaged by the hinged bar of said clearing mechanism and by said carrying mechanism during their respective operations.

4. In a machine of the class described, in combination, a plurality of toothed wheels having lateral projections, a cam lever having its free end in the path of the said lateral projections, so that said free end is moved away transversely by the action of said lateral projections in order to project its cam under the next wheel to the left, a carrying device, comprising an oscillating arm, and means connected therewith and engaging with said cam to carry the contiguous wheel one step forward, when the said cam lever has been moved and said arm is moved as described.

5. A machine of the class described, in combination, a plurality of toothed numeral wheels each having lateral projections, a number indicator overlying an arc of the wheel, a cam lever to contact with one of said lateral projections on one wheel to set the cam lever, a carrying device comprising an oscillating arm and means connected therewith engaging with said cam lever when the latter has been set, thereby carrying the next wheel one step upon the movement of the arm.

[Claims 6 to 10 not printed in the Gazette.]

1,210,754. MOTOR-VEHICLE. WILLIAM M. BEATTY, Beaver Falls, Pa. Filed Aug. 10, 1914. Serial No. 856,056. (Cl. 21—90.)



1. In a motor vehicle, the combination of driving mechanism, a driven shaft, a hub shaft, gears connected

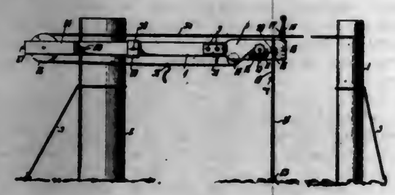
with the driven shaft and the hub shaft, intermediate gears between the gears of the two shafts, and ball and socket connection between the intermediate gears and the shafts.

2. In a motor vehicle, the combination of an axle shaft, angle gearing comprising oppositely arranged gear members connected by an intermediate gear member rotatable upon a horizontal axis, said members adapted to rock laterally upon each other and connected with one or more of the wheels of the vehicle by means of which power may be imparted to the wheel when at an angle to the line of the axle.

3. In a motor vehicle, the combination of an axle shaft, a hub shaft, gears connected with the driven shaft and the hub shaft, an intermediate double-faced gear between the gears of the two shafts, and ball and socket connection between the intermediate gear and the shaft gears.

4. In a motor vehicle, the combination of a power shaft, a hub, bevel gears connected respectively with the power shaft and the hub, and a double-faced bevel gear located within the hub and connecting the shaft bevel gear and the hub bevel gear, and angularly movable with respect to each of said gears.

1,210,755. WIRE-STRETCHER. BERNARD A. BELLER, Bueyeros, N. Mex. Filed Apr. 27, 1916. Serial No. 93,951. (Cl. 254—162.)



1. A wire stretcher including a supporting bar, means for anchoring the bar in an operative position, a housing formed on the outer end of the bar, winding means mounted in the housing, a U-shaped wire guide slidably and removably mounted in the outer end of the housing, and a retaining plate pivotally connected to and depending from the intermediate portion of the guide and coöperating with the upper edge of the housing whereby to removably hold a piece of wire to prevent the wire from slacking while the winding means is being adjusted.

2. A wire stretcher comprising a bar, a housing secured to one end of the bar, arms formed on the opposite end of the bar, prongs formed on the arms, pulleys rotatably mounted between the bar and arms, a drum rotatably mounted within the housing, a pulley removably mounted in the housing, a chain secured to the drum, a clamp secured to the chain, a retainer slidably and removably mounted in the housing, a plate pivotally connected to the retainer, a rod adjustably connected to the housing, a support hingedly connected to the rod, a block slidably mounted upon the bar, and a chain connected to the bar and adapted to engage the sliding block.

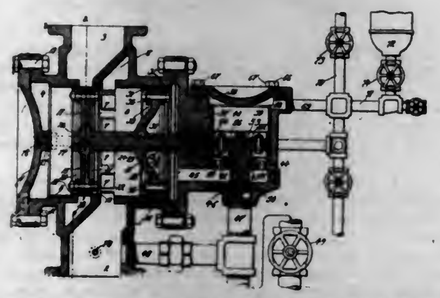
1,210,756. COMPOSITION FOR TILE. PAUL C. BOVING, Philadelphia, Pa. Filed July 19, 1915. Serial No. 40,638. (Cl. 106—29.)

1. The herein described method of making a composition tile consisting of mixing ground burnt clay powder with calcined magnesite and chlorid of magnesium in solution in such proportions as to make a pasty mixture, then partially drying this mixture to form a damp powder, and finally compressing the damp powder to form the tile, substantially as described.

2. The herein described method of making a composition tile consisting of mixing ground burnt clay powder with calcined magnesite and chlorid of magnesium in solution in such proportions as to make a pasty mixture, then partially drying this product to form a damp powder, and finally compressing the damp powder in molds to form the tile, substantially as described.

3. The herein described method of making a composition tile consisting of forming a pasty mixture of elements, then partially drying said mixture and forming it into a damp powder and finally compressing the damp powder to form a tile, substantially as described.

1,210,757. VALVE MECHANISM. SIDNEY W. BRAINARD, Cleveland, Ohio, assignor to John M. Duncan, Philadelphia, Pa. Filed May 5, 1916. Serial No. 95,536. (Cl. 169—23.)



1. The combination in valve mechanism, of a casing having an inlet and an outlet passage, a balanced valve including pistons spaced apart, the peripheral surface of one of said pistons being designed to close said outlet passage, said casing having other passages communicating with each other and with opposite faces of one of the pistons of said balanced valve, a differential valve normally interposed between said latter passages, said casing having another passage containing fluid under pressure and operative to normally hold the differential valve in said interposed position, said latter fluid when reduced in pressure permitting the movement of the differential valve by the pressure fluid in said second-mentioned passages to operate the balanced valve to open the inlet and outlet passages, substantially as described.

2. The combination in valve mechanism, of a casing having an outlet passage and an inlet passage containing fluid under pressure, a balanced valve interposed between said passages including pistons spaced apart, the peripheral surface of one of said pistons being designed to close said outlet passage, said casing having other passages communicating with each other and with opposite faces of one of the pistons of said balanced valve, a differential valve interposed between said other passages in said casing, certain of said latter passages containing fluid under pressure, said casing having another passage for fluid under pressure, said latter passage being connected to the differential valve and operative to normally hold the differential valve in said interposed position, said latter fluid when reduced in pressure permitting the movement of the differential valve by the fluid in said second-mentioned passages to automatically effect movement of the balanced valve to open the inlet and outlet passages, substantially as described.

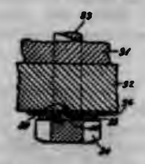
3. The combination in valve mechanism, of a casing having inlet and outlet passages, a balanced valve interposed between said passages, said valve including members spaced apart and movable in conjunction with each other, said valve normally closing the outlet passage, the space between said members acting, when the valve is moved, to form a direct passage way between the inlet and outlet passages, substantially as described.

4. The combination in valve mechanism, of a casing having inlet and outlet passages, a balanced valve interposed between said passages and including two pistons of the same diameter spaced apart, said valve normally closing the outlet passage, the space between said pistons acting when the valve is moved to form a direct passageway between the inlet and the outlet passages, substantially as described.

5. The combination in valve mechanism, of a casing having an inlet and an outlet passage, a balanced valve normally closing said passages, a differential valve, said casing having a passage leading between said valves, and a passage connecting said valves and containing fluid under pressure, said latter passage communicating with but being normally cut off from the third passage by the differential valve, said casing having another passage leading to the differential valve and normally containing fluid under pressure, said fluid when reduced in pressure permitting the fluid in said connecting passage to move the balanced valve to permit communication between the inlet and outlet passages, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,210,758. NUT-LOCK. ADOLPH L. BRAND, Seattle, Wash. Filed June 8, 1916. Serial No. 102,584. (Cl. 151—39.)



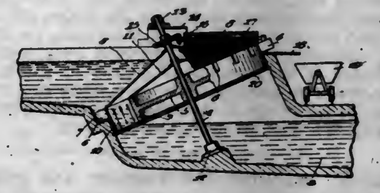
1. A bolt and nut lock of the class described, which embodies a bolt having a bolt-head whose inner side surface is provided with a plurality of radial notches extending from its shank to a point near the edges of its outer side surfaces; a nut whose inner surface is provided with a plurality of radial notches extending from the edge of its screw-threaded hole to a point near the edges of its outer side surfaces; two washers adapted to surround and freely fit the shank of said bolt, both of said washers being split radially and each having that portion of it adjacent to one side of said split bent abruptly sidewise to form a sharp catching edge, while its portion adjacent to the other side of said split is bent sidewise in an opposite direction, said latter portion being thinner and provided with an outwardly projecting catch of a form that adapts it to serve as a pawl when disposed within one of said radial notches of said bolt-head and said nut; and an auxiliary washer adapted to surround and freely fit the shank of said bolt, said auxiliary washer being provided with radial slots and sidewise projecting catches which extend from its inner circular edge toward its outer circular edge.

2. A bolt and nut lock of the class described, which embodies a bolt having a bolt-head whose inner side surface is provided with a plurality of radial notches extending from its shank to a point near the edges of its outer side surface; a nut whose inner surface is provided with a plurality of radial notches extending from the edge of its screw-threaded hole to a point near the edges of its outer side surfaces; and two washers adapted to surround and freely fit the shank of said bolt, both of said washers being split radially and each having that portion of it adjacent to one side of said split bent abruptly sidewise to form a sharp catching edge, while its portion adjacent to the other side of said split is bent sidewise in an opposite direction, said latter portion being thinner and provided with an outwardly projecting catch of a form that adapts it to serve as a pawl when disposed within one of said radial notches of said bolt-head and said nut.

1,210,759. APPARATUS FOR PURIFYING SEWAGE-WATER. JOHANNES PAUL BREDDIN, Cologne, Germany. Filed Feb. 7, 1914. Serial No. 817,237. (Cl. 210—14.)

1. Apparatus for purifying sewage water comprising a rotating sieve on an axis inclined to the vertical, a series of blades around the sieve and a floor under the descending side of the sieve.

2. Apparatus for purifying sewage water comprising a rotating sieve on an axis inclined to the vertical, a series of blades around the sieve, a floor under the descending side of the sieve, and a cover above the ascending side of the sieve.



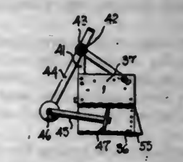
3. Apparatus for purifying sewage water comprising a rotating sieve on an axis inclined to the vertical a series of blades around the sieve and a floor under the descending side of the sieve, and a rotating brush driven by the rotation of the sieve for the purpose of sweeping debris from the top of the sieve.

4. Apparatus for purifying sewage water comprising a rotating sieve on an axis inclined to the vertical, a series of blades around the sieve, a floor under the descending side of the sieve, and a cover above the ascending side of the sieve, and a rotating brush driven by the rotation of the sieve for the purpose of sweeping debris from the top of the sieve.

5. Apparatus for purifying sewage water comprising a wheel on an axis inclined to the vertical, a conical rotating sieve above the wheel, a shield between the sieve and the wheel, a series of blades around the periphery of the sieve, and a floor under the blades on one side.

[Claim 6 not printed in the Gazette.]

1,210,760. EXCAVATOR. LEVI J. CHAPIN, Luverne, Iowa, assignor of one-half to William E. McDonald, Algona, Iowa. Filed Aug. 23, 1916. Serial No. 116,511. (Cl. 37—16.)



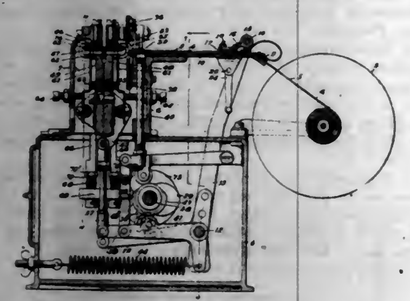
1. In an excavating machine, a vertically swinging track, a dipper mounted to travel upon the track and suspended therefrom, means for moving the dipper, a plunger longitudinally movable in the dipper having a rigid rod projecting from one end of the dipper, a rigid actuating element pivotally supported upon the dipper above the track and operatively connected to the plunger rod, and means on one end of the track with which said element is adapted to engage in the movement of the dipper to its discharging position, whereby the plunger is actuated and the earth expelled from the dipper.

2. In an excavating machine, a track, a dipper suspended from said track for longitudinal movement thereon, means for operating the dipper, a plunger longitudinally movable in the dipper, actuating means pivotally mounted upon the dipper above the track and operatively connected to the plunger, and a fixed stop element on the track at one end thereof adapted to be engaged by said actuating means to move the plunger and expel the earth from the dipper.

3. In an excavating machine, a vertically swinging track having an upwardly curved free end portion, a dipper to travel upon said track, means for moving the dipper, a stop fixed to the curved end of the track, a plunger longitudinally movable in the dipper, and an actuating element pivotally mounted upon the dipper and operatively connected to the plunger, said element engaging said stop when the dipper is moved to its discharging position on the curved end of the track to move the plunger and positively expel the earth from the dipper.

4. In an excavating machine, a vertically swinging track having an upwardly curved free end portion, a dipper to travel upon said track, means for moving the dipper, a stop fixed to the curved end of the track, a plunger longitudinally movable in the dipper, and a yoke member pivotally mounted upon the dipper, the arms of said yoke member straddling the track being operatively connected to the plunger, said yoke arms engaging the stop when the dipper is moved to a discharging position upon the curved end of the track to positively actuate the plunger and expel the earth from the dipper.

1,210,761. MACHINE FOR FEEDING AND CUTTING LABELS. FRANKLIN CHATFIELD, Minneapolis, Minn., assignor to Rose Patch and Label Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Dec. 26, 1912. Serial No. 738,702. (Cl. 223—15.)



1. The combination, with a tape feeding and severing means, clamping means between which the tape sections are held, said clamping means including rotating spindles having outer faces intersecting the axes of said spindles, the rotation of said spindles operating to fold the ends of the tape.

2. The combination, with a tape feeding and severing means, of means for clamping the several sections, and rotating means, sector-shaped in cross section, having their outer faces intersecting the axes of said rotating means for engaging and folding the ends of the severed sections.

3. The combination, with means for feeding and severing a tape, of stationary and movable jaws arranged in pairs between which the tape is clamped, said stationary jaws having beveled clamping edges, and means mounted to rotate over said edges for folding the projecting ends of the tape thereon.

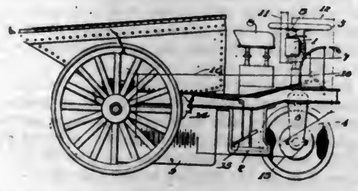
4. The combination, with a tape feeding and severing means, of a clamping means comprising stationary and movable jaws arranged in pairs, means for folding the ends of the tape section held between said jaws, one jaw of a pair being adjustable with respect to the other jaw of the same pair to adapt them for clamping tape sections of different lengths.

5. The combination, with a tape feeding and severing means, of stationary and movable jaws between which a tape section is clamped, rotating means mounted to bear on the projecting ends of the tape section for folding it over said stationary jaws, and yielding plates mounted to form a backing for said folding means.

[Claims 6 to 30 not printed in the Gazette.]

1,210,762. AUTOMOBILE FOR COLLECTING AND DISTRIBUTING. MELVIN B. CHURCH, Grand Rapids, Mich. Filed Mar. 14, 1914. Serial No. 824,770. (Cl. 21—90.)

1. In a peddling automobile, the combination of a front-motor traction and steered wheel, the usual seat, a battery or generator having circuit connection to the front wheel motor, a step or rest for the driver at a side of the vehicle, a controller and switch means between the controller and front wheel motor for driving the vehicle at different speeds or for stopping the vehicle, steering means, said switch and steering means being within reach of the driver from said step or rest.



2. In a peddling automobile, the combination of a front motor traction and steered wheel, the usual seat, a battery or generator, circuit connections to the front wheel drive, a step or rest for the driver at a side of the vehicle, steering means, brake means, means for controlling the circuit to the front traction wheel, said steering means, brake means, and circuit controlling means being so arranged as to be accessible from the usual seat and from the side step or rest.

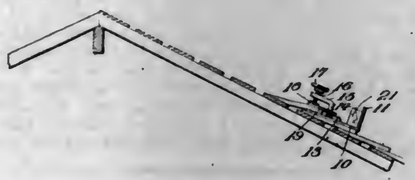
3. In combination in a motor vehicle, a self front propelling wheel carrying a motor within it, a swivel fork in which said propelling wheel is mounted, a steering post extending up directly from the fork and axially of the swivel mounting of said wheel, and steering means consisting of a hand wheel mounted directly on and coaxially with the post and moving through angles corresponding to the different angular positions of the self propelling wheel in steering, substantially as described.

4. In combination in a motor vehicle, a front propelling wheel carrying an electric motor, a swiveled fork for said wheel, a steering post extending up directly from the fork and axially of the swivel mounting of said wheel, steering means consisting of a wheel mounted directly on the post, and an electric controller to control the current to said driving and steering wheel for fast or slow speed to accord with the rate of deflection in steering, substantially as described.

5. In combination in a motor vehicle, a front propelling wheel carrying a motor, a swiveled fork in which said wheel is mounted, a steering post extending up directly from the fork and axially of the swivel mounting of the fork, steering means consisting of a hand wheel mounted directly on the post, an electric controller arranged adjacent the steering wheel to control the current for fast or slow speed, and a side front step from which the operator may manipulate the steering wheel and controller, substantially as described.

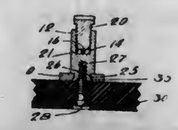
[Claims 6 to 9 not printed in the Gazette.]

1,210,763. COMBINED STAGING-CLAMP AND SHINGLE-BRACKET. JAMES H. S. CLOYD, Tilden, Nebr. Filed Nov. 10, 1914. Serial No. 871,317. (Cl. 20—86.)



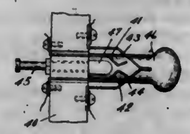
A combined staging clamp and shingle bracket including a base plate having its rear end bent upwardly at right angles thereto to form a vertically disposed arm adapted to support a staging member, a standard secured to the base plate in spaced relation to the arm and having a horizontally disposed portion spaced from the plate and provided with a threaded opening, a clamping plate of substantially the same width as the base plate loosely fitted over the standard and having a relatively large opening therein to accommodate the standard and permit rotative movement of the plate with respect to said standard, a clamp screw threaded in the opening in the horizontal portion of the standard and having its upper end provided with a head, a clamping disk swiveled on the lower end of the screw and independent of and coacting with the clamping plate, to clamp a shingle between the base plate and clamping plate when the screw is adjusted, the free end of the arm extending upwardly in a straight line above the staging member to permit the staging member to be moved vertically of the arm when placing said staging member on or removing the staging member from the base plate.

1,210,764. BINDING-POST. FREDERICK W. COLE, Newton Highlands, Mass., assignor to Gamewell Fire Alarm Telegraph Co., Newton Upper Falls, Mass., a Corporation of New York. Filed Nov. 24, 1915. Serial No. 63,322. (Cl. 173—259.)



A binding-post comprising a body having an internally threaded socket in its outer end, provided with an unyielding side wall, and a flat bottom wall, the latter extending at right angles to the longitudinal axis of the body, there being diametrically opposed wire-receiving holes leading through the body and into the socket at the bottom thereof, the plane of the bottom of the socket being tangential to the bottom portions of the holes, and the diameter of the socket being several times greater than the diameter of the wire-receiving holes, and a binding-screw threaded into the socket having a flat inner end substantially co-extensive with its diameter for engagement with the terminal portion of a wire passed through the holes and extended diametrically across the bottom of the socket, the flat engaging end of said binding-screw being of a diameter several times greater than the diameter of the wire-receiving holes, so as to engage a comparatively long length of wire and to slide thereon in a transverse direction while being turned to clamp the wire, thus providing a long frictional bearing between the screw and wire, whereby the wire is positively held from being moved about the longitudinal axis of the body and also from being withdrawn.

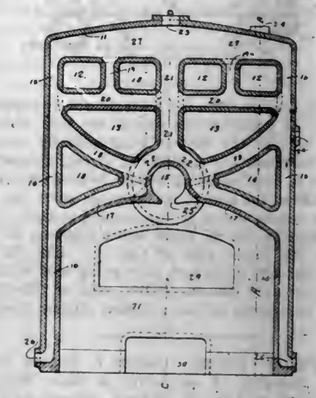
1,210,765. SIGNAL-BOX. FREDERICK W. COLE, Newton Highlands, Mass., assignor to Gamewell Fire Alarm Telegraph Company, New York, N. Y., a Corporation of New York. Filed Nov. 24, 1915. Serial No. 63,323. (Cl. 175—283.)



1. A testing-switch element for signal boxes comprising a pair of long contact-pens connected with the line circuit and normally in engagement, a pair of short contact-pens connected with branch circuits and normally separated and arranged between said long contact-pens and adapted upon lateral movement from normal to engage, move laterally, and separate said long contact-pens, thereby to connect the branch circuits in multiple relation with the line circuit, while maintaining the continuity of the circuit, and an operating-member arranged for moving said short contact-pens laterally.

2. A testing-switch element for signal boxes comprising a pair of long contact-pens connected with the line circuit and normally in engagement, a pair of short contact-pens connected with branch circuits and normally separated and arranged between said long contact-pens and adapted upon lateral movement from normal to engage, move laterally, and separate said long contact-pens, thereby to connect the branch circuits in multiple relation with the line circuit, while maintaining the continuity of the circuit, and a sliding operating-member having an outstanding lug arranged between the short contact-pens to move said short contact-pens laterally.

1,210,766. STEAM-BOILER OR FLUID-HEATER. NATHAN COOPER, Brooklyn, N. Y. Filed Nov. 29, 1915. Serial No. 64,197. (Cl. 122—212.)



1. In a steam boiler or fluid heater, comprising multiple boiler sections and a suitable grate thereunder, a coal feeding duct extending through said sections, said coal feeding duct having inclined chutes adapted to feed coal therethrough to said grate, the inclination of said chutes being in opposite directions, thereby tending to distribute the coal fed therethrough to said grate.

2. In a steam boiler or fluid heater comprising multiple boiler sections and a suitable grate, a coal feeding duct extending through said sections, said duct being cast in one with said sections and containing inclined chutes arranged in pairs, said chutes being adapted to feed coal therethrough to said grate, and the inclination of said chutes being in opposite directions in each pair, thereby tending to distribute the coal fed therethrough to said grate.

3. In a steam boiler or fluid heater comprising multiple boiler sections and a suitable grate thereunder, a coal feeding duct extending through said sections, said duct having inclined chutes arranged in pairs, each pair of said chutes being inclosed by two adjacent boiler sections in the adjoining ends thereof, said chutes being adapted to feed coal therethrough, and the inclination of said chutes being in opposite directions, thereby tending to distribute the coal fed therethrough to said grate.

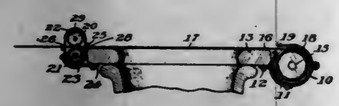
4. In a steam boiler or fluid heater comprising a front boiler section, a rear boiler section, middle boiler sections and a suitable grate thereunder, a coal feeding duct extending through said sections, forming a continuous passage for the coal propelled therethrough, said duct having chutes adapted to feed coal therethrough to said grate, said middle boiler sections being of substantially the same pattern, and a means for restricting the openings of successive chutes in such a manner as to distribute the coal substantially evenly through all the chutes without varying the patterns of the middle boiler sections.

5. In a steam boiler or fluid heater, comprising a front boiler section, a rear boiler section, middle boiler sections and a suitable grate thereunder, a coal feeding duct extending through said sections, forming a continuous pas-

sage for the coal propelled therethrough, said duct having chutes adapted to feed coal therethrough to said grate, said middle boiler sections being of substantially the same pattern, and suitable gratings adapted to restrict the openings of the successive chutes in such a manner as to distribute the coal substantially evenly through all the chutes, without varying the patterns of said middle boiler sections.

[Claim 6 not printed in the Gazette.]

1,210,767. SANITARY DEVICE FOR TOILET-SEATS. FRANK J. CUNHA, Hayward, Cal. Filed Jan. 4, 1916. Serial No. 70,183. (Cl. 4—18.)



In a sanitary device for toilet seats, means to support an apertured roll of paper on one side of the seat, means on the opposite side of the seat to longitudinally score the paper after the latter has passed out of engagement with the seat, and a fixed severing means located beyond the last named side of the seat to transversely sever the paper into as many waste sheets as the scoring initially forms, said scored portion oft he paper being disposed so as to depend from the latter side of the seat with its outer end free so that the occupants may grasp said outer end and sever same while the succeeding part of the sheet is held against movement by the occupant sitting thereon.

1,210,768. FRUIT-PICKER. GEORGE L. CURTIS, Nevada City, Cal., assignor of one-fourth to Matt Wheelihan and one-fourth to John H. McLean, Nevada City, Cal. Filed June 1, 1916. Serial No. 101,071. (Cl. 30—24.)

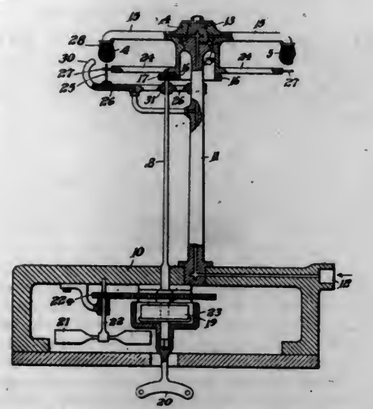


A device of the class described comprising a bar, one end of said bar having a finger rest carried thereby the other end of said bar terminating in an angularly disposed plate, said plate having a curved cutting edge carried thereby, a second bar fixed longitudinally of the first named bar and having pliable finger rests upon its ends, a flexible casing connected to the second named bar and between the last named finger rests which engage therewith, a strap adapted to be engaged with the wrist of the user, and a strip of elastic fabric connecting the casing and strap.

1,210,769. APPARATUS FOR AUTOMATICALLY EXCHANGING INCANDESCENT BODIES. GUSTAF DALÉN, Lidingön, Stockholm, Sweden. Filed July 17, 1914. Serial No. 851,671. (Cl. 67—111.)

1. In an apparatus for automatically exchanging incandescent bodies, the combination of burners, an incandescent body associated with an active burner, an additional incandescent body associated with an inactive burner, means tending to move the said burners and the said bodies so as to move the inactive burner and its associated body into the position occupied by the active burner and its associated body whereby said inactive burner is brought into activity, and stopping means for retaining the said burners and bodies in predetermined positions said stopping means including a part adapted to be rendered ineffective by the action thereon of the flame of the active burner in case its associated incandescent body should become ruptured to permit the passage of the flame to the stopping means.

2. An apparatus for automatically exchanging incandescent bodies comprising burners and an incandescent body associated with each burner, one burner and one body being active and the remaining burner or burners and body or bodies being inactive, a stopping device for retaining the said active burner and body in active position and the remaining inactive burner or burners and body or bodies in inactive position, said stopping device including a member adapted to be rendered ineffective by the action of the flame of the active burner should the incandescent body associated therewith be ruptured, and means for automatically moving a reserve burner and its associated reserve body into active position when said active body is ruptured.



3. An apparatus for automatically exchanging incandescent bodies comprising burners and an incandescent body associated with each burner, one of said burners being active and the other or others inactive, a movable frame supporting such burners and incandescent bodies, means tending to move said frame, and stopping means for holding said frame in certain predetermined positions said stopping means comprising members adapted to contact with each other, one of which members is adapted to be rendered ineffective by the action of the flame of the active burner thereon when said incandescent body is ruptured.

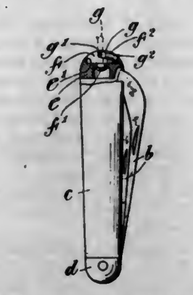
4. An apparatus for automatically exchanging incandescent bodies, said apparatus comprising a plurality of burners and incandescent bodies associated respectively therewith, means for causing movement of the said burners and the bodies associated therewith, and means for retaining the said burners in predetermined positions in which one of said burners is active while the other or others are inactive, such means including a part adapted to be rendered ineffective by the action of the flame of the active burner in case the incandescent body associated therewith should become ruptured.

5. In an apparatus for automatically exchanging incandescent bodies, a movable cock casing carrying an incandescent body, a power device for actuating said casing, a cock in said casing communicating with a gas conduit, a burner for said incandescent body, and stopping means for resisting said power device and holding the said casing against actuation, said stopping device being rendered ineffective by the action of the flame of the burner thereon upon the rupturing of the said incandescent body.

[Claims 6 to 24 not printed in the Gazette.]

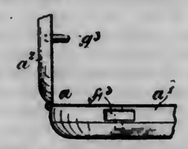
1,210,770. POCKET-KNIFE. CHARLES L. DEPOLLIER, Brooklyn, N. Y. Filed Aug. 2, 1915. Serial No. 43,246. (Cl. 30—10.)

A pocket knife having in one end of the handle a block with a circular recess, a head swiveled to the block in said recess and freely rotatable therein with respect to the block and knife and also provided with a recess, and a bail pivoted to said head in said recess and adapted to be seated and received therein within the surface of the



knife or to be extended for engagement with securing means.

1,210,771. WATCHCASE. CHARLES L. DEPOLLIER, Brooklyn, N. Y. Filed July 19, 1916. Serial No. 110,073. (Cl. 224—4.)

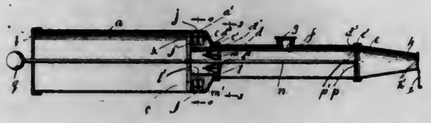


1. A catch-case having relatively movable parts and having a recess in one of said parts to receive an eye or link, and a transverse pin or stud to engage such eye or link and retain it within the recess, the pin or stud being covered by the relatively movable part of the case when closed to prevent disengagement.

2. A watch-case having a center and a relatively movable part and having a recess in the center to receive an eye or link, and a transverse pin or stud to engage such eye or link to retain it within the recess, the pin or stud being covered by the relatively movable part of the case when closed to prevent disengagement.

3. A watch-case having a center and a relatively movable part and having a recess formed in one side of the center to receive an eye or link, and a transverse pin or stud to engage said eye or link and retain it within the recess, the pin or stud being covered by the relatively movable part of the case when closed to prevent disengagement.

1,210,772. SYRINGE OR ATOMIZER. ALEXANDER DEUTSCH, Girard, Ohio. Filed Sept. 27, 1916. Serial No. 122,340. (Cl. 128—2.)



1. An atomizer of the character described, comprising a receptacle for the medium to be dispersed, a perforated piston therein, and an air pump communicating with said receptacle, the said piston and air pump being operatively connected so that the air drawn in by said pump is caused to be impregnated with said medium and subsequently dispersed.

2. An atomizer of the character described, comprising a receptacle for the liquid medium, another receptacle in extension thereof, a perforated piston in said liquid receptacle and a piston in the said other receptacle, air controlling means for the last named receptacle and means for controlling communication between the two receptacles and arranged so that the air drawn into the second receptacle is caused to be impregnated with the medium contained in the first receptacle and subsequently dispersed into the surrounding air.

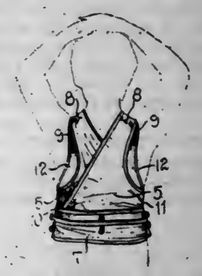
3. An atomizer of the character described, comprising a receptacle for the medium to be dispersed, a perforated piston working therein, an air pump, the piston of the latter with that in the said receptacle being operatively connected together, air controlling valves and means for controlling communication between said receptacle and said pump and arranged so that the air drawn into the second receptacle is caused to be impregnated with the medium contained in the first receptacle and subsequently dispersed into the surrounding air.

4. An atomizer of the character described, comprising a receptacle for the medium to be dispersed, a perforated nozzle at one end thereof, a perforated piston in said receptacle, an air pump connected with said receptacle and operatively connected with said piston and means for controlling communication between said air pump and said receptacle.

5. An atomizer of the character described, comprising a receptacle for the medium to be dispersed, a perforated piston therein, a perforated nozzle on said receptacle, an air pump, the piston of which and that of the said receptacle have a common piston rod, and means for automatically controlling the communication between said air pump and said receptacle.

[Claim 6 not printed in the Gazette.]

1,210,773. UNDERWAIST. MARGARET DONALDSON, Winchester, Ky., assignor to Premier Manufacturing Company, Winchester, Ky., a Corporation of Kentucky. Filed Dec. 8, 1915. Serial No. 65,766. (Cl. 2—98.)

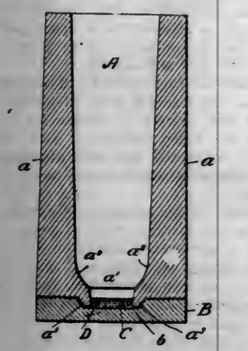


1. An underwaist consisting of two body sections constituting the back portion of the garment, and two similar front sections, one of said body sections having a main waist portion and the other section a corresponding relatively narrow portion stitched to the waist portion of the first named body section, said front sections being connected to the opposite ends of the waist portion of said first named body section, and each of said front portions having a shoulder strap attenuation, each of said body sections being also cut to provide an obliquely extending gradually attenuated portion terminating in a shoulder strap section secured to the shoulder strap of one of the front sections of the garment, said extensions of the body sections of the garment intersecting and lapping upon each other, and means for fastening the free vertical edges of the front sections of the garment together.

2. An underwaist consisting of two body sections constituting the back of the garment and having waist portions stitched to each other, said body sections also having gradually attenuated obliquely disposed portions extending from the waist portions in relatively opposite directions, and lapping upon each other, said attenuated portions terminating in shoulder strap sections, and two front sections stitched to the opposite ends of the waist portion of one body section, and also having shoulder strap extensions connected to the respective shoulder strap extensions of the body sections of the garment, one of the front sections being provided on its free vertical edge with

spaced button holes and the other front section being provided with a plurality of buttons for engagement therethrough, to secure the garment upon the body of the wearer.

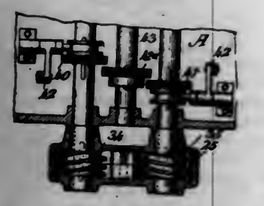
1,210,774. INGOT-MOLD. GEORGE A. DORNIN, Baltimore, Md. Filed May 24, 1916. Serial No. 99,560. (Cl. 22—139.)



1. An ingot mold having a bottom opening surrounded by a downwardly projecting flange and a stool having a recess for receiving sealing material of larger diameter and of greater area than said bottom opening and into which said mold flange extends.

2. An ingot mold having a bottom opening surrounded by a downwardly extending flange the outer walls of which are inclined and a stool having a recess of larger diameter and of greater area than the bottom opening of the mold and which recess is formed with inclined walls surrounding said mold flange and sealing material supported in said recess and extending into the bottom opening of the mold.

1,210,775. GEARING. KARL EGGART, Arbon, Switzerland, assignor to the Firm of Adolph Saurer, Arbon, Switzerland. Filed Mar. 14, 1913. Serial No. 754,194. (Cl. 74—34.)



1. A gearing for jacquard embroidery machines comprising a differential gearing with a central member and lateral members, separate means to actuate the lateral members of the differential gearing separately and independently of each other in opposite directions and to hold them from backward movement, a common driving device for said separate means adapted to be placed in operative relation with either of said means, and means to transmit the motion from the central member of the differential gearing.

2. A gearing for jacquard embroidery machines comprising a differential gearing with a central member and lateral members, separate means to actuate the lateral members of the differential gearing separately and independently of each other in opposite directions and to hold them from backward movement, a common driving device for said separate means adapted to be placed in operative relation with either of said means, a pattern mechanism for controlling the operative relation between said driving device and said separate means, and means to transmit the motion from the central member of the differential gearing.

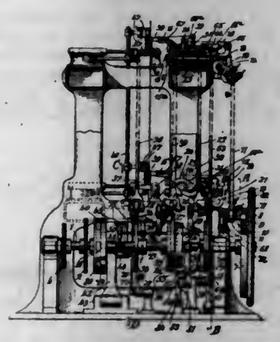
3. A gearing for jacquard embroidery machines and the like comprising a differential gearing with a central member and lateral members, a driving gear secured to each of the lateral members of the differential gearing, a separate actuating means for each of said driving gears, said actuating means acting to actuate the driving gears in opposite directions and to prevent movement of the driving gears in a backward direction, a common driving device for said actuating means, mechanism to place either of said actuating means in operative relation with said driving device, and means to transmit motion from the central member of the differential gearing.

4. A gearing for jacquard embroidery machines and the like comprising a driven shaft, studs thereon at right angles thereof, gears mounted on said studs, other gears mounted loosely on the shaft in engagement with the gears on the studs, a worm gear secured to each of said last named gears, a worm in engagement with each of said worm gears, a common driving device for said worms, and means for placing either of said worms in operative relation with said driving device.

5. A gearing for jacquard embroidery machines and the like comprising a driven shaft, studs thereon at right angles thereof, gears mounted on said studs, other gears mounted loosely on the shaft in engagement with the gears on the studs, a worm gear secured to each of said last named gears, a worm in engagement with each of said worm gears, a common driving device for said worms, means for placing either of said worms in operative relation with said driving device, and a pattern mechanism for controlling the operative relation between said driving device and said worms.

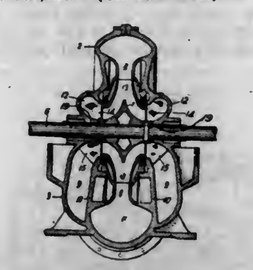
[Claims 6 to 8 not printed in the Gazette.]

1,210,776. JACQUARD EMBROIDERY-MACHINE. KARL EGGART, Arbon, Switzerland, assignor to the Firm of Adolph Saurer, Arbon, Switzerland. Original application filed June 10, 1913, Serial No. 772,774. Divided and this application filed Jan. 9, 1914. Serial No. 811,145. (Cl. 112—7.)



In a jacquard embroidery machine, in combination, a jacquard apparatus, perforating mechanism, a shaft, a needle cam, a thread-guide cam and a shuttle cam on the shaft, needle mechanism, thread-guide mechanism and shuttle mechanism operated by the cams, means actuated by the jacquard apparatus for throwing the needle mechanism and the thread-guide mechanism out of operative relation with the cams and for effecting a change in the motion of the shuttle mechanism, all without stopping the rotation of the shaft, a cam on the shaft for operating the perforating mechanism, and means for throwing the perforating mechanism into operative relation with its cam.

1,210,777. CENTRIFUGAL PUMP. EDWARD F. ENTWISLE, Duquesne, Pa., assignor to Henry R. Worthington, a Corporation of New Jersey. Filed May 21, 1918. Serial No. 769,027. (Cl. 253—191.)



1. A centrifugal pump comprising in combination, a casing, a rotary impeller mounted therein, an inlet conduit for said casing terminating in an annular chamber substantially concentric with said rotary impeller, and means located in said annular chamber for compelling the inflowing fluid to travel along lines substantially parallel with the axis of the impeller at the moment it enters the impeller.

2. A centrifugal pump comprising in combination, a casing, a rotary impeller mounted therein, an inlet conduit for said casing terminating in an annular chamber substantially concentric with said rotary impeller, and means located in said annular chamber for compelling the inflowing fluid to travel therethrough along lines substantially parallel with the axis of the impeller, said means including at least one partition located in said annular chamber, and extending entirely across the same in a plane substantially parallel to said axis.

3. A centrifugal pump comprising in combination, a casing forming a substantially circular chamber, an impeller in said chamber mounted on a shaft whose axis coincides with the axis of the chamber, means for delivering a supply of fluid to the impeller in said chamber around the shaft of the impeller, and means for compelling said fluid to travel in planes substantially parallel with the axis of said shaft, at the moment of its entry into said impeller.

4. A centrifugal pump comprising in combination, a casing having a circular pump chamber therein with the usual side inlet at the center, and an impeller journaled in said casing and adapted to rotate in said chamber, an inlet conduit connected to said inlet opening in the casing, and means for compelling the incoming fluid to travel in a direction substantially perpendicular to the plane of rotation of the impeller at the moment of its entry into the impeller.

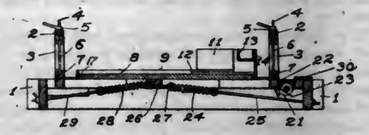
5. A centrifugal pump having an impeller chamber, an annular inlet chamber surrounding the axis of the impeller chamber at one side of said impeller chamber and communicating laterally therewith, an inlet passage communicating with the annular inlet chamber, and means in said annular chamber to prevent rotation of the inlet water in said inlet chamber which would otherwise be caused by the rotation of the water in the impeller.

[Claims 6 to 12 not printed in the Gazette.]

1,210,778. CONCENTRATING-TABLE. HENRY W. FAUST, Grants Pass, Oreg. Filed Sept. 2, 1914. Serial No. 859,810. (Cl. 83—88.)

1. A concentrating device comprising a substantially flat inclined shaking table having a groove running substantially perpendicular to the discharge edge of the table for carrying off the gangues, means whereby said groove may be opened or closed as desired, means for supplying water along the edge of the table which is parallel and opposite to said groove, and means for shaking said table in such a manner that the waste material will move toward said groove under the influence of the water and the values will move in substantially the opposite direction.

2. A concentrating device comprising in combination, a cam for moving said table in one direction only and arranged to have a direct contact with said table, a spring independent of said cam for jerking said table in the opposite direction, and a second spring arranged to change the motion of the table after it has been jerked by the first mentioned spring, said springs acting to prevent the table from contacting with any fixed member.

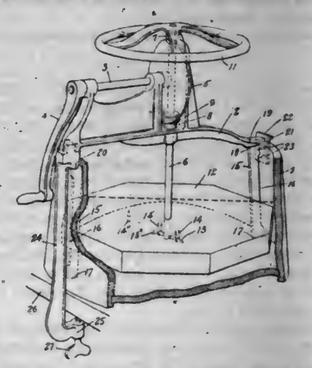


3. A concentrating device comprising in combination, a table, a cam for moving said table in one direction only and arranged to act directly on the table, a spring independent of said cam for starting said table in the opposite direction, and resilient means, also independent of said cam, for reversing the movement of said table after it has been started by said spring, said cam being so arranged as to overtake said table and accelerate movement of the table after it has been reversed, said springs being adapted to prevent the table from contacting with any fixed member.

4. A concentrating device comprising in combination a flat inclined table, and means for reciprocating said table, said means comprising a cam for moving the table in one direction, a tension spring adapted to jerk the table in the opposite direction when released by the cam, a second tension spring for reducing the speed of the table at the end of the movement produced by said first mentioned tension spring, and buffer springs adapted to reverse the movement of the table independently of said cam, said springs being adapted to give the table a momentary tremulous or vibratory action at the turn of the second mentioned reversal.

5. A concentrating device comprising in combination a flat inclined shaking table having a rim around three sides thereof, the fourth side being the delivery edge, a water launder arranged at one end of the table perpendicular to said delivery edge, means for delivering pulp to the table at the inner end of the launder, means for shaking the table in a direction perpendicular to the launder, the table having a groove along the side opposite the launder for facilitating the delivery of gangues and water, and a gate for regulating the discharge from said groove, whereby the level of the gangues and water may be maintained on the table as desired.

1,210,779. APPARATUS FOR OPERATING UPON COMPOSITE SUBSTANCES. ALPHEUS FAY, Louisville, Ky. Filed Mar. 1, 1915. Serial No. 11,352. (Cl. 259—108.)



1. In a device of the class described and in combination with a containing vessel, the diameter of which is

greater than its depth, a thin solid horizontally arranged rotating impeller having varying diameters the periphery of which moves in close proximity with the side wall of said vessel, said impeller having smooth upper and lower surfaces and the same being located adjacent the bottom of said vessel and designed to operate in a comparatively shallow body of liquid contained in said vessel, a vertically arranged shaft whereby said impeller is supported and driven, and means for rotating said shaft, substantially as described.

2. In a device of the class described and in combination with a containing vessel of relatively large diameter, a thin solid horizontally arranged rotating impeller the periphery of which moves in close proximity with the side wall of said vessel, said impeller having smooth upper and lower surfaces, and the same being located adjacent the bottom of said vessel and designed to operate in a comparatively shallow body of liquid contained in said vessel, and the periphery of which impeller is provided with a groove, a vertically arranged shaft whereby said impeller is supported and driven, and means for rotating said shaft, substantially as described.

3. In a device of the class described and in combination with a containing vessel of relatively large diameter, a thin solid horizontally arranged rotating impeller polygonal in form and the periphery of which moves in close proximity with the side wall of said vessel, said impeller having smooth upper and lower surfaces and the same being located adjacent the bottom of said vessel and designed to operate in a comparatively shallow body of liquid contained in said vessel, a vertically arranged shaft whereby said impeller is supported and driven, and means for rotating said shaft, substantially as described.

4. In a device of the class described and in combination with a containing vessel the diameter of which is greater than its depth, a thin solid horizontally arranged rotating impeller polygonal in form and the periphery of which moves in close proximity with the side wall of said vessel, said impeller having smooth upper and lower surfaces and the same being located adjacent the bottom of said vessel and designed to operate in a comparatively shallow body of liquid contained in said vessel and the periphery of which impeller is provided with a groove, a vertically arranged shaft whereby said impeller is supported and driven, and means for rotating said shaft, substantially as described.

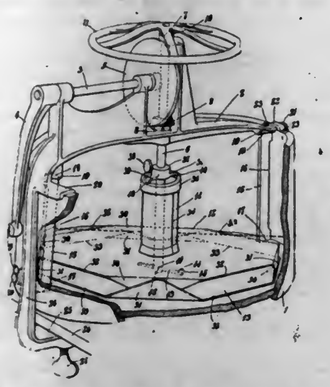
5. In a device of the class described and in combination with a containing vessel the diameter of which is greater than its depth, a solid horizontally arranged rotating impeller of diameter greater than the depth of the vessel the periphery of which moves in close proximity with the side wall of said vessel, said impeller having smooth upper and lower surfaces and the same being located adjacent the bottom of said vessel and designed to operate in a comparatively shallow body of liquid contained in said vessel, a vertically arranged shaft whereby said impeller is supported and driven, and means for rotating said shaft, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,210,780. APPARATUS FOR OPERATING UPON COMPOSITE SUBSTANCES. ALPHEUS FAY, Louisville, Ky. Filed Mar. 1, 1915. Serial No. 11,353. (Cl. 259—96.)

1. In a device of the character described, in combination with a vessel, a bracket comprising a main part extending across the top of the vessel and forming supporting and bearing means for the operating mechanism of the device, means on one end of this main part bearing on the rim of the vessel, and another part extending down from said main part, outside and under the vessel, and clamping means on this part, under the vessel, whereby the bracket is held on the vessel and the vessel is held to suitable supporting means.

2. In a device of the character described, in combination with a vessel, a bracket comprising a main part extending across the top of the vessel and forming supporting and bearing means for the operating mechanism of the device, a part at one end of said main part having a downwardly opening channeled formation to fit over the rim of the vessel and support and steady the bracket, a securing element extending down from said main part, on the outside of the vessel, with an inwardly extended terminal part below the vessel, and clamping means on this terminal part whereby the bracket is held on the vessel and the vessel is held to a suitable supporting means.



3. In a device of the character described, in combination with a vessel, a bracket comprising a main part extending across the vessel and forming supporting and bearing means for the operating mechanism of the device, means on one end of this main part bearing on the rim of the vessel, and another part extending down from said main part, outside and under the vessel, clamping means on this part, under the vessel, whereby the bracket is held on the vessel and the vessel is held to suitable supporting means, a part at the other end of said main part to bear on the rim of the vessel, and means fixed on the rim of the vessel for this part to engage with, whereby this end of the bracket is supported and steadied.

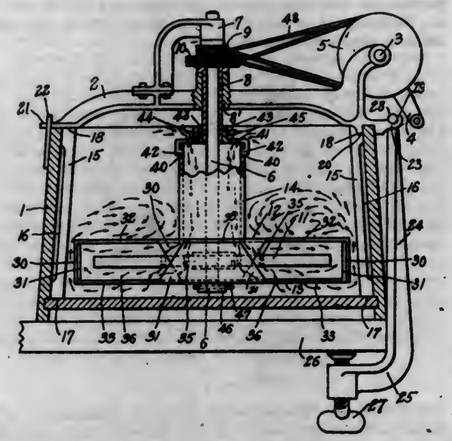
4. In a device of the character described, in combination with a vessel, a bracket comprising a main part extending across the top of the vessel and forming supporting and bearing means for the operative mechanism of the device, a part at one end of said main part having a downwardly opening channeled formation to fit over the rim of the vessel and support and steady the bracket, an arm extending down from said main part, on the outside of the vessel, with an inwardly extended terminal part below the vessel, clamping means on this terminal part whereby the bracket is held on the vessel and the vessel is held to suitable supporting means, a part at the other end of said main part to bear on the rim of the vessel, and means fixed on the rim of the vessel for this part to engage with, whereby this end of the bracket is supported and steadied.

5. In a device of the character described, in combination with a vessel and bracket comprising a main part extending across the top of the vessel and forming supporting and bearing means for the operating mechanism of the device, means on one end of this main part bearing on the rim of the vessel and an arm detachably engaging with said bracket, adjacent to the part of the bracket that bears on the arm of the vessel, said arm extending down outside and under the vessel, and clamping means on the part of the arm under the vessel, whereby the bracket is held on the vessel and the vessel is held to a suitable supporting means.

[Claims 6 to 22 not printed in the Gazette.]

1,210,781. APPARATUS FOR OPERATING UPON COMPOSITE SUBSTANCES. ALPHEUS FAY, Louisville, Ky. Filed Mar. 1, 1915. Serial No. 11,354. (Cl. 31—66.)

1. In a device of the class described and in combination with a vessel, a rotary outer impeller located adjacent the bottom of said vessel and comprising two horizontally arranged members spaced apart from one another; an independent rotary inner impeller comprising a disk located within said outer impeller; a vertically arranged driving shaft operatively connected with said inner impeller, a tubular shaft surrounding and spaced apart from said driving shaft and operatively connected with said outer impeller, the upper end of said shaft being open to the atmosphere and the lower end thereof being in open communication with the interior of said outer impeller, and means for rotating said shafts respectively at different speeds.



2. In a device of the class described and in combination with a vessel, a rotary outer impeller located adjacent the bottom of said vessel and comprising two horizontally arranged members spaced apart from one another and the periphery of which impeller moves in close proximity with the wall of said vessel, a rotary inner impeller comprising a disk located within said outer impeller, a vertically arranged driving shaft operatively connected with said inner impeller, a tubular shaft surrounding and spaced apart from said driving shaft and operatively connected with said outer impeller, the upper end of said shaft being open to the atmosphere and the lower end thereof being in open communication with the interior of said outer impeller, and means for rotating said shafts.

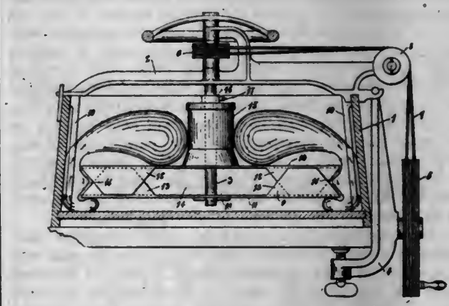
3. In a device of the class described and in combination with a vessel, a rotary outer impeller located adjacent the bottom of said vessel and comprising two horizontally arranged members spaced apart from one another and the periphery of which impeller moves in close proximity with the wall of said vessel, and the lower of which members is provided with a plurality of holes, a rotary inner impeller comprising a disk located within said outer impeller, a vertically arranged driving shaft operatively connected with said inner impeller, a tubular shaft surrounding and spaced apart from said driving shaft and operatively connected with said outer impeller, the upper end of said shaft being open to the atmosphere and the lower end thereof being in open communication with the interior of said outer impeller, and means for rotating said shafts at different speeds.

4. In a device of the class described and in combination with a vessel, a rotary outer impeller located adjacent the bottom of said vessel and comprising two horizontally arranged members spaced apart from one another and the lower of which members is provided with a plurality of holes, a rotary inner impeller comprising a disk located within said outer impeller and provided with a plurality of holes, a vertically arranged driving shaft operatively connected with said inner impeller, a tubular shaft surrounding and spaced apart from said driving shaft and operatively connected with said outer impeller, the upper end of said shaft being open to the atmosphere and the lower end thereof being in open communication with the interior of said outer impeller, and means for rotating said shafts.

5. In a device of the class described and in combination with a vessel, a rotary outer impeller located adjacent the bottom of said vessel and comprising two horizontally arranged members spaced apart from one another, a rotary inner impeller comprising a disk located within said outer impeller, a vertically arranged driving shaft operatively connected with said inner impeller, a hollow driving shaft surrounding and in contact with the upper portion of said first mentioned shaft, means for rotating said shafts, a tubular shaft surrounding the lower portion of said first mentioned driving shaft and spaced apart therefrom, the upper end of said shaft being open to the atmosphere and the lower end thereof being in open communication with the interior of said outer impeller, means whereby the end of said tubular shaft is detachably connected with said outer impeller and means for detachably connecting the upper end of said hollow driving shaft with the lower end of said tubular shaft.

[Claims 6 to 16 not printed in the Gazette.]

1,210,782. METHOD FOR PRODUCING BUTTER. ALPHEUS FAY, Louisville, Ky. Filed Mar. 1, 1915. Serial No. 11,355. (Cl. 31—66.)



1. The method of producing butter which consists in causing circular and radial vibratory currents in a body of cream elements by the rotation therein of an impeller disk shaped to give minimum impact to the cream elements of the mass to produce such a difference in the vibration of the cream elements as to bring about a uniform and coincident separation of the butter globules.

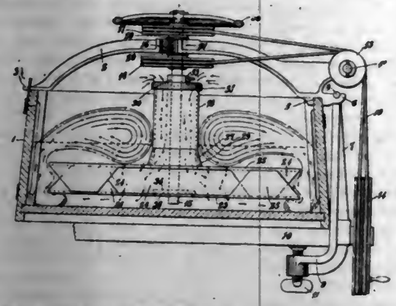
2. The method of producing butter which consists in causing circular and radial vibratory currents in a body of cream elements by the rotation therein of an impeller disk, the depth and diameter of the said body of cream elements being so proportioned with respect to the pitch and the diameter of the impeller disk as to produce uniform changes in the rate of vibration, the said impeller disk being so shaped as to give minimum impact to the cream elements to produce such vibration of the cream elements as to bring about a uniform and coincident separation of the butter globules.

3. The method of producing butter which consists in causing radial and circular vibratory currents in a body of cream elements, said cream elements being confined in a space the diameter of which is a substantial multiple of the depth thereof, the surface of said cream elements being at all times free to be moved by the rotation therein of an impeller disk shaped to give minimum impact to the cream elements as to bring about a uniform and coincident separation of the butter globules.

1,210,783. APPARATUS FOR OPERATING UPON COMPOSITE SUBSTANCES. ALPHEUS FAY, Louisville, Ky. Filed Apr. 29, 1915. Serial No. 24,787. (Cl. 74—21.)

1. The combination with a support, of a vessel thereon, operating means within the vessel, a belt driving means

connected to the operating means and a single means for clamping the vessel to the support and for tightening the belt driving means.



2. The combination with a support, of a vessel thereon, operating means within the vessel, a bracket comprising a cross bar and a depending arm pivotally connected thereto, the operating means being suspended from said cross bar, a driving member carried by the arm, a belt connecting said driving member with the operating means, and means carried by the arm for detachably connecting the vessel to the support, the adjustment of the arm about its pivot tightening the belt of the driving means.

3. In apparatus for operating upon composite substances, a vessel, operating means in the vessel, a bracket across the top of the vessel, means detachably securing the operating means to the bracket, driving means for said operating means mounted on said bracket outside said vessel, and means for detachably securing said bracket to said vessel and for detachably securing said vessel to supporting means, said driving means being mounted partly on said operating means, partly on said bracket and partly on said means for detachably securing said bracket and said vessel.

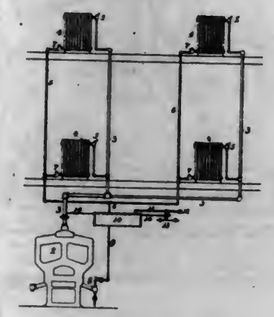
4. In apparatus for operating upon composite substances, a vessel, rotatable operating means in said vessel, a shaft for said operating means, a bracket mounted across the top of said vessel, a loose bearing for said shaft removably mounted in said bracket, and driving means for said operating means comprising a flexible member passed around said shaft and thereby holding said bearing in said bracket.

5. In apparatus for operating upon composite substances, a vessel, rotatable operating means in said vessel, a shaft for said operating means, a bracket mounted across the top of said vessel, a loose bearing for said shaft removably mounted in said bracket, driving means for said operating means comprising a flexible member passed around said shaft and thereby holding said bearing in said bracket, an arm engaging with said bracket and extending down alongside said vessel and supporting means, said arm adapted to engage with the supporting means for the vessel, to hold the bracket on the vessel and the vessel on the supporting means, said driving means also comprising a driving wheel mounted on said arm, and said flexible member passing around this driving means.

[Claims 6 to 17 not printed in the Gazette.]

1,210,784. STEAM-HEATING APPARATUS. JAMES L. FITTS, Merchantville, N. J., assignor to Warren Webster & Company, a Corporation of New Jersey. Filed Jan. 5, 1910. Serial No. 536,504. (Cl. 237—68.)

1. In a steam heating apparatus, the combination of a steam boiler, radiators, a supply pipe leading from the boiler to the radiators, a return pipe from the radiators to the boiler for returning water of condensation thereto under a normal static head, automatic devices between the radiators and return pipe for permitting the passage of air and water but preventing the passage of steam, a normally open vent pipe in communication with the return pipe and discharging into the atmosphere, and an automatic valve device to temporarily close the normally open vent pipe operated by means of pressure existing in the steam supply pipe above the normal allowable pressure therein and arranged to open said vent pipe when the pressure in the return pipe plus the normal allowable pressure in the boiler equals the abnormal boiler pressure, said valve device consisting of a valve piece to control the thoroughfare in the vent pipe, a diaphragm to operate the valve piece, a chamber closed on one side by the diaphragm and in communication with the return side of the system, a chamber closed on the other side by the diaphragm and in communication with the supply side of the system, and mechanical adjusting devices for adjusting the action of the diaphragm and valve piece independently of the pressures on opposite sides thereof.



2. In a steam heating apparatus, the combination of a steam boiler, radiators, a supply pipe leading from the boiler to the radiators, a return pipe from the radiators and connecting with the boiler below the water line for returning the water of condensation thereto, means adjacent to the boiler to prevent back flow from the boiler into the return pipe, automatic devices between the radiators and return pipe for permitting the passage of water and air but restricting the passage of steam, a vent pipe in communication with the return pipe and discharging into the atmosphere, automatic means for closing and opening the vent pipe arranged to be closed by the steam pressure from the boiler whenever the said boiler pressure exceeds a predetermined normal pressure capable of supporting a definite static head in the return pipe and arranged to be opened by the pressure in the return pipe whenever the said pressure in the closed return pipe added to the pressure of the normal static head exceeds the boiler pressure, and mechanical means for adjusting said automatic means so that it will close the vent pipe by the steam pressure when a definite static head has been produced in the return pipe.

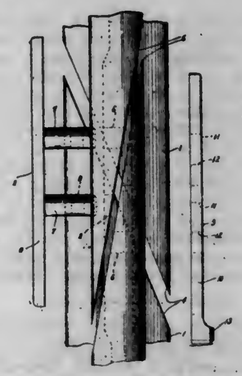
3. In a gravity system of steam heating, a steam boiler, radiators, a supply pipe and a return pipe connecting said boiler and radiators and forming therewith a circulating system, combined with return valves at the outlets of the radiators for permitting the passage of air and water and restricting the passage of steam, a vent from the return pipe at a point above the normal water level therein and open to the atmosphere, and an automatic valve device in said vent and wholly outside of the return pipe and passage to the boiler and out of contact with and operating independent of the water in the system having a steam actuated part operated by the pressure in the supply pipe and an adjustable gravity actuated means to actuate the valve device to control the degree of pressure at which the opening and closing of the valve takes place, for automatically closing the vent and maintaining it closed when abnormal pressures exist in the boiler.

4. In a gravity system of steam heating, a boiler, supply and return pipes extending from the boiler, radiators connected between the supply and return pipes, automatic devices between the radiators and the return pipes for permitting the passage of air and water from the radiator but preventing the passage of steam, a vent pipe from the return pipe normally open to the atmosphere, and an automatic valve device controlled by the differential in pressures in the supply and return sides of the system to close for all steam pressures above a predetermined normal pressure and independently of the water level in the return pipe for automatically closing the vent and maintaining it closed whenever and so long as a predetermined relative pressure in the supply side of the system is exceeded.

5. In a steam heating apparatus, the combination of a steam boiler, radiators, a supply pipe leading from the boiler to the radiators, a return pipe from the radiators to the boiler for returning water of condensation thereto under a normal static head, automatic devices between the radiators and return pipe for permitting the passage of water and air and restricting the passage of steam, a receiving tank for receiving the water of condensation and air from the return pipe arranged at an elevation above the water level of the boiler in communication with the return pipe and through which the water passes on its way to the boiler, a check valve to prevent water flowing from the boiler into the receiving tank, a vent pipe in communication with the receiving tank and discharging into the atmosphere, and an automatic valve device outside of and independent of the tank and directly operated by the pressure conditions in the steam supply pipe and independent of the water in the system to temporarily close the vent pipe and build up the air pressure in the tank whenever and for so long as the differentials in pressure existing in the steam supply pipe and the return pipe become and remain abnormal by an excessive steam supply pressure.

[Claims 6 to 8 not printed in the Gazette.]

1,210,785. RAIL-JOINT. PETER J. FONOS, New Richmond, Wis. Filed Aug. 25, 1915. Serial No. 47,296. (Cl. 239—8.)

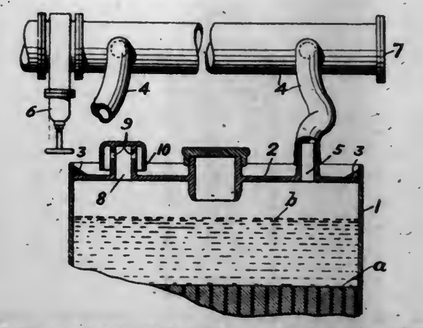


In a rail joint, rails having their meeting base flanges cut at an acute angle to the longitudinal axis of the rail, and their tread and web portion cut at a corresponding angle in an opposite direction, to dispose the rail terminals in overlapping relation, transverse registrable openings provided in the overlapping portions, bolts adapted to enter said openings, to retain the rails against longitudinal displacement, a plate connecting said bolts, openings provided in the projecting ends of said bolts, a plate having elongated openings to receive the bolts and pins disposed in said openings for entering the openings in the bolts to retain the rail against lateral displacement.

1,210,786. SECONDARY OR STORAGE BATTERY. BRUCE FORD, Philadelphia, Pa. Filed Apr. 22, 1915. Serial No. 23,009. (Cl. 204—53.)

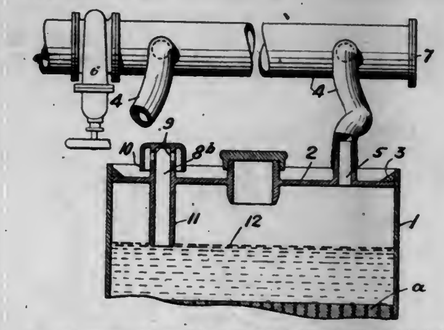
1. In a storage battery the combination of a closed container or jar having an air inlet opening, and a downwardly depending normally open trap applied to said opening to oppose the entry of sea water, substantially as described.

2. In a secondary or storage battery the combination of a closed container or jar provided with an air inlet opening, an exhaust connection communicating with the container or jar and having means for making it ineffective, and a downwardly depending normally open trap applied to the opening to oppose the entry of sea water, substantially as described.



3. In a storage battery the combination of a closed jar or container having a downwardly extending air inlet opening constituting a liquid seal to oppose the entry of sea water.

1,210,787. SECONDARY OR STORAGE BATTERY. BRUCE FORD, Philadelphia, Pa. Filed Apr. 22, 1915. Serial No. 23,010. (Cl. 204—53.)



1. The combination in a storage battery of an air inlet, and a trap for said inlet having two sealing portions one inside and the other outside the jar or container.

2. In a storage battery the combination of a sealed jar or container having an air inlet, a trap tube extending inward from the air inlet, and a tube extending outward from the air inlet and provided with a cap projecting below its outward orifice.

3. In a storage battery the combination of a closed jar or container, an exhauster connected therewith, means for rendering the exhauster ineffective, and a trap arranged inside and outside of the jar or container substantially as described.

4. The combination in a storage battery of a plurality of cells each having an air inlet provided with a tube extending downward and terminating in the electrolyte below the surface thereof to constitute liquid seals, an exhaust system common to all said cells, and means for rendering the exhaust system ineffective on all the cells, substantially as described.

1,210,788. EGG-TESTER. WILLIAM A. FOX, Greeley, Kans. Filed May 17, 1916. Serial No. 98,176. (Cl. 99—6.)

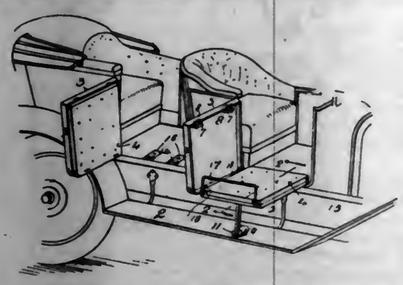
1. The combination with an egg supporting float, a pivoted frame carried thereby, a float carried by said

frame, and to one side of the first mentioned float, a pointer carried by the frame, a transverse scale carried by the first mentioned float and over which said pointer works, and a counterbalancing float supported by the first mentioned float and on the side opposite the second mentioned float.



2. An egg tester comprising a float adapted to maintain an upright position in a liquid, means for holding an egg at the lower end of said float, a vertical bracket on the float, a second float, lugs carried by the second float and through which said bracket loosely passes, guide arms carried by the first mentioned float and preventing swinging movement of the second mentioned float, a pivoted frame on the first mentioned float, a third float carried by said frame, a pointer carried by the frame, and a scale beam carried by the first mentioned float.

1,210,789. REMOVABLE SEAT FOR AUTOMOBILES. LOUIS A. FREEDMAN, New York, N. Y. Filed June 17, 1914. Serial No. 845,552. (Cl. 21—43.)



1. A device of the class described comprising an automobile body having a door, said door having an open side, a seat normally carried in said open side, means in said open side coöperating with means on the seat for holding said seat in the open side of the door and means on the seat adapted to engage means on the floor, door and step of the automobile and support the seat when said seat is removed from the open side of the door.

2. A device of the class described comprising an automobile body having a door, the inner side of said door being open for the reception of a seat, a seat detachably secured in the open side of said door and normally held therein, fixtures on the edge of the seat for securing said seat to the floor of the automobile and to the lower end of the door, and a rod extending from the seat to the step of the automobile for supporting said seat.

3. In a device of the class described, a door with eyes at its upper end, a floor with recesses and a seat with hooks adapted to engage either said eyes or the walls of said recesses, a step, and means for securing said seat and step together and a means for fastening said door and seat together.

4. In a device of the class described, a door with fixtures, a floor with fixtures and a step fixture and a seat with correspondingly located fixtures so adapted that the seat may be either secured to the door or to the floor and step by engaging their respective fixtures, and a means for fastening said door and seat together.

1,210,790. PROCESS FOR THE MANUFACTURE OF A PAPER. JULES GERNAERT, Brussels, Belgium. Filed Aug. 21, 1913. Serial No. 785,920. (Cl. 154—40.)

1. The process of manufacturing three-ply security paper which consists in combining with two outer plies, an intermediate ply having a pattern and a different coefficient of shrinkage relative to said outer plies; the outer plies after being combined, being printed with patterns exactly coinciding with that of the intermediate ply.

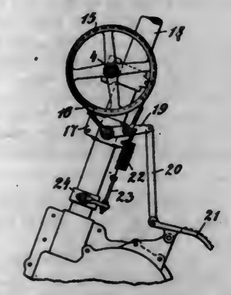
2. The process of manufacturing three-ply security paper, which consists in inserting under pressure an intermediate ply of paper together with suitable adhesive between two outer plies, said intermediate ply being previously provided with a regularly repeated configuration and having a different coefficient of shrinkage to the outer plies; in subsequently, upon the article having been dried, providing the outside of the three-ply paper with additional configuration exactly coinciding with the intermediate configuration.

3. The process of manufacturing three-ply security paper, which consists in inserting under pressure an intermediate ply of paper together with suitable adhesive between two outer plies, said intermediate ply being previously provided with a regularly repeated configuration and having a different coefficient of shrinkage to the outer plies; in subsequently, upon the article having been dried, providing the outside of the three-ply paper with additional configuration exactly coinciding with the intermediate configuration; and in finally subjecting the three-ply paper to additional pressure between knurled pressing members.

4. As an article of manufacture, a "security paper", comprising a plurality of paper plies pasted together and having different coefficients of shrinkage, a configuration on the pasted side of one of said plies and a duplication of said configuration on the outside of another of said plies; said configuration coinciding exactly with each other so as to give the appearance of a single configuration.

5. As an article of manufacture, a "security paper", comprising a plurality of paper plies pasted together and having different coefficients of shrinkage, a configuration on the pasted side of one of said plies and a duplication of said configuration on the outside of another of said plies; said configuration coinciding exactly with each other so as to give the appearance of a single configuration; the surface of the "security paper" being grooved.

1,210,791. GEAR FOR ADJUSTING THE ELEVATION OF THE FRAMES OF MOTOR-PLOWS. CARL GLEICHE, Berlin, Germany, assignor to Stock Motorpflug Gesellschaft Mit Beschränkter Haftung, Berlin, Germany, a Corporation of Germany. Filed Dec. 1, 1915. Serial No. 64,566. (Cl. 97—30.)



1. A brake for plows comprising in combination with an adjustable plow frame, a gear for adjusting the elevation of said frame and a soil tilling implement on said frame, a driving shaft, a band brake upon said driving shaft, a steering shaft for said plow, a sleeve surrounding said shaft, a lug on said sleeve to which the end of said brake band is secured and a foot pedal for releasing said brake.

2. A brake for motor plows comprising in combination with a gear for adjusting the frame, a soil tilling implement carried on said frame and a driving shaft provided on said frame, means for raising and lowering said frame, and means for increasing the braking action during the lowering of said frame substantially as described and for the purpose set forth.

1,210,792. METHOD OF PURIFYING ACETIC ACID. ADOLF GORHAN, Liesing, near Vienna, Austria-Hungary. Filed May 21, 1915. Serial No. 29,699. (Cl. 23—24.)

1. The method of removing formic acid and empyreumatic substances from acetic acid which comprises subjecting to distillation, at a temperature above that at which formic acid is decomposed and below that at which acetic acid is decomposed, a mixture of raw acetic acid, concentrated sulfuric acid and a diluting agent, the latter being in such proportion that the sulfuric acid will not affect the acetic acid at distillation temperature of the latter.

2. The method of removing formic acid and empyreumatic substances from acetic acid comprising mixing with raw acetic acid concentrated sulfuric acid of such strength that it will not injuriously affect the acetic acid at distillation temperature of acetic acid, and subjecting the mixture to a temperature above the temperature of decomposition of formic acid but below the temperature of decomposition of acetic acid.

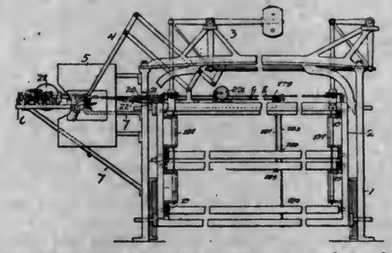
3. The method of removing formic acid and empyreumatic substances from acetic acid which comprises subjecting to distillation, at a temperature above that at which formic acid is decomposed and below that at which acetic acid is decomposed, a mixture of raw acetic acid, concentrated sulfuric acid and water, the latter being in such proportion that the sulfuric acid will not affect the acetic acid at distillation temperature of the latter.

4. Method of removing formic acid and empyreumatic substances from acetic acid, which consists in subjecting a mixture of substantially equal parts of acetic acid and of sulfuric acid of 70 per cent. to distillation at a temperature above the temperature of decomposition of formic acid but below the temperature of decomposition of acetic acid.

5. Method of removing formic acid and empyreumatic substances from acetic acid, which consists in subjecting a mixture of substantially equal parts of acetic acid and of sulfuric acid of 70 per cent. to distillation at a temperature not far above the boiling point of acetic acid.

[Claims 6 to 8 not printed in the Gazette.]

1,210,793. FABRIC SHIFTING AND TENSIONING MECHANISM FOR EMBROIDERING-MACHINES. JOSEPH A. GROEBLI, New York, N. Y. Filed Jan. 10, 1914. Serial No. 811,289. (Cl. 112—7.)



1. An embroidering machine having a tambour frame and means for supporting the fabric thereon, and fabric tensioning mechanism, comprising devices for performing different functions in the tensioning of the fabric, operating means for operating the several devices, and means actuated by a tensioning device for initiating the operation of another of said devices, whereby said devices will automatically operate in sequence.

2. An embroidering machine having a tambour frame and fabric supporting means, fabric controlling mechanism, comprising devices for performing different functions in the shifting and tensioning of the fabric, operating means for operating the several devices, and means actuated by one of said devices for initiating the operation of another of said devices, whereby said devices will automatically operate in sequence.

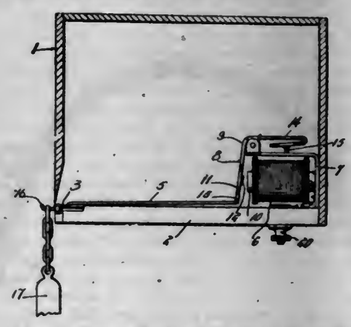
3. An embroidering machine having a tambour frame and means for supporting the fabric thereon, and fabric tensioning mechanism, comprising devices for performing different functions in the tensioning of the fabric, operating means for operating the several devices, and means, actuated by a tensioning device upon the completion of its operation, for initiating the operation of another of said devices, whereby said devices will automatically initiate the operation of each other.

4. An embroidering machine having a tambour frame for supporting the fabric, and fabric tensioning mechanism, comprising devices for performing different functions in the tensioning of the fabric, a common shaft from which said several devices are operated, and means actuated by said devices for initiating the operation of each other, whereby said devices will automatically initiate the operation of each other by said shaft.

5. An embroidering machine having a tambour frame for supporting the fabric, fabric tensioning mechanism and means for operating the same, including a plurality of relatively movable and separate gears, a common gear adapted to be operated by either of said separate gears for the purpose of operating the tensioning mechanism forwardly or backwardly, and automatic means for causing said common gear to be operated by either of said separate gears.

[Claims 6 to 53 not printed in the Gazette.]

1,210,794. FURNACE-DRAFT OPERATOR. WALTER HANN, Hasbrouck Heights, N. J. Filed Apr. 18, 1916. Serial No. 91,971. (Cl. 236—4.)

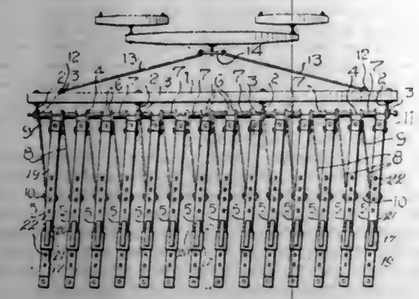


A furnace draft operating mechanism including a base block, a trip plate hinged at one end of said base block and being weighted to normally fall against said base block, an electromagnet mounted upon said base block, a counterweighted armature for said electromagnet normally locking said trip plate in folded position, and a hook extending rearwardly from said lock plate and in the normal position of said trip plate providing a support for a draft mechanism operating weight.

1,210,795. HARROW. HANS G. HANSON, Gettysburg, S. D. Filed Oct. 17, 1914, Serial No. 867,191. Renewed June 21, 1916. Serial No. 105,085. (Cl. 55—32.)

1. A device of the class described including a draft bar, spaced bearings carried thereby, a rod arranged in

spaced parallel relation with the draft bar and mounted in said bearings, drag bars having spaced plates secured to the inner ends thereof, said plates projecting beyond the ends of the drag bars at an angle and pivotally mounted upon said rod, teeth carried by the drag bars, sleeves arranged between the inner ends of the drag bars to retain the same in spaced relation, yieldable brace members having their inner ends mounted upon said rods and their outer ends rigidly connected to the medial portions of the draft bars, said brace members having their inner ends disposed adjacent the drag bar next in order, as and for the purpose set forth.



2. A device of the class described including a draft bar, spaced bearings carried thereby, a rod arranged in parallel relation to the draft bar and mounted within said bearings, drag bars arranged in spaced relation and pivotally mounted upon said rod, teeth carried by said drag bars, and a movable member supported upon said draft bars, whereby the adjustment of said member will vary the depth or of engagement of the teeth with the earth.

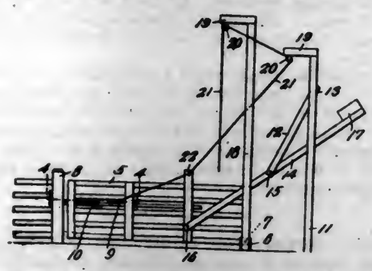
1,210,796. BACK-BAND. DANIEL H. HARDEN, Banks, Ala. Filed Nov. 23, 1914, Serial No. 873,595. Renewed June 12, 1916. Serial No. 103,338. (Cl. 54—4.)



A back band comprising a plurality of pairs of hingedly connected plates, the upper plates of each pair being pivotally connected, a strip of batting contacting with and common to said plates, and means for connecting the batting to the plates adjacent their hinged connections.

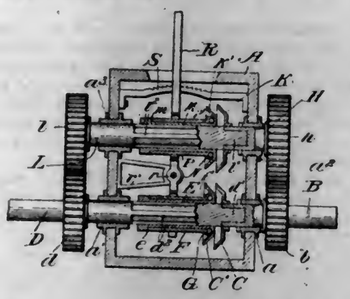
1,210,797. FARM-GATE. GEORGE E. HARDESTY, Folsom, N. Mex. Filed Mar. 28, 1916. Serial No. 87,296. (Cl. 39—44.)

The combination with a gate pivoted at its rear lower corner to swing into vertical position, a lever pivotally connected at one end to the lower portion of the gate and extending upwardly and rearwardly therefrom, a link suspended from an overhead point and pivotally connected to an intermediate point on said lever, to provide a pivot for the latter which swings in an arc rearwardly



from said gate, a counterbalance on the free end of said lever, and means to initially lift the gate.

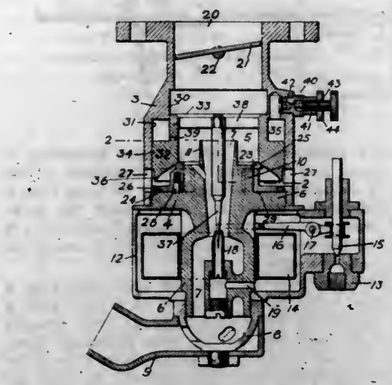
1,210,798. TRANSMISSION-GEARING. GEORGE V. HARRIMAN, New York, N. Y. Filed Dec. 18, 1913, Serial No. 807,528. Renewed June 2, 1916. Serial No. 101,382. (Cl. 74—59.)



The combination with a casing, of a driving shaft journaled in the casing and having a gear arranged outside the casing and a friction clutch member arranged in the casing, a driven shaft arranged in line with the driving shaft and also journaled in the casing, said driven shaft having a gear outside the casing and a friction clutch member inside the casing, the latter clutch member being supplemental to the one on the driving shaft, and splined on the driven shaft, a pair of secondary shafts journaled in the casing and carrying gears and supplemental friction clutch members like those on the driving and driven shafts, the gears on the secondary shafts being constantly in mesh with the respective gears on the driving and driven shafts and all the friction clutch members being housed in the casing, and means for simultaneously throwing in one clutch and throwing out the other clutch.

1,210,799. CARBURETER. JOHN JAY HAWXHURST, Jr., Brooklyn, and EDWARD FRANKLIN NICOLAI, Port Washington, N. Y., assignors to H. & N. Carbureter Company, New York, N. Y., a Corporation of New York. Filed Mar. 3, 1916. Serial No. 81,865. (Cl. 261—48.)

1. In a carbureter of the class described, a suitable casing having a vertically arranged air passage in communication with the atmosphere at its lower end, a series of auxiliary air inlet ports independent of said air passage and which ports are in direct communication with the atmosphere, and an outlet passage through which combustible mixture may flow; a fuel supply nozzle located within said air passage; an annular valve seat surrounding the upper end of said air passage; a vertically movable annular air valve located within said casing and having an annular seating portion adapted to coöperate with the valve seat at the upper end of said air passage, and the lower end of said valve lying opposite the ports aforesaid when said valve is in its lowermost position and the periphery thereof moving in contact with the interior of said casing; and a fuel supply valve carried by said air valve and adapted to control the flow of fuel through said fuel supply nozzle.



2. In a carbureter of the class described, a suitable casing having a vertically arranged air passage in communication with the atmosphere at its lower end, a series of auxiliary air inlet ports in communication with the atmosphere, and an outlet passage through which combustible mixture may flow; a fuel supply nozzle located within said air passage; a vertically adjustable annular valve seat surrounding the upper end of said air passage; means for adjusting said valve seat; a vertically movable annular air valve located within said casing and having an annular portion adapted to coöperate with the valve seat at the upper end of said air passage, the lower end of said valve lying opposite the ports aforesaid when said valve is in its lowermost position and the periphery thereof moving in contact with the interior of said casing; and a fuel supply valve carried by said air valve and adapted to control the flow of fuel through said fuel supply nozzle.

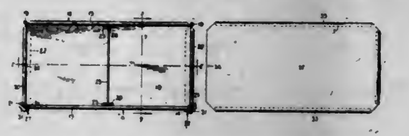
3. In a carbureter of the class described, a suitable casing having a vertically arranged air passage in communication with the atmosphere at its lower end, laterally disposed ports located adjacent the upper end of said air passage and also in communication with the atmosphere, and an outlet passage through which combustible mixture may flow; a fuel supply nozzle located within said air passage; an annular valve seat surrounding the upper end of said air passage; a vertically movable annular air valve located within said casing and adjacent the upper end of said air passage and having an annular seating portion adapted to coöperate with the valve seat at the upper end of said air passage, and the lower end of which valve lies opposite the ports aforesaid when said valve is in its lowermost position; and a fuel supply valve carried by said air valve and adapted to control the flow of fuel through said fuel supply nozzle.

4. In a carbureter of the class described, a suitable casing having a vertically arranged air passage in communication with the atmosphere at its lower end, a series of auxiliary air inlet ports located adjacent the upper end of said air passage and also in communication with the atmosphere, and an outlet passage through which combustible mixture may flow; a fuel supply nozzle located within said air passage; a vertically adjustable annular valve seat surrounding and located adjacent the upper end of said air passage; means for adjusting said valve seat; a vertically movable annular air valve located within said casing and adjacent the upper end of said air passage and having an annular portion adapted to coöperate with the valve seat at the upper end of said air passage, the lower end of said valve lying opposite the ports aforesaid when said valve is in its lowermost position and the periphery thereof moving in contact with the interior of said casing; and a fuel supply valve carried by said air valve and adapted to control the flow of fuel through said fuel supply nozzle.

5. In a carbureter of the class described, a suitable casing having a vertically arranged air passage in communication with the atmosphere at its lower end, a series of laterally disposed auxiliary air inlet ports located adjacent the upper end of said air passage and also in communication with the atmosphere, and an outlet passage through which combustible mixture may flow; a fuel supply nozzle located within said air passage; an annular valve seat surrounding the upper end of said air passage; a vertically movable annular air valve located within said casing and adjacent the upper end of said air passage, said air valve having a portion adapted to coöperate with the valve seat at the upper end of said air passage, and a depending portion adapted to obstruct the flow of air through the ports aforesaid when said valve is in its lowermost position; and a fuel supply valve carried by said air valve and adapted to control the flow of fuel through said fuel supply nozzle.

[Claims 6 to 25 not printed in the Gazette.]

1,210,800. COLLAPSIBLE CRATE. JAMES ALTON HAZEN and LOUIS DAVID GENTZLER, Holyoke, Colo. Filed Feb. 24, 1915. Serial No. 10,341. (Cl. 220—17.)



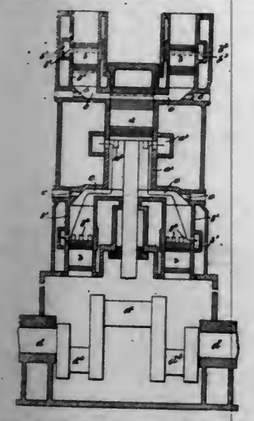
1. A collapsible metal crate, comprising a bottom, a front hinged to the bottom, a back hinged to the bottom, the front and back having rolled upper edges, ends hinged to the back and having at their lower edges flanges extending under the bottom to support the same, the end edges of the front and the front edges of the ends terminating in outwardly projecting tongues having their inner portions contacting with each other, removable grooved locking members slidingly engaging the said tongues, and each locking member being formed of a flat strip having its edges bent inwardly toward each other and spaced apart, and a cover having longitudinal beads slidably engaging the rolled edges of the front and back.

2. A collapsible metal crate, comprising a bottom, a front hinged to the bottom, a back hinged to the bottom, ends hinged to the back and having at their lower edges flanges extending under the bottom, the end edges of the front and the front edges of the ends terminating in outwardly extending tongues standing at acute angles to said edges and having their inner portions in engagement with each other, removable grooved locking members slidably engaging the said tongues, each member being formed of a flat strip having its edges bent inwardly toward each other and terminating a short distance from one another, and a cover having a sliding engagement with the crate.

1,210,801. DOUBLE-ACTING TWO-STROKE-CYCLE INTERNAL-COMBUSTION ENGINE. ALBERT HENNIG, Hamburg, Germany. Filed Aug. 28, 1912. Serial No. 717,507. (Cl. 123—53.)

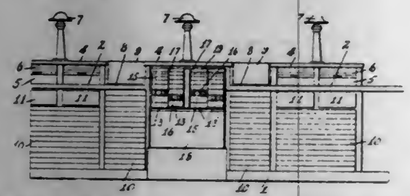
In a double acting, two-stroke cycle internal combustion engine having cylinders provided with scavenging air and exhaust ports, the combination of a large double acting working piston controlling the scavenging air ports with four similar smaller single acting working pistons, said smaller pistons having parallel axes, a shaft, a central crank on said shaft, said double acting working piston being connected to said central crank arranged at an angle of 180° to said first named crank, means for con-

necting the smaller pistons to said cranks, two of said smaller pistons and the working piston bounding each of



the compression chambers of the engine, substantially as described.

1,210,802. TICKET-COUNTER. GEORGE B. HERINGTON, Alhambra, Cal. Filed May 17, 1915. Serial No. 28,595. (Cl. 211—11.)

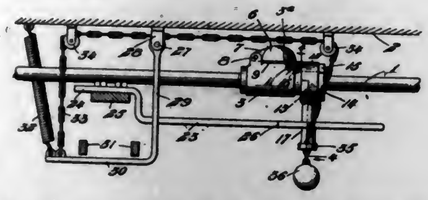


A device of the character described comprising a general top having working portions extending entirely thereacross at spaced intervals, a ticket carrier accessible from the rear portion of the top, the outer portion of the carrier being protected by a false top of substantially inverted L-shaped formation having a part thereof located above the general top and on one side of the same, but permitting access to the carrier at its rear end, other false tops of the same structure as the first mentioned top disposed upon the general top and arranged on each side of the ticket carrier, said false tops being spaced apart and forming a housing for movable receptacles, and removable guards positioned between said false tops and attached thereto, substantially as described.

1,210,803. SAFETY APPLIANCE FOR RAILROAD-CARS. BENJAMIN HOOVER, Meridian, Miss., assignor of one-half to Swebert B. Rieg, Meridian, Miss. Filed Sept. 20, 1916. Serial No. 121,262. (Cl. 188—2.)

1. A safety appliance for railroad cars embodying a valve casing to be interposed in a train pipe and having a boss provided with a concaved recess, the casing having an outlet port centrally of said recess, a valve head pivotally connected with the valve casing, a hemi-spherical gasket having its flat side fitting said head and seatable snugly in said recess, securing means extending through the gasket and into the head, means carried by the casing for holding said head with the gasket seated in said recess, and means for releasing said holding means.

2. A safety appliance for railroad cars embodying a valve adapted to be interposed in a train pipe, an oscillatory member carried by the valve for holding it closed when said member is in one position, said member having a guiding element, a flexible element extending through said guide element, and a weight carried by said flexible element for holding it taut and adapted to contact with said guiding element when the flexible element is pulled for swinging said member to release the valve.

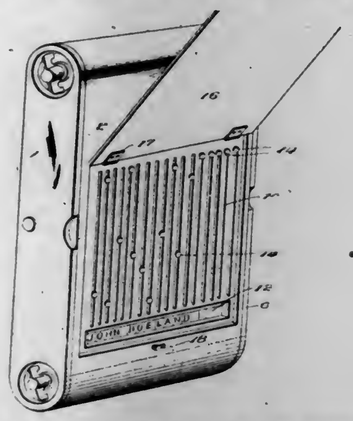


3. A safety appliance for railroad cars embodying a normally closed valve adapted to be interposed in the train pipe, a swinging device adapted to be hung from a car body and having means to extend below the brake beams of a truck for catching them, whereby said device is swung, and means whereby when said device is swung the valve is operated to open it.

4. A safety appliance for railroad cars embodying a normally closed valve to be interposed in a train pipe, a rock shaft adapted to be carried by a car body, hangers carried by said shaft and having arms extending therefrom to be disposed below the brake beams of a truck for catching and supporting said beams whereby the arms are depressed and the hangers swung, and means operable when said arms are depressed for operating the valve so that it opens.

5. A safety appliance for railroad cars embodying a normally closed valve, an oscillatory member assembled therewith for holding the valve closed when in one position, said member having a guide element, a rock shaft adapted to be hung from a car body, hangers carried by said shaft and having arms projecting therefrom to be disposed below the brake beams of a track, a guided flexible element attached to one of said arms and extending through said guide element, a weight attached to the flexible element to contact with the guide element when the chain is pulled by the depression of said arms, and spring means for normally raising said arms.

1,210,804. EXPOSURE-IDENTIFYING DEVICE FOR CAMERAS. PAUL WM. HOWLAND, Houghton, Wash. Filed Apr. 6, 1915. Serial No. 19,518. (Cl. 95—1.1.)



1. In a device of the class described, the combination with a camera casing having an exposure opening in one wall thereof, of a plurality of strips having character perforations therein, the said strips being slidably mounted and all arranged for adjustment across the said opening whereby compositions of characters may be produced at the opening, and means for closing the opening.

2. In a device of the class described, the combination with a camera casing having a transversely extending opening in one wall thereof, of a plurality of guides extending above and below the said opening, and character carrying members slidably mounted in the guides and arranged for adjustment across the said opening whereby compositions of characters may be produced at the opening.

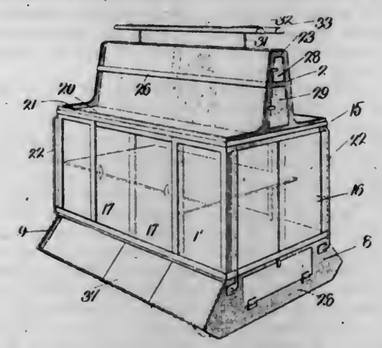
3. In a device of the class described, the combination with a camera casing having an exposure opening in one wall thereof, of a plurality of character carrying strips slidably movable upon the said wall of the casing and across the opening whereby compositions of characters may be produced at the opening, and means upon the said strips and upon the said wall arranged to coöperate to hold the strips in positions of adjustment with selected characters opposite the said opening.

4. In a device of the class described, the combination with a camera casing having an exposure opening in one wall thereof, of a plurality of character carrying strips slidably movable upon the said wall of the casing and across the opening whereby compositions of characters may be produced at the opening, and means upon the said strips and upon the said wall arranged to coöperate to hold the strips in positions of adjustment with selected characters opposite the said opening, the said means comprising projections upon the said strips and a member having means for coöperation with the said projections.

5. In a device of the class described, the combination with a camera casing having an exposure opening in one wall thereof, of a series of guides within the said wall transecting the opening, character carrying strips mounted in the guides for sliding movement across the opening whereby a composition of characters may be produced at the opening, and means whereby the strips may be independently adjusted.

[Claim 6 not printed in the Gazette.]

1,210,805. VENDING-TRUCK. JOHN F. HUCKEL, Kansas City, Mo. Filed Aug. 6, 1915. Serial No. 44,000. (Cl. 211—14.)

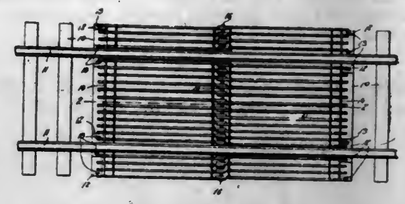


1. A showcase comprising a top member and a rack extending longitudinally along the top member and having spaced sides forming a compartment therebetween, and ends closing said compartments and projecting beyond the side of the rack and above the ends of the top to form confining rails.

2. A showcase comprising a top member and a rack extending longitudinally along the top member and having spaced sides forming a compartment therebetween, ends closing said compartments and projecting beyond the side of the rack and above the ends of the top to form confining rails, and edge rails along the top between said ends, forming horizontal and inclined troughs along the top of the case and sides of the rack.

3. A showcase comprising a top member and a rack extending longitudinally along the top member and having spaced sides forming a compartment therebetween, ends closing said compartments, and projecting beyond the sides of the rack and above the ends of the top to form confining rails, and edge rails along the top between said ends forming horizontal and inclined troughs along the top of the case and sides of the rack, and doors opening through said end members to the compartment within the rack.

1,210,806. CATTLE-GUARD. WILLIAM A. INMAN, Hartford City, Ind. Filed Aug. 9, 1916. Serial No. 114,019. (Cl. 256—15.)



1. A cattle guard comprising side strips adapted for connection with the cross ties of a track, a housing secured beneath said side strips and extending transversely of the track at a point intermediate the length of the side strips, cross bars secured upon said side strips and provided with upstanding flanges having openings formed therein, tread platforms including longitudinally extending bars having their outer end portions hooked and extending through the openings of said flanges to slidably connect the platform with the cross bars, a pivot rod extending through the inner end portions of the longitudinally extending bars of said platform, supporting posts positioned in said housing and having reduced threaded lower end portions extending through openings in the bottom of the housing and provided at their upper ends with yokes engaging said pivot rod, springs positioned upon the reduced ends of said posts to yieldably hold the posts in a raised position, securing nuts screwed upon the threaded lower ends of said posts, and an abutment bar slidably connected with said housing and provided with key-hole openings through which said posts pass.

2. A cattle guard comprising side supporting strips adapted for sliding connection with the cross ties of a railway track, cross bars carried by said side strips and having upstanding perforated flanges, platforms including longitudinally extending bars having their outer end portions passing through the slots to slidably mount the outer ends of the platforms, a pivot rod pivotally connecting the inner end portions of the bars of said platforms, a housing extending beneath said pivot rod, posts slidably carried by said housing and engaging said pivot rods, and resilient means carried by said posts for yieldably holding the same in a raised position.

3. A cattle guard comprising side strips, cross bars connected with the end portions of said side strips, a housing extending beneath the side strips and secured thereto, an adjusting bar slidably mounted beneath said housing and provided with key-hole openings, posts slidably passing through said housing and through the key hole openings of said adjusting bar and provided with securing nuts forming abutments engaging said bar, resilient means yieldably holding said posts in a raised position, platforms including longitudinally extending bars having their outer end portions slidably connected with said cross bars and having their inner end portions extending in overlapping relation, and a pivot rod passing through the overlapping inner end portions of the bars of said platforms and engaged by said posts.

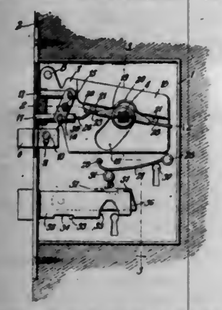
4. A cattle guard comprising platforms including longitudinally extending bars having their inner end portions extending in overlapping relation, a pivot rod extending through the overlapping inner end portions of said longitudinally extending bars, tread plates for the platforms carried by said longitudinally extending bars

and providing gutters between the bars, and a supporting structure for said platform including cross bars slidably engaged by the outer ends of the longitudinally extending bars of said platforms, posts engaging said pivot rod, and springs yieldably holding the posts in a raised position.

5. A cattle guard including platforms, a pivot rod pivotally connecting the inner end portions of said platforms, and a supporting structure for said platforms including cross bars for slidably engaging the outer end portions of said platforms, a housing forming part of said supporting structure and extending beneath said pivot rod, posts carried by said housing and engaging said pivot rod and yieldably held in a raised position, and a hood connected with and extending beneath said housing.

[Claim 6 not printed in the Gazette.]

1,210,807. LOCK. JAMES F. IVES, Newbern, N. C. Filed Apr. 26, 1916. Serial No. 93,687. (Cl. 70—51.)



1. The combination of a latch, a weight pivotally hung above the latch and connected therewith to hold the same normally projected and having an overhanging portion along its upper edge, spindles disposed below the said overhanging portion, lifting arms carried by the respective spindles and adapted to act upon said overhanging portion of the weight to lift the weight and withdraw the latch, and a key actuated lever mounted below the weight and adapted to engage the lower edge of the same.

2. The combination of a latch, a weight pivotally hung above the latch and connected therewith to hold it normally projected, a spindle, a rocking arm on said spindle adapted to lift the weight, and a lever fulcrumed at one end below the weight at one side of the vertical plane of the spindle and having its opposite end in contact with the lower edge of the weight at the opposite side of the vertical plane of the spindle.

3. The combination of a latch, a weight pivoted above the latch and connected therewith to hold it normally projected, a pair of axially alined spindles mounted for independent rotation, lifting arms on said spindles adapted to actuate the weight, and a dead-latch pin having a socket to engage the end of the lifting arm on the outer spindle and hold the same against movement.

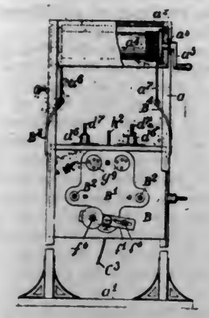
1,210,808. ORANGE TO RED DYESTUFFS ABLE TO BE CHROMATED AND A PROCESS OF MAKING SAME. CARL JAGERSPACHER, Basel, Switzerland, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Dec. 31, 1915. Serial No. 69,652. (Cl. 8—1.)

1. The described process for the manufacture of orange to red dyestuffs able to be chromated, consisting in combining an orthooxydiazo compound with a pyrazolone derivate of the benzene or the naphthalene series substituted by hydroxyl in the phenyl- or naphthyl nucleus.

2. The described process for the manufacture of orange to red dyestuffs able to be chromated, consisting in combining the diazo derivative of an orthoaminophenol- or an orthoaminonaphthol compound with a pyrazolone derivate of the benzene or the naphthalene series substituted by hydroxyl in the phenyl- or naphthyl- nucleus.

3. As new products the described orange to red dyestuffs able to be chromated, which are derived from an orthooxydiazo compound and a pyrazolone derivate of the benzene or the naphthalene series substituted by hydroxyl in the phenyl- or naphthyl nucleus and which constitute yellow to red powders soluble in concentrated sulfuric acid with intense colorations and in water to yellow to red solutions dyeing animal fibers according to the known processes used for chromium dyestuffs, orange to brown and red tints fast to fulling, potting and light.

1,210,809. MASSAGE APPARATUS. JOHANNES CHRISTIAN JOHANSEN, London, England. Filed Apr. 8, 1913. Serial No. 759,785. (Cl. 128—16.)



1. A massage apparatus comprising upright standards, a casing mounted on said standards, means for moving and adjusting the position of the casing, a motor and mechanisms operated by said motor inclosed in said casing and a plurality of openings in the casing for the passage of stems of applicators.

2. A massage apparatus comprising upright standards, a casing mounted on said standards, means for moving and adjusting the position of the casing, a motor in said casing, a plurality of openings and bearings in said casing for the passage of stems of applicators and members intermediate the motor and the stems for transmitting motion from the motor to the stems to produce massaging movements by the applicators.

3. A massage apparatus comprising upright standards, a casing mounted on said standards, means for moving and adjusting the position of the casing, a motor in said casing, levers adapted to be rocked by said motor and a plurality of openings and bearings in the casing for the passage of stems of applicators adapted to be operated by said levers so as to produce a tapping movement.

4. A massage apparatus comprising upright standards, a casing mounted on said standards, means for moving and adjusting the position of the casing, a motor in said casing, levers operated by said motor, shafts adapted to be rocked by said levers and projecting arms mounted on said rocking shafts, a plurality of openings and bearings in said casing for the passage of stems of applicators adapted to be operated by said projecting arms so as to produce a tapping movement.

5. A massage apparatus comprising upright standards, a casing mounted on said standards, means for moving and adjusting the position of the casing, a motor and mechanisms operated by said motor inclosed in said casing, a plurality of openings and bearings in the casing for the passage of applicator stems and means whereby the applicators are operated only when outside pressure is applied thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,210,810. LOCK. CHARLES E. JOHNSON, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Aug. 10, 1915. Serial No. 44,708. (Cl. 70—78.)

1. A case, a bolt movably mounted in the case and having branching legs, said bolt projecting through an opening in the case and being held against lateral movement therein, holding means carried by one of said legs to lock it against endwise movement, means to engage said holding means to coöperate in the locking operation, means upon the other leg to receive a key for actuation of the bolt, and means to force said locking parts into engagement.

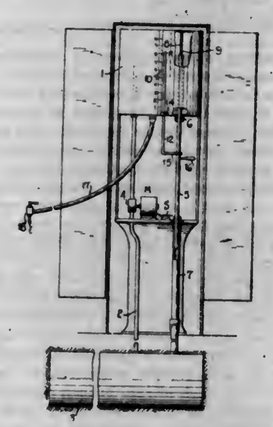


2. A case, a bolt movably mounted in the case and having branching legs, said bolt projecting through an opening in the case and being held against lateral movement therein, means carried by one of said legs to lock it against endwise movement, means to engage said holding means to coöperate in the locking operation, means carried by the other leg to receive a key to move the bolt laterally to disengage said locking means, and means similarly carried to move the bolt longitudinally.

3. A case, a bolt movable laterally and longitudinally within the case, legs branching from the bolt, means acting against one of said legs to force the bolt laterally in one direction, means upon the other leg to lock the bolt against endwise movement in either direction, and means to engage said holding means to coöperate in the locking operation.

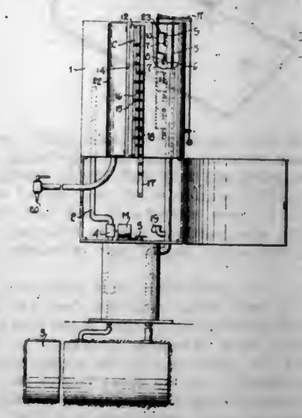
4. A case, a bolt slidable within the case, legs branching from the bolt, one of said legs having on its inner edge a surface to be engaged by a key to move the bolt laterally and another surface to be engaged by a key to move the bolt longitudinally, the other leg having on its outer surface a lug to engage openings in the edge wall of the case, and a spring located between the edge of the case and the first mentioned leg to force said lugs into engagement with said opening.

1,210,811. LIQUID-FUEL-DISPENSING APPARATUS. EDWARD N. KERN, Portsmouth, Ohio. Filed Nov. 27, 1915. Serial No. 63,876. (Cl. 221—100.)



In combination with a reservoir in communication with a suitable source of supply, a vertically disposed return pipe extending within the reservoir and mounted for endwise movement, an index member having its lower end secured to the return pipe at a point below the reservoir, the upper end portion of said member overlying an outer face of the reservoir, a hand grasp extending laterally from the return pipe for imparting endwise movement thereto, a scale arranged on the outer face of the reservoir and with which the index member coacts, and a guide carried by the reservoir through which the index member is slidably disposed, said guide coacting with the index member for holding the return pipe against rotation.

1,210,812. LIQUID-FUEL-DISPENSING APPARATUS. EDWARD N. KERN, Portsmouth, Ohio. Filed Nov. 27, 1915. Serial No. 63,877. (Cl. 221—100.)



1. A device of the character described including a measuring tank in communication with a suitable source of supply, a return pipe disposed vertically through the container, said return pipe being provided with a plurality of longitudinally spaced openings, a valve for controlling each of said openings, means extending exteriorly of the tank for adjusting the valve into open adjustment, the exterior portion of said means being provided with an identity, a rock arm to which said valve is affixed and with which the operating means coacts, and a spring coacting with the rock arm for maintaining the valve normally in a closed position.

2. A device of the character described including a measuring tank in communication with a suitable source of supply, a return pipe disposed vertically through the container, said return pipe being provided with a plurality of longitudinally spaced openings, a valve for controlling each of said openings, means coacting with each of the valves and extending exteriorly of the tank for adjusting the valve into open adjustment, the exterior portion of said means being provided with an identity, and means coacting with each of the valves for normally maintaining the same in a closed position.

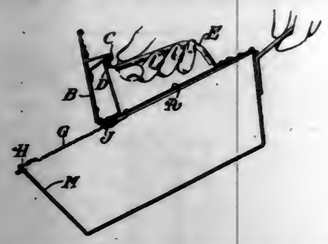
3. A device of the character described including a measuring tank in communication with a suitable source of supply, a return pipe in communication with the container, a discharge nozzle in communication with the container, and an elbow in communication with the return pipe below the container and into which the nozzle is adapted to discharge.

1,210,813. COOKING-POT COVER. KITTIE M. KOOPMANN, Waldwick, N. J. Filed Feb. 12, 1916. Serial No. 77,919. (Cl. 53—8.)

1. A pot cover including two sheet material sections arranged substantially in the same plane and hinged together, one section having a handle upstanding thereon and the other section having a spring catch rigidly secured thereto, said handle having means adapted to engage with the catch on elevating one section out of said plane and thereupon to hold said section elevated.

2. A pot cover including a divided disk of sheet material having its parts hinged together, an upstanding handle attached to one part and arranged approximately perpendicular to the hinge axis and having a locking shoulder, and a spring catch rigidly secured thereto upstanding from

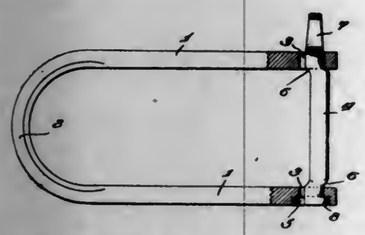
the other part and adapted to spring into locking engagement with said shoulder on elevating said other part.



3. A pot cover including a sheet metal part, another part of sheet material having one edge joined to an edge of the first part, said first part having tubular edge-portions in angular relation to its first named edge, and a wire having its ends entered into and thus supported by said tubular edge portions and its intermediate portion supporting the second named part outwardly of its said edge.

4. A pot cover including a sheet metal part, a foraminous part of sheet metal extending from and having one edge thereof underlapping an edge of the first named part, a reinforcing strip extending lengthwise of said edges and against the under face of the second-named part, a handle upstanding from the upper face of the first-named part, and means, extending through the handle, said parts and the strip, to secure all of them together.

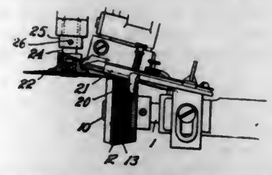
1,210,814. CLEVIS. CLARENCE L. KISSINGER, Pierson, Iowa, assignor of one-half to Frank A. De Witt, Pierson, Iowa. Filed May 20, 1916. Serial No. 98,801. (Cl. 97—4.)



The combination with a clevis including spaced arms having lateral openings at their ends and provided with a recess in the wall of one of said openings, of a clevis pin adapted to be inserted through said openings and having its entire intermediate portion offset bodily from the ends thereof to provide annular shoulders adapted to engage between the opposed inner faces of the arms of the clevis, one end of the pin being provided with an enlarged head adapted to bear against the outer surface of one of the arms and the other end of the pin being provided with a laterally extending lug spaced from the adjacent annular shoulder and adapted to seat within the recess, the lower face of the pin and lug being disposed in the same plane and flush with the outer surface of the other arm of the clevis.

1,210,815. SKIVING-MACHINE. WILLIAM F. LAUTENSCHLAGER, Cincinnati, Ohio, assignor to Lorenz Muther, Newton, Mass. Filed Mar. 9, 1914. Serial No. 823,274. (Cl. 69—16.)

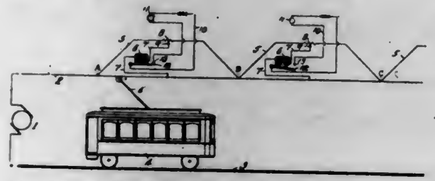
1. In a skiving machine, the combination with a cutting knife of a feed-wheel for feeding and supporting the material, which feed-wheel consists of a disk mounted on a rotatable shaft, said rotatable shaft, a rotatable bearing movably mounted in said disk, a plurality of rotatable disks yieldingly mounted on said rotatable bearing, a spring for normally retaining said rotatable bearing in alinement with the rotatable shaft, and an adjusting nut for adjusting the tension of said spring.



2. A feed-wheel for skiving machines, comprising a disk having a fixed axis of rotation mounted on a rotatable shaft, said rotatable shaft, a rotatable bearing having one of its ends mounted in said disk in such manner that its axis of rotation may be varied with relation to the axis of rotation of said rotatable shaft, a plurality of disks yieldingly mounted on said bearing, means for causing said plurality of disks to rotate with the disk having the fixed axis of rotation, spring-controlled means for normally holding said plurality of rotatable disks with their axes of rotation in alinement with the axis of rotation of the rotatable shaft, and means for varying the tension of said spring.

3. A feed-wheel for skiving machines for supporting and feeding the material, consisting of a plurality of rotatable disks, and yielding means to permit the axes of rotation of a plurality of said disks to be automatically varied with relation to the cutting plane of a cutting knife, and means that may be adjusted to rigidly hold said disks with their axes of rotation in alinement with each other.

1,210,816. RAILWAY SIGNALING SYSTEM. REED M. LEWIS, Aliquippa, Pa. Filed Nov. 4, 1913. Serial No. 799,143. (Cl. 246—36.)



1. In a railway signal system, a continuous trolley conductor connected with a source of electrical energy, a plurality of paralleling branch conductors each connected at both ends to said trolley conductor at spaced intervals forming blocks, a signal device for each block and a signal controlling circuit connected with the trolley conductor and with the branch conductor of each block.

2. In a railway signal system, a continuous trolley conductor, connected with a source of electrical energy, a plurality of paralleling branch conductors connected at both ends to said trolley conductor at spaced intervals forming blocks, a signal device for each block, and a signal controlling device positively connected with the trolley conductor and branch conductor of each block.

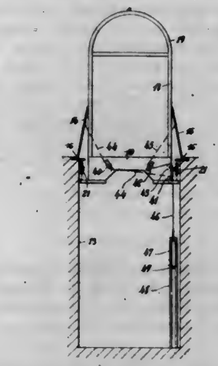
3. In a railway signal system, a continuous trolley conductor connected with a source of electrical energy, a plurality of paralleling branch conductors each connected at both ends to said trolley conductor at spaced intervals forming blocks, each of said branch conductors having a resistance therein, a signal device for each block, and a signal controlling device connected at one end to the trolley conductor and at the other end to the branch conductor of each block.

4. In a railway signal system, a continuous trolley conductor connected with a source of electrical energy, a plurality of paralleling branch conductors each connected at both ends to said trolley conductor at spaced intervals forming blocks, a signal device for each block, a signal controlling device connected with the trolley conductor and the branch conductor of each block, and means carried by the car to automatically increase the current to and insure operating of the signal controlling device when the current otherwise is not sufficient.

5. In a railway signal system, a continuous trolley conductor connected with a source of electrical energy, a plurality of paralleling branch conductors each connected at both ends to said trolley conductor at spaced intervals forming blocks, a signal device for each block, a signal controlling device connected with the trolley conductor and branch conductor of each block, and means to vary the resistance of the circuit in the branch conductor of each block.

[Claims 6 and 7 not printed in the Gazette.]

1,210,817. SIDEWALK-ELEVATOR DOOR. JENS S. LINDHOLM, Brooklyn, N. Y. Original application filed Sept. 22, 1915, Serial No. 51,923. Divided and this application filed Feb. 15, 1916. Serial No. 78,366. (Cl. 187—62.)

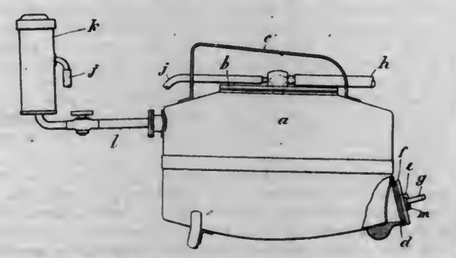


1. The combination with a sidewalk elevator shaft and sidewalk doors therefor, an elevator movable within said shaft and means operated by said elevator for preventing accidental opening of the said sidewalk doors.

2. The combination with a sidewalk elevator shaft and sidewalk doors therefor, and means including the elevator operated in said shaft for preventing the said doors from being opened by means other than the said elevator and for closing the said doors when the elevator descends.

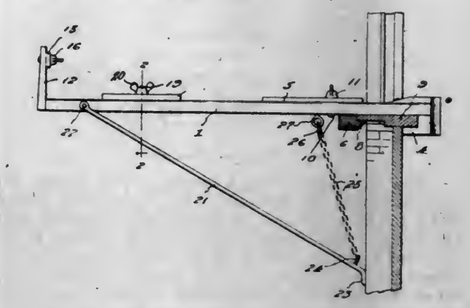
3. The combination with a sidewalk elevator shaft and sidewalk doors therefor, an elevator operated the length of said shaft, means on said elevator for opening the said doors on the ascent of the elevator, and means in said shaft and connected to the said doors for closing the latter by the said elevator as it descends and for maintaining said doors closed during the entire descending movement of the elevator below the sidewalk level.

1,210,818. MILK VESSEL FOR MILKING-MACHINES WORKING WITH VACUUM. KNUT IVAR LINDSTRÖM, Djursholm, Sweden, assignor to Aktiebolaget Mjölkningsmaskin Omega, Flen, Sweden. Filed Mar. 9, 1916. Serial No. 83,152. (Cl. 31—73.)



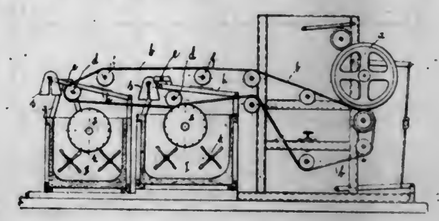
In a milking apparatus in combination, a combined vacuum and milking vessel having an opening at the top and a second opening close to the bottom of the vessel, and a cover for each of said openings, said vessel and the cover for the second opening having inter-engaging members for holding the same in position over said second opening, said cover being pressed against the mouth of said second opening during the milking process on account of the vacuum prevailing in the vessel.

1,210,819. ADJUSTABLE WINDOW-SCAFFOLD. GEORGE E. LOEBEL, West Allis, Wis. Filed Feb. 17, 1915. Serial No. 8,841. (Cl. 20—87.)



A window scaffold extending entirely across the space between the sides of a window frame and adjustable to suit the width of the window and comprising a pair of channeled supporting bars provided at their inner ends with hooks for engaging a window sill at the inner edge thereof, said supporting bars being also provided at their outer ends with upwardly extending arms and having longitudinal slots located intermediate of their ends, clamping members consisting of bars of greater width than the slots arranged upon the upper faces of the supporting bars and provided with hooks extending downwardly through the slots and arranged to engage the window sill under the outer edge thereof to hold the scaffold against upward movement, fastening devices spaced from the hooks and operating in the slots to secure the clamping members in their adjustment, a platform adjustably secured upon the supporting bars, a bar connecting the arms and also adjustably secured to the latter, said connecting bar and platform maintaining the supporting bars in proper spaced relation at the sides of the window frame and inclined braces pivoted to the flanges of the channeled supporting bars and adapted to fit against the exterior of a wall.

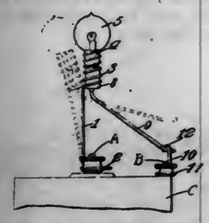
1,210,820. PROCESS FOR THE MANUFACTURE OF ARTIFICIAL-STONE PLATES. LUDWIG LUKACS, Budapest, Austria-Hungary. Filed Oct. 17, 1908. Serial No. 458,145. (Cl. 25—1.)



A process of manufacturing artificial stone composed of layers of asbestos and cement, the outside layers being of cement, consisting in delivering onto an endless belt, at an initial stage, a single layer of cement, transferring said layer onto a drum, simultaneously delivering onto the endless belt, at another stage, two layers, one a layer of cement, and the other a layer of asbestos, one being super-

posed on the other, transferring said superposed layers onto said drum, and delivering onto the endless belt, at a final stage, a single layer of cement, and transferring said layer of cement onto said drum.

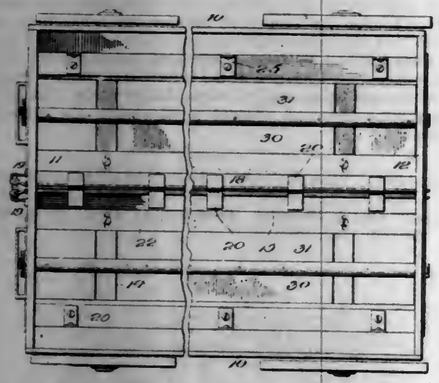
1,210,821. BATTERY-LAMP. HENRY ED MCCLURE, Marion, Ind. Filed Feb. 5, 1915. Serial No. 6,356. (Cl. 240—8.5.)



1. The combination with a battery, a limb having one end attached to one terminal of the battery and formed with a coil at its free end, an electric bulb engaged in said coil, a second limb connected to the central terminal of the bulb, and a portion carried by the other terminal of the battery for the engagement of the second mentioned limb, one of the limbs being resilient and tending to normally move the second mentioned limb away from said portion.

2. A lamp attachment for batteries, embodying a limb having means at one end for engagement with one terminal of a battery and formed with a coil at its other end for the reception of an electric bulb, a member of insulating material engaged within said coil, a second limb engaged through said member for connection with the central terminal of the bulb and adapted to be connected with the other terminal of the battery, one of the limbs being resilient and normally tending to move the second mentioned limb away from the respective terminal of the battery.

1,210,822. DUMPING-WAGON. WILLIAM MCEWAN, Freeland Park, Ind. Filed Aug. 10, 1915. Serial No. 44,810. (Cl. 21—20.)



1. In mechanism of the character described, a frame, a dividing bar mounted thereon, a shiftably mounted load supporting element arranged upon each side of the dividing bar, and bed plates carried by the frame and adjustable relative to opposite sides of each of the said load supporting elements to coöperate therewith, with the said plates providing bottom wall sections for the frame.

2. In mechanism of the character described, a frame, a dividing bar mounted thereon, members mounted adjacent said dividing bar, bed plates carried by the said members and adjustable thereon toward or away from the dividing bar with the said plates providing bottom wall sections for the frame, and load supporting elements carried by the frame and adapted for movement to dump a load.

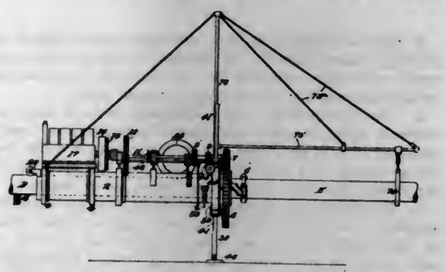
3. In mechanism of the character described, a frame, a dividing bar mounted thereon, load supporting elements carried by the frame and adapted for movement to dump a load, brackets carried by the frame, and bed plates adjustable upon said brackets toward or away from the said load supporting elements in the normal position of said elements with the said plates providing bottom wall sections for the frame.

4. In mechanism of the character described, a frame, transversely extending members carried by the frame, blocks mounted upon said members, a dividing bar carried by said blocks and provided with downwardly diverging sides, a scraping element arranged to coöperate with each side of the dividing bar and shiftable longitudinally thereof, cleats carried by said transversely extending members, bed plates carried by the cleats, load supporting elements mounted upon the frame and adapted for oscillation to dump a load, brackets carried by the frame, and bed plates carried by the brackets, the several bed plates being adjustable toward or away from the load supporting elements in the normal position of said elements.

5. In mechanism of the character described, the combination with a frame, a dividing bar carried thereby, and load supporting elements carried by the frame and adapted for movement to dump a load, of a scraping element mounted to coöperate with the dividing bar, and a lever for shifting the said element to scrape the said bar.

[Claims 6 to 11 not printed in the Gazette.]

1,210,823. PIPE-LAYING MACHINE. JOHN J. MAHONEY, San Francisco, and WILLIAM L. NORRIS, Berkeley, Cal., assignors to California Pipe Line Machine Co., San Francisco, Cal., a Corporation of California. Original



application filed May 7, 1913, Serial No. 766,056. Divided and this application filed May 25, 1915, Serial No. 30,339. Renewed May 29, 1916. Serial No. 100,700. (Cl. 29—88.2.)

1. In a pipe laying machine, the combination of a frame to receive a pipe, a trailer wheel carried by the frame for supporting one end thereof on the pipe, and means connected with the other end of the frame for adjusting the latter.

2. In a pipe laying machine, the combination of a frame to receive a pipe and adapted to be carried upon and supported at one end by said pipe and a support for the other end of the pipe, said support including means for adjusting said frame to vary the angle and elevation of the pipe.

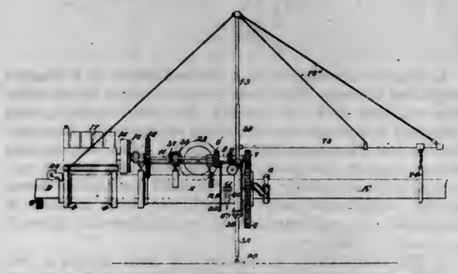
3. In a pipe laying machine, the combination of a cylindrical member adapted to be carried on a pipe and to be supported at one end upon the ground and at its other end on the pipe, and means for centering the pipe within the member.

4. In a pipe laying machine, the combination of a supporting member adapted to be supported on a pipe line, a pipe receiving member carried thereby for holding a pipe section in alinement with and to be secured to the pipe line, and means for adjusting said supporting member vertically in either direction to aline the pipe section with the pipe line.

5. In a pipe laying machine, the combination of a main frame to receive and support a pipe, an outrigger carried by said frame to receive another pipe in line with the first mentioned one, and means for adjusting said frame and outrigger to bring said pipes into alined positions to be screwed together.

[Claims 6 to 15 not printed in the Gazette.]

1,210,824. PIPE-LAYING MACHINE. JOHN J. MAHONEY, San Francisco, and WILLIAM L. NORRIS, Berkeley, Cal., assignors to California Pipe Line Machine Co., San Francisco, Cal., a Corporation of California. Original application filed May 17, 1913, Serial No. 766,056. Divided and this application filed May 25, 1915, Serial No. 30,340. Renewed Sept. 18, 1916. Serial No. 120,887. (Cl. 29—88.2.)



1. In a pipe laying machine, a carriage formed to travel on a pipe line as a track, and pipe laying mechanism mounted on the carriage and extending in advance of the latter to lay a pipe onto which the carriage may subsequently be advanced.

2. In a pipe laying machine, a carriage, a tractor for driving the carriage when in operative engagement with the supporting surface, a support for the tractor normally holding the latter out of operative engagement with the supporting surface, and pressure bearing means for moving the tractor support to bring the tractor into operative engagement with the supporting surface.

3. In a pipe laying machine, the combination of a carriage adapted to travel on a pipe line as a track, pipe laying mechanism on the carriage, common power operated means for driving said carriage and pipe laying mechanism, and means for rendering the first means inoperative relative to either the mechanism or carriage.

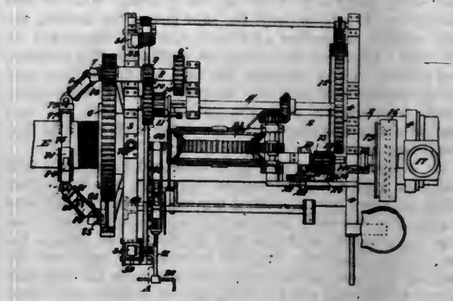
4. In a pipe laying machine, a carriage formed to travel on a pipe line, pipe laying mechanism mounted on the carriage and extending in advance of the latter, said mechanism including means for alining a pipe section to the pipe line and means for securing the pipe section to the pipe line, and power means for driving the carriage and operating the pipe laying mechanism.

5. In a pipe laying machine, the combination of a carriage, pipe laying mechanism on the carriage, a tractor for said carriage adapted to travel on a pipe line as a track, common means for driving said tractor and said pipe laying mechanism, and means for moving said tractor into and out of engagement with the pipe line to render the tractor operative and inoperative for moving the carriage.

[Claims 6 to 19 not printed in the Gazette.]

1,210,825. PIPE-SCREWING MACHINE. JOHN J. MAHONEY, San Francisco, and WILLIAM L. NORRIS, Berkeley, Cal., assignors to California Pipe Line Machine Co., San Francisco, Cal., a Corporation of California. Original application filed May 17, 1913, Serial No. 766,056, now Patent No. 1,143,844. Divided and this application filed May 25, 1915, Serial No. 30,341. Renewed May 29, 1916. Serial No. 100,701. (Cl. 81—57.)

1. In a pipe screwing machine, a frame to receive a pipe; means for locking the pipe thereto against turning movement, a shaft journaled on the frame, change speed mechanism for rotating said shaft, a rotatable member fixed on the end of the shaft, gripping means spaced outwardly of the shaft, and yielding connections supporting the gripping means from the rotatable member.



2. In a pipe screwing machine, a frame to receive a pipe; means for locking the pipe thereto against turning movement, a rotatable member on the frame, change speed mechanism for rotating said member, gripping means, yielding connections between the rotatable member and gripping means, and strain indicating devices for said connections.

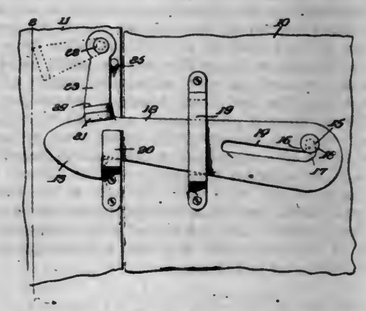
3. In a pipe screwing machine, a rotating member, pipe gripping means, a driving connection between the member and pipe gripping means including flexible means permitting movement of the pipe gripping means toward and from the rotating member and initial rotation of the latter relative to the former.

4. In a pipe screwing machine, a frame, a wheel rotatable thereon having spoke portions, pipe gripping means spaced laterally from the wheel and having outwardly extending parts, and yieldable connections between the spoke portions of the wheel and the outwardly extending parts of the gripping means.

5. In a pipe screwing machine, a frame, a wheel rotatable thereon, pipe gripping means adapted to grip a pipe and spaced laterally from the wheel, said gripping means comprising an arched arm adapted to straddle a pipe and a jaw adjustably secured to the arm, and yieldable connections between the arm and wheel.

[Claims 6 to 20 not printed in the Gazette.]

1,210,826. DOOR-LATCH. WILLIAM S. MINOR, Northville, N. Y., assignor of one-half to John R. Walrath, Northville, N. Y. Filed Dec. 7, 1915. Serial No. 65,535. (Cl. 70—102.)



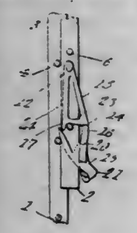
1. A device of the character described including a bolt, a retainer therefor, means for supporting the bolt, the bolt being projectable to engage the retainer with the bolt engaging the said means for holding the bolt against retraction and with the bolt freely supported by the said means to disengage the retainer, and locking means coöperating with the retainer to engage the bolt for holding

the said bolt in engagement with the retainer and against shifting movement to disengage with the said first mentioned means.

2. A device of the character described including a bolt, a retainer therefor, means for supporting the bolt, the bolt being projectable to engage the retainer with the bolt gravitating to engage with the said means for holding the bolt against retraction and with the bolt supported by the said means for movement to disengage the retainer, and locking means engaging the bolt for holding the said bolt in engagement with the retainer with the said locking means coöperating with the retainer to hold the bolt against shifting movement to disengage with the said first mentioned means.

3. A device of the character described including a bolt provided with a slot having an upwardly directed terminal, a retainer for the bolt, a pin supporting the bolt and engaging in the said slot, the bolt being projectable to engage the retainer with the bolt gravitating to engage the pin in the upwardly directed terminal of said slot for holding the bolt against retraction and with the bolt supported by the said pin to disengage the retainer, and locking means coöperating with the retainer and engaging the bolt for holding the said bolt in engagement with the retainer and against movement to disengage the pin from within the said terminal of the said slot.

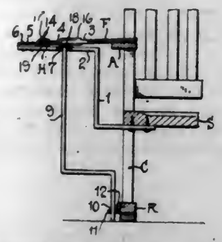
1,210,827. AUTOMATIC GRAVITY LADDER-LOCK. ISRAEL MYERS, Goshen, Ind., assignor to The Superior Ladder Company, Goshen, Ind. Filed Nov. 23, 1914. Serial No. 873,559. (Cl. 228—25.)



An extension ladder comprising a front section and a back section; a latch comprising an open triangular head defined by the forward and rear upwardly converging arms and by a bottom bar uniting the arms, the bottom bar being provided at its forward end with an integral depending extension, and being provided at its rear end with a depending projection which is shorter than the extension; the extension being equipped with a slot defining a stop at the lower end of the extension; a pivot element mounted in the extension and extended across the slot; a guard located in the slot, the guard terminating at its rear end in a reduced, upwardly extended finger prolonged to the rear of the projection, the guard being provided in its forward end with an integral weight adapted to engage the stop and being provided intermediate its ends with an upward prolongation mounted to swing on the pivot element; the extension being offset to permit the slot to be of a maximum width, and to permit the guard to be of sufficient thickness; a pivot element uniting the apex of the head with one stile of the forward section, the bottom bar being adapted to engage one rung of the rear section, and the finger being engageable by one rung of the rear section to permit a downward swinging of the rear end of the guard.

1,210,828. FAN. JAMES E. NISBET, Jacksonville, Ala. Filed Dec. 11, 1915. Serial No. 66,369. (Cl. 230—7.)

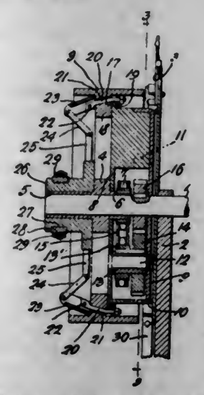
1. A fan attachment for rocking chairs comprising a bracket adapted to be attached to a rocking chair and extend laterally therefrom, a fan hingedly engaged with the upper face of the bracket, a rod loosely disposed through the bracket and having a head at its upper end limiting the downward movement of the rod relative to the bracket, the upper end of the rod contacting with the under side of the shank of the fan, the fan having free movement away from the bracket independent of the rod, and means separate from the fan and its shank for resiliently limiting the movement of the fan in the last named direction.



2. The combination with a rocking chair, of a bracket extending laterally therefrom, a fan having a shank hingedly engaged with the bracket, the fan normally lying upon the face of the bracket, a rod supported by the chair for vertical movement and having its upper end passing loosely through the bracket and formed with a head contacting with the shank of the fan, said fan and its shank having independent vertical movement with relation to said rod, and resilient means for limiting the upward movement of the fan.

3. The combination with a rocking chair having a seat and an arm, of an angular bracket attached to the seat extending laterally therefrom, then upward to approximately the level of the arm and then laterally outward, a guide member mounted upon the rocker of the chair and extending laterally therefrom, a fan having a shank hingedly connected to the upper face of the lateral projection of the bracket, the fan normally lying upon the arm of the rocker, a rod at its lower end passing through the guide member and at its upper end passing through the lateral projection of the bracket and having a head disposed beneath but disconnected from the shank of the fan whereby the fan may have independent movement with relation to the rod, and a spring attached to the outer extremity of the bracket extending upward and inward over the hinged connection of the shank of the fan to the bracket and resiliently limiting the upward movement of the fan.

1,210,829. TRANSMISSION MECHANISM. JOHN OLDHAM, Helm, Ky. Filed Aug. 2, 1916. Serial No. 112,761. (Cl. 74—34.)

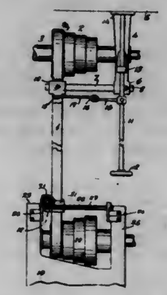


1. The combination with a drive shaft and a driven element mounted for rotation on the shaft, of a casing mounted for rotation within the driven element and upon the shaft, means for coupling the casing to and uncoupling it from the driven element, means for engaging the casing to hold it against rotation, a gear secured to the shaft and within the casing, a sprocket within the casing and revoluble with the driven element, a driven gear mounted within and revoluble with the casing and meshing with the gear upon the shaft, a sprocket revoluble with the driven gear, and a chain connecting the sprockets.

2. The combination with a drive shaft and a pulley mounted for rotation on the shaft, of a casing seated within and revoluble relative to the pulley, said casing being revoluble upon the shaft, coöperating means upon the pulley and casing for holding said pulley and casing against independent rotation, means for engaging the casing to hold it against rotation with the pulley, and mechanism within the casing for transmitting motion from the shaft to the pulley.

3. The combination with a drive shaft and a pulley mounted for rotation on the shaft, of a casing seated within and revoluble relative to the pulley, said casing being revoluble upon the shaft, coöperating means upon the pulley and casing for holding said pulley and casing against independent rotation, means for engaging the casing to hold it against rotation with the pulley, and mechanism within the casing for transmitting motion from the shaft to the pulley, said mechanism including a gear secured to the shaft, a sprocket revoluble with the pulley, a gear mounted for rotation within the casing and revoluble with the casing, said gear meshing with the gear upon the shaft, a sprocket revoluble with the second mentioned gear, and a chain engaging the sprocket.

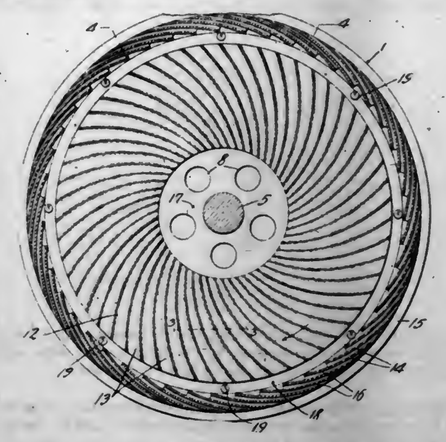
1,210,830. BELT-SHIFTER MECHANISM. WILLIAM OESTERLEIN, Cincinnati, Ohio, assignor to The Oesterlein Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 9, 1913. Serial No. 778,192. (Cl. 64—4.)



In a belt-shifting mechanism, the combination of a suitable hanger, a horizontal pulley-shaft journaling in said hanger, a vertical endless belt adapted to coöperate with a machine to be driven, a carrier-loop through which the belt is passed along one of its vertical portions, a horizontal bar adjustably mounted on said hanger beneath said pulley-shaft and on which the carrier-loop is mounted and adapted to reciprocate, a stepped-cone on said pulley-shaft, a vertical shaft mounted on said hanger; a lateral arm or lever adjustably mounted near the upper end of said vertical shaft below its bearing in the hanger, an operating hand-wheel mounted at the lower end of said vertical shaft, and a horizontal link pivotally-connecting the said lateral arm or lever with the said carrier-loop.

1,210,831. GAS-TURBINE. FRED BROWN PFEIFFER, Akron, Ohio. Filed Feb. 19, 1916. Serial No. 79,445. (Cl. 123—10.)

1. A gas turbine embodying a rotor having a central gas inlet chamber, channels extending outwardly from said chamber to conduct the gas therefrom by centrifugal action, an annular combustion chamber in communication with the outer ends of said channels, and outlet channels extending from the combustion chamber approximately tangentially of the rotor.



2. A gas turbine embodying a rotor having a central gas inlet chamber, channels extending from said chamber and curved away from the direction of rotation of the rotor, an annular combustion chamber with which the outer ends of said channels communicate, and outlet channels extending from said combustion chamber approximately tangentially relative to the rotor, said channels increasing in size from their inner to their outer ends.

3. A gas turbine embodying a rotor having a central gas inlet chamber, a large number of channels extending outwardly from said chamber of relatively small cross sectional areas to conduct the gas from said chamber by centrifugal action, an annular combustion chamber with which the outer ends of said channels communicate, and an annular series of outlet channels extending from the combustion chamber approximately tangentially relative to the rotor.

4. A gas turbine embodying a rotor having a central gas inlet chamber, a large number of channels extending outwardly from said chamber of relatively small cross sectional areas to conduct the gas from said chamber by centrifugal action, an annular combustion chamber with which the outer ends of said channels communicate, and an annular series of outlet channels extending from the combustion chamber approximately tangentially relative to the rotor, the first mentioned channels being curved away from the direction of rotation of the rotor and increasing in size from their inner to their outer ends, the last mentioned channels being relative wide and shallow and increasing in width from their inner to their outer ends.

5. In a turbine, a rotor comprising a body having a rim and an annular chamber, and an annular series of overlapped blades secured upon said rim and provided with channels extending from said chamber away from the direction of rotation of the rotor.

[Claims 6 to 8 not printed in the Gazette.]

1,210,832. FENDER FOR SHIPS' PIERS. EDWARD S. J. PHILLIPS, New York, N. Y. Filed June 22, 1916. Serial No. 105,105. (Cl. 114—219.)

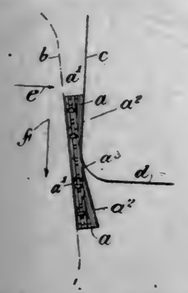
1. A fender for ships' piers having relatively inclined side faces.

2. A fender for ships' piers having relatively inclined side faces and means to secure the fender to the pier.

3. A fender for ships' piers adapted to float between the broad side of a ship and the pier and having a substantially wedge shaped horizontal cross section.

4. A fender for ships' piers having a straight edge to engage the broad side of the ship and oppositely inclined faces formed on the other edge.

5. A fender for ships' piers having a straight edge to engage the broad side of the ship, inwardly extending and oppositely inclined faces formed on the other edge and



a straight edge section on the second named edge of the fender substantially parallel to the first named edge and at which the oppositely inclined faces terminate.

1,210,833. ICE-CHEST OR REFRIGERATOR. CELSO PIAZZA, Marseille, France. Filed Jan. 6, 1914. Serial No. 810,538. (Cl. 217—3.)



1. In a refrigerator or ice chest, a casing for the ice comprising a double layer of wool, and an intermediate filling of clay and wax.

2. In a refrigerator or ice chest, a casing for the ice comprising a double layer of wool, and an intermediate filling of clay and wax, the walls of said casing having holes therethrough.

3. In a refrigerator or ice chest, a casing for the ice comprising a double layer of wool, and an intermediate filling of clay and wax, said casing having the shape of an inverted truncated pyramid as described.

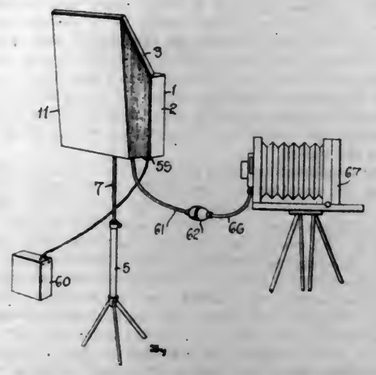
4. In a refrigerator or ice chest, an ice compartment lined with a double layer of wool and a filling of wax and clay between the layers of wool.

1,210,834. PHOTOGRAPHIC FLASH-LIGHT APPARATUS. WILLIAM B. POYNTER, Cincinnati, Ohio, assignor of one-half to William E. Mayer, Cincinnati, Ohio. Filed Sept. 25, 1915. Serial No. 52,653. (Cl. 67—30.)

1. In a photographic flashlight apparatus, a magazine, a firing chamber spaced from the magazine and adapted to hold flashlight cartridges, a baffle plate yieldably mounted between the magazine and the firing chamber, a cartridge shifting member operable across the end of the magazine and engageable with one cartridge at a time to move it from the magazine to the firing chamber, said cartridge shifting means engaging said baffle plate to shift it out of the way to permit the movement of the cartridge into the firing chamber, and independently operable means for firing the cartridges in said chamber.

2. A photographic flashlight apparatus, including a housing, a firing chamber mounted therein, yieldable electrodes mounted in the housing in juxtaposition to said firing chamber, a magazine adapted to hold a plurality of cartridges in the housing in superposed relation to each other, a slide bar mounted in the housing and operable from the exterior thereof and adapted to move one cartridge at a time from the magazine to the firing chamber into contact with said electrodes, and a latch bar carried by said slide and arranged to lock the slide at the limit of its movement when the cartridge is pushed firmly into contact with said electrodes.

3. A photographic flashlight apparatus, including a housing, a cartridge firing chamber mounted therein, a magazine adapted to hold cartridges in the housing and spaced from said chamber, means for moving the cartridges from the magazine into the firing chamber, means for firing the cartridges in said chamber, and a yieldable baffle wall between the said chamber and said magazine, normally held in position across the end of the firing chamber.



4. A photographic flashlight apparatus, including a housing, a cartridge firing chamber mounted therein, a magazine adapted to hold cartridges in said chamber, and spaced from said firing chamber, means for moving the cartridges from the magazine to the firing chamber, and a spring-held baffle wall between the said chamber and said magazine, and adapted to engage the rear end of a cartridge pushed into the firing chamber.

5. A photographic flashlight apparatus, including a housing, a firing chamber mounted therein, a magazine adapted to hold cartridges in said housing, a reciprocating slide bar mounted in said housing and operable from the exterior thereof and adapted to move the cartridges from the magazine to the firing chamber, a spring-held baffle wall between said chamber and said magazine engageable by the slide bar in its movements and adapted to prevent the passage of flame from the firing chamber into the magazine, and means for firing a cartridge in said chamber.

[Claims 6 to 28 not printed in the Gazette.]

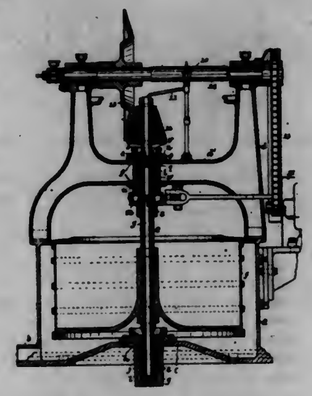
1,210,835. DEVICE FOR ATTACHING AND DETACHING ELECTRIC BULBS. JOSEPH ALEXANDER PRICE, New York, N. Y. Filed June 18, 1915. Serial No. 34,880. (Cl. 240—101.)



1. A device for attaching and detaching electric bulbs including a bulb embracing member, means in connection with said member for rotating the latter, a housing for completely inclosing said means, and secondary means for imparting movement to the aforementioned means.

2. A device for attaching and detaching electric bulbs including a polygonal housing, a bulb embracing member in connection with one face of the housing and movable independently of the latter for use in connection with laterally extending bulbs, and means mounted on another face of the housing to receive said member, the latter adapted to move as an entirety with the housing for use with vertically depending bulbs.

1,210,836. HYDRO-EXTRACTOR. CLIFFORD H. RAMSEY, Paterson, N. J., assignor to James L. Morrison Machine Co., Paterson, N. J., a Corporation of New Jersey. Filed May 27, 1916. Serial No. 100,415. (Cl. 64—56.)



1. In combination, a support and an upright rotary member having a bearing in the support and a lubricant passage extending through the bearing portion of said member, said member having a constant-level lubricant retarder in the passage and a lubricant port leading laterally from the retarder to the bearing and delivering to the latter at a point above the constant level of the retarder.

2. In combination, a support and an upright rotary member having a bearing in the support and a lubricant passage extending through the bearing portion of said member, said member having a constant-level lubricant retarder in the passage and an inclined lubricant port leading laterally from the retarder to the bearing and delivering to the latter at a point above the constant level of the retarder.

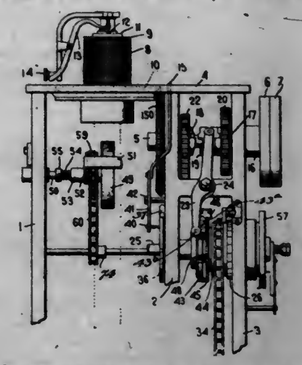
3. In combination, a support having an annular lubricant well including interiorly thereof a bearing part, and an upright rotary member penetrating said well and having a bearing part depending into the well and operatively engaging the bearing part thereof, said member having means to feed a lubricant substantially axially through the same and then into the well.

4. In combination, a support having an annular lubricant well including a bearing part, and an upright rotary member penetrating said well and having a bearing part depending into the well and operatively engaging the first-named bearing part, one of said bearing parts having its bearing surface tapered, and one of said bearing parts being vertically adjustable relatively to the other.

5. In combination, a support having upper and lower bearings, and an upright rotary member journaled in said bearings and having a lubricant passage extending therethrough, uninterrupted from above the upper bearing to and delivering into the lower bearing, said member having a constant-level lubricant retarder in said passage and a lubricant port leading laterally from the retarder to the upper bearing.

[Claims 6 to 8 not printed in the Gazette.]

1,210,837. KNITTING-MACHINE. EDISON E. RANDALL, Kankakee, Ill., assignor to Paramount Knitting Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 28, 1913. Serial No. 797,885. (Cl. 66—23.)



1. In a knitting machine for knitting different kinds of work, a friction wheel located in the path of the web and adapted to be rotated thereby, a movable guard which, when interposed between the wheel and the web prevents the rotation of the wheel by the web, a pattern chain driven by said wheel and operating to effect the movement of the guard into the interposed position upon the completion of a predetermined length of knitted web and pattern controlled means for effecting the movement of said guard out of interposed position.

2. A knitting machine comprising means for knitting ribbed and plain work and for changing from one to the other, a friction wheel located in the path of the web and adapted to be rotated thereby, means for automatically causing the co-action of said web and wheel upon the commencement of ribbed work and means operated from said wheel and actuated upon the completion of a predetermined length of web to effect a termination of the co-action of said wheel and web and a setting into action of the means for knitting plain work.

3. In a knitting machine, means for knitting ribbed work, plain circular work and reciprocating work and for changing from one to the other, means operated by contact with the knitted web for causing the cessation of either circular or ribbed knitting and the commencement of another of the aforesaid kinds of knitting upon the completion of a predetermined length.

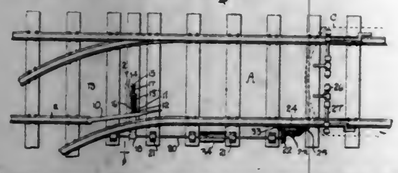
4. A knitting machine comprising means for knitting ribbed work, plain circular work and reciprocating work and for changing from one to the other, means operated by contact with the knitted web for causing the cessation of one kind of knitting and the commencement of another kind of knitting upon the completion of a predetermined length and means for causing the cessation of one kind of knitting and the commencement of another kind of knitting upon the completion of a predetermined number of courses and pattern controlled means for throwing either of the last two means into operation.

5. In a knitting machine, a friction wheel located in the path of the web and adapted to be rotated thereby, to measure the length of the knitted web, means for determining the number of courses in the web being knitted and means for automatically causing, when required, the co-action of the said wheel and web, whereby the length of the web may be measured either by the wheel or by the number of courses knit.

1,210,838. SWITCH-OPERATING MECHANISM. CLAUDE HENRY RATLIFF, Plateau, Ala. Filed Apr. 19, 1916. Serial No. 92,240. (Cl. 104—24.)

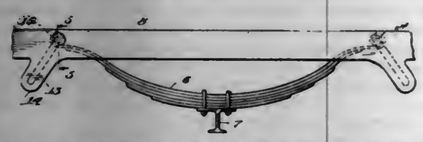
1. The combination with a switch point, of a switch rod extending therefrom, a shaft extending longitudinally of the track, in advance of the switch point, an eccentric mounted on the shaft, a sleeve surrounding the eccentric,

an eccentric bar extending from the sleeve, having loose connection with the switch rod, springs surrounding the switch rod and bearing against the eccentric bar and resisting independent movement of the switch rod with relation to the bar, a bevel gear wheel carried upon the shaft, a bevel gear wheel disposed in a plane parallel to the track, and engaging the first named bevel gear wheel, and radially disposed arms projecting from the second bevel gear wheel and adapted to be engaged by switch operating mechanism on a car.



2. The combination with a track including a switch point, of a shaft extending longitudinally of the track, a rotatable member on the shaft operatively engaging the switch point, whereby a half rotation of the shaft will oscillate the switch point from one operating position to another, a bevel gear wheel on the shaft, a bevel gear wheel disposed in a plane parallel to the track and engaging the first named bevel gear wheel and having a diameter twice as great as that of the first named bevel gear wheel, and arms extending radially from the second named gear wheel adapted to be engaged by an operating member on a car.

1,210,839. VEHICLE-SPRING. DANIEL R. RAYMOND, Los Angeles, Cal. Filed Dec. 16, 1915. Serial No. 67,188. (Cl. 267—37.)



1. In a suspension device, a pair of spaced parallel plates having correspondingly inclined opposed grooves on their adjacent faces, a second pair of spaced plates formed with correspondingly inclined opposed grooves on their adjacent faces, inclined oppositely in relation to the grooves on the other plates, said grooves having closed ends and parallel side walls, a pair of relatively movable members on one of which said pairs of plates are carried in spaced alinement, a semi-elliptic spring secured at its middle to the other movable member with its ends extending between the plates of each pair of plates, and pins carried on the ends of the spring projecting on each side thereof and terminating in the parallel grooves in position to bear on either side wall of the latter.

2. The combination with a pair of relatively movable members and a semi-elliptic spring interposed therebetween, of oppositely inclined grooved guide walls with which the ends of the spring are slidably engaged to permit elongation of the span of the spring on movement of the members toward each other.

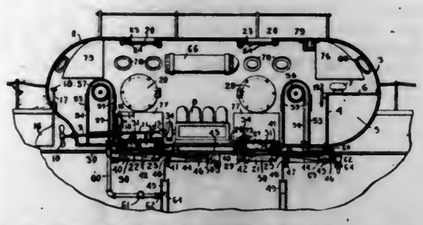
3. The combination with a pair of relatively movable members, one of which is fitted with spaced divergent guide grooves having parallel side walls, a semi-elliptic spring interposed between said members, and a slidable connection between the extremities of said spring and the guide grooves engageable with either wall of said grooves.

4. The combination with a pair of relatively movable members, one of which is fitted with spaced divergent guide grooves, a semi-elliptic spring interposed between said members, and a slidable connection between the extremities of said spring and the guide grooves, said grooves diverging in a direction opposite the direction of compression of the spring and having parallel side walls.

5. The combination with a pair of relatively movable members, spaced oppositely inclined pairs of parallel grooved walls carried by one of said members, and a semi-elliptic spring attached intermediate its ends to the other member having its ends slidably engaged between said inclined parallel walls.

[Claims 6 to 9 not printed in the Gazette.]

1,210,840. SUBMARINE LIFE-BOAT. DAVID VICTOR REEVES, East Dedham, Mass. Filed Apr. 19, 1915. Serial No. 22,222. (Cl. 114—16.7.)



1. In combination with a ship having an egress passage, a submarine life boat having an air tight body provided with an ingress passage and means for detachably securing said life boat to said ship with said egress and ingress passages in connection, and means for closing the ingress passage of the life boat from the interior of the life boat and automatically operating means adapted to be actuated upon the release of the life boat to close the egress passage of the ship.

2. In combination with a ship having an egress passage, a submarine life boat having an air tight body provided with an ingress passage and means for detachably securing said life boat to said ship with said egress and ingress passages in connection, and means for closing both the egress passage of the ship and the ingress passage of the life boat from within the latter and supplemental automatic means adapted to be actuated upon the release of the life boat to reinforce the closure of the egress passage of the ship.

3. In combination with a ship having a hatch, a submarine life boat having an air tight body provided with a hatch adapted to be superimposed upon the ship's hatch, bolts for securing the life boat to the ship, independent means for closing the respective hatches of the ship and life boat, a supplemental closure for the hatch of the ship comprising a counterweighted sliding plate, normally resting against the bolts which secure the life boat to the ship and adapted to be released when the bolts are withdrawn substantially as described.

4. In combination with a ship having a hatch, a submarine life boat having a water-tight body, and provided with a hatch adapted to be superimposed upon the ship's hatch, bolts for securing the life boat to the ship, independently operable closures respectively for the hatches of the ship and the life boat and means for closing the bolt holes in the ship when the bolts are withdrawn therefrom to release the life boat.

5. In combination with a ship having a hatch, a submarine life boat having a water-tight body, and provided with a hatch adapted to be superimposed upon the ship's hatch, bolts for securing the life boat to the ship, independently operable closures respectively for the hatches of the ship and the life boat and means for automatically closing the bolt holes in the ship when the bolts are withdrawn therefrom to release the life boat.

[Claims 6 and 7 not printed in the Gazette.]

1,210,841. MOP. MARY G. REILLY, Denver, Colo. Filed Jan. 27, 1913. Serial No. 744,301. (Cl. 15—43.)

1. A mop including a handle with a flat head thereon, a rotatable sliding spool on the handle, and a cloth formed as an elongated flat bag loosely surrounding the head and having its upper end clamped around the spool and a slit in its lower portion adapted to pass the head.

2. A mop including a handle, a flat rubber head on the lower end of the handle, a spool on the handle above the head, and a mop cloth formed as an elongated flat bag inclosing the head and having its upper end clamped around the spool and a slit in its lower portion adapted to pass the head.



3. A mop including a handle, a flat head on one end of the handle, a spool slidably and rotatably mounted on the handle above the head, and a cloth formed as an elongated flat bag clamped at its upper end around the spool and fitting around the head.

1,210,842. METHOD OF MAKING FOUNTAIN-PEN BARRELS. HERMAN RICKMAN, Butler, N. J. Filed Oct. 16, 1916. Serial No. 125,901. (Cl. 18—56.)

1. A method of making fountain pen barrels which consists in first cutting a tube of unvulcanized rubber the desired size, then inserting a raw rubber plug in one end of said tube, then placing water within the tube, then inserting a raw rubber plug in the other end thereof, then placing the closed tube within a mold, then vulcanizing the mold-inclosed tube, then cutting said tube transversely into two sections, and then finishing the sections.

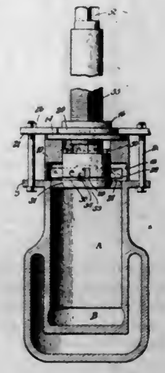
2. A method of making fountain pen barrels which consists in first cutting a tube of unvulcanized rubber the desired size, then inserting a raw rubber plug in one end of said tube, then placing water within the tube, then inserting a raw rubber plug in the other end thereof, then placing the closed tube within a mold, then vulcanizing the mold-inclosed tube, then cutting said tube transversely into two sections, then drilling out the inside of the sections to form chambers of desired size, and then finishing the sections.

3. A method of making fountain pen barrels which consists in first cutting a tube of unvulcanized rubber the desired size, then inserting a raw rubber plug in one end of said tube, then placing water within the tube, then inserting a raw rubber plug in the other end thereof, then placing the closed tube within a mold, then vulcanizing the mold-inclosed tube, then cutting said tube transversely into two sections, then drilling out the inside of the sections to form chambers of desired size, then facing the cut ends of the sections and smoothing their closed ends, then placing the sections on mandrels and threading the open ends thereof.

1,210,843. PORTABLE MACHINE FOR REBORING ENGINE-CYLINDERS. ROBERT E. ROSEBERRY, Baltimore, Md. Filed Apr. 26, 1916. Serial No. 93,716. (Cl. 77—2.)

1. A machine for re-boring engine cylinders including supporting means adapted to be clamped in axial alinement with the cylinder bore, a feed plate carried by the supporting means, a feed screw threaded through the plate, a cutter head carried by the feed screw, and cutters adjustably clamped in the head with their cutting edges vertically disposed and extending to the plane of the lower face of the head.

2. A machine for re-boring engine cylinders including supporting means adapted to be clamped in axial alinement with the cylinder bore, a feed plate carried by the supporting means, a feed screw threaded through the plate, a cutter head carried by the feed screw, cutters adjustably clamped in the head with their cutting edges vertically disposed and extending to the plane of the lower face of the head, a beveled head detachably secured to the lower face of the cutter head, and an expanding guide ring engaging the beveled head and expansible through such engagement.



3. A machine for re-boring engine cylinders including supporting means adapted to be clamped in axial alinement with the cylinder bore, a feed plate carried by the supporting means, a feed screw threaded through the plate, a cylindrical cutter head carried by the feed screw and formed with an axial bore and in its lower face with radial slots laterally extended at their upper ends, cutters mounted in the slots and having ribs engaging in the lateral extensions thereof, an expander movable in the bore and engageable with the inner ends of the cutters to move them outwardly, and means for locking the cutters against longitudinal movement.

4. A machine for re-boring engine cylinders including a supporting ring adapted to engage against the open end of a cylinder and counterbored at its outer end to form a seat, a feed plate engageable in the seat, a feed screw threaded through the plate and extending axially of the supporting ring, a cutter head carrying radial cutters mounted upon the feed screw, the lower end of the supporting ring being counterbored to form a chamber to receive the cutter blades when the upper portion of the cutter head is guided by the intermediate portion of the ring, a clamping plate apertured for passage of the feed screw and adapted to project beyond the ring, the projecting portions of the plate being formed with slots, and clamping means adapted to pass through bolt openings in a cylinder flange and the slots of the clamping plate to clamp the ring against the flange.

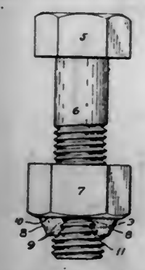
5. In a machine for re-boring engine cylinders, a cylindrical cutter head formed with a central bore and in one end with radial slots opening into the bore and through the sides of the head, the slots being wider at their inner than their outer sides, cutters fitting snugly in the slots and so held against movement other than longitudinally of the slots, set screws threaded into the cutter head at right angles to and engaging the cutters, and means mounted in the bore of the cutter head for simultaneously extending the cutters and for supporting them in extended position.

[Claims 6 to 9 not printed in the Gazette.]

1,210,844. NUT-LOCK. WALTER T. ROSS, Vancouver, British Columbia, Canada. Filed Sept. 27, 1915. Serial No. 52,760. (Cl. 151—22.)

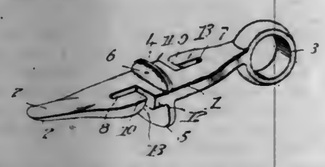
In combination with a bolt having a screw-threaded shank, of a screw-threaded nut uninterrupted in its body portion threaded on the shank, a plurality of integral non-resilient fingers projecting from the outer face of the nut and having threaded faces engaging the threads of the

bolt, the fingers being formed to permit their complete severance from the face of the nut carrying the same without destroying the main body portion of the nut, one of the threads of the bolt being mutilated by having its apex flattened inwardly adjacent one of said fingers and



outwardly of the body portion of the nut to provide a detent and to prevent accidental unscrewing of the nut, the said fingers adapted for forceful counter clockwise rotation to restore the mutilated thread to normal condition to permit unscrewing of the nut.

1,210,845. TYING IMPLEMENT. REUBEN D. ROTH, Gettysburg, Pa. Filed June 16, 1914. Serial No. 845,461. (Cl. 100—20.)



1. A device of the character described, comprising a bar, lateral extensions arranged upon the opposite faces of said bar intermediate the ends thereof, a plurality of distorted recesses formed in the bar and opening on the opposite edges thereof, said recesses being disposed upon either side of the lateral extensions and adapted to receive the extremities of a tying member to retain the same while tying.

2. A device of the character described, comprising a bar, lateral extensions formed upon the opposite sides of said bar substantially midway the length thereof, a plurality of distorted recesses open in the opposite edges of the bar to receive a tying member, said lateral extensions serving as means on which the extremities of the tying member may be placed when completing a tying operation.

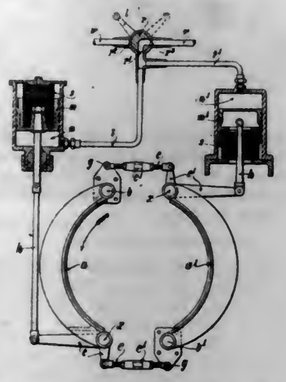
3. A device of the character described, comprising a bar having laterally oppositely disposed projections on the faces thereof, a plurality of substantially right angularly shaped recesses formed in the bar and opening on the opposite edges thereof and adjacent said projections to receive a tying member, said projections serving as means to hold a flexible tying element when tying.

1,210,846. BRAKE MECHANISM. FREDERICK HENRY ROYCE, Derby, England. Filed June 6, 1914. Serial No. 843,554. (Cl. 74—13.)

1. A brake mechanism comprising brake shoes each having one end pivotally mounted, and independent means connected with the free end of each of the brake shoes for independently and simultaneously actuating them to bind the object they act upon.

2. A brake mechanism comprising brake shoes each having one end pivotally mounted upon a base, and independent fluid actuated means connected with the free end of each of the brake shoes for independently and simultaneously actuating them toward a point midway thereof to provide for uniform binding action upon the object acted upon.

3. A brake mechanism comprising brake shoes each having their radially opposed ends pivotally mounted upon a base, independent fluid actuated means, deriving power from a common source, connected with the free end of each of the brake shoes for independently and simultaneously actuating them toward a point midway the two to provide for uniform binding action upon the object acted upon and means connected with the first named means and pivotally mounted upon a base for compensating for the wear of the brake shoes.



4. A brake mechanism comprising a pair of diametrically opposed identical brake shoes each having their radially opposed ends pivotally mounted upon a base, independent fluid actuated reversely moving means, deriving power from a common source, connected with the free end of each of the brake shoes for independently and simultaneously actuating them toward a point midway the two to provide for uniform binding action upon the object acted upon and means connected with the first named means and pivotally mounted upon a base for compensating for the wear of the brake shoes.

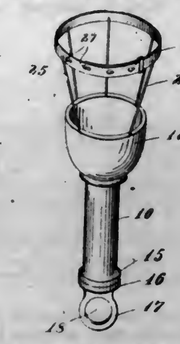
5. A brake mechanism comprising a pair of diametrically opposed identical brake shoes each having their radially opposed ends pivotally mounted upon a base, independent fluid actuated reversely moving means, deriving power from a common source, connected with the free end of each of the brake shoes for simultaneously actuating them toward a point midway the two to provide for uniform binding action upon the object acted upon, said means comprising, means for compensating for the wear of said brake shoes, and bell crank levers included in said actuating means and having connection with both the free ends of the brake shoe and the compensating means whereby to co-act with said actuating means and said compensating means to maintain an association between the two to compensate for brake shoe wear and to adjust the shoes relatively to each other.

1,210,847. TOY BALL-THROWER. GEORG RUBEL, New Orleans, La. Filed Feb. 3, 1916. Serial No. 75,919. (Cl. 46—59.)

1. In a toy, the combination with a hollow stem adapted to be manually operated and having a cylindrical bore therethrough, of a plunger operatively engaged in said bore, means contained in said bore for normally forcing said plunger toward one end, a hollow hemisphere engaged with and open to the upper end of said stem, a guide band loosely connected with the upper edge of said hemispherical shell, and means permitting contraction or expansion of said band.

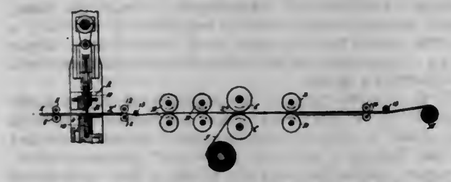
2. In combination with a hollow stem adapted to be manually maneuvered and having a cylindrical bore therethrough, of a plunger suited to the mentioned bore, an elastic compressible sleeve adapted to force said plunger

normally outward, means whereby said sleeve may be compressed, a hollow hemispherical casing connected at the



upper end of said stem and an extensible guide ring removably engaged with said hemispherical casing.

1,210,848. METHOD AND MACHINE FOR MAKING METAL LATH. CHARLES H. SCAMMELL, New York, N. Y., assignor to Charles H. Scammell Company, a Corporation of New Jersey. Filed Nov. 27, 1914. Serial No. 874,161. (Cl. 164—6.6.)



1. The method of making metal lath, which consists in forming the metal lath with projecting tongues integral therewith, and forcing said tongues into a backing sheet to secure the latter on the lath.

2. The method of making metal lath, which consists in forming the metal lath with projecting tongues integral therewith, forcing said tongues into a backing sheet to secure the latter on the lath, and clenching the tongues upon the sheet.

3. The method of making metal lath of expanded metal, which consists in slitting the metal to form tongues projecting from the slits, expanding the metal to turn the strands and tongues at an angle to the plane of the metal with the tongues projecting beyond the plane of the strand joints of the lath, and forcing said tongues into a backing sheet to secure the latter on the lath.

4. The method of making metal lath of expanded metal, which consists in slitting the metal to form tongues projecting from the slits, expanding the metal to turn the strands and tongues at an angle to the plane of the metal with the tongues projecting beyond the plane of the strand joints of the lath, forcing said tongues into a backing sheet to secure the latter on the lath, and clenching the tongues upon the sheet.

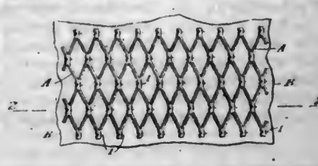
5. The method of making metal lath of expanded metal, which consists in slitting the metal to form tongues projecting from the slits, and expanding the metal to turn the strands and tongues at an angle to the plane of the metal with the tongues projecting beyond the plane of the strand joints of the lath.

[Claims 6 to 13 not printed in the Gazette.]

1,210,849. METAL LATH. CHARLES H. SCAMMELL, New York, N. Y., assignor to Charles H. Scammell Company, a Corporation of New Jersey. Filed Nov. 27, 1914. Serial No. 874,162. (Cl. 72—117.)

1. An article of manufacture consisting of metal lath having projecting tongues formed thereon, and a backing sheet secured on the lath by said projecting tongues.

2. An article of manufacture consisting of metal lath having projecting tongues formed thereon, and a backing sheet secured on the lath by said projecting tongues clenched upon the sheet.

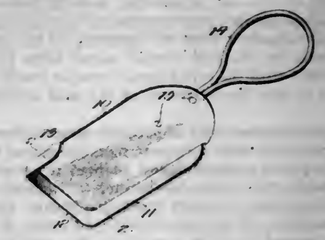


3. An article of manufacture consisting of expanded metal lath having its strands turned at an angle to the plane of the metal and tongues formed on the metal and projecting beyond the plane of the strand joints of the lath, and a backing sheet secured on the lath by said tongues clenched upon the sheet.

4. An article of manufacture consisting of plastering material formed of metal lath adapted to receive and hold plaster or similar plastic material and having projecting tongues formed thereon, and a backing sheet of paper or similar material secured by said projecting tongues on one side of the lath and adapted to form a mold sheet for the plaster applied to the lath.

5. An article of manufacture consisting of plastering material formed of expanded metal lath adapted to receive and hold plaster or similar plastic material and having its strands turned at an angle to the plane of the metal having projecting tongues formed on the projecting strand joints of the lath, and a backing sheet of paper or similar material secured by said projecting tongues on one side of the lath and adapted to form a mold sheet for the plaster applied to the lath.

1,210,850. CLEANER FOR KITCHEN UTENSILS. JAMES SCARR, Randsburg, Cal. Filed June 5, 1915. Serial No. 32,406. (Cl. 65—12.)



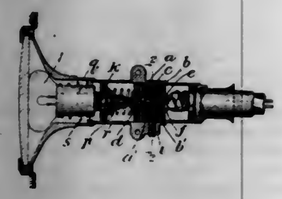
1. As a new article of manufacture, a scraper for cooking utensils comprising an elongated body portion open at its rear end and provided at its front end and side edges with upstanding flanges, each terminating in a knife edge, one of the side flanges being longer than the other and both of said side flanges extending in the direction of the open end of said body portion, and a handle secured to the lower surface of the body portion at the open end thereof with its free end disposed at an angle to said surface.

2. As a new article of manufacture, a scraper for cooking utensils comprising an elongated body portion open at its rear end and having smooth upper and lower surfaces, there being a flange projecting laterally from the upper surface of the body portion at the front end thereof and side flanges projecting from said upper surface and formed integral with the front flange, one of said side flanges being shorter than the other and all of said flanges terminating in knife edges, the corner of the body portion at the junction of the long side flange and front flange being rounded, and a handle extending longitudinally from the open end of the body portion and having its free end disposed at an angle to the lower surface, thereof.

3. As a new article of manufacture, a scraper for cooking utensils comprising an elongated body portion having

its rear end open and curved transversely and its upper surface smooth and unobstructed, said body portion being provided at its front end with an upstanding flange and at its side edges with upstanding flanges of different lengths and extending in the direction of the open end of the body portion, the corner of the body portion at the junction of the short flange and front flange being angular and the corner of the body portion at the junction of the long flange and front flange being curved, and an operating handle extending longitudinally from the open end of the body portion with its free end disposed at an angle thereto.

1,210,851. ELECTRICAL CONNECTOR. OTTO SCHAEFER, New York, N. Y. Filed Nov. 20, 1914. Serial No. 873,118. (Cl. 240—17.5.)

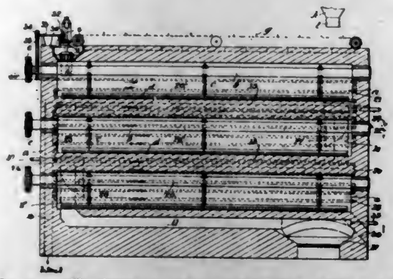


1. In combination with a portable electric current consuming device provided with a tubular metallic casing inclosing the said current consuming device and adapted to serve as part of one branch of the electric circuit, a current terminal device, comprising two-part insulating means supporting the extremities of two electrical conductors, a central metallic contact member carried by the said insulating means and holding the same in position and connected with the extremity of one of the said electrical conductors, the said contact member being adapted to make contact with one of the terminals of the said current consuming device and an annular metallic contact member supported on the circumference of the said insulating means and connected with the extremity of the other electrical conductor, the said tubular casing being adapted to make contact with the said annular contact member at any one point of the circumference of the said annular member.

2. In combination with a portable electric lighting apparatus provided with a tubular metallic casing inclosing the said lighting apparatus and adapted to serve as part of one branch of the electric circuit, a current terminal device, comprising two-part insulating means supporting the extremities of two electrical conductors, a central metallic contact member carried by the said insulating means holding the same in position and connected with the extremity of one of the said electrical conductors, the said contact member being adapted to make contact with one of the terminals of the said lighting apparatus, and an annular metallic contact member supported on the circumference of the said insulating means and connected with the extremity of the other electrical conductor, the said tubular casing being adapted to make contact with the said annular contact member at any one point of the circumference of the said annular member.

3. In combination with a portable electric miner's cap lamp having a tubular metallic casing inclosing the incandescent bulb and adapted to serve as part of one of the branches of an electric circuit, a current terminal device comprising two flanged disks of insulating material supporting the extremities of two electrical conductors, a central metallic screw holding the said disks together, the said screw being in electrical contact with the extremity of one of the said electrical conductors, a metallic ring held between the flanged portions of the said disks and insulated from the said casing, the said ring being in electrical contact with the extremity of the other electrical conductor, the said casing being adapted to make contact with the said ring at any one point of the circumference of the said ring.

1,210,852. MECHANICAL ROASTING-FURNACE. WILHELM SCHEFCZIK, Hamborn-on-the-Rhine, Germany. Filed May 22, 1914. Serial No. 840,240. (Cl. 263—25.)



1. In a muffle furnace, the combination with a round bottom muffle; of a hollow shaft mounted longitudinally therein, a single rabbling member parallel with said shaft, a single series of arms connecting said member and shaft, a plurality of rows of triangular teeth rigidly secured to said member, the teeth of one row off-set from the teeth of its adjacent row, and means to oscillate said shaft.

2. In a muffle furnace, the combination with a series of superposed muffle chambers discharging by gravity through openings in their bottoms into one another; of an oscillating rabbling mechanism in each muffle comprising a shaft passing longitudinally through the muffle, and a toothed rabbling member supported by the shaft, a feeding device for the upper muffle comprising a hopper and a coöperating cone and means to rotate said cone from the shaft of a muffle.

3. In a muffle furnace, the combination with a muffle thereof; of a shaft extending longitudinally through the muffle, a rabbling member secured to said shaft and having thereon a plurality of rows of triangular teeth, a hopper discharging into the muffle, a cone coöperating with said hopper, a gear train between said shaft and cone and means for oscillating said shaft.

4. In a muffle furnace, the combination with superposed, non-removable muffles, fire flues arranged only under the soles of said muffles, means to introduce air to said flues when desired, and means to separately heat said flues when desired, and a furnace for successively heating all the fire flues of a superposed series of muffles.

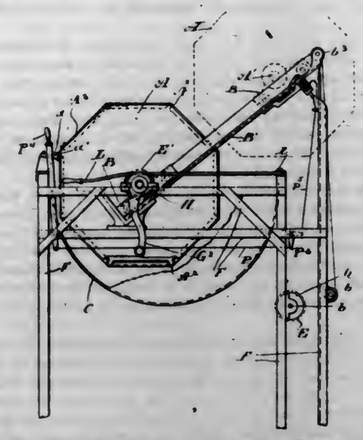
5. In a muffle furnace, a shaft in each muffle, a rabble on said shaft, a pinion on the shaft outside the muffle, a rack engaging the pinion, a hydraulic piston and cylinder, means connected with said racks for automatically reversing the flow of water to and from said piston, and means to regulate the flow of water to and from said cylinder whereby the speed of said piston and rabble may be instantly changed at will.

[Claims 6 to 8 not printed in the Gazette.]

1,210,853. VEGETABLE-WASHING MACHINE. CHARLES A. SCHETTLER, Cleveland, Ohio. Filed Apr. 23, 1915. Serial No. 23,511. (Cl. 146—14.)

1. In combination, in a vegetable washing machine, a water containing vat, a rotatable drum in which the articles to be washed are inclosed and immersed in said vat, said drum provided with openings for the circulation of water therethrough, bearings upon which said drum is rotatable, inclined guides upon which said bearings are movable, to raise said drum out of the water in said vat, means for rotating said drum and means for raising said bearings upon said guides to drain said drum and automatically acting locking devices for said bearings when raised upon said inclines, substantially as described.

2. In a washing machine, a vat, a frame supporting said vat, a drum rotatable in said vat and provided with openings for circulation of fluid, a shaft upon which said drum is rotatable, movable bearings for said shaft, an elevating device for said drum and bearings, an operating shaft, a clutch for alternately connecting the operating shaft with the drum shaft and with the drum elevating mechanism, and means for rotating the operating shaft.

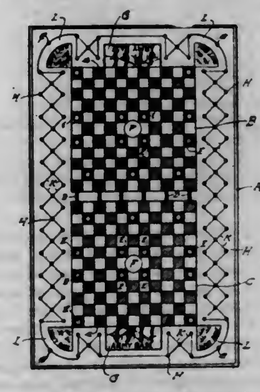


3. The combination with a drum having an opening and a closure therefor, of a frame, inclined guides on the frame, a drum shaft, bearings therefor movable upon said guides, means for raising and lowering said drum and bearings upon said guides, depressible retaining means for said drum adapted to hold it in the elevated position, and means for releasing said retaining means.

4. In combination, a frame, a drum revoluble therein, a drum shaft, movable bearings therefor, an operaitng shaft, mechanism for elevating said bearings, and a clutch adapted to operatively connect the drum shaft with the operating shaft and alternately therewith to connect the elevating mechanism with the operating shaft:

5. The combination with a drum having an opening and a closure therefor, of a frame, inclined guides on said frame, a drum shaft, bearings therefor movable on said guide, said guides provided with shoulders limiting the downward passage of said bearings, means for raising and lowering said drum and bearings upon said guides, spring actuated holding members in the paths of said bearings and adapted to be depressed by said bearings in passing, and means for depressing said holding members to permit the return of said bearings.

1,210,854. GAME. HANS RAYMOND SCHROER, Albany, N. Y., assignor to William C. Martineau and Clarence R. Martineau, Albany, N. Y. Filed May 16, 1916. Serial No. 97,798. (Cl. 46—64.)

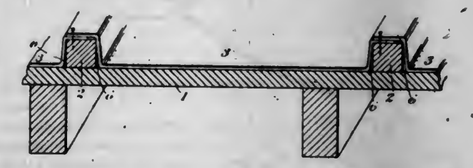


1. A game comprising a board laid out in the form of two like sections slightly separated, each section resembling in appearance a checker board; connecting lines between the two sections; a series of dots connected by lines extending around the combined checker sections; a series of playing pieces representing soldiers for use on the checkered sections; and a series of playing pieces representing battleships for use on the dots and lines.

2. In a game adapted to represent army and navy maneuvers, two like but separately spaced checkered sections illustrated on the game board; connections between the said sections illustrated thereon; playing pieces representing soldiers for use on the sections; a series of representations of forts on each section; a representation of a fortress with protecting forts connecting on each section; dots and lines arranged around the combined sections to represent the places for the movement of the battleships; and a series of playing pieces representing battleships to be moved along the lines occupying the positions indicated by the dots around the edges of the sections.

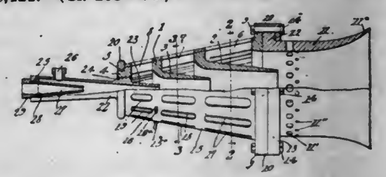
3. A game adapted to represent both naval and army battles, comprising a game board having depicted thereon two territories divided into suitable squares; the two territories connected by representations of bridges; a representation of water placed around the two territories with an indicated direction of the permitted movement of playing pieces representing ships on said portion representing water; a series of playing pieces representing soldiers of one color for one player and a series of playing pieces representing soldiers of a different color for the other player; a series of playing pieces representing battleships of one color for one player and a like series of battleships of a different color from the first series for the other player.

1,210,855. ROOFING. RALPH L. SHAINWALD, Jr., New York, N. Y. Filed Jan. 7, 1915. Serial No. 895. (Cl. 108—7.)



A roof construction comprising sheets of prepared roofing, each having its marginal portions folded to form standing seams and an intermediate trough portion; said sheets being secured in such manner as to provide spaces, adjacent to folded margin of the trough portion, to accommodate the expansion of the sheet by variation in the angle of the fold, rather than by otherwise distorting the sheet; the line of fold of said sheets having been previously defined, as by creasing, so as to insure the concentration at the fold of the distorting effect of expansion.

1,210,856. HYDROCARBON-BURNER. JAMES E. SHEAFFER, Burnham, Pa. Filed Oct. 28, 1915. Serial No. 58,421. (Cl. 158—74.)

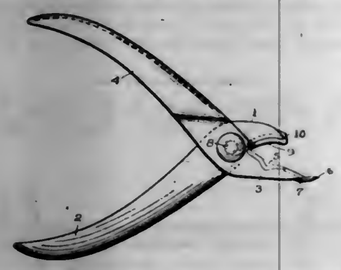


1. A hydrocarbon burner embodying a casing having an open end and a nozzle projecting through said open end, a refractory discharge nozzle having a relatively thick cylindrical end portion abutting said end of the casing and in registration therewith, said end of the nozzle having an outturned relatively thick flange, and means clamp-

ing said flange against the end of the casing, the free end of the discharge nozzle being flared, said nozzle decreasing in thickness to the flared end, the first mentioned nozzle projecting within the first mentioned end of the refractory nozzle, and the refractory nozzle having an annular series of air inlet openings in its periphery disposed in a plane spaced slightly from the end of the first mentioned nozzle.

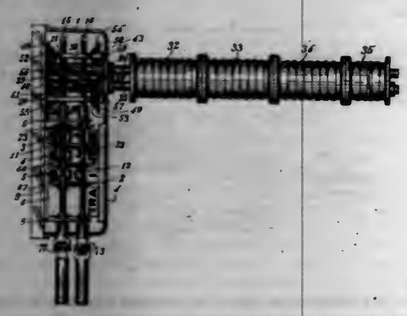
2. A hydrocarbon burner embodying a casing having a nozzle therein and air inlets adjacent the basal end of said nozzle, a pressure fluid nozzle tapered from one end to the other and having an enlarged portion adjacent its smaller end threaded through one end of the casing and having its smaller end projecting into the basal portion of the first mentioned nozzle, said pressure fluid nozzle having a lateral pressure fluid inlet port adjacent its larger end and a reduced opening at its larger end, and a tapered liquid fuel nozzle threaded through the opening of the larger end of the pressure fluid nozzle and having an enlarged portion at its larger end bearing against the larger end of the pressure fluid nozzle, the liquid fuel nozzle being tapered similar to the pressure fluid nozzle and extending past the pressure fluid inlet port.

1,210,857. OPERATING-TOOL. CHARLES WILLIAM SHERMAN, Peoria, Ill., assignor to R. C. Lowes, doing business as Lowes Manufacturing Co., Peoria, Ill. Filed Mar. 17, 1915. Serial No. 14,938. (Cl. 128—27.)



In a hog operating tool, the combination of a pair of coacting cutting jaws each comprising a pair of cutting edges, a muscle elevating means comprising in part a cutting edge and carried by one of said jaws, and muscle retaining depressions in the cutting edges of one of said jaws.

1,210,858. FARE-INDICATOR-SELECTING MECHANISM. HARRY J. SIBLEY, Dayton, Ohio, assignor to Ohmer Fare Register Company, Dayton, Ohio, a Corporation of New York. Filed Nov. 15, 1915. Serial No. 61,484. (Cl. 235—44.)



1. In an indicator selecting mechanism, the combination of a plurality of sets of indicators, a series of indicator-selecting members coöperating therewith arranged parallel and in juxtaposition one with the other, a series of grip members inclosing portions of all of said indicator selecting members, each of said grip members being fixed to a respective selecting member whereby said selecting members are individually rotatable in setting said indicators.

2. In an indicator selecting mechanism, the combination with a series of indicators, of a series of indicator selecting members arranged parallel and adjacent to each other, a series of grip members each of which incloses all of said indicator selecting members, each of said grip members being connected with a respective selecting member whereby said selecting members are individually rotatable in actuating a selected indicator.

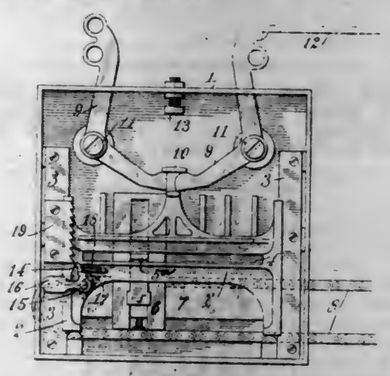
3. In a mechanism of the character specified, the combination with a series of visual indicators, of a corresponding series of indicator selecting rods operatively connected therewith and extending along the interior of a car parallel and adjacent to each other, a series of hand grips inclosing portions of all of said rods, and gears interposed between each hand grip and a respective indicator selecting rod.

4. In a mechanism of the character specified, the combination with a series of visual fare indicators, a corresponding series of actuating members arranged adjacent thereto, a like series of selecting members extending on the interior of a car and operatively connected to said actuating members, a series of grip members inclosing portions of all of said selecting members and arranged adjacent to each other, and gears connecting each of said selecting members with one of said grip members.

5. In a mechanism of the character specified, a series of rotatable indicators, a series of actuating rods mounted in proximity thereto and each of which is geared to a specific indicator, a similar number of extension rods connected with said actuating rods, a series of indicator selecting rods arranged on the interior of a car and each of which is geared to a respective extension rod, a hand grip geared to each of said selecting rods, each of said hand grips inclosing portions of all of said selecting rods.

[Claim 6 not printed in the Gazette.]

1,210,859. OPERATING MECHANISM FOR FARE-REGISTERS. HARRY J. SIBLEY, Dayton, Ohio, assignor to Ohmer Fare Register Company, Dayton, Ohio, a Corporation of New York. Filed Nov. 15, 1915. Serial No. 61,485. (Cl. 235—44.)



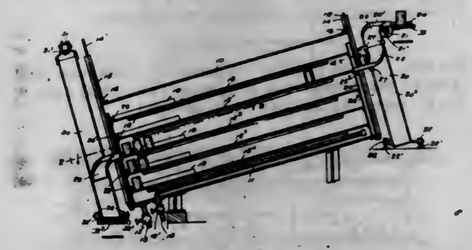
1. In an operating device for fare registers, a movable member, a stationary ratchet mounted adjacent to said movable member, and a spring-controlled over-balanced pawl pivoted to said movable member and one end of which is normally controlled by said spring in a position to clear the teeth of said ratchet when the movable member is given a uniform movement in actuating the same.

2. In an operating device for fare registers, a gate, means horizontally movable thereon and adapted to engage a selected register to be operated, said means being subjected to vertical movement by said gate, a stationary ratchet mounted adjacent to an end of said gate, and a spring-controlled over-balanced pawl pivoted to said gate and one end of which is normally controlled by said spring in a position to clear the teeth of said ratchet when the gate is given a uniform movement in actuating the same, substantially as specified.

3. In an operating device for fare registers, the combination of a main supporting member, a gate mounted thereon and subject to vertical movement, guides engaging the ends of said gate and forming tracks upon which said gate moves, a register-operating device carried by said gate and having horizontal movement thereon to different positions of operation, a ratchet plate mounted upon one of the gate guides, an over-balanced pawl mounted on said gate in proximity to said ratchet plate, and a spring attached to the nose of said pawl and normally holding said nose in a plane outside of the outer extremities of the teeth of said ratchet, the weight of the over-balanced portion of said pawl being controlled by the spring during a uniformly gradual movement of said gate, substantially as specified.

4. In an operating device for fare registers, the combination of a supporting plate, a vertically movable gate mounted thereon, a register-operating device carried by said gate, a stationary plate having ratchet teeth overlapping an end of said gate, a pawl pivoted to said gate, the lower arm of said pawl being weighted, a compression spring attached to the upper arm of said pawl and to the gate, said spring overcoming the inertia of the pawl and maintaining the nose thereof in a position to free the ratchet during a comparatively slow and uniform upward movement of the gate, substantially as specified.

1,210,860. APPARATUS FOR COOKING CANNED GOODS. EDGAR A. SIMS, Port Townsend, Wash. Filed Dec. 4, 1915. Serial No. 64,966. (Cl. 126—272.)



1. In cooking apparatus of the class described, a vessel, having inclined shelves arranged one above the other, means to feed the goods to be cooked upon the upper ends of the shelves selectively, means for delivering the goods from the lower ends thereof, and devices provided for the respective shelves whereby the goods are guided to the second named means.

2. In cooking apparatus of the class described, the combination with a vessel having a series of superposed shelves, and a belt conveyer, of an inclined trough for conducting canned goods from said conveyer, and a vertically adjustable chute for transferring such goods from the trough to a selected one of said shelves.

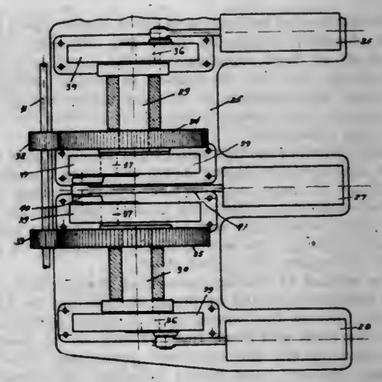
3. In cooking apparatus, the combination with a vessel containing shelves inclined to afford sliding movements to canned goods supplied thereto on their ends, and a conveyer, of an inclined trough movable longitudinally of said conveyer, a finger for directing the cans from the conveyer to said trough at various positions of the latter, and means regulated by adjusting the position of the trough to effect the delivery therefrom of the cans to a selected one of said shelves.

4. In cooking apparatus, the combination with a cooking vessel containing a series of superposed spaced shelves, and a belt-conveyer, of a chute which is inclined to enable canned goods placed thereon to slide toward its lower end, a trough adjustably connected to the chute, means rendered effective by the travel of said conveyer to conduct the cans from the conveyer into the upper end of said trough, and means to transfer the cans from selected positions lengthwise of said trough onto predetermined of said shelves.

5. In apparatus of the class described, a vessel having a series of superposed shelves, and a belt conveyer located at a higher elevation than said vessel, means actuated by the travel of said conveyer to remove goods from the conveyer, and inclined transfer devices upon which the goods are slidable by the force of gravity whereby the goods removed from said conveyer are conducted onto the respective shelves.

[Claim 6 not printed in the Gazette.]

1,210,861. RECIPROCATING GEARING. MASSEY SITNEY, South Bethlehem, Pa. Filed July 31, 1915. Serial No. 42,920. (Cl. 74—34.)



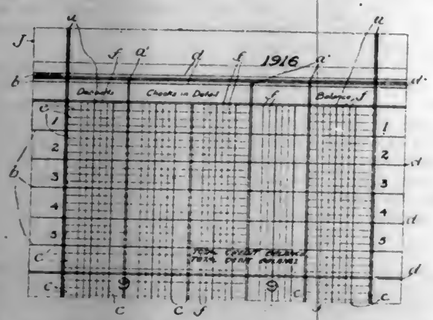
1. A reciprocating gearing comprising a rotary driving shaft, a pair of pinions thereon, a pair of crank shaft sections parallel to the driving shaft having gears meshed with the pinions thereon, crank pin projections from the crank shaft sections at the respective ends of each, pinions rotatively mounted on the crank pin projections, stationary internal gears concentric with the crank shaft, and meshing with the several pinions, crank pin projections from the non-adjacent pinions, and a wrist pin connecting the adjacent pinions in their pitch lines, the crank pin projections from the pinions and the wrist pin being respectively adapted to be connected to operate a reciprocating member and the pinions having pitch diameters equal to one-half of the pitch diameters of the stationary gears.

2. A reciprocating gearing comprising a pair of crank shaft sections in axial alinement, means for driving the shaft sections, crank pin projections from the crank shaft sections at the respective ends of each, pinions rotatively mounted on the crank pin projections, stationary internal gears concentric with the crank shaft, and meshing with the several pinions, crank pin projections from the non-adjacent pinions, and a wrist pin connecting the adjacent pinions in their pitch lines, the crank pin projections from the pinions and the wrist pin being respectively adapted to be connected to operate a reciprocating member and the pinions having pitch diameters equal to one-half the pitch diameters of the stationary gears.

1,210,862. METHOD OF MAKING CROSS-RULED SHEETS. LOUIS SMITH, Chicago, Ill. Filed June 28, 1916. Serial No. 106,313. (Cl. 101—182.)

1. The method of making cross ruled sheets which consists in producing a cross lined pattern for each set of lines with the lines continuous from end to end and sharply intersecting at their crossings, thereafter transferring said patterns to printing elements, and finally

printing from said elements to produce the finished ruled sheet.



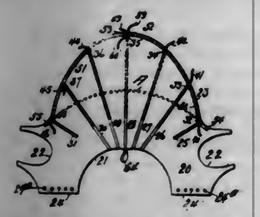
2. The method of making cross ruled sheets which consists in separately producing down and cross line forms for each set of lines, superimposing the down and cross line forms for each set in register to produce patterns, transferring said patterns to printing plates and finally printing the several plates in register to produce the composite cross ruled sheet.

3. The method of making cross-ruled sheets which consists in separately producing down and cross line forms for each set of lines; printing the down and cross line forms for each set in register to produce patterns for the several sets; transferring said patterns to printing plates, and finally printing the several plates in register to produce the composite cross-ruled sheet.

4. The method of making cross-ruled sheets which consists in separately setting up forms of rules for the down and cross lines of the several sets of lines; printing in register the cross and down lines of each set to produce a composite pattern for each set; producing transfers from said patterns, and finally printing the transfers in register to provide the final cross-ruled sheet.

5. The method of making cross-ruled sheets which consists in separately setting up forms of rules for the down and cross lines of the several sets of lines and composing type on one or more of said forms, printing in register the cross and down lines and composed type of each set to produce a composite pattern for each set; producing transfers from said patterns, and finally printing the transfers in register to provide the final cross-ruled sheet.

1,210,863. ADJUSTABLE BUST-WAIST. MARGUERITE L. SOBRA, New York, N. Y. Filed May 14, 1913. Serial No. 767,506. (Cl. 2—87.)



1. In a waist of the character described, the combination of a body portion, pockets formed in radial directions on said body portion; pockets formed on one of the edges of said body portion; pliant reinforcing strips in the pockets lying in the radial directions; strings at the ends of the reinforcing strips; a string in each pocket at the edge of the body portion, with one end of each of the latter strings fastened at one end of its pocket, the strips and strings coacting to give a spherical form to the body portion and form pockets therein when properly adjusted.

2. A garment as characterized, having a normally flat front-body portion, said body portion being abnormally extended above the normal chest-line of the completed garment and between the armholes of said garment; and means for contracting said front-body portion to the normal chest-line and to the normal front-body width thereof to form a puffed bosom for said garment.

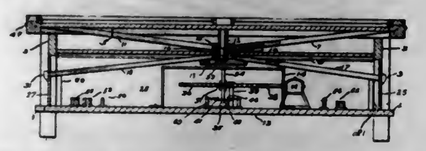
3. A garment as characterized, having a normally flat front-body portion, said body portion being abnormally extended above the normal chest-line of the completed garment and between the armholes of said garment; a plurality of gathering members suitably disposed on said front-body portion in spaced relation to contract said body portion to form a conventional chest-line; and means for contracting the upper edge of said body portion to the dimensions of the conventional chest-line.

4. A garment as characterized, having a normally flat front-body portion, said body portion being abnormally extended above the normal chest-line of the completed garment and transversely between the armholes of said garment; a plurality of gathering members suitably disposed on said front-body portion in spaced relation to contract said body portion to form a conventional chest-line; means for contracting the upper edge of said body portion to the dimensions of the conventional chest-line; and reinforcing means for disposing outwardly the contracted portions to form puffs.

5. A garment as characterized, having a normally flat front-body portion, said body portion being abnormally extended above the normal chest-line of the completed garment and transversely between the armholes of said garment; a plurality of gathering members suitably disposed on said front-body portion in spaced relation to contract said body portion to form a conventional chest-line; means for contracting the upper edge of said body portion to the dimensions of the conventional chest-line; and a plurality of resilient members mounted coincident with said gathering members to bulge outwardly the gathered portion of said front-body portion to form puffs therein.

[Claims 6 and 7 not printed in the Gazette.]

1,210,864. POOL-TABLE. JOSEPH P. SORENSEN and ROYDEN THORNBERG, San Francisco, Cal. Filed June 8, 1914. Serial No. 843,741. (Cl. 46—12.)



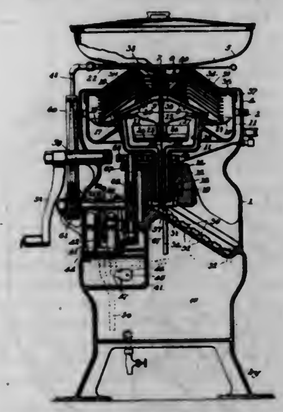
1. In a pool table, the combination of a table having a plurality of pockets, a distribution apparatus, troughs to deliver the balls played into the pockets of the table to the distribution apparatus, an electric motor for operating the distribution apparatus, electric circuits for operating said motor including a push-button for individual players, a relay for holding the motor circuit closed after the push button has been operated until the distribution apparatus has moved to a position corresponding to that push button, and other troughs to deliver the balls to the individual players after the distribution has been effected.

2. In a pool table, a table having a plurality of pockets therein, a central distribution compartment, troughs to deliver the balls played into the pockets of the table to the distribution compartment, a plurality of individual compartments, means in the distribution compartment to distribute the balls played to the several individual compartments, a plurality of troughs leading from the distribution compartments to the individual compartments, means to move the distribution apparatus to deliver the balls to the individual players, means whereby a number of players may control the ball distribution apparatus, and a relay to prevent the ball distribution apparatus from being stopped after it has been set in motion and until it has completed the desired change.

3. In a pool table, a table having a plurality of pockets, a central compartment having a movable distribution apparatus therein, troughs leading from the pockets of the table to the distribution compartment, other troughs to deliver the distributed balls to the individual players, electrical means to operate the distribution apparatus, means under the control of a number of players for operating said distribution apparatus, means to indicate the fact of motion of the distribution apparatus, and a relay to prevent the stoppage of the motor until a given change in the distribution apparatus has been made when it has once been set in motion.

4. A pool table comprising a table having pockets, a plurality of troughs extending from the pockets to a centrally placed compartment, means in said compartment to distribute the balls played, a second series of troughs extending from the central compartment, receptacles to which the latter troughs lead, an electric motor for operating the distribution apparatus, electric circuits for different players whereby each may set said apparatus to deliver the balls to his individual receptacle, and means on each side of the table to indicate when the distribution apparatus is in motion.

1,210,865. PROCESS AND APPARATUS FOR PURIFYING MILK. EARLE J. P. SPENCER, Phoenix, N. Y. Filed Oct. 26, 1915. Serial No. 57,958. (Cl. 233—13.)



1. A device of the character described in combination, a centrifugal device including a plurality of nested cones, a bowl in which said cones are mounted, the edge of said bowl extending below the peripheries of said cones to provide a receptacle for heavy material, an upwardly curved annular lip adjacent the lower edge of said nested cones, and stationary tubes constructed to supply milk over said annular lip and adjacent the outer edge of the lower cone whereby the annular velocity of the lip draws the streams of milk into thin sheets and directs same outwardly and upwardly.

2. In a device of the character described, in combination, a centrifugal element including a rotating bowl, a plurality of nested cones within said bowl and constructed to be rotated therewith, an annular upturned lip having its outer edge extending nearer to the wall of said bowl than the edges in said cones, said bowl extending below said lip to provide a chamber for receiving solids separated out by centrifugal action, and stationary means to supply milk above said annular lip and adjacent the outer edge of the lower cone whereby the annular velocity of the lip draws the milk into a thin sheet and directs same outwardly and upwardly.

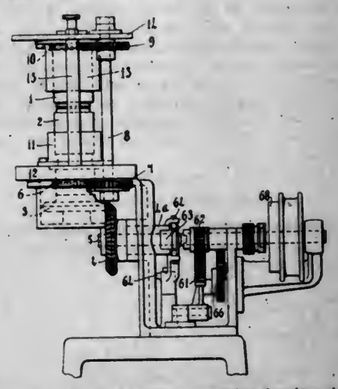
3. In a device of the character described, in combination, a rotating bowl, a series of nested cones supported within said rotating bowl, each cone being provided with a continuous wall wherein the portions of said cones nearest the vertical axis of said bowl are inclined inwardly and downwardly, the inner edges of the cones terminating in such manner as to provide a free outlet through which the milk will fall by gravity as it leaves the cones, means to supply milk to the outer edges of said nested cones, and a stationary pan beneath the inner edges of said cones to receive milk flowing from said inner edges.

4. In a device of the character described, in combination, a rotating bowl, a plurality of nested cones within said bowl, the outer edges of said nested cones being substantially parallel to the walls of said bowl, the inner edges of said cones being arranged in such manner that the edge of the uppermost cone is nearest to the axis of said bowl and that the edge of the lowermost cone is the farthest from the said axis, whereby milk falling from the edge of each respective cone will fall in a separate vertical path, means to supply milk to the outer edges of said cones, and means to receive milk as it falls from the inner edges of said cones.

5. In a device of the character described, in combination, a centrifugal member adapted to remove undesirable solids from the milk, means to supply milk to said centrifugal member in combination with aerating means located beneath the central portion of said centrifugal member and adapted to receive and aerate the milk after it leaves the centrifugal devices.

[Claims 6 to 14 not printed in the Gazette.]

1,210,866. CIRCULAR-KNITTING MACHINE. WILLIAM SPIENS, Leicester, England. Filed Oct. 7, 1913. Serial No. 793,791. (Cl. 66—23.)



1. A circular rib knitting machine having, in combination, stationary upper and lower cam boxes, superposed parallel needle cylinders capable of rotary and rotary reciprocating motion within said cam boxes, double ended latch needles therein, sliders to actuate said needles, a transfer cam and a receiver cam in the upper and lower cam boxes respectively adapted to coöperate to transfer needles from the top cylinder to the bottom cylinder, a transfer cam and a receiver cam in the upper and lower cam boxes respectively adapted to coöperate to transfer needles from the bottom to the top cylinder, means to automatically and simultaneously bring the said coöperating cams into and out of operation, means for effecting the rotary motion of the cylinders, and means for effecting rotary reciprocating motion thereof.

2. A circular rib knitting machine having, in combination, stationary upper and lower cam boxes, superposed parallel needle cylinders capable of rotary and rotary reciprocating motion within said cam boxes, double ended latch needles therein, sliders to actuate said needles, a transfer cam and a receiver cam in each cam box, an arm to actuate each receiver cam, a plunger to actuate each transfer cam, a lever to actuate each plunger, rods coupling the arms of the receiver cams with the levers of the transfer cams in opposite cam boxes, means for effecting the rotary motion of the cylinders, and means for effecting the rotary reciprocating motion thereof.

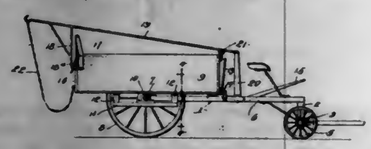
3. A circular knitting machine having, in combination, stationary upper and lower cam boxes, superposed parallel needle cylinders capable of rotary and rotary reciprocating motion within said cam boxes, double ended latch needles therein, sliders to actuate said needles, a transfer cam and receiver cam in each cam box, means for putting said cams into and out of operation, a latch guard comprising a finger pivotally mounted on the upper cam box, and means for actuating said guard comprising a spring to move it out of operation, a plate movable with the transfer cam in the upper cam box, and a screw in said plate engaging the latch guard whereby the latter is brought into action simultaneously with the transfer cam, substantially as described.

4. A circular knitting machine having, in combination, upper and lower stationary cam boxes, superposed parallel needle cylinders capable of rotary and rotary reciprocating motion within said cam boxes, double ended latch needles therein, sliders to actuate the needles, means to transfer said needles from one cylinder to the other, means for effecting the rotary motion of the cylinders, means for effecting the rotary reciprocating motion thereof, a divider cam pivotally mounted on the lower cam box, and means for putting the cam into and out of action comprising a pivoted lever, a cam, intermediate mechanism to operate the dividing cam in one direction from said cam, and a spring to operate the dividing cam in the opposite direction, substantially as described.

5. A circular knitting machine having superposed needle cylinders capable of rotary and rotary reciprocating motion within stationary cam boxes, movable sinkers arranged on the inside of the lower cylinder, a cam to actuate the said sinkers, said cam during the rotary motion of the cylinders remaining stationary and during the reciprocating motion having a restricted movement in company therewith, a sleeve on which said cam is mounted, said sleeve being capable of rotary reciprocation within the cylinder, and adjustable means to restrict the movement of the sleeve in each direction within the cylinder for the purpose described.

[Claim 6 not printed in the Gazette.]

1,210,867. DUMP-WAGON. SAMUEL LUTHER STARNER, Bucyrus, Ohio. Filed June 19, 1916. Serial No. 104,595. (Cl. 21—20.)



1. A dump wagon comprising a running gear, a body mounted thereon to tilt downwardly at its rear end, a tail gate hinged at its upper edge to said body, a vertically moving lever extending longitudinally of said body and having a stop arm engaging the rear side of said tail gate to hold the same in closed position, and means for raising said lever when the body is tilted, thereby moving said stop arm clear of the tail gate to permit opening of the latter.

2. A dump wagon comprising a running gear, a body mounted thereon to tilt downwardly at its rear end, a tail gate hinged at its upper edge to said body and having a downwardly and rearwardly inclined cam on its rear side, an upwardly moving lever extending longitudinally of the body and having a stop arm engaging said cam to hold the tail gate in closed position, and means for raising said lever when the body is tilted, thereby moving said stop arm free of the cam and the gate to permit opening of the latter.

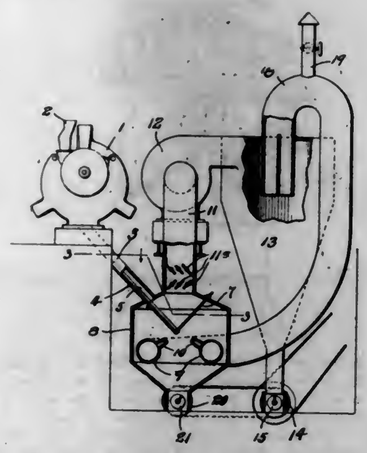
3. A dump wagon comprising a running gear, a body mounted thereon to tilt downwardly at its rear and upwardly at its front end, a tail gate hinged at its upper edge to said body, a rigid standard rising from the running gear in advance of said body, a lever extending longitudinally above the body and fulcrumed at its front end to said standard, a stop arm depending rigidly from said lever in rear of the tail gate to normally prevent opening of the latter, and a shoe on the front end of the body underlying the lever to raise the latter when said body is tilted, thus moving the stop arm free of the gate to permit opening of the latter.

4. A dump wagon comprising a running gear, a body mounted thereon to tilt downwardly at its rear end, a tail gate hinged at its upper edge to said body, a vertically moving lever extending longitudinally above the body and having a depending stop arm in rear of the gate to normally prevent opening of the latter, means for raising said lever when the body is tilted, and a flexible connection between the lower edge of the tail gate and the rear end of the lever for opening said tail gate when said lever is raised.

5. A dump wagon comprising a running gear, a body mounted thereon to tilt downwardly at its rear end, a tail gate for said rear end of the body, a vertically moving lever extending longitudinally of said body and having a stop arm engaging the rear side of said tail gate to hold the same in operative position, and means for raising said lever when the body is tilted, thereby moving said arm clear of the tail gate to permit opening of the latter.

[Claim 6 not pritned in the Gazette.]

1,210,868. SEPARATING DEVICE. EDWARD J. STECKLE, Dixon, Ill. Filed Dec. 30, 1915. Serial No. 69,371. (Cl. 83—54.)



1. A separating apparatus of the character described, comprising a separating chamber having a spreader for conducting the material thereinto, and angularly disposed nozzles for emitting blasts of air on opposite sides of the material as it leaves said spreader.

2. An apparatus of the character described comprising a separating chamber, a pipe leading thereinto, and whose lower end is inclined and substantially fan shaped, the lower wall of said fan shaped portion being provided with spreading means, angularly disposed nozzles for imparting blasts of air throughout the entire width of the separator and on opposite sides of the material as it leaves the spreading means, substantially as described.

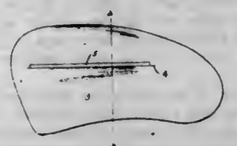
3. A separating apparatus of the character described comprising a separating chamber having a spreader for conducting the material thereinto, air pipes arranged below and on each side of said spreader, said air pipes extending substantially parallel to the edge of the spreader and being provided with angularly disposed nozzles for emitting blasts of air on opposite sides of the material as it leaves the spreader, means for supplying air under pressure to said air pipes, and removable caps or covers for closing one end of said air pipes whereby access may be gained to the interior thereof for cleansing purposes.

4. An apparatus of the character described comprising a separating chamber having a spreading inlet pipe for conducting material thereinto, air pipes for directing angularly disposed blasts of air on opposite sides of the material as it leaves the spreader, a discharge pipe leading from said chamber, and adjustable baffle plates arranged in said discharge pipe.

5. A separating apparatus of the character described comprising a separating chamber having a spreader for conducting the material thereinto, and angularly disposed rotatably adjustable nozzles for emitting blasts of air on opposite sides of the material as it leaves said spreader.

[Claim 6 not printed in the Gazette.]

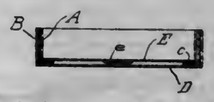
1,210,869. ARCH-SUPPORTER. CHARLES C. STEGER, Dayton, Ohio. Filed May 16, 1916. Serial No. 97,928. (Cl. 36—71.)



1. A foot arch supporter comprising a piece of hard leather bent to conform to the arch of the human foot, and a single strip of soft leather completely covering the bottom of said hard leather piece, said strip having a central longitudinal slit positioned within the side edges of the device, at such a place that it can be used to modify that portion of the device which lies under the arch, the middle portino of said strip below its slit being unsecured to the hard leather piece to provide an opening for reinforcing means.

2. A foot arch supporter comprising a piece of hard leather bent to conform to the arch of the human foot, and a single strip of soft leather glued to the bottom of said hard leather piece to completely cover the latter, said strip having a longitudinal slit on a line which approximately coincides with that along which the arch supporter is bent to form its wing portion, the middle part of said strip below its slit being unsecured to said hard leather piece to provide a cavity for reinforcing means.

1,210,870. TRAY. FREDERICK A. STEVENS, Providence, R. I. Filed Mar. 7, 1916. Serial No. 82,643. (Cl. 229—6.)



1. In a tray, the combination of a frame comprising a series of coils, a lining strip of greater width than the width of the coils and comprising a portion engaging the innermost coil and an inwardly directed flap portion, and a base engaging the flap portion and the coils.

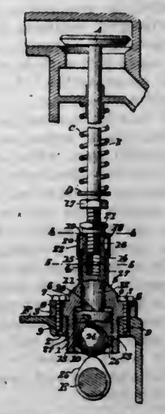
2. In a tray, the combination of a frame comprising a series of compact coils and an adhesive coating between the coils, a lining strip of greater width than the width of the coils and attached to the face of the innermost coil provided with an inturned flap portion, and a base engaging the flap portion and the edges of the coils.

3. In a tray, the combination of a frame comprising a series of coils, a lining strip of greater width than the width of the coils and comprising a portion engaging the face of the innermost coil, and an inwardly directed flap portion, an adhesive coating on the flap portion, and a base engaging the coating on the flap portion and bearing against the edges of said coils.

4. In a tray, the combination of a frame comprising a series of coils and an adhesive coating between the coils, a lining strip of greater width than the width of the coils and comprising a body portion covering the innermost coil and attached to the same, and a flap portion provided with a dry adhesive face, and a base engaging the flap and the adjacent edges of the coils.

5. A tray comprising a body portion formed of a multiplicity of coils comprising a frame and a lining wound upon each other and closely adhered together, the lining being of greater width than the outer portion of the tray and forming a flap, a bottom engaging the bottom edges of the coils of the body of the tray and secured to said flap, and an interior reinforcement within said lining and supported on said flap and secured to the bottom.

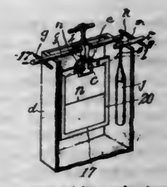
1,210,871. PUSH-ROD. GEORGE A. SUFFA, Dorchester, Mass. Filed Jan. 17, 1916. Serial No. 72,518. (Cl. 121—97.)



1. A device of the class described comprising a housing, a push rod movable within said housing, said push rod being provided with a universally movable spherical surface, means without the casing for preventing foreign matter from entering between the housing and push rod, means within the housing for lubricating said push rod and means for adjusting the length of said push rod.

2. A device of the class described comprising a housing adapted to be secured to the base of an internal combustion engine, and a push rod movable within said housing, said housing being provided with communicating cylindrical passages of variable diameter, said push rod being of a corresponding diameter to snugly engage said passages within said housing, a ball secured to the lower portion of said push rod for engagement with a cam on the camshaft of said engine, means for excluding foreign matter from said push rod, and means for lubricating said ball within said push rod and said push rod within said housing.

1,210,872. PROCESS OF MAKING ELECTROTYPE-PLATES OR METALLIC SHELLS. FRANK T. THOMPSON, Chicago, Ill. Filed Aug. 4, 1916. Serial No. 113,144. (Cl. 204—8.)



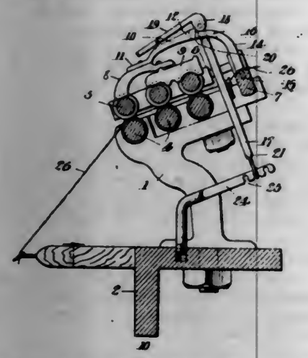
1. The process of making electrotype plates or shells of the class described which comprises making a mold

formed of plastic material, laying a metallic electric conductor in contact with and in position to extend along opposite marginal portions of the molding surface of the mold and out of contact with the back of the mold, covering the molding surface of the mold with a coating of electrically conductive material in contact with said first mentioned conductor, and placing the mold in an electrolytic solution and in circuit with a source of electrical energy, whereby metal is caused to be deposited upon opposite marginal portions of the surface of the mold simultaneously and caused to spread over the surface from opposite directions.

2. The process of making electrotype plates or shells of the class described which comprises making a mold formed of plastic material, laying a metallic wire in contact with and in position to extend along opposite marginal portions of the surface of the mold, covering the molding surface of the mold with a coating of electrically conductive material having opposite marginal portions of said coating in contact with said wire, and placing the mold with the electrically conductive coating and wire thereon, in an electrolytic solution, whereby metal is caused to be deposited upon opposite marginal portions of said electrically conductive surface of the mold simultaneously and caused to spread inward over the surface of the mold from opposite directions.

3. The process of making electrotype plates or shells of the class described which comprises making a mold formed of plastic material upon which metal is to be deposited, laying an electrically conductive wire in the plastic material in position to extend along opposite marginal portions of and in contact with and in position to substantially encircle a surface portion of the mold upon which metal is to be deposited, covering the molding surface of the mold with a coating of electrically conductive material having opposite marginal portions in contact with said wire, the wire being of greater electrical conductivity than said coating, and placing the mold in an electrolytic solution and in circuit with a source of electrical energy, whereby metal is deposited on opposite margins of the mold simultaneously and caused to spread inward from opposite directions.

1,210,873. CAM ATTACHMENT FOR ROLLER-BEDS OF SPINNING-FRAMES. EDWARD J. VALES and JAMES T. BISHOP, Augusta, Ga. Filed Sept. 30, 1916. Serial No. 122,999. (Cl. 19—34.)



1. In a device of the character described in combination, a roll stand, a set of lower feed rolls mounted upon said roll stand, an upper set of feed rolls mounted over said lower feed rolls, a pair of saddles upon said upper feed rolls, a back rail, an arched member seated upon said back rail and extending over the feed rolls and bearing against one of said saddles, a bed-plate carrying said roll stand, an L-shaped spring member mounted in said bed-plate and provided on its outer end with adjusting notches, a flat link connected with said spring arm, and a rotatable cam secured to said flat link and bearing upon said arched-shaped member whereby tension may be applied or released to said arched-shaped member to apply or release pressure on the saddles.

2. In a device of the class described in combination, a roll stand, lower feed rolls mounted upon said roll stand, upper feed rolls mounted upon said roll stand and above the lower feed rolls, saddle members bearing upon the upper feed rolls, a roll stand bed, a back rail, an L-shaped anchor arm secured in said bed, an arched-shaped lever having one end mounted upon said back rail and the other end resting upon said saddles, a link connecting said anchor arm with said arched-shaped lever, and a cam lever for applying tension to said link and pressure to the arched-shaped lever.

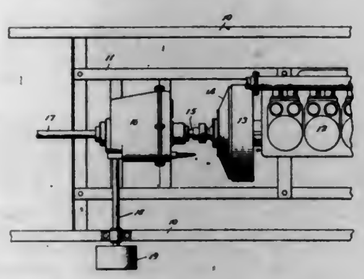
3. In a device of the class described in combination, a roll stand bed, a roll stand mounted upon said bed, feed rolls carried by said roll stand, a saddle above said feed rolls, an anchor secured to said bed, said anchor comprising a spring member secured beneath the feed rolls and extending toward the rear of the roll stand, an arched-shaped lever resting upon a portion of the frame of the roll stand and upon said saddle, means connecting said anchor and said arched-shaped lever, and devices for applying tension to said means to apply pressure to the said saddle.

4. In a device of the character described in combination, a roll stand bed, a roll stand mounted upon said bed, feed rolls in said roller stand, saddles bearing on certain of said feed rolls, a removable lever having one end resting upon a portion of the frame of the roller stand and the other end resting upon said saddles, and means comprising a cam and an L-shaped spring anchor for applying pressure to said lever to apply pressure to the said saddles.

5. In a device of the character described in combination, a bed-plate constructed to carry a roll stand, a roll stand mounted upon said bed-plate, lower feed rolls mounted in said roll stand, removable upper feed rolls mounted over said lower feed rolls, a saddle resting upon said upper feed rolls, a back rail provided with a recess, an arched-shaped lever having one end seated in said recess in the back rail and the other end resting upon the saddle, an L-shaped anchor member secured in the bed-plate and provided on its outer end with a plurality of adjustment notches, a cam lever above the said arched-shaped lever, and a link connecting the said anchor member and the cam lever, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,210,874. GEARING FOR MOTOR-VEHICLES. HARRY C. WAITE, Chicago, Ill., assignor to Waite Tractor Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 1, 1915. Serial No. 53,482. (Cl. 74—58.)



1. In a vehicle, a motor, a drive-shaft, a clutch interposed between the motor and the drive-shaft, a variable speed transmission gearing connected with the said drive-shaft, a propelling shaft for the vehicle wheels in alinement with said drive-shaft, a second shaft unconnected with the vehicle wheels and at right-angles to said propeller shaft, and a movable clutch element carried by the variably-driven end of said transmission gearing and adapted to selectively engage said propelling shaft or said second-named shaft.

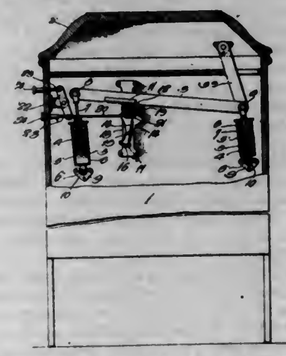
2. In a vehicle, a motor, a drive-shaft, a clutch interposed between the motor and the drive-shaft, a variable speed transmission gearing connected with the said drive-shaft, a propelling shaft for the vehicle wheels in alinement with said drive-shaft, a second shaft unconnected with the vehicle wheels and at right-angles to said propeller shaft, disengageable means for driving the said propelling shaft from the variably driven end of said transmission gearing, and means for driving said second-named shaft from the said variably-driven end of the transmission gearing.

3. In a vehicle, a motor, a drive-shaft, a clutch interposed between the motor and drive-shaft, a variable speed transmission gearing connected with said drive-shaft, a propelling shaft for the vehicle wheels in alinement with said drive-shaft, a second shaft unconnected with the vehicle wheels and at right-angles to said propeller-shaft, means for driving each of said last-named shafts from the variably-driven end of said transmission gearing, said means operating to simultaneously engage one shaft and release the other shaft or to engage the second shaft and release the first shaft.

4. In a vehicle, a motor, a drive-shaft, a clutch interposed between the motor and drive-shaft, a variable speed transmission gearing connected with the said drive-shaft, a propelling shaft for the vehicle wheels in alinement with the variably-driven end of said transmission gearing, a slidable clutch carried by the said end of the transmission gearing and adapted to engage the said propelling shaft, a gear connected with the said clutch, a second shaft unconnected with the vehicle wheels, and a pinion carried by said second shaft in position to be engaged by said gear when the clutch is moved out of engagement with the propelling shaft.

5. In a vehicle, a motor, a drive-shaft, a clutch interposed between the motor and drive-shaft, a connector shaft in alinement with the drive-shaft, a lay-shaft parallel with the connector shaft, means for driving the lay-shaft from the drive shaft, means for driving the connecting shaft at variable speeds from the lay-shaft, a propelling shaft for operating the vehicle wheels in alinement with said connecting shaft, means for clutching said connecting shaft directly to the drive-shaft, a slidable clutch member mounted on said connecting shaft and adapted in one position to engage the latter with the propelling shaft, a bevel gear connected with said clutch, a second shaft arranged at right-angles to said connecting shaft, and a bevel pinion carried by said last-named shaft and in position to be engaged by said bevel gear when the clutch member is moved to release the said propelling shaft.

1,210,875. CONTROL FOR CABINET-COVERS. RICHARD H. WARD, Queens, N. Y. Filed Mar. 11, 1916. Serial No. 83,580. (Cl. 211—25.)



1. The combination with a cabinet and a cover therefor, of a lever connected with the cover for raising the same, mechanical means connected with said lever for operating the same, the relation between the fulcrum of the lever and the points of connection of said operating means and cover with said lever being normally such as to prevent said means from moving said lever, and means for varying said relation to permit the operating means to shift the lever for the purpose of elevating the cover.

2. The combination with a cabinet and a cover therefor, of a lever connected with the cover for raising the same, means for operating said lever, the power of the latter being normally overcome by the weight of the cover, and means for adjusting the lever and its fulcrum relatively to increase the raising power of said lever.

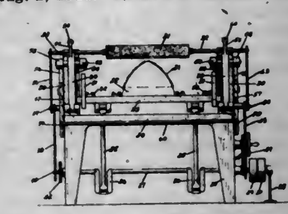
3. The combination with a cabinet and a cover therefor, of a lever connected with said cover for raising the same, said lever having as its fulcrum a roller, means for operating said lever, the power of the latter being normally overcome by the weight of the cover, and means for rotating the aforesaid roller to adjust it and the lever relatively to increase the raising power of the latter.

4. The combination with a cabinet and a cover therefor, of a lever connected with said cover for raising the same, means for operating said lever, the power of the latter being normally overcome by the weight of said cover, means for adjusting the lever and its fulcrum relatively to increase the raising power of said lever, manually operated means for initially moving said adjusting means, and mechanical means for quickly completing the movement of said adjusting means.

5. The combination with a cabinet and a cover therefor, of a lever connected with said cover for raising the same, means for operating said lever, the power of the latter being normally overcome by the weight of said cover, a pivotally mounted adjuster for adjusting said lever and its fulcrum relatively to vary the raising power of said lever, said adjuster being movable in opposite directions around its pivot to respectively increase and decrease the power of the lever, and means for actuating said adjuster.

[Claims 6 to 13 not printed in the Gazette.]

1,210,876. MACHINE FOR JACKING AND BRUSHING HAT-BODIES. AUGUST M. WARM, Danbury, Conn. Filed Aug. 1, 1916. Serial No. 112,542. (Cl. 223—26.)



1. In a machine of the character described, in combination, brushes, swinging arms by which they are carried, and a vertically reciprocating block by which bodies are carried while being operated upon.

2. In a machine of the character described, in combination, brushes rotating inward and downward, swinging arms by which the brushes are carried and a vertically reciprocating block by which bodies are carried while being operated upon.

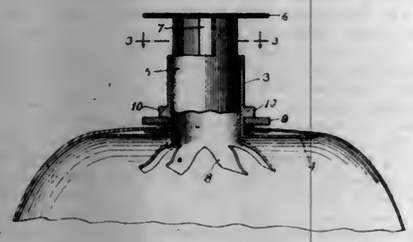
3. In a machine of the character described, in combination, brushes, swinging arms by which they are carried and a vertically reciprocating block, elongated in the direction of the width of the machine, flattened on opposite sides and cone-shaped in cross-section, by which bodies are carried while being operated upon.

4. In a machine of the character described, in combination, brushes, swinging arms by which they are carried, a vertically reciprocating block by which bodies are carried while being operated upon, and means for causing the brushes to move outward relatively to the body as the block moves upward, and vice versa.

5. In a machine of the character described, in combination, brushes, swinging arms by which they are carried, a vertically reciprocating block by which bodies are carried, wedges engaging the arms for causing the brushes to move outward relatively to the block as the block moves upward, aad springs for retaining the arms in engagement with the wedges.

[Claims 6 to 20 not printed in the Gazette.]

1,210,877. TOBACCO-SAVER. WICKES WASHBURN, Roselle, N. J. Filed Oct. 7, 1915. Serial No. 54,671. (Cl. 221—23.)

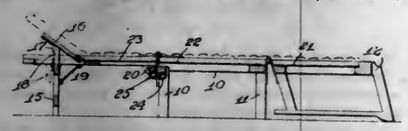


1. The combination of an outer tube having a flange at its lower end, means for detachably securing a bag thereto over said flange, an inner tube rotatably mounted within the outer tube and having lateral discharge openings, stirring means secured to said inner tube below said flange, and a cap closing the outer end of said tube.

2. The combination of an outer tube having a flange at its lower end, means for detachably securing a bag thereto over said flange, an inner tube mounted to rotate and reciprocate within said outer tube and having lateral discharge openings at its outer end, stirring blades extending laterally from the end of the inner tube below said flange, and a cap secured to the outer end of the inner tube and seating against the end of the outer tube in closed position.

3. The combination of an outer tube having a flange at its lower end, means for detachably securing a bag thereto over said flange, an inner tube mounted to rotate and reciprocate within said outer tube and having lateral discharge openings at its outer end, stirring means secured to the lower end of the inner tube below said flange, and a cap for closing the outer end of the tubes.

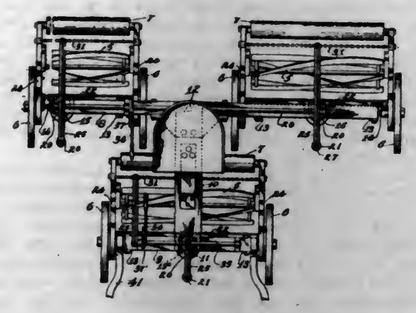
1,210,878. CONVERTIBLE CHAIR. SAMUEL W. WEBER, Brooklyn, and LEONARD HORINKO, New York, N. Y. Filed Nov. 20, 1915. Serial No. 62,449. (Cl. 155—6.)



1. A convertible chair comprising a base section, a back section hinged thereto, said back section being adapted to be swung back to form the head of a bed, legs hinged to the back section to support the same on the floor in extended position, a head piece on the back section, and means on the head piece engaging the legs to hold them in position when supporting the back section.

2. A convertible chair comprising a base section, a back section hinged thereto adapted to swing down to form the head portion of the bed, hinged legs mounted on the back section, a pivoted extension provided on the legs, a swinging head piece, and means on said head piece to engage the extension to hold the legs in position when supporting the back and to maintain the head piece in raised adjustment.

1,210,879. GANG LAWN-MOWER. CHARLES C. WORTHINGTON, Dunfield, N. J. Filed Nov. 26, 1913. Serial No. 803,296. (Cl. 56—19.)



1. In a gang mower, the combination of a frame, a plurality of mower elements on which the entire weight of said frame is supported, said elements being arranged in rows, and means connecting the mower elements to the frame whereby independent vertical angular movement on the part of each mower element is permitted without altering the amount of the weight of said frame that is imposed on each mower element or changing the location of the point on which it rests.

2. A lawn mowing machine consisting of a plurality of individual mower units, each unit having an axle, said axles being so held centrally by a superimposed frame, that they are all free to oscillate in their respective vertical planes but are held rigidly to said planes.

3. In a gang lawn mowing machine, a plurality of individual mower members, each member having two independently moving wheels connected by an axle, and a superimposed frame whose weight is supported upon said axles by supports located about midway between each pair of said wheels.

4. In a lawn mower comprising a plurality of cutter units having independent vertical angular movements, a frame carried wholly upon said units by supports so located upon the axles of said units that the said vertical movements do not vary the proportionate amount of the weight of said frame carried by each individual unit.

5. In a lawn mowing machine, a plurality of mower units each having two wheels, a frame supported upon said wheels, and means whereby the weight of said frame is distributed in substantially continuous and unvarying proportion over each of said wheels.

[Claims 6 to 41 not printed in the Gazette.]

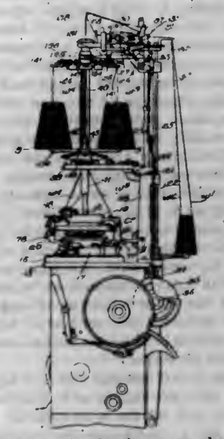
1,210,880. PROCESS FOR SEPARATING PRECIOUS METALS FROM THEIR ORES. WILLIAM HENRY AGHAN, Burke's Flat, Victoria, Australia. Filed Dec. 9, 1914. Serial No. 876,350. (Cl. 83—67.)

1. In separating precious metals from their ores—subjecting such ores to the action of a bath containing a solution of water, cyanid of potassium, sulfuric acid, corrosive sublimate, and common salt, in the approximate proportions described, other reagents capable of modifying the action on the bath being excluded.

2. In separating precious metals from their ores—subjecting such ores to the action of a bath containing a solution of water, sulfuric acid, corrosive sublimate, and common salt, in the approximate proportions described, other reagents capable of modifying the action on the bath being excluded.

3. In separating precious metals from their ores—subjecting the ores to treatment with lime to neutralize the same, and then to a treatment with a solution consisting of water, cyanid of potassium, sulfuric acid, corrosive sublimate, and common salt, other reagents capable of modifying the action on the bath being excluded.

1,210,881. YARN-CHANGING MECHANISM FOR KNITTING-MACHINES. ARTHUR N. AMES, Franklin, N. H., assignor, by mesne assignments, to Commercial Machine Company, Franklin, N. H., a Corporation of Massachusetts. Continuation in part of application Serial No. 635,245, filed June 26, 1911. This application filed Sept. 26, 1912. Serial No. 722,515. (Cl. 66—12.)



1. A knitting machine having yarn changing mechanism including yarn feeds, means for reciprocating said feeds, a guide ring, and a vertically adjustable cylindrical member normally extending below said ring to separate the yarns leading to the needles during reciprocating knitting.

2. A knitting machine having yarn changing mechanism including yarn feeds, means for reciprocating said feeds, a guide ring, and a telescopic tube having its lower member normally extending below said ring to separate the yarns leading to the needles during reciprocating knitting.

3. A knitting machine having yarn changing mechanism including yarn feeds, means for reciprocating said feeds, a guide ring, and a telescopic tube having its lower member normally extending below said ring, to separate the yarns leading to the needles during reciprocating knitting, the upper member having a vertical slot.

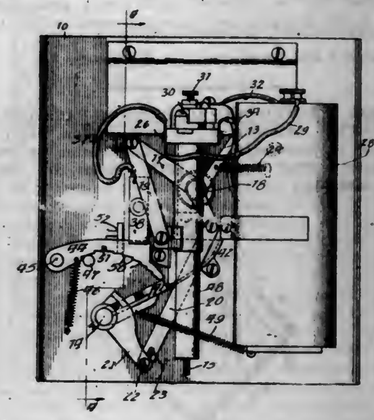
4. In a knitting machine a latch ring having a slot for the passage of threads, a yarn changer comprising a pair of thread guides pivotally mounted on vertical axes at opposite sides of said slot, the guides being movable through said slot, a segment slide, means for actuating said slide, and connections whereby said slide will swing the thread guides in opposite directions.

5. In a knitting machine a latch ring having a slot for the passage of threads, a yarn changer comprising a pair of thread guides pivotally mounted on vertical axes at opposite sides of said slot, the guides being movable through said slot, a segment slide, means for actuating said slide, and connections whereby said slide will swing the thread guides in opposite directions, said guides having gates adjacent the thread passages.

[Claims 6 to 20 not printed in the Gazette.]

1,210,882. CHECK-CONTROLLED MACHINE. ALFRED D. ANTOINE and FLOYD BLACK, Chicago, Ill., assignors to Advance Machine Co., Chicago, Ill., a Corporation of Illinois. Filed Aug. 5, 1916. Serial No. 113,240. (Cl. 194—84.)

1. A machine of the character described embodying an electric circuit, a shiftable handle included in the circuit, a magnetic coil also included in the circuit, a check controlled make and break device for the circuit, said make and break device embodying a fixed contact, a shiftable contact movable into and out of engagement therewith, means tending normally to move the shiftable contact in a direction to render the circuit inactive, a check seat shiftable in one direction to move the check into engagement with the shiftable contact to shift the latter to render the circuit active, means whereby the first recited means will shift the contact at a predetermined point in the forward movement of the check in the check seat, and means whereby a retrograde movement of the check seat will shift the check with relation to its seat to render the circuit inactive.



2. A machine of the character described embodying an electric circuit, a shiftable handle included in the circuit, a magnetic coil also included in the circuit, a check controlled make and break device for the circuit, said make and break device embodying a fixed contact, a shiftable contact movable into and out of engagement therewith, means tending normally to move the shiftable contact in a direction to render the circuit inactive, a check seat shiftable in one direction to move the check into engagement with the shiftable contact to shift and hold the latter in engagement with the fixed contact, said shiftable contact movable out of engagement with the fixed contact when the check is shifted with respect to its seat, means whereby a retrograde movement of the check seat from any position to which it has been advanced will shift the check with relation to its seat to render the circuit inactive, and means whereby the movable contact may be moved out of engagement with the fixed contact when the check is in the seat.

3. A device of the character described embodying an electric circuit, a magnetic coil included in the circuit, means for varying the strength of the field of said coil, a make and break device for controlling the circuit, said make and break device embodying a fixed and a shiftable contact movable into and out of engagement therewith, means tending normally to separate said contacts, said shiftable contact being provided with spaced projections on one face, a check seat, means for moving the said seat to cause the check to successively move over the said projections, means for varying the strength of the said circuit, and means for rendering the circuit inactive while the check is in said seat.

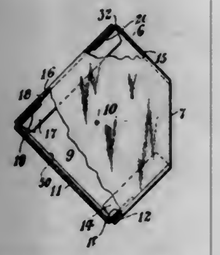
4. A device of the character described embodying an electric circuit, a shiftable handle, a check controlled make and break device for the circuit and embodying cooperating contacts one of which is shiftable with respect to the other, a shiftable check seat, means for shifting the seat to move the check into engagement with one of the contacts to move the latter into operative position with the other contact, means responsive to the movement of the check for varying the strength of said circuit, and means whereby the circuit will be rendered inactive at a predetermined point in its strength and while the check is still in its seat.

5. A device of the character described embodying an electric circuit, a shiftable handle, a check controlled make and break device for the circuit and embodying co-

operating contacts one of which is shiftable with respect to the other, a shiftable check seat, means for shifting the seat to move the check into engagement with one of the contacts to move the latter into operative position with the other contact, means responsive to the movement of the check for varying the strength of said circuit, means whereby the check will be ejected from its seat upon a retrograde movement of the seat, and means whereby the circuit will be rendered inactive at a predetermined point in its strength and while the check is still in its seat.

[Claims 6 and 7 not printed in the Gazette.]

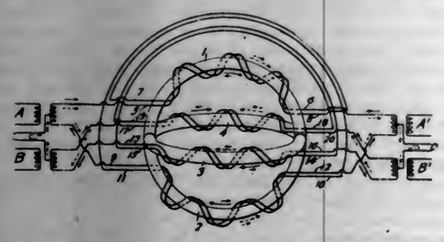
1,210,883. PASTEBOARD DISPENSING-PACKAGE FOR ELASTIC. HERBERT A. AUSTIN, Boston, Mass., assignor to Everlastik, Inc., a Corporation of Massachusetts. Filed Feb. 15, 1913. Serial No. 748,713. (Cl. 206—52.)



1. A dispensing package for a reel of tape-like fabric comprising a thin rectangular pasteboard box having side walls to face against the sides of the reel; a dispensing slot formed in one edge wall; and being cut off at one corner to expose said reel for the purpose of rewinding.

2. A dispensing package for a reel of tape-like fabric comprising a thin rectangular pasteboard box having side walls to face against the sides of the reel; a dispensing slot formed in one edge wall; exterior guiding means adjacent the corner next to the dispensing slot to guide the passage of said tape-like fabric over the exterior of the box; and being cut off at one corner to expose said reel for the purpose of rewinding.

1,210,884. PHANTOM-CIRCUIT LOADING. JOHN FRANKLIN BALDWIN, Jr., East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed June 27, 1916. Serial No. 106,119. (Cl. 178—44.)



1. An inductance coil comprising two toroidal core members intersecting at right angles on a common diameter, main windings on each of the semi-toroidal core sections thereby formed, and a supplementary winding on each of said sections, the supplementary winding of one section being in series with the main winding of the opposite section.

2. An inductance coil comprising two toroidal core members intersecting at right angles on a common diameter, a main winding on each of the semi-toroidal core sections thereby formed, and a supplementary winding on each of said sections, said supplementary windings being so connected as to add to the inductive effect of the main windings of the two sections lying in the same plane when said windings are connected in parallel, and to detract from said inductive effect when such windings are connected in series.

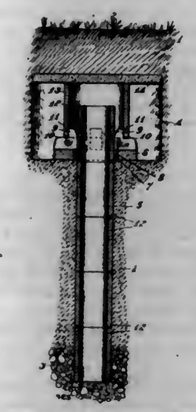
3. An inductance coil comprising two toroidal core members intersecting at right angles on a common diameter, a main winding on each of the semi-toroidal core sections thereby formed, and a supplementary winding on each of said sections, said supplementary windings being so connected as to modify in one way the inductive effect of the main windings of the two sections lying in the same plane when said windings are connected in parallel, and to modify in the opposite way said inductive effect when such windings are connected in series.

4. An inductance coil having two toroidal core members intersecting at right angles on a common diameter, a main winding on each of the semi-toroidal core sections thereby formed, and a supplementary winding on each of said sections, the supplementary winding of each section being connected in series with the main winding of the opposite section in such a manner as to add to the inductive effect of the main windings of opposite sections when said main windings are connected in parallel, and to detract from said inductive effect when said main windings are connected in series.

5. An inductance coil having two toroidal core members intersecting at right angles on a common diameter, a main winding on each of the semi-toroidal core sections thereby formed, and a supplementary winding on each of said sections, the supplementary winding of each section being connected in series with the main winding of the opposite section in such a manner as to modify in one way the inductive effect of the main windings of opposite sections when said main windings are connected in parallel, and to modify in the opposite way said inductive effect when said main windings are connected in series.

[Claim 6 not printed in the Gazette.]

1,210,885. DRAINAGE-TILE. ALBERT E. BEALL, Clinton, Iowa, assignor to Vertical Drainage Company, Clinton, Iowa. Filed Aug. 26, 1912. Serial No. 717,036. (Cl. 61—9.)



1. In a tiling system, the combination of a vertically disposed tubular member, a foundation member encircling said tubular member and separable therefrom, a housing member carried by said foundation member, and a cover for said housing member.

2. In a tiling system, the combination of a tubular member leading from a water chamber to a porous stratum below, a foundation member resting on the bottom of said chamber, a housing member inclosing the upper end of said tubular member to form a water trap with water passages between said foundation member and said housing member, and a closure for the top of said housing member.

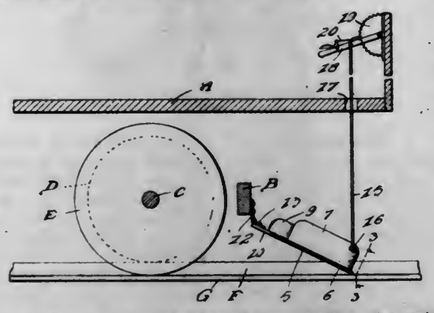
3. In a tiling system, the combination of a tubular member leading from a chamber to a porous stratum beneath, the upper end of said tubular member projecting substantially above the bottom of said chamber, a foundation member resting on the bottom of said chamber and having upstanding lugs, and a housing member resting on the lugs of said foundation member and spaced from said tubular member to form a water trap from which the water from said chamber may overflow into the tubular member and thence into the porous stratum below.

4. In a drainage system, the combination of a tubular member composed of tile sections arranged vertically one above the other, the upper end of said member projecting a substantial distance into a water chamber, a foundation member encircling the upper portion of said tubular member and having serrated inner edges forming water passages about said tubular member, said foundation member carrying upstanding lugs with shoulders, said lugs serving to support the upper section of said vertical member, a housing member anchored by said lugs and supported on said shoulders and a flat disk resting on the upper edge of said housing member and forming a closure therefor, said disk also serving as a top for said chamber.

5. In a device of the character described, a drain sunk in the ground down to porous earth, a sustaining member surrounding said drain and resting on the ground, a hollow column around the upper end of the drain and on the base of the sustaining member, and a cover over the column and extending beyond the outer edge of the sustaining member.

[Claim 6 not printed in the Gazette.]

1,210,886. TRACK-SCRAPER FOR STREET-RAILWAYS. BARENT M. BENNETT, Jordan, N. Y. Filed Jan. 12, 1916, Serial No. 71,748. Renewed Nov. 1, 1916. Serial No. 129,036. (Cl. 104—100.)

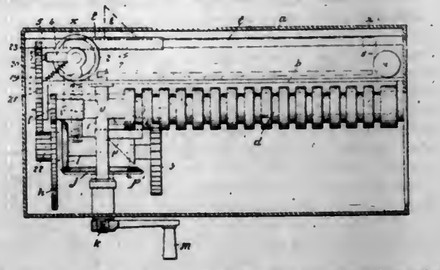


1. A clearer of the class described consisting of a pair of scrapers adapted to be hingedly connected to a car body and each comprising an elongated base plate having its forward end provided with a cutting edge, a guide plate carried by the base plate and provided with a cutting edge, and a deflector plate carried by the base plate and located in rear of the guide plate.

2. A clearer of the class described consisting of a pair of scrapers each comprising an elongated base plate having its forward end provided with a cutting edge, a guide plate carried by the base plate and provided with a cutting edge, a deflector plate carried by the base plate and located in rear of the guide plate, and a connecting bar having its opposite ends connected to the guide plates of the scrapers.

1,210,887. MOVING-PICTURE APPARATUS. GIANNI BETTINI, Paris, France, assignor to Bettini Syndicate, Limited, London, England, a Corporation of Great Britain. Filed Aug. 4, 1911. Serial No. 642,250. (Cl. 88—16.)

1. In a moving picture machine the combination of a plate, an objective, means for bending a beam of light so as to pass through said plate and through said objective, and means for simultaneously moving said bending means and said objective with reference to said plate.



2. In a moving picture machine the combination of a plate, an objective, means for bending a beam of light so as to pass through said plate and through said objective, and means for intermittently and simultaneously moving said bending means and said objective with reference to said plate.

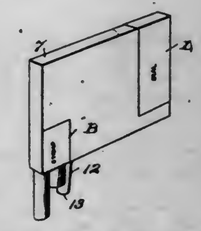
3. In a moving picture machine, the combination of a plate, an objective, means for bending a beam of light so as to pass through said plate and through said objective, means for intermittently and simultaneously moving said bending means and said objective with reference to said plate, and means for intermittently interrupting the light beam as said bending means and said objective are moved.

4. In a moving picture machine the combination of a plate, an objective, means for bending a beam of light so as to pass through said plate and through said objective, means for intermittently and simultaneously moving said bending means and said objective with reference to said plate, and a shutter arranged to open and shut in synchronism with the periods of rest and movement of the aforesaid bending means and objective.

5. In a moving picture machine the combination of a plate, an objective on one side of said plate, means on the other side of said plate for bending a beam of light so as to pass through said plate and through said objective, means for intermittently and simultaneously moving said bending means and said objective in planes parallel to said plate, and means for periodically interrupting the light beam as said bending means and said objective are moved.

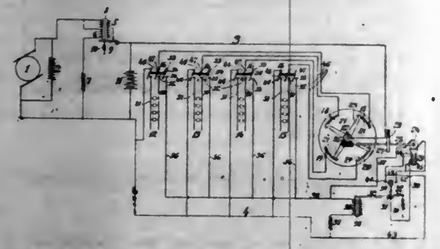
[Claims 6 to 30 not printed in the Gazette.]

1,210,888. CIGARETTE-BOX. MAJOR H. BETTS, Bloomfield, N. J. Filed Oct. 13, 1915. Serial No. 55,722. (Cl. 206—41.)



A single delivery cigarette box provided with a discharge opening and also having a wall near one corner of the receptacle, provided with a relatively flexible tongue for closing the discharge opening and adapted to be flexed under the impact of a cigarette thereagainst when the package is struck against a fixed object, destructible means for normally holding the tongue in a closed and inactive position, and a straight extension formed on the tongue in a plane therewith and projecting beyond the adjacent side of the package and serving as a manipulating means for the tongue, whereby the tongue may be initially raised to destroy said destructible means.

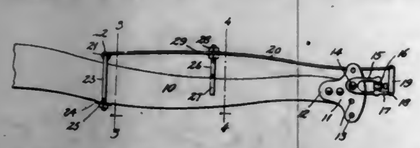
1,210,889. REGULATING APPARATUS. JOSEPH BIJUR, New York, N. Y., assignor to The Safety Car Heating and Lighting Co., New York, N. Y., a Corporation of New Jersey. Filed Nov. 18, 1911. Serial No. 660,945. (Cl. 171—229.)



1. In apparatus of the class described, in combination, a source of current, a plurality of lamp circuits, means adapted separately to connect said lamp circuits to said source of current, a plurality of variable resistance media, one of which is serially connected in each lamp circuit, a motor, a voltage relay controlling said motor and connected to present a field proportional to the voltage across the lamps, and means varying said media actuated from said motor to maintain the voltage across the lamps substantially constant, said relay and motor being connected with a lamp circuit on the lamp side of said first connecting means.

2. In apparatus of the class described, in combination, a source of power, a plurality of lighting circuits each comprising a pair of conductors in one of which is serially connected a resistance medium and a bank of lamps bridged in parallel across said conductors, a plurality of double-pole switches respectively adapted to connect said circuits across said source in parallel one with another, each of said resistance media being so disposed in the corresponding conductor as to be traversed by the entire current passing to the corresponding bank of lamps, said several resistance media each comprising a plurality of contacts grouped about a rotary member, a member mounted upon said rotary member and provided with arms respectively coacting with said sets of contacts, an electric motor controlling said rotary member, and means controlled in accordance with the voltage across said lamps and controlling the direction and duration of drive of said motor.

1,210,890. DOUBLETREE-SUPPORT. WILLIAM B. BISHER, Taylor, Nebr. Filed Aug. 11, 1916. Serial No. 114,452. (Cl. 97—4.)



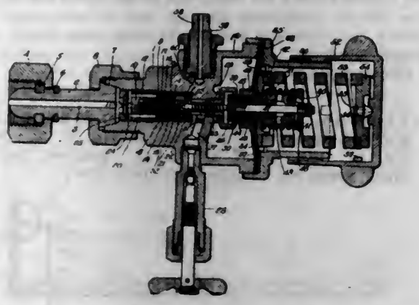
1. The combination with a plow beam or equivalent member of a clevis pivotally connected to the forward end thereof for supporting a doubletree, a spring plate extending over said plow beam and secured thereto at one end and at its other end to said clevis, and means between the ends of the spring and bearing upon said plow beam for varying the tension of said spring and the vertical position of said doubletree.

2. The combination with a plow beam or equivalent member, of a leaf spring extending longitudinally thereof and above the same, means connecting the rear end of said spring to the plow beam, a clevis pivotally connected to the forward end of said beam and supporting a doubletree, connecting links between the clevis and the forward end of said spring, and a tensioning and position changing device for said spring acting thereon between its ends.

3. The combination with a plow beam, a clevis pivotally connected to its forward end for supporting a doubletree, a flat leaf spring extending longitudinally of the plow beam above the same, a loop pivotally connected to the rear end of said spring and rigidly connected to the plow beam, links between the forward end of the spring and said clevis for connecting the latter to the spring, and a tensioning device for said spring adjustably secured between the ends thereof and adapted to bear on the top of the plow beam.

4. The combination with a plow beam of a spring extending longitudinally above the same, a loop connected to said beam and to an eye formed on the rear end of said spring, a clevis pivotally connected to the forward end of the plow beam and adapted to hold a doubletree, an arm projecting forwardly from said clevis and beyond the doubletree, links between said arm and the forward end of the spring to maintain said doubletree in operable position, and a device for tensioning the spring adjustably secured thereto and adapted to bear upon the top of the plow beam.

1,210,891. PRESSURE-REDUCING VALVE. FREDERICK C. BLANCHARD and ERNEST B. CROCKER, Bridgeport, and PHILIP S. KEEFER, Milford, Conn., assignors to The Ashcroft Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 2, 1915. Serial No. 43,064. (Cl. 50—23.)



1. In a reducing valve, a valve body having an initial pressure passage and a discharge pressure passage, a valve and valve seat therebetween, a discharge pressure chamber, the wall of which includes a diaphragm, a spring which imparts pressure to the diaphragm opposed to the pressure in said discharge pressure chamber, means actuated by the diaphragm for controlling the valve and a helical passage connecting said discharge passage and said discharge pressure chamber adapted to check rapid pressure fluctuations.

2. In a reducing valve, a valve body having an initial pressure passage and a discharge pressure passage, a valve and valve seat therebetween, a discharge pressure chamber, the walls of which include a diaphragm, a spring which imparts pressure to the diaphragm opposed to the pressure in said discharge pressure chamber, a bore connecting said discharge pressure passage and said discharge pressure chamber, and a valve controlling push rod actuated by said diaphragm extending through said bore and having a helical groove forming with said bore a tortuous passage adapted to check rapid pressure fluctuations.

3. In a reducing valve, a valve body having an initial pressure passage and a discharge pressure passage, a valve and valve seat therebetween, a discharge pressure chamber, the walls of which include a diaphragm, a spring which imparts pressure to the diaphragm opposed to the pressure in said discharge pressure chamber, a tubular bushing formed with a bore connecting said discharge pressure passage and said discharge pressure chamber, and a valve controlling push rod actuated by said diaphragm extending through said bore and having a helical groove forming with said bore a tortuous passage adapted to check rapid pressure fluctuations.

4. A reducing valve having an initial pressure passage, a discharge pressure passage, a main valve and valve seat therebetween, a diaphragm responsive to pressures on the discharge side of said main valve for controlling said main valve, a safety outlet passage communicating with said discharge passage having a safety valve seat, a safety valve controlling said safety outlet passage adapted to close in the direction of the pressure, and means operative by an excessive movement of said diaphragm caused by an over-pressure on the discharge side of said main valve adapted positively to open said safety valve against said pressure.

5. A reducing valve having an initial pressure passage, a discharge pressure passage, a main valve and valve seat therebetween, a diaphragm responsive to pressures on the discharge side of said main valve, for controlling said main valve, a safety valve and valve seat carried by and moving with said diaphragm, and means to arrest the safety valve when an excessive movement of the diaphragm occurs, caused by an over-pressure on the discharge side of said main valve, whereby the diaphragm will carry the seat away from the safety valve.

[Claims 6 to 14 not printed in the Gazette.]

1,210,892. COVER FOR RECEPTACLES. CLARA BORCHMANN, New York, N. Y. Filed Dec. 3, 1915. Serial No. 64,835. (Cl. 215—3.)



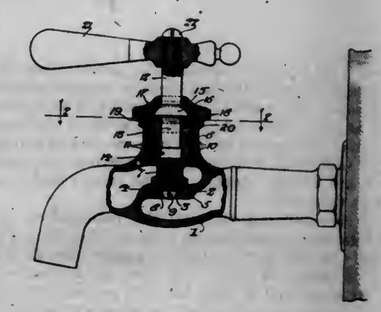
1. A bottle cover comprising a body portion shaped to approximately the contour of the trunk of the human body and having a walled opening longitudinally therethrough adapted to receive and conceal the neck of a bottle, a head section mounted on the body portion and adapted to overlie the mouth of a bottle and a nether section depending from the body portion and adapted to cover and conceal the body of a bottle.

2. A bottle cover comprising a body section having an elongated walled opening extending longitudinally therethrough for the insertion of a bottle neck, said body section conforming in outline to the general shape of the trunk of a human body, a head section movably connected with the body section and adapted to be positioned to conceal and expose the mouth of a bottle, and a nether section depending from the body section and covering the body of the bottle.

3. In a device of the character set forth, in combination, a bottle having a neck and a removable stopper therefor, a figure of a doll having a body with an opening therethrough receiving the said neck of the bottle, said opening having means therein for engaging the neck of the bottle to secure said body thereto, and a skirt of flexible material extending down from said body and coöperating with said body to envelop and completely conceal said bottle, said doll having a movable head attached thereto movable into a position to expose said stopper.

4. In a device of the character set forth, in combination, a bottle having a neck and a removable stopper therefor, a figure of a doll having a body with an opening therethrough receiving the said neck of the bottle, said opening having means therein for engaging the neck of the bottle to secure said body thereto, and a skirt of flexible material extending down from said body and coöperating with said body to envelop and completely conceal said bottle, said doll having a movable head attached thereto movable into a position to expose said stopper, said figure having its waist line substantially at the base of said neck, said bottle operating to support said figure in an upright position, the shoulder of the said bottle giving shape to the hips of the said figure.

1,210,893. QUICK-OPENING FAUCET. JAMES BRENTON, Waukegan, Ill., assignor to Northern Brass Manufacturing Company, Waukegan, Ill., a Corporation of Illinois. Filed Mar. 15, 1915. Serial No. 14,459. (Cl. 137—4.)



1. A faucet of the quick opening type having a rotatable valve-operating stem, a washer loosely mounted on said stem but connected to rotate therewith, and means held against rotation on said faucet for frictionally engaging said washer.

2. A faucet comprising a casing having a valve seat, a valve on the discharge side of said seat having quick acting threads, a rotatable stem for operating said valve, a washer loosely mounted on said stem but connected to rotate therewith, a cap-nut for said casing, and means held against rotation between said cap-nut and casing for frictionally engaging said washer.

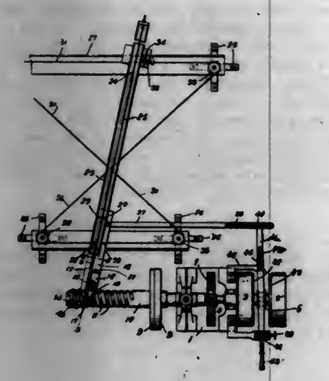
3. A faucet comprising a casing having a valve seat, a valve on the discharge side of said seat having quick acting threads, a rotatable stem for operating said valve having a collar thereon, and a washer loosely mounted on said stem but connected to rotate therewith, said casing having means coöperating with said collar to hold said stem against vertical movement and for frictionally engaging said washer.

4. A faucet of the quick opening type having a rotatable valve-operating stem, a plurality of metal washers separate from said stem but mounted thereon, one of which is connected to rotate with said stem, and means on said faucet for clamping the other washer or washers against rotation and in frictional contact with said rotatable washer.

5. A faucet of the quick opening type having a rotatable, valve operating stem, three metal washers mounted on said stem, the intermediate washer being connected to said stem to rotate therewith, and means for clamping the other washers against rotation and in frictional contact with said intermediate washer.

[Claims 6 to 9 not printed in the Gazette.]

1,210,894. TUBE-BENDING MACHINE. LOUIS H. BRINKMAN, Glen Ridge, N. J., assignor, by mesne assignments, to Baltimore Tube Company, Incorporated, a Corporation of Virginia. Filed May 26, 1913. Serial No. 769,835. (Cl. 153—67.)



1. In a tube-bending machine the combination of a groove former having a thread thereon, a guide mounted on said former and movable longitudinally of said former at a rate of speed dependent upon the pitch of the thread on the former, a mandrel for the tube one end of which is carried by said guide and means for carrying and moving the other end of said mandrel at the same relative rate of speed as the guide.

2. In a tube-bending machine the combination of a grooved rotatable former having a thread thereon, a guide for the tube carried by the former, a mandrel for the tube, one end of which is carried by said guide, cable for moving the other end of said mandrel so that the angle between the longitudinal axis of the mandrel and that of the former is constant, and a clamp rigidly attached to the mandrel adapted to engage the cable at different points for maintaining the angle of said mandrel to the former.

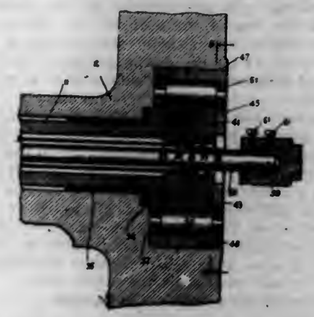
3. In a tube-bending machine the combination of a grooved former, a metallic frame coöperating with said former and provided with an adjustable bearing screw disposed to engage the spiral groove in said former, a bending shoe on one side of the frame, a mandrel and means whereby said mandrel may be adjusted at any angle to said former and maintained at that angle throughout a complete bending cycle.

4. In a tube-bending machine the combination of a grooved former, a frame engaging said former, a swiping-block attached to said frame and having a groove registering with the groove in the former, a mandrel means for moving said mandrel, frame and swiping-block longitudinally of said former in one direction and means for automatically reversing said first-named means after the bending operation and discharging said tube from the former.

5. In a tube-bending machine, the combination of a grooved former for the tubes to be bent, said former having a part near the commencement of the groove adapted to be engaged by a tube-securing member, and a tube-securing member of substantial C-shape having a head end constructed to engage said portion of the former and a tail end constructed to fit the tube to be bent and adapted to lie substantially tangent to the groove of the former when said member is in position to secure the tube to the former, the distance between the engaging head of said member and the tail of said member where tangent to the groove being less than the diameter of the groove adjacent said member.

[Claims 6 to 18 not printed in the Gazette.]

1,210,895. APPARATUS FOR AND METHOD OF CORRUGATING METAL TUBES. LOUIS H. BRINKMAN, Glen Ridge, N. J., assignor, by mesne assignments, to Baltimore Tube Company, Incorporated, a Corporation of Virginia. Filed Oct. 15, 1914. Serial No. 866,758. (Cl. 153—71.)



1. In a machine for corrugating metal tubes, the combination of means rotative relative to the tube for momentarily gripping the tube along a helical line and releasing it one or more times successively during each relative rotation between the tube and said gripping means to form corrugations in the tube, and means for rotating said gripping means.

2. In a machine for corrugating metal tubes, the combination of means for rotating the tube, rotative means for momentarily and successively gripping the tube along a helical line and releasing it a plurality of times during each rotation of the tube to form corrugations in the tube, and means for rotating said gripping means relative to the rotating tube.

3. In a machine for corrugating metal tubes, the combination of means rotative relative to the tube for momentarily gripping the tube along a helical line and releasing it one or more times successively during each relative rotation between the tube and said gripping means to form corrugations in the tube, means for rotating said gripping means, and means for producing relative longitudinal movement between the tube and the gripping means.

4. In a machine for corrugating metal tubes, the combination of means for rotating the tube, means continuously operating to momentarily and successively grip the tube along a helical line and release it to form corrugations therein, means for rotating said gripping means relative to the rotating tube, and means for producing relative longitudinal movement between the tube and the gripping means.

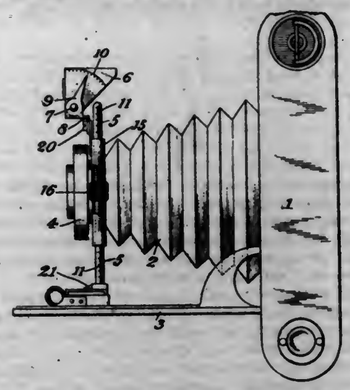
5. In a device for corrugating metal tubes, the combination of a plurality of radial reciprocatory tool sections each provided at its inner end with a longitudinal section of a helix having a plurality of convolutions, means for rotating said tool sections relative to the tube to be corrugated, and means coöperating with said sections to cause them to be reciprocated when rotated to momentarily grip and release the tube being corrugated.

[Claims 6 to 28 not printed in the Gazette.]

1,210,896. FINDER FOR CAMERAS. STANLEY BROWN, Garden City, N. Y. Filed Jan. 20, 1915. Serial No. 3,213. (Cl. 95—51.)

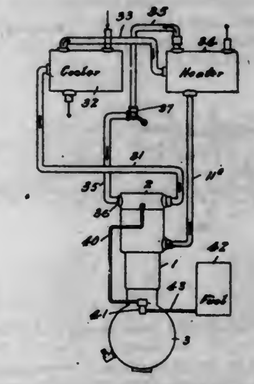
1. In a camera having a vertically movable lens, a finder provided with a gravitation device having a coöperative reference scale to ascertain the optical divergence, *i. e.*, the angular departure from the horizontal of the subject to be included in the negative, and a corresponding scale and pointer on the camera lens supporting mechanism to determine the necessary vertical offsetting of the camera lens relative to the normal axis of the camera.

2. In a camera having a vertically movable lens, a tilting finder provided with a gravitation device having a coöperative reference scale to ascertain the optical divergence, *i. e.*, the angular departure from the horizontal of the subject to be included in the negative and a



corresponding pointer and scale on the camera lens supporting mechanism to determine the necessary vertical offsetting of the camera lens relative to the normal axis of the camera.

1,210,897. GAS-ENGINE. ARTHUR BENJ. BROWNE, Denver, Colo. Filed July 9, 1910, Serial No. 571,247. Renewed Mar. 12, 1915. Serial No. 13,967. (Cl. 123—1.)



1. In a prime mover, the combination of a power cylinder, an inlet valve and a discharge valve therein, a cooler, a heater, a passage leading from the discharge valve to the cooler, a connection between the cooler and the heater, and a passage from the heater to the inlet valve.

2. In a prime mover, the combination of a power cylinder, an inlet valve and a discharge valve therein, a storage space including a cooler and a heater, a gas conduit for leading gases from the discharge valve to the cooler and heater in succession and back to the inlet valve, and means for supplying heat to the heater from burned gases exhausted from the cylinder.

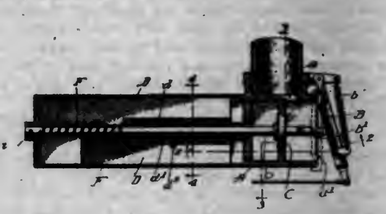
3. In an internal combustion engine, the combination of a power cylinder, a piston, crank case compression means, the cylinder being provided with primary supply and exhaust ports near the outward end of piston travel, said primary supply port having communication with the crank case, a discharge chamber, a valve between said chamber and the cylinder opening outward, an inlet port, a valve therefor opening outward, a spring normally closing the discharge valve, a heavier spring normally closing the inlet valve, a cooler and piping leading from the discharge chamber to the cooler and from the cooler to the inlet valve.

4. In an internal combustion engine, the combination of a power cylinder, a piston, crank case compression means, the cylinder being provided with primary supply and exhaust ports near the outward end of piston travel, said primary supply port having communication with the crank case, a discharge chamber, a valve between said chamber and the cylinder opening outward, an inlet port, a valve therefor opening outward, a spring normally closing the discharge valve, a heavier spring normally closing the inlet valve, a cooler and a heater and a conduit leading in order from the discharge chamber to the cooler to the heater and to the inlet valve.

5. In an internal combustion engine, the combination of a power cylinder, a piston, crank case compression means, the cylinder being provided with primary supply and exhaust ports near the outward end of piston travel, said primary supply port having communication with the crank case, a discharge chamber, a valve between said chamber and the cylinder opening outward, an inlet port, a valve therefor opening outward, a spring normally closing the discharge valve, a heavier spring normally closing the inlet valve, a cooler, a heater, a conduit leading in order from the discharge chamber to the cooler to the heater and to the inlet valve, a fuel port opening adjacent to the seat of the inlet valve, and mechanical means for opening the inlet valve shortly after the piston reaches the inward end of its stroke.

[Claims 6 to 32 not printed in the Gazette.]

1,210,898. EXHAUST-WHISTLE. MORTON G. BUNNELL, Chicago, Ill., assignor to The Corning Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 2, 1913. Serial No. 787,607. (Cl. 116—59.)

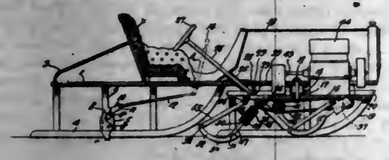


1. An exhaust whistle-structure comprising a stationary member adapted to be connected with the exhaust, having an exhaust outlet and a fluid discharge opening, an element having endwise motion toward and away from said opening, serving to control communication between the atmosphere and the interior of the structure, said element being mounted on said member, an outwardly opening valve for said outlet, a connection between said element and valve, including a rod mounted to slide endwise in said member, and means to control the valve and rod, a device inside of said element for receiving the exhaust from said opening, thereby to produce the sound, means for adjusting said device toward and away from said opening.

2. An exhaust whistle comprising a hollow member having exhaust inlet and outlet openings, a passage through which the exhaust escapes to operate the whistle, an outwardly opening external valve for said outlet, and means serving to prevent the exhaust from escaping through said passage when the said outlet is open, but not when the valve is closed, said outlet being disposed between said inlet and said valve, together with a spring for normally holding said valve in open position.

3. An exhaust whistle comprising a hollow member having exhaust inlet and outlet openings, a passage through which the exhaust escapes to operate the whistle, an outwardly opening external valve for said outlet, and means serving to prevent the exhaust from escaping through said passage when the said outlet is open, but not when the valve is closed, said outlet being disposed between said inlet and said valve, said means comprising a wall within said member.

1,210,899. MOTOR-SLEIGH. RICHARD D. BURCHILL, Tampa, Fla. Filed Mar. 20, 1916. Serial No. 85,433. (Cl. 21—47.)



1. In a motor sleigh, a platform; a rear sled connected with the platform; a turntable journaled for rotation on a vertical axis and located at the forward end of the platform; a forward sled assembled with the turntable; means for rotating the turntable about a vertical axis; a ground-engaging driving means carried by the turntable; an engine mounted on the turntable; and means for operatively connecting the engine with the driving means.

2. In a motor sleigh, a platform; a rear sled assembled with the platform; a turntable mounted on the platform adjacent the forward end of the platform for rotary movement about a vetrical axis; means for rotating the turntable about a vertical axis; a front sled pivotally assembled with the turntable for swinging movement in a vertical plane; an engine on the turntable; a ground-engaging driving means carried by the turntable; and mechanism for operatively connecting the engine with the driving means.

3. In a motor sleigh, a platform; a rear sled assembled with the platform; a turntable mounted to rotate about a vertical axis and located adjacent the forward end of the platform; means for rotating the turntable; forward and rear shoes located below the platform; links connecting the rear ends of the shoe with the turntable; shafts journaled on the turntable and having cranks; connections between the cranks and forward ends of the shoes; an engine mounted on the turntable; and means for operatively connecting the engine with the shafts.

4. In a motor sleigh, a platform; a rear sled carried by the platform; a turntable journaled for rotation on the platform for movement on a vertical axis; means for rotating the turntable about a vertical axis; a front sled carried by the turntable; a shoe located below the platform a link connecting the rear end of the shoe with the turntable; a shaft journaled on the turntable and provided with a crank; a connection between the crank and the forward end of the shoe, the connection including a cushioning spring; an engine mounted on the turntable; and means for operatively connecting the engine with the shaft.

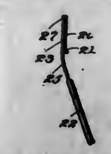
5. In a device of the class described, a sled; a table connected with the sled; front and rear ground-engaging shoes located below the table; links connecting the rear ends of the shoes with the table; shafts journaled for rotation on the table and provided with cranks; connections between the cranks and the forward ends of the shoes; a transmission mechanism mounted on the table between the shafts, the transmission mechanism including a third shaft; sprocket wheels on the third shaft and on the crank shafts; sprocket chains connecting the sprocket wheels of the third shaft with the sprocket wheels of the crank shafts; and an engine mounted on the table and connected with the transmission mechanism.

[Claim 6 not printed in the Gazette.]

1,210,900. METHOD OF MAKING UMBRELLA-FRAMES. GEORGE B. CANNON, Jr., Brooklyn, and FRANK W. HOWARD, New York, N. Y. Filed May 24, 1915. Serial No. 30,060. (Cl. 29—25.)

1. The method of making part of an umbrella frame which consists in forming a plurality of resilient rib members with flexible substantially flat ends, arranging said flexible ends spaced apart and adjacent to each other, and integrally uniting said flat ends to a sleeve member.

2. The method of making part of an umbrella frame which consists in forming a plurality of resilient rib members with substantially flat flexible ends, arranging said flexible ends spaced apart and adjacent to each other, integrally uniting said flat ends to a sleeve member, and securing the sleeve member upon an umbrella stick.



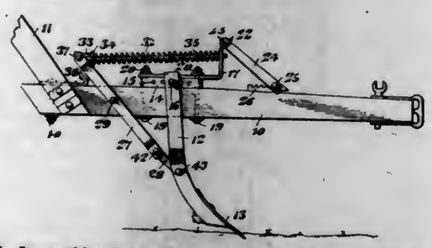
3. The method of making part of an umbrella frame which consists in forming a plurality of rib members with flexible substantially flat ends, holding said rib members with said flat flexible ends spaced apart upon a substantially flat strip, securing the said flat extensions to said strip, and then rolling said strip into a sleeve.

4. The method of making part of an umbrella frame which consists in forming a plurality of rib members with flexible substantially flat ends, holding said rib members with said flat flexible ends spaced apart upon a substantially flat strip, welding the said flat extensions to said strip, and then rolling said strip into a sleeve.

5. The method of making part of an umbrella frame which consists in forming a plurality of rib members with flexible substantially flat ends, holding said rib members with said flat flexible ends spaced apart upon a substantially flat strip, securing the said flat extensions to said strip, and then rolling said strip into a sleeve around the periphery of an umbrella stick.

[Claim 6 not printed in the Gazette.]

1,210,901. PLOW ATTACHMENT. CHARLIE M. CARRAWAY, Shongaloo, La. Filed July 20, 1916. Serial No. 110,373. (Cl. 97—26.)



1. In combination with a plow beam, and a standard, a pivotal connection for the standard mounted for longitudinal adjustment on the plow beam, a brace hinged to the plow beam and extended above the latter and having connection with the standard, and resilient means mounted for longitudinal adjustment on and above the plow beam and engaging the upper end of the brace to normally hold the standard in a forwardly swung position.

2. In combination with a plow beam, and a standard, a pivot member on said beam having a longitudinal row of transverse openings therethrough, a bolt carried upon the upper end of said standard and adapted for engagement in the desired one of said openings to pivotally and adjustably connect the standard to the beam, a brace hinged to the beam and having connection with the standard, a supporting member mounted on said pivot member and adapted for longitudinal adjustment thereon, and a spring between said supporting member and said brace to urge the latter in one direction and yieldingly hold the standard in a forwardly swung position.

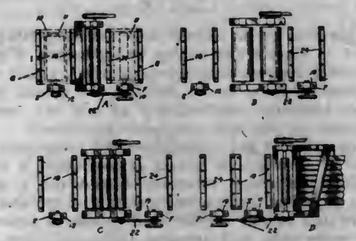
3. In combination with a plow beam, and a standard having a forked end receiving the beam therethrough, a pivot member formed of strap metal bent into substantially rectangular form and having registering rows of apertures in its opposite sides, means for securing the pivot member edgewise against the upper side of the beam, a pivot bolt engaging through the forked ends of the standard and through a registering pair of said apertures in the pivot member to pivotally support the standard, a brace pivoted to said beam having connection with said standard, and a spring mounted on the beam and having connection with the brace to swing the brace and the standard forwardly.

4. In combination with a plow beam, and a standard, means for pivotally connecting the standard in longitudinally adjusted position upon the beam, a brace consisting of a lever pivoted to the beam and having one end projecting below the same and its opposite end projecting above the beam, and a link hinged between the lower end of said lever and said standard, and a spring adjustably supported at one end on said beam and engaging at its opposite end against the upper end of said lever to yieldingly hold the latter and said standard in a forwardly swung position.

5. In combination with a plow beam, and a standard, means for pivotally mounting the standard on the plow beam, a brace consisting of a lever hinged on the beam and extending above and below the same, and a link connecting the lower end of the lever to the standard, a rod hinged to the upper end of said lever, a supporting member mounted for longitudinal adjustment on said beam and having an upturned apertured portion receiving the outer end of the rod therethrough to guide the rod, a spring surrounding the rod between said supporting member and the upper end of said lever, a stop on said beam adapted for engagement with the upper end of said lever to limit the rearward swinging thereof, and means connected to the upturned end of said supporting member to support the same against the pressure of the spring.

[Claims 6 to 9 not printed in the Gazette.]

1,210,902. METHOD OF MANIPULATING AND HANDLING ROLLS OF FABRIC. EMIL B. CEDERSTROM, Detroit, Mich., assignor to Morgan & Wright, a Corporation of Michigan. Filed Apr. 21, 1915. Serial No. 22,887. (Cl. 242—58.)

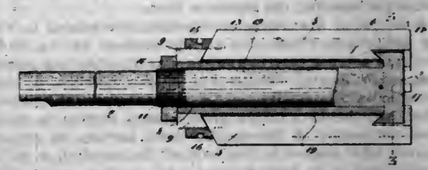


1. An apparatus for manipulating a roll of fabric during a course of treatment, comprising a series of machines each arranged to operate upon the fabric in the form of a traveling web, a feed installation and a take-up installation for the fabric, simultaneously operatable and permanently associated with the feed and discharge ends respectively of the machines, a pair of frames interchangeable with said permanent feed and take-up installations, means for carrying the roll of fabric on each frame, and a truck forming means for transporting as well as applying and removing said frames interchangeably throughout the series of said installations.

2. An apparatus for manipulating a roll of fabric including a series of machines for operating independently of each other upon the fabric in the form of a traveling web, a feed installation and a take-up installation at the feed and discharge ends respectively of the machines, the feed installation embodying a track, and a braked spindle adapted to feed the fabric from the roll into the machine, and the take-up installation embodying a track and a driven spindle adapted to roll up the fabric from the machine, a pair of frames, axles on the frames for carrying the roll of fabric, said frames being interchangeably receivable by all of said tracks, said tracks serving to position said axles for reception by the respective spindles of said installations.

1,210,903. REAMER HAVING DETACHABLE BLADES. GEORGE B. CHADWICK, Portsmouth, N. H. Filed Feb. 24, 1916. Serial No. 80,292. (Cl. 77—75.)

1. A tool of the character described, comprising a driving mandrel having a unitary enlargement provided with blade-receiving notches, a shell mounted on the mandrel



behind said enlargement and provided with blade-receiving grooves in alinement with the corresponding notches, a set of blades located in said grooves and notches, and means for securing the blades in place.

2. A tool of the character described, comprising a driving mandrel having a unitary enlargement provided with blade-receiving notches, a shell mounted on the mandrel behind said enlargement and provided with blade-receiving grooves in alinement with the corresponding notches, a set of blades located in said grooves and notches, means for adjusting the blades radially, and means for securing the blades in place.

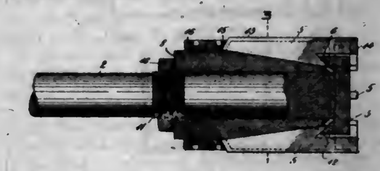
3. A tool of the character described, comprising a driving mandrel having at its front end a unitary enlargement provided with blade-receiving notches, a shell mounted on the mandrel behind said enlargement and provided with blade-receiving grooves in alinement with the corresponding notches, a set of blades located in said grooves and notches and having at their front ends transverse cutting edges projecting beyond said enlargement, and means for securing the blades in place.

4. A tool of the character described, comprising a driving mandrel having a unitary enlargement provided with blade-receiving notches and with rearwardly-extending projections each located behind one of said notches, a shell mounted on the mandrel behind said enlargement and provided with blade-receiving grooves in alinement with the corresponding notches, a set of blades located in said grooves and notches and having recesses to receive said projections, whereby the front ends of the blades are held against outward movement, and means for clamping the blades in place.

5. A tool of the character described, comprising a driving mandrel having at its front end a unitary enlargement provided with blade-receiving notches and with rearwardly-extending projections each located behind one of the notches, a shell mounted on the mandrel behind said enlargement and provided with blade-receiving grooves in alinement with the corresponding notches, a set of blades located in said grooves and notches and having recesses to receive said projections, said blades being provided with longitudinal and transverse cutting edges located respectively outside of the shell and in front of said enlargement, and means for clamping the blades in place.

[Claims 6 to 12 not printed in the Gazette.]

1,210,904. ADJUSTABLE REAMER. GEORGE B. CHADWICK, Portsmouth, N. H. Filed Mar. 14, 1916. Serial No. 84,060. (Cl. 77—75.5.)



1. A tool of the character described, comprising a driving mandrel provided with an enlargement having blade-receiving notches therein, a shell mounted on the mandrel

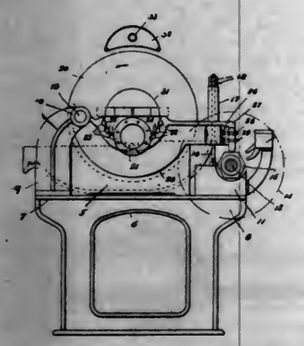
behind said enlargement and provided with blade-receiving grooves each located in alinement with one of the notches and having its bottom slanted with respect to the axis of the mandrel, a set of blades located in said grooves and notches, means for maintaining said shell in various longitudinal positions with respect to said enlargement, and means for securing the blades in place.

2. A tool of the character described, comprising a driving mandrel provided with an enlargement having blade-receiving notches therein and rearwardly-extending projections each located behind one of the notches, a shell mounted on the mandrel behind said enlargement and provided with blade-receiving grooves each located in alinement with one of the notches and having its bottom slanted with respect to the axis oft he mandrel, a set of blades located in said grooves and notches and having recesses to receive said projections, means for maintaining said shell in various longitudinal positions with respect to said enlargement, and means for clamping the rear ends of the blades in place.

3. A tool of the character described, comprising a driving mandrel provided with an enlargement having blade-receiving notches therein and rearwardly-extending projections each located behind one of the notches, a shell mounted on the mandrel behind said enlargement and provided with blade-receiving grooves each located in alinement with one of the notches and having its bottom slanted with respect to the axis of the mandrel, a nut mounted on a threaded portion of the mandrel behind said shell and adapted to engage the latter, a set of blades located in said grooves and notches and having recesses to receive said projections, and a blade-clamping nut mounted on the shell and adapted to engage the rear ends of the blades.

4. A tool of the character described, comprising a driving mandrel provided with an enlargement having blade-receiving notches therein and rearwardly-extending projections each located behind one of the notches and having an inwardly and forwardly slanting rear face, a shell mounted on the mandrel behind said enlargement and provided with blade-receiving grooves each located in alinement with one of the notches and having its bottom slanted with respect to the axis of the mandrel, a set of blades located in said grooves and notches and having angular recesses adapted to receive the respective projections, a nut mounted on a threaded portion of the mandrel behind said shell, and a blade-clamping nut mounted on a threaded portion of the shell behind said blades and adapted to engage the rear ends of the latter.

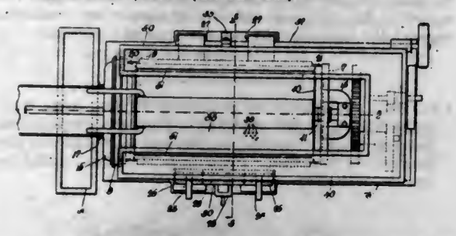
1,210,905. PULP-SCREEN. RALPH S. CLARKE, East Walpole, Mass., assignor to Bird Machine Company, a Corporation of Massachusetts. Filed May 29, 1916. Serial No. 100,687. (Cl. 92—35.)



1. A pulp screening machine comprising a frame, a pulp receiving pan sustained by said frame, arms and blocks on said frame arranged in pairs at the respective sides of said pan, a shaft journaled in said blocks and having cams, screen carrying members pivotally mounted on said arms and having screen supporting bearings spaced apart and elements bearing on said cams, a cylindrical pulp screen having collars sustained by said spaced bearings, said screen carrying members having perforations adjacent their free ends, rods mounted on said blocks and extending through said perforations, yielding reacting buffers mounted on said rods above said members to resist the upward movement of said members and to exert reactive pressure thereon, and means at the upper ends of said rods to adjust the pressure of said buffers.

2. A pulp screening machine comprising a frame having a pulp receiving pan and a pair of arms extending upward at the ends of said pan, a pair of horizontal members pivotally sustained by said arms and having at their free ends horizontal abutments and vertical webs, riding devices removably secured against said abutments and webs, said members having bearings to rotatably receive elements of a cylindrical screen, a pair of rotatable cams acting against said riding devices and yielding means acting to press downward the free ends of said pivoted members.

1,210,906. PULP-SCREEN. RALPH S. CLARKE, East Walpole, Mass., assignor to Bird Machine Company, a Corporation of Massachusetts. Filed June 26, 1916. Serial No. 105,956. (Cl. 92—35.)



1. Apparatus of the nature described comprising a vat mounted to vibrate and having at its bottom a longitudinal outlet, a screen rotatable in said vat, a pair of supply troughs mounted above said vat and having delivery openings extending longitudinally of said vat, means to vibrate said vat and means to rotate said screen.

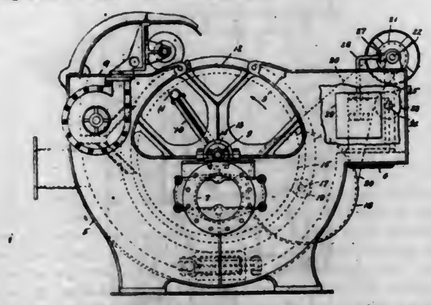
2. Apparatus of the nature described comprising a vat mounted to vibrate and having at its bottom a longitudinal outlet, a screen rotatable in said vat, a pair of troughs extending longitudinally of said screen and above the same and having between said troughs a deflector to deflect water into said troughs, means to direct water from within said screen against said deflector, means to vibrate said vat, and means to rotate said screen.

3. Apparatus of the nature described comprising a pair of end frames one of which has an opening, a vat located between said frames and connected flexibly therewith, said vat having an outlet at its bottom, a pair of frames supporting said vat, flexible means for sustaining said frames at one side of said vat, a pivotally mounted link for sustaining said frames at the other side of said vat, said link having a lever arm, an eccentric operated mechanism for effecting vibration, of said arm, a cylindrical screen rotatable within said vat, and means to rotate said screen.

1,210,907. SAVE-ALL. RALPH S. CLARKE, East Walpole, Mass., assignor to Bird Machine Company, a Corporation of Massachusetts. Filed Aug. 8, 1916. Serial No. 113,819. (Cl. 92—36.)

1. A save-all of the nature described comprising a vat, a pulp gathering member in said vat to carry pulp toward a point of discharge, means to operate said member, and means governed by the supply of pulp and water to control the driving action of said operating means.

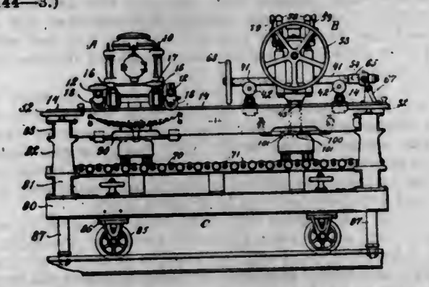
2. A save-all of the nature described comprising a vat, a pulp gathering member in said vat to carry pulp toward a point of discharge, and dividing the inlet side of said vat from its pulp discharging point, means to operate said member, and means governed by the level of pulp and water at the inlet side of said member to control the driving action of said operating means.



3. A save-all of the nature described comprising a vat, a pulp gathering cylinder rotatable in said vat, means within said cylinder to direct jets of water through the cylinder wall at a predetermined point of discharge, means to drive said cylinder, and means, governed by the quantity of pulp and water at that side of said cylinder removed from said point of discharge, to control the speed of said cylinder driving means.

4. A save-all of the nature described comprising a vat, a pulp gathering cylinder rotatable in said vat, a belt operated mechanism for driving said cylinder, a take-up pulley for said belt carried by a lever arm, and a float located in said vat and having an arm connected to operate said lever arm with relation to the rise and fall of said float with liquid in said vat.

1,210,908. MACHINE FOR GROOVING AND BORING RAILWAY-TIES. ALBERT COLLET, Paris, France, assignor to Société Maurice et Pierre Collet et Cie., Paris, France. Filed Apr. 24, 1915. Serial No. 23,788. (Cl. 144—3.)



1. A portable machine for grooving and boring railway ties, comprising a motor with a direct connected grooving tool, a carriage upon which said motor and tool is mounted, said carriage being movable on rails crosswise of the tie, said motor and tool being slidable on said carriage longitudinally of the tie, and means for automatically moving said motor and tool longitudinally, said means comprising a cam-plate adapted to displace the motor and cutter, a finger or stud engaging said cam-plate, said stud being slidable with said carriage, and stops adapted to limit the movement of said stud at points where the cutter has been carried by the carriage to the completion of its crosswise cut, whereby said cam-plate is moved by the stud, and the motor and cutter displaced longitudinally of the tie and adapted to make another cut in the tie when moved crosswise thereof again.

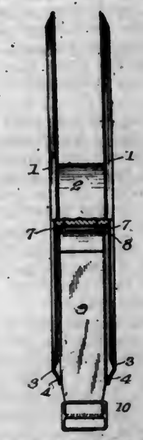
2. A portable machine for grooving and boring railway ties, comprising a motor with a direct connected grooving tool movable crosswise of the tie, a gage for positioning said tie beneath the tool, and means for moving said gage into and out of contact with the tie, said means, when the gage is in contact with the tie, locking the motor and tool against displacement.

3. A portable machine for grooving and boring railway ties, comprising a motor with a direct connected grooving tool movable crosswise of the tie, a gage for positioning said tie beneath the tool, and means for moving said gage into and out of contact with the tie, said means, when the gage is in contact with the tie, locking the motor and tool against displacement, said gage also comprising means for marking the tie to assist in positioning the tie beneath the boring mechanism.

4. A portable machine for grooving and boring railway ties, comprising a motor and a grooving tool, a motor and a boring tool, a gage beneath said grooving tool for positioning said tie, means for moving said gage into and out of contact with the tie, said gage comprising means for marking the tie, and a gage beneath the boring tool, said gage comprising a notched bar, the tie being positioned beneath the borer by positioning the marks on the tie relatively to the notches on the gage bar.

5. A portable machine for grooving and boring railway ties, comprising a motor and boring tool, a carriage on which said motor and tool is mounted, a lever for moving said carriage and boring tool for quick movement of the boring tool from one boring position to another, and a feed screw for adjustment of the position of said carriage, whereby the initial boring position of the carriage and boring tool may be adjusted.

1,210,909. FIREPROOF CASING FOR MOVING-PICTURE FILMS. ANTHONY F. COPERSITO, Brooklyn, N. Y. Filed Nov. 8, 1915. Serial No. 60,233. (Cl. 206—52.)



1. A combined reel and casing for moving picture films consisting of a reel member comprising two imperforate metallic disks each having a bead adjacent the outer edge, a hub to which said disks are secured and means for securing the film to the reel member, a band forming with said disks a casing for the film and comprising a plurality of metallic members joined together and provided with flanged edges and beads adjacent said flanged edges, said band members fitting over the edges of the disks so that the flanges engage the beads of the disks and the peripheries of said disks enter the grooves of the bends of the band members.

2. A combined reel and casing for moving picture films consisting of a reel member comprising two imperforate metallic disks each having an inwardly flaring portion at the outer edge, a hub to which said disks are secured and means for attaching the film to said hub, a band member forming with said reel member a casing for the film and comprising a plurality of metallic members hinged together and provided with flanged edges and beads adjacent said flanged edges, said metallic members fitting over the edges of the disks so that the flanged edges thereof

bear on the flaring portion of the disks and the peripheries of the disks enter the grooves of the beads of said metallic members and means for locking the band member to the reel member.

8. A combined reel and casing for moving picture films consisting of a reel member comprising two imperforate metallic disks having inwardly flaring edges and annular beads adjacent said edges, a hub to which said disks are secured and means for securing the film to said hub, a band member forming with said reel member a casing for the film and comprising a plurality of metallic members hinged together and provided with flanged edges and beads adjacent said flanged edges, said metallic members fitting snugly over the flaring edges of the disks so that the flanged edges of said metallic members bear on the flaring edges of the disks and the peripheries of the disks enter the grooves of the beads of said metallic members, supplemental metallic walls carried by the band members and spanning the meeting edges thereof and means for locking the band member to the reel member.

1,210,910. CUTTING APPARATUS FOR HARVESTERS. JOSEPH DAIN, Moline, Ill., assignor, by mesne assignments, to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed Jan. 4, 1913. Serial No. 740,156. (Cl. 56—44.)



1. A finger-bar having its rear edge of greater thickness than its front edge, a guard-finger secured to said finger-bar, a shoulder on the guard-finger against which the front edge of said finger-bar contacts, and means to increase the pressure of the front edge of the finger-bar against said shoulder as the finger-bar and guard-finger are drawn together.

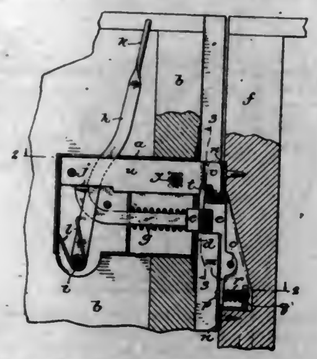
2. A finger-bar having its rear edge of greater thickness than its front edge, a guard-finger secured to the lower side of said finger-bar, said guard-finger increasing in thickness forwardly the length of its connection with said finger-bar, a shoulder on the guard-finger against which the front edge of said finger-bar contacts, and a bolt inclined rearwardly from the vertical and adapted to hold said guard-finger and finger-bar together, the pressure of the contact of the front edge of said finger bar against the shoulder on the guard finger being maintained or increased by tightening said bolt.

3. A finger-bar having its rear edge of greater thickness than its front edge, a guard-finger secured on the lower side of said finger-bar, a shoulder on the guard-finger against which the front edge of said finger-bar contacts, a bolt inclined rearwardly from the vertical and securing said guard-finger and finger-bar together, the pressure of the contact of the front edge of said finger-bar against the shoulder on the guard-finger being maintained or increased by tightening said bolt.

4. A finger-bar beveled on its under side downwardly and rearwardly, a guard-finger having a shoulder thereon against which the front edge of said finger-bar contacts, said guard-finger being beveled downwardly and rearwardly from said shoulder, bolt-holes in said finger-bar and guard-finger substantially at right angles to their bevels and adapted to register when the front edge of said finger-bar and guard-finger contact, and a bolt in said bolt-holes to draw the bevels of the finger-bar and guard-finger together and increase the pressure of the front edge of the finger-bar against the shoulder on the guard-finger.

1,210,911. DOOR-LATCH. ORIN C. DAVIS, Manistee, Mich. Filed Mar. 17, 1916. Serial No. 84,754. (Cl. 70—42.)

1. In a door latch the combination of a striker applicable to the door jamb, a latch case applicable to the door and provided with a spring actuated latch bolt adapted to coöperate with the striker, and a hooked member projecting from the latch case and adapted by engagement with the striker when the door is closed to hold the striker in operative relation to the latch bolt.



2. In a door latch the combination of a striker applicable to the door jamb, yieldable toward the door and formed with an abutment transverse to the door jamb, and a rib extending outwardly from the abutment, a latch case applicable to the door and provided with a spring actuated bolt adapted to coöperate with the striker, and an outwardly yielding hooked member projecting from the latch case substantially parallel with the latch bolt and adapted by engagement with said abutment and with said rib to take up play between the latch bolt and keeper and to hold the striker in operative relation to the latch bolt when the door is closed.

3. In a door latch the combination of a striker applicable to the door jamb and having a vertically inclined abutment extending inwardly from the jamb, a latch case applicable to the door and provided with a latch bolt adapted to coöperate with the striker, and an outwardly yielding member projecting from the latch case substantially parallel with the latch bolt and having a vertically inclined face adapted by engagement with said abutment to take up play between the bolt and striker and to prevent the vertical displacement of the door when it is closed.

4. In a door latch the combination with the latch bolt, of a plate applicable to the door jamb and provided with a striker pivotally connected therewith, a screw adjustably connecting the striker with the plate and limiting its outward movement relative thereto, and a spring tending to force the striker inwardly and permitting it to yield outwardly relative to the door jamb.

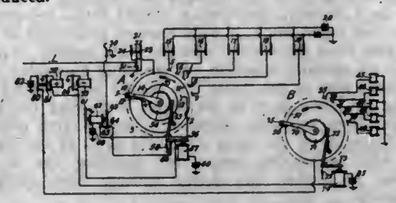
5. In a door latch the combination with a spring actuated bolt and a hooked member associated therewith, of a jamb plate and a striker yieldingly connected with said plate and having a projection coöperating with the hooked member to hold the striker in engagement with the latch bolt when the door is closed.

[Claim 6 not printed in the Gazette.]

1,210,912. SELECTING MECHANISM AND SYSTEM. AMOS F. DIXON, Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 27, 1915. Serial No. 17,361. (Cl. 177—353.)

1. A selecting system comprising current-polarity control means, a revoluble step-by-step current collector coöperating therewith to form a succession of polarity-selective current impulses, and a step-by-step current distributing apparatus controlled by the current impulses so produced.

2. A selective system comprising current polarity control means, a current collector coöperating therewith, an electromagnet for effecting the intermittent operation of said collector to form a succession of current impulses of unvaried number but selectively variable polarity, current distributing apparatus, and an electromechanical actuator therefor controlled by the current impulses so produced.



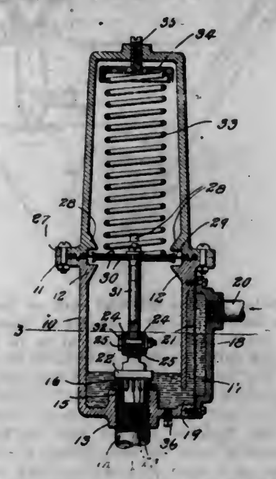
3. A selecting system comprising electro-mechanical selecting apparatus, distributing apparatus to deliver current thereto, a plurality of polarized relays each controlling the action of said selecting and said distributing apparatus, current control means for determining the character of each impulse, and an electromechanical current collector coöperating with said means to form a succession of impulses to act upon said relays.

4. A selecting apparatus comprising a current impulse collector, an electromagnet for providing an intermittent movement therefor, current control means for determining the character of the impulses and coöperating with said collector to form a succession of impulses of selectively variable polarity, and a current distributing apparatus controlled by the current impulses so produced.

5. A selecting mechanism comprising current-polarity control means, a current collector coöperating therewith to form a succession of current impulses of unvaried number, and a self-interrupting electromechanical system for giving a step-by-step movement to said collector.

[Claims 6 to 11 not printed in the Gazette.]

1,210,913. RELIEF-VALVE. JOHN M. DOUGHERTY and HARRY C. TABLER, St. Louis, Mo. Filed Apr. 3, 1916. Serial No. 88,717. (Cl. 137—53.)



1. The combination with a hot water heating system, of a chamber adapted to receive water from said system, which water traps and compresses air in the upper portion of said chamber, there being an opening in the lower portion of said chamber, a valve normally closing said opening and held in closed position by the normal pressure of air trapped within said chamber, a diaphragm forming one of the walls of the chamber, a rod carried by said diaphragm and having a connection with the valve, whereby the latter can move independently of said rod.

2. The combination with a hot water heating system, of a chamber adapted to receive water from said system, which water traps and compresses air in the upper portion of said chamber, there being an opening in the lower portion of said chamber, a valve normally closing said opening and held in closed position by the normal pressure of air trapped within said chamber, a diaphragm forming one of the walls of the chamber, a rod carried by said diaphragm and having a connection with the valve, whereby the latter can move independently of said rod, and yielding pressure means for resisting the outward movement of the diaphragm.

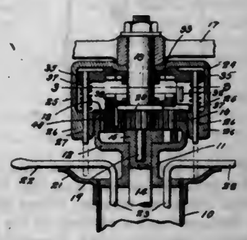
3. The combination with a hot water heating system, of a chamber adapted to receive water from said system, which water traps and compresses air in the upper portion of said chamber, there being an opening in the lower portion of said chamber, a valve normally closing said opening and held in closed position by the normal pressure of air trapped within said chamber, a diaphragm forming one of the walls of the chamber, a rod carried by said diaphragm and having a connection with the valve, whereby the latter can move independently of said rod, yielding pressure means for resisting the outward movement of the diaphragm, and means for regulating the tension of said yielding pressure means.

4. The combination with a hot water heating system, of a chamber adapted to receive water from said system, which water traps and compresses air within said chamber, a diaphragm forming one of the walls of the chamber, there being an outlet opening in the wall of the chamber opposite said diaphragm, a rod carried by said diaphragm, and a valve loosely connected to said rod, which valve is held in position upon its seat by the normal pressure of the trapped air within the housing.

5. The combination with a hot water heating system, of a chamber adapted to receive water from said system, which water traps and compresses air within said chamber, a diaphragm forming one of the walls of the chamber, there being an outlet opening in the wall of the chamber opposite said diaphragm, a rod carried by said diaphragm, and a valve loosely connected to said rod, which valve is held in position upon its seat by the normal pressure of the trapped air within the housing and unseated by the outward movement of the diaphragm and the rod carried thereby.

[Claims 6 to 13 not printed in the Gazette.]

1,210,914. AUTOMOBILE-LOCK. JOHN M. DOUGHERTY and HARRY C. TABLER, St. Louis, Mo. Filed July 17, 1916. Serial No. 109,796. (Cl. 74—39.)



1. The combination with a steering gear including a rotary steering post, a wheel, a stationary gear, a drive pinion operated by the wheel, planetary pinions meshing with said drive pinion and the stationary gear, of a member loosely mounted on the steering post and having parts normally positioned between the planetary pinions, and a non-rotating locking member adapted to engage said loosely mounted member for holding the same against rotary movement.

2. The combination with a steering gear including a rotary steering post, a wheel, a stationary gear, a drive pinion operated by the wheel, planetary pinions meshing with said drive pinion and the stationary gear, of a member loosely mounted on the steering post and having parts normally positioned between the planetary pinions, a non-rotating locking member adapted to engage said loosely mounted member for holding the same against

rotary movement, and means for locking the non-rotatable member in engagement with the loosely mounted member.

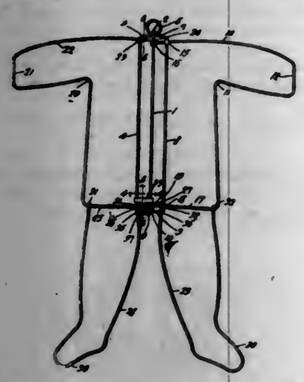
3. The combination with a steering gear including a steering post, a wheel, a stationary gear, a drive pinion operated by the wheel, and planetary pinions meshing with said stationary gear and pinion, of a member loosely mounted on the post and having parts normally positioned between the planetary pinions, and a non-rotating member, parts of which are adapted to interlock with parts of the loosely mounted member.

4. The combination with a steering gear including a steering post, a wheel, a stationary gear, a drive pinion operated by the wheel, and planetary pinions meshing with said stationary gear and pinion, of a member loosely mounted on the post and having parts normally positioned between the planetary pinions, a non-rotating member, parts of which are adapted to interlock with parts of the loosely mounted member, and means for locking the non-rotating member and loosely mounted member in engagement with each other.

5. The combination with steering gear, including a rotary steering post, a wheel, a stationary gear, a drive pinion operated by the wheel, and planetary pinions meshing with the stationary gear and drive pinion, of a member loosely mounted on the post and having parts normally positioned between the planetary pinions, non-rotating means adapted to engage said loosely mounted member for holding the same against rotation, and means for moving said non-rotating means into engagement with said loosely mounted member.

[Claims 6 to 8 not printed in the Gazette.]

1,210,915. GARMENT-STRETCHER. HARRY M. DRAKE, Denver, Colo. Filed Jan. 7, 1916. Serial No. 70,813. (Cl. 223—19.)



1. A garment stretcher comprising a pair of body members; means for pivotally connecting the body members whereby the body members may be folded together along a longitudinal line; and a leg pivoted to the lower end of each body member, the legs being upwardly foldable to lie between the body members when the body members are folded.

2. A garment stretcher comprising a pair of body members; means for pivotally connecting the body members whereby the body members may be folded together along a longitudinal line; a leg pivoted to the lower end of each body member, the legs being upwardly foldable to lie between the body members when the body members are folded; and a latch carried by said means and coöperating with one of the body members to hold the body members extended and in approximate alinement.

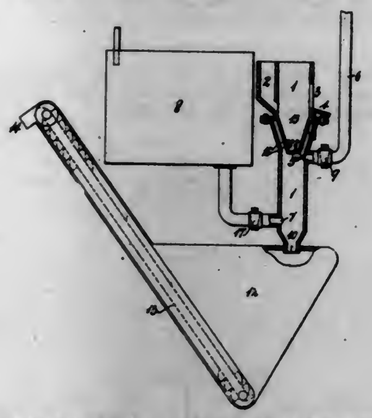
3. In a garment stretcher, a central frame comprising inner and outer parts; a body member projecting in one direction from the frame; a second body member projecting in an opposite direction and pivotally assembled with the inner part of the frame, the second body member engaging the outer part of the frame to prevent the second body member from swinging rearwardly; and a latch carried by the frame and engaging the second body member, to prevent the latter from swinging forwardly.

4. In a garment stretcher, a central frame comprising inner and outer parts; a body member projecting in one direction from the frame; a second body member projecting in an opposite direction and pivotally assembled with the inner part of the frame, the second body member engaging the outer part of the frame to prevent the body member from swinging rearwardly; and a latch slidable longitudinally on the inner and outer parts of the frame, the latch embodying means for engaging the second member to prevent the second member from swinging forwardly.

5. In a garment stretcher, a central frame embodying three approximately parallel bars connected by bottom strips; a body member projecting in one direction from the frame; a second body member pivotally connected with one of the bars, whereby the body members may be folded together; and legs pivoted at their upper ends to the lower ends of the body members and adapted to be folded between the body members when the body members are folded, the legs coacting with the bottom strips, to prevent the legs from swinging rearwardly, when the stretcher is extended.

[Claims 6 to 9 not printed in the Gazette.]

1,210,916. APPARATUS FOR SEPARATING SUBSTANCES OF DIFFERENT SPECIFIC GRAVITIES, SUCH AS FINE COAL OR ORES AND THE LIKE. JOHN MARRIOTT DRAPER, Manchester, England. Filed Jan. 24, 1916. Serial No. 73,916. (Cl. 83—82.)



1. A separator for fine material such as fine ores, fine coal and the like comprising a separating chamber having a discharge outlet for heavy material in its lower part and an overflow outlet for light material in its upper part, a hydraulic inlet connected with said separating chamber below said overflow outlet and adapted to establish an upward current in said chamber, and means connected with said separating chamber between said discharge outlet and said hydraulic inlet for maintaining a constant balancing column on a level with said overflow outlet.

2. A separator for fine material such as fine ores, fine coal and the like comprising a separating chamber having a discharge outlet for heavy material in its lower part and an overflow outlet for light material in its upper part, a hydraulic inlet connected with said separating chamber below said overflow outlet and adapted to establish an upward current in said chamber, means connected with said separating chamber between said discharge outlet and said hydraulic inlet for maintaining a constant balancing column on a level with said overflow outlet, a closed collecting chamber connected with said discharge outlet and provided with a water tube adapted to maintain a level of water corresponding with that in said separating chamber, and an elevator working in said collecting chamber and tube.

3. A separator for fine material such as fine ores, fine coal and the like comprising a separating chamber having a discharge outlet for heavy material in its lower part and an overflow outlet for light material in its upper part, a hydraulic inlet connected with said separating chamber below said overflow outlet and adapted to establish an upward current in said chamber, means connected with said separating chamber between said discharge outlet and said hydraulic inlet for maintaining a constant balancing column on a level with said overflow outlet, and an inner conical chamber disposed in said separating chamber between said overflow outlet and said hydraulic supply inlet.

4. A separator for fine material such as fine ores, fine coal and the like comprising a separating chamber having a discharge outlet for heavy material in its lower part and an overflow outlet for light material in its upper part, a hydraulic inlet connected with said separating chamber below said overflow outlet and adapted to establish an upward current in said chamber, a balancing tank, and a pipe connecting said balancing tank with said separating chamber at a point between said discharge outlet and said hydraulic inlet, said pipe and hydraulic inlet being provided with regulating means.

5. A separator for fine material such as fine ores, fine coal and the like comprising a separating chamber having a discharge outlet for heavy material in its lower part and an overflow outlet for light material in its upper part, a hydraulic inlet connected with said separating chamber below said overflow outlet and adapted to establish an upward current in said chamber, a balancing tank, and a pipe connecting said balancing tank with said separating chamber at a point between said discharge outlet and said hydraulic inlet.

[Claim 6 not printed in the Gazette.]

1,210,917. CALLING DEVICE. ALFRED H. DYSON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 14, 1912. Serial No. 677,499. (Cl. 179—90.)



1. A calling device comprising impulse mechanism and means for the adjustment thereof, impulse contacts operated responsive to said impulse mechanism, shunt contacts normally connected in shunt of said impulse contacts, and means for interrupting said shunt contacts responsive to a setting operation of said impulse mechanism.

2. A calling device comprising a setting member having a fully operated position, impulse mechanism adjusted for operation responsive to actuation of said member to such position, means for restoring said member, means actuated upon restoration of said member whereby said mechanism is subsequently operated, shunt contacts, and mechanism responsive only to a full setting operation for operating said contacts and maintaining them operated while said impulse mechanism is operating.

3. A calling device comprising an adjustable setting member, impulse mechanism adjusted for operation responsive to adjustment of said setting member, shunt contacts normally rendering said mechanism ineffective but operated responsive to said setting operation to render said mechanism effective, means for restoring said setting member, means actuated upon restoration of said member whereby said mechanism is subsequently operated, and restoring means for said shunt contacts effective upon operation of said impulse mechanism.

4. A calling device comprising an adjustable setting member, a finger hold for actuating said member, impulse mechanism adjusted for operation responsive to adjustment of said setting member, shunt contacts, means actuated by engagement with the finger while in the finger hold but independent of the finger-hold to operate said shunt contacts, means for restoring said setting member, means actuated upon restoration of said setting member whereby said mechanism is subsequently operated, and restoring means for said shunt contacts effective upon operation of said impulse mechanism.

5. A calling device comprising a setting member, a series of finger holds for actuating said member, impulse mechanism adjusted for operation corresponding to actuation of said setting member, means for restoring said member, means actuated upon restoration of said member whereby said mechanism is subsequently operated according to its adjustment, shunt contacts normally rendering the impulse mechanism ineffective, and mechanism for operating said contacts and maintaining them operated to render the impulse mechanism effective while operating.

[Claims 6 to 14 not printed in the Gazette.]

1,210,918. PROCESS OF RENOVATING BUTTER. HARRY B. EICHELBERNER, Oak Park, Ill. Filed Mar. 22, 1915. Serial No. 16,245. (Cl. 99—13.)

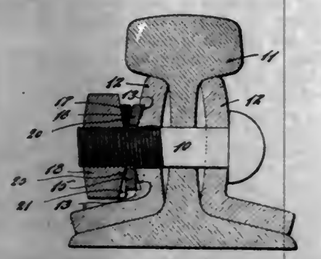
1. The process of renovating oleaginous food products which comprises the following steps: first: neutralizing the acids by washing the oleaginous material in a hot lime solution, and afterward separating the oil from such solution; second: exposing the oil at length for slow action in a hot solution containing a deodorant and a preventant of the chemical action of the deodorant, and subsequently separating the oil from such solution; third: washing out any remaining traces of the last mentioned solution; fourth: removing the moisture from the oil by heat.

2. The process of renovating butter which comprises the following steps: first: neutralizing the butyric and other volatile acids by washing the butter in a hot water containing lime, separating the lime water from the butter oil and washing the latter in clear water to remove traces of the lime; second: thoroughly intermixing the butter oil with a hot saturated solution of common salt containing a small percentage of a deodorant whose chemical action on the butter oil is prevented by the salt solution, and maintaining the elements intermixed for a length of time for slow action of the deodorant and then separating the oil from the solution; third: washing the oil in hot water to remove traces of the last mentioned solution, and subsequently removing moisture from the oil by heat.

3. The process of renovating butter, or like oleaginous material which comprises the following steps: first: neutralizing the butyric and other volatile acids by washing the butter in a hot water containing lime, separating the said solution from the butter oil and washing the latter in clear water to remove traces of lime; second: mixing and maintaining for several hours mixture of the butter oil with a hot saturated solution of common salt containing a small fraction of one per cent. of chlorid of zinc, and afteward separating the oil from said solution; third: washing the oil in hot water to remove traces of the zinc chlorid and salt, and subsequently removing moisture from the oil by heat.

4. The process of removing foreign odors from oleaginous substances which have a capacity of absorbing odors which comprises maintaining such oleaginous material in mixture for several hours with a solution containing a very small percentage of an odor absorbent and a preventant of the chemical action of such absorbent on the oil.

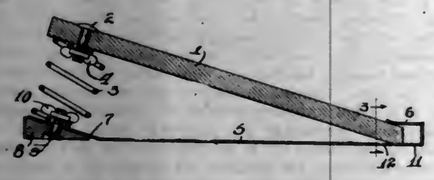
1,210,919. NUT-LOCK. ERNEST E. ELLMANN, St. Louis, Mo. Filed Sept. 27, 1915. Serial No. 52,948. (Cl. 151—39.)



1. A nut lock comprising in combination a threaded bolt, a plate having a graduate shoulder extended from the plane of the face of the plate into the body of the plate and an inclined surface next to the shoulder which inclines first in a direction from the base of said shoulder to a point removed therefrom at the plane of the face of the plate, and second in a direction from the plane of the face of the plate next the bolt at an angle to a line perpendicular to the bolt, a nut whose one face comprises a number of shoulders and surfaces as just recited in the plate, and a spirally formed spring washer whose free ends incline in opposite direction to each other for engagement with the shoulders of said plate and nut.

2. In combination with a washer of spiral formation and having free ends each standing at an angle relative to a line perpendicular to the axis of the washer, a plate and a nut each having a depression formed in their faces next said washer forming shoulders which incline at the same angle as the free ends of said washer whereby said free washer ends will engage throughout their lengths said shoulders.

1,210,920. SPRING-BOARD. DOUGLAS P. FLETCHER, Cicero, Ill. Filed May 21, 1915. Serial No. 29,491. (Cl. 46—69.)



1. In a spring-board of the class described, guiding members, resilient means connected at one end thereof, and a board connected to said resilient means and having sliding engagement upon said guiding members.

2. In a device of the class described, guide bars, a block detachably secured transversely thereof at one end thereof, resilient means detachably connected on said end of said bars, and a board having one end thereof detachably connected to said resilient means with the other end having sliding engagement with the other end of said guide bars.

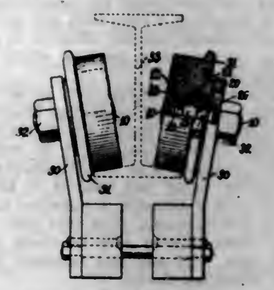
3. In a portable spring-board device of the class described, a board, and means slidably and resiliently supporting the same.

4. In a device of the class described, a board, means slidably and detachably supporting and guiding one end thereof, and resilient means detachably connected to the other end of said board.

5. In a device of the class described, guide bars, a block transversely connected at one end of the same, resilient means associated with said bars and block, the other end of said bars turned upwardly and inwardly, and a spring board having sliding engagement with said bars confined to engagement therewith by said inturned ends thereof and at the other end connected to said resilient means.

[Claim 6 not printed in the Gazette.]

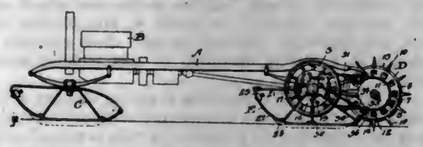
1,210,921. BALL-BEARING. PIER-LUIGI FOCARDI, Brooklyn, N. Y., assignor to Garwood Company, Garwood, N. J., a Corporation of New Jersey. Filed July 23, 1915. Serial No. 41,437. (Cl. 64—36.)



1. In a construction of the character described, an axle threaded to provide a shank portion at one end and grooved at its opposite end portion to provide ball tracks facing toward each other, said axle having a shoulder thereon adjoining the ball track adjacent to the shank portion of the axle and cut through to the ball track to provide an entrance notch for the balls, a wheel engaged over the grooved portion of the axle and provided with oppositely facing ball tracks confronting the ball tracks on the axle, balls engaged between the confronting sets of ball tracks, a support receiving the shank portion of the axle and covering the entrance notch and a nut engaged on the threaded end of the axle and clamping the shoulder thereon in rigid engagement with the support.

2. In a trolley bearing of the character described, the combination of an inclined axle having ball bearing tracks facing toward each other and arranged on different levels, said axle having an entrance notch extending through a part of the lower track, a wheel having tracks facing opposite to the tracks on said axle, the tracks in said wheel both opening toward the outer faces of said wheel, two sets of balls in said track-ways, a supporting arm secured to the lower end of said axle and covering said entrance notch and a washer on the upper free end of said axle covering the entrance to the upper set of balls, all whereby said bearing is subjected to vertical and horizontal pressure.

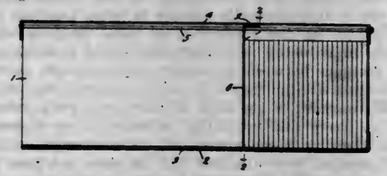
1,210,922. MOTOR-SLEIGH. EUGENE FORREST, Brimley, Mich., assignor of two-eighths to Trefley Forrest, one-eighth to Carl Forrest, and one-eighth to Alfred Forrest, Sr., Brimley, Mich. Filed Mar. 14, 1916. Serial No. 84,182. (Cl. 21—47.)



1. The combination with the rear axle housing of a motor vehicle, of a pair of traction wheel frames journaled on said axle housing at opposite sides of the center thereof, said traction wheel frames being laterally offset in opposite directions toward their rear extremities, traction wheels journaled in the free ends of said frames, a sprocket wheel on the shaft of each traction wheel, a driving sprocket wheel encircling the brake drum of the adjacent driving wheel of the vehicle, chains connecting the driving sprocket wheels with those on the shafts of the traction wheels, runners located outside of the driving wheels of the vehicle, bearings for said runners having disk-shaped flanges, and bolts extending between the spokes of the driving wheels and serving to fasten the sprocket wheels and said flanges in fixed relation to the vehicle driving wheels.

2. The combination with the driving wheel of a motor vehicle, of a sleigh runner, a journal box on said runner, a combined axle cap and journal mounted in said box and having a disk-shaped flange at one end, said cap fitting over one extremity of the driving axle of the vehicle, a sprocket wheel fitting around the brake drum and provided with a flange, bolts extending through said flanges and serving to secure the sprocket wheel and said combined axle cap and journaled in fixed relation to the driving wheel of the vehicle, a traction wheel frame journaled on the rear axle housing and extending rearwardly therefrom, a traction wheel carried by the free end of said frame, a sprocket wheel on the shaft of said traction wheel, and a drive chain extending around both of said sprocket wheels.

1,210,923. GALLEY-LOCK. WILLIAM H. FRANCIS, Washington, D. C. Filed Jan. 26, 1916. Serial No. 74,406. (Cl. 101—54.)



1. The combination with a printer's galley, of a transverse type holding member having one end mounted adjacent one wall of the galley for longitudinal adjustment, said member being swingable upwardly out of the way, and the opposite side wall of the galley and free end of said member having interengageable means for holding said member in operative position and for longitudinal adjustment.

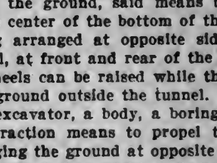
2. The combination with a printer's galley, of a longitudinal rod carried thereby adjacent one side wall, and a type holding member slidably engaging said rod for longitudinal adjustment, and adapted to be swung thereon into and out of type holding position.

3. The combination with a printer's galley, of a longitudinal rod carried thereby adjacent one side wall, a transverse type holding member having one end slidable upon said rod, said member being swingable upwardly out of the way, the opposite side wall of the galley having a longitudinal groove, and the free end of said member having a lug engageable in said groove.

4. The combination with a printer's galley, of a longitudinal rod carried thereby, and a type holding member slidably engaging said rod for longitudinal adjustment and adapted to be swung thereon into and out of type holding position, said member having a spring tongue bearing against the rod to move said member to type holding position.

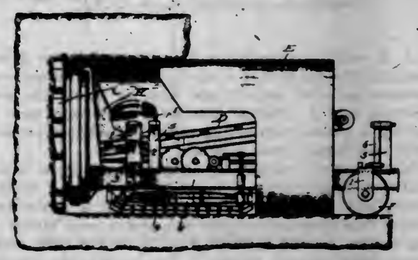
1,210,924. METALLIC BEDSTEAD. LOUIS FRANK, Brooklyn, and JOSEPH COOPER, New York, N. Y., assignors to Greenpoint Metallic Bed Company, Brooklyn, N. Y., composed of David Frank, Brooklyn, N. Y., John Trounstine, New York, N. Y., and William Lies, Brooklyn, N. Y. Filed Mar. 1, 1915. Serial No. 11,183. (Cl. 5—4.)

1. An end-frame for a metal bedstead comprising metal corner posts, transverse members connecting the same, vertical members connecting said tranvserse members and a woven cane panel interposed in said end frame and secured at its edges to portions of members thereof, said portions having affixed thereto channel sections for receiving folded-over edges of said panel and strips for wedging said edges in said sections, and metal strips being provided to be bent over on said wedge strips for securing the same in said channel sections.



2. An end-frame for a metal bedstead comprising metal corner posts, transverse members connecting the same, vertical members connecting said transverse members and a woven cane panel interposed in said end frame and secured at its edges to portions of members thereof, said portions having affixed thereto channel sections for receiving folded-over edges of said panel and strips for wedging said edges in said sections, means being provided for securing said strips in said channel section.

1,210,925. TUNNELING-MACHINE. JAMES C. FRENCH, Kenosha, Wis., assignor to Frederick C. Austin, Chicago, Ill. Filed Feb. 14, 1916. Serial No. 78,116. (Cl. 61—16.)



1. In an excavator, a body, a boring head in front of said body, traction means to propel the body forward, wheels engaging the ground to keep the body upright, and elements to hold said wheels in elevated positions against the inner surface of the excavation after the machine enters the ground.

2. In an excavator, a body, a boring head in front of said body, traction means to propel the body forward, wheels engaging the ground to keep the body upright, and elements to hold said wheels in elevated positions against the inner surface of the excavation after the machine enters the ground, said means being arranged to travel at the center of the bottom of the excavation, said wheels being arranged at opposite sides of said center line of travel, at front and rear of the body, and so that the front wheels can be raised while the rear wheels are still on the ground outside the tunnel.

3. In an excavator, a body, a boring head in front of said body, traction means to propel the body forward, wheels engaging the ground at opposite sides of the excavator to keep the body upright, and elements to hold said wheels in elevated positions against the inner surface of the excavator after the machine enters the ground, said elements serving to hold the wheels above the body and against the top of the excavator, and said means being disposed under said body and in the middle of the space between the wheels of one side and those of the other side.

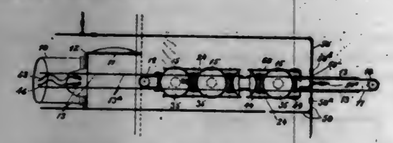
4. In an excavator, a series of traveling buckets for carrying the excavated dirt upward to the desired point of discharge, a pivoted cleaner arranged in the path of the buckets, mechanism for moving said cleaner about its pivot, means traveling with said buckets to operate said mechanism and thereby cause said cleaner to move forward into the oncoming bucket and then out of the path

thereof, each time a bucket encounters said cleaner, and a device for operating said mechanism to restore the cleaner to normal position.

5. In an excavator, a series of traveling buckets for carrying the excavated dirt upward to the desired point of discharge, a pivoted cleaner arranged in the path of the buckets, mechanism for moving said cleaner about its pivot, means traveling with said buckets to operate said mechanism and thereby cause said cleaner to move forward into the oncoming bucket and then out of the path thereof, each time a bucket encounters said cleaner, and a device for operating said mechanism to restore the cleaner to normal position, said mechanism comprising an arm rigid with said cleaner and provided with a longitudinal slot and a pivoted lever engaging said slot at one end and having its other end disposed in position by said means.

[Claims 6 to 11 not printed in the Gazette.]

1,210,926. PRESS FOR HORIZONTAL VULCANIZERS. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Oct. 5, 1916. Serial No. 123,982. (Cl. 18—17.)



1. A vertical vulcanizing press comprising a base or platform for supporting a stack of molds, an upper press-member movable toward said base to clamp the molds thereon, and a cylinder associated with said base and having a downwardly-acting piston detachably connected with said upper press member.

2. A vertical vulcanizing press comprising a base or platform constituting a lower support for a stack of molds and having associated therewith a downwardly-acting fluid-pressure cylinder and piston, said piston having a stem passing through a guide on the base, and an upper press member having a stem detachably connected with said piston stem.

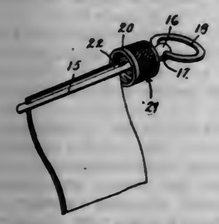
3. A vertical vulcanizing press comprising a base provided with a lower press member and a downwardly-open cylinder having means for admitting and discharging the working fluid, a piston in said cylinder exposed to atmospheric pressure on its lower side, and an upper press member connected with said piston.

4. Vulcanizing apparatus comprising a horizontal open-heat vulcanizing chamber, and a car adapted to be run into and out of said chamber and provided with a press for acting on a stack of molds carried by the car.

5. Vulcanizing apparatus comprising a horizontal vulcanizing chamber, a car movable into and out of said chamber and carrying a fluid-operated mold press, and a fluid-supply conduit having a separable coupling for attaching it to the press when located within said chamber.

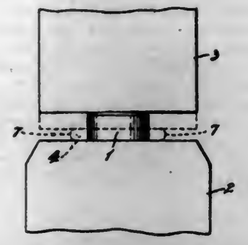
[Claims 6 to 13 not printed in the Gazette.]

1,210,927. POCKET LICENSE-CARRIER. LEON C. GERMAIN, Conway, Mass. Filed Apr. 12, 1915. Serial No. 20,914. (Cl. 40—19.)



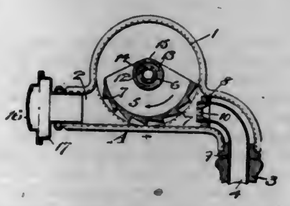
An article of the class described comprising a casing, one end of which is open, a license receiving spindle removably inserted within the casing and terminating at one end in an attaching eye, and a cap swivelly mounted on the spindle and detachably engaging the open end of the casing.

1,210,928. UTILIZATION OF SCRAP METAL IN THE MANUFACTURE OF WASHERS. JOHN F. GOLDING, Washington, D. C. Filed Nov. 16, 1915. Serial No. 61,765. (Cl. 10—86.)



The herein described process of utilizing solid and imperforate scrap disk punchings, of the punch-sheared form which they normally assume in being punched from metal plate, for the production of metal washers, which consists in reducing such individual solid punchings by axial pressure between opposing continuous die surfaces and causing all the metal therein, excepting that at the immediate center of the disk, to flow under such pressure radially, freely and uniformly outward in all directions so that the disk is expanded until the desired diameter of the washer has been attained and the same has been duly flattened, and then perforating such reduced disks.

1,210,929. WATER-MASSAGE VIBRATOR. MORRIS M. GRUBER and PHILIP LAUTER, New York, N. Y. Filed Mar. 5, 1915. Serial No. 12,361. (Cl. 128—16.)



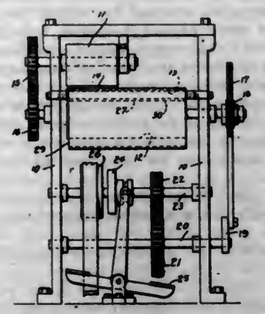
1. A device of the character described having a hollow casing, a sector rotatably mounted therein, means for directing a stream of water against said sector for rotating it, and a discharge nozzle for said casing.

2. A device of the character described having a hollow casing, a toothed sector rotatably mounted therein, means for directing a stream of water against said sector for rotating it, and a discharge nozzle for said casing.

3. A device of the character described having a hollow casing, a tubular axle therein, the interior of said casing being in open communication with external atmosphere through said tubular axle, a toothed sector rotatably mounted on said axle, means for directing a stream of water against said toothed sector for rotating it, and a discharge nozzle for said casing.

4. A device of the character described having a hollow casing, a tubular axle therein, a toothed sector having a hub rotatably mounted on said axle, an annular chamber in said hub surrounding said axle, the interior of said casing being in open communication with external atmosphere through said chamber and tubular axle, means for directing a stream of water against the toothed sector for rotating it, and a discharge nozzle for said casing.

1,210,930. ROLLING-MACHINE. FREDERICK HADFIELD, Millville, and WILLIAM KUHLTHAU, Blackstone, Mass., assignors to Woonsocket Rubber Company, a Corporation of Rhode Island. Filed May 18, 1916. Serial No. 98,291. (Cl. 154—1.)

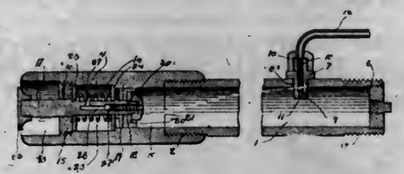


1. A rolling machine comprising rollers disposed opposite each other, means for rotating and then reversing rotation of the rollers, and a conveyer belt between the rollers for supporting the materials operated upon by the rollers.

2. A rolling machine comprising rollers disposed opposite each other, means for rotating and reversing rotation of the rollers, and a conveyer belt between the rollers frictionally driven by one of the rollers to support and carry the materials operated upon by the rollers first in one direction and then in the reverse direction.

3. A rolling machine comprising rollers disposed one above the other, means for rotating and reversing rotation of the rollers, a table through which the upper portion of the lower roller projects, and a conveyer belt supported in flat condition by the table and frictionally driven by contact with the upper portion of the lower roller.

1,210,931. OILER FOR DIE-STOCKS. ABRAM R. HALL, Greeley, Colo. Filed June 29, 1916. Serial No. 106,693. (Cl. 184—28.)

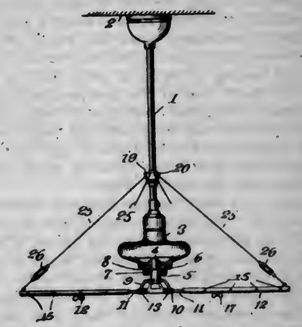


1. A lubricator comprising a hollow body portion adapted to contain a liquid lubricant, a lubricant discharge passage from one end of said body, a check valve to preclude return of the lubricant through said discharge passage, a plunger stem mounted at the remaining end of the body, a piston on said plunger working to cause the flow of liquid lubricant through the discharge passage as the plunger stem is moved inwardly, and means to permit supply of air to the lubricant chamber upon the return stroke of the piston to compensate for the liquid discharged from the chamber by the instroke of the piston.

2. A lubricator comprising a body portion formed to provide a lubricant containing chamber, a passage from said chamber, a head member secured on said body member and provided with a bore alined with the liquid chamber in the body, a removable face bushing mounting in the outer end of said head member and provided with a central opening, a plunger stem mounted to be capable of reciprocatory movement through the orifice of the bushing, a piston carried by the inner end of said plunger stem to cause discharge of lubricant through the passage from the storage chamber upon instrokes of the plunger stem, and a spring to return the plunger stem following instroke of the piston.

3. A lubricator comprising a body portion formed to provide a lubricant containing chamber, a passage from said chamber, a head member secured on said body member and provided with a bore alined with the liquid chamber in the body, a removable face bushing mounting in the outer end of said head member and provided with a central opening, a plunger stem mounted to be capable of reciprocatory movement through the orifice of the bushing, a piston carried by the inner end of said plunger stem to cause discharge of lubricant through the passage from the storage chamber upon instrokes of the plunger stem, a spring to return the plunger stem following instroke of the piston, a check valve mounted in the lubricant discharge passage to close the same against back flow of lubricant, an air supply chamber formed in the head, a valved air passage formed through the plunger stem to open into the air supply chamber, and means held under the proper packing tension by said spring to close access from the lubricant chamber to the air supply chamber.

1,210,932. SUSPENDED CLOTHES-DRIER. MARION BORDEN HALLIDAY, Wallkill, N. Y. Filed Dec. 30, 1915. Serial No. 69,335. (Cl. 68—34.)



1. A suspended clothes drier comprising a motor, a stationary vertical spindle supporting said motor and fastened to an overhead support, a clothes drying frame having horizontally adjustable radiating arms to permit regulating of the size of the frame, the inner ends of said arms being detachably secured to the motor shaft, and struts fastened to the free ends of said arms for supporting the same.

2. A suspended clothes drier comprising a motor, a vertical spindle supporting said motor from its lower end and fastened to an overhead support, a spider secured to the motor shaft, a clothes drying frame having adjustable radiating arms to permit regulating of the size of the frame and detachably secured to said spider, a sleeve loosely carried by said spindle and struts for supporting said arms and detachably secured to said sleeve.

3. A suspended clothes drier comprising a motor, a vertical spindle supporting said motor and fastened to an overhead support, a spider secured to the motor shaft, arms secured to said spider, a clothes drying frame having adjustable radiating arms to permit regulating of the size of the frame and detachably secured to said spider arms, a sleeve carried by said spindle, struts for supporting said radiating arms and detachably secured to the free ends of said radiating arms and to said sleeve and means carried by said struts for adjusting the length of the same.

1,210,933. TREAD FOR RESILIENT TIRES. BERTRAM C. HAMM, Boston, Mass. Filed May 26, 1916. Serial No. 99,998. (Cl. 152—14.)

1. A resilient tire body having integral resilient studs projecting radially from its external surface and arranged in a plurality of peripheral rows, the studs of each row

being in transverse alinement with the studs of the other row, and each stud having a flat tread face in the same plane with the tread face of the stud transversely alined therewith, the alternate studs of each row being hollow and constituting suction studs while the other studs are solid, and compensate for the relative flexibility of the hollow studs.

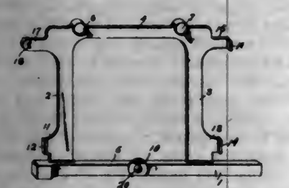


2. A resilient tire body having integral resilient studs projecting radially from its external surface and arranged in a plurality of peripheral rows, the studs of each row being in transverse alinement with the studs of the other row, and each stud having a flat tread face in the same plane with the tread face of the stud transversely alined therewith, the alternate studs of each row being hollow and constituting suction studs and the other studs being solid, the suction studs of each row being staggered relatively to those of the other row, so that the solid studs compensate for the relative flexibility of the hollow studs.

3. A resilient tire body having integral resilient studs projecting radially from its external surface and arranged in a plurality of peripheral rows, the studs of each row being in transverse alinement with the studs of the other row, each stud having a flat outer tread face in the same plane with the tread face of the stud transversely alined therewith, some of the studs being solid while others are hollow and constitute suction studs, and elastic webs connecting the transversely alined studs and the adjacent studs of each row, said webs forming walls of suction cups supplementing the suction studs.

4. A resilient tire body having integral resilient studs projecting radially from its external surface and arranged in a plurality of peripheral rows, the studs of each row being in transverse alinement with the studs of the other row, each stud having a flat outer tread face in the same plane with the tread face of the stud transversely alined, therewith, the alternate studs of each row being solid while the others are hollow and constitute suction studs, the suction studs of each row being staggered relatively to those of the other row, and elastic antiskidding webs connecting the adjacent studs of each row, and serving to brace the hollow studs.

1,210,934. PICTURE-HOLDER. ALBERT HAYES, Salt Lake City, Utah, assignor to Moving Advertisement Company, a Corporation of Arizona. Filed Dec. 22, 1914, Serial No. 878,468. Renewed Mar. 22, 1916. Serial No. 85,973. (Cl. 88—16.)



1. A device for holding picture plates, cards and the like, comprising a bar adapted to support the lower edge of the picture plate, uprights carried by the bar of less thickness than the bar, lugs carried by the uprights recessed to receive the upper edge of the picture plate, side lugs carried by the uprights to engage the side edges of the picture plate and means for retaining the picture plate on the bar.

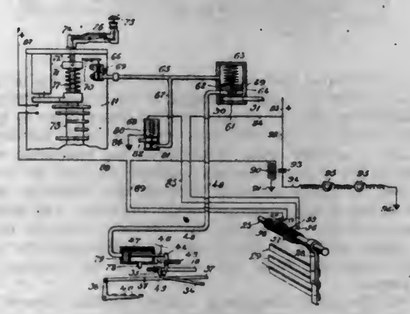
2. A device for holding picture plates, cards and the like, comprising a bar adapted to support the lower edge of the picture plate, uprights carried by the bar of less thickness than the bar, lugs carried by the uprights recessed to receive the upper edge of the picture plate, side lugs carried by the uprights to engage the side edges of one of the picture plates, means carried by the uprights for limiting the movement of the other picture plate, and means for retaining the picture plates on the bar.

3. A device for holding picture plates, cards and the like, comprising a bar adapted to support the lower edge of the picture plate having its upper face of sufficient breadth to receive two picture plates, uprights carried by the bar of less thickness than the bar, lugs carried by the uprights recessed to receive the upper edges of the two picture plates, side lugs carried by the uprights to engage the side edges of one of the picture plates, means carried by the uprights for limiting the movement of the other picture plate, and means for retaining the picture plates on the bar.

4. A device for holding picture plates, cards and the like, comprising a bar adapted to support the lower edge of the picture plate having its upper face of sufficient breadth to receive two picture plates, uprights carried by the bar of less thickness than the bar, lugs carried by the uprights recessed to receive the upper edges of the two picture plates, side lugs carried by the uprights to engage the side edges of one of the picture plates, said side lugs extending forward a distance not exceeding the thickness of the picture plate engaged by them, means carried by the uprights for limiting the movement of the other picture plate, said means extending forward a distance greater than the forward extent of the said side lugs, and means for retaining the picture plates on the bar.

5. A device for holding picture plates, cards and the like, comprising a bar adapted to support the lower edge of the picture plate having its upper face of sufficient breadth to receive two picture plates, uprights carried by the bar of less thickness than the bar, lugs carried by the uprights recessed to receive the upper edges of the two picture plates, side lugs carried by the uprights to engage the side edges of one of the picture plates, said side lugs extending forward a distance not exceeding the thickness of the picture plate engaged by them, means carried by the uprights for limiting the movement of the other picture plate, said means comprising a fixed lug carried by one upright and a removable projection carried by the upright, and means for retaining the picture plates on the bar.

1,210,935. SAFETY LIFE-GUARD ATTACHMENT FOR CARS. FRANK HEDLEY, Yonkers, and JAMES S. DOYLE, Mount Vernon, N. Y. Filed May 5, 1913. Serial No. 765,455. (Cl. 105—130.)



1. The combination with a car body and a supporting truck therefor, of a life guard pivotally mounted on the truck, a tripping gate therefor, a horizontally acting bumper bar and means actuated by the operation of said bumper bar for swinging said gate to trip said guard.

2. The combination with a car body and a supporting truck therefor, of a life guard pivotally mounted on the truck, a tripping gate therefor, a yieldingly mounted bumper bar and means operated by the yielding movements of the bumper bar for swinging said gate to trip said guard.

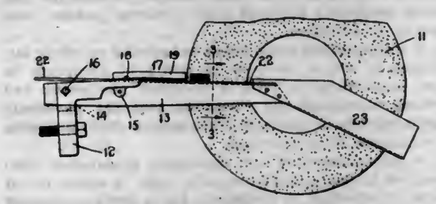
3. The combination with a car body and a supporting truck therefor, of a life guard pivotally mounted on the truck, a tripping gate therefor, a yieldingly mounted bumper bar, and means operated by the yielding movements of the bumper bar for swinging said gate to trip said guard, said gate being mounted for swinging movement independent of the bumper bar.

4. The combination with a car body and a supporting truck therefor of a life guard pivotally supported upon said truck, a tripping gate therefor, a yieldingly mounted bumper bar having a slotted rod, and an arm connected to said gate and engaging in the slot of said rod.

5. In a safety apparatus for cars, a life guard, a tripping mechanism therefor, a piston for operating said tripping mechanism, and means for coincidently operating said piston and opening the circuit to the car propelling motor.

[Claims 6 to 15 not printed in the Gazette.]

1,210,936. FEEDING DEVICE FOR ROLL-GRINDING MACHINES. LEWIS R. HEIM, Danbury, Conn., assignor to The Ball and Roller Bearing Company, Danbury, Conn., a Corporation of Connecticut. Filed Mar. 6, 1915. Serial No. 12,526. (Cl. 51—4.)



1. A roll feeding device for grinding machines comprising a slotted body, a carrier pivoted in the slot and adjustable guides secured to the body on opposite sides of the slot.

2. A roll feeding device for grinding machines comprising a carrier by which the rolls are conducted to a position to be operated upon and by which they are carried past the operative surfaces and a trough secured to the inner end of the carrier by which the ground rolls are conducted away from the operative surfaces.

3. A roll feeding device for grinding machines comprising a carrier by which the rolls are conducted to a position to be operated upon and by which they are carried past the operative surfaces, a wearing strip in said carrier, and a trough secured to the inner end of the carrier by which the ground rolls are conducted away from the operative surfaces.

4. A roll feeding device for grinding machines comprising a slotted body, a carrier pivoted in the slot, said carrier being provided with a groove, and a removable wearing strip in said groove having a plurality of faces which may be used successively.

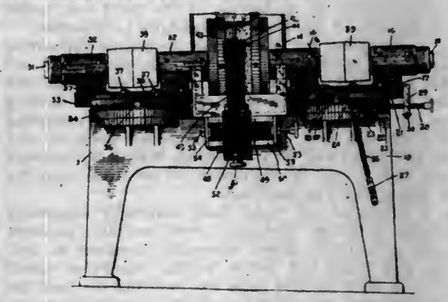
5. A roll feeding device for grinding machines comprising a body having a slot, a carrier pivoted in said slot to swing in the vertical plane and means for locking the carrier at any required adjustment.

[Claim 6 not printed in the Gazette.]

1,210,937. ROLL-GRINDING MACHINE. LEWIS R. HEIM, Danbury, Conn., assignor to The Ball and Roller Bearing Company, Danbury, Conn., a Corporation of Connecticut. Filed Mar. 6, 1915. Serial No. 12,524. (Cl. 51—4.)

1. A machine of the character described comprising a grinding wheel adapted to be rotated at a relatively high speed, a regulating wheel adapted to be rotated in the opposite direction at a relatively low speed and a carrier between said wheels upon which the rolls rest while being operated upon.

2. A machine of the character described comprising a carrier for rolls, a grinding wheel having an operative surface adapted to rotate in the direction of the carrier at a relatively high speed and a regulating wheel coöperating therewith and having an operative surface adapted to rotate in the opposite direction at a relatively low speed, whereby constant and uniform rotation, at a lower surface speed than that of the grinding wheel, is imparted to the rolls while being operated upon.



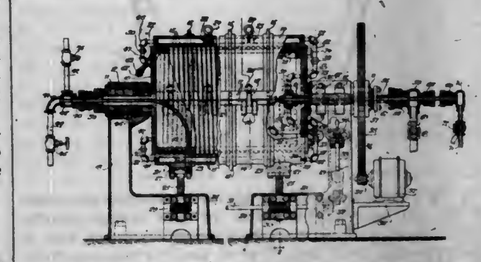
3. A machine of the character described comprising a carrier for rolls, a grinding wheel adapted to be rotated at a relatively high speed, and a regulating wheel adapted to be rotated in the opposite direction at a relatively low speed, the operative surfaces of said wheels lying in a plane oblique to the vertical plane, so as to throw rolls being operated upon toward the regulating wheel.

4. A machine of the character described comprising a carrier for rolls, a grinding wheel having an operative surface adapted to rotate in the direction of the carrier at a relatively high speed and a regulating wheel coöperating therewith and having an operative surface adapted to rotate in the opposite direction at a relatively low speed, the operative surfaces of said wheels lying in a plane oblique to the vertical plane, so as to throw rolls being operated upon toward the regulating wheel.

5. A machine of the character described comprising a carrier for rolls, a grinding wheel adapted to be rotated at a relatively high speed, and a regulating wheel adapted to be rotated in the opposite direction at a relatively low speed, the axes of said wheels lying obliquely to each other for the purpose set forth and said wheels being provided with parallel operative surfaces.

[Claims 6 to 25 not printed in the Gazette.]

1,210,938. VULCANIZING APPARATUS FOR RUBBER HOSE. SARAH D. HEWITT, Buffalo, N. Y. Filed Apr. 8, 1915. Serial No. 19,988. (Cl. 18—6.)



1. A vulcanizer for rubber hose comprising supporting standards, a hollow drum journaled therein, a sectional jacket removably mounted on said drum, said drum and jacket having companion spiral grooves in their meeting faces for receiving the hose, means for supplying steam to said drum and the sections of said jacket, and a pipe connection having an axially disposed portion for supplying fluid under pressure to the hose during the movement of the drum and jacket about the axis of the drum, substantially as described.

2. A vulcanizer for rubber hose comprising supporting standards, a hollow drum journaled therein, a sectional jacket removably mounted on said drum, said drum and jacket having companion spiral grooves in their meeting faces for receiving the hose, means for moving the drum and jacket about the axis of the drum, and connections having axially disposed portions for supplying steam to said drum and jacket sections, withdrawing the condensation therefrom and for supplying fluid under pressure to the hose during the movement of the drum and jacket about the axis of the drum, substantially as described.

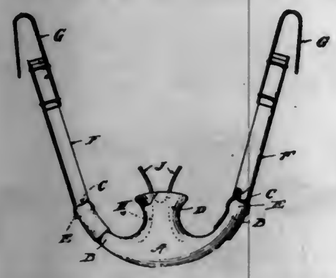
3. A vulcanizer for rubber hose comprising supporting standards, a hollow drum journaled therein, a sectional jacket removably mounted on said drum, said drum and jacket having companion spiral grooves in their meeting faces for receiving the hose, and connections extending axially through said drum for supplying steam to said drum and jacket and for maintaining fluid under pressure in the hose during the movement of the drum upon its axis, substantially as described.

4. A vulcanizer for rubber hose comprising supporting standards, a hollow, horizontal drum rotatably mounted thereon, a sectional jacket removably mounted on said drum, said drum and jacket having companion spiral grooves in their meeting faces for receiving the hose, an axially disposed steam supply connection, separate, axially disposed drain pipes for said drum and said jacket sections, said drum drain pipe being fixed in position and having a downturned inner end, said jacket drain pipe being connected to rotate with said drum and externally detachable connections between said rotatable drain pipe and said jacket sections, substantially as described.

5. A vulcanizer for rubber hose comprising supporting standards, a hollow drum journaled therein, a sectional jacket removably mounted on said drum, said drum and jacket having companion spiral grooves in their meeting faces for receiving the hose, steam supply connections, separate drain connections leading respectively from said drum and said jacket, and connections for supplying fluid under pressure to the hose, all of said connections extending axially into said drum, and means for moving the drum about its axis during the vulcanizing operation, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,210,939. RESPIRATING DEVICE. MARTIN HILGERS, Tazewell county, Ill. Filed June 24, 1914. Serial No. 847,167. (Cl. 128—13.)



1. In a respirating device for use in treating affections of the eye, the combination of an open tubular mouth-piece including a tubular extension communicating with it and extending away from it at an angle to the axis of its bore, means attached to the said extension adapted to be engaged or hooked over the ear of the patient, and a pair of members extending from the said mouth-piece to engage over the nose of the patient and adapted by their form, in conjunction, to close the nostrils.

2. In a respirating device for use in treating affections of the eye, the combination of a tubular mouth-piece open at one end, a tubular member with which it communicates at its other end, said tubular member extending at each side of the said mouth-piece, the resulting extensions lying in a plane disposed at an angle to the axis of the mouth-piece, the axis of the bore of the latter piercing said plane, means extending from the said extensions to suspend them from the ears of the patient, and a pair of extensions carried by the mouth-piece to engage each side of the nose of the patient and adapted by their form, in conjunction, to hold the nostrils closed.

3. As a new article of manufacture, a U-shaped tubular body having a substantially centrally disposed, hollow, communicating, outwardly flared, extension open at its outer end lying between the arms of the U-shaped body, a pair of spaced extensions formed with said centrally disposed extension, and a tubular portion extending from each arm of the said body each including a looped portion at its free extremity.

1,210,940. SHORTENING AND LEAVENING PREPARATIONS. ROBERT A. HOLBROOK, Chicago Heights, Ill. Filed Dec. 30, 1915. Serial No. 69,342. (Cl. 99—10.)

1. A stable baking preparation comprising a body of thickened vegetable oil, a carbonate and a baking acid in proper proportions to form a combined shortening and leavening compound, the carbonate and the baking acid being intimately mixed and embedded in the body of thickened vegetable oil, substantially as described.

2. A stable leavening and shortening preparation comprising a body of thickened vegetable oil of lard-like consistency intimately admixed with a baking powder, substantially as described.

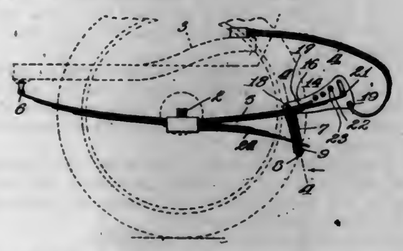
3. A stable baking preparation comprising an edible fat, a carbonate, and a finely pulverized acid phosphate in proper proportions to form a combined shortening and leavening compound the carbonate and the phosphate being intimately mixed and embedded in the shortening fat, substantially as described.

4. A stable leavening and shortening preparation comprising an intimate admixture of a body of edible fat of lard-like consistency, a carbonate, and a finely pulverized acid phosphate, substantially as described.

5. A stable leavening acid shortening preparation comprising a mixture of a body of edible fat of lard-like consistency, baking soda in substantially the proportion of seven parts by weight of fat to one part of soda, and a sufficient amount of a baking acid to react with the soda, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,210,941. VEHICLE-SPRING. FRANK HARTWELL HOPKINS, Westmount, and GEORGE BINET DORBY, Montreal, Quebec, Canada. Filed Oct. 30, 1914. Serial No. 869,449. (Cl. 267—19.)



1. The combination with a pair of relatively movable parts, of springs carried respectively by said parts and a lever having a shifting fulcrum and connecting the springs, such lever including a series of elements movable with relation to the lever and constituting fulcrum points for the latter.

2. The combination with a pair of relatively movable parts, of a spring connected to one of said parts and a lever connected to the other of said parts and to the spring, the lever including a series of elements movable with relation to the lever and constituting fulcrum points for the latter.

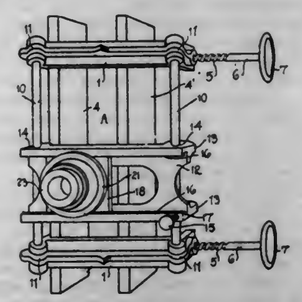
3. The combination with a pair of relatively movable parts, of a laminated spring carried by one of the parts, a helical spring carried by the laminated spring, a plate located at each side of the laminated spring and connected to the helical spring, a pin and slot connection between the plates and laminated spring, a web extending across the laminated spring and connecting the plates, a series of rollers extending between the plates, such web and rollers being adapted to successively bear upon the laminated spring and normally extending in a curved line outwardly from the latter and connecting means between the plates and the other movable part.

4. The combination with a pair of relatively movable parts, of a laminated spring carried by one of the parts, a helical spring carried by the laminated spring, a plate located at each side of the laminated spring, and connected to the helical spring, a pin and slot connection between the plates and laminated spring, a web extending across the laminated spring and connecting the plates, a series of rollers extending between the plates, such web and rollers being adapted to successively bear upon the laminated spring and normally extending in a curved line outwardly from the latter and a second laminated spring connecting the plates and the other movable part.

5. In a vehicle, the combination with the body thereof and the axle, of a spring carried by the body, a spring carried by the axle and a lever having a shifting fulcrum and connecting the springs, such lever causing the springs to co-act one with the other and being adapted to vary the tension of same as the fulcrum shifts.

[Claims 6 to 16 not printed in the Gazette.]

1,210,942. MORTISING-JIG. ERNEST B. JONES, West Canaan, N. H. Filed Mar. 25, 1916. Serial No. 86,786. (Cl. 77—62.)



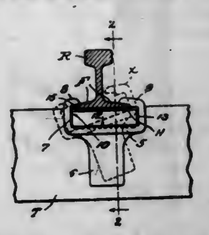
1. A mortising jig, including a vise, comprising spaced bars formed at their ends with angularly disposed arms, a clamping member secured to the arms at one end of said bars, adjusting screws working through the other arms of said bars, a clamping member connected to the inner ends of said screws, guide rods connecting said bars together in spaced relation to each other, a cross-head slidable longitudinally on said rods, means for holding said cross-head in different positions on said rods, and a collet holder carried by said cross-head, the cross-head being provided with flanges formed with laterally extending channels facing each other, and the collet holder being provided with a base plate slidable in said channels and with a clamping nut adjustable on the holder and designed to bear against said flanges whereby the collet holder may be fastened at different lateral adjustments on the cross-head.

2. A mortising jig including a vise, provided with guide rods, a cross-head formed on one face with laterally extending flanges having apertured ears receiving said guide rods and by which the cross-head is slidable on said rods, means for holding the cross-head at different adjustments on said rods, the cross-head being formed on its opposite face with laterally disposed flanges formed with channels, a collet holder having a base plate received in said channels, whereby it is mounted for sliding movement laterally on the cross-head, the collet holder also embodying a cylindrical body portion having external screw-threads, and a clamping nut working on said screw-threads and adapted to bear against the last named flanges whereby the collet holder may be fastened in different adjusted positions.

3. In a mortising jig, a collet holder provided with a base plate, in combination with a cross-head having guides in which the base plate is receivable, said collet holder being also provided with a cylindrical body portion having external screw threads, a clamping nut working on said screw threads, for the purpose specified, said body portion being also internally screw-threaded, and a collet receivable in said cylindrical body portion and externally screw-threaded to engage the internal threads of the holder.

4. A mortising jig of the character described, comprising spaced bars having angularly disposed end arms and formed at its end with apertured bosses, guide rods received in said bosses and securing the cross-bars together in spaced relation to each other, a board fastened to the inner face of the arms at corresponding ends of the cross bars, adjusting screws working in the other arms of said bars, another board secured to the inner ends of said screws, a cross-head formed with apertured ears by which it is mounted for sliding movement on said rods, a set screw working through said cross-head and adapted to impinge upon one of said rods to hold the cross-head in different adjusted positions, the cross-head being formed on one face with laterally extending flanges provided with channels, and a collet holder having a base plate movable in said channels and a cylindrical body portion formed with external screw threads, and a clamping nut working on said screw threads and adapted to bear against said flanges whereby the collet holder may be fastened at different lateral adjustments of the cross head.

1,210,943. ANTICREEPING DEVICE FOR RAILS. CHRIS M. JORGENSON, Seattle, Wash. Filed May 29, 1916. Serial No. 100,435. (Cl. 238—4.)



1. In a device of the class described, a rail-clamping means comprising a chambered body, said body having at its top a longitudinal groove communicatng with the referred to chamber and disposed to provide two inwardly directed flanges at opposite sides of the groove whereby the body may be suspended from the flanges of a track rail, and means insertible within the body chamber from one end of the body and below the rail for securing said body to the rail and also serving to hold said body in juxtaposition with a track tie.

2. In a device of the class described, a rail-clamping means comprising a chambered body provided with an arm depending from one end thereof, said body having at its top a longitudinal groove communicating with the referred to chamber and disposed to provide two inwardly directed flanges of unequal widths at opposite sides of the groove whereby the body may, by being tilted, be engaged with the flanges of a track-rail, and means insertible within the body chamber and below the rail for securing said body to the rail.

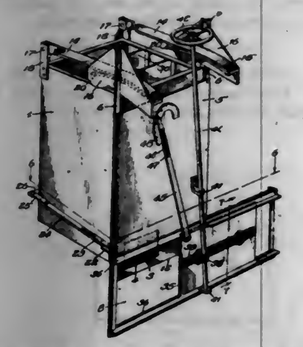
3. In a device of the class described, a rail-clamping means comprising a body adapted to be suspended from the flanges of a track-rail and having an arm depending from one end of said body, said body being provided with a recess having a floor inclined from the plane of the

underside of said rail, and a roller adapted to mutually engage against the underside of said rail and the aforesaid floor to couple said body to the rail and also serve to maintain the body in position to cause the arm thereof to bear against a track tie.

4. In a device of the class described, a rail-clamping means comprising a body adapted to embrace the flanges of a track-rail and having an arm depending from one end of said body to bear against a track tie, said body being provided with a recess having a floor inclined from the plane of the underside of said rail, a roller adapted to mutually engage against the underside of said rail and the aforesaid floor to couple said body to the rail, and an apertured block serving as a frame for said roller and insertible therewith in the block recess to maintain the axis of the roller in rectangular relation to the rail.

5. In a device of the class described, a one-part body provided with means integral therewith for detachably suspending the same from the flanges of a track-rail, said body being chambered to provide a recess subjacent to said rail flanges and with a floor disposed in angular relation to such flanges, a roller, and means provided with a recess to accommodate said roller and adapted to be inserted therewith in said recess to maintain the axis of the roller in transverse relation to the rail for coupling said body to the rail, said frame also serving to enable the roller to be readily removed from said recess for disengaging said body.

1,210,944. AUTOMATIC HEAD-GATE. KARL F. KEELER, Provo, Utah, assignor to Keeler Automatic Headgate Company, Provo, Utah, a Corporation of Utah. Filed Jan. 22, 1916. Serial No. 73,539. (Cl. 61—46.)



1. The combination with a fluid conduit, of a vertically movable headgate provided with a receptacle and an opening leading thereinto for admitting water to increase or decrease the weight of the gate in accordance with the increase or decrease of level in the source, and a spring rigidly supported at one end and free to move vertically at the other, said gate being suspended from the movable portion of said spring, whereby the spring both supports the gate and guides it.

2. The combination with a fluid conduit of a headgate movable relatively thereto and provided with a receptacle having an opening through which the fluid may enter to increase or decrease the weight of the gate in accordance with the variation of head in the source, and a spring for supporting said gate, said spring being rigidly supported at one end and having a shelf arranged beneath it, said shelf being curved whereby, as the free end of the spring descends, a greater portion of the spring will contact the shelf.

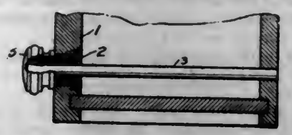
3. The combination with a fluid conduit of a headgate movable relatively thereto and provided with a receptacle having an opening through which the fluid may enter to increase or decrease the weight of the gate in accordance with the variation of head in the source, and flat spring elements rigidly supported at one and at the other end connected to said gate, one of said springs being connected near the upper end of the gate and the other near the lower end of the gate and said springs being approximately horizontal both as to their length and width whereby they are capable of bending in a vertical direction and resist pressure applied in any direction in a horizontal plane.

4. The combination with a fluid conduit of a headgate movable relatively thereto and provided with a receptacle having an opening through which the fluid may enter to increase or decrease the weight of the gate in accordance with the variation of head in the source, and a pair of flat cantaliver springs for suspending and guiding said gates.

5. The combination of a stationary front sheet, a headgate movable relatively thereto for controlling the flow past it, flat springs rigidly supported at one end and at the other end connected to said headgate, said springs being arranged flatwise and parallel to each other whereby said springs may bend in a vertical direction and effectually resist pressure exerted in any direction in a horizontal plane.

[Claims 6 to 12 not printed in the Gazette.]

1,210,945. DRAWER-PULL. HENRY FRANCIS KEIL, New York, N. Y., assignor to Library Bureau, Ilion, N. Y. Filed Apr. 24, 1916. Serial No. 93,317. (Cl. 129—16.)



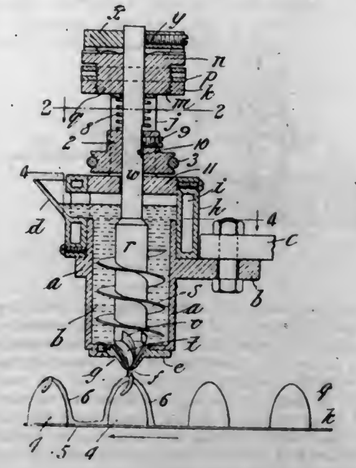
1. In a device of the class described, a rod having an enlarged medial stepped portion, the outer end of which latter is threaded, the rod also having at least one notch formed in the same at its inner end beyond the inner portion of the head of the said enlarged portion, in combination with a knob having two concentric bores or recesses of different diameters respectively constructed and arranged to contain the notched end of the rod and the enlarged medial portion thereof, the metal around the open ends of said recesses being upset to lie respectively against the said notch and the enlarged head.

2. In a device of the class described, a rod having a stepped sleeve mounted on the medial portion thereof, the outer end of which sleeve is threaded, the said rod having at its end at the inner side of the head of the sleeve at least one notch formed in the same, in combination with a knob having two concentric communicating bores or recesses of different diameters respectively constructed and arranged to contain the notched end of the rod and the enlarged medial portion thereof, the metal around the open ends of said recesses being upset to lie respectively against the said notch and the enlarged head.

1,210,946. STRINGING DEVICE FOR MAKING CONFECTIONS. THEODOR KIHLGREN, Springfield, Mass., assignor, by mesne assignments, to National Equipment Company, Springfield, Mass., a Corporation of Massachusetts. Filed Sept. 23, 1908. Serial No. 454,422. (Cl. 107—27.)

1. A chocolate stringing machine having in combination a receptacle for containing liquid chocolate, a member located therein, and means for continuously and simultaneously imparting a rotating and a reciprocating movement to said member, as described, the means for imparting the reciprocating movement to said member being independent of the action of the chocolate contained in the receptacle.

2. A chocolate stringing machine having in combination with a receptacle therefor which is provided with an opening for the delivery of the chocolate, a rotating member located therein, means associated with the rotating member for imparting a reciprocating movement thereto, said means comprising a nut provided with a wavy upper surface and an element carried by the rotated member having interengaging devices for engaging the wavy surface of the nut, and means for maintaining the said surface and the devices carried by the element in contact, as described.



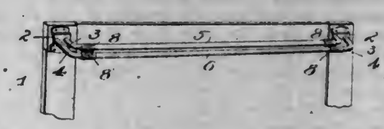
3. A machine for controlling the flow of pasty material, in combination, a receptacle having a conical-shaped opening therein, a rotatable shaft provided with a grooved end located in the opening, and means for rotating the shaft whereby clogging of the opening is prevented, and means for imparting a reciprocating movement to the shaft, said shaft having a spiral or screw mounted thereon and rotating in the pasty material, whereby the material may be forced through the opening as described.

4. A machine for stringing pasty material having in combination a receptacle therefor provided with an outlet opening, and means for imparting to the receptacle a reciprocating movement and a feed screw located in the receptacle, and continuously operable driving means to rotate the feed screw during the movement of the receptacle.

5. A chocolate stringing or decorating machine comprising a receptacle for containing the material, and having an outlet in the lower portion thereof, a member provided with a screw for expelling the material, and means for reciprocating the receptacle in a line transversely to the line of movement of confections to be decorated.

[Claims 6 to 17 not printed in the Gazette.]

1,210,947. CURTAIN-ROD. CHARLES W. KIRSCH, Sturgis, Mich., assignor to Kirsch Manufacturing Co., Sturgis, Mich., a Corporation of Michigan. Filed Sept. 19, 1914. Serial No. 862,498. (Cl. 156—22.)



1. A curtain fixture comprising in combination, a pair of brackets each equipped with a projection, said projections constituting the opposed end-portions of a curtain rod, a middle-portion adapted to fill the open space between the opposed ends of said end-portions, and telescopic coupling members for holding said middle and end-portions in axial alinement, said coupling members telescopically movable with respect to said curtain rod members for receiving the opposed end-portions of said parts, and inter-engaging formations on the carrier for each of said coupling members and the latter for yieldingly holding said coupling member against longitudinal movement in either direction when disposed in coupling position relatively to the several rod-parts, one of said parts presenting opposed shoulders to the other thereof.

2. A curtain rod and bracket in combination with a coupling member carried by and telescopically engaging the adjacent end of the other of said members to hold said members in axial alinement with each other, and means limiting the longitudinal movement of the coupling on the member by which it is carried comprising a pair of opposed shoulders on one of said parts, and spring tongues on the other of said parts projecting into engaging relation to said shoulders.

3. The combination with a curtain rod and a bracket therefor, of a sleeve longitudinally movable relatively to both said parts and adapted to project partly over both to engage them with and hold them peripherally substantially flush with each other, and interengaging means on said sleeve and one of said parts coacting to limit the relative longitudinal movement thereof, said means comprising a pair of opposed shoulders on one of said parts, and opposed spring tongues on the sleeve having their free end portions normally projecting into engaging relation to said shoulders, the latter constituting stops to limit the movement of said sleeve.

4. The combination with a curtain rod and a bracket therefor, of a sleeve longitudinally movable relatively to both said parts and adapted to project partly over both to engage them with and hold them peripherally substantially flush with each other, and interengaging means on said sleeve and one of said parts coacting to limit the relative longitudinal movement thereof, said means comprising a pair of annular grooves in one of said parts each having a wall disposed substantially perpendicular to the axis of said part, said perpendicular walls opposed to each other, the other walls of said grooves tapered, and elastic means on the sleeve normally projecting into engaging relation to said grooves and adapted to be engaged by the perpendicular walls of the latter to limit the longitudinal movements of said sleeve on said part.

5. The combination with a curtain rod and a bracket therefor, of a sleeve longitudinally movable relatively to both said parts and adapted to project partly over both to engage them with and hold them peripherally substantially flush with each other, and interengaging means on said sleeve and one of said parts coacting to limit the relative longitudinal movement thereof, said means comprising a pair of annular grooves in one of said parts each having a wall disposed substantially perpendicular to the axis of said part, said perpendicular walls opposed to each other, the other walls of said grooves tapered, and a pair of opposed spring tongues extending longitudinally of the sleeve between the ends of the latter and having inwardly extending end portions projecting into engaging relation to said grooves, each of said tongues coacting with an opposed perpendicular wall of the part carrying said sleeve to limit the longitudinal movement of the latter thereon in one direction.

1,210,948. PURIFYING LOGWOOD DYES. ISIDOR KITSEE, Philadelphia, Pa., assignor to Dye Products Company of the United States, Philadelphia, Pa., a Corporation of Delaware. Filed Nov. 5, 1915. Serial No. 59,759. (Cl. 8—5.)

1. The method of purifying logwood dyes, which consists in subjecting such dyes to the chemical action of a sulfur oxid.

2. In the treatment of logwood dyes, the improvement which consists in subjecting a suitable logwood dye to the action of a sulfurous acid.

3. As a new article of manufacture, a logwood dye consisting of the dye proper and an oxid of sulfur.

4. As a new article of manufacture, a logwood dye combined with a slight amount of sulfurous acid.

1,210,949. MEDICINAL COMPOUND. WILLIAM JOHN KNOX, New York, N. Y., assignor, by mesne assignments, to General Research Laboratories, New York, N. Y., a Corporation of New York. Filed July 30, 1914. Serial No. 854,036. (Cl. 167—7.)

1. A medicinal compound comprising the ozonid of the triglycerid of a hydroxylated fatty acid of the $C_nH_{2n-2}O_3$ series.

2. A medicinal compound comprising the tri-glycerid of ricinoleic ozonid.

3. A medicinal product comprising ozone in chemical union with castor oil.

4. The method of treating castor oil to destroy the toxic property of the ricin constituent, consisting in oxidizing the ricin constituent.

5. The method of treating castor oil to destroy the toxic property of the ricin constituent consisting in commingling ozone with the castor oil.

[Claims 6 and 7 not printed in the Gazette.]

1,210,950. PERCUSSION MUSICAL INSTRUMENT. JOHN B. KOHLER, Chicago, Ill., assignor to The Kohler-Liebich Company, Wilmington, Del., a Corporation of Delaware. Filed Nov. 19, 1914. Serial No. 872,932. (Cl. 84—31.)



1. In a sounding device, a resonance-box, uprights secured thereon, sounding members, means connected with certain of said uprights to support and hold one end of each of said sounding members in spaced relation with one another, and cords alternately crossed above and below said sounding members connected with the remaining uprights supporting the opposite ends of said sounding members.

2. In a device of the class described, a resonance-box, a cord mounted thereabove, sounding members, members secured thereon and engaging said cord for mounting said sounding members on said cord, and means on said cord adapted to hold the sounding members in spaced relation with one another.

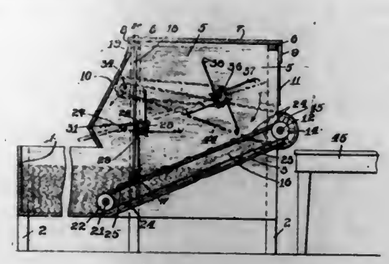
3. In a device of the class described, a sounding box, supports thereon, a silken cord threaded therethrough, sounding members, means connected with one end of said sounding members and with said cord, sleeves on said cord, said means and sleeves supporting and holding the sounding members spaced in proper relation with respect to said supports and with one another, and cords alternately crossed above and below the other ends of said sounding members to support the same.

4. In a device of the class described, a resonance-box, a plurality of uprights secured on the upper surface thereof, silken cords strung through said uprights, sounding members, means connecting one end of each of said members to one of said cords, the remaining cords engaged about the other ends of said members supporting the same in position upon said resonance-box to prevent displacement of said members.

5. In a device of the class described, a sounding box, uprights secured at one end thereof, a silken cord threaded therethrough, spacing sleeves on said cord between said uprights, sounding members, an eye secured in each of said sounding members, and engaged on said cord between said spacing members to support one end thereof, and means yieldably supporting the other end of said sounding members on the sounding box to prevent displacement of the sounding members.

[Claim 6 not printed in the Gazette.]

1,210,951. CARCASS SCALDING, DEHAIRING, AND POLISHING MACHINE. JOHN W. KOHLHEPP, Chicago, Ill., assignor to The Allbright Mill Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 12, 1912. Serial No. 677,133. (Cl. 17—11.)



1. A scalding tank and a dehairing and polishing machine mounted thereon and embracing a transversely movable conveyer, a beater shaft journaled transversely the tank and above the inner end of the conveyer, beaters thereon striking inwardly and upwardly of the conveyer and acting to assist in loading the carcasses thereon and acting to spray and dash the hot water from the tank on said carcasses while beating and scraping the same and while supported on said conveyer, and means for rotating said carcasses on said conveyer.

2. A machine of the class described embracing a scalding tank, an inclined, constantly movable conveyer therein, discharging at one end therefrom, a transverse beater shaft journaled above the lower end of the conveyer, beaters thereon dipping into the water of the tank and striking in the direction of travel of the conveyer, and coacting with the conveyer in loading the same, an upper beater shaft journaled transversely the conveyer, beaters thereon striking downwardly and oppositely from the travel of the conveyer and acting to rotate the carcasses thereon, and means throwing said upper beater shaft out of action to permit the discharge of the carcasses therepast.

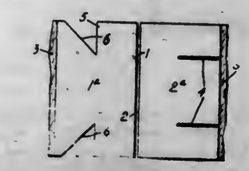
3. A machine of the class described embracing a scalding tank, a continuously movable conveyer discharging from the end of the tank, scraping and polishing means mounted on the tank above the inner end of the conveyer and coacting with the conveyer in loading the carcasses thereon, and acting to dash the hot water from the tank thereover while moving on the conveyer, an upper rotative beater shaft, means for rotating the same to strike downwardly and oppositely from the travel of the conveyer and acting thereby to rotate the carcasses thereon, and a clutch acting to throw said beater shaft out of action to permit the discharge of the carcasses therepast.

4. A machine of the class described comprising a scalding tank, a scraping and polishing machine mounted at the inner end thereof and embracing a continuously movable conveyer, an upper and a lower beater shaft journaled transversely the machine, beaters thereon, means rotating said beater shafts, the lower at a relatively slow rate to strike upwardly and in the direction of travel of the conveyer to facilitate the loading of the carcasses thereon and to dash the water from the tank thereover, the other at a higher rate of speed and downwardly and oppositely from the movement of the shaft to co-act therewith in rotating the carcasses thereon, and means arresting the rotation of the upper beater shaft to permit the discharge of carcasses therepast and from the machine.

5. In a machine of the class described a scalding tank, an inclined conveyer extending from near the bottom thereof and upwardly and outwardly from one end of the same, and adapted to convey scalded carcasses and the refuse therefrom from the machine, rotative beater shafts supported above the inner end of said conveyer and near the upper end thereof, and rotated oppositely, and beater arms thereon, one acting in the direction of the travel of the conveyer to load the carcasses thereon and spray the same with the water from the tank, the other acting downwardly thereon to rotate the carcasses.

[Claims 6 to 35 not printed in the Gazette.]

1,210,952. GUMMED STICKER OR LABEL. THEODORE H. KRUEGER, New York, N. Y. Filed Oct. 25, 1915. Serial No. 57,661. (Cl. 220—77.)



1. As a new article of manufacture, a package fastener consisting of two independent strips so connected as to prevent substantial relative movement, but detachable one from the other, the free ends of said strips being provided with a layer of adhesive, and the detachably connected ends being reinforced, and rendered stiffer than the free end portions which remain flexible.

2. As a new article of manufacture, a package fastener consisting of two independent strips, the inner ends of the strips overlapping each other, and means for releasably connecting the overlapping ends and holding them against substantial relative movement but in such a manner that they are detachable one from the other, the free ends of said strips being provided with a layer of adhesive and the releasably connected overlapping ends being reinforced, and rendered stiffer than the free end portions which remain flexible.

3. As a new article of manufacture, a package fastener consisting of two independent strips, the inner ends of the strips overlapping each other, and the overlapping end of one strip being formed with a pair of oppositely extending lateral tongues, while the overlapping end of the opposite strip is formed with slits to receive and interlock with the tongues and hold the strips against substantial relative movement, but in such a manner as to be detachable one from the other, the free ends of said strips being provided with a layer of adhesive, and the overlapping ends being reinforced, and rendered stiffer than the free end portions which remain flexible.

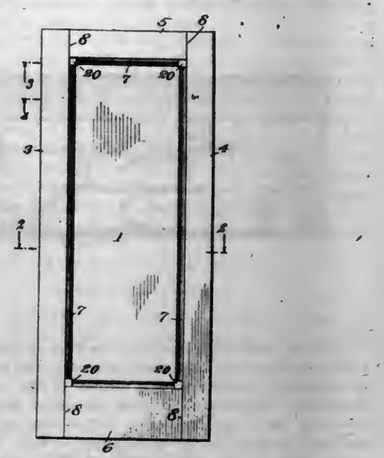
4. As a new article of manufacture, a paper fastener comprising two independent strips provided with reinforced ends overlapping and releasably held together, said reinforced ends being formed of plural plies held together by a cementitious material, the free ends of said strips being provided on one side with a coating of adhesive material, whereby said overlapping reinforced ends are strengthened and rendered stiffer than the free ends which remain flexible.

1,210,953. METAL PANEL-WORK. MAURICE LACHMAN, New York, N. Y., assignor to Universal Electric Welding Company, New York, N. Y., a Corporation of New York. Filed May 6, 1913. Serial No. 765,780. (Cl. 189—53.)

1. In a metal panel construction, the combination of a panel, frame sections secured to the panel, moldings between the panel and frame sections and a metal corner piece having sides abutted laterally against the inner edges of adjoining frame sections and also perpendicular depending sides fitted to adjacent moldings, said corner piece spanning and concealing the junction of the moldings.

2. In a sheet door construction, the combination of a panel member, stile sections secured to said panel member, molding members, hollow metal blocks on opposite surfaces of said panel member in the corners formed by the stile sections, said blocks being fitted to the moldings and concealing the ends of adjacent members and a post welded to said blocks to join them together and to the door.

3. In a sheet metal door construction, the combination of a panel member, stile sections secured to said panel member, molding members, hollow metal blocks on opposite surfaces of said panel member in the corners formed



by the stile sections, said blocks having depending sides fitted to the moldings and means securing said blocks to each other and to the door.

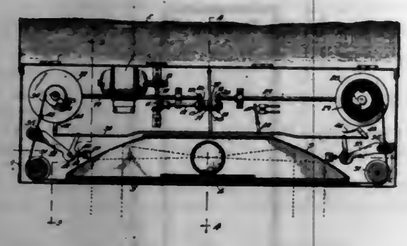
1,210,954. CRATE. BERTHOLD A. LANGE, Webster Groves, Mo. Original application filed Mar. 26, 1914, Serial No. 827,432. Divided and this application filed Mar. 27, 1916. Serial No. 86,860. (Cl. 217—26.)



1. In a shipping crate or case, the combination of a housing, frames removably disposed within the housing and arranged in pairs, each frame comprising opposite pairs of side and end members, coöperating plates disposed with their edges secured between the pairs of side and end members of each pair of frames, said coöperating plates having alining apertures formed therein, said side and end members upon opposite sides of the plates of each frame being of different width, and the frames being arranged in said housing with the narrow side and end members of each pair of frames in engagement.

2. In a shipping case or crate for eggs or the like, a housing, frames removably disposed therein, with the edges of one frame resting upon the edges of adjacent frames, said frames being arranged in pairs, each frame consisting of opposite side and end members, plates of resilient material disposed with their edges between the side and end members of the frames, said side and end members of the frames upon one side of the plates being of greater width than the side and end members upon the opposite side of the plates, the narrower side and end members of the pairs of frames being in engagement, said plates being arranged in coöperating pairs corresponding to the pairs of frames, each pair of plates having alining apertures formed therein with the material surrounding the same struck outwardly of the pairs of plates to engage opposite portions of the eggs or the like to be shipped in said case or crate, and braces connecting the opposite sides of the frames and engaging the outer sides of the plates to prevent bowing of the same.

1,210,955. ADVERTISING DEVICE. GUSTAVUS F. LANGHECK, Chicago, Ill. Filed May 10, 1915. Serial No. 27,236. (Cl. 40—31.)



1. In an advertising device of the kind specified, a motor, a one direction rotatable shaft geared to the motor, a pair of oppositely rotatable reels geared to the shaft, clutch mechanism interposed between the reels and shaft for throwing the reels alternately into actuating relation to the shaft, a web connected at opposite ends to respective reels, stops on the web, a pair of bell-crank levers disposed to be operated by said stops, a bar connected to both bell-crank levers, and connection between said bar and the clutch mechanism, whereby as the web is unwinding from one reel the stop at such unwinding end will effect the operative connection of said reel with said shaft and the disconnection of the opposite reel for reversing the direction of movement of the web.

2. In an advertising device of the kind specified, a motor, a one direction rotatable shaft geared to the motor, a pair of oppositely rotatable reels geared to the shaft, clutch mechanism interposed between the reels and shaft for throwing the reels alternately into actuating relation to the shaft, a web connected at opposite ends to respective reels, stops on the web, a pair of bell-crank levers disposed to be operated by said stops, a longitudinally movable bar connected to both bell-crank levers, a clutch shifting lever operable by said bar, whereby as the web is unwinding from one reel the stop at such unwinding end will effect the operative connection of said reel with said shaft and the disconnection of the opposite reel for reversing the direction of movement of the web.

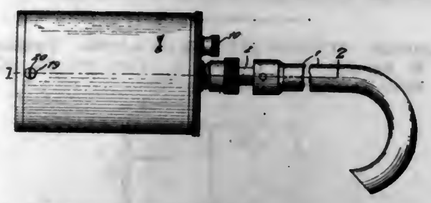
3. An advertising device including a motor, a pair of reels associated therewith to be alternately driven to effect travel of a web connected therewith alternately in opposite directions, said web adapted to be unwound from the idle reel, a brake associated with each reel, and motor-actuated means for automatically throwing the brake into engagement with the idle reel and simultaneously throwing the brake out of engagement with the driven reel.

4. An advertising device including a motor, a pair of reels associated therewith to be alternately driven thereby, one of said reels being idle while the other is driven, a web attached at its ends to said reels and adapted to be wound upon the driven reel and rotate the idle reel as it is unwound therefrom, and web actuated clutch and brake mechanism for automatically throwing said reels into operative relation to the motor and simultaneously therewith throwing the brakes to release the driven and engage the idle reel.

5. An advertising device including a motor, a pair of reels associated therewith to be alternately driven thereby, one of said reels being idle while the other is driven, a web attached at its ends to said reels and adapted to be wound upon the driven reel and rotate the idle reel as it is unwound therefrom, electric illuminating means associated with the visible surface of the web, an electric circuit controlling the same, a switch controlling said circuit, and switch actuating mechanism engaging the web and adapted to be actuated thereby for automatically opening and closing said circuit in accordance with the variation in direction of travel of said web.

[Claims 6 and 7 not printed in the Gazette.]

1,210,956. STAMPING-TOOL OR PUNCH. THOMAS B. LEAR, Washington, D. C. Filed Oct. 22, 1915. Serial No. 57,369. (Cl. 101—24.) (Dedicated to the public.)



1. A stamping device, comprising a plunger rod having secured thereto a piston provided with a series of needles spaced in the form of a design, and adjusted in operative position within a casing provided with dual bottoms and an automatic cutoff, each having a plurality of perforations arranged to represent the design formed by said needles, a handle to control said plunger, a lug secured to said cutoff, and a spring having contact therewith, means for releasing said cutoff and bringing said perforations to register with each other for providing an outlet through which said needles pass from said casing to the object to be marked, substantially as specified.

2. A stamping device, comprising a plunger rod having secured thereto a piston having slots in the side thereof, carrying a plurality of needles having cavities near their pointed ends, said needles arranged in the form of a design, a stop plate and disk adjusted on said rod, and a spring disposed intermediate said plate and disk, said elements operating within a casing having a ridge and a guide bar secured to its interior, and provided with false and main bottoms, an automatic cutoff valve adjusted between said bottoms, perforations in said bottoms and valve arranged in the form of the design of said needles, means for releasing said cutoff for bringing said perforations to register with each other for providing exit from the casing for said needles, and automatic means for returning said needles in said valve to closed position, substantially as specified.

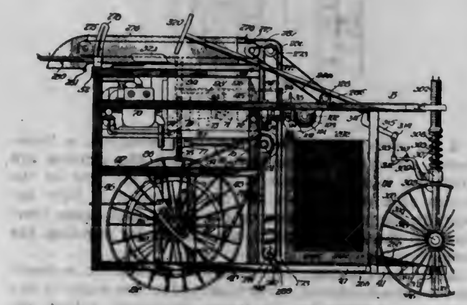
3. A stamping device, comprising a plunger rod having secured thereto a piston carrying a series of needles having cavities, said needles arranged in the form of a design and said elements operating within a casing provided with false and permanent bottoms, an opening in the center of said false bottom, a cutoff valve adjusted between said bottom and lugs for holding said bottom in place, and a spring having contact therewith for returning said valve to closed position, a vertical lug having a curved top secured to said valve, said lug passing through said opening in said false bottom and adapted to form contact with said plunger, a plurality of holes in said bottoms and valve arranged to form the design formed by said needles, means for adjusting said parts together in operative position and automatic means for opening and closing said valve and bringing said holes to register with each other, substantially as specified.

1,210,957. CORSAGE-BOUQUET HOLDER. ELISA LEWY, New York, N. Y. Filed Apr. 23, 1915. Serial No. 23,287. (Cl. 24—6.)



A corsage flower holder comprising a longitudinal strip of metal provided with two pairs of oppositely extending over-lapping arms integral therewith, each pair being positioned at the opposite ends of said strip, two oppositely extending pairs of pin supports also integral with said strip adjacent each end thereof, a pin member pivotally secured to one member of each pair, the free end of said pin members being adapted to be retained by the free end of the opposite member of each of said pairs of pin supports, and an integral barbed member struck up from said strip and projecting at an angle therewith.

1,210,958. COTTON-HARVESTING MACHINE. EXTA LIGHTFOOT, Fort Worth, Tex., assignor to Lightfoot Cotton Harvester Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 1, 1914. Serial No. 828,775. (Cl. 56—118.)



1. In a cotton harvesting machine, the combination of a cotton picking spindle rotatably mounted, a spindle-driving element for rotating said spindle, and means for rotating said spindle-driving element, said means including a friction clutch device having the driven element thereof directly connected with said spindle-driving element.

2. In a cotton harvesting machine, the combination of a cotton picking spindle rotatably mounted, and means operatively associated therewith for rotating said spindle, said means including a power transmission device, said spindle rotating means having means for automatically increasing the power transmitting efficiency of said transmission device when resistance tending to prevent the rotation of said spindle is brought to bear upon the spindle.

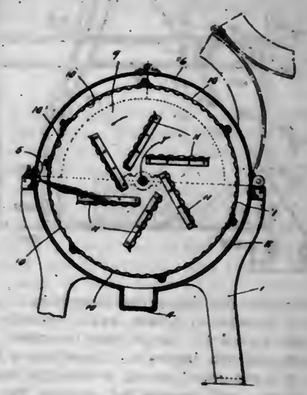
3. In a cotton harvesting machine, the combination of a cotton picking spindle rotatably mounted, means including a friction clutch having a driving member and a driven member for rotating said spindle, and means intermediate said driving clutch member and said spindle for automatically providing a movement of said driven clutch member into closer frictional engagement with said driving clutch member when resistance to rotation is applied to said spindle.

4. In a cotton harvesting machine, the combination of a cotton picking spindle rotatably mounted, a rotatably mounted worm gear connected with said spindle so as to rotate the same when the gear is rotated, a rotatably mounted spiral gear intermeshing with said worm gear, said spiral gear being mounted so as to move bodily in an axial direction, and means for rotating said spiral gear, said means including a driven clutch element in driving relation to said spiral gear and a driving clutch element in operative association with said driven clutch element, said driven clutch element being adapted to move into contact with said driving clutch element when said spiral gear is moved axially, the arrangement being such that when resistance is brought to bear upon said spindle tending to prevent its rotation said spiral gear will move in an axial direction relatively to said worm gear and force said driven clutch element into closer operative association with said driving clutch element.

5. In a cotton harvesting machine, the combination of a spindle holder mounted to travel in a path, a driving shaft rotatably mounted in said holder, coöperating means on said shaft and spindle for rotating the spindle when the shaft is rotated, means for rotating said shaft, said shaft-rotating means including a clutch having a driving element and a driven element and means for rotating the driving element, the driven element of which clutch is rigidly connected with said shaft, one of said clutch elements being movable into driving association with the other, and means for so moving said one of said clutch elements, said means including a cam track relatively fixed with respect to said spindle holder and its path of travel and an element mounted for travel on said track as said spindle holder travels, said traveling element being operatively connected to said movable clutch element so as to move the same into engagement with said driving clutch element, and means for causing said spindle holder to travel in a path.

[Claims 6 to 78 not printed in the Gazette.]

1,210,959. WASHING-MACHINE. HERMAN LUBE, Alton, Ill. Filed Aug. 11, 1916. Serial No. 114,405. (Cl. 17—12.)



1. A machine for the cleansing of animal parts comprising a suitable inclosing casing, a revoluble foraminous casing supported therein and spaced apart from the walls thereof and having its inner wall formed with abrading or scraping projections, flights disposed within and revoluble with said foraminous casing and spaced apart from the inner wall thereof, said flights being formed with foraminous abrading surfaces, means for injecting water against the foraminous casing and flights, and means for rotating the same.

2. A machine of the class described including a foraminous casing mounted for rotation on a horizontal axis, said casing having inwardly projecting abrading portions, flights disposed within said casing and rotatable therewith, said flights being spaced apart from the inner wall of the casing and having abrading surfaces, means for rotating the casing, and means for injecting a liquid through the foraminous rotating portions of said casing.

3. A machine of the class described including a container, means for rotating said container on a horizontal axis, said container being formed with peripheral apertures and inwardly presented burs forming the boundaries of said apertures, and means for injecting liquid into said container through said apertures during the rotation of the container.

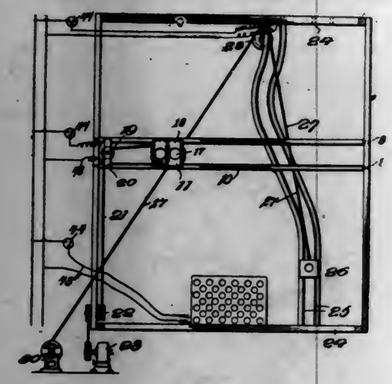
4. A machine of the class described including a container mounted for rotation on a horizontal axis, said container having a foraminous peripheral wall with inwardly projecting burs about the apertures, flights mounted within the container for rotation therewith and having roughened foraminous surfaces extending at a tangential angle relative to the axis of the container, and means for rotating the container.

5. A machine of the class described including a container having a foraminous peripheral wall and mounted

for rotation about a horizontal axis, flights disposed within said container for rotation therewith and spaced apart from the peripheral wall thereof, said flights having foraminous supporting surfaces with abrading projections extending away from the axis of the container, and said container being provided on its peripheral wall with abrading projections extending toward said axis.

[Claims 6 to 8 not printed in the Gazette.]

1,210,960. APPARATUS FOR LIGHTING THE SCREENS USED WITH CINEMATOGRAPHS AND THE LIKE. LANGDON MCCORMICK, New York, N. Y. Original application filed Apr. 10, 1914, Serial No. 831,015. Divided and this application filed Oct. 30, 1915. Serial No. 58,896. (Cl. 88—24.)



1. A cinematograph apparatus comprising a projecting apparatus, a translucent screen, and a movable lamp behind the said screen for the purpose described.

2. A cinematograph apparatus comprising a projecting apparatus, a translucent screen, a movable lamp behind the said screen, and means for moving the lamp to correspond with the picture produced on the screen.

3. A cinematograph apparatus comprising a projecting apparatus, a translucent screen, a lamp positioned to direct light to a particular point on the screen, and means for moving the lamp to correspond with the picture produced on the screen to show actual light on a part of said picture.

4. A cinematograph apparatus comprising a projecting apparatus, a translucent screen, a movable lamp behind the screen, and an adjustable track for the said lamp.

5. A cinematograph apparatus comprising a projecting apparatus, a translucent screen, a lamp behind the screen, an adjustable track for the lamp, and means for moving the lamp to correspond to the pictures produced on the screen.

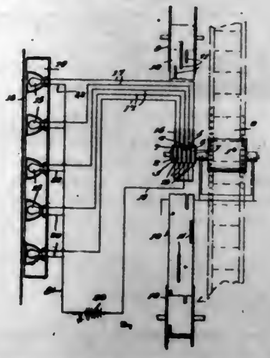
[Claim 6 not printed in the Gazette.]

1,210,961. CINEMATOGRAPH. LANGDON MCCORMICK, Port Huron, Mich. Original application filed Apr. 10, 1914, Serial No. 831,015. Divided and this application filed May 3, 1916. Serial No. 95,039. (Cl. 88—24.)

1. In combination, cinematograph mechanism, a translucent screen on one surface of which pictures are exhibited, a lamp positioned in rear of the screen, and means operated by cinematograph mechanism for lighting the lamp.

2. In combination, cinematograph mechanism, a translucent screen on one surface of which pictures are exhibited, a lamp positioned in rear of the screen, and means operated synchronously with and by cinematograph mechanism for lighting the lamp.

3. In combination, cinematograph mechanism, a translucent screen on one surface of which the pictures are exhibited, a plurality of lamps in rear of the screen, and means operated by and with cinematograph mechanism to light certain of the lamps to show in the reproduced picture actual light at a particular point.

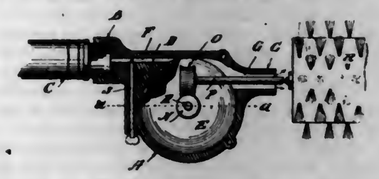


4. In combination, cinematograph mechanism, a translucent screen on one surface of which the pictures are exhibited, a lamp positioned to show actual light on the screen at a point where the representation of light appears in the picture shown on the screen, and means operated by the cinematograph mechanism for lighting the lamp.

5. In combination, cinematograph mechanism, a translucent screen on one surface of which the pictures are exhibited, a plurality of lamps positioned behind the screen, and means including a perforated tape operated synchronously with the cinematograph mechanism for lighting a lamp or lamps to show actual light on the screen at points where the representation of light appears in the picture on said screen.

[Claims 6 to 11 not printed in the Gazette.]

1,210,962. VEHICLE-WASHER. SAMUEL M. MCLAUGHLIN and HENRY A. GAINER, Minier, Ill. Filed May 18, 1914. Serial No. 839,410. (Cl. 15—37.)



In a vehicle washer, the combination of a substantially flat body having a shallow circular recess, said body including a passage lying tangentially to the said recess and communicating at one end with the same, the other end of said passage terminating in a threaded bore at the edge of said body for attachment to a hose, said body also including a discharge opening communicating with said recess, a water wheel lying in said recess and provided with projections adapted to successively receive a jet of water from said passage, a shaft on which the water wheel is mounted, the same having conical ends, the said body having a conical socket at the bottom of the recess to receive one end of said conical shaft, a worm mounted on the shaft, a cover-plate for said body having a recess therein to receive into it the said worm, there being a conical socket at the bottom of said recess to receive the other conical end of the shaft, a shaft journaled in said cover-plate perpendicular to the shaft of the said water wheel and provided with a worm wheel to mesh with said worm, the said recess in the cover-plate receiving said worm also receiving said worm wheel, and a brush secured on the last named shaft and lying opposite the discharge opening to receive the water discharged from said discharge nozzle, the brush and its shaft and the worm-wheel being removable from the body with the said cover-plate, and means to secure the latter to the said body.

1,210,963. RING-GAGE. PAUL U. MASCHER, East Palestine, Ohio. Filed Jan. 3, 1916. Serial No. 69,990. (Cl. 33—178.)



A ring gage comprising a tapered rod circular in cross section and having a series of parallel spaced transverse lines extending around the same, a zero line extending lengthwise of said rod, and a series of spaced parallel lines extending lengthwise of said rod, the last named lines being arranged also parallel to said zero line and being spaced apart by a distance equal to the difference in circumference of the rod at two adjacent transversely extending lines.

1,210,964. BOOK-MARKER. THOMAS F. MATTHEWS, Philadelphia, Pa. Filed Feb. 28, 1916. Serial No. 79,842. (Cl. 11—12.)



1. A book marker composed of a card, an angular hanger thereon substantially in the same vertical plane as that of said card, said hanger being composed of horizontal and vertical limbs, the horizontal limb of said hanger being on said card, and a clip which is secured to said card and adapted to clamp said horizontal limb thereto.

2. A book marker composed of a card, and an angular hanger thereon provided with horizontal and vertical limbs, the latter being in substantially the same vertical plane as that of said card, the horizontal limb of the latter being imposed on said card, and a clip fixed to said card adapted to clamp said horizontal limb to the card, and the other limb depending from the first named limb forming together a hook which is set out from the side edge of said card.

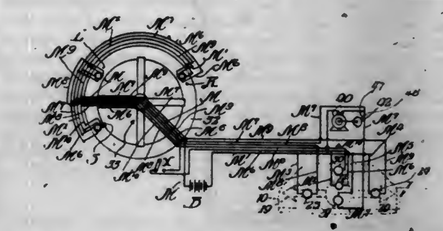
3. A book marker composed of a card, and an angular hanger thereon on a side thereof, said hanger being formed of horizontal and vertical limbs, the horizontal limb of said hanger extending outwardly from the upper corner portion of said card, and the vertical limb depending from the outer end of said horizontal limb and being set out from the side edge of said card, said horizontal limb forming a stop for the descent of the card, said horizontal and vertical limbs being substantially in the same vertical plane as that of said card.

1,210,965. BOILER COMPOUND. VALDIMAR J. MELSTED, Winnipeg, Manitoba, Canada. Filed Dec. 10, 1913. Serial No. 805,818. (Cl. 210—22.)

1. A boiler compound comprising a comminuted mixture of mercury in its metallic state and a separating substance in a liquid state at ordinary atmospheric temperature.

2. A boiler compound consisting of a mixture of comminuted metallic mercury and petroleum.

1,210,966. SIGNAL APPARATUS FOR MOTOR-VEHICLES. MAX A. MILLER, Maywood, Ill. Filed Mar. 31, 1916. Serial No. 87,893. (Cl. 177—337.)



1. In a signal apparatus for motor vehicles, a signal flashing lamp, and a direction indicating lamp, normally open electric circuits therefor, including a circuit making and breaking device for both circuits located adjacent the driver's seat of a motor vehicle, an electrically operated circuit interrupter having circuit interrupting means interposed in one of said circuits, whereby a series of flashes are produced in one of said lamps when the circuit thereof is closed, and a normally open circuit for said interrupter capable of being closed by said circuit making and breaking device, of the direction indicating lamp.

2. In a signal apparatus for motor vehicles, a signal flashing lamp, "right" and "left" indicating lamps, normally open electric circuits therefor, circuit making and breaking devices for said circuits located adjacent the driver's seat of the motor vehicle, an electrically operated circuit interrupter having circuit interrupting means interposed in the signal lamp circuit, and arranged to produce a series of flashes in said lamp, and a separate normally open circuit for said interrupter capable of being closed by either of said "right" and "left" lamp circuit making and breaking devices.

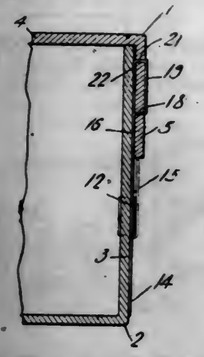
3. In a signal apparatus for motor vehicles, a tail light lamp, a circuit therefor, including a night switch whereby said circuit may be opened and closed, a signal flashing lamp, and "right" and "left" indicating lamps normally open circuits therefor, an electrically operated circuit interrupter having circuit interrupting means interposed in said signal lamp circuit, and adapted to produce a series of flashes therein, a separate circuit for said interrupter, and "right" and "left" circuit closing devices for making and breaking the circuits through the tail light circuit, the "right" and "left" indicating lamps, the "signal" lamp, and interrupter.

4. In a signal apparatus for motor vehicles, a rear lamp housing having a centrally located lens and horizontally disposed transparent direction indicating portions contiguous therewith, electric lamps behind said lens and other transparent portions, electric circuits therefor, a circuit making and breaking device for each circuit, an electrically operated circuit interrupter, having circuit interrupting means interposed in the circuit of the lamp which is located behind the lens, and an electric circuit for said interrupter controlled by each circuit making and breaking device, whereby a series of flashes are produced in one of said lamps while the other is burning steadily.

5. In a signal apparatus for motor vehicles, a signal lamp, and a plurality of direction indicating lamps, electric circuits for said lamps, an electrically operated circuit interrupter having circuit interrupting means inter-

posed in the signal lamp circuit, and push buttons, one in the circuit of each direction indicating lamp, each push button also being in the circuit of the signal flashing lamp.

1,210,967. BOX-FASTENER. STEPHEN E. MILLER, North Attleboro, Mass. Filed May 20, 1916. Serial No. 98,839. (Cl. 70—3.)



A box comprising a body including a side wall; a lid including a flange overlapping the outer face of the side wall; a socket secured to the outer face of the side wall; and a flexible tongue extended downwardly through the socket and having its lower end bent upwardly across the outer face of the socket, the tongue passing upwardly between the flange and the side wall, the upper end of the tongue being provided with an L-shaped extension, one arm of which passes through the flange, the other arm of which extends upwardly along the outer face of the flange, the last specified arm of the extension being terminally provided with a bendable prong passing inwardly through the flange and clenched upon the inner face of the flange to hold the tongue in place, and to coöperate with that part of the tongue which lies between the flange and the side wall, in spacing the flange from the side wall.

1,210,968. PROCESS IN TANNING FUR SKINS. ROBERT NASSE, St. Paul, Minn., assignor of one-half to August Prohofsky, St. Paul, Minn. Filed Jan. 3, 1916. Serial No. 69,776. (Cl. 149—4.)

1. The process of tanning fur skins consisting in treating the skins with a solution of aluminum potassium sulfate, sodium chlorid, sodium borate and water, mixed with a solution of wheat flour, brewers' yeast, alcohol and water, in about the proportions specified.

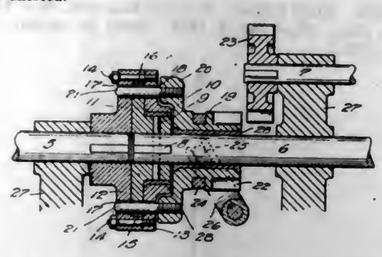
2. The process of tanning fur skins consisting in treating the skins with a solution of aluminum potassium sulfate, sodium chlorid, sodium borate and water, mixed with a fermented organic solution of the ingredients named in about the proportions specified.

3. The process of tanning fur skins consisting in treating the skins with a mineral tanning solution mixed with a fermented solution of wheat flour, yeast, alcohol and water, substantially as herein described.

4. The process of tanning fur skins with a mineral tanning solution mixed with a fermented organic solution of the ingredients and in about the proportions herein specified.

1,210,969. SHAFT-COUPLING. WILHELM NIEDERGESAESS, Seattle, Wash. Filed Apr. 21, 1914. Serial No. 833,351. (Cl. 192—9.)

1. In a device of the class described, the combination with a driving and a driven shaft, of coupling members secured to the respective shafts, one of said members being incased by the other member whereby said members are connected so as to prevent any relative axial movements and allow them to rotate independently of each other, a hub element and clutch pins carried by said hub element and engaging in spaced holes provided in one of said members, said pins being adapted to engage in the holes of the other member when the hub element is suitably shifted.

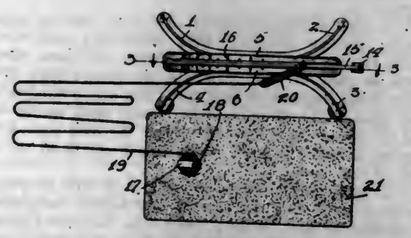


2. In a device of the class described, the combination with a driving shaft and a driven shaft, of coupling members rigidly secured to the respective shafts and securing the shafts against relative axial movements but affording independent rotary movements to one of the shafts, of means carried by one of said shafts and adapted to be employed for locking said coupling members together so that the two shafts will thereupon be rotatable as a single piece.

3. In a device of the class described, the combination with a driving shaft and a driven shaft disposed in axial alinement with each other, apertured coupling members provided on the respective shafts and engaged against endwise movements, a clutching member loosely mounted on said driven shaft, prongs provided on the clutching member and engaged within the apertures of coupling member of the driving shaft, and means for effecting the endwise movements of said clutching member to cause the prongs thereof to engage in the apertures of the driven member for coupling the two shafts for rotary movements.

4. The combination with two axially alined shafts, of a flanged coupling member fixedly secured to one of said shafts, a coupling member fixedly secured to the other shaft and provided with a recess to receive the flange of the first named member and present internal faces which oppose the outer faces of the flange thereof, said members being provided with holes arranged concentrically of the axis of said shafts, a hub slidably mounted upon one of said shafts, and prongs carried by said hub and adapted to be moved with the latter to engage in the holes of both of said members to couple the same together and cause the prongs to be supported by the second named member at opposite sides of the other member.

1,210,970. GOLF DRIVING-MACHINE. JOSEPH H. NOTT, Chicago, Ill., assignor to Rex Golf Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1915. Serial No. 43,123. (Cl. 73—15.)



1. In a device of the class described, a sling adapted to be attached to a golf ball leaving one side of the latter exposed, a line connected with said sling, and measuring mechanism connected to said line to check the flight of the golf ball, when struck, to measure the energy of flight thereof.

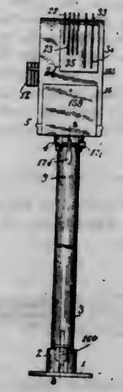
2. In a device of the class described, a sling adapted to be attached to a golf ball leaving one side of the latter exposed, a line connected with said sling and forming the means for retaining the latter in its engagement with the golf ball, and measuring mechanism connected to said line to check the flight of the golf ball, when struck, to measure the energy of flight thereof.

3. In a device of the class described, a line adapted to be attached to a golf ball, a movable arm to which said line is connected, and means offering a progressively increasing resistance to the movement of said arm and acting to hold said arm in any adjusted position to indicate the energy of flight of the golf ball.

4. In a device of the class described, a line adapted to be attached to a golf ball, a resilient element attached to said line, a movable arm to which said resilient element is connected, and means offering a progressively increasing resistance to the movement of said arm and acting to hold said arm in any adjusted position to indicate the energy of flight of the golf ball.

5. In a device of the class described, a line adapted to be attached to a golf ball, a pivoted arm to which said line is connected, a curved resilient bar disposed eccentric to the pivot of said arm, and means engaging said arm and bar, whereby said bar affords a progressively increasing resistance to the movement of said arm to check the flight of the golf ball, when struck, and to measure the energy of flight thereof.

1,210,971. TRANSFER PRINTING AND ISSUING MACHINE. JOHN F. OHMER and HARRY J. SIBLEY, Dayton, Ohio, assignors to Ohmer Fare Register Company, Dayton, Ohio, a Corporation of New York, (incorporated in 1902.) Filed Oct. 2, 1915. Serial No. 53,750. (Cl. 101—187.)



1. In a machine of the type specified, a printing type, a platen mounted on tilting members and adapted to move over the face of said type, and a latch adapted to engage one of said tilting members to move said platen away from the type and to hold it away from the type during its descending movement through the continued engagement between said latch and said tilting member.

2. In a machine of the type specified, a printing type, a roller platen mounted on tilting members and adapted to move over the face of said type, and a spring-controlled pivotal member adapted to engage one of said tilting members to move the platen away from the type and to hold said platen away from said type during its descending movement, through the continued engagement between said pivotal and said tilting member.

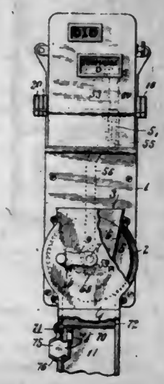
3. In a machine of the type specified, a printing type, a reciprocable frame, a pivotal frame mounted on said reciprocable frame, a roller platen mounted on said pivotal frame and adapted to move over the face of said type during its ascending movement, and a latch pivoted in the path of the descending movement of said pivotal frame and adapted to engage one end of said pivotal frame to move said platen away from said type and to hold it in such position during its descending movement, through the continued engagement between said latch and the end of said pivotal frame.

4. In a machine of the type specified, the combination of printing members, a roller platen, means for imparting a reciprocable and rotary movement to said platen, tilting frame members 55 in which said roller platen is journaled, and a pivotal member 74 arranged in the path of one of said members 55 and adapted to engage said member 55 during the descending movement of the platen to move and hold said platen away from the type during such descending movement through a direct engagement between said pivotal member 74 and said frame member 55.

5. In a machine of the type specified, a printing type, a roller platen adapted to move over the face of said type, a rack and pinion adapted to rotate said platen, an oscillating frame for said platen comprising end plates 55 and connecting shaft 56, and a spring-controlled pivotal latch adapted to engage one end of said frame to move said platen and to hold it out of a printing position during its descending movement.

[Claims 6 to 20 not printed in the Gazette.]

1,210,972. RECORDING-DEPOSITORY. JOHN F. OHMER, Dayton, Ohio, assignor to Ohmer Fare Register Company, Dayton, Ohio, a Corporation of New York, (incorporated in 1902.) Filed Oct. 2, 1915. Serial No. 53,751. (Cl. 234—12.)



1. In a machine of the type specified, a recording mechanism, an oscillating receptacle pivotally mounted below said recording mechanism, flexible connections between the pivot of said oscillating receptacle and said recording mechanism whereby said receptacle may be swung upon its pivot and said recording mechanism may be actuated simultaneously, means for taking records from said recording mechanism, and means for identifying with said records the person taking the same.

2. In a machine of the type specified, a recording counter, printing mechanism coöperating therewith to take records from said counter, a key controlling said printing mechanism, a tilting receptacle pivotally mounted below said printing and recording mechanisms, connections between the pivot of said tilting receptacle and said counter whereby the receptacle may be tilted and the recording mechanism actuated simultaneously.

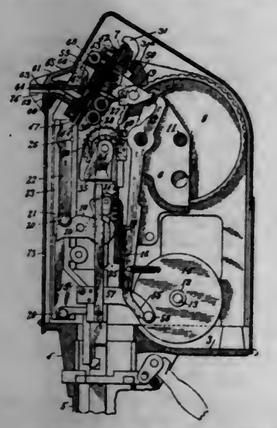
3. In a device of the type specified, an insertible printing key, a printing counter, date and time printing means, printing mechanism for said key, counter, and date and time printing means, a tilting receptacle, a connection between the pivot of said tilting receptacle and said counter whereby said receptacle is tilted and said counter is actuated concurrently, said counter and receptacle being controlled by said printing mechanism and controlling the extraction of said key.

4. In a device of the type specified, an insertible printing key, a printing counter, date and time printing means, printing mechanism for said key, counter, and date and time printing means, said key controlling said printing mechanism, and a tilting receptacle, connections between the pivot of said tilting receptacle and said counter, said counter being under the control of said printing mechanism and adapted to be locked when said key is extracted.

5. In a device of the type specified, a printing counter, a tilting receptacle, connections between the pivot of said tilting receptacle and said counter whereby the receptacle is tilted and the counter is actuated concurrently, a printing key, printing mechanism for said counter and key, said printing mechanism being under the control of said key, and said counter and receptacle being under the control of said printing mechanism and said key.

[Claims 6 to 11 not printed in the Gazette.]

1,210,973. TRANSFER-ISSUING MACHINE. JOHN F. OHMER and HARRY J. SIBLEY, Dayton, Ohio, assignors to Ohmer Fare Register Company, Dayton, Ohio, a Corporation of New York, (incorporated in 1902.) Filed Dec. 13, 1915. Serial No. 66,482. (Cl. 211—33.)



1. In a machine of the character specified, means for intermittently feeding a strip of paper, means for cutting said strip of paper at the end of each feeding operation thereof, and a plate movable to a position to cover the advanced end of said strip of paper simultaneously with each feeding operation and to a position to uncover the same at the completion of the cutting operation.

2. In a machine of the character specified, means for intermittently advancing a strip of paper from a roll, a guard plate adapted to cover the advanced end of said paper strip movable to such position simultaneously with the operation of the paper advancing means, a knife adapted to cut said paper strip after each advancing operation, and means actuated during the cutting movement of said knife to move the guard plate to a position to uncover the severed transfer and permit of its removal.

3. In a machine of the character specified, a casing having a discharge spout, intermittent paper feeding devices adapted to feed a strip of paper into said spout, means adapted to cut said paper at the end of each feeding operation, and means actuated before and after said paper feeding devices are operated to guard the end of the paper in said spout before it is cut and to enable access thereto after it is cut.

4. In a machine of the character specified, a casing having a discharge spout, paper feeding means adapted to feed a strip of paper into said spout, severing means actuated subsequent to said feeding means to cut said paper, and means actuated before and after said feeding means is operated to prevent the withdrawal of the paper from said discharge spout until after it is cut.

5. In a machine of the character specified, a casing having a discharge spout adapted to receive a paper strip, means for intermittently feeding said paper into said spout, a plate movable in and out of said spout to guard the paper until it is cut, means for cutting said paper when it is advanced into said spout, and means for actuating said paper cutting means and said plate before and after said paper cutting means is operated.

[Claims 6 and 7 not printed in the Gazette.]

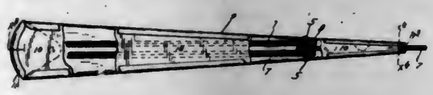
1,210,974. FOLDING FRYING-PAN. CORNELIUS J. O'RIELY, Los Angeles, Cal. Filed Mar. 25, 1916. Serial No. 86,807. (Cl. 53—7.)



1. The herein-described frying pan having a raised border with a socket on the upper part thereof and provided with a handle consisting of a single piece of metal rod which is doubled and formed to fit closely against the outer lower part of the pan and which has one end portion thereof pivotally attached to and formed with an offset adapted to brace the lower part of the pan and has on the other end portion thereof a projection which is removably fitted in said socket.

2. A frying pan having a raised border provided with a socket on the upper part thereof and with a pivot bearing on the lower part thereof and having a handle consisting of a metal rod which is doubled to provide spaced arms, and formed to fit against the outer lower part of the pan, said handle being provided with an offset and a connection between the arms as set forth, and one of the arms having the end portion thereof provided with a projection removably fitted in said socket, and the other of the arms having the end portion thereof fitted in the pivot bearing and provided with an offset which latter when the handle is in the extended position affords an abutment against the lower part of the pan to brace the latter in an effective manner substantially as set forth.

1,210,975. CROCHET-HOOK. THORINDA V. PARKER, Minneapolis, Minn. Filed June 29, 1916. Serial No. 106,616. Cl. 66—17.)

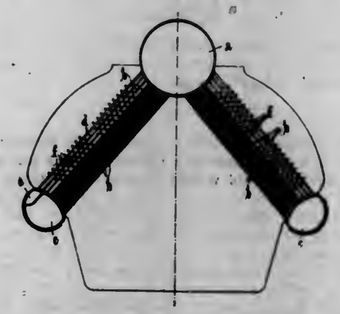


1. The combination with a hollow handle affording a casing and provided with a displaceable side plate, of a plurality of crochet hooks movably mounted within said handle and adapted to be projected therefrom, one at a time, the said displaceable side when in position, serving to hold the projected crochet hook in its projecting position, and a lock piece movably applied to said handle and normally holding said displaceable side plate in its closed position.

2. The combination with a tapered hollow handle having flanged edges and a coöperating removable wedge plate at one side, of a multiplicity of crochet hooks pivotally attached within said handle at a point quite distant from its contracted end, the contracted end of said handle permitting but one hook at a time to be turned outwardly to an operative position, and the said wedge plate when in position serving to hold the outturned hook projected, and the other hooks within said handle, and a lock piece movably applied to said handle and normally holding said wedge plate in its working position.

3. The combination with a tapered hollow handle having flanged edges and a coöperating removable wedge plate at one side, of a multiplicity of crochet hooks pivotally attached within said handle at a point quite distant from its contracted end, the contracted end of said handle permitting but one hook at a time to be turned outwardly to an operative position, the said wedge plate when in position serving to hold the outturned hook projected, and the other hooks within said handle, and a lock segment pivoted to the large end of said handle and provided with a segmental inturned flange normally overlapping the large end of said wedge plate and holding the same in working position.

1,210,976. WATER-TUBE BOILER. CHARLES ALGERNON PARSONS, Newcastle-upon-Tyne, and STANLEY SMITH COOK, Wallsend, England; said Cook assignor to said Parsons. Filed Apr. 10, 1913. Serial No. 760,287. (Cl. 122—478.)



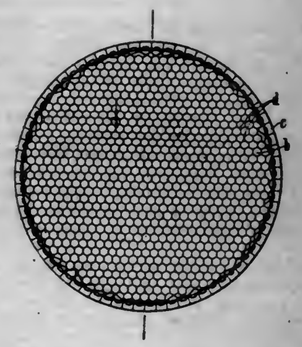
1. In a water tube boiler of A form having a steam drum, and two water drums all arranged triangularly with their axes substantially horizontal and rows of upwardly convergent straight water tubes extending between the water drums and the steam drum, and with the fire space between the convergent water tubes, which are closely spaced apart adjacent the fire space, the combination therewith of a plurality of rows of superheater tubes in single layers intermeshed with single layers of water tubes out beyond the closely spaced water tubes, the superheater tubes of each row being axially parallel with the axes of the drums and spaced apart for the passage of the hot gases laterally between them at different heights as received between the water tubes at different levels, and located in close proximity to the water tubes for the transfer of heat to the latter, said superheater tubes being arranged in groups with spaces between the groups for the escape of the hot gases laterally of the tubes, said lateral escape spaces lying toward the outside of and at a point intermediate the length of the bank of closely spaced water tubes and parallel with the axes of the drums, substantially as described.

2. In combination in a water tube boiler, a steam drum, two water drums all arranged triangularly and with their axes substantially horizontal, rows of straight water-heating tubes disposed with their axes substantially at right angles to the axes of said drums and connecting said water drums to said steam drum, a plurality of rows of superheating tubes disposed with their axes substantially parallel to the axes of said drums and lying transversely of said water tubes in single rows between single rows of said rows of water tubes, and in sufficiently close proximity thereto for transfer of heat from the superheater tubes to the water tubes, chambers within said water drums to which the feed water is directly fed, straight feed water heating tubes disposed with their axes substantially parallel to the axes of said water tubes connecting said chambers with said steam drum, and further superheating tubes disposed in single layers between said straight feed heating tubes and said water tubes and with their axes substantially at right angles to said feed heating and said water tubes, and in sufficiently close proximity thereto for transfer of heat from the superheater tubes to the water tubes.

3. In combination in a water tube boiler, a steam drum, two water drums all arranged triangularly and with their axes substantially horizontal, rows of straight water-heating tubes disposed with their axes substantially at right angles to the axes of said drums and connecting said water drums to said steam drum, a plurality of rows of superheating tubes disposed with their axes substantially parallel to the axes of said drums and lying transversely of said water tubes in single rows between single rows of said rows of water tubes, and in sufficiently close proximity thereto for transfer of heat from the superheater tubes to the water tubes, chambers within said water drums to which the feed water is directly fed, straight feed water heating tubes disposed with their axes substantially parallel to the axes of said water tubes connecting said chambers with said steam drum, and further superheating tubes disposed in single layers between said straight feed heating tubes and said water tubes, and in sufficiently close proximity thereto for transfer of heat from the superheater tubes to the said feed and water tubes, the whole of said superheating tubes being arranged in groups with spaces between the groups for the escape of hot gases.

4. In combination in a water tube boiler an upper steam drum, two lower water drums, water tubes extending from the lower water drums to the upper drum, on each side of the fire space, the water tubes nearest the fire space being closely spaced and those more distant from the fire space being more widely spaced and two groups of superheater tubes arranged at each side of the boiler and toward the outer side of the water tubes and in single layers between single layers of widely separated water tubes, said groups of superheater tubes having escape spaces for the gases between them and having also escape spaces between said superheater tubes and the upper and lower drums, substantially as described.

1,210,977. REFLECTOR FOR SEARCH-LIGHTS. CHARLES ALGERNON PARSONS and EBENEZER BENNETT, Newcastle-upon Tyne, England; said Bennett assignor to said Parsons. Filed Nov. 2, 1914. Serial No. 869,957. (Cl. 88—1.)



1. A reflector comprising in combination, a transparent member, a reflecting surface upon one side of said member, a continuous layer of unstrained metal, extending over the entire back of said reflecting surface, and open work means tensioned over said metal layer, and acting to compress said transparent member.

2. A reflector comprising in combination, a transparent member, a reflecting surface upon one side of said member, a continuous layer of unstrained metal, extending over the entire back of said reflecting surface and over the entire periphery of said transparent member, channel sec-

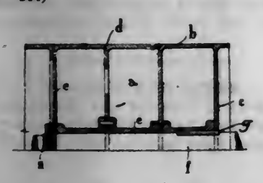
tion means adapted to engage said periphery and clamp said layer on to said first member, and reticulated means engaging said channel means, and acting to radially compress said first member.

3. A reflector, comprising in combination a member of transparent medium silvered on its back, a continuous layer of metal situated immediately behind and completely covering said silvering, circumferentially contractible channel section means adapted to clamp said layer over and upon the entire periphery of said first member, and open work straining means extending over said metal layer, and engaging said channel means, and acting to radially compress the substance of said first member.

4. A reflector comprising in combination, a transparent member, a reflecting surface upon one side of said member, a continuous layer of unstrained metal, extending over the entire back of said reflecting surface and over the entire periphery of said transparent member, channel section means adapted to engage said periphery, reticulated means engaging said channel means, and acting to radially compress said first member, and to cause said channel member to clamp said layer on to said first member.

5. A reflector comprising in combination, a transparent member, a reflecting surface upon one side of said member, a layer of varnish on the back of said reflecting surface, a continuous layer of unstrained metal on said varnish, and a layer of strained metal open work tensioned over said metal layer, and acting to compress said transparent member.

1,210,978. CONSTRUCTION OF TURBINE AND LIKE ROTORS. CHARLES ALGERNON PARSONS and ALFRED QUINTIN CARNEGIE, Newcastle-upon-Tyne, and STANLEY SMITH COOK, Wallsend, England; said Carnegie and said Cook assignors to said Parsons. Original application filed Oct. 9, 1913, Serial No. 794,353. Divided and this application filed Mar. 20, 1916. Serial No. 85,510. (Cl. 253—69.)



1. A rotor comprising in combination a plurality of cup shaped elements, hub portions between said elements, and means connecting said hub portions and said elements.

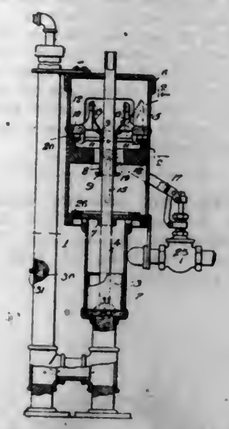
2. A rotor comprising a pair of cup shaped elements, hub portions between said elements, distance pieces between said elements, and means connecting said hubs and said elements and said distance pieces and said elements.

3. In a rotor comprising cup shaped elements and hub elements, means for connecting said cup shaped elements and said hub elements comprising screwed portions upon said hubs entering holes in said cup shaped elements, and nuts upon said screwed portions to clamp said cup shaped elements.

4. A rotor comprising a pair of cup shaped elements, hub portions between said elements, distance pieces between said elements, and means connecting said hubs and said elements and said distance pieces and said elements, and a toothed ring secured upon the outer peripheries of said elements.

1,210,979. PRESSURE OR VACUUM CONTROLLED TRIPPING MECHANISM. REGINALD J. S. PIGOTT, Bridgeport, Conn., assignor of one-half to Charles F. Dixon, Buffalo, N. Y. Filed June 24, 1916. Serial No. 105,768. (Cl. 74—93.)

1. The combination with a device to be operated, of a cylinder, a weight contained therein, means for connecting said device to said weight, means for normally retaining said weight in a raised position in said cylinder, and means operated by an excess of a predetermined amount of pressure for dropping said weight.



2. The combination with a device to be operated, of a cylinder, a weight contained therein, means for connecting said device to said weight, means for normally retaining said weight in a raised position in said cylinder, a U-shaped pipe, mercury contained therein, and means operated by the action of the mercury seeking its level in the U-shaped pipe for releasing said weight.

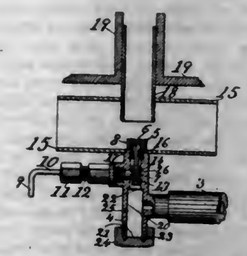
3. The combination with a device to be operated, of a cylinder, a weight contained therein, means for connecting said device to said weight, means for normally retaining said weight in a raised position in said cylinder, a plunger cylinder and a plunger therefor, and means operated by the admission of pressure into said plunger chamber for releasing said weight.

4. The combination with a device to be operated, of a cylinder, a weight contained therein, means for connecting said device to said weight, means for normally retaining said weight in a raised position in said cylinder, a U-shaped pipe, a plunger cylinder and a plunger therefor, said pipe being in communication with said plunger chamber, and means operated by pressure in said pipe to raise said plunger for releasing said weight.

5. In a device of the class described, the combination with a plunger or float and rod rigidly secured thereto, a weight, a trigger device for normally retaining said weight in a raised position, a collar carried by said rod for releasing said trigger upon a predetermined movement of said rod for releasing said weight and allowing the same to drop.

[Claims 6 to 8 not printed in the Gazette.]

1,210,980. AIR-TUBE AND DIRT-TRAP FOR OIL-BURNERS. GEORGE A. PINGREE and RICHARD A. UHLIN, Seattle, Wash. Filed Sept. 26, 1916. Serial No. 122,261. (Cl. 158—118.)

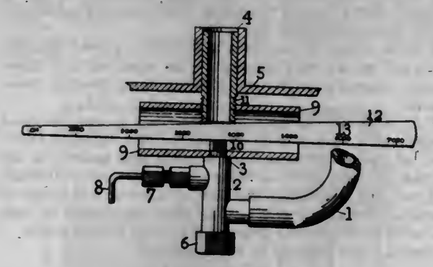


1. In an air tube and dirt trap for oil burners, a tip connected with a retort, and having a spraying nozzle, and shaped around the nozzle as a smooth cylinder with a shoulder; an air tube having an intake opening at each end, a delivery opening at one side and opposite thereto a cylindrical aperture fitted to the said smooth cylinder and shoulder, whereby the air tube may be freely raised from the shouldered cylinder for removal.

2. An air tube and dirt trap for oil burners, comprising a spraying tip having a trap chamber, a pipe for communicating with a retort and entering a side of the chamber; a screen fitted to securely engage the chamber wall by being pushed upward against a shoulder thereof; and a removable lower end whereby a screen may be inserted or removed.

3. An air tube and dirt trap for oil burners, comprising a tip, a pipe communicating with a retort, an air intake tube fitted at one side upon the said tip and having a spraying nozzle removably secured to the tip and located within the intake tube; the latter having open ends whereby the nozzle is accessible for removal or replacing.

1,210,981. OIL-BURNER-AIR-SUPPLY REGULATOR. GEORGE A. PINGREE and RICHARD A. UHLIN, Seattle, Wash. Filed Sept. 26, 1916. Serial No. 122,262. (Cl. 158—118.)



1. In an oil burner air supply regulator, the combination with an air and oil-vapor mixing chamber having a passage through its bottom and a delivery nozzle for oil-vapor located to deliver into the said aperture, of an intake tube open at both ends and fitted upon the said nozzle for free removal, and a gate tube fitting the said passage to rotate and to slide longitudinally and screwthreaded into one side of the intake tube.

2. An oil burner air supply regulator comprising an air intake tube open at both ends and adapted at one side to receive an oil-vapor delivery nozzle; and a gate tube screwthreaded into the other side opposite to the said nozzle and fitted through the bottom of the air and oil mixing chamber for rotary and longitudinal movement therein.

1,210,982. PROCESS FOR THE PRODUCTION OF RESINLIKE CONDENSATION PRODUCTS. FRITZ POLLAK, Berlin, Germany. Filed June 4, 1912. Serial No. 701,572. (Cl. 106—22.)

1. The method of producing soluble shellac-like resins which consists in heating a mixture of a crystallized body of the phenolic series and an anhydrous trioxy methylene.

2. The method of producing soluble shellac-like products which consists in heating a mixture of crystallized phenol, cresol and an anhydrous trioxy methylene.

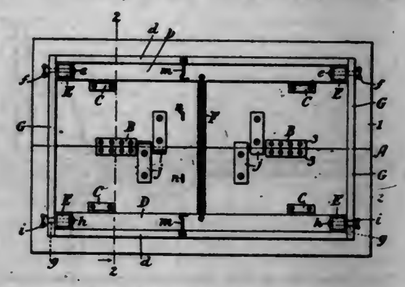
3. In a method of producing soluble shellac-like resins by treating a mixture of a body of the phenolic series and an anhydrous trioxy methylene, the step of gradually adding the anhydrous trioxy methylene in several portions.

4. In a method of producing soluble shellac-like resins by heating a mixture of a body of the phenolic series and an anhydrous trioxy methylene, the step of washing the reaction product with water of less than 40 degr. C.

5. The method of producing soluble shellac-like resins which consists in heating a mixture of a crystallized body of the phenolic series and an anhydrous trioxy methylene, washing the reaction product with water of less than 40 degr. C. and heating the remaining mass above 105 degr. C.

[Claim 6 not printed in the Gazette.]

1,210,983. FOLDING TABLE. JOHN PORRAZZO and FRANK PORRAZZO, New York, N. Y. Filed Aug. 28, 1915. Serial No. 47,730. (Cl. 45—116.)



1. In a folding table, the combination with a frame having longitudinal side pieces with fixed extended legs, swinging end pieces for removably securing the side pieces, of a top comprising two sections parallel with the side pieces and hingedly connected together, one being hinged to each of the side pieces so that the top sections may be folded between the side pieces, and a helical spring having its opposite ends secured to the respective opposite side pieces for yieldingly holding the sections of the top in a normally horizontal position, substantially as shown and described.

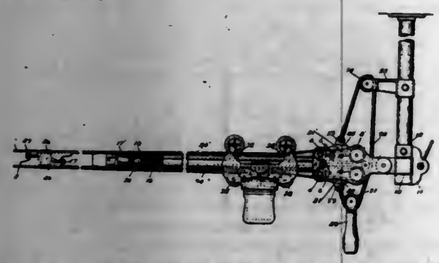
2. In a folding table of the character described, with a frame having longitudinal side pieces with extended legs, and end pieces for securing the side pieces together so as to form a rigid supporting frame for a table top pivotally secured to one of the side pieces and means for removably securing the end pieces, the combination of a top comprising two sections disposed parallel with the side pieces, said top-sections being hinged together and one of them hinged to each of the side pieces, so that said top-sections may be swung downwardly into folded relation between the side pieces, and fastening means for securing the parts in folded relation, and a helical spring having its opposite ends secured to the respective opposite side pieces of the frame, for yieldingly supporting the top-sections in a normally horizontal position when the table is extended for use, substantially as shown and described.

3. In a folding table of the character described, the combination, of parallel pieces and extended legs, and pivotally connected end pieces, and longitudinal top-sections hingedly connected with the side pieces, and three-piece hinges, and cleats secured in overlapping relation, two upon each of the top-sections at their abutting edges, said cleats and said three-part hinges serving to prevent the top-sections from collapsing upwardly when in a horizontal position, and a helical spring having its opposite ends connected to the respective opposite side-pieces of the frame for yieldingly supporting the top-sections in a normally horizontal position when the table is extended, substantially as shown and described.

4. A folding table of the character described, comprising two parallel side pieces with fixed extended legs, two parallel top-sections parallel with the side pieces, said top-sections being hingedly secured together with one way three-part hinges, and each being hinged to one of the side pieces, overlapping cleats secured to the top-sections at the abutting edges of the top-sections and on the under surface thereof, said cleats coöperating with the one-way hinges to prevent the said top-sections from collapsing, a helical spring having its opposite ends secured to the respective opposite side pieces and serving to yieldingly support the top-sections in a normally horizontal position, and swinging end pieces for rigidly securing the side pieces in position to serve as a supporting frame, and

means for removably securing the swinging end pieces to admit of folding the table, substantially as shown and described.

1,210,984. SPREAD-WIRE CARRIER-DESPATCH SYSTEM. FRANK D. POWELL, Boston, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed May 13, 1914. Serial No. 838,350. (Cl. 186—13.)



1. In a wire-line carrier despatch system the combination of a way, comprising two parallel wires, a carrier to travel along said way, a flexible element attached at a point along said way and adapted, when being angularly spread apart from said way, to propel said carrier, means to spread said element angularly apart from said way, and means movable longitudinally of said way to draw said flexible element normally into substantial parallelism with said way, said means being disposed between said two parallel wires.

2. In a wire-line carrier despatch system the combination of a way, a carrier to travel along said way, a flexible element distinct from said way, wedge acting clamping means to detachably attach said element to said way, and means, co-acting with said clamping means, to normally hold said element under tension, and means to spread said element from said way, said element, when being spread apart from said way, being adapted to propel said carrier.

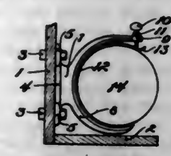
3. In a wire-line carrier despatch system, a way extending between two stations, a carrier to travel along said way, a flexible element, attached to a point substantially in said way, for propelling said carrier from one of said stations by the spreading apart of said element from said way, means to spread said element from said way, a casing in parallelism with said way, means in said casing for drawing said element into substantial parallelism with said way, and friction means carried by said carrier and adapted to co-act with said casing to check the speed of said carrier when approaching the station from which it may be propelled by said flexible element.

4. In a wire-line carrier despatch system, a track extending between two stations, a carrier to travel along said track, a flexible element adapted to be spread apart from the track to propel a carrier along the latter, means to spread said element from said track, a friction brake mounted on said carrier to co-act with a part of said track to normally oppose the movement of said carrier over said part, and means for automatically slackening said friction brake when said flexible element is operated to propel said carrier away from said part of said track.

5. In a wire-line carrier despatch system, a track extending between two stations, a wheeled carrier to travel along said track, a flexible element adapted to be spread apart from the track to propel said carrier along the latter, means to spread said element from said track, a friction brake to co-act with a part of said track to normally oppose the movement of said carrier over said part, and means for automatically slackening said friction brake when said flexible element is operated to propel said carrier away from said part of said track, said brake-slackening means including levers upon which at least one of the wheels of said carrier is mounted.

[Claims 6 to 14 not printed in the Gazette.]

1,210,985. GAS-TANK HOLDER. WILLIAM E. PRATT, Chicago, Ill. Filed Aug. 12, 1915. Serial No. 45,216. (Cl. 248—20.)



1. In a device of the class described a tank support, comprising a resilient band, a bracket surrounding the same, and threaded means projecting through said bracket to hold said band clamped about a tank.

2. A tank holder of the class described comprising an apertured base, a neck integral therewith, an arc-shaped bracket integral with said neck, a screw member adapted to be threaded through the upper end of said bracket, a resilient band having one end rigidly secured to said bracket and its other end bent outwardly, said latter end adapted to be moved downwardly by said screw member to clamp about a tank to hold the same securely in position.

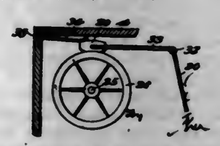
3. In a tank holder of the class described a curved bracket, and a spring clamping band secured co-axially on the inner periphery thereof.

4. In a device of the class described a curved bracket, a co-axial spring band secured on the inner surface thereof, and means for holding said spring band clamped about a tank.

5. In a device of the class described a tank support comprising a base, a semi-circular bracket integral therewith, an apertured head integral with said bracket, a nut secured on said head, a thumb screw threaded through said nut and projecting through said head, and resilient clamping means secured on the inner periphery of said bracket adapted to be compressed by said thumb screw.

[Claim 6 not printed in the Gazette.]

1,210,986. MACHINE-BRAKE. CHRISTOPHER C. RED and OSCAR G. ROSS, Turlock, Cal. Filed July 30, 1913. Serial No. 782,046. (Cl. 74—18.)



In an attachment for sewing machines, the combination with the foot pedal, and mechanism to operate the machine independently of movement of said pedal of a spring actuated brake shoe movable to govern operation of said mechanism, means to normally maintain said shoe in braking relation with that portion of the mechanism with which it is directly associated, a lever connected to said shoe, and means to operatively connect the pedal to said lever, said pedal when depressed from one side of its fulcrumed point moving the brake shoe out of braking relation with its associated means and against tension of said spring, said pedal when depressed from the outer side of its fulcrumed point increasing the degree of braking engagement of the brake shoe with its associated means, as and for the purpose set forth.

1,210,987. NON-SCATTERABLE GLASS AND THE PROCESS OF MAKING IT. ANDRÉ ROOSEVELT, New York, N. Y., assignor to Glass Founders Corporation, New York, N. Y., a Corporation of New York. Filed June 3, 1915. Serial No. 31,807. (Cl. 91—68.)

1. The process of making non-scatterable glass which comprises applying to a sheet of glass successively a solution of gelatin and a solution of cellulose material, at least one of said solutions containing a solvent which has a solvent action upon both the gelatin and the cellulose material.

2. The process of making non-scatterable glass which comprises applying to a sheet of glass a transparent gelatinous solution, allowing said solution to partially dry and then applying thereto a solution of cellulose material, at least one of said solutions containing formic acid.

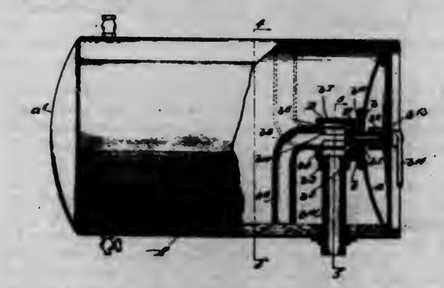
3. The process of making non-scatterable glass which comprises applying to a sheet of glass a solution of gelatin dissolved in formic acid, allowing said solution to partially dry and then applying thereto a solution of cellulose material.

4. The process of making non-scatterable glass which comprises applying to a sheet of glass a solution of gelatin dissolved in formic acid, allowing said solution to partially dry and then applying thereto a solution of celluloid dissolved in acetone.

5. The process of making non-scatterable glass which comprises applying to a sheet of glass a gelatin coating and applying to said gelatin coating a coating of cellulose material, there being present in the region of contact of the two coatings a solvent for both.

[Claims 6 to 8 not printed in the Gazette.]

1,210,988. LIQUID-METERING TANK. NILS M. ROSENDAHL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Nov. 6, 1911. Serial No. 658,862. (Cl. 221—95.)



1. A liquid metering apparatus comprising a tank, a fixed coupling member disposed a distance above the bottom in said tank, a fixed pipe supported by and leading downward from said member, a pipe swiveled in said member and thereby capable of extending either downward or upward or endwise, the two pipes coöperating to form a siphon with a swinging short leg and a fixed long leg for draining off the contents of the tank through the fixed pipe which is longer than the swiveled pipe, and means to adjust the position of said swiveled pipe, said means including an axial stem for said swiveled pipe, a spring on said stem to hold the swiveled pipe in adjusted position, and a handle for said stem.

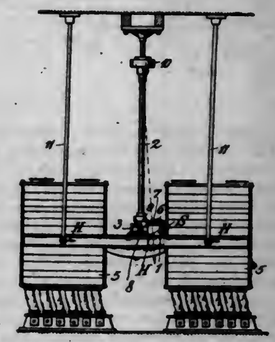
2. The combination of a tank, a swivel-head fixed to said tank and operable about a horizontally disposed axis, a short pipe supported by said head to swing about said axis, a long pipe having its upper end fixed in the under side of said head and extending downward through the bottom of said tank, the two pipes and said swivel-head being inclosed by said tank and forming a siphon with a swinging short leg and a fixed long leg to draw off the contents thereof, a connection for the lower end of said fixed pipe, and an external handle for changing the position of the short pipe to vary the quantity of the discharge.

3. The combination of a tank, a swivel-head fixed to said tank and operable about a horizontally disposed axis, a short pipe supported by said head to swing about said axis, a long pipe having its upper end fixed in the under side of said head and extending downward through the bottom of said tank, the two pipes and said swivel-head being inclosed by said tank and forming a siphon with a swinging short leg and a fixed long leg to draw off the contents thereof, a connection for the lower end of said fixed pipe, and an external handle for changing the position of the short pipe to vary the quantity of the discharge, said connection having means for using said pipes to fill the tank.

4. A liquid metering apparatus comprising a tank, a fixed coupling member disposed a distance above the bottom in said tank, a fixed pipe supported by and leading downward from said member, a pipe swiveled in said member and thereby capable of extending either downward or upward or sidewise, the two pipes coöperating to form a siphon with a swinging short leg and a fixed long leg for draining off the contents of the tank through the fixed pipe which is longer than the swiveled pipe, and means to adjust the position of said swiveled pipe, said means including an axial stem for said swiveled pipe, a spring on said stem to hold the swiveled pipe in adjusted position, and a handle for said stem, said handle being parallel with said short pipe to indicate the position of the latter, said short pipe having a horizontal section provided with lateral openings, and said member having a chamber communicating with said openings.

5. The combination of a tank, a swivel-head fixed to said tank and operable about a horizontally disposed axis, a short pipe supported by said head to swing about said axis, a long pipe having its upper end fixed in the under side of said head and extending downward through the bottom of said tank, the two pipes and said swivel-head being inclosed by said tank and forming a siphon with a swinging short leg and a fixed long leg to draw off the contents thereof, a connection for the lower end of said fixed pipe, and an external handle for changing the position of the short pipe to vary the quantity of the discharge, said tank being cylindric and having its axis of curvature coincident with said axis of the swivel-head, so that said short pipe may swing around with its end close to the cylindric wall of said tank, and means to hold said short pipe in any desired position.

1,210,989. PLANSIFTER. ERNST ROTH, Niederutzwil, Switzerland, assignor to the Firm of Gebrüder Bühler, Uzwil, Switzerland. Filed Apr. 22, 1916. Serial No. 92,969. (Cl. 83—38)



1. In a freely oscillating plan-sifter in combination, a sieve box, a pendulum member, a balancing weight in operative connection with said member and box, the point of connection of said weight and member being outside of the neutral axis and to one side of the center of gravity of said weight.

2. In a freely oscillating plansifter, in combination, a sieve box, a balancing weight operatively connected to said box, a pendulum means carrying said balancing weight and an articulated connection between said pendulum means and the balancing weight and lying outside the neutral axis on the side of the center of gravity of the balancing weight.

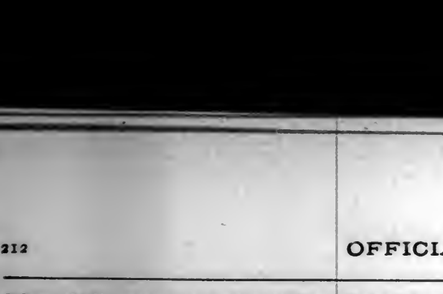
3. In a freely oscillating plan-sifter in combination, a sieve box, means to swingingly support said box, a pen-

dulum shaft, means to rotate said shaft, a balancing weight supported by said shaft and operatively connected to said box, said weight retaining when in and out of operation essentially its position in relation to the center of gravity of said box, the point of support of said weight lying in or approximately in a vertical axis through the center of gravity of said weight.

4. In a freely oscillating plansifter, in combination, a sieve box, a balancing weight operatively connected to said box and retaining essentially in and out of operation its position in relation to the center of gravity of the sieve box, oscillating suspending means for the sieve box, a pendulum shaft for the balancing weight, means to rotate this shaft, and an articulated connection between the balancing weight and said shaft, this connection lying in or approximately in the vertical axis of the center of gravity of the balancing weight.

5. In a freely oscillating plansifter, in combination, a sieve box, a balancing weight operatively connected to said box and retaining essentially in and out of operation its position in relation to the center of gravity of the sieve box, oscillating suspending means for the sieve box, a pendulum shaft for the balancing weight, means to rotate this shaft, an articulated connection between the balancing weight and said shaft, said connection lying approximately in a vertical axis through the center of gravity of said weight, and means to adjust the point at which the balancing weight is connected with the pendulum shaft, so that the horizontal power components can be increased or diminished.

1,210,990. LAMP-DIRECTOR. LAURA E. SILLS, St. Paul, Minn. Filed May 14, 1915. Serial No. 28,044. (Cl. 240—61.)



1. In combination with a motor vehicle including a lamp, a standard having forks between which the lamp is swiveled and adapted to turn about a vertical axis, means for turning the vertical standard and lamp, a vertical rod journaled upon the vehicle, a connection between said rod and said lamp, and means horizontally movable for turning said rod to tilt said lamp vertically between said forks.

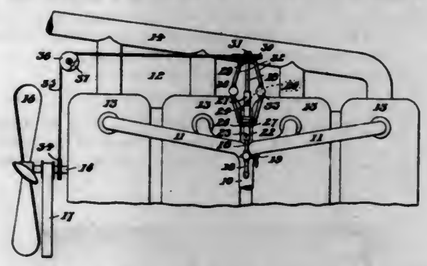
2. In combination with a motor vehicle including a lamp and having a dash provided with a horizontal slot, a standard having forks between which the lamp is swiveled for vertical movement, a vertical rod journaled upon the vehicle, a connection between said rod and said lamp, and means slidable within said slot having a connection with said rod for turning the same to tilt said lamp between said forks.

3. In combination with a motor vehicle including a lamp and having a dash provided wtih a horizontal slot, a standard having forks between which the lamp is swiveled for vertical movement, a vertical rod journaled upon the vehicle in proximity to the dash, a connection between said rod and said lamp, and means slidable within said slot having a connection with said rod for turning the same to tilt said lamp.

4. In combination with a motor vehicle including a lamp and having a dash provided with a horizontal slot formed with a serrated edge, a standard upon which the lamp is tiltingly mounted, a vertical rod journaled upon the vehicle, a flexible connection between said rod and said lamp, and a crank handle slidable within said slot having a connection with said rod for turning the same to tilt said lamp and adapted to be retained in selected position by engagement with said serrated edge.

5. In combination with a motor vehicle including a pair of lamps, a dash provided with a horizontal slot formed with a serrated edge, a pair of standards upon each of which one of said lamps is tiltingly mounted, a pair of vertical spaced rods journaled upon said vehicle, a flexible connection between each of said rods and a lamp, means rotatably connecting said rods, and a crank handle slidable within said slot engaging said rotating means to tilt said lamp and adapted to be retained in selected position by engagement with said serrated edge.

1,210,991. AUTOMATIC AIR-VALVE FOR ENGINE INTAKE-MANIFOLDS. JAMES A. SILSBEE, Elmira, N. Y. Filed Aug. 8, 1916. Serial No. 113,684. (Cl. 137—140.)

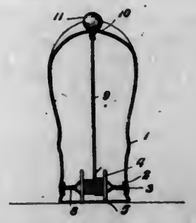


1. A device of the class described comprising in combination with an explosive motor having a gasolene intake provided with an upright, an angular pipe tapped into said upright and having a pear-shaped air inlet opening in the side thereof, a sleeve longitudinally slidable upon the said pipe having a circular air port therein adapted for registry with the said opening, pin and slot connections between the said sleeve and pipe whereby the said port and opening are out of alinement when the sleeve is in its lowered position and are in open alinement with each other when the sleeve is elevated, a head upon the said pipe, a disk journaled upon the said head, a collar adjustably mounted upon the said sleeve, a band revolubly journaled upon the said collar, and weighted governor members pivotally linked between the said disk and band.

2. A device of the class described, comprising in combination with an explosive motor having a gasolene intake provided with an upright, an angular pipe tapped into said upright and having a pear-shaped air inlet opening in the side thereof, a sleeve longitudinally slidable upon the said pipe having a circular air port therein adapted for registry with the said opening, pin and slot connections between the said sleeve and pipe whereby the said port and opening are out of alinement when the sleeve is in its lowered position and are in open alinement with each other when the sleeve is elevated, a head upon the said pipe, a disk journaled upon the said head, a collar adjustably mounted upon the said sleeve, a band revolubly journaled upon the said collar, weighted governor members pivotally linked between the said disk and band, and operable connections between said governor and a rotating part of the motor.

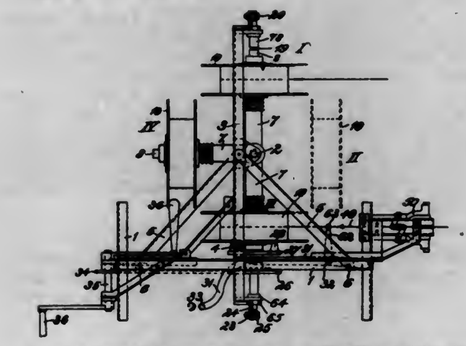
3. A device of the class described comprising in combination with an explosive motor having a gasolene intake provided with an upright, an angular pipe tapped into said upright and having a pear-shaped air inlet opening in the side thereof, a sleeve longitudinally slidable upon the said pipe having a circular air port therein adapted for registry with the said opening, pin and slot connections between the said sleeves and pipe whereby the said port and opening are out of alinement when the sleeve is in its lowered position and are in open alinement with each other when the sleeve is elevated, a head upon the said pipe, a disk journaled upon the said head, a collar adjustably mounted upon the said sleeve, a band revolubly journaled upon the said collar, weighted governor members pivotally linked between the said disk and band, and operative connections between the said disk and motor whereby the said port and opening are gradually brought into registry with each other during the increased speed of the motor.

1,210,992. FIGURE TOY. JOHN MAX SIMON, New York, N. Y. Filed Sept. 27, 1916. Serial No. 122,507. (Cl. 46—45.)



A figure toy including a body, a drum the sides of which constitute supporting wheels and provided with oppositely disposed slots, an elastic band connected to the lower sides of the body and receivable in the slots after being twisted, a string wound about the drum and having the free end arranged through an opening in the body, an operating member carried by the free end of the string whereby when the string is pulled outwardly the band will be placed under tension to consequently rotate the wheels and move the body about a surface when the operating member has been released.

1,210,993. PORTABLE CONVEYER. VICTOR WALTER SINTON, Belfast, Ireland. Filed June 10, 1916. Serial No. 102,975. (Cl. 214—14.)



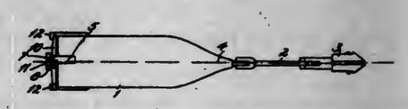
1. In a portable conveyer the combination of a plurality of drums each adapted to carry a convenient length of conveyer wire, a winding apparatus comprising a frame, a column carried thereby, three radiating arms with means for supporting them on the column and permitting them to be turned independently around the same, locking means adapted to hold one arm in a position for paying out wire from a drum turning on said arm, additional locking means adapted to hold another of said arms in an opposite position for winding up wire on a drum supported on said arm, and a winding gear adapted to be engaged with a drum when in the winding position, and a guide pulley with means for supporting the same at the other terminal station in such manner that the wire can be passed around it.

2. A supporting and winding apparatus for the drums of a wire conveyer, comprising a frame, a column carried thereby, three radiating arms with means for supporting them on the column and permitting them to turn around the same, locking means adapted to hold one arm in a position for paying out wire from a drum turning on said arm, additional locking means adapted to hold another of said arms in a position for winding up wire on a drum supported on said arm, and a winding gear adapted to be engaged with a drum when in the winding position, and to turn the same, the frame being of such construction as to leave space for the third arm to stand in an intermediate position with a full drum upon it if on one side, or an empty drum upon it if on the other side of the column in said frame.

3. A supporting and winding apparatus for the drums of a wire conveyer, comprising a frame, a column carried thereby, a plurality of radiating arms with means for supporting them on the column and permitting them to turn around the same, locking means adapted to hold one arm in a position for paying out wire from a drum turning on said arm, means for automatically checking the unwinding of the wire according to the tension thereon, comprising a guide over which the outgoing wire passes, a frictional device adapted to engage with the unwinding drum, a spring tending to apply said frictional device against the drum, and means for supporting the said guide and including a member adapted to hold off the frictional device so long as the tension of the wire holds said guide in a normal working position, additional locking means adapted to hold another of said arms in a position for winding up wire on a drum supported on said arm, and a winding gear adapted to be engaged with a drum when in the winding position, and to turn the same.

4. In a portable conveyer the combination with a frame, a column carried thereby having a portion thereof formed with squared faces, three arms mounted to turn on said column adapted to carry drums for unwinding and winding up conveyer wire, spring-pressed blocks carried by said arms and adapted to bear against the squared faces of the column in such manner as to tend to hold the arms in any one of the four positions corresponding to the squared faces, of a bracket on said frame, and means on said bracket for locking one of said arms in one of the four positions which is the position to receive a drum of conveyer wire to be run out, a shaft on said frame, gearing revolubly supported on said shaft for driving a drum, means for locking one of the said arms in line with said shaft which is in the position for winding, and means for coupling the gearing to a drum on said arm in the winding position.

1,210,994. CONVEYER. VICTOR WALTER SINTON, Belfast, Ireland. Filed June 10, 1916. Serial No. 102,976. (Cl. 104—87.)



1. An attachment device for a wire conveyer, comprising a block with a tapered nose adapted to coöperate with a releasing mechanism, a pair of jaws behind said tapered nose, said jaws being pivoted on the block and having tail pieces projecting laterally therefrom for coöperation with the releasing mechanism, a spring and a member pressed forward thereby normally holding said jaws close together to grip the conveyer wire, a handle and a transverse bar in connection therewith adapted when the handle is moved into one position to press back the member aforesaid against the action of the spring, and to release the said jaws, and means for connecting to the clip the article to be carried thereby.

2. A wire-engaging and releasing mechanism for a conveyer, comprising a clip with a tapered nose, a pair of wire-engaging jaws pivotally supported on said clip and having tail pieces which normally project laterally from said clip behind the nose, a spring device normally pressing together the engaging faces of said jaws, means for attaching to said jaws the article to be carried by the clip, a pair of stationary releasing jaws with means for supporting them at the position where the clip is required to be detached from the conveyer wire, a spring device normally drawing together the releasing jaws in

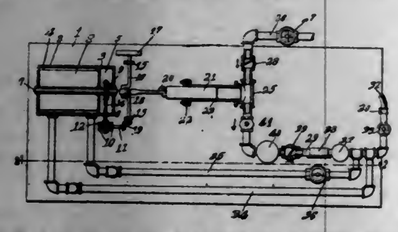
such manner that they form a surface over which the conveyer wire will pass, cheeks on said releasing jaws adapted to be pressed apart by the tapered nose of the clip, and to approach one another again behind the tapered nose under the action of the spring device to press back the jaws of the clip whereby the same is released from the conveyer wire.

3. The combination with a conveyer having a traveling wire, of a clip for securing articles to said wire, said clip having a tapered nose, a wire engaging mechanism and a tail piece adapted to serve as an attachment for the articles to be carried by the clip, and a releasing device comprising a pair of releasing jaws with means for drawing them together and means for supporting them at the place where the clips are to be released from the conveyer wire, said releasing jaws having rounded faces over which the conveyer wire and also the nose of a clip will ride, cheeks on said releasing jaws adapted to be pressed apart by the nose of a clip, and to hold said releasing jaws separated to such an extent that the tail piece of a clip can pass between the releasing jaws, said cheeks being adapted after the nose of a clip has passed the same, to operate upon the wire-engaging mechanism of the clip and to release the same from the wire.

4. In a conveyer the combination with the conveyer wire of a clip with means thereon for engaging with the wire and a tail piece extending rearwardly therefrom, a carried in the form of a casing attached to said tail piece, a projection on the carrier near to the rear end thereof formed with a diagonal slot and an undercut space beneath the same, whereby the rear end of said carrier will hang upon the wire when the carrier has been turned at an angle to the wire in order to pass the same through the diagonal slot before the clip is secured to the wire in order to hold the carrier along the same, and means for releasing the clip from the wire at its destination, whereby when the clip is allowed to fall, releasing the forward end of the carrier, the carrier is allowed to turn sufficiently to permit the wire to pass out of the diagonal slot in said projection thereby automatically releasing the carrier completely from the wire.

5. In a conveyer the combination with the conveyer wire of a clip with means thereon for engaging with the wire, automatic means for disengaging the clip from the wire at the destination, a carrier attached to said clip, and a projection on said carrier with a diagonal slot in the top thereof communicating with an undercut aperture whereby the carrier can be hung upon the wire by causing the wire to pass through the diagonal slot, while the carrier is at an angle to said wire, then turning the carrier along the wire, and engaging the clip at its forward end therewith.

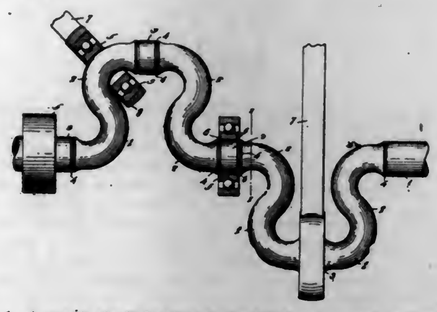
1,210,995. FLASH-BOILER FEED MECHANISM. VERNON H. SLOSSER, Bascom, Ohio. Filed Oct. 16, 1916. Serial No. 125,986. (Cl. 210—19.)



1. In a device of the class described, a pump; a plunger operating in the pump; a supply pipe communicating with the pump; an outlet pipe communicating with the pump; a tank; separate pipes leading from the outlet pipe to the tank; an agitator operating in the tank; and a common means for actuating both the agitator and the plunger of the pump.

2. In a device of the class described, a pump; a plunger constituting a part of the pump; a supply pipe communicating with the pump; a discharge pipe leading from the pump; a tank; pipes leading from the discharge pipe to the tank; a shaft journaled for rotation in the tank; an agitator carried by the shaft; a drive shaft including a crank; a pitman connecting the crank with the plunger of the pump; a third shaft; means for supporting the third shaft for rotation; means for operatively connecting the third shaft with the drive shaft; and means for operatively connecting the third shaft with the first specified shaft.

1,210,996. CRANK-SHAFT. THOMAS B. SLATE, Washington, D. C., assignor to American Mechanical Improvement Company, Washington, D. C., a Corporation of West Virginia. Filed Mar. 18, 1916, Serial No. 85,138. Renewed Nov. 24, 1916. Serial No. 133,268. (Cl. 74—38.)

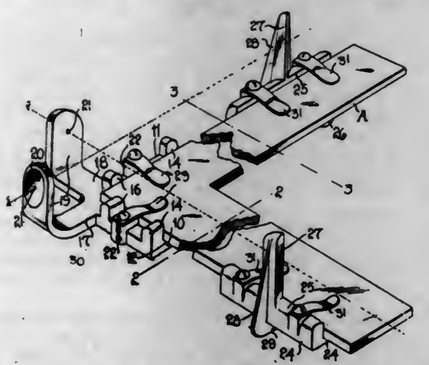


1. A crank shaft having a plurality of reduced resilient portions of approximate S-shape forming the crank webs and having bearing portions of larger size in cross section than the crank webs, substantially as and for the purposes described.

2. A crank shaft having a plurality of S-shaped resilient crank webs, relatively larger bearing portions positioned for operative connection with engines of the opposed type, and a member immediately connecting said bearings.

3. A crank shaft having a plurality of S-shaped webs of reduced size nonangular in cross section and having a degree of resiliency, enlarged bearing portions, grooved portions in said bearing portions, bearings removably mounted on said enlarged bearing portions, and resilient bearing retaining rings removably clasped in the grooved portions, for the purposes set forth.

1,210,997. SIGHTING ATTACHMENT FOR CARPENTERS' SQUARES. THOMAS J. SMITH, Pontiac, Mich. Filed July 1, 1916. Serial No. 107,088. (Cl. 33—46.)



1. Sighting attachments for squares comprising a rear sighting member having a base formed with abutments disposed at right angles to each other and adapted to engage the corner of the square, and a fore sight having a base formed with an abutment adapted to engage the edge of the square and having a sighting member coacting with the first named sighting member.

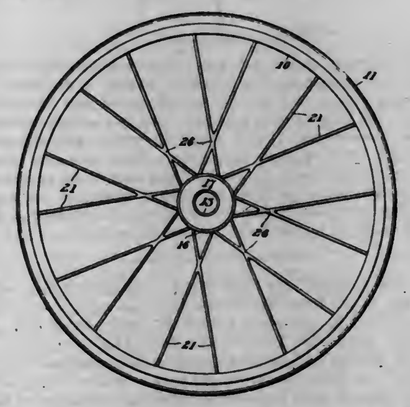
2. Sighting attachments for carpenters' squares comprising a rear sighting member having a peep-hole, said sighting member having a base formed with abutments disposed at right angles to each other and adapted to engage the corner of the square, and a fore sight having a base formed with an abutment adapted to engage the edge of the square and having a sighting member coacting with the peep-hole sight.

3. Sighting attachments for carpenters' squares comprising a rear sight having a base adapted to engage the corner of a square and be held thereby at right angles to one of the edges of the square, and a fore sight adapted to be detachably mounted upon one of the blades of the square.

4. Sighting attachments for carpenters' squares comprising a rear sighting member consisting of a base having abutments disposed at right angles to each other and adapted to engage against the outer edge of a carpenter's square, said base having means for detachably holding it upon the square and being provided with arms extending upward and in planes at right angles to each other, each of said arms being formed with a peep-hole sight, and fore sights one for each blade of the square comprising a base formed with an abutment adapted to bear against the edge of the square and with an upwardly extending sighting member and with means for detachably and slidably engaging it with the corresponding blade.

5. Sighting attachments for carpenters' squares comprising a rear sight and a pair of fore sights, the rear sight comprising an approximately triangular base having upwardly extending lugs upon its surface adapted to bear against the under face of the square and having upwardly extending abutments disposed at right angles to each other and adapted to bear against the outer edges of the square and also formed with upwardly extending arms disposed in planes at right angles to each other and parallel to the outer edges of the square, each of said arms being formed with a peep-hole, and spring clips mounted upon the base and engageable with the face of the square, the fore sights each comprising a base having an abutment adapted to engage the outer edge of the square, said abutment having an upwardly extending sighting member coacting with the corresponding peep-hole sight, and spring clips mounted upon said abutments adapted to bear upon the face of the square.

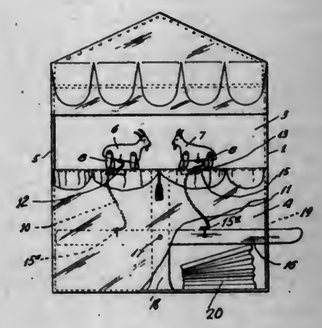
1,210,998. SPRING-WHEEL. LOUIS SMOLEN, Chicago, Ill. Filed Aug. 19, 1915. Serial No. 46,294. (Cl. 152—44.)



1. A spoke member formed from a single piece of resilient metal and bent in substantially the form of double X-shaped spokes lying in parallelism and having parallel attaching portions at their opposite ends, the crossing points of the members being positioned nearer one end of the member than the opposite end thereof.

2. In a device of the class described, a rim, a hub, a plurality of spoke members connecting said rim and hub each being of double X-shape with portions positioned at opposite sides of the wheels, the portions thereof being in substantial parallelism and having their crossing points arranged adjacent the said hub.

1,210,999. FIGURE TOY. MATHIAS SMOLIK, Pittsburgh, Pa., assignor of one-half to Frank Klousnitzer and one-half to Karl Arthur Primsler, Pittsburgh, Pa. Filed Aug. 19, 1916. Serial No. 115,794. (Cl. 46—40.)



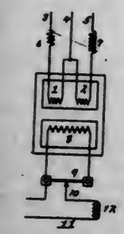
1. A figure toy comprising a casing provided with a partition having a pair of slots, resilient members of ogee curvature extending down through said slots, miniature figures mounted on the upper ends of said members, an oscillatory lever having said members connected therewith and adapted when operated to reciprocate said members, and guide bars extending across said slots and against which ride said members when reciprocated.

2. A figure toy comprising a casing provided with a partition having a pair of slots, resilient members of ogee curvature extending down through said slots, miniature figures mounted on the upper ends of said members, an oscillatory lever having said members connected therewith and adapted when operated to reciprocate said members, and guide bars extending across said slots and against which ride said members when reciprocated, one of said guides positioned near the outer end of its respective slot and the other guide bar arranged approximately centrally of its respective slot.

3. A figure toy comprising a platform provided with a pair of rectangular slots, curved resilient members extending down through said slots, miniature figures mounted on the upper ends of said members, an oscillatory lever having said members connected therewith and adapted when operated to reciprocate said members to shift said miniature figures, and guide bars extending across said slots and against which ride said members when reciprocated.

4. A figure toy comprising a platform provided with a pair of rectangular slots, curved resilient members extending down through said slots, miniature figures mounted on the upper ends of said members, an oscillatory lever having said members connected therewith and adapted when operated to reciprocate said members to shift said miniature figures, and guide bars extending across said slots and against which ride said members when reciprocated, one of said guides positioned near the outer end of its respective slot and the other guide bar arranged approximately centrally of its respective slot.

1,211,000. APPARATUS FOR RENDERING A PROTECTIVE DEVICE RESPONSIVE TO PHASE RELATIONS. SEVERN D. SPRONG and WALTER E. MCCOY, New York, N. Y. Filed Mar. 2, 1916. Serial No. 81,626. (Cl. 175—294.)



1. An apparatus for rendering a protective device responsive to changes in phase relations, comprising a primary formed of two counter-balancing coils, a secondary, and a circuit-controlling device in circuit with said secondary; whereby upon the disturbance of the balance between said primary coils, the said controlling device shall be operated by the current induced on said secondary.

2. An apparatus for rendering a protective device responsive to changes in phase relations, comprising a primary formed of two counter-balancing coils, a secondary, a circuit including said secondary, and means for opening said circuit operated by the current induced on said secondary when said current shall have attained a predetermined value.

3. An apparatus for rendering a protective device responsive to changes in phase relations, comprising a primary formed of two counter-balancing coils, a secondary, a circuit including said secondary, a no-voltage release magnet in said circuit, and a switch lever controlled by said magnet, and a translating device in relay circuit with said switch lever.

4. An apparatus for rendering a protective device responsive to changes in phase relations, comprising a primary formed of two counter-balancing coils, a secondary, a circuit including said secondary, a fuse in said circuit, and a translating device in relay circuit with said fuse.

5. An apparatus for renderng a protective device responsive to changes in phase relations, comprising a primary formed of two counter-balancing coils, a secondary, a circuit including said secondary, a no-voltage release magnet in said circuit, a switch lever controlled by said magnet, and a translating device in relay circuit with said switch lever.

[Claims 6 to 8 not printed in the Gazette.]

1,211,001. ORDNANCE-PROJECTILE. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Dec. 8, 1914. Serial No. 876,081. (Cl. 102—29.)

1. In a projectile of the class described, the combination with a shell containing an explosive charge, of continuous barbed wire inclosed within the shell arranged therein to be readily extended by the explosion of said charge and having a length many times the greatest dimension of the latter, and means for exploding the shell.

2. The combination with an explosive shell, of a mass of barbed wire arranged in the shell with many laterally free linearly connected portions lying alongside each other in condition to be extended by the explosion of the shell and having a length when extended many times the greatest dimension of the shell, said wire being relatively very light and lacking the destructive momentum of ordinary projectiles.

3. The combination with an explosive shell having a suitable internal cavity, of a length of barbed wire folded many times upon itself, inclosed in said cavity, and in condition to be extended by the force of explosion when freed from the shell thereby.

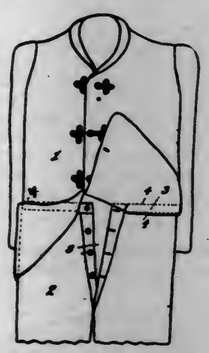
4. The combination with an explosive shell having a suitable cavity, of barbed wire having a terminal weight made up of many connected links folded to form a compact mass and contained in said cavity.



5. The combination with a shell containing a shell-destroying explosive and chain-like wire consisting of many connected barbed links folded upon each other, parallel to the axis of the shell, and in condition to be readily extended, and means for detonating the shell.

[Claims 6 to 8 not printed in the Gazette.]

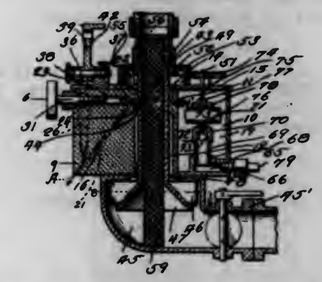
1,211,002. UNION-PAJAMAS. BURR C. STEPHENSON, South Bend, Ind., assignor, by mesne assignments, to E. Rosenfeld & Company, Baltimore, Md., a Firm composed of Ephraim Rosenfeld, George M. Harsh, and Noah Dillenberg. Filed Oct. 20, 1913. Serial No. 796,188. (Cl. 2—144.)



A pajama having a coat and trousers combined to form a one-piece garment, the trousers having a fly front, a closed crotch, a slack seat, and a drop-seat flap, the openings at the sides of such seat-flap being in the body portion of the trousers and ending above the crotch, and the coat having a skirt falling over such fly front and side openings of the trousers, the back of the coat being provided, under such skirt, with an attaching band for the drop seat-flap, such band being so located that it normally occupies a position on the wearer below his waist line.

1,211,003. COMBINATION-FUEL CARBURETER. EDWARD A. STINSON, Frankfort, Ind., assignor of one-half to Milton T. McCarty, Frankfort, Ind. Filed Jan. 8, 1916. Serial No. 71,013. (Cl. 261—18.)

1. A carbureter including a bowl, a web disposed within the bowl to form two compartments, a sleeve within the bowl disposed with its passage opening exteriorly of the bowl at both ends, said web having a horizontal chamber therewithin opening through the outer face of the bowl and communicating at its inner end with the interior of the sleeve, an air conducting member disposed within the sleeve and having an opening registering with the chamber to receive fluid therefrom, said web having vertical valve chambers formed therein and opening through its top and having also passages leading one from each of said valve chambers to the bowl compartments respectively, said web also having ducts formed therein and leading from the valve chambers to the horizontal passage, valves in the valve chambers arranged for operation to open and close the ducts, and a needle valve disposed within the horizontal chamber of the web for operation to open and close the inner end of said chamber, said needle valve extending outwardly beyond the outer end of said chamber.



2. A carbureter including a bowl having two compartments and a centrally located open ended sleeve formed therewithin, fluid conducting means communicating with the compartments and with the interior of the sleeve, an air conducting tube engaged through the sleeve in spaced relation thereto and having an opening in close union with the fluid conducting means to receive fluid into the tube, a vaporizing dome carried by one end of the tube and communicating both with the tube and with the sleeve exteriorly of the tube, means for controlling the admission of air to the space between the sleeve and the tube, and means for controlling the supply of fluid from the compartments.

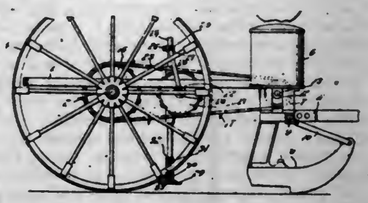
3. A carbureter comprising a bowl, a sleeve within the bowl disposed with its passage opening exteriorly of the bowl at both ends, said bowl having two compartments therein, an air conducting member disposed within the sleeve in spaced relation to the walls thereof, means for controlling the passage of air through the space between the sleeve and the air conducting member, means for conducting air from both the air conducting member and the space between the air conducting member and the sleeve to an engine, and means for conducting fluid from the two compartments to the interior of the air conducting member.

4. A carbureter having an angularly disposed carbureted air duct, an inlet and mixing tube leading to said duct and provided at its end with a spreading cone, and a gauze tube lining said inlet and resting at one end on the wall of the duct to close said tube end, said carbureter having an auxiliary air passage surrounding said inlet tube and communicating with said duct.

5. A carbureter including a bowl having a web therein disposed to form two compartments, said web having separate valve chambers therein and having also a passage communicating with each valve chamber and with one of the compartments, an air conducting member associated with the bowl, said web having a passage formed therethrough and communicating with the interior of the air conducting member, said web also having a passage communicating with each of the valve chambers and with the passage which communicates with the air conducting member, a valve for each valve chamber, said valves being arranged for movement into and out of position to close the passages which lead to the compartments, means for operating the valves oppositely, and means for controlling the flow of fluid through the passage which communicates with the air conducting member.

[Claim 6 not printed in the Gazette.]

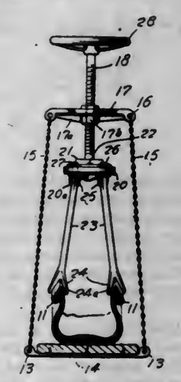
1,211,004. MARKING ATTACHMENT FOR PLANTERS. RUDOLPH E. STRAWN, Lacon, Ill. Filed Dec. 29, 1915. Serial No. 69,208. (Cl. 111—24.)



1. A land marking attachment for planters including a stamping bar, slotted sleeves carried by the upper surface of the bar adjacent the respective ends thereof, vertically movable plunger rods the lower ends of which are arranged in the sleeves, means carried by the rods and engaging the slots in the sleeves for establishing a slidable connection therebetween, shock absorbing means arranged in the sleeves between the rods and the bar, means for adjusting the movement of the rods, and means for moving the rods simultaneously with the seed dispensing means of the planter.

2. A check row planter including a frame, seed dispensing means thereon, a chain operatively mounted on the frame, means on the chain for actuating the seed dispensing means at predetermined periods, a rotatably mounted shaft in the frame, cranks formed upon the projecting ends of the shaft, sprocket wheels carried by the shaft for engaging the chain to consequently rotate the shaft, links pivotally connected to the cranks, vertically slidable stamping means for engaging the ground at predetermined periods above the place where seed has been deposited for efficiently planting the seed, and means for adjustably connecting the links to the vertically movable stamping means to vary the height of the stamping means.

1,211,005. TIRE OR CASING SPREADING TOOL. JOHN BELL STROUD, Pass Christian, Miss. Filed Aug. 9, 1916. Serial No. 113,866. (Cl. 152—27.)



1. A tire or casing spreading device consisting of a supporting member for the tire or casing, an upper guide plate, flexible means connecting said plate and supporting member, a vertically movable spreader below said guide plate, divergent spreader arms suspended from said follower and adapted to engage the bead edge of a tire or casing, a shaft extending upwardly from said follower and vertically movable through said guide plate, and means for causing vertical movement of said shaft through the guide plate.

2. In a tire or casing spreading device, a tire supporting member, a guide plate, flexible means connecting said plate and supporting member, a shaft vertically movable through said guide plate, a spreader plate carried at the

lower end of said shaft, divergent arms depending from said follower, said arms having forked lower ends to grip the bead edges of the tire or casing.

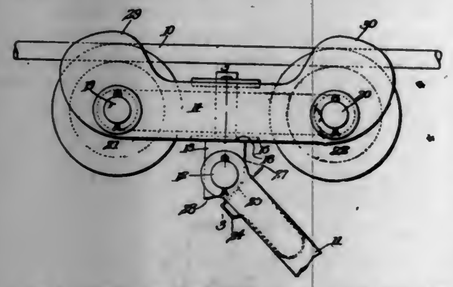
3. In a tire or casing spreading device, a tire supporting base, an upper guide plate having a threaded central opening, a threaded shaft fitted in said central opening, a spreader plate swiveled to the lower end of said threaded shaft, divergent arms extending downwardly from said swiveled plate, said arms having forked lower ends.

4. A tire casing spreading device consisting of a supporting base member, an upper guide member having a threaded central aperture, a threaded shaft fitted in said threaded aperture, a spreader plate swiveled to the lower end of said shaft, detachable flexible means connecting the supporting member and the guide plate, divergent spreader arms flexibly suspended from the spreader plate, and gripping means at the lower ends of the said arms for engaging the bead edge of the tire casing.

5. A tire casing spreading device, consisting of a lower supporting member and upper guide member having a central threaded opening therethrough, flexible means suspending the supporting member from the sides of guide member, a screw shaft carried in said threaded opening and having means at its upper end for rotating same, a spreader plate swiveled to lower end of said shaft, divergent spreader arms pivotally suspended from said spreader plate, and gripping means carried at the lower ends of said arms for engaging and spreading the edge of the casing when said spreader plate is moved downwardly by the screw shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,211,006. ELECTRIC-CURRENT COLLECTOR. ALFRED G. TAYLOR, Greenville, S. C., assignor to James R. Aiken, Greenville, S. C. Filed May 24, 1916. Serial No. 99,588. (Cl. 191—58.)



1. In a current collecting device, the combination with a frame, of a support on which said frame is adjustable, and a wheel mounted in each end of said frame and adapted to roll in contact with a conductor to collect current therefrom, and means for maintaining said frame in any one of three different positions on its support to hold either wheel or both wheels in contact with a current conductor.

2. In a current collecting device, a trolley pole, a stem pivotally mounted on said pole, a frame secured to said stem, a trolley wheel mounted in said frame, a spring within the frame having vertical faces bearing against said wheel and said stem, and a second spring bearing against said stem and said pole, said springs being adapted to facilitate the conduction of electricity from said wheel to said pole.

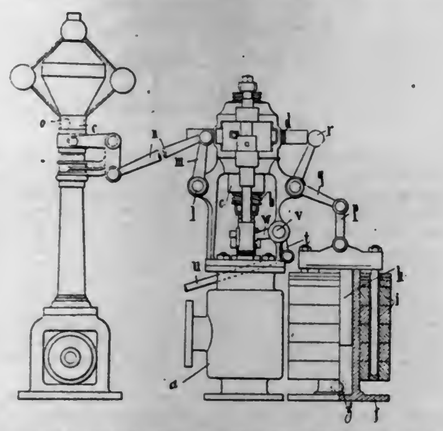
3. In a current collecting device, a trolley pole, a frame, a stem pivoted to said pole and carrying said frame, said stem and frame being rotatable about said pivot in a vertical plane, a trolley wheel mounted in each end of said frame, and a spring secured to said pole and adapted to frictionally engage said stem below its pivot to retard the rotation of said frame about said pivot.

4. In a current collecting device, a trolley pole, a frame, connecting means between said pole and said frame allowing said frame to rotate about an axis at right angles to said pole and to rotate about a second axis at right angles to said first axis, spring means for retarding frictionally the rotation of said frame about said first axis, and spring means normally tending to hold said frame in a plane at right angles to said first mentioned axis.

5. In a current collecting device, a trolley pole, a frame, a member pivotally connecting said frame and said pole, a trolley wheel mounted in each end of said frame, and a spring within said frame having vertical faces continuously contacting with each of said wheels and also having a bend provided with a vertical face continuously contacting with a vertical side of said member, said spring being adapted to facilitate the conduction of electricity from said wheels to said member.

[Claims 6 to 10 not printed in the Gazette.]

1,211,007. GOVERNOR MECHANISM FOR COMPRESSOR-ENGINES AND THE LIKE. MOSES EDWARD TEAGUE, Cinderford, Gloucester, England. Filed Oct. 19, 1914. Serial No. 867,499. (Cl. 103—95.)



1. Governor mechanism for compressor engines and the like comprising in combination an expansion valve, a rack bar adapted to actuate said valve and a speed governor and a pressure governor each of which is adapted to act separately and independently upon said rack bar.

2. Governor mechanism for compressor engines and the like comprising an expansion valve, a rack bar actuating said valve, a pressure governor, a bell crank lever serving to transmit the movement of the pressure governor to the rack bar, a speed governor and means whereby the speed governor may actuate said rack bar separately and independently of the pressure governor.

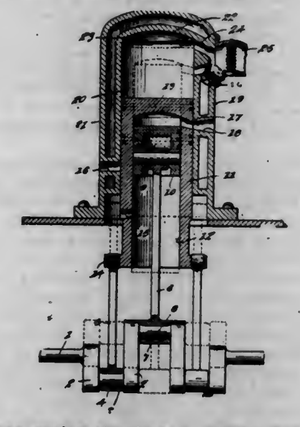
3. Governor mechanism for compressor engines and the like comprising an expansion valve, a rack bar adapted to actuate said valve, a speed governor, link mechanism whereby said speed governor may operate said rack bar, a pressure governor and means whereby said pressure governor may operate said rack bar separately and independently of the speed governor.

4. Governor mechanism for compressor engines and the like comprising in combination an expansion valve, a rack bar adapted to operate said valve, a pressure governor, a bell crank lever one end of which is connected with said pressure governor while the other end abuts against one end of said rack bar, a speed governor, a link connected to the speed governor and to the other end of said rack bar, and means for rendering the action of the pressure governor and speed governor upon the rack bar independent of one another.

5. Governor mechanism for compressor engines comprising in combination an expansion valve, a rack bar adapted to actuate said valve, a pressure governor, a bell crank lever, one end of which is connected with said pressure governor while the other end abuts against one end of said rack bar, a speed governor, a link connected with the other end of said rack bar and loosely mounted upon a spindle connected by link mechanism with said speed governor, and means for connecting the loosely mounted link to the spindle upon which it is mounted when required.

[Claim 6 not printed in the Gazette.]

1,211,008. INTERNAL-COMBUSTION ENGINE. CHARLES H. THIS and WILLIARD M. BUTLER, Toledo, Ohio. Filed Nov. 7, 1914. Serial No. 870,900. (Cl. 123—50.)



1. In an engine structure, a cylinder having a closed upper terminal providing a compression chamber, inwardly diverging inlet ports communicating with the compression chamber and an exhaust port formed in the lower portion thereof, an outer hollow piston reciprocable within the cylinder having an internal explosion chamber and an exhaust port formed in the lower portion thereof adapted to communicate, during reciprocation of the piston, with the exhaust port in the cylinder, the wall of the explosion chamber being formed with an inlet port adapted to register with the lowermost inlet port of said pair, whereby an explosive charge is admitted to the explosion chamber, and an inner piston reciprocably mounted within the outer piston and arranged to gradually close the exhaust port in the outer piston as said port moves into registration with the exhaust port in the cylinder.

2. In an engine structure, a cylinder having a closed upper terminal providing a compression chamber, inwardly diverging inlet ports communicating with the compression chamber, and an exhaust port formed in the lower portion thereof, a valve chamber communicating with the diverging inlet ports and constituting an auxiliary compression chamber, said cylinder having a spark plug receiving port disposed in line with said inlet ports, an outer hollow piston reciprocable within the cylinder having an internal explosion chamber, and an exhaust port in the lower portion thereof adapted to communicate, during reciprocation of the piston, with the exhaust port in the cylinder, the wall of the explosion chamber being formed with a single inlet port adapted to register with the lowermost inlet port of said pair and with said spark plug-receiving port, whereby an explosive charge is admitted to the explosion chamber, and an inner piston reciprocably mounted within the outer piston and arranged to gradually close the exhaust port in the outer piston as said port moves into registration with the exhaust port in the cylinder.

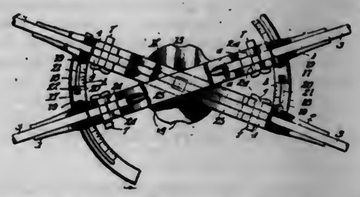
1,211,009. ELECTRIC WELDING-TOOL. GEORGE L. THORNTON, Huntington, W. Va. Filed Oct. 19, 1916. Serial No. 126,534. (Cl. 219—8.)

1. A tool of the class set forth, comprising a handle hollow throughout its length and open at its rear end, a tube attached to the forward end of the handle and carrying welding-rod grasping devices, and a conductor extending through the handle from the rear and connected to the rear or inner end of said tube at the forward end of the handle, said conductor being smaller in diameter than the interior diameter of the hollow of the handle, for the purpose set forth.



2. In a tool of the class set forth, the combination of a hollow handle, a tube attached thereto at one end, a conductor attached to the inner end of the tube, rod-grasping devices embodying a slidable rod in the tube, a coil spring inclosed in the tube at the rear end of the rod, heat-insulating devices within the tube forming abutments for said spring, and devices for drawing said rod inwardly against the action of said spring, for the purpose set forth.

1,211,010. CONDUCTOR-SUPPORT. JOHN T. TIOHE, Scranton, Pa. Filed July 8, 1914. Serial No. 849,783. (Cl. 191—37.)



1. A conductor support comprising in combination a plurality of wire guiding and retaining members; each member having a body portion and end sections; wire guiding instrumentality disposed on each end section; means, comprising coacting wedge members for securing wires, disposed on each end section; means for connecting said body portions; means for determining the degree of angularity of one member in relation to another; and means, independent of said body portion connecting means, for securing the members in any degree of relative angular relation.

2. A conductor support comprising in combination a plurality of wire guiding and retaining members; each member having a body portion and end sections; wire guiding instrumentality disposed on each end section; wheel guiding flanges disposed on each end section; means, comprising coacting and interlocking wedge members for securing wires, disposed on each end section; means for connecting said wire guiding and retaining members; means for determining the degree of angularity of one member in relation to another; means, forming a portion of said angle determining means, for securing the members in any degree of relative angular relation; and a guide plate secured to the members.

3. A conductor support comprising in combination a plurality of wire guiding and retaining members, each

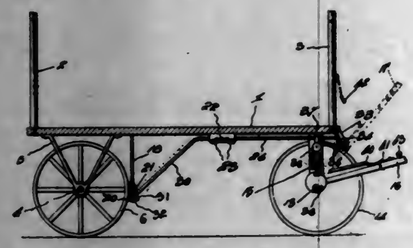
member having a body portion and end sections; raised shoulders in spaced relation to form wire guides, disposed on each end section; said shoulders being provided with juxtaposed openings; a wedge member, provided at its upper edge with a notched opening and adapted to bear at its lower edge on a wire, disposed in each end section between said shoulders; a locking wedge member disposed in the juxtaposed openings in said shoulders, and bearing in the notched opening in said first mentioned wedge; means for securing the wire guiding and retaining members; and means, independent of said securing means, for retaining the members in any predetermined degree of relative angular relation.

4. A conductor support comprising in combination a plurality of wire guiding and retaining members, each member having a body portion and end sections; raised shoulders in spaced relation to form wire guides, disposed on each end section; said shoulders being provided with juxtaposed openings; a wedge member, provided at its upper edge with a notched opening and adapted to bear at its lower edge on a wire, disposed on said end sections between said raised shoulders; a locking wedge member disposed in the juxtaposed openings in said shoulders and bearing in the notched opening in said first mentioned wedge; wheel guiding flanges on the end sections; a guide plate disposed between said flanges and secured to said body portions; means for determining the degree of angularity of one member in relation to another; means for securing the wire guiding and retaining members; means, independent of said securing means, for retaining the members in predetermined angular relation; and means, connecting oppositely disposed shoulders on each end section, for bracing the structure.

5. A conductor support comprising in combination a plurality of wire guiding and retaining members, each member having a body portion and end sections; wire guiding instrumentality comprising raised shoulders, in spaced relation, disposed on each end section; means, comprising coacting and interlocking wedge members for securing said wires; means for connecting said wire guiding and retaining members; wheel guiding flanges disposed on said end sections; a guide plate disposed between said flanges and secured to said body portions; abutments disposed on said raised shoulders; means, comprising a cross brace having a tongue at each end adapted to enter the space between the shoulders, disposed on opposite shoulders against said abutments; and means for securing said brace members in position against said abutments.

[Claims 6 and 7 not printed in the Gazette.]

1,211,011. AUTOMATIC BRAKE FOR BAGGAGE AND EXPRESS TRUCKS. EDWIN W. TUCKER, North Prairie, Wis. Filed Feb. 1, 1916. Serial No. 75,536. (Cl. 21—9.)



1. In a device of the character described including a truck, a brake beam journaled transversely of said truck, brake shoes carried by the ends of the brake beam, a crank arm formed on said brake beam, a housing secured to the truck, a brake rod slidable through said housing and pivotally connected to the crank arm at one end thereof, a collar secured to said brake rod within the housing, a coil spring interposed between said collar and one end of the housing to normally hold the brake rod in a forward position, and means connected to the forward end of the brake rod for an engagement with a tongue of the truck when this tongue is in a certain position to cause the brake rod to move in a rearward direction to apply the brake shoes to the wheels against the tension of said spring.

2. In a device of the character described including a truck, a brake beam journaled to said truck, brake shoes secured to the ends of said brake beam, a crank arm formed on said brake beam, a cylindrical housing secured to said truck, a brake rod slidable in said housing, means for securing one end of the brake rod to the crank arm, an operating lever pivoted to the truck, means for securing the lever to the forward end of said brake rod, means connected to the free end of the lever and to a tongue of the truck for moving the brake rod in a rearwardly direction when the tongue is in a downwardly inclined position, and means for returning the brake rod to a forwardly position when the tongue is in an operative position.

3. In a device of the character described including a truck, an upper and lower bolster, a hollow king bolt connecting said bolsters, a brake beam secured to said truck, brake shoes secured to the ends of said brake beam, a crank arm formed on said brake beam, a brake rod slidably secured to said truck, means for securing one end of the brake rod to the crank arm, an operating lever pivoted to the forward end of the truck, means for securing the forward end of the brake rod to the operating lever, a pulley journaled to the truck, a drum journaled within the lower bolster, a flexible element secured to the free end of the operating lever and passed over the pulley through the king bolt and secured to the drum, a rod eccentrically secured to the drum and pivoted to a tongue of the truck for rotating the drum according to the movement thereof and for applying the brake shoes to the wheels of the truck when the tongue is in a downwardly inclined position.

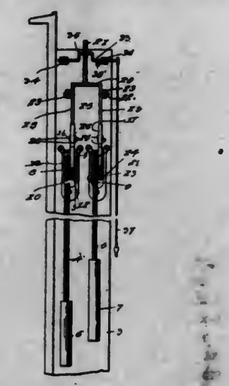
4. In a device of the character described including a truck, a brake beam journaled to said truck, brake shoes secured to the ends of the brake beam, a crank arm formed on said brake beam, a brake rod slidably mounted to the truck, means for securing one end of the brake rod to the crank arm, an operating lever pivoted to the forward end of said truck, the forward end of said brake rod bifurcated to form arms, a pin carried intermediate the ends of the operating lever for an engagement with the arms of the brake rod, and means for operating the operating lever rearwardly to apply the brake shoes to the rear wheels and means for normally holding the brake rod forwardly.

5. A brake for hand trucks, including a movably mounted brake beam, shoes connected to the brake beam, means movably mounted on the truck and pivotally connected with the brake beam for an engagement with the truck tongue when swung upwardly, and means connected to the said movable means and to the truck tongue for moving said movable means when the truck tongue is swung downwardly.

1,211,012. WINDOW-CLOSING DEVICE. WALTER B. UFFERT, Hempstead, N. Y. Filed Mar. 21, 1916. Serial No. 85,674. (Cl. 268—4.)

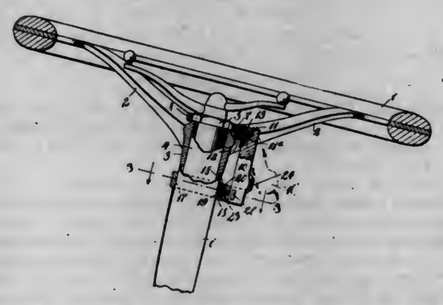
1. In a window closing device of the class described, the combination with upper and lower sliding sashes, rotary elements provided with ratchet teeth, separate flexible connection arranged on the rotary elements and connected with the said sashes and provided with independent weights, the weight for the upper sash being heavier than said sash and the lower sash being heavier than its weight, a lever fulcrumed at an intermediate point and provided with an upwardly extending arm, said lever being also provided with spaced ratchet locking sides having means for engaging the ratchet teeth of the said rotary elements against rotary movement, and a releasing rock shaft having operating means and provided with an arm arranged to engage the stem or arm of the said lever.

2. In a window closing device of the class described, the combination with upper and lower sliding sashes, rotary elements provided with ratchet teeth, separate flexible connections arranged on the rotary elements and connected with the said sashes and provided with independent weights, the weight for the upper sash being heavier than said sash, a lever fulcrumed at an intermediate point and provided with an upwardly extending arm, said lever being also provided with spaced ratchet locking sides having means for engaging the ratchet teeth of the said rotary elements to hold the latter against rotary movement and a rock shaft provided with a crank loop or bend receiving the releasing arm or stem of the said lever, operating means connected with the rock shaft for swinging the crank shaft to actuate the same lever and means connected with the rock shaft for holding the crank bend normally out of engagement with the said lever.



3. In a window closing device of the class described, the combination with upper and lower sliding sashes, rotary elements provided with ratchet teeth, separate flexible connections arranged on the rotary elements and connected with the said sashes and provided with independent weights, the weight for the upper sash being heavier than said sash, a lever fulcrumed intermediate of its ends and having spaced ratchet locking sides, pawls or dogs pivoted to the spaced sides adjacent to the lower ends thereof and projecting beyond the said ends and having reversely arranged teeth or engaging portions to engage with the said ratchet teeth, springs connected with the pawls or dogs for urging the same toward the ratchet teeth and means for operating the lever.

1,211,013. LOCKING DEVICE. MICHIEL J. ULINE, Cleveland, Ohio. Filed Mar. 18, 1916. Serial No. 85,181. (Cl. 70—90.)



1. The combination, with a steering column and a housing therefor, the steering column having a polygonal member thereon, of a locking device comprising an upper member having an opening adapted to fit such polygonal member, an arm projecting from such opening, a latch pivoted to said arm, and a spring tending to swing the lower end of the latch away from the column and the housing, a lower locking member secured to the housing and having a latch engaging portion, and means for locking the latch in operative relation to such portion of the lower member.

2. The combination, with a steering column and a housing therefor, the steering column having a polygonal member, of a lock comprising an upper member having an opening adapted to receive and fit said polygonal portion and having an arm projecting from such opening, a latch pivoted to said arm, means carried by the upper member adapted to hold the lower end of the latch away from the steering column, a locking member secured to the steering column and having one or more projections adapted to engage the lower portion of the latch, and a lock carried by the latch whereby it may be secured to the lower member of the locking device.

3. The combination, with a steering column and a housing therefor, of a locking member secured to the column, a second locking member on the housing, the second locking member having an aperture to receive the column, one side of the aperture wall being provided between the top and bottom thereof with a substantially crescent-shaped recess, a pair of rollers vertically disposed in said recess, a wedge interposed between said rollers, an adjusting device for moving said wedge thereby to spread the rollers apart, and a latch carried by the upper member and adapted to be secured to the lower member in such position as to cover said device.

4. The combination, with a steering column and a housing therefor, of a lock comprising an upper member carried by the column and having an arm, a latch movably connected to said arm, a lower member having a bore therethrough adapted to receive the column, one side of said bore having a substantially crescent-shaped recess between top and bottom flanges adapted to engage the housing, an abutment on the lower member for the latch, a pair of vertically disposed rollers within the crescent-shaped recess and between the flanges thereof, a wedge member in said recess and interposed between the rollers, an adjusting device mounted in said lower member and adjustable therein to move the wedge to spread the rollers apart, and means whereby the latch may be locked in operative relation to said abutment and covering said device.

5. The combination, with a pair of concentric relatively rotatable members, of a locking member secured to one of such concentric members, a second locking member having an aperture therethrough for the other concentric member, one side of the aperture being provided between the top and bottom thereof with a recess diminishing in depth from the central portion thereof, a pair of rollers vertically disposed in said recess, a wedge in the central portion of said recess between said rollers, and an adjusting screw for moving said wedge thereby to spread the rollers apart and means whereby the screw may be covered and the locking members may be secured together when the concentric members occupy a predetermined position.

[Claim 6 not printed in the Gazette.]

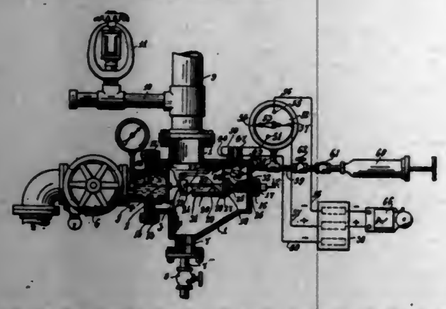
1,211,014. DRY-PIPE VALVE FOR AUTOMATIC FIRE-EXTINGUISHING SYSTEMS. EUGENE D. VAN NESS, New York, N. Y. Filed June 20, 1916. Serial No. 104,752. (Cl. 169—22.)

1. In fire extinguishing systems, a dry pipe valve having means controlled by electrical members which are adapted to fuse a portion of its closing mechanism upon the outbreak of fire.

2. A fire extinguishing systems, a dry pipe valve having means adapted to be operated by the prearranged electrical fusing of a portion of its mechanism.

3. In fire extinguishing systems, a dry pipe valve having a water closing mechanism therefor adapted to be automatically released by the electrical fusing of a portion of its mechanism, and an electrical system connected therewith adapted to communicate a fusing impulse to said mechanism upon the outbreak of fire.

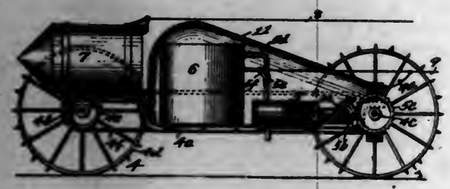
4. A dry pipe valve having means for applying and maintaining a fixed degree of compression upon its closing mechanism without the use of air or water and independent of any of these pressures in its valve chamber or system piping, and electrically fusible means controlling the release of said closing mechanism.



5. In fire extinguishing systems, a dry pipe valve having a valve chamber in open communication with a sprinkler system, a water supply pipe opening into said chamber and closing mechanism therefor which includes a strut, and electrically fusible means for controlling said strut and adapted to operate the same upon the outbreak of fire.

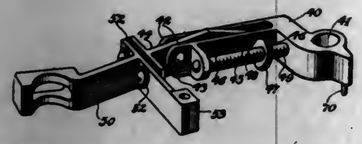
[Claims 6 to 12 not printed in the Gazette.]

1,211,015. LAND-TORPEDO. VICTOR A. VILLAR, New York, N. Y., and STAFFORD C. TALBOT, London, England. Filed Nov. 13, 1915. Serial No. 61,307. (Cl. 102—2.)



A device of the class described, comprising a frame, front and rear axles rotatable therein, spiked wheels fixed to the respective axles, sprocket wheels on said axles, chains connecting the respective sprocket wheels, a motor for one of said axles, a shield for said motor, a container for explosives on said frame, and means at a distance from said device for firing said explosives.

1,211,016. ARC-LAMP. JOHN VINTILA, Cleveland, Ohio. Filed Jan. 19, 1916. Serial No. 72,993. (Cl. 176—119.)



1. In an arc lamp, the combination of a base, a post and a yoke mounted thereon, a cross bar connecting the post and yoke, an arm slidable up and down on the post, a screw mounted in the cross bar and threaded into the arm to raise or lower the latter, means to turn the screw, including a worm mounted in the yoke, a bracket pivotally supported by said arm, means to swing the bracket, and carbon holders supported by said bracket.

2. In an arc lamp, an adjustable carbon holder, comprising an arm having a relatively fixed section, and a tilting section pivoted thereto and provided with a clamp for the carbon, the tilting section having an inclined surface extending lengthwise thereof, a non-traveling screw mounted on the fixed section and extending beside the tilting section, and a threaded block mounted to travel along the screw and slidable along said inclined surface to vary the tilt thereof.

3. In an arc lamp, a carbon holder comprising a tilting arm having a clamp at one end for the carbon and an inclined slot at the other end, a non-traveling screw mounted beside the end having the slot, and a threaded block mounted to travel on the screw and having a laterally-projecting part slidable lengthwise of the arm, in said slot, to vary the tilt of the arm.

1,211,017. MEANS FOR THE REGULATION OR CONTROL OF RAILWAY AND LIKE TRAFFIC. HANS VON KRAMER, Edgbaston, Birmingham, England. Filed June 1, 1916. Serial No. 101,033. (Cl. 246—25.)



1. In signal apparatus for railways and the like, a danger indicating section comprising three wires only, namely, a main wire, a return wire on the opposite side of the track to the main wire, and an additional wire on the same side of the track as the return wire; and means controlled by the position of the signal for cutting out of circuit the main wire in the section and substituting the additional wire; all so arranged that when the signal is at safety the inductive effects of the main wire and return wire are added to each other, while when the signal is at danger the inductive effect of the additional wire neutralizes the inductive effect of the return wire.

2. In signal apparatus for railways and the like, a danger indicating section comprising three wires only, viz. a main wire, a return wire on the opposite side of the track to the main wire, and a "danger" wire on the same side of the track as the return wire and adapted to induce in the frame on the vehicle E. M. F.'s of the same strength as those induced by the return wire but in an opposite and neutralizing direction; for the purpose specified.

3. In combination, a track for vehicles; an induction frame on a vehicle; a main line wire adjacent to said track; means for passing periodic current through said line wire; a return wire in series with said main line wire but on the opposite side of the track; an additional wire normally out of circuit but adapted to be put in series with the main wire and so disposed as to have an equal but opposite inductive effect on the frame to the inductive effect of the return wire; and means controlled by the position of the signal for putting the additional wire in circuit with the main wire in substitution for a corresponding length of the main wire when the signal is at danger.

1,211,018. SPARK-PLUG. ARCHIBALD H. WALLACE, New York, N. Y., assignor of one-half to Eric Brandquist, Orange, N. J. Filed Apr. 29, 1916. Serial No. 94,358. (Cl. 123—169.)

1. In a spark plug of the character described, a stationary contact having a pair of branches, a movable contact coacting with said branches, said movable contact merging into a cylinder fitting into the casing of the plug, arms extending from said cylinder to a position exteriorly of the outer end of the plug, and means engaging said arms for moving the same whereby said movable contacts will be adjusted.

2. In a spark plug of the character described, a casing provided with a bore therethrough arranged with a seat intermediate the length, a sleeve arranged in the lower part of the bore provided with a flange resting on said seat, a plurality of arms extending upwardly from said flange, said arms extending beyond the outer end of said casing, said arms being threaded, a nut engaging the threaded end of said arms for bringing the arms under tension and thereby locking the arms and parts connected therewith against movement, a pair of contacts rigidly connected with said sleeve whereby whenever said arms and sleeve are moved said contacts will be moved, a fixed contact member, and means for rigidly holding the fixed contact member in position and insulating the same from the movable contact member.



3. In a spark plug of the character described, a casing provided with a bore therethrough, said bore having a shoulder intermediate its length, a sleeve fitted in the lower part of said bore, a flange member extending through said sleeve and resting on said shoulder, an arm extending upwardly from said sleeve to a position beyond the outer end of said casing, means connected with said arm for moving the same and said sleeve, a contact arranged on said sleeve, said contact being adjusted when said arm is moved, a fixed contact, and means including an insulating member for holding the fixed contact member in said casing.

4. In a spark plug of the character described, a casing, a porcelain arranged in said casing, a movable rod extending through said porcelain, a pair of contacts arranged at the lower end of said casing, a contact connected with the lower end of said rod, a pair of indicating members extending to a position adjacent the upper end of said rod, said indicating members indicating the position of the contacts on said casing, and a pin connected with said rod adjacent said indicating members, said rod being adjustable whereby the spark gap may be varied at will.

5. In a spark plug of the character described, a casing provided with a pair of contacts at the lower end and a pair of indicating members at the upper end, a porcelain arranged in said casing, a rotatable rod arranged in said porcelain, an adjustable contact member connected with the lower end of said rod, a spring for normally holding said rod against movement and in proper position so that the contact connected therewith will correctly coact with the contacts on the casing, and an indicating member on said rod for indicating the position of the contact on said rod.

1,211,019. CENTRIFUGAL AMALGAMATOR. PAUL WEEKS, Los Angeles, CHARLES R. MCCOLLOM, Pasadena, and CHARLES O. HASKELL, Los Angeles, Cal., assignors to Centrifugal Machinery Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 19, 1915. Serial No. 22,234. (Cl. 83—67.)

1. A centrifugal amalgamator comprising a rotatively mounted double walled bowl formed of upper and lower sections free from interlocking overlap so as to allow downward movement of the lower section without other shifting of parts, the lower section having an annular trough and the inner wall of the lower section projecting inside of the upper section and the rim of the inner wall of the upper section projecting below the level of the inner wall of the lower section adjacent the trough, and means to rotate said bowl.

2. A centrifugal amalgamator comprising a rotatively mounted double walled bowl formed of upper and lower sections free from interlocking overlap so as to allow downward movement of the lower section without other shifting of parts, the lower section having an annular trough and the rim of the inner wall of the upper section projecting below the level of the inner wall of the lower section adjacent the trough, and means to rotate said bowl.



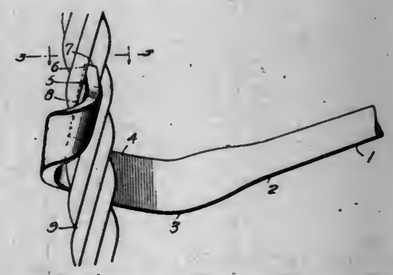
3. A centrifugal amalgamator comprising a bowl formed of upper and lower double walled sections hinged to one another and free from interlocking overlap so as to allow downward movement of the lower section without other shifting of parts, the inner walls being spaced apart radially and overlapping axially, and means to rotate said bowl.

4. A centrifugal amalgamator comprising two separable sections, the upper section having a bowl-shaped passage and an inlet to said passage and having an expansion chamber, and the lower section having an annular basin and an annular wall extending up from the inside rim of the basin into the expansion chamber, the walls of said sections being free from interlocking overlap so as to allow downward movement of the lower section without other shifting of parts, and means to rotate said sections.

5. A centrifugal amalgamator comprising two separable sections free from interlocking overlap so as to allow downward movement of the lower section without other shifting of parts, the upper section having a bowl-shaped passage and an inlet to said passage and having an expansion chamber, and the lower section having an annular trough communicating with said passage and with the expansion chamber and having an outlet for the expansion chamber, the inner wall of the passage extending downward to within a slight distance of the level of the lower margin of the trough, and means to rotate the sections.

[Claims 6 to 12 not printed in the Gazette.]

1,211,020. CABLE-TWISTING DEVICE. PERRY A. WELSBY, Sapulpa, Okla. Filed Apr. 21, 1916. Serial No. 92,670. (Cl. 81—3.)



1. A cable twisting tool comprising a handle and having a spirally bent portion provided with an edge conforming to the contour of the strands of the cable, said

edge being arranged to enter the space between adjacent strands on the cable, said tool having a fulcrum on another strand of the cable.

2. A tool for twisting cables comprising a handle portion and a spirally curved gripping portion, said gripping portion being provided with a flat surface arranged to engage a strand of the cable and having an edge adjacent to said flat portion, said edge being arranged to follow the contour of the strands of the cable, and said tool having a bearing portion for engaging the cable at another point.

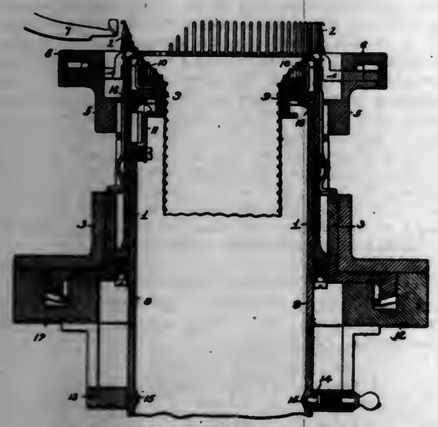
3. A tool for twisting cables comprising a handle and a gripping portion, said gripping portion being curved in spiral shape and being bent in helical shape with respect to the axis of the spiral, the end of the tool having an edge arranged to follow the contour of a strand of the cable.

4. A tool for twisting cables comprising a handle and a gripping portion, said gripping portion being curved in spiral shape and being bent in helical shape with respect to the axis of the spiral, the end of the tool having an edge arranged to follow the contour of a strand of the cable, and said tool having a flat portion adjacent to said edge arranged to engage a strand of the cable for exerting pressure on the latter.

5. A cable twisting tool comprising a handle portion and a gripping portion, said gripping portion being bent into spiral form, and being bent into helical form with respect to the axis of the spiral, one end of said helix being of substantially smaller diameter than the other, and said tool having a flat portion arranged to engage a strand of cable and being provided with an angular portion nearest that flat portion arranged to enter between adjacent strands.

[Claim 6 not printed in the Gazette.]

1,211,021. STITCH-TRANSFERRING DEVICE FOR KNITTING-MACHINES. LOUIS N. D. WILLIAMS Ogontz, Pa. Filed Mar. 17, 1916. Serial No. 84,771. (Cl. 66—32.)



1. The combination of the needle carrier of a knitting machine with a transfer point carrier removable downwardly through said needle carrier with the web upon it, and means for freeing said web from the needles.

2. The combination of the needle carrier of a knitting machine with a transfer point carrier contained within said needle carrier and removable downwardly through the same, said point carrier having its points so disposed as to engage stitches of a course preceding that upon the needles, and means for freeing said terminal course from said needles.

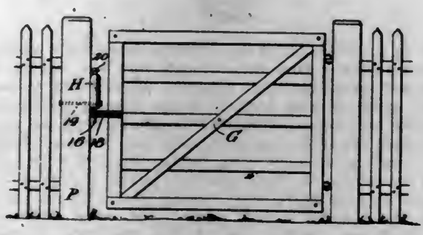
3. The combination of the needle carrier of a knitting machine, a transfer point carrier removable downwardly through said needle carrier, a raising and lowering device upon which said transfer point carrier is mounted, and means for detachably connecting said point carrier to said raising and lowering device.

4. The combination of the needle cylinder of a knitting machine, a transfer point carrier removable downwardly through said needle cylinder, a raising and lowering device upon which said transfer point carrier is mounted, and means for detachably connecting said point carrier to said raising and lowering device.

5. The combination of the needle carrier of a knitting machine, a transfer point ring carrier removable downwardly through said needle carrier, a raising and lowering device upon which said point ring carrier is mounted, and means for supporting said raising and lowering device in its raised position.

[Claim 6 not printed in the Gazette.]

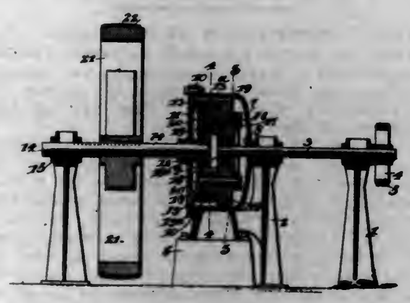
1,211,022. RING GATE-LATCH. ROLLIN A. WILLIAMS, Lima, Ohio. Filed Nov. 4, 1916. Serial No. 129,502. (Cl. 70—28.)



1. In a gate latch, the combination with a post and a gate having an arm extending therefrom, of a housing mounted on the post having a lower open end, a pair of bolts extending through said housing for securing the same to said post, latch rings suspended from said bolts and disposed beyond the bottom margin of the housing in the path of movement of said arm, means for withdrawing said rings from the path of movement of said arm including a vertically movable rod projecting from the upper end of said housing, a handle on the upper end of said rod, a head on the lower end of said rod, said head being provided with hooks for engagement with said rings.

2. In a latch, the combination of a housing and latch rings normally disposed beyond the same, means for supporting the housing on a gate post and for supporting said rings, and a rod having a head formed with hooks for engagement with said rings to withdraw the same into the housing.

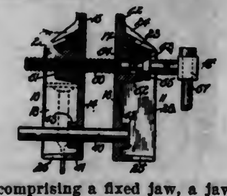
1,211,023. MECHANICAL POWER-TRANSMITTING DEVICE. FLOYD J. WILLIS, Notasulga, Ala. Filed July 3, 1915. Serial No. 37,887. (Cl. 74—34.)



1. In a power transmitting mechanism, a stationary housing having a circular opening at one end and a flanged opening at the other end, a cover plate for the last named opening having a centrally apertured bearing hub and an inwardly projected flange adjacent its outer edge extending within the housing, a gear track formed internally of said flange, a drive shaft extending into the housing and having a pinion, a driven shaft projecting into the housing through said bearing hub and carrying a frame, and compound gears of two diameters mounted in the frame, the ones of lesser diameter meshing with the internal gear track and the others meshing with said drive shaft pinion.

2. In a power transmitting mechanism, a housing having a circular opening at one end and a flanged opening at the other end, a cover plate for the last named opening having a centrally apertured bearing hub and an inwardly projected flange extending within the flanged edge of the housing, a gear track formed internally of said flange, a two-part line shaft comprising a drive shaft and a driven shaft projecting in axially alined relation into the housing through the circular opening therein and through the apertured bearing hub, respectively, with their ends spaced apart, a pinion secured to the drive shaft internally of the housing, a gear carrying frame secured to the driven shaft internally of said housing and around said shaft ends, and compound gears of two diameters mounted in the frame, the ones of lesser diameter meshing with the internal gear track and the ones of greater diameter meshing with the drive shaft pinion.

1,211,024. WOODWORKING-VISE. ALBERT L. WILSON and FRANK MCGLINCHY, Willoughby, Ohio. Filed Sept. 8, 1916. Serial No. 118,995. (Cl. 81—33.)



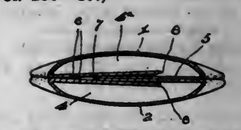
1. A vise, comprising a fixed jaw, a jaw movable transversely toward and from the said fixed jaw, each of the jaws having integral legs at a right angle one relative to the other to fit against the edge and face of a support, the opposite faces of the jaws being parallel, attaching means on the fixed jaw for fastening the latter to the support, transverse guiding means for guiding the movable jaw transversely toward and from the fixed jaw, and manually operated transverse adjusting means for moving the movable jaw transversely toward and from the fixed jaw.

2. A vise, comprising a fixed jaw, a jaw movable transversely toward and from the said fixed jaw, each of the jaws having integral legs at a right angle one to the other to fit against the edge and face of a support, a bracket on the inner face of one of the legs of the fixed jaw and provided with a nut, a clamping screw screwing in the said nut and having its clamping head directly opposite the under side of the other leg of the fixed jaw to fasten the fixed jaw to the support, transverse guiding means for guiding the movable jaw transversely toward and from the fixed jaw, and a transverse adjusting screw screwing in one jaw and mounted to turn in the other jaw to move the movable jaw toward and from the fixed jaw.

3. A vise, comprising a fixed jaw, a jaw movable transversely toward and from the said fixed jaw, each of the jaws having integral legs at a right angle one to the other to fit against the edge and face of a support, a bracket on the inner face of one of the legs of the fixed jaw and provided with a nut, a clamping screw screwing in the said nut and having its clamping head directly opposite the under side of the other leg of the fixed jaw to fasten the fixed jaw to the support, a transverse guiding pin attached to one of the said jaws and slidingly engaging the other jaw, and a transverse adjusting screw mounted to turn in one of the said jaws and screwing in the other jaw, the said guiding pin and the said adjusting screw engaging the same legs one above the other and a distance inward from the outer edges of the legs.

4. A vise, comprising a fixed jaw, a jaw movable transversely in parallelism toward and from the said fixed jaw, each of the jaws having integral horizontal and vertical legs, of which the under side of the horizontal jaw is adapted to rest on the face of a support, and the inner face of the vertical jaw is adapted to abut against an edge of the support, the opposite faces of the jaws presenting clamping surfaces at both the horizontal and vertical legs of the jaws, a bracket extending integrally from the lower end of the vertical leg of the fixed jaw below and parallel to the horizontal leg of the fixed jaw, the free end of the bracket being threaded to form a fixed nut, a clamping screw screwing in the said nut and having a head adapted to engage the under side of the support directly opposite the horizontal member of the fixed jaw, a transverse guide pin attached to the vertical leg of one of the jaws and slidingly engaging the vertical leg of the other jaw, and a transverse adjusting screw mounted to turn in the vertical leg of the movable jaw and screwing in the vertical leg of the fixed jaw, the said guide pin and adjusting screw being located one above the other and spaced from the outer edges of the vertical legs of the jaws, and the said adjusting screw being a distance below the under sides of the horizontal legs of the jaws.

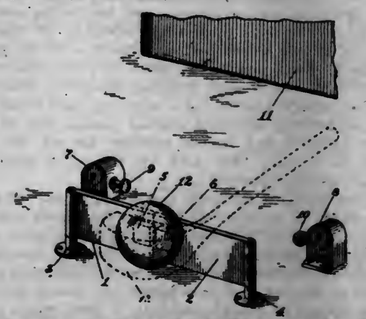
1,211,025. CARD AND LETTER CASE. REUBEN J. WRIGHT, Bliss, N. Y. Filed Dec. 4, 1915. Serial No. 65,033. (Cl. 150—39.)



1. A card or letter case made from a single piece of material having the sides bent over toward the center, and said folded blank being bent upon itself to form two separate pockets, said bent sides forming a telescoping partition between said pockets whereby the contents of said pockets can be easily removed when the sides of the pockets are squeezed.

2. A card or letter case made from a single piece of material having the sides bent over toward the center, and said folded blank being bent upon itself to form two separate pockets, said bent sides having their edges oppositely beveled whereby said bent sides are adapted to telescope for the purpose set forth.

1,211,026. GAME APPARATUS. FREDERICK A. YEAGER, Johnstown, Pa. Filed Jan. 19, 1914. Serial No. 812,894. (Cl. 73—15.)



1. In apparatus for mechanically determining the flight of a ball under the action of an impact device, a movable impact-receiving member temporarily contacting with the ball when the latter is subjected to impact from said device, and a registering mechanism in the path of movement of the impact-receiving member and adapted to receive and register the blow from said member, the movements of the member under the blow permittting the ball to take its flight.

2. In apparatus for determining the effect of a blow on a golf ball under the action of a club, a swinging impact-transmitting member substantially contacting with the

ball when the latter is subjected to impact from said club and movable out of the path of flight of the ball, and registering mechanism having means in the path of movement of the swinging impact transmitting member to receive a blow therefrom.

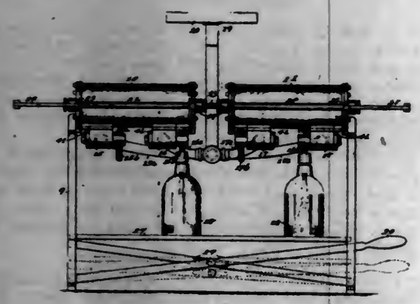
3. In an apparatus for measuring the flight of a golf ball, independently swinging barriers substantially in contact with and adapted to receive the force of impact of a blow communicated to the ball, said barriers being movable away from and out of the direction of flight of the ball, and registering mechanism in the path of movement of the barriers to which said blow is adapted to be transmitted by the swinging barriers.

4. In apparatus for measuring the extent of a blow on a golf ball under the action of a golf club, of a swinging barrier adapted to receive the blow from and movable out of the path of movement of the ball, said barrier being in temporary contact with the ball in advance of the delivery of the blow, and an indicating mechanism in the path of swing of the barrier to indicate the force of the blow communicated thereto.

5. The combination of a divided barrier, each member of the barrier being movable, and a registering mechanism in the path of movement of each barrier, each registering mechanism being adapted to indicate the force of the blow communicated to its particular barrier member.

[Claims 6 to 10 not printed in the Gazette.]

1,211,027. BOTTLE-FILLING MACHINE. CHARLES A. YOUNGMAN, Louisville, Ky. Filed Apr. 19, 1915. Serial No. 22,318. (Cl. 226—18.)



1. A bottle filling machine, comprising a pair of cylinders, a piston in each cylinder, a rod connecting said pistons and having ends projecting outwardly of said cylinders, adjustable means for engagement with the piston rod ends to limit piston movement in each direction, a valve at each end of each cylinder, means for leading a fluid to all of said valves, and a nipple on each valve, said valves connecting said fluid leading means with the respective cylinder end in one position thereof and connecting the cylinder ends with the respective nipples in the other position thereof.

2. A bottle filling machine, comprising a pair of cylinders, a piston in each cylinder, a rod connecting said pistons and having ends projected outwardly of said cylinders, longitudinally arranged tubes on each cylinder, a frame slidably arranged in the tubes of each cylinder in the path of movement of said piston rod, means for locking said frames in desired positions to limit piston movement, a valve at each end of each cylinder, means for leading a fluid to all of said valves, and a nipple on each valve, said valves connecting said fluid leading means with the respective cylinders in one position thereof and connecting the cylinder ends with the respective nipples in the other position thereof.

1,211,028. FIREPROOF COMPOSITION. PASQUALE ZAPPI, Youngstown, Ohio, assignor of one-fourth to Joseph J. Spotts, Youngstown, Ohio. Filed May 23, 1916. Serial No. 99,464. (Cl. 106—34.)

1. A plastic composition comprising thirty parts of a vegetable fibrous material, forty-four parts gypsum, twenty parts asbestos fiber, five parts kaolin and one part boric acid.

2. A non-conductive plastic composition consisting of the following ingredients mixed in about the proportions named:

Gypsum	44 per cent.
Sawdust	30 " "
Asbestos fiber	20 " "
Kaolin	5 " "
Boric acid	1 " "

1,211,029. MUSIC-SHEET CHANGER FOR MECHANICAL MUSICAL INSTRUMENTS. ADALBERT ZOLLINGER, Leipzig-Eutritzsch, Germany, assignor to the Firm of Popper & Co., Gesellschaft mit beschränkter Haftung, Leipzig, Germany. Filed Apr. 11, 1914. Serial No. 831,105. (Cl. 84—161.)



1. In apparatus for the purpose set forth, the combination of a music sheet magazine, a guide for said magazine wherein the latter is adapted to travel in one direction by gravity, and motor mechanism for moving the magazine in the opposite direction in said guide.

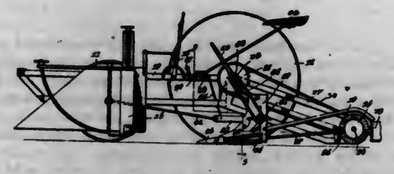
2. In apparatus for the purpose set forth, the combination of a music sheet magazine, a guide for said magazine wherein the latter is adapted to travel in one direction by gravity, and motor mechanism for moving the magazine in the opposite direction in said guide, said motor mechanism including an electric motor, an electric contact device, a motor pneumatic and a clutch controlled by said pneumatic.

3. In apparatus for the purpose set forth, the combination of a music sheet magazine, a guide for said magazine wherein the same is adapted to travel in one direction by gravity, motor mechanism for moving said magazine in the opposite direction in said guide, means for retaining said magazine in elevated positions in said guide, a take-up roller, means for transferring sheets from said magazine to said roller, means for winding sheets off said roller and returning same to said magazine, and means whereby on completion of the return of a sheet to said magazine said retaining means are disengaged.

4. In apparatus for the purpose set forth the combination of a music sheet magazine, a guide for said magazine wherein the latter is adapted to travel in one direction by gravity, motor mechanism for moving the magazine in the opposite direction in said guide, a take-up roller, a tracker board, means for transferring sheets from said magazine across said tracker board to said take-up roller, an index sheet holder, a movable pointer adjacent said index sheet holder, and pneumatically actuated mechanism associated with said tracker board for moving said pointer.

1,211,030. BEET LIFTING AND DIGGING DEVICE. FRANK P. ADDLEMAN, Austin, Colo. Filed July 12, 1916. Serial No. 108,897. (Cl. 55—106.)

1. A beet digging and lifting machine comprising a main frame having a forward axle and a rear axle, the rear axle constituting a driving shaft, a yoke connected with the forward axle, an auxiliary frame pivotally mounted upon said axle and extending behind said main frame, a receptacle carried by said auxiliary frame, a trough leading to said receptacle, supporting plates connected with the forward end of said trough and provided with forwardly extending arms connected with said yoke to pivotally mount the supporting plates, an adjusting lever rotatably mounted upon said driving shaft and connected with one of said supporting plates, cutting blades carried by said supporting plates and extending in spaced relation, lifting rollers rotatably mounted upon said supporting plates to the rear of said cutting blades and having their rear end portions provided with sockets, shafts rotatably carried by said auxiliary frame and having their forward end portions squared and fitting into the sockets of said rollers, a driven shaft rotatably carried by said auxiliary frame, means for transmitting rotary motion from said driven shaft to the roller shafts, means for transmitting rotary motion from said driving shaft to said driven shaft, a driven shaft carried by said supporting plates, paddle wheels mounted upon said last mentioned driven shaft, and means for transmitting rotary movement from said driving shaft to said last mentioned driven shaft.



2. A beet digging and lifting machine including a main frame, a driving shaft carried by said main frame, an auxiliary frame pivotally mounted upon said driving shaft, a driven shaft carried by said auxiliary frame, supporting plates pivotally mounted beneath the forward end portion of said auxiliary frame, an adjusting lever pivotally mounted upon said driving shaft and connected with said plates, cutting blades carried by said supporting plates, lifting rollers carried by said supporting plates, a driven shaft carried by said plates, paddle wheels mounted upon said last mentioned driven shaft, means for transmitting rotary movement from the driving shaft to the last mentioned driven shaft, shafts rotatably carried by said auxiliary frame and supporting plates and having their forward end portions connected with said rollers, means for transmitting rotary movement from the driven shaft of said auxiliary frame to said last mentioned shafts, means for transmitting rotary movement from said driving shaft to the driven shaft of said auxiliary frame, and a conveyer trough leading from said supporting plates back of said paddle wheels.

3. A beet digging and lifting machine including a main frame, an auxiliary frame connected with said main frame, a driving shaft carried by said main frame, a driven shaft carried by said auxiliary frame, means for transmitting rotary movement from said driving shaft to said driven shaft, supporting plates mounted beneath the forward end portion of said auxiliary frame, cutting blades carried by said supporting plates in spaced relation, lifting rollers rotatably carried by said supporting plates and rotated from said driven shaft, a driven shaft carried by said supporting plates, paddle wheels carried by said driven shaft of the supporting plates, a conveyer trough leading from said supporting plates, and means for transmitting rotary movement from said driving shaft to the driven shaft of said supporting plates.

4. A beet digging and lifting machine including a main frame, an auxiliary frame pivotally connected with said main frame, supporting plates movably mounted beneath the forward end portion of said auxiliary frame, means for vertically adjusting said supporting plates, means for transversely adjusting said supporting plates, cutting blades carried by said supporting plates, lifting rollers carried by said supporting plates, a driven shaft carried by said auxiliary frame, means for transmitting rotary movement from said driven shaft to said rollers, and means for transmitting rotary movement from said driving shaft to said driven shaft, a driven shaft carried by said supporting plates, a paddle wheel carried by said last mentioned driven shaft, and means for transmitting rotary movement from said driving shaft to the last mentioned driven shaft.

5. A beet lifting and digging machine including a main frame, an auxiliary frame carried by said main frame, supporting plates positioned beneath said auxiliary frame, a conveyer trough connected with said supporting plates, digging means carried by said supporting plates, lifting means carried by said supporting plates, propelling means carried by said supporting plates for moving beets upon said conveyer trough, and actuating means for said lifting means and propelling means.

[Claim 6 not printed in the Gazette.]

1,211,031. TELEPHONE SYSTEM AND APPARATUS. ALLISON AKIN, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 21, 1915. Serial No. 35,373. (Cl. 175—21.)

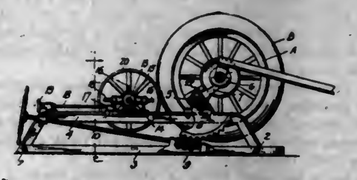


1. A relay comprising an armature of magnetic material, a core, composed of superposed layers of magnetic and non-magnetic material at varying distances from said armature to provide magnetic paths of different lengths for increasing the difference in the magnetic density of the core at points near to and remote from the armature and an energizing winding for said core and armature.

2. In an electromagnetic device, a core composed of a plurality of laminæ separated by non-magnetic gaps, an armature of magnetic material in operative relation thereto and adapted to move toward the core in a direction transverse to the plane of said laminæ, whereby the core forms a plurality of magnetic paths of different lengths having non-magnetic gaps therein.

1,211,032. [WITHDRAWN.]

1,211,033. TRANSMISSION APPARATUS. CHARLES M. ANDERSEN, Denver, Colo., assignor to Auto Power Generator and Appliance Company, a Corporation of Colorado. Filed Feb. 23, 1916. Serial No. 79,939. (Cl. 21—90.)



1. Power transmission apparatus comprising in combination, with a supporting structure, a rotary shaft, seats projecting from said shaft for the support of a vehicle axle, a worm-movement adapted for the manual rotation of the shaft, and a rotary friction-element to engage the wheels on a vehicle axle raised by rotation of said shaft.

2. Power-transmission mechanism comprising in combination with a supporting structure, a rotary shaft, seats projecting from said shaft for the support of a vehicle-axle, a segmental worm-gear on said shaft, a worm meshing with said gear, a hand-wheel operatively connected

with said worm, and a rotary friction-element to engage the wheels on a vehicle axle raised by rotation of said shaft.

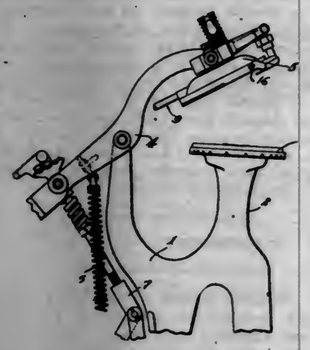
3. Power transmission mechanism comprising in combination with a supporting structure, a movable seat adapted for the support of a vehicle-axle, manually operated mechanism for the elevation of said seat, sliding box-carriers, nuts on said carriers, rotary screws coöperating with said nuts for the adjustment of the carriers, boxes on said carriers, a shaft rotatably supported in said boxes, and friction-wheels on said shaft to engage the wheels on a vehicle-axle raised by movement of said seat.

4. Power transmission apparatus comprising in combination with a supporting structure, a rotary shaft, seats for the support of a vehicle axle, adjustably mounted on said shaft for varying the distance between them, mechanism for rotating the shaft, and a rotary friction element to engage the wheels on a vehicle axle raised by rotation of said shaft.

5. Power transmission mechanism comprising in combination with a supporting-structure, movable seats for the support of a vehicle axle, and manually operated mechanism adapted to move said seats conjunctively for raising or lowering a vehicle axle supported thereon, and to automatically hold said seats in their adjusted positions.

[Claims 6 and 7 not printed in the Gazette.]

1,211,034. GARMENT-PRESS. WILLIAM E. ANDRÉE, Chicago, Ill., assignor to The American Laundry Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 19, 1916. Serial No. 104,435. (Cl. 68—9.)



1. In a garment press, upper and lower relatively movable pressing bucks, each comprising a body and press cloth secured thereto, and means for discharging a supply of steam across the face of one of said bucks outside of the press cloth thereon.

2. In a garment press, upper and lower relatively movable pressing bucks, each comprising a body and press cloth secured thereto, and means for discharging a supply of steam across the face of the upper buck outside of the press cloth thereon.

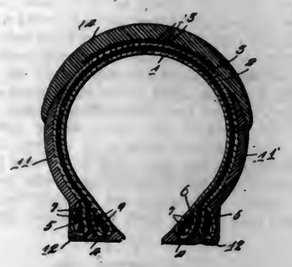
3. In a garment press, a stationary buck, a movable buck coöperating therewith and provided with a body and press cloth secured thereto, and means carried by the movable buck for discharging a supply of steam along the plane of the movable buck and across its face outside of the press cloth thereon.

4. In a garment press, a stationary buck, a movable buck coöperating therewith, said bucks being each provided with a body and press cloth secured thereto, and a steam supply conduit located at the edge of one of said bucks and outside of the press cloth thereon and arranged to discharge a supply of steam across the face of the buck.

5. In a garment press, stationary and movable pressing bucks, each comprising a body and press cloth secured thereto, and a steam supply conduit located at one edge of one of said bucks and pivotally connected thereto so as to swing toward and from the same.

[Claim 6 not printed in the Gazette.]

1,211,035. PNEUMATIC CORD TIRE. CHARLES L. ARCHER, Minneapolis, Minn. Filed Jan. 26, 1916. Serial No. 74,497. (Cl. 152—13.)



1. In a pneumatic cord tire, the combination of a plurality of transversely extending cords, longitudinally extending cords positioned upon said transversely extending cords, said transversely extending cords having their ends looped over to provide longitudinal pockets, cable strips positioned within said pockets, said cable strips comprising strips having looped over portions, and cables carried within the looped over portions, whereby said cable strips will hold said looped over portions of said transversely extending cords in their correct positions, and an outer cover positioned upon said cords.

2. In a pneumatic cord tire, the combination of a plurality of transversely extending cords, longitudinally extending cords positioned upon said transversely extending cords, said transversely extending cords having their ends looped over to provide longitudinal pockets, cable strips positioned within said pockets, said cable strips comprising strips having looped over portions, cables carried within the looped over portions, whereby said cable strips will hold said looped over portions of said transversely extending cords in their correct positions, filler means positioned within said longitudinally extending pockets so as to resist any tendency of the shifting of said cable strips, whereby said looped over portions of said transversely extending cords will constitute beads, and an outer covering positioned upon said beads and cords.

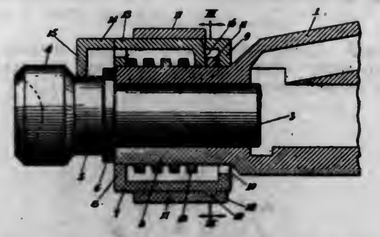
3. In a device of the class described, the combination of a plurality of longitudinally extending cords, transversely extending cords positioned upon said longitudinally extending cords, cable strips positioned upon said transversely extending cords, each cable strip comprising a fabric body having a loop portion, a cable positioned within said loop portion, and means for holding said strips in fixed positions upon said transversely extending cords for constituting heels therefor.

4. In a device of the class described, the combination of a plurality of longitudinally extending cords, transversely extending cords positioned upon said longitudinally extending cords, the outer ends of said transversely extending cords being looped over to provide longitudinal pocket portions, cable strips positioned within said pocket portions, each cable strip comprising a fabric body having a loop portion, a cable positioned within said loop portion, whereby heels will be formed adjacent the outer longitudinally extending cords.

5. In a device of the class described, the combination of a plurality of longitudinally extending cords, transversely extending cords positioned upon said longitudinally extending cords, the outer ends of said transversely extending cords being looped over to provide longitudinally bulged or pocket portions, cable strips carried within said longitudinally bulged or pocket portions, thereby forming extra thickened portions resting upon said longitudinally extending cords, thereby forming heels.

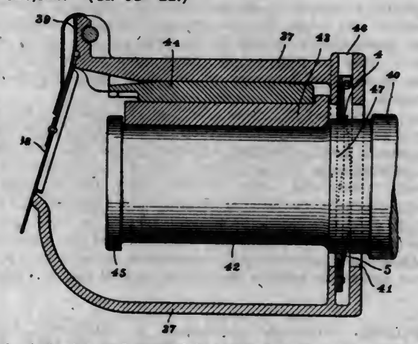
[Claims 6 and 7 not printed in the Gazette.]

1,211,036. RIVET-SET RETAINER. WILLIAM H. ARMSTRONG, Plainfield, N. J., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 29, 1913. Serial No. 797,979. (Cl. 78—44.5.)



In a tool retainer for percussive tools, a tool cylinder, a sleeve surrounding the forward end of the tool cylinder and secured thereon against longitudinal movement, said sleeve having an inturned flange, a spring inside of said sleeve engaging said flange, a dog mounted slidably in said sleeve, said dog having a tool grasping jaw and an inturned lug for engaging the rear end of said spring, and means for holding said dog in position.

1,211,037. DUST-GUARD. CARL P. ASTROM, East Orange, N. J., assignor to M. H. Treadwell Company, a Corporation of New York. Filed May 7, 1914. Serial No. 836,840. (Cl. 64—22.)



1. A dust guard comprising a U-shaped member formed by a pair of spaced plates secured together, a coöperating U-shaped member adapted to slide between said spaced plates, bearing segments carried by said members and spring means carried by one member and engaging the other to draw them together.

2. A dust guard comprising a U-shaped member formed by a pair of spaced plates secured together, a coöperating U-shaped plate member sliding between said plates, bearing segments carried by said members and having their faces on one side in the same plane with the side faces of the members.

3. A dust guard comprising a pair of spaced U-shaped plates secured together, one of said plates having inturned ends, a coöperating member sliding between said spaced plates and below said inturned ends, a spring between said member and said ends, and bearing segments carried by said member and said plates and pressed together by said spring.

4. A dust guard comprising spaced U-shaped plates secured together, a spacing member between said plates, a second member carrying a filler plate and sliding between said plates, a spring between said second member and said spaced plates, and bearing segments grooved to fit said members, said plates and bearing segments having their faces on one side in a common plane.

5. A dust guard comprising a pair of U-shaped plates secured together, a spacing member between them projecting into the space between their arms, a bearing segment grooved to fit the projecting end of said spacing member and engaging the edges of said plates, a second member sliding between said plates and carrying a second bearing segment, said second member and segments having their faces on one side flush with the side face of one of said plates, and a spring acting between said second member and said plates.

[Claim 6 not printed in the Gazette.]

1,211,038. PENCILING-GUIDE. WILLIAM E. AYCOCK, Moultrie, Ga. Filed May 5, 1916. Serial No. 95,589. (Cl. 91—65.)



1. A penciling guide having upwardly and inwardly inclined oppositely disposed side walls, and means connecting the same.

2. A penciling guide having upwardly and inwardly inclined oppositely disposed side walls, means connecting the same and upwardly and outwardly inclined ledges extending thereabove.

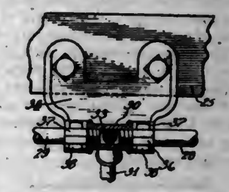
3. A penciling guide having upwardly and inwardly inclined oppositely disposed side walls, means connecting the same and upwardly and outwardly inclined ledges of uniform width extending thereabove.

4. A penciling guide having upwardly and inwardly inclined oppositely disposed side walls provided with inwardly directed ears at each end and means connecting opposed ears whereby the side walls are held in spaced relation.

5. A penciling guide having upwardly and inwardly inclined oppositely disposed side walls provided with inwardly directed ears at each end, upwardly and outwardly inclined ledges extending above said side walls, and means connecting opposed ears whereby the side walls are held in spaced relation.

[Claims 6 to 11 not printed in the Gazette.]

1,211,039. DEVICE FOR CHECKING THE TENDENCY OF TRAIN-PIPES TO SHIFT LONGITUDINALLY. AUGUSTINE RIDENOUR AYERS, Chicago, Ill., assignor to Walter P. Murphy, Chicago, Ill. Filed Mar. 20, 1913. Serial No. 755,612. (Cl. 248—31.)

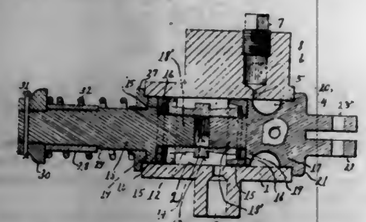


1. In a device for supporting and preventing the longitudinal shift, in either direction, of a horizontally arranged train pipe, the combination with a plurality of alined pipe sections, of a coupling member having an external diameter greater than that of the said train pipe interposed between said pipe sections and engaging the extremities thereof, means for rigidly securing said pipe sections to a car comprising a forked member adapted to

be secured to the underframe of the car, the forked portions of said forked member extending under said pipe sections near their extremities and abutting against the opposite ends of said coupling member.

2. In a device for supporting and preventing the longitudinal shift, in either direction, of a horizontally arranged train pipe, the combination with a plurality of alined pipe sections, of a coupling member having an external diameter greater than that of the said train pipe interposed between said pipe sections and engaging the extremities thereof, means for rigidly securing said pipe sections to a car comprising a forked member adapted to be secured to the underframe of the car, the forked portions of said forked member extending under said pipe sections near their extremities and abutting against the opposite ends of said coupling member, and clamping members fitted over said pipe sections and secured to said forked member.

1,211,040. VALVE. ARCHIE M. BAIRD and HARVEY D. PALMER, Topeka, Kans.; said Baird assignor to Baird Pneumatic Tool Company, Incorporated, Topeka, Kans., a Corporation of Kansas. Filed Jan. 25, 1915. Serial No. 4,121. (Cl. 137—4.)



1. The combination of a valve casing formed with a cylinder bore and with inlet, exhaust, and working ports; and a valve proper reciprocatingly mounted in said cylinder bore and comprising a central elongated sleeve formed with an axial internally threaded opening and with an angular outside portion, two stems each formed integrally with a collar fitting in said bore and forming guides for the valve and each stem being formed with a screw-threaded extension engaging in opposite ends respectively of said opening, washers on the respective threaded portions of said stems and bearing against opposite ends of said sleeve, and two packing cups on the respective extensions between the respective washers and collars; one of said stems projecting axially out of said cylinder bore and there formed with an integral collar larger than the cylinder bore and adapted to abut the end of the cylinder casing.

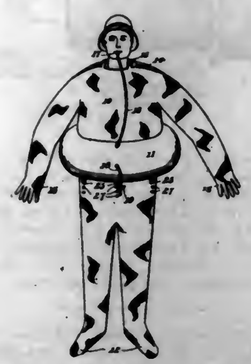
2. The combination of a valve casing formed with a cylinder bore and with inlet, exhaust, and working ports; and a valve reciprocatingly mounted in said cylinder bore and comprising a central elongated sleeve formed with an axial, internally threaded opening, two stems each formed with a collar and with a threaded end said threaded ends engaging in the opposite ends respectively of said threaded opening and one of said stems extending out of the cylinder bore and formed for connection with an operating lever, two packing cups mounted on the respective threaded ends and clamped between the respective ends of said sleeve and the respective collars, each of said stems being integrally formed with its collar, threaded end, and extension, and an operating lever pivoted to the casing and connected with said extension.

1,211,041. COLLAPSIBLE BED-SPRING. CHARLES H. BALDWIN and ALONZO R. SHUTE, Port Jefferson Station, N. Y. Filed May 28, 1915. Serial No. 31,027. (Cl. 5—69.)

In a collapsible bed spring, the combination with a pair of flat end bars, of a spring member secured to and extending between the upper edges thereof, adjustable push bars extending between the end bars adjacent to the upper edges thereof, brace rods adjustably connected to the end bars adjacent to the lower edges thereof and adjustably connected to the push bars and means for securing the braces in their adjusted positions.



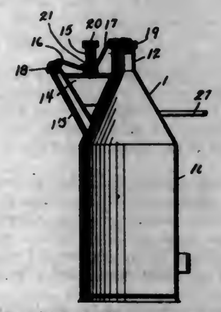
1,211,042. LIFE-SAVING SUIT. GERGELY BALOGH, Detroit, Mich. Filed Aug. 9, 1916. Serial No. 113,922. (Cl. 9—20.)



1. A life saving apparatus comprising a suit having a plurality of series of circumferentially arranged buttons adjacent the waist-line thereof, an encircling pneumatic float removably attached to the said buttons in its adjusted operative position, and an inflated double keel portion provided at the rear of the float depending therebeneath.

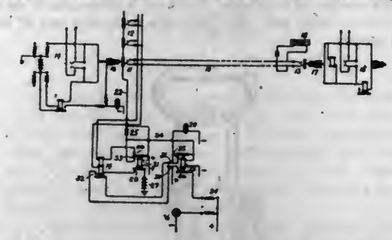
2. A device of the class described comprising a waterproof suit adapted for enveloping the person, an encircling pneumatic float adjustably attached to the said suit and at substantially the waist-line thereof, diametrically arranged reinforcing cords secured within the said float, and a rearwardly-extending divided rudder portion carried by the said float with the interior thereof in communication with the pneumatic chamber of the float and arranged with depending downwardly converging parallel keel portions extending beneath and rearwardly of the said float.

1,211,043. OIL-CAN. CHARLES A. BARTLETT, Cape Breton, Nova Scotia, Canada. Filed Apr. 20, 1915. Serial No. 22,723. (Cl. 221—3.)



In an oil can a body having an upwardly tapering top provided with a filling opening in the apex thereof, a spout, a brace connected to the top and spout, a vertical thumb screw engaged in the brace, a pair of arms rotatably mounted on the screw, stoppers carried on the outer ends of the arms for disposition respectively in the filling opening and spout, and a sleeve on the screw for engagement with the inner ends of the arms to clamp the stoppers in the filling opening and spout.

1,211,044. SIGNALING SYSTEM. HENRY M. BASCOM, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Sept. 7, 1915. Serial No. 49,297. (Cl. 179—42.)



1. In a telephone system, a central station and a private branch exchange station, a trunk line extending between the stations, connecting circuits for coöperation with the trunk at both stations, a line signal displayed when the private branch exchange connecting circuit is joined to the trunk, means for causing the withdrawal of said signal upon the connection of the central station circuit with the trunk, and means situated at the central station for preventing the signal from being again displayed when the central station circuit is disconnected from the trunk before the disconnection of the private branch exchange circuit.

2. The combination with a telephone line, of a line relay, a signal controlled thereby, a cutoff relay, and a slow release relay governed by the cutoff relay for removing the signal from the control of the line relay.

3. The combination with a telephone line, of a line relay, a signal controlled thereby, a cutoff relay, a slow release relay for disconnecting the signal from the line relay, an energizing circuit for the slow release relay including a front contact of the cutoff relay, and a locking circuit for the slow release relay extending through a front contact of the line relay.

4. The combination with a telephone line, of switching means for connecting with and disconnecting from opposite extremities of the line, and means for producing an audible signal upon the line dependent upon the disconnection of the switching means in a particular order.

5. In a telephone system, two stations, a line joining the stations and having a conductor local to a station, switching means coöperating with the line at both stations, and means for producing a signal upon the local conductor of the line at one of the stations dependent upon the disconnection of the switching means in a particular order.

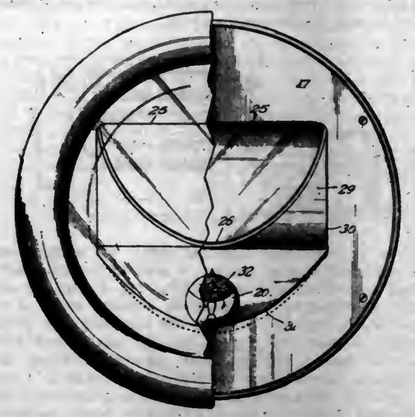
[Claims 6 to 11 not printed in the Gazette.]

1,211,045. [WITHDRAWN.]

1,211,046. [WITHDRAWN.]

1,211,047. LIGHT-PROJECTOR. HAROLD L. BATTING and HOWARD H. GROSS, Jr., Chicago, Ill. Filed Mar. 16, 1916. Serial No. 84,532. (Cl. 240—41.)

1. In a light projector, the combination with a parabolic reflector positioned with its axis approximately perpendicular to the horizontal the front edge of said reflector terminating in a vertical plane at substantially right angles to the path of the projected light and adjacent the axis of the reflector, of a source of light located at approximately the focal point of said reflector, and a substantially flat reflector inclined to the horizontal and positioned to intersect rays of light reflected by the parabolic reflector.



2. In a light projector, the combination with a parabolic reflector positioned with its axis approximately perpendicular to the horizontal the front edge of said reflector terminating in a vertical plane at substantially right angles to the path of the projected light and adjacent the axis of the reflector, of a source of light located at approximately the focal point of said reflector, and a substantially flat reflector positioned above the parabolic reflector and inclined at approximately 45 degrees to the horizontal.

3. In a light projector the combination with a parabolic reflector positioned with its axis approximately perpendicular to the horizontal, of a source of light located at approximately the focal point of said reflector, and a substantially flat reflector inclined at 45 degrees or less to the horizontal and positioned to intersect rays of light reflected by the parabolic reflector, the space between said source of light and plane reflector being unobstructed.

4. In a light projector the combination with a parabolic reflector positioned with its axis approximately perpendicular to the horizontal, of a source of light located at approximately the focal point of said reflector, a portion of the forwardly extending part of said parabolic reflector being cut away at points below the focal center thereof, and a plane reflector inclined to the horizontal and positioned to intersect rays of light reflected by the parabolic reflector.

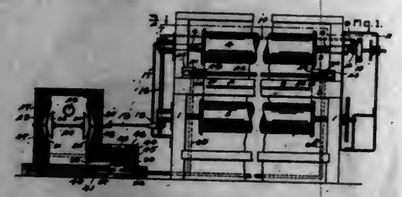
5. In a light projector the combination with a parabolic reflector positioned with its axis approximately perpendicular to the horizontal, of a source of light located at approximately the focal point of said reflector, the front portion of said reflector being cut away to points below the focal point, and a plane reflector inclined at approximately 45 degrees to the horizontal and positioned to interest rays of light reflected by the parabolic reflector.

[Claims 6 to 10 not printed in the Gazette.]

1,211,048. AUTOMATIC TRACKING DEVICE FOR MUSIC-SHEETS. WILLIAM F. BAYER, Buffalo, N. Y. Filed Jan. 2, 1914. Serial No. 809,894. (Cl. 84—161.)

1. In an automatic adjusting device for music sheets, the combination of a tracker, a pair of tracking ducts, valves controlling said ducts, actuating devices for said valves arranged to be engaged by opposite edges of the music sheet, and mechanism for restoring the proper relation between the tracker and the music sheet when the sheet moves laterally to an abnormal position, said mechanism comprising a suction box containing a pair

of opposing diaphragm-chambers adapted to be flushed in the open position of said controlling valves, motor-diaphragms covering said chambers and having their faces constantly exposed to the tension in said box, and valve mechanisms respectively controlled by said tracking ducts for admitting either suction or the outer atmosphere to said diaphragm chambers.



2. In an automatic adjusting device for music sheets, the combination of a tracker, a pair of tracking ducts, valves controlling said ducts, actuating devices for said valves arranged to be engaged by opposite edges of the music sheet, and mechanisms for restoring the proper relation between the tracker and the music sheet when the sheet moves laterally to an abnormal position, said mechanism comprising a suction box containing a pair of opposing diaphragm-chambers, motor-diaphragms covering said chambers and having their faces constantly exposed to the tension in said box, means for transmitting motion from one of said diaphragms to the other, conduits leading from each of said diaphragm-chambers to said suction box and the outer atmosphere, valves controlling the conduits of the respective diaphragm-chambers, and primary pneumatics for the last-named valves connected with said tracking ducts.

3. In an automatic adjusting device for music sheets, the combination of a tracker, a pair of tracking ducts, means associated with opposite edges of the music sheet for controlling said ducts, and mechanism for restoring the proper relation between the tracker and the music sheet when the sheet moves laterally to an abnormal position, said mechanism comprising a suction box containing a pair of opposing diaphragm-chambers adapted to be flushed in the open position of said controlling valve, motor-diaphragms covering said chambers and having their faces constantly exposed to the tension in said box, means for transmitting motion from one of said diaphragms to the other, and valve mechanisms respectively controlled by said tracking ducts for admitting either suction or the outer atmosphere to said diaphragm-chambers.

1,211,049. FLUID-OPERATED PERCUSSIVE TOOL. LEWIS C. BAYLES, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 9, 1914. Serial No. 843,925. (Cl. 121—20.)

1. In a fluid operated percussive tool, a cylinder having a smaller rearward portion and a larger forward portion, a piston having a shank sliding in said rearward cylinder portion and a head sliding in said forward cylinder portion, means for admitting fluid constantly to the rearward end of said larger cylinder portion, a passage controlled by the piston for admitting fluid into the rearward end of the cylinder near the rearward end of the piston stroke, a passage for admitting fluid into the forward end of said cylinder, said passage having a port uncovered by the piston, a valve controlling said port, means for moving said valve to open said port near the end of the forward stroke of the piston, and means for moving said valve to close said port near the end of the rearward stroke of the piston.

2. In a fluid operated percussive tool, a cylinder having a rearward portion of smaller diameter and a forward portion of larger diameter, a piston having a shank sliding in said rearward cylinder portion and a head sliding in said forward cylinder portion, said piston having two small surfaces for driving it forward and a large surface for driving it rearward, a fluid passage for admitting fluid to a portion of the cylinder to exert a constant pressure on one of said smaller surfaces, a passage controlled by the piston for admitting fluid to exert pressure on the other of said smaller surfaces near the end of the piston's rearward stroke, a passage to the forward end of the cylinder and adapted to be put into communication with the constant pressure portion of the cylinder by the movement of said piston, a valve controlling said passage having a port controlling portion, and a separate operating portion having operating surfaces, a passage opened by the piston near the forward end of its forward stroke to convey fluid under pressure from the cylinder to an operating surface of said valve to move it to open said port, and means to move said valve to close said port near the rearward end of the piston stroke.



3. In a fluid operated percussive tool, a cylinder having a smaller rearward portion, and a larger forward portion, a piston having a shank sliding in said rearward cylinder portion and a head sliding in said forward cylinder portion, means for admitting fluid constantly to the rearward end of said larger cylinder portion, a passage controlled by said piston for admitting fluid into the rearward end of the cylinder near the rearward end of the piston stroke, a passage for admitting fluid into the forward end of said cylinder, said passage having a port uncovered by the piston, a valve for controlling said port having a port controlling portion and a separate operating portion having operating surfaces, a passage opened by the piston near the forward end of its forward stroke to convey fluid under pressure from the cylinder to an operating surface of said valve to move it to open said port, and means to move said valve to close said port near the rearward end of the piston stroke.

4. In a fluid operated percussive tool, a cylinder having two different diameters, a piston having a head sliding in the larger bore, a shank sliding in the smaller bore of said cylinder, and a neck connecting said head and shank, means for admitting fluid constantly to the end of the larger bore surrounding said neck, a passage controlled by the piston and operating in conjunction with said piston neck for admitting fluid from said end of the larger bore to the outer end of said smaller bore, a passage overrun by said piston head for admitting fluid from said end of the larger bore to the outer end of said larger bore, a valve controlling said port, and means for moving said valve to open said port when the piston reaches the end of its stroke toward the outer end of said larger bore.

1,211,050. APPARATUS FOR TRANSMITTING MOVEMENTS OR POSITIONS OF INDEXES BY MEANS OF MULTIPHASE-WOUND BODIES. ERICH BECKMANN, Hanover, Germany. Filed Jan. 14, 1913. Serial No. 742,009. (Cl. 172—237.)

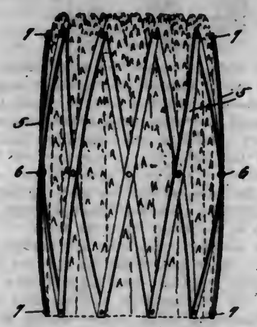
1. In electrical transmission apparatus, the combination of an annular core of U-section, each half of the core having an annular pole-face, a soft iron member rotatable about the axis of the core and magnetically connecting each pole-face only with the other pole-face, and alternating-current means comprising a winding located in the groove of said core for producing at each pole-face a field having only one maximum.



2. In electrical transmission apparatus, the combination of an annular core of U-sections, each half of the core having an annular pole-face, a soft-iron member rotatable about the axis of the core and magnetically connecting each pole-face only with the other pole-face, a multiphase winding carried by said core, and a single-phase winding located in the groove of said core.

3. In electrical transmission apparatus, the combination of an annular core of U-section, each half of the core having an annular pole-face, a soft iron member rotatable about the axis of the core and magnetically connecting each pole face only with the other pole-face, a multiphase winding carried by said core, and occupying part of the groove therein, and a single-phase winding located in said groove in the portion thereof more remote from said axis than the portion thereof occupied by part of the said multiphase winding.

1,211,051. CULINARY DEVICE. ELLEN BENSON, Chicago, Ill. Filed Apr. 3, 1916. Serial No. 88,586. (Cl. 53—1.)



A culinary bundle-holding device, comprising an endless belt which is expansible and contractile, said belt being composed of bars which are arranged in pairs pivotally connected at their ends, the members of the respective pairs being pivotally connected intermediate their ends, and said bars being curved in the direction of their length, with their end portions directed inward to permit the bundle inclosed to bulge at its middle portion.

1,211,052. RAIN-WATER FILTER. PHILIP BERNARD, Sioux City, Iowa. Filed Apr. 8, 1916. Serial No. 89,851. (Cl. 210—4.)

1. The combination with a rain spout, and a conducting pipe spaced therebeneath, of a basin having a depending nipple in its bottom adapted to fit into the upper end of the conducting pipe, and a filter section having an opening in its top adapted to slidably receive the lower end of the rain spout when said top is tilted inwardly beneath the spout, the filter section being adapted to be raised upon the spout and swung inwardly at its lower end and fitted thereat upon the basin.

2. In combination with a wall having thereon a rain spout and a conducting pipe spaced beneath the spout, of a basin having a depending nipple in its bottom adapted to fit into the upper end of the conducting pipe, a filter section having an opening in its top adapted to slidably receive the lower end of the rain spout when said top is tilted inwardly beneath the spout, the filter section being adapted to be raised upon the spout and swung inwardly at its lower end and to be seated upon the basin, and supporting means on the wall adapted to interlock with both the basin and the filter section by the positioning of the same, to support the filter independently of the spout and the pipe.



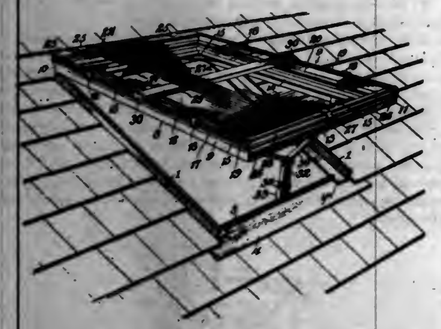
3. In a rain-water filter, the combination with a downwardly opening rain spout and an upwardly opening conducting pipe spaced therebeneath, of an upper filter section having an inlet in its top to receive the lower end of the rain spout and having a marginal flange upon its lower end, a lower section having an outlet in its bottom for engagement with said conducting pipe, a slip joint fastening means between each section and the wall supporting the spout and conducting pipe, said filter sections being adapted to be brought against said wall and into registry with the spout and conducting pipe respectively, and adapted to be slid into interfitting engagement to interlock said slip joint fastening means and secure the sections in place.

4. In a rain-water filter, a body, a horizontal partition in the upper end of the body, a filter element in said body between the bottom thereof and the partition, a spreading plate fitting transversely in the body in the space above the partition and having spaced apart openings therethrough to distribute the rain-water over the entire surface of the partition, said body being perforated above the bottom of the said plate and at the ends thereof, and a cover on the body having an opening therein to receive the end of a rain spout.

5. In a rain-water filter, a body having a foraminous bottom, filtering material in the body supported on the bottom, a foraminous partition in the body at the top of the filtering material to hold the same in place, a space being provided in the body above said partition, a V-shaped spreading plate supported in said space above the partition and extending transversely across said body, said spreading plate having spaced apart relatively small openings therethrough to distribute water in small streams over the entire surface of the partition, and a cover fitted to the top of the body above the spreading plate.

[Claims 6 to 8 not printed in the Gazette.]

1,211,053. WINDOW. PHILIP BERNARD, Sioux City, Iowa. Filed Apr. 24, 1916. Serial No. 93,249. (Cl. 108—16.)



1. A ventilating window for stock and other buildings provided with a window frame, and a window sash having a hinge connection comprising coacting telescoping tubular members extending crosswise of the sash and frame and movable one in the other on the opening and closing of the window about a common axis, the tubular members being concentric one with the other, and the tubular member on the sash being exterior to the tubular member on the frame, and a curved strip carried by the window sash outside the tubular members and substantially fitting the same and serving as a shield for the hinge.

2. A ventilating window comprising a window frame including an end bar provided with a hinge member of tubular form substantially co-extensive with said bar and constituting one member of a hinge, a window sash including an end bar formed with a tubular member substantially co-extensive with said end bar, said tubular member of the window sash telescoping with the hinge of the window frame thereby forming an offset hinge connection between the window sash and the window frame, a curved strip arranged on the outside of the tubular member of the sash and having a curvature to fit the same and serving as a shield for the hinge, said strip terminating at its inner side in means for engaging the window pane, and means for connecting said shield to the tubular member of the sash.

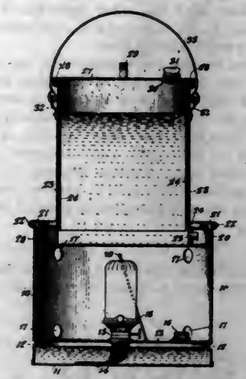
3. A ventilating window comprising a window frame including an end bar provided with a hinge member of tubular form substantially co-extensive with said bar and constituting one member of a hinge, a window sash including an end bar formed with a tubular member substantially co-extensive with said end bar, said tubular member of the window sash telescoping with the hinge member of the window frame thereby forming an offset hinge connection between the window sash and the window frame, a curved strip arranged on the outside of the tubular member of the sash and having a curvature to fit the same and serving as a shield for the hinge, said strip terminating at its inner side in means for engaging the window pane, and bendable fingers extending from the tubular member of the sash and passing through passages in said curved strip to hold the same in place.

4. In a ventilating window, a window frame including an upper end bar and two side bars, said upper end bar having a tubular extension offset therefrom forming one member of a hinge, in combination with a window sash comprising side bars and end bars of channel form, the upper end bar of the window sash having a tubular extension fitting on the outside of the tubular extension of the upper end bar of the window frame and telescoping with the same and constituting the other member of the hinge, said channel members constituting a support for a glass pane, and a curved strip fitting on the outside of the tubular extension of the upper end bar of the sash and co-extensive in length therewith and having a longitudinally extending flange adapted to engage the glass pane and retain the same on the channel member of the upper end bar of the sash, said curved strip serving as a shield for the hinge, and fingers extending from the tubular member of the upper end bar of the sash and passing through slots of the said curved strip to retain said strip in place.

5. In a ventilating window, a window frame comprising side bars and upper and lower end bars with a horizontal flange extending inwardly from the side bars and the upper end bar, the side bars and the flanges adjacent thereto extending beyond the lower end bar, a window sash hinged at its upper end to the upper end bar of the window frame by a hinge which is offset from both the window frame and the sash, said sash fitting down within the side bars and the upper end bar and resting upon the flanges thereof, the lower end of the sash fitting outside the lower end bar.

[Claims 6 to 10 not printed in the Gazette.]

1,211,054. CHICKEN-WATERER. PHILIP BERNARD, Sioux City, Iowa. Filed Apr. 29, 1916. Serial No. 94,436. (Cl. 119—73.)



1. A chicken waterer comprising a cylindrical base section having a closed bottom and an open upper end, a false bottom spaced from and located above the bottom of the section and providing an oil space between the two bottoms, a lamp supported upon the false bottom and a bail hinged to the walls of the base section within the latter and adapted to be swung upwardly out of the open upper end of the base section for carrying the same, or swung downwardly so as to rest upon the false bottom in spaced relation to and away from the lamp.

2. A chicken waterer comprising a cylindrical base section open at its upper end, a heating element in the base section, an upper section detachably fitting upon the upper end of the base section and adapted to contain water, a bail mounted on the upper section for carrying the latter and for carrying the two sections when in assembled relation, and a second bail hinged to the base section and being adapted to be swung down wholly within the base section and at one side of the heating element to permit the assembling of the sections, and being adapted to be swung upwardly out of the base section for carrying the same when the sections are separated.

3. In a chicken waterer, a pan, a cylinder carried in the pan and being of less diameter than the same to provide an annular trough about the cylinder, said cylinder having an open top and having a relatively small lateral opening below the upper edge of the pan, a second cylinder telescoping into the top of the first cylinder and having an annular supporting and sealing flange at its upper end and having a permanent top closing the upper end of the second cylinder, a handle on the permanent top for withdrawing the second cylinder to permit the filling of the first cylinder and for replacing the second cylinder, and a regulatable air vent in said permanent top to permit the passage of air into and from the second cylinder upon the positioning and removal of the same.

1,211,055. ARCH AND ANKLE SUPPORT. HENRY A. BERNSTEIN, New York, N. Y. Filed Mar. 13, 1916. Serial No. 83,881. (Cl. 128—3.)

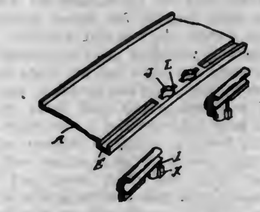


1. As an article of manufacture, an arch and ankle support, comprising a comparatively wide endless elastic band twisted to form an arch loop and an ankle loop, the loops standing approximately at a right angle one to the other and the ankle loop tapering in a downward and outward direction, the portions of the band intermediate the loops having their opposite flat surfaces slidingly overlying one the other at the top.

2. As an article of manufacture, an arch and ankle support, comprising a comparatively wide endless elastic band twisted to form an arch loop and an ankle loop, the loops standing approximately at a right angle one to the other, the portions of the band intermediate the loops having their opposite flat surfaces slidingly overlying one the other at the top, and a loop attached to the under middle portion and through which extends the upper middle portion and holding the said parts in position.

3. As an article of manufacture, an arch and ankle support, comprising a comparatively wide endless elastic band twisted to form an arch loop and an ankle loop, the loops standing approximately at a right angle one to the other, the said ankle loop being tapering in a downward and outward direction to fit the curvature of the ankle, the portions of the band intermediate of the loops crossing each other at the top, and a loop secured to the underlying portion and through which the overlying portion freely slides and holding the parts in position.

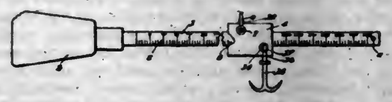
1,211,056. RIM. JAMES M. BERRY, Detroit, Mich. Filed Oct. 11, 1915. Serial No. 55,246. (Cl. 152—21.)



1. The combination with a tire rim having a grooved portion at one side thereof, of a detachable ring for engaging said groove formed of complementary segments, seats formed in the rim, a head formed at one end of each of the segments adapted to be engaged with a seat in the rim when the segment is arranged in the plane transverse to the rim and to interlock with said seat when turned into operative relation with the rim, and means for securing the other end of each segment to the rim.

2. The combination with a tire rim, of a detachable ring for engaging the rim adjacent one side thereof, said ring being formed of complementary segments, seats formed in the rim, a head formed on one end of each of the segments and engageable with its respective seat when the segment is in a plane cross-wise of the rim, said head interlocking with the rim when the segment is in operative position upon the rim, and means for securing the other end of each segment to the rim.

1,211,057. SCALE. LOUIS BERZON, Mount Vernon, N. Y. Filed June 1, 1916. Serial No. 101,136. (Cl. 73—103.)



In a beam scale structure, the combination, of a graduated scale beam, a balancing weight rigidly connected to one end of said beam, a fulcrum block slidably mounted upon said beam, said fulcrum block being provided with a cut out portion for forming a pointed end for coaction with said graduation, substantially elliptical-shaped trunnions carried by and projecting outwardly from the sides of said fulcrum block, a yoke pivotally carried by said trunnions, a suspending hook swivelly connected to said yoke, said suspending hook having a shank, the free end of said shank being pointed, an upstanding pointer carried by said fulcrum block and having its pointed end adapted for coaction with the pointed end of said hook shank for indicating when the scale beam is evenly balanced, a slidable weight slidably mounted upon said beam intermediate said fulcrum block and said balance weight for increasing the weighing scope of the scale.

1,211,058. MACHINE FOR WINDING STRIPS OF FABRICS. PAUL BISCHOFF, St. Gallen, Switzerland. Filed Sept. 14, 1914. Serial No. 861,603. (Cl. 242—56.)



1. In a machine for winding up fabric strips of a predetermined length, such as embroidery strips, festoons, insertions and the like, a winding spindle, fastening means on the latter for the end of a strip, means to automatically cut off strips of predetermined length, means for automatically catching the beginning of the fabric strip from behind the cutting means, means for bringing and attaching said end automatically to said fastening means, and controlling means including a detector engaging the strip to be wound for bringing said catching and cutting means automatically into operation.

2. In a machine for winding up fabric strips of a predetermined length, such as embroidery strips, festoons, insertions, and the like, a winding spindle, means for rotating said spindle, fastening means on the latter for the end of a strip, means to automatically cut off strips of predetermined length, a pivotally mounted arm, a fabric catcher carried by said arm and adapted to catch the end of a strip from behind the cutting means and to hold the end of said strip, means for moving said arm and fabric catcher toward the spindle to automatically attach the end of the strip to said fastening means, and controlling means including a detector engaging the strip to be wound for bringing said catching and cutting means automatically into operation.

3. In a machine for winding up fabric strips of a predetermined length, such as embroidery strips, festoons, insertions, and the like, a winding spindle, means for rotating said spindle, fastening means on the latter for the end of a strip, means to automatically cut off strips of predetermined length, a pivotally mounted arm, a fabric catcher carried by said arm and adapted to catch the end of a strip from behind the cutting means and to hold the end of said strip, means for moving said arm and fabric catcher toward the winding spindle, to automati-

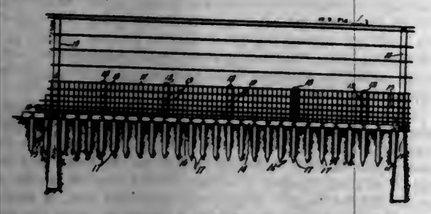
ally attach the end of the fabric to said fastening means, a fabric presser for holding the strip during the cutting operation and fastening the end of the strip to said fabric catcher, and controlling means including a detector engaging the strip to be wound for bringing said catching and cutting means automatically into operation.

4. In a machine for winding up fabric strips of a predetermined length, such as embroidery strips, festoons, insertions, and the like, a winding spindle, means for rotating said spindle, fastening means on the latter for the end of a strip, means to automatically cut off strips of predetermined length, means for automatically catching the end of the fabric strip from behind the cutting means, means for bringing and attaching said end automatically to said fastening means, a fabric presser normally held above the strip, two coöperating rollers for moving the strip forward, means for actuating said fabric presser to hold the strip, one of said rollers being carried by said fabric presser in such a manner that said roller is lifted when the fabric presser acts upon the strip, means for rotating the other roller, and controlling means including a detector engaging the strip to be wound for bringing said catching and cutting means automatically into operation.

5. In a machine for winding up fabric strips of a predetermined length, such as embroidery strips, festoons, insertions and the like, a winding spindle, means for rotating said spindle, fastening means on the latter for the end of a strip, means to automatically cut off strips of predetermined length, a pivotally mounted arm, mechanism for actuating said arm, a fabric catcher carried by said arm adapted to catch the end of a strip from behind the cutting means and to hold the end of said strip, means for moving said fabric catcher toward the winding spindle to automatically attach the end of the fabric to said fastening means, a fabric presser to hold the strip during the cutting operation and to fasten the end of the strip to said catcher, two coöperating rollers for moving the strip forward, one of said rollers being carried by said fabric presser and lifted thereby when the latter acts upon the strip, means for rotating the other roller, and controlling means including a detector engaging the strip to be wound for bringing said catching and cutting means automatically into operation.

[Claims 6 to 12 not printed in the Gazette.]

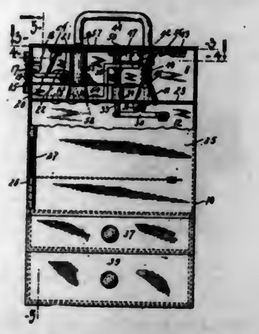
1,211,059. FENCE ATTACHMENT. JULIUS A. BLANK, Fremont, Wis. Filed Feb. 28, 1916. Serial No. 81,032. (Cl. 256—1.)



1. In a fence structure, the combination with spaced uprights, of a stringer slotted at each end for adjustable and detachable engagement rigidly with the uprights, sharpened stakes secured to and extending in one direction beyond the stringer to penetrate the ground with the stringer resting upon the surface thereof, certain of said stakes being extended in the opposite direction beyond the stringer for connection with a fence wire.

2. An attachment for fences comprising a stringer, adapted for rigid engagement with spaced uprights, a plurality of sharpened stakes secured to and extending in one direction from the stringer, and adapted to penetrate the ground with the stringer resting upon the surface thereof, certain of said stakes being continued in the opposite direction beyond the stringer and means carried by the continuations of said last named stakes for connection with a fence wire.

1,211,060. COIN-CONTROLLED CABINET. EUGENE BLUM and GÉZA MÜLLER, New York, N. Y. Filed Sept. 23, 1916. Serial No. 121,795. (Cl. 194—84.)



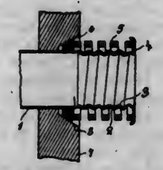
1. In a device of the character described, the combination with a box having a door provided with a catch, a lever disposed within said box in engagement with said catch for holding said door in its closed position, an oscillatable spindle, a coin chute fixedly attached to said spindle, a disk rotatably mounted upon said spindle provided with radial slots and with ratchet teeth-like projections upon its under face, said box having a coin-receiving slot normally registering with said chute and with one of the slots in said disk, whereby a coin inserted into the slot in said box forms a connector between said disk and said chute, and a spring-pressed actuating bar in engagement with said lever and said projections, substantially as and for the purpose specified.

2. In a device of the character described, the combination with a box having a door provided with a catch, a lever disposed within said box in engagement with said catch for holding said door in its closed position, an oscillatable spindle, a coin chute fixedly attached to said spindle, a disk rotatably mounted upon said spindle provided with radial slots and with ratchet teeth-like projections upon its under face, said box having a coin-receiving slot normally registering with said chute and with one of the slots in said disk, whereby a coin inserted into the slot in said box forms a connector between said disk and said chute, and means operated by said projections for disengaging said lever from said catch when said disk is given a partial turn.

3. In a device of the character described, the combination with a box having a door provided with a catch, a lever disposed within said box in engagement with said catch for holding said door in its closed position, an oscillatable spindle, a coin chute fixedly attached to said spindle, a disk rotatably mounted upon said spindle provided with radial slots and with ratchet teeth-like projections upon its under face, said box having a coin-receiving slot normally registering with said chute and with one of the slots in said disk, whereby a coin inserted into the slot in said box forms a connector between said disk and said chute, means operated by said projections for disengaging said lever from said catch when said disk is given a partial turn, a second disk rotatably mounted within said box, a second door upon said box having a catch, a lever in engagement with said second catch, means upon said second disk for disengaging said second lever from said second catch when said second disk completes an entire turn, and a gearing between said two disks causing said second-named disk to move through a partial turn whenever said first-named disk completes a whole turn.

4. In a device of the character described, the combination with a box having a door provided with a catch, a lever disposed within said box in engagement with said catch for holding said door in its closed position, an oscillatable spindle, a coin chute fixedly attached to said spindle, a slotted disk rotatably mounted upon said spindle, said box having a coin-receiving slot normally registering with said chute and with one of the slots in said disk, whereby a coin inserted into the box slot forms a connector between said disk and said chute, and coöperating means upon said disk and said lever for disengaging the latter from said catch whenever said disk is moved through an angular distance corresponding to that between two adjacent slots therein.

1,211,061. PIPE-PACKING HOLDER. HERMANN BOCK, Buchatz, Oberschlesien, Germany. Filed Apr. 16, 1914. Serial No. 832,293. (Cl. 137—131.)



1. In a pipe packing, the combination of a pipe having a threaded end portion, an annular packing member surrounding the pipe, a nut engaging said threads, and a coiled spring surrounding the pipe, interposed between and bearing on the packing and a flange on one end of the nut, whereby the tension of the spring may be regulated.

2. In a pipe packing, the combination of a tube wall having a tube aperture formed with a conical face, a tube projecting through said aperture having an internally threaded end portion, a nut having external threads engaging said internally threaded portion, a packing ring seated on said face, and a coiled spring surrounding the pipe between and bearing on the ring and a flange formed on the end of the nut whereby the tension of the spring may be regulated.

1,211,062. KITCHEN-SPOON. CARRIE OTTO BOWMAN, Mesilla Park, N. Mex. Filed Jan. 19, 1916. Serial No. 72,985. (Cl. 65—12.)



A kitchen implement consisting of a handle having attached thereto a spoon-like bowl whose forward edge extends obliquely across the bowl so as to provide a longer edge at one side of the bowl than at the other side, this oblique forward edge of the bowl curving to correspond with the cross-section of the bowl, for the purposes herein set forth.

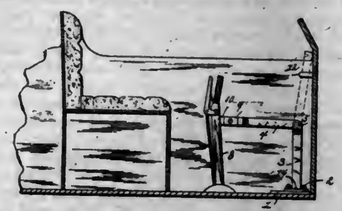
1,211,063. RAILWAY-TIE. HUGH L. BOY, Speers Ferry, Va. Filed June 16, 1916. Serial No. 104,024. (Cl. 238—5.)

1. A railway tie comprising a wooden tie, a metallic casing embracing said tie, pairs of enlargements arranged adjacent the opposite ends of said casing, the portions of said casing intermediate the enlargements of each pair being cutaway, and rail clamping members supported upon said wooden tie and engaged between the pairs of enlargements.



2. A railway tie comprising a wooden tie, a metallic casing including a top plate and spaced depending flanges carried thereby embracing said wooden tie, a pair of enlargements formed adjacent each end of said casing, a pair of clamping members arranged between the enlargements of each pair, the portions of said casing intermediate said enlargements being cutaway, adjusting screws threaded in such enlargements and engaging said clamping members for holding the latter in operative position, and means to lock said screws in adjusted position.

1,211,064. LOCKING DEVICE FOR AUTOMOBILES. MILFARD W. BOYCE, Kearney, N. J. Filed Dec. 1, 1915. Serial No. 64,442. (Cl. 70—90.)



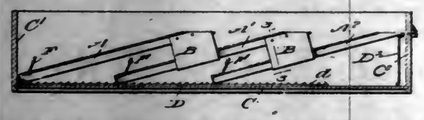
1. In a device for securing an operating lever, a base plate provided with slots secured to the floor of a car, a standard designed to be adjustably secured in said base plate by means of said slots toward and away from the operating lever, an arm pivotally secured to said standard, the free outer end of said arm being provided with a recess, a stud secured on said operating lever adapted to be engaged by the recess in said movable arm, pin-cylinder means secured on said movable arm, a keeper on said operating lever in close proximity to said stud, said pin-cylinder means adapted to engage with said keeper, whereby when said means are in locking engagement with said keeper, said stud and recess are in further engagement, for locking and holding said operating lever in its normal position.

2. In a device for securing an operating lever, an adjustable standard, an arm pivoted to said standard adapted to be engaged by and disengaged from the operating lever, the free outer end of said arm being provided with receiving means, holding means secured on said operating lever designed to engage with the said receiving means on said movable arm, pin cylinder means also secured on the free outer end of said movable arm, a keeper on said operating lever in close proximity to the means on said operating lever, said pin-cylinder means adapted to engage with said keeper, whereby when said means are in locking engagement with said keeper, the first-mentioned means on both the movable arm and operating lever are also in engagement, for locking and holding said operating lever in its normal position.

1,211,065. DRAWER-RACK. FREDERICK BRADY, Middletown, Del. Filed Mar. 27, 1915. Serial No. 17,372. (Cl. 45—7.)

1. A drawer rack comprising a series of inclined parallel partition plates, each of which has flanged side edges, and guides connecting the side edges of the several plates and maintaining the same in spaced parallel relation and slidable with respect to one another, each of said guides consisting of a plate secured to and depending from the forward end of the flanged side edge of its respective par-

tition plate, and having a flange and an extension provided with a reverting edge adjacent the flange.



2. A drawer rack comprising a series of inclined parallel partition plates, guides carried by and connecting the said plates in parallel slidable relation and spaced apart, each of said guides consisting of a plate depending from and secured to the forward portion of its respective partition plate, and having a flange at one end, and an extension provided with a reverting edge adjacent the flange.

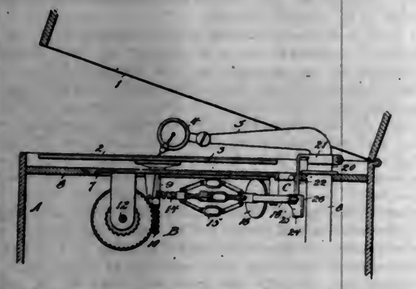
3. A drawer rack comprising a series of partition plates held in spaced parallel and inclined relation, each plate being movable in the direction of its length with respect to the other plates, and a supporting strip with which the lower edges of the plates are engageable to maintain the plates in adjusted relation, said strip extending beneath the several partition plates and having means to adjustably receive and hold the said lower edges thereof.

4. A drawer rack comprising a series of partition plates held in spaced parallel and inclined relation, guides adjacent the upper forward ends of the plates and connecting the same in movable relation to permit their lengthwise adjustment, and a supporting strip with which the lower edges of the plates are engageable to maintain the plates in adjusted position, said strip extending beneath the several plates, and being carried by one of said plates.

5. A drawer rack comprising a series of partition plates held in spaced parallel and inclined relation, each plate being movable in the direction of its length with respect to the other plates, and a supporting strip secured at its rear end to the rear plate of the series and extending freely in a forward direction beneath the series of plates, said supporting strip having a longitudinal series of struck-up lugs, with selected ones of which the lower edges of the other plates are engageable to maintain the several plates in adjusted relation.

[Claim 6 not printed in the Gazette.]

1,211,066. SPEED-CONTROLLER FOR GRAPHOPHONES. JOSEPH H. BRAGDON, New York, N. Y. Refiling of application Serial No. 758,380, filed Apr. 2, 1913. This application filed Jan. 14, 1915. Serial No. 2,157. (Cl. 74—45.)



1. In a graphophone, the combination of a casing, a graphophone record disk support mounted outside the casing, a driving mechanism within the casing and operatively connected with the support for rotating the same, said mechanism including a speed governor, a sound box carrier in the form of a hollow tone arm having a vertical portion serving as the axis on which the arm swings, said arm being movable by the grooves in the record and mounted exteriorly to the casing and in coöperative relation with the said support, and a device carried by and movable with the vertical portion of the tone arm and extending into the casing to control the governor for obtaining a uniform rotative speed of the record disk support, or a progressively varying rotative speed thereof.

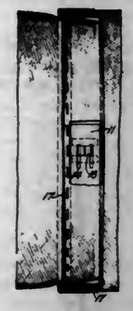
2. In a graphophone, the combination of a reproducer, a tone arm supporting the reproducer, a record disk driving mechanism including a speed governor, and a device mounted on the reproducer tone arm and adjustable to different positions to control the speed governor for obtaining a uniform rotative speed or a progressively varying rotative speed of the record disk.

3. The combination of a carrier for a sound box, a record disk driving mechanism, a speed governor including a brake disk, a controller therefor consisting of a brake shoe element engaging the said disk, and separate surfaces movable with the said carrier to operate on the brake shoe element to obtain a uniform rotative speed or a progressively varying rotative speed of the record disk.

4. The combination of a swinging reproducer-carrying arm, mechanism for driving a record disk, a governor therefor including a brake shoe element, a device having separate surfaces respectively concentric and eccentric to the axis on which the reproducer carrying arm swings, and means for adjusting the device to engage either surface with the brake shoe element.

5. The combination of a swinging reproducer-carrying arm, mechanism for driving a record disk, a governor therefor including a brake shoe element, a device having separate surfaces respectively concentric and eccentric to the axis on which the reproducer carrying arm swings, means for adjusting the device to engage either surface with the brake shoe element, and means for setting said device with respect to the brake shoe element to obtain any desired initial speed of the record driving mechanism.

1,211,067. CANVAS-HOSE COUPLING. NORMAN BLYTHE BRALY, Butte, Mont. Filed Aug. 8, 1916. Serial No. 113,702. (Cl. 137—28.)

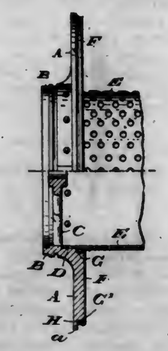


1. A hose coupling comprising a coupling ring formed with an inwardly extending flange, said ring being cut or divided at one point so that the ends may overlap, and means for slidingly holding said ends in position, the ring connected with one section of hose being capable of insertion into the next adjacent section of hose.

2. In a hose coupling of the character described, the combination of a canvas hose divided into sections, a resilient metallic ring arranged at each end of each of said sections, said rings being cut at one point in order to overlap, a pair of slots in each of the overlapped portions or ends of said ring, said slots extending longitudinally of the rings, and a binding plate formed with a body fitting against the ring and with retaining extensions projecting through said slots and overlapping part of the material of the ring between the slots whereby the overlapped ends cannot become disengaged but may freely move longitudinally so as to vary the diameter of the ring.

3. A coupling for canvas hose comprising a ring divided at one point and overlapped at the divided point, said overlapped sections having each a pair of longitudinally arranged slots, and a clip having arms extending from said slots for preventing disengagement of the overlapping sections while allowing a free longitudinal movement within limits, whereby the ring on the end of one section of hose may be forced into or from the ring of the next adjacent section.

1,211,068. PERFORATED BEAM FOR DYEING AND LIKE APPARATUS. JOHN BRANDWOOD, THOMAS BRANDWOOD, and EDWARD BRANDWOOD, Bury, England. Filed Oct. 27, 1914. Serial No. 868,842. (Cl. 8—17.)



1. In a perforated beam for dyeing or like apparatus a flange at the end of the beam comprising a thin protective facing and an iron backing for such facing, the backing being at least the full diameter of the facing, substantially as hereinbefore described.

2. In a perforated beam for dyeing and like apparatus a flange at the end of the beam comprising a thin protective facing and an iron backing for such facing, the backing being of larger diameter than the facing, substantially as hereinbefore described.

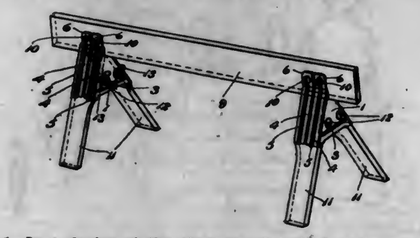
3. In a perforated beam for dyeing and like apparatus a flange at the end of the beam comprising an iron foundation and a thin nickel covering plate on the inner face, substantially as described.

4. In a perforated beam for dyeing and like apparatus a flange at the end of the beam comprising an iron foundation and a thin nickel covering plate the edges of which are spun or pressed into contact with the iron foundation, substantially as hereinbefore described.

5. In a perforated beam for dyeing and like apparatus a flange at the end of the beam comprising an iron foundation and a thin nickel covering plate of less diameter, the edges of which are pressed into contact with the iron foundation, substantially as hereinbefore described.

[Claims 6 and 7 not printed in the Gazette.]

1,211,069. SAWHORSE. WILLIAM BRETHOUR, Wyoming township, Kent county, Mich. Filed Feb. 29, 1916. Serial No. 81,100. (Cl. 20—83.)

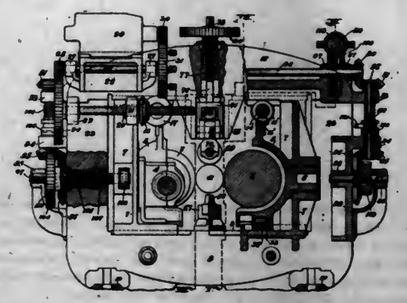


1. In a device of the character described, a beam, oppositely disposed tie members, depending from and secured to the beam in pairs, legs inserted between the members of each pair of members and devices to draw the members of each pair of members toward each other and against the edges of said legs to thereby bind the tie members and legs together.

2. In a device of the character described, a beam, tie members each including a flat body wider at the bottom than at the top with sides bent at substantially right angles to the body at each side edge and extending above the body to provide ears for attachment to the beam, and a ledge bent at right angles from the lower edge of the body, the ends of said ledge terminating a distance from the sides, said tie members being secured to the beam in pairs adjacent each end of the beam and with the sides thereof extending toward each other, legs inserted between the ends of the ledges and adjacent sides of the tie members, and means passing through the bodies of said pairs of tie members to draw the members firmly against the legs.

3. A tie member for devices of the character described comprised of a metal body wider at one end than at the other sides bent at substantially right angles from the body, ears integral with the sides extending beyond the narrow end of the body and spaced apart adapting them to receive a beam therebetween, and a ledge bent from the wider end of the body, said ledge terminating at each end a distance from the said sides, substantially as described.

1,211,070. TUBE-REDUCING MILL. RICHARD E. BROCK, Canton, Ohio. Filed Feb. 21, 1916. Serial No. 79,587. (Cl. 80—13.)



1. In a tube rolling mill, a pair of continuously operable cross rolls, a tilting frame for each cross roll having journal bearings therefor, and simultaneously operable gearing operatively connecting said tilting frames for alternating their relative positions together.

2. In a tube rolling mill, a pair of continuously operable cross rolls, means for alternating their relative positions, and means for re-introducing a blank by its last treated end to the cross rolls.

3. In a tube rolling mill, a pair of continuously operable cross rolls, a tilting frame for each cross roll having journal bearings therefor, simultaneously operable gearing operatively connecting said tilting frames for alternating their relative positions, and means for adjusting the cross rolls toward or from each other and maintaining such operative connection.

4. In a tube rolling mill, a pair of continuously operable cross rolls, a tilting frame for each cross roll having journal bearings therefor, simultaneously operable gearing operatively connecting said tilting frames for alternating their relative positions, and means for guiding and forcibly introducing a blank between the cross rolls endwise alternately in opposite directions.

5. In a tube rolling mill, a pair of continuously operable cross rolls, means for alternating their relative positions, means at one side for guiding and introducing a blank between the cross rolls, and means beyond the cross rolls for imparting reversing endwise movement of the blank and re-introducing it to the cross rolls during reversing operation thereof.

[Claims 6 to 26 not printed in the Gazette.]

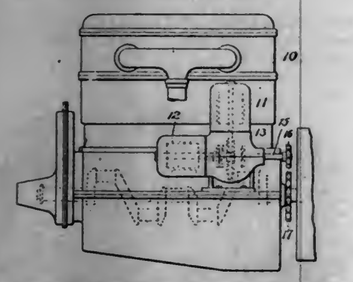
1,211,071. ASH-RETAINING CIGARETTE AND THE LIKE. GEORGE H. BROWN, Wilkinsburg, Pa. Filed Mar. 11, 1916. Serial No. 83,560. (Cl. 131—51.)



1. A device of the character described including an ash retaining cage for cigarettes and the like, and a flame extinguishing collar slidably mounted upon the ash retaining cage and adapted to be set at any desired position thereon.

2. A device of the character described, including a tubular ash retaining cage for cigarettes or the like, a band applied to one end of the cage, and a flame extinguishing collar slidably mounted upon the cage and adapted to be moved against the band or set at any desired position upon the cage.

1,211,072. ENGINE-STARTING AND CURRENT-GENERATING APPARATUS. ALANSON P. BRUSH, Flint, Mich. Filed Jan. 30, 1913. Serial No. 745,073. (Cl. 74—7.)



1. In starting and lighting apparatus for a motor vehicle and in combination with the internal combustion engine thereof, a starting motor and a lighting generator in the form of a self-contained unit and power transmitting mechanism for both elements of the unit having a single connection with the crank shaft of the engine.

2. In starting and lighting apparatus for a motor vehicle and in combination with the engine thereof, a starting motor and a lighting generator in the form of a unitary structure or self-contained unit, power transmitting mechanism for both parts of the unit and including an element having a single driving connection with the crank shaft of the engine, and clutch mechanism between the motor and said element.

3. In starting and lighting apparatus for a motor vehicle and in combination with the engine thereof, a starting motor and a lighting generator in the form of a unitary structure or self-contained unit, a single support by which said unit is supported on the vehicle in a fixed position with reference to the engine, and power transmitting mechanism for both the motor and generator having a single driving connection with the crank shaft of the engine.

4. In combination with the engine of a motor vehicle, engine starting and lighting apparatus for the vehicle, including a motor, a generator and a driving shaft for both the motor and generator, all said parts being in the form of a unitary structure adapted to be applied as a unit to the vehicle, said shaft having a single driving connection with the crank shaft of the engine, and the motor being connected to the shaft by a one-way driving clutch.

5. In combination with the engine of a motor vehicle, engine starting and lighting mechanism for the vehicle and including a starting motor, a lighting generator and power transmitting means for both the motor and generator, said power transmitting means having a single driving connection with the crank shaft of the engine, and said motor, generator and power transmitting means being in the form of a unitary structure having a common support and adapted to be applied as a unit to the vehicle and to be supported thereby in definite relationship with respect to the engine.

[Claims 6 to 11 not printed in the Gazette.]

1,211,073. RETINOSCOPE. LUCIAN W. BUGBEE, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Aug. 7, 1916. Serial No. 113,524. (Cl. 88—20.)



1. A retinoscope, comprising a continuous transparent disk having a transparent reflecting coating applied thereto, whereby the device may be employed to cast a beam of light into the eye of a patient and at the same time permit of uninterrupted inspection of the eye of the patient through the retinoscope by the operator.

2. A retinoscope or the like, comprising a transparent disk having the property of selective absorption of light rays, said disk having applied thereto a transparent reflecting coating whereby light impinging on the disk will be reflected back in the direction of its origin while an operator may have clear vision through the disk and coating in the direction of the projected light.

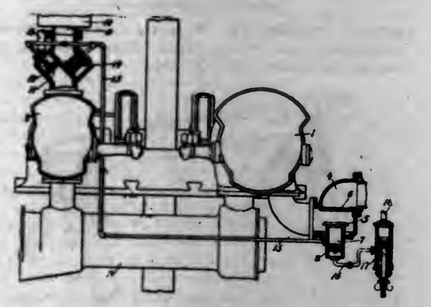
3. A retinoscope composed of superimposed transparent layers, one of said layers having the property of selecting absorption and the other of selective reflection of light rays.

4. A retinoscope comprising superimposed transparent layers, one of said layers having the property of reflection of light rays.

5. A retinoscope comprising superimposed transparent layers, one of said layers having the property of selective absorption of light rays, and the other of said layers having the property of reflection of rays in the visible spectrum.

[Claim 6 not printed in the Gazette.]

1,211,074. REGULATOR FOR FLUID-COMPRESSORS. EMERY L. BULKLEY, Painted Post, N. Y., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 5, 1914. Serial No. 875,588. (Cl. 230—24.)

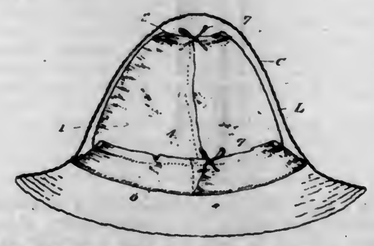


1. In a regulator for fluid compressors, in combination, a compressor, its receiver, a discharge line unloading valve mechanism, an intake closing valve, a valve mechanism for operating said intake valve at a predetermined receiver pressure and means controlled by the movement of said intake valve to operate said discharge line valve after said intake valve has operated.

2. In a regulator for fluid compressors, in combination, a compressor, its receiver, a discharge line unloading valve mechanism, an intake closing valve, valve mechanism for closing said intake valve at a predetermined receiver pressure, and a conduit for conveying fluid to operate said discharge line valve controlled by the movement of said intake closing valve, to open said discharge valve after said intake valve has closed.

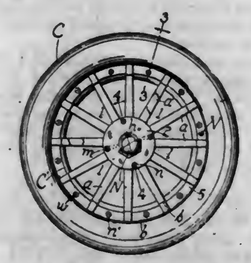
3. In a regulator for fluid compressors, in combination, a compressor, its receiver, a discharge line opening valve, an intake closing valve, valve mechanism for closing said intake valve at a predetermined receiver pressure, a piston for operating said intake closing valve, and a fluid conduit leading to said discharge valve opened to a fluid supply by the movement of said piston in closing said intake valve.

1,211,075. WOMAN'S HAT-BANDING. MARY A. BURNS, Williamstown, N. Y. Filed Oct. 5, 1915. Serial No. 54,249. (Cl. 2—113.)



In combination with a hat, a lining therefor comprising a flexible strip of material having one marginal portion secured to the crown of the hat, the opposite longitudinal margin of the strip being provided with a hem, said strip at a predetermined point inwardly of its connected longitudinal margin being provided with a tuck, said tuck and hem extending the entire length of the lining, and flexible members threaded through the hem and the tuck, the ends of the flexible strip being free one from the other.

1,211,076. VEHICLE-WHEEL. WILLIAM H. BURRITT, St. Louis, Mo. Filed Mar. 29, 1915. Serial No. 17,781. (Cl. 21—69.)



1. In combination with a vehicle-wheel provided with a hub, series of spokes radiating from said hub in two distinct planes spaced apart, an outer felly ring at the free ends of each series of spokes, an inner felly ring opposite the outer ring, a tire secured to the rings and forming therewith the rim of the wheel, said rim being shouldered to and between the series of spokes disposed in the respective planes aforesaid, and a controllable member on the hub for forcing the shoulders of the respective spokes into locking engagement with the tire.

2. In combination with a vehicle-wheel provided with a hub, series of spokes radiating from said hub in two distinct planes spaced apart, an outer felly ring at the free ends of each series of spokes, an inner felly ring opposite to the outer ring, a spacing rib between the rings, a pneumatic tire comprising inner and outer casings having their edges confined between the respective rings and brought into contiguous relation opposite the spacing rib between the rings, means for clamping the casings to the rings, shoulders or offsets formed on the spokes at points to cause said offsets to engage the walls of the openings of the outer rings, and a controllable member on the hub for forcing the shoulders of the several spokes into locking engagement with said outer felly rings.

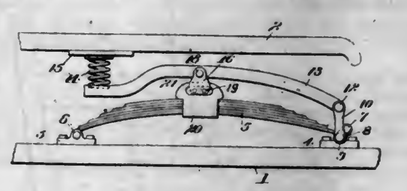
3. In combination with a vehicle-wheel provided with a hub, series of body sections radiating from the hub and having inner terminal beveled edges inclined to the axis of the hub, an outer rim, the hub having inclined peripheral formations disposed at different radial distances from the axis of the hub coöperating with the beveled edges of the body sections, and means on the hub for forcing the body sections along the inclined portions of the hub whereby the said sections are locked to the rim.

4. In combination with a vehicle-wheel provided with a hub, series of spokes radiating from said hub in two distinct planes spaced apart, outer and inner felly rings disposed in pairs at the free outer ends of each series of spokes, a channel rib on the inner felly ring maintaining a space between the rings, a tire comprising an outer casing disposed exteriorly to the felly rings, an inner casing disposed interiorly to the felly rings, the edges of the casings engaging the ribs from opposite sides and confined between the respective rings, the spokes being provided with offsets engaging the walls of the openings of the outer rings and having portions beyond the offsets engaging the outer faces of the outer rings, the spokes being adjustable radially, and means on the hub for forcing the offsets on the spokes against the walls of the openings of the outer felly rings and outer edges of the inner casing, whereby the spokes are locked to the tire.

5. In combination with a vehicle-wheel, a rim comprising inner and outer felly rings disposed in pairs spaced apart, a rib between the members of each pair for spacing said members apart, the walls of the openings of the outer rings being provided with flanges forming ledges inclining downward and outward toward the axis of rotation of the wheel, an inner casing having beaded edges confined between the rings and bearing against the ribs and ledges respectively, an outer casing having beaded edges confined between the rings and bearing against the outer walls of the ribs, a hub for the wheel, and means leading from the hub and engaging the ledges of the rim for locking the latter to the wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,211,077. SUPPORT FOR ENGINES. HERBERT BURTON, New York, N. Y. Filed Nov. 3, 1916. Serial No. 129,346. (Cl. 248—30.)



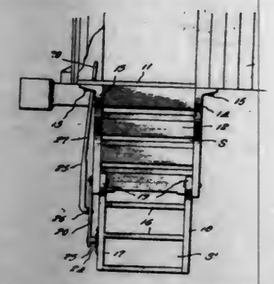
1. In a support for high speed engines and the like a main spring, an arm having one end pivotally connected to the spring and having a movable bearing between its ends on the main spring, a spring carried by the free end of the arm, and a platform supported by the spring carried by the arm.

2. In a support for high speed engines and the like, a main spring, a link at one end of the spring, an arm pivoted to the link and extending over the main spring, a spring carried by the free end of the arm, a platform carried by the spring on the arm, and a bearing carried

by the arm provided with rollers arranged to bear on the main spring midway between its ends.

3. In a support for high speed engines and the like, an inverted leaf spring, a link at one end of the spring, an arm pivoted at one end to the link, and extending over the inverted leaf spring, a spring carried by the free end of the arm, a platform carried by the spring on the free end of the arm, and a bearing carried by the arm provided with rollers arranged to bear on the inverted leaf spring midway between its ends.

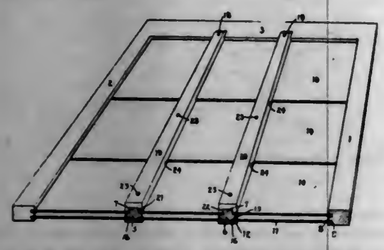
1,211,078. RAILWAY-CAR STEP. GEORGE BYRON and CLAUD SKIPWITH, Williams, Ariz. Filed Nov. 3, 1916. Serial No. 129,356. (Cl. 105—86.)



1. In a device of the character described, the combination with a fixed step section, of a movable step section hingedly connected to the bottom of first said section, and receivable within the same when not in use, a link fixedly connected to said movable step section and pivotally connected to the first said section, and an operating rod extending to the top of first said step section and pivotally connected with the intermediate portion of said link to raise and lower second said step section.

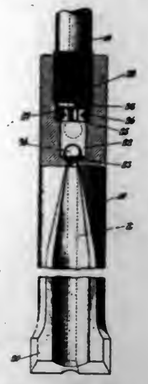
2. A device as specified, including the combination with a fixed step section, of a movable step section pivotally connected to the lower end of first said section and receivable within the same when not in use, a link pivotally connected with first said section and fixedly connected with second said section, and an operating rod slidable along first said section and pivotally connected with the intermediate portion of said link to raise and lower second said step section to bring the same into and out of operative position.

1,211,079. DUO-GLAZED SASH. THOMAS J. CALLAHAN, Dayton, Ohio. Filed Oct. 16, 1914. Serial No. 867,017. (Cl. 108—16.)



A glazed sash for garden frames, comprising a pair of parallel end members, a pair of side members secured thereto, the inner face of each of said side members having a wide longitudinal groove to receive lapped panes of glass, one or more intermediate longitudinal members, edges formed on the intermediate member or members to support said glass, a tongue extending upwardly from said intermediate member or members, a grooved strip removably mounted upon said tongue, and shoulders on the lower longitudinal edge of said strip opposite the ledges, to engage and hold in a lapped position, the panes of glass supported by said longitudinal grooves and ledges, substantially as described.

1,211,080. DRILL-BIT AND SECTIONAL ROD THEREFOR. RUSSELL S. CARTER, Hewlett, N. Y., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 9, 1914. Serial No. 843,917. (Cl. 255—31.)



1. In a pump drill, the combination of a bit having a longitudinal bore opening into a valve chamber of larger diameter, a valve, to close said bore, a shoulder at the upper end of said chamber, a retaining washer on said shoulder, a cylindrical drill rod receiving sleeve extending upwardly from said washer having a non-threaded portion immediately adjacent to said washer and a threaded portion of larger diameter above said non-threaded portion, together with a hollow drill rod having a threaded portion fitting said sleeve threaded portion, and a non-threaded extremity fitting said sleeve non-threaded portion.

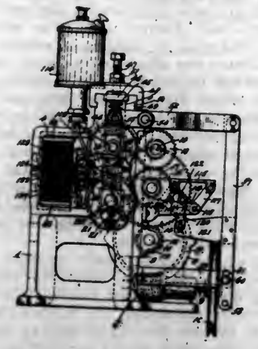
2. In a pump drill, the combination of a bit having a longitudinal bore opening into a valve chamber, a valve controlling said bore, a shoulder at the upper end of said chamber, retaining means on said shoulder, a cylindrical drill rod receiving sleeve extending upwardly from said retaining means having a threaded portion, together with a hollow drill rod having a threaded portion fitting said sleeve threaded portion.

3. In a pump drill, the combination of a bit having a bore opening into a valve chest, a valve in said chest, to close said bore, a drill rod receiving sleeve extending upwardly from said valve chest, a valve retaining washer in the lower end of said sleeve, and a drill rod threaded into said sleeve, said drill rod retaining said washer and valve in position.

1,211,081. APPARATUS FOR FORMING TAB-STOCK. FRANCIS M. CASE, Cleveland, Ohio, assignor to J. C. Hub, Cleveland, Ohio. Filed Apr. 1, 1914. Serial No. 828,879. (Cl. 18—11.)

1. Apparatus for forming celluloid tab stock, comprising a guide for the central body strip, means for applying a solution to both sides of the body strip, means for guiding side plate portions into position upon the opposite faces of the main body strip, and means for applying pressure and heat to the several strips to amalgamate the same.

2. Apparatus for forming celluloid tab stock, comprising means for guiding several strips into contact with each other, means for applying a solution between the strips, means for heating the strips before they contact with each other, and means for applying pressure and heat to the several contacting strips to amalgamate the same.



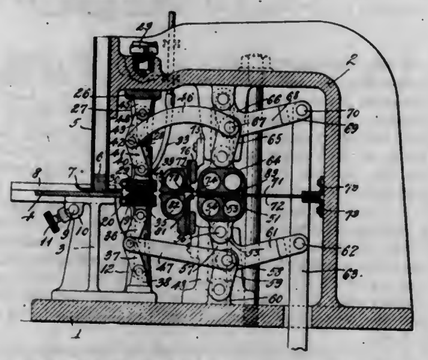
3. An apparatus for forming tab stock comprising means for feeding a plurality of strips of celluloid, means for applying an amalgamating solution between the strips, a pair of pressure rolls, means normally tending to force said rolls together, means for bringing about a relative movement of said rolls to separate the same, and a gage for the strips adapted to enter between the rolls when separated.

4. An apparatus for forming tab stock comprising means for feeding a plurality of strips of celluloid, means for applying an amalgamating solution between the strips, an amalgamating roll, another amalgamating roll, means for driving said rolls, means for moving one of said rolls bodily with respect to the other, and a gage actuated by said roll moving means and adapted to enter the space between said rolls when separated and form a stop for the strips.

5. An apparatus for forming celluloid tab stock comprising means for amalgamating the same, a feeding mechanism for the strips and comprising a device having a plurality of separated guiding openings one for each strip, and means arranged between the strips for applying an amalgamating solution between the strips.

[Claims 6 to 11 not printed in the Gazette.]

1,211,082. APPARATUS FOR MAKING TAB-CARDS. FRANCIS M. CASE, Cleveland, Ohio, assignor to J. C. Hub, Cleveland, Ohio. Filed May 18, 1914. Serial No. 839,846. (Cl. 93—1.)



1. In apparatus for making tab sheets, means for receiving and guiding a sheet, and means for forming a designating three ply tab structure and securing the same to the sheet.

2. In apparatus for making tab sheets, means for receiving and guiding a sheet, and means for forming and securing a celluloid designating tab thereto, said tab comprising a main body portion and a binder, the binder being secured to the sides of the main body portion and to the sheet.

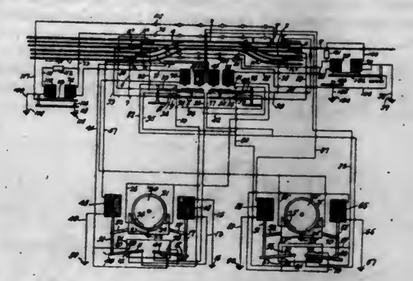
3. In apparatus for making tab sheets, means for receiving and guiding a sheet, means for feeding and guiding a tab body with its edge in juxtaposition to the edge of said sheet, and means for binding and securing said tab body to the sheet.

4. In apparatus for making tab sheets, means for receiving and guiding a sheet, and means for forming a plural ply designating tab structure and securing the same to both faces of the tab edge of the sheet.

5. In apparatus for making tab sheets, means for receiving and guiding a sheet, means for feeding and guiding a tab body with its edge in juxtaposition to the edge of said sheet, and means for guiding a binder strip and applying the same to the body portion and adjacent portion of the sheet.

[Claims 6 to 22 not printed in the Gazette.]

1,211,083. ELECTRIC SIGNAL SYSTEM. ALVA H. CAVEN, Youngwood, Pa. Filed Oct. 23, 1914. Serial No. 868,257. (Cl. 246—36.)



1. In a signal system, a tell-tale circuit having a signaling means, a normally closed signal circuit having signaling means and a resistance therein to dim the signaling means, means for shunting said resistance, the signal circuit and shunting means having coöperating means for normally holding the tell-tale circuit open.

2. In a signal system, a tell-tale circuit having signaling means, a normally closed signal circuit having signaling means and a resistance therein to dim the signaling means, means for shunting said resistance, the signal circuit and shunting means each having an electromagnet, and the tell-tale circuit having a switch normally held open by one or the other of said electromagnets.

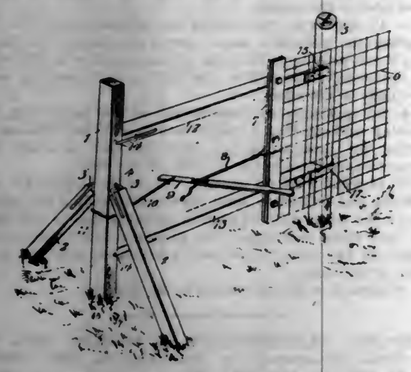
3. In a signal system, a tell-tale circuit having signaling means, a normally closed signal circuit having signaling means and a resistance therein, means for shunting said resistance, and said signal circuit and shunting means having coöperating means controlling the tell-tale circuit.

4. In a signal system, a tell-tale circuit having signaling means, a normally closed signal circuit having signaling means and a resistance therein, means for shunting said resistance, the signal circuit and shunting means each having an electromagnet, and the tell-tale circuit having a switch controlled by each of said magnets.

1,211,084. ANCHOR FOR WIRE-STRETCHERS. JOHN CESSNA, Locust Grove, Ohio. Filed Apr. 21, 1916. Serial No. 92,776. (Cl. 254—51.)

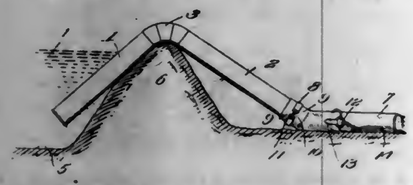
A wire stretcher anchor comprising a vertical standard, post engaging arms connected to the standard, said connection including a U-shaped member, the ends of said member being bent into engagement with the arm, staples engaging the U-shaped member and the arms to prevent dislodgment of the same, the end of the arm being provided with a recess intermediate the edges thereof, said recess being adapted to receive a U-shaped staple attached

to the standard and embodying the first mentioned U-shaped member, and the said standard being provided



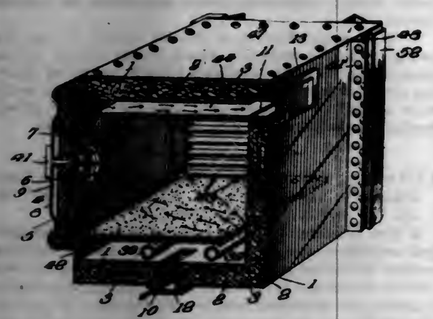
with a recess to receive the end of the first mentioned U-shaped member, and brace arms carried by said standard universally connected therewith for a purpose specified.

1,211,085. SIPHON. NATHANIEL M. CHANDLER, Woodland, Cal. Filed Mar. 17, 1915. Serial No. 14,955. (Cl. 137—20.)



In combination with a siphon, a flexible collapsible tube having one end fitted around the outer end of the delivery leg of the siphon, a clamp for clamping said end to the siphon leg, a handle comprising a flexible loop encircling the tube, said tube having a ring, and the loop passing through the ring after it encircles the tube to provide a handhold and means for closing the tube during the act of handling by the loop.

1,211,086. COOKING-OVEN. GUY B. CHILD, Chicago, Ill., assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Original application filed Dec. 27, 1915, Serial No. 68,703. Divided and this application filed Feb. 23, 1916. Serial No. 79,918. (Cl. 126—39.)



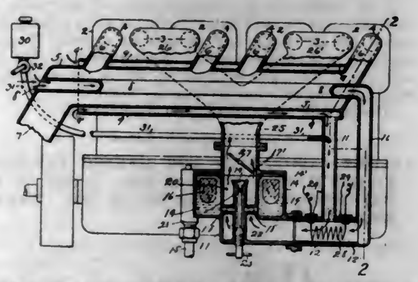
1. An oven of the fireless cooker principle, comprising an oven chamber having inner and outer walls, a filling of insulating material between the said walls and in engagement throughout the entire inner surface of the walls whereby the walls form a support for the insulating material, the outer wall having ventilating openings, and means within the oven for heating it whereby any odor or moisture within the insulating material is driven by the heat therefrom through the said ventilating openings.

2. An oven of the fireless cooker principle, comprising an oven chamber having inner and outer walls, and a filling of insulating material between the said walls, the insulating material engaging the walls throughout its surface whereby the walls form a positive and direct support for the insulating material, the outer wall having ventilating openings, a cover for the openings spaced from the outer wall, the said cover also having openings, and means for heating the oven.

3. An oven of the fireless cooker principle, comprising an oven chamber having inner and outer walls, a filling of insulating material between the walls and in direct contact therewith throughout its surface, whereby the walls form a support for the insulating material; the edges of the outer wall having ventilating openings, a combined cover and shield on the outside of the wall and located over and apart from the ventilating openings for the purpose described, and means for heating the oven.

4. An oven of the fireless cooker principle, comprising an oven chamber having inner and outer walls, a filling of insulating material between the walls, the outer wall having ventilating openings for the insulating material, and heating means within the oven whereby the insulating material is heated and moisture and odor driven therefrom through the ventilating openings of the outer wall.

1,211,087. MEANS FOR CONVERTING KEROSENE-OIL INTO EXPLOSIVE GAS FOR INTERNAL-COMBUSTION ENGINES. ERVING D. CLARK, Syracuse, N. Y. Filed Mar. 13, 1916. Serial No. 83,966. (Cl. 261—12.)

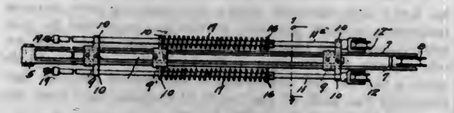


1. The combination with a conduit for the passage of a heating element having a plurality of independent chambers for conducting air to be heated by the heating element, a receiving means communicating with all of said hot air chambers, means for feeding a priming fluid to one of the hot air chambers, a heating coil for vaporizing the priming fluid, and a carbureter communicating with the receiving means.

2. The combination with a conduit for the passage of a heating element, of an air conducting means for conveying air to be heated by the heating element, means discharging a priming fluid in the air conducting means, a heating coil for vaporizing said priming fluid, and a conducting pipe for delivering said vaporized priming fluid and the heated air to a carbureter, substantially as described.

3. The combination of a conduit for the passage of a heating element having an air chamber passing through its center, an independent air chamber enveloping the same, the corresponding ends of said chambers being open to receive incoming air to be heated by the heating element passing through the conduit, a receiving chamber common to both of said hot air chambers, a priming nozzle in one of said hot air chambers, a heating chamber at a point where the priming chamber communicates therewith for initially vaporizing the priming fluid, a carbureter, and means connecting the receiving chamber with the carbureter.

1,211,088. ELECTRIC RAILWAY. JAMES M. CLARK, Macon, Ga., assignor of one-fifth to Du Pont Guerry, Macon, Ga. Filed Jan. 22, 1916. Serial No. 73,586. (Cl. 104—155.)



1. The combination with an electric railway car, a switch mechanism and a normally open electrical circuit, of a trolley attachment including the main trolley, wheel and conductor, a supplemental trolley pole carried by the main trolley provided with a contact member and movable relatively to the main pole, means on the car for retaining said supplemental pole in retracted position, and means for projecting the supplemental pole to close the circuit and operate the switch.

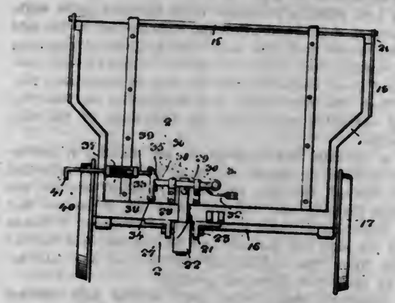
2. The combination with an electric railway car, a switch and electrical connections therefor, and a trolley wheel and supporting pole, of guide brackets attached to the pole, a supplemental trolley pole and contact member movably supported in said brackets, means for projecting the supplemental trolley pole, and means for normally retaining the pole in retracted position.

3. The combination with a trolley pole having guide brackets, of a supplemental trolley pole and contact member supported in the brackets, means tending to project the supplemental pole, and means for positively holding the pole in retracted position.

4. The combination with a trolley pole having guide brackets, of a supplemental trolley pole and contact member supported in the brackets, a spring engaging a fixed part of the pole to project it, and a retaining device for positively holding the spring compressed and the pole retracted.

5. The combination with an electric car and its main trolley pole, of guide brackets on the trolley pole, a supplemental trolley pole movably supported in the brackets, a spring engaging a fixed part of the supplemental trolley pole and also the main trolley pole and tending to project the pole, a cord attached to the supplemental pole, a locking bolt attached at the end of the cord and a casing for the bolt, and means for locking the bolt in position to hold the supplemental trolley pole in retracted position.

1,211,089. MINE-CAR. JAMES V. CLARK, Davis, W. Va. Filed May 13, 1916. Serial No. 97,340. (Cl. 105—15.)



1. A mine car having a swingingly supported end gate, a swingingly supported socket member, a pin slidable in said socket member and adapted to obstruct the end gate, and spring means actuating the socket member to hold the locking pin in obstructing position.

2. A mine car having a swingingly supported end gate, a swingingly supported socket member, a pin slidable in said socket member and adapted to obstruct the end gate, spring means engaging the socket member to hold the locking pin in obstructing position, and friction means for retaining the slidable locking pin in adjusted position in the socket member.

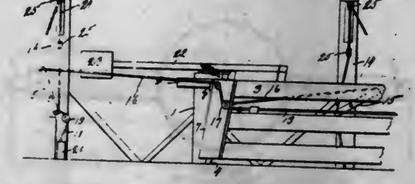
3. A mine car having a swingingly supported end gate, a swingingly supported socket member, a locking pin slidable in the socket member, friction means to retain the pin in adjusted position in the socket member, hook-shaped brackets on the end gate adapted to receive the locking pin between them, and a locking bar pivoted on the end gate and adapted to engage the hook-shaped brackets adjacent to the locking pin.

4. A mine car having a swingingly supported end gate, a swingingly supported socket member, a locking pin slidable in the socket member, friction means to retain the pin in adjusted position in the socket member, hook-shaped brackets on the end gate adapted to receive the locking pin between them, a locking bar pivoted on the end gate and adapted to engage the hook-shaped brackets adjacent to the locking pin, and spring means engaging the socket member to hold the locking pin in engaging position with respect to the end gate.

5. In a mine car, a swingingly supported end gate, a swingingly supported socket member, a locking pin slidable in the socket member and adapted to obstruct the end gate, a friction spring engaging the locking pin, a guide rod pivotally connected with the socket member, guide means for said rod, and a spring coiled on the guide rod.

[Claims 6 and 7 not printed in the Gazette.]

1,211,090. GATE. HOWARD L. COATS, Hammond, N. Y. Filed May 27, 1916. Serial No. 100,316. (Cl. 39—56.)



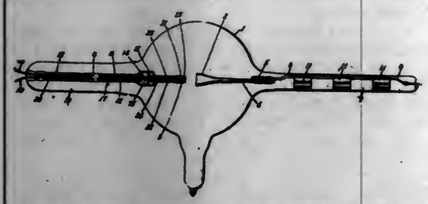
In a device of the class described, the combination with a post, of a gate pivotally mounted at its lower end adjacent to the post and pivotally connected at its upper end to the top of the post, the connection being loose, an arcuate horizontally disposed track mounted on the post, a roller on the gate and adapted to ride on the track, an arm secured to the upper portion of the gate and extending across the upper end of the post, a counter-weight on the extremity of said arm and means for tilting the gate out of a vertical plane.

1,211,091. CATHODE-RAY DEVICE. WILLIAM D. COOLIDGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 8, 1913, Serial No. 788,566. Renewed Sept. 26, 1916. Serial No. 122,314. (Cl. 250—35.)

1. An electrical discharge tube comprising an envelop, an anode, a cathode adapted to be independently heated disposed substantially in a plane normal to a line passing through anode and cathode, and means for focusing the cathode discharge, said envelop and electrodes being freed from ionizable gas to such extent as to render said tube operable with an electron discharge independent of gas ionization.

2. A cathode ray tube operable with an electron discharge independent of gas ionization, provided with a cathode having a heated portion disposed substantially in one plane perpendicular to the axis of the tube and a static focusing ring surrounding said cathode.

3. In a Roentgen ray tube, operable with an electron discharge independent of gas ionization, an anode, an electron-emitting cathode arranged in the shape of a flat spiral located perpendicular to the axis of the tube and having a diameter smaller than the working face of the anode.

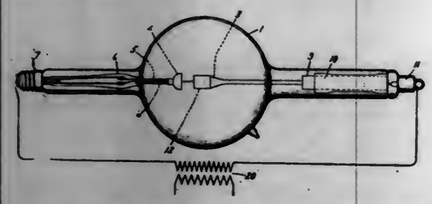


4. In an electron-discharge tube operable with a discharge independent of gas ionization, an anode, a cathode conductor consisting of a wire disposed substantially in a plane perpendicular to an axis passing through the electrodes, means for heating said wire, and means for focusing the cathode rays upon said anode.

5. In an X-ray tube operable with an electron discharge independent of gas ionization, an evacuated envelop pervious to X-rays, a stem having a tip of heat-resisting, insulating material projecting into said envelop, refractory supports joined to said tip, an anode and an electron-emitting cathode comprising a heated conductor and a surrounding ring of refractory conducting material carried by said supports.

[Claims 6 and 7 not printed in the Gazette.]

1,211,092. X-RAY TUBE. WILLIAM D. COOLIDGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 5, 1915. Serial No. 32,331. (Cl. 250—35.)



1. The combination of an envelop, a cathode adapted to be independently heated, an anode, means for focusing a discharge from said cathode upon a spot of restricted area on the surface of the anode, and conductive means electrically connected to said anode and surrounding at least in part the path of said discharge, said envelop being so highly evacuated that electrical conduction occurs by a pure electron discharge.

2. An X-ray device comprising the combination of a sealed envelop, the space within which is evacuated to a pressure so low that an electron discharge may occur therein substantially without evidences of positive ionization, an electron-emitting cathode, an anode, means for focusing a discharge from said cathode on the face of the anode, and conductive shielding means surrounding at least in part the face of said anode, while leaving an unobstructed path between said cathode and said anode for the passage of cathode rays.

3. A Roentgen-ray device comprising the combination of an envelop, in incandescing cathode, an anode, means for concentrating a discharge from said cathode upon the face of the anode, and a conductor connected to said anode and extending at least in part about the path of said discharge toward the cathode, said device being evacuated to a pressure so low that a discharge may occur therein substantially without positive ionization.

4. An electrical discharge device comprising the combination of a sealed envelop evacuated to a pressure so low that an electron discharge may occur therein substantially without positive ionization, a cathode adapted to be independently heated, an anode, means for focusing a discharge from said cathode upon the anode, and a conductive member, surrounding in part the charge-receiving face of the anode but providing an opening for admitting an electron discharge from the cathode, whereby an electric field is established suppressing the emanation of an electron discharge from the face of the anode.

5. The combination of a source of alternating current, an X-ray tube operable with a substantially pure electron discharge without positive ionization connected to said source, said tube having an incandescing cathode, an anode, means for focusing a discharge from said cathode upon a face of the anode, and a conductive member, surrounding the path of the beam of cathode rays near the point of impingement on the anode.

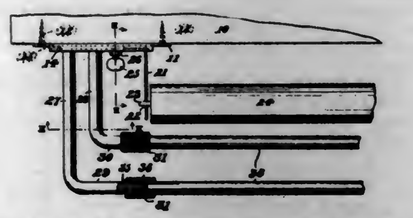
1,211,093. CEMENTING OR CASE-HARDENING MATERIAL. ROBERT B. COREY, Edgewood Park, Pa. Filed Mar. 29, 1916. Serial No. 87,515. (Cl. 148—25.)

1. A cementing or case hardening material consisting essentially of carbonaceous material with not less than ten per cent. of oxid of magnesium.

2. A cementing or case-hardening material consisting essentially of carbonaceous material with not less than ten per cent. of a compound reducible by heat to oxid of magnesium.

3. A cementing or case-hardening material consisting essentially of carbonaceous material with oxid of magnesium and carbonate of magnesium, the total weight of the said magnesium compounds being not less than ten per cent. of the weight of the said cementing material.

1,211,094. SHADE AND DRAPERY FIXTURE. JAMES O. CRAWFORD, Waco, Tex. Filed Apr. 17, 1916. Serial No. 91,666. (Cl. 156—24.)

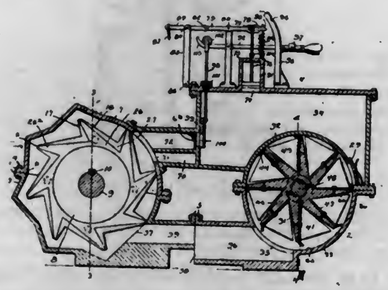


1. A device of the class described, comprising a window plate having opposite inwardly projecting side flanges, a curtain support comprising a slide having opposite marginal feet shiftably arranged within the said flanges and having a channeled body-portion, an angular shade bracket having a foot slidably arranged upon the said plate within the channel of said slide, limiting lugs carried by the said foot, a set screw upon the said slide adjustably engaging the said bracket foot when the device is operatively positioned, and goose necks of different lengths outwardly projecting from the said slide, and adjustable curtain rod retaining extension nuts upon the free ends of the said goose necks.

2. In a curtain rod support, a bar having a screw-threaded portion in spaced relations with the overturned free end thereof, the said bar being reduced between the said screw-threads and its end, and an extension nut having inwardly-extending centrally arranged threads engaging the said bar threads and having one end thereof journaled upon the cylindrical portion of the bar inwardly of the screw-threaded portion.

3. A combined shade roller and curtain pole bracket comprising a plate adapted to be fixed to a window frame and having opposite slide ways, a channeled slide shiftably mounted in the said ways, an angular shade bracket having a foot portion slidably mounted upon the said plate within the channel of the said slide, a locking screw carried by said slide in engagement with the said bracket foot when the bracket and slide are in their adjusted positions, goose necks outwardly-extending from the said slide in substantial parallelism and having their free ends extending inwardly of the window frame and provided with overturned shoulders at their free ends, and extension nuts threaded upon the said goose-necks adjacent the said shoulders and having limited longitudinal movements thereon.

1,211,095. ENGINE. ARTHUR J. CULP, Clanton, Ala., assignor of one-fourth to John Wesley Stanfield, Clanton, Ala. Filed Dec. 18, 1915. Serial No. 67,642. (Cl. 123—4.)



1. The combination of a driven motor with a compressor driven by the said motor, a receiving reservoir for the compressed charges communicating with the driven motor and means for controlling the admission of the compressed charges to the motor including a movable piston adapted to operate a system of levers when the charges reach a predetermined degree of compression in the reservoir.

2. The combination of a driven motor with a compressor driven by the said motor, a receiving reservoir for the compressed charges communicating with the driven motor and means for controlling the admission of the compressed charges to the motor including a movable piston connected to the driving mechanism of the motor and adapted to operate in one direction when the compressed charges reach a predetermined degree of compression, and in the opposite direction when they fall below the said predetermined degree of compression.

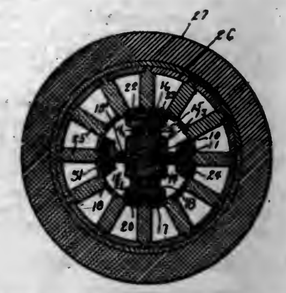
3. The combination of a driven motor with a compressor driven by the said motor, a receiving reservoir for the compressed charges communicating with the driven motor and means for controlling the admission of the compressed charges to the motor including an adjustable pressure controlled piston interconnected with the controlling mechanism of the driven motor and adapted to operate when the charges reach a predetermined degree of compression in the reservoir.

4. The combination of a rotary explosive engine including an ignition system with a compressor driven by the said engine, a receiving reservoir for the compressed charges communicating with the explosive engine and means for stopping the ignition mechanism of the explosive engine and admitting compressed charges to the rotating member of the said explosive engine when they reach a predetermined degree of compression, and for again operating the ignition mechanism when the compressed charges fall below the said degree of compression.

5. The combination of a rotary explosive engine, including an ignition system, with a compressor driven by the said engine, a receiving reservoir for the compressed charges communicating with the explosive engine and means for controlling the stopping and starting of the ignition mechanism of the engine and the admission of the compressed charges including a pressure operated piston interconnected with the reservoir and the ignition mechanism of the explosive engine.

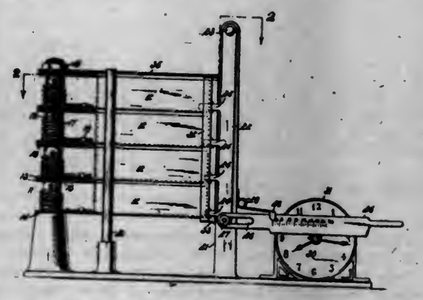
[Claims 6 to 11 not printed in the Gazette.]

1,211,096. VEHICLE-WHEEL. LEON CYGON, Meadville, Miss. Filed Aug. 9, 1916. Serial No. 114,026. (Cl. 152—44.)



In a wheel of the class described, a hub member adapted to be fixedly positioned on an axle, oppositely disposed vertically movable plungers carried by said hub member, other oppositely disposed horizontally movable plungers carried by said member, springs normally urging said plungers outwardly, heads on said plungers provided with ball races in their outer faces and having ball return passages communicating with the ends of the races, a hub ring surrounding said heads and having ball races formed internally of said ring to coact with the first-mentioned ball races, balls in said races and passages, spokes extending from the ring, and a rim carried by the outer ends of the spokes.

1,211,097. CHICKEN-FEEDER. EDGAR WARD DAN, Platteville, Wis. Filed Mar. 29, 1916. Serial No. 87,470. (Cl. 161—10.)



1. A feeder, including a plurality of feed pans, means for separately moving said pans laterally, restraining means for the pans, and unitary means common to all the pans to release said pans from the restraining means at predetermined intervals to permit movement of the pans by the first-mentioned means.

2. A feeder, including a plurality of pivotally mounted feed pans, means to swing said pans on their pivots to discharge the feed therefrom under centrifugal force, and unitary means common to all of said pans to release said pans in succession at predetermined intervals, said last-mentioned means having separate members engaging the several pans and adapted to disengage the latter in succession.

3. In a feeder of the class referred to, a pivotally mounted feed pan, spring means to swing said pan on its pivot, restraining means engageable with the pan to prevent movement thereof on its pivot, and a continuously driven motor adapted to disengage the restraining means to release the pan after a predetermined period of operation of the motor.

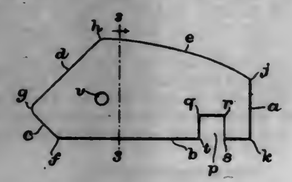
4. In a feeder of the class described, a feed pan presenting an open top and an open free end and mounted to swing in an arc to discharge the contents of the pan by

centrifugal force, spring means to swing the pan, means to restrain the pan from movement by said spring means, a fixed guard positioned to close the open end of the pan when the latter is in the réstrained position, a fixed cover beneath which the pan is positioned when restrained, and means operable after a predetermined period to release the pan and permit the spring means to swing the pan away from the restrained position adjacent to the cover and guard.

5. A feeder, including a plurality of feed pans pivotally mounted one above another for separate swinging movement, separate spring means to swing said pans, a restraining bar having a series of pan-engaging arms of different lengths, said bar being pivotally mounted whereby to swing through an angle to successively disengage the said arms from the pans, and means operable after a predetermined period to give a releasing movement to said restraining bar.

[Claims 6 and 7 not printed in the Gazette.]

1,211,098. DISH AND KETTLE SCRAPER. MARY S. DARRIN, Brooklyn, N. Y. Filed Aug. 13, 1914. Serial No. 856,643. (Cl. 65—12.)



As a new and improved article of manufacture, a dish and kettle scraper, comprising a single thin flat piece of sheet celluloid cut and formed with a straight base having a rectangular recess therein at one end, said recess bounded by three straight edges formed by the base and sides of said recess, the angles and corners of the boundary of said recess being sharp, the end of the scraper adjacent the said recess being straight and forming a sharp right angle with the base, the opposite end of the sheet at the other end of the base being formed of two straight edges forming an outward angle having a rounded apex, and the top of the scraper joining the two ends being outwardly curved and forming a sharp corner with the straight end of the scraper.

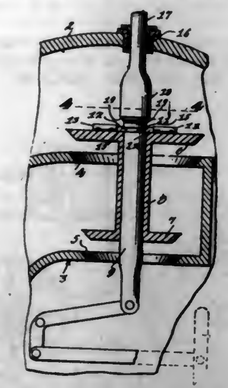
1,211,099. AUTOMATIC TRAIN-CONTROLLER. JAMES B. DARROW, Hinckley, N. Y., assignor of one-half to John Cameron, Hinckley, N. Y. Filed July 23, 1915, Serial No. 41,589. Renewed Sept. 25, 1916. Serial No. 122,130. (Cl. 246—59.)

1. In an automatic train control, a valve stem, a throttle valve normally locked to the stem for movement therewith to and from its seat, and means automatically operable to release and actuate the valve independently of the stem to seat the same.

2. In an automatic control for locomotives, the combination of a valve stem, a throttle valve slidable thereon to and from its seat, an arm supported by the locomotive, latches carried by the throttle valve to normally lock same to stem, a head operable in the steam dome of the locomotive, and means connecting the arm and head to actuate the latches upon movement of the arm downwardly, whereby said latches are actuated to permit the valve to slide on the stem to its seat, as and for the purpose set forth.

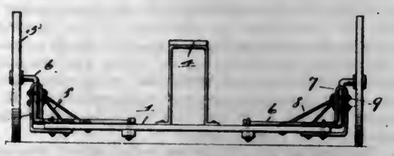
3. In an automatic control for locomotives, the combination with the throttle valve thereof, the stem of which is slidably connected to the valve, said stem having an annular groove formed therein, spring actuated latches carried by the valve for engaging the groove, an arm supported by the locomotive, a head, and means connecting the head and arm, whereby movement of the latter will cause the head to engage the latches to force them from engagement with the groove, as and for the purpose set forth.

4. In an automatic train control, a valve stem, a throttle valve slidable on the stem, spring pressed latches carried by the valve, said stem having an annular groove for engagement by the latches, a head, an arm, means connecting the head and arm to cause the former to disengage the latches from the groove when the latter is moved downwardly, thereby closing the valve, and means operable by the arm for indicating that the valve has been closed.



5. In an automatic train control, a valve stem, a throttle valve slidable on the stem, means normally locking the valve to said stem for movement therewith to and from its seat, and means automatically operable to release said locking means and subsequently slide the valve on said stem to its seat.

1,211,100. CORN-CUTTER. ALVA GREEN DAVIS, Three Springs, Ky. Filed Mar. 30, 1915. Serial No. 18,018. (Cl. 56—32.)



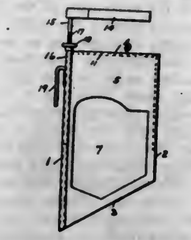
In a device of the kind described, a platform having forwardly converging cutting edges, supporting wheels, drop axles on which said wheels are mounted, said axles being journaled on said platform, U-shaped straps having horizontal and vertical portions and provided with perforations the horizontal portions of the straps engaging the sides of the platform, and the axles passing obliquely through the vertical portions of the straps, and means passing through the perforations of the straps for supporting said axles and regulating the extent of their inclination from the perpendicular.

1,211,101. DUST-CATCHER. FRANK B. DAVIS, Erie, Pa. Filed Apr. 20, 1916. Serial No. 92,537. (Cl. 51—7.)

1. In a dust catcher, the combination of a box having an opening at each side thereof for the introduction of the hands of the operator with the operating tool at one side and the work at the opposite side; and a transparent closure for the top.

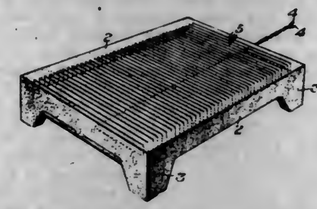
2. In a dust catcher, the combination of a box having an opening in the side thereof for the introduction of the hand of the operator with the work; a transparent closure for the top; and means for attaching the box to an operator.

3. In a dust catcher, the combination of a box having an opening at each side thereof for the introduction of the hands of the operator with the operating tool at one side and the work at the opposite side; and a transparent closure for the top and front.



4. In a dust catcher, the combination of a box having an opening in each side thereof for the introduction of the hands of the operator with the work with the operating tool at one side and the work at the opposite side; a transparent closure for the top; means for attaching the box to an operator; and a magnifying glass above the transparent top and supported by the box.

1,211,102. ELECTRIC HEATING UNIT AND METHOD OF MANUFACTURING THE SAME. ROBERT WILLIAM DAVIS, Jr., Aspinwall, Pa. Filed Aug. 26, 1912. Serial No. 717,042. (Cl. 219—64.)



1. An electric heating unit consisting of a molded body formed of asbestos and cement together with electric resistance material said resistance material having a plurality of exposed members on the upper surface of the body, and a plurality of loop members embedded in the body connecting said exposed members in series with each other; substantially as described.

2. An electric heating unit, consisting of a molded body portion formed of asbestos and cement and electric resistance material, said body portion having legs formed integrally therewith, the resistance material having a plurality of parallel members on the upper surface of the body and downwardly extending loop members embedded in the body, said loop members connecting the parallel members in series with each other; substantially as described.

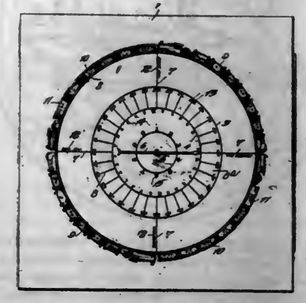
3. The method of manufacturing hard, elastic and smooth faced electric heating units, which consists in placing resistance material in the mold, then placing a plastic mass of asbestos mixed with water and cement in the mold over the resistance material, then applying pressure to the mold to compress the plastic mass therein, and retaining the mass under pressure a sufficient time to permit the mass to change its chemical nature by absorbing chemically hydrous water, substantially as described.

4. The method of manufacturing electric heating units, which consists in first placing the electric resistance material in a mold, then placing a plastic mass of asbestos and cement in the mold around the wire, then compressing the plastic mass within the mold, and permitting the article to remain in the mold until set, and then drying the mass by intermittently passing an electric current through the resistance material; substantially as described.

5. An electric heating unit consisting of a body portion having legs integral therewith, an electric resistance material having a plurality of members at the surface of the body, and a plurality of loop members connected to said members and embedded in the body arranged to anchor the resistance material thereto; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,211,103. GAME-BOARD AND GAME. JOSEPH LAWRENCE DEVLIN, Denver, Colo. Filed Oct. 4, 1916. Serial No. 123,689. (Cl. 46—63.)



1. A game board comprising a board having formed upon the surface thereof four concentric circles, and having outside the outermost line the representations of four railroad trains, each train covering an arc of ninety degrees, the board having radial lines between the outermost and the next circle and between adjacent trains, the space between the second and third circles being divided by radial lines into thirty-two equal spaces, and each space having a character adjacent to each of the radial lines and near the second circle, the space between the third and fourth circles having near each circle a series of characters, and a pointer pivoted at the center of the circles and adapted to coöperate with the characters, the representations of the trains having the separate cars thereof provided with combinations of letters designating well known railroads, and the playing face of the board having a blackboard surface.

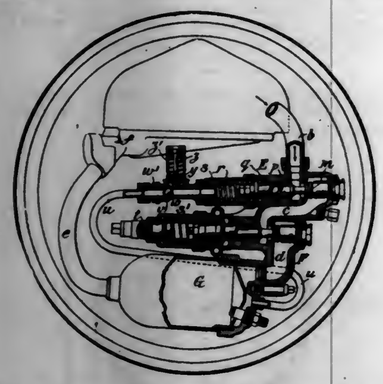
2. A game board comprising a board having formed upon the surface thereof four concentric circles, and having outside the outermost line the representations of four railroad trains, each train covering an arc of ninety degrees, the board having radial lines between the outermost and the next circle and between adjacent trains, the space between the second and third circles being divided by radial lines into thirty-two equal spaces, and each space having a character adjacent to each of the radial lines and near the second circle, the space between the third and fourth circles having near each circle a series of characters, and a pointer pivoted at the center of the circles and adapted to coöperate with the characters.

3. A game board having formed upon the surface thereof concentric circles and having a pointer pivoted at the center of the circles for coöperating therewith, said board having representations of railroad trains arranged in arc-shape about the outermost circle and having radial lines between the said circle and the next inner circle and between adjacent trains, the space within the next inner circle being divided by radial lines, and having characters arranged adjacent to the said lines for coöperating with the pointer.

1,211,104. REDUCING-VALVE FOR AUTOMOBILE-TORPEDOES. WILLIAM DIETER, Brooklyn, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Sept. 20, 1916. Serial No. 121,148. (Cl. 60—3.)

1. In an automobile torpedo, the combination with a source of compressed air and a pressure-reducing valve,

of means in connection with such valve for conducting leakage of air from the high pressure side of such valve to a point beyond the valve where this leakage can be utilized.



2. In an automobile torpedo, the combination with primary and secondary pressure-reducing valves, of means in connection with the primary valve for conducting leakage from the high pressure side thereof to a point beyond the secondary valve where such leakage can be utilized.

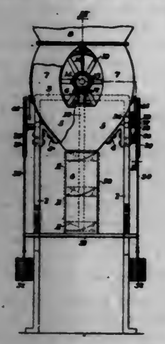
3. In an automatic torpedo, the combination with a source of compressed air and primary and secondary pressure-reducing valves, and a heater beyond the secondary valve, of means for conducting leakage from the high pressure side of said primary valve to said heater.

4. In an automobile torpedo, the combination with a source of compressed air and a pressure-reducing valve comprising a balancing plunger, a spring, and a spring chamber, of means for conducting air leaking into said chamber to a point beyond said valve where such leakage can be utilized, and means for preventing a back flow of pressure into said chamber.

5. In an automobile torpedo, the combination with a source of compressed air and a pressure-reducing valve comprising a balancing plunger, a spring, and a spring chamber, of means for conducting air leaking into said chamber to a point beyond said valve where such leakage can be utilized, and a relief valve for discharging excess of pressure from said chamber.

[Claim 6 not printed in the Gazette.]

1,211,105. PACKER. ROWAN T. F. DODDS, Decatur, Ill. Filed Mar. 7, 1916. Serial No. 82,580. (Cl. 100—56.)



1. A packer of the character described, comprising a filling tube, a packing auger within said tube, driving mechanism for said auger including a clutch having a plurality of members, a lever for retaining said members in driving connection with each other, a locking member for the clutch lever for retaining it in position to hold the clutch members in engagement with each other, and means controlled by the movement of the bag for actuating the locking lever to release the clutch lever and stop the driving mechanism; substantially as described.

2. A packer of the character described, comprising a filling tube, a packing auger within said tube, driving mechanism for said auger including a clutch having a plurality of members, a lever for retaining said members in driving connection with each other, a locking member for the clutch lever for retaining it in position to hold the clutch members in engagement with each other, means controlled by the movement of the bag for actuating the locking lever to release the clutch lever and stop the driving mechanism, and other means for releasing said locking member; substantially as described.

3. A packer of the character described, comprising a filling tube, a packing auger within said tube, driving mechanism for said auger including a clutch having a plurality of members, means for normally holding said members out of engagement with each other, a clutch lever for throwing said clutch members into engagement with each other to set the driving mechanism into motion, a bag support, means controlled by the movement of the bag support for actuating said lever to throw the clutch members into engagement with each other, and a locking member for holding the clutch lever in its thrown position; substantially as described.

4. A packer of the character described, comprising a filling tube, a packing auger within said tube, driving mechanism for said auger including a clutch having a plurality of members, means for normally holding said members out of engagement with each other, a clutch lever for throwing said clutch members into engagement with each other to set the driving mechanism into motion, a bag support, means controlled by the movement of the bag support for actuating said lever to throw the clutch members into engagement with each other, a locking member for holding the clutch lever in its thrown position, and means controlled by the movement of the bag support in the reverse direction for releasing the locking member to permit the clutch to be actuated to disengage the driving mechanism; substantially as described.

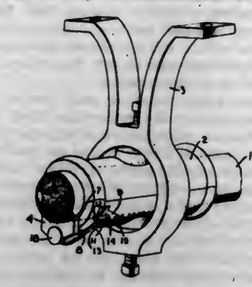
5. A packer of the character described, comprising a filling tube, a packing auger within said tube, a bag support, a shaft having sheaves thereon, supporting members for the bag support on said sheaves, a friction device connected to said shaft, driving mechanism for the auger including a clutch having a plurality of members, a clutch lever for throwing said clutch members into engagement with each other to connect the auger with the driving mechanism, means for throwing the clutch members out of engagement with each other, a holding member for holding the clutch lever in a position to retain the clutch members in engagement with each other, and means on the shaft for actuating the locking member to release the clutch member after the bag has moved a predetermined distance to disengage the driving mechanism; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,211,106. OIL-GUARD FOR SHAFT-BEARINGS. ISSACHAR W. DOBC, Exeter, N. H. Filed Nov. 8, 1915. Serial No. 60,197. (Cl. 64—24.)

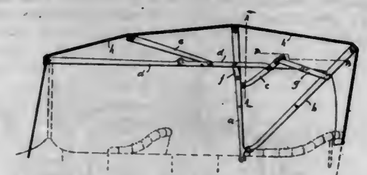
1. In a device of the class described, the combination with a shaft and its bearing, of an oil guard situated exterior to said bearing and fitting and partially embracing the shaft, said guard having a wiping edge adjacent the bearing which is inclined relative to the axis of the shaft, and a resilient arm secured to the bearing and by which the oil guard is sustained.

2. In a device of the class described, the combination with a shaft and its bearing, of a resilient supporting member secured to the bearing, and an oil guard sustained on the supporting member for rocking movement, said oil guard having a face fitting and partially embracing the shaft, one edge of which face is inclined to the axial direc-



tion of the shaft and constitutes a wiping edge of preventing the oil working along the shaft.

1,211,107. VEHICLE-TOP. WALTER P. DORL, Detroit, Mich. Filed Feb. 25, 1916. Serial No. 80,523. (Cl. 21—62.)



1. In a vehicle top, the combination of a main bow, a rear bow, a folding cantaliver structure, a weather-excluding fabric spread over said bows and the cantaliver structure, a lever pivoted to the main bow and to which the folding cantaliver structure is pivoted, said lever terminating short of the said fabric when the top is up, a link pivoted to the folding cantaliver structure and to the main bow for supporting the folding cantaliver structure, and a connector between the said lever and the rear bow for resisting the tendency of the folding cantaliver structure to cause the lever to fold toward the main bow.

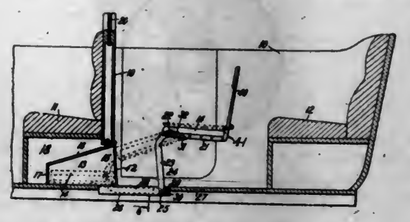
2. In a vehicle top, the combination of a main bow, a rear bow, a top fabric, a lever pivoted to the rear of the main bow and terminating short of the top fabric when the top is up, a folding cantaliver structure pivoted to the lever, a link for supporting the folding cantaliver structure on the main bow, and a strap for connecting the end of the lever to the rear bow.

3. In a vehicle top, the combination of a main bow, a lever pivoted to the main bow and projecting to the rear thereof, a folding cantaliver structure pivoted at its rear to the said lever, a link pivoted at its top to the folding cantaliver structure and at its bottom to the main bow and when the top is up being tipped only slightly forward of a vertical position, and a strap for preventing the lever from folding toward the main bow when the top is up.

4. In a vehicle top, the combination of a main bow, a lever pivoted directly to the main bow and extending rearwardly thereof, a folding cantaliver structure pivoted at its rear to the said lever, a link pivoted at the top to the folding cantaliver structure and at its bottom to the main bow, the said cantaliver structure being pivoted solely to the link and the lever, and means for preventing the lever from folding toward the main bow when the top is up.

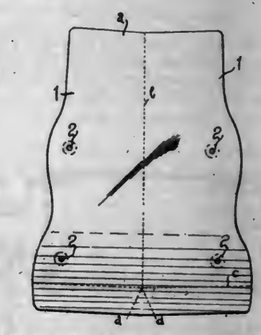
1,211,108. AUXILIARY SEAT FOR AUTOMOBILES. WILLIAM H. DOUGLAS, Belleville, N. J., assignor to Healey & Co., New York, N. Y. Filed Feb. 24, 1916. Serial No. 80,176. (Cl. 21—43.)

In combination, a vehicle body having an auxiliary seat storage chamber under a seat thereof for receiving said auxiliary seat when not in use, a swing frame pivoted on the bottom of the vehicle and rearwardly of said chamber and including oppositely disposed side arms, the main portions of which are straight and the free ends thereof curved, the extremities of such curved ends being connected by a transverse seat supporting bar, members mounted in the bottom of the vehicle for forming slots to receive said side arms when swung to a horizontal position, the curved ends of said arms then extending up-



wardly, and the transverse bar providing a handle for swinging the said frame to a substantially vertical position, a seat pivoted intermediate the extremities of said curved ends and adapted to engage and be supported by said transverse bars when in use, and stop lugs carried by said seat and curved ends of said side arms for limiting the swinging movement of said swinging frame when the seat is adjusted to folding position prior to being nested in said storage casing.

1,211,109. METALLIC CORNER-SHIELD. JOHN P. DRESP, Beatrice, Nebr., assignor to Beatrice Steel Tank Manufacturing Company, Beatrice, Nebr., a Corporation of Nebraska. Filed Jan. 30, 1915. Serial No. 5,264. (Cl. 20—5.)

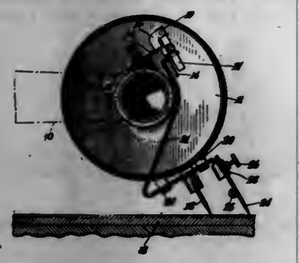


As a new article of manufacture, a metallic corner shield for lapsiding comprising perpendicularly disposed integral wings having their lower end margins turned inwardly to afford flanges, said flanges being integrally connected, the adjacent extremities of the flanges overlapping and being flexed to afford an intermediate ply at their overlapping portions to strengthen the device and to maintain the wings at their requisite relative angles.

1,211,110. STOP MECHANISM FOR TALKING-MACHINES. RAYMOND DUNCAN, New York, N. Y. Filed Feb. 3, 1916. Serial No. 75,895. (Cl. 74—46.)

1. In combination, a reproducer including a stylus, circuit controlling means carried by said reproducer and comprising contact members one of which is movable into and out of engagement with the other thereof, and means adapted to engage the tone groove of a record and to be actuated thereby to move said movable contact member relatively to said other contact member, substantially as specified.

2. In combination, a reproducer including a stylus, circuit controlling means carried by said reproducer comprising a fixed member and a member movable into and out of engagement therewith, and means adapted to engage the tone groove of a record and to be actuated thereby for moving said movable member relatively to said fixed member, substantially as specified.



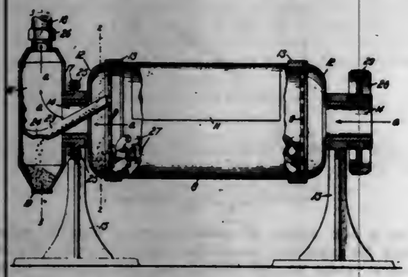
3. In combination, a reproducer including a stylus, a normally open circuit closer carried by said reproducer, and means adapted to engage the tone groove of a record and to be actuated thereby for closing said normally open circuit closer, substantially as specified.

4. The combination of a tone arm carrying a reproducer including a stylus, with co-acting contact members, and means adapted to be controlled by the tone groove of a record for moving one of said contact members relatively to another thereof, substantially as specified.

5. The combination of a tone arm carrying a reproducer including a stylus, with normally spaced co-acting members, and means adapted to be controlled by the tone groove of a record for closing said normally spaced contact members, substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]

1,211,111. CLEANER FOR TUMBLERS FOR METAL CASTINGS, BUTTONS, AND OTHER ARTICLES. MICHAEL A. DUNN, Poughkeepsie, N. Y. Filed Mar. 1, 1916. Serial No. 81,367. (Cl. 83—54.)

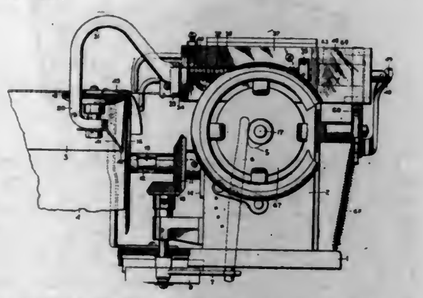


1. A tumbler having a tubular end journal and an end chamber separated from the body of said tumbler by a screen; in combination with a cleaner comprising a receptacle in open communication with said chamber; means for discharging the solids collected in said receptacle; means for delivering air-suspended particles from the tumbler to the receptacle; means for discharging the dust or air-suspended articles from said receptacle; and an inclined chute rigidly mounted in said receptacle and having a receiving end extending into the adjacent chamber of said tumbler in the path of debris when dropped from the upper side of said chamber when carried there by the rotation of said tumbler.

2. A tumbler having a tubular end journal and a collecting chamber formed adjacent said journal; in combination with an inclined chute stationarily supported and extending into the adjacent collecting chamber, and adapted to receive the debris carried by the rotation of said tumbler above the axis of the same; a receptacle for said debris, said receptacle being in open communication with the collecting chamber through the journal, the chute extending through but not closing said journal, and terminating within the receptacle, said receptacle being adapted to separate the lighter from the heavier particles delivered from the tumbler.

3. A tumbler having a tubular end journal; in combination with a cleaner for removing debris from said tumbler, said cleaner comprising a receptacle in open communication with said journal; means for discharging the solids collected in said receptacle, there being an air-delivery opening at the upper end of said receptacle; and an inclined chute rigidly mounted in said receptacle and having a receiving end extending through said journal into the adjacent end of the tumbler in the path of debris accumulated in said end when carried to the upper side by the rotation of said tumbler, said chute being of such dimension as to only partially obstruct the communication through the journal.

1,211,112. AUTOMATIC PRESSER-FOOT FOR SEWING-MACHINES. JULIUS DUNNER, Brooklyn, N. Y., assignor of one-half to Sellmar M. Jacoby, New York, N. Y. Filed Dec. 11, 1915. Serial No. 66,287. (Cl. 112—31.)



1. In a machine of the character described, a stitching mechanism, a presser foot for holding work in proper position for being stitched, a rotatable shaft for supporting said presser foot, means for moving said shaft longitudinally whereby the presser foot will be moved in a straight line away from the stitching mechanism and means for rotating said shaft to a position distant from the stitching mechanism after it has been moved longitudinally.

2. In a machine of the character described, the combination with a stitching mechanism, of means for supporting a hat adjacent the stitching mechanism a feeding member operated in timed relationship to the stitching mechanism, a presser foot for holding the hat against said feeding mechanism in proper position for being stitched, and means for actuating said presser foot for moving the same to a point distant from the feeding means and the stitching mechanism.

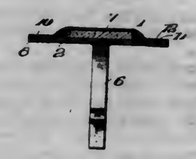
3. In a machine of the character described, the combination with a stitching mechanism, of means for supporting a hat adjacent the stitching mechanism, a feeding member operated in timed relationship to the stitching mechanism, a presser foot co-acting with the feeding mechanism for holding the hat in proper position to be moved by the feeding mechanism, a supporting arm for holding the presser foot in position, and means for moving said presser foot away from the feeding mechanism and then rotating the same to a point distant from the stitching mechanism, said means including a power shaft, means for moving the power shaft longitudinally and means for rotating the power shaft.

4. In a machine of the character described, the combination with a stitching mechanism, of a support for holding a hat adjacent the stitching mechanism, a feed member, means operated by the stitching mechanism for causing the feed member to intermittently move the hat on the hat support, a presser foot for holding the hat against said feed member, and means for moving the presser foot to one side when the hat is being removed and a new one substituted.

5. In a machine of the character described, the combination with a stitching mechanism, of means for supporting a hat so that the sweatband thereof may be stitched in position by the stitching mechanism, means for feeding the hat intermittently, a presser foot for holding the hat in proper position while being fed forwardly as the stitching mechanism is operated, an arm for supporting said presser foot, a shaft connected with said arm, means acting on said shaft for normally holding said arm in such position that the presser foot will be pressed against said hat, means for moving said shaft against the action of said first mentioned means, and a foot operated member for setting in motion said last mentioned means and also means for rotating said shaft, whereby the presser foot will be moved away from the hat and then rotated for part of a revolution.

[Claims 6 to 16 not printed in the Gazette.]

1,211,113. FIBER-CASE RAILWAY-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 22, 1915. Serial No. 29,850. (Cl. 246—20.)



1. A fiber case railway torpedo comprising a case having opposite open ends, an explosive tablet within the case, a clip carrying strip below the case, and a stitching closing the open ends of the case and securing the strip to the case.

2. A fiber case railway torpedo comprising an elongated case having opposite open ends, an explosive tablet within the center of the case, the ends of the case flattened beyond the explosive tablet, a clip carrying strip resting against the lower face of the case and a stitching passing through the case and the strip for closing the flattened ends of the case and securing the strip thereto.

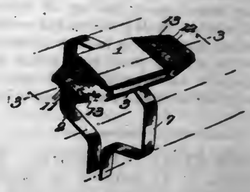
3. A fiber case railway torpedo comprising an elongated case having opposite open ends, an explosive tablet within the center of the case, the ends of the case flattened beyond the explosive tablet, a clip carrying strip of a size corresponding to that of the case and resting against the lower face thereof, stitching securing the flattened ends of the case together and securing the strip thereto, and a water-proofing composition covering the flattened ends of the case.

4. A fiber case railway torpedo comprising an elongated case, having opposite open ends, an explosive tablet within the center of the case, the ends of the case flattened beyond the explosive tablet, a strip having two openings, a clip threaded through said openings and a stitching passing through the flattened ends of the case and through the strip for securing the flattened ends of the case together and securing the strip thereto.

5. A fiber case railway torpedo comprising an elongated case having opposite open ends, an explosive tablet inclosed within a water-proof casing within the center of the case, the ends of the case flattened beyond the explosive tablet, a strip resting against the lower face of the case, a rail attaching clip carried by the strip and stitching passing through the flattened ends of the case, and the strip for closing the ends of the case and securing the strip thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,211,114. FIBER-CASE RAILWAY-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 28, 1915. Serial No. 31,033. (Cl. 246—20.)



1. A railway torpedo comprising an explosive tablet, a wrapper around the tablet in tubular form with open ends, an open ended tube surrounding the tubular wrapper and of substantially the same length, the wrapper and tube having their ends extending beyond the explosive and flattened, and a stitching extending through the ends of the wrapper and tube uniting them and closing the open ends of both the tubular wrapper and the tube.

2. A fiber case railway torpedo comprising an explosive tablet, a wrapper therearound in tubular form with open ends, an open ended tube inclosing the tubular wrapper, the ends of the wrapper and tube extending beyond the explosive substantially the same distance, and the edges of the tube and the wrapper folded inward to form extended tapered ends, and stitching passing through the ends of the tube and the tubular wrapper and closing their open ends.

3. A fiber case railway torpedo, comprising a flattened tube, an explosive tablet within the tube, means for closing the ends of the tube, a second tube tightly fitting the first tube, and of a length less than that of the first tube, and a rail-attaching strap carried by said second tube.

4. A fiber case railway torpedo comprising a flattened tube, an explosive tablet within the tube, means for closing the end of the tube beyond the explosive tablet, a tube tightly fitting the first-mentioned tube and of a length shorter than the same, a rail-attaching strap carried by the second tube, and means for holding the second tube on the first-mentioned tube, substantially as shown and described.

5. A fiber case railway torpedo comprising a flattened tube, an explosive tablet within the tube, the ends of the tube beyond the end of the explosive tablets folded and flattened, a stitching passing through the flattened folded ends of the tube, a second tube tightly fitting the first tube, and of a length less than the same, a rail-attaching strap carried by the second tube, and a waterproof composition covering the entire torpedo first and securing the second tube to the first tube, substantially as shown.

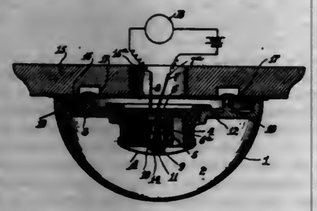
1,211,115. AUTOMOBILE-SIGNAL. JAMES T. DYE and FREDERICK S. CLARK, New York, N. Y. Filed Aug. 4, 1915. Serial No. 43,660. (Cl. 40—132.)



A signal for vehicles, comprising a casing having a chamber, an opening in its front wall smaller than said

chamber, and a slot in its top adjacent said front wall, a panel within the casing behind said front wall extending across said opening and within said slot, a lamp within said chamber, an angle member attached to said front wall at the front upper corner of the casing and having a forwardly projecting flange above the top of the casing, a strip of U-shaped section having one flange secured upon the top of the casing immediately in rear of said slot and having an upper rearwardly projecting flange above the top of the casing, and a cover plate slidable longitudinally upon said flanges and having reflexed edges engageable under the same.

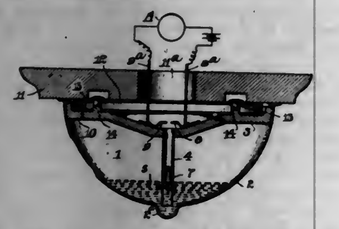
1,211,116. THERMOSTATIC APPARATUS. BRUCE V. EDWARDS, Newark, N. J., assignor, by mesne assignments, to The Burchell-Johnston Corporation, a Corporation of New York. Filed Mar. 28, 1914. Serial No. 827,825. (Cl. 200—32.)



1. In a thermostatic controller having an expansion chamber, the combination of a movable diaphragm, a vessel supported by said diaphragm and having a downwardly and inwardly extending collar, a body of conductive material in said vessel, and an electric terminal extending within the collar in position to be engaged by said conductive body on the movement of the diaphragm.

2. In a thermostatic controller having a fluid expansion chamber the wall of which is provided with an inwardly extending sleeve, the combination of a diaphragm closing the inner end of said sleeve, a neck situated within the sleeve, thereby forming an annular chamber surrounding the neck and closed at its lower end by the diaphragm, electric circuit terminals extending into the neck, and a vessel containing a liquid body of conductive material, said vessel being sustained by the diaphragm and adapted on the movement of the latter to cause the liquid body to contact with the terminals, said vessel being guided in its movement by the neck.

1,211,117. THERMOSTATIC APPARATUS. BRUCE V. EDWARDS, Newark, N. J., assignor, by mesne assignments, to The Burchell-Johnston Corporation, a Corporation of New York. Filed Mar. 28, 1914. Serial No. 827,826. (Cl. 200—32.)



1. In a thermostatic controller, the combination of a hollow open casing, a plate fitting over the end of the same and constituting in connection therewith a fluid expansion chamber, a liquid column in said chamber adapted to be raised by the expansive action of the fluid therein and acting when raised to control an electric circuit, a supporting block provided with slots, and pins on the plate adapted to enter the slots and effect a detachable connection of the casing with the block.

2. In a thermostatic controller, the combination of a hollow open casing, a plate fitted in the open end of the casing and constituting in connection therewith a fluid expansion chamber, a liquid column in said chamber adapted to be raised by the expansive action of the fluid, an electric circuit adapted to be controlled by the rise of the liquid column, and a supporting block to the face of which the plate and connected casing are detachably connected, the said plate being provided with a restricted vent opening; whereby the said vent opening will be protected by the block from the direct entrance of dust or dirt therein.

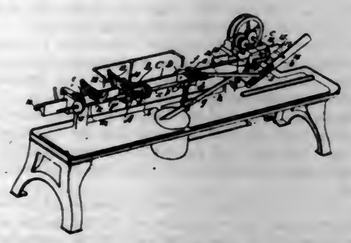
1,211,118. NECKTIE. EDWARD EKSTROMER, Vancouver, British Columbia, Canada. Filed Dec. 23, 1915. Serial No. 68,384. (Cl. 2—11.)



1. A neck band, comprising in combination, a neck band having a tab secured to its midlength and provision at each end of the band and the end of the tab for attachment to the back and front collar studs respectively, the back face of the tab, that is the front face when folded over the bow, being plaited the overlying portion of the plait changing from one side to the other toward opposite ends of the tab.

2. A necktie, comprising in combination, a bow portion shaped and folded to represent the bow of a tie, and a detached neck band with provision at each end and at the midlength for attachment respectively to the back and front collar studs of a shirt, said band having a tab secured to and depending from the middle of the band, which tab is provided at its end with provision for attachment to the front collar stud of a shirt and the back portion of the tab between the attachment of the neck band and the stud attaching provision is plaited, the underlying portion of the plait reversing from one side of the tab to the other intermediate of its ends.

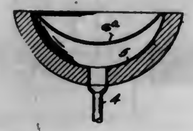
1,211,119. GUN-BARREL-RIFLING MACHINE. EDWARD H. ELDER, Chicopee, Mass. Filed July 8, 1915. Serial No. 38,770. (Cl. 90—28.1.)



1. In a gun barrel rifling machine, in combination, a chuck for the barrel, mounted for a rotative movement, and provided with a ratchet wheel, a rifling device comprising a rod and an oppositely operable cutting tool arranged longitudinally relatively to the axis of the chuck, and means for imparting a reciprocatory movement to the rifling device relatively to the chuck, a rock shaft, parallel with the length of the chuck and rifling rod, having an arm, a pawl-carrier carried thereby, provided with a pawl coacting with the ratchet wheel of the chuck, and means for imparting rocking movements to said shaft concurrently with the reversals of the strokes of the rifling device.

2. In a gun barrel rifling machine, in combination, a chuck for the barrel, mounted for rotative movement, and provided with a ratchet wheel, a rifling device comprising a rod and a reversely operable cutting tool arranged longitudinally relatively to the axis of the chuck, and a carrier for the rifling rod longitudinally movable relatively to the chuck, a rockshaft, parallel with the length of the chuck and rifling rod, having an arm provided with a pawl carrier, and a pawl on the carrier coacting with the ratchet wheel of the chuck,—said rockshaft having another arm thereon, a rotative shaft having a crank and a link connecting same with the carrier for the rifling rod for reciprocating such carrier, a double nosed cam on said rotative shaft, a lever with which said double nosed cam coacts and which is connected with the second named arm of the rockshaft whereby said shaft will have rocking movements concurrently with the reversal of the movements of the rifling rod carrier.

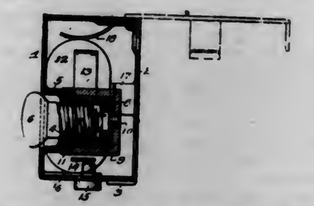
1,211,120. METHOD OF MAKING GLASS REFLECTORS. PETER EMMENEGGER, Guyaux, Pa. Filed Aug. 31, 1916. Serial No. 117,869. (Cl. 49—85.)



1. The method of forming glass reflectors, comprising the steps of shaping a blank into approximately semi-spherical form with a flat wall at one end thereof, and during the shaping chilling the semi-spherical wall and maintaining the flat wall in a plastic condition, and then causing the flat wall to approach the semi-spherical wall to form a second semi-spherical wall; substantially as described.

2. The method of forming glass reflectors, comprising the steps of shaping a blank into approximately semi-spherical form with a flat wall at one end thereof, and during the shaping chilling the semi-spherical wall and maintaining the flat wall in a plastic condition, and then exhausting some of the air from the blank to cause the flat wall to approach the semi-spherical wall to form a second semi-spherical wall; substantially as described.

1,211,121. FLASH-LAMP. HENRY L. EVERETT, Philadelphia, Pa. Filed May 4, 1916. Serial No. 95,455. (Cl. 240—8.5.)



1. The combination in a flash lamp of a box; a threaded shell therein for the reception of a lamp; a sleeve removably mounted on said shell within the box but insulated from said shell; a battery cell having a spring terminal separably engaging the cylindrical surface of said sleeve; a lamp in said shell; and a switch for controlling the flow of current to the lamp.

2. The combination in a flash lamp of a box having an opening; a threaded shell mounted in the box in line with said opening; a lamp outside said box threaded through said opening into said shell; a body of metal having a substantially cylindrical surface and including a part engaged by the center terminal of the lamp and removably mounted on the shell also within the box; a battery in the box placed to have one of its terminals engage the cylindrical surface of the body of metal on the shell; and a switch for engagement with the other terminal of the cell.

3. The combination in a flash lamp of a metal box having a threaded metal socket shell mounted within and electrically connected to it; a lamp threaded into said shell; a metal sleeve having an insulating lining and removably threaded on the shell in electrical connection with the center terminal of the lamp; a battery mounted in the box with one of its terminals in engagement with said shell; and a switch mounted to electrically connect the other cell terminal with the metal of the box.

4. The combination in a flash lamp of a metal box; a threaded socket shell mounted thereon; a lamp threaded into said shell and projecting beyond the same within the box; a metal sleeve having a threaded lining whereby it is removably mounted on but insulated from said first sleeve and electrically connected to the center lamp terminal; a battery in the box having one terminal removably engaging the metal sleeve; and a switch for controlling the flow of current to the lamp.

5. The combination in a flash lamp of a metal box; a threaded socket shell mounted in said box adjacent one end thereof; a body of metal removably mounted on the outside threaded portion of said socket shell but insulated therefrom; a lamp screwed into the shell with its center terminal in electrical connection with said body of metal; a relatively flat battery mounted in the box in a plane substantially at right angles to the line of the socket shell with one of its terminals in electrical contact with the body of metal on the shell; and a switch mounted to coact with the second battery terminal for controlling the flow of current to the lamp.

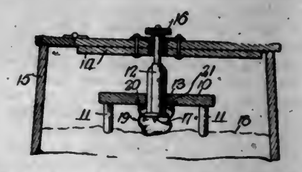
[Claim 6 not printed in the Gazette.]

1,211,122. HAME AND TUG CONNECTION. ANDREW A. FANGMAN, Bancroft, Iowa. Filed Sept. 13, 1915. Serial No. 50,422. (Cl. 54—30.)



A connection of the class described comprising a pair of sections each formed of a single blank having one end taperingly reduced and having a reduced extension at its other end, the blank being provided with slits adjacent said extension forming tongues, said sections being each transversely bent to embrace a securing member with their extremities and their tongues bent about said members, one of said sections having its extremities extending in parallel planes from the bend, the other of said sections having its extremities converging from the bend and then parallel to lie between the extremities of the first section, a rivet passing through the overlapping portions of said extremities, and a spacing washer on said rivet between the extremities.

1,211,123. AGITATOR OR DOLLY FOR WASHING-MACHINES. ALVA J. FISHER, Chicago, Ill., assignor to Hurley Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 14, 1916. Serial No. 120,171. (Cl. 259—134.)



1. An agitator for washing machines adapted to be attached to an operating member, said agitator comprising an operating head and a flexible curtain attached to and

depending from said head and adapted to protect said operating member.

2. An agitator for washing machines adapted to be nonrotatively and slidably attached to an operating member, said agitator comprising a head provided with a bearing opening and a flexible curtain attached to and depending from said head, said curtain surrounding said bearing opening and being adapted to protect said operating member.

3. An agitator for washing machines adapted to be attached to an operating member, comprising a head provided with depending pins or fingers, said head having a bearing opening for an operating member and a flexible curtain attached to and depending from the bottom of said head, said curtain consisting of a tube which depends below the ends of said pins or fingers.

4. An agitator for washing machines adapted to be attached to an operating member, comprising a head provided with depending pins or fingers, said head having a bearing opening for an operating member and a flexible curtain detachably connected with and depending from the bottom of said head, said curtain consisting of a tube which depends below the ends of said pins or fingers.

5. An agitator for washing machines adapted to be attached to an operating member, comprising a head provided with depending pins or fingers, said head having a bearing opening for an operating member and a flexible curtain detachably connected with and depending from the bottom of said head, said curtain consisting of a tube having a closed bottom end which depends below the ends of said pins or fingers.

1,211,124. FOOD PRODUCT. JOHN C. FLEMING, Boston, Mass. Filed May 23, 1916. Serial No. 99,377. (Cl. 99—5.)

1. A food product comprising a cooked mixture of fish and a vegetable in a dry, comminuted condition.

2. A food product comprising a cooked mixture of fish and a vegetable in a dry, comminuted condition, and including the bones of the fish.

3. A food product comprising a cooked mixture of fish and a vegetable in a dry, comminuted condition, and including a flavoring ingredient.

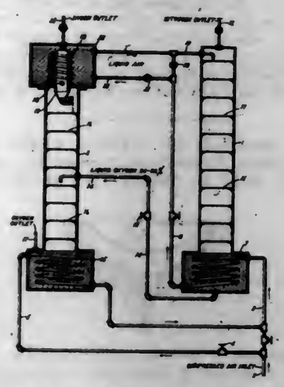
4. A food product comprising a cooked mixture of fish and a vegetable in a dry and comminuted condition, compressed into tablet form.

1,211,125. APPARATUS AND PROCESS FOR CONCENTRATING ARGON. GORTON R. FONDA, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 12, 1915. Serial No. 55,399. (Cl. 62—122.)

1. Means for fractionating a mixture of liquid oxygen and argon comprising the combination of a rectification column, means for introducing said mixture at an intermediate point in said column, means for evaporating liquid at the foot of said column, a conduit for withdrawing gas at the foot of said column, means for refrigerating the gaseous mixture at the top of said column to the liquefying temperature of oxygen, means for returning the condensate to said column and means for conducting away the uncondensed gases rich in argon from the top of said column.

2. The process which consists in boiling a mixture comprising a liquid oxygen and argon, introducing fresh portions of said liquid in contact with the ascending vapors from said liquid, withdrawing oxygen near the surface of said liquid, refrigerating the vapors at a region above the point of introduction of said liquid to condense oxygen, returning the condensed liquid in contact with the vapors ascending to said refrigerated region and conducting away the gaseous argon concentrate.

3. The process of fractioning liquid air which consists in rectifying said liquid air until a liquid containing about 94% oxygen and several per cent. argon is obtained, conducting said liquid into a vertically extending confining space, collecting and evaporating liquid at the foot of said space, conducting away gaseous oxygen from the foot of said space, conducting the rest of the gaseous mixture in contact with the descending liquid mixture thereby evaporating argon from the descending liquid and liquefying oxygen from the ascending gas, refrigerating the ascending gases at a point higher than the point of introduction of the liquid mixture to condense oxygen, conducting away a gaseous argon residue and returning the condensed liquid in contact with ascending gases to the foot of the confined space.



4. The process of concentrating argon which consists in fractionating liquid air until a liquid residue is obtained containing about 94% oxygen and about 4% argon, withdrawing said liquid and subjecting the same to countercurrent rectification, conducting the vapor to a refrigerating zone maintained at a temperature lower than the boiling point of oxygen, conducting away the uncondensed argon and returning the condensate to the rectification zone, in contact with the vapors being conducted to the refrigerating zone.

1,211,126. CEREAL FOOD. R JAY FOSTER, Cereal, Pa., assignor to Jersey Cereal Food Company, Cereal, Pa., a Corporation of Pennsylvania. Filed Oct. 5, 1916. Serial No. 123,870. (Cl. 99—11.)

1. A process of manufacturing an uncooked cereal food, consisting in mixing bran with whole grain, and then crushing the grain.

2. A process of manufacturing an uncooked cereal food, consisting in mixing bran and whole grain with a binder which causes the bran to adhere to the grain, and then crushing the grain.

3. A process of manufacturing an uncooked cereal food, consisting in mixing damp whole grain with bran and gluteneous flour, and then crushing the grain.

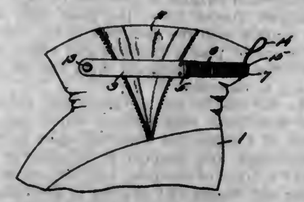
4. A process of manufacturing an uncooked cereal food, consisting in toughening whole grain for flaking, mixing the toughened grain, while damp, with bran and gluteneous flour, and subjecting the mixture to crushing pressure which flakes the grain.

5. An uncooked cereal food consisting of crushed whole grain which includes all of the bran of such grain, and an added portion of bran.

[Claims 6 to 12 not printed in the Gazette.]

1,211,127. SHOE. GEORGE B. FOX, Norwich, Conn. Filed July 18, 1916. Serial No. 109,939. (Cl. 36—51.)

The combination with a shoe having folded inserts in the opposite sides of its uppers, of means to normally hold the upper of said shoe in snug engagement with the foot of the wearer, including an unyieldable strap, one end of which is fixedly engaged with the shoe in proximity to one of the folded inserts, said strap extending across the insert, an elastic element engaged with the opposite end of said strap and adapted to extend from said strap around the rear of the shoe, a plate having an opening therein engaged with said elastic element and adapted to



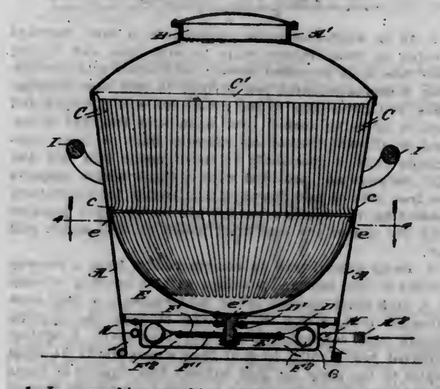
extend across the opposite folded insert and a stud carried by said upper and adapted for coöperation with said plate to hold the latter from movement.

1,211,128. ELECTRICAL CONNECTOR. HARRY FRANKEL, New York, N. Y., assignor to Frankel Connector Company, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 20, 1916. Serial No. 92,445. (Cl. 173—269.)



A terminal connector comprising a threaded body having a plurality of short gripping jaws extending longitudinally thereof at one end, and a longitudinal passage through said jaws into said body, an annular groove around said connector at the outer end of said threaded portion and the inner end of said jaws, and a contracting member arranged to screw onto said threaded body and engage with and contract said jaws.

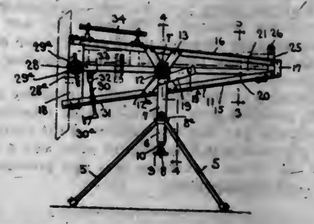
1,211,129. POWER WASHING-MACHINE. WILLIAM HENRY FRANKLIN, Red Lodge, Mont. Filed Jan. 25, 1916. Serial No. 74,255. (Cl. 68—37.)



1. In a washing machine of the character described, a casing having in its upper portion a rubbing surface, a fluid holding bowl shaped clothes receptacle disposed within said casing below its said rubbing surface and opening upwardly to receive the clothes introduced within the casing, and means for rotating the said bowl shaped receptacle whereby to move the clothes and fluid upwardly along the wall thereof and around within the casing and against the said rubbing surface.

2. In a washing machine of the character described, a casing having in its upper portion an annular rubbing surface, a fluid holding bowl shaped clothes receptacle disposed within said casing with its upper open end contiguous to and below the said rubbing surface to receive the clothes introduced within the casing, and means for rotating the said bowl shaped receptacle whereby to move the clothes upwardly therefrom and around within the casing and against the said rubbing surface, the said bowl shaped receptacle also having a rubbing surface acting directly upon the clothes carried thereby.

1,211,130. GUN-CARRIAGE. JOSEPH FRATESCHI, Ogdensburg, N. Y. Filed May 13, 1916. Serial No. 97,242. (Cl. 42—94.)

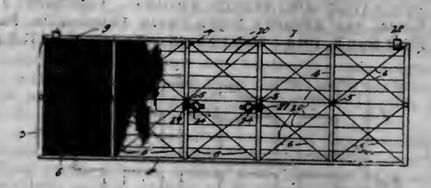


1. A gun supporting and sighting device consisting of a main frame, a secondary frame, companion posts on the forward end of the main frame, pendant supporting members pivoted at their upper ends to the posts and secured at their lower ends to the forward end of the secondary frame to support a gun located on the secondary frame with its front sight below and in alinement with the horizontal line between the pivots connecting the supporting members to the posts, and means for adjusting the rear end of the secondary frame within the main frame.

2. A gun supporting and sighting device consisting of a tripod, a yoke rotatably mounted on the tripod and provided with slots in its upper ends and with brackets secured to the arms of the yoke and having terminal slots, and a gun holding frame adapted to be positioned on the slotted ends of the yoke arms or the slotted brackets.

3. A gun supporting and sighting device consisting of a support, a yoke mounted thereon and having opposing supporting arms, a main gun holding frame, screw rods connected with the main gun holding frame and having bearings on the arms of the yoke, means for clamping the gun holding frame mentioned to the yoke arms, a secondary frame having a swinging pivotal connection by its forward end with the forward end of the main frame, screws carried by the rear end of the secondary frame and projecting through slots formed in the main frame, nuts threaded on said screws and adapted to clamp said secondary frame against movement on the main frame, and a screw having swivel engagement with the secondary frame and threaded engagement with the main frame for varying the relation of the secondary frame to the main frame.

1,211,131. AEROPLANE. GEORGE A. FURNEAUX, Dufur, Oreg. Filed Apr. 14, 1915. Serial No. 21,328. (Cl. 244—25.)



1. An airship of the class described including a substantially rectangular frame curved transversely and provided at intervals with curved transversely disposed bars, vertically disposed strut members secured to the transversely disposed bars and extending above and below the same, a longitudinal series of oppositely inclined braces connected with the ends of the strut members above and

below the said frame, a net work located beneath the frame and feathering strips arranged to close against the net work at the lower face thereof.

2. An airship of the class described including a substantially rectangular frame curved transversely and provided at intervals with curved transversely disposed bars, vertically disposed strut members secured to the transversely disposed bars and extending above and below the same, a longitudinal series of oppositely inclined braces connected with the ends of the strut members above and below the said frame, a net work located beneath the frame and feathering strips arranged to close against the net work at the lower face thereof, a vertical guide bar, a sliding sleeve mounted on the guide bar and provided with a horizontally disposed pivot and a clamp secured to one of the transverse bars and having a bearing receiving the said pivot.

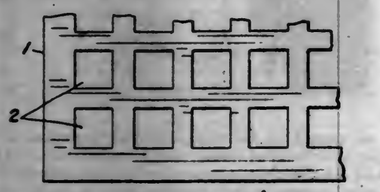
3. An airship of the class described including a feathering plane provided with a frame having transverse bars, a vertical guide bar, a sleeve slidable on the vertical guide bar and provided with a horizontal pivot and a clamp secured to one of the transverse bars and provided with a bearing receiving the pivot.

1,211,132. FLUE CONNECTION. DANIEL B. GALLOWAY, Corydon, Ky. Filed May 9, 1914. Serial No. 837,548. (Cl. 126—314.)



The combination with a chimney having an opening therein and a stove adjacent the chimney and below the opening, of a plate secured to the chimney and having an opening therein in communication with the opening in the chimney, a pipe extending through the opening and having a flange end secured to the back face of the plate, said pipe being inclined downwardly at an acute angle relative to the plate and terminating above the lower end of the plate, and a stove pipe section extending from the stove and having an inclined upper end projecting into the lower end of said pipe on the plate.

1,211,133. MEANS FOR USE IN MAKING CONCRETE SKY-VAULT OR FLOOR LIGHTS. FREDERICK J. GEIGER and ANTHONY ELTON DAVIS, Philadelphia, Pa. Filed May 5, 1916. Serial No. 95,565. (Cl. 25—131.5.)

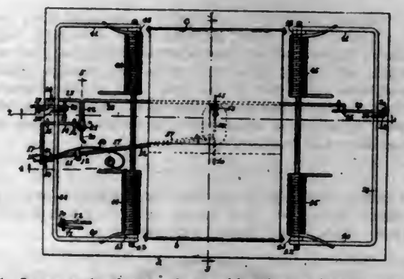


1. Means for use in making glass and concrete sky-vault and floor light constructions which comprise the combination of a removable centering sheet having openings therethrough and adapted to temporarily underlie and support a layer of concrete, and bottomless cups having end flanges and adapted to protrude through the openings to support glasses above the sheet with their end flanges in contact with the underface of the sheet to prevent the escape of plastic concrete and afford means by which the cups can be removed from the set concrete, substantially as described.

2. Means for use in making glass and concrete sky-vault and floor light constructions which comprise the combination of a removable centering sheet having openings therethrough and adapted to temporarily underlie and support a layer of concrete, and bottomless tapering cups having end flanges and adapted to protrude through the openings to support glasses above the sheet with their end flanges in contact with the underface of the sheet to prevent the escape of plastic concrete and afford means by which the cups can be removed from the set concrete, substantially as described.

3. Means for use in making glass and concrete sky-vault and floor light constructions which comprise the combination of a temporary support, a centering sheet having openings therein and adapted to rest upon said support, and bottomless cups adapted to protrude through said openings and having end flanges adapted to lie between the support and sheet, substantially as described.

1,211,134. RAT-TRAP. WILLIAM GILL, Boston, Mass. Filed Nov. 5, 1914. Serial No. 870,532. (Cl. 43—21.)



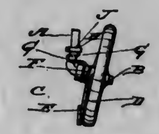
1. In an animal trap, in combination, a base, runways pivoted at their remote ends to said base and having their free ends extended toward each other and overlapping, a spring-actuated jaw pivoted to said base substantially at right angles to the pivots for said runways and capable of being turned over upon said runways to extend lengthwise thereof on opposite sides of their overlapping ends, a rock-shaft extended under said jaw and said runways and provided with a crank which supports the free ends of said runways, and means for operatively connecting the spring-actuated jaw in its open position with the end of the rock-shaft which extends under said jaw.

2. In an animal trap, in combination, a base, a runway pivoted to said base and provided with an opening through it, a rock-shaft located below said runway, a bait hook extended from above the runway through the opening therein and connected with said rock-shaft, a spring-actuated jaw pivoted to said base substantially at right angles to the pivot for said runway and capable of being turned over upon the runway to extend lengthwise thereof and substantially at right angles to the pivot of said runway, said rock-shaft having its outer end extended under the spring-actuated jaw, and means for operatively connecting the spring-actuated jaw in its open position with the end of the rock-shaft which extends under said jaw.

3. In an animal trap, in combination, a base, a runway pivoted at one end to said base, a crank located below said runway and supporting the free end of the latter in a position above said pivot to incline the runway upward from its pivot toward its free end, a rock-shaft extended laterally beyond said runway and to which said crank is attached, a spring-actuated jaw pivoted to said base substantially at right angles to the pivot of said runway to cause the said jaw to be moved over upon the runway from one side thereof and to extend lengthwise of said runway and substantially at right angles to the pivot of said runway, and means for operatively connecting the said jaw with the end of the rock-shaft which projects beyond the side of the said runway.

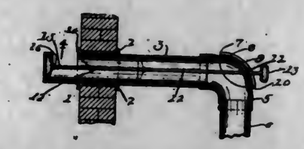
4. In an animal trap, in combination, a runway pivoted at one end to said base, a crank located below said runway and supporting the free end of the latter in a position above said pivot to incline the runway upward from its pivot toward its free end, a rock-shaft extended laterally beyond said runway and to which said crank is attached, spring-actuated jaws pivoted to said base on opposite sides of said runway and substantially at right angles to the pivot of said runway to cause the said jaws to be moved over upon the runway from the opposite sides thereof and substantially at right angles to the pivot of said runway, means extended under one end of said runway and coöperating with said jaws to hold the latter in their open position, and operatively connected with said rock-shaft to be actuated by the latter to release said jaws and permit them to be moved toward each other and over upon the said runway.

1,211,135. AGRICULTURAL IMPLEMENT. EDWARD C. GILLE, Stampede, N. D. Filed July 29, 1915. Serial No. 42,526. (Cl. 21—23.)



In combination with the hanger and ground wheel of an agricultural implement, a fender connected to said hanger and wheel to prevent growth from becoming entangled therewith, said fender consisting of a ground engaging arm, a spring coil, and a terminal passing through an opening in the hanger, said terminal being clamped to said hanger.

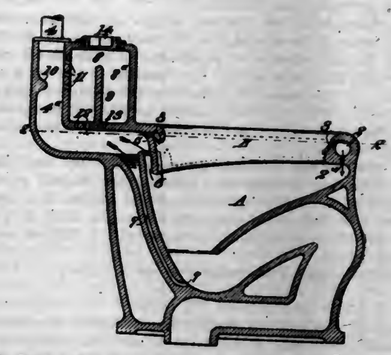
1,211,136. STOVEPIPE DAMPER AND CLEANER. SAM G. GIVENS, Paducah, Ky., and HENRY LEWIS, New Liberty, Ill. Filed May 17, 1915. Serial No. 28,730. (Cl. 126—285.)



1. In combination with the stove pipe and connecting elbow provided with an elongated slot, guides at the side of said slot, a plate closing said slot and movably mounted in said guides, a rod passing through said plate and having one end in the pipe and the other end outside said pipe, a spring having one end secured to the end of said rod in the pipe and a cleaner head secured to the other end of the spring.

2. In combination with the stove pipe and connecting elbow provided with an elongated slot, guides at the side of said slot a plate closing said slot and movably mounted in said guides, a rod passing through said plate and having one end in the pipe and the other end outside said pipe, a spring having one side secured to the end of said rod in the pipe and a cleaner head secured to the other end of the spring, said cleaner head consisting of a pair of separated curved disks and a layer of non-conducting material between said disks.

1,211,137. SANITARY TOILET-BOWL. ALEXANDER D. GRANT, San Jose, Cal. Filed Apr. 3, 1916. Serial No. 88,505. (Cl. 4—18.)



1. In a toilet bowl of the character described, a channeled and perforated rim, a flush water supply pipe with a passage 5 from said pipe into the rim, a passage 6 into the upper interior part of the bowl below the rim, a passage 7 in the rear wall of the bowl leading from the main supply pipe and discharging into the bottom of the bowl, and an elevated diverting dam between said last two passages.

2. A toilet bowl having a flushing inlet and a plurality of connecting distributers, a containing chamber located contiguous to the inlet, said chamber having a transverse half partition, orifices through which water may be delivered into the first chamber and transferred to the second, and means whereby the contents of the first chamber escapes directly into the bowl and also indirectly over the partition and to the bottom of the bowl.

3. A toilet bowl flushing device, including an inlet pipe, a perforated, two-part container with partition, orifices in the container, a diversion lug in the inlet pipe coacting to divert water into the first and second compartments successively, and independent passages from the first and second compartments.

4. The combination with a toilet bowl, of a flush water inlet a plurality of containing compartments, located contiguous to the flush water inlet having a communicating passage, perforations between the inlet and the first compartment, whereby the compartments are successively flooded, a receiver beneath the compartments, discharge orifices in the bottoms of the compartments, and a plurality of passages from the receiver through which, flow from the inlet and the compartments, is directed into the bowl rim, to the top of the bowl and to the bottom of the bowl successively.

1,211,138. METHOD OF PREPARING METAL FOR PAINTING. JAMES H. GRAVELL, Philadelphia, Pa. Filed July 22, 1916. Serial No. 110,690. (Cl. 148—42.)

1. The method of cleaning metals of the iron class which consists in applying to the surface thereof a relatively strong solution of an acid which produces water insoluble salts, and after said relatively strong solution of acid has acted upon the surface of the metal subjecting the same to the action of a relatively weak solution of such acid, substantially as described.

2. The method of cleaning metals of the iron class which consists in applying to the surface thereof a relatively strong solution of phosphoric acid, and after said relatively strong solution of phosphoric acid has acted upon the surface of the metal subjecting the same to the action of a relatively weak solution of phosphoric acid.

3. The method of cleaning metals of the iron class which consists in applying to the surface thereof a relatively strong solution of phosphoric acid in excess, and after a portion of the acid of said relatively strong solution has cleaned the surface of the metal washing the same

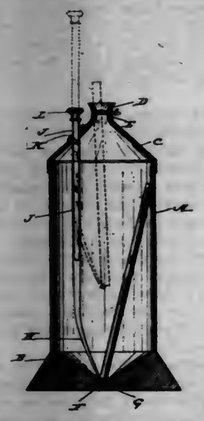
with a limited quantity of water which by re-dissolving the excess of acid forms a relatively weak solution of phosphoric acid and removes the products of the cleaning action of the strong solution.

4. The method of cleaning metals of the iron class which consists in applying to the surface thereof a relatively strong solution of phosphoric acid in water, and after said acid has exerted its cleaning action upon the surface of the metal washing the same with a limited quantity of water to form a weak solution of phosphoric acid and remove the products of the cleaning action of the strong solution.

5. The method of cleaning metals of the iron class which consists in applying to the surface thereof a relatively strong solution or admixture of alcohol and phosphoric acid, and after said acid has acted upon the surface of the metal washing the same with a limited quantity of water.

[Claims 6 and 7 not printed in the Gazette.]

1,211,139. STRAW-DISPENSING DEVICE. HOWARD B. GRIEL and PARKE E. SHEE, Lancaster, Pa., assignors to No-Touch Straw Holder Co., Lancaster, Pa. Filed Feb. 14, 1916. Serial No. 78,224. (Cl. 211—8.)



1. A straw dispensing device, consisting of a container having a recess in its bottom and a gravity ejector having a hook to normally lie in said recess and discharge the straw through the top of the container, said ejector having an upper angular portion guided in the cover of the container and a lower enlarged portion to limit the movement and prevent detachment of said ejector.

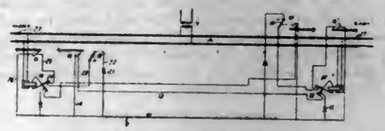
2. A straw dispensing device, consisting of a container having a conical bottom formed with a recess and a conical top having a discharge spout, a hinged cover for said spout, and a gravity ejector guided in the top of the container and having a hook at its lower end seated in the recess of the bottom of the container, said gravity ejector having an angular upper guiding portion and a lower enlarged portion to limit the movement of the ejector.

3. A straw dispensing device, consisting of a container having a conical bottom formed with a recess and a conical top having a discharge spout, a hinged cover for said spout adapted to engage and retain the straw when raised, said top having an angular opening therein, and a gravity ejector guided in said opening and having a hook at its lower end seated in the recess in the bottom of the container.

4. A straw dispensing device, consisting of a container having a conical bottom formed with a recess and a conical top having a discharge spout, a hinged cover for said spout, a hook on the lower end of the ejector seated in the recess of the bottom of the container adapted to engage one straw at a time, and a grasping portion on its upper end for lifting the ejector, said gravity ejector having an angular upper guiding portion and a lower rounded portion, said rounded portion limiting the movement of the ejector, substantially as described.

5. A straw dispensing device, consisting of a container having a conical bottom formed with a recess and a conical top having a discharge spout, said top having an angular opening therein, and a gravity ejector guided in said opening and having a hook at its lower end seated in the recess in the bottom of the container, said ejector having an enlarged portion to limit its upward movement and prevent its dislodgement from the container.

1,211,140. RAILWAY SIGNALING. HENRY W. GRIFFIN, New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Jan. 27, 1913. Serial No. 744,367. (Cl. 246—30.)

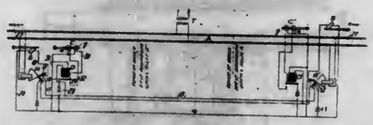


1. In combination, a stretch of railway track, two relays one connected with the track rails adjacent each end of the stretch, a source of signaling current, connected with the rails adjacent the middle of the stretch, two end signals one located adjacent each end of the stretch, two intermediate signals located respectively in advance of the two ends of the stretch but in the rear of the point at which a car or train passing through the stretch from the adjacent end causes the track relay at the opposite end of the stretch to open, a signal circuit for each intermediate signal which signal circuit is controlled by the track relay at the other end of the stretch, a circuit controller operatively connected with each intermediate signal and arranged to be closed or open according as the signal indicates proceed or stop, and a signal circuit for each end signal which signal circuit is controlled by the circuit controller for the adjacent intermediate signal and also by the adjacent track relay.

2. In combination, a stretch of single track, two track relays connected with the track rails of said stretch adjacent the opposite ends of the stretch and arranged to be opened successively by a car or train passing through the stretch, the relay first opened remaining open until after the other relay has opened, means for energizing said relays, two end signals located respectively adjacent the ends of the said stretch for governing the entrance of cars or trains into the stretch, two intermediate signals located respectively in advance of the end signals but in the rear of the point at which a car or train passing through the stretch from the said end opens the relay at the opposite end, a signal circuit for each intermediate signal which circuit is controlled by the relay first opened by a car or train entering the stretch from the other end, a circuit controller operatively connected to each intermediate signal and arranged to be closed or open according as the signal indicates proceed or stop, and a signal circuit for each end signal which circuit is controlled by the circuit controller for the adjacent intermediate signal and by the relay first opened by a car or train entering the stretch from the adjacent end.

3. In combination, a stretch of railway track, two track relays connected with the track rails adjacent the ends of the stretch respectively and arranged to be opened successively by a car or train passing through the stretch, the relay first opened remaining open until after the other relay has opened, each of said relays being mechanically independent of the other, means for energizing said relays, two end signals located respectively adjacent the ends of the stretch, and two intermediate signals located respectively in advance of the end signals but in the rear of the point at which a car or train passing through the stretch from the adjacent end causes the track relay at the opposite end to open, and means for controlling each end signal by both track relays, and means for controlling each intermediate signal by the track relay at the other end of the stretch but not by the adjacent relay.

1,211,141. RAILWAY SIGNALING. HENRY W. GRIFFIN, New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Original application filed Jan. 27, 1913, Serial No. 744,367. Divided and this application filed June 30, 1913, Serial No. 776,483. Renewed Oct. 19, 1916. Serial No. 126,626. (Cl. 246—30.)



1. In combination, a stretch of railway track, a source of alternating signaling current connected with the track rails adjacent the middle of the stretch, two track relays connected with the track rails adjacent the ends of the stretch respectively, two end signals located adjacent the ends of the stretch respectively, two intermediate signals located respectively in advance of the end signals but in the rear of the point at which a car or train passing through the stretch from the adjacent end opens the track relay at the other end, two signal circuits one controlled by each track relay, each signal circuit comprising two branches for the control respectively of the two signals on the opposite side of the source from the track relay, the said branch for each end signal being controlled also by the track relay adjacent the corresponding end.

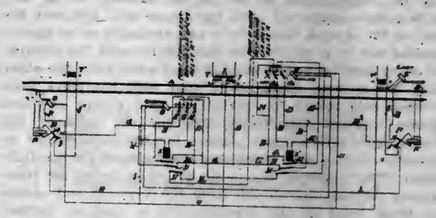
2. In combination, a stretch of railway track, a source of signaling current connected with the track rails adjacent the middle of the stretch, two track relays connected with the track rails adjacent the ends of the stretch respectively, two end signals for the stretch located adjacent the ends of the stretch respectively, two intermediate signals located respectively on opposite sides of the source, two signal circuits one controlled by each track relay, each signal circuit comprising two branches for the control respectively of the two signals on the opposite side of the source from the track relay, the said branch for each end signal being controlled also by the track relay adjacent the corresponding end.

3. In combination, a stretch of railway track, two track relays connected with the track rails adjacent the opposite ends of the stretch and arranged to be opened successively by a car or train passing through the stretch, the relay first opened remaining open until after the other relay has opened, means for energizing said relays, two end signals located respectively adjacent the ends of the stretch, two intermediate signals located respectively in advance of the end signals but in the rear of the point at which a car or train passing through the stretch from said end causes the track relay at the opposite end of the stretch to open, and two signal circuits one controlled by each track relay, each signal circuit comprising two branches for the control respectively of the two signals adjacent the opposite end of the stretch from the track relay which controls the signal circuit, the branch for each end signal being controlled also by the track relay adjacent such end signal.

4. In combination, a stretch of railway track, two track relays connected with the track rails adjacent the opposite ends of the stretch and arranged to be opened successively by a car or train passing through the stretch, the relay first opened remaining open until after the other relay has opened, means for energizing said relays, two end signals located respectively adjacent the ends of the said stretch for governing the entrance of cars or train into the stretch, two intermediate signals located respectively in advance of the end signals but in the rear of the point at which a car or train passing through the stretch from said end causes the track relay at the opposite end of the stretch to open, a signal relay for each intermediate signal for the control thereof, two signal circuits one controlled by each track relay, each signal circuit comprising two branches for the control respectively of the end signal at the opposite end of the stretch from the track relay and of the signal relay for the intermediate signal adjacent the opposite end of the stretch from the track relay, the said branch for each end signal being controlled also by the track relay adjacent such end signal.

5. In combination, a stretch of single track over which traffic moves in both directions, two track relays connected with the track rails adjacent the ends of the stretch respectively and arranged to be opened successively by a car or train passing through the stretch, the relay first opened remaining open until after the other relay has opened, means for energizing said relays, two end signals located respectively adjacent the ends of the stretch, two intermediate signals located respectively in advance of the end signals but in the rear of the point at which a car or train passing through the stretch from said end causes the track relay at the opposite end of the stretch to open, each intermediate signal comprising two electric lamps adapted when illuminated to indicate respectively stop and proceed, a signal relay for each intermediate signal, circuits for the lamps for each signal controlled by the corresponding signal relay and so arranged that when the relay is energized the proceed lamp is illuminated and that when the signal relay is deënergized the stop lamp is illuminated, and means for controlling each end signal and the signal relay for the adjacent intermediate signal by the track relay at the opposite end of the stretch and for controlling each end signal also by the adjacent track relay.

1,211,142. RAILWAY SIGNALING. HENRY W. GRIFFIN, New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Continuation in part of application Serial No. 744,367, filed Jan. 27, 1913. This application filed June 30, 1913, Serial No. 776,482. Renewed Oct. 18, 1916. Serial No. 125,502. (Cl. 246—30.)



1. In combination, a stretch of railway track over which traffic moves in both directions, two track relays one connected with the track rails adjacent each end of the stretch, a source of signaling current connected with the track rails at a point between said relays, two end signals located respectively adjacent the ends of the stretch, two intermediate signals located respectively on opposite sides of the point of connection of the source of current with the rails, means for controlling each intermediate signal by the track relay on the opposite side of said source and for controlling each end signal by both track relays, and means for each end signal controlled by the intermediate signals for rendering the first-mentioned means ineffective so far as the control of said end signal by the track relay at the opposite end of the stretch is concerned.

2. In combination, a stretch of railway track, two track relays one connected with the track rails adjacent each end of the stretch, a source of alternating signaling current connected with the track rails at a point between said relays, two end signals located respectively adjacent the ends of the stretch, two intermediate signals located respectively on opposite sides of the point of connection of the source of current with the rails, means for controlling each intermediate signal by the track relay on the

opposite side of the said source of current and for controlling each end signal by both track relays, and means for each end signal for rendering the first-mentioned means ineffective so far as the control of said end signal by the track relay at the opposite end of the stretch is concerned.

3. In combination, a stretch of railway track, two track relays connected with the rails of the stretch adjacent the ends thereof, a source of signaling current connected with the rails between said relays, two end signals located respectively adjacent the ends of the stretch, two intermediate signals located respectively on opposite sides of the point of connection of said source with the rails and each intermediate signal being located at the point at which a car or train passing through the stretch from the adjacent end opens the track relay at the other end or farther from the source than said point, means for controlling each intermediate signal by the track relay on the opposite side of said source and for controlling each end signal by both track relays, and means for each end signal for rendering the first-mentioned means ineffective so far as the control of said end signal by the track relay at the opposite end of the stretch is concerned.

4. In combination, a stretch of railway track, two track relays connected with the track rails adjacent the ends of the stretch respectively and arranged to be opened successively by a car or train passing through the stretch, the relay first opened remaining open until after the other relay has opened, means associated with the track rails between said relays for energizing said relays, two end signals located respectively adjacent the ends of the stretch, two intermediate signals located respectively on opposite sides of said energizing means, each intermediate signal being located at the point at which a car or train passing through the stretch from the adjacent end opens the track relay at the other end or farther from the energizing means than said point, means for controlling each intermediate signal by the relay on the opposite side of said energizing means and for controlling each end signal by both relays, and means for each end signal for at times removing therefrom the control normally exerted thereon by the track relay at the other end of the stretch.

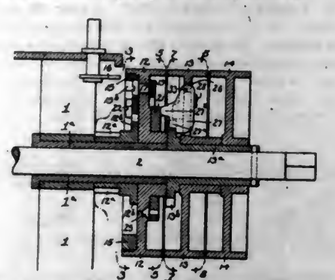
5. In combination, a stretch of railway track, two track relays connected with the track rails adjacent the ends of the stretch respectively and arranged to be opened successively by a car or train passing through the stretch, the relay first opened remaining open until after the other relay has opened, means associated with the track rails between said relays for energizing said relays, two end signals located respectively adjacent the ends of the stretch, two intermediate signals located respectively on opposite sides of said energizing means, each intermediate signal being opposite the point at which a car or train passing through the stretch from the adjacent end causes the track relay at the opposite end to open or farther from the energizing means than said point, means for controlling each intermediate signal by the track relay at the opposite end of the stretch and for controlling each end signal by both track relays, means comprising an auxiliary relay for each end signal for rendering the first-mentioned controlling means ineffective so far as the control of said end signal by the track relay at the opposite end of the stretch is concerned, and means for controlling said auxiliary relays.

[Claims 6 to 8 not printed in the Gazette.]

1,211,143. STOP-MOTION DEVICE. IVAN W. GROTHEY, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed July 19, 1916. Serial No. 110,175. (Cl. 74—46.)

1. The combination, in a stop motion device, of a plurality of driving members in proximity to one another, a plurality of driven members in corresponding proximity, each of said driving members having a locking device for engaging it with its respective driven member, and means for simultaneously releasing the group of locking devices.

2. The combination, in a stop motion device, of a plurality of driving members in proximity to one another, a plurality of driven members in corresponding proximity, each of said driving members having a locking device for engaging it with its respective driven member, a stop member carried by one of said driving members, and means whereby the arrest of said stop member effects simultaneous release of the group of locking devices.



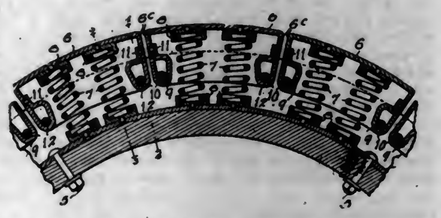
3. The combination, in a stop motion device, of a plurality of driving members in proximity to one another, a plurality of driven members in corresponding proximity, each of said driving members having a locking device for engaging it with its respective driven member, the locking device of one member being so mounted as to move into and out of locking position in a direction different from that of the corresponding movement of the locking device of the other member.

4. The combination, in a stop motion device, of a plurality of driving members in proximity to one another, a plurality of driven members in corresponding proximity, each of said driving members having a locking device for engaging it with its respective driven member, the locking device of one member being so mounted as to move in a lateral plane and the locking device of the other member being so mounted as to move in a longitudinal plane.

5. In combination, in a stop motion device, of a plurality of driving members in proximity to one another, a plurality of driven members in corresponding proximity, each of said driving members having a locking device for engaging it with its respective driven member, means for mounting said locking devices so as to cause them to move in different angular planes, and actuators for said locking devices mounted so as to move in corresponding planes therewith.

[Claims 6 to 15 not printed in the Gazette.]

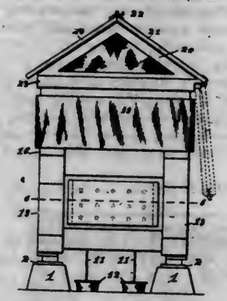
1,211,144. CUSHION-TIRE. DANIEL G. GUNN, Walnut Springs, Tex. Filed Oct. 10, 1916. Serial No. 124,828. (Cl. 152—8.)



1. In a device of the character described, the combination with a channel shaped rim, of a series of independent hollow shoes formed of sheet metal and loosely assembled within the rim, said shoes having side flanges which slidably engage the sides of the rim and being also formed with end flanges terminating in extensions which are looped inwardly, the side flanges being provided with slots which register with the said looped extensions, transverse bolts connecting the flanges of the rim and passing loosely through the slots and looped end extensions, and springs interposed between the shoes and the base of the channel shaped rim.

2. In a device of the character described, the combination with a channel shaped rim, of a series of independent hollow shoes formed of sheet metal and loosely assembled within the rim, said shoes having side flanges which slidably engage the sides of the rim and being also formed with square ends which are normally slightly spaced from each other, the ends terminating in extensions which are looped inwardly and the sides being formed with slots which register with the said looped extensions, transverse bolts connecting the flanges of the rim and loosely received within the looped end extensions and side slots, and springs interposed between the shoes and the base of the channel shaped rim.

1,211,145. BEEHIVE. EDSON HAINS, Bedford, Ohio. Filed July 1, 1915. Serial No. 37,554. (Cl. 6—1.)



1. In a beehive, the combination of foundation members; detachable legs supported by said foundation members; a sub-basement member supported on the legs and provided with corner outboards which overlap said legs; a brood chamber above the sub-basement and having corner out-boards which overlap the exterior corners of the sub-basement member; a storage chamber above the brood chamber and having corner out-boards which overlap the exterior corners of the brood chamber; a super above the storage chamber, corner out-boards on said super which overlap the exterior corners of the storage chamber; and an attic above said super.

2. In a beehive, a brood chamber elevated and supported on foundation members, the floor of said brood chamber having openings therein, strips of fabric attached to the underside of said floor and depending therefrom for the purpose set forth.

3. In a beehive, the combination of a brood chamber; and overflow chambers outside the brood chamber and entrances from the overflow chamber to said brood chamber.

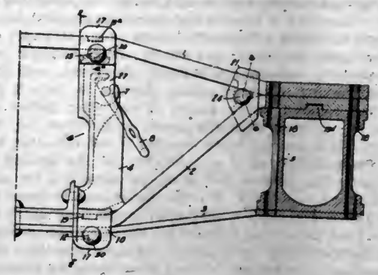
4. In a beehive, the combination of a brood chamber having openings in two opposite sides thereof; interchangeable screens, windows, and closure members for covering said openings; overflow chambers arranged on the exterior of the other two sides of the brood chamber, and openings from the overflow chambers into the brood chamber.

5. In a beehive, the combination of a brood chamber having openings in two opposite sides thereof; interchangeable screens, windows, and closure members for covering said openings; overflow chambers arranged on the exterior of the other two sides of the brood chamber; a detachable floor in said brood chamber having openings therein; strips of fabric attached to the underside of said floor in juxtaposition to said openings and depending therefrom; and a sub-basement member below the brood chamber.

[Claims 6 to 13 not printed in the Gazette.]

1,211,146. CAR-TRUCK. SOREN HANSSON, New Glasgow, Nova Scotia, Canada. Filed Jan. 16, 1915. Serial No. 2,550. (Cl. 105—243.)

1. A truck side frame, comprising arch bars, integral column posts connecting the same, and wedge members whose length is perpendicular to the plane of the frame and arranged to tighten and connect said arch bars and column posts.



2. A truck side frame, comprising upper and lower arch bars, integral column posts connecting the same, and wedges driven in between said arch bars and portions of said column posts for tightening and connecting the same.

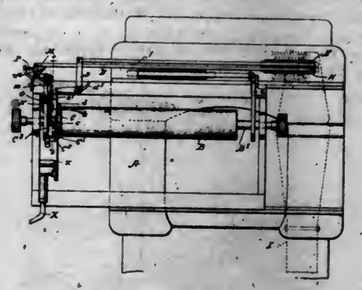
3. A truck side frame, comprising upper and lower arch bars, integral column posts connecting the same and having side arms embracing said bars, said arms being provided with openings, and wedges driven in through said openings for securing the column posts to the arch bars.

4. A truck side frame, comprising arch bars, integral column posts connecting the same, said column posts being provided with side arms straddling said bars and lateral extending wedges connecting said column posts and arch bars.

5. A truck side frame, comprising upper and lower arch bars, integral column posts connecting said arch bars, interlocking connections between said column posts and arch bars at each end of said column posts, a journal box, and dowel connections between said journal box and arch bars.

[Claims 6 to 9 not printed in the Gazette.]

1,211,147. TYPE-WRITER. SAMUEL ADRIAN HARRINGTON, Richmond, Va. Filed Apr. 21, 1915. Serial No. 22,827. (Cl. 197—65.)



1. The combination in a typewriter, of line spacing and carriage return devices and means for actuating the same by the foot of the operator, comprising a treadle, and flexible connections between said treadle and said devices, including a differential drum interposed in said connections and a spring for each drum element tending to turn it in a direction opposed to the action of the other spring, one spring adapted for taking up slack and holding said connections taut.

2. The combination in a typewriter, of line spacing and carriage return devices and means for actuating the same, comprising a treadle and intermediate flexible connections including a differential drum over which said connections pass, the larger and smaller drum elements being independently rotatable in opposite directions, and each having a spring acting thereon to turn it in a direction opposed to the action of the other spring, and means on one drum

engaging means on the other for causing the two drums to rotate together in one direction only.

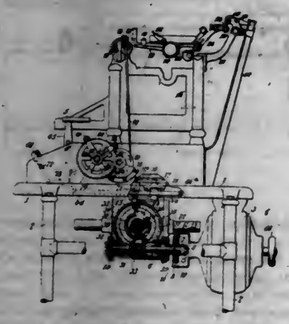
3. The combination in a typewriter, of line spacing and carriage return devices and means for actuating the same, comprising a treadle and intermediate flexible connections including a differential drum over which said connections pass, the larger and smaller drum elements being independently rotatable in opposite directions, each drum element having a spring acting thereon to turn it in a direction opposed to the action of the other spring, and means on one drum engaging means on the other for causing the two drums to rotate together in one direction only.

4. The combination in a typewriter, of line spacing and carriage return devices and means for actuating the same, comprising a foot lever, flexible connections between said lever and said devices, a differential drum over which said connections pass, the larger and smaller drum elements being independently rotatable in opposite directions upon the same axis, and means on one drum engaging means on the other for causing the two drums to rotate together in one direction only, together with a spring acting on each drum element to turn it in a direction opposed to the action of the other spring; one spring tending to rotate the larger drum and hold said connections taut.

5. The combination in a typewriter, of line spacing and carriage return devices and means for actuating the same, comprising a foot lever, flexible connections between said lever and said devices, a differential drum over which said connections pass, the larger and smaller drum elements being independently rotatable in opposite directions upon the same axis, and means on one drum engaging means on the other for causing the two drums to rotate together in one direction only, together with a spring acting on each drum element to turn it in a direction opposed to the action of the other spring; one spring tending to rotate the larger drum and hold said connections taut, and means carried by the smaller drum for engaging and imparting movement to the larger drum in one direction only, together with means for releasing the engagement between the two drums and rotating the smaller drum to restore it to initial starting position.

[Claims 6 to 12 not printed in the Gazette.]

1,211,148. COMBINED TYPE-WRITING AND ADDING MACHINE. FREDERICK A. HART, Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Dec. 9, 1910. Serial No. 596,451. (Cl. 235—60.)



1. A mechanism for operating the adding mechanism of a typewriting machine from a source of power, comprising a motor, an actuator for the adding mechanism, means for connecting the motor to the actuator to effect the movement of the latter, an error correcting mechanism, and means for rendering inoperable the connection from the source of power to said actuator during the operation of the error correcting mechanism.

2. A mechanism for operating the adding mechanism of a typewriting machine from a source of power, comprising a motor, an actuator for the adding mechanism, means for connecting the motor to the actuator to effect the movement of the latter, an error correcting mechanism, a key for operating said error correcting mechanism, and means controlled by said key for rendering inoperative the connection from the source of power to said actuator during the operation of the error correcting mechanism.

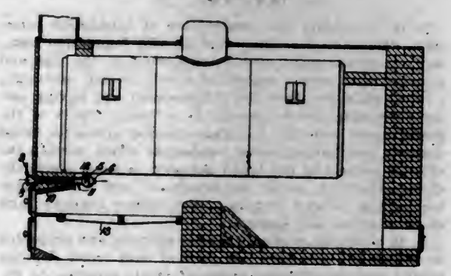
3. In a computing machine, the combination, with computing mechanism, and a driving mechanism therefor; of a key; an arm controlling said driving mechanism, and controlled by said key; a second key; and an arm movable by the second key for locking the first-named arm against operation by the first-named key during the time that said second key is depressed.

4. A computing machine comprising a key, an arm moved by said key, a stop, a spring moving said stop to lock said arm, a second arm, a stop on said second arm holding said spring-moved stop inoperative, and a key moving said second arm to cause said first arm to be locked.

5. A computing machine comprising a key, an arm moved by said key, a driving mechanism controlled by said arm, a stop, a spring for moving said stop to lock said arm, a second arm on which said spring is anchored, a stop on said second arm holding said spring-moved stop inoperative, and a key to operate said second arm to lock said first arm.

[Claims 6 to 11 not printed in the Gazette.]

1,211,149. COMBUSTION-ACCELERATOR. EMIL ARTHUR HELLER, New York, N. Y. Filed June 27, 1916. Serial No. 106,226. (Cl. 110—52.)



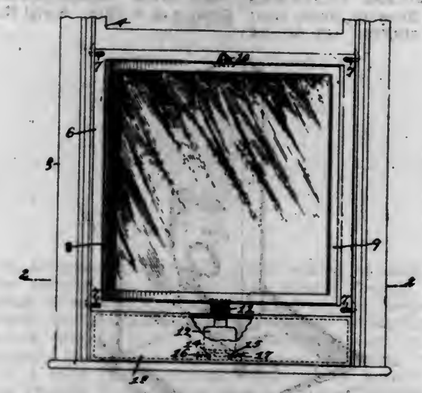
1. A combustion accelerator for furnaces comprising a mixing chamber having a discharge nozzle adapted to be disposed within the fire chamber of the furnace, said mixing chamber having an air inlet adapted to be disposed outside of the furnace, baffle plates in said chamber between the air inlet and the discharge nozzle, means associated with the air inlet to give a whirling motion to the air entering the chamber, and a suction nozzle associated with the air inlet and adapted to be located within the fire chamber of the furnace.

2. A combustion accelerator for furnaces comprising a mixing chamber adapted to be disposed within the furnace and having a discharge nozzle within the fire chamber of the furnace, said mixing chamber having an air inlet opposite the nozzle adapted to be disposed outside of the furnace, baffle plates within the chamber for intercepting the direct flow from the inlet to the discharge nozzle, means within the air inlet for whirling the air entering the chamber, and a suction nozzle leading to the air inlet and located between said means and chamber and adapted to be disposed within the fire chamber of the furnace.

3. A combustion accelerator for furnaces comprising a drum adapted to be disposed within the furnace, said drum having a slot extending substantially through its entire length and forming a discharge nozzle therethrough into the fire chamber of the furnace, a tubular member extending from the drum substantially midway between its ends and located opposite said slot, the end of said tubular member being adapted to be located outside of the furnace to form an air inlet for said drum, baffle plates within said drum extending longitudinally thereof and intercepting the direct flow from the inlet to the slot, a helix within the tubular member to whirl the air passing through the tubular member into the drum, and a suction nozzle depending from the inlet between the helix and the drum and adapted to be located within the fire chamber of the furnace.

4. A combustion accelerator for furnaces comprising a mixing chamber having a discharge nozzle adapted to be disposed within the furnace so as to discharge in the direction of the outlet of combustion gases from the fire chamber of the furnace, said mixing chamber having an air inlet opposite the nozzle adapted to be disposed outside of the furnace, baffle plates within the chamber between the air inlet and the nozzle, and a suction nozzle associated with the air inlet and adapted to be disposed within the fire chamber of the furnace to draw the unburned gases of the fire chamber and cause the gases to pass with the air through the discharge nozzle.

1,211,150. ELECTRIC WINDOW-FAN. ELLIS ELDER HEPSLEY, Everett, Wash. Filed Dec. 14, 1915. Serial No. 66,746. (Cl. 230—1.)



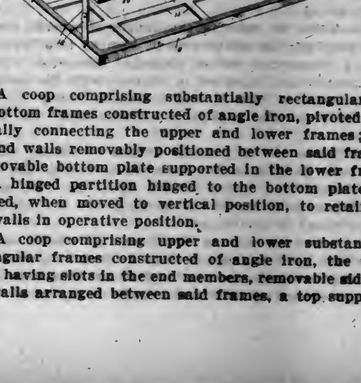
As an article of manufacture, for use in a window, a frame normally free from said window, a sash pivotally mounted therein and closely fitting the same, a casing at the lower side of said frame, an electric motor in said casing and in operative connection with said sash, means for connecting said motor with a source of electrical energy, and means engaged in the sash runs of said window for holding said frame in the window.

1,211,151. DIFFERENTIAL DRIVING-GEAR. RICHARD B. HEWITT, Birmingham, Mich. Filed Feb. 7, 1916. Serial No. 76,849. (Cl. 21—90.)

1. In a driving mechanism for motor vehicles, the combination of a revoluble axle, a tractor wheel revoluble on said axle, and differential gearing mounted in said tractor wheel and connected to both the wheel and axle and comprising an internally toothed gear ring mounted in the wheel, an eccentric on the axle, a pinion mounted on the eccentric and meshing with said gear ring, and means for preventing the pinion from revolving on its own axis.

2. In a driving mechanism for motor vehicles, the combination of a revoluble axle, a tractor wheel revoluble on said axle, an internally toothed gear ring mounted in the wheel, an eccentric on the axle, a pinion mounted on the eccentric and meshing with said gear ring, and means for preventing the pinion from revolving on its own axis.

3. In a driving mechanism for motor vehicles, the combination of a revoluble axle, a tractor wheel-hub revoluble thereon, and gearing mounted on said axle and connected to said wheel-hub for driving the wheel-hub at less speed than the speed of the axle and comprising an internally toothed gear ring mounted in the wheel, an eccentric on the axle, a pinion mounted on the eccentric and meshing with said gear ring, and means for preventing the pinion from revolving on its own axis.

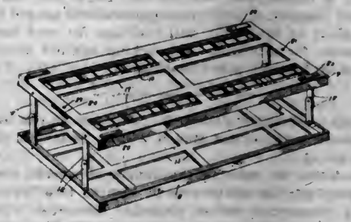


4. In a driving mechanism for motor vehicles, the combination of a revoluble main axle and a stub-axle, means to support the main axle, a coupling connecting the stub-axle to the main axle, a support for the stub-axle pivoted to the support for the main axle, a wheel-hub revoluble on the stub-axle and on the support for the stub-axle, and gearing mounted on said stub-axle and connected to said wheel-hub for driving the wheel-hub at less speed than the speed of the axle.

5. In a driving mechanism for motor vehicles, the combination of a revoluble main axle and a stub-axle, means to support the main axle, a coupling connecting the stub-axle to the main axle, a support for the stub-axle pivoted to the support for the main axle, a wheel hub revoluble on the stub-axle and on the support for the stub-axle, gearing mounted on said stub-axle and connected to said wheel hub for driving the wheel hub at less speed than the speed of the axle, and means to swing the wheel hub, the stub-axle and the support for the stub-axle through a horizontal arc.

[Claim 6 not printed in the Gazette.]

1,211,152. COLLAPSIBLE CHICKEN-COOP. STERLING P. HICKERSON, Fullerton, Nebr. Filed May 12, 1916. Serial No. 97,100. (Cl. 220—132.)



1. A coop comprising substantially rectangular top and bottom frames constructed of angle iron, pivoted links pivotally connecting the upper and lower frames; side and end walls removably positioned between said frames; a removable bottom plate supported in the lower frame; and a hinged partition hinged to the bottom plate and adapted, when moved to vertical position, to retain the side walls in operative position.

2. A coop comprising upper and lower substantially rectangular frames constructed of angle iron, the upper frame having slots in the end members, removable side and end walls arranged between said frames, a top supported

in the top frame, and a cover plate removably supported upon said top having reduced ends adapted, when the plate is flexed, to be inserted in said slots.

1,211,153. ELECTRICAL CONDUCTOR. MARTIN HOCHSTADTER, Berlin, Germany. Filed Jan. 16, 1915. Serial No. 2,755. (Cl. 173—13.)



1. An aerial conductor for overhead power transmission consisting of a bundle of bare copper strands in conductive contact to constitute a main conductor, said bundle being devoid of insulation, and an auxiliary conductor, which alone is provided with an insulation, said insulation separating said auxiliary conductor from the main conductor, the insulated auxiliary conductor being embedded in the uninsulated main conductor.

2. An aerial conductor for overhead power transmission consisting of a bundle of uninsulated copper strands in conductive contact to constitute a main conductor, an insulated auxiliary conductor embedded in the main conductor, and a metallic protective covering surrounding the auxiliary conductor.

3. An aerial conductor for overhead power transmission consisting of a bundle of uninsulated copper strands in conductive contact to constitute a main conductor, an insulated auxiliary conductor embedded in the main conductor, and a metallic covering surrounding the auxiliary conductor and adapted to participate in the carrying of the current of the main conductor.

1,211,154. GRAVITY-CONVEYER. ARTHUR V. HOEFFLEUR, Chicago, Ill. Filed Feb. 5, 1915. Serial No. 6,212. (Cl. 64—36.)



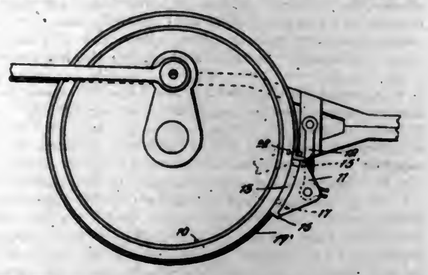
The combination with a track roller, of an apertured support, a needle-point bearing stud adjustably threaded into said support, a rotary bearing-member engaged by the needle-point of said stud, ball bearings for said member, and means for adjusting and locking against accidental rotation said needle point bearings.

1,211,155. FLANGE-TURNER. EDWARD CLYDE HONEA, Alexandria, La. Filed Mar. 4, 1916. Serial No. 82,195. (Cl. 82—4.)

1. A device for turning the flanges of wheels, comprising a body portion adapted to be secured to a brake shoe head, a transverse cutter pivotally connected with the body portion and adapted to contact with the periphery of the flange to turn it, and means to swing the cutter upon its pivot and hold it in adjustment at the desired position.

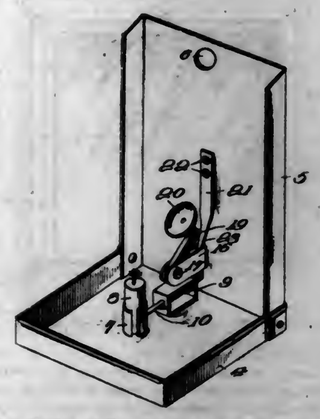
2. A device for turning the flanges of wheels, comprising a body portion having a groove to receive the flange, and a transverse cutter pivoted upon the body portion and adapted to be moved across the groove to contact with the periphery of the flange.

3. A device for turning the flanges of wheels, comprising a body portion adapted to be secured to a brake shoe head and provided upon one longitudinal edge with a head having a groove to receive the flange of the wheel, a cutter extending transversely of the body portion at one end thereof and having its cutting end adapted for movement across the groove, a bolt pivotally connecting the



cutter and body portion, and an adjusting bolt having screw-threaded engagement with a portion of the body portion and contacting with one end of the cutter to swing it upon its pivot.

1,211,156. CANDLE-EXTINGUISHER. JOSEPH EDWARD HOSKING, Butte, Mont. Filed Aug. 8, 1916. Serial No. 113,736. (Cl. 67—24.)



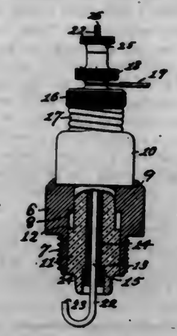
1. In a device of the character described, the combination with a base, candle holding means thereon, a stationary bearing adjacent said means, a rod extending through said bearing and normally in engagement with said candle, a handle formed on said rod, a spring adapted to cause a forward movement of said rod, candle extinguishing means in engagement with said rod whereby disengagement of said rod with said candle will cause said spring to move said rod forwardly to operate said extinguishing means.

2. In a device of the character described, the combination with a base having an extension, candle holding means on the base, a bearing block on the base, a rod mounted in said block and adapted to engage a candle, a spring on said extension in engagement with said rod, a bracket on said extension, candle extinguishing means carried by said bracket and in engagement with said rod whereby disengagement of said rod from said candle will cause said spring to cause a forward movement thereof to actuate said extinguishing means.

3. In a device of the character described, the combination with a base formed with an extension candle holding means, a bearing block, a rod mounted in said block and adapted to engage a candle, a handle on said rod, a bracket on said extension, candle extinguishing means mounted thereon, said rod being bent to form a vertical portion and a horizontal portion to engage said extinguishing means, and a spring on said extension in engagement with the vertical portion of said rod whereby disengagement of the rod from the candle will cause a forward movement thereof under the action of the spring to operate the extinguishing means.

4. In a device of the character described, the combination with a base having an extension, candle holding means, a bearing block, a rod mounted in said bearing block and normally in engagement with a candle, said rod being bent to form a handle, a vertical portion and a horizontal portion, a bracket on said extension, candle extinguishing means pivotally mounted on said bracket and in engagement with the horizontal portion of said rod and a spring in engagement with the vertical portion of said rod to cause a forward movement thereof when disengaged from said candle to operate said extinguishing means.

1,211,157. SPARK-PLUG. ROBERT HUGHES, Mount Vernon, N. Y. Filed June 6, 1916. Serial No. 101,907. (Cl. 123—169.)



1. A spark plug, comprising a body member of conductive material, an insulating tube slidable therein, a spring for resisting such movement, and a center contact pole in said tube, said tube fitting the interior of the body member whereby it will clear the latter of soot when manually depressed against the action of said spring.

2. A spark plug, comprising a body member having a soot chamber in the bottom thereof, a spring controlled insulating tube slidably held in said body portion and closely fitting the interior thereof whereby it will clear the latter of soot when manually depressed against the action of said spring, a center contact pole in said tube, and means for externally rotating said pole to carry the point at its lower end to different points at the lower end of said body member to present new sparking points.

3. A spark plug, comprising a body member having an unbroken lower edge perpendicular to its longitudinal axis, an insulating tube therein, a center contact pole in said tube, having a hooked lower end in juxtaposition with said lower edge, external means for carrying said end against said edge and external means for rotating said pole whereby said end and edge may be cleaned.

4. A spark plug, comprising a body member having an unbroken lower edge perpendicular to its longitudinal axis and having a bore of two diameters to form a shoulder, an insulating tube of two diameters slidably fitted within said body member and having a shoulder bearing against said first named shoulder, a spring for yieldingly holding said shoulders together, a hooked center contact pole in said tube, and a nut threaded on said pole for adjusting the lower end thereof toward or from said body member to provide a desired spark gap between itself and said body member.

5. A spark plug, comprising a body member having an unbroken lower edge perpendicular to its longitudinal axis and having a bore of two diameters to form a shoulder, an insulating tube of two diameters slidably fitted within said body member and having a shoulder bearing against said first named shoulder, a spring for yieldingly holding said shoulders together, a hooked center contact pole slidable and rotatable in said tube, a nut threaded on said pole for adjusting the lower end thereof toward or from said body member to provide a desired spark gap between itself and said body member, and means for rotating said pole to carry the hooked end of said pole into different radial positions with respect to said body member to provide new sparking points.

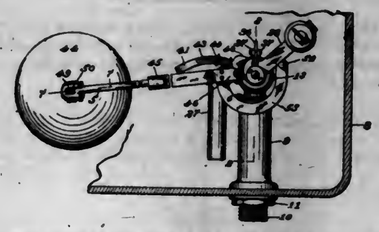
[Claims 6 to 8 not printed in the Gazette.]

1,211,158. PAPER-FASTENER. ASA O. IRWIN, Fort Mills, Philippine Islands. Filed June 15, 1916. Serial No. 103,832. (Cl. 24—153.)



A paper fastener consisting of a single piece of sheet metal bent to form two legs or members, said legs or members being reversely cut to form a pair of coacting pointed tongues or prongs located opposite each other and bent inwardly, said tongues or prongs being reversely curved and each tongue or prong presenting a concave surface to the other tongue or prong whereby the tongues or prongs are straightened out and are caused to lie opposite the openings from which they were cut to form a lock.

1,211,159. VALVE-OPERATING MECHANISM. CHARLES E. ITTNER and CHARLES A. SMITH, Baltimore, Md. Filed July 2, 1915. Serial No. 37,680. (Cl. 137—104.)



1. The combination with a casing having a water supply connection and a discharge opening, of a rock shaft in the casing; a valve in the casing between the supply connection and the discharge opening and said valve being actuated by the rock shaft; a float-rod entirely exterior to the casing and having one end pivoted independently of the rock shaft and provided at its other end with a float; means actuated by the downward swinging movement of the float-rod to rock the shaft and open the valve; means for locking the rock-shaft in position to hold the valve open and means actuated by the upward swinging movement of the float rod to release the locking means and allow the rock-shaft to turn and close the valve.

2. The combination with a casing having a supply connection and a discharge opening, of a valve in the casing between the supply and discharge opening; a rock-shaft extending into the casing; a reciprocating valve-stem having one end connected to the valve and its other end connected with the rock shaft; a lever connected to the rock shaft for normally holding the latter in position to keep the valve closed; a float rod having one end pivotally sustained independently of the rock shaft; means mov-

able with the float rod to engage the lever and move the rock shaft to open the valve as the float rod moves downward; means for locking the lever and rock shaft in position to keep the valve open and means actuated by the float rod for releasing the locking means.

3. The combination with a casing having a water supply connection and a discharge opening, of a valve in the casing between the supply and the discharge opening; a horizontal rock shaft; a sleeve on said rock shaft; an actuating lever rigidly connected to the outer end of the rock shaft; a locking member to hold the actuating lever in one position; a trip lever pivotally engaging the sleeve and to trip the locking member; a float rod pivoted to one side of the rock shaft and engaging the trip lever and a segment arm carried by the float rod for engaging the actuating lever.

4. The combination with a casing having a water supply connection and a discharge opening, of a valve in the casing between the supply and the discharge opening; a sleeve extending horizontally from the casing; a rock shaft passing through the sleeve and having its inner end connected with the valve and its outer end projecting from the sleeve; an actuating lever rigidly connected to the outer projecting end of the rock shaft; a trip lever pivotally mounted on the sleeve; a locking device operated by the trip lever; a float rod pivotally connected to the casing at one side of the rock shaft and a segment arm carried by the float rod and having its free end movable into engagement with the actuating lever.

5. The combination with a casing having a water supply connection and a discharge opening, of a valve in the casing between the supply and discharge opening; a sleeve extending horizontally from the casing; a rock-shaft passing through the sleeve and having its inner end connected with the valve and its outer end projecting from the sleeve; an actuating lever rigidly connected to the outer end of the rock shaft; a trip lever pivotally mounted on the sleeve; a float rod pivoted below the trip lever and sustaining the free end of the latter; an arm carried by the float rod and movable into engagement with the actuating lever and a locking pawl in the path of the trip lever to engage and hold the actuating lever.

[Claim 6 not printed in the Gazette.]

1,211,160. LATTICED POLE. JOHN EDWARD JENNINGS, Brooklyn, N. Y. Filed July 13, 1915. Serial No. 39,565. Renewed Oct. 10, 1916. Serial No. 124,900. (Cl. 189—24.)



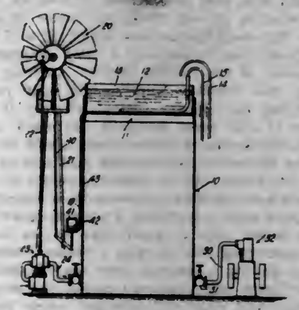
1. A pole comprising a plurality of oppositely disposed perforated reach bars; a plurality of brace rods, each having perforated ends and extending between and through the perforations in said bars; and wedge-shaped fasteners extending through said perforated ends and pressing against the outer surface of said bars, said fasteners having each an abutment on the bearing side thereof adapted to fall within the perforations within said reach bars for locking the fasteners against withdrawal from the perforations in said brace rods.

2. A pole comprising a plurality of oppositely disposed perforated reach bars; a plurality of brace rods, each having perforated ends and extending between and through the perforations in said bars; wedge-shaped fasteners extending through said perforated ends and pressing against the outer surface of said bars, said fasteners having each an abutment on the bearing side thereof adapted to fall within the perforations within said reach bars for locking the fasteners against withdrawal from the perforations in said brace rods; and means operatively engaging said fasteners and said brace rods for limiting the extension of said fasteners through the perforations in said brace rods.

3. A pole comprising a plurality of oppositely disposed perforated reach bars; a plurality of brace rods, each having perforated ends and extending between and through the perforations in said bars; wedge-shaped fasteners extending through said perforated ends and pressing against the outer surface of said bars, said fasteners having each an abutment on the bearing side thereof adapted to fall within the perforations within said reach bars for locking the fasteners against withdrawal from the perforations in said brace rods; and an abutment formed on the outer surface of each of said fasteners to limit the insertion thereof through the perforations in the brace rods.

4. A structure as characterized comprising a perforated member, the material forming the edge of which perforation being resilient for resuming its normal position after being deflected therefrom; a brace member having a perforated end extending through the perforation in the first-mentioned member; and a fastening device having a wedge-shaped end adapted for driving through the perforations in said brace members, said fastening device having a projection extending from the under side thereof for insertion in said perforation, the metal at the side of the perforation being deflected to admit the projection to said perforation.

1,211,161. WIND-POWER. TOSHIHEI JIKIHARA, Upland, Cal., assignor of one-half to Nasaju Ando, Upland, Cal. Filed July 6, 1915. Serial No. 38,045. (Cl. 230—32.)



1. A power system of the character described, embodying in combination a wind power element, an air compressor operated thereby, a compressed air storage, and a compressed air motor operated by the stored compressed air, said compressed air storage embodying an upright tank with a piston movable from top to bottom of the tank, said piston fitting the tank to prevent escape of air, and means controlled by the piston when it reaches a position at the upper end of the tank to render the wind power element inoperative with reference to the air compressor.

2. A power system of the character described, embodying in combination a wind power element, an air compressor operated thereby, a compressed air storage, and a compressed air motor operated by the stored compressed air, said compressed air storage embodying an upright tank with a piston movable from top to bottom of the tank, said piston fitting the tank to prevent escape of air means controlled by the piston when it reaches a position at the upper end of the tank to render the wind power element inoperative, and means for variably loading the piston embodying a weight chamber on the piston and means for introducing and withdrawing a fluid to and from the weight chamber.

3. A power system of the character described, embodying in combination a wind power element, an air compressor operated thereby, a compressed air storage, and a compressed air motor operated by the stored compressed air, said compressed air storage embodying an upright tank with a piston movable from top to bottom of the tank, said piston fitting the tank to prevent escape of air, means controlled by the piston when it reaches a position at the upper end of the tank to render the wind power element inoperative embodying an air pressure operated element and a pipe leading to said element and connecting into the upper part of the tank to be uncovered by the piston when the piston moves to its upper position, and means for variably loading the piston embodying a weight chamber on the piston and means for introducing and withdrawing a fluid to and from the weight chamber.

1,211,162. RAIL BOND OR TIE. ANDREW JOHNSON, Cripple Creek, Colo. Filed Aug. 19, 1916. Serial No. 115,824. (Cl. 238—5.)



1. A rail bond comprising an inverted channel bar formed in one piece adapted to be fitted between a pair of spaced rails, with its opposite ends bearing against the base flanges of said rails, and having offset lips at the tops of said ends engaging over said flanges, relatively short bars telescoping into each end of said channel bar and snugly fitting the same and projecting outwardly beneath the bases of said rails, means provided on the outer ends of said short bars for engagement with the outer base flanges of the rails, and means for securing the short bars in the channel bar.

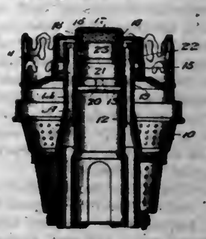
2. A rail bond comprising an inverted channeled bar adapted to be fitted between a pair of spaced rails, and having longitudinally extending lips at its opposite ends for engagement over the inner base flanges of the rails, a short solid bar telescoping into each end of the channeled bar and projecting outwardly beneath the bases of the rails and having inwardly overturned lips for engagement over the outer base flanges of the rails, and means for securing the short bars in the channeled bar.

3. A rail bond comprising a bar U-shaped in cross-section and adapted to be placed in inverted position between a pair of spaced rails, said U-shaped bar having on opposite ends and at its upper closed side longitudinally projecting and upwardly offset lips adapted for engagement over the inner base flanges of the rails, short solid bars telescoping into the opposite ends of the U-shaped bar and projecting outwardly therefrom beneath the rail bases, said short bars having overturned lips on their outer ends for engagement over the outer base flanges of the rails, and securing means for holding the short bars in the ends of the long bar to prevent the rails from spreading and turning over.

1,211,163. LAMP. VICTOR S. JOHNSON, Chicago, Ill., assignor to The Mantle Lamp Company of America, Chicago, Ill., a Corporation of Illinois. Filed Feb. 25, 1913. Serial No. 750,680. (Cl. 67—38.)

1. A lamp burner comprising a wick, an inner wick tube, an outer wick tube, a removable baffle carried by the outer wick tube for producing a chamber near the outer surface of the wick, a spreader mounted on the inner wick tube, and a baffle carried within the spreader to produce a chamber near the inner surface of the wick.

2. A lamp burner comprising a wick, an inner wick tube, an outer wick tube, an outer baffle carried by the outer wick tube to provide a chamber near the outer surface of the wick, a flame spreader having perforated sides, and a baffle positioned within the flame spreader to produce a chamber between the flame spreader and the baffle, and restrict the passage of air through the side perforations of said spreader.



3. A lamp burner including a wick tube, a flame spreader the side wall of which is provided with perforations extending substantially to the wick tube, and a baffle having its upper part spaced away from the flame spreader and said upper part terminating at a point above the wick tube to restrict the passage of air through a perforated part of said wall to a flame when set low.

4. A lamp burner comprising an inner wick tube, a flame spreader supported thereby, said flame spreader having a depending wall which is perforated at its upper portion and imperforate at its lower portion, and an imperforate baffle mounted within the spreader to engage the lower imperforate part of the depending wall and to form an air space between the perforated portion of said depending wall and said baffle, and to restrict the passage of air from the inner wick tube to the flame through the lower perforations in said depending wall.

5. A lamp burner comprising an inner wick tube, a flame spreader having a depending wall, said depending wall being perforated at its upper portion and imperforate at its lower portion, and a baffle engaging a portion of said imperforate lower portion, said baffle having a contracted upper portion which is adapted to be positioned adjacent perforations in said depending wall to restrict the passage of air from the inner tube through the lower perforations of the depending wall.

[Claims 6 to 17 not printed in the Gazette.]

1,211,164. CASING FOR PILES. CLARENCE H. JONES, Seattle, Wash., assignor of one-half to Henry C. Bromley, Seattle, Wash. Filed Mar. 20, 1913. Serial No. 756,829. (Cl. 72—81.)



1. A casing for piles comprising a base section composed of two segments, each having an outwardly extending footing, a downwardly extending lip or flange border-

ing the central pile-receiving opening, and an upwardly extending semi-tubular shell, said segments having meeting edges provided with complemental interlocking constructions adapted to be engaged by relative axial movements.

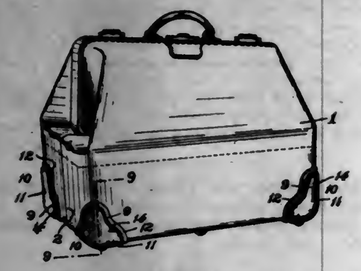
2. A casing for piles having a base section composed of two segments divided along vertical lines, their meeting edges having complemental interlocking shapes adapted to be engaged by lengthwise movement, each segment having outwardly extending footings and a downwardly extending lip or flange bordering the pile-receiving opening and an upwardly extending semi-tubular shell, which shells are of unequal length for the respective segments.

3. A pile comprising a continuous central wooden core and a protective casing therefor composed of segmental concrete sections having their vertical edges of complemental interlocking shape integral therewith and engageable by relative axial movements.

4. A pile comprising a continuous central wooden core and a protective casing therefor composed of segmental concrete sections having their vertical edges of complemental interlocking shape integral therewith and engageable by relative axial movements, said sections also having interlocking end shapes.

5. A pile comprising a continuous central wooden core and a protective casing therefor composed of segmental concrete sections having their vertical edges of complemental interlocking shape integral therewith and engageable by relative axial movements, said concrete segments being of a size to be spaced outward from the central wooden core when in place and a filling for the space between core and inclosing segments composed of cementitious material placed therein when in a plastic state.

1,211,165. PRESSED-OUT, RAISED, OR EMBOSSED CORNER-PIECES FOR BAGS. ARY KAUFMANN, Newark, N. J., assignor to K. Kaufmann & Co., a Corporation of New Jersey. Filed Sept. 4, 1915. Serial No. 48,956. (Cl. 190—37.)

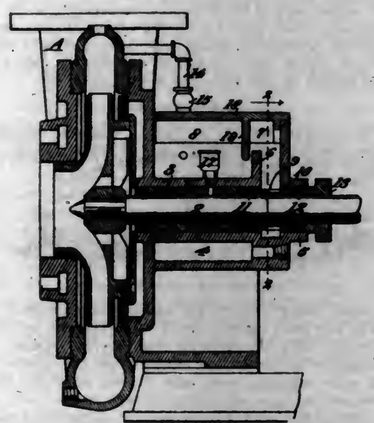


1. A bag or case comprising a body, and an edge-member separate from said body, said edge-member having an outwardly extending pressed-out, raised, or embossed body-portion, bounded by an abrupt off-set and a depressed marginal flange-like element, said off-set providing a thread-protecting element connecting said flange-like element with said pressed-out, raised, or embossed body-portion, and stitching through said flange-like element located in close proximity to said thread-protecting element for attaching said edge-member to the body of the bag.

2. A bag or case comprising a body, and an edge-member separate from said body, said edge-member having an outwardly extending pressed-out, raised, or embossed body-portion, bounded by an abrupt off-set and a depressed marginal flange-like element, said off-set providing a thread-protecting element connecting said flange-like element with said pressed-out, raised, or embossed body-portion, stitching through said flange-like element located in close proximity to said thread-protecting element for attaching said edge-member to the body of the bag, the body of the bag having a lining, and a reinforcing filler located in the pocket-like portion formed by the pressed-out, raised, or embossed body-portion of said edge-member.

3. A corner-piece adapted to be attached to the body of a bag or case, said corner-piece having an outwardly extending pressed-out, raised, or embossed body-portion, bounded by an abrupt off-set and a depressed marginal flange-like element, said off-set providing a thread-protecting element connecting said flange-like element with said pressed-out, raised, or embossed body-portion.

1,211,166. LIQUID-SEALING BOX. JOHN B. KEATING, Oakland, Cal., assignor to Byron Jackson Iron Works, West Berkeley, Cal., a Corporation of California. Filed Feb. 3, 1916. Serial No. 75,982. (Cl. 137—118.)



1. In a centrifugal pump, the combination with the casing, impeller shaft and shaft bearing, of a liquid sealing box surrounding the shaft and bearing and divided into two compartments, one constituting a settling chamber and the other a sealing chamber with an overflow from the settling chamber to the sealing chamber.

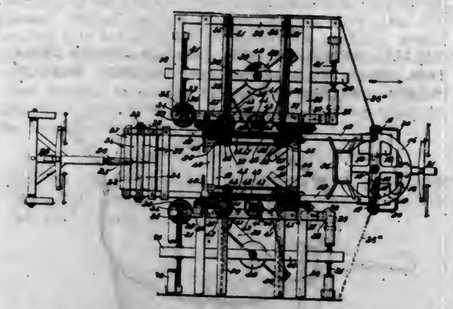
2. In a centrifugal pump, the combination with the casing, impeller shaft and shaft bearing, of a liquid sealing box surrounding the shaft and bearing and divided into two compartments, one constituting a settling chamber and the other a sealing chamber with an overflow from the settling chamber to the sealing chamber, and fluid connections between the settling chamber and the pump discharge for replenishing the settling chamber.

3. In a centrifugal pump, the combination with the casing, impeller shaft and shaft bearing, of a liquid sealing box surrounding the shaft and bearing and divided into two compartments, one constituting a settling chamber and the other a sealing chamber with an overflow from the settling chamber to the sealing chamber, a cover for the box having a downwardly extending submergible baffle member coöperating with the overflow partition between the two chambers.

4. The combination with a pump shaft and its bearing, of a liquid sealing box surrounding the bearing, a stuffing box in the outer end of the bearing, a partition member dividing the box into a settling chamber and an overflow chamber, and means for admitting liquid from the overflow chamber into the stuffing box.

5. The combination with a pump shaft and its bearing, of a liquid sealing box surrounding the bearing, a stuffing box in the outer end of the bearing, a partition member dividing the box into a settling chamber and an overflow chamber, a lantern gland interposed between the packing in the stuffing box, and means for admitting liquid from the overflow chamber to the lantern gland.

1,211,167. ROAD-GRADING MACHINE. JOHN H. KEETLE, Ashland, Nebr. Filed June 10, 1916. Serial No. 102,921. (Cl. 37—49.)



1. In a road machine, the combination with a main frame, of side frames extending longitudinally of and parallel to said main frame and to each other, and having hinged connections with said main frame, scrapers carried by said hinged side frames, means for adjusting said scrapers bodily in and out on said hinged side frames, a support extending upward from said main frame, winding rollers mounted in said support, flexible connections passing from said winding rollers to the outer parts of said hinged frames, suitable pulleys over which said flexible connections run, means for turning said winding rollers and means for retaining said rollers in any desired positions.

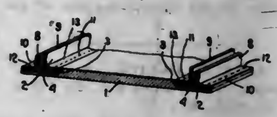
2. In a road machine, the combination with a main frame, of side frames extending longitudinally of and arranged parallel to said main frame and to each other, and having hinged connections with said main frame, said side frames being adapted to be lifted nearly to vertical positions, scrapers carried by said hinged side frames, means for adjusting said scrapers bodily in and out on said side frames, a support extending upward from said main frame, winding rollers mounted in said support, flexible connections passing from said winding rollers to the outer parts of said hinged frames, suitable pulleys near the top of said support and means for turning said winding rollers and means for retaining said rollers in any desired positions; whereby said hinged frames may be lowered to bring said scrapers into working positions and may be raised so as that their outer ends are brought up near the top of said support for compactness in traveling the machine through narrow passageways.

3. In a road machine, the combination with a main central frame, of side frames extending longitudinally of and arranged parallel to said main frame and to each other and having hinged connections with said main central frame so that they may be raised and lowered, scrapers carried by said hinged frames, means for raising and lowering said hinged frames, for the purpose of varying the vertical working positions of said scrapers or for lifting said hinged frames nearly to vertical positions, to narrow the machine, when desired, and means for adjusting said scrapers in and out on said hinged frames, said means comprising carrying bars for said scrapers, said bars being each provided with two separated nuts, adjusting screws passing through said nuts, and hand-operable gearing for turning said screws.

4. In a road machine, the combination with a main central frame, of side frames having hinged connections with said main central frame so that they may be raised and lowered, an adjustable bar on each of said hinged frames, said bars being each provided with two separated nuts, scrapers pivotally supported on said bars so that they may be turned to different inclined positions, a screw passing through each of said nuts and provided with a gear, an adjusting shaft mounted on each hinged frame and having at its upper end a hand wheel by which it may be turned and having at its lower end a gear meshing with the gear on one of said screws, a longitudinal rod mounted in each hinged frame and having at one end a gear meshing with the gear on said adjusting shaft, and having at its other end a gear meshing with the gear on the other of said screws, so that by turning said adjusting shaft the bars carrying said scrapers may be moved in and out with a parallel adjustment by the screws passing through the two separated nuts in each of said bars.

5. In a road machine, the combination with a main central frame, of side frames having hinged connections with said main central frame so that they may be raised and lowered, an adjustable bar on each of said hinged frames, said bars being each provided with two separated nuts, scrapers pivotally supported on said bars so that they may be turned to different inclined positions, a screw passing through each of said nuts and provided with a gear, an adjusting shaft mounted on each hinged frame and having at its upper end a hand wheel by which it may be turned and having at its lower end a gear meshing with the gear on one of said screws, a longitudinal rod mounted in each hinged frame and having at one end a gear meshing with the gear on said adjusting shaft, and having at its other end a gear meshing with the gear on the other of said screws, so that by turning said adjusting shaft the bars carrying said scrapers may be moved in and out with a parallel adjustment by the screws passing through separated nuts in each of said bars, and means for adjusting said scrapers on their pivots in said bars, to vary the inclination of their working positions.

1,211,168. INSOLE. FREDERICK R. KEITH, Randolph, Mass. Filed May 15, 1916. Serial No. 97,504. (Cl. 36—22.)



1. An insole comprising a body element having an outwardly-facing rib-positioning shoulder formed on an integral part thereof adjacent its edge, the portion of said body element between the shoulder and the edge being thinner than the rest thereof and said shoulder having a depth equal to the difference in thickness between the main portion of the body element and the thin edge thereof, and a rib-forming element secured to the thin edge portion of the body element and positioned by the shoulder, said rib-forming element providing an inseam-receiving rib which is made entirely from material that is separate from but secured to the body element.

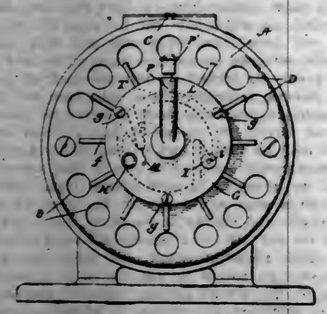
2. An insole comprising a body element formed with an outwardly-facing shoulder adjacent its edge and having the edge portion between the shoulder and the edge thinner than the rest thereof, and a rib-forming element secured to said thinner edge portion of the body element and positioned by the shoulder thereof, said rib-forming element being channeled longitudinally from the outer edge and the channeled portion being turned up to form an inseam-receiving rib.

1,211,169. ROTARY COMPRESSOR. CHARLES EDMUND KELLS, New Orleans, La. Filed Apr. 10, 1916. Serial No. 90,200. (Cl. 230—30.)

1. A rotary compressor comprising a rotor chamber having inlet and outlet ports, a rotor within the chamber having V-shaped vane-receiving recesses open at their outer ends and on two opposite sides and swinging vanes loosely mounted in said recesses and removable endwise therefrom and which are pressed inward endwise therein to hold their inner ends seated at all times in the inner ends of said recesses as the rotor revolves.

2. A rotary compressor comprising a rotor chamber having inlet and outlet ports and a curved wall forming an abutment between the inlet and outlet ports, a rotor with-

in said chamber having V-shaped recesses each of which is open at its outer end and on two opposite sides and having one of its closed sides longer than the other, and a swinging vane loosely mounted in each of said recesses which at times projects beyond the periphery of the rotor and at other times lies within the recess, one of the sides of said vane being of the same length as the longer side of the recess and each vane having an inclined outer end fitting the inner peripheral wall of the rotor chamber.



3. A rotary compressor comprising a rotor chamber having inlet and outlet ports, and a depressed abutment between the ports, a rotor within the chamber having vane receiving recesses, vanes mounted to swing in said recesses, and a detachable end plate for the rotor chamber provided with a lubricant chamber and with a channel leading radially to the middle portion of the depressed abutment.

1,211,170. TALLYING DEVICE. RAYBURN F. KENNEDY, College Corner, Ohio. Filed Feb. 23, 1916. Serial No. 79,967. (Cl. 235—90.)



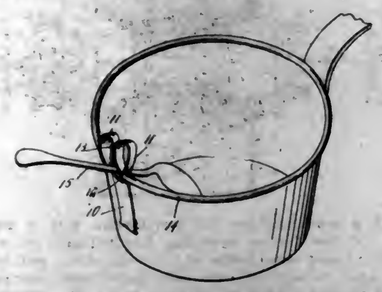
1. A game tallying device of the class described, comprising a casing, having a plurality of depressible key members therein, a support, spring locking means comprising stripe carried by said support and engageable with said key arms, said keys being independently depressible, and means for simultaneously disengaging said spring locking means from said key arms to permit return of said keys to normal position.

2. A game tallying device of the class described, including a casing having a plurality of keys therein depressible against the tension of a spring, arms carried by said keys, spring locking means for said arms, and a shaft having a plurality of arms carried thereby for engagement with said locking means to release said keys and allow the same to return to normal position.

3. In a device of the class described, a casing, a support in said casing, a plurality of depressible key members in said casing, arms carried by said key members and arranged in parallelism, spring locking strips carried by said support and having upturned laterally bent ends for engagement with the free ends of said arms, and a shaft having radially extending parallel spaced arms thereon for engagement with said spring locking members to disengage the same from said key arms and simultaneously release all of the keys.

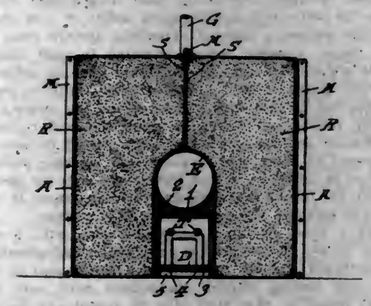
4. In a game tallying device, a casing, a plurality of depressible key members in said casing, arms carried by said key members, a support, a plurality of locking strips carried by said support and having upturned ends formed with laterally bent portions for engagement with the key arms, and means engageable with said upturned ends to move the laterally bent portions out of engagement with said arms to permit return of said keys to normal position.

1,211,171. SPOON-HOLDER. FRANCIS EUGENE KERSHNER, Henry, W. Va. Filed June 30, 1915. Serial No. 37,329. (Cl. 65—65.)



As an article of manufacture, a spoon holder formed from a single piece of flat material doubled on itself to provide a pair of legs the connecting portion of which is formed into a cylindrical member, and a pair of elliptical arms bent from the opposite ends of the cylindrical member and extending vertically thereabove and having their mutually adjacent longer bowed sides resiliently contacting centrally above the cylindrical member.

1,211,172. HOT-WATER BOILER. CHARLES KETTEL, St. Louis, Mo., assignor of one-fourth to Joseph A. Skillman, St. Louis, Mo. Filed July 29, 1915. Serial No. 42,595. (Cl. 122—494.)



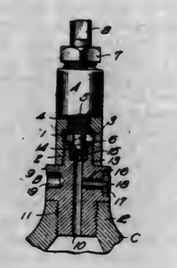
1. In a hot water heating system, a horizontally arranged boiler, a plurality of sectional compartments adapted to be mounted in abutting relation to each other over said boiler, thereby inclosing the circular wall and end walls of said boiler, each of said compartments having a heat storing element contained therein.

2. In a hot water heating system, a boiler, a combustion chamber for said boiler, a plurality of sectional compartments adapted to have their adjacent walls abut and envelop said boiler and said combustion chamber, means for mounting said compartments together, said compartments adapted to be filled with a combined heat receiving and restoring element.

3. In a hot water heating system, a boiler, a combustion chamber for said boiler, inlet and outlet pipes leading to and from said boiler, a plurality of sectional compartments adapted to fit over and envelop said boiler, combustion chamber and portions of said pipes, means for clamping said compartments together after said compartments have been engaged against said boiler and said combustion chamber, said compartments being filled with a heat storing element.

4. In a hot water heating system, a horizontally arranged boiler, a combustion chamber for said boiler, a plurality of box like sectional compartments having curved surfaces formed thereon adapted to abut each other and envelop said boiler and said combustion chamber, supply pipes leading from said boiler, return pipes leading to said boiler, said sectional compartments when abutting each other adapted to envelop portions of said pipes adjacent said boiler, each of said sectional compartments being for the reception of a heat storing element.

1,211,173. SAFETY-FUSE COUPLING FOR GAS-TANK VALVES. OTTO S. KING, New York, N. Y. Filed Oct. 15, 1915. Serial No. 55,998. (Cl. 220—121.)



1. The combination of a gas container, an outlet valve, and a combined coupler and safety device interposed between and separate from the container and valve.

2. The combination of a gas container, a valve, and a coupler having a threaded connection with the valve and container and provided with a safety relief normally closed by fusible material.

3. The combination of a gas container, an outlet valve, a coupling device comprising a body formed with a passage communicating with the valve and container and also provided with a lateral passage, and a fuse plug normally closing the latter passage.

4. The combination of a valve device including a valve element, a gas container, and a coupler between the valve device and container, said coupler forming a seat for the valve element and also a safety means for permitting the escape of gas from the container when the temperature of the surrounding air reaches a predetermined point.

5. The combination of a valve device including a casing open at its bottom, and a threaded valve element in the casing, a gas container, and a coupler having threaded connection with the container and valve casing and forming a seat for the valve element, and a safety device for permitting the escape of gas under pressure when the temperature surrounding the container reaches a predetermined point.

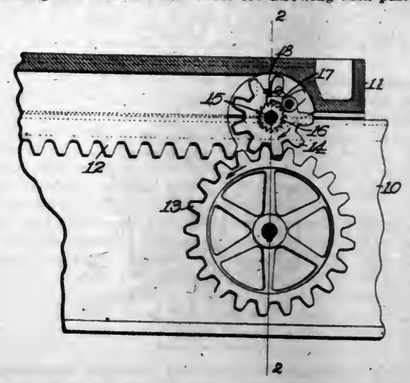
[Claim 6 not printed in the Gazette.]

1,211,174. ATTACHMENT FOR PLANERS. HARRY J. KINOSIAN, Worcester, Mass. Filed Apr. 29, 1916. Serial No. 94,453. (Cl. 74—27.)

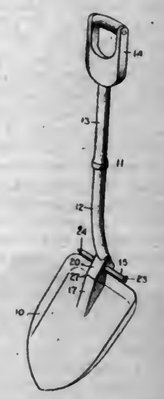
1. The combination with a planer table, its rack, and a gear for operating the rack adapted to be reversed at the end of the stroke, of rotary means independent of the reversing means adapted to remain constantly in mesh with the gear when the rack moves beyond it for returning the rack into mesh with the gear upon reversal.

2. In a planer the combination with a planer table rack and a gear for operating it, of a pinion mounted to move with the rack and capable of meshing with the gear and rotatable in one direction only.

3. The combination with a planer table rack, and its gear, of a pinion located at the end of the rack and having teeth in line with the teeth of the rack and adapted to mesh with the teeth of the gear, said pinion being freely rotatable on its axis, a fixed ratchet wheel, and means cooperating with the ratchet wheel for allowing said pinion to rotate in one direction and preventing it from rotating in the other.



1,211,175. IMPLEMENT. EDWARD KINZEL, Albany, N. Y. Filed June 30, 1916. Serial No. 106,801. (Cl. 55—116.)

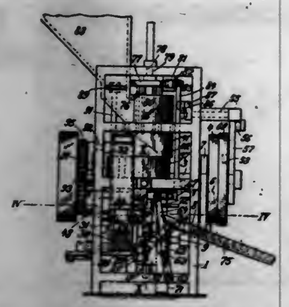


1. A shovel, spade or similar instrument comprising a blade and a separable handle connected with each other, the blade having a cut out portion at the base and a socket in front of the cut out portion, and the said handle having an arm fitting in the cut-out portion and engaging the said socket.

2. A shovel, spade or similar instrument, comprising a blade and a separable handle connected with each other, the blade having a cut-out portion at the base and a socket located forward of the cut-out portion and the said handle having a forwardly extending arm the rear portion of which fits into said cut-out portion and the forward end of which engages the said socket, and means for detachably fastening the handle and blade together.

3. A shovel, spade or a similar instrument, comprising a blade and a handle connected with each other, the blade being provided at its base with transversely extending registering eyes spaced apart, the blade having a cut-out portion at the base between the said eyes and the blade having a socket in front of the cut-out portion, the said handle having a transverse aperture registering with the said eyes, the said handle having a forwardly extending angular arm the rear portion of which fits into the said cut-out portion and the forward end of which fits into the said socket, and a pintle removably held in the said eyes and passing through the aperture in the handle.

1,211,176. MACHINE FOR MAKING BOBBINS FOR ELECTRIC BATTERIES. ABRAHAM KIPNISS and MAX PAUL NEUMANN, New York, N. Y. Filed Oct. 4, 1916. Serial No. 123,741. (Cl. 18—16.)



1. A machine of the character described comprising a compressing chamber; means for moving a stick of previously pressed carbon to rest therein; means for pressing a measured quantity of graphite into said chamber and around said carbon stick; means whereby a portion of the carbon stick is left protruding beyond the pressed graphite; and means whereby said pressed graphite and carbon stick may be forced out of said compressing chamber.

2. A machine of the character described comprising a cylindrical compressing chamber, a plunger having reciprocating movement in line with the longitudinal axis of said chamber, said plunger having a recess adapted to receive one end of a previously pressed carbon stick, the diameter of the carbon stick being less than that of said chamber; means whereby forward movement of said plunger causes the remaining portion of said carbon stick to be moved into said chamber, and causes the plunger to close one end of said chamber; means whereby powdered graphite may be forced into said chamber, around said portion of the carbon stick, and against said slide, whereby the graphite is pressed to conform to the shape of the chamber, and caused to adhere to said portion of the carbon stick; said plunger during return movement thereof being moved away from said pressed graphite and carbon stick; said end of said carbon stick being then left protruding beyond said pressed graphite, thereby forming a "bobbin"; and means whereby said bobbin may be removed from said chamber.

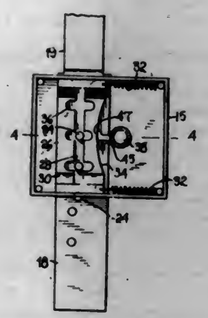
3. A machine of the character described comprising a compressing chamber; means for moving a stick of previously pressed carbon to rest therein; means for pressing a measured quantity of graphite into said chamber and around said carbon stick; means whereby a portion of the carbon stick is left protruding beyond the pressed graphite; and means whereby said pressed graphite and carbon stick may be forced out of said compressing chamber; a reciprocating slide having a receptacle to receive said bobbin; a fixed incline adapted to force said bobbin from said receptacle at the end of a forward movement of said slide; and an inclined receiving chute down which said bobbin may roll when discharged from said receptacle.

4. A machine of the character described, comprising a compressing chamber; a reciprocating slide having a plunger pivoted thereto, said plunger having a recess formed in the free end thereof; a magazine for previously pressed carbon sticks; mechanism adapted to move one end of one of said sticks into said recess of said plunger; means whereby forward movement of said slide causes said plunger and carbon stick to swing into alinement with the longitudinal axis of said chamber; further forward movement of said slide then causing the remaining portion of said carbon stick to be moved into said chamber and causing the plunger to close one end of said chamber; means whereby powdered graphite may be forced into said chamber, around said portion of the carbon stick, and against said slide, whereby the graphite is pressed to conform to the shape of the chamber, and caused to adhere to said portion of the carbon stick; said plunger during return movement of said slide being moved away from said pressed graphite and carbon stick, and said end of said carbon stick being then left protruding beyond said pressed graphite; and means whereby said pressed graphite and carbon stick may be removed from said chamber.

5. A machine of the character described, comprising a compressing chamber, a plunger having reciprocating movement in line with the longitudinal axis of said chamber, said plunger having a recess adapted to receive one end of a previously pressed carbon stick, the diameter of the carbon stick being less than that of said chamber; means whereby forward movement of said plunger causes the remaining portion of said carbon stick to be moved into said chamber, and causes the plunger to close one end of said chamber; a plunger located at the opposite end of said chamber and having reciprocating movement in line with the longitudinal axis thereof; a carrier adapted to move powdered graphite to rest between the second-named plunger and said chamber; forward movement of said second plunger then causing said powdered graphite to be forced into said chamber, around said carbon stick, and against the end of the first-named plunger, whereby the graphite is pressed to conform to the shape of the chamber, and caused to adhere to said portion of the carbon stick; the first-named plunger during return movement thereof being moved away from said pressed graphite and carbon stick; said end of said carbon stick being then left protruding beyond said pressed graphite; further forward movement of the second plunger then causing said pressed graphite and carbon stick to be forced out of said chamber.

[Claims 6 to 11 not printed in the Gazette.]

1,211,177. LOCK. HERMANN KLASK, Batesburg, S. C. Filed Sept. 2, 1916. Serial No. 118,248. (Cl. 70—31.)



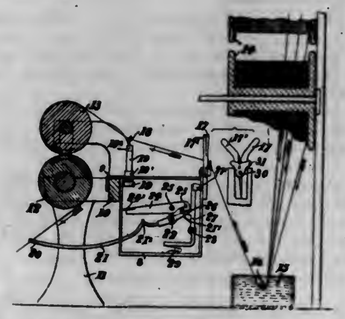
1. In a lock, a case, a locking bolt shiftable through said case, key engaging means on one side of the locking bolt, tumbler members arranged upon the relatively opposite sides of the locking bolt and movable in a plane at right angles thereto, individual means carried by the bolt to independently co-act with the respective tumbler members and lock the bolt against shifting movement, and an operating key provided with means to move the tumbler members and disengage the same from the locking means on the bolt and also having a part to subsequently engage the means on the side of the locking bolt and shift said bolt.

2. In a lock, a case, a locking bolt shiftable through said case, a toothed plate secured upon one side of said bolt, tumblers arranged upon the opposite sides of the bolt and movable in a plane at right angles to the movement of the locking bolt, said toothed plate being disposed between the side of the locking bolt and one of the tumbler members, individual means carried by the bolt to independently co-act with the respective tumbler members and lock the bolt against shifting movement, and an operating key provided with means to move the tumbler members and disengage the same from the locking means on the bolt and also having a part to co-act with said toothed plate and subsequently shift the bolt.

3. In a lock, a case, a longitudinally shiftable locking bolt mounted in the case, spring-held tumbler plates arranged on opposite sides of the bolt and movable in a plane at right angles to the movement of the bolt, each of said plates having a longitudinal slot and said slots being disposed in offset relation, a series of pins projecting from each side of the locking bolt and disposed along different longitudinal lines for engagement in the respective slots, each tumbler plate being also provided with spaced notches along one edge of the slot therein, the said series of notches being of relatively different depths to receive the respective series of pins on the bolt, an operating key having lugs of relatively different lengths to engage the corresponding edges of the respective tumbler plates and shift the same to disengage the pins from the notches in the respective tumbler plates, one of said lugs being provided with a projecting finger, and additional means on the bolt for engagement by said finger to longitudinally shift the bolt.

4. In a lock, a longitudinally shiftable locking bolt, spring-held tumbler plates arranged upon opposite sides of the locking bolt and movable in a plane at right angles to the movement of the bolt, each of said plates having a longitudinal slot therein and a series of notches along each edge of the slot, the notches along corresponding edges of said slots being of relatively different depths, locking pins projecting from opposite sides of the bolt to normally engage the latter series of notches in each plate whereby the bolt is held against shifting movement, a toothed plate fixed upon one side of the locking bolt, an operating key provided with spaced lugs between which one edge of the bolt is received in the turning movement of the key, said lugs co-acting with the respective tumbler plates to shift the same and position the pins on the bolt in the slots of the respective plates, and a projecting finger formed upon one of the key lugs for engagement with said toothed plate to shift the locking bolt.

1,211,178. AUTOMATIC STOP-MOTION FOR YARN-SPINNING MACHINES. WLADYSLAW KOZLOWSKI, Warsaw, Russia. Filed Jan. 5, 1912. Serial No. 669,633. Renewed May 7, 1914. Serial No. 837,073. (Cl. 19—25.)



1. In a stop motion for yarn spinning machines, thread supporting means, guides directing said threads, pincers adjacent said guides to grip said threads, weights having eyes through which said threads pass, a detector having a terminal hook on its longer arm engaging said thread and its shorter arm engaging a pin on a latch, said latch adapted at one end to be depressed by said weight and at its other end to release a spring-operated, bent lever, carrying a wedge to actuate said pincers to grip said threads, for the purpose specified.

2. In a stop motion mechanism for yarn spinning machines, thread supporting means, guides directing the threads from said means, pincers adjacent said guides to grip said threads, weighted thread guides having eyes through which said threads pass, said rollers carrying said threads between them, a pivoted detector actuating a latch, said latch releasing a spring operated lever carrying a wedge to operate said pincers, on the breaking of a thread.

3. In a stop motion for yarn spinning machines, thread supporting means, guides directing the threads from said means, pincers adjacent said guides to grip said threads, a detector carrying said threads on its longer arm, a latch engaged by its shorter arm means to depress one end of said latch, a lever releasable by the other end of said latch and a wedge carried by said lever to cause said pincers to grip said threads, as specified.

4. In a stop motion for twisting and spinning machines or the like, thread supporting means, guides directing said threads, normally opened pincers adjacent said guides to grip said threads when broken; a substantially closed box, a detector projecting from the box, the latter containing a spring influenced lever provided with means to actuate the pincers, a latch normally retaining the lever, means for releasing the latch by the swinging movement of the detector, and means for reëstablishing the normal position of the spring influenced lever and locking it by the returning movement of the said detector.

5. In a stop motion for twisting and spinning machines or the like, thread supporting means, guides directing said threads, normally opened pincers adjacent said guides to grip said threads when broken, a substantially closed box, a detector projecting from the box, the latter containing a spring influenced lever provided with means to actuate the pincers, a latch normally retaining the lever, the said detector being provided with an arm abutting against the latch and releasing it by its swinging movement, the latch having a second arm, the said detector abutting by its returning movement against the second arm and forcing thereby the latch against and in engagement with the spring influenced lever.

[Claim 6 not printed in the Gazette.]

1,211,179. POST-CARD TRAY. PAUL H. KRAETSCH, Astoria, Oreg. Filed Nov. 23, 1915. Serial No. 63,065. (Cl. 211—28.)

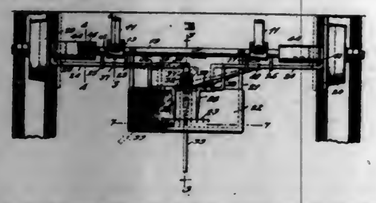


The herein described postcard tray consisting of a bottom having a recess provided in its forward edge, a rear wall and end walls connected with the bottom, said end walls being of a length less than half the length of one end of the bottom, a cover adapted to fit between the rear wall and end walls, said cover being of a width substantially equal to the width of the upper surface of the bottom, and an elastic band connected at its ends along the medial line of the cover and extending around the bottom.

1,211,180. TRACK-GAGE. LEWIS W. KRAKE, Bonduel, Wis. Filed May 9, 1916. Serial No. 96,328. (Cl. 33—144.)

1. A gage mechanism for tracks comprising a shaft, track engaging elements movable longitudinally thereof, manually operated means for adjusting said track engaging elements in opposite directions whereby the same may be fitted between the rails of a track, and means automatically operated by movements of said elements due to variations in the distance between said rails and connected to said manually operated means for indicating the amount of such variations.

2. A gage mechanism for tracks comprising a shaft, track engaging elements movable longitudinally thereof, manually operated means for adjusting said track engaging elements in opposite directions whereby the same may be fitted between the rails of a track, and indicators associated with the manually operated means and actuated by the movements of said elements due to variations in the distance between said rails for registering the amount of such variations.



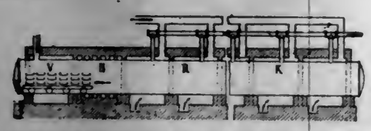
3. A gage mechanism for tracks comprising yieldably mounted track engaging elements movable relatively to each other, indicating devices associated with said elements, and means connected to said devices for manually adjusting the same and said track engaging elements in opposite directions.

4. A gage mechanism for tracks comprising yieldably mounted track engaging elements movable relatively to each other, indicating devices associated with said elements, means connected to said devices for manually adjusting the same and said track engaging elements in opposite directions, and means for releasably retaining the last named means in its adjusted position.

5. A gage mechanism for tracks comprising a shaft, track engaging elements rotatably mounted on said shaft and movable longitudinally of said shaft and relatively to each other, yieldable means for constantly maintaining said elements in engagement with the rails of a track, and indicating means connected to said track engaging elements, and operated by the relative movement therebetween to ascertain the amount of said movement.

[Claims 6 to 12 not printed in the Gazette.]

1,211,181. APPARATUS FOR THE PRODUCTION OF NITROGEN COMPOUNDS. CONSTANTIN KRAUSS, Cologne-Braunsfeld, and PAUL STÄHELIN, Knapsack, near Cologne, Germany. Original application filed Dec. 6, 1913, Serial No. 805,180. Divided and this application filed Mar. 26, 1915. Serial No. 17,286. (Cl. 23—13.)



1. An apparatus for the continuous production of nitrogen compounds from metal carbids and nitrogen, comprising an elongated furnace, means for transporting the metal carbids through said furnace in one direction, means for introducing nitrogen through said furnace in a direction opposed to the travel of said transporting means, and means for cooling the major portion of said furnace.

2. An apparatus for the continuous production of nitrogen compounds from metal carbids and nitrogen, comprising an elongated furnace, means for transporting the metal carbids through said furnace in one direction, means for introducing nitrogen through said furnace in a direction opposed to the travel of said transporting means, means for regulating the supply of said nitrogen, and means for cooling the major portion of said furnace.

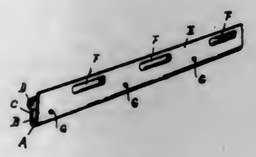
3. An apparatus for the continuous production of nitrogen compounds from metal carbids and nitrogen, comprising an elongated furnace, means for transporting the metal carbids through said furnace in one direction, means for introducing nitrogen through said furnace in a direction opposed to the travel of said transporting means, independent means for successively regulating the supply of said nitrogen, and means for cooling the major portion of said furnace.

4. An apparatus for the continuous production of nitrogen compounds from metal carbids and nitrogen, comprising a furnace arranged to provide a plurality of zones, means for transporting the metal carbids progressively through said zones in one direction, means for introducing nitrogen through said zones in a direction opposed to the travel of said transporting means, means for regulating the supply of said nitrogen, and means for cooling the major portion of said furnace.

5. An apparatus for the continuous production of nitrogen compounds from metal carbids and nitrogen, comprising a furnace arranged to provide a preheating zone, a main heating zone, a reaction zone and a cooling zone, means for transporting the metal carbids progressively through said zones, means for introducing nitrogen through said zones in a direction opposed to the travel of said transporting means, means for regulating the supply of said nitrogen, and means for cooling the major portion of said furnace.

[Claims 6 and 7 not printed in the Gazette.]

1,211,182. MOUNTING-STRIP FOR SWITCH-BOXES. EDWARD H. KRUSE, Fort Wayne, Ind. Filed Feb. 17, 1916. Serial No. 78,845. (Cl. 247—5.)



1. A mounting strip consisting of a folded metallic plate, the folded portions being spaced apart, the back portion extending beyond the edge of the front portion thereof, the front portion having a bead formed therein along its edge, and the back portion having a series of bosses that project toward the front portion, said strip having holes made therein that extend through both portions.

2. A mounting strip consisting of a folded metallic plate, the folded portions being spaced apart, the back portion extending above the edge of the front portion thereof, the front portion having a bead formed therein along its edge.

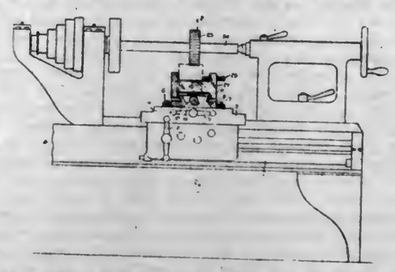
3. A mounting strip consisting of a folded metallic plate, the folded portions being spaced apart, and the back portion having made therein forwardly protruding bosses.

4. A mounting strip consisting of a folded plate the front and back portions being parallel to each other, the front part having a bead made therein along its upper edge, and the back part being straight, its upper edge extending above the plane of the front part.

1,211,183. LATHE ATTACHMENT. CARL A. KULENKAMPFF, Brooklyn, N. Y. Filed July 22, 1916. Serial No. 110,720. (Cl. 90—59.)

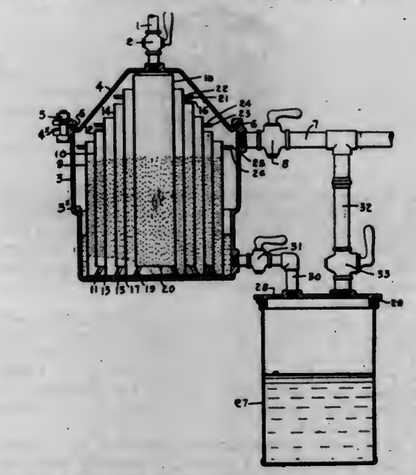
1. In an attachment for lathes, the combination with the carriage of a lathe provided with a tool rest, of a wedge member clamped to said carriage by the bolts used in clamping the rest in position, said wedge member having a dove-tail projection in the upper face formed with a hollowed-out portion, a transversely movable carriage having a dove-tail groove mating with the dove-tail projection of said wedge, and a threaded sleeve extending into said hollowed-out portion, and a threaded shaft extending through said sleeve and beyond said wedge member for shifting the position of said transversely movable carriage.

2. In an attachment for lathes of the character described, a wedge-shaped block provided with an inclined upper face having a groove therein, said groove being inclosed at the ends by walls having notches, a screw extending through said notches and said groove, means for preventing longitudinal movement of said screw while



allowing a rotary movement thereof, a carriage having an inclined lower face and a horizontal upper face, said carriage having the inclined face resting on the inclined face of said wedge, and a threaded sleeve extending from said carriage so as to surround said threaded screw and be moved thereby.

1,211,184. WATER-PURIFIER FOR ICE-MAKING. JONAS THEODOR LAGERGREN, Toronto, Ontario, Canada. Filed Dec. 3, 1915. Serial No. 64,894. (Cl. 210—1.)



1. In a filter, the combination with a supply pipe, of a filter container connected therewith, a receptacle connected with the filter container and a vacuum pipe connected with the filter container and with the receptacle.

2. In a filter, the combination with a supply pipe of a filter container connected therewith, and containing filtering material, a receptacle connected with the filter container and a vacuum pipe connected with the filter container and with the receptacle.

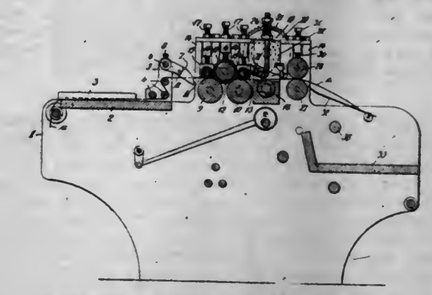
3. In a filter, the combination with a supply pipe, of a filter container connected therewith, a series of concentric members located one within the other spaced apart, having their upper ends in stepped relation and alternate bases closed to direct the water in a serpentine course to overflow over each alternate step, a receptacle connected with the filter container and a vacuum pipe connected with the filter container and with the receptacle.

4. In a filter, the combination with a supply pipe, of a filter container connected therewith, a series of concentric members located one within the other, spaced apart, with their alternate bases closed to direct the flow of water in a serpentine course over each alternate member, means for dividing the flow of water into fine streams as it flows over the members, a receptacle connected with the filter container, and a vacuum pipe connected with the filter container.

5. In a filter, the combination with a supply pipe, of a filter container connected therewith, a series of concentric wall members located one within the other, spaced apart with their alternate bases closed to direct the flow of water in a serpentine course over each alternate member, trays extending around and carried by each alternate member and provided with perforations through which the flow of water passes in fine streams, a receptacle connected with the filter container, and a vacuum pipe connected with the filter container.

[Claims 6 to 15 not printed in the Gazette.]

1,211,185. CLOTH-CUTTING MACHINE. JAMES LEATHEM, Lebanon, Pa., assignor to Herrmann Aukam & Co., New York, N. Y., a Corporation of New York. Filed Jan. 18, 1915. Serial No. 2,780. (Cl. 164—49.)



1. A machine for cutting cloth and like material comprising in combination feed rollers for feeding the material, guide rollers for engaging the material after it leaves the feed rollers, transverse cutting means arranged between said feed rollers and said guide rollers, means for intermittently rotating said feed rollers and said guide rollers a predetermined distance, said guide rollers arranged to rotate a short distance after the feed rollers have stopped to stretch the material, and means for actuating said transverse cutting means to cut the material after said feed rollers and guide rollers have stopped rotating.

2. A machine for cutting cloth and like material comprising in combination longitudinal cutting means for cutting the material longitudinally, feed rollers for drawing the material through said longitudinal cutting means, guide rollers for engaging the material after it leaves the feed rollers, transverse cutting means arranged between said feed rollers and said guide rollers, means for intermittently rotating said feed rollers and said guide rollers a predetermined distance, said guide rollers arranged to rotate a short distance after the feed rollers have stopped to stretch the material, and means for actuating said transverse cutting means to cut the material after said feed rollers and guide rollers have stopped rotating.

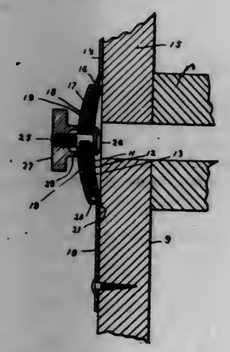
3. A machine for cutting cloth and like material comprising in combination longitudinal cutting means for cutting the material longitudinally, feed rollers for drawing the material through said longitudinal cutting means, guide rollers for engaging the material after it leaves the feed rollers, transverse cutting means arranged between said feed rollers and said guide rollers, means for intermittently rotating said feed rollers and said guide rollers a predetermined distance, said guide rollers arranged to rotate a short distance after the feed rollers have stopped to stretch the material, and means for actuating said transverse cutting means to cut the material after said feed rollers and guide rollers have stopped

rotating, and a stacking device for stacking the cut material after it leaves the guide rollers.

4. A machine for cutting cloth and like material, comprising in combination feed rollers for feeding the material, guide rollers for engaging the material after it leaves the feed rollers, transverse cutting means arranged between said feed rollers and guide rollers, means for intermittently rotating said feed rollers and said guide rollers a predetermined distance, comprising a controlling gear provided with intermittent means for rotating said guide rollers, a gear having a ratchet wheel for rotating said feed rollers, and a lever for operatively connecting said controlling gear and said ratchet wheel.

5. A machine for cutting cloth and like material, comprising in combination feed rollers for feeding the material, guide rollers for engaging the material after it leaves the feed rollers, transverse cutting means arranged between said feed rollers and guide rollers, means for intermittently rotating said feed rollers and said guide rollers a predetermined distance, comprising a controlling gear provided with intermittent means for rotating said guide rollers, a gear having a ratchet wheel for rotating said feed rollers, and a lever for operatively connecting said controlling gear and said ratchet wheel, and means for adjustably securing said lever to said controlling gear to permit of the same being adjusted to vary the amount of material fed by the feed rollers on each rotation of the controlling gear.

1,211,186. ADJUSTABLE FRICTION-HINGE. CHARLES A. LEE, Oneida, N. Y. Filed May 11, 1915. Serial No. 27,451. (Cl. 16—142.)



1. In an adjustable friction hinge, a hinge member having a friction face, a separate friction plate spaced therefrom, an ear on one of said members beyond its friction face entering into an aperture provided in the other member beyond its friction face and adapted to hold said members in non-rotative position relative to each other, a second hinge member rotatively mounted between said first hinge member and said friction plate and having friction faces coöperating therewith respectively and having a portion extending radially from between said first hinge member and said friction plate whereby said second hinge member may be secured to the desired object, a headed bolt extending through the friction faced portions of said three members and a nut in screw threaded engagement with the extended end of said bolt and bearing upon one of said outer members and adapted to adjust the tension of said friction hinge.

2. In an adjustable friction hinge, a hinge member having a friction face, a separate friction plate spaced therefrom, an ear on one of said members beyond its friction face entering into an aperture provided in the other member beyond its friction face and adapted to hold said members in non-rotative position relative to each other, a second hinge member rotatively mounted between said first hinge member and said friction plate and having friction faces coöperating therewith respectively and having a portion extending radially from between said first hinge member and said friction plate whereby said second hinge member may be secured to the desired object, a headed bolt extending through the friction faced portions of said three members and non-rotatively mounted relative to one of the outer members and a nut in screw threaded engagement with the extended end of said bolt and bearing upon one of said outer members and adapted to adjust the tension of said friction hinge.

3. In an adjustable friction hinge, a hinge member having a friction face, a separate friction plate non-rotatively mounted relative to the first hinge member, a second hinge member rotatively mounted between said first hinge member and said friction plate and having friction faces coöperating therewith respectively and having a portion extending radially from between said first hinge member and said friction plate whereby said second hinge member may be secured to the desired object, a headed bolt extending through the friction faced portions of said three members and non-rotatively mounted relative to one of the outer members and a nut in screw threaded engagement with the extended end of said bolt and bearing upon one of said outer members and adapted to adjust the tension of said friction hinge.

1,211,187. DEVICE FOR APPLYING LIQUID INSECTICIDES TO ANIMALS. TALBOT LENNOX, Marshalltown, Iowa. Filed Apr. 23, 1915. Serial No. 23,432. (Cl. 119—151.)



1. In a device for applying liquid insecticides to animals, the combination with a trough, of a distributer rockably mounted above said trough on a pivotal point eccentric to the center of the distributer, and means operated by the rocking of said distributer for the transferring of liquid from the said trough to the surface of the distributer.

2. In a device of the character described, the combination with a trough, of an elongated distributer rockably mounted above said trough and having its sides and ends projecting beyond the sides and ends of the trough, and means operated by the rocking of said distributer for transferring the liquid from said trough to the surface of said distributer.

3. In a device of the character described, the combination with a trough, of a distributer mounted above said trough and draining thereinto and vertically reciprocally movable with respect thereto, and a pump operated by the reciprocal movement of said distributer for transferring the liquid from said trough to the top of said distributer.

4. In a device of the character described, the combination with a trough, of a distributer rockably mounted above said trough, a piston rod loosely hung from the top of said distributer, a pump well formed in the bottom of said trough, and a piston on the end of said rod operating in said well for forcing the liquid therein up through the rod to the surface of said distributer.

5. In a device of the character described, the combination with a trough, of an elongated distributer having flat sides flaring outwardly from said trough merging into a rounded top, said sides and top merging into pointed ends projecting beyond the ends of the trough, and means for conveying the liquid in said trough to the surface of said distributer.

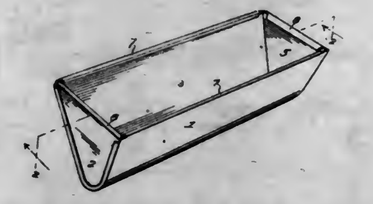
[Claims 6 to 11 not printed in the Gazette.]

1,211,188. DETERGENT FOR CLEANING AND POLISHING PURPOSES. ANTON A. LERAAS, Spokane, Wash. Filed Sept. 27, 1915. Serial No. 52,855. (Cl. 134—24.)

1. The herein described composition of matter for cleaning and polishing, consisting of buttermilk, salt, paraffin oil, turpentine, denatured alcohol, water, oil of cedar leaves, and a coloring matter.

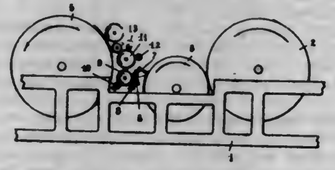
2. The herein described composition of matter for cleaning and polishing, consisting of the following ingredients in the following proportions by weight: fresh buttermilk thirty-six parts, salt four parts, paraffin oil thirty-six parts, turpentine eighteen parts, denatured alcohol eighteen parts, water eighteen parts, oil of cedar leaves one part, dye one-thirty-fifth part which has previously been dissolved in one part of denatured alcohol.

1,211,189. TURPENTINE-CUP. LOUIS LERIO, Mobile, Ala. Filed Sept. 27, 1915. Serial No. 52,892. (Cl. 220—98.)



A metallic turpentine cup and a lining therefor formed of a single sheet of bendable material fitted to the sides and bottom of said cup, and separate end portions with the adjacent edges of the body and end portions of the lining chamfered, the upper edges of the sides and ends of the cup being bent over the top edges of the sides and ends of the lining.

1,211,190. APPARATUS FOR SUPPLEMENTING THE CARDING AND BURRING OF THE SLIVER IN DOUBLE-CARDING MACHINES. LÉON LEVEUGLE, Roubaix, France. Filed June 30, 1914. Serial No. 848,136. (Cl. 19—3.)

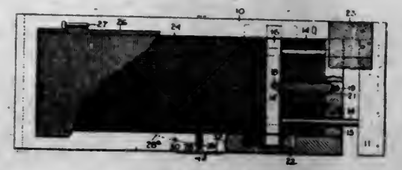


1. The combination with a double carding machine comprising a breaker carding cylinder, a doffer in operative engagement therewith and a finisher carding cylinder, of an apparatus for supplementing the carding and burring of the sliver as it passes through the machine comprising a plurality of toothed rolls interposed between the said doffer and the finisher carding cylinder between which rolls said sliver passes, and means for rotating said rolls in a direction opposite to the direction of the teeth thereon.

2. The combination with a double carding machine comprising a breaker carding cylinder, a doffer in operative engagement therewith, a burring apparatus in operative engagement with said doffer and a finisher carding cylinder, of an apparatus for supplementing the carding and burring of the sliver comprising a plurality of toothed rolls interposed between said burring apparatus and the finisher carding cylinder, between which rolls said sliver passes, and means for rotating said rolls in a direction opposite to the direction of the teeth thereon.

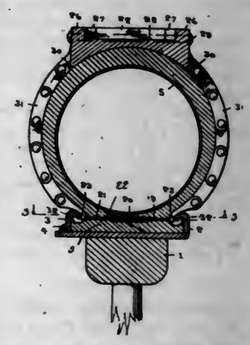
3. The combination with a double carding machine comprising a breaker carding cylinder, a doffer in operative engagement therewith and a finisher carding cylinder, of an apparatus for supplementing the carding and burring of the sliver interposed between the doffer and the finisher carding cylinder comprising a plurality of toothed rollers, a second doffer in close proximity to said toothed rollers, means for rotating said toothed rollers in a direction opposite to the teeth thereon, and means for delivering the sliver from said last named doffer to the finisher carding cylinder, said means comprising a third doffer delivering said sliver direct to the finisher carding cylinder and a brush and drum wheel in operative engagement with said last named doffer.

1,211,191. VENTILATOR. SIMON ELLIS LEVEY, Union Hill, N. J. Filed Mar. 10, 1915. Serial No. 13,330. (Cl. 98—31.)



A window ventilator including a frame presenting longitudinal bars and end bars, an extension member at an end of said frame, parallel lateral guide pins projecting from the inner face of the said extension member, the said pin slidably extending through the adjacent end bar of the frame, a vertical connecting bar joining the inner ends of said pins within the frame, the longitudinal members of the frame having alined recesses in their opposed faces and the ends of the said vertical connecting bar extending into said recesses and having sliding movement therein, and an expansion spring secured at one end to said vertical connecting bar and at its opposite end to the adjacent end bar of the frame.

1,211,192. TIRE-PROTECTOR. WILLIAM C. LOGAN, Loudsville, Ga. Filed Apr. 21, 1916. Serial No. 92,741. (Cl. 152—16.)

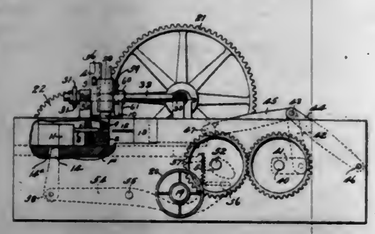


1. The combination with a tire protector comprising a plurality of tread plates hingedly connected together, and means carried by said tread plates for engaging the inturned flanges of a wheel rim for securing the protector upon the tire, of means projecting through the engaging means and the base of the tire for additionally securing the protector upon the tire.

2. The combination with a tire protector comprising a plurality of tread plates hingedly connected together, and flexible means carried by said tread plates for engaging the inturned flanges of a wheel rim for securing the pro-

tector upon the tire, of telescopic screw bolts projecting through the engaging means of said tread plates and the base of the tire for additionally securing the protector upon the tire.

1,211,193. FORGING-MACHINE FOR MAKING HOLLOW BODIES. FRED R. LONG, Catawissa, Pa. Filed Jan. 28, 1916. Serial No. 74,890. (Cl. 207—1.)



1. A forging machine for making hollow bodies, including a die, an automatic shear operating at one side of the die, a positioning plunger at one side of the die and operating as an anvil member, a temporary locking abutment for said positioning plunger, and a piercing tool operating in opposition to said plunger.

2. A forging machine for making hollow bodies, including a die, an automatic shear operating at the feeding-in side of the die, a combined positioning and ejecting plunger coöperating with the die, said plunger operating as a stationary anvil at one stage and as an ejector at a later stage of the operation, a movable locking element for temporarily holding said plunger rigidly in position while functioning as an anvil, and a piercing tool operating in opposition to said plunger.

3. A forging machine for making hollow bodies, including a die, an automatic shear operating at one side of the die, a positioning plunger at one side of the die and operating as an anvil member, a vertically movable member for temporarily locking said plunger rigidly in position, and a piercing tool operating in opposition to said plunger.

4. A forging machine for making hollow bodies, including a frame, a die mounted in said frame, an automatic blank shear operating at one side of the die, a positioning plunger also at one side of the die and operating as an anvil member, means for rigidly locking the plunger with said frame so that the latter constitutes with the plunger a part of the anvil, and a piercing tool working in opposition to said plunger.

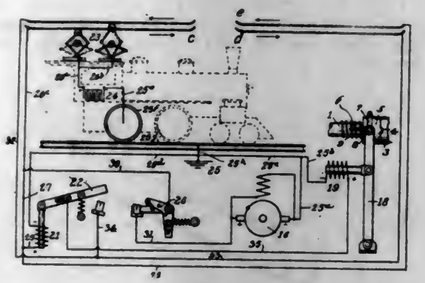
5. A forging machine for making hollow bodies, including a rigid frame, a die holder including a restraining die carried by said frame, a shearing device operating at one side of the die, a positioning plunger also at one side of the die, and acting as an anvil member, means for rigidly and solidly locking said plunger with said frame so that the latter becomes a part of the solid anvil, and a piercing tool operating in opposition to said plunger.

[Claims 6 to 11 not printed in the Gazette.]

1,211,194. RAILROAD-CROSSING GATE. RUSSELL H. LONGBRAKE, Del Sur, Cal. Filed Feb. 14, 1916. Serial No. 78,242. (Cl. 269—3.)

1. In a railroad crossing gate, the combination of a gate; counter weights for raising the gate; an electric motor for lowering the gate; an electric circuit for said motor adapted to be closed by trains that are approaching the crossing; means for opening the motor circuit when the gate has reached its closed position; a solenoid adapted for releasing the gate from its closing mechanism, so as to allow it to be raised by the action of said counter weights; an electric circuit for said solenoid adapted to be closed by trains that have passed the crossing; means for preventing the closing of the solenoid circuit when a train is approaching the crossing; and a source of electricity adapted for operating said electric circuits.

2. In a railroad crossing gate, the combination of a gate; an electric motor for closing the gate; an electric circuit for the motor that is adapted to be closed by trains that are approaching the crossing; an automatic switch for opening the motor circuit when the gate has closed; a solenoid for releasing the gate from its closing mechanism; an electric circuit for said solenoid that is adapted to be closed by trains that have passed the crossing; a switch in said solenoid circuit that is normally closed but adapted to be opened by trains that are approaching the crossing; a source of electricity adapted for operating said electric circuits; and counter weights for opening the gate when it has been released from its closing mechanism.

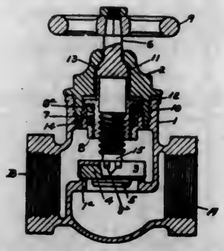


3. In a railroad crossing gate, the combination of a gate; counter weights for raising the gate; an electric motor for lowering the gate; an electric circuit for said motor that is adapted to be closed by a train when it is approaching the crossing; a switch in the motor circuit that is adapted to be opened by the gate mechanism when the gate has reached its closed position; a solenoid operated means for releasing the gate from its closing mechanism, so as to allow it to be raised by the action of said counter weights; an electric circuit for said solenoid adapted to be closed by the train when it has passed the crossing; a switch in said solenoid circuit that is adapted to be opened by another train that is approaching the crossing; and a source of electricity that is located upon a train passing the crossing and that is adapted for operating said electric circuits.

4. In a railroad crossing gate, the combination of a gate; counter weights for raising the gate; an electric motor for lowering the gate; an electric circuit for said motor which includes a conductor located near the railroad track, and parallel thereto, and adapted for making electrical contact with a conducting member on a train approaching the crossing; means for opening the motor circuit when the gate has reached its closed position; a solenoid adapted for releasing the gate from its closing mechanism, so as to allow it to be raised by the action of said counter weights; an electric circuit for said solenoid which includes a conductor located near the railroad track, and parallel thereto, and adapted for making electrical contact with a conducting member on a train that has passed the crossing; means for preventing the closing of the solenoid circuit when a train is approaching the crossing; a source of electricity that is adapted to be located upon a train passing the crossing, and that is adapted for operating said electric circuits; and a conducting member on said train that is connected to said source of electricity and adapted to make electrical contact with said conductors located near and parallel to the track.

5. In a railroad crossing gate, the combination of a gate; electrical means for causing said gate to open; an electric circuit for said means that includes a source of power and a switch whereby said circuit may be broken; and electrical means for causing said switch to break said circuit when a train is approaching the crossing.

1,211,195. VALVE. EDWARD B. LORENZEN, Sandusky, and HARRY M. ARTZ, Mansfield, Ohio. Filed Nov. 10, 1914. Serial No. 871,265. (Cl. 137—4.)



The combination with a valve casing having an internal valve-seat and a removable bonnet, of a valve and valve stem, a handle stem which screws on the valve stem and is provided with a horizontal flange, a nut screwed into the bonnet and having an internal shoulder and a vertical annular extension adapted for contact with said flange and the shoulder of the nut, the upper contacting portions of the body and stem being hemispherical as described.

1,211,196. COMBINATION-BED. SVEN LUNDBLAD, Seward, Alaska. Filed May 22, 1916. Serial No. 99,211. (Cl. 5—5.)



1. A bed comprising in combination, a flexible bed bottom, a long flap secured to one end of the bed bottom and adapted to overlie the bed-bottom to form a mattress by inclosing a filler between it and the bed bottom, and a short flap secured to the same end of the bed bottom and adapted to be folded over said long flap to form a pillow by including a filler between itself and said long flap.

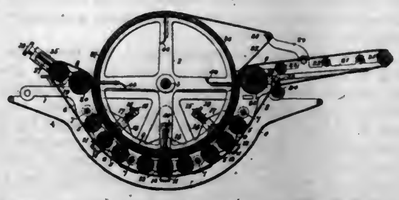
2. A sleeping bag comprising a flexible bottom, a downwardly extending flap fastened to the bottom near the head end adapted to overlie a filling and thereby form a mattress, another flap at the head end adapted to overlie a filling and thereby form a pillow, and a third flap at the foot end adapted to be laid back over said mattress and pillow.

3. A sleeping bag comprising a flexible bottom, a downwardly extending flap fastened to the bottom near the head end adapted to overlie a filling and thereby form a mattress, another flap at the head end adapted to overlie a filling and thereby form a pillow, a third flap at the foot end adapted to be laid back over said mattress and pillow, and side flaps secured to the bottom along the sides and drawn together in the middle of the bed by a lacing.

4. A camp bed comprising a flexible bottom with a hem at each side forming tubes, poles extending through said tubes, flaps attached to the bottom near the ends forming similar tubes, pairs of crossed legs at the ends, pivotally connected, supporting the longitudinal poles, and pairs of crossed legs at the sides, pivotally connected, supporting the transverse poles.

1,211,197. STARCHING-MACHINE. JOHN LYNCH, Harrisburg, Pa. Filed July 19, 1915. Serial No. 40,661. (Cl. 68—28.)

1. The combination of a rotatable drum, a cradle in which the drum is carried, supporting members secured to opposite sides of the cradle, and three rollers arranged side by side in said members in position to bear against the face of the drum, one of said rollers being yieldably mounted.



2. The combination of a rotatable drum, a cradle in which the drum is carried, a pair of supporting members resiliently secured to opposite sides of the cradle, and three rollers arranged side by side in said members in position to bear against the face of the drum, one of said rollers being yieldably mounted.

3. The combination of a rotatable drum, a cradle in which the drum is carried, a pair of supporting members pivotally connected to opposite sides of the cradle, and three rollers arranged side by side in said members in position to bear against the face of the drum, one of said rollers being yieldably mounted.

4. The combination of a rotatable drum, a cradle in which the drum is carried, a pair of supporting members pivotally and resiliently connected to opposite sides of the cradle, and three rollers arranged side by side in said members in position to bear against the face of the drum, one of said rollers being yieldably mounted.

5. In a starching machine, the combination of a rotatable hollow drum having its ends open, a starch container in which the drum revolves, means for holding articles to be treated in contact with the drum as said articles are passed through the container, and scoops mounted inside the drum and between the open ends thereof for agitating the starch in the container.

[Claim 6 not printed in the Gazette.]

1,211,198. WELL-DRILLING APPARATUS. WILLIAM A. MCCAUSLAND, Pittsburgh, Pa. Filed Jan. 26, 1915. Serial No. 4,451. (Cl. 255—28.)



1. In a well drilling apparatus, a flexible rope or cable, a boring bit, means for securing said boring bit to said cable, and a series of interlocking sections adapted to be assembled around the cable after the latter has been secured to the bit.

2. In a well drilling apparatus, a flexible rope or cable, a boring bit, means for securing said boring bit to said cable, a series of sections adapted to be assembled after the bit has been secured to the cable, each of said sections having a central longitudinal slot to permit the passage of the cable, and means for securing the sections together.

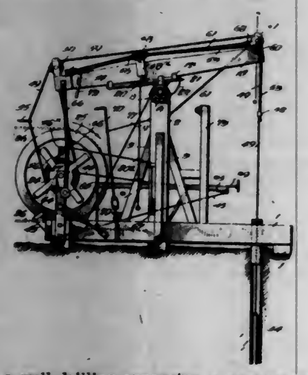
3. A well drilling tool comprising a bit, means for securing a rope or cable to the bit, and a plurality of sections each having a longitudinal central bore arranged to receive the rope, and a longitudinal slot for permitting the entrance of the cable into the central bore, and means for joining the sections together.

4. A well drilling tool comprising a bit, means for securing a rope or cable to the bit, and a plurality of sections each having a longitudinal central bore arranged to receive the rope, a longitudinal slot for permitting the entrance of the cable into the central bore, means for joining the sections together, said joining means comprising a locking plate arranged to enter the longitudinal slots of adjacent tool sections, and means for securing said locking plates to the tool sections.

5. A well drilling tool comprising a bit, means for securing a rope or cable to the bit, a plurality of sections each having a longitudinal central bore arranged to receive the rope, a longitudinal slot for permitting the entrance of the cable into the central bore, means for joining the sections together, said joining means comprising a locking plate arranged to enter the longitudinal slots of adjacent tool sections, and taper pins for securing said locking plates to said tool sections.

[Claims 6 to 16 not printed in the Gazette.]

1,211,199. WELL-DRILLING MACHINERY. WILLIAM AUGUSTUS MCCAUSLAND, Pittsburgh, Pa. Filed May 17, 1916. Serial No. 98,069. (Cl. 255—11.)



1. In a well drilling apparatus, a samson post, a walking beam pivotally mounted on said samson post, said walking beam being movable with respect to its pivotal support in the longitudinal direction of the beam.

2. In a well drilling apparatus, a samson post, a walking beam pivotally mounted on said samson post, said walking beam being slidable with respect to its pivotal support in the longitudinal direction of the beam.

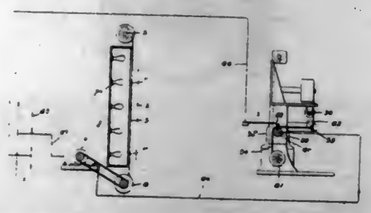
3. In a well drilling apparatus, a samson post, a walking beam pivotally mounted on said samson post, said walking beam being slidable with respect to its pivotal support in the longitudinal direction of the beam, and automatic means for retaining the walking beam in its shifted position.

4. In a well drilling apparatus, a samson post, a walking beam pivotally mounted on said samson post, said walking beam being slidable with respect to its pivotal support in the longitudinal direction of the beam, and automatic means for retaining the walking beam in its shifted position, said means comprising a spring-actuated pawl arranged to engage a portion of the beam, a hook secured to the frame of the device, and a hook or eye secured to said walking beam and arranged to engage said first named hook.

5. In a well drilling apparatus, a samson post, a walking beam having a pivotal connection with said samson post, said walking beam also being slidable with respect to its pivotal connection, a spring pressed pawl for normally holding the walking beam in a central position during the normal reciprocatory movement of the walking beam, means for disengaging the pawl from the walking beam when the latter is tilted to an abnormal position, and means for shifting the beam when the pawl is disengaged therefrom.

[Claims 6 to 15 not printed in the Gazette.]

1,211,200. CINEMATOGRAPH AND THE LIKE EFFECT. LANGDON MCCORMICK, London, England. Filed Apr. 10, 1914. Serial No. 831,015. (Cl. 88—16.)



1. In combination, cinematograph mechanism, a translucent screen on which the moving pictures are exhibited, and a lamp positioned in rear of the screen to register its light on the screen at such point where actual light is required to complete the pictorial representation.

2. In combination, cinematograph mechanism, a translucent screen on which the moving pictures are exhibited, a plurality of lamps in rear of the screen, and means for localizing the light of the lamps to register light on the screen where actual light is required to complete the pictorial representation.

3. In combination, a cinematograph mechanism, a translucent screen on which the pictures are exhibited, a plurality of lamps in rear of the screen, and movable means for localizing the light of the lamps to show in the reproduced picture actual light at a particular point.

4. In combination, cinematograph mechanism, a translucent screen on which pictures are exhibited, an opaque screen in rear of the translucent screen, said opaque screen having places through which light may pass, means for moving said opaque screen, lamps in rear of the opaque screen, and means for causing the opaque screen to move correspondingly to the picture exhibited on the translucent screen, whereby to produce actual light in the picture reproduced.

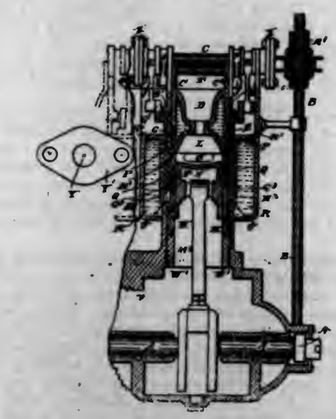
5. In combination, cinematograph mechanism, a translucent screen on which pictures are exhibited, an opaque screen in rear of the translucent screen and provided with openings, lamps in rear of the opaque screen, and means for registering the opening in the opaque screen with the represention of lights in the exhibited picture.

[Claims 6 to 10 not printed in the Gazette.]

1,211,201. VALVE AND VALVE-GEAR OF INTERNAL-COMBUSTION ENGINES. JOHN CAMPBELL MCINTOSH, The Glen, by Paisley, Scotland, assignor to William Henry Alexander and John Liddle, Glasgow, Scotland. Filed Dec. 20, 1909. Serial No. 534,168. (Cl. 123—75.)

1. In an engine of the class described the combination of a cylinder head, a piston movable with respect to said cylinder head, a shaft operatively connected with said piston, a secondary shaft at the combustion end, an inner and outer valve sleeve, in engagement with each other and surrounding said cylinder head, and means for actuating said sleeve from said secondary shaft.

2. In an engine of the class described the combination of a cylinder head, a piston slidable with respect to said cylinder head, a shaft operatively connected with said piston, a secondary shaft at the combustion end in driving connection with said first named shaft, valve sleeves in engagement with each other and surrounding said cylinder head, means for connecting said valve sleeves with said secondary shaft, said means engaging said sleeves on a plurality of points on the circumference thereof, and a casing for said last named shaft.



3. In an engine of the class described the combination of a cylinder head, a piston movable with respect to said cylinder head, a shaft operatively connected with said piston, a secondary shaft at the combustion end in driving relation with said first named shaft, valve sleeves in engagement with each other and surrounding said cylinder head, means for connecting said valve sleeves with said secondary shaft, said means engaging said sleeves on a plurality of points on the circumference thereof, a casing for said last named shaft, and a casing inclosing said connecting means, said casings being in communication with each other.

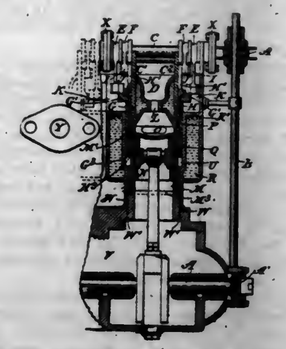
4. In an engine of the class described the combination of a cylinder head, a piston movable with respect to the cylinder head, a shaft operatively connected with said piston, a secondary shaft at the combustion end in driving relation with said first named shaft, valve sleeves in engagement with each other and surrounding said cylinder head extensions projecting from each of said sleeves at diametrically opposite points, the extensions of all of the sleeves being in alinement with respect to each other, elements connected with the secondary shaft and in engagement with said extensions, and a casing for said last named shaft.

5. In an engine of the class described, the combination of a cylinder head, a piston movable with respect to the cylinder head, a shaft operatively connected with the piston, a second shaft at the combustion end in driving relation with said first named shaft, valve sleeves in circumferential engagement with each other and controlled from the second shaft, a lining in the cylinder head and means for water cooling the lining, head and valve sleeves.

1,211,202. VALVE FOR INTERNAL-COMBUSTION ENGINES. JOHN CAMPBELL MCINTOSH, The Glen, by Paisley, Scotland, assignor to William Henry Alexander and John Liddle, Glasgow, Scotland. Original application filed Dec. 20, 1909, Serial No. 534,168. Divided and this application filed Jan. 16, 1913. Serial No. 742,258. (Cl. 123—75.)

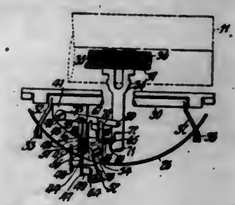
1. In an engine of the class described, the combination of a cylinder, a liner therefor having its lower end in engagement with said cylinder, said cylinder being spaced therefrom above, a valve mechanism comprising a sleeve surrounding said liner within said space, a cylinder head closing the top of said liner having a lower portion with an internal diameter equal to that of the liner and coacting therewith to form a gastight engagement with the liner, and means carried by said cylinder head for operating said sleeve.

2. In an engine of the class described the combination of a cylinder, a liner therefor having ports therein, a plurality of concentric valve sleeves surrounding said liner, said sleeves terminating a short distance below said ports and above the lower end of said liner, the upper portion of one of said sleeves being offset laterally, and a crank engaging said offset portion for operating said valve sleeves.



3. In an engine of the class described the combination of a cylinder, a cylindrical liner mounted in said cylinder with its inner surface forming a continuation of the bore of said cylinder, a detachable cylinder head closing the top of said liner and comprising a portion having an exterior diameter equal to that of said liner, and a plurality of concentric valve sleeves mounted on said liner and cylinder head, one of said sleeves provided with a pair of diametrically disposed upward projections constituting trunnions, and connecting rods pivotally connected to said trunnions for operating said valve sleeves.

1,211,203. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 13, 1915. Serial No. 20,987. (Cl. 197—155.)



1. The combination with a ribbon vibrator and a universal bar, of means for transmitting motion from the universal bar to the vibrator, said means comprising a bell crank having an arm to which a forward and rearward movement is imparted by the universal bar, and an arm having an up and down movement, and a link connected between said last-mentioned arm and the vibrator for moving the latter up and down, said last-mentioned arm and link forming a toggle arranged to gradually decrease the speed of the vibrator relative to that of the actuator during the upward throw of the vibrator.

2. The combination with a platen shiftable to upper and lower case positions, of a universal bar, a ribbon vibrator, an actuating lever for said vibrator, a support on which said lever is mounted, said support being shiftable up and down with the platen, a link between said lever and vibrator forming with said lever a toggle, and connections between the universal bar and said lever for operating the latter and permitting the lever to shift with the platen.

3. In a typewriting machine, the combination with a platen shiftable to upper and lower case positions, of a ribbon vibrator, a vibrator lever connected thereto, a sup-

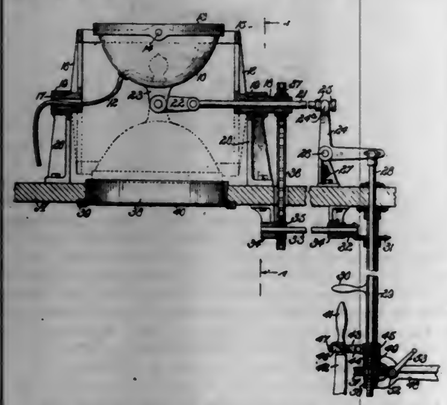
port on which said lever is mounted, means to shift said support up and down with the platen, an actuating lever mounted on said support, a link connecting one arm of said actuating lever with the vibrator lever and forming with said arm a toggle, and means to operate said actuating lever at each type stroke and cause the members of the toggle to be moved toward a straight line position during the type stroke whereby the ribbon vibrator is operated at a gradually decreasing speed.

4. In a typewriting machine, the combination with a platen shiftable to upper and lower case positions, of a ribbon vibrator, a vibrator lever connected thereto, a support on which said lever is mounted, means to shift said support up and down with the platen, an actuating lever mounted on said support, a link connecting one arm of said actuating lever with the vibrator lever and forming with said arm a toggle, a universal bar actuated by the type-bars, and means providing a slot-and-pin connection between the universal bar and said actuating lever permitting the latter to shift up and down with the platen, while maintaining an operative relation between the universal bar and actuating lever.

5. In a typewriting machine, the combination with a platen shiftable to upper and lower case positions, of a ribbon vibrator, a vibrator lever connected thereto, a support on which said lever is mounted, means to shift said support up and down with the platen, an actuating lever mounted on said support, a link connecting one arm of said actuating lever with the vibrator lever and forming with said arm a toggle, a universal bar operated at each type stroke, and a switch connected to the universal bar, and shiftable thereon to connect the universal bar with said actuating lever at different distances from the fulcrum of the lever to vary the throw of the latter and thereby vary the throw of the ribbon vibrator to bring the different color bands of a bichrome ribbon carried by the vibrator into activity, the switch having a slidable connection with the actuating lever while the switch is in either of its shifted positions to permit the actuating lever to shift up and down with the platen.

[Claims 6 to 15 not printed in the Gazette.]

1,211,204. SEARCH-LIGHT. JAMES H. MCPARTLAND, Houlton, Me. Filed July 15, 1916. Serial No. 109,493. (Cl. 240—7.)



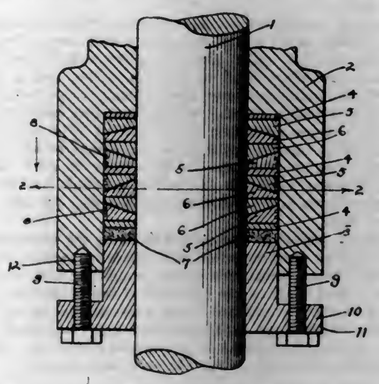
1. In a search light, a support having a vertical opening therein, a search light body mounted above said opening and having a source of light, means mounting the said body for universal movement, and means to impart turning movement to the body in one direction through an angle to dispose the same in inverted position at the said opening.

2. In a search light, a body having a source of light, a support for said body, and means mounting the body to turn in planes at right angles to each other, said means including trunnions on the body, a ring in which the said trunnions are mounted to rock, arms supporting the said ring, said arms having hollow trunnions disposed at right angles to the first trunnions, a shaft extending through one of the hollow trunnions and connected with the body of the light, means to move said shaft longitudinally, and means to rock the hollow trunnions about the axis of the shaft.

3. In a search light, a body having a source of light, means to rock said body in one plane, means to mount the light on a locomotive, means to turn the light in a plane at right angles to the first plane, said last-mentioned means including an actuating member mounted to turn, and means carried by said actuating member to detachably connect the same with the throttle lever of the locomotive.

4. In a search light, a support, a search light body having a source of light, trunnions on said body, a ring in which said trunnions have bearings, arms mounting said ring, trunnions on said arms, one of said last-mentioned trunnions being hollow, horizontal bearings in which said last mentioned trunnions are mounted, a shaft extending through the hollow trunnion and connected with the search light body, a bellcrank lever having one arm engaging said shaft, a vertical shaft connected with the other arm of the bellcrank, a hollow shaft in which the vertical shaft is mounted for longitudinal movement, said hollow shaft being mounted to turn about the vertical shaft, means to turn the hollow trunnion by the turning of said hollow shaft, and means to give longitudinal movement to the vertical shaft which extends through the hollow shaft.

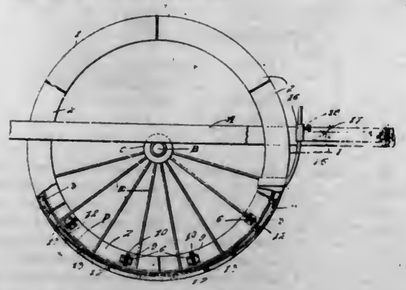
1,211,205. PISTON-ROD PACKING. WILLIAM T. MACDONALD, Somerville, Mass. Filed Jan. 23, 1914. Serial No. 813,923. (Cl. 137—116.)



In combination, a stuffing box having an enlarged bore, a shaft extending therethrough and a gland detachably secured to the box and extending therein, of a plurality of lead rings positioned within the bore and at points at each end thereof and intermediate its ends, Babbitt metal rings beveled in the direction of their inner edges and positioned adjacent the lead rings, Babbitt metal rings beveled in the direction of their outer edges and positioned between the first mentioned Babbitt rings, and an absorbent packing ring positioned adjacent the gland within the bore for furnishing the rings with lubricant.

1,211,206. ATTACHMENT FOR TRACTION-WHEELS. CHARLES C. MADISON, Scandia, Kans. Filed Dec. 17, 1915. Serial No. 67,428. (Cl. 21—207.)

1. An attachment for vehicle wheels comprising, a plurality of segments engaging over the rim of the wheel and each being U-shaped in cross section, the said segments having slots therein, L-shaped members interposed between the segments and the wheel rim and having short arms slidably extending through the slots in the segments, brackets carried by the sides of the segments and having portions extending inwardly of the wheel and in spaced relation to the inner surface of the rim of the wheel, and resilient members interposed between the inner surface of the wheel rim and the extended portion of the bracket, as and for the purpose specified.



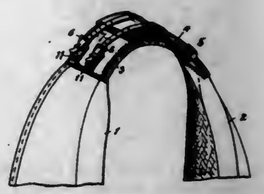
2. The combination with a wheel rim, of a plurality of segments removably and slidably associated with the rim, and each segment being U-shaped in cross section and having a plurality of slots therein, one end of the connecting portions for the sides of each segment being extended beyond the adjacent ends of the sides and offset inwardly to provide a flange, the flange on the connecting portion for the sides of one segment being arranged in overlapping relation with one end of the connecting portion for the sides of the adjacent segment, ground engaging members slidable through the slots in the segments, and resilient members associated with the segments and the wheel rim, for returning the segments to normal position, after operation, for the purpose specified.

3. The combination with a wheel rim, of a plurality of segments removably and slidably associated with the rim, each of the segments being U-shaped in cross section, and provided with slots, ground engaging members interposed between the segments and the rim of the wheel and slidable through the slots in the segment, brackets carried by the sides of the segment and extending inwardly of the wheel and spaced from the inner surface of the rim and provided with openings, rods carried by the inner surface of the wheel rim and slidable through the openings in the extended portions of the bracket, and springs surrounding the rods and interposed between the extended portions of the bracket and the inner surface of the wheel rim, for the purpose specified.

4. An attachment for a vehicle wheel comprising a plurality of segments slidably engaging over the vehicle wheel and each being U-shaped in cross section, the segments having slots therein, L-shaped members interposed between the segments and the wheel rim and having short arms slidably extending through the slots in the segments, brackets secured to the sides of the segments and having portions extending inwardly of the rim and spaced relation thereto, L-shaped members carried by the inner surface of the rim of the wheel and alined with the inwardly extending portions of the L-shaped brackets carried by the segments, rods extending through the wheel rim and the brackets on the inner side of the wheel rim loosely received by openings in the inwardly extending portions of the L-shaped brackets carried by the segments, nuts turned on the rods and adjustable against the L-shaped members on the inner surface of the rim, and springs encircling the rods and interposed between the inwardly extending portions of the L-shaped brackets carried by the segments, and the nuts on the rods.

5. The combination with a wheel rim, of a plurality of sections slidably associated with the wheel rim and having slots therein, ground-engaging members interposed between the sections and the wheel rim and slidable through the slots in the sections, brackets carried by the sections, rods carried by the inner surface of the wheel rim slidably associated with the brackets, springs surrounding the rods and interposed between the brackets and the inner surface of the wheel rim, nuts on the inner ends of the rods, and means to be positioned between the nuts and the brackets to prevent movement of the sections.

1,211,207. HARNESS-COLLAR. EDWIN W. MAHONE, Marshall, Tex. Filed May 24, 1916. Serial No. 99,505. (Cl. 54—21.)



1. A combined harness-collar adjusting and fastening means, having connected elements arranged in pairs, one element of each pair being attached to and carried by the extremity of one member of a collar and adapted to overlap the corresponding element of the other pair, and the other element of each pair being adjustably connected, for longitudinal movement, with the first-named element of the same pair, the second-named elements being mutually engaged for relative longitudinal adjustment.

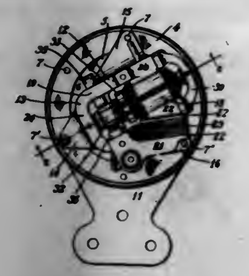
2. A combined harness-collar adjusting and fastening means, having connected elements arranged in pairs, one element of each pair being attached to and carried by the extremity of one member of a collar and adapted to overlap the corresponding element of the other pair, and the other element of each pair being adjustably connected, for longitudinal movement, with the first-named element of the same pair, and means for permanently locking the second-named elements in their adjusted relations with the first-named elements, the second-named elements being provided with adjustably related temporary engaging devices.

3. A harness collar having its end portions provided with overlapping flaps, the inside flap being provided at its free ends with guides adapted slidably to engage the outside flap, each of the said flaps having a series of openings therein, a buckle for one of said flaps, a tongue for the other of said flaps, a bolt and wing nut for adjustably holding said buckle in any one of the openings of said flaps, and a bolt and wing nut for adjustably holding said tongue in engagement with any one of the openings of said flap.

1,211,208. AUTOMOBILE OR MOTOR-CYCLE HORN. RAY H. MANSON, Elyria, Ohio, assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed May 15, 1915. Serial No. 28,259. (Cl. 177—7.)

1. In an automobile horn, the combination of a frame piece, a sonorous diaphragm, means to connect the diaphragm to the frame piece, an electric motor for operating the diaphragm, a field yoke for said motor, a plurality of wings on said yoke, means to connect the motor through said wings to the frame piece, an armature for the motor mounted in the yoke, a limb on the yoke parallel to the diaphragm and to the armature shaft, a second limb on the yoke parallel to the diaphragm but inclined to the armature shaft, an arm on said second named limb, a field winding on said arm, a link integral with said limbs and connecting the same together at one end, a bearing in said link for the armature shaft, a second link for connecting the other ends of the limbs, said second link being removable from said limbs, a bearing in said link for the other end of the armature shaft, said limbs being provided with

openings, brushes in said openings, an anvil on the diaphragm and a roughened wheel rotated by the motor for striking the anvil and causing the actuation of the diaphragm.



2. In an automobile or motor cycle horn, the combination of a flat frame piece provided with an opening in the central portion thereof, a sonorous diaphragm, means to connect the diaphragm to the front of the frame piece, said diaphragm extending over the opening in the frame piece, a field yoke for an electric motor, comprising a plurality of limbs and an interconnecting link, a plurality of wings integral with said yoke, means to connect said wings to the back of the frame piece, an armature mounted in said yoke, said interconnecting link being provided with an opening forming a bearing for one end of the armature shaft, a removable, interconnecting link connecting the free ends of the limbs of the yoke, an opening in said removable link forming a bearing for the other end of the armature shaft, one of the limbs of the yoke being parallel to the armature shaft and the other inclined to the armature shaft, an arm on the free end of the inclined limb extending toward the armature, a field coil on said limb, said limbs being provided with openings for the commutator brushes, brushes in said openings, an anvil on the diaphragm and a roughened wheel operated by the armature for vibrating the diaphragm through the anvil.

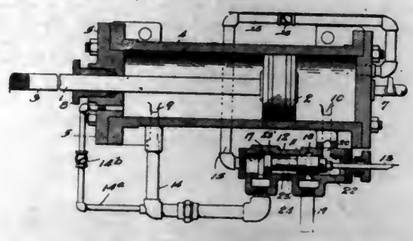
3. In an automobile or motor cycle horn, the combination of a frame piece, a diaphragm connected therewith, a field yoke consisting of a pair of limbs and an interconnecting link, means to connect the yoke to the frame piece, said limbs and link being parallel to the diaphragm, an armature in said yoke, one of the limbs of the yoke being parallel to the armature shaft, the other limb being inclined to the armature shaft, an arm on the free end of the inclined limb of the yoke, a field coil on said arm and means operated by the motor for vibrating the diaphragm.

4. In an automobile horn, the combination of a frame piece, a diaphragm connected thereto, a field yoke consisting of a pair of limbs and an interconnecting link integral therewith, a removable link for connecting together the free ends of the limbs, means to connect the yoke to the frame piece, said links being provided with bearings for an armature shaft, an armature in said yoke having the ends of its shaft in said bearings, the limbs of the yoke, the interconnecting links and the armature being parallel to the diaphragm, one of said limbs being inclined to the armature shaft, an arm on said limb, a field coil on said arm and means including a roughened wheel controlled by the armature for causing the vibration of the diaphragm.

5. In an automobile horn, the combination of a frame piece, a diaphragm, means for operating the diaphragm including an electric motor comprising an armature parallel to the diaphragm, a field yoke provided with limbs parallel to the diaphragm, one of the limbs being inclined to the shaft of the armature, an arm on said limb, a field coil on said arm and means to connect the motor to the frame piece and mechanism including a roughened wheel by means of which the armature causes the actuation of the diaphragm when rotated.

[Claims 6 to 16 not printed in the Gazette.]

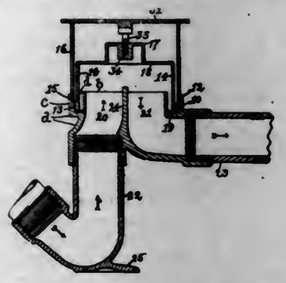
1,211,209. FLUID-PRESSURE MOTOR. EDWARD W. MEREDITH, Bloomsburg, Pa. Filed Dec. 23, 1915. Serial No. 68,381. (Cl. 121—45.)



1. In a single acting motor, the combination with its cylinder and its piston, of a casing having a valve therein and a motive fluid inlet, ports at the ends of the cylinder in communication with ports in the casing, said valve having means for equalizing the pressure in the cylinder upon the return stroke of the piston and also adapted to admit motive fluid to the cylinder at one end and exhaust the same from the cylinder at the other end, and means for permitting free flow of motive fluid throughout the motor when the parts are in position under equalized pressure.

2. In a single acting motor, the combination with its cylinder and its piston, of a casing having a groove and also a valve therein and a motive fluid inlet, ports at the ends of the cylinder in communication with ports in the casing and one of said casing ports being the terminus of the groove in the casing for permitting free flow of motive fluid throughout the motor when the parts are in position under equalized pressure, said valve having means for equalizing pressure in the cylinder, and adapted to admit pressure to the cylinder at one end and exhaust it from the other end of the cylinder.

1,211,210. PLUMBER'S TRAP. JOHN MILLER, Sr., Boston, Mass., assignor to United Utilities Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 18, 1915. Serial No. 51,461. (Cl. 182—12.)



1. In a trap of the character described, in combination, a body portion provided with a cylindrical upper wall of different thicknesses and having internal screw-threads, an annular flange within said wall forming with the thicker portion thereof a well to receive water and form a water seal, a cap having external screw-threads at its lower end in engagement with the internally threaded thicker portion of said upper wall, and a cylindrical reservoir having external screw-threads at its lower end in engagement with the internally threaded thinner portion of said upper wall, said body portion having an inlet port and an outlet port and a partition wall forming a dam between said ports.

2. In a trap of the character described, in combination, a body portion provided with a cylindrical upper wall and with a cylindrical flange of smaller diameter forming with said upper wall a water-receiving annular well, a removable cap extended into said well and having its lower end in threaded engagement with one of the walls of said well, and a removable cylinder surrounding said cap and having its lower end in threaded engagement with said upper wall, said body portion having an inlet port, an outlet port and a partition wall forming a dam between said ports.

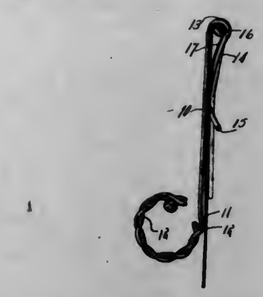
3. In a trap of the character described, in combination, a body portion provided with an annular upper wall and an annular flange of smaller diameter than said upper wall and forming therewith a water-receiving well, a cap having its lower end in threaded engagement with one of said walls, and a reservoir attached to the said outer wall and extended above said cap.

4. In a trap of the character described, in combination, a body portion provided with an annular upper wall and an annular flange of smaller diameter than said upper wall and forming therewith a water-receiving well, a cap having its lower end in threaded engagement with one of said walls, a reservoir attached to the said outer wall and extended above said cap, and a floor plate provided on its under side with a threaded rod in engagement with a threaded socket in said cap.

5. In a trap of the character described, in combination, a body portion provided with an annular upper wall and an annular flange of smaller diameter than said upper wall and forming therewith a water-receiving well, a cap having its lower end in threaded engagement with one of said walls, and a cylinder removably secured at its lower end to said outer wall and extended above said flange to form a reservoir.

[Claim 6 not printed in the Gazette.]

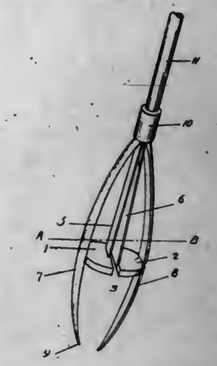
1,211,211. CLOTHES-PIN. EDWARD S. MITCHELL, Syracuse, N. Y. Filed Mar. 16, 1916. Serial No. 84,638. (Cl. 24—139.)



A clothes pin for use in connection with an endless pulley line formed of a single piece of wire and consisting of a pair of parallel bars, a second pair of shorter bars disposed outwardly of and at a greater distance apart than the first bars, said shorter bars extending into a plane approximately coincident with the plane of the longer bars, whereby a twisting clamping action is produced between the longer and shorter bars, curved members connecting the longer and shorter bars at one end, a curved member connecting the other ends of the shorter bars, the remaining ends of the longer bars being twisted and formed into a rearwardly and upwardly extending open ring to provide a hand grip, said ring also serving to receive and guide the lower lap of an endless pulley line.

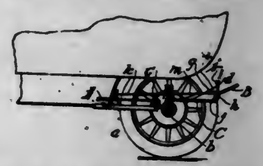
1,211,212. FLUE-CLEANER. ARTHUR JOHN MULLINER, Shediac, New Brunswick, Canada. Filed Dec. 7, 1914. Serial No. 875,893. (Cl. 83—64.)

A flue cleaner comprising a handle, a collar at the end of said handle, a pair of scrapers inserted in said collar and extending therefrom and describing perfect opposing arcs from said collar to their outer ends, a pair of spring arms inserted in said collar between said scrapers and extending outwardly and terminating slightly beyond the longitudinal center of said scrapers, and a pair of semi-



circular disk scrapers secured at their straight sides to said spring arms and on their curved sides to the aforesaid scrapers.

1,211,213. SIGNALING DEVICE FOR AUTOMOBILES. HAROLD T. MURPHY, Springfield, Mass. Filed Dec. 20, 1915. Serial No. 67,803. (Cl. 116—31.)



In a signaling device, in combination with the rear axle housing of an automobile, a bracket supported on said housing, extended rearwardly therefrom and provided with an upstanding member, a signaling member which at its lower end is pivotally connected to said upstanding member on an axis parallel with that of the rear axle of the vehicle, a brake operating rod, and a rod connected with and ranging substantially parallel with the brake operating rod and rearwardly extended to connection with said signaling member at a point slightly above the point of pivotal connection of said signaling member with said support, a stop on the upstanding member of said bracket on which the signal member rests normally in an approximately horizontal position, another stop provided at an upper part of the said upstanding member for limiting the signal member in an upwardly and rearwardly inclined position, and said second mentioned rod comprising separately formed sections having a spring retracting lost motion connection.

1,211,214. TIRE-PROTECTOR. AMBROSE W. NEFF, Powell, Ohio, assignor of one-half to George W. Neff, New York, N. Y. Filed Feb. 25, 1916. Serial No. 80,390. (Cl. 152—16.)

1. A tire protector, comprising a tread adapted to fit the peripheral face of a tire and provided at the sides with ledges, the peripheral face of the tread being provided with transverse grooves leading to the said ledges, flexible connections extending in the said grooves and ring-shaped protecting plates overlying the sides of the tread and extending onto the sides of the tire, the said plates being provided at their outer edges with flanges resting on the said ledges, and detachably connected with the ends of the said flexible connections.

2. A tire protector, comprising a tread adapted to fit the peripheral face of a tire and provided at the side with ledges, the peripheral face of the tread being flattened

and provided with transverse grooves leading to the said ledges, flexible connections extending in the said grooves and terminating at the said ledges, ring-shaped protecting plates overlying the sides of the said tread and extending



inward onto the sides of the tire, the outer edges of the said plates having inward return bent flanges seated on the said ledges, and means for connecting the ends of the said flexible connections with the said flanges.

1,211,215. VEHICLE-SIGNAL. MAX H. NEWMAN, Atlantic City, N. J. Filed May 17, 1916. Serial No. 98,074. (Cl. 40—67.)



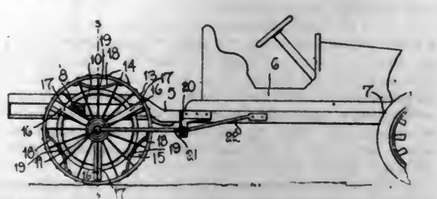
1. In a vehicle signal, the combination of stop and turn-out signs, manually controlled actuating levers each connected with a corresponding sign to swing the latter from normal inactive position into display position, and a manually controlled return lever having a pin extending into the paths of the said actuating levers to be actuated by either one of said actuating levers on swinging a sign into display position and to return a displayed sign and its actuating lever to normal inactive position.

2. In a vehicle signal, the combination of stop and turn-out signs, manually controlled actuating levers each connected with a corresponding sign to swing the latter from normal inactive position into display position, each of the said actuating levers having an arm, and a manually controlled return lever having a pin engaged by the said arms of the actuating levers to be actuated by either one of the said arms on swinging a corresponding sign into display position the said return lever serving to return a displayed sign and its actuating lever to normal inactive position.

3. In a vehicle signal, the combination of stop and turn-out signs mounted to swing and normally disposed in an inactive position, actuating levers connected with the said signs for swinging the same from normal inactive position into display position, controlling levers under the control of the driver of the vehicle, flexible connections connecting the said controlling levers with the said actuating levers, a return lever having a pin extending in the paths of the said actuating levers, and manually controlled means connected with the said return lever to return a displayed sign and its actuating mechanism to normal inactive position.

4. In a vehicle signal, the combination of stop and turn-out signs mounted to swing and normally disposed in an inactive position, actuating levers connected with the said signs for swinging the same from normal inactive position into display position, controlling levers under the control of the driver of the vehicle, flexible connections connecting the said controlling levers with the said actuating levers, a return lever having a pin extending in the paths of the said actuating levers, a flexible connection connected at one end with the said return lever, and a manually controlled lever connected with the other end of said flexible connection.

1,211,216. MOTOR-TRACTOR. ALFRED NOWKA, Harvard, Nebr. Filed Oct. 7, 1916. Serial No. 124,388. (Cl. 21—114.)

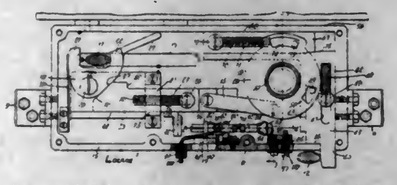


1. The combination with a motor vehicle, of a supplementary axle rotatably mounted in advance of the rear driven axle of the vehicle, traction wheels secured upon the ends of said supplementary axle, forwardly extending brace connections between the ends of the axle and the vehicle frame, and a driving connection between each end of the driven axle of the vehicle and the respective traction wheels.

2. The combination with a motor vehicle, of a supplementary axle rotatably mounted in advance of the rear driven axle of the vehicle, a tractor wheel fixed upon each end of the supplementary axle, an internal gear for each tractor wheel, radially disposed bars fixed at their outer ends to the tractor wheel and at their inner ends to the wheel hub and extending across the outer face of the internal gear and fixed thereto, additional brace bars arranged between the periphery of the internal gear and the traction wheel and secured thereto, and a spur gear fixed to each end of the driven axle of the vehicle having meshing engagement with the internal gears on the respective tractor wheels.

3. The combination with a motor driven vehicle, of a supplementary axle rotatably mounted in advance of the driven axle of the vehicle, tractor wheels fixed upon the ends of the supplementary axle, a driving connection between each end of the driven axle and the respective tractor wheels, transversely disposed angle bars fixed to the opposite sides of the machine frame in advance of the tractor wheels, brace rods secured to the ends of the supplementary axle and to said angle bars, and additional brace rods secured to the angle bars and extending forwardly therefrom and having their forward ends fixed to the vehicle frame.

1,211,217. LOCKING DEVICE FOR MOTOR-VEHICLES. CHARLES J. OUELLET and AMOS J. OUELLET, Cambridge, Mass. Filed Mar. 24, 1915. Serial No. 16,750. (Cl. 70—90.)



1. In combination, a pair of operating levers, a casing, means in said casing adapted to obstruct the movements of said levers, a pair of electric circuit terminals in said casing, a switch arranged within said casing and adapted to connect said terminals, a common actuating means for said obstructions and said switch, and locking means for said common actuating member.

2. In combination, a pair of operating levers, a casing, means in said casing adapted to obstruct the movements of said levers, a pair of electric circuit terminals in said casing, a switch arranged within said casing and adapted to connect said terminals, a common actuating means for said obstructions and said switch, a spring catch adapted to automatically lock said switch in a position to connect said terminals, means adapted to return said switch to its disconnected position, and locking means for said common actuating member.

3. In combination, a pair of operating levers, a casing, means in said casing adapted to obstruct the movements of said levers, a pair of electric circuit terminals in said casing, a switch arranged within said casing and adapted to connect said terminals, a common actuating means for said obstructions, and said switch, a spring catch adapted to automatically lock said switch in a position to connect said terminals, means adapted to permit an independent release of said switch from said spring catch, a spring adapted to return said switch to its disconnected position, and locking means for said common actuating member.

4. In combination, a casing provided with slots arranged in opposite walls thereof, an operating lever adapted to project through said casing within said slots, a latch arranged within said casing and adapted to engage and be operated by said operating lever, a slide in said casing adapted to be moved to engage said latch and to prevent the movements of said operating lever, an actuator operatively connected with said slide, and locking means for said actuator.

5. In combination, a fixed casing, an operating lever extending through said casing, a bifurcated rocker member arranged to straddle said operating lever within said casing, said rocker member being adapted to be moved when said operating lever is operated, a slide in said casing adapted to prevent the rocking of said rocker member, an actuator operatively connected to said slide, and locking means for said actuator.

[Claims 6 to 12 not printed in the Gazette.]

1,211,218. PROCESS FOR PLATING METALS. CLARK W. PARKER, Detroit, Mich., assignor to Parker Rust Proof Company of America, Detroit, Mich., a Corporation of Michigan. Filed July 31, 1916. Serial No. 112,250. (Cl. 204—8.)

1. The process of metal-coating articles of iron and steel which consists in immersing them in a heated solution of phosphoric acid and then suspending them in an electro-plating bath.

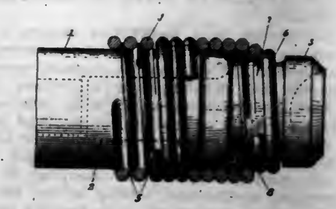
2. The process of coating articles of iron and steel with another metal which consists in immersing the same in a bath containing a solution of phosphoric acid and then suspending them in an electro-plating bath embodying a soluble compound of the metal to be deposited.

3. The process of coating articles of iron and steel with nickel which consists in immersing the same in a heated bath containing a solution of phosphoric acid and an intensifying agent and then suspending the same in an electro-plating bath embodying a solution of nickel sulfate.

4. The process of coating articles of iron and steel with nickel which consists in immersing the same in a heated solution of phosphoric acid and manganese oxid, then mechanically cleaning the surfaces, and then suspending the same in a nickel plating bath.

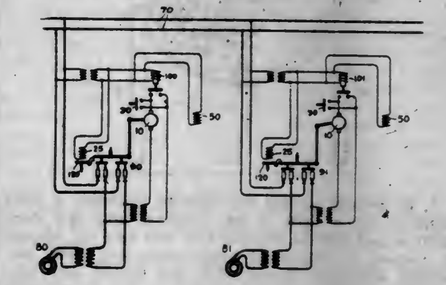
1,211,219. TOOL-RETAINER FOR PERCUSSIVE TOOLS. CAID H. PECK, Waverly, N. Y., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 16, 1913. Serial No. 806,999. (Cl. 78—44.5.)

1. In combination with a percussive tool barrel having a forward end and a tool having a shank sliding in said forward end, a coiled spring encircling said forward end and secured thereto, said spring having a forward portion of smaller diameter, and a projection on said tool adapted to be forced through said smaller diameter spring portion to a free position inside of said spring, said projection being of such a width that it has free longitudinal movement for a slight distance within said spring without engaging said spring, to prevent said spring from interfering with the normal operation of the tool.



2. In combination with a percussive tool barrel having a forward end and a tool having a shank sliding in said forward end, a coiled spring encircling said forward end and secured thereto, said spring having a forward portion of smaller diameter projecting beyond said barrel, and a threaded portion on said tool adapted to be screwed through said smaller diameter spring portion to a free position inside of said spring, said threaded portion being of such width that it has free longitudinal movement for a distance within said spring sufficient to prevent said spring from interfering with the normal operation of said tool.

1,211,220. AUTOMATIC SUBSTATION. CHARLES W. PEN DELL, Chicago, Ill., assignor to General Electric Company, a Corporation of New York. Filed May 13, 1915. Serial No. 27,840. (Cl. 171—118.)



1. The combination of a distribution system, a plurality of sources of power, one of which is connected to said system, automatically operated switching devices interposed between said sources and said system, and means responsive to an electrical condition of said system controlling the operation of said devices to put in service an idle source upon the failure of the connected source.

2. The combination of a distribution system, a plurality of sources of power, automatically operated switching devices interposed between said sources and said system, means responsive to an electrical condition of said system controlling the operation of said devices, and means for preventing the closure of more than one switch.

3. The combination of a distribution system, a plurality of sources of power, automatically operated switching devices interposed between said sources and said system, means, composing a relay responsive to the voltage of said system, for operating said switches when the voltage is substantially different from normal, and means responsive to the voltage of said system for rendering said operating means ineffective when the voltage is substantially normal.

and provided with transverse grooves leading to the said ledges, flexible connections extending in the said grooves and terminating at the said ledges, ring-shaped protecting plates overlying the sides of the said tread and extending



inward onto the sides of the tire, the outer edges of the said plates having inward return bent flanges seated on the said ledges, and means for connecting the ends of the said flexible connections with the said flanges.

1,211,215. VEHICLE-SIGNAL. MAX H. NEWMAN, Atlantic City, N. J. Filed May 17, 1916. Serial No. 98,074. (Cl. 40—67.)



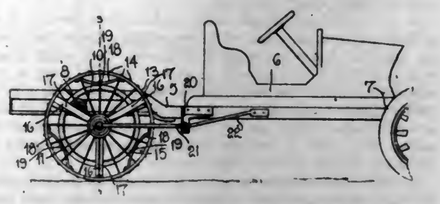
1. In a vehicle signal, the combination of stop and turn-out signs, manually controlled actuating levers each connected with a corresponding sign to swing the latter from normal inactive position into display position, and a manually controlled return lever having a pin extending into the paths of the said actuating levers to be actuated by either one of said actuating levers on swinging a sign into display position and to return a displayed sign and its actuating lever to normal inactive position.

2. In a vehicle signal, the combination of stop and turn-out signs, manually controlled actuating levers each connected with a corresponding sign to swing the latter from normal inactive position into display position, each of the said actuating levers having an arm, and a manually controlled return lever having a pin engaged by the said arms of the actuating levers to be actuated by either one of the said arms on swinging a corresponding sign into display position the said return lever serving to return a displayed sign and its actuating lever to normal inactive position.

3. In a vehicle signal, the combination of stop and turn-out signs mounted to swing and normally disposed in an inactive position, actuating levers connected with the said signs for swinging the same from normal inactive position into display position, controlling levers under the control of the driver of the vehicle, flexible connections connecting the said controlling levers with the said actuating levers, a return lever having a pin extending in the paths of the said actuating levers, and manually controlled means connected with the said return lever to return a displayed sign and its actuating mechanism to normal inactive position.

4. In a vehicle signal, the combination of stop and turn-out signs mounted to swing and normally disposed in an inactive position, actuating levers connected with the said signs for swinging the same from normal inactive position into display position, controlling levers under the control of the driver of the vehicle, flexible connections connecting the said controlling levers with the said actuating levers, a return lever having a pin extending in the paths of the said actuating levers, a flexible connection connected at one end with the said return lever, and a manually controlled lever connected with the other end of said flexible connection.

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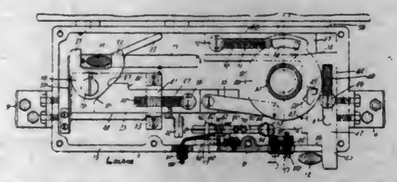


1. The combination with a motor vehicle, of a supplementary axle rotatably mounted in advance of the rear driven axle of the vehicle, traction wheels secured upon the ends of said supplementary axle, forwardly extending brace connections between the ends of the axle and the vehicle frame, and a driving connection between each end of the driven axle of the vehicle and the respective traction wheels.

2. The combination with a motor vehicle, of a supplementary axle rotatably mounted in advance of the rear driven axle of the vehicle, a tractor wheel fixed upon each end of the supplementary axle, an internal gear for each tractor wheel, radially disposed bars fixed at their outer ends to the tractor wheel and at their inner ends to the wheel hub and extending across the outer face of the internal gear and fixed thereto, additional brace bars arranged between the periphery of the internal gear and the traction wheel and secured thereto, and a spur gear fixed to each end of the driven axle of the vehicle having meshing engagement with the internal gears on the respective tractor wheels.

3. The combination with a motor driven vehicle, of a supplementary axle rotatably mounted in advance of the driven axle of the vehicle, tractor wheels fixed upon the ends of the supplementary axle, a driving connection between each end of the driven axle and the respective tractor wheels, transversely disposed angle bars fixed to the opposite sides of the machine frame in advance of the tractor wheels, brace rods secured to the ends of the supplementary axle and to said angle bars, and additional brace rods secured to the angle bars and extending forwardly therefrom and having their forward ends fixed to the vehicle frame.

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1. In combination, a pair of operating levers, a casing, means in said casing adapted to obstruct the movements of said levers, a pair of electric circuit terminals in said casing, a switch arranged within said casing and adapted to connect said terminals, a common actuating means for said obstructions and said switch, and locking means for said common actuating member.

2. In combination, a pair of operating levers, a casing, means in said casing adapted to obstruct the movements of said levers, a pair of electric circuit terminals in said casing, a switch arranged within said casing and adapted to connect said terminals, a common actuating means for said obstructions and said switch, a spring catch adapted to automatically lock said switch in a position to connect said terminals, means adapted to return said switch to its disconnected position, and locking means for said common actuating member.

3. In combination, a pair of operating levers, a casing, means in said casing adapted to obstruct the movements of said levers, a pair of electric circuit terminals in said casing, a switch arranged within said casing and adapted to connect said terminals, a common actuating means for said obstructions, and said switch, a spring catch adapted to automatically lock said switch in a position to connect said terminals, means adapted to permit an independent release of said switch from said spring catch, a spring adapted to return said switch to its disconnected position, and locking means for said common actuating member.

4. In combination, a casing provided with slots arranged in opposite walls thereof, an operating lever adapted to project through said casing within said slots, a latch arranged within said casing and adapted to engage and be operated by said operating lever, a slide in said casing adapted to be moved to engage said latch and to prevent the movements of said operating lever, an actuator operatively connected with said slide, and locking means for said actuator.

5. In combination, a fixed casing, an operating lever extending through said casing, a bifurcated rocker member arranged to straddle said operating lever within said casing, said rocker member being adapted to be moved when said operating lever is operated, a slide in said casing adapted to prevent the rocking of said rocker member, an actuator operatively connected to said slide, and locking means for said actuator.

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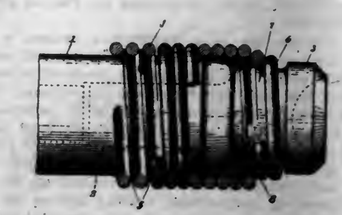
2. The process of coating articles of iron and steel with another metal which consists in immersing the same in a bath containing a solution of phosphoric acid and then suspending them in an electro-plating bath embodying a soluble compound of the metal to be deposited.

3. The process of coating articles of iron and steel with nickel which consists in immersing the same in a heated bath containing a solution of phosphoric acid and an intensifying agent and then suspending the same in an electro-plating bath embodying a solution of nickel sulfate.

4. The process of coating articles of iron and steel with nickel which consists in immersing the same in a heated solution of phosphoric acid and manganese oxid, then mechanically cleaning the surfaces, and then suspending the same in a nickel plating bath.

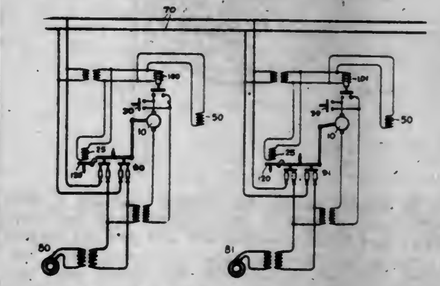
1,211,219. TOOL-RETAINER FOR PERCUSSIVE TOOLS. CAID H. PECK, Waverly, N. Y., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 16, 1913. Serial No. 806,999. (Cl. 78—44.5.)

1. In combination with a percussive tool barrel having a forward end and a tool having a shank sliding in said forward end, a coiled spring encircling said forward end and secured thereto, said spring having a forward portion of smaller diameter, and a projection on said tool adapted to be forced through said smaller diameter spring portion to a free position inside of said spring, said projection being of such a width that it has free longitudinal movement for a slight distance within said spring without engaging said spring, to prevent said spring from interfering with the normal operation of the tool.



2. In combination with a percussive tool barrel having a forward end and a tool having a shank sliding in said forward end, a coiled spring encircling said forward end and secured thereto, said spring having a forward portion of smaller diameter projecting beyond said barrel, and a threaded portion on said tool adapted to be screwed through said smaller diameter spring portion to a free position inside of said spring, said threaded portion being of such width that it has free longitudinal movement for a distance within said spring sufficient to prevent said spring from interfering with the normal operation of said tool.

1,211,220. AUTOMATIC SUBSTATION. CHARLES W. PEN DELL, Chicago, Ill., assignor to General Electric Company, a Corporation of New York. Filed May 13, 1915. Serial No. 27,840. (Cl. 171—118.)



1. The combination of a distribution system, a plurality of sources of power, one of which is connected to said system, automatically operated switching devices interposed between said sources and said system, and means responsive to an electrical condition of said system controlling the operation of said devices to put in service an idle source upon the failure of the connected source.

2. The combination of a distribution system, a plurality of sources of power, automatically operated switching devices interposed between said sources and said system, means responsive to an electrical condition of said system controlling the operation of said devices, and means for preventing the closure of more than one switch.

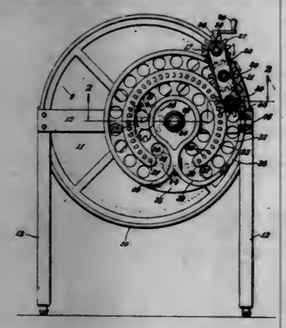
3. The combination of a distribution system, a plurality of sources of power, automatically operated switching devices interposed between said sources and said system, means, composing a relay responsive to the voltage of said system, for operating said switches when the voltage is substantially different from normal, and means responsive to the voltage of said system for rendering said operating means ineffective when the voltage is substantially normal.

4. The combination of a distribution system, a plurality of sources of power, automatically operated switching devices interposed between said sources and said system, means, comprising a relay responsive to the voltage of said system, for operating said switches when the voltage is substantially different from normal, means responsive to the voltage of said system for rendering said operating means ineffective when the voltage is substantially normal, and means for varying the time of closing of said switches.

5. The combination of a distribution system, a plurality of sources of power, switching devices interposed between said system and said sources, electrical operating mechanisms for said switching devices arranged to be energized from the associated source, relay switches responsive to the voltage of said system arranged to energize an operating mechanism upon a failure of voltage on said system, switches in parallel with said relay switches and controlled by the movement of its controlling operating mechanisms, holding latches for said switching devices, low-voltage trip coils for said latches, and means associated with each switching device responsive to a predetermined potential difference on said system for rendering said operating mechanism ineffective.

[Claim 6 not printed in the Gazette.]

1,211,221. REVERSING-GEARING FOR WASHING-MACHINES. OTTO G. PFEIFFER, St. Louis, Mo. Filed May 6, 1915. Serial No. 26,407. (Cl. 74—50.)



1. In driving gearing for washing machines, a drive shaft, a driven shaft, a gear operated from said drive shaft, a gear element meshing with said gear and adapted to perform an alternating rotary movement, means connecting said gear element with said driven shaft constructed to cause said driven shaft to make a plurality of complete revolutions before reversing, and buffer means coöperating with said gear element at the point of reversal.

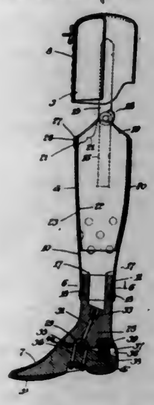
2. In driving gearing for washing machines, a drive shaft, a driven shaft, a gear operated from said drive shaft, a gear element mounted eccentrically with respect to said driven shaft and having inner and outer segmental gear faces meshing with said gear, a movable support for said gear, a roll on said support, a track on said gear element guiding said roll, said gear element being provided on its other side with an inside gear face, and a pinion on said driven shaft meshing with the inside gear face of said gear element constructed to cause said driven shaft to rotate a plurality of times before reversing.

3. In driving gearing for washing machines, a drive shaft, a driven shaft, a gear operated from said drive shaft, a gear element mounted eccentrically with respect to said driven shaft and having on one face inner and outer segmental gear faces meshing with said gear, an inside gear face on the other side of said gear element, and a pinion on said driven shaft meshing with said inside gear face.

4. In driving gearing for washing machines, a drive shaft, a driven shaft, a gear operated from said drive shaft, a gear element having on one face inner and outer segmental gear faces meshing with said gear, a movable support for said gear, a roll on said support, a track on said gear element guiding said roll, a gear face on the other side of said gear element, and a pinion connected with said driven shaft and meshing with said second gear face.

5. In driving gearing for washing machines, a drive shaft, a driven shaft, a gear operated from said drive shaft, a gear element mounted eccentrically with respect to said driven shaft and having on one face inner and outer segmental gear faces meshing with said gear, a movable support for said gear, a roll on said support, a track on said gear element guiding said roll, a gear face on the other side of said gear element, and a pinion on said driven shaft meshing with said second gear.

1,211,222. ARTIFICIAL LEG. CHARLES J. PILLING, Lansdowne, and FRANCIS H. JEWETT, Philadelphia, Pa., assignors to Pilling Artificial Limb Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 20, 1916. Serial No. 98,724. (Cl. 3—3.)



1. In an artificial leg, a hollow leg member, and a socket member within the leg member and adapted to receive the stump and comprising a body portion removably contained within the leg member and having its upper end turned outwardly and downwardly forming a cuff embracing the top of the leg member, a spacing member secured to the socket member between the main body thereof and the cuff and resting upon the top of the leg member and supporting the socket member therein.

2. In an artificial leg, a hollow section, a second section forming a continuation of the hollow section, the two sections constituting a leg member, the hollow section surrounding and being fitted to said second section, the portion of the hollow section which surrounds said second section being split longitudinally to permit the hollow section to expand when said second section is inserted therein to provide a tight fit, and said second section being adapted to be adjusted longitudinally within the hollow section, and means to secure said sections together in different positions of adjustment.

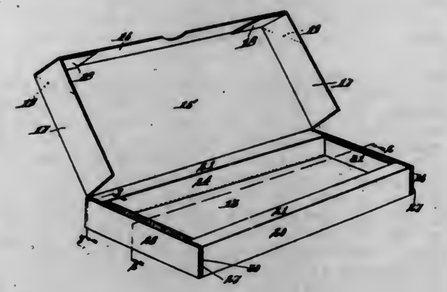
3. In an artificial leg, a hollow section, a second section forming a continuation of the hollow section, the two sections constituting a leg member, the hollow section surrounding and being fitted to said second section, the portion of the hollow section which surrounds said second section being split longitudinally to permit the hollow section to expand when said second section is inserted therein to provide a tight fit, and said second section being adapted to be adjusted longitudinally within the hollow section, an expansible covering surrounding the hollow section and crossing the split portion thereof and secured thereto, whereby said covering may expand in conformity with the expansion of the split portion of the hollow section to provide a smooth and uninterrupted outer surface at all times for the hollow section, and means to secure said sections together in different positions of adjustment.

4. In an artificial leg a foot member formed of wood and having a heel portion, a sheet metal guard set into the foot member and having its outer surface flush with the outer surface of the foot member and extending upwardly from said heel portion and forming a pocket, means to secure the guard to the foot member, and a leg section pivoted to the foot member and having a part adapted to enter said pocket.

5. In an artificial leg a foot member formed of wood and having a heel portion, a sheet metal guard set into the foot member and having its outer surface flush with the outer surface of the foot member and extending upwardly from said heel portion and forming a pocket, means to secure the guard to the foot member, a covering secured to the foot member and the guard and crossing the joint between them, and a leg section pivoted to the foot member and having a part adapted to enter said pocket.

[Claim 6 not printed in the Gazette.]

1,211,223. FOLDING BOX. EDWARD E. PINKERTON, Chicago, Ill. Filed Sept. 20, 1915. Serial No. 51,616. (Cl. 229—34.)

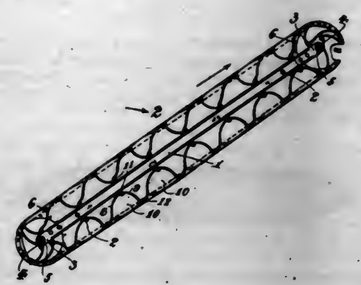


1. A folding box formed from a single blank having a central bottom portion; a side portion at one edge of said bottom portion; a cover portion at the outer edge of said side portion; a side portion at the opposite edge of said bottom portion; a portion at the outer edge of said last mentioned side portion foldable to form hollow sides inserted within said beforementioned sides; box end members on said bottom, cover and hollow side forming portions; and tongues on the bottom end members foldable into the box and frictionally engaging the sides thereof, substantially as described.

2. A folding box formed from a single blank having a central bottom portion; a side portion at one edge of said bottom portion; a cover portion at the outer edge of said side portion; a side portion at the opposite edge of said bottom portion; a portion at the outer edge of said last mentioned side portion foldable to form hollow sides inserted within said before-mentioned sides; box end members on said bottom, cover and hollow side forming portions; and tongues on the bottom end members foldable over said box end members into the box and frictionally engaging the sides thereof, substantially as described.

3. A folding box formed from a single blank having a central bottom portion; a side portion at one edge of said bottom portion; a cover portion at the outer edge of said side portion; a side portion at the opposite edge of said bottom portion; a portion at the outer edge of said last mentioned side portion foldable to constitute a false bottom and hollow side portions inserted in the box; and box end members on said bottom, cover and hollow side forming portions, substantially as described.

1,211,224. CONVEYER. DENNIS C. PLACE, Brooklyn, N. Y. Filed June 22, 1915. Serial No. 35,507. (Cl. 193—6.)



1. An articulated bucket for an endless chain conveyer comprising a front wall pivoted by a rod extending transversely between and joined to two opposite links of the bucket-carrying means, and a rear wall pivoted by a rod extending transversely between and joined to two opposite links of the bucket carrying means, said last two links being separated from said first two links respectively by one or more intervening links of the bucket-carrying means, said front and rear walls being hinged at or near the lowermost point of the bucket, side walls integral with said front wall and unattached to said rear wall, whereby the bucket may be partially closed or opened as the distance between the respective pivots of the front and rear walls may be varied.

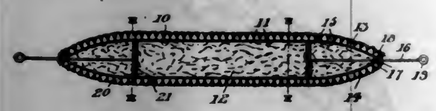
2. In a conveyer, the combination with a pair of endless chains and wheels over which the chains pass, of an articulated bucket having a front wall pivoted by a rod extending transversely between and joined to two opposite links of the bucket-carrying means and a rear wall pivoted by a rod extending transversely between and joined to two opposite links of the bucket carrying means, said last two links being separated from said first two links respectively by one or more intervening links of the bucket carrying means, said front and rear wall being hinged at or near the lowermost point of the bucket, and having side walls integral with said front wall and attached to said rear wall, whereby the angular relation of the front and rear walls of the bucket may be changed when the bucket is passing around the wheels at the ends of the conveyer.

3. In a conveyer the combination of a frame, shafts journaled in opposite ends of said frame, a pair of sprocket wheels upon each of said shafts, a pair of endless chains passing over said sprocket wheels, and articulated buckets carried by said chains, the said buckets comprising two hinged parts, each part pivotally attached at the top thereof to said chains by means of rods extending transversely between and joined to said chains, said rods being separated from one another by one or more links of said chain whereby the said buckets are adapted to lie wholly within the operative path of said chains and to bend as necessary in passing over said sprockets.

4. In an endless chain conveyer, a bucket, comprising in combination, a front wall pivotally attached to a rod extending transversely between parallel chains; a rear wall hinged to said front wall and pivotally attached to another rod extending transversely between the chains; side walls for said bucket rigidly fixed to said front wall and unattached to said rear wall; said transversely extending rods being mounted upon said chains and separated one from another by a plurality of intervening links of said chain, whereby said rods and the walls of the bucket attached thereto, will be moved toward each other as said chains engage a sprocket adapted to carry the same, and away from each other as said chains disengage said sprocket, thereby contracting the space between

the front and rear walls of said bucket prior to the discharge of material therefrom, and expanding the space between the front and rear walls of said bucket at substantially the time of the discharge of material therefrom.

1,211,225. BATH-BRUSH. ALEKSANDER PLUDOWSKI, Waterbury, Conn., assignor of one-third to Stanyslaw Orlowski and one-third to Wladyslaw Szczepaniak, Waterbury, Conn. Filed July 24, 1916. Serial No. 110,982. (Cl. 15—26.)



1. A brush comprising an elongated flexible casing tapered at its opposite ends and provided with annular rows of perforations, absorbent material arranged within the said casing, and bristles annularly arranged upon the casing intermediate the said rows of perforations.

2. A brush comprising an elongated flexible casing tapered at its opposite ends and provided with annular rows of perforations, absorbent material arranged within the said casing, bristles annularly arranged upon the casing intermediate the said rows of perforations, rings secured within the casing adjacent the ends thereof, radial braces carried by the said rings, and operating rods having their inner ends secured to the said braces positioned axially of the casing and projecting outwardly through the opposite pointed ends of the latter.

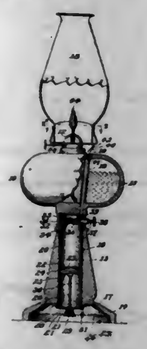
3. A body brush comprising an elongated casing having conical end portions, the said casing being formed of flexible material provided with a receiving chamber therein and having annular rows of perforations communicating with the said chamber, an absorbent filling for the said casing arranged within the said chamber, annular ribs upon the casing intermediate the said rows of perforations, and annular rows of bristles carried by the said ribs.

4. A body brush comprising an elongated casing having conical end portions, the said casing being formed of flexible material provided with a receiving chamber therein and having annular rows of perforations communicating with the said chamber, an absorbent filling for the said casing arranged within the said chamber, annular ribs upon the casing intermediate the said rows of perforations, annular rows of bristles carried by the said ribs, annular projections arranged within the casing positioned substantially at the bases of the said end portions, rings secured within the said projections, operating rods arranged axially of the casing having their inner ends centrally secured within the said rings, the said rods projecting in opposite directions through the pointed ends of the casing, packing washers upon the said rods in spaced relations inwardly and outwardly of the said pointed ends, and finger loops upon the outer ends of the said rods.

1,211,226. LAMP-EXTINGUISHER. ALEKSANDER PLUDOWSKI, Waterbury, Conn., assignor of one-fourth to Wincenty Wodzinski and one-half to Bronislaus Grebziszewki, Waterbury, Conn. Filed July 28, 1916. Serial No. 111,859. (Cl. 67—75.)

1. A lamp comprising a reservoir, a supporting pedestal having an axial bore, a casing within the said bore, a communicating pipe between the upper end of the said casing extending through the said reservoir and having its upper end adjacent the burner of the lamp, a fan-shaped outlet nozzle in the upper end of the said pipe having perforations directed toward the burner of the lamp, a compressed air chamber within the said casing, and a normally closed controlling valve adjacent the upper end of the said casing operable exteriorly of one side of the said pedestal.

2. A lamp comprising a reservoir, a supporting pedestal having an axial bore, a casing within the said bore, a communicating pipe between the upper end of the said casing extending through the said reservoir and having its upper end adjacent the burner of the lamp, a fan-shaped outlet nozzle in the upper end of the said pipe having perforations directed toward the burner of the lamp, a compressed air chamber within the said casing, a normally closed controlling valve adjacent the upper end of the said casing operable exteriorly of one side of the said pedestal, a supporting base for the said pedestal having a chamber therein, a perforated cap upon the lower end of the said casing within the said base chamber, and an air compressing piston within the lower end of the said casing provided with an operating handle normally arranged within the said base chamber.



3. A device of the class described comprising in combination with a lamp having an oil reservoir, a burner upon the said reservoir, and a pedestal provided with a supporting base attached beneath the latter, the said burner having a perforated air receiving plate adjacent the bottom thereof adjacent the burning portion of the wick of the lamp, the said pedestal being provided with an axial bore and said base with a chamber communicating with the said bore, a casing arranged within the said bore, a closure cap for the said casing within the said base chamber, a pipe extending through the said reservoir and communicating with the said casing at the upper end thereof, a fan-shaped nozzle arranged in the upper end of the said pipe beneath the said plate and having outlet openings directed toward the said plates, a controlling valve within the said casing adjacent the said pipe, and an air compressing means for the said casing.

4. A device of the class described comprising in combination with a lamp having an oil reservoir, a burner upon the said reservoir, and a pedestal provided with a supporting base attached beneath the latter, the said burner having a perforated air receiving plate adjacent the bottom thereof adjacent the burning portion of the wick of the lamp, the said pedestal being provided with an axial bore and said base with a chamber communicating with the said bore, a casing arranged within the said bore, a closure cap for the said casing within the said base chamber, a pipe extending through the said reservoir and communicating with the said casing at the upper end thereof, a fan-shaped nozzle arranged in the upper end of the said pipe beneath the said plate and having outlet openings directed toward the said plate, spaced plates within the said casing adjacent the upper end thereof providing a reduced chamber portion adjacent the communicating end of the said pipe, the said plates being provided with alining openings therethrough, a normally closed spring-pressed slide valve between the said plates having a port therethrough, an operating finger piece for the said slide valve arranged adjacent the upper end of the said pedestal exteriorly thereof, and an air compressing means in the lower end of the said casing.

5. A device of the class described comprising in combination with a lamp having an oil reservoir, a burner upon the said reservoir, and a pedestal provided with a supporting base attached beneath the latter, the said burner having a perforated air receiving plate adjacent the bottom thereof adjacent the burning portion of the wick of the lamp, the said pedestal being provided with an axial bore and said base with a chamber communicating with the said bore, a casing arranged within the said bore, a closure cap for the said casing within the said base chamber, a pipe extending through the said reservoir and communicating with the said casing at the upper end thereof, a fan-shaped nozzle arranged in the upper end of the said pipe beneath the said plate and having outlet openings directed toward the said plates, spaced plates within the said casing adjacent the upper end thereof providing a reduced chamber portion adjacent the communicating end of the said pipe, the said plates being provided with alining openings therethrough, a normally closed spring-pressed slide valve between the said plates having a port therethrough, an operating finger piece for the said slide valve arranged adjacent the upper end of the said pedestal exteriorly thereof, a partition within the said casing substantially centrally thereof having a valved port therethrough, an air compressing piston within the said casing beneath the said partition, a two-part operating stem for the said piston, a closure cap for the said casing within the said base chamber through which the said stem is slidably arranged, and a supporting means within the said base for the upper pivoted end portion of the said stem when the device is inoperatively positioned.

1,211,227. PROCESS FOR THE MANUFACTURE OF INSOLUBLE CONDENSATION PRODUCTS. FRITZ POLLAK, Berlin, Germany. Filed Aug. 15, 1912. Serial No. 715,164. (Cl. 106—22.)

1. The method of producing insoluble resins from bodies of the phenolic series and polymerized formaldehyde, which consists in heating a mixture of a body of the phenolic series and β and γ polyoxymethylene, repeatedly washing the soluble products obtained with water, heating to more than 105 degr. C., adding suitable quantities of formaldehyde solution, concentrating the mixture *in vacuo* at a low temperature, gradually heating to approximately 95 degr. C., until no more water is yielded, and hardening the mass by further heating.

2. The method of producing insoluble resins from a body of the phenolic series and polymerized formaldehyde, which consists in heating a mixture of a body of the phenolic series and β and γ polyoxymethylene, repeatedly washing the soluble products obtained with water, heating to more than 105 degr. C., in presence of suitable quantities of polymerized formaldehyde soluble in water, concentrating the mixture *in vacuo* at a low temperature, gradually heating to approximately 95 degr. C., until no more water is yielded up, and hardening the mass by further heating.

1,211,228. MANUFACTURE OF ARTICLES EMBODYING FIBROUS FILAMENTS AND VULCANIZABLE PLASTICS. RAYMOND B. PRICE, New York, N. Y., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Dec. 1, 1915. Serial No. 64,525. (Cl. 18—50.)

1. The process of manufacturing articles embodying fibrous filaments and vulcanizable plastic, consisting of inclosing each filament with vulcanizable plastic, fixing the relationship of the plastic and filament by partially vulcanizing the plastic in the absence of materially distorting conditions, building the article to include this partially vulcanized material, and giving final formation to the article by completing the desired vulcanization of the plastic.

2. The process of manufacturing articles embodying fibrous filaments and vulcanizable plastic, consisting of inclosing each filament with vulcanizable plastic, fixing the relationship of the plastic and filament by partially vulcanizing the plastic in the absence of materially distorting conditions, building the article to include this partially vulcanized material, and giving final formation to the built article by completing the desired vulcanization of the plastic.

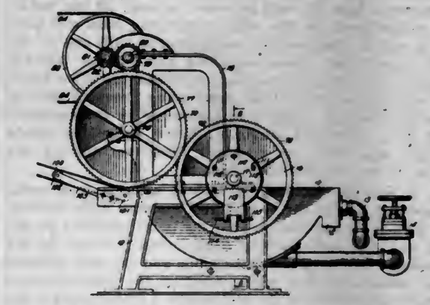
3. The process of manufacturing articles embodying fibrous filaments and vulcanizable plastic, consisting of inclosing each filament with vulcanizable plastic, fixing the relationship of the plastic and filament by partially vulcanizing the plastic in the absence of materially distorting pressure, building the article to include this partially vulcanized material, and giving final formation to the built article by completing the desired vulcanization of the plastic under squeezing pressure.

4. The process of manufacturing articles embodying fibrous filaments and vulcanizable plastic consisting of inclosing each filament with vulcanizable plastic, fixing the relationship of the plastic and filament by subjecting the product to the action of heat raised to the vulcanizing temperature under conditions which will not materially distort the predetermined relationship of the plastic and filament to each other until the plastic is partially vulcanized, building the article to include this partially vulcanized material, and giving final formation to the article by completing the desired vulcanization of the plastic under squeezing pressure.

5. The process of manufacturing articles embodying fibrous filaments and rubber consisting of inclosing each filament with raw rubber, fixing the relationship of the rubber and filament by partially vulcanizing the rubber in the absepce of materially distorting conditions, building the article of this partially vulcanized material, and giving final formation to the built article by completing the desired vulcanization of the rubber.

[Claims 6 and 7 not printed in the Gazette.]

1,211,229. MACHINE FOR MAKING ARTICLES FROM PULP. FREDERIC PRUYN, Albany, N. Y., and WILLIAM J. DE REAMER, Verona, N. J., assignors to Seamless Products Corporation, East Orange, N. J., a Corporation of New York. Filed Dec. 17, 1915. Serial No. 67,391. (Cl. 92—42.)



1. A machine for making articles from pulp, comprising a pulp vat adapted to contain pulp in suspension, a continually rotating drum extending with its lower portion into the said pulp and provided on its peripheral face with perforate molds, suction means for producing a suction action on the backs of the molds as the latter pass through the pulp to draw the latter onto the molds and compact the pulp thereon, a light suction means on the backs of the molds immediately after they have passed out of the pulp to hold the articles in position on the molds until the molds and articles have passed a horizontal central position of the drum, a heavy suction means producing a suction action on the molds while the latter pass up one side and over the top of the drum to deprive the articles on the molds of some of their moisture, and means for directing blasts of air against the under side of the molds to gradually force each article off its mold.

2. A machine for making molded articles from pulp comprising a pulp vat, a revoluble molding drum extending with its lower portion into the pulp contained in the pulp vat, the said molding drum being provided on its periph-

eral face with perforate molds and the said molding drum being provided with chambers in communication with the under sides of the said molds, a transferring drum revolving in unison with the said molding drum and provided on its peripheral face with perforate receiving plates and with chambers in communication with the receiving plates, the said molds on the molding drum having perforate raised portions and the plates on the transferring drum having perforate depressions adapted to register with the raised mold portions, fixed heads on the ends of the said drums and having air suction chambers and compressed air chambers adapted to register with the said drum chambers, the chambers being arranged relatively to each other to suck the pulp onto the molds of the molding drum and thereby form the article and deprive the same of a large portion of its moisture, to force the molded article off the molds onto the plates of the transferring drum and to finally force the molded article by compressed air off the said plates of the transferring drum.

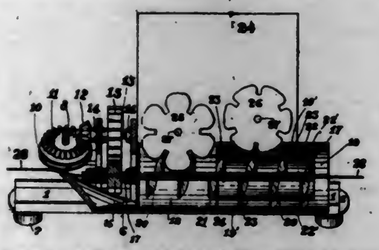
3. A machine for making molded articles from pulp, comprising a pulp vat, a revoluble molding drum extending with its lower portion into the said pulp vat and provided on its peripheral face with spaced perforate molds having raised portions, the said molding drum being provided with chambers of which a plurality are in communication with the under sides of a corresponding mold, a transferring drum revolving in unison with the said molding drum and provided on its peripheral face with perforate receiving plates having perforate depressions for receiving said raised portions of the molds, the said transferring drum having chambers of which a plurality are in communication with the under side of a corresponding plate, a fixed head for one end of the said revolving molding drum and having suction chambers in communication with a plurality of the said chambers on the molding drum, the said fixed head having a pressure chamber adapted to register singly with a chamber of the said molding drum, the said chambers being so arranged relatively to each other that the pulp in the vat is drawn onto the said molds and deprived of a large portion of the moisture to form molded articles, the latter being forced by pressure from the said pressure chamber off the molds, and a fixed head for the said transferring drum and having a suction chamber in communication with one of the said transferring drum chambers and located directly opposite the said pressure chamber of the said other head, the said transferring drum head being provided with a pressure chamber adapted to register with the transferring drum chambers singly to direct successive blasts against each article to gradually force the same off the plates of the transferring drum.

4. A machine for making molded articles from pulp, comprising a pulp vat, a revoluble molding drum extending with its lower portion into the pulp contained in the pulp vat, the said molding drum being provided on its peripheral face with perforate molds and the said molding drum being provided with chambers in communication with the undersides of the said molds, a transferring drum revolving in unison with the said molding drum and provided on its peripheral face with perforate receiving plates and with chambers in communication with the said receiving plates, the said molds on the molding drum having perforate raised portions and the plates on the transferring drum having perforate depressions adapted to register with the raised mold portions, fixed heads on the ends of the said drums, the head on the molding drum having three separate suction chambers arranged in a circle and of which the lowermost one produces a suction in the lowermost chambers of the molding drum to suck the pulp onto the molds to form the articles and to deprive the same of some of the moisture, the next following suction chamber produces a light suction in the chambers of the molding drum to hold the green articles in position on the molds and against distortion, and the uppermost suction chamber produces a heavy suction action in the chambers of the molding drum to deprive the articles of more of their moisture, the said head on the molding drum being provided next to the said uppermost suction chamber and directly opposite the transferring drum with a compressed air chamber adapted to register singly with the drum chambers to force each article by a number of pressure actions off its mold onto a corresponding plate of the transferring drum, the head of the latter being provided directly opposite the transferring drum with a suction chamber for producing a suction singly in the chambers of the transferring drum and the said head of the transferring drum being provided with a compressed air chamber spaced from the said suction chamber for forcing the molded articles off the transferring drum.

5. A machine for making molded articles from pulp, comprising a pulp vat, a revoluble molding drum extending with its lower portion into the pulp in the said vat, the said molding drum being provided on its peripheral face with perforate molds and being provided with chambers in communication with the under side of the said molds, a fixed head on one end of the said molding drum and having separate suction chambers adapted to register successively with the said drum chambers, and means for producing varying suction pressures in the said suction chambers to suck the pulp onto the molds to form the articles and deprive the same of moisture, to hold each article in position on its mold and against distortion as it emerges out of the pulp in the vat and to finally subject the article to a heavy suction action for drawing off some of the remaining moisture in the article.

[Claims 6 to 12 not printed in the Gazette.]

1,211,230. MACHINE FOR THE CONTINUOUS MANUFACTURE OF CEMENT AND OTHER TILE OR PIPE. ARNOLD W. PUPKE, New York, N. Y. Filed Sept. 6, 1916. Serial No. 118,664. (Cl. 37—53.)



1. A machine of the class stated embodying an excavating device at its forward end, a chamber for granular core making material, a separate chamber for plastic material, such as mixed cement, means carried by the machine to simultaneously eject from the rear thereof and deposit a central core of the granular material and a body of the plastic material surrounding the core and means to advance the machine.

2. A machine of the class stated embodying a device at its forward end adapted to excavate a groove or bed conforming to the exterior shape of a portion of the pipe, a chamber for granular core making material, a separate chamber for plastic material, such as mixed cement, means to simultaneously eject from the rear of the machine and deposit a central core of the granular material and a body of the plastic material surrounding the core, and means to advance the machine.

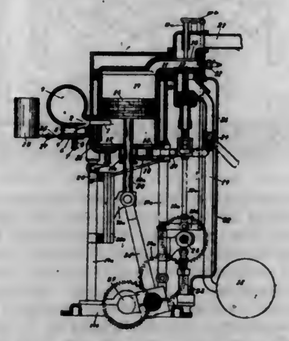
3. A machine of the class stated embodying a device at its forward end adapted to excavate a groove or bed conforming to the exterior shape of a portion of the pipe, an underbody part of the machine adapted to move along the said excavated groove or bed and smooth and press its exterior surface, a chamber for granular core making material, a separate chamber for plastic material, such as mixed cement, means to simultaneously eject from the rear of the machine and deposit a central core of the granular material and a body of the plastic material surrounding the core, and means to advance the machine.

4. A machine of the class stated having an excavating device at its forward end provided with means to deliver the excavated material laterally, means carried by the machine for simultaneously ejecting from its rear end a central core of removable granular material and an exterior body of plastic material, such as cement, surrounding the core, and means adjacent to the delivery end of the machine for moving the excavated material inwardly about and upon the body of plastic material.

5. A machine of the class stated having an excavating device at its forward end provided with means to deliver the excavated material laterally, means carried by the machine for simultaneously ejecting from its rear end a central core of removable material, a continuous device adapted to longitudinal removal embedded in the central core, an exterior body of plastic material, such as mixed cement, surrounding the core, and means adjacent to the delivery end of the machine for moving the excavated material inwardly about and upon the body of plastic material.

[Claims 6 to 13 not printed in the Gazette.]

1,211,231. INTERNAL-COMBUSTION ENGINE. HENRY E. A. RAABE, Jersey City, N. J. Filed Apr. 26, 1910. Serial No. 557,649. (Cl. 123—32.)



1. An oil engine having a working cylinder and a piston, an air-compressor means formed by the lower part of the working cylinder having controlled communication with the compression chamber of the cylinder to admit air to the same, an exhaust-valve means arranged to open the compression chamber to the atmosphere during the whole or a part of the period of air admission, means for admitting to the compression chamber, after the closure of the exhaust-valve means, an atomized jet of oil and air richer than an explosive mixture, whereby such jet mixes with the air remaining in the compression chamber to form an explosive mixture and means for igniting such mixture, said compressor means serving to compress the air of said fuel before admission to the cylinder.

2. An oil engine having a working cylinder and a piston, an air-compressor means formed by the lower part of the working cylinder having controlled communication with the compression chamber of the cylinder to admit air to the same, an exhaust-valve means arranged to open the compression chamber to the atmosphere during the whole or a part of the period of air admission, means for admitting to the compression chamber, after the closure of the exhaust-valve means, an atomized jet of oil and air richer than an explosive mixture, whereby such jet mixes with the air remaining in the compression chamber to form an explosive mixture and means for igniting such mixture, the engine having a heated part in the path of said atomized jet, the heat of which serves to crack the hydrocarbons of the jet and transform the same into a fixed gas.

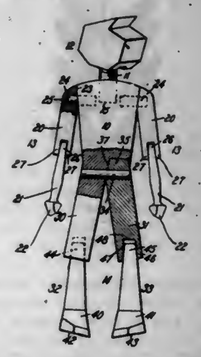
3. An oil engine having a working cylinder and a piston, an air-compressor means formed by the lower part of the working cylinder having controlled communication with the compression chamber of the cylinder to admit air to the same when the piston is at the end of its working stroke, an exhaust-valve means arranged to open the compression chamber to the atmosphere during the whole or a part of the period of air admission, means for admitting to the compression chamber, after the closure of the exhaust-valve means, an atomized jet of oil and air richer than an explosive mixture, whereby such jet mixes with the air remaining in the compression chamber to form an explosive mixture and means for igniting such mixture.

4. An oil engine having a working cylinder and a piston, an air-compressor means formed by the lower part of the working cylinder having controlled communication with the compression chamber of the cylinder to admit air to the same, an exhaust-valve means arranged to open the compression chamber to the atmosphere during the whole or a part of the period of air admission, means for admitting to the compression chamber, after the closure of the exhaust-valve means, an atomized jet of oil and air richer than an explosive mixture and at a higher pressure than the air remaining in the compression chamber, whereby such jet mixes with the air remaining in the compression chamber to form an explosive mixture and means for igniting such mixture.

5. An oil engine having a working cylinder and a piston, an air-compressor means formed by the lower part of the working cylinder having controlled communication with the compression chamber of the cylinder to admit air to the same, an exhaust-valve means arranged to open the compression chamber to the atmosphere during the whole or a part of the period of air admission, means for admitting to the compression chamber, after the closure of the exhaust-valve means, but before the end of the compression stroke, an atomized jet of oil and air richer than an explosive mixture, whereby such jet mixes with the air remaining in the compression chamber to form an explosive mixture and means for igniting such mixture.

[Claims 6 to 14 not printed in the Gazette.]

1,211,232. JOINTED TOY FIGURE. ELMER J. READ, Rutherford, N. J. Filed Jan. 19, 1916. Serial No. 72,962. (Cl. 46—40.)



1. A jointed toy figure, comprising a body, jointed arms pivotally connected with the said body, a neck mounted to turn in the top of the said body, a head mounted to rock forward or backward on the said neck, and legs of which one has its thigh integral with the said body and the other leg has its thigh mounted to swing forward and backward on the body.

2. A jointed toy figure provided with a body, a thigh integral with the said body, and a thigh mounted to swing forward and backward on the said body.

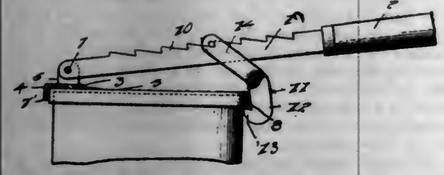
3. A jointed toy figure provided with a body, a thigh integral with the said body, a thigh mounted to swing forward and backward on the said body, and calf and integral foot members mounted to swing forward and backward on the said thighs.

4. A jointed toy figure having a body, thighs diverging from the body, and calf and feet members extending from the said thighs and disposed parallel to each other, the under surfaces of the feet being sidewise beveled in an outward and upward direction.

5. A jointed toy figure having a body, diverging thighs, of which one extends integrally from the said body and the other is pivoted on the body to swing forward and rearward.

[Claim 6 not printed in the Gazette.]

1,211,233. LID-REMOVER. GEORGE M. RHONEMUS, Independence, Mo. Filed Feb. 18, 1916. Serial No. 79,126. (Cl. 65—46.)



A lid remover comprising a plate having struck up portions to form a pair of relatively spaced ears, one edge of said plate being of arcuate shape, an arcuate extension formed on the arcuate curved edge of said plate to engage the flange of a cover, a shank pivoted to said ears and overlying the cover, a handle secured to the shank, teeth formed on the upper longitudinal edge of the shank, a dog engaging the cover and having one end bifurcated to receive the shank, and a pin extending through the bifurcated end to engage the teeth for holding the dog at various adjusted positions on the shank.

1,211,234. HANGER FOR EARS OF CORN. REYNOLD J. RICE, Waterloo, Iowa. Filed Aug. 21, 1913. Serial No. 785,927. (Cl. 34—20.)

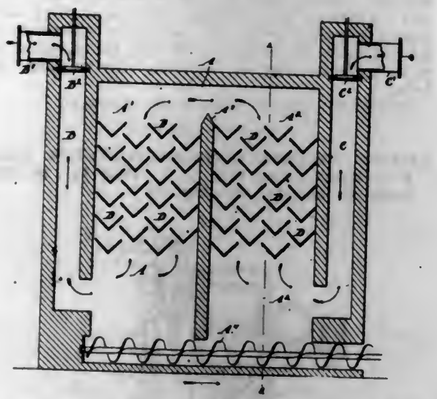


1. A seed-corn hanger, consisting of a plurality of like bodies detachably linked together, each body being an elastic rod doubled over to form a medial loop extending angularly to one side of spaced members, the members being oppositely bent to form their extremities into upwardly directed prongs, and the loop of each rod being linked about the members of the rod immediately above at the location of outward bending of said prongs.

2. A device of the character described, comprising a plurality of interlocked units, each of said units being formed from a single piece of wire bent upon itself to form spaced elongated strands capable of relative movement, the free extremities of which are directed laterally and upwardly to afford impaling prongs, the opposite end portions of the strands being flexed angularly to afford an engaging means adapted to coact with the impaling prongs of an adjacent unit, said impaling prongs being positioned in substantially the same longitudinal plane occupied by the spaced strands.

1,211,235. DUST-COLLECTOR. WILLIAM M. ROBERTSON, Brooklyn, N. Y. Filed June 15, 1916. Serial No. 103,706. (Cl. 183—76.)

1. In an apparatus of the character set forth, a chamber, and a group of open-topped receptacles therein arranged in staggered relation, with the margins of each receptacle overlapping the adjacent margins of the pair of receptacles next below, said receptacles having upwardly divergent side-faces, whereby dust-laden currents between said receptacles are deflected by such side-faces to produce a dead space in and above each of said receptacles and permit dust to settle undisturbedly in the latter and means for opening and closing each of said receptacles at the lower portion thereof to discharge dust thus collected therein.



2. In an apparatus of the character set forth, a chamber, and a group of trough-like receptacles therein each extending from side to side thereof, arranged in staggered relation with the margins of each receptacle overlapping the adjacent margins of the pair of receptacles next below, said receptacles having upwardly divergent side-faces, whereby dust-laden currents between said receptacles are deflected by such side-faces to produce a dead space in and above each of said receptacles and permit dust to settle undisturbedly in the latter and means for opening and closing each of said receptacles at the lower portion thereof to discharge dust thus collected therein.

3. In an apparatus of the character set forth, a chamber, and a group of V-shaped troughs therein extending from side to side thereof and arranged in staggered relation, with the margins of each trough overlapping the adjacent margins of the pair of troughs next below, whereby dust-laden currents between said troughs are deflected by the upwardly divergent side-faces of said troughs to produce a dead space in and above each trough and permit dust to settle undisturbedly in the latter and means for opening and closing each of said troughs at the lower portion thereof to discharge dust thus collected therein.

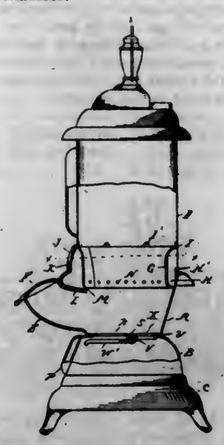
4. In an apparatus of the character set forth, a chamber, and a group of receptacles therein arranged in staggered relation to each other, each having upwardly divergent side-plates, and one of said side-plates movable from the other to permit the contents of said receptacle to fall.

5. In an apparatus of the character set forth, a chamber, and a group of receptacles therein, each having upwardly divergent side-plates, and one of said side-plates movable from the other.

[Claims 6 to 12 not printed in the Gazette.]

1,211,236. STOVE. WILLIAM V. ROBINSON, Lansing, Mich. Filed Apr. 24, 1914. Serial No. 834,092. (Cl. 126—77.)

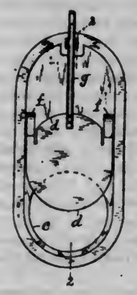
1. In an underfeed stove, the combination with a fire-pot, of a laterally-extending fuel inlet on the lower portion of said fire-pot, its lower wall inclining slightly upward and the outer edge thereof forming a fulcrum for a poker adapted to lift the live fuel within said fire-pot to permit the feeding in of green fuel on to the grate, an air chamber adjacent to the upper wall of said laterally-extending fuel inlet, having inwardly-opening air discharge apertures, and control means for admitting air into said air chamber.



2. In an underfeed stove, the combination with a fire-pot, of an annular member within the upper portion of said fire-pot forming an air chamber with inward discharge openings around the lower end thereof, and a laterally-extending fuel inlet on the lower portion of said fire-pot, its lower wall inclining slightly upward and the outer edge thereof forming a fulcrum for a poker adapted to lift the live fuel within said fire-pot to permit the feeding of green fuel on to the grate below the air inlet.

3. In a stove, the combination with a fire-pot and a drum thereabove, of an annular member within the upper portion of said fire-pot forming an air chamber having an external inlet and a series of inward discharge openings around the lower edge thereof, a laterally-extending fuel inlet connection on the lower portion of said fire-pot beneath said air chamber, its lower wall inclining slightly upward and the outer edge thereof forming a fulcrum for a poker adapted to lift the live fuel within the fire-pot to permit the feeding of green fuel thereunder, and a cover for the outer end of said fuel inlet.

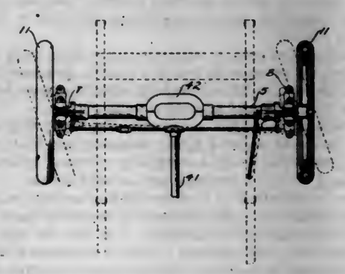
1,211,237. GATE FOR AIR-BLASTS. WALTER S. ROCKWELL, New York, N. Y., assignor to W. S. Rockwell Company, New York, N. Y., a Corporation of New Jersey. Filed May 18, 1916. Serial No. 98,264. (Cl. 137—5.)



1. A blast-gate having a casing formed in two longitudinal sections with a closed chamber between the same, the sections having respectively inlet and outlet-nozzles to engage a pipe, and the closed chamber having parallel walls, a valve-plate movable in the casing between the said nozzles and into the closed chamber when the gate is opened, a rod attached to the plate and extended through the closed chamber and outside of the same for adjusting the plate, and a leaf-spring projected from the edge of the plate next to the chamber and extending into the chamber when the gate is closed, and flexed to one side of the plate to contact elastically with the adjacent wall of the chamber, and thus hold the plate from accidental displacement.

2. A blast-gate having a casing formed in two longitudinal sections with a closed chamber between the same, the sections having respectively inlet and outlet-nozzles to engage the pipe, and the closed chamber having parallel walls, a valve-plate movable in the casing between the said nozzles and into the closed chamber when the gate is opened, a rod attached to the plate and extended through the closed chamber and outside of the same for adjusting the plate, and a leaf-spring integral with the plate and reflexed at one side of the same, and its outer side contacting with the wall of the chamber to hold the plate from accidental displacement.

1,211,238. STEERING AND DRIVING WHEEL FOR MOTOR-VEHICLES. RALPH H. ROSENBERG, Columbus, Ohio, assignor to The Kinnear Manufacturing Company, Columbus, Ohio, a Corporation of West Virginia. Filed Oct. 6, 1910. Serial No. 585,712. (Cl. 21—90.)



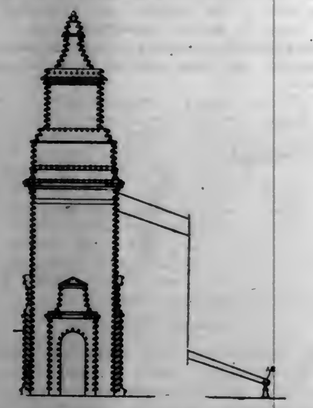
1. A steering and driving wheel for motor vehicles including, in combination, a yoke, a bearing ring vertically swiveled in the yoke, a wheel having a ring turning in said swiveled bearing ring, a socket member, a ball driving member within the socket member, and a pin and slot connection between the ball and socket members, said pin and slot connection including not more than two pins and slots, substantially as described.

2. A steering and driving wheel for motor vehicles including, in combination, a yoke, a bearing ring vertically swiveled in the yoke, a wheel having a ring turning in said swiveled bearing ring, a socket member, a ball driving member within the socket member and a pin and slot connection between the ball and socket members, said pin and slot connection including not more than two pins and slots polarily located with reference to the ball member, substantially as described.

3. A steering and driving wheel for motor vehicles including, in combination, a yoke, a bearing ring vertically swiveled in the yoke, a wheel having a ring turning in said swiveled bearing ring, a socket member, a ball driving member within the socket member and a pin and slot connection between the ball and socket members, said pin having a close fit diametrically at all points in its slot and said connection including not more than two pins and slots, substantially as described.

4. A steering and driving wheel for motor vehicles including, in combination, a suitable mounting permitting the wheel to oscillate horizontally, a socket member, a ball driving member within the socket member, and a pin and slot connection between the ball and socket members, said pin and slot connection including not more than two pins and slots polarily located, substantially as described.

1,211,239. SYSTEM OF DECORATION. WALTER D'A. RYAN, North Adams, Mass. Filed Dec. 18, 1913, Serial No. 807,566. Renewed Nov. 13, 1916. Serial No. 131,146. (Cl. 240—10.)



1. A decorative system consisting of a supporting structure; a series of jewels movably mounted thereon; and a series of relatively distant projectors mounted to illuminate said jewels.

2. A decorative system consisting of a supporting structure; a series of colored freely movable, pendant jewels mounted thereon; with a relatively distant means for projecting a beam of light on said jewels.

3. A decorative system consisting of a supporting structure; a series of colored freely movable, pendant jewels mounted thereon; with a relatively distant means for projecting a beam of colored light on said jewels.

4. The combination of a supporting structure; a jewel-carrying member mounted thereon; a jewel having a rearwardly extending conical portion; a holder for the jewel suspended from said member; with a projection on the holder extended in position to strike the supporting structure before it can be engaged by the rearward extension of said jewel.

5. As a new article of manufacture, a jewel and a holder therefor provided with a suspending portion having a rearward projection for limiting its rearward swing.

[Claims 6 to 14 not printed in the Gazette.]

1,211,240. DECORATIVE JEWEL. WALTER D'A. RYAN, North Adams, Mass. Filed Aug. 15, 1914. Serial No. 856,973. (Cl. 63—26.)



1. A decorative gem consisting of a body of glass having a rearwardly projecting apex; a mirror; and means independent of the gem for supporting said mirror adjacent said apex.

2. The combination of a gem in the form of a body of faceted glass; a holder for freely suspending said gem; and a mirror carried by the holder at the rear of the gem.

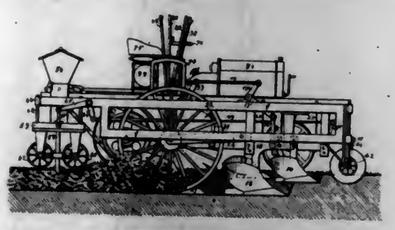
3. The combination of a gem consisting of a body of faceted glass; a holder for the same consisting of a ring having a suspending arm; a second arm projecting rearwardly from the ring; and a mirror carried by said second arm adjacent the rear portion of the gem.

4. The combination of a gem consisting of a faceted body of glass having a rearwardly projecting apex; a metal holding ring extending around the gem adjacent its part of largest diameter; an arm projecting rearwardly from the ring; and a plane mirror carried by the arm immediately adjacent the apex of the gem.

5. A decorative gem consisting of a body of glass having a rearwardly projecting apex; a mirror; and means for supporting said mirror adjacent said apex.

[Claim 6 not printed in the Gazette.]

1,211,241. AGRICULTURAL IMPLEMENT. CHARLES E. SACKETT, Danbury, Conn. Filed Jan. 19, 1916. Serial No. 72,966. (Cl. 97—30.)

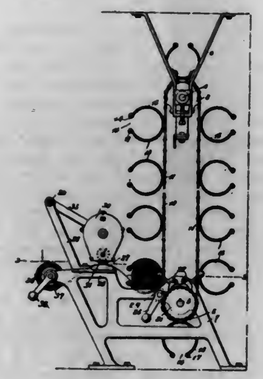


1. An implement as characterized comprising a power-propelled frame; a furrow-turning plow operatively connected with and laterally extended from the land side of said frame; a furrow-clearing member operatively connected with said frame in advance of the working position of and at the side of said furrow-turning plow for clearing a previously formed furrow; an earth-pulverizing apparatus propelled by said frame in the following path of said furrow-clearing member and at the side of said furrow-turning plow for receiving the earth turned by said furrow-turning plow; a surface-clearing plow disposed in service in advance of said furrow-turning plow for delivering the surface growth in the rear of said furrow-clearing member and in the path of said pulverizing apparatus, whereby said surface growth is disposed below the bed prepared by said earth-pulverizing apparatus, said furrow-turning, furrow-clearing, and surface-clearing plows being disposed below the overhanging section of said power-propelled frame, and having independent vertical movements, relative to said frame and to each other, said earth-pulverizing apparatus having an automatic voluntary vertical movement relative to said frame, the earth discharged from said earth-pulverizing apparatus refilling the furrow behind it above said surface growth; and means following said earth-pulverizing apparatus to level the pulverized earth deposited in said furrow behind said pulverizing apparatus, thus preparing said furrow for immediate seeding.

2. In an implement as characterized, the combination of means for working a plurality of furrows, one of said furrows being previously formed; means for receiving the earth from the furrow being turned, and pulverizing said earth; means for delivering the surface growth of the land being prepared onto the bottom of the cleared previously formed furrow; means for refilling the previously formed furrow with pulverized earth and for forming and finishing a bed for immediate seeding; means for operatively connecting said above-mentioned means, said connecting means embodying a power-propelled frame divided longitudinally into land and furrow-sections, said furrow section overhanging the furrows to be worked, said furrow section being supported laterally by the land section of said frame; and means mounted on said frame for placing each of said means into active or inactive position and for operating the same.

1,211,242. DISPLAY-RACK. BENNO C. SCHAFFER, Ellinwood, Kans. Filed Apr. 29, 1914. Serial No. 835,129. (Cl. 211—18.)

1. In a display rack, the combination of endless chains mounted to move, sundry of the links of said chains having lateral extensions, annular members secured directly to said extensions and having gaps, laterally opened sleeves carried by said annular members and adapted to receive fabric and display the same, the said annular members having outwardly bent ends at the gaps, the ends of said sleeves at the openings being bent to receive and clamp the said ends of the annular members to rigidly secure the sleeves to said members, means adapted to dispense the fabric from any of the sleeves, means for bringing any of the sleeves in operative relation to said means for dispensing the fabric, means for normally locking the chains against movement whereby the desired sleeve is maintained in coöperative relation with said dispensing means, and a table between the said sleeve and the dispensing means over which the material is drawn.



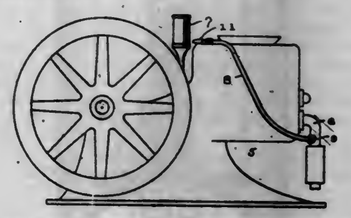
2. In a display rack, the combination of a pair of horizontal shafts, chains carried by said shafts, the chains having links provided at one side with lateral extensions, annular bands secured directly to siad extensions and provided with gaps, the said annular bands having outwardly bent ends at the gaps, laterally opened sleeves carried by said annular bands, said sleeves forming carrying cases for fabrics and adapted to display the same, the edges of the openings of said sleeves being turned up to fit over the said ends of the annular bands at the gaps to secure the sleeves rigidly to said bands, means for dispensing the fabric from the sleeves, means for rotating one of said shafts whereby any one of the sleeves may be brought into coöperative relation with said dispensing means, and means for normally preventing the rotation of said shaft.

3. In a display rack, a pair of parallel substantially horizontal shafts arranged one above the other, hangers in which the upper shaft is adjustably mounted, a fixed frame in which the lower shaft is mounted, sprockets mounted on the said shafts, endless chains engaging the said sprockets, a plurality of means carried by said chains for carrying and displaying fabrics, the upper shaft supporting the load carried by said means, a member bridging the said hangers, an adjustable support on said member carrying a bearing engaged by said upper shaft, means for rotating the lower shaft to move the said chains, means for normally preventing the rotation of said shaft in either direction, and a dispensing mechanism for dispensing the fabric from any of said fabric carrying means.

4. In a display rack, a pair of horizontally disposed shafts arranged one above the other, means in which the ends of the upper shaft are adjustably mounted, a frame in which the lower shaft is mounted, endless members carried by said shafts, a plurality of means carried by said endless members for carrying and displaying fabrics, the upper shaft supporting the load carried by said means, an adjustable support for the upper shaft substantially midway between its ends, means for rotating the lower shaft to move the said endless members, means for normally preventing the rotation of said shaft in either direction, and a dispensing mechanism for dispensing the fabric from any one of said fabric carrying means.

5. In a display rack, a pair of horizontally disposed shafts arranged one above the other, hangers in which the ends of the upper shaft are adjustably mounted, a fixed frame in which the lower shaft is mounted, sprockets mounted on said shafts, endless chains engaging the said sprockets, means carried by the chains for carrying and displaying fabrics, the upper shaft supporting the load carried by said means, a U-shaped member bridging the said hangers, an adjustable support on said member, a bearing carried by said support and engaged by the upper shaft substantially midway of the said hangers, means for rotating the lower shaft to move the said chains and the fabric carrying means, and a dispensing mechanism for dispensing the fabric from said means.

1,211,243. OIL-HEATER. PHILIPP E. SCHENKENBERGER, Temvik, N. D. Filed Apr. 12, 1916. Serial No. 90,621. (Cl. 184—104.)



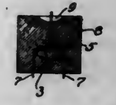
1. The combination with an explosive engine including a lubricant reservoir and an exhaust pipe, of means for conducting the exhaust products of combustion in proximity to said lubricant reservoir.

2. The combination with an explosive engine including an oil reservoir and an exhaust pipe, of a flexible tube connected with said exhaust pipe for directing the exhaust products of combustion from the engine cylinder against said reservoir.

3. The combination with an explosive engine including an oil reservoir and an exhaust pipe, of a heater pipe communicating with said exhaust pipe and terminating in proximity to said reservoir for directing the products of combustion against said reservoir.

4. The combination with an explosive engine including an oil reservoir and an exhaust pipe, of a heater pipe communicating with said exhaust pipe, and a nozzle connected with said heater pipe and arranged to direct products of combustion against said reservoir.

1,211,244. PROCESS AND APPARATUS FOR MAKING PORCELAIN INLAYS. ERNST R. SCHROEDER and CHARLES M. MILLER, Alameda, Cal. Filed Jan. 25, 1916. Serial No. 74,127. (Cl. 32—6.)



1. A form for baking and shaping a porcelain inlay for a given tooth cavity comprising a rigid cast matrix block having a recess therein the exact duplicate of the tooth cavity.

2. A form for baking and shaping a porcelain inlay for a given tooth cavity comprising a rigid cast matrix block formed of a material active in a reagent in which the inlay is inert and having a recess therein the exact duplicate of the tooth cavity.

3. The process of forming a porcelain inlay for a tooth cavity which consists in making a positive of said cavity, casting a rigid negative from said positive and forming said inlay in said negative.

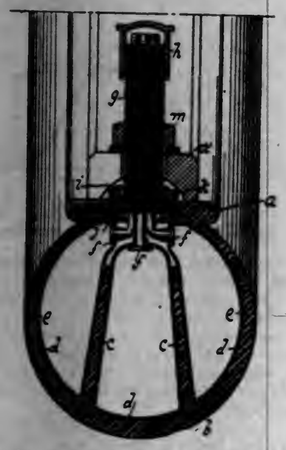
4. The process of forming an inlay for a tooth cavity which consists in making a silver positive of said cavity,

forming a rigid gold negative from said positive, baking a porcelain mixture in said negative to form said inlay and dissolving said negative away from said inlay.

5. The process of forming an inlay for a tooth cavity which consists in making a positive of said cavity, casting a negative upon said positive, removing the positive from the negative, treating a porcelain mixture in said negative to form said inlay and removing said negative from said inlay.

[Claims 6 and 7 not printed in the Gazette.]

1,211,245. VALVE FOR PNEUMATIC TIRES. OTTO SCHUTZ, New York, N. Y. Original application filed Oct. 6, 1914, Serial No. 865,268. Divided and this application filed July 1, 1916. Serial No. 107,028. (Cl. 152—12.)



1. A valve for pneumatic tires comprising a plurality of segmental separable air inlet tubes normally clustered together, and a removable sleeve mounted on the tubes for locking the segments together.

2. A valve for pneumatic tires comprising a plurality of segmental separable air inlet tubes normally abutting against each other to form a cylinder, and a removable sleeve adjustably engaging the cylinder for locking the segments together.

3. A valve for pneumatic tires comprising a plurality of segmental threaded separable air inlet tubes normally clustered together, and a sleeve having interior threads for engagement with the threads of the tubes.

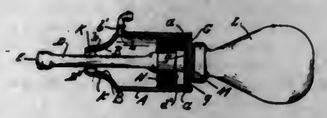
4. A valve for pneumatic tires comprising a plurality of segmental threaded separable air inlet tubes normally clustered together, a sleeve having interior threads for engagement with the threads of the tubes, and means co-acting with the sleeve for locking it to the wheel rim.

5. A valve for pneumatic tires comprising a plurality of segmental separable air inlet tubes normally fastened together each having a lower extension one projecting radially and the others laterally in opposite directions, a sleeve having interior threads for engagement with the threads of the tubes, and means engaging the sleeve for locking it to the wheel rim.

[Claims 6 to 8 not printed in the Gazette.]

1,211,246. VAGINAL SYRINGE. NICHOLAUS C. E. SCHWARTZ, Chicago, Ill. Filed Feb. 27, 1913. Serial No. 751,010. (Cl. 128—25.)

1. The combination of a base, a discharge stem on said base, said base and stem provided with a passage way therethrough, a check valve to said passage way adapted to direct the flow of liquid from said passage way and to prevent the backward flow of liquid therefrom, a cylindrical shell to said base, a restricted opening to said shell concentric to said stem, an outlet from said shell, a source of liquid supply to the inlet side of the passage way in said base, said base provided with an additional passage way therethrough from the inlet side thereof to said shell, and a check valve in said additional passage way adapted to prevent the flow of liquid from said source of supply into said shell and to permit said flow from said shell to said source of supply.



2. The combination of a base, a cylindrical wall on said base arranged to form a receptacle, a restricted end to said wall and an opening through said end adapted to permit the flow of liquid therethrough into said receptacle, a stem to said base, said stem extending through said opening and said base and stem provided with a passage way therethrough, a source of liquid supply to said passageway, means to prevent the flow of liquid through said passage way toward said source of supply, an additional passage way adapted to permit the flow of liquid from said receptacle to said source of supply, means to prevent the flow of liquid in the opposite direction through said additional passage way, and an aperture adapted to permit the flow of fluid into and from said receptacle.

3. In a device of the class described, a hollow body reduced at one end, said body being provided with a vent in its walls, a tube secured in said body and projecting from said reduced end, said tube terminating in a nozzle, a check valve in said nozzle, and a means for forcing fluid through said tube, substantially as described.

4. In a device of the class described, a hollow body cylindrical at one end and reduced at the other, there being an opening in said reduced end, a plug inserted in the cylindrical end, a tube secured to the interior of said plug and projecting through said opening, said tube terminating in a nozzle, a check-valve in said nozzle, a passage-way in said plug communicating with said tube, a second passage-way in said plug communicating with the interior of said body, a check-valve in said second passage-way, a bulb connected to said plug and adapted to force liquid through said tube and nozzle, and a vent provided in the walls of said body, substantially as described.

5. A device of the class described, comprising a hollow body open at one end, a plug screwed in said body opposite the open end thereof, an axial tube secured to said plug and projecting through said open end, there being an annular opening formed between said tube and said open end, said tube terminating in a nozzle, an automatic check-valve in said nozzle to prevent the return flow of fluid escaping therefrom, two passage-ways in said plug one communicating with said tube and the other with the interior of said body, a check-valve in the last-named passage-way, a bulb coupling screwed to said plug the interior of which is in open communication with said tube and nozzle, a bulb secured to said coupling, and an air-vent plug secured in said body, substantially as described.

1,211,247. HOSIERY. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed May 26, 1914. Serial No. 841,027. (Cl. 66—4.)

1. A seamless stocking having a ribbed leg portion with uniform type of rib throughout but with a coarser gage in the rear half than in the front half due to a lesser number of wales in the rear half than in the front half.

2. A seamless stocking having leg and instep portions of ribbed fabric, and heel, sole and toe of plain fabric, the type of ribbed web being uniform throughout but being of coarser gage in the rear portion of the leg than in the front of the leg and instep due to a lesser number of wales in the rear half than in the front half.

3. A seamless stocking having leg and instep portions composed of ribbed web, and heel, sole and toe of plain web, the ribbed web being of uniform type throughout but the rear portion of the leg being of coarser gage than the front portion and instep due to a lesser number of wales in the rear half than in the front half, and the plain web having reinforced portions.



4. A seamless stocking having leg and instep portions of ribbed fabric, and heel, sole and toe of plain fabric, the type of ribbed web being uniform throughout but being of coarser gage in the rear portion of the leg than in the front of the leg and instep due to a lesser number of wales in the rear half than in the front half, and the plain fabric of the heel, sole and toe having a lesser number of wales than the ribbed fabric of the front of the leg and instep.

5. A seamless stocking having leg and instep portions of ribbed fabric, and heel, sole and toe of plain fabric, the type of ribbed fabric being uniform throughout but being of coarser gage in the rear portion of the leg than in front of the leg and instep due to a lesser number of wales in the rear half than in the front half, and the plain fabric of the heel, sole and toe having a lesser number of wales than the ribbed fabric of the front of the leg and instep, and being composed of heavier yarn.

1,211,248. POCKET SAVINGS-BANK. WALTER P. SCULLY, Chicago, Ill., assignor to G. Felsenthal & Sons, a Firm composed of G. Felsenthal, L. J. Felsenthal, and I. G. Felsenthal, Chicago, Ill. Filed Jan. 3, 1916. Serial No. 69,874. (Cl. 232—4.)



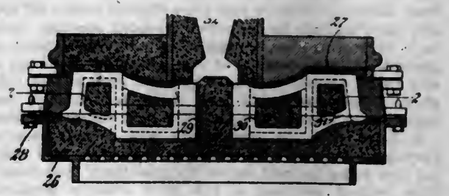
1. In a pocket savings bank, the combination with a box and its cover, of a headed stud projecting centrally inward from one of such parts, and a spring socket centrally mounted upon the inside of the other of said parts for receiving and yieldingly retaining the head of the stud in the closed position of the cover.

2. In a pocket savings bank, the combination with a box and its cover, one of said parts being centrally apertured, of a headed stud projecting inwardly from the other of said parts, a spring socket centrally mounted upon the inside of the apertured part for receiving the head of the stud in the closed position of the cover, the said spring socket having at its inner end a threaded aperture which registers with the aperture of the part upon which the socket is mounted, and an opening instrument comprising a screw-threaded stem adapted for threaded engagement with the said inner end of the socket to exert outward pressure upon the head of the stud when introduced through the aperture of the part upon which the socket is mounted.

3. In a pocket savings bank, in combination, a box having a double floor, both floors of the box being centrally apertured, a cover for the box, a headed stud carried by the cover and projecting centrally inward therefrom, a spring socket for receiving the head of the stud in the closed position of the cover, said socket comprising a spring metal plate having a central screw-threaded aperture and a plurality of radial arms folded upwardly and inwardly, the body of the plate being located between the two floors of the box with its screw-threaded aperture registering with the apertures of said floors and with the said arms of the plate projecting into the box chamber through the inner floor of the box, and an opening instrument comprising a screw-threaded stem adapted to loosely pass through the apertures of both floors of the box and to have threaded engagement with the screw-threaded aperture of the said socket plate for exerting outward pressure upon the head of the said stud.

4. In a pocket savings bank, the combination with a box and its cover, one of said parts being centrally apertured, of a headed stud projecting inwardly from the center of the other of the said parts, and a spring socket centrally mounted upon the inside of the apertured part for receiving and yieldingly retaining the head of the stud in the closed position of the cover, the said spring socket being open at its inner end to provide access to the end of the said stud through the aperture of the part upon which the socket is mounted.

1,211,249. METHOD OF MAKING CAR-WHEELS. CLIFTON W. SHERMAN, Buffalo, N. Y. Filed Sept. 8, 1914. Serial No. 860,557. (Cl. 22—209.)



1. The herein described method of making car wheels having a hub, a flanged tread and a body connecting the hub and flanged tread, which comprises casting the flange of the tread and the adjacent bearing surface of the tread against a chiller, and forming the flanged tread and that part of the body in line therewith comparatively rapidly and at a uniform rate of pouring of the metal into the mold cavity, as compared with those parts above and below the same the formation of the flange and load line portions of the tread being effected substantially while that part of the hub about midway between its upper and lower ends and the adjacent part of the body are being formed.

2. The herein described method of casting in a mold having a chill, car wheels having a hub, a rim provided with a tread and flange and a supporting member connecting said hub and rim, comprising casting the rim against the chill at a faster rate than the other parts of the wheel during a uniform rate of pouring of the metal into the mold the formation of the flange and load line portions of the tread being effected substantially while that part of the hub about midway between its upper and lower ends and the adjacent part of the body are being formed.

1,211,250. TRUSS. OSCAR A. SHIPLEY, Rahway, N. J. Filed Aug. 29, 1916. Serial No. 117,412. (Cl. 128—26.)

1. In a truss, the combination with a truss-frame of



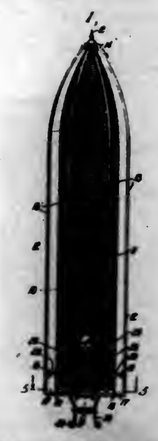
a supporting-stem, a hollow compressing-pad body, a back-plate secured to said body having an opening through which said supporting-stem passes, said back-plate having a socket-bearing concentrically disposed about said opening, an annular shoulder upon the inner end of said supporting-stem provided upon its rearward side with a ball-like bearing surface receivable in said socket-bearing, the inner end of said supporting-stem having a longitudinally extending receiving-socket, a guide-pin secured to said body and directed rearwardly toward said supporting-stem so as to be receivable in said receiving-socket, a conical spring-member surrounding said guide-pin and the inner end of said supporting-stem, a diametrically disposed terminal arm connected with the large end of said spring-member adapted to be passed through said guide-pin, a hugging convolution connected with the small end of said spring-member adapted to embrace the inner end of said supporting-stem, a longitudinally projecting terminal arm connected with said hugging convolution, and said annular shoulder of said supporting-stem having an opening therein adapted to receive said longitudinally projecting terminal arm.

2. In a truss, the combination with a truss-frame of horizontal carrying-bars connected therewith, said carrying-bars being inclined outwardly from their ends toward their central portions, a yoke-piece slidably supported upon said carrying-bars having screw-threaded openings therein, a supporting-stem having a screw-threaded shank engageable in said openings of said yoke-piece, lock-nuts on said shank adapted to engage opposite sides of said yoke-piece, a compressing-pad, and means for yieldably connecting said compressing-pad with said supporting stem.

3. In a truss, the combination with a truss-frame of horizontal carrying-bars connected therewith, said carrying-bars being inclined outwardly from their ends toward their central portions, a yoke-piece slidably supported upon said carrying-bars having screw-threaded openings therein, a supporting-stem having a screw-threaded shank engageable in said openings, of said yoke-piece, lock nuts on said shank adapted to engage opposite sides of said yoke-piece, a hollow compressing-pad body, a back-plate secured to said body having an opening through which said supporting-stem passes, said back-plate having a socket-bearing concentrically disposed about said opening, an annular shoulder upon the inner end of said supporting-stem provided upon its rearward side with a ball-like bearing surface receivable in said socket-bearing, the inner end of said supporting-stem having a longitudinally extending receiving-socket, a guide-pin secured to said body and directed rearwardly toward said supporting-stem so as to be receivable in said receiving socket, and a spring-means interconnecting said body with said supporting-stem.

1,211,251. CANDLE-GUARD. ARTHUR SHORROCK, North Adams, Mass. Filed Feb. 23, 1916. Serial No. 79,921. (Cl. 240—102.)

1. A candle guard, comprising a skeleton frame and a mantle of wire netting arranged within the said frame and spaced therefrom at the sides, the upper and lower ends of the mantle being attached to the upper and lower ends of the skeleton frame.



2. A candle guard, comprising a skeleton frame made of wire and having a base, the upper ends of the wire being bent inward and connected with each other at their upper terminals, and a tubular mantle of wire netting arranged within the said skeleton frame and having its upper end conical and connected with the upper end of the skeleton frame, the lower end of the mantle being attached to the said base.

3. A candle guard, comprising a skeleton frame made of wire and having a base, the upper ends of the wire being bent inward and connected with each other at their upper terminals, a tubular mantle of wire netting arranged within the said skeleton frame and having its upper end conical and connected with the upper end of the skeleton frame, the lower end of the mantle being attached to the said base, and a support for the candle attached to the said base and arranged centrally relatively to the said mantle.

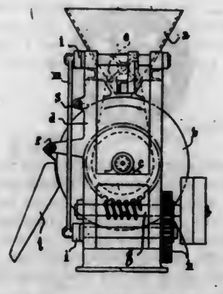
4. A candle guard, comprising a skeleton frame made of wire and having a base, the upper ends of the wire being bent inward and connected with each other at their upper terminals, a tubular mantle of wire netting arranged within the said skeleton frame and having its upper end conical and connected with the upper end of the skeleton frame, the lower end of the mantle being attached to the said base, and a support for the candle attached to the said base and arranged centrally relatively to the said mantle, the said support having two oppositely disposed fixed prongs and two oppositely disposed spring actuated pivoted prongs, the upper ends of which are adapted to act as extinguishes by closing onto the exposed portion of the wick of the candle after the latter is nearly burned down to its base.

5. A candle holder having a supporting member and provided with a pair of oppositely disposed fixed prongs adapted to bear against the exterior surface of the candle, and a pair of oppositely disposed pivoted prongs alternating with the said fixed prongs and likewise adapted to bear against the surface of the candle, the said pivoted prongs having arms extending beyond the pivots, and a spring connected with the arms to press the same apart and cause the pivoted prongs to move toward each other.

[Claim 6 not printed in the Gazette.]

1,211,252. APPARATUS FOR THE TREATMENT OF CALCIUM CYANAMID. GEORGE WILLIAM SINCLAIR, Odda, Norway. Filed July 7, 1914. Serial No. 849,583. (Cl. 257—96.)

1. Apparatus for producing granulated calcium cyanamid comprising a hopper for containing a plastic or semi-fluid mixture of calcium cyanamid and water, a grooved member movable relatively to and forming a closure for said hopper, a plurality of reciprocable plungers within said hopper and means for removing the material from the grooves in said member.



2. Apparatus for producing granulated calcium cyanamid comprising a hopper, a grooved cylinder rotating beneath and forming a closure for said hopper so that the plastic material may enter the grooves of said cylinder, means for giving an axial reciprocation to said hopper, and a scraper for removing the material from the grooves in said cylinder.

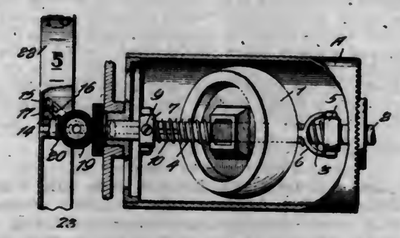
3. Apparatus for producing a granulated calcium cyanamid comprising a hopper for containing a plastic or semi-fluid mixture of calcium cyanamid and water, a grooved rotary member movable past and forming a closure for said hopper, means for forcing said material out of the hopper and into the grooves of said member, and means for removing the material from the grooves in said member.

4. Apparatus for producing granulated calcium cyanamid comprising a hopper for containing a plastic or semi-fluid mixture of calcium cyanamid and water, a grooved member movable relatively to said hopper, means for heating said member, means for forcing said material out of the hopper and into the grooves of said member, and means for removing the material from the grooves in the said member.

5. Apparatus for producing granulated calcium cyanamid comprising a hopper for containing a plastic or semi-fluid mixture of calcium cyanamid and water, a grooved cylinder movable relatively to and forming a closure for said hopper, so that the plastic material may enter the grooves of said cylinder, means for giving a transverse motion to said hopper relatively to the direction of motion of the cylinder, a plurality of partitions within the said hopper contacting with said cylinder and a scraper for removing the material from the grooves in said cylinder.

[Claims 6 to 9 not printed in the Gazette.]

1,211,253. SPEEDOMETER. MARVIN SMITHEY, Lawrenceville, Va. Filed Sept. 18, 1916. Serial No. 120,825. (Cl. 264—20.)



1. A speedometer comprising a drive shaft, a centrifugal member pivotally mounted on said drive shaft, a slidable collar mounted on said drive shaft, means pivotally connecting said collar with said centrifugal member, a spring for opposing the movement of the collar, a number wheel, a movable member having a cam groove, means for connecting said movable member with said number wheel and for rotating the latter, and a rigid connection having engagement with the slidable collar at one end and being provided with a pin arranged to traverse said cam groove at the other end.

2. A speedometer comprising a drive shaft, a centrifugal member pivotally mounted on said drive shaft, a slidable collar mounted on said drive shaft, means pivotally connecting said collar with said centrifugal member, a spring for opposing the movement of the collar, a number wheel, said number wheel being provided with a hub having a bevel gear, a second bevel gear arranged to mesh with the first named bevel gear, a sleeve for supporting said bevel gear, an extension through said sleeve provided with a cam groove, a rigid connection having engagement with the collar at one end, and being provided with a pin at the other end arranged to traverse the cam groove.

3. A speedometer comprising a drive shaft, one end of said drive shaft being hollow, a centrifugal member pivotally mounted on said drive shaft, a slidable collar carried by the hollow end of the drive shaft, means pivotally connecting said collar with said centrifugal member, a spring for opposing the movement of the collar, said shaft being provided with a longitudinal slot, a screw carried by said collar and arranged to extend through said slot, a plunger having a grooved head disposed within said hollow shaft, the end of the screw entering the grooved head of the plunger, the opposite end of the plunger being provided with a laterally extending arm, a pin carried by the arm, a sleeve mounted for rotation and having a bevel gear secured thereto at one end, an extension carried by the sleeve at the opposite end and being provided with a cam groove arranged to receive the pin on said arm, a number wheel mounted for rotation around its axis, and a bevel gear carried by the number wheel and arranged to be engaged by the first named bevel gear.

1,211,254. CONDYLE-INDICATOR. GEORGE B. SNOW, Long Beach, Cal. Filed Sept. 25, 1916. Serial No. 122,024. (Cl. 32—1.)



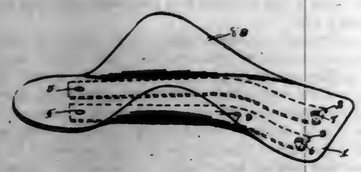
A condyle indicator, consisting of a strip of stiff material capable of being bent and retaining its shape and adapted to fit the cheek and to pass over the tragus of the ear, a bulbous part attached thereto, and filling the auditory meatus, and an eminence projecting from the surface of the said strip suitable for the removable attachment of a face bow, and situated directly over the mandibular condyle; substantially as described.

1,211,255. ARCH-SUPPORT. GEORGE F. SPIEGEL, Rochester, N. Y. Filed June 19, 1916. Serial No. 104,599. (Cl. 36—71.)

1. In an arch support the combination of a plurality of springs adapted to span over the shank of the shoe from the ball to the heel, and a cover for said springs.

2. In an arch support the combination of a plurality of springs adapted to span over the shank of the shoe from the ball to the heel, a cover for said springs, and means on the forward end of the springs to engage with the sole of the shoe and hold the support in place.

3. In an arch support the combination of a plurality of springs adapted to span over the shank of the shoe from the ball to the heel, and a cover for said springs, said springs being rigidly fastened to the cover at both ends.

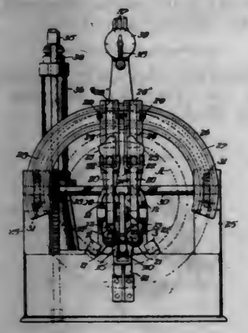


4. In an arch support the combination of a plurality of springs adapted to span over the shank of the shoe from the ball to the heel, and a cover for said springs, said springs being rigidly fastened to the cover at both ends, each of said springs being capable of being bent independently of the other to form a support for the foot.

5. In an arch support the combination of a plurality of springs adapted to span over the shank of the shoe from the ball to the heel, a cover for said springs, and flexible tongues on the sides of the cover extending upwardly and adapted to draw the sides of the feet together.

[Claim 6 not printed in the Gazette.]

1,211,256. TIRE-STRIPPING MACHINE. WILLIAM C. STEVENS, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Aug. 24, 1916. Serial No. 116,615. (Cl. 18—2.)



1. Apparatus for removing tires from cores, comprising a support for a core, a tire removing member, and means to operate said member to remove the tire from the core.

2. Apparatus for removing tires from cores, comprising a support for a core, a tire removing tool, adapted to rest against the surface of the core, and means to pass the tool over the surface of the core to remove the tire.

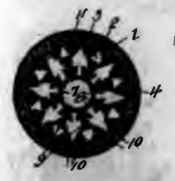
3. Apparatus for removing tires from cores, comprising a support for a core, a tire removing tool adapted to rest against the surface of the core below the bead of the tire and means to project the tool radially over the surface of the core.

4. Apparatus for removing tires from cores, comprising a support for a core, a tire removing tool adapted to rest against the surface of the core below the head of the tire and means to project the tool radially over the surface of the core, and means to pass said tool around the periphery of the core.

5. Apparatus for removing tires from cores, comprising a support for a core, a tire removing tool, and means to pass the tool around the periphery of the core.

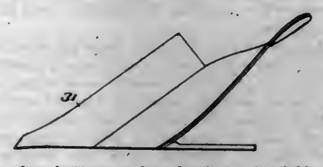
[Claims 6 to 17 not printed in the Gazette.]

1,211,257. PILLOW. HANNAH J. K. THOMAS, Jacksonville, Fla. Filed Mar. 22, 1916. Serial No. 85,922. (Cl. 5—15.)



A pillow comprising a circular wall having the end portions thereof inturned to form end walls and formed with axially alining openings, a coiled spring arranged within said circular wall and extending longitudinally thereof and having the end convolutions secured to said end walls respectively, and springs radiating from the convolutions of said coiled spring and connected to said circular wall.

1,211,258. PLOW-BOTTOM. JOHN A. TICKOFF, Moline, Ill. Filed Nov. 22, 1915. Serial No. 62,848. (Cl. 97—18.)



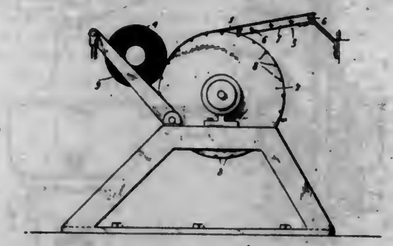
1. In a plow bottom, a frog having a landside member provided with a T-shaped slot, a share having a flange, a T-shaped block, the shank of which has an oblong aperture, and a bolt whereby said T-shaped block is connected with the flange for adjustable engagement with the T-shaped slot in the landside member.

2. In a plow bottom, a frog having a rectangular slot, a rib adjacent to said slot and provided with a bolt hole and a bolt receiving notch, and a landside member formed on the frog; a mold board having a flange engaging the rectangular slot, said mold board provided also with flanged lugs engaging the frog; a connecting bolt extending through the flange of the mold board and through the aperture of the rib; a share having a frog-engaging flanged lug, and a downwardly extending headed stud; and an eye bolt having a keyhole-shaped eye engaging the headed stud, and a shank seated in the notch formed in the rib upon the frog and extending through the flange on the underside of the mold board.

3. In a plow bottom, a frog having a rectangular slot, a rib adjacent to said slot and provided with a bolt hole and a bolt receiving notch, and a landside member formed on the frog; a mold board having a flange engaging the rectangular slot, said mold board provided also with flanged lugs engaging the frog; a connecting bolt extending through the flange of the mold board and through the aperture of the rib; a share having a frog-engaging flanged lug, and a downwardly extending headed stud; and an eye bolt having a keyhole-shaped eye engaging the headed stud, and a shank seated in the notch formed in the rib upon the frog and extending through the flange on the underside of the mold board, said share being also provided with a flange member and a T-shaped block adjustably mounted thereon in engagement with the T-shaped slot in the landside portion of the frog.

1,211,259. SMOOTHING DEVICE FOR WET PAPER WEBS. SOLOMON R. WAGG, Appleton, Wis.; James B. Wagg administrator of said Solomon R. Wagg, deceased. Original application filed Oct. 8, 1913, Serial No. 794,101. Divided and this application filed Mar. 23, 1914. Serial No. 826,701. (Cl. 242—55.)

1. In apparatus for treating wet paper web, the combination, with web-winding mechanism; of a device arranged immediately in front of and adjacent to said winding mechanism and embodying a member with which the wet web is in continuous contact throughout its entire width, said member comprising portions lying wholly in a plane parallel with the plane of the web and disposed to form with each other an angle whose apex extends in the direction of movement of the web, so as to exert a spreading and smoothing action upon the web from its central portion outward toward its marginal edges just before said web reaches said winding mechanism.



2. In apparatus for treating wet paper web, the combination, with web-winding mechanism; of a device arranged in front of and adjacent to said winding mechanism and with which the wet web is in continuous contact throughout its entire width, said device comprising a plurality of angular members lying wholly in a plane parallel with the plane of the web and having their apices extending in the direction of movement of the web, so as to exert a spreading and smoothing action upon the web from its central portion outward toward its marginal edges.

3. In apparatus for treating wet paper web, the combination, with a winding drum; of a device arranged immediately in front of and adjacent to said drum in a plane substantially tangential to the periphery of said drum; said device embodying a member comprising portions lying wholly in a plane parallel with the plane of the wet web and disposed to form with each other an angle whose apex extends in the direction of movement of the web, so as to exert a spreading and smoothing action upon the web from its central portion outward toward its marginal edges just before said web reaches said drum.

4. In an apparatus for treating wet paper web, the combination, with web-winding mechanism; of a web-spreading rack arranged adjacent to said mechanism for acting on said web prior to winding, said rack embodying a series of bars having convergent angular portions arranged in spaced parallel relation.

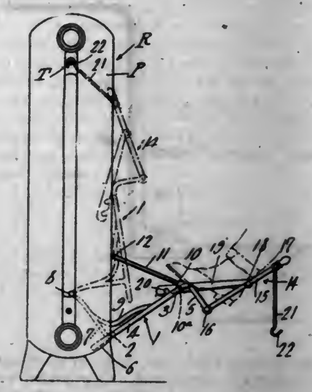
5. In an apparatus for treating wet paper web, the combination, with web-winding mechanism; of a web-spreading rack arranged adjacent to said mechanism for action on said web prior to winding, said rack embodying a series of angular members arranged in spaced, parallel relation and inclined downwardly toward the winding mechanism.

1,211,260. ADJUSTABLE RADIATOR FOOT-REST. ELLIS WEBB, Geneva, N. Y. Filed Apr. 26, 1916. Serial No. 93,676. (Cl. 155—9.)

1. A radiator attachment embodying a frame adapted to rest against the pipes of a radiator and having a portion to pass between and engage behind said pipes, and means carried by the frame movable against the radiator to bind the frame upon the pipes.

2. A radiator attachment embodying a frame adapted to rest against the pipes of a radiator and having a portion to pass between and engage behind said pipes, and a member pivoted to the frame to swing against the radiator for binding the frame upon the pipes.

3. An attachment of the character described embodying a frame adapted to rest against the pipes of a radiator and having a shank projecting therefrom to pass between said pipes, said shank having a T-head to engage behind said pipes, and a member pivotally connected with the frame and having a T-head to bear against said pipes.



4. A radiator attachment embodying a frame having a shank projecting angularly therefrom to pass between the pipes of a radiator, said shank having a T-head to engage behind said pipes, a sleeve pivoted to the frame opposite said shank, and a rod threaded through said sleeve and having a T-head to bear against the pipes.

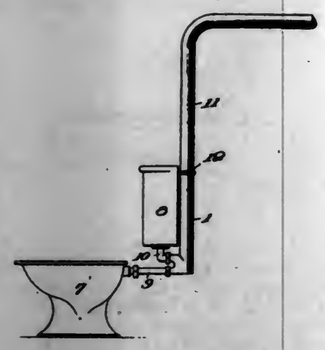
5. A radiator attachment embodying a frame adapted to rest against the pipes of a radiator and having a shank projecting therefrom, a rod opposite said shank, and downturned portions adjacent said rod, said shank having a T-head to engage behind the pipes of the radiator, a member pivotally connected with said rod and having a T-head to engage the pipes, a rack pivotally connected with said downturned portions, and bars pivotally connected with the rack and having notches engageable with said rod.

1,211,261. CLOTHES-LINE PROP. PETER WEBER, Hamilton, Ohio. Filed Mar. 3, 1916. Serial No. 81,964. (Cl. 68—12.)



A clothes prop comprising a main section, an auxiliary section having a pivotal connection with said main section and a spring pressed rod slidably mounted upon one section and having one extremity engaging the other section.

1,211,262. COMBINATION FLUSH AND LOCAL-VENT FITTING. JOSEPH A. WELSH, Dunkirk, N. Y. Filed Aug. 7, 1916. Serial No. 113,548. (Cl. 4—21.)



1. A combination flush and local vent, comprising a pipe section having a closed end and provided with laterally extending branch pipes connecting said pipe section respectively to a closet and flush tank, the open end of said pipe section having a connection with a local vent.

2. The combination with a closet and flush tank therefor, of a pipe section having superposed branches connected respectively to said closet and flush tank, said pipe section having a connection with a local vent.

3. A closet fitting, comprising a pipe section having a closed bottom, said pipe section having superposed branches extending therefrom adjacent said bottom, means for connecting the upper branch to a flush tank, means for connecting the lower branch to a closet, and means for connecting the open end of said pipe section to a local vent.

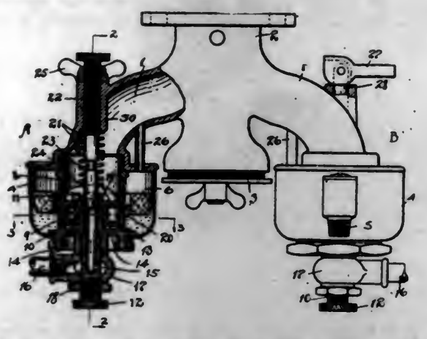
4. A combination flush and local vent for flush closets, comprising a pipe section having a closed bottom, means for connecting the open end of said pipe section to a local vent, said pipe section being provided with superposed branches, means for connecting the upper branch to a flush tank, means for connecting the lower branch to a closet whereby said pipe section forms a conduit for the fluid from said flush tank to said closet, and a vent from said closet to said local vent pipe.

5. The combination with a local vent, of a pipe section connected thereto having a closed bottom, branches extending laterally from said pipe section, a connection from the lower branch to a closet and a connection from the upper branch to a flush tank, whereby said pipe section serves as a conduit for conveying the fluid to said closet.

1,211,263. HYDROCARBON-AERATOR. WALTER C. WILLARD, Cleveland, Ohio. Filed Feb. 8, 1913. Serial No. 747,003. (Cl. 261—16.)

1. In a device of the character described, the combination of a chamber open to atmosphere; a fuel nozzle within said chamber; a second nozzle located centrally within said fuel nozzle; pressure fluid connections for said second nozzle; a valve normally closing the end of said second nozzle; and a second valve connected with said first valve and disposed in said chamber to close the opening therethrough in the normal position of said first named valve, said second valve being operable by the engine suction to raise said first named valve.

2. In a device of the character described, the combination of a fuel supply chamber; a central vertical chamber within the same open at its lower end to atmosphere and connected at its upper end with the engine; a fuel nozzle within said second chamber having free connection with said fuel supply chamber; means adapted to regulate the level of the fuel in said supply chamber and thus in said nozzle; a second nozzle located centrally within said fuel nozzle; pressure fluid connections for said second nozzle; a valve normally closing the end of said second nozzle; and a second valve of annular form normally closing the space between said fuel nozzle and the walls of said chamber but adapted to be raised by the engine suction, said annular valve being connected with said first valve to simultaneously raise the same.



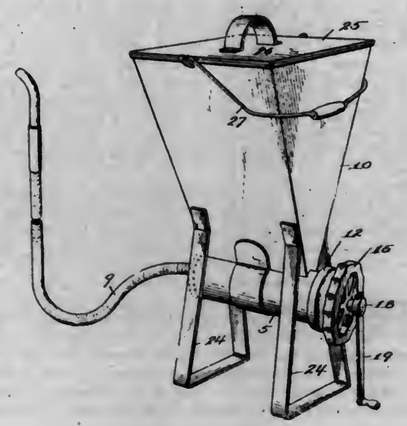
3. In a device of the character described, the combination of a fuel supply chamber; a central vertical chamber within the same open at its lower end to atmosphere and connected at its upper end with the engine; a fuel nozzle within said second chamber having free connection with said fuel supply chamber; means adapted to regulate the level of the fuel in said supply chamber and thus in said nozzle; a second nozzle located centrally within said fuel nozzle; pressure fluid connection for said second nozzle; means adapted to vertically adjust said second nozzle within said fuel nozzle; a valve adapted to seat in the end of said second nozzle to close the same; a second valve of annular form attached to said first valve and adapted to close the space between said fuel nozzle and the walls of said central chamber so as to be raised by the engine suction; and a spring normally seating said valves.

4. In a device of the character described, the combination of a fuel supply chamber; a central vertical chamber within the same open at its lower end to atmosphere and connected at its upper end with the engine; a fuel nozzle within said second chamber having free connection with said fuel supply chamber; means adapted to regulate the level of the fuel in said supply chamber and thus in said nozzle; a second nozzle located centrally within said fuel nozzle; pressure fluid connections for said second nozzle; means adapted to vertically adjust said second nozzle within said fuel nozzle; a valve adapted to seat in the end of said second nozzle to close the same; a second valve of annular form attached to said first valve and adapted to close the space between said fuel nozzle and the walls of said central chamber so as to be raised by the engine suction; a spring normally seating said valves; and means limiting the unseating movement of said valves.

1,211,264. GRAVITY-FILLING OIL OR GREASE GUN. JOHN WALLER WILLIAMS, Sailsbury, Md. Filed Apr. 29, 1916. Serial No. 94,456. (Cl. 221—79.)

1. An oil or grease gun having a receiving nozzle with an outlet at one end and an injecting tube communicating therewith, a charging means for the nozzle, a cut-off rotatably mounted in and extending approximately full length of the interior of the nozzle to control communication of the nozzle with the charging means, said cut-off having an inlet along the side portion and an outlet at one end in communication with the outlet of the nozzle, the cut-off being automatically supplied with oil or grease from the charging means, and expelling means longitudinally movable in the nozzle and the cut-off for discharging the contents longitudinally of the nozzle through the injecting tube.

2. An oil or grease gun having a fixed receiving nozzle with an outlet at one end and an injecting tube connected to the outlet end, a charging means for the nozzle, a tubular cut-off with an end outlet and side inlet and snugly fitting and rotatably disposed in the nozzle to control communication of the nozzle and the cut-off with the charging means, the said cut-off extending approximately full length of the interior of the nozzle to receive oil or grease automatically from the charging means while located in the said nozzle, and a follower longitudinally movable in the cut-off for discharging the contents of the nozzle through the end outlet of the nozzle and into and through the tube, the cut-off being rotatable independently of the follower, the end outlet of the cut-off at all times registering with the end outlet of the nozzle.



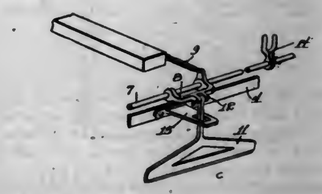
3. An oil or grease gun having a nozzle with an end outlet, a charging means for the nozzle, a rotatable tubular cut-off in the nozzle to control communication of the nozzle with the charging means and providing a lining extending approximately full length of the interior of the nozzle to automatically receive the oil or grease from the charging means, and means movably mounted in the cut-off and operable independently of the rotation of the said cut-off for discharging the contents of the nozzle and cut-off longitudinally of the latter through the end outlet means, the cut-off having an end outlet in continual communication with the end outlet of the nozzle and a side inlet to extend full length of the bottom portion of the charging means, the discharge of the contents of the nozzle and cut-off being effected when the side inlet of the cut-off is closed.

4. An oil or grease gun having a nozzle with an end outlet, a charging means having an outlet for feeding the nozzle by gravity, the outlet of the charging means extending full length of the bottom of the latter, a manually rotatable tubular cut-off in the nozzle to control communication of the nozzle with the charging means and having an inlet corresponding in dimensions to the outlet of the charging means to permit the oil or grease to have unrestricted automatic deposit in the cut-off, and means longitudinally movable in the cut-off and operable independently of the latter for discharging the contents of the said cut-off through the outlet of the latter, the tubular cut-off having an inlet in the side portion thereof of the same length and width as the outlet of the charging means, the discharge of the contents of the nozzle and cut-off being effected when the side inlet of the cut-off is closed.

5. In an oil or grease gun of the character specified, a nozzle provided with an intermediate inlet and an outlet at one end, a rotatable cut-off within the nozzle also having a side inlet corresponding in dimensions to and for registration with the inlet of the nozzle, a charging receptacle having an outlet in communication with the inlet of the nozzle, the cut-off also having an end outlet in constant registration with the end outlet of the nozzle and the inlets of the nozzle and cut-off permitting a free gravitation of the contents of the receptacle into the nozzle and cut-off, means movable in the cut-off for forcing the oil or grease through the end outlets of the cut-off and nozzle when the side inlet of the cut-off is closed, and means for independently operating the cut-off and the said movable means, the said movable means being longitudinally shiftable throughout the full length of the movable cut-off and the latter adjustable without affecting the said movable means.

[Claim 6 not printed in the Gazette.]

1,211,265. CORN-PLANTER AND HILL-MARKER. FRANK W. WORATZECK, Trenton, Ill. Filed Oct. 31, 1913. Serial No. 798,536. (Cl. 111—46.)



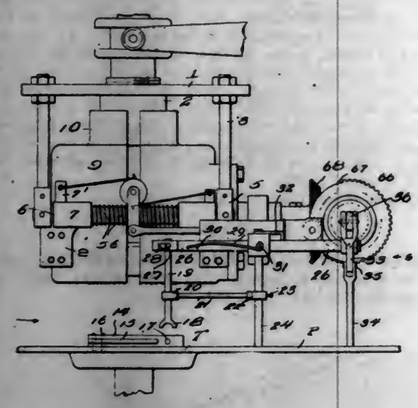
A planter and hill marker comprising a main frame, seed depositing means carried by said frame, a rock shaft mounted across the frame for controlling release of the seed from said depositing means, a bracket arm mounted on the shaft in a rigid relation to extend in a substantially horizontal plane therefrom, an upstanding arm provided on said bracket arm, a spring connected from said upstanding arm to the frame to normally hold the rock shaft in a relation to close the outlet from the seed depositing means, a land or hill marker connected pivotally to said bracket arm to depend downwardly therefrom, an arm mounted on the frame extended to embrace and carry said marker in a vertical path of movement into and out of the earth as the rock shaft may be turned, and means to turn the rock shaft at predetermined intervals to open the passage for the deposit of seeds and to simultaneously bring the marker in a vertically downward path of movement to be sunk into the earth to establish markings to identify the position of deposit of the seeds.

1,211,266. CAN CLOSING AND EXHAUSTING MACHINE. LUDWIG WURZBURG, Bellingham, Wash. Filed Sept. 2, 1915. Serial No. 48,741. (Cl. 113—82.)

1. In a can closing machine, the combination with the table, the head and seaming mechanism, and means for altering their relative positions and sealing the can; of a hood composed of movable sections and defining a chamber inclosing said mechanism and the upper part of the can hermetically when the sections are brought together, means for exhausting air from such chamber prior to the sealing of the can, and mechanism actuated by the insertion and rise of the can for controlling said exhausting means.

2. In a can closing machine, the combination with the table, the head and seaming mechanism, and means for altering their relative positions and sealing the can; of a hood composed of movable sections and defining a chamber inclosing said mechanism and the upper part of the can hermetically when the parts are brought together, means for exhausting air from such chamber prior to the sealing of the can, and mechanism controlled by the inser-

tion and rise of the can on the table for first forcing the sections of the hood together and then controlling said exhausting means.



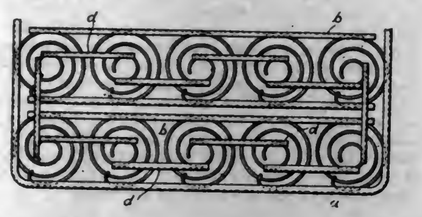
3. In a can closing machine, the combination with the table, the head and seaming mechanism, and means for altering their relative positions and sealing the can; of a hood composed of two movable parts and defining a chamber inclosing said mechanism and the upper part of the can hermetically when the parts are brought together, a conduit leading from said chamber to a source of air exhaust, a valve in said conduit for establishing communication between the chamber and exhaust or between the chamber and the open air, mechanism controlled by the insertion and rise of the can for forcing the parts of the hood together, and connections between said mechanism and valve for actuating the latter after the hood has been closed.

4. In a can closing machine, the combination with the table, the seaming mechanism, and means for altering their relative positions and sealing the can; of a hood composed of two movable parts and defining a chamber inclosing said mechanism and the upper part of the can hermetically when the parts are brought together, a conduit leading from said chamber to a source of air exhaust, a valve in the conduit for establishing communication between the chamber and exhaust or between the chamber and the open air, a shaft having cams, means actuated by said cams for forcing the parts of the hood together, connections between the shaft and valve for actuating the valve by the rotation of the shaft, and mechanism actuated by the insertion and rise of the can for starting the rotation of the shaft and by the descent of such can for checking its rotation.

5. In a can closing machine, the combination with the table, the seaming mechanism, and means for altering their relative positions and sealing the can; of a hood composed of two movable parts and defining a chamber inclosing said mechanism and part of the can hermetically when the parts are brought together, a source of air exhaust, a valve for establishing communication between the chamber and exhaust or between the chamber and the open air, a shaft rotating and sliding in its bearings and having a driven wheel, a driving wheel with which said driven wheel engages when the shaft is moved longitudinally, mechanism actuated by the insertion and rise of the can for so moving the shaft to engage the driven with the driving wheel and by the descent of the can for throwing said wheels out of engagement, cams fast on the shaft, means for closing the hood-sections including push rods with which said cams aline when the shaft is thrown into action, and connections between the shaft and valve for rotating the latter from the former.

[Claims 6 to 23 not printed in the Gazette.]

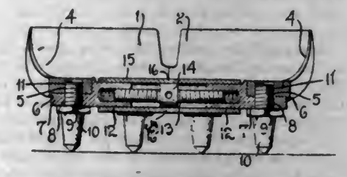
1,211,267. SEAT-SPRING. LEONARD A. YOUNG, Highland Park, Mich. Filed Feb. 11, 1916. Serial No. 77,741. (Cl. 5—29.)



1. In a seat spring, the combination of a plurality of supporting springs, a frame for supporting the said springs at the bottom, and ties or braces connecting the mid portions of the supporting springs and comprising short lengths arranged to reach from spring to spring only, the said lengths being arranged in staggered relation across the said seat spring so that one length is on one side of two springs it connects and the next succeeding length is on the opposite side of the two springs it connects.

2. In a seat spring, the combination of a supporting frame, supporting springs carried thereby, and ties or braces for connecting the mid portions of the supporting springs and comprising short lengths of channel strips each bridging from one spring to another only, the said short lengths of channel strips being arranged in staggered relation across the seat spring when viewed in plan, that is to say, one length engaging the two springs it connects on one side of these two springs and the second length engaging the two springs it connects on the opposite side of such two springs, and arranged in zig-zag relation when viewed sidewise, that is, the alternate lengths being disposed obliquely upward and obliquely downward.

1,211,268. HORSESHOE. ANTON ZADINA, Ceresco, Nebr. Filed Nov. 13, 1916. Serial No. 131,135. (Cl. 168—19.)



1. A horseshoe of the character described, comprising complemental members hingedly connected together at the toe of the shoe, socket members pivotally connected to the first named members at the heel ends thereof and formed with threaded sockets, an adjusting member having right and left hand threads engageable with the threads of said socket members, and a sleeve mounted upon said adjusting member and extending over and upon the adjoining ends of the socket members.

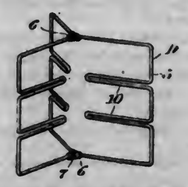
2. A horseshoe of the character described, comprising complemental members hingedly connected together and formed with under-cut flanges, internally threaded socket members pivotally connected to the first named members at the heel ends thereof, an adjusting member having right and left hand threads engageable with the threads of the socket members and having a head formed with an opening, and a sleeve loosely mounted upon said adjusting member and extending over the head and the socket members and formed with openings adapted to register with the opening in the head.

3. A horseshoe of the character described, comprising hingedly connected members formed at their heel ends with openings extending therethrough and recesses concentric with said openings, socket members having apertured ears mounted in said recesses, heel calks extending through the apertures of said ears and into the openings and secured therein whereby the socket members are pivotally connected to the first named members, and an adjusting member adjustably connected to the socket members, as and for the purpose set forth.

4. A horseshoe of the character described, comprising hingedly connected members formed at their heel ends with threaded openings extending therethrough and with recesses concentric to said openings, internally threaded socket members having apertured ears mounted in said recesses and formed with screw threads, heel calks having screw-threaded stems engaging in the threads of the apertures and threads of said openings and pivotally connecting the socket members to the first named members, an adjusting member having right and left hand threads engageable with the threads of the socket members, and a sleeve mounted upon said adjusting member and said socket members, for the purpose specified.

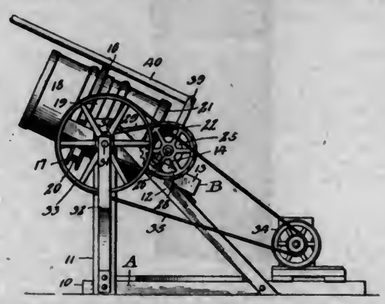
5. A horseshoe of the character described, comprising hingedly connected members formed at their heel ends with threaded openings extending therethrough and with recesses concentric to said openings, internally threaded socket members having apertured ears mounted in said recesses and formed with screw threads, heel calks having screw-threaded stems engaging in the threads of the apertures and threads of said openings and pivotally connecting the socket members to the first named members, and an adjusting member having right and left hand threads engageable with the threads of the socket members.

1,211,269. RACK FOR COOKING UTENSILS. ROBERT J. ABBOTT, Washington, D. C. Filed Nov. 27, 1915. Serial No. 63,799. (Cl. 248—41.)



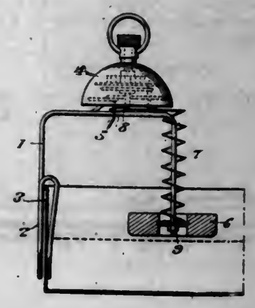
A rack of the character described comprising a pair of ring members, and U-shaped frames having eye terminals loosely embracing the pair of rings for the free swinging movement of the frame, each of said frames being bent to form rests, the rests of the respective frames being arranged in superposed relation to each other.

1,211,270. CONCRETE-MIXING MACHINE. WILLIAM ACHESON, Superior, Nebr. Filed Feb. 8, 1916. Serial No. 77,068. (Cl. 83—73.)



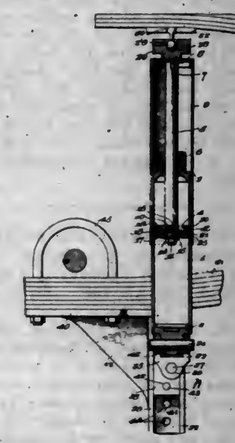
In combination, a pair of spaced standards, a bar connecting the standards, a tilting frame journaled between the standards adjacent one of its ends, extensions formed on the frame and normally engageable with said bar, a mixing drum rotatively mounted within the frame, hoop sections carried by the frame and encircling said drum, a bracket secured to one end of the frame and upstanding therefrom, a handle having one end secured to the bracket and intermediate portion being secured to one of the hoop sections, and means carried by the standards and frame for rotating said drum.

1,211,271. DRIP-PAN SIGNAL. JOHN E. AMERMAN, Brooklyn, N. Y. Filed Mar. 17, 1916. Serial No. 84,890. (Cl. 116—15.)



A drip pan alarm comprising a bracket, means for securing the bracket to a pan, a float movably mounted upon the bracket, an alarm mounted on the bracket, a spring connected at one end with the float and having convolutions which receive a portion of the bracket and a loop carried by the spring and adapted to receive the vibrator of the alarm and hold the same in an inactive position.

1,211,272. SHOCK-ABSORBER FOR VEHICLES. WILLIAM ANDERSON, Harrisburg, Pa. Filed Feb. 11, 1916. Serial No. 77,761. (Cl. 21—105.)



1. In a shock absorber of the fluid cylinder and piston type, the combination with a piston rod, of a piston formed with a circular series of ports extending therethrough, an adjustable throttle of circular formation carried by said piston and provided with a circular series of ports corresponding in number to those in the piston, said throttle

being adapted to be turned for moving the ports thereof partly or wholly into and out of line with the ports in the piston, the said piston and throttle members being provided one with an eccentric locking pin and the other with a circular series of sockets any one of which is adapted to receive said pin to form an interlocking connection between the piston and throttle valve, and a nut on said piston which clamps the throttle valve against the piston.

2. In a shock absorber of the fluid cylinder and piston type, an attaching connection at one end thereof comprising an attaching plate, a substantially vertical arm on said plate, a stud plate adjustable longitudinally of said arm, a pivot stud projecting from said stud plate, a coupling member pivotally mounted on said stud, and a pivot pin connecting said coupling member to one end of the cylinder, said coupling pin extending at a right angle to said pivot stud.

1,211,273. CLIPPER. CHARLES E. ARD, Birmingham, Ala. Filed Aug. 25, 1916. Serial No. 116,843. (Cl. 30—1.)



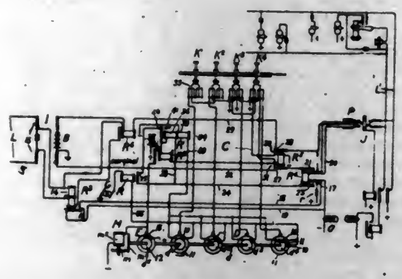
1. Clippers comprising inner and outer cylindrical casings, the outer casing having a longitudinally extending slot, and the inner casing having inclined slots for coöperating with the side walls of the slot of the outer casing to provide a cutting action, and means for rotatably connecting the said casings, the outer casing having one end closed, a hollow shaft connected with the opposite end of the inner casing for rotating the same and adapted to be connected to exhaust mechanism to withdraw the material cut, said casing tapering toward the closed end of the outer casing, and means in connection with the mounting of the said casings for permitting them to be adjusted longitudinally with respect to each other.

2. Clippers comprising inner and outer cylindrical casings, the outer casing having a longitudinally extending slot, and the inner casing having inclined slots for cooperating with the side walls of the slot of the outer casing to provide a cutting action, and means for rotatably connecting the said casings, the outer casing having one end closed, a shaft connected with the opposite end of the inner casing for rotating the same, said casing tapering toward the closed end of the outer casing, and means in connection with the mounting of the said casings for permitting them to be adjusted longitudinally with respect to each other.

1,211,274. PARTY-LINE SIGNALING SYSTEM. HENRY M. BASCOM, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Apr. 17, 1916. Serial No. 91,654. (Cl. 179—84.)

1. In a signaling system for producing signals at predetermined intervals, a source of signaling current and conductors to which said current is to be applied, mechanism between the current sources and conductors for applying said current in successive cycles of predetermined intervals, a device operable to render the controlling mechanism effective, and means for determining the interval after which the source and conductors shall be connected following the operation of the device.

2. In a signaling system for producing signals at predetermined intervals, a source of signaling current and conductors to which said current is to be applied, normally stationary mechanism between the current source and conductors adapted when set in operation to apply said current in successive cycles of predetermined intervals, a device operable to start the controlling mechanism and means to determine the position from which the controlling mechanism starts.



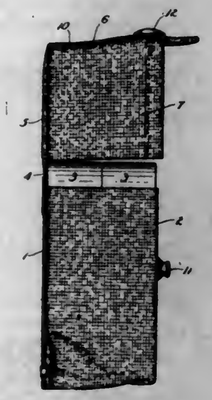
3. The combination with substation lines, of a connecting circuit therefor, a source of signaling current, an interrupting mechanism between the connecting circuit and current source, motor mechanism for the interrupting mechanism, means for starting the motor mechanism when the connecting circuit is joined to the substation lines, and means controlled by a substation for rendering the motor mechanism ineffective.

4. The combination with telephone lines, of a connecting circuit therefor, a source of signaling current, an interrupting mechanism between the connecting circuit and current source, motor mechanism for the interrupting mechanism, means for starting the motor mechanism when the connecting circuit is joined to the lines, and means for stopping the motor mechanism upon the response of the called subscriber.

5. In a machine ringing system, lines to be signaled and switching means therefor, a source of ringing current, an interrupter, motor mechanism therefor, and a relay controlling the motor mechanism and controlled by the switching means.

[Claims 6 to 12 not printed in the Gazette.]

1,211,275. WOVEN CARRIER. FRANK R. BATCHELDER, Worcester, Mass. Filed May 23, 1916. Serial No. 99,322. (Cl. 224—23.)



1. A carrier of woven material having a flexible pocket of woven fabric provided with a hood also of woven fabric, united flexibly to the back of the pocket, the said hood having a top of well-defined rectangularity corresponding in area with the cross-section of the filled pocket, a front extension having woven side-selvages, which extends down in front of the pocket, and side-skirts which are connected with the top and front of the hood and overlap and inclose the sides of the pocket, the said side-skirts consisting of integral portions of one and the same transversely-extending piece of fabric and having woven selvages, each side skirt secured along one selvaged edge thereof to a selvaged edge of an adjoining portion of the hood whereby the hood is shaped and is adapted to surround the upper portion of the filled and expanded pocket at both sides as well as the front.

2. A carrier of woven material having a flexible pocket of woven fabric provided with a hood also of woven fabric, united flexibly to the back of the pocket, and having a front extension having woven side-selvages, which extends down in front of the pocket, and side-skirts which are integral with a transverse portion of the hood-top and overlap and inclose the sides of the pocket, the said side-skirts secured along the front edges thereof to the corresponding woven selvages of the said front extension, whereby the hood is shaped and is adapted to surround the upper portion of the filled and expanded pocket at both sides as well as the front.

3. A woven carrier comprising a body-web, a woven pocket projecting from the face thereof, and a hood of flexible material adapted to surround and fit the upper portion of the filled and expanded pocket, comprising an attaching portion which is made fast to the body-web at the back of the pocket, a front extension having woven side-selvages, which extends down in front of the pocket, and deep side-skirts which extend alongside the sides of the pocket and are integral portions of the same transversely-extending piece of fabric, and means for fastening said hood in closed condition.

4. A woven carrier comprising a body-web, a woven pocket projecting from the face thereof, and an attached hood of flexible material which is secured by a rear extension thereof to the body-web, having a top of well-defined rectangularity, a front extension having woven side-selvages, which extends down in front of the front wall pocket, and side-skirts which unite at well-defined angles with the said top and extend down alongside the sides of the pocket, and prevent the existence of openings at the opposite sides of the covered pocket, and means for fastening the hood in closed condition.

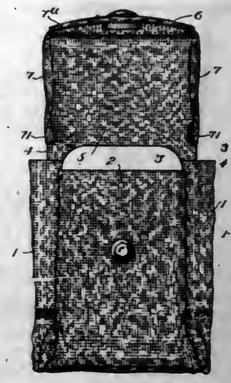
5. A woven carrier having a pocket, and a cover therefor comprising a strip of flexible material having a rearward extension which is secured at the back of the pocket, and a transverse strip secured to the first-mentioned strip and having end-portions constituting side-wings of skirts of the cover, a portion of said cover forming also a cover-front, whereby a hood-like cver is provided.

[Claim 6 not printed in the Gazette.]

1,211,276. WOVEN CARRIER. FRANK R. BATCHELDER, Worcester, Mass. Filed June 3, 1916. Serial No. 101,639. (Cl. 224—23.)

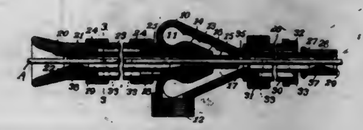
1. A woven carrier having a pocket, and a hood-like cover therefor comprising a strip of flexible material which is secured by its rear end at the back of the pocket, its intermediate portion constituting the cover-top and its forward portion constituting one thickness of the cover-front, and a transverse strip having an intermediate portion constituting a second thickness of the cover-front and end-portions constituting side-wings or skirts of the cover.

2. A woven carrier having a pocket, and a hood-like cover therefor comprising a selvaged woven strip which is secured by its rear end at the back of the pocket, its intermediate portion constituting the top of the cover and its forward portion constituting one thickness of the front of the cover, and a transverse selvaged woven strip having an intermediate portion constituting a second thickness of the cover-front and end-portions which constitute side-wings or skirts of the cover, the two thicknesses of the cover-front fastened together and the top-



edges of the side-wings or skirts fastened to the side-edges of the cover-top.

1,211,277. APPARATUS FOR COOLING METAL RODS. ARVID T. BLOOM, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corpotion of Massachusetts. Filed June 25, 1914. Serial No. 847,309. (Cl. 29—81.)



1. In an apparatus for cooling a metal rod, means for directing cooling water against said rod in an annular jet surrounding said rod.

2. In an apparatus for cooling a metal rod, a pipe for the passage of said rod, and means for admitting cooling water to said pipe in an annular jet surrounding said rod.

3. In an apparatus for cooling a metal rod, a pipe for the passage of said rod, means for admitting cooling water to said pipe, and means for restricting the outlet of water from said pipe.

4. In an apparatus for cooling a metal rod, a pipe for the passage of said rod, means for admitting water under pressure to said pipe, and a second pipe surrounding the first mentioned pipe and in communication with the interior thereof.

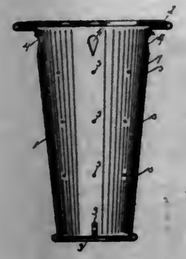
5. In an apparatus for cooling a metal rod, a plurality of sections, each comprising a pipe for the passage of said rod, means for admitting water under pressure to the pipe of each section, and means for restricting the outlet of water from each pipe.

[Claims 6 to 12 not printed in the Gazette.]

1,211,278. SACK-SPREADER AND GAGE. JOSEPH OTTO BLUM, Madison, Wis. Filed Dec. 20, 1915. Serial No. 67,714. (Cl. 83—26.)

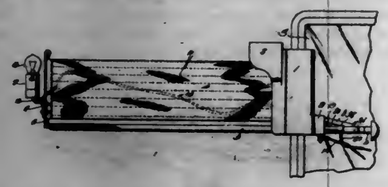
1. In a new article of manufacture, a combined sack spreader and gage comprising a hollow metal shell the top of which is provided with an outwardly projecting integral flange, said shell being smaller at its bottom than at the top, wedge shaped apertures arranged around said shell near the top thereof and circumferentially, said

apertures adapted to receive and retain securely the corners of a sack or similar receptacle.



2. In a combined sack spreader and gage, the combination with a metal shell provided with an integral flange extending outwardly therefrom, sack holding means disposed near the top of said shell, graduations comprising circumferentially alined circular apertures, and means in the bottom of said shell whereby said shell is braced and held rigid while in use.

1,211,279. TURNING AND STOPPING SIGNAL FOR AUTOMOBILES. JOHN BOECK, Boise, Idaho. Filed June 22, 1916. Serial No. 105,308. (Cl. 177—311.)



1. In a turning and stopping signal for automobiles, the combination of a spring wound roller, a signal flag wound thereon, an operating rod slidable transversely of said roller and secured at its outer end to the free end of said flag for unfurling the same at will, an electric signal lamp carried by said outer end of the rod, a circular contact on the roller and a relatively movable contact for closing the circuit of said lamp, and means on the operating rod for forcing said relatively movable contact against the circular contact when said rod is projected.

2. In a turning and stopping signal for automobiles, the combination of a spring wound roller, a signal flag wound thereon, an operating rod slidable transversely of said roller and secured at its outer end to the free end of said flag for unfurling the same at will, an electric signal lamp carried by said outer end of the rod, wiring for said lamp including a wire extending along the flag, a circular contact to which said wire is secured, said contact being mounted on one end of the roller, a spring retracted member having a contact to be forced against said circular contact, and a lateral projection on the operating rod for striking and projecting said member when said rod is projected.

1,211,280. SNOW-REMOVER. FRANK J. BORRES, Pittsburgh, Pa. Filed June 9, 1916. Serial No. 102,750. (Cl. 104—38.)

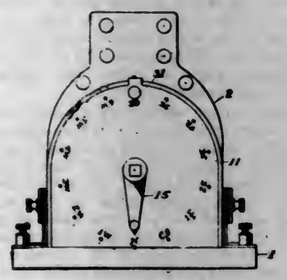
1. A snow remover including a track traveling structure, a belt mounted thereon, elevating and carrying means arranged on the belt, a loading car in rear of the track traveling structures and including a hopper to receive material from the belt, and a belt to pick up the material from the hopper and carry the same lengthwise to the loading car.

2. In a snow remover, a track traveling platform, a belt arranged for travel lengthwise the platform, means carried by the platform for driving the belt, a series of carriers arranged on the belt, and vertically arranged shields carried by and arranged in advance of the platform and having a vertical length exceeding the operative vertical sweep of the belt.



3. In a snow remover, a track traveling platform, a belt arranged for travel lengthwise the platform, means carried by the platform for driving the belt, a series of carriers arranged on the belt, and vertically arranged shields carried by and arranged in advance of the platform, and having a vertical length exceeding the operative vertical sweep of the belt, said shields being disposed beyond the respective sides of the belt.

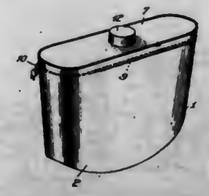
1,211,281. ELECTRIC SWITCH. BENJAMIN S. BOWERS, Laprairie, Minn. Filed Sept. 19, 1914. Serial No. 862,553. (Cl. 179—8.)



1. A switching system for train despatchers' offices and the like, comprising a number of telegraph and telephone lines and instruments therefor, terminal connections for each line and instrument, switch contacts connected to each terminal and arranged in pairs, a movable support of insulating material having on its surface sets of electrical control devices, consisting of contact plates or insulating spaces, longitudinally arranged in sets and so disposed that the pairs of switch-contacts may engage any set of said electrical control devices, some of said contact plates being electrically inter-connected, and indicating means, whereby any of the various connections desired may be made by moving the support to bring the corresponding set of electrical control devices and pairs of contacts into engagement.

2. A switching system for train despatchers' offices and the like, comprising a number of telegraph and telephone lines and instruments therefor in combination with a switch having at each side thereof terminal connections for the telephone and telegraph lines and the instruments therefor, switch contacts connected to each terminal and arranged in pairs, and a movable support of insulating material having on its surface sets of electrical control devices, each set consisting of two rows of separate contact plates or insulating spaces, and so disposed that the pairs of switch contacts engage any set of said electrical control devices, some of said contact plates being electrically connected from one row to the other and other contact plates connected in the same row, and indicating means, whereby any of the various connections desired can be made by moving the support to bring the corresponding set of electrical contact devices and spring fingers into engagement.

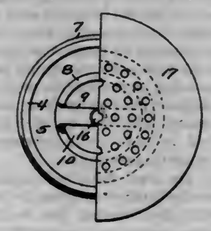
1,211,282. ANTISEPTIC SHAVING OUTFIT. ARON BRAUNSTEIN, Brownsville, Tex. Filed Aug. 18, 1916. Serial No. 115,726. (Cl. 132—15.)



1. A sanitary package of the class described comprising a substantially flat folded cup, a cover detachably secured to the said folded cup, and a brush carried by said cover having a shank protruding beyond said cover and bristles extending into the said cup, said brush being removable from the said cover.

2. A sanitary package of the class described comprising a substantially flat folded cup, a lather producing material provided in said cup, a cover detachably secured to the said cup including a severing cord, and a brush secured to said cover having the bristles extending inwardly into said cup and the shank thereof protruding beyond the cover, said brush being removable from the said cover.

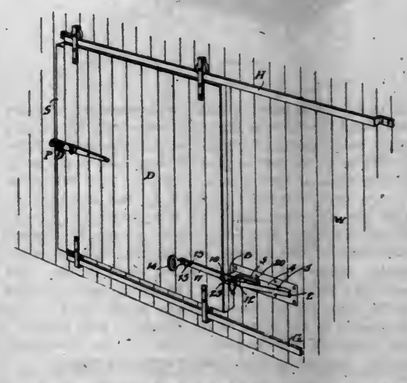
1,211,283. TRAP. THOMAS F. BUTLER, Lorain, Ohio. Filed Apr. 24, 1915. Serial No. 23,754. (Cl. 182—14.)



1. As a new article of manufacture, a drain-trap for drain pipes, comprising a basin member adapted to be mounted in the end of the drain pipe, a removable perforated cover for the basin, said basin having an opening in the bottom thereof, a valve-seat consisting of an annular member disposed in the opening in said basin member, a yoke spanning and integral with said annular member, a float valve for said seat, and a valve stem projecting from the valve and slidably mounted in said yoke and having an enlarged head at its free end, said annular member being removably threaded in the opening in said basin for facilitating the removal of the valve and valve-seat from the basin without necessitating the removal of the latter from the drain pipe.

2. A drain trap for drain pipes, comprising, a basin member adapted to be inserted in the end of said pipe and a removable perforated cover therefor, said basin member having an opening in the bottom thereof, a valve seat consisting of an annular member, a yoke integral with said annular member and spanning the same, a valve for said seat, a valve stem projecting from the valve and slidably mounted in said yoke and having an enlarged head at its free end, a helical spring surrounding the valve stem between said yoke and said enlarged head for normally seating said valve, and a casing enveloping said valve stem and said spring and threadedly secured to said yoke, said annular member being removably threaded in the opening in said basin member for facilitating the removal of the valve and valve-seat from the basin member without necessitating the removal of the latter from the drain-pipe.

1,211,284. CAR-DOOR FASTENER. DAVID W. CAMPBELL, Brownwood, Tex., assignor of one-half to James A. Snoddy, Brownwood, Tex. Filed Sept. 20, 1916. Serial No. 121,267. (Cl. 70—102.)



1. The combination with a sliding car door, and a support on the car wall therefor; of a housing let into the wall in rear of the door when closed, a dog mounted in said housing and normally projected across the rear edge of the door, and means movably mounted on the door for depressing said dog and then sliding the door.

2. The combination with a wall having a door opening, a sliding door movable across same, a door fastener, and means for normally projecting it across the rear edge of the door when the latter is closed; of a lever pivoted to the door at its rear edge with one arm overlying said fastener, for the purpose set forth.

3. The combination with a wall having a door opening, a sliding door movable across the same, a door fastener, and means for normally projecting it across the rear edge of the door when the latter is closed; of a lever pivoted to the door at its rear edge with one arm overlying said fastener, and the other arm having a slot and a handle, and means on the door engaging said slot when the lever lies parallel with the door.

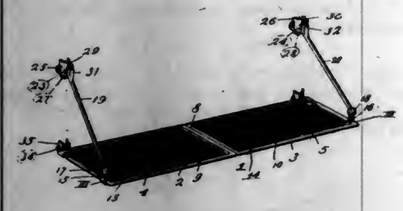
4. The combination with a freight car wall having a door opening, a door slidably mounted thereon, a stop at the inner edge of the opening, a housing in the wall near the rear edge of said opening, and a spring-projected dog mounted in said housing and adapted to stand across the rear edge of the door when the latter is closed; of a lever pivoted between its ends to the rear corner of the door and having the extremity of its outer arm enlarged and engaging the outer edge of said dog and its inner arm provided with a slot, and a button on the door adapted to pass through said slot and be turned to hold the lever against the door.

5. In a device of the class described, the combination with a sliding car door, a spring-actuated dog normally projected into the path of said door when closed, and a lever on the door having an arm projecting over the dog for throwing the latter out of the path of the door, said arm being slotted; of a hasp pivoted at one end on the dog and with its other end adapted to be swung through said slot, this end having an eye.

[Claims 6 and 7 not printed in the Gazette.]

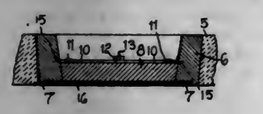
1,211,285. [WITHDRAWN.]

1,211,286. SHELF. THOMAS M. CARNEY, Kansas City, Mo. Filed Mar. 7, 1914. Serial No. 823,086. (Cl. 45—55.)



A shelf comprising a pair of rectangular frames arranged end to end and hingedly connected for folding upwardly only, a mat filling for each frame set in from the opposite faces thereof to provide depressed portions on the opposite sides of each frame, a clip for each frame having a sleeve part rotatably secured to the free end of the frame for swinging into the depression on either side thereof, vertically slotted brackets, means to support the inner edges of the frames, and inclined hanger arms universally connected at their lower ends to the clips for supporting the outer edges of the frames and carrying angularly disposed buttons on their upper ends to detachably engage in the slots of the brackets, said hanger arms when inoperatively disposed lying in the depressed portions of the frames with their respective clips.

1,211,287. DOOR FOR SILOS. RUFUS B. CLARK, Liberty Center, Ind. Filed July 29, 1915. Serial No. 42,535. (Cl. 20—1.4.)



1. The combination with a silo having a door opening, of an insulating sheet flush with the inner face of the silo wall and entirely closing the door opening, and a door hingedly mounted in the door opening to close against the outer face of the insulating sheet.

2. The combination with a silo having a door frame, of an insulating sheet, said frame being provided with means to receive and support said insulating sheet against vertical or lateral movement with respect to the silo wall, and a door mounted in said frame to close against the outer face of the insulating sheet.

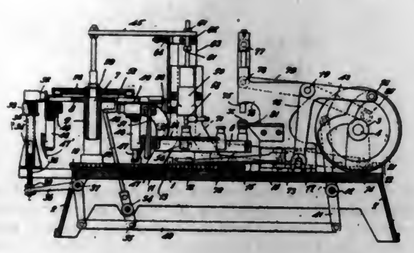
3. The combination with a silo, of a door frame mounted in the silo wall and having its inner face recessed, an insulating sheet adapted to be seated in the recessed face of the frame and held therein by the pressure of the ensilage against the sheet, said frame preventing vertical or lateral movement of the insulating sheet with respect to the silo wall, and a door mounted in said frame to close against the outer face of the insulating sheet.

1,211,288. PROCESS OF SIZING PAPER. RENÉ CLAVEL, Basel, Switzerland. Filed Aug. 12, 1916. Serial No. 114,583. (Cl. 91—68.)

1. A process for sizing paper wherein the sizing and fixing baths are applied to the paper mass or the paper, in the form of foam, substantially as described.

2. A process for sizing paper wherein there is applied to paper which has been treated with glue, casein or the like, a fixing bath in the form of foam produced by diffusing gaseous formaldehyde through a liquid adapted to foam, substantially as described.

1,211,289. LABELING, FILLING, AND STOPPERING MACHINE. FREDERICK COATES, Rochester, N. Y. Filed Jan. 2, 1913. Serial No. 739,800. (Cl. 226—28.)



1. A machine of the kind described, comprising label applying mechanism, consisting in a rotatable turret adapted to receive bottles flatwise with means associated therewith for supplying labels and adhesive and fitting the labels to the bottles, filling and stoppering mechanism having a turret adapted to receive the bottles standing up, and means for transferring the labeled bottles to said second turret, said means consisting in a chute having a horizontally extending receiving portion and a vertically extending delivery portion to deliver bottles upright on to seats of said second turret whereby the bottles are positioned for filling and stoppering on the second turret.

2. A machine of the kind described, comprising a carrier adapted to receive bottles flatwise and having means associated therewith for supplying labels and adhesive to the bottles at successive stations, a second carrier having means associated therewith for filling and stoppering the bottles, and transfer means having provision for positive actuation to deliver the bottles from horizontal position on the first named carrier to upright position on the second carrier, said carriers being intergeared for definitely timed step-by-step movement.

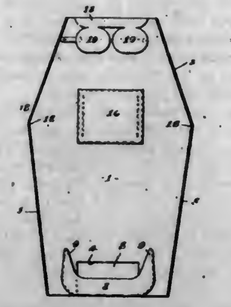
3. A machine of the kind described, comprising a carrier adapted to receive bottles flatwise and having means associated therewith for labeling the bottles, a second carrier having means associated therewith for filling the bottles, and a transfer device for shifting the bottles from the first named carrier to the second carrier equipped with a positively actuated pusher for initiating the bottle transfer, said device having a chute way terminating in a vertically extending portion adapted to deliver the bottles upright to said second carrier.

4. A machine of the kind described, comprising two turrets intergeared for step-by-step rotation, one at a higher elevation than the other, one of said turrets having means associated therewith for labeling the bottles, the other turret having means associated therewith for filling the bottles, there being a transfer chute between said turrets adapted to receive the bottles flatwise from the higher turret and having a vertically extending delivery portion to discharge the bottles upright on to the lower turret.

5. A machine of the kind described, comprising a horizontally disposed turret having means associated therewith for labeling bottles, a second turret at a substantially lower elevation having means associated therewith for filling the bottles, said turrets being intergeared for definitely timed step-by-step rotation, a curved transfer chute adapted to receive the horizontally disposed bottles on the first named turret and terminating in a vertically extending portion in position to deliver the bottles upright to the lower turret, and a positive pusher connected for movement to initiate the bottle transfer from one turret to the other.

[Claims 6 and 7 not printed in the Gazette.]

1,211,290. VEHICLE-ROBE. FRANK W. COLLINS, Cortland, N. Y. Filed Jan. 8, 1916. Serial No. 71,055. (Cl. 2—80.)



1. A vehicle robe comprising a front body piece having its side edges thereof converging from near the waistline to the collar line thereof, and side flaps extending substantially the full length of the body piece and having straight edges contiguous to the body piece, the straight edges being secured to the angular edges of the body piece whereby the side flaps normally stand at an angle to the body piece, substantially as and for the purpose described.

2. A vehicle robe comprising a front body piece having its side edges converging downwardly from points near the waistline toward the lower end thereof and converging upwardly from said points near the waistline to the collar line, side flaps oblong in general outline and having straight edges which are secured to the angular side edges of the body piece whereby the side flaps normally stand at an angle to the body piece and in position to be readily wrapped around the user's body, substantially as and for the purpose specified.

3. A vehicle robe comprising a front body piece having side edges thereof converging from near the waistline to the collar line thereof, and side flaps foldable rearwardly and under the wearer, the side flaps extending substantially the full length of the body piece and having straight edges contiguous to the body piece, the straight edges being secured to the angular edges of the body piece whereby the side flaps normally stand at an angle to the body piece, the side flaps having arm holes near their upper ends, substantially as and for the purpose set forth.

4. A vehicle robe comprising a body piece, side flaps on opposite sides of the body, and a forwardly extending boot at the lower end of the body piece and arranged to stand at an angle to the body piece and having an entrance opening on the rear side thereof, the boot also having a wall closing the lower portion of its entrance opening leaving the upper portion thereof open, the side flaps being foldable in position to close said entrance opening, substantially as and for the purpose set forth.

5. A vehicle robe comprising a body piece and a forwardly projecting boot at the lower end, the boot including side walls standing at an angle to the body piece, a top wall inclining downwardly and forwardly from the front of the body piece and a bottom wall, the side walls of the boot holding the same in an angular relation to the body so that the wearer's feet can be readily inserted therein, and a wall inclosing the lower portion of the entrance opening of the boot, and side flaps secured to the edges of the body piece and foldable rearwardly around the wearer and over the entrance opening of the boot and lapping the wall across the lower portion of the entrance opening, substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,211,291. COLLAPSIBLE ARCH-FORM. GLENN A. COMPTON, Minneapolis, Minn. Filed Sept. 30, 1916. Serial No. 123,032. (Cl. 25—131.5.)



1. A collapsible form for use in the construction of arches comprising a pair of arch bars, and side plates supported on the arch bars and made up of a plurality of slats detachably and flexibly connected.

2. A collapsible form for use in the construction of arches comprising a pair of arch bars, and side plates supported on the arch bars and made up of a plurality of slats detachably connected by overlapping and flexible joints.

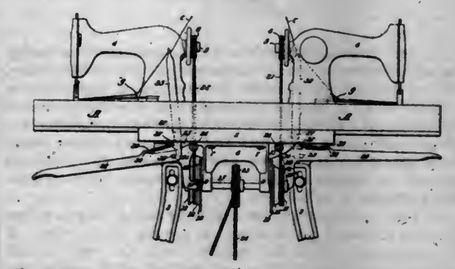
3. A collapsible form for use in the construction of arches comprising a pair of arch bars, a ridge plate supported on the arch bars, and side plates hung from the ridge plate and supported on the arch bars.

4. A collapsible form for use in the construction of arches comprising a pair of arch bars, a ridge plate supported on the arch bars, and side plates flexibly connected to the ridge plate and supported on the arch bars.

5. A collapsible form for use in the construction of arches comprising a pair of arch bars, a ridge plate supported on the arch bars, and side plates flexibly connected to the ridge plate and comprising a plurality of slats flexibly connected and supported on the arch bars.

[Claims 6 to 12 not printed on the Gazette.

1,211,292. POWER-TRANSMISSION DEVICE. HERBERT CORRALL, Helensburgh, Scotland, assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Original application filed Oct. 19, 1912, Serial No. 726,757. Divided and this application filed Apr. 10, 1914. Serial No. 830,862. (Cl. 64—4.)



1. In driving devices for machines, a driving pulley and an adjacent normally-stationary idler pulley made each with a single flange on the outside, the idler pulley being of larger diameter than the driving pulley and having a belt-engaging face inclined toward a similarly-inclined face of the driving pulley, a driven pulley, a substantially

round belt connecting said driving and driven pulleys, and means for shifting said belt from said driving- to said idler-pulley, thereby placing the belt under the tension.

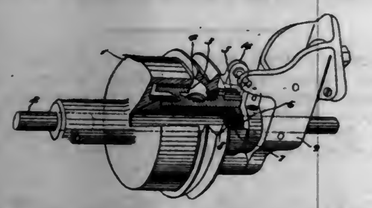
2. A driving device for machines, comprising a driving and an idler pulley mounted for independent rotation upon a common axis and having conical faces inclined in the same direction relative to said axis and of substantially equal diameter at their adjacent edges, a belt adapted to embrace either of said pulleys, and a shipper for shifting the belt from one to the other of said pulleys.

3. A driving device for machines, comprising a driving and an idler pulley mounted for independent rotation upon a common axis and having conical faces inclined in the same direction relative to said axis, the faces of said pulleys being of substantially the same diameter at their adjacent edges and that of the driving pulley being the smaller of the two relative to the opposite edges, a belt adapted to embrace either of said pulleys, and a shipper for shifting the belt from one to the other of said pulleys.

4. A driving device for machines, comprising a hanger having a bearing boss, a driving shaft journaled in said hanger, a loose pulley journaled upon said bearing boss, a driving pulley fixed upon said shaft and having one edge of its face of substantially the same diameter as the adjacent edge of the loose pulley, a substantially round belt adapted to connect said pulleys with a machine to be driven, and a shipper for shifting the belt from one to the other of said pulleys.

5. A driving device for machines, comprising a driving and an idler pulley mounted for independent rotation upon a common axis and having conical faces inclined in the same direction relative to said axis and of substantially equal diameter at their adjacent edes, a belt adapted to connect said pulleys with a machine to be driven, a shipper for shifting the belt from one to the other of said pulleys and self-acting in a direction toward the idler pulley, and a pivotally mounted latch-lever adapted to hold the shipper in position to maintain the belt upon the driving pulley and adapted to be tripped to cause the automatic shifting of the belt upon the idler pulley.

1,211,293. POWER-TRANSMITTER. HERBERT CORRALL, Helensburgh, Scotland, assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 6, 1915. Serial No. 26,249. (Cl. 74—26.)



1. The combination with a driving and a driven pulley the rim of one of which embraces the rim of the other, of an eccentric bearing bush for said driven pulley, and a tubular member having an outer surface eccentric to the axis of said driving pulley, said member sustaining externally said bush, said bush and said member being angularly movable relatively to one another to effect and interrupt the frictional engagement of the rims of said driving and driven pulleys.

2. The combination with a driving and a driven pulley the rim of one of which embraces the rim of the other, of an angularly adjustable bearing bush for said driven pulley, and a member having a convex outer surface eccentric to the axis of the driving pulley, said member sustaining said bush eccentrically, said bush and said member formed with lubricant passages adapted to be brought into communication on angular adjustment of said bush.

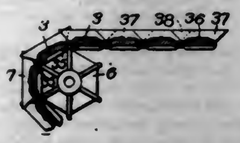
3. In a power transmitter, the combination with a driving shaft and a driving member fixed on said shaft, of a driven member adapted to engage said driving member, a tube encircling said shaft, an eccentric bearing bush for said driven member, a member sustaining said bush and sustained by said tube eccentrically of said shaft, and means for effecting relative angular displacement of said bush and said sustaining member, whereby to effect engagement of said driving and driven members.

4. In a power transmitter, the combination with a driving shaft and a driving member fixed upon said shaft, of a driven member adapted to engage said driving member, an adjustably mounted hanger, a tube encircling said shaft, said tube supported by said hanger, an eccentric bearing bush for said driven member, and a member on said tube sustaining said bush eccentrically of said shaft, said bush being angularly movable in relation to said sustaining member so as to bring said driven member into engagement with said driving member.

5. In a power transmitter, the combination with a driving shaft and a driving member carried thereby, of a driven member adapted to engage said driving member, a tube encircling said shaft, an eccentric bearing bush for said driven member, a member on said tube sustaining said bush eccentrically of said shaft, a braking device, and means for effecting relative angular displacement of said bush and said sustaining member to effect engagement and disengagement of said driving and driven members, and to effect application and release of said braking device.

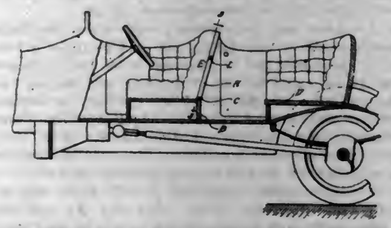
[Claims 6 and 7 not printed in the Gazette.]

1,211,294. CONVEYER FOR A SAND-SPREADER. JOHN D. CURTIS, Worcester, Mass., assignor to Richardson Manufacturing Company, Worcester, Mass., a Corporation of Massachusetts. Filed Aug. 29, 1912. Serial No. 717,713. (Cl. 193—2.)



In a sand spreader, a body, a movable bottom, comprising a series of rigid transverse slats having hinged connections, flexible coverings for the openings between the slats, flexible flanges carried by the opposite ends of said slats, overlapping each other and the sides of the body, said flanges being of greater width at their free ends than the said slats, and a depending apron attached to the body and overlapping said flexible flanges.

1,211,295. ADJUSTABLE AUTOMOBILE-SEAT. JAMES WICKLIFFE DANIEL, Texico, N. Mex. Filed May 3, 1916. Serial No. 95,187. (Cl. 21—43.)



1. A convertible back to automobile seats comprising, in combination with a back and seat to which the same is hinged, a horizontally disposed resilient bar mounted in said back, an axially movable push rod mounted in the back of the seat and engaging said resilient bar, a lug upon the push rod adapted to engage a shoulder in the back of the seat forming means for holding the resilient rod in a sprung position with its ends retracted within the back of the seat.

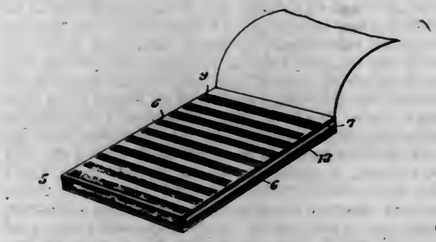
2. A convertible back to automobile seats comprising, in combination with a back and seat to which the same is hinged, and provided with tapering apertures near its opposite sides, socket members countersunken in said apertures and in the side walls of the car, a horizontally disposed resilient rod mounted in said apertures and engaging the sockets in the back, an axially rotatable push rod adapted to bear against and hold the resilient rod in a sprung position, and means for holding the push rod in an operative position.

1,211,296. CONNECTING DEVICE. GEORGE A. DAVIS, Muncie, Ind. Filed Feb. 11, 1916. Serial No. 77,757. (Cl. 24—102.)



As a new article of manufacture, a connecting device embodying a pair of disks provided with a pair of opposed semi-circular heads, a bar connecting the heads together and in spaced relation one to the other, defining a pair of entrance slots, and a flexible element connecting the said disks by the insertion of the same through said entrance slots and around the connecting bar.

1,211,297. WRITING-TABLET. GEORGE E. DAVIS, Vista, Cal. Filed Jan. 12, 1916. Serial No. 71,763. (Cl. 11—11.)

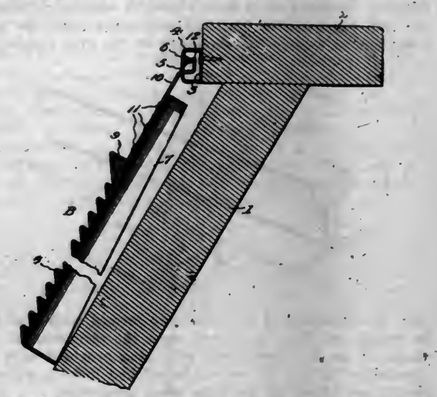


1. A writing tablet having a plurality of sheets of paper and having a guide sheet of a greater width, said guide sheet having guiding provisions adapted to be visible through one of said sheets of paper, the edges of the guide sheet protruding beyond the tablet sheets being bent angularly to prevent any accidental lateral creeping movement of the guide sheet from between the tablet sheets.

2. A writing tablet having a plurality of sheets of paper and having a guide sheet of a greater width, said guide sheet having guiding provisions adapted to be visible through one of said sheets of paper, the edges of the guide sheet protruding beyond the tablet sheets being bent angularly to prevent any accidental lateral creeping movement of the guide sheet from between the tablet sheets, the said angularly bent portions of the guide sheet further serving as guide flanges for accurately positioning the guide sheet between the sheets of the tablet.

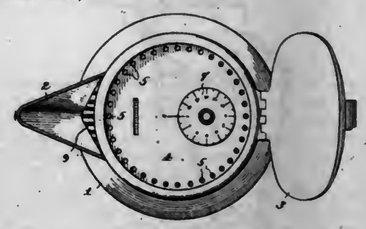
1,211,298. WASHBOARD-SUPPORT. HARRY E. DAWE, Perth Amboy, N. J. Filed Aug. 30, 1916. Serial No. 117,695. (Cl. 68—29.)

The herein described device for supporting washboards within a tub, the same comprising a strip adapted for attachment within the front wall of the tub and having on it a plurality of sockets, each of the same being hollow and provided with a slot in its front face near its lower edge and an internal lug above said slot, and a plurality of metallic strips adapted for attachment to the washboard at points corresponding with the position of said sockets, each strip projecting above the upper edge of the board and having its projecting portion bent into an



L-shaped extension whose tip is adapted to rest against the lug when its shank passes through the slot of one of such socket members, for the purpose set forth.

1,211,299. TOY BANK. WILLIAM R. DOERWALD, Brooklyn, N. Y. Filed June 6, 1916. Serial No. 102,055. (Cl. 46—36.)



1. A toy savings bank, comprising a vessel simulating a pot having a pouring spout, a slotted crown, a swinging cover normally concealing the crown and a yieldingly mounted foraminated member normally closing the spout from the body of the vessel.

2. A toy savings bank, comprising a vessel simulating a pot having a pouring spout, a slotted crown, a swinging cover normally concealing the crown and a yieldingly mounted foraminated member normally closing the spout from the body of the vessel and releasing means movable through the crown and against said foraminated member.

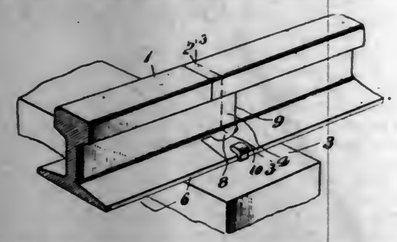
3. A toy savings bank, comprising a vessel simulating a pot having a pouring spout, a slotted crown, a swinging cover normally concealing the crown and a yieldingly mounted foraminated member normally closing the spout from the body of the vessel and a coin chute having angularly disposed branches, said chute being secured to the crown in line with the coin receiving slot.

4. A bank comprising a vessel having a spout, a slotted crown mounted on the vessel and having a series of perforations, a resiliently supported member normally closing the spout from the body of the vessel and a lug mounted on said member and disposed in alinement with one of the perforations in the crown.

1,211,300. RAILWAY-RAIL. JOVAN DROBAC, Lackawanna, N. Y. Filed Feb. 2, 1916. Serial No. 75,815. (Cl. 239—8.)

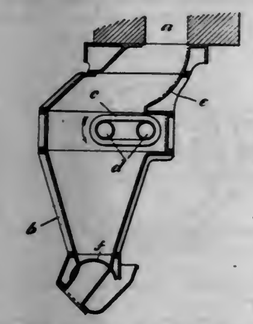
In a rail joint, two rails, one having a web extension which has its upper edge horizontally straight, said web extension from its upper corner being formed with a nose which is flat in plan, the flange of the rail being formed with an extension terminating in a nose disposed

below the first mentioned nose, the other rail having its flange and head extending beyond the web portion, said flange at its end formed with a vertical opening to receive the web extension of the first mentioned



rail, the underface of its head being formed with a pocket to receive the first mentioned nose, the extension of the flange of the first mentioned rail being provided with an opening to receive the second mentioned nose to prevent lateral movement of the rails when assembled.

1,211,301. DISCHARGING VERTICAL RETORTS. ARTHUR MCDOUGALL DUCKHAM, Ashstead, England. Filed May 19, 1915. Serial No. 29,147. (Cl. 202—7.)

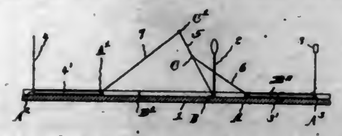


Apparatus for discharging vertical retorts in which a positive mechanical pressure is imposed upon the charge therein comprising in combination, a substantially-vertical extension on the retort disposed directly below the open bottom thereof and embodying a curved side wall which extends inwardly and downwardly from one side wall of said bottom to a point substantially in line with the opposite side wall, so as to sustain a portion of the weight of the charge; an endless chain belt disposed at the foot of said wall and having one end overhung by the same, so as to sustain the remainder of the weight of the charge; and means for driving said belt in a direction to enable it to discharge continuously at its opposite end the charge which it supports.

1,211,302. AUTOMATIC FOCUSING DEVICE FOR COPYING OR ENLARGING CAMERAS AND THE LIKE. RENÉ GUSTAVE ARTHUR DUTERT, Paris, France. Filed June 10, 1912. Serial No. 702,879. (Cl. 88—24.)

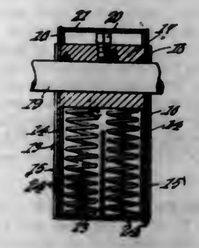
1. In an optical apparatus of the character specified, the combination, with a base, and a pair of longitudinally-movable slides mounted thereon; of a three-part link system for shifting said slides, one member of which system is pivoted to said base and the other two members to said slides and to the first mentioned member at different points in its length, the pivot point of the first-named member being so related to the pivot points of the second-named members that the product of the respective distances of the second-named points from the first-named point is constant.

2. In an optical apparatus of the character specified, the combination, with a base, and a pair of longitudinally-movable slides mounted thereon; of a link system comprising three inter-connected rods pivoted at their lower ends one to said base and the other two to said slides and to different points in the length of the rod first mentioned, the pivot point of the first-named rod being so disposed relative to the pivot points of the second-named rods that the product of the respective distances of the second-named points from the first-named point is constant; a lens connected to said base above and directly in line with the said first-named point; an object holder carried by one of the said slides; and a receiving surface carried by the other slide, the product of the distances between the object holder and one of the foci of the lens and between the other focus of the lens and the receiving surface being equal to the square of the focus of the said lens.



3. In an optical apparatus of the character specified, the combination, with a base, and a pair of longitudinally-movable slides mounted thereon; of a link system comprising three inter-connected rods pivoted one to said base and the other two to said slides, the pivot point of the first-named rod being so disposed relative to the pivot points of the second-named rods that the product of the respective distances of the second-named points from the first-named point is constant; a lens connected to said base above and directly in line with the first-named point; an object holder carried by one of the said slides; a receiving surface carried by the other slide; the product of the distances between the object holder and one of the foci of the lens and between the other focus of the lens and the receiving surface being equal to the square of the focus of the said lens; and focusing means for a condenser and a source of light embodying a second link system comprising a plurality of inter-connected rods one of which is connected to the slide which carries the said object holder; a condenser mounted on that slide; and a third slide mounted on said base for longitudinal movement and carrying a source of light, the said third slide having one of the rods of the second-named link system connected thereto, said rods coöperating to maintain constant the product of the respective distances of the source of light and the lens from the foci of the condenser.

1,211,303. BICYCLE ATTACHMENT. GUY E. ECKEL, Rushville, N. Y. Filed Sept. 12, 1916. Serial No. 119,762. (Cl. 208—125.)



1. An attachment for bicycles and the like, including a head, said head having opposed longitudinal openings, a block slidably mounted within the head, yieldable supporting means for the block, handle bars extending through the block, means for securing the handle bars to the block, a cap upon the head and extending over the block to retard the upward movement of the block, and means for connecting the head to a bicycle or the like.

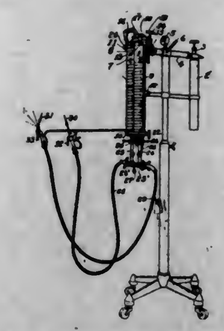
2. The combination with a steering fork and head of a bicycle or the like, of an attachment comprising a housing, a yieldingly supported block slidably mounted therein, a handle bar extending through the block and beyond the sides of the housing, means within the block for engaging the handle bar to hold it against movement relative to the block, means detachably connected to the housing and extending over the block to retard the upward movement of said block, and an adjustable connection between said housing and the steering fork.

3. An attachment for bicycles and the like, including a housing having opposed longitudinal slots, a yieldingly supported block within the housing, said block having an opening for the reception of a handle bar, means carried by the block for engaging the handle bar and holding it against rotation within the opening, a cap detachably connected to the housing and extending over the block to limit the movement of the block in one direction, an arm extending from the block, and means adjustably engaging the arm for connecting the housing to a bicycle or the like.

4. An attachment for bicycles and the like, including a housing having opposed longitudinal slots, a yieldingly supported block within the housing, said block having an opening for the reception of a handle bar, means carried by the block for engaging the handle bar and holding it against rotation within the opening, a cap detachably connected to the housing and extending over the block to limit the movement of the block in one direction, means movable with the block for closing the openings in the sides of the housing, and means for adjustably connecting the housing to a bicycle or the like.

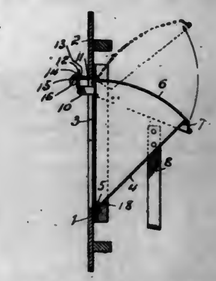
5. An attachment for bicycles and the like, including a housing having opposed longitudinal slots, a yieldingly supported block within the housing, said block having an opening for the reception of a handle bar, means carried by the block for engaging the handle bar and holding it against rotation within the opening, a cap detachably connected to the housing and extending over the block to limit the movement of the block in one direction, means movable with the block for closing the openings in the sides of the housing, and means for adjustably connecting the housing to a bicycle or the like, said means including an arm, a link adjustably connected to the arm, a ring, and an arm upon the ring and adjustably connected to the link.

1,211,304. LOCAL-ANESTHESIA MACHINE. ROBERT E. FARR, Minneapolis, Minn. Filed Oct. 15, 1915. Serial No. 56,001. (Cl. 128—25.)



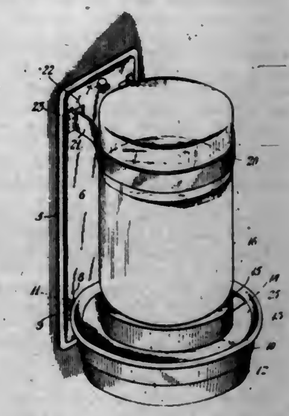
In a machine for producing local anesthesia, the combination of a pressure tank, a pair of anesthetic reservoirs, a filter chamber communicating between said pressure tank and said reservoirs, a filter in said filter chamber, a pressure gage for showing the pressure within said filter chamber, an adjustable safety valve in said filter chamber, a pair of valves for opening and closing communication between said filter chamber and said anesthetic reservoirs, a header at the top of said anesthetic reservoirs having a pair of openings therein through which said anesthetic reservoirs may be filled, a stopper to close each of said openings, means for clamping each of said stoppers, whereby said stoppers may be locked in a closed position, distributing pipes at the other end of said anesthetic reservoirs and communicating therewith, a pair of flexible connections from said distributing pipes, a pair of hypodermic needles, one at the other end of each of said flexible connections, a pair of three-way valves in said distributing pipes by which communication may be opened from either or both of said anesthetic reservoirs to either or both of said hypodermic needles, a drain at the bottom of each of said reservoirs, a valve controlling each of said drains, and an adjustable vent at the top of each of said anesthetic reservoirs, whereby pressure in said reservoirs may be gradually reduced.

1,211,305. GARBAGE-RECEPTACLE. JOHN EDWARD FEHRENKAMP and LOUIS A. SMALLFIELD, Kansas City, Mo.; said Smallfield assignor to said Fehrenkamp. Filed July 12, 1915. Serial No. 39,242. (Cl. 220—119.)



In a garbage receptacle, a frame adapted to be secured to one side of a fence and to encircle a hole provided therefor in the fence, and having at its upper end a horizontal guard adapted to extend through the hole in the fence, a garbage container hinged to the lower portion of the frame and adapted to be swung from an upright position through said hole to an inclined discharge position, a cover hinged to the upper portion of the frame and adapted to cover the container when the latter is in the upright position, and means for releasably locking the container to said guard in the upright position, the guard extending beyond the forward side of the container, when the latter is in the upright position.

1,211,306. DEODORIZING DEVICE. CLAUDE H. FREESE, Los Angeles, Cal. Filed July 19, 1916. Serial No. 110,245. (Cl. 137—154.)

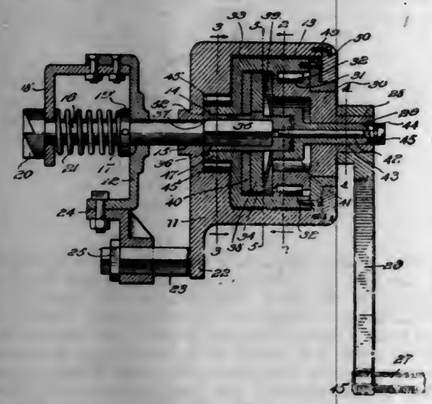


1. In combination, a supporting member, a cup supported on said member, a sleeve of porous material in

said cup, a bottle supported on said sleeve in inverted position thereon, the neck of said bottle extending downwardly into said sleeve with the mouth of the bottle spaced apart from the bottom of the cup, and a series of rings of porous material in said cup about said sleeve, the rings being placed one above another.

2. In combination, a supporting plate having a pair of openings therein, a band having its ends extended through said openings to support the band on said plate, a cup supported in said band, a sleeve of porous material in said cup, a bottle supported on said sleeve in inverted position, the mouth of said bottle being spaced apart from the bottom of said cup, a series of rings of porous material in said cup inclosing said sleeve, said rings being placed one above another, and means detachably secured to said plate for supporting the upper end of said bottle.

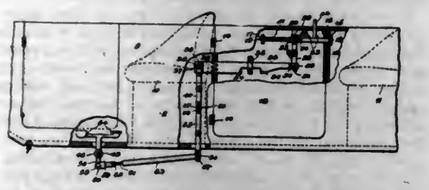
1,211,307. STARTING-CRANK FOR ENGINES. WILLIAM H. FRICK and ARCHIBALD J. MARTIN, Philadelphia, Pa. Filed Dec. 14, 1915. Serial No. 66,786. (Cl. 123—185.)



1. A starting device for internal combustion motors, the combination of a motor starting shaft, resilient means for retaining said shaft normally spaced from the crank-shaft of a motor, means for forcing said shaft into a rotatable relation with said crank shaft, a rotatable collar secured to one extremity of said shaft, inclined recesses formed upon said collar, a non-rotatable casing supported by said motor starting shaft and formed with an axial internal bore, rollers positioned in said recesses and adapted for coöperation with the wall of said bore for preventing movement of said collar upon the rotation of said motor starting shaft in a backward direction, said collar being formed with an annular chamber, a rotatable member positioned within said chamber provided with inclined recesses upon the outer face thereof, the faces of said inclined recesses being disposed reversely to the previously mentioned recesses, and rollers positioned in the recesses of said rotatable member and coacting with the wall of said chamber for rotating said collar and shaft upon the forward movement of said rotatable member.

2. In a cranking mechanism for internal combustion motors, a non-rotary casing, a manually operated member rotatable within said casing, said member being provided with inclined recesses, a revoluble collar in said casing, means disposed within said recesses for revolving said collar upon the rotation of said member in a specified direction, a reduced extension formed upon said collar and operable within said casing, said extension being formed with recesses diversely to the recesses in the rotatable member, rollers positioned in said recesses and designed for coöperation with an annular wall of the casing upon a reverse movement of said collar to lock the latter against further movement, spring pressed disks coöperating with a relatively flat wall of said collar to impart movement from the collar to the disk, means for varying the tension or frictional relation between said disks and collar, and means for transmitting motion from said disks to a motor cranking shaft.

1,211,308. DOOR-OPERATOR. DELBERT L. GALLUP, Colegrove, Pa. Filed Aug. 9, 1916. Serial No. 113,992. (Cl. 268—5.)



1. In combination, a fixed keeper, a hinged swingable door, a slidable latch housed within the door having a longitudinal slot and arranged to engage said keeper, a spring normally maintaining said latch in engaging position, a stem in said slot, a lever pivoted intermediate its ends having a forked end formed with slots in which said stem is positioned, a slide connected with the other end of said lever and normally extending beyond the hinge side of said door, opposed shoulders on said slide, a guide enveloping said slide between said shoulders, a slide-extension hingedly connected to the outer end of said slide, and an operating-lever pivotally connected with said slide extension.

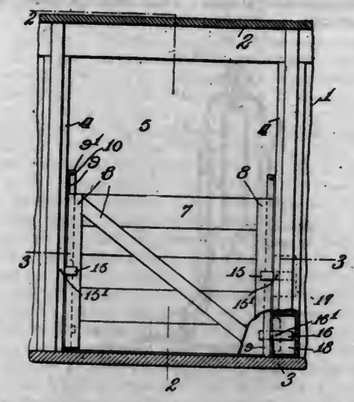
2. In combination in a door-operating mechanism, an operating-shaft including a rotatable section and a non-rotatable section suitably mounted with ends abutting, a sleeve fast on said rotatable section and enveloping the abutting end portion of said non-rotatable section and having clutch-teeth at the end of its enveloping portion, a collar loose on said non-rotatable section and having clutch-teeth opposed to those of the sleeve, an arm extending from said collar, a clutch-member shiftable on said non-rotatable section between said collar and sleeve and having clutch-teeth arranged to engage the teeth of either of them, an operating-arm on said clutch member, an arm fixed to said rotatable section, an operating-rod connected therewith, an operating-rod connected with said collar-arm, and a door-operating lever connected with each of said operating-rods.

1,211,309. GRAIN-DOOR. JOSEPH NÉREE GINGRAS, Thetford Mines, Quebec, Canada, assignor of one-half to Wilson W. Butler, Montreal, Canada, one-sixth to Lucien T. Pacaud, Thetford Mines, Canada, and one-sixth to William J. Lynch, Quebec, Canada. Filed Nov. 21, 1912. Serial No. 732,709. (Cl. 20—30.)

1. In a car having a door opening, a strip formed of angularly disposed flanges and being adapted to inclose the lower portion of the inner corner of one of the side posts of such door opening, one flange of the strip overlapping that surface of the side post which faces inwardly of the car and the other flange of the strip overlapping that surface of the mentioned side post which faces inwardly of the door opening and means for hinging the strip to said door post whereby the strip may be swung into the door opening to a position with one flange flat against the post and the other flange projecting from the post into the door opening.

2. In a car, the combination with a grain door, of a door post strip adapted to engage the side of the grain door, and means providing a universal joint connection between the upper end of such strip and the car to permit of the strip being moved in different directions out of the position wherein it is adapted to engage with the door, for the purpose set forth.

3. In a car, the combination with a door casing presenting a door opening, of a grain door, a door post strip within the door opening adapted to engage the side of the grain door, releasable means retaining the lower end of the said strip in position, and means providing a universal joint connection between the upper end of such strip and the door casing to permit of the lower end of the strip being swung bodily outward when the said locking means is released or the strip being swung around the door casing out of the position wherein the strip is adapted to engage with the grain door.



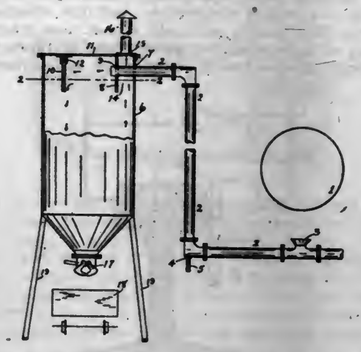
4. In a car, the combination with a door casing presenting a door opening, of a grain door, a door post strip within the door opening adapted to engage the side of the grain door, releasable means retaining the lower end of the said strip in position, and including a detent latch pivotally mounted in the car and adapted to project across the face of the door, and means providing a universal joint connection between the upper end of such strip and the door casing to permit of the lower end of the strip being swung bodily outward when the said locking means is released, or the strip being swung around the door casing out of the position wherein the strip is adapted to engage with the grain door.

5. In a car, the combination with a grain door, of a pair of door post strips of angular cross section adapted to engage the sides thereof, slot and staple connections between the upper end of such strips and the car, whereby the strip may be swung in different directions out of the position wherein it is adapted to engage with the door, and detent latches pivoted adjacent such strips and adapted to project across the inner and outer sides thereof.

1,211,310. ASH TANK AND SETTLER. LORNE A. GRIFFIN, Elkhart, Ind., assignor to American Steam Conveyor Corporation, Chicago, Ill., a Corporation of New York. Filed Dec. 11, 1915. Serial No. 66,342. (Cl. 183—109.)

1. An ash receiving tank for a pneumatic conveyer comprising, in combination, a tank body provided with a top and a vent opening in said top; a baffle plate within the tank and depending from the top thereof; an apertured deflector plate within the tank and depending from the top thereof, said deflector plate being located between said vent opening and said baffle plate and opposed to the latter; a conveyer discharge pipe penetrating said deflector plate aperture and directed at said baffle plate to discharge its contents against the same; and means providing a passage direct from the impact face of said baffle plate around said deflector plate to said vent opening.

2. An ash receiving tank for a pneumatic conveyer comprising, in combination, a tank body provided with a top and a vent opening in said top adjacent one side thereof; a baffle plate secured to the tank top adjacent the opposite side of said tank and projecting downward into the tank; an apertured deflector plate secured to the tank top intermediate said vent opening and the baffle plate, opposed to the latter and projecting downward into the tank; a conveyer discharge pipe penetrating the tank side and said deflector plate aperture and directed at said

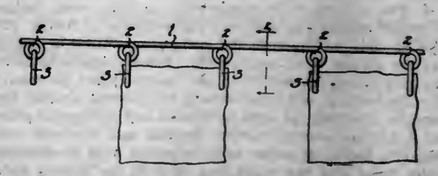


baffle plate to discharge its contents against the same; means providing a passage direct from the impact face of said baffle plate around the bottom of said deflector plate to said vent opening; and means adjacent the tank bottom for the removal of the ash accumulation therein.

1,211,311. CURRYCOMB. HENRY HARTBERG, Watervliet, Mich. Filed May 15, 1916. Serial No. 97,592. (Cl. 119—88.)

A currycomb comprising a back, said back having transverse slots formed therein, cleaning plates including backs and sides, said sides being slidably engaged with the comb teeth, pins slidable in the slots and having their inner ends connected to the backs of the cleaning plates, a bar connecting the outer ends of the pins, and means carried by the bar for moving the same laterally and causing the sides of the cleaning plates to move diagonally across the comb teeth.

1,211,312. COMBINATION CLOTHES-LINE AND CLOTHES-PIN CONSTRUCTION. JOSEPH E. HEASLEY, Butler, Pa. Filed June 17, 1915. Serial No. 34,594. (Cl. 68—3.)

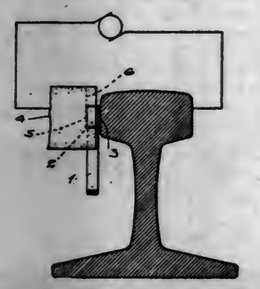


As a new article of manufacture, the herein described wire clothes line formed of a single strand of wire which is provided at periodic intervals with spiral coils providing suspending eyes, any selected ones of the suspending eyes being adapted to interlock with and support clothes pins.

1,211,313. METHOD OF AND ELECTRODE FOR WELDING BONDS TO RAILS. ALBERT B. HERRICK, New York, N. Y., assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 29, 1912. Serial No. 733,974. Renewed June 23, 1915. Serial No. 35,938. (Cl. 219—10.)

1. The method of homogeneously uniting metal bodies, which consists in holding said bodies in contact at the

desired point of union; directly heating one of said bodies by pressing against the same an electrode of high resistance and thereupon passing a heating current through said electrode and said two bodies in series until said first body and the contacting face of the second body are brought to a welding temperature; and then bringing said electrode into contact with said second body, whereby a portion of such current is passed directly through said electrode and second body, substantially as described.



2. The method of homogeneously uniting metal bodies having unlike characteristics as to fusibility, the more readily fusible body having also the greater heat conductivity; which consists in holding said bodies in contact at the desired point of union; directly heating the first or more readily fusible body by pressing against the same an electrode of high resistance and thereupon passing a heating current through said electrode and said two bodies in series until said first body and the contacting face of the second body are brought to a welding temperature; and then bringing said electrode into contact with said second body, whereby a portion of such current is passed directly through said electrode and second body, substantially as described.

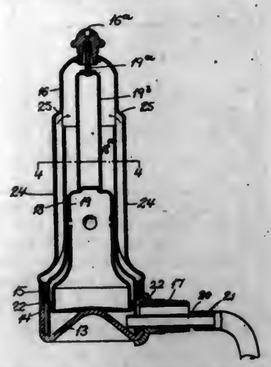
3. The method of homogeneously uniting metal bodies of unlike masses and different temperatures of fusion, the smaller body having both the lower temperature of fusion and the greater heat conductivity; which consists in holding said bodies in contact at the desired point of union; directly heating said smaller body by pressing against the same an electrode of high resistance and thereupon passing a heating current through said electrode and said two bodies in series until said first body and the contacting face of the second body are brought to a welding temperature; and then bringing said electrode into contact with said second body, whereby a portion of such current is passed directly through said electrode and second body, substantially as described.

4. The method of homogeneously uniting metal bodies of unlike masses and different temperatures of fusion, the smaller body having both the lower temperature of fusion and the greater heat conductivity; which consists in holding said bodies in contact at the desired point of union; directly heating said smaller body by pressing against the same an electrode of high resistance and thereupon passing a heating electric current through said electrode and said two bodies in series until said first body is substantially fused and the contacting face of the second body brought to a welding temperature; and then continuing the pressure on said electrode to bring the same into contact with said second body at points laterally contiguous to said first body, whereby a portion of such current is passed directly through said electrode and second body, substantially as described.

5. The method of homogeneously uniting a bond to a rail, which consists in holding the bond in contact with the rail at the desired point of union; directly heating said bond by pressing against the same an electrode of high resistance and thereupon passing a heating current through said electrode and said bond and rail in series until said bond and the contacting face of said rail are brought to a welding temperature; and then bringing said electrode into contact with said rail, whereby a portion of such current is passed directly through said electrode and rail, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,211,314. AUTOMATIC AIR-VALVE FOR STEAM-RADIATORS. GEORGE D. HOFFMAN, Pasadena, Cal., assignor to Hoffman Specialty Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 29, 1913. Serial No. 757,531. (Cl. 236—20.)



1. An air valve for steam radiators comprising a casing having an air outlet in its upper portion, a nipple connected with the lower portion of said casing, a water accumulating chamber within said casing, a float within said water accumulating chamber and provided with a valve for closing said air outlet, a siphonic drainage tube leading from the lower portion of said water accumulating chamber and connected therewith to prevent passage of water from the chamber except through said tube, and an air conduit having a lower inlet end communicating with the nipple, and an upper end in communication with said water accumulating chamber at a point above any possible level of the water within the water accumulating chamber when the value carried by said float is unseated.

2. An air valve for steam radiators comprising a casing having an air outlet in its upper portion, a nipple connected with the lower portion of said casing, a water accumulating chamber within said casing, a float within said water accumulating chamber and provided with a valve for closing said air outlet, and a siphonic drainage tube leading from the lower portion of said water accumulating chamber and connected thereto to prevent passage of water from the water accumulating chamber except through said tube, the wall of said water accumulating chamber, and the wall of the casing coöperating to form an air conduit having a lower inlet end communicating with the nipple and having its sole air discharge portion in communication with said water accumulating chamber at a point above any possible level of the water in said water accumulating chamber when the valve carried by said float is unseated.

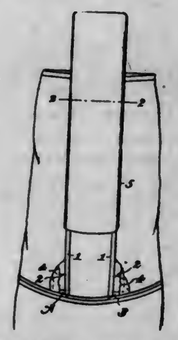
3. An air valve for steam radiators comprising a lower or base casing member having a bottom, a vertical wall, and a radiator-engaging nipple projecting from said wall, a cylindrical tubular member seated on the base and forming therewith a float chamber open at its upper end and having a draining stem extending through the nipple, the lower portion of the float chamber being separated from the wall of the base member by an air space communicating with said nipple, an upper casing member detachably connected with the wall of the base member, and having an outwardly projecting longitudinal boss on its upper portion extending from said air space to a point above the float chamber, the internal surface of the upper casing member at opposite sides of said boss being formed to have a close sliding fit on the external surface of the float chamber, so that the boss and the said air space form an air duct entirely outside the float chamber and communicating with the nipple, the upper end of the upper casing member being contracted and provided with an air vent, and a float movable vertically in the float chamber and provided with a valve adapted to close said air vent.

4. An air valve for steam radiators comprising a lower or base casing member having a bottom, a vertical wall, and a radiator-engaging nipple projecting from said wall, a cylindrical tubular member seated on the base and forming therewith a float chamber open at its upper end and having a drainage stem extending through the nipple, the lower portion of the float chamber being separated from the wall of the base member by an annular air space communicating with said nipple, and an upper casing member detachably connected with the wall of the base member, and having a plurality of outwardly projecting longitudinal bosses on its upper portion extending from said annular air space to points above the float chamber, the internal surface of the upper casing member at opposite sides of the bosses being formed to have a close sliding fit on the external surface of the float chamber, the upper end of the upper casing member being provided with an air vent and the float chamber with a float having a valve adapted to close said vent.

5. An air valve for steam radiators comprising an external casing having a radiator-engaging nipple at its lower portion and an air vent at its upper portion, a float chamber within said casing having an open upper end, a draining tube having an air tight connection with the lower portion of the float chamber and extending through said nipple without communicating therewith, a float movable in the chamber and having a member adapted to close said vent, the valve being provided with an air conduit wholly external to the float chamber, and extending from the nipple to the upper portion of the casing, having a discharge end communicating with the float chamber at its upper portion, the float chamber forming one wall of said conduit and preventing air entering the casing through the nipple from passing through water in the float chamber.

[Claims 6 and 7 not printed in the Gazette.]

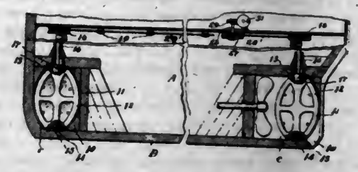
1,211,315. SHOE-FASTENING. FRANK H. HOPKINS, Brooklyn, N. Y. Filed June 13, 1916. Serial No. 103,500. (Cl. 24—207.)



The combination with a shoe, of rails secured to the uppers thereof along the vertical edges of the same, each rail comprising a single strip of relatively flexible material subdivided at their outer edges only into a plurality of substantially free sections each having an attaching portion secured to the shoe, the inner edge portions of the rails being continuous from end to end of the rails, and a tongue slidable in said rails, as and for the purpose specified.

1,211,316. BOAT'S RUDDER. NIELS JANTZEN, Tacoma, Wash. Filed Sept. 12, 1916. Serial No. 119,717. (Cl. 114—163.)

1. In a boat having a framed opening in one end of its body, a blade forming a rudder having opposed clutch and pivot sockets, a pivot stud arranged within the framed opening and received in the pivot socket in the blade, and a driving member rotatably mounted in the body and adapted for sliding movement and having a clutch head for engagement in the clutch socket in the blade.



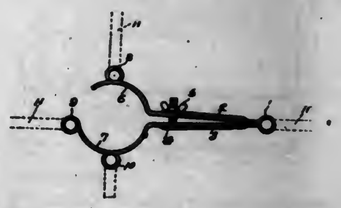
2. In a boat having a framed opening in one end of its body, a blade forming a rudder having opposed clutch and pivot sockets, a pivot stud arranged within the framed opening and received in the pivot socket in the blade, a driving member rotatably mounted in the body and adapted for sliding movement and having a clutch head for engagement in the clutch socket in the blade, and means for operating said driving member and supported within the boat.

3. The combination with a boat body having framed openings in the bow and stern thereof, of rudders, each comprising a blade having opposed clutch and pivot sockets, means arranged in the openings for pivotal engagement in the pivot sockets in the blade, stems rotatably and slidably journaled in the body and having clutch heads for detachable engagement in the clutch socket in the blade, and means arranged within the body for rotating the stem.

4. The combination with a boat body having framed openings in the bow and stern thereof, of rudders, each comprising a blade having opposed clutch and pivot sockets, means arranged in the openings for pivotal engagement in the pivot sockets in the blade, stems rotatably and slidably journaled in the body and having clutch heads for detachable engagement in the clutch socket in the blade, and means arranged within the body for rotating the stem, each blade being of substantially truncated elliptical shape.

5. The combination with a boat body having framed openings in the bow and stern thereof, of rudders, each comprising a blade having opposed clutch and pivot sockets, means arranged in the openings for pivotal engagement in the pivot sockets in the blade, stems rotatably and slidably journaled in the body and having clutch heads for detachable engagement in the clutch socket in the blade, means arranged within the body for rotating the stem, each blade being of substantially truncated elliptical shape, and reinforcements on the blade.

1,211,317. SMOKE-BELL SUPPORT. MORRIS A. KAMINETSKY, Passaic, N. J. Filed Oct. 14, 1915. Serial No. 55,884. (Cl. 248—30.)



1. A supporting bracket comprising a strip of resilient metal bent upon itself to form divergent arms, said arms having the free extremities thereof bent to provide clamping jaws, and a plurality of tongues struck from said clamping jaws and rolled upon themselves to constitute loops, as and for the purpose set forth.

2. A supporting bracket, comprising a strip of resilient metal bent upon itself to form divergent arms, said arms

having the extremities thereof bent to provide clamping jaws, clamping means arranged upon said arms, and a plurality of complementally formed tongues struck from each of said clamping jaws and rolled upon themselves to constitute vertically disposed supporting loops.

3. A supporting bracket, comprising a strip of resilient metal bent upon itself to form divergent arms, said arms having the free extremities thereof bent to provide clamping jaws, clamping means arranged upon said arms, longitudinally disposed reinforcing ribs arranged upon the divergent arms, and a plurality of complementally formed tongues struck from each of the clamping jaws and rolled upon themselves to constitute vertically supporting loops.

4. A supporting bracket, comprising a strip of resilient metal bent upon itself to form divergent arms, a loop formed adjacent the point of bending of such arms, clamping jaws arranged upon the free extremities of the arms, clamping means carried by said arms, and a plurality of complementally formed tongues struck from each of the clamping jaws and rolled upon themselves to constitute vertically disposed supporting loops, as and for the purpose set forth.

1,211,318. SCAFFOLD. JOHN C. KEELER, Cottonwood, Cal. Filed Apr. 21, 1916. Serial No. 92,708. (Cl. 20—81.6.)



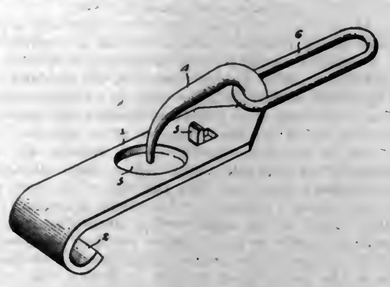
An adjustable scaffold, including, in combination with raising means, a supporting bar connected at its middle to said means, and a footrest loosely suspended from said bar in spaced relation therebelow.

1,211,319. COLLAR. FREDERICK H. KLINE, Los Angeles, Cal. Filed Sept. 8, 1915. Serial No. 49,451. (Cl. 2—62.)



A turned-over collar of flexible material including a neck band and an outer flap, comprising a plurality of flexible plies secured to each other so as to form pockets in the neck band adjacent the ends thereof, said pockets having openings adjacent the top of the neck band, and formative members disposed in said pockets having adjacent edges meeting at the top and diverging toward the bottom of said neck band clearing the button-holes, thereby stiffening the collar beneath the chin.

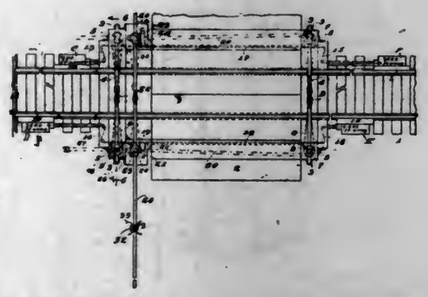
1,211,320. HARNESS-HOOK. EDWARD B. KNAPP, San Jacinto, Cal., assignor to Ada Blanche Knapp, San Jacinto, Cal. Filed Aug. 4, 1915. Serial No. 43,648. (Cl. 24—231.)



1. As a new article of manufacture, a harness hook constructed from a flat plate having one of its ends reduced and extended rearwardly of the plate to provide a hook, and the bill of the hook being projected downwardly toward the plate, said plate having an opening receiving the said bill of the hook, and said plate having an upstruck lug disposed between the opening and the outer end of the hook.

2. As a new article of manufacture, a harness hook formed from a plate having one of its ends rounded toward the plate and its opposite end reduced and extended over the face of the plate opposite that provided with the said rounded end, said hook having its inner end bent in the direction of the plate and the said bent end providing the bill of the hook, the plate having a round opening receiving the said bill, said plate between the bill and the outer end of the hook being slitted and the metal between the slits being upstruck to provide a lug, as and for the purpose set forth.

1,211,321. RAILWAY-GATE OPERATOR. JOHN LA FIELEO, Pittsburg, Kans., assignor of two-fifths to J. A. Polley, Nowata, Okla. Filed Dec. 29, 1915. Serial No. 69,231. (Cl. 269—7.)



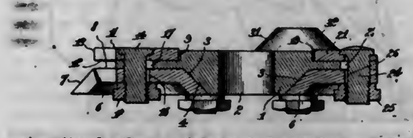
In railway cattle guard and roadway apparatus, cattle guards disposed at opposite sides of the roadway and projecting normlly across the trackway, road gates arranged at opposite sides of the trackway at one edge of the roadway and normally lying parallel with the roadway and capable of movement across the roadway, shafts carrying said guards and gates, pulleys on the lower ends of said shafts, ropes trained over said pulleys whereby all of said gates may be operated simultaneously, train operated trip mechanism for operating said gates, the lower ends of certain of said shafts being squared, and spring actuated bolts engaging the squared portions of said shafts to hold the shafts against accidental movement.

1,211,322. FLASH-LIGHT SWITCH. MARTIN B. LANGDON, Pardeeville, Wis. Filed Mar. 14, 1916. Serial No. 84,138. (Cl. 240—8.5.)



An electric flashlight including a casing having a battery therein and a lamp between one of the poles of the battery and the casing, a spring contact upon the opposite end of the battery, a cap engaging the casing and surrounding the said contact, a spring contact member in the cap normally engaging with the said contact member on the end of the battery, a pivoted lever of insulating material for the cap having one of its ends projecting through an opening in the cap, the portion of the lever in the cap and beyond the pivotal connection between the said lever and cap being offset, and said offset portion adapted to ride between and separate the contact member of the battery from the contact member of the cap, when the lever is swung to one position.

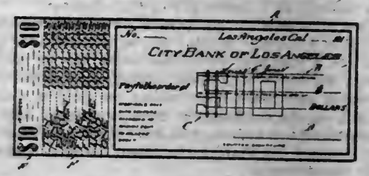
1,211,323. CUTTER-HEAD. ANDREW LARSON, Oakland, Cal. Filed Dec. 13, 1915. Serial No. 66,611. (Cl. 144—234.)



A cutter head comprising a body having recesses, a bit mounted in a recess at one side thereof and adapted to cut a beveled surface upon a stick of timber, another bit mounted in a recess at the opposite side thereof and adapted to cut a groove in the stick of timber, said groove being spaced from said bevel surface thereby leaving a tongue between the groove and the bevel surface, another bit mounted in a recess of the body and lying between the sides thereof and adapted to chamfer the edges of the tongue which is left between the groove and the said bevel surface and a fourth bit mounted upon the body and disposed beyond the side thereof and adapted to cut a bevel surface upon the stick of timber adjacent the said groove.

1,211,324. CHECK-BOOK. ELGIN A. LEAVITT, Los Angeles, Cal. Filed June 1, 1915. Serial No. 31,601. (Cl. 11—13.)

1. A check book comprising a certificate of deposit, and a series of checks bound therewith each of said checks having a maximum limit indicated thereon, the sum of the limits of all the checks equaling the amount of the certificate of deposit, and each check having a detachable limit portion which may be torn off to indicate an amount equal to or less than the maximum limit of that check, the stub from which the check is torn being left in the book to indicate the amount for which the check was drawn, or to indicate the difference between the amount for which the check was drawn and the maximum limit of the check; the certificate of deposit having a closing check printed thereon which when properly filled out will be cashed by the bank of issue for an amount equal to the face value of the certificate of deposit less the checks drawn against same as evidenced by said stubs.



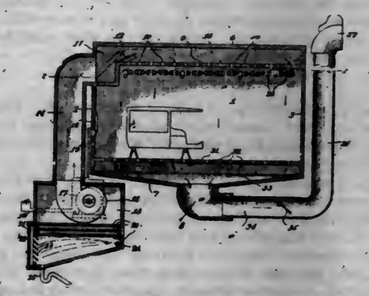
2. A check book comprising a certificate of deposit, a series of checks, means on each check for indicating a maximum limit for which the check may be drawn, the sum of the limits of the checks being equal to the amount of the certificate of deposit, and means for binding said certificate of deposit and said checks together to form a book.

3. A check book comprising a certificate of deposit, a series of checks, means on each check for indicating a maximum limit for which the check may be drawn, the sum of the limits of the checks being equal to the amount of the certificate of deposit, a stub for each check to which said check is initially attached, means on said stub for indicating the amount for which the check was drawn, and means for binding said stubs and said certificate of deposit together to form a book.

4. A check book comprising a certificate of deposit, a series of checks, means on each check for indicating a maximum limit for which the check may be drawn, the sum of the limits of the checks being equal to the amount of the certificate of deposit, a closing check, and means for binding said certificate of deposit, said series of checks, and said closing check together to form a book.

5. A check book comprising a certificate of deposit, a series of checks, means on each check for indicating a maximum limit for which the check may be drawn, the sum of the limits of the checks being equal to the amount of the certificate of deposit, a stub for each check to which said check is initially attached, means on said stub for indicating the amount for which the check was drawn, a closing check, and means for binding said certificate of deposit, said stubs and said closing check together to form a book.

1,211,325. DRYING ROOM AND APPARATUS. OWEN LILLY, Memphis, Tenn. Filed May 15, 1916. Serial No. 97,612. (Cl. 34—19.)



1. In a structure of the character described the combination with intercommunicating compression drying and exhaust chambers superimposed in the order mentioned, of means for forcing a drying medium downwardly from the compression chamber through said drying and exhaust chambers, and means for heating said drying medium as it enters the drying chamber.

2. In a structure of the character described the combination with a drying chamber having a perforated under ceiling and a similarly perforated work floor, a compression chamber above said under ceiling, an exhaust chamber beneath said work floor, means for forcing a drying medium from the compression chamber through said drying and exhaust chambers, and means for heating said drying medium as it enters the drying chamber.

3. In a structure of the character described the combination with a drying chamber having a perforated under ceiling and a similarly perforated work floor, a compression chamber above said under ceiling, an exhaust chamber beneath said work floor, means for forcing a drying medium from the compression chamber through said drying and exhaust chambers, and heating pipes within said drying chamber for heating the drying medium during its passage therethrough.

4. In a structure of the character described the combination with intercommunicating compression drying and exhaust chambers, of means for forcing a drying medium from the compression chamber through said drying and exhaust chambers, and independently controllable heat radiators within said drying chamber for heating the drying medium in its passage therethrough.

5. In a structure of the character described the combination with a drying chamber, of means for forcing a drying medium through said chamber, independently controllable pipes within said drying chamber for heating the drying medium in its passage therethrough, and main supply and exhaust pipes common to all of the aforesaid pipes.

[Claims 6 to 13 not printed in the Gazette.]

1,211,326. METHOD OF ATTACHING HALF-SOLES TO THE BASE OF OLD SHOES. WILLIAM H. MCCAUSLAND, Los Angeles, Cal. Filed May 31, 1916. Serial No. 100,887. (Cl. 12—142.)

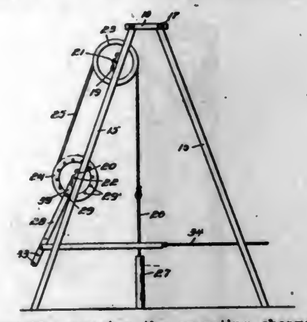


A method of half-soling shoes with leather soles, consisting in cutting away the worn sole, beveling the transverse edge of the shank portion of the outer sole at a point adjacent the terminating line of the instep and loosening said shank portion from the insole and the welt of the shoe by cutting the stitches along the marginal edges of the sole, applying an adhesive to the beveled face of said shank portion, preparing a leather half-sole with a beveled edge complementary to that of the shank portion, and placing the same on the beveled edge thereof, stitching the overlapping beveled edges of the shank portion and the half-sole together, and finally stitching the half-sole to the welt of the shoe along its remaining marginal edge, whereby the insole of the shoe remains free from any nails or tacks driven therethrough.

1,211,327. PUMPING-JACK. WILLIAM H. MCCUIN, Sourlake, Tex., assignor of one-half to Maude Hunter, Sourlake, Tex. Filed Oct. 25, 1915. Serial No. 57,801. (Cl. 74—14.)

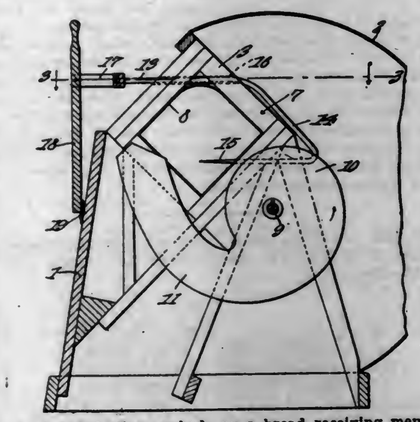
1. In a pumping jack, a portable collapsible supporting frame comprising a plurality of uprights, and a cap member with which said uprights are hingedly connected, some of said uprights being provided with bearings, and shafts supported therein, a guide sheave supported on one shaft, an operating sheave supported on another shaft, a pump stem, a flexible element connected with the operating sheave and guided over the guide sheave to the pump stem with which it is also connected, the descending portion of the flexible element being in axial alinement with the pump stem, and means for imparting a rocking movement to the operating sheave.

2. In a pumping jack, a supporting frame, a shaft, an operating sheave supported for rotation on the shaft, a lever fulcrumed on the shaft, an arm having an eye engaging the shaft, and a pin or key carried by said arm



and adjustably engaging the operating sheave and the lever operatively connecting the same.

1,211,328. BREAD-SLICER. FRANK MCLAUGHLIN, Texarkana, Tex. Filed Sept. 15, 1916. Serial No. 120,371. (Cl. 146—12.)



1. A bread slicer embodying a bread receiving member of substantially square form having its diagonal lines arranged horizontally and vertically, said member having slots in parallel planes, a rotatable shaft at one side of said member, slicing cutters carried by the shaft and having spiral blades to pass through said slots, spurs slidable through said member between the slots, and means for simultaneously moving said spurs to project and retract them.

2. A bread slicer embodying a bread receiving member of substantially square form having its diagonal lines arranged horizontally and vertically, said member having slots in parallel planes, a rotatable shaft at one side of said member, slicing cutters carried by said shaft and having spiral blades to pass through said slots, rods slidable through the upper portion of said member and having bent back portions providing spurs slidable through one portion of said member adjacent to said shaft, and means for sliding said rod simultaneously to project and retract said spurs.

3. In a slicing machine, a rotatable shaft, a slicing cutter operated thereby, a member rotated by said shaft, a driving shaft, means for connecting said shafts, an oblique sliding member controlling the connecting means and arranged in the path of movement of the first mentioned member to be moved thereby for connecting the shafts, and means for holding the shafts connected and releasable manually.

4. In a slicing machine, a rotatable shaft, a slicing cutter carried thereby, a gear wheel carried by said shaft, a member connected to said shaft, a lever, a driving shaft carried by said lever, a pinion carried by the driving shaft for movement into and out of engagement with said gear wheel, an oblique sliding bar connected to said lever and having one end arranged in the path of the first mentioned member when the lever is swung to bring the pinion into engagement with said gear wheel, said bar in being moved by the first mentioned member serving to swing the lever to move the pinion out of engagement with said gear wheel, and a catch for holding the lever when moved to the last mentioned position.

1,211,329. ENVELOP-FILLING MACHINE. LEVI MCMILLAN, Wilmington, N. C. Filed Mar. 28, 1916. Serial No. 87,361. (Cl. 93—6.)



1. In a machine of the class described, a substantially horizontal bed, a filler container and an envelop container spaced apart and supported with respect to the bed to permit their respective contents to gravitate in the direction thereof, constantly movable means parallel to the bed for conveying the filler from the filler container in the direction of the envelop container, and intermittently movable means for opening the mouth of an envelop to receive the filler, said opening means being arranged for operation in a plane substantially parallel to the plane of movement of the conveying means.

2. In a machine of the class described, a substantially horizontal bed, a container for a stack of fillers and a container for a stack of envelops, said containers being spaced apart and so arranged as to permit their contents to gravitate in the direction of the bed on which the lowermost contents unit in each container is supported, constantly moving means for conveying the lowermost filler in the direction of the envelop container, the latter being arranged directly in the path of movement of the conveying means, and intermittently movable means for opening the mouth of the lowermost envelop from the stack to receive a filler, said opening means being arranged for operation in a plane substantially parallel to the plane of movement of the conveying means.

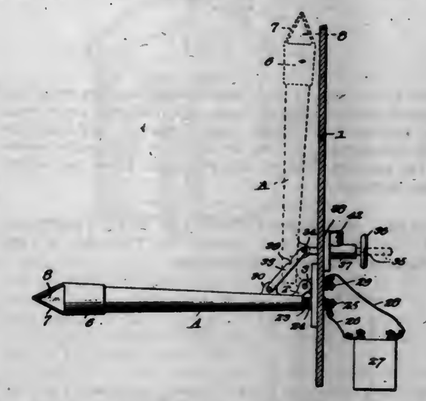
3. In a machine of the class described, a substantially horizontal bed, a container for a stack of fillers and a container for a stack of envelops, said containers being spaced apart and so arranged as to permit their contents to gravitate in the direction of the bed on which the lowermost contents unit in each container is supported, constantly moving means for conveying the lowermost filler in the direction of the envelop container, the latter being arranged directly in the path of movement of the conveying means, and intermittently movable means for opening the mouth of the lowermost envelop from the stack to receive a filler, said opening means being arranged for operation in a plane substantially parallel to the plane of movement of the conveying means, and said containers having rear wall members that are spaced from the bed to permit the passage of material therebetween.

4. In a machine of the class described, a frame, a vertically adjustable bed, a container for a stack of fillers including a front wall member supported for longitudinal adjustment on the bed and a rear wall member supported on the frame of the machine, an envelop container, friction means carried by the bed for initially projecting the lowermost filler from the container, and constantly moving means for carrying the filler thus advanced in the direction of the envelop container, the latter being supported in spaced relation to the filler container.

5. In a machine of the class described, a frame, a vertically adjustable bed, a filler container including a rear wall member supported on the frame and side wall members supported on the bed for lateral adjustment with respect thereto, longitudinal guide flanges supported on the bed and transversely adjustable thereon, and an envelop container including a rear wall member supported on the frame and side wall members connected with the longitudinal guide flanges and adjustable therewith.

[Claims 6 to 22 not printed in the Gazette.]

1,211,330. DIRECTIONAL SIGNAL. JAMES MARCELLO, Greenwich, Conn. Filed May 24, 1916. Serial No. 99,596. (Cl. 177—311.)



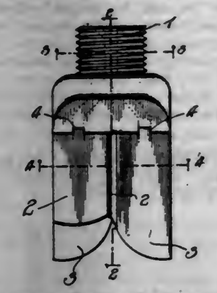
1. The combination with the body of a closed vehicle, of a signaling arm pivotally supported on said body, means for shifting said arm from a substantially vertical to a substantially horizontal position, means for retaining said arm in either of said positions, a head at the free end of said arm having an illuminating panel, an electric lamp contained in said head, a contact rod extending longitudinally within said arm, an electric circuit including a contact against which said rod is adapted to rest when the signal arm is in signaling position, a socket contained within and insulated from said arm, a sliding contact piece movable in said socket, a spring for pressing said contact piece against the contact point of the lamp, and an internally threaded neck on said socket in to which the adjacent end of the contact rod is threaded.

2. The combination with the body of a closed vehicle, of a signaling arm pivotally supported on said body, means for shifting said arm from a substantially vertical to a substantially horizontal position, means for retaining said arm in either of said positions, a head at the free end of said arm having an illuminating panel, an electric lamp contained in said head, a contact rod extending longitudinally within said arm, an electric circuit including a contact against which said rod is adapted to rest when the signal arm is in signaling position, the signal operating means comprising a rod operable from the interior of the vehicle, a link connecting the operating rod with the signaling arm, a fixed guide for said operating rod, and said retaining means comprising a spring pressed catch adapted to engage said link to sustain the signaling arm in non-signaling position, the guide serving in conjunction with the head of the operating rod to sustain the signaling arm in signaling position.

1,211,331. DRILL-BIT FOR WELLS. ROBERT DRURY MARTIN, Humble, Tex. Filed Aug. 7, 1916. Serial No. 113,652. (Cl. 255—61.)

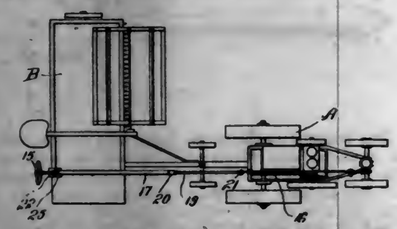
A drill bit of the class described comprising a shank provided with a pair of diametrically opposite longitudi-

nally extending bores and having one of its ends flattened to form a pair of wings, the latter being disposed at right angles to the plane passing through the axes of said bores and terminating in cutting edges, said shank being further provided with pairs of diagonal intersecting



bores having one of their ends communicating with said longitudinally extending bores, said diagonal bores being bent into parallel relation with respect to said longitudinally extending bores and having their other ends located on the opposite sides of said wings and above the cutting edges thereof.

1,211,332. STEERING DEVICE FOR FARM-TRACTORS. ARTHUR H. MEHRINGS, Benson, Ill. Filed Feb. 8, 1916. Serial No. 77,099. (Cl. 21—192.)



1. In a device of the class described, a tubular steering rod having a hand wheel at one end and provided at the other end with a fixed internal sleeve having a bore of non-circular cross section, said tubular rod being provided with an annular groove near the end carrying the hand wheel, a support consisting of a bracket having an arm, and a fork engaging the annular groove in the tubular rod, said fork having an arm swiveled in the bracket, an extension rod of non-circular cross section, said rod having slidable connection with the sleeve at the end of the tubular steering rod, a permanent steering rod, and a universal joint connecting said permanent steering rod with the slidable extension rod.

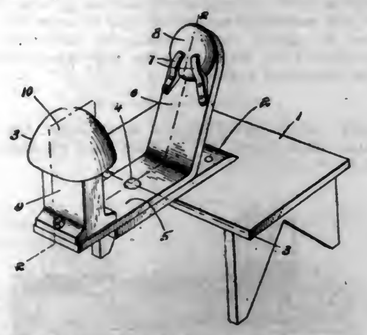
2. In a device of the class described, a tubular steering rod having a hand wheel at one end and provided at the other end with a fixed internal sleeve having a bore of non-circular cross section, an extension rod of non-circular cross section slidably engaging the sleeve, and a lubricator engaging the tubular rod and the sleeve to supply lubricating material to the extension rod.

1,211,333. RIVETING INSTRUMENT. FRED F. MILLER, Compton, Ill. Filed July 29, 1916. Serial No. 112,199. (Cl. 78—7.)

1. In a device for the purpose set forth, a pivoted member having an angular side, fingers upon the side, a disk adapted to be received between the fingers, and an anvil upon the member disposed opposite the said angular side.

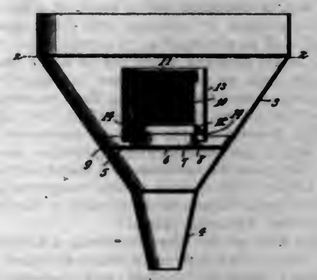
2. In a device for the purpose set forth, a revoluble member including a flat base, said base having an angular extension at one of the ends thereof, fingers formed upon the inner face of the said angular member, a disk adapted to be received between the said fingers, a standard upon the base adjacent to the end thereof opposite that provided with the angular member, and the upper end of the said standard being enlarged and of a substantially cone-shaped formation in plan, as and for the purpose set forth.

3. In a device for the purpose set forth, the combination with a bench having a plate extending beyond one of the sides thereof, a member including a base which is centrally pivotally connected to the extension of the base,



said base having an angular side at one of the ends thereof, angularly disposed fingers upon the inner face of the side adjacent to the outer edge thereof, said fingers having their inner faces of an arcuate formation, whereby to receive the rounded face of a disk therebetween and retain the inner flat face of the disk against the said side, a standard removably secured to the base and said standard having its outer end formed with a substantially cone-shaped anvil.

1,211,334. FILTER. EDWARD C. MOHR and REMUS A. BEACH, Bloomfield, Nebr. Filed Sept. 29, 1916. Serial No. 122,911. (Cl. 210—16.)



1. The combination with a funnel, of a diaphragm in said funnel having an aperture, a band surrounding said aperture and projecting upwardly from said diaphragm, a filter member carried by said band, and a cylinder secured to said band and surrounding said filtering member.

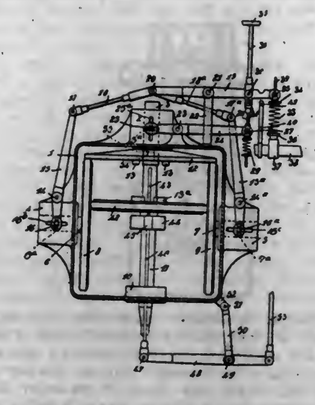
2. The combination with a funnel, of a diaphragm having an aperture arranged in said funnel, an upstanding member detachably secured to said diaphragm and surrounding said aperture, a fabric cylinder secured at its lower end to said upstanding member, a cap for said cylinder, and a cylinder carried by said upstanding member and inclosing said fabric cylinder and being opened at its upper end.

3. The combination with a funnel, of an apertured diaphragm in said funnel, a mesh fabric cylinder projecting upwardly from said diaphragm and arranged concentric with said aperture, and a metallic cylinder detachably carried by said mesh cylinder.

4. The combination with a funnel, of a diaphragm in said funnel having an aperture, a flange surrounding said aperture, a band threaded on said flange, a mesh cylinder secured to said band and projecting above said diaphragm,

a cap for closing the upper end of said cylinder, a metallic cylinder detachably secured to said ring and surrounding said mesh cylinder and having its walls spaced from those of said mesh cylinder, and the upper end of said metal cylinder being open.

1,211,335. POWER-TRANSMITTING DEVICE FOR MOTOR-VEHICLES. JACQUES CAMILLE NARDON, Suresnes, France. Filed Jan. 29, 1915. Serial No. 5,034. (Cl. 74—26.)



1. In a device of the character described, the combination of drive and driven shafts, stub shafts, movable transmission elements on said shafts, levers arranged to shift said transmission elements, a device connected to simultaneously actuate certain of said levers, means for normally acting to maintain said transmission elements in engagement, and means for adjusting said last-named means, substantially as described.

2. In a device of the character described, the combination of a drive shaft, stub shafts, movable transmission elements on said drive and stub shafts arranged to be moved into and out of engagement, a driven shaft, a transmission element on said driven shaft normally in engagement with the transmission elements on said stub shafts, slotted levers for shifting the transmission elements on said drive and stub shafts, means connecting said levers for simultaneous operation, and yieldable means operating in opposition to said last-named means for normally maintaining the elements engaged, substantially as described.

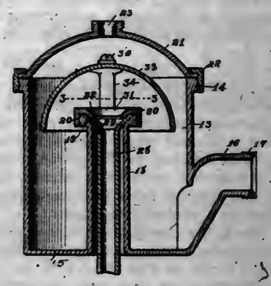
3. In a device of the character described, the combination of a slidable drive shaft, slidable stub shafts, transmission elements arranged between said drive and stub shafts, studs on said drive and stub shafts, levers provided with slots engaging said studs, means connecting said levers for simultaneous operation to shift said shafts whereby to engage and release the transmission elements, a driven shaft, and a transmission element on said driven shaft normally in engagement with the transmission elements on said stub shafts, substantially as described.

4. In a device of the character described, the combination of slidable drive and stub shafts having each a groove therein, transmission elements on said shafts, levers, studs fitted in the grooves in said shafts and engaged for operation by said levers to shift the shafts, means connected to operate said levers, a driven shaft, and a transmission element on said driven shaft arranged to engage said before-mentioned transmission elements, substantially as described.

5. In a power transmitting device, the combination of a slidable drive shaft provided with a groove, slidable stub shafts arranged angularly to said drive shaft and provided each with a groove therein, transmission elements arranged between said shafts, a driven shaft, a transmission element on said driven shaft adapted to be engaged by the transmission elements on said drive and stub shafts, levers, studs fitted in the grooves in said drive and stub shafts and connected to move with said levers for shifting the shafts, means connecting said several levers for simultaneous operation, means for normally moving said levers to engage the transmission elements, and means for adjusting the tension of said last-mentioned means, substantially as described.

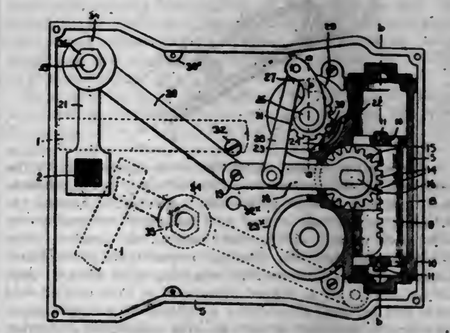
[Claims 6 to 12 not printed in the Gazette.]

1,211,336. DRAIN-TRAP. JOHN H. NICHOLS, Spencer, Iowa. Filed June 2, 1913. Serial No. 771,322. (Cl. 137—111.)



In a device of the class described, a tube having at one end on its outer surface an annular, laterally projecting, externally screw-threaded flange, the inner portion of said flange being beveled upwardly and outwardly, a second tube received within the first tube having an outwardly and upwardly flaring flange at its upper end resting upon the beveled portion of said first flange, and a nut having an annular portion resting above the upper edges of said flanges, and provided with a downwardly inclined, internally screw-threaded flange received on said first flange, said nut having a central, annular, inwardly and downwardly inclined flange adapted to engage the flaring portion of the second tube and press it against the beveled portion of said first flange, said nut having opposite upwardly extending members adapted to be engaged by a bar or the like for screwing the nut into position.

1,211,337. DOOR-CHECK. LEWIS C. NORTON, Chicago, Ill., assignor to Norton Door Check Company, Chicago, Ill., a Corporation of West Virginia. Filed Sept. 10, 1915. Serial No. 50,022. (Cl. 16—88.)



1. In a door check, the combination with a cylinder, of a piston element therein having rack teeth, a pinion meshing with said rack teeth, an arm rigid with the pinion, a door-supporting trunnion, an arm rigid therewith, a link connecting said arms whereby swinging movement of the door is communicated to the piston, a spiral door-closing spring, a spindle or shaft to which said spring is

connected, and an arm rigid with said shaft and connected to the piston-controlled arm.

2. In a door check, the combination with a cylinder, of a piston element therein having rack teeth, a pinion meshing with said rack teeth, an arm rigid with the pinion, a door-supporting trunnion, an arm rigid therewith, a link connecting said arms whereby swinging movement of the door is communicated to the piston, a spiral door-closing spring, and means connecting said spring to the first-named arm.

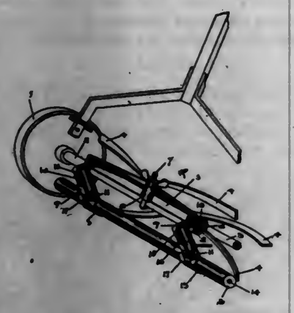
3. In a door check, the combination with a cylinder, of a piston element therein having rack teeth, a pinion meshing with said rack teeth, an arm rigid with the pinion, a door-supporting trunnion, an arm rigid therewith, a link connecting said arms whereby swinging movement of the door is communicated to the piston, and frictional means associated with one of the arms for holding the door in open position.

4. In a door check, the combination with a cylinder, of a piston element therein having rack teeth, a pinion meshing with said rack teeth, an arm rigid with the pinion, a door-supporting trunnion, an arm rigid therewith, a link connecting said arms whereby swinging movement of the door is communicated to the piston, one of said arms and said link having coöperating friction faces, and means to bring said friction faces into engagement when the door is opened to a predetermined point.

5. In a door check, the combination with a cylinder, of a piston element therein having rack teeth, a pinion meshing with said rack teeth, an arm rigid with the pinion, a door-supporting trunnion, an arm rigid therewith, a link connecting said arms whereby swinging movement of the door is communicated to the piston, one of said arms and said link having coöperating friction faces, means to bring said friction faces into engagement when the door is opened to a predetermined point and means for relatively adjusting said friction faces whereby the door may be arrested and maintained at any desired opened position.

[Claims 6 to 13 not printed in the Gazette.]

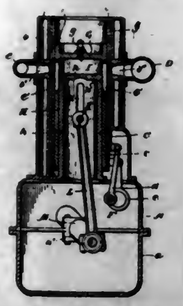
1,211,338. LAWN-MOWER SHARPENER. CHARLES A. OMAN, Portland, Oreg. Filed Nov. 23, 1915. Serial No. 63,019. (Cl. 56—19.)



1. In a lawn mower sharpener, a clamp secured to the cross rod of the mower and comprising a beam substantially parallel to said cross rod, a duality of hooked extensions, one at each end of said beam and integral therewith, each of said extensions engaging said mower cross rod, and a hooked bolt passing through said beam intermediate said extensions and engaging said mower cross rod; a duality of L shaped arms, one at each end of said beam and integral therewith; a cylindrical abrasive member; and a dualitity of spring clips adjustably mounted upon said L shaped arms, and having hooked ends formed thereon partially surrounding said abrasive member and rotatably supporting the same.

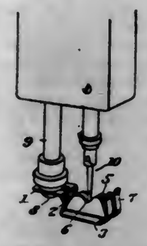
2. A lawn mower shapener, comprising a clamp to secure the sharpener to the cross rod of the mower; a cylindrical abrasive member; a duality of resilient supporting members each partially surrounding said abrasive member and rotatably supporting the same therein; means for attaching the said supporting members at one end thereof respectively to said clamp; and means acting upon the supporting members between the attaching means and the abrasive member holding means for adjusting the supporting members.

1,211,339. INTERNAL-COMBUSTION ENGINE. CYRIL N. OUTERBRIDGE, Charlottesville, Va. Filed Nov. 29. 1915. Serial No. 64,056. (Cl. 123—50.)



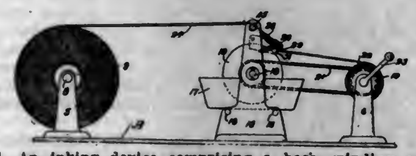
In an internal combustion engine, the combination of a crank case, a crank shaft journaled therein, a cylinder having a fixed relation to the crank case and open at both ends, a stationary cylindrical abutment having a fixed relation to the crank case closed at its outer end and open at its inner end, a tubular piston working in said cylinder and around said cylindrical abutment and having its head exposed to the atmosphere, and a connecting rod between said piston and crank shaft.

1,211,340. SEWING-MACHINE FOOT. LILLIAN PAGE, Packwaukee, Wis. Filed Mar. 18, 1916. Serial No. 85,116. (Cl. 112—29.)



A sewing machine pressure foot comprising a single piece of sheet metal having a slot, and folded upon itself at its side edges and having flanges extending upwardly from said folded portions.

1,211,341. INKING DEVICE. VERNON J. PEAKS, Aurora, Ill. Filed May 6, 1916. Serial No. 95,834. (Cl. 91—43.)



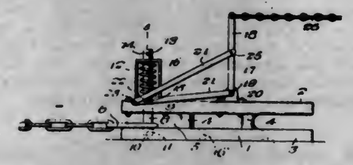
1. An inking device comprising a base, winding and unwinding spools detachably journaled above the base near opposite ends thereof, a stand intermediate the spools, an ink reservoir held within the stand, an inking roll journaled in the stand and working within the reservoir for the distribution of ink therefrom, a guide swingingly supported in the stand for the ribbon, and a scraper mounted to engage both the roll and the ribbon for the feeding of ink thereonto from said roll.

2. An inking device comprising a base, winding and unwinding spools detachably journaled above the base near opposite ends thereof, a stand intermediate the spools, an ink reservoir held within the stand, an inking roll journaled in the stand and working within the reservoir for the distribution of ink therefrom, a guide swingingly supported in the stand for the ribbon, a scraper mounted to engage both the roll and the ribbon for the feeding of ink thereonto from said roll, and means for adjusting the scraper.

3. An inking device comprising a base, winding and unwinding spools detachably journaled above the base near opposite ends thereof, a stand intermediate the spools, an ink reservoir held within the stand, an inking roll journaled in the stand and working within the reservoir for the distribution of ink therefrom, a guide swingingly supported in the stand for the ribbon, a scraper mounted to engage both the roll and the ribbon for the feeding of ink thereonto from said roll, means for adjusting the scraper, and means for centering the spools and sustaining the same in alinement with each other.

4. An inking device comprising a base, winding and unwinding spools detachably journaled above the base near opposite ends thereof, a stand intermediate the spools, an ink reservoir held within the stand, an inking roll journaled in the stand and working within the reservoir for the distribution of ink therefrom, a guide swingingly supported in the stand for the ribbon, a scraper mounted to engage both the roll and the ribbon for the feeding of ink thereonto from said roll, means for adjusting the scraper, means for centering the spools and sustaining the same in alinement with each other, and means for driving the winding spool and the ink roll simultaneously with each other.

1,211,342. CONNECTOR AND RELEASER. MANUEL V. PENA, Cotulla, Tex. Filed May 5, 1916. Serial No. 95,739. (Cl. 21—75.)

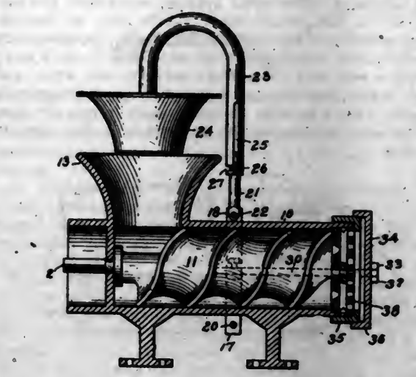


In a holding and releasing device, a bracket including a pair of parallel bars, spacing connections between said bars, a bolt movable across the opening between the bars for engagement with one bar and extending through the other bar, a casing upon the second-named bar inclosing one end of the bolt, a spring disposed in said casing, a pin projecting transversely through the bolt and acted upon by said spring for normally holding the bolt projected, a bell crank lever pivoted at the angle of intersection of its arms and having one of its arms provided with a slot slidably and pivotally receiving said pin, a bracing member connecting the arms of said lever, and an operating element connected with the other arm of the lever.

1,211,343. FOOD-CHOPPER. FREDERICK R. PERSHING, Braddock, Pa. Filed June 28, 1916. Serial No. 106,500. (Cl. 17—20.)

1. The combination with a casing of a food grinding machine, of a band around the casing, a standard supported upon the band, a sleeve on the standard and a follower carried by the sleeve.

2. A casing of a food grinding machine, having a hopper, a standard removably supported upon the casing, a sleeve having a reciprocatory and a rotary movement and a hopper-closer carried by the sleeve.

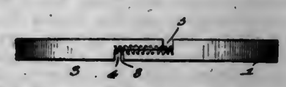


3. A casing of a food grinding machine having a hopper, a standard upon the casing, a lug on the standard, a sleeve on the standard and provided with a bayonet slot to engage the lug, and a hopper closer upon the end of the sleeve.

4. In combination with a food grinding machine of the character described, a band encircling said casing and a hopper closer having slidable and rotatable connection with said band.

5. In combination with a food grinding machine of the class described, a band encircling and clamped to said casing and closures having swinging connection with said band for closing the hopper and exit end of the casing.

1,211,344. PACKING-RING. MATTHEW J. PETERS, St. Louis, Mo. Filed Oct. 13, 1916. Serial No. 125,438. (Cl. 121—108.)



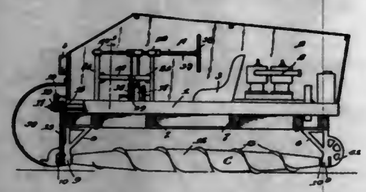
1. A split packing ring having the extremities thereof rabbeted on reverse sides to overlap each other, the meeting faces of the lapped extremities being formed with grooved seats extending longitudinally of the ring and each substantially semicircular in cross section and terminating in a semi-disk-like shoulder, and a coiled expansion spring contained partly in one seat and partly in the other seat and bearing at its opposite extremities against said shoulders.

2. A split packing ring having the extremities thereof rabbeted on reverse sides to overlap each other, the meeting faces of the lapped extremities being formed with grooved seats extending longitudinally of the ring and each substantially semicircular in cross section and terminating in a semi-disk-like shoulder, and a coiled expansion spring contained partly in one seat and partly in the other seat and bearing at its opposite extremities against said shoulders, said spring being detachably mounted in relation to the ends of the ring and being held in place by reason of its shape and resiliency.

1,211,345. MOTOR-SLEIGH. MARINUS PETERSEN, Norma, N. D. Filed July 1, 1916. Serial No. 107,128. (Cl. 21—47.)

1. In a motor sleigh, the combination of a frame, combined rotary propellers and runners extending in a fore and aft direction beneath said frame and having their axes substantially parallel, parallel driving shafts supported by said frame, driving connections between said

driving shafts and said propellers and runners, gears connecting said driving shafts for actuating the same simultaneously in opposite directions, one of said driving shafts being sectional, differential gearing connecting the sections of the last named shaft, clutch faces on two opposing members of said differential gearing, independently operable clutch bands encircling said clutch faces, a hand steering wheel, and connections between said wheel and clutch bands, whereby the latter may be independently operated, one by turning the hand wheel in one direction and the other by turning the hand wheel in the opposite direction.



2. In a motor sleigh, the combination of a frame, combined rotary propellers and runners extending in a fore and aft direction beneath said frame and having their axes substantially parallel, parallel driving shafts supported by said frame, driving connections between said driving shafts and said propellers and runners, gears connecting said driving shafts for actuating the same simultaneously in opposite directions, one of said driving shafts being sectional, differential gearing connecting the sections of the last named shaft, clutch faces on two opposing members of said differential gearing, independently operable clutch bands encircling said clutch faces, a hand steering wheel, connections between said wheel and clutch bands, whereby the latter may be independently operated, one by turning the hand wheel in one direction and the other by turning the hand wheel in the opposite direction, and clutch band releasing means.

3. In a motor sleigh, the combination of a frame, combined rotary propellers and runners extending in a fore and aft direction beneath said frame and having their axes substantially parallel, parallel driving shafts supported by said frame, driving connections between said driving shafts and said propellers and runners, gears connecting said driving shafts for actuating the same simultaneously in opposite directions, one of said driving shafts being sectional, differential gearing connecting the sections of the last named shaft, clutch faces on two opposing members of said differential gearing, independently operable clutch bands encircling said clutch faces, a hand steering wheel, connections between said wheel and clutch bands, whereby the latter may be independently operated, one by turning the hand wheel in one direction and the other by turning the hand wheel in the opposite direction, a motor mounted on said frame, and variable speed transmission gearing interposed between the said motor and the driving shaft with which the differential gearing is associated.

1,211,346. MAGNESIUM-CONTAINING PIGMENT AND PAINT. OSCAR WARREN PICKERING, Springfield, Mass., assignor to Pickering Paint and Pigment Company, a Corporation of West Virginia. Filed June 2, 1916. Serial No. 101,357. (Cl. 134—39.)

1. A new pigment, comprising flocculent magnesium aluminate.

2. A paint, comprising magnesium aluminate and a vehicle.

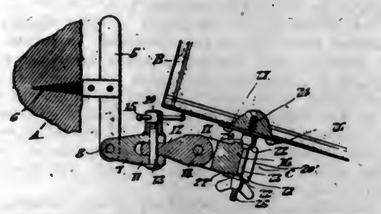
3. A paint, comprising magnesium aluminate and an oil.

4. A paint, comprising magnesium aluminate and a drying oil.

5. A paint, comprising magnesium aluminate, an oil, and a drier.

[Claims 6 to 26 not printed in the Gazette.]

1,211,347. CAMERA-SUPPORT. ANDREW PLOPCHAN and JOHN ZURAW, Detroit, Mich. Filed June 24, 1916. Serial No. 105,596. (Cl. 248—30.)



1. A support for a camera comprising means for detachable engagement with a part, an ear swingingly connected to said means, a second ear swingingly connected to the first named ear and movable at right angles thereto, an arm swingingly connected to the last named ear and having a slot opening through one end and also countersunk in opposite faces thereof, a stem detachably engaged in the slot and adapted to engage with a camera body, and means for fastening the stem in the slot engageable in one countersink.

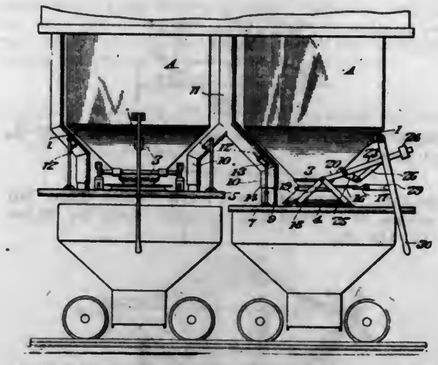
2. A support for a camera comprising means for detachable engagement with a part, an ear swingingly connected to said means, a second ear swingingly connected to the first named ear and movable at right angles thereto, an arm swingingly connected to the last named ear and having a slot opening through one end and also countersunk in opposite faces thereof, a stem detachably engaged in the slot and adapted to engage with a camera body, means for fastening the stem in the slot and engageable in one countersink, and a disk on the stem and having a portion engageable in the other countersink.

3. A support for a camera comprising means for detachable engagement with a part, an ear swingingly connected to said means, a second ear swingingly connected to the first named ear and movable at right angles thereto, an arm swingingly connected to the last named ear and having a slot opening through one end and also countersunk in opposite faces thereof, a stem detachably engaged in the slot and adapted to engage with a camera body, means for fastening the stem in the slot and engageable in one countersink, a disk on the stem and having a portion engageable in the other countersink, and finger gripping lips cut and struck from the disk.

1,211,348. LOADING APPARATUS FOR POWDERED MATERIALS AND THE LIKE. CLAUDE H. POLK, Anaconda, Mont. Filed Feb. 7, 1916. Serial No. 76,785. (Cl. 193—29.)

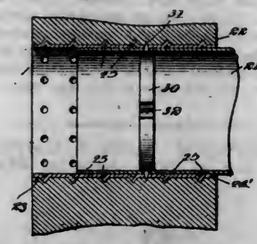
1. In loading apparatus of the class described, a hopper, a dust guard mounted in the lower end of the hopper and capable of vertical movement to cover and uncover the car being loaded, a valve movable across the lower end of the hopper to open and close the same, means for operating said valve and moving said dust guard simultaneously, an outlet flue connected to said dust guard for conveying the dust away from the vicinity of the loader, a damper in said flue capable of movement to open and closed positions, and a connection between said damper and dust guard whereby the damper will be operated to open position in the downward movement of the guard and to closed position in the upward movement of the guard.

2. In loading apparatus for calcine and other powdered material, a hopper, a dust guard connected to the lower end of the hopper and adapted for movement relatively to the hopper to cover and uncover the car being loaded, a flue connected to said dust guard to convey the dust away from the vicinity of the loader, a damper in said flue, and a connection between said damper and dust guard whereby the damper will be opened in the movement of the guard to cover the car, and closed in the movement of the guard to uncover the car.



3. In loading apparatus for calcine and other powdered material, a hopper, a dust guard connected to the lower end of the hopper and adapted for movement relatively to the hopper to cover and uncover the car being loaded, a flue connected to said dust guard to convey the dust away from the vicinity of the loader, a damper in said flue, a connection between said damper and dust guard whereby the damper will be opened in the movement of the guard to cover the car, and closed in the movement of the guard to uncover the car, a valve controlling the flow of material from the hopper, a lever capable of swinging movement, a connection between said lever and valve, and connections between said lever and dust guard whereby said dust guard and valve may be operated simultaneously.

1,211,349. STOVEPIPE-FASTENER. WILLI A. PRAHL, Salt Lake City, Utah. Filed Dec. 15, 1914. Serial No. 877,392. (Cl. 126—318.)



The combination with a chimney having a flue opening therein, of a sleeve within said opening having spurs struck therefrom and embedded in the wall of the opening, a stove pipe section having one end within said sleeve, a split clamping band within said pipe section and normally engaging the inner surface thereof, spurs on said band designed to penetrate said pipe section and sleeve, and a link having the ends thereof pivotally connected to the ends of said band and provided with a rigid handle at one end whereby the band may be expanded and contracted.

1,211,350. METHOD OF MAKING CONVEYER-BELTS. RAYMOND B. PRICE, New York, N. Y., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Mar. 18, 1914. Serial No. 825,689. (Cl. 154—4.)

1. The process of making conveyer belts which comprises applying a wear facing of rubber to a strip of fibrous material and forming a substantially regular distended surface thereon adapted to provide compression when the belt is flat.

2. The process of making conveyer belts which comprises applying a wear facing of rubber to a strip of fibrous material and forming a substantially regular distended convex surface thereon.



3. The process of making conveyer belts which comprises applying a wear facing of rubber to a strip of fibrous material and forming a substantially regular distended convex surface of approximately uniform thickness thereon.

4. The process of making conveyer belts which comprises applying a wear facing of rubber to a strip of fibrous material, vulcanizing the rubber, shaping the rubber-treated material, and heating the material to set it as so shaped.

5. An art or method of making conveyer belts consisting in applying a load carrying surface of unvulcanized rubber to a body including therein a stratum of fibrous material, subjecting the belt, while flat, to the action of a vulcanizing medium, thereafter placing the rubber under stretch by arching the belt transversely with a convex upward curvature, and subjecting the arched belt to heat of a degree to remove the stretch therefrom, whereby the belt will be given a permanent arched set and the subsequent flattening thereof will place the load carrying surface under a normal compression or compaction.

[Claim 6 not printed in the Gazette.]

1,211,351. PROCESS OF MANUFACTURING RUBBER ARTICLES. RAYMOND B. PRICE, New York, N. Y., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Feb. 9, 1915, Serial No. 6,980. Renewed June 6, 1916. Serial No. 102,090. (Cl. 154—14.)

1. The process of manufacturing articles embodying vulcanizable plastic and fabric material, consisting of fixing the relationship of the plastic and fabric by partially vulcanizing the material, building the article of this partially vulcanized material, and giving final formation to the built article by completing the vulcanization of the material.

2. The process of manufacturing articles embodying vulcanizable plastic and fabric material, consisting of fixing the relationship of the plastic and fabric by partially vulcanizing the material in the absence of distorting pressure, building the article of this partially vulcanized material, and giving final formation to the built article by completing the vulcanization of the material under compacting pressure.

3. The process of manufacturing articles embodying vulcanizable plastic and fabric material, consisting of fixing the relationship of the plastic and fabric by partially vulcanizing the material in open heat, building the article of this partially vulcanized material, and giving final formation to the built article by completing the vulcanization of the material under compacting pressure.

4. The process of manufacturing tires embodying rubber treated fabric material, consisting of fixing the relationship of the rubber and fabric by partially vulcanizing said material, building the tire of elements of this partially vulcanized material, and giving final formation to the built tire by completing the vulcanization of the material.

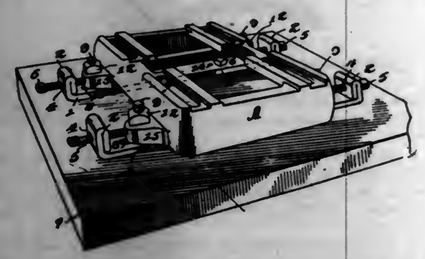
5. The process of manufacturing tires embodying rubber treated fabric material, consisting of first subjecting the material to the action of a setting medium under conditions that will not materially disturb the normal relationship of the rubber and fabric to each other, then building the tire of elements of this material, and finally vulcanizing the built tire.

[Claim 6 not printed in the Gazette.]

1,211,352. MOTOR-ADJUSTING BASE. CARLOS C. RATHBURN, Westwood, Cal. Filed Feb. 7, 1916. Serial No. 76,831. (Cl. 248—30.)

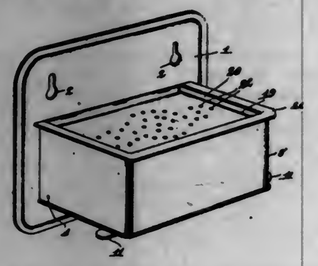
The combination with a bed, of a plurality of bars adapted to support the base of a motor, said bars having

angular end portions, adjusting screws threaded through said end portions, and base clamping bolts extending upwardly from said bars and adjustable longitudinally thereof, said bars being provided with longitudinal slots to admit of the shifting of said clamping bolts, and housings



located beneath the slots in said bars and elongated in the direction of length of the slots, the heads of the clamping bolts being received in said housings and being prevented from turning thereby.

1,211,353. SOAP-RECEPTACLE. FREIDA RAUTZENBURG, Philadelphia, Pa. Filed Apr. 6, 1916. Serial No. 89,393. (Cl. 45—28.)



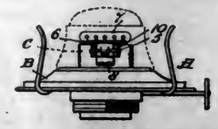
1. A device of the class described comprising a casing having a panel pivotally mounted for downward swinging movement, means for holding the panel in horizontal position within the casing, and a means coöperating with said panel for removing the soap from the panel and delivering the soap from the receptacle when the panel is swung downwardly.

2. A device of the class described comprising a casing having a panel mounted for swinging movement, means coöperating with said panel for removing the soap from the panel and delivering the same from the receptacle when the panel is swung, and means for returning said panel and the last mentioned means to normal position.

3. A device of the class described comprising a casing, a rod mounted within the casing, a panel swingingly mounted upon said rod, said panel being provided with slots, a substantially U-shaped member swingingly mounted upon said rod and having the parallel portions thereof disposed within the slots of said panel, springs mounted on said rod and engaging said panel to hold the same in horizontal position, and an extension formed on one of said springs and engaging said U-shaped member to normally hold the parallel portions thereof within said slots.

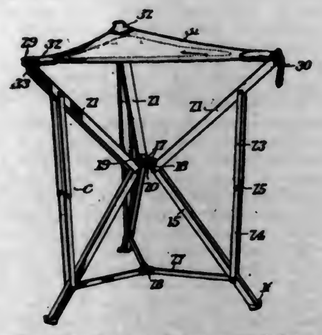
1,211,354. LAMP-EXTINGUISHER. SOLOMON REPLANSKY, New York, N. Y. Filed Sept. 25, 1915. Serial No. 52,652. (Cl. 67—78.)

A flame extinguisher comprising a sheet metal sleeve, the sheet at one side of the sleeve having spaced ends, said sleeve having outstanding lugs located at its opposite sides and at points between the ends of the sleeve, there being openings provided at the edge portions of the sleeve and between the lugs at the sides thereof, flame extinguishing elements having shanks located between the lugs, pins pivotally connecting the shanks with the lugs, whereby the said shanks may swing into the said openings, and head portions carried by the extinguishing elements and



adapted to enter the sleeve when the shanks enter the said openings.

1,211,355. COLLAPSIBLE CHAIR. TONY RIZZO, Milwaukee, Wis. Filed Apr. 20, 1915. Serial No. 22,694. (Cl. 155—32.)



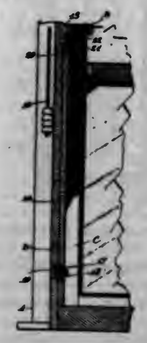
In a collapsible chair, a frame comprising a bracket having radial arms, channeled legs pivotally connected with said arms, channeled arms pivotally connected with the legs and capable of receiving said legs partly within their respective channels when the chair is collapsed, jointed connecting members terminally connected pivotally with the respective legs and arms near the free ends thereof and at the outer sides thereof, brace links pivotally connected with the legs at the pivots which connect the jointed members thereto and capable of being received partly within the channels thereof, and angle plates with which said brace links are pivotally connected and adapted to be received in the channels of the legs when the chair is collapsed.

1,211,356. PENCIL-TOP. FRANK J. ROETKER, Moffat, Colo. Filed Feb. 25, 1916. Serial No. 80,461. (Cl. 40—108.)



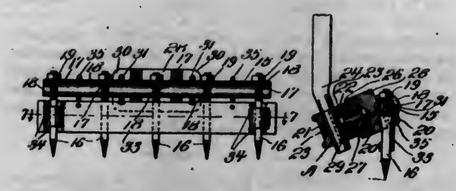
A pencil attachment comprising a plurality of indicating cards, a casing having a partition dividing the interior thereof into two compartments one of rectangular configuration for receiving said cards, the other receiving one end of the pencil, two opposite walls of said card compartment being formed with slots extending through one end of the casing, and a cap completely inclosing the card end of the casing and having inclosed slots arranged parallel to portions of the slots in said side walls.

1,211,357. WINDOW-FRAME AND SASHES THEREFOR. JOHN ROSSOW, Milwaukee, Wis. Filed Mar. 29, 1916. Serial No. 87,540. (Cl. 20—12.)



The combination with a window frame having sectional inner stop beads arranged one above the other, the upper section of said beads being permanently secured to the window frame while the lower section thereof is removable from the same, a plate mounted on the lower end of the uppermost section of the stop bead and cut and bent to provide a U-shaped socket extension beyond the end of said section, the upper end of the lower section being recessed and slotted to form a reduced intermediate tongue for detachable engagement in the socket extension, and means on the vertical stile of the window frame and the lowermost section of the bead for detachably connecting the said lower section of the bead to the window frame.

1,211,358. HARROW ATTACHMENT. PHILIP SCHERZER, Melvin, Iowa. Filed June 20, 1916. Serial No. 104,722. (Cl. 97—44.)



1. In a harrow attachment for cultivators, a toothed harrow bar and a shield detachably connected therewith, said shield having struck up keepers engaging some of the harrow teeth.

2. In a harrow attachment for cultivators, a toothed harrow bar and a shield detachably connected therewith, said shield having struck up keepers engaging some of the harrow teeth; and means for suspending the shield with respect to the toothed bar.

3. In a harrow attachment for cultivators, a rockingly supported tooth carrying bar, a shield having keepers engaging some of the teeth of said bar, and bar engaging hooks connected with the shield to support the latter in raised position with respect to the points of the teeth.

1,211,359. WASHBOARD. JOSEPH ANTHONY SCHLEHR, Rockford, Ill., assignor to A. Vere Martin, Chicago, Ill. Filed Oct. 1, 1914, Serial No. 864,466. Renewed June 22, 1916. Serial No. 105,277. (Cl. 68—29.)



A wash-board having a rubbing surface composed of a plurality of rigid strips and loop shaped flexible elements clamped between said strips with the looped portion thereof projecting beyond said strips.

1,211,360. WASHBOARD. JOSEPH ANTHONY SCHLEHR, Rockford, Ill., assignor to A. Vere Martin, Chicago, Ill. Filed Oct. 1, 1914, Serial No. 864,467. Renewed June 22, 1916. Serial No. 105,278. (Cl. 68—29.)



A wash board comprising connected side bars having longitudinally extending grooves on their opposed inner faces, a plurality of longitudinally spaced rigid rubbing elements having their ends disposed in said grooves and fixed to said side bars, one of said elements having a groove extending longitudinally thereof, a flexible apron extending around and incasing said elements and having the ends thereof overlapped and disposed in said groove, a clamping bar having a laterally projecting tongue extending laterally therefrom and adapted to be inserted in said groove for clamping said overlapped ends therein, the ends of said bar being inserted in the grooves of said side bars, fastening means extending transversely through said clamping bar, tongue, and apron into said grooved element for detachably holding the apron in adjusted position, and blocks detachably mounted in the grooves of said side bars below said clamping bar and having their ends engaging said clamping bar to assist in holding it in engagement with said grooved element.

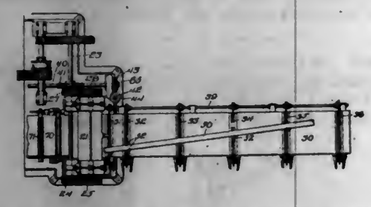
1,211,361. SEPARATING THE COMPONENT PARTS OF LIQUIDS. EDWARD J. SHEEHAN, Pasadena, Cal., assignor of one-half to William S. McCay, Pasadena, Cal. Filed Feb. 8, 1915. Serial No. 6,732. (Cl. 99—5.)

1. A process of treating liquids extracted from vegetable, animal and mineral matter, consisting in subjecting the liquid to a temperature sufficient to cause solidification of one of the components, sterilizing the liquid and separating the solid and liquid components.

2. A process of treating liquids extracted from vegetable, animal and mineral matter, consisting in subjecting the liquid to a temperature sufficient to cause solidification of one of the parts, agitating the liquid during freezing, sterilizing the same, and separating the solid and liquid components.

3. A process of treating liquids extracted from vegetable, animal and mineral matter, consisting in subjecting the liquid to a temperature sufficient to cause a solidification of one of the components, agitating the same during solidification, sterilizing by contacting the liquid with ozone and separating the solid and liquid parts.

1,211,362. MACHINE FOR SLITTING SHEET-METAL STRIPS. FRED C. ABEY, Oak Park, Ill., assignor to Northwestern Expanded Metal Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 14, 1915. Serial No. 21,198. (Cl. 164—6.6.)



1. In a machine of the character described, rolls having helical complementary cutting zones containing cutting edges lying in planes at right angles to the axes of the rolls, and means for feeding a strip to be operated upon between the rolls at an angle to the planes of the said cutting edges.

2. In a machine of the character described, rolls having helical complementary cutting zones containing cutting edges lying in planes at right angles to the axes of the rolls, means for feeding a strip to be operated upon between the rolls at an angle to the planes of the said cutting edges, and means for receiving the strip from the rolls and shifting it so as to bring it parallel with the direction in which it travels.

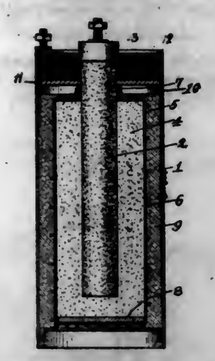
3. In a machine of the character described, strip-working mechanism, means for feeding a strip to said mechanism at an acute angle to the direction of length of the strip, and means for receiving said strip from said mechanism and shifting it so as to bring it parallel with the direction of movement thereof.

4. In a machine of the character described, strip-working mechanism adapted to act on a strip passing through the same at an acute angle to the direction of the length of the strip, and means in advance of said mechanism for guiding the trailing end of a strip in said mechanism so as to maintain it at said angle to the direction of feed.

5. In a machine of the character described, strip-working mechanism adapted to act on a strip passing through the same at an angle to the direction of the length of the strip, means in advance of said mechanism for guiding the trailing end of a strip in said mechanism so as to maintain it at said angle to the direction of travel, and means for receiving said strip from said mechanism and shifting it so as to bring it parallel with the direction of travel.

[Claims 6 to 24 not printed in the Gazette.]

1,211,363. BATTERY. CHARLES F. BURGESS, Madison, Wis., assignor to C. F. Burgess Laboratories, a Corporation of Wisconsin. Original application filed Dec. 10, 1913, Serial No. 805,675. Divided and this application filed Sept. 18, 1914. Serial No. 862,284. (Cl. 204—38.)



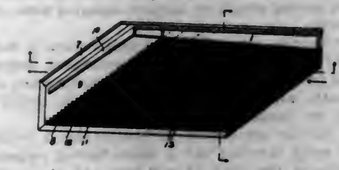
1. In a dry battery, the combination of a zinc container, a carbon rod supported therein, a depolarizing mixture inclosing said rod and consisting essentially of impalpable graphite and manganese dioxid together with the usual salts and water, and a gelatinized paste separating said depolarizing mixture from the zinc container and effectively preventing transference of the impalpable graphite into physical contact with the zinc, substantially as described.

2. In a dry battery, the combination of a zinc container, a carbon rod supported therein, a depolarizing mixture inclosing said rod and consisting essentially of impalpable graphite and manganese dioxid together with the usual salts and water, and an envelop inclosing said mixture, the lower end of said envelop and of the mixture being impregnated with paraffin and preventing the impalpable graphite from passing over to the adjacent zinc surface by migration or otherwise, substantially as described.

3. In a dry battery, the combination of a zinc container, a carbon rod supported therein, a depolarizing mixture inclosing said rod and consisting essentially of impalpable graphite and recovered manganese together with the usual salts and water, a cloth envelop for said mixture, the lower end of said envelop and of the mixture being impregnated with paraffin, and a gelatinized paste between said container and said envelop, substantially as described.

4. In a dry battery, the combination of a zinc container, a carbon rod supported therein, a depolarizing mixture inclosing said rod and consisting essentially of impalpable graphite and recovered manganese, a cloth gauze envelop for said mixture and a gelatinized paste separating said depolarizing mixture from the zinc and effectively preventing movement of the impalpable graphite through said gauze envelop, substantially as described.

1,211,364. CONCENTRATING-TABLE. EMIL DEISTER, Fort Wayne, Ind., assignor to Deister Machine Company, Fort Wayne, Ind., a Corporation of Indiana. Filed June 26, 1916. Serial No. 105,839. (Cl. 83—88.)



1. A concentrating table having a portion of its surface extending from the line of feed approximately horizontal and the succeeding portion extending toward the tailings discharge edge having a downward inclination relative to the first portion in combination with riffles arranged substantially parallel with the direction of vibration of the table and means arranged transversely of the riffles for causing the values to move upwardly with reference to the material on the main stratifying surface.

2. A concentrating table having portions of its surface intermediate the line of feed and the tailings discharge edge at different inclinations relative to a horizontal plane, the portion adjacent to the line of feed having less inclination than the portion adjacent to the tailings discharge edge in combination with riffles arranged substantially parallel with the direction of vibration of the table and an upwardly inclined surface arranged transversely of the riffles in the rear of the mineral discharge edge.

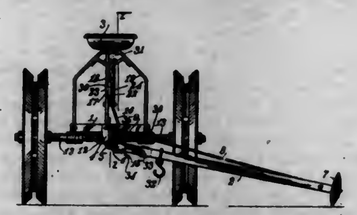
3. A transversely inclined concentrating table having portions of its surface intermediate the line of feed and the tailings discharge edge at different inclinations relative to a horizontal plane, the portion adjacent to the line of feed having less inclination than the remaining portion of the table, in combination with riffles arranged substantially parallel with the direction of vibration of the table, a portion raised above the stratifying surface, the front edge of such portion forming the mineral discharge, and its rear edge being downwardly inclined to the main stratifying surface.

4. A transversely inclined concentrating table, having portions of its surface, intermediate the line of feed and the tailings discharge edge, at different inclinations, relative to a horizontal plane, the portion adjacent to the line of feed having less inclination than the portion adjacent to the tailings discharge edge, in combination with an upwardly inclined surface arranged along a diagonal line relative to the line of movement of the table, said inclined surface extending along the mineral discharge edge of the table, and riffles arranged on the table and extending toward the mineral discharge edge.

5. A differentially vibrated, transversely inclined concentrating table, having portions of the surface, intermediate the line of feed and the tailings discharge edge, at different inclinations relative to a horizontal plane, than the portion adjacent to the tailings discharge edge, the inclination from the feed side to the tailings discharge side successively increasing, in combination with an upwardly inclined portion arranged along a diagonal line relative to the line of movement of the table, said inclined surface extending along the mineral discharge edge of the table, and riffles arranged on the table and extending toward the mineral discharge edge.

[Claims 6 to 12 not printed in the Gazette.]

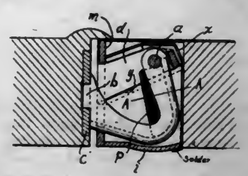
1,211,365. CORN-PLANTER. ERNST E. ENGLUND, Moline, Ill., assignor to D. M. Sechler Implement & Carriage Co., Moline, Ill. Filed July 19, 1916. Serial No. 110,026. (Cl. 111—24.)



1. In a machine of the character described, a marker bar, a rock shaft having bearings in the frame of said machine and to which said marker bar is pivotally connected, means for limiting the movement of the marker bar when swinging it upon its pivot from one position to another, a marker disk pivoted to said marker bar, a flexible brace-rod for said marker bar, and a connection between said brace-rod and the marker bar of a character to yield in the event the disk or marker bar meets with an obstruction in the operations thereof, whereby the marker bar is prevented from breakage.

2. In a machine of the character specified, a planter frame, a marker bar having a marker disk pivoted thereto, a shaft to which said marker bar has a pivotal connection, means on said shaft and engaging the marker bar to prevent said bar from swinging too far on its pivot when being moved to an elevated position, and a flexible brace-rod one end of which is united to the marker bar by a breakable connection whereby the marker bar will be released from the brace-rod when the movement of said marker bar is resisted by an obstruction.

1,211,366. CONCEALED HINGE. FRED J. FISHER, Detroit, Mich. Filed May 29, 1916. Serial No. 100,446. (Cl. 16—5.)



1. In a concealed hinge, the combination of a pintle, means for supporting the same, and a hinge arm journaled by the pintle, and comprising a channeled strip formed into elbow shape.

2. In a concealed hinge, the combination of a pintle, means for supporting the same, an elbow-like channeled hinge arm journaled by the pintle, an abutment, and a cushioning element secured in the channel of the hinge arm for striking the abutment.

3. A concealed hinge, having in combination, a housing provided with a way leading from the opening in the housing along one of the horizontal walls rearwardly and obliquely to one side and a wide post to act as a stop made possible by the said obliquely disposed way, a pintle-carrier removably securable to said housing and adapted to fit into said way, a pintle supported by the carrier, and a hinge arm supported by the pintle.

4. A concealed hinge, having in combination, a housing provided with a finishing plate having a portion forming a comparatively wide post or abutment, the said housing being provided with a box portion having one or more ways extending obliquely rearward from the opening at the side of said post, and a pintle-carrier, pintle and hinge arm removably securable in said housing by sliding the pintle-carrier in said obliquely-extending way.

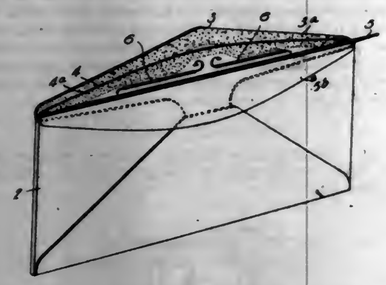
5. In a concealed hinge, the combination of a pintle, means for supporting the same, a hinge arm, an abutment, a cushioning element, and means on the hinge arm for engaging opposite sides of the cushioning element to hold the same in place and in position to strike the abutment.

1,211,367. SAFETY-ENVELOP. CHARLES GARGANO, Elizabeth, N. J., assignor to Fred Gargano, Elizabeth, N. J. Filed May 24, 1916. Serial No. 99,664. (Cl. 229—80.)

1. As a new article of manufacture, a safety envelop including a body formed with an integral main sealing flap, and a pair of opposed auxiliary tissue paper flaps secured to opposite edges of the mouth of the body portion and extending the full length thereof, said tissue paper flaps being adapted to be folded over each other and secured to opposite sides of the envelop and being concealed by the main sealing flap when the envelop is sealed, said main sealing flap being provided with a layer of adhesive which extends over a sufficiently large area to engage one of the tissue paper flaps, as well as the back of the envelop.

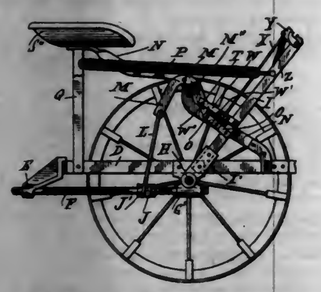
2. As a new article of manufacture, a safety envelop including a body formed with an integral main sealing

flap, and a pair of opposed auxiliary tissue paper flaps secured to opposite edges of the mouth of the envelop and extending the full length of the envelop, said tissue paper flaps being adapted to be folded over each other and secured to opposite sides of the envelop and being concealed by the main sealing flap when the envelop is sealed, one



of the tissue paper flaps having characters printed therein with soluble ink which will smear upon the application of steam or moisture, and the main sealing flap being provided with a layer of adhesive which extends over a sufficiently large area to engage the tissue paper flap as well as the back of the envelop.

1,211,368. MARKER FOR CORN-PLANTERS. STEPHEN H. GARST, Moline, Ill., assignor to D. M. Sechler Implement & Carriage Co., Moline, Ill. Filed June 30, 1916. Serial No. 106,743. (Cl. 111—6.)

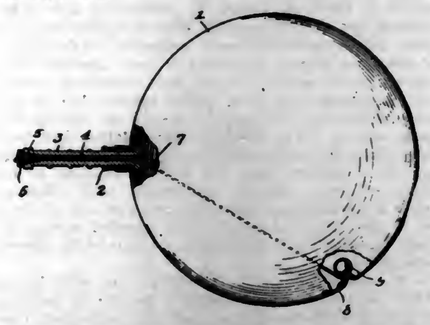


1. In a machine of the character specified, the combination with a hand-operative lever, a lever connected to said hand-operative lever, means on said hand-operative lever for locking the lever connected thereto in any position to which said hand operative lever has moved it, a rock shaft, a marker bar attached to said rock shaft, and connections between said rock shaft and the lever connected to the hand-operative lever whereby said marker bar may be raised or lowered from said hand operated lever, substantially as specified.

2. In a machine of the character specified, the combination with a hand-operative lever, a rock shaft, a bell-crank lever connected to said hand-operative lever and to said rock shaft, a marker bar attached to said rock shaft, and adapted to be raised or lowered from said hand-operative lever, and co-acting means on the hand-operative lever and the bell-crank lever respectively for maintaining said marker bar in either position, substantially as specified.

1,211,369. TOY BALLOON. THOMAS W. MILLER, Ashland, Ohio, assignor to The Faultless Rubber Company, Ashland, Ohio, a Corporation of Ohio. Filed Aug. 25, 1916. Serial No. 116,787. (Cl. 46—37.)

1. In an elastically expansible balloon, means for inflating and expanding the same, and means operated automatically by the balloon body as it is expanded for closing the inflating orifice.



2. In an elastically expansible balloon, means for inflating and expanding the same, a plug for closing the inflating orifice, and means operated by the balloon body as it is expanded for automatically seating said plug in its closing position.

3. In an elastically expansible balloon, means for inflating and expanding the same, a plug for closing the inflating orifice, and a string attached to said plug and passed into said balloon and attached to the interior thereof for automatically seating said plug in its closing position when the balloon is expanded.

4. In an elastically expansible balloon, means for inflating and expanding the same, a plug for closing the inflating orifice, and a string attached to said plug and passed into said balloon and attached to the interior thereof for automatically seating said plug in its closing position when the balloon is expanded and for simultaneously restricting the expansion of the balloon at its point of attachment thereto.

1,211,370. TREATMENT OF MATERIALS. RAYMOND B. PRICE, New York, and WILLIAM J. STEINLE, Elmhurst Heights, N. Y., assignors to Rubber Regenerating Company, a Corporation of Indiana. Filed Apr. 24, 1915. Serial No. 23,653. (Cl. 18—14.)

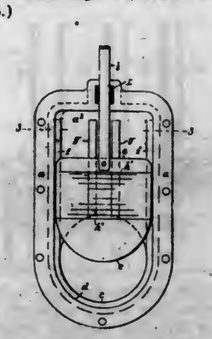


1. An apparatus for treating material embodying a casing, means for feeding the material into the casing, a form, a member in the discharge end of the casing having a discharge opening permitting of the passage of the form therethrough, the wall of said opening being spaced from the form in all directions, means for feeding the form through the opening, means for exhausting the material, and a feed screw in the casing for feeding the exhausted material in contact with said wall and the traveling form.

2. An apparatus for treating material embodying a casing, a hollow feed-screw for advancing the material in the casing, a form receivable in the bore of the feed-screw, means for feeding the form through said bore, a suction pipe for exhausting the material, and a die at the discharge end of the casing having an opening permitting of the passage therethrough of the form with a coating of the exhausted material thereon.

3. An apparatus for treating material embodying a casing, a feed-screw in the casing, means for exhausting the material advanced by the feed-screw, a mandrel, means for moving the mandrel past the feed-screw, and a die at the delivery end of the casing having an opening for permitting the passage therethrough of the mandrel with a surface coating of the compacted exhausted material thereon.

1,211,371. FRICTIONALLY-HELD BLAST-GATE. WALTER S. ROCKWELL, New York, N. Y., assignor to W. S. Rockwell Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 27, 1916. Serial No. 122,359. (Cl. 137—5.)

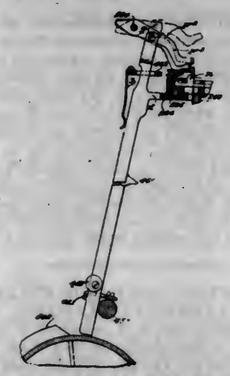


1. A blast-gate having a casing with an air-passage through the same and a chamber within the casing at one side of the passage, a groove extended from the chamber around the passage, a valve-plate movable in the groove and casing, and slightly bowed between its edges and pressed by the said casing elastically, to hold the plate from accidental displacement.

2. A blast-gate having a casing with an air-passage through the same and a chamber within the casing at one side of the passage, a groove extended from the chamber around the passage, a coincident channel in the chamber, a valve-plate fitted to the said groove and channel, and a rod extended from the plate outside of the chamber, the plate being slightly bowed or concaved between its edges, and its convex side pressed in said channel to produce a frictional resistance to accidental displacement while permitting free movement of the plate by means of the rod.

3. A blast-gate having a plate formed of two similar longitudinal sections each having a half channel forming a chamber therein, a groove extended around the passage in a line with the channel, a valve-plate fitted to the said groove and channel and having a rod extended outside of the chamber, and the plate being slightly bowed to produce a frictional resistance to accidental displacement.

1,211,372. YARN-CHANGING MECHANISM FOR KNITTING-MACHINES. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed July 24, 1914. Serial No. 852,896. (Cl. 66—12.)



1. A knitting machine having a plurality of movable yarn guides, and a single actuator therefor movable in one dimension to position said yarn guides for operation or to hold them inoperative, said actuator being movable in another dimension when the yarn guides are positioned for operation to then render one of said yarn guides operative and another inoperative, and to exchange the respective positions of said guides.

2. A knitting machine having a yarn changing device comprising a plurality of movable yarn guides, in combination with a single actuator common to and in contact with said yarn guides, and means acting on said actuator to move said guides together from a position for action to a position of inaction, and means coacting with said actuator to move it when in position for the action of said guide to then render said guide alternately active and inactive.

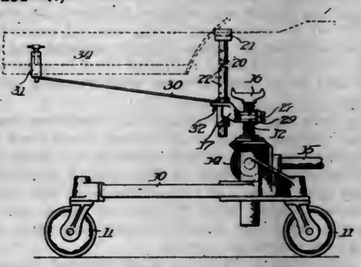
3. In a knitting machine, a pair of yarn changing yarn guides, one of said yarn guides having a cam slot with an active portion and idle portion, the other yarn guide having a similar slot with similar portions oppositely disposed, a common actuator taking into said slots and means for successively positioning said actuator in one end of said slots, in the middle of said slots, and in the other end of said slots.

4. In a knitting machine, movable yarn guides, an actuator therefor and means carried by said yarn guides for positioning them together in active and inactive positions corresponding to the different positions of said actuator, in combination with means for moving said actuator from a position in which one of said yarn guides is active to a neutral position in which both of said guides are active, and thence to a position in which the other of said guides is active.

5. In a knitting machine, a thrust bar, a lug on said bar and means for determining the position of said bar and said lug in one direction, in combination with a cam for contact with said lug when in one position to move said bar, a plurality of yarn guides and means carried by said bar for actuating each of said yarn guides upon movement of said bar.

[Claims 6 and 7 not printed in the Gazette.]

1,211,373. AUTOMOBILE-JACK. IRA A. WEAVER, Springfield, Ill. Filed May 22, 1916. Serial No. 99,072. (Cl. 254—7.)



1. In a jack, the combination of a threaded standard, a bracket adapted to be clamped to the threaded portion of said standard, and a second standard mounted in said bracket with means for vertically adjusting said last mentioned standard, substantially as described.

2. In a jack, the combination of a threaded standard, means for raising and lowering said standard, a clamp adapted to engage the threaded portion of said standard, an apertured extension from said clamp, and a second standard mounted in said aperture with capacity for vertical adjustment, substantially as described.

3. In a jack, the combination of a threaded standard, a bracket having a vertical aperture, a clamp associated with said bracket and adapted to engage the threaded portion of said standard, an extension standard adapted to occupy the aperture in said bracket, and a brace-rod extending from said bracket to the article to be supported by said jack, substantially as described.

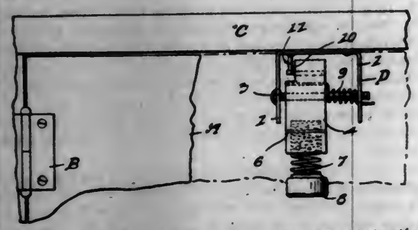
4. In a device of the class described, the combination of a casting having a vertical aperture therein and pro-

vided with an apertured lug, an arm hinged to said lug, screw means for engaging and holding said arm, a threaded aperture being provided between said extension and said arm, one-half of said threaded aperture being in each of said portions, said threaded aperture being adapted to engage the threaded standard of a jack, and an extension standard adapted to occupy the first named aperture in said casting, substantially as described.

5. In a device of the class described, the combination of a member having a vertical aperture, an apertured ear and an apertured lug, a clamping member associated with said apertured lug whereby said member may be attached to a vertically adjustable portion of a jack, and a bracered adapted to be secured to said apertured ear, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,211,374. DOOR-CHECK. GEORGE E. CARTER, Apex, N. C. Filed Oct. 7, 1914. Serial No. 865,528. (Cl. 16—85.)



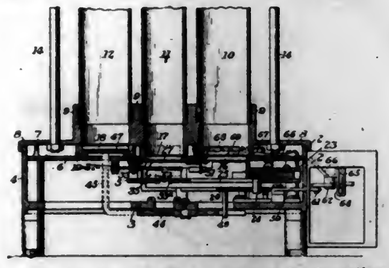
1. A door check consisting of an inverted substantially U-shaped frame secured upon the upper part of a door frame, a pin having its opposite ends secured to the side of the frame, an elongated check block pivoted within the frame on said pin and held in vertical position when the door is opened, a cushioning element secured upon the lower end of the block, a trip member adapted to be secured upon a door and engage and move said block into horizontal position upon the closing of the door so as to cause the cushioning member to engage the door, a spring surrounding the pin and interposed between the block and one side of the frame and having one end secured to the adjacent side of the frame and its opposite end secured to the block to normally hold said block in a vertical position and to prevent the same from swinging idly upon said pin.

2. A door check consisting of a supporting frame secured to a door frame, an elongated check block pivoted within the frame and normally lying in a vertical position when the door is opened, a trip member adapted to be secured upon a door and engage and move said block in a horizontal position when the door is closed, and means secured to said door frame to engage said block to limit the upward movement thereof.

3. A door check consisting of an inverted substantially U-shaped frame secured upon the upper portion of a door frame, an elongated check block pivoted within the frame, a trip member adapted to be secured upon a door and engage and move said block upward, the upper end of said block being cut away adjacent to one side thereof, and a stop pin carried by the frame and projecting downwardly into the cut away of said block to engage and limit the upward movement of said block.

1,211,375. SANDWICH-MACHINE. ALFRED J. CLAYTON, Brooklyn, N. Y., assignor to N. Y. Sanitary Food Corp., New York, N. Y., a Corporation of New York. Filed Apr. 26, 1916. Serial No. 93,700. (Cl. 146—12.)

1. The combination with a container for investing material, of a container for filling material, a pusher for shifting a piece of investing material from its container to a position below the filling material container, a knife for slicing the filling material, a resilient finger at the exit of the investment container for controlling the outward movement of the material therefrom, and an ejector for pushing the assembled inserting and filling material to a delivery plate on the exterior of the machine; substantially as described.



2. The combination with a container for investing material, of a container for filling material, a pusher for pushing a piece of investing material from its container to a position below the filler container, a knife for slicing a chip of the filler material from the filler in the container and for supporting the body of the filling material against further downward movement while the knife is under said material, and an ejector for ejecting the assembled sandwich parts to a point of delivery, substantially as described.

3. The combination with a container for investing material, of a container for filling material, a pusher for pushing the piece of investing material from its container to a position below the filler container, a movable support for the bottom of said filling material, means for moving said support, a knife above said support for slicing the filler in such container upon the investing material pushed below the filler container, said knife being arranged to support the filling material against downward movement while the knife is under the material and during the time that the support has been moved from thereunder, and an ejector for ejecting the assembled sandwich parts to a point of delivery, substantially as described.

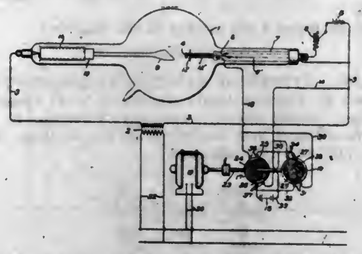
4. In a sandwich machine, mechanism for positioning investing material below a column of filling material, a movable support for said column, a knife for removing the filling material so as to place it on said investing material, actuating devices connected to the knife and support to shift the support when the knife is moved, mechanism for delivering the sandwich so formed, an actuating device for operating all of said mechanisms in a prearranged order to form and deliver a single sandwich during each cycle, and means for locking all of said mechanisms at the completion of each cycle; substantially as described.

5. In a sandwich machine, mechanism for positioning investing material below a column of filling material, a movable support for said column, a knife for removing the filling material and placing it on said investing material, actuating devices connected to the knife and support to shift the support when the knife is moved, mechanism for delivering the sandwich so formed, an actuating device for operating all of said mechanisms in a prearranged order to form and deliver a single sandwich during each cycle, means for preventing retrograde movement of said mechanisms, and means for locking said mechanisms at the completion of each cycle; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,211,376. ELECTRON-DISCHARGE APPARATUS AND METHOD OF OPERATING THE SAME. WILLIAM D. COOLIDGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 30, 1915. Serial No. 18,138. (Cl. 250—34.)

1. The process of selectively operating an electron discharge device fed with an energy supply periodically varying in voltage which consists in applying an electrostatic field about the cathode of said device to control the flow of current and periodically changing said electrostatic field over desired current intervals in the direction of positive polarity to increase the current.



2. The process of selectively operating an X-ray tube with a current of variable voltage which consists in applying an electrostatic field radially about the cathode of said tube to reduce the cathode discharge, and periodically in step with the variations of supply voltage changing said field over a range of voltages near the maximum value to increase the cathode discharge and thereby to increase the generation of X-rays.

3. The process of operating an electron discharge device which consists in supplying said device with a current periodically varying in potential and in synchronism with the variations of applied potential applying an electrostatic field about the cathode over selected portions of the supply current waves to increase the conductivity of said device relative to the remaining portions.

4. The process of operating with a periodically varying current an electrical discharge device having an electron-emitting cathode, an anode and an inclosing bulb evacuated to a pressure so low that evidences of positive ionization are substantially absent during the operation of the device, which consists in establishing an electrostatic field radially about the cathode, said field having negative potential high enough during intervals when no current is desired to prevent the discharge between the cathode and the anode, and periodically reducing the value of said field to or beyond zero during intervals when current flow is desired.

5. The combination of an electron discharge device comprising coöperating electrodes and a conductive member surrounding at least in part the discharge path between said electrodes, a source of variable current connected to the electrodes of said tube, a source of electromotive force, means for connecting said source between the cathode and the conductive member during selected portions of each wave of supply current synchronously with the periodicity of supply current.

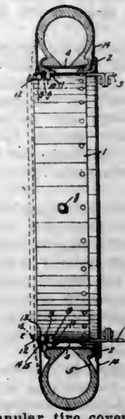
[Claims 6 to 9 not printed in the Gazette.]

1,211,377. COMBINED TIRE CARRIER AND COVER. EMIL R. DRAVER, Richmond, Ind. Filed Mar. 16, 1916. Serial No. 84,572. (Cl. 224—29.)

1. The combination with a carrying hoop having an outstanding clamping flange, of a demountable rim and tire applicable around said carrying hoop, rim holding means applied on said carrying hoop, and a flexible tire cover having its inner edge directly clamped between said clamping flange and the adjacent edge of said demountable rim, the outer edge of said cover being laterally spaced from the inner edge thereof and slipped over and engaged with said carrying hoop on a line outward of said rim holding means.

2. The combination with a carrying hoop having an outstanding clamping flange, of a demountable rim and tire applicable around said carrying hoop, and a flexible tire cover having its inner edge directly engaged between said clamping flange and the adjacent edge of said demountable rim, and means for holding said rim on said hoop in position to thus clamp the inner edge of said cover, the said cover having an elastic outer edge adapted to be sprung onto the outer portion of said hoop.

3. The combination with a carrying hoop, of a flexible tire cover provided with a continuous elastic outer edge and having a transversely split inner portion equipped with separable fasteners whereby it is adapted for application over a tire and onto a carrying hoop.

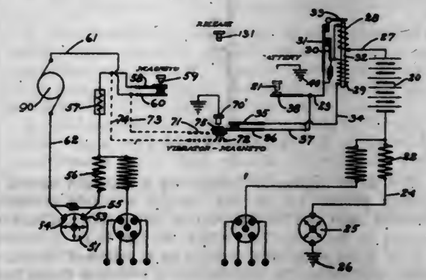


4. A flexible annular tire cover that is channel-shaped in cross section, having an elastic outer edge and having a transverse slit extended from the inner edge thereof, at least as far as the greatest diameter of said cover, and formed at the said slit with overlapping flaps equipped with fastening devices.

5. The combination with a carrying hoop, of a flexible tire cover provided with a continuous elastic outer edge and having a transversely split inner portion equipped with separable fasteners whereby it is adapted for application over a tire and onto a carrying hoop, in combination with a carrying hoop around which said cover is applicable, said hoop having a clamping flange for engagement with the inner edge portion of said cover, and means applied to said hoop for holding a demountable rim and tire thereon with the inner edge of said rim engaged with the inner edge portion of said cover.

[Claims 6 and 7 not printed in the Gazette.]

1,211,378. SYSTEM OF SELECTIVE ELECTRICAL DISTRIBUTION. CHARLES F. KETTERING and WILLIAM A. CHRYST, Dayton, Ohio, assignors to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Nov. 20, 1912. Serial No. 732,483. (Cl. 123—148.)



1. In a system for supplying ignition to combustion or explosion engines, the combination with a plurality of independent ignition systems; of controlling elements operable independently to bring the said ignition systems into operation and means having provisions for maintaining the established systems in operative condition upon the actuation of certain of the controlling elements, regardless of the previous position of the unactuated controlling elements.

2. In a system for supplying ignition to combustion or explosion engines, the combination with a plurality of independent ignition systems; of controlling elements operable independently to bring the various ignition systems into operation; and latching means actuated by the controlling elements and adapted to maintain the controlling elements in position to establish the ignition systems in operative position.

3. In a system for supplying ignition to combustion or explosion engines, the combination with a plurality of ignition systems; of controlling elements operable independently and concurrently to establish any of the ignition systems independently, and certain of the systems concurrently; and means operable by each of the controlling elements for maintaining the ignition system in operative condition when once established by the controlling element.

4. In a system for supplying ignition to combustion or explosion engines, the combination with a plurality of ignition systems; of controlling elements for establishing and dis-establishing said systems; and means for maintaining said systems in established position when the controlling elements are operated concurrently, said means being operable to release any established system, when actuated by a controlling element operated to independently establish a different system.

5. In a system for supplying ignition to combustion or explosion engines, the combination with a plurality of ignition systems; independent controlling elements for said systems; and means operable by said controlling elements for maintaining all of said circuits in operative condition, when the controlling elements are actuated concurrently.

[Claims 6 to 23 not printed in the Gazette.]

1,211,379. GAME APPARATUS. AUGUST T. MAISCH, Brooklyn, N. Y. Filed Oct. 11, 1915. Serial No. 55,132. (Cl. 46—59.)



1. A game apparatus comprising a standard having a bearing portion at the top thereof, a frame rotatably mounted upon said bearing portion, and a series of baskets carried by the frame into which the ball is to be landed.

2. A game apparatus comprising a standard having a needle portion at the top thereof, a rotatable frame having a step bearing mounted on the needle, and a series of baskets carried by the frame.

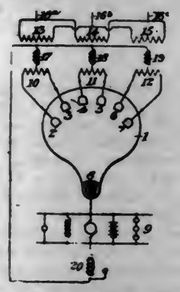
3. A game apparatus comprising a standard, a frame rotatably mounted thereon comprising a circular ring, a series of spanners attached to the ring, and baskets depending from said spanners.

4. In a game apparatus, a support, a frame rotatably mounted thereon, a circular series of baskets on the frame, and another basket disposed above said circular series.

5. In a game apparatus, a support, a frame rotatably mounted thereon comprising a number of vertical pieces, a basket secured to said vertical pieces at one elevation, and a second basket secured to said pieces at a higher elevation.

[Claims 6 and 7 not printed in the Gazette.]

1,211,380. SYSTEM OF ELECTRICAL DISTRIBUTION. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Feb. 3, 1913. Serial No. 745,786. (Cl. 175—363.)



1. In a system of electrical distribution, a vapor rectifier, a three-phase supply circuit, three single phase transformers connected in delta across the supply circuits and having their secondaries connected together at their middle points, connections from the terminals of the secondaries to separate anodes in said rectifier and a connection from the point of common connection of said secondaries to the cathode of the rectifier and inductance coils inserted in the connections between said middle points and said common point.

2. In a system of electrical distribution, the combination with a multi-phase rectifier, a work circuit therefor, a plurality of single-phase transformers connected to anodes in said rectifier, and means for maintaining a substantially continuous flow of current from each single-phase transformer, of a poly-phase supply for the said single-phase transformers, whereby relatively continuous currents flow in said supply circuit.

3. In a system of electrical distribution, the combination with a poly-phase rectifier, having a plurality of main anodes and a main cathode and separate supply points for said several anodes, of means for causing a simultaneous flow in said rectifier from a plurality of said anodes.

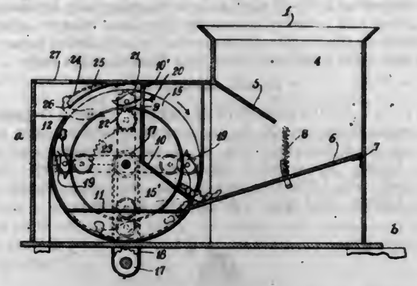
4. In a system of electrical distribution, the combination with a poly-phase vapor electric rectifier, of a plurality of single-phase supply windings therefor, and means for causing current flow from said single-phase supply windings to overlap in said rectifier.

5. In a system of electrical distribution, the combination with a poly-phase rectifier comprising an exhausted container, a plurality of main anodes in pairs, a main cathode therefor and a plurality of sources of supply of different phase for said anodes, of means for maintaining a flow of current from each pair of said anodes continuous independently of the current flowing from other anodes.

REISSUES.

14,238. PLANTER. JAMES D. CHANTLER, Freeport, N. Y. Filed July 31, 1916. Serial No. 112,436. Original No. 1,142,400, dated June 8, 1915, Serial No. 879,680, filed Dec. 30, 1914. (Cl. 111—27.)

1. A planter comprising a hopper, a wheel adjacent to said hopper, fingers on said wheel, prongs on the fingers adapted to engage the seed, a stationary disk filling said wheel, means for revolving the wheel, means for rotating the fingers at a predetermined point and means for removing the seed from the fingers.



2. A planter comprising a hopper, a yieldable bottom therein, a partition having a yieldable section adjacent to the bottom, a chamber having an A-shaped bottom, rotating members located to rotate in the bottom of the chamber, fingers on said rotating members adapted to engage the seed, means for rotating said members, means for rotating said fingers at a predetermined point, a swinging flap adapted to engage the seed to remove it from the fingers and a chute located adjacent thereto to receive the seed and deliver it to the furrow.

3. In a potato planter a seed chamber, a rotating member therein, means for rotating said member, pronged fingers rotatively mounted on said member adapted to engage the seed and means for rotating the fingers at a predetermined point.

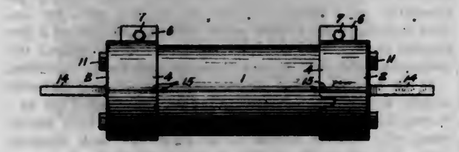
4. A potato planter comprising a seed chamber, a wheel therein, pronged fingers on said wheel adapted to engage the seed, a filler in said wheel, means for rotating the fingers at a predetermined point and means for removing the seed from the fingers.

5. In a potato planted a hopper adapted to hold the main mass of seed, a bottom therein, a partition, a seed chamber adjacent to the hopper adapted to hold a smaller mass of seed, members located to rotate in the bottom of the chamber, means for removing the seed at a predetermined point and a chute adjacent to the point of removal adapted to receive the seed and deliver it to the furrow.

6. In a potato planter a seed chamber having an A-shaped bottom, rotating members located to rotate in the bottom of said chamber, pronged fingers rotatively mounted on said members adapted to engage the seed, means for rotating the fingers at a predetermined point, means for removing the seed at a predetermined point and a chute located adjacent thereto adapted to receive the seed and deliver it to the furrow.

7. In a potato planter a seed chamber, a rotating member therein, means for rotating the member, pronged fingers on said member adapted to engage the seed, means for rotating the fingers on the member at a predetermined point and means for thereafter removing the seed from the fingers.

14,239. CARTRIDGE-FUSE. ALBERT F. DAUM, Pittsburgh, Pa. Filed Oct. 30, 1915. Serial No. 58,916. Original No. 1,061,228, dated May 6, 1913, Serial No. 680,939, filed Mar. 1, 1912. (Cl. 175—273.)

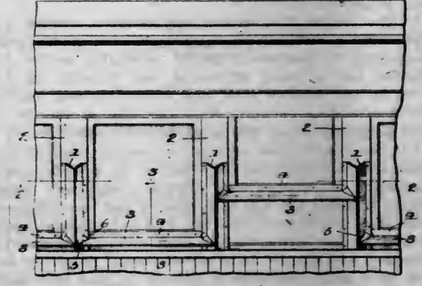


1. In a cartridge fuse, a tubular body, skirted caps secured exteriorly of the ends of the body and provided with holes in their ends, a washer within each cap free therefrom and from the body and having therein threaded holes arranged to register with complemental holes in the adjacent cap, a fuse element extending through the said body and having its ends passed through one of the holes in each washer, and one or more screws extending through some only of the said holes in a cap and certain of the unoccupied holes in the washer to clamp the fuse element between each washer and the adjacent cap, other of said registering holes being unoccupied to allow the escape of gases therethrough.

2. In a cartridge fuse, a tubular body, a cup-shaped cap having its closed end opposite the end of the body and having its skirted portion arranged telescopically over one end of the body and provided with a slot, and means for drawing the opposing edges of the slot toward each other so as to clamp the skirted portion to the body.

3. In a refillable fuse, an end cap, a shell adapted to extend into said cap, a metallic member within the end cap and free from peripheral engagement with the skirt of the cap and coöperating with the cap to secure a fuse element therebetween, said cap and member having complemental openings spaced from the fuse axis to provide a free clamping space between the cap and member intermediate said openings, a plurality of clamping screws extending through cap openings and threaded into member openings, and means for removably securing the cap to the shell, said member being free from holding engagement with the shell, whereby maintenance of position of the cap by said means and the freedom from holding engagement between member and shell will permit the member to be drawn into clamping position by the threading action of the clamping screws.

14,240. CINDER-GUARD. DAVID FUNSTEN, Washington, D. C. Filed Oct. 14, 1916. Serial No. 125,741. Original No. 1,171,033, dated Feb. 8, 1916, Serial No. 55,090, filed Oct. 9, 1915. (Cl. 98—21.)



1. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a shield that extends substantially horizontally across and projects outwardly from the window substantially at the bottom of the sash.

2. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a shield that extends substantially horizontally across and projects outwardly from the window substantially at the bottom of the sash when the latter is in its fully raised position, said position being intermediate the sill and the top of the window.

3. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a substantially horizontally extending vertically movable shield that extends across the window and projects outwardly therefrom, said shield being shiftable to various vertical positions to agree with the various vertical positions of the sash bottom in the vertical movement of the sash.

4. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a substantially horizontal shield that extends

2. In a system for supplying ignition to combustion or explosion engines, the combination with a plurality of independent ignition systems; of controlling elements operable independently to bring the various ignition systems into operation; and latching means actuated by the controlling elements and adapted to maintain the controlling elements in position to establish the ignition systems in operative position.

3. In a system for supplying ignition to combustion or explosion engines, the combination with a plurality of ignition systems; of controlling elements operable independently and concurrently to establish any of the ignition systems independently, and certain of the systems concurrently; and means operable by each of the controlling elements for maintaining the ignition system in operative condition when once established by the controlling element.

4. In a system for supplying ignition to combustion or explosion engines, the combination with a plurality of ignition systems; of controlling elements for establishing and dis-establishing said systems; and means for maintaining said systems in established position when the controlling elements are operated concurrently, said means being operable to release any established system, when actuated by a controlling element operated to independently establish a different system.

5. In a system for supplying ignition to combustion or explosion engines, the combination with a plurality of ignition systems; independent controlling elements for said systems; and means operable by said controlling elements for maintaining all of said circuits in operative condition, when the controlling elements are actuated concurrently.

[Claims 6 to 23 not printed in the Gazette.]

1,211,379. GAME APPARATUS. AUGUST T. MAISCH, Brooklyn, N. Y. Filed Oct. 11, 1915. Serial No. 55,132. (Cl. 46—59.)



1. A game apparatus comprising a standard having a bearing portion at the top thereof, a frame rotatably mounted upon said bearing portion, and a series of baskets carried by the frame into which the ball is to be landed.

2. A game apparatus comprising a standard having a needle portion at the top thereof, a rotatable frame having a step bearing mounted on the needle, and a series of baskets carried by the frame.

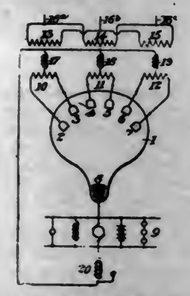
3. A game apparatus comprising a standard, a frame rotatably mounted thereon comprising a circular ring, a series of spanners attached to the ring, and baskets depending from said spanners.

4. In a game apparatus, a support, a frame rotatably mounted thereon, a circular series of baskets on the frame, and another basket disposed above said circular series.

5. In a game apparatus, a support, a frame rotatably mounted thereon comprising a number of vertical pieces, a basket secured to said vertical pieces at one elevation, and a second basket secured to said pieces at a higher elevation.

[Claims 6 and 7 not printed in the Gazette.]

1,211,380. SYSTEM OF ELECTRICAL DISTRIBUTION. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Feb. 3, 1913. Serial No. 745,786. (Cl. 175—363.)



1. In a system of electrical distribution, a vapor rectifier, a three-phase supply circuit, three single phase transformers connected in delta across the supply circuits and having their secondaries connected together at their middle points, connections from the terminals of the secondaries to separate anodes in said rectifier and a connection from the point of common connection of said secondaries to the cathode of the rectifier and inductance coils inserted in the connections between said middle points and said common point.

2. In a system of electrical distribution, the combination with a multi-phase rectifier, a work circuit therefor, a plurality of single-phase transformers connected to anodes in said rectifier, and means for maintaining a substantially continuous flow of current from each single-phase transformer, of a poly-phase supply for the said single-phase transformers, whereby relatively continuous currents flow in said supply circuit.

3. In a system of electrical distribution, the combination with a poly-phase rectifier, having a plurality of main anodes and a main cathode and separate supply points for said several anodes, of means for causing a simultaneous flow in said rectifier from a plurality of said anodes.

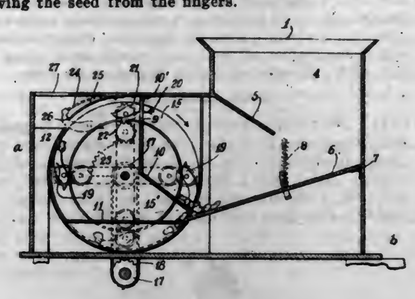
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5. In a system of electrical distribution, the combination with a poly-phase rectifier comprising an exhausted container, a plurality of main anodes in pairs, a main cathode therefor and a plurality of sources of supply of different phase for said anodes, of means for maintaining a flow of current from each pair of said anodes continuous independently of the current flowing from other anodes.

REISSUES.

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2. A planter comprising a hopper, a yieldable bottom therein, a partition having a yieldable section adjacent to the bottom, a chamber having an A-shaped bottom, rotating members located to rotate in the bottom of the chamber, fingers on said rotating members adapted to engage the seed, means for rotating said members, means for rotating said fingers at a predetermined point, a swinging flap adapted to engage the seed to remove it from the fingers and a chute located adjacent thereto to receive the seed and deliver it to the furrow.

3. In a potato planter a seed chamber, a rotating member therein, means for rotating said member, pronged fingers rotatively mounted on said member adapted to engage the seed and means for rotating the fingers at a predetermined point.

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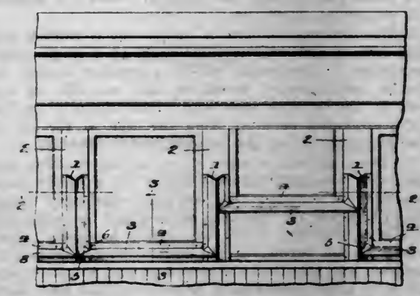


1. In a cartridge fuse, a tubular body, skirted caps secured exteriorly of the ends of the body and provided with holes in their ends, a washer within each cap free therefrom and from the body and having therein threaded holes arranged to register with complemental holes in the adjacent cap, a fuse element extending through the said body and having its ends passed through one of the holes in each washer, and one or more screws extending through some only of the said holes in a cap and certain of the unoccupied holes in the washer to clamp the fuse element between each washer and the adjacent cap, other of said registering holes being unoccupied to allow the escape of gases therethrough.

2. In a cartridge fuse, a tubular body, a cup-shaped cap having its closed end opposite the end of the body and having its skirted portion arranged telescopically over one end of the body and provided with a slot, and means for drawing the opposing edges of the slot toward each other so as to clamp the skirted portion to the body.

3. In a refillable fuse, an end cap, a shell adapted to extend into said cap, a metallic member within the end cap and free from peripheral engagement with the skirt of the cap and coöperating with the cap to secure a fuse element therebetween, said cap and member having complemental openings spaced from the fuse axis to provide a free clamping space between the cap and member intermediate said openings, a plurality of clamping screws extending through cap openings and threaded into member openings, and means for removably securing the cap to the shell, said member being free from holding engagement with the shell, whereby maintenance of position of the cap by said means and the freedom from holding engagement between member and shell will permit the member to be drawn into clamping position by the threading action of the clamping screws.

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1. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a shield that extends substantially horizontally across and projects outwardly from the window substantially at the bottom of the sash.

2. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a shield that extends substantially horizontally across and projects outwardly from the window substantially at the bottom of the sash when the latter is in its fully raised position, said position being intermediate the sill and the top of the window.

3. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a substantially horizontally extending vertically movable shield that extends across the window and projects outwardly therefrom, said shield being shiftable to various vertical positions to agree with the various vertical positions of the sash bottom in the vertical movement of the sash.

4. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a substantially horizontal shield that extends

across the window, and vertically movable to extend outwardly substantially at the bottom of the sash in all positions thereof.

5. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a substantially horizontally extending vertically movable shield that extends across the window, and having its outer free edge in substantially the plane of the bottom of the sash, said shield being shiftable to various vertical positions to agree with the various vertical positions of the sash bottom in the vertical movements of the sash.

6. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a substantially horizontally extending vertically movable shield that extends across the window, and having its outer free edge in substantially the plane of the bottom of the sash, and means attaching said shield to the sash situated wholly on the outside of the sash.

7. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a substantially horizontally extending vertically movable shield that extends across the window, said shield being shiftable to various vertical positions to agree with the various vertical positions of the sash bottom in the vertical movement of the sash, and a substantially vertical shield extending outward situated in a plane that crosses the plane in which the horizontally extending shield lies.

8. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a substantially horizontally extending vertically movable shield that extends across the window and having its outer edge in substantially the plane of the bottom of the sash, means attaching said shield to the sash situated wholly on the outside of the sash, and a substantially vertical shield extending outward situated in a plane that crosses the plane in which the horizontally extending shield lies.

9. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a horizontal shield extending across the window and outward therefrom and movable up and down by the window sash, and a substantially vertical shield extending outward from the side of the car in close proximity to an end of said lateral shield.

10. The combination with a car having windows provided with vertically movable sashes, of a cinder guard comprising a substantially vertical stationary shield located adjacent the side of a window and extending outward from the side of the car, and a horizontal shield secured to the bottom of the sash extending outwardly therefrom and adapted to be moved up and dowwn by said sash in a path substantially parallel to said side shield and adjacent thereto.

11. The combination with a car having windows provided with vertically movable sashes, of a cinder guard comprising substantially vertical stationary shields located between adjacent windows and extending outward from the side of the car, and a horizontal shield secured to the window sash bottom, lying in a plane intersecting that of said vertical shields and movable up and down therebetween by the raising and lowering of said sash.

12. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a shield that extends substantially horizontally across and projects outwardly from the window, and a substantially vertical shield extending outward, said horizontally extending shield being upturned adjacent the vertical shield.

13. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a shield that extends substantially horizontally across and projects outwardly from the window substantially at the bottom of the sash, the said shield being provided with upward extensions at the sides of the window.

14. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a shield that extends substantially horizontally across and projects outwardly from the window substantially at the bottom of the sash, the said shield being provided with vertically extending flanges at its ends.

14,241. INCANDESCENT MANTLE. SVERRE GULBRANDSEN, Woodbury, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Dec. 1, 1916. Serial No. 134,537. Original No. 1,133,470, dated Mar. 30, 1915, Serial No. 836,671, filed May 6, 1914. (Cl. 67—98.)



1. As a new article of manufacture, a limp mantle reduced in size to less than one inch diameter when shaped, and adapted for connection to burners using ordinary gas pressures, and a carrier having a correspondingly reduced opening to which the open end of the mantle is secured, substantially as described.

2. As a new article of manufacture, a limp mantle reduced in size to less than one inch diameter when shaped, and adapted for connection to burners using ordinary gas pressures, and a carrier having a correspondingly reduced opening to which the open end of the mantle is secured, said carrier having a screw-threaded portion adapted to screw snugly on a burner tip, substantially as described.

3. As a new article of manufacture, a reduced limp mantle adapted for connection to burners using ordinary city gas pressures, said mantle having its surface area not less than five times its volume when shaped, and its open end portion adapted to be tightly secured to a reduced burner pit, substantially as described.

14,242. LIMP INCANDESCENT MANTLE. SVERRE GULBRANDSEN, Woodbury, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Dec. 1, 1916. Serial No. 134,538. Original No. 1,197,365, dated Sept. 5, 1916, Serial No. 75,047, filed Jan. 29, 1916. (Cl. 67—98.)



1. As a new article of manufacture, a limp inverted mantle having a carrier adapted for close connection with a burner using ordinary gas pressures, said mantle being of a size to shrink to less than 1 inch diameter when shaped in place, and having such a proportion of length to diameter that when shaped the proportion will be not over 2; substantially as described.

2. As a new article of manufacture, a limp inverted mantle having its open end portion adapted to be tightly secured to a reduced burner tip using ordinary city gas pressures, said mantle having its surface area not less than five times its volume when shaped, and having a proportion of length to diameter such that when shaped this proportion will not be over 2; substantially as described.

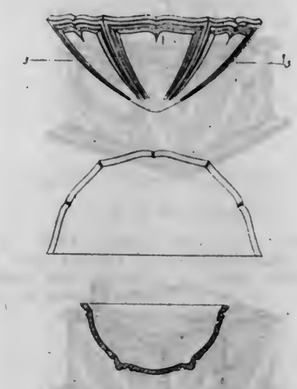
3. As a new article of manufacture, a limp inverted mantle secured to a carrier adapted for connection to a burner nozzle using ordinary gas pressures, said mantle being of a size to shrink to at least one inch diameter when shaped in place, the proportion of the length of the mantle to its diameter being such that when shaped this proportion will not be over 2, and the weight of the mantle per square inch of area when shaped being not over .055 grams; substantially as described.

4. As a new article of manufacture, a limp inverted mantle adapted to be tightly secured to a reduced burner tip using ordinary city gas pressures, said mantle having its surface area not less than five times its volume when shaped, and the weight of the shaped mantle being not over .055 grams per square inch; substantially as described.

5. As a new article of manufacture, a limp inverted mantle having a carrier adapted to make a close connection with a burner nozzle using ordinary gas pressures, said mantle being of a size to shrink to at least one inch diameter when shaped in place and being of such weight that after shaping in place its weight per square inch of illuminated portion is not over .055 grams, substantially as described.

DESIGNS.

50,117. BOWL FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J. Filed Sept. 22, 1916. Serial No. 121,678. Term of patent 7 years.



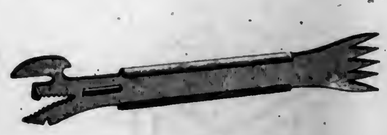
The ornamental design for a bowl for lighting fixtures, as shown.

50,118. WALL-PAPER. CASPAR BECKER, Montgomery county, Pa., assignor to Becker, Smith & Page, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 6, 1916. Serial No. 129,888. Term of patent 7 years.



The ornamental design for wall paper, as shown.

50,119. WRENCH. WILLIAM LOUIS BESSOLO, San Diego, Cal. Filed Aug. 16, 1916. Serial No. 115,300. Term of patent 14 years.



The ornamental design for a wrench as shown.

50,120. VEHICLE-TIRE. WARREN B. BUCKLEY, New York, N. Y. Filed Aug. 24, 1916. Serial No. 116,734. Term of patent 14 years.



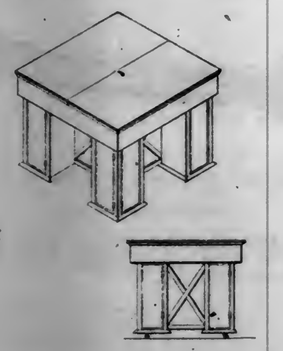
The ornamental design for a vehicle tire, as shown.

50,121. VEHICLE-TIRE. WARREN B. BUCKLEY, New York, N. Y. Filed Oct. 14, 1916. Serial No. 125,744. Term of patent 14 years.



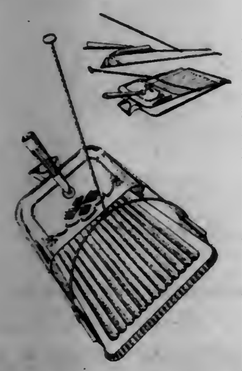
The ornamental design for a vehicle tire, as shown.

50,122. BOOK-TABLE. MURRY BUTLER, Brookhaven, Miss. Filed Oct. 20, 1916. Serial No. 126,801. Term of patent 14 years.



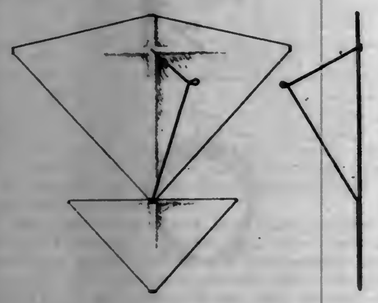
The ornamental design for a book table, as shown.

50,123. DUST-PAN. THOMAS A. CARVER, Colo, Iowa. Filed Sept. 1, 1916. Serial No. 118,155. Term of patent 3½ years.



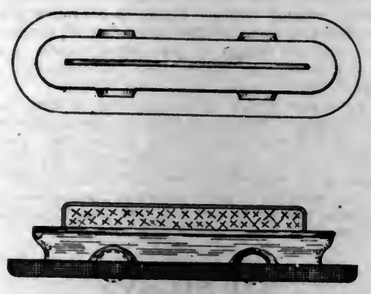
The ornamental design for a dust pan, as shown.

50,124. KITE. WILLIAM A. COLLINS, Brooklyn, N. Y. Filed Sept. 7, 1916. Serial No. 118,937. Term of patent 3½ years.



The ornamental design for a kite, as shown.

50,125. VEHICLE-BODY. HERMAN W. EICHBAUM, Venice, Cal. Filed June 20, 1916. Serial No. 104,827. Term of patent 7 years.



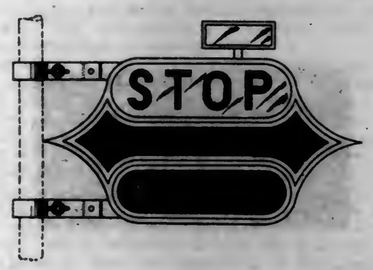
The ornamental design for a vehicle body, as shown.

50,126. TALKING-MACHINE CASING. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Jan. 28, 1911. Serial No. 605,335. Term of patent 14 years.



The ornamental design for a talking machine casing, as shown.

50,127. AUTOMOBILE SIGNAL-BOX. EDWIN T. GRAY and ALFRED T. HOEVET, New York, N. Y. Filed Sept. 1, 1916. Serial No. 118,153. Term of patent 3½ years.



The ornamental design for an automobile signal box as shown.

50,128. GEM-SETTING. DAVID GREENBERG, New York, N. Y. Filed Sept. 25, 1916. Serial No. 122,161. Term of patent 7 years.



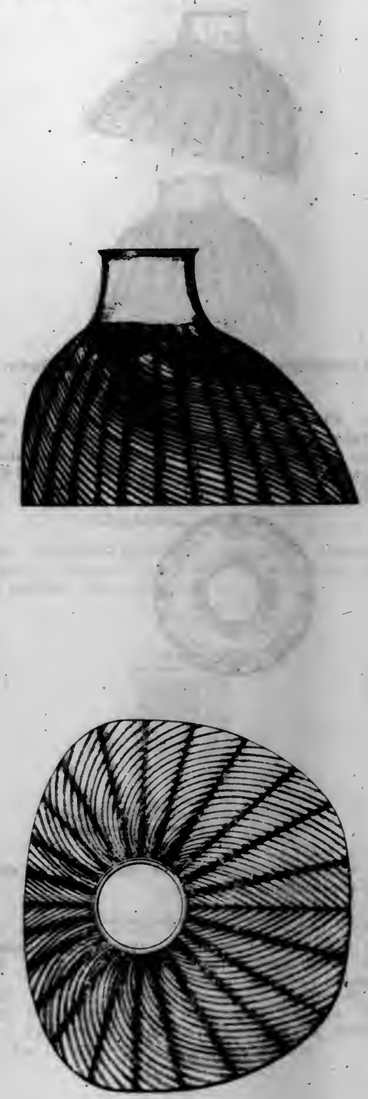
The ornamental design for a gem setting as shown.

50,129. GEAR-WHEEL. WILLIAM S. HARLEY, Milwaukee, Wis., assignor to Harley-Davidson Motor Co., Milwaukee, Wis. Filed Oct. 21, 1916. Serial No. 127,024. Term of patent 14 years.



The ornamental design for a gear wheel, as shown.

50,130. REFLECTOR. JOHN A. HOEVELER, Chicago, Ill. Filed Jan. 29, 1916. Serial No. 75,181. Term of patent 14 years.



The ornamental design for a reflector, as shown.

50,131. REFLECTOR. JOHN A. HOEVELER, Chicago, Ill. Filed Jan. 29, 1916. Serial No. 75,182. Term of patent 14 years.



The ornamental design for a reflector, as shown.

50,132. CHOP-DISH OR SIMILAR ARTICLE. GEORGE P. ITTIG, Bridgeport, Conn., assignor to W. D. Smith Silver Company, Bridgeport, Conn., a Corporation of Delaware. Filed July 10, 1916. Serial No. 108,478. Term of patent 3½ years.





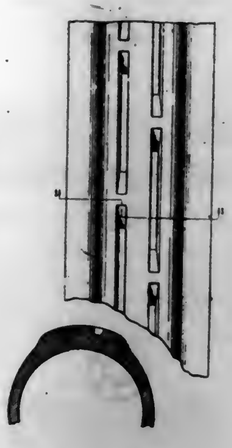
The ornamental design for a chop dish or similar article, substantially as shown.

50,133. SPOON. EDWARD H. JOHNSON, Binghamton, N. Y. Filed Nov. 1, 1916. Serial No. 129,022. Term of patent 14 years.



The ornamental design for a spoon substantially as shown and described.

50,134. VEHICLE-TIRE. ROBERT H. KEATON, San Francisco, Cal. Filed June 10, 1916. Serial No. 103,040. Term of patent 14 years.



The ornamental design for a vehicle tire substantially as shown.

50,135. CHARM. AUGUST G. KLEINT, Fort Wayne, Ind. Filed Sept. 7, 1916. Serial No. 118,928. Term of patent 7 years.



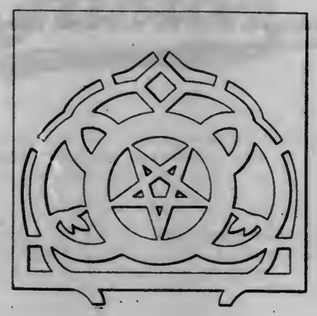
The ornamental design for a charm as shown.

50,136. HAT-BAND. GUSTAV KREMER, Paterson, N. J. Filed Sept. 17, 1915. Serial No. 51,295. Term of patent 7 years.



The ornamental design for a hat band, substantially as herein described and shown.

50,137. WALL-PAPER. HUGH MCKINNON, Truro, Nova Scotia, Canada. Filed June 6, 1916. Serial No. 102,099. Term of patent 3½ years.



The ornamental design for wall paper, as shown.

50,138. ELECTRIC-LIGHT FIXTURE. THOMAS O'DONNELL, Ironwood, Mich. Filed Apr. 7, 1916. Serial No. 89,718. Term of patent 14 years.



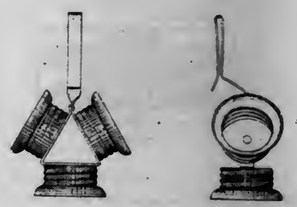
The ornamental design for an electric light fixture, as shown.

50,139. TALKING-MACHINE CABINET. ARCHIE E. PARNALL, Chicago, Ill. Filed Sept. 18, 1916. Serial No. 120,908. Term of patent 3½ years.



The ornamental design for talking machine cabinet as shown.

50,140. CARBID-CARRIER. ADOLPH C. RECKER, Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Oct. 26, 1916. Serial No. 127,955. Term of patent 14 years.



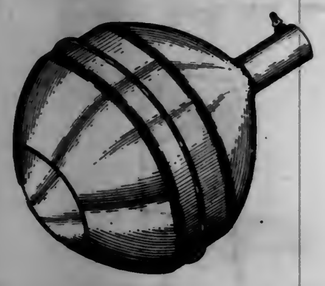
The ornamental design for a carbid carrier, as shown.

50,141. COFFEE-POT. GORDON G. SAPP, Chicago, Ill. Filed Sept. 13, 1915. Serial No. 50,518. Term of patent 7 years.



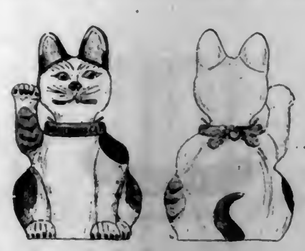
The ornamental design for a coffee pot, as shown.

50,142. REFLECTOR FOR MOVING-PICTURE-MACHINE LIGHT. ELMER SHOUP, Winesburg, Ohio, assignor of one-third to Rolandus O. McFarren, Massillon, Ohio, and one-third to John E. Arnold, Mount Hope, Ohio. Filed Sept. 13, 1916. Serial No. 119,988. Term of patent 3½ years.



The ornamental design for a reflector for moving picture machine light, substantially as shown.

50,143. ANIMAL FIGURE. TOSHIO SOGA, Brooklyn, N. Y., assignor to Morimura Bros., New York, N. Y., a Firm composed of Ichizaemon Morimura, Est. of Toyo Morimura, Kaisaku Morimura, Saneyoshi Hirose, Sanemitsu Nirose, and Yusakata Murai. Filed Oct. 6, 1916. Serial No. 124,198. Term of patent 3½ years.



The ornamental design for an animal figure, as shown and described.

50,144. WATER-BOTTLE, SYRINGE-BAG, OR SIMILAR ARTICLE. FRED O. WILLIAMS, Brookline, Mass., assignor to United Drug Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 31, 1916. Serial No. 128,797. Term of patent 7 years.



The ornamental design for water bottle, syringe bag, or similar article, as shown.

TRADE-MARKS

PUBLISHED JANUARY 2, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 88,337. (CLASS 15. OILS AND GREASES.) THE PHOENIX OIL COMPANY, Cleveland, Ohio. Filed July 31, 1915.

Cut-rite

Particular description of goods.—Soluble Lubricating-Oils.
Claims use since about January of 1912.

Ser. No. 90,642. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE WIRTHLIN-MANN COMPANY, Cincinnati, Ohio. Filed Nov. 13, 1915.

Hiklas

Particular description of goods.—Rubber Belting, Rubber Hose, Rubber Packing, and Rubber Tires.
Claims use since Dec. 15, 1912.

Ser. No. 92,323. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) A. BOURJOIS & Co., INC., New York, N. Y. Filed Jan. 22, 1916.

SAVON MANON LESCAUT

No claim being made to the word "Savon."
Particular description of goods.—Soap.
Claims use since Oct. 22, 1894.

Ser. No. 92,426. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE SIMPLEX PROTECTIVE STOPPER CO., Baltimore, Md. Filed Jan. 26, 1916.

SIMPLEX

Particular description of goods.—Non-Refillable-Bottle Stoppers.
Claims use since May, 1911.

Ser. No. 92,472. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KEEN ROBINSON AND COMPANY LIMITED, London, England. Filed Jan. 28, 1916. Under ten-year proviso.



No claim is made to the representation of the British coat-of-arms apart from the mark shown in the drawing.
Particular description of goods.—Groats.
Claims use since the year 1862.

Ser. No. 93,841. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HUDSON MECHANICAL RUBBER COMPANY, New York, N. Y. Filed Mar. 24, 1916.

Particular description of goods.—Canvas Belting, Rubber Belting, Leather Belting, and Combination Canvas and Rubber Belting.
Claims use since Jan. 1, 1912.

Ser. No. 93,931. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE COLORPLATE ENGRAVING COMPANY, New York, N. Y. Filed Mar. 28, 1916.

PRYNTWEL PLATES TRADE MARK REGISTERED

No registration rights being claimed for the words "Pryntwel Plates" and "Trade-Mark Registered" apart from the mark shown in the drawing.
Particular description of goods.—Etched and Engraved Plates.
Claims use since Dec. 18, 1915.

Ser. No. 93,956. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HENRY GITTERMAN & Co., New York, N. Y. Filed Mar. 29, 1916.

WYCLO
The White Shoe Cloth with many merits

The words "The White Shoes Cloth with Many Merits" being disclaimed.
Particular description of goods.—Adhesively-United Laminated Fabrics for Use as a Shoe-Cloth.
Claims use since Feb. 1, 1916.

Ser. No. 94,380. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) HERBERT A. FOSTER, Spokane, Wash. Filed Apr. 13, 1916.

Thrift Coin

No claim being made to the word "Coin."
Particular description of goods.—Redeemable Trade-Checks Made of Metal.
Claims use since Mar. 25, 1916.

Ser. No. 94,445. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ANDREW KIRKPATRICK, New York, N. Y. Filed Apr. 15, 1916.

GEM

Particular description of goods.—Carbureters.
Claims use since Dec. 1, 1915.

Ser. No. 96,309. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) NEW YORK BELTING AND PACKING COMPANY, New York, N. Y. Filed July 3, 1916.

TRIPLE DIAMOND

Particular description of goods.—Machinery-Belting Composed of Rubber and Fabric.
Claims use since June 8, 1916.

Ser. No. 96,310. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) NEW YORK BELTING AND PACKING COMPANY, New York, N. Y. Filed July 3, 1916.

Particular description of goods.—Machinery-Belting Composed of Rubber and Fabric.
Claims use since June 8, 1916.

Ser. No. 96,362. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBERT AUGUSTE ODIER, Geneva, Switzerland. Filed July 6, 1916.

Silederine

Particular description of goods.—Lotions, Pomades, and Powders for Use in the Treatment of Wounds.
Claims use since Jan. 13, 1916.

Ser. No. 97,014. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) FABRIC FIRE HOSE COMPANY, New York, N. Y., and Sandy Hook, Conn. Filed Aug. 1, 1916. Under ten-year proviso.

SAFETY

Particular description of goods.—Conducting-Hose Composed of Rubber and Fabric.
Claims use since 1881.

Ser. No. 97,020. (CLASS 43. THREAD AND YARN.) MARSHALL FIELD & COMPANY, Chicago, Ill. Filed Aug. 1, 1916.

KLOSTER

Particular description of goods.—Cotton Threads and Yarns.
Claims use since about Apr. 1, 1916.

Ser. No. 97,081. (CLASS 38. PRINTS AND PUBLICATIONS.) ELIZABETH M. GILMER, New York, N. Y. Filed Aug. 4, 1916.

Dorothy Dix

Particular description of goods.—Newspaper Articles. Magazine Articles, a Magazine-Section Published Periodically.
Claims use since May 5, 1895.

Ser. No. 97,392. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) BLUE DIAMOND COAL COMPANY, Knoxville, Tenn., and Cardiff, Ky. Filed Aug. 17, 1916.

BLUE DIAMOND COAL

No claim being made to the word "Coal" apart from the mark shown in the drawing, the diamond-shaped field being printed in blue.
Particular description of goods.—Coal.
Claims use since June 15, 1916.

Ser. No. 97,401. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE GLUCKAUF COMPANY, INC., New York, N. Y. Filed Aug. 17, 1916.

YELLOW JACKET

Particular description of goods.—Suspenders.
Claims use since Feb. 19, 1914.

Ser. No. 97,465. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ABRAHAM M. MALOUF, Salt Lake City, Utah. Filed Aug. 21, 1916.

The First National Stores

"The First National Stores." The words "The" and "Stores" are disclaimed.
Particular description of goods.—Embroideries Made of Silk and Wool, and Suspenders.
Claims use since the 3d day of January, 1916.

Ser. No. 97,474. (CLASS 17. TOBACCO PRODUCTS.) THEOBALD AND OPPENHEIMER COMPANY, Philadelphia, Pa. Filed Aug. 21, 1916.

EL PROPOSO
T & CO
Rough Havana
Seed Wrapper

The words "Philadelphia Rough Havana Seed Wrapper" being disclaimed.
Particular description of goods.—Cigars.
Claims use since the year 1904.

Ser. No. 97,521. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) POLAND AND SAVAGE, Philadelphia, Pa. Filed Aug. 21, 1916.

MAJESTIC



Particular description of goods.—A Remedy for Epileptic Fits and Convulsions.
Claims use since Aug. 1, 1916.

Ser. No. 97,676. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE WORTHINGTON BALL COMPANY, Elyria, Ohio. Filed Aug. 28, 1916.



No claim is made to the representation of the golf-ball on the drawing apart from the black square or diamond on the golf-ball shown in the drawing.
Particular description of goods.—Golf-Balls.
Claims use since Mar. 31, 1916.

Ser. No. 97,728. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) GANDOLFO CIPRIANO, New York, N. Y. Filed Aug. 31, 1916.



G.C.

The trade-mark consists of the letters "G. C.," accompanied by the representation of a horse's head; but no claim is made to the use of the said representation.
Particular description of goods.—Feed-Bags.
Claims use since Apr. 11, 1916.

Ser. No. 97,761. (CLASS 37. PAPER AND STATIONERY.) WORTENDYKE MANUFACTURING CO., Richmond, Va. Filed Sept. 1, 1916.

ATHLETE

TOILET TISSUE

No claim being made to the words "Toilet Tissue" apart from the mark as shown.
Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since July 1, 1916.

Ser. No. 97,762. (CLASS 37. PAPER AND STATIONERY.) WORTENDYKE MANUFACTURING CO., Richmond, Va. Filed Sept. 1, 1916.

AMIGO

TOILET TISSUE

No claim being made to the words "Toilet Tissue" apart from the mark as shown.
Particular description of goods.—Toilet Paper and Paper Towels.
Claims use since July 1, 1916.

Ser. No. 97,764. (CLASS 37. PAPER AND STATIONERY.) WORTENDYKE MANUFACTURING CO., Richmond, Va. Filed Sept. 1, 1916.



No claim being made to the words "Toilet Tissue" apart from the mark as shown.
Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since July 1, 1916.

Ser. No. 97,823. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID A. SALTZ, New York, N. Y. Filed Sept. 6, 1916.

SAL-NE

Particular description of goods.—Hair-Remover.
Claims use since Feb. 1, 1916.

Ser. No. 97,948. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CONWAY & HALL, Sault Ste. Marie, Mich. Filed Sept. 12, 1916.

AR-BE-TABS

Particular description of goods.—Medicinal Tablets for the Treatment of Anemic Conditions of the Blood.
Claims use since Sept. 1, 1916.

Ser. No. 98,039. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) B. ALTMAN & CO., New York, N. Y. Filed Sept. 18, 1916.

BALTA

Particular description of goods.—Neckties.
Claims use since Sept. 8, 1916.

Ser. No. 98,041. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE BORGFELDT & CO., New York, N. Y. Filed Sept. 18, 1916.

SERVUS

Particular description of goods.—Solid Alcohol.
Claims use since Sept. 11, 1916.

Ser. No. 98,080. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRIC APPARATUS.) THE C. E. SQUIRES CO., Cleveland, Ohio. Filed Sept. 19, 1916.



No claim is made to the word "Squires" apart from the mark shown.
Particular description of goods.—Steam-Traps for Heating Apparatus, Feed-Water Controllers for Steam-Boilers, Reducing-Valves for Steam-Heating Apparatus.
Claims use since January, 1913.

Ser. No. 98,115. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROBERT H. LINTON, New York, N. Y. Filed Sept. 20, 1916.

"REXPUN"

Particular description of goods.—Silk Shirtings, All Wool Flannels and Worsteds.
Claims use since June 16, 1916.

Ser. No. 98,235. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) A. S. ROSENTHAL COMPANY, New York, N. Y. Filed Sept. 26, 1916.



Particular description of goods.—Silk Piece Goods, Silk and Cotton Fabrics, also Cotton Piece Goods and Handkerchiefs.
Claims use since 1914.

Ser. No. 98,257. (CLASS 33. GLASSWARE.) A. H. HEISEY & CO., Newark, Ohio. Filed Sept. 27, 1916.

AMERICAN CRYSTAL

No claim is made to registration of the words "American Crystal" except in connection with the mark as shown.
Particular description of goods.—Lime Blown Glass.
Claims use since June 5, 1916.

Ser. No. 98,272. (CLASS 43. THREAD AND YARN.) REX SPINNING CO., Gastonia, N. C. Filed Sept. 27, 1916.



Particular description of goods.—Fine Combed Yarns.
Claims use since Apr. 13, 1916.

Ser. No. 98,288. (CLASS 38. PRINTS AND PUBLICATIONS.) JOHN F. L. COLLINS, Brooklyn, N. Y. Filed Sept. 28, 1916.

AERO WORLD

Particular description of goods.—A Monthly Aeronautical Journal.
Claims use since Aug. 5, 1916.

Ser. No. 98,367. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LA GUARDIAS AND COMPANY, New York, N. Y. Filed Oct. 2, 1916.

EURELIA

Particular description of goods.—Hair-Tonic.
Claims use since Sept. 1, 1916.

Ser. No. 98,384. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia, Pa. Filed Oct. 3, 1916.

GIANT

Particular description of goods.—Electric Storage Batteries or Accumulators, Their Parts and Supplies.
Claims use since Mar. 28, 1916.

Ser. No. 98,394. (CLASS 17. TOBACCO PRODUCTS.) CHRISTOPHER J. STETTLER, Buffalo, N. Y. Filed Oct. 3, 1916.

GUARDIAN

Particular description of goods.—Cigars.
Claims use since Jan. 2, 1912.

Ser. No. 98,434. (CLASS 39. CLOTHING.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Oct. 5, 1916.



Comprising the words "Betty Wales Dresses" with the "doll figure," no claim being made to the exclusive right to the use of the words "Dresses" and "Trade Mark" apart from the mark shown in the drawing. The script words "Betty Wales" are the signature adopted by the author who created the fictitious character known as "Betty Wales" for the series of books bearing that name.
Particular description of goods.—Dresses.
Claims use since the 1st day of April, 1915.

Ser. No. 98,481. (CLASS 17. TOBACCO PRODUCTS.) RAUCH CIGAR COMPANY, INC., Indianapolis, Ind. Filed Oct. 6, 1916.



The portrait shown is that of James Whitcomb Riley, deceased.
Particular description of goods.—Cigars, Cigarettes, and Smoking-Tobacco.
Claims use since Jan. 1, 1892.

Ser. No. 98,724. (CLASS 17. TOBACCO PRODUCTS.) UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y. Filed Oct. 17, 1916.



No claim being made to the words and figure "Best 5c Cigar."
Particular description of goods.—Cigars.
Claims use since the year 1897.

Ser. No. 98,755. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATIONAL MILLING AND CHEMICAL CO., Philadelphia, Pa. Filed Oct. 18, 1916.



Particular description of goods.—A Bleaching and Water-Softening Compound.
Claims use since Aug. 10, 1916.

Ser. No. 98,784. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) H. H. BUTTERWORTH, Sedalia, Mo. Filed Oct. 20, 1916.

Mutual

Particular description of goods.—Spark-Plugs.
Claims use since Jan. 1, 1916.

Ser. No. 98,789. (CLASS 32. FURNITURE AND UPHOLSTERY.) QUINCY SHOW CASE WORKS, Quincy, Ill. Filed Oct. 20, 1916.



No claim being made to the word "Sectional" apart from the mark shown in the drawing.
Particular description of goods.—Wall-Cases.
Claims use since Aug. 1, 1916.

Ser. No. 98,807. (CLASS 17. TOBACCO PRODUCTS.) W. K. GRESH & SONS, Norristown, Pa. Filed Oct. 21, 1916.

ENVOYS

Particular description of goods.—Cigars.
Claims use since Jan. 13, 1916.

Ser. No. 98,828. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLARKE-GUTHRIE CO., Philadelphia, Pa. Filed Oct. 23, 1916.

REL-KA-SOL
FIRST AID TREATMENT

No claim is made to the words "First Aid Treatment" or "Trade Mark" apart from the mark shown in the drawing.
Particular description of goods.—A Dental, Medical, and Surgical Disinfecting Fluid.
Claims use since January, 1914.

Ser. No. 98,845. (CLASS 38. PRINTS AND PUBLICATIONS.) HOLLAND S. REAVIS, Houston, Tex. Filed Oct. 23, 1916.

OIL

Particular description of goods.—Monthly Periodicals.
Claims use since Oct. 15, 1911.

Ser. No. 98,857. (CLASS 4. ABRASIVE, DETERGENT. AND POLISHING MATERIALS.) BRISTOL-MYERS. COMPANY, Brooklyn, N. Y. Filed Oct. 24, 1916.

ZIRASOAP

No claim is made to the word "Soap" apart from the mark shown in the drawing.
Particular description of goods.—A Liquid Soap.
Claims use since Nov. 23, 1915.

Ser. No. 98,885. (CLASS 15. OILS AND GREASES.) LUBREX OIL & GREASE COMPANY, Pittsburgh, Pa. Filed Oct. 25, 1916.

TRADE MARK
LUBREX
LUBRICANTS

No claim being made to the use of the words "Trade Mark" and "Lubricants" apart from the trade-mark shown in the drawing.
Particular description of goods.—Lubricating Oils and Greases.
Claims use since July 1, 1915.

Ser. No. 98,923. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE GERMICIDE COMPANY, Denver, Colo. Filed Oct. 27, 1916.



The exclusive use of the words "Denver Mud" is not claimed in this application.

Particular description of goods.—An Antiphlogistic Preparation in the Form of a Plastic Dressing.

Claims use since about June 1, 1916.

Ser. No. 98,927. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ROBERT G. LINDSAY, New York, N. Y. Filed Oct. 27, 1916.

BUDDY BUD

Particular description of goods.—Dolls.

Claims use since Sept. 11, 1916.

Ser. No. 98,972. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DEFIANCE CHECK WRITER CORPORATION, Rochester, N. Y. Filed Oct. 30, 1916.

DIMUNETTE

Particular description of goods.—Check-Protectors.

Claims use since about the middle of July, 1916.

Ser. No. 98,979. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GRIFFITH CHEMICAL COMPANY, Freeport, Ill. Filed Oct. 30, 1916.

Pyrol 523

Particular description of goods.—A Pharmaceutical Preparation for Use as an Antiseptic Astringent and Hemostatic to be Applied to the Gums for the Prevention and Treatment of Pyorrhea, Sore and Bleeding Gums.

Claims use since Sept. 1, 1916.

Ser. No. 99,028. (CLASS 39. CLOTHING.) LARRY J. MARGULIES, New York, N. Y. Filed Nov. 1, 1916.

De talleyrand Stock
Larrymade

Comprising the words "De talleyrand Stock, Larrymade," no claim being made to the exclusive use of the word "Stock" apart from the mark as shown in the drawing.

Particular description of goods.—Ladies' Ornamental Collars.

Claims use since Oct. 21, 1916.

Ser. No. 99,041. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CHARLES H. KOHL & Co., Philadelphia, Pa. Filed Nov. 2, 1916.



I hereby disclaim the right to the exclusive use of the words, numerals, and abbreviations, except the word "Polene," and of the representation of the label.

Particular description of goods.—A Powder for Cleaning Eyeglasses, Goggles, and other Similar Glass Surfaces.

Claims use since Oct. 4, 1916.

Ser. No. 99,044. (CLASS 48. MALT EXTRACTS AND LIQUORS.) OBERMEYER & LIEBMANN, Brooklyn, N. Y. Filed Nov. 2, 1916.

ONA

Particular description of goods.—Non-Alcoholic Beverages Prepared from Selected Barley-Malt, Rice, and Hops.

Claims use since Oct. 28, 1916.

Ser. No. 99,045. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) PEERLESS NOVELTY MANUFACTURING COMPANY, Grand Haven, Mich. Filed Nov. 2, 1916.

TNOJ

Particular description of goods.—Crochet-Hooks.

Claims use since Sept. 22, 1916.

Ser. No. 99,047. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) PACIFIC NOVELTY COMPANY, New York, N. Y. Filed Nov. 2, 1916.

Pollyanna

Particular description of goods.—Barrettes.

Claims use since the 15th day of October, 1916.

Ser. No. 99,053. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE JELOL COMPANY, New York, N. Y. Filed Nov. 2, 1916.

Jelol

The word "Jelol."

Particular description of goods.—A Medicinal Preparation of Olive-Oil.

Claims use since the 15th day of February, 1915.

Ser. No. 99,054. (CLASS 12. CONSTRUCTION MATERIALS.) AMERICAN ENCAUSTIC TILING CO. LTD., Zanesville, Ohio, Maurer, N. J., and New York, N. Y. Filed Nov. 3, 1916.



Particular description of goods.—Wall, Floor, and Ceiling Tiles for Interior and Exterior Purposes.

Claims use since August, 1913.

Ser. No. 99,058. (CLASS 17. TOBACCO PRODUCTS.) CHARLES CHESTER BOGART, Middletown, N. Y. Filed Nov. 3, 1916.



The vertical and horizontal shade lines appearing at the top, center, and left-hand side of said drawing indicate shadows and not any particular color.

Particular description of goods.—Cigars.

Claims use since Jan. 1, 1913.

Ser. No. 99,059. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE CLARK THREAD COMPANY, Newark, N. J. Filed Nov. 3, 1916. Under ten-year proviso.

CLARK'S

Particular description of goods.—Crochet Hooks or Needles.

Claims use since about the year 1812.

Ser. No. 99,075. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE AVALON FARMS COMPANY, Chicago, Ill. Filed Nov. 4, 1916.

AVALON FARMS

Particular description of goods.—Liquid Worm-Killer and Conditioner, Bone-Blister, Poultry-Tablets, Horse-Tone, a Tonic Liniment for External Application in the Treatment of Swelling, Lameness, Pain, and Enlargements, Distemper and Cold Compound, Heave Compound, and Antiseptic Compound.

Claims use since November, 1915.

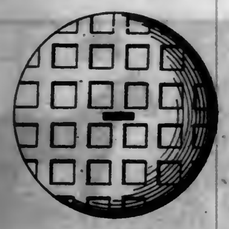
Ser. No. 99,103. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Nov. 4, 1916.

Uncle Sam

Particular description of goods.—Clasps, Snap-Fasteners of All Kinds, Snap-Fastener Tapes, Hair-Pins, Hat-Pins, Buttons of All Kinds, Collar-Supporters, Tie-Clasps, Needles (Sewing) of All Kinds, Pins of All Kinds, Loops, Placket-Fasteners, Buckles, Safety-Pins, Hooks and Eyes, Fancy Buttons, Trimming-Buttons, Tapes, Collar-Buttons, Cuff-Buttons, Trousers-Buttons, Glove-Buttons, Dress-Shields.

Claims use since July 30, 1913.

Ser. No. 99,104. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOHN WANAMAKER, NEW YORK, New York, N. Y. Filed Nov. 4, 1916.

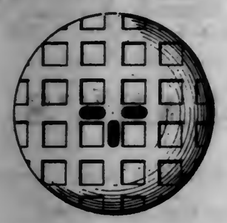


No claim is made to the representation of a golf-ball as a part of the trade-mark, the golf-ball being shown in the drawing merely for the purpose of exemplifying the mark.

Particular description of goods.—Golf-Balls.

Claims use since May 1, 1916.

Ser. No. 99,105. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOHN WANAMAKER, NEW YORK, New York, N. Y. Filed Nov. 4, 1916.



No claim is made to the representation of a golf-ball as a part of the trade-mark, the golf-ball being shown in the drawing merely for the purpose of exemplifying the mark.

Particular description of goods.—Golf-Balls.

Claims use since Apr. 1, 1916.

Ser. No. 99,115. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK BUSS, St. Louis, Mo. Filed Nov. 6, 1916.

IRITINE

Particular description of goods.—A Medical Salve or Ointment Used for the Drawing Ont of Poisonous Matter and Healing of Boils, Poisoned Flesh and Tissue.

Claims use since Oct. 25, 1916.

Ser. No. 99,116. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BRIDGEPORT BRASS COMPANY, Bridgeport, Conn. Filed Nov. 6, 1916. Under ten-year proviso.

Bridgeport

Particular description of goods.—Automobile-Tire Pumps and Bicycle-Tire Pumps.

Claims use since on or about the 1st day of January, 1891.

Ser. No. 99,123. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) F. A. HARDY & COMPANY, Chicago, Ill. Filed Nov. 6, 1916.

NOVIROENT

Particular description of goods.—Goggles and Eye-Protectors for Use by X-Ray Specialists.

Claims use since Oct. 23, 1916.

Ser. No. 99,126. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATSKI MEDICINE COMPANY, Mowcaqua, Ill. Filed Nov. 6, 1916.

NATSKI

Particular description of goods.—A Blood-Purifier.

Claims use since Oct. 24, 1916.

Ser. No. 99,127. (CLASS 38. PRINTS AND PUBLICATIONS.) THE NORRIS, ALISTER-BALL COMPANY, Chicago, Ill. Filed Nov. 6, 1916.

JEWELERS' BLUE BOOK

Particular description of goods.—An Annular Catalogue or Illustrated Price-List for the Jeweler's Trade.

Claims use beginning with the year 1911.

Ser. No. 99,130. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) PERFECT NOTION CO., INC., New York, N. Y. Filed Nov. 6, 1916.

SANHYGENIC

Particular description of goods.—Compressed Sanitary Napkins, Sanitary Napkins, Sanitary Aprons, Sanitary Bloomers, Sanitary Belts, and Compressed Absorbent Cotton.

Claims use since the beginning of September, 1916.

Ser. No. 99,132. (CLASS 18. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE REPUBLIC METALWARE CO., Buffalo, N. Y. Filed Nov. 6, 1916.

SAVORY

Particular description of goods.—Double Boilers, (Cooking;) Fish-Racks, Coffee-Boilers, Washbowls, Forks, Tea-Kettles, Milk-Pans, Stove-Pans, Dinner-Plates, Coffee-Pots, Skimmers, Covers, Strainers, Lemonade-Shakers, Cake-Molds, Fry-Pans, Tea-Balls, Pot-Covers, Lemon-Juice Extractors, Coffee-Makers, Steam-Cookers, (Steamers;) Milk-Boilers, Colanders, Dippers, Funnels, Ladles, Dairy-Pans, Saucepans, Pie-Plates, Teapots, Spoons, Biscuit-Cutters, Bread-Pans, Coffee-Balls, Egg-Poachers, Rice-Boilers, Cups, Preserving-Kettles, Jelly-Cake Pans, Pudding-Pans, Soup-Plates, Sauce-Pots, Tea-Steepers, Cake-Cutters, Cake-Turners, Bread-Raisers, Muffin-Pans, Cereal-Cookers, Dust-Pans, Baking-Tins, Casseroles, All Made of Base Metal.

Claims use since about Jan. 7, 1899.

Ser. No. 99,182. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) AMERICAN OPTICAL COMPANY, Southbridge, Mass. Filed Nov. 9, 1916.

Shelloid

Particular description of goods.—Ophthalmic Mountings and Parts Thereof, Lenses for Optical and Scientific Use, Magnifiers, Optometers, Refractometers, Ophthalmoscopes, Pupillometers, Astigmascopes, Nose-Gages, Face-Measures, Frame-Measures, Temple-Measures, Trial-Frames, Lens-Testing Instruments, Lens-Measuring Instruments.

Claims use since about Jan. 1, 1915.

Ser. No. 99,186. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BANKS ALEXANDER BENNIE, Nashville, Tenn. Filed Nov. 9, 1916.

Impgo

The linings in said drawing merely representing shading, the trade-mark comprising the word "Impgo."

Particular description of goods.—A Liniment to be Used for the Treatment of Rheumatism.

Claims use since Oct. 15, 1916.

Ser No. 99,195. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE MECHANICAL RUBBER COMPANY, New York, N. Y., Chicago, Ill., and Cleveland, Ohio. Filed Nov. 9, 1916.

Uni Strip

Particular description of goods.—Friction-Tape.

Claims use since Nov. 23, 1915.

Ser. No. 99,230. (CLASS 15. OILS AND GREASES.) TIDE WATER OIL CO., New York, N. Y. Filed Nov. 10, 1916.

STELLA

Particular description of goods.—Refined Petroleum.

Claims use since Jan. 1, 1881.

Ser. No. 99,234. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BURRELL-MILLER, Indianapolis, Ind. Filed Nov. 11, 1916.

AVICOL

Particular description of goods.—Poultry Remedy.

Claims use since Apr. 1, 1915.

Ser. No. 99,238. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DUANE LABORATORIES, New York, N. Y. Filed Nov. 11, 1916.

EPYSAN

Comprising the word "Epysan."

Particular description of goods.—Paste for Treatment of Soft Bleeding Gums.

Claims use since April, 1915.

Ser. No. 99,261. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SMITH, HOGG & CO., New York, N. Y. Filed Nov. 11, 1916.

DOWNAP

Particular description of goods.—Blankets.

Claims use since Oct. 25, 1916.

Ser. No. 99,291. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) AMERICAN HARD RUBBER CO., New York, N. Y. Filed Nov. 14, 1916.

RESISTON

Particular description of goods.—Hard-Rubber Compound for Electrical Purposes.

Claims use since Nov. 1, 1916.

Ser. No. 99,293. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ELCAYA CO., INC., New York, N. Y. Filed Nov. 14, 1916.

LA VEDA

Particular description of goods.—Toilet Cream.

Claims use since Sept. 12, 1916.

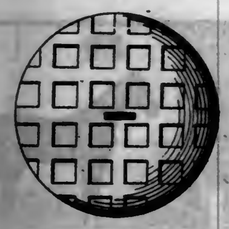
Ser. No. 99,295. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORM. MEISTER LUCIUS & BRUNING, Höchst-on-the-Main, Germany. Filed Nov. 14, 1916.

PEPTARGON

Particular description of goods.—A Chemical Compound Having Bactericide Action and Being Particularly Useful for the Treatment of Gonorrhea.

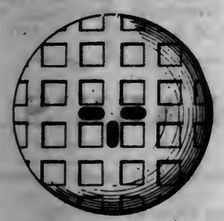
Claims use since Sept. 25, 1915.

Ser. No. 99,104. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOHN WANAMAKER, NEW YORK, New York, N. Y. Filed Nov. 4, 1916.



No claim is made to the representation of a golf-ball as a part of the trade-mark, the golf-ball being shown in the drawing merely for the purpose of exemplifying the mark.
Particular description of goods.—Golf-Balls.
Claims use since May 1, 1916.

Ser. No. 99,105. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOHN WANAMAKER, NEW YORK, New York, N. Y. Filed Nov. 4, 1916.



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Claims use since Apr. 1, 1916.

Ser. No. 99,115. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK BUSS, St. Louis, Mo. Filed Nov. 6, 1916.

IRITINE

Particular description of goods.—A Medical Salve or Ointment Used for the Drawing Out of Poisonous Matter and Healing of Boils, Poisoned Flesh and Tissue.
Claims use since Oct. 25, 1916.

Ser. No. 99,116. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BRIDGEPORT BRASS COMPANY, Bridgeport, Conn. Filed Nov. 6, 1916. Under ten-year proviso.

Bridgeport

Particular description of goods.—Automobile-Tire Pumps and Bicycle-Tire Pumps.
Claims use since on or about the 1st day of January, 1891.

Ser. No. 99,123. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) F. A. HARDY & COMPANY, Chicago, Ill. Filed Nov. 6, 1916.

NOVIROENT

Particular description of goods.—Goggles and Eye-Protectors for Use by X-Ray Specialists.
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Ser. No. 99,126. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATSKI MEDICINE COMPANY, Moweaqua, Ill. Filed Nov. 6, 1916.

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Claims use since Oct. 24, 1916.

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JEWELERS' BLUE BOOK

Particular description of goods.—An Annular Catalogue or Illustrated Price-List for the Jeweler's Trade.
Claims use beginning with the year 1911.

Ser. No. 99,130. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) PERFECT NOTION CO., INC., New York, N. Y. Filed Nov. 6, 1916.

SANHYGENIC

Particular description of goods.—Compressed Sanitary Napkins, Sanitary Napkins, Sanitary Aprons, Sanitary Bloomers, Sanitary Belts, and Compressed Absorbent Cotton.
Claims use since the beginning of September, 1916.

Ser. No. 99,132. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE REPUBLIC METALWARE CO., Buffalo, N. Y. Filed Nov. 6, 1916.

SAVORY

Particular description of goods.—Double Boilers, (Cooking;) Fish-Racks, Coffee-Boilers, Washbowls, Forks, Tea-Kettles, Milk-Pans, Stove-Pans, Dinner-Plates, Coffee-Pots, Skimmers, Covers, Strainers, Lemonade-Shakers, Cake-Molds, Fry-Pans, Tea-Balls, Pot-Covers, Lemon-Juice Extractors, Coffee-Makers, Steam-Cookers, (Steamers;) Milk-Boilers, Colanders, Dippers, Funnels, Ladles, Dairy-Pans, Saucepans, Pie-Plates, Teapots, Spoons, Biscuit-Cutters, Bread-Pans, Coffee-Balls, Egg-Poachers, Rice-Boilers, Cups, Preserving-Kettles, Jelly-Cake Pans, Pudding-Pans, Soup-Plates, Sauce-Pots, Tea-Steepers, Cake-Cutters, Cake-Turners, Bread-Raisers, Muffin-Pans, Cereal-Cookers, Dust-Pans, Baking-Tins, Casseroles, All Made of Base Metal.
Claims use since about Jan. 7, 1899.

Ser. No. 99,182. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) AMERICAN OPTICAL COMPANY, Southbridge, Mass. Filed Nov. 9, 1916.

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Particular description of goods.—Ophthalmic Mountings and Parts Thereof, Lenses for Optical and Scientific Use, Magnifiers, Optometers, Refractometers, Ophthalmoscopes, Pupillometers, Astigmascopes, Nose-Gages, Face-Measures, Frame-Measures, Temple-Measures, Trial-Frames, Lens-Testing Instruments, Lens-Measuring Instruments.
Claims use since about Jan. 1, 1915.

Ser. No. 99,186. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BANKS ALEXANDER BENNIE, Nashville, Tenn. Filed Nov. 9, 1916.

Impgo

The linings in said drawing merely representing shading, the trade-mark comprising the word "Impgo."
Particular description of goods.—A Liniment to be Used for the Treatment of Rheumatism.
Claims use since Oct. 15, 1916.

Ser No. 99,195. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE MECHANICAL RUBBER COMPANY, New York, N. Y., Chicago, Ill., and Cleveland, Ohio. Filed Nov. 9, 1916.

Uni-Strap

Particular description of goods.—Friction-Tape.
Claims use since Nov. 23, 1915.

Ser. No. 99,230. (CLASS 15. OILS AND GREASES.) TIDE WATER OIL CO., New York, N. Y. Filed Nov. 10, 1916.

STELLA

Particular description of goods.—Refined Petroleum.
Claims use since Jan. 1, 1881.

Ser. No. 99,234. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BURRELL-MILLER, Indianapolis, Ind. Filed Nov. 11, 1916.

AVICOL

Particular description of goods.—Poultry Remedy.
Claims use since Apr. 1, 1915.

Ser. No. 99,238. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DUANE LABORATORIES, New York, N. Y. Filed Nov. 11, 1916.

EPYSAN

Comprising the word "Epysan."
Particular description of goods.—Paste for Treatment of Soft Bleeding Gums.
Claims use since April, 1915.

Ser. No. 99,261. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SMITH, HOGG & CO., New York, N. Y. Filed Nov. 11, 1916.

DOWNAP

Particular description of goods.—Blankets.
Claims use since Oct. 25, 1916.

Ser. No. 99,291. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) AMERICAN HARD RUBBER CO., New York, N. Y. Filed Nov. 14, 1916.

RESISTON

Particular description of goods.—Hard-Rubber Compound for Electrical Purposes.
Claims use since Nov. 1, 1916.

Ser. No. 99,293. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ELCAYA CO., INC., New York, N. Y. Filed Nov. 14, 1916.

LA VEDA

Particular description of goods.—Toilet Cream.
Claims use since Sept. 12, 1916.

Ser. No. 99,295. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORM. MEISTER LUCIUS & BRUNING, Höchst-on-the-Main, Germany. Filed Nov. 14, 1916.

PEPTARGON

Particular description of goods.—A Chemical Compound Having Bactericide Action and Being Particularly Useful for the Treatment of Gonorrhea.
Claims use since Sept. 25, 1915.

Ser. No. 99,311. (CLASS 39. CLOTHING.) HOLTITE-THISTLE COMPANY, INC., New York, N. Y. Filed Nov. 15, 1916.

Tomboy

Particular description of goods.—Men's, Women's, and Children's Hats and Caps.
Claims use since about Aug. 1, 1916.

Ser. No. 99,334. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) W. J. BUSH & Co. INCORPORATED, New York, N. Y. Filed Nov. 17, 1916.

GLYCOMEL

Particular description of goods.—Glycerin Substitutes.
Claims use since Nov. 9, 1916.

Ser. No. 99,357. (CLASS 48. MALT EXTRACTS AND LIQUORS.) PIEL BROS., Brooklyn, N. Y. Filed Nov. 17, 1916.

SERVICE BREW

No claim is made to the exclusive use of the word "Brew" apart from its association or combination with the trade-mark shown in the accompanying drawing.
Particular description of goods.—Beer.
Claims use since May 1, 1916.

Ser. No. 99,389. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) BARNETT SAMUEL & SONS, LTD., London, England. Filed Nov. 18, 1916.

DECCA

Particular description of goods.—Gramophones, Phonographs, and Records for the Same.
Claims use since March, 1914.

Ser. No. 99,392. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WHITE ROCK MINERAL SPRINGS COMPANY, Waukesha, Wis., and New York, N. Y. Filed Nov. 18, 1916.



Particular description of goods.—Natural Spring-Water Used as a Beverage.
Claims use since June 1, 1916.

Ser. No. 99,400. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EASTMAN KODAK Co., Rochester, N. Y. Filed Nov. 20, 1916.

KODELON

Particular description of goods.—Photographic Developers.
Claims use since Sept. 14, 1916.

Ser. No. 99,409. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HALL & RUCKEL, New York, N. Y. Filed Nov. 20, 1916. Under ten-year proviso.

X. BAZIN

Particular description of goods.—A Depilatory Powder.
Claims use since the year 1838.

Ser. No. 99,423. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PORT MORRIS CHEMICAL WORKS, INC., New York, N. Y. Filed Nov. 20, 1916.

LUTITE

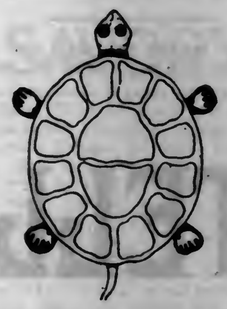
Particular description of goods.—A Decolorizing-Powder.
Claims use since about Mar. 15, 1909.

Ser. No. 99,455. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE AUTOYRE CO., Oakville, Conn. Filed Nov. 22, 1916.

TURTLE BACK

Particular description of goods.—Snap-Fasteners.
Claims use since Nov. 13, 1916.

Ser. No. 99,456. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE AUTOYRE CO., Oakville, Conn. Filed Nov. 22, 1916.



Particular description of goods.—Snap-Fasteners.
Claims use since Nov. 13, 1916.

Ser. No. 99,468. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CABELL COMPANY, Baltimore, Md. Filed Nov. 22, 1916.

VELVET

Particular description of goods.—Powdered Egg.
Claims use since Sept. 1, 1916.

Ser. No. 99,488. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Nov. 22, 1916.



Particular description of goods.—Powder-Paper.
Claims use since Jan. 8, 1916.

Ser. No. 99,491. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Nov. 22, 1916.



Particular description of goods.—Powder-Paper.
Claims use since Jan. 25, 1916.

Ser. No. 99,502. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARICHT, BRAUN & Co., New York, N. Y. Filed Nov. 23, 1916.

RAJADERA

Particular description of goods.—Desiccated Cocoanut.
Claims use since Nov. 20, 1916.

Ser. No. 99,509. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. GEORGE A. PETTITT, Syracuse, N. Y. Filed Nov. 23, 1916.



I.EES

Particular description of goods.—Eye-Wash.
Claims use since Nov. 1, 1916.

Ser. No. 99,510. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LULAH M. SMIDT, Los Angeles, Cal. Filed Nov. 23, 1916.

Follicide

Particular description of goods.—Liquid and Solid Superfluous-Hair Remover.
Claims use since Jan. 26, 1915.

Ser. No. 99,516. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SAMUEL CRAMER, Philadelphia, Pa. Filed Nov. 24, 1916.

ZENITH

Particular description of goods.—Satins in the Piece.
Claims use since about Aug. 1, 1916.

Ser. No. 99,528. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK STEARNS & Co., Detroit, Mich. Filed Nov. 24, 1916.

BIOMINES

Comprising the word "Biomines."
Particular description of goods.—A Reconstructive Tonic.
Claims use since Nov. 2, 1916.

Ser. No. 99,579. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARTHUR J. NYE, Walla Walla, Wash. Filed Nov. 27, 1916.

BILL NYE'S

Particular description of goods.—A Soldering Compound.
Claims use since April, 1914.

Ser. No. 99,584. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE REFLEX IGNITION CO., Cleveland, Ohio. Filed Nov. 27, 1916.

REFLEX

Particular description of goods.—Spark-Plugs.
Claims use since February, 1909.

Ser. No. 99,612. (CLASS 48. MALT EXTRACTS AND LIQUORS.) GEORGE L. HARBAUER, New York, N. Y. Filed Nov. 28, 1916.

SOCIETY

SOCIETY BRAND

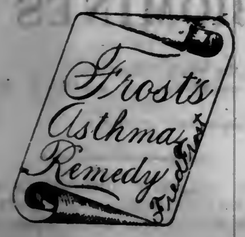
No claim is made on the word "Brand."
Particular description of goods.—Beer.
Claims use since Jan. 1, 1916.

Ser. No. 99,622. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ENTOL PRODUCTS CO. INC., New York, N. Y. Filed Nov. 29, 1916.

ENTOL

Particular description of goods.—Antiseptic and Healing Lotion.
Claims use since Feb. 21, 1916.

Ser. No. 99,624. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FROST REMEDY COMPANY, Albany, Mo. Filed Nov. 29, 1916.



The words "Fred Frost" being a reproduction of the signature of Fred Frost, general manager of applicant, and no claim being made to the words "Frost's Asthma Remedy" apart from the other features of the trade-mark.
Particular description of goods.—A Remedy for Asthma.
Claims use since Nov. 18, 1916.

Ser. No. 99,626. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LA MANNA, AZEMA & FARNAN, New York, N. Y. Filed Nov. 29, 1916.

GONDOLIER

Particular description of goods.—Canned Sardines.
Claims use since July, 1908.

Ser. No. 99,632. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PASTEUR LABORATORIES OF AMERICA, New York, N. Y. Filed Nov. 29, 1916.

PASCREOL

Particular description of goods.—A Disinfectant, Antiseptic, Germicide, Insecticide, and Deodorant.
Claims use since January, 1916.

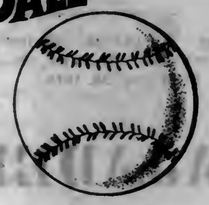
Ser. No. 99,642. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA-PACIFIC FISHERIES, Portland, Oreg. Filed Dec. 1, 1916.

OLD FAITHFUL

Particular description of goods.—Canned Salmon.
Claims use since the year 1915.

Ser. No. 99,643. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA-PACIFIC FISHERIES, Portland, Oreg. Filed Dec. 1, 1916.

BALL



Particular description of goods.—Canned Salmon.
Claims use since the year 1912.

Ser. No. 99,648. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EARL COWAN COMPANY, Los Angeles, Cal. Filed Dec. 1, 1916.

REWARD

Particular description of goods.—Coffee.
Claims use since Oct. 10, 1916.

Ser. No. 99,659. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MURPHY OIL COMPANY, East Whittier, Cal. Filed Dec. 1, 1916.

ZENITH

Particular description of goods.—Lemons.
Claims use since Sept. 1, 1916.

Ser. No. 99,823. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MONAHAN MEDICINE CO., Asheville, N. C. Filed Dec. 9, 1916.



Consisting of the portrait of T. R. Monahan.
Particular description of goods.—A Remedy for Trachoma and Other Affections of the Eyes.
Claims use since Apr. 1, 1916.



TRADE-MARK REGISTRATIONS GRANTED

JANUARY 2, 1917.

114,666. MEDICINAL PREPARATION CONTAINING LIQUID PARAFFIN WITH IRISH MOSS. THE ABBOTT LABORATORIES, Chicago, Ill.
Filed July 24, 1916. Serial No. 96,774. PUBLISHED OCTOBER 31, 1916.

114,667. REFRACTORY CEMENT. ADAMS & JEWELL, Rome, N. Y.
Filed September 15, 1914. Serial No. 81,253. PUBLISHED OCTOBER 24, 1916.

114,668. INGOTS, CASTINGS CONSISTING OF ENGINE-CASTINGS NOT FINISHED, MACHINE-BEARINGS, AND BABBITT METAL. THE AJAX METAL COMPANY, Philadelphia, Pa.
Filed September 8, 1916. Serial No. 97,848. PUBLISHED OCTOBER 24, 1916.

114,669. COPPER BASE METAL ALLOYS. THE AJAX METAL COMPANY, Philadelphia, Pa.
Filed September 8, 1916. Serial No. 97,849. PUBLISHED OCTOBER 24, 1916.

114,670. BABBITT METAL. THE AJAX METAL COMPANY, Philadelphia, Pa.
Filed September 8, 1916. Serial No. 97,850. PUBLISHED OCTOBER 31, 1916.

114,671. CRANBERRIES. AMERICAN CRANBERRY EXCHANGE, New York, N. Y.
Filed September 28, 1916. Serial No. 98,284. PUBLISHED OCTOBER 31, 1916.

114,672. SEEDS. AMERICAN SEEDTAPE COMPANY, INCORPORATED, New York, N. Y.
Filed September 11, 1916. Serial No. 97,887. PUBLISHED OCTOBER 31, 1916.

114,673. SHOVELS, SPADES, AND SCOOPS. AMES SHOVEL & TOOL COMPANY, Jersey City, N. J., and Boston, Mass.
Filed May 29, 1916. Serial No. 95,506. PUBLISHED OCTOBER 24, 1916.

114,674. SHOVELS, SPADES, AND SCOOPS. AMES SHOVEL & TOOL COMPANY, Jersey City, N. J., and Boston, Mass.
Filed May 29, 1916. Serial No. 95,508. PUBLISHED OCTOBER 24, 1916.

114,675. BITUMEN, RAW OR PARTLY PREPARED, FOR USE IN MANUFACTURES. THE ANGLO-MEXICAN PETROLEUM PRODUCTS CO. LTD., London, England.
Filed August 22, 1916. Serial No. 97,544. PUBLISHED OCTOBER 24, 1916.

114,676. ALLOYS. M. H. ATHERTON CO. INC., New York, N. Y.
Filed August 4, 1916. Serial No. 97,072. PUBLISHED OCTOBER 24, 1916.

114,677. MONTHLY MAGAZINE. THE ATLAS PORTLAND CEMENT COMPANY, Northampton, Pa., and New York, N. Y.
Filed September 9, 1916. Serial No. 97,867. PUBLISHED OCTOBER 31, 1916.

114,678. PAPRIKA. AUSTIN, NICHOLS & CO., INC., Brooklyn and New York, N. Y.
Filed September 19, 1916. Serial No. 98,074. PUBLISHED OCTOBER 31, 1916.

114,679. TIRE-FILLERS. THE AUTIFI COMPANY, San Francisco, Cal.
Filed April 7, 1916. Serial No. 94,224. PUBLISHED OCTOBER 31, 1916.

114,680. CANDY. WILLIAM J. BADER, Philadelphia, Pa.
Filed August 25, 1916. Serial No. 97,611. PUBLISHED OCTOBER 24, 1916.

114,681. METAL-POLISH. GERTRUDE BARR, Brooklyn, N. Y.
Filed April 13, 1916. Serial No. 94,372. PUBLISHED OCTOBER 17, 1916.

114,682. AMMONIA COMPOUND, COLD-WATER STARCH, LAUNDRY STARCH, STARCHING COMPOUND, BLUING, AND BAKING-SODA. BANNER COFFEE CO., Milwaukee, Wis.
Filed September 15, 1916. Serial No. 98,002. PUBLISHED OCTOBER 31, 1916.

114,683. FINISHING OILS AND STAINS. MARTIN BARIFFI, New Haven, Conn.
Filed September 9, 1916. Serial No. 97,868. PUBLISHED OCTOBER 31, 1916.

114,684. MACHINERY-LUBRICATING OIL. BEACON MOTOR SUPPLY COMPANY, Springfield, Mass.
Filed August 24, 1914. Serial No. 80,773. PUBLISHED OCTOBER 31, 1916.

114,685. PNEUMATIC RUBBER AUTOMOBILE-TIRES. BEACON TIRE COMPANY, INC., Beacon, N. Y.
Filed August 17, 1916. Serial No. 97,391. PUBLISHED OCTOBER 31, 1916.

114,686. WHISKY. THE GEO. BIELER SONS CO., Cincinnati, Ohio.
Filed September 29, 1916. Serial No. 98,310. PUBLISHED OCTOBER 31, 1916.

114,687. CERTAIN NAMED CLOTHING. J. BLACH & SONS, Birmingham, Ala.
Filed October 6, 1911. Serial No. 59,007. PUBLISHED OCTOBER 31, 1916.

114,688. HEEL-LIFTS AND HEEL-LEVELERS. ALEXANDER E. BLOCK, St. Louis, Mo.
Filed September 13, 1915. Serial No. 89,162. PUBLISHED OCTOBER 31, 1916.

114,689. CERTAIN PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. THE BONNEY COMPANY, Chicago, Ill.
Filed February 10, 1916. Serial No. 92,765. PUBLISHED OCTOBER 31, 1916.

114,690. COTTON-SEED MEAL FOR FOOD. BOWEN & MURPHY, Birmingham, Ala.
Filed September 5, 1916. Serial No. 97,779. PUBLISHED OCTOBER 24, 1916.

114,691. COTTON-SEED MEAL. BOWEN & MURPHY, Birmingham, Ala.
Filed September 5, 1916. Serial No. 97,780. PUBLISHED OCTOBER 31, 1916.

114,692. MOTION-PICTURE FILMS. BOY SCOUTS OF AMERICA, New York, N. Y.
Filed August 5, 1916. Serial No. 97,106. PUBLISHED OCTOBER 24, 1916.

114,693. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS FOR CERTAIN NAMED DISEASES. BREWER & CO., Worcester, Mass.
Filed September 22, 1916. Serial No. 98,158. PUBLISHED OCTOBER 31, 1916.

114,694. WIRE CLOTH OR FABRIC. BUFFALO WIRE WORKS CO., Buffalo, N. Y.
Filed September 12, 1916. Serial No. 97,944. PUBLISHED OCTOBER 31, 1916.

114,695. WIRE CLOTH OR FABRIC. BUFFALO WIRE WORKS CO., Buffalo, N. Y.
Filed September 12, 1916. Serial No. 97,945. PUBLISHED OCTOBER 31, 1916.

114,696. CARBON-REMOVING AND GASOLENE-SAVING OILS, CHEMICALS, AND COMPOUNDS. JAMES C. CALDWELL, Pittsburgh, Pa.
Filed September 13, 1916. Serial No. 97,969. PUBLISHED OCTOBER 31, 1916.

114,697. CHEESE. HARRY JAMES CAMPBELL, Butternut, Mich.
Filed February 9, 1916. Serial No. 92,724. PUBLISHED OCTOBER 24, 1916.

114,698. WHEAT-FLOUR. CANADIAN MILL & ELEVATOR CO., El Reno, Okla.
Filed September 11, 1916. Serial No. 97,897. PUBLISHED OCTOBER 24, 1916.

114,699. PREPARATION FOR THE TREATMENT OF CERTAIN SKIN DISEASES. GEORGE W. CATES, Denver, Colo.
Filed August 11, 1916. Serial No. 97,267. PUBLISHED OCTOBER 31, 1916.

114,700. SELF-RISING WHEAT-FLOUR. CENTENNIAL MILL CO., Spokane, Wash.
Filed August 5, 1916. Serial No. 97,113. PUBLISHED OCTOBER 31, 1916.

114,701. CHAINS AND CHAIN-LINKS FOR CONVEYING AND POWER-TRANSMISSION PURPOSES. CHAIN BELT COMPANY, Milwaukee, Wis.
Filed September 12, 1916. Serial No. 97,949. PUBLISHED OCTOBER 31, 1916.

114,702. DISINFECTANT-POWDER. THE CHAMBERLAIN CO., Pittsburgh, Pa.
Filed October 7, 1916. Serial No. 98,490. PUBLISHED OCTOBER 31, 1916.

114,703. HOG-CHOLERA AND FOOT-AND-MOUTH DISEASE. NICHOLAS CHENNAUX, Le Mars, Iowa.
Filed September 15, 1916. Serial No. 98,004. PUBLISHED OCTOBER 31, 1916.

114,704. RUBBER BELTING, DUCK BELTING, RUBBER HOSE, DUCK HOSE, RUBBER MACHINERY PACKING, AND ASBESTOS MACHINERY PACKING. THE CINCINNATI RUBBER MANUFACTURING COMPANY, Norwood, Ohio.
Filed August 21, 1916. Serial No. 97,496. PUBLISHED OCTOBER 31, 1916.

114,705. RUBBER BELTING, RUBBER HOSE, DUCK BELTING, DUCK HOSE, RUBBER MACHINERY PACKING, AND ASBESTOS MACHINERY PACKING. THE CINCINNATI RUBBER MANUFACTURING COMPANY, Norwood, Ohio.
Filed August 21, 1916. Serial No. 97,497. PUBLISHED OCTOBER 31, 1916.

114,706. CERTAIN NAMED BELTING, HOSE, MACHINERY PACKING, AND BRAKE-BAND LINING. THE CINCINNATI RUBBER MANUFACTURING COMPANY, Norwood, Ohio.
Filed August 21, 1916. Serial No. 97,499. PUBLISHED OCTOBER 31, 1916.

114,707. CERTAIN NAMED BELTING, HOSE, AND MACHINERY PACKING. THE CINCINNATI RUBBER MANUFACTURING CO., Norwood, Ohio.
Filed August 21, 1916. Serial No. 97,500. PUBLISHED OCTOBER 31, 1916.

114,708. CERTAIN NAMED BELTING, HOSE, AND MACHINERY PACKING. THE CINCINNATI RUBBER MANUFACTURING CO., Norwood, Ohio.
Filed August 21, 1916. Serial No. 97,501. PUBLISHED OCTOBER 31, 1916.

114,709. CERTAIN NAMED BELTING, HOSE, AND MACHINERY PACKING. THE CINCINNATI RUBBER MANUFACTURING COMPANY, Norwood, Ohio.
Filed August 21, 1916. Serial No. 97,504. PUBLISHED OCTOBER 31, 1916.

114,710. RUBBER BELTING, RUBBER HOSE, DUCK BELTING, AND DUCK HOSE. THE CINCINNATI RUBBER MANUFACTURING COMPANY, Norwood, Ohio.
Filed August 24, 1916. Serial No. 97,597. PUBLISHED OCTOBER 31, 1916.

114,711. LEMON SHAMPOO. CITRUS FRUIT JUICE CO., Pomona, Cal.
Filed October 6, 1916. Serial No. 98,461. PUBLISHED OCTOBER 31, 1916.

114,712. FLUX. THE CLEVELAND TENSILITE CO., Cleveland, Ohio.
Filed August 29, 1916. Serial No. 97,679. PUBLISHED OCTOBER 31, 1916.

114,713. CLEANSERS AND WATER-SOFTENERS. CLIMALENE CHEMICAL COMPANY, Canton, Ohio.
Filed September 2, 1915. Serial No. 88,980. PUBLISHED OCTOBER 17, 1916.

114,714. SAFETY-FUSE. COAST MANUFACTURING & SUPPLY CO., Livermore, Cal.
Filed August 16, 1916. Serial No. 97,369. PUBLISHED OCTOBER 31, 1916.

114,715. SAFETY-FUSE. COAST MANUFACTURING & SUPPLY CO., Livermore, Cal.
Filed August 16, 1916. Serial No. 97,370. PUBLISHED OCTOBER 31, 1916.

114,716. EGGS. COLLINS & BARNARD CO., New York, N. Y.
Filed September 12, 1916. Serial No. 97,947. PUBLISHED OCTOBER 31, 1916.

114,717. FURNITURE-POLISH AND SANITARY CLEANER. ELMER E. CONRAD, Newton, Kans.
Filed July 18, 1916. Serial No. 96,644. PUBLISHED OCTOBER 31, 1916.

114,718. CERTAIN NAMED FURNITURE. CONREY-DAVIS MF'G. CO., Shelbyville, Ind.
Filed August 2, 1916. Serial No. 97,031. PUBLISHED OCTOBER 31, 1916.

114,719. PISTON-RINGS. CONTINENTAL PISTON RING CO., Memphis, Tenn.
Filed September 8, 1916. Serial No. 97,859. PUBLISHED OCTOBER 31, 1916.

114,720. TABLES, CHAIRS, SERVING-CABINETS, STANDS, BENCHES, SHELVES, AND COUNTERS. JOHN F. DASCHNER, Detroit, Mich.
Filed September 5, 1916. Serial No. 97,783. PUBLISHED OCTOBER 31, 1916.

114,721. REMEDY FOR CATARRH. SAMUEL H. DAVIS, Lansing, Mich.
Filed August 25, 1916. Serial No. 97,619. PUBLISHED OCTOBER 31, 1916.

114,722. WOOLEN FABRICS IN THE PIECE. DETMER WOOLEN CO., New York, N. Y.; Boston, Mass.; Chicago, Ill.; Kansas City, Mo.; San Francisco and Los Angeles, Cal., and Seattle, Wash.
Filed September 14, 1916. Serial No. 97,985. PUBLISHED OCTOBER 31, 1916.

114,723. ELECTRIC MOTOR-CAR-LIGHTING SYSTEMS. DETROIT STARTER CO., Detroit, Mich.
Filed August 4, 1916. Serial No. 97,076. PUBLISHED OCTOBER 31, 1916.

114,724. CIGARS. W. LLOYD DIEHL, King City, Mo.
Filed July 11, 1916. Serial No. 96,492. PUBLISHED OCTOBER 31, 1916.

114,725. BEER. THOMAS O. DIXON, Townsend, Mont.
Filed September 30, 1916. Serial No. 98,328. PUBLISHED OCTOBER 31, 1916.

114,726. THREADS AND YARNS MADE OF COTTON, SILK, LINEN, JUTE, AND RAMIE. DOLLFUS-MIEG & CIE. SOCIÉTÉ ANONYME, Mulhouse, Germany.
Filed September 10, 1914. Serial No. 81,158. PUBLISHED OCTOBER 24, 1916.

114,727. CANNED SALMON. DORMAN, HUXFORD & CO., Boston, Mass.
Filed September 23, 1916. Serial No. 98,181. PUBLISHED OCTOBER 31, 1916.

114,728. ROASTED COFFEE. CHARLES GUSTAVE DUREL, New Orleans, La.
Filed September 23, 1916. Serial No. 98,188. PUBLISHED OCTOBER 31, 1916.

114,729. COFFEE, CHICORY, AND CACAO-SEED COATS. CHARLES GUSTAVE DUREL, New Orleans, La.
Filed September 23, 1916. Serial No. 98,184. PUBLISHED OCTOBER 31, 1916.

114,730. CANNED FRUITS. EAT AND GROW THIN FOOD CO., New York, N. Y.
Filed August 19, 1916. Serial No. 97,445. PUBLISHED OCTOBER 31, 1916.

114,731. CORNMEAL. THE ECLIPSE MILLING COMPANY, INC., Graham, Va.
Filed August 26, 1916. Serial No. 97,635. PUBLISHED OCTOBER 31, 1916.

114,732. EXTERNAL REMEDY FOR TREATMENT OF THE FEET. CLIFFORD F. EHA, Cincinnati, Ohio, assignor to The Edward Wesley Company, Cincinnati, Ohio, a Corporation of Ohio.
Filed September 15, 1916. Serial No. 98,007. PUBLISHED OCTOBER 31, 1916.

114,733. SELF-RISING WHEAT-FLOUR. EVANSVILLE MILL & ELEVATOR CO., INC., Evansville, Ind.
Filed September 19, 1916. Serial No. 98,082. PUBLISHED OCTOBER 31, 1916.

114,734. WORK-SHIRTS. JOSEPH FELS COMPANY, Chicago, Ill.
Filed August 19, 1916. Serial No. 97,446. PUBLISHED OCTOBER 31, 1916.

114,735. PORCELAIN INSULATOR-KNOBS. THE FINDLAY ELECTRIC PORCELAIN COMPANY, Findlay, Ohio.
Filed September 5, 1916. Serial No. 97,788. PUBLISHED OCTOBER 24, 1916.

114,736. BREAKFAST CEREALS. FLEMING & CO. LTD., Gore, New Zealand.
Filed September 4, 1915. Serial No. 89,028. PUBLISHED OCTOBER 31, 1916.

114,737. CERTAIN NAMED FOODS. FOLEY BROS. & QUINLAN, INCORPORATED, St. Paul, Minn.
Filed May 18, 1915. Serial No. 86,700. PUBLISHED OCTOBER 31, 1916.

114,738. LEATHER BOOTS AND SHOES. FOOT, SCHULZE & CO., St. Paul, Minn.
Filed August 7, 1916. Serial No. 97,158. PUBLISHED OCTOBER 31, 1916.

114,739. LEATHER BOOTS AND SHOES. FOOT, SCHULZE & CO., St. Paul, Minn.
Filed August 7, 1916. Serial No. 97,159. PUBLISHED OCTOBER 31, 1916.

114,740. ROASTED COFFEE. FORT SMITH COFFEE COMPANY, Fort Smith, Ark.
Filed September 19, 1916. Serial No. 98,085. PUBLISHED OCTOBER 31, 1916.

114,741. LUBRICATING-OILS ESPECIALLY ADAPTED TO PREVENT CORROSION. PAUL FROHLICH, Long Beach, Cal.
Filed August 17, 1916. Serial No. 97,398. PUBLISHED OCTOBER 31, 1916.

114,742. NUT-MEATS. R. E. FUNSTEN DRIED FRUIT & NUT CO., St. Louis, Mo.
Filed September 28, 1916. Serial No. 98,290. PUBLISHED OCTOBER 31, 1916.

114,743. MATTRESSES AND UPHOLSTERING. LOUIS R. GANS, Brooklyn, N. Y.
Filed June 3, 1916. Serial No. 95,608. PUBLISHED OCTOBER 31, 1916.

114,744. AIRCRAFT. GENERAL AERONAUTIC COMPANY, New York, N. Y.
Filed June 12, 1916. Serial No. 95,817. PUBLISHED OCTOBER 31, 1916.

114,745. WHEAT-FLOUR. THE GLAZIER MILL & ELEVATOR CO., Glazier, Tex.
Filed September 14, 1916. Serial No. 97,988. PUBLISHED OCTOBER 24, 1916.

114,746. WHEAT-FLOUR. GLOBEMEYER FLOUR COMPANY, St. Louis, Mo.
Filed August 26, 1916. Serial No. 97,638. PUBLISHED OCTOBER 31, 1916.

114,747. CIGARETTE-CASES. SHEPARD J. GOLDBERG, Brooklyn, N. Y.
Filed August 18, 1916. Serial No. 97,430. PUBLISHED OCTOBER 24, 1916.

114,748. COAL AND HARDWOOD CHARCOAL. WILLIAM E. GOULD, Philadelphia, Pa.
Filed August 16, 1916. Serial No. 97,368. PUBLISHED OCTOBER 31, 1916.

114,749. LEATHER AS A FINISHED PRODUCT. THE GRATON AND KNIGHT MANUFACTURING COMPANY, Worcester, Mass.
Filed July 24, 1916. Serial No. 96,782. PUBLISHED OCTOBER 24, 1916.

114,750. WHEAT-FLOUR. C. H. GUENTHER & SON, (INC.,) San Antonio, Tex.
Filed September 20, 1916. Serial No. 98,113. PUBLISHED OCTOBER 24, 1916.

114,751. CHOCOLATE CANDIES. GURLEY CANDY COMPANY, Minneapolis, Minn.
Filed September 19, 1916. Serial No. 98,089. PUBLISHED OCTOBER 31, 1916.

114,752. MEDICINAL PREPARATION FOR TREATING HOG-CHOLERA. Dr. A. J. HAGER, Hartsville, Tenn.
Filed September 16, 1916. Serial No. 98,026. PUBLISHED OCTOBER 31, 1916.

114,753. COLLARS MADE OF TEXTILE MATERIAL. HALL HARTWELL & CO., Troy, N. Y.
Filed September 11, 1915. Serial No. 89,145. PUBLISHED OCTOBER 31, 1916.

114,754. WHEAT-FLOUR. HARVEST MILLING COMPANY, INC., Syracuse, N. Y.
Filed September 11, 1916. Serial No. 97,903. PUBLISHED OCTOBER 31, 1916.

114,755. LADIES' HATS. MARIE ELIZABETH HAUPT, New York, N. Y.
Filed September 27, 1916. Serial No. 98,258. PUBLISHED OCTOBER 31, 1916.

114,756. CERTAIN NAMED CLOTHING FOR MEN AND BOYS. HEIDELBERG WOLFF & CO., New York, N. Y.
Filed August 18, 1916. Serial No. 97,436. PUBLISHED OCTOBER 31, 1916.

114,757. WHEAT-FLOUR. HEZEL MILLING COMPANY, East St. Louis, Ill.
Filed September 19, 1916. Serial No. 98,091. PUBLISHED OCTOBER 31, 1916.

114,758. COAL HEATERS AND STOVES. CLEMENT V. HILL, Trenton, N. J.
Filed July 24, 1915. Serial No. 88,158. PUBLISHED OCTOBER 31, 1916.

114,759. LIQUID COMPOUND USED IN CLEANING FLOORS. FREDERICK HOBSCHAR, Brooklyn, N. Y.
Filed July 11, 1916. Serial No. 96,501. PUBLISHED OCTOBER 24, 1916.

114,760. DYES AND DYE-BASES. HOFFMAN & KROPFF CHEMICAL CO., Brooklyn, N. Y.
Filed September 21, 1916. Serial No. 98,140. PUBLISHED OCTOBER 31, 1916.

114,761. OVERALLS, OUTSIDE SHIRTS, AND TROUSERS. JOHN FRED HOLBERT, Chattanooga, Tenn.
Filed September 18, 1916. Serial No. 98,047. PUBLISHED OCTOBER 31, 1916.

114,762. LEATHER BOOTS AND SHOES AND BOOT AND SHOE SOLES OF LEATHER. HOLLAND SHOE CO., Holland, Mich.
Filed January 3, 1916. Serial No. 91,871. PUBLISHED OCTOBER 31, 1916.

114,763. SCOTCH WHISKY. THE HOLLYWOOD COMPANY, New York, N. Y.
Filed September 30, 1916. Serial No. 98,334. PUBLISHED OCTOBER 31, 1916.

114,764. CERTAIN PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. RICHARD HUDNUT, New York, N. Y.
Filed September 27, 1916. Serial No. 98,259. PUBLISHED OCTOBER 31, 1916.

114,765. LEATHER BOOTS AND SHOES. HUISKAMP BROS. Co., Keokuk, Iowa.
Filed August 23, 1916. Serial No. 97,575. PUBLISHED OCTOBER 31, 1916.

114,766. WHISKY, BRANDY, AND GIN. HURLEY BROS. INCORPORATED, St. Paul, Minn.
Filed September 27, 1916. Serial No. 98,256. PUBLISHED OCTOBER 31, 1916.

114,767. TYPE-METAL. IMPERIAL TYPE METAL Co., Philadelphia, Pa.
Filed September 11, 1916. Serial No. 97,906. PUBLISHED OCTOBER 24, 1916.

114,768. GRAIN-DRIERS. THE INTERNATIONAL GRAIN DRIER & MILL EQUIPMENT Co., Milwaukee, Wis.
Filed September 18, 1916. Serial No. 98,178. PUBLISHED OCTOBER 31, 1916.

114,769. CAKES AND COOKIES. ITEN BISCUIT Co., Omaha, Nebr.
Filed September 5, 1916. Serial No. 97,792. PUBLISHED OCTOBER 24, 1916.

114,770. CALENDARS AND PICTORIAL AND FANCY IMPRINTED CARDS, SUCH AS CHRISTMAS, NEW YEAR, AND EASTER CARDS. REEVES H. ISARD, Atlantic City, N. J.
Filed February 24, 1916. Serial No. 93,067. PUBLISHED OCTOBER 24, 1916.

114,771. OINTMENT FOR THE TREATMENT OF CERTAIN NAMED DISEASES. FRED W. ISRAEL, Wichita, Kans.
Filed April 17, 1916. Serial No. 94,473. PUBLISHED OCTOBER 31, 1916.

114,772. CERTAIN NAMED METALS AND METAL CASTINGS AND FORGINGS. THE JEFFREY MANUFACTURING Co., Columbus, Ohio.
Filed September 14, 1915. Serial No. 89,183. PUBLISHED OCTOBER 31, 1916.

114,773. CORNMEAL. JULIETTE MILLING Co., Macon, Ga.
Filed August 18, 1916. Serial No. 97,423. PUBLISHED OCTOBER 31, 1916.

114,774. CANDY, PARTICULARLY CARAMEL CANDY. KIBBE BROS. COMPANY, Springfield, Mass.
Filed October 2, 1916. Serial No. 98,365. PUBLISHED OCTOBER 31, 1916.

114,775. LAMPS OF ELECTRIC FORM. HERBERT KIENZLE, New York, N. Y.
Filed June 5, 1916. Serial No. 95,624. PUBLISHED OCTOBER 31, 1916.

114,776. CORNMEAL AND MILK. FREDERICK C. KLOTZ, Louisville, Ky.
Filed August 12, 1916. Serial No. 97,309. PUBLISHED OCTOBER 31, 1916.

114,777. ALUMINUM ALLOYS. HARRY D. KRAMM, Indianapolis, Ind.
Filed August 23, 1916. Serial No. 97,581. PUBLISHED OCTOBER 31, 1916.

114,778. RAZORS. KRUSIUS BROTHERS, New York, N. Y.
Filed April 6, 1916. Serial No. 94,201. PUBLISHED OCTOBER 31, 1916.

114,779. CALCIUM SALTS. P. MAX KUHNRICH, Los Angeles, Cal.
Filed September 27, 1916. Serial No. 98,261. PUBLISHED OCTOBER 31, 1916.

114,780. TABLE-KNIVES, KNIVES, AND FRUIT-KNIVES OF BASE METAL. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed July 29, 1916. Serial No. 96,958. PUBLISHED OCTOBER 24, 1916.

114,781. COMPOUND WHICH WHEN APPLIED TO ANY PANE OF GLASS PREVENTS FOGGING, STEAMING, OR SWEATING. HAROLD G. LARSEN, Chicago, Ill.
Filed July 22, 1916. Serial No. 96,750. PUBLISHED SEPTEMBER 12, 1916.

114,782. METALLIC ALLOY. WALKER M. LEVETT COMPANY, New York, N. Y.
Filed February 3, 1916. Serial No. 92,602. PUBLISHED OCTOBER 31, 1916.

114,783. WHEAT-FLOUR. LEXINGTON MILL & ELEVATOR Co., Lexington, Nebr.
Filed September 11, 1916. Serial No. 97,909. PUBLISHED OCTOBER 31, 1916.

114,784. WHEAT-FLOUR. LISTMAN MILL COMPANY, La Crosse, Wis.
Filed September 15, 1916. Serial No. 98,011. PUBLISHED OCTOBER 24, 1916.

114,785. SHAVE-PAPER CARTONS. BENJ. LONG, Champaign, Ill.
Filed April 29, 1916. Serial No. 94,798. PUBLISHED OCTOBER 31, 1916.

114,786. CIGARS, CHEROOTS, AND LITTLE CIGARS. JOSE LOVERA COMPANY, New York, N. Y.
Filed August 3, 1916. Serial No. 97,050. PUBLISHED OCTOBER 31, 1916.

114,787. PAINT AND VARNISH REMOVERS. CHARLES MCADAM, Chicago, Ill.
Filed June 16, 1915. Serial No. 87,847. PUBLISHED OCTOBER 31, 1916.

114,788. FRESH FRUITS AND VEGETABLES. HUGH MCCARREN, Jr., New York, N. Y.
Filed March 28, 1916. Serial No. 93,938. PUBLISHED OCTOBER 24, 1916.

114,789. HAIR-GROWER COMPOSITION. FRANK O. MCCOLLOCH, Los Angeles, Cal.
Filed September 26, 1916. Serial No. 98,244. PUBLISHED OCTOBER 31, 1916.

114,790. CHINAWARE. MADDOCK POTTERY COMPANY, Trenton, N. J.
Filed September 30, 1916. Serial No. 98,340. PUBLISHED OCTOBER 24, 1916.

114,791. LIQUID OIL PREPARATION FOR CLEANING AND POLISHING FURNITURE AND THE LIKE. MAGIC MIST, INCORPORATED, New York, N. Y.
Filed September 13, 1916. Serial No. 97,977. PUBLISHED OCTOBER 24, 1916.

114,792. MEN'S AND WOMEN'S FUR-FELT HATS. E. A. MALLORY AND SONS, INCORPORATED, Danbury, Conn., and New York, N. Y.
Filed September 23, 1916. Serial No. 98,100. PUBLISHED OCTOBER 31, 1916.

114,793. MEN'S AND WOMEN'S FUR-FELT HATS. E. A. MALLORY AND SONS, INCORPORATED, Danbury, Conn., and New York, N. Y.
Filed September 23, 1916. Serial No. 98,191. PUBLISHED OCTOBER 31, 1916.

114,794. HATS, CAPS, COLLARS AND CUFFS, AND SHOES MADE OF LEATHER ONLY. ABRAHAM M. MALOUF, Salt Lake City, Utah.
Filed January 12, 1916. Serial No. 92,084. PUBLISHED JULY 11, 1916.

114,795. BELTING, HOSE, AND MACHINERY PACKING MADE PARTLY OF RUBBER AND PARTLY OF COTTON. THE MANHATTAN RUBBER MFG. Co., New York, N. Y.
Filed July 25, 1916. Serial No. 96,826. PUBLISHED OCTOBER 31, 1916.

114,796. HOSE AND MACHINERY PACKING MADE PARTLY OF RUBBER AND PARTLY OF COTTON. THE MANHATTAN RUBBER MFG. Co., New York, N. Y.
Filed July 25, 1916. Serial No. 96,830. PUBLISHED OCTOBER 31, 1916.

114,797. BELTING MADE PARTLY OF RUBBER AND PARTLY OF COTTON. THE MANHATTAN RUBBER MFG. Co., New York, N. Y.
Filed July 25, 1916. Serial No. 96,846. PUBLISHED OCTOBER 24, 1916.

114,798. BUTTER. MARICOPA CREAMERY Co., Phoenix, Ariz.
Filed June 24, 1916. Serial No. 96,113. PUBLISHED OCTOBER 31, 1916.

114,799. CANNED FOOD PRODUCT PREPARED FROM MEAT AND OTHER INGREDIENTS. THE MARSHALL-STACEY COMPANY, Aldenville, Pa.
Filed August 20, 1915. Serial No. 88,715. PUBLISHED OCTOBER 31, 1916.

114,800. COFFEE-MILLS, COFFEE-REFINERS, MEAT-CHOPPERS, CHEESE-CUTTERS, BONE-CUTTERS, AND PARTS. THE MASTER CUTTER MACHINE COMPANY, Cincinnati, Ohio.
Filed October 9, 1915. Serial No. 89,768. PUBLISHED OCTOBER 31, 1916.

114,801. WHEAT-FLOUR AND STOCK FEEDS. MERRILL & MAYO Co., Waterville, Me.
Filed June 14, 1916. Serial No. 95,873. PUBLISHED OCTOBER 31, 1916.

114,802. SKIMMED-MILK POWDER. MERTON DAIRY PRODUCTS Co., Merton, Wis.
Filed March 20, 1916. Serial No. 93,713. PUBLISHED OCTOBER 24, 1916.

114,803. GLUE. KALT-LEIM-FABRIK O. MESSMER, Basel, Switzerland.
Filed August 8, 1916. Serial No. 97,166. PUBLISHED OCTOBER 31, 1916.

114,804. TOY CANNONS. MILTON BRADLEY Co., Springfield, Mass.
Filed September 11, 1916. Serial No. 97,915. PUBLISHED OCTOBER 31, 1916.

114,805. GINGER-ALE AND ALL KINDS OF SODAS AND SOFT DRINKS. MISKO SEAL BEVERAGE COMPANY, Montpelier, Vt.
Filed August 15, 1916. Serial No. 97,361. PUBLISHED OCTOBER 31, 1916.

114,806. BAKING-POWDER. MONROE DRUG COMPANY, Quincy, Ill.
Filed October 7, 1916. Serial No. 98,498. PUBLISHED OCTOBER 31, 1916.

114,807. BAKING-POWDER. MONROE DRUG COMPANY, Quincy, Ill.
Filed October 7, 1916. Serial No. 98,499. PUBLISHED OCTOBER 31, 1916.

114,808. CERTAIN NAMED CLOTHING FOR MEN, WOMEN, AND CHILDREN. MORRIS & COMPANY, Baltimore, Md.
Filed July 26, 1916. Serial No. 96,874. PUBLISHED OCTOBER 31, 1916.

114,809. LAXATIVE PREPARATION. THE MU-COL COMPANY, Buffalo, N. Y.
Filed October 4, 1916. Serial No. 98,417. PUBLISHED OCTOBER 31, 1916.

114,810. DRY PAINTS. GUSTAV AUGUSTUS HENRY MULLER, New York, N. Y.
Filed June 23, 1916. Serial No. 96,085. PUBLISHED OCTOBER 31, 1916.

114,811. AUTOMOBILE TIRE-CASINGS AND TIRE-TUBES. THE NATIONAL TIRE & RUBBER COMPANY, East Palestine, Ohio.
Filed September 6, 1916. Serial No. 97,828. PUBLISHED OCTOBER 31, 1916.

114,812. METAL REFLECTORS. NATIONAL X-RAY REFLECTOR COMPANY, Chicago, Ill.
Filed July 27, 1916. Serial No. 96,896. PUBLISHED OCTOBER 24, 1916.

114,813. CERTAIN NAMED MEDICINES AND PHARMACEUTICAL PREPARATIONS. NAVE-MCCORD MERCANTILE Co., St. Joseph, Mo.
Filed June 20, 1916. Serial No. 96,005. PUBLISHED OCTOBER 31, 1916.

114,814. CERTAIN NAMED FOODS. NAVE-MCCORD MERCANTILE Co., St. Joseph, Mo.
Filed July 22, 1916. Serial No. 96,757. PUBLISHED OCTOBER 31, 1916.

114,815. CERTAIN NAMED FOODS. NAVE-MCCORD MERCANTILE Co., St. Joseph, Mo.
Filed July 22, 1916. Serial No. 96,758. PUBLISHED OCTOBER 31, 1916.

114,816. CATHARTIC PILLS. OPURGO Co., Chattanooga, Tenn.
Filed October 9, 1916. Serial No. 98,522. PUBLISHED OCTOBER 31, 1916.

114,817. HANDCUFFS. PEERLESS HANDCUFF COMPANY, Springfield, Mass.
Filed August 14, 1916. Serial No. 97,341. PUBLISHED OCTOBER 24, 1916.

114,818. CROCKERY AND EARTHENWARE. LZ PHILLIPS, Omaha, Nebr.
Filed November 6, 1915. Serial No. 90,487. PUBLISHED OCTOBER 24, 1916.

114,819. DOLLS. MARGARET B. PHILIPS, Port Allegany, Pa.
Filed August 21, 1916. Serial No. 97,520. PUBLISHED OCTOBER 31, 1916.

114,820. ORANGE MINERAL, A PIGMENT USED AS A PAINT CONSTITUENT. PICHER LEAD COMPANY, Joplin, Mo.
Filed August 15, 1916. Serial No. 97,352. PUBLISHED OCTOBER 24, 1916.

114,821. OXYGEN GAS. PINTSCH COMPRESSING COMPANY, New York, N. Y.
Filed June 8, 1916. Serial No. 95,721. PUBLISHED OCTOBER 31, 1916.

114,822. COOKING-FAT. THE PROCTER & GAMBLE COMPANY, Cincinnati, Ohio.
Filed September 21, 1916. Serial No. 98,143. PUBLISHED OCTOBER 31, 1916.

114,823. ELECTRIC VACUUM-CLEANERS AND PARTS THEREOF. DANIEL B. REPLOGLE, Berkeley, Cal., and Toledo, Ohio.
Filed July 21, 1916. Serial No. 96,781. PUBLISHED SEPTEMBER 26, 1916.

114,824. ANTISEPTIC MOUTH-WASH. ROY G. ROBERTS, Jamestown, N. Y.
Filed August 29, 1916. Serial No. 97,692. PUBLISHED OCTOBER 31, 1916.

114,825. TOMATO SAUCE. F. ROMBO AND Co., INC., New York, N. Y.
Filed September 19, 1916. Serial No. 98,100. PUBLISHED OCTOBER 31, 1916.

114,826. DRIERS FOR DRIVING OFF FREE MOISTURE FROM VARIOUS MATERIALS. RUGGLES-COLES ENGINEERING Co., New York, N. Y.; Chicago, Ill., and York, Pa.
Filed July 27, 1916. Serial No. 96,906. PUBLISHED OCTOBER 24, 1916.

114,827. BOTTLED WHISKY. MONROE SANDER, San Francisco, Cal.
Filed September 28, 1916. Serial No. 98,302. PUBLISHED OCTOBER 31, 1916.

114,828. PAPER SPOONS. THE SANISPOON Co., Boston, Mass.
Filed September 2, 1916. Serial No. 97,773. PUBLISHED OCTOBER 31, 1916.

114,829. CAKE. SCHULZE BAKING COMPANY, Chicago, Ill.
Filed July 19, 1916. Serial No. 96,678. PUBLISHED OCTOBER 10, 1916.

114,830. CERTAIN NAMED PRINTING MACHINERY. THE ESTATE OF WALTER SCOTT, DECEASED, Plainfield, N. J.
Filed May 4, 1915. Serial No. 86,368. PUBLISHED OCTOBER 24, 1916.

114,831. CERTAIN NAMED PRINTING MACHINERY. THE ESTATE OF WALTER SCOTT, DECEASED, Plainfield, N. J.
Filed May 4, 1915. Serial No. 86,369. PUBLISHED OCTOBER 24, 1916.

114,832. CERTAIN NAMED FOODS. SCOTTSBURG CANNING CO., INC., Scottsburg, Ind.
Filed September 19, 1916. Serial No. 98,101. PUBLISHED OCTOBER 31, 1916.

114,833. MONTHLY MAGAZINE. SERVICE MOTOR SUPPLY CO., Chicago, Ill.
Filed August 17, 1916. Serial No. 97,413. PUBLISHED OCTOBER 31, 1916.

114,834. CREOLE SAUCE. ALONZO SLACK, Chatham, N. J.
Filed May 26, 1916. Serial No. 95,455. PUBLISHED OCTOBER 24, 1916.

114,835. HANDKERCHIEFS. SMITH'S HANDY HANDKERCHIEF CO., Los Angeles, Cal.
Filed December 23, 1915. Serial No. 91,786. PUBLISHED OCTOBER 31, 1916.

114,836. WHEAT-FLOUR. FRANCIS S. SMITH, Boston, Mass.
Filed June 1, 1916. Serial No. 95,582. PUBLISHED OCTOBER 31, 1916.

114,837. HYDRAULIC CEMENT. SOUTHERN CEMENT CO., Birmingham, Ala.
Filed August 19, 1916. Serial No. 97,461. PUBLISHED OCTOBER 31, 1916.

114,838. SWIMMING-SUITS. A. G. SPALDING & BROS., New York, N. Y.
Filed September 21, 1916. Serial No. 98,147. PUBLISHED OCTOBER 31, 1916.

114,839. COFFEES AND SPICES. SPRINGFIELD COFFEE AND SPICE COMPANY, Springfield, Ill.
Filed November 15, 1915. Serial No. 90,665. PUBLISHED OCTOBER 24, 1916.

114,840. CERTAIN NAMED OILS AND GREASES. STANDARD OIL COMPANY OF NEW YORK, New York, N. Y.
Filed August 26, 1916. Serial No. 97,652. PUBLISHED OCTOBER 31, 1916.

114,841. FEATHER PILLOWS. STAR BEDDING CO., St. Louis, Mo.
Filed September 11, 1916. Serial No. 97,930. PUBLISHED OCTOBER 31, 1916.

114,842. NEWSPAPER-SECTION. STAR COMPANY, New York, N. Y.
Filed February 18, 1916. Serial No. 92,955. PUBLISHED OCTOBER 31, 1916.

114,843. MEDICINES FOR PREVENTING HOG-CHOLERA AND REMOVAL OF WORMS, LICE, AND OTHER PARASITES. SWEET & HODGMAN, Dallas, Tex.
Filed May 29, 1916. Serial No. 95,534. PUBLISHED OCTOBER 31, 1916.

114,844. DOG-BISCUITS. THOROUGHBRED DOG BISCUIT CO. INC., New York, N. Y.
Filed April 1, 1916. Serial No. 94,048. PUBLISHED OCTOBER 24, 1916.

114,845. WIRELESS DETECTORS FOR WIRELESS TELEGRAPH. EUGENE T. TURNEY CO. INC., New York, N. Y.
Filed September 28, 1916. Serial No. 98,303. PUBLISHED OCTOBER 24, 1916.

114,846. LADIES' HATS. M. UPLAND & CO., New York, N. Y.
Filed October 3, 1916. Serial No. 98,395. PUBLISHED OCTOBER 31, 1916.

114,847. CIGARS. UNITED STATES MANUFACTURERS COMPANY, New York, N. Y.
Filed August 21, 1916. Serial No. 97,478. PUBLISHED OCTOBER 31, 1916.

114,848. RUBBER, LEATHER, AND FABRIC BOOTS AND SHOES. UNITED STATES RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y.
Filed July 28, 1916. Serial No. 96,939. PUBLISHED OCTOBER 31, 1916.

114,849. NETTINGS, VEILS, AND VEILINGS IN THE PIECE. E. & Z. VAN RAALTE, New York, N. Y.
Filed August 21, 1916. Serial No. 97,529. PUBLISHED OCTOBER 31, 1916.

114,850. FLAVORING-SYRUPS FOR SOFT DRINKS AND NATURAL MINERAL WATER. FREDERICK WEBER, Salt Lake City, Utah.
Filed August 7, 1916. Serial No. 97,154. PUBLISHED OCTOBER 31, 1916.

114,851. CASH-DISCOUNT AND CASH-DISCOUNT-SAVINGS RECEIPTS. MIONA WHITLOCK, Denver, Colo.
Filed July 17, 1916. Serial No. 96,639. PUBLISHED OCTOBER 24, 1916.

114,852. SMOKED MEATS, DRIED SALT MEATS, AND LARD. WILSON PROVISION COMPANY, Peoria, Ill.
Filed September 27, 1916. Serial No. 98,283. PUBLISHED OCTOBER 31, 1916.

114,853. SOFT DRINK. ABE ZIMMERMAN, Tampa, Fla.
Filed July 27, 1916. Serial No. 96,913. PUBLISHED OCTOBER 31, 1916.

TRADE-MARK REGISTRATIONS RENEWED.

14,305. A LIQUID PROPRIETARY MEDICINE. THE EVANS CHEMICAL COMPANY, Cincinnati, Ohio.
Registered April 19, 1887. Renewed April 19, 1917.

DECISIONS
OF THE
COMMISSIONER OF PATENTS
AND OF
UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE ANDREWS.

Decided October 24, 1916.

DESIGNS—APPLICABLE TO GROUP OF ARTICLES—WHEN ONE PATENT MAY COVER ALL.

Where a design is produced which is applicable to a group of articles, such as dishes, and the showing thereof as applied to one makes clear its mode and effect when applied to the others without further explanation, *Held* that the applicant may be permitted to cast his specification, claim, and drawing so as to cover the group.

ON PETITION.

DESIGN FOR A GLASS ARTICLE OF MANUFACTURE.

Mr. Joseph M. Nesbit for the applicant.

CLAY, *Assistant Commissioner:*

The applicant petitions for contrary directions to the Examiner of Designs, who has held that the applicant's disclosure does not constitute sufficient subject-matter to support a design patent. Specifically it is contended that the drawing need not show in full lines the entire article to which the design is shown as applied; that the applicant may state that his design is usable on other articles, and that this case comes under the ruling in *ex parte Fulda* (194 O. G., 549) and should be governed accordingly.

To the extent that the case of *ex parte Fulda* holds it proper to patent a design without specifying any particular article to which it is applied that decision has been overruled, for the reasons given in *ex parte Cady*, decided August 28, 1916. In this latter case it was also ruled that when an applicant presents a design shown as embodied in some particular article, but obviously applicable with the same effect to other articles, he will be allowed to cast his specification in such form as to show that the design is not alone for the particular article shown in the drawing.

The applicant's design is one adapted for a series of cut-glass articles differing very radically in their specific forms; but it is nevertheless a design which preserves intact all its characteristics, wherever applied. It is not possible to define in words the physiological effects made upon the eye by a design. It would be, in fact, an extremely difficult problem even to point out what it is in the design which creates the pleasing impression. It will suffice here to say that in this case, among the distinctive characteristics, are deeply-cut bars with a partially-opaque outer surface somewhat less, both in width and length, than the sloping side cuttings and arranged in orderly series. The novelty of this design is not in question.

Any one who is familiar with the work of designers in such arts will know that the designer starts out originally with the thought of creating such a design as will be applicable to a plurality of articles or a line of articles likely to be associated in use or to be presented simultaneously to a prospective customer. Having worked out a primal element of the design, the matter of changing the size or form of the element to suit the place it is to be put, multiplying the number of elements, etc., is a secondary part of the designing act and a part of the act of adapting the design to the form of the vessel. Some small final modification is doubtless necessary in adapting the design to each particular vessel; but the principle by which the design is recognized is the same thing on different dishes, and the principle by which the design is made to harmonize with other ornamental features of the dish or with the form of the dish itself are all inherent parts of the design.

In view of these facts it clearly would be absurd and a perversion of the law to limit the patent to the one particular dish or vessel or other article to which the design is shown applied. To say, for example, that one who had invented a design for a tea set could not obtain a patent on the design for a tea set, but must be limited to a design for that particular one of the dishes shown, would be entirely out of harmony with the spirit and terms of the law. Though the patent show the design as applied to a saucer, yet if it be a design the mode and effect of which when applied to a cup or sugar-bowl is obvious without further showing or explanation manifestly it would not be reasonable to require the applicant to take a series of patents to cover what is, in fact, one single invention—namely, a design for dishes broadly, not narrowly for a particular dish. The principal value of many of the most beautiful designs resides exactly in the adaptability of the design to several forms of articles.

In the expression of the law "design for an article of manufacture" it is not only necessary to

note that the word "for" is used and not "of," but also to notice that the word "an" does not refer necessarily to a distinct and specific article, but may refer to a class of articles. In some cases, as in *Graff, Washbourne & Dunn* v. *Webster*, (195 Fed. Rep., 522,) it has apparently not been even considered that the term "an article" means a complete article, since a section of a border of a dish was held patentable, notwithstanding the entire dish with that border was also patentable. It is obvious that a design for a carpet would necessarily be a design shown as applied to a fragment of the carpet. What is to be borne in mind is not the terms by which the thing is described, but the thing itself. In this present case the applicant's invention is not a bowl or a pitcher or a vase or a plate, but it is a design applied to any one of these things and to all of these things with the same effect—that is to say, the appearance of each of these vessels will be modified and rendered distinctive and more beautiful by reason of the presence of the design and in substantially the same way and with substantially the same effect in each vessel.

The applicant having canceled his original drawing, showing a fragment of an indefinite vessel with the design applied thereto, I am not now called upon to rule whether that was a proper drawing; but I am clear that if any drawing can be so made as to indicate on its face that the invention is not dependent on the specific form of the vessel this ought to be allowed. In the present instance the drawing is proper and sufficient. The specification also is without objection. The claim should be:

The ornamental design for a glass article substantially as shown and described.

There is no such thing as a broad claim or a narrow claim in a design patent, because the scope of the patent is and must inherently be controlled solely by the appearance of the applied design and the relation of that appearance to the appearances of like articles in the prior art.

The petition is granted, and the Examiner will be guided by the foregoing opinion.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Sixth Circuit.

ELITE MFG. CO. *v.* ASHLAND MFG. CO.

Decided October 3, 1916.

1. PATENTS—INVENTION—WHAT CONSTITUTES.
   There is no invention in selecting and assembling the most desirable parts of different mechanisms in the same art where each operates in the same way in the new device as it did in the old and effects the same results.
2. SAME—VALIDITY—ANTICIPATION.
   The Burkholder patent, No. 1,004,741, for a lift-jack for automobiles, *Held* invalid for lack of invention and anticipation.
3. SAME—PATENTABILITY—LACK OF INVENTION.
   The Burkholder design patent, No. 44,837, for a design for a lifting-jack standard, *Held* invalid for want of invention, showing neither beauty, originality, nor creative design.

APPEAL from District Court of the United States for the Eastern Division of the Northern District of Ohio; John H. Clarke, judge.

Mr. M. G. Norton for the appellant.

Mr. C. L. Parker for the appellee.

Before KNAPPEN and DENISON, Circuit Judges, and SATER, District Judge.

SATER, *Dis. J.:*

The plaintiff, as assignee of the Burkholder patents, No. 1,004,741, for a lift-jack for automobiles, issued October 3, 1911, and No. 44,837, for a design for a lifting-jack standard, issued November 4, 1913, lost its infringement suit against the defendant in the lower court on the ground that neither of its patents disclosed novelty or an exercise of the inventive faculty. Relief is sought against such adverse ruling. The claims of the first-named patent are shown in the margin.[1]

(1, 2) The lift-jack is not exclusively adapted to automobiles, but may be used for the same general purposes as other lift-jacks. The upright standard on which the parts of the jack are mounted has a wide base, its greatest extension being in front of the standard and beneath the supporting-arm of the head or rest for the automobile-hub. The upper surface of the rest is depressed or curved, the better to engage the object to be raised. Lateral flanges project from the front edges of the standard. A lift-bar, having ratchet-teeth on its outer edges, and so attached to the front of the standard by ears or lugs as to permit its sliding on the standard, projects laterally at its top. Through this projecting portion is a tapered vertical hole in which is inserted the shank of the revoluble rest for the automobile-hub or other object to be supported. To an extension at the top of the rear of the standard is affixed by an outer pivot a handle or lever used in operating the jack. Its inner extension is bifurcated at an obtuse angle to its main portion, thus forming a crank-handle or lever. To the end of the bifurcated portion of the handle is a yoke or link which extends downward embracing both the standard and the lift-bar, its lower curved part engaging the under portion of the nearest ratchet-tooth and thus holding the lifted object in an elevated position when the jacking-up process is ended. The jack is operated by placing it where it is to stand; the lift-bar is then raised by the handle until it engages the object to be lifted; the yoke is at the same time made to engage the lower surface of the nearest ratchet-tooth with the handle in a raised position. The handle being then depressed to its lowest position, raises such object so as to be supported by the jack.

[1] 1. In a device of the character described, a standard, having flanges at its front edges, a lift bar having slidable engagement on said flanges and provided with an outward projection integral with the front edge thereof, and a head having a free pivot on said projection to rotate horizontally, and means to raise said lift bar in respect to said standard.

2. In a device of the character described, a standard, a lift bar mounted upon the edge thereof and provided with an integral arm at its top and a socket in its extremity and a head having a transverse depression on its top adapted to engage the object to be raised and a spindle on its bottom rotatable in said socket.

The lifting-jack art is so old and so highly developed as to afford slight opportunity to inventive genius. Claims submitted by the patentee were repeatedly rejected by the Patent Examiner. The defendant rightfully contends that the two claims finally allowed and here involved are substantially the same as those declared invalid for want of patentable novelty in the interference proceeding between the patentee and Willour, the only difference aside from that of descriptive wording being the inclusion of flanges in claim 1 and a pivot and socket in claim 2. The decision made in that proceeding was not assailed and remains undisturbed. The plaintiff answers that such inclusions, in view of the state of the art, are obviously secondary matters and that the primary feature of its device is the lift-bar with an integral arm and a rotatable head; but these features were also old in the art. A comparison of the plaintiff's jack with the numerous prior patented devices shown in the record would be tedious and is not deemed necessary. Reference to a few will suffice. In construction and principle of operation the Rikard device, Patent No. 375,769 (1888), excepting as to flange and pivot and socket features, bears a strong family resemblance to that of plaintiff. But the flanges and every other element, excepting the rotatable head, called for by claim 1, is seen in earlier patents—that of Huber, for instance, No. 362,085 (1887). Excepting the spindle rotatable in its socket, the Cox patent, No. 468,965 (1892), embraces all the elements of the second claim. Rotatable heads are found in a number of earlier patents—some of which are Parks, No. 240,330 (1881), Garcin, No. 303,504 (1884). Aiken, No. 480,685 (1892), and Wands, No. 806,088 (1905). A head or rest with a transverse depression is seen in several of the patents. Heads of that character susceptible of being turned, like that in the plaintiff's device, to any desired position for placing the jack for lifting purposes, appear in the Welles patent, No. 750,740 (1904), and in that of Wands, who specifically mentions this characteristic of his jack. The particular means specified in claim 2 for rotating the head is covered by the patents of Aiken and of Ammidown, No. 60,114 (1866). The various elements shown in plaintiff's patent and mentioned in its respective claims are all found in the prior art, performing respectively the same function in the same way and producing the same result as in plaintiff's device. We are not unmindful that to combine old parts in such manner as to produce a new result by their harmonious coöperation may be patentable; but where the combination is not only of old parts, but obtains old results, without the addition of any new and distinct function, it is not patentable. There is no invention in merely selecting and assembling, as Burkholder did, the most desirable parts of different mechanisms in the same art, where each operates in the same way in the new device as it did in the old, and effects the same results. (*Goodyear Tire & Rubber Co.* v. *Rubber Tire Wheel Co.*, 116 Fed., 363, 369; 53 C. C. A., 583; *Overweight Counterbalance Co.* v. *Henry Vogt Machine Co.*, 102 Fed., 957, 961, 962; 43 C. C. A., 80; *Sheffield Car Co.* v. *D'Arcy*, 194 Fed., 686, 693; 116 C. C. A., 322.) All of these cases were decided by this court. It requires only the commonest kind of skill, such as any mechanic ordinarily skilled in the art could and would have exercised, to borrow, as the patentee did, from well-known styles of jack one or more of their operative parts and put the same into another, there to perform the same function as such respective parts performed in the first. The plaintiff's lifting-jack patent, for want of novelty and patentable invention, cannot be sustained.



(3) The plaintiff's design patent shows the lifting-jack standard with its base, such standard having projecting strengthening-flanges and elliptical openings placed at intervals between the base and a point beneath the attachment of the handle. The openings are such as any mechanic would make to economize material and reduce the weight of the jack without materially reducing its strength. The production of such a design did not call for an exercise of the creative faculty. Originality is wanting. The beauty of the design is not impressive. For these reasons, the patent must be held invalid. (*Chas. Boldt Co.* v. *Nivison-Weiskopf Co.*, 194 Fed., 871; 114 C. C. A., 617, C. C. A., 6.)

The judgment of the lower court is affirmed.

Adverse Decisions in Interference.

PATENT NO. 1,191,029.

On November 21, 1916, a decision was rendered that James P. Norwood was not the first inventor of the subject-matter covered by claims substantially the same as and not patentably different from claims 2, 3, 4, 8, 23, and 24 of his Patent No. 1,191,029, subject, "Bread wrapping, labeling, and sealing machine," and no appeal having been taken within the time allowed such decision has become final.

Interference Notices

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 23, 1916.

Earl J. Baker and Ernest C. Root take notice:

Letters suggesting claims for purposes of interference having been mailed to Ernest C. Root, Engineers Building, Cleveland, Ohio, (1365 Ontario street,) the attorney of record in an application filed by Earl J. Baker, and returned undelivered, and a telegram addressed to Earl J. Baker, 2077 East Seventy-seventh street, Cleveland, Ohio, not having been delivered, notice is hereby given that unless Ernest C. Root or Earl J. Baker shall furnish an address to which mail may be delivered to one or the other

within thirty days from the first publication of this notice the interferences will be proceeded with as in case of default.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 27, 1916.

Mildred Lewless, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Eugene B. Walsh, 59 Howard avenue, Brooklyn, N. Y., and the patent to Mildred Lewless, 155 Harmon street, Brooklyn, N. Y., (Patent No. 1,102,934, issued July 7, 1914,) and a notice of such declaration sent by registered mail to said Mildred Lewless at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Lewless, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

F. W. H. CLAY, *Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 12, 1916.

Joseph P. McHugh, his heirs, successors, or assigns, take notice:

An interference having been declared by this Office between the application of Liberty & Co., Limited, Wardwick and Regent streets, London, England, for registration of a trade-mark and trade-mark registered April 2, 1895, No. 26,341, to Joseph P. McHugh, 504 Fifth avenue, New York, N. Y., and the said Joseph P. McHugh being deceased, notice is hereby given that unless his heirs, successors, or assigns shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 16, 1916.

John F. Doty, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Maryland Rubber Company, of 37 Hopkins Place, Baltimore, Md., for registration of a trade-mark and trade-mark registered July 12, 1887, No. 14,581, to John F. Doty, of 8 College Place, New York, N. Y., and a notice of such declaration sent by registered mail to said John F. Doty at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said John F. Doty, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
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ISSUE OF JANUARY 9, 1917.

Patents	725—No.	1,211,381 to No. 1,212,165, inclusive.
Designs	9—No.	50,145 to No. 50,153, inclusive.
Trade-Marks	99—No.	114,854 to No. 114,915, inclusive.
Labels	None.	
Prints	None.	
Reissues	5—No.	14,243 to No. 14,247, inclusive.
Total	861	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	....	North Carolina	2	....
Arizona	1	....	North Dakota	1	....
Arkansas	1	....	Ohio	33	4
California	44	3	Oklahoma	5	....
Colorado	15	....	Oregon	5	....
Connecticut	18	2	Pennsylvania	58	6
Delaware	1	....	Rhode Island	3	....
Florida	7	....	South Carolina	3	....
Georgia	5	....	South Dakota	5	....
Idaho	1	....	Tennessee	6	....
Illinois	89	10	Texas	11	....
Indiana	7	1	Utah	4	....
Iowa	18	....	Vermont	....	....
Kansas	10	....	Virginia	5	1
Kentucky	11	....	Washington	13	....
Louisiana	5	....	West Virginia	1	....
Maine	7	....	Wisconsin	18	....
Maryland	7	2	Wyoming	2	....
Massachusetts	37	6			
Michigan	35	2	Alaska Territory	....	....
Minnesota	23	1	Canal Zone	2	....
Mississippi	2	....	District of Columbia	1	....
Missouri	19	3	Hawaii Territory	....	....
Montana	3	1	Philippine Islands	1	....
Nebraska	6	....	Porto Rico	1	....
Nevada	....	....	U. S. Army	....	....
New Hampshire	4	1	U. S. Navy	....	....
New Jersey	37	5			
New Mexico	4	....	Total to residents of the United States.	714	69
New York	111	12			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Natal	....	....
Austria-Hungary	3	....	Newfoundland	....	....
Belgium	....	....	New South Wales	....	....
Brazil	....	....	New Zealand	....	....
British West Indies	....	....	Norway	1	....
Canada	15	....	Portugal	....	....
Cape Colony	....	....	Queensland	....	....
Chile	1	....	Roumania	....	....
Costa Rica	....	....	Russia	2	....
Cuba	....	....	Scotland	5	....
Denmark	1	1	South Australia	....	....
England	22	....	Spain	....	....
Finland	....	....	Sweden	1	....
France	4	1	Switzerland	....	....
Germany	30	....	Transvaal, South Africa	....	....
India	1	....	Victoria	1	....
Ireland	1	....	Wales	1	....
Island of Guam	1	....			
Italy	....	....	Total to residents of foreign countries	80	2
Japan	....	....			
Mexico	1	....			

Disclaimer.

1,146,542.—*John G. Blessing*, Chicago, Ill. AUTOMATIC TELEPHONE SWITCHING APPARATUS. Patent dated July 6, 1915. Disclaimer filed December 18, 1916, by the patentee and assignee, *Automatic Electric Company.*

Enters this disclaimer—

"To claims 61 and 62 in said specification, which are in the following words, to-wit:

"61. In a telephone system, a metallic line circuit, an impulse transmitting device for transmitting a varying number of impulses over one side of said line, and a single impulse over the opposite side of said line, a plurality of keys, and electromagnets controlled thereby for controlling the operation of said impulse device.

"62. In a telephone system, a metallic line circuit, an impulse device for transmitting a series of impulses over one side of said line, followed by one or more impulses over the opposite side of said line, a movable arm, a plurality of keys, and electromagnets controlled thereby for controlling the operation of said impulse device."

Access to Pending Applications.

No person except the applicant, the assignee whose assignment is of record, or the attorney of record will be permitted to have access to the file of any application, except as provided for under the interference rules, unless written authority from the applicant, assignee, or attorney, identifying the application to be inspected, is filed in the case to become a part of the record thereof, or upon the written order of the Commissioner, which will also become a part of the record of the case.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 5, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Oct. 19	Oct. 16	345
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	July 6	Oct. 26	624
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Dec. 15	Dec. 8	94
282	4. Conveyors; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Oct. 27	Dec. 15	227
197	5. Bookbinding; Harvesters; Jewelry; Music	Aug. 19	Dec. 1	310
510	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Aug. 5	Nov. 20	203
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Aug. 3	Oct. 23	320
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	June 9	Sept. 14	1294
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	June 24	Nov. 28	561
295	10. Carriages and Wagons; Spring Devices	July 5	Dec. 5	230
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Oct. 20	Dec. 21	110
222	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Aug. 26	Dec. 22	291
239	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Aug. 15	Nov. 27	419
207	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Aug. 4	Dec. 7	286
208	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 1	Dec. 26	206
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	June 19	Oct. 26	642
208	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Oct. 10	Dec. 22	127
237	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 2	Dec. 1	198
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Aug. 7	Sept. 6	446
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 9	Dec. 12	229
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Sept. 19	Nov. 16	262
240	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	July 26	Nov. 20	804
370	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	June 29	July 25	378
144	24. Apparel; Apparel Apparatus; Sewing-Machines	May 25	Oct. 24	77
215	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers. Gas Separation.	Oct. 25	Nov. 13	194
136	26. Electricity, Generation; Motive Power	Apr. 4	Sept. 30	673
272	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Nov. 20	Dec. 13	135
65	28. Internal-Combustion Engines	Aug. 4	Oct. 10	609
147	29. Cooperage; Fire-Escapes; Ladders; Rods; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	July 15	Nov. 6	331
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Oct. 20	Dec. 15	240
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Aug. 2	Oct. 23	204
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	June 1	Dec. 4	578
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Aug. 28	Nov. 21	406
104	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	June 1	Nov. 9	389
87	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	June 12	Dec. 14	723
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Aug. 18	Dec. 9	772
107	37. Electric Lamps: Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	May 25	Nov. 15	825
278	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Dec. 9	Dec. 5	143
231	39. Water Distribution	July 14	Nov. 17	230
269	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Aug. 25	Dec. 14	864
128	41. Railway Draft Appliances; Resilient Tires and Wheels	Aug. 22	Nov. 10	826
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	June 6	Nov. 14	345
282	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Oct. 3	Nov. 27	122

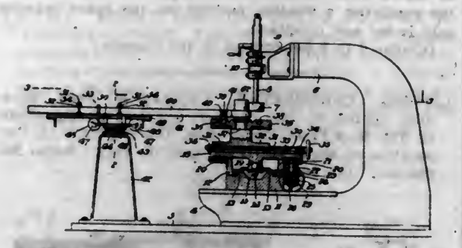
Oldest new case, Apr. 4; oldest amended, July 25.
Total number of applications awaiting action..... 18,891

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Nov. 22	Dec. 15	260
	Designs	Nov. 8	Dec. 8	412
	Labels and Prints	Nov. 26	Nov. 27	167

PATENTS

GRANTED JANUARY 9, 1917.

1,211,881. MACHINE-TOOL. CHARLES A. ALDEN, Steelton, Pa. Filed Apr. 3, 1916. Serial No. 88,436. (Cl. 51—4.)



1. The combination of a frame, a movable tool, means operative to actuate the tool, a rotatable member, means operative to rotate said member, a work carrier carried by said member, and means adapted to engage work carried by said carrier and prevent said work from turning on the axis of said member, whereby work carried by said carrier may be acted upon by said tool.

2. The combination of a frame, a rotatable tool, means operative to rotate the tool, a rotatable member having its axis of rotation in alinement with the axis of rotation of the tool, means operative to rotate said member, a work carrier carried by said member, and means to prevent work carried by said carrier from turning on the axis of said member, whereby work carried by said carrier may be acted upon by said tool.

3. The combination of a frame, a movable tool, means operative to actuate the tool, a rotatable member, means operative to rotate said member, a work carrier rotatably mounted on said member and adapted to carry a portion of the work acted upon by the tool, and a work support adapted to support another portion of the work and prevent it from turning on the axis of said member.

4. The combination of a frame, a rotatable tool, means operative to rotate the tool, a rotatable member having its axis of rotation in alinement with the axis of rotation of the tool, means operative to rotate said member, a work carrier rotatably mounted on said member and adapted to carry a portion of the work acted upon by the tool, and a work support adapted to support another portion of the work and prevent it from turning on the axis of said member.

5. The combination of a frame, a rotatable tool, means operative to rotate the tool, a rotatable member having its axis of rotation in alinement with the axis of rotation of the tool, means operative to rotate said member, a work carrier rotatably mounted on said member and having its axis of rotation out of alinement with the axis of rotation of the tool, and means to prevent work carried by said carrier from turning on the axis of said member, whereby work carried by said carrier may be acted upon by said tool.

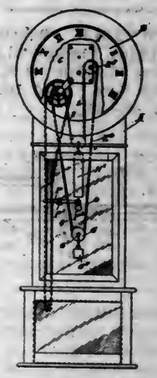
[Claims 6 to 17 not printed in the Gazette.]

1,211,882. PLASTIC COMPOSITION. OSCAR ALTPETER, Milwaukee, Wis. Filed Jan. 8, 1915. Serial No. 1,154. (Cl. 106—31.)

1. As a new article of manufacture, a composition for roofing or the like comprising comminuted granulated slag in intimate commixture with asbestos fiber and an asphalt binder, said slag constituting approximately 55 per cent. of the mixture.

2. As a new article of manufacture, a composition for roofing or the like comprising comminuted granulated slag in intimate commixture with asbestos fiber and an asphalt binder, the constitutents of the mixture being present approximately in the following proportions; slag, 55 per cent.; asbestos fiber, 10 per cent.; asphalt binder, 35 per cent.

1,211,883. CLOCK. FRIEDRICH BANGERTER, New York, N. Y. Filed June 3, 1911. Serial No. 631,068. (Cl. 58—48.)



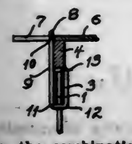
1. The combination with a clock train of gravity-controlled operating means therefor, a time striking device, a power device, and means actuated by, and on a predetermined limit of downward travel of, said gravity-controlled operating means, adapted to cause said power device to recurringly raise said gravity-controlled operating means after equal pre-determined periods of time and simultaneously actuate said time-striking device.

2. The combination with a clock train of flexible means for operating the same, including a weight, a time-striking device, a spring motor, a tripping member operatively connected to said spring motor, gearing and a second flexible means operatively connecting said spring motor and said first-named flexible means and weight, whereby, on the downward travel of said weight, said tripping member is recurringly operated by the movement of the latter to actuate said spring motor and recurringly raise said weight through the flexible means specified after equal pre-determined periods of time and simultaneously actuate said time-striking device.

1,211,884. RECEPTACLE-COVER AND FASTENER THEREFOR. FREDERICK W. BARKER, Coopers Plains, N. Y. Filed Nov. 15, 1915. Serial No. 61,645. (Cl. 217—124.)

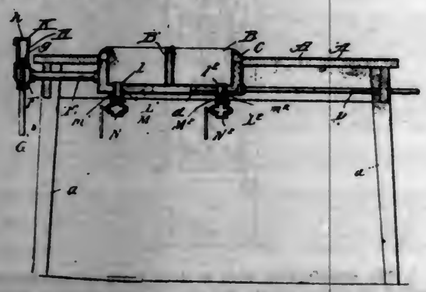
1. In a receptacle, the combination of a cover, having a rim provided with transversely and longitudinally arranged slats, the ends of one of said slats constructed to project beyond the outer edge of said cover, a cover fastener comprising a staple adapted to receive an end of the projecting slat and having loops formed at its ends

adapted to receive the rim of the receptacle, the extreme end portions overlapping the top of the receptacle rim, said cover rim adapted to bear upon the rim of the receptacle and cover up the extreme ends of said loops which overlie the top of the receptacle rim.



2. In a receptacle, the combination of a cover having a rim adapted to bear on the rim portion of the receptacle and having transversely and longitudinally arranged slats, the ends of one of said slats constructed to project beyond the outer edge of said cover, a cover fastener comprising a pair of staples carried by the receptacle having vertically projecting portions bent on a horisontal plane and having their ends bent to provide loops for receiving the rim of the basket and overlying the inner and outer sides thereof and the bottom and top portions thereof, the vertically projecting portions of said staples being adapted to receive the respective ends of the projecting slat.

1,211,385. STARCH-TABLE. WILLIAM BARTHOLOMEW and CHARLES M. LEARY, Chicago, Ill., assignors to Troy Laundry Machinery Company, Ltd., Chicago, Ill., a Corporation of New York. Filed Apr. 18, 1913. Serial No. 762,069. (Cl. 68—28.)



1. The combination with a table, of a starch containing receptacle located in an opening in the top of the table in a position to leave an adjacent part of the top of the table to form a supporting surface for portions of articles which are not to be starched, a jacket surrounding said receptacle, means for supplying a heating medium to the space between said jacket and receptacle, and an outlet conduit leading from the bottom of said receptacle for discharging the starch therefrom.

2. The combination with a table, of a starch containing receptacle located in an opening in the top of the table, a jacket surrounding said receptacle and permanently secured thereto as well as to the top of the table, a guard ridge surrounding the open top of the receptacle and projecting above the upper surface of the table for retaining the articles in position with portions depending into the receptacle and other portions resting upon the adjacent surface of the top of the table, and means for supplying a heating medium to the space between said jacket and receptacle.

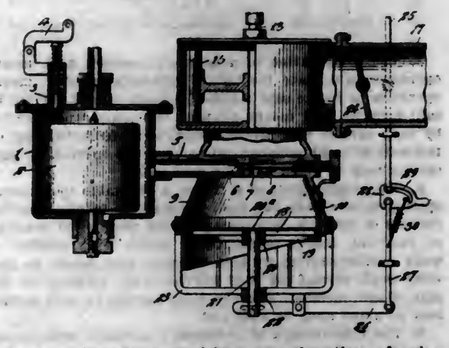
3. The combination with a table, of a starch containing receptacle located in an opening in the top of the table, a jacket surrounding said receptacle and projecting through the opening in the table to which it is secured, means for supplying a heating medium to the space between said jacket and receptacle, and means for automatically maintaining a predetermined level of the heating medium in the jacket.

4. The combination with a table, of a starch containing receptacle located in an opening in the top of the table, a jacket surrounding said receptacle, an inlet conduit for supplying steam to said jacket, an outlet conduit communicating with said jacket, an overflow casing with which said outlet conduit communicates, a water discharge pipe extending into said casing to the height of the water level desired in said jacket, and means for permitting the escape of steam from said overflow casing.

5. A table for the starching by hand of laundried articles comprising a starch containing receptacle located in an opening in the top of the table, a jacket completely surrounding and secured to said receptacle and projecting through the opening in the table top, a partition in said receptacle dividing the interior thereof into compartments, means for permitting the separate discharge of starch from each of said compartments, and means for supplying a heating medium to the space between said jacket and receptacle.

[Claims 6 to 9 not printed in the Gazette.]

1,211,386. CARBURETER. CHARLES W. BECK, Rockville Center, N. Y., assignor, by mesne assignments, to The Beck-Frost Corporation, Detroit, Mich., a Corporation of Michigan. Filed Oct. 19, 1911. Serial No. 655,453. (Cl. 261—44.)



1. A carbureter comprising a carbureting chamber, means for supplying gasolene thereto, an air inlet into said carbureting chamber, a pervious closure for the air inlet, means for moving said closure to place the carbureting chamber more or less in free open communication with the atmosphere.

2. A carbureter comprising a vertically arranged carbureting chamber having an air inlet at its lower end, means for supplying gasolene to the upper end of said carbureting chamber, a pervious, absorbent closure for the air inlet of said carbureting chamber and arranged to receive gasolene delivered into said carbureting chamber, means for vertically moving said closure, means whereby the said carbureting chamber may be placed in more or less open communication with the atmosphere by said vertical movement of said closure device, and means for drawing air through said absorbent closure and through the carbureting chamber.

3. A carbureter comprising a vertically arranged carbureting chamber having an air inlet at its lower end, means for supplying gasolene to the upper end of said carbureting chamber, an absorbent closure for the said air inlet, means for moving said closure to place the carbureting chamber in more or less open communication with the atmosphere, and means for drawing air through said absorbent closure and through the carbureting chamber.

4. A carbureter comprising a vertically arranged carbureting chamber having an air inlet at its lower end, means for supplying gasolene to the upper end of said carbureting chamber, an absorbent closure for the air inlet, means for vertically moving said closure, means whereby the said carbureting chamber may be placed in more or less open communication with the atmosphere by said vertical movement of said closure device, and means for drawing air through said absorbent closure and through the carbureting chamber.

5. A carbureter comprising a carbureting chamber having an air inlet at its lower end, the lower edge of said chamber being in part oblique to the axis of the chamber, a pervious closure device fitting said chamber, means for moving said closure device inwardly or outwardly beyond points on the lower edge of the carbureting chamber to place said chamber more or less in open communication with the atmosphere, means for supplying gasolene to said chamber, and means for drawing the carbureted air through the carbureting chamber.

[Claim 6 not printed in the Gazette.]

1,211,387. DEVICE FOR CONNECTING AIR-HOSE TO PNEUMATIC-TIRE VALVES. CHARLES W. BECK, Rockville Center, N. Y., assignor, by mesne assignments, to Beck-Frost Corporation, Detroit, Mich., a Corporation of Michigan. Substitute for application Serial No. 605,752, filed Jan. 31, 1911. This application filed Mar. 15, 1912. Serial No. 684,077. (Cl. 137—28.)



1. A device of the class described comprising a base longitudinally bored and formed with a longitudinally extending cavity at one end, a yieldable seating plug in said cavity, a rigid valve-opening plug projecting into said cavity, said plug being bored for the passage of air, a pair of radially movable locking jaws carried by said base and adapted to project into the said cavity outside of or beyond the yielding seating plug and formed with thread-engaging teeth on their inner surfaces, heads formed on the outer ends of said jaws, said heads engaging the outer surface of the base to limit the inward movement of said jaws, a cam ring carried by the said base and inclosing and protecting the jaws and formed with recesses to receive the outwardly projecting head portions thereof, the outer walls of said recesses forming cam surfaces adapted to force the jaws inwardly when the cam sleeve is rotated in the proper direction, the end walls of said recesses forming stops to limit the rotation of the cam sleeve in either direction.

2. A device of the class described comprising a base longitudinally bored and formed with a longitudinally extending cavity at one end, a yieldable seating plug in said cavity, a rigid valve-opening plug projecting into said cavity, said plug being bored for the passage of air, a pair of radially movable locking jaws carried by said base and adapted to project into the said cavity outside of or beyond the yielding seating plug and formed with thread-engaging teeth on their inner surfaces, heads formed on the outer ends of said jaws, said heads engaging the outer surface of the base to limit the inward movement of said jaws, a cam ring carried by the said base and inclosing and protecting the said jaws and formed with recesses to receive the outwardly projecting head portions thereof, the outer walls of said recesses forming cam surfaces adapted to force the jaws inwardly when the cam sleeve is rotated in the proper direction, the end walls of said recesses forming stops to limit the rotation of the cam sleeve in either direction and the heads of the jaws locking the cam ring to the base.

3. A device of the class described comprising a base longitudinally bored and formed with a longitudinally extending cavity at one end, a yieldable seating plug in said cavity, a rigid valve-opening plug projecting into said cavity, said plug being bored for the passage of air, a pair of radially movable locking jaws carried by said base and adapted to project into the said cavity outside of or beyond the yielding seating plug and formed with thread-engaging teeth on their inner surfaces, heads formed on the outer ends of said jaws, said heads engaging the outer surface of the base to limit the inward movement of said jaws, a cam ring carried by the said base and formed with recesses to receive the outwardly projecting head portions of the locking jaws, the outer walls of said recesses forming cam surfaces adapted to force the jaws inwardly when the cam sleeve is rotated in the proper direction, the end walls of said recesses forming stops to limit the rotation of the cam sleeve in either direction and the heads of the jaws locking the cam ring being provided with longitudinally extending slots adapted to be brought into register with the heads of the locking jaws when said cam ring is in its unlocked position.

4. A device of the class described comprising a base formed with a longitudinally extending cavity at one end, a yielding seating plug in said cavity, a valve lifting plug carried by said base and extending above the yieldable seating plug, a series of radially movable jaws formed with screw engaging teeth on their inner surfaces, a rotatable cam ring inclosing said jaws and adapted to force them inwardly as said ring is rotated, and heads formed on the locking jaws outside of the base and within the said ring, said heads fitting in recesses formed in the cam ring and serving to lock said ring to the base.

5. A hose coupling, comprising a base, a radially movable jaw engaged with said base and formed with thread engaging teeth on its inner surface, a cam ring rotatably carried by the base for forcing said jaw inward when said ring is rotated, and means upon said jaw for locking the ring to the base.

[Claims 6 and 7 not printed in the Gazette.]

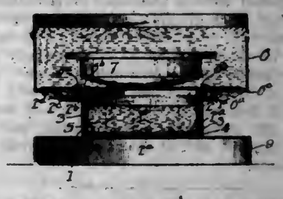
1,211,388. PROTECTED ELECTRODE AND PROCESS OF MAKING THE SAME. EDMUND HENRY BECKER, Washington, D. C., assignor to Kinetic Electric Company, Norfolk, Va., a Corporation of Virginia. Filed Oct. 18, 1916. Serial No. 126,817. (Cl. 204—38.)

1. As a new article of manufacture a negative electrode for galvanic cells composed of copper oxid with a superficial coating of amalgamated metallic copper.

2. As a new article of manufacture a negative electrode for galvanic cells composed of an intimate and uniform mixture of cuprous and cupric oxids having its surface covered with a thin coating of amalgamated copper.

3. In the production of protected copper oxid electrodes the process which comprises superficially coating a copper oxid electrode with copper and thereafter amalgamating such coating with mercury.

1,211,389. MEDICAMENT VAPORIZER AND BURNER. GEORGE W. BENNETT, Chicago, Ill. Filed Jan. 11, 1912. Serial No. 670,613. (Cl. 167—3.)



1. The combination of a receptacle adapted to contain a fuel, a wick extending upwardly along the sides of the receptacle and projecting laterally therefrom, and a container adapted to be supported by said receptacle.

2. The combination of a receptacle adapted to contain a fuel, a wick extending upwardly along the sides of the receptacle which has an opening through which the wick projects laterally formed, and a container adapted to be supported by said receptacle.

3. The combination of a receptacle adapted to contain a fuel and having a series of wick openings at its upper portion, a series of wicks extending upwardly along the sides of the receptacle and projecting through said openings and laterally formed.

4. The combination of a burner and a box which when closed is adapted to inclose the burner and which when open coöperates with the burner in operation, said box comprising a body portion and a cover, the former constituting an inclosing case and also a receptacle adapted to be supported by the fuel receptacle, and the latter constituting a cover for the body portion and a support or stand for the fuel receptacle.

5. The combination of a fuel receptacle, a box comprising a body portion and a cover, the former constituting an inclosing case and also a receptacle adapted to be supported by the fuel receptacle and the latter constituting a cover for the body portion and also a support or stand for the fuel receptacle, and a medicament holder having a convex bottom against the central portion of which the cover is arranged to press when the parts are packed together.

[Claims 6 to 17 not printed in the Gazette.]

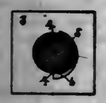
1,211,390. SCREW-PUMP. ROBERT B. BENNETT, New York, N. Y., assignor to Erastus S. Bennett, New York, N. Y. Continuation of application Serial No. 706,654, filed June 29, 1912. This application filed Jan. 4, 1916. Serial No. 70,319. (Cl. 253—182.)



1. In combination in a screw pump, a cylinder, a sectional screw piston having hubs interlocking, a shaft extending through said hubs and diaphragms within the cylinder surrounding the interlocking ends of the hubs, substantially as described.

2. In combination in a screw pump, a cylinder made up of sections, a screw piston made up of sections with interlocking hubs, a shaft extending through the hubs and diaphragms held between the sections of the cylinder and surrounding the interlocking ends of the hubs, substantially as described.

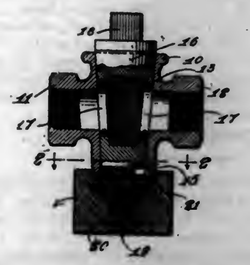
1,211,391. NUT-LOCK. CHARLIE A. BLACKWELDER, Gunter, Tex. Filed Apr. 1, 1916. Serial No. 88,389. (Cl. 151—11.)



The combination with a screw threaded bolt having oppositely disposed grooves extending longitudinally along its threaded part, each groove comprising an upright wall and an inclined wall, of a lock nut having a threaded bore engaging the threaded portion of said bolt and a curved cam shaped chamber in its face side adjacent said bore, and a flat segmental spring dog housed in said chamber, one end of said dog engaging the narrow end wall of the chamber and the other end being inturned and adapted to engage the upright wall of one of said grooves, substantially as set forth.

1,211,392. STOP. LEWIS H. BOLTON, Slippery Rock, Pa. Filed July 27, 1915. Serial No. 42,213. (Cl. 137—7.)

In a stop; a casing having a longitudinal conducting bore, said casing being further provided with a through receiving bore intersecting said conducting bore, a valve plug seated in said receiving bore, a head at one end of said plug whereby it may be moved rotatably in said receiving bore, a threaded extension projecting from the



other end of said plug, a bur adjustably mounted on said casing having a threaded aperture to receive said threaded extension, whereby upon movement of said bur said plug may be moved longitudinally in said receiving bore, as and for the purpose specified.

1,211,393. MANUFACTURE OF CARBONIC-ACID COMPOUNDS OF AMMONIA. CARL BOSCH, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Germany. Filed Apr. 8, 1915. Serial No. 20,047. (Cl. 23—21.)

1. The process of manufacture of carbonic acid compounds of ammonia by introducing ammonia and carbon dioxid into an indifferent liquid that does not mix with water.

2. The process of manufacture of carbonic acid compounds of ammonia by introducing ammonia and carbon dioxid into a vessel containing a cooled indifferent liquid that does not mix with water.

3. The process of manufacture of carbonic acid compounds of ammonia by introducing ammonia and carbon dioxid into a vessel containing a cooled liquid hydrocarbon.

4. The process of manufacture of carbonic acid compounds of ammonia by introducing ammonia and carbon dioxid in the presence of water vapor into an indifferent liquid that does not mix with water.

5. The process of manufacture of carbonic acid compounds of ammonia by introducing ammonia and carbon dioxid in the presence of water vapor into a liquid hydrocarbon.

[Claim 6 not printed in the Gazette.]

1,211,394. CATALYZER. CARL BOSCH, ALWIN MITTASCH, and CHRISTOPH BECK, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Germany. Filed Apr. 8, 1915. Serial No. 20,048. (Cl. 23—28.)

1. An active catalyst suitable for the catalytic oxidation of ammonia to nitrogen oxids comprising an oxygen compound of bismuth and an activator.

2. An active catalyst suitable for the catalytic oxidation of ammonia to nitrogen oxids comprising an oxygen compound of bismuth and an activator which for itself acts as a catalyst for the said reaction.

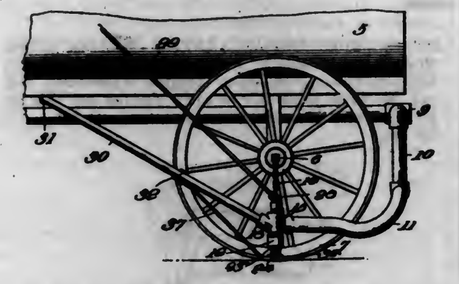
3. An active catalyst suitable for the catalytic oxidation of ammonia to nitrogen oxids comprising an oxygen compound of bismuth and an oxid of at least one metal of the iron group.

4. An active catalyst suitable for the catalytic oxidation of ammonia to nitrogen oxids comprising the oxid of bismuth, iron and manganese.

1,211,395. TREATMENT OF COKE-OVEN GASES. JØGOR ISRAEL BRONN, Rombach, Lorraine, Germany, assignor of one-half to the Firm of Rombacher Hüttenwerke, Rombach, Germany. Filed Oct. 14, 1916. Serial No. 125,739. (Cl. 183—115.)

The method of producing from previously treated coke oven gases, a compressed lighting, heating and welding gas, consisting in passing the gas through a substance capable of absorbing CO_2, then through a substance capable of absorbing C_2H_4, and then liquefying the remaining gases with the exception of hydrogen and nitrogen.

1,211,396. FLUSHING-CART. JACOB I. BROBBY, Shenandoah, Iowa. Filed Mar. 24, 1916. Serial No. 86,381. (Cl. 137—63.)



1. In a flushing apparatus, the combination with a cart having axles, flushing heads, means carried by said axles adapted to support said flushing heads to permit a vertical movement thereof, and means carried by said heads adapted to automatically cause said vertical movement to compensate for irregularities in the roadway traversed by said cart.

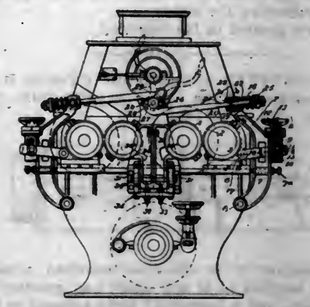
2. In a flushing apparatus, a cart, flushing heads, nozzles carried by said heads, means for changing the angle of direction of the stream from said nozzles, means for automatically causing a vertical movement of said heads relative to the irregularities in the roadway carried by said cart, and means for preventing horizontal movement of said flushing heads.

3. In a flushing apparatus, the combination with a cart having axles, flushing heads, flexible means carried by said axles adapted to support said flushing heads to permit vertical movement thereof, means for preventing horizontal movement of said heads and a shoe adapted to underlie each of said heads and engage the roadway whereby irregularities in the roadway will move said shoe to cause the head to move vertically in order to clear such obstruction.

4. In a flushing apparatus, the combination with a cart having wheels and axles, of a tank supported thereon, flushing heads, means for supplying fluid from said tank and said heads, flexible means carried by said axles adapted to support said heads to permit vertical movement thereof, nozzles carried by said heads, means for changing the angle of delivery of said nozzles, a shoe underlying each of said nozzles, means carrying said shoes adapted to prevent horizontal movement of said heads whereby the heads may be lifted by said shoes upon said shoes coming in contact with inequalities in the road.

5. A flushing apparatus comprising a cart, a U-shaped member supported by said cart and carrying flushing heads at either end thereof, means for supporting said flushing heads from the axles of said cart in such a manner as to permit vertical movement of said heads, flexible connections for supplying fluid to said heads, a shoe adapted to underlie each of said heads and contact with the roadway whereby inequalities in the roadway are adapted to be engaged by said shoes to lift said heads over said inequalities in order to prevent injury to said head.

1,211,397. REDUCING-MILL. HAROLD EVERETT BRUNNER and LORENZO S. COPE, Philadelphia, Pa., assignors to The Hess-Bright Manufacturing Company, a Corporation of Delaware. Filed July 8, 1913. Serial No. 777,813. (Cl. 83—12.)



1. In a mill, the combination of two rolls, one of which is movable to and from the other, movable bearings for the movable roll, a freely movable controlling member for the movable roll, comprising two upright arms connected together in fixed relations to move in unison, an adjustable connection directly between the arm and its companion bearing, causing the arms to be moved in unison by the movable roll when the latter separates from its companion roll, and permitting of the adjustment of the movable roll relatively to the arms and the companion roll, and springs sustained independently of the movable bearings, and acting on said arms respectively and operating through the medium of said arms, to hold the movable roll yieldingly in coactive relation to its companion roll.

2. In a mill, the combination of a frame, two rolls mounted therein, one of which is movable to and from the other, movable bearings for the movable roll, sustained by the frame, a freely movable controlling member for the movable roll, sustained by the frame, adjustable connections between said controlling member and the respective movable bearings, causing said controlling member to be moved when the movable roll separates from its companion roll, and permitting of the adjustment of the movable roll relatively to the controlling member and to its companion roll, a spring sustained by the frame and acting on the controlling member and operating, through the medium of the controlling member, to hold the movable roll in coactive relation to its companion roll, and means for moving the controlling member in opposition to the spring to quickly separate the movable roll from its companion roll.

3. In a mill, the combination of a frame, two rolls mounted therein, one of which is movable to and from the other, movable bearings for the movable roll, a rock shaft mounted in bearings in the frame and extending parallel with the axis of the rolls, two arms fixed at their ends to said shaft to move in unison, links pivoted at one of their ends to the roll-bearings respectively and movably connected at their opposite ends with the respective arms, adjusting means on the arms acting on the movable ends of the links, and springs sustained independently of the movable bearings and acting on the arms to hold the movable roll yieldingly in coactive relation to its companion roll.

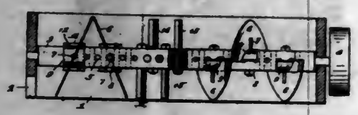
4. In a mill, the combination of two rolls, one of which is movable to and from the other, movable bearings for the movable roll, an upright horizontally movable controlling member for the movable roll, horizontal links pivoted at their inner ends to said bearings respectively, vertically movable slides mounted in the controlling member and jointed to the rear ends of the links, and devices sustained by the controlling member and connected with the slides for adjusting the same vertically.

5. In a mill, the combination of two rolls, one of which is movable to and from the other, movable bearings for the movable roll, a horizontally movable controlling member for the movable roll, adjusting slides sustained by the

controlling member and movable relatively thereto at an angle to the movement of the bearings, operative connections between the slides and bearings for moving the latter in one direction when the slides are moved in a different direction, and means sustained by the controlling member for adjusting the slides.

[Claim 6 not printed in the Gazette.]

1,211,398. CONVEYER AND MIXER. CHARLES H. BURGARD, Leavenworth, Kans. Filed Aug. 23, 1915. Serial No. 46,850. (Cl. 170—158.)



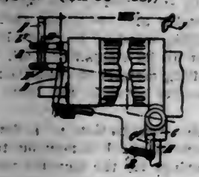
1. In a conveyer of the character described, a shaft, a flight holder adapted to fit said shaft and provided with slotted margins, and a segmental flight adapted to be secured to the shaft and held at a certain pitch by the slotted margins of the flight holder.

2. In a conveyer of the character described, a shaft, a flight holder consisting of a segmental portion provided with oppositely-extending flanges having diagonal slots therein, and a flight adapted to enter the diagonal slots in the flight holder and provided with a pin whereby it is secured to the shaft.

3. In a conveyer of the character described, a shaft, a flight holder adapted to fit said shaft and provided with oppositely-disposed flanges having slots arranged at an angle therein, a segmental flight having ends arranged to enter said slots, and a threaded pin to extend through the flight holder and the shaft and secure the flight thereon.

4. In a conveyer of the character described, a shaft, a flight holder adapted to fit said shaft and provided with oppositely-disposed marginal flanges, and a flight adapted to be secured to the shaft and engage the flanges and be held thereby at a certain pitch.

1,211,399. SIGHTING APPARATUS. WILLIAM ALBERT BURNS, Drummondhill, Scotland. Filed Oct. 30, 1915. Serial No. 58,911. (Cl. 33—48.)



1. Sighting apparatus having a foresight and a rear sight, in combination with means for automatically varying the position of one of the sights as the gun is being laid, said means being of such construction that the ratio between the respective distances, measured horizontally, from the two sights to a vertical plane perpendicular to the line between them is equal to the ratio of muzzle velocity of the projectile to the gun-platform speed.

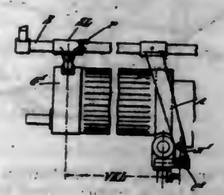
2. Sighting apparatus having a foresight and a rear sight, the former being pivotally connected to a part moving in elevation with the gun, in combination with means for automatically moving the foresight as the gun is being laid, said means being of such construction that the ratio between the respective distances, measured horizontally from the two sights to a vertical plane perpendicular through the point of connection between the foresight and the part moving with the gun, is equal to the ratio of muzzle velocity of the projectile to the gun-platform speed.

3. Sighting apparatus having a foresight in combination with parallel link mechanism carrying the foresight from a part moving with the gun in elevation, and means for automatically actuating said link mechanism to vary the distance of the fore-sight from the gun axis to compensate for the gun-platform speed.

4. Sighting apparatus having a fore-sight in combination with parallel link mechanism carrying the fore-sight from a part moving with the gun in elevation and mechanism interposed between the gun and its mounting for automatically raising and lowering the fore-sight as the gun is depressed and elevated.

5. Sighting apparatus having a fore-sight in combination with parallel link mechanism carrying the fore-sight from a part moving with the gun in elevation, and means for automatically actuating said link mechanism to vary the distance of the fore-sight from the gun axis to compensate for the gun-platform speed, said fore-sight being adjustable relatively to the pivots of the link mechanism to set the apparatus to agree with different gun-platform speeds.

1,211,400. SIGHTING APPARATUS. WILLIAM ALBERT BURNS, Drummondhill, Scotland, assignor to Vickers Limited, London, England. Original application filed Oct. 30, 1915, Serial No. 58,911. Divided and this application filed July 31, 1916. Serial No. 112,397. (Cl. 33—48.)



1. Sighting apparatus having a pivoted sight bar in combination with means for automatically rocking the sight bar as the gun is being laid, said means being such that the ratio between the respective distances, measured horizontally, from two points on the sight bar to a vertical plane perpendicular to the line between them and passing through the axis of the gun trunnions, is equal to the ratio of muzzle velocity of the projectile to the gun-platform speed.

2. Sighting apparatus having a pivoted sight bar in combination with link mechanism for automatically rocking the sight bar as the gun is being laid, said link mechanism being so proportioned that the ratio between the respective distances, measured horizontally, from the points of support of the link mechanism on a part that moves in elevation with the gun and on a part that does not move with the gun in elevation, to a vertical plane passing through the axis of the gun trunnions, is equal to the ratio of muzzle velocity of the projectile to the gun-platform speed.

3. Sighting apparatus having a pivoted sight bar in combination with link mechanism, of which the sight bar forms part, for automatically rocking the sight bar as the gun is being laid, said link mechanism being so proportioned that the ratio between the respective distances, measured horizontally, from the points of support of the link mechanism on a part moving with the gun in elevation and on a part that does not move with the gun in elevation, to a vertical plane passing through the axis of the gun trunnions, is equal to the ratio of muzzle velocity of the gun, to the gun-platform speed.

4. Sighting apparatus having a sight bar in combination with means for pivotally connecting it at one side of the gun trunnion axis to a part moving in elevation with the gun and means for pivotally connecting said sight bar to the gun mounting at the other side of the gun trunnion axis the pivotal points of connection being so arranged that the ratio between the respective distances, measured horizontally, from said pivotal points to a vertical plane passing through the trunnion axis is equal to the ratio of muzzle velocity of the projectile to the gun-platform speed.

5. Sighting apparatus having a sight bar in combination with means for pivotally connecting it at one side of the gun trunnion axis to a part moving in elevation with the gun, means for pivotally connecting said sight bar to the gun mounting at the other side of the gun trunnion axis, the pivotal points of connection being so arranged that the ratio between the respective distances, measured horizontally, from said pivotal points to a vertical plane passing through the trunnion axis, is equal to the ratio of muzzle velocity of the projectile to the gun-platform speed, and means for adjusting the distance between the trunnion axis and the pivotal point of connection of the sight bar with the gun mounting, to agree with different gun-platform speeds.

[Claims 6 to 10 not printed in the Gazette.]

1,211,401. SIGHTING APPARATUS. WILLIAM ALBERT BURNS, Drummondhill, Scotland, assignor to Vickers Limited, London, England. Original application filed Oct. 30, 1915, Serial No. 58,911. Divided and this application filed July 31, 1916. Serial No. 112,398. (Cl. 33—48.)



1. In sighting apparatus for use with guns firing at traveling targets, the combination with the sighting index of an angularly displaceable member on which said index is mounted, and means for adjusting said member so that a line joining the sighting index to the axis of movement of the member is parallel to the direction of travel of the target.

2. In sighting apparatus for use with guns firing at traveling targets, the combination with the sighting index, of an angularly displaceable member on which said index is adjustable toward and away from the axis of movement of said member in accordance with the speed of the target, and means for adjusting said member so that a line joining the sighting index to the said axis of movement of the member is parallel to the direction of travel of the target.

3. In sighting apparatus for use with guns firing at traveling targets, the combination with the foresight, of a crank arm, means for mounting said foresight on said crank arm so as to be adjustable longitudinally thereon in accordance with the speed of the target, and means for angularly adjusting said crank arm to correspond in angular position to the direction of travel of the target.

4. In sighting apparatus for use with guns firing at traveling targets, the combination with a support, of an angularly movable sighting index mounted on the support and adapted to be set in angular position in conformity with the direction of travel of the target, said index being so shaped as to indicate, in accordance with its angular position, the amount of "spread" of fire necessary to hit the moving target.

5. In sighting apparatus for use with guns firing at traveling targets, the combination with an angularly movable member adapted to be set in angular position in conformity with the direction of travel of the target, of a sighting index of T shaped formation mounted on said member.

[Claims 6 and 7 not printed in the Gazette.]

1,211,402. HOLDING MEANS FOR ROLLER-SCREENS. EDWARD T. BURROWES, Portland, Me. Filed Jan. 25, 1915. Serial No. 4,251. (Cl. 156—14.)

1. The combination with a window having the usual upper sash, of a screen for such window, said screen comprising a rigid transversely extending bar, and hangers carried by the lower edge of said sash in which said bar is supported and held against rotation, said hangers embracing the sides of said bar at each end thereof and being so shaped that the bar may be moved laterally into and out of position therein.



2. The combination with a window having the usual upper sash, of a screen for such window, said screen comprising a rigid transversely extending bar, and laterally opening resilient brackets carried by and depending from the bottom of said sash in which the end portions of said bar rest, said brackets frictionally embracing said bar and permitting its disengagement by a horisontal movement.

3. The combination with a window having the usual upper sash, of a screen for such window comprising a piece of flexible material, upper and lower bars to which such material is secured, and on which it may be wound, and a pair of brackets carried by said sash, said brackets being shaped to embrace the end portions of both of said bars.

4. The combination with a window having the usual upper sash, of a screen for such window comprising a piece of flexible material, upper and lower bars to which such material is secured, and on which it may be wound, a bracket at each side adapted to support said bars, each bracket being shaped to embrace the end portion of both bars, and a swinging strip carried by each bracket and serving to lock the bars in position in said bracket.

5. The combination with a window having the usual frame, of a screen therefor formed of flexible material, a strip secured to the frame at each side, against which strip the free edges of the screen material are adapted to rest, and means for holding such free edges in contact with said strip, such means comprising spring clips each having a portion disposed between a strip and the frame, and a resilient portion overlying that face of the strip with which the screen material engages, and under which portion the edges of such material may be inserted.

1,211,403. COLLAPSIBLE WINDOW-SCREEN. EDWARD T. BURROWES, Portland, Me. Filed June 24, 1915. Serial No. 36,089. (Cl. 156—14.)

1. The combination with a window frame having the usual sash, of a strip secured to a vertical face of the frame, a flexible screen, and a bar to which one end of said screen is secured mounted horizontally with its ends in and snugly fitting the space between such sash and strip, the side edges of said screen resting against the face of said strip.

2. The combination with a window frame having the usual sash, of a strip secured to a vertical face of the frame, a bar having its ends mounted in the space between said sash and strip, and a piece of flexible netting secured to the outer face of said bar and having its edges in contact with said strip.

3. The combination with a window frame having the usual runway, and a sash in said runway, of a strip secured to a vertical portion of said frame and having its inside face at its upper end spaced from said runway, and at its lower end flush with the edge of said runway, a

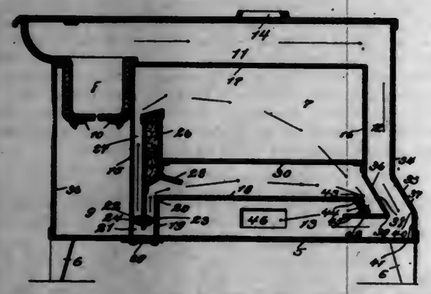
flexible screen having its edge in substantial contact with said strip, and a bar to which said screen is secured, the end of said bar lying in said runway.



4. The combination with a window frame having the usual sill, sash guides and sash, of a flexible screen, top and bottom bars to which said screen is secured, said bottom bar being in contact with the sill and said top bar being disposed between the two outside sash guides, and means carried by said guides for frictionally engaging the ends of said top bar for supporting the same.

5. The combination with a window frame having the usual outside trim including lintel and sash guides, of a plurality of spring clips secured thereto, each clip having a pair of downwardly extending arms, one of said arms being straight and provided at its end with a projection, said straight arm lying in the plane of the inner edge of the sash guide, a bar detachably held between the arms of said clips with its inner face adjacent the sash and its lower edge resting against said projection, and a flexible screen secured to said bar.

1,211,404. STOVE AND RANGE. WILLIAM ADOLPH BUSINK, Belleville, Ill. Filed May 20, 1916. Serial No. 98,543. (Cl. 126—36.)



1. In a device of the character described, an oven, a source of heat consisting of hollow perforated members connected at their extremities, a partition in said oven so positioned with respect to said source of heat that direct communication between the perforations is destroyed, that the products of combustion in emanating therefrom are selectively divided between the upper and lower portion of said oven.

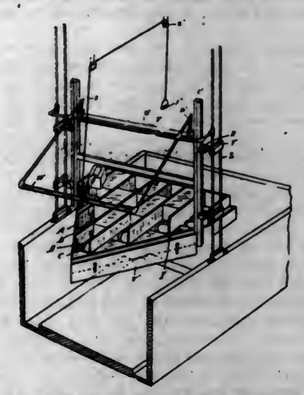
2. In a device of the character described, an oven, surrounded by flues, an offset in one of the walls of said oven, a projecting plate from said offset, a protruding plate from the adjacent wall of said oven, a sliding damper positioned in said protruding plate, the damper, the projecting plate, and the protruding plates so positioned relative each other as to establish communication between the oven and one of said flues, but to preclude it between said flue and said oven.

3. In a device of the character described, an oven, surrounded by flues, a source of heat, a partition in said oven, so positioned with respect to said source of heat, that the products of combustion in emanating therefrom are selectively divided between the upper and lower portion of said oven, in combination with an offset in one of the walls of said oven, a projecting plate from said offset, a protruding plate from the adjacent wall of said oven, a sliding damper positioned in said protruding plate, the damper, the projecting plate and the protruding plates so positioned relative each other as to establish communication between the oven and one of said flues, but to preclude it between said flue and said oven.

4. In a device of the character described an oven, a source of heat consisting of a hollow member having longitudinal rows of perforations, a partition in said oven so positioned with respect to said source of heat, that direct communication between the rows of perforations of said source of heat is destroyed, and that the products of combustion in emanating therefrom are selectively divided between different portions of said oven.

5. In a device of the character described, a source of heat consisting of a hollow member having longitudinal rows of perforations, a partition in said oven so positioned with respect to said source of heat, that direct communication between the rows of perforations of said source of heat is destroyed and that the products of combustion in emanating therefrom are selectively divided between different portions of said oven, and means whereby fuel from all the rows of perforations on said source of heat can be simultaneously ignited.

1,211,405. BOWLING-PIN-SETTING MECHANISM. ANGUS CAMERON, Detroit, Mich. Filed July 12, 1915. Serial No. 39,469. (Cl. 46—5.)



1. In a pin setter, the combination with a vertically movable frame provided with pin pockets and inclined seats for the pins, of means operating upon the lowering of the frame for tripping said pins off said inclined seats, guides for accurately positioning the pins upon the alley, and means operating upon the raising of said frame for releasing said guides to permit withdrawal from said pins without displacement thereof.

2. In a pin setter, the combination with a vertically movable frame having pin pockets and seats for pins in inclined position, of means operating upon the lowering of said frame for tripping said pins from their seats, guides conforming to the tapering form of the pin for accurately positioning the latter upon the alley, and means operating upon the raising of said frame for releasing said guides to permit withdrawal of the same.

3. In a pin setter, a vertically-movable frame, means for supporting a pin upon said frame, means for displacing the pin from said support to an upright position upon a floor when the frame is adjacent the floor, a plurality of pivotal dogs carried by the frame and spaced about the pin in its displaced position, and cams operated by the final downward movement of the frame to displace said dogs radially inward to accurately position the pin, and operated by the initial upward movement of the frame to release the dogs and permit withdrawal thereof from the pin.

4. In a pin setter, the combination with a vertically-movable main frame, of a plurality of apertured auxiliary frames depending from the main frame, and adjustable to or from the same, a spring tending to maintain a maximum spacing between each auxiliary frame and the main frame, a plurality of pivotal dogs mounted upon the main frame above each auxiliary frame and angularly displaceable to engage a pin mounted in the aperture of said auxiliary frame, and means carried by each auxiliary frame for engaging the dogs above the same when the same is upwardly displaced to shift said dogs radially inward.

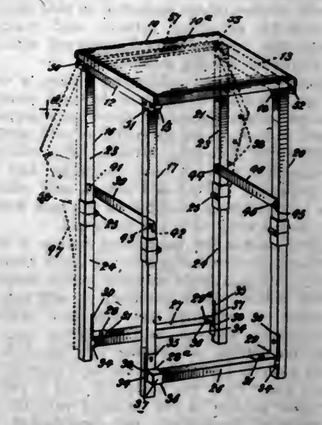
5. In a pin setter, the combination with a vertically movable frame apertured for the passage of a pin therethrough, of a seat for a pin in inclined position with its lower end in registration with said aperture, a guide conforming to the tapering form of said pin when the latter is resting on the alley to accurately position the same, means operating upon the lowering of said frame for setting said guide in registration with said aperture in the frame and for also tripping said pin from said seat, and means operating upon the raising of the frame for expanding said guide to permit withdrawal from the pin.

[Claims 6 to 17 not printed in the Gazette.]

1,211,406. LUBRICATING SYSTEM. GEORGES HENRI MARIUS CANTON, PIERRE GEORGES UNNÉ, and EMILE JEAN JULES SALMSON, Billancourt, France. Original application filed Mar. 29, 1912, Serial No. 687,011. Divided and this application filed Nov. 27, 1912. Serial No. 733,766. (Cl. 184—6.)

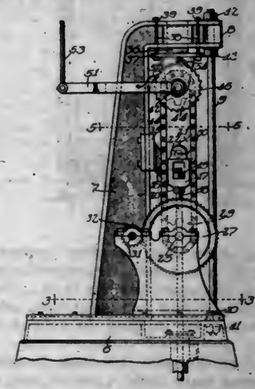
In a lubricating system, the combination of a central stationary casing, a series of cylinders fixed radially therein, a crank shaft at substantially the central part of said casing, said crank shaft being longitudinally chambered and having a radial passage leading from the chamber in the crank shaft to the surface thereof, a source of lubricant remote from the crank shaft a lubricant distributer placed above the crank shaft, a pipe for conveying lubricant from said source to the chamber in the crank shaft, a pump for forcing lubricant through said pipe, a distributing pipe connecting the lubricant distributer to the chamber in the crank shaft, a trap for excess lubricant carried near the base of the central stationary casing, and a pump for forcing said excess lubricant back to the source.

1,211,407. FOLDABLE WARDROBE. AMANDA WILHELMINA CARLSON, Brooklyn, N. Y. Filed Mar. 25, 1915. Serial No. 16,889. (Cl. 45—118.)



In a foldable wardrobe, a frame comprising a supporting board, two stationary bars disposed transversely on the underside of said supporting board, a pair of standards hingedly connected to the inner side of each bar, said standards being adapted to swing inwardly to fold against the under surface of said supporting board, and one standard of each pair being nearer the center of the bar than the adjacent standard of the other pair whereby said standards will lie alongside each other when folded, members hingedly connected to said standards and adapted to form extensions thereof and to fold inwardly and upwardly on said standards; together with a pair of braces connecting the extensions of the two adjacent standards of each pair, said braces having one end connected to the inner surface of the extension of the outer standard and with the other end connected to the outer surface of the extension of the inner standard, substantially as and for the purpose described.

1,211,408. PUMPING APPARATUS. MATTHEW T. CHAPMAN, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Feb. 3, 1912. Serial No. 675,324. (Cl. 103—62.)



1. A pumping mechanism, comprising a standard having a horizontal arm, a bracket adjustably supported by said arm, a sprocket-wheel carried by said bracket, a lower sprocket-wheel, an endless chain operating on said sprocket-wheels, means for driving said chain, a pump-rod, and swinging means connecting said pump-rod with said chain.

2. A pumping mechanism, comprising a standard having a horizontal arm, a bracket adjustably supported by said arm, sprocket-wheels carried by said bracket, lower sprocket-wheels, endless chains operating on said sprocket-wheels, a pump-rod extending between said chains, a swinging connection connecting said pump-rod with said chains, and means for driving said chains.

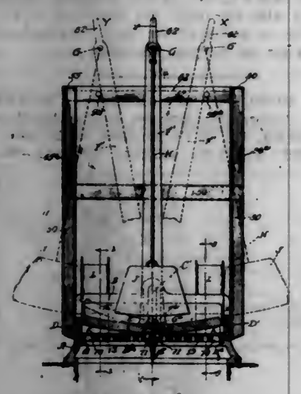
3. A pumping mechanism, comprising a base, a standard, upper sprocket-wheels supported by said standard, frames mounted on said base, sprocket-wheels supported by said frames, endless chains operating on said sprocket-wheels, a pump-rod extending between said chains, a swinging connection between said pump-rod and said chains, and means for driving said chains, said standard and brackets being slidably mounted on the base whereby they may be moved away from the pump-rod.

4. A pumping mechanism, comprising a base, a standard, upper sprocket-wheels supported by said standard, frames mounted on said base, sprocket-wheels supported by said frames, endless chains operating on said sprocket-wheels, a pump-rod extending between said chains, a swinging connection between said pump-rod and said chains, means for driving said chains, said standard and brackets being slidably mounted on the base whereby they may be moved away from the pump-rod, and a rod connecting the upper portion of the standard with the base.

5. In a pumping mechanism, the combination of a frame, a head slidably mounted thereon, a pair of endless chains supported at one end by said head and at the other end by said frame, a plurality of bolts adjustably connecting said head with said frame for tightening said chains, means for driving said chains in unison, a pump-rod, and connections between said chains and said pump-rod whereby the movement of the chains reciprocates the pump-rod.

[Claims 6 and 7 not printed in the Gazette.]

1,211,409. MECHANICAL MOVEMENT. WILLIAM R. CHITTENDEN, Chicago, Ill. Filed Aug. 20, 1915. Serial No. 46,450. (Cl. 74—14.)



1. A device of the class described, comprising a plane plate, a curved base, a pair of upstanding arms secured to said base, means connecting said arms at their free ends, a freely swinging weight suspended from said connecting means, and means for shifting the axis of oscillation of said weight.

2. A device of the class described, comprising a horizontally disposed plane plate, a curved base, a pair of upstanding arms secured to said curved base, a shaft connecting the upper ends of said arms, a freely swinging weight suspended from said shaft, means for laterally moving said shaft to cause the oscillation of said weight.

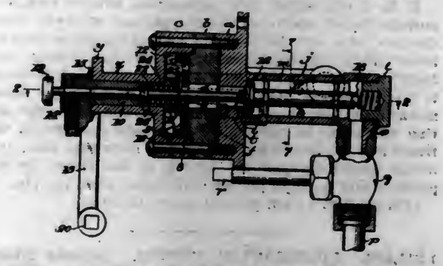
3. A device of the class described, comprising a curved bed, a pair of upstanding arms secured to said bed, means for connecting the upper ends of said arms, a freely swinging weight suspended from said connecting means, and means for horizontally shifting the axis of oscillation of said weight.

4. A device of the class described, comprising, a pair of upstanding arms, a curved base to which said arms are attached at their lower ends, a freely swinging weight suspended from the upper ends of said arms, and means for oscillating said weight by a reciprocating movement of the upper ends of said arms.

5. A device of the class described including, in combination, a rockable bed and perpendiculars arising therefrom, a member connecting said perpendiculars, a weight freely suspended from said member, and means whereby said bed may be oscillated.

[Claims 6 to 14 not printed in the Gazette.]

1,211,410. CONTROLLING-VALVE FOR SELF-STARTERS. NIELS A. CHRISTENSEN, Milwaukee, Wis. Filed Dec. 8, 1913. Serial No. 805,288. (Cl. 123—181.)



1. In a controlling valve for self-starters, having supply and service ports and an exhaust port open to the atmosphere, the combination of a selector valve adapted to open and close communication either between service and supply ports or between service and exhaust ports, a self-closing stop valve in the supply port operating independently of pressure in the selector valve chamber and means for manually opening the stop valve independently of the operation of the selector valve.

2. In a controlling valve for self-starters, the combination of a case having supply, service and exhaust ports, a rotary selector valve controlling communication between certain of said ports, a tubular stem rotatably mounted in the valve case in engagement with the selector valve and having an enlarged bore in its inner portion forming an internal shoulder, a spring seated stop valve normally closing said supply port, a push rod fitted in said stem in alinement with the stop valve and provided with a collar and packing fitting the enlarged bore in said stem, a spring interposed between said collar and the selector valve and normally holding said packing against said shoulder, a handle removably fitted on said stem for turning the selector valve and provided with a push button removable therewith for thrusting the push rod inward and opening the stop valve.

3. In a controlling valve for self-starters, the combination of a valve case having service, exhaust and auxiliary exhaust ports, a nozzle attached to the case in communication with the exhaust port, a cap removably connected with the case over said nozzle and forming a passage connecting the exhaust port with the auxiliary exhaust port, and a selector valve adapted to connect and disconnect the service and exhaust ports.

4. In a controlling valve for self-starters, the combination of a valve case having supply, service, exhaust and auxiliary exhaust ports, a nozzle attached to the case over the exhaust port, a cap removably connected with the case and forming a passage connecting the exhaust port with the auxiliary exhaust port, a selector valve adapted in different positions to connect and disconnect the supply and service ports and to connect and disconnect the service and exhaust ports, a self-closing stop valve normally closing the supply port independently of the selector valve, and means for opening the stop valve.

5. In a controlling valve for self-starters, the combination of a case provided with a valve seat having a central supply port and service and exhaust ports at a distance from the center, means for connecting a hose or pipe with the exhaust port, a rotary selector valve having a central opening in constant communication with said supply port, a through port adapted to register with either the service or exhaust port and a cavity adapted to connect the service and exhaust ports, and means for turning said valve.

[Claims 6 to 8 not printed in the Gazette.]

1,211,411. LEGGING. WILLIAM R. CLAXTON, Bartow, Fla. Filed Apr. 24, 1915. Serial No. 23,681. (Cl. 36—2.)



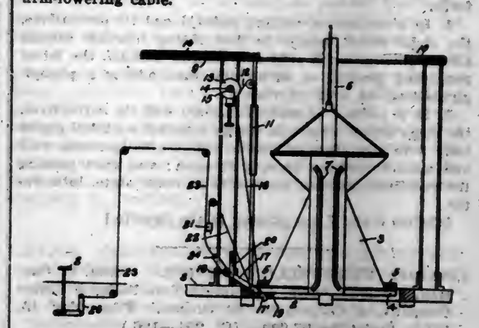
1. A legging comprising a flexible metal plate having rounded corners and rolled to form a body having overlapping end portions, said end portions having outwardly curved marginal edges co-acting with said rounded corners in providing the body with substantially V-shaped openings above and below said overlapping end portions, and a bearing strip for contact with a shoe extending beyond the lower edge of said body and in advance of the lowermost of said openings.

2. A legging comprising a plate of resilient material having rounded corners and rolled to form a body having overlapping end portions, said end portions having outwardly curved marginal edges coacting with said rounded corners in providing the body with substantially V-shaped openings above and below said overlapping end portions, a strip of flexible material extending circumferentially about the lower edge of said body and projecting beyond the same in advance of the lowermost of said openings, and a pair of lacing loops on said body having closed ends spaced therefrom and arranged adjacent said overlapping end portions.

1,211,412. MINE-SHAFT GATE. JOHN J. COLLIER, Irwin, Pa. Filed Jan. 14, 1916. Serial No. 72,050. (Cl. 187—58.)

1. The combination of a normally closed gate for a shaft landing, a cage movable in the shaft, a vertically swinging arm adapted to extend into the path of the cage, a cable extending from the arm and operatively connected to the gate for opening the latter when the arm is depressed by the cage, a counterweight for raising the arm out of cage-engaging position when the gate is closed and thereby slacking said gate-actuating cable, and means for causing the arm to move into cage-engaging position without affecting the position of the gate said movement being afforded by the slack in said cable.

2. The combination of a normally closed gate for a shaft landing, a cage movable in the shaft, a vertically swinging arm adapted to move into the path of the cage, a cable operatively connecting said arm and the gate for opening the latter when the arm is depressed by the cage, a counterweight for moving the arm out of cage-engaging position when the gate is closed, a cable connected to the arm for lowering it into cage-engaging position notwithstanding the counterweight, and means for actuating said arm-lowering cable.



3. The combination of a vertically-movable cage, a vertically-movable normally closed gate, a winding shaft controlling the vertical position of the gate, a gate-operating cable between the shaft and gate through which said shaft controls the gate, a shaft-operating cable for rotating the shaft to wind up the gate cable and elevate the gate, a vertically-swingable arm for actuating said shaft-operating cable to elevate the gate and hold the same elevated, manually-operated means for moving said arm into the path of movement of the cage for depression thereby to cause winding up of said gate cable, and means constantly acting on said arm to return the same to and normally maintain the same out of the path of said cage.

4. The combination of a vertically-movable cage, a normally-closed gate for a landing stage in the shaft in which said cage is movable, means for opening said gate, a swingable arm for operating said means to open the gate and hold the same open, means constantly acting on said arm to yieldingly maintain the same at its limit of upward swing in normal inoperative position removed from the path of movement of the cage and for automatically returning the same to such position independently of the movement of said gate, and manually operated connections from a remote point for swinging said arm downwardly until it enters the path of movement of said cage, substantially as described.

5. The combination of a vertically-movable cage, a vertically-movable gravity-drop normally-closed gate, a winding shaft having operative connection with said gate for elevating the same, a vertically movable shaft-operating member having constant operative connection with said shaft for rotating the same to elevate the gate and hold the same elevated, means yieldingly maintaining said member in normal inoperative position and for automatically returning the same to such position independently of said gate, and manually operated means at a point remote from said gate and cage having operative cable connection with said member for moving the same into operative position in the path of the cage.

[Claim 6 not printed in the Gazette.]

1,211,413. METHOD OF MAKING INDOXYL AND DERIVATIVES. LEE E. H. CONE, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a Corporation of Michigan. Filed June 21, 1916. Serial No. 105,078. (Cl. 8—1.)

1. In a method of making indoxyl and its derivatives, the step which consists in heating a phenyl-glycin body with a mixture of caustic alkali, alkaline-earth oxid and metallic sodium present as such, substantially as set forth.

2. In a method of making indoxyl and its derivatives, the step which consists in heating a phenyl-glycin body with a mixture of potassium hydroxid, lime and metallic sodium present as such, substantially as set forth.

3. In a method of making indoxyl and its derivatives, the step which consists in heating a phenyl-glycin body

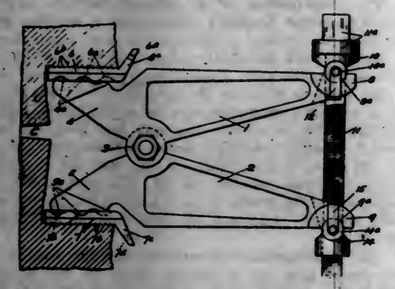
with a mixture of sodium and potassium hydroxids, lime and metallic sodium present as such, substantially as set forth.

4. In a method of making indoxyl and its derivatives, the steps which consist in first fusing together caustic alkali, alkaline-earth oxid and metallic sodium, the latter remaining present as such; and then adding a phenyl-glycin body to such mixture.

5. In a method of making indoxyl and its derivatives, the steps which consist in fusing together a phenyl-glycin body with a mixture of caustic alkali, alkaline-earth oxid and metallic sodium present as such; and then passing the resulting product, while still in fused state, into water.

[Claims 6 and 7 not printed in the Gazette.]

1,211,414. TREE-FELLING DEVICE. JAMES E. CROMAN, Portland, Oreg., assignor to Tree Faller & Cutter Company, a Corporation of Oregon. Filed May 15, 1916. Serial No. 97,699. (Cl. 254—126.)



1. A tree felling device of the character referred to, comprising two pivotally connected power levers, bearing one upon the other in rocker-like relationship, a power screw operating at their outer ends for drawing said levers together, said levers being provided with operating jaws at their opposite ends, a pair of supplemental jaw plates adapted to be inserted in a notch cut in a tree to receive said jaws, and means for holding said jaws in operating engagement with said jaw plates.

2. A tree felling device of the character shown and described, comprising a pair of pivotally connected power levers bearing one upon the other in rocker-like relationship, a power screw operatively connecting the outer ends of said levers together and adapted to draw said outer ends toward each other, said levers being provided at their opposite ends with jaws, and a pair of jaw engaging plates adapted to be inserted in a notch cut in a tree, said plates and said jaw members having interfitting engagements therebetween, whereby to prevent slipping of said jaw members on said plates.

3. In a tree felling device of the character referred to, a pair of operating levers pivotally connected to each other, nut-like members pivotally seated in the outer ends of said levers, a power screw connecting the outer ends of said levers, through said nut-like members, said levers being provided at their opposite ends with jaws, supplemental jaw plates adapted to be inserted in a notch cut in a tree, the tree-engaging faces of said plates being provided with holding means to prevent slipping, and their inner or adjacent faces being adapted to have interfitting engagement with the engaging faces of said jaw members, which are adapted therefor, substantially as described.

4. A tree felling device of the character shown and described, comprising in combination, two pivotally connected power levers bearing one upon the other in rocker-like relationship, nut-like members pivotally and detachably seated in the outer ends of said levers, means for holding said nut-like members in their seats, a power screw connecting said nut-like members and having a threaded engagement with one of them, whereby to draw the outer ends of said levers together when said screw is operated, said levers being provided at their opposite ends with jaw portions, and a pair of supplemental jaw plates having interfitting operating connections with said jaw portions, said jaw plates being provided in their outermost faces with holding means, substantially as shown and described.

1,211,415. DRIVEN-WELL POINT AND STRAINER. GEORGE C. CROSS, Cleveland, Ohio. Filed Nov. 6, 1916. Serial No. 129,722. (Cl. 166—5.)



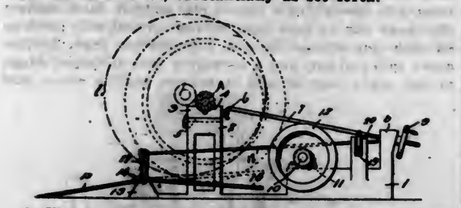
1. The combination with an outer lower tube provided with a drive point, of a strainer tube telescoping therein with a close joint between the upper end of the lower tube and the strainer tube, a casing pipe connected to the strainer tube, and an inner tube secured in said strainer tube and adapted for connection at its upper end to an inner strainer and pump elements.

2. The combination of an outer lower tube having a drive point a strainer tube and a casing connected thereto, the strainer tube telescoping in the outer tube, a packed joint between said tubes, an inner tube in the strainer tube and spaced therefrom, said space being closed at its lower end, and an upper strainer connected at its lower end to the upper end of the inner tube and adapted for connection to a pump valve above.

3. The combination with a strainer tube and casing connected thereto, of an inner tube fixed within said strainer tube, and a tubular upper strainer spaced within the casing and connecting at its lower end with the inner tube and adapted for connection at its upper end to a pump valve, and a drive point telescopically connected to said strainer tube said tube being open ended to permit the drive point to be operated by a rod lowered through the upper strainer and the inner tube.

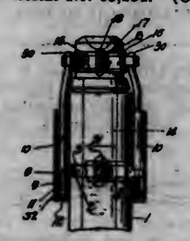
1,211,416. FRICTION-DRIVE AUTOMOBILE ATTACHMENT. SOPHUS ALFRED DALAGER, Glenwood, Minn. Filed Mar. 28, 1916. Serial No. 86,297. (Cl. 21—90.)

1. The combination in a friction drive automobile attachment of a frame, a drive shaft mounted thereon, one or more pulleys carried by the drive shaft to operate a belt at predetermined speeds, friction wheels mounted on the drive shaft and positioned to frictionally engage the rear wheels of an automobile below the horizontal median line of said wheels, means for supporting the rear wheels of the automobile in elevated position, means for longitudinally adjusting said supporting means, and means for raising and lowering the automobile wheels from the supporting means, said means including a hand wheel, elevatable wheel platform members operatively connected with the hand lever, substantially as set forth.



2. The combination in a friction drive automobile attachment of means for supporting the rear wheels of an automobile in raised position, friction drive mechanism arranged to frictionally engage said wheels, elevatable wheel platform members to raise and lower said automobile wheels to the supporting means, a hand wheel, means operatively connecting the hand wheel with the elevatable platforms, and friction regulating means including a hand wheel to adjust the supporting means.

1,211,417. RIVET-SET HOLDER FOR RIVETING-HAMMERS. ARTHUR C. DAVIS, Cristobal, Canal Zone. Filed Dec. 4, 1915. Serial No. 65,134. (Cl. 78—44.5.)



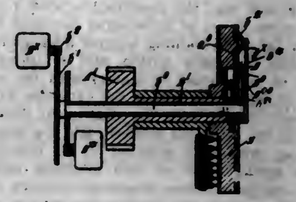
1. In a riveting hammer, a barrel having an annular shoulder near its outer end, a rivet set having an annular groove, a hinged collar mounted for rotation in the groove on the rivet set, yieldable and quick detachable means to connect the free ends of said collar, a hinged collar mounted for rotation on the barrel in engagement with the shoulder thereon, connecting rods for the collars which are made fast in the rivet set collar and are loosely connected to the barrel collar, and springs engaging the loose ends of said connecting rods and acting thereon to draw the collars together, the hinges in said collars being disposed on the same side of the hammer, and said rivet set collar being adapted to be opened to release the rivet set without disturbing the barrel collar or the connection of said rods thereto.

2. In a riveting hammer, a plunger barrel having a circumferential groove turned with straight side walls, a rivet set having a circumferential groove, a split collar yieldingly clamped about the rivet set and interfitting with the groove therein, a collar having a right angled shoulder adapted to fit in the barrel groove, means to clamp the collar in interlocked relation with said groove but free to turn about the barrel, rods having their reduced ends made fast to the rivet set collar at one end, and yieldingly connected to the barrel collar at the other end, and guards for the yieldable connections between the rods and barrel collar.

3. In a riveting hammer, a plunger barrel having a rectangular annular groove turned in its exterior wall near its nose, a rivet set mounted in the barrel and having an annular groove turned therein with outwardly sloping walls, a clamp collar adapted to interfit with said rivet set groove, a yieldable clamp connection for said collar, a barrel collar having a rectangular shoulder which interfits with the barrel groove, means to fasten the collar about the barrel while leaving it free to turn thereabout, lugs on the collars, rods reduced at their outer ends and bradded to the lugs on the rivet set collar, springs surrounding the reduced ends of the rods which project through the lugs on the barrel collar, nuts to adjust the tension on the springs, and tubular guards detachably connected to the barrel collar and inclosing the adjacent ends of the rods, substantially as described.

4. A riveting hammer, members thereon immovable axially of the barrel and perforated, a rivet set engaging means comprising rods having their inner ends reduced and inserted through the perforations of said members, springs surrounding said reduced ends of the rods beyond said members, nuts on the rods forming end seats for said springs, and guards to surround said members and the spring inclosed ends of the rods connected thereto, substantially as described.

1,211,418. CONTROL SYSTEM FOR GUN-MOUNTINGS AND OTHER MECHANISM. ARTHUR TREVOR DAWSON, Westminster, London, and JAMES HORNE, Barrow-in-Furness, England, assignors to Vickers Limited, Westminster, England. Original application filed July 12, 1912, Serial No. 708,964. Divided and this application filed Dec. 2, 1913. Serial No. 804,165. (Cl. 172—239.)



1. In a control system for power driven mechanism, the combination of a member driven thereby, two sets of contact strips and a supply ring thereon, two members actuated from a distance and moving at different speeds, a relay under the control of said members, a control device for the power driven mechanism, means for operating said control device from the relay, means whereby relative movement between said power driven member and said members actuated from a distance renders the relay operative and means whereby the movement of said relay consequent on its being rendered operative, renders it again inoperative.

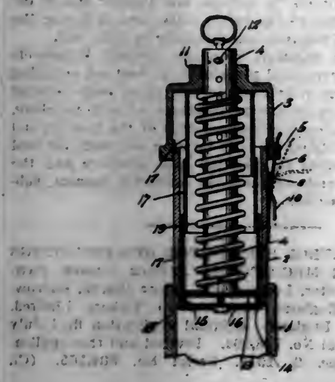
2. In a control system for power driven mechanism, the combination of a member driven thereby, two sets of contact strips and a supply ring thereon, two members actuated from a distance and moving at different speeds, contact fingers in electrical connection with said strips, contact plates against which said fingers bear, a relay in electrical connection with said contact plates, a control device actuated by said relay, and means for connecting said plates with the control device.

1,211,419. GREASE-CUP. JOHN G. DEBBELER and FRANK J. KIRSCH, Covington, Ky. Filed Aug. 5, 1916. Serial No. 113,239. (Cl. 184—45.)

1. In a grease cup, the combination with a grease retaining member, a set of telescoping members therein, a top member for said retaining member adapted to bear on said cylinders, a piston within said retaining member adapted to be maintained in contact with the said cylinders, and spring means within the cylinders for causing the extension thereof with the consequent depression of the piston in the retaining member.

2. In a grease cup, the combination with a grease retaining member, a set of telescoping members therein, a top member for said retaining member adapted to bear on said cylinders, a piston within said retaining member adapted to be maintained in contact with the said cylinders, and spring means within the cylinders for causing the extension thereof with the consequent depression of the piston in the retaining member, and means for pre-

venting the loss of the top member from the retaining member.



3. In a grease cup, the combination with a grease retaining member, a set of telescoping members therein, a top member for said retaining member adapted to bear on said cylinders, a piston within said retaining member adapted to be maintained in contact with the said cylinders, and spring means within the cylinders for causing the extension thereof with the consequent depression of the piston in the retaining member, said top member comprising a cap threadably mounted on the retaining member, and a spring finger on said retaining member and adapted to engage said cap to prevent rotation thereof.

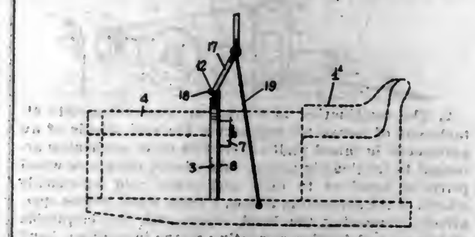
4. In a grease cup, the combination with a grease retaining member, a set of telescoping members therein, a top member for said retaining member adapted to bear on said cylinders, a piston within said retaining member adapted to be maintained in contact with the said cylinders, and spring means within the cylinders for causing the extension thereof with the consequent depression of the piston in the retaining member, said top member comprising a cap threadably mounted on the retaining member, and a spring finger on said retaining member adapted to engage said cap to prevent rotation thereof, said finger being provided with means for throwing it out of engagement with said cap.

5. In a grease cup, a cylindrical barrel, a plunger adapted to move in said barrel, a washer on the end of the plunger, said washer having expandible means in contact therewith to keep it in constant contact with the walls of said barrel, a set of telescoping cylinders loosely mounted over the plunger, a spring within the cylinders and bearing on the upper and lower ones of said set, and a cap for said barrel adapted to contact with the cylinders whereby the washer will be spring-advanced in the barrel, and the grease therein will be prevented from contact with the spring with the consequent clogging thereof.

1,211,420. WIND-SHIELD SUPPORT. ALFRED J. DIEFENDERFER, Bronxville, N. Y., assignor to Hayes Diefenderfer Co., Inc., New York, N. Y., a Corporation of New York. Filed Apr. 30, 1915. Serial No. 24,927. (Cl. 21—148.)

1. In commercial automobile construction, the combination with the permanent dash having a coil-box on the inner side thereof, of a sheet-metal support fitted against the inner side of said dash having vertical side portions extending downwardly on each side of said coil-box, a transverse upper portion above said coil-box, and a forwardly bent U-shaped flange at the upper edge of said transverse portion extending above said dash, a wind shield having its lower edge supported in said U-shaped flange, and rods for supporting the upper part of said wind shield from the frame of the automobile, substantially as set forth.

2. In commercial automobile construction, the combination with the permanent dash having a coil-box on the inner side thereof, of a sheet-metal support fitted against the inner side of said dash having vertical side portions on each side of said coil-box, a transverse upper portion above said coil-box, and a forwardly bent U-shaped flange at the upper edge of said transverse portion above said



dash, said side and transverse portions overlapping the side and top edges respectively of said dash and being bolted thereto, said side portions having openings to receive the supporting screws of the front lamps, through the overlapping portions at each side of the dash, and a wind shield having its lower edge supported in said U-shaped flange, substantially as set forth.

1,211,421. CHAIN-LINK. ALFRED N. EDEBURN, Cleveland, Ohio, assignor to The Cleveland Galvanizing Works, Cleveland, Ohio, a Corporation of Ohio. Filed June 14, 1915. Serial No. 34,085. (Cl. 59—92.)



1. A primary chain link blank consisting of a section of wire or the like, having its end portions respectively off-set in opposite directions with reference to the blank's axis, the extremities of such end portions extending in the general direction of the main part of said blank.

2. A secondary chain link blank comprising a section of wire or the like bent to form two loops lying in substantially the same plane, the end portions of such sections extending laterally in opposite directions from an axis of the blank.

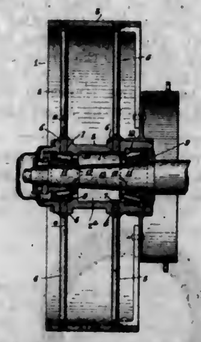
3. A secondary chain link blank comprising a section of wire or the like bent in opposite directions to form two symmetrical loops lying in substantially the same plane, the end portions of such section extending laterally of and in opposite directions from an axis of the blank, and over the outer portion of the loop of which the other end portion forms a part.

4. A chain link comprising a section of wire bent to form two adjacent loops at one end of the link and bent to form an eye at the other end of such link of which the end-portions of said section form a part, the main part of such eye-forming end-portions lying upon opposite sides of a longitudinal plane perpendicular to said loops, and the extremities of said eye-forming portions respectively, lying upon sides of said plane opposite those upon which said main portions thereof lie.

5. A chain link comprising a section of wire bent to form two adjacent loops at one end of the link and bent to form an eye at the other end of such link of which the end-portions of said section form a part, the main part of such eye-forming end-portions lying upon opposite sides of a longitudinal plane perpendicular to said loops, the extremities of said eye-forming portions respectively, lying upon sides of said plane opposite those upon which said main portions thereof lie; said extremities being both intersected by a line perpendicular to said longitudinal plane.

[Claim 6 not printed in the Gazette.]

1,211,422. WHEEL. ERNEST E. EINFELDT, Davenport, Iowa, assignor to G. Watson French, Nathaniel French, Joseph L. Hecht, and W. H. Stackhouse, Davenport, Iowa, composing the Firm of French & Hecht, Davenport, Iowa. Filed Apr. 12, 1916. Serial No. 90,736. (Cl. 21—69.)



1. In a wheel, the combination of a hub provided with an internal chamber, spokes connected fixedly with the hub and having their inner ends exposed within the chamber, and an antifriction bearing situated in the chamber and including an external bearing ring seated against and supported by said ends of the spokes.

2. In a wheel, the combination of a hub having an internal chamber, spokes connected rigidly with the hub and provided with heads extending in the chamber, and an antifriction bearing situated in the chamber and including a bearing seated against and supported by said spoke heads.

3. In a wheel, the combination of a hub provided with an internal chamber, spokes connected fixedly with the hub and provided on their inner ends with flat heads exposed within the chamber, and an antifriction bearing situated within the chamber and including a bearing ring seated against and supported by said flat spoke heads.

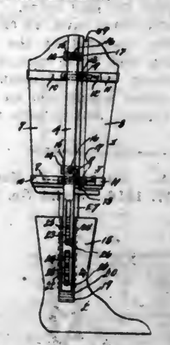
4. In a wheel, the combination of a hub provided with an internal chamber, spokes fixedly connected with the hub in two ranks spaced from each other in an axial direction, the inner ends of the spokes of one rank being provided with heads extending within the chamber, an antifriction bearing situated in said chamber in line with one of the ranks of spokes and including a bearing ring bearing against and supported by the heads on the spokes of said rank, and a second antifriction bearing situated in said chamber adjacent the other rank of spokes; whereby the two ranks of spokes and the bearings may be properly spaced from each other.

1,211,423. ARTIFICIAL LIMB. WILLIAM M. EISEN, New York, N. Y., assignor, by mesne assignments, to The Adjustable Artificial Limb Company, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 25, 1916. Serial No. 93,374. (Cl. 3—2.)

1. In an artificial-leg, a stump-socket-member, a foot-member, braces carried by said socket adjustably secured to said foot member, and an auxiliary support connected at one end to said socket-member and slidably engaging said foot-member at its opposite end.

2. In an artificial-leg, a stump-socket-member, a foot-member, racks carried by said foot-member, braces carried by said socket-member, teeth carried by said braces to engage the teeth in corresponding racks, and releaseable means to keep the teeth on said racks and braces in engagement.

3. In an artificial-leg, a stump-socket-member, a foot-member, racks carried by said foot-member, braces carried by said socket-member, teeth carried by said braces to engage the teeth in corresponding racks, releasable means to keep the teeth on said racks and braces in engagement, and an auxiliary support connecting said foot-member and socket-member.

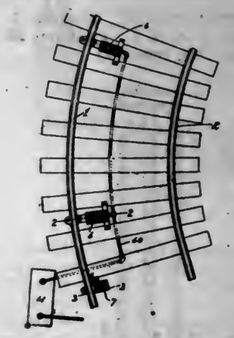


4. In an artificial leg, a stump-socket-member, a socket-plate carried thereby, a foot-member, and a slidable post rigidly and directly connected at its upper end to said plate and having a direct slidable connection with the foot-member at its opposite end.

5. A stump-socket for artificial-legs, consisting of a plurality of separable spaced apart members, means to connect said members arranged to permit of the diametrical adjustment of said members, one of said members being provided with transversely disposed slots for the passage of bolts to engage leg-braces and a post-supporting plate connected to one of said members.

[Claims 6 to 10 not printed in the Gazette.]

1,211,424. FLANGE AND RAIL LUBRICATOR. CARL HENRY EPPLE, Oakland, and GEORGE A. WHITE, Red Bluff, Cal. Filed Mar. 10, 1915. Serial No. 13,534. (Cl. 184—3.)



1. In combination with track rails, an oil reservoir, and means initiated by the passage of a wheel flange for spraying a quantity of oil against the side of the rail head from said reservoir.

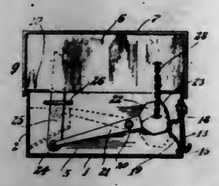
2. In combination with track rails, an oil reservoir, an electrical contact maker operated by the train wheel passing over said track rails, a spray nozzle connected with said oil reservoir, a valve for admitting air under pressure to said spray nozzle, electrical means for operating said valve, and an electrical circuit connecting said valve operating means with said contact maker.

3. In combination with the track rails of a curve, of oil spraying mechanisms located adjacent each end of said curve, contact makers located at each end of said curve adapted to be moved by the passage of the train wheel flanges to operate said oil spray mechanism, a relay adapted to electrically connect the spraying mechanisms and the contact maker at the end of the track curve where a train enters, and to prevent an electrical

connection between the spraying mechanisms and contact maker adjacent the exit end of the curve during the passage of the train through the said curve.

4. In combination with track rails, an oil reservoir, an electrical contact maker operated by the passage of a train wheel flange along said track rails, a spray nozzle attached to said reservoir, electrical means for causing the operation of said spray nozzle and an electrical circuit connecting said contact maker with said electrical means.

1,211,425. MAIL-BOX. CHARLES F. FARRAR, Howell, Mich. Filed June 17, 1916. Serial No. 104,155. (Cl. 232—35.)



A mail box having end walls with one of said walls provided with a door opening and a slot, a rear wall having the upper edge thereof inturned, a lid hinged to the upper inturned edge of said rear wall, a semaphore arm in said box projecting through the inturned upper edge of said rear wall and adapted to be raised and lowered relative to said wall, a fulcrumed lever in said box connected to said semaphore arm, a resilient member in said box engaging said lever to hold said lever in adjusted positions, a hinged door for the doorway of said end wall, and a flexible connection between said resilient member and said door and extending through the slot of said end wall adapted for moving said resilient member when said door is open.

1,211,426. COCKTAIL-MIXER. RICHARD J. ANDERSON FARRINGTON, New York, N. Y. Filed July 25, 1916. Serial No. 111,153. (Cl. 259—98.)



1. In a cocktail mixer, the combination of an elongated cylindrical casing, a base member secured thereto, a removable cover member on the open upper end of the casing, having a central opening therethrough and a pouring spout at one side thereof, and a reciprocable operating rod extending through said opening, having a perforated disk at its lower end, extending substantially across the interior of the casing, substantially as set forth.

2. In a cocktail mixer, the combination of an elongated cylindrical casing, having a flat base and an open upper end, a screw-cap removably mounted on the upper end, having a central opening therethrough and a pouring spout at one side thereof, an operating rod extending through said opening and reciprocally mounted therein, said rod having a handle member at its upper end, and a perforated mixing disk on the lower end of the rod, substantially as set forth.

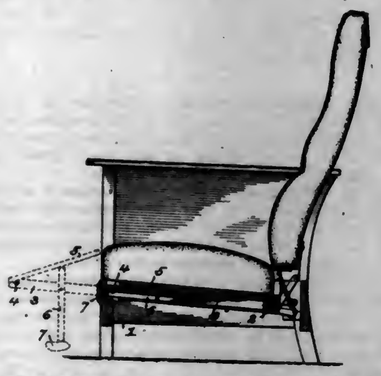
3. In a cocktail mixer, the combination of a cylindrical casing, having an open upper end, a removable cover member thereon, having a central opening therethrough, an operating rod extending through and mounted to reciprocate therein, said rod having a longitudinal passage therethrough and a vent connecting said passage with the atmosphere, adjacent the upper end of the rod, a perforated mixing device on the lower end of the rod, a handle on the upper end of the rod and an elastic bulb adjacent the handle and connected with the upper end of said passage, substantially as set forth.

1,211,427. TIRE-PATCH. HAROLD B. FERGUSON and IVIN G. FERGUSON, Newburgh, N. Y. Filed Mar. 14, 1916. Serial No. 84,168. (Cl. 152—24.)



A tire patch of the class described comprising a strip of suitable fabric having openings in the ends thereof, straps disposed in overlapping relation upon the lower edges of the strip and having openings disposed in registration with the openings of the strip, plates disposed against the overlapping ends of the strip and the straps and provided with openings also registering with the aforementioned openings, each of said plates being formed with a hook engageable over the wheel rim to hold the said plate in spaced relation thereto, removable pins disposed through the registered openings for detachably connecting the strip, straps and plates together, and fastening means for adjustably connecting the ends of the straps together.

1,211,428. LEG-REST FOR CHAIRS. GEORGE FISCHRUPP, Chicago, Ill. Filed Jan. 24, 1916. Serial No. 73,802. (Cl. 155—9.)

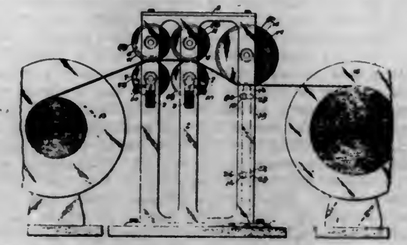


1. In a leg rest, the combination of a seat frame, a guideway on said frame, a sliding member in said guideway, a leg rest pivoted at its forward end to said sliding member, and a weighted brace pivoted to said sliding member to the rear of the pivots of the leg rest and adapted for operative engagement therewith, substantially as set forth.

2. In a leg rest, the combination of a seat frame, a pair of channel shape guideways on said frame, sliding rails moving in the channels of said guideways, a leg rest pivoted at its forward end to said sliding rails, and a weighted brace pivoted to said sliding rails to the rear of the pivots of the leg rest and adapted for operative engagement therewith, substantially as set forth.

3. In a leg rest, the combination of a seat frame, a pair of channel shape guideways on said frame, sliding rails moving in the channels of said guideways, a leg rest pivoted at its forward end to said sliding rails, a U-shape brace pivoted to said sliding rails to the rear of the pivots of the leg rest and adapted for operative engagement therewith, and a transverse bar secured to the forward end of the U-shape bar aforesaid and adapted to form a closure for an opening in the front rail of the seat through which the mechanism has movement, substantially as set forth.

1,211,429. MACHINE FOR TREATING CINEMATOGRAPH-FILMS. WILLIAM FRANK, St. Louis, Mo. Filed Jan. 26, 1916. Serial No. 74,509. (Cl. 91—36.)

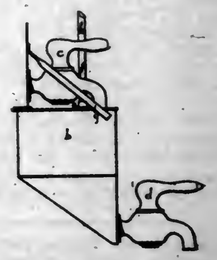


1. In a machine for treating cinematograph films, a platen mounted transversely in the main frame of the machine and having at each edge guiding flanges, narrow raised rings within the flanges adapted to engage the edge of a film strip, separate containers for plastic bars of lubricating material removably mounted in the frame below said platen and at either side thereof, so as to present the ends of separate plastic bars to the edge of the film strips below said rings on said platen, a movable support for the plastic bars in each container, a spring in each of said containers tending to press the movable support upwardly, thereby holding the ends of the bars of plastic material in yielding contact with the edges of the film, and means for arresting the upward movement of said movable supports.

2. A machine for treating cinematograph films comprising a frame, tensioning mechanism including duplicate pairs of rollers, the upper rollers of each pair rigidly mounted in the frame and the lower rollers of each pair movably mounted in the frame, all of said rollers being provided with extending rings adapted to engage only the edges of the film strip, a platen roller mounted in the frame forward of said tensioning mechanism, raised rings on said platen roller adapted to engage the edge only of the film strip, containers for plastic bars mounted below the respective rings on said platen and adapted to present the upper end of the plastic bars at each side of the strip of film below the points where the film is engaged by said rings, separate means for yieldingly elevating the plastic bars in said containers to maintain them in contact with the longitudinal edges of the film strips, and means for independently controlling the upward movement of said plastic bars, substantially as specified.

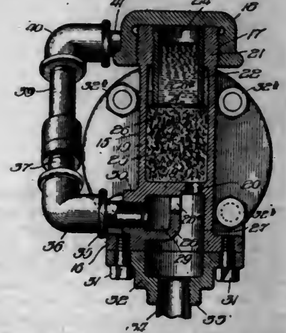
3. In a machine for treating cinematograph films, tensioning means engaging the edges only of the film strip, a platen roll having raised rings disposed to engage the edges only of the film strip, and means for yieldingly maintaining separate bars of lubricating material below the edges of the film strip engaged by the engaging portion of the platen, substantially as specified.

1,211,430. LIQUID-MEASURING APPARATUS. EDWARD GARVEY, Farmington, Minn. Filed Aug. 24, 1914. Serial No. 858,254. (Cl. 221—110.)



A liquid measuring apparatus comprising a reservoir, a measuring vessel mounted outside the reservoir, said vessel having a valved inlet connection at the top with the bottom of the reservoir and a valved bottom outlet, and a transparent combined gage tube and vent connected to the top of the measuring vessel and rising therefrom to the height of the top of the reservoir, the volume of the tube relative to the volume of the measuring vessel being inappreciable.

1,211,431. LUBRICATOR. ALBERT J. GATES, Chicago, Ill., assignor to Hanna Engineering Works, Chicago, Ill., a Corporation of Illinois. Filed Apr. 8, 1913. Serial No. 759,594. (Cl. 184—58.)



1. In combination with a fluid conduit, a lubricator comprising a lubricant containing chamber, said lubricator being provided with a duct communicating with said conduit, means to substantially normally prevent flow of lubricant through said duct, said means comprising fibrous material closely compressed so that lubricant will flow therethrough substantially only upon passage of fluid through said conduit, and means to compress or pack said material in said duct.

2. In combination with a fluid conduit, a lubricator comprising a lubricant containing chamber, said lubricant being provided with a duct communicating with said conduit, means to substantially normally prevent flow of lubricant through said duct, said means comprising fibrous material closely compressed so that lubricant will flow therethrough upon passage of fluid through said conduit, and means to maintain said material in compressed condition.

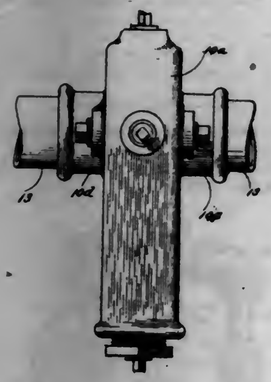
3. In a device of the class described, a lubricator having a chamber and a passage leading therefrom, said lubricator being adapted to be attached to a fluid conduit so that said passage will communicate with the latter, flow impeding means carried in said chamber, a sleeve located therein and bearing on said material, and a cap threadedly attached to said lubricator to close one end of the same.

4. In a device of the class described, a fluid conduit, a lubricator in communication therewith, said lubricator being provided with a chamber therein and a threaded shoulder in said chamber, a pressure member externally threaded and engaging said threaded shoulder, said chamber having an outlet communicating with said conduit, means located in said chamber to substantially prevent the flow of oil from said chamber to said air conduit, except when fluid is flowing through said conduit.

5. In combination with a fluid conduit, a lubricator having a passage therethrough communicating with said conduit, flow impeding material carried in said lubricator, and means to compress said material, said means comprising a sleeve, said sleeve being arranged to contain lubricant.

[Claims 6 to 8 not printed in the Gazette.]

1,211,432. LUBRICATOR. PHILETUS W. GATES, Chicago, Ill., assignor to Hanna Engineering Works, Chicago, Ill., a Corporation of Illinois. Filed Nov. 7, 1914. Serial No. 870,829. (Cl. 184—58.)



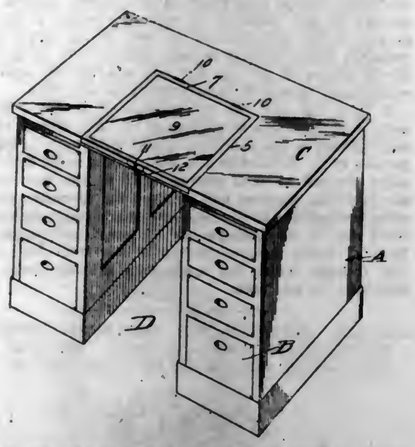
1. In a device of the class described, a lubricator comprising a casing, said casing being provided with a reservoir, a chamber and means to permit the flow of lubricant from said reservoir into said chamber, said lubricator being provided with a passage therethrough for communication with a fluid line and a duct therein communicating between said chamber and said passage, means to normally prevent flow of lubricant from said chamber to said passage, said means being arranged to permit such flow upon flow of fluid through said passage.

2. A lubricator comprising a casing, said casing being provided with a passage therethrough and a reservoir, the casing being further provided with a chamber in communication with said reservoir and with said passage, means to normally prevent flow of lubricant from said chamber to said passage, said means being arranged to permit such flow upon flow of finid through said passage, said means comprising fibrous material.

3. A lubricator comprising a casing, said casing being provided with a passage therethrough and a reservoir, the casing being further provided with a chamber in communication with said reservoir and with said passage, means to normally prevent flow of lubricant from said chamber to said passage, said means being arranged to permit such flow upon flow of fluid through said passage, said means comprising fibrous material, and means to permit the filling of said chamber in any position thereof.

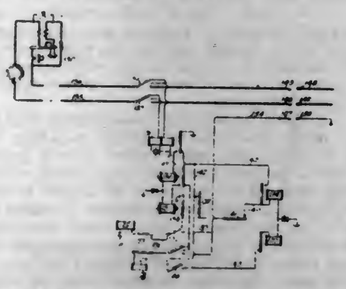
4. In a device of the class described, a casing chambered to form a reservoir, being provided with a chamber therein in communication with said reservoir, apertured shoulders carried by said casing and a passage extending through said shoulders and casing, the former being constructed and arranged for engagement by an air line or the like.

1,211,433. WRITING-BED FOR DESKS. RICHARD J. GIBBONS, Fort Rosecrans, Cal. Filed Oct. 22, 1915. Serial No. 57,301. (Cl. 45—70.)



In a desk having a solid top provided with a countersink opening through the upper face and the front edge thereof to form a pocket, an open frame shaped correspondingly to the countersink and received therein, hinges countersunk within the top and frame for swingingly connecting said frame to the top, and a transparent panel fitted within the open frame to have its upper surface flush with the upper surface of said frame, said frame when within the countersink having its upper surface flush with the upper surface of the top, and means carried by the frame in engagement with the bottom of the countersink for locking said frame therein.

1,211,434. TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 17, 1915. Serial No. 14,971. (Cl. 179—18.)



1. In a telephone exchange system, a line circuit, a stepping relay connected thereto, a switch including a stepping magnet, an operating circuit for said magnet controlled at the front contact of said stepping relay, and a locking circuit for said stepping magnet.

2. In a telephone exchange system, a line circuit, a stepping relay connected thereto, a switch including a stepping magnet, an operating circuit for said magnet controlled at the front contact of said stepping relay and at an off-normal switch, and a slow-acting relay operated by said stepping relay and controlling a break point in said operating circuit.

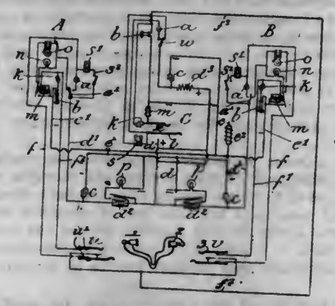
3. In a telephone exchange system, a line circuit, a stepping relay connected thereto, a slow-acting relay operated by said stepping relay at the first energization thereof, a second slow-acting relay, an energizing circuit therefor having a break point therein closed at the armature and front contact of said first named slow-acting relay, a switch including a stepping magnet, an operating circuit for said magnet controlled by said stepping relay and having a break point therein closed at an armature and front contact of said second slow-acting relay, and a circuit for locking the stepping magnet at the end of the last directive impulse.

4. In an automatic telephone exchange system, a line circuit, a switch adapted to extend said line circuit, a stepping relay connected to said line circuit, a stepping magnet for controlling the operation of said switch, an energizing circuit for said stepping magnet controlled at the armature and front contact of said stepping relay, and a locking circuit for said magnet.

5. In a telephone exchange system, a plurality of lines terminating in a bank of stationary contacts, a line circuit adapted to be connected to any one of said plurality of lines, a movable contact, a magnet for moving said contact over said bank of contacts in search of an idle line, a side switch, a circuit for said magnet extending through a contact of said side switch, an operating magnet for said side switch a circuit therefor including said movable contact, said last named circuit being completed when the movable contact engages with the terminal of an idle line, whereby the operating magnet energizes to move the side switch to break the circuit of said first named magnet.

[Claims 6 to 9 not printed in the Gazette.]

1,211,435. TELEPHONE SYSTEM. EDWARD ALFRED GRAHAM, Brockley, London, England. Filed Nov. 18, 1914. Serial No. 872,818. (Cl. 179—70.)



1. A telephonic system comprising a transmitter at one station, a receiver at a companion station, a source of current common to both stations, positive and negative supply leads, means possessing inductance, connections including positive and negative leads adapted to supply direct current to the transmitter and receiver aforesaid through the said inductance and means, preventing the flow of unidirectional current, connected in parallel with the transmitter and receiver circuit aforesaid when the latter is complete, such means being a direct shunt across the source of current, for the purpose set forth.

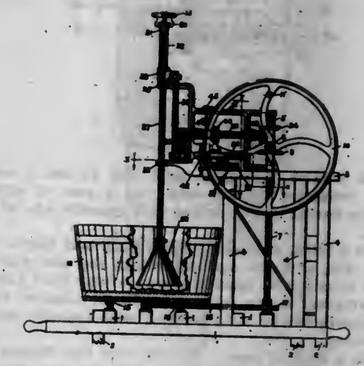
2. A telephonic system comprising a transmitter at one station, a receiver at a companion station, a source of current common to both stations, positive and negative supply leads having inductance in at least one of them, leads adapted to operatively connect the transmitter to the receiver and both of these to the supply leads and means, preventing the flow of unidirectional current, connected in parallel with the transmitter and receiver circuit aforesaid, such means being a direct shunt across the source of current for the purpose set forth.

3. A telephonic system comprising a transmitter at one station, a receiver at a companion station, a source of current common to both stations, positive and negative supply leads containing inductance, leads adapted to operatively connect the transmitter to the receiver and both of these to the supply leads and means, preventing the flow of unidirectional current, arranged as a shunt across the supply leads at the telephone side of the inductance aforesaid, the said means being thus in parallel with the transmitter and receiver circuits and a direct shunt across the source of current.

4. A telephonic system comprising a transmitter at one station, a receiver at a companion station, a source of current common to both stations, positive and negative supply leads having inductance in at least one of them, leads adapted to operatively connect the transmitter to the receiver and both of these to the supply leads and a condenser arranged as a shunt to the source of current across the supply leads at the telephone side of the inductance aforesaid.

5. A telephonic system comprising a transmitter at one station, a receiver at a companion station, a condenser and an inductance associated therewith, the said receiver and condenser being in series and bridged by the inductance, a source of current common to both stations, connections including positive and negative supply leads adapted to supply direct current to the transmitter and receiver with its condenser and bridging inductance aforesaid and means, preventing the flow of unidirectional current, connected in parallel with the transmitter and receiver circuit aforesaid, such means being a direct shunt across the source of current.

1,211,436. WASHING-MACHINE. ALVA J. GROVER, Council Bluffs, Iowa. Filed Apr. 5, 1915. Serial No. 19,389. (Cl. 68—19.)



1. In a washing machine, vertically reciprocating agitating means, a tub associated therewith and rotatable on a vertical axis, a swing-frame carrying the agitating means and movable in a horizontal plane to carry the agitating means in a path approximately radial to the axis of the tub, and connected driving mechanism for reciprocating the agitating means, rotating the tub, and swinging the frame.

2. In a washing machine, vertically reciprocatable agitating means, a pivoted horizontally swingable frame carrying said agitating means, and connected driving means for reciprocating the agitating means and for swinging said frame in alternating directions about the pivotal axis thereof.

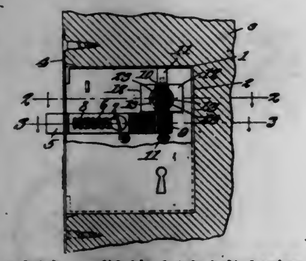
3. In a washing machine, a fixed frame, a vertical shaft journaled therein, a movable frame pivoted on said shaft, a horizontal shaft journaled in said movable frame and extending radially to the vertical shaft, gearing operatively connecting said horizontal and vertical shafts, a rod slidable vertically in the movable frame, means connecting said rod and the horizontal shaft for reciprocating the rod, and means actuated by the horizontal shaft for swinging the movable frame to reciprocate the same about the axis of the vertical shaft.

4. In a washing machine, a tub rotatable on a vertical axis, agitating means disposed within the tub, a movable

frame carrying said agitating means, said frame being pivoted on a vertical axis and being swingable thereon to move the agitating means horizontally toward and away from the axis of the tub, and connected driving means for actuating the agitating means, rotating the tub, and swinging the movable frame alternately toward and away from the tub-axis.

5. In a washing machine, a fixed frame, a movable frame pivoted on the fixed frame so as to be swingable horizontally about a vertical axis, a horizontal crank-shaft journaled in said movable frame, means for rotating said shaft, a rod slidable vertically in the movable frame, means connecting said rod and crank-shaft whereby the rod may be reciprocated vertically by rotation of said shaft, a crank-wheel mounted on the movable frame so as to be revoluble on a vertical axis, means connected with the crank-shaft for rotating said wheel, a plate connected with the fixed frame and extending adjacent to the crank-wheel, and a pin on the crank-wheel disposed eccentrically thereto and extending into a rectilinear channel in said plate, the channel being substantially radial to the axis of the movable frame.

1,211,437. DOOR-LATCH. ARCHIBALD B. GRUBER, San Bernardino, Cal. Filed Nov. 24, 1915. Serial No. 63,271. (Cl. 70—42.)



1. In a latch, a slidable latch bolt having a rack, a pinion connected to said rack, and a pair of opposite plungers having racks meshing with opposite sides of said pinion.

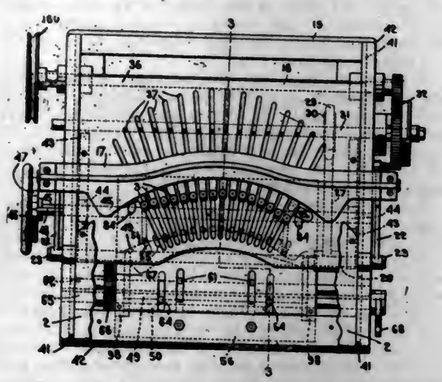
2. In a latch, a case, a slidable latch bolt therein having a rack, a pinion mounted within the case and connected to said rack, opposite sleeves having their adjacent ends attached to the case, and slidable members within said sleeves having racks meshing with opposite sides of said pinion.

3. In a latch, a case, a slidable latch bolt therein having a rack, a pinion mounted within the case and connected to said rack, opposite sleeves having their adjacent ends attached to the case, members slidable within said sleeves and having racks meshing with opposite sides of said pinion, knobs engaged upon the remote ends of said sleeves, and plungers slidable within said knobs and engaged with said members.

4. In a latch, a case, a latch bolt therein, a pinion mounted within the case and connected to said bolt, opposite sleeves having their adjacent ends attached to the case, members slidable within said sleeves and having racks meshing with opposite sides of said pinion, knobs threaded upon the remote portions of said sleeves, and plungers slidable within the knobs and having threaded engagement with said members.

5. In a latch, a case, a latch bolt slidable therein, a pinion within the case connected to said bolt, a pair of opposite sleeves having their adjacent ends attached to the case, members slidable within the sleeves and having racks meshing with opposite sides of said pinion, knobs having bores, said knobs having counterbores threaded upon the remote portions of said sleeves, plungers slidable within the first mentioned bores of said knobs and projecting therefrom, the adjacent ends of the plungers having reduced threaded extensions threadedly engaging said members, and washers disposed between said members and the shoulders formed by said reduced extensions.

1,211,438. BUTTONHOLE-LOCATION MARKER. CHRISTIAN H. T. HAGELSTEIN, Boston, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Apr. 19, 1915. Serial No. 22,449. (Cl. 33—190.)



1. In a machine for marking the location of buttonholes on shoe uppers, the combination with a plurality of marking devices, of means to adjust said marking devices relative to each other in one direction to correspond to different sizes of shoes, and independent means to adjust said marking devices in another direction to position said devices for marking either right or left shoes.

2. In a machine of the class described, the combination with a work-supporting plate, of a plurality of marking devices, means to actuate said marking devices to mark work sustained on said plate, means to adjust said marking devices relative to each other in one direction to correspond to different sizes of shoes, and independent means to adjust said marking devices in another direction to position said devices for marking either right or left shoes.

3. In a device of the class described, the combination with a plurality of marking devices, of a plurality of gage elements each having a gaging edge and each adapted to be moved separately into and out of operative position, and means acting on said marking devices and operating to hold them in a position determined by the gaging edge of the particular gage element that is in operative position.

4. In a device of the class described, the combination with a plurality of marking devices, of two gage elements, each having a gaging edge by which the position of said marking devices is determined when said element is in operative position, and means to move either element into its operative position, whereby either one of said gage elements may be used to position said marking devices.

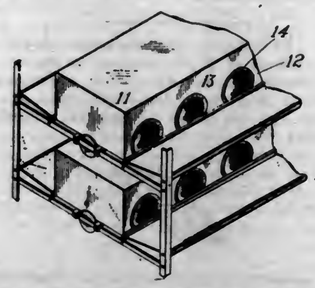
5. In a device of the class described, the combination with a plurality of separate marking devices, of a spring acting an each device, two complementary gage elements, each having a gaging edge, and means to move said elements alternately into operative position, said springs cooperating with the gaging edge of the gage element that is in its operative position to determine the position of the marking devices.

[Claims 6 to 14 not printed in the Gazette.]

1,211,439. DETACHABLE COVERING FOR EXPOSED EDGES. HARRY HALL, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 22, 1915. Serial No. 35,726. (Cl. 34—26.)

1. An apparatus for treating shoes having an aperture for the insertion of a shoe, and a strip of protecting material and a retaining member constructed and arranged to grip removably the edge of the aperture and fasten the protecting strip over the edge.

2. An apparatus for treating shoes having an aperture for the insertion of a shoe, and a flat strip of protecting material and a retaining member constructed and arranged to hold the strip in position to cover said retaining member and the edge of said aperture.



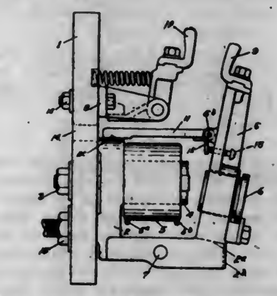
3. An apparatus for treating shoes having an aperture for the insertion of a shoe, a strip of protecting material and a slotted retaining member constructed and arranged to receive the edge of said aperture in its slot and to hold the edge of the strip between the retaining member and said edge.

4. An apparatus for treating shoes having an aperture for the insertion of a shoe, a resilient slotted retaining member, and a strip of protecting material covering said member, constructed and arranged to cover the edge of said aperture.

5. An apparatus for treating shoes having an aperture for the insertion of a shoe, and a slotted tube constructed and arranged to receive in its slot the edges of a strip of protecting material and the edge of said aperture, and to clamp said strip to said edge.

[Claims 6 to 8 not printed in the Gazette.]

1,211,440. ELECTRIC SWITCH. JAY H. HALL, Cleveland, Ohio, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 24, 1913. Serial No. 750,189. (Cl. 175—281.)



1. In an electro-magnetically operated device, a movable member, a brake member having travel with the movable member, a second brake member, adapted to be in frictional engagement with the first brake member, and means including a winding arranged to move the movable member when current therein is at a predetermined value and to produce such friction between the brake members as to prevent the movement of the movable member when current in the winding is above the said value.

2. In an electro-magnetically operated device, a movable member, normally open contacts closable thereby, a brake member having travel with the movable member, a second brake member adapted to be in frictional engagement with the first brake member, and means including a winding adapted to produce such friction between the brake members as to prevent the winding from moving the movable member and closing the contacts when current in the winding is above a predetermined value.

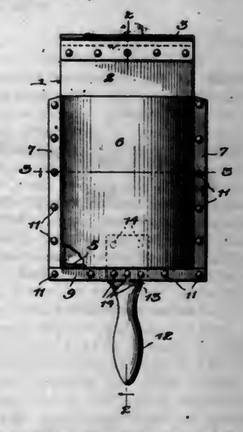
3. In an electro-magnetically operated device, a magnetizable frame, a movable mechanism, a winding for operating the same and magnetizing the frame, and means for preventing any movement of said mechanism when the current in the winding exceeds a certain value, said means comprising a magnetizable member in sliding engagement with said frame.

4. In an electro-magnetically operated device, a magnetizable frame, a movable mechanism, a winding for operating the same and magnetizing the frame, and means for preventing any movement of said mechanism when the current in the winding exceeds a certain value, said means comprising a magnetizable member pivoted to said mechanism and in sliding engagement with said frame.

5. In an electro-magnetically operated device, a magnetizable frame, a winding arranged when supplied with current to magnetize the frame, a movable mechanism actuated thereby, a magnetizable member slidable on said frame, and means whereby said winding when energized with current above a certain value produces a pressure between said member and the frame which prevents any movement of said mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,211,441. TURPENTINE-SCRAPER. JOSEPH A. HAM, Apalachicola, Fla. Filed Jan. 13, 1916. Serial No. 71,895. (Cl. 47—40.)

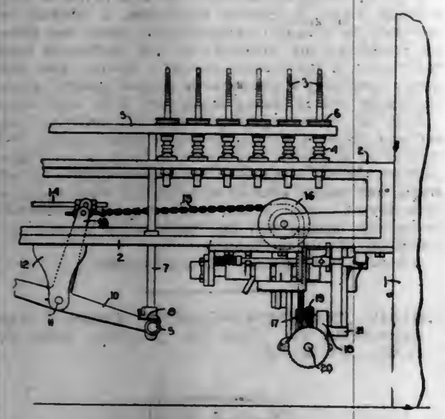


A turpentine scraper comprising a one-piece rectangular back plate of sheet metal, a rigid blade secured to and extending throughout the width of one end of said plate, a handle secured to the other end of said plate, a sheet metal front plate bent into semi-cylindrical shape in cross section and having its longitudinal edges secured to the longitudinal edges of the back plate, the semi-cylindrical shape of said front plate serving to reinforce the entire back plate to prevent longitudinal bending thereof when the blade is being forced against a tree, and a sheet metal bottom plate fitting snugly between the inner ends of the front and back plates and secured at its rear edge to the inner end of said back plate to prevent transverse bending thereof, said bottom plate also serving to prevent the front plate from collapsing under strain.

1,211,442. SPINNING-MACHINE. HARRY F. HAWKINS and MYRON L. STICKNEY, Manchester, N. H., assignors, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Jan. 3, 1916. Serial No. 69,746. (Cl. 242—43.6.)

1. In a machine of the class described comprising a series of rotating spindles, coöperating yarn guiding means and a builder arm for causing relative movement there-

between to effect a traverse of yarn upon the filling carriers; means for actuating said builder arm to effect a primary winding of short slow traverses, means operable upon the completion of the primary winding to actuate said builder arm to effect a service winding of relatively longer and more rapid traverses and means for positioning the builder arm actuating mechanism to a starting point which will cause an initial downward traverse of the yarn upon the bobbin.



2. In a machine of the class described comprising a series of rotating spindles, coöperating yarn guiding means and a builder arm for causing relative movement therebetween to effect a traverse of yarn upon the filling carriers; means for actuating said builder arm to effect a primary winding of short slow traverse, means operable upon the completion of a plurality of short, slow primary traverses to actuate said builder arm to effect a service winding of relatively longer and more rapid traverses and means for positioning the builder arm actuating mechanism to a starting point which will cause an initial downward traverse of the yarn upon the bobbin.

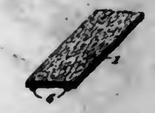
3. In a machine of the class described comprising a series of rotating spindles, coöperating yarn guiding means and a builder arm for causing relative movement therebetween to effect a traverse of yarn upon the filling carriers; primary and secondary traverse cams adapted to engage said builder arm, the primary cam effecting a short, slow movement of the builder arm and the secondary cam effecting a relatively longer and more rapid movement of the builder arm, and means operable upon engagement of the builder arm by a predetermined portion of said primary traverse cam for shifting the primary cam out of engagement with the builder arm.

4. Builder mechanism for spinning machines comprising a builder arm, a cam shaft, a primary and a secondary traverse cam mounted upon said shaft and rotated in unison thereby adapted to engage and actuate said builder arm, spring actuated means tending normally to move said primary traverse cam axially of said shaft out of relative relation to said builder arm, trip mechanism adapted to maintain said primary traverse cam in operative relation to the builder arm and adjustable means carried by said primary cam for releasing said trip mechanism at a predetermined point in the rotation of said cam.

5. Builder mechanism for spinning machines comprising a builder arm, a cam shaft, a primary and a secondary traverse cam mounted upon said driving shaft rotatable in unison thereby and adapted to engage and actuate said builder arm, said primary cam being movable axially upon said cam shaft, means for releasing said cams from said shaft, means for rotarily positioning said cams when released to a predetermined starting position in relation to the builder arm, and means operable at a predetermined point in the rotation of said cams for moving said primary cam axially of said cam shaft to disengage the same from the builder arm whereby after a predetermined primary winding has been laid the service winding will be effected through the actuation of the builder arm by the secondary cam.

[Claims 6 to 10 not printed in the Gazette.]

1,211,443. ELECTRIC INSULATION. JOHN ALLEN HEANY, New York, N. Y., assignor to Patents Experiment Corporation, New York, N. Y., a Corporation of New York. Filed Aug. 16, 1915, Serial No. 45,667. Renewed Nov. 9, 1916. Serial No. 130,472. (Cl. 173—320.)



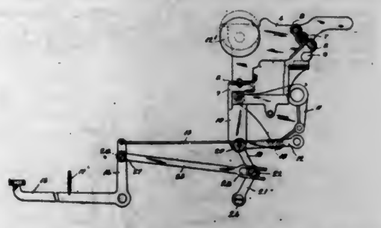
1. An insulating medium for electric conductors comprising a sliver or roving of fibers and a reinforcing thread or filament cemented to one face thereof.

2. An insulating medium for electric conductors comprising a flattened tape-like sliver of fibers and a reinforcing thread or filament cemented to one face thereof.

3. An insulating medium for electric conductors comprising a flattened tape-like sliver of asbestos fibers and a reinforcing thread or filament cemented to one face thereof.

4. An insulating medium for electric conductors comprising a flattened tape-like sliver of asbestos fibers and multiple reinforcing threads or filaments cemented to one face thereof.

1,211,444. CARRIAGE-SHIFT STOP FOR TYPE-WRITING MACHINES. EDWARD B. HESS, Brooklyn, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Sept. 9, 1914. Serial No. 860,848. (Cl. 197—81.)



1. In a typewriting machine, a carriage shift frame and a stop for arresting the upward movement thereof comprising a toggle pivotally connected at its upper end to the shift frame and at its lower end to the main frame of the machine in the same vertical plane as its upper pivot, a shift key lever and operating connections independent of the toggle stop between it and the shift frame, whereby the members of the toggle are moved into a right line when the shift frame is raised by the shift-key and act as a stop to limit the upward movement of the shift frame.

2. In a typewriting machine, a carriage shift frame and a stop for arresting the upward movement thereof comprising a toggle pivotally connected at its upper end to the shift frame and at its lower end to the main frame of the machine in the same vertical plane as its upper pivot, an eccentric adjusting connection at one end of the toggle, a shift key lever and operating connections independent of the toggle stop between it and the shift frame, whereby the members of the toggle are moved into a right line when the shift frame is raised by the shift-key and thus limit the upward movement of the shift frame.

3. In a typewriting machine, a carriage shift frame and a stop for arresting the upward movement thereof comprising a toggle connected to the shift frame and the main frame of the machine, a shift key lever and operating connections between it and the shift frame, a bar pivotally connected at one end to the shift key lever and having a slotted opening at the other end embracing the stud of the central connection of the toggle, whereby the members of the toggle are moved into a right line when the shift frame is raised by the shift key and thus limit the upward movement of the shift frame.

4. In a typewriting machine, a carriage shift frame and a stop for arresting the upward movement thereof comprising a toggle connected to the shift frame and the main frame of the machine, a shift key lever and operating connections between it and the shift frame, a bar having a slotted opening at one end embracing the stud of the central connection of the toggle, an eccentric connection joining the other end of the bar to the shift key lever, whereby the members of the toggle are moved into a right line when the shift frame is raised by the shift key and thus limit the upward movement of the shift frame and whereby the central joint of the toggle is moved rearwardly by the bar when the shift key is released.

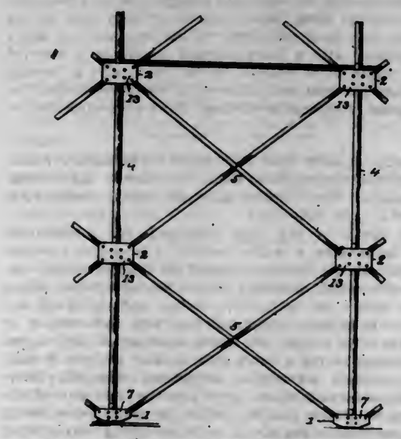
5. In a typewriting machine, a carriage shift frame and a stop for arresting the upward movement thereof comprising a toggle connected to the shift frame and the main frame of the machine, an eccentric adjusting connection at one end of the toggle, a shift key lever and operating connections between it and the shift frame, a bar having a slotted opening at one end embracing the stud of the central connection of the toggle, an eccentric connection joining the other end of the bar to the shift key lever, whereby the members of the toggle are moved into a right line when the shift frame is raised by the shift key and thus limit the upward movement of the shift frame and whereby the central joint of the toggle is moved rearwardly by the bar when the shift key is released.

[Claims 6 to 8 not printed in the Gazette.]

1,211,445. COMPOSITION FOR MAKING WALL-PLASTER AND PLASTER BUILDING-BLOCKS. LOUIS A. HOFMAN, St. Louis, Mo. Filed June 12, 1916. Serial No. 103,191. (Cl. 106—34.)

The herein described composition for making hard wall plaster and building blocks, consisting of ordinary clay seventy pounds, ordinary lime fourteen pounds, gypsum fifteen pounds, pulverized glass one pound, and muriatic acid two ounces, substantially as described.

1,211,446. BUILDER'S SCAFFOLDING. WILLIAM W. HORN, Chicago, Ill. Filed Jan. 21, 1916. Serial No. 73,320. (Cl. 20—81.)



1. In a scaffolding of the type described, the combination of a gusset plate adapted for the attachment of diagonal braces of the structure, a pair of cheek plates fixedly secured to said gusset plate in spaced relation to each other and in right-angle relation to said gusset plate, a horizontal rail having a vertical web, the end of which is fitted and secured between the cheek plates aforesaid, and a tubular post having a flattened portion which is fitted and secured between said cheek plates, substantially as set forth.

2. In a scaffolding of the type described, the combination of a gusset plate adapted for the attachment of diagonal braces of the structure, a pair of cheek plates fixedly secured to said gusset plate in spaced relation to each other and in right-angle relation to said gusset plate, a filler piece secured between said cheek plates to constitute a stop, a horizontal rail having a vertical web, the end of which is pivotally secured between the cheek plates aforesaid, and a tubular post having a flattened portion which is fitted and secured between said cheek plates, substantially as set forth.

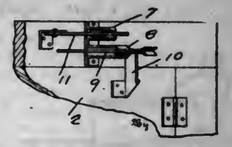
3. In a scaffolding of the type described, the combination of a gusset plate adapted for the attachment of diagonal braces of the structure, a pair of cheek plates fixedly secured to said gusset plate in spaced relation to each other and in right-angle relation to said gusset plate, a base plate fixedly secured to said gusset plate and to the cheek plates aforesaid to provide a rigid association of parts, a horizontal rail having a vertical web, the end of which is fitted and secured between the cheek plates aforesaid, and a tubular post having a flattened portion which is fitted and secured between said cheek plates, substantially as set forth.

1,211,447. LANTERN-LENS. LEON J. HOUZE, Point Marion, Pa. Filed Mar. 8, 1913. Serial No. 753,115. (Cl. 240—48.4.)



A composite light diffusing lens comprising a plurality of concavo-convex lenses each having corrugations extending rectilineally transversely across the same, said lens being superposed one upon the other with the corrugations of one extending at right angles to the corrugations of the other.

1,211,448. TIME AND BURGLAR ALARM. WILLIS G. HUBBS, Walnut Ridge, Ark. Filed Sept. 16, 1915. Serial No. 51,077. (Cl. 200—28.)



1. In a switch of the class described, the combination with a socket, of a switch blade constructed and arranged to swing into the same, a pair of switch blades having portions of the same in contact and having a space between other portions of the same, electrically connected to the socket, and a switch blade constructed and arranged to swing between the pair of switch blades and to contact with the same during its passage to the aforementioned space.

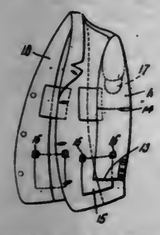
2. In a switch of the class described, the combination with a socket and a pair of switch blades, of a switch blade constructed and arranged to enter the socket and a switch blade constructed and arranged to swing between the pair of switch blades, the said pair of switch blades having a space between the same adjacent their bases and being bent into contact adjacent to their ends.

3. In a switch of the class described, the combination with a socket, of a switch blade pivoted adjacent and ar-

ranged to swing into the same, a pair of switch blades having portions arranged in spaced relation to each other and other portions arranged in spaced relation but relatively closer to each other, the said switch blades being electrically connected to the socket and a switch blade movable to a position between the aforementioned pair of blades and which is of such thickness that it will contact with the pair of blades during its initial movement between the same.

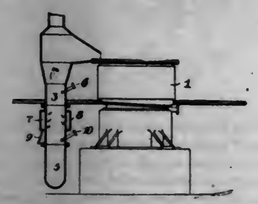
4. In a switch of the class described, the combination with a socket and a pair of switch blades, of a switch blade pivoted adjacent to the socket and arranged to swing into the same and a switch blade movable to a position between the pair of blades, the said pair of blades having a space between the same adjacent to their bases and being bent toward each other adjacent to their ends.

1,211,449. OFFICE-COAT. NATHANIEL INGBER, New York, N. Y., assignor to C. Ingber & Sons, New York, N. Y., a Firm composed of Samuel Ingber, Celia Ingber, Nathaniel Ingber, and Max Ingber. Filed June 29, 1915. Serial No. 36,985. (Cl. 2—61.)



A coat comprising a body, sleeves attached thereto, a lining for each sleeve extending from the lower edge thereof to a substantial distance above the elbow portion of the same but stopping short of the upper end of the sleeve, said sleeves and linings being made of material of substantially the same color and so arranged in the finished coat that, even if the sleeves wear out the holes therein will not be easily perceptible, and each lining being attached to its sleeve at the lower edge of the latter and in a line parallel to and adjacent to the upper edge of the lining.

1,211,450. WASHING DEVICE FOR GUNCOTTON AND SIMILAR PRODUCTS. HANS JAKOB, Ebenhausen, Germany, assignor to the Firm of Selwig & Lange, Brunswick, Germany. Filed Apr. 1, 1916. Serial No. 88,421. (Cl. 23—31.)



1. In a washing device for gun-cotton and similar products, the combination, with the conveying passage for the material to be treated, of two water supplies situated one after the other with respect to the conveying direction of said material, and a drainage place located between said two places of supply, substantially as described.

2. In a washing device for gun-cotton and similar products, the combination, with the conveying passage for the material to be treated, of two water supplies situated one after the other with respect to the conveying direction of said material; a chamber provided between said two supplies, and a drainage pipe communicating with said chamber, substantially as described.

3. In a washing device for gun-cotton and similar products, the combination, with the conveying tube for the material to be treated, of two water supply pipes terminating into said tube one after the other with respect to the direction of conveyance of said material; a chamber provided between said two water supply pipes; a perforated wall located within said chamber and forming part of the conveying passage, and a drainage pipe commencing at said chamber outside of said perforated wall, substantially as described.

4. In a washing device for gun-cotton and similar products, the combination, with the conveying tube for the material to be treated, of two water supply pipes terminating tangentially in said tube one after the other with respect to the direction of conveyance of said material, and a drainage pipe commencing at the said tube between said two water supply pipes, substantially as described.

5. In a washing device for gun-cotton and similar products, the combination, with the conveying tube for the material to be treated, of two water supply pipes terminating tangentially and in an oblique direction downward in said tube one after the other with respect to the direction of conveyance of said material, and a drainage pipe commencing at the said tube between said two water supply pipes, substantially as described.

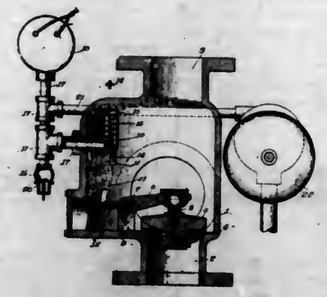
[Claims 6 and 7 not printed in the Gazette.]

1,211,451. LOCKING DEVICE. BURTON M. KENT, Sayre, Pa., assignor of one-half to Edward M. Ragan, Binghamton, N. Y. Filed July 28, 1915. Serial No. 42,369. (Cl. 184—48.)

A device of the class described, comprising a cup interiorly threaded, a plunger exteriorly threaded for threaded engagement in the cup, said plunger having a plurality of longitudinal slots formed therein, a steel arm having its lower end fixed exteriorly of the cup, and its upper end provided with a head adapted to engage a selected slot, a finger piece carried by the head, and a bracket carried by the cup and adapted to be grasped with the finger piece to disengage the head from a selected slot.

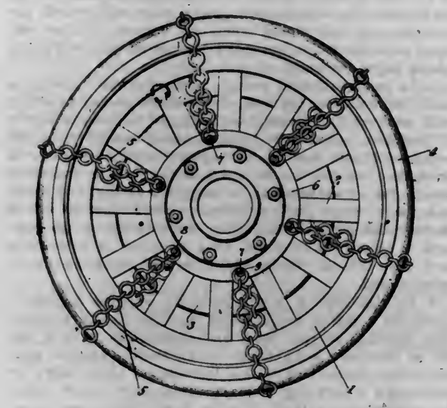
1,211,452. ALARM FOR WET-PIPE AUTOMATIC FIRE-EXTINGUISHING SYSTEMS. CHARLES W. KERSTETER, Milwaukee, Wis. Filed July 20, 1914. Serial No. 852,057. (Cl. 169—23.)

In a device of the class described, the combination with a main valve, a casing therefor, a lever-arm carrying the main valve, a fulcrum support for said lever-arm, carried by the casing, an alarm device having a valve casing located within the main-valve casing, and the lower end of which is in open communication with the interior of the main-valve casing, the lower opening of said alarm valve casing having a valve seat, a valve adapted to said seat, relatively adjustable articulated members interposed between said alarm valve and the lever-arm of the main valve, a stem located within the alarm valve casing and connected to the alarm valve, a spring surrounding said stem and exerting its pressure in one direction against the alarm-valve casing, means through the medium of which said spring exerts its pressure in the opposite direction against the alarm-valve stem, the alarm device,



having also a water-chamber and a duct or passage connecting said chamber of the alarm device with the interior of the alarm-valve casing.

1,211,453. TRACTION DEVICE FOR VEHICLE-WHEELS. JACOB S. KINGSBURY, Albany, N. Y., assignor to Kingsbury-Leahy Company, Albany, N. Y., a Corporation of New York. Filed Nov. 27, 1914. Serial No. 874,156. (Cl. 152—2.)

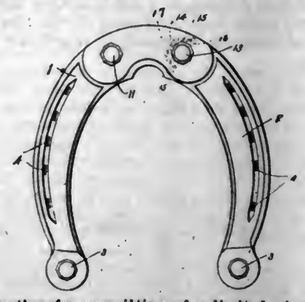


1. A traction device for a vehicle wheel, comprising a plurality of radially arranged chains, and a floating ring rigidly connecting the same by both ends of each of the chains.

2. A traction device for a vehicle wheel, comprising a plurality of radially arranged chains, and a floating, rigid ring connecting the same and directly connected to both ends of each of the chains.

1,211,454. HORSESHOE. CHESTER A. KOSER, Lake Wilson, Minn. Filed May 11, 1916. Serial No. 96,855. (Cl. 168—19.)

A horseshoe composed of a pair of sections the toe end of one of said sections being provided with a recess, an arm formed on the toe end of the other of said sections, and adapted for seating in said recess, alining openings formed in the toe end of said sections, and an ordinary calk extending into said openings and pivotally connecting said sections, the end of said arm being provided with a recess having inclined walls, a projection formed on and extending into said first named recess, the walls of said arm carried recess being spaced slightly from the edges of



said projection for permitting of a limited pivotal movement of the sections with respect to each other.

1,211,455. ORNAMENTING SURFACES. THEODORE F. KOTTER and RICHARD VAN CLEEF COLTON, New York, and SIGMOND HARRY SCHWERIN, Brooklyn, N. Y., assignors to Vernart Manufacturing Corporation, New York, N. Y., a Corporation of New York. Filed July 18, 1916. Serial No. 109,937. (Cl. 41—36.)



1. The method of decorating surfaces which consists of applying to the surfaces a finely subdivided adhesive inserting particles of glass into said adhesive and applying to said particles of glass and adhesive a semi-transparent tint which will allow the glass to shine therethrough.

2. The method of decorating surfaces consisting in placing upon the surface to be decorated a foraminous pattern bearing member forcing an adhesive through the interstices of said foraminous member and applying particles of glass to said surface and tinting said glass particles with thin coloring matter that will not conceal the surface of the glass as herein specified.

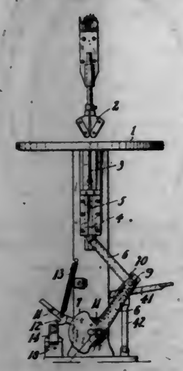
3. The method of decorating flexible surfaces which consists of forcibly applying to the surface to be decorated an adhesive, inserting into said adhesive material having a hard and brilliant surface and when the adhesive is dry applying to the exposed part of said brilliant surface a semi-transparent tint through which the brilliancy of the surface may be observed.

1,211,456. SCROLL-CUTTING MACHINE. ERNEST GEORGE LACEY, South Melbourne, Victoria, Australia. Filed Mar. 27, 1914. Serial No. 827,666. (Cl. 143—72.)

1. In a scroll cutting machine, a work support, a reciprocating saw working through said support and having its upper end free and unconnected, and means for withdrawing said saw beneath the surface of said support while the saw is still reciprocating, whereby to render said support free of obstructions for manipulating the work thereon, the reciprocation of the saw beng stopped when the saw is withdrawn.

2. In a scrool cutting machine, the combination with a work support, an implement mounted beneath said support, means for actuating said implement, means for rais-

ing said implement above the support and lowering the same beneath said support, said actuating means for said implement having operative connection with the raising and lowering means thereof for being thrown into and out of operation when the implement is raised and lowered, respectively.



3. In a scroll cutting machine, a work-support, a reciprocating saw working through the said support and having a free upper end, actuating means for the saw comprising a rotatable drive shaft, an eccentric provided upon the said shaft, a rod connecting the eccentric with the saw and including angularly adjustable sections connected by a hinged joint having an axially projecting slide, an adjustable member having a guide for the slide of the connecting rod joint, and means by which said adjustable member may be adjusted to affect the angular relation of the sections of the connecting rod so that the saw may be withdrawn beneath the support or restored to operative position above the support during its normal actuation.

4. In a scroll cutting machine, a work-support, a reciprocating saw working through the said support and having a free upper end, actuating means for the saw comprising a rotatable drive shaft, an eccentric provided upon the said shaft, a rod connecting the eccentric with the saw and including angularly adjustable sections connected by a hinged joint having an axially projecting slide, a lever pivoted concentric to the drive shaft and having a guide receiving the said slide of the connecting rod joint, and means by which the said lever may be adjusted angularly to affect the angular relation of the connecting rod sections so that the saw may be withdrawn beneath the support or restored to operative position above the latter during its normal reciprocation.

5. In a scrool cutting machine, a reciprocating saw a work-support through which the saw works, means for actuating said saw, a collapsible connection between said saw and the actuating means for imparting motion to the saw, means for controlling the operation of said actuating means, means for collapsing said connection to withdraw the saw from an operative relation with said work-support, means on said controlling means and said collapsing means adapted to coöperate, when said connection is collapsed, for simultaneously controlling said actuating means, upon operation of the collapsing means.

[Claims 6 to 8 not printed in the Gazette.]

1,211,457. PUMPING MECHANISM. MAHLON E. LAYNE, Houston, Tex. Filed Sept. 29, 1914. Serial No. 864,026. (Cl. 103—43.)

1. In combination, a pump casing, runners therein, a shaft for rotating the runners, a shaft casing provided with bearings for the shaft and adapted to carry a supply of lubricant, a discharge casing leading upward from the pump casing, and a check valve held closed when the runners are not rotated and adapted to prevent a flow of lubricant from the shaft casing to the pump casing below the valve at such time.



2. In combination, a pump casing, runners therein, a shaft for rotating the runners, a shaft casing provided with bearings for the shaft and adapted to carry a supply of lubricant, a discharge casing leading upward from the pump casing, a bearing for the shaft at the upper end of the pump casing, means for supplying lubricant to the shaft casing for said bearing, and a check valve below the said bearing held closed when the runners are not rotated and adapted to prevent a flow of oil into the pump casing below the valve at such time.

3. In combination, a pump casing, runners therein, a shaft for rotating the runners, a shaft casing provided with bearings for the shaft and adapted to carry a supply of lubricant, a discharge casing leading upward from the pump casing, a check valve exposed on one side to the pressure of the oil in the shaft casing and on the other side to the water pressure in the pump casing, and a second check valve for preventing a back flow of water through the pump casing when the rotation of the runners is stopped whereby a head of water is secured at such time sufficient to maintain the first mentioned check valve closed.

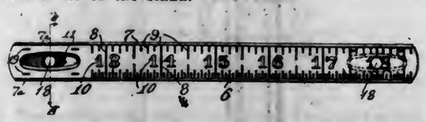
4. In combination, a pump casing, runners therein, a shaft for rotating the runners, a shaft casing provided with bearings for the shaft and adapted to carry a supply of lubricant, a discharge casing leading upward from the pump casing, and means, including a check valve for preventing a back flow of water through the pump casing for maintaining a head of water in the discharge casing, when the rotation of the runners is stopped, sufficient to counterbalance the head of oil in the shaft casing and prevent a down flow of oil at such time.

5. In combination, a pump casing, runners therein, a shaft for rotating the runners, a shaft casing provided with bearings for the shaft and adapted to carry a supply of lubricant, a discharge casing leading upward from the pump casing, a bearing for the shaft at the upper end of the pump casing, a collar secured to the shaft below said bearing, a second collar loose on the shaft and adapted when held against the first collar to act as a check valve, means coöperating with the second collar for separating the space in the casing above such collar from the space in the casing therebeneath, and means whereby the second collar is made to contact with the first collar when the runners are not rotated.

[Claim 6 not printed in the Gazette.]

1,211,458. PROCESS OF MAKING ALUMINUM RULES. PHILIP J. LEAVENS, Bridgeton, N. J. Filed July 15, 1915. Serial No. 40,091. (Cl. 29—148.)

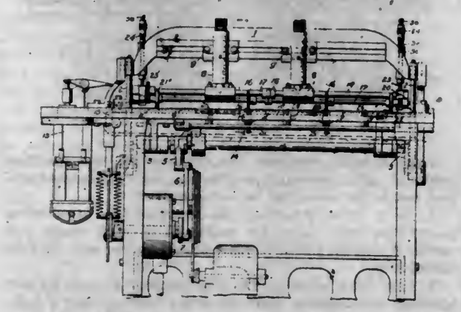
1. The method of producing rule sections having markings and ribs raised above the general surface thereof; said method consisting in subjecting a suitable strip of soft metal, such as aluminum, to the action of a blanking die, having its pressing surface shaped to form a blank with raised areas limited to localize the metal of the blank with relation to the raised markings and ribs to be produced; and thereafter subjecting the blank so formed to the action of a finishing die with surface depressions conforming to the raised markings and ribs to be produced, and positioned to act upon the appropriate raised areas of the blank.



2. The method of producing sections for rules made up of a plurality of members hinged together at their ends, and with raised markings and ribs upon the sections; said method consisting in subjecting a suitable strip of soft metal, such as aluminum, to the action of a die shaped to form a blank with raised portions upon its surface limited to localize the metal with relation to the raised markings and ribs to be formed, and to provide metal for integral means for attaching hinges; and thereafter subjecting the blank so formed to the action of a finishing die having surface depressions conforming to the raised markings and ribs to be produced and to hinge-attaching lugs definitely located with relation to said markings, and positioned to act upon the appropriate raised portions of the blank.

3. The method of producing rule sections having markings and ribs raised above the general surface thereof; said method consisting in subjecting a suitable strip of soft metal, such as aluminum, to the action of a blanking die, having its pressing surface shaped to form a blank with raised areas limited to localize the metal of the blank with relation to the raised markings and ribs to be produced; and thereafter subjecting the blank so formed to the action of a finishing die with surface depressions conforming to the raised markings and ribs to be produced, and positioned to act upon the appropriate raised areas of the blank; the metal being confined against edgewise expansion while being pressed, and thereby condensed in structure.

1,211,459. PRINTING APPARATUS WITH MULTIPLE LISTER. ULYSSES G. LEE, Chicago, Ill., assignor to Montague Mailing Machinery Co., a Corporation of Tennessee. Filed May 25, 1914. Serial No. 840,848. (Cl. 101—1.)



1. In combination a plurality of record plates, means for feeding them *seriatim* to a plurality of impression points, means for taking off from the plates impressions of less than all the characters on the plates, and individual feeds for the forms to be printed one for each impression point, substantially as described.

2. In combination a plurality of record plates, means for feeding them *seriatim* to a plurality of impression points, means for taking off from the plates impressions

of less than all the characters on the plates, and individual feeds for the forms to be printed, said feeds being individually adjustable to vary the length of feed at one impression point in respect to that at another impression point, substantially as described.

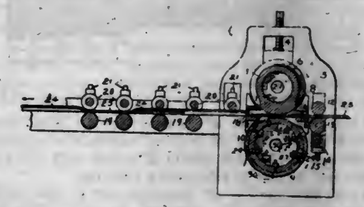
3. In combination a plurality of record plates, means for feeding them *seriatim* and in line to a plurality of printing points, means for taking off from each plate at one point impressions from less of the characters than the entire number thereon and for taking off from each plate at another printing point impressions from a greater number of characters than at the first mentioned point, said means extending over said plurality of printing points to make impressions simultaneously from a plurality of said plates, and individual feeds for forms to be printed, substantially as described.

4. A machine for printing from individual record plates and in combination, a table, a reciprocating impression member above the table having a plurality of impression portions, means for feeding the record plates step by step along the table past the impression member, and individual feeds for the forms to be printed for feeding them in relation to their respective portions of the reciprocating impression member, said individual feeds being arranged above the table and having connections above the table leading to and deriving their motion from the reciprocating impression member, said table directing the forms to the feeds, substantially as described.

5. A machine for printing from individual record plates and in combination, a table, an impression member having a plurality of impression portions operating above and to and from the table, means for feeding the record plates step by step past the impression member, and individual feeds for the forms to be printed for feeding them in relation to their respective portions of the impression member, said feeds including feed wheels located adjacent their respective portions of the impression members and above the table, said table directing the forms to the feeds, substantially as described.

[Claims 6 to 54 not printed in the Gazette.]

1,211,460. CORRUGATING APPARATUS. OTTO B. LINDQUIST, Tarentum, Pa., assignor to Harry E. Sheldon, Pittsburgh, Pa. Filed May 27, 1914. Serial No. 841,258. (Cl. 153—77.)



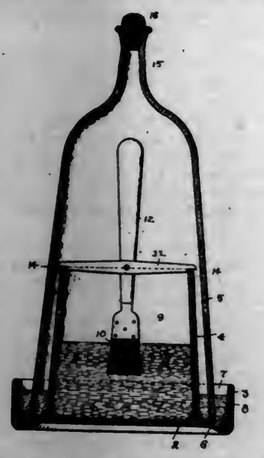
The combination of a roll having ribs thereon, a second roll having grooves coöperating with the said ribs to form ribs on a metal plate fed between the rolls, the latter having opposed surfaces interrupting the continuity of the said ribs and grooves on the rolls, and pairs of rollers between which the plate is fed from the rolls, the rollers which lie on the same side of the plate as the grooved roll having corrugations fitting the corrugations of the plate.

1,211,461. SHELLAC-JAR. JOHN R. LONG, Orrville, Ohio, assignor of one-fourth to John C. Gibson, Akron, Ohio. Filed Feb. 16, 1916. Serial No. 78,583. (Cl. 91—67.1.)

1. A jar having concentric chambers to hold a volatile liquid and a sealing material in segregation, and a cover for the inner chamber removably seated in the outer chamber having an opening for intake and exhaust of air.

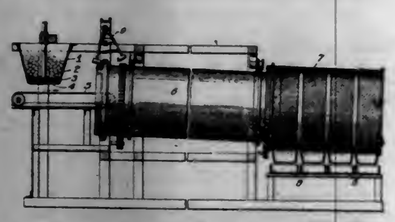
2. A jar having a central reservoir bordered by a channeled seat, and a cover for said reservoir removably sup-

ported in said seat having a valved opening for air supply and relief in removing and replacing operations of the cover.



3. A jar having concentric chambers open at their top, and a chambered cover seated in the outer chamber having a valved stopper to admit and exhaust air in removing and seating operations of said cover.

1,211,462. FOOD PRODUCT, CONSISTING OF GLOBULES OF STARCHY MATERIAL AND METHOD OF PREPARING THE SAME. FREDERICK G. LORENZEN, Battle Creek, Mich. Filed May 19, 1916. Serial No. 98,489. (Cl. 99—10.)



1. As a new article of manufacture, a food product consisting of globules of starchy material composed of finely ground aggregated particles mixed with saccharine material and having a gelatinized structure.

2. As a new article of manufacture, a food product consisting of globules of starchy material composed of finely ground aggregated particles mixed with saccharine material and completely gelatinized to a state in which it is translucent and relatively tough and insoluble.

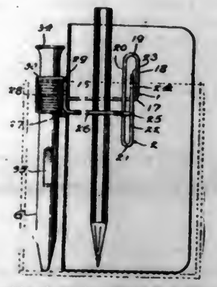
3. As a new article of manufacture, a food product consisting of globules of starchy material composed of finely ground aggregated particles mixed with flavoring and seasoning material, and having a gelatinized structure.

4. As a new article of manufacture, a food product consisting of globules of starchy material composed of finely ground aggregated particles mixed with flavoring and seasoning materials and completely gelatinized to a state in which it is translucent and relatively tough and insoluble.

5. As a new article of manufacture, a food product consisting of globules of artificially colored starchy material composed of finely ground aggregated particles mixed with saccharine material and having a gelatinized structure.

[Claims 6 to 24 not printed in the Gazette.]

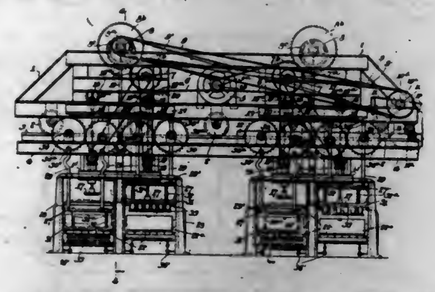
1,211,463. ARTICLE-HOLDER. FRANK J. LOVIN, Mahnomen, Minn. Filed June 4, 1915. Serial No. 32,228. (Cl. 24—3.)



1. In a combined pocket-attached book, pen and pencil holder, a tube, a single strand of resilient wire bent to form a coil, gripping jaws formed at each side of the coil, the coil providing a means whereby said jaws are normally held in engaging proximity and also providing a retaining means for the tube, a retaining means for the article itself formed upon one of said jaws, the said retaining means being bowed to afford with the remainder of the jaw of which it is a part a means whereby an article may be held in place, substantially as described.

2. In a combined pocket attached book, pen and pencil holder, a single resilient strand of wire bent to form a coil, triplicate gripping jaws, two of which are connected at their ends and formed into a right angular flat face for co-action with the remaining jaw to clasp the book, the connected jaws being slightly separable to receive a pencil and to engage the material of a pocket, and a tube held within the convolutions of the coil.

1,211,464. BRICKMAKING-MACHINE. ROY I. MCCARTY, Claysburg, Pa., assignor of one-third to D. R. Wynn, Philipsburg, Pa., and one-third to William A. Stanton, New York, N. Y. Filed July 11, 1916. Serial No. 108,656. (Cl. 25—100.)



1. In a brick machine, the combination of a carriage provided with ramming mechanism, slicking mechanism, and means for operating said mechanisms.

2. In a brick machine, the combination of slicking mechanism and means for operating it, with molds and means for moving said molds transversely to said slicking mechanism.

3. In a brick machine, the combination of ramming and slicking mechanisms, and means for moving said mechanisms with molds and means for moving said molds relatively to said mechanisms.

4. In a brick machine, the combination of a carriage provided with ramming mechanism, slicking mechanism and means for operating them, with molds over which said carriage moves said mechanisms.

5. In a brick machine, the combination of a carriage provided with ramming mechanism, slicking mechanism and means for operating them, with a bed over which said ramming and slicking mechanisms are movable, and means comprising molds movable intermittently across said bed, whereby material in said molds is rammed and smoothed.

[Claims 6 to 44 not printed in the Gazette.]

1,211,465. FLASH-LIGHT. JOHN J. MCGUCKIN, Brooklyn, N. Y. Filed Aug. 25, 1916. Serial No. 116,770. (Cl. 240—8.5.)



1. The combination, with a cylindrical flash-light holder, of a unitary, lens-retaining and anti-rolling device having an external contour other then cylindrical.

2. The combination, with a cylindrical flash-light holder, of a detachable, unitary, lens-retaining and anti-rolling device having an external contour other than cylindrical.

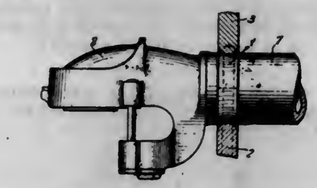
3. The combination, with a cylindrical flash-light holder, of a detachable, unitary, lens-retaining device having a plurality of anti-rolling elements protruding therefrom, and a detachable, end-closing cap having a plurality of anti-rolling elements protruding therefrom.

4. The combination, with a cylindrical flash-light holder, of a unitary, lens-securing device having a plurality of anti-rolling elements protruding therefrom.

5. The combination, with a cylindrical flash-light holder, of an anti-rolling device provided with flexible, metallic elements for attaching it to the flash-light holder.

[Claim 6 not printed in the Gazette.]

1,211,466. HOSE-CLAMP. CHARLES A. MCKEBAHAN, Wilmerding, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed May 14, 1914. Serial No. 838,464. (Cl. 137—28.)

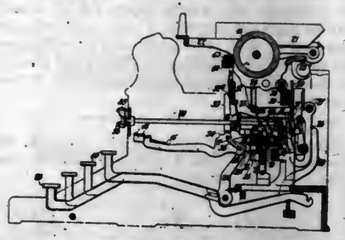


1. The combination with a flexible hose section and a metallic connection inserted therein, of a hose clamp for securing the hose to the metallic connection comprising a narrow cylindrical band having its cross section formed to an arc extending to the free edges of the band after the parts are assembled.

2. The combination with a flexible hose section and a metallic connection inserted therein, of a hose clamp for securing the hose to the metallic connection comprising a narrow cylindrical band having its cross section on an unbroken arc extending to the free edges of the band.

1,211,467. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 30, 1915. Serial No. 24,844. (Cl. 197—155.)

1. In a typewriting machine, the combination with a platen shiftable to upper and lower case positions, of a ribbon vibrator to vibrate a ribbon over the printing line on the platen, an actuator operated at each type stroke, a support on which said actuator is mounted, means to shift said support up and down with the platen, a toggle forming a connection between said support and the vibrator, and means cooperating with said toggle to form a driving connection between the actuator and vibrator and also to cause the vibrator to shift up and down with said support, and thus maintain a constant relation to the platen during the shifting of the latter.



2. In a typewriting machine, the combination with a platen shiftable to upper and lower case positions, of a ribbon vibrator, an actuator therefor, a support on which the actuator is mounted, means for shifting said support with the platen, a toggle forming a connection between said support and the vibrator, and means connecting the actuator with the toggle for operating the latter, and thereby actuating the vibrator, said connecting means between the toggle and said actuator serving to support the vibrator and cause it to shift up and down with the platen.

3. In a typewriting machine, the combination with a ribbon vibrator, of a pair of links forming a toggle, one end of which is connected to the vibrator, a support to which the other end of the toggle is connected, an actuating lever, a link connecting said lever to the toggle and operated by said lever in a direction transverse to the direction of movement of the vibrator, and means to actuate said lever.

4. In a typewriting machine, the combination with a vibrator mounted to move up and down at each type stroke, of a pair of links forming a toggle connected at one end to the vibrator, a support to which the other end of the toggle is connected at a point below the vibrator, a universal bar operated at each type stroke, a bell crank forming an actuator for the vibrator, and swinging transversely to the direction of movement of the vibrator, means to cause said bell crank to be operated by the universal bar, and a link connecting said bell crank with the toggle.

5. In a front-strike typewriting machine, the combination with a platen shiftable to upper and lower case positions, of a ribbon vibrator mounted to vibrate up and down in front of the platen to cover the printing point at each type stroke, a universal bar moved rearwardly at each type stroke, a supporting frame mounted for up and down movement on the machine frame, a pair of links forming a toggle, one end of which is connected to the vibrator and the other end of which is pivotally connected to said supporting frame at a point below the vibrator, an actuating bell crank mounted on said supporting frame and comprising an arm having a connection with the universal bar for operating the bell crank from said bar, a link connecting an arm of the bell crank with the toggle, a platen shift rail, and a connection between said rail and the supporting frame for shifting the latter up and down with the platen.

[Claims 6 to 38 not printed in the Gazette.]

1,211,468. TOOTH-BRUSH HANDLE. WILLIAM J. MCLEAN, Everett, Mass. Filed July 23, 1915. Serial No. 41,546. (Cl. 15—39.)



1. A tooth brush having a handle of transparent material and kerfed longitudinally to provide resilient sec-

tions, a card engaged between the sections and means for holding the card between the sections, said card having designating characters thereon.

2. A tooth brush having its handle formed from transparent material, said handle being kerfed longitudinally to provide resilient sections, a card engaged between the sections one of said sections having ribs disposed transversely thereof for engaging the card when placed between the sections, said card having printed thereon designating characters.

1,211,469. CUFF-BUTTON GUARD. NORA E. MCMAHON, Columbia, Tenn. Filed Mar. 21, 1916. Serial No. 85,656. (Cl. 24—90.5.)

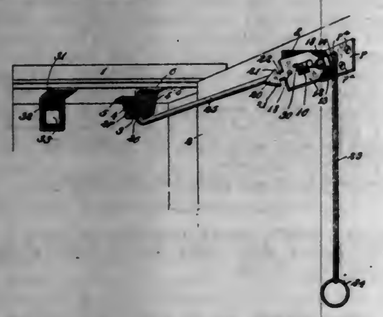


1. A cuff button guard including a pair of sectional side members, plates pivotally connecting the opposite ends of the side members, and means normally tending to close said side members.

2. A cuff button guard including a pair of sectional side members, the adjacent ends of the sections of each side member being offset to present an opening when the side members are closed adapted to receive the shank of a button, plates pivotally connecting the opposite ends of the side members, and means normally tending to close the side members.

3. A guard including a pair of sectional side members, the sections of each side member being pivotally connected and offset at their pivoted ends so as to present an opening for the reception of the shank of a button when the side members are closed, the inner edges of two of the opposed side members being formed with inclined grooves, an actuating block slidably mounted in said grooves, means normally tending to move said block inwardly, means for effecting a closing movement of the side members during inward movement of said block, and a flexible actuating member carried by said block.

1,211,470. CLOSURE-RETAINING DEVICE. LEVI D. MALONE and HENRY E. HUBBS, Shelby, Ohio, assignors to The Shelby Spring Hinge Company, Shelby, Ohio, a Corporation of Ohio. Filed June 21, 1915. Serial No. 35,208. (Cl. 16—6.)



1. The combination with relatively fixed and movable members, of an arm pivotally connected to one of said members, a supporting guide carried by the other member, and with which the arm coöperates, and a pivoted gravity latch carried by said guide and adapted to engage said arm, said movable member and arm being in substantially parallel planes.

2. The combination with relatively fixed and movable members, of an arm pivotally connected to one of said members, said arm having an abutment, a supporting guide carried by the other member and in which the arm slides, and a pivoted gravity latch carried by said guide and adapted to engage said arm, and means for disengaging said latch from said arm, said movable member and arm being in substantially parallel planes.

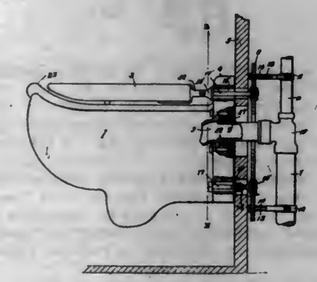
3. The combination with relatively fixed and movable members, of an arm pivotally connected to one of said members, a supporting guide carried by the other member and in which the arm slides, said arm having an abutment, a pivoted gravity latch arranged in coöperative relation with said guide and adapted to engage said arm, means for disengaging said latch from said arm, and a keeper, arranged upon the member to which the arm is pivoted, said latch having a portion adapted to engage said keeper, when said members are brought together, said movable member and arm being in substantially parallel planes.

4. The combination, with a pair of relatively movable members, of an arm pivotally connected to one of said members, a support carried by and projecting from the other member, said support having an opening through which said arm may slide, a gravity latch pivotally connected to said support and having an opening therein adapted to register with the opening in the support and through which said arm may also slide, the arm having an abutment arranged and adapted to be engaged by said latch, and operating means connected with said latch for lifting said latch away from said arm.

5. The combination, with a pair of relatively movable members, of an arm pivotally connected to one of said members, a support projecting from the other member and having a guide opening therethrough for said arm, a gravity latch pivoted to said support and having an opening registering with the opening in the support and adapted to receive the arm, said arm being provided with an abutment which is adapted to be engaged by said latch, and said support having an elongated opening, a pin or stud connected to the latch and extending through said opening and having an enlargement or head thereon, and means connected with the latch for operating the same.

[Claims 6 to 18 not printed in the Gazette.]

1,211,471. WATER-CLOSET. IRA A. MANN, Pittsburgh, Pa. Filed Dec. 22, 1911. Serial No. 667,313. (Cl. 137—94.)



1. In combination in a wall closet, a bowl having an outlet and a bearing portion opposing the front of a partition, a metal bearing plate behind the partition, a soil pipe having connection with the outlet of the closet, a connection between the lower part of the said bearing portion and the bearing plate whereby the thrust from the bearing portion is taken by the bearing plate, and a connection between the bearing plate and the soil pipe whereby the said thrust imposed upon the bearing plate is taken by the soil pipe.

2. In combination in a wall closet, a bowl having an outlet and a bearing portion opposing the front of a partition, a metal bearing plate behind the partition, a soil pipe having connection with the outlet of the closet, a vent pipe extending upward from the soil pipe, a connection between the lower part of the said bearing portion and the bearing plate whereby the thrust from the bearing portion is taken by the bearing plate, a connection between the bearing plate and soil pipe whereby the said thrust imposed upon the bearing plate is taken by the soil pipe, a connection between the upper part of the bearing portion and the bearing plate, and a connection between the bearing plate and the vent pipe.

3. In combination in a wall closet, a bowl having an outlet and a bearing portion opposing the front of a partition, piping connected to the outlet and lying to the rear of the partition, a bearing plate supported entirely by said piping independent of the partition, and means independent of the connection between the piping and outlet for securing the said bearing portion to the bearing plate.

4. In combination in a wall closet, a bowl having an outlet and a bearing portion opposing the front of a partition, piping connected to the outlet and lying to the rear of the face of the partition, a bearing plate to the rear of the partition, connections between the piping and the bearing plate whereby the bearing plate is maintained against movement toward and from the piping, connections between the upper part of the bearing portion of the bowl and the bearing plate adapted to prevent movement of the bearing portion away from the plate, and connections between the lower part of the bearing portion of the bowl and the bearing plate adapted to prevent movement of the bearing portion toward the plate.

5. In combination in a wall closet, a bowl having an outlet and a bearing portion opposing the front of a partition, piping to the rear of the closet, a coupling between the bowl at the outlet and the piping for rigidly securing the bowl to the piping and supporting it therefrom, and other connections between the said bearing portion and the piping above and below the said coupling whereby the bowl is supported from the piping and held against movement toward or from the partition.

[Claims 6 to 35 not printed in the Gazette.]

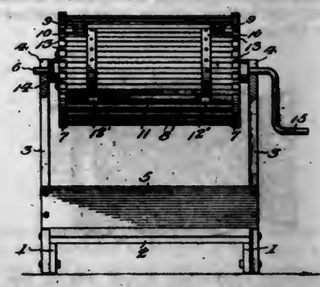
1,211,472. TROUSERS-PROTECTOR. ANTHONY MARCELLI, New York, N. Y. Filed Feb. 25, 1916. Serial No. 80,875. (Cl. 2—124.)



The combination with trousers having cuffs on their bottoms, of a protector to envelop said cuffed bottoms, and hooks on the inner face of the protector for engaging the upper edge of the cuff to support said protector in proper position.

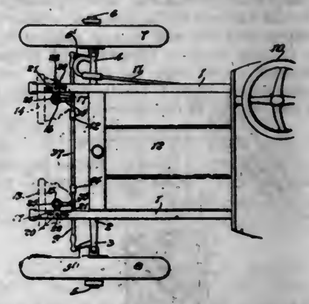
1,211,473. POTATO-SPROUTER. EDWARD MASSING, Irene, Mont. Filed May 25, 1911. Serial No. 629,801. (Cl. 130—32.)

A potato sprouter including in combination, two similar end sills held in parallel spaced relation, each being wider at one end than at the other, a platform secured obliquely to the edges of said sills, two standards secured vertically to said sills and intermediate of the ends of said sills, a rotatable slat drum supported upon said standards and a panel resting upon said platform edgewise and secured to said standards at the edges toward the lower side of said platform, whereby sprouts falling upon said platform will gravitate toward the lower end



of said platform and finally be stopped against said panel, as, and in the manner set forth.

1,211,474. CONTROLLING DEVICE FOR AUTOMOBILE-HEADLIGHTS. GILBERT ROBERT MATHESON and JOSEPH BERTRAM SHAW, Winnipeg, Manitoba, Canada. Filed Apr. 27, 1915. Serial No. 24,302. (Cl. 240—62.)



1. A device of the class described including a rod arranged to move transversely of the direction of vehicle motion, a plurality of headlights revolubly mounted on the vehicle and a rod connecting said lights together, of oppositely disposed spirally coiled S-shaped springs inserted between the rods and with their ends connected thereto and having the body portion thereof normally parallel with the rods.

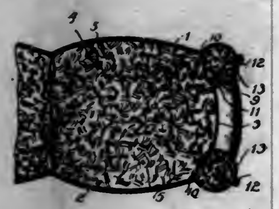
2. The combination with a vehicle having movable wheels, a rod connecting said wheels and arranged to move transversely of the direction of vehicle motion, a plurality of headlights revolubly mounted on the vehicle and a rod connecting said headlights together, of pairs of collars permanently secured to the rods and a pair of oppositely disposed shrouded coiled springs inserted between the rods and having their ends terminating in eyes pivotally fastened to the collars, said springs being positioned such that the body portions thereof pass normally in a direction parallel with the rods.

1,211,475. MATTRESS. DAVID MICON, Benton Harbor, Mich. Filed June 28, 1915. Serial No. 36,671. (Cl. 5—13.)

1. A mattress comprising a tick having a top, bottom and sides and a continuous solid filling therefor, and means disposed entirely within said tick secured to said top and bottom at points spaced longitudinally and transversely thereof and passing through said filling, whereby said top and bottom may be secured together to compress said filling.

2. A mattress comprising a tick having a top, bottom and sides, and a continuous solid filling therefor, reinforcing means secured to the inner sides of said top and bottom and extending longitudinally and transversely

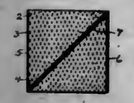
thereof, and means disposed entirely within said tick secured to said top and bottom at the intersections of said reinforcing means and passing through said filling, whereby said top and bottom may be secured together to compress said filling.



3. A mattress comprising a tick having top, bottom and sides and a continuous solid filling therefor, a plurality of intersecting strips secured to the inner sides of said top and bottom to reinforce the same longitudinally and transversely, a plurality of loops secured to said top and bottom at the intersections of said strips, and means passing through said filling for connecting said loops.

4. A mattress comprising a tick having a top, bottom and sides and a filling therefor, and a plurality of flaps disposed across the corners of said tick within the same and secured to said top and bottom respectively and to said sides to form separate compartments adapted when filled to provide a roll edge, the flap along one edge of the mattress being divided longitudinally to facilitate the filling and closing of the mattress.

1,211,476. PACKING. NORMAN BRUCE MILLER, West Collingswood, N. J. Filed Apr. 5, 1916. Serial No. 89,011. (Cl. 154—45.5.)



1. A packing in two parts and an adhesive substance having a low melting point and adapted to secure said parts during the application and to release them for independent operation after said packing is applied in position.

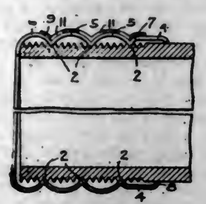
2. A packing in two parts adapted to wedge one upon another and means adapted to be applied between said parts for retaining said parts in operative relation during the preparation and application of said packing and to release said parts by the rise in temperature due to useful operation.

1,211,477. PIPE-THREAD PROTECTOR. MARTIN L. MOORE, Glen Osborne, Pa., assignor to Frick & Lindsay Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 24, 1915. Serial No. 52,407. (Cl. 137—91.)

1. A thread protector consisting of a thin, curved plate or annulus having a plurality of annular arches whose bases form the continuous threads which engage the threads on the article to be protected.

2. A thread protector consisting of a thin, curved plate or annulus having a plurality of arches; continuous threads at the bases of said arches, the outer arch being adapted to overlap the end of the pipe, and the inner end being adapted to overlap the unthreaded portion of the pipe.

3. A thread protector consisting of a thin curved plate or annulus having a plurality of annular continuous threads and having a plurality of annular arches springing directly from said threads as their bases, whereby said protector is supported upon the threaded pipe end only by the means of said threads resting between the threads of the pipe end, the intermediate threaded portions of the pipe end being entirely free of the device, and being protected against abrasion by the strength of the arched form of the device, whose bases are the threads which engage the threaded end of the article protected.



4. A thread protector consisting of a thin, curved plate or annulus having a plurality of continuous threads and a plurality of annular arches whose bases are the threads which engage the threaded portion of the article protected; and a joiner-plate for the ends of said device, having at its ends offset arches adapted to those on the annular device or protector, adapted when the joiner-plate is applied to the device to hold the ends of the device in a predetermined offset position whereby it is made to suit the pitch of the thread upon the end of the article to which the protector is applied for the purpose of protecting its thread.

5. A thread protector consisting of a thin, curved plate or annulus having a plurality of annular continuous threads and having a plurality of annular arches springing directly from said threads as their bases, whereby said protector is supported upon the threaded pipe, and whereby said bases are fixed and immovable by their being inserted into the thread of the pipe, and whereby, due to the fact of their being inserted and immovable, a considerable strength is added to the arch, increasing its efficiency in resisting a blow which would tend to crust it.

1,211,478. WIRE-SPLICER. WILLIAM L. MUIR, South Milwaukee, Wis. Filed Apr. 3, 1916. Serial No. 88,451. (Cl. 140—119.)



1. A wire splicing tool comprising a tubular barrel having a longitudinal slot along one side, and provided with projections at one end, whereby the barrel may be held against rotation, a swiveled member mounted upon the other end of the barrel and provided with operating projections, means connected with the swiveled member for holding strands of wire in parallel relation therein, and means connected with the opposite end of the barrel for holding strands of wire in parallel relation therein, said barrel and swiveled member being adapted to allow strands of wire to extend therethrough longitudinally in such parallel relation.

2. A wire splicing tool comprising a cylindrical barrel provided with a wire-receiving slot along one side thereof, having means for engaging and holding strands of wire or a wire connecting member in fixed relation to the barrel, a swiveled head mounted upon the other end of the barrel, and having a portion projecting longitudinally from the barrel and provided with means for holding strands of wire in fixed relation to each other and to the swivel head with the intermediate portions of the strands of wire free to rotate within the barrel.

3. A wire splicing tool comprising a cylindrical barrel having a slot along one side through which the wire may be inserted, and also having a head-piece provided with a deep groove through which strands of wire may project from the barrel, the walls of said groove being adapted to hold such strands of wire in fixed relation to each other and to the barrel, all other portions of said barrel having an interior cavity of sufficient size to permit a twisting movement of said strands of wire, and a head-piece mounted to rotate upon the other end of said barrel from that provided with said groove, said head-piece having a similar groove adapted to be adjusted in axial alinement with the barrel and with the groove in said barrel head.

1,211,479. TOY. HUBERT A. MYERS, Toledo, Ohio. Filed Mar. 20, 1916. Serial No. 85,343. (Cl. 46—40.)



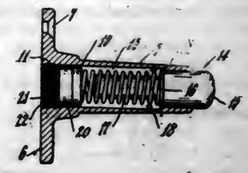
1. In a toy, a cord, a figure guided by said cord for movements lengthwise thereof, jointed foldable members pivotally attached to one end of said figure and having guides spaced lengthwise of the members through which said cord passes whereby a pull on one end of the cord will impart an unfolding movement to said members and a movement to the figure lengthwise of the cord, said guides being spaced transversely of the figure when said members are folded, and means normally retaining said members in folded relation to the figure.

2. In a toy, a cord, a figure having a jointed member pivotally attached to one end thereof, said figure having guides through which said cord passes and said member having guides provided on and spaced longitudinally of the lower jointed part thereof for said cord to pass through and to have frictional coaction with the cord when the member is being unfolded by an outward pull on the cord, and means acting on said member to normally retain it in folded relation to the figure.

3. In a toy, a cord, a figure guided for lengthwise movements on said cord and having sliding frictional engagement therewith, a leg member pivotally connected to one end of said figure and having a knee-joint to permit an upward drawing of the foot portion of the leg member with respect to said figure, said leg member having a plurality of guides through which said cord passes and located in spaced relation longitudinally of said member and below the knee-joint thereof, and means acting on said member to normally retain it in folded relation to the figure.

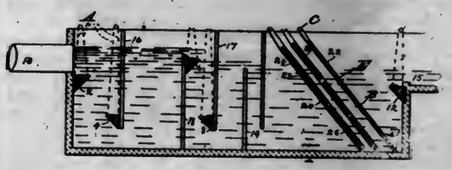
4. In a toy, a cord, a figure guided for movements lengthwise of said cord, jointed leg and arm members pivoted to opposite ends of said figure and connected to have inward and outward movements in unison with respect to said figure, said arm members having means in sliding friction engagement with the cord for imparting a movement to the figure lengthwise of the cord when the arms are drawn inward, and said leg members having means in sliding coaction with the cord whereby a pull on the leg end of the cord will impart an outward movement to the leg members and a consequent movement of the figure lengthwise of the cord, and means normally acting on one set of said members for retaining them in folded relation to the figure.

1,211,480. DOOR-BUFFER. ALBERT S. NEWTON, Providence, R. I. Filed Nov. 4, 1916. Serial No. 129,412. (Cl. 16—77.)



In a door-buffer, the combination of a hollow post, an internal shoulder near one end of the post, a plunger slidably mounted in the post comprising a head projecting from the post and a shank within the post, a projection on the head engaging the shoulder, a spring of greater length than the shank surrounding the shank and engaging the head at one end, a bearing plate loose in the post engaging the other end of the spring, a rubber abutment member loose in the post in contact with the plate, and a plug in the end of the post engaging the abutment member.

1,211,481. MEANS FOR TREATING WATER, SEWAGE, AND LIQUID MANUFACTURING-WASTE. FRANKLIN NOBLE, Brooklyn, N. Y. Filed Sept. 17, 1913. Serial No. 790,180. (Cl. 210—1.)



1. The method herein described of treating polluted liquid, which consists of receiving such liquid into a tank and passing said liquid through perforated receptacles containing calcium hypochlorite and carbonate of lime.

2. The method herein described of treating polluted liquid which consists of receiving said liquids into a tank, flowing said liquid in a broad and shallow stream through said tank, passing said liquids through and under perforated receptacles containing hypochlorite of lime, and causing said liquids to deposit their suspended matter within said tank as herein specified.

3. The herein described method of purifying liquids which consists of intimately mingling therewith hypochlorous acid gas evolved by the action of said liquid upon calcium hypochlorite and carbonate of lime as herein specified and for the purpose set forth.

4. The method herein described of treating polluted liquid for the purification thereof which consists in applying chlorin by means of receptacles arranged approximately at right angles to and on both sides of a broadened and shallowed flow of said liquid and causing said flow to promote a uniform mixing of said chlorin therewith.

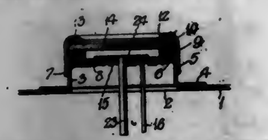
5. The method herein described of treating polluted liquids which consists in submerging in said liquids receptacles containing calcium hypochlorate and calcium carbonate and saturating said chemicals with the liquid wherein they are submerged to evolve hypochlorous acid gas therefrom, and diffusing said gas through said liquids to obtain oxidizing purifying effects.

[Claims 6 and 7 not printed in the Gazette.]

1,211,482. TANK-GAGE. WALTER I. OESCHGER, Detroit, Mich., assignor to Retlaw Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 24, 1916. Serial No. 73,818. (Cl. 73—82.)

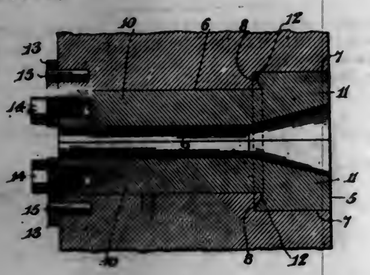
In a gage, the combination with a float mechanism including a shaft having a hand, of a dial housing adapted

for attachment to a tank and comprising an annular base member having the outer end inturned to provide a flange with an annular seat therein, a float dial plate having the edges thereof on the seat of said base member and through which said shaft extends with the hand thereof



movable relative to said dial plate, a cap on said base member having an inturned annular flange, gaskets in said cap with one of said gaskets retaining said dial plate on its seat, and a transparent plate interposed between said gaskets.

1,211,483. DRILL-SHARPENER. EDWARD L. OLDHAM, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Apr. 12, 1915. Serial No. 20,829. (Cl. 76—5.)



1. In apparatus of the character set forth, coacting die holders relatively movable toward and from each other and having die seats in their opposing faces, dies in the seats, one of said dies comprising a shank having a head at one end, said die being laterally removable from its seat and said head having an interlocked engagement with the die holders, and means engaging the end of the shank opposite to that having the head to hold the head in said interlocked engagement, said holding means being disposed out of the path of the coacting die.

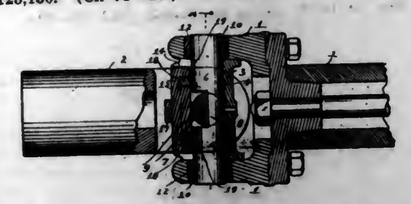
2. In apparatus of the character set forth, coacting die holders relatively movable toward and from each other and having die seats in their opposing faces, dies in the seats, one of said dies having a head and a shank and laterally removable from said seat, said head having an interlocking engagement with its die holder, and a device secured to the shank and having a detachable bearing against the holder to secure the head in said interlocked engagement, said device being disposed out of the path of the coacting die.

3. In apparatus of the character set forth, a die holder having a transverse die seat provided with an enlarged recess, a die having a shank fitting in the seat and a head located in the enlarged recess, and a cap plate connected to the end of the shank and overlapping the die holder to secure the head in the recess.

4. In apparatus of the character set forth, a die holder having a transverse die seat provided with an enlarged recess, a die having a shank fitting in the seat and a head located in the enlarged recess, a cap plate overlapping the die holder and the shank of the die, and a screw securing the cap plate to the die.

5. In apparatus of the character set forth, a die holder having a transverse die seat provided with an enlarged recess in one side of said holder, a die extending across the die holder and having a shank fitting in the seat and a head located in the enlarged recess, said head having an interlocking engagement with the walls of said recess, a cap plate overlapping the free end of the shank and the side of the die holder opposite to that in which the head is located, a device detachably securing the cap plate to said end of the shank, and a device engaging the cap plate to hold the same against rotation.

1,211,484. UNIVERSAL JOINT. CHARLES E. PERKINS, Grand Rapids, Mich. Filed Oct. 12, 1916. Serial No. 125,150. (Cl. 74—19.)



1. In a universal joint; shaft members having rock bearings; a threaded connecting member therefor having open sockets angularly disposed; spindles adapted to be laterally-removably held in the sockets and rocking in said bearings; and a nut threaded on the connecting member's threads and adapted to hold the spindles tightly in the sockets.

2. In a universal joint; shaft members having rock bearings; a threaded connecting member therefor having open sockets angularly disposed, and lugs; and a nut threaded on the connecting member's threads and adapted to hold the spindles tightly in the sockets, and having an annular rib adapted to engage outside the lugs.

3. In a universal joint; shaft members having rock bearings; a threaded connecting member therefor having open sockets angularly disposed; spindles halved in their middle portions to receive each other, and adapted to be laterally-removably held in the sockets, and rocking in said bearings; and a nut threaded on the connecting member's threads and adapted to hold the spindles tightly in the sockets.

4. In a universal joint; shaft members having rock bearings; a threaded connecting member therefor having intersecting open sockets angularly disposed, spindles halved in their middle portions to receive each other, and adapted to be laterally-removably held in the sockets, and rocking in said bearings; and a nut threaded on the connecting member's threads and adapted to hold the spindles tightly in the sockets.

1,211,485. MOP-HOLDER. JOHN JAY PHARR, Cleveland, Ohio. Filed July 19, 1915. Serial No. 40,544. (Cl. 15—56.)

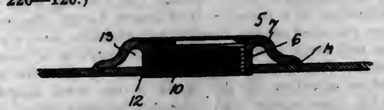


1. In a mop holder a head adapted to engage a mop handle, a cross bar comprised in said head having longitudinal slots, one end of each slot having an enlargement to admit the head of a suitable attaching device secured to a mop or duster.

2. A mop holder comprising a head, a cross bar, slots in said cross bar adapted to removably engage the heads of suitable attaching devices secured to a mop or duster.

3. In a mop holder, a head adapted to engage a mop handle and provided with a cross bar, slots in said cross bar and a duster or mop provided with means for engaging said slots whereby the mop or duster is detachably secured to the holder.

1,211,486. BUNG-RING OR SPUD. GEORGE B. PICKOP, New Haven, Conn., assignor to Malleable Iron Fittings Company, Branford, Conn., a Corporation of Connecticut. Filed June 27, 1916. Serial No. 106,253. (Cl. 220—120.)



1. The combination with a container having a metal wall with an opening therein, of a sheet metal spud having a sleeve portion fitting said opening, and a crowned flange on the sleeve portion abutting the outer surface of the container wall; substantially as described.

2. The combination with a container having a metal wall with an opening therein, of a sheet metal spud having a cylindrical sleeve portion fitting said opening, a crowned flange on the upper porton of the sleeve portion directed outwardly and laterally therefrom, and a lateral rim at the lower edge of said flange abutting the outer surface of the container wall and welded thereto; substantially as described.

3. The combination with a container having a metal wall with an opening therein, of a sheet metal spud having a cylindrical sleeve portion fitting said opening, a crowned flange on the upper edge of the sleeve porton directed outwardly and laterally therefrom, and a lateral rim at the lower edge of said flange abutting the outer surface of the container wall and welded thereto, the distance from the lower edge of the sleeve portion to the lower surface of the flange rim being substantially equal to the thickness of the container wall; substantially as described.

1,211,487. METHOD OF TREATING SHEETS OF VULCANIZABLE PLASTICS. RAYMOND B. PRICE, New York, N. Y., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Apr. 29, 1915, Serial No. 24,756. Renewed July 7, 1916. Serial No. 107,973. (Cl. 18—50.)

1. The method of treating sheets of vulcanizable plastic consisting in superimposing a plurality of sheets of vulcanizable plastic one upon another, and thereafter withdrawing fluids from within and between said sheets by subjecting the pile to a reduced pressure.

2. The method of treating sheets of vulcanizable plastic consisting in superimposing a plurality of sheets of vulcanizable plastic one upon another, thereafter withdrawing fluids from within and between said sheets by subjecting the pile to a reduced pressure and finally compressing the pile.

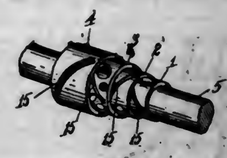
3. The method of treating sheets of vulcanizable plastic consisting in superimposing a plurality of sheets of vulcanizable plastic one upon another, thereafter subjecting the pile to the action of heat insufficient to vulcanize said plastic, and simultaneously therewith or subsequently thereto withdrawing fluids from within and between said sheets by subjecting the pile to a reduced pressure.

4. The method of treating sheets of vulcanizable plastic consisting in superimposing a plurality of sheets of vulcanizable plastic one upon another, thereafter subjecting the pile to the action of heat insufficient to vulcanize said plastic simultaneously therewith or subsequently thereto, withdrawing fluids from within and between said sheets by subjecting the pile to a reduced pressure and finally compressing the pile while subjecting it to the reduced pressure.

5. The method of treating sheets of vulcanizable plastic consisting in superimposing a plurality of alternately arranged sheets of vulcanizable plastic and strata of a non-vulcanizable separating medium, and withdrawing fluids from within said sheets and from between them and said separating strata by subjecting the pile to a reduced pressure.

[Claims 6 to 10 not printed in the Gazette.]

1,211,488. BALANCING DEVICE. WILLIAM A. REED, Chelsea, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 30, 1914. Serial No. 835,460. (Cl. 74—6.)



1. The combination with a rotary member of a weighted member frictionally mounted thereon and rotating therewith whereby the rotation of said weighted member may be retarded during the rotation of said rotary member to shift its angular position and thereby its weighted portion circumferentially of the axis of said rotary member.

2. The combination with a rotary member of a weighted member adjustable circumferentially thereof and held in adjusted angular position by friction whereby when the shaft is rotated said shaft may be balanced by pressing upon said weighted member to cause it to slip on said rotating member.

3. The combination with a rotary shaft of a balancing member having a weighted portion mounted on said shaft, and means connecting said shaft and member so constructed and arranged that movement of said member longitudinally of said shaft shifts said weighted portion angularly with respect to the axis of said shaft.

4. The combination with a rotary member of a weighted member mounted thereon, a guide on one of said members and the other member being provided with a coöperating guideway, said guideway extending in a direction oblique to the axis of said rotating member whereby movement of said weighted member longitudinally with respect to said rotary member will shift said member angularly with respect to the axis of said rotary member.

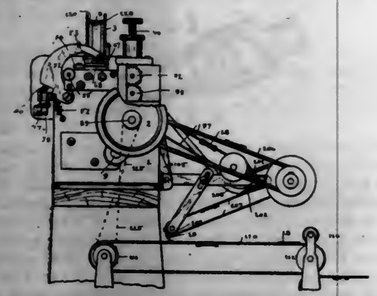
5. The combination with a rotary shaft of a guide connected therewith and a weighted member having a guideway to receive said guide, said guideway extending in a direction oblique to the axis of said shaft, whereby movement of said member longitudinally with respect to said shaft will shift the weighted portion of said member angularly with respect to the axis of said shaft, said guide being movable to lock said weighted member in adjusted position.

[Claims 6 to 14 not printed in the Gazette.]

1,211,489. LABEL CUTTING AND FOLDING MACHINE. MICHAEL PETROCCHI, Grand Rapids, Mich., assignor to Rose Patch & Label Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Nov. 25, 1914. Serial No. 873,885. (Cl. 223—15.)

1. In an automatic label cutting and folding means, the combination of a frame, a label feeding means comprising grippers adapted to grip the end of a label strip and advance the same, a label strip tautening means coöperating with said grippers, a label length holder adapted to receive the label length comprising separable jaws and having a fold form, automatic cut off means for severing a label length form the label strip after the same has been forwarded into the label holder, coöperating folding

members in movable relation to the said label length holder, movable in the relative direction of the plane of the label length and having inclined faces to coöperate with the fold form and to fold the ends of the label, means for moving the said holder and folder in relation to each other, means for separating the members of said holder and folding means after the folding operation, an expeller adapted to expel the folded label length and deliver the same from the folder, creasing rolls disposed to receive the expelled label length, a belt conveyer adapted to receive the label from the creasing rolls, a tilting table coöperating with said conveyer, a second belt conveyer to receive the label from the tilting table, a third belt conveyer driven in opposite directions to the said second belt conveyer to receive the label therefrom and thus turn the label over, and creasing rollers to receive the label length from the third belt and discharge it from the machine.



2. In an automatic label cutting and folding means, the combination of a frame, a label feeding means comprising grippers adapted to grip the end of a label strip and advance the same, a label strip tautening means coöperating with said grippers, a label length holder adapted to receive the label length comprising separable jaws and having a fold form, automatic cut off means for severing a label length from the label strip after the same has been forwarded into the label holder, coöperating folding members in movable relation to the said label length holder, movable in the relative direction of the plane of the label length to coöperate with the fold form and to fold the ends of the label, means for moving the said holder and folder in relation to each other, means for separating the members of said holder and folding means after the folding operation, an expeller adapted to expel the folded label length and deliver the same from the folder, creasing rolls disposed to receive the expelled label length, a belt conveyer adapted to receive the label from the creasing rolls, a tilting table coöperating with said conveyer, a second belt conveyer to receive the label from the tilting table, a third belt conveyer driven in opposite direction to the said second belt conveyer to receive the label therefrom and thus turn the label over, and creasing rolls to receive the label length from the third belt and discharge it from the machine.

3. In an automatic label cutting and folding means, the combination of a frame, a label feeding means comprising grippers adapted to grip the end of a label strip and advance the same, a label strip tautening means coöperating with said grippers, a label length holder adapted to receive the label length comprising separable jaws and having a fold form, automatic cut off means for severing a label length from the label strip after the same has been forwarded into the label holder, coöperating folding members in movable relation to the said label length holder, movable in the relative direction of the plane of the label length to coöperate with the fold form and to fold the ends of the label, means for moving the said holder and folder in relation to each other, means for separating the members of said holder and folding means after the folding operation, and means to expel the said label.

4. In an automatic label cutting and folding means, the combination of a frame, a label feeding means comprising grippers adapted to grip the end of a label strip and advance the same, automatic cut off means for severing a label length from the label strip after the same has been forwarded into the label holder, coöperating folding members in movable relation to the said label length holder, movable in the relative direction of the plane of the label length to coöperate with the fold form and to fold the ends of the label, means for moving the said holder and folder in relation to each other, means for separating the members of said holder and folding means after the folding operation, and means to expel the said label.

5. In an automatic label cutting and folding means, the combination of a frame, a label length holder adapted to receive the label length comprising separable jaws and having a fold form, coöperating folding members in movable relation to the said label length holder, movable in the relative direction of the plane of the label length and having downwardly and inwardly inclined faces to coöperate with the fold form and to fold the ends of the label, means for moving the said holder and folder in relation to each other, means for separating the members of said holder and folding means after the folding operation, and means to expel the said label.

[Claims 6 to 40 not printed in the Gazette.]

1,211,490. FORGED FULCRUM FOR BRAKE-BEAMS. FREDERICK J. SCHROEDER, Cleveland, Ohio, assignor, by mesne assignments, to The Damascus Brake Beam Co., Cleveland, Ohio, a Corporation of Ohio, (incorporated Feb. 25, 1916. Filed Nov. 15, 1915. Serial No. 61,661. (Cl. 188—22.)



1. A forged metal brake beam fulcrum with third point support comprising a pair of substantially parallel wrought metal bars spaced apart to provide a lever slot between them; said bars having their ends forged into a solid integral head provided with a recessed seat for a truss member, and with a third point support on said head; the metal constituting the third point support forming an originally integral part of one of the bars.

2. A forged metal brake beam fulcrum with third point support comprising a pair of substantially parallel wrought metal bars spaced apart to provide a lever slot between them; said bars having their ends forged into a solid integral head provided with a recessed seat for a truss member, and with a third point support on said head; said support comprising a pair of spaced ears each constituted by metal forming an originally integral part of one of the bars.

3. A forged metal brake beam fulcrum with third point support comprising a pair of substantially parallel wrought metal bars spaced apart to provide a lever slot between them; said bars having their ends forged into a solid integral head provided with a recessed seat for a truss member, and with a third point support on said head; the metal constituting the third point support forming an originally integral part of one of the bars; and the portions of said solid head forming the opposite walls of the truss member seat, constituting originally integral portions of both of said spaced bars.

4. A forged metal brake beam fulcrum having an integral third point support; said fulcrum comprising a pair of substantially parallel wrought metal bars spaced apart to provide a lever slot between them; said bars having their ends forged into a solid integral head provided with a recessed seat for a truss member; said third point support comprising a pair of ears projecting integrally from one side wall of said seat and having between them, a separating slot extending through the seat wall to the base of the seat; the metal constituting said ears forming originally integral portions of one of the spaced bars, and the portions of the seat wall divided by said slot embodying in their structure metal that formed originally integral portions of different bars.

1,211,491. RECORDING APPARATUS. MAX SEIDLER, Frankfort-on-the-Main, Germany, assignor to the Firm of Hartmann & Braun A.-G., Frankfort-on-the-Main, Germany. Filed Jan. 7, 1914. Serial No. 810,749. (Cl. 234—1.5.)



1. In recording apparatus, means to produce, by means of a single marking device impinging upon a common strip arranged between the said marking device and the color bearing body, records or diagrams relating to several electric currents, and wherein a number of differently colored pads or the like are in succession automatically brought beneath the marking device.

2. In an apparatus for recording characteristics of a plurality of electric circuits, a single marking device whose actuation is controllable by each of said circuits, a series of movable color-bearing bodies, one color for each circuit, means for bringing a particular one of the color-bearing bodies to position adjacent the marker when the marker is actuated by the circuit corresponding to that color, and a record sheet passing between the marker and the color-bearing bodies.

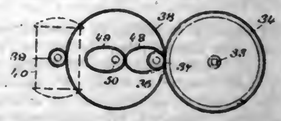
3. In an apparatus for recording characteristics of a plurality of electric circuits, a single marking device whose actuation is controllable by each of said circuits, a series of movable color-bearing bodies, one color for each circuit, means for causing the actuation of said marking device by the several electric circuits in succession and for moving the color-bearing bodies in a corresponding succession so as to bring a particular one of the color-bearing bodies to position adjacent the marker when the marker is actuated by the circuit corresponding to that color, and a record sheet passing between the marker and the color-bearing bodies.

4. In an apparatus for recording characteristics of a plurality of electric circuits, a single marking device whose actuation is controllable by each of said circuits, a series of movable color-bearing bodies, one color for each circuit, means for causing the actuation of said marking device by the several electric circuits in succession and for moving the color-bearing bodies in a corresponding succession so as to bring a particular one of the color-bearing bodies to position adjacent the marker when the marker is actuated by the circuit corresponding to that color, and a record sheet moving intermittently between the marker and the color-bearing bodies, in consonance with the movements of the latter.

5. In an apparatus for recording characteristics of a plurality of electric circuits, a single marking device whose actuation is controllable by each of said circuits, a series of movable color-bearing bodies, one color for each circuit, means for bringing a particular one of the color-bearing bodies to position adjacent the marker when the marker is actuated by the circuit corresponding to that color, a record sheet passing between the marker and the color-bearing bodies, and means for causing a relative movement between the marking device and the color-bearing body which is in position adjacent the same so as to cause an imprint to be made upon the record sheet from said color-bearing body.

[Claims 6 to 9 not printed in the Gazette.]

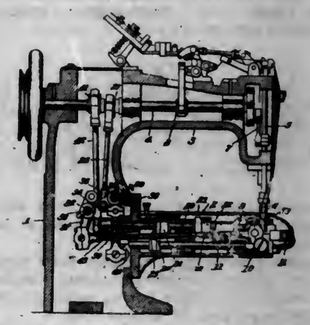
1,211,492. ELECTRIC BELT. VICTOR SENCE, New York, N. Y. Filed June 25, 1912. Serial No. 705,821. (Cl. 174—88.)



1. A therapeutic device comprising a belt adapted to be worn about the human body having attached thereto a rotary generator of electricity, a spring motor geared to said generator, contact plates adapted to press on the body of the wearer, and connections from said plates to the poles of the generator, together with a train of variable speed gearing inserted between the motor and the generator, said gearing comprising a pair of intermeshing elliptical gear wheels.

2. An electric therapeutic device comprising a rotary generator of electricity, body contacts in the generator circuit, a motor, and gearing connecting the motor and the generator adapted to rotate the generator at varying speeds during a given period of uniform rotation of the motor.

1,211,493. SEWING-MACHINE. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 5, 1912. Serial No. 669,574. (Cl. 112—5.)



1. A sewing machine including in combination, a main rotating shaft, a feed dog, a looper, a needle, means for reciprocating the needle, an eccentric mounted on said main shaft, devices operated from said eccentric for moving the looper into and out of the needle loop and for raising and lowering the feed dog, a second eccentric on the main shaft, and devices operated from said second eccentric for moving the looper laterally, and for giving to the said feed dog a forward and backward movement.

2. A sewing machine including in combination, a standard, an overhanging arm carried thereby, a main rotating shaft in said overhanging arm, a needle, means for reciprocating said needle, a looper, a feed dog, an eccentric on said shaft, a link connected to said eccentric, a shaft in said standard oscillated by said link, devices operated from said shaft for moving the looper into and out of the needle loop and for raising and lowering said feed dog, a second eccentric on said main shaft, and devices operated thereby for moving the looper laterally and for giving the feed dog backward and forward movements.

3. A sewing machine including in combination, a standard, an overhanging arm carried thereby, a rotary shaft mounted in said overhanging arm, a needle, means for reciprocating said needle, a looper, a transverse shaft mounted in the standard, an eccentric on said rotary shaft, a link coöperating therewith for oscillating said transverse shaft, a second transverse shaft in said standard, devices for oscillating said second transverse shaft from said first named transverse shaft, devices for mov-

ing the looper into and out of the needle loop operated by said second transverse shaft, devices operated from said first named shaft for raising and lowering the feed dog, and means for giving the fed dog a backward and forward movement.

4. A sewing machine including in combination, a standard, an overhanging arm carried thereby, a rotary shaft mounted in said overhanging arm, a needle, means for reciprocating said needle, a looper, a transverse shaft mounted in the standard, an eccentric on said main shaft, a link coöperating therewith for oscillating said transverse shaft, a second transverse shaft in said standard, devices for oscillating said second transverse shaft from said first named transverse shaft, devices for moving the looper into and out of the needle loop operated by said second transverse shaft, devices operated from said first named shaft for raising and lowering the feed dog, a second eccentric on said main shaft, and devices operated from said second eccentric for moving the looper laterally and for giving the feed dog a forward and backward movement.

5. A sewing machine including in combination, a looper, a feed dog, a main rotating shaft, an eccentric carried by said main shaft, a transverse shaft oscillated from the eccentric on the main shaft, a toggle mechanism operated by said transverse shaft for giving one movement to the looper, and a toggle mechanism operated by said transverse shaft for giving one movement to the feed dog.

[Claims 6 to 18 not printed in the Gazette.]

1,211,494. DENTAL ARTIFICIAL ANCHOR. WILLIAM F. SHAW, Pueblo, Colo. Filed Sept. 1, 1916. Serial No. 118,110. (Cl. 32—12.)



1. An anchor attachment for bridge work embodying an extensible bridge member having means at its ends for attachment to natural teeth.

2. An anchor attachment for bridge work comprising an adjustable anchor member embodying slidably connected sections, said sections having means at their remote ends for attachment to natural teeth.

3. An anchor attachment for bridge work embodying a bridge member having webs at the opposite ends thereof disposed substantially in the same plane and adapted to fit within slits in natural teeth, said webs having abutment wings to rest against said teeth and for the attachment of artificial teeth.

4. An anchor attachment for bridge work embodying a bridge member having webs at its ends to enter slits in natural teeth, said webs and bridge member being disposed in substantially the same plane and the webs extending at an angle in the same direction from said member, said webs having abutment wings at those edges nearest one another.

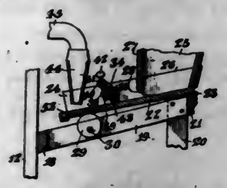
5. An anchor attachment for bridge work embodying an extensible bridge member having webs at its ends to fit within slits in natural teeth.

[Claims 6 to 8 not printed in the Gazette.]

1,211,495. VACUUM GOLD-SEPARATOR. WILLIAM SHORB, Montesano, Wash. Filed Jan. 21, 1916. Serial No. 73,396. (Cl. 83—54.)

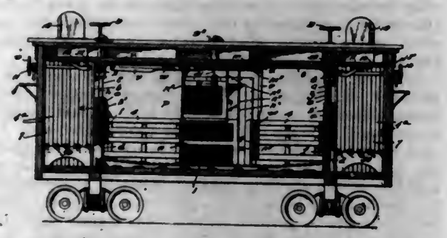
1. In a vacuum separator, and in combination, a stationary inclined chute, the inclination being such as to feed by gravity, a suction head extending across the chute near its lower end, means for adjusting the distance between the head and the chute surface, and a distributing and retarding means on the chute in proximity to the suction head.

2. In a vacuum separator, and in combination, an imperforate inclined chute being vertically adjustable, the inclination being such as to feed by gravity, a suction head extending across the chute near its lower end, means for adjusting the distance between the head and the chute surface, feed means at the upper end of the chute, and a distributing and retarding means on the chute in proximity to the suction head.



3. In a vacuum separator, and in combination, a rigid frame, a normally stationary inclined chute, means for pivotally connecting the chute to the frame at one end, a hopper mounted upon and delivering to the chute at the pivotal end thereof, a trough at the lower end of the chute, a suction head extending across the chute near its lower end, means mounted on the frame for raising and lowering the chute to adjust the distance between the head and the chute surface, the inclination of the chute being such as to feed by gravity, and a distributing and retarding means on the chute between the hopper and the head and nearer to the head than the hopper.

1,211,496. REFRIGERATOR-CAR. EDWARD J. SHUR, New Orleans, La. Filed Sept. 18, 1915. Serial No. 51,425. (Cl. 62—19.)



1. The combination of a car body having an ice compartment, a drop door to cut off cold air, means for controlling said door, and an indicator movable by the door and extending outside the car.

2. The combination of a car body having an ice compartment, a drop door to cut off cold air, a shaft journaled in the car body, cables connecting the drop door with said shaft, a miter gear on the shaft, and an upright shaft journaled in the top of the car body and having a miter gear intermeshed with the first-named gear and also having a handle exterior of the body.

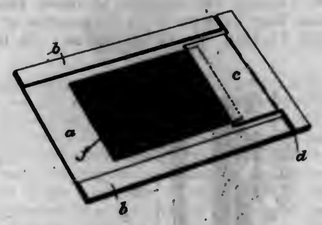
3. The combination of a car body having an opening, a swinging plug in the body for closing said opening, a rock shaft in the body having an arm connected with the plug and also having a miter gear, and a shaft journaled in a wall of the body and having a miter gear meshed with the first-named gear and also having means for detachably securing it against retrograde rotation.

4. The combination of a body having an ice compartment and a goods compartment and also having lower and upper communications between said compartments, vertically-sliding gravitating doors adapted to control said communications, door raising means arranged exterior of the body, and a connection intermediate the doors and said means whereby the doors may be synchronously opened and the upper door may be closed independently of the lower door opening.

5. The combination of a body having an ice compartment and a goods compartment and also having lower and upper communications between said compartments, doors for controlling said communications, and means outside the body for synchronously opening and closing said doors; said means being also constructed and arranged for the independent closing of the upper door while the lower door is open.

[Claims 6 to 10 not printed in the Gazette.]

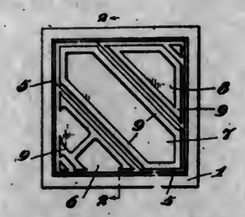
1,211,497. HOLDER FOR PHOTOGRAPHS. ALEXANDER S. SPIEGEL, Chicago, Ill., assignor of one-third to Robert Glendinning and one-third to Gabriel Felsenthal, Chicago, Ill. Filed Feb. 24, 1916. Serial No. 80,232. (Cl. 40—35.)



1. As a new article of manufacture, a holder consisting of a base having its margins on opposite sides thereof folded inwardly and upon the main portion of the base, a flap connected with the base at one end thereof, and a cover member having an opening and overlying the folded in margins of the base and attached thereto and leaving an opening at the end of the base opposite that at which the flap is located, and between the said base and the cover member, said opening lying between the folded in margins and adapted to receive a card bearing the composite picture, and a screen located in the space between the cover and the base and between the margins of the base, and being connected with the flap, said flap being movable to displace the screen carried thereby in relation to the picture member when inserted into said space through said opening for producing a motion picture effect, substantially as described.

2. As a new article of manufacture, a holder for receiving and displaying composite picture cards to produce motion picture effects consisting of a base, a cover attached thereto, and spaced apart therefrom and thereby providing a space for the reception of a composite picture card, a movable screen member in said space with means for reciprocating the same at one end of the holder, said holder having an open mouth at its end opposite that at which the screen operating means is located, said mouth communicating with the space between the base and the cover for the insertion of the composite picture card into said space, substantially as described.

1,211,498. MONOGRAM-STAMP. HELFRID STENSTROM, Philadelphia, Pa. Filed Feb. 1, 1916. Serial No. 75,495. (Cl. 101—58.)



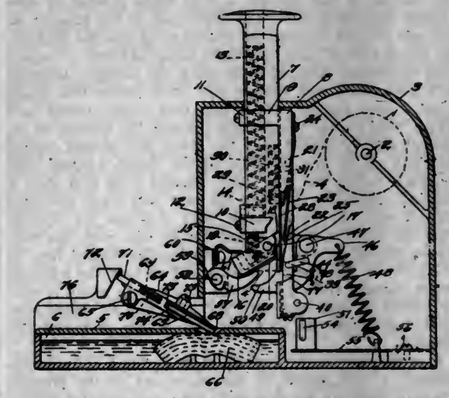
1. A stamping device, comprising a holder having a recess, certain of the side walls of which intersect each other and form a closure, a plurality of irregularly shaped blocks each having an outer edge surface fitting a particular part of the side walls of the recess, said blocks also having edge surfaces which fit against each other, each block having a letter thereon projecting beyond the face of the holder, substantially as described.

2. A stamping device, comprising a holder having a recess therein, and a plurality of irregularly shaped blocks within said recess, the side wall of said recess forming a complete inclosure for the blocks, said blocks having letters thereon projecting beyond the recessed portion of the block, certain of the blocks being longer than other of the blocks, each of said blocks having an edge surface fitting against an edge surface of another block, the outer edge surfaces of the blocks when fitted together being flush with each other and fitting said recess, substantially as described.

3. A stamping device, comprising a holder having a recess therein, and a plurality of irregularly shaped blocks within said recess, each of said blocks having an edge surface against an edge surface of another block, the outer edge surfaces of the blocks when fitted together being flush with each other and fitting said recess, the side wall of said recess forming a complete inclosure for the blocks, certain of said blocks having different shapes and designed to fit different portions of the walls forming the inclosure, said blocks also having letters thereon projecting beyond the recessed portion of the block, substantially as described.

4. A monogram stamp, comprising a rectangular holder, and three diagonally positioned blocks secured in the holder and respectively engaging diagonally opposite corners of the holder, each block having a letter thereon projecting beyond the face of the block beyond the edge of the holder, each of said blocks having an edge surface corresponding to and designed to be fitted against an edge surface of another of said blocks, substantially as described.

1,211,499. STAMP-AFFIXING MACHINE. FREDERICK W. STORCK, Boston, Mass., assignor, by mesne assignments, to E. Charles Drouet, Somerville, Mass. Filed May 10, 1911, Serial No. 626,238. Renewed Nov. 27, 1916. Serial No. 133,814. (Cl. 216—28.)



1. In a stamp affixing machine, a support for envelops, a feed device for a stamp strip having a reciprocable plunger and a feed blade attached to the plunger which feeds the strip, said plunger in its descent causing a stamp to be severed from the strip and being adapted to press the same upon an envelop positioned beneath the plunger.

2. A feed device for a stamp strip having a reciprocable plunger, a foot hinged to the lower end of the plunger in a normally tilted position, means for guiding a stamp strip beneath said hinged foot, yielding means for supporting the free end of the stamp strip beneath the said foot, a bed beneath the plunger against which the downwardly projecting end of the hinged foot will clamp the advance end of the stamp near the end of the descent of the plunger, means for clamping the strip in a line

transversely of the strip back of the path of movement of the plunger and restraining the strip from further feed movement while the plunger continues its descent, the continued descent of the plunger causing the opposite edge of the bottom of the hinged foot to tear the advance portion from the held portion of the strip.

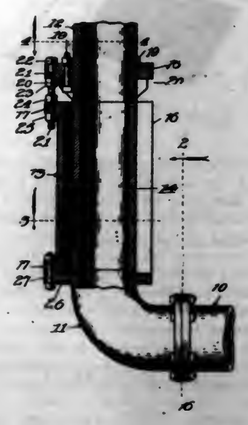
3. A feed device for a stamp strip having a reciprocable plunger, a foot hinged to the lower end of the plunger whereby normally the foot will hang in a tilted position, means for guiding a stamp strip beneath said hinged foot, yielding means for supporting the free end of the stamp strip beneath the said foot, a bed beneath the plunger against which the downwardly projecting end of the hinged foot will clamp the advance end of the stamp near the end of the descent of the plunger, a feed blade carried by said plunger extending below the lower end of the plunger on one side thereof between the stamp strip and the plunger, the lower edge of said feed blade being adapted to engage with the stamp strip whereby when the plunger descends said feed blade will engage and carry down the stamp strip, a stop against which said feed blade clamps said stamp strip before the plunger reaches the bottom of its descent and so located that the lower end of said hinged foot will clamp the free end of the stamp against said bed plate before the feed blade engages with said stop, a yielding connection between the said feed blade and said plunger whereby the plunger may continue its descent after the feed blade has engaged with said stop, the continued descent of the plunger causing the hinged foot to swing into a horizontal position and to tear the advance stamp engaged thereby from the stamp strip which is held stationary by said feed blade and stop.

4. A feed device for a stamp strip having a reciprocable plunger, a foot hinged to the lower end of the plunger, the axial line of the hinge being nearer to one edge of the foot whereby normally the foot will hang in a tilted position, means for guiding a stamp strip beneath said hinged foot, yielding means for supporting the free end of the stamp strip beneath the said foot, a bed beneath the plunger against which the downwardly projecting end of the hinged foot will clamp the stamp near the end of the descent of the plunger, a feed blade carried by said plunger extending below the lower end of the plunger on one side thereof between the stamp strip and the plunger, the lower edge of said feed blade being adapted to engage with the stamp strip whereby when the plunger descends said feed blade will engage and carry down the stamp strip, a stop against which said feed blade clamps said stamp strip before the plunger reaches the bottom of its descent and so located that the lower end of said hinged foot will clamp the free end of the stamp against said bed plate before the feed blade engages with said stop, a yielding connection between the said feed blade and said plunger whereby the plunger may continue its descent after the feed blade has engaged with said stop, the continued descent of the plunger causing the hinged foot to swing into a horizontal position and to tear the advance stamp engaged thereby from the stamp strip which is held stationary by said feed blade and stop, and an elastic connection between the swinging end of the foot and the plunger.

5. A feed device for a stamp strip having a reciprocable plunger, a foot hinged to the lower end of the plunger whereby normally the foot will hang in a tilted position, means for guiding a stamp strip beneath said hinged foot, yielding means for supporting the free end of the stamp strip beneath the said foot, a bed beneath the plunger against which the downwardly projecting end of the hinged foot will clamp the stamp near the end of the descent of the plunger, a feed blade carried by said plunger extending below the lower end of the plunger on one side thereof between the stamp strip and the plunger, the lower edge of said feed blade being adapted to engage with the stamp strip whereby when the plunger descends said feed blade will engage and carry down the stamp strip, a stop against which said feed blade clamps said stamp strip before the plunger reaches the bottom of its descent and so located that the lower end of said hinged foot will clamp the free end of the stamp against said bed plate and having a plurality of points which pierce the stamp strip before the feed blade engages with said stop, a yielding connection between the said feed blade and said plunger whereby the plunger may continue its descent after the feed blade has engaged with said stop, the continued descent of the plunger causing the hinged foot to swing into a horizontal position, and to tear the advance stamp engaged thereby from the stamp strip which is held stationary by said feed blade and stop.

[Claims 6 to 46 not printed in the Gazette.]

1,211,500. ASH-CONVEYING SYSTEM. ARTHUR P. STRONG, Chicago, Ill., assignor to Green Engineering Company, East Chicago, Ill., a Corporation of Illinois. Filed Oct. 11, 1916. Serial No. 124,923. (Cl. 137—75.)



1. In a system for conveying abrasive materials, the combination of two permanent pipe sections, a removable pipe section interposed between the ends of said permanent pipe sections, and a spacing member connecting the ends of said permanent pipe sections and capable of longitudinal adjustment.

2. In a system for conveying abrasive materials, the combination of two permanent pipe sections, a removable pipe section interposed between the ends of said permanent pipe sections, a spacing member connected to the ends of said permanent pipe sections and adapted to maintain the same in spaced relation, and means for varying the distance between the ends of said permanent pipe sections.

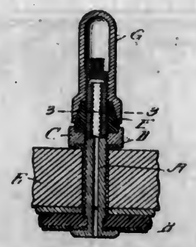
3. In a system for conveying abrasive materials, the combination with two pipe sections, of a spacing member interposed between and connecting the ends of said pipe sections, a removable pipe section insertible between the ends of said pipe sections, and means for adjusting the length of said spacing member.

4. In a conveying system for abrasive materials, the combination of two pipe sections, a spacing member connecting the ends of said pipe sections, adjusting means associated with said spacing member for varying the distance between the ends of said pipe sections, and a removable pipe section insertible between the ends of said first mentioned pipe sections and adapted to be retained by pressure exerted by said first mentioned pipe sections.

5. In a conveying system for abrasive materials, the combination of two permanent pipe sections, a removable pipe section interposed between the ends of said permanent pipe sections, and an extensible spacing member connecting the ends of said permanent pipe sections and embracing said removable pipe section.

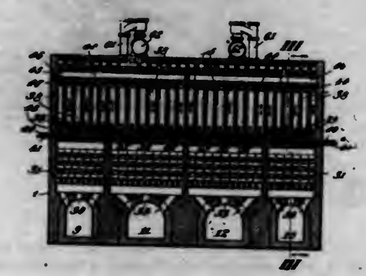
[Claims 6 to 10 not printed in the Gazette.]

1,211,501. VALVE FOR PNEUMATIC TIRES. JAMES WALTER TAYLOR, Lansing, Mich., assignor of two-thirds to George A. Mohr, Lansing, Mich. Filed Nov. 7, 1914. Serial No. 870,792. (Cl. 152—12.)



The combination of a threaded valve tube, a nut or bur threaded on the said valve tube, and having similar annularly grooved inner and outer faces, a washer extending within the groove of the inner face of the said nut or bur and adapted to bear against a wheel rim and the like, a conical gasket having its enlarged end projecting within the groove of the outer face of the said nut or bur, and a thimble threaded upon the outer end of the said valve tube and inclosing the same, and having a conical bore at its inner end receiving the smaller end of the gasket whereby to form a compression joint between the said inclosed end of the valve tube and the atmosphere, the said grooved opposite faces of the said nut or bur forming retaining rings to respectively prevent the gasket and the washer from spreading.

1,211,502. COKE-OVEN CONSTRUCTION. GEORGE E. THACKRAY, Westmont borough, Pa. Filed Oct. 28, 1913. Serial No. 797,701. (Cl. 202—9.)



1. The combination with a plurality of horizontal retort coke ovens, of a plurality of regenerators extending longitudinally under each oven, vertical heating flues in the side walls of said ovens, a horizontal channel under each oven connected with each heating flue by a port, the regenerators under the end portions of the oven being of less length than those under the interior portions of said oven, connections between the regenerators and the said horizontal channels, means for supplying heating gas to each of the said vertical flues, and means for supplying air to the regenerators and for reversing the direction of flow through the regenerators and heating flues.

2. A plurality of horizontal retort ovens arranged side by side with vertical heating flues in the side walls thereof, a plurality of regenerators below each oven, a horizontal channel between the regenerators and each oven connected to said regenerators and the heating flues, the regenerators under the end portions of the ovens being of less length than those under the interior portions, means for supplying heating gas to the vertical flues, means for supplying air to the regenerators and means for reversing the direction of flow through said regenerators and heating flues.

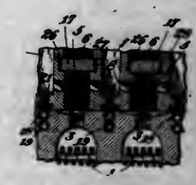
3. A horizontal retort coke oven, with vertical heating flues in the side walls thereof, a plurality of regenerators located directly below said coke oven communicating with said heating flues through a horizontal channel located between the tops of the regenerators and the bottom of the oven, a gas supply to the end heating flues of the ovens, a separate gas supply to the interior heating flues of the ovens, the regenerators below and directly connected to each set of heating flues being separate, whereby the heating of said oven may be equalized.

4. In a retort coke oven having vertical side walls provided with groups of vertical heating flues, regenerators substantially as long as each of said groups under each oven, a burner at the lower end of each heating flue, means for admitting air into the heating flues on either side of each burner, and a damper for controlling the openings at the upper end of each heating flue.

5. In a retort coke oven having vertical side walls provided with groups of vertical heating flues, regenerators substantially as long as each group of vertical heating flues under each oven, a burner at the lower end of each heating flue, a plurality of distribution pipes of different lengths connecting with said burners and adapted to furnish gas to the burners in groups, and means for admitting air to the vertical heating flues above the burners on opposite sides thereof.

[Claims 6 to 12 not printed in the Gazette.]

1,211,503. COKE-OVEN. GEORGE E. THACKRAY, Westmont borough, Pa. Original application filed Oct. 28, 1913, Serial No. 797,701. Divided and this application filed Sept. 2, 1916. Serial No. 118,204. (Cl. 202—9.)



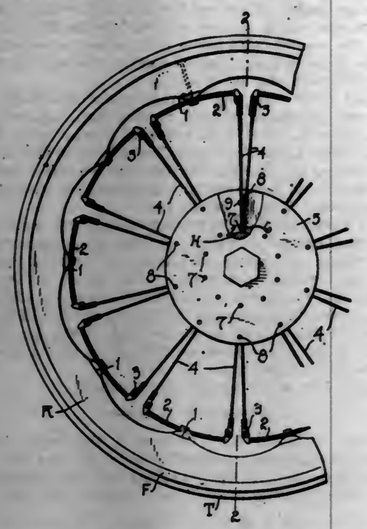
1. In a retort coke oven having vertical side walls provided with a plurality of vertical heating flues, a base block at the lower end of each heating flue, a burner formed in said base block, and distributing pipes of different lengths beneath and connecting with the base blocks.

2. In a retort coke oven having vertical side walls provided with a plurality of vertical heating flues, a base block at the lower end of each heating flue upon which the vertical side walls rest, a burner formed in said base block, distribution pipes of different lengths beneath the base blocks, a plurality of holes in each distribution pipe for supplying gas to the burners, and a recess formed beneath the burners on the under side of each base block wide enough to cover the holes in either of a pair of distribution pipes.

3. In a retort coke oven having vertical side walls provided with a plurality of vertical heating flues, a base block at the lower end of each heating flue upon which the vertical side walls rest, a burner formed in said base block, distribution pipes of different lengths beneath the base blocks, a plurality of holes in each distribution pipe for supplying gas to the burners, a recess beneath the burners formed on the under side of each base block wide enough to cover the holes in a plurality of distribution pipes, and horizontal ports decreasing in size from the ends of the oven for admitting air to the vertical heating flues above the burners through the opposite side walls.

4. In a retort coke oven an oven floor formed of blocks of refractory material, the ends of which adjacent the side walls are separated therefrom to form expansion joints, a plurality of vertical heating flues, the upper portions of the walls of which are spaced apart forming upper expansion joints, a base block at the lower end of each heating flue, a burner formed in said base block and distributing pipes of different lengths beneath and connecting with the base blocks.

1,211,504. WHEEL STRUCTURE. OSKAR THUREN, Virginia, Minn. Filed Apr. 27, 1916. Serial No. 93,959. (Cl. 152—28.)



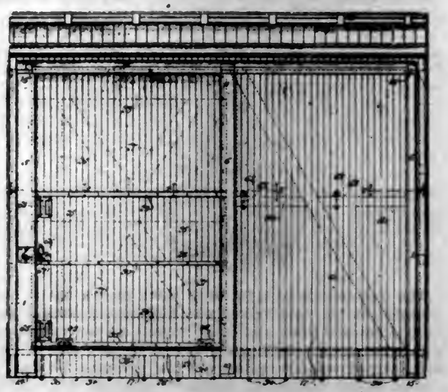
1. A wheel structure comprising a rim provided with inwardly directed extensions, a hub, a flat spring member secured midway its length to the inner end of each of the extensions, and spokes interposed between the hub and the opposite end portions of the spring, said spokes being resilient, adjacent spokes being formed of a single length of material bent back upon itself at substantially midway its length.

2. A wheel structure comprising a rim provided with inwardly directed extensions, a hub, a flat spring member secured midway its length to the inner end of each of the extensions, spokes interposed between the hub and the opposite end portions of the spring, said spokes being resilient, adjacent spokes being formed of a single length of material bent back upon itself at substantially midway its length, a member disposed through the hub and coacting with the connecting portions of the adjacent spokes for holding said spokes in operative position relative to the hub, a member carried by the hub and disposed between adjacent spokes for maintaining the same in spaced relation, and a member connecting adjacent spokes at a point inwardly of the spacing member.

1,211,505. SLIDING DOOR FOR RAILWAY FREIGHT-CARS. HENRY J. TIERNEY, Denison, Tex. Filed July 9, 1913. Serial No. 778,151. (Cl. 20—22.)

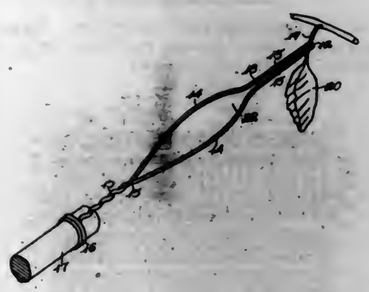
1. A railway freight car having in its wall front, rear and intermediate posts flush with its inner face and projecting outwardly beyond its outer side face with a door-opening between said front and intermediate posts, said intermediate post comprising inner and outer members, said outer member extending downwardly across the outer face of the car sill, an outer sheathing and an inner lining between said intermediate and rear posts forming a compartment, and a roller supported door movable across said opening and into said compartment, substantially as described.

2. A railway freight car having in its side wall a door opening, front, rear and intermediate posts flush with the inner face of its lining, said posts being mortised on their inner sides to receive the edges of said lining and being mortised on their outer sides to receive the sheathing of the car wall, said intermediate post comprising inner and outer members, the inner member extending between the car plate and sill and the outer member extending across the outer face of said sill, an outer sheathing and an inner lining between said intermediate and rear posts



forming a compartment, and a door movable across said opening and into said compartment, substantially as described.

1,211,506. MOTH-NEST PICKER AND RETRIEVER. FRED L. TOOTHAKER, Belfast, Me., assignor of one-half to Elon B. Gilchrest, Belfast, Me. Filed Apr. 27, 1916. Serial No. 93,887. (Cl. 57—9.)

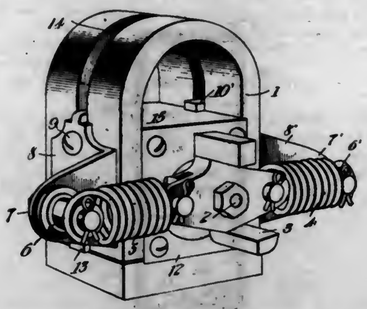


A moth nest picker and retriever comprising a length of resilient wire bent to form a neck, two substantially parallel portions forming spring-yielding jaws connected by the neck and normally separated by an elongated crevice which is narrower than the thickness of a leaf stem, is of substantially uniform width along its major portion, and flares outwardly at its receiving end, two curved portions bounding a nest-receiving opening communicating with said crevice, and two end members connected to form a pole-engaging shank, said jaws being movable endwise upon an attached nest-supporting leaf stem in said opening, and caused by such movement to exert a gradually increasing grip on the stem which is maintained until the stem and nest are detached and retrieved.

1,211,507. MAGNETO ATTACHMENT. HARRY RANDOLPH VAN DEVENTER, Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Sept. 22, 1914. Serial No. 863,028. (Cl. 171—209.)

1. In combination with an ignition generator having a rotor shaft, a trip lever, a spring support secured to the generator and formed from a sheet of metal having a side portion adapted to be clamped to said generator and supported wholly thereby, lugs on said support adapted to position the same on said generator, an arm portion on

said support at right angles to the side thereof, spring supporting means carried by said arm portion, and a spring between said trip lever and said spring supporting means.



2. In combination with an ignition generator having a rotor shaft, a trip lever, a spring support secured to the generator and formed from a sheet of metal having a side portion adapted to be clamped to said generator and supported wholly thereby, lugs on said support adapted to position the same on said generator, an arm portion on said support at right angles to the side thereof, a spring support carried by said arm portion and integral therewith, and a spring between said trip lever and said spring supporting means.

3. In combination with an ignition generator having a rotor shaft, a trip lever, a spring support secured to the generator and formed from a sheet metal blank having an apertured portion adapted to be clamped to said generator and supported wholly thereby, means on said spring support adapted to position the same on the generator, an arm portion on said support at right angles to the side thereof, a spring support on said arm portion, and a spring between said trip lever and said spring supporting means.

4. In combination with an ignition generator having a rotor shaft, a trip lever, a spring support having an apertured portion adapted to be clamped to said generator and supported wholly thereby, lugs on said support adapted to position the same on said generator, an arm portion on said support at right angles to the apertured part thereof, and a spring support carried by said arm portion and intergral therewith.

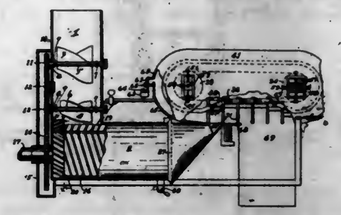
5. In combination with an ignition generator having a rotor shaft, a trip lever, a spring support having an apertured portion adapted to be clamped to said generator and supported wholly thereby, lugs for positioning said apertured portion, an arm support at right angles to said apertured portion, and a spring support secured to said last portion, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,211,508. BUTTER MAKING AND MOLDING MACHINE. CHARLES VOLKMANN, Chicago, Ill., assignor to The Universal Butter Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 23, 1912. Serial No. 685,823. (Cl. 31—25.)

1. A butter molding machine comprising a cylindrical member terminating in an upwardly extending conoidal nozzle, means to force the butter through said nozzle, a molding device consisting of a casing, two wheels mounted on axles journaled in the side walls of the casing, a chain carried by the said wheels, a plurality of blades secured to the chain, a stamp intermediate the blades, rollers secured to each stamp, guides formed on the side walls of the casing to which the rollers are fitted whereby the stamps may be vertically reciprocated.

2. A butter molding machine comprising a vertical rectangular portion having a laterally extending cylindrical member at its lower end which terminates in an upwardly extending conoidal nozzle, means to force the butter through said nozzle, a molding device consisting of a casing, two wheels mounted in axles journaled in the side walls of the casing, a chain carried by the wheels, a plurality of blades secured to the chain, a stamp intermediate the blades, rollers secured to each stamp, guides formed on the side walls of the casing to which the rollers are fitted whereby the stamps may be vertically reciprocated.



3. A butter molding machine comprising a vertical rectangular portion having a laterally extending cylindrical member at its lower end which terminates in an upwardly extending conoidal nozzle, a conveyer to force the butter through said nozzle, a molding device consisting of a casing, two wheels mounted on axles journaled in the side walls of the casing, a chain carried by the wheels, a plurality of blades secured to the chain, a stamp intermediate the blades, rollers secured to each stamp, guides formed on the side walls of the casing to which the rollers are fitted, whereby the stamps may be vertically reciprocated.

4. A butter molding machine comprising a vertical rectangular portion having a laterally extending cylindrical member at its lower end which terminates in an upwardly extending conoidal nozzle, a conveyer to force the butter through said nozzle, a molding device consisting of a casing, two wheels, mounted on axles journaled in the side walls of the casing, a chain carried by the wheels, a plurality of blades secured to the chain, a stamp intermediate the blades, rollers secured to each stamp, guides formed on the side walls of the casing to which the rollers are fitted, whereby the stamps may be vertically reciprocated, a screw loosely journaled in the said cylindrical member which meshes with the grooves in the conveyer and means to rotate the conveyer.

5. A butter molding machine comprising a cylindrical member which terminates in an upwardly extending conoidal nozzle, means to force the butter through said nozzle, a molding device consisting of a casing, two wheels mounted on axles journaled in the side walls of the casing, a chain carried by the said wheels, a plurality of blades secured to the chain, a stamp intermediate the blades, rollers secured to each stamp, guides formed on the side walls of the casing to which the rollers are fitted, whereby the stamps may be vertically reciprocated and means whereby said wheels may be manually rotated.

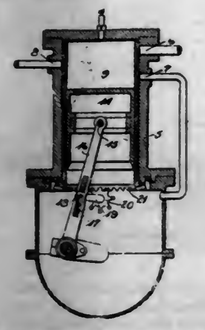
[Claims 6 and 7 not printed in the Gazette.]

1,211,509. INTERNAL-COMBUSTION ENGINE. HUGO C. WELL, New York, N. Y., assignor of fifty one-hundredths to Frederick A. B. Meinhardt, New York, N. Y. Filed Oct. 23, 1914. Serial No. 868,221. (Cl. 123—76.)

1. In an internal combustion engine, a cylinder having a head and adjacent the head in different zones, a combustible mixture port, an exhaust port and an air port, a valve sleeve disposed coaxially with the cylinder and having in different zones a combustible mixture port, an exhaust port and an air port for communicating with the first mentioned ports respectively, the exhaust and the air ports being positioned in the sleeve for uncovering the cylinder air and exhaust ports simultaneously.

2. In an internal combustion engine, a cylinder having a head and adjacent the head in different zones, a combustible mixture port, an exhaust port and an air port, a valve sleeve disposed coaxially with the cylinder and having in different zones a combustible mixture port, an exhaust port and an air port for communicating with the first mentioned ports respectively, the exhaust and

the air ports being positioned in the sleeve for uncovering the cylinder air and exhaust ports simultaneously, and means for forcing air under pressure through the air port into the cylinder.



3. In an internal combustion engine, a cylinder having in different zones a combustible mixture port, an exhaust port and an air port, a valve sleeve disposed coaxially with the cylinder and having in different zones a combustible mixture port, an exhaust port and an air port for communicating with the first mentioned ports respectively, the exhaust and the air ports being positioned in the sleeve for uncovering the cylinder air and exhaust ports simultaneously, and an auxiliary air port in the valve sleeve positioned for uncovering the air port in the cylinder at the termination of the suction stroke of the engine.

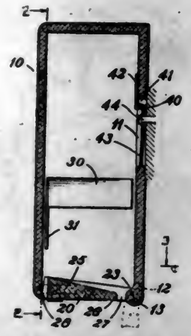
4. In an internal combustion engine, a cylinder having a head and adjacent the head in different zones, a combustible mixture port, an exhaust port and an air port, a valve sleeve disposed coaxially with the cylinder and having in different zones a combustible mixture port, an exhaust port, and an air port for communicating with the first mentioned port respectively, the exhaust and the air ports being positioned in the sleeve for uncovering the cylinder air and exhaust ports simultaneously, and means for forcing air under pressure through the air port into the cylinder, there being an auxiliary air port in the valve sleeve positioned for uncovering the air port in the cylinder at the termination of the suction stroke of the engine.

5. In an internal combustion engine, a cylinder having adjacent its head an inlet port, an exhaust port and an air port, a piston in the cylinder, valve means for commanding the ports, and means to operate the valve means to open the exhaust and air ports simultaneously and to open the air port independently of the exhaust port at the termination of the suction stroke of the piston.

1,211,510. DISPENSING-CABINET. SETH WHEELER, Castleton, N. Y. Filed Dec. 22, 1915. Serial No. 68,115. (Cl. 211—29.)

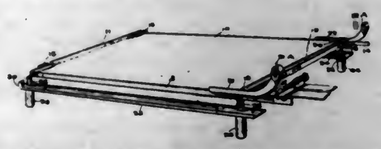
1. A dispensing cabinet comprising a rectangular box-like casing having no bottom, a downwardly swinging bottom plate having side hinges pivotally supported at the bottom corners of said casing, the bottom plate being of less width between its flanges than that of the cabinet and adapted when swung upwardly into closed position to form with the lower edge of the casing between the corners to which the bottom plate is pivoted, a transverse discharge slot, and a vertically movable follower within the casing, said follower being provided with a downwardly extending indicating tab and said bottom plate provided with an opening through which said tab may project.

2. A dispensing cabinet comprising a rectangular box-like casing, the back of said casing being constructed with an opening of predetermined shape and size, combined with a hanger bracket adapted to be affixed to a wall, said bracket having a portion adapted to fit the opening in the back of the casing and having a flange adapted to extend upwardly above said opening, and a spring adapted to press against the lower edge of said opening to lock the casing onto the bracket.



3. A dispensing cabinet comprising a rectangular box-like casing open at the bottom, a downwardly swinging bottom plate pivotally supported by said casing, the back of said casing being constructed with an opening of predetermined shape and size, combined with a hanger bracket adapted to be affixed to a wall, said bracket having a portion adapted to fit the opening in the back of the casing and having a flange adapted to extend upwardly above said opening, and a spring adapted to press against the lower edge of said opening to lock the casing onto the bracket, said hanger and spring being accessible only through the bottom of the casing.

1,211,511. DELIVERY-TRAY AND SUPPORT. JOSEPH WHITE, Piscataway township, N. J., assignor to Hall Printing Press Company, Dunellen, N. J., a Corporation of New Jersey. Filed Oct. 19, 1912. Serial No. 726,592. (Cl. 101—34.)



1. A pair of parallel supports, spaced apart, and a delivery tray having supporting members on opposite edges of said tray at one end only thereof and projecting beyond said edges and constructed and arranged to engage said supports to support said tray and to permit it to be slid along said supports.

2. A pair of parallel supports, spaced apart, and a delivery tray having supporting members on opposite edges of said tray at one end only thereof and projecting beyond said edges and adapted and arranged to engage said supports to support said tray and to permit it to be slid along said supports, one of said supporting members being adapted to engage one of said supports to hold said tray in lateral position thereon as it is being slid along said supports.

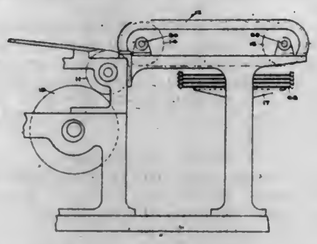
3. A pair of parallel supports, spaced apart, and a delivery tray having supporting members on opposite edges of said tray at one end only thereof and projecting beyond said edges and adapted and arranged to engage said supports to support said tray and to permit it to be slid along said supports, and a stop to limit the motion of said tray along said support.

4. A pair of parallel supports, spaced apart, and a delivery tray having supporting members on opposite edges of said tray at one end only thereof and projecting beyond said edges and adapted and arranged to engage said supports to support said tray and to permit it to be slid along said supports, and a removable stop to limit the motion of said tray along said support.

5. A delivery tray support constructed and arranged to permit trays to be moved horizontally thereon, a movable stop having a fixed position with relation to said support and constructed and arranged to limit the motion of said trays on said support and automatic means to move said stop out of operative position as a new tray is moved into position on said support.

[Claims 6 to 14 not printed in the Gazette.]

1,211,512. SHEET-DELIVERY MECHANISM. JOSEPH WHITE, Piscataway township, N. J., assignor to Hall Printing Press Company, Dunellen, N. J., a Corporation of New Jersey. Filed Oct. 19, 1912. Serial No. 726,593. (Cl. 101—34.)



1. A delivery pile support, a sheet carrier constructed and arranged to pass across said support to deposit sheets thereon and automatic means, including a member contacting with the top of the pile, to maintain the top of the pile at a predetermined level as sheets are deposited thereon, and means to move said member to permit sheets to be deposited on the pile.

2. A delivery pile support, a sheet carrier constructed and arranged to pass across said support to deposit sheets thereon and automatic means, including a member contacting with the top of the pile, to maintain the top of the pile at a predetermined level as sheets are deposited thereon, and means to move said member to permit said carrier to pass.

3. A delivery pile support, trays adapted to be placed one by one on said support, a member adapted to contact with the topmost of said trays on said support, means to move said member into and out of contact with said topmost tray, and automatic means, controlled by said member, and arranged to be thrown into operation when an additional tray is placed on said support, to lower said support the thickness of the tray.

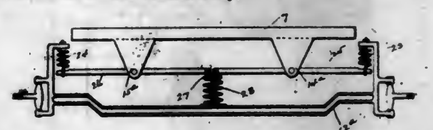
4. A delivery pile support, trays adapted to be placed one by one on said support, means to deliver sheets to the topmost of said trays, a member adapted to contact with the topmost of said trays on said support, means to move said member into and out of contact with said topmost tray after each sheet is delivered thereto, and lowering means for said support, arranged to be thrown into operation when an additional tray is placed on said support.

5. A delivery pile support, means to deliver sheets thereto from one side thereof, and a plurality of trays adapted to be placed one by one on said support, means to support and guide a tray into place on said support, and means constructed and arranged to permit said trays to be inserted from a side other than that from which the sheets are delivered to said support, and made operative by the placing of a tray on said support to lower said support.

[Claims 6 to 25 not printed in the Gazette.]

1,211,513. VEHICLE SUSPENSION. WILLIAM R. WILLIAMS, New York, N. Y., assignor to Catherine Emily Williams, Bakersfield, Cal. Filed Jan. 22, 1912. Serial No. 672,769. (Cl. 267—5.)

1. A vehicle suspension including in combination, a pair only of elastic supporting elements arranged in coöperative relation with the body and an axle of a vehicle, said elements being connected at their outer ends with the opposite ends of the axle and pivotally attached at their centers to the body, a third elastic element, and means connecting said pair of elastic elements at their inner ends with said third elastic element, the connection being made to each of said pair of elastic elements at the point marking the limit of elasticity which without said connection can be given to said elastic element without affecting the equilibrium of the vehicle body.



2. A vehicle suspension including in combination, a pair only of elastic supporting elements arranged in coöperative relation with the body and an axle of a vehicle, said elements being connected at their outer ends with the opposite ends of the axle and pivotally attached at their centers to the body, a third elastic element, and means connecting said pair of elastic elements at their inner ends with said third elastic element, said pair of elastic elements having a common point of connection to said third element, and said point marking the limit of elasticity which without said connection can be given to each of said pair of elements without affecting the equilibrium of the vehicle body.

3. A vehicle suspension including in combination, a plurality of elastic supporting elements arranged in coöperative relation with the body and an axle of a vehicle, said elements being connected at their outer ends with the opposite ends of the axle and pivotally attached at their centers to the body, a third elastic element, and means connecting said plurality of elastic elements at their inner ends with said third elastic element, the connection being made to each of said plurality of elastic elements at the point marking the limit of elasticity which without said connection can be given to said element without affecting the equilibrium of the vehicle body.

4. A vehicle suspension including in combination, a pair only of elastic supporting elements arranged in coöperative relation with the body and an axle of a vehicle, said elements being connected at their outer ends with the opposite ends of the axle, each elastic element comprising a spring and a lever, and a third elastic element connecting the inner ends of said first named elements, each lever being connected to said third elastic element and the elasticity of each of said pair of elastic elements being the maximum which without the connection to the third elastic element can be imparted to said member without affecting the equilibrium of the vehicle body.

5. A vehicle suspension including, in combination, a pair of resilient members located in an intermediate plane substantially parallel to the vehicle body and a supporting axle, said members being connected with opposite parts of the axle at their outer ends and pivotally attached at their centers to the body, and an elastic element linked to the inner ends of both members so as to control movement of either member relatively to the other.

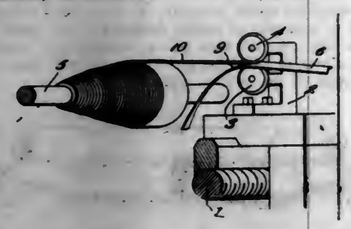
[Claims 6 to 10 not printed in the Gazette.]

1,211,514. PAPER CONE. WYLE T. WILSON, Philadelphia, Pa. Filed Feb. 18, 1916. Serial No. 79,103. (Cl. 93—1.)

1. A paper cone comprising a strip of paper convolutely wound in layers, said layers being successively narrower from the inside toward the outside of the cone, whereby one of the edges of said strip forms the base, and the other edge forms the inclined surface of said cone and a wooden center member having a rounded outer end completing the extreme point of said cone, substantially as described.

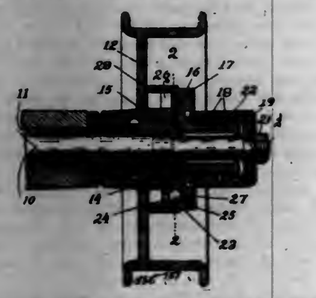
2. A paper cone comprising a center member and a continuous strip of paper convolutely wound in layers around

said center member, said layers being successively narrower from the inside toward the outside of the cone, whereby one of the edges of said strip forms the base; and the other edge forms the inclined surface of same cone, substantially as described.



3. A paper cone comprising a center member of wood and a continuous strip of paper convolutely wound in layers around said center member, said layers being successively narrower from the inside toward the outside of the cone, whereby one of the edges of said strip forms the base, and the other edge forms the inclined surface of said cone; and said other edge or inclined surface being smoothed off to form a substantially continuous surface, substantially as described.

1,211,515. SAFETY CLUTCH OR COUPLING. WILLIAM R. WINTER, Berlin, Germany, assignor to Potter and Johnston Machine Company, Pawtucket, R. I. Filed Dec. 15, 1913. Serial No. 806,794. (Cl. 74—29.)

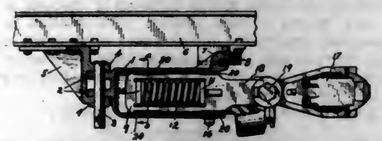


1. The combination of a shaft, a driving clutch member loose on the shaft, a driven clutch member rotatably and slidably connected with the shaft, said members being placed side by side and having cavities in their opposing faces, a ball adapted to be seated in said cavities, the cavity in one member being deeper than in the other, and a spring that yieldingly presses the sliding member toward the driven clutch member, the ball being automatically displaceable from the cavity in the driven member, and a space being provided into which said ball is moved when displaced, whereby automatic reëngagement of the ball with opposing cavities is prevented.

2. The combination of driving and driven members having opposing faces that contain cavities, an automatically displaceable coupling device in the form of a loose body adapted to be seated in opposing cavities, and one of said members having at one side of the cavity therein an opening, and a pocket to which said opening leads, and means for yieldingly holding said device seated in opposing cavities, said device when displaced from said cavities being adapted to pass through said opening into said pocket.

1,211,516. COUPLING ATTACHMENT. HARRY F. WORMLEY, Pittsburgh, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 2, 1914. Serial No. 869,799. (Cl. 213—42.)

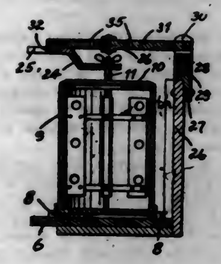
1. In a draft gear attachment, the combination with a draft gear yoke provided with bearing faces, of a casing inclosing said yoke and having bearing faces coöperating with the bearing faces on the yoke to permit axial rotative movement of the yoke within the casing.



2. In a draft gear attachment, the combination with a draft gear yoke having longitudinal cylindrical bearing faces, of a casing within which said yoke is mounted and having bearing faces corresponding with the bearing faces of the yoke to permit of a relative rotative movement of the yoke.

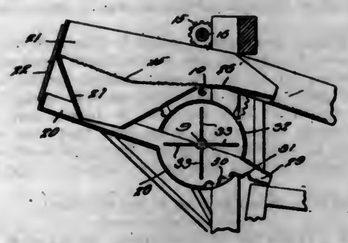
3. In a draft gear attachment, the combination with a draft gear yoke having cylindrical bearing faces, of a casing having corresponding bearing faces arranged in the interior of the casing at the top and bottom and on which the bearing faces of the yoke are adapted to engage and thereby provide for a rotative movement of the yoke relative to the casing.

1,211,517. OPERATING MECHANISM FOR CHURNS. RUFUS HENRY WOOD, Overton, Nebr. Filed Jan. 21, 1914. Serial No. 813,470. (Cl. 74—5.)



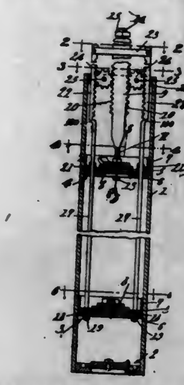
A churning mechanism from which a churn body and dasher may be quickly released for removal, consisting of a body supporting base provided with an upright, a lever connected with the upright for pivotal movement both parallel with the base and toward and away therefrom, an oscillatory shaft and a crank arm adapted at one end for connection with the oscillatory shaft and with the other end of which the lever is operatively connected in sliding relation in its movement parallel with the base and from which connection it is disengageable when moved away from the base.

1,211,518. PLACER-MACHINE. JAMES W. WOODS, Grand Junction, Colo. Filed Feb. 28, 1916. Serial No. 80,960. (Cl. 83—81.)



In a placer machine, the combination of a dished trough having an inclined discharge lip at its lower side extending the whole length of said trough and a rotary agitator having fingers adapted to disintegrate material and work the upper strata thereof through the dished trough; the said dished trough being provided on its lower uprising portion and on said discharge lip with riffle pockets adapted to intercept the heavier material passing thereover under impetus from the agitator.

1,211,519. DOUBLE-ACTING PUMP. HENRY C. WRISTEN and JAMES W. HENDERSON, Dexter, N. Mex. Filed Mar. 5, 1915. Serial No. 12,368. (Cl. 103—82.)



In a pump having a barrel and upper and lower oppositely movable pistons, an upper flat piston rod connected with the upper piston by a yoke disposed with its arms in a plane perpendicular to the width of said rod, a lower piston rod consisting of members disposed in a plane perpendicular to the plane of the arms of said yoke and extending through the upper piston, a yoke connecting the upper ends of the members of said lower piston rod and forming a guide for the upper end of the upper piston rod, pinions interposed between said upper piston rod and the members of the lower piston rod and engaging with racks on the latter and on the edges of the former, and a guide arranged in contact with the outer sides of the members of the lower piston rod for maintaining the parts in position in the plane of operation of said pinions.

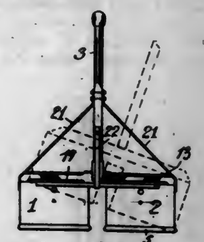
1,211,520. METHOD OF MAKING COMPOSITE INSOLES. FRANK ZALESKI, Somerville, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Oct. 21, 1916. Serial No. 127,012. (Cl. 12—146.)



1. The process of making a composite insole comprising an inner and an outer member which consists in providing the outer member with a coating of adhesive material which is not sticky or tacky when dry but which becomes sticky or tacky when subjected to heat, folding the edge of the inner member back on itself, placing the folded inner member upon the coated face of the outer member, folding the projecting portion of said outer member back onto the body thereof and forming its peripheral edge into a lip, and subjecting said outer member to the action of heat whereby the adhesive coating becomes sufficiently tacky to cause the two members to adhere together and to cause the folded-over portion of the outer member to adhere to the body thereof.

2. The method of making a composite insole comprising an inner and an outer member which consists in applying to one face of the outer member a coating of adhesive material which when dry will not be sticky or tacky but which will become sticky or tacky when subjected to the action of heat, placing the inner member on the coated face of the outer member when the latter is dry, folding back directly on itself the portion of the projecting edge of the outer member immediately circumjacent the edge of the inner member thereby to make a fold in the outer member which is situated entirely exterior to the inner member and subjecting the outer member to sufficient heat during the folding operation to soften the adhesive coating and render the same sticky or tacky.

1,211,521. CLOTHES-POUNDER. JOHN ZIMMERMANN, Brooklyn, N. Y. Filed June 29, 1916. Serial No. 106,547. (Cl. 68—5.)



1. A clothes pounder comprising two washing boxes arranged alongside of one another and having air holes formed in the walls thereof near the top, a perforated partition in each of said boxes below the said air holes for forming an upper air chamber and a lower washing chamber, a top plate extending over both of said boxes, channels formed integral with said top plate for securing the said washing boxes thereto and a handle for operating the said pounder.

2. A clothes pounder comprising two rectangular washing boxes arranged alongside of one another and having air holes formed in the walls thereof near the top, a perforated partition in each of said boxes below the said air holes for forming an upper air chamber and a lower washing chamber, a top plate extending over both of said boxes, channels formed at the longitudinal sides of said top plate integral therewith, flanges on the said washing boxes adapted to engage the said channels for securing the boxes and top plate together and a handle mounted on the latter between the said boxes for operating the said pounder.

1,211,522. SPRING BED-BOTTOM. WILLIAM B. ANDERSON, Chicago, Ill., assignor to Haggard and Marcusson Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 24, 1916. Serial No. 80,139. (Cl. 5—39.)



1. In a bed bottom the combination with end frame members and a spring supported structure between said members, of a marginal border consisting of a strip of

woven wire fabric, providing diagonal parallel openings in the body part thereof, spring suspended between said frame members and a wire bent upon itself to provide two parallel legs for insertion in adjacent openings to provide laterally projecting eyes whereby to connect said border to said spring supported structure.

2. In a bed bottom the combination with end frame members, and a fabric structure extending therebetween, of a marginal border consisting of a strip of woven wire fabric, providing diagonal parallel openings in the body part thereof, and a fastener having an eye for connection with the first said fabric and a body part for insertion in a diagonal opening of the marginal border whereupon to connect said border to said first mentioned fabric.

1,211,523. SIPHON. WILLIAM T. ANDERSON, Atlantic, Iowa. Filed Apr. 28, 1916. Serial No. 94,227. (Cl. 137—20.)



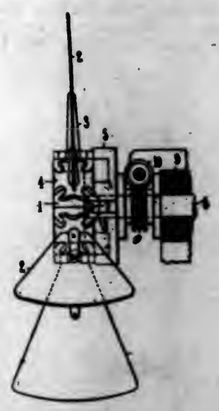
1. In a siphon the combination of an inverted U-shaped duct, a cock disposed in the discharging leg of the duct, a pump cylinder communicably connected with the discharging leg above said cock, a revoluble longitudinally-slidable sleeve disposed through the head of the pump cylinder, a piston consisting of a piston-rod disposed through said sleeve, a piston-head disposed in the cylinder to engage the inner end of said sleeve and a handle on the outer end of the piston-rod to engage the outer end of said sleeve, means to connect the sleeve to open and close said cock, and a handle on the outer end of the sleeve to manually revolve or slide the sleeve independently of the piston.

2. A siphon, comprising communicably-connected receiving and discharging legs, a cock in the discharging leg to open and close the siphon duct, a suction cylinder having one end communicably connected with the discharging leg above said cock, a longitudinally-slidable sleeve disposed centrally through the opposite head of said cylinder, a centrally pivoted lever having one end connected to said sleeve and the opposite end connected to open and close said cock, and a handled piston having a rod disposed slidingly through said sleeve, the head of the piston disposed in said cylinder and adapted to engage the inner end of the sleeve to slide it outwardly, and the handle on the outer end of the piston-rod adapted to engage the outer end of said sleeve to slide it inwardly.

1,211,524. BLADE-WHEEL MECHANISM. JOHN ARTHUR ARMSTRONG, Gilnockie, Westcombe Park, England. Filed Feb. 17, 1911. Serial No. 609,245. (Cl. 74—41.)

1. In a Geneva stop motion the combination of a driven spindle, a locking disk arranged parallel to said spindle, an operating pin projecting from said disk and a stop wheel carried by said spindle and formed with alternate locking surfaces and slots for coöperating with said driving pin.

2. A stop motion comprising in combination a rotatable slotted wheel, a shaft parallel to the face of said wheel, a locking plate mounted upon and adapted to rotate on said shaft adjacent to said wheel, a pin carrying a barrel-shaped roller secured in position in said plate to engage the slotted wheel on relative rotation occurring between said wheel and said plate, and means for rotating said plate and clamping it in any position.



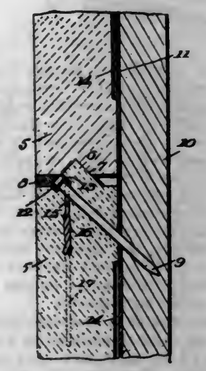
3. A stop motion comprising in combination a rotatable slotted wheel, a locking plate rotatable about an axis parallel with the face of said wheel, and a pin carrying a barrel-shaped roller secured in position in said locking plate to engage the slotted wheel on relative rotation occurring between said wheel and said plate.

4. A stop motion comprising a spindle rotatable about its own axis and about an axis at right angles thereto, a cam attached at right angles to said spindle substantially square in shape and having radial slots at its corners extending toward said spindle, a recessed locking plate parallel with the plane of rotation of said spindle co-acting with said cams to lock them from rotation, and pins adjacent to said locking plate adapted to engage and substantially fit the slots in said cam so as to rotate it and also to control it during rotation.

5. A stop motion comprising in combination a relatively rotatable parallel spindle and locking plate, the latter recessed, a cam revoluble with said spindle and a pin mounted upon said locking plate opposite the recess in said locking plate, and carrying a barrel-shaped roller adapted to engage with said cam and to rotate it.

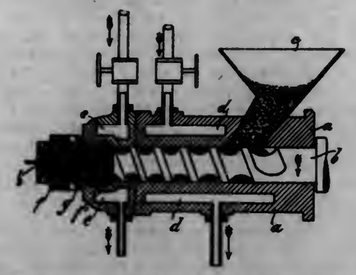
[Claims 6 to 8 not printed in the Gazette.]

1,211,525. WALL STRUCTURE. FRANK BALL, Chicago, Ill. Filed Sept. 12, 1916. Serial No. 119,672. (Cl. 72—101.)



A wall composed of a tile facing and a sheathing behind the same, the facing being composed of slabs having top ridges and bottom grooves, the ridge of one slab seating in the groove of the next slab, driven fasteners passing through the slabs into the sheathing from the front faces of the ridges, and a combined reinforcement and anchor embedded in the slabs and having loops which are exposed at the front faces of the ridges, through which loops the fasteners are driven.

1,211,526. PROCESS FOR THE MANUFACTURE OF HORNY SUBSTANCES FROM CASEIN. AMANDUS BARTELS, Harburg-on-the-Elbe, Germany. Filed Dec. 28, 1915. Serial No. 69,105. (Cl. 106—22.)



1. An improved process of making elastic horn-like substances from slightly moistened casein, which comprises subjecting slightly moistened casein of granular and hard consistency, in an inclosed space, to a high pressure while kneading the mass, and thereafter subjecting the same simultaneously to the action of heat and high pressure.

2. An improved process for the manufacture of elastic horny substances from slightly moistened casein under the simultaneous application of high pressure, wherein slightly moistened casein of granular and hard consistency is at first subjected to a high pressure and then kneaded during a heating and pressing of the whole mass simultaneously, substantially as set forth.

3. An improved process for the manufacture of elastic horny bodies from casein, in which the ground casein in a granular condition, with as little water as possible (about 20 to 42 parts of water in 100 parts of the powdered mixture of casein and water), so that the moistened casein while still having a dry feel under ordinary pressing is, by simultaneously employing a pressure of about 100 atmospheres and heating, kneaded to a completely uniform paste.

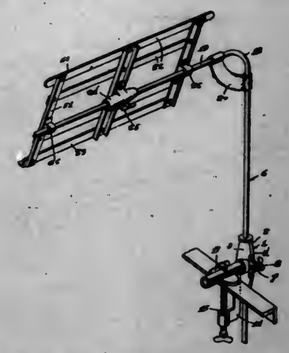
4. An improved process for the manufacture of horny bodies from casein consisting in moistening dried and ground casein with only a little quantity of water, adding a hardening agent, and kneading the mass to a completely uniform paste by simultaneously subjecting the mass during the mixing and kneading under a pressure of about 100 atmospheres, with the simultaneous application of heat, then forming the mass, while hot, and under substantially the same high pressure.

5. An improved process for the manufacture of horny bodies from casein consisting in moistening dried and ground casein with only a little quantity of water, adding an aqueous solution of hexamethylenetetramin and glycerin, kneading the mass to a completely uniform paste by simultaneously subjecting the mass during the mixing and kneading under a pressure of about 100 atmospheres, then forming the mass while hot and under substantially the same high pressure.

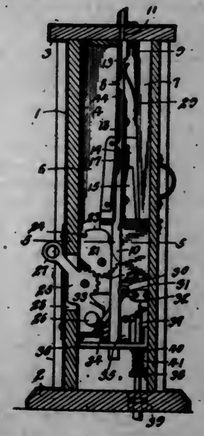
[Claims 6 and 7 not printed in the Gazette.]

1,211,527. FURNITURE ATTACHMENT. JOHN ROBERT BERNDT, Moline, Ill. Filed Feb. 12, 1914. Serial No. 818,334. (Cl. 45—82.)

An adjustable tray comprising end bars of an angular formation in cross-section, an intermediate bar of an inverted U-shape in cross-section, a plurality of flat longitudinal connecting bars, the lowermost of the said connecting bars having a supporting flange formed thereon, bearings secured to said end bars in abutting relation with the angular extensions formed thereon, a clamp member secured to said intermediate bar in abutting relation with the spaced angular extensions formed thereon, the extensions collectively assisting the bearing and clamp securing means in precluding displacement of said bearings and said clamp, said bearings and said clamp being provided each with a longitudinal bore, each of the several bores being alined, and a means fitting the several bores to support the tray for movement into various positions with respect thereto.



1,211,528. COIN-CONTROLLED MECHANISM FOR VENDING-MACHINES. SAMUEL BESKIN, Norfolk, Va. Filed Feb. 25, 1916. Serial No. 80,505. (Cl. 194—73.)



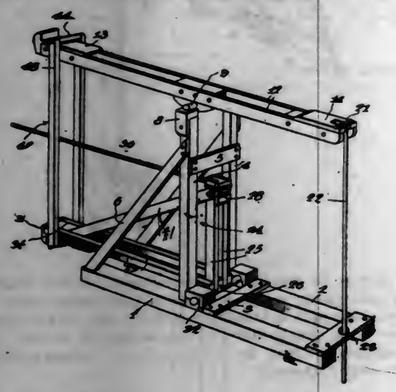
1. In mechanism of the class described, a vertically movable plunger, means for moving said plunger, a plate adapted for swinging movement designed to operate said means to move said plunger, means for swinging said plate, and a coin controlled lever controlling the connection between said swinging means and said plate.

2. In mechanism of the class described, a vertically movable plunger, means for moving said plunger, a plate adapted for swinging movement and designed to operate said means to move said plunger, a lever pivoted upon said plate and normally disposed in inactive position and capable of movement to active position by the weight of a coin, and means adapted to engage said lever when in active position to swing said plate.

3. In mechanism of the class described, a vertically movable plunger, means for moving said plunger, a plate

adapted for swinging movement and designed to operate said means to move said plunger, a lever pivoted upon said plate and normally disposed in inactive position and capable of movement to active position by the weight of a coin, and manually operable means adapted to engage said lever to swing said plate and to automatically release said lever.

1,211,529. PUMPING-JACK. WILLIAM M. BEST and WINTFORD P. CUNNINGHAM, Morris, Okla. Filed Aug. 21, 1915. Serial No. 46,760. (Cl. 74—5.)



1. In a pumping jack of the class described, a supporting frame, a beam pivoted thereto, a bell crank comprising a pivot rod journaled in said frame and having an apertured lug extending from one side thereof, said pivot rod on each side of said lug being flattened, a pair of upright spaced bars, one disposed on each side of said lug, a spacing block disposed between the upper ends of said bars, a second pair of substantially horizontal spaced bars disposed one on each side of said lug, a fastening element extending through said lug and the adjacent ends of said bars, an additional spacing block disposed between the outer ends of the second pair of bars, means connected with the bell crank to operate the same, and a connection between said bell crank and beam.

2. In a device of the class described, a supporting frame, a beam pivoted thereto, a bell crank comprising a pivot member, a pair of upright spaced bars connected by one end to said pivot member, a spacing member disposed between the other ends of said bars, a second pair of substantially horizontal spaced bars connected by one end to said pivot member, a spacing member disposed between the other ends of said second pair of bars, said spacing member consisting of a base plate disposed beneath the bottom of said bars, a rib formed on said base plate to space said bars apart, an end plate engaging the ends of said bars and connected to said rib and base plate, and a pair of brace bars connected by one of the first mentioned pair of spaced bars, their other ends being connected to said last mentioned spacing member, the rib thereof being cut away to receive said brace bars, means connected with the bell crank to operate the same, and a connection between said beam and bell crank.

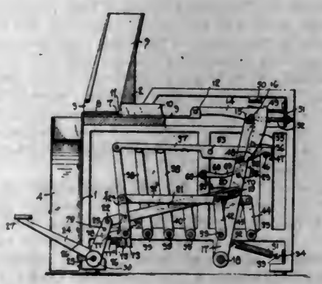
3. In a pumping jack of the class described, a supporting frame, a beam pivoted thereto, a bell crank comprising a pivot member, a pair of upright spaced bars connected at their lower ends with said pivot member, a spacing member disposed between the other ends of said bars, said member consisting of a rib disposed between said bars, and a plate connected with said rib and disposed in engagement with one face of said bars, said member being substantially T-shaped in cross section, said plate having a plurality of seats therein, a second pair of substantially horizontal spaced bars connected at one end to said pivot member, a spacing member disposed between the other ends of said second pair of bars, a connection between said beam and bell crank, an operating rod connected with any one of said seats in the first mentioned spacing member.

4. In a pumping jack of the class described, a supporting frame, a bell crank pivoted in said frame, a walking beam comprising a pair of spaced beams, a spacing block disposed between the central portions of said beams, pivot studs projecting from opposite sides of said spacing member, bearing members carried by said frame to receive said pivot studs, and a connection between said walking beam and the bell crank.

5. In a pumping jack of the class described, a supporting frame having a pair of upright spaced bars, a right angular bearing plate disposed on the upper end of each of said bars, the horizontal portion of each of said plates having a seat therein, a walking beam comprising a pair of spaced beams, a spacing block disposed between the central portions of said beams, pivot studs projecting from opposite sides of said spacing block and disposed in said seats, spacing members disposed between the outer ends of said beams, a bell crank pivoted in said supporting frame, means for operating said bell crank, and a connection between said bell crank and the walking beam.

[Claims 6 and 7 not printed in the Gazette.]

1,211,530. COIN-HANDLING DEVICE. IRWIN F. BIDWELL, HARRY M. FLAVEL, EUGENE E. HENRY, and LESTER C. MCLEOD, Astoria, Oreg. Filed Feb. 12, 1916, Serial No. 77,967. Renewed Nov. 27, 1916. Serial No. 133,815. (Cl. 133—2.)



1. A device of the character described comprising a coin container, a chute into which the container discharges, said chute being provided with a delivery opening, a closure member movable relative to said opening, means for ejecting a coin from the container, said means including a rock arm, a bell lever mounted for rocking movement and having one arm engaged with the closure member, and a link operatively engaged with the rock arm of the operating means and with the second arm of the bell lever whereby the closure member is adjusted into closed position upon movement of the rock arm in one direction and adjusted to open position upon movement of the rock arm in an opposite direction.

2. A device of the character described comprising a plurality of coin containers, an ejector coacting with each of the containers and independently operable to eject, a deducting mechanism coacting with the ejectors for rendering a predetermined number of ejectors inoperative, said deducting mechanism comprising a plurality of movable bars capable of independent operation, lugs carried by the bars, the lug of one bar being of a height different from the heights of the lugs of the remainder of the bars, a pivoted dog common to each of the bars and engageable with the lugs for forcing the dog in contact with certain of the lugs of the bars upon movement of a single bar in one direction, said dog being provided with a tail common to the bars, and an additional lug carried by each of the bars coacting with the tail of the dog for forcing the dog toward the bars upon movement of a single bar in one direction.

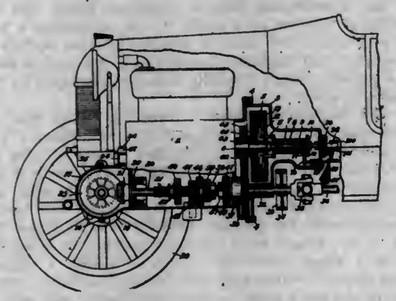
3. A device of the character described comprising a plurality of coin containers, an ejector coacting with each of the containers and independently operable to eject, a deducting mechanism coacting with the ejectors for rendering a predetermined number of ejectors inoperative, said deducting mechanism comprising a plurality of movable bars capable of independent operation, lugs carried by the bars, the lug of one bar being of a height different from the heights of the lugs of the remainder of the bars, a pivoted dog common to each of the bars and engageable with the lugs for forcing the dog in contact with certain of the lugs of the bars upon movement of a single bar in one direction, said dog being provided with a tail common to the bars, and an additional lug carried by each of the bars coacting with the tail of the dog for forcing the dog toward the bars upon movement of a single bar in one direction, said tail serving to maintain the dog normally elevated relative to the bars.

4. A device of the character described comprising a plurality of coin containers, an ejector coacting with each of the containers and independently operable to eject, a deducting mechanism coacting with the ejectors for rendering a predetermined number of ejectors inoperative, said deducting mechanism comprising a plurality of movable bars capable of independent operation, a locking dog common to certain of the bars for holding a bar against return movement after being moved from neutral position, means for disengaging the dog from the bars upon operation of an ejector, and a supplemental dog coacting with the remainder of the bars and provided with an extension overlying the first named dog whereby movement of the first named dog serves to elevate the supplemental dog and whereby the remainder of the bars are capable of movement from neutral position when the first named bars are locked.

5. A device of the character described comprising a plurality of coin containers, an ejector coacting with each of the containers and independently operable to eject, a deducting mechanism coacting with the ejectors for rendering a predetermined number of ejectors inoperative, said deducting mechanism comprising a plurality of movable bars capable of independent operation, a locking dog common to certain of the bars for holding a bar against return movement after being moved from neutral position, means for disengaging the dog from the bars upon operation of an ejector, said dog being capable of limited movement independently of the operating means therefor, and a resetting bar coacting with the deductor bars and operable to return the deductor bars to neutral position, said resetting bar being provided with means for disengaging the dog from the deductor bars upon operation of the resetting bar to return the deductor bars to neutral position.

[Claims 6 to 8 not printed in the Gazette.]

1,211,531. DRIVING MECHANISM FOR MOTOR-VEHICLES. CARL H. BLOMSTROM, Detroit, Mich. Filed Aug. 11, 1915. Serial No. 45,072. (Cl. 21—90.)



1. In a driving mechanism for motor vehicles, a frame, an engine having a casing in the base thereof mounted on said frame, power transmission gearing and differential driving mechanism mounted in said casing, a main shaft journaled in said casing beneath said engine in driving engagement at one end with said differential driving mechanism and extending at its opposite end through the wall of said casing, change speed gears slidably carried on said shaft and engageable with said transmission gearing, and controlling means mounted on said casing and operatively associated with actuating means for engaging and disengaging said change speed gears with said transmission gearing.

2. In a driving mechanism for motor vehicles, a frame, an engine having a casing depending from the base thereof mounted on said frame, power transmission gearing and differential driving mechanism mounted in said casing, a main shaft journaled in said casing beneath said engine to extend therefrom at one end and having a gear at its opposite end engaged with said differential mechanism, slidable gears on said shaft for effecting a driving engagement with said transmission gearing, a coupling connection on said shaft exterior of said casing, and controlling means mounted on said casing and adapted for selective connection with actuating means for engaging and disengaging said slidable gears with said transmission gearing.

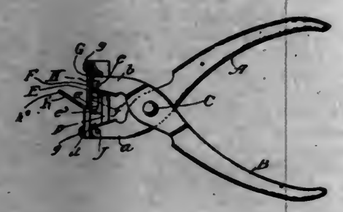
3. In a driving mechanism for motor vehicles, a frame, an engine having a depending casing formed on the base thereof and mounted on said frame, power transmission gearing and differential driving mechanism mounted in said casing, a main shaft journaled in said casing to extend therethrough at one end beneath and at the rear of said engine and having a gear at its opposite end engaged with said differential mechanism, slidable gears on said shaft movable into and out of driving engagement with said power transmission gearing, a coupling connection on said shaft exterior of said casing, means carried on the shaft of said engine and operatively connected with actuating means mounted on said casing for effecting a driving engagement with said transmission gearing, and controlling means mounted on said casing and adapted for selective connection with actuating means engaging said slidable gears for imparting movement to engage and disengage said gears with said transmission gearing.

4. In a driving mechanism for motor vehicles, a frame, an engine having a casing inclosing the base thereof mounted on said frame, power transmission gearing mounted in said casing and connected in driving engagement with a releasing clutch carried on the shaft of said engine, differential driving mechanism mounted in said casing and carrying shaft sections adapted for driving connection with the wheels of the vehicle, a main shaft journaled in said casing beneath said engine to extend therethrough at one end and having a gear at its inner end in mesh with said differential mechanism, change speed gears mounted on said shaft and adapted for driving engagement with said transmission gearing, brake mechanism carried on said shaft exteriorly of said casing, means mounted on said casing and connected with actuating means for releasing said clutch and for operating said brake mechanism.

5. In a driving mechanism for motor vehicles, a frame, an engine having a casing depending therefrom mounted on said frame, power transmission gearing mounted in said casing in driving engagement with a releasing clutch carried on the shaft of said engine, differential driving mechanism mounted in said casing and carrying flexible shaft sections adapted for driving connection with the front wheels of the vehicle, a main shaft carrying variable driving gear adapted for engagement with said transmission gearing journaled in said casing beneath said engine in driving engagement at one end with said differential mechanism and extending through the rear of said casing at its opposite end, a coupling connection and a brake drum mounted on said shaft exteriorly of said casing, a brake band embracing said drum and connected with actuating means mounted on said casing for contracting said band upon said drum.

[Claims 6 to 8 not printed in the Gazette.]

1,211,532. PHONOGRAPH-NEEDLE CUTTER. BURR B. BLOOD, Chicago, Ill., assignor to Carlyle MacHarg, Chicago, Ill. Filed Feb. 14, 1914. Serial No. 818,622. (Cl. 144—146.)



1. A phonograph needle cutter comprising a body, a cutting edge, a block reciprocating on said body, a knife on said block, adapted to coöperate with said edge, means for holding the needle in position between said knife and edge, and means for causing said block to reciprocate relative to said body, said knife being removably held on said block, and said means for reciprocating the block comprising a pair of pivoted handles, one handle having end portions which embrace the body and block, disposed in position to hold the knife in place, said portions being connected with said block.

2. A phonograph needle cutter comprising a body, a cutting edge, a block reciprocating on said body, a knife on said block, adapted to coöperate with said edge, means for holding the needle in position between said knife and edge, means for causing said block to reciprocate relative to said body, said body being recessed to form a working space for said block, and a removable plate disposed over said space, secured at its ends to the ends of said body, holding said knife and block in operative position, provided with an opening for the end of the needle.

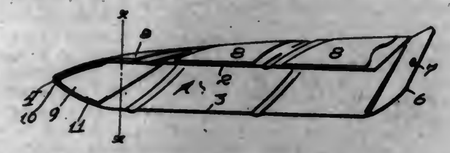
3. A phonograph needle cutter comprising a body, a cutting edge, a block reciprocating on said body, a knife on said block, adapted to coöperate with said edge, means for holding the needle in position between said knife and edge, means for causing said block to reciprocate relative to said body, said means for reciprocating the block having ears which overlap the edges of said knife, thereby holding the latter against displacement, and means for pivoting said ears on the sides of said block.

4. A phonograph needle cutter comprising a body, a cutting edge, a block reciprocating on said body, a knife on said block, adapted to coöperate with said edge, means for holding the needle in position between said knife and edge, and means having three parallel axes of operation for causing said block to reciprocate relative to said body, said axes being disposed respectively at the three corners of a variable triangle, said knife having motion about two of said axes, and said body having motion about the third axis.

5. A phonograph needle cutter comprising a body, a cutting edge, a block reciprocating on said body, a knife on one side of said block, adapted to coöperate with said edge, the opposite side of said block having sliding engagement with said body, means for holding the needle in position between said knife and edge, and means for causing said block to reciprocate relative to said body, said block having a portion that forms an abutment for the end of the needle, spaced a distance from the cutting edge of the knife, a recess for the cuttings between said knife and portion, said body having a smooth surface which forms a backing for said block to maintain said knife against said edge, a handle pivoted on said block to operate the cutter, said handle having means to prevent lateral displacement of said block, and means engaging the opposite ends of said block to limit the back and forth motion thereof.

[Claims 6 to 15 not printed in the Gazette.]

1,211,533. BILL-FOLD AND CARD-CASE. HERMAN BOCK, Red Wing, Minn. Filed Mar. 4, 1916. Serial No. 82,033. (Cl. 150—38.)



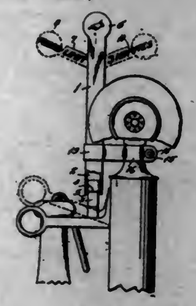
1. A bill holder, comprising, an envelop forming a pocket having opposite sides and an end corner adapted to receive and hold bills in outstretched flat condition and an antifriction device secured along the inner surface of said corner, adapted to facilitate the insertion of bills into said envelop in outstretched flat condition.

2. A bill holder, comprising, an envelop forming a pocket between the sides of which bills may be inserted and held in outstretched flat condition and having an end corner and a lining secured along said end corner having an inner antifriction surface adapted to facilitate the insertion of bills into said envelop in outstretched flat condition.

3. A bill holder, comprising, an envelop forming a pocket and having an end corner, said pocket being adapted to receive and hold bills in outstretched flat condition, and a resilient lining secured along said end corner adapted normally to spread the sides apart and having an inner antifriction surface facilitating the insertion of bills into said pocket in outstretched flat condition.

4. A bill holder, comprising, an envelop having opposite sides and an end corner and a resilient antifriction device secured in said end corner and coöperating with said sides to spread them apart in open position, said device also facilitating the insertion of bills into said pocket in outstretched flat condition.

1,211,534. TELEPHONE SIGNAL DEVICE. URA M. BOYD, Dallas, Tex. Filed May 11, 1916. Serial No. 96,738. (Cl. 177—329.)



1. The combination with a telephone stand and the switch-hook thereof, of a signal device comprising a support attached to the stand, a movable member carried by the support and displaced upwardly by the switch-hook, and a signal element normally dormant displayed by the movable member.

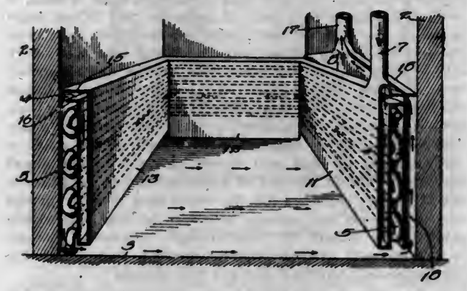
2. The combination with a telephone stand and the switch-hook thereof, of a signal device comprising a support attached to the stand, a plunger correlated with the support and resting on the switch-hook whereby it is displaced upward by the hook when the same is operated, and a target normally concealed by the support and having connection with the plunger whereby it is displaced laterally by the plunger when the latter is displaced upwardly.

3. In a signal device for telephone stands, a support having means for attaching it to a telephone stand, and a normally dormant signal element carried by the support and constructed to be displayed only when displaced laterally.

4. In a signal device for telephone stands, a support having means for attaching to a telephone stand, a relatively movable member correlated with the support, and a normally concealed signal displayed when the movable member is displaced with relation to the support.

5. In a signal device for telephone stands, an upright support, a laterally projecting clamp disposed on the support, a plunger mounted on the support, and a pair of target arms pivoted to the plunger, and means on the support for displacing the arms in opposite directions from each other as the plunger is moved upward.

1,211,535. OVEN. FRANKLIN F. BRADLEY, Chicago, Ill., assignor to Bradley & Vrooman Company, Chicago, Ill., a Corporation of Illinois. Filed June 12, 1916. Serial No. 103,297. (Cl. 34—19.)



1. The combination with an oven; of an air conveying chamber therein located adjacent the oven floor and having two opposed portions with slight spaces between the same and the oven floor and behind which chamber portions there are air conveying spaces in communication with the aforesaid spaces and through these spaces with the oven interior, one of these chamber portions receiving air from the exterior of the oven while the other chamber portion has an exit opening in communication with the exterior of the oven by way of the space behind this chamber portion, the space between this chamber portion and the floor, the oven interior, the space between the other chamber portion and the floor, and the space behind this latter chamber portion and which latter space discharges upon the exterior of the oven; means for effecting the forced circulation of air through said chamber from and to the exterior of the oven; and means for heating the circulating air.

2. The combination with an oven; of an air conveying chamber therein located adjacent the oven floor and having two opposed portions with slight spaces between the same and the oven floor and behind which chamber portions there are air conveying spaces in communication with the aforesaid spaces and through these spaces with the oven interior, one of these chamber portions receiving air from the exterior of the oven while the other chamber portion has an exit opening in communication with the upper portion of the space behind it and with the exterior of the oven by way of the space behind this chamber portion, the space between this chamber portion and the floor, the oven interior, the space between the other chamber portion and the floor, and the space behind this latter chamber portion and which latter space discharges upon the exterior of the oven; means for effecting the forced circulation of air through said chamber from and to the exterior of the oven; and means for heating the circulating air.

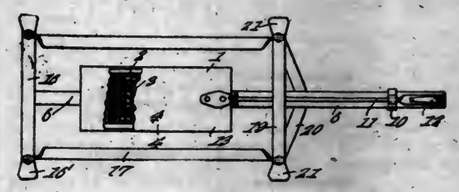
3. The combination with an oven; of an air conveying chamber therein located adjacent the oven floor and having two opposed portions with slight spaces between the same and the oven floor and behind which chamber portions there are air conveying spaces in communication with the aforesaid spaces and through these spaces with the oven interior, one of these chamber portions receiving air from the exterior of the oven while the other chamber portion has an exit opening in communication with the exterior of the oven by way of the space behind this chamber portion, the space between this chamber portion and the floor, the oven interior, the space between the other chamber portion and the floor, and the space behind this latter chamber portion and which latter space discharges upon the exterior of the oven; means for effecting the forced circulation of air through said chamber from and to the exterior of the oven; and means for heating the circulating air.

4. The combination with an oven; of an air conveying chamber therein located adjacent the oven floor and having two opposed portions with slight spaces between the same and the oven floor and behind which chamber portions there are air conveying spaces in communication with the aforesaid spaces and through these spaces with the oven interior, one of these chamber portions receiving air from the exterior of the oven while the other chamber portion has an exit opening in communication with the upper portion of the space behind it and with the exterior of the oven by way of the space behind this chamber portion, the space between this chamber portion and the floor, the oven interior, the space between the other chamber portion and the floor, and the space behind this latter chamber portion and which latter space discharges air at its upper portion from the oven; means for effecting the forced circulation of air through said chamber from and to the exterior of the oven; and means for heating the circulating air.

5. The combination with an oven; of an air conveying chamber therein located adjacent the oven floor and having two opposed portions with slight spaces between the same and the oven floor and behind which chamber portions there are air conveying spaces in communication with the aforesaid spaces and through these spaces with the oven interior, one of these chamber portions receiving air from the exterior of the oven while the other chamber portion has an exit opening in communication with the exterior of the oven by way of the space behind this chamber portion, the space between this chamber portion and the floor, the oven interior, the space between the other chamber portion and the floor, and the space behind this latter chamber portion and which latter space discharges upon the exterior of the oven; means for effecting the forced circulation of air through said chamber from and to the exterior of the oven; and means for heating the circulating air, this heating means having portions behind the aforesaid air conveying chamber portions.

[Claims 6 to 12 not printed in the Gazette.]

1,211,536. FIRE-LIGHTER AND HEATER. CARL ADOLF BUCHHOLTZ, Hoboken, N. J. Filed Sept. 1, 1916. Serial No. 118,130. (Cl. 126—30.)



1. The combination with a burner casing, a handle extending therefrom, a closure slidably engaging the casing, and a means on the handle for actuating the closure, of supporting legs foldable relative to the casing, side connections between the legs and coöperating means upon certain of the legs and the handle for holding all of the legs in active or supporting positions.

2. The combination with a burner casing, a handle extending therefrom and a clip upon the handle, of legs foldable relative to the casing, side connections between the legs, said connections and legs constituting utensil supports and means upon certain of the legs and coöperating

with the clip for holding the legs in upstanding or active positions.

3. The combination with a burner casing and a handle strip extending therefrom and having angularly disposed ends extending beyond the casing, and a yoke having its sides pivoted to said ends, a second yoke, side strips connecting the two yokes, a cross strip carried by said second yoke, and means upon the handle strip and coöperating with said cross strip for holding the yokes in upstanding or active positions.

1,211,537. DRILL-BIT. ELISHA L. BURTON, Thealka, Ky., assignor of one-half to Roscoe C. Burton, Thealka, Ky. Filed July 29, 1916. Serial No. 112,049. (Cl. 255—69.)

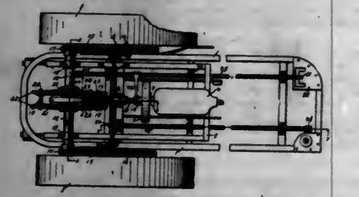


1. A drill having a screw shaped shank and having a plurality of pairs of teeth at its cutting extremity, the teeth on one side of the axis being bent in one direction and the teeth on the other side in the opposite direction, the shank being formed on opposite sides with grooves intersecting the bases of said teeth and forming gides in filing the teeth.

2. A drill having a screw shaped shank and having two pairs of teeth at its cutting extremity, one pair of teeth being oppositely bent to the other pair, the shank being formed on one side with a crease extending longitudinally of the shank and intersecting the cutting end of the shank between the teeth of one pair, the opposite face of the shank having a like crease intersecting the end of the shank between the teeth of the other pair, and the shank being formed with opposite creases intersecting the cutting extremity of the shank between the two pairs of teeth.

3. A drill having a screw shaped shank and having a plurality of pairs of teeth at its cutting extremity, the teeth on one side of the axis being bent in one direction and the teeth on the other side in the opposite direction, the shank being formed with grooves intersecting the bases of said teeth and forming guides in filing the teeth.

1,211,538. DRIVING OR TRANSMISSION GEARING. FRANK BURTT, Kalamazoo, Mich., assignor, by direct and mesne assignments, to Albaugh-Dover Co., Chicago, Ill. Original application filed May 1, 1914, Serial No. 835,585. Divided and this application filed Oct. 5, 1915. Serial No. 54,151. (Cl. 21—114.)



1. In a structure of the class described, the combination of a running gear frame, a pair of traction wheels, a pair of alined tubular driven shafts, independent driving connections for said shafts and traction wheels, a beveled driving gear, a pair of facing beveled driven gears mounted on said driven shafts for rotative and axial movement whereby either may be shifted into mesh with said driving gear, a pair of driven friction disks disposed between said driven gears and secured to said driven shafts, a driving friction disk disposed between and coacting with said driven friction disks, said driving friction disk having driving connection with said driven gears, a rod arranged through said driven shafts for longitudinal movement therein, springs arranged to act on said driven shafts, thrust members for the outer ends of said springs carried by said rod, collars mounted on said rod on the outer sides of said thrust members, sleeves arranged on said rod within said driven members with their inner ends engaging said driving friction member, pins carried by said collars arranged through said thrust members to act on said sleeves, support members on the outer ends of said rod, cam levers pivotally mounted on said collars to engage said support members, and a shifting bar connecting said cam levers, all coacting for the purpose specified.

2. In a structure of the class described, the combination of a running gear frame, a pair of traction wheels, a pair of alined tubular driven shafts, independent driving connections for said shafts and traction wheels, a beveled driving gear, a pair of facing beveled driven gears mounted on said driven shafts for rotative and axial movement whereby either may be shifted into mesh with said driving gear, a pair of driven friction disks disposed between said driven gears and secured to said driven shafts, a driving friction disk disposed between and coacting with said driven friction disks, said driving friction disk having driving connection with said driven gears, a rod arranged through said driven shafts for longitudinal movement therein, springs arranged to act on said driven shafts, thrust members for the outer ends of said springs carried by said rod, sleeves arranged on said rod within said driven shafts for longitudinal movement therein to act on said driving friction member, and means for simultaneously shifting said rod and sleeves.

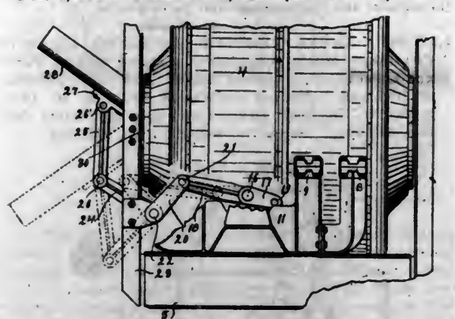
3. In a structure of the class described, the combination of a running gear frame, a pair of traction wheels, a pair of alined tubular driven shafts, independent driving connections for said shafts and traction wheels, a beveled driving gear, a pair of facing beveled driven gears mounted on said driven shafts for rotative and axial movement whereby either may be shifted into mesh with said driving gear, a pair of driven friction disks disposed between said driven gears and secured to said driven shafts, a driving friction disk disposed between and coacting with said driven friction disks, said driving friction disk having driving connection with said driven gears, a rod arranged through said driven shafts for longitudinal movement therein, coiled springs arranged to act on said driven shafts, thrust members for the outer ends of said springs carried by said rod, and means for simultaneously increasing the tension on one of said springs and decreasing the tension on the other, for the purpose specified.

4. In a structure of the class described, the combination of a running gear frame, a pair of traction wheels, a pair of alined tubular driven shafts, independent driving connections for said shafts and traction wheels, a pair of driven friction disks secured to said driven shafts, a driving friction disk disposed between and coacting with said driven friction disks, a rod arranged through said driven shafts for longitudinal movement therein, coiled springs arranged to act on the outer ends of said driven shafts, thrust members for the outer ends of said springs carried by said rod, sleeves arranged on said rod within said driven shafts for longitudinal movement therein to engage said driving friction member, collars mounted on said rod on said thrust members, pins carried by said collars arranged through said thrust members to act on said sleeves, support members on the outer ends of said rod, levers pivotally mounted on said collars to engage said support members, and a shifting bar connecting said levers, all coacting for the purpose specified.

5. In a structure of the class described, the combination of a running gear frame, a pair of traction wheels, a pair of alined tubular driven shafts, independent driving connections for said shafts and traction wheels, a pair of driven friction disks secured to said driven shafts, a driving friction disk disposed between and coacting with said driven friction disks, a rod arranged through said driven shafts for longitudinal movement therein, coiled springs arranged to act on the outer ends of said driven shafts, thrust members for the outer ends of said springs carried by said rod, sleeves arranged on said rod within said driven shafts for longitudinal movement therein to engage said driving friction member, and means for simultaneously shifting said rod and sleeves, all coacting for the purpose specified.

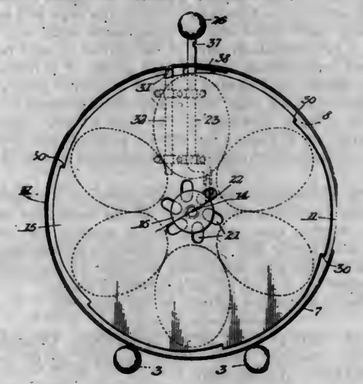
[Claims 6 to 15 not printed in the Gazette.]

1,211,539. MIXING-MACHINE. CHARLES A. BUSH, Oshkosh, Wis., assignor to Oshkosh Manufacturing Company, Oshkosh, Wis., a Corporation of Wisconsin. Filed Feb. 6, 1915. Serial No. 6,462. (Cl. 193—29.)



In a mixing machine, a mixing chamber, a drive shaft mounted for continuous rotation in parallel relation to said mixing chamber, a discharge chute pivoted adjacent to one end of said mixing chamber, a rock-shaft having oppositely extending crank-arms mounted below said chute and at right-angles to said drive shaft, a worm mounted loosely on said drive-shaft, a clutch for connecting said worm to said drive-shaft, a horizontally reciprocating link operated by said worm to operate said rock-shaft, and a vertically reciprocating link connected to said chute and operated by said rock-shaft for reciprocating said chute vertically to discharging and non-discharging positions.

1,211,540. MULTIPLE-PICTURE-DISPLAYING DEVICE. AUGUST CAPLAN, Denver, Colo. Filed Feb. 19, 1916. Serial No. 79,328. (Cl. 40—71.)



1. In a display device, the combination of two telescoping casings, the front one of which is provided with a display aperture, a disk pivotally and axially supported in said casings, provided with a plurality of equidistantly spaced pictures and with concentrically arranged apertures equal in number to the pictures on said disk surrounding its supporting axle, a finger pin arranged to enter each aperture in consecutive order, a push rod extending through said casing for operating said finger to turn said picture disk a predetermined distance, a spring arranged to move said push rod and finger pin on the inoperative stroke of their reciprocal movement, ratchet teeth on the said disk spaced to register with the number of pictures thereon, and a spring actuated pawl mechanism actuated in its operating movement by said push mechanism to engage said ratchet teeth and stop and hold each picture in said display aperture, and means for supporting said device on a table.

2. In a display device, the combination of two telescopic disk shaped casings arranged to be secured detachably together, and provided with supporting footings, the outer disk being provided with a glass protected picture displaying aperture arranged to enable pictures within to be displayed, a picture supporting disk rotatively mounted within said casings, and provided with ratchet teeth arranged at a plurality of equidistantly spaced points in its circumference, a picture opposite each ratchet tooth on said disk and facing said display frame, said disk having an aperture adjacent its actual center in alinement with each picture, a push rod having a pawl for turning said picture disk intermittently to cause each picture to register with the display aperture, and a pawl for stopping the disk in picture displaying position.

3. In a device of the character described, a casing having a sight opening, a headed pin axially mounted in said casing, a picture displaying disk mounted on said pin, having equidistant stop teeth on its circumferential edge, an expansion coil spring on said pin between the picture disk and the back of the casing to press said picture disk against the head of said pin, said disk having a circular row of equidistant slots adjacent its axial center, a push bar having a pawl to engage said slots consecutively, an expansion spring for normally holding said push bar in raised position, a bar having a stop pawl for engaging the stop teeth on said picture disk, a contraction spring for normally exerting a downward pull on said stop pawl bar, and means carried by the push bar for normally holding the stop pawl bar raised, and for releasing the same when the push bar is depressed, the push bar actuating expansion spring being stronger than the stop pawl bar actuating contraction spring.

4. In a device of the character described, the combination with a casing having a sight opening, an axial pin therein and a picture displaying disk rotatably mounted on said pin, having equidistant stop teeth on its circumferential edge, of a push bar having a pawl to engage said disk to rotate the same, a spring for normally holding the said push bar up, a pawl to engage the stop teeth of said disk consecutively, a contraction spring for exerting a normal down pull on said pawl, whereby the same is caused to engage the circumferential edge of the said disk and engage a stop tooth thereon, and means carried by the push bar for normally holding the said stop pawl up out of the path of the said stop teeth, and for releasing the same when the stop bar is depressed.

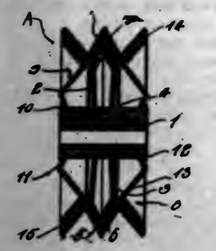
5. In a device of the character described, a casing having a light opening, a picture displaying disk rotatably mounted in said casing, having a circular row of apertures concentric with its axis, a push rod having a spring actuated pawl adapted to engage said apertures to rotate said disk by intermittent steps, a spring actuated pawl controlled by said push bar for stopping said disk at the end of each step movement, and means for locking said push bar in its depressed position.

[Claim 6 not printed in the Gazette.]

1,211,541. PULLEY. ROBERT G. CARLE, Woonsocket, R. I. Filed May 29, 1916. Serial No. 100,607. (Cl. 64—17.)

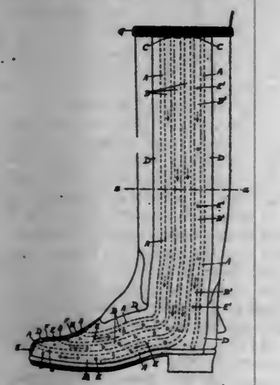
1. A device of the class described comprising a central axle, a pair of sheet metal stiffening disks centrally mounted on said axle in spaced relation, said disks being inclined outwardly adjacent their peripheries to form shoulders thereon, and then converging inwardly at equal angles to form pulley flanges with their rims contacting, a pair of sheet metal side sections having inwardly pro-

jecting inclined portions around the central openings secured in the ends of said axle, inwardly projecting converging portions on said sections terminating against the opposite shoulders on the stiffening disks, and said sections having integral pulley flanges diverging from each other at the same inclination as said shoulders, and the rims of the disks and flanges being equidistant from the axis of the pulleys.



2. A device of the class described comprising a central axle, a pair of sheet metal disks centrally mounted on said axle in spaced relation, said disks being inclined outwardly adjacent their peripheries to form shoulders thereon and then converging inwardly to form pulley flanges, a pair of sheet metal side section centrally mounted on said axle having inwardly projecting converging portions terminating against the shoulders of the stiffening disks, and said sections having integral pulley flanges diverging from each other.

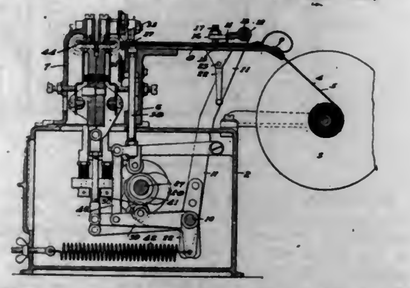
1,211,542. VENTILATED BOOT OR SHOE. EDWARD MARLAY DE LAUNE CAROLIN, Leeds, England. Filed Feb. 21, 1916. Serial No. 79,766. (Cl. 36—3.)



1. In a boot or shoe, in combination, a series of parallel flexible separated strips applied externally down the leg, extensions of sundry of said external strips continuing horizontally around and over the sides and front of the foot, and a comparatively narrow external cover inclosing the whole of said separated external strips in such a manner as to form a corresponding series of external air passages open adjacent the top of the leg, sundry of said external air passages being unperforated down their leg portions but inwardly perforated throughout their horizontal extensions around and over the sides and front of the foot, and the remainder of said external air passages being inwardly perforated down the leg and terminating at the heel.

2. In a boot or shoe, a series of parallel flexible separated strips applied externally down the leg, extensions of sundry of said external strips continuing horizontally around and over the sides and front of the foot, and a comparatively narrow external cover inclosing the whole of said separated external strips in such a manner as to form a corresponding series of external air passages open adjacent the top of the leg, sundry of said external air passages being unperforated down their leg portions but inwardly perforated throughout their horizontal extensions around and over the sides and front of the foot, and the remainder of said external air passages being inwardly perforated down the leg and terminating at the heel, in combination with a loose perforated and grooved insole having a pair of interconnected recesses at points corresponding respectively to the ball of the foot and heel, whereby the natural intermittent or alternate pressure of the foot and heel is utilized to induce a double suction and to thereby maintain a constant circulation of air throughout the air passages and perforations.

1,211,543. LABEL-FEEDING MACHINE. FRANKLIN CHATFIELD, Minneapolis, Minn., assignor to Rose Patch and Label Company, Grand Rapids, Mich., a Corporation of Michigan. Original application filed Dec. 26, 1912, Serial No. 738,702. Divided and this application filed Nov. 28, 1913. Serial No. 803,589. (Cl. 211—33.)



1. The combination, with a tape guide, of a feeder arranged to engage the raised areas provided in a tape and advance the tape in said guide and means for timing the point of engagement of the feeder with the tape.

2. The combination, with a tape guide, of a feeder operating therein to engage the raised areas provided in a tape and advance the tape, and means for holding the feeder out of engagement with the thinner portions of the tape but allowing it to engage with the thicker portions thereof.

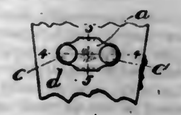
3. The combination, with a tape guide, of a pivoted feeder operating therein and adapted to engage the raised areas provided in a tape and advance the tape and means for tilting said feeder out of engagement with said tape during a predetermined part of the stroke of said feeder.

4. The combination, with a tape guide, of a feeder operating therein and having a series of needle points provided with rounded ends, said points being adapted to slide over the thinner portions of the tape without engaging therewith, and to engage the thicker portions and feed the tape, and means for regulating the effective stroke of said feeder.

5. The combination, with a tape guide, of a reciprocating feeder operating therein and having means for engaging and feeding tape, severing knives whereto the tape is fed by said feeder and a gage adjusted longitudinally of said guide, said gage indicating the limit of the stroke of said feeder for a label of predetermined length.

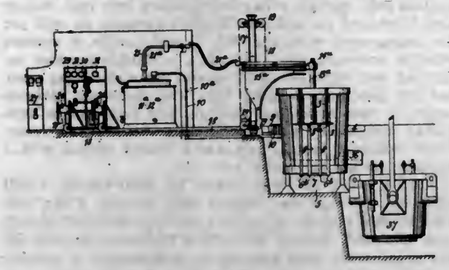
[Claims 6 to 16 not printed in the Gazette.]

1,211,544. STUD FOR SHOE-TONGUES. CHARLES C. CHENEY, Boston, Mass. Filed Apr. 24, 1916. Serial No. 93,147. (Cl. 36—54.)



The combination with a shoe tongue of a plate applied transversely thereto, having its upper and lower edges provided with prongs extending through the material of the tongue and clenched upon the inner face, said plate also being provided with opposite studs projecting from the front surface thereof at its ends, for the passing of the shoe-laces in contact therewith.

1,211,545. MANUFACTURE OF STEEL. GODFREY JOHN BOYLE CHETWYND, West Riding, England. Filed Jan. 2, 1914. Serial No. 809,972. (Cl. 204—64.)



1. The process of purifying steel that has been normally finished in a steel making, refining or melting furnace and transferred to a receptacle so as to form therein a deep bath of molten metal preparatory to casting, which consists in causing electric current of large amperage to flow substantially through the whole depth of the molten metal and produce at the bottom thereof a small localized center of intense heat, maintaining the current to enable impurities to separate from the molten metal and rise to the surface thereof and afterward running off the purified metal from the bottom of the receptacle.

2. The process of purifying steel that has been normally finished in a steel making, refining or melting furnace and transferred to a receptacle so as to form therein a deep bath of molten metal preparatory to casting, which consists in causing electric current of large amperage to flow substantially through the whole depth of the molten metal and produce a number of separate centers of intense heat disposed over the bottom of the receptacle and in contact with the molten metal therein, maintaining the current to enable impurities to separate from the molten metal and rise to the surface thereof and afterward running off the purified metal from the bottom of the receptacle.

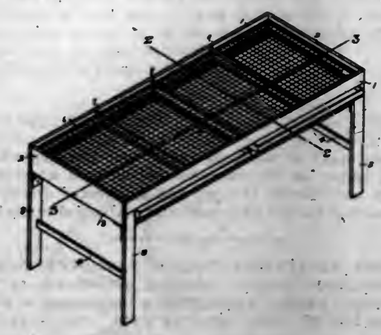
3. The process of purifying steel that has been normally finished in a steel making, refining or melting furnace and transferred to a receptacle so as to form therein a deep bath of molten metal preparatory to casting, which consists in causing electric current of large amperage to flow substantially through the whole depth of the molten metal and produce a number of separate liquid centers of intense heat located at the bottom of the receptacle and in contact with the molten metal therein, maintaining the current to enable impurities to separate from the molten metal and rise to the surface thereof and afterward running off the purified metal from the bottom of the receptacle.

4. The process of purifying steel that has been normally finished in a steel making, refining or melting furnace and transferred to a receptacle so as to form therein a deep bath of molten metal preparatory to casting which consists in causing electric current of large amperage to flow substantially through the whole depth of the molten metal and produce at the bottom thereof a zone of intense heat in contact with the molten metal, maintaining the current to enable impurities to separate from the molten metal and rise to the surface thereof and afterward running off the purified metal.

5. The process of purifying steel that has been normally finished in a steel making, refining or melting furnace and transferred to a receptacle so as to form therein a deep bath of molten metal preparatory to casting which consists in causing electric current of large amperage to flow substantially through the whole depth of the molten metal and produce at the bottom thereof a liquid center of intense heat in contact with the molten metal, maintaining the current to enable impurities to separate from the molten metal and rise to the surface thereof and afterward running off the purified metal from the bottom of the receptacle.

[Claim 6 not printed in the Gazette.]

1,211,546. COOP-SUPPORT. LEVI CLIPPINGER, Llano, Tex. Filed Mar. 14, 1916. Serial No. 84,059. (Cl. 119—17.)



1. A coop support including a rectangular framework composed of side and end members secured together, legs hinged to the respective corners thereof and adapted to be folded inwardly, lengthwise ribs secured to the inner sides of the side members and adapted to support the coop, said side and end members extending up above the ribs to receive the coop which rests upon said ribs and to secure said coop upon the support, wire netting secured to the side and end members and forming a bottom for the coops supported by said framework and transverse braces spaced apart secured at their respective ends to the corresponding side members reinforcing the wire netting and forming roost poles for the fowls.

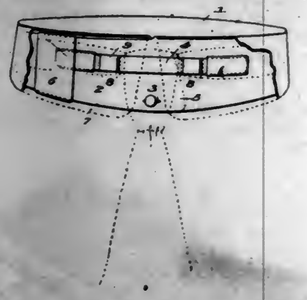
2. A coop support including a rectangular framework composed of side and end members secured together, legs hinged to the respective corners thereof and adapted to be folded inwardly, lengthwise ribs secured to the inner sides of the side members and adapted to support the coop, said side and end members extending up above the ribs to receive the coop which rests upon said ribs and to secure said coop upon the support, wire netting secured to the side and end members and forming a bottom for the coops supported by said framework, transverse braces spaced apart secured at their respective ends to the corresponding side members reinforcing the wire netting and forming roost poles for the fowls, transverse end bars spaced below the end members and secured to the side members and a central bar secured to the side members underneath, lengthwise braces spaced apart secured at one end to the respective end bars and at their other ends to the central bar and forming a support and removable refuse pans, one arranged on each side of the central bar upon said support and adapted to receive the refuse falling through the wire netting.

1,211,547. COLLAR AND NECKTIE RETAINER. ULYSSES G. COOK, Casey, Ill. Filed May 5, 1915. Serial No. 26,069. (Cl. 2—71.)

1. A turndown collar having a band provided at one end with an elongated tab, a strip attached at its ends to the band and extending longitudinally thereof forming means for the attachment of a necktie, and a keeper on the other end of the band adapted to receive and sustain the tab and to prevent downward movement of the tab when a necktie is attached to the strip.

2. A turndown collar having a band provided at one end with an elongated tab, a strip attached to the band

by transverse stitchings forming loops, a bar forming means for the attachment of a necktie, having arms extending therefrom, the arms being substantially the same



distance apart as the loops and of corresponding width, and a keeper on the other end of the band adapted to receive and sustain the tab and to prevent downward movement of the tab when a necktie is attached to the bar.

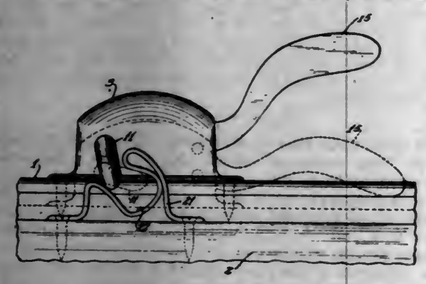
1,211,548. SANITARY MATTRESS. BENJAMIN D. COURTS, Toledo, Ohio, assignor, by mesne assignments, to The Washtik Company, Toledo, Ohio, a Corporation of Ohio. Filed Jan. 29, 1915. Serial No. 5,074. (Cl. 5—13.)



1. In a mattress, the combination of a plurality of pads located one above the other, each pad having tufting ties forming biscuit tufts, the tufting ties of each paid being located above and below the central portion of the biscuit tufts of the adjoining pads.

2. In a mattress, the combination of a plurality of pads located one above the other, each pad having tufting ties forming biscuit tufts, the tufting ties of each pad being located above and below the central portion of the biscuit tufts of the adjoining pads, and an inclosing ticking having side flaps and buttons for closing the ticking along the side edges of the flaps to secure the pads in their relative positions as to the tufting ties.

1,211,549. LATCH. ARCHIE H. CRAMPTON, Chicago, Ill. Filed Sept. 4, 1915. Serial No. 49,028. (Cl. 70—49.)



1. In a latch, an outer casing, an inner casing, a bolt extending through and beyond said casings, a pin connecting said casings, a handle extending into said casings and fulcrumed on said pin, a link fulcrumed on said pin for engagement with one end of said handle, a member slidably arranged upon said link, a flexible member encircling said link and abutting said pin and sliding member for yieldingly keeping them the maximum distance apart, a yoke extending through said link in frictional engagement with said sliding member and terminally embedded in the said bolt and a keeper for said bolt.

2. In a latch, an outer casing, an inner casing, a bolt extending through and beyond said casings, a pin connecting said casings, a handle extending into said casings and fulcrumed on said pin, a link fulcrumed on said pin for engagement with one end of said handle, a member slidably arranged upon said link, a flexible member encircling said link and abutting said pin and sliding member for yieldingly keeping them the maximum distance apart, a yoke extending through said link and in frictional engagement with said sliding member and terminally embedded in said bolt, and a keeper formed with a resilient pocket to receive said bolt.

3. In a latch, an outer casing, an inner casing, a bolt extending through and beyond said casings, a pin connecting said casings, a handle extending into said casings and fulcrumed on said pin, a link fulcrumed on said pin for engagement with one end of said handle, a member slidably arranged upon said link, a flexible member encircling said link and abutting said pin and sliding member for yieldingly keeping them the maximum distance apart, a yoke extending through said link and in frictional engagement with said sliding member and terminally embedded in said bolt, a finger formed integral with said inner casing for limiting the movement of said yoke and a keeper formed with a resilient pocket to receive said bolt.

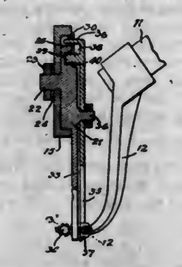
4. In a latch, a perforated outer casing, an inner casing formed with inwardly extending lugs perforated in alinement with the perforations in said outer casing, a bolt extending through alined perforations in said casings, a pin extending through alined perforations in said casings, a handle extending into said casings and fulcrumed on said pin, a link fulcrumed on said pin for engagement with one end of said handle, a shoe slidably arranged on said link, a spring encircling said link and abutting said shoe and pin, a yoke extending through said link and in frictional engagement with said shoe and terminally embedded in said bolt, a finger formed integral with said inner casing for limiting the movement of said yoke and a keeper formed with a resilient pocket to receive said bolt.

5. In a latch, an outer casing, an inner casing, a bolt for said casings, a pin connecting said casings, a link fulcrumed on said pin, a spring-pressed shoe slidably carried by said link, a finger formed integral with said inner casing, a yoke carried by said bolt, and extending through said link and in frictional engagement with said shoe, the movement of said yoke being limited by said finger, manually operable means fulcrumed on said pin for engagement with said link to actuate the same and its connections thereby actuating said bolt, and a keeper formed with a resilient pocket to receive said bolt.

[Claim 6 not printed in the Gazette.]

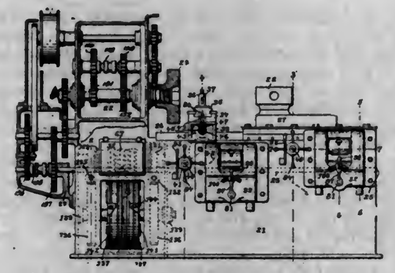
1,211,550. LOCKING DEVICE FOR THE STEERING-GEARS OF AUTOMOBILES. THOMAS CUFF, Govan, Saskatchewan, Canada. Filed May 21, 1915. Serial No. 29,587. (Cl. 74—39.)

In an automobile the combination with the steering wheels, the steering post and crank and the steering gear, said steering gear presenting an operating rod, of a suitably suspended locking device inserted between the crank of the post and the operating rod and presenting a suitably suspended stationary bearing block located adjacent the crank, a disk received by and rotatably mounted in the block and having a peripheral slot therein having the outer side thereof closed by the material of the bearing block and having the width thereof gradually decreasing in passing from the ends toward the center, an operating lever extending from the disk and permanently associated with the same and having the extending end connected with the operating rod, a releasing lever pivotally secured to the disk and having the outer end thereof connected with the crank and the inner end thereof offset to form a trip extending into the slot, spring pressed balls contained



within the slot and located at opposite sides of the trip and a stop pin extending inwardly from the latter lever into an opening provided in the disk of larger dimension than the pin, as and for the purpose specified.

1,211,551. METAL-WORKING MACHINE. MYRON S. CURTIS, Pawtucket, R. I., assignor to Potter & Johnston Machine Company, Pawtucket, R. I., a Corporation of Rhode Island. Filed Oct. 28, 1912. Serial No. 728,139. (Cl. 29—46.)



1. In a metal working machine the combination of a driving element, a member movable intermittently, a disconnectible operative connection between said driving element and said member, a controlling mechanism comprising manually settable actuating devices, means for actuating the disconnectible operative connection operated by the controlling mechanism, and an operative connection between said driving element and said controlling mechanism.

2. In a metal working machine the combination of a driving element, a reciprocating tool-carrying member, a disconnectible operating connection between said driving element and said member, a controlling mechanism comprising manually settable actuating devices, means for actuating the disconnectible operative connection operated by the controlling mechanism, and an operative connection between said driving element and said controlling mechanism.

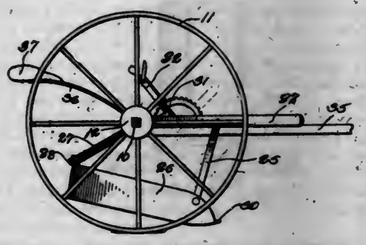
3. In a metal working machine the combination of a driving element, a member movable intermittently, a disconnectible operative connection between said driving element and said member, a controlling mechanism comprising manually settable successively acting actuating devices, means for actuating the disconnectible operative connection operated by the controlling mechanism, and an operative connection between said driving element and said controlling mechanism.

4. In a metal working machine the combination of a driving element, a reciprocating tool carrying member, a driving shaft operatively connected with said member, clutch mechanism adapted operatively to connect said driving element and said shaft, said clutch mechanism including a shiftable clutch collar, a controlling mechanism for said clutch collar comprising manually settable successively acting actuating devices, and an operative connection between said driving element and said control mechanism.

5. In a metal working machine, a common driving member, a plurality of tool carrying members, feed controlling units operatively connected with the common driving member and with each tool carrying member, means in each feed controlling unit, including a cyclometer mechanism, for automatically controlling the relative relations of the various tool carrying members and for automatically varying the length and duration of movement of each tool carrying member and by which a record may be kept of all the various movements of each of the tool carrying members.

[Claims 6 to 27 not printed in the Gazette.]

1,211,552. STONE-RAKE. WILLARD E. DAHN, Harlem, Mont. Filed Mar. 27, 1916. Serial No. 87,058. (Cl. 55—17.)



1. A stone rake comprising a frame including a transversely extending bar, an axle rotatably carried by said frame and constituting a crank shaft, supporting wheels mounted upon the axle and turning the axle with the wheels, a receptacle having its bottom formed of longitudinally extending fingers, links connecting the forward end portion of said receptacle with the cross bar of said frame, a shaft carried by the rear portion of said receptacle, links connecting said shaft with said crank shaft, and means for releasably holding said receptacle in an adjusted position.

2. A stone rake comprising a frame, an axle connected with said frame and constituting a crank shaft, a receptacle having teeth forming a bottom, links connected with said crank shaft and with the rear portion of said receptacle, links connected with said frame and with the forward portion of said receptacle, and means for rotating said crank shaft.

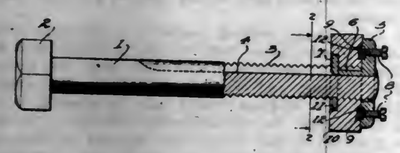
3. A stone rake comprising a frame, a crank shaft connected with said frame, an adjusting lever, a rod extending from said adjusting lever, a receptacle slidably connected with said rod, resilient means mounted upon said rod yieldably holding the receptacle at a point adjacent the outer end of the rod, links connected with said crank shaft and with said receptacle, and links connected with said frame and with said receptacle.

4. A stone rake comprising a frame, a crank shaft connected with said frame, supporting wheels mounted upon said crank shaft, means for releasably connecting the crank shaft with one of the supporting wheels to turn the crank shaft with the wheel, a receptacle, links connecting said receptacle with said crank shaft, and links connecting said receptacle with said frame.

1,211,553. NUT-LOCK. MEHO DERVOZ, Chicago, Ill. Filed Aug. 12, 1916. Serial No. 114,515. (Cl. 151—9.)

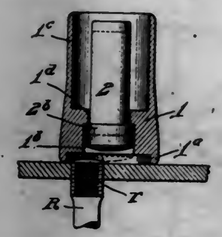
In combination, a bolt having a longitudinal slot, a nut screwing thereon, a locking plate having its inner surface contacting the outer surface of the nut, a key on said plate sliding in said slot, a finger on said key for holding the nut in contact with the locking plate, said nut being

countersunk to receive the finger, the outer face of the nut having pockets arranged in a circle concentric with the axis of the bolt, spring pawls mounted on the inner



surface of the locking plate and countersunk in said locking plate, and screws screwing into said locking plate to force said pawls into the pockets in the nut.

1,211,554. STAY-BOLT-HEADING ATTACHMENT FOR PNEUMATIC HAMMERS. WALTER H. DIFFENDALL, Hagerstown, Md. Filed Sept. 20, 1915. Serial No. 51,654. (Cl. 78—46.)



An attachment for pneumatic hammers, comprising a casting having a sleeve portion on its upper end adapted to detachably fit over the end of the hammer barrel, an axial bore of less diameter for the passage of the shank of a ram, and a flange at the upper end of the bore to limit the upward movement of the ram, and a circumferential flange on the lower end of the casting forming a guide to keep the attachment in proper position relative to the object being operated upon; with a ram having a head slidably fitted in said bore below the flange at the upper end thereof, and a shank extending above said flange and adapted to be engaged by the hammer plunger; said attachment being adapted to be placed eccentrical to the bolt or rivet with the lowermost flange against the head of the rivet and then moved orbitally around the head while the hammer is in operation.

1,211,555. INNERSOLE-LEVELING KNIFE. FRANK M. DORR, Helena, Mont. Filed June 21, 1916. Serial No. 104,987. (Cl. 12—103.)

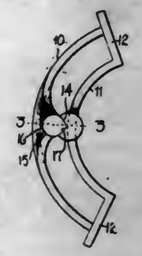


1. An insole trimming or feveling knife comprising a shank terminating in a widened portion bent downwardly and rearwardly, the end edge of said portion being sharpened to form a cutting edge, and the side edges of said portion being blunt and extending laterally beyond said cutting edge.

2. An insole trimming or leveling knife comprising a shank terminating in a widened portion bent downwardly and rearwardly, the end edge of said portion being rounded and sharpened to form a rounded cutting edge, and the side edges of said portion being rounded but blunt and extending laterally beyond the cutting edge.

3. An insole trimming or leveling knife comprising a curved shank terminating in a widened portion bent downwardly and rearwardly, the end edge of said portion being sharpened to form a curved cutting edge, and the side edges of said portion being blunt and rounded and extending laterally beyond said cutting edge.

1,211,556. SANDPAPER-CUTTER FOR BREASTING-WHEELS. FRANK M. DORR, Helena, Mont. Filed June 21, 1916. Serial No. 104,988. (Cl. 164—29.)



1. An implement for cutting segmental strips comprising an inner arcuate cutter with laterally projecting wings, and an outer arcuate cutter having its ends adapted to bear against said wings, the cutters being each provided with an upwardly projecting shank, one shank being longitudinally recessed and the other provided with a longitudinal rib engageable in said recess to thereby center the cutters with relation to each other.

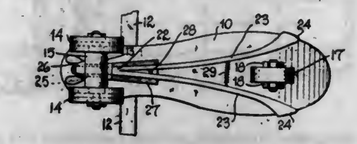
2. A tool of the character described comprising an inner arcuate cutter having laterally extended wings and provided with a shank extending straight upward from the middle of the cutter, and an outer cutter arcuate in plan and having its ends when the cutter is in position bearing against said wings, said cutter having an inwardly deflected upwardly extending shank, one of said shanks having a portion projecting into a recess formed in the other shank whereby the two shanks may be conjoined to dispose the cutters in concentric relation.

3. A tool of the character described comprising an inner arcuate cutter having laterally extended wings and provided with a shank extending straight upward from the middle of the cutter, and an outer cutter arcuate in plan and having its ends when the cutter is in position, bearing against said wings, said cutter having an inwardly deflected upwardly extending shank, one of said shanks being formed with a rib upon its inner face and the other with a recess upon its outer face to receive such rib whereby said shanks may be conjoined to center the cutters relative to each other.

4. A tool of the character described comprising an inner arcuate cutter having laterally extending wings and provided with a shank extending straight upward from the middle of the cutter, and an outer cutter arcuate in plan and having its ends when the cutter is in position bearing against said wings, said cutter having an inwardly deflected upwardly extending shank, the shank of the inner cutter being formed upon its upper face with a vertically extending V-shaped downwardly tapering recess and the shank of the outer cutter being formed upon its inner face with a V-shaped longitudinally extending rib insertible into said recess whereby the cutters may be centered with relation to each other.

5. An implement for cutting segmental strips comprising an inner semicircular cutter with laterally projecting wings, and an outer arcuate cutter having its ends adapted to bear against said wings, the cutters being each provided with an upwardly projecting shank, the said shanks being relatively bent so that the shanks will have contact with each other when the cutters are disposed in coöperative relation.

1,211,557. ROLLER-SKATE. FRANK M. DORR, Helena, Mont. Filed June 26, 1916. Serial No. 106,033. (Cl. 46—51.)

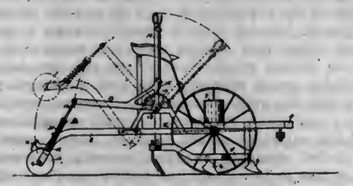


1. In a roller skate, a sole plate, supporting rollers mounted thereon, means for engaging the skate with the shoe sole comprising a longitudinally movable clamping rod split to provide divergent arms, the extremities of the arms being formed with upwardly extending clamping jaws, means for drawing said rod rearward, and a tubular member through which the rod passes acting to force the arms toward each other as the rod is shifted forward, the tubular member being operatively attached to the sole plate.

2. A roller skate of the character described comprising a sole plate, forward and rear rollers mounted thereon, means for engaging the forward end of the sole plate with a shoe comprising a longitudinally movable rod operatively supported beneath the sole plate and split to provide divergent resilient arms, said arms at their forward ends extending upward and terminating in clamping jaws, the rear end of said rod being screw-threaded, a member through which the rear end of the rod passes, a nut engaging the screw-threads and bearing against said member, and a tubular member mounted upon the sole plate and through which said rod passes, said tubular member being laterally flared at its forward end.

3. A roller skate comprising a sole plate, a bracket member attached to the sole plate adjacent its rear end and extending downward therefrom and formed with laterally projecting gudgeons, and a medially disposed aperture, rear wheels mounted upon said gudgeons, a front roller operatively supported upon the forward end of the sole plate, a clamping rod screw-threaded at its rear end and passing through the aperture of said member, said rod being split to provide divergent resilient arms extending forward and at their forward ends being bent upward to form sole clamping jaws, a nut forming a key engaging the screw-threads of the rod and bearing against said apertured member, and a tubular member operatively supported upon the sole plate in advance of the apertured member and through which said rod passes, the interior of said tubular member being laterally flared at its forward end to cause the contraction of said arms of the clamping rod when the clamping rod is moved rearward.

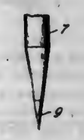
1,211,558. PLANTER ATTACHMENT. JOSIAH D. DRUMMOND, Hungerford, Tex. Filed Dec. 27, 1915. Serial No. 68,607. (Cl. 111—6.)



1. A device of the character described including a framework mounted upon the carrier wheels including a pair of side members rearwardly extending, a pair of arms pivoted to said side members and extending rearwardly therefrom, a single roller having said bearings which rotate in corresponding bearings in the free ends of said arms, a lug laterally extending from each of said arms having a bearing, a transverse shaft rotatably mounted on the frame, a manual lever fixed to one end thereof, lift arms fixed to and extending rearwardly from the respective ends of said shaft, lift rods, each pivoted at one end to the corresponding lift arms and whose other ends are slidable through said lug bearings, means secured on said last mentioned ends preventing the disengagement of said rods from their bearings, a nut fixed to each rod, and spaced from the corresponding lug and a spring surrounding each rod and interposed between the corresponding nut and lug, and operating to hold the roller yieldably against the earth's surface.

2. A device of the character described including a framework mounted upon the carrier wheels, including a pair of side members rearwardly extending, a pair of arms pivoted thereto and extending rearwardly therefrom, a single roller having side bearings which rotate in corresponding bearings in the free ends of said arms, a laterally extending lug having a bearing secured to each arm, a transverse shaft rotatably mounted on the frame, a manual lever fixed to one end thereof, lift arms fixed to and extending rearwardly from the respective ends of said shaft, lift rods, each pivoted at one end to the corresponding lift arms and whose other ends are slidable through said lug bearings, means secured on said last mentioned ends preventing the disengagement of said rods from their bearings, a nut fixed to each rod, and spaced from the corresponding lug and a resilient member surrounding each rod and interposed between the corresponding nut and lug, and operating to hold the roller yieldably against the earth's surface, and a scraper plate fixed to said arms at the two respective ends and whose edge is arranged adjacent the roller surface.

1,211,559. STYLUS FOR TALKING-MACHINES. WILLIAM P. DUN LANY, Chicago, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Apr. 26, 1916. Serial No. 93,610. (Cl. 274—38.)



1. A stylus for talking machines composed of iridium.

2. A stylus for talking machines partially composed of iridium.

3. A stylus for talking machines having a record-engaging portion composed of iridium.

1,211,560. ADJUSTABLE SCREEN. GEORGE W. ECKERT, Butler, Ky. Filed Jan. 8, 1916. Serial No. 71,071. (Cl. 156—38.)

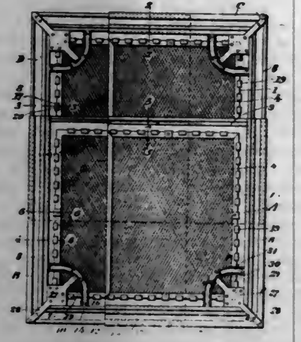
1. An adjustable screen comprising interlocking hollow corner members and overlapping wire mesh carrying screens mounted upon said corner members.

2. An adjustable screen comprising hollow corner members including upper and lower horizontal frame members, vertical frame members connecting said horizontal frame members, and independent wire mesh carrying frames mounted upon said frame members.

3. An adjustable screen comprising vertical and horizontal adjustable hollow frame members, and overlapping wire mesh carrying frames mounted upon said frame members.

4. An adjustable screen comprising upper corner members mounted upon one another for transverse adjustment, lower corner members mounted upon one another for transverse adjustment, the corresponding upper and lower corner members being mounted upon one another for ver-

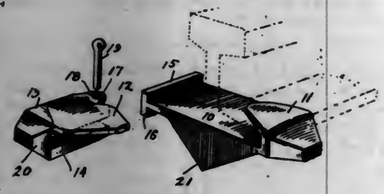
tical adjustment, and independent overlapping wire mesh carrying members mounted upon said corner members.



5. An adjustable screen comprising upper and lower corner members telescopically connected for vertical adjustment upon one another, the corresponding upper and lower corner members being telescopically connected for horizontal adjustment upon one another, and wire mesh carrying frames mounted upon the separate corner members.

[Claims 6 to 9 not printed in the Gazette.]

1,211,561. RAIL-STAY. ISAAC L. EDWARDS, Aurora, Ill. Filed May 26, 1915. Serial No. 30,578. (Cl. 238—4.)



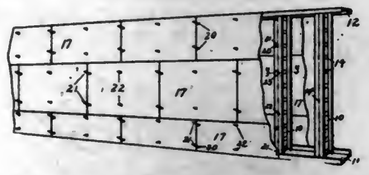
1. A rail stay comprising a base, and a flange-engaging jaw which overhangs the upper side of the rail flange having an under flange-engaging surface that is inclined forward and downward in the direction in which the rail tends to creep and said base and jaw having similarly inclined engaging surfaces.

2. A rail stay comprising a base, and a flange-engaging jaw which overhangs the upper side of the rail flange having an under flange-engaging surface that is inclined forward and downward in the direction in which the rail tends to creep, said jaw being carried by a block that is separate from the base and has interlocking lug and slot connection with the base.

3. A rail stay comprising a base, and a flange-engaging jaw which overhangs the upper side of the rail flange having an under flange-engaging surface that is inclined forward and downward in the direction in which the rail tends to creep, said jaw being carried by a block that is separate from the base and has inter-locking lug and slot connection with the base, the lug having an upper surface that is correspondingly inclined to the inclination of the jaw, and a contiguous slot surface being similarly inclined.

4. A rail stay comprising a base, and a flange-engaging jaw, and engaging inclined surfaces on the base and jaw whose inclination is forward and downward in the direction in which the rail tends to creep, the base having beyond the rail flange upwardly and downwardly projecting flanges whose top and bottom surfaces are, respectively, the inclined surfaces on the base, and the jaw having a T-shaped slot to receive said flanges and the portion of the base immediately adjacent thereto on the inner side thereof.

1,211,562. METAL STRUCTURAL MEMBER AND BUILDING CONSTRUCTION. WILLIAM C. EDWARDS, Jr., Kansas City, Mo. Filed May 8, 1916. Serial No. 96,084. (Cl. 72—115.)



1. A composite structural member comprising two channel-like elements placed back to back and spaced flat bottomed transverse depressions formed across the back face of the web portion of one or both of said channel-like elements and intermediate contacting integrally connected web portions of said combined elements; said depressions forming slotted openings rectangular in cross-section extending through the composite web from face to face of said structural member; said openings being adapted to receive and house metallic tie members in the manner and for the purposes as specified.

2. A composite structural member comprising two channel-like elements placed back to back, and registering flat bottomed transverse depressions formed across the back face of the web portion of each channel element intermediate contacting integrally connected web portions of said combined elements; said registering depressions forming a slotted opening rectangular in cross-section extending through said structural member and adapted to receive and house a metallic tie member for the purposes specified.

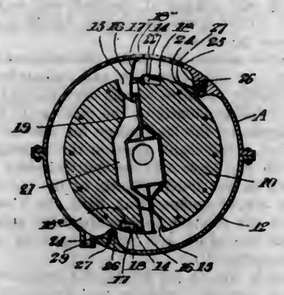
3. A composite structural member comprising two channel-like elements placed back to back, a series of spaced registering transverse depressions formed across the back face of the web portion of each channel element intermediate contacting integrally connected web portions of said combined elements, said registering depressions forming slotted openings extending through the composite web from face to face of said structural member; and one or more independent metallic tie members, each tie member having a central body portion intermediate pronged ends, and a shoulder head prong at one end bent from and at right angles to said body portion, the pronged end opposite said shoulder prong being adapted to enter and be pushed through any selected slotted opening from a selected face of said structural member so that said end projects beyond the opposite face and the shoulder prong contacts with and the other pronged end projects from the first face.

4. A composite structural member comprising two channel-like elements placed back to back, a series of spaced registering transverse depressions formed across the back face of the web portion of each channel element intermediate contacting integrally connected web portions of said combined elements, said registering depressions forming slotted openings extending through the composite web from face to face of said structural member; a plurality of independent tie members, each tie member having a pair of prongs at one end and a single prong and a shoulder prong at the opposite end, each tie member having its paired prongs inserted in and pushed through a selected slot from either face of said structural member so that the paired prongs project beyond the opposite face and the shoulder prong contacts with and the single prong projects from the other face of said structural member.

5. In a composite structural member comprising two channel-like elements placed back to back, a series of spaced slotted openings extending through the composite web from face to face of said structural member; and one or more independent metallic tie members for attaching covering materials to the opposite faces of said structural member, each tie member having a central body portion intermediate pronged ends and a shoulder prong at one end bent from and at right angles to said central portion, the pronged end opposite said shoulder prong being adapted to enter and be pushed through a slotted opening from a selected face of said structural member until said shoulder prong comes into contact with said face, in which position said pronged end projects from the opposite face while the pronged end adjacent the shoulder prong projects from the first face.

[Claim 6 not printed in the Gazette.]

1,211,563. ROTARY ENGINE. CARL ROBERT ELIASON, Wetaskiwin, Alberta, Canada. Filed Jan. 10, 1916. Serial No. 71,219. (Cl. 14—87.)



In a rotary engine and in combination, a casing, a rotor rotatably mounted therein and forming therewith an expansion chamber and provided with peripheral pockets and rectangular ports located behind the said pockets and adjacent thereto, said ports being provided with a recessed wall partially overhanging the outer end thereof, curvilinear vanes pivotally mounted intermediate of their length between the peripheral pockets and ports and adapted when closed to bridge the same, means for admitting motive fluid to the ports during each cycle of the rotor, and means connecting diametrically opposite curvilinear vanes adapted to close one of the vanes when the other is opened under the influence of the motive fluid.

1,211,564. PRODUCTION OF ANTIMONATES. PHILIPP EYER, Halberstadt, Germany, assignor to the Firm of Rudolph Koepp & Co., Oestrich-on-the-Rhine, Germany. Filed July 21, 1915. Serial No. 41,198. (Cl. 23—13.)

1. The method of producing metal antimonates which consists in mixing an antimony oxid and a metal oxid other than an alkali metal oxid with ammonium nitrate and heating the mixture to volatilize the ammonium nitrate.

2. The method of producing metal antimonates which consists in mixing a compound yielding an antimony oxid and a metal oxid other than an alkali metal oxid with ammonium nitrate and heating the mixture to volatilize the ammonium nitrate.

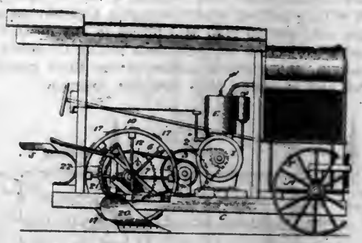
3. The method of producing metal antimonates, which consists in mixing an antimony oxid and a compound yielding a metal oxid other than an alkali oxid with ammonium nitrate and heating the mixture to volatilize the ammonium nitrate.

4. The method of producing metal antimonates, which consists in mixing a compound yielding an antimony oxid and a compound yielding a metal oxid other than an alkali oxid with ammonium nitrate and heating the mixture to volatilize the ammonium nitrate.

5. The method of producing metal antimonates, which consists in mixing an antimony oxid and a metal oxid other than an alkali metal oxid, said metal oxid being in excess, with ammonium nitrate and heating the mixture to volatilize the ammonium nitrate.

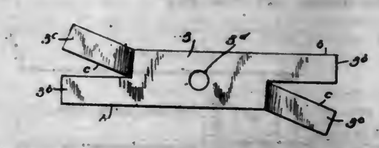
[Claims 6 to 14 not printed in the Gazette.]

1,211,565. TRACTOR FOR PLOWS, &c. JAY FINK, Elmo, Kans. Filed Oct. 16, 1913. Serial No. 795,598. (Cl. 21—114.)



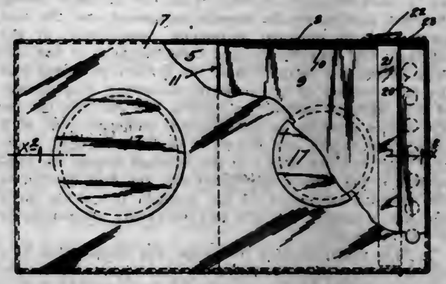
In a traction device, the combination of an axle, a driving wheel surrounding the same, a pair of spaced traction wheels disposed one on each side of the driving wheel and having elongated hubs mounted on the axle with their inner ends disposed in contact with the opposite sides of said driving wheel, a plurality of radiating ears formed integrally with the inner ends of the hubs and contacting with opposite sides of the driving wheel whereby to brace and reinforce said wheel, and bolts passing through said ears and through the intervening driving wheel.

1,211,566. GRAIN OR HAY GRINDER. HARVEY BENNET FORTNEY, Hartman, Colo. Filed June 26, 1915. Serial No. 36,521. (Cl. 146—30.)



A double ended blade for grain or hay grinders having straight sides and with its ends slit or divided, the divided ends being bent laterally in opposite directions, diagonally opposite sections of the divided ends extending beyond or overhanging the line of the sides of the blade, substantially as described.

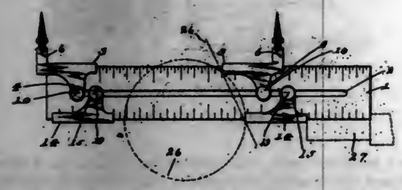
1,211,567. SUPPLEMENTAL STOVE-TOP. LEWIS FRIDLUND, Willmar, Minn. Filed July 15, 1915. Serial No. 40,025. (Cl. 126—215.)



The combination with a main stove top provided with lid openings and grates covering the lid openings and projecting above said top, of a supplemental top having communicating combustion and distributing chambers, said combustion chamber having downwardly extended flanges surrounding the grate of one of the lid openings, and a horizontally adjustable leg for supporting the distributing chamber.

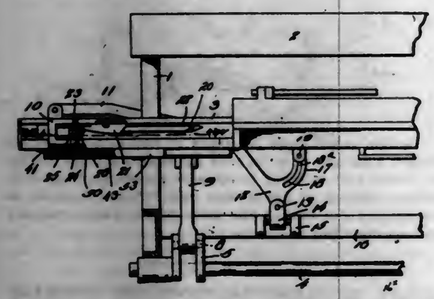
1,211,568. SCALE. ROBERT E. GARRETT, Nashville, Tenn. Filed Mar. 22, 1916. Serial No. 85,820. (Cl. 33—158.)

1. A geometrical instrument comprising a blade having a central longitudinal slot therein, a set of slide pieces formed with a pair of blades engaging ears having means engaging said slot to bind said pieces in any desired position and a projection on each piece having threaded openings therein, and scribing points having their inner ends threaded and engaging said threaded openings.



2. A geometrical instrument comprising a blade having graduations marked thereon and a central longitudinal slot therein, a set of slide pieces on each edge of the blade, each being formed with blade engaging ears having an opening therein registering with the slot in said blade, and clamping screws engaging said openings for clamping the slide pieces in the desired position, the slide pieces on one edge acting in conjunction with the slide pieces on the other for the purposes stated.

1,211,569. SHUTTLE-MOTION FOR LOOMS. JOSEPH A. GENDRON, Nashua, N. H. Filed Dec. 20, 1915. Serial No. 67,846. (Cl. 139—49.)



1. In a shuttle motion for looms, the combination of a lay, a carriage movable inwardly and outwardly on the lay, a shuttle-holder movable with the carriage during the first portion of the inward movement and the last portion of the outward movement, respectively, of the carriage, and movable on and independently of the carriage during the completion of the inward movement and the first portion of the outward movement, respectively, of the carriage, means for moving the carriage on the lay, means movable on the carriage and connected with the shuttle holder, and means on the lay arranged to engage said movable means on the carriage during the completion of the inward movement and the first portion of the outward movement of the carriage to quickly move the shuttle-holder inwardly and outwardly independently of the carriage.

2. In a shuttle-motion for looms, the combination of a lay, a carriage movable inwardly and outwardly on the lay, a shuttle-holder movable with the carriage during the first portion of the inward movement and the last portion of the outward movement, respectively, of the carriage, and movable on and independently of the carriage during the completion of the inward movement and the first portion of the outward movement, respectively, of the carriage, means for moving the carriage on the lay, means movable on the carriage and connected with the shuttle holder, means on the lay arranged to engage said movable means on the carriage during the completion of the inward movement and the first portion of the outward movement of the carriage to move the shuttle-holder inwardly and outwardly independently of the carriage, a shuttle lock in the shuttle holder, provided with a runner, a shuttle having means for the engagement of said lock, and means for coöperating with said runner of the lock and locking and unlocking the shuttle while the shuttle holder is adjacent to its innermost position.

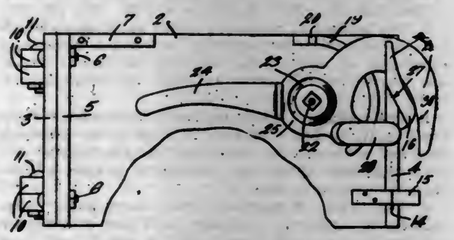
3. In a shuttle motion for looms, the combination of a suitable support, a shuttle-holder movable inwardly and outwardly on the support, means for so moving the shuttle-holder, a shuttle-lock in the shuttle-holder, provided with a runner, a shuttle having means for the engagement of said lock, and means on the support for cooperating with said runner of the lock and locking and unlocking the shuttle while the shuttle-holder is adjacent to its innermost position.

4. In a shuttle motion for looms, the combination of a lay, a carriage movable inwardly and outwardly on the lay, a shuttle-holder mounted on the carriage and movable with and on or independently of the carriage in the direction of the length of the lay, means for moving the carriage on the lay, a bell-crank lever on the carriage, a connection between said lever and the shuttle-holder for moving said holder on and independently of the carriage, and means on the lay for coöperating with one arm of said lever to move the shuttle holder inwardly and for cooperating with the other arm of the lever to move the shuttle-holder outwardly.

5. In a shuttle motion for looms, the combination of a lay, a carriage movable inwardly and outwardly on the lay, a shuttle-holder mounted on the carriage and movable with and on or independently of the carriage in the direction of the length of the lay, means for moving the carriage on the lay, a shaft journaled in the carriage and having a gear and a bell-crank lever fixed thereon, a second shaft journaled in the carriage and having a gear and an arm fixed thereon; said gear being intermeshed with the first-named gear, a connection between said arm and the shuttle-holder for moving the latter, and means on the lay for coöperating with one arm of the bell-crank lever to move the shuttle-holder inwardly and for coöperating with the other arm of the lever to move the shuttle-holder outwardly.

[Claims 6 to 12 not printed in the Gazette.]

1,211,570. MOLD-JACKET. JAMES C. GEORGE and GABRIEL L. GEORGE, Bristol, Va. Filed Sept. 29, 1916. Serial No. 122,916. (Cl. 22—112.)

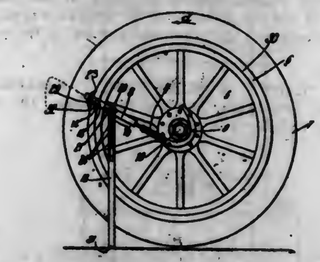


1. A mold jacket comprising end walls and side walls the end walls being provided at two diagonally opposite corners of the jacket with outwardly projecting flanges; handles located in the angles defined by the flanges and the side walls and constituting braces for the flanges; securing elements uniting the flanges with the extremities of the side walls; a hinge uniting one side wall with one end wall at one of the remaining corners of the jacket; and a latch uniting the other end wall with the other side wall at the fourth corner of the jacket.

2. A mold jacket comprising an end wall; a side wall having a keeper including an upstanding arm; a latch fulcrumed on the end wall and including a depending bill engaged behind the arm and coacting with the keeper to draw the side wall toward the end wall when the latch is lowered, the latch including a finger disposed at an angle to the bill, and coacting with the inner face of the arm to move the side wall away from the end wall when the latch is raised.

3. A mold jacket comprising an end wall; a side wall having a keeper including an upstanding arm; a latch fulcrumed on the end wall and including a depending bill engaged behind the arm and coacting with the keeper to draw the side wall toward the end wall when the latch is lowered, the latch including a finger disposed at an angle to the bill and coacting with the inner edge of the arm to move the side wall away from the end wall when the latch is raised; and a stop on the end wall and coöperating with the latch to prevent a disengagement of the latch from the keeper when the latch is raised.

1,211,571. TIRE-TOOL. WALTER E. GOODRICH, Campello, Mass. Filed Dec. 6, 1915. Serial No. 65,177. (Cl. 157—6.)



1. A tire tool having, in combination, a bar including a tire engaging portion and a rim engaging portion, means connected with said bar adapted to engage the hub of a wheel, a lever having universal pivotal connection with said bar, and a hook connected with said lever adapted to engage the opposite side of the rim from that engaged by the rim engaging portion of said bar.

2. A tire tool having, in combination, a bar provided with a tire engaging member, a lever pivotally attached to said bar, a series of lugs on said lever and a hook provided with an eye at one end thereof constructed and arranged to receive one of the lugs of said series, the opposite end of said hook being adapted to engage the rim of the tire, said hook constituting a fulcrum for said lever.

3. A tire tool having, in combination, a bar having one end thereof transversely deflected, a head disposed transversely of the end of said deflected portion, one end of said head constituting a tire engaging member and the other end of said head constituting a rim engaging member, the outer surface of said head with respect to said bar being inclined outwardly from opposite extremities thereof to a point substantially midway between said extremities, means adjustably connected with said bar adapted to engage the hub of a wheel and a lever pivotally connected with said bar adjacent to the head end thereof adapted to support said head end during the removing and replacing operations on the tire.

1,211,572. WHEEL FOR AUTOMOBILES AND THE LIKE. ERNEST FREDERICK GOODYEAR, Dudley, England. Filed Oct. 17, 1914. Serial No. 867,142. (Cl. 21—69.)

1. A wheel for automobiles and the like comprising in combination two sheaves or half members, the inner edges of said sheaves extending inwardly toward each other to the mid-plane of the wheel, and having flanges at said mid-plane, strengthening members for said sheaves provided with beveled inner edges, said beveled edges being separated by said flanges and being welded thereto, the said strengthening members having plate portions contiguous to the faces of the wheel and adapted to counteract indentation or compression of the central portion of the wheel.



2. A wheel comprising in combination two sheaves or half members, a box-like annular liner assembled in halves within the central part of the wheel, the halves of the wheel and of said box-like liner being welded together whereby the liner is welded to the wheel, said liner having extensions projecting into the spoke portions of the wheel.

3. A wheel for automobiles and the like comprising in combination a pair of sheaves or half members, bushes connecting the halves of the wheel, and distance pieces encircling said bushes, said bushes being adapted to permit the passage therethrough of fastening bolts or the like.

4. A wheel for automobiles and the like comprising in combination a pair of sheaves or half members, bushes connecting the halves of the wheel, and distance pieces encircling said bushes, said bushes being adapted to permit the passage therethrough of fastening bolts or the like, additional members near the center of the wheel for increasing the thickness thereof, and shouldered rivets for holding the parts together.

5. A wheel comprising in combination two sheaves or half members, a box-like annular liner assembled in halves within the central part of the wheel, the halves of the wheel and of said box-like liner being welded together at portions of their inner edges and also at portions of their outer edges, whereby the liner is welded to the wheel, said liner having extensions projecting into the spoke portions of the wheel.

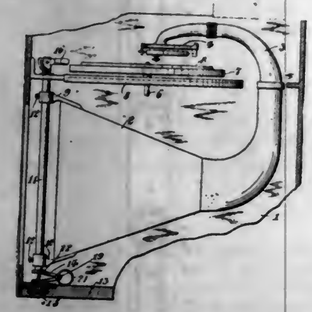
1,211,573. PHONOGRAPH. EDGAR J. GRISWOLD, New York, N. Y. Filed July 12, 1916. Serial No. 108,778. (Cl. 274—2.)

1. The combination with a phonograph horn of a shock absorber therefor comprising a pair of levers; a fulcrum on which the levers are pivoted; and spring means engaging the levers on one side of the fulcrum to yieldingly hold apart the ends of the levers on the opposite side of the fulcrum, the weight of the horn bearing upon said last mentioned ends of the levers.

2. The combination with a phonograph horn of a shock absorber therefor comprising a pair of levers; a fulcrum on which the levers are pivoted; and a split ring spring engaging the levers on one side of the fulcrum to yieldingly hold apart the ends of the levers on the opposite side of the fulcrum, the weight of the horn bearing upon said last mentioned ends of the levers.

3. In a phonograph the combination of a sound unit comprising a sound-box, tone-arm and horn forming a unitary structure; a spindle mounted in bearings and to which the sound unit is attached; means for raising and lowering the spindle and sound unit; and a shock absorber for the spindle and sound unit comprising a pair

of levers, a fulcrum on which the levers are pivoted, and spring means engaging the levers on one side of the fulcrum to yieldingly hold apart the ends of the levers on the opposite side of the fulcrum, the weight of the spindle and sound unit bearing upon said last mentioned ends of the levers.

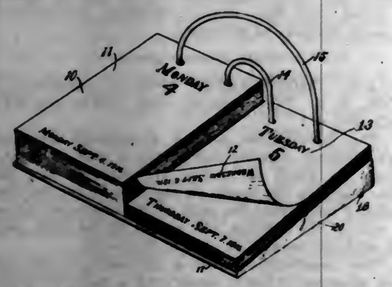


4. In a phonograph the combination of a sound unit comprising a sound-box, tone-arm and horn forming a unitary structure; a spindle mounted in bearings and to which the sound unit is attached; means for raising and lowering the spindle and sound unit; and a shock absorber for the spindle and sound unit comprising a pair of levers, a fulcrum on which the levers are pivoted, and a split ring spring engaging the levers on one side of the fulcrum to yieldingly hold apart the ends of the levers on the opposite side of the fulcrum, the weight of the spindle and sound unit bearing upon said last mentioned ends of the levers.

5. The combination with a phonograph horn of a shock absorber therefor comprising a pair of levers; a fulcrum on which the levers are pivoted; and spring means engaging the levers on one side of the fulcrum to yieldingly hold apart the ends of the levers on the opposite side of the fulcrum, the weight of the horn bearing upon said last mentioned ends of the levers and said spring means being so arranged as to offer a nearly uniform resistance to the weight of the horn.

[Claims 6 to 8 not printed in the Gazette.]

1,211,574. MEMORANDUM-CALENDAR. FRANK A. HALB, Chicago, Ill. Filed Mar. 30, 1916. Serial No. 87,715. (Cl. 40—120.)

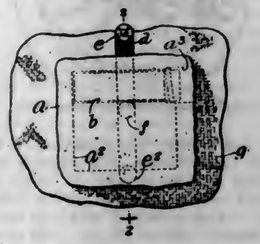


1. A holder for pad calendars comprising, in combination, a base plate having a pair of apertures extending through the same, a filing arch having its two end portions extended through the apertures of the base plate, each of the said end portions of the arch being notched upon the inside below the base plate and a latch adapted to swing on one of the end portions of the arch as a pivot in line with its said notch and to enter the notch of the other end portion of the arch.

2. A holder for pad calendars comprising, in combination, a base plate having a row of apertures extending through the same, a pair of elastic filing arches of unequal span each arch having both of its end portions extended through apertures of the base plate, the two end portions of the smaller arch being notched upon the outside and the said notches being engaged with the plate at the outer margins of the corresponding apertures, the two end portions of the larger arch being notched upon the inside below the base plate, and a latch adapted to swing on one of the end portions of the larger arch as a pivot in line with its said notch and to enter the notch of the other end portion of the larger arch, the said latch being provided with a lateral projection which enters the space between the two end portions of the smaller arch and is of a width equal to the distance between the end portions of the smaller arch when the said arch is elastically expanded for the said engagement of its notches with the base plate.

3. A holder for pad calendars, and the like comprising, in combination, a base plate having a pair of apertures, an upright filing arch having its two end portions extended through the apertures of the base plate, both of the said end portions of the arch being notched below the plate, and a latch adapted to swing on the notched part of one of the end portions of the arch as a pivot and to enter the notch of the other end portion of the notch.

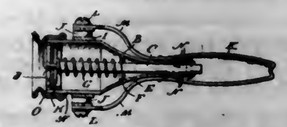
1,211,575. LADY'S POWDER-PUFF. ROXANNA A. HAMPTON, New York, N. Y. Filed Jan. 19, 1916. Serial No. 72,925. (Cl. 132—28.)



1. A flat flexible powder puff provided with a pocket, a separate receptacle adapted to be inserted into said pocket, a band secured to one side of said puff, whereby said puff may be rolled up and secured in the rolled condition, and means for securing said puff to a handkerchief consisting of a two part fastening device one part of which is secured to said band and the other to the handkerchief.

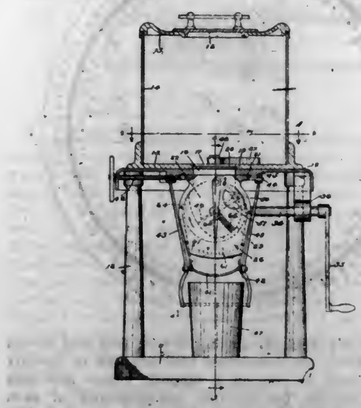
2. A flat powder puff provided with a pocket, a separate powder receptacle adapted to be inserted into said pocket and having perforations, a securing band secured to one side of said puff whereby said puff may be rolled up and secured in the rolled condition, and means whereby said puff may be secured to a handkerchief.

1,211,576. MASSAGE DEVICE. AUGIE L. HANSEN, Evanston, Ill., assignor to Chicago Title & Trust Co., trustee, a Corporation of Illinois. Filed Jan. 5, 1912. Serial No. 669,566. (Cl. 128—16.)



A massaging device comprising a cylinder, a piston slidable therein, a spring resisting the movement of the piston in one direction, manually operable means for moving the piston against the resistance of said spring, a flexible tubular extension for the mouth of the cylinder, and guard means associated with said manually operable means for preventing a slipping of the hand operating the latter, said guard means enabling the user simultaneously to operate the piston and to force the said extension firmly against the skin surface which is being massaged, said manually operable means including a piston rod and levers pivoted upon the cylinder at opposite sides of said rod substantially symmetrically of the latter, whereby the axis of the piston passes substantially across the palm of the hand operating the device.

1,211,577. DISPENSING-MACHINE. SIGVORT HANSON, Racine, Wis. Filed Aug. 27, 1915. Serial No. 47,611. (Cl. 221—107.)



1. In a dispensing machine, a revoluble measuring element having a hinged bottom, and means for imparting an ejecting movement to said bottom when said measuring element is in discharging position.

2. In a dispensing machine, a revoluble measuring element having a hinged, spring pressed bottom, means for holding the bottom in fixed position during the filling operation, and means for releasing the same when discharging so that the spring imparts an ejecting movement to the bottom.

3. In a dispensing machine, a revoluble measuring element having a hinged bottom, means for adjusting the angular position of the bottom to vary the capacity of said measuring element, and means for imparting an ejecting movement to the bottom when said measuring element is in its discharging position.

4. In a dispensing machine, a revoluble measuring element having a hinged spring pressed bottom, means for holding said bottom in fixed position during the filling operation, means for adjusting said position of the bottom to vary the capacity of said filling element, and means for releasing the bottom when said element is in discharging position so that the spring may impart an ejecting movement to the bottom.

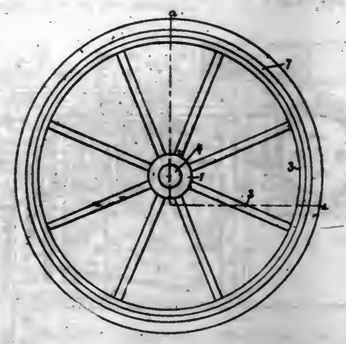
5. In a dispensing machine, a revoluble measuring element having a hinged bottom, and means for adjusting the angular position of the bottom so as to vary the capacity of said element.

[Claims 6 to 22 not printed in the Gazette.]

1,211,578. TRACTION-WHEEL. JESSE E. HARRISON, Madison, S. D. Filed May 6, 1916. Serial No. 95,941. (Cl. 21—216.)

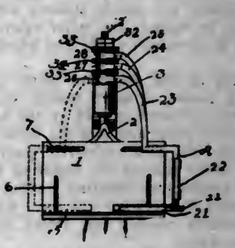
1. A traction wheel having its face skeletoned by apertures and the margins between the apertures designed for cleats or calks to take hold of the ground, said wheel being composed of two wheel-shaped sections having adjacent reduced portions creating a peripheral recess, a ring detachably secured in said recess and provided with sprocket teeth.

2. A traction wheel having its face skeletoned by apertures and the margins between the apertures designed for cleats or calks to take hold of the ground, said wheel being composed of two wheel shaped sections having adja-



cent reduced portions creating a peripheral recess, a ring detachably secured in said recess and provided with sprocket teeth and sprocket teeth upon each section, to enable each section to be used as an individual traction wheel when so desired.

1,211,579. MUSIC-LEAF TURNER. EDWARD J. HAWKINS, Solvay, N. Y. Filed Oct. 4, 1915. Serial No. 53,981. (Cl. 84—17.)



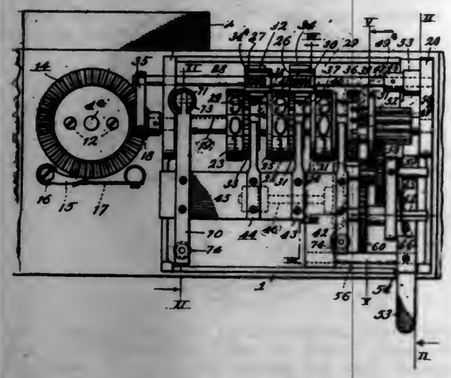
1. In a music leaf turner including a music rack, the combination of a leaf holding element rotatably supported thereon, a sprocket wheel and shaft operatively connected with the leaf holding element, a sprocket chain on the wheel having a cord attached to its ends, a spring actuated sprocket wheel and a supporting shaft therefor having a pedal rigidly connected thereto, a second sprocket chain, and means for releasably holding said pedal, said cord being connected to the ends of the second sprocket chain.

2. The combination with a rotatably supported music leaf turning element, of a sprocket wheel and chain operatively connected thereto, a second sprocket wheel and chain operatively connected to the first sprocket wheel and chain, a supporting shaft for the second wheel and a coiled spring for rotating said wheel, means for rotating the wheel against the tension of the spring, and a latch for holding the wheel from operation, a second pedal, and means connected therewith to release said latch.

3. The combination with a rotatable leaf turning element, of a spring wound wheel operatively connected thereto, a shaft for said wheel carrying a pedal, a latch for holding said pedal in inoperative position, and means for restoring said latch to operative position.

4. The combination with a rotatable leaf turning element including a spring wound operating wheel, of a shaft for said wheel and a pedal carried thereby, a latch for holding said pedal in inoperative position, a second pedal and means connected with said second pedal for restoring said latch to operative position when released by movement of the second pedal, said means consisting of a spring actuated slide bar connected with the second named pedal having a lug thereon adapted to impinge against the lower end of the latch.

1,211,580. STOP-REGISTER. BONIFACE HEHLE, Kansas City, Mo. Filed Dec. 11, 1915. Serial No. 66,281. (Cl. 235—132.)



1. In a device of the character described, a rotary numeral wheel having a recess, an actuator for the wheel including a rotary arm, a detent arranged to enter the wheel recess, a stop operable by the detent on entering the wheel recess for projection in the path of said arm to lock the actuator, and means slidably supporting and guiding the stop to support the latter against movement in the direction of movement of the arm when encountered by the arm.

2. In a device of the class set forth, a registering wheel having a recess, a shaft loosely supporting the wheel, a rock bar, a detent carried by the bar to engage in the recess of the wheel and lock the latter after a predetermined number has been registered, gearing for rotating the wheel, other gearing for resetting the wheel, a lever normally holding the resetting gearing fixed, and a connection between the rock bar and lever whereby on releasing the resetting gearing the detent will be disengaged from the wheel.

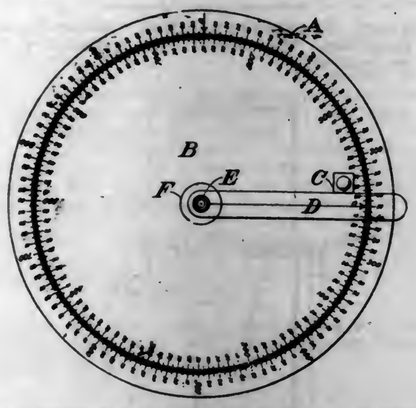
3. In a device of the class set forth, a registering wheel having a recess, a shaft loosely supporting the wheel, a rock bar, a detent carried by the bar to engage in the recess of the wheel and lock the latter after a predetermined number has been registered, gearing for rotating the wheel, other gearing for resetting the wheel, a lever normally holding the resetting gearing fixed, a pinion for driving said shaft, a dog engageable with the pinion when the resetting gearing is released, and a connection between the bar and lever whereby the detent will be disengaged from the wheel on releasement of the resetting gearing.

4. In a device of the class set forth, a registering wheel having a recess, a shaft loosely supporting the wheel, a rock bar, a detent carried by the bar to engage in the recess of the wheel and lock the latter after a predetermined number has been registered, gearing for rotating the wheel, other gearing for resetting the wheel, a lever normally holding the resetting gearing fixed, and a pin and slot connection between the rock bar and lever permitting of independent movement of the rock bar and its supported detent to operative position and providing a positive connection between the rock bar and lever on movement to release the resetting gearing whereby the detent will be disengaged from the wheel.

5. In a device of the character described, a registering wheel, means for locking the wheel at a predetermined time, a counter shaft upon which said wheel is loosely mounted, a pinion for driving said counter shaft, means for driving said pinion, gearing for rotating the registering wheel, a train of gears embodying a part of the last-mentioned gearing for resetting the registering wheel, a lever normally holding the resetting train stationary and connected with said means to render the same inoperative when the train is released, and a dog controlled by said lever to lock the counter shaft driving pinion during the operation of the resetting train.

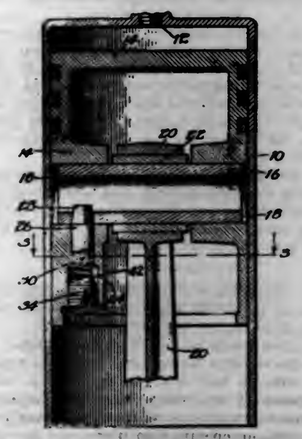
[Claims 6 to 10 not printed in the Gazette.]

1,211,581. ADDING DEVICE. MILTON J. HENOCH, Sioux City, Iowa. Filed July 10, 1912. Serial No. 708,705. (Cl. 235—78.)



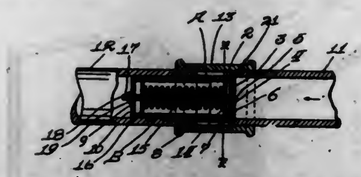
In a manually held calculating device, first and second superposed disks, the lowermost disk adapted to directly rest in the hand or rest on a support, means fastening said disks together for rotation independently of each other, one of said disks being of less diameter than the other, each disk being provided with graduations adjacent its outer edge, an indicator rotatable over and independently of said disks and projecting beyond the edge of said disks whereby both the larger disk and the indicator can be readily grasped by one hand and held against movement, and means on said second disk serving as a handle to facilitate adjustment of said second disk substantially as described.

1,211,582. PISTON-PIN-LOCKING MECHANISM. FRANKLIN G. HOBART, Beloit, Wis., assignor to Fairbanks, Morse & Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 27, 1915. Serial No. 68,642. (Cl. 74—85.)



A trunk piston or crosshead having an inserted pin for connecting rod attachment, a dowel carried by the crosshead and engaging said pin, a spring urging said dowel against said pin and a screw plug acting against said spring, said plug and dowel being shaped where they make contact with this spring so that the tension of the spring will tend to prevent the plug from unscrewing even though it may be quite loose in the threads.

1,211,583. GAS-SAVING DEVICE. CHARLES H. HOMEIER, St. Paul, Minn. Filed Mar. 31, 1916. Serial No. 88,129. (Cl. 67—119.)



1. A device of the class set forth, comprising, in combination, a cap having a body formed with a passaged end wall, a thimble in the form of a cylindrical casing mounted axially upon said cap, a diaphragm arranged freely adjacent the passaged end of said cap, a base plate adjustably mounted upon the outer end of said thimble and adapted to be regulated inwardly within said thimble, and a coil compression spring having one end mounted upon said base plate and its other end secured to and resiliently supporting said diaphragm, said cap being adapted to be clamped between the adjacent ends of a pair of sections of piping with one end facing the onward flow of gas to intercept said current by said resiliently supported diaphragm.

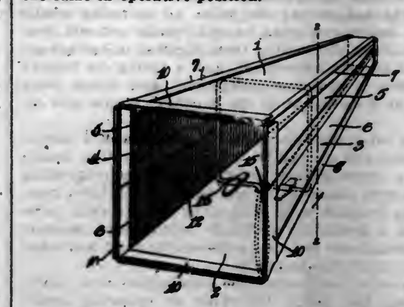
2. A gas regulator, comprising, in combination, a cap having a body adapted to be clamped between the adjacent ends of a pair of sections of piping and an end wall passaged to admit gas passing through said piping, a perforated plate movably mounted upon said end and adapted to be held in initially regulated position by the clamping of said sections of piping together, a thimble carried by said cap having a perforated end, a base within said thimble having a regulating element movably mounted in its end, a coil compression spring mounted upon said base within said thimble and extending longitudinally thereof and a diaphragm carried by the free end of said spring adjacent the passaged end of said cap and adapted to intercept the flow of gas passing through said thimble and cap.

3. A gas regulator comprising, in combination, a cap having a body adapted to be clamped between the adjacent ends of a pair of pipe sections, said cap having an end wall provided with a plurality of openings for the passage of gas therethrough, a thimble carried by said cap having a perforated end, and an abutment therein adjacent said end, a coil compression spring bearing at one extremity against said abutment, a diaphragm carried by the free end of said spring adjacent the passaged end of said cap and adapted to intercept the flow of gas passing through the thimble and cap, and a member movably disposed with respect to the end of said cap having openings therein adapted to be brought into register with the openings in the end of the cap whereby the quantity of the flow of gas may be regulated to accord with the tension of the spring.

1,211,584. COLLAPSIBLE MEGAPHONE. GEORGE F. HOOEY, Sechelt, British Columbia, Canada. Filed June 2, 1916. Serial No. 101,380. (Cl. 181—27.)

1. A collapsible megaphone, comprising a frusto pyramidal structure, comprising four walls of substantially rectangular configuration in cross section, the said walls being collapsible, and a rectangular frame pivotally mounted on one of the walls and adapted to engage all of the said walls when in operative position.

2. A collapsible megaphone, comprising four tapered walls, hinges joining the meeting edges of the walls, two of the walls being divided into sections for permitting the same to be folded between the adjacent walls, and collapsible bracing means embraced by the said walls for holding the same in operative position.



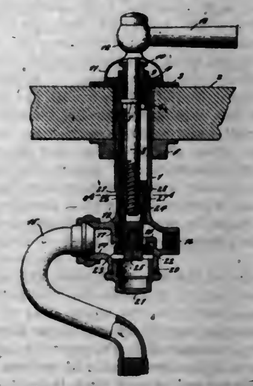
3. A collapsible megaphone, comprising four tapered walls, hinges joining the meeting edges of the walls, two of the walls being divided into sections for permitting the same to be folded between the adjacent walls, collapsible bracing means embraced by the said walls for holding the same in operative position, one of the said walls having an aperture formed therein, and a handle disposed on the exterior of one of the walls and associated with the said collapsible bracing means for operating the said means from without the megaphone.

4. A collapsible megaphone, comprising a plurality of tapered walls, some of the said walls being centrally longitudinally divided, hinge elements secured to the meeting edges of the said divided wall and to the adjoining edges of the said main tapered walls, and collapsible bracing means embraced by the said walls and adapted to be disposed for holding the said walls in rigid open position.

5. A collapsible megaphone, comprising a plurality of tapered walls, two of said walls being centrally divided to provide collapsible sections, hinges connecting the edges of said walls and the meeting edges of said collapsible sections, a brace frame pivotally mounted on one of said walls and disposed in the space between said walls, and an operating handle for said frame.

[Claim 6 not printed in the Gazette.]

1,211,585. HANDLE MECHANISM FOR FAUCETS. LOUIS M. HOOPER, Rutherford, N. J., assignor to The J. L. Mott Iron Works, a Corporation of New York. Filed Sept. 30, 1915. Serial No. 53,281. (Cl. 74—33.)



1. In a valve mechanism, the combination of a spindle for opening and closing the valve, an operating handle therefor, devices connected to said spindle and said handle respectively, for locking them together in various positions of angular adjustment, and means for holding such

devices in operative engagement, such means being operable by a movement of the handle to release said devices.

2. In a valve mechanism, the combination of a spindle for opening and closing the valve, an operating handle therefor, devices connected to said spindle and said handle respectively, for locking them together in various positions of angular adjustment, and a spring for holding such devices in operative engagement, such spring being operable by a movement of the handle to release said devices.

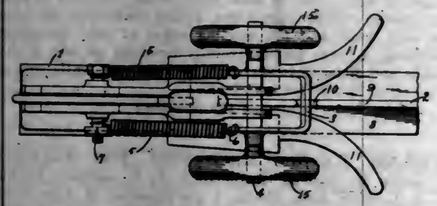
3. In a valve mechanism, the combination of a spindle for opening and closing the valve, an operating handle therefor a clutch member on said spindle, a coöperating clutch member connected to said handle, said clutch members being designed to be released by relative axial movement and a spring for yieldingly holding said members in engagement and resisting such relative axial movement as effects their disengagement.

4. In a valve mechanism, the combination of a spindle for opening and closing the valve, an operating handle therefor, coöperating clutch members connected to said spindle and handle respectively, said members comprising concentric interlocking parts, and a spring for yieldingly holding said members in engagement and resisting such relative axial movement as effects their disengagement.

5. In a valve mechanism, the combination of a spindle for opening and closing the valve, an operating handle therefor, coöperating clutch members connected to said spindle and handle respectively, said members comprising concentric serrated members adapted to interlock in various positions of relative angular adjustment, and a spring yieldingly holding said members in engagement.

[Claims 6 to 8 not printed in the Gazette.]

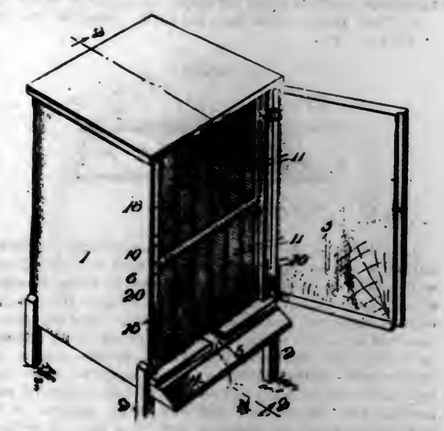
1,211,586. STANCHION. JOHN JAMES, Fort Atkinson, Wis., assignor to The James Manufacturing Company, Fort Atkinson, Wis. Filed Aug. 18, 1913. Serial No. 785,194. (Cl. 119—147.)



1. The combination of a stationary and inclinable stanchion bar, each provided with converging upper end portions, a transverse operating shaft pivoted to one of said upper end portions and provided with an operating handle, a U-shaped latch member mounted upon said shaft and held against rotation thereon, a spring connecting said latch member below the shaft with the latch supporting stanchion bar, said spring having tension to draw the latch downwardly, and a flange carried by the converging portion of the other stanchion bar and provided with a notch in which said latch may engage, the upper margin of said flange having a downwardly tapering inclination at its inner end, whereby it may pass underneath the latch and lift the same in position for engagement with said notch with the side arms of the latch on opposite sides of said flange.

2. In a device of the described class, the combination of a pair of stanchions, a revoluble shaft supported from and arranged transversely to the upper ends of one of said stanchions, handles rigidly affixed to the protruding ends of said shaft, a U-shaped latch centrally affixed to said shaft between said handles, a pair of springs for normally retaining the front end of said latch in its locked position, whereby said latch is caused to engage said inclinable stanchion when brought to its vertical position, said handles being adapted to enable a person to revolve said shaft and disengage said latch from the inclinable member of said stanchion, from either the front or rear side of said stanchions, all substantially as and for the purpose specified.

1,211,587. BEEHIVE. JAMES WILLIAM JORDAN, Williamsburg, Ky. Filed Mar. 7, 1916. Serial No. 82,688. (Cl. 6—2.)



In a bee-hive, the combination of an inclosure having two compartments, one of said compartments containing a brood-frame while the other compartment contains a super-frame, a bee-escape board between the frames, a screen for each compartment, a slide superposed with respect to the escape-board, said slide being adapted to support the super-screen while the base-board supports the lower screen, and means at opposite sides of the inclosure for detachably retaining the screens.

1,211,588. PROCESS OF TREATING CELLULOID. EDGAR JOSEPHSON, Passaic, N. J., assignor to Pantasote Leather Company, Passaic, N. J., a Corporation of New Jersey. Filed Feb. 2, 1914, Serial No. 816,134. Renewed Aug. 19, 1916. Serial No. 115,916. (Cl. 23—24.)

1. The process of treating celluloid which consists in dividing the celluloid into a fine powder and then distilling camphor therefrom, substantially as and for the purpose described.

2. The process of treating celluloid which consists in contacting finely powdered celluloid with water and then distilling camphor from said celluloid, substantially as and for the purpose described.

3. The process of treating celluloid, which consists in contacting finely powdered celluloid with water and then distilling the camphor from said celluloid by means of a heated fluid, substantially as and for the purpose described.

4. The process of treating celluloid, which consists in dividing the celluloid into a fine powder and then distilling the camphor therefrom by means of steam, substantially as and for the purpose described.

5. The process of treating celluloid, which consists in placing a mass of finely powdered celluloid in a still, passing a current of steam into said mass, condensing the steam and camphor issuing from said still and separating said condensed camphor from said condensed steam, substantially as and for the purpose described.

1,211,589. GARMENT-SUPPORTER. OSCAR KALLBERG, Patterson, Cal. Filed July 26, 1915. Serial No. 42,039. (Cl. 24—85.)

1. In a garment supporter formed from a pair of spring wire lengths, a safety pin serving as the sustaining member, and a depending clasp support including a hook-like supporting member formed integrally from a single length of wire, curved locking lengths also formed from the same length of wire with said clasp support, and a clasp member formed from the second length of wire and pivoted upon said support to coact with said curved lengths.



2. In a garment supporter formed of a pair of spring wire lengths, a safety pin and a clasp support below the pin including a hook-like member formed from the same wire length, circularly curved locking lengths substantially parallel and projecting rearwardly, formed integrally with said clasp support, and a clasp member pivotally mounted upon the hook-like member of said support and laterally coacting with said curved lengths in resisting its own displacement from closed position.

3. In a garment supporter formed from a pair of spring wire lengths, a safety pin including a head formed by the bight of one of said spring wires, a pin portion formed from a length of wire depending from said bight, an integral clasp support including an upwardly open hook-like member formed from the other length of wire depending from said bight, and a movable clasp member formed from the second piece of spring wire and pivotally mounted on the terminal of said hook-like member of said support.

4. In a garment supporter formed from a pair of spring wire lengths, a safety pin including a head formed by the bight of one of said spring wires, a pin portion formed from a length of wire depending from said bight, an integral clasp support formed from the other length of wire depending from said bight and including a hook-like member with its terminal formed of a straight length of wire, a pair of circular locking lengths formed integrally with said clasp support, and a clasp member pivotally mounted on said straight length of wire in radial relation to said locking lengths.

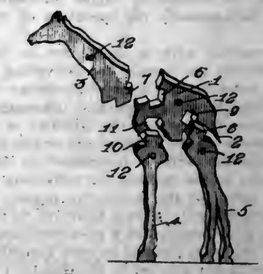
5. In a garment supporter formed from a pair of spring wire lengths, a safety pin having its head formed by a doubled bight portion of one of said wire lengths, one of the continuations from said bight portion forming the remainder of said safety pin, the other of said continuations from the bight portion forming a pair of circular locking lengths, and a pair of supporting bights connected by a cross bar at the center of curvature of said locking lengths, and the other of said spring wire lengths forming a clasp member pivoted upon said cross bar and provided with terminal hook portions adapted to radially engage said locking lengths.

1,211,590. TOY. JAMES J. KENNEDY, Brooklyn, N. Y. Filed Mar. 21, 1916. Serial No. 85,657. (Cl. 46—40.)

1. A toy comprising a body shaped to have dismembered parts connected therewith at predetermined points, and a plurality of dismembered parts, said body and said dismembered parts being provided with corresponding portions of interfitting joints by which the members are fitted and connected to the body to be held against displacement through endwise strain.

2. A toy comprising a dismembered body of animal or other shape having mortised sockets notched out of the material thereof substantially at the points of dismemberment and extending across the thickness of the material comprising the body, a plurality of members corresponding to the dismembered parts, and tenons carried by said parts of configuration corresponding to the shape of the mortised sockets arranged to be received in the sockets to hold the members fitted in the proper relation as the tenons are inserted laterally.

3. A toy comprising a plurality of body members of animal or like form, a plurality of head and leg members, dovetailed mortise sockets provided in certain of said members, and tenons carried by the remaining members to be fitted in the dovetailed sockets to hold the members secured in proper relation.

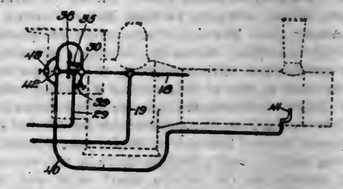


4. A toy comprising a plurality of body members of animal and like form, a plurality of head and leg members, said body members provided with substantially dovetailed shaped mortise sockets notched from the material thereof to extend transversely and through the thickness of the same, and substantially dovetailed shaped tenons carried by the dismembered parts to be fitted in the dovetailed shaped sockets through lateral movement and to hold the dismembered parts secured to the body in the proper relation and against withdrawal through strain exerted in a line with the plane in which the bodies and dismembered parts are disposed.

5. A toy comprising a plurality of body members of a substantial thickness in their transverse extent, a plurality of head and like extending members for said bodies made of substantially the same thickness, substantially dovetail-shaped mortise sockets formed in said bodies at points corresponding to the natural placing of the extending members, substantially dovetail-shaped tenons formed on said members, and all of said parts so arranged that the extending members may be fitted to the body members to be held against displacement through pulling strain exerted in line with the plane in which the several members are disposed and to present a sufficient thickness in the legs of the toy to permit the same to stand upright.

[Claims 6 to 11 not printed in the Gazette.]

1,211,591. AUTOMATIC STOKING APPARATUS. WILLIAM J. KENNEY, Wilmette, and HENRY P. GROHN, Chicago, Ill., assignors to Underfeed Stoker Company of America, Chicago, Ill., a Corporation of New Jersey. Original application filed Oct. 12, 1908, Serial No. 457,199. Divided and this application filed Jan. 29, 1912. Serial No. 673,993. (Cl. 110—103.)



1. In combination with a locomotive, a furnace, an automatic steam-actuated stoker mechanism for delivering fuel to the furnace, a steam supply pipe for said stoker mechanism, a valve in said supply pipe, a locomotive throttle valve, a common actuating means for the aforesaid valves, and a valved by-pass around the valve in said supply pipe.

2. In combination with a locomotive, an automatic stoker, and means for automatically causing the operation

of the stoker when the locomotive engine is operated and for reducing the rate of operation of the stoker without entirely stopping it when the locomotive engine is stopped.

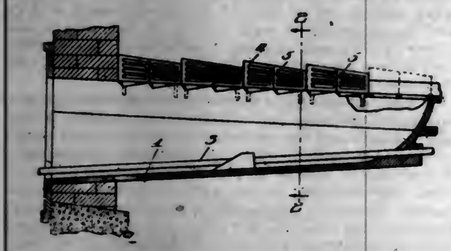
3. In combination with a locomotive, a furnace, an automatic stoker in the furnace for delivering fuel thereto, a throttle valve for the locomotive engine, and means independent of the locomotive engine for controlling the operation of the stoker by the operation of the throttle valve.

4. In combination with a locomotive, a furnace, an automatic stoker in the furnace for delivering fuel thereto, a throttle valve for the locomotive engine, and means controlled by the throttle valve and independent of the locomotive engine for varying the quantity of fuel delivered to the furnace as the speed of the engine is varied.

5. In combination with a locomotive, a furnace, an automatic stoker in the furnace for delivering fuel thereto, a throttle valve for the locomotive engine, and means for reducing the quantity of fuel delivered to the furnace and causing it to be supplied at a predetermined minimum rate when the engine is stopped by such throttle valve.

[Claims 6 to 12 not printed in the Gazette.]

1,211,592. UNDERFEED STOKER. WILLIAM J. KENNEY, Wilmette, Ill., assignor to Under-Feed Stoker Company of America, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 10, 1914. Serial No. 866,028. (Cl. 110—44.)



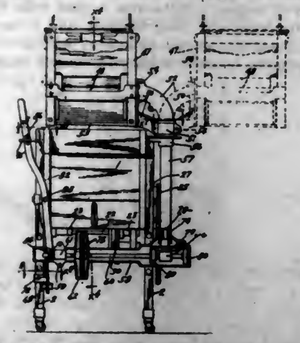
1. In combination, a retort open at the top and at one end and adapted to receive fuel through the open end, twyer blocks arranged about the top of the retort, the twyer blocks being shaped to produce a serrated inner edge containing a series of shoulders facing said open end.

2. The combination with the retort of an under-feed stoker, of twyer blocks arranged about the top of the retort, the twyer blocks being shaped to produce a serrated inner edge at the top of the retort, and the twyer blocks projecting inwardly from the upper edges of the retort and having their projecting under edges shaped to present a serrated line.

1,211,593. WRINGER-BRACKET. PETER P. KIEL, Albert Lea, Minn., assignor to Kiel Manufacturing Company, Albert Lea, Minn., a Corporation of Minnesota. Filed July 12, 1915. Serial No. 39,223. (Cl. 68—32.)

1. The combination with a support, of a wringer including a frame and a pair of coöperating wringing rollers, a vertically disposed driven shaft, a bracket connecting the frame of the wringer to the support for horisontal swinging movement around the driven shaft, said bracket having a casing section, and a flexible shaft in the casing section and connecting the driven shaft with one of the wringing rollers.

2. The combination with a support, of a wringer including a frame and a pair of coöperating wringing rollers, a vertically disposed driven shaft, a bracket connecting the frame of the wringer to the support for horisontal swinging movement around the driven shaft, said bracket having a casing section into which one of the trunnions of the wringing rollers projects, and a flexible shaft attached at one end to the driven shaft and having at its other end a socket arranged to be detachably interlocked, by an endwise movement of the flexible shaft, with the trunnion projecting into said casing.

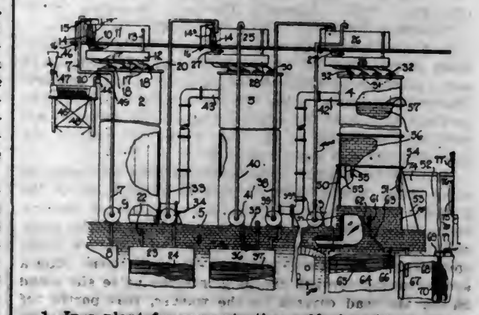


3. The combination with a support, of a wringer including a frame and coöperating wringing rollers, a bracket secured to said frame, having a depending sleeve journaled in bearings on the support and also having a casing section forming a continuation of the upper end of said sleeve, and a driven shaft journaled in the sleeve, having a flexible section mounted in the casing section of said bracket and connecting the driven shaft with the journal of one of the wringing rollers.

4. The combination with a support, of a wringer including a frame and a pair of coöperating wringing rollers, a bracket secured to said frame and having an axially divided clamp, draw bolts connecting the sections of said clamp, an upright sleeve having its upper end secured between the sections of the clamp, said sleeve being journaled in bearings on the support, a driven shaft journaled in the sleeve, and a flexible shaft section connecting said driven shaft with the journal of one of the said coöperating wringing rollers.

5. The combination with a support, of a wringer including a frame and a pair of coöperating wringing rollers, a bracket secured to said frame, having a depending sleeve and also having a casing section forming a continuation of the upper end of said sleeve, the upper end of the sleeve being journaled in a bearing on the support, a main casing provided with a bearing hub axially alined with the bearing on the support and having the lower end of the sleeve journaled thereon, a driven shaft mounted in the sleeve and journaled in said bearing hub, driving connections mounted in the main casing for driving the driven shaft in either direction, at will, and a flexible shaft mounted in the casing section and connecting the driven shaft with one of the journals of one of the wringing rollers.

1,211,594. APPARATUS FOR CONCENTRATING SULFURIC ACID. THOMAS KILROY, Bayonne, N. J. Filed Aug. 18, 1915. Serial No. 46,149. (Cl. 23—1.)



1. In a plant for concentrating sulfuric acid, a concentrating tower, means for causing the descent of sulfuric acid in fine streams downward through the tower, means for discharging products of combustion at a high temperature in the lower end of the tower, a pan disposed at the lower end of the tower, and means for applying heat beneath the pan.

2. In a plant for concentrating sulfuric acid, a plurality of towers, a plurality of tanks one for each tower, means for pumping sulfuric acid to be concentrated from each tank into its corresponding tower, means for causing the acid to descend through the corresponding tower in the form of fine streams and passing the liquid caught at the lower end of the tower into the tank for the next successive tower, a final concentrating tower, a receiving pan therein, means for passing the acid to be concentrated into the upper portion of the final concentrating tower and causing it to descend therein in fine streams, a furnace connected to the final concentrating tower and having a flue discharging into the lower portion of the tower, flues connecting the upper portion of each tower to the lower portion of the next successive tower in advance whereby to cause the heated products of combustion from the concentrating tower to pass in succession through the several towers in a course reverse to that of the descending stream and means for applying heat beneath the receiving pan of the final concentrating tower.

3. A sulfuric concentrating plant including a tower formed of metallic sections, columns supporting sections of the tower in spaced relation to the base of the tower, a lead pan removably disposed below the lower section and less in height than the space between the base and the lower section, and a wall extending around three sides of the lead pan and preventing the dissipation of heat therefrom.

4. A sulfuric acid plant including a concentrating tower formed of metallic sections, columns supporting the sections of the tower in spaced relation to the base thereof, arches extending across the lowest section of the tower and adapted to support a refractory packing, a furnace disposed in connection with said concentrating tower and having a flue opening into the lowest section of the tower, and a lead pan removably disposed below the lowest section of the tower and disposed between the column supporting said tower whereby the pan may be slid laterally from beneath the tower.

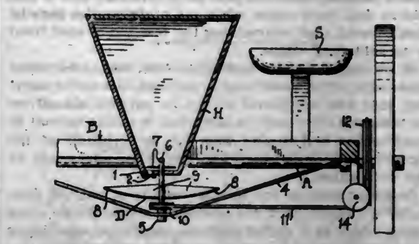
1,211,595. SPIGOT-VALVE. ALFRED KIMMEY, Brooklyn, and JOSEPH D. CARL, Elmhurst, N. Y. Filed Feb. 8, 1916. Serial No. 76,960. (Cl. 137—4.)



1. The combination with a valve stem having a recessed seating end, of a plug swivelingly mounted in said recess and having a marginal flange in its outer face defining a recess which has the same diameter as the recess in the seating end of the valve stem, and a valve washer seating in the recess of the plug.

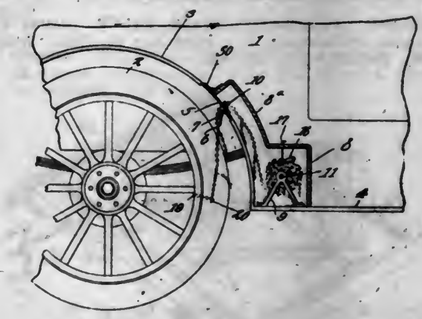
2. The combination with a valve stem having a recessed seating end, of a plug swivelingly mounted in said recess and having a marginal flange in its outer face defining a recess which has the same diameter as the recess in the seating end of the valve stem, and a valve washer seating in the recess of the plug, the swiveling connection between the plug and the valve stem being a screw passing through the plug into the valve stem, and having its head covered by the washer, that portion of the screw shank which passes through the plug being devoid of threads.

1,211,596. PLANTER. ARTHUR H. KINDT, Myerstown, Pa. Filed July 8, 1916. Serial No. 108,210. (Cl. 111—38.)



A planter comprising a portable body including a rotatable axle, a hopper carried by the body and provided with a discharge opening in its bottom, a vertically supported shaft disposed through the bottom of the hopper at one side of the opening therein, a pulley affixed to the shaft, a second pulley affixed to the axle, an endless member disposed around both of said pulleys, guide pulleys coacting with said endless member, and a scatterer fixed to the shaft at a point intermediate the bottom of the hopper and the pulley on the shaft.

1,211,597. AUTO DEVICE. WILLITTS A. KRESS, Coffeyville, Kans. Filed Feb. 10, 1916. Serial No. 77,488. (Cl. 21—114.)



In a vehicle, a running board; a mud guard having an opening; a casing located in the angle defined by the running board and the mud guard; a vertically movable lid for the casing and having an aperture; standards carried by the running board and located within the casing; a shaft journaled in the standards and projecting at one end through the casing; winding means detachably assembled with the projecting end of the shaft; a ratchet wheel secured to the shaft; a pawl pivoted to the casing and coacting with the ratchet wheel; a pawl controlling member assembled with the pawl and projecting through the aperture in the lid; and a flexible traction member provided at one end with wheel engaging means, the traction member being extended through the opening in the mud guard and being connected with the shaft.

1,211,598. METHOD OF AND APPARATUS FOR TESTING CORSETS. CORA H. LAKE, Chicago, Ill. Filed Jan. 22, 1916. Serial No. 73,542. (Cl. 73—51.)

1. A method of testing corsets which comprises securing one edge of each of the two sections of a corset in contiguous parallel relation, maintaining the outer edges in spaced parallel relation, and stretching the corset in a line normal to said outer edges while maintaining the parallel relation thereof, and determining the relation of the said contiguous edges to said outer edges.

2. A method of testing back-lace corsets which comprises securing the front edge of the two sections of a corset in contiguous parallel relation, maintaining the back edges in spaced parallel relation, stretching the corset in a line normal to said back edges while maintaining the parallel relation thereof, and determining the relation of said front edges to said back edges.

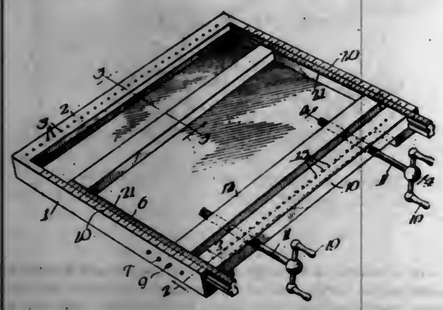
3. In an apparatus for testing corsets, means to which the outer edges of a corset may be secured, means for maintaining said first-mentioned means in parallel spaced relation, whereby the corset is stretched in a line normal to its outer edges and means whereby the relation of the contiguous edges of the corset to said outer edges may be readily determined.

4. In an apparatus for testing corsets, a pair of relatively movable bars, each provided with means for securing the outer edges of a corset thereto, means for separating and maintaining said bars in parallel spaced relation, whereby the corset is stretched in a line normal to its outer edges, and means whereby the relation of the contiguous edges of the corset to said outer edges may be readily determined.

5. In an apparatus for testing corsets, a pair of relatively movable bars, each provided with a plurality of spaced openings corresponding to the eyelets in the outer edges of a corset, pins in said openings adapted to engage said eyelets, means for separating and maintaining said bars in parallel spaced relation, whereby the corset is stretched in a line normal to its outer edges, and means whereby the relation of the contiguous edges of the corset to said outer edges may be readily determined.

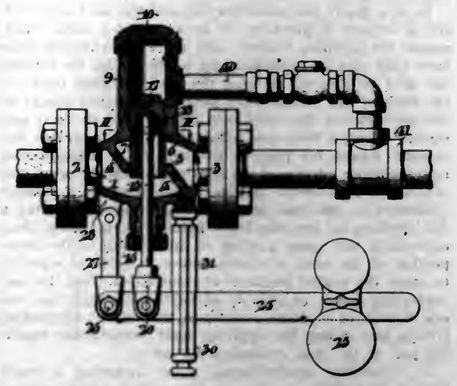
[Claims 6 and 7 not printed in the Gazette.]

1,211,599. AUTOMATIC DRAIN-VALVE. JAMES D. LALOR, Philadelphia, Pa. Filed May 21, 1914. Serial No. 839,953. (Cl. 137—69.)



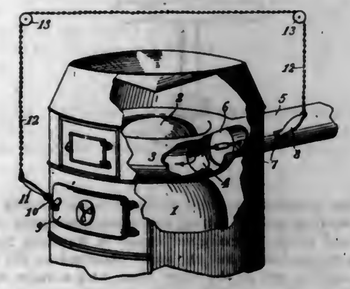
1. In an automatic drain valve, the combination of an inlet, an outlet, a horizontal partition located between the inlet and the outlet, an orifice in the partition, a dome located adjacent the orifice, a hollow valve cylinder closed at the top adapted to reciprocate in the orifice and dome, an aperture in the side of the valve cylinder adapted to be closed by the sides of the dome when the valve cylinder is raised, and opened when the cylinder is lowered, and means whereby the normal fluid pressure on the inlet side of the valve holds the valve cylinder to its raised and closed position, while a predetermined diminution of said pressure allows the cylinder to fall, opening the aperture and permitting the fluid to flow therethrough to the outlet pipe.

2. In an automatic drain valve, the combination of an inlet pipe, an outlet pipe, a horizontal partition located between the inlet pipe and the outlet pipe, an orifice in the partition, a dome located adjacent the orifice, a hollow valve cylinder closed at the top adapted to reciprocate in the orifice and dome, an aperture in the side of the valve cylinder adapted to be closed by the sides of the dome when the valve cylinder is raised, and opened when the cylinder is lowered, a by-pass leading from the dome to the outlet pipe, and means whereby the normal fluid pressure on the inlet side of the valve holds the valve cylinder in its raised and closed position, while a predetermined diminution of said pressure allows the cylinder to fall, opening the aperture and permitting the fluid to flow therethrough to the outlet pipe.



3. In an automatic drain valve, the combination of an inlet pipe, an outlet pipe, a horizontal partition located between the inlet pipe and the outlet pipe, an orifice in the partition, a dome located adjacent the orifice, a hollow valve cylinder closed at the top adapted to reciprocate in the orifice and dome, an aperture in the side of the valve cylinder adapted to be closed by the sides of the dome when the valve cylinder is raised, and opened when the cylinder is lowered, a by-pass leading from the dome to the outlet pipe, a stem made fast at its upper end to said valve cylinder and adapted to reciprocate therewith, having its lower end projecting without the valve casing, and a weight adjustably secured in relation to said valve stem, whereby the effective weight of the valve cylinder may be varied and thereby given such relation to the normal fluid pressure as to establish a predetermined pressure point at which the valve cylinder will fall and open the valve.

1,211,600. AUTOMATIC DAMPER. AUGUST H. LANDWEHR, Holland, Mich., assignor to Holland Furnace Company, Holland, Mich., a Corporation of Michigan. Filed Mar. 23, 1914. Serial No. 826,753. (Cl. 126—286.)



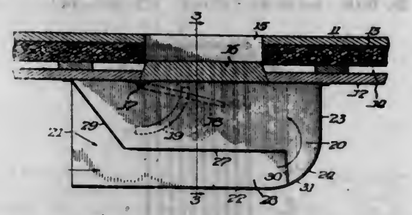
In a furnace having a front door and a radiating chamber with a smoke pipe extending horizontally therefrom, a rotary shaft mounted horizontally within the smoke pipe and having one end extending into the radiating chamber, a valve mounted on the shaft within the radiating chamber, an operating lever mounted on the opposite end of the shaft and extending through the smoke pipe to the exterior thereof, a latch lever pivoted to the furnace and means for connecting said operating lever with the latch lever, whereby said latch lever and valve can be operated in unison.

1,211,601. WAGON-JACK. LAWRENCE LARSON, Milford, Iowa. Filed Apr. 21, 1916. Serial No. 92,643. (Cl. 21—20.)



The combination with a wagon body having individually removable transversely arranged bottom boards, of a movable jack adapted to rest upon the top of the wagon body and comprising a pair of spaced bars, a filler block and a guide strap, a pair of brackets supported between the spaced bars, a pivoted lever adjustable in said brackets, and a chain and hook attached to the lever adapted to lift the bottom boards successively.

1,211,602. VENTILATOR. HOSMER W. LEEDS, Chicago, Ill. Filed June 26, 1915. Serial No. 36,431. (Cl. 98—22.)



1. In a ventilator the combination of a hood open at one end to provide an inlet and having intermediate its ends an outlet port to the apartment to be ventilated, a partition wall disposed between the outlet and inlet and extending from the front to a point adjacent the rear of the hood and forming with the walls of the hood a single tortuous air-entraining duct.

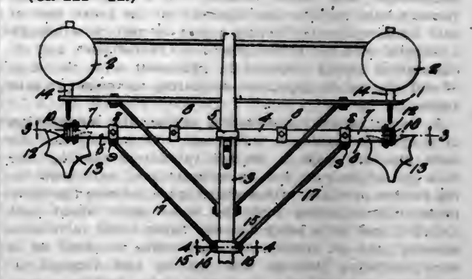
2. In a ventilator the combination of a hood open at one end to provide an air inlet and having intermediate its ends upon one side thereof an outlet port to the apartment to be ventilated, a vertical partition wall extending in front of the outlet from the open end of the hood to a point near the rear end thereof to form with the outer wall of the hood an air entraining duct separated from the outlet port by said partition wall.

3. In a ventilator the combination of a hood open at one end to provide an inlet and having an outlet port to the apartment to be ventilated, a partition wall disposed between the outlet and inlet and forming with the walls of the hood a single tortuous air-entraining duct, a riffle plate disposed in the bottom of the duct to catch detritus carried by the air, the wall of the hood apertured on its rear lower portion adjacent the riffle plate to permit the escape of detritus.

4. In a ventilator the combination of a hood open at one end to provide an air inlet and having an outlet port to the apartment to be ventilated, a partition wall disposed between the inlet and outlet and extending from the open end of the hood to a point near its closed rear end to form a tortuous air-entraining duct, a riffle plate disposed in the bottom of the duct to catch detritus carried by the air, the wall of the hood apertured in its lower portion adjacent the inner end of the partition wall to permit the escape of detritus.

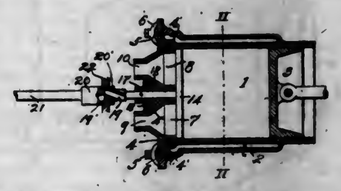
5. In a ventilator the combination of a hood open at one end to provide an air inlet and having intermediate its ends upon one side thereof an outlet port to the apartment to be ventilated, a vertical partition wall extending in front of the outlet from the open end of the hood to a point near the rear end thereof to form with the outer wall of the hood an air-entraining duct separated from the outlet port by said partition wall, the wall of the hood apertured in its lower portion adjacent the inner end of the partition wall to permit the escape of detritus carried by the air.

1,211,603. SEED-PLANTER. JOSEPH LETRICH, El Centro, Cal. Filed June 28, 1916. Serial No. 106,458. (Cl. 111—11.)



An attachment for planters comprising a main bar, means for attaching the bar to the tongue of a planter, angle bars, shovel supporting standards adjustably connected each to one arm of each angle bar, clamps adjustably connecting the remaining arms of the angle bars to the main bar, certain of said clamps having loops, a clamp adapted to be secured to the tongue of a planter, and brace bars connecting the last named clamp and said loops.

1,211,604. INTERNAL-COMBUSTION ENGINE. REED M. LEWIS, Aliquippa, Pa. Filed Feb. 21, 1914. Serial No. 820,093. (Cl. 123—81.)



1. In an internal combustion engine, the combination of a cylinder of a uniform bore and having its head provided with a central valve-stem opening and with an intake port and an exhaust port, said ports being disposed beyond said valve-stem opening, a disk valve mounted on a stem extending through said opening and disposed on the inner face of said head, said valve having a port formed therethrough to control both the intake port and the exhaust port, and reciprocating means disposed in alinement with the stem of and adapted to impart an oscillating movement to said valve.

2. In an internal combustion engine, the combination with the cylinder having a uniform bore of a removable head provided with a central valve-stem opening and with an intake port and an exhaust port, said ports being disposed beyond said valve-stem opening, a disk valve mounted on a stem extending through said opening and disposed on the inner face of said head, said valve having a port formed therethrough to control both of said intake and exhaust ports, and reciprocating means disposed in alinement with the stem of and adapted to impart an oscillating movement to said valve.

3. In an internal combustion engine, the combination of a cylinder having its head provided with a central valve-stem opening and with an intake port and an exhaust port, one disposed opposite the other, said ports being disposed beyond said valve-stem opening, an oscillatable disk valve mounted on a stem extending through said opening and disposed on the inner face of said head,

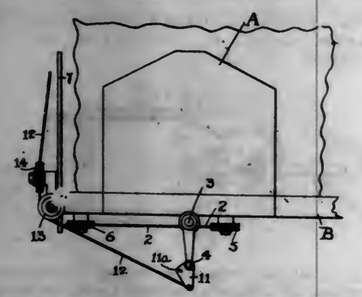
said valve having a port formed therethrough to control both the intake port and exhaust port, and reciprocating means disposed in alinement with the stem of and adapted to impart an oscillating movement to said valve.

4. In an internal combustion engine, the combination with the cylinder, of a removable head provided with a central valve-stem opening and with an intake port and an exhaust port, one disposed opposite the other, said ports being disposed beyond said valve-stem opening, an oscillatable disk valve mounted on a stem extending through said opening and disposed on the inner face of said head, said valve having a port formed therethrough to control both the intake port and exhaust port, and reciprocating means disposed in alinement with the stem of and adapted to impart an oscillating movement to said valve.

5. In an internal combustion engine, the combination of a cylinder having a water space thereabout and its head provided with a central valve-stem opening and with an intake port and an exhaust port, said head being further provided with a water space between the valve ports communicating with the water space about said cylinder, said ports being disposed beyond said valve-stem opening, and an oscillatable disk valve mounted on a stem extending through said opening and disposed on the inner face of said head, said valve having a port formed therethrough to control both the intake port and exhaust port.

[Claim 6 not printed in the Gazette.]

1,211,605. STARTING MECHANISM FOR THE MOTORS OF MOTOR ROAD-VEHICLES. GEORGE PATRICK MCDONNELL, Mullinahone, Ireland. Filed Jan. 18, 1916. Serial No. 72,842. (Cl. 74—5.)

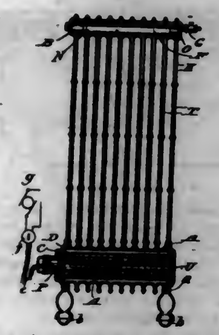


1. The combination with a motor shaft provided with a clutch member, of a starting shaft, a clutch member on said starting shaft, means for normally keeping the clutch member on said starting shaft out of contact with the clutch member on said motor shaft, a starting member disposed at the rear of said starting shaft, and connections between said starting member and said starting shaft arranged to cause rotation and lengthwise axial movement of said starting shaft when said starting member is moved in one direction to bring said clutch members into potential coacting relation, and to rotate said starting shaft in the opposite direction to impart rotary motion to the motor shaft when said starting member is moved in the opposite direction.

2. The combination with a motor shaft provided with a clutch member, of a starting shaft, a clutch member on said starting shaft, means for normally keeping the clutch member on said starting shaft out of contact with the clutch member on said motor shaft, a starting lever disposed at the rear of said starting shaft, a starting handle secured at the front of said starting shaft, connections between said starting lever and said starting shaft operable by movement of said starting lever in one direction to cause rotation and rearward movement of said starting shaft to bring its clutch member into potential coacting relation with the clutch member on the motor shaft, and connections between said starting lever and said starting handle operable by movement of said starting lever in the opposite direction to cause rotation of said starting shaft whereby rotation is imparted to the motor shaft.

3. The combination with a motor shaft provided with a clutch member, of a starting shaft, a clutch member on said starting shaft, means for normally keeping the clutch member on said starting shaft out of contact with the clutch member on said motor shaft, a starting lever disposed at the rear of said starting shaft, a starting handle secured at the front of said starting shaft, connections, including a tension member, between said starting lever and said starting shaft operable by movement of said starting lever in one direction to cause rotation and rearward movement of said starting shaft to bring its clutch member into potential coacting relation with the clutch member on the motor shaft, and connections between said starting lever and said starting handle operable by movement of said starting lever in the opposite direction to cause rotation of said starting shaft whereby rotation is imparted to the motor shaft.

1,211,606. ELECTRICALLY-HEATED RADIATOR. JOHN D. MCDONALD, Sudbury, Ontario, Canada, assignor to McDonald Hydro-Electro Heating Company Limited. Filed Jan. 8, 1913, Serial No. 741,132. Renewed Nov. 23, 1916. Serial No. 133,065. (Cl. 237—16.)



1. A radiator, comprising a series of independent thin, flat radiator sections, each constructed of a pair of thin flat sheet metal plates united at their edges and an independent narrow strip of metal centrally and longitudinally and vertically arranged between and terminating short of the upper and lower ends of said plates and riveted to the plates, said sections adapted to be partially filled with water, a heating unit applied to said radiator for heating the water therein, an expansion tube connecting the upper ends of said sections and communicating with the spaces therein above the water level, and an automatic valve for exhausting the air from said sections through said expansion tube.

2. A radiator, comprising a series of thin, flat independent sections, each constructed of a pair of thin flat sheet metal plates united at their edges, and an independent narrow strip of metal centrally and longitudinally and vertically arranged between said plates and terminating short of the upper and lower ends of the plates and riveted to the plates, and means for connecting said sections.

3. An electrically heated radiator, comprising a series of thin, flat, independent radiator sections adapted to be partially filled with water, means for connecting said sections, including a tube passing through the lower ends of said sections and adapted to receive an electric heating unit for heating the water in said sections, an expansion tube passing through the upper ends of said sections and communicating with the spaces above the water level therein, and an automatic valve fitted in said expansion tube, whereby the air is confined in the spaces at the upper ends of said sections and automatically exhausted therefrom as the water is heated by said heating unit.

4. A radiator, comprising a series of thin, flat straight sections, each constructed of a pair of plates, united at their edges, and an interposed spacer riveted together, the sides of each section inclined from end to end to provide greater water capacity at one end of the sections than at the other.

5. A radiator comprising a series of thin, flat, straight sections, each constructed of a pair of plates, united at their edges, and an interposed spacer riveted together, the sides of each section inclined inwardly from top to bottom, to thereby provide greater water capacity at the top of said sections than at the bottom thereof.

1,211,607. TELEPHONE APPARATUS. MAURICE K. MCGRATH, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 30, 1915. Serial No. 37,179. (Cl. 179—90.)

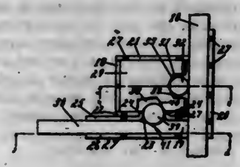


1. In a telephone set, the combination of a signal transmitter, a telephone receiver, and means for removably supporting said receiver in position to interfere with access to and use of said signal transmitter.

2. In a telephone set, the combination of a support, a signal transmitter mounted thereon, a telephone receiver, and a switch-hook mounted on said support and arranged to hold said receiver in position to interfere with access to and use of said signal transmitter.

3. In a telephone desk set, the combination of a support having base and standard members, a signal transmitter mounted on said base member, a telephone receiver, and a switch-hook mounted in said standard member and extending over said signal transmitter arranged to hold said receiver above said signal transmitter and in a position to interfere with use of the latter until said receiver is removed from said switch-hook.

1,211,608. ADJUSTING MECHANISM. CHARLES A. MANKIN, Sturgis, Mich., assignor to Jerrold F. Walton, Sturgis, Mich. Filed Mar. 20, 1916. Serial No. 85,848. (Cl. 155—27.)



1. In a structure of the class described, the combination of a slide bar, a coacting clutch roller having a central peripheral groove, a casing-like support member provided with a way for said slide bar, a clutch roller cage member way disposed transversely of said slide bar way, and an actuating member way disposed at the side of said cage member slide way, there being an opening between said cage member and actuating member ways constituting an actuating roller cage, an actuating roller disposed in said cage, a clutch roller cage member provided at its inner end with a clutch roller recess having a V-shaped rear wall and with a longitudinal bore opening into said recess at the apex thereof, said cage member being provided with a recess opposite said actuating roller cage having a forwardly inclined front edge coacting with said actuating roller, a spring disposed in the said bore of said cage member with one end engaged with said groove of said clutch roller and the other connected to said support so that it acts to center the roller and retract said cage member, an actuating member disposed in said actuating member slide way and having a cam coacting with said actuating roller, a spring urging said actuating member to actuating position, and means for retracting said actuating member.

2. In a structure of the class described, the combination of a slide bar, a coacting clutch roller having a central peripheral groove, a casing-like support member provided with a way for said slide bar, a clutch roller cage member way disposed transversely of said slide bar way, and an actuating member way disposed at the side of said cage member slide way, there being an opening between said cage member and actuating member ways constituting an actuating roller cage, an actuating roller disposed in said cage, a clutch roller cage member provided at its inner end with a clutch roller recess having a V-shaped rear wall and with a longitudinal bore opening into said recess at the apex thereof, said cage member being provided with a recess opposite said actuating roller cage having a forwardly inclined front edge coacting with said actuating roller, a spring disposed in the said bore of said cage member with one end engaged with said groove of said clutch roller and the other connected to said support so that it acts to center the roller and retract the said cage member, and an actuating member disposed in said actuating member slide way and having a cam coacting with said actuating roller.

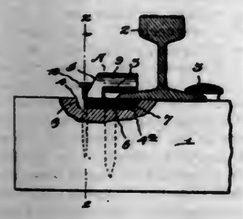
3. In a structure of the class described, the combination of a slide bar, a coacting clutch roller having a knurled periphery and a central peripheral groove, a casing-like support member provided with a way for said slide bar, a clutch roller cage member way disposed transversely of said slide bar way, an actuating roller disposed in said cage, a clutch roller cage member provided at its inner end with a clutch roller recess having a V-shaped rear wall and with a longitudinal bore opening into said recess at the apex thereof, a spring disposed in the said bore of said cage member with one end engaged with said groove of said clutch roller and the other connected to said support so that it acts to center the roller and retract said cage member, and means for actuating said cage member.

4. In a structure of the class described, the combination of a slide bar, a coacting clutch roller, a casing-like support member provided with a way for said slide bar, a clutch roller cage member way disposed transversely of said slide bar way, and an actuating member way disposed at one side of said cage member slide way, there being an opening between said cage member and actuating member ways constituting an actuating roller cage, a clutch roller cage member provided at its inner end with a clutch roller cage having oppositely disposed clutching surfaces with which said clutch roller coacts, a spring connected to said roller and to said support so that it acts to center the roller and retract said cage member, an actuating roller, said cage member being provided with a surface inclined to the plane of its movement with which said roller coacts, a reciprocating actuating member having a cam coacting with said actuating roller, and a spring urging said actuating member to actuated position.

5. In a structure of the class described, the combination of a slide bar, a coacting clutch roller having a central peripheral groove, a casing-like support member provided with a way for said slide bar and a clutch roller cage member way disposed transversely of said slide bar way, a clutch roller cage member provided at its inner end with a clutch roller cage having oppositely disposed clutching surfaces with which said clutch roller coacts, a spring engaged with said groove of said clutch roller and connected to said support, so that it acts to center the roller and retract said cage member, and means for actuating said cage member.

[Claims 6 to 16 not printed in the Gazette.]

1,211,609. RAILROAD-SPIKE HOLDER. HARRY A. MANSFIELD, Monroe, Nebr. Filed June 15, 1916. Serial No. 103,762. (Cl. 238—4.)

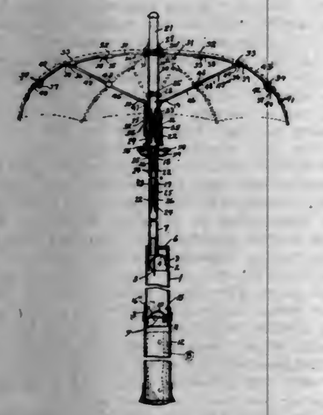


1. A device of the kind described comprising a block, shoes carried by the underface of the block and projecting laterally beyond the block, said shoes having oppositely inclined ends, and a transversely curved projecting hood carried by the upper portion of the block.

2. A spike holder comprising a block having an upwardly sloping outer face, a horizontally projecting hood carried by the upper portion of the block, and shoes carried by the under face of the block and projecting beyond the same, said shoes being V-shape in cross section and having oppositely tapering end portions.

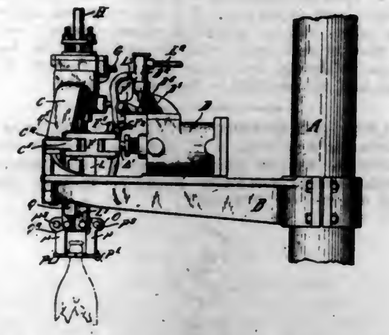
3. The combination with a wooden tie and a spike, of a block, a hood carred by the block and adapted to cover the spike head, and shoes carried by the block and adapted to enter said tie and extend beneath a rail base, the outer ends of the shoes sloping upwardly and inwardly, said shoes when forced into position forming grooves on opposite sides of the spike, as and for the purpose set forth.

1,211,610. FOLDING UMBRELLA. CONRAD P. MENSEN, San Francisco, Cal. Filed May 13, 1915. Serial No. 27,783. (Cl. 135—26.)



In an umbrella, the combination with a jointed standard, of a series of jointed ribs and braces pivoted thereto, the jointed ribs being channel shaped in cross-section and having loops at their inner ends surrounding the next adjacent rib section, and springs lying in the channels of said ribs and adapted to bear on the outer ends of the next adjacent inner rib sections to hold the ribs extended, each rib having a plurality of joints, the spring locks of which are successively released by the sliding of the outer rib ends over the next adjacent inner rib spring lock.

1,211,611. LIFT-OUT FOR BOTTLE-MAKING MACHINES. JOHN J. MEYER, Jr., Glenshaw, Pa., and JOHN G. LEPPER, Bridgeport, Conn., assignors to Glenshaw Glass Company, Glenshaw, Pa., a Corporation of Pennsylvania. Filed July 5, 1916. Serial No. 107,517. (Cl. 49—14.)



1. In a machine of the kind described, the combination with a movable arm, of pneumatically operated means for moving said arm, a bottle gripping device carried at the free end of said arm, and pneumatically operated means for raising and lowering, opening and closing said gripping device.

2. In a device of the kind described, the combination with a movable arm and means for moving the same, of an air cylinder arranged at the end of said arm, a second cylinder operatively connected with said first mentioned cylinder, a bottle gripping device, and operative connections between said gripping device and said second cylinder.

3. In a device of the kind described, the combination with a movable arm and means for moving the same, of an air cylinder arranged at the end of said arm, a rod working through said cylinder, a second cylinder upon the end of said rod, a bottle gripping device carried by and operated from said cylinder together with pneumatically operative means for raising and lowering said second cylinder.

4. In a device of the kind described, the combination with a movable arm and means for moving the same, of an air cylinder arranged at the end of said arm, a second cylinder arranged below the first named cylinder and movable with reference thereto, a bottle gripping device carried by and operated from said second cylinder together with automatic means for opening the bottle gripping device simultaneously with the completion of the outward movement of the arm.

5. In a machine of the kind described, the combination with a movable arm and means for moving the same, of an air cylinder arranged at the free end of said arm, a piston movable therein the rod of said piston passing through said cylinder, a second cylinder carried at the lower end of said rod, a piston in said second cylinder operative from the first cylinder, a bottle gripping device connected with said piston of the second cylinder, and means operative from the arm moving means to release said bottle gripping device.

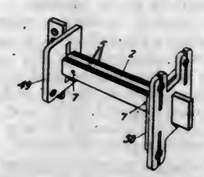
[Claim 6 not printed in the Gazette.]

1,211,612. SWITCHING DEVICE FOR TELEPHONE SYSTEMS. DANIEL D. MILLER, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 8, 1915. Serial No. 32,847. (Cl. 175—321.)

1. An electromagnet having a core composed of a plurality of superposed sections of different lengths.

2. An electromagnet having a core composed of a long section and a plurality of shorter sections superposed thereon.

3. An electromagnet having a core composed of a long solid section having a plurality of shorter sections of laminæ secured thereto.

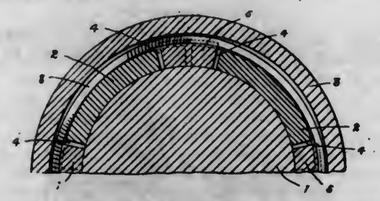


4. In an electromagnet, a pair of spool-heads, a main core section extending therethrough, and auxiliary sections located on said main section between said spool heads.

5. In an electromagnet, a winding and a core composed of two sections, one extending beyond the winding and the other being co-extensive therewith.

[Claim 6 not printed in the Gazette.]

1,211,613. ROD PACKING-RING. CLARENCE E. MOORE, Virginia, Minn. Filed Feb. 28, 1916. Serial No. 80,880. (Cl. 137—116.)

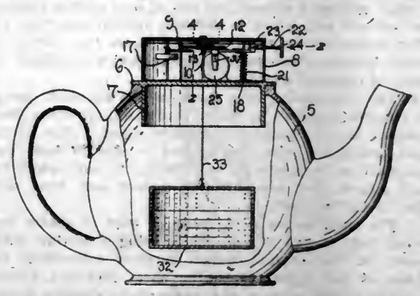


1. The combination with a packing ring composed of a plurality of segmental shaped sections having oppositely disposed through slots in the ends thereof and an endless contractile spring for holding the sections together, of segmental shaped filler blocks intermediate the ends of the sections extending within the through slots and whose outer and inner walls are concentric with the bore of the sections, the outer wall being in the form of a seat for the contractile spring and of a diameter greater than that of the outside of the sections, and flanges on the sides only of the filler blocks for covering the space at the sides thereof intermediate the adjacent ends of the sections.

2. A packing ring for reciprocating rods comprising four identical segmental shaped sections having through rectangular shaped radial slots formed in the adjacent ends thereof, segmental shaped coöperative filler blocks formed concentric with the sections and designed to snugly fill laterally but not longitudinally the slots in the ends of the sections, laterally projecting flanges formed integral with the block and projecting flush with the edges of the sections and tightly covering the space between the adjacent ends thereof, semi-circular shaped seats in the peripheral surfaces of the blocks formed concentric with the sections but of a diameter greater than that of the outer surface thereof and an endless contractile spiral spring held laterally within the seats in the blocks, surrounding the same and the sections and forcibly engaging them both.

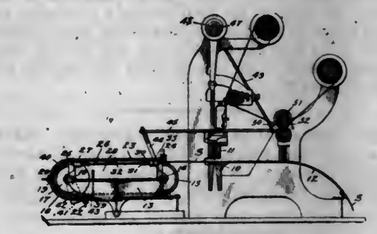
1,211,614. AUTOMATIC TEAPOT. CALEB A. MORALES, New York, N. Y. Filed Sept. 27, 1916. Serial No. 122,456. (Cl. 161—16.)

1. The combination with a vessel and closure therefor, a spring controlled drum mounted upon the closure, latch means holding the drum against rotation under the action of its spring, a container, a flexible element connected at one of its ends to the container and at its other end to said drum, a movable element having means to engage and actuate the latch device of the drum, manually operable means to dispose said element in a predetermined position with respect to the latch device, and timing mechanism with which said element co-acts and whereby it is moved to actuate the latch and release the drum, whereby the container is elevated in the vessel.



2. The combination with a teapot and closure therefor, of a casing carried by said closure, a spring-controlled drum mounted in said casing, latch means holding the drum against rotation under the action of its spring, a flexible element connected at one of its ends to the drum, a tea container to which the other end of said element is connected and by which it is suspended within the pot, a dial secured to the casing, an indicator movable over the dial, clock mechanism to actuate said indicator, a gear segment geared to the clock mechanism, a spring connected to said gear segment, manually operable setting means to actuate the gear segment and set the indicator, said spring urging the gear segment to its normal position, and means on the gear segment co-acting with the latch means for the drum to release the drum upon the return of the gear segment to normal position, whereby the tea container is elevated above the level of the liquid in the pot.

1,211,615. PAPER-FEED. EDGAR W. MYERS, San Jose, Cal., assignor, by mesne assignments, to Masteroll Perforating Machine Company, Los Gatos, Cal., a Corporation of California. Filed Apr. 25, 1914. Serial No. 834,447. (Cl. 164—116.)



1. The combination of a frame, a driving shaft, means for imparting motion to the driving shaft, traveling sheet clamping devices situated to engage opposite sides of the sheet, means for imparting motion to said devices from said shaft, and supports for said devices, one being shiftable toward and from the other to adjust for sheets of different width.

2. The combination of a frame, a driving shaft, means for imparting motion to the driving shaft, endless carriers receiving motion from said driving shaft, a series of sheet clamping devices spaced along each of said carriers, said clamping devices having each a movable jaw, means in the path of travel of said jaws to actuate the same, and a support for one of said endless carriers which is shiftable toward and from the other endless carrier to adjust the distance from carrier to carrier between their sheet-clamping device to adjust for sheets of different width.

3. The combination of a frame, a driving shaft, means for imparting motion to the driving shaft, endless carriers receiving motion from said driving shaft, a series of sheet clamping devices spaced along each of said carriers, said clamping devices having each a movable jaw, a spring for

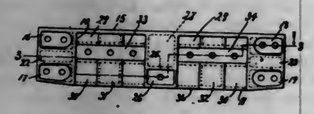
each jaw acting to move it to an open position, a rail contiguous to the path of travel of the movable jaws that is engaged by them to move them in opposition to the action of their springs, a support for one of said endless carriers and for said rail, which is shiftable toward and from the other endless carrier to adjust the distance from carrier to carrier between their sheet-clamping device to adjust for sheets of different width.

4. The combination of a frame, a driving shaft, means for imparting motion to the driving shaft, traveling sheet clamping devices situated to engage opposite sides of the sheet, means for imparting motion to said devices from said shaft, and supports for said devices through which the shaft passes that are shiftable toward and from each other along the shaft.

5. The combination of a frame, a pair of shafts supported thereby, one of said shafts being a driving shaft, wheels on the shafts, endless carriers connecting the wheels of the respective shafts, sheet clamping devices mounted on said carriers, and frame plates slidably mounted on the two shafts and straddling the respective wheels on the shaft whereby shifting of the plates is accompanied by shifting of the wheels and their carriers.

[Claims 6 to 10 not printed in the Gazette.]

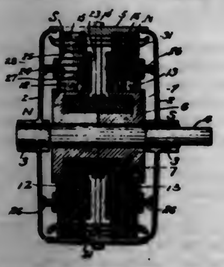
1,211,616. DRAFT-PLATE. CHARLES J. NASH, Chicago, Ill., assignor to Universal Draft Gear Attachment Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1915. Serial No. 21,665. (Cl. 213—42.)



1. A draft plate having draft and buffing lugs with continuous faces, a longitudinal section of the body of the plate being off set backwardly to form a bearing to engage and be secured to a support, such off set terminating at and being connected with the faces of the lugs.

2. A draft plate having stop lugs and intermediate limiting stops, the body of the plate having a horizontal section lying above its median line backwardly offset forming a channel in its face extending across the limiting stops, the portion of such stops located below the channel constituting a spring guide.

1,211,617. DYNAMO-ELECTRIC MACHINE. ALFONS H. NEULAND, San Francisco, Cal., assignor to Neuland Electrical Company, Inc., a Corporation of New York. Filed Aug. 27, 1913. Serial No. 786,907. (Cl. 171—252.)



1. In a dynamo electric machine, means for producing a magnetic flux, a stationary element and a rotatable element adapted to be traversed by said magnetic flux, and a plurality of relatively movable elements arranged between said stationary element and said rotatable element.

2. In a dynamo electric machine, means for producing a magnetic flux, means for modifying said magnetic flux, a stationary element and a rotatable element adapted to be traversed by said magnetic flux and a plurality of relatively movable bars arranged in the path of the magnetic flux and spaced from the stationary and rotatable elements adapted to vary the reluctance of the magnetic circuit at different portions of the machine.

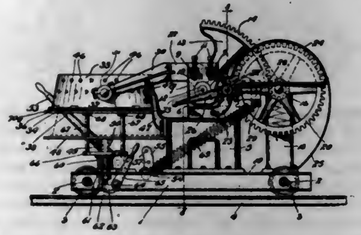
3. In a dynamo electric machine, a magnetizing winding adapted to produce a magnetic flux, an armature winding adapted to modify said magnetic flux and a magnetic circuit adapted to be traversed by said flux, including a stationary element, a rotatable element and a plurality of relatively movable bars spaced from said elements and adapted by their relative movement to vary the resistance of the circuit at different portions thereof.

4. In a dynamo electric machine, a stator including circularly arranged elements spaced apart radially, a rotor including circularly arranged elements spaced apart radially and alternating with the stator elements, a winding on said stator, and a magnetizing winding, said stator and rotor forming part of a magnetic circuit, the circularly arranged elements thereof being arranged to vary the reluctance of the magnetic circuit at different portions thereof.

5. In a dynamo electric machine, a stator including an annular element and a concentric series of spaced bars spaced radially from said element and separated magnetically therefrom.

[Claims 6 to 29 not printed in the Gazette.]

1,211,618. MOLDING-MACHINE. OSCAR P. NYSTROM, Holland, Mich. Filed Oct. 30, 1915. Serial No. 58,831. (Cl. 22—32.)



1. In a molding machine, spaced apart supports, a shaft extending between the supports, spaced apart members connected to the shaft and extending therefrom, a flask pivotally mounted to turn about a horizontal axis between the ends of said members, a table located below the flask and to one side of the supports and means for rotating the shaft and attached members through an arc of a circle to elevate the flask above the table to permit its rotation, substantially as described.

2. In a molding machine, a table, a flask located above the table, supporting arms for the flask, said flask being rotatably mounted between the arms, means to operate the arms to raise and lower the flask with respect to the table, said means comprising a shaft to which the arms are secured, gearing associated with the shaft, and means to operate the gearing.

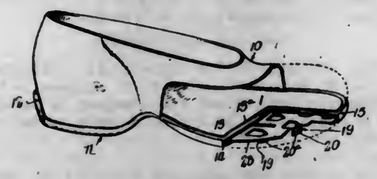
3. In a molding machine, spaced apart supports, a shaft rotatably mounted therein, arms connected to the shaft, a flask rotatably mounted between the free ends of the arms, a table on which the flask may rest, means to rotate the shaft to raise and lower the flask with respect to the table, means for raising and lowering the table, and means secured to the supports to hold the arms from downward movement beyond a predetermined point.

4. In a molding machine, a shaft, supports therefor, arms secured to and projecting from the shaft, a flask rotatably mounted between the arms, a bar pivotally mounted to one of the arms, means for detachably connecting the bar to the flask to hold it in rigid relation with respect to the arms, and means for rotating the shaft to raise and lower the flask, substantially as described.

5. In a molding machine, spaced apart vertical supports, a cross member connecting the upper ends thereof, a post slidably mounted for vertical movements in the cross member, a table attached to the upper end of the post, means for raising and lowering the post and table, vertical sleeves on the supports, rods slidable in the sleeves, members carried at the upper end of the rods, rods projecting from the members through the table, devices vertically adjustable carried in the upper ends of the rods, and means to raise and lower the first mentioned rods in the sleeves, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,211,619. ANTISKID OR ANTISLIP TREAD. AUGUST J. OEHRING, Chicago, Ill., assignor of one-half to Albert L. Tucker, Chicago, Ill. Filed Jan. 24, 1916. Serial No. 73,773. (Cl. 36—59.)



1. An anti-skid or anti-slip tread, comprising a pad of elastic material, a plurality of spaced, non-yielding studs fixed in said pad, said studs each consisting of two vertical sheet metal webs, which converge in one direction only, the bottom edges of said webs terminating in the plane of the tread surface of the pad, the webs forming said studs being surrounded on all sides by the material of the pad, and means providing a backing against which said pad may be compressed relative to said webs, to expose the converging bottom edges of said webs.

2. An anti-skid or anti-slip tread, comprising a pad made of elastic material, a plurality of spaced, non-yielding studs fixed in said pad, said studs each consisting of two vertical sheet metal webs which converge in one direction only, the bottom edges of said webs terminating in the plane of the tread surface of the pad, the webs forming said studs being surrounded on all sides by the material of the pad, and a plate in said pad to which said stud webs are fixed.

3. An anti-skid or anti-slip tread, comprising a pad of elastic material, a sheet metal plate in said pad, and a plurality of spaced, non-yielding studs fixed in said pad, said studs each consisting of two vertical sheet metal webs punched from said plate and depending therefrom, said webs converging in one direction only to form a V, the converging bottom edges of said webs terminating in the plane of the tread surface of the pad, and the webs forming said studs being surrounded on all sides by the material of the pad.

1,211,620. CORNER-POST FOR CABINETS AND OTHER FURNITURE AND THE PROCESS OR METHOD OF MANUFACTURING SAME. SAMUEL E. OVERTON, South Haven, Mich. Filed Jan. 26, 1916. Serial No. 74,376. (Cl. 45—48.)

1. An ornamental corner post for cabinets, comprising a straight shaft portion 2, with a straight molding formed thereon, ornaments, the backs of which are exactly conformed to the molding of said corner post, and the outer portions suitably carved, and a leg, the outer portion of which is made up of a suitably carved ornamental portion and the rear portion of which is made up of the carved lower portion of the post blended with the carving of the ornament, as specified.

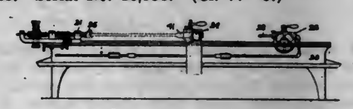
2. An ornamental corner post for cabinets, comprising a straight shaft portion 2, with a straight molding formed thereon, and a leg, the outer portion of which is made up of a suitably carved ornamental portion and the rear portion of which is made up of the carved lower portion of the post blended with the carving of the ornament, as specified.

3. The process of forming a corner post and leg for cabinets consisting in forming a straight molding at the outer portion of said post, conforming a separate outer portion for the leg to the lower end of said post, carving



the outer surface of the same, jointing it to the said leg, and carving and finishing the inner portion of the completed leg to blend it with the said outer ornamental portion, as specified.

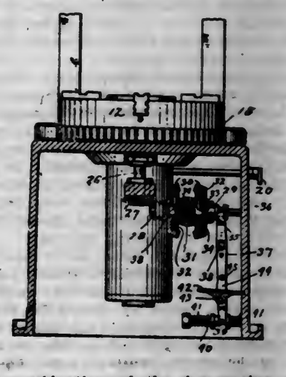
1,211,621. GUN-BARREL-DRILLING MACHINE. JOSEPH E. PETERSON, Norwich, Conn., assignor of one-half to Charles A. Poole, Norwich, Conn. Filed Aug. 28, 1915. Serial No. 46,955. (Cl. 77—5.)



1. In a barrel drilling machine, means for revolubly supporting the ends of a barrel-blank, yielding thrust bearings therefor, and resilient members for cushioning said bearings, of relatively different resistances.

2. In a barrel drilling machine, means for revolubly supporting a barrel blank, and yielding thrust bearings of relatively different resistance located at the opposite ends of said blank.

1,211,622. POWER-OPERATED LATHE-CHUCK. JAMES C. POTTER, Pawtucket, R. I. Filed May 23, 1914. Serial No. 840,569. (Cl. 29—126.)

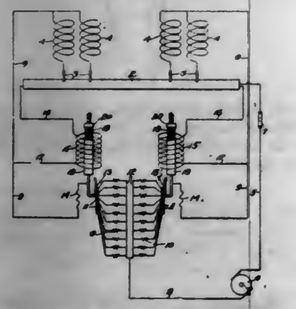


1. The combination of the jaw-moving means of a chuck, a driven shaft operatively connected therewith,

alternately acting oppositely rotating members on said shaft, a power driven machine shaft, a constantly acting operative connection between said driven shaft and said rotating members, and means for operatively connecting either of said rotating members at a time with said driven shaft.

2. The combination of the jaw-moving means of a chuck, a shaft parallel with and eccentric to the chuck axis and operatively connected with said jaw-moving means, a second shaft geared to said first mentioned shaft, a pair of bevel gears loose on said second named shaft, a driving shaft, a gear on the latter constantly meshing with said loose gears, and means to connect said loose gears alternately with their shaft.

1,211,623. ELECTRICALLY-OPERATED PIANO-PLAYER. WALTER C. REED, Dalton, Mass., assignor to The Telelectric Company, Pittsfield, Mass., a Corporation of Massachusetts. Filed Jan. 29, 1913. Serial No. 744,814. (Cl. 84—228.)



1. An electrically-operated piano player comprising a series of playing magnets arranged in parallel circuits, means for closing the circuits through the several magnets according to the notes to be played thereby, a controller magnet included in a normally closed circuit arranged in parallel with the playing magnet circuits, and means operated by said controller magnet for substantially maintaining a predetermined strength in the current sent through each one of such playing magnets as are in closed circuit at one time.

2. An electrically-operated piano player comprising a series of playing magnets arranged in parallel circuits, means for closing the circuits through the several magnets according to the notes to be played thereby, a controller magnet included in a normally closed circuit arranged in parallel with the playing magnet circuits, means operated by said controller magnet for substantially maintaining a predetermined strength in the current sent through each one of such playing magnets as are in closed circuit at one time, and means for varying the predetermined current strength.

3. An electrically-operated piano player comprising a series of playing magnets arranged in parallel branches of a circuit having a portion which is common to all the magnets of the series, means for closing the branch circuits through the several magnets according to the notes to be played thereby, a resistance included in the common portion of the playing magnet circuit, and means for automatically varying said resistance comprising a controller magnet included in a normally closed circuit arranged in parallel with the playing magnets.

4. An electrically-operated piano player comprising a series of playing magnets arranged in parallel branches of a circuit having a portion which is common to all the magnets of the series, means for closing the branch circuits through the several magnets according to the notes to be played thereby, a resistance included in the common portion of the playing magnet circuit, a controller magnet included in a normally closed circuit arranged in parallel with the playing magnets, means operated by the controller magnet for varying said resistance to such an extent as to substantially maintain a predetermined strength in the current sent through each one of such playing magnets as are in closed circuit at one time, and means for varying the predetermined current strength.

5. An electrically-operated piano player comprising a series of playing magnets arranged in parallel branches of a circuit having a portion which is common to all the magnets of the series, means for closing the branch circuits through the several magnets according to the notes to be played thereby, a resistance included in the common portion of the playing magnet circuit, a solenoid included in a normally closed circuit arranged in parallel with the playing magnets, a plunger movable in one direction by said solenoid, a spring for moving said plunger in the opposite direction, and means operated by the plunger for varying said resistance.

[Claims 6 to 8 not printed in the Gazette.]

1,211,624. COVERING FOR IRREGULAR SURFACES. HERMAN W. RITTER, Brooklyn, N. Y., assignor to The Goodyear's Metallic Rubber Shoe Company, a Corporation of Connecticut. Filed Mar. 4, 1915. Serial No. 12,012. (Cl. 154—43.)



1. A rubber covered article comprising a relatively rigid form, a covering of yieldable fabric attached to said form, and a layer of vulcanized rubber compound superimposed on and united to said fabric.

2. A rubber covered article comprising a relatively rigid form, said form consisting of an inner element held in position and partially inclosed by an outer element, a covering of yieldable fabric attached to said form, and a layer of vulcanized rubber compound superimposed on and united to said fabric.

3. A rubber covered article comprising an upper element, the edges of said upper element being bent downwardly; a lower element, the edge portions of said lower element being bent upwardly to overlap and grip the edges of said upper element; and layers of yieldable fabric and vulcanized rubber compound successively applied to and united with the outer surfaces of said rigid elements.

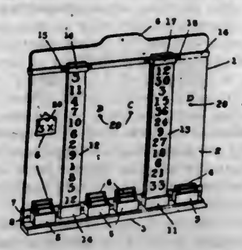
4. A rubber covered article comprising two overlapping metallic segments, coverings of knitted fabric on the outer surfaces of said segments, vulcanized rubber superposed thereon, said fabric and rubber being turned smoothly around the edges of said outer segment and clamped between the overlapping margins of said segments.

5. A rubber covered article comprising a relatively rigid form having an irregular surface, a covering of yieldable fabric conforming smoothly to the contour of said form, and a layer of vulcanized rubber compound superimposed on and united to said fabric.

[Claims 6 to 8 not printed in the Gazette.]

1,211,625. EDUCATIONAL DEVICE FOR TEACHING ARITHMETIC. MAY ROBBINS, Newark, and HERMAN DRESSEL, Kearney, N. J. Filed Mar. 8, 1915. Serial No. 12,718. (Cl. 35—2.)

1. In an apparatus of the character described, the combination with a back or board, of a strip having a column of numbers thereon, means for removably displaying said strip on said back or board, a series of cards each bearing an inscription adapted to indicate with the successive numbers of said strip different arithmetical operations to be performed by a pupil, means on said back or board adjacent the lateral edges of said strip for detachably supporting said cards, and means on said back or board for filing said cards when not in use.



2. In an apparatus of the character described, the combination with a back or board, of a single strip having a column of numbers thereon, and a series of strips each having on itself a column of multiples of said numbers, means for removably displaying said strips on said back or board, a series of cards each bearing an inscription adapted to indicate with the successive numbers of said strips different arithmetical operations to be performed by a pupil, means on said back or board adjacent the lateral edges of said strips for detachably supporting said cards, and means on said back or board for filing said cards when not in use.

3. In an apparatus of the character described, the combination with a back or board, of a strip having a column of numbers thereon, a band at the bottom of said back or board adapted to receive the lower end of said strip, means at the top of said back or board for removably receiving the top of said strip, a series of cards each bearing an inscription adapted to indicate with the successive numbers of said strip different arithmetical operations to be performed by a pupil, means on said back or board adjacent the lateral edges of said strip for detachably supporting said cars, and means on said back or board for filing said cards when not in use.

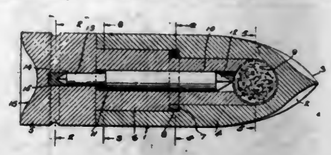
4. In an apparatus of the character described, the combination with a back or board, of a strip having a column of numbers thereon, a band at the bottom of said back or board adapted to receive the lower end of said strip, a ledge below said band upon which the strip may rest, means at the top of said back or board for removably receiving the top of said strip, a series of cards each bearing an inscription adapted to indicate with the successive numbers of said strip different arithmetical operations to be performed by a pupil, means on said back or board adjacent the lateral edges of said strip for detachably supporting said cards, and means on said back or board for filing said cards when not in use.

5. In an apparatus of the character described, the combination with a back or board, of a strip having a column of numbers thereon, a band at the bottom of said back or board adapted to receive the lower end of said strip, a band at the top of said back or board for removably receiving the top of said strip, a series of cards each bearing an inscription adapted to indicate with the successive numbers of said strip different arithmetical operations to be performed by a pupil, means on said back or board adjacent the lateral edges of said strip for detachably supporting said cards, and means on said back or board for filing said cards when not in use.

[Claim 6 not printed in the Gazette.]

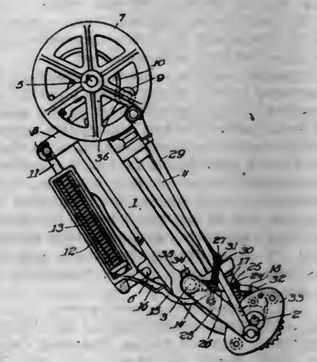
1,211,626. SHELL. FRANK ROBERTSON, Dayton, Ohio. Filed July 2, 1915. Serial No. 37,729. (Cl. 102—29.)

A projectile including a hollow shell comprising complemental shell sections, a yielding ball containing an explosive substance disposed forwardly and interiorly of the shell, one of the shell sections engaging the ball to act as a retaining means therefor, a longitudinally movable percussion device mounted interiorly of the shell, one end of said device normally contacting the mentioned ball,



means to releasably maintain the percussion device against movement, said device being movable forcibly into contact with the ball and the explosive substance therein incident to contact of the projectile with a resisting object, substantially as described.

1,211,627. GRAIN-BINDER. CHARLES W. ROBINSON, Hamilton, Ontario, Canada, assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Aug. 29, 1913. Serial No. 787,285. (Cl. 56—126.)



1. A trip stop for binders comprising a body portion and a head portion reciprocable with respect to the body portion and adapted to engage a movable part of the binder mechanism.

2. A trip stop for binders comprising a body portion and a yieldingly mounted head portion reciprocable with respect to the body portion.

3. A trip stop for binders comprising a body portion and a yieldingly mounted head portion reciprocable with respect to the body portion, and means for adjusting the amount of yielding thereof.

4. A trip stop for binders comprising a body portion and a yieldingly mounted head portion reciprocable with respect to the body portion, and means including a slot and pin connection intermediate said head and body portion for limiting the movement of the former.

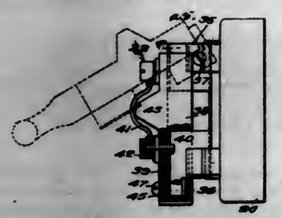
5. In combination, a rotating clutch member, and an oscillating spring controlled trip stop comprising a body portion and a head portion reciprocable with respect to the body portion and disposed in the path of said clutch member.

[Claims 6 to 15 not printed in the Gazette.]

1,211,628. ELECTRIC SWITCH. JOSEPH SACHS, Hartford, Conn. Filed Mar. 25, 1915. Serial No. 16,836. (Cl. 175—292.)

1. A connector, the ends of which are of resilient split tubular form, said tubularly formed portions having contact lips extending outwardly therefrom and constituting continuations of the side walls of the split portions thereof, said tubularly formed parts being expansible and con-

tractible approximately throughout the entire transverse extent thereof, whereby the contact lips at each end of the connector will be yieldingly moved toward each other by said tubularly formed portions.



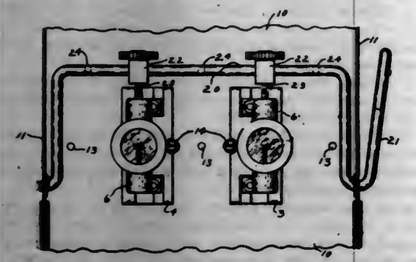
2. A connector having two contact members each comprising a resilient split tubular head provided with projecting contact lips at opposite sides of the split thereof, the head being expansible and contractible approximately throughout its entire transverse extent, and means carrying a fuse element for mechanically connecting said contact members.

3. A connector having contact portions at its ends each comprising a resilient split tubular head provided with projecting contact lips at opposite sides of the split thereof, the head being expansible and contractible approximately throughout its entire transverse extent, and a handle connected with said connector.

4. A connector having contact portions at its ends, each comprising a split tubular head provided with projecting contact lips at opposite sides of the head thereof, the head being expansible and contractible approximately throughout its entire transverse extent, and a fuse element supported by and constituting part of said connector.

5. A connector having contact portions at its ends, each comprising a split tubular head provided with projecting contact lips at opposite sides of the head thereof, the head being expansible and contractible approximately throughout its entire transverse extent, said connector being provided with means for the connection therewith of a fuse element.

1,211,629. ELECTRIC SWITCHING AND METER-TESTING SYSTEM. JOSEPH SACHS, Hartford, Conn. Filed Apr. 28, 1915. Serial No. 24,451. (Cl. 175—183.)



1. A base block unit comprising a base, a pair of contacts and a connector to make and break connection between said contacts, said base block unit being provided with means to function for circuit controlling or meter testing purposes, the said base block being usable alone as stated or in conjunction with coacting means to present an appliance of different structural character serving also for circuit controlling or meter testing purposes, and said base block unit being also adapted to coact with a complemental base block unit, the two units when operatively related with each other, or with coacting means, presenting an appliance of a different character electrically or structurally.

2. A base block unit comprising a base, a plurality of pairs of contacts and a connector coöperative with each pair of contacts, said base block unit having means to permit it to function for circuit controlling or meter testing purposes, the said block base unit being usable alone as stated or in conjunction with coacting means to present an appliance of different structural character serving also for circuit controlling or meter testing or both purposes, and a second base block unit comprising a base and a single pair of contacts and complemental connector, and having means to permit it to function for similar purposes, the two base block units when operatively related with each other or with coacting means presenting an appliance of a different character electrically or structurally.

3. An appliance serving for circuit controlling or meter testing purposes comprising a plurality of base block units, each of which is composed of a base and at least a single pair of contacts and a complemental connector, said base block units being each provided with means to function either in themselves or collectively for circuit controlling or meter testing purposes and said appliance having means whereby the number of base blocks used may be either increased or decreased to change said appliance to one of different character.

4. Two base block units, each of said units comprising a base, a pair of contacts and a connector to make and break connection between said contacts, one of said units being fitted with a single pair of contacts and complemental connector and another of said units being fitted with a plurality of pairs of contacts and complemental connectors, each of said units being provided with means to function for circuit controlling or meter testing purposes and being usable alone or in conjunction with coacting means to present an appliance of different structural character serving also for circuit controlling or meter testing or both purposes or being adapted to serve together for similar purposes and said units being also adapted to coact with a complemental unit or units, the plurality of units when operatively related with each other, or with coacting means, presenting an appliance of a different character electrically or structurally.

5. A base block unit comprising a base, a pair of contacts and a connector provided with means to serve for circuit controlling or testing purposes, the said base block unit being usable alone or in conjunction with coacting means to present an appliance of different structural character serving also for circuit controlling or meter testing purposes and said base block unit being also adapted to coact with a complemental base block unit, the two units when operatively related with each other, or with coacting means, presenting an appliance of a different character electrically or structurally.

[Claims 6 to 16 not printed in the Gazette.]

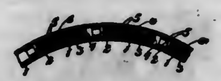
1,211,630. CIGAR-BAND. GEORGE P. SCHREIBER, Baltimore, Md. Filed July 15, 1916. Serial No. 109,551. (Cl. 40—21.)



An improved article of manufacture consisting of a flexible cigar band having means for adhesively connecting the end portions thereof, one of said end portions being laterally curved and the other end portion of the band overlying said curved end and having an oblique line of perforations therein extending circumferentially of the cigar in coinciding relation with one edge of said curved end, the terminal of the curved end of the band being free and projecting beyond one of the side edges of the perforated end of the band.

1,211,631. BRACELET. ABRAHAM SCHWARTZMAN, St. Louis, Mo., assignor of one-half to Leo S. Bauman, St. Louis, Mo. Filed Mar. 20, 1916. Serial No. 85,447. (Cl. 59—79.)

1. An expansible bracelet or the like comprising a plurality of units, each unit including an inner tubular member provided with a spring abutment, an outer tubular member also provided with a spring-abutment, said outer member fitting around and being movable upon said inner member and the inner member of one unit being rigidly fixed at one end to and within the adjacent end of the outer member of the next unit, and a spring disposed wholly within said inner member and between the abutments of said inner and outer members, said spring being compressed on expanding movement of said outer member upon said inner member.



2. An expansible bracelet or the like comprising a plurality of units, each unit including an inner tubular member provided with a spring-abutment, an outer tubular member also provided with a spring-abutment, said outer member fitting around and being movable upon said inner member and the inner member of one unit being rigidly fixed at one end to and within the adjacent end of the outer member of the next unit, and a spring disposed wholly within said inner member and between the abutments of said inner and outer members, said spring being compressed on expanding movement of said outer member upon said inner member, the abutment of said outer member being adapted to engage with said inner member to limit expanding movement of said outer member upon said inner member.

3. An expansible bracelet or the like comprising a plurality of units, each unit including an inner approximately tubular member closed at one end and slotted lengthwise inwardly from its opposite end, an outer member fitting around and movable upon said inner member, the inner member of one unit being fixed at its slotted end to the adjacent end of the outer member of the next unit, a cross-piece on said outer member fitting in the slot of said inner member and adapted to engage the end wall of said slot to limit the expanding movement of said outer member on said inner member, and a spring within said inner member, said spring being interposed between the closed end of said inner member and said cross-piece and being compressed on expanding movement of said outer member on said inner member.

4. An expansible bracelet or the like comprising a plurality of units, each unit including an inner approximately tubular member closed at one end and having a pair of alining slots extending lengthwise inwardly from its opposite end, an outer approximately tubular open-ended member fitting around and movable upon said inner member, the inner member of one unit being fixed at its slotted end to and within the adjacent end of the outer member of the next unit, a cross-piece on said outer member fitting in the slots of said inner member, said cross-piece being adapted to engage the end wall of said slots to limit the expanding movement of said outer member on said inner member, and a coiled spring lengthwise fitting within said inner member, said spring being interposed between the closed end of said inner member and said cross-piece and being compressed on expanding movement of said outer member on said inner member.

5. In an expansible bracelet or the like, a unit including an inner tubular member provided with a spring abutment, an outer tubular member also provided with a spring abutment, said outer member fitting around and being movable upon said inner member and said inner member being adapted to be rigidly fixed at one end to the adjacent end of the outer member of the next unit of the bracelet, and a spring disposed lengthwise wholly within said inner member, said spring being interposed between the abutments of said inner and outer members and being compressed on expanding movement of said outer member on said inner member.

[Claims 6 to 8 not printed in the Gazette.]

1,211,632. MOLD. OTTO G. SHAW and GEORGE A. MCKENZIE, Bay City, Mich. Filed Jan. 11, 1916. Serial No. 71,487. (Cl. 25—122.)

In combination with a mold for making concrete blocks composed of a mass of body material and a layer of facing material, said mold having a face plate of irregular surface; a removable facing sheet of flexible material, said sheet carrying said layer of facing material secured to



the sheet by adhesive, the said sheet being porous, and adapted to be shaped to the irregular surface of the face plate by the pressure of the body material.

1,211,633. REVERSIBLE DRIVING-CHUCK. FREDERICK S. SHORT, Springfield, Mo. Filed May 19, 1916. Serial No. 98,491. (Cl. 29—124.)



1. An automatic chuck comprising a shank and chuck body rigidly connected, said chuck body providing a supporting wall having a central chamber, a double cam surface within said chamber and rigid with respect to said supporting wall, and jaw members within said chamber arranged to coact with said cam surface when the latter is rotated with respect to said jaw members, said jaw members having a normal closing action whereby any article engaged thereby tends to hold the jaws stationary until movement of the shank and chuck body causes said cams to engage with said jaw members.

2. An automatic chuck comprising a shank and chuck body rigidly connected, said chuck body providing a supporting wall having a central chamber, double cam surfaces within said chamber and rigid with respect to said supporting wall, jaw members within said chamber arranged to coact with said cam surfaces when the latter are rotated with respect to said jaw members, and yieldable resilient means engaging said jaw members and holding the same in a normally closed position whereby any article engaged thereby tends to hold the jaws stationary until movement of the shank and chuck body causes the said cams to engage with said jaw members.

3. A chuck comprising a chuck body providing a supporting wall having a central chamber, a double cam surface within said chamber and rigid with respect to said supporting wall, jaw members within said chamber arranged to co-act with said cam surface when rotated in either direction with respect to said supporting wall, an annularly extending groove on the periphery of the said jaw members, and a substantially circular spring member seated in said groove and embracing said jaw members to normally hold said members together.

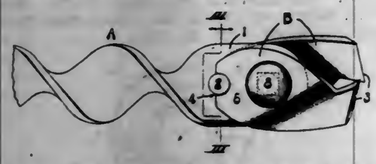
4. A chuck comprising a chuck body providing a supporting wall having a central chamber, a plurality of double cam surfaces within said chamber and rigid with respect to said supporting wall, said cam surfaces providing eccentric recesses within said chamber between said surfaces, a plurality of jaw members within said chamber having eccentrically formed extensions corresponding to said eccentric recesses, an annularly extending groove on the periphery of said jaw members, and a substantially circular spring member seated in said groove and embracing said jaw members to normally hold said members together, said jaws engaging with said cam surfaces upon rotary movement in either direction of said jaws with respect to said supporting wall.

5. A chuck comprising a chuck body providing a supporting wall having a central chamber, a double cam surface within said chamber and rigid with respect to said

supporting wall, jaw members within said chamber arranged to co-act with said cam surface when rotated in either direction with respect to said supporting wall, an annularly extending groove on the periphery of said jaw members, and a substantially circular spring member seated in said groove and embracing the jaw members to normally hold said members together, said supporting wall within said chamber having an annularly extending groove providing a groove on the surface of said cam member to receive said spring when said jaw members engage said double cam surface.

[Claims 6 to 10 not printed in the Gazette.]

1,211,634. DRILL. SAMUEL T. SKEEN, Sandoval, Ill. Filed Mar. 24, 1916. Serial No. 86,353. (Cl. 255—69.)



1. A drill having a stem, a pair of blades fitted to opposite sides of said stem, said blades being deflected to lap each other and to extend in opposite directions from points on opposite sides of the axis of the stem, each of said blades having two seats one of which is adapted to engage one side of the stem and the other being adapted to engage the other side of the stem, and said seats being located at opposite sides of each blade so that the blades may be interchanged with each other to increase the distance between the extremities of their cutting edges, and means for securing each blade to either side of said stem.

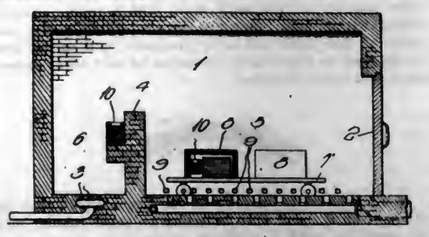
2. A drill having a stem, a pair of blades fitted to opposite sides of said stem and extending in opposite directions from points on opposite sides of the axis of said stem, said blades being deflected to lap each other at opposite sides of the axis of the stem, each of said blades having two oppositely disposed seats one of which is adapted to engage one side of the stem and the other being adapted to engage the other side of the stem, and said seats being located on opposite sides of each blade, so that each blade may be fitted to one side of the stem with its deflected portion extending partially around an edge of the stem or fitted to the opposite side of the stem so that its deflected portion will extend from the last mentioned side without lapping an edge of the stem, and means for securing each blade to either side of said stem.

3. A drill having a stem, a pair of blades fitted to opposite sides of said stem, said blades being deflected to lap each other and to extend in opposite directions from points on opposite sides of the axis of the stem, each of said blades having two seats one of which is adapted to engage one side of the stem and the other being adapted to engage the other side of the stem, and said seats being located at opposite sides of each blade so that the blades may be interchanged with each other to increase the distance between the extremities of their cutting edges, means for securing each blade to either side of said stem, said means including a screw threaded fastening device extending through both blades, and means for interlocking each blade with either side of said stem.

1,211,635. PROCESS FOR HEATING STEEL AND TIN PLATES. VICTOR C. SMITH, Wheatland, Pa. Filed Oct. 1, 1915. Serial No. 53,551. (Cl. 148—21.)

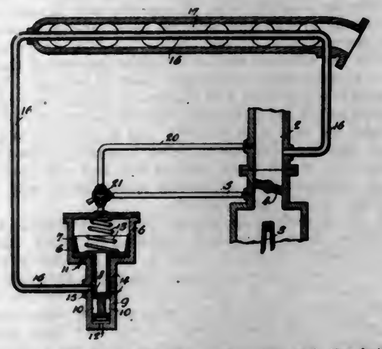
1. A method of heating tin and steel bars which consists in placing them in a furnace supplied with the necessary heat and consuming the oxygen from the atmosphere which is contained in the furnace and surrounds the bars being treated.

2. A method of heating metal bars which consists in placing them in a suitable furnace and subjecting them to the action of an atmosphere in which a soft metal is melted and boiled at a low temperature, thereby preventing said bars from scaling and welding.



3. A method of heating metal bars which consists in placing them in a furnace, supplying the necessary heat to said furnace for heating the bars to the desired extent, and melting and boiling lead within said furnace at a point where the heat is greatest, whereby the temperature in the furnace is rendered uniform, the oxygen of the atmosphere in the furnace consumed and scaling and sticking of the metal bars is prevented.

1,211,636. AUXILIARY AIR-SUPPLY FOR INTERNAL-COMBUSTION ENGINES. WILLIAM B. A. SPRAY, Vancouver, British Columbia, Canada. Filed Dec. 30, 1915, Serial No. 69,449. Renewed Nov. 6, 1916. Serial No. 129,908. (Cl. 48—180.)



1. In combination with the carbureter and the intake pipe between the carbureter and the engine, said carbureter having a throttle valve; of a duct for delivering auxiliary air into the manifold on the engine side of the throttle valve, means governed by the suction produced on the carbureter side of the throttle valve for controlling the flow of auxiliary air through said duct.

2. In an internal combustion engine, the combination with an induction pipe through which gaseous fuel is delivered to the engine and the throttle valve regulating such admission, of a pipe delivering a supplementary supply of air to the induction pipe on the engine side of the throttle valve, a valve controlling the amount of air delivered through the pipe, means for holding that air control valve normally closed, and means operative by the partial vacuum on the atmospheric side of the throttle valve for opening the air control valve.

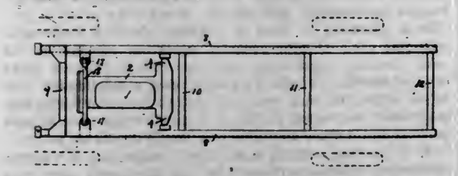
3. In an internal combustion engine, the combination with the induction pipe through which the gaseous fuel is delivered to the engine and the throttle valve regulating such admission, of a pipe delivering a supplementary supply of air to the induction pipe on the engine side of the throttle valve, a valve controlling the amount of air so delivered, means for holding that air control valve normally closed, and a piston connected to the valve which piston is endwise movable in a cylinder, and means for connecting the cylinder to the atmospheric side of the throttle valve whereby the partial vacuum therein will open the valve.

4. In an internal combustion engine, the combination with the carbureter having a throttle valve and the induction pipe between the carbureter and the engine through which the gaseous mixture is delivered to the engine, of an air admission valve, a duct governed by said air admission valve for delivering auxiliary air into the induction pipe between the throttle valve and the engine, said air valve including a vacuum chamber, a duct between said vacuum chamber and the delivery end of the carbureter on the carbureter side of the throttle valve.

5. In an internal combustion engine, the combination with the carbureter having a throttle valve and the induction pipe between the carbureter and the engine through which the gaseous mixture is delivered to the engine, of an air admission valve, a duct governed by said air admission valve for delivering auxiliary air into the induction pipe between the throttle valve and the engine, said air valve including a vacuum chamber, a duct between said vacuum chamber and the delivery end of the carbureter on the carbureter side of the throttle valve, and a supplemental duct between said vacuum chamber and the induction pipe on the engine side of said throttle valve, and a three-way valve for effecting communication between said vacuum chamber and the respective ducts.

[Claim 6 not printed in the Gazette.]

1,211,637. THREE-POINT SUSPENSION FOR VEHICLE-MOTORS. JOHN SQUIRES, Detroit, Mich., assignor to Signal Motor Truck Company, Detroit, Mich., a Corporation of Michigan. Filed May 27, 1916. Serial No. 100,194. (Cl. 21—90.)



1. In a vehicle, the combination of a main frame, and a cross bar, springs carried by said main frame for positioning the ends of said cross bar, an engine sub-frame positioned adjacent the main frame, a longitudinal pin connecting one end of the sub-frame to said cross bar, and a pair of universal joints connecting the opposite end of the sub-frame to the main frame.

2. In a vehicle, the combination of a main frame, a sub-frame, an internal combustion engine, a cross bar resiliently mounted on the main frame and provided with a horizontal pivot intermediate its ends, sockets mounted on the side bars opposite each other, said sub-frame having one end mounted on the said pivot, and balls secured to the sub-frame and resting in said sockets to support the sub-frame and permit the members of the main frame to assume new positions without excessively stressing the sub-frame.

3. In a vehicle, the combination of a main frame and a cross bar, a pin extending downward from each end of the cross bar, a bracket secured to each side of the frame and provided with a hole through which the pin extends, a spring on each pin between the bracket and cross bar, a spring on each pin below the bracket, a nut and washer on each pin to tension the springs, an engine positioned adjacent the cross bar, a longitudinal pin carried by one end of the engine and extending into a bearing on the cross bar, and means to connect the opposite end of the engine to the main frame.

1,211,638. BELT-DRESSING. ERVIN B. STACK, Monroe, N. C. Filed May 22, 1916. Serial No. 99,234. (Cl. 134—9.)

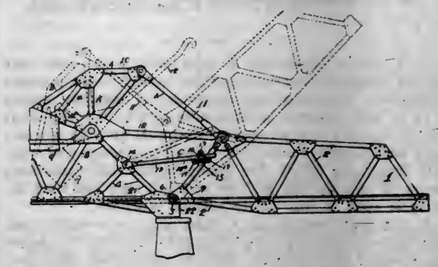
1. A composition of matter in the form of a plastic mass, comprising, rosin, linseed oil, beeswax, heavy grease, and pumice stone, the amount of rosin being more than one half of the entire composition.

2. A composition of matter in the form of a plastic mass, comprising, rosin, linseed oil, beeswax, heavy grease, pumice stone, and a coloring matter soluble in the menstrum the amount of rosin being more than one half of the entire composition.

3. A composition of matter comprising a plastic mass composed of the following materials, in substantially the portions stated:

Rosin	61%
Beeswax	8%
Linseed oil	7%
Heavy grease	7%
Pumice stone	16%
Oil-soluble coloring matter or dye	1%
	100%

1,211,639. BASCULE-BRIDGE. JOSEPH B. STRAUSS, Chicago, Ill. Filed Dec. 26, 1911. Serial No. 667,616. (Cl. 14—36.)



1. A bascule bridge comprising a movable span having trusses, a support for said movable span having trusses, the trusses of the movable span and support on the same side being in the same vertical plane and an operative connection between the trusses of the movable span and the support, in the same vertical plane as said trusses, whereby the weight transmission from the movable span to the support, while the movable span is being opened and closed, is effected within the plane of the trusses of the movable span and the support.

2. A bascule bridge comprising a movable span trusses at each side thereof, a support for said movable span having trusses at each side thereof, a counter-weight frame having trusses at each side thereof, the trusses of the movable span, support and counter-weight frame on the same side being in the same vertical plane, a counter-weight connected with said counter-weight frame, part of the members of the counterweight frame being on one side of the vertical plane containing the trusses of said movable span and support and a weight transmitting connection between the trusses of the movable span and the support, and located in the vertical plane of said trusses.

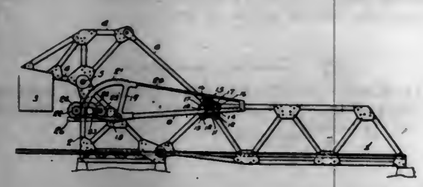
3. A bascule bridge comprising a movable span provided with trusses, an approach span provided with trusses, the approach span provided with counter-weight supporting parts, a counter-weight frame connecting with said supporting parts, the trusses of the movable span and approach span being in alinement and trunnions interposed between the ends of the adjacent trusses of said movable span and support, and in the plane of said trusses for movably connecting them together.

4. A bascule bridge comprising a movable span provided with trusses, a supporting part therefor provided with trusses, the ends of the trusses of the movable span and supporting part abutting, a weight transmitting connection contained within the limits of the trusses of the movable span and supporting part and connecting them together so that they may move relative to each other to permit the movable span to be opened and closed.

5. A bascule bridge comprising a movable span, a fixed part associated therewith, a counterweight frame rotatably mounted on said fixed part so that the parts thereof move in vertical planes and a counterweight connected with said counterweight frame for balancing the movable span, a bridgeway from the movable span to the fixed part, the counterweight frame in the closed position acting as support for said bridgeway, the counterweight being behind the bridgeway when the bridge is closed.

[Claims 6 to 13 not printed in the Gazette.]

1,211,640. BRIDGE. JOSEPH B. STRAUSS, Chicago, Ill. Filed Dec. 26, 1911. Serial No. 667,617. (Cl. 14—28.)



1. A bridge comprising a fixed part, a movable span having members fixed with relation to each other, a motor operatively connected with said movable span for moving it to its open position, a self-guiding frictional connecting device movably connecting the fixed part and the movable span, and means associated with said connection and separate from said motor, for manipulating said connecting device to increase the friction so as to stop and hold the movable span in any of its various positions.

2. A bridge comprising a fixed part, a movable span having members fixed with relation to each other, a motor for moving said movable span, a connecting piece connected with the fixed part, a connection between said connecting piece and said motor whereby the connecting piece is moved when the motor is operated, a slidable engaging device slidably connected with said connecting piece and connecting the connecting piece with the movable span, an actuating mechanism separate from said motor for actuating said sliding engaging device to cause it to clamp said connecting piece and hold the movable span in any of its various positions.

3. An operating device comprising a movable part, a pivoted beam, a support to which it is pivotally connected, a slidable engaging device slidably connected with said beam and connected with the movable part, a rack also connected with said beam, a pinion engaging said rack, and a support for said pinion.

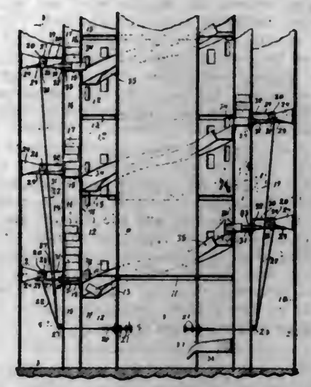
4. An operating device comprising a beam, pivoted between its ends, a slidable engaging device slidably connected with said beam on one side of said pivot, a movable part to which said slidable engaging device is connected, a rack connected with said beam on the other side of said pivot, a pinion engaging said rack, and a support for said pinion.

5. An operating device comprising a pivoted beam having a short arm and a long arm, a part to which it is pivotally connected, a counterweight on the short arm, a rack also connected with said short arm, a pinion associated with said rack; a support therefor, and an engaging device slidably connected with the long arm of said beam and a movable device connected with said engaging device.

[Claim 6 not printed in the Gazette.]

1,211,641. PACKAGE-SELLING SYSTEM. JOHN A. STROMBERG, Escanaba, Mich. Filed Mar. 11, 1915. Serial No. 13,660. (Cl. 211—8.)

1. A package selling apparatus, comprising a vertical stationary tubular structure, a series of package holding pockets supported on the wall of said structure and arranged successively around the same to provide a plurality of tiers or pockets, ejecting mechanism adjacent each of said pockets, operating mechanism for each ejecting mechanism operable from a common point on the interior of said structure, and a continuous conveyer encircling said structure within its outer walls and positioned to receive packages of goods from each of said pockets and deliver the same to a single discharge point.



2. A package selling apparatus, comprising a vertical stationary tubular structure, a series of package holding pockets supported on the wall of said structure and arranged successively and spirally around the same to provide a plurality of tiers of pockets, ejecting mechanism adjacent each of said pockets, operating mechanism for each ejecting mechanism operable from a common point on the interior of said structure, and a continuous conveyer encircling said structure within its outer walls and positioned to receive packages of goods from each of said pockets and deliver the same to a single discharge point.

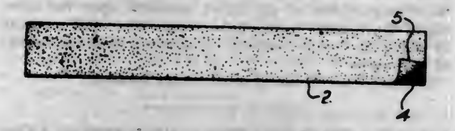
3. A package selling apparatus, comprising a vertical stationary tubular structure having horizontal partitions to form a plurality of superposed compartments, a series of package holding pockets supported on the wall of said structure and arranged successively and spirally around the same to provide a plurality of tiers of pockets, ejecting mechanism adjacent each of said pockets, operating mechanism for each ejecting mechanism operable from the interior of the lower compartment, and a continuous conveyer encircling said structure within its outer walls and positioned to receive packages of goods from each of said pockets and deliver the same to a single discharge point.

4. A package selling apparatus, comprising a plurality of concentrically disposed stationary vertical walls, a series of package holding pockets having discharge openings and supported between said walls, an ejecting mechanism adjacent each of said pockets, operating mechanism for each of said ejecting mechanisms and operable from a common point, and a continuous conveyer encircling said walls and positioned to receive packages of goods from each of said pockets and deliver the same to a single discharge point.

5. In a package selling system, the combination of a conveyer for delivering packages or parcels of goods to a point of delivery, a pocket for containing superimposed packages or parcels of goods, a plunger arranged in line to act upon the lowermost package or parcel of goods of the pile, a rack bar secured to and extending from the plunger, a rotatable shaft, a pinion mounted fast upon the shaft and engaging the rack bar, a drum mounted fast on the shaft, a pull rod under the control of an operator, a rope or cable connected to the pull rod and also wound about and connected to the drum, and means for retrieving the plunger and pull rod, after a package has been forced into the conveyer.

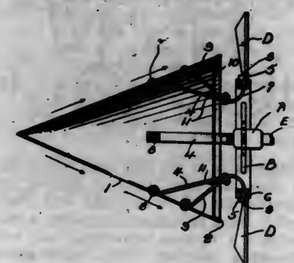
[Claims 6 and 7 not printed in the Gazette.]

1,211,642. AUTOMOBILE-TOP PATCH. HENRY C. THOMPSON, Hartford, Conn., assignor to The Hall-Thompson Company, Hartford, Conn., a Corporation of Connecticut. Filed Aug. 9, 1916. Serial No. 114,033. (Cl. 154—46.)



An automobile top repair patch comprising a mohair body provided on one side with an adhesive in the form of a rubber gum vulcanizable by natural heat, the rubber gum being compressed into the mohair body.

1,211,643. WINDMILL ATTACHMENT. STANLEY E. TWEEDY, Troy, Idaho. Filed Mar. 22, 1916. Serial No. 85,946. (Cl. 170—40.)



1. In an attachment for a wind mill, the said wind mill including a wind wheel having blades radially extending therefrom, a cone-shaped deflector mounted upon the wheel, the center of the deflector being in axial alinement with the said wheel, the said wheel carrying brackets projecting into the interior of the deflector and fastened to the inner surface thereof, the said brackets retaining the edge of the deflector in position adjacent the center of the said blades.

2. In an attachment for a wind-mill, a wind wheel having blades fastened to its periphery, brackets including strips having their ends fastened to the periphery of the wind wheel, a hollow conical deflector, the opposite ends of the said brackets being engaged and fastened to the interior of the said conical deflector, braces for the said brackets, the said brackets being curved outwardly from their point of contact with the wheel whereby the said conical deflector will be held in spaced relation to the said wheeel.

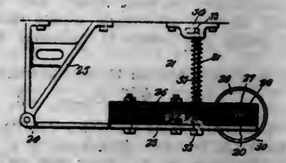
3. In an attachment for a wind-mill, a plurality of brackets carried by the wind wheel, a cone-shaped deflector mounted upon the brackets and adapted to rotate with the wind wheel, the opening in the end of the said deflector being considerably larger than the diameter of the wind wheel, a closure for the end of the said deflector having apertures through which the said brackets are extended, and braces for the said brackets, the said closure also being provided with apertures for the reception of said braces.

4. In an attachment for a wind-mill, a wind wheel having a plurality of blades attached thereto, a cone-shaped deflector having its large end of greater diameter than the diameter of the said wind wheel, a closure for the end of the said deflector, means for connecting the said deflector to the said wind wheel whereby the said deflector will be rotated with the wind wheel, the said means including braces projecting through the said closure and fastened to the inner wall of the said deflector.

5. In an attachment for a wind-mill, a deflector mounted in spaced relation to the wind wheel of the said windmill, a closure for the end of the deflector provided with a plurality of apertures, brackets comprising strips having their ends fastened to the said deflector and projecting through the said openings, the outer ends of the said strips being curved and connected to the said wind wheel, and bracing elements for preventing the collapsing of the said brackets, the longitudinal center line of the deflector being in alinement with the center line of the said wind wheel.

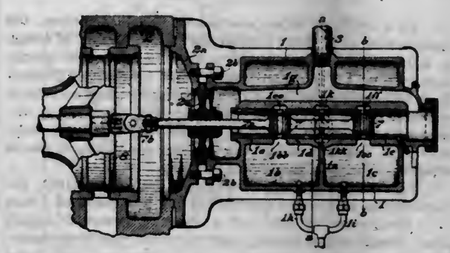
[Claim 6 not printed in the Gazette.]

1,211,644. AUTOMATIC ALARM SYSTEM. BEHREND ULFERTS, Lakefield, Minn. Filed July 27, 1915. Serial No. 42,135. (Cl. 246—26.)



In an alarm circuit of the character described and in combination with an electrical circuit adapted to be set for closure under prescribed conditions, means for closing said circuit comprising a contact rail and a contact device upon the locomotive, said contact device including a bar pivotally mounted at one end thereof, an insulation block carried by the swinging end thereof, a contact wheel carried by the swinging end of the bar, a suspension rod loosely connected with said bar and slidably and pivotally supported from the locomotive and a cushioning spring associated with said suspension rod.

1,211,645. LOCOMOTIVE-DRIFTING-VALVE MECHANISM. HARRY S. VINCENT, Ridgewood, N. J., and JOHN L. MOHUN, Brooklyn, N. Y. Filed Aug. 19, 1916. Serial No. 115,781. (Cl. 121—14.)



1. In a drifting valve mechanism for locomotives, the combination of a valve controlling the admission of steam to a locomotive cylinder, through a line independent of a throttle governed supply pipe; and means for actuating said valve by positive connections to a moving member of a locomotive, throughout, and in accordance with the speed of, the movement of the locomotive when running with its throttle closed.

2. In a drifting valve mechanism for locomotives, the combination of a valve controlling the admission of steam to a locomotive cylinder, through a line independent of a throttle governed supply pipe; and means for actuating said valve by positive connections to a moving member of a locomotive, throughout the movement of the locomotive when running with its throttle closed.

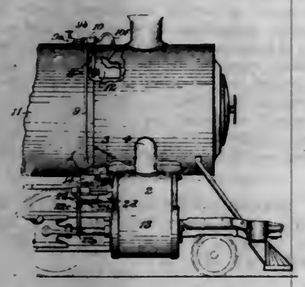
3. In a drifting valve mechanism for locomotives, the combination of a valve controlling the admission of steam to a locomotive cylinder, through a line independent of a throttle governed supply pipe; and means for effecting the alternate opening and closure of said valve by positive connections to a moving member of the locomotive, throughout the movement of the locomotive when running with its throttle closed.

4. In a drifting valve mechanism for locomotives, the combination of a valve controlling the admission of steam to a locomotive cylinder, through a line independent of a throttle governed supply pipe; means for effecting the alternate opening and closure of said valve by a moving member of the locomotive; and means, automatically operable by and upon the admission and exclusion of steam to and from a throttle governed supply pipe, for cutting off and admitting, respectively, steam from and to said valve.

5. In a drifting valve mechanism for locomotives, the combination of a valve controlling the admission of steam to a locomotive cylinder, through a line independent of a throttle governed supply pipe; intercepting means, interposed between said valve and cylinder, for interrupting direct communication between them; and means for actuating said valve to alternately supply steam to said intercepting means and deliver it therefrom to the cylinder.

[Claims 6 to 11 not printed in the Gazette.]

1,211,646. LOCOMOTIVE-DRIFTING-VALVE MECHANISM. HARRY S. VINCENT, Ridgewood, N. J., and JOHN L. MOHUN, Brooklyn, N. Y. Filed Aug. 19, 1916. Serial No. 115,782. (Cl. 121—14.)



1. In a drifting valve mechanism for locomotives, the combination of a valve controlling the admission of steam to a locomotive cylinder, of a throttle governed supply pipe; means for actuating said valve by positive connections to a moving member of a locomotive; and automatically operative means for disconnecting said valve and moving member, during the periods in which the locomotive is running under the normal condition of steam admission through the supply pipe.

2. In a drifting valve mechanism for locomotives, the combination of a valve controlling the admission of steam to a locomotive cylinder, of a throttle governed supply pipe; means for actuating said valve by positive connections to a moving member of a locomotive; and automatically operative means for disconnecting said valve and moving member, upon and by the opening of the throttle valve of the supply pipe.

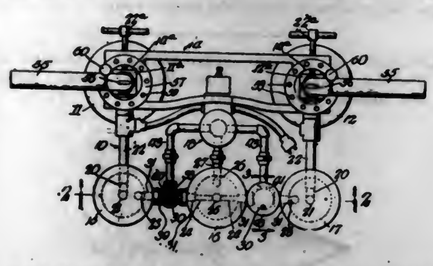
3. In a drifting valve mechanism for locomotives, the combination of a valve controlling the admission of steam to a locomotive cylinder, of a throttle governed supply pipe; means for actuating said valve by positive connections to a moving member of a locomotive; and automatically operable means for disconnecting said valve and moving member, upon and by the opening of the throttle valve of the supply pipe and reinstating its operation, upon and by the closure of said valve.

4. In a drifting valve mechanism for locomotives, the combination of a valve controlling the admission of steam to a locomotive cylinder, independently of a throttle governed supply pipe; means for actuating said valve by a moving member of a locomotive; and automatically operative clutch mechanism for engaging said valve with, and disengaging it from, its actuating means, upon and by the closure and opening, respectively, of the throttle valve of the supply pipe.

5. In a drifting valve mechanism for locomotives, the combination of a valve controlling the admission of steam to a locomotive cylinder, independently of a throttle governed supply pipe; means for actuating said valve by a moving member of a locomotive; a clutch mechanism interposed between said valve and its actuating mechanism; a piston which is actuated by cylinder pressure to effect the disengagement of the clutch members, upon the opening of the throttle valve of the supply pipe; and a spring by which the clutch members are engaged, upon the closure of said valve.

[Claims 6 to 10 not printed in the Gazette.]

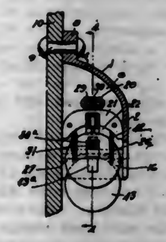
1,211,647. APPARATUS FOR ADMINISTERING ANESTHETICS. WILL P. WALTER, Chicago, Ill. Filed June 19, 1915. Serial No. 34,980. (Cl. 128—13.)



1. In an apparatus of the kind described, a gas cylinder, a washing tube, an ether tube, a heating and mixing chamber, means directly connecting said washing tube with said ether tube, said means including a valve casing, means providing a by-pass connecting said valve casing with said heating chamber, and a valve provided with two ports, one port being adapted for connecting the washing tube with said by-pass, and the other port being adapted to connect the washing tube with the ether tube, said ports being constructed so that when one is in register with its associated conduit, the other is closed.

2. In an apparatus of the kind described, a gas cylinder, a washing-tube, an ether tube, a heating and mixing chamber, means directly connecting said washing tube with said ether tube, said means including a valve casing, means providing a by-pass connecting said valve casing with said heating chamber, a valve provided with two ports, one port being adapted for connecting the washing tube with said by-pass, and the other port being adapted to connect the washing tube with the ether tube, said ports being constructed so that when one is in register with its associated conduit the other is closed, and stop means to limit the movement of said valve in either of its two positions.

1,211,648. CHECK-LOCK. SAMUEL C. WEBB, Pittsburgh, Pa. Filed June 7, 1915. Serial No. 32,592. (Cl. 40—10.)



1. A check lock, comprising a casing having a chamber therein and provided with a slot to receive a check, a hollow support therein, a depending freely swinging locking member carried by said support and arranged to engage a check, and a movable abutment in the cavity of said support for temporarily preventing said locking member from moving to locking position.

2. A check lock, comprising a hollow casing for attachment to a car side and provided with a slot to receive a check, a support therein, a depending locking member carried by said support and arranged to engage an opening in said check, means for exerting downward pressure upon said check to prevent disengagement of the locking device therefrom, and a projection on said locking member arranged to prevent accidental withdrawal of said member through the check opening.

3. A check lock, comprising a casing provided with a slot to receive a check, a support therein provided with a check receiving cavity, a yielding abutment above said cavity for engaging the check, and a swinging locking device having an arm arranged to move across the plane of said cavity beneath said abutment.

4. A check lock, comprising a casing provided with a slot to receive a check, a support therein provided with a check receiving cavity, a yielding abutment above said cavity for engaging the check, and a swinging locking device having an arm arranged to move across the plane of said cavity beneath said abutment, said abutment when projected extending into the path of movement of said arm and forming a stop to temporarily prevent it from moving to locking position.

5. A check lock, comprising a casing having a cavity to receive a check, the walls of said cavity being provided with channels, means carried by the casing arranged to engage the check to lock the same, and a check provided with ribs arranged to engage the grooves of said cavity for guiding the check to locking position.

[Claim 6 not printed in the Gazette.]

1,211,649. SPRING SUSPENSION FOR VEHICLE-BODIES. ERNEST E. WEMP, Pontiac, Mich. Filed Feb. 9, 1916. Serial No. 77,140. (Cl. 267—31.)



1. In a vehicle, two pivotal connections maintained by a supporting member at a fixed operating distance, a laminated spring articulating with one of the said pivotal connections, a shackle articulating with the other said pivotal connection and with one end of the laminated spring, whereby the elongation of the laminated spring upon compression will combine with rotation of the shackle to produce flexibility, while rebound of the laminated spring will be opposed when the center lines of the fixed pivotal connections and of the shackle become coplanal, and means for yieldingly resisting the rotation of the shackle upon the action of compression of the laminated spring.

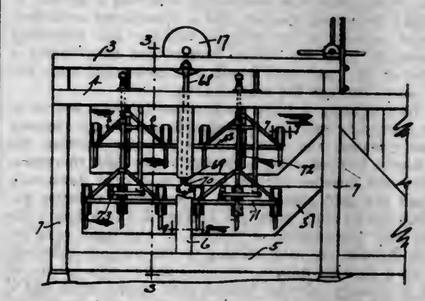
2. In a vehicle, two pivotal connections maintained by a supporting member at a fixed operating distance, a laminated spring, means for connecting the laminated spring with one of said pivotal connections, rotatable connecting means joining the other said pivotal connection and one end of the laminated spring, whereby, upon compression, the elongation of the laminated spring will combine with rotation of the connecting means to produce flexibility, while rebound of the laminated spring will be opposed when the center lines of the fixed pivotal connections and of the connecting means become co-planal, and means for yieldingly resisting the rotation of said connecting means upon the action of compression of the laminated spring.

3. In a vehicle, a frame, two pivotal connections supported by the frame at a fixed operating distance, an axle, a cambered cantaliver spring, means for connecting one end of said spring with the axle, means for connecting said spring intermediately with one of said frame connections, a bell-crank shackle mounted intermediately in the other said frame connection and having one arm pivotally connected with the other end of said spring, and means, comprising a bolt co-acting with the other arm of said bell-crank, an auxiliary spring sleeved upon the bolt and adapted to be compressed by the action of the latter, and an adjustable device for regulating the tension of the auxiliary spring, in combination with the cambered spring for yieldingly resisting a non co-planal position of the pivotal center lines.

4. In a vehicle, a frame, two pivotal connections supported by the frame at a fixed operating distance, a laminated spring articulating with one of said pivotal connections, a shackle articulating with the said other pivotal connection and with one end of the lamited spring, whereby the elongation of the laminated spring upon compression will combine with the rotation of the shackle to produce flexibility, while rebound of the laminated spring will be opposed when the line of centers of the fixed frame connections and the line of centers of the shackle become coincident, and means for maintaining the shackle resiliently in a normal non-coincident center line position.

5. In a vehicle, a frame, two pivotal connections supported by the frame at a fixed operating distance, a laminated spring connected with one of said pivotal frame connections, a shackle pivotally connecting one end of the laminated spring with the other pivotal frame connection, an auxiliary spring, means for connecting the auxiliary spring and the shackle, whereby the auxiliary spring will maintain the shackle in a normal non-coincident center line position with respect to the line of centers of the fixed frame connections, and whereby flexibility of the laminated spring will be opposed when the said center lines become coincident.

1,211,650. WATER-MOTOR. GUSTAVE A. WENDT, Spokane, Wash. Filed June 23, 1915. Serial No. 35,797. (Cl. 253—19.)



1. In a water motor, a supply bucket provided with a discharge valve, braking means normally resisting movement of said discharge valve, a motor bucket movable into receiving relation with said supply bucket, and spring means operated by said motor bucket for effecting quick actuation of said discharge valve, substantially as described.

2. In a water motor, a supply bucket provided with a discharge valve, braking means normally resisting movement of said discharge valve, a motor bucket movable into receiving relation with said supply bucket, and means operated by said motor bucket for effecting quick actuation of said discharge valve, substantially as described.

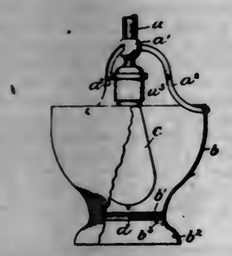
3. In a water motor, a supply bucket provided with a discharge valve, braking means normally resisting movement of said discharge valve, a motor bucket movable into receiving relation with said supply bucket, an actuating rod mounted upon said motor bucket, and oppositely disposed spring buffers connected with said discharge valve and coacting with said rod for opening and closing said discharge valve on movement of said motor bucket, substantially as described.

4. In a water motor, a motor bucket provided with a discharge valve, means for supplying water to said motor bucket to actuate the latter, a rod connected with said discharge valve, braking means for resisting movement of said rod, a guide for said rod, and spring buffers mounted on said rod for coaction with said guide to open and close said discharge valve upon movement of said motor bucket, substantially as described.

5. In a water motor, a bucket provided with a discharge valve and having a slotted guide for said valve, and a gravity acting closure for closing said slotted guide when said valve is in one position, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,211,651. LIGHTING-FIXTURE. ERNEST CANTELO WHITE, Evanston, Ill., assignor, by direct and mesne assignments, to The Duplex Lighting System, Inc., Chicago, Ill., a Corporation of Illinois. Filed Apr. 5, 1916. Serial No. 89,004. (Cl. 240—92.)



1. In a lighting fixture, the combination of a source of light, a primary reflector formed with opaque sides and a centrally disposed bottom opening, the said primary reflector housing the said source and reflecting a portion of the light therefrom upward, and a translucent secondary reflector carried by the primary reflector and extending downwardly from the bottom thereof and intercepting a portion of the light rays which pass downward from the said source through the said opening.

2. In a lighting fixture, the combination of a source of light, a primary reflector formed with a centrally disposed bottom opening, the said primary reflector housing the said source and reflecting a portion of the light therefrom upward and another portion of the said light downward through the said opening, and a secondary reflector extending downwardly from the bottom of the primary reflector and intercepting a portion of the light rays reflected through the said opening by the primary reflector.

3. In a lighting fixture, the combination of a source of light, a primary reflector formed with opaque sides and a centrally disposed bottom opening, the said primary reflector housing the said source and reflecting a portion of the light therefrom upward and another portion of the said light downward through the said opening, and a translucent secondary reflector carried by the primary reflector and extending downwardly therefrom and intercepting a portion of the light rays reflected through the said opening by the primary reflector.

4. In a lighting fixture, the combination of a source of light, a primary reflector comprising opaque sides and a translucent bottom section, the said primary reflector housing the said source and reflecting upward a portion of the light therefrom, and a secondary reflector extending downwardly from the said primary reflector and intercepting a portion of the light rays transmitted from the said source through the translucent section of the said primary reflector.

5. In a lighting fixture, the combination of a source of light, a primary reflector comprising opaque sides and a removable translucent bottom member and reflecting upward a portion of the light from the said source, and a secondary reflector formed integral with the said translucent bottom member and extending downwardly therefrom and intercepting a portion of the rays transmitted from the said source through the said translucent bottom member.

[Claims 6 to 8 not printed in the Gazette.]

1,211,652. JACK. CHARLES BREWER WOLCOTT, West Cheshire, Conn. Filed Aug. 21, 1916. Serial No 116,079. (Cl. 254—111.)



1. A jack comprising a casing having a vertical slot, a stem housed in the said slot and having a rack on one face, a lever pivoted to the casing, an upper dog pivotally connected to the end of the lever and having a tooth for engaging with the said rack, a lower dog pivotally supported from the casing and having a tooth for engaging with the said rack, a block pivotally supported from the casing, having a finger operatively connected to the said lower dog, and having a slot in the body portion, and a spring supported by the said upper dog, having one end portion positioned in the said slot, and serving to position the said dogs relatively to the said rack.

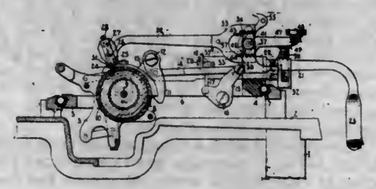
2. A jack comprising a casing having a vertical slot, a stem housed in the said slot and having a rack on one face, a lever pivoted to the casing, an upper dog pivotally connected to the end of the lever and having a tooth for engaging with the said rack, a lower dog pivotally supported from the casing and having a tooth for engaging with the said rack, a block pivotally supported from the casing, having a finger operatively connected to the said lower dog, and having a slot in the body portion, a spring supported by the said upper dog and having one end portion positioned in the said slot, and a shifting device comprising a shifting bar, pivotally mounted on the casing, and having a pin for engaging with the portion of the said spring extending between the upper dog and the block.

3. A jack comprising a casing having a vertical slot, a stem housed in the said slot and having a rack on one face, a lever pivoted to the casing, an upper dog pivotally connected to the end of the lever and having a tooth for engaging with the said rack, a lower dog pivotally supported from the casing and having a tooth for engaging with the said rack, a block pivotally supported from the casing, having a finger operatively connected to the said lower dog, and having a slot in the body portion, a spring supported by the said upper dog and having one end portion positioned in the said slot, a shifting device comprising a shifting bar, pivotally mounted on the casing, and having a pin for engaging with the portion of the said spring extending between the upper dog and the block, and a latch for locking the said shifting bar in such position.

4. In a jack having a casing and a stem operatively mounted therein, an upper dog and a lower dog for engaging with the stem, a lever connected by one end of the said upper dog, the said lower dog being supported from the casing, a swinging block pivotally supported from the casing, operatively connected to the said lower dog, a spring carried by the said upper dog and having a part extending to the said block, the said block having a slot that is a loose fit for the said spring, the end portion of the said spring being positioned in the said slot suitably to make sliding and lateral bearing contact with the walls thereof, and the parts being so related that as the upper dog is raised and lowered by operating the said lever the contact position of the said spring with the said block will be shifted from one side to the other of the pivotal support for the said block.

5. In a jack having a casing, a stem provided with a rack operatively mounted thereon, mechanism coöperating with the said stem comprising a lever, an upper dog, a lower dog, and a spring, a pivotally mounted block serving as the connecting means between the said spring and the lower dog, the said block having a slot in which a part of the said spring is operatively housed, the said spring serving to position the said lower dog relatively to the said stem, the said lever having a limited oscillating movement and serving to raise and lower the said spring and thereby shift the bearing contact of the said spring with the said block, and the pivotal support for the said block being so related to the said slot and spring that in one of the limited positions of the said lever the lower dog will be held in contact with the said stem and in the other of the said positions will be held away from the said stem.

1,211,653. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Aug. 21, 1912. Serial No. 716,147. (Cl. 197—121.)



1. In a typewriting machine, the combination with a platen carriage, a platen and a line spacing wheel connected thereto, of line spacing mechanism, a detent, and devices controlled by a plurality of keys for bodily moving said detent in two directions whereby said line spacing wheel and platen may be turned a fractional line space distance either forward or backward at will.

2. In a typewriting machine, the combination with a platen carriage, a platen and a line spacing wheel connected thereto, of line spacing mechanism, a detent cooperative with said wheel, and devices controlled by a plurality of keys for moving said detent bodily at will in either of two directions whereby said line spacing wheel and platen may be turned a fractional line space distance either forward or backward, one key operating to turn the platen forward and the other key to turn it backward.

3. In a typewriting machine, the combination with a platen carriage, a platen and its line spacing wheel, of a detent coöperating with said wheel, a support on which said detent is mounted, and devices controlled by a plurality of keys at the front of the carriage for at will moving said support in either of two directions.

4. In a typewriting machine, the combination with a platen and its line spacing wheel, of a detent, a support on which said detent is yieldingly mounted, a plurality of keys, and connections between said keys and said support, each of said keys being operative to bodily move said support and turn said platen.

5. In a typewriting machine, the combination with a carriage, a platen and its line spacing wheel, of a detent, a swinging support therefor mounted concentrically with said platen, a key lever at the front of the carriage, and connections between said key lever and said support including a bar extending rearward from said key lever and pivotally connected to said support whereby said key lever is operated to swing said support about the axis of the platen as a center, the movement of said support acting through said detent to turn said platen on its axis.

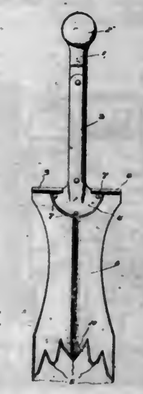
[Claims 6 to 25 not printed in the Gazette.]

1,211,654. METAL DIAPHRAGM FOR CAR-VESTIBULES. THOMAS W. YOUNGER and OTTO B. SCHOENKY, Sacramento, Cal., assignors to Holmes Forsyth, Chicago, Ill. Filed July 15, 1914, Serial No. 851,034. Renewed Nov. 24, 1916. Serial No. 133,267. (Cl. 105—61.)



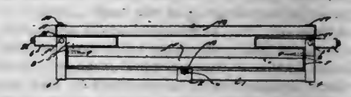
A diaphragm for car vestibules comprising two arched plates fitting together telescopically and adapted to be secured between the vestibule face plate and the frame of a car, the outer plate having a water groove in the upper face of its arched portion.

1,211,655. ROOT-CUTTER. JOSEPH W. ADAMS and ROBERT L. CARRICK, Lexington, Ky. Filed May 23, 1916. Serial No. 99,426. (Cl. 55—44.)



A tool for the purpose set forth comprising a handle, a blade of arcuate cross sectional form having an arched lower end provided with a plurality of teeth, the upper end of the blade being formed with a central tang fitting against the back of the handle and secured thereto, a tang secured to the front side of the handle and having its lower end expanded and secured against the concave face of the blade, and beads secured on the upper end of the blade at the sides of the handle.

1,211,656. CRATE. AXEL ANDERSON, Stave Falls, British Columbia, Canada. Filed May 29, 1915. Serial No. 31,304. (Cl. 217—15.)

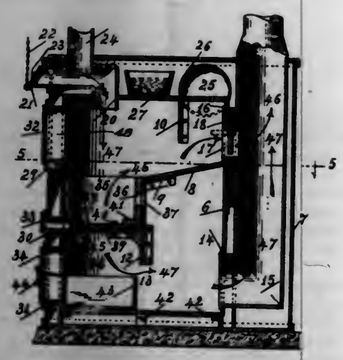


1. A crate comprising a base, terminal bands carried by said base and projected upwardly therebeyond, end pieces, bands for the edges of said end pieces formed with inwardly projected portions spaced from the inner sides of said end pieces, fingers projected inwardly from the said terminal bands and through the bands applied to the edges of said end pieces, said end pieces being pivotally carried by said fingers, side pieces, terminal bands for said

side pieces formed with projections spaced from the ends of said side pieces and adapted for interlocking engagement with the first named projected portions whereby said end and side portions are retained in assembled relation and a top adapted for releasable locking engagement with the said end pieces.

2. A crate comprising a base, terminal bands carried by said base and projected upwardly therebeyond, end pieces, bands for the lateral edges of said end pieces formed with inwardly projected portions spaced from the inner sides of said end pieces, fingers projected inwardly from one of the said bands and through the other of said bands, apertured plates carried by one of said end pieces, headed pins carried by the other end piece, side pieces pivotally carried by said fingers, bands carried by the side faces of said side pieces and formed with projections extending along and spaced from the end edges thereof for interlocking engagement with the first named projections whereby said end and lateral pieces are retained in assembled relation and a top provided with means for releasable engagement with the said end pieces when in assembled relation and for releasable engagement with the said apertured plates of one end piece and with the headed pins of the other end piece when said members are in collapsed relation.

1,211,657. DOWNDRAFT-FURNACE. ALVIN R. ATTEBERRY, Springfield, Ill. Filed Mar. 30, 1916. Serial No. 87,831. (Cl. 126—103.)



1. In a furnace, the combination of an oblong shell; a stationary baffle plate centrally transverse to the shell and having a forwardly extended member; removable deck sections complemental to each other and together occupying the full width of the rear part of the shell, each deck section comprising a forwardly inclined top plate and a perforated front plate; removable fire box sections complemental to each other and supported on the forwardly extended member of the baffle plate and between the wall of the shell and the front plates of the associated deck sections and together occupying the full width of the front part of the shell and having openings in registry with the perforations in the front plates of the associated deck sections; and a grate mounted on the forwardly extended member of the baffle plate.

2. In a furnace, the combination of an oblong shell; a stationary baffle plate centrally transverse to the shell and having a forwardly extended member; removable deck-sections complemental to each other and together occupying the full width of the rear part of the shell, each deck section comprising a front plate and a forwardly inclined top plate; removable fire box sections complemental to each other and supported on the forwardly extended member of the baffle plate and between the wall of the shell and the front plates of the associated deck sections and together occupying the full width of the front part of the shell; and a grate mounted on the forwardly extended member of the baffle plate.

1,211,658. STRING-HOLDING MEANS FOR PIANOS AND THE LIKE. ERNEST R. AYERS, Hutchinson, Kans., assignor of one-half to Martin R. Benson, Harper, Kans. Original application filed Dec. 18, 1913, Serial No. 807,532. Patent No. 1,181,422, dated May 2, 1916. Divided and this application filed June 5, 1916. Serial No. 101,810. (Cl. 84—139.)

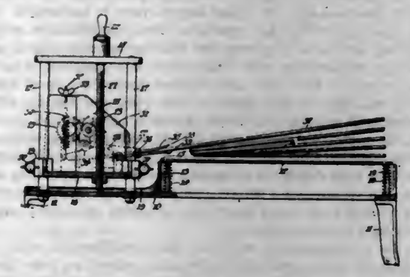


1. The combination with a sounding board, strings and a bridge, there being a transverse groove in the face of the bridge and extending at right angles to the strings, of a binding post extending through the bridge and the groove, string bearing elements upon the bride at the sides of the groove, and a string retaining member extending through the post and parallel with the groove, said bearing elements and retaining member being integral.

2. The combination with a sounding board and a bridge, said bridge having a transverse groove therein, of strings extending at right angles across the groove and having crimps extending into the groove, a binding post extending through the bridge and groove, bearing members upon the bridge and adjacent the sides of the groove, said members being engaged by the strings, and means extending through the post for holding the crimps in the strings projected into the groove, said holding means and bearing members being integral.

3. The combination with a sounding board and a bridge, said bridge having a transverse groove therein, of strings extending at right angles across the groove and having crimps extending into the groove, a binding post extending through the sounding board, and the bridge and groove, bearing members upon the bridge and adjacent the sides of the groove, said members being engaged by the strings, means extending through the post for holding the crimps in the strings projected into the groove, and a head upon the binding post and engaging one face of the sounding board, said binding post and string engaging means coöperating to fasten the bridge to the sounding board.

1,211,659. BEATING-MACHINE FOR FURS. SAMUEL BARUCH, Brooklyn, MORRIS J. BARUCH, New York, THEODORE LINDNER, Brooklyn, and SAMUEL GOLDSMITH, New York, N. Y. Filed Feb. 18, 1916. Serial No. 79,191. (Cl. 15—8.)



1. A beating machine for furs or other articles, including a platform, a plurality of whips or beaters, a pivotal support therefor, means for swinging said whips or beaters about said pivotal support, and means for relatively adjusting vertically said platform and said support.

2. A beating machine for furs or other articles, including a platform, a frame, a plurality of pivoted whips or beaters carried by said frame, means for vertically adjusting said frame in respect to said platform.

moving said whips or beaters, and means for vertically adjusting said frame in respect to said platform.

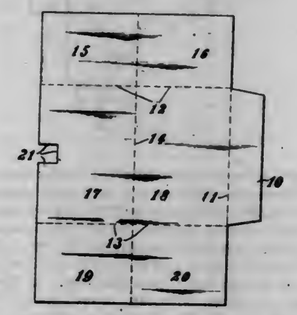
3. A beating machine for furs or other articles, including a main frame, a platform carried thereby for supporting the articles to be beaten, an auxiliary frame vertically movable in respect to said main frame, a plurality of beaters pivotally supported on said auxiliary frame, and a prime mover for operating said beaters.

4. A beating machine for furs or other articles, including a main frame, a platform mounted thereon, an auxiliary frame, vertical guides carried by said main frame, clamping members for holding said auxiliary frame to said guides, means for vertically adjusting said auxiliary frame along said guides and in respect to said main frame, a prime mover carried by said auxiliary frame, a shaft journaled on said auxiliary frame, reducing gearing between said prime mover and said shaft, a pivot rod carried by said auxiliary frame and substantially parallel to said shaft, a series of beater arms journaled on said rod, springs tending to swing said arms toward said platform, and cams on said shaft for intermittently swinging said arms away from said platform.

5. A beating machine for fur or other articles, including a main frame presenting vertical guides, an auxiliary frame in engagement with said guides, means for vertically adjusting said auxiliary frame along said guides and in respect to said main frame, a prime mover carried by said auxiliary frame, a shaft driven by said prime mover, a pivot rod carried by said auxiliary frame, a series of beater arms journaled on said rod, and means for swinging said beater arms about their pivotal support upon the rotation of said shaft.

[Claim 6 not printed in the Gazette.]

1,211,660. ENVELOP LETTER-SHEET. BARNIM L. BEHRENDT, Brooklyn, N. Y. Filed Apr. 29, 1915. Serial No. 24,653. (Cl. 120—74.)



1. A letter sheet comprising a substantially rectangular paper blank, a flap formed centrally on one end thereof and of less than half the full length of said blank, said blank containing an open recess in the margin opposite to said flap.

2. A letter sheet comprising a substantially rectangular paper blank, a flap formed centrally on one edge thereof and of less than half the full length of said blank, said blank being folded both vertically and longitudinally and containing an open recess in the margin opposite to said flap, and a postage stamp adapted to engage with said flap through the mentioned recess and with the margin therearound when said blank is folded.

1,211,661. DIFFERENTIAL MECHANISM. STEPHEN S. BENNETT, Highland Park, Mich. Filed Mar. 4, 1915. Serial No. 12,084. (Cl. 192—20.)

1. In a differential mechanism, a driven axle, a wheel free to revolve thereon, a bearing member connected to said wheel, an outstanding annular flange adjacent the periphery of the bearing member, channel shoes having outer walls at the periphery of said annular flange and inner walls within the area of said annular flange, and means on the end of said axle confined between planes representing the width of said shoes and connected to the inner walls of said shoes adapted to shift the outer walls of said shoes on to the periphery of said flange and cause a clutching action between said axle and said wheel.



2. In a differential mechanism, a driven axle, a wheel free to revolve thereon, a bearing member connected to said wheel, an annular flange carried by said bearing member concentric of said axle, channel shoes adapted to be shifted inwardly to frictionally engage the periphery of said flange, a retaining ring engaging the outer sides of said channel shoes, a cap connected to said bearing member, and means mounted upon the end of said axle confined between planes representing the width of said shoes and connected to said shoes adapted to shift said shoes on to the periphery of said flange and cause a clutching action between said axle and said wheel.

1,211,662. TIRE-RIM TOOL. ROBERT A. BEST, Grand Rapids, Mich., assignor of one-half to George M. Fish, Grand Rapids, Mich. Filed Nov. 15, 1915. Serial No. 61,553. (Cl. 157—1.)



1. In a tire rim tool, the combination of a central turn buckle with right and left threads, turn buckle rods with suitable eyes at their outer ends connected thereby, oppositely disposed hook members perforated and loosely carried by each of said eyes, the perforations being transverse to the engaging portions of said hooks, adapted to engage the rim of an automobile wheel, spring means for holding said hook members yieldingly in engagement with the said rim whereby the hooks act on the rim to compress it when the turn buckle is operated to contract the rim, and to insure the centering of the said eyes against the rim when the turn buckle is operated to expand the same, co-acting for the purpose specified.

2. In a tire rim tool, the combination of a central turn buckle with right and left threads, turn buckle rods with suitable eyes at their outer ends connected thereby, oppositely disposed hook members perforated and loosely carried by each of said eyes, the perforations being transverse to the engaging portions of said hooks, adapted to engage the rim of an automobile wheel whereby the hooks act on the rim to compress it when the turn buckle is operated to contract the rim, and to insure the centering of the said eyes against the rim when the turn buckle is operated to expand the same.

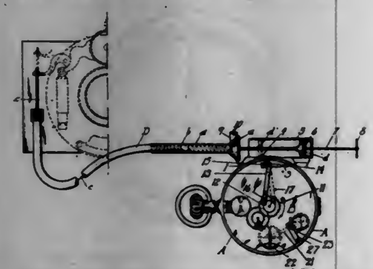
1,211,663. TIRE-RIM TOOL. ROBERT A. BEST, Grand Rapids, Mich. Filed Mar. 8, 1916. Serial No. 82,976. (Cl. 157—1.)



1. In a tire rim tool, the combination of a right and left hand turn buckle and rods, a head at the end of each turn buckle rod angularly disposed to the axes thereof, a set screw axially disposed in each head and angularly disposed to the axes of the said rods, a pair of laterally disposed and rearwardly curved hook eyes projecting from each head, pairs of oppositely disposed rim hooks loosely engaging the said hook eyes of each head, and spring means for holding the said rim hooks yieldingly in engagement with the said rim, coacting for the purpose specified.

2. In a tire rim tool, the combination of a right and left hand turn buckle and rods, a head at the end of each turn buckle rod, a set screw axially disposed in each head and angularly disposed to the axes of the said rods, a pair of laterally disposed hook eyes projecting from each head, and pairs of oppositely disposed rim hooks loosely engaging the said hook eyes of each head, coacting for the purpose specified.

1,211,664. CAMERA-SHUTTER-OPERATING DEVICE. ELLIS E. BJORLING, Salt Lake City, Utah. Filed Feb. 7, 1916. Serial No. 76,518. (Cl. 161—26.)



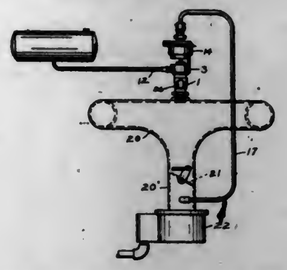
1. In a camera-shutter-operating device the combination with a train of spring moved gear wheels, of a pin projecting from the side face of one of said gear wheels; a lever having an open slot in one end and pivoted adjacent to the side face of the same gear wheel; a shaft on which said lever is secured; a cam lever fastened on said shaft; a spring movable by said cam lever; a camera shutter cable; means to secure the free end of said camera shutter cable adjacent said spring; and a manually operated piston adjacent said spring and adapted to move said shutter cable longitudinally and to permit engagement of the corner of said spring with said cable.

2. In a camera-shutter-operating device the combination with the works of an ordinary watch; of a case having an opening in its periphery and in which said works are carried, wound, set and operated; a base plate secured tangentially on said case and provided with an opening in alinement with the opening in said case; a spring movable transversely through said openings; a camera shutter cable; means to detachably fasten the free end of said camera shutter-cable adjacent said spring; a manually operated piston adapted to move said camera shutter cable longitudinally to be engaged by said spring; a rocking lever pivoted in the frame of said watch works one arm adjacent to said spring and the other arm adjacent to the side of the minute gear of said watch and provided with an open slot in the end of said arm; and a projecting pin secured in the minute gear of said watch adapted to engage in said slot whereby the movement of said gear may be imparted to said rocking shaft to compress said spring.

3. In a camera-shutter-operating device the combination with the works of a common watch; a case in which said works may be wound, set and operated, and having a slotted opening in its periphery; a spring operable within said opening; a camera shutter cable; means to detachably fasten the free end of said camera shutter cable on said spring; a rocking lever having one arm adjacent and adapted to move said spring, and the other arm movable by the gear wheel whose shaft carries the minute hand of a watch.

4. In a camera shutter operating device the combination with a train of gears; a case in which said gears may be wound, set and operated, and having a slotted opening in the periphery; a spring movable in said opening; a camera shutter cable; means to detachably fasten one end of said camera cable on said spring; a lever movable on its fulcrum by the operation of said gears; a fulcrum shaft for said lever; and means on said shaft to trip said spring.

1,211,665. ATOMIZING WATER-SUPPLY MEANS FOR INTERNAL-COMBUSTION ENGINES. BENJAMIN B. BLOCK, Los Angeles, Cal. Filed Apr. 3, 1916. Serial No. 88,572. (Cl. 123—25.)



1. In combination with an internal combustion engine having its intake provided with a carbureter and with a throttle between the carbureter and the engine, an atomizing water supply means therefor, comprising a water supply valve having its outlet connected to the intake between the throttle and the engine, and said valve being provided with an air inlet passage means at its outlet for supplying air along with the water passing through said outlet, and a controlling device for said valve having an operating connection to the intake of the engine, between the carbureter and the throttle, and responsive to suction in such connection to open said valve.

2. In combination with an internal combustion engine having its intake provided with a carbureter and with a throttle between the carbureter and the engine, a water supply means, a valve for controlling admission of water from said water supply means to said intake, said valve being provided with means tending to close the same, and a pneumatic device operating to open said valve, and connected to the intake of the engine between the carbureter and the throttle, to open said valve in response to the condition of partial vacuum at such part of the intake, so as to control the water supply in accordance with the demands on the engine.

1,211,666. TRUSS-PAD. WALTER T. BOBO, Battle Creek, Mich., assignor to The Easy Truss Company, Battle Creek, Mich. Filed July 10, 1916. Serial No. 108,332. (Cl. 128—26.)

1. In a truss pad, the combination of a rubber casing having an opening in its rear wall, an inner container disposed within said casing and provided with a valve, an inner closure plate disposed within said casing to overlap the edges of the opening in the rear wall thereof, a fabric casing covering having its edges drawn over the rear wall of said covering, a supporting strap disposed over said covering, an outer closure plate disposed over said strap, said plate and strap having registering openings through which said valve projects, and screws disposed through said outer plate and strap and threaded into said inner plate whereby the parts are secured together and the inner wall of the casing closed, said strap being provided with openings for permitting the adjustment of the strap.

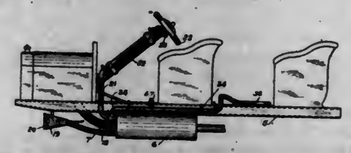


2. In a truss pad, the combination of a rubber casing having an opening in its rear wall, an inner container disposed within said casing and provided with a valve, an inner closure plate disposed within said casing to overlap the edges of the opening in the rear wall thereof, a fabric casing covering having its edges drawn over the rear wall of said covering, a supporting strap disposed over said covering, an outer closure plate disposed over said strap, said plate and strap having registering openings through which said valve projects, and screws disposed through said outer plate and strap and threaded into said inner plate whereby the parts are secured together and the inner wall of the casing closed.

3. In a truss pad, the combination of a rubber casing having an opening in its rear wall, an inner container disposed within said casing and provided with a valve, an inner closure plate disposed within said casing to overlap the edges of the opening in the rear wall thereof, a fabric casing covering having its edges drawn over the rear wall of said covering, a supporting strap disposed over said covering, an outer closure plate disposed over said strap, said plate and strap having registering openings through which said valve projects, and screws disposed through said outer plate and strap and threaded into said inner plate whereby the parts are secured together and the inner wall of the casing closed, said screws being provided with collars spaced from their heads so that the screws constitute attaching studs.

4. In a truss pad, the combination of a rubber casing having an opening in its rear wall, an inner container disposed within said casing and provided with a valve, an inner closure plate disposed within said casing to overlap the edges of the opening in the rear wall thereof and having outwardly projecting internally threaded bosses, a fabric casing covering having its edges drawn over the rear wall of said covering, a supporting strap disposed over said covering, an outer closure plate disposed over said strap, said plate and strap having central registering openings through which said valve projects, and screws disposed through said outer plate and strap and threaded into said bosses of said inner plate whereby the parts are secured together and the inner wall of the casing closed.

1,211,667. HEATING SYSTEM FOR AUTOMOBILES. PAINE BRIER, Denver, Colo. Filed Mar. 26, 1915. Serial No. 17,175. (Cl. 237—21.)



1. Means for heating motor vehicles, comprising a heating member, said heating member consisting of inner and outer members respectively forming inner and outer chambers, reversely arranged spiral baffle plates arranged in the outer chamber, a pipe establishing communication between the exhaust of the engine and said outer chamber, an air induction pipe communicating with the said inner chamber, a third pipe leading from said inner chamber into the body of the vehicle, and a fan journaled in said air induction pipe for creating a draft through said inner chamber.

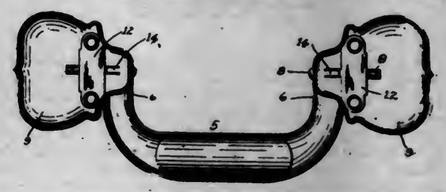
2. Means for heating motor vehicles, comprising a heating member, said heating member consisting of inner and outer members respectively forming inner and outer chambers, the exhaust from the engine adapted to be conveyed through the said outer chamber, means for inducing air in said inner chamber, and an eduction pipe leading from said inner chamber into the body of the vehicle, and deflectors universally journaled on said eduction pipe and adapted to be located in proximity to the steering wheel of the vehicle.

3. Means for heating motor vehicles, comprising a heating member, said heating member consisting of inner and outer members respectively forming inner and outer chambers, the exhaust from the engine adapted to be conveyed through said outer chamber, reversely arranged spiral baffle plates arranged in the outer chamber adapted to cause the exhaust to circulate in opposite directions around said inner chamber, means for inducing air into the inner chamber, and an eduction pipe leading from said inner chamber into the body of the vehicle.

4. Means for heating motor vehicles, comprising a heating member, said heating member consisting of inner and outer members respectively forming inner and outer chambers, the exhaust from the engine adapted to be conveyed through said outer chamber, means for inducing air into said inner chamber, and eduction pipe leading from said inner chamber into the body of the vehicle, said pipe having a branch thereof extended into close proximity to the steering wheel of the vehicle, and deflectors universally journaled on the extremity of said branch adjacent said steering wheel.

5. Means for heating motor vehicles, comprising a heating member, said heating member consisting of inner and outer members respectively forming inner and outer chambers, a pipe establishing communication between the exhaust of the engine and said outer chamber, an air induction pipe communicating with said inner chamber, a circulating member disposed in the body of the vehicle and communicating with said inner chamber, the outer extremity of said air induction pipe being enlarged, and a fan journaled therein for creating a draft through said inner chamber.

1,211,668. CASKET-HANDLE. JULIUS E. BROOKS, East Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed June 15, 1916. Serial No. 103,884. (Cl. 16—108.)



1. In a casket handle or the like, the combination of a pair of socket plates, each having a forwardly projecting boss with a perforation at one side, a bail having laterally extending trunnions engaging the perforations of the respective bosses, said bail having hanger arms located in front of the respective plates, and means of engagement between the respective hanger arms and the respective plates interposed between the upper rear portions of the hanger arms and the front surfaces of the plates for preventing lateral separation of the bail and plates; substantially as described.

2. In a casket handle, or the like, the combination of a bail, a socket plate, means providing a bearing for the

bail in the socket plate, and means for preventing disconnection of the socket plate and bail, including a locking tongue on the socket plate to engage a part of the bail; substantially as described.

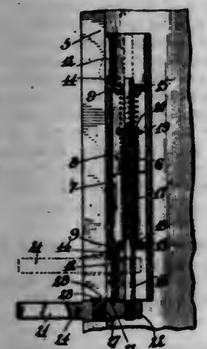
3. In a casket handle, or the like, the combination of a bail, a socket plate, means providing a bearing for the bail in the socket plate, and means for preventing disconnection of the socket plate and bail, including a locking tongue on the socket plate to engage a part of the bail, said tongue struck up integrally from the socket plate; substantially as described.

4. In a casket handle, or the like, the combination of a bail having a hanger arm of generally semi-tubular form, a trunnion extending through both walls of the hanger arm and directed laterally from said hanger arm at one side, a socket plate having a boss which receives the laterally extending portion of said trunnion, and means interposed between the hanger arm and the front face of the socket plate for preventing disconnection of the bail and socket plate; substantially as described.

5. In a casket handle or the like, the combination of a bail having a hanger arm of generally semi-tubular form, a trunnion extending through both walls of the hanger arm and directed laterally from said hanger arm at one side, a socket plate having a boss which receives the laterally extending portion of said trunnion, and means interposed between the hanger arm and the front face of the socket plate for preventing disconnection of the bail and socket plate, said means comprising a tongue struck up from the socket plate into blocking relation with respect to one of the side walls of the hanger arm; substantially as described.

[Claim 6 not printed in the Gazette.]

1,211,669. BURGLAR-ALARM. SIDNEY ROGERS BROOKS, Salamanca, N. Y. Filed June 3, 1915. Serial No. 31,860. (Cl. 116—42.)

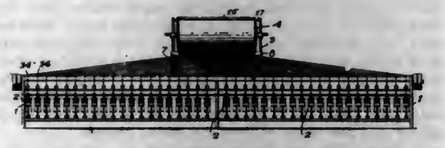


1. A burglar alarm of the type described, comprising a box-like body portion having one of its walls provided with a slot at each end, a rod guided for rocking and lengthwise movement in said body portion, a spring tending to move said rod lengthwise in one direction, and a trip arm secured to said rod and having a cartridge-receiving opening therein, said arm being positioned in the path of a movable closure and engaging the lower edge of said body portion to hold said spring under tension.

2. A burglar alarm adapted to be actuated by a door, a box-like body portion having slots in one of its walls at opposite ends and a prong extending from the inner wall of each of said slots, a rod guided for lengthwise and rocking movement within said body portion and being reversible end for end, a coil spring surrounding said rod and tending to draw the latter in one direction, and a trip arm secured to the lower end of said rod and having a pocket adapted to receive an explosive cartridge, said trip arm engaging the lower edge of said body portion and being adapted to be actuated upon opening the door so as to bring said trip arm in line with the adjacent slot in said body portion, said spring serving to forcibly draw said trip arm inwardly in said slot and bring the cartridge in said arm against said prong.

3. A burglar alarm of the type described, comprising a box-like body portion having a slot at the lower end, a removable wall and spaced cross walls, and having also a securing flange extending from one side thereof, a rod guided for rocking and lengthwise movement within said cross walls, a coil spring surrounding said rod and receiving bearing at one end from one of said cross walls and having fixed bearing on said rod at a point between said cross walls, and a trip arm secured to the lower end of said rod and having a pocket therein adapted to receive an explosive cartridge, said trip arm engaging the lower edge of said box-like body portion and being adapted to be swung inwardly in line with the slot thereof when engaged by a door and said coil spring serving to forcibly draw said rod and trip arm against the prong of said lower slot.

1,211,670. TWISTING-MACHINE. GEORGE L. BROWNELL, Worcester, Mass. Filed June 19, 1914. Serial No. 846,162. (Cl. 28—34.)



1. In a machine of the class described, a series of rotatable twisting mechanisms, a beam for holding the threads to be twisted arranged on said beam in groups, means for holding the threads of each group in spaced relation to each other as they leave the beam, a pair of pins for changing the direction of each group as it is drawn from the beam, said pins being arranged to maintain each group of threads at uniform angles.

2. In a machine of the class described, a series of twisting mechanisms, a beam for holding the threads to be twisted arranged in groups, a series of grooved and tapered blocks arranged with their axes parallel with the axis of said beam, and a series of pins with their axes at right angles with the axes of said blocks, but at varying distances therefrom over which the groups of threads are conducted to the twisting mechanisms.

3. In a machine of the class described, a twisting mechanism, a beam for holding the threads to be twisted arranged in groups, a tapered block over which the group of threads is drawn, means for holding the threads of the group in spaced relation to each other, and a pin at right angles to the axis of said tapered block by which the direction of the group of threads is changed as it passes to the twisting mechanism.

4. In a machine of the class described, a series of twisting mechanisms, a beam for holding the threads to be twisted arranged in groups, a device for holding the threads of each group in spaced relation to each other, comprising a series of hollow grooved and tapered blocks, with abutting and telescopic ends, and a concentric retaining rod for said blocks.

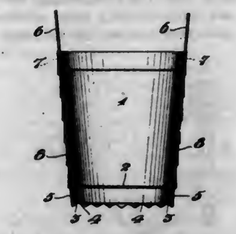
5. In a machine of the class described, a series of twisting mechanisms, a beam for holding the threads to be twisted, arranged in groups, a series of pins for changing the direction of each group of threads between the beam and the twisting mechanism, said series of pins being arranged in a row obliquely to the axis of said beam, whereby said pins are arranged at varying distances from the axis of the beam.

[Claims 6 to 9 not printed in the Gazette.]

1,211,671. WATERPROOF BASKET. JOSEPH A. BAUDER, Philadelphia, Pa. Filed Mar. 8, 1916. Serial No. 82,786. (Cl. 229—8.)

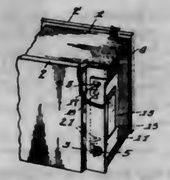
As a new article of manufacture, a waterproof basket comprising a receptacle having a reinforced supporting

portion at its lower end formed by three thicknesses of material, a bail handle having its ends located outside of the receptacle, securing devices extending through the three thicknesses of material and into the handle, addi-



tional securing devices at the upper portion of the receptacle securing the handle thereto, and overlapping strands of ornamental braid wound around the receptacle and secured thereto, substantially as described.

1,211,672. LOOSE-LEAF-BINDER DEVICE. WILLIAM B. CAIN, Chicago, Ill. Filed Dec. 27, 1915. Serial No. 68,808. (Cl. 129—1.)



1. In a device of the class described, a binder entrant and engaging portion, and a face portion, the binder entrant portion being formed with elongated slots for co-action with the binding posts of a binder and positioned to admit limited movement of the face portion to and from the binder.

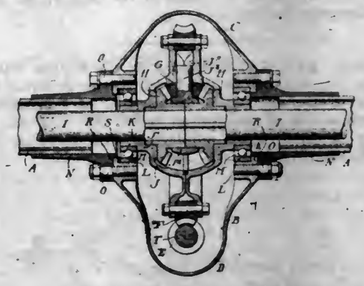
2. In a device of the class described, a binder entrant and engaging portion and a face portion, the binder entrant and engaging portion being formed for attachment to a binder, and a non-metallic member on the face portion, said member being formed to receive and expose an index card.

3. In a device of the class described, a face portion and a binder entrant and engaging portion, said binder entrant and engaging portion being formed with elongated slots for co-action with binding posts of different spaced relations and positioned to admit limited movement of the face portion to and from the binder back.

1,211,673. DRIVING MECHANISM FOR MOTOR-VEHICLES. CHARLES H. CALKINS, Ludlow, Mass., assignor to Baush Machine Tool Company, a Corporation of Massachusettts. Filed June 3, 1915. Serial No. 31,886. (Cl. 74—34.)

1. A worm gear axle mount comprising in combination a worm and a worm gear driven thereby, driven shaft gears, differential gearing driven by said worm gear and driving said driven shaft gears differentially, the body of said worm gear being shaped to constitute bearings for said differential gearing and said driven shaft gears and a casing inclosing said worm and gears and shaped to constitute bearings for said worm and worm gear, the portion of the casing which incloses the worm being formed in a single integral piece from end to end.

2. A worm gear axle mount comprising in combination a worm and a worm gear driven thereby, driven shaft gears, differential gearing driven by said worm gear and driving said driven shaft gears differentially, the body of said worm gear being shaped to constitute bearings for said differential gearing and said driven shaft gears and a casing inclosing said worm and gears and shaped to constitute bearings for said worm and worm gear, said casing including a main portion B, a removable cover portion C and a transverse tubular portion D inclosing the entire length of the worm and formed in a single integral piece with the main portion B.

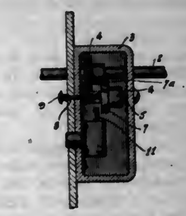


3. A worm gear axle mount comprising in combination a worm and a worm gear driven thereby, driven shaft gears, differential gearing driven by said worm gear and driving said driven shaft gears differentially, the body of said worm gear being shaped to constitute bearings for said differential gearing and said driven shaft gears and a casing having a portion inclosing said differential gearing and a second portion integral with the first and inclosing said worm.

4. A worm gear axle mount including in combination a worm and a worm gear driven thereby, driven shaft gears, differential gearing driven by said worm gear and driving said driven shaft gears differentially, a casing having a portion inclosing said differential gearing and a second portion integral with the first and inclosing said worm, and a thrust bearing for said worm fitted in permanently fixed position in said second portion of the casing.

5. A differential driving mechanism including in combination a driving gear, driven shafts, differential gearing driven by said driving gear and driving said shafts differentially, bearings for said differential gearing, and a casing inclosing said mechanism, a flanged torque tube adapted to surround a driving shaft of said driving gear and a ring surrounding said tube and engaging the flange thereof and having a threaded engagement with said casing to fasten said tube to the casing.

1,211,674. AUTOMOBILE-LOCK. HARVEY D. CALVIN and WILLIAM M. CALVIN, Colusa, Cal. Filed Sept. 19, 1916. Serial No. 120,961. (Cl. 70—90.)



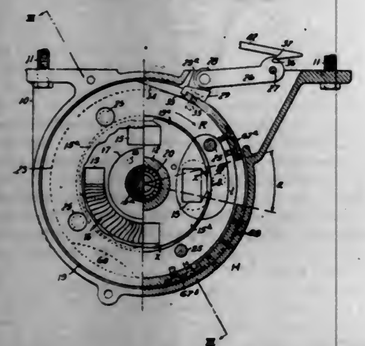
1. The combination with a steering post, of a pinion secured thereto, a square shaft adjacent the steering post, a sliding sleeve on the square shaft, a pinion segment on the sleeve arranged to be brought into mesh with the pinion, and means for locking the parts in said last named position.

2. The combination with a steering post, of a casing surrounding the post, a square shaft within the casing parallel with the post, a pinion on the post, a slidable member on the square shaft carrying a pinion segment

engageable with said pinion, and means for locking said segment in or out of engagement with the pinion.

9. The combination with a steering post provided with a pinion thereon, a square shaft extending parallel to the post, a sleeve slidable on the shaft, a collar on the sleeve, a pinion segment on the collar engageable with the pinion, and a lock arranged to extend in the path of the collar on either side thereof.

1,211,675. RAILWAY-SIGNAL. ELMER R. COE, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Continuation of application Serial No. 778,781, filed July 12, 1913. This application filed Nov. 14, 1914. Serial No. 872,097. (Cl. 246—29.)



1. A railway signal comprising a signal device biased in one direction, a motor, mechanism interposed between the motor and the signal device for causing the motor to move the signal device in opposition to the biasing force, said mechanism including a clutch, and an electromagnetic device for controlling said clutch and comprising two parts capable of relative rotary movement, one of said parts having considerable inertia.

2. A railway signal comprising a signal device biased in one direction, a motor for moving said signal device in opposition to the biasing force, a clutch interposed between said motor and said signal device, and an electromagnetic device for controlling said clutch and comprising two parts capable of relative rotary movement, one of said parts having considerable inertia.

3. A railway signal comprising a signal device biased in one direction, and means for holding said signal device in opposition to the biasing force, said means including an electromagnetic device having two parts capable of relative rotary movement one of which parts has considerable inertia.

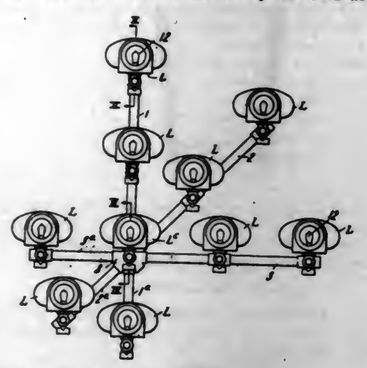
4. A railway signal comprising a signal device biased in one direction, means for holding said device in opposition to the biasing force, said means including an electromagnetic device comprising a stator and a rotor having considerable inertia and means for energizing said stator by alternating current.

5. A railway signal comprising a signal device biased in one direction, an electromagnetic device comprising a stator and a rotor having considerable inertia, and means controlled by said rotor for holding said signal device in opposition to the biasing force.

[Claims 6 to 9 not printed in the Gazette.]

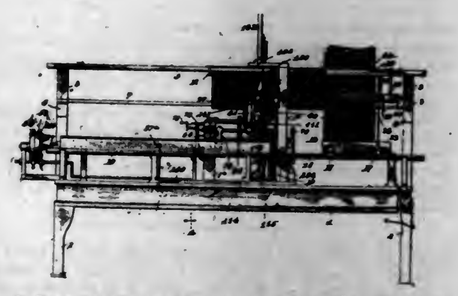
1,211,676. SIGNAL. JOHN P. COLEMAN, Edgewood borough, Pa., assignor, by mesne assignments, to The Position-Light Signal Company, a Corporation of Maine. Filed July 31, 1914. Serial No. 854,290. (Cl. 246—37.)

A light signal comprising a central supporting member, a plurality of arms radiating therefrom in a vertical plane corresponding to different signal indications, a plurality of apertures formed in each of the arms at predetermined intervals and concentric with the central supporting member, a plurality of light signal units adapted to be supported by the said arms, each unit comprising a housing adapted to a light source and light-projecting media, a ball projecting from the said housing and provided with a central aperture, brackets carried by the said arms and



capable of sliding movement thereon, a set screw carried by the said bracket for engagement with the apertures formed in the said arms, a screw carried by the said bracket and adapted to pass through the aperture formed in said ball, and a clamping member carried by the last-named screw and adapted to engage said ball and clamp the same when said screw is turned.

1,211,677. MACHINE FOR PREPARING WARPS FOR WEAVING. HOWARD D. COLMAN, Rockford, Ill., assignor, by mesne assignments, to Howard D. Colman, Luther L. Miller, and Henry A. Severson, Copartners doing business at Rockford, Ill., as Barber-Colman Company. Filed Oct. 12, 1904. Serial No. 228,240. (Cl. 139—94.)



1. In a textile machine in which threads are to be selected singly and successively from a series of threads, means for supporting the threads in substantial parallelism, and means for bowing the entire series of threads laterally to place them under tension.

2. In combination, a heddle facer having a narrow space to receive a sheet metal heddle, and means for pushing a heddle out of said space.

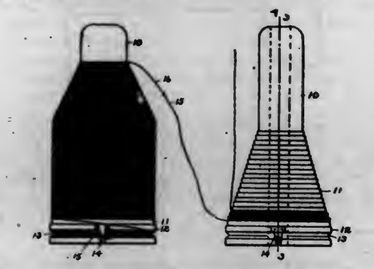
3. In combination, a heddle facer having a narrow space to receive a sheet metal heddle, means for placing a heddle in said space, means for turning the facer to face the heddle, means for threading the heddle, and means for pushing the threaded heddle out of said space.

4. A machine for operating upon warps having, in combination, means for holding distended in parallel sequence a series of warp threads, the threads being held in the form of a sheet, a selector reciprocable transversely of the sheet to select threads singly and successively from the sheet, means for causing a relative feed movement between the selector and said thread-holding means, a drive for the selector, and drive controlling means actuated when the selector fails to select a thread.

5. In a warp-drawing machine, in combination, an oscillatory heddle facer comprising two arms rigidly connected together and having between them a narrow space for the reception of a heddle; means for moving a heddle into said space; means to turn the heddle facer in one direction after the heddle has been inserted in said space; means for inserting a warp thread into the faced heddle; means for removing the heddle from said facer, and means for thereafter turning the heddle facer in the opposite direction into position to receive another heddle.

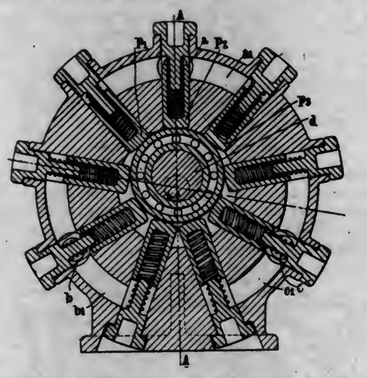
[Claims 6 to 92 not printed in the Gazette.]

1,211,678. LOOM FILLER-CARRIER. JAMES E. CONNELLY, Fort Wayne, Ind. Filed Mar. 24, 1915. Serial No. 16,536. (Cl. 242—120.)



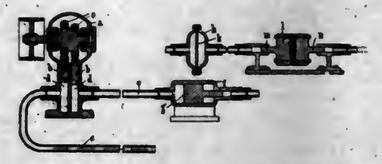
A bobbin including a cylindrical carrier, a base for the carrier, a head on the base having an annular groove in its periphery adapted to receive a portion of the inner end of the filler, the said end being accessible when the filler is wound on the carrier and means to detachably secure the said end in the groove.

1,211,679. HYDRAULIC POWER TRANSMISSION. GOGU CONSTANTINESCO, London, England, assignor of one-half to Walter Haddon, London, England. Filed Feb. 27, 1914. Serial No. 821,376. (Cl. 138—22.)



Apparatus for hydraulic transmission of energy, comprising in combination, a generator, a plurality of chambers in said generator, pistons in each of said chambers, a common eccentric actuating said pistons, a receiver, including a plurality of chambers, pistons in said chambers, and a common eccentric acted on by said pistons, pipes connecting each of said chambers in said generator with one of said chambers of said receiver, and means for interchanging the connections of said pipes and said receiver or generator in such a manner as to produce reverse rotation.

1,211,680. HYDRAULIC TRANSMISSION. GOGU CONSTANTINESCO, London, England, assignor of one-half to Walter Haddon, London, England. Filed Apr. 4, 1914. Serial No. 829,718. (Cl. 138—22.)



1. A hydraulic condenser comprising in combination, a chamber, a solid body elastically supported in both directions dividing said chamber, passages for liquid connected to said chamber on both sides of said solid body, said passages and chamber being adapted to contain liquid in contact with both ends of said solid body, as and for the purposes described.

2. A hydraulic condenser comprising in combination, a chamber, a piston in said chamber, springs on each side of said piston, pipes connected to said chamber on both sides of said piston, said pipes and said chamber being adapted to contain liquid in contact with both sides of said piston, as and for the purposes described.

3. Apparatus for the hydraulic transmission of power comprising in combination, a generator, a receiver, a pipe connecting said generator and said receiver, and a hydraulic condenser connected in said pipe, as set forth.

4. Apparatus for the hydraulic transmission of power comprising in combination, a generator, a receiver, a pipe connecting said generator and said receiver, a hydraulic condenser connected in said pipe, and an additional inertia device connected in said pipe, as set forth.

5. Apparatus for the hydraulic transmission of power comprising in combination, a generator, a receiver, a pipe connecting said generator and said receiver, a hydraulic condenser connected in said pipe, an additional inertia device connected in said pipe, said generator being adapted to produce periodic pressure variations in said pipe, and said hydraulic condenser and additional inertia device being so proportioned that the period of natural oscillation in the system is equal to the period of the expressed pressure variations, as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,211,681. BAGGAGE-TAG HOLDER. DUNCAN G. CURRIE, Manistique, Mich. Filed Sept. 9, 1915. Serial No. 49,779. (Cl. 40—19.)



1. A device of the character described including a drum, a casing rotatable upon the drum and provided with a sight opening, a locking member connecting the casing with the drum, and yieldable means engaging the locking member for holding it in active position.

2. A device of the character described including a hollow drum, a casing surrounding the drum and rotatably mounted thereon, the casing being provided with a sight opening, a locking member connecting the casing with the drum, and means arranged within the drum and shiftable axially thereof to engage said locking member for holding it in active position.

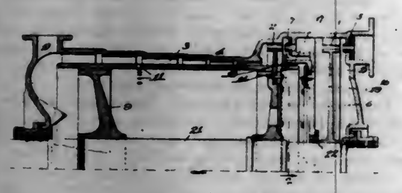
3. A device of the character described including a hollow drum, a casing surrounding the drum and rotatably mounted thereon, the casing being provided with a sight opening, a locking member connecting the casing with the drum and extending axially of the drum, and a follower arranged within the drum and yieldably urged to engage the locking member for holding it in active position.

4. A device of the character described including a drum, flanges surrounding the drum at its extremities and arranged in spaced relation to the drum, the said flanges being adapted to engage a tag wound upon the drum, a casing surrounding the drum and rotatably mounted upon said flanges, the casing being provided with a sight opening, and a locking member connecting the casing with the drum.

5. A device of the character described including a drum, a casing surrounding the drum and rotatably mounted thereon, the casing being closed at one end and provided with a sight opening, and a locking member engaging through the closed end of the casing for detachably connecting the casing with the drum, the said locking member providing an attaching terminal.

[Claims 6 to 17 not printed in the Gazette.]

1,211,682. STEAM-TURBINE. CHARLES G. CURTIS, New York, N. Y. Filed Mar. 19, 1914. Serial No. 825,828. (Cl. 253—69.)



1. A steam turbine having two wheel stages and a low pressure drum stage, a diaphragm between the two wheel stages, means for permitting leakage between the wheel stages, and means for utilizing the energy of the leakage steam.

2. A steam turbine having, in combination, a drum stage, a wheel stage, a diaphragm, an annular wall carried by the drum, and an overhanging rim carried by the diaphragm, said rim surrounding the wall, whereby if the rim comes in contact with the wall and thereby becomes heated it will expand and free itself.

3. A steam turbine having, in combination, a drum stage, two wheel stages, a diaphragm located between the wheel stages, an annular wall carried by the drum, and an overhanging rim carried by the diaphragm, said rim surrounding the wall, whereby if the rim comes in contact with the wall and thereby becomes heated it will expand and free itself.

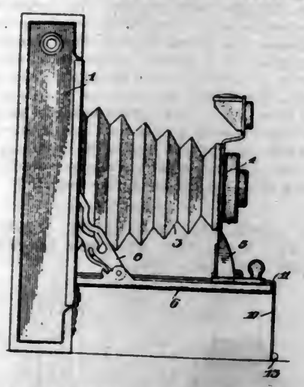
4. A steam turbine having in combination a drum stage, two wheel stages, a diaphragm located between the wheel stages, an annular wall projecting from an end of the drum, an adjustable rim projecting from the diaphragm and surrounding the wall, whereby, if the rim contacts with the wall and thereby becomes heated it will expand and free itself.

5. A steam turbine having a drum stage, an annular wall carried by the drum, a diaphragm, said diaphragm having an annular recess therein, a baffling rim, made in segments, each segment carrying an inturned flange, said flanges lying within the annular recess and there being spaces normally separating the adjacent ends of the segments, whereby the segments can expand circumferentially and still retain a circular shape.

[Claims 6 and 7 not printed in the Gazette.]

1,211,683. FOLDING CAMERA. HARRY R. DARLING. Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed July 24, 1915. Serial No. 41,765. (Cl. 95—86.)

1. In a folding camera, the combination with a body and a door therefor narrower than the body and constituting a bed when extended, of a latch for locking the door having one position at right angles to the latter in which it serves as a leg when the door is extended and the camera is upright and another position other than the locking position parallel with the door and in which it projects beyond the side thereof and also serves as a leg when the door is extended and the camera is on its side.



2. In a folding camera, the combination with a body and a door therefor narrower than the body and constituting a bed when extended, of a latch arm having three operative positions in one of which it locks the door in closed position and in the other two of which it serves as a leg for the door when extended to support the camera in either an upright position or on its side, respectively.

3. In a folding camera, the combination with a body having an opening in the front thereof and a door adapted to close the opening or to be extended to constitute a bed, of a latch lever pivoted to one of said members to swing in a plane at right angles to the door when the latter is closed and coöperating with the other member to lock the door closed said latch lever being arranged to lie between the edge of the door and a side of the opening when in operative position.

4. In a folding camera, the combination with a body having an opening in the front thereof and a door adapted to close the opening or to be extended to constitute a bed, of a latch lever pivoted to the edge of the door to swing in a plane at right angles thereto and coöperating with the body to lock the door closed, said latch lever being arranged to lie between the edge of the door and a side of the opening when in operative position and to stand at right angles to the door when released to serve as a leg beneath the door supporting the camera when the door is extended.

1,211,684. GLASS CASKET. JAMES W. DE CAMP, Blackwell, Okla., assignor of one-fourth to Charles E. De Camp, Blackwell, Okla., and one-fourth to John P. Miller, McAllen, Tex. Filed July 20, 1915. Serial No. 40,999. (Cl. 27—8.)



1. A burial casket of plastic material having its walls reinforced by binding strips secured thereabout, and strips of yieldable material interposed between the binding strips and the outer surfaces of the said walls of the casket.

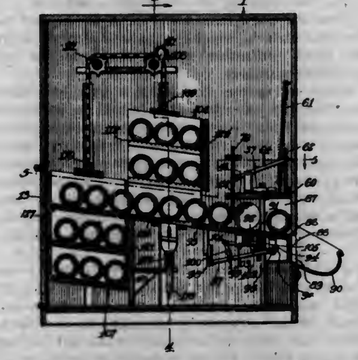
2. A burial casket comprising a body and a lid therefor, a metallic band surrounding the sides and ends of the lid at the lower portion thereof, bands extending transversely of the upper portion of the lid and secured at their ends to the sides of the first-mentioned band, a metallic band surrounding the sides and ends of the body of the casket at the upper portion thereof, a metallic band surrounding the sides and ends of the said body below the last-mentioned band, bands extending up beside the body and beneath the body thereof and secured at their ends and inwardly of their ends to the last two-mentioned bands, and yieldable protective strips arranged beneath all of said bands and between the same and the respective portions of the casket about which the bands extend.

3. The combination with a burial casket having transparent walls, of a lining for the casket having a finished surface visible through the said walls and a finished surface visible at the interior of the casket.

4. A burial casket having transparent walls, and a lining draped within the casket and having a ply provided with a finished surface presented toward the inner surface of the said walls and a ply having a finished surface presented toward the interior of the casket.

5. A casket including a body of plastic material, a yieldable base disposed against the under side of the said body, a binding strip secured about the sides of the body and binding strips secured at their ends to the first mentioned strip and extending downwardly beside the said sides of the body and transversely beneath the yieldable base, and strips of yieldable material interposed between the binding strips and the outer surfaces of the walls of the body and between the last mentioned strips and the under side of the yieldable base.

1,211,685. VENDING-MACHINE. MATTEO DE CESARE, Passaic, N. J. Filed June 18, 1915. Serial No. 34,862. (Cl. 211—8.)



1. In a vending machine, delivery means, and an automatic gravity feed arrangement comprising relatively movable connected carriers operable to direct the articles acted on to said delivery means.

2. In a vending machine, delivery means, and an automatic gravity feed arrangement comprising connected reciprocable carriers operable to direct the articles acted on to said delivery means.

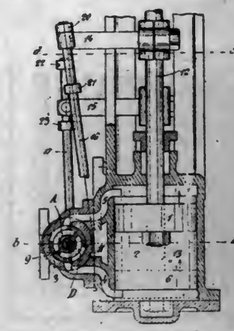
3. In a vending-machine, delivery means, a gravity feed arrangement for the articles acted on comprrising relatively movable carriers, and lock means operable by the weight of the articles acted on to respectively lock and release the carriers at proper intervals, substantially as described.

4. In a vending machine, delivery means, an automatic gravity feed arrangement for the articles acted on comprising relatively movable carriers, and a connection between the respective carriers that they may be moved in unison and in opposite directions, substantially as described.

5. In a vending machine, delivery means, an automatic gravity feed arrangement comprising relatively movable carriers operable to direct the articles acted on to said delivery means, a connection between the respective carriers that they may move in unison and oppositely, and lock means operating automatically to maintain the carriers against relative movement for a predetermined number of actuations of the device.

[Claims 6 to 16 not printed in the Gazette.]

1,211,686. DUPLEX STEAM-PUMP. SIGVART DIDRICHSEN, Skölen, near Christiania, Norway. Filed Mar. 29, 1915. Serial No. 17,820. (Cl. 121—4.)



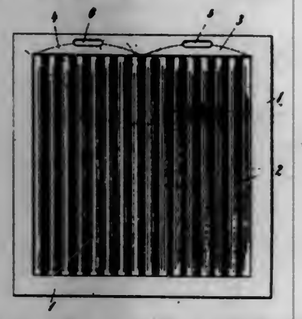
1. In a duplex steam pump, the combination of a pair of cylinders; pistons therein; piston rods for said cylinders; alined rotary slide casings having their mutual axis arranged transverse to the cylinder axes; channels passing from the end spaces of the cylinders to respectively opposite sides of the respective alined casings; a rotary slide comprising a pair of rigidly inter-connected rotary members adapted to rotate in a constant direction by increments of 90°; crank levers secured to said slide 90° apart in angular relation to each other; clutch pieces on each piston rod respectively; and connecting rods, one between each clutch piece and its corresponding crank lever.

2. In a duplex steam pump, the combination of a pair of cylinders; pistons therein; piston rods for said cylinders; alined rotary slide casings having their mutual axis arranged transverse to the cylinder axes; channels passing from the end spaces of the cylinders to respectively opposite sides of the respective alined casings; a rotary slide comprising a pair of rigidly inter-connected rotary members adapted to rotate in a constant direction by increments of 90°; crank levers secured to said slide 90° apart in annular relation to each other; clutch pieces on each piston rod respectively; connecting rods, one between each clutch piece and its corresponding crank lever; and a tangentially adjustable connection between each connecting rod and its corresponding crank lever for adjusting the cut-off position of the slide relative to the piston position.

3. In a duplex steam pump, the combination of a pair of cylinders; a piston in each cylinder; a slide casing having feed and exhaust channels communicating therewith the axis of said casing being arranged transverse to the cylinder axes; a rotary double slide adapted to rotate in a constant direction in said casing; and comprising a pair of members each having approximately oppositely disposed connecting spaces connecting with the feed and exhaust channels respectively; crank levers secured to said slide 90° apart in annular relation to each other; channels connecting opposite ends of the cylinders with the opposite sides of the slide casing and adapted to register with the connecting spaces of the respective members of the rotary slide, the relative arrangement of the channels and spaces being such that the feed and exhaust are cut off from one cylinder while connected to the opposite ends respectively of the other cylinder; and means

connecting each crank lever to the piston of the corresponding cylinder for causing one member of the slide to cut off the feed and exhaust of such cylinder when the piston reaches the end of the stroke, while the other member of the slide connects the feed and exhaust to opposite ends of the other cylinder, the relation of said connecting spaces being such that the feed is cut off before the exhaust is closed in order that the steam inclosed within the cylinder may expand.

1,211,687. APPARATUS FOR THE ELECTROLYTIC DECOMPOSITION OF WATER. ARTHUR DOHMEN, Cologne, Germany. Filed Oct. 20, 1913. Serial No. 796,258. (Cl. 204—5.)



1. In a series of cells of the filter-press type, a cell member having a quadrilateral straight edged frame, separate passages below the upper edge of the frame and gas separating chambers formed in the top of the frame each communicating with a passage.

2. In a series of cells of the filter press type, a cell member having a quadrilateral straight edged frame, two passages below the upper edge of the frame, a gas separating chamber formed at one end of said top in one side thereof and a second chamber formed at the other end of said top in the other side thereof, each chamber communicating with a passage.

3. In a series of cells of the filter press type, a cell member comprising a wrought iron frame having gas passages below the upper edge thereof and a detachable electrode.

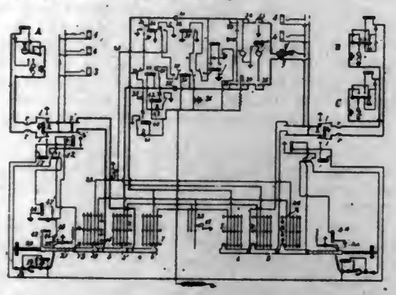
4. In a series of cells of the filter press type, a cell member comprising a thin polygonal wrought iron frame, an electrode detachably secured thereto, two gas passages therethrough one of which conducts gas from one side of the electrode and the other conducts gas from the other side of the electrode.

5. In a series of cells of the filter press type, a cell member comprising a quadrilateral frame containing a single central opening and two passages through the top of said frame, a sheet metal electrode secured to the frame within said opening and two gas separating chambers in the top of said frame, one at one side of the electrode and communicating with one of said passages, and the other at the other side of said electrode communicating with the other passage, said chambers extending from said passages laterally and downward to the active faces of the electrode.

[Claims 6 to 10 not printed in the Gazette.]

1,211,688. TELEPHONE SYSTEM. FRANCIS W. DUNBAR, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Nov. 12, 1904. Serial No. 232,440. (Cl. 179—27.)

1. A telephone system including a pair of connected telephone lines, a selective switch and a manual link circuit through which a conversational circuit extends, multiple private or test contacts for said selective switch for preventing intrusion upon the talking circuit, means including a relay of said link circuit for altering the electrical condition of said contact to restore to normal said selective switch, and a centralized source of current for operating and talking purposes.



2. A telephone system including telephone lines, relatively movable switch contacts and an operator's link circuit through which a talking circuit between a calling and a called line may be completed, means including a test contact for determining the talking circuit, means for restoring said switch contacts to normal including said test contact and a switch contact in said link circuit, and a centralized source of current for operating and talking purposes.

3. A telephone system including a telephone line, a selective switch at the exchange connected with said line, a manual link circuit connected with said switch, contacts of said switch and said link circuit forming part of the talking circuit, an additional contact piece for said switch in connection with a contact piece of said link circuit serving to protect the talking circuit against intrusion, means for altering the electrical condition of said contact piece when disconnection is desired, release mechanism for said switch responsive to said altered electrical condition, and a centralized source of current for operating and talking purposes.

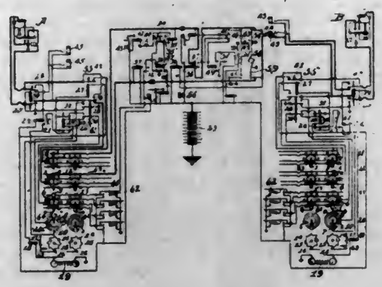
4. A telephone system including a pair of connected telephone lines, a selective switch and a manual link circuit through which a conversational circuit extends, a test contact for said switch for preventing intrusion upon the conversational circuit, release mechanism for said switch, means including said release mechanism, said test contact and a relay of said manual link circuit for restoring to normal the said automatic switch, and a centralized source of current for operating and talking purposes.

5. In a telephone system, a subscriber's line, a switch individual to said line provided with a pair of line wipers and with a test wiper, a plurality of manual trunks one end of each of said trunks terminating in the banks of said switch, the other end of said trunks terminating in terminal plugs, means for operating said switch to select one of said manual trunks, release means for said switch operated over a circuit including said test wiper, and a centralized source of current for operating and talking purposes.

[Claims 6 to 135 not printed in the Gazette.]

1,211,689. TELEPHONE-EXCHANGE SYSTEM. FRANCIS W. DUNBAR, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed June 19, 1905. Serial No. 265,846. (Cl. 179—27.)

1. A telephone exchange system, including a plurality of telephone lines extending from sub-stations to an exchange and provided at the exchange with multipled jacks upon different sections of a switch-board, link circuits for connecting calling lines with called lines, selecting mechanism for connecting the answering ends of the link circuits with calling lines, the link circuits having manually controlled terminals for uniting the connecting ends thereof with called lines, a test system for the multipled jacks, and relay mechanism and control circuits therefor governed by the selecting mechanism for placing a busy condition upon the jacks of a calling line while the selecting motor is operating.



2. A telephone system including telephone lines provided with multiple spring-jacks at the exchange, link-circuits for connecting calling lines with called lines, selecting mechanisms for connecting calling lines with idle link-circuits, line relays for operation by currents over calling lines to initiate travel of said selecting mechanisms, a connection governed by a selecting mechanism for temporarily altering the normal electrical condition of the jacks of a calling line while said selecting mechanism is traveling to render them busy, and a relay for the calling line operated responsive to connection made by said mechanism to establish a second connection to said jacks to continue the altered electrical condition thereof.

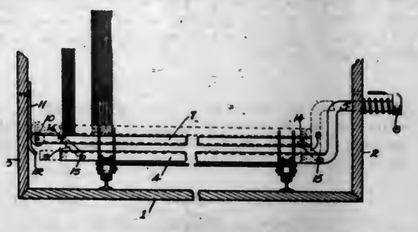
3. A telephone exchange system, including a plurality of telephone lines extending from sub-stations to an exchange and provided at the exchange with multipled jacks upon different sections of a switch-board, link circuits for connecting calling lines with called lines, selecting mechanism for connecting the answering ends of the link circuits with calling lines, the link circuits having manually controlled terminals for uniting the connecting ends thereof with called lines, a test circuit system for the multipled jacks, a supplemental test conductor, and relay switching mechanism and control circuits therefor governed by the selecting mechanism and serving to connect said supplemental test conductor with the jacks of a calling line while the selecting motor is operating.

4. A telephone exchange system, including a plurality of telephone lines extending from sub-stations to an exchange, link circuits for connecting calling lines with called lines, selecting mechanism including motors for connecting the answering ends of the link circuits with calling lines, releasing magnets for causing the selecting motors to operate, line relays, and switching mechanisms controlled by the line relays and partially controlling the circuit of the releasing magnets, whereby said releasing magnets may effect continuation of the operation of the motors during the operation of the line relays.

5. A telephone exchange system, including a plurality of telephone lines extending from sub-stations to an exchange, link circuits for connecting calling lines with called lines, selecting mechanism including motors for connecting the answering ends of the link circuits with calling lines, the link circuits having manually controlled terminals for uniting the connecting ends thereof with called lines, releasing magnets for causing the selecting motors to operate, line relays, and switching mechanisms controlled by the releasing magnets and the line relays, serving to control the releasing magnets, whereby said releasing magnets may effect continuation of the operation of the motors during the operation of the line relays.

[Claims 6 to 55 not printed in the Gazette.]

1,211,690. LOOSE-LEAF DEVICE. KENNETH L. EDDY, Chicago, Ill., assignor, by mesne assignments, to Automatic Utilities Co., a Corporation of Illinois. Filed Mar. 20, 1914. Serial No. 825,947. (Cl. 129—16.1.)

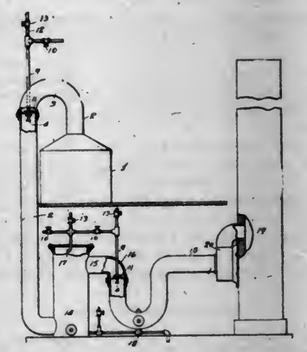


1. In a card index, a case, cards arranged in groups, a rising bar to lift the cards of the respective groups, a roller mounted in the inner end of said rising bar, a guide plate for said roller having its lower edge bent inwardly for the purpose set forth substantially as described.

2. In a device of the character described the combination with a casing having a plurality of cards therein, a rising rod for displacing one or more cards from their normal position, a roller mounted in the inner end of the rising rod, with a guide for said roller consisting of a metal plate the lower end of which is bent inwardly for the purpose set forth substantially as described.

3. In a device of the character described the combination with a casing having a plurality of cards therein, a rising rod for displacing one or more cards from their normal position, a roller mounted in the inner end of the rising rod, with a guide for said roller consisting of a metal plate, the lower edge of said plate being curved inwardly, for the purpose set forth substantially as described.

1,211,691. DEVICE FOR ELIMINATING ODORS FROM GASES, FUMES, &c. SAMSON D. EISENDRATH, Chicago, Ill. Filed Apr. 7, 1913. Serial No. 759,403. (Cl. 87—13.)



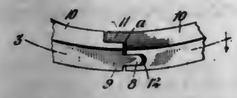
1. A device for eliminating odors from gases, fumes, etc. comprising a receptacle for the material to be treated, a pipe leading from said receptacle, a spraying device in said pipe for injecting a finely divided spray of water into the material passing therethrough and a shield for said spraying device.

2. A device for eliminating odors from gases, fumes, etc. comprising a receptacle for the material to be treated, a pipe leading from said receptacle, a spraying device in said pipe located in the path of the gases passing through the pipe and a shield suspended in front of said spraying device.

3. A device for eliminating odors from gases, fumes, etc. comprising a receptacle for the material to be treated, a connection between said receptacle and a dis-

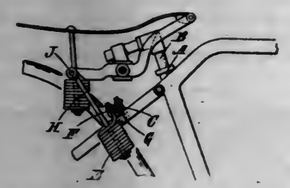
charge flue, a bend in said connection near said receptacle, a water pipe projecting into said connection at said bend, a spraying device in said pipe, a U-shaped bend in said connection, a liquid spraying device in said connection for directing the spray into said U-shaped bend, a shield in front of said spraying device and means separate from said spraying device for causing the gas to flow through said connection.

1,211,692. PACKING-RING. CARL H. ENDEBROCK and WILLIAM H. MAHLOW, Trenton, N. J.; said Mahlow assignor to said Endebrock. Filed Apr. 30, 1914. Serial No. 835,416. (Cl. 121—108.)



A single piece packing ring having one end formed with an overlap and the other end formed with an underlap, the overlap formed with a tongue projecting beyond its end, and a pocket formed in the upper face of the other end of the ring intermediate the sides thereof beyond which the underlap projects and into which pocket the tongue extends.

1,211,693. SADDLE MECHANISM FOR CYCLES. EDWIN GEORGE FIDO, Berar, India. Filed Aug. 24, 1916. Serial No. 116,754. (Cl. 208—15.)

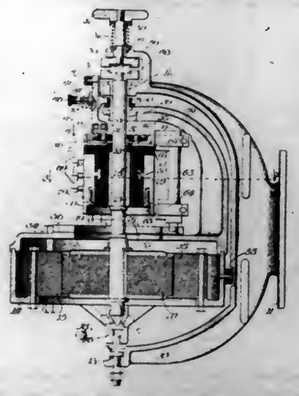


1. In saddle mechanism for cycles a seat pillar, a key thereon, a seat pillar-socket with a recess to engage the said key, means to clamp the said socket in the cycle frame, a saddle plate, a saddle frame, spiral springs to support the saddle plate on the saddle frame, and additional spiral springs to support the saddle frame, for the purpose described.

2. In saddle mechanism for cycles a seat pillar, a key thereon, a seat pillar-socket with a recess to engage the said key, means to clamp the said socket in the cycle frame, a saddle plate, a saddle frame, spiral springs to support the saddle plate on the saddle frame, additional spiral springs to support the saddle frame, and an angle iron bracket clamped to the back forks of the cycle to support the additional spiral springs, for the purpose described.

1,211,694. RECTIFIER. JOHN M. FITZGERALD, Chicago, Ill., assignor to Henry S. Hawley, Chicago, Ill.; The Merchant's Loan and Trust Company executor of said Henry S. Hawley, deceased. Filed Feb. 15, 1915. Serial No. 8,178. (Cl. 175—364.)

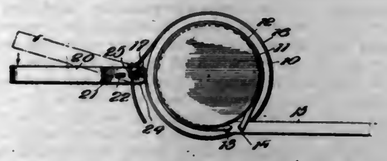
1. In a rectifier, the combination of a field frame, a rotor, a commutator mounted for rotation with said rotor, a pair of slip rings, one of said slip rings having a plurality of conducting elements electrically connected thereto, a conducting ring insulated from said slip ring, a conducting brush-carrier having a pair of brushes, one of which is adapted to engage successively said conducting elements and the other of which is adapted to engage said conducting ring, and a governor adapted to connect said slip ring with said conducting ring when a predetermined speed of rotation of said commutator is attained, whereby below said predetermined speed said brush-carrier is intermittently electrically connected with said slip ring, and at or above said predetermined speed said brush-carrier is continuously electrically connected with said slip ring.



2. In a rectifier, the combination of a field frame, a rotor, a commutator mounted for rotation with said rotor, a pair of slip rings, one of said slip rings having a plurality of conducting elements electrically connected thereto, a conducting ring insulated from said slip ring, a conducting brush-carrier having a pair of brushes, one of which is adapted to engage successively said conducting elements and the other of which is adapted to engage said conducting ring, a governor adapted to connect said slip ring with said conducting ring when a predetermined speed of rotation of said commutator is attained, whereby below said predetermined speed said brush-carrier is intermittently electrically connected with said slip ring, a clutch member carried by said rotor, a second clutch member adapted to engage said first clutch member for starting the rotation of said rotor, and spring means normally holding said second clutch member out of engagement with said first clutch member.

3. In a rectifier, the combination of a field frame, a rotor shaft having a rotor mounted thereon, a commutator carried by said shaft, a clutch member on said shaft, a second clutch member adapted to engage said first clutch member, whereby the rotation of said rotor may be started by rotating said second clutch member, and spring means normally holding said second clutch member out of engagement with said first clutch member.

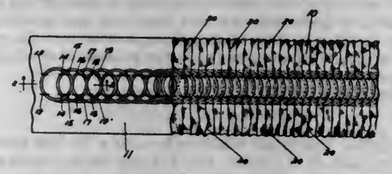
1,211,695. JAR-HOLDER AND TOP-REMOVER. PAUL L. FOWLER, Ogden, Utah. Filed July 28, 1915. Serial No. 42,376. (Cl. 65—26.)



1. A device for the purpose set forth comprising a flat band having one end doubled on itself to form a hook and provided at the extremity of said hook portion with a perforation, the band being provided adjacent its opposite terminal with a plurality of transverse openings, and a holding member comprising parallel spaced sides adapted to fit over the ends of the band, spaced stays connecting said sides and an offset on the stay nearer the ends of the said sides projecting toward the other stay, the stay provided with the offset being adapted to fit within the hook on the band and have its offset engaged in the opening therethrough, the other end of the band passing between the stays and having one of its openings engaged over said offset whereby the inner stay will hold the ends of the band together on said offset.

2. A device for the purpose set forth comprising a flat band having one end doubled on itself to form a hook and provided at the extremity of said hook portion with a perforation, the band being provided adjacent its opposite terminal with a plurality of transverse openings, and a holding member comprising parallel spaced sides adapted to fit over the ends of the band, spaced stays connecting said sides and an offset on the stay nearer the ends of the said sides projecting toward the other stay, the stay provided with the offset being adapted to fit within the hook on the band and have its offset engaged in the opening therethrough, the other end of the band passing between the stays and having one of its openings engaged over said offset whereby the inner stay will hold the ends of the band together on said offset, one of the said sides being provided at the end adjacent the stays with a laterally extending fulcrum plate.

1,211,696. ELASTIC STRIP. ALBERT W. GRIGGS, Bridgeport, Conn. Filed Sept. 9, 1916. Serial No. 119,826. (Cl. 154—48.)



1. An elastic strip consisting of a coil of spring wire having its coils flattened and elongated, and plies of non-elastic fabric between which the flattened coils are stitched while elongated, the coils being adapted to contract and gather the plies of fabric.

2. An elastic strip comprising a coil of spring wire having its coils flattened and elongated, plies of non-elastic fabric on opposite sides of the coils and lines of stitching whereby opposite sides of the coils are secured to the plies of fabric.

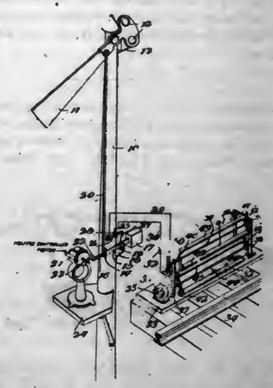
3. An elastic strip comprising a coil of spring wire having its coils flattened and elongated, plies of non-elastic fabric on opposite sides of the coils and lines of stitching through the plies of fabric, each stitch engaging a single coil only.

4. An elastic strip comprising a coil of spring wire having its coils flattened and elongated, plies of non-elastic fabric on opposite sides of the coils and lines of stitching through the plies of fabric and engaging the coils, each coil being held by four stitches and each stitch engaging a single coil.

5. An elastic strip comprising a coil of spring wire having its coils flattened and elongated so that contiguous coils overlie, plies of non-elastic fabric on opposite sides of the coils, and lines of stitching through the plies of fabric, successive stitches engaging the low side of one coil and the high side of the contiguous coils.

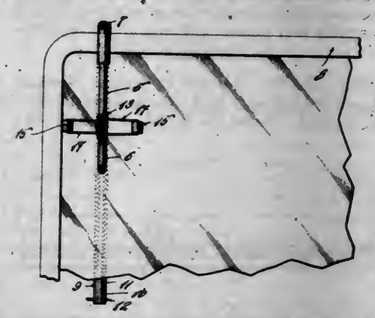
1,211,697. SAFETY BLOCK-SIGNAL. GEORGE W. GERLACH, Cumberland, Iowa. Original application filed May 6, 1913, Serial No. 765,859. Divided and this application filed Aug. 14, 1915. Serial No. 45,552. (Cl. 246—59.)

1. A signaling mechanism for block signal systems including a motor adapted to be normally energized, a switch held in closed position when such motor is energized and adapted to open upon the deënergization of the motor, an energized circuit normally closed through this switch, track contacts adapted to be swung by gravity to active position, and means operable when the switch is closed for holding the track contacts in inactive position, said means including a second motor in the switch controlled circuit, and operative connection between the second motor and the contacts.



2. A signaling device for block signal systems including a swingingly mounted semaphore arm, a swingingly mounted lever, connecting means between the arm and lever, an electric motor having a revoluble shaft, an arm carried by the shaft and engaging one arm of the lever to normally hold the semaphore arm in one position when the motor is energized, a counter weight upon the other arm of the lever to move the semaphore arm to reverse position when the motor is deënergized, a switch operatively connected to the lever arm and normally closed, an energized circuit including the switch, a second motor in this circuit, and track contacts movable out of active position by the second motor when energized.

1,211,698. CLEANER FOR AUTOMOBILE WINDSHIELDS. GEORGE E. GOODRICH, St. Louis, Mo. Filed Apr. 12, 1915. Serial No. 20,732. (Cl. 15—59.)

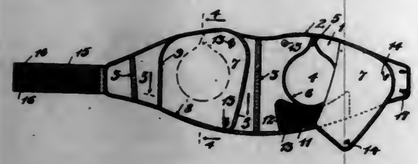


1. A window cleaning device, having a U-shaped frame, a handle projecting at right angles from said frame, and a single rubber "squeegee" frame rotatably mounted upon one arm of said U-shaped frame and adapted to project inwardly in cleaning automobile wind shields, and means for permitting said frame to be reversed upon said arm and to project outwardly when the device is used as an ordinary window cleaner, and a suitable locking-device for securing said frame after its reversal.

2. A window cleaner having a U-shaped frame, a handle projecting from said frame, a "squeegee" clamping frame carried by said U-shaped frame, and two oppositely-projecting spring bracing arms also carried by said U-shaped frame and adapted to brace and guide the device during the operation of cleaning glass.

3. A window cleaner having a U-shaped frame, a handle projecting from said frame, a "squeegee" clamping frame carried by said U-shaped frame, two oppositely-projecting spring bracing arms also carried by said U-shaped frame and adapted to brace and guide the device during the operation of cleaning glass, and rollers carried at the outer ends of said spring bracing arms and adapted to engage the glass.

1,211,699. NURSING-VEST. VICTOR GUINZBURG, New York, N. Y., assignor to I. B. Kleinert Rubber Company, New York, N. Y., a Corporation of New York. Filed July 26, 1916. Serial No. 111,375. (Cl. 128—3.)

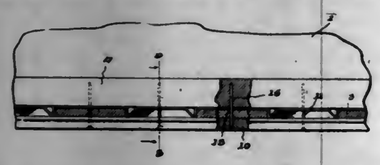


1. A device of the type described, including a body-portion having breast-openings and pockets applied to said body-portion, below said breast-openings to contain an absorbent to absorb moisture, flaps secured to said body-portion, along their bottom edges and a lateral edge of each, said breast-openings having elongated slits in their upper edges, and attaching means for the free edges of said flaps.

2. A device of the type described, including a body-portion having breast-openings and pockets formed of reticulated material, said pockets being applied to said body-portion, below said breast-openings to contain an absorbent to absorb moisture, flaps secured to said body-portion, along their bottom edges and a lateral edge of each, and attaching means for the free edges of said flaps.

3. A device of the type described, including a body-portion having breast-openings and pockets applied to said body-portion, below said breast-openings to contain an absorbent to absorb moisture, and flaps secured to said body-portion, along their bottom edges and a lateral edge of each, and means to provide for detachably connecting the unsecured edges of said flaps to said body-portion, said flaps covering said pockets and said breast openings.

1,211,700. CRATE. JOSEPH C. HEALD, Newfield, Me., assignor to Antoinette D. A. Heald, Newfield, Me. Filed Apr. 28, 1916. Serial No. 94,177. (Cl. 217—43.)



1. In a crate or similar structure, a wall member and staves to be assembled therewith, the said wall member having spaced portions, and a strip disposed between the said portions and provided at intervals with ribs, the spaces defined by adjacent ribs and the said spaced portions constituting sockets to receive the ends of the said staves.

2. In a crate or similar structure, a wall member and staves to be assembled therewith, the said wall member having spaced portions, and a strip disposed between the said portions and formed at intervals with ribs having spaced relatively angularly disposed sides, the ribs being arranged in pairs and the spaces defined by the adjacent sides of the ribs of each pair and the spaced portions of the said wall member constituting a socket to receive the stave end.

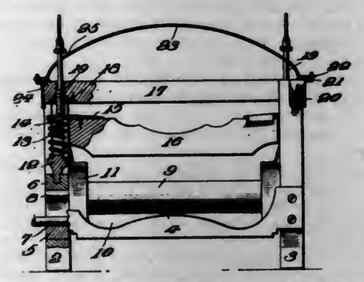
3. In a crate or similar structure, a wall member, and staves to be assembled therewith, the said wall member having spaced portions, and a metallic strip disposed between the said portions and provided at intervals with pairs of ribs stamped out therefrom, the ribs of each pair having their adjacent sides at right angles to the body of the strip and their other sides extending at an angle to the first mentioned sides and yieldably bracing the first mentioned sides, the spaces defined by the said adjacent sides of the ribs and the said spaced portions of the wall member constituting sockets to receive the ends of the said staves.

4. In a crate or similar structure, a wall member comprising a body portion, a cleat secured thereto at the edge thereof, a metallic strip secured to the outer face of the cleat and provided at intervals with pairs of ribs, a strip disposed against the first mentioned strip and secured in place with respect thereto, and staves adapted to have their ends fitted into the sockets formed between the ribs of the said pairs and the said cleat and last mentioned strip.

5. In a crate or similar structure, a wall member comprising a body portion, a cleat secured thereto at the edge thereof, a metallic strip secured to the outer face of the cleat and provided at intervals with pairs of ribs, a strip disposed against the first mentioned strip and secured in place with respect thereto, and staves adapted to have their ends fitted into the sockets formed between the ribs of the said pairs and the said cleat and last mentioned strip, the first mentioned strip being formed between each pair of ribs with an opening for the passage of a securing element driven through the said stave end.

[Claim 6 not printed in the Gazette.]

1,211,701. CLOTHES-WRINGER. JOHN F. HEMENWAY, New York, N. Y. Filed Apr. 1, 1916. Serial No. 88,247. Renewed Oct. 23, 1916. Serial No. 127,314. (Cl. 68—32.)



1. A clothes wringer comprising a frame having pressure rolls and pressure means mounted therein, a movably mounted top bar mounted within the frame of said wringer, members secured to the side bars of said frame having upwardly extending slotted portions, and a bowed spring having horizontally disposed portions at its ends extending through the slots of said extension for preventing upward movement of said top bar.

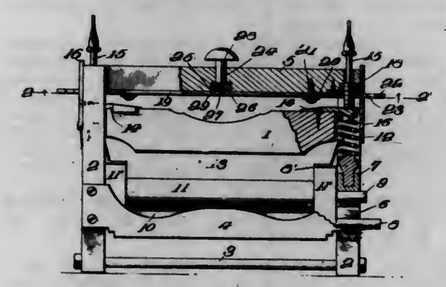
2. A clothes wringer comprising a frame having pressure rolls and pressure means mounted therein, a top bar movably mounted in said frame having pressure screws for adjusting the pressure of said pressure means, offset slotted lugs extending outward from the side bars of said frame, a bowed spring having a horizontally disposed portion arranged in the slots of said offset lugs for preventing upward movement of said top bar, said horizontally disposed ends being capable of being forced through said slot out of the path of travel of said top bar allowing said top bar to move vertically within said frame.

3. A clothes wringer comprising a frame having pressure rolls and pressure means mounted therein, U-shaped members secured to the upper ends of the side bars of said frame having offset upwardly projecting slotted lugs extending therefrom, a top bar mounted in the side bars of said frame having bearing plates at its ends, pressure screws carried by said top bar for adjusting the pressure means, a bowed spring having slotted portions to receive said pressure screws and provided with horizontally disposed ends mounted within the slotted lugs of said U-shaped member for preventing upward movement of said top bar, said spring being capable of being elongated to throw the horizontally disposed ends through the slots of the lugs to allow said top bar to move vertically within said frame to release the pressure on said pressure rolls.

4. A clothes wringer comprising a frame, having a movably mounted top bar carrying pressure screws, U-shaped members secured to the side bars of said frame having offset upwardly extended slotted lugs, bearing plates secured to the upper face of said top bar at its ends, a bowed spring having slotted portions to receive said pressure screws, said spring having reduced horizontally disposed portions seated within the slotted lugs on said bearing plates for preventing upward movement of said top bar, said horizontally disposed portions being capable of being forced through the slotted lugs for allowing said top bar to move vertically within the arc of said bowed spring.

5. A clothes wringer, comprising a frame having slotted side bars, pressure rolls and pressure means slidably mounted within said frame, U-shaped members secured to the side bars of said frame, provided with upward extending offset lugs, a top bar slidably mounted within the slotted side bars of said frame having bearing plates at its ends in longitudinal alinement with the slots of said lug, pressure screws carried by said top bar for adjusting the pressure means of said wringer, a bowed spring having slots to receive said pressure screws and provided with reduced horizontally disposed end portions resting on said bearing plates and extending through the slots of said lug for preventing upward movement of said top bar, said horizontally disposed portions being capable of moving laterally out of the path of travel of said top bar for allowing said top bar to move vertically within said frame.

1,211,702. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed July 12, 1916. Serial No. 108,909. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means mounted therein, a top bar for said frame having pressure screws for adjusting said pressure means, members secured to the side bars of said frame having substantially inverted T-shaped openings, a spring carried by the top bar of said frame coöperating with said openings, and means coöperating with said spring for allowing said top bar to move vertically within said frame.

2. A clothes wringer, comprising a frame having a vertically mounted top bar carrying pressure screws, members carried by the side bars of said frame provided with inverted T-shaped openings, a spring slidably carried by said top bar having substantially T-shaped ends coöperating with the openings for holding said top bar in position within said frame, and a member coöperating with said spring for moving the ends of said spring inwardly for allowing said top bar to move vertically within said frame.

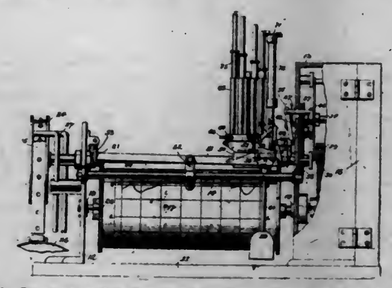
3. A clothes wringer, comprising a frame having pressure rolls and pressure means mounted therein, a top bar for said frame having pressure screws for adjusting said pressure means, members secured to the side bars of said frame provided with horizontally disposed slots registering with the vertically disposed slots, a spring slidably carried by said top bar having its ends seated within the horizontally disposed slots of said members, and provided with reduced portions adapted to enter the vertically disposed slots, and means coöpearting with said spring for moving the reduced portions of said spring into alinement with the vertically disposed slots for allowing said cross bar to move vertically within the wringer frame.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a resilient member having means for normally holding said pressure means in predetermined position, and means coöperating with said resilient member for releasing said pressure means.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, members carried by the side bars of said frame, a resilient member coöperating with said members for holding said pressure means in predetermined position, and means coöperating with said resilient member for releasing said pressure means.

[Claims 6 to 15 not printed in the Gazette.]

1,211,703. RECORDER. WENDELL HESS, Jr., Troy, N. Y., assignor to W. & L. E. Gurley, Troy, N. Y., a Corporation of New York. Filed May 26, 1915. Serial No. 30,542. (Cl. 234—10.)



1. In a recorder the combination of means for supporting a record sheet; marking means for tracing a graphic record on said sheet; and a color change mechanism operatively related with said marking means for changing the color of the record graph made by said marking means.

2. In a recorder the combination of means for supporting a record sheet; marking means for tracing a graphic record on said sheet; and a time controlled color change mechanism operatively related with said marking means for periodically changing the color of the record graph made by said marking means.

3. The combination with a recorder of the graphic type, of a plurality of recording pencils of different colors; and means for presenting them successively at the recording point.

4. The combination with a recorder of the graphic type of a plurality of recording pencils of different colors; and time controlled means for presenting them successively at the recording point.

5. In a recorder, the combination of means for supporting a record sheet; a carriage; driving means for propelling said carriage back and forth across said record sheet; a multiple pencil carrier provided with a plurality of pencils and shiftably mounted on said carriage; and shifting means for said carrier operating at the reversal of movement of the carriage, for causing said carrier successively to present said pencils at marking position.

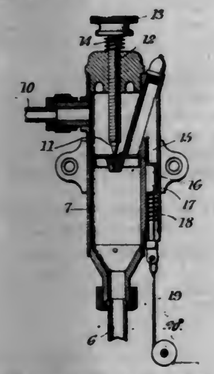
[Claims 6 to 19 not printed in the Gazette.]

1,211,704. CONVERSION OF UNSATURATED INTO SATURATED COMPOUNDS. ERIC BERKELEY HIGGINS, Wallasey, England. Filed Apr. 19, 1913. Serial No. 762,390. (Cl. 87—12.)

1. In processes for the hydrogenation of fatty acids and their esters by the use of hydrogenation catalyst and hydrogen, causing the reaction to take place in the presence of a free volatile organic acid.

2. In processes for the conversion of unsaturated into saturated compounds by the use of a hydrogenation catalyst and hydrogen, causing the reaction to take place in the presence of free formic acid.

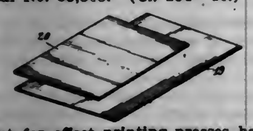
1,211,705. DECARBONIZING ATTACHMENT FOR INTERNAL-COMBUSTION MOTORS. GEORGE H. HODGDON, New York, N. Y. Filed Oct. 27, 1915. Serial No. 58,255. (Cl. 123—25.)



1. The combination with an internal combustion motor having a carbureter and a manifold, of a member communicating with the manifold and having a chamber provided with a valve port in its top wall, a source of supply of water, means for conducting water from the said source to the said port, a controlling valve associated with the port and adapted to cause the water to fall in the form of drops into the chamber to be vaporized therein, the wall of said chamber having a transparent view portion disposed beneath the said valve port, and regulable means for admitting air into the chamber at a point situated above the view portion thereof.

2. A device of the class described comprising a member having a chamber, said chamber having an outlet at its bottom adapted to be connected with the manifold of an internal combustion motor and having an inlet at its top adapted to be connected with a source of water supply, a controlling valve provided in the inlet, the member being provided with a transparent view portion beneath the inlet, and regulable means for admitting air into the chamber at a point situated above the said transparent view portion.

1,211,706. BLANKET FOR OFFSET-PRINTING PRESSES AND METHOD OF MAKING THE SAME. BERNARD W. HOERBELT, Buffalo, N. Y. Filed May 6, 1916. Serial No. 95,805. (Cl. 154—40.)



1. A blanket for offset printing presses having a non-yielding base or backing and a sheet or film of stretchable material stretched over and applied to said base or backing.

2. A blanket for offset printing presses comprising a non-stretchable base or backing and a sheet or film of stretchable material stretched and cemented at all points to said base or backing.

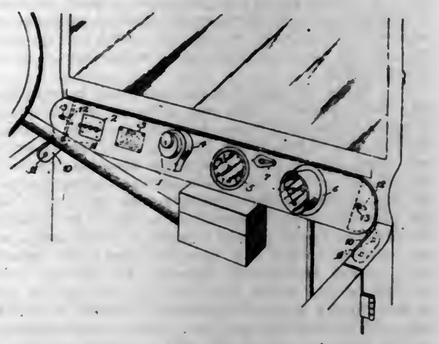
3. A blanket for offset printing presses comprising a non-yielding non-stretchable base or backing and a thin sheet or film of rubber stretched and cemented to said base or backing.

4. A blanket for offset printing presses comprising a flexible non-stretchable base or backing and a sheet or film of stretchable material of smaller size than said base or backing stretched to the size of the latter and cemented thereto.

5. A blanket for offset printing presses comprising a flexible non-stretchable base or backing and a sheet or film of stretched rubber, the two being joined together to prevent relative movement thereof.

[Claims 6 to 15 not printed in the Gazette.]

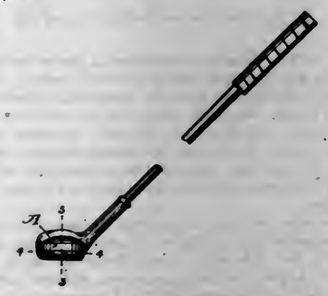
1,211,707. INSTRUMENT-BOARD FOR AUTOMOBILES. AXEL F. HOLMBERG, San Francisco, Cal. Filed Apr. 29, 1915. Serial No. 24,692. (Cl. 21—90.)



1. In combination with a vehicle, an instrument board, a pair of brackets secured to the side wall of said vehicle, each of said brackets having a base portion for attachment to the vehicle, and a board engaging portion adapted to be engaged by said instrument board, the board engaging portion being formed with an end opening slot, and a fastening member passing through the instrument board and through said slot to removably secure the instrument board to the bracket.

2. In combination with a vehicle, an instrument board, a pair of brackets secured to the side walls of the vehicle body, said brackets having base portions for attachment to the body, inclined portions adapted to be engaged by said instrument board, the inclined portions being formed with inwardly opening slots and screw bolts passing through the instrument board and through said slots to removably secure the instrument board to the brackets.

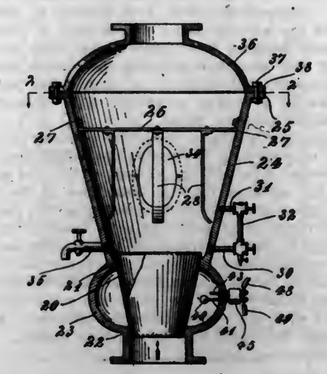
1,211,708. GOLF-CLUB. JOHN L. HUDSON, Belleville, N. J. Filed Dec. 28, 1915. Serial No. 68,973. (Cl. 46—4.)



1. A golf club having its striking face concave in the horizontal direction thereof.

2. A golf club having its striking face concave in both the vertical and the horizontal directions thereof.

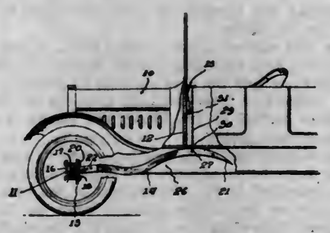
1,211,709. DRY-PIPE VALVE AND SIGNAL. WILLIAM HUMPHREY, New York, N. Y. Filed Feb. 23, 1916. Serial No. 79,831. (Cl. 169—23.)



1. In a dry pipe valve, a flattened globular valve chamber provided with conical seats at the upper and lower ends thereof, a hollow conical valve plug suited to said seats, a casing communicating with said chamber, means in said casing for guiding said plug when raised, means for visually ascertaining the contents of said casing, and means for withdrawing the contents of said casing.

2. In a dry pipe valve, a flattened spherical casing inclosing a valve chamber, said casing having conical seats formed at its upper and lower ends, a hollow conical valve plug fitted to said seats, and adapted to extend therebetween and guides for said valve plug arranged in said casing whereby said valve plug is held when in a raised position in register with its seats.

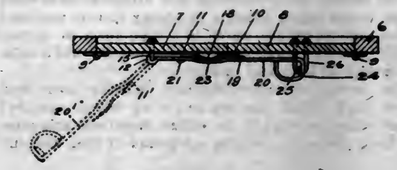
1,211,710. EMERGENCY-STOP FOR AUTOMOBILES. JOHN F. JENNINGS, Smithfield, Ill. Filed Apr. 6, 1916. Serial No. 89,482. (Cl. 21—8.)



The combination with a vehicle, of a sprag brake pivoted at one end to the vehicle, a substantially L-shaped bracket mounted upon the vehicle above the intermediate portion of the brake, one arm of the bracket extending substantially horizontally and being formed with an opening and with a slot communicating with the opening and extending into the other arm, and a chain connected at one end to the brake and extending through the opening of the bracket with its links lockingly engageable with the slot.

1,211,711. DOOR-FASTENER. HOMER V. JUNGST and HARRY G. KENNEDY, Seattle, Wash., assignors to The Kennedy Wagon Company, Seattle, Wash., a Corporation of Washington. Filed Aug. 7, 1916. Serial No. 113,492. (Cl. 70—45.)

1. A hasp fastener comprising a spring member adapted to be pivotally connected with a door, a lock bar pivoted to said spring member, and means for detachably connecting said lock bar with another door and impart a pressure which will be exerted through the medium of said spring member on said doors.



2. A hasp fastener comprising a spring member adapted to be pivotally secured from one end thereof to a door and having a tip portion adapted to engage with and press against the door, a lock bar pivotally connected to said spring member and engageable with the latter intermediate its length, a locking element provided on the outer end of said bar, and means engageable by said locking element to exert a pressure through the medium of said spring member for securing the door in its closed position.

3. A hasp fastener comprising a spring member adapted to be hingedly secured to a door, said spring member being provided with a shoulder engageable with said staple to limit the horizontal movement of said spring member with respect to said door, a locking bar pivoted to said spring member, and means for engaging said locking bar in a support.

4. A hasp fastener comprising a spring member having a curved central portion, a locking bar pivotally secured to said spring member and at one side of said curved portion, a locking element on the outer side thereof, and means engageable with said locking element to cause the locking bar to exercise a lateral thrust against the curved portion of said spring member.

5. A hasp fastener comprising a spring member having a curved central portion, an inclined shoulder provided on said spring member, a locking bar pivotally secured at one end to said spring member and having an inclined end adapted to engage the aforesaid shoulder to limit the downward movement thereof, a lock element on the outer end of said bar, and means engageable with the lock element.

[Claims 6 to 8 not printed in the Gazette.]

1,211,712. DENTIFRICE. JAMES E. KEEFE, Chicago, Ill. Filed Apr. 5, 1916. Serial No. 89,014. (Cl. 167—9.)

1. In a dentifrice, the combination of a crystalline grit one part of which by weight is soluble in less than approximately twenty-five parts by weight of water at room temperature, and a carrier for said grit, said grit being insoluble in said carrier, said dentifrice being free of any less soluble grit.

2. In a dentifrice, the combination of a crystallized abrasive as a grit one part of which by weight is soluble in less than approximately twenty-five parts by weight of water at room temperature, and a suitable germicide, said dentifrice being free of any less soluble grit.

3. In a dentifrice, the combination of a crystalline abrasive forming a grit one part of which by weight is soluble in less than approximately twenty-five parts by weight of water at room temperature, a suitable germicide, and a carrier for said grit, said grit being insoluble in said carrier, said dentifrice being free of any less soluble grit.

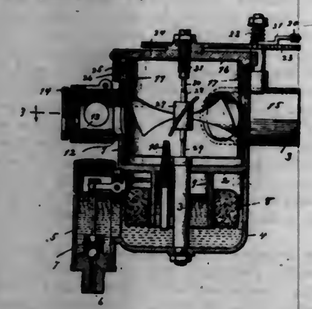
4. In a dentifrice, the combination of sugar of milk and glycerin, the sugar of milk being present in such quantities as to form a grit and the glycerin acting as a carrier, said dentifrice being free of any material less soluble than one part by weight in approximately twenty-five parts by weight of water at room temperature.

1,211,713. METHOD OF REVIVIFYING AND UTILIZING SPENT OXID. EMIL B. KINZ, Oak Park, and EDSON C. WESCOTT, Sacramento, Cal., assignors to Pacific Gas and Electric Company, San Francisco, Cal., a Corporation of California. Filed May 27, 1916. Serial No. 100,368. (Cl. 23—13.)

1. The method of revivifying and utilizing spent oxid from gas works which consists in adding thereto unslaked lime and sufficiently hot water in a fluid form to extract the sulfur therefrom and separating from the oxid a soluble compound of lime and sulfur.

2. The method of revivifying and utilizing spent oxid from gas works which consists in adding thereto unslaked lime and steam to extract the sulfur therefrom and separating from the oxid a soluble compound of lime and sulfur.

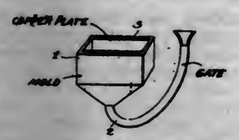
1,211,714. CARBURETER. ROBERT KIRBACH and VICTOR UBER, Linden, N. J. Filed Aug. 4, 1915. Serial No. 43,534. (Cl. 261—89.)



1. A carbureter comprising a casing, a liquid fuel cup arranged below the same, a liquid fuel nozzle that projects from the cup upwardly a distance into the lower portion of the casing, a fan wheel having an upright spindle which is journaled within the casing, said nozzle extending toward the lower face of said wheel, an air inlet port and an explosive mixture outlet port entering the casing opposite the periphery of the wheel and arranged out of axial alinement with each other, and a combined air and throttle valve that controls both of said ports.

2. A carbureter comprising a cylindrical casing, a liquid fuel cup arranged below the bottom thereof, a bolt connecting said cup to said casing, a lower bearing extending upwardly from the bolt into the casing, a cover carried by the casing, an upper screw-bearing tapped into said cover, and a fan wheel that is mounted in said bearings.

1,211,715. METHOD OF WELDING A PROTECTIVE COVERING OF COPPER TO AN IRON OR STEEL BODY. JOHN KIRBY, Pittsburgh, Pa. Filed Dec. 8, 1915. Serial No. 65,665. (Cl. 22—203.)

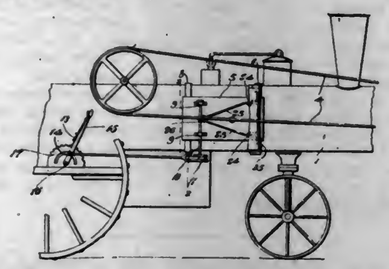


1. A method of welding a protective covering of copper to an iron or steel body comprising the softening of the inner face of a solid copper body by bringing into gradual contact with said inner face the metal to be protected when in a molten state and at a temperature from 2400 degrees F. to 2600 degrees F., and then allowing the molten metal to cool to cause the solidification of such metal with the copper thereby setting up a perfect weld between the copper and the solidified metal.

2. A method of welding a protective covering of copper to an iron or steel body comprising the positioning of the covering formed of a solid copper body within the molding cavity of the mold, then supplying the metal to be protected at a temperature from 2400 degrees to 2600 degrees F. to the molding cavity of the mold to gradually contact with the inner face of said copper body to soften said inner face, and then allowing the molten metal to cool to cause the solidification of such metal with the copper thereby providing a perfect weld between the copper and the solidified metal.

3. A method of welding a protective covering of copper to an iron or steel body comprising the positioning of the covering formed of a solid copper body within the molding cavity of the mold, so that the outer face of the copper body will oppose the wall of the molding cavity, then supplying the metal to be protected at a temperature from 2400 degrees to 2600 degrees F. to the molding cavity of the mold to gradually contact with the inner face of said copper body to soften said inner face, and then allowing the molten metal to cool to cause the solidification of such metal with the copper thereby providing a perfect weld between the copper and the solidified metal.

1,211,716. BELT GUIDE AND SHIFTER. WILLIAM R. KLIER, Newton, Ill. Filed Mar. 11, 1916. Serial No. 83,602. (Cl. 64—4.)



1. In a belt shifter, a swinging plate, a frame adjustably mounted on said plate, a gear to adjust said frame, rollers carried by the forward end of the frame and adapted to engage a belt to shift the same and means to swing the plate on its hinges.

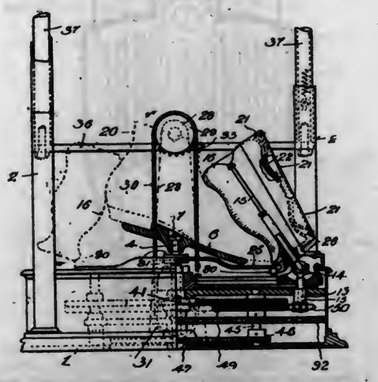
2. In a belt shifter, an attaching plate, a base plate hinged to the attaching plate, guide flanges on the base plate, means to swing the base plate on its hinges, a longitudinally adjustable frame slidably mounted on the base plate, rollers carried by the frame, and means to adjust the frame on said plates.

3. In a belt shifter, a base plate, means to attach the base plate to the boiler of a traction engine, a hinged plate hingedly connected to the forward end of the base plate, guide flanges on the hinged plate, a shaft on the base plate, a lever controlling the movement of the shaft, links connected to the lever, and to the hinged plate, a frame adjustably mounted on the hinged plate between the guide flanges, a pinion for adjusting said frame with relation to the hinged plate, a stop to limit the outward movement of the frame, and a roller at the forward end of the frame adapted to engage a belt to shift the same upon the swinging of the hinged plate.

4. In combination with a hinged plate, a frame, adjustable on said plate, brackets at the forward end of the frame, a shaft journaled in the forward ends of the brackets and a roller comprising a pair of frusto conical elements having their reduced ends joined, mounted on said shaft.

1,211,717. SHOE-SHINING MACHINE. VASILY KOSMIN, New York, N. Y. Filed Jan. 8, 1916. Serial No. 70,940. (Cl. 15—61.)

1. In a shoe polishing machine, the combination with a foot rest, brushes, means operated by the pressure of the foot upon said foot rest to cause said brushes to bear toward the same, and means for individually rotating said brushes and to coincidently rotate said brushes around said foot rest.



2. In a shoe polishing machine, the combination with a foot rest, brushes, means operated by the pressure of the foot upon said foot rest to cause said brushes to bear toward the same, a treadle for the other foot of the operator, and means operated by the pressure of the foot upon said treadle for individually rotating said brushes and to coincidently rotate said brushes around said foot.

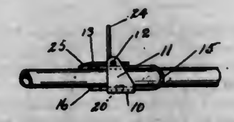
3. In a machine of the class described, the combination with a foot rest for one foot of the operator, a plurality of individually rotatable brushes adapted to rotate thereabout, and a treadle operated by the other foot of the operator for causing the rotation of said brushes, and means for locking said treadle in an inoperative position.

4. In a machine of the class described, the combination with a foot rest for one foot of the operator, a plurality of individually rotatable brushes adapted to rotate thereabout, and a treadle operated by the other foot of the operator for causing the rotation of said brushes, and means for locking said treadle in an inoperative position, and coin controlled means for releasing said locking means.

5. In a machine of the class described, the combination with a foot rest, a plurality of brushes, adapted to rotate thereabout, and means operated by pressure on said foot rest to incline said brushes toward the same.

[Claims 6 to 9 not printed in the Gazette.]

1,211,718. TUBE-CLAMP. CHARLES P. KUEHNER, Providence, R. I. Filed Mar. 31, 1916. Serial No. 87,888. (Cl. 137—6.)

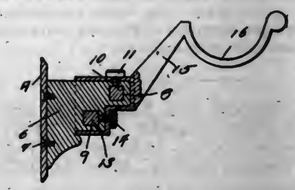


1. A tube clamp comprising a sheet metal body member having two side ears, a pair of opposing jaw members constructed of a single piece of wire bent into a double loop both loops lying between said ears, one being secured to said body portion and a cam pivoted in said ears for closing the jaws upon the tube.

2. A tube clamp comprising a sheet metal body member having two side ears, a pair of opposing jaw members constructed of a single piece of wire consisting of two parallel arms, each bent into a U-shape loop and lying between said ears, means in said body portion for securing one arm of each loop therein, and a cam pivoted in said ears for closing said jaws upon the tube.

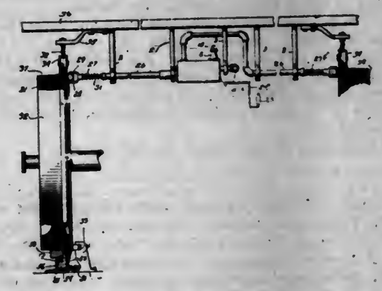
3. A tube clamp comprising a sheet metal body member having two side ears, a pair of opposing jaw members constructed of a single piece of wire consisting of two parallel arms, each bent into a U-shape loop and lying between said ears, means in said body portion for securing one arm of each loop therein, the arms of one of said jaw members being offset laterally to engage the ends of said body to prevent relative longitudinal motion, and a cam pivoted in said ears for closing said jaws upon the tube.

1,211,719. SHADE AND CURTAIN FIXTURE. WILLIAM H. LAMBERSON, Schenectady, N. Y. Filed Apr. 27, 1916. Serial No. 93,968. (Cl. 156—24.)



In a device of the class described, the combination with a plate, of a bracket extending outwardly therefrom and having a pair of rectangular openings therein, a curtain rod supporting bar removably and adjustably mounted in one of said openings, means for securing the bar in any of its adjusted positions, a shade roller supporting bar removably and adjustably mounted in the other of said openings, means for securing said bar in any of its adjusted positions and a portière pole supporting arm having an opening therein through which the first of the aforementioned bars extends to secure the last mentioned arm to the first mentioned bracket.

1,211,720. AUTOMATIC TRAIN-STOPPING DEVICE. HARRY LANDRETH, Fullerton, Cal., assignor of five-eighths to Fred M. Lutschg, one-sixteenth to Hugh B. Badgley, one-sixteenth to Otto J. Dyckman, one-sixteenth to Walter G. Dyckman, one-sixteenth to Sidney D. McKelvey, one-sixteenth to Adolph T. Hammerschmidt, and one-sixteenth to Henry R. Dyckman, Fullerton, Cal. Filed Sept. 25, 1915. Serial No. 52,605. (Cl. 246—58.)



1. In a train stopping device adapted to be mounted on a car having an air brake system therein, a valve connected to said air brake system, a motor for opening and closing said valve, an electrical circuit including one wall of the car, the rail on which the wheel operates and a supplemental resiliently mounted rail adjacent the wheel rail, means for pressing the supplemental rail toward the wheel rail so that when the wheel passes between the wheel rail and the supplemental rail the circuit will be completed and the valve opened.

2. In an automatic train stopping device, means for causing the application of the air brakes, and means for controlling the said first mentioned means including a plurality of resiliently mounted electrically energized rails in spaced relation to the wheel rail, the said means

being operative when the flange of a wheel of a train is interposed between the wheel rail and one of the energized rails and the flange of a wheel of another train enters between another of the energized rails and the wheel rail.

3. In a train stopping device, the combination with the train pipe, of an air brake system, of a valve for releasing the air therefrom, means for operating said valve to open the same, the said means being included in an electric circuit, said circuit including an energized rail and a wheel rail, resilient means for maintaining the energized rail in slight spaced relation to the wheel rail so that when the flange of a wheel enters between the other rail and the energized rail it will contact with each and the circuit will be completed.

1,211,721. PROCESS FOR THE MANUFACTURE OF ASPHALT-LIKE MASSES AND DERIVATIVES THEREFROM. LUDWIG LANDSBERG, Nuremberg, Germany. Filed Apr. 28, 1913. Serial No. 764,121. (Cl. 196—28.)

1. The process which comprises removing from the acid resins or sludge resulting from the refining of heavy mineral oils with sulfuric acid, the oils still contained therein and the sulfuric acid, until the solid asphalt-like masses become water-soluble masses.

2. The process which comprises subjecting the acid resins or sludge resulting from the refining of heavy mineral oils with sulfuric acid, to the action of an aliphatic solvent for the remaining oils and a solvent for the remaining sulfuric acid, thereby obtaining solid water-soluble asphalt-like bodies.

3. The process, which comprises subjecting the acid resins or sludge resulting from the refining of heavy mineral oils with sulfuric acid, to the action of benzin in quantity sufficient to lixiviate the oils remaining in said sludge, and with water sufficient to remove the residual sulfuric acid, thereby obtaining water-soluble asphalt-like bodies.

4. The process, which comprises subjecting the acid resins or sludge resulting from the refining of heavy mineral oils with sulfuric acid, to the simultaneous action of an aliphatic solvent sufficient to lixiviate the oils remaining in the sludge, and a solvent sufficient to lixiviate the sulfuric acid in said sludge, thereby obtaining a solid residue of water-soluble, asphalt-like masses.

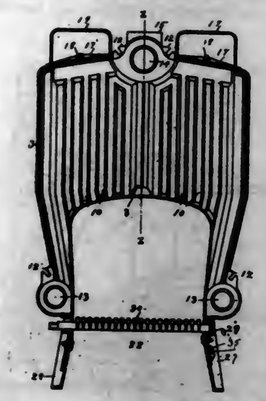
5. The process, which comprises removing from the acid resins or sludge, resulting from the refining of heavy mineral oils with sulfuric acid, the residual oil and the sulfuric acid content, to leave water-soluble asphalt-like masses, and precipitating said masses from their aqueous solution by means of a metal combination capable of precipitating them.

[Claims 6 to 16 not printed in the Gazette.]

1,211,722. VAPOR, STEAM, AND HOT-WATER GENERATOR. CHRISTOPHER LAUTERBACH, Baltimore, Md. Filed June 10, 1916. Serial No. 102,837. (Cl. 122—230.)

1. A generator comprising a front section having a flat outer surface and a straight vertical projection at the center of the inner surface, said inner surface tapering vertically between said central projection and the outer edges, a rear section having a flat outer surface and a straight vertical projection at the center of the inner surface, said inner surface tapering vertically between said central projection and the outer edges, one or more intermediate sections each surface of which is provided with a central vertical projection and the surface between said vertical projections and the outer edges being tapered vertically.

2. A generator comprising a front section having a flat outer surface and a tapering inner surface, a rear section having a flat outer surface and a tapering inner surface, one or more intermediate sections having both surfaces thereof tapering vertically, and a fine covering the space between each section at the top thereof and a damper adapted to be operated to open and close said space.



3. A generator comprising a front and a rear section each having a tapering inner wall provided with a straight vertical central projection and between said central projection and the outer edges said inner walls are tapered vertically and provided with corrugations or projections, one or more intermediate sections each having a central vertical projection and tapering walls between said central projection and the outer edges provided with corrugations or projections, slides covering the spaces between said sections, and rods connecting said slides for operating same.

4. A generator comprising a front section having a flat outer surface and a tapering inner surface, a rear section having a flat outer surface and a tapering inner surface, one or more intermediate sections having both surfaces tapering above the fire box, slides for the openings between said sections, a smoke hood at the top of said sections at each side thereof covering said openings and having outlets for the smoke.

5. A generator comprising a plurality of sections each having an inlet and an outlet, a base upon which said sections rest and forming an ash-pit, said base having openings in one side for the insertion and removal of the grate bars, a plate secured over each of said openings and having recesses in their upper ends, a separate grate bar under each section having one end mounted in one side of the base and the other end resting in and projecting beyond the recess in said plate, a separate inlet under each section, and slides for opening and closing said draft inlets.

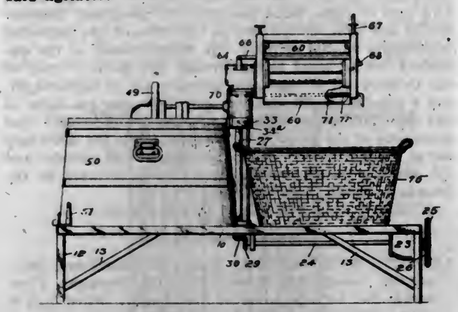
[Claim 6 not printed in the Gazette.]

1,211,723. GEARING DEVICE. GEORGE W. LEWIS, Grinnell, Iowa, assignor to Grinnell Washing Machine Company, Grinnell, Iowa, a Corporation. Filed Nov. 6, 1912. Serial No. 729,897. (Cl. 68—15.)

1. In a device of the class described, a tub, an upright support, a horizontal member rotatably mounted upon said support to swing in a horizontal plane, a cover hinged to said horizontal member, an upright shaft in said cover, an agitator operatively connected therewith, and means for imparting alternate rotary motion to said upright shaft.

2. In a device of the class described, a frame, an upright thereon, a tub supported on said frame adjacent to said upright, a horizontal member mounted on said upright and adapted to swing in a horizontal plane, a cover hinged to said horizontal member, an agitator supported by said cover, a gearing device on said upright, and means for operatively connecting said gearing device and said agitator.

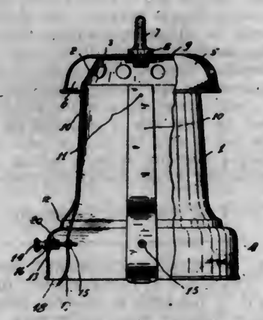
3. In a device of the class described, an upright, a tub adjacent thereto, a cover supported from said upright and adapted to swing in a horizontal plane from position over said tub to position away from the tub, an agitator supported by said cover, a gearing device supported by said cover, a gearing device supported by said upright, and means for operatively connecting said gearing device with said agitator.



4. In a device of the class described, a support adapted to receive a plurality of tubs, an upright member on said support, a horizontal member mounted thereon for rotation in a horizontal plane around the support, a cover member pivoted to said horizontal member adapted to be moved to position above the tubs in various positions of said support, an agitator mounted in said cover member, a gearing device on said upright, and means for operatively connecting said gearing device with said agitator.

5. In a device of the class described, a tub, a support, a shaft rotatably mounted therein, a bevel pinion on said shaft, a horizontal flange upon said support having a cylindrical member provided with notches, a cylindrical casing rotatably mounted upon said horizontal flange, said casing being provided with a horizontal bracket, a spring actuated latch in said bracket designed to engage the notch within the said flange to lock the said bracket against rotation, a horizontal member secured to said bracket, a cover hinged to said horizontal member, a dolly shaft in said cover, a dolly on said shaft, a pinion on said dolly shaft, a rack in mesh with said pinion, a horizontal crank shaft rotatably mounted on said horizontal member, a pinion on one end of said horizontal shaft designed to mesh with the pinion on said driving shaft to impart rotary motion thereto, a link connecting said crank and said rack to impart alternate rotary motion to said dolly shaft.

1,211,724. LAMP SHADE OR GLOBE HOLDER. ALEXANDER LITTLE, Pittsburgh, Pa. Filed Feb. 15, 1916. Serial No. 78,407. (Cl. 240—115.)



1. A holder for the purpose set forth comprising a body portion having its bottom offset with respect to the upper part thereof and cylindrical in contour, a plurality of vertically disposed spring fingers arranged within and having their upper portions connected to the upper part of said body portion and their lower portions projecting down through and free of said cylindrical bottom, said fingers spaced from the inner face of said cylindrical bottom, said cylindrical bottom having a plurality of openings, said lower portions of said fingers having openings and integral bosses, said bosses being threaded and forming a continuation of the openings in the fingers, and adjusting screws carried by and disposed at right angles with respect to said cylindrical bottom and extending through and having threaded engagement with the bosses for shifting said lower parts of the spring fingers to clamping position.

2. A holder for the purpose set forth comprising a body portion having its bottom offset with respect to the upper part thereof and cylindrical in contour, a plurality of vertically disposed spring fingers arranged within and having their upper portions connected to the upper part of said body portion and their lower portions projecting down through and free of said cylindrical bottom, said fingers spaced from the inner face of said cylindrical bottom, said cylindrical bottom having a plurality of openings, said lower portions of said fingers having openings and integral bosses, said bosses being threaded and forming a continuation of the openings in the fingers, and adjusting screws carried by and disposed at right angles with respect to said cylindrical bottom and extending through and having threaded engagement with the bosses for shifting said lower parts of the spring fingers to clamping position, the lower part of each of said spring fingers depending below said cylindrical bottom and of ogee curvature.

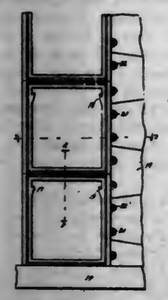
3. A holder for the purpose set forth comprising a body portion having its bottom offset with respect to the upper part thereof and cylindrical in contour, a plurality of vertically disposed spring fingers arranged within and having their upper portions connected to the upper part of said body portion and their lower portions projecting down through and free of said cylindrical bottom, said fingers spaced from the inner face of said cylindrical bottom, said cylindrical bottom having a plurality of openings, said lower portions of said fingers having openings and integral bosses, said bosses being threaded and forming a continuation of the openings in the fingers, and adjusting screws carried by and disposed at right angles with respect to said cylindrical bottom and extending through and having threaded engagement with the bosses for shifting said lower parts of the spring fingers to clamping position, said openings in said bottom being oval-shape.

4. A holder for the purpose set forth comprising a body portion having its bottom offset with respect to the upper part thereof and cylindrical in contour, a plurality of vertically disposed spring fingers arranged within and having their upper portions connected to the upper part of said body portion and their lower portions projecting down through and free of said cylindrical bottom, said fingers spaced from the inner face of said cylindrical bottom, said cylindrical bottom having a plurality of openings, said lower portions of said fingers having openings and integral bosses, said bosses being threaded and forming a continuation of the openings in the fingers, and adjusting screws carried by and disposed at right angles with respect to said cylindrical bottom and extending through and having threaded engagement with the bosses for shifting said lower parts of the spring fingers to clamping position, and sleeves loosely mounted upon said adjusting screws and interposed between said cylindrical bottom and the lower part of said spring fingers and adapted to limit the movement in one direction of the lower part of said spring fingers.

1,211,725. BUILDING CONSTRUCTION. GEORGE A. LEONARD, Sheffield, Iowa. Filed Apr. 5, 1915. Serial No. 19,388. (Cl. 189—46.)

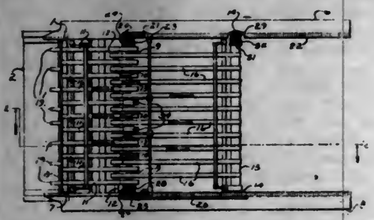
In a building structure, a continuous door frame comprising a plurality of substantially rectangular frame members superposed one above the other in vertical succession, the upper and lower surfaces of successive sec-

tions being adapted to fit together, each frame section having at its sides inwardly extending ribs, each side rib



being provided with a lug and with a second lug located above the first lug extending inwardly and upwardly from the rib.

1,211,726. SHEET-DELIVERY MECHANISM FOR PRINTING-PRESSES. GEORGE C. LEOV, Oakland, Cal., assignor to American Automatic Press Company, San Francisco, Cal., a Corporation of California. Filed July 19, 1916. Serial No. 110,091. (Cl. 101—31.)



1. Delivery mechanism comprising primary and secondary carriers connected together for simultaneous forward and backward movements bodily, and means for effecting a feed movement of one carrier while the other carrier is at rest on one stroke and for effecting feed movements of both carriers on the other stroke.

2. The combination of a bodily reciprocative and rotary impression cylinder, delivery mechanism comprising primary and secondary carriers connected with said cylinder for simultaneous bodily movement therewith, and means for effecting a feed movement of one carrier while the other carrier is at rest during the advance of the cylinder and for effecting feed movement of both carriers on the backward stroke of the cylinder.

3. The combination of a bodily reciprocative and rotative printing press impression cylinder, delivery mechanism comprising primary and secondary sets of feed tapes, the two sets of tapes being mounted for movement together bodily and with the cylinder on the forward and backward movements of said cylinder, the primary set of tapes receiving a sheet from the cylinder and delivering the same to the secondary set of tapes, and means for effecting a feed movement of the primary set of tapes while the secondary set of tapes is at rest on the advance of the cylinder and for effecting feed movement of both sets of tapes on the backward stroke of the cylinder.

4. The combination of a bodily reciprocative and rotary printing press impression cylinder, delivery mechanism comprising primary and secondary sets of feed tapes, the two sets of tapes being connected together for movement bodily and being connected with the cylinder for movement with said cylinder, the primary set of tapes receiving a sheet from the cylinder and delivering the same to the secondary set of tapes, and means for effecting a feed movement of the primary set of tapes while the secondary set of tapes is at rest on the advance of the cylinder and for effecting the feed movement of both sets of tapes on the back stroke of the cylinder.

5. The combination of a bodily reciprocative and rotary printing press impression cylinder, delivery mechanism comprising primary and secondary sets of feed tapes, the two sets of tapes being mounted for movement together bodily and with the cylinder on the forward and backward movements of said cylinder, the entering ends of the secondary set of tapes being between the delivery ends of the primary set of tapes, the primary set of tapes receiving a sheet from the cylinder and delivering the same to the secondary set of tapes, and means for effecting a feed movement of the primary set of tapes while the secondary set of tapes is at rest on the advance of the cylinder and for effecting feed movement of both sets of tapes on the backward stroke of the cylinder.

[Claims 6 to 10 not printed in the Gazette.]

1,211,727. RAILWAY-TIE. BURNS D. LOCKWOOD, Bellevue, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed July 8, 1916. Serial No. 108,153. (Cl. 238—5.)



1. A tie comprising a member of channel form in cross section having a horizontal web and downwardly depending flanges, a plate at each end of said tie extending upwardly between and secured to said flanges, a rail carried by said tie, and a clamp for adjustably securing said rail to said tie, said clamp comprising a plurality of coöperating parts having coöperating inclined faces, and a substantially vertically disposed bolt operatively connecting said parts.

2. A tie comprising a member of hollow form and a plate at each end of said tie extending upwardly within and secured to said member, a rail carrried by said tie, and a clamp for adjustably securing said rail to said tie, said clamp comprising a plurality of coöperating parts having coöperating inclined faces and a substantially vertically disposed bolt operatively connecting said parts.

3. A tie comprising a member having a horizontal web and downwardly inclined flanges and a plate extending across the bottom of said tie and secured to said flanges, said plate extending upwardly within said tie, a rail carried by said tie, and a clamp for adjustably securing said rail to said tie, said clamp comprising a plurality of coöperating parts having coöperating inclined faces and a substantially vertically disposed bolt operatively connecting said parts.

4. A tie comprising a member having a web and downwardly inclined flanges and a plate arched upwardly between and secured to said flanges, a rail carried by said tie, and a clamp for adjustably securing said rail to said tie, said clamp comprising a plurality of coöperating parts having coöperating inclined faces and a substantially vertically disposed bolt operatively connecting said parts.

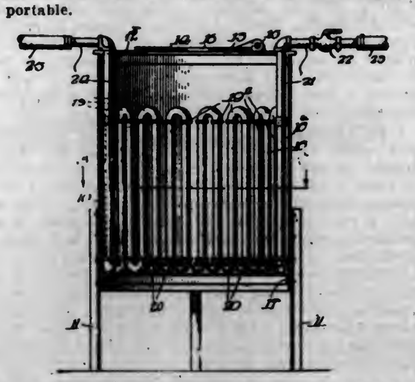
5. A tie, a rail carried by said tie, and independent clamp members on each side of said rail for adjustably fastening said rail to said tie, each of said clamp members comprising a plurality of parts having coöperating inclined surfaces and a bolt operatively connecting said parts.

[Claims 6 to 14 not printed in the Gazette.]

1,211,728. BUILDER'S PORTABLE HOT-WATER HEATER. CHRISTIAN A. LONDELIUS, Jr., Chicago, Ill., assignor to C. A. Londelius & Sons Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 7, 1916. Serial No. 70,875. (Cl. 122—373.)

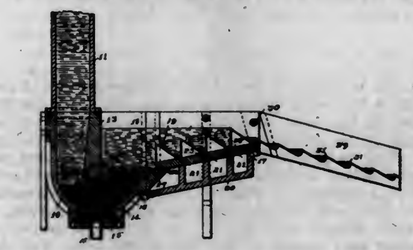
1. A builder's portable water heater, comprising a shell open at the top and bottom, supporting legs therefor arranged to support the open bottom of the shell in an exposed condition free from the object on which the heater

stands, a cover for the open top of the shell, a water circulating coil removably supported in the shell and having a large surface area, the ends of said coil being arranged for connection with flexible inlet and discharge pipes, said water circulating coil having closely spaced pipes arranged close to the inner face of the shell and having horizontal closely spaced pipes arranged adjacent the open bottom of the shell, said coil forming the fuel supporting means for the heater and the entire structure being readily portable.



2. A builder's portable water heater, comprising a shell open at the top and bottom, supporting legs therefor arranged to support the open bottom of the shell in an exposed condition free from the object on which the heater stands, a cover for the open top of the shell, a water circulating coil removably supported in the shell and having a large surface area, the ends of said coil being arranged for connection with flexible inlet and discharge pipes, and a shut off valve on one of said ends of the coil, said water circulating coil having closely spaced pipes arranged close to the inner face of the shell and having horizontal closely spaced pipes arranged adjacent the open bottom of the shell, said coil forming the fuel supporting means for the heater and the entire structure being readily portable.

1,211,729. AMALGAMATOR. ROWE F. LOUNSBERRY, Sheridan, Wyo., assignor to Mid-Continent Machinery Company, Sheridan, Wyo., a Corporation of Wyoming. Filed July 14, 1913. Serial No. 779,063. (Cl. 83—67.)

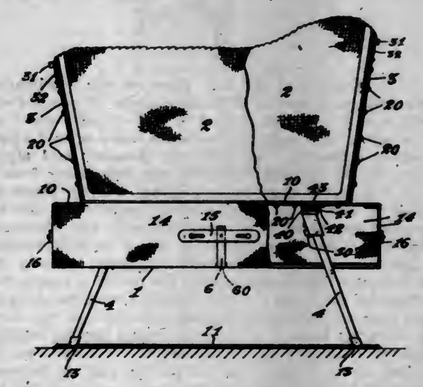


1. In a device of the class described, an inclined platform, a series of riffles of substantially uniform size on said platform, each riffle comprising a substantially vertical front portion and a rear portion inclined downwardly and rearwardly, said platform being provided with water passageways extending through it to discharge into the space between each of the riffles in a direction substantially parallel with the inclined side of the riffle, and independent means for supplying water under pressure to each of said passageways for each of the spaces between the riffles.

2. In a device of the class described, an inclined platform, a series of riffles of substantially uniform size on said platform, each riffle comprising a substantially vertical front portion and a rear portion inclined downwardly and rearwardly, said platform being provided with water passageways extending through it to discharge into the spaces between each of the riffles in a direction substantially parallel with the inclined side of the riffles, for the purposes stated.

3. An improved amalgamator, comprising a receptacle designed to contain mercury, means for supplying ores and water thereto under pressure, means for agitating the mercury, means for drawing off the amalgam, an inclined platform at the delivery end thereof, a water receptacle below the inclined platform having independent compartments therein, independent means for supplying water to each compartment, means for regulating the pressure of the water in each of said water supplying means, said inclined platform being provided with a number of series of openings inclined upwardly and away from the delivery end, a series of riffles on top of the inclined platform, each riffle being of the same height and the front edge of each being substantially vertical and the rear side being inclined downwardly and rearwardly, said rear sides being so arranged that the openings in the inclined platform will discharge upwardly parallel therewith, there being also openings in the platform to discharge over the top of the mercury within the mercury chamber in a substantially horizontal position, substantially as and for the purposes stated.

1,211,730. COLLAPSIBLE BABY-BED. ALZAMON IRA LUCAS, Seattle, Wash. Filed Mar. 29, 1916. Serial No. 87,617. (Cl. 5—58.)



1. An infant's crib having a base or floor section, in the form of a shallow inverted box, and separable sides, said bottom and meeting edges of the sides being provided with interlocking means engageable to hold these parts in assembled relation, and the sides being of a size to fit within the box-like bottom when separated.

2. An infant's crib having a base or floor section, in the form of a shallow inverted box, and separable sides, said bottom and meeting edges of the sides being provided with complemental key-hole slots and headed pins, and means for locking the sides against accidental releasing movement.

3. A collapsible infant's crib comprising a base or floor section in the form of a shallow open box, and four separable sides, adapted when the crib is collapsed to fit in said box, the bottom of said box having key-hole slots along two edges and the corresponding sides having headed pins adapted to enter said slots, the vertical edges of all sides having complemental key-hole slots and headed pins, and spring held catches engaging the side sections to prevent accidental movement in releasing direction.

4. A collapsible child's crib comprising a base or floor member in the form of an inverted shallow box, and four sides of a size to store within said box, means for securing the sides to each other and to the box to form a crib, a

box closing section and means for securing it in place to close the box.

5. A collapsible child's crib comprising a base or floor member in the form of an inverted shallow box, and four sides of a size to store within said box, means for securing the sides to each other and to the box to form a crib, legs, means for detachably securing the legs to the inner side of the box bottom, a box closing section, having means for holding the lower ends of the legs when the crib is set up, and means for securing it in place to close the box.

[Claims 6 and 7 not printed in the Gazette.]

1,211,731. AUTOMATIC AIR CUT-OFF. JOSEPH G. LUNDHOLM, Miller, Kans. Filed Jan. 18, 1916. Serial No. 72,684. (Cl. 137—28.)



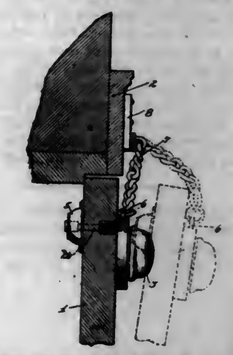
1. In a device of the kind described the combination of a cylinder formed with an air chamber at one end and with a stop, a nipple secured to said cylinder and communicating with said air chamber, a valve in said nipple opening outwardly from said air chamber, said nipple being formed for attachment to and detachment from a source of supply of air under pressure, another nipple secured to said cylinder and communicating with said air chamber and formed for connection with and disconnection from a tire to be inflated, a piston in said cylinder, a rod connecting the valve with the piston whereby the valve is operable in unison with the piston, a piston rod, a head for the piston rod formed with a shoulder engaging said stop for limiting the opening movement of the valve, an adjusting head, a compression spring bearing between said two heads and tending to open the valve, and an adjusting screw to move said adjusting head to increase and diminish the tension of said spring; said cylinder being formed with a slot disclosing said two heads and being inscribed with a designation indicating the position of the head when said valve is closed and with marks indicating the pressure in the air chamber at which the piston will be moved to close the valve according to the several adjustments of the adjusting head.

2. In a device of the kind described, the combination of a cylinder formed with an air chamber in one end, a nipple secured to said cylinder and communicating with said air chamber and formed for connection with a source of supply of air under pressure, a valve in said nipple opening outwardly from said air chamber, another nipple communicating with said air chamber and secured to said cylinder and formed for connection with a tire to be inflated, a piston in said cylinder connected to and operating said valve, a piston rod, a head for the piston rod, an adjusting head, a compression spring bearing between said two heads and tending to open the valve, and an adjusting screw to shift the adjusting head to vary the tension of the spring; said cylinder being formed with an opening in its wall to disclose said two heads and being inscribed with marks to indicate the position of the first-named head when the valve is closed and with marks associated with the adjusting head indicating the pressure necessary to close the valve.

3. In a device of the kind described, the combination of a cylinder formed with an air chamber, means communicating with the air chamber and adapted for connection with a source of supply of air under pressure, a valve in the passage of said communicating means opening outwardly from said chamber, another means communicating with said air chamber and adapted for connection with a tire to be inflated, a piston in said cylinder connected with said valve and operable under pressure of air in said air chamber to close said valve, a piston rod, an adjusting head, a compression spring between the piston rod and the adjusting head, and an adjusting screw to shift the adjusting head, said spring tending to force the valve open, and said cylinder being formed with an opening to disclose the positions of operating parts associated with said valve and said adjusting head.

4. In a device of the kind described, the combination of a casing formed with an air chamber and with a passage adapted for connection with a source of supply of air under pressure and also with a passage from said air chamber adapted for connection with a place to be supplied, a valve in the first-named passage, a piston in said chamber operably connected to said valve and operable by air under pressure in said chamber to close said valve, an adjusting head, a compression spring between the piston and the adjusting head, and an adjusting screw for adjusting said adjusting head; said casing and said adjusting head being formed with externally visible means indicating the closed position of the valve and the position of the adjusting head.

1,211,732. COMBINED DOOR-BELL AND BURGLAR-ALARM. EDGAR J. LUTWYCHE, Chicago, Ill. Filed June 6, 1914. Serial No. 843,426. (Cl. 116—44.)



1. In a device of the character described, an alarm adapted to be mounted on a door, a casing, means for actuating the alarm comprising an escapement mechanism, a stop device resiliently fastened to the casing and having an off-set part engaging the escapement for holding the same inactive, a pivoted rocking lever engaging said stop device, a plurality of distinct releasing devices engaging said lever, one of said releasing devices comprising a movable plunger coacting with an outwardly projecting inclined part carried at one end of the lever, and the other of said releasing devices comprising a flexible member and a bar projecting to the exterior of the casing fastened at one end to said flexible member and fastened at its other end to the rocking lever, the other end of said flexible member being adapted to be fastened to the frame of the door to limit the extent of the opening of the door.

2. In a device of the character described, an alarm adapted to be mounted upon a door, means for actuating the alarm comprising an escapement mechanism and a rocking lever, a single stop device for holding the escapement inactive, a plurality of distinct releasing mechanisms for said stop device, one of said releasing mechanisms comprising a movable plunger passing through the door and an offset projecting part on the side of the lever extending at an angle thereto and adapted to be engaged by said plunger, the said offset projecting part of the lever being inclined relative to the body of the lever, and the other releasing device comprising a flexible member secured at one end to the rocking lever and at its opposite end to the door frame to limit the extent of the opening of the door.

1,211,733. CASEMENT-ADJUSTER. ULYSSES GRANT MCQUEEN, New York, N. Y. Filed Mar. 30, 1915. Serial No. 18,163. (Cl. 16—22.)



1. A holding device for vertically movable and horizontal swinging casements, comprising a bracket adapted to be secured to the frame, a tube mounted to tilt vertically and swing horizontally from said bracket, a rod sliding in said tube and free to oscillate therein and provided with spaced annular grooves and a yieldingly mounted spherical locking body carried by said tube and adapted to be successively projected into said grooves as the rod is adjusted longitudinally therein.

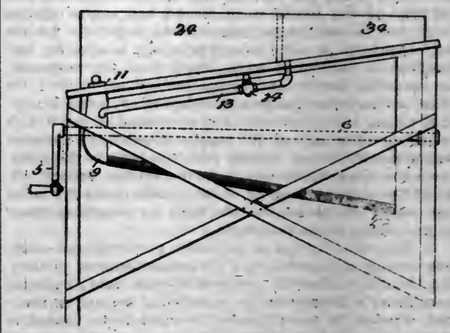
2. A holding device for vertically movable and horizontally swinging casements, comprising, a bracket adapted to be secured to the frame, a tube mounted to tilt vertically and swing horizontally from said bracket, a rod sliding in said tube and free to oscillate therein and provided with spaced annular grooves and a yieldingly mounted spherical locking body carried by said tube and adapted to be successively projected into said grooves as the rod is adjusted longitudinally therein, the said rod having a transversely restricted portion adapted to freely pass over said locking body initially on movement of the rod from the tube and on the normal projection of the rod in the tube.

3. A holding device for vertically movable and horizontally swinging casements, comprising, a tube mounted to swing vertically and horizontally and to tilt vertically from the casement, said rod being movable in the tube, a stop on the rod, a stop on the tube adapted to co-act with the first stop to limit the projection of the rod from the tube, and a securing device carried by the tube and coacting with the rod to hold the same against movement in the tube.

4. A holding device for vertically movable and horizontally swinging casements, comprising, a tube adapted to swing horizontally and to tilt vertically from the frame, a rod adapted to be mounted to swing horizontally and to tilt vertically from the casement and with the tube and mounted to slide in said tube, a member having a stop, said member being secured to the tube, a stop formed on the rod and adapted to coact with the first stop, and a locking device carried by said member and adapted to coact with the rod to hold the latter adjusted in the tube.

1,211,734. SMUT-MACHINE. CLARENCE MCKINNEY, Amherst, S. D. Filed June 29, 1915. Serial No. 37,081. (Cl. 83—28.)

In an apparatus of the class described, a supporting frame including a top, a drum mounted for rotation beneath the top and independent thereof, a spout having an upper intake end fitted through said top and having a lower discharge end fitting within the intake end of the drum, a grain container mounted upon said top and arranged to discharge into said spout, a liquid container also mounted upon the top, a liquid conducting pipe arranged beneath the top and having one end thereof extending through said top and through the bottom of the liquid container and its other end provided with a hooked terminal piercing the spout at the receiving end of the drum and communicating with the interior thereof, and a



valve arranged in the liquid conducting pipe for controlling the flow of liquid from the container to the drum.

1,211,735. TREATMENT OF WATER FOR SOFTENING, STERILIZING, AND LIKE PURPOSES. HENRY JAMES MAGRATH, Poplar, London, England. Filed July 21, 1915. Serial No. 41,174. (Cl. 210—1.)

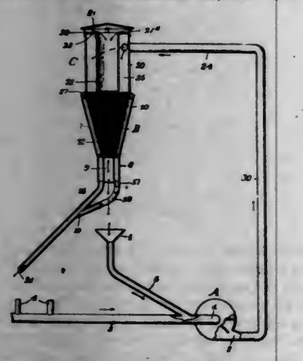
1. Apparatus for use in softening, purifying and otherwise acting upon water, and for regenerating or revivifying the active material employed therein, said apparatus comprising a receptacle for containing the active material, a tank for supplying the salt solution and also water with means for supporting salt therein while it is dissolved by the flow of water therethrough, and three valves adapted to control respectively the admission to the receptacle of fresh water to be treated, the admission of liquid from the tank, and the outflow of waste liquid from the receptacle, with means for operating said valves such that a movement of the operating means in one direction will close the valve which admits water to be treated to the receptacle, and will open the valve admitting liquid from the tank and the valve permitting outflow of waste liquid from the receptacle, and return movement of said operating means will close the valve communicating with the tank and the valve for outflow of waste liquid from the receptacle, and will then open the valve for admitting fresh water to be treated to the receptacle.

2. Apparatus for use in softening, purifying and otherwise acting upon water, and for regenerating or revivifying the active material employed therein, said apparatus comprising a receptacle for containing the active material, a valve for the admission to the receptacle of water to be treated, a tank divided into two compartments with

means of communication between said compartments, means for maintaining the supply of water to one compartment, means for supporting a charge of regenerating material in the second compartment and a pipe leading from said second compartment to the recpetacle for the active material, a valve in said pipe, and a valve for controlling the outflow of waste liquid from the receptacle, an operating handle and means connecting together the three valves before mentioned with said operating handle, said means being such that the movement of the handle in one direction cuts off the supply of water to be treated and opens the valves leading from the tank to the receptacle and from the receptacle to the outflow respectively, while the return movement of the handle closes the latter two valves and then opens the valve for admitting water to be treated to the receptacle.

3. Apparatus for use in softening, purifying and otherwise acting upon water, and for regenerating or revivifying the active material employed therein, said apparatus comprising a receptacle for containing the active material, a valve for the admission of water to be treated to the receptacle, a tank divided into two compartments with means for communication between said compartments, means for maintaining the supply of water to one compartment, a perforated tray in the other compartment adapted to support the salt requisite for regenerating the active material, a pipe leading out from the latter compartment beneath the tray, a valve in said pipe communicating with the receptacle for the active material, a valve for permitting outflow of waste liquid from the receptacle, and operating means for said valves adapted to maintain the second and third valves closed when the first mentioned valve is open, and the first mentioned valve closed when the second and third valves are open.

1,211,736. APPARATUS FOR DISINTEGRATING SHAVINGS. DAVID E. MARSHALL, Kansas City, Mo. Filed Nov. 1, 1915. Serial No. 59,124. (Cl. 83—75.)



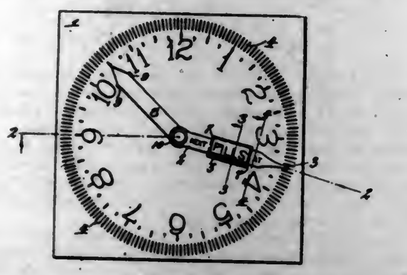
1. In combination, a receptacle comprising a plurality of angularly disposed inclined perforated walls, and pneumatic means for driving a vortical stream of wood waste into said receptacle and against said walls.

2. In combination, a receptacle comprising a plurality of angularly disposed inclined perforated walls, and pneumatic means for maintaining a descending vortex of air laden with wood waste, within said receptacle.

3. In combination, a receiving trunk, a delivery trunk, a rotary blower connected between said trunks, a drum having a vertical axis, said delivery trunk being connected non-radially to said drum, a pneumatic wood reducing hopper below and communicating with said drum, said hopper having an open bottom for eduction of unreduced material, a receptacle spaced below said open bottom to receive the unreduced material, and a spout from said receptacle to said receiving trunk.

4. In combination, a receiving trunk, a delivery trunk, means for circulating air through said trunks at high velocity, a drum having a vertical axis and with which the delivery trunk is connected on a tangent, a pneumatic wood reducing hopper below and communicating with said trunk and embodying angularly disposed screens, said hopper having an open bottom for eduction of unreduced material, a receptacle spaced below said open bottom to receive the unreduced material, a spout leading from said receptacle to the receiving trunk, a conical shell surrounding the wood reducing hopper to receive the reduced material therefrom, and two communicating spouts leading from the bottom of said shell to conduct the reduced material therefrom.

1,211,737. MEDICINE DEVICE. ANDREW A. MARTINI, Buffalo, N. Y. Filed Feb. 24, 1916. Serial No. 80,184. (Cl. 116—60.)



1. A medicine indicator comprising a dial plate, a hand which may be moved over the face of said plate so as to indicate any desired point on the same, and an indicating sleeve mounted on said hand so as to be capable of rotation thereon independently of the movement of said hand to permit of presenting any desired part of the same.

2. A medicine indicator comprising a plate having a dial face indicating time, a hand which may be swung around on the dial face and an indicating sleeve mounted to turn on said hand independently of the movement of the latter and held frictionally against turning thereon and bearing the names of suitable medical requirements.

3. A medicine indicator comprising a plate having a dial, a hand which may be moved over the face of said dial, flexible wings arranged on the longitudinal edges of the hand, and an indicating sleeve mounted on the hand and wings and capable of rotation thereon.

4. A medicine indicator comprising a plate having a dial, a hand which may be moved over the face of said dial, flexible wings arranged on the longitudinal edges of the hand, an indicating sleeve mounted on the hand and wings and capable of rotation thereon and retaining flanges formed on the transverse ends of said wings and engaging the ends of said sleeve for holding the latter against longitudinal movement on the hand.

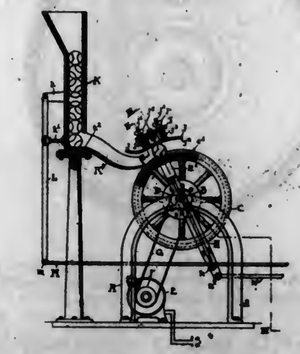
5. A medicine indicator comprising a plate having a dial face indicating time, a hand which may be swung around on the dial face, an indicating sleeve mounted on said hand and held frictionally against turning thereon and bearing the names of suitable medical requirements and means for retaining the hand in any desired position on the dial circumferentially of the latter.

[Claims 6 and 7 not printed in the Gazette.]

1,211,738. AUTOMATIC BASE-BALL-PITCHING MACHINE. BARTLEY N. MARTY, Lakewood, Ohio. Filed Apr. 29, 1916. Serial No. 94,490. (Cl. 89—10.)

1. A baseball pitching machine, the combination of a wheel, a frame in which said wheel is rotatably mounted, a shoe mounted adjacent to the circumference of said wheel and in position to hold the ball against the surface of the wheel, and means for revolving said wheel, whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved.

2. In a baseball pitching machine the combination of a grooved wheel, a frame in which said wheel is rotatably mounted, a shoe mounted adjacent to the circumference of said wheel in position to hold the ball against the grooved surface of the wheel, and means for revolving said wheel, whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved.



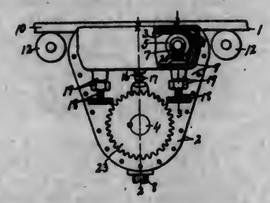
3. In a baseball pitching machine the combination with a wheel having a circumferential groove with rings of yielding material to impinge against the ball, a frame in which said wheel is rotatably mounted, a shoe mounted adjacent to the circumference of said wheel in position to hold the ball against said rings of yielding material, and means for revolving said wheel whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved.

4. In a baseball pitching machine the combination of a wheel, a frame in which said wheel is rotatably mounted, a shoe adjustably mounted adjacent to the circumference of said wheel in position to hold the ball against the surface of the wheel, and means for revolving said wheel whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved.

5. In a baseball pitching machine the combination of a grooved wheel, a frame in which said wheel is rotatably mounted, a shoe adjustably mounted adjacent to the circumference of said wheel in position to hold the ball against the grooved surface of the wheel, and means for revolving said wheel whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved.

[Claims 6 to 10 not printed in the Gazette.]

1,211,739. SUCTION-BOX. CHARLES EDWARD MIERS, Watertown, N. Y. Filed Apr. 6, 1915. Serial No. 19,477. (Cl. 92—52.)



1. In a suction device for pulp carriers, a non-metallic foraminous traveling apron of resilient material, and a suction box inclosing substantially all but the portion thereof which contacts with the pulp carrier.

2. In combination with a traveling foraminous pulp carrier, a stationary suction box having an open side adjacent the underside of the carrier, and an endless traveling foraminous apron within said box and having a portion thereof movable across the open upper side thereof in contact with the underside of the carrier.

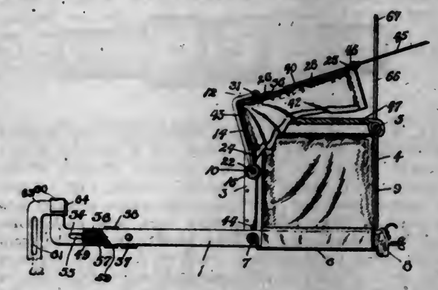
3. In combination with a traveling foraminous pulp carrier, a stationary suction box having an open side adjacent the underside of the carrier, and an endless traveling foraminous apron within said box and having a portion thereof movable across the open upper side thereof in contact with the underside of the carrier, and supporting rollers for said apron adjustable to tension the same.

4. In combination with a traveling foraminous pulp carrier, a stationary suction box having an open side adjacent the underside of the carrier, and an endless traveling foraminous apron within said box and having a portion thereof movable across the open upper side thereof in contact with the underside of the carrier, and means for adjusting the upper portion of the apron relatively to the carrier.

5. In combination with a traveling foraminous pulp carrier, a stationary suction box having one side adjacent the carrier open but otherwise substantially air-tight, and an endless traveling foraminous apron covering the open side of the box in contact with the carrier and otherwise wholly within said box.

[Claim 6 not printed in the Gazette.]

1,211,740. DETACHABLE GRASS-CATCHER FOR LAWN-MOWERS. TAZEWELL S. MORTON, Birmingham, Ala. Filed Nov. 26, 1915. Serial No. 63,477. (Cl. 56—114.)



1. A grass catcher adapted to be attached to a lawn-mower comprising in combination a stationary receptacle; means for attaching the same to a mower; a collapsible collecting receptacle resting normally in an open position forward of said stationary receptacle; a pivotal connection between the rear of said collecting receptacle and the front of said stationary receptacle; and operating means for moving the collecting receptacle from its normal position to a discharge position above the stationary receptacle.

2. A grass catcher adapted to be attached to a lawn-mower comprising in combination a stationary receptacle; means for attaching the same to a mower; a collecting receptacle comprising a plurality of sections, hinged together, said receptacle resting normally in an open position forward of said stationary receptacle; a pivotal connection between the rear of said collecting receptacle and the front of said stationary receptacle; and operating means for moving the collecting receptacle from its normal position to a discharge position above the stationary receptacle.

3. A grass catcher adapted to be attached to a lawn-mower comprising in combination a stationary receptacle; means for attaching the same to a mower; a spring-distended, collapsible receptacle resting normally in an open position forward of said stationary receptacle; a pivotal connection between the rear of said collapsible receptacle and the front of said stationary receptacle; and operating means for moving the collapsible receptacle from its normal position to a discharge position above the stationary receptacle.

4. A grass catcher adapted to be attached to a lawn-mower comprising in combination a stationary recepta-

cle; means for attaching the same to a mower; a two-part foldable receptacle hingedly connected to the forward wall of said stationary receptacle and resting normally in an open position forward thereof; spring members interposed between the parts of said foldable receptacle to maintain the same in open form; spring members coacting with the hinged connections between the foldable receptacle and the stationary receptacle, to restore the former to its normal position; and means for moving said foldable receptacle from its normal position to a discharge position above the stationary receptacle.

5. A detachable, collapsible grass-collector for grass catchers comprising a plurality of sections hinged together; means for normally holding said sections in an open position; attaching means mounted on the rear of said collector for pivotally securing the same within and transversely of the open end of a grass-catcher; means coacting with said attaching means for retaining said collector in its normal distended or horizontal position; and operating means for moving said collector from its normal position to an inverted discharge position above said grass-catcher.

[Claims 6 and 7 not printed in the Gazette.]

1,211,741. PIPE-COUPLING. KARL O. MUEHLBERG, Manitowoc, Wis. Filed July 10, 1914. Serial No. 850,180. (Cl. 137—28.)



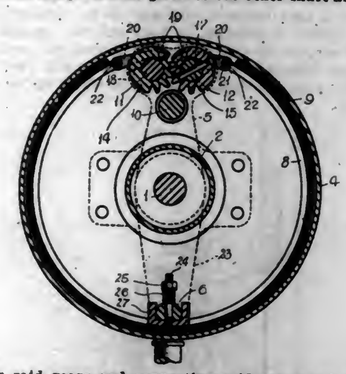
1. A hose or pipe coupling, comprising a body member provided at one end with means for connecting it to a conduit and at the other end having a plurality of circumferentially spaced projections provided with spirally arranged front and rear edges, the spaces between said projections being slightly wider than said projections, said rear edges being provided with teeth and the front edges being uninterrupted, whereby the front edges of like mating coupling members guide said projections to interlocking position of said teeth, and a gasket seated in said body member and projecting endwise therefrom for coöperation with a similar gasket of the mating member.

2. A hose or pipe coupling, comprising a body member provided at one end with means for connecting it to a conduit and at the other end having a plurality of circumferentially spaced projections detachably connected thereto and provided with spirally arranged front and rear edges, the spaces between said projections being slightly wider than said projections, said rear edges being provided with teeth and the front edges being uninterrupted, whereby the front edges of like mating coupling members guide said projections to interlocking position of said teeth, and a gasket seated in said body member and projecting endwise therefrom for coöperation with a similar gasket of the mating member.

1,211,742. BRAKE MECHANISM FOR MOTOR-VEHICLES. EMIL A. NELSON, Bonville, Mich. Filed Dec. 17, 1914. Serial No. 877,652. (Cl. 74—37.)

1. The combination with a brake drum, of a brake band within the drum, a rotatable member within the drum adjacent to one end of the band provided with grooves, connecting members pivotally connected to the end of the band and extending into the grooves of said members with pivotal connections in said grooves to connect the band with the rotatable member tangentially to the path of movement of the pivotal connections of the connecting members with the rotatable member, and means for rotating the rotatable member.

2. In a brake mechanism, the combination with a drum, and brake bands therein, of parallel rock shafts extending into said drum, a set of gears on each rock shaft with one of said gears fixed to said shaft and the gears of one shaft meshing with the gears of the other shaft and means



set in said gears and connecting said gears and the ends of said brake bands whereby one of said bands can be adjusted independently of the other band.

1,211,743. MILL-PRODUCT-DISCHARGING MECHANISM. WILLIAM B. NEWLON, Fremont, Nebr., assignor of one-half to George A. Mead, Central City, Nebr. Filed Feb. 9, 1915. Serial No. 7,145. (Cl. 193—10.)



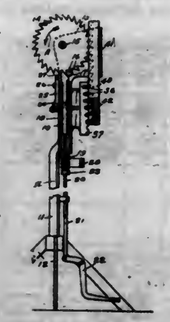
1. In a mechanism for discharging pulverulent materials from a receptacle containing such material together with air under pressure, a casing having a chamber therein connected through an open passage with the receptacle, a reciprocating member movable in said chamber to push the material toward the end thereof, and means forming a yielding throat at the end of said chamber into which the material may be pushed directly by the reciprocating member and compacted to form a stopper for preventing escape of air from the chamber through said throat.

2. In a mechanism of the class described, a casing, a piston movable in said casing, means forming an open passage for directing material into the path of the piston, means forming a yieldable throat into which the material may be pushed directly by the piston, and means for receiving the material discharged from the throat.

3. In a mechanism of the class described, a casing having a horizontally-extending chamber therein, means for directing material into the central part of said chamber, a reciprocating piston disposed in the chamber and adapted to push material toward alternate ends thereof, there being at the ends of the chamber throat-spaces into which the material is pushed by the piston, a movable plate disposed at one side of each throat-space, means connected with the plates for pressing them toward the throat-spaces to maintain pressure upon material therein, and means for receiving material from the outer ends of the throat-spaces and conveying the same to a common discharge-opening.

4. In a mechanism of the class described, a horizontally disposed casing, a piston disposed in the upper central portion of the casing, means for reciprocating the piston horizontally, a partition-plate closing the bottom of the space traversed by the piston, a chute for directing material into the central part of the space traversed by the piston, yielding means adjoining each end of the partition-plate and forming the lower sides of throat-spaces connecting with the ends of the space traversed by the piston, and means for varying the resistance of said yielding means to displacement thereof by material pushed into the throat-spaces by the piston.

1,211,744. MUSIC-LEAF TURNER. JOHN NICHOLIS and SETTAMO LAZZUBE, Seattle, Wash. Filed May 9, 1916. Serial No. 96,292. (Cl. 84—135.)



1. A leaf turner comprising a standard, a rack secured thereto at one side thereof, rings carried by said rack for fastening music leaves thereto, spring-actuated leaf-turning fingers mounted on said rack and arranged in horizontal parallel planes, a finger-holding bar on said rack, and means for moving said finger-holding bar to successively release said fingers, the said means including a rack bar and a double-detent controlled ratchet wheel engaging the rack bar.

2. A leaf turner comprising a standard, a rack secured thereto, rings carried by said rack for securing music leaves thereto, spring-actuated leaf-turning fingers arranged in parallel horizontal planes, a support in the central portion of said rack for said fingers, a plate on said standard having recesses for the outer ends of said fingers, a bar for holding said fingers in engagement with said plate, a rack face formed on said bar, a double-detent controlled ratchet wheel in engagement with said bar for moving the same intermittently, to successively release said fingers, and means for locking said bar-moving mechanism.

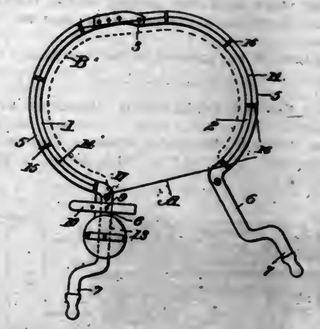
3. A leaf turner comprising a standard having a rack secured thereto, spring-actuated leaf-turning fingers, a pivotal support for said fingers on the central portion of said rack, a plate having recesses of increasing depth from bottom to top thereof for the reception of said fingers and to facilitate the superposing of the sheets, a finger-holding bar movable lengthwise of said plate, and means for moving said bar to successively release said fingers.

4. A music-leaf turner, comprising a standard having a rack secured thereto, a bracket on the top of said standard, a ratchet wheel rotatably mounted on said bracket, a plunger for engaging said ratchet wheel to move said wheel, a locking arm connected with said plunger and adapted to engage said ratchet wheel, means connected with a pedal for moving said plunger, means on said rack for holding leaves of music, spring-actuated leaf-turning fingers pivoted on said rack and arranged between successive leaves of music, a recessed plate for the reception of the outer ends of said leaf-turning fingers, and a toothed finger-holding bar slidably mounted in the bracket and engageable with said ratchet wheel and adapted to be moved lengthwise of said plate by the turning of said ratchet wheel successively to release said fingers.

5. A music-leaf turner, comprising a standard having a music rack secured thereto, a ratchet wheel rotatably mounted in said standard, a spring-pressed plunger for turning said ratchet wheel, means for moving said plunger, a locking arm connected with said plunger for simultaneous movement therewith in an opposite direction, spring-actuated leaf-turning fingers on said music rack, a finger-holding bar having teeth engageable with said ratchet wheel, a guide for said bar, and a recessed plate for the reception of the ends of said fingers.

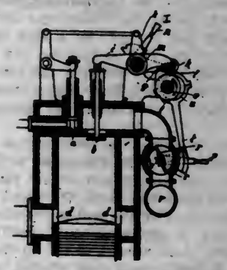
[Claim 6 not printed in the Gazette.]

1,211,745. CORN-SHOCK TYER. SOREN P. NIELSEN, New Ulm, Minn. Filed Apr. 8, 1915. Serial No. 19,867. (Cl. 100—31.)



A corn shocking device comprising a pair of arms pivoted together, a stop secured to one of the arms for limiting the movement with relation to the other of said arms, a spring actuated latch secured to one of the arms for engaging the other arm when said arms are brought together, eyes upon each of the arms to receive binding material, means for holding the free end of the binding material secured to one arm, thereby enabling said binding material to encircle the shock when the arms are fastened around said shock and handles secured to each arm for operating said arms.

1,211,746. INTERNAL-COMBUSTION ENGINE. HANS NORDSTRÖM, Petrograd, Russia. Filed Feb. 16. 1912. Serial No. 678,092. (Cl. 123—98.)



1. In a two-stroke cycle gas engine, the combination with an air inlet valve, means to supply air to said valve, an auxiliary valve to control the admission of air to said means, means for opening the auxiliary valve, and means operating in conjunction with the latter to advance or retard the opening of said auxiliary valve.

2. In a two-stroke cycle gas engine, the combination with an air inlet valve, means to supply air to said valve, an auxiliary valve to control the admission of air to said means, means for opening the auxiliary valve, and manually operated means operating in conjunction with said auxiliary valve to advance or retard the opening of the latter.

3. A two-stroke cycle gas engine having an air inlet valve, means to supply air to said valve, means operable at each cycle of movement to control admission of air to the air supply means, and means to vary the duration of the passage of the air through said air supply means.

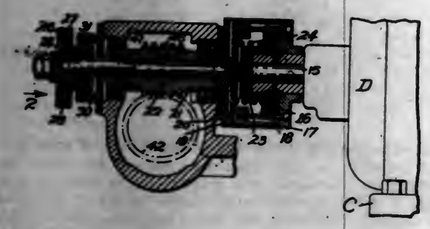
4. In an engine, an air inlet valve, a valve controlling the supply of compressed air to said inlet valve, and a chamber between the valves, and means to open the inlet valve in advance of said second valve and to hold said inlet valve open during the opening of said second valve.

5. In an engine, an air inlet valve, a valve controlling the supply of compressed air to said inlet valve, a cham-

ber between the valves, means operated by the engine to open the inlet valve at a definite point in relation to the piston stroke, means operated by the engine to open the said second valve after the opening of the inlet valve, and means to regulate the extent of opening of the second valve.

[Claims 6 to 10 not printed in the Gazette.]

1,211,747. CLUTCH-OPERATING MEANS. CHARLES H. NORTON, Worcester, Mass., assignor to Norton Grinding Company, Worcester, Mass., a Corporation of Massachusetts. Filed May 31, 1913. Serial No. 771,062. (Cl. 192—1.)



1. In a head stock for a grinding machine, the combination of a motor shaft, a transmission shaft in alinement with the motor shaft, a friction clutch surrounding the end of the motor shaft for connecting said shafts, a rod extending all the way through the transmission shaft for operating said clutch, and means beyond the end of the transmission shaft for reciprocating the rod.

2. In a head stock for a grinding machine, the combination of a shaft, a second shaft, a friction clutch for connecting said shafts, a rod extending through said second shaft, and movable independently thereof, for opening said clutch, means for closing the clutch, a plate on the end of said rod beyond the second shaft, a hub slidably mounted on the rod beyond the end of the second shaft, a friction washer between the plate and hub, means for manipulating the hub and a handle on the front of the machine for controlling the operation of said means.

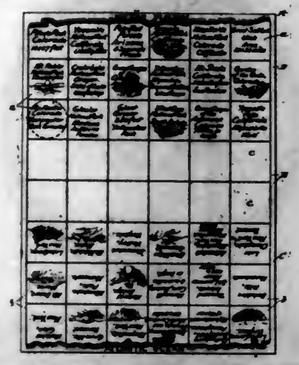
3. In a grinding machine, the combination of a bed, a motor shaft, a second shaft in alinement with the motor shaft, a clutch for connecting said second shaft with the motor shaft, a rod extending from the clutch for operating it, and having a cup on the end for receiving the end of the motor shaft, a spring on said cup for normally closing the clutch, said second shaft having a hollow casing thereon inclosing said cup, clutch, and spring, and means mounted on the front of said bed for controlling said rod.

4. In a grinding machine, the combination of a motor shaft, a transmission shaft, a clutch for connecting the motor shaft with the transmission shaft, said clutch having a spring for normally holding the clutch closed, a rod extending from the clutch for operating it, and a solenoid for operating said clutch in opposition to the spring to open the clutch and stop the rotation of the transmission shaft from the motor shaft.

1,211,748. GAME APPARATUS. CLARA B. O'CONNOR, New York, N. Y. Filed June 27, 1916. Serial No. 106,232. (Cl. 46—34.)

1. A game apparatus comprising a board divided into three sections, each section in turn subdivided into similar smaller spaces, said smaller spaces of the two outermost divisions or sections bearing respectively pictures, legends, or data suitable to impart to the players desired information; and a series of markers, one for each subdivision of the two outer sections, said markers respectively bearing matter identifying them with the different subdivisions, and being of dimensions practically to cover the matter appearing on any given subdivision.

2. A game apparatus comprising a board having a mid-section and two outer sections of distinctively different color or ground separated thereby, the several sections subdivided into uniform smaller spaces, each subdivision of the outer sections bearing pictures, legends,



or like means of imparting information; and a series of markers equal in number to the subdivisions of said outer sections, of dimensions practically to cover the matter of said subdivisions, of color or ground to correspond therewith, and respectively bearing matter corresponding with that of the several subdivisions.

1,211,749. ARTIFICIAL TOOTH. WALTER W. OSWALD, Syracuse, N. Y. Filed Jan. 21, 1916. Serial No. 73,459. (Cl. 32—9.)



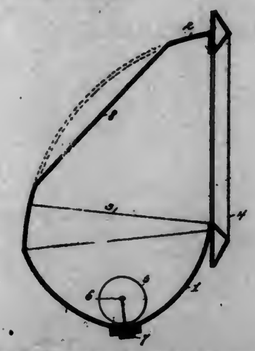
1. An artificial tooth comprising a main body of porcelain or equivalent material having a laterally elongated chamber of angular cross section from front to rear opening from the back, and a metal back-piece having a forwardly projecting shelf-like angle plate seated in said chamber for locking the two parts together, and a cementitious filling in the chamber for holding the angle plate in the chamber.

2. An artificial tooth comprising a main body having a laterally elongated chamber consisting of a horizontal portion extending from the back forwardly and an upright portion extending from the inner end of the horizontal portion toward the crown of the tooth, and a metal backpiece having a laterally elongated angle plate consisting of a substantially flat horizontal portion seated in the horizontal portion of the chamber and a flat upright flange projecting downwardly from the inner edge of the horizontal portion and seated in the upright portion of the chamber.

3. An artificial tooth comprising a main body having a laterally elongated chamber consisting of a horizontal portion extending from the back forwardly and an upright portion extending from the inner end of the horizontal portion toward the crown of the tooth, a metal back-piece having a laterally elongated angle plate consisting of a substantially horizontal portion seated in the horizontal portion of the chamber and an upright portion seated in the upright portion of the chamber, and end braces connecting opposite ends of the upright portion with corresponding ends of the horizontal portion of the angle plate.

1,211,750. LAMP. WILLIAM C. PAUL, Newark, N. J., assignor to Reflex Co., Newark, N. J., a Corporation of New Jersey. Filed Mar. 16, 1916. Serial No. 84,563. (Cl. 240—41.)

1. A non-glaring lamp for vehicles comprising a casing having a light outlet opening, a reflector behind said opening inclined rearwardly and downwardly from adjacent the top of said opening to substantially the bottom of the opening, and a concave reflector mounted below said opening and adapted to project light upwardly and rearwardly upon the inclined reflector.

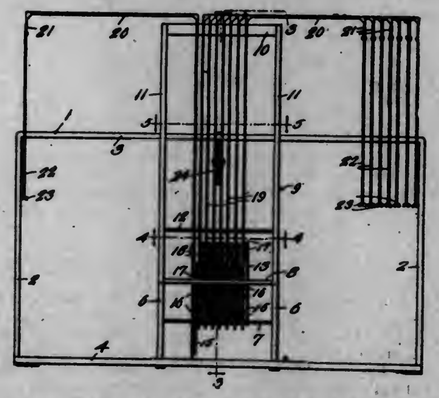


2. A non-glaring lamp for vehicles comprising a reflector casing having a light outlet opening, said reflector casing being formed with a substantially flat reflecting surface extending from adjacent the top of the opening rearwardly and downwardly, said reflector casing adjacent the bottom of the opening being formed into a concave reflector adapted to project light upwardly upon the inclined reflector.

3. A non-glaring lamp for vehicles having a circular perpendicular opening, a reflector behind said opening inclined rearwardly and extending from the top to substantially the bottom of said opening, and a paraboloidal reflector mounted wholly below said opening and adapted to project light rearwardly and upwardly upon the inclined reflector.

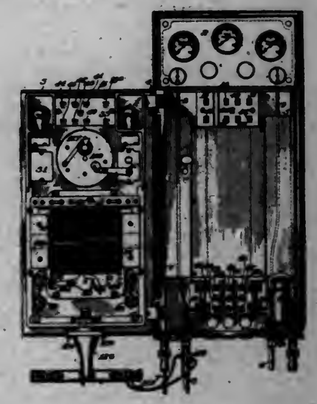
4. A non-glaring lamp for vehicles comprising a reflector casing having a circular light-emitting aperture, said reflector casing behind said aperture being inclined from a point adjacent and on one side of said aperture rearwardly across the axial line of said aperture and formed into a substantially flat reflecting surface, said reflector casing being formed on the opposite side of said aperture into a paraboloidal reflector mounted wholly on one side of the aperture and with its axis inclined rearwardly from the perpendicular to the axial line of said aperture.

1,211,751. MUSIC-LEAF TURNER. WILEY C. PERRY, Oklahoma, Okla. Filed Apr. 21, 1916. Serial No. 92,705. (Cl. 84—17.)



A music leaf turner comprising a frame, a supplemental frame supported by the first named frame, a casing carried by the supplemental frame, U-shaped rods slidably engaged with the casing, other rods rotatably engaged with the first named frame and having spirally arranged webs thereon, spaced fingers carried by one of the vertical arms of the U-shaped rods and slidably engaged with the webs, the other vertical arms of the U-shaped rods being slidably connected with the casing for vertically moving the U-shaped rods, whereby the second named rods will be rotated when slidably engaged by the fingers, and leaf turning arms carried by the upper ends of the second named rods.

1,211,752. ELECTRIC CONTROLLING MECHANISM. OSCAR H. PIEPER and ALPHONSE F. PIEPER, Rochester, N. Y. Filed Oct. 15, 1915. Serial No. 56,122. (Cl. 175—298.)



1. In an electric controlling mechanism, the combination with a casing and a movable closure therefor, of a series of circuits including high voltage conductors arranged in the casing and connected with corresponding conductors on the closure, a series of low voltage conductors on the closure, and means acting to open the circuits when the closure is opened.

2. In an electric controlling mechanism, the combination with a casing and a movable closure therefor, of a series of circuits including high voltage conductors arranged in the casing and connected with corresponding conductors on the closure, a transformer carried by the closure, a series of low voltage conductors on the closure, and means acting to open the circuits when the closure is opened.

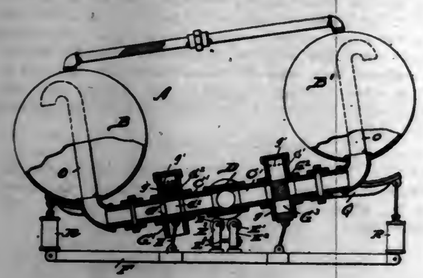
3. In an electric controlling mechanism, the combination with a casing and a movable closure therefor, of a transformer arranged on the closure, a series of circuits including low voltage conductors arranged on the closure, and means acting to open said circuits when the closure is opened.

4. In an electric controlling mechanism, the combination with a casing and a movable closure therefor, of a series of circuits including high voltage conductors arranged in the casing and connected with corresponding conductors on the closure, a transformer, a series of low voltage conductors on the closure and governed by said transformer, and means acting to open said circuits when the closure is opened.

5. In an electric controlling mechanism, the combination with a casing and a movable closure therefor, of a series of circuits including high voltage conductors arranged in the casing and connected with corresponding conductors on the closure, a series of low voltage conductors on the closure, and governing switches for each of said circuits located on the closure.

[Claims 6 to 22 not printed in the Gazette.]

1,211,753. STEAM-TRAP AND BOILER-FEEDER. THOMAS G. RAKESTRAW, Detroit, Mich. Filed Nov. 1, 1915. Serial No. 58,986. (Cl. 137—101.)



1. In an apparatus of the character described, a pair of tilting tanks, oscillatable pipe fittings suitably journaled, a plurality of pipes adapted to support the tanks and connected with the pipe fittings, a plurality of piston valves respectively in line with the pipe connections for controlling delivery through the pipes adapted to be actuated by the oscillatory movement of the tanks, whereby the exhaust of one tank is released that feed water or condensation may enter the tank, simultaneously with the admission of steam or boiler pressure to the other tank, that the water contained in the latter may pass to the boiler.

2. In an apparatus of the character described, a base plate, a pair of tilting tanks, pipe fittings having trunnions on which the tanks are adapted to rock, bearings for supporting the trunnions of the pipe fittings, pipe connections between the tanks and the pipe fittings, and between the latter and a source of water supply and discharge for the exhaust, a check valve in line with the water supply pipe, a check valve in line with the exhaust pipe, a piston valve in line with each of the pipes leading from the pipe fittings to the tanks, rods respectively pivoted to the pistons and to the base plate, whereby upon the alternate tilting of the tanks, the valves are caused to alternately open and close for the discharge of exhaust and delivery of water to one tank, and the delivery of steam and discharge of water from the other tank.

3. In an apparatus of the character described, a base plate, a pair of tilting tanks, pipe fittings having trunnions on which the tanks are adapted to rock, pipe connections between the pipe fittings and the tanks, a roller bearing supported upon the base plate to receive the trunnions of the pipe connections, and a plurality of piston valves adapted to be actuated by the tilting of the tanks for controlling the passage through the respective pipe connections.

4. In an apparatus of the character described, a base plate, a pair of tilting tanks, pipe fittings having trunnions on which the tanks are adapted to rock, pipe connections between the pipe fittings and the tanks, a roller bearing supported upon the base plate to receive the trunnions of the pipe connections, a plurality of piston valves adapted to be actuated by the tilting of the tanks for controlling the passage through the respective pipe connections, and means for cushioning the impact of the tanks upon tilting.

1,211,754. CRYSTAL-RECTIFIER. PAUL C. RAWLS, Des Moines, Iowa. Original application filed July 6, 1914, Serial No. 849,298. Divided and this application filed Dec. 30, 1914. Serial No. 879,801. (Cl. 250—31.)

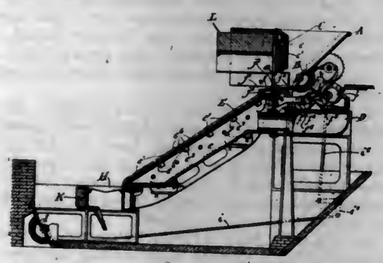
1. In a crystal rectifier, the combination of a sleeve, means for supporting the sleeve, a body portion slidingly mounted in the sleeve, a spring for normally extending the body portion in one direction from the sleeve, a transverse arm on the outer end of the body portion, a crystal holder at one end of the transverse arm, and a spring connected to the arm and adjustably mounted on the sleeve, for the purposes stated.



2. In a crystal rectifier, the combination of a crystal holder, a spring for normally projecting it toward the opposite crystal, and a second spring arranged in opposition to the first and also capable of applying a lateral tension to the crystal.

3. A crystal rectifier, comprising the combination of two adjacent crystals, one having a relatively blunt point, and the other having a smooth flat polished surface provided with minute substantially regular and uniform projections, the blunt point being arranged to contact with said flat surface.

1,211,755. BOILER AND OTHER FURNACE. JAMES REAGAN, Philadelphia, Pa. Filed May 17, 1915, Serial No. 28,742. Renewed Dec. 4, 1916. Serial No. 134,809. (Cl. 110—38.)



1. A furnace having in combination a fuel feeder delivering to a coking zone and a movable grate of a different declination, including means for supplying air to the fuel, the fuel feeding means being so related to the grate as to admit of a disruption of the body of the fuel as it passes to the grate and stationary means for supporting the fuel moving through the coking zone and delivering directly to the grate, whereby disruption of the body of fuel will be localized and destructive distillation thereof, controlled.

2. A furnace having in combination a fuel feeder delivering to a coking zone and a movable grate of a different declination, including means for supplying substantially equal increments of air to the fuel, the fuel feeding means being so related to the grate as to admit of a disruption of the body of the fuel as it passes to the grate and stationary means for supporting the fuel moving through the coking zone and delivering directly to the grate, whereby disruption of the body of fuel will be localized and destructive distillation thereof, controlled.

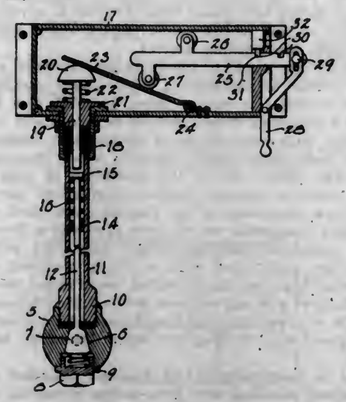
3. A furnace having in combination a fuel feeder delivering to a coking zone and a movable grate, including means for admitting air to the fuel, said grate having a declination different from that of the feeder and arranged in stepped relation to said feeder and stationary means for supporting the fuel moving through the coking zone and delivering directly to the grate, whereby disruption of the body of fuel will be localized and destructive distillation thereof, controlled.

4. The combination of a furnace and a fuel feeder and a grate, the grate having hollow and movable air feeding sections, and means for supplying air between said sections, the several sections having air openings for directing intersecting streams of air into the fire zone.

5. The combination of a furnace, a fuel feeder, and a grate, the grate having hollow and movable air feeding sections provided with intermeshing lugs therebetween and means for supplying air between said sections, the several sections having air openings for directing intersecting streams of air into the fire zone.

[Claims 6 to 10 not printed in the Gazette.]

1,211,756. CUT-OFF LOCK. WILLIAM OTHO REID, Strawn, Tex. Filed July 29, 1915, Serial No. 42,567. Renewed July 13, 1916. Serial No. 109,195. (Cl. 137—4.)



1. A gasolene cut-off for internal combustion engines, including a cut-off valve interposed between the gasolene tank and the carbureter, a plunger, an operative connection between the plunger and the cut-off valve, an inclined lever pivoted at one end thereof, the free end of the inclined lever engaging the plunger, a locking slide cooperating with the inclined lever to control the plunger, and means for holding the locking slide in adjusted positions.

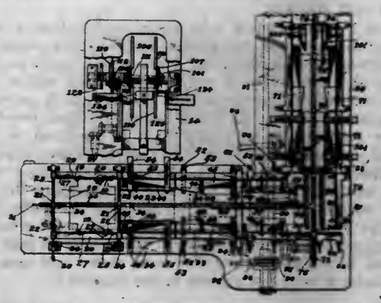
2. A gasolene cut-off for internal combustion engines, including a cut-off valve interposed between the gasolene tank and the carbureter, a lock box, a plunger projecting into the lock box, an operative connection between the plunger and the cut-off valve, an inclined lever engaging the plunger, a locking slide mounted within the lock box and coöperating with the inclined lever to control the plunger, and means for holding the locking slide in adjusted positions.

3. A gasolene cut-off for internal combustion engines, including a cut-off valve interposed between the gasolene tank and the carbureter, a lock box, a plunger projecting into the lock box and having an operative connection with the cut-off valve, an inclined lever arranged within the lock box and engaging the plunger, a locking slide mounted within the lock box and provided with antifriction rollers engaging an interior wall of the lock box and the inclined lever so that by manipulating the operating slide the lever can be moved to control the plunger, and means for holding the locking slide in adjusted positions.

4. A gasolene cut-off for internal combustion engines, including a valve casing interposed between the gasolene tank and the carbureter, a reciprocating cut-off valve mounted within the valve casing, a tubular standard projecting from the valve casing, a valve stem connected to the valve and extending loosely through the tubular standard, a spring normally holding the valve in a closed position, a plunger mounted in alinement with the valve stem and adapted to engage the same to open the valve, a swinging lever engaging the plunger, a locking slide mounted for coöperation with the swinging lever to control the plunger, and means for holding the locking slide in adjusted positions.

5. A gasolene cut-off for internal combustion engines, including a valve casing interposed between the gasolene tank and the carbureter, a reciprocating cut-off valve mounted within the valve casing, a tubular standard projecting from the valve casing, a valve stem connected to the valve and passing loosely through the tubular standard, a packing ring arranged within the tubular standard and tightly engaging the valve stem, a collar upon the valve stem, a spring interposed between the collar and the packing ring and normally holding the valve in a closed position, a lock box, a plunger projecting into the lock box and arranged in alinement with the valve stem so as to engage the same to open the valve, an inclined lever engaging the plunger, a locking slide mounted to move at an angle to the inclined lever, a roller upon the locking slide for engagement with the inclined lever to move the same and control the plunger, and means for holding the locking slide in adjusted positions.

1,211,757. BLANK-BENDING MACHINE. JAMES D. REIFSNYDER, Olney, Pa., assignor to Stokes & Smith Company, Summerdale, Pa., a Corporation of Pennsylvania. Filed July 6, 1914. Serial No. 849,271. (Cl. 93—52.)



1. In a blank bending machine, in combination, a table, an endless conveyer having a plurality of dogs projecting above the table for engaging the blanks to advance them in succession along said table, means for creasing the side edges of each blank as it is advanced by said endless conveyer, a second endless conveyer moving in a plane transverse to said first named conveyer and projecting at its receiving end across the plane of said first named conveyer, each dog of said first named conveyer operating to pass below the table near the second conveyer and leave a blank on the table over said second conveyer, said second conveyer having a plurality of dogs operating to engage each blank received from said first named conveyer and advance the same along said table, and means for bending the edges of the blank as it is advanced by said second conveyer.

2. In a blank bending machine, in combination, a table, an endless conveyer having a plurality of dogs projecting above the table for engaging the blanks to advance them in succession along said table, means for creasing the side edges of each blank as it is advanced by said endless conveyer, a second endless conveyer moving in a plane transverse to said first named conveyer and projecting at its receiving end across the plane of said first named conveyer, each dog of said first named conveyer operating to pass below the table near the second conveyer and leave a blank on the table over said second conveyer, said second conveyer having a plurality of dogs operating to engage the rear edge of each blank received from said first named conveyer and advance the same along said table, means for bending the edges of the blank as it is advanced by said second conveyer, and means for pressing the blank down onto the table to prevent the blanks from buckling at their creased points.

3. In a blank bending machine, in combination, a table, an endless conveyer having a plurality of dogs projecting above the table for engaging the blanks to advance them in succession along said table, means for bending over the side edges of each blank and for bending the bent edges back into the plane of the blank, a second endless conveyer moving in a plane transverse to said first named

conveyer and projecting at its receiving end across the plane of said first named conveyer, each dog of said first named conveyer operating to pass below the table near the second conveyer and leave a blank on the table over said second conveyer, said second conveyer having a plurality of dogs operating to engage the rear edge of each blank received from said first named conveyer and advance the same along said table, and means for bending the edges of the blank as it is advanced by said second conveyer.

4. In a blank bending machine, in combination, a table, an endless conveyer for advancing the blank along the table, means for bending the edges of the blank as it is advanced by said endless conveyer, a second endless conveyer disposed transversely of said first endless conveyer, arranged to receive the blank from said first conveyer, means for bending the blank as it is advanced by said second endless conveyer including creasers for engaging the upper face of the blank adjacent to the edges to be bent, and means for holding down the blank near the point where it is received by said second endless conveyer from said first endless conveyer to guide the same under said creasers.

5. In a blank bending machine, in combination, a table, an endless conveyer for advancing the blank along the table, means for bending the edges of the blank as it is advanced by said endless conveyer, a second endless conveyer disposed transversely of said first endless conveyer, arranged to receive the blank from said first conveyer, means for bending the blank as it is advanced by said second endless conveyer including creasers for engaging the upper face of the blank adjacent to the edges to be bent, and a guide above the table for directing the forward edge of the advancing blank down upon the table and for holding down the blank near the point where it is received by said second endless conveyer from said first endless conveyer to guide the same under said creasers.

[Claims 6 to 11 not printed in the Gazette.]

1,211,758. SAFETY-CHUCK. JESSE H. RICHARDSON, Philadelphia, Pa. Filed Aug. 5, 1915. Serial No. 43,737. (Cl. 29—107.)



1. In an instrument of the character described, revoluble driving means provided with a locking device and a controlling device, in combination with revoluble driven means provided with a locking device adapted to be engaged by said locking device first named, means for turning said driving means to effect the disengagement thereof from said locking device and a controlling device coacting with said controlling device first named, whereby said means second named are permitted a limited longitudinal movement relative to said means first named and said means first named are adapted to revolve independently of said means second named.

2. In an instrument of the character described, revoluble driving means provided with a locking device adapted for positive engagement and a controlling device, in combination with revoluble driven means provided with a locking device adapted to be engaged positively by said locking device first named and a controlling device coacting with said controlling device first named, anti-friction bearings whereby said means are journaled relatively, said means second named being permitted a limited longitudinal movement relative to said means first named and said means first named being adapted to revolve independently of said means second named, and a spring for disengaging said locking devices.

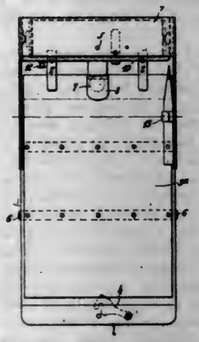
3. In an instrument of the character described, a shank having connected therewith a sleeve and a clutching device, in combination with a chuck provided with a head having a clutching device movable in said sleeve into engagement with said clutching device first named, said devices comprising means whereby when engaged said shank and chuck are by the revolution of said shank locked together against relative longitudinal movement.

4. In an instrument of the character described, a driving shank comprising one or more jaws and a sleeve having a cylindrical interior surface concentric with said shank, in combination with a chuck provided with a cylindrical head having a limited longitudinal movement in said sleeve and one or more jaws adapted for engaging said jaw or jaws first named, and means for automatically turning said head to effect the separation of the engaging jaws.

5. In an instrument of the character described, a revoluble shank provided with jaws having a bearing surface substantially at right angles to the axis of said shank and a sleeve having a cylindrical interior surface surrounding said jaws, said surfaces and jaws being concentric with said shank, in combination with a chuck provided with a cylindrical head having a limited longitudinal movement in said sleeve and jaws on said head having bearing surfaces disposed substantially at right angles to the axis of said shank and adapted for engaging said bearing surfaces first named.

[Claims 6 to 10 not printed in the Gazette.]

1,211,759. ILLUMINABLE PAD-HOLDER. THOMAS ROBINS, New York, N. Y., assignor to Supremus Manufacturing Company, New York, N. Y. Filed Mar. 21, 1916. Serial No. 85,628. (Cl. 240—8.4.)



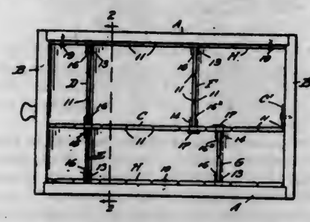
1. A pocket pad-holder comprising a case provided with a folding flap adapted to support a foldable writing pad in either folded or unfolded position, a battery and electric lamp mounted at the head of the case, and means for holding the flap closed as a cover.

2. As a new article of manufacture, a device for holding writing pads, comprising in combination, a case provided with pad-retaining means and having an extensible and collapsible flap adapted to support a foldable pad when extended, said flap affording a closure for the case when collapsed, an electric lamp for illuminating the surface of the pad, and means accommodated in, and detachably fitted to said case, for supplying electric current to said lamp.

3. An illuminable pad-holder comprising a case, a folding flap adapted to support a foldable writing pad and foldable around the case, an electric lamp for illuminating the pad, and a telescopic shield for the lamp having a forward portion serving as a cowl for directing the rays upon the surface of the pad.

4. An illuminable pad-holder comprising a case, a folding flap adapted to support a foldable writing pad and foldable around the case, an electric lamp for illuminating the pad, and a cell or battery for supplying current to the lamp housed in a container detachably fitted transversely across the head of the case.

1,211,760. PARTITION. CHARLES F. ROTHWEILER, Seattle, Wash. Filed June 2, 1915. Serial No. 31,773. (Cl. 217—7.)



1. In combination, a partition member of the class described, provided with a series of spaced holes, slotted studs adapted to be received by the holes of said partition member, and a second partition member adapted to have an end thereof engage in the slots of said studs whereby the partition members are coupled together.

2. In devices of the class described, the combination with partition members provided with series of spaced holes, of studs adapted to be inserted in selected ones of said holes, said studs being provided with slotted extremities to receive the end of a partition member disposed in rectangular relation to the partition member in which are inserted said studs.

3. In devices of the class described, a rectangular plate formed with spaced grooves extending across the opposite faces of the plate to provide relatively weak lines at which the plate may be broken into predetermined lengths, said plate being provided with holes in the spaces intermediate the adjacent of said grooves for the reception of coupling studs.

4. A partition structure comprising a plurality of transversely and longitudinally arranged partitions, and slotted studs extending through the transverse or longitudinal partitions to receive the ends of the other partitions whereby all of the partitions are connected rigidly together.

1,211,761. PROCESS FOR THE MANUFACTURE OF NITROSTARCH. SAMUEL S. SADTLER, Springfield, Pa. Filed Jan. 31, 1916. Serial No. 75,236. (Cl. 52—3.)

1. The process of manufacturing nitrostarch which comprises treating starch with an oxidizing agent capable of liberating nascent oxygen to remove impurities and nitrating the purified starch.

2. The process of manufacturing nitrostarch which comprises treating starch with an alkali solution adapted for removing oil and protein matter and with an oxidizing agent capable of liberating nascent oxygen to remove remaining impurities, and thereafter nitrating the purified starch.

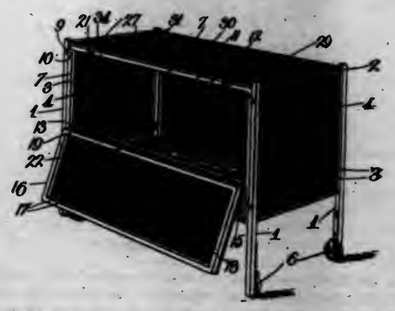
3. The process of manufacturing nitrostarch which comprises treating starch with an alkali solution adapted for swelling it and removing impurities, washing out the dissolved impurities, treating the washed product with an oxidizing agent capable of liberating nascent oxygen to remove further impurities and thereafter nitrating the purified starch.

4. The process of manufacturing nitrostarch which comprises treating starch with a solution of sodium hydroxid adapted for removing impurities, washing out the dissolved impurities, treating the washed product with an oxidizing agent capable of liberating nascent oxygen to remove further impurities, washing this product, and nitrating this washed product.

5. The process of manufacturing nitrostarch which comprises treating starch for the removal of impurities, nitrating the product of the purifying treatment, removing excess acid and boiling in the presence of a slight amount of residual acid.

[Claims 6 to 9 not printed in the Gazette.]

1,211,762. BABY-BED. FRANKLIN M. SAWYER, Kansas City, Mo. Filed Dec. 18, 1914. Serial No. 877,966. (Cl. 5—58.)



A baby bed, comprising ends, sides arranged between said ends, means connecting the ends and sides to prevent independent movement in every direction except longitudinally of the sides, fastening devices connecting the ends and sides against movement longitudinally of the sides; one of the sides having an opening and an outwardly opening door controlling said opening, and a suitably supported bottom for the bed arranged between the sides and occupying a horizontal plane below the lower margin of said door opening, in combination with a movable top, and screens covering the ends, the top and the sides, the screen for the side provided with the door opening consisting of two sections, one covering the door and the other the side below the door.

1,211,763. CONNECTING-BAR. FREDERIC SCHAEFER, Pittsburgh, Pa. Filed Feb. 4, 1916. Serial No. 76,185. (Cl. 88—16.)



1. A bar, comprising a one-piece hollow body slotted at its end to form a pair of oppositely disposed ears, said ears being provided with oppositely disposed pin eyes and protuberances around said eyes to increase the bearing surface, said protuberances being eccentric to said eyes.

2. A bar, comprising a one-piece hollow body slotted at its end to form a pair of oppositely disposed ears, said ears being provided with oppositely disposed pin eyes and protuberances around said eyes to increase the bearing surface, the walls of said protuberances being thicker on one side of said eyes than on the other.

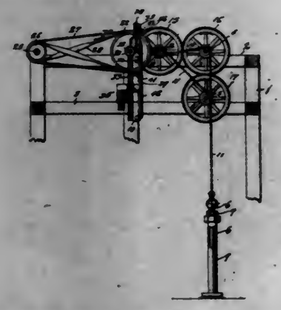
3. A bar, comprising a one-piece hollow body slotted at its end to form a pair of oppositely disposed ears, said ears being provided with oppositely disposed pin eyes and protuberances around said eyes to increase the bearing surface, the walls of said protuberances being thicker on the inner side of said eyes than on their outer sides.

4. A bar, comprising a one-piece hollow body slotted at its end to form a pair of oppositely disposed ears, said ears being provided with oppositely disposed pin eyes and protuberances around said eyes on the inner and outer surfaces of said ears, to increase the bearing surface, said protuberances being eccentric to said eyes.

5. A bar, comprising a one-piece hollow body member slotted at its opposite ends to form pairs of longitudinally extending oppositely disposed perforated ears, the holes in the ears at opposite ends of the bar being in line with each other and out of line with the main body member.

[Claims 6 to 9 not printed in the Gazette.]

1,211,764. PUMP-OPERATING APPARATUS. JOHN J. SCHILDER, Fort Worth, Tex. Filed May 11, 1916. Serial No. 96,745. (Cl. 103—82.)



1. In an apparatus of the class described, the combination with a support and oppositely reciprocating pumping elements, of a flexible connection attached to one of said elements, and a second flexible connection attached to the other pumping element, a pair of guide shafts each having one of the connections coiled thereabout, an operating shaft, drums mounted on the operating shaft on which the connections are coiled in opposite directions, a train of gears mounted on the shafts so that the guide shafts are revolved in opposite directions, and means for driving the operating shaft including means for intermittently reversing the transmission of motion thereto.

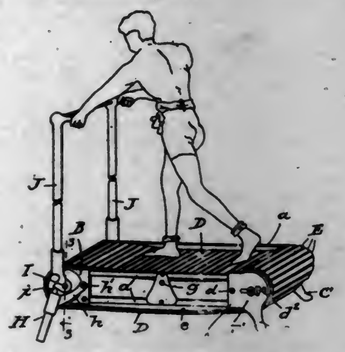
2. In an apparatus of the class described, the combination with a support and oppositely reciprocating pumping elements, of a flexible connection attached to one of said elements, and a second flexible connection attached to the other pumping element, a pair of guide shafts one disposed above the other, spools mounted on the guide shafts each having one of the connections coiled thereabout, an operating shaft, drums mounted on the operating shaft on which the connections are coiled in opposite directions, a train of gears mounted on the shafts so that the guide shafts are revolved in opposite directions, and means for driving the operating shaft including means for intermittently reversing the transmission of motion thereto.

1,211,765. HEALTH-EXERCISER. ADRIAN PETER SCHMIDT, New York, N. Y. Filed Jan. 9, 1915. Serial No. 1,294. (Cl. 46—69.)

1. In a health exerciser, a frame encircled longitudinally by an endless, flexible tread laid frictionally upon said frame for sliding movement thereon, legs pivoted to one end of said frame, and means whereby the angular relation between the legs and the frame may be varied, at will, to raise or lower one end of the frame.

2. In a health exerciser, a frame encircled longitudinally by an endless, flexible tread, with means for raising or lowering one end of the frame and means for governing the curvature of the upper surface of the tread.

3. In a health exerciser, a frame encircled longitudinally by an endless, flexible tread, with means for raising or lowering one end of the frame and means for governing the curvature of the upper surface of the tread and having adjustable handles.



4. In a health exerciser, a frame encircled longitudinally by an endless, flexible tread, and means coöperating with said frame and tread for governing the curvature of the upper surface of said tread.

5. In a health exerciser, a supporting frame encircled longitudinally by an endless, flexible tread laid frictionally upon said supporting frame, and means cooperating with the supporting frame and with the endless, flexible tread for governing the curvature of the upper surface of the latter.

[Claims 6 to 17 not printed in the Gazette.]

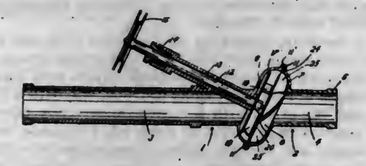
1,211,766. METHOD OF CUTTING AND MAKING UNDERWEAR. EDWARD J. SCHREMP, Utica, N. Y. Filed Mar. 1, 1912. Serial No. 680,829. (Cl. 2—122.)



1. The method of forming bifurcated undergarments from tubular knit fabric which consists in severing a portion of the tube by an irregular longitudinal cut through both folds simultaneously to form enlarged and diminished portions of oppositely arranged legs, severing through both folds of another portion of the tube to form counterpart gusset pieces, slitting the gusset-pieces so formed centrally to divide the lower portion thereof into depending tapering leg gussets, severing the gusset by short slits diverging from the upper extremity of the central slit to provide a triangular crotch gusset, sewing together the edges of the leg portions at their bottom ends, sewing the upper edges of each leg portion to the edges of the leg gussets to form enlarged thigh portions, sewing the upper portions of each leg section to the upper edges of the gusset piece to close the rear body portion, seaming the edges of the triangular gusset piece to the lower front edges of the body potrion to form a crotch portion and providing securing means to close the front body opening of the garment when worn.

2. The method of cutting bifurcated undergarments from tubular knit fabric which consists in severang a portion of the tube by an irregular longitudinal cut through both folds simultaneously to form enlarged and diminished portions of oppositely arranged legs, severing through both folds of another portion of fabric to form counterpart gusset pieces, severing the gusset pieces to provide opposite leg gussets tapering toward their lower ends and to form a centrally arranged triangular crotch gusset, sewing together the edges of the leg portions at their bottom ends, sewing the upper edges of each leg portion to the edges of the leg gussets to form enlarged thigh portions, sewing the upper portions of each leg section to the upper edges of the gusset piece to close the rear body portion, seaming the edges of the triangular gusset piece to the lower front edges of the body portion to form a crotch portion and providing securing means to close the front body opening of the garment when worn.

1,211,767. PUMP. HERMAN D. SCHROEDER, Los Angeles, Cal., assignor of one-half to Frank G. Wagner, Los Angeles, Cal. Filed Dec. 29, 1915. Serial No. 69,156. (Cl. 103—43.)



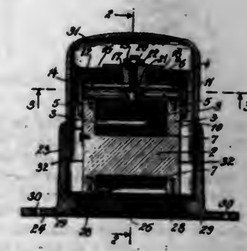
1. A pump comprising two members, provided respectively with inlet and outlet pipe portions extending in alinement, and with casing portions secured together and forming a pump chamber extending obliquely to the axis of said pipe portions, a shaft rotatably mounted on one of said members and having its axis directed obliquely to the axis of said pipe portions, and provided with driving means, a runner mounted within said pump chamber, on said shaft, and provided with blades for producing centrifugal action on liquid within said pump chamber, and a stator mounted within said pump chamber and provided with blades for deflecting the liquid from the runner to the outlet pipe portion.

2. A pump comprising two members provided respectively with inlet and outlet pipe portions and with casing portions forming a pump chamber, a shaft mounted on one of said pipe portions and extending obliquely thereto, a runner carried by said shaft and provided with openings for passage of liquid and with blades for centrifugal and impelling action on such liquid, and a stator mounted within the pump chamber and with openings for passage of liquid and with blades for deflecting the liquid toward the outlet pipe portion.

3. A pump comprising two membzers, provided respectively with casing portions secured together to form a pump chamber, an inlet pipe portion connected with one of said casing portions and extending obliquely thereto, a shaft journaled on said pipe portion and extending obliquely thereto, a runner carried by said shaft and extending within the casing portion adjacent thereto and provided with openings for passage of liquid and with blades in advance of said openings and directed backwardly and outwardly with reference to the direction of rotation of said shaft, for combined centrifugal and impelling action, an outlet pipe portion on the other casing member and a stator mounted within saod other casing portion and provided with openings for passage of liquid and with blades directed reverseely to the blades of the runner.

4. A pump comprising two members provided respectively with inlet and outlet pipe portions and with casing members connected respectively to said pipe portions and secured together to form a pump chamber, a shaft rotatably mounted on the inlet pipe portion and extending obliquely thereto and provided with driving means, a runner carried by said shaft and extending within the adjacent casing member, and formed as a flat plate having openings for passage of liquid and having blades extending obliquely rearward with reference to the direction of rotation of the shaft, for centrifugal and impelling action, and a stator formed as a flat plate having its peripheral portion clamped between said casing portions and provided with openings for passage of liquid and with blades directed reversely to the blades of the stator to deflect the liquid to the outlet pipe portion, said runner having flat portions in advance of the blades for confining the liquid between the said flat portions and the stator.

1,211,768. ELECTROMAGNETIC VIBRATOR. WOLFGANG E. SCHWARZMANN and CHARLES M. WILD, Springfield, Mass., assignors to Bosch Magneto Company, a Corporation of New York. Filed Aug. 10, 1914. Serial No. 856,042. (Cl. 175—349.)



1. In an electromagnetic vibrator, a shuttle-shaped magnetic core having a cross bar and side flanges and also having pole pieces forming an air gap in the magnetic circuit, a vibratory armature bridging the air gap and carrying a contact terminal, a coöperative contact terminal, a magnetizing coil mounted on the cross bar and electrically connected in circuit with the contact terminals, the side flanges of the core extending above and below the magnetizing coil, and a condenser electrically connected across the contact terminals and fastened in place between the magnetizing coil and the pole pieces.

2. In an electromagnetic vibrator, a magnetic core comprising a cross bar and end flanges integral therewith, pole pieces fastened at one end of the side flanges and forming an air gap in the magnetic circuit, a vibratory armature designed to bridge the air gap and carrying a contact terminal, a coöperative contact terminal, a magnetizing coil mounted on the cross bar and electrically connected in circuit with the contact terminals, a condenser electrically connected across the contact terminals and fastened in place between the cross bar and pole pieces, and a housing comprising a base fastened to the other ends of the side flanges of the core and a hood fastened to the base.

3. In an electromagnetic vibrator, an electromagnet having a magnetizing coil, a vibratory armature rotatably supported with respect to the electromagnet and carrying a contact terminal, and a coöperative contact terminal, the magnetizing coil being electrically connected in circuit with the contact terminals.

4. In an electromagnetic vibrator, a magnetic core, a support, a vibratory armature loosely fitted to the support for vibratory and rotary movements relatively thereto, a contact terminal mounted on the vibratory armature, a coöperative contact terminal fastened to the support in adjustable position relatively to the vibratory armature, and a magnetizing coil electrically connected in circuit with the contact terminals.

5. In an electromagnetic vibrator, a magnetic core having pole pieces forming a gap in the magnetic circuit, a support adjustably connected to the core, a vibratory armature comprising a diaphragm connected at opposite points to the support and an iron button fastened to the diaphragm in position to bridge the gap, a contact terminal carried by the vibratory armature, a cooperative contact terminal adjustably connected to the support, and a magnetizing coil electrically connected in a circuit with the contact terminals.

[Claims 6 to 10 not printed in the Gazette.]

1,211,769. TIRE-VALVE. MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, N. J., and HENRY P. KRAFT, Brooklyn, N. Y. Filed Mar. 14, 1910. Serial No. 549,242. (Cl. 152—12.)



1. In a tire valve, a valve shell formed in two parts, the lower part being provided with a socket at its top, and the upper part being adapted to fit in said socket, said lower part being formed with a threaded portion, and a sleeve encircling the upper part and having a threaded portion adapted to engage the threads of said lower part.

2. In a tire valve, a valve shell formed in two parts, the lower part being provided with a socket at its top, and the upper part being adapted to fit in said socket, a packing ring surrounding said upper part within said socket, an anti-friction ring above and in contact with said packing ring, and a screw-threaded sleeve adapted to engage screw threads on said lower part and to press said anti-friction ring inwardly whereby to expand said packing against the wall of said lower part.

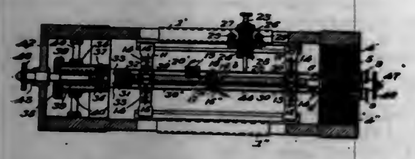
3. In a tire valve, a valve shell formed in two parts, the lower of said parts having a valve proper therein, and the upper of said parts being adapted to fit into said lower part, and both of said parts having provisions of the same size for engaging a pump connection.

4. In a tire valve, a valve shell formed in two parts, the lower of said parts having a valve proper therein, and the upper of said parts being adapted to fit into said lower part, and both of said parts having screw-threaded portions adapted to fit a single pump connection.

5. In a tire valve or the like, the combination of a lower member adapted to be attached to a tire and having a valve proper therein, and a second member adapted to be connected to said first member, said second member having a lower flange, a packing ring surrounding said member above said flange, an anti-friction ring above said packing, and a screw-threaded part adapted to engage screw threads on said lower member to force said packing against the wall of said lower member.

[Claims 6 to 11 not printed in the Gazette.]

1,211,770. MICROMAGNETIC DETECTOR. FREDERICK G. SIMPSON, Seattle, Wash. Original application filed Nov. 1, 1912, Serial No. 729,064. Divided and this application filed Apr. 23, 1913. Serial No. 763,143. (Cl. 250—22.)



1. In a wireless telegraph system, the combination with two suitably supported magnetizable reeds disposed at a suitable distance from and parallel with each other, of means for changing the natural and fundamental rate of vibration of each of said reeds, means for magnetically polarizing to a desired constant degree one of said reeds, an electro-magnet disposed to extend lengthwise between said reeds, and adapted to be energized to attract said reeds each toward the other, a helix of insulated wire disposed to surround one of said reeds whereby electrical energy may be caused to change the magnetic condition of said reed, and a pair of movable electrical contact points associated with and adapted to be controlled by said reeds.

2. In a receiving apparatus of a wireless telegraph system, the combination with two magnetizable members suitably supported to adapt them to vibrate, of independent means for magnetizing one of said members to a desired normal degree, electro-magnetic means adapted to change the said normal degree of magnetization, an electro-magnet disposed to adapt it to operate to change the distance between the movable portions of said members, two electrical contact points associated with the movable portions of said members and adapted to be actuated thereby to vary the electrical resistance of their contact, and means for adjusting each of said members to have a desired natural and fundamental rate of vibration.

3. In a receiving apparatus of a wireless telegraph system, the combination with a suitable supporting frame, of a shaft mounted to rotate in bearings within said frame, equal portions of said shaft being provided one with a left-handed and the other with a right-handed screw thread, carriers adapted to be moved in guide ways disposed within said frame, one of said carriers being provided with a left-handed screw thread which is disposed to engage with the left-handed screw thread of said shaft while the other of said carriers is provided with a right-handed screw thread and disposed to engage the right-handed screw thread of said shaft, whereby said carriers are adapted to approach toward and recede from each other in response to a rotation in a proper direction of said shaft, two reeds of magnetizable material each of which is stretched between adjustable supports that are adapted to vary their tension, said reeds being disposed parallel with each other and parallel with the path traveled by said carriers, projecting arms fixed in each of said carriers and disposed to engage with and press against said reeds whereby, when said carriers are moved toward each other and away from each other, the active length of said reeds may be changed, and adjustable movable electro-magnetic means for changing the magnetic conditions of said reeds.

4. In a micro-magnetic receiving instrument, the combination of adjacent vibrating reeds, engaging microphonic contacts carried by said reeds, means for varying the length of the vibratory portions of said reeds, means for magnetizing one of said reeds, an electro-magnet located between the reeds for attracting them, and an adjustable electro-magnet whose field includes the magnetized reed and the core of said first electro-magnet.

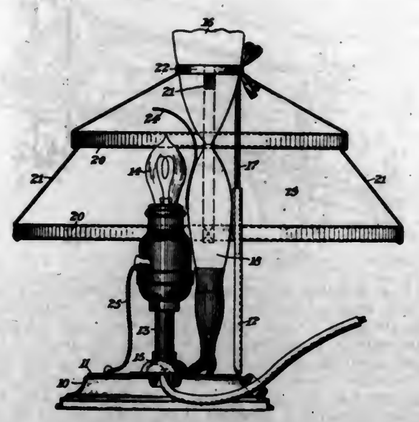
5. In a micro-magnetic receiving instrument, the combination of a vibratory reed, a magnetizing helix surrounding it, microphonic contacts actuated by said reed, an electro-magnet for attracting said reed in one direction, and a second electro-magnet for attracting said reed in the opposite direction, the coil of the second magnet being in series circuit with said helix and having its core in the field of the first magnet and composed of fine individually insulated iron wires.

[Claims 6 to 13 not printed in the Gazette.]

1,211,771. BOUDOIR-LAMP. HELEN SINGER, New York, N. Y. Filed Nov. 24, 1915. Serial No. 63,180. (Cl. 240—10.)

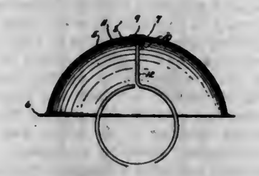
1. A lamp including a base, a plate supported thereon and having an upwardly extending arm integral therewith, a lamp standard on said plate, means for connecting said standard, plate and base together, a body portion having a depending arm telescoping with said first mentioned arm, a skeleton frame including a series of concentric spaced rings supported by said body portion, and a lamp shade shaped cover encircling said frame.

2. A lamp including a base, a plate supported thereon and having an upwardly extending arm integral therewith, a lamp standard on said plate, means for connecting said standard, plate and base together, a body portion having a depending arm telescoping with said first mentioned arm, a skeleton frame including a ring larger than and suspended from said body portion, a lamp shade shaped cover encircling said frame, and a shield of non-combustible material supported beneath said shade and between said body portion and said light.



3. A lamp including a base, an upwardly extending arm carried thereby, a lamp standard carried by said base, a doll body having a depending member telescoping with said upwardly extending arm, a skeleton frame secured to said body and including a series of concentric spaced rings and flexible connecting members, a lamp shade shaped cover encircling said frame and having its lower edge spaced above said base, and a non-combustible shield supported beneath said cover and between the lamp and said doll body.

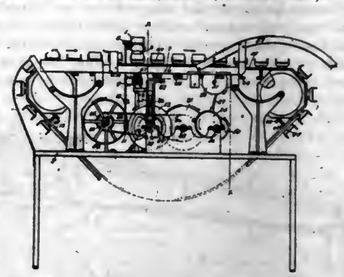
1,211,772. LAMP-SHADE. FREDERICK C. SMITH, Waterbury, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Oct. 23, 1916. Serial No. 127,094. (Cl. 240—108.)



1. A lamp shade comprising a shell formed with a central opening, a stud larger in diameter than said hole and formed with a neck adapted to extend through said hole outside of which it is upset, said stud also formed with a transverse slot, and a wire-holder entered into said slot the side walls of which are compressed against the said holder.

2. A lamp shade comprising a metal shell formed with a flange and with a central hole, a stud larger in diameter than said hole formed with a reduced portion adapted to extend through said hole and project beyond the outer surface of the shell upon which it is upset, whereby the stud is interlocked with the shell, said stud formed with a transverse slot, combined with a wire holder swaged at its center to enter said groove in the stud, the walls of which are upset to interlock the holder with the stud, the ends of said holder projecting outward from said stud and beyond the edge of the shell, the ends of the wire turned into ring-shape which are arranged parallel with each other.

1,211,773. MACHINE FOR PACKING MATCHES. CHARLES FRANK SOMMERS, Saginaw, Mich. Filed Feb. 27, 1914. Serial No. 821,409. (Cl. 144—61.)



1. In a machine for packing matches in box-trays, the combination with a match feed-hopper having a lower delivery-port, of means for repeatedly feeding matches therefrom into a single box-tray at a time, an endless box-tray conveyer for intermittently impelling box-trays to and under and away from the delivery-port of said feed-hopper, and means carried by the conveyer for turning the box-tray to a reversed position between each feed of matches thereto, thereby causing the heads of the matches of one feed to extend in a direction opposite the heads of the matches of a second feed.

2. In a machine for packing matches in box-trays, the combination with a match feed-hopper having a lower delivery-port, of means for periodically opening and closing said delivery-port to repeatedly feed matches to one box-tray at a time, an endless box-tray conveyer for intermittently impelling box-trays to and under and away from the delivery-port of said feed-hopper, means carried by the conveyer for imparting vertical reciprocating movement to said box-trays, and means carried by the conveyer for turning the box-trays to a reversed position between each delivery of matches thereto, thereby causing the heads of matches of one delivery to extend in a direction opposite the heads of matches delivered in a subsequent delivery.

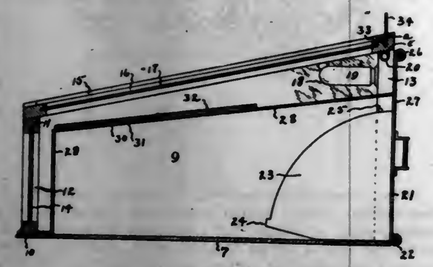
3. In a machine for packing matches in box-trays, the combination with a suitable supporting frame, of a suitable feed-hopper having a match delivery-port, a cut-off blade arranged in said delivery-port, means for imparting a reciprocating movement to said cut-off blade, an endless link-conveyer, means for intermittently impelling said conveyer below said hopper, holders carried by the links of said conveyer adapted to receive the box-trays, said holders mounted at spaced intervals along said conveyer, means for imparting vertical reciprocating movement to said holders and to a single box-tray, repeatedly at predetermined intervals, means for reversing said holder and box-tray end-for-end at predetermined intervals simultaneously with the reciprocating movement of said holder, and means for gradually elevating said box-tray from said holder.

4. In a machine for packing matches in box-trays, the combination with a feed hopper having a match delivery port, an endless link conveyer adapted to travel beneath said hopper at right angles thereto, the links of said conveyer carrying match-tray supporting devices, said devices adapted to vertical reciprocating movement and rotary movement, and means adapted to actuate said devices vertically and to rotate said devices intermittently, for the purposes set forth.

1,211,774. SALES-DISPLAY CABINET. JENS SORENSEN, Harlan, Iowa. Filed Apr. 12, 1915. Serial No. 20,731. (Cl. 211—9.)

A sales display cabinet, comprising, in combination with an elongated, rectangular base having vertical end walls and provided with intermediate walls parallel with the end walls to define a plurality of sections, rectangular, movable covers each having a transparent part and dis-

posed above a section, transparent plates disposed vertically between the front ends of said walls, non-transparent plates each having a height less than the height of said walls and disposed adjacent to and parallel with the vertical, transparent plates, substantially horizontal shelves below said covers, each being provided with an aperture near its front end and a slide for closing said aperture and connected with the upper end of a non-trans-



parent plate to provide in combination therewith a lower compartment and an angularly formed upper compartment for each section, a hingeably mounted door at the rear end of each section for making a closure for a lower compartment, and a hingeably mounted door at the rear end of each section for making a closure for an angularly formed upper compartment.

1,211,775. COMBINED VAPORIZER AND HOMOGENIZER FOR EXPLOSIVE-ENGINES. VERNON C. SPARKS, San Francisco, Cal. Filed Mar. 16, 1916. Serial No: 84,703. (Cl. 48—180.)

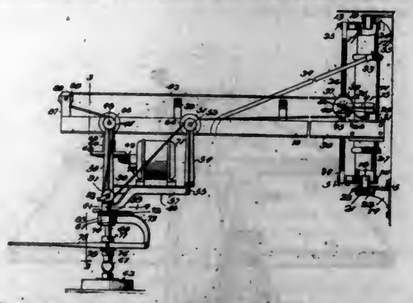


1. A gas generator for explosion engines comprising a tubular extension of the inlet manifold, a heating chamber formed around said tubular extension of the inlet manifold, a pipe leading from the exhaust manifold to the heating chamber, a carbureter connected with the heater, a plurality of inverted cup shaped screens frictionally engaging the interior of the heater through which the fuel must pass to reach the engine and means to hold the screens in a fixed position.

2. A gas generator for explosion engines comprising a tubular extension of the inlet manifold of the engine, a heating chamber formed around said tubular extension of the inlet manifold, a pipe leading from the exhaust manifold to said heating chamber, a carbureter connected with the lower end of the heater, a transversely placed screen across the upper end of the heater, a rod passing through the center of said screen, and a plurality of other screens connected to said rod and frictionally engaging said tubular member whereby the wire screens are heated to gasify the fuel as it passes through the heater.

1,211,776. MACHINE FOR GRINDING AND POLISHING STONES. JOSEPH H. SPEARS, Knoxville, Tenn., assignor to Ty-Sa-Man Machine Company, Knoxville, Tenn. Filed Dec. 31, 1915. Serial No. 69,596. (Cl. 51—11.)

1. A grinding and polishing machine including a revolubly mounted standard, a sleeve movable vertically of the standard, a track secured to the sleeve and extending horizontally, a carriage movable along the track, a tool head receiving spindle journaled in vertically alined bearings formed upon the carriage, and means operable from the carriage for raising and lowering the track.



2. A grinding and polishing machine including a revolubly mounted standard, a sleeve movable vertically of the standard, a track secured to the sleeve and extending horizontally, a carriage movable along the track, a tool head receiving spindle journaled in vertically alined bearings formed upon the carriage, and means operable from the carriage for raising and lowering the track, said means including a threaded shaft, a nut carried by the sleeve and engaging the shaft, a sprocket wheel, operative connection between the sprocket wheel and nut, an additional sprocket wheel supported by the track, a plurality of sprocket wheels supported by the carriage, a chain trained about all of the sprocket wheels in such a manner as to remain stretched, irrespective of the position of the carriage on the track, and means for manually rotating one of the sprocket wheels on the carriage.

3. A grinding and polishing machine including a track supported for swinging movement in a horizontal plane and also movable vertically, a carriage movable along the track, a spindle journaled in bearings formed in the carriage, means supported on the carriage for driving the spindle, means for manually raising and lowering the spindle, such means being movable in a horizontal plane without effecting movement of the spindle, and means for locking such means against movement in a horizontal plane.

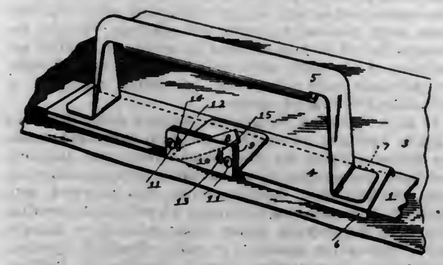
4. A grinding and polishing machine including a swingingly mounted track, a carriage movable along the track, a tool head receiving spindle journaled in vertically alined bearings supported by the carriage, means for rotating the spindle, a bracket supported by the carriage and free for turning movement, a handle bar pivoted at one end to the bracket and operatively engaging the spindle to permit raising and lowering of the latter, and means for locking the brace against swinging movement.

5. A grinding and polishing machine including a swingingly mounted track, a carriage movable along the track, a tool head receiving spindle journaled in vertically alined bearings supported by the carriage, means for rotating the spindle, a bracket supported by the carriage and free for turning movement, a handle bar pivoted at one end to the bracket and operatively engaging the spindle to permit raising and lowering of the latter, and means for locking the bracket against swinging movement, said means including a bearing plate supported by the carriage and formed with a notch adapted to aline with one of a plurality of notches formed in the bracket, and a locking lever pivoted to the bracket and adapted to simultaneously engage in the notch of the bearing plate and one of the notches of the bracket.

[Claims 6 to 9 not printed in the Gazette.]

1,211,777. CUTTING DEVICE. JASPER H. STANFIELD, Muskegon, Mich., assignor of one-half to Frank C. Pangborn, Grand Rapids, Mich. Filed July 24, 1916. Serial No. 110,874. (Cl. 164—83.)

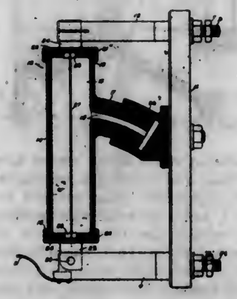
1. In a device of the character described; a carriage; a clamp mounted on the carriage and comprising a pair of members with a pair of lugs extending between them; and a cutter blade adapted to be clamped between the members with one of its edges above one lug and its other edge below the other lug.



2. In a device of the character described! a carriage; a clamp comprising one member fixed on the carriage and a coöperating member adjustably held relatively to the first member by screws; the clamp having a pair of lugs extending between said members; and a cutter blade adapted to be clamped by the screws between the members, with one of its edges above one lug and its other edge below the other lug.

3. In a device of the character described; a carriage; a clamp comprising one member fixed on the carriage and a coöperating member adjustably held relatively to the first member by screws; one of said members having a pair of lugs, and the other member having orifices into which said lugs extend; and a cutter blade adapted to be clamped by the screws between the members, with one of its edges above one lug and its other edge below the other lug.

1,211,778. CIRCUIT-BREAKER. HALFDAN A. STEEN, Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Mar. 23, 1912. Serial No. 685,715. (Cl. 175—273.)



1. In a circuit breaker, the combination of fixed contacts, a movable switch arm normally engaging said contacts, said switch arm having a hollow portion with an opening, stationarily mounted means effective to cover said opening when said switch arm is in circuit-closed position, and a fuse in the hollow portion of said switch arm, pressure created on the blowing of said fuse acting against said covering means to throw said switch arm out of engagement with one of said contacts.

2. In a circuit breaker, the combination of fixed contacts, a movable switch arm adapted to engage said contacts, said switch arm including a hollow member provided with a projection having an opening, means for telescopically receiving said projection and covering said opening, said means being mounted on a stationary support, and a fuse in the hollow portion of said switch arm, pressure created by the blowing of said fuse acting against said means to throw said switch arm out of engagement with one of said contacts.

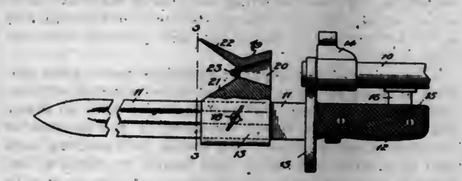
3. In a circuit breaker, the combination of a movable switch member, a fuse inclosed within said movable switch member, and means forming a stationary abutment against which fluid pressure created on the blowing of said fuse is exerted directly and reacts to cause a movement of said movable switch member.

4. In a circuit-breaker, the combination with a movable switch member having a hollow portion and provided with a curved projection with an opening, a curved member mounted on a stationary support and adapted to receive said curved projection and to cover said opening, and a fuse in the hollow portion of said switch member which when blown generates pressure which is exerted between said movable switch member and covering member for actuating said switch member.

5. In a circuit-breaker, the combination of stationary contacts, a movable switch member comprising a hollow member having an opening, metal caps for the ends of said hollow member, said caps being engageable with said stationary contacts, and a fuse in the hollow member electrically connecting said caps to complete a circuit through said stationary contacts and said movable switch member, and means for covering said opening, said covering means being mounted on a stationary support and coöperating as an abutment with said movable switch member to utilize the pressure generated by the blowing of the fuse to cause said movable switch member to be actuated.

[Claims 6 to 11 not printed in the Gazette.]

1,211,779. WIRE-ENTANGLEMENT SHOOTER-CUTTER. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed June 19, 1916. Serial No. 104,513. (Cl. 42—90.)



1. The combination with the barrel of a small-arm weapon, of a block supported by the barrel and provided with a forwardly converging passage alining with the bore of the weapon and having forwardly extending divergent projections adapted to bring a transverse wire against which the block is thrust into position across the smaller end of said passage.

2. The combination with a rifle barrel, of a bayonet fixed thereto, a block mounted on the bayonet at some distance from the muzzle of the gun, and provided with a passage registering with the bore of the gun and further provided with projections forwardly divergent from opposite sides of said passage, substantially as set forth.

3. The combination with a rifle and its bayonet of a sleeve block fixed upon the bayonet at some distance from the end of the barrel and provided with a forwardly converging passage alining with the bore of the firearm and with faces forwardly divergent from the passage, substantially as set forth.

1,211,780. PHOTOGRAPHIC INDICATING DEVICE. ALFRED C. STEWART, Los Angeles, Cal. Filed Apr. 8, 1915. Serial No. 20,067. (Cl. 88—23.)

1. A photographic indicating device comprising an objective aperture member, a diffusing device including a plurality of sections of different light absorptive capacity, means for bringing the various sections at will into the path of the light transmitted through the objective aperture, an eyepiece containing an aperture for viewing said light absorbing sections, and adjustable controlling means for controlling the amount of light transmitted through the objective aperture.

2. A photographic indicating device comprising an objective aperture member, adjustable controlling means for controlling the amount of light transmitted through the objective aperture, means comprising two light diffusing surfaces and an intermediate light absorbing surface, adapted to be brought successively and by the same movement into the path of the light transmitted through the objective aperture without affecting the adjustment of said adjustable controlling means, and an eyepiece containing an aperture for viewing said diffusing and absorbing surfaces.



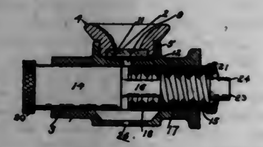
3. A photographic indicating device comprising an objective aperture member, adjustable controlling means for controlling the amount of light transmitted through the objective aperture, means comprising a plurality of surfaces of different light diffusing capacity adapted to be brought successively and by the same movement into the path of the light from the objective aperture without affecting the adjustment of said adjustable controlling means, and an eyepiece containing an aperture for viewing said diffusing surfaces.

4. In a photographic indicating device, an eye-piece provided with an aperture, means for receiving light from an object and transmitting it to said aperture, said means comprising diffusive reflecting surfaces of different shade, means for bringing the surfaces selectively into action, and means for variably stopping the light received from the object.

5. In a photographic indicating device, an eye-piece provided with an aperture, means movably mounted with relation to the eye-piece, for receiving light from an object and transmitting it to the eye-piece, in one position of such means and provided with means for absorbing such light in another position of such means, to enable a condition of illumination at the eye-piece to be compared with a condition of no illumination, and indicating means provided with means for variably stopping the light received from the object.

[Claims 6 and 7 not printed in the Gazette.]

1,211,781. ACTINOMETER. ALFRED C. STEWART, Los Angeles, Cal. Filed Feb. 14, 1916. Serial No. 78,240. (Cl. 88—23.)



1. An actinometer comprising a translucent member, an eye-piece for observation thereof, objective aperture means, adjustable means for controlling the illumination of said translucent member from said aperture means, said adjustable means being provided with means for indicating its position of adjustment, and means for shutting off light from said translucent member without affecting the adjustment of said adjustable means.

2. An actinometer comprising objective aperture means, a translucent member adapted to be illuminated from said aperture means, adjustable means for controlling the illumination of said translucent means from said aperture means, and provided with means for indicating its position of adjustment, an eye-piece adapted to receive light transmitted through said translucent means, and means for shutting off light from said eye-piece without affecting the adjustment of said adjustable means.

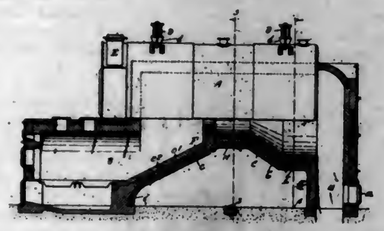
3. An actinometer comprising objective aperture means, an eye-piece provided with a translucent screen, and light intercepting means slidably mounted between said aperture means and screen, and provided with relatively rotatable parts forming an adjustable opening, whereby the illumination of said screen may be varied by rotative adjustment of said parts, and the light may be shut off without affecting such adjustment, by sliding movement of said light intercepting means.

4. An actinometer comprising objective means provided with an aperture, an eye-piece provided with light diffusing means adapted for illumination from said aperture, and light intercepting means mounted between said aperture and said light diffusing means and provided with relatively adjustable parts forming an adjustable opening, said light intercepting means being movable to bring a light intercepting portion, or said adjustable opening, alternatively into position between the objective aperture and the light diffusing means.

5. In an actinometer, a member having an aperture, an eyepiece provided with a translucent screen, and light intercepting means slidably mounted between said aperture and screen and comprising two members each adapted to shut off the aperture from the screen, said members being relatively rotatable and having a screw engagement, whereby the opening between said members may be adjusted by rotation thereof, to provide for variation of the illumination of said screen through said opening, and said members being provided with scale means for indicating the size of such opening.

[Claim 6 not printed in the Gazette.]

1,211,782. STEAM-BOILER FURNACE. FREDERICK C. STIMMEL, Chattanooga, Tenn., assignor to The Casey-Hedges Co., Chattanooga, Tenn. Filed Dec. 13, 1913. Serial No. 806,449. (Cl. 110—1.)



1. A metal jacketed steam boiler casing having a front fire chamber portion, and a rear ash receptacle, said front portion and ash receptacle being adapted to rest on a foundation, and a metal jacketed intermediate arch portion adapted to envelop the lower portion of the boiler and having a forward throat part which inclines upwardly toward the rear of the casing and a part in rear of said throat part which inclines downwardly and rearwardly toward said ash receptacle, said forward and rear parts being secured to and supported entirely from said fire chamber and said ash receptacle, and said rear part being adapted to form with a boiler a rear chamber which increases rearwardly in cross section and causes solid matter to be dropped into said ash receptacle from the products of combustion.

2. The combination with a substantially horizontal boiler, of a metal jacketed furnace casing partly enveloping said boiler and comprising a front fire chamber and a rear part, said fire chamber and rear part resting on a supporting foundation, and a metal jacketed and substantially arch-shaped intermediate portion connected with and supported by said fire chamber and rear part and forming with said boiler a combustion chamber extending lengthwise of the boiler and having a front space decreasing in size toward the rear of said casing and connected with said fire chamber and a rear space increasing in size toward the rear of said casing and in which solid matter is removed from the products of combustion passing through said rear space.

3. A metal jacketed steam boiler casing having front and rear supporting portions resting on foundations, said front portion forming a fire chamber and said rear portion containing a passage for the products of combustion, and an intermediate metal jacketed arch shaped portion which is secured to and supported entirely from said front and rear portions and which is lined with fire resisting material, said intermediate portion being adapted to form with the boiler a combustion chamber having a front space increasing in cross section toward the front of the casing and communicating at its front end with the fire chamber, and a rear space increasing in cross section toward the rear of the casing and connected with said passage, whereby solid matter is removed from the products of combustion while passing through said rearwardly increasing part of the combustion chamber.

4. The combination with a substantially horizontal boiler, of a metal jacketed furnace casing partly enveloping said boiler and comprising a front fire chamber and an ash receptacle at the rear portion of said casing, said fire chamber and ash receptacle resting upon a supporting foundation, and a metal jacketed intermediate portion arranged beneath the boiler and extending lengthwise thereof, said intermediate portion being arch-shaped and being connected with and entirely supported from said fire chamber and ash receptacle, and forming with the boiler a chamber having a contracted middle portion and front and rear chambers decreasing in cross section toward said middle portion, the front chamber terminating in said fire chamber and the rear chamber terminating in said ash receptacle.

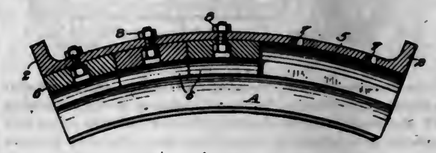
1,211,783. TOOL-HANDLE. WILLIAM E. STRATTON, Voltage, Oreg. Filed Nov. 23, 1915. Serial No. 63,058. (Cl. 81—177.)



1. A handle for tools including a pair of sections, one of which is solid and screw threaded having the opposite sides thereof flattened while the other is hollow and oval shaped in cross section to telescope the solid section, partially threaded projections arranged on opposite sides of the inner bore of the hollow section for removably and adjustably engaging the solid section, a plug corresponding to the contour of the hollow section, and a threaded bolt passing through the plug and engaging the adjacent end of the solid section to prevent accidental displacement of the sections and adapted to be tightened to cause the plug to frictionally engage the end of the solid section to positively prevent accidental disengagement of the sections from each other subsequent to adjustment.

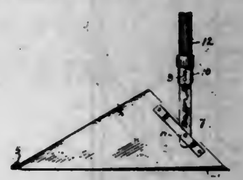
2. A handle for tools including an exteriorly threaded section flattened at diametrically opposite sides, an oval shaped sleeved section for telescoping the threaded section, oppositely arranged projections integral with and extending from the inner sides of the sleeved section adjacent one end thereof, the front faces of the projections being flattened and arranged in uniformly spaced parallel relation with each other and provided with a plurality of uniformly spaced grooves which constitute in effect partially threaded portions, the flattened sides of the threaded section being arranged in close relation with the flattened faces of the projections and slidable therebetween, the threaded section being rotatable so that the threads will engage the partially threaded portions of the projections, consequently holding the sections in various adjusted positions, an oval shaped plug, and a bolt passing through the plug and engaging the adjacent end of the exteriorly threaded section for normally permitting of the partial rotary movement so that the sections may be adjusted and for preventing disengagement of the sections one for the other and also adapted to be tightened to cause the plug to frictionally engage with the threaded section to prevent accidental disengagement of the sections, subsequent to adjustment.

1,211,784. SECTION-ELBOW FOR CONCRETE-CONVEYERS. JOHN C. K. STUART, Montreal, Quebec, Canada. Filed July 31, 1916. Serial No. 112,384. (Cl. 137—75.)



An elbow for concrete conveying systems comprising two separable semicylindrical sections adapted to form a cylindrical bore therein when connected together, an air-tight connection between said sections, the medial portion of one of said sections being enlarged, said enlarged section being provided with a groove extending throughout the entire length of said section, a plurality of blocks adapted to be arranged within said groove, the inner periphery of said blocks being of the same curvature as the inner periphery of said section and adapted to form a continuation thereof, and a detachable connection between each block and said section for the purpose set forth.

1,211,785. CISTERN-CLEANING DEVICE. CYRUS M. SUTER, Franklin Grove, Ill. Filed July 27, 1916. Serial No. 111,689. (Cl. 210—3.)



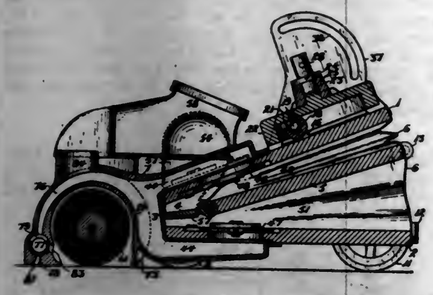
1. A device of the class described, comprising a receptacle having an opening at one of its ends and walls tapering to a junction at the other end, the edge of the bottom plate of said receptacle being curved downwardly to conform to the bottom of a cistern; and a handle pivotally connected with said receptacle, at a point which will maintain the receptacle in vertical alinement when being moved upwardly or downwardly in the cistern.

2. A cistern cleaning device, comprising a receptacle having an opening at one of its ends and walls tapering to a junction at the other end, the edge of the bottom plate thereof being adapted to conform to the bottom of a cistern; a handle pivotally connected with said receptacle, at a point which will maintain the receptacle in vertical alinement when being moved upwardly or downwardly in the cistern; and means for yieldingly holding said receptacle in such vertical alinement.

3. A cistern cleaning device, comprising a receptacle having an opening at one of its ends and walls converging

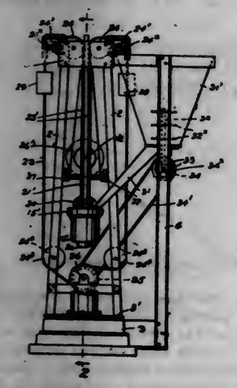
to a junction at the opposite end; a handle pivotally connected with said receptacle at its larger end; and a plate, operatively connected with said handle and adapted to close said opening when the handle is in alinement with said receptacle.

1,211,786. VACUUM-CLEANER. HORACE H. TAYLOR and LEONARD A. MOBERRY, Oakland, Cal. Filed Feb. 1, 1916. Serial No. 75,494. (Cl. 15—60.)



In a vacuum cleaner, the combination of a pump, a metal frame secured thereto, having a concave portion forming with the surface to be cleaned, a brush chamber, a rotary brush in said chamber, said frame also forming a valve seat, a rotary valve in said seat, and conduits in said frame leading to said valve seat from the brush chamber and from a portion of the frame in close proximity to said surface, said valve being formed with ports adapted to alternately register respectively with said conduits, and means whereby said valve can be turned in its seat, said frame forming a conduit from the valve seat to the pump.

1,211,787. MACHINE FOR MAKING CEMENT PIPES. JAMES THOMAS, Tacoma, Wash. Filed Nov. 6, 1915. Serial No. 59,906. (Cl. 25—30.)



1. In a machine of the class described, the combination with a mold, a rotary table for supporting said mold, and means to rotate the table and said mold, a non-rotatable standard extending upwardly through the center of said table, a core provided with means engageable with said standard whereby the core is held centrally of the table and against rotary movements.

2. In a machine of the class described, the combination with a mold, a rotary table for supporting said mold, and means to rotate the table and said mold, a non-rotatable standard extending upwardly through the center of said table and terminating above the latter in a polygonal head, and a cylindrical core provided at its lower end with a socket, said socket being adapted to engage the standard at various rotary positions of the core, to secure the latter against rotary movements.

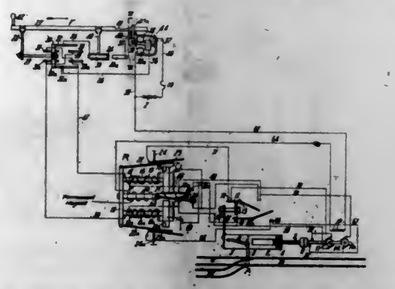
3. In a machine of the class described, the combination with a mold, a rotary table for supporting said mold, and means to rotate the table and said mold, a non-rotatable standard extending upwardly through the center of said table and terminating above the latter in a polygonal head, a cylindrical core provided with a socket in its lower end, said socket being adapted to engage the standard at various rotary positions of the core to secure the latter against rotary movements, a hoisting rod for said core, and means to secure the core to said rod in selected rotary positions.

4. In a machine of the class described, a core, an upright rod having an opening adjacent its lower end, means to detachably connect said core to the lower end of the rod, a guide for said rod, a hoisting cable arranged with a bight engaging said rod in the opening thereof, a cable winding drum, and guide sheaves for directing said cable to extend upwardly at opposite sides of the rod from said opening and thence to said drum.

5. In a machine of the class described, the combination with the rotary table, a mold provided with an enlarged upper end, a cylindrical core, non-rotatable means extending through the table for supporting the core and also securing the same against rotation, and a collar provided with means whereby the collar may be detachably supported by the core, said collar serving as an internal form for the bell-mouth of a pipe.

[Claims 6 and 7 not printed in the Gazette.]

1,211,788. RAILWAY-TRAFFIC-CONTROLLING APPARATUS. JOHN D. TAYLOR, Wilkinsburg, Pa.; Mary E. Taylor, executrix of said John D. Taylor, deceased, assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Aug. 28, 1913. Serial No. 787,134. (Cl. 246—53.)



1. In combination, a railway traffic controlling device, operating means comprising a motor for operating said device, a relay comprising a polarized armature and a neutral armature, a circuit for said relay, a circuit controlling lever for governing said circuit, means controlled by said polarized armature for supplying current to said motor to cause operation thereof in one direction or the other, an indication device for controlling said lever, a circuit for said indication device controlled by said neutral armature and by said operating means, and means for supplying current to said last-mentioned circuit.

2. In combination, a railway traffic controlling device, operating means comprising a motor for operating said device, a relay comprising a polarized armature and a neutral armature, a circuit for said relay, a circuit controlling lever for governing said circuit, means controlled by said polarized armature for supplying current to said motor to cause operation thereof in one direction or the other, an indication device for controlling said lever, a circuit for said indication device controlled by said neutral armature and by said operating means, and means for supplying current from the motor to the last-mentioned circuit.

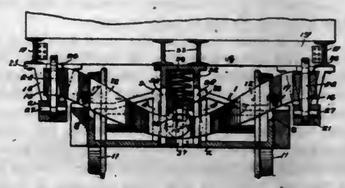
3. In combination, a railway traffic controlling device, operating means comprising a motor for operating said device, a relay comprising an armature responsive to reversals of current and an armature responsive to the presence and absence of current, a circuit for controlling said relay, a circuit controlling lever for governing said circuit, means controlled by the first-mentioned armature for supplying current to said motor to cause operation thereof in one direction or the other, an indication device for controlling said lever, a circuit for said indication device controlled by said second-mentioned armature and by said operating means, and means for supplying current to said last-mentioned circuit.

4. In combination, a railway traffic controlling device, operating means comprising a motor for operating said device, and comprising two armature windings and a field winding, a relay comprising a polarized armature and a neutral armature, a circuit for controlling said relay, a circuit controlling lever for governing said circuit, means controlled by said polarized armature for supplying current to both motor armature windings and the motor field winding to cause operation of the motor in one direction or the other; means controlled by the traffic controlling device upon the completion of a movement thereof for disconnecting said motor from the source of current; means controlled by said polarized armature, said neutral armature and said operating means upon the completion of a movement of the latter for supplying current to the motor field winding and to one motor armature winding whereby the motor continues to operate and a current is generated in the other armature winding; an indication device for controlling said lever, and a circuit for said indication device including said last-mentioned motor armature winding, said last mentioned circuit being also controlled by the neutral armature.

5. In combination, a railway traffic controlling device, operating means comprising a motor for operating said device, and comprising a field winding and two armature windings, a relay comprising two windings, a polarized armature and a neutral armature; a source of current; two control wires; a circuit including the source, both control wires, both relay windings and both motor armature windings, all in series, the motor armature windings being interposed between the two relay windings in said circuit; a circuit controller in said circuit for reversing the connection of the source with the control wires, an indication device for controlling said circuit controller and comprising a winding included in said circuit between one terminal of the source and the circuit controller, said indication device being responsive to current in one direction only and so arranged that the current which flows in its winding from said source will not operate it; a common wire connected with one terminal of the motor field winding and with the same terminal of the source as said indication device winding; contacts and conductors controlled by said polarized armature for connecting the other terminal of the motor field winding with said circuit at a point on one side or the other of the motor armature windings whereby reverse operations of the motor are caused; contacts and conductors controlled by said operating means and operative upon the completion of a movement of the latter for disconnecting said motor field winding from the point at which it was connected with the circuit and connecting it through a front contact of said neutral armature with a point intermediate the two armature windings whereby the motor continues to operate and generates current in the other armature winding, which latter current flows from the said point intermediate the two armature windings through the same path as the motor operated current as far as the junction of the common wire with the source of current, then through the said winding of the indication device, the control wire which is not carrying motor current, and one relay winding to the motor armature, the direction of flow of the last-mentioned current through the indication device winding being such as to cause operation of the indication device.

[Claims 6 to 17 not printed in the Gazette.]

1,211,789. CAR-TRUCK. GEORGE K. THOMPSON, New York, N. Y. Filed June 2, 1915. Serial No. 31,723. (Cl. 105—115.)



1. In combination with a car body and truck, mechanism carried by the truck to distribute undue pressure applied to either side of the latter, and means coöperating with said mechanism to absorb shock from the car body.

2. In combination with a car body and truck levers pivoted to stationary portions of the truck and movably engageable with the body at their outer ends, and elastic means between the inner ends of the levers and the body, as and for the purposes set forth.

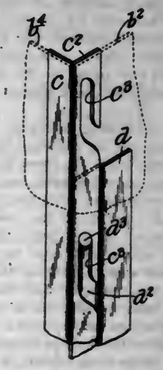
3. In a mechanism to avoid side motion of a car body on its truck and to absorb shock exerted by the body on the truck and equalize the pressure of the body on the truck and wheels thereof, means coöperative between the body and truck to distribute undue pressure exerted at any point on the truck from the body and means in connection with the body and coacting with the first-named means but operable independently of the latter to take up jar from the body.

4. In combination with a car body and truck having a frame movable with respect to the journals of the truck, a cantaliver mechanism associated with said truck and pivoted to the latter independently of pivotal connection with the body at the center thereof and in connection with the car body at the sides and resilient means between the center of the car and the cantaliver mechanism to distribute pressure equally to the truck, immaterial of the portion of the body to which the pressure is applied.

5. In combination with a car body and truck, a cantaliver mechanism associated with said truck and in connection with said body to equally distribute pressure of the latter to the truck, and an elastic element for absorbing shock from said cantalivers.

[Claims 6 and 7 not printed in the Gazette.]

1,211,790. TELEPHONE OR OTHER BOOTH. HOWARD E. VAN ORDEN, East Orange, N. J., assignor of one-half to Joseph W. Sinnott, Brooklyn, N. Y. Filed Mar. 16, 1915. Serial No. 14,749. (Cl. 189—2.)



1. In a knock-down booth, a plurality of side plates provided on their opposite edges and on the inner side thereof with angle plates provided with longitudinal recesses which open outwardly at their lower ends through

one edge thereof, and front and back plates provided at their opposite side edges with strips having longitudinal offset portions for overlapping and concealing the recessed portion of said recessed members and provided with pins adapted to enter said recesses.

2. In a knock-down booth of the class described, a wall plate consisting of a plurality of sections, one of said sections being provided with a longitudinally extending strip having longitudinally disposed recesses which open downwardly at their lower ends through one edge of said strip, and the other of said sections being provided with a longitudinal strip having a longitudinal offset portion for overlapping and concealing the recessed portion of said recessed strip and provided with pins adapted to enter said recesses.

1,211,791. PIANO-BACK. JOSEPH VOGELMAN, Richmond, Ind. Filed July 13, 1916. Serial No. 109,171. (Cl. 84—28.)



1. A piano back comprising a frame including a plurality of vertical posts spaced apart and having L-shaped mortises in their rear faces at both their upper and lower end portions, double back boards extending across and filling both the upper and the lower mortises of the posts, a wrest plank secured across and to the upper portions of the inner faces of the posts, a beveled plate secured across and to the lower portions of the inner faces of the posts, side strips secured to the two outer posts and connecting the wrest plank and the beveled plate, and means for securing all of said parts into a unitary structure, substantially as set forth.

2. A piano back comprising a frame including a plurality of vertical posts spaced apart, a double back board extending across the upper portions of all of the posts and mortised in flush therewith, a double back board extending across the lower portions of all of the posts and mortised in flush therewith, a wrest plank extending across and secured to said posts on the side thereof opposite to said upper back board, a beveled plate extending across and secured to said posts on the side thereof opposite to said lower back board, and means for securing said parts together.

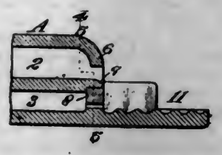
3. A piano back comprising a frame including a plurality of vertical posts having mortises in their rear faces at their upper and lower ends, an inner back board located in the upper mortises, an outer back board located in the upper mortises and contacting with the inner back board, an inner back board located in the lower mortises, an outer back board located in the lower mortises and contacting with the last mentioned inner back board, a wrest plank extending across and located on the upper portions of the posts and on the opposite side thereof to said upper inner and outer back boards, blocks filling the spaces between the upper portions of the posts with their upper and lower edges flush with the upper and lower edges of the upper inner and outer back boards, a plate secured to the lower portions of the posts on the side thereof opposite to said lower inner and outer back boards, blocks filling the spaces between the posts with their edges flush with the upper and lower edges of lower inner and outer back boards, all substantially as set forth.

4. A piano back comprising a plurality of vertical posts spaced apart, a double back board let in flush with and extending across the upper end portions of the posts, a double back board let in flush with and extending across the lower end portions of the posts, blocks filling the spaces in front of the upper double back and between the posts, blocks filling the spaces in front of the lower double back and between the posts, a wrest plank extending across the upper portions of the posts on the sides thereof opposite to the upper double back, a beveled plate extending across the lower portions of the posts on the sides thereof opposite to the lower double back, dowels connecting the inner member of the double upper back with the posts and the wrest plank, dowels connecting the inner member of the double lower back with the posts and beveled plate, all substantially as shown and described.

5. A piano back comprising a plurality of spaced apart posts, double back boards connecting the top and the bottom of the posts and let in flush with the rear faces thereof, a wrest plank connecting the upper ends of the inner faces of the posts, a beveled plate connecting the lower ends of the inner faces of the posts, a sounding board resting on the beveled plate and let in flush with and connected to the wrest plank, side strips carried by the outside posts and on which the side edges of the sounding board rest, blocks filling the spaces between the upper and the lower end portions of the posts, and means for securing all of said parts into a unitary structure, all substantially as shown and described.

[Claim 6 not printed in the Gazette.]

1,211,792. OIL-BURNER. GEORGE B. VON BODEN and EDWIN F. INGLES, San Francisco, Cal. Filed Apr. 18, 1916. Serial No. 91,910. (Cl. 158—75.)



1. In an oil atomizer and burner, parallel oil and steam conduits, the oil conduit having its upper and lower walls curved downwardly at the discharge end and the subjacent steam conduit having a discharge formed of finely divided passages, certain of which passages are parallel and others divergent, a table with corrugated surface located below the discharge, and side walls inclosing the table.

2. An atomizer and burner including an oil conduit having a wall with a downwardly curved forward end, and a subjacent steam conduit having a block insertible and removable through the front of the mouth of the conduit, said block having finely divided independent outlets through which steam is discharged to receive the falling oil and deliver a fine fog or mist.

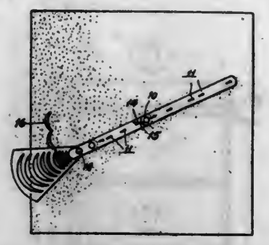
3. An oil burner comprising an oil conduit, a subjacent steam conduit, and an inserted block in the mouth of the steam conduit having a plurality of passages provided in the bottom wall of said block for forming a plurality of outlets with the opposing bottom wall of the steam conduit on which said block rests.

4. An oil burner comprising an oil conduit and a subjacent steam conduit having a series of finely divided divergent outlets, and end outlets parallelly related and including the divergent outlets therebetween.

5. An oil burner including a conduit having a transverse straight series of finely divided outlets of which the end ones are parallel and the intermediate outlets angularly related thereto.

[Claims 6 and 7 not printed in the Gazette.]

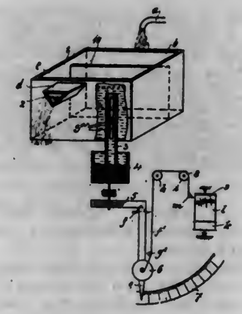
1,211,793. EMBROIDERY OUTFIT. GUIDO VON HORVÁTH, Philadelphia, Pa. Filed May 20, 1915. Serial No. 29,265. (Cl. 33—1.)



1. An embroidery outfit comprising a scallop marker of transparent material arranged in sections pivotally connected, having a guide rod with numbered notches, a marker end with cut out scallops numbered to correspond with the numbered notches on the guide rod the number at which the guide rod is fastened to the fabric indicating the number at the marker end where the scallop is to be outlined and a pin for attaching to the fabric.

2. An embroidery outfit comprising a celluloid sectional hingedly connected scallop marker, having a guide rod provided with a plurality of numbered notches, a marker end having a plurality of numbered scallop designs the number at which the guide rod is fastened to the fabric indicating the number at the marker end where the scallop is to be outlined.

1,211,794. LIQUID-MEASURER. LOUIS VON LOSSAU, Saarbrücken, Germany. Filed May 22, 1914. Serial No. 840,227. (Cl. 73—167.)



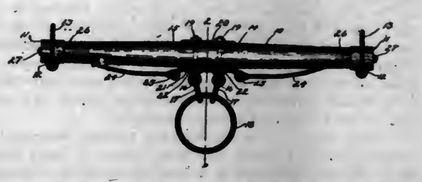
1. Mechanism for weighing liquids, comprising a container, a pipe passing into the container surrounded by and communicating with the body of liquid in the container, means to liquid seal the other end of the pipe and movable with respect thereto, and a scale beam to which said means transfers its load.

2. Mechanism for weighing liquids, comprising a container, a perforated pipe passing through the bottom of the container and communicating therewith through said perforations, a vessel containing a liquid for sealing the lower end of said pipe and a scale beam for directly supporting said vessel.

3. Mechanism for weighing liquids, comprising a container through which a liquid flows, means in the bottom of said container extending over a fraction of the area thereof to receive the weight of a liquid column over said area, and a balancing indicating device actuated by said means.

4. Mechanism for weighing liquids, comprising a container through which a liquid flows, a stationary pipe passing through the container, open to the interior thereof and surrounded by the contents, a mercury seal for the bottom of said pipe to automatically compensate for change of volume due to temperature changes, said seal directly connected to a scale beam.

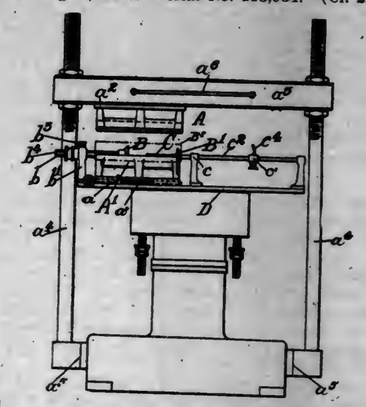
1,211,795. NECK-YOKE. JAMES A. WALKER, Genesee, Pa. Filed Mar. 14, 1916. Serial No. 84,063. (Cl. 21—77.)



1. A neck yoke or the like comprising a bar having spaced apart clamp bolts extending transversely through the central portion thereof, an elongated member having its intermediate portion clamped by said bolts to said bar to serve as a reinforcement therefor and having its extremities outturned substantially from the surface of the bar, and truss members having their inner ends secured to the outturned ends of said member and having their outer ends secured at the outer ends of said bar.

2. A neck yoke or the like comprising a bar, spaced apart eye bolts passed through the central portion thereof, intermediate rings passed through the eyes of said bolts, a pole receiving ring held by said intermediate bolts with a capability of limited lateral and endwise movement, an elongated member having its intermediate portion clamped by the eyes of said bolts to said bar to serve as a reinforcement therefor, and having its extremities outturned substantially from the surface of said bar, and truss rods having their inner ends secured to said outturned extremities of said member and having their outer ends fixed at the outer ends of said bar with provision for adjustment to apply a tension thereto.

1,211,796. CORE-MAKING MACHINE FOR FOUNDRY PURPOSES. JOHN JAMES WARREN, Preston, England. Filed Aug. 9, 1916. Serial No. 113,934. (Cl. 22—10.)



1. A core making machine comprising a core box formed of relatively movable sections, a stationary end for said sections, a movable end, means for adjustably retaining said movable end in position between said sections, and a movably supported vent rod positioned to be projected longitudinally into said core box.

2. A core making machine comprising a core box formed of relatively movable sections, a stationary end for said sections, a movable end, a carrier member therefor, means for adjustably supporting said carrier member to position

the movable end between the said sections, and a movably supported vent rod positioned to be projected longitudinally into said core box.

3. In a core making machine for foundry purposes the combination of a rising and falling table, a lower portion of a core box arranged in hinged relationship thereto, an upper portion of a core box movably supported above the lower portion and arranged to be brought into and out of alinement therewith, a stationary plate closing one end of the lower portion of the core box and adapted to close the corresponding end of the upper portion of the core box when the two portions are brought into contact, a movable end shaped to fit within the upper and lower portions of the core box, means for moving such movable end toward and away from the stationary plate and means for securing it in any adjusted position.

4. In a core making machine for foundry purposes, the combination of a rising and falling table, a lower portion of a core box arranged in hinged relationship thereto, an upper portion of a core box movably supported above the lower portion and arranged to be brought into and out of alinement therewith, a stationary plate closing one end of the lower portion of the core box and adapted to close the corresponding end of the upper portion of the core box when the two portions are brought into contact, a movable end shaped to fit within the upper and lower portions of the core box, means for moving such movable end toward and away from the stationary plate, means for securing it in any adjusted position, a guide mounted on the rising and falling table, a rod slidable in such guide and arranged to be passed into and out of the core box through an aperture in the stationary plate.

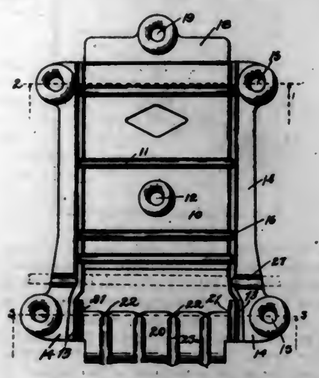
5. In a core making machine for foundry purposes, the combination of a rising and falling table, a plate hinged thereto, a lower portion of a core box secured to such plate the said portion being open at its ends and having beveled side edges, an upper portion of a core box movably supported above the lower portion and arranged to be brought into and out of alinement therewith, the said upper portion having open ends and beveled side edges, a stationary plate closing one end of the lower portion of the core box and having an upper beveled edge adapted to close the corresponding end of the upper portion of the core box when the two portions are brought into contact, a movable plate shaped to fit within the upper and lower portions of the core box and having an upper beveled edge, a screw connected to the movable plate and having a longitudinal interruption, a guide to receive such screw and a set screw in such guide to engage the interruption, a nut mounted upon the screw for regulating the amount of endwise movement of the screw and movable plate, a guide mounted on the rising and falling table outside the stationary plate, and a rod slidable in such guide and arranged to be passed into and out of the core box through an aperture in the stationary plate.

1,211,797. LEG-SOCKET. EDWARD L. WATROUS, Des Moines, Iowa, assignor to David B. Gann, Chicago, Ill. Filed Apr. 18, 1910. Serial No. 556,279. (Cl. 68—31.)

1. A leg socket integral throughout and composed of sheet metal and adapted to be attached to a tub, said socket being of uniform width from top to bottom but tapering upwardly in thickness, said socket having a bar across its throat and forming the inner wall thereof and being adapted to yield to expand the throat when the socket is attached to a tub.

2. A leg socket consisting of a single piece of sheet metal, said socket adapted for attachment to a tub or other support and being of tapering thickness from bottom to top and having an integral sheet metal cross-piece which forms a yielding inner wall for the mouth of said socket and is provided with integral spurs arranged for engagement with the wooden leg carried by the socket.

3. A device of the class described formed complete of a single piece of sheet metal and comprising a front and sides, and means for attaching the same to a support, said sides being of tapering width from bottom to top and being extended below said front, and a yielding cross-piece integral with said sides and located adjacent their lower ends and spaced apart from their inner edges, said cross-piece having ribs therein extending crosswise thereof.



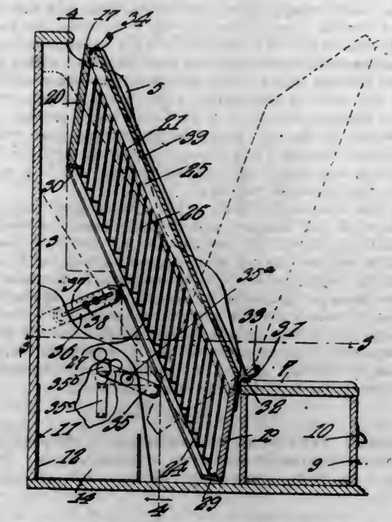
4. A leg socket of sheet metal comprising a hollow body portion having a front member and side members, said side members being tapering in width, apertured flanges extending laterally from said side members, a cross-piece below said front member and formed integral with the side members and protruding at the throat of said socket so that a leg of substantially uniform thickness may be placed in the socket with its front in engagement with the socket front and its rear in engagement with said cross-piece, said cross-piece being spaced apart from the article to which the socket is applied by a distance sufficient to admit a tub hoop under the leg near said cross-piece.

5. An improved leg socket adapted to be attached to a tub, comprising a main body portion having a front of rectangular outline, side members integral with the front and projecting below the same, a sheet metal cross-piece connected with said side members below said front and so positioned as to be spaced apart from a tub on which the socket may be carried, and an extension at the lower edge of said cross-piece arranged to project under the edge of the supporting tub.

1,211,798. FILING-CABINET. ARTHUR JOHN WATSON, London, Ontario, Canada. Filed Apr. 24, 1915. Serial No. 23,778. (Cl. 45—2.)

1. A case comprising a back, side walls and a bottom; a compartment upstanding from the bottom at the front of the case; a removable auxiliary tray located in the angle defined by the bottom and the back; a main tray pivoted to the case at the front of the auxiliary tray and at a distance above the lower end of the main tray, the lower end of the main tray being of acutely angular form to permit said end to move between the compartment and the auxiliary tray when the upper end of the main tray is swung forwardly and rearwardly, the upper end of the main tray being adapted to coact with the back to limit the rearward swinging movement of the upper end of the main tray.

2. A case comprising a back, side walls and a bottom; a compartment upstanding from the bottom at the front of the case; a removable auxiliary tray located in the angle defined by the bottom and the back; a main tray pivoted to the case at the front of the auxiliary tray and at a distance above the lower end of the main tray, the lower end of the main tray being of acutely angular form to permit said end to move between the compartment and the auxiliary tray when the upper end of the main tray is swung forwardly and rearwardly; and a stop carried by one of the side walls and adapted to coact with the main tray to limit the rearward swinging movement of the upper end thereof, the stop being adjustable to vary the space between the upper end of the main tray and the back.



3. In a device of the class described, a case; and a tray movably mounted on the case, the tray comprising side walls, upper strips assembled with the side walls and having notches; partitions having their upper edges received in the notches, each partition being provided with a forwardly extended lip abutting against an adjoining partition; and lower strips applied to the side walls, the lower strips engaging the partitions at the angles defined by the lips and the body portions of the partitions, to hold the upper edges of the partitions assembled with the notches.

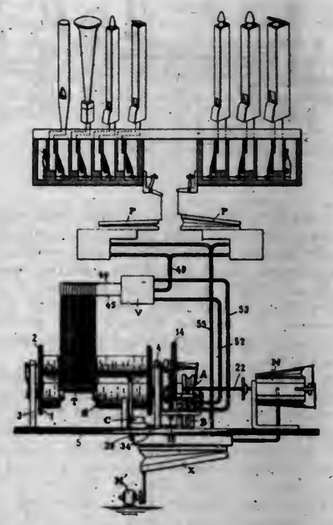
4. In a device of the class described, a case; an abutment thereon; a stop pivotally supported on the case and adapted to engage the abutment; and a tray mounted to swing in the case, the stop being movable by contact with the tray when the tray is swung inwardly, and cooperating with the abutment and the tray when the tray is swung outwardly, thereby to limit the outward swinging movement of the tray.

1,211,799. DRIVING AND CONTROLLING MECHANISM FOR MUSIC-ROLLS. CARL M. WELTE, New York, N. Y., assignor to M. Welte & Sons, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 9, 1913. Serial No. 805,547. (Cl. 84—161.)

1. In a musical instrument, a tracker-board, a pair of music rolls, a driving shaft for each music roll, a clutch member upon each of said shafts, a driving gear operatively mounted upon each of said shafts and each provided with a clutch member and means for releasing the clutch intermediate the gear and shaft, pneumatics for clutching either of said gears to their respective shafts and a driving shaft and gear connections common to both of said gears.

2. In a musical instrument a tracker-board, a pair of music rolls and a perforated music sheet capable of operatively controlling the tracker-board in either direction of movement across said tracker-board, driving gears appurtenant to each of said music-rolls, clutching and releasing devices appurtenant to each driving gear and its respective roll, pneumatics controlling said clutching devices, a valve controlling said pneumatics, pneumatic means including tracker-ducts and perforations in the note sheet for automatically controlling said valve and automatic means for simultaneously effecting a relative movement of the music sheet and tracker-board.

3. In a musical instrument, a tracker-board, a pair of music rolls, a driving gear for each of said music rolls, a shaft and gear connections common to both of said driving gears, clutch devices intermediate each of said driving gears and its music roll and automatically controlled pneumatics for actuating each of said clutch devices, a valve mechanism controlling said pneumatics and an automatically actuated pneumatic controlling the movement of said valve, said automatic pneumatic having a valve action controlled from the tracker-board and music sheet whereby said valve may be automatically moved and held in predetermined positions.



4. In a musical instrument, a tracker-board, a pair of music-rolls, a driving shaft for each music-roll, a friction clutch member upon each of said shafts, a driving gear operatively mounted upon each of said shafts and each provided with a friction clutch member and releasing spring intermediate the gear and shaft, pneumatics for clutching either of said gears to their respective shafts and a driving shaft and gear connections common to both of said gears.

5. In a musical instrument, a tracker-board, a pair of music-rolls and a perforated music-sheet capable of operatively controlling a tracker-board in either direction of movement across said tracker-board, driving gears appurtenant to each of said music-rolls, clutching and releasing devices appurtenant to each driving gear and its respective roll, pneumatics controlling said clutching devices, a valve controlling said pneumatics and pneumatic means including tracker-ducts and perforations in the note-sheet for automatically controlling said valve.

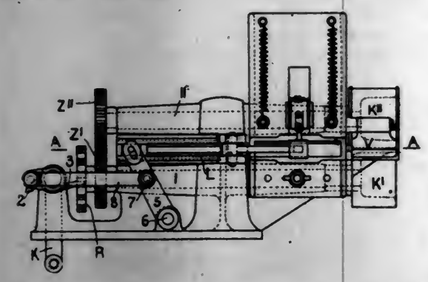
[Claims 6 to 8 not printed in the Gazette.]

1,211,800. LOADING-MACHINE FOR CARTRIDGE-BELTS. PETRUS WESTER, Berlin, Germany. Filed Apr. 30, 1914. Serial No. 835,411. (Cl. 89—1.)

1. In a machine for loading cartridge belts, means for opening the pocket to be filled, comprising means for moving the belt forward, means for holding fast the rear end of the forwardly-moved belt, and means for imparting a return movement to the forward end of said belt.

2. In a machine for loading cartridge belts, means for opening the pocket to be filled comprising a pair of transporting wheels, two shafts carrying said wheels, a gear-wheel mounted on one of said shafts, and two cams operating said gear-wheel for the purpose specified.

3. In a machine for loading cartridge belts, means for opening the pocket to be filled, comprising means for moving the belt forward, means for holding fast the rear end of the forwardly-moved belt, means for imparting a return movement to the forward end of said belt, a cartridge magazine, and means for feeding the cartridge from said magazine into said pocket, substantially as hereinbefore described.

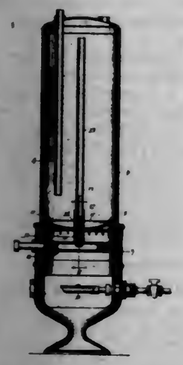


4. In a machine for loading cartridge belts, means for opening the pocket to be filled comprising a pair of transporting wheels, two shafts carrying said wheels, a gear-wheel mounted on one of said shafts, and two cams operating said gear-wheel, a cartridge magazine, a plunger for feeding the cartridge from said magazine into said pocket, means for feeding forward said plunger and means for withdrawing said plunger into its initial position, as set forth.

5. In a machine for loading cartridge belts, means for opening the pocket to be filled comprising a pair of transporting wheels, two shafts carrying said wheels, a gear-wheel mounted on one of said shafts, and two cams operating said gear-wheel, a cartridge magazine, a plunger for feeding the cartridge from said magazine into said pocket, a driving shaft, a crank situated thereon, a rocking lever operating said plunger and a connecting rod between said crank and said rocking lever, for the purpose specified.

[Claims 6 to 11 not printed in the Gazette.]

1,211,801. HOT-WATER HEATER. DAVID WHITEFORD, Chicago, Ill. Filed June 28, 1912. Serial No. 706,343. (Cl. 122—18.)



1. A hot water heater comprising in combination a water tank, supply pipes for discharging cold and hot water therein respectively near the bottom and top thereof, an undivided water heating bowl, a coupling for connecting said bowl and tank provided with a cold water passage projecting into the heating bowl, a hot water passage external of said cold water passage connected to the discharge pipe, and with a transverse passage therethrough connecting with the cold water passage in a plane above the bottom of the tank.

2. A hot water heater comprising in combination a water tank, supply pipes for discharging cold and hot water therein, respectively near the bottom and top thereof, an undivided water heating bowl, a coupling, adapted to suspend the heater from the tank, provided with a cold water passage closed across its upper end, and projecting into the body of the water in the heating bowl, a hot water passage externally of said cold water passage and connected to the hot water discharge pipe, and with a transverse passage therethrough connecting with the cold water passage below the top end thereof, and in a plane above the bottom of the tank.

3. The combination with a water containing tank provided with cold and hot water supply pipes discharging respectively toward the bottom and top thereof, a heater for the contents of said tank, a coupling adapted to suspend the heating bowl from the tank provided with a hot water passage connected to the hot water supply pipe and a cold water passage projecting through the hot water passage and having an axis in common with the hot water passage and the axis of the hot water supply pipe, whereby the descending cold water is conductively exposed to the heat of the hot water passing therethrough.

1,211,802. SYSTEM OF ELECTRICAL DISTRIBUTION. JOSEPH LESTER WOODBRIDGE, Philadelphia, Pa. Filed Nov. 26, 1913. Serial No. 803,125. (Cl. 171—313.)

1. In combination a motor and a dynamo mechanically connected, a storage battery electrically connected to the dynamo, a field coil for the motor connected in series with the motor armature and also connected between the dynamo and the battery, said coil adapted to increase the motor field excitation upon increase of current input to the motor and also upon increase of current output from the dynamo.

2. A comparatively high voltage motor and a comparatively low voltage dynamo mechanically connected, a storage battery electrically connected to the dynamo, a field coil for the motor connected in series with the motor armature and also connected between the dynamo and the battery, said coil adapted to increase the motor field excitation upon increase of current input to the motor and also upon increase of current output from the dynamo.

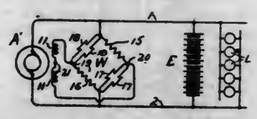
3. In combination a variable voltage source of electrical energy, a constant voltage work circuit, a storage battery connected to the work circuit, a dynamo connected to the work circuit, a motor for driving the dynamo connected to the source and a field coil for the motor connected between the dynamo and the work circuit in the direction to strengthen the motor field excitation with increase in current from the generator to the battery.

4. In combination a variable source of electrical energy, a constant voltage work circuit, a storage battery connected to the work circuit, a dynamo connected to the work circuit, a motor for driving the dynamo connected to the source, a field coil for the motor connected between the dynamo and the work circuit and a device adapted to transmit a substantially constant current connected in parallel with the field coil.

5. In combination a variable voltage source of electrical-energy, a constant voltage work circuit, a storage battery connected to the work circuit, a dynamo connected to the work circuit, a motor for driving the dynamo connected to the source, a field coil for the motor connected between the dynamo and the work circuit and a resistance of high temperature coefficient in parallel with the field coil.

[Claims 6 to 21 not printed in the Gazette.]

1,211,803. VOLTAGE REGULATION. JOSEPH LESTER WOODBRIDGE, Philadelphia, Pa. Filed Dec. 4, 1914. Serial No. 875,420. (Cl. 171—229.)



1. In combination a dynamo whose voltage is to be maintained at a desired value, a control circuit connected across the dynamo terminals including two resistors in series whereof the first has a negative temperature coefficient of sufficient magnitude to produce a drooping voltage characteristic with increments of current within certain limiting current values, and whereof the second has a rising voltage characteristic and is adapted at the desired dynamo voltage to permit a flow of current through the control circuit within the range of said limiting current values, means for establishing a junction point intermediate in potential between the dynamo terminals, and a circuit containing a coil for controlling the dynamo field excitation connected between the last named junction point and the junction between the two resistors, said coil circuit having a resistance suitable at the desired dynamo voltage and with any potential within certain limits at the junction between said resistors, to permit a flow of current between said two junction points substantially equal to the difference between the current values necessary in the two resistors to maintain said potential at their junction.

2. In combination, a dynamo whose voltage is to be maintained at a desired value, a Wheatstone bridge connected at two opposite junction points across the dynamo terminals, said bridge having in each of two opposite branches two resistors in parallel, each having a negative temperature coefficient of sufficient magnitude to produce a drooping voltage characteristic with increments of current within certain limiting current values, and said bridge having in each of the other two opposite branches a resistor having a rising voltage characteristic and adapted at the desired dynamo voltage to permit a flow of current within the range of said limiting current values, and a circuit containing a coil for controlling the dynamo field excitation connected across the other two opposite junction points of the bridge, said coil circuit being of a resistance suitable at the desired dynamo voltage and with any equal and opposite potential differences within certain limits between each of the last named junction points and the mid-potential between the dynamo terminals to permit a flow of current between said junction points substantially equal to the difference between the current values necessary in the two resistors on either side of either of said junction points to maintain said potential at their junction.

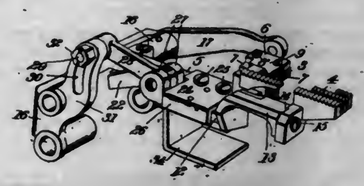
3. In combination, a work circuit whose voltage is to be maintained at a desired value, a dynamo connected to said work circuit, a control circuit connected across the work circuit including two resistors in series whereof the first has a negative temperature co-efficient of sufficient magnitude to produce a drooping voltage characteristic with increments of current within certain limiting current values and whereof the second has a rising voltage characteristic and is adapted at the desired voltage on the work circuit to permit a flow of current through the control circuit within the range of said limiting current values, means for establishing a junction point intermediate in potential between the conductors of the work circuit and a circuit containing a coil for controlling the dynamo field excitation connected between the last named junction point and the junction between the two resistors, said coil circuit having a resistance suitable at the desired work circuit voltage and with any potential within certain limits at the junction between said resistors to permit a flow of current between said two junction points substantially equal to the difference between the current values necessary in the two resistors to maintain said potential at their junction.

4. In combination a work circuit whose voltage is to be maintained at a desired value, a dynamo connected to said work circuit, a Wheatstone bridge connected at two opposite junction points across the work circuit, said bridge having in each of two opposite branches a resistor having a negative temperature co-efficient of sufficient magnitude to produce a drooping voltage characteristic with increments of current within certain limiting current values, and said bridge having in each of the other two opposite branches a resistor having a rising voltage characteristic and adapted at the desired voltage on the work circuit to permit a flow of current within the range of said limiting current values, and a circuit containing a coil for controlling the dynamo field excitation, connected across the other two opposite junction points of the bridge, said coil circuit having a resistance suitable, at the desired voltage on the work circuit and with any equal and opposite potential differences within certain limits between the last named junction points and the midpotential of the work circuit to permit a flow of current between said junction points substantially equal to the difference between the current values necessary in the two resistors on either side of either of said junction points to maintain said potential at their junction.

5. In a constant voltage system the combination of a circuit whose voltage is to be controlled, a dynamo connected to said circuit and adapted to control its voltage, resistors in series relation across said circuit and of which one has a drooping voltage characteristic and the other has a rising voltage characteristic and is adapted to cooperate with the first mentioned resistor over its range of drooping characteristic, means for establishing a junction point of intermediate potential with respect to the circuit, and a field regulaing coil for the dynamo connected to the junction and to a point intermediate of said resistors, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,211,804. FEEDING MECHANISM FOR SEWING-MACHINES. RUSSEL G. WOODWARD, Waukegan, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed June 17, 1910. Serial No. 567,518. (Cl. 112—8.)



1. In a sewing machine, a feeding mechanism including in combination a main feed bar, a main feed dog carried thereby, a rocking frame fulcrumed on the bed of the machine, means for pivotally connecting said main feed bar to said rocking frame at a point above said fulcrum, a second feed bar, a feed dog carried thereby and located in advance of said first named feed dog, means for raising and lowering said feed bars in unison, and means for moving said second feed bar back and forth, including a link pivotally connected at one end to the rear end of said second named feed bar, and at its other end to a stud, said stud being adjustably secured in a substantially vertical slot formed in an upwardly projecting arm carried by said feed rocker.

2. A feeding mechanism for sewing machines including in combination, a main feed bar, a feed dog carried thereby, an auxiliary feed bar, a feed dog carried thereby, a laterally projecting hardened plate carried by the under face of one of said feed bars on which the other feed bar is adapted to rest and slide, means for holding said sliding feed bar on said plate, means for moving said feed bars back and forth and for moving one feed bar relative to another, and means engaging said hardened plate for moving said feed bars up and down in unison.

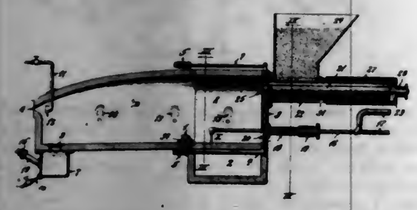
3. A feeding mechanism including in combination, a main feed bar, a feed dog carried thereby, an auxiliary feed bar, a feed dog carried thereby and located in advance of the main feed dog, a laterally projecting hardened plate carried by the under face of one of said feed bars on which the other feed bar rests and slides, a second projecting plate carried by one of said feed bars and extending over the other feed bar for holding it in engagement with said first named projecting plate, one of said plates having a projecting lip for forming an inclosed bearing in which the sliding feed bar moves, means for moving said feed bars back and forth, giving one feed bar a sliding movement relative to the other, and means engaging said hardened projecting plate for moving said feed bars up and down in unison.

4. A feeding mechanism for sewing machines including in combination a main feed bar, a feed dog carried thereby, an auxiliary feed bar, a feed dog carried thereby, a laterally projecting plate secured to one feed bar on which the other feed bar is adapted to rest and slide, means for holding said last named feed bar in sliding engagement with said plate, one of said feed bars having a rearwardly projecting arm carrying a lug extending underneath the other feed bar and slidingly engaging the same for preventing the feed bars from tilting longitudinally relative to each other, means for moving said feed bars back and forth and for sliding one feed bar relative to the other, and means for raising and lowering said feed bars in unison.

5. A feeding mechanism for sewing machines, including in combination a feed rocker, means for oscillating said feed rocker, a main feed bar pivoted to said feed rocker, a laterally projecting plate carried by said main feed bar, an auxiliary feed bar resting and sliding on said projecting plate, a second plate for holding said auxiliary feed bar on said plate, a link pivoted at one end to the rear end of said auxiliary feed bar and adjustably connected at its other end to said feed rocker, means for raising and lowering said feed bars in unison, a main feed dog carried by said main feed bar and an auxiliary feed dog carried by said auxiliary feed bar and located in advance of said main feed dog.

[Claims 6 to 9 not printed in the Gazette.]

1,211,805. PROCESS OF AND APPARATUS FOR SMELTING ORES. GEORGE W. WRIGHT, Deming, N. Mex. Filed July 25, 1916. Serial No. 111,146. (Cl. 75—153.)



1. A smelting apparatus comprising a retort, an agitator arranged in said retort, said agitator being provided with an operating device which extends through a wall of the retort, and means for closing said retort to exclude air from the interior thereof, said means including a universal bearing in which said operating device is slidably mounted.

2. A smelting apparatus comprising a retort, an agitator arranged in said retort, said agitator being provided with an operating device which extends through a wall of the retort, and means for closing said retort to exclude air from the interior thereof, said means including a flexible tube surrounding a portion of said operating device and a stuffing box at the free outer end of said flexible tube.

3. A smelting apparatus comprising a retort, means for closing said retort to exclude air from the interior thereof, said retort having an inlet, a feeder provided with a closure for said inlet, and a housing closely fitted to said feeder, said feeder being movable into the closed retort and said closure being movable with the feeder.

4. A smelting apparatus comprising a retort, means for closing said retort to exclude air from the interior thereof, said retort having an inlet, a feeder provided with means for closing said inlet, a housing to which said feeder is closely fitted, and a receptacle having a discharge opening through which material may be discharged to said feeder, said feeder being movable through said inlet to feed the material into the closed retort.

5. A smelting apparatus comprising a retort, means for closing said retort to exclude air from the interior thereof, said retort having an inlet and a feeder housing forming a continuation of said inlet, a feeder provided with means for closing said inlet, said housing having an inlet for the admission of material to said feeder, the latter having a pocket open at the top to receive said material and said feeder being adapted to reciprocate in said housing so as to carry the material into the closed retort and also adapted to turn in the housing to discharge the material in the retort.

[Claims 6 to 12 not printed in the Gazette.]

1,211,806. CUSHIONED HEEL-PAD FOR BOOTS AND SHOES. JOHN ANDREW ADAMS, Toronto, Ontario, Canada, assignor to Edward Andrew Adams, Montreal, Canada. Filed Aug. 7, 1916. Serial No. 113,648. (Cl. 36—37.)



1. A heel pad comprising a series of tubular chambers arranged parallel one with the other and having the ends thereof suitably sealed and having perforations in the upper peripheral portions thereof adapted to be located beneath the instep of the wearer.

2. A heel pad comprising a series of tubular chambers arranged parallel one with the other and having the ends thereof suitably sealed and having perforations in the upper peripheral portions thereof adapted to be located beneath the instep of the wearer, and suitable means for binding the parallel tubes together to form the pad.

3. A heel pad comprising a series of tubular chambers arranged parallel one with the other and having the lower peripheral portions of the inner ends thereof tapered off from a point intermediately of their length and having the ends thereof suitably sealed and having perforations in the upper peripheral portions thereof adapted to be located beneath the instep of the wearer.

4. A heel pad comprising a series of parallel tubular chambers having sealed ends and having a perforation in the upper wall of each chamber, and a superimposed asbestos sheet having correspondingly formed perforations, and a suitable cover extending around the same and connecting the parts together.

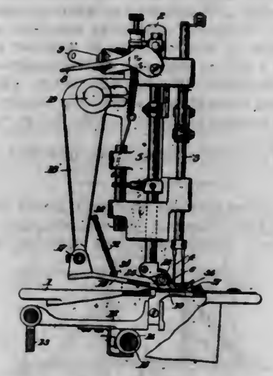
1,211,807. COMBINED HOOD AND SCARF. HARRY AIDENLAND, Toledo, Ohio. Filed June 8, 1916. Serial No. 102,407. (Cl. 2—118.)

A combined hood and scarf formed of a blank of fabric having two equal side edges and a W shaped top edge, adapted to form a hood portion, and two equal elongated extensions from the body of the hood portion opposite the inner angles of the top edge and having equal outer edges incurved from and extending the side edges of the hood portion and two equal inner edges oppositely outcurved from a line bisecting the middle outer angle of the top edge at a distance less than the lengths of the side edges



of the hood portion, the hood adapted to be formed by folding the blank on said bisecting line and stitching together the coinciding side and top edges of the hood portion, said hood having foldable pointed surplus portions at the closed end of the hood and scarf extensions from its lower and open end.

1,211,808. FEEDING MECHANISM FOR SEWING-MACHINES. EDWARD T. ALLAN, Cincinnati, Ohio, assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 15, 1911. Serial No. 665,928. (Cl. 112—8.)



1. The combination of a work support, a presser foot, and a feeding mechanism including a feed dog located above said work support, means for reciprocating the feed dog back and forth, and coöperating means carried by the presser foot and feed dog for increasing the gripping pressure of the feed dog on the material during its backward reciprocation.

2. The combination of a work support, a presser foot, and a feeding mechanism including a feed dog located above said work support, means for reciprocating said feed dog back and forth, a spring for normally lifting the feed dog from the material, said presser foot having means to limit the upward movement of the feed dog, and means carried by the feed dog and coöperating with said limiting means for increasing the grip of the feed dog on the material during its backward stroke.

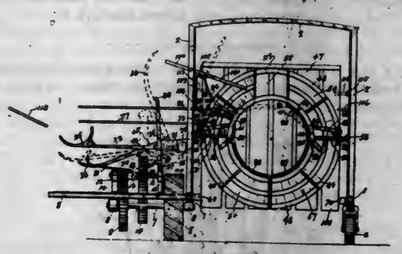
3. A feeding mechanism including in combination a work support, a feed dog located above said work support, means for reciprocating the feed dog back and forth, and means operated by the reciprocation of the feed dog for moving the same into gripping contact with the material, said last named means including a cam-projection, a roller engaging the cam projection, and means for adjusting the roller to vary the gripping contact of the feed dog.

4. A sewing machine including in combination, a work support, a feed dog located above said work support, means for reciprocating the feed dog, a roller engaging the upper face of the feed dog, and an adjustable eccentric stud for supporting said roller.

5. The combination of a presser foot, a work support and a feeding mechanism, including an upper feed dog having a cam projection with means for reciprocating said upper feed dog and a roller carried by the presser foot and adapted to engage said cam projection for forcing the feed dog into gripping contact with the material during the reciprocation of the upper feed dog.

[Claims 6 to 9 not printed in the Gazette.]

1,211,809. SHOCKING-MACHINE. GODFREY ERNEST ALLEN and JOHN HENRY WULFF, Swalwell, Alberta, Canada. Filed Jan. 17, 1916. Serial No. 72,612. (Cl. 56—121.)



1. In a shocking machine, the combination with the frame and deck of a binder, of a sheaf receiving shock forming open ended basket pivotally mounted and connected to the binder, releasable means for holding the basket in a normally horizontal position against gravity tending to up-end the same, an inclined table located above the basket normally inoperative sheaf elevating means adapted to elevate the sheaves from the binder deck onto the table, doors forming the bottom of the basket, means for compressing the sheaves within the basket members against which the sheaves are compressed, comprising a pair of curved arms disposed within the basket supported clear of the inner sides of said doors and movable therewith, and means for automatically opening the doors as the basket is up-ended.

2. In a shocking machine, the combination with the frame, deck and traction wheel of the binder, of a sheaf receiving basket, a main support for the basket connected to the binder frame, a vertically movable member carrying a cross head, interengaged means for imparting vertical movement to such member operated from the traction wheel, sheaf engaging arms pivotally mounted at one end and resting upon the cross head, and means operated by the weight of a sheaf for carrying the means for imparting vertical movement to the interengaged position.

3. In a shocking machine, the combination with the frame, deck and traction wheel of a binder, of a sheaf receiving basket, a main support for the basket connected to the binder, sheaf elevating arms pivotally mounted at one end, members depressed by the weight of the sheaf received from the binder deck, a gear driven from the traction wheel, an idler gear, a clutch interposed between the idler gear and driven gear and operated by the depression of the aforesaid depressible members, means for locking the depressible members in the depressed position, and means for releasing such locking means operated by the sheaf elevator arms reaching their upward position.

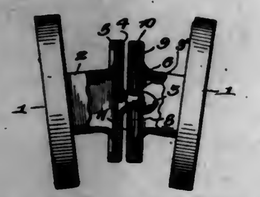
4. In a shocking machine, the combination with the frame, deck and traction wheel of a binder, of a sheaf receiving basket, a main support for the basket connected to the binder, sheaf elevating arms pivotally mounted at one end, members depressed by the weight of the sheaf received from the binder deck, a gear driven from the traction wheel, an idler gear, a clutch interposed between the

idler gear and driven gear and operated by the depression of the aforesaid depressible members, a swing hook, a projection carried by the depressible member with which the hook engages, and means operated by the sheaf elevator arms for raising the hook out of engagement when the elevator arms approach the extreme upward position.

5. In a shocking machine, the combination with the frame, deck and traction wheel of a binder, of a sheaf receiving basket, a main support for the basket connected to the binder, sheaf elevating arms pivotally mounted at one end, members depressed by the weight of the sheaf received from the binder deck, a gear driven from the traction wheel, an idler gear, a clutch interposed between the idler gear and driven gear and operated by the depression of the aforesaid depressible members, a swing hook, a projection carried by the depressible member with which the hook engages, a swinging frame through which the elevator arms extend and carrying a projection designed to raise the latch when the elevator arms engage the top of the frame, and counterweight means for carrying the depressible members back to their normal position.

[Claims 6 to 20 not printed in the Gazette.]

1,211,810. SNAP-FASTENING. EDWARD L. ANDERSON, Attleboro, Mass. Filed Apr. 25, 1916. Serial No. 93,378. (Cl. 24—102.)



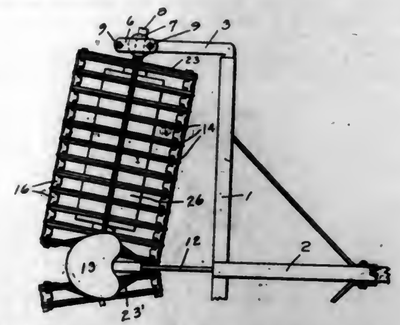
1. In a snap fastening, a male member having a head and a female member having a base disk formed with a head-receiving opening, said base disk being formed with a struck-out rib disposed approximately central between its periphery and said opening, and a locking disk secured at its periphery adjacent the periphery of the base disk and having a series of spring fingers to engage the head, said rib engaging the fingers at points approximately central of the length of the fingers and holding same entirely out of contact with the base disk, and approximately parallel to the base disk whereby upon outward movement of the head the fingers will be moved thereby through the space between the fingers and the base disk before engaging the latter.

2. In a snap fastening, a male member having a head and a female member having a base disk formed with a head-receiving opening, said base disk being provided with a narrow inwardly extending rib located approximately central between its periphery and said opening, and a locking disk secured at its periphery adjacent the periphery of the base disk and having a series of spring fingers to engage the head, said rib engaging the fingers at points approximately central of the length of the fingers and holding same entirely out of contact with the base whereby upon outward movement of the head the fingers will be moved thereby through the space between the fingers and the base disk before engaging the latter.

1,211,811. ROLLER. JAMES G. BAILEY, Delavan, Ill. Filed Apr. 11, 1914. Serial No. 831,153. (Cl. 55—48.)

1. In a device of the character described, a roller composed of rings spaced apart to provide an open formation, said rings being substantially square in cross-section, and disposed so that one angle forms a ground engaging edge.

2. In a device of the character described, a roller composed of rings spaced apart to provide an open formation, said rings being substantially square in cross-section, and disposed so that one angle forms a ground engaging edge, spacing and holding members interposed between said rings, and securing means connected to said spacing and holding members.



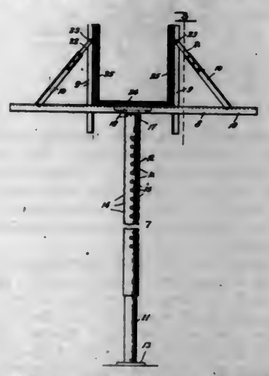
3. In a device of the character described, a roller composed of rings spaced apart to provide an open formation, said rings being substantially square in cross-section, and disposed so that one angle forms a ground engaging edge, spacing and holding members interposed between said rings, having sockets in which said rings are fitted and securing means connecting said spacing and holding members.

4. In a device of the character described, a roller composed of rings spaced apart to provide an open formation, said rings being substantially square in cross-section, and disposed so that one angle forms a ground engaging edge, spacing and holding members interposed between said spaced rings and having V shaped grooves or notches receiving the side edges of said rings, and securing means passing through said spacing and holding members.

5. A roller including supporting members, a plurality of rings square in cross-section and disposed so that one angle forms a ground engaging edge, spacing and holding members interposed between said rings, and securing means passing through said supporting members and said spacing and holding members to hold the parts in assembled relation.

[Claims 6 to 8 not printed in the Gazette.]

1,211,812. APPARATUS FOR BUILDING CONCRETE STRUCTURES. LEW A. BARNES, Chicago, Ill. Filed Feb. 1, 1916. Serial No. 75,529. (Cl. 25—131.5.)



1. In apparatus of the character set forth, the combination of a plate containing openings in its upper surface, uprights adapted to be inserted into said openings, and braces for said uprights having flanges and adapted to enter others of said openings and bear at said flanges against said plate.

2. In apparatus of the character set forth, the combination of a plate containing openings of angular shape in its upper surface, uprights adapted to enter said openings, and braces for said uprights having flanges and adapted to enter others of said openings and bear at said flanges against said plate.

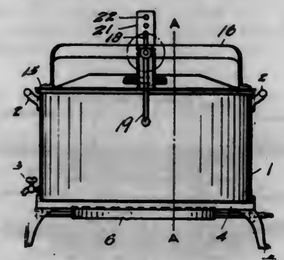
3. In apparatus of the character set forth, the combination of a plate containing openings of angular shape in its upper surface, uprights of angle-shape in cross-section adapted to enter said openings, and braces for said uprights having flanges and adapted to enter others of said openings and bear at said flanges against said plate.

4. In apparatus of the character set forth, the combination of a plate containing openings of angular shape in its upper surface, portions of said openings extending lengthwise of said plate and other portions crosswise thereof, the cross-wise disposed portions of said openings at one end of the plate being disposed at one end of each of the lengthwise-extending portions of said openings, and the cross-wise disposed portions of said openings at the other end of said plate being disposed at the opposite end of the lengthwise-extending portions of said openings, uprights extending into certain of said openings at opposite ends of said plate, and braces for said uprights having flanges and extending into others of said openings in said plate and bearing at said flanges against said plate.

5. In apparatus of the character set forth, the combination of a plate containing openings of angular shape in its upper surface, portions of said openings extending lengthwise of said plate and other portions crosswise thereof, the cross-wise disposed portions of said openings at one end of the plate being disposed at one end of each of the lengthwise-extending portions of said openings, and the cross-wise disposed portions of said openings at the other end of said plate being disposed at the opposite end of the lengthwise-extending portions of said openings, uprights having flanges extending into certain of said openings at opposite ends of said plate, and braces for said uprights having flanges and extending into others of said openings in said plate and bearing at said flanges against said plate.

[Claims 6 to 8 not printed in the Gazette.]

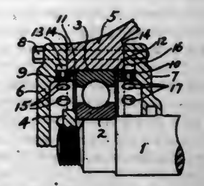
1,211,813. COMBINED WASHER AND BOILER. LEWIS B. BEAN, Columbus, Ohio. Filed May 5, 1916. Serial No. 95,681. (Cl. 68—19.)



The combination of an outer receptacle and an inner removable recepacle, there being a space between the receptacles forming a water jacket, said inner receptacle having a perforated bottom projecting beyond its walls, perforations in its walls above the median line, and perforations in its bottom within the receptacle to provide circulation of water through the inner receptacle and the water jacket, a flange on the top edge of the inner receptacle covering the water jacket and a frame supported on the flange, a crank shaft journaled in the frame, and a perforated dasher having a stem supported on the shaft.

1,211,814. HOUSING FOR BALL OR ROLLER BEARINGS. FRANK G. BEETEM, Philadelphia, Pa. Filed Dec. 21, 1914. Serial No. 878,344. (Cl. 64—36.)

1. In a device of the class described, the combination of a journal box, and an end closure abutting upon the box, thereby forming a joint, and having an annular shoulder forming with said parts a lubricant receiving channel in communication with the joint, and having ports in said shoulder communicating with said channel and with the interior of the box.



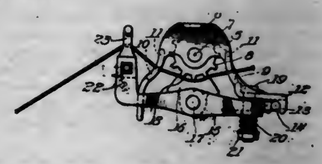
2. In a device of the class described, the combination of a journal box, a bearing ring therein, an end closure abutting upon the box, thereby forming a joint, an annular shoulder in respect to which the ring is afforded end play, and which forms with the box and closure a lubricant receiving channel in communication with said joint and ports in said shoulder communicating with said channel and with the interior of the box.

3. In a device of the class described, the combination of a journal box, a bearing ring therein, an end closure abutting upon the box, thereby forming a joint, an annular shoulder in respect to which the ring is afforded end play, a lubricant receiving channel between the joint and ring, and ports in said shoulder communicating with said channel and with the interior of the box, substantially as described.

4. In a device of the class described, the combination of a journal box, a bearing ring therein, and an end closure abutting upon the box, thereby forming a joint and in respect to which closure the ring is afforded end play, there being a lubricant receiving channel between the joint and the ring and ports communicating with said channel and with the interior of the box, substantially as described.

5. In a device of the class described, the combination of a journal box, a bearing ring therein, and a closure abutting upon the box, thereby forming a joint, and in respect to which closure the ring is afforded end play, there being a lubricant receiving channel communicating with the joint and with the end play space between the ring and the closure end ports communicating with the channel and the interior of the box, substantially as described.

1,211,815. TWINE-TENSION DEVICE FOR HARVESTERS, SHOCKERS, AND THE LIKE. BERT R. BENJAMIN, Oak Park, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed June 12, 1913. Serial No. 773,191. (Cl. 242—152.)



1. In a twine tension device, twine gripping means releasable upon tension being applied to the twine, and a cooperating normally operative slack absorbing member acting upon the twine drawn through said twine gripping means and movable with the movable element of said releasable means when the twine is put under tension.

2. In a twine tension device, a frame, a spring-held swinging twine guiding lever pivotally mounted thereon, coöperating twine gripping members carried on said frame and lever normally gripping the twine, and a swinging slack absorbing member carried on said lever and protrud-

ing longitudinally forward and downward with respect to said lever.

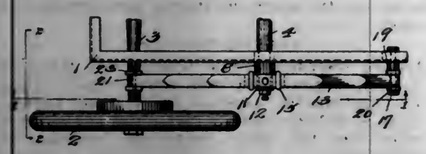
3. In a twine tensioning device for harvesters and the like, a frame, a rotary member journaled in said frame, a lever pivoted to said frame and disposed horizontally beneath said rotary member, resilient means normally holding said lever in elevated position, a member carried by said lever normally coöperating with said rotary member to position and grip the twine, and a twine guide carried at one end of said lever extending into a plane a considerable distance above the lowest point on the periphery of said rotary member so as to deflect the twine positively to one side of a straight line so that when tension is applied to the twine tending to return it to a straight line the lever will be depressed to release the grip upon the twine.

4. In a twine tensioning device for harvesters and the like, a frame having twine openings in its opposite ends and depending portions disposed substantially at right angles to each other, one of said portions having spaced depending lugs thereon and the other having a slot therein, a substantially L-shaped rocking lever journaled between said lugs and having its horizontal portion movable in said slot, resilient means carried on said frame at one side of said lugs normally holding said lever in elevated position, coöperating twine gripping members carried on said frame and rocking lever, and a twine guide formed on the upright leg of said lever having a twine opening disposed above the pivot of said lever and in alinement with the openings in said frame.

5. In a twine tensioning device for harvesters and the like, a frame, a rotary member journaled in the side walls of said frame, a lever pivoted to said frame and disposed horizontally beneath said rotary member, resilient means normally holding said lever in elevated position, a member carried by said lever normally coöperating with said rotary member to position the twine, a twine guide carried at one end of said lever extending into a plane above the lowest point on the periphery of said rotary member, and a twine tensioning member pivoted to said lever and protruding at an angle therefrom.

[Claim 6 not printed in the Gazette.]

1,211,816. VEHICLE-SPRING. BRYCE E. BLACKLEY, Providence, R. I. Filed Oct. 14, 1915. Serial No. 55,898. (Cl. 267—27.)



1. The combination with a vehicle frame, axle casing and a supporting member in the frame, of a spring block carried by said member and longitudinally movable relatively to the frame, upper and lower springs attached to the block, a shackle pivotally connecting the forward ends of the springs and pivoted to the frame, and a shackle pivotally connecting the rear ends of the springs and carried on the rear axle casing.

2. The combination with a vehicle frame, axle casing, and supporting shaft, of a leaf spring supported on the shaft and movable longitudinally of the frame relatively to the shaft, and the ends of the spring pivoted respectively to the frame and axle casing, whereby a direct drive is secured throughout the full length of the spring.

3. The combination with a vehicle frame, axle casing and supporting shaft journaled in the frame, of a pair of spaced leaf springs, a slotted block, to which said springs are attached, movable on the shaft longitudinally of the frame, pivotal supports for the springs on the frame at one end, and a member on the axle casing to which the other ends of the springs are pivoted.

1,211,817. ARTIFICIAL TOOTH. DAVID WILLIAM BLUNDELL and JOHN HENRY MILLS, East Molesey, and ALFRED THOMAS MAGUIRE, London, England, assignors to British Diatoric Manufacturing Company Limited, East Molesey, England. Filed Jan. 4, 1912. Serial No. 669,430. (Cl. 32—9.)

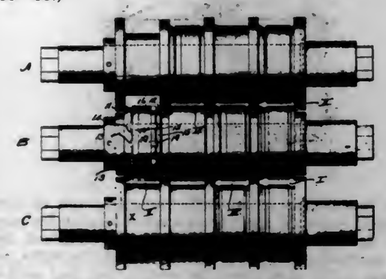


1. In an artificial denture, a backing, an artificial tooth having an opening formed on the back or lingual surface thereof which is closed by the backing when the tooth is secured thereto, an anchor adapted to be partially embedded in the backing and projecting into said opening when the tooth is in place on the backing, and a removable locking pin located in a second passage in the tooth and passing through the anchor.

2. In an artificial denture, a backing, an artificial tooth having an opening formed in the lingual surface thereof which is closed by the backing when the tooth is in place thereon, a bifurcated anchor having its bifurcated end embedded in the backing and adapted to project into the opening in the tooth, and a removable locking pin located in a second passage of the tooth and passing through the anchor, said anchor adapted to be locked to the tooth by the pin, prior to mounting the tooth on the backing.

3. In an artificial denture, an artificial tooth having an opening formed in the lingual face thereof and a passage extending at an angle thereto and intersecting said passage, an anchor projecting into the lingual opening, a pin located in said passage and engaging the anchor to lock it to said tooth, and a backing in which the projecting portion of the anchor is embedded during the operation of securing the tooth thereto, said backing being arranged to close the open end of said passages.

1,211,818. ROLL CONSTRUCTION FOR ROLLING-MILLS. WILLIAM J. BRADLEY, Troy, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Original application filed Mar. 20, 1915, Serial No. 15,790. Divided and this application filed July 10, 1915. Serial No. 39,158. (Cl. 80—58.)



1. An apparatus for rolling tie plates including a roll having a die provided with alternating recesses and projections, and a former carrying die units lying opposite said recesses.

2. An apparatus for rolling tie plates including a roll having an intermediate reducing collar, a marginal die ring having peripheral recesses, and a former clamped between said ring and die and carrying a series of projecting die units.

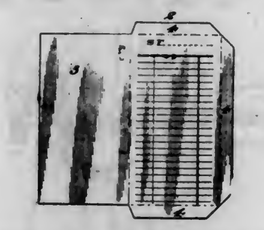
3. An apparatus for rolling tie plates including a roll having an intermediate reducing collar, a marginal die ring provided with a peripheral series of recesses, and a former clamped between the collar and the ring and having a plurality of die units lying respectively opposite said recesses.

4. An apparatus for rolling tie plates including a roll having an intermediate reducing collar, a marginal die ring having a plurality of recesses, and a forming ring clamped between the collar and the marginal ring and carrying a series of outwardly and laterally projecting die units.

5. An apparatus for rolling tie plates including a roll having an intermediate reducing collar, a marginal die ring provided with a series of die recesses, and a forming ring clamped between the collar and the marginal ring and carrying a series of outwardly and laterally projecting die units, each of said units lying opposite a recess of the marginal ring.

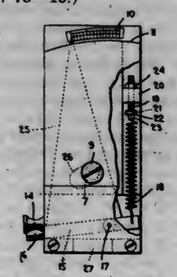
[Claims 6 to 9 not printed in the Gazette.]

1,211,819. MANIFOLDING ORDER-BLANK. HORACE P. BROWN, Oakland, Cal., assignor to Pacific Burt Co., Emeryville, Cal., a Corporation of Ontario, Canada. Filed Sept. 16, 1913. Serial No. 790,035. (Cl. 11—28.)



A multigraph order blank comprising a sealed envelop structure consisting of a single sheet of paper folded at one side of its central line to form an upper writing sheet and a lower triplicate sheet wherein the upper sheet extends beyond the edge of the lower sheet to form a flap, flaps on the opposite and one adjacent edge of said sheet, a carbon backing on the inner face of said upper sheet and on two of said flaps, a loose sheet inserted between said upper and lower sheets to receive an imprint from said upper sheet, a carbon backing on the loose sheet to produce a triplicate imprint on the inner face of said lower sheet, and means for securing said flaps to the lower sheet to seal the structure.

1,211,820. TENSION-MEASURING DEVICE. LOUIS S. BURBANK, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Feb. 23, 1916. Serial No. 79,867. (Cl. 73—15.)



1. A device for measuring the tension upon a strand of flexible material comprising a frame having a plurality of stationary strand engaging members, a spring actuated lever located intermediate of said stationary members and adapted to engage and bend said strand, and an index connected to said lever adapted to multiply the amount of deflection and by its extent of movement and amplitude of vibration to indicate the amount and character of the tension.

2. A device for measuring the tension upon a strand of flexible material comprising a frame having two relatively stationary members spaced apart and adapted to engage one side of the strand, a spring actuated strand engaging lever located midway between said members and adapted to engage the opposite side of the strand and bend the same, and indicating means operatively connected to said lever.

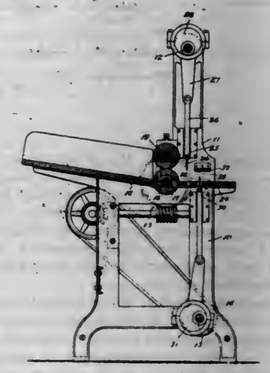
3. A device for measuring the tension upon a strand of flexible material comprising a frame having two relatively stationary members spaced apart and adapted to engage one side of said strand, a lever located midway between said stationary members and adapted to engage the opposite side of the strand, an adjustable spring for actuating said lever and an index operatively connected to said lever coöperating with a scale upon said frame.

4. A device for measuring the tension upon a strand comprising a frame having a relatively large base portion and upwardly disposed parallel extensions slightly spaced apart, one of said extensions bearing a scale and the other extension being cut away to expose said scale to view, two studs upon said base portion adapted to engage one side of a strand of flexible material, a lever pivotally mounted intermediate of said strands adapted to engage the opposite side of said strand and an index in the form of a triangular sheet of light material connected to said lever and located intermediate of said extensions, the apex of said sheet forming a finger adapted to coöperate with said scale.

5. A device for measuring the tension upon a strand of flexible material comprising a frame having two relatively stationary members spaced apart adapted to engage one side of said strand, a lever adapted at one end to engage the opposite side of said strand and having its opposite end connected to a helical spring, means adjustably securing said helical spring to said frame and an index connected to said lever located in operative relation to a scale carried by said frame.

[Claim 6 not printed in the Gazette.]

1,211,821. MACHINE FOR INTERLACING CURLED HAIR. CARL A. CARLSON and HERBERT E. HILL, Chicago, Ill., assignors to Morris & Company, Chicago, Ill., a Corporation of Maine. Filed Sept. 5, 1916. Serial No. 118,376. (Cl. 38—8.)



1. A curled-hair interlacing-machine comprising a mat-supporting table, means for feeding a mat across the table, and two sets of reciprocating needles adapted to act upon the opposite surfaces of the said mat, the two sets of needles being offset from one another in the direction of motion of the mat.

2. In a curled-hair interlacing-machine, a mat-supporting table, means for feeding a mat across the table, an upper needle-bar arranged transversely of the direction of

motion of the mat, a plurality of needles carried thereby, a lower needle-bar parallel with said upper bar and offset therefrom in the direction of motion of the mat, a plurality of needles carried by said lower bar, and means for reciprocating the two bars to cause the needles carried thereby to alternately enter and draw out of said mat.

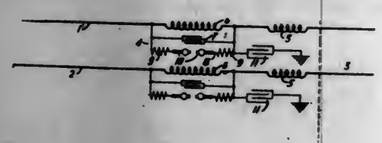
3. A curled-hair interlacing-machine comprising a mat supporting table, means for feeding a mat across the table, a set of needles arranged opposite one face of the said mat, and having notched points, means for driving said needles through the said mat, a throat-plate for receiving the projected ends of the said needles as they pass outward through the mat, the said throat-plate having a throat aperture therein extending in the direction of motion of the mat, a second set of needles arranged opposite said first set and longitudinally spaced therefrom in the direction of motion of the mat, and means for driving said second set of needles into the mat, said second set of needles likewise having notched points.

4. A curled-hair interlacing-machine comprising a mat-supporting table, means for feeding a mat across the said table, a needle-bar arranged above the surface of said table for movement toward and away from the mat carried thereby, a set of needles carried by said needle-bar and in a line transverse to the direction of motion of the mat, each of said needles having a notched point, a throat aperture in said table for receiving the projected ends of the needles as they pass outwardly through the mat, said throat aperture being extended in the direction of motion of the mat, and the needles being of such length as to permit the needle-bar to compress the mat between its surface and the said throat on the inward stroke of the needles.

5. In a curled-hair interlacing-machine, means for forming and feeding a mat, a pair of needle-bars arranged transversely to the direction of motion of the mat and on opposite faces thereof, said needle-bars being offset in the direction of motion of the mat, needles carried by said bars and having notched points, and throat members arranged opposite each set of needles.

[Claims 6 to 8 not printed in the Gazette.]

1,211,822. LIGHTNING-ARRESTER. ALEXANDER CHERNYSHOFF, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 1, 1915. Serial No. 18,512. (Cl. 175—30.)



1. In a protective device, the combination with a line conductor, an inductive device inserted therein, a condenser connected in shunt to said inductive device, and a subsidiary circuit comprising a resistance element, and spaced spark gap members connected in shunt to said condenser, of a second condenser connected between the ground and said conductive device, said first condenser and said subsidiary circuit.

2. In a protective device, the combination with a line conductor, an inductive device inserted therein, a condenser connected in shunt to said inductive device, and a subsidiary circuit comprising spaced spark-gap members connected in shunt to said condenser, of a second condenser connected between ground and said inductive device, said first condenser and said subsidiary circuit.

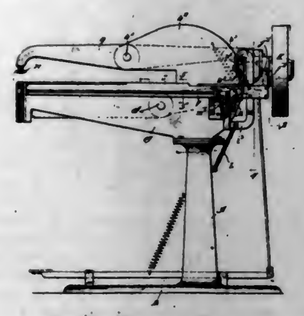
3. In a protective device, the combination with a line conductor and an inductive device, a condenser and a subsidiary circuit all connected in parallel relationship and inserted in series in said line conductor, said subsidiary circuit comprising an energy-consuming device, of a second condenser connected between ground and said first condenser.

4. In a protective device, the combination with a line conductor, an inductive device inserted therein, a condenser connected in shunt to said inductive device, and a subsidiary circuit comprising spaced spark-gap members connected in shunt to said condenser, of a second condenser connected between ground and said inductive device, said first condenser and said subsidiary circuit, said secondary condenser being connected to the line conductor on the power-house side of said inductive device.

5. In a protective device, the combination with a line conductor and an inductive device, a condenser and a subsidiary circuit all connected in parallel relationship and inserted in series in said line conductor, said subsidiary circuit comprising elements having electrical constants which impart to the subsidiary circuit natural periods of vibration of extremely high frequencies, of a second condenser connected between ground and said first condenser.

[Claims 6 to 14 not printed in the Gazette.]

1,211,823. STAPLING-MACHINE. EDWARD CRAIG, St. Joseph, Mich., assignor, by mesne assignments, to Wirebounds Patents Company, Chicago, Ill., a Corporation of Maine. Filed Sept. 20, 1909. Serial No. 518,582. (Cl. 1—11.)



1. In a box stapling machine, mechanism for making the staples with their points up, mechanism for feeding a row or series of the staples horizontally in the same position, mechanism for driving the staples upward, disposed a distance from the staple making mechanism, said row of staples with their points upward extending from the point where they are made to the point where they are driven upward, and means serving as a gage by which the sides of the box may be successively engaged on the inner surface thereof to properly position the same relatively to the staple driving mechanism.

2. In a box stapling machine, a driving mechanism, a guide for directing a row or series of staples to said mechanism, a forming device arranged for making the staples at the distant end of said row, means adapted to project inside of the box to gage the position thereof, and means adjacent said device for exerting pressure only on the end of said row, to feed all of the staples forward on the guide, keeping said staples pointing in the same direction from the time they are made until they are driven.

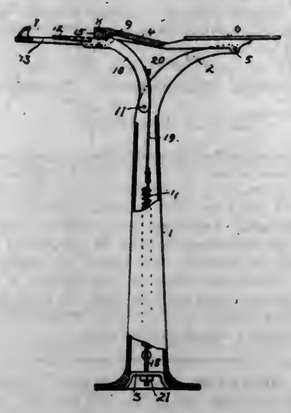
3. In a box stapling machine, staple-driving mechanism, staple-guiding means leading thereto, staple-feeding mechanism for moving the staples on the guiding means, a staple-forming mechanism arranged permanently a distance from the driving mechanism and between the guiding means and feeding mechanism, and means serving as a gage by which the sides of the box may be successively engaged on the inner surface thereof to properly position the same relatively to the staple driving mechanism.

4. In a box stapling machine, a stationary guide bar, means for forming staples on the under side of said bar, means for feeding the staples along the lower edge of said bar, means below the bar for supporting and holding the staples thereon, means for driving the staples, disposed a distance from the staple forming means, and means serving as a gage by which the sides of the box may be successively engaged on the inner surface thereof to properly position the same relatively to the staple driving mechanism.

5. In a box stapling machine, a guide for a row or series of inverted staples, mechanism for making the staples with their points up, mechanism for feeding the last or freshly made inverted staple onto the guide, to thereby feed all of the previously made staples forward, keeping them crowded tightly together, and means for driving the staples, the staple making mechanism and the staple driving means being disposed a distance apart.

[Claims 6 to 14 not printed in the Gazette.]

1,211,824. FOOT-REST. GEORGE A. CRAMER, Garrett, Ind. Filed June 2, 1916. Serial No. 101,318. (Cl. 15—58.)



1. A tubular standard having forwardly extending arms at its upper end; a pedal pivoted between said arms near its forward end and having upwardly projecting jaws at its rear end, and also a pendant lug at the forward part of its heel portion; a trigger pivoted in the standard and having a notch made therein adapted for engagement with the lug; and a jaw-bar in pivoted connection with the trigger adapted to engage and press the heel of a shoe against the projecting jaws when the trigger and pedal are depressed by the heel.

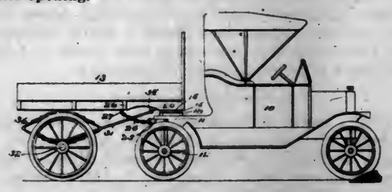
2. In a device of the class described, a standard; a pedal pivoted in the standard; a trigger also pivoted in the standard and adapted to engage the pedal and detain the same in normal position; tension means for holding the trigger in engaging position; and means in connection with the trigger and pedal for clamping the heel of a shoe when the trigger and pedal are depressed by the heel.

3. In a device of the class described, a standard; a pedal pivotedly mounted thereupon; a trigger pivoted in the standard and so formed as to engage and detain the pedal in normal position, a portion of the trigger projecting loosely through the heel portion of the pedal; a jaw-bar having pivotal connection with the trigger and extending laterally in relation with the pedal; and tension means contained within the standard and having connection with the trigger for holding the same in engaged relation with the pedal.

4. In a device of the class described, a standard; a pedal pivoted thereupon; a trigger pivoted in the standard and adapted to engage and hold the pedal in normal position; and a spring mechanism tending to hold the trigger in engaged position.

1,211,825. COMBINED TRACTOR AND TRAILER. WILLIAM BARNEY CURL, Louisville, Ky., assignor of one-half to Arthur T. Shrader, New Albany, Ind. Filed Mar. 28, 1916. Serial No. 87,203. (Cl. 21—90.)

1. In combination, an upper supported device, a lower supporting device, and a universal connection between the same, said universal connection comprising an upwardly open substantially semi-spherical upper member rigidly secured to the upper supported device and having an opening at its axis, an upwardly open substantially semi-spherical lower member rigidly secured to the lower supporting device and having an opening at its axis of a greater diameter than the opening at the axis of the upper member, a clamping member receiving the lower member and having an axial opening of less diameter than the opening in the lower member, and a pivot, snugly fitting in the axial openings of the upper member and the clamping member and passing through the opening in the lower member, the last named opening forming an oil reservoir between the lower wall of the upper member, the upper wall of the clamping member and the surrounding wall of the opening.



2. A fifth wheel comprising two cup-shaped bearing members, one supporting the other and provided with an enlarged central opening, a clamping member, a pivotal attachment extending from the clamping member through the cup shaped members, and a removable ferrule on said pivotal attachment in the enlarged opening of the supporting cup shaped member.

3. A fifth wheel comprising an upright cup shaped, substantially semi-spherical upper bearing member provided with means for rigid attachment to the underside of an upper supported device and with a central opening, a lower upright cup shaped bearing member adapted to receive the upper member and provided with means for rigid attachment to the upper side of a lower supporting device and with an enlarged central opening, a clamping member for receiving the lower member and provided with a central opening, a pivotal connecting member passing through the openings of the upper cup shaped member and the clamping member and the enlarged opening of the lower bearing member for pivotally securing the upper and lower cup shaped members together, and a removable ferrule around the pivotal connecting member in the enlarged opening in the lower bearing member and between the upper bearing member and the clamping member.

4. A fifth wheel comprising a cup shaped, substantially semi-spherical upper bearing member provided with oil holes and a central bolt hole, a lower cup shaped bearing member adapted to receive the upper member and provided with an enlarged central opening, a clamping member for receiving the lower member and provided with a central bolt hole and a bolt passing through the bolt holes of the upper bearing member and the clamping member and the enlarged opening of the lower bearing member, the enlarged opening in the lower bearing members serving as a reservoir for oil passed through the oil holes.

5. A connection for a tractor and a trailer comprising a fifth wheel having an upper bearing member located under the forward end of the trailer and a lower bearing member secured to the upper side of the rear portion of the tractor, and converging chains connected to the sides of the tractor at their forward ends and to the transverse center of the trailer at their rear ends.

[Claim 6 not printed in the Gazette.]

1,211,826. IRON ALLOY. FRED C. T. DANIELS, Natick, Mass. Filed Apr. 3, 1916. Serial No. 88,718. (Cl. 75—1.)

1. An iron alloy containing silicon, sulfur, phosphorus, manganese, combined carbon from 1.25% to 3.50%, and nickel from 1.00% to 3.50%, the relative proportions of the said elements being maintained to produce a white iron under all conditions.

2. An iron alloy containing silicon, sulfur, phosphorus, combined carbon from 1.25% to 3.50%, nickel from 1.00% to 3.50%, and a manganese content above the percentage used in foundry irons, the relative proportions of said elements being maintained to produce a white iron.

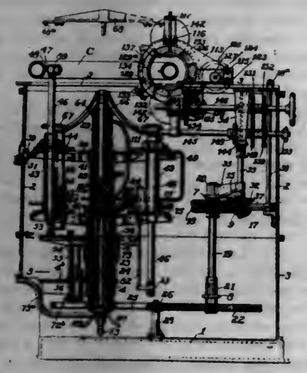
3. An iron alloy containing silicon, sulfur, phosphorus, combined carbon from 1.25% to 3.50%, nickel from 1.00% to 3.50%, manganese from 1.00% to 2.75%, the relative proportions of said elements being maintained to produce a white iron.

4. A white casting metal, an alloy of iron containing sulfur, phosphorus and manganese, and also containing carbon from 1.25% to 2.20% in the presence of a nickel content from 1.00% to 3.50% and silicon from 1.00% to 5.00%.

5. A white casting metal, an iron alloy containing sulfur and phosphorus, and also containing carbon from 1.25% to 2.20%, nickel from 1.00% to 3.50%, manganese from 1.00% to 2.75%, and silicon from 1.00% to 5.00%.

[Claims 6 to 8 not printed in the Gazette.]

1,211,827. TIRE-WINDING MACHINE, (PNEUMATIC CONTROL.) WALTER R. DENMAN, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed May 1, 1916. Serial No. 94,747. (Cl. 154—11.)



1. In a tire winding machine, the combination with a ring core, of a plurality of supporting arms positively engaging the inner circumference of the core and pneumatically operated means for moving said arms successively out of and into engagement with said core.

2. In a tire winding machine, the combination with a ring core, of a plurality of arms supporting the core by engagement with its inner circumferential surface, means for rotating said arms simultaneously and pneumatic means for successively retracting the arms from engagement with the core and returning them thereto.

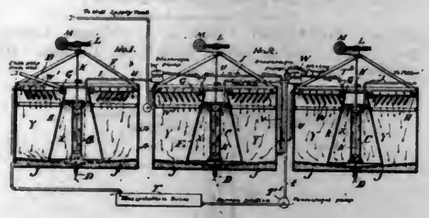
3. In a tire winding machine, the combination with a ring core, of a plurality of slidable supporting arms engaging the core along its inner periphery, means for moving said arms simultaneously around the axis of the core, and pneumatic means for causing said arms to be slid successively into and out of engagement with the core.

4. In a tire winding machine, the combination with a ring core, of a bobbin ring encircling a portion of the core a plurality of supporting arms for rotating said ring core and pneumatically operated means for successively withdrawing and returning said arms as they pass the bobbin ring.

5. In a tire winding machine, the combination with a ring core, of a bobbin ring casing in interlocked position around a portion of the core, a plurality of vertically movable supporting arms engaging the ring core along its inner periphery, means for rotating said arms simultaneously and pneumatic means for successively moving each of said arms vertically away from said ring core as it passes the bobbin casing and for returning it subsequently thereto.

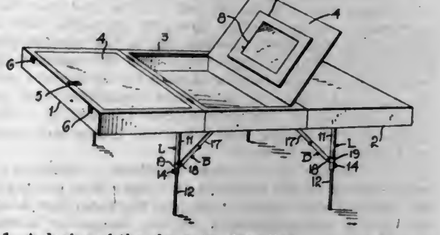
[Claims 6 to 37 not printed in the Gazette.]

1,211,828. APPARATUS FOR THICKENING AND AGITATING PULP. JOHN VAN NOSTRAND DORR, Denver, Colo. Original application filed Sept. 9, 1912, Serial No. 719,465. Divided and this application filed June 26, 1913. Serial No. 775,884. (Cl. 23—31.)



Apparatus for thickening and agitating pulp, comprising a series of vessels each provided with a separator having on one side a chamber in which the pulp is agitated and on the other a space for quiet settling, means in said chamber for thoroughly agitating the thickened pulp, means connecting the agitating chamber of one vessel with the settling space of another, and means for conducting the clear liquid from one vessel to and mixing it with the thickened agitated pulp passing from the agitating chamber of another vessel in the series before said agitated pulp descends to another settling area.

1,211,829. SUITCASE. ANNA EADES, Alturas, Cal. Filed July 31, 1916. Serial No. 112,411. (Cl. 190—11.)



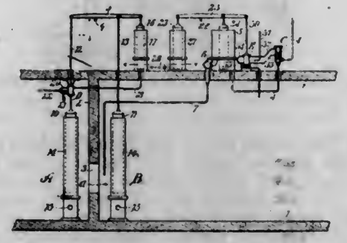
1. A device of the character described comprising three pivotally connected units adapted to be folded into superimposed relation, the corresponding faces of said units being provided with guideways adapted to aline when the units are in extended relation, slides engageable within said guideways, supporting legs pivotally engaged with said slides, and brace members operatively engaged with the slides and the supporting legs.

2. A device of the character described comprising three pivotally connected units adapted to be folded into superimposed relation, the corresponding faces of said units being provided with guideways adapted to aline when the units are in extended relation, slides engageable within said guideways, supporting legs pivotally engaged with said slides, and brace members operatively engaged with the slides and the supporting legs, each of said brace members comprising pivotally connected sections.

3. A device of the character described comprising three pivotally connected units adapted to be folded into superimposed relation, the corresponding faces of said units being provided with guideways adapted to aline when the units are in extended relation, slides engageable within said guideways, supporting legs pivotally engaged with said slides, and brace members operatively engaged with the slides and the supporting legs, each of said brace members comprising pivotally connected sections, each of said units having depressed portions in which the guideways are arranged.

4. A device of the character described comprising three pivotally connected units, the end units being adapted to be folded over the opposite faces of the intermediate unit, the corresponding faces of said units when extended being provided with guideways adapted to aline, slides engageable within said guideways, supporting legs pivotally engaged with the slides, and brace members operatively engaged with the slides and the supporting legs, the guideways of the intermediate unit being of a length to entirely receive the slides so that the units may be folded.

1,211,830. AUTOMATIC CONTROLLING OR REGULATING APPARATUS. GEORGE GOODELL EARL, New Orleans, La. Continuation of application Serial No. 536,239, filed Jan. 3, 1910. This application filed Feb. 8, 1913. Serial No. 747,105. (Cl. 210—19.)



1. In an apparatus of the character described, a beam, weights suspended from said beam, one of said weights being adapted to be submerged or partially submerged by a liquid on one side of an orifice, and the other weight being adapted to be submerged or partially submerged by a liquid on the other side of said orifice, said weights being so proportioned and arranged that the beam is in balance when the liquid around said weights stands at a certain level or certain levels, a chemical feed device, and hydraulically controlled means governed by the flow of fluid through said orifice for causing said device to operate when the level of the liquid around said weights varies and thus destroys the equilibrium of the beam.

2. In an apparatus of the character described, a beam, weights suspended from said beam, one of said weights being adapted to be submerged or partially submerged by a liquid on one side of an orifice, and the other weight being adapted to be submerged or partially submerged by a liquid on the other side of said orifice, said weights being so proportioned and arranged that the beam is in balance when the liquid around said weights stands at a certain level or certain levels, a device, means for causing said device to operate when the level of the liquid around said weights varies and thus destroys the equilibrium of the beam, and means for automatically restoring the equilibrium of said beam.

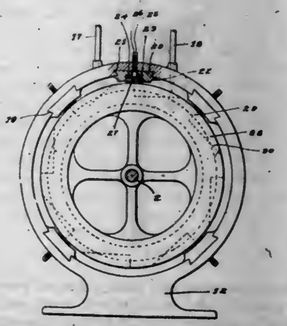
3. In an apparatus of the character described, a beam, weights suspended from said beam, one of said weights being adapted to be submerged or partially submerged by a liquid on one side of an orifice and the other weight being adapted to be submerged or partially submerged by a liquid on the other side of said orifice, said weights being so proportioned and arranged that the beam is in balance when the liquid around said weights stands at a certain level or certain levels, a device, means for causing said device to operate or become operative when the level of the liquid around said weights varies and thus destroys the equilibrium of the beam, and means for restoring the equilibrium of said beam and also causing said device to become inoperative.

4. In an apparatus of the character described, a balanced member which remains in equilibrium so long as a certain condition exists, a device which it is desired to operate automatically, means for causing said device to become operative when the equilibrium of said member is destroyed, and hydraulic operated means for automatically restoring the equilibrium of said member.

5. In an apparatus of the character described, a balanced member which remains in equilibrium so long as a certain condition exists, a plurality of weights suspended from said member, a device which it is desired to operate automatically, means for causing said device to become operative when the equilibrium of said member is destroyed, and means for automatically restoring the equilibrium of said member.

[Claims 6 to 50 not printed in the Gazette.]

1,211,831. ROTARY STEAM-ENGINE. VAN EVERY EDWARDS, Decatur, Ill., assignor of one-half to Olive B. Wheeland, Riverton, Ill. Filed Mar. 13, 1916. Serial No. 83,877. (Cl. 253—50.)



1. In combination in a rotary engine, a cylindrical casing, a rotor mounted therein, packing between the sides of the rotor and the casing, said casing having inlet and exhaust connections, a plurality of pressure blocks adjustably mounted in said casing and adapted to be moved toward and from the rotor, one being located between the inlet and exhaust connection, said rotor having a plurality of buckets or sockets provided in the face thereof.

2. In combination in a rotary engine, a cylindrical casing immovably mounted, a rotor mounted therein, packing between the sides of the rotor and casing, said rotor being provided with a plurality of recesses or buckets on its face, said casing having inlet and exhaust connections, a plurality of pressure blocks located at intervals about the casing, one being located between the inlet and exhaust connections.

3. In combination in a rotary engine, a cylindrical casing immovably mounted, a rotor mounted therein, packing between the sides of the rotor and casing, said rotor being provided with a plurality of recesses or buckets on its face, said casing having inlet and exhaust connections, a plurality of pressure blocks located at intervals about the casing, one being located between the inlet and exhaust connections, and means for adjusting the pressure blocks to and from the rotor.

4. In combination in a rotary engine, a cylindrical casing immovably mounted, a rotor mounted therein, packing between the sides of the rotor and casing, said rotor being provided with a plurality of recesses or buckets on its face, said casing having inlet and exhaust connections, said casing having a plurality of guideways, a guiding and holding member mounted in each guideway and a pressure block adjustably supported by each guiding and holding member.

5. In combination in a rotary engine, a cylindrical casing immovably mounted, a rotor mounted therein, packing between the sides of the rotor and casing, said rotor being provided with a plurality of recesses or buckets on its face, said casing having inlet and exhaust connections, said casing having a plurality of dove-tailed guide-ways on the inner face thereof, a guiding and hold-

ing member having a dove-tailed portion mounted in each guide-way and said guiding and holding member having a socket in its face, a pressure block slidably mounted in each socket and means extending through the guiding and holding member in casing for moving the pressure block in and out to vary the distance thereof from the face of the rotor.

[Claim 6 not printed in the Gazette.]

1,211,832. KIMONO. VIRGINIA MARIE ELLIOTT, Chicago, Ill. Filed Apr. 14, 1916. Serial No. 91,007. (Cl. 2—145.)



1. A kimono, the back and front parts of which consist of a transversely folded seamless strip of textile fabric, provided with a number of spaced loops opposing and in register with each other, and with strips passing through said loops, and thereby adapted for detachably connecting and securing the meeting edges of said strip together and shape the garment to the wearer.

2. A kimono, having a closed back and divided front part, consisting of a transversely folded seamless strip of textile fabric provided with a number of spaced loops adjacent their opposing side edges formed integral with the fabric, and strips passing through said loops detachably connecting said back and front parts.

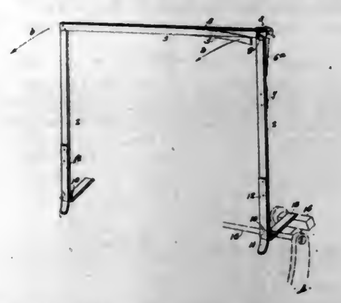
3. A kimono, the back and front parts of which consist of a transversely folded seamless strip of textile fabric, provided adjacent the opposing side edges thereof from their bottom edge to about the hip line with a series of spaced loops extending at a right angle to said edges, a number of strips adapted to pass through and connect said loops, longitudinal loops located adjacent said edges in register with each other at the waist line, and one or more longitudinal loops located about the center of the back in a plane substantially above the waist line, and a sash passing through said longitudinal loops, the tightening of which conforms the kimono to the figure of the wearer, and distends the folded edge to a form simulating sleeves.

4. A kimono, the back and front parts of which consist of a transversely folded seamless strip of textile fabric, provided with means for detachably connecting the longitudinal side edges thereof, and with a cross cut in the front part adjacent the back part forming corner pieces, adapted to be folded outwardly, and means for detachably securing said folded corner pieces to the front part and to the form of a collar for the neck of the wearer.

5. A kimono, provided with a closed back and divided front parts, consisting of a transversely folded seamless strip of textile fabric having a number of spaced loops adjacent the side edges thereof, and at the middle of the back part above the waist line of the wearer, provided with corner pieces at the neck portion by a cross cut at a right angle to and through the meeting edges of the front portion, said front portions and corner pieces being respectively provided with tongues adapted to register with each other, and means passing through said several slits adapted to connect together the back and front parts, the corner pieces in a folded condition to the front part and to adjust the kimono to and conform it to the bust of the wearer.

[Claim 6 not printed in the Gazette.]

1,211,833. TYPE-WRITER COPY-HOLDER. AUGUST C. EATNER, Vancouver, British Columbia, Canada. Filed Mar. 27, 1916. Serial No. 86,997. (Cl. 120—28.)



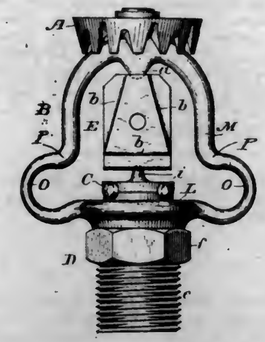
1. In combination with a typewriting machine having a carriage provided with a stay rod, of a copy holder comprising a light frame composed of uprights and an upper cross rail, resilient means for pivotally connecting the lower ends of the uprights of this frame to said stay rod of the typewriter carriage, means for supporting the frame against pivotal movement backward on said rod, and means on the cross rail of the frame for retaining the sheet or sheets to be copied.

2. A copy holder for a typewriting machine, said copy holder comprising a light frame composed of uprights and an upper cross rail the lower end of each upright being notched to fit on a stay rod of the typewriter carriage and below the notch bent to engage an adjacent stationary part of the typewriter carriage and prevent pivotal movement of the frame backward beyond a certain limit, a spring secured to each upright adjacent the lower end and projecting over and beyond its notch, a light metal strip secured at one end to the end of the cross rail and extending along it to the other end, and means for latching the free end of this strip to the end of the cross rail.

3. In combination with a typewriting machine having a carriage provided with a stay rod comprising a light open frame composed of uprights and an upper cross rail, the lower end of each upright provided with resilient means for pivotally mounting the frame on said stay rod and with means below the notch for preventing pivotal movement of the frame on said rod backward beyond a certain limit, a copy retaining strip secured to one end of the cross rail and extending along its front, said strip having a resilient tendency from the cross rail, and a spring latch for retaining the free end of the strip in engagement with the adjacent end of the cross rail.

1,211,834. AUTOMATIC STATIONARY FIRE-EXTINGUISHER. WILLIAM ESTY, Laconia, N. H., assignor to Esty Sprinkler Company, Laconia, N. H., a Corporation of New Hampshire. Filed Sept. 27, 1911. Serial No. 651,483. (Cl. 169—5.)

1. A collapsible strut for a sprinkler comprising, in combination, a valve lever with an angular upper edge and a flange at its bottom having a valve registering recess at the middle of its underside and two spaced recesses on its upper face; a frame lever having a flange at its top resting on the angular upper edge of said valve lever, said flange having an abutment registering recess at the middle of its upper face, said frame lever lying face to face against said valve lever; and a multiplying lever lying against the outer face of said frame lever and having projecting feet at its bottom entering said spaced recesses in the upper facec of the flange of said valve lever, and said three levers being united together by fusible solder.



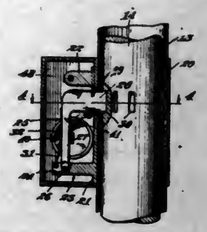
2. A sprinkler head having an integral frame comprising a threaded collar, side arms, a strut abutment at the juncture of the side arms and opposite the center of said collar, and laterally projecting resilient side loops, each of which connects the collar with one of the side arms, the eye of each loop extending outwardly beyond the outer face of the corresponding side arm, and both legs of the loop extending in a direction substantially at right angles to the line of strain between the collar and abutment, in combination with a nut screwing into said collar, said nut having a limiting shoulder seating against said collar and a valve seat; means for positively locking said nut and collar together after the collar is seated on said shoulder; a valve fitting on said valve seat; and a collapsible fusible strut between said valve and abutment.

3. A sprinkler head having an integral frame comprising a threaded collar, side arms, a strut abutment at the juncture of the side arms and opposite the center of said collar; and laterally projecting resilient side loops, each of which connects the collar with one of the side arms, the eye of each loop extending outwardly beyond the outer face of the corresponding side arm, and the leg of the loop which joins the collar extending in a direction substantially at right angles to the line of strain between the collar and abutment, in combination with a nut screwing into said collar, said nut having a limiting shoulder seating against said collar and a valve seat; means for positively locking said nut and collar together after the collar is seated on said shoulder; a valve fitting on said valve seat; and a collapsible fusible strut between said valve and abutment.

4. A sprinkler head having a resilient frame, a threaded collar, and a strut abutment, in combination with a nut screwing into said collar, said nut having a limiting shoulder seating against said collar and a valve seat; means for positively locking said nut and collar together after the collar is seated on said shoulder; a valve fitting on said valve seat; and a collapsible fusible strut between said valve and abutment.

1,211,835. AUTOMOBILE-STEERING-GEAR LOCK. HIRAM W. FOOTE, Los Angeles, Cal. Filed Feb. 21, 1916. Serial No. 79,542. (Cl. 70—90.)

1. The combination with a steering column having an opening, and a steering shaft turnable within the column formed with a slot arranged to register with the opening in the column, of a lock housing on the column, a guard slidably mounted in the housing arranged to cover the opening in the column, means for normally holding the guard in an advanced position, a pivoted spring-pressed bolt in the housing arranged to seat on the guard, means for retracting the guard from the exterior of the housing to release the bolt and allow it to advance through the opening into engagement with the slot in the shaft, and key controlled means for retracting the bolt.

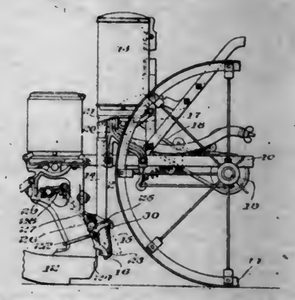


2. The combination with a steering column having an opening, and a steering shaft turnable within the column formed with a slot arranged to register with the opening in the column, of a lock housing on the column, a guard slidably mounted in the housing arranged to cover the opening in the column, means for normally holding the guard in an advanced position, a pivoted spring-pressed bolt in the housing arranged to seat on the guard, means for retracting the guard from the exterior of the housing to release the bolt and allow it to advance through the opening into engagement with the slot in the shaft, a key controlled tumbler, and a pin on said tumbler positioned in the path of travel of the bolt and adapted, on turning of the tumbler in one direction, to move the bolt to its retracted position.

3. A lock, comprising a housing formed with an opening, a spring-pressed guard slidably mounted in the housing normally projecting over the opening, a pivoted spring-pressed bolt in the housing arranged to normally seat on the guard, means for retracting the guard from the exterior of the housing to release the bolt and allow it to advance through the opening, and key-controlled means for retracting the bolt.

4. A lock, comprising a housing formed with an opening, a spring-pressed guard slidably mounted in the housing normally projecting over the opening, a pivoted spring-pressed bolt in the housing arranged to normally seat on the guard, means for retracting the guard from the exterior of the housing to release the bolt and allow it to advance through the opening, a key-controlled tumbler, and means on said tumbler adapted to engage the bolt when turning the tumbler to move the bolt to its retracted position.

1,211,836. FERTILIZER ATTACHMENT FOR SEED-PLANTERS. RALPH L. FORD, Chicago, Ill., assignor to International Harvester Corporation, a Corporation of New Jersey. Filed Sept. 13, 1913. Serial No. 789,701. (Cl. 111—34.)



1. In a fertilizer attachment for planters, a container, a discharge spout for said container, a valve for said spout fixed to the furrow opener of the planter and provided with upwardly extending arms to pivotally receive said discharge spout, and means for operating said spout to engage and disengage said valve.

2. In a seed planter, a wheeled frame, furrow openers carried by said frame, a fertilizer container carried on said frame, a conduit for said container, a discharge spout communicating with said conduit, a closure for said spout secured to one of said furrow openers and provided with bearing portions to pivotally receive said spout, a limiting lug on said closure, and means operated by said planter to swing said spout away from the closure and strike said limiting lug with a force sufficient to impart a vibratory movement to the walls of said spout.

1,211,837. MANUFACTURE OF FLEXIBLE BITUMINOUS ROOFING AND WATERPROOFING MATERIALS. CHARLES N. FORREST, Rahway, N. J., assignor of one-fourth to Robert L. Fowler and one-fourth to Marius S. Darrow, Perth Amboy, N. J., and one-fourth to Edmund B. Rosevear, Boonton, N. J. Filed Feb. 26, 1916. Serial No. 80,589. (Cl. 91—68.)

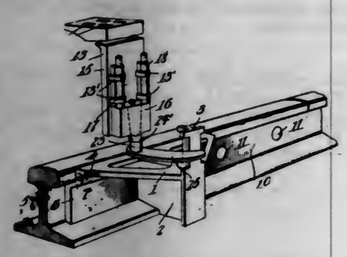
1. A material of the class described, composed of a highly absorbent flexible sheet comprising fibers of cotton or wool and leather felted together and saturated with a bituminous material.

2. A roofing or water-proofing material composed of a highly absorbent felt containing from ten to fifty per cent. of leather fibers and from ninety to fifty per cent. of mixed wool cotton fibers felted together, and saturated with bituminous water-proofing materials.

3. A material of the class described consisting of felted fibers of cotton and wool combined with from ten to fifty per cent. of leather fibers in the form of an absorbent flexible sheet and saturated with bitumen to render it water-proof.

4. The process of manufacturing flexible roofing or water-proofing materials, which consists in placing soft leather scrap together with cotton and wool fibers in a beating engine, working all together into a homogeneous mass, felting such fibers in any suitable manner into sheets of absorbent material and subsequently saturating said sheets with bitumen to render them water-proof.

1,211,838. AUTOMATIC TRAIN-STOPPING DEVICE. DAVID D. GOOD, Landis township, Cumberland county, N. J. Filed Sept. 11, 1912. Serial No. 719,830. (Cl. 246—59.)



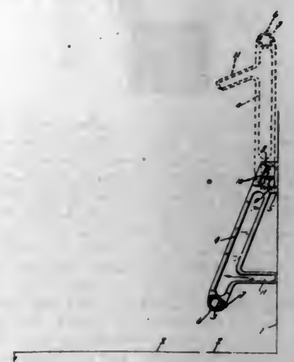
1. A portable train stop adapted to be applied to the side of a rail adjacent a fish plate and provided with means engaging with the fish plate for rigidly securing said stop in position.

2. A portable stop for operating stopping mechanisms on railway vehicles, said stop being so formed as to bear against the head, the web and the base of a rail, and the end of a fish plate attached to the rail and having a projection adapted to enter the space between the fish plate and the web of the rail.

3. A portable stop for operating stopping mechanism on railway vehicles, said stop consisting of a wholly rigid structure adapted to be manually attached to and detached from a rail and comprising a horizontal top plate adapted to bear, at its inner edge, against the head of the rail, a central vertical plate adapted to bear at its lower edge on the base of the rail and to bear against the end of a fish plate carried by the rail, an inner vertical plate adapted to bear against the web of the rail, a vertical standard extending above said horizontal top plate, and a projection adapted to enter a groove in the inner surface of the fish plate between the fish plate and the rail.

4. The combination with a railway train stopping mechanism carried on a train, of a portable device adapted to be applied to the rail for the purpose of actuating the stopping mechanism and provided with means for interlocking with a fish plate, said portable device being so constructed as to be supported wholly by the rail laterally of the tread thereof.

1,211,839. PIG-GUARD. JOHN L. GRISWOLD, Dodge Center, Minn. Filed Mar. 27, 1916. Serial No. 87,056. (Cl. 119—16.)



1. The combination with the wall and floor of a hog house, of a pair of arms secured to the wall, and a guard rail carried by the arms and gravitationally held thereby spaced outward from the wall and above the floor with freedom for raising movement.

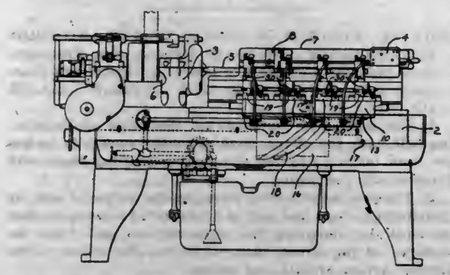
2. The combination with the wall and floor of a hog house, of a pair of arms secured to the wall, a guard rail carried by the arms and held thereby above the floor, and a stop finger on each of said arms directly and loosely engaging the wall, for holding the guard rail spaced apart therefrom.

3. The combination with the wall and floor of a hog house, of a pair of brackets secured to the wall, a pair of arms pivoted to the bracket for vertical swinging movement, a guard rail carried at the free ends of the arms and held thereby above the floor, a stop finger on each of the arms loosely engaging the wall for holding the guard rail spaced apart therefrom, and means for holding the arms raised.

4. The combination with the wall and floor of a hog house, of a pair of brackets secured to the wall, a pair of arms secured to the brackets by slot and pin connections, a guard rail carried at the free ends of the arms and held thereby above the floor, a stop finger in each of the arms engageable with the wall for holding the guard rail spaced apart therefrom, said arms arranged, when raised, to interlock with the brackets by an endwise sliding movement.

5. The combination with the wall and floor of a hog house, of a pair of brackets secured to the wall, a pair of arms, slot and pin connections securing the inner ends of the arms to the brackets for vertical swinging movement, and a guard rail on the outer end of the arms and supported in an operative position thereby above the floor, said arms when raised having a limited endwise movement on their slot and pin connections to engage the brackets as stops for holding the guard rail in an inoperative position.

1,211,840. METAL-WORKING MACHINE. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Jan. 10, 1916. Serial No. 71,316. (Cl. 82—2.)



1. A metal working machine comprising means for supporting and rotating work, a main slide mounted to travel in the direction of the axis of rotation of the work, a plurality of auxiliary slides carried by the main slide for movement transversely of the line of motion thereof, the auxiliary slides being provided with means for supporting turning tools, and means acting against the auxiliary slides to cause the turning tools to be simultaneously brought against the work and thus turn the work along longitudinally distinct zones on the movement of the main slide and to also cause the auxiliary slides to move the turning tools free of the work at the conclusion of the respective cuts.

2. A metal working machine comprising means for supporting and rotating work, a plurality of turning tools, supporting means for said turning tools, and automatic mechanism to cause the turning tools to be simultaneously brought against the work at longitudinally separated points, to cause the tools to simultaneously move in the direction of the axis of the work while thereagainst for thus turning the work simultaneously along longitudinally distinct zones and to cause the tools to move free of the work at the conclusion of predetermined cuts.

3. A metal working machine comprising means for supporting and rotating work, a plurality of turning tools, supporting means for said turning tools, and automatic mechanism to cause the turning tools to be simultaneously brought against the work at longitudinally separated points to cause the tools to move in the direction of the axis of the work while thereagainst to cause one tool to finish its cut practically at the point of commencement of the cut of the tool next to it and to also cause the several tools to pass free of the work at the conclusion of the predetermined cuts.

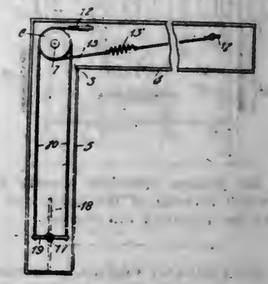
4. A metal working machine comprising means for supporting and rotating work, a plurality of turning tools, supporting means for said turning tools, and mechanism for automatically moving the turning tools in the direction of the axis of the work while thereagainst simultaneously along longitudinally distinct zones and for also causing the tools to move free of the work at the conclusion of the predetermined cuts.

5. A metal working machine comprising means for supporting and rotating work, a plurality of turning tools, supporting means for said turning tools, and mechanism for automatically moving the turning tools in the direction of the axis of the work while thereagainst simultaneously along longitudinally distinct zones, for moving one tool approximately to the point where another tool commences its cut and moving the tools free of the work at the conclusion of the predetermined cuts.

[Claims 6 to 17 not printed in the Gazette.]

1,211,841. RAILWAY-CROSSING SIGNAL. HENRY A. HARRISON, Sykestown, N. D. Filed Mar. 10, 1916. Serial No. 83,813. (Cl. 246—48.)

1. A railway crossing signal comprising a right angular casing having one leg lying parallel with the trackway and the other leg parallel with the highway, a drum rotatably mounted in said casing at the juncture of the legs thereof, levers pivoted within the track leg of said casing adjacent to the inner and outer ends of said leg respectively, a connection between said levers and drum whereby the latter will be rotated in one direction in the operation of one of the levers and in the reverse direction in the operation of the other lever, a vertical shaft journaled in the outer end of the highway leg of said casing, a signal blade on the upper end of said vertical shaft, and connections between said shaft and drum whereby the shaft will be rotated to move the blade to signaling position in the rotation of the drum in one direction and the shaft rotated to restore the blade to normal position in the other movement of the drum.



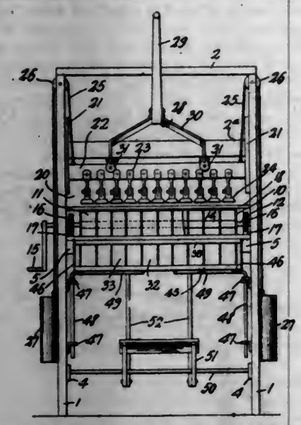
2. A railway crossing signal comprising a right angular casing having one leg lying parallel with the trackway and the other leg parallel with the highway, a drum rotatably mounted in said casing at the juncture of the legs thereof, levers pivoted within the track leg of said casing adjacent to the inner and outer ends of said leg respectively, a connection between said levers and drum whereby the latter will be rotated in one direction in the operation of one of the levers and in the reverse direction in the operation of the other lever, a vertical shaft journaled in the outer end of the highway leg of said casing, a signal blade on the upper end of said vertical shaft, a cross arm connected to the lower end of said vertical shaft, and a flexible connection between the ends of said cross arm and said drum.

3. In a railroad crossing signal comprising a right angular casing having one leg lying parallel with the trackway and the other leg parallel to the highway, a drum rotatably mounted at the jointure of said legs, a vertical shaft journaled in said casing, a signal blade mounted on the upper end of the shaft, a cross arm intersecting the plane of the signal blade at right angles and mounted on the lower end of the said vertical shaft, a flexible element attached to one end of the said cross arm and then wound about the said drum, the free end of the flexible element being attached to the opposite end of the cross arm, track trips arranged proximate and remote of the crossing, a flexible element connecting said track trips and said drum, and shock absorbing means associated with one of said flexible elements.

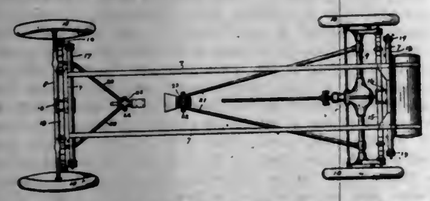
1,211,842. CEMENT-BRICK MACHINE. FRANCIS HART, Rockaway, Oreg. Filed Sept. 28, 1914. Serial No. 863,940. (Cl. 25—41.)

In a device of the class described, a frame; a front plate hinged to the frame; a mold upheld by the frame and coöperating with the front plate, the front plate being movable to secure a reversal of the mold; supports each comprising an upright arm journaled on the frame and a transverse arm adapted to be swung beneath the mold to support the same, the transverse arms being adapted to be swung toward and away from each other to accommodate molds of different lengths, the transverse arms being rearwardly movable to assume positions within the contour of the frame; a plunger the upper end of which is mounted to slide directly in the frame, the plun-

ger lying in the path of the transverse arms when the latter are swung within the contour of the frame, the upper end of the plunger operating beneath the mold to secure an initial reversal of the mold; and frame supported means for actuating the plunger.



1,211,843. EASY-RIDING VEHICLE. ROBERT H. HASSLER, Indianapolis, Ind. Filed Sept. 22, 1916. Serial No. 121,643. (Cl. 267—27.)



1. In a vehicle, a frame, an axle, a cross spring shackled to the axle, radius rods connecting the axle with the frame, a second cross spring shackled to the frame, and means rigidly fastening the second spring at its center to the other leaf spring, the two leaf springs being at different distances from the radius rod center.

2. In a vehicle, a frame, an axle, a cross spring, means for supporting the cross spring from the axle, radius rods having means for resiliently connecting the axle with the frame, a second cross spring shackled to the frame and means rigidly fastening it at its center to the other leaf spring, the two leaf springs being at different distances from the radius rod center.

3. In a vehicle, a frame, an axle, radius rods rigidly attached to the axle, resilient means connecting the radius rods with the frame, a pair of cross springs, means for rigidly fastening the cross springs together in different vertical planes, means comprising shackles for securing one of the cross springs to the frame and means comprising shackles for securing the other cross spring to the axle.

4. In a vehicle, a frame, an axle, brackets extending laterally of the axle, radius rods rigidly attached to the axle, resilient means connecting the radius rods with the frame, a pair of cross springs, means for rigidly fastening them together in different vertical planes, means comprising shackles for securing one of the cross springs to the frame, and means comprising shackles for securing the other cross spring to said brackets.

5. In a vehicle, a frame, a pair of axles, a pair of radius rods for each axle rigidly secured thereto at one of their ends, springs connecting the other ends of the radius rods with the frame, a pair of cross springs for each axle, means comprising shackles for supporting one spring of each pair of springs from and to the rear of its adjacent axle, means comprising shackles for connecting the other spring of each pair with the frame, and means for rigidly connecting the centers of each pair of springs together.

[Claim 6 not printed in the Gazette.]

1,211,844. PROCESS OF CURING OLIVES AND PRODUCT THEREOF. FRANK P. HEBERT, San Francisco, Cal., assignor of one-half to George J. Henry, San Francisco, Cal. Filed Sept. 5, 1916. Serial No. 118,425. (Cl. 99—1.)

1. The method of curing olives consisting of distributing salt with the olives, next removing such salt as has not been taken up by the olives, then treating them with further salt and water.

2. The process of curing olives by the action of salt, by distributing olives and salt in a ventilated receptacle, then mechanically removing the unassimilated salt from the surfaces of the olives, then subjecting the olives to the further action of salt and water.

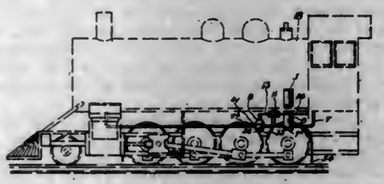
3. The process of curing olives by the action of salt, by distributing olives and salt in layers for a period of time in a ventilated receptacle, then mechanically removing the unassimilated salt from the surfaces of the olives, then subjecting the olives to the further action of salt and water.

4. The process of curing and preserving olives by subjecting them to the action of granular, coarse or rock salt in a ventilated receptacle for a period of time, then separating surface adhering salt from the olives, then placing them in a liquid container with substantially dry salt and thereafter adding a quantity of water less than sufficient to dissolve said salt.

5. The process of curing or preserving olives by subjecting them to the action of granular salt in alternating layers contained within a receptacle having openings in the sides and bottom, after which surface adhering salt is removed, and then treating them within a closed receptacle to the further action of salt, and during said treatment adding a small quantity of water.

[Claims 6 and 7 not printed in the Gazette.]

1,211,845. MEANS FOR LUBRICATING AND CLEANING RAILROAD-TRACKS, &c. THOMAS E. HILL and JAMES J. MILLETT, Louisville, Ky. Filed Oct. 30, 1916. Serial No. 128,579. (Cl. 104—153.)



1. In a locomotive, the combination with an exhaust steam line, of means for directing the exhaust steam from said line upon the rails of the track, said means having an outlet for the exhaust steam adjacent the rails, a connection between the outlet and the exhaust steam line and a valve in the connection.

2. In a locomotive, the combination with an exhaust steam line, of means disposed to discharge the exhaust steam upon the rails of the track, conduits leading from the exhaust steam line to said means and a valve for controlling the passage of steam from the exhaust steam line to the conduits.

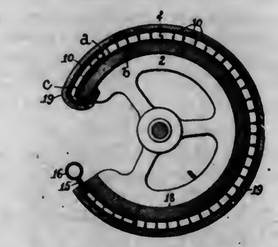
3. In a locomotive, the combination with an exhaust steam line, of means disposed to discharge the exhaust steam upon the rails of the track, conduits between the exhaust steam line and said means, a valve for controlling the passage of steam from the exhaust steam line to the conduits and means controllable from the cab of the locomotive for actuating said valve.

4. In a locomotive, the combination with an exhaust steam line, of means disposed to discharge upon the track, conduits leading from the exhaust steam line to said discharge means, a valve for controlling the passage of steam from the exhaust steam line to the conduits and means controllable from the cab of the locomotive for actuating said valve, said means serving to move said valve to one or the other of two positions, said valve in one position establishing communication between the exhaust line and said conduits and shutting off the passage of steam through that portion of the exhaust line which extends beyond said valve and when moved to the other position shuts off communication between said conduits and the exhaust line and establishes normal communication through the exhaust line.

5. The combination with a locomotive, of an exhaust steam line, nozzles disposed to discharge the exhaust steam upon the track, conduits through which exhaust steam is supplied to said nozzles and a three way shut-off valve arranged when turned to one position to establish uninterrupted communication through the exhaust steam line and when turned to another position to interrupt communication through the exhaust steam line and deflect the exhaust steam line into said conduits.

[Claims 6 to 11 not printed in the Gazette.]

1,211,846. PNEUMATIC BED FOR HIDE AND LEATHER WORKING MACHINES. HENRY A. HOLDER, Lynn, Mass., assignor to Holder-Perkins Company, Woburn, Mass., a Corporation of Massachusetts. Filed Apr. 29, 1914. Serial No. 835,323. (Cl. 149—12.)



1. In a work support of the character described, a pneumatic member containing air under pressure, a supporting member for said pneumatic member, a member of substantially non-stretchable material covering the pneumatic member and secured in fixed relation to said supporting member at its sides and at a plurality of points between its sides to form a plurality of pockets within which the pneumatic member is confined, substantially as described.

2. In a work support of the character described, a plurality of hollow yielding members, a reservoir with which said members communicate, a member of substantially non-stretchable material covering the said yielding members and secured in fixed relation at its sides and between its sides to form a plurality of pockets in which said hollow yielding members are confined.

3. In a work support of the character described, a member of substantially non-stretchable material, a second member of substantially non-stretchable material composed of a plurality of strips which are secured to the first mentioned member in fixed relation at their sides and between said sides to form a plurality of pockets, a plurality of hollow yielding members located in said pockets, and a reservoir for containing elastic fluid with which said hollow yielding members communicate.

4. In a work support of the character described, a plurality of hollow yielding members, a reservoir with which said members communicate, a member of substantially non-stretchable material covering the said yielding members and secured in fixed relation at its sides and between its sides to form a plurality of pockets in which said hollow yielding members are confined, and means for securing together the adjacent walls of adjoining pockets near the outer walls of the latter.

5. In a work support of the character described, a member of substantially non-stretchable material, means for forming said member into a plurality of pockets, hollow yielding members located in said pockets, and means to secure together the side walls of said pockets near the outer walls of the same.

[Claim 6 not printed in the Gazette.]

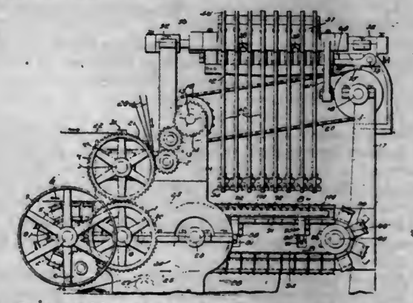
1,211,847. ELECTRIC-LIGHT FITTING OR BRACKET. EDWIN ROBERT HOUGH and LAURENCE HARRISON, London, England. Filed Feb. 14, 1916. Serial No. 78,247. (Cl. 240—115.)



1. An electric light fitting or bracket comprising a cap provided with an annular rim having spiral grooves formed in its inner surface and extending from the lower edge of said rim to within a short distance of the cap, a supporting ring for clamping the annular rim of a well-glass against said cap, mounted in said rim and provided on its periphery with lugs which engage said grooves, and means for locking said ring in said rim.

2. An electric light fitting or bracket comprising a cap provided with an annular rim having spiral grooves formed in its inner surface, a supporting ring for clamping the annular rim of a well-glass against said cap, mounted in said rim and provided with lugs which engage said grooves, teeth formed in the periphery of said ring, and a toothed eccentric adapted to engage the teeth of said ring for locking the ring in the rim.

1,211,848. PAPER-REINFORCING MACHINE. CHARLES H. HOWARD, Saugus, Mass., assignor of one-half to Patrick Tracy Jackson, Jr., Cambridge, Mass. Filed Apr. 15, 1914. Serial No. 832,073. (Cl. 154—1.)



1. In a machine of the character described, the combination of means for feeding material to be reinforced, means movable transversely of the machine for simultaneously carrying a plurality of independent reinforcing filaments into parallel relation transversely of the material to be reinforced, and means for releasing the rein-

forcing filaments from connection with said movable carrying means.

2. In a machine of the character described, the combination of means for feeding material to be reinforced, means movable transversely of the machine for simultaneously carrying a plurality of independent reinforcing filaments into parallel relation transversely relatively to the material to be reinforced, means for relatively moving the material to be reinforced and the reinforcing filaments in a direction of approach for applying the reinforcing filaments to the material, and means for releasing the reinforcing filaments from connection with said movable carrying means.

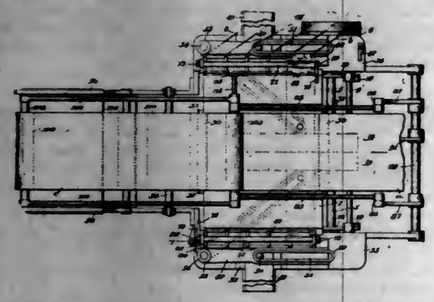
3. In a machine of the character described, the combination of means for feeding and guiding material to be reinforced, a source of supply of reinforcing filaments at one side of the machine, means movable transversely of the machine for taking simultaneously a plurality of filaments from the supply side of the machine and placing them in parallel relation transversely thereof, and means for disconnecting the filaments from the source of supply and from the said movable means.

4. In a machine of the character described, the combination of feeding devices for longitudinally feeding a web of material to be reinforced, a source of transverse thread supply, means for carrying a plurality of threads from said supply transversely of the web to be reinforced and placing them in a plane for delivery to the surface of the web, and means for relatively moving the web and transverse threads toward each other to place the transverse threads upon the surface of the web.

5. A machine of the character described, comprising transverse thread carriers, means for moving the carriers in rectilinear paths, a guide roll located between said carriers for guiding the web to be reinforced into transverse thread receiving position between the rectilinearly moving carriers, and means for delivering transverse threads to said carriers.

[Claims 6 to 48 not printed in the Gazette.]

1,211,849. PAPER-REINFORCING MACHINE. CHARLES H. HOWARD, Saugus, Mass., assignor of one-half to Patrick Tracy Jackson, Jr., Cambridge, Mass. Filed Nov. 23, 1914, Serial No. 873,515. Renewed Apr. 13, 1916. Serial No. 90,977. (Cl. 154—1.)



1. In a paper reinforcing machine, the combination of a support over which the paper is passed, grippers for carrying a series of threads transversely of the paper and holding the threads in a plane above the paper, means for raising the paper to the plane of the transverse series of threads while said threads are held by the grippers, and means for moving the grippers with the paper as it travels over the support.

2. In a paper reinforcing machine, the combination of a support over which the paper is passed, grippers for carrying a series of threads transversely of the paper and holding the threads in a plane above the paper, means for raising the paper to the plane of the transverse series of threads while said threads are held by the grippers, means for moving the grippers with the paper as it travels over the support, and means for freeing the series of threads from the grippers while in contact with the paper.

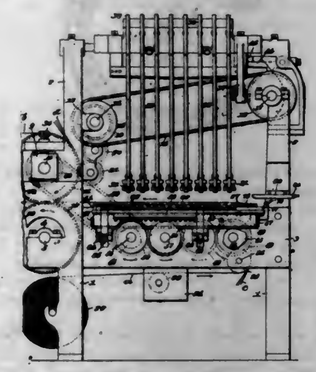
3. In a paper reinforcing machine, the combination of a support over which the paper is passed, grippers, for carrying a series of threads transversely of the paper, means for relatively moving the paper and grippers in a direction of approach to lay the series of transverse threads upon the paper, and means for moving the grippers with the paper as it travels over the support with the threads in contact with the paper.

4. In a machine of the character described, the combination of a support over which a strip of sheet material is passed, grippers for simultaneously carrying a plurality of threads transversely of the sheet material, and means for moving said grippers in the direction of feed of the sheet material while holding the transverse threads.

5. In a machine of the character described, the combination of a table over which a web of sheet material having a sticky surface is passed, grippers for simultaneously carrying a plurality of threads transversely of the sheet material, means for relatively moving the grippers and table toward each other to place the transverse threads held by the grippers in contact with the sticky surface of the sheet material, means for moving the grippers with the sheet material as it is fed over said table and while the threads held by the grippers are in contact with the sticky surface of the sheet material, and means for freeing one end of the transverse threads from the grippers and for severing the threads adjacent the other grippers.

[Claims 6 to 30 not printed in the Gazette.]

1,211,850. PAPER-REINFORCING MACHINE. CHARLES H. HOWARD, Saugus, Mass., assignor of one-half to Patrick Tracy Jackson, Jr., Cambridge, Mass. Filed Dec. 8, 1914. Serial No. 876,140. (Cl. 154—1.)



1. In a machine of the character described, the combination of means for feeding material to be reinforced by a series of independent transverse reinforcing filaments, means for simultaneously distending a plurality of independent reinforcing filaments in parallel relation transversely of the material to be reinforced, carrier means for taking the plurality of transversely arranged independent reinforcing filaments from the distending means and delivering them to the material to be reinforced, and means for moving the carrier means toward and from the distending means.

2. In a machine of the character described, the combination of means for feeding material to be reinforced, by a series of independent transverse reinforcing filaments, means for simultaneously distending a plurality of independent reinforcing filaments in parallel relation transversely of the material to be reinforced, carrier means for taking the plurality of transversely arranged independent reinforcing filaments from the distending means and delivering them to the material to be reinforced, means for moving the carrier means toward and from the distending means, and means for moving the carrier means with the material to be reinforced.

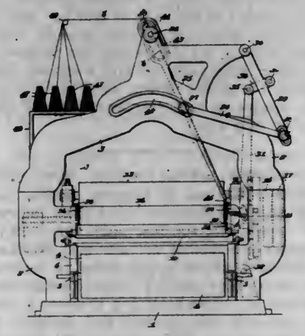
3. In a machine of the character described, the combination of a source of transverse thread supply, means for taking a plurality of threads from said source of supply and placing them simultaneously in a single plane transversely of the machine, means for feeding a web of sheet material longitudinally, transverse thread carrying means, means for moving said carrying means toward and from the plane of the transverse threads to take and deliver the same to the material to be reinforced, means for moving said carrying means longitudinally with the material while still holding the transverse threads, and means for then freeing the threads from the carrying means.

4. In a machine of the character described, the combination of gripper mechanism for taking transverse threads from a source of supply and placing them in a plane transversely of the material to be reinforced, transverse thread carriers movable toward and from the plane of the transverse threads constructed and arranged to take the threads from said plane and place them in contact with said material, and means for moving the transverse thread carriers along with the material as it is fed.

5. In a fabric reinforcing machine, the combination of means for guiding and feeding the fabric longitudinally, gripper mechanism for taking a plurality of threads from a source of supply and placing them simultaneously in a single plane, a transverse thread carrier at each side of said fabric provided with thread engaging and holding jaws, means for raising the thread carriers to the plane of the transverse threads and lowering the same, means for closing the carrier jaws upon the transverse threads while in said plane, means for moving the transverse thread carriers along with said fabric while still holding the transverse threads, and means for freeing the threads held by the carriers from the gripper mechanism.

[Claims 6 to 24 not printed in the Gazette.]

1,211,851. PAPER-REINFORCING MACHINE. CHARLES H. HOWARD, Saugus, Mass., assignor of one-half to Patrick Tracy Jackson, Jr., Cambridge, Mass. Filed Dec. 23, 1914. Serial No. 878,700. (Cl. 154—1.)



1. The combination of means for feeding material to be reinforced, thread presenting means for taking a plurality of threads from a source of supply and carrying them back and forth transversely to the path of said material, devices at the terminals of the back and forth travel of the thread presenting means for engaging the reinforcing threads, and means for severing the threads where they change direction to interrupt the continuity of the diagonally disposed threads.

2. In a machine for reinforcing a fabric by diagonally-extending threads, the combination of means for continuously feeding a fabric longitudinally, thread presenting means for taking a plurality of threads from a source of supply and carrying them back and forth transversely of the fabric, rectilinearly movable thread carriers at each side of the machine to engage loops of thread presented by the presenting means and hold said threads diagonally of the fabric, means for moving the thread carriers rectilinearly with the fabric while holding the threads diagonally thereto, and means for cutting the loops held by the carriers.

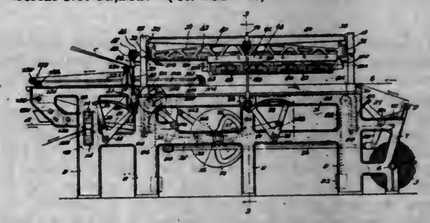
3. In a machine of the character described, the combination of means for feeding a fabric, means for drawing reinforcing filaments from a source of supply and carrying them back and forth transversely of the fabric, means for engaging loops of the filaments drawn from the supply by the said drawing means and presenting them diagonally to the fabric to be reinforced, and means for severing the loops of thread that the continuity thereof diagonally back and forth of the fabric may be interrupted.

4. In a machine for reinforcing a fabric by diagonally-extending threads, the combination of a source of thread supply, means for feeding the fabric continuously, thread presenting means for taking a plurality of threads from said supply and carrying them back and forth transversely of said fabric, a thread carrier at each side of the machine for engaging loops of thread and holding said threads diagonally of but out of contact with the fabric, means for moving the carriers longitudinally with the fabric as it is fed while still holding the diagonal threads out of contact therewith, means for forcing the diagonal threads into contact with the fabric, and means for cutting the loops of thread held by the carriers.

5. In a machine of the character described, the combination of means for feeding a fabric, means for drawing threads from a source of supply and carrying them back and forth in transverse relation to the fabric, a thread carrier for engaging loops of the diagonal reinforcing threads and placing the threads upon the fabric, and means for cutting the loops of diagonal threads after the threads have been placed upon the fabric.

[Claims 6 to 21 not printed in the Gazette.]

1,211,852. PAPER-REINFORCING MACHINE. CHARLES H. HOWARD, Saugus, Mass., assignor of one-half to Patrick Tracy Jackson, Jr., Cambridge, Mass. Filed Jan. 8, 1915, Serial No. 1,208. Renewed Apr. 14, 1916. Serial No. 91,262. (Cl. 154—1.)



1. In a machine for reinforcing fabrics, the combination of means for feeding a fabric longitudinally, gripper means for taking a plurality of threads from a source of supply and placing them transversely to the surface of the fabric to be reinforced, means for moving said gripper means toward the surface plane of the fabric to place the threads in contact with the fabric, and means for moving the gripper means with the fabric while still holding the transverse threads.

2. In a machine for reinforcing fabrics, the combination of means for feeding a fabric longitudinally, a plurality of grippers, means for causing said grippers to simultaneously carry a series of threads transversely of the fabric, means for moving the grippers toward the plane of the fabrics, and means for moving the grippers longitudinally.

3. In a machine of the character described, the combination of means for supporting and feeding a fabric longitudinally, grippers, means for causing said grippers to simultaneously carry a plurality of threads transversely of the fabric, means for moving the grippers toward the

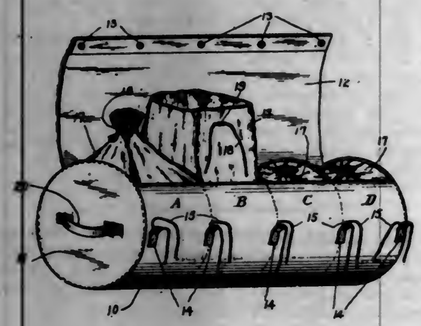
plane of the fabric to place the transverse threads held by the grippers into contact with the surface of the fabric, and means for moving the grippers longitudinally with and at the same speed as the fabric while still holding the transverse threads.

5. In a machine for reinforcing fabrics, the combination of means for feeding a fabric longitudinally, grippers, and means for moving said grippers in three directions, first, transversely of the fabric; second, toward the fabric; and third, longitudinally in the same direction as the fabric.

6. In a machine for reinforcing fabrics, the combination of means for feeding a fabric longitudinally, gripper means for taking a plurality of threads from a source of supply and placing them transversely to the surface of the fabric to be reinforced, means for moving said gripper means toward the surface plane of the fabric to place the threads in contact with the fabric, means for moving the gripper means with the fabric while still holding the transverse threads, and means to release the transverse threads from the grippers.

[Claims 6 to 38 not printed in the Gazette.]

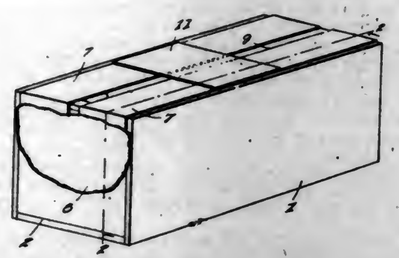
1,211,853. BAG. GURRY E. HUGGINS, Montclair, N. J. Filed Aug. 1, 1913. Serial No. 782,452. (Cl. 150—8.)



1. An article of manufacture of the character specified comprising a body portion constructed to constitute the sustaining portion of the bag, said body portion being relatively long and being provided with an open top, a flexible cover secured to said body portion, the securing portion extending longitudinally of said body portion whereby said flexible cover is adapted to extend over and close the open upper part of said body portion, means to draw said flexible cover over said upper portion and to secure the said cover in closed position, a partition extending cross-wise of the body portion to divide the said body portion into a plurality of compartments, individual compartment closures secured within the upper walls of the said compartments, said closures comprising flexible bag tops adapted to be tied and folded below the upper edge of said partition whereby the said flexible cover when positioned may rest upon the upper edge of the said partition, and carrying means on the ends of said body portion whereby the device may be conveniently transported.

2. As an article of manufacture a duffle bag comprising a relatively stiff body portion in substantially the form of the segment of a cylinder, substantially circular ends secured within said body portion, a plurality of partitions extending transversely of said body portion to divide the body portion into a plurality of compartments, flexible closures for said compartments comprising substantially individual flexible bag tops adapted to be tied and folded into said compartments, a flexible cover constructed to be drawn over and cover the said compartment closure bag tops, means for securing the said cover in position over the said bag tops, and suitable carrying devices constructed to enable said bag to be conveniently transported.

1,211,854. BALLOT-BOX. LEVIN J. HYSLUP, Keller, Va. Filed Jan. 8, 1916. Serial No. 71,052. (Cl. 232—4.)



1. In a ballot box structure, the combination of a ballot box body having ends, a removable cover for said box, said cover being provided with a slot to permit of the insertion of ballots within the box, a fabric strip, a sealing material for attaching the ends of said fabric strip to the ends of said ballot box, said fabric strip extending over the removable cover for preventing removal of the cover from the box, and a second fabric strip extending transversely across the cover and secured to said first named fabric strip, said second named fabric strip extending over said slot.

2. In a ballot box structure, the combination, of a ballot box body including ends and a removable cover, said ends being provided with a plurality of slots, a plurality of fabric strips, the ends of said strips being inserted through said slots, said strips extending longitudinally across said removable cover, a sealing material attached to the outer surfaces of the end of said box and engaging the ends of said fabric strips for securely sealing the fabric strips in place for preventing the removal of said cover.

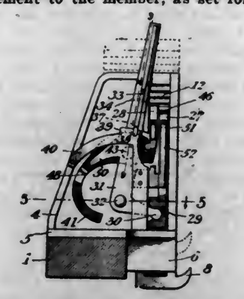
3. In a ballot box structure, the combination of a ballot box body including ends and a removable cover, said ends being provided with a plurality of slots, a plurality of fabric strips, the ends of said strips being inserted through said slots, said strips extending longitudinally across said removable cover, a sealing material attached to the outer surfaces of the ends of said box and engaging the ends of said fabric strips for securely sealing the fabric strips in place for preventing the removal of said cover, said cover being provided with a slot for permitting of the deposit of ballots within said ballot box, and a fabric strip secured to said first named fabric strips and extending over said slot.

1,211,855. TAPER ATTACHMENT FOR SAWMILL-CARRIAGES. WALTER M. INGRAM, Hollis Center, Me. Filed Jan. 22, 1914, Serial No. 813,726. Renewed June 29, 1916. Serial No. 106,588. (Cl. 143—122.)

1. A tapering attachment for saw mill carriages, comprising a standard which is chambered, a vertically disposed taper attachment member movable within the standard and having an under-hook dog thereon, a lever-actuated block engaging said member and designed to move the member laterally as the block is moved longitudinally, and means for imparting an upward intermittent movement to said member, as set forth.

2. A tapering attachment for sawmill carriages, comprising a standard which is chambered, a vertically disposed taper attachment member movable within the standard and having an under-hook dog thereon, the face of said member having a longitudinal recess, a block movable within said recess, a lever having pivotal link connections with said block, means for imparting a lateral movement to the member as the block is moved longitudinally, and means for imparting an upward intermittent movement to said member, as set forth.

3. A tapering attachment for sawmill carriages, comprising a standard which is chambered, a vertically disposed taper attachment member movable within the standard and having an under-hook dog thereon, the face of said member having a longitudinal recess, a block movable within said recess, the wall of the standard having diagonally disposed slots therein, projections upon said block movable within said slots, a pivoted lever upon the standard and having pivotal link connections with one of said projections, and means for imparting an intermittent upward movement to the member, as set forth.

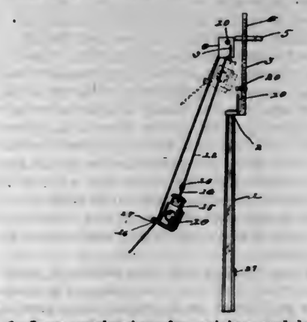


4. A tapering attachment for sawmill carriages, comprising a standard which is chambered, a vertically disposed taper attachment member movable within the standard and having an under-hook dog thereon, the face of said member having a longitudinal recess, a block movable within said recess, the wall of the standard having diagonally disposed slots therein, projections upon said block movable within said slots, a pivoted lever upon the standard and having pivotal link connections with one of said projections, a pawl pivoted to said lever, a segment with notches therein for engagement with said pawl, and means for imparting an upward intermittent movement to the member, as set forth.

5. A tapering attachment apparatus for sawmill carriages, comprising a standard which is chambered, a taper attachment member mounted within said chamber, means for imparting a lateral movement to said member, the face of the taper member having a series of ratchet-teeth and an under-hook dog at the lower end thereof, a pivoted lever upon the standard, a pawl engaged by an arm of said lever and designed to engage said ratchet teeth, a second pawl and a pivotal member connected therewith and adapted to be actuated by said lever, said pawls being designed to be thrown out of engagement with the ratchet teeth as the lever approaches its limit in one direction, as set forth.

[Claims 6 to 12 not printed in the Gazette.]

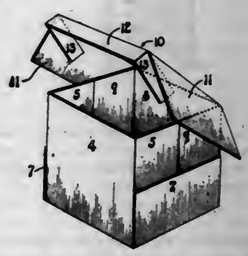
1,211,856. MECHANISM FOR RAISING AND LOWERING LANTERNS. AVY V. JOHNS, Forsyth, Mont., assignor of one-half to Thomas A. Davis, Findlay, Ill. Filed Apr. 19, 1916. Serial No. 92,258. (Cl. 240—63.)



1. In a mechanism for raising and lowering lanterns, the combination with a suitable support, a vertical staff carried thereby, an arm adjustably secured to said staff, a hood mounted on one end of said arm and having a pulley secured therein, and a cord passing over said pulley and having one end secured to the bail of the lantern to be raised and the other end free and passing through a guide mounted on the body of the lantern.

2. In a mechanism for raising and lowering lanterns, the combination with a suitable support, a lantern engaging bracket carried thereby, a vertical staff mounted on said support, an adjustable arm carried by said staff and having a hood mounted on its outer end, a pulley journaled in said hood, a cord passing over said pulley and having one end secured to the lantern to be raised and the other end free and passing through a guide mounted on the lantern, a cleat on the lantern for engaging the bracket on said support, and means carried by the vertical staff for guiding said cleat to cause its engagement with the bracket.

1,211,857. PAPER BOX. HENRY A. JOHNSON, Kansas City, Mo. Filed Oct. 22, 1915. Serial No. 57,244. (Cl. 229—37.)



1. A paper box having front and rear panel members forming the front and rear walls of the box, a bottom panel member forming the bottom of the box, a closure in the form of a panel hinged to said rear panel member to constitute the top of the box, side flaps extending from said closure, and side flaps extending from said front, rear and bottom panel members, said side flaps being folded to constitute the side walls of the box, said closure having a front flap which laps the upper portion of said front panel, and said front flap being provided at its ends with foldable extensions which extend backwardly and lie within the side walls of the box at points between the side flaps of the closure panel and the side flaps of said front panel member.

2. A paper box having front and rear panel members forming the front and rear walls of the box, a bottom panel member forming the bottom of the box, a closure in the form of a panel hinged to said rear panel member to constitute the top of the box, side flaps extending from said closure, and side flaps extending from said front, rear and bottom panel members, said side flaps being folded to constitute the side walls of the box, the side flaps of the front and rear panels being provided with vertical edges which abut against each other, said closure having a front flap which laps the upper portion of said front panel, and said front flap being provided at its ends with foldable extensions which extend backwardly and lie within the side walls of the box at points between the side flaps of the closure panel and the side flaps of said front panel member.

1,211,858. DOMESTIC WATER-HEATER. OLE S. JOHNSON, St. Paul, Minn. Filed Mar. 9, 1915. Serial No. 13,292. (Cl. 122—16.)

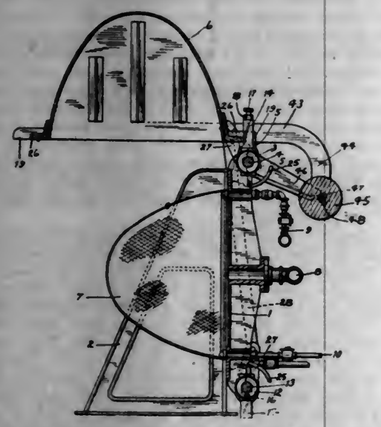
In a device of the kind described, in combination an upright central tank, a concavo-convex bottom in said tank having its concave side lowermost, a screw shaped fire box secured to the bottom and having its convolutions of uniform diameter, said fire box terminating, at its upper end, in a tubular portion, a vertical tubular flue projecting into said tubular portion, a screw shaped boiler having its convolutions of uniform diameter dis-

posed concentrically in said fire box, a nipple formed at the upper end of said boiler, a hot water pipe secured in said nipple, a worm baffle resting upon said nipple and extending around the length of said hot water pipe, an



inlet pipe projecting through said bottom and having a vertical pipe connection secured in the bottom of said boiler, and a supply pipe extending into said tank and secured to the upper end thereof.

1,211,859. FILTER. HERBERT N. KILBY, Cleveland, Ohio. Filed Aug. 31, 1915. Serial No. 48,166. (Cl. 220—124.)



1. A locking structure for a two-part filter casing, one of which is movable with respect to the other comprising a locking member adapted to lock the parts of said casing together, toggle lever means operable to first move said member to a locking position and then move it laterally into holding engagement with the casing, and means for keeping said toggle uncramped until said locking member has assumed a locking position.

2. A locking structure for a two-part filter casing, one of which is movable with respect to the other comprising a locking member adapted to lock the parts of said casing together, said member being formed with a slotted pivot opening, a pivot support coöperating with said opening, and means whereby said member is swung about its support to assume a locking position and then moved laterally in the direction of the slotted opening into holding engagement with the casing.

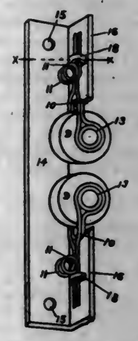
3. A locking structure for a two-part filter casing one of which is movable with respect to the other comprising a pivotally supported locking member, and toggle lever means operable to first swing said member about its pivot into a locking position and then move it laterally into holding engagement with said casing.

4. A locking structure for a two part filter casing, one of which is movable with respect to the other, and means for locking said two parts together comprising a pivotally supported locking member carried by one of said parts and adapted to engage the other part, and toggle lever means for actuating said member to first move it laterally to release its holding engagement and then to swing it about its pivot away from said second named part.

5. A locking structure for a two part filter casing, one of which is movable with respect to the other, comprising a locking member carried by one of said parts and adapted to engage the other part, and toggle lever means for actuating said member to first swing it into a locking position and then to straighten said toggle to bring it into clamping engagement with said second named part.

[Claims 6 to 11 not printed in the Gazette.]

1,211,860. ANTIRATTLING DEVICE. JOHN KIRBY, Jr., Dayton, Ohio, assignor to The Dayton Manufacturing Company, Dayton, Ohio. Filed June 17, 1916. Serial No. 104,258. (Cl. 16—54.)

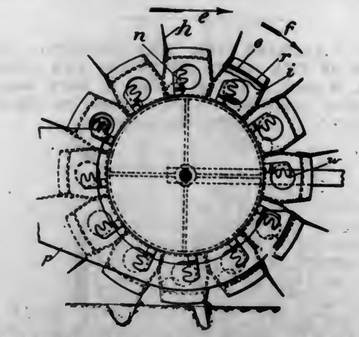


1. In an anti-rattling device, the combination of a face-member, a roller-frame secured at one end thereof to the face-member and consisting of a single piece of spring wire formed to constitute two parallel side members and a transverse member located approximately midway of the ends of the frame and by which the side members are spaced apart to receive a roller, a loop formed in each of the side members at the free ends thereof, a pintle whose ends engage said loops and are secured therein to the side members, and a roller mounted on the pintle and adapted to revolve thereon between the side members forward of the transverse member.

2. In an anti-rattling device, the combination of a face-member, a roller-frame secured at one end thereof to the face-member and consisting of a single piece of spring wire formed to constitute two parallel side members and a transverse member located approximately midway of the ends of the frame and by which the side members are spaced apart to receive a roller, a loop formed in each of the side members at the free ends thereof, a pintle whose ends engage said loops and are secured therein to the side members, a roller mounted on the pintle and adapted to revolve thereon between the side members forward of the transverse member, a coil formed in each side member to impel a forward movement to the frame, and means for limiting said movement.

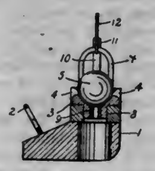
3. A new article of manufacture comprising a roller-frame for an anti-rattling device consisting of a single piece of spring wire formed to constitute two parallel side members and a transverse member located approximately midway of the ends of the frame and by which the side members are spaced apart to receive a roller, each of said side members having a loop adapted to receive a pintle for supporting a roller and a coil to impel a forward spring action to the frame.

1,211,861. POTATO-PLANTER. WILHELM LIPPITZ, Posen, Germany, assignor to the Firm of Gebrüder Lesser, Posen, Germany. Filed Apr. 29, 1915. Serial No. 24,839. (Cl. 111—27.)



In a potato planter the combination, with a feeding wheel, of pockets, each adapted to receive one potato and adapted to be removably and adjustably secured to the rim of said wheel at certain predetermined distances, spades and grippers for each of said pockets, and a partition within each of said pockets provided with a discharge opening for the potato, located at that side of the pocket on which the spade is disposed.

1,211,862. TENSION APPARATUS FOR YARN-WINDING FRAMES AND THE LIKE. WILLIAM LISTER, Nelson, England. Filed Oct. 27, 1915. Serial No. 58,199. (Cl. 242—151.)



In tension apparatus of the ball drag type for yarn winding frames and the like, a notched block forming a seat for the ball and having a central downwardly directed opening lined with a ring or tube of a resilient material such as rubber,

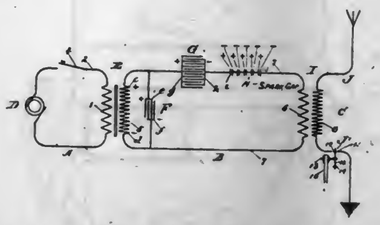
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1,211,863. APPARATUS FOR AND METHOD OF PRODUCING HIGH-FREQUENCY CURRENTS OF ELECTRICITY. DAVID G. MCCAA, Lancaster, Pa. Filed Sept. 24, 1913. Serial No. 791,547. (Cl. 250—37.)

1. In a system for producing and transmitting continuous electrical oscillations of high frequency a source of electrical supply, a condenser of small capacity in shunt with such source of supply, a multiple spark gap, a condenser of large capacity in series with said multiple spark gap, and a transmitting circuit.

2. In a system for producing and transmitting continuous electrical oscillations of high frequency a source of electrical energy and a condenser of small capacity in shunt therewith, a multiple spark gap and a condenser of capacity exceeding twice the capacity of the shunt condenser in series with said multiple spark gap, and a transmitting circuit.

3. An oscillatory circuit including the secondary of a step up transformer, a condenser of small capacity in shunt with said secondary, a multiple spark gap and a condenser of capacity exceeding twice the capacity of the shunt condenser, said larger condenser arranged in series with the multiple spark gap, the secondary of the step up transformer and the primary of an air core transformer also included in said oscillatory circuit, in combination with a transforming circuit which includes the secondary of the air core transformer, and with an energy generating circuit which includes the primary of the step up transformer with which said small condenser is in shunt.



4. In a system for producing and transmitting continuous electrical oscillations of high frequency the combination of an oscillatory circuit including the secondary of a step up transformer, a condenser in shunt with said secondary and a condenser in series with said secondary and with a multiple spark gap which is also included in said oscillatory circuit, said series condenser having a capacity which exceeds the capacity of the shunt condenser by a ratio that would with a given supply current cause an arc to form in a single spark gap if such were to be substituted for the multiple gap, with a generating circuit including the primary of the step up transformer and a source of electrical supply, and with a transmitting circuit.

5. An oscillatory system, a generator of electricity in circuit with said oscillatory system, a plurality of condensers of unequal capacities included in said oscillatory system, a multiple spark gap comprising a plurality of independent conductive elements included in said oscillatory system in series with the condenser of largest capacity therein included, a transmitting system, and means to cause discharge of the condensers across said spark gap to actuate devices to continually energize said transmitting system.

[Claims 6 to 12 not printed in the Gazette.]

1,211,864. COMBINATION COAL AND GAS STOVE. JAMES MCGOVERN, Taunton, Mass., assignor to The White-Warner Company, Taunton, Mass., a Corporation of Massachusetts. Filed June 19, 1916. Serial No. 104,372. (Cl. 126—36.)

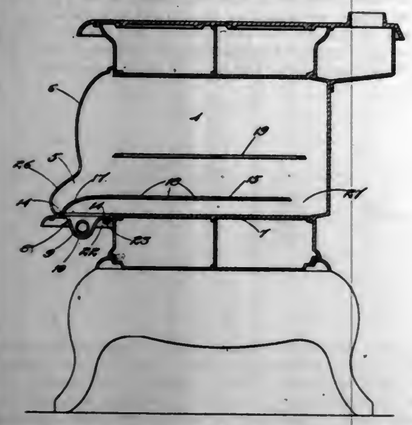
1. A combined coal and gas stove having an oven shelf secured to the front part of the oven bottom and projecting outside of the body of the stove, said oven shelf being formed with a trough-shaped depression to receive a gas burner, said depressed portion having a plurality of slots in its bottom and having an end opening to receive a gas pipe, said shelf also having a flange portion which extends forwardly of said depressed portion.

2. A combined coal and gas stove having an oven shelf detachably secured to and suspended from the main front part of the stove and level with the oven bottom and projecting outside of the body of the stove, and formed with a trough-shaped pocket or depression to receive a gas burner, said pocket having an open top adapted to open into the oven and having in its wall vent openings and an opening to admit a gas burner pipe.

3. An attachment for a coal burning range whereby said range may be converted into a gas burning range, said attachment consisting of an oven shelf formed with a pocket in its upper face, open at the top and having vent openings in its wall and an opening to admit a gas burner pipe and means for securing said shelf to the front part of the oven bottom outside of the body of the stove.

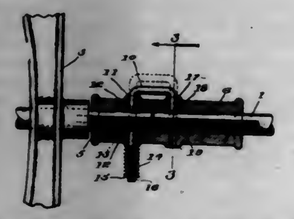
4. A combined coal and gas stove having an oven shelf secured thereto which serves also as a gas burner holder, said oven shelf being formed with a trough-shaped de-

pressed portion integral therewith formed with vent openings and with an opening in one end of said depressed portion to admit a gas burner pipe, said shelf also having



a flange portion which extends outwardly and downwardly at the front and ends of the upper part of said depressed portion.

1,211,865. SHAFT-COUPLING FOR REELS. RICHARD E. MCINTIRE, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed May 17, 1913. Serial No. 768,343. (Cl. 64—13.)



1. In a reel support, a frame, a power shaft journaled thereon, a sleeve protruding beyond the end of said power shaft, a reel shaft seated in said sleeve, said shafts and sleeve having registering openings therein, and a U-shaped member for attaching said reel shaft to said power shaft having arms of different lengths reciprocable through the registering openings in said shafts and sleeve.

2. In a reel support, a frame, a power shaft journaled thereon, a sleeve carried on said power shaft, a reel shaft seated in said sleeve, said shafts and sleeve having registering openings therein, and a transversely movable spring-pressed member normally locking said reel shaft to said power shaft having arms of different lengths reciprocable in the registering openings in said shafts and sleeve.

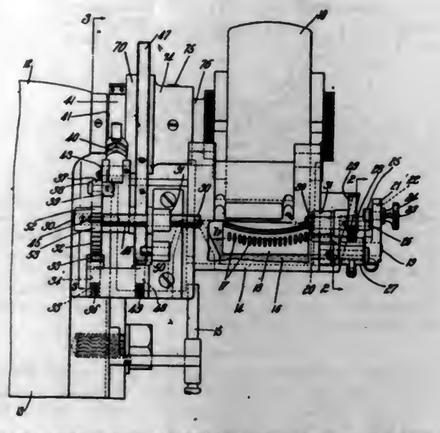
3. In a reel support, a frame, a power shaft journaled thereon, a sleeve fixed to said power shaft, a reel shaft carried in said sleeve and splined thereto having a transversely disposed opening therein, and a transversely movable spring pressed member carried by said sleeve having a portion thereof normally seated in the opening in said reel shaft and locking the latter to said sleeve.

4. In a reel support, a frame, a power shaft journaled therein, a sleeve carried on the end of said power shaft, a reel shaft receivable in said sleeve and having an opening in its end, and a substantially U-shaped spring pressed locking member protruding transversely through said sleeve and power shaft and having a projection normally seated in the opening in said reel shaft.

5. In a reel support, a frame, a power shaft carried thereon, a sleeve inclosing said power shaft and protruding beyond the end thereof, a reel shaft seated in the open end of said sleeve, reciprocal means for locking said power shaft and sleeve against relative rotation, and operable without interruption of their locking function for locking said reel shaft against longitudinal separation from said power shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,211,866. MACHINE FOR WAX-FINISHING THE EDGES OF THE HEELS OF BOOTS AND SHOES. CARL A. MATSON, Lynn, and ALBERT M. HOYT, Swampscott, Mass. Filed Sept. 5, 1914. Serial No. 860,347. (Cl. 51—7.)



1. A machine for wax finishing the edges of the heel of a boot or shoe having, in combination, a rotary work-rubbing member, a receptacle for wax, a plurality of fingers arranged to project into wax in said receptacle and mechanism adapted to intermittently move said fingers from said wax into and out of contact with the periphery of said work-rubbing member.

2. A machine for wax finishing the edges of the heel of a boot or shoe having, in combination, a rotary work rubbing member having a periphery curved in cross section, a receptacle for wax, a plurality of fingers arranged in series in a curve substantially like that of said periphery and mechanism adapted to intermittently move said fingers from said wax into and out of contact with the periphery of said work rubbing member.

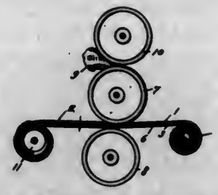
3. A machine for wax finishing the edges of the heel of a boot or shoe having, in combination, a rotary work rubbing member, a receptacle for wax, a plurality of spring fingers arranged to project into wax in said receptacle and mechanism adapted to intermittently move said fingers from said wax into and out of contact with the periphery of said work rubbing member.

4. A machine for wax finishing the edges of the heel of a boot or shoe having, in combination, a rotary work rubbing member, a receptacle for wax, a rock-shaft, a plurality of fingers adapted to be adjusted at different angles on said rock-shaft and arranged to project into wax in said receptacle and mechanism adapted to intermittently move said fingers from said wax into and out of contact with the periphery of said work rubbing member.

5. A machine for wax finishing the edges of the heel of a boot or shoe having, in combination, a rotary work rubbing member, a receptacle for wax, a plurality of fingers arranged to project into wax in said receptacle, mechanism adapted to intermittently move said fingers from said wax into and out of contact with the periphery of said work-rubbing member and means to vary the number of times per minute that said fingers are brought into and out of contact with said work rubbing member.

[Claims 6 to 15 not printed in the Gazette.]

1,211,867. TIRE-PATCH AND THE PROCESS OF MAKING THE SAME. JOSEPH G. MOOMY, Erie, Pa. Filed Sept. 2, 1916. Serial No. 118,216. (Cl. 154—2.)

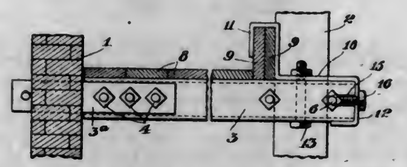


1. A tire patch formed of a layer of non-vulcanizing stock; a layer of vulcanizing stock next the layer of non-vulcanizing stock; a facing of fabric on the outer face of the non-vulcanizing layer; and a layer of fabric on the vulcanizing layer, said layers being united by heat as the vulcanizing layer is vulcanized, the fabric on the face of the non-vulcanizing layer being detachably secured to said non-vulcanizing layer and the fabric on the vulcanizing layer being permanently secured to the vulcanizing layer.

2. A tire patch formed of a layer of non-vulcanizing stock; a layer of vulcanizing stock next the layer of non-vulcanizing stock; a facing of glazed fabric on the outer face of the non-vulcanizing layer; and a layer of fabric on the vulcanizing layer, said layers being united by heat as the vulcanizing layer is vulcanized, the fabric on the face of the non-vulcanizing layer being detachably secured to said non-vulcanizing layer and the fabric on the vulcanizing layer being permanently secured to the vulcanizing layer.

3. The process of forming tire patches which consists in placing in contact a fabric; a layer of non-vulcanizing rubber; a layer of vulcanizing rubber; and a fabric, in the order named; winding the same on an interior support; subjecting the same to a vulcanizing heat, vulcanizing the vulcanizing layer; and sealing the edge of the winding by cutting back the fabric next the non-vulcanizing layer so that said non-vulcanizing layer will adhere to the preceding layer of the winding.

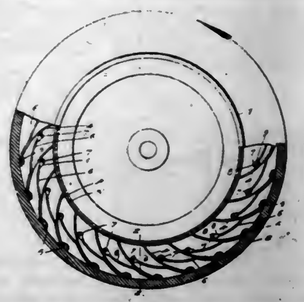
1,211,868. SCAFFOLDING. GEORGE MOHR, New York, and JOHN PETTIGREW, Brooklyn, N. Y. Filed Mar. 6, 1916. Serial No. 82,287. (Cl. 20—88.)



1. The combination, in demountable scaffolding, of a number of uprights, spaced apart from a building wall, a metal channel extending, edgewise, between each upright and said wall, a detachable clamp uniting each upright and channel, lapped skirting boards supported, edgewise, upon said channels, alongside said uprights, and metal straps having right angularly arranged hooks at their ends, to respectively engage said skirting boards and channels.

2. In combination, a series of uprights, a series of horizontally arranged metal channels connecting said uprights to a building wall, a series of lapped skirting boards, and a metal strap secured to each channel, one end of said strap being hook shaped to engage said lapped boards, and its other end being hook shaped to engage the free end of said channel, and means for drawing said members tensionally together.

1,211,869. RESILIENT TIRE. HENRY A. NAYLOR, Valparaiso, Chile. Filed June 22, 1916. Serial No. 105,187. (Cl. 152—8.)



In a resilient tire structure, the combination with a wheel rim and a tire shoe mounted upon said rim, of a band extending circumferentially about said rim, a plurality of resilient arcuate arms connected to said band and extending outwardly therefrom, the outer ends of said arms being rolled for presenting curved surfaces to the inner surface of the tire shoe, bracing arms secured to said arcuate arms a short distance inwardly from their rolled ends, said bracing arms abutting the rear surface of said arcuate arms for substantially one-third of the length of the arcuate arms and extending tangentially therefrom toward the arcuate arms next to the ones to which they are connected, and rollers carried by the free ends of said bracing arms and engaging the concaved surfaces of the arcuate arms.

1,211,870. TOY GUN. GEORGE W. NEWTON, Newton, Iowa, assignor to W. P. Johnson, Des Moines, Iowa. Filed Jan. 11, 1916. Serial No. 71,445. (Cl. 46—46.)



1. In a toy gun, a shell, a bell in said shell, a plate adapted to fit within the shell and be secured thereto, and an operative mechanism for striking said bell mounted on said plate.

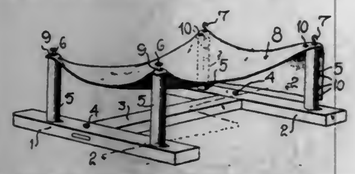
2. In a toy gun, a shell, a plate adapted to fit within said shell, a bell, means for securing said bell to said plate and to the wall of said shell, and an operative mechanism mounted on said plate for striking said bell.

3. In a toy gun, a hollow shell made in parts adapted to be secured to each other, a plate adapted to be mounted within said hollow shell, a bell, means for securing said bell to said plate and to the wall of said shell, and operative mechanism mounted on said plate adapted to strike and ring said bell, having a part projecting through said shell.

1,211,871. PILLOW. JOHN M. PEOPLES, Harrisburg, Pa. Filed Mar. 15, 1916. Serial No. 84,398. (Cl. 5—15.)

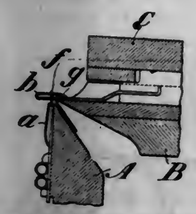
1. A pillow of the character described comprising end bars, a spacing bar for connecting said end bars and holding the same in rigid spaced relation, said connecting bar

being arranged intermediate the ends of the end bars, uprights carried adjacent the ends of each of said end bars, removable headed pins carried adjacent the upper ends of the uprights of one end bar, hooks carried adjacent the upper ends of the uprights of the other end bar, a support, eyelets secured to said support adjacent one end and near its longitudinal edges for engagement with the pins of the first mentioned uprights, other eyelets secured to said support near its opposite end and in spaced relation along its longitudinal edges, said eyelets being adapted for engagement with the hooks of the last mentioned uprights for the purpose set forth.



2. A pillow of the character described comprising a frame, said frame including end bars provided substantially midway their lengths with openings, a spacing bar having its end portions removably insertible within the openings of the end bars, removable pins disposed through the end bars and the end portions of the spacing bar for holding said end bars and spacing bar in assembled relation, uprights carried by the end bars, and a head support engageable with the uprights.

1,211,872. KNITTING-MACHINE. CHARLES H. PERKINS, Laconia, N. H., assignor to Crane Manufacturing Company, Lakeport, N. H., a Corporation of New Hampshire. Filed May 8, 1916. Serial No. 96,081. (Cl. 66—22.)



1. An independent needle circular knitting machine having a main set of spring beard needles and a set of ribbing spring beard needles, in combination with a yarn feed supplying yarn to the main needles, a draw cam for the main needles, and a draw cam for the ribbing needles, the relative location of said draw cams being such that the main needles are drawn down beneath the ribbing needles while the ribbing needles are moving outwardly and before the beards of the ribbing needles pass outwardly beyond the main needles so that the yarn drawn downwardly by the main needles lands upon the spring beards of the ribbing needles.

2. An independent needle circular knitting machine having a main set of spring beard needles and a set of ribbing spring beard needles, in combination with a yarn feed supplying yarn to the main needles, a draw cam for the main needles, a throw out cam and a draw cam for the ribbing needles, said cams for the ribbing needles acting to give but one throw out travel and one draw in travel at each knitting operation and the said draw cams for the main and ribbing needles being relatively located so that the main needles are drawn down beneath the ribbing needles while the ribbing needles are moving outwardly and before the beards of the ribbing needles pass outwardly beyond the main needles so that the yarn drawn downwardly by the main needles first lands upon the spring beards of the ribbing needles and subsequently upon the shanks of the ribbing needles as the said ribbing needles complete their outward movement.

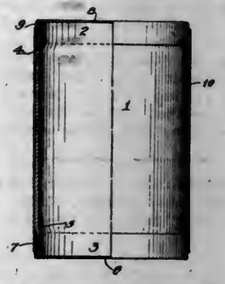
3. An independent needle circular knitting machine having a main set of spring beard needles, a set of ribbing spring beard needles, and a fixed cap plate within the circle of main needles, in combination with a bearing fixed to said cap plate, a presser acting upon the spring beards of the ribbing needles as they are drawn inwardly to cast off the old loops, such presser consisting of a plate the lower edge of which acts upon the beards of the ribbing needles and a horizontal rock shaft turning in said bearing, and a spring acting upon the rock shaft and causing the presser to yieldingly bear upon the beards of the ribbing needles.

4. An independent needle circular knitting machine having a main set of spring beard needles and a set of ribbing spring beard needles, a yarn feed which feeds yarn to the main needles, a throw out cam for the ribbing needles, and a presser bearing upon the beards of the ribbing needles as they are drawn in to cast off the old loops, in combination with a yarn guard located between the said yarn feed and said presser, and a spring acting upon the yarn guard causing it to press yieldingly upon the beards of the outwardly moving ribbing needles, the bearing edge of said presser being located in substantially the same plane as the shanks of the main needles.

5. An independent needle circular knitting machine having a main set of spring beard needles and a set of ribbing spring beard needles, a yarn feed which feeds yarn to the main needles, a throw out cam for the ribbing needles, a presser bearing upon the beards of the ribbing needles as they are drawn in to cast off the old loops, in combination with a yarn guard located between the said yarn feed and said presser, and a spring acting upon the yarn guard causing it to press yieldingly upon the beards of the outwardly moving ribbing needles.

[Claim 6 not printed in the Gazette.]

1,211,873. FIBER-BOARD CONTAINER. JONATHAN PETERSON, Brooklyn, N. Y., assignor to Combination Machine Company, a Corporation of Delaware. Filed Mar. 21, 1916. Serial No. 85,542. (Cl. 229—12.)



1. As a new article of manufacture, a container comprising a shell of compressible material having one end portion thereof compressed to produce an inwardly off-set neck, a cap having a flange fitting over the off-set neck of the shell and permanently secured thereto and a removable cap for the opposite end of the shell, said removable cap having a flange of less thickness than the flange of the first-mentioned cap, the outer surfaces of both flanges lying in a perimeter of equal radius when the caps are applied to the shell.

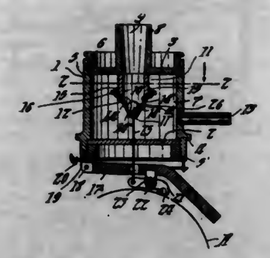
2. As a new article of manufacture, a container comprising a cylindrical shell of compressible material, having one end portion thereof compressed to produce an inwardly off-set tapered neck, a cap also of compressible material having a tapered compressed flange fitting over the neck of the shell and permanently secured thereto, said flange being tapered reversely to the taper of the neck of the shell, and a removable cap for the opposite end of the shell having a flange of less thickness than the flange of the first mentioned cap, the outer surfaces of both cap flanges lying in a perimeter of equal radius when the caps are applied to the ends of the shell.

3. As a new article of manufacture, a container comprising a cylindrical shell of fibrous material, one end of said shell being compressed to form an inwardly off-set neck, a fibrous cap adapted to be permanently attached to said neck, and having a flange fitting said neck, and a removable metallic cap for the opposite end of the shell having a flange the outer surface of which lies in a perimeter of the same radius as the perimeter of the flange of the fibrous cap when the caps are applied to the ends of the shell.

4. As a new article of manufacture, a container comprising a cylindrical shell of fibrous material having heads with flanges closing the ends of said shell, at least one of said heads being of fibrous material, the said shell having the material at one end thereof compressed to provide a reduced neck adapted to receive the flange of one of said heads, said flanges having their outer faces substantially in alinement with each other and with the outer face of said shell.

5. As a new article of manufacture, a container comprising a cylindrical shell of fibrous material having heads with flanges closing the ends thereof, at least one of said heads being of fibrous material, the said shell having the material at one end thereof compressed to provide a neck of less thickness than the main body portion of the shell, said neck being adapted to receive the flange of one of said heads, the adjacent contacting walls of the said neck and flange respectively being correspondingly inclined, the outer peripheral faces of the flanges at the opposite ends of the shell lying in substantially the plane of the outer peripheral surface of the body of the shell.

1,211,874. PHONOGRAPH-REPRODUCER. ALEXANDER N. PIERMAN, Newark, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed July 19, 1913. Serial No. 779,917. (Cl. 274—6.)



1. In a phonograph reproducer, the combination of a hollow body having a port, a valve for said port, and means comprising a member movable along the face of said valve to shift the latter relatively to said port for varying the extent of opening of said port, substantially as described.

2. In a phonograph, the combination of a hollow body having a port, a flexible valve for said port, and means arranged to flex said valve by wedging action thereon to vary the extent of opening of said port in accordance with sound vibrations, substantially as described.

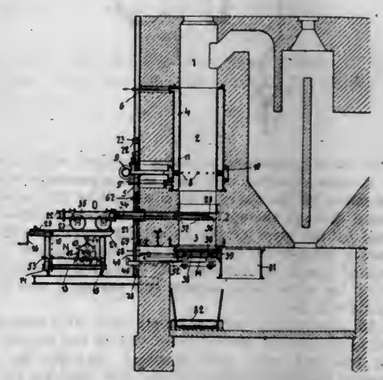
3. In a phonograph, the combination of a hollow body having a port, a flexible valve of high elasticity for said port, and means arranged to flex said valve by wedging action thereon to vary the extent of opening of said port in accordance with sound vibrations, substantially as described.

4. In a phonograph, the combination of a hollow body having a port, a flexible glass valve for said port, and means arranged to flex said valve by wedging action thereon to vary the extent of opening of said port in accordance with sound vibrations, substantially as described.

5. In a phonograph reproducer, the combination of a hollow body adapted to permit the passage of fluid therethrough, a plurality of valves inclined to each other for controlling the passage of fluid through said body, and means comprising a single member coacting with said valves for operating the latter by wedging action thereon to impress on the fluid passing through said body vibrations corresponding to sound waves, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,211,875. FURNACE FOR BURNING REFUSE. WALTER PIERNAY, Stettin, Germany, assignor to Stettiner Chamotte-Fabrik Actien-Gesellschaft Vormals Didier, Stettin, Germany. Filed May 16, 1914. Serial No. 839,129. (Cl. 110—8.)



1. In a furnace for burning refuse, the combination of a shaft; a removable sole at the bottom of the shaft; a carriage in front of the shaft; a slag cutting device on said carriage and comprising a part adapted to be projected into the shaft; and a means carried on the carriage for operating the sole.

2. In a furnace for burning refuse, the combination of a shaft; a removable sole closing the bottom of said shaft; a carriage; a slag cutting device on said carriage and adapted to be moved toward said shaft; a rack on said carriage; an arm removably connecting said sole and rack; and means carried on said carriage and operatively engaging said rack.

3. In a furnace for burning refuse, the combination of a shaft; a removable sole closing the bottom of said shaft; a carriage; a slag cutting device on said carriage and adapted to be moved toward said shaft; a rack on said carriage; an arm removably connecting said sole and rack; a pinion on said carriage engaging said rack; and means carried by the carriage for operating the pinion.

4. In a furnace for burning refuse, the combination of a shaft; a removable sole closing the bottom end of said shaft; a frame carrying said sole; wheels carrying said frame; and means carried with said wheels and adapted to move the center of said wheels and thus to raise and lower said sole.

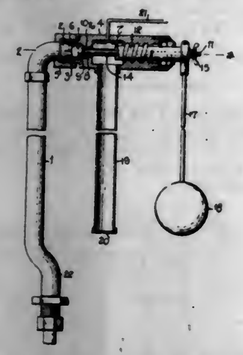
5. In a furnace for burning refuse, the combination of a shaft; a removable sole closing the bottom end of said shaft; a frame carrying said sole; wheels carrying said frame; and eccentrics adapted to move the center of said wheels and thus to raise and lower said sole.

[Claim 6 not printed in the Gazette.]

1,211,876. VALVE. BINGHAM S. PRICE, Rawlins, Wyo. Filed Sept. 15, 1915, Serial No. 50,850. Renewed Aug. 2, 1916. Serial No. 112,840. (Cl. 137—104.)

1. A valve comprising a casing provided with a valve seat, a valve coacting with said seat, a rotatable operating member for the valve, a stem carried by the valve and disposed through the operating member from end to end, means adjustably carried by the stem of the valve and coacting with the operating member for imparting end-

wise movement to the stem, and means for rotating the operating member.

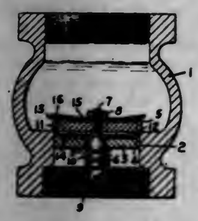


2. A valve comprising a casing provided with a valve seat, a valve coacting with said seat, a rotatable operating member for the valve, a stem carried by the valve and disposed through the operating member, means adjustably carried by the stem of the valve and coacting with the operating member for imparting endwise movement to the stem, and means for rotating the operating member, said stem of the valve being hollow and having a port in its end adjacent the valve.

3. In combination with a supply pipe, of a casing secured upon the end thereof, said end of the supply pipe being provided with slots disposed through the wall thereof, a valve for controlling the flow through the casing, an operating member rotatably supported within the casing, a stem carried by the valve and disposed through the operating member and capable of movement independently thereof, and a means carried by the stem and coacting with the operating member for imparting endwise movement to the stem.

4. A valve of the character described comprising a casing, a valve therein for controlling the flow therethrough, an operating member for the valve, a stem carried by the valve and disposed through the operating member, said stem being provided with a channel, and means carried by the stem coacting with the operating member for controlling the position of the valve relatively to the operating member.

1,211,877. FOOT OR CHECK VALVE. MARTIN JOSEPH QUINN, Toronto, Ontario, Canada. Filed Nov. 18, 1915. Serial No. 62,150. (Cl. 103—66.)



1. In a valve of the class described, a lower valve seat, such seat having annular flanges forming an upper valve seat, a valve head co-acting with said lower seat, said flanges projecting beyond the main upper surface of the valve head, and a flexible washer co-acting with the upper seat.

2. In a valve, the combination with an annular valve seat of a flexible washer having its outer edge portion bearing against the upper edge of the valve seat, means for supporting the central portion of the washer, and resilient means held on and projecting beyond the central portion for pressing the outer edge of the washer against its seat.

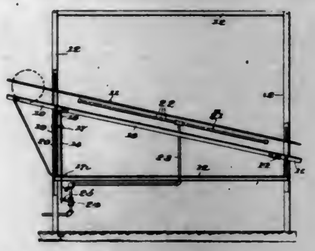
3. In a valve, the combination with an annular valve seat, of a valve head, a flexible washer bearing on the valve seat having the central portion thereof carried by the head, and spring fingers also carried by the head bearing against the upper face of the outer edge portion of the washer.

4. In a valve, the combination with a valve seat having an upper and lower seating surface, of a valve head coacting with the lower seat and having its upper face located below the face of the upper seat, a washer below the head, a flexible washer secured to the upper face of the head and extending radially beyond the outer periphery thereof, the extended end resting upon the upper face of the upper valve seat.

5. In a valve, the combination with a valve seat having an upper and lower seating surface, of a valve head co-acting with the lower seat and having its upper face located below the face of the upper seat, a washer below the head, a flexible washer secured to the upper face of the head and extending radially beyond the outer periphery thereof, the extended end resting upon the upper face of the valve seat, and spring means bearing upon the top of such extended end at independent points and means bearing upon the top of said washer.

[Claims 6 to 8 not printed in the Gazette.]

1,211,878. CAN-WASHING MACHINERY. ERNEST F. RASSMAN, Charlottesville, Va. Filed Sept. 30, 1916. Serial No. 123,054. (Cl. 141—7.)



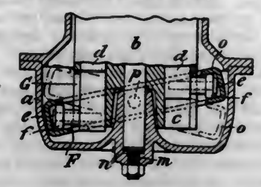
1. In a machine of the class described, the combination of a track along which the can part is adapted to move, a section of said track being movable into and out of alinement with the remainder, a pipe having an outlet adjacent said movable section, a valve in said pipe, and a connection between said valve and said movable section for transmitting movement from the latter to the valve to operate it.

2. In a machine of the class described, the combination of an inclined track along which the can part is adapted to move, a section of said track being movable into and out of alinement with the remainder, a pipe having an outlet adjacent said movable section, a valve in said pipe, and a connection between said valve and said movable section for transmitting movement from the latter to the valve to operate it.

3. In a machine of the class described, the combination of a track having upwardly extending separated guide flanges, a pair of guide rails spaced apart above said track along which the can part is adapted to move, a section of said track being movable into and out of alinement with the remainder, a pipe having an outlet adjacent said movable section, a valve in said pipe, and a connection between said valve and said movable section for transmitting movement from the latter to the valve to operate it.

4. In a machine of the class described, the combination of a track having upwardly extending separated guide flanges, a pair of guide rails spaced apart above said track along which the can part is adapted to move, said track having a pointed section upon which said section is adapted to swing, a pipe having a series of nozzles extending alongside of the swinging section of the track, a valve in said pipe, a rod connecting said section and the valve to operate the latter, and a spring acting normally to move said swinging section into alinement with the remainder of the track.

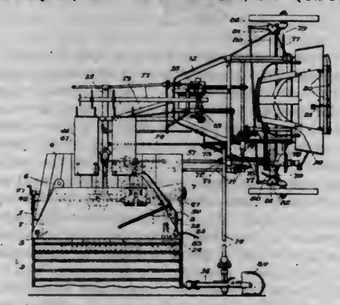
1,211,879. ROTARY PUMP OR BLOWER. JAMES ROBERTSON, Leytonstone, England. Filed Apr. 24, 1914. Serial No. 834,154. (Cl. 103—44.)



1. In a pump or blower of the kind described, the combination of a rotary drum provided with a plurality of longitudinal cylinders having open ends for the inlet and outlet of fluid and also having longitudinal slots, reciprocating pistons in each of said cylinders provided with radially extending studs, small rollers mounted on said studs and movable in said slots, a stationary casing within which the said drum is rotatably mounted and with one end of which the drum forms a fluid-tight working joint, curved passages provided in one end of the casing and communicating directly with the open ends of the cylinders, inlet and outlet branches tangential to and communicating with said passages, a channel shaped ring pivotally mounted in said casing, and large rollers provided upon the ends of said studs and traveling in said ring.

2. In a pump or blower of the kind described, the combination of a rotary drum provided with a plurality of longitudinal cylinders having open ends for the inlet and outlet of fluid, reciprocating pistons in each of said cylinders provided with radially extending studs, rollers mounted on said studs, a stationary casing within which the said drum is rotatably mounted and with one end of which the drum forms a fluid-tight working joint, curved passages provided in one end of the casing and communicating directly with the open ends of the cylinders, inlet and outlet branches tangential to and communicating with said passages, a channel shaped ring pivotally mounted in said casing in which the rollers travel, and means for rocking said ring.

1,211,880. SHOCKING-MACHINE. HORACE H. ROCKWELL, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed May 18, 1914. Serial No. 839,257. (Cl. 56—121.)



1. In a shocking machine, shock setting mechanism, and automatically acting means for varying the elevation thereof with respect to the ground set in operation by the grain being shocked.

2. In a shocking machine, a shock setting mechanism, and means for raising or lowering the same with respect to the ground automatically actuated by the grain being shocked upon an increased or decrease in length of the latter.

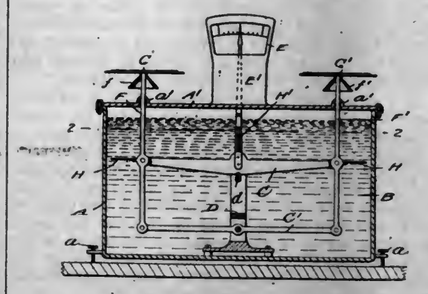
3. In a shocker, a shock receptacle, and means automatically controlled by the grain being shocked for automatically varying the elevation of said receptacle with respect to the ground.

4. In a shocking machine, a frame, a shock receptacle thereon, and means automatically set in operation by an increase in length of the grain being shocked for raising said receptacle with respect to the ground.

5. In a shocking machine, a frame; a shock receptacle thereon, and means automatically set in operation by a decrease in length of the grain being shocked for lowering said receptacle toward the ground.

[Claims 6 to 44 not printed in the Gazette.]

1,211,881. SCALE. GEORGE LORD RUSHTON, Omaha, Nebr. Filed Nov. 17, 1914. Serial No. 872,530. (Cl. 73—99.)



1. In a weighing scale, the combination of an inclosing casing adapted to contain a quantity of oil or similar fluid, balance beams disposed and supported within the casing below the level of the fluid therein, posts connected to the balance beams below the level of the oil and having their upper ends projecting vertically beyond the casing, weighing pans disposed upon the upwardly projecting ends of the posts above the casing, and a top secured upon the upper portion of the casing and through which the posts work, all for the purpose described.

2. The combination with the working parts of a scale, of a casing inclosing said working parts, a working fluid disposed within the casing and immersing the bearings of and connections between the said working parts, and resistance blades secured to certain of the working parts and movable in the fluid whereby to coöperate with the fluid to cushion and control movements of the said working parts, all substantially as described.

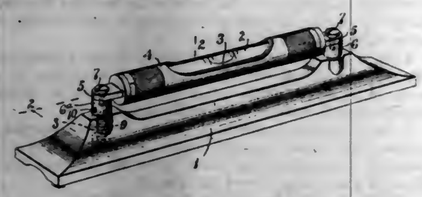
3. A scale, the working parts of which are immersed in a working fluid, and including a partly immersed indicator arm certain of which working parts and said indicator arm are provided with resistance blades working in the said fluid.

1,211,882. SPIRIT-LEVEL. EDMUND A. SCHADE, New Britain, Conn., assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed June 7, 1916. Serial No. 102,113. (Cl. 33—214.)

1. In a spirit level, a base, a bubble glass container mounted thereon and including a support for each end thereof, one of said supports comprising a screw threaded stud adjustable up and down by rotation in a screw threaded bore in said base, a spring arranged between said base and said adjustable stud to cause the screw threads to bind.

2. In a spirit level, a base, a bubble glass container mounted thereon and including a support for each end thereof, one of said supports comprising a screw threaded stud adjustable up and down by rotation in a screw threaded bore in said base, a spring arranged between said

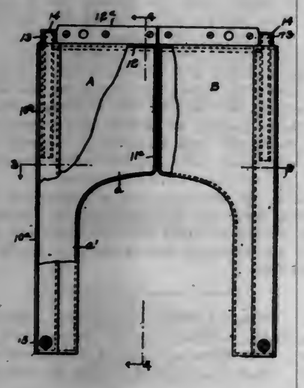
base and said adjustable stud to cause the screw threads to bind, said stud having a bore in its lower end, said spring projecting into said bore.



3. In a spirit level, a base, a bubble glass container mounted thereon and including a support for each end thereof, one of said supports comprising a screw threaded stud adjustable up and down by rotation in a screw threaded bore in said base, a spring arranged between said base and said adjustable stud to cause the screw threads to bind, and operative means of connection between the bubble glass and the upper end of said adjustable stud to coöperate with said spring in holding said stud against rotation when the parts are adjusted.

4. In a spirit level, a base, a bubble glass, a container therefor recessed at its upper side to expose the middle top side of said glass, two stud supports for the ends of said container, said supports being carried by said base, one of said supports comprising a threaded stud, the base having a corresponding threaded opening to receive said stud whereby said stud may be adjusted up and down by rotation, said stud having a bore in its lower end and a spiral spring seated in the bottom of the recess in the base at one end and in the bottom of the bore of the stud at the other end and means for securing said bubble glass container to the said supporting studs.

1,211,883. FURNACE-DOOR FRAME. LAWRENCE S. SCHMIDT, Pittsburgh, Pa., assignor to Schmidt-McCormick Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 5, 1915. Serial No. 54,129. (Cl. 122—497.)



1. A furnace door frame formed of independent vertically separable sections, each section comprising sheet metal plates welded together and including a hollow jamb, a portion of the head or body, and a door guide, said sections having means adjacent the upper ends thereof for maintaining the sections in alinement.

2. A furnace door frame formed of independent vertically separable sections, each section comprising sheet metal plates welded together and including a hollow jamb, a portion of the head or body, and a door guide, each section having an independent water circulating means, and connecting means adjacent the tops of the sections for securing them together and maintaining the sections in alinement.

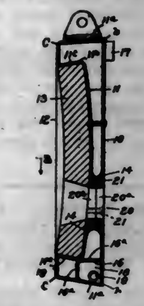
3. A furnace door frame comprising a pair of sections each of hollow sheet metal construction and comprising front, rear and top plates welded together, said sections each constituting a jamb and a portion of the head of the frame, each section having its front and rear plate flanged and disposed with the edges of the flanges abutting and welded together, said flanges combinedly forming spaced welded walls in the head of the frame, the weld line of each of said walls being approximately equi-distant from the outer faces of the front and rear plates.

4. A furnace door frame comprising a pair of sections each of hollow sheet metal construction and comprising front, rear and top plates welded together, said sections each constituting a jamb and a portion of the head of the frame, each section having its front and rear plate flanged and disposed with the edges of the flanges abutting and welded together, said flanges combinedly forming spaced welded walls in the head of the frame, the weld line of each of said walls being approximately equi-distant from the outer faces of the front and rear plates, and connecting means adjacent the tops of the sections for securing them together and maintaining the sections in alinement.

5. A furnace door frame comprising a hollow sheet metal structure having a head and depending jambs, the head portion being formed in two independent sections, each section having a top welded thereto, each top having a projecting flanged portion, and a member for securing said projecting flanged portions together in substantially longitudinal alinement.

[Claims 6 to 8 not printed in the Gazette.]

1,211,884. FURNACE-DOOR. LAWRENCE S. SCHMIDT, Pittsburgh, Pa., assignor to Schmidt-McCormick Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 5, 1915. Serial No. 54,130. (Cl. 122—498.)



1. A furnace door comprising a hollow sheet metal structure formed of outer and inner sheets united together at their edges to form a body chamber and communicating hollow side, top and bottom portions, the outer plate having side bends only, said inner plate having top and bottom bends entering into the hollow top and bottom portions, the uniting line of the bottom portion disposed on the lower outside edge of the door.

2. A furnace door comprising a hollow sheet metal structure formed of outer and inner sheets united together at their edges to form a body chamber and communicating hollow side, top and bottom portions, the outer plate having side bends only, said inner plate having top and bottom bends entering into the hollow top and bottom portions, said members being united by welding, with the welding lines limited to opposed edges of different plates.

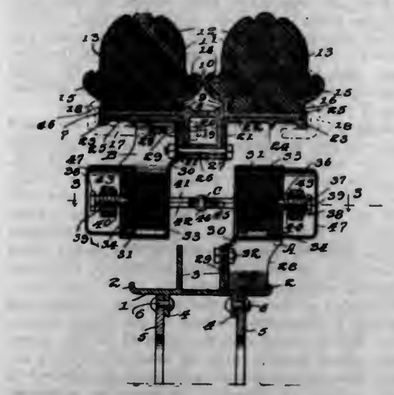
3. A furnace door comprising a hollow sheet metal structure formed of outer and inner sheets united together at their edges to form a body chamber and communicating hollow side, top and bottom portions, the outer plate having side bends only, said inner plate having top and bottom bends entering into the hollow top and bottom portions, the uniting line of the bottom portion being on a different vertical plane from that of the side portions.

4. A furnace door comprising a hollow sheet metal structure formed of sheets or plates shaped and united together at their edges to form a body chamber and communicating hollow side, top and bottom portions, the uniting line of the bottom portion being on a different vertical plane from that of the side portions and disposed at the lower outside edge of the door.

5. A furnace door comprising a hollow sheet metal structure formed of sheets or plates shaped and united together at their edges to form a body chamber and communicating hollow side, top and bottom portions, one of said plates bent to form a flange constituting the outer peripheral wall of the bottom portion and the other bent to form a flange constituting the outer peripheral wall of a side portion when the plates are assembled.

[Claims 6 to 9 not printed in the Gazette.]

1,211,885. RESILIENT WHEEL. BENJAMIN C. SEATON, Nashville, Tenn. Filed Apr. 15, 1916. Serial No. 91,866. (Cl. 152—32.)



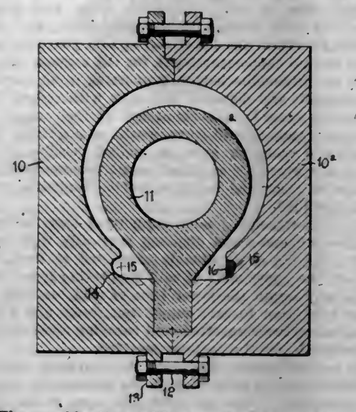
1. In a resilient wheel, an inner fixed rim, an outer rim, arms having a fixed relation to the inner rim projecting outwardly therefrom and staggered in relation to each other, other arms bearing the same relation to the outer rim but projecting inwardly therefrom, the arms of both series being arranged in pairs and the arms of each pair being arranged in opposed and spaced relation to each other, cushions carried by said arms, an oscillatory yoke embracing the arms of each pair and entirely embracing said cushions, imperforate followers bearing against the outer sides of said cushions, and bearing members carried by the end portions of said yoke and coöperating with said followers to compress the cushions of each pair of arms as the yoke is oscillated.

2. In a resilient wheel, an inner fixed rim, an outer rim, arms having a fixed relation to the inner rim projecting outwardly therefrom and staggered in relation to each other, other arms bearing the same relation to the outer rim but projecting inwardly therefrom, the arms of both series being arranged in pairs and the arms of each pair being arranged in opposed and spaced relation to each other, cushions carried by said arms, an oscillatory yoke embracing the arms of each pair and entirely embracing said cushions, imperforate followers bearing against the outer sides of said cushions, imperforate bearing cups carried by said followers, and bearing members carried by the end portions of said yoke and coöperating with said cups and followers to compress the cushion of each pair of arms as the yoke is oscillated.

3. In a resilient wheel, an inner fixed rim, an outer rim, arms having a fixed relation to the inner rim projecting outwardly therefrom and staggered in relation to each other, other arms bearing the same relation to the outer rim but projecting inwardly therefrom, the arms of both series being arranged in pairs and the arms of each pair being arranged in opposed and spaced relation to each other, an oscillatory yoke embracing the arms of each pair, cushions carried by said arms, followers bearing against the outer sides of said cushions, and bearing members carried by the end portions of said yoke and coöperating with said followers to compress the cushions of each pair of arms as the yoke is oscillated, all of said arms being of channeled formation and forming housings which completely inclose the cushions.

4. In a resilient wheel, an inner fixed rim, an outer rim, arms having a fixed relation to the inner rim projecting outwardly therefrom and staggered in relation to each other, other arms bearing the same relation to the outer rim but projecting inwardly therefrom, annular arm carrying-rings united to the inner face of the outer rim and having the last named arms fastened thereto, the arms of both series being arranged in pairs and the arms of each pair being arranged in opposed and spaced relation to each other, an oscillatory yoke embracing the arms of each pair, cushions carried by said arms, followers bearing against the outer sides of said cushions, and bearing members carried by the end portions of said yoke and coöperating with said followers to compress the cushions of each pair of arms as the yoke is oscillated.

1,211,886. CONVERTIBLE MOLD FOR FORMING RUBBER TIRES. HARRY J. SMITH, New Castle, Pa., assignor of one-half to John S. Wilson, Pittsburgh, Pa. Filed Nov. 18, 1915. Serial No. 62,183. (Cl. 18—34.)



1. The combination with a mold section for forming pneumatic tires, the interior face of the section having a clencher bead groove, of an annular filler removably disposed within said groove.

2. The combination with a mold section for forming tires, the interior face of the section having an annular mold space and a clencher bead groove, of an annular filling member removably disposed in said groove and when in place filling said groove.

3. The combination with a mold section for forming pneumatic tires, the interior face of the section having an annular mold space and an annular clencher bead groove, of an annular resilient filling ring removably disposed in said groove and when in place fitting against the walls of the groove and filling it up.

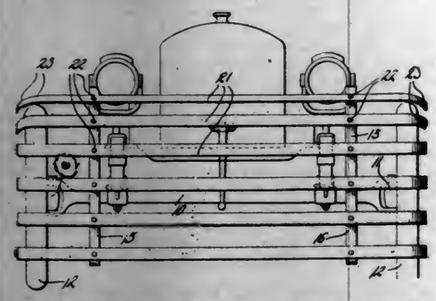
4. The combination with a mold section for forming pneumatic tires, the interior face of the section having an annular mold space and an annular clencher bead groove, of an annular resilient filling ring removably disposed in said groove and when in place fitting against the walls of the groove and filling it up, said ring being split and being overlapped at the split portion of the ring.

5. The combination with a mold for forming pneumatic tires, said mold comprising opposed sections, a core and

means for drawing the sections toward each other, the inner face of each section being formed with a clencher groove, of annular members disposable in the clencher grooves of each section, fitting said grooves and partially or entirely filling up the grooves.

[Claim 6 not printed in the Gazette.]

1,211,887. AUTOMOBILE-FENDER. ALFRED J. STATE, Montreal, Quebec, Canada. Filed Dec. 30, 1915. Serial No. 69,428. (Cl. 105—33.)



1. In a device of the character described, supporting irons associated with the automobile and disposed vertically with respect thereto, a guard loosely connected at its upper edge to said supporting irons and disposed transversely with respect to the automobile, and means to yieldingly retain the lower end of said guard in spaced relation to said supporting irons, for the purpose specified.

2. In an automobile fender, supporting irons carried by the automobile and disposed vertically with respect thereto, carrying arms loosely connected at their upper ends to the upper ends of said irons, means to yieldingly retain ends of said carrying arms in spaced relation to said irons, and a plurality of guard members associated with the carrying arms and bodily movable therewith, for the purpose specified.

3. In an automobile fender, supporting irons associated with the automobile and disposed vertically with respect thereto, carrying arms slidably connected at their upper ends with the upper ends of said supporting irons, means to yieldingly retain the lower ends of said carrying arms in spaced relation to said supporting irons, and a series of guard members connecting said carrying arms and movable therewith, for the purpose specified.

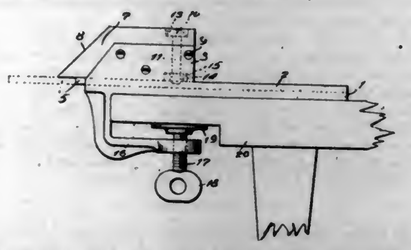
4. In an automobile fender of the character described, supporting irons to be carried by the automobile, carrying arms connected at one end with said irons to be slidable longitudinally with respect thereto, resilient means to normally space the intermediate portions and the other end of said carrying arm from said irons, and a plurality of guard members carried by said arms, and movable together therewith, as and for the purpose specified.

5. In an automobile fender, supporting irons supported by the automobile and disposed vertically with respect thereto, carrying arms, means slidably connecting the upper ends of said carrying arms and the upper ends of said supporting irons, the upper end of said carrying arms being curved to overlie the upper ends of said supporting irons, means to yieldingly retain the lower portion of said carrying arms in spaced relation to said supporting irons, and a series of guard members associated with said carrying arms and movable therewith, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,211,888. COMBINATION FILING-BLOCK AND SAWING-BOARD. HARRY E. STILLIANS, El Paso, Tex. Filed Mar. 25, 1916. Serial No. 86,737. (Cl. 144—286.)

1. In a device of the character described a supporting plate having a longitudinal recess therein, a sawing board slidably mounted in the recess, a filing block resting on the upper surface of the plate and rigid therewith and also arranged in close relation with the upper surface of the sawing board, and fastening means mounted in and passing through the filing block to frictionally engage the sawing board whereby to maintain the sawing board in various adjusted positions on the plate.



2. In a device of the character described, an elongated and relatively flat supporting plate, means for removably clamping the plate in position, a sawing board slidably mounted on the upper face of the plate, filing means rigidly connected to the plate and arranged above the sawing board, and fastening means mounted in the filing means for adjustably and removably maintaining the sawing board in various adjusted positions on the plate.

3. In a device of the character described, an elongated and relatively flat supporting plate having a longitudinal recess in the upper surface thereof, a sawing board slidably mounted in the recess, a wood filing block rigidly mounted on the upper face of the plate and in close relation with the sawing board, and fastening means extending through the filing block and adjustable into frictional engagement with the upper surface of the sawing board for maintaining the sawing board in various adjustable positions with respect to the plate.

4. In a device of the character described, a supporting plate having a longitudinal recess in the upper surface thereof, a sawing board slidably mounted in the recess, standards formed integral with the sides of the plate adjacent the forward end thereof, a filing block disposed on the upper surface of the plate between the standards, means for removably securing the filing block between the standards, and fastening means associated with the block for adjustably and removably maintaining the sawing board in position in the recess.

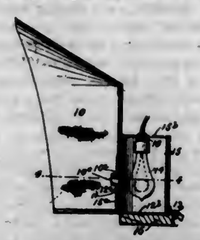
5. In a device of the character described, including a plate, a sawing board slidably associated with the plate, a filing block associated with the plate and having an opening therethrough, a bolt countersunk in the block and arranged in the opening, and a nut associated with the free end of the bolt and countersunk in the bottom of the block, the free end of the bolt engaging the upper surface of the board for removably and adjustably maintaining the board in position on the plate.

1,211,889. EGG-TESTER. FREDERICK F. STONE, Buffalo, N. Y. Filed Aug. 7, 1916. Serial No. 113,641. (Cl. 99—6.)

1. An egg tester comprising a bottomless egg-receiving hood having a rearwardly inclined top or covering and a light opening between the top or covering and the lower end which latter is concavo-convexed, the space below said light opening and extending past the lower end of the hood being entirely unobstructed.

2. An egg tester comprising an egg-receiving hood formed with a concavo-convexed side having a light opening therethrough and with an inclined upper end arranged to shade the concaved side around the light opening and with all terminal points of its lower end lying in a common plane.

3. An egg tester comprising an exposure hood consisting of a single piece of sheet metal formed with oppositely turned converging flanges interlocked so as to render said sheet of metal concavo-convexed, said hood also being provided with a light opening therethrough.

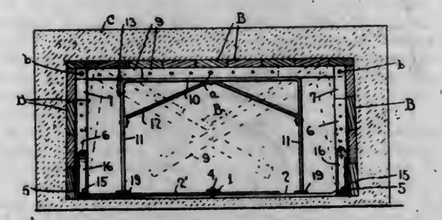


4. An egg tester comprising a concavo-convexed exposure hood or shade provided with a light opening therethrough and having its concaved side unobstructed and of a dark color.

5. An egg tester comprising a concavo-convexed exposure hood having a light opening therethrough and having a rearwardly inclined top portion, the concaved side of said hood being entirely unobstructed so as to accommodate the vision and the hands of the operator without interference therewith, and means for holding a light at said light opening, said means being secured to the convexed side of the said hood.

[Claims 6 to 10 not printed in the Gazette.]

1,211,890. CONCRETE-CULVERT FORM. GEORGE W. STORMS, Louisville, Ky. Filed Jan. 4, 1916. Serial No. 70,192. (Cl. 25—131.5.)

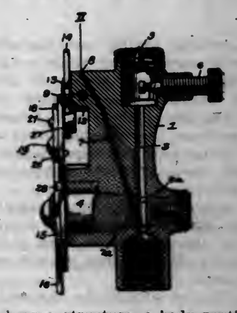


1. The combination in a concrete culvert form frame, of a main draw bar, oppositely directed laterally extending arms pivoted to said draw bar and disposed in sets of twos, two angle iron edge bars pivotally secured to said arms and held in parallel spaced relation, a lower side bar loosely secured to each end of said edge bars, an upper side bar adjustably secured to each lower side bar, a top bar pivotally secured to each upper side bar, pivot bolts securing said top bars in sets of twos, two side supporting draw bars arranged in parallel spaced relation and adjacent to said main draw bar, and a supporting frame supported by said side draw bars each supporting a set of pivotally connected top bars, as and in the manner set forth.

2. The combination in a concrete culvert form frame, of a main draw bar, oppositely directed laterally extending arms pivoted to said draw bar and disposed in sets of twos, two angle iron edge bars pivotally secured to said arms and held in parallel spaced relation, a lower side bar loosely secured to each end of said edge bars, an upper side bar having a socket adjustably secured to each lower side bar, a top bar pivotally secured to each upper side bar, pivot bolts securing said top bars in sets of twos, two side supporting draw bars arranged in parallel spaced relation and adjacent to said main draw bar, a supporting frame supported by said side draw bars each supporting a set of pivotally connected top bars, and brace bars loosely secured to each of said angle iron edge bars each engaging a socket within a side bar whereby said side bars are held in upright position.

3. The combination in a concrete culvert form frame, of a main draw bar, oppositely directed laterally extending arms pivoted to said draw bar and disposed in sets of twos, two angle iron edge bars pivotally secured to said arms and held in parallel spaced relation, a lower side bar loosely secured to each end of said edge bars, an upper side bar having a socket adjustably secured to each lower side bar, a top bar pivotally secured to each upper side bar, pivot bolts securing said top bars in sets of twos, two side supporting draw bars arranged in parallel spaced relation and adjacent to said main draw bar, a supporting frame supported by said side draw bars each supporting a set of pivotally connected top bars, a notched ear secured to each supporting frame in engagement with one of said top bars, and brace bars loosely secured to each of said angle iron edge bars each in engagement with a socket within a side bar whereby said side bars are held in upright position.

1,211,891. AUTOMATIC PILOT-LIGHT GAS-BURNER. FRED STREET, Philadelphia, Pa., assignor of one-half to E. Bryan Kyle, Philadelphia, Pa. Filed Dec. 9, 1915. Serial No. 65,981. (Cl. 67—16.)



In a gas burner structure, a body portion therefor consisting of a unitary part having self-contained gas passages extending therethrough substantially in the same direction and both longitudinally of said part, said passages converging from one end of said body toward the opposite end, and said body having a tapering socket arranged at substantially right-angles to the passages; a turning-plug mounted in said socket and having two ports made transversely therethrough in substantially the same direction and converging to one side of the plug, said ports in one position of the plug adapted to connect both body passages with a source of supply and in another position to cut off one of the body passages with said source of supply, said body having at one portion a chamber and a regulating valve therein, and having at the opposite portion means for the attachment of the body to a source of gas supply.

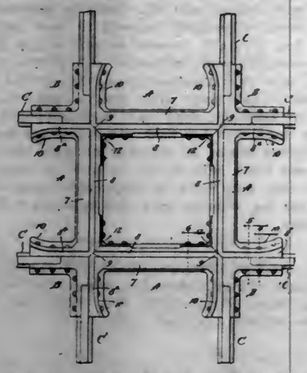
1,211,892. RAILWAY-CROSSING. EUGENE N. STROM, Chicago, Ill., assignor to Pettibone, Mulliken Company, Chicago, Ill., a Corporation of New York. Filed Dec. 1, 1915. Serial No. 64,509. (Cl. 104—40.)

1. A railway-crossing having corner-members formed with separably and yieldingly jointed sections having guard-rail sections formed thereon, and the joints extending diagonally through the wheel-flange grooves at their intersections.

2. A railway-crossing having its corner-members formed of jointed sections with guard-rail sections formed thereon and extending therefrom, the joints of said sections extending diagonally through the wheel-flange grooves at their intersections and being yielding, and corner-pieces in the angles between adjacent guard rail sections.

3. A railway-crossing having corner-members formed of jointed sections with guard-rail sections formed thereon and extending therefrom, the joints of said sections extending diagonally through the wheel-flange grooves at their intersections and being yielding, and the corner-pieces in the angles formed by adjacent guard-rail sec-

tions, the opposing guard-rail sections and the corner-pieces forming confining means for the end portions of the track-rails between them.

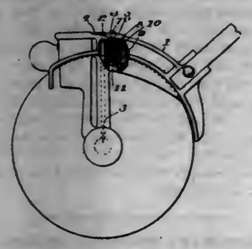


4. A railway-crossing having corner-members formed of obliquely-jointed sections, the joints extending diagonally through the wheel-flange grooves at their intersections, guard-rail sections on said jointed sections and corner-pieces in and fitting the angles formed by adjacent guard-rail sections, the opposing guard-rail sections and sides of the corner-pieces corresponding in length and forming confining means for the end-portions of the track-rails between them.

5. A railway-crossing comprising straight one-piece cast rail-sections having oblique ends meeting in the corner-members of the crossing to form yielding joints extending diagonally through the wheel-flange grooves at their intersections.

[Claims 6 and 7 not printed in the Gazette.]

1,211,893. OIL-CUP COVER. JOHN STURROCK, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Sept. 18, 1913. Serial No. 790,457. (Cl. 184—88.)



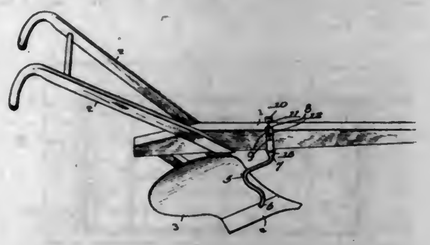
1. In combination, a support having an oil duct therein and a bore adjacent said duct having a restricted opening, a plunger carried in said bore and protruding through said opening, resilient means in said bore normally tending to withdraw the plunger from said opening, and a cover for said duct operatively connected to the protruding end of said plunger in a manner permitting said cover to be turned upon said plunger in a vertical plane.

2. In combination, a support having a plurality of apertures therein, a spring-pressed plunger seated in one of said apertures and protruding therefrom, a cover for the other aperture having an opening therein loosely receiving the protruding end of said spring-pressed plunger, and means whereby a turning movement of said cover upon said plunger in a vertical plane may reciprocate said plunger in its aperture.

3. In combination, a support having an oil duct therein and a bore disposed adjacent and substantially parallel thereto, said bore having a restricted outlet in one end of the same, a plunger having an enlarged end seated in said bore and having its opposite end extending through the restricted opening in the end of the same, a spring surrounding said plunger and having its opposite ends engaging the enlarged end of the plunger and the end wall of the bore surrounding said restricted opening, and an oil cup cover operatively connected to the protruding end of said plunger in a manner permitting said cover to be turned upon said plunger in a vertical plane parallel with the axes of said oil duct and said bore and extending over the adjacent end of said oil duct in a manner permitting said cover to be turned upon said spindle in a plane parallel with the axes of said oil duct and said bore.

4. In combination, a support having an oil duct therein and a bore disposed adjacent and substantially parallel to said oil duct, said bore having a restricted outlet in one end of the same, a spindle having an enlarged end seated in said bore and having its opposite end extending through the restricted opening in the end of the same, a spring surrounding said spindle and having its opposite ends engaging the enlarged end of said spindle and an end wall of the bore surrounding said restricted opening, an oil cup cover having an opening therein through which the protruding end of said spindle extends, said oil cup cover extending over the adjacent end of said oil duct, and means on the protruding end of said spindle for attaching said cover thereto.

1,211,894. PLOW-BEAM ATTACHMENT. DAVID WALTER SWEAT, Waycross, Ga. Filed Feb. 21, 1914. Serial No. 820,207. (Cl. 97—33.)



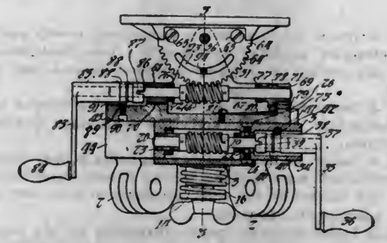
1. In a weed hook attachment for plows, comprising an integral bar, consisting of a reversely curved body portion terminating in a rearwardly turned guard finger at one end, and a vertical shank at its other end, and means for securing said shank upon the beam of a plow.

2. In a weed hook attachment for plows, comprising an integral bar, consisting of a vertically disposed attaching shank having a plurality of apertures in its upper end, a downwardly and rearwardly curved neck extending from the lower end of said shank, a reversely curved body portion extending laterally downward from said neck, a rearwardly turned guard finger upon the free end of said body portion, and means for adjustably attaching said neck hook upon a plow beam.

3. In a weed hook attachment for plows, compricing an integral bar, consisting of a vertically disposed attaching shank having a plurality of apertures in its upper end, a downwardly and rearwardly curved neck extending from the lower end of said shank, a laterally and slightly downwardly disposed body portion extending from said neck, said body portion being curved first rearwardly and downwardly and thence forwardly and downwardly and having its free end curved rearwardly to provide a guard finger, and means for adjustably securing said weed hook upon a plow beam.

4. In a weed hook attachment for plow beams, comprising a downwardly obliquely disposed reversely curved hook member, having a rearwardly turned guard finger formed at its outer end, and an upstanding shank formed at its inner end, said shank having a plurality of apertures adjacent its upper end and adapted to engage one side of said beam, an apertured plate adapted to engage the opposite side of said beam, an upper securing bolt projecting through one of the apertures of said shank and the upper aperture of said plate, a lower securing bolt having a screw threaded end projecting through the lower aperture of said plate, and an angularly formed hook member at the opposite end of said lower bolt for embracing the lower portion of said shank, whereby to adjustably secure said weed hook upon said plow beam.

1,211,895. SUPPORTING DEVICE. JOHN H. THEISS, Mount Vernon, N. Y. Filed June 1, 1915. Serial No. 31,363. (Cl. 248—45.)



1. In a device of the class described, a camera support mounted for movement about a given axis, mechanism for moving said support about said axis comprising a worm gear and a worm engaging said worm gear, and means for automatically compensating for wear in said mechanism, substantially as described.

2. In a device of the class described, a camera support mounted for movement about a given axis, mechanism for moving said support about said axis comprising a worm gear and a worm engaging said worm gear, and unitary means for compensating for wear in said mechanism and for taking up the end thrust of said worm, substantially as described.

3. In a device of the class described, a support mounted for movement about a given axis, mechanism for moving said support about said axis comprising a gear fast to said support and an operating gear engaging said first gear, and unitary means for compensating for wear in said mechanism and for taking up the end thrust of said operating gear, substantially as described.

4. In a device of the class described, a camera support mounted for movement about a pair of angularly disposed axes, separate mechanisms for moving said support about said axes respectively, each of said mechanisms comprising a worm gear and a worm engaging said worm gear, and separate means for automatically compensating for wear in each of said mechanisms, substantially as described.

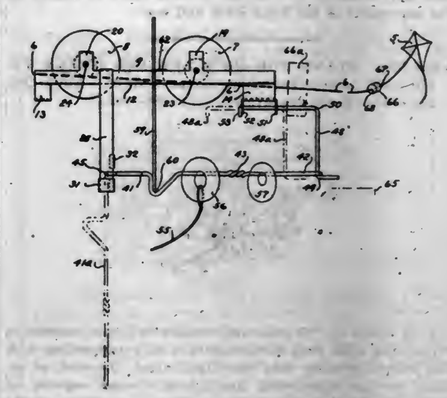
5. In a device of the class described, a camera support mounted for movement about a pair of angularly disposed axes, separate mechanisms for moving said support about said axes respectively, each of said mechanisms comprising a worm gear and a worm engaging said worm gear, and separate unitary means for compensating for wear in each of said mechanisms respectively and for taking up the end thrust of the worms thereof, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

1,211,896. KITE-TROLLEY. CHARLES J. THOMAS, Brooklyn, N. Y. Filed Oct. 31, 1914. Serial No. 869,546. (Cl. 244—24.)

1. A kite trolley comprising a carrier arranged to ride upon the kite-cord, an object bearer thereunder operatively mounted in substantial parallelism with both the carrier and cord, a flexible connection keeping said bearer permanently suspended by one end, and means releasably holding the other end of the bearer so that it may be dropped to discharge the object.

2. A kite-trolley comprising a carrier adapted for riding along the kite-cord, a rigid pendant under one end thereof, an object bearer pivotally connected by one end to said pendant, and a slidable detent holding the other end of said bearer.



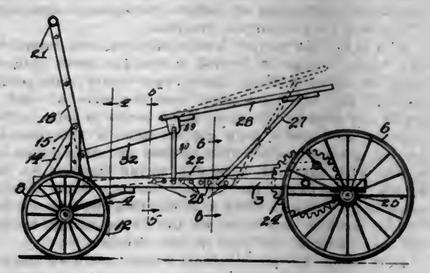
3. A kite-trolley comprising a carrier adapted to ride on the kite-cord, an object bearer held suspended from said carrier in substantial parallelism therewith, and a sail detachably set between the carrier and said bearer.

4. A kite-trolley comprising a carrier riding upon the kite-cord, a bearer hingedly connected to said carrier at one end, a detent holding up said bearer by its other end, a sail resting upon the bearer intermediately thereof, and means on the carrier arranged to maintain said sail in its operative position.

5. A kite-trolley comprising a carrier adapted to ride upon the kite-cord, an object bearer operatively mounted in substantial parallelism with said carrier and pivotally connected thereto at one end, a detent holding the other end of said bearer releasably suspended from the carrier, a sail transversely seated in a depression of the bearer, and projections on the carrier supporting said sail against the wind pressure.

[Claims 6 to 8 not printed in the Gazette.]

1,211,897. CHILD'S VEHICLE. MAX. THOMSEN, Chicago, Ill. Filed Jan. 31, 1916. Serial No. 75,266. (Cl. 208—38.)



1. In a device of the class described, a frame, wheels supporting the same, a transmission for driving said wheels, a pivoted hand lever, means directly connecting said hand lever with said transmission to drive the latter, a movably mounted seat, and connections between said seat and said hand lever whereby a co-acting driving effect is gained by the movement of the hand lever and seat.

2. In a device of the class described, a frame, wheels supporting the same, a transmission for driving said wheels, a hand lever pivoted intermediate its length, a

connecting rod pivoted to one end of said hand lever and to said transmission, a seat, pivoted U-supports for said seat, and a connecting rod between said hand lever and said seat whereby a co-acting driving effect is gained by the movement of the hand lever and seat.

1,211,898. STAND FOR BICYCLES AND OTHER VEHICLES. PAUL TOURTIER, Paris, France. Filed Oct. 22, 1915. Serial No. 57,327. (Cl. 208—82.)



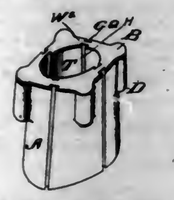
1. A stand for bicycles and similar vehicles comprising supporting rods each formed with a long supporting arm and short pivoting and operating arms disposed at an angle to the supporting arm, fixed clamps capable of being detachably secured to the frame members of the bicycle or similar vehicle, sleeve bearings on the clamps arranged to embrace the pivoting arms of the supporting rods, a spring on each rod between the sleeve bearing and the operating arm and fixed at one end to the said arm and at the other end to the sleeve for raising the supporting arm of the rod into the inoperative position, a fork pivotally jointed to the end of each short operating arm, and manually operated means connected with the operating arm through the fork for lowering the supporting arm into contact with the ground.

2. A stand for bicycles and similar vehicles comprising supporting rods each formed with a long supporting arm and short pivoting and operating arms, fixing clamps capable of being detachably secured to the frame members of the bicycle or similar vehicle, sleeve bearings on the clamps arranged to embrace the pivoting arms of the supporting rods, a spring on each rod between the sleeve bearing and the operating arm and fixed at one end to the said arm and at the other end to the sleeve for raising the supporting arm of the rod into the inoperative position, a fork pivotally jointed to the end of each short operating arm, a stop arranged to limit the movement of the fork toward the arm, a yoke operatively connected with each fork, and operating means connected with the yoke, the connection between the yoke and forks being adjustable permitting of relative independent movement of the rods for the purpose described.

3. A stand for bicycles and similar vehicles comprising two fixing clamps or sleeves, a bearing sleeve obliquely mounted on each fixing sleeve, two rotary rods passing through the bearing sleeves and the ends of each of which are bent in the same plane so as to form a short traction arm and a long support arm, a fork pivotally jointed to each traction arm, manual operating means connected with the fork, a torsion spring mounted on each rotary rod between the bearing and the short traction arms and serving to bring each pivoting rod into its inoperative position and stops on the fixing clamps to limit the movement of the rods in one direction.

4. A stand for bicycles and similar vehicles comprising detachable mounting means applicable to the rear fork of a bicycle, supporting rods pivoted in said mounting means and each comprising short pivoting and operating arms and a long supporting arm whose range of motion about said pivots enables them to be moved into positions where their lower ends are below the horizontal plane running through the point of contact of the vehicle with the ground, springs adapted to raise the supporting arms into inoperative positions, a fork pivotally jointed to each operating arm, and manually operated means connected with the fork whereby the arms are lowered into the operative position.

1,211,899. FEEDER FOR INGOT-MOLDS. ERNEST J. TURNER, Pittsburgh, Pa. Filed July 1, 1916. Serial No. 107,024. (Cl. 22—147.)



1. A feeder for ingot molds comprising a body portion of refractory material, and having a bore therethrough, and ribs carried by the outer periphery of said body portion.

2. A feeder for ingot molds comprising a tubular body of refractory material, and ribs projecting outwardly therefrom.

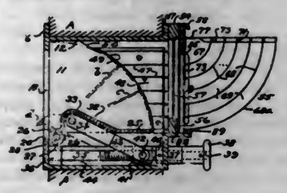
3. A feeder for ingot molds comprising a body portion of refractory material, and having a bore therethrough, and ribs carried by the outer periphery of said body portion adjacent its upper end.

4. A feeder for ingot molds comprising a body portion of refractory material having a bore therethrough and approximately the same thickness throughout its entire length and provided with longitudinally extending ribs on its outer face.

5. A feeder for ingot molds comprising a body portion of refractory material having a bore therethrough and approximately the same thickness throughout its entire length and provided with longitudinal ribs, and having their lower ends adapted to rest upon the upper end of the mold.

[Claim 6 not printed in the Gazette.]

1,211,900. VENTILATING APPARATUS. HARRY L. VAN ZILE and THOMAS A. LEWIS, New York, N. Y.; said Lewis assignor to said Van Zile. Filed Oct. 10, 1914. Serial No. 866,084. (Cl. 98—31.)



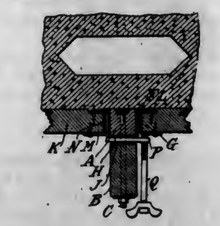
1. A ventilating apparatus including, in combination, a series of concentric arcuate deflectors spaced to form air passages therebetween, means for supporting said deflectors adjacent to a ventilating orifice, and means for opening or closing said air passages successively.

2. A ventilating apparatus including, in combination, a series of concentric arcuate deflectors of progressively increasing lengths spaced to form air passages therebetween, means for supporting said deflectors adjacent to a ventilating orifice, and a slidable member for controlling the flow through said passages serially from the longest to the shortest in one direction, and to close the same in reverse order when moved in the opposite direction.

3. A ventilating apparatus including, in combination, a series of concentric arcuate deflectors spaced to form air passages of unequal lengths therebetween, means for supporting said deflectors adjacent to a ventilating orifice, said passages having their entrance ends superposed in the same vertical plane so as to receive the air tangentially from said orifice in horizontal layers, and their exit ends disposed one behind another in the same horizontal plane for delivering the air in parallel vertical layers supporting each other, and a closure at said entrance ends operable to open or close them serially.

4. A ventilating apparatus including, in combination, a series of concentric arcuate deflectors separated from one another so as to form air passages therebetween, means for removably supporting said series of deflectors in spaced relation to a ventilating orifice, and a slidable element operable in the space between the latter and the deflectors to establish or cut off the flow of air therethrough.

1,211,901. MOLD FOR CONCRETE WALLS AND ARCHES. ROWLAND T. WALES, Sewaren, N. J. Filed Nov. 25, 1913. Serial No. 802,867. (Cl. 25—131.)



1. A mold for concrete construction comprising a series of supports, plates disposed at the face of the mold space and devices for holding the plates against movement outwardly of the mold, each of said devices comprising a bar part of which is disposed through an opening in the support side which is nearest a plate end held by said device, and a member carried by said bar, said member being adjustable relatively to the bar and toward and from the mold space into different selected positions at different distances from the mold space.

2. A mold for concrete construction comprising a series of supports each support being formed of two parts, one of such parts being located adjacent the mold space and the other outwardly thereof, there being a space between the said parts, flanges carried by the said part located adjacent the mold space, plates engaging the flanges, and positioning devices for holding the plates against the flanges each comprising a bar disposed in the said space, and movable longitudinally of the support, and a plate holding member carried thereby and movable toward and from the mold space.

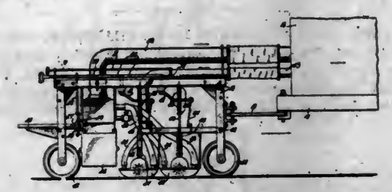
3. A mold for concrete construction comprising a series of supports each support being formed of two parts one of such parts being located adjacent the mold space and the other outwardly thereof, there being a space between the said parts, plates disposed between the supports, and positioning devices for holding the plates against movement outwardly of the mold each comprising a bar disposed in the said space and movable longitudinally of the support, and a plate holding member carried thereby and movable toward and from the mold space.

4. A mold for concrete construction comprising a series of supports each support being formed of two parts one of such parts being located adjacent the mold space and the other outwardly thereof, there being a space between the said parts, flanges located adjacent the mold space, plates engaging the flanges, and positioning devices for holding a plate against the flanges each comprising a bar disposed in the said space and movable longitudinally of the support and a plate holding member carried thereby and movable relatively thereto toward and from the mold space.

5. A mold for concrete construction comprising a series of supports, each support being formed of two parts, one of such parts being located adjacent the mold space and the other outwardly thereof, a lateral side of the inner part of a support constituting a sheet metal wing common to two sheet metal angles, and from which wing the other wings diverge, one of the latter of said wings projecting laterally from such part and being located adjacent the mold space, and the other wing being located rearwardly of such part, spacing members between the support parts and engaging the front face of the rear part and the rear face of the last said wing, means for fastening the structure together, and plates between said supports and overlapping the said laterally projecting wings.

[Claims 6 to 11 not printed in the Gazette.]

1,211,902. RAILWAY-TRACK CLEANER. FRANK L. WARNER, New York, N. Y. Filed Mar. 29, 1916. Serial No. 87,474. (Cl. 104—38.)



1. The combination of a portable platform, pneumatic power devices thereon, a dust-gathering mouthpiece carried adjacent the platform along and over the surface to be cleaned, said mouthpiece having an open mouth directly over the surface being treated and extending transversely of the line of movement of the machine, means leading from the power devices to one side of the mouthpiece and serving to deliver a blast of air through the body of the mouthpiece into the hollow interior thereof along one side, said body having an outlet opening formed along the opposite side thereof, and a suction pipe leading from the last mentioned opening to the other side of the power devices from the blast means, whereby a practically continuous current of air may be operated within and across the opening in the mouthpiece.

2. The herein described pneumatic cleaning apparatus comprising a platform, a trolley connected to the platform, a dust collecting mouthpiece carried by the trolley, said mouthpiece having an open center, a blast pipe leading from the power devices on the platform to convey a blast of air directly into the central opening of the mouthpiece, a gravity separator for heavy particles carried by the trolley, an air suction pipe leading from the interior of the mouthpiece to the separator, a pipe leading from the separator to the power means continuing the circulation of the air and conveying therewith the lighter particles of dust, and other separating means on the platform to deliver said lighter particles of dust from the air prior to the return of the air to the mouthpiece.

3. The herein described pneumatic cleaning apparatus, the same comprising, in combination, portable supporting means, a mouthpiece carried by the supporting means and having an open face movable closely adjacent the surface to be cleaned, independent blast and suction pipes leading respectively into and out of the open center of the mouthpiece through the body thereof remote from the surface to be cleaned, power means on the supporting means to complete the connection between the blast and suction pipes to provide for a continuous circulation of air, and means located within the current of air thus caused to circulate to separate the dust from the air.

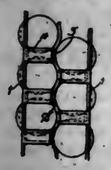
4. In a pneumatic cleaning machine, the combination of supporting means, movable along the surface to be cleaned, a dust-gathering mouthpiece having a hollow interior with an opening directly adjacent the surface to be cleaned, pneumatic power devices on the supporting means, independent blast and suction pipes leading to and from the hollow interior of the mouthpiece through openings formed in the body thereof on opposite sides of the mouthpiece whereby a blast of air is delivered directly into the opening and toward the surface to be cleaned and the air is conveyed therefrom carrying with it the dust, and independent separators for the heavier and lighter particles of dust located in the path of circulation of the air.

5. In a pneumatic cleaning machine, the combination of portable supporting means, a plurality of independently actuated mouthpieces movable with the supporting means along the surface to be cleaned, pneumatic power devices

on the supporting means, a main blast pipe leading from the power devices toward the mouthpieces, a series of branch blast pipes leading from the main blast pipe to the several mouthpieces, a main suction pipe leading to the power devices, branch suction pipes leading from the several mouthpieces to the main suction pipe, and means to separate and hold the dust from the air caused to move through the blast pipes, mouthpieces and suction pipes.

[Claims 6 and 7 not printed in the Gazette.]

1,211,903. BALL-CAGE FOR BALL-BEARINGS. VICTOR EMANUEL WESTERBERG, Gottenborg, Sweden, assignor, by mesne assignments, to S. K. F. Ball Bearing Company, Hartford, Conn., a Corporation of Connecticut. Filed Sept. 3, 1915. Serial No. 48,757. (Cl. 64—59.)



1. A ball cage for ball bearings having two rows of the balls, comprising two rings of sheet-metal having means for separating the balls and placed outside the ball rows, and a third ring, likewise of sheet-metal, disposed between said outer rings and provided with means for securing said outer rings together, substantially as described.

2. A ball cage for ball bearings having two rows of balls, comprising two rings of sheet-metal having means for separating the balls and a third ring of sheet-metal adapted to secure the outer rings together, the means for separating the balls consisting of wings extending across the rings and supported by brackets bent at right angles from the edges of the rings, substantially as described.

3. A ball cage for ball bearings having two rows of balls, comprising two rings of sheet-metal placed outside the rows of balls and a third ring of sheet-metal disposed between the rows of balls, the first-mentioned rings being provided with wings to separate the balls and brackets to support said wings and further provided with means to retain said wings in position.

4. A ball cage for ball bearings having two rows of balls, comprising two rings of sheet-metal, placed outside the rows of balls and a third ring of sheet-metal disposed between the rows of balls and having means for securing said rings together, the first mentioned rings being provided with wings to separate the balls and brackets supporting said wings and further provided with ears engaging the ends of the wings to retain the latter in position, substantially as described.

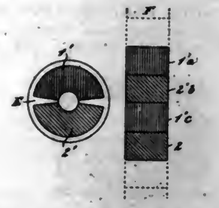
5. A ball cage for ball bearings having two rows of balls, comprising two outer rings of sheet-metal having wings for separating the balls, and an intermediate third ring of sheet-metal having tongues for securing the outer rings together, said tongues extending from the outer edge of the intermediate ring and being bent alternately to the one side and the other.

[Claims 6 and 7 not printed in the Gazette.]

1,211,904. COLOR PHOTOGRAPHY. MAURICE J. WOHL, Brooklyn, and MAX MAYER, New York, N. Y., assignors, by mesne assignments, to Prizma Incorporated, a Corporation of Virginia. Original application filed Oct. 15, 1913, Serial No. 795,244. Divided and this application filed Dec. 29, 1914. Serial No. 879,442. (Cl. 88—16.4.)

1. In motion picture projection apparatus, in combination with a film on which the series of pictures are arranged in groups of four different color values, of a screen composed of two sets of balanced complementary colors, said sets being arranged to be used alternately with a single objective in connection with the successive pictures on said film.

2. In motion picture projection apparatus, in combination with a film on which the series of pictures are arranged in groups of four different color values, of a screen composed of two sets of balanced complementary colors, the colors of one set overlapping those of the other set but extending over a different section of the spectrum, said sets being arranged to be used alternately with a single objective in connection with the successive pictures on said film.



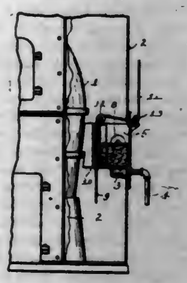
3. In motion picture projection apparatus, means adapted to rapidly and successively present a series of pictures representing succeeding groups of four different color impressions and a two color screen of balanced complementary colors adapted to be brought into position so that the two colors alternately serve the series of pictures of corresponding color values, one color for each image, the two color screen being brought into position twice for each group of four color impressions.

4. In motion picture projection apparatus, in combination with a film on which the series of pictures are arranged in groups of four different color values, of a screen adapted to be brought into position twice for each group; each half of said screen comprised of balanced complementary colors, which combined, approximate the color values in the pictures which they serve.

5. In motion picture projection apparatus, means adapted to rapidly and successively present a series of pictures representing succeeding groups of four different color impressions, of a screen adapted to be brought into position twice for each group, each half of said screen comprised of balanced complementary colors approximating the color values in the pictures which it serves.

[Claims 6 to 9 not printed in the Gazette.]

1,211,905. HUMIDIFYING APPARATUS. NICHOLAS J. YONKER, Holland, Mich. Filed Oct. 25, 1916. Serial No. 127,512. (Cl. 126—113.)



1. In apparatus of the character described; a closed water container; means for forcing water thereinto; an open water container, having an inlet thereto whereby water may flow from the closed to the open container; means for automatically controlling said flow; and a heater for heating the water in the containers and vaporizing the water in the open container.

2. In apparatus of the character described; a closed water container; means for forcing water thereinto: an open water container, having an inlet thereto whereby water may flow from the closed to the open container; a float-operated valve in the open container for automatically controlling said flow; and a heater for heating the water in the containers and vaporizing the water in the open container.

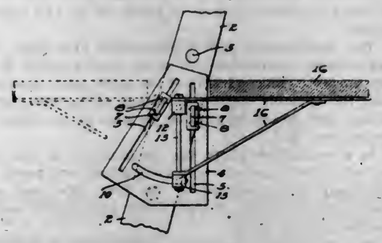
3. In apparatus of the character described; a closed water container; means for forcing water thereinto; an open water container, having an inlet thereto whereby water may flow from the closed to the open container; a float-operated valve in the open container for automatically controlling said flow; a heater for heating the water in the containers and vaporizing the water in the open container; and a screen adapted to be moved into and out of position between the heater and said container.

4. In apparatus of the character described; a closed water container; means for forcing water thereinto; an open water container, having an inlet thereto whereby water may flow from the closed to the open container; a float-operated valve in the open container for automatically controlling said flow; a heater for heating the water in the containers and vaporizing the water in the open container; and a slidably mounted screen adapted to be slid into and out of position between the heater and said container.

5. In apparatus of the character described; a closed water container; means for forcing water thereinto; an open water container, having an inlet thereto whereby water may flow from the closed to the open container; means for automatically controlling said flow; a heater for heating the water in the containers and vaporizing the water in the open container; and a casing for the containers and the heater.

[Claims 6 to 8 not printed in the Gazette.]

1,211,906. LADDER-BRACKET. CLARENCE E. ALBERTSON, Minneapolis, Minn. Filed July 29, 1916. Serial No. 112,110. (Cl. 20—85.)



1. A ladder bracket comprising a plate having upwardly converging guides therein, clamping jaws mounted in said guides for movement therein toward or from one another and having faces for clamping the ladder rail, and a bracket carried by said plate.

2. A ladder bracket comprising a plate having upwardly converging guides therein, clamping jaws mounted in said guides for movement therein toward or from one another and having faces for clamping the ladder rail, and a bracket mounted to oscillate on said plate.

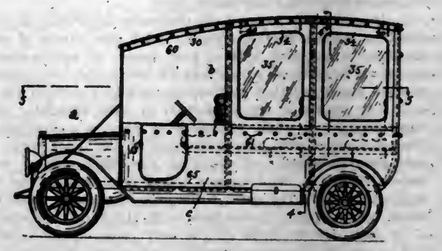
3. A ladder bracket comprising a plate, ladder rail clamping jaws mounted thereon, a bolt pivoted on the upper portion of said bracket and mounted to swing in a guide provided in the lower portion of said plate, and a scaffold support carried by said bolt.

4. A ladder bracket comprising a plate having upwardly converging guides therein, jaws slidably mounted in said plate for engaging the ladder rail, and a scaffold supporting bracket having its upper portion swiveled on said plate and its lower portion mounted to oscillate therein.

5. The combination, with a ladder rail, of a member having jaws for engaging and clamping said rail, said member having a curved guide in the lower portion thereof, and a scaffold supporting bracket having its upper portion swiveled on said member and its lower portion mounted to slide in said guide.

[Claim 6 not printed in the Gazette.]

1,211,907. MOTOR-VEHICLE. PETER G. ALLENDORF, Westwood, Mass. Filed Sept. 24, 1915. Serial No. 52,504. (Cl. 21—14.)



1. In a motor vehicle of the character described, in combination, a chassis provided with a dasher near its front end, a body portion supported by said chassis and provided with side panels of substantial depth and of substantially uniform height throughout their length and extended from the rear of the chassis to near the said dasher, one of said side panels having a door at its front end for entrance to the driver's compartment, a rear panel of substantially the same height as said side panels and hinged at its lower edge to be lowered, stationary side uprights extended above said side panels and separated to leave spaces, a top supported by said uprights, a window-supporting frame located under said top substantially in line with said side and rear panels and provided on its inner side with recesses, removable windows to fill the spaces between said side uprights and the space above said rear panel, said windows being supported at their bottoms by said side panels and rear panel and having their upper ends fitted into said recesses, and means for securing said windows in their closed position in fixed relation to said body portion.

2. In a motor vehicle of the character described, in combination, a chassis to support the motor of the vehicle, a body portion supported by the chassis behind the motor and provided with a dasher and with side panels extended from the dasher to the rear end of the chassis and one of which is provided with an opening adjacent to said dasher, and a movable rear panel, stationary uprights extended above said side panels, a top supported by said uprights, and a window-supporting frame located beneath said top substantially in line with said side panels and said rear panel and provided on its inner side with recesses extended longitudinally of said frame.

3. In a motor vehicle of the character described, in combination, a body portion provided with side panels of substantially uniform height throughout their length, one of the said side panels having an entrance opening in it near its front end, uprights extended above said panels, a top supported by said stationary uprights, each of the rear uprights being provided with longitudinally extended rabbets or recesses substantially at right angles to each other, and a window-supporting frame located below said top substantially in line with said side panels and provided with longitudinally extended rabbets or recesses on the inner sides of said frame.

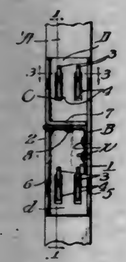
4. In a motor vehicle of the character described, in combination, a chassis provided with a dasher near its front end, a body portion supported by said chassis at the rear end of the dasher, and provided with side panels of substantial height throughout their length and separated at their rear ends by an opening which extends from side panel to side panel, a rear panel of substantially the same height as the side panels and extended from one side panel to the other side panel and pivoted at its lower end so as to be lowered, said side panels being extended from said dasher to the rear of the chassis and one of said side panels having at its front end an opening for entrance into the vehicle, from the side thereof and behind said dasher, stationary uprights extended above said side panels, a top supported by said uprights, and a window-supporting frame located below said top in proximity

thereto and substantially in line with said side panels and separated from the upper edge of the side panels by window openings of a size to impart to the body portion the appearance of a limousine body.

5. In a motor vehicle of the character described, in combination, a body portion provided with side panels of substantial height and with a rear panel of substantially the same height and pivoted at its lower end and extended from panel to panel, stationary uprights extended above said side panels, a top supported by said uprights, windows grooved on their underside to fit over and straddle the top edge of said panels and having the inner walls of said grooves capable of engaging the inner side of said panels when the windows are closed from within the vehicle and having the outer walls of said grooves extended below the top edge of said panels on the outer side thereof to form water sheds on the outer side of the panels, and below the top edge thereof, and means for securing the upper ends of the windows in fixed position.

[Claims 6 and 7 not printed in the Gazette.]

1,211,908. BED-FRAME CORNER CONSTRUCTION. JOHN F. BANTA, Goshen, Ind. Filed Aug. 23, 1915. Serial No. 46,779. (Cl. 5—55.)



1. In a bed frame, a corner post, a bracket plate secured to said post, a side rail, and a coupling member on the end of said rail, said plate and member having devices whereby they are coupled together flatwise, said rail being of angle iron formation, one side wall of said member being secured to the vertical web of said rail, and the other side wall having a portion thereof cut away and bent inward to rest on top of said rail, and said member being trough-shaped with the channel thereof extending vertically to contain said devices and receive the end of said rail.

2. In a bed frame, a corner post, a bracket plate secured to said post, a side rail, and a coupling member on the end of said rail, said plate and member having devices whereby they are coupled together flatwise, and said member having parallel vertical side walls which are secured to said rail, one side wall of said member being secured to the vertical flange of said rail, and the other side wall having an inwardly bent portion secured to the horizontal flange of said rail.

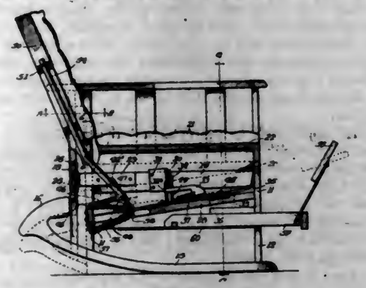
3. In a bed frame, a corner post, a bracket plate secured to said post, a side rail, and a coupling member on the end of said rail, said plate and member having devices whereby they are coupled together flatwise, and said member having parallel vertical side walls which are secured to said rail, said rail being of angle iron formation, one side wall of said member being secured to the vertical web of said rail, and the other side wall having a portion thereof cut away and bent inward to rest on top of said rail.

4. In a bed frame, a corner post, a bracket plate secured to said post, a side rail, and a coupling member on the end of said rail, said plate and member having devices whereby they are coupled together flatwise, said plate and member being of sheet metal, and said devices comprising opposite vertical edge portions of said plate cut away and bent outward to form hooks, disposed in vertical longitudinal planes and vertical slots in said member to receive said hooks, which devices are arranged in pairs above and below said rail.

5. In a bed frame, a corner post, a bracket plate secured to said post, a side rail, and a coupling member on the end of said rail, said plate and member having devices whereby they are coupled together flatwise, said rail having a top wall, and said member being trough shaped and having an inner horizontal web bent inward from one side wall and secured to said top wall.

[Claim 6 not printed in the Gazette.]

1,211,909. CHAIR. SALVATORE BATTAGLIA, Chicago, Ill. Filed Feb. 28, 1916. Serial No. 80,784. (Cl. 155—18.)



1. The combination with a convertible chair, of a rocker member comprising two parts, one of which is bodily movable vertically independently of the other part.

2. The combination with a convertible chair, of a rocker member comprising two parts, one of which is bodily movable vertically independently of the other part, and means for locking the movable part in either of its two extreme positions.

3. The combination with a convertible arm chair, of a rocker member comprising two parts, one of which is vertically movable independently of the other part, means for locking the movable member in either of its two extreme positions, and means located on an arm of the chair for releasing said lock.

4. In a convertible chair, the combination of four legs, a pair of rocker members each comprising two parts, the forward part being carried by the four legs, and posts slidably connected with the rear legs and rigidly secured to the rear rocker parts.

5. In a convertible chair, the combination of four legs, a pair of rocker members each comprising two parts, the forward part being carried by the four legs, posts slidably connected with the rear legs and rigidly secured to the rear parts of the rockers and means for locking said posts in either of their extreme positions.

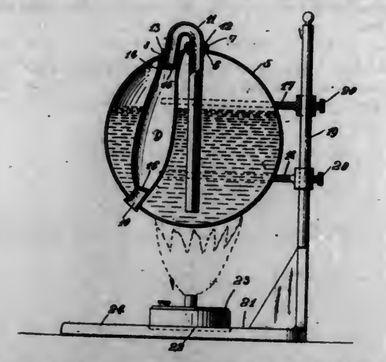
[Claims 6 to 11 not printed in the Gazette.]

1,211,910. COFFEE-PERCOLATOR. STEFANO BATTILANI, New York, N. Y. Filed June 8, 1915. Serial No. 32,986. (Cl. 53—3.)

1. A coffee percolator comprising, in combination, a glass balloon having a circular opening at its top, a separate compartment formed inside of said glass balloon, integrally therewith, hermetically divided therefrom, having an inlet from and an outlet to the outside, near the top and bottom of said balloon, respectively, a siphon tube having one end removably inserted into said top opening of the balloon and reaching nearly to its bottom, and its other end inserted into the inlet opening of said separate compartment, air tight packing around said siphon tube at said top and inlet-openings, and screens provided in said inlet and outlet.

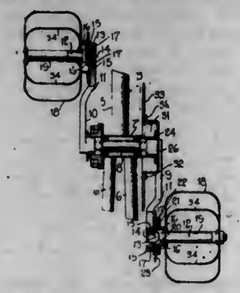
2. A coffee percolator comprising, in combination, a base, a pedestal mounted on said base, a globular container having separate compartments for water and coffee, means of communication between said separate compartments and an outlet from the compartment for coffee,

means adjustable on said pedestal for maintaining thereon said globular container in any desired position, means



in said base for supporting therein a heater adapted to heat the contents of said container and means for supporting thereon a receptacle under the said outlet.

1,211,911. PROPELLING MECHANISM FOR VEHICLES. ARTHUR BOYD, West Hartlepool, England. Filed Aug. 28, 1915. Serial No. 47,877. (Cl. 208—69.)



1. Means for increasing the leverage of the crank arm of a pedal driven vehicle, including a bracket, a crank shaft journaled therein, an arm on each end of the crank shaft, each of said arms having its outer end inwardly offset, a pedal mounted to turn upon the offset end of each arm, a floating clutch member, a movable connection between the same and the crank bracket, and a clutch member adapted to coöperate with the floating clutch member and reduce the angular velocity required to indirectly lock the pedal to the crank.

2. Means for increasing the leverage of the crank arm of a pedal driven vehicle, including a bracket, a crank shaft journaled in said bracket, a crank arm fixed to each end of said shaft, a crank pin having an eccentric stud mounted in the outer end of each arm, a pedal loosely engaged on said pin, a clutch member carried by said pedal, a second clutch member movable upon the first clutch member, a flexible connection between the latter clutch member and the crank case adapted to reduce the angular velocity required to indirectly lock the pedal to the crank, and means for locking the crank pin in an adjusted position upon the crank arm to tension said flexible connection.

3. The combination with a crank bracket, of a crank shaft journaled therein, a crank arm fixed upon each end of said shaft, a crank pin having an eccentrically disposed threaded stud on one end removably mounted in the outer end of each arm, said pin being provided with a flange at the inner end of said stud having a circular series of recesses in its face concentrically disposed with respect to the stud, set pins threaded in the arm for engagement in said recesses to lock the crank pin in an adjusted position on the arm, a pedal mounted to turn on the crank pin, a gear fixed upon the crank bracket, a clutch carried by the pedal, and a flexible connection between the movable part of the clutch and said fixed gear.

4. Means for increasing the leverage of the crank arm of a pedal driven vehicle including a crank shaft, a crank arm fixed to each end of said shaft, a crank pin for each of the arms, a pedal loosely mounted thereon, a dead wheel concentric to the crank shaft, a rotatable element having its axis coincident with the crank pin, a movable connection between said rotatable element and the dead wheel, means for locking the rotatable element to the pedal during the working stroke of the crank arm, and means for adjusting the crank pin longitudinally upon the crank arm.

5. Means for increasing the leverage of the crank arm of a pedal driven vehicle including a crank shaft, a crank arm fixed to each end of said shaft, a crank pin for each of the crank arms, a pedal loosely mounted thereon, a dead wheel concentric to the crank shaft, a rotatable element having its axis coincident with the crank pin, a movable connection between said rotatable element and the dead wheel, means for locking the rotatable element to the pedal during the working stroke of the crank arm, and means for mounting and adjusting the crank pin eccentrically with respect to a fixed point on the crank arm.

1,211,912. STEAM-BOILER. COLIN CAMPBELL, Rutherford, N. J. Filed Apr. 16, 1915. Serial No. 21,812. (Cl. 110—98.)



1. The combination with a flame wall and boiler tube, of a baffle collar formed in sections, each section including a flange adapted to fit against the flame wall and a flange adapted to fit against the tube, and the tube engaging flanges coöperating with each other to form a bore disposed at an angle to the plane of the flame wall engaging flanges, and means for locking the sections in operative position.

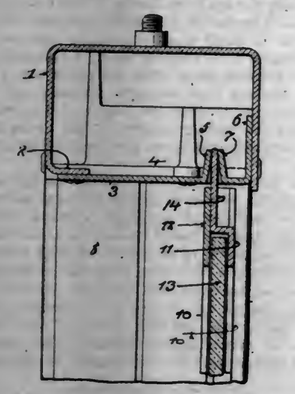
2. The combination with a flame wall and boiler tube, of a baffle collar formed in complemental sections, each section including a flame wall engaging flange and a boiler tube engaging flange, the complemental sections being provided at one end thereof with corresponding ears having bolt receiving openings therein and having a detachable and interlocking hinged connection at the opposite ends thereof, a clamping bolt passing through the bolt receiving openings of the ears, and a nut engaging the threaded end of the bolt and constructed to interlock with one of the ears so as to be held against rotation.

1,211,913. METAL WINDOW FRAME AND SASH. HARRY E. CAMPBELL, New York, N. Y. Filed July 1, 1916. Serial No. 106,995. (Cl. 189—72.)

1. A window-frame of metal, comprising a lintel, having a longitudinal opening in its bottom, and within said lintel two separated resilient flanges on opposite sides of said opening and inclined toward one another, and a sash having on its upper rail a longitudinal vertical extension plate entering between said flanges, when said sash is in closed position.

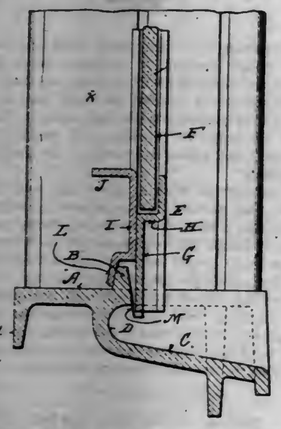
2. A window-frame of metal, comprising a lintel, a sash having its upper rail formed of two bars united and receiving the pane between them, one of said bars being flat, and the other bar being bent twice to form a shoulder and a vertical portion extending upwardly from said shoulder and beyond the upper longitudinal edge of said flat bar, and two upwardly extending separated resilient flanges on said lintel receiving said vertical portion of said sash plate and resiliently engaging both sides thereof when said sash is in closed position.

3. A window-frame of metal, comprising a hollow lintel, having an opening in its bottom, a cover plate for said opening having on one longitudinal edge and within said lintel an inclined resilient flange, an angle plate secured



to the front wall of said lintel having a resilient flange also within said lintel and inclined toward said first-named flange, and a sash having on its upper rail an extension plate entering between and in contact with said flanges, when said sash is in closed position.

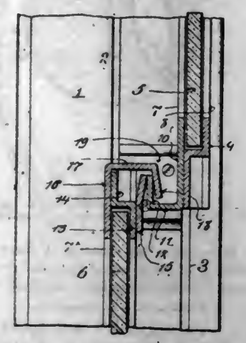
1,211,914. METAL WINDOW FRAME AND SASH. HARRY E. CAMPBELL, New York, N. Y. Filed July 1, 1916. Serial No. 106,996. (Cl. 189—72.)



1. A sash of sheet metal, having a bottom rail comprising an outer bar and an inner bar united together and receiving the lower edge of the pane between them, the said outer bar being bent to form a shoulder closing the space between said bars, and a sill comprising an inner horizontal portion, a vertical wedge-shaped flange, and an outer inclined portion; the said inner bar having a downwardly and inwardly inclined flange extending over and cooperating with said sill flange, and the said outer bar, when said sash is in closed position, extending below and forming a joint with the angle of said sill at the base of the wedge-shaped flange thereon.

2. A sash of metal having two longitudinal plates secured on the under side of its lower rail, the outer plate extending below the inner plate, a sill, and a vertical flange on said sill entering between said plates and having its inner side downwardly and inwardly inclined; the said inner plate, upon the closing of said sash, cooperating with the inclined inner side of said flange to move said outer plate laterally inward into contact with said sill below said flange and the said outer plate extending below the bottom of said sill flange, when the sash is closed.

1,211,915. METAL WINDOW FRAME AND SASH. HARRY E. CAMPBELL, New York, N. Y. Filed July 1, 1916. Serial No. 106,997. (Cl. 189—72.)



1. A window-frame, an upper sash, a lower sash, the said sashes being vertically movable in said frame, and, on the meeting rail of one of said sashes, two separated resilient flanges, one of said flanges being inclined toward the other flange, and, on the meeting rail of the other sash, a single flange; the said first-named flanges receiving in the tapering space between them and resiliently engaging the said last-named flange when said sashes are in closed position.

2. A window-frame, an upper sash, a lower sash, said sashes being vertically movable in said frame, two separated resilient converging flanges on the meeting rail of the lower sash, and a single upwardly extending flange on the meeting rail of the upper sash; the said converging flanges receiving between them and resiliently engaging the said single flange when said sashes are in closed position.

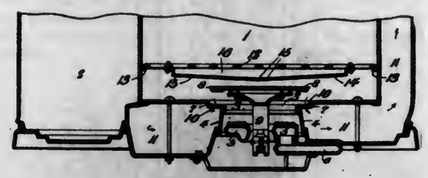
3. A metal window-frame, and two sashes vertically movable therein, the lower sash having on the outer side of its meeting rail an outwardly and upwardly inclined plate and, secured to the opposite side of its meeting rail, a plate extending over said inclined plate and having at its outer edge a downwardly and outwardly inclined flange, and an upper sash having an upwardly extending flange entering between and in contact with said inclined plate and said inclined flange on said lower sash when said sashes are in closed position.

4. A window-frame, two sashes slidable therein, the meeting rail of each sash having all parts of each of its end faces disposed in the same plane, and fixed blocks on the inner sides of said frame, having their exposed faces parallel to the end faces of said rails and placed to make contact with said end faces to close the joints between said block faces and said end faces when said sashes are in closed position.

5. A metal window-frame, comprising hollow jambs, each having two vertical guide slots in its inner wall, two sashes respectively entering said slots, and, on each of said jambs between said slots, a fixed block disposed opposite the ends of the meeting rails of said sashes when said sashes are closed and making contact with the extremities of both said meeting rails to close the joints between said rails at said extremities.

1,211,916. OVEN FOR COAL AND GAS STOVES. CHARLES D. CARTER, New York, and GEORGE F. BIBB, Troy, N. Y., assignors to The Floyd-Wells Company, Royersford, Pa., a Corporation of Pennsylvania. Filed Oct. 3, 1916. Serial No. 123,502. (Cl. 126—36.)

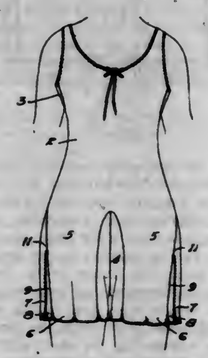
1. In a stove oven of the character stated having a flue for the products of combustion from the stove, the bottom of said oven having therein an opening, a casing depending from said bottom in communication with said opening, a gas burner in said casing and a movably mounted baffle plate adapted to close said opening, said bottom having therein a port affording communication between the oven and said flue, said port being covered by said plate when in its closed position.



2. A stove oven of the character stated having its bottom wall formed with an opening with a depressed portion around said opening provided with a port, a casing depending from said wall at said opening, a gas burner in said casing, said port being outside said casing, a flue communicating with the combustion chamber of the stove, and a movable plate fitted to said opening adapted to be seated on said portion and to cover said port.

3. In a stove oven of the character stated, a depending casing in communication with said oven, a gas burner in said casing, a flue for the products of combustion from the stove, and a movable baffle plate adapted to open and close the communication between said casing and the oven, said bottom having therein a port adapted to be covered by said baffle plate when in its closed position.

1,211,917. LADY'S UNDERGARMENT. FRANKLIN CHATFIELD, Minneapolis, Minn., assignor to Northwestern Knitting Company, Minneapolis, Minn., a Corporation. Filed Sept. 21, 1915. Serial No. 51,869. (Cl. 2—144.)

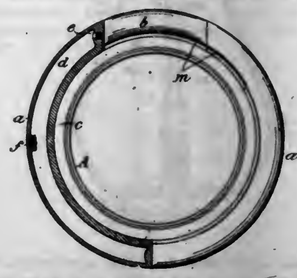


1. A lady's undergarment comprising an upper portion and leg portions having a closed crotch between them, overlapping gore inserts having their edges stitched to said leg portions, the lower edges of said inserts on one side having loose edges lapping by one another and allowing said leg portions to be drawn to one side to provide a posterior opening.

2. A lady's undergarment comprising a bust and body portion and leg portions having a closed crotch between them, gore inserts fitting into said leg portions over the hips of the garment and extending upwardly therein to a point adjacent the waist line, the upper portions of said gore inserts being stitched on both sides to the garment, said gore inserts lapping by one another and the lower portions thereof being stitched on one side only to the garment, the opposite edges thereof being loose and having freedom of separation to allow the leg portion of the garment to be drawn to one side to provide a posterior opening.

3. A lady's undergarment comprising an upper portion and leg portions having a closed crotch between them, gore inserts stitched on one edge to a leg portion, the other contiguous edges of said inserts being loose and providing an opening running lengthwise of the leg portion for allowing it to be drawn to one side to provide a posterior opening.

1,211,918. MANUFACTURE OF TIRE-SHOES. HENRY Z. COBB, Winchester, Mass., assignor, by direct and mesne assignments, to United States Rubber Company, New Brunswick, N. J., a Corporation of New Jersey. Filed July 3, 1914. Serial No. 848,766. (Cl. 18—56.)



1. In the manufacture of tire shoes, building up a shoe upon a mandrel, confining the shoe and mandrel in a mold, providing an individual source of fluid pressure sufficient to expand said shoe within its mold, forming a pressure tight joint between the mandrel and mold near each edge of the shoe, admitting said pressure between the mandrel and shoe, and vulcanizing the shoe while confining said pressure within it.

2. In the manufacture of tire shoes, storing in a chamber associated with a mandrel, a charge of fluid adapted under vulcanizing temperature to afford the required pressure, such mandrel having a neck-portion, and having thermostatic means adapted to open and liberate such charge at a temperature approaching the vulcanizing temperature, building up the shoe on such mandrel with a lining of elastic rubber extended over said neck-portion, placing the mandrel and shoe in a mold fitting the opposite sides of said neck-portion, clamping the mold-sections together so that the extended lining makes a tight joint between said neck-portion and mold, and subjecting to vulcanizing temperature, whereby said thermostatic means opens and liberates the stored medium under pressure within the shoe to expand the shoe within the mold and hold it expanded during vulcanizing.

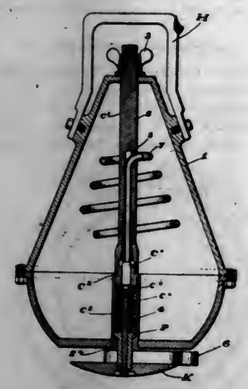
3. In the manufacture of tire shoes, building up the shoe on a mandrel, providing a source of fluid pressure in thermostatically controlled potential communication with the interior of the shoe, placing the mandrel and shoe in a mold, forming a pressure tight joint between the mandrel and mold near each edge of the shoe, applying heat so as to operate thermostatically to admit pressure from said source into the tire shoe, and continuing the heat until vulcanizing is accomplished.

4. In the manufacture of tire shoes, inclosing the shoe in a sectional mold with an annular neck portion between the mold sections, a lining of yielding rubber being provided extending over such neck portion, clamping the mold sections together so that such lining makes a tight joint between said neck portion and mold, liberating within the shoe fluid under pressure from a source of such pressure individual to the shoe, and sufficient to expand the shoe within its mold and vulcanizing while the shoe is so expanded.

1,211,919. DETONATOR. GERALD ALFRED COCK, London, England, assignor to Ernest A. Bigelow and Ernest A. Bigelow, Jr., New York, N. Y. Filed Mar. 10, 1916. Serial No. 83,223. (Cl. 102—39.)

1. A bomb of the kind described comprising a housing, a priming cylinder located therein, a percussion cap dis-

posed in said cylinder, and a detonating fuse having one end disposed in said cap, and its body portion coiled in the body of the bomb around the priming cylinder substantially as described.



2. A bomb of the kind described comprising a housing, a priming cylinder located therein, a percussion cap disposed in said cylinder, and a detonating fuse having one end disposed in said cap, and its body portion coiled in spiral form in the body of the bomb, a striker mounted in the priming cylinder and carrying a head exposed at the lower end of the bomb.

3. A bomb of the kind described comprising a housing, a priming cylinder located therein, a percussion cap disposed in said cylinder, and a detonating fuse having one end disposed in said cap, and its body portion coiled in spiral form in the body of the bomb, a striker mounted in the priming cylinder and carrying a head exposed at the lower end of the bomb, and a spring safety-clip adapted to hold the striker in inoperative position.

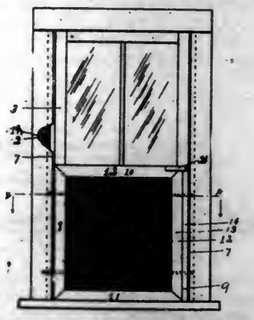
4. A bomb of the kind described comprising a housing adapted to receive a charge of explosive material, a priming cylinder located therein, a percussion cap disposed in said cylinder, a fuse of insensitive high explosive having one end disposed in said cap, and its body portion coiled in spiral form in the body of the bomb in combination, with means for firing the cap and thereby igniting the fuse and explosive in the bomb substantially as described.

5. In a bomb of the kind described, a housing, a priming cylinder located in said housing comprising an end member having a central opening adapted to receive the end of a fuse, a center member having a central opening adapted to receive a cap and an end member adapted to receive and support a firing pin, the said three members being adjustably connected, and all in combination with a detonating fuse having its end disposed in an opening in the first named end member and its body coiled in spiral form in said housing.

1,211,920. WINDOW-SCREEN AND SIMILAR DEVICE. AUGUSTINE F. COMEAU, Portland, Me., assignor of one-half to Joseph Gaudet, Portland, Me. Filed Dec. 11, 1915. Serial No. 66,249. (Cl. 156—38.)

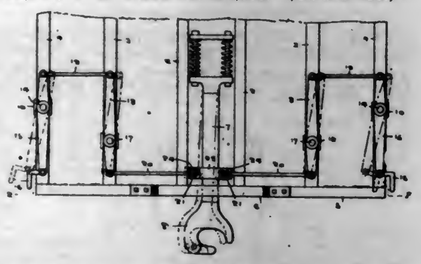
1. In a device of the character described, a rectangular frame and mesh provided on one side with guide members projecting beyond the outer edge of the frame and on the other side with two retractable bolts projecting normally beyond the outer edge of the frame, one projecting farther than the other, both serving as guide members and one serving as a locking member.

2. In a device of the character described, a rectangular frame and mesh provided on one side with rigid guide members projecting normally beyond the edge of the frame and on the other side with two retractable bolts projecting normally beyond the edge of the frame, one projecting farther than the other, and means for holding them yieldingly in normal position, both serving as guide members and one serving as a locking member.



3. In a device of the character described, a frame, one side formed of two overlapping angle shaped members, the outer member being movable laterally, spring actuated laterally movable bolts projecting normally beyond the outer edge of the frame, the bolts on the two member side being fixedly secured to the movable member, the outer side of the frame having a retractable bolt projecting normally beyond the outer edge of the frame.

1,211,921. SAFETY DRAW-BAR ADJUSTER. BLAKE C. COOK and EMMETT J. KELLY, Youngstown, Ohio. Filed May 29, 1916. Serial No. 100,735. (Cl. 213—59.)

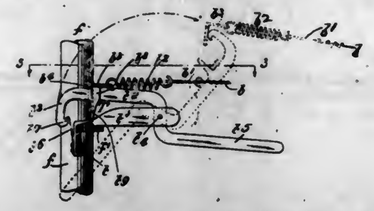


In a device of the character described, the combination with a vehicle, and the draw-bar and the coupler thereof, of levers pivotally mounted upon said vehicle in parallel relation to said drawbar and comprising an outer lever and an inner lever, the outer lever being pivotally mounted adjacent its rear end to provide a rear short arm and a forward longer arm, the inner lever being pivotally mounted adjacent its forward end to provide a short forward arm and a longer rear arm, a bar connecting the short arm of said outer lever with the long arm of said inner lever, a bar connecting the short arm of said inner lever with said drawbar, and means upon the long arm of said outer lever for actuating the same whereby to adjust said drawbar with a minimum amount of power.

1,211,922. SPRING BED-BOTTOM. MAYER DAXE, New York, N. Y. Filed Feb. 16, 1915. Serial No. 8,470. (Cl. 5—67.)

1. In combination, an elastic resilient bed bottom of the character designated, formed with end cross members connected by tension springs to the bottom spread, a bedstead frame formed with end cross bars, readily removable holders on one bedstead end cross bar adapted to engage with an end cross member of the spring bed bottom, and pivotally mounted levers adjacent opposite sides of and on the other bedstead end cross bar adapted to engage with the other end cross bar on the bed bottom, and constructed to tighten and hold the fabric permanently in place.

2. In combination, an elastic resilient bed bottom of the character designated formed with end cross members connected by tension springs to the bottom spread, a bedstead formed with end cross bars, means readily removably and detachably mounted on one bedstead end cross bar for holding one end of the spring bed bottom, and pivotally mounted levers adjacent opposite sides of and on the other bed bottom end bar for engaging with the other bedstead end cross bar and adapted to hold the spring bed bottom taut at all times, for the purposes described.



3. In combination, an elastic resilient bed bottom of the character designated formed with end cross members connected by tension springs to the bottom spread, a bedstead frame with end cross bars, readily removable holders on one bedstead end cross bar adapted to engage with an end cross member of the spring bed bottom, and detachable pivotally mounted levers adjacent opposite sides of and on the other bedstead end cross bar, adapted to engage with the other end cross bar on the bed bottom, and constructed to tighten and hold the fabric permanently in place.

4. In combination, an elastic resilient bed bottom of the character designated, formed with end cross members connected by tension springs to the bottom spread, a bedstead formed with end cross bars, readily removable means on one bedstead end cross bar for holding one end of the spring bed bottom, and detachable pivotally mounted levers adjacent opposite sides of and on the other bed bottom end bar for engaging with the other bedstead end cross bar and adapted to hold the spring bed bottom taut, and constructed to tighten and hold the fabric permanently in place.

5. In combination, an elastic resilient bed bottom of the character designated, formed with end cross members connected by tension springs to the bottom spread, said end members being formed with recesses, a bedstead formed with end cross bars, readily removable holders on one bedstead end cross bar adapted to engage with the recesses in the adjacent end cross member of the bed bottom, and pivotally mounted levers adjacent opposite sides of and on the other bedstead end cross bar, adapted to engage with the recess in the other and adjacent end cross bar of the bed bottom, and constructed to tighten and hold the fabric permanently in place.

[Claims 6 to 9 not printed in the Gazette.]

1,211,923. METHOD OF SEPARATING A SULFONIC ACID OF A HYDROCARBON OF THE AROMATIC SERIES FROM SULFURIC ACID AND OF CONVERTING THE SULFONIC ACID INTO A SALT. LOUIS M. DENNIS, Ithaca, N. Y. Filed July 14, 1916. Serial No. 109,213. (Cl. 23—24.)

1. A method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid consisting in treating a mixture of the acids with a solvent which dissolves but one of them.

2. A method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid consisting in treating a mixture of the acids with a solvent which dissolves the sulfonic acid but not the sulfuric acid.

3. A method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid consisting in treating a mixture of the acids with an organic solvent which dissolves the sulfonic acid but not the sulfuric acid.

4. A method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid consisting in treating a mixture of the acids with benzene.

5. A method of making a salt of a sulfonic acid of a hydrocarbon of the aromatic series consisting in dissolving the sulfonic acid in a solvent in which the salt is relatively insoluble and treating the solution with a suitable compound to form the salt.

[Claims 6 to 44 not printed in the Gazette.]

1,211,924. MATTRESS-TUFTING MACHINE. GUY DILLON, Indianapolis, Ind., assignor to Frank H. Hirschman, Indianapolis, Ind. Filed May 8, 1916. Serial No. 96,223. (Cl. 112—24.)



1. In a mattress tufting machine, the combination, with a reciprocating needle for carrying the twine through the mattress, means for temporarily holding the end of the twine in restraint, loop-turning means adapted to catch and turn a loop in the twine, a cross-hook adapted to catch the end of the twine when freed by the twine holding means and for pulling said twine end through the twisted loop for completing the knot, and means actuating said cross hook for releasing the twine end when the knot is drawn tight and before the needle reaches the upper end of its stroke.

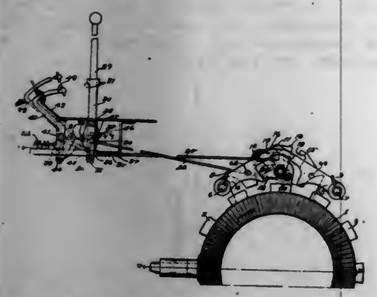
2. In a mattress tufting machine, the combination, with a reciprocating needle for carrying the twine through the mattress, means for temporarily holding the end of the twine in restraint, loop turning means adapted to catch and turn a loop in the twine, a cross-hook adapted to catch the end of the twine when freed by the twine holding means and for pulling said twine end through the twisted loop for completing the knot, shifting means for moving said hook to free the twine when the knot is drawn tight and before the needle reaches the upper end of its stroke, and means for actuating said shifting means.

3. In a mattress tufting machine, the combination, with a reciprocating needle for carrying the twine through the mattress, means for temporarily holding the end of the twine in restraint, loop turning means adapted to catch and turn a loop in the twine, a cross-hook adapted to catch the end of the twine when freed by the twine holding means and for pulling said twine end through the twisted loop for completing the knot, and a cam actuating said cross-hook for releasing the twine end when the knot is drawn tight and before the needle reaches the upper end of its stroke.

4. In a mattress tufting machine, the combination, with a reciprocating needle for carrying the twine through the mattress, means for temporarily holding the end of the twine in restraint, loop turning means adapted to catch and turn a loop in the twine, a cross-hook adapted to catch the end of the twine when freed by the twine hold-

ing means and for pulling said twine end through the twisted loop for completing the knot, shifting means for moving said hook to free the twine when the knot is drawn tight and before the needle reaches the upper end of its stroke, and a cam for actuating said shifting means.

1,211,925. SAFETY-LOCK FOR VEHICLES. FREDERICK W. DOBBEL, Sonoma, Cal., assignor to Dobbel Auto Safety Lock Company, Sonoma, Cal., a Corporation of California. Filed Dec. 15, 1915. Serial No. 67,086. (Cl. 21—8.)



1. A safety lock for wheeled vehicles comprising a member adapted to rotate with a road wheel of the vehicle, shiftable stop devices for interlocking therewith for positively holding the said member against rotation, and mechanism for automatically actuating said stop devices to engage with said member to prevent the rotation thereof in either direction.

2. A safety lock for wheeled vehicles comprising a member adapted to rotate with a road wheel of the vehicle, a pair of oppositely operating shiftable stop devices for interlocking therewith for positively holding said member against rotation, and mechanism for automatically actuating either one of said stop devices to engage with said member to prevent the rotation thereof in either direction, and means for operating both of said stop devices simultaneously to lock said wheel against any rotation.

3. A safety lock for wheeled vehicles comprising a toothed wheel mounted for rotation with a road wheel of the vehicle, oppositely operating pawls adapted to engage the teeth of said wheel, and mechanism for automatically actuating said pawls to lock said toothed wheel against rotation in either direction.

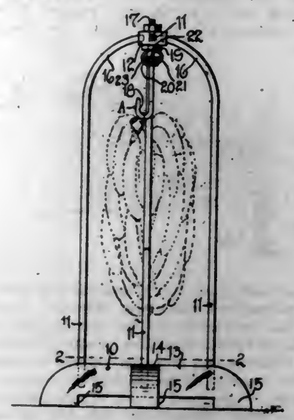
4. A safety lock for wheeled vehicles comprising a toothed wheel mounted for rotation with a road wheel of the vehicle, a pair of oppositely operating pawls adapted to engage the teeth of said wheel, selecting means for automatically actuating either one of said pawls to lock said toothed wheel respectively against rotation in either direction, and mechanism for actuating both of said pawls simultaneously to lock said wheel against any rotation.

5. A safety lock for wheeled vehicles comprising a toothed wheel mounted for rotation with a road wheel of the vehicle, a pair of oppositely operating pawls adapted to engage the teeth of said wheel to prevent the rotation thereof in either or both directions, selecting mechanism for automatically actuating either one of said pawls independently of the other, mechanism for actuating both of said pawls simultaneously, means for locking said actuating mechanism to retain said pawls in operative position, and devices independent of said locking means for temporarily rendering said pawls inoperative.

[Claims 6 to 21 not printed in the Gazette.]

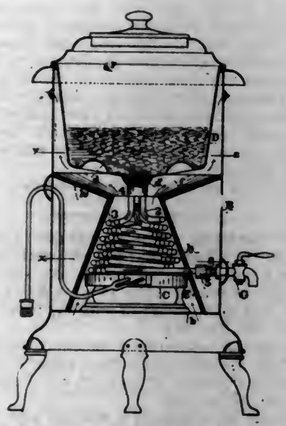
1,211,926. BANANA-RACK. ALBERT J. DODD, Denver, Colo. Filed June 9, 1915. Serial No. 33,172. (Cl. 46—71.)

1. A rack of the character described including upwardly and inwardly extending spaced standards operatively connected at their upper ends, a bolt operatively connected to the standards and depending therefrom and having a head at its lower end, and a hook having upwardly extending arms, said arms at their upper ends having inwardly extending superposed eyes through which said bolt passes, said eyes embracing the bolt above the head and loosely surrounding the bolt whereby the hook may be freely rotated.



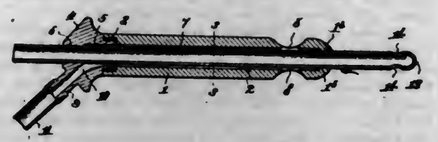
2. A rack of the character described including a supporting base, a supporting frame comprising rods connected at their upper ends and extending downward to and inserted in said standards, the rods crossing each other at their upper ends, a bolt passing through the rods and having a head at its lower end, and a supporting hook having an upwardly extending bill and upwardly extending arms, the extremities of the arms having inwardly extending extremities being formed to provide superposed eyes through which the bolt loosely passes whereby said hook is swiveled upon the bolt.

1,211,927. WATER-HEATER. JOHN A. FERRIS, Chicago, Ill. Filed Feb. 10, 1916. Serial No. 77,402. (Cl. 126—350.)



In a water heater the combination of a stove C within a casing B a water bowl D provided with a bottom formed with several semispherical depressions d, d', and the said bowl depending within the said casing, conical spiral pipe coils located between the stove C and the water bowl with the upper ends of the said pipe coils joined to the bottom portion of the water bowl, a faucet G communicating with spiral pipe coils by a connecting bush cap, a conical sheet metal jacket F surrounding the spiral pipe coils, a cup shaped metal disk above the conical jacket and joining thereto, and sheet asbestos outwardly covering the said conical jacket and the cup shaped metal disk, to prevent heat radiation through the conical jacket and the metal disk supported thereby, substantially as described and shown.

1,211,928. COLON-IRRIGATOR. ARTHUR R. FISHER, New York, N. Y. Filed Mar. 25, 1916. Serial No. 86,637. (Cl. 128—25.)



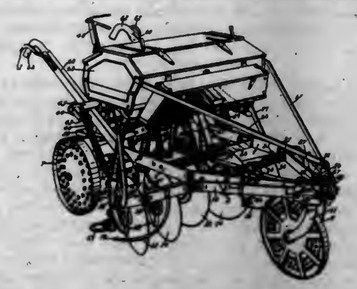
1. A colon irrigator, comprising a flexible cylindrical body having an inflexible guard piece, and a flexible applicator tube longitudinally movable therethrough as and for the purpose specified.

2. A colon irrigator, comprising a flexible cylindrical body having a bore therein; an inflexible guard piece connected to the cylindrical body at one end, and having a discharge duct which communicates with said bore; apertures in the side walls of the cylindrical body at the other end thereof, the said bore, discharge duct and apertures constituting a drain passage, and a flexible applicator tube longitudinally movable through the inflexible guard piece and the flexible cylindrical body, as and for the purpose specified.

3. A colon irrigator, comprising a flexible cylindrical body having an inflexible guard piece at one end; and a flexible applicator tube of a greater degree of tensility than the cylindrical body, the said tube being longitudinally movable through the cylindrical body and the guard piece, alining bores in the cylindrical body and the guard piece, said bores being of a greater diameter than the exterior diameter of said tube, the bore of said guard piece being restricted for a portion of its length to snugly fit the applicator tube at any portion in its length; and tube engaging portions of the cylindrical body engaging said tube around a portion of its circumference to provide passages at the extreme end of said cylindrical body, said body having apertures in the side walls thereof; a nipple on said guard piece, having a discharge duct therein, which communicates with the bore of said guard piece, and a drain tube connected with said nipple, as and for the purpose specified.

1,211,929. GRAIN-DRILL. CHARLES L. FOWLE, Dowagiac, Mich. Filed Nov. 30, 1914. Serial No. 874,880. (Cl. 111—36.)

1. In a grain drill, the combination of a frame comprising side members converged at their front ends, an axle at the rear end of said frame, wheels on said axle, a caster wheel disposed centrally at the front end of said frame, a rearwardly projecting handle at each side of the rear end of said frame, a double disk central furrow opener, concavo-convex furrow openers at each side of said central furrow opener disposed with their concave sides inwardly and inclined outwardly to the line of draft, the outer furrow openers being arranged on the outside of said frame side members, draw bars for the outer furrow openers having converging front ends arranged on the outside of said frame side members, said outer draw bars being pivotally mounted for lateral swinging movement to the front end of said frame, chains for limiting the outward swing of said outer draw bars adjustably connected to the converging portions thereof, a transverse draft rod, draw bars for the central and intermediate furrow openers mounted on said draft rod, the draw bars of the intermediate furrow openers being mounted for lateral adjustment on said draft rod, guards mounted on the outer draw bars to extend downwardly and rearwardly therefrom at the outer sides of the outer furrow openers, boots and seed tubes, pressure springs for said furrow openers, the seed tubes and pressure springs for the outer furrow openers being arranged on the outer side of said side frame members, and guards mounted on said outer draw bars to project upwardly therefrom in front of the seed tubes and pressure spring of the outer furrow openers.



2. In a grain drill, the combination of a frame comprising side members converged at their front ends, an axle at the rear end of said frame, wheels on said axle, a caster wheel disposed centrally at the front end of said frame, a rearwardly projecting handle at each side of the rear end of said frame, a double disk central furrow opener, concavo-convex furrow openers at each side of said central furrow opener disposed with their concave sides inwardly and inclined outwardly to the line of draft, the outer furrow openers being arranged on the outside of said frame side members, draw bars for the outer furrow openers having converging front ends arranged on the outside of said frame side members, said outer draw bars being pivotally mounted for lateral and vertical swinging movement to the front end of said frame, chains for limiting the outward swing of said outer draw bars adjustably connected to the converging portions thereof, a transverse draft rod, draw bars for the central and intermediate furrow openers mounted on said draft rod, the draw bars of the intermediate furrow openers being mounted for lateral adjustment on said draft rod.

3. In a grain drill, the combination of a frame comprising side members converged at their front ends, an axle at the rear end of said frame, wheels on said axle, a caster wheel disposed centrally at the front end of said frame, a rearwardly projecting handle at each side of the rear end of said frame, a double disk central furrow opener, concavo-convex furrow openers at each side of said central furrow opener disposed with their concave sides inwardly and inclined outwardly to the line of draft, the outer furrow openers being arranged on the outside of said frame side members, draw bars for the outer furrow openers having converging front ends arranged on the outside of said frame side members, said outer draw bars being pivotally mounted for lateral swinging movement to the front end of said frame, a transverse draft rod, draw bars for the central and intermediate furrow openers mounted on said draft rod, guards mounted on the outer draw bars to extend downwardly and rearwardly therefrom at the outer sides of the outer furrow openers, boots and seed tubes, pressure springs for said furrow openers, the seed tubes and pressure springs for the outer furrow openers being arranged on the outer side of said side frame members, and guards mounted on said outer draw bars to project upwardly therefrom in front of the seed tubes and pressure spring of the outer furrow openers.

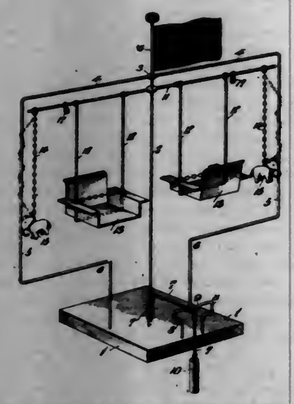
4. In a tongueless dirigible grain drill, the combination of a frame comprising side members converged at their front ends, an axle at the rear end of said frame, wheels on said axle, a caster wheel disposed centrally at the front end of said frame, a double disk central furrow opener, concavo-convex furrow openers at each side of said central furrow opener disposed with their concave

sides inwardly and inclined outwardly to the line of draft, the outer furrow openers being arranged on the outside of said frame side members, draw bars for the outer furrow openers having converging front ends arranged on the outside of said frame side members, said outer draw bars being pivotally mounted for limited lateral and vertical swinging movement to the front end of said frame, a transverse draft rod, draw bars for the central and intermediate furrow openers mounted on said draft rod and a handle secured to each side of said frame to project rearwardly therefrom and by means of which pressure may be applied to either side, all coacting for the purpose specified.

5. In a grain drill, the combination of a frame, a pair of carrying wheels at the rear end of said frame, a caster wheel disposed centrally at the front end of said frame, a handle at each side of the rear end of said frame, a double disk central furrow opener, concavo-convex furrow openers at each side of said central furrow opener disposed with their concave sides inwardly and inclined outwardly to the line of draft, draw bars for the outer furrow openers pivotally mounted for lateral swinging movement, means for limiting the swing of said outer draw bars, draw bars for the central and intermediate furrow openers, the draw bars of the intermediate furrow openers being mounted for lateral adjustment, guards mounted on the outer draw bars to extend downwardly and rearwardly therefrom at the outer sides of the outer furrow openers, boots and seed tubes, pressure springs for said furrow openers, the seed tubes and pressure springs for the outer furrow openers being arranged on the outer side of said frame, and guards mounted on said outer draw bars to project upwardly therefrom in front of the seed tubes and pressure spring of the outer furrow openers.

[Claims 6 to 11 not printed in the Gazette.]

1,211,930. TOY SWING. ISAAC M. FREDERICK, Perkasie, Pa. Filed June 1, 1916. Serial No. 101,020. (Cl. 46—37.)



1. A toy of the character stated composed of a beam, a shaft carrying the same, a base on which the lower end of said shaft is mounted, a swing on said beam, a cord-like member connected with said shaft adapted to be wound on and unwound therefrom, a weight on said member adapted to unwind the same from said shaft and cause the rotation of said shaft and its connections, a frame on said base rising therefrom, the top of said frame forming a bearing for the upper end of said shaft, a flexible hanger on said beam, and a weight pendant from said hanger adjacent to the side of said frame whereby said weight by centrifugal action imparted to it is adapted to cause said hanger to wind around said side as an intermittent detaining device for said beam.

2. A toy of the character stated composed of a beam, a shaft carrying the same, a base on which the lower end of said shaft is mounted, a swing on said beam, a cord-like member connected with said shaft adapted to be wound on and unwound therefrom, a weight on said member adapted to unwind the same from said shaft and cause the rotation of said shaft and its connections, a frame on said base rising therefrom, the top of said frame forming a bearing for the upper end of said shaft, a flexible hanger on said beam, a weight pendant from said hanger adjacent to the side of said frame whereby said weight by centrifugal action imparted to it is adapted to cause said hanger to wind around said side as an intermittent detaining device for said beam, and a guide on said base for said cord-like member adapted to have the latter ride thereon in its opposite motions.

3. A toy of the character stated composed of a beam, a shaft carrying the same, a base on which the lower end of said shaft is mounted, a swing on said beam, a cord-like member connected with said shaft adapted to be wound on and unwound therefrom, a weight on said member adapted to unwind the same from said shaft and cause the rotation of said shaft and its connections, a frame on said base rising therefrom, the top of said frame forming a bearing for the upper end of said shaft, a flexible hanger on said beam, a weight pendant from said hanger adjacent to the side of said frame whereby said weight by centrifugal action imparted to it is adapted to cause said hanger to wind around said side as an intermittent detaining device for said beam, and means on said beam adapted to hold said weight on said hanger out of the path of said side of said frame.

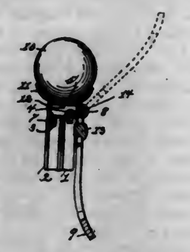
4. A toy of the character stated composed of a beam, a shaft carrying the same, a base on which the lower end of said shaft is mounted, a swing on said beam, a cord-like member connected with said shaft adapted to be wound on and unwound therefrom, a weight on said member adapted to unwind the same from said shaft and cause the rotation of said shaft and its connections, a frame on said base rising therefrom, the top of said frame forming a bearing for the upper end of said shaft, a flexible hanger on said beam, a weight pendant from said hanger adjacent to the side of said frame whereby said weight by centrifugal action imparted to it is adapted to cause said hanger to wind around said side as an intermittent detaining device for said beam, means on said beam adapted to hold said weight on said hanger out of the path of said side of said frame, and a guide on said base for said cord-like member adapted to have the latter ride thereon in its opposite directions.

5. A toy of the character stated composed of a beam, a shaft carrying the same, a base on which the lower end of said shaft is mounted, a swing on said beam, a cord-like member connected with said shaft adapted to be wound on and unwound therefrom, a weight on said member adapted to unwind the same from said shaft and cause the rotation of said shaft and its connections, a frame on said base rising therefrom, the top of said frame forming a bearing for the upper end of said shaft, a flexible hanger on said beam, and a weight pendant from said hanger adjacent to the side of said frame whereby said weight by centrifugal action imparted to it is adapted to cause said hanger to wind around said side as an intermittent detaining device for said beam, said shaft being extended above said frame adapted to form a handle for rotating the former.

1,211,931. BAG-FASTENER. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed June 1, 1915. Serial No. 31,323. (Cl. 70—116.)

1. In combination two members movable relatively to each other, a fastener secured to one of said members holding said frame members together, said fastener provided with integral holding means, positioning means on the sides of said holding means, a locking element provided with trunnions secured to said holding means having locking engagement with the other frame member for additionally holding said members together and independently operated from the said fastener.

2. The combination with a pair of frame members, a fastener mounted upon one of said frame members and having interlocking engagement with the other frame member, the other frame member being provided with a button on its outer face, said fastener being provided with an integral extension forming a bearing provided with positioning means formed on its ends, a locking element, the open end of which is pivotally secured in said bearing, said locking element provided with holding means and having interlocking engagement with the button on the other frame member for additionally holding said members together.



3. In combination two members movable relatively to each other, a catch member secured to one of said frame members and having interlocking engagement with the other frame member, said catch member being provided at its forward end with a bearing, said bearing being further provided at its outer ends with positioning means, and a locking element pivotally secured in said bearing, said locking element provided with two arms, the inner sides of which form a curved engaging portion designed to have locking engagement with the other frame member, the said arms of the locking element being further designed to be engaged by the positioning means located on the bearing to frictionally hold the locking element in an unlocked position.

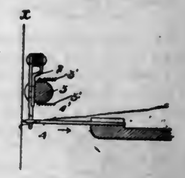
4. The combination with a pair of pivoted frame members, a fastener provided with an extension on its base for securing said fastener to one of said frame members and adapted to have interlocking engagement with the other frame member, said fastener being provided with an integral extension forming a tubular bearing, said bearing provided with positioning means formed on its ends, a locking element provided with integral trunnions, said trunnions adapted to be mounted in said tubular bearing, the inner side walls of the arms of said locking element designed to be engaged by said positioning means and frictionally position said locking element, a knob on the other frame member, said locking element provided with holding means designed to snap over said knob for additionally holding said members together and forming a pull-piece for the easy manipulation of said first named fastener and bag frames.

1,211,932. SURFACING DEVICE FOR TRACING-CLOTH. HENRY GOLDBERGER and MORRIS GOLDBERGER, Chicago, Ill. Filed Nov. 27, 1914. Serial No. 874,187. (Cl. 91—59.)



In a holder for an abrading and filling implement for tracing cloth the combination with a hollow body having a flat underface and a concaved upper handle portion, a pad secured to said underface, a perforated plate secured to and closing the end of said body, and terminating at its lower end in a forwardly projecting perforated lip, a second perforated plate slidably mounted on the first named perforated plate, a stud depending from the slidably mounted plate, and projecting through the perforation on said lip, a coiled spring around the said stud and resting upon said lip, an operating handle extending inwardly from the top of the slidable plate and positioned over the holder within the concave upper portion of the handle.

1,211,933. EMBROIDERING-MACHINE. JOSEF GRANZ, Plauen, Germany, assignor to Vogtländische Maschinen-Fabrik, Plauen, Germany. Filed Mar. 5, 1915. Serial No. 12,280. (Cl. 112—7.)



1. In an embroidering machine, the combination with the needles, of a device for producing moss or plush-like embroidery work, comprising ear-like members capable of closing and opening, said members being adapted to first lie in the range of the respective needle and while the latter is in the fabric to close around the same, then during the retreating movement of the needle to catch the thread thereof and while loosely holding said thread move it out of the range of the needle, then after the formation of the next stitch drop the formed loop and move back into the range of the needle to catch the thread for the next loop.

2. In an embroidering machine, the combination with the stitching needles, of a device for producing moss or plush-like embroidery work, comprising ear-like members capable of closing and opening and adapted to catch the needle thread and hold it loosely out of the range of the needle until the formation of the next stitch.

3. In an embroidering machine, the combination with the stitching needles, of a device for producing moss or plush-like embroidery work, comprising ear-like members capable of closing and opening and of moving laterally relative to the needles, said ear-like members being adapted to catch the needle thread and hold it loosely out of the range of the needle until the formation of the next stitch.

4. In an embroidering machine, the combination with the stitching needles, of a device for producing moss or plush-like embroidery work, comprising implements formed like shears or tongs and provided with ears capable of closing and opening and adapted to catch the needle thread and hold it loosely out of the range of the needle until the formation of the next stitch.

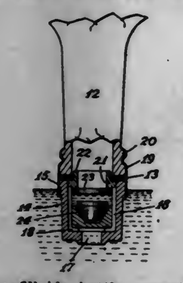
5. In an embroidering machine, the combination with the stitching needles, of a device for producing moss or plush-like embroidery work, comprising a member extending longitudinally of the machine and movable laterally to the needles, a series of implements formed like shears or tongs and fulcrumed to said member, said implements being each formed with a pair of ear-like members capable of closing and opening and adapted to catch the needle thread and hold it loosely out of the range of the needle until the formation of the next stitch.

[Claim 6 not printed in the Gazette.]

1,211,934. BOTTLE. EDGEWORTH GREENE, Montclair, N. J. Filed May 23, 1914. Serial No. 840,401. (Cl. 215—62.)

1. A non-refillable bottle comprising a reservoir provided with a separate valve-compartment having a dis-

charge orifice; a valve-seat intermediate the orifice and the reservoir; a valve including a float; weighted-means, separate from the float and retained against escape from said valve-compartment, adapted and arranged to move the float in a direction away from the seat when the bottle containing the liquid is tilted from an upright into a pouring position and to move the float, in response to gravity, in a direction toward the seat when the bottle is returned from a pouring to a horizontal position, and when refilling with liquid is attempted while the bottle is in an inverted position communication through said seat is closed by the movement of said float, due to its flotation on the entering liquid, in a direction toward said seat; and further means for preventing adhesion, between the weighted-means and any adjacent surface of any element of the bottle, sufficient to prevent the closing of the valve when refilling with liquid is attempted.



2. A non-refillable bottle comprising a reservoir provided with a separate valve-compartment having a discharge orifice; a valve-seat intermediate the orifice and the reservoir; a valve including a float; weighted-means, separate from the float and retained against escape from said valve-compartment, adapted and arranged to move the float in a direction away from the seat when the bottle containing the liquid is tilted from an upright into a pouring position, and to move the float, in response to gravity, in a direction toward the seat when the bottle is returned from a pouring to a horizontal position; and the configuration of the surfaces of the weighted-means as well as that of the adjacent surface of any element of the bottle being such that the adhesion between them is insufficient to prevent the closing of the valve when refilling with liquid is attempted.

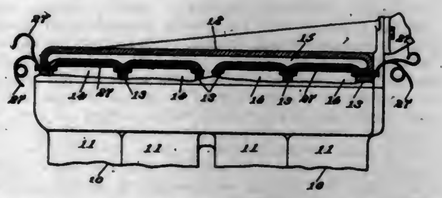
3. A non-refillable bottle comprising a reservoir; an adjacent separate valve-compartment having a discharge orifice; a valve-seat intermediate the orifice and the reservoir; closing-means, including a float and weighted-means permanently retained against escape from said valve-compartment, for normally sealing communication through said valve-seat, said weighted-means including a weight movable with respect to the float; that part of said closing-means, adjacent the valve-seat and including the float, constituting a float-valve and the arrangement of the members of said closing-means being such that, when the bottle containing liquid is tilted from an upright to a pouring position, communication through said valve-seat is opened by the movement, in response to gravity, of an element of said closing-means which in turn effects movement of the float in a direction away from the seat; when the bottle is returned from a pouring to a horizontal position, communication through said seat is closed by the movement, in response to gravity, of an element of said closing-means which in turn effects movement of the float in a direction toward said valve-seat; and when refilling with liquid is attempted while the bottle is in an inverted position communication through said seat is closed by the movement of said float, due to its flotation on the entering liquid, in a direction toward said seat; and said closing-means also including further means for preventing adhesion, between the surface of the weight and an element of the bottle adjacent thereto, sufficient to interfere with the closing of communication through the valve-seat when refilling with liquid is attempted.

4. A non-refillable bottle comprising a reservoir; an adjacent separate valve-compartment having a discharge orifice; a valve-seat intermediate the orifice and the reservoir; closing-means, including a float and weighted-means permanently retained against escape from said valve-compartment, for normally sealing communication through said valve-seat, said weighted-means including a weight movable with respect to the float; that part of said closing-means, adjacent the valve-seat and including the float, constituting a float-valve and the arrangement of the members of said closing-means being such that, when the bottle containing liquid is tilted from an upright to a pouring position, communication through said valve-seat is opened by the movement in response to gravity, of an element of said closing-means which in turn effects movement of the float in a direction away from the seat; and when the bottle is returned from a pouring to a horizontal position, communication through said seat is closed by the movement in response to gravity of an element of said closing-means which in turn effects movement of the float in a direction toward said valve-seat; and the configuration of the surface of the weight, as well as that of any surface of an element of the bottle adjacent thereto, being such that adhesion between them is insufficient to prevent the closing of communication through the valve-seat when refilling with liquid is attempted.

5. An attachment for rendering bottles non-refillable, including a valve-compartment, having a discharge orifice at one end and a valve-seat at the other, and containing a guard-member, the interior surface of which is of frusto-conical configuration, and a coöperating slidable weight-member having a corresponding frusto-conical configuration at one end and a cylindrical configuration at the other, the maximum diameter of said conical portion being equal to that of said cylindrical portion, and the configuration of the adjacent surfaces of said guard and said weight being such that the adhesion therebetween when wet will be insufficient to prevent the separation thereof in response to gravity.

[Claims 6 to 8 not printed in the Gazette.]

1,211,935. MEANS FOR HEATING CYLINDERS OF EXPLOSIVE-ENGINES. JOHN H. GROSHANS, Baltimore, Md. Filed Aug. 17, 1915. Serial No. 45,904. (Cl. 123—179.)

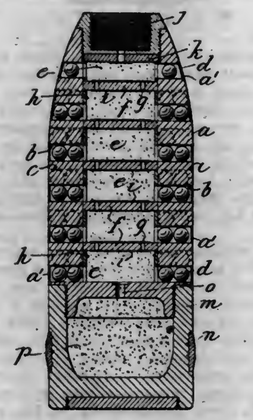


1. The combination with an explosive engine having a plurality of cylinders, of a cover extending across the ends of said cylinders and provided with flanges to form chambers on the under side thereof and in register with the cylinders; a heater device extending across each chamber of the cover between said partitions and heater wires extending through the partitions and also through the heater devices in the cover chambers.

2. The combination with an explosive engine having a plurality of cylinders, of a cover extending across the ends of the cylinders and having a plurality of bottom chambers which register with the said cylinders and each chamber being provided with a cross-wise recess; a heater seated in the recess of each cover chamber and provided with two channels and a heater wire extending through one channel of each heater and back through the other channel of said heater.

3. The combination with an explosive engine having a plurality of cylinders, of a cover extending across the ends of the cylinders and having a plurality of bottom chambers which register with the said cylinders and each chamber being provided with a cross-wise recess; a two part heater in each recess of the cover chamber,—one part of said heater having two electrically-separated channels and the other part of said heater receiving the channeled part and a heater wire extending through one channel of said heater part and back through the other channel of said part.

1,211,936. EXPLOSIVE PROJECTILE. ROBERT GUNTER and MARSHALL MCILWAINE EAKIN, London, England, assignors to George Thomas Cavendish Paget and William Edmund Slaughter, London, England. Filed Nov. 24, 1915. Serial No. 63,167. (Cl. 102—29.)



1. An explosive projectile comprising a shell having a wall surrounding a space constituting a central chamber, and formed with housings radiating from the said central chamber, means for subdividing such chamber in an axial direction to form separate explosion regions, explosive charges disposed in said regions, shrapnel bullets in the wall housings, and means for closing the outer ends of such housings.

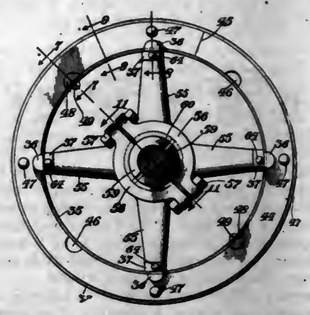
2. An explosive projectile comprising a shell having a wall surrounding a space constituting a central chamber and formed with housings radiating from the latter, perforated disks adapted to be inserted in such chambers, rings adapted to be assembled alternately with the disks and hold the latter in spaced relationship thereby forming separated explosion regions, explosive charges disposed in such regions, shrapnel bullets in the wall housings, and means for closing the outer ends of such housings.

3. An explosive projectile comprising a hollow shell having a pierced cylindrical wall, shrapnel bullets housed in such piercings, charges, adapted to be fired successively, arranged in such hollow shell and a container at the base of the shell adapted to receive a higher explosive than that in the shell, the said container, being in communication with the interior of the shell through a perforation.

1,211,937. PULLEY. LUDWIG GUTMANN, St. Louis, Mo. Filed Sept. 28, 1912. Serial No. 722,915. (Cl. 64—17.)

1. A pulley having a rim, a plurality of rim elements removably mounted on and arranged axially of said rim, each rim element comprising a pair of side members and a pulley facing between said side members, said side members and pulley facing being united to form a self-contained annular structure, and means for securing said rim elements in assembled relation on the rim.

2. A pulley having a rim, a plurality of split rim elements removably mounted on and arranged axially of said rim, each rim element comprising a pair of side members and a pulley facing between said side members, said side members and pulley facing being united to form a self-contained split annular structure, and means for securing said rim elements in assembled relation on the rim.



3. A pulley having a rim, and a self-contained rim element comprising a pair of annular metallic side members, and a laminated non-metallic pulley facing between said side members, said parts being secured together to form a self-contained annular structure, the rim element so formed being adapted to be removably mounted on the pulley to form the driving rim thereof.

4. A pulley having a rim element comprising a pair of annular sheet metal side members having laterally extending serrated flanges struck up from the body thereof, the teeth on one flange fitting between the teeth of the other, and said flanges being positioned to form a rim of channel section, and a pulley facing between said side members, said parts being secured together to form a self-contained annular structure, the rim element so formed being adapted to be removably mounted on the pulley to form the driving rim thereof.

5. A pulley having a rim, and a self-contained rim element comprising a pair of annular metallic side members, and a laminated non-metallic pulley facing between said side members, said parts being secured together to form a self-contained annular structure, the rim element so formed being adapted to be removably mounted on the pulley to form the driving rim thereof, said elements having recesses, and said rim having coöperating lugs to form a lock joint between said element and said rim.

[Claims 6 to 9 not printed in the Gazette.]

1,211,938. PULLEY COVERING OR FACING. LUDWIG GUTMANN, St. Louis, Mo. Continuation of application Serial No. 722,915, filed Sept. 28, 1912. This application filed May 21, 1914. Serial No. 840,003. (Cl. 64—45.)



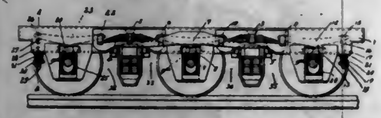
A pulley having an applicable rim covering comprising a series of circumferentially extending links flexibly joined together endwise to form a flexible pulley facing.

1,211,939. SPRING SUSPENSION SYSTEM FOR RAILWAY-TRUCKS. FRANK HAMMOND HARDIN, White Plains, N. Y. Filed Dec. 17, 1915. Serial No. 67,471. (Cl. 105—243.)

1. In a spring suspension system for a railway car having car supports and wheels, a plurality of axle supports, an equalizing member balanced upon each axle support and spring members directly connecting both ends of each equalizing member to said car supports.

2. In a spring suspension system for a railway car having car supports and wheels, a plurality of axle supports,

an equalizing member balanced upon each axle support, a leaf spring connecting one end of said equalizing member to support said car and a helical spring connecting the other end of said member to support said car.



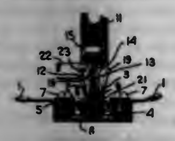
3. In a spring suspension system for a railway car having car supports and wheels, a plurality of equalizing members balanced upon axle supports, spring members directly connecting both ends of each equalizing member to said car supports, said spring members being located along the upper sides of wheels mounted on said axles and above the customary brake rigging on said wheels.

4. In a spring suspension system for a railway car having car supports and wheels, a plurality of axle supports, an equalizing member balanced upon each axle support, a leaf spring connecting one end of said equalizing member to support said car, a helical spring connecting the other end of said lever to support said car, said spring members being located along the upper sides of wheels mounted on said axles and above the customary brake rigging on said wheels.

5. In a spring suspension system for a railway truck having wheels, a plurality of axle supports, a non-resilient pivoted equalizing lever balanced upon each axle support and metal spring members having a range of movement sufficient to accommodate service vibration connecting both ends of an equalizing lever to supports on said truck.

Claims 6 to 21 not printed in the Gazette.]

1,211,940. PLUGGING-IN SWITCH. WILLIAM S. HARLOW, Swampscott, Mass. Filed Dec. 1, 1913. Serial No. 804,011. (Cl. 173—338.)



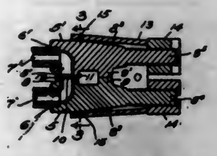
1. In a device of the class described the combination with a support of a pair of U-shaped terminals each secured at one end to said support, the free ends contacting with each other with a yielding pressure and a locking member pivoted to the loop of one of said U-shaped terminals and arranged to swing into engagement with and embrace the loop of the other terminal to hold said terminals together.

2. In a device of the class described the combination with a support of a pair of U-shaped terminals each secured at one end to said support, the free ends contacting with each other with a yielding pressure, said U-shaped terminals being slotted at their looped portions, and a locking member pivoted to one of said U-shaped terminals in the slot thereof and arranged to swing into the slot of the other terminal and shaped to engage said terminal to hold the terminals together.

1,211,941. PIPE-COUPLING. ADOLPH C. J. HENNIG, Seattle, Wash. Filed Aug. 14, 1915. Serial No. 45,594. (Cl. 137—28.)

1. A pipe coupling comprising two elbow fittings adapted to be connected with the pipes at an end of each and having communicating side outlets, a sleeve for clamping said fittings together, and nuts engaging screw-threaded portions of the respective fittings for adjustably securing said sleeve upon the fittings.

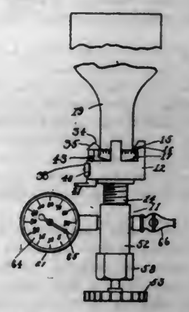
2. A pipe coupling comprising two elbow fittings formed with passages extending from an end of each and communicating through complementary protuberances provided at the sides of said fittings, said fittings being also provided with protuberances adapted to be juxtaposed with each other when the aforesaid protuberances are joined, a sleeve arranged to engage over tapered portions of both of said fittings, and nuts engaging screw-threaded portions of the fittings for securing the sleeve in engagement with the fittings.



3. A pipe coupling comprising two elbow fittings each having a screw-thread at one end, a socket at its other end and a tapered portion intermediate said ends, said fitting being provided with pairs of laterally extending protuberances, one pair of said protuberances having a passage therein which communicates with the respective sockets and having their meeting ends formed to make a non-leakable joint, a sleeve arranged to fit over the tapered portions of both fittings to clamp said fittings together, and means for detachably securing said sleeve in operative position.

4. A pipe coupling comprising two members respectively adapted to be secured to the ends of pipes and having complementary passages extending from an end of each and terminating in a lateral opening at the side of the respective member, said members being formed to make a non-leakable joint about such side opening when the members are clamped together, a sleeve having a tapered opening extending therethrough to receive said members, and means engageable with said members for thrusting said sleeve longitudinally of the members to couple the latter together.

1,211,942. TESTING DEVICE. JOHN A. HOFF, Cincinnati, Ohio. Filed Nov. 22, 1915. Serial No. 62,789. (Cl. 73—51.)



1. In a testing device of the character described, the combination of a clamp arranged to be clamped to the cap of a metal-capped bottle, said clamp comprising a packing surrounding a portion of said cap to be pierced and pressed against said cap, a piercing-stem, means for forcing said piercing-stem toward said cap for piercing said surrounded portion of said cap, and a pressure-gage, said device provided with a passage communicating with said pressure-gage and said pierced part of said cap for indicating the pressure in said bottle on said pressure-gage.

2. In a testing device of the character described, the combination of a clamp arranged to be clamped to the cap of a metal-capped bottle, said clamp comprising a packing surrounding a portion of said metal-cap to be pierced and pressed against said cap, a piercing-stem, means for forcing said piercing-stem toward said cap for piercing said surrounded portion of said cap, a pressure-gage, said device provided with a passage communicating with said pressure-gage and said pierced part of said cap for indicating the pressure in said bottle on said pressure-gage, and a valve communicating with said passage for releasing the pressure in said bottle.

3. In a testing device of the character described, the combination of a casing, a housing arranged to be received about the cap of a metal-capped bottle, a washer in said housing provided with an aperture, means between said casing and housing for clamping said washer to said cap, a piercing-stem having threaded connection with said casing for moving said stem through said aperture and piercing said cap, and a pressure-gage, there being a pressure-passage lengthwise of said stem communicating with said pressure-gage.

4. In a testing device of the character described, the combination of a casing, a housing arranged to be received by lateral movement about the cap of a metal-capped bottle, a keeper coacting with said housing for securing said housing to said cap, said casing comprising a shank threaded in said housing, a compressible washer pressed between said shank and said cap by relative rotation between said housing and shank, said shank and washer having apertures therein in line with each other, a piercing-stem in said aperture in said shank, said piercing-stem having threaded connection with said casing arranged to move said piercing-stem through said aperture in said washer for piercing said cap, and a pressure-gage, there being a pressure-passage extending lengthwise of said stem communicating with said pressure-gage.

5. In a testing device of the character described, the combination of a casing, a housing arranged to be received by lateral movement about the cap of a metal-capped bottle, a keeper coacting with said housing for securing said housing to said cap, said casing comprising a shank threaded in said housing, a compressible washer pressed between said shank and said cap by relative rotation between said housing and shank, said shank and washer having apertures therein in line with each other, a piercing-stem in said aperture in said shank, said piercing-stem having threaded connection with said casing arranged to move said piercing-stem through said aperture in said washer for piercing said cap, a pressure-gage, there being a pressure-passage extending lengthwise of said stem communicating with said pressure-gage, and a valve communicating with said pressure-passage for releasing the pressure in said bottle and said pressure-gage.

[Claim 6 not printed in the Gazette.]

1,211,943. ELECTRICAL RESISTANCE MATERIAL. MATTHEW A. HUNTER, Troy, N. Y. Filed Aug. 9, 1916. Serial No. 113,880. (Cl. 75—1.)

1. An electric resistance material comprising a strip, strand or filament formed of an alloy of iron, a metal of the chromium group, and a metal having the properties of nickel and cobalt, no other metal being present in such proportions as to affect the qualities of said alloy as a resistance material.

2. An electric resistance material comprising a strip, strand or filament formed of an alloy having a major portion of iron, a metal of the chromium group, and a metal having the properties of nickel and cobalt.

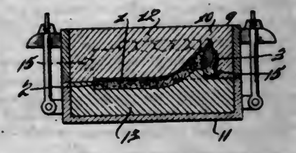
3. An electric resistance material comprising an iron-nickel portion comprising one hundred parts wherein iron is present in the proportion of more than fifty parts and a metal having the properties of nickel and cobalt is present in the proportion of less than fifty parts, and a chromium portion in which a metal of the chromium group is present in the proportion of more than twenty parts of such last named metal to one hundred parts of nickel and iron.

4. An electric resistance material comprising an iron-nickel portion comprising one hundred parts wherein iron is present in the proportion of seventy five to twenty five parts and a metal having the properties of nickel and cobalt is present in the proportion of twenty five to seventy five parts, and a chromium portion in which a metal of the chromium group is present in the proportion of ten to thirty parts of such last named metal to one hundred parts of nickel and iron.

5. An electric resistance material comprising iron, a metal having the properties of nickel and cobalt and a metal of the chromium group, the proportion of iron being substantially equal to the other elements together.

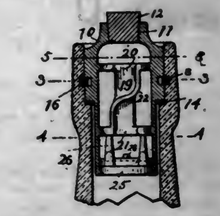
[Claim 6 not printed in the Gazette.]

1,211,944. ART OF FORMING PLATES FOR ARTIFICIAL TEETH. ERNEST A. HUSSAR, New York, N. Y. Filed Apr. 1, 1916. Serial No. 88,200. (Cl. 32—4.)



The process of preparing dental plates, consisting first, in making a trial plate of plastic material approximately corresponding to the human jaw which is to be treated and to the neighboring interior part of the mouth; secondly, in molding on the inner surface of the human gums in this jaw and the neighboring part of the interior of the mouth a thin plate of flexible metal adapted to take exactly the form of the human surface and molding on the outer surface of the gums a narrow plate of like material; and thirdly, applying theses thin plates thus molded to the corresponding surfaces of the trial cast so as to transfer to them the exact impression of the human surfaces, thus completing a trial plate from which the final rubber setting may be made.

1,211,945. DISPENSING-RECEPTACLE. JACOB W. KAISER, East Cleveland, Ohio. Filed July 21, 1914. Serial No. 852,208. (Cl. 215—65.)



1. The combination with a receptacle having a restricted outlet passageway, of a body located in said passageway, said body having an annular passageway with openings at the upper and lower portions of the body which communicate with the passageway, a baffle extending across the passageway and connecting diagonally opposite sides of the openings whereby fluid flowing through the passageway must make a complete turn between inlet and outlet openings, and a check valve located in said passageway at the inner side of the body.

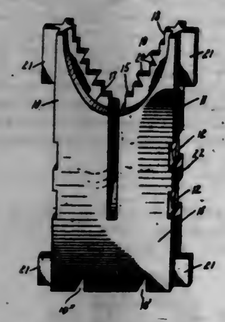
2. The combination with a receptacle having a restricted outlet passageway, of a body permanently mounted in said passageway, said body having a hollow interior, spaced transversely extending walls within the hollow interior of the body, each of said walls being provided with an opening, a baffle connecting diagonally opposite sides of the openings whereby fluid flowing through the passageway must make a complete turn between inlet and outlet openings, and a check valve located in the passageway at the inner side of the body.

3. The combination with a receptacle having a restricted outlet passageway, of a body having a hollow interior located in said passageway, transversely extending walls within the said hollow body, a centrally disposed spacing member between the said walls, each of said transversely extending walls being provided with an

opening, a baffle extending between the transversely extending walls and connecting diagonally opposite sides of the openings whereby fluid flowing through the passageway must make a complete turn between inlet and outlet openings, and a check valve located in said passageway at the inner side of the body.

4. The combination with a receptacle having a restricted outlet passageway, of a body having a hollow interior located in said passageway, said body having transversely extending walls within the interior, each of said walls being provided with an opening, a central support having rounding surfaces between the said transversely extending walls, a baffle extending between the transversely extending walls connecting diagonally opposite sides of the openings whereby fluid flowing through the passageway must make a complete turn between inlet and outlet openings, a transverse wall located at the inner end of the said body, an opening through said wall, a valve body adapted normally to cover said opening, and means for confining the movement of the valve.

1,211,946. MATRIX FOR LINOTYPE-MACHINES. ALEXANDER KÁLMÁN, New York, N. Y. Filed Aug. 10, 1916. Serial No. 114,166. (Cl. 199—12.)



1. A linotype matrix having on both edges thereof characters standing in the same direction, and a distributing device and alining means both of which are disposed centrally in relation to the opposite faces of the matrix.

2. A linotype matrix having a single distributing device and characters on both edges thereof inverted in relation to said distributing device, and alining means disposed centrally in relation to the opposite faces of the matrix, said distributing device being also arranged centrally in relation to the opposite faces of the matrix.

3. A linotype matrix having a distributing device and alining means both of which are disposed centrally in relation to the opposite faces thereof.

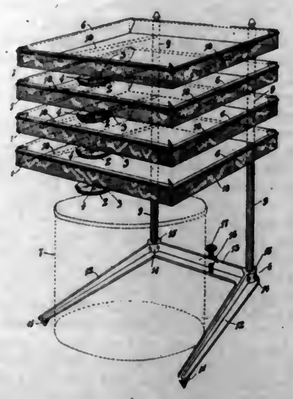
4. A linotype matrix having on both edges thereof characters standing in the same direction, and a distributing device and alining means disposed centrally in relation to the opposite faces thereof, said matrix having in its lower end two font distinguishing notches, each cooperating with one of the edges thereof.

5. A linotype matrix having a single distributing device and characters on both edges thereof standing in the same relation to said distributing device, and alining means upon said edges disposed centrally in relation to the opposite faces of the matrix, said matrix having in its lower end two font distinguishing notches, each cooperating with one of the edges thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,211,947. FILTERING APPARATUS. KARL KIEFER, Cincinnati, Ohio. Filed Apr. 8, 1913. Serial No. 759,821. (Cl. 210—16.)

1. In filtering apparatus, the combination with a rigid shallow tray provided with internal sheet-supporting means, adapted to space a sheet from the body of the tray while allowing liquid to pass freely in the intervening space, and with an aperture permitting free gravity-discharge of liquid from said space, of a primarily plane tray-lining filter sheet supported by said means and having all its marginal portions bent upwardly to cover and be supported by the side walls of the tray.



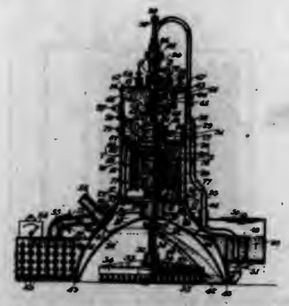
2. In filtering apparatus, the combination with a shallow rectangular tray having internal surface projections with intermediate channels leading to an aperture at the bottom of the tray, of a primarily plane filter sheet supported by said projections and having all its lateral marginal portions bent upwardly to cover the lateral walls of the tray, the surplus stock at the corners of the sheet being folded and out of contact with the adjacent portions of the sheet; whereby the filtering capacity of the sheet is substantially uniform throughout.

3. In filtering apparatus, a series of trays of minimized height and augmented bottom area, each with an outlet orifice through its bottom near one side thereof, a spout on each tray, attached to the bottom of the tray, with part of the area of the spout under said outlet orifice, each spout having an outlet, filtering material supported in each tray and conforming substantially to the bottom and sides of the respective tray with the structure of said material intact, means forming liquid-conducting ways over the surface of each tray under the filtering material therein to the outlet of the tray, a stand, and means on said stand supporting said trays in vertical alinement, with their spouts in vertical alinement, so that each spout discharges into the spout below it, and means for receiving liquid from the lowermost spout.

4. In filtering apparatus, a series of trays of minimized height and augmented bottom area, each with an outlet orifice through its bottom near one side thereof, a spout on each tray, attached to the bottom of the tray, with part of the area of the spout under said outlet orifice, each spout having an outlet, filtering material supported in each tray and conforming substantially to the bottom and sides of the respective tray with the structure of said material intact, means forming liquid-conducting ways over the surface of each tray under the filtering material therein to the outlet of the tray, a stand, means on said stand supporting said trays with their spouts in vertical alinement, so that each spout discharges into the spout below it, means for receiving liquid from the lowermost spout, and means for inclining and changing the inclination of said stand to control the flow to the tray outlets.

5. In a filtering apparatus, a wide and shallow rectangular tray with an outlet from its bottom, spacing means in the interior of the tray, and a filtering sheet supported in said tray with superfluous parts of it near the corners of the tray disposed of by folding, whereby the fibers of the sheet are not removed or materially disturbed, and whereby the sheets may contain liquid to be filtered through it without the filtering structure of the material impaired, thereby affording substantially the full normal resistance of the filtering sheet against the passage of impurities with the filtrate.

1,211,948. SCRUBBING-MACHINE. GEORGE F. KOSTER, White Plains, and HECTOR D. MACINTYRE, Brooklyn, N. Y. Filed Dec. 5, 1913. Serial No. 804,795. (Cl. 15—14.)



1. A scrubbing machine comprising a casing, a scrubber within the same, means for revolving the scrubber in one direction, a refuse remover concentric with said scrubber and also within the casing, and means for revolving the refuse remover in the opposite direction.

2. A scrubbing machine comprising a casing, a scrubbing device within the same, means for supplying a cleaning fluid to the said scrubbing device, means for revolving the scrubbing device in one direction, a device concentric with the said scrubbing device for removing the scrubbing refuse from the casing, and means for revolving the last aforesaid device in an opposite direction.

3. A scrubbing machine comprising a casing, a scrubbing device within the casing, means for revolving the scrubbing device in one direction, a device concentric with the said scrubbing device for removing the scrubbing refuse therefrom, means for revolving the last aforesaid device in the opposite direction, and means for regulating the aforesaid means for revolving the said devices.

4. A scrubbing machine comprising a casing, a scrubbing device within the casing, means for revolving the scrubbing device in one direction, a device concentric with the said scrubbing device for removing the scrubbing refuse therefrom, means for revolving the last aforesaid device in the opposite direction, means for regulating the aforesaid means for revolving the said devices, and means for supplying a cleaning fluid to the said scrubbing device.

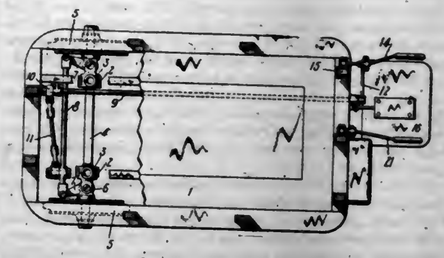
5. A scrubbing machine comprising a casing, a scrubber within the casing, means for supplying a cleaning liquid to the scrubber, means for revolving the scrubber in one direction, a device concentric with said scrubber for removing the scrubbing refuse from the casing, means for revolving the last aforesaid device in the opposite direction, and means for drying a surface after the same has been cleaned.

[Claims 6 to 11 not printed in the Gazette.]

1,211,949. FREIGHT-TRUCK. ROBERT MCA. LLOYD, New York, N. Y., assignor, by mesne assignments, to General Vehicle Company, Inc., a Corporation of New York. Filed Sept. 12, 1913. Serial No. 789,563. (Cl. 21—90.)

1. The combination in a freight truck, of a platform at one end thereof upon which the operator stands, and an operating lever pivoted to the truck above and to one side of the platform, said lever extending substantially horizontally and being movable up and down to control the truck.

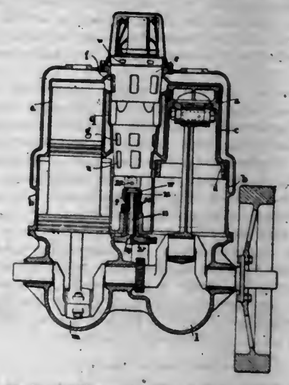
2. The combination in a freight truck, of a platform at one end thereof upon which the operator stands, and two operating levers pivoted to the truck above the platform, one of said levers being at one side and the other at the other side of said platform, said levers extending substantially horizontally and being movable up and down to control the truck.



3. The combination in a freight truck, of a platform at one end thereof upon which the operator stands, a steering lever pivoted above and at one side of the platform, a controller lever pivoted above and at the other side of the platform, said levers extending substantially horizontally and being movable up and down to control the truck.

4. The combination in an electric freight truck having a controller and a steering mechanism, of a controller lever pivoted above and at one side of the platform and connected to the controller, a steering lever pivoted above and at the other side of the platform and connected to the steering mechanism, said levers extending substantially horizontally and being movable up and down to control the truck.

1,211,950. INTERNAL-COMBUSTION ENGINE. HECTOR VIVIAN LOUGH, Plainfield, N. J. Filed July 30, 1912. Serial No. 712,247. (Cl. 123—49.)



1. In an internal combustion engine, the combination of a power cylinder, a movable valve having a ported combustion chamber therein, a frame in which said valve moves, having a conduit for a compressed charge and a passage leading to said power cylinder, and means for moving said valve to successively establish communication between said conduit and said chamber to permit a compressed charge to enter said chamber; to cut off such communication; and to establish communication between said chamber and power cylinder, the ports of said chamber being out of communication with said passage for a period after communication with said conduit has been cut off; and means for igniting the charge in said chamber after communication has been cut off from said conduit

and before communication has been established through said passage with said power cylinder.

2. In an internal combustion engine, the combination of a plurality of power cylinders, a movable casing divided into a plurality of combustion chambers, having ports, a frame in which said casing moves, having passages leading to said power cylinders, means for compressing charges into said chambers, when the latter are in proper position, means for moving said casing in a cycle of operations to cause the charges to be compressed into said chambers; to cut each casing off from communication with said first-mentioned means; and to place each chamber in communication with a power cylinder through one of said passages; and means for igniting the charge in each chamber after communication has been cut off from said first-mentioned means and before communication has been established through one of said passages with a power cylinder.

3. An internal combustion engine, comprising in combination, a power cylinder, a combustion chamber distinct from said cylinder, a compression cylinder coöperating with said power cylinder, means for introducing a charge into said compression cylinder, means for establishing communication between said compression cylinder and said combustion chamber, to allow compression of the charge into said chamber, and for cutting off said communication, a second power cylinder, means for establishing communication between said combustion chamber and said second power cylinder, to allow expansion of the ignited gases in said cylinder, and means for subsequently establishing communication between said combustion chamber and the other side of the piston in said compression cylinder, in order to introduce a charge of scavenging air into said chamber.

4. An internal combustion engine, comprising in combination, a power cylinder, a combustion chamber distinct from said cylinder, a compression cylinder coöperating with said power cylinder, means for introducing a charge into said compression cylinder, means for establishing communication between said compression cylinder and said combustion chamber, to allow compression of the charge into said chamber, and for cutting off said communication, a second power cylinder, means for establishing communication between said combustion chamber and said second power cylinder, to allow expansion of the ignited gases in said cylinder, and means for subsequently introducing a charge of scavenging air into said combustion chamber.

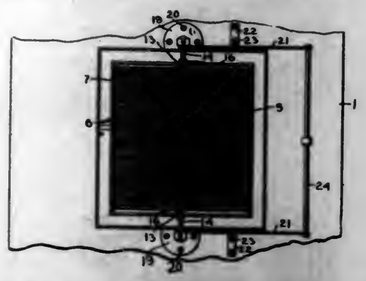
5. An internal combustion engine comprising in combination a pair of power cylinders, a plurality of combustion chambers distinct from said cylinders, a compression cylinder coöperating with each of said power cylinders, means for introducing charges into said compression cylinders in proper sequence, means for establishing communication between each of said compression cylinders and said combustion chambers in succession, to allow compression of said charges into said chambers, and for cutting off said communication, and means for establishing communication between each of said power cylinders and said combustion chambers in succession, to allow of the expansion in one power cylinder of the gases compressed by the compression cylinder of the other power cylinder.

[Claims 6 to 17 not printed in the Gazette.]

1,211,951. PASTING-MACHINE. THOMAS F. LYNCH, Lynn, Mass., assignor to National Adhesive Company, Inc., Lynn, Mass., a Corporation of Massachusetts. Filed Mar. 21, 1916. Serial No. 85,716. (Cl. 91—56.)

1. In a machine for applying an adhesive, a support therefor; a reservoir for the adhesive; an instrumentality adapted to bear an adhesive comprising a frame, a plurality of members arranged in spaced relation, said members having their respective ends secured to the frame, means extending transversely of the frame and secured thereto means on said transverse means to engage said members to reinforce and to retain them in said spaced relation; and means for reciprocating said instrumentality into and out of submersed position in the adhesive.

2. In a machine for applying an adhesive, a support therefor, a reservoir for the adhesive; a grid comprising a frame, a plurality of grid-forming members arranged in substantial parallelism and having their respective ends secured to the frame sides, an instrumentality arranged transversely of the grid-forming members, means on said instrumentality to engage each of said grid forming members whereby said members are reinforced and retained in spaced relation; and means for reciprocating the grid into and out of submerged position in the adhesive.



3. In a machine for applying an adhesive, a support therefor; a reservoir for the adhesive; a grid comprising a frame, a plurality of grid-forming members arranged in substantial parallelism and having their respective ends secured to the frame sides, a bar arranged transversely of the grid-forming members and secured to the frame, a plurality of instrumentalities on said bar each engaging a grid-forming member to reinforce and retain the same in proper spaced relation, said instrumentalities engaging each member whereby the upper portion thereof is free to effect its adhesive-bearing function; and means for reciprocating the grid into and out of submersed position in the adhesive.

4. In a machine for applying an adhesive, a support therefor; a reservoir for the adhesive; a grid comprising a frame, wires arranged in substantial parallelism and having their respective ends secured to the frame sides and a bar extending transversely of the wires and secured to the frame, said bar having a plurality of recesses on its upper face to engage a portion of all the wires whereby the upper portion of each wire is free to effect its adhesive-bearing function and whereby the wires are reinforced and retained in proper spaced relation; and means for reciprocating the wired grid into and out of submersed position in the adhesive.

1,211,952. VALVE-GEARING MECHANISM. EARL E. MCCOLLUM, Downers Grove, Ill. Filed Apr. 5, 1915, Serial No. 19,285. Renewed Aug. 1, 1916. Serial No. 112,526. (Cl. 123—80.)

1. In an engine, the combination with a rotatable crank, a connected reciprocable member and a connecting rod; of a valve gear mechanism comprising a rotary cylinder port controlling valve, and means associated with the connecting rod and driven thereby for rotating said valve, said means being carried entirely by the reciprocable member.

2. In an engine, the combination with a rotatable crank, a member reciprocatable thereby and a connecting rod, connecting said crank and member; of a valve gear mechanism comprising a valve and means operable by said connecting rod for moving said valves at all times proportionally to the cosine of the crank angle.

3. In an engine, the combination with a rotatable crank, a member reciprocatable thereby, and a connecting rod, connecting said crank and member; of a valve gear mechanism comprising a rotatable valve and means operable by said connecting rod for rotating said valve at a speed rate proportional at all times to the cosine of the crank angle.

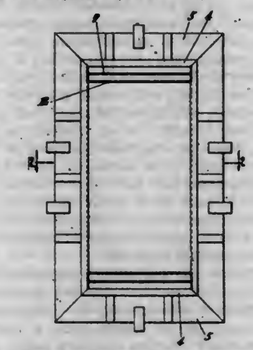
4. In an engine, the combination with a rotatable shaft, a rotatable crank, a member reciprocatable thereby and a connecting rod, connecting said crank and member; of a valve gear mechanism for converting substantially constant rate rotation of said shaft into differential or substantially intermittent rate motion of a valve, comprising a valve and oscillatable means connecting said connecting rod and valve, whereby to move the latter proportionally to the cosine of the crank angle and inversely proportional to the sine thereof.



5. In an engine, the combination with a rotatable shaft, a rotatable crank, a piston reciprocatable thereby and a connecting rod, connecting said crank and piston; of a valve gear mechanism for converting substantially constant rate motion of said shaft into differential, or substantially intermittent rate motion of a valve, comprising a valve, an oscillatable member connecting said valve and connecting rod for imparting motion to the valve substantially after cessation of the instroke of the piston and another oscillatable member connecting said valve and connection rod, for imparting motion to the valve substantially after cessation of the outstroke of the piston whereby to open and close the ports of said engine.

[Claims 6 to 24 not printed in the Gazette.]

1,211,953. PROCESS AND APPARATUS FOR MOLDING AND FACING CEMENTITIOUS BODIES. DAVID METRUSTRY, Newburgh, N. Y. Filed Mar. 22, 1915. Serial No. 16,015. (Cl. 25—1.)



1. The combination with a mold for cementitious bodies, of a vertically disposed removable partition member, and means for holding said partition parallel to and at a predetermined distance from a vertical wall of the mold, for temporarily retaining in position a thin layer of material to form an outer surface of said molded body, said partition member being provided with means extending on the side thereof toward the center of the mold for supporting an intermediate layer of material adapted to unite with the central portion and outer surface material when said partition member is withdrawn.

2. The combination with a mold for cementitious bodies, of a vertically disposed removable partition member, provided with vertically disposed spacing flanges projecting on the exterior side thereof to engage a vertical wall of the mold and hold said member at a predetermined distance from said wall, and provide a pocket to retain a thin layer of material forming the outer surface of the molded body, said partition member being provided with vertically disposed flanges on the inner face to retain a thin intermediate layer of cementitious material adapted to unite with the central portion and the outer surface material when the partition member is removed.

3. The combination with a mold for cementitious bodies, of a vertically disposed removable partition member, provided with vertically disposed spacing flanges projecting on the exterior side thereof to engage a vertical wall of the mold and hold said member at a predetermined distance from said wall, and provide a pocket to retain a thin layer of material forming the outer surface of the molded body, the adjacent angularly disposed walls of the mold being provided with recesses open at their upper ends to receive said spacing flanges and permit the vertical withdrawal of the same.

4. The combination with a mold for cementitious bodies, of a vertically disposed removable partition member, provided with vertically disposed spacing flanges projecting on the exterior side thereof to engage a vertical wall of the mold and hold said member at a predetermined distance from said wall, and provide a pocket to retain a thin layer of material forming the outer surface of the molded body, and a bottom pan fitting the bottom of the mold and having upturned flanges at its edges, the side walls of the mold being provided with horizontal recesses to receive the said flanges of the bottom pan, and the side walls, disposed adjacent to and angularly to said partition member being provided with vertical recesses to receive the said flanges of the partitions.

5. The herein described process of molding and facing a cementitious body which consists in supporting a thin vertical layer of dry granular material, and a thin intermediate layer of semi-plastic cementitious material adjacent to and parallel to a face of the mold, pouring the central portion of the body in substantially liquid form and permitting it to unite with the intermediate layer and with the layer of granular material before setting.

[Claims 6 and 7 not printed in the Gazette.]

1,211,954. GARMENT. EMANUEL METZGER, New York, N. Y. Filed June 5, 1916. Serial No. 101,681. (Cl. 2—145.)



1. In a garment of the character designated, the combination with the yoke, back, sleeves, etc., of a simulated under waist or brassière, a front skirt the upper edge of which is detachably secured to said under waist or brassière, and a blouse front the lower part of which is adapted to be positioned either in front of or behind the said skirt front.

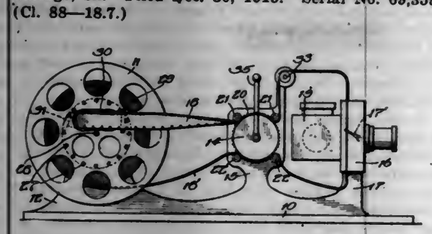
2. In a garment of the character designated, the combination with the yoke, back, sleeves, etc., of a simulated under waist or brassière, a front skirt the upper edge of

which is detachably secured to said under waist or brassière, a blouse front the lower part of which is adapted to be positioned either in front of or behind the said skirt front, and a belt band secured to the waist band of the skirt front and concealing the means of attachment between the front skirt and waist lining or brassière.

3. In a garment of the character designated, the combination with the yoke, back, sleeves, etc., of a simulated under waist or brassière, a front skirt the upper edge of which is detachably secured to said under waist or brassière, a blouse front the lower part of which is adapted to be positioned either in front of or behind the said skirt front, and a belt band secured to the waist band of the skirt front and concealing the means of attachment between the front skirt and waist lining or brassière, said belt band extending loosely around the back of the garment and being provided with means for the adjustment of the free ends one upon the other.

4. In a garment of the character designated, the combination with the yoke, back, sleeves, etc., of a simulated under waist or brassière, a front skirt the upper edge of which is detachably secured to said under waist or brassière, and a blouse front the lower part of which is adapted to be positioned either in front of or behind the said skirt front, said blouse front being formed with lateral flaps or extensions at its lower side edges, together with means for detachably securing said lateral flaps or extensions to back portions of the garment.

1,211,955. ENDLESS-FILM AND REEL DEVICE FOR EXHIBITING PICTURES, &c. WILLIAM E. MILLAR, Chicago, Ill. Filed Dec. 30, 1915. Serial No. 69,359. (Cl. 88—18.7.)

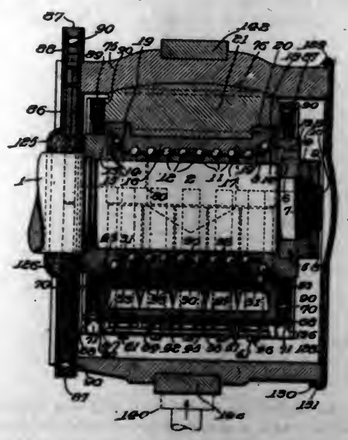


1. An endless film and reel device for exhibiting pictures, comprising, in combination with an endless film or strip, of a reel comprising spaced heads and an annular series of film roll supporting and guide rollers, one of which rotates on an axis oblique to the axes of rotation of the other rollers, one of the heads provided adjacent to the oblique roller with an outlet opening through which the film is passed in a plane parallel to the plane of said latter head and guiding means engaging the looped portion of the film exterior to said reel.

2. An endless film and reel device for exhibiting pictures, comprising, in combination with an endless film or strip, of a reel comprising spaced heads and an annular series of film roll supporting and guide rollers, one of which rotates on an axis oblique to the axes of rotation of the other rollers, one of the heads provided adjacent to the oblique roller with an outlet opening through which the film is passed in a plane parallel to the plane of said latter head, guiding means engaging the looped portion of the film exterior to said reel and a guide roller exterior to and mounted on said latter head adjacent to said outlet opening.

3. An endless film and reel device for exhibiting pictures, comprising, in combination with an endless film or strip, of a reel comprising spaced heads and an annular series of closely spaced film roll supporting and guide rollers of small diameter, one of which rotates on an axis oblique to the axes of rotation of the other rollers, one of the heads provided adjacent to the oblique roller with an outlet opening through which the film is passed in a plane parallel to the plane of said latter head, rotating guiding means engaging the looped portion of the film exterior to the reel and rotating on an axis parallel to the axis of the reel, and an exhibiting device through which said exterior looped portion of the film passes.

1,211,956. ANTIFRICTION-BEARING. JOHN H. MORELAND, Altoona, Pa. Filed Apr. 25, 1911. Serial No. 623,218. (Cl. 64—36.)



1. In an anti-friction bearing, a casing, a journal, an upper bearing member between said casing and said journal, provided with a semicircular series of ball races, a lower bearing member comprising a series of alined members mounted in said casing below said journal each member having a semicircular ball race in registration with and completing a ball race in said upper member, said ball race in each of said alined members being independent of the races in others of said alined members, a series of anti-friction balls in each of said raceways, said upper and lower members being slightly spaced from each other in a plane coincident with the longitudinal axis of said journal and springs in said casing between said casing and said complemental members to force said members toward the axis of said journal.

2. In an anti-friction bearing, the combination of a casing, a journal, an upper bearing block above said journal, supporting said casing and provided with a plurality of ball races, a lower complemental bearing member comprising a series of independent alined spring pressed members each provided with a ball race completing a ball race in said upper bearing block, a series of balls in each of said races and springs for forcing said alined members toward the axis of said journal, said upper bearing block and said complemental bearing member being slightly separated along a horizontal plane passing through the axis of said journal whereby the load is substantially carried by the balls between said journal and said upper bearing block, the race-ways for said balls being completed by said lower alined members, and the wear on said balls and races being taken up by said spring pressed members of the lower complemental bearing member.

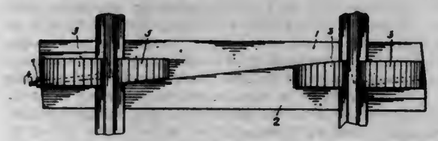
3. In an anti-friction bearing, the combination with a journal, of opposed complementary bearing members, the upper one of which bears substantially the load upon said journal and the lower one of which bears a much less load, said complementary bearing members being slightly separated on a longitudinal plane passing through the axis of said journal, said members being provided with ball races in registration with each other, and bearing balls in said races, the races in said lower bearing member which is subjected to the least load being grooved longitudinally to substantially equalize the wear to which said races are subjected and to form a circulatory path for a lubricant and yielding means to hold said lower member against said journal and to take up the wear in said races.

4. In an anti-friction bearing for a journal, the combination of complemental bearing members slightly separated on a longitudinal plane and provided with grooves forming a ball race, one of said bearing members being subjected to more load than the other of said bearing members, and bearing balls mounted in said races, the members subjected to the least wear being provided with channels in the bottoms of said grooves extending longitudinally of said grooves and being provided with apertures extending through said bearing members and communicating with said channels, said channels and apertures being coöperative to form a circulatory path for a lubricant and to make the wear of the balls in the races of the member subjected to the least load substantially equal to the wear of the races in the member subjected to the greater load and spring means to force the member subjected to the least load against said journal.

5. In an anti-friction bearing, a journal, a semi-cylindrical upper bearing member gradually increasing in thickness in transverse cross-section circularly toward its crest and having a plurality of spaced ball races at a uniform distance from the axis of said bearing and a plurality of ball races at a relatively greater distance from said axis, a coöperating semicylindrical bearing on the lower side of said journal provided with coöperating ball races and anti-friction balls in said races and means to yieldingly press said lower bearing member against said journal.

[Claims 6 to 82 not printed in the Gazette.]

1,211,957. RAILWAY-TIE. FRANK L. MORRIS, Salt Lake City, Utah, assignor of one-half to Wilford D. Peterson, Salt Lake City Utah. Filed June 5, 1916. Serial No. 101,841. (Cl. 238—5.)



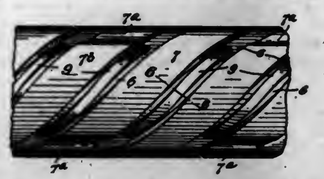
1. A railway tie consisting of two interlocking metal plates; upstanding integral flange engaging lugs on the upper face of each; a threaded bolt in each of said plates having one end fastened into an angled faced portion thereof and adapted to pass through an opening in a similar angled faced portion of the opposed plate; and nuts screwed on said bolts to draw said lugs in gripping contact with the base flange of rails.

2. A railway tie consisting of two interlocking plates; each having a vertical edge or face which coincides with a similar face when the two metal plates are contiguous, a portion of said face being parallel with the other edge and two other portions parallel with each other and at an angle of 60 degrees from the first described parallel portions and positioned across the rail bearing parts of the tie; and a central portion of said face cut at an angle extending from the inner edge of one rail tread to the inner edge of the other rail tread and crossing the central line of the assembled tie at its medial point; upstanding integral flange engaging lugs on each plate coacting with similar lugs on the interlocking plate; a threaded bolt fastened into one of said angle faces and adapted to operate within an opening through the other angle faced portion; and nuts on said bolts to draw said lugs into gripping contact with the base flange of rails.

1,211,958. TIRE. MAX CYRUS OVERMAN, New York, N. Y. Filed Apr. 18, 1914. Serial No. 832,967. (Cl. 152—14.)

1. A pneumatic shoe having a nose-portion which is generally rounded transversely and which comprises deep, spaced, transversely disposed rubber bars which are concaved to a reduced depth at the ends of their ground-contacting middle portion, and thence continue around to the sides of the tire.

2. A pneumatic shoe having a nose-portion which is generally rounded transversely and which comprises deep, spaced, transversely disposed rubber bars which are concaved to a reduced depth at the ends of their ground contacting middle portion, and thence continue around with reductions of depth into merger with the sides of the tire.



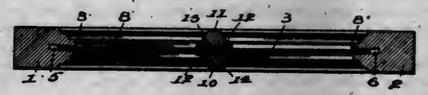
3. A pneumatic shoe having a nose-portion which is generally rounded transversely and which comprises deep, spaced, transversely disposed rubber bars which are concaved to a reduced depth at the ends of their ground-contacting middle portion, and thence become convex and continue with reductions of depth into merger with the sides of the tire.

4. A pneumatic shoe having a nose-portion which is generally rounded transversely and which comprises deep, spaced, transversely disposed rubber bars which are decidedly reduced in depth at the ends of their ground-contacting middle portion, and thence continue around to the sides of the tire.

5. A pneumatic shoe having a nose-portion which is generally rounded transversely and which comprises deep, spaced, transversely disposed rubber bars which are decidedly reduced in depth at the ends of their ground-contacting middle portion, and thence continue with reductions of depth into merger with the sides of the tire.

[Claims 6 to 15 not printed in the Gazette.]

1,211,959. WINDOW-SASH. CARNOT B. PINCKNEY, Savannah, Ga. Filed Apr. 1, 1916. Serial No. 88,282. (Cl. 20—56.2.)



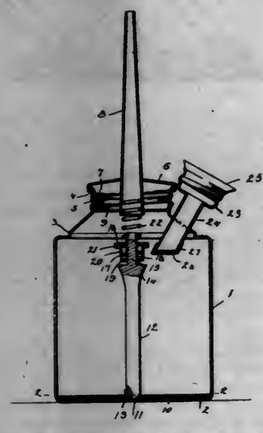
1. A window sash comprising a substantially rectangular frame consisting of side bars and connecting end bars each of said bars having a glass receiving groove on its inner edge, and each groove in the side members and one of the end members cut askew relative to the inner face of the said members and the pane to be received therein, a parting strip arranged longitudinally of the sash at the center thereof, and means interposed between the inner edges of the panes adapted to exert lateral pressure thereupon for forcing the panes into the side grooves.

2. A window sash comprising a substantially rectangular frame consisting of side bars and connecting end bars each of said bars having a glass receiving groove on its inner edge, and each groove in at least three of said bars cut at slight angle relative to the face of said bars and the panes to be received therein, a parting strip comprised of an outer fixed portion and an inner removable portion arranged longitudinally of the sash at the center thereof, and a wedging means interposed between the inner edges of the panes and housed within said parting strip, said parting strip adapted to be clamped together securing the inner edges of the panes therebetween.

3. A window sash comprising a substantially rectangular frame consisting of side bars and connecting end bars each of said bars having a glass receiving groove on its inner edge, and each groove in the side members and one of the end members cut askew relative to the inner face of the said members and the pane to be received therein, a parting strip arranged longitudinally of the sash at the center thereof, comprised of an outer fixed portion and an inner removable portion, slots arranged in the inner faces

and lengthwise of said parting strip, and a wedging means interposed between the inner edges of the panes and housed within said slots and a screw passing through the removable portion and engaging the fixed portion for clamping the inner edges of the panes between the sections of the parting strip.

1,211,960. OIL-CAN. JOHN C. POTTER, Alexandria, S. D. Filed Dec. 11, 1915. Serial No. 66,316. (Cl. 221—48.)



1. An oil can comprising side walls and a flexible bottom, a cap detachably secured to the upper edges of the walls, a spout secured within the cap, a tension spring secured to the lower end of said spout, a supporting strip secured to the flexible bottom and provided with an aperture intermediate its length, a standard secured within said aperture and resting upon the flexible bottom, said standard provided wth an enlarged portion to form a shoulder and terminating in a reduced portion, a coupling sleeve screw threaded through the reduced portion of said standard, said coupling sleeve provided with a pocket therein to receive said spring to press the standard downwardly, and means for filling said oil can.

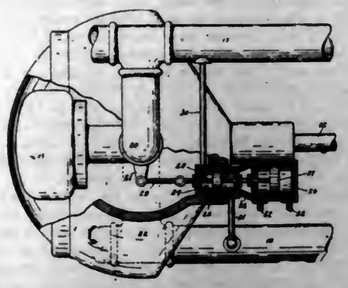
2. An oil can comprising side walls and a flexible bottom, a cap detachably secured to the upper edges of the walls, a spout secured within the cap, a clamping spring secured to the lower end of said spout, a supporting strip secured to the flexible bottom and provided with an aperture intermediate its length, a standard mounted within said aperture and resting upon the flexible bottom, said standard provided with a slot in the lower end thereof, a wedge positioned within said slot and bearing upon the wall of the aperture within said attaching strip to hold the standard therein, means for detachably connecting the upper end of the standard to the spring to force said standard downwardly against the bottom, and means for filling the oil can.

1,211,961. MEANS FOR CONTROLLING AND SYNCHRONIZING FLUID-GEARS. CHARLES R. PRATT, Montclair, N. J., assignor to Universal Speed Control Company, a Corporation of New York. Filed Apr. 15, 1909. Serial No. 489,976. (Cl. 138—22.)

1. The combination with a plurality of fluid gears each having a pump member, of means for maintaining equal products of fluid pressure and velocity in all of said pump members while permitting the fluid pressure and velocity to vary.

2. The combination with a plurality of fluid gears each having a pump member, of means for maintaining equal products of fluid pressure and velocity in all of said pump members while permitting the fluid pressure and velocity to vary, and means for predetermining said equal products.

3. The combination with a plurality of fluid gears each having a pump member, and means for regulating the velocity and pressure of fluid pumped and reversing the direction of flow of the same of means for maintaining equal products of fluid pressure and velocity in all of said pump members.



4. The combination with a pump for producing pressure, and means for varying the velocity and volume of fluid pumped, said means comprising an operating member, of means for moving said operating member in either direction, and means adapted to be operated by the fluid pressure of the pump for opposing said movement, whereby the fluid pressure of the pump may be maintained in constant proportion to the pressure of said means for moving said operating member.

5. The combination with a pump for producing pressure, and means for varying the velocity and volume of fluid pumped, said means comprising an operating member, of means for applying a yielding pressure to said operating member and releasing it therefrom, and means adapted to be operated by the fluid pressure of the pump for opposing said movement, whereby the fluid pressure of the pump may be maintained in constant predetermined proportion to the pressure of said means for moving said operating member.

[Claims 6 to 31 not printed in the Gazette.]

1,211,962. RUBBER BOOT OR SHOE AND PROCESS OF MANUFACTURING SAME. RAYMOND B. PRICE, New York, N. Y., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Oct. 27, 1913. Serial No. 797,634. (Cl. 36—4.)

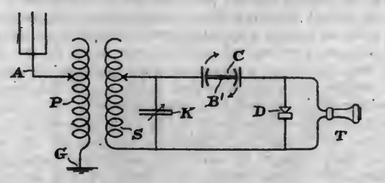
1. A boot or shoe comprising a knitted seamless fabric lining completely shaped to conform to the inner surface of the finished article under substantially equal tension of its threads at all points, and an outer covering of rubber vulcanized to said fabric.

2. A boot or shoe comprising a seamless fabric lining completely preshaped to conform to the inner surface of the finished article under substantially equal tension of its threads at all points and having wearing portions of greater thickness than the main body of said fabric, and an outer covering of rubber vulcanized to said fabric.

3. The method of manufacturing boots or shoes which comprises, applying to a suitable last or form a seamless fabric completely preshaped to conform closely to the surface of said last at all points and under substantially equal tension of its threads, applying to said fabric a covering of vulcanizable rubber, and then vulcanizing the article so constructed while maintaining said fabric under uniform tension.

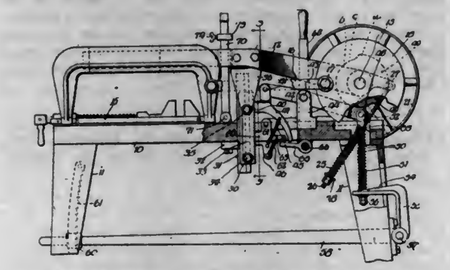
1,211,963. RADIO RECEIVING APPARATUS. JOHN A. PROCTOR, Revere, Mass., assignor to Wireless Specialty Apparatus Company, Boston, Mass., a Corporation of New York. Filed June 29, 1914. Serial No. 847,827. (Cl. 250—20.)

In a receiver of continuous oscillations, the combination with an antenna, of a detector and a telephone receiver, all coöperatively arranged, and a variable condenser connected to vary the oscillations passing to the detector, said condenser being constructed to be continuously ro-



tated at a high speed to produce oscillation-variations of a frequency corresponding to the operating period of the telephone receiver.

1,211,964. POWER HACKSAW-MACHINE. ANDREW RASMUSSEN, Racine, Wis. Filed Feb. 14, 1916. Serial No. 78,148. (Cl. 29—73.)



1. Feeding means for power hack saw machines comprising, in combination, a reciprocating saw frame, a vertically movable supporting guide therefor, means acting on the guide to overbalance the saw frame to lift the saw from the work during the non-cutting stroke, means acting in opposition to the overbalancing means to feed the saw to its work during the cutting stroke and means for limiting the lifting movement of the saw.

2. Feeding means for power hack saw machines comprising, in combination, a reciprocating saw frame, a vertically movable supporting guide therefor, means acting on the guide to overbalance the saw frame to lift the saw from its work during the non-cutting stroke, a cam controlled lever, a feed dog carried by the lever, a ratchet member operatively associated with said supporting guide, for operative engagement by the dog and a check device for limiting the lifting movement of the saw.

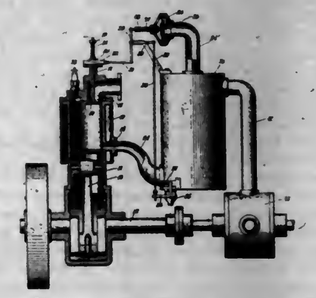
3. Feeding means for power hack saw machines comprising, in combination, a reciprocating saw frame, a vertically swingable supporting guide therefor, means acting on the guide to overbalance the weight of the saw frame and the forward end of the guide to lift the saw from its work, a ratchet member operatively associated with the saw supporting guide, a cam controlled lever, a feed dog mounted on the lever to engage the ratchet member during the cutting stroke of the saw to press the saw toward its work and adapted to be released from the ratchet member during the non-cutting stroke of the saw, and a locking dog to engage the ratchet when the feed dog is released to limit the rising movement of the supporting guide under the action of said overbalancing means.

4. Feeding means for power hack saw machines comprising, in combination, a reciprocating frame, a vertically movable supporting guide therefor, means acting on the guide to overbalance the weight of the saw frame and the forward end of the guide to lift the saw from its work, a ratchet member operatively associated with the saw supporting guide, a cam controlled lever, a feed dog mounted on the lever to engage the ratchet member during the cutting stroke of the saw to press the saw toward its work and adapted to be released from the ratchet member during the non-cutting stroke of the saw, a locking dog to engage the ratchet member when the feed dog is released to limit the rising movement of the supporting guide under the action of said overbalancing means, and a throw-out device having means to simultaneously act upon both dogs to release them from said ratchet member.

5. Feeding means for power hack saw machines comprising, in combination, a reciprocating saw frame, a vertically movable supporting guide therefor, means acting on the guide to overbalance the weight of the saw frame and the forward end of the guide to lift the saw from its work, a ratchet member operatively associated with the saw supporting guide, a cam controlled lever, a feed dog mounted on the lever to engage the ratchet member during the cutting stroke of the saw to press the saw toward its work and adapted to be released from the ratchet in the non-cutting stroke of the saw, a locking dog to engage the ratchet member when the feed dog is released to limit the rising movement of the supporting guide under the action of said overbalancing means and a rock shaft mounted in the machine and provided with a throw-out arm to engage said dogs, with means to rock said shaft.

[Claims 6 to 18 not printed in the Gazette.]

1,211,965. INTERNAL-COMBUSTION ENGINE. RUDOLPH ROEHRICH, New York, N. Y. Filed Dec. 3, 1913, Serial No. 804,358. Renewed Aug. 12, 1916. Serial No. 114,625. (Cl. 123—40.)



1. In an internal combustion engine, a cylinder having inlet and exhaust ports, a piston adapted to reciprocate in the cylinder, a valve for the inlet port, means connected with the exhaust port for withdrawing the burned gases from the cylinder, and regulating devices for the said valve under the influence of the said means.

2. In an internal combustion engine, a cylinder having inlet and exhaust ports, a piston adapted to reciprocate in the cylinder and in its travel to open and close the exhaust port, a valve for the inlet port, a vacuum structure connected with the exhaust port, and regulating devices for said valve under the influence of the pressure in said structure.

3. In an internal combustion engine, a cylinder having inlet and exhaust ports, a piston adapted to reciprocate in the cylinder and in its travel to open and close the exhaust port, a valve for the inlet port, a spring normally seating said valve, a vacuum structure connected with the exhaust port, and regulating devices for the said spring under the influence of the pressure in the vacuum structure.

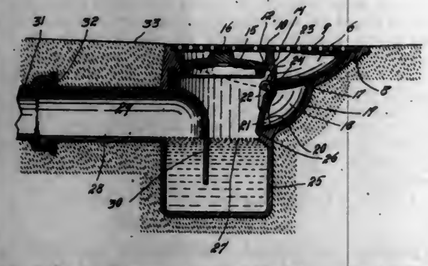
4. In an internal combustion engine, a cylinder having inlet and exhaust ports, a piston adapted to reciprocate in the cylinder and in its travel to open and close the exhaust port, a valve for the inlet port, a spring normally seating said valve, a vacuum structure connected with the exhaust port, a yielding diaphragm under the influence of the pressure in the said structure, and means connected with said diaphragm for varying the force of the spring.

5. In an internal combustion engine, a cylinder having inlet and exhaust ports, a piston adapted to reciprocate in the cylinder and in its travel to open and close the ex-

haust port, a valve for the inlet port, a vacuum structure connected with the exhaust port, an air inlet for the vacuum structure, a valve for said air-inlet, and means under the influence of the pressure in said chamber for controlling the air-inlet valve.

[Claim 6 not printed in the Gazette.]

1,211,966. SANITARY FLOOR-DRAIN. FREDERICK H. SAMSON, Denver, Colo. Filed Mar. 28, 1916. Serial No. 87,167. (Cl. 182—12.)

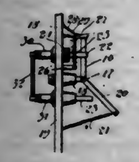


1. A floor drain comprising a basin member and a trap having a liquid seal in its bottom portion, a depressed portion formed integrally with said basin, extending abruptly downwardly below the bottom thereof and terminating with its lower edge above the water level of said trap, the trap being provided with an opening for establishing communication between said depressed portion of the basin and the trap, a check valve adapted to normally close said opening from the atmosphere, a removable cap for the trap adapted to afford easy access to said check valve and a perforated cover for said basin.

2. A floor drain comprising a basin member and a trap having a liquid seal in its bottom portion, a contracted, depressed portion formed integral with said basin extending abruptly downwardly below the bottom thereof and terminating with its lower edge above the water level of said trap, to provide a discharge nozzle for the water, the trap being provided with an opening for establishing communication between said depressed portion of the basin and the trap, and a check valve adapted to normally close said opening from the atmosphere.

3. A floor drain comprising a basin member, and a circular trap integral therewith and having a liquid seal in its bottom portion, a contracted depressed portion extending abruptly downwardly below the bottom of the basin and providing a discharge passage with its lower edge above the water level of said trap, the trap casing provided with an opening for establishing communication between said discharge passage and the trap, a check valve adapted to normally close said opening from the atmosphere, an upstanding lug formed integral with said trap casing, and a perforated, removable cover for said basin centrally supported on said lug.

1,211,967. OVERLOAD CIRCUIT-BREAKING APPARATUS. EDMUND O. SCHWEITZER, Chicago, Ill. Filed May 19, 1913. Serial No. 768,577. (Cl. 175—268.)

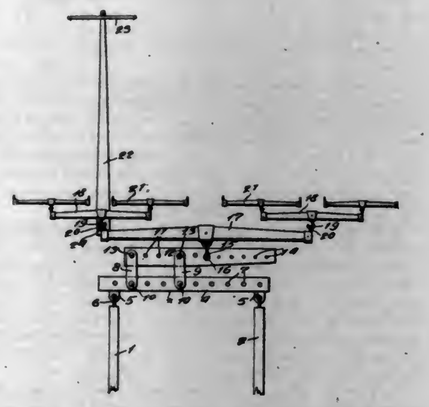


1. The combination of a circuit breaking device having a swinging knife blade, spring contact jaws therefor mounted upon an insulating support, electromagnetic means tending to hold said knife blade normally in position in said contact jaws, spring means tending to open said knife blade, and a fuse mounted on the opposite side of said support and arranged for connection in shunt between the spring contact jaws for said knife blade.

2. A circuit breaking device comprising a support, contact jaws carried by a metallic post which extends through said support and has its opposite end made in the form of a fuse terminal, a swinging blade adapted to engage said contact jaws and mounted upon a post also carried by said support on the same side thereof as said contact jaws, another post mounted on the other side of said support and providing the other fuse terminal on the same side of said support as said first mentioned terminal, a magnet and a trip device controlled by the armature thereof for controlling said blade.

3. A circuit breaking device comprising a support, contact jaws carried by a metallic post which extends through said support and has its opposite end made in the form of a fuse terminal, a swinging blade adapted to engage said contact jaws and mounted upon a post also carried by said support on the same side thereof as said contact jaws, another post mounted on the other side of said support and providing the other fuse terminal on the same side of said support as said first mentioned terminal, a magnet and a trip device controlled by the armature thereof for controlling said blade, said second mentioned fuse terminal post being an extension of the post upon which said swinging blade is mounted.

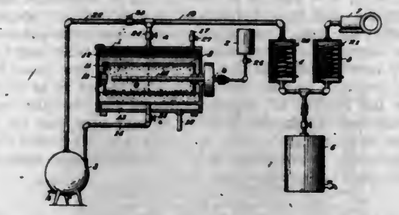
1,211,968. PLOW-HITCH. JAMES O. SHAFER, Claremont, Ill. Filed Nov. 6, 1915. Serial No. 59,987. (Cl. 97—4.)



A plow hitch for equalizing side draft on plows including in combination with two plow beams, a bar connected to the beams and provided with a plurality of openings throughout the length thereof, another bar arranged in advance of the first mentioned bar and provided with a plurality of openings, the openings in one portion of the bar being smaller than those in the other portion, links arranged above and below the bars in pairs and removably and adjustably connected in the large openings in one bar and in the openings in the other bar, a large tree, a clevis for removably and adjustably connecting the large tree with the smaller openings in the second mentioned bar, and other trees mounted in the respective ends of the large tree.

1,211,969. EXTRACTING ESSENTIAL OILS. EDWARD J. SHEEHAN, Pasadena, Cal., assignor of one-half to William S. McCay, Pasadena, Cal. Filed Feb. 8, 1915. Serial No. 6,733. (Cl. 87—6.)

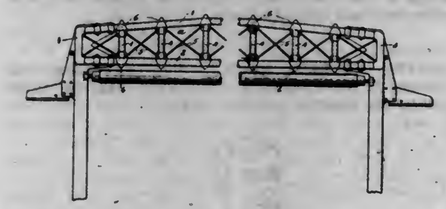
1. A process for extracting essential oils, consisting in distilling an essential oil of the same character as that to be extracted, condensing the volatile constituents for use as a solvent, retaining the non-volatile constituents, rupturing the oil bearing cells of the materials from which the oil is to be extracted, subjecting said materials to the solvent action of said solvent, and combining the solution with said non-volatile constituents.



2. A process for extracting essential oils, consisting in distilling an essential oil of the same character as that to be extracted, condensing the volatile constituents for use as a solvent, retaining the non-volatile constituents, rupturing the oil bearing cells of the materials from which the oil is to be extracted, subjecting said materials to the solvent action of said solvent, agitating the mass during extraction, and combining the solution with said non-volatile constituents.

3. A process for extracting essential oils, consisting in distilling an essential oil of the same character as that to be extracted, condensing the volatile constituents for use as a solvent, retaining the non-volatile constituents, rupturing the oil bearing cells of the materials from which the oil is to be extracted, subjecting said materials to the solvent action of said solvent, draining the solution from said materials, subjecting the residue to the action of heated vapors, condensing said vapors, separating the oil from said vapors, and combining said solution, said non-volatile constituents and oil obtained from said condensed vapors.

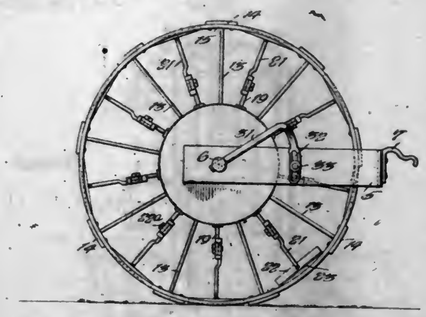
1,211,970. TAMBOUR-FRAME. GOTTWALT SIEBER, Plauen, Germany, assignor to Vogtländische Maschinen-Fabrik, Plauen, Germany. Substitute for application Serial No. 843,460, filed June 6, 1914. This application filed Dec. 1, 1915. Serial No. 64,587. (Cl. 112—7.)



In a tambour frame, the combination with end parts or members and fabric supporting means borne in the latter, of a longitudinal part, composed of upper and lower tubular steel girdles connected to said members and vertically tubular posts extending between said girdles and diagonal tensioning wires connecting adjacent posts.

1,211,971. PLANT BLOCKING OR SPACING MACHINE. HENRY MORTIMER SIEMANN, Fort Lupton, Colo. Filed Apr. 7, 1915. Serial No. 19,600. (Cl. 97—49.)

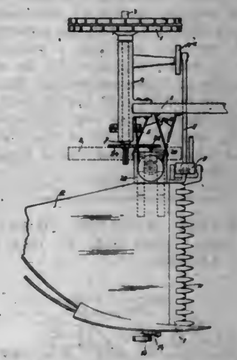
1. A device of the class described, comprising a stationary axle, a drum revoluble on the axle, a rim surrounding the drum and connected thereto, a plurality of arms pivotally mounted at their inner ends within the drum and extending at their outer ends beyond the drum through slots cut in the peripheral wall of the drum, cutting blades carried by the arms, spring means housed within the drums normally maintaining the arms in a common plane with the drums, means housed within the drum and carried by the axle for successively shifting the arms out of normal position and then releasing them, and plates movable with the arms and overlying the slots in the drum wall through which the arms extend.



2. A device of the class described, including a wheel having a drum at its hub, said drum being provided in its peripheral wall with a plurality of slots, chopping arms pivotally mounted at points within the drum and extending through the slots, means housed within the drum for operating the chopping arms, and means for maintaining the slots in closed position against entrance of foreign matter to the drum.

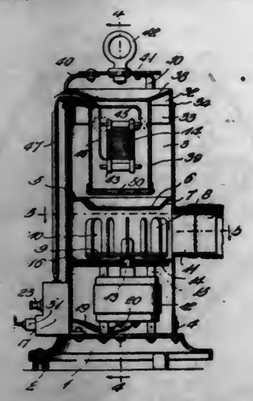
3. A device of the class described including a wheel having a drum portion, a plurality of chopping arms mounted within the drum and extending therefrom through apertures provided in the drum, means within the drum for causing the operation of the arms, and means for preventing entrance of foreign matter to the drum through the apertures.

1,211,972. MOWING-MACHINE. STĚPÁN SKALICKÝ, Česká Skalice, Austria-Hungary. Filed Nov. 27, 1914. Serial No. 874,201. (Cl. 56—33.)



In a combined reaper and mowing machine, the combination of a main frame, drive shaft, driving wheels mounted thereon, cutting knife and means for operating the latter, the driving wheel on the grass side of the machine being removable, a reaper attachment comprising an arm having at its lower end a supporting wheel adapted to take the place of the driving wheel on the grass side of the machine, means for attaching the upper end of the arm to the frame, a sprocket secured to the shaft when the reaper attachment is employed, a rake support mounted on the frame, rakes carried by the rake support, and means for operating the same from the sprocket wheel.

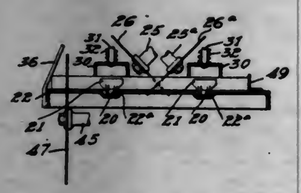
1,211,973. ELECTRIC HEATER. VERN SLATER and LEONIDAS D. WEST, Denver, Colo., assignors to The Electro-Fume Company, Denver, Colo., a Corporation of Colorado. Filed June 9, 1916. Serial No. 102,688. (Cl. 219—39.)



1. An air heater and circulator comprising a main vertically elongated casing having in its top an air inlet, a fan in the lower portion of said casing, the latter having an air outlet through which said fan is adapted to discharge air taken into the casing through said air inlet, an auxiliary open-ended casing secured to and depending from the top of the main casing, said auxiliary casing having its lower end disposed adjacent the eye of the fan, and a heating element in said auxiliary casing.

2. An air heater and circulator comprising a vertically elongated casing, a removable cap applied to the upper end thereof and having an air inlet, a fan in the lower portion of the casing, the latter having an outlet through which said fan is adapted to discharge air taken into the casing through the aforesaid inlet, an electric motor below said fan for driving the same, a terminal block adjacent the lower end of the casing, a pair of wires for supplying current to the motor, said wires passing through said block, a pair of sockets carried by said block and electrically connected with said wires, the connection between one socket and one wire including a manually operable switch, an electric heater supported by the aforesaid cap for heating the air as it passes through the casing, and a pair of wires for feeding said heater, said wires being passed outwardly through the cap and extended downwardly along the exterior of the casing, the lower ends of said wires having plugs for detachable engagement with the aforesaid sockets.

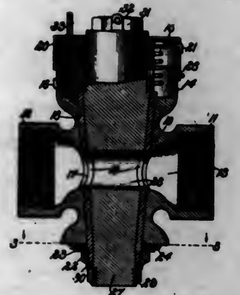
1,211,974. TIE-PLUG MACHINE. HARRY G. SMART, St. Cloud, Minn. Filed Jan. 8, 1914. Serial No. 810,955. (Cl. 143—49.)



1. In a tie plug machine, the combination with a suitable table, of a pair of endless chains or conveyers upon said table, each of said chains being provided with a series of carrying lugs, a presser bar arranged over each conveyer and extending across the table substantially parallel with the line of movement of the conveyers, said presser bars being construtced so as to engage the tie-plug at opposite sides of the carrying lugs, and a saw for sawing entirely through the material in proximity to the upper face of said table and between said conveyers.

2. In a tie plug machine, the combination with a suitable table, of a pair of endless chains or conveyers upon said table, each of said chains being provided with a series of carrying lugs, a U-shaped presser bar arranged over each conveyer and extending across the table substantially parallel with the line of movement of the conveyers, said U-shaped presser bars being constructed so as to engage the tie-plug at opposite sides of the carrying lugs, springs controlling the pressure of said bars, and an inclined saw arranged above the table with its lower edge in proximity to the upper face of said table and substantially midway between said conveyers.

1,211,975. AUTOMATIC GAS CUT-OFF. JOHN W. SMITH, Brooklyn, N. Y. Filed July 5, 1916. Serial No. 107,559. (Cl. 137—92.)



In an automatic valve, the combination of a rigid body having a transverse passageway therethrough, a sleeve fitted in the body and having diametrically opposite holes normally registering with said passageway, means acting between the sleeve and the body tending to turn the sleeve automatically, fusible metal normally locking the sleeve from rotation, and a valve plug fitted in the sleeve and having a transverse hole adapted to register with the passageway and holes aforesaid.

1,211,976. NOVELTY DEVICE. JOHN R. SPENCER and JAMES L. ROSS, Bartow, Fla. Filed Apr. 26, 1915. Serial No. 24,020. (Cl. 240—8.4.)



An electric lighting novelty comprising an electric lamp and an electric circuit, the latter consisting of a housing, a battery cell located in the housing, a spring contact arm secured externally to the housing and in metallic circuit with the jacket of the cell, the free end of the arm passing through the upper end of the casing, a plug of insulation removably secured in the upper end of the housing, and a pair of electrical conductor wires connected at one end to the said lamp and having their other ends extending through the plug, one of said wires having its end exposed at the inner end of the plug for contact with the other element of the cell, and the other wire having its end exposed at the side of the plug for contact with the free end of the said contact arm.

1,211,977. INCUBATOR-BROODER. CHARLES HENRY SPERLE, Somerville, N. J. Filed Oct. 14, 1915. Serial No. 55,819. (Cl. 119—30.)



1. A combined incubator and brooder comprising an incubator construction provided with yieldable curtain walls, whereby the chicks may pass from the incubator to a floor below the incubator for receiving said chicks, a hot water tank spaced above said floor approximately the height of a chick so that when a chick moves to a position beneath the floor it will contact with the tank for receiving heat directly therefrom, and a curtain covering arranged around the periphery of said hot water tank and substantially reaching said floor.

2. A combination incubator and brooder comprising a pair of water tanks, one tank being for the brooder and one for the incubator, a single heating means for supplying heated water to said tanks, means for supporting eggs so as to contact with the upper hot water tank, a fabric covering for the lower heating tank, said fabric covering having an overhanging edge provided with slits, and a flooring arranged below said lower tank, said flooring being adapted to receive the chicks as the same fall from said incubator, said flooring also acting as the bottom of the floor of the brooder inclosed by said fabric covering.

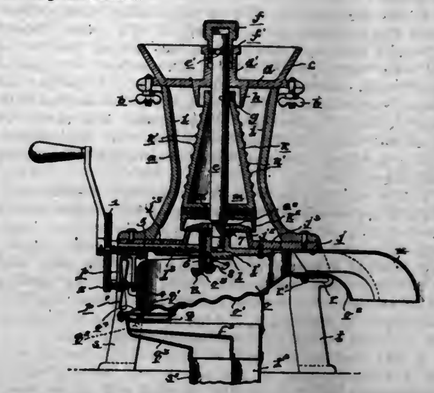
3. An incubator having a warm water tank, an egg tray, resilient means on said tray for resiliently pressing the eggs in the tray against said tank, a lever connected with said tray and a weight connected to said lever acting thereon for causing the lever to give a continual even pressure on said eggs at all times.

4. A combined incubator and brooder, comprising an upper and a lower hot water tank, an upper and a lower floor for supporting eggs and chicks, respectively, said lower floor being stationary and said upper floor being rotatable, a supporting journal for said upper floor, a lever connected with said journal, a weight acting on said lever for raising the journal so that the floor will be given a tendency to move upwardly and press said eggs against said upper hot water tank, and means for guiding said journal.

1,211,978. NUT SHELLING AND SEPARATING MACHINE. FANNIE S. SPITZ, Albuquerque, N. Mex. Filed Sept. 26, 1916. Serial No. 122,270. (Cl. 146—3.)

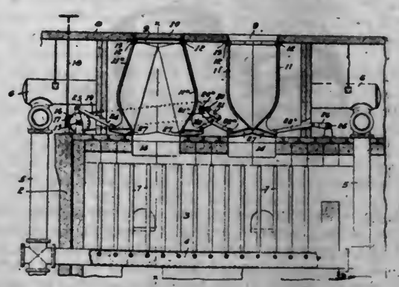
1. In a nut-shelling machine, the combination of a vertically-disposed stationary cylindrical grinding member, a laterally-yieldable conical grinding member rotatably mounted within said stationary member, resilient means for normally centering said conical member vertically within the stationary member, and means for rotating the conical member.

2. In a nut-shelling machine, the combination of a stand, a stationary grinding cylinder mounted thereon, a hopper supported on the top of said grinding cylinder and having a yoke extending diametrically across the top of the cylinder, said yoke being provided with a central vertically-disposed shaft-bearing, a vertical shaft rotatably mounted in said bearing, means for adjustably supporting said shaft embodying a hollow cap threaded on said bearing and having inwardly-projecting lugs engaging in an annular groove in said shaft, a vertically-disposed hollow conical grinding member mounted on said shaft to rotate therewith and capable of moving laterally with respect thereto, means for normally centering said conical member within the stationary member, and means for driving said shaft.



3. In a machine of the class set forth, the combination of a stand, and means for separating the meats and shells comprising a pan having a downwardly-inclined bottom and a discharge opening at its lower end and provided with a constricted discharge spout at its upper end, a nut-meat receptacle supported on the stand below the lower discharge opening, a shell and dust collecting bag supported on said stand and having a flexible connection with the discharge spout, a fan-blower mounted adjacent the lower discharge opening adapted to deliver an air-blast upwardly along the inclined pan bottom toward the discharge spout, means for driving the fan, and means for imparting a rotary reciprocatory motion to the pan.

1,211,979. INCINERATOR. ELMER N. STACY, Minneapolis, Minn., assignor to Decarie Incinerator Company, Minneapolis, Minn., a Corporation. Filed Nov. 28, 1913. Serial No. 803,528. (Cl. 110—118.)



1. The combination, with an incinerating chamber having a filling opening in the top thereof and a platform surmounting said incinerating chamber and spaced therefrom and also having a filling opening to register with the opening in said incinerator, a flange fitting within said platform opening and having a suitable cover, a hopper divided vertically into separable sections hinged on said flange and having means at its lower end for normally closing the opening in said incinerator, and mechanism for separating said sections to expose said incinerator opening and discharge the contents of said hopper therein.

2. The combination, with an incinerating chamber having a filling opening in the top thereof, of a hopper divided

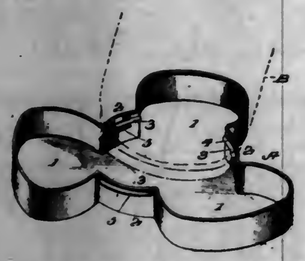
vertically into separable sections above said filling opening, the lower ends of said sections having brackets thereon provided with under surfaces for closing said filling opening when said sections are brought together, and means for separating said hopper sections to allow the contents thereof to discharge into said incinerating chamber.

3. The combination, with an incinerating chamber having a filling opening in the top thereof, of a hopper divided vertically into separable sections and having brackets at its lower end provided with under surfaces for closing said filling opening when said sections are brought together, rock shafts having arms and link connections with said brackets, mechanism for operating said shafts to move said hopper sections toward and from one another, and a platform having a filling opening provided above said hopper sections.

4. The combination, with an incinerating chamber having a filling opening in the top thereof, of a hopper having substantially straight upper walls and converging lower side walls and divided vertically into separable sections, each section having a pivotal support for its outer wall at its upper end, means for closing said filling opening when the sections of said hopper are brought together, and means for separating said hopper sections to discharge the contents thereof into said incinerating chamber.

5. The combination, with an incinerating chamber having a filling opening in the top thereof and a platform surmounting said incinerating chamber and spaced therefrom and also having a filling opening, a hopper divided vertically into independent sections, said sections being hinged at their upper ends beneath and adjacent to said platform and upon opposite sides of the opening therein, the lower walls of said hopper sections converging and positioned to direct the contents of the hopper into the opening in the top of the incinerating chamber, the lower ends of said hopper sections having a limited movement for separating them to expose the opening into said incinerating chamber, and means for operating said hopper sections simultaneously.

1,211,980. DRINKING-FOUNTAIN. EUGENE C. STACY, Tiffin, Ohio. Filed Nov. 19, 1912. Serial No. 732,225. (Cl. 119—77.)

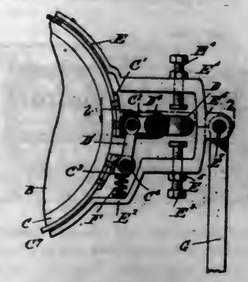


1. In a watering device, the combination with an inverted water reservoir having an opening in its lower end and a projection from the surface around such opening, of a receptacle having sides with reëntrant portions approaching closely to the projection around the opening in such reservoir, and projections from such reëntrant portions adapted to engage with the first mentioned projection.

2. In a watering device the combination with an inverted jar having a circular mouth and a projection from the surface around such mouth, of a detachable cover for such jar with sides adapted to form a water trough, such sides having reëntrant portions lying in a circle of diameter slightly greater than the diameter of the mouth of such jar, and projections from such reëntrant portions adapted to engage with the projection around the mouth of such jar.

3. In a watering device the combination with an inverted jar having a projection from the surface around its mouth, of a detachable cover for such jar with sides adapted to form a water trough, such sides having yielding reëntrant portions with projection therefrom adapted to be sprung into engagement with the projection first mentioned.

1,211,981. AUTOMATIC REBOUND-GOVERNOR. ELIAL M. STAPLES, Elizabeth, N. J. Filed Mar. 3, 1916. Serial No. 81,954. (Cl. 21—105.)



1. A rebound governor for vehicle springs, comprising a support, a hub mounted thereon and held against rotation, a casing mounted for turning movement upon the hub, a friction band interposed between the casing and the hub, members pivotally connected together and connected one with one end of the band and the other with the other end of the band, and means carried by the casing for engaging one of the said members when the casing is turned with relation to the hub to cause the band to frictionally engage the periphery of the hub.

2. A rebound governor for vehicle springs, comprising a support, a hub mounted thereon and held against rotation, a casing mounted for turning movement upon the hub, a friction band interposed between the casing and the hub, ears carried at one end of the band, a lever fulcrumed to the ears, means operatively connecting the lever with the other end of the band, and means provided upon the casing for engaging the lever when the casing turns upon the hub to cause the band to frictionally engage the hub.

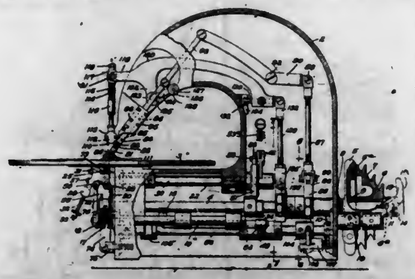
3. A rebound governor for vehicle springs, comprising a hub mounted thereon and held against rotation, a casing mounted for turning movement on the hub, a friction band interposed between the casing and the hub, spring means operating upon the band to maintain the same at normal condition, a lever pivotally connected with one end of the band, a link operatively connecting the lever with the other end of the band, and means carried by the casing and adapted to engage the lever to cause the band to frictionally engage the hub.

4. A rebound governor for vehicle springs, comprising a hub, a casing surrounding the hub and movable with relation thereto, a band interposed between the casing and the hub, said casing having an extension, adjustable screws carried by the extension, a lever pivotally connected with one end of the band and having an end portion disposed between the screws, and a link operatively connecting the lever with the other end of the band.

5. A rebound governor for vehicle springs, comprising a hub mounted thereon and held against rotation, a casing mounted for turning movement on the hub, a friction band interposed between the casing and the hub, a lever pivotally connected with one end of the band, means operatively connecting the lever with the other end of the band, and means carried by the casing for engaging the lever when the casing is moved with relation to the hub to cause the band to frictionally engage the hub.

1,211,982. MACHINE FOR FOLDING PLIABLE MATERIAL. CHARLES P. STANBON, Saugus, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 6, 1910. Serial No. 580,723. (Cl. 12—54.)

1. In a machine for folding pliable material, the combination with folding instrumentalities, of a hammer, and means for moving said hammer downwardly and inwardly upon the margin.



2. In a machine for folding pliable material, the combination with folding instrumentalities of means to determine the line of fold and an inthrowing hammer arranged to operate upon the folded edge.

3. A machine of the class described having, in combination, a frame, folding instrumentalities, a vibrating slitting knife, an actuating shaft, driving connections between the shaft and knife for vibrating the knife normally in a path which intersects the work, said connections being constructed and arranged to be manipulated to move the knife to inoperative position, and treadle operated means carried by the frame for accomplishing said manipulation at will during the operation of the machine.

4. A machine of the class described having, in combination, a frame, folding instrumentalities, a vibrating slitting knife, an actuating shaft, driving connections between the shaft and knife for vibrating the knife normally in a path which intersects the work, said connections being constructed and arranged to be varied in effective length for the purpose of moving the knife out of range of the work, and treadle operated means mounted on the frame for controlling the driving connections.

5. In a machine for folding pliable material, the combination with work feeding means of a slitting knife, means positively connected at all times with the knife for vibrating it, a spring normally acting to cause the path of the knife to intersect the material, and means under control of the operator during the operation of the machine for changing the location of the path of the slitting knife by acting in opposition to said spring to render said knife inoperative without interrupting its vibration.

[Claims 6 to 48 not printed in the Gazette.]

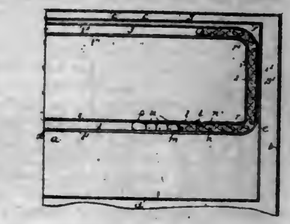
1,211,983. WOOD WIND MUSICAL INSTRUMENT. GEORGE STERNBERG, Agaña, Island of Guam. Filed Apr. 16, 1914. Serial No. 832,208. (Cl. 84—7.)



1. A wood wind musical instrument of the flute class, comprising a tube having a lateral mouth open near one end, and a series of key-controlled openings extending longitudinally thereof, a plurality of series of sleeves journaled adjacent to the last named openings, the sleeves of one series being at the end adjacent to the mouth opening and the sleeves of the other series being at the opposite end of the tube and at the opposite side of the openings, the sleeves of each series having stems supporting rings adapted to encircle adjacent openings, and padded covers adapted to close the adjacent openings, and said sleeves having extensions extending in the opposite direction from the stems, a lever pivoted intermediate its ends to the tube at each series of sleeves and engaging between the adjacent extensions at one end and adapted for engagement by the hand of the player to simultaneously close the covers of the sleeves having the extensions, sundry of the sleeves having finger pieces overlying the adjacent covers whereby the finger pieces of the overlying covers may be simultaneously operated.

2. A wood wind musical instrument of the flute type, comprising a tube having a lateral mouth open near one end, and a series of key-controlled openings extending longitudinally thereof, a plurality of series of sleeves journaled adjacent to the last named openings, the sleeves of one series being at the end adjacent to the mouth opening and the sleeves of the other series being at the opposite end of the tube and at the opposite side of the openings, the sleeves of each series having stems supporting rings adapted to encircle adjacent openings, and padded covers adapted to close the adjacent openings, and said sleeves having extensions extending in the opposite direction from the stems, a lever pivoted intermediate its ends to the tube at each series of sleeves and engaging beneath the adjacent extensions at one end and adapted for engagement by the hand of the player to simultaneously close the covers of the sleeves having the extensions.

1,211,984. STOVE-OVEN SHELF. JOHN TOWART, Jr., Peekskill, N. Y. Filed July 31, 1916. Serial No. 112,269. (Cl. 126—339.)



1. The combination with a stove oven of raceways on the sides, back, and top of the oven, a flexible shelf comprising flat slitted tubes hooked together, the ends of said shelf tubes traveling in said raceways, the forward end of said shelf composed of members flexible in only an upward direction, constituting a shelf that will be self supporting when drawn partly out of the oven.

2. The combination with a stove oven of raceways on the sides of the oven, said raceways extending from the oven into the flue space back of the oven thence upward in said flue space and forward over the top of the oven, and a flexible shelf to traverse said raceways, the rear portion of the shelf composed of members hooked together, the forward members of the shelf comprising members flexible in only an upward direction.

3. The combination with a stove oven of raceways continuous on the sides, against the back and over the top of the oven, a flexible shelf supported in said raceways, the forward end of the shelf made flexible in only an upward direction.

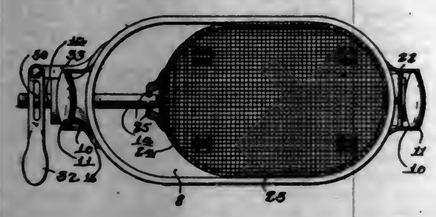
4. The combination with a stove oven of raceways on the sides and back of the oven, the raceways lapping one over the other, and a flexible shelf, the inner end of the shelf composed of members hooked together, the forward members of the shelf flexible in only an upward direction.

5. A flexible shelf for a stove oven comprising members consisting of flat, slitted tubes, joined together by uniting a curve of one tube with a curve of a tube next to it, the shapes of the tubes rendering them unseparable sidewise, the tubes kept in place by the raceways in which they travel.

1,211,985. DISH-WASHER. JOHN H. VAN WYCK, Jersey City, N. J. Filed June 21, 1915. Serial No. 35,386. (Cl. 141—9.)

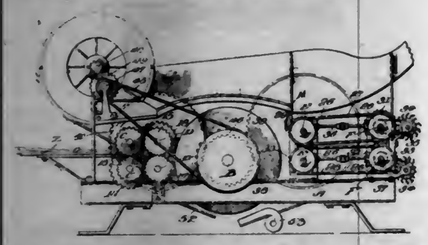
A dish washer including an oblong body having straight parallel sides, a relatively short dish holding member in said body and provided with reticulated side and bottom walls, caster straps fixed to the bottom walls, caster rollers journaled in the straps and holding the bottom wall in normally constant spaced relation to the

bottom of the body, and reciprocating means for said dish holding member including a rod projecting into the



body and engageable by the member when the rollers are on the bottom of the body and disengaged therefrom when said member is lifted.

1,211,986. HEMP-BRAKE. RICHARD S. WEBB, Jr., Lexington, Ky., assignor of one-half to Allie B. Webb and one-half to Mary G. Webb, Lexington, Ky. Filed Feb. 29, 1916. Serial No. 81,133. (Cl. 13—1.8.)



1. In a hemp-brake, the combination with crushing means, of a beater, and means directing a blast of air transversely of said beater.

2. In a hemp-brake, the combination with crushing means, of a beater, means directing a blast of air tangentially upon the beater, and means directing a blast of air transversely of said beater.

3. In a hemp-brake, the combination with crushing means, of a beater, means directing a blast of air tangentially upon the beater, means directing a blast of air transversely of said beater, and means for regulating the supply of air transversely thereof.

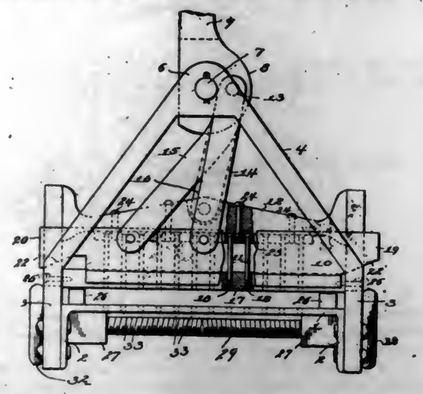
4. In a hemp-brake, the combination with crushing means, of a beater, means directing a blast of air tangentially upon said beater, means directing a blast of air transversely of said beater, and means for passing air radially through said beater.

5. In a hemp-brake, the combination with a feeding mechanism, of a break-bar, a rotary beater arranged to beat the stalks upon the under side of such break-bar, a blower arranged to direct a blast of air across the upper side of the rotary beater, a chute for receiving the refuse blown from the rotary beater, auxiliary air ducts arranged at the sides of the chute adapted to direct a blast of air transversely of said rotary beater, and delivery belts at the rear of the beater.

[Claims 6 to 13 not printed in the Gazette.]

1,211,987. IMPLEMENT FOR CUTTING BELTS AND PUNCHING THEIR ENDS. CAMILLE J. WEBB, New Orleans, La. Filed Apr. 10, 1916. Serial No. 90,152. (Cl. 164—15.)

1. In an implement of the type set forth, in combination, a table, a transverse knife, an eccentric supported above the knife, a pair of links connecting the eccentric and the knife, one link being connected to the center of the knife and the other link, longer than the first one, being connected to the knife between the center and an end thereof, end bearers carried by the knife and having inclined guide faces and posts at each side of the knife having slots through which said end bearers project.



2. In an implement of the type set forth, in combination, a table, a transverse knife, a transverse series of perforating pins and means for vertically and simultaneously reciprocating the knife and the pins, the pins having their lower ends arranged at an elevation relatively to the knife edge whereby the pins will engage the material on the table prior to the cutting operation of the knife.

3. In an implement of the type set forth, in combination, a table, a transverse knife, a transverse series of perforating pins, means common to the knife and the pins for effecting a vertical reciprocation thereof and means acting in conjunction with the vertical reciprocation of the knife for simultaneously shifting the knife in the direction of its length.

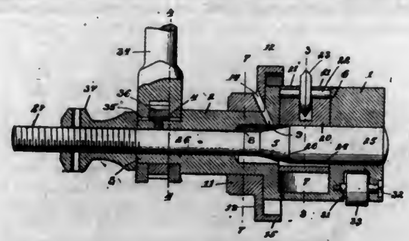
4. In an implement of the type set forth, in combination, a table, a transverse knife, a transverse series of perforating pins, means common to the knife and the pins for effecting a vertical reciprocation thereof and means acting in conjunction with the vertical reciprocation of the knife for simultaneously shifting the knife in the direction of its length, the pins having their lower ends arranged at an elevation to the knife edge whereby the pins will engage the material on the table prior to the cutting operation of the knife.

5. In an implement of the type set forth, in combination, a table, a transverse knife, a transverse series of perforating pins, an eccentric supported above the knife and the pins, a cross-head carrying the pins, a link connecting the eccentric and the cross-head, a pair of links connecting the eccentric and the knife, one link being connected to the center of the knife and the other link, longer than the first one, being connected to the knife between the center and an end thereof, and inclined guide means for directing the knife in the direction of its length in connection with the vertical reciprocation thereof.

[Claims 6 to 10 not printed in the Gazette.]

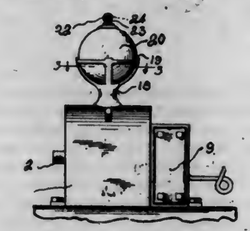
1,211,988. TUBE-CUTTER. BENJAMIN E. WEBBS, Elmhurst, N. Y. Filed July 3, 1915. Serial No. 37,888. (Cl. 81—195.)

1. In a device of the class described, the combination with a head having a reduced extension thereon and provided with a radial opening, of a cutter-wheel carrier adapted to reciprocate in said opening and having a transverse opening slightly greater in diameter than the diameter of an aliningopening in the head, said carrier being bifurcated to form cutter-wheel bearings, a cutter wheel in said bearings, stops projecting through the head and engaging flattened portions on the cutter-wheel carrier and a longitudinally movable cutter-wheel-carrier actuator, said actuator projecting through the opening in the head and through the opening in the carrier.



2. In a device of the class described comprising a head having a reduced portion and a removable flanged member on said reduced portion, said flanged member being adapted to engage the work to be operated upon, said head having a radial bore intersected by a longitudinal bore, a reciprocatory cutter-wheel carrier in the radial bore and having a bore intersected by the longitudinal bore in the head, a cutter-wheel on the head-actuator movable in the head and having a threaded portion extending beyond the reduced portion of the head, and a pawl-and-ratchet mechanism on the reduced portion of the head and an adjusting nut for actuating the acuator, said adjusting nut having one end resting against the pawl-carrying member of the pawl and ratchet mechanism and adapted to hold it in place.

1,211,989. SUNKEN-SHIP INDICATOR. HENRY WESTIN, Smithville, Minn. Filed Apr. 14, 1916. Serial No. 91,174. (Cl. 9—9.)

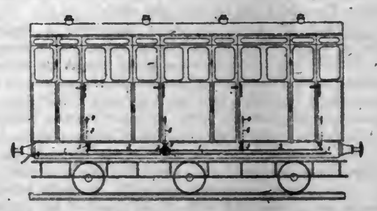


1. In combination with a ship, a casing mounted thereon, a water tight chamber associated with the casing, a drum rotatably mounted in the casing and having one of its trunnions extended into the chamber, a bracket mounted upon the top of the casing, a float normally supported by the bracket, a lamp carried by the float, an electric cable windable upon the drum and in circuit with the lamp, a circuit closure mounted in the chamber and rotatable with the drum trunnion which extends thereinto, means operable by the drum to close the circuit, and means for conducting a source of electrical energy to the circuit closure and electric cable.

2. In combination with a ship, a casing mounted thereon, a drum mounted in the casing, a float mounted on the casing, an electric cable windable on the drum and connected to the float, a chamber associated with the casing, said drum having a trunnion projected into the chamber, battery circuit wires being extended into the chamber, a switch arranged in the circuit wires, means for closing the circuit between the electric cable and battery wires, and means for closing the switch upon rotation of the drum.

1,211,990. MEANS FOR CONTROLLING THE OPENING OF RAILWAY-CARRIAGE DOORS. EDWARD WILLIAMS, Jr., Wrexham, Wales. Filed June 7, 1916. Serial No. 102,368. (Cl. 105—265.)

1. In means for controlling the opening of railway carriage doors, the combination of an actuator adapted to be operated by steam or fluid pressure, comprising a cylinder and vibratory piston or fan device therein, operated by impact of the steam supplied to the cylinder; and connecting means between said fan or piston and locks on the carriage for controlling the opening of the doors; substantially as set forth.



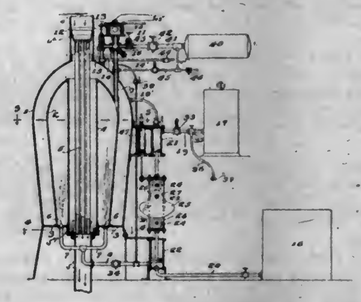
2. In means for controlling the opening of railway carriage doors the combination of a motor or actuator adapted to be operated by steam or fluid pressure comprising a cylinder and vibratory piston or fan device therein operated by impact of the steam supplied to the cylinder and connecting means between said fan or piston and locks on the carriage for controlling the opening of the doors, and connecting rods and levers between said actuator or motor and various locks controlled thereby on the carriage.

3. In means for controlling the opening of railway carriage doors the combination of a motor or actuator adapted to be operated by steam or fluid pressure comprising a cylinder and vibratory piston or fan device therein operated by impact of the steam supplied to the cylinder and connecting means between said fan or piston and locks on the carriage for controlling the opening of the doors, and wherein the connections between the shaft of the piston of the actuator or motor and the locks is effected by double lever chains on each side of said shaft, one end of the chains being connected to each arm.

4. In combination, a railway car having a plurality of doors, a lock for each door, an actuator including a casing inclosing a vibratory element operated by fluid pressure, pipes communicating with the casing to supply fluid pressure thereto to operate the vibratory element, and connecting means between the vibratory element and the locks for controlling the opening of the doors.

5. In combination, a railway car having a plurality of doors, each door having a lock, an actuator including a vibratory element and shaft therefor, pipes for supplying fluid pressure to the actuator, arms extending from the shaft, and connections between the arms and the locks, whereby when fluid pressure acts on either side of the vibratory element all the locks will be released.

1,211,991. VAPORIZING APPARATUS. ROBERT H. WILSON, Tacoma, Wash. Filed Feb. 25, 1916. Serial No. 80,463. (Cl. 48—107.)



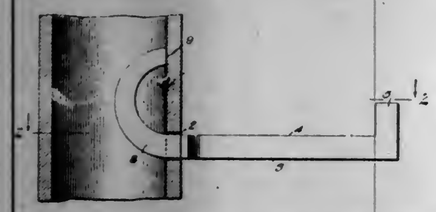
1. In apparatus of the class described, a vaporizing chamber, an air heating chamber surrounding said vaporizing chamber and having an air inlet, means for delivering

gasolene to said vaporizing chamber in the form of a spray, a gas conducting pipe leading from said vaporizing chamber, an air tube leading from said air heating chamber, a throttle valve in said gas conducting pipe, a valve in said air tube for controlling the flow of air through the tube, a connection between said air tube and gas conducting pipe, and means carried by said throttle valve and controlling the operation of said air valve.

2. In apparatus of the class described, a vaporizing chamber, an air heating chamber surrounding said vaporizing chamber and having an air inlet, means for delivering gasolene to said vaporizing chamber in the form of a spray, a gas conducting pipe leading from said vaporizing chamber, an air tube leading from said air heating chamber, a throttle valve in said gas conducting pipe, a valve in said air tube for controlling the flow of air through the tube, a connection between said air tube and gas conducting pipe, and means arranged centrally of said vaporizing chamber and connected with the exhaust of the engine for heating the said vaporizing and air chambers.

3. In apparatus of the class described, a vaporizing chamber, an air heating chamber surrounding said vaporizing chamber and having an air inlet, means for delivering gasolene to said vaporizing chamber in the form a spray, a gas conducting pipe leading from said vaporizing chamber, an air tube leading from said air heating chamber, a throttle valve in said gas conducting pipe, a valve in said air tube for controlling the flow of air through the tube, a connection between said air tube and gas conducting pipe, means arranged centrally of said vaporizing chamber for heating the said vaporizing and air chambers, and means connected to said gas conducting pipe whereby an explosive mixture may be delivered to the engine independently of said vaporizing and air heating chambers.

1,211,992. POLE-STEP. CHRISTIAN WINTER, Oskaloosa, Iowa. Filed Nov. 20, 1915. Serial No. 62,557. (Cl. 228—22.)



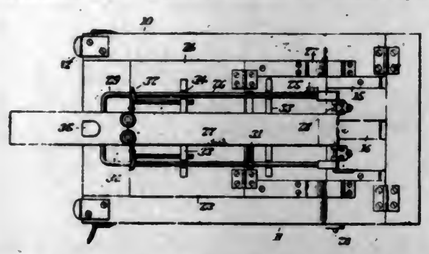
1. In a device of the character described, the combination with a pole having an aperture therein, of a step provided with a tread portion formed with enlargements adjacent one end, and a curved projection extending from said enlargement, said curved projection extending through said aperture and engaging part of the pole above the aperture whereby the enlargements may be used as fulcrums and the end of the curved portion as a bracing member.

2. A step for poles formed from a single piece of material and provided with a member merging into a pair of laterally extending fulcrums, and an arc-shaped brace arranged at the end of the member carrying the fulcrums.

1,211,993. PHOTOGRAPHIC-PRINTING MACHINE. WILLIAM W. WONNER and CHARLES W. SIMON, York, Pa.; said Wonner assignor to Noah C. Stabley, Red Lion borough, Pa. Filed Apr. 9, 1915. Serial No. 20,289. (Cl. 95—73.)

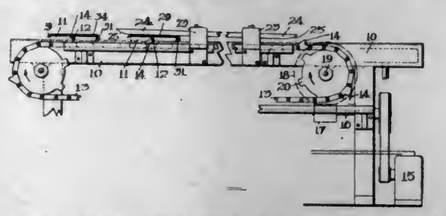
1. In a photographic printing frame, a transparent plate, a holding member for holding a mask against said transparent plate, a holding member for holding a film against said transparent plate and said mask and means for alternately simultaneously or independently operating said holding member.

2. In a photographic printing frame, a transparent plate, a holding member for holding a mask against said transparent plate, a holding member for holding a film



against said transparent plate, and means for operating the film and mask holding members and also operating said film holding member independently of said mask holding members.

1,211,994. APPARATUS FOR DRYING MATRICES. HENRY A. WISE WOOD, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Feb. 23, 1911. Serial No. 610,234. (Cl. 34—16.)



1. In a matrix drying device, the combination with a stationary heating table having a top surface, and a form and matrix movable along said surface, of means spaced from said surface for constantly holding the form in contact with the heating table under pressure while the form is moved along the table whereby the matrix will be dried during its motion by the heat from said table.

2. In a matrix drying device, the combination with a heating table having an upper surface adapted to support a form with a matrix thereon in such a way that the form can be moved along the surface of the table in contact therewith and be heated thereby during its motion along the surface thereof, of means supported by said table and located above it for exerting continuous pressure on the form while it is moving along the table.

3. In a matrix drying device, the combination with a heating table having an upper surface adapted to support a form with a matrix and blanket thereon in such a way that the form can be moved along the table and be heated thereby during its motion along the surface thereof, of a shoe supported by the table and located above it for exerting continuous pressure on the blanket and form while moving along the table.

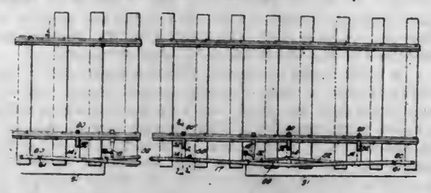
4. In a matrix drying device, the combination with a heating table having a surface along which a form with matrix and drying blankets thereon can be moved so as to dry the matrix during its motion along the table, and a shoe supported by said table and located at a distance from said surface sufficient to permit the form with the matrix and blankets to pass between the surface and shoe, whereby the moisture from the matrix will be driven into the blankets while they are under pressure by the heat from said table.

5. In a matrix drying device, the combination with a heating table having a plane surface along which the forms are adapted to pass with the matrices and drying blankets thereon, of a shoe extending substantially the whole width of said surface and at a distance therefrom less than the normal thickness of a form, matrix and blankets, so that when the form passes along between said surface and the shoe the blankets and matrix will be under a continuous pressure.

[Claims 6 to 13 not printed in the Gazette.]

1,211,995. RAILROAD-TRAFFIC-CONTROL EQUIPMENT. BENJAMIN F. WOODING, Montclair, N. J. Filed Nov. 9, 1915. Serial No. 60,605. (Cl. 246—58.)

1. An equipment as characterized comprising a ramp; and vertically yielding supports for said ramp permitting the depression of the same below the crown of the track rail with which said ramp is associated.



2. An equipment as characterized comprising a ramp; vertically yielding supports for said ramp permitting the depression of the same below the crown of the track rail with which said ramp is associated; and means pivotally connecting said supports with the adjacent track rail.

3. An equipment as characterized comprising a ramp; vertically yielding supports for said ramp permitting the depression of the same below the crown of the track rail with which said ramp is associated; and means pivotally connecting said supports with the adjacent track rail, said means embodying foot extensions disposable below the flange of said rail, and a retaining block removably connected therewith forming a pivot seat for the inner edge of said flange.

4. An equipment as characterized comprising a ramp anchored upon a road-bed; a plurality of supporting arms rigidly secured to said ramp intermediate the ends thereof, said arms being provided each with a foot extension for disposition below the flange of an adjacent track rail and having a hook-like pivot seat for engaging the inner edge thereof; and a plurality of spiral springs for supporting said arms, said spring being pivotally connected at the ends thereof with one of said arms and the edge of said flange.

5. An equipment as characterized comprising a ramp anchored upon a road-bed; a plurality of supporting arms rigidly secured to said ramp intermediate the ends thereof, said arms being provided each with a foot extension for disposition below the flange of an adjacent track and having a hook-like pivot seat for engaging the inner edge thereof; a plurality of spiral springs for supporting said arms, said springs being pivotally connected at the ends thereof with one of said arms and the edge of said flange; and means for definitely arresting the upward movement of each of said arms.

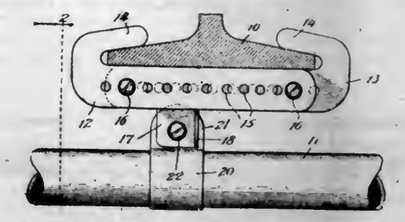
[Claims 6 to 11 not printed in the Gazette.]

1,211,996. SHOE-FASTENER. ANTHONY T. WRIGHT, Frolona, Ga. Filed Dec. 29, 1914. Serial No. 879,495. (Cl. 24—205.)



The combination with the curved meeting edges of an article of wearing apparel, of a plurality of eyelets secured to one of the edges, a pair of bearing members secured to the other edge, a member longitudinally secured in said bearing members and curved from end to end conformably with the curved meeting edge, a plurality of spring hook members secured to said rotatable member and having hooked outer terminals adapted to engage in said eyelets, and an arm secured to said rotatable member adapted to engage a portion of the article of wearing apparel to secure the rotatable member against rotation.

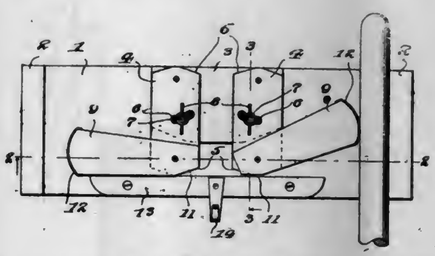
1,211,997. CLAMP AND HANGER. ERNEST H. AHLANDER, Chicago, Ill., assignor to Thomas Wrigley Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 23, 1915. Serial No. 46,905. (Cl. 248—32.)



1. A clamp and hanger of the type described and comprising conjugate clamp members adapted to be secured together to embrace the edges of a beam, a depending hanger formed on one of said clamp sections and having a wing and extending at an angle thereto, whereby the pipe may be supported from said hanger or said wing.

2. A clamp and hanger of the type described and comprising conjugate clamp members formed of sheet metal and having their opposite ends return bent in the plane of the sheet to embrace the edges of a beam, and having their adjacent ends overlapping, means for securing said overlapping ends to one another in adjusted positions, a hanger member formed on and depending from one of said overlapping ends and having a perforation therein adapting it to support a pipe strap, and a wing on said hanger and extending at an angle thereto, said wing being also perforated to adapt it to support a pipe strap.

1,211,998. AUTO BROOM-RACK. JESSE E. S. ANTHONY, Los Angeles, Cal. Filed Jan. 4, 1916. Serial No. 70,176. (Cl. 24—249.)

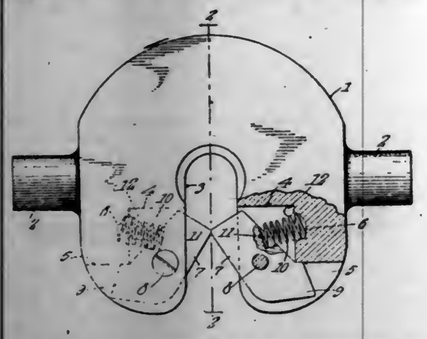


A rack comprising a plate, a block secured to said plate, a link mounted on said block and depending from the same, said link having a slot formed therein, means mounted on said plate and extending through said slot to lock said link against movement, a gripping lever having one end thereof provided with a longitudinally extending slot, said link being pivotally mounted within the walls of said slot, a cleat formed on said plate and disposed adjacent the outer extremity of said gripping lever, and a stop block secured to said plate and engaging the underside of said gripping lever.

1,211,999. ELEVATOR. SAMUEL EDWARD AREY and JAY J. HERN, Fellows, Cal. Filed Apr. 28, 1916. Serial No. 94,187. (Cl. 57—9.)

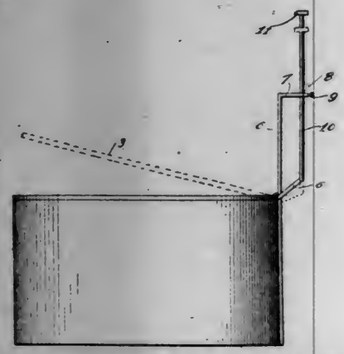
An elevator embodying a body having a radial open slot and recesses at the opposite sides of said slot between the

faces of the body extending from the open end of the slot to a point short of the inner end of the slot, said recesses providing walls facing the slot, said recesses having extensions projecting away from one another at the open end of the slot for receiving the thumb and finger of a hand for movement toward one another, said extensions providing walls arranged at an angle with the aforesaid walls, pivot members carried by the body within said recesses between the ends thereof, latches pivotally mount-



ed upon said pivot members within said recesses and projecting toward the closed end of the slot, said latches having finger pieces extending at obtuse angles therefrom beyond the pivot members and projecting away from one another to contact with the second mentioned walls, and expansion springs between the latches and first mentioned walls for swinging the latches toward one another and moving the finger pieces against the second mentioned walls.

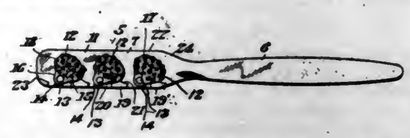
1,212,000. CUSPIDOR. JOHN S. BARNWELL, Chattanooga, Tenn. Filed July 30, 1915. Serial No. 42,767. (Cl. 4—39.)



A device of the class described including a cylindrical body, a cover hingedly secured to the open end of said body, an outwardly extending and upwardly inclined arm having one end bifurcated, said bifurcated arm secured to said cover, a guide arm having its lower end extending through the bifurcated portion of the first mentioned arm and secured to said body, its upper end projecting beyond the cover, said first mentioned arm adapted to raise the cover to an upward position, and means on the second named arm coöperating with the operating arm for holding the cover in a raised or lowered position.

1,212,001. TOOTH-BRUSH. HARRY T. BAXTER, Nauvoo, Ill. Filed Mar. 1, 1916. Serial No. 81,509. (Cl. 15—39.)

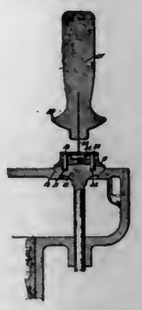
1. In combination with a tooth brush comprising a backing, a series of brush heads having opposite convexed edges pivotally connected to said backing, and a series of projections on said backing adapted to be engaged by the convexed edges of the brush heads for limiting the movement of the brush heads in opposite directions with respect to the backing.



2. A tooth brush having a backing provided with a plurality of spaced projections, and a series of brush heads pivotally mounted upon the backing and adapted to alternately engage with said projection for limiting the movement of the brush heads in opposite directions.

3. A tooth brush comprising a backing having a recess formed therein, a plate mounted in said recess, and disposed flush with one of the faces of the backing, a series of brush heads mounted on the opposite face of the backing and having a pivotal connection with said plate, and projections formed integral with the latter mentioned face of the backing adapted to be alternately engaged by the brush heads for limiting the movements of the brush heads in opposite directions.

1,212,002. VALVE-GRINDING TOOL. BURTON BOGARDUS BEAN, New Haven, Conn. Filed May 4, 1916. Serial No. 95,351. (Cl. 51—4.)



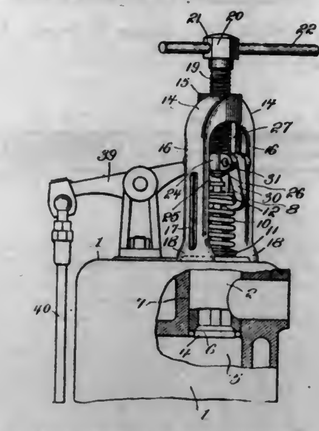
1. A valve grinding tool, comprising a split body provided with depending gripping means adapted to engage the valve, the gripping means being located on opposite sides of the split, and a clamping screw on the said body and extending across the split near the outer end thereof and parallel to a vertical plane passing through the axes of the said gripping means to allow of drawing the split members of the body toward each other to firmly engage the gripping means with the valve to be ground.

2. A valve grinding tool, comprising a disk provided with a slot extending diametrically from the peripheral edge of the disk to within a distance of the edge at the opposite side, the said slot providing the disk with a pair of jaws, gripping keys depending from the jaws and adapted to engage key recesses in the valve to be ground, and a clamping screw engaging the jaws near the free ends thereof and extending across the slot.

3. A valve grinding tool, comprising a disk provided with a slot extending diametrically from the peripheral edge of the disk to within a distance of the edge at the opposite side, the said slot providing the disk with a pair of jaws, gripping keys depending from the jaws and adapted to engage key recesses in the valve to be ground, the said gripping keys extending in a diametrical line at a right angle to the said slot, a clamping screw engaging the outer free ends of the jaws and extending across the slot, a pivot held in the disk and extending at a right angle across the slot in alinement with the said gripping keys, and a handle having a shank extending into the slot and pivoted on the said pivot.

4. A valve grinding tool, comprising a disk provided with a slot extending diametrically from the peripheral edge of the disk to within a distance of the edge at the opposite side, the said slot providing the disk with a pair of jaws, gripping keys depending from the jaws and adapted to engage key recesses in the valve to be ground, the said gripping keys extending in a diametrical line at a right angle to the said slot, a clamping screw engaging the outer free ends of the jaws and extending across the slot, a pivot held in the disk and extending at a right angle across the slot in alinement with the said gripping keys, and a handle having a shank extending into the slot and pivoted on the said pivot, the said handle having an annular bottom flange for the hands of the operator to rest on while turning the handle.

1,212,003. VALVE-ASSEMBLY REMOVER. CHARLES L. BEAN, San Jose, Cal. Filed July 19, 1916. Serial No. 110,114. (Cl. 29—87.1.)



1. A valve assembly remover comprising an inverted U-shaped frame, a jack screw threaded through said frame, a non-rotary cross head having said jack screw journaled therein and guided in a rectilinear path by said frame, said cross being actuated by said jack screw, and hooked claws of different lengths connected by pivots to said cross head to swing toward and away from each other, said frame embodying legs which extend below said claws.

2. A valve assembly remover comprising an inverted U-shaped frame, a jack screw threaded through said frame, a non-rotary cross-head guided by said frame and having said jack screw journaled therein, claws of different lengths pivotally carried by said cross-head and having hook shaped free ends and a valve stem embracing cap having an annular flange with which the free ends of the claws engage.

3. A valve assembly remover comprising an inverted U-shaped frame, a jack screw threaded through said frame, a non-rotary cross-head guided by said frame and having said jack screw journaled therein, claws of different lengths pivotally carried by said cross-head and having hook shaped free ends and a valve stem embracing cap having an annular flange with which the free ends of the claws engage, and also having lugs between which the free ends of the claws are received.

1,212,004. TUB-DRAINER. HENNING J. BERG, Troy, N. Y. Filed May 16, 1914. Serial No. 839,018. (Cl. 162—1.)

As a new article of manufacture, a one piece siphon for draining collapsible tubs having canvas bodies, comprising a combined coupling nipple and body of cylindrical formation, a flange formed integrally with and flaring outwardly from the inlet end of said body, a tapering nozzle axially alined with said body and having its discharge end extending into said flange to a point adjacent the inlet end of the body, a spider connecting said nozzle to said flange and formed integrally with both members, and a coupling



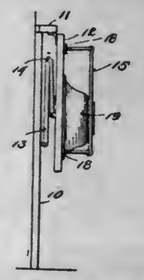
nipple axially alined and formed integrally with said nozzle, the outer edge of said flange being located outwardly beyond the body, nozzle and second coupling member to prevent the walls of the canvas body from closing the inlet end of the siphon body.

1,212,005. FACING FOR WALLS AND CEILINGS. ARTHUR BIBERFELD, Berlin, Germany, assignor, by mesne assignments, to the Firm Heinrich Wollheim and Ossenbach, Industriegesellschaft M. B. H., Berlin, Germany. Filed May 31, 1913. Serial No. 771,069. (Cl. 20—15.)



A flexible wall facing comprising transversely spaced flexible bands and a plurality of rods or bars mounted loosely on said bands, the said bars having a groove in one edge thereof, substantially V-shaped in cross section, and with the edges of the walls of said groove curved outwardly, the other edge of said rod having a tongue extending longitudinally thereof and adapted to project into the groove of the adjacent bar, said tongue being wider than the depth of the groove and having inwardly curved or concave side walls to provide for the flexing of the bars laterally in relation to each other on one side or the other.

1,212,006. FOLDING WASHSTAND. CHRIS BIRKY, Beemer, Nebr. Filed Feb. 2, 1915. Serial No. 5,733. (Cl. 45—37.)



A basin support comprising a pivotally mounted table for supporting the basin at times on its top, a wire frame including substantially U-shaped members and transverse connecting members, said frame being pivotally mounted on one end of the table and arranged to be swung against the top thereof at times when the said top is in depending position and to embrace the basin, hook members carried by the top for holding the frame in basin holding position, and hooks on the bottom of the table for holding the frame in a depending position at the side of the table when said table is in elevated position.

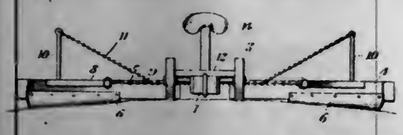
1,212,007. WATER-SOFTENING. FERDINAND BLUMENTHAL, Cologne-Braunsfeld, Germany. Filed Apr. 26, 1915. Serial No. 24,115. (Cl. 23—13.)

1. A process for the production of a substance for softening water, consisting in the precipitation of a dilute

solution of sodium silicate in a solution of ferrous chlorid, washing and pressing the resultant product or precipitate, then drying the latter, which forms into relatively hard lumps, moistening the lumps sufficiently to cause the same to break into relatively small particles, and then drying said small particles.

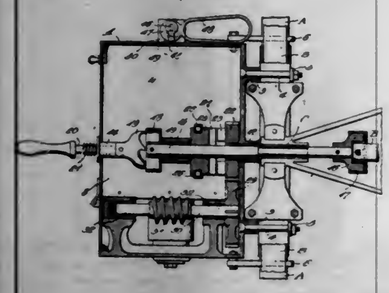
2. A process for the production of a substance for softening water, consisting in the precipitation of a solution of three kilograms of sodium silicate and thirty liters of water in a solution of seven hundred and fifty (750) grams ferrous chlorid and twenty liters of water, washing and pressing the resultant product or precipitate, then drying the latter at a temperature of about 100° C. thus forming into relatively hard lumps, moistening the lumps sufficiently to cause the same to break into relatively small particles of one or two millimeters in size, and then drying said small particles at a relatively low temperature.

1,212,008. ROAD-SCRAPER. FRANK BODINE, Richwood, Minn. Filed May 31, 1916. Serial No. 100,865. (Cl. 37—5.)



A road scraper including a main beam, leveling beams arranged on opposite sides thereof, adjustable chain connections between the rear ends of the leveling beams and the main beam, chains secured to the leveling beams and adjustably secured to the main beam to vary the distance of the forward ends of the leveling beams from the main beam at will, rods rising vertically from the leveling beams, and chains connected to the upper ends of said rods with the first mentioned chains to provide for tilting the leveling beams.

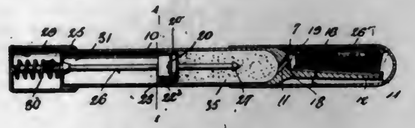
1,212,009. ATTACHMENT FOR MOTOR-VEHICLES. DELOSS BORLAND and HARLIN LEROY FOX, Charleston, Miss. Filed Aug. 1, 1916. Serial No. 112,580. (Cl. 254—166.)



1. A device of the class described comprising a casing having means for attachment to the front of a motor driven vehicle, a stationary shaft mounted in said casing, a winding drum revolubly and slidably mounted on said shaft, driving connections connected with said drum and having means for attachment to the motor shaft of said vehicle, said connections including coöperating clutch members adapted to be thrown in and out of engagement by the longitudinal movement of said drum, a lever pivotally mounted at one end to said casing, and a link connected at one end to said drum and pivoted at its other end to said lever, the pivot points of said link and said lever being on the opposite sides of the longitudinal axis of the latter, and arranged angularly with respect to the same, whereby to lock said drum in either of its longitudinal positions.

2. A device of the class described comprising a casing having vertically extending horizontally spaced abutments on its back, bolts extending through the latter and through said abutments and provided with means for clamping said casing around the front spring of a motor driven vehicle, hook members pivoted to the opposite sides of said casing and adapted to engage the front axle of said vehicle, a horizontal and a vertical partition in said casing for dividing the same into compartments, a winding drum revolubly mounted in one of the latter, driving connections connected with said drum arranged in the other compartments and having means for attachment to the motor shaft of said vehicle, and a door for closing the front of said casing.

1,212,010. TOOTH-BRUSH. GEORGE L. BROWN, Plant City, Fla. Filed June 20, 1916. Serial No. 104,764. (Cl. 15—39.)



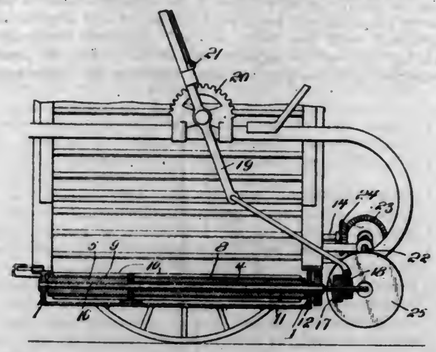
1. In a device for the purpose set forth, a hollow handle providing a paste receptacle, said handle having its closed end provided with an angular port, a spring pressed valve normally closing the port, a brush at the said closed end of the handle, a compressible gasket surrounding the plunger and engaging with the bore of the handle, a clutch member coöperating with the plunger and including a bowed spring plate provided with inturned angular fingers and outturned angular arms which normally contact with the bore of the handle, and a spring pressed stem passing centrally through the plunger and frictionally contacted by the ends of the fingers of the clutch, as and for the purpose set forth.

2. In a device for the purpose set forth, a hollow handle comprising a paste receptacle, said handle having its closed end provided with an inclined port, a brush upon the said closed end of the handle, a spring pressed valve between the said brush and the said end of the handle and normally closing the port at the handle, a plunger in the handle to contact with the paste, a clutch member for the plunger, said clutch comprising a bowed member provided with a central opening and with inturned angular fingers and with outturned angular arms at the juncture of the fingers with the body of the clutch and said arms frictionally engaging with the bore of the handle, a protective member for the clutch, a cap at the open end of the handle, a sleeve over the cap and slidable upon the handle, a stem centrally connected with the sleeve and projecting within the handle through the plunger and frictionally contacted by the fingers of the clutch member, said stem having its inner end provided with a head, a stop lug upon the stem normally contacting with the inner face of the cap, a spring surrounding the stem and disposed to exert a pressure upon the outer face of the cap and the said inner face of the sleeve.

1,212,011. CANVAS PLATFORM FOR BINDERS. WALTER BRUGMANN, Davenport, Iowa. Filed Dec. 4, 1915. Serial No. 65,118. (Cl. 193—4.)

In combination with a grain deck, a sleeve journaled thereon, a roller fixed to the sleeve, a belt section trained around said roller, means for rotating the sleeve at one rate of speed, a disk operatively connected with said rotating means, a shaft journaled in the sleeve, a roller

fixed to the shaft, a belt section trained around the last mentioned roller, and a wheel slidably mounted on the



shaft and constrained to rotate the same and frictionally engaging the disk.

1,212,012. AUTOMATIC LOCKING DEVICE FOR FIREARMS. NICOLAI BULGAKOW, Yurief, Jurjew, Russia. Filed June 30, 1914. Serial No. 848,272. (Cl. 42—70.)



1. In a firearm, the combination of a trigger and its pivoted axis, a pendulous body arranged behind the trigger and coöperative therewith to prevent firing of the weapon by the trigger when the firearm is not in a predetermined vertical position, and a member supported by the pivotal axis of the trigger for pivotal movement and having pivotal connection with the said body.

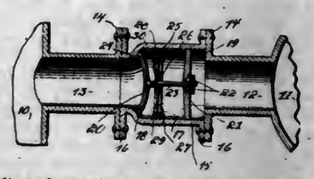
2. In a firearm, the combination of a trigger, and a double hinged pendulous body arranged behind the trigger to prevent pulling of the latter when the firearm is not in a correct vertical position, said body being formed with a knife-like projection, and the trigger having a forked projection with which said first-mentioned projection is engageable to establish coöperation between said parts.

3. In a firearm, the combination of a trigger, and a double hinged pendulous body arranged behind the trigger to prevent pulling of the latter when the firearm is not in a correct vertical position, said body being formed with a knife-like projection, the trigger having a forked projection with which said first-mentioned projection is engageable to establish coöperation between said parts, and means adjustably supporting said knife-like projection.

4. In a firearm, the combination of a pivoted trigger and its axis, and a pendulous body arranged behind the trigger and coöperative therewith to prevent firing of the weapon by the trigger when the firearm is not in a predetermined vertical position, a carrier member mounted on the pivotal axis of the trigger for pivotal movement, said pendulous body being pivotally supported on the carrier member as an axis.

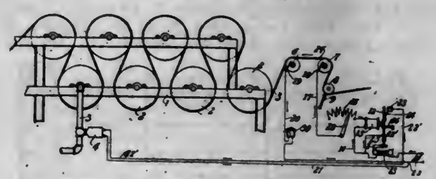
1,212,013. FUEL-MIXER FOR EXPLOSIVE-ENGINES. MIKE THOMAS BURKE, Kalispell, Mont., assignor of one-half to Marguerite Gorham, Butte, Mont. Filed Feb. 6, 1912. Serial No. 675,765. (Cl. 48—180.)

The combination with a gas engine, a carbureter and a pipe arranged to convey a mixture of air and hydrocarbon from the carbureter to the engine, of means for increasing the mechanical output of the engine in response to its quantity of supply of explosive mixture delivered from the carbureter, said means consisting of fixed spaced spider frames mounted transversely within the pipe, a shaft rotatably mounted in said frames, a stationary disk provided with openings and secured within the casing in encircling relation to the shaft, a rotatable disk keyed on



the shaft and provided with openings adapted to pass into and out of registration with the openings in the first named disk during the rotation of the shaft, and wings extending from the edges of the openings of the rotatable disk and disposed at an angle to the latter so as to partially cover the openings in the rotatable disk.

1,212,014. PROCESS AND APPARATUS FOR DRYING. EDWARD P. BUTTS, Springfield, Mass. Filed Sept. 11, 1915. Serial No. 50,164. (Cl. 34—48.)



1. In a paper making machine the combination with the drying drums thereof, a pair of spaced supports for receiving the web of paper means for conducting the web of paper across a pair of spaced supports, the source of electrical energy, connections therefrom to the pair of supports for permitting an electric current to flow through the web of paper between said supports, an electro-magnetically controlled valve to vary the supply of the heating medium to the drying drums, electrical connections for controlling the operation of the valve, means in the connections between the supports and said valve for controlling the flow of current to said valve dependent upon the strength of the current flowing through the web of paper on said supports.

2. In a paper making machine, the combination with the drying drums, spaced supports to receive the web of paper as it leaves a drying drum, a source of electrical energy, connections therefrom to the spaced supports for permitting the electric current to flow through the web of paper between said supports, an electrically controller shut-off device for varying the flow of the heating medium to the drying drums, means for opening and closing the connections to said shut-off, an electro-magnet interposed in the connections from the source of energy to the spaced support for controlling said means, the movements of said controlling means depending upon the variation of moisture in the movable web of paper as it passes through the web of paper from one support to the other, whereby the quantity of heat supplied to the drying drums is automatically varied, as described.

3. In a machine of the kind described, the combination with the heating drums, means to support the web of paper as it passes from a drying drum, a source of electric energy, connections therefrom to said means for causing the current to pass through the web from the support, electro-magnetic means in the connections and controlled by the current therein, an electric valve for controlling the flow of the heating medium to the drums, connections from the valve to the first named connections, the current flowing to the valve for operating the same being dependent upon the conductivity of the web of moving paper,

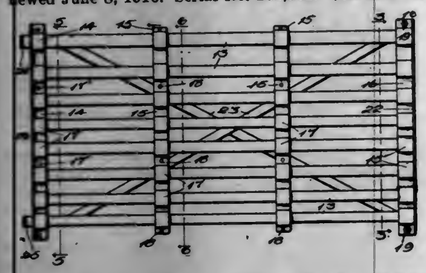
whereby the temperature of the drums may be automatically maintained for determining the moisture or dryness of the web.

4. In a device for controlling the supply of steam to the heating drums of a paper making machine, comprising in combination, supporting devices for receiving the web of paper as it leaves the last drying drum, a source of electric energy, connections from the supporting devices to said source, an electrically operated valve for controlling the supply of steam to the drums, connections from the valve to the source of energy, electro-magnetic devices in the first-named connections for controlling the operation of said valve, the operation of the electro-magnetic devices being dependent upon the electric conductivity of the moving web of paper on the supporting devices.

5. In a machine of the kind described, for automatically maintaining the electric conductivity of a web of paper constant, means to support a definite length of the web, a source of electric energy, connections therefrom to the supports, a movable member, means in the connections for controlling the movements of the member, means to control the supply of heat to the drying drums, connections therefrom and controlled by said member, whereby the conductivity of the web on the supports will control the heat controlling means.

[Claims 6 to 8 not printed in the Gazette.]

1,212,015. FENCE-GATE. JOHN F. CASSMAN, Logansport, Ind. Filed Dec. 4, 1914, Serial No. 875,458. Renewed June 8, 1916. Serial No. 102,601. (Cl. 256—73.)

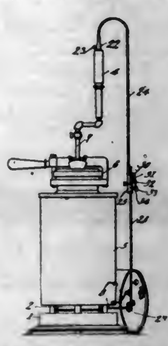


1. A gate, comprising a plurality of flat transverse strips with the end strip having a lateral flange, a corresponding number of supplemental transverse strips bent to provide longitudinal sets of pockets and secured upon corresponding sides of the flat strips, diagonal brace strips secured to the opposite side of the flat strips and extending for substantially the entire length of the gate with corresponding ends contacting with the lateral flange of the end flat strip and their corresponding opposite ends extending beyond the opposite end of the gate and bent into hinge knuckles, and longitudinal bars arranged in the pockets.

2. A gate comprising a plurality of flat transverse strips with the end strip having a lateral flange, a corresponding number of supplemental transverse strips bent to provide outwardly bulging pockets with the pockets of the end supplemental strips closed at their outer ends, means detachably connecting one supplmental end strip to the corresponding end flat strip, means permanently securing the other supplemental strips to the corresponding flat strips, longitudinal bars arranged in the pockets, and diagonal brace strips secured upon the opposite side of the flat strips and extending for substantially the entire length of the gate with corresponding ends contacting with the lateral flange of the end flat strip and their corresponding opposite ends extending beyond the opposite end of the gate and bent into hinge knuckles.

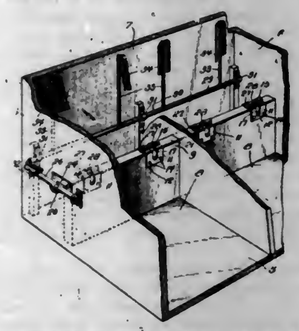
1,212,016. DENTAL-VULCANIZER ATTACHMENT. THEODORE T. CATER, Columbus, Kans. Filed Oct. 13, 1914. Serial No. 866,517. (Cl. 74—47.)

A connection between the lamp of a dental vulcanizer and a pressure controlled element of the vulcanizer, comprising an upper rod having a laterally offset socket; a lower rod longitudinally adjustable in the socket and having vertically spaced notches in its opposite edges; a set screw threaded into one side of the socket and adapted to coöperate with one notch; a lever fulcrumed intermediate its ends on the opposite side of the socket, the lever terminating in an angular pawl engaging the lower rod,



an adapted to coöperate with the other notch, the pawl lying above the upper end of the socket and being freely exposed, thereby to permit a mark to be made on the lower rod in alinement with the pawl whereby to facilitate the location of the notch with which the pawl engages; and spring means coacting with the lever and with the socket to cause the pawl to engage the upper rod.

1,212,017. STOCK-RELEASING DEVICE. ADOLPH CLEMETSON and HARRY G. HOLLOWAY, Howard, S. D. Filed May 9, 1916. Serial No. 96,459. (Cl. 119—115.)



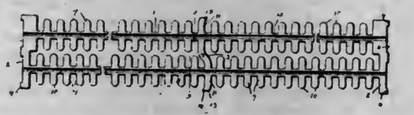
1. In combination with a stable having a manger rail therein formed with a series of sockets, a releasing bar formed with spaced grooved tongues, the tongues of the releasing bar being slidably mounted within the sockets of the manger rail, clips straddling the releasing bar and secured to the manger rail, each clip having a slot, a series of hitching members secured to the releasing bar, and means connected with the releasing bar for moving the hitching members into and out of registration with the slots of the clips substantially as and for the purpose specified.

2. A device of the class described embodying a manger rail formed with a series of sockets, a releasing bar having grooved tongues adapted to extend within the sockets of the manger rail for opposite sliding movements, a clip having a slot disposed over the sockets formed in the manger rail and provided with spaced guide grooves, a series of hitching members secured to the releasing bar and disposed over the grooved tongues, means connected with the releasing bar for moving the hitching members in obstructing and non-obstructing relation with respect to the slots of the clips.

3. A device of the class described embodying a manger rail formed with a series of sockets, a releasing bar having grooved tongues adapted to extend within the sockets of the manger rail for opposite sliding movements, a clip having a slot disposed over the sockets formed in the manger rail and provided with spaced guide grooves, a series of hitching members secured to the releasing bar and disposed over the grooved tongues, means connected with the releasing bar for moving the hitching members in obstructing and non-obstructing relation with respect to the slots of the clips, and manually operable means disposed in advance of the manger rail for driving the stock from the stable.

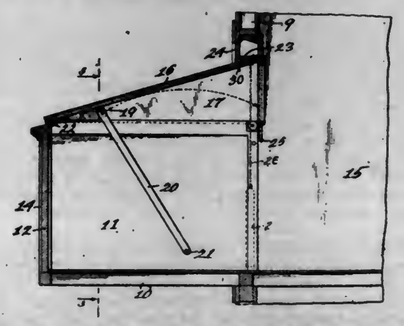
4. In a device of the class described, a stationary member formed with a series of sockets, a bar having grooved tongues reposed upon the fixed member with the tongues thereof disposed within the sockets of said member, a series of pins connected with the bar and arranged in longitudinal alinement one to the other, and a slotted clip having a groove for slidably receiving the pin, means for imparting movement to said bar in opposite directions, said pins upon the movement of the bar in one direction adapted to close the slot of the clip substantially as and for the purpose specified.

1,212,018. GRATE-BAR FOR MARINE AND STATIONARY BOILERS. WILLIAM C. CODD, Baltimore, Md. Filed May 3, 1916. Serial No. 95,218. (Cl. 126—167.)



A grate bar of the class described including spaced parallel bars or body portions provided at intervals with laterally projecting lugs arranged in staggered relation and having rounded top and outer end faces and tapered downwardly to a relatively sharp lower edge and a transverse connecting portion formed integral with the bars or body portions and consisting of straight end sections arranged in different transverse planes and connected by a diagonally disposed central portion, said end sections having reversely extending diagonally disposed outer terminals projecting beyond the lugs and having flat end faces.

1,212,019. SLEEPING-BALCONY. HERBERT MILTON COE, San Jose, Cal., assignor of one-half to George W. Dobson, San Jose, Cal. Filed Nov. 9, 1915. Serial No. 60,525. (Cl. 20—1.11.)



1. The combination with a balcony opening directly to the interior of a building, of an inclined roof for said balcony provided with triangular side plates grooved in their lower edges to receive the end walls of said balcony, and means for guiding said roof from said balcony into a position separating said balcony and interior.

2. The combination with a balcony opening directly to the interior of a building, of a roof for said balcony and separable therefrom, said roof being adapted to be moved to separate said balcony and interior, a bar pivoted to each end of said balcony and to each end of said roof for guiding said roof in its movement, and a counterweight for said roof when in said last named position.

3. The combination with a balcony opening directly to the interior of a building, of an inclined roof for said balcony provided with triangular plates rigidly secured to said roof, said plates resting on the end walls of said balcony, the under edges of said plates forming tracks on which said roof is carried from said balcony into a position separating said balcony and interior.

4. The combination with a balcony opening directly to the interior of a building, of a roof for said balcony and separable therefrom provided with plates secured to said roof, and rollers carried by the inner upper corners of the end walls of said balcony for anti-frictionally supporting said roof plates in the roof movement from said balcony to said interior.

5. The combination with a balcony opening directly to the interior of a building, of a roof for said building and separable therefrom, two bars placed one at each end of said balcony and pivoted at the lower ends to the respective end walls of said balcony and at their upper ends to the respective ends of said roof, and a truss rod rigidly connected with the said bars to insure complemental movement thereof in the roof movement out of and into balcony protecting position.

1,212,020. ATTACHMENT FOR PENS. ISAAC CONTANT, Jr., Lodi, N. J. Filed June 3, 1916. Serial No. 101,569. (Cl. 120—42.)

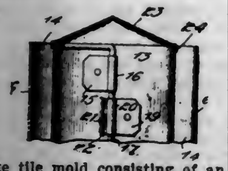


1. A device of the class described comprising a body having a chamber therein and tapered slots forming an outlet opening from said chamber, said slots each having a beveled wall forming a tearing edge, a spool mounted to turn in said chamber and having a bore to receive the end of a writing instrument, a paper roll carried by said spool and having an end arranged to extend through said opening below said tearing edge, means for imparting turning movement to the spool connected therewith and with the body, and a spring band connected with the body and contacting with the paper roll.

2. A device of the class described comprising a body for connection with the end of a writing instrument and having a chamber therein and tapered slots forming an outlet opening from said chamber, said slots having beveled side walls, a spool arranged in the chamber, a paper roll carried by the spool, means for turning the spool and the paper roll, a spring band connected with the peripheral wall of said chamber, and an offset portion in said band forming arms for contact with said roll.

3. A device of the class described comprising a body for connection with end of a writing instrument and provided with a chamber having an outlet opening and a groove and a slot arranged at diametrically opposite points in the peripheral wall of said chamber, a spool mounted to turn in said chamber, a paper roll carried by the spool, means for imparting turning movement to the spool and roll, a spring band, a stud on said band received in said groove, and an offset portion in said band received in said slot, said offset portion forming arms arranged interiorly and exteriorly of said chamber for contact with the paper roll.

1,212,021. CONCRETE-TILE FORM. GUY G. CRESS, Benedict, Kans. Filed Sept. 2, 1915. Serial No. 48,627. (Cl. 25—127.)

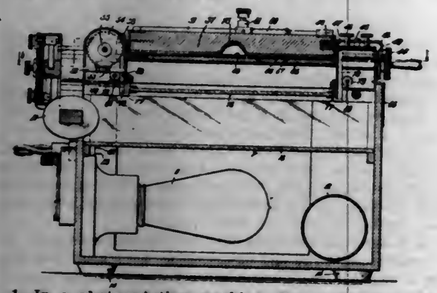


1. A concrete tile mold consisting of an exterior shell and a collapsible core comprising a sheet of metal bent to cylindrical shape, means adjacent the edges of said sheet for locking the same in operative position, and means comprising inwardly projecting tongues carried by the opposite edge of the sheet adapted to abut and slide past said locking means for lessening the diameter of the core to collapse the same.

2. A concrete tile mold consisting of an exterior shell and a collapsible core comprising a sheet of metal bent to cylindrical shape, means adjacent the edges of said sheet for locking the same in operative position, and means comprising inwardly projecting abutments having an inclined face and carried by the opposite edge of the sheet adapted to abut and slide past said locking means for lessening the diameter of the core to collapse the same.

3. A concrete tile mold including an expansible resilient shell and a contractile core, said core consisting of a sheet of resilient material bent to cylindrical shape and having along one edge bent tongues projecting inwardly, and perforated ears above and below said tongues, perforated ears disposed on the inner surface of the opposite end of the sheet and set back from its edge, said ears being adapted to be brought into vertical alinement with the opposite ears to receive a rod to lock the core in expanded condition, certain of said tongues being adapted to engage and slide past the abutting ears to materially lessen the diameter of the core and contract the same for removal from the inside of the tile.

1,212,022. PHOTOPRINTING-MACHINE. GEORGE CROSTON, Hoquiam, Wash. Filed Mar. 30, 1916. Serial No. 87,733. (Cl. 95—73.)



1. In a photo-printing machine, the combination of a casing, a source of light within the casing, a tiltable hinged lid for the casing, means tending to lift and tilt the lid to open the casing, means holding the lid closed and causing the light to glow, a timing block carried by the lid and movable lengthwise thereof, and means to cause the movement of the timing block according to a predetermined time for printing, such movement of the timing block automatically releasing the means holding the lid closed, thereby permitting the lid to open automatically and extinguish the light.

2. In a photo-printing machine, the combination of a casing including a lid tiltable upwardly around a horizontal axis, means to hold the lid closed for the printing operation, a guide rod carried by the lid and extending longitudinally thereof with the axis of the rod perpendicular to the axis of the lid hinge, a timing block movable longitudinally along the guide rod according to a predetermined time for printing, and means acting upon the timing block to move it positively in one direction to automatically release the lid-holding means, thereby allowing the lid to tilt upwardly and permit the timing block to move by gravity along the guide rod in the opposite direction.

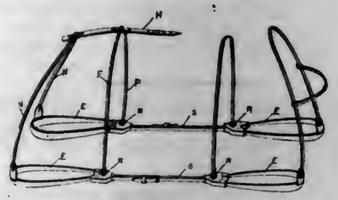
3. In a photo-printing machine, the combination of a casing including a lid tiltable to open position around a horizontal axis, means acting upon the lid tending to tilt it to open position, catch means to hold the lid closed, a member movable longitudinally of the lid at right angles to the axis of the lid hinge, and power means acting upon said member to cause it to move positively against the catch means to release the same to permit the lid to open automatically, said member being movable automatically by gravity to normal position when the lid is open.

4. In a photo-printing machine, the combination of a casing, a source of light within the casing, a lid for the casing tiltable to open position around a horizontal axis, catch means to hold the lid closed and cause the light to glow, means tending to open the lid and stop the action of the light, a guide rod connected to the lid with its axis perpendicular to the axis of the lid hinge, a runner slidable upon the rod, but non-rotary thereon, and means acting upon the runner to positively move it along the rod when the lid is closed until it engages and releases the catch means permitting the lid to open, said runner when the lid tilts to open position being slidable by gravity along said rod to its original position.

5. In a photo-printing machine, the combination of a casing, a source of light within the casing, a movable lid for the casing, light diffusing means between the source of light and the lid, a portion of said diffusing means consisting of a plate below and parallel to the lid, means acting upon said plate to adjust the same bodily toward or from the lid, negative and printing elements being adapted to be held between the light diffusing means and the lid, and means tending to open the lid and automatically interrupt the source of light and the printing operation.

[Claims 6 to 14 not printed in the Gazette.]

1,212,023. HOPPLE. PATRICK CURLEY, Goshen, N. Y. Filed Nov. 4, 1916. Serial No. 129,565. (Cl. 54—71.)

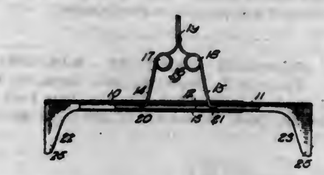


1. A hopple comprising casings, pulleys journaled therein, hopple straps movable through said casings and about said pulleys, and back straps secured to the casings, the casings being provided with ends which are concaved to receive the legs of an animal.

2. A hopple comprising two sets of casings, pulleys journaled one in each casing, each casing having openings at one end, hopple straps movable through said openings and passing about said pulleys, eyes upon the casings, back straps secured to said eyes, and adjustable strap connections between the casings of each set.

1,212,024. GARMENT HANGER AND STRETCHER. CHARLES J. DAHLGREN, East Orange, N. J. Filed Oct. 6, 1915. Serial No. 54,377. (Cl. 223—19.)

1. A garment hanger and stretcher, comprising arms slidable one on the other and provided with slots, the said arms having their outer ends provided with integral depending stretching and holding members of inverted U-shape in cross-section, adapted to pass into the trousers legs at the creases thereof and a spring having arms detachably engaging said slots in the slidable arms, and bearing on the said arms, to cause the depending members to exert an outward pressure against the inside of the creases of the trousers legs thus supporting the trousers and holding the leg ends stretched from the front to the rear creases.



2. A garment hanger and stretcher comprising tubular arms slidable one on the other and having their outer ends provided with integral depending stretching and holding members adapted to pass into the trousers legs at the creases thereof, and a spring having its free ends extending through slots in the tubular arms and engaging the said arms to press the same outwardly to cause the said stretching and holding members to exert an outward pressure against the inside of the creases of the trousers legs thus supporting the trousers and holding the leg ends stretched from the front to the rear creases.

3. A garment hanger and stretcher, comprising arms slidable one on the other and having their outer ends provided with integral depending stretching and holding members adapted to pass into the trousers legs at the creases thereof, and a spring having side arms detachably engaging the said slidable arms and pressing the same outwardly to cause the said stretching and holding members to exert an outward pressure against the inside of the creases of the trousers legs thus supporting the trousers and holding the leg ends stretched from the front to the rear creases, the side arms of said spring each having a coil at its upper end, the ends of the coils extending upward and inward and forming a suspension hook for suspending the hanger from a suitable support.

4. A garment hanger and stretcher, comprising tubular arms telescoping one on the other and provided at the top with registering slots, the outer ends of the arms terminating in integral depending stretching and holding members of inverted U shape in cross section and adapted to pass into both trousers legs at the creases thereof, a spring having its free ends extending through the said registering arm slots to exert pressure against the opposite end walls of the slots to move the arms outward and to cause the said stretching and holding members to exert an outward pressure, the said spring being provided with a suspension hook for suspending the hanger from a suitable support.

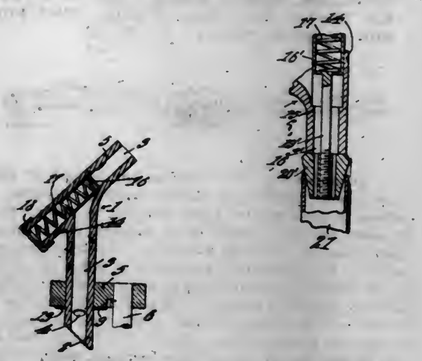
5. A garment hanger and stretcher, comprising tubular arms telescoping one on the other and provided at the top with registering slots, the outer ends of the arms terminating in integral depending stretching and holding members of inverted U shape in cross section and adapted to pass into both trousers legs at the creases thereof, the outer edges of the said stretching and holding members being serrated, a spring having its free ends extending through the said registering arm slots to exert pressure against the opposite end walls of the slots, to move the arms outward and to cause the said stretching and holding members to exert an outward pressure, the said spring being provided with a suspension hook for suspending the hanger from a suitable support.

[Claim 6 not printed in the Gazette.]

1,212,025. SAFETY-SPOUT FOR POWDER-KEGS. HARRISON H. DAVIS, The Plains, Ohio. Filed Nov. 27, 1915. Serial No. 63,846. (Cl. 221—23.)

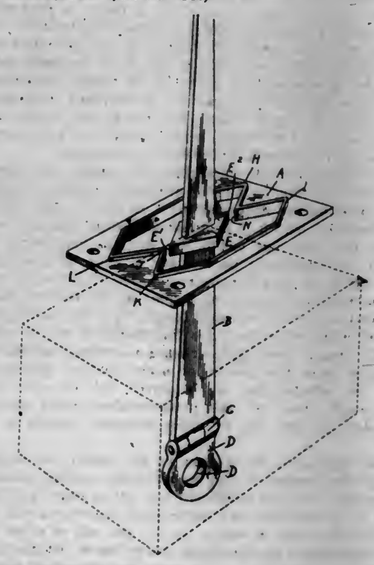
1. In a device of the character described, a spout having an entering end, a jaw attached to said spout and having a rim engaging groove, a tie rod having one end attached to said jaw, a second jaw slidable upon the other end of said rod and having a rim engaging groove, and a nut threaded upon the last mentioned end of the rod for moving the second jaw toward the first mentioned one for clamping a receptacle therebetween.

2. In a device of the character described, a spout having an entering end, a jaw carried by said spout and having a rim engaging groove, a second jaw having a rim engaging groove, a tie rod attached to one of said jaws and slidable through the other, and means carried by said rod to engage the jaw through which the rod is slidable for forcing said jaws toward one another to engage said grooves of the jaws with the end rims of a keg.



3. In a device of the character described, a spout having portions arranged at an angle with one another, one portion extending to opposite sides of the other, the first mentioned portion having a valve seat ahead of the second mentioned portion, a spring pressed valve slidable within the first mentioned portion to seat against said seat and to extend across the second mentioned portion when seated, a pin carried by the valve and projecting from the spout, and an apertured member carried by said pin to fit a cartridge shell or vessel and to abut against the end of the spout when the valve is unseated by said pin.

1,212,026. GEAR-SHIFTING APPARATUS. HARVEY R. DE BRA, Cameron, Mo. Filed May 28, 1916. Serial No. 99,366. (Cl. 74—39.)



A gear shifting apparatus consisting of a shifting lever having a universal movement, a diamond-shaped plate

mounted thereon, a stationary plate having an opening therein with V-shaped recesses in the ends thereof into which the diamond-shaped plate is adapted to be guided by the walls of the recesses as the lever is swung to different positions.

1,212,027. WEIGHING APPARATUS. JAMES DOBSON, Birmingham, England, assignor to Henry Pooley and Son, Limited, Birmingham, England. Filed July 12, 1916. Serial No. 108,924. (Cl. 73—3.)



1. An apparatus for obtaining the weight of railway rails, beams, girders or similar sectional lengths, comprising in combination means adapted to receive the rail or other sectional length to be weighed, means pivotally supporting the receiving means for initially balancing the rail and its appendant parts about a point in proximity to its center of gravity, means adapted to pivotally support the receiving means for displacing the fulcrum point of the rail or other sectional length from the said point to another predetermined point in its length, and means for rebalancing the rail or other sectional length about the said predetermined point whereby the weight of the rail or other sectional length is obtained.

2. An apparatus for obtaining the weight of railway rails, girders, beams or similar sectional lengths, comprising a cradle or stirrup adapted to receive the rail or other sectional length to be weighed, two knife-edged centers on the said cradle about either of which the rail or other sectional length and its appendant parts can be balanced, and means for balancing the said rail or other sectional length and its appendant parts about either of the said centers.

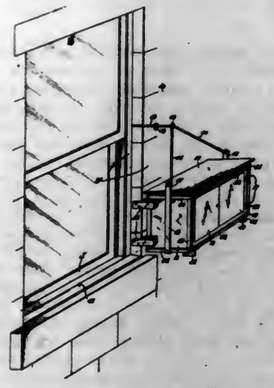
3. An apparatus for obtaining the weight of railway rails, girders, beams or similar sectional lengths, comprising in combination means adapted to receive the rail or other sectional length to be weighed, means pivotally supporting the receiving means for initially balancing the rail and its appendant parts about a point in proximity to its center of gravity, means adapted to pivotally support the receiving means for displacing the fulcrum point of the rail or other sectional length from the said point to another predetermined point in its length, adjustable means for adapting the apparatus to different sections of rail or other sectional length, and means for rebalancing the rail or other sectional length about the said predetermined point whereby the weight is obtained.

4. An apparatus for obtaining the weight of railway rails, girders, beams or similar sectional lengths, comprising in combination means adapted to receive the rail or other sectional length to be weighed, means pivotally supporting the receiving means for initially balancing the rail and its appendant parts about a point in proximity to its center of gravity, means adapted to pivotally support the receiving means for displacing the fulcrum point of the rail or other sectional length from the said point, a second point of support for the displaced rail or other sectional length, leveling means for accurately setting the apparatus upon the ground or other surface, adjustable means for rebalancing the displaced rail or other sectional length about the said predetermined point whereby the weight of the rail or other sectional length is obtained.

5. An apparatus for obtaining the weight of railway rails, girders, beams or similar sectional lengths, comprising a cradle adapted to receive the rail or other sectional length to be weighed, two knife-edged centers on the said cradle about either of which centers the rail or other sectional length and its appendant parts can be alternatively balanced, a graduated scale removably connected to said cradle, means for balancing the said rail or other sectional length and its appendant parts about either of the said centers, said means embodying a poise weight adapted to be traversed along the said scale to indicate the weight of the rail or other sectional length.

[Claims 6 and 7 not printed in the Gazette.]

1,212,028. SWINGING SANITARY WINDOW-CUPBOARD. FRANCIS J. DOWLING, New York, N. Y., assignor of one-half to Daniel P. Conway, New York, N. Y. Filed Mar. 29, 1916. Serial No. 87,469. (Cl. 45—104.)



1. In a storage receptacle of the character set forth, the combination of a cupboard proper, hinge connections for one end thereof for securing it in position adjacent one side of a window to swing around a vertical axis against the wall or in the opposite direction so as to project well within the window opening, an automatically operated hook carried by the cupboard and coöperating with the wall to hold the cupboard in normal position remote from the window, a pivoted pull piece connected to the hook to release the same from holding position and providing means for swinging the cupboard into the window, and means to hold the cupboard in the position last mentioned.

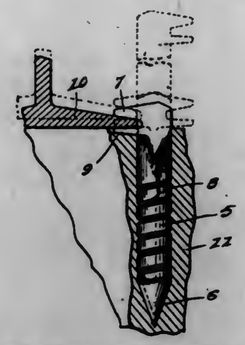
2. In combination, a storage receptacle, a pair of hinges connecting one end of the receptacle to the edge of the wall adjacent the window opening providing for swinging of the cupboard around a vertical axis either adjacent the wall at one side of the window or well within the window opening, automatic means to hold the cupboard in either of said positions, and auxiliary hanger means coöperating with said hinges to relieve the hinges from lateral and side tilting strains, said hanger means including a fixed bracket having an eye above and in alinement with the axes of the hinges, an angle member connected at the one end to one end of the cupboard and having a hook at its other end pivoted in said eye, the angle of the member being directly above the center of the opposite end of the cupboard, and a link connected to the latter mentioned end of the cupboard and extending directly up into engagement with the angle of the angle member.

3. The combination of a cupboard, a pair of hinges connecting one end of the cupboard to the edge of the wall adjacent the window opening and providing for the swinging of the cupboard around against the wall or into the window, overhead hanger means including an angle member and a link connected to the angle of the angle member in the vertical longitudinal central plane of the cupboard and a hinge member to which the angle member is pivoted on an axis coinciding with the axis of the hinges and at one side of said plane, and means to hold the cupboard in either position to which it may be swung around said axis.

4. In a device of the character set forth, the combination of a cage comprising a plurality of vertical corner angle members, front and rear longitudinal bottom edge angle members, all of said angle members having their

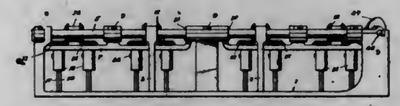
open sides directed inwardly, a U-shaped reinforcing bar coöperating with the aforesaid angle members midway between the front and the rear of the cage, a box-like structure fitted into the cage within the open sides of the angle members aforesaid, suspension means for the box connected to the upper ends of said bar, and catch devices connected to the cage and serving to hold the same in open or closed position.

1,212,029. SPIKE. JAMES DVORACEK, Jr., Maynard, Ohio. Filed Oct. 17, 1914. Serial No. 867,159. (Cl. 85—41.)



A railway spike including a cylindrical shank having one end pointed and a spiral groove extending from end to end thereof, a head carried by the opposite end of said shank, a lug formed integral with said body and arranged in spaced relation and inwardly of said head, and a straight surface connecting said head with said lug adapted to engage the edge of the base of a rail to prevent rotary movement of the spike shank.

1,212,030. VALVE-GRINDING MECHANISM. LOUIS DUQUESNOY, Hiawatha, Utah. Filed Apr. 17, 1916. Serial No. 91,688. (Cl. 51—4.)



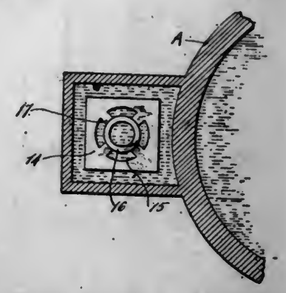
1. An engine valve grinder comprising a base secured to the engine, a frame having a swinging connection with said base, a shaft rotatably mounted in said frame, a set of gears mounted on said shaft, a second set of gears engaging said first gears and rotatably mounted in said frame, and means supported by said second set of gears for engaging the valve head.

2. An engine valve grinder comprising a base secured to the engine, a frame having a swinging connection with said base, a shaft rotatably mounted in said frame, a set of gears mounted on said shaft, a second set of gears engaging said first gears and rotatably mounted in said frame, and means detachably supported by said second set of gears for engaging the valve head.

3. An engine valve grinder comprising a base secured to the engine, a frame having a swinging connection with said base, a shaft rotatably mounted in said frame, a set of gears mounted on said shaft, a second set of gears engaging the said first gears and rotatably mounted in said frame, and means having an adjustable detachable connection with said second set of gears and arranged to engage the valve head.

4. An engine valve grinder comprising a base, a frame having a swinging connection with said base, a shaft mounted for rotation in said frame, a gear on said shaft, a second gear rotatably mounted in said frame and having engagement with said first gear, pivoted valve engaging members carried by said second gear and a single element working between the members for giving adjustment thereto.

1,212,031. MEANS FOR EXCLUDING STONES IN GLASS-DRAWING. JOSEPH DURIEUX, Mount Vernon, Ohio. Filed Mar. 21, 1913. Serial No. 756,047. (Cl. 49—61.)



1. An article of the character described, consisting of a body portion having an opening therethrough and a tubular member disposed in the opening in spaced relation to the wall thereof and connected with the body, one end face of the tubular member lying in a plane beyond the corresponding face of the body.

2. An article of the character described, consisting of a body portion having an opening therethrough, a tubular member disposed in the opening in spaced relation to the wall thereof and connected with the body, one end face of the tubular member lying in a plane beyond the corresponding face of the body and the other end face of the tubular member lying in the same plane with the face of the body corresponding thereto.

3. An article of the character described, consisting of a flat body portion having a central circular opening, a ring disposed in said opening concentric with the latter and in spaced relation to its wall and arms connecting the ring and body portion, said ring having one end face in the same plane with the corresponding face of the body and its other end face in a plane beyond that face of the body corresponding thereto.

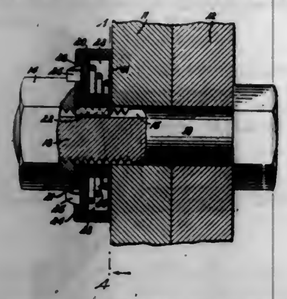
1,212,032. DISH-MOP. CHARLES B. ELMORE, Hartford, Conn., assignor to J. M. Sherwood Manufacturing Corporation, New York, N. Y., a Corporation of New York. Filed Dec. 27, 1915. Serial No. 68,904. (Cl. 15—57.)



1. A mop head composed of cordage whose strands are made up of twisted cords wound with metal strips.

2. A mop head composed of strands, each made up of a plurality of cords twisted about each other, and a copper strip wound about the strand.

1,212,033. AUTOMATIC LOCKING DEVICE. OTIS FRAZER ENSIGN and ALBIN JOHN THUNEMAN, Defiance, Ohio. Filed Sept. 19, 1916. Serial No. 120,953. (Cl. 151—2.)



1. An automatic locking device for locking nuts on bolts, comprising a washer having a central opening for the passage of a bolt and having a series of apertures arranged in a circle, the center of which coincides with the center of the said opening, the said washer having at its back an annular recess into which open the said apertures, and a locking ring yieldingly mounted in the said recess and having teeth extending through the said apertures and projecting on the face of the washer to engage the sides of a nut screwed on the said bolt.

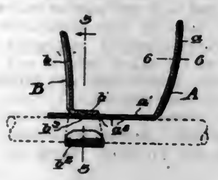
2. An automatic locking device for locking nuts on bolts, comprising a washer having a central opening for the passage of a bolt and having a series of apertures arranged in a circle, the center of which coincides with the center of the said opening, the said washer having at its back an annular recess into which open the said apertures, a locking ring loose in the said recess and provided with ratchet teeth projecting through the said apertures and adapted to engage the sides of a nut screwing on the bolt, a coil spring in the said recess and bearing with one end against the back of the said locking ring, and means on the back of the washer for the other end of the spring to rest on.

3. In a nut lock, the combination of a bolt having a groove, a nut screwing on the bolt, a washer engaging the bolt in the rear of the nut and having a key fitting the said groove to hold the washer from turning on the bolt, the said washer having an annular recess in its back and having in its face a series of apertures leading to the said recess, the said apertures being arranged in a circle, a locking ring in the said recess and having ratchet teeth extending through the said apertures and engaging the sides of the said nut, and a spring held in the said recess and engaging the said locking ring.

4. In a nut lock, the combination of a bolt having a groove, a nut screwing on the bolt, a washer engaging the bolt in the rear of the nut and having a key fitting the said groove to hold the washer from turning on the bolt, the said washer having an annular recess in its back and having in its face a series of apertures leading to the said recess, the said apertures being arranged in a circle, a locking ring in the said recess and having ratchet teeth extending through the said apertures and engaging the sides of the said nut, a spring held in the said recess and engaging the said locking ring, and a second washer seated in the back of the first-named washer and against which rests the rear end of the said opening.

1,212,034. PENCIL-HOLDER. JOSEPH A. EUBANKS, Greenfield, Ohio. Filed Jan. 4, 1915. Serial No. 495. (Cl. 120—106.)

1. A device of the character described comprising a pair of arms having shanks of unequal length extending at an angle thereto, one shank being mounted upon the other and having a spring clasp extending therefrom adapted to embrace the other shank and a pencil or pen holder and secure said parts together, the longer shank having a series of perforations therein, and a lug or protuberance on the shorter shank adapted to engage said perforations for adjusting and securing the two arms at different distances apart.



2. A device of the character described consisting of a resilient arm having a shank extending therefrom at an angle thereto and provided with a series of apertures therein, a second arm having a short shank resting upon the shank of the other arm and provided with a lug or protuberance adapted to engage said perforations, the latter arm having a spring clasp extending from its shank adapted to embrace the shank of said resilient arm and a pen holder or pencil and secure the same and the two arms together.

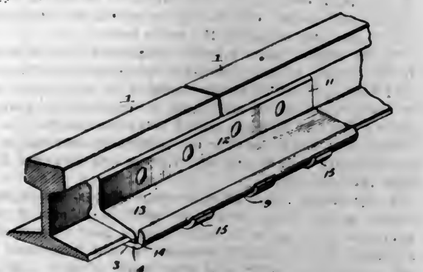
3. A device of the character described comprising a pair of arms having shanks of unequal length extending at an angle thereto, one arm being adapted to set within the palm of the hand while the other arm clasps the back of the hand, each arm having a marginal bead to protect the hand from injury by contact with a sharp edge; said shanks being adjustably mounted one upon the other and one of them having a spring clasp thereon adapted to embrace the other shank and a pencil or pen holder and secure both arms thereto, together with means whereby the two arms may be adjusted and secured at different distances apart.

4. A device of the character described comprising an arm having a shank extending at an angle thereto and a spring clasp integral therewith adapted to embrace a pencil and secure said arm thereon, a second arm having a shank extending at an angle thereto and perforated, the shank of the first-mentioned arm resting on said perforated shank and having a projection engaging a perforation therein, whereby said clasp serves to secure the two arms together and to the pencil with provision for moving both arms along the pencil and securing them at any desired point.

5. A device of the character described comprising two members, one having an arm adapted to set within the palm of the hand and the other an arm for clasping the back of the hand, one of said members being provided with a shank having a series of apertures therein and the other provided with a protuberance adapted to engage the apertures in said shank for holding the two arms in a relatively fixed position with provision for adjustment; and means for attaching the device to a pencil and holding said arms in said relatively fixed position.

[Claim 6 not printed in the Gazette.]

1,212,035. JOINT-CHAIR. DAVID H. EVANS, Milbank, S. D. Filed Mar. 9, 1915. Serial No. 13,221. (Cl. 239—6.)



In combination with the meeting ends of two rail sections, plates secured within the fishing spaces of the said rails, angular flanges formed on each of said plates and engaging the top face of the base flanges of said rails, a chair formed on the edge of one of said flanges and extending to the opposite edge of said face, an inwardly rolled longitudinal edge formed upon the chair, the said chair being provided at intervals with openings adjacent said rolled edge, a series of hook shaped lips formed upon the flange of the opposite plate for engagement with the said openings, the said lips contacting with the outer surface of the inwardly rolled flange when the plates are in position.

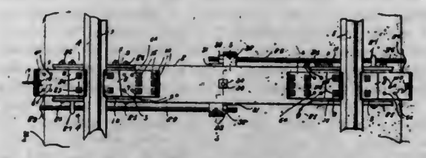
1,212,036. SPRING-TIRE. SAMUEL L. FILSON, Kansas City, Mo. Filed June 9, 1916. Serial No. 102,745. (Cl. 152—8.)



1. In a spring tire, a band, tubular segments, each having a groove on the inner side to receive the band and a spring in each tubular segment, having its outer end attached to the outer side of the segment and its inner end inserted in registering openings in the segment and band and thereby detachably securing the band and segment together.

2. In a spring tire, a band, tubular segments, each having a groove on the inner side to receive the band and a spring in each tubular segment, having its outer end attached to the outer side of the segment and its inner end inserted in registering openings in the segment and band and thereby detachably securing the band and segment together, the said segment being open on the inner side, and having overlapping ends provided with openings through which the inner end of the spring extends.

1,212,037. METALLIC RAIL-TIE. IRA S. FISHER, Molino, Mo. Filed July 28, 1916. Serial No. 111,890. (Cl. 238—5.)



1. In a railway roadbed construction, the combination with a concrete ballast, of a tie mounted on the ballast, rods located at the opposite sides of the ballast and each having one end embedded therein, and its opposite end projecting beyond the ballast, second and vertically disposed rods located at the opposite sides of the ballast and having their lower ends provided with eyes for receiving the outer ends of the first-mentioned rods, and means associated with the opposite ends of the tie body for engaging the upper ends of the second-mentioned rods.

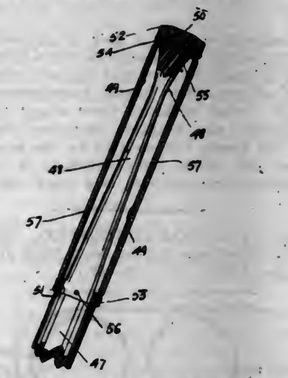
2. In a railway roadbed construction, the combination with a ballast having upwardly extending rods having the upper ends thereof provided with eyes, a rail tie mounted on the ballast, plates carried by the opposite ends of the tie and each having one end projecting beyond the adjacent end of the tie, and hooks depending from the projecting ends of the plates for engaging in the eyes in the upper ends of the rods.

3. In a railway roadbed construction, the combination with a ballast, and a rail tie mounted on the ballast, of rods adjustably associated with the tie, and depending heads carried by the rods and operatively engaging the ballast, for the purpose specified.

4. In a railway roadbed construction, a ballast, a rail tie mounted on the ballast, rods positioned on opposite sides of the tie and adjustable thereon, means carried by the rods for engaging the ballast, plates carried by the tie, and apertured heads carried by the plates and located at the opposite sides of the tie and receiving the rods, and means adjustable on the rods and against the apertured heads for the purpose specified.

5. In railway roadbed construction, the combination with a ballast, and a tie mounted on the ballast, upwardly extending rods located at the opposite sides of the ballast, means for connecting the lower ends of the rods to the ballast, plates carried by the tie, and means for connecting the upper ends of the upwardly extending rods to the tie plates.

1,212,038. HANDLE OR GRIPPING-SURFACE. AMERIC EDWIN FLAXMAN, Pittenweem, Scotland. Filed Nov. 11, 1915. Serial No. 60,937. (Cl. 46—9.)



1. A golf club handle consisting of a sleeve surrounding the handle proper and in spaced relation therefrom except at the extreme ends where the sleeve and handle proper are immovably secured together, substantially as and for the purposes hereinbefore described.

2. A golf club handle having a metal gripping tube positioned upon the handle proper and having a space between the shaft proper and the tube, substantially as and for the purposes hereinbefore described.

3. A handle having the usual shaft proper made with a portion thereof tapered and weakened and surrounded by a rigid tubular member within which it is free to vibrate.

4. A handle having an inner member, an outer inclosing member, an annular space between the members to permit of vibration of the inner within the outer member, and an outer covering upon the said inclosing member.

1,212,039. ROLLING-PIN. ELIZABETH IDA FLETCHER, Norwich, Conn. Filed Mar. 13, 1916. Serial No. 83,853. (Cl. 107—50.)

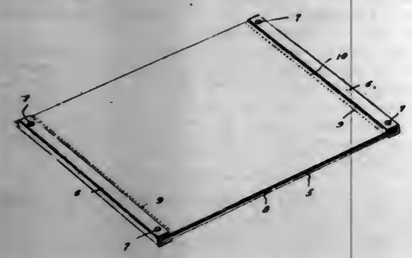


1. A rolling pin, including a hollow cylinder, a roll of impervious paper perforated to provide a plurality of

sheets covering the cylinder, and two handle carried clamps for the ends of the cylinder to hold the roll in place.

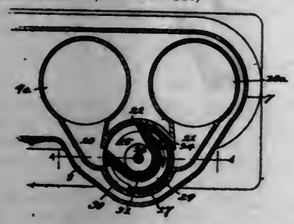
2. A sanitary rolling pin comprising a cylindrical body, a removable piece by piece impervious covering for the body, and means for clamping the cover to the body at the ends thereof.

1,212,040. DOUGH-BOARD. ELIZABETH IDA FLETCHER, Norwich, Conn. Filed Mar. 13, 1916. Serial No. 83,854. (Cl. 107—46.)



The combination with a pair of channeled members constituting cleats, of a board having a plurality of perforations arranged in rows near opposite edges thereof, a plurality of impervious sheets superimposed upon the board and having weakened lines spaced from opposite edges thereof, and bendable fastening devices passed through the sheets and engaged in the openings in the board and also within the channels in the cleats which are detachably engaged with said sheets and board.

1,212,041. INTERNAL-COMBUSTION ENGINE. ALBERT H. FORSYTHE, Joplin, Mo. Filed Jan. 20, 1915. Serial No. 3,262. (Cl. 123—59.)



An internal combustion engine, comprising a casing provided with a plurality of cylinders arranged in pairs, a valve chamber for each pair of cylinders, a fuel intake, and a fuel exhaust, a conical valve in each chamber provided with ports and passages for alternately placing said fuel intake and fuel exhaust in communication with the respective cylinders, said valve being provided with a peripheral groove and a port adapted to place the same in communication with the respective cylinders alternately, and a pipe communication with said groove and adapted for connection with a compressed air reservoir.

1,212,042. AUTOMATIC CONTROL DEVICE. CHARLES L. FORTIER, Milwaukee, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Aug. 4, 1915. Serial No. 43,661. (Cl. 236—8.)

1. In a control device of the pressure motor type, the combination with the pressure motor and the controlling element actuated thereby, of a quick throw device forming the operative connection between the motor and the controlling element and comprising a member movable by said motor; a pair of rollers carried by said member and movable therein toward and from each other in a direction transverse to the movement of said member; resilient means urging said rollers together; and a head having an enlarged middle portion, connected with said controlling element and embraced by said rollers.



2. In a control device of the pressure motor type, the combination with the pressure motor and the controlling element actuated thereby, of a quick throw device forming the operative connection between the motor and the controlling element and comprising a member movable by said motor; a pair of rollers carried by said member and movable therein toward and from each other in a direction transverse to the movement of said member; resilient means urging said rollers together; and a head connected with said controlling element, said head being embraced by said rollers and having one side formed with a convex curvature and the other with two intersecting substantially plane surfaces.

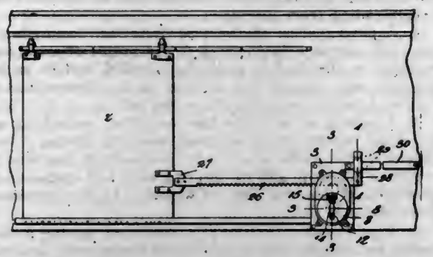
3. In a control device of the pressure motor type, the combination with the pressure motor and the controlling element actuated thereby of a quick throw device forming the operative connection between the motor and the controlling element and comprising a member movable by said motor; a yoke mounted in said member to have a slight swinging movement in the direction of movement of said member; a pair of rollers mounted in said yoke and movable toward and from each other; resilient means for urging said rollers toward each other; and a head connected with said controlling element, embraced by said rollers and having an enlarged middle portion.

4. In a control device of the pressure motor type, the combination with the pressure motor and the controlling element actuated thereby of a quick throw device forming the operative connection between the motor and the controlling element and comprising a member movable by said motor; a yoke mounted in said member to have a slight swinging movement in the direction of movement of said member; a pair of rollers mounted in said yoke and movable toward and from each other; resilient means for urging said rollers toward each other; and a head connected with said controlling element, embraced by said rollers, and having a convex curvature on the side toward the fulcrum of said yoke and an angular ridge on the opposite side.

5. In a control device of the pressure motor type, the combination with the pressure motor and the controlling element actuated thereby of a quick throw device forming the operative connection between the motor and the controlling element and comprising a member movable by said motor and having a pair of spaced retaining members; a yoke held between said members, confined at one end but free to swing slightly at the opposite end in the general direction of movement of said member; a pair of rollers mounted in said yoke and movable therein toward and from each other; resilient means for urging said rollers toward each other; and a head connected with said controlling element, embraced by said rollers and having an enlarged middle portion.

[Claim 6 not printed in the Gazette.]

1,212,043. DOOR OPERATING AND LOCKING MEANS. RICHARD J. FREEMAN, Yoakum, Tex., assignor of one-half to Alex May, Jr., Yoakum, Tex. Filed July 28, 1916. Serial No. 111,891. (Cl. 70—102.)



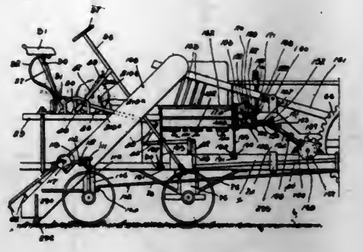
1. In an operating and locking means for the purpose set forth, a rack, a guide rail for the rack, a plurality of toothed wheels, one meshing with the rack, another of said toothed wheels having a hub provided with a disk, a circular rack disposed below the disk, and a pivoted handle upon the disk having a head provided with teeth which normally engage with the teeth of the circular rack, and means for locking the handle upon the disk.

2. In a device for the purpose set forth, a movable rack bar, a guide rail for the rack bar, a plurality of intermeshing tooth wheels, one of which engages with the rack bar, another of said toothed wheels having its hub provided with a disk, a circular rack disposed inward of the disk, a spring pressed handle member pivotally secured to the disk, said handle member including a head having teeth which normally engage with the teeth in the circular rack, a slotted lug upon the disk, said handle having an opening to receive the lug, the side of the handle having openings communicating with the slots in the lug, as and for the purpose set forth.

3. In a device for the purpose set forth, a rack bar, a guide rail for the rack bar, a plurality of intermeshing tooth wheels, one of which engages with the rack bar, another of said toothed wheels having its hub provided with a disk, a circular rack disposed inward of the disk, a spring pressed handle member pivotally secured to the disk, said handle member including a head having teeth projecting through an opening in the disk engaging with the teeth in the circular rack, a slotted lug upon the disk, said handle having an opening to receive the lug, the side of the handle having openings communicating with the slots in the lug, and means upon the handle and cooperating with the disk for retaining the handle at a right angle with respect to the disk and the teeth thereof out of engagement with the teeth of the circular rack.

4. In a device for the purpose set forth, a rack bar, said rack bar having its end provided with a yoke and anti-frictional rollers in the yoke engaging with the guide rail, a peripherally toothed circular member journaled upon a shaft to one side of the rack bar, a hub having a toothed wheel also journaled upon the shaft, a disk upon the hub covering the toothed circular member, a spring pressed handle upon the disk normally resting upon the outer face of said disk, a slotted lug upon the disk, said handle having a notch to receive the lug and having its sides provided with openings registering with the slots in the lug, said handle having an enlarged end comprising a head member which is pivotally secured to the disk and which has one of its faces provided with teeth which normally engage with the teeth of the circular member, spring means for normally sustaining the handle against the disk and the teeth thereof in engagement with the teeth of the circular member, a sliding lock upon the head of the handle, a keeper upon the disk to receive the said lock, and whereby the handle is retained at a right angle with relation to the disk, and a plurality of intermeshing toothed wheels one of which engages with the teeth of the rack bar.

1,212,044. HAY RAKE AND BALER. WALTER E. GADDIS, Clinton, Ill. Filed Oct. 2, 1915. Serial No. 53,803. (Cl. 100—65.)



1. In a hay rake and baler, a supporting frame, an auxiliary supporting frame carried by and at one side of said supporting frame for movement into a vertical non-operative position along side of said supporting frame.

2. In a hay rake and baler, a supporting frame, an auxiliary supporting frame carried by and at one side of said supporting frame for movement into a vertical non-operative position along side of said supporting frame, a crank shaft carried by said auxiliary supporting frame, a plurality of rake arms connected to said crank shaft, and raking teeth secured to the ends and the under surfaces of said bars.

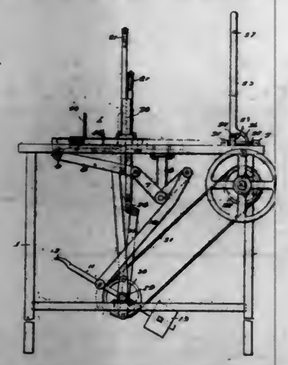
3. In a hay rake and baler, a supporting frame, an auxiliary supporting frame carried by and at one side of said supporting frame for movement into a vertical non-operative position along side of said supporting frame, a crank shaft carried by said auxiliary supporting frame, a plurality of rake arms connected to said crank shaft, raking teeth secured to the ends and the under surfaces of said bars, a supporting wheel carried by said auxiliary frame, and means operated by the rotation of said supporting wheel for rotating the crank shaft.

4. In a hay rake and baler, a supporting structure, a prime mover, supporting wheels carried by said supporting structure, means for guiding said supporting wheels for guiding the traction of said supporting structure, means operatively connecting said prime mover to certain of said supporting wheels for propelling said supporting structure, an auxiliary supporting frame carried by and at one side of said supporting frame for movement into an inoperative vertical position along said supporting structure, a supporting wheel carried by said auxiliary supporting structure, and means operatively connecting the supporting wheels of said supporting structure and the supporting wheel of said auxiliary supporting structure for synchronously guiding the wheels for steering the hay rake and baler.

5. In a hay rake and baler, a supporting structure, a prime mover, supporting wheels carried by said supporting structure, means for guiding said supporting wheels for guiding the traction of said supporting structure, means operatively connecting said prime mover to certain of said supporting wheels for propelling said supporting structure, an auxiliary supporting frame carried by and at one side of said supporting frame for movement into an inoperative vertical position along said supporting structure, a supporting wheel carried by said auxiliary supporting frame, means operatively connecting said supporting wheels of said supporting structure and the supporting wheel of said auxiliary supporting frame for synchronously guiding said wheels for steering the hay rake and baler, hay gathering means carried by said auxiliary supporting frame, conventional hay baling means carried by said first named supporting structure, and means for feeding the hay from said hay gathering means to sad baling means.

[Claims 6 to 12 not printed in the Gazette.]

1,212,045. BREAD-SLICER. WILLIAM H. GARLOCK and WILLIAM J. STUBBS, Seattle, Wash. Filed Mar. 13, 1916. Serial No. 83,953. (Cl. 146—12.)

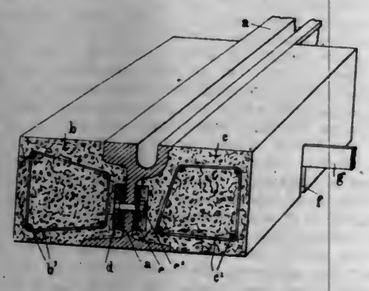


1. In a loaf slicing machine, the combination with a table top having an opening and the cutting mechanism working therein, of guides along the side edges of said opening, castings let into said guides and each having a track including a rearwardly inclined leg, a carriage mounted on said guides and including a slotted plate and a leaf hinged at its rear edge and provided with pins at its front edge engaging said track, spurs rising from the leaf, and means for reciprocating the carriage.

2. In a loaf slicing machine, the combination with a table top having an opening, cutting mechanism at about the mid-length thereof, a carriage, means for reciprocating the carriage, and devices associated with the latter for engaging the loaf, of ejecting mechanism comprising posts disposed in pairs in rear of said opening, rods connecting the posts of each pair, blocks slidably mounted on said rods, arms pivoted to the blocks and connected at their upper ends by a bail, and spurs projecting from the arms near their pivots and curved downward and rearward, for the purpose set forth.

3. In a loaf slicing machine, the combination with a table top having an opening, cutting mechanism at about the mid-length thereof, a carriage, and means for reciprocating the carriage from front to rear; of a bail having parallel arms connected by a cross rod adapted to be moved between the slices and the cutting mechanism, and means for movably supporting said arms at the rear corners of the table.

1,212,046. MONOLITHIC CONCRETE BLOCKS ADAPTED TO SNUGLY FIT THE RAILS. ADOLPHE GARAIVIER, Toulouse, France. Filed June 1, 1916. Serial No. 101,121. (Cl. 104—14.)



1. A paving block of the type described, comprising a monolith having a face shaped to the profile of a rail but recessed on this face to receive a fish-plate and its securing bolt together with rust-preventing material in said recess in the assembled rail and block, and surrounding the bolt end to prevent rusting of the latter.

2. A paving block of the type described, comprising a monolith having a face shaped to the profile of a rail, and transversely grooved on its bottom face to receive a tie bar extending from the rail.

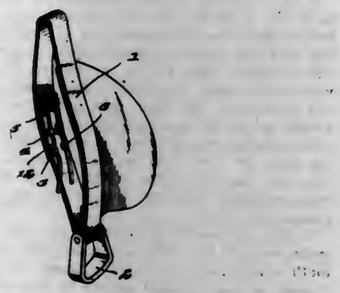
3. A paving block of the type described, comprising a monolith having a face shaped to the profile of a rail but recessed on this face to receive a fish-plate and its securing bolt, and transversely grooved on its bottom face to receive a tie bar extending from the rail.

4. A paving block of the type described, comprising an interiorly reinforced cementitious monolith having a face shaped to the profile of a rail but recessed on this face to receive a fish-plate and its securing bolt, and transversely grooved on its bottom face to receive a tie bar extending from the rail.

5. A paving block of the type described, having a face fitting against the side of a rail and transversely grooved in its lower face to receive a tie bar on which said block may be temporarily supported.

[Claim 6 not printed in the Gazette.]

1,212,047. FASTENING DEVICE FOR STIRRUP-LEATHERS OF SADDLES. STEPHEN A. GIBSON, Hereford, Ariz. Filed Feb. 8, 1916. Serial No. 77,010. (Cl. 24—105.)



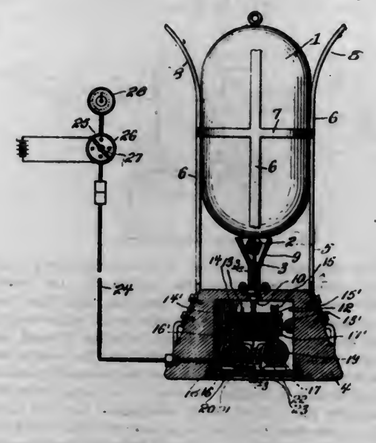
The combination with stirrup straps, of fastening means therefor, said means including fastening devices arranged in a double row each of which comprise a member provided with a threaded shank adapted to be passed through the ends of the straps from one side, a second member provided with a threaded sleeve adapted to be passed through the straps upon the opposite side and engaged with said shank, a head upon the shank provided with prongs for engagement with one of the straps, a head formed upon the sleeve and provided with an opening and a single removable flexible element for insertion through all of the said openings, whereby all of the members of the said fastening devices are prevented from turning.

1,212,048. MINE ANCHOR AND CONTROLLER. PHILIP L. E. DEL FUNGO GIBBA and GORDON MILLER, New York, N. Y. Filed Oct. 27, 1915, Serial No. 58,237. Renewed Dec. 6, 1916. Serial No. 135,487. (Cl. 102—8.)

1. In a mine anchoring and controlling means, the combination, with a mine, of an anchor comprising a weighted base, a winding shaft upon the base, a cable connecting the mine with the shaft, a pair of separate and independent electric motors, sets of gearing operable by the respective motors for driving the winding shafts in opposite directions to wind up or let out the cable, reversely operable sets of clutch devices for rendering the respective sets of gears operative each for transmitting motion to the shaft in one direction only and for an idling action on the motion of the shaft in the opposite direction, and current supplying means for driving the respective motors.

2. In a mine anchoring and controlling means, the combination, with a mine, of an anchor comprising a weighted base, a winding shaft upon the base, a cable connecting

the mine with the shaft, a pair of separate and independent electric motors, sets of gearing operable by the respective motors for driving the winding shaft in opposite directions to wind up or let out the cable, reversely operable sets of clutch devices for rendering the respective sets of gears operative each for transmitting motion to the shaft in one direction only and for an idling action on the motion of the shaft in the opposite direction, each set of clutch devices embodying clockwise and counter-clockwise acting pawl and ratchet elements, and current supplying means for driving the respective motors.



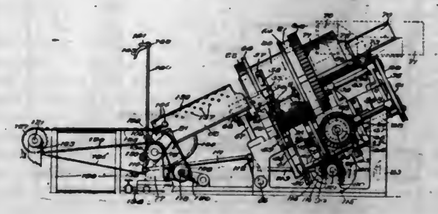
3. In mine anchoring and controlling means, the combination, with a mine, of an anchor comprising a weighted base, a cable attached to the mine, a winding drum upon the base including a shaft and a sleeve fixed thereto and to which the cable is fastened, gears loosely mounted on said shaft and forming the heads of the drum, said gears being provided with worm teeth, ratchet wheels fixed to the shaft and having teeth extending in opposite directions, dogs carried by the gears and engageable with the ratchet wheels to independently connect the wheels with the shaft for the reverse rotations of the shaft, motors having their shafts provided with worms meshing with the respective gears, and an electric circuit including means for separately and independently actuating said motors.

4. In a mine anchoring and controlling means, the combination, with a mine, of an anchor comprising a weighted base, a winding shaft upon the base, a cable connecting the mine with the shaft, gears loosely mounted on said shaft, ratchet wheels fixed to the shaft and having teeth extending in opposite directions, dogs carried by the gears and engageable with the ratchet wheels to independently connect the wheels with the shaft for reverse rotations of the shaft, electric motors having their shafts provided with gear elements meshing with the respective gears, and current supplying means for driving the respective motors.

5. In a mine anchoring and controlling means, the combination, with a mine, of an anchor including a weighted base having a chamber therein, a winding shaft journaled upon the base within said chamber, a bottom plate closing said chamber, a cable connecting the mine with the winding shaft, gears loosely mounted on the winding shaft, ratchet wheels fixed to the shaft and having their teeth facing in opposite directions, electric motors supported by the bottom plate and having gear elements upon their shafts meshing with the aforesaid gears, pawls upon the gears engaging the teeth of the ratchet wheels, and current supplying means for driving the respective motors.

[Claim 6 not printed in the Gazette.]

1,212,049. STEREOTYPE-PLATE-FINISHING MACHINE. SAMUEL G. GOSS, Glencoe, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 30, 1911. Serial No. 605,573. (Cl. 29—21.)



1. In a stereotype plate finishing machine, the combination with a frame and a drum mounted thereon with one end higher than the other, of a table pivotally mounted on said frame in front of said drum and adapted to be turned either into a horizontal position or into inclined position in alinement with said drum.

2. In a stereotype plate finishing machine, the combination with a frame, and a drum mounted thereon with one end higher than the other, of a table mounted on said frame in front of said drum on a pivot intermediate of the ends of said table and adapted to be turned either into a horizontal position or into inclined position in alinement with said drum, and stops adapted to limit the movement of said table.

3. In a stereotype plate finishing machine, the combination with a frame, and a drum mounted thereon with one end higher than the other, of a table pivotally mounted on said frame in front of said drum and adapted to be turned either into a horizontal position or into inclined position in alinement with said drum, said table being curved at one end to conform to the curvature of a stereotype plate and being so positioned that when said table is turned into inclined position with a plate thereon said plate is adapted to slide into position in said drum.

4. In a stereotype plate finishing machine, the combination with a frame and a drum mounted thereon with one end higher than the other, of a table pivotally mounted on said frame in front of said drum and adapted to be turned either into a horizontal position or into inclined position in alinement with said drum, and guiding means on said table whereby when said table is turned into inclined position with a plate thereon said plate will automatically slide into position in said drum.

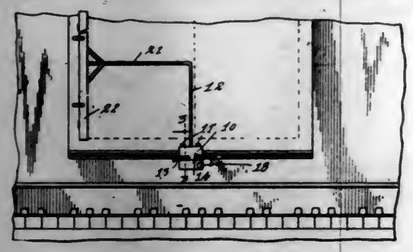
5. In a stereotype plate finishing machine, the combination with a frame and a drum mounted thereon with one end higher than the other, of a table pivotally mounted on said frame in front of said drum and adapted to be turned either into a horizontal position or into inclined position in alinement with said drum, guiding means on said table whereby when said table is turned into inclined position with a plate thereon said plate will automatically slide into position in said drum, and a stop adapted to limit the movement of said plate into said drum.

[Claims 6 to 22 not printed in the Gazette.]

1,212,050. MUSIC-LEAF TURNER. LYNFORD OSCAR GREEN, Capay, Cal. Filed May 10, 1915. Serial No. 27,129. (Cl. 84—135.)

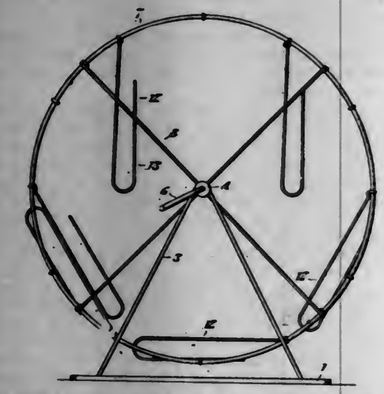
A music leaf turner comprising a box having means for attaching the same to a support, the front of the box having a transverse slot formed therein, a vertically slidable bolt mounted within the box, on one end thereof, and projecting across one end of the slot, an operating stem slidably extending through the front of the box, a bell crank lever pivoted at its angle to said end of the box and having its arms connected respectively to the bolt and stem, a vertical post mounted in the box and carrying leaf engaging means on its upper end, a spring mounted on the

post within the box, and, a laterally extending arm carried by the post and extending through the slot, said arm being arranged to be moved along the slot into engage-



ment with the said bolt against the action of the spring, the spring having one end connected to the arm and the other end connected to the box.

1,212,051. BREAD-TOASTER. GEORGE S. GUMAER, Coronado, Cal. Filed May 23, 1916. Serial No. 99,375. (Cl. 53—5.)



1. A toaster comprising a frame mounted for rotary movement, grills pivotally mounted upon the frame, and means engageable with the grills for limiting their movement in one direction whereby upon the rotation of the frame, the grills will gravitate to horizontal position at the lowermost point of the frame.

2. A toaster comprising a revoluble member, grills mounted for free swinging movement upon said revoluble member so as to automatically assume by gravity a horizontal position at a point in the path of revolution of said revoluble member, and means for limiting the movement of the grills beyond a predetermined point in assuming such position.

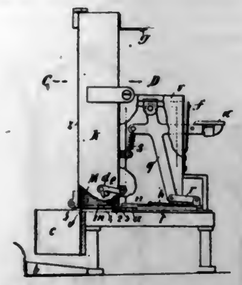
3. A toaster comprising a revoluble member composed of spaced side pieces and interconnecting cross pieces, and grills mounted upon certain of said cross pieces to automatically assume by gravity a horizontal position at a point in the path of revolution of the revoluble member, and limited in such movement by other cross pieces.

4. In combination, a pair of spaced wheels mounted for rotary movement, cross bars connecting the wheels at the circumference thereof, and a plurality of grills suspended within the wheels and engageable with the bars for preventing the grills from falling lower than the mean circumference of the wheels during the rotation of the latter.

5. A toaster comprising a revoluble member consisting of spaced sides connected by cross pieces, U-shaped grills pivotally mounted for swinging movement between the sides of the member upon alternate cross pieces so as to assume by gravity a horizontal position at a point in the path of revolution of said member, said grills being arranged to engage the intervening cross pieces to limit their gravital movement beyond a predetermined point.

[Claims 6 and 7 not printed in the Gazette.]

1,212,052. DEVICE FOR GIVING OUT COINS. MAX HANUSCH, Marienbad, Austria-Hungary. Filed Dec. 10, 1914. Serial No. 876,562. (Cl. 133—5.)



1. In a coin handling device, a coin receptacle pivotally mounted substantially near its midlength and movable from a vertical to a horizontal position, and vice versa, said receptacle having a removable wall with a slit, a housing having a slit, a key lever mounted in said housing and movable in said slit, a link pivotally connected to the lower end of said key lever, a slide pivotally connected to said link and a tongue carried by said slide and movable beneath the bottom of the receptacle to eject a coin.

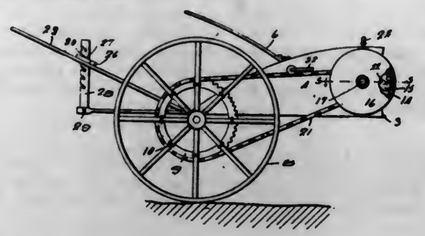
2. In a coin handling device, a coin receptacle pivotally mounted substantially near its midlength and movable from a vertical to a horizontal position, and vice versa, said receptacle having a removable wall with a slit, a housing having a slit, a key lever mounted in said housing and movable in said slit, a link pivotally connected to the lower end of said key lever, a slide pivotally connected to said link and a tongue carried by said slide and movable beneath the bottom of the receptacle to eject a coin, and a spring on said slide bearing on said tongue.

3. In a coin handling device, a coin receptacle pivotally mounted substantially near its midlength and movable from a vertical to a horizontal position, and vice versa, said receptacle having a removable wall with a slit, a housing having a slit, a key lever mounted in said housing and movable in said slit, a link pivotally connected to the lower end of said key lever, a slide pivotally connected to said link and a tongue carried by said slide and movable beneath the bottom of the receptacle to eject a coin, and a spring on said slide bearing on said tongue, said tongue being wedge-shaped.

4. In a coin handling device, a coin receptacle pivotally mounted substantially near its midlength and movable from a vertical to a horizontal position, and vice versa, said receptacle having a removable wall with a slit, a housing having a slit, a key lever mounted in said housing and movable in said slit, a link pivotally connected to the lower end of said key lever, a slide pivotally connected to said link and a tongue carried by said slide and movable beneath the bottom of the receptacle to eject a coin, and a spring on said slide bearing on said tongue, said tongue being wedge-shaped and said slide provided with a depression in which said tongue is depressible.

1,212,053. GRASS-SEED HARVESTER. WOODSON J. HATHEWAY, Stanberry, Mo. Filed May 21, 1915. Serial No. 29,557. (Cl. 56—2.)

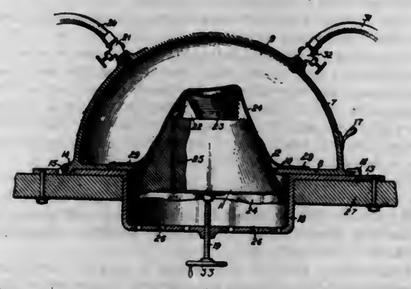
1. A harvester of the class described comprising a frame, a box at the front end of the frame, a header mechanism at the front end of the box and including a revoluble element provided with a spur gear, an axle on which the frame is mounted, ground wheels on the axle, a sprocket wheel attached to one of the ground wheels, a stub shaft extending from one side of the box, an internally toothed gear mounted on said stub shaft and engaged with said spur gear, a second sprocket wheel also on the stub shaft to rotate the internally toothed gear, and an endless sprocket chain connecting said sprocket wheels, the said second sprocket wheel being mounted for movement toward and from said internally toothed gear, said sprocket wheel and said internally toothed gear being provided with clutch elements to connect them together, a spring to normally hold said sprocket wheel and internally toothed gear in clutched relation, and a shifter to unclutch said sprocket wheel from said internally toothed gear.



2. A harvester of the class described comprising a frame, an axle on which the frame is mounted, ground wheels on the axle, a box on the front portion of the frame, a header mechanism at the front end of the box, push rods hingedly secured to the ends of said frame and adjacent the ground wheels, a push bar connecting the free ends of the push rods together, a cross rod secured to the push rods intermediate their ends thereof, a rearwardly extending guide formed on the cross bars intermediate its ends and provided with an elongated slot therein, an adjusting link pivotally secured to the rear end of the frame and provided with notches therein adapted to engage the elongated slots of the rearwardly extending guides for the purpose of securing the push rods in any desired position in relation to the frame.

3. A harvester of the class described comprising a frame, a pair of walls formed on said frame, a bottom secured to said frame between the walls, a cover secured to the upper edges of the walls, a door hinged to the cover providing means for removing seed from the closure formed, ground wheels mounted upon the frame, a header mechanism secured transversely of the front ends of the walls, push arms pivoted to the frame and extending rearwardly therefrom, and means for rotating the header mechanism.

1,212,054. HAT-PRESS. FREDERICK HERR, New York, N. Y. Filed Jan. 12, 1916. Serial No. 71,682. (Cl. 223—31.)



1. A hat press comprising a member for supporting a hat block; a dome removably disposable for covering said member; a flexible gasket extending between said dome and member and forming therewith a pressure chamber, said gasket preventing the escape of an expansive medium from said chamber; means embodying a supply of expansive medium and inlet pipes therefor entering the chamber within said dome; and a cover sheet for said block and for a hat form thereon, said cover sheet extending in service between said block and said gasket.

2. A hat press comprising a member for supporting a hat block; a dome removably disposable for covering said member; a flexible gasket extending between said dome and member and forming therewith a pressure chamber, said gasket preventing the escape of an expansive medium from said chamber; means embodying a supply of expansive medium and inlet pipes therefor entering the chamber within said dome; a cover sheet for said block and for a hat form thereon, said cover sheet extending in service between said block and said gasket; and means for releasing air from between said cover sheet and said member.

3. A hat press comprising a member for supporting a hat block; a dome removably disposable for covering said member; a flexible gasket extending between said dome and member and forming therewith a pressure chamber, said gasket preventing the escape of an expansive medium from said chamber; means embodying a supply of expansive medium and inlet pipes therefor entering the chamber within said dome; a cover sheet for said block and for a hat form thereon, said cover sheet extending in service between said block and said gasket; and means for releasing air from between said cover sheet and said member, said last-mentioned means embodying a series of perforations in said member.

4. A hat press comprising a member for supporting a hat block; a removable cover sheet therefor, said sheet being adapted to cover said block and said member; a base plate supporting said member; a dome pivotally mounted on said base plate for disposition above and inclosing said member and the block thereon; a latch for locking said dome in service relation; a flexible gasket extending between said member and said dome for preventing the escape of expansive medium from the chamber formed by said dome; and means for introducing an expansive medium under said dome, said means embodying an inlet pipe opening within the space below said dome.

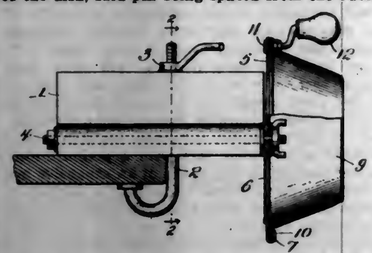
5. A hat press comprising a member for supporting a hat block; a removable cover sheet therefor, said sheet being adapted to cover said block and said member; a base plate supporting said member; a dome pivotally mounted on said base plate for disposition above and inclosing said member and the block thereon; a latch for locking said dome in service relation; a flexible gasket extending between said member and said dome for preventing the escape of expansive medium from the chamber formed by said dome; means for introducing an expansive medium under said dome, said means embodying an inlet pipe opening within the space below said dome; and manually-controlled means for releasing the expansive medium from said dome.

1,212,055. VEGETABLE-SLICER. ULYSSES S. HICKS, Hilts, Cal. Filed Aug. 16, 1916. Serial No. 115,292. (Cl. 146—11.)

1. A vegetable slicer comprising a body, a shaft journaled therein, a disk fixed to the shaft and having radially disposed openings provided with sharp edges, inturned lugs carried by the disk, the said disk being provided at its periphery with an L-shaped slot, a pan having an outstanding rim adapted to fit between the lugs and the disk and a pin having a head portion passing through the flange of the pan and adapted to enter the L-shaped slot in the disk.

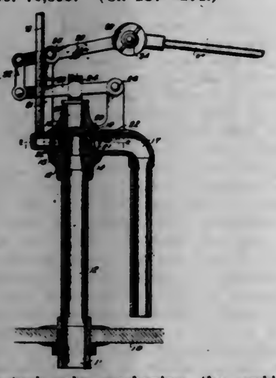
2. A vegetable slicer comprising a body, a shaft journaled therein, a disk fixed to the shaft and having radially disposed openings provided with sharp edges, said disk having inturned lugs, said disk having at its periphery an L-shaped slot, a pan having an outstanding flange adapted to fit between the lugs and the disk, a pin passing transversely through the flange of the pan and

having a head portion adapted to enter the L-shaped slot of the disk, said pin being spaced from the outer side



of the pan whereby it might be used as a handle and a knob mounted upon the pin.

1,212,056. CLOSET-TANK BALL-COCK. ELIJAH ROBERTSON HILL, New Albany, Miss. Filed Jan. 5, 1916. Serial No. 70,390. (Cl. 137—104.)

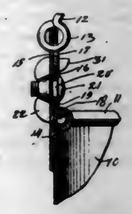


In flush tank valve mechanism, the combination of a supply pipe having a head and valve seat at its upper end, said head having a laterally projecting annular shoulder, a hollow rigid body into which said head and valve seat are projected and secured, said body having an annular shoulder directly above the head shoulder, a flexible diaphragm spanning the upper portion of the body cavity across the valve seat, and fitted against the body shoulder, a hollow cylindrical crown located between the head and the periphery of the diaphragm serving to clamp the diaphragm in place, said crown having one or more lateral radial openings, a member movable toward and from the valve seat and located upon the opposite side of the diaphragm therefrom, and float controlled devices connected to said movable member and determining its position with respect to the valve seat according to the depth of the water in the tank.

1,212,057. DETACHABLE HANDLE. HOWARD H. HILL, Upper Montclair, N. J. Filed June 9, 1916. Serial No. 102,711. (Cl. 220—23.)

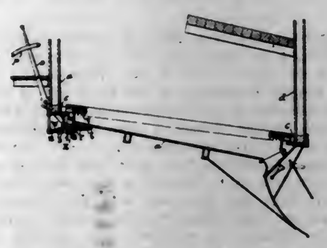
1. The combination with a bail having eyes at its ends; of a detachable connection at each end of the bail comprising a pair of members having openings engaged in the eye, one of the members being slidably mounted on the other and being arranged to coact therewith to form a cam edge grip, said eye being arranged to permit relative movement of the members when the bail is in one position and to prevent such movement when the bail is in a second position.

2. The combination, a bail having an eye at the end, a plate having a slot at one end engaged with said eye, the slotted end of the plate being semicircularly curved to permit swinging movement of the bail with the eye at the upper end of the slot, said eye having an interior diameter slightly greater than the distance from the edge of the slot to the plate, and a second plate having longitudinal sliding engagement with the first plate and provided with



an opening wherewith the eye engages, said plates having their confronting lower faces arranged to form a pail edge grip when the opening is positioned at the upper end of the slot.

1,212,058. FURNACE-GRATE FOR LOCOMOTIVE AND LIKE BOILERS AND OTHER PURPOSES. JOSEPH ALBERT HILL, Sheffield, England. Filed Mar. 12, 1912. Serial No. 683,199. (Cl. 126—176.)



1. A furnace grate for locomotive and other boilers and for other purposes comprising a plurality of sections comprising pivotally mounted fire-bars, link mechanism for effecting the tilting of said sections about their longitudinal axes, a second set of link mechanism for effecting the shaking of the fire-bars composing each section, a lever for operating either set of link mechanism as desired, and a guide plate having an angled slot for controlling the movements of the lever.

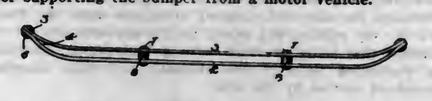
2. A furnace grate for locomotive and other boilers and for other purposes comprising two sections, each of which is composed of two conduits supporting transverse fire-bars therein, link mechanism for rocking the grate sections about their longitudinal axes, a second set of link mechanism for oscillating the individual conduits forming the sections, and a single operating member for actuating either set of link mechanism as desired.

3. A furnace grate for locomotive and other boilers and for other purposes comprising two sections, each of which is composed of two conduits supporting transverse fire-bars therein, link mechanism for rocking the grate sections about their longitudinal axes, a second set of link mechanism for oscillating the individual conduits forming the sections, a single lever for actuating either set of link mechanism as desired, and an angled guide controlling the movements of said lever.

1,212,059. AUTOMOBILE-BUMPER. THOMAS A. HOOVER, Fresno, Cal. Filed Nov. 3, 1915. Serial No. 59,867. (Cl. 213—39.)

1. A spring bumper embodying a pair of continuous spaced spring members set on edge and connected at their ends, a pair of spacing means between the spring members arranged on opposite sides of the centers of the spring members, and brackets connected to the rear spring

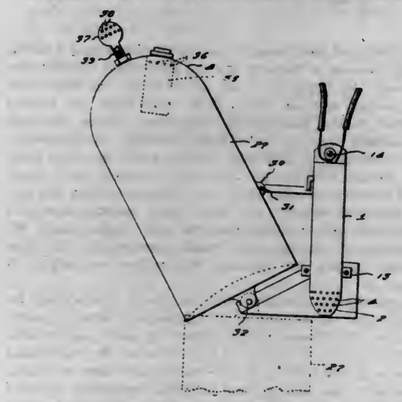
member and beyond the outer sides of the spacing means for supporting the bumper from a motor vehicle.



2. A bumper comprising a front spring bar and a rear spring bar disposed parallel with each other and in a horizontal plane, their terminals being rearwardly directed and secured at their extreme ends by horizontal rivets headed on the forward and rear faces of the front and rear bars respectively, and spaced means for mounting the bars on a vehicle, said means being secured to the rear bar between its ends.

3. A bumper comprising a front spring bar and a rear bar disposed in parallelism, spacers for the bars interposed between the same at spaced points, and a pair of brackets removably embracing the rear bar adjacent each spacer whereby the latter will serve as a stop to limit the rear bar from sliding in the brackets should the latter become loosened.

1,212,060. AUTOMATIC FIRE ALARM AND EXTINGUISHER. JOHN A. HOPKINS, Jr., Burns, Kans. Filed May 15, 1915. Serial No. 28,411. (Cl. 169—8.)



1. A device of the class described including a tubular casing adapted to receive a fusible plug, a coiled spring arranged within the casing and having one of its ends arranged to be engaged by the plug, said spring being provided with a stem extending from such end of the spring through the latter and projecting beyond the other end of the spring, a removable washer mounted within the casing and having a slot receiving the said stem and constituting a bearing for the adjacent end of the spring.

2. A device of the class described including a tubular casing adapted to receive a fusible plug within one end of it, a contact located at the other end of the casing, a spring arranged within the casing and having one of its ends bearing against the fusible plug and provided with a stem extending from such end to the spring and normally engaging the said contact, said stem constituting a movable contact and means for holding the other end of the spring.

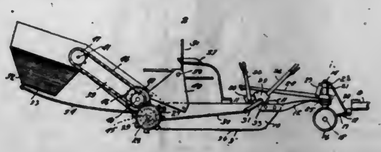
3. A device of the class described including a casing adapted to receive a fusible plug, a spring mounted within the casing and arranged to be held in a compressed condition by the fusible plug, a fixed contact provided with a recess and a stem connected with the spring and having a bifurcated portion engaging the fixed contact in the recess thereof and constituting a movable contact adapted to be carried out of such engagement by the expansion of the spring.

4. A device of the class described including an inclined fire extinguisher pivotally mounted at its lower end, an arm or bar connected with the fire extinguisher and provided with a recess, a casing receiving the arm or bar and supporting the same, said casing being adapted to contain a fusible plug, a spring located within the casing and arranged to be maintained in a compressed condition by the fusible plug and a trigger connected with the spring and normally engaging the arm or bar and adapted to release the same when the spring expands.

5. A device of the class described including a pivotally mounted inclined fire extinguisher provided at the top with a vertically disposed receptacle having apertures at its upper portion and means including a fusible plug for normally holding the fire extinguisher in an inclined position.

[Claims 6 and 7 not printed in the Gazette.]

1,212,061. BEAN AND PEA HARVESTER. EARL G. HOWARD and ROY ALTMAN, Rush, Colo. Filed Sept. 18, 1916. Serial No. 120,748. (Cl. 56—1.)



1. In a bean harvester, a main frame, harvesting devices supported by the frame and including conveyer mechanism having a driving gear, a shaft swingingly connected to said main frame, ground wheels on said shaft, a gear on the shaft arranged to revolve with one of the wheels, and means to swing said shaft into position to raise the frame and move the gears out of engagement and to lower the frame and move the gears into engagement.

2. In a bean harvester, a main frame, a set of gathering fingers fixed adjacent their forward ends to the main frame and extending rearwardly and upwardly from their points of attachment, the rear ends of the fingers being free, a conveyer belt extending beneath said free ends and provided with transverse flights engaging the under sides of the rear ends of the fingers, and means to operate the conveyer belt.

3. In a bean harvester, a main frame, a set of gathering fingers fixed adjacent their forward ends to the main frame and extending rearwardly and upwardly from their points of attachment, the rear ends of the fingers being free, a conveyer belt extending beneath said free ends and provided with transverse flights engaging the under sides of the rear ends of the fingers, means to operate the conveyer belt, a reel working over the free ends of said fingers, and means to drive the conveyer and reel.

4. In a bean harvester, a main frame including spaced pairs of sled runners carrying cutter knives and gathering fingers, a wheeled truck supporting the forward ends of the runners, means to raise and lower said truck relatively to the frame, a shaft mounted on the frame to swing vertically with relation to said frame, ground wheels carried by the shaft, and means to swing the shaft with relation to the frame whereby to raise and lower the frame with respect to the ground.

1,212,062. PROCESS FOR THE PRODUCTION OF CUPROUS OXID ELECTROLYTICALLY. BERTRAM HUNT, Glasgow, Scotland. Filed Oct. 7, 1916. Serial No. 124,425. (Cl. 204—1.)

1. In the process for the production of cuprous oxid by the electrolysis of metallic copper in an electrolyte solution of sodium chlorid; the constant addition to the electrolyte of a soluble nitrate, the electrolyte being maintained at a temperature above normal, as described.

2. In the process for the production of cuprous oxid by the electrolysis of metallic copper in an electrolyte

solution of sodium chlorid; an electrolyte consisting of a 10% solution of common salt and 5% sodium nitrate maintained at a temperature of about 100° cent., as described.

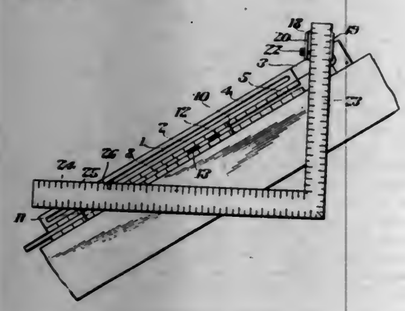
1,212,063. WRENCH. JAMES R. HUNTER, Asheville, N. C. Filed July 7, 1916. Serial No. 108,061. (Cl. 81—130.)



1. A wrench comprising a fixed jaw and a sliding jaw with a slot to receive the shank of the fixed jaw, the shank of the sliding jaw having a recess, a spring interposed between the shank portion of the fixed jaw and the wall of the slot, a sleeve upon the shank portion of the fixed jaw, a pawl carried thereby and adapted to engage the end of the shank portion of the movable jaw.

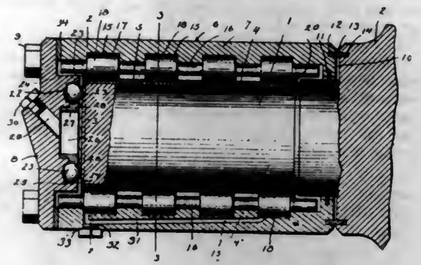
2. A wrench having a fixed jaw with a shank portion having a contracted end, a handle upon the latter, a sleeve upon said shank portion, a movable jaw slotted to receive the shank of the fixed jaw and having a recess in one end, a spring-pressed dog carried by said sleeve and adapted to engage over the end of the recess in the sliding jaw.

1,212,064. COMBINATION-TOOL. HORACE H. HYER, Hertel, Wis. Filed Jan. 4, 1916. Serial No. 70,275. (Cl. 33—92.)



In a device for the purpose set forth, the combination with a try-square including a blade having an angular tongue, of a graduated stock having a medial line extending the length thereof, said stock having one of its ends reduced, a holder member for the tongue of the try square arranged in said reduced portion and pivotally secured to the stock at the medial line thereof, said holder having side flanges, the ends of which terminate in a line with the axial center of the pivot of the said holder, an adjusting element carried by one of the said flanges whereby the tongue of the try square may be secured upon the holder, the stock to one side of the medial line having a longitudinally extending slot, a clamping member passing through the slot and adapted to engage with the blade of the try square, the stock, to the opposite side of its medial line being provided with a longitudinal channel, a graduated slide in the channel, and right angular members carried by the slide.

1,212,065. BALL AND ROLLER BEARING FOR JOURNAL-BOXES. ASA O. IRWIN, Fort Mills, Philippine Islands. Filed July 19, 1916. Serial No. 110,164. (Cl. 64—39.)



1. A device of the character set forth comprising a shaft, a casing thereon, a Babbitt bearing positioned between the casing and the shaft, a casing surrounding the first mentioned casing, a head detachably secured to the second mentioned casing, said second mentioned casing provided with annular grooves providing bearings therebetween, rollers consisting of large and small bearing members positioned within the second mentioned casing, said small bearing members resting upon the bearings within the second mentioned casing, and said large bearing members located within the annular grooves and bearing upon the first mentioned casing, and means carried by the first mentioned casing for causing the rollers to rotate in unison.

2. A device of the character set forth comprising an axle, a casing surrounding said axle and spaced therefrom, inwardly directed lugs formed on said casing, Babbitt material molded in said casing between the casing and the axle and retained in said casing by the lugs, a boxing surrounding the casing, and rollers journaled in said boxing and bearing upon said casing to rotatably support the boxing.

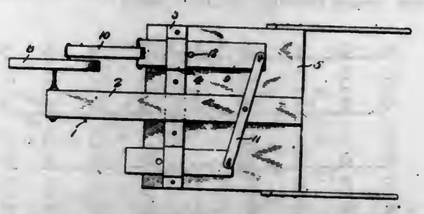
1,212,066. IMITATION FOOD OR OTHER ARTICLE AND ART OF MAKING THE SAME. CHRISTIAN JAEGER, New York, N. Y., assignor to Plastic Art Novelty and Specialty Co., New York, N. Y., a Corporation of New York. Filed July 8, 1916. Serial No. 108,214. (Cl. 106—33.)

1. The herein described art of producing imitations of common objects, comprising (1) the mixing thoroughly together of a mass of flour, gypsum, and a bulky filler; (2) the dissolving in liquid paraffin of sulfur and gum and a resinous material to constitute a binder; (3) the mixing and boiling together of the first mentioned mass and the binder, (4) the molding of the mixture in suitable molds, and the addition of suitable coloring matter.

2. The herein described composition of matter for making imitation food or other products, comprising a bulky mass of flour, gypsum, and sawdust, a binder comprising a solution of sulfur, carnauba wax, beeswax, and a resinous material in paraffin, and suitable coloring matter.

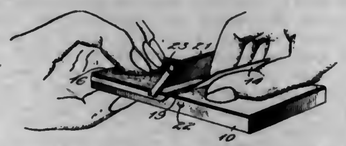
1,212,067. PLANTER. ANTHONY L. JONES, Columbia, S. C. Filed Mar. 17, 1916. Serial No. 84,893. (Cl. 111—6.)

A planter comprising a frame, a cross bar mounted on the frame and having depressed guides located at the opposite sides of the frame, hoppers mounted on the cross bar and provided at their bottoms with openings located above said depressed guides and opposite closed portions thereof, a wheel journaled to the frame, slide bars movably mounted in the depressed guide portions of the cross bars and having openings adapted to be brought into



register with the openings in the bottom of the hoppers and adapted to be moved beyond the edges of the depressed guide portions, a pitman rod pivotally connected with one of the slide bars and eccentrically connected with the guide wheel and a lever fulcrumed upon the frame and pivotally connected with both of the said slide bars.

1,212,068. SANITARY CIGARETTE-PAPER RECEPTACLE. JOHN A. JONES, CLAUDE O. ROWE, and CLAUSE E. JOHNSON, Palestine, Tex. Filed Dec. 9, 1915. Serial No. 65,995. (Cl. 206—39.)



1. A receptacle of the class described comprising a casing including a top for partially closing the same, a closure hinged to one end of said casing, the free end of said closure terminating short of the adjacent edge of said top to provide a transverse slot, means for normally retaining said closure in closing position, and a cutting member pivoted to said closure adjacent the free end thereof and adapted to overlap said slot to form a closure therefor.

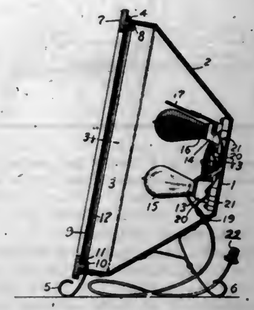
2. In combination, a casing including a top, a closure hinged to one end of said casing, the free end of said closure terminating short of the adjacent edge of said top to provide a transverse slot, means for normally retaining said closure in closing position, a cutting member pivoted to said closure adjacent the free end thereof and adapted to overlap said slot to form a closure therefor, and a continuous strip of paper in said casing, the free end thereof being retained between the top of said casing and said cutting member, the latter being adapted to be raised whereby to permit the withdrawal of a portion of said strip from the casing.

3. A receptacle of the class described comprising a casing having a top, a closure pivoted to one end of said casing and terminating short of said top to provide a slot, and a hinged cutting member exteriorly of said casing and normally in a position to close said slot and retain the end of a strip of paper between the same and said casing.

4. A receptacle of the class described comprising a casing having a top, a closure pivoted to said casing, one end of said closure terminating adjacent said top to provide a slot, and a cutting member carried by said closure and normally closing said slot whereby to retain the end of a strip of paper between said cutting member and said casing.

1,212,069. SIGN. JOHN FREDERICK KAISER, Bartlesville, Okla. Filed Dec. 14, 1915. Serial No. 66,742. (Cl. 40—132.)

1. In a device of the character specified, a lamp box, a sign plate at the front of the said lamp box, lamps of different color within the said lamp box, reflectors for the said lamps, means for changing one of the said lamps from a dim to a bright light, the other lamp being adapted to burn uniformly during operation, the said lamps being of such a color and so positioned relative to the said reflectors, that the sign plate will be of the color of the changing lamp when the same is burning brightly, and of the color of the other lamp when the changing lamp is dimmed.



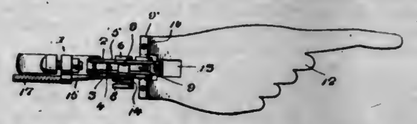
2. A sign substantially as described, comprising a lamp box open at its front, a frame having a rearwardly projecting flange adapted to fit within the open end of the lamp box and support a transparent plate, a beading secured to the said flange and adapted to hold the said plate in position, a display sign formed of semi-transparent material in rear of the said plate and within the said beading, means for holding the semi-transparent sign in position, and means carried within the lamp box for illuminating the said sign.

3. In a sign of the character specified, the combination with electric lamps of different color, of an electric circuit through the said lamps, means for changing one of the said lamps from a dim to a bright light, the other lamp burning uniformly during operation, the said changing lamp being of such a color as to obliterate when burning brightly the effect of the light from the other lamp.

4. A sign comprising a semi-transparent sign plate, a lamp in rear thereof burning uniformly during operation, a second lamp coöperating therewith and adapted to obliterate the effect of the light from the first lamp through the said sign plate, and a light shield so positioned as to interrupt part of the rays of light from the first-mentioned lamp through the said sign plate.

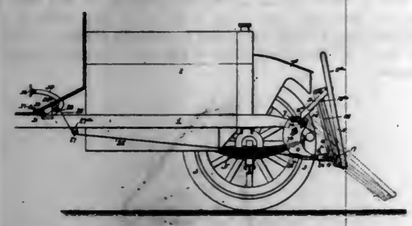
5. In a device of the character specified, a sign plate, a lamp in rear thereof burning uniformly during operation, a second lamp coöperating therewith and adapted when burning brightly to obliterate the effect of the light from the first-mentioned lamp through the said sign plate, and means for changing the second lamp from a dim to a bright light.

1,212,070. DIRECTION-INDICATOR FOR VEHICLES. JACOB KALTENBACH, Wilkes-Barre, Pa. Filed Oct. 8, 1915. Serial No. 54,849. (Cl. 116—31.)



A direction indicating device for vehicles comprising, a casing, a vertical shaft journaled in said casing and having the ends thereof projecting above and below the casing, an indicating hand having the end remote from the fingers bifurcated and straddling said casing and having the limbs of the bifurcated portion secured to the projecting ends of said shaft, and means for rotating said shaft to swing said hand.

1,212,071. FENDER FOR MOTOR-VEHICLES. ARTHUR M. KENNEDY, Philadelphia, Pa. Filed May 4, 1915, Serial No. 25,666. Renewed June 15, 1916. Serial No. 103,910. (Cl. 105—255.)



1. The combination, in a fender for motor cars, of a side plate mounted on the frame of the car, a slotted bar, a fender frame carried thereby, a fixed lower guide for said slotted bar, and a swinging arm upon which the upper portion of the bar is mounted.

2. The combination, in a fender for motor cars, of a fixed structure, a fender structure which can rise and fall in respect to said fixed structure, a pivot pin on which said fender structure can, as it drops, swing so as to forwardly project its lower end, a slotted member for receiving said pivot pin, and means whereby, as the fender structure drops, its lower end will be projected forwardly.

3. The combination, in a fender for motor cars, of a side plate mounted on the frame of the car, a slotted bar, a fender frame carried thereby, a fixed lower guide for said slotted bar, and a swinging arm upon which the upper portion of the bar is mounted, said slotted bar having near the upper end of the slot a notch for engaging the lower guide and retaining the fender in its lowered position.

4. The combination, in a fender for motor cars, of a fender frame having at each end a wing projecting upwardly beyond the intervening portion and in line with the wheel guard on that side of the car, the space between said wings and above the top bar of the intervening portion of the fender being unobstructed.

5. The combination, in a fender for motor cars, of a fender frame normally occupying a substantially upright position in advance of the front wheels, and having at each end a wing projecting upwardly beyond the intervening portion and in line with the wheel guard on that side of the car, the space between said wings and above the top bar of the intervening portion of the fender being unobstructed, and means for retaining said fender in elevated position or releasing the same so as to permit it to drop.

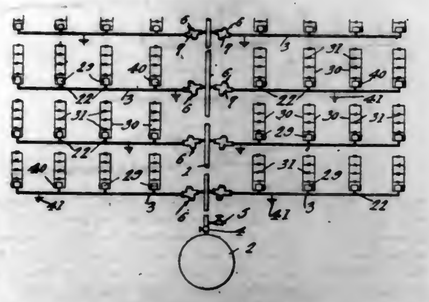
[Claims 6 to 14 not printed in the Gazette.]

1,212,072. SYSTEM FOR FIRING EXPLOSIVES IN MINES. CAMDEN EUGENE KNOWLES and LEROY DANIEL CORNELIUS, Pittsburg, Kans. Filed Dec. 7, 1914, Serial No. 875,902. Renewed June 9, 1916. Serial No. 102,794. (Cl. 175—115.)

1. A system for firing explosives in mines, comprising a fluid conduit extending into the mine, a normally open electrical circuit in the mine and including an electrical squib, and a fluid operated circuit closer for the said circuit and operatively connected to the said conduit.

2. In a system for firing explosives in mines, a fluid conduit extending into the mine, a plurality of fluid operated circuit closers operatively connected thereto, a normally open electrical circuit in the mine coöperable with each circuit closer and arranged to be closed thereby, said circuits including electrical squibs and means for rendering the various circuit closers inoperative until various predetermined pressures of the fluid are attained.

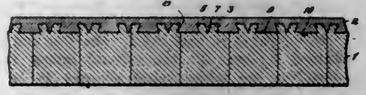
3. A system for firing explosives in mines, comprising a fluid conduit extending into the mine and having a plurality of branches extending into the branches of the mine, each branch having a valve for controlling the passage of fluid from the conduit thereinto, means for holding the respective valves closed until the pressure of the fluid within the conduit rises to predetermined degrees, a fluid operated circuit closer operatively connected to each branch, and a normally open electrical circuit associated with each circuit closer and arranged to be closed thereby, said circuits including electrical squibs.



4. A system for firing explosives in a mine, comprising a fluid conduit extending into the mine and having a plurality of branches extending into the branches of the mine, each branch having a valve for controlling the passage from the conduit thereinto and a check valve for allowing the fluid to flow back from the branch into the conduit, means for holding the respective first mentioned valves closed until the pressure of the fluid within the conduit rises to predetermined degrees, a fluid operated circuit closer operatively connected to each branch, and a normally open electrical circuit associated with each circuit closer and arranged to be closed thereby, said circuits including electrical squibs.

5. A system for firing explosives in a mine, comprising a fluid conduit extending into the mine and having a nozzle, a cylinder slidable upon said nozzle to be moved thereon by the action of the fluid in the conduit, an electrical circuit in the mine including an electrical squib and a pair of contacts, and an insulated switch member carried by said cylinder and coöperable with said contacts to close said circuit when the cylinder is moved by the action of the fluid.

1,212,073. DOVETAIL-LOCKED VENEER. WILLIAM F. KRUEGER, Chicago, Ill. Filed Oct. 17, 1916. Serial No. 126,091. (Cl. 20—89.)

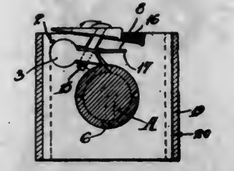


1. The combination of a wooden body having a plurality of tongues each divided longitudinally, and a strip of wooden veneer having its back face provided with a plurality of dovetailed grooves into which tongues extend, and a longitudinal wedge in each groove for spreading the tongues to interlock in the grooves.

2. The combination of a wooden body having a plurality of parallel tongues formed with their side walls initially parallel, and each tongue being split longitudinally, and a sheet of veneer having dovetailed grooves to register with and receive the tongues, and a wedge in each groove, whereby the tongues are spread to interlock with the side walls of the grooves.

1,212,074. NUT-LOCK. ELIJAH F. KUHNS, Columbus, Kans. Filed May 25, 1916. Serial No. 99,858. (Cl. 151—12.)

1. A combination with a bolt having a nut screw threadedly mounted, the threads on the bolt having a plurality of notches, a rotatable locking element carried by the nut and adapted to register with one of said notches, an operating lever connected to said locking element and extending outwardly at the side of said nut, and means associated with the said operating lever and slidably mounted on the nut for imparting movement to said operating lever whereby said locking element may be rotated.



2. A combination with a bolt having a nut screw threadedly mounted, the threads on the bolt having a plurality of notches, a rotatable locking element carried by the nut and adapted to register with one of said notches, an operating lever connected to said locking element and extending outwardly at the side of said nut, wedging means slidably mounted on the nut and connected to the said operating lever, the said lever having a head engaging said wedging means for preventing the said means from being displaced from said nut.

3. A combination with a bolt and a nut mounted upon the bolt, the said bolt having a plurality of notches formed in its threads, a circular disk rotatably mounted in the nut and provided with a latch for registration with one of the notches in the threads of the bolt, a wedge slidably mounted on the nut, said nut having a recess formed in one side for the reception of said wedge, an operating lever connected to the said latch and engaging the said wedge, and a resilient member fixedly mounted on the nut and engaging the said latch for normally holding the latch in engagement with one of the said notches, the said wedge having a tongue formed at one end adapted to fit in a groove formed in the end of the said recess.

4. A combination with a bolt having screw threads formed on its shank, of a nut screw threadedly mounted upon said bolt and having a wedge-shaped recess formed in one of its sides, a wedge loosely mounted within said recess and provided with a longitudinally extending slot, locking means carried by said nut and adapted to engage said bolt, an operating lever disposed in a recess formed in said nut, said lever extending through the central longitudinal slot in said wedge, a head formed on one end of said lever and resting upon said wedge, and a hook carried by the opposite end of said lever and engaging said locking means.

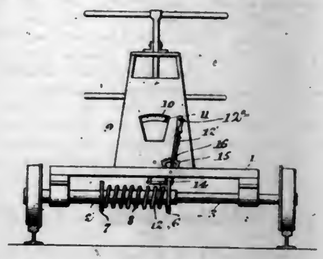
5. A combination with a bolt having screw threads formed on its shank, of a nut screw threadedly mounted on said bolt, a wedge provided with a slot and disposed on the edge of said nut, a locking element rotatably mounted and adapted to register with one of a plurality of notches formed in the threads of said bolt, and an operating lever connected to said locking element and extending through the slot in said wedge, said lever provided with a head at its terminal for engaging said wedge.

[Claim 6 not printed in the Gazette.]

1,212,075. TRACK-GAGE. ALBERT J. LAMARRE, Pawtucket, R. I. Filed Feb. 7, 1916. Serial No. 76,688. (Cl. 33—146.)

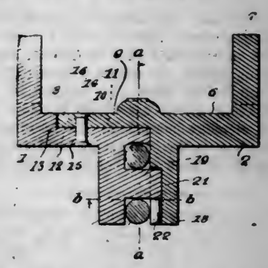
1. In an automatic track gage, a car, one of the axles of said car being formed of a stationary section and a movable section carrying wheels respectively adapted to traverse the track rails, means for shifting the movable section when the wheels traverse spread portions of the rails, a gage connected to said movable section, and a lever and locking means therefor for holding said movable section against movement under the action of said means.

2. In an automatic track gage, a car, one of the axles of said car being formed of a stationary section and a movable section carrying wheels respectively adapted to traverse the track rails, means for shifting the movable section when the wheels traverse the spread portions of



the rails, a gage connected to said movable section, and means for holding said movable section against movement under the action of said first means.

1,212,076. LOG-CHAIN DOG. THOMAS H. LEMP and HURLEY M. COBB, Bagdad, Fla. Filed Mar. 28, 1916. Serial No. 87,273. (Cl. 193—8.)



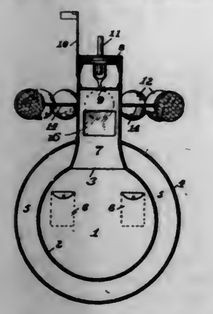
1. A log chain dog comprising a pair of separable members, one having a transversely arranged locking arm extending from the inner end of its base and the other having a correspondingly shaped locking recess in the upper side of its base for engagement by said arm, said recess and said arm having correspondingly shaped widened portions causing said recess and arm to unlock said separable members, said members also having chain engaging means extending downwardly from their bases and comprising a pair of arms, one of said arms having a block to extend through the chain link.

2. A log chain dog comprising a pair of separable members, one having a transversely arranged locking arm extending from the inner end of its base and the other having a correspondingly shaped locking recess in the upper side of its base for engagement by said arm, said recess and said arm having correspondingly shaped widened portions causing said recess and arm to unlock said separable members, said members also having chain engaging means extending downwardly from their bases and comprising a pair of arms, one of said arms having a block through a chain link, and provided at the outer end with a dove-tailed projection, the other depending arm having a vertical dove-tailed groove engaged by said dove-tailed projection.

1,212,077. LIFE-PRESERVER. JAMES WRENLEY LEWIS, Boley, Okla., assignor of one-fourth to T. L. Lee, Boley, Okla. Filed June 22, 1915, Serial No. 35,624. Renewed Dec. 4, 1916. Serial No. 135,005. (Cl. 9—4.)

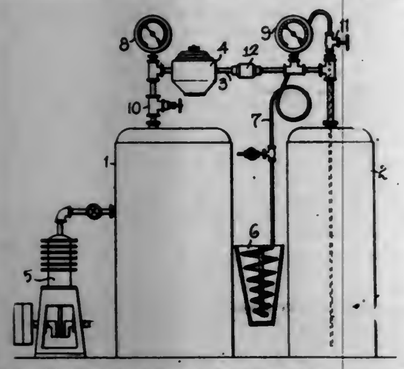
1. A life preserver including a receptacle, an entrance and exit tube connected with and rising from the receptacle, a closure therefor, ventilating means associated with said tube, a buoying element comprising an annular series of buoying members, a cable connecting said members, and radial connections between said cable and the tube.

2. A life preserver including a receptacle of spherical form, a jacket surrounding said receptacle and forming an air containing space, an entrance and exit tube connected with and rising from the receptacle, a closure therefor, ventilating means associated with said tube, and a buoying element comprising an annular series of buoying members, a cable connecting said members, and radial connections between said cable and the tube.



3. A life preserver including a receptacle having pockets or compartments therein, and a non-conducting lining, a jacket surrounding said receptacle and forming an air containing space, an entrance and exit tube connected with and rising from the receptacle, a closure therefor, ventilating means extending through said tube, and a buoying element comprising an annular series of buoying members, a cable connecting said members, and radial connections between said cable and the tube.

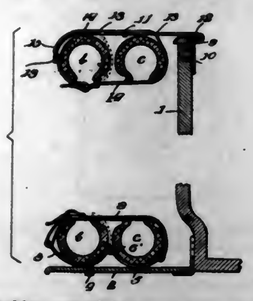
1,212,078. OIL-SUPPLY SYSTEM FOR BURNERS. HENRY G. LIEBZEIT, Sheboygan Falls, Wis. Filed July 24, 1915. Serial No. 41,721. (Cl. 158—50.1.)



In combination, an oil tank, an air tank in communication therewith and adapted to contain air under pressure, a reducing valve interposed in the connection between the tanks, a burner, a connection between the burner and the oil tank, a gage interposed in the connection between the reducing valve and the air tank, a second gage interposed in the connection between the oil tank and the valve, a cut-off valve interposed in the first named connection intermediate the air tank and the second named gage, and a cut-off interposed in the connection between the oil tank and the burner.

1,212,079. SPARE-TIRE HOLDER. JOHN D. MCRAE, Oswego, N. Y. Filed Feb. 4, 1916. Serial No. 76,166. (Cl. 224—29.)

1. A spare tire holder consisting essentially of two plates pivotally joined together, one of said plates adapted to be secured vertically to the inner surface of a vehicle body side wall and the other plate adapted to project outwardly beyond said side wall and over the vehicle running board, said last mentioned plate adapted to receive means for securing a tire thereto.



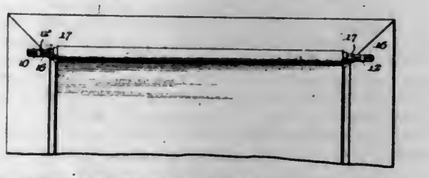
2. A tire holder comprising one member adapted to be secured to the inner face and vertical wall of the vehicle body and another member hinged thereto and adapted to extend outwardly therefrom over the running board to extend across the tire, and when not in use adapted to be swung upwardly and to hang inside the vehicle body beside the first mentioned member, substantially as described.

3. A tire holder consisting of a plate adapted to be secured in vertical position at the inner side of a vehicle body wall, and an arm hinged thereto and adapted to extend outwardly across the top edge of said wall, the outer end of said arm being deflected downwardly and provided with means for securing a tire thereto.

4. A device for the purposes substantially as described, consisting essentially of a tire holding member and a securing member therefor, said securing member formed to be fastened within a vehicle body and said holding member being connected thereto and adapted to swing from operative position wherein it extends laterally from the body, to inoperative position, wherein it is located within said body.

5. A spare tire holder comprising a tire holding member and a securing member therefor, said tire holding member movably connected to said securing member whereby it may be swung from operative position without a vehicle body to inoperative position to lie within a vehicle body.

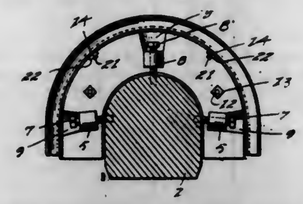
1,212,080. ADJUSTABLE WINDOW-SHADE BRACKET. MICHAEL MAES, Jr., Cincinnati, Ohio. Filed May 27, 1916. Serial No. 100,285. (Cl. 156—24.)



1. A device of the class described comprising a strip of material adapted to be secured to the window casing and having a substantially U-shaped offset portion, a nut arranged between the limbs of said offset portion, a screw bolt adjustable through said offset portion and having threaded engagement with the bore of said nut, and a bracket slidably mounted upon said strip and connected with the adjacent end of the bolt to be adjusted thereby.

2. A device of the class described comprising a strip of material adapted to be secured to the window casing and having a substantially U-shaped offset portion, a nut arranged between the limbs of said offset portion, a screw bolt adjustable through said offset portion and having threaded engagement with the bore of said nut, a bracket slidably mounted upon the strip and connected with the adjacent end of the bolt to be adjusted thereby, and tongues depending from said offset portion at the opposite sides of the nut to hold the latter immovably associated therewith.

1,212,081. SAND-BAND FOR VEHICLE-WHEELS. CLAUS E. MAGNUSON, Hoopeston, Ill. Filed Apr. 4, 1916. Serial No. 88,880. (Cl. 21—40.)



1. A sand band comprising a yoke, means for detachably securing said yoke to a vehicle axle, a supporting plate adjustably supported on one face of the yoke, a sand band hood adjustably supported by said plate.

2. A sand band comprising a yoke, sleeves arranged on one face of said yoke, means extending through said sleeves for adjustably securing said yoke to a vehicle axle, a supporting plate adjustably secured to the rear face of said yoke, and a sand band hood adjustably mounted on said plate.

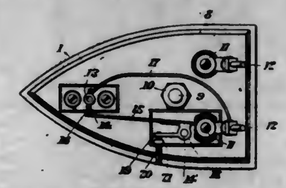
3. A sand band comprising a yoke, sleeves arranged on the front face of said yoke at spaced distances apart, means extending through said sleeves for detachably securing the yoke to a vehicle axle, a supporting plate adjustably secured to the rear face of said yoke, and a sand band hood having a hub inclosing portion adjustably secured upon said plate.

4. A sand band comprising a yoke, sleeves arranged on one face of said yoke at spaced distances apart, means extending through said sleeves for holding said yoke in a vertical position upon a vehicle axle, a semi-circular supporting plate adjustably secured to the rear face of said yoke, angularly and forwardly projecting arms secured at spaced distances apart to the upper edge of said plate, and a sand band hood adjustably mounted upon the arms of the supporting plate.

5. A sand band hood comprising a yoke provided on one face with spaced sleeves, bolts arranged through said sleeves detachably securing said yoke to a vehicle axle, a semi-circular band secured to the rear face of said yoke, and vertically adjustable thereon, forwardly projecting arms formed on the upper edge of said supporting plate, and provided with elongated slots and a sand band hood including a hub engaging portion adjustably mounted on the arms of the supporting plate.

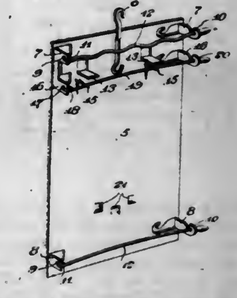
[Claims 6 to 8 not printed in the Gazette.]

1,212,082. ELECTRICALLY-HEATED SAD-IRON. ERNEST V. MANZELLA, Chicago, Ill. Filed Aug. 25, 1916. Serial No. 116,893. (Cl. 219—25.)



In an electrically heated sad iron, a base, a metal plate mounted upon the base, a heating element interposed between said plate and base and insulated therefrom, terminal posts mounted upon said plate, a connection between one of said terminal posts and one end of said heating element, a post upstanding from said plate, a wire connection between said post and the other terminal post, a contact screw carried by the upstanding post, a thermostatic strip, a stud to which one end of said strip is secured, said stud being connected to the other terminal of said heating element, the remaining end of said thermostatic strip engaging said contact screw whereby current may flow through said heating element from said terminal posts, a cover inclosing said plate and secured to said base, and a handle carried by said cover.

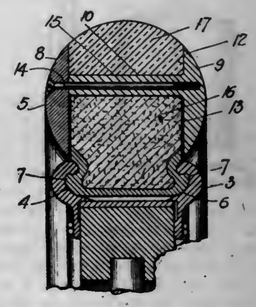
1,212,083. FILE. WALKER MAYFIELD, Scottsville, Ky. Filed Feb. 7, 1916. Serial No. 76,720. (Cl. 129—1.)



1. A file of the class described comprising a plate, wings projecting from one face thereof and forming abutments for the edges of prescription sheets, means on the plate for engaging such prescription sheets to hold the same in stacked relation to each other, means for clamping the prescription sheets when superimposed upon each other or when folded back, and a hanger at one end of the plate.

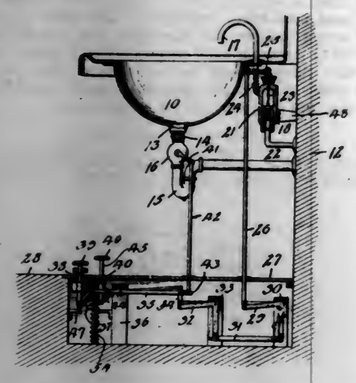
2. A file of the class described comprising a plate, wings projecting from one face thereof and forming abutments for the edges of prescription sheets, means on the plate for engaging such prescription sheets to hold the same in stacked relation to each other, means for clamping the prescription sheets when superimposed upon each other or when folded back, a hanger at one end of the plate, and a card holder on the opposite face of the plate.

1,212,084. CUSHION-TIRE. EARL MEFFERD, Denver, Colo., assignor of one-fifth to Raymond W. Cain, Denver, Colo. Filed May 12, 1915. Serial No. 27,542. (Cl. 152—36.)



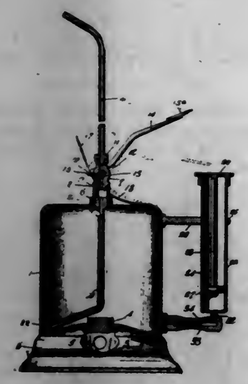
A cushion tire comprising a channeled inner member fitting in the channeled rim of a motor-vehicle-wheel of ordinary construction, an outer member having exteriorly a thread and interiorly a channel in which said inner member is loosely fitted, and a body of elastic material filling the adjoining channels of said members.

1,212,085. FLUID-CONTROLLING DEVICE. HENRY D. METCALF, Casey, Ill., assignor of one-half to Glenn Dougherty, Casey, Ill. Filed Nov. 28, 1914, Serial No. 874,499. Renewed Dec. 1, 1916. Serial No. 134,503. (Cl. 137—139.)



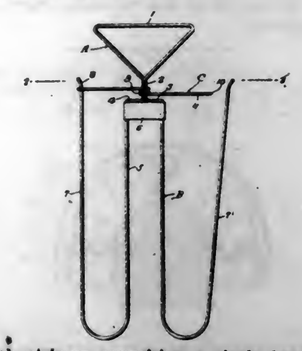
In combination a valve having its stem projecting vertically, a centrally pivoted link having one end pivotally connected to said stem, a vertically arranged bar having its upper end pivotally connected to the remaining end of the said link, a pair of bell crank levers pivotally connected together and one further pivotally connected to the lower end of said rod, a horizontally arranged centrally pivoted lever having one end pivotally connected to one of said bell crank levers, a vertically slidable member and a link swingingly connecting the remaining end of said horizontally arranged lever with said member.

1,212,086. OILER. HENRY MICHELSEN, Garwin, Iowa. Filed May 31, 1916. Serial No. 100,821. (Cl. 221—80.)



In an oiler of the class described, a tank having a delivery valve and a delivery spout at its upper side, said valve including an element mounted for turning movement, a lever attached to said movable element of the valve to turn the same and provided with an arm, an inverted L-shaped stop attached to said arm and arranged to engage the delivery spout and limit the movement of said valve element in one direction, and a spring also attached to said arm of the lever slidably bearing on the top of the tank and serving to normally turn the valve to closed position.

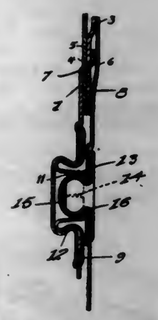
1,212,087. FISH-STRINGER. WILLIAM M. MIKELL, Blackshear, Ga., assignor of one-half to Mikell, Nobles and Company, Blackshear, Ga. Filed July 11, 1916. Serial No. 108,659. (Cl. 224—7.)



1. A fish stringer comprising a single length of resilient wire bent intermediate its ends to provide a handle, the ends of the handle being twisted upon themselves to provide a shank, the free ends of the shank being extended at right angles to provide the offset portions, the free ends of the offset portions being extended to provide the parallel spaced rigid members, a plate connecting the members, the free ends of the rigid members being extended to provide the movable members, and a rigid wire having its intermediate portion twisted about said shank, the opposite ends thereof terminating in reversely disposed keepers, said keepers receiving the free ends of the movable members.

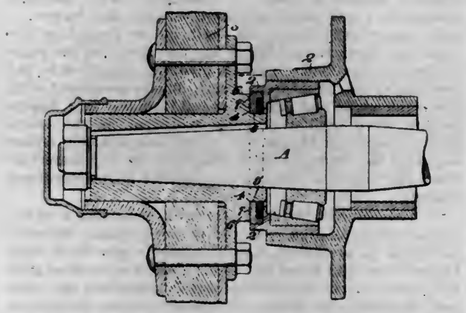
2. A fish stringer comprising a single length of resilient wire bent intermediate its ends to provide a handle, the ends of the handle being twisted upon themselves to provide a shank, the free ends of the shank being extended at right angles to provide the offset portions, parallel spaced rigid members formed integral with the offset portions, the free ends of the rigid members being bent upon themselves to provide the movable members, and reversely disposed keepers formed on the shank of said handle and detachably receiving the free ends of the movable members.

1,212,088. COLLAR-FASTENER. EDWIN MILLER, Taunton, Mass. Filed May 1, 1915. Serial No. 25,211. (Cl. 2—41.)



The combination with a shirt having a neck band with a loose outer ply opened at the bottom and provided with a button hole, of a collar fastener including a tab secured at its upper end to the neck band at the top of the button hole at the inner face of the loose outer ply and carried by the latter and adapted to be arranged between said loose outer ply and the neck band and to hang down out of the way in rear of the free lower edge of said outer ply portion, said tab being also adapted to be passed through the button hole of the loose outer ply and the button hole of the collar, the free end of said tab being rounded, a fastener for securing the free end of the tab to the shirt below the neck band, said fastener comprising a male member having a head secured to said shirt below said neck band, and a female member having a socket and a flat relatively large circular flange secured relatively near and concentric with said rounded end of said tab, whereby the flange of said female member acts as a stiffener and a means for inserting said tab through the button hole of the collar and said loose ply.

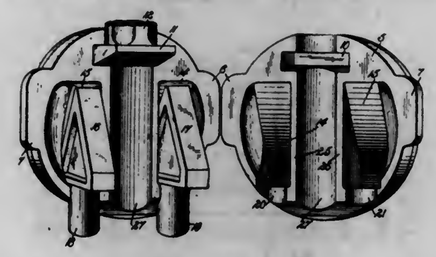
1,212,089. ROTARY-JOINT OIL-RETAINER. GEORGE E. MILLER and EDWIN B. CANTRELL, San Francisco, Cal. Filed Oct. 11, 1915. Serial No. 55,208. (Cl. 64—22.)



1. In combination with a rotatable element having a cut-out, a member having a cut-out which confronts the first named cut-out, and a gasket in the cut-outs convexed outwardly and extending across the joint between the cut-outs, the gasket abutting the element and one of the latter two parts having means to conduct oil into the member.

2. In combination with a rotatable element having a cut-out forming a vertical wall, a member having a cut-out which confronts the first named cut-out and forming a horizontal wall, and a gasket in the cut-outs having a vertical face and having a peripheral portion which closes the joint between the cut-outs and which at its periphery engages the horizontal wall of the member, said vertical face of the gasket abutting said vertical wall of said element, and one of said last named parts having means to return oil to the member.

1,212,090. GATE-VALVE. FOSTER MILLIKEN, Lawrence, N. Y. Filed Aug. 18, 1916. Serial No. 115,636. (Cl. 137—5.)



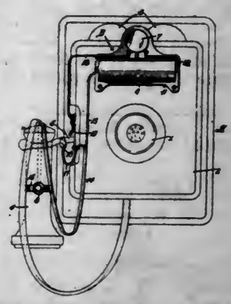
1. A gate valve comprising a casing provided with a pair of seats, a pair of disks arranged between said seats, each of said disks being formed with a central groove extending longitudinally therethrough and a pair of sockets on each side of said groove, each of said sockets having a bottom arranged at an angle to the face of the disk, a pair of wedges fitting into said sockets, each of said wedges being formed with an extension projecting beyond the disk, and an operating member for moving said disks back and forth, said operating member acting to move said disks until the projections from the wedges engage the casing and separate the disks until they tightly engage said seats.

2. In a gate valve of the character described, a pair of disks, each of said disks being formed with a guiding ear on each side, means engaging said ears for guiding said disks, a socket merging into a notch, said socket being provided to receive an operating stem, and a pair of cam sockets arranged an equal distance on opposite sides of a central line drawn one way across the disk, each of said cam sockets having an inclined bottom the center of which is approximately on a central line drawn at right angles to the first mentioned central line and a wedge for each of said sockets for forcing the disks bodily in a transverse direction for seating the same when the disks have been forced over the wedges.

3. In a valve of the character described, a disk formed from a single casting and provided with a pair of guiding ears, a groove extending centrally across one face of the disk and merging into a stem receiving socket, and a socket having a wedge receiving face arranged substantially centrally of the space on each side of said groove whereby a reinforcing ring is presented at the periphery of the disk.

4. In a gate valve of the character described, a casing, a pair of disks, each disk being comparatively thick and formed with a groove extending across the disk centrally, and a cam socket arranged substantially centrally of the space on each side of the groove whereby there is produced a reinforcing ring substantially around the outer edge of the disk for preventing warping of the disk due to temperature changes when in use, and a wedge for each of said disks for separating the disks when in use, said wedges being formed with projections engaging said casing when the disks are being moved thereover.

1,212,091. TELEPHONE ATTACHMENT. JOHN OSCAR MOISSON, Charleston, S. C. Filed July 5, 1916. Serial No. 107,550. (Cl. 179—1.)

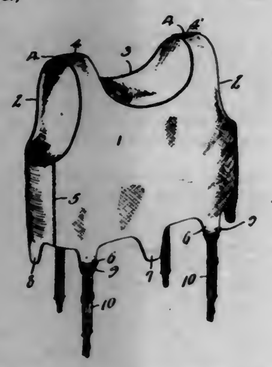


1. An attachment for telephones of the class described, comprising a source of current, a signal connected in circuit therewith, a normally closed pushbutton adapted to be attached to a telephone receiver or desk telephone stand and connected with the circuit, and switch contacts in the circuit, one of which is adapted to be connected with the receiver hook of the telephone, whereby the latter will make contact with the other contact and complete the circuit when the receiver hook is raised.

2. A signal attachment of the class described comprising a cell, a signal device connected with one terminal thereof, a contact connected with the signal device, a pushbutton, means for connecting the pushbutton with the telephone receiver or desk telephone stand, and a cord conductor extending from the pushbutton and having one wire connected with the terminal of the cell and another wire provided with means for engaging with the receiver hook of the telephone, whereby the latter coöperates with the first-mentioned contact to close the circuit.

3. The combination of a telephone set, with a signal attachment comprising a source of current, a signal connected therewith, a pushbutton applied to a part of the telephone set gripped while conversing and adapted to be pressed to hold the circuit of the signal and source of current open, a conductor leading from one terminal of the pushbutton to the said source, a conductor leading from the other terminal of the pushbutton, a clip on the last-mentioned conductor for engaging with the receiver hook of the telephone set, and a contact fixed with respect to the telephone hook for engagement by the latter when the receiver is removed, said last-mentioned contact being connected with the signal.

1,212,092. NETHERGARMENT. NELLIE C. MOORE, Virginia, Minn. Filed Feb. 26, 1915. Serial No. 10,741. (Cl. 2—98.)



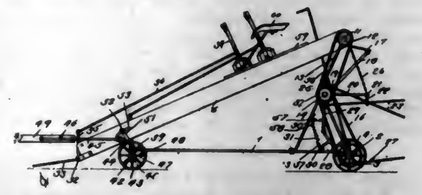
A nether garment having a body composed of a single piece of material formed into a tubular section by a single side seam and with integral upward extensions at the front and back set well in from the side portions of the body, and united in pairs at their upper ends to form shoulder straps, four downward projections for supporting the garters, located one directly below each upward extension and depending tabs at the front, back and sides located intermediate the garter supports for supporting other garments.

1,212,093. DOLL. AMELIA MORSE, New York, N. Y. Filed Sept. 6, 1916. Serial No. 118,662. (Cl. 46—40.)



The herein described figure toy comprising a hollow body, a hollow head, a stem connected to the head and extending thence into the body and serving to hold the head in place, a loose pebble within the head, a pair of legs, and a transverse member connecting said legs at the lower end of the stem and serving to hold the stem in place.

1,212,094. MACHINE FOR BUNCHING HAY. BERT C. MYERS, Saginaw, Oreg. Filed Jan. 28, 1916. Serial No. 74,912. (Cl. 56—68.)

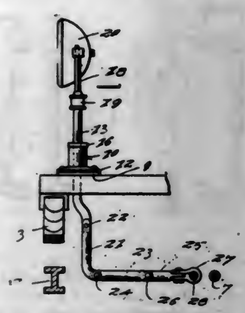


1. A machine of the class described comprising a wheeled supported frame, a conveyer frame mounted thereon, a crank shaft arranged between the frames, a yoke supported by the crank shaft, guides carried by the yoke, rake teeth for gathering hay and directing the same to the conveyer frame, a cradle pivotally connected to the rear end of the first named frame, fingers associated with the crank shaft and slidable in said guides, said fingers serving when oscillating upon movement of the crank shaft to pack the hay on the cradle, and yieldable means to permit the cradle to tilt to discharge the hay therefrom when the weight of the hay has reached a predetermined amount.

2. A machine of the class described comprising a frame, a conveyer associated with the frame, a cradle pivotally connected to the frame, a table hingedly associated with the conveyer and above the cradle, fingers associated with the cradle, means for simultaneously vibrating the table and oscillating the fingers, and means for permitting the cradle to rock when a predetermined amount of hay has been deposited thereon and packed by the fingers.

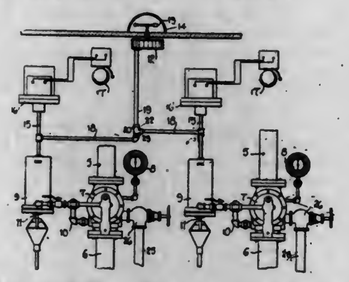
3. A machine of the class described comprising a wheeled supported frame, a second frame supported thereby, a crank shaft arranged between the frames, a conveyer supported by the second named frame, a table hingedly connected to the rear end of the second named frame, a yoke associated with the crank shaft and having guides carried thereby, fingers engaged in the guides and having their inner ends connected to the crank shaft, links connecting the crank shaft and table, whereby when the crank shaft is rotated the table will be vibrated and the fingers oscillated, a cradle hingedly connected to the first named frame for receiving hay from the table, said fingers being adapted to engage the hay as it falls from the table to the cradle to pack the same upon the cradle, and means rendered operative by the weight of the hay on the cradle to tilt the cradle to discharge the hay.

1,212,095. DIRIGIBLE AUTOMOBILE-HEADLIGHT. HARLEY V. NEEDHAM, Neosho, Mo. Filed Oct. 7, 1916. Serial No. 124,324. (Cl. 240—62.)



In combination, an automobile including a chassis and a steering mechanism, of a bracket secured to the chassis and having openings therein, a sleeve secured to said bracket, ball bearings located within said sleeve, a lamp standard extending through the sleeve, a collar formed on the lamp standard and bearing upon the ball bearings, a duct cap secured to the sleeve, a collar secured to the lamp standard and bearing against the dust cap to limit the upward movement of the lamp standard, a headlight secured to the lamp standard, and means for connecting the lamp standard to the steering mechanism to turn the headlight.

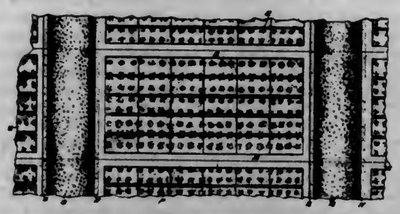
1,212,096. AUTOMATIC SPRINKLER SYSTEM. PATRICK JAMES NEILON, Connersville, Ind. Filed July 8, 1916. Serial No. 108,228. (Cl. 169—23.)



1. The combination with two automatic sprinkler systems and a single, hydraulically-operated alarm device, of a pipe extending from each sprinkler system, a supply pipe for the alarm device, a T-shaped coupling member connecting said pipes and having internal valve seats extending at right angles with respect to each other, a valve plate pivotally mounted within the coupling member at the juncture of the valve seats to engage upon the respective seats and prevent the passage of water from one sprinkler system into the other when the former is in operation, said valve, when in either position, being disposed in parallel relation to the direction of flow of the water from the operating sprinkler system into the supply pipe of the alarm device.

2. The combination with two automatic sprinkler systems and a single hydraulically operated alarm device, of a pipe extending from each sprinkler system, a common pipe connection between the first named pipes and the alarm device, and a double-acting check valve interposed between said pipes at the juncture thereof to prevent the passage of water from one system into the other, when the former is in operation, said valve being held by the water pressure against movement to maintain open communication between the operating sprinkler system and the alarm device.

1,212,097. HOTBED. JOSEPH NICASTRI, New York, N. Y. Filed June 13, 1916. Serial No. 103,441. (Cl. 47—27.)



1. A hotbed provided with a concrete support in the form of a rectangular frame, the sides of which rise above the ends of the frame, the raised portions of the sides being spaced apart to provide space for a path on top of the support between the sides, the support having longitudinal passages in its sides and openings leading to said passages.

2. A hotbed provided with a concrete support in the form of a rectangular frame, the sides of which rise above the ends of the frame, the raised portions of the sides being spaced apart to provide space for a path on top of the support between the sides, the said support having passages extending from end to end through the sides, the sides having openings leading from the outer faces of the sides into the outermost passages.

3. A hotbed provided with a concrete support in the form of a rectangular frame, the sides of which rise above the ends of the frame, the raised portions of the sides being spaced apart to provide space for a path on top of the support between the sides, and a path filling of loose material filling the frame to a height a distance above the ends and approximately to the height of one of the sides, the sides of the support at their lower ends being provided with inward extensions.

4. A hotbed provided with a concrete support in the form of a rectangular frame, the sides of which rise above the ends of the frame, the raised portions of the sides being spaced apart to provide space for a path on top of the support between the sides, one of the sides being higher than the other side, the sides being provided at their bases with inward extensions and passages in the sides and extensions.

5. A hotbed, comprising a pair of spaced concrete supports, each in the form of a rectangular frame having spaced sides raised above the ends, and a sash of a width corresponding to the length of the supports, the ends of the sash resting on top of the opposite sides of the supports.

[Claims 6 to 10 not printed in the Gazette.]

1,212,098. METHOD OF MANUFACTURING ARTICLES OF SYNTHETIC COMPOSITION. EBERHARDT P. NICHOLSON, New York, N. Y. Filed Aug. 23, 1916. Serial No. 116,420. (Cl. 18—59.)

1. A method of manufacturing articles of synthetic composition, which consists in forming a hollow core the surface of which presents protuberances for centering the core in a mold and for providing a grip for a coating, dipping the core into a solution of synthetic composition of a consistency sufficient to form a thick film on the surface of the core, and placing the core with the coating into a mold and subjecting the mold to pressure.

2. A method of manufacturing articles of synthetic composition, which consists in forming a hollow core of halves with protuberances on the outer surface of the core, cementing the halves, dipping the cemented halves into a solution of synthetic composition of a consistency sufficient to form a thick coating on the surface of the core, placing the core with the coating thereon into the mold, then subjecting the mold to pressure, the protuberances on the core centering the same in the mold and controlling the uniformity of the coating on the core.

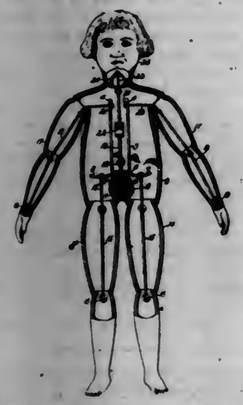
1,212,099. ARTICULATED DOLL. EBERHARDT P. NICHOLSON, New York, N. Y. Filed Aug. 23, 1916. Serial No. 116,421. (Cl. 46—40.)

1. A doll having an articulated body, a leaf spring within the torso of the doll, links connecting the leaf spring to the legs at the knees, a blade having the shape of a U the sides of which are elongated resting with its base on the leaf spring, means securing the U-shaped blade to the leaf spring and the torso, and links connecting the extremities of the U-shaped blade to the wrists.

2. A doll having an articulated body, a leaf spring within the torso of the doll, means anchoring the leaf spring to the torso, links connecting the leaf spring to the legs at the knees, said means adapted to maintain said leaf spring stressed, a U-shaped spring rising from the leaf spring and anchoring therewith, and means connecting the ends of the U-shaped spring to the remote members of the arms, said means adapted to maintain said U-shaped spring stressed.

3. A doll, comprising a torso, articulated arms associated with the torso, articulated legs also associated with the

torso, a leaf spring, means anchoring the leaf spring within the torso in proximity of the juncture of the torso with the legs, a U-shaped spring rising from the leaf spring toward the top of the torso, the U-shaped spring being anchored to said leaf spring with the base thereof, links connecting the leaf spring to the legs at the knees, said connection maintaining the leaf spring stressed, links connecting the wrists of the sectional arms to the ends of the U spring, said connection stressing the U-shaped spring, an expansible rod anchored with one end thereof to the torso, a ball associated with the other end of said rod, and a head carrying said ball and engaging the torso, said expansible rod normally maintaining the head against the torso.

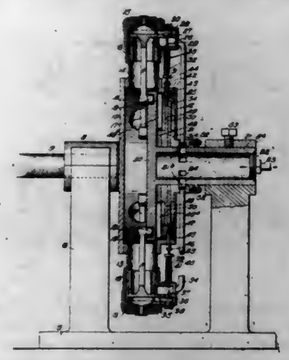


4. A doll having a torso, articulated legs associated with the torso, articulated arms associated with the torso, a leaf spring, said torso presenting a seat for the leaf spring in proximity of the juncture thereof with the legs, a U-shaped spring resting with its base on the leaf spring and having the ends thereof directed toward the top of the torso, means anchoring the U-shaped spring and the leaf spring to the torso, a rod having one end thereof anchored to the means anchoring the leaf to the U-shaped spring, a spring associated with said rod and normally tending to resist the lengthening thereof, a ball associated with said rod, a head carrying said ball whereby said head is drawn against the torso by said spring which resists the lengthening of the rod, flexible members connecting the wrists of the articulated arms with the ends of the U-shaped springs and whereby the joints of said articulated arms are maintained in engagement, and flexible means connecting the ends of the leaf spring to the articulated legs in proximity of the knees.

5. A doll having an articulated body, a flat metallic spring within the torso of the doll, flexible members connecting the spring to the legs, a second flat spring, flexible means connecting the second flat spring to the arms, means anchoring the two springs to the torso, a yielding member in the head of the doll, and a yielding rod connecting the yielding member to the torso.

1,212,100. INTERNAL-COMBUSTION ENGINE. HERSCHEL OLDHAM, Escondido, Cal., assignor of two-fifths to F. D. Hall, Escondido, Cal. Filed Sept. 24, 1915, Serial No. 52,390. Renewed Sept. 28, 1916. Serial No. 122,738. (Cl. 123—44.)

1. In an internal combustion engine, the combination of a support having alined bearings, a sleeve secured in one of said bearings, a casing mounted to turn relative to said sleeve, the sleeve extending through one side of the casing, a power shaft extending through the other bearing of the support and connected rigidly with the other side of said casing, cylinders mounted upon said casing, a piston slidably mounted within each cylinder, a piston rod secured rigidly to said piston, an intake chest disposed adjacent each cylinder and adapted to communicate therewith, an exhaust chest disposed adjacent each cylinder and adapted to communicate with the same, a main cam plate within the casing and rigidly connected with the inner end of said sleeve, the piston rods engaging said main cam plate, an intake-controlling cam plate, and an exhaust-controlling cam plate mounted rigidly upon said sleeve within the casing, means for supplying an explosive mixture to said intake chests, mechanism actuated by the intake cam plate for delivering charges of explosive mixture from the intake chests to said cylinders, and mechanism actuated by said exhaust-controlling cam plate for discharging burnt gases from the said cylinders.



2. In an internal combustion engine, the combination of a support having alined bearings, a sleeve secured in one of said bearings, a main cam plate, an intake-controlling cam plate and an exhaust-controlling cam plate mounted rigidly upon said sleeve at one side of the main cam plate, a casing mounted revolubly in relation to said sleeve and inclosing all of said cam plates, the sleeve extending through one side of the casing and carrying the main cam plate at its inner end, a power shaft extending through the other bearing and connected rigidly with the other side of said casing and adapted to be turned by the rotation thereof, cylinders mounted upon said casing, pistons slidably mounted within said cylinders, piston rods connected rigidly with said pistons, heads carried by said piston rods, rollers mounted upon said heads and engaging said main cam plate so as to establish a working relation between said pistons and said main cam plate, mechanism connected with said intake cam plate and actuated thereby for delivering charges of explosive mixture to said cylinders, and other mechanism associated with said exhaust-controlling cam plate and actuated thereby for discharging burnt gases from said cylinders.

3. In an engine, the combination of a revoluble casing, a power shaft connected rigidly with one side of the casing and adapted to receive its power by the rotation of the casing, a plurality of cylinders carried by said casing, pistons slidably mounted within said cylinders, piston rods connected with said pistons, stationary mechanism including a sleeve in line with the shaft and on which the casing is mounted to rotate, and a cam on the inner end of said sleeve engaging said piston rods and co-acting therewith for maintaining a working relation between said stationary mechanism and said revoluble casing, an intake chest and an exhaust chest at one side of each cylinder and adapted to communicate therewith, a valve for controlling communication between said intake chest and the cylinder with which it is associated, a separate valve for controlling communication between each exhaust chest and the cylinder with which it is associated, a valve stem for each valve extending inward from the said chests and having guided movement, a dolly rod for each valve stem, said dolly rod having guided movement in said revoluble casing and being disposed in alinement with the valve stem with which it is associated so that the movement of a dolly rod causes the corresponding valve to open, the dolly rods controlling the inlet valves being disposed in one plane and the dolly rods controlling the exhaust valves being disposed in a different plane, and a pair of cam plates housed within said revoluble casing and located alongside each other, said cam plates being stationary on said sleeve and provided with lobes disposed within the path of travel of said dolly rods.

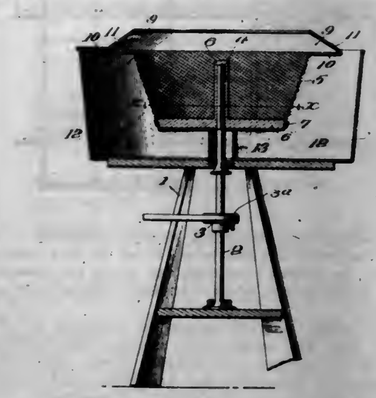
4. In an internal combustion engine, the combination of a support having alined bearings, a casing, a revoluble shaft extending through one of said bearings and rigidly secured to one side wall of the casing, the shaft being rotated by the rotation of the casing, a hollow sleeve rigidly secured in the other bearing and extending through the other side wall of the casing to the interior thereof, a main cam plate rigid on the inner end of the sleeve, cylinders carried by said casing, pistons in said cylinders having piston rods engaging the said cam plate, an intake chest and an exhaust chest at one side of each cylinder, means for supplying explosive mixture to the hollow sleeve, the sleeve having openings, a revoluble collar surrounding the said sleeve and secured to the side wall of the casing, the collar having a hub portion, supply tubes communicating with the intake chests and connected at their inner ends to said hub portion, the said hub portion of the collar having an internal annular passage communicating with the openings of the sleeve and the inner ends of said supply tubes, valves for controlling communication between the said intake and exhaust chests and the said cylinders, cam plates mounted rigidly on the said sleeve alongside each other, and means controlled by said cam plates on the rotation of the casing for actuating said valves.

5. In an internal combustion engine, the combination of a support having alined bearings, a casing having a back plate, a casing band mounted on the back plate, and a face plate secured to the casing band, a revoluble shaft carrying the back plate and extending through one of said bearings, a hollow sleeve rigidly secured in the other bearing and extending through the face plate to the interior of the casing, a main cam plate at the inner end of said fixed sleeve, means for supplying explosive mixture to the fixed sleeve, the said sleeve being provided with openings leading therefrom, a plurality of internal combustion cylinders carried by said casing, a piston slidably mounted within each cylinder, piston rods secured to said pistons and provided with means for engaging the main cam plate, an intake chest and an exhaust chest located adjacent each other at one side of each cylinder, supply tubes communicating with the said intake chests, a revoluble collar surrounding the said sleeve and secured to the said face plate of the casing, the collar having a hub portion to which the inner ends of the supply tubes are connected, the hub having an annular passage communicating with the inner ends of the supply tubes and with the openings of the said fixed sleeve, valves for controlling the communication between the intake chests and the adjacent cylinders, valves for controlling the communication between the cylinders and the exhaust chests, an intake cam plate and an exhaust cam plate secured rigidly upon the said fixed sleeve adjacent each other and between the said main cam plate and the face plate of the casing, and means controlled by said cam plates on the rotation of the casing for actuating said valves to admit charges of explosive mixture from said intake chests into the adjacent cylinders and to discharge burnt gases from said cylinders.

1,212,101. FRUIT-SEEDER. DAVID PHILLIPS, Daytona, Fla. Filed May 1, 1916. Serial No. 94,623. (Cl. 210—34.)

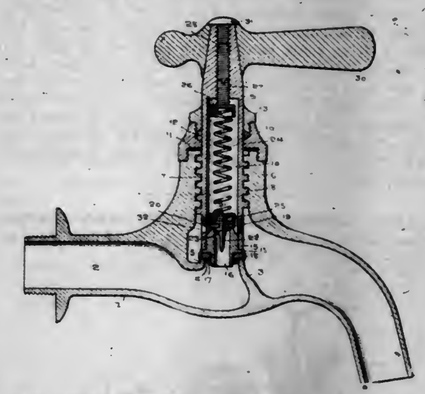
1. A separator comprising a vertical rotary shaft, a separator proper mounted thereon and having an upwardly flared perforated side wall, and an annular pocket surrounding, and attached to, the upper edge of said wall, and its floor or bottom diverging horizontally directly from the wall, whereby the pocket is adapted to receive seed and refuse matter separated by centrifugal action from the material treated.

2. A rotary separator of the character specified, comprising an imperforate bottom having a centrally disposed socket and comprising upwardly flared walls which are perforated and an annular pocket at the upper edge of the side walls for catching and retaining the matter separated from the material to be treated.



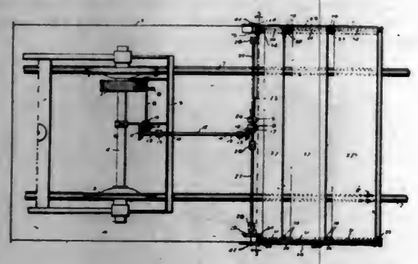
3. In apparatus of the character specified, a rotary separator comprising an imperforate bottom and perforate side walls and having an annular pocket at its upper edge and a receptacle comprising a bottom disposed some distance below the bottom of the separator and formed with a central opening and having a collar in line with the opening and rising from the bottom of the receptacle to within a short distance of the bottom of the separator.

1,212,102. SAFETY ATTACHMENT FOR FAUCETS. BARNEY PIPE, San Diego, Cal. Filed Dec. 11, 1915. Serial No. 66,302. (Cl. 137—4.)



The combination with a faucet having a valve seat therein, a valve cooperating with said seat, and a valve stem having a cavity therein and an outlet opening for said cavity, said stem provided externally with graduations, of an apertured plug fitted in the said cavity having a valve seat surrounding said aperture, an auxiliary valve in said cavity cooperating with the last named seat, a spring adapted to direct pressure on said auxiliary valve, a screw to tension said spring, the screw head designed to selectively aline with the graduations to indicate the pressure on the auxiliary valve, a handle for said valve stem, and a screw cap threaded connectedly to the end of the valve stem to close the cavity therein and retain the handle in position on the stem.

1,212,103. CAR-FENDER. FRANK J. PLUMMER, Portland, Me. Filed May 26, 1916. Serial No. 99,986. (Cl. 105—129.)



1. A fender of the character described composed of a frame, transversely-movable belts carried by said frame, mechanism for driving said belts, and means for connecting and disconnecting said mechanism, substantially as described.

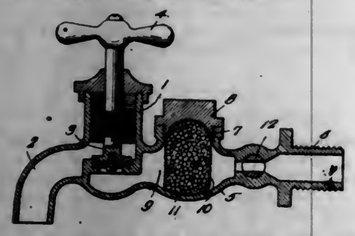
2. In a fender, movable means for removing an obstruction from the fender path, normally-disconnected mechanism for driving said movable means, and automatic means for connecting said mechanism when an obstruction is encountered, substantially as described.

3. The combination with a vehicle, of a fender therefor including movable belts, normally-disconnected mechanism for actuating said belts, and automatic clutch means for coupling said mechanism to drive the belts when the fender encounters an obstruction, substantially as described.

4. The combination with a vehicle, of a fender therefor including side frame members hinged to fold, transversely-movable belts carried by said frame members, normally-disconnected mechanism for driving said belts, a clutch for coupling said mechanism, operator-controlled means for throwing said clutch, and automatic means also for throwing said clutch, substantially as described.

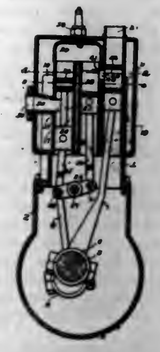
5. The combination with a vehicle, of a fender therefor comprising frame members, a plurality of transversely-movable belts supported in said frame members, belt shafts, a drive shaft in operative engagement with said belt shafts, mechanism for rotating the drive shaft when the vehicle is in motion, a clutch normally disconnecting said drive shaft from said mechanism, automatic means for engaging said clutch whenever an obstacle strikes the fender, and operator-controlled means for throwing said clutch independent of said automatic means, substantially as described.

1,212,104. COMBINATION FAUCET AND FILTER. LEOPOLD PROCKER, New York, N. Y. Filed May 25, 1916. Serial No. 99,809. (Cl. 210—7.)



In a combination faucet and filter, the combination with a faucet casing and spout of a reciprocating valve mounted in the former, an extension on the casing having an opening in the upper side thereof and a chamber located beneath the opening, a filter including a screen cylinder having a filtering material therein removably mounted in the chamber, a cap for closing the opening in the extension of the casing and having a portion extending into said opening and engaging the upper end of the filter so that it may force the filter into the chamber and fill the latter, the said filter being out of alinement with the line of motion of the aforementioned reciprocating valve.

1,212,105. INTERNAL-COMBUSTION ENGINE. HARVEY L. REESE, Sharon Hill, and HAVILAND H. PLATT, Wallingford, Pa., assignors to Reese-Platt Engine Company, Wilmington, Del., a Corporation of Delaware. Filed Dec. 27, 1913. Serial No. 808,997. (Cl. 123—49.)



1. The combination in an internal combustion engine of a crank shaft; a working and a compression cylinder mounted with their center lines in a plane at right angles to the line of said shaft; a combustion chamber directly connecting said cylinders; a valve mounted to control the flow of fuel from a source thereof to the compression cylinder and from said cylinder to the combustion chamber; a second valve mounted to control the passage of products of combustion from the combustion chamber to the working cylinder; a third valve mounted to control the exhaust of products of combustion from the working cylinder, all of said valves being operative at one side of the cylinders; with mechanism for positively actuating said valves.

2. The combination in an internal combustion engine of a compression and a working cylinder; a crank shaft extending substantially at right angles to a plane passing through the center lines of said cylinders; a combustion chamber directly connecting the cylinders; three piston valves mounted at one side of said cylinders with their axes adjacent a single plane, for controlling the flow of fuel and the exhaust of products of combustion; with mechanism for positively operating said valves.

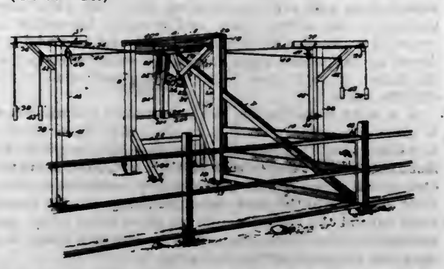
3. The combination in an internal combustion engine of a working cylinder; a combustion chamber; two valves mounted to operate in parallel lines for respectively controlling the flow of fuel to the combustion chamber and the passage of products of combustion from the same to said cylinder; mechanical elements connecting said valves to balance them; and means for operating the valves.

4. The combination in an internal combustion engine of a cylinder; a piston therein; a combustion chamber; two piston valves respectively controlling the flow of fuel to said combustion chamber and its passage therefrom to the cylinder; a rocker arm connected to both of said piston valves; and means for oscillating said rocker arm to operate the valves.

5. The combination in an internal combustion engine of a compression cylinder; a piston therein; a working cylinder; a piston in said working cylinder; a combustion chamber having two cylindrical valve chambers communicating therewith; piston valves in said latter chambers mounted to respectively control the flow of fuel to the combustion chamber from the compression cylinder and from said chamber to the working cylinder; rods connected to said valves; a rocker arm connecting both of said rods; and means for oscillating the said rocker arm to actuate the valves.

[Claims 6 to 11 not printed in the Gazette.]

1,212,106. GATE-OPERATOR. CHARLES REMHARK, San Francisco, Cal. Filed May 15, 1915. Serial No. 28,324. (Cl. 39—36.)



1. The combination with a swing gate, of separate latches spaced to receive a gate member to retain the latter in the closed position, independent latch operating means on the gate, and actuating means pivotally mounted on the gate connected with the latch operating means and having initial movement to actuate the said latch operating means and serving to open the gate after the release of the latter.

2. The combination with a swing gate, of separate latch members spaced to receive a member of the gate to retain the latter in closed position, latch operating means pivotally mounted on the gate to operate either latch, pull cords extending in opposite directions from the gate and connected with the latch operating means, and arranged so that a pull thereon will initially actuate said operating means and then swing the gate, and movably mounted strike plates operatively connected with the latches and disposed in position to be struck by the gate in the closing of the latter.

3. The combination with a gate having a vertical pivot post and a counter balancing extension beyond the post, a latch mounted in position to engage the said extension in the closed position of the gate, latch operating means on the said extension, pull cords extending in opposite directions from the gate and connected with the latch operating means, said pull cords being adapted to actuate the latch operating means and then swing the gate, and a second latch operating means operatively connected with the latch and disposed in position to be actuated by the gate extension in the closing of the gate.

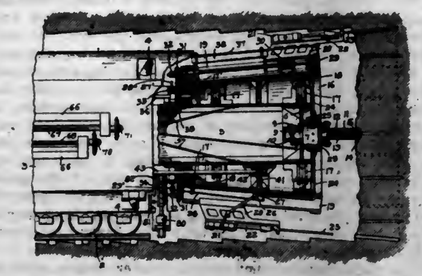
4. The combination with a gate, of a pull cord, operatively connected with the gate, guide means over which the cord runs, means tending to maintain the cord approximately taut, a latch mounted to engage the gate in the open position, and a roller riding on the cord and having operative connection with the said latch, whereby to raise the latch and disengage the same from the gate when a pull is exerted on the cord.

5. The combination with a gate, of a pull cord, operatively connected with the gate, guide means over which the cord runs, means tending to maintain the cord approximately taut, a latch mounted to engage the gate in the open position, a roller riding on the cord and having operative connection with the said latch, whereby to raise the latch and disengage the same from the gate when a pull is exerted on the cord, a relatively fixed element, and flexible means connecting the said element with the roller, to prevent displacement of the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,212,107. TUNNELING-MACHINE. DIGHTON A. ROBINSON, Seattle, Wash. Filed Aug. 1, 1910. Serial No. 574,914. (Cl. 125—14.)

1. In a tunneling machine; a channeling apparatus comprising a revolving drum, a support therefor, carriages mounted on said drum and having cylinders and pistons and drills mounted therein, a fluid pressure reservoir, fluid pressure pipes connecting said reservoir with said cylinders, a valve for each pipe, common means for controlling the valves, and means for revolving the drum.



2. In a tunneling machine, a channeling apparatus comprising a revolving drum, a centrally arranged support having means to engage the heading of the tunnel, carriages mounted on said drum, cylinders and pistons therefor carried by said carriages, said central support forming a fluid pressure reservoir, pipes connecting said reservoir with said cylinders, and devices for controlling independently the flow of fluid pressure from said reservoir into said cylinders and common means for actuating said devices.

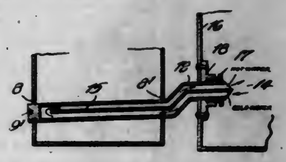
3. In a tunneling machine, a channeling apparatus comprising a centrally arranged fluid pressure reservoir having a head and a chamber provided therein, said chamber having a series of ports and a valve controlling admission of fluid pressure to said chamber, said head having a part to engage the tunnel heading and provided with a longitudinal extension, a revolving drum, channeler carriages carried by said drum having cylinders and pistons therefor, and fluid pressure pipes leading from said ports to said cylinders.

4. In a tunneling machine, a revolving member, channelers mounted thereon, means supporting said revolving member, said supporting means having a part to engage the heading of the tunnel and a longitudinal extension carried by said engaging means, for the purpose specified.

5. In a tunneling machine, a centrally arranged fluid pressure reservoir having a head, a stud carried by said head, a telescoping sleeve mounted on said stud and means for operating said sleeve to project or withdraw it, said sleeve being adapted to engage the tunnel heading, revolving means carried by said fluid pressure reservoir and a channeling mechanism mounted on said revolving means.

[Claims 6 to 19 not printed in the Gazette.]

1,212,108. WATER-HEATER. VAN KING ROBINSON, Gatun, Canal Zone. Filed Oct. 18, 1916. Serial No. 126,252. (Cl. 126—34.)



1. In a water heater, the combination with a stove including an oven and a fire box, of a heater casing including an elongated body portion of rectangular formation in cross section and extending through opposite walls of the fire box, the casing having an upwardly inclined portion at one end of said body portion, a circular extension forming a continuation of said upwardly inclined portion and adapted to be projected into a tank, and a baffle plate arranged in said heater casing medially of the top and

bottom thereof and extending for approximately the entire length thereof.

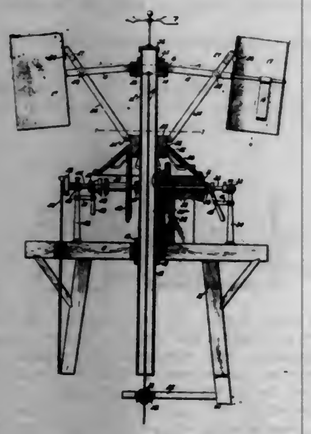
2. In a water heater, the combination with a stove including an oven and a fire box, of a heater casing including an elongated body portion of rectangular formation in cross section, the said body portion extending through corresponding openings in the walls of the fire box and arranged at an inclination within said fire box, the said body portion being closed at one end and having a means at said end for engaging the edge of the opening in the wall of the fire box, the casing having an upwardly inclined portion at the other end of said body portion, a circular extension forming a continuation of said upwardly inclined portion and adapted to be projected into the tank, said circular extension having its ends reduced to provide oppositely beveled surfaces, and a baffle plate arranged in said heater casing and extending for approximately the entire length thereof, the end of said plate adjacent said circular extension projecting beyond the inner ends of said beveled surfaces.

3. A water heater comprising a heater casing adapted to be mounted in the fire box of a stove, and including an elongated body portion having one end closed and provided in its bottom at said end with engaging means, and its other end provided with a diagonal portion, an extension projecting from said diagonal portion and in parallel relation with said body portion, and a baffle plate arranged in said heater casing and extending approximately the entire length thereof, said plate terminating short of the closed end of said casing.

4. A water heater comprising a heater casing including an elongated body portion, an extension forming a part of said body portion and projecting in a different plane therefrom, the extremity of said extension being oppositely beveled, and a baffle plate extending longitudinally of said body portion and said extension for approximately the entire length thereof, the end of said baffle plate adjacent said extension projecting beyond the inner ends of the beveled surfaces thereof.

5. A water heater comprising a heater casing, including an elongated body portion adapted to be mounted in the fire box of a stove, and having a notch in its bottom at one end adapted to engage the fire box to hold the casing in position, an extension forming a part of said body portion and arranged in a different plane therefrom, and a baffle plate extending longitudinally of said body portion and said extension for approximately the entire length thereof.

1,212,109. WIND-MOTOR. ERNEST C. RODWICK, Santa Barbara, Cal. Filed Apr. 22, 1916. Serial No. 93,018. (Cl. 170—30.)



1. In a wind motor, a wind wheel including collars, means to slide one collar relatively to the other, arms pivoted at their inner ends on the slidable collar, wind blades mounted on said arms to rock on their own axes, arms pivoted on the second collar, and co-acting trip members on the second arms and on the said blades to turn the latter on their axes by a sliding movement of the collar.

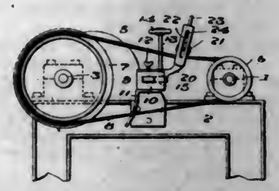
2. A wind motor having means including collars, means to slide one collar relatively to the other, arms pivoted at their inner ends on the slidable collar, wind blades mounted on said arms to rock on their own axes, arms pivoted on the second collar and pivotally connected between their ends with the first arms, and coacting trip means on the second arms and on the said blades to turn the latter on their axes by the sliding movement of the slidable collar.

3. A wind motor having means including collars, means to slide one collar relatively to the other, arms pivoted at their inner ends on the slidable collar, wind blades mounted on said arms to rock on their own axes, arms pivoted on the second collar and pivotally connected between their ends with the first arms, the ends of the second arms beyond the second-mentioned pivot being offset, and members on the blades engageable by the said offset ends upon the swinging of the first arms.

4. In a wind motor, a tubular post having vertical slots, collars revoluble on said post, one of the collars being slidable relatively to the other, a vertical pull rod in said post, a transverse pin to which said rod is connected, said pin being extended through said slots and secured to the slidable collar, arms pivoted at their inner ends to said slidable collar, wind blades rockable on said arms to positions into or out of the wind, arms pivotally connected at their inner ends to the other collar and pivotally connected between their ends with the first arms, and co-acting trip members on the second arms and on the blades to rock the latter on their own axes by a swinging movement of the respective arms in response to the sliding movement of the slidable collar.

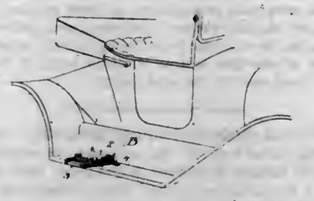
5. In a wind motor, a wind wheel including revoluble collars, one of which is slidable relatively to the other, wind blades swingingly connected with the slidable collar, means connected with the second collar and acting to turn the blades on their own axes by a sliding movement of the slidable collar, a gear element on the non-sliding collar, a driven shaft and drive means between said shaft and the said gear element.

1,212,110. POWER-TRANSMITTING AND SPEED-REGULATING MEANS. JOSEPH ROGISTER, Providence, R. I. Filed May 26, 1916. Serial No. 100,020. (Cl. 64—4.)



In means for the purpose described, the combination of a frame, a shaft mounted in the frame, a second shaft mounted in the frame and spaced from the first-named shaft, reversely-arranged cone pulleys fixed on said shafts, a bar fixed to and extending laterally outward from the frame, a belt on said pulleys, a carriage movable outwardly and inwardly on said lateral bar and between the upper and lower stretches of the belt and having a vertically-disposed shipper receiving one stretch of the belt and also having a vertically-disposed arm extending in the opposite direction from the carriage and receiving the other stretch of the belt, adjustable means for holding the carriage against casual movement on the bar, and a spring-pressed roller mounted in the last-named arm and bearing against said stretch of the belt.

1,212,111. FOOT SCRAPER AND CLEANER FOR AUTOMOBILE RUNNING-BOARDS. WILLIAM AUGUST ROOS, New York, N. Y. Filed Mar. 22, 1916. Serial No. 85,894. (Cl. 21—55.)



1. The combination of an automobile body having a pocket in its side, a running-board under the pocket, and a foot cleaner mounted to swing in and out of the pocket and to rest on the running-board when in operative position.

2. The combination of an automobile running-board, with a foot cleaner movably mounted on the running board to rest thereon when in use and foldable to position close to the body when not in use, said cleaning device comprising a brush, and a scraper fastened to the brush and adapted to extend beyond the outer edge of the running-board.

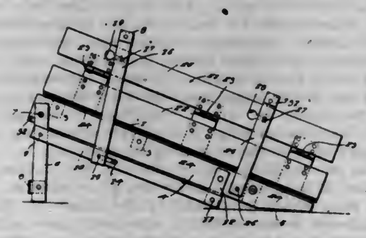
3. The combination of an automobile body having a pocket in its side, a running-board under the pocket, and a foot cleaner mounted to swing in and out of the pocket and to rest on the running-board when in operative position, said cleaner including a brush, and a scraper arranged on the brush in such a position that it will lie beyond the edge of the running-board, whereby the scrapings will drop between the scraper and running board.

4. The combination of an automobile running-board, hinge brackets fastened to the running-board adjacent the body of the automobile, the brackets having upwardly extending spring locking members, a cleaning device pivoted on the brackets to swing outwardly from a vertical to horizontal position, and means on the members and cleaning device adapted to interlock when the latter is in upright position.

5. The combination of a vehicle body including a running-board or step, a foot cleaning device hingedly mounted to normally lie in an upright position close to the body and movable to an approximately horizontal position where the device rests on the running-board or step, said device including a brush, and a scraping bar mounted on the brush and adapted to extend beyond the outer edge of the running-board or step when the cleaning device is in use.

[Claim 6 not printed in the Gazette.]

1,212,112. ANIMAL-CHUTE. GEORGE G. ROUDEBUSH, Oshkosh, Nebr. Filed May 11, 1916. Serial No. 96,900. (Cl. 119—82.)



1. In a hog chute structure, the combination, of a platform, depending side boards connected to said platform, upstanding side boards hingedly connected to said platform, and a pair of supporting legs pivotally connected to said depending side boards and adapted for downwardly extending positions with respect to the side boards for supporting one end of the platform at a higher elevation than the other end, arms pivotally connected to said supporting legs, and a substantially inverted U-shaped member connected to said arms and adapted for connection with the hinged upstanding side boards for holding them rigidly in place.

2. In a hog chute structure, the combination, of a platform, depending side boards connected to said platform, upstanding side boards hingedly connected to said platform, and a pair of supporting legs pivotally connected to said depending side boards and adapted for downwardly extending positions with respect to the side boards for supporting one end of the platform at a higher elevation than the other end, arms pivotally connected to said supporting legs, and a substantially inverted U-shaped member connected to said arms and adapted for connection with the hinged upstanding side boards for holding them rigidly in place, said substantially U-shaped member adapted for pivotal movement into a folded position upon upward pivotal movement of said legs toward said platform, and a second substantially U-shaped member pivotally connected to said depending side boards and adapted for detachable connection with said upstanding hinged side boards for holding them rigidly in place.

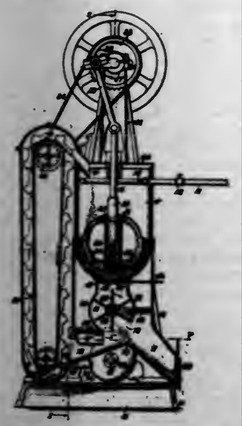
3. In a hog chute structure, the combination, of a platform, depending side boards connected to said platform, supporting legs pivotally connected to the forward end of said depending side boards, arms pivotally connected to said legs, upstanding side boards hingedly connected to said platform, a substantially inverted U-shaped member pivotally connected to said arms intermediate of their ends, headed pins carried by said inverted U-shaped member, said hinged upstanding side boards provided with key hole slots for receiving said headed pins for connecting said hinged side boards to said inverted U-shaped member when said supporting legs are in an extended supporting position, said U-shaped member being connected to said arms so that it will be moved downwardly toward said platform upon pivotal movement of said legs upwardly toward the platform.

4. In a hog chute structure, the combination, of a platform, depending side boards connected to said platform, supporting legs pivotally connected to the forward end of said depending side boards, arms pivotally connected to said legs, upstanding side boards hingedly connected to said platform, a substantially inverted U-shaped member pivotally connected to said arms intermediate of their ends, headed pins carried by said inverted U-shaped member, said hinged upstanding side boards provided with key hole slots for receiving said headed pins for connecting said hinged side boards to said inverted U-shaped member when said supporting legs are in an extended supporting position, said U-shaped member being connected to said arms so that it will be moved downwardly toward said platform upon pivotal movement of said legs upwardly toward the platform, and stop pins carried by said depending side boards for limiting the pivotal movement of said supporting legs.

5. In a hog chute structure, the combination, of a platform, depending side boards connected to said platform, supporting legs pivotally connected to the forward end of said depending side boards, arms pivotally connected to said legs, upstanding side boards hingedly connected to said platform, a substantially inverted U-shaped member pivotally connected to said arms intermediate of their ends, headed pins carried by said inverted U-shaped member, said hinged upstanding side boards provided with key hole slots for receiving said headed pins for connecting said hinged side boards to said inverted U-shaped member when said supporting legs are in an extended supporting position, said U-shaped member being connected to said arms so that it will be moved downwardly toward said platform upon pivotal movement of said legs upwardly toward the platform, and stop pins carried by said depending side boards for limiting the pivotal movement of said supporting legs, each of said side boards composed of a plurality of hingedly connected sections.

[Claim 6 not printed in the Gazette.]

1,212,113. HULLING-MACHINE. CARLOS SCHÄFLER, Merida, Mexico. Filed June 16, 1916. Serial No. 103,986. (Cl. 83—33.)



1. In a hulling machine, a vessel adapted to contain the cereal to be hulled and a plunger, means for moving the plunger up and down in the said vessel, and means for turning the plunger alternately in opposite directions.

2. In a hulling machine, a vessel having a hemispherical bottom and adapted to contain the cereal to be hulled and a spherical plunger within the said vessel and having an up and down and an alternate turning motion in opposite directions.

3. In a hulling machine, a vessel having a hemispherical bottom and adapted to contain the cereal to be hulled, a spherical plunger in the said vessel and spaced from the inner surface of the vessel, means for moving the plunger up and down, and means for turning the plunger alternately in opposite directions.

4. In a hulling machine, a vessel having a hemispherical bottom and adapted to contain the cereal to be hulled, a spherical plunger in the said vessel and spaced from the inner surface of the vessel, the said vessel bottom and the exterior surface of the plunger being corrugated, means for moving the plunger up and down, and means for turning the plunger alternately in opposite directions.

5. In a hulling machine, a vessel having a hemispherical bottom and adapted to contain the cereal to be hulled, a spherical plunger in the said vessel and spaced from the inner surface of the vessel, the said vessel bottom being provided with a corrugated lining and the exterior surface of the said plunger being provided with spiral corrugations, means for moving the plunger up and down, and means for turning the plunger alternately in opposite directions.

[Claims 6 to 17 not printed in the Gazette.]

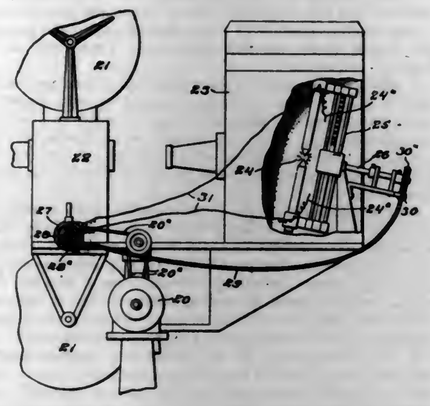
1,212,114. RETAINING DEVICE FOR UMBRELLA-RIBS. WILLIAM G. SCHEINPFLUG, New York, N. Y. Filed Apr. 14, 1916. Serial No. 91,043. (Cl. 135—44.)



1. A retaining device for holding umbrella ribs in closed position, comprising a flexible band provided at one end with a hook adapted to hook onto an umbrella rib adjacent the tip thereof and secure the band to the ribs, and fastening members, one at the said hook and the other at the free end of the band to fasten the said free end to the said hook.

2. A retaining device for umbrella ribs, comprising a flexible metal band, a hook pivotally connected with one end of the said band and adapted to hook onto an umbrella rib adjacent the tip thereof, and fastening members, one at the outer face of the said hook and the other at the inner side of the free end of the said band to fasten the said free band end to the said hook.

1,212,115. ILLUMINATION-CONTROLLER. GEORGE H. SCHERFF, New York, N. Y., assignor, by mesne assignments, to George H. Scherff & Company, Inc., Brooklyn, N. Y., a Corporation of New York. Filed Oct. 9, 1915. Serial No. 55,040. (Cl. 88—16.)



1. In projection apparatus, the combination, with picture-moving means and an illumination source associated therewith, of regulating mechanism operable to adjust the brilliancy of said source, and transmission means automatically operable in response to fluctuations in the brilliancy of said source to connect said regulating mechanism in driven relation to said picture-moving means, provision being made for automatically effecting disconnection when the desired adjustment is accomplished.

2. In projection apparatus, the combination, with picture-moving means and a projecting arc associated therewith, of regulating mechanism operable to adjust the brilliancy of said arc, and transmission means automatically operable in response to fluctuations in the brilliancy of said arc and arranged to connect said regulating mechanism in driven relation to said picture-moving means, provision being made for automatically effecting disconnection when the desired adjustment is accomplished.

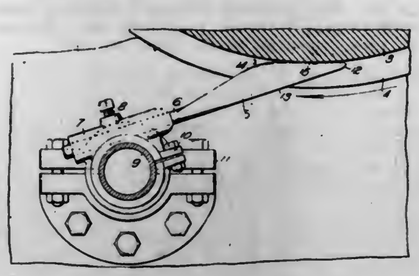
3. In projection apparatus, the combination, with picture-moving means and a projecting arc associated therewith, of mechanism for feeding the arc carbons, magnetic clutch means interposed between said picture-moving means and the carbon-feeding mechanism, said clutch means being normally idle, and electrical connection between said clutch means and said arc, whereby upon suitable fluctuation of current conditions in the arc said clutch means is actuated and the picture-moving means is caused to drive the carbon-feeding means.

4. In motion picture apparatus, the combination, with film-moving means and a projecting arc associated therewith, of a device for regulating the length of the arc, transmission means including a normally open magnetic clutch interposed between said device and said film-moving means, and a clutch-operating circuit connected across the arc and arranged to close said clutch upon suitable change in voltage across the arc and thereby to place said film-moving means in driving relation to said arc-regulating device.

5. In motion picture apparatus, the combination, with film-moving means and a projecting arc associated therewith, of arc-regulating means, and clutch means controlled by the voltage across the arc and automatically operable upon sufficient variation of arc voltage from normal to connect said arc-regulating means to said film-moving means for operation by the latter, said clutch means being arranged automatically to effect disconnection when the arc voltage returns substantially to normal.

[Claims 6 to 14 not printed in the Gazette.]

1,212,116. GROOVE-CLEANER FOR ROLLING-MILLS. FREDERICK SCHERR, Jr., and BYRON P. LUCE, Fajardo, Porto Rico. Filed Nov. 9, 1915. Serial No. 60,535. (Cl. 100—47.)



1. The combination with the grooved roll of a mill of cleaning means for the grooves, comprising a triangular-shaped blade for each groove and means for presenting two edges of the blade tangentially to the bottom of the groove at different points.

2. The combination with the grooved roll of a mill of cleaning means for the grooves, comprising a triangular-shaped blade for each groove, said blade having a cleaning edge and a contacting edge, means for maintaining the contacting edge in engagement with the bottom of the groove, said cleaning edge being so related to the contacting edge that the same is in a substantially tangential direction with the bottom of the groove.

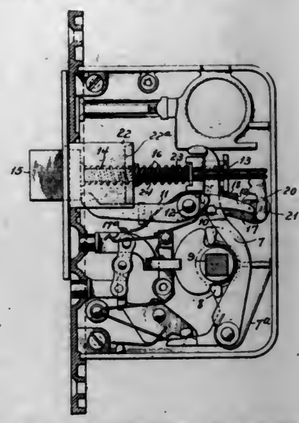
3. The combination with the grooved roll of a mill of cleaning means for the grooves, comprising a blade for each groove, said blade having a contacting edge and a cleaning edge, and means for maintaining the contacting edge against the bottom of a groove, the apex formed by the cleaning and contacting edges of the blade adapted to be disposed ahead of the radius joining the center of the roll and the point of contact.

4. The combination with the grooved roll of a mill of cleaning means for the grooves, comprising a triangular-shaped blade for each groove, each of the blades having a stem extending from one of the apexes of the blade, a bracket for each stem in which the stem is free to turn and slide, means for securing the stem to the bracket, and a cross bar adapted to extend parallelly to the roll for supporting said brackets, each of said brackets having clamping means for adjustably securing said brackets on to the bar, each bracket being adapted to maintain one edge of the blade in contact with the bottom of the groove, another edge of the blade being tangential to the bottom of the groove.

5. The combination with the grooved roll of a mill of cleaning means for the grooves, comprising a triangular-shaped blade for each groove, each of said blades having a stem extending from one of the apexes, each of the blades having a contacting and a cleaning edge, the apex formed by said edges being the attacking end of the blade, a bracket for each blade having a socket in which the stem is adapted to slide and turn, means for securing the stem to the socket, and a tubular bar adapted to extend parallelly to the roll for supporting the brackets, each of the brackets having clamping means for securing the bracket to the bar and whereby the socket of the bracket can be adjusted laterally and transversely of the bar, each bracket being adapted to maintain the contacting edge of the blade against the bottom of the groove, the cleaning edge of the blade being so related to the contacting edge that the same is substantially tangential to the bottom of the groove when the contacting edge of the blade is in engagement with the bottom of the groove.

[Claims 6 and 7 not printed in the Gazette.]

1,212,117. LATCH. REINHOLD SCHOELL, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Aug. 15, 1916. Serial No. 114,987. (Cl. 70—29.)



1. In a lock, the combination of a double throw bolt having a tail piece, a spring for projecting the bolt, a lever having means to engage a projection on the tail piece for holding the bolt in its partly projected position and a slide actuated by contact with the strike plate of the lock for holding the lever out of contact with the projection on the tail piece of the bolt so as to permit the latter to be fully projected.

2. In a lock, the combination of a double throw bolt having a tail piece, a spring for projecting the bolt, a lever having a shoulder to engage a projection on the tail piece for holding the bolt in its partly projected position, the tail piece having means for moving the lever out of the path of said projection as the bolt is moved to its retracted position, and a slide actuated by contact with the strike plate of the lock for holding the said lever out of the path of movement of the projection in the tail piece so as to permit the bolt to be fully projected.

3. In a lock, the combination of a bolt having a tail piece, a spring for projecting the bolt, a spring pressed pivoted lever engaging a projection on the tail piece of the bolt for holding the bolt in a partly projected position, means actuated by the inward movement of the bolt for disengaging the said lever and projection on the tail piece, and an independent device actuated by the inward movement of the bolt for holding the said lever out of the path of the said projection so as to permit the bolt to move to fully projected position.

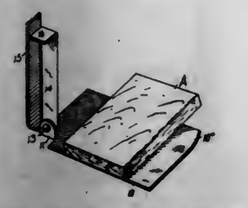
4. In a lock, the combination of a double throw bolt, a spring for projecting the same, a lever having a shoulder to engage a projection on the tail piece of the bolt for holding the bolt in its partly projected position, the said lever also having a stop, and a slide actuated by contact with the strike plate or keeper and engaging the stop on the lever for holding the latter out of the path of the projection on the tail piece so as to permit the bolt to be fully projected, the said stop normally resting in the path of the slide for preventing rearward movement of the latter when the bolt is partly projected.

5. In a lock, the combination of a spring actuated bolt having a tail piece, a pivoted lever having a shoulder

to engage a projection on said tail piece for holding the bolt in its partly projected position, the construction being such that the inward movement of the tail piece turns the pivoted lever and moves the shoulder thereon out of the path of the projection on the tail piece, and a slide movable rearwardly with the bolt and engaging and holding the lever against movement thereby permitting the bolt to move to double throw position.

[Claims 6 and 7 not printed in the Gazette.]

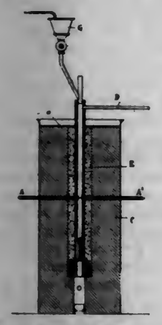
1,212,118. PLUG-TOBACCO CUTTER. HARRY HERMAN SCHUTZ, Los Lunas, N. Mex. Filed Jan. 27, 1916. Serial No. 74,632. (Cl. 131—33.)



1. An improved cutter for plug tobacco comprising a flat metal base, one corner of the same being upturned and constituting an upstanding hinge lug, an angle iron cutter consisting of a vertical knife member and a lateral back member formed integrally, the said knife member being pivoted at one end to said lug and its free end bent laterally beneath the back member and inward from the free end of the knife, as and for the purpose specified.

2. A tobacco-plug cutter comprising a sheet metal base plate adapted to support a tobacco plug, and a cutter hinged at one end to said base plate at the corner of the same, the cutter being in the form of an angle iron and presenting a vertical knife member and a lateral back member which is integral therewith, the knife member being provided at its free end with a stop, as and for the purpose specified.

1,212,119. PROCESS OF PRODUCING ALUMINIUM NITRID. OTTOKAR SERPEK, Paris, France, assignor to Societe Générale des Nitrures, Paris, France. Original application filed Oct. 23, 1913, Serial No. 796,913. Divided and this application filed Apr. 14, 1915. Serial No. 21,322. (Cl. 204—64.)



1. A process of obtaining aluminium nitrid, by heating aluminous material and carbon in an atmosphere containing nitrogen, the solid bodies being projected freely through a space filled with nitrogen and heated to the temperature of the reaction.

2. A process of obtaining aluminium nitrid, by heating aluminous material and carbon in an atmosphere of nitrogen, the solid bodies being projected in powdered form freely through a space filled with nitrogen and heated to the temperature of the reaction.

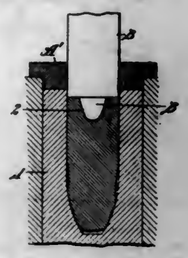
3. A process of obtaining aluminium nitrid, by heating aluminous material and carbon in an atmosphere of nitrogen, the solid bodies being allowed to fall freely through a space filled with nitrogen and heated to the temperature of the reaction.

4. A process of obtaining aluminium nitrid, by causing a mixture of aluminous material and carbon in finely divided condition to be projected freely through an electric arc in the presence of nitrogen.

5. A process of obtaining aluminium nitrid by causing a mixture of aluminous material and carbon in finely divided condition to be projected freely through an electric arc, together with a current of nitrogen flowing in the same direction.

[Claim 6 not printed in the Gazette.]

1,212,120. PROCESS FOR FORMING HOLLOW FORGINGS. EDWIN H. STEEDMAN, St. Louis, Mo. Filed Mar. 31, 1916. Serial No. 88,054. (Cl. 207—10.)



1. A process for forming a hollow forging, characterized by forming a depression or recess in a billet, and also compressing the metal surrounding said depression prior to the operation of forming a cavity or center opening in the billet.

2. A process for forming a hollow forging, characterized by forming a depression or recess in a billet and also subjecting the billet to longitudinal pressure in a die so as to compress the metal surrounding said depression in the billet and thus cause the metal to substantially fill the adjacent portion of the die, prior to the operation of forming a cavity or center opening in the billet.

3. A process for forming a hollow article, which consists in compressing a billet or metal blank in a die and also simultaneously forming a depression in said billet by a member that exerts longitudinal pressure on the billet, and thereafter forming a cavity or opening in the billet by means of a member that is centered by the depression in the billet and guided by the compressed metal in the billet that surrounds said depression.

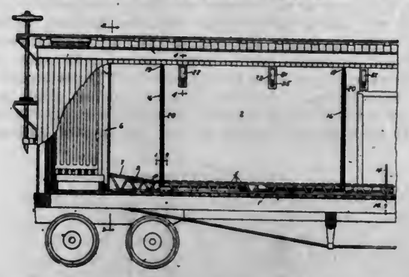
4. A process for forming a hollow forging, which consists in forming a depression in a heated billet or metal blank and also compressing the metal around said depression so that it is of substantially uniform density, and thereafter forging said billet into the shape of a hollow article by a member that enters the depression formed in the billet during the the first part of the forging operation.

5. A process for forming a hollow forging, which consists in forming a depression in a heated billet arranged in a die and also compressing the billet so as to fill the die to the desired extent around said depression, and thereafter forging said billet into a hollow article by a member that enters the depression in the billet during the first part of the forging operation.

[Claims 6 to 8 not printed in the Gazette.]

1,212,121. AUXILIARY FLOOR FOR RAILWAY-CARS. WILLIAM E. VAN DORN, Chicago, Ill., assignor to Van Dorn Girder Plate Company, a Corporation of Illinois. Filed June 3, 1915. Serial No. 31,843. (Cl. 105—15.)

1. The combination with a car, of an auxiliary perforated ventilating floor adapted to rest upon the main floor of the car, means for raising the auxiliary floor to and lowering it from the top of the car, and additional means for supporting the auxiliary floor in a raised position independently of the aforesaid means.



2. The combination with a car, of an auxiliary perforated ventilating floor adapted to rest upon the main floor of the car, cables extending between the auxiliary floor and the upper part of the car, means for actuating said cables to raise the auxiliary floor into the vicinity of the top of the car, and means for supporting the auxiliary floor in its raised position independently of said cables.

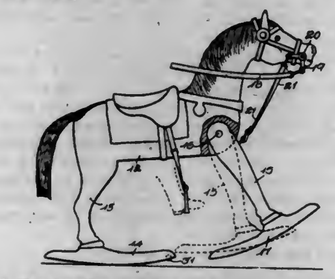
3. The combination with a car, of an auxiliary floor adapted to rest upon the main floor of the car, cables extending up the sides of the car from the auxiliary floor, protective ledges projecting from the sides of the car on opposite sides of the cables, and means for actuating the cables to raise the auxiliary floor into the vicinity of the top of the car.

4. The combination with a car, of an auxiliary floor adapted to rest above the main floor of the car, a drum on the under side of the auxiliary floor, cables extending from the drum to the sides of the car and up the latter to the upper part of the car, and means for actuating said drum to raise and lower the auxiliary floor.

5. The combination with a car, of an auxiliary floor adapted to rest above the main floor of the car, a drum on the under side of the auxiliary floor, cables extending from the drum to the sides of the car and up the latter to the upper part of the car, a worm wheel fixed to said drum, an actuating shaft mounted on the auxiliary floor, and a worm on said shaft meshing with said worm wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,212,122. PROGRESSIVE ROCKING-HORSE. JOHN F. WILKINSON, Winchendon, Mass., assignor to Arthur F. Evans, trustee of The Running Pony Company, Winchendon, Mass. Filed Apr. 29, 1916. Serial No. 94,353. (Cl. 46—22.)



1. A progressive rocking horse comprising a body, rigid rear legs provided with rockers, independently movable oscillatory front legs pivoted to the forward portion of the body, the rockers being adapted to support the body backwardly tilted with the front legs raised from the floor, and the front legs being adapted to support the body forwardly tilted with the rockers raised from the floor, and means operative when the body is tilted backward for projecting the front legs either singly or simultaneously to cause a forward movement of the rockers when the body is again tilted forward.

2. A progressive rocking horse comprising a body, rigid rear legs provided with rockers, independently movable oscillatory front legs pivoted to the forward portion of the body, the rockers being adapted to support the body backwardly tilted with the front legs raised from the floor, and the front legs being adapted to support the body forwardly tilted with the rockers raised from the floor, and means operative when the body is tilted backward for projecting the front legs either singly or simultaneously to cause a forward movement of the rockers when the body is again tilted forward, the front legs being normally held retracted toward the rockers.

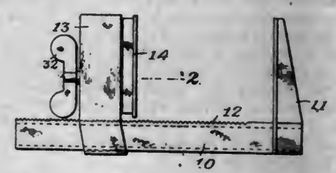
3. A progressive rocking horse comprising a body, rigid rear legs provided with rockers, independently movable oscillatory front legs pivoted to the forward portion of the body, the rockers being adapted to support the body backwardly tilted with the front legs raised from the floor, and the front legs being adapted to support the body forwardly tilted with the rockers raised from the floor, and means operative when the body is tilted backward for projecting the front legs either singly or simultaneously to cause a forward movement of the rockers when the body is again tilted forward, the front legs being provided with rockers adapted to coöperate with the rockers on the rear legs.

4. A progressive rocking horse comprising a body, rigid rear legs provided with rockers, oscillatory front legs pivoted to the forward portion of the body, the rockers being adapted to support the body backwardly tilted with the front legs raised from the floor, and the front legs being adapted to support the body forwardly tilted with the rockers raised from the floor, the front legs being independently movable, and means controlled by the rider and operative when the body is tilted backward for selectively projecting one leg only and thereby guiding the horse laterally, said means being adapted to simultaneously project both legs and thereby cause a straight ahead movement.

5. A progressive rocking horse comprising a body, rigid rear legs provided with rockers, oscillatory front legs pivoted to the forward portion of the body, the rockers being adapted to support the body backwardly tilted with the front legs raised from the floor, and the front legs being adapted to support the body forwardly tilted with the rockers raised from the floor, the front legs being independently movable, reins arranged to be pulled by the rider, and connections between said reins and the front legs, the arrangement being such that both front legs may be simultaneously projected, or either leg projected alone by said reins.

[Claims 6 to 11 not printed in the Gazette.]

1,212,123. CLAMP. ENOCH J. ANDERSON, Worcester, Mass. Filed May 15, 1916. Serial No. 97,570. (Cl. 144—303.)



1. As an article of manufacture, a hand clamp comprising a bar having teeth on one edge, a jaw mounted at one end thereof, and a movable jaw member comprising two main parts, a member having a passage therein for receiving the bar whereby said member is slidable along the bar and having in the surface which engages the toothed edge of the bar a plurality of teeth having a

pitch consisting of a multiple of the pitch of the teeth on the bar, and a jaw member movably connected therewith and carried thereby.

2. As an article of manufacture, a hand clamp comprising a toothed bar provided with a jaw thereon, a member readily adjustable along said bar and having a casing-like form, a jaw provided with a main body located within the casing of said movable member and adjustable therein toward and from the first named jaw, said movable jaw being provided with a longitudinal passage, a nut in said passage, and a screw connected with said nut and with said movable member, said nut being slidable with the screw along said passage for adjustment.

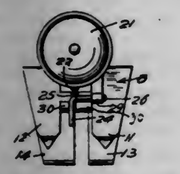
3. As an article of manufacture, a hand clamp comprising a bar and jaw connected together, a member movable along the bar, a movable jaw adjustably carried by said member, said movable jaw having a longitudinal passage therein, a nut slidable in said passage, and a left-handed screw connected with said nut having an enlarged collar therein, said movable member being provided with a pair of guides for the opposite sides of said collar.

4. As an article of manufacture, a hand clamp comprising a bar and jaw connected together, a member movable along the bar, a movable jaw connected with said member, said movable jaw having a passage therein, a nut slidable in said passage, a screw connected with said nut having an enlarged collar thereon, said movable member being provided with a pair of guides for the opposite sides of said collar, and with a longitudinal slot between them for the screw, said slot having an enlargement at the end near the bar for permitting the collar to be introduced.

5. As an article of manufacture, a hand clamp comprising a bar and jaw connected together, a member movable along the bar, a movable jaw adjustably carried by said member, said movable jaw having a longitudinal passage therein, a nut slidable in said passage, a screw connected with said nut, said movable member being provided with a guide for said screw, said nut being provided with a spring for constantly engaging the movable jaw and forcing it yieldingly away from the nut.

[Claim 6 not printed in the Gazette.]

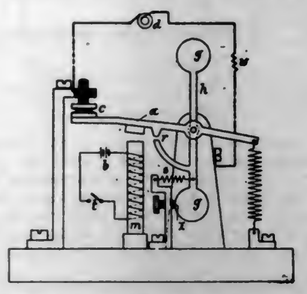
1,212,124. ALARM ATTACHMENT FOR DRIP-PANS. HARRY BUCKS, Somerville, Mass. Filed Apr. 20, 1916. Serial No. 92,500. (Cl. 116—15.)



In an alarm attachment for drip pans, a clamp comprising a plate bent on itself to form spring jaws, a handle integral with one of said jaws, a bracket integral with the other of said jaws, said bracket having a slot therein forming a guide, tongues integral with the last mentioned clamp, one of said tongues having a hole therein and constituting a bracket, a bell attached to said bracket, the other of said tongues being shaped to form a bearing, an arm having an angular extension supported in the bearing, the main portion of the arm being movable in the slot of the first mentioned bracket and in position to operate the bell.

1,212,125. SWITCH FOR HEAVY ALTERNATING CURRENTS. WALTHER BURSTYN, Berlin, Germany. Filed Jan. 14, 1915. Serial No. 2,268. (Cl. 175—282.)

1. In a switch for heavy alternating currents, the combination of switch contacts having surfaces consisting of metal, such as silver, which is a good conductor of electricity and heat and does not readily oxidize, one of said surfaces being slightly convex, and means operating independently of the speed of movement of a hand to open said contacts to such an extent that at the moment of the next minimum value of the alternating current the contacts will not be farther apart than the distance beyond which the quenching and cooling effect of the electrodes will not extinguish the resulting arc, whereby when the contacts are opened the resulting arc will be extinguished in consequences of the quenching and cooling effect produced at the moment the value of the alternating current is at its minimum, and means for closing said contacts.



2. In a switch for heavy alternating currents, the combination of switch contacts having slightly convex surfaces consisting of a metal which is a good conductor of electricity and heat and does not readily oxidize, means for causing the contacts to initially open a small distance with a quick movement so that at the moment of the next minimum value of the alternating current the contacts are not farther apart from each other than from one-half to two millimeters so that the issuing arc is extinguished in consequence of the quenching effect produced by the electrodes, said means thereafter causing a further separation of the electrodes.

3. In a switch for alternating currents, the combination of switch contacts, means for initially separating one of said contacts from the other a predetermined distance so that at the moment of a succeeding minimum value of the alternating current the issuing arc will be extinguished in consequence of the quenching effect produced at the moment the current passes zero, and means for resisting the separation of said contacts after said initial movement.

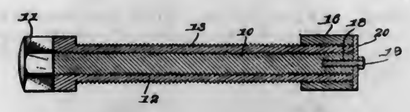
4. In a switch for heavy alternating currents, the combination of switch contacts, means for initially separating one of the contacts from the other a predetermined distance so that at the moment of a succeeding minimum value of the alternating current the issuing arc will be extinguished in consequence of the quenching effect produced at the moment the current passes through zero value, and means for resisting the further separation of said contacts after the said initial separation.

5. In a switch for heavy alternating currents, the combination of switch contacts, electric means capable of causing the separation of one of said contacts from the other, said means causing an initial separation for a predetermined distance so that at the moment of the next minimum value of the alternating current controlled by said switch the issuing arc will be extinguished in consequence of the quenching effect produced at the moment the current passes through zero value, and mechanical means permitting the further separation of said contacts after said initial separation.

[Claim 6 not printed in the Gazette.]

1,212,126. SELF-TIGHTENING BOLT AND NUT. JESSE C. CANFIELD, Elkins, W. Va. Filed June 9, 1915. Serial No. 33,051. (Cl. 151—27.)

1. The combination with a bolt provided with a threaded shank, of a sleeve having internal threads complemental to the threads of said bolt, said sleeve having external threads of a pitch opposite to the pitch of the internal threads, a nut having threads complemental to the exterior threads of said sleeve, and means engaging contiguous ends of the nut and sleeve for preventing movement of said nut and said sleeve longitudinally of said bolt.

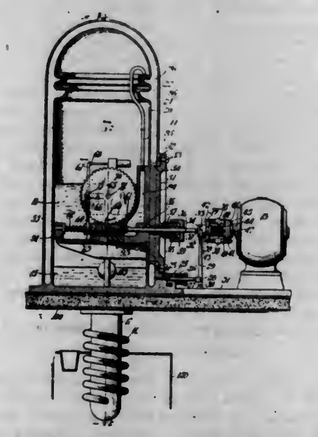


2. The combination with a bolt provided with a threaded shank, of a sleeve having an external angular portion at one end and internal threads complemental to the threads of said bolt, said sleeve having external threads of a pitch opposite to the pitch of the internal threads, a nut having threads complemental to the exterior threads of said sleeve, and means engaging contiguous ends of the nut and sleeve for preventing movement of said nut and said sleeve longitudinally of said bolt.

3. The combination with a bolt provided with a threaded shank, of a sleeve having internal threads complemental to the threads of said bolt, said sleeve having external threads of a pitch opposite to the pitch of the internal threads, a nut having threads complemental to the exterior threads of said sleeve, a retaining cap to prevent movement of said nut and sleeve longitudinally of said bolt, and means for securing said cap in operative position.

4. The combination with a bolt provided with a threaded shank having a threaded bore in one end, the threads of said bore being opposite in pitch to those of the shank, of a locking sleeve having internal threads complemental to the threads of said bolt, and external threads of a pitch opposite to the pitch of the internal threads, a nut having threads complemental to the external threads of said sleeve, a retaining cap, and a securing bolt for said cap engaging the threaded bore of said first mentioned bolt.

1,212,127. REFRIGERATING APPARATUS. HOWARD H. CARPENTER, Altadena, Cal. Filed Aug. 31, 1915. Serial No. 48,359. (Cl. 62—116.)



1. In a refrigerating apparatus, walls forming a condensing chamber, means for circulating a cooling fluid through the walls of said chamber, pump means for compressing a refrigerant, a body of lubricant surrounding said pump means, and means for circulating said lubricant over the inner walls of said condensing chamber.

2. In a refrigerating apparatus, walls forming a condensing chamber, means for circulating a cooling fluid through the walls of said chamber, pump means for compressing a refrigerant, a body of lubricant surrounding said pump means, means whereby said pump means circulates said lubricant over the inner walls of said condensing chamber, a series of water cooled shelves formed on the inner walls of said condensing chamber near the top thereof, and means for circulating said lubricant over said shelves and over the inner surface of the walls of said cooling chamber.

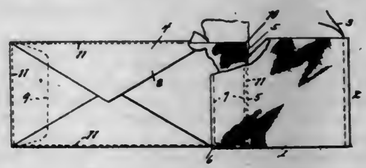
3. In a refrigerating apparatus, a pump, a driven gear connected to said pump, a driving gear, driving means connected to and driving said driving gear, a relief valve so connected that it will relieve excessive pressure on said pump, and means whereby said relief valve is opened whenever there is an excessive pressure developed between said driven and said driving gear.

4. In a refrigerating apparatus, walls forming an expansion chamber, a pipe for drawing refrigerant from said chamber, a lip surrounding a cavity into which said pipe extends, said lip forming an annular space with the walls of the expanding chamber, and means for discharging refrigerant into said annular space.

5. In a refrigerating apparatus, walls forming a condensing chamber, means for circulating a cooling fluid through the walls of said chamber, a valve for controlling the flow of cooling fluid through said walls, and means for opening said valve only when the pressure in said chamber rises above a certain amount.

[Claim 6 not printed in the Gazette.]

1,212,128. DOUBLE-COMPARTMENT PACKAGE FOR MAILING PURPOSES. CLARENCE P. CHAMBERLIN and CHESTER T. FEZZEY, Detroit, Mich.; said Chamberlin assignor to said Fezzey. Filed Apr. 18, 1914. Serial No. 832,687. (Cl. 229—72.)



1. A mailing package comprising a sealable envelop of itself forming a closed receptacle for first class mail matter, an open ended tubular cloth member sewed to the envelop at one end, the stitching serving to close an end of the tube and forming thereof a separate compartment for parcel post matter, and means for releasably closing the opposite end thereof.

2. A mailing package comprising an envelop having a gummed flap for the sealing thereof, a cloth container of tubular form, the envelop being partly inserted within an end of the cloth container and secured thereto, and a cord secured to the free end of the cloth container for closing the opening thereof.

3. A package for mailing parcel-post and first class mail matter comprising a paper envelop having a cloth reinforcement secured thereto, and a cloth container forming a separate compartment for parcel-post matter sewed to the envelop, the stitching passing through both the envelop and reinforcement.

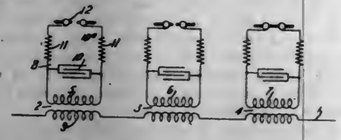
4. A package for mailing purposes comprising a paper envelop for first class mail matter, a cloth reinforcement secured within the envelop, and a cloth container for parcel-post mail matter sewed to the envelop, the stitching passing through both the envelop and the reinforcement.

5. A double compartment package for mailing purposes comprising a sealable envelop, a cloth container of tubular form, the envelop being partly inserted within an end of the cloth container and secured thereto the envelop be-

ing of a width to hold the cloth container at the point of securing comparatively flat, and means for closing the open end of the cloth container.

[Claim 6 not printed in the Gazette.]

1,212,129. LIGHTNING-ARRESTER. ALEXANDER CHERNYSHOFF, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 10, 1914. Serial No. 861,142. (Cl. 175—30.)



1. A lightning arrester comprising a series transformer having a primary winding which is adapted to be connected in circuit with a line conductor and a secondary winding irresponsive to normal conditions of the system, means associated with the secondary winding for substantially instantaneously absorbing the energy of disturbances of more than a predetermined degree of severity, and energy-consuming means for subsequently dissipating the energy thus absorbed.

2. A lightning arrester comprising a series transformer having a primary winding which is adapted to be connected in circuit with a line conductor and a secondary winding irresponsive to normal conditions of the system, means associated with the secondary winding for substantially instantaneously absorbing the energy of disturbances of more than a predetermined degree of severity, and means comprising an energy-consuming element for subsequently dissipating such energy by effecting alternating discharges of higher frequencies than that of the original disturbances through said energy-consuming element.

3. A lightning arrester comprising a series transformer having a primary winding that is adapted to be connected in circuit with a line conductor and a secondary winding irresponsive to normal operating conditions but effective for abnormal conditions, a concentrated capacity element associated with the secondary winding for substantially instantaneously absorbing the energy of disturbances of more than a predetermined degree of severity, and a circuit connected in shunt to said capacity element for consuming the energy of the disturbances absorbed by said capacity element.

4. In a protective device, the combination with a line conductor, a secondary circuit inductively related thereto, and means irresponsive to normal operating conditions for transferring disturbing energy of abnormal frequencies impressed on the line conductor to the secondary circuit, of means embodied in the secondary circuit for instantaneously absorbing the energy of said disturbances, and means for subsequently dissipating substantially all of the absorbed energy as heat.

5. In a protective device, the combination with a line conductor, a secondary circuit inductively related thereto, and means irresponsive to normal operating conditions for transferring disturbing energy of abnormal frequencies impressed on the line conductor to a secondary circuit, of means comprising an energy-consuming device associated with the secondary circuit for effecting discharges of the disturbing energy through said energy-consuming device with frequencies exceeding the initial frequency of the disturbing energy.

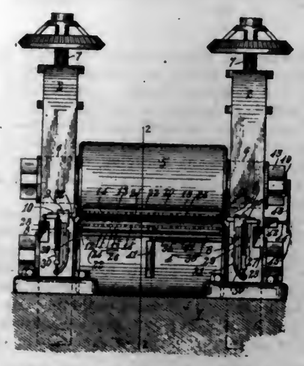
[Claims 6 to 20 not printed in the Gazette.]

1,212,130. FLOTATION PROCESS OF CONCENTRATING. GALEN H. CLEVENGER, Palo Alto, Cal. Filed June 13, 1916. Serial No. 103,558. (Cl. 83—85.)

1. The method of concentrating ores which consists in distilling sage and utilizing the liquid products of the distillation as flotative agents in the flotation process of concentrating ores.

2. The method of concentrating ores which consists in destructively distilling sage and utilizing the liquid products of the distillation as flotative agents in the flotation process of concentrating ores.

1,212,131. MEANS FOR GRINDING AND POLISHING ROLLING-MILL ROLLS. ALBERT P. COATE, Middletown, Ohio. Filed May 4, 1916. Serial No. 95,294. (Cl. 51—4.)



1. In means for grinding and polishing rolls, the combination of a bar having a series of openings therein, a series of holders having portions entering the openings in said bar and supported therein, abrasive members adjustably mounted in said holders and adapted to engage a roll, means adapted to press said abrasive members against said roll, and springs adapted to maintain said holders in contact with said means.

2. In means for grinding and polishing rolls, a bar, abrasive members adjustably mounted on said bar and adapted to engage a roll, means actuated by the roll so engaged and adapted to reciprocate said bar, and means adapted to press the abrasive members against said roll while the bar is being reciprocated.

3. In means for grinding and polishing rolls, a bar, holding members adjustably mounted on said bar, abrasive members mounted on said holding members carried by said bar for adjusting said abrasive members relative to the roll acted upon thereby, and means acting on said bar to press said abrasive members against the roll.

4. In means for grinding and polishing rolls, a bar having rectangular openings therein mounted across the face of a roll, wedge-shaped members extending into said rectangular openings, holding members mounted on said wedge-shaped members, screws adapted to adjust the position of said holding members relative to said bar, abrasive members mounted in said holding members, and means adapted to press said abrasive members against said roll.

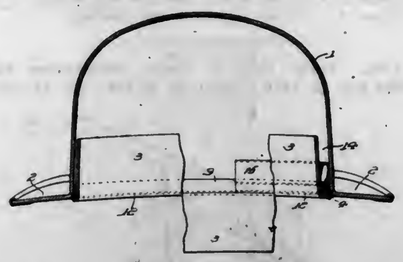
5. In means for grinding and polishing rolls, abrasive members mounted in engagement with rolls, means adapted to press said abrasive members against said rolls, and means actuated by one of said rolls and adapted to reciprocate said abrasive members.

[Claims 6 and 7 not printed in the Gazette.]

1,212,132. HAT. WILLIAM CONNER, Philadelphia, Pa. Filed Feb. 16, 1916. Serial No. 78,568. (Cl. 2—32.)

1. In a hat, the combination with a hat body, of a sweat band, and tensioned resilient material disposed between said band and said body independent of said band and extending partially around the periphery thereof.

2. In a hat, the combination with a hat body, of a sweat band spaced from the interior of said body, and resilient material under tension unconnected to said band and disposed in the space between said body and said band operative to maintain said band in its spaced relation with said body for a portion of its length.



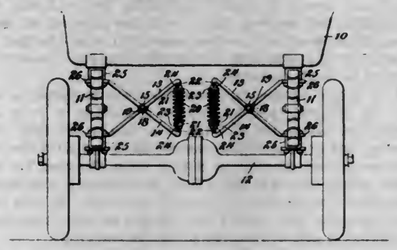
3. In a hat, the combination with a hat body, of a sweat band spaced for a portion of its length from the interior of said hat body, and resilient material under longitudinal tension disposed in the space between said body and said band and independent thereof operative to maintain said band in its spaced relation with said body.

4. In a hat, the combination with a hat body, of a sweat band spaced from the interior of said body for a portion of its length and resting closely adjacent said hat body for the balance of its length, and resilient means normally under longitudinal tension disposed between the hat body and that portion of the sweat band spaced therefrom and independent of said band operative to maintain said portion of said sweat band in spaced relation with said body.

5. A hat comprising a hat body, a sweat band, means to secure said sweat band in operative relation with said body, said sweat band being initially arranged in spaced relation with the interior of said body, and longitudinally tensioned resilient means secured to said first mentioned means and normally disposed between said sweat band and said body independent of said band and extending partially around the periphery thereof operative to maintain the initial spaced relation of said sweat band and said body when said hat is in use.

[Claims 6 to 8 not printed in the Gazette.]

1,212,133. SHOCK-ABSORBER. HERBERT VAN VECHTEN DEMING, Cumberland, Md. Filed May 31, 1916. Serial No. 100,964. (Cl. 267—19.)



1. A shock absorber comprising a pair of arms crossed at intermediate points of their lengths and pivotally connected at the crossing points, said arms having at their outer ends stems which extend inwardly toward each other, a coiled spring lying between the outer ends of said arms and engaging at its ends over the stems, adjustable securing means between the coiled spring and said stems to connect the spring thereto, and attaching means for securing said arms beyond their pivotal connection to the relatively movable parts of a vehicle.

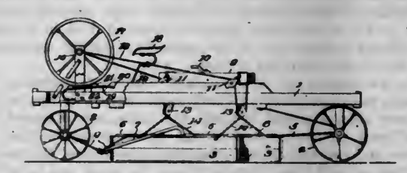
2. In a shock absorber, a pair of crossed arms having flattened webs at their crossed portions and an attaching web inwardly therefrom, and having at their outer ends stems which extend toward and are spaced apart from one another, a bolt pivotally connecting the crossed webs of the arms, a coiled spring engaging at its ends over the said stems, means adjustable on the stems for securing the ends of the spring thereto, and means engaging the attaching webs to secure the same to the relatively movable parts of a vehicle.

3. A shock absorber comprising two pairs of crossed arms, a bolt pivotally connecting the crossed portions of each pair of arms, a spring connecting the outer ends of each pair of arms, and vehicle attaching webs joining the inner portions of the respective arms of each pair.

4. A shock absorber comprising two pairs of crossed arms having intermediate attaching web portions, means for pivotally connecting each pair of arms together at the points of crossing, said arms having threaded outer ends turned inwardly toward each other, a coiled spring having its end coils engaging over said threaded ends, retaining nuts on said threaded ends to adjustably connect the ends of the spring thereto, and means connecting the attaching web portions to the relatively movable parts of a vehicle.

5. A shock absorber comprising two members of semi-elliptical form having midway of their length attaching means for securing said members to independent parts of a vehicle, said members crossing each other near their outer ends on each side of the respective points of attachment of said members, said members being pivoted together at the points of crossing, said members diverging outwardly from the crossing points and then bent inwardly at their terminals and a coiled spring mounted between each pair of terminals.

1,212,184. ROAD-DRAG. ALBERT FAY, Evans, Colo. Filed Aug. 8, 1916. Serial No. 113,762. (Cl. 37—7.)

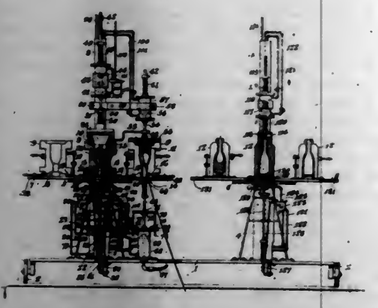


1. In a road grader, the combination of a truck, a supporting beam pivotally mounted for movement in a horizontal plane, pulleys secured upon said beam at the ends thereof, flexible members secured to the ends of the beam and passing over said pulleys, other pulleys mounted upon the said members between the first-mentioned pulleys and the points of attachment of the members to the beam, a blade suspended from the last-mentioned pulleys, and means at the front end of the truck for winding or unwinding the flexible members.

2. In a road grader, the combination of a truck, standards erected thereon near the front end of the same, a supporting beam pivoted on the frame for movement parallel with the truck, guide pulleys on said beam, other pulleys below the beam, a blade disposed below the pulleys below the beam, connections between said pulleys and the blades, winding drums mounted upon said standards, flexible members secured to said drums and passing over the pulleys on the beam and under the pulleys connected with the blade and having their ends secured to the beam, and means for rotating the winding drums.

3. In a road grader, the combination of a truck, standards erected thereon near the front end of the same, a beam pivotally mounted on the truck for movement in a horizontal plane, winding drums mounted on said standards, hand wheels connected with the respective drums, brakes yieldably engaging said hand wheels, pulleys secured on the beam at the ends of the same, flexible members secured at their front ends to the winding drums and passing over the said pulleys and having their rear ends secured to the beam, pulleys mounted upon said flexible members between their rear ends and the pulleys on the beam, and a blade suspended from the last-mentioned pulleys.

1,212,135. APPARATUS FOR MAKING HOLLOW GLASS ARTICLES. JOHN F. GEOENHEIMER, Jeannette, Pa. Filed Feb. 27, 1915. Serial No. 11,016. (Cl. 49—5.)



1. In an apparatus for making hollow glass articles, a movable table, a row of inverted molds carried by the table, a fluid pressure operated core plug arranged beneath one of the molds for engagement up into the same, a fluid pressure operated supply funnel arranged over said mold to direct a quantity of molten glass thereto, a fluid pressure operated plate arranged above the second mold and adapted to close the latter, a fluid pressure operated means beneath said second mold for blowing into the same, means for locking the table at each step of the consecutive advancement of the row of molds, and a single operating means connected to said table locking means and to all of said fluid pressure operated devices to consecutively actuate all of the same by a single operation of the single operating means.

2. An apparatus of the class described including a rotary table, an inverted blank mold carried by the table, a core plug mounted beneath the table and movable to and from the lower end of the mold, a funnel located above and movable to and from the upper end of the mold, a blowing head also arranged above the mold and movable to and from the funnel, and fluid pressure mechanism connected with the core plug, the funnel, and the blowing head for actuating the same.

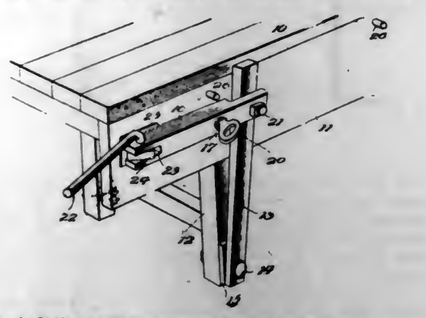
3. In an apparatus for making hollow glass articles, a table having a mold thereon, a cylinder above the table, a vertically movable piston rod in the cylinder and projecting from one end thereof, a funnel connected to said piston rod and overhanging said mold for moving toward and from the same by the reciprocation of the piston rod, and an independently operated blowing head overhanging the funnel and adapted to be moved downwardly therefrom against when said funnel is in its lowered position to blow into said mold.

4. In an apparatus for making hollow glass articles, a rotary table provided with a number of inverted blank molds, a core plug movable toward and from one of said molds, a funnel arranged above said mold and being movable toward and from the same, a blowing head arranged above said mold and said funnel and adapted to be moved toward and from the funnel, a blowing head arranged beneath the table in register with a second one of said molds, a closure plate adapted for movement toward and from the upper end of said second mold, locking means for said table to secure it at each advancement of the molds, controlling mechanism for simultaneously raising said core plug and said second blowing head against the lower ends of the respective molds, and lowering said funnel and said closure plate against the upper ends of the respective molds, and independent means for moving said first blowing head toward and from the funnel.

5. An apparatus of the class described including a table, a plurality of molds supported by the table, a cylinder having a vertically disposed piston rod located above one of the molds, a plate or head carried by the piston and cooperating with such mold, and a funnel located above another mold and connected with and carried by the said piston, whereby the head or plate and the funnel are simultaneously carried to and from the said molds.

[Claims 6 to 14 not printed in the Gazette.]

1,212,136. VISE. ISAAC N. GIFFIN, Winterhaven, Fla. Filed Feb. 25, 1916. Serial No. 80,450. (Cl. 81—25.)



1. A device of the character described including a pivoted clamping jaw, a rock arm operatively engaging with the said jaw with its free extremity extending laterally from one side of the jaw, and means associated with the free extremity of said rock arm and operable to shift the arm for urging said jaw to active position.

2. A device of the character described including a pivoted clamping jaw, an adjustably mounted rock arm operatively connected to said jaw with its free extremity extending laterally therefrom, and means associated with the free extremity of said rock arm and operable to shift the arm for urging the said jaw to active position.

3. A device of the character described including a support, a pivoted clamping jaw associated therewith, a rock arm pivotally connected to said jaw, a pivot pin adjustably supporting the jaw with respect to the support, means carried by said pin and acting upon the said arm for normally urging the said jaw away from the support, and means associated with the said arm for urging the jaw toward the support.

4. A device of the character described including a support, a clamping jaw associated therewith, a rock arm operatively connected to the said jaw to extend laterally therefrom, means pivotally supporting the said arm and adjustable for spacing the jaw either toward or away from the support, and means associated with the free extremity of the said arm for urging the jaw toward the support to coact therewith.

5. A device of the character described including a support, a clamping jaw associated therewith, a rock arm operatively connected to said jaw, means pivotally supporting said arm, yieldable means associated with the said first mentioned means and acting upon the arm for normally urging the jaw away from the support, and means operatively connected to the free extremity of said arm for urging the jaw toward the support to coact therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,212,137. PHOTOGRAPHIC-FILM CARTRIDGE. HARRISON GINDELE, Cincinnati, Ohio. Filed Sept. 14, 1915. Serial No. 50,586. (Cl. 95—9.)

1. A film cartridge embodying a flexible photographic film, a covering strip of flexible material longer than the film and attached to one end of the latter, and a film-engaging element independent of, and adapted to be interposed between the film and the cover strip and to be secured to the film and covering strip.

2. A film cartridge embodying a photographic film, a covering strip longer than the film having a slot and attached to one end of the latter, and a film engaging element independent of, and adapted to be interposed between the film and covering strip and to be secured to the film and covering strip at a predetermined point intermediate the ends of the film with a portion of the film engaging elements extending through the slot to be secured to the face of the film.



3. A film cartridge embodying a covering strip, a photographic film attached at one end of said covering strip, and a film engaging element independent of the film and covering strip, and adapted to be interposed between the film and covering strip, said element comprising means to be secured to the outer face of the covering strip and to the sensitized face of the film.

4. A film cartridge embodying a covering strip, a photographic film attached at one end of said strip and provided with an aperture formed therethrough, and a film engaging element adapted to be positioned between the film and covering strip and to have a portion thereof extend through the aperture of said film and another portion adapted to be secured to the inner and outer faces of the covering strip.

5. A film cartridge embodying a covering strip, a photographic film having a curved aperture formed therethrough, and a film engaging element positioned between said covering strip and said film and adapted to have a portion thereof extend through the aperture of the film and an adhesive portion thereof secured to the covering strip.

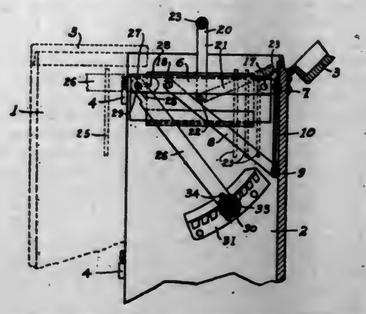
[Claims 6 to 9 not printed in the Gazette.]

1,212,138. COMBINED TOOTH-PASTE SQUEEZER AND BRUSH-HOLDER. ALBERT O. GLASOW and EDWARD L. ACKER, San Pedro, Cal. Filed Aug. 2, 1915. Serial No. 43,279. (Cl. 221—60.)



A dental toilet appliance, comprising a standard having a laterally extending bracket portion for engaging a collapsible dentifrice tube adjacent its outlet and maintaining said tube parallel and contiguous to said standard, a squeezer guide member slidably mounted on said standard, and a two-armed squeezer pivotally mounted on said squeezer guide member on an axis in a plane parallel to the plane of said standard, one arm of said squeezer adapted to rock toward said standard, the other arm forming a finger hold.

1,212,139. WARDROBE-TRUNK. CHURCHILL G. GRAVES, Roanoke, Va., assignor to The Seward Trunk and Bag Company, Petersburg, Va., a Corporation of Virginia. Filed May 23, 1916. Serial No. 99,312. (Cl. 190—15.)



1. In a wardrobe trunk, a hanger rack comprising a frame-work of dimensions suitable for admission within the said trunk, said frame-work embodying spaced parallel members disposed along both sides of the cavity of the trunk near the top thereof and having a connecting member extending from one of said parallel members to the other along the rear of the trunk, braces extending from the said parallel members downwardly and rearwardly to the rear wall of said trunk and having a connecting member extending from one brace to the other against the rear wall of the trunk, a vertical tie member connecting the last said connecting member with the first one, brackets affixed to the inside of the side walls having slideways adapted to receive and slidably accommodate the said parallel members, the said frame-work being slidably removable from the said trunk and said brackets as a unit.

2. In a wardrobe trunk, a hanger-rack comprising a frame-work of dimensions suitable for admission within the said trunk, said frame-work embodying spaced parallel members disposed along both sides of the cavity of the trunk near the top thereof and having a connecting member extending from one of said parallel members to the other along the rear of the trunk, braces extending from the said parallel members downwardly and rearwardly to the rear wall of said trunk and having a connecting member extending from one brace to the other against the rear wall of the trunk, a vertical tie member connecting the last said connecting member with the first one, brackets affixed to the inside of the side walls having slideways adapted to receive and slidably accommodate the said parallel members, the said frame-work being slidably removable from said trunk and said brackets as a unit, means in the rear of said frame-work and near the top thereof formed for engagement with a supporting member.

3. In a wardrobe trunk, a hanger-rack comprising a frame-work of dimensions suitable for admission within the said trunk, said frame-work embodying hanger ways along the inner walls of the trunk, brackets secured to the inner walls of the trunk adapted to retain and support the said hanger-rack, a lid on said trunk adapted to retain the said hanger-rack within the said brackets, and said hanger-rack being removable as a unit from the said brackets and trunk when the said lid is open, and having means for its support against a wall when removed from the said trunk.

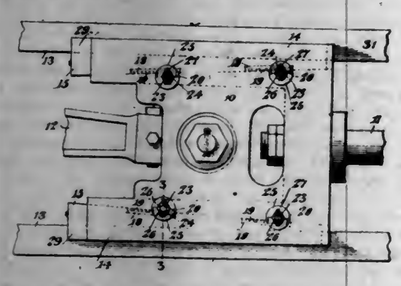
4. In a wardrobe trunk, a hanger-rack comprising a frame-work of dimensions suitable for admission within the said trunk, said frame-work embodying hanger ways along the inner walls of the trunk, brackets secured to the inner walls of the trunk adapted to retain and support the said hanger-rack, a lid on said trunk adapted to re-

tain the said hanger-rack within the said brackets, the said hanger-rack being removable as a unit from the said brackets and trunk when the said lid is open, and a bail extending from side to side of the said frame-work and being pivoted thereto, the said bail being adapted to be swung about its pivot as an axis from an upright position above the cavity of the trunk to a substantially horizontal position in which latter position the bail falls within the cavity of the trunk.

5. A wardrobe trunk having an open front side, a pair of hanger ways disposed along the inside of the side walls of the trunk and near the top thereof, said hanger ways having projecting pins near their front ends and having overturned portions above the said pins, outward extensions from said hanger ways having elongated slots at their inner ends, the said slots embracing and accommodating the said pins and the inner ends of the said extensions underlying the said overturned portions of the hanger ways, the slots in the said extensions being so disposed that the inner ends of the extensions will engage the overturned portions of the hanger ways when the pins are in the outer ends of the slots and thereby support the extensions in extended position and being formed further so that when the said pins occupy the rear ends of the said slots the said extensions may swing downwardly and rearwardly about said pins as an axis, a transverse member extending transversely of the trunk from the outer end of one of said extensions to the outer end of the other, and means carried by the inner faces of the side walls of the trunk for holding said extensions from return movement.

[Claims 6 to 8 not printed in the Gazette.]

1,212,140. ADJUSTABLE GIB FOR CROSS-HEADS. MILES D. JOYNER, Savannah, Ga. Filed Mar. 21, 1916. Serial No. 85,639. (Cl. 74—84.)



1. In a device as specified, a guide bar, a cross head, a gib adjustable on the cross head for advancement toward said guide bar to take up wear between the same and the inner face of the guide bar, and means for adjusting the gib against the lateral edges of the guide bar to take up the lateral wear therebetween.

2. In a device as specified, a guide bar, a cross head, a gib between the cross head and the guide bar to take up the wear of the guide bar, said cross head and said gib having oppositely inclined contacting faces whereby the longitudinal movement of the gib on the cross head advances the gib outwardly toward the guide bar to take up wear upon the inner face thereof, and means on the gib to advance the same against the lateral edges of the guide bar to take up lateral wear therebetween.

3. In a device as specified, a guide bar, a cross head, a gib mounted for longitudinal movement in the cross head and adapted for advancement thereby toward the guide bar, a locking key carried by the cross head and engaging said gib to hold the same from longitudinal movement on the cross head and from outward movement toward the guide bar, and means for advancing the gib against the lateral edges of the guide bar upon said longitudinal movement of the gib.

4. In a device as specified, a cross head having projecting side walls and a longitudinally inclined face between the side walls, a longitudinally tapered gib arranged between the side walls on said inclined face and provided at its inner side with a longitudinal row of interlocking recesses, a transverse key mounted in the cross head and having ribs engaging in said recesses of the gib to lock the latter from longitudinal and outward displacement with respect to the cross head, and means for detachably securing the key in the cross head.

5. In a device as specified, a cross head having projecting walls and an inclined face between the walls, a tapering gib arranged between the walls on the inclined face and adapted for movement thereover to advance the gib outwardly from the cross head, and a locking key secured in the cross head, said gib having recesses therein for interlocking engagement with said key to hold the gib from outward displacement from between said walls and also from adjustable movement over the inclined face.

[Claims 6 to 15 not printed in the Gazette.]

1,212,141. HAMMER ROCK-DRILL. WALTER E. KIMBER, Harlesden, London, England. Filed Dec. 27, 1915. Serial No. 68,840. (Cl. 121—10.)



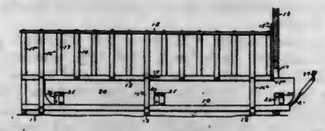
1. In a fluid actuated rock drill, the combination of a supporting cylinder, a rotatable spindle disposed axially of said cylinder and provided with rotating means, a sleeve slidable and rotatable in said supporting cylinder, engaged by said spindle and having a forward projection beyond said cylinder, a hammer cylinder mounted on said forward projection of the sleeve and rotatable thereon, a rotatable bit-carrying chuck in the forward end of said hammer cylinder, a central rod disposed within said hammer cylinder and connecting said chuck with said sleeve projection, and a piston hammer slidable on said rod within said hammer cylinder.

2. In a fluid actuated rock drill, the combination of a supporting cylinder, a rotatable spindle disposed axially of said cylinder and provided with rotating means, a sleeve slidable and rotatable in said supporting cylinder, engaged by said spindle and having a forward projection beyond said cylinder, a hammer cylinder mounted on said forward projection of the sleeve and rotatable thereon, a rotatable bit-carrying chuck in the forward end of said hammer cylinder, a central rod disposed within said hammer cylinder and connecting said chuck with said sleeve projection, a piston hammer slidable on said rod within said hammer cylinder, means for supplying a motive fluid to said hammer cylinder, and means connecting said supply means with said sleeve.

3. In a fluid actuated rock drill, the combination of a hammer cylinder, a rotatable sleeve connected with the rear end of said hammer cylinder and provided with an angular socket, a rotatable bit-carrying chuck in the forward end of said hammer cylinder and provided with an angular socket, a central rod having angular opposite ends engaging said sockets with a loose fit which permits an alining adjustment, and a piston hammer slidable on said rod within said hammer cylinder.

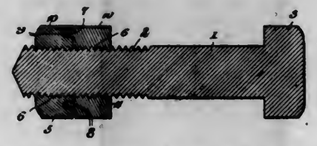
1,212,142. SLIDABLE FEEDING-TROUGH. WILLIAM A. MCCOLLOUGH, Webster City, Iowa. Filed Jan. 15, 1916. Serial No. 72,229. (Cl. 119—61.)

1. A device of the class described, comprising a skeleton rack adapted to be mounted in an inclosure and adjacent one wall thereof, said wall having an aperture at and registering with one end of said rack, means for securing said rack to said wall on each side of and above said aperture, said rack being formed with a supporting track adapted to project through said aperture, and a trough slidingly mounted in said track and adapted for lengthwise movement through the aperture of said wall, one end of said trough normally closing said aperture against the passage of swine when said trough is in closed position in said rack.



2. A device of the class described, comprising a skeleton rack adapted to be mounted in an inclosure and adjacent one wall thereof, said wall having an aperture at and registering with one end of said rack, said rack being formed with spaced tracks extending along its bottom and projecting through the aperture of said wall, and a trough formed with runners slidably mounted on said tracks for lengthwise movement through said aperture, said runners being extended outwardly and upwardly through said aperture and provided with a handle on their outer ends, said trough normally closing said aperture in the wall.

1,212,143. NUT-LOCK. CHRISTOPHER J. MCGURN and CLARK L. TANNER, Miles City, Mont. Filed May 20, 1916. Serial No. 98,870. (Cl. 151—19.)



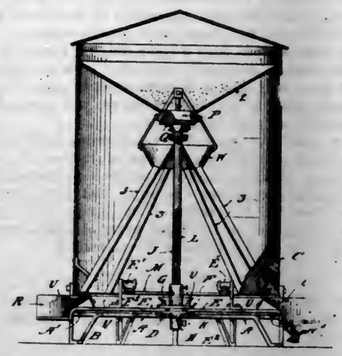
1. A nut lock comprising two similar nut members with one member having a circular tongue projecting from one face in eccentric relation to and surrounding and spaced from the threaded passage through the nut member, and the other nut member having a circular groove produced in the face toward the first nut member and similarly eccentric to and surrounding and spaced from the threaded passage through the second member to receive the tongue of the first nut member, the tongue and groove each having their opposite walls parallel.

2. A nut lock comprising two similar nut members with one member having a circular tongue projecting from one face in eccentric relation to and surrounding and spaced from the threaded passage through the nut member, and the other nut member having a circular groove produced in the face toward the first nut member and similarly eccentric to and surrounding and spaced from the threaded passage through the second member to receive the tongue of the first nut member, the tongue and groove each having their opposite walls substantially parallel, and the axial length of the tongue and the axial depth of the groove receiving it being greater than the spacing of two adjacent threads and less than the spacing of three threads.

1,212,144. STOCK-FEEDING MACHINE. ALFRED F. MEYER, Morton, Ill., assignor to William H. Simmons, Minneapolis, Minn. Filed Aug. 11, 1914. Serial No. 856,304. (Cl. 83—7.)

1. In a machine of the nature described, a support, a member mounted thereon and adapted to have a limited oscillating movement laterally and including a feeding pan or tray, a material grinding means, and mechanism interposed between the member and said means by which to impart movement to the latter.

2. A machine of the nature described including in combination, a member adapted and arranged to oscillate in a lateral direction, a material grinding or reducing means, mechanism interposed between the member and said means and operatively engaging each, said member adapted to move in one direction independently of said means, and a feed tray mounted on the member in position to receive reduced material from said reducing means.



3. A machine of the nature described including in combination, a pivotally supported member adapted and arranged to swing upon its pivot, a material grinding or reducing means, mechanism interposed between the member and said means and operatively engaging each, said member adapted to move in one direction independently of said means, and a feed tray mounted on the member in position to receive reduced material from said reducing means.

4. In a machine of the nature described, a support, a member mounted thereon adapted to have a limited oscillating movement horizontally, a material grinding or reducing means, mechanism interposed between the member and said means and operatively engaging each by which movement is imparted from the former to the latter, and a feed tray mounted on the member.

5. In a machine of the nature described, the combination of a support, a member supported thereby and adapted to oscillate in a lateral direction, a material grinding or reducing means, mechanism interposed between the member and said means and operatively engaging each whereby motion is imparted to the grinding or reducing means in the movement of the said member, said member adapted to move in one direction independently of said means, and a feed tray mounted on the mechanism in position to receive reduced material from the reducing means and moved by an animal feeding from it.

[Claims 6 to 24 not printed in the Gazette.]

1,212,145. HEADLIGHT-LAMP. CHARLES G. MOLLAN, Chicago, Ill. Filed Oct. 2, 1914. Serial No. 864,556. (Cl. 240—48.6.)



1. A headlight lamp including a concavo-convex light diffuser having a lusterless front surface, a light producer supported centrally in front of said diffuser, and a shield supported in front of the light producer.

2. A headlight lamp consisting of a hollow casing having one of its ends open, a plate of transparent material mounted on the open end of said casing, a light diffuser supported within the casing and having its front surface lusterless, a light producer in front of said diffuser, and a shield supported in front of the light producer.

3. In a headlight lamp, the combination with a hollow casing, of a light diffuser having a lusterless front sur-

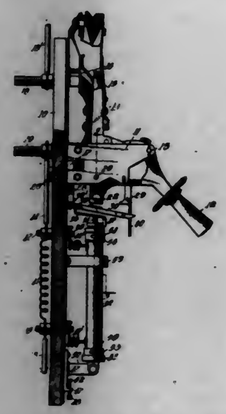
face and provided with a hollow extension, a socketed lamp having its socket fitted in the front portion of said hollow extension, a holder located around the lamp socket and having arms extended forwardly of the lamp, and a shield mounted on the front parts of said arms.

4. The combination with a light diffuser having a symmetrically curved concavity provided with a lusterless front surface, of a source of light located approximately at the focal point of the diffuser curve, and a shield supported in front of said light source.

5. In a headlight lamp, the combination with a lamp support, of a socketed lamp mounted thereon, a holder comprising a circular one-piece member surrounding the lamp socket and engaging the same and arms extended from said member forwardly of the lamp, and a shield detachably mounted on the front parts of said arms.

[Claims 6 to 8 not printed in the Gazette.]

1,212,146. CIRCUIT-BREAKER. JULIAN J. NIELSEN, Chicago, Ill. Filed May 24, 1915. Serial No. 29,990. (Cl. 175—270.)



1. The combination with a switch releasing trip, an armature adapted to actuate said trip, and an electromagnet associated with said armature, of means expansible in response to increase in temperature, a connection between said means and armature, a heat producing means responsive to current passing through the switch and associated with said expansible means, and means for controlling the amount of heat communicated to the expansible means by the heating means.

2. The combination with a switch releasing trip, an armature adapted to actuate said trip, and an electromagnet associated with said armature; of means expansible in response to increase in temperature, a connection between said means and armature, a heat producing means responsive to current passing through the switch and associated with said expansible means, a casing inclosing said expansible means and heat producing means, said casing having openings formed therein, and means for varying the area of said openings.

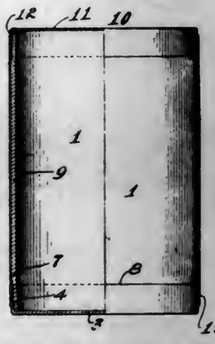
3. The combination with a switch releasing trip, an armature adapted to actuate said trip, and an electromagnet associated with said armature; of a rod expansible in response to increase in temperature, a connection between one end of said rod and the armature, an abutment for the other end of the rod, means for varying the position of said abutment with respect to the armature, a heat producing means responsive to the current passing through the switch and associated with the rod, and means for controlling the amount of heat communicated to the expansible rod by said heat producing means.

4. The combination with a switch releasing trip, an armature adapted to actuate said trip, and an electromagnet associated with said armature; of means expansible in response to increase in temperature, a connection between said means and armature, a heat producing means associated with said expansible means and responsive to current variation, and means for controlling the amount of heat communicated to the expansible means by the heating means.

5. The combination with a switch releasing trip, an armature adapted to actuate said trip, and an electromagnet associated with said armature; of means expansible in response to increase in temperature, a connection between said means and armature, a heat producing means associated with the expansible means and responsive to current variations, and a casing inclosing and supporting said expansible means and heat producing means, said casing having openings formed therein at the upper and lower ends thereof.

[Claim 6 not printed in the Gazette.]

1,212,147. FIBER-BOARD CONTAINER. JONATHAN PETERSON, Brooklyn, N. Y., assignor to Combination Machine Company, a Corporation of Delaware. Filed July 10, 1915. Serial No. 39,150. (Cl. 229—12.)

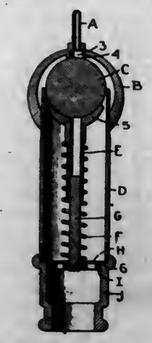


As a new article of manufacture, a container comprising a cylindrical shell of fiber board, the material at the end portions of the shell being compressed to provide necks of less thickness than the main body portion of the shell, one of said necks being reduced to a greater extent than the other, a flanged end-cap of fiber board having its flange fitted over and secured to that end of the shell having the neck of greater reduction, and a flanged metal cover removably fitted to the reduced neck at the other end of the shell, the outer peripheral faces of the said flanges at opposite ends of the shell lying in substantially the plane of the outer surface of the shell, whereby to provide a container having substantially the same cross-sectional diameter from end to end.

1,212,148. SAFETY DEVICE TO PREVENT THE COLLAPSING OF HOT-WATER BOILERS. EDWARD F. DONNELLY, Malden, Mass., assignor to Donnelly Manufacturing Company, Malden, Mass., a Corporation of Massachusetts. Filed May 24, 1915. Serial No. 30,255. (Cl. 137—53.)

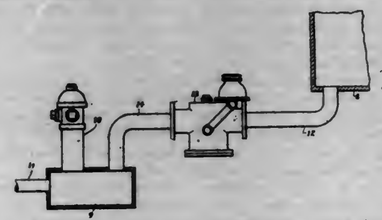
1. In a safety device for hot water boilers, the combination with a cylindrical casing adapted to be connected at one end to a hot water boiler, of a head secured to the other end of the casing and provided with an air inlet port and an inwardly-projecting annular valve seat, a ball valve of cork composition adapted to engage said seat, a follower having a cup-shaped end against which said valve loosely rests and on which it is free to turn when the valve is open whereby different portions of the valve may be presented to the valve seat, a spring acting against the follower to hold the valve yieldingly against its seat, and means other than the casing and situated therewithin to guide the follower in its movement as the valve opens and closes.

2. In a device of the class described, the combination with a cylindrical casing adapted to be connected to a hot water boiler, of a head secured to said casing and provided with an air inlet port and an annular valve seat, a ball valve of cork composition adapted to engage said



seat, a follower having a cup-shaped end against which said valve loosely rests and a hollow stem, a guiding pin secured to said casing and over which said stem telescopes, and a spring encircling said pin and stem and holding the valve yieldingly against its seat.

1,212,149. FLUID-METERING SYSTEM. GEORGE GOODELL EARL and ALBERT BALDWIN WOOD, New Orleans, La. Filed July 12, 1911. Serial No. 638,047. (Cl. 73—167.)



1. In a device of the class described, the combination of a fluid main, a valve in said main adapted to be operated by the fluid in said main, and means to control the operation of said valve, the distance of said valve from its closed position being a function of the pressure differences and the absolute pressure in the main.

2. In a device of the class described, the combination of a fluid main, a valve in said main adapted to be operated by the fluid in said main, and a pressure controlled device controlling the operation of the valve, the distance of said valve from its closed position being a function of the pressure difference and the absolute pressure in the main.

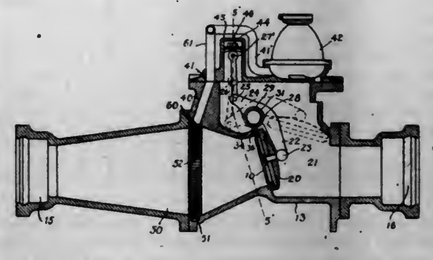
3. In a device of the class described, the combination of a fluid main, a valve in said main adapted to be operated by the fluid in the main, said valve being adapted to be subjected to the pressure of different values on the two sides thereof, a device on one side of said valve operated by the pressure of the fluid on that side of the valve, an arm connecting said device to said valve, said arm and the pressure on said device exerting a moment and means to vary said moment as the valve moves from and toward its closed position.

4. In a device of the class described, the combination of a fluid main, a valve in said main adapted to be operated by the fluid in the main, said valve being adapted to be subjected to pressure of different values on the two sides thereof, a piston on one side of said valve adapted to be controlled by the pressure of the fluid on that side of the valve, and a pivoted lever connecting said piston and said valve, the distance between the valve and the piston being proportional to the distance of the valve from its closed position.

5. In a device of the class described, the combination of a fluid main, a valve in said main adapted to be operated by the fluid in the main, said valve being adapted to be subjected to pressures of different values on the two sides thereof, a piston chamber associated with said main on one side of said valve, a piston in said chamber controlled by the pressure of fluid in said main and adapted to move substantially at right angles to the main, and a pivoted lever arm connecting said piston and said valve, the distance of said valve from its closed position being a function of the pressure difference and the absolute pressure in the main.

[Claims 6 to 45 not printed in the Gazette.]

1,212,150. FLUID-METERING SYSTEM. GEORGE GOODELL EARL and ALBERT BALDWIN WOOD, New Orleans, La. Filed Feb. 3, 1912. Serial No. 675,379. (Cl. 73—167.)



1. In a device of the class described, the combination of a fluid main, said main being of greater cross section at one point than at another, a source of pressure associated with said main, a normally partially closed main valve in said main, a path being provided for fluid around said valve adapted to conduct the small flow through said main, a meter for measuring the fluid flowing through said path, said main valve controlling said path to close the same as the main valve opens, a second path being provided around said valve, said second path being normally partially closed and being controlled by said main valve, and opened thereby in proportion as said main valve opens, and a meter for measuring the proportional flow through said second path.

2. In a device of the class described, a fluid main, a normally partially closed main valve in said main, a path being provided for fluid communicating with said main adapted to convey the small flow of said main around said main valve, said main being expanded where said path communicates with it, a meter for measuring the fluid flowing through said path, said main valve controlling said path to close the same as the main valve opens, a second path being provided around said valve, said second path being normally partially closed, and controlled by said main valve and opened thereby in proportion as the main valve opens, and a meter for measuring the proportional flow through said second path.

3. In combination, a fluid main, a source of pressure associated therewith, a main valve in said main, a plurality of paths being provided around said main valve, said main being enlarged where said paths are connected thereto, said paths being connected to the main where the enlargement is greatest, a meter in each path, and means controlled by said main valve governing the flow through said paths, one of said paths being opened by said main valve as another is closed.

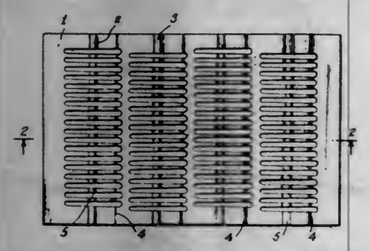
4. In combination, a fluid main, a source of pressure associated therewith there being an enlargement in said main, a main valve controlling the flow of fluid through said main, a path being provided communicating with said main at the point of greatest enlargement, and shunting

said main valve, a meter in said path, and means controlled by said main valve governing the flow through said path.

5. In combination, a fluid main having an orifice therein, a source of pressure associated therewith, there being an enlargement in said main, a main valve controlling the flow through the orifice in said main, a plurality of ducts leading around said orifice, said ducts being connected to said enlargement, meters in said ducts, and means controlled by said main valve governing the flow through said paths, one of said paths being opened by said main valve as another is closed.

[Claims 6 to 24 not printed in the Gazette.]

1,212,151. SCREEN. SAMUEL OWEN EDMONDS, New York, N. Y., assignor to Hendrick Manufacturing Company, Carbondale, Pa., a Corporation of Pennsylvania. Filed Aug. 7, 1915. Serial No. 44,151. (Cl. 83—56.)



1. An integral screen of sheet-metal, provided at intervals with transverse shoulders determining areas or steps lying in different planes, each such area or step being provided with a series of substantially parallel slots, the slots of all the series extending in the same direction, and integral elevations or protuberances formed in the working surface of the screen, in the path of material treated thereon, substantially as set forth.

2. An integral screen of sheet-metal, provided at intervals with transverse shoulders determining areas or steps lying in different planes, each such area or step being provided with a series of substantially parallel slots, and integral elevations or protuberances formed in certain of the webs bounding said slots, at points intermediate of the ends of said slots, substantially as set forth.

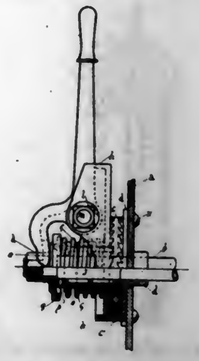
3. An integral screen of sheet-metal, provided at intervals with transverse shoulders determining areas or steps lying in different planes, each such area or step being provided with a series of substantially parallel slots whose ends extend over a shoulder adjacent to said step or area the slots of all the series extending in the same direction and into the next adjacent step or area, and integral elevations or protuberances formed in the working surface of the screen, in the path of material treated thereon, substantially as set forth.

4. An integral screen of sheet-metal, provided at intervals with transverse shoulders determining areas or steps lying in different planes, each such area or step being provided with a series of substantially parallel slots whose ends extend over a shoulder adjacent to said step or area and into the next adjacent step or area, and integral elevations or protuberances formed in certain of webs bounding said slots, at points intermediate of the ends of said slots, substantially as set forth.

1,212,152. RATCHET WINDING MECHANISM. HILARY J. HENNESSY, St. Paul, Minn. Filed Feb. 25, 1916. Serial No. 80,488. (Cl. 74—54.)

1. In a ratchet winding mechanism, the combination with a winding shaft of a combined journal bearing and ratchet, and a winding shaft ratchet wheel and a lever ratchet substantially as described.

2. In a ratchet winding mechanism, a winding shaft, a combined journal bearing and ratchet, a winding shaft ratchet wheel having an extended hub, and mounted upon said winding shaft, and a lever ratchet, loosely mounted on the said extended hub of said winding shaft ratchet wheel.



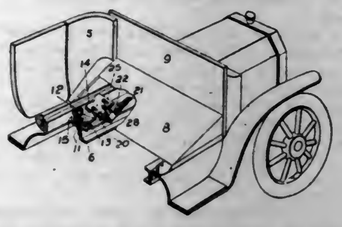
3. In a ratchet winding mechanism, the combination with a winding shaft, of a combined journal bearing and ratchet with integral teeth, and a winding shaft ratchet wheel with integral teeth on both sides thereof, and an extended hub secured to said winding shaft for longitudinal movement but to prevent rotation about said winding shaft, of a lever ratchet with integral teeth and an extended hub loosely mounted upon the hub of said winding shaft ratchet wheel, so as to allow longitudinal travel and rotation around hub of said winding shaft ratchet wheel and held from moving off hub of said winding shaft ratchet wheel by a collar secured to last named hub substantially as described.

4. In a ratchet winding mechanism, the combination with a winding shaft of a combined journal bearing and ratchet and a winding shaft ratchet wheel and a lever ratchet of a spring to keep said winding shaft ratchet wheel in mesh with said combined journal bearing and ratchet, substantially as described.

5. In a ratchet winding mechanism, the combination with a winding shaft, of a combined journal bearing and ratchet and a winding shaft ratchet wheel and a lever ratchet and a spring to keep said winding shaft ratchet wheel in mesh with said combined journal bearing and ratchet, of a spring to keep said lever ratchet in mesh with said winding shaft ratchet wheel, substantially as described.

[Claim 6 not printed in the Gazette.]

1,212,153. SPEED-CONTROLLING APPARATUS FOR MOTOR-VEHICLES. WILLIAM G. LEWI, Albany, N. Y. Filed Mar. 21, 1916. Serial No. 85,556. (Cl. 74—81.)



1. The combination with a Ford automobile of a support, means for securing the support to the inner side of a side-member of the frame of the car with the support extending inwardly of the frame from said side-member, a base mounted on the support in an inclined position

directly under the inclined floor of the body of the car, and devices mounted on said base and coacting with the speed controlling lever of the car to control the movements of said lever; substantially as described.

2. In a Ford automobile, a support having a horizontal wall adapted to be secured to the frame of the car, a vertical wall at one edge of the horizontal wall adapted to be secured to the body of the car, a vertical wall at the opposite edge of the horizontal wall, and an inclined wall at the upper edge of the last named vertical wall, a base mounted upon the inclined wall directly below and parallel to the inclined portion of the floor of the car, and devices mounted on said base and coacting with the speed controlling lever of the car to control the movements of said lever; substantially as described.

3. In a Ford automobile, a support adapted to be secured to the frame of the car and provided with an inclined supporting surface, a base mounted upon the inclined surface of the support directly below and parallel to the inclined portion of the floor of the car, means for securing the base to the inclined portion of the support permitting adjustment of the position of the base relatively to the support, a spring actuated notched lever pivotally mounted upon the support in position to coact with the speed controlling lever of the car, and a spring actuated detent for said lever pivotally mounted upon the base and extending across the path of movement of the speed controlling lever of the car so as to be actuated thereby; substantially as described.

4. In a Ford automobile, a support having a horizontal wall adapted to be secured to the frame of the car, a vertical wall at one edge thereof, and an inclined wall at the upper edge of said vertical wall provided with two parallel slots, a base resting upon the said inclined wall and provided with parallel slots disposed at an angle to the slots in said inclined wall, bolts passing through the slots in the inclined wall and the base for securing the base to the support in various positions of adjustment, a spring actuated notched lever pivotally mounted upon the support in position to coact with the speed controlling lever of the car, and a spring actuated detent for said lever pivotally mounted upon the base and extending across the path of movement of the speed controlling lever of the car so as to be actuated thereby; substantially as described.

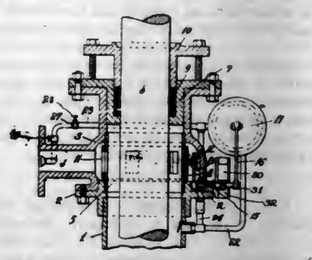
5. A controlling mechanism for the speed controlling lever of a Ford automobile comprising a base, a spring actuated lever pivotally mounted thereon and provided with a notch adapted to coact with the speed controlling lever, a spring actuated detent pivotally mounted upon the base in position to coact with said lever and adapted to extend across the path of movement of the speed controlling lever, and a flange on the base extending over the free end of the detent to prevent upward movement of the spring actuated lever and the detent effected by the speed controlling lever of the car; substantially as described.

[Claim 6 not printed in the Gazette.]

1,212,154. SPEED-REGULATOR FOR ELEVATORS. EDWIN S. MATTHEWS, New York, N. Y., assignor, by mesne assignments, to Howard H. Williams and Albert C. Wall, receivers of The Standard Plunger Elevator Company. Filed Nov. 3, 1905, Serial No. 285,703. Renewed Apr. 7, 1914. Serial No. 830,290. (Cl. 188—14.)

1. In a hydraulic elevator, the combination with a car and its plunger, of a receiving cylinder for said plunger, a perforated lining in a portion of said cylinder, and a movable device for throttling said perforations to regulate the outflow of motor fluid from said cylinder.

2. In a hydraulic elevator, the combination with a car and its plunger, of a cylinder for said plunger, a change valve connected to said cylinder, a lining for a portion of said cylinder and provided with a plurality of perforations to establish communication between said cylinder and change valve, and a movable throttle for closing one or more of said perforations to throttle the outflow of motor fluid from said cylinder to limit the speed of descent of the car.



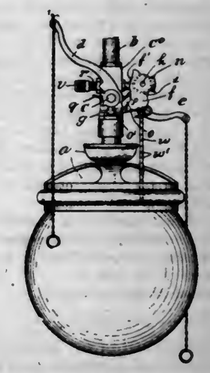
3. The combination with a main cylinder, of an auxiliary cylinder containing a piston, connections between one side of the piston and the supply pipe of said main cylinder and between the other side of said piston and the interior of the main cylinder, and a valve in said main cylinder controlled by the movement of said piston for regulating the port area of said main cylinder, substantially as described.

4. The combination with a main cylinder, of an auxiliary cylinder containing a piston, connections between one side of the piston and the supply pipe of said main cylinder and between the other side of said piston and the interior of the main cylinder, and a valve at the main cylinder port controlled by the movement of said piston for regulating the port area of said main cylinder, substantially as described.

5. The combination with a main cylinder, of a regulator within the cylinder, pressure operated means for actuating said regulator to vary the flow, and means comprising an adjustable valve whereby sudden action of said regulator due to excessive pressure is prevented, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,212,155. GAS-IGNITER. FREDERICK H. POMEROY, Haverhill, Mass., assignor to Safety Gas Lighter Company, Haverhill, Mass., a Corporation of Massachusetts. Filed June 4, 1914. Serial No. 842,927. (Cl. 67—20.1.)



1. An igniter for gas burners comprising a gas-cock having an operating lever for opening the same, a dog pivoted on said lever, a rotary abrader, and means for holding a pyrophoric metal thereagainst, a spring-actuated arm having a pawl and ratchet connection with said abrader arranged to cause rotation thereof when actuated by its spring, a dog pivoted on said lever and a fixed guide arranged to direct said dog into engagement with said arm, to swing the latter against its spring action, as said lever is moved to open the gas cock, and to direct the dog out of engagement with said arm to

release said arm at a predetermined point in said movement.

2. In a gas-igniter, an abrader, an open-ended tube having one end adjacent the abrader, a sleeve adapted to slide in said tube and having a piece of pyrophoric metal in one end thereof, a coil spring in said tube arranged to be connected at one end to the opposite end of said sleeve when pressed thereagainst, and a cap on the opposite end of said tube from the abrader arranged to engage the opposite end of said spring to press the metal against the abrader, substantially as described.

1,212,156. PYROPHORIC RENEWAL FOR GAS-LIGHTERS. THEODORE T. POMEROY, Haverhill, Mass., assignor to Safety Gas Lighter Co., Haverhill, Mass., a Corporation of Massachusetts. Filed June 1, 1915. Serial No. 31,341. (Cl. 67—6.1.)



1. A friction gas-igniter, comprising coöperating, abrading and pyrophoric elements, said pyrophoric element comprising two metals arranged side by side in close contact, to provide a continuous abrader-engaging face, and means to move the abrading element over said face, to cause simultaneous abrasion of said metals, the igniting point of the particles from one of said metals being relatively low as compared with that of the other, and the latter having frictional qualities, so that the heat generated from the abrasion thereof, tends to cause ignition of the particles from the former.

2. A friction gas-igniter, comprising coöperating, abrading and pyrophoric elements, said pyrophoric element comprising a piece of the metal cerium and a piece of a metal having relatively high frictional qualities as compared with those of the cerium, said metals being arranged side by side in close contact, to provide a continuous, abrader-engaging face, and means to move the abrading element over said face, to cause simultaneous abrasion of said metals.

3. A friction gas-igniter, comprising coöperating, abrading and pyrophoric elements, said pyrophoric element comprising two pieces of metal, one the metal cerium, and the other the metal magnesium, arranged side by side in close contact, to provide a continuous abrader-engaging face, and means to move the abrading element over said face to cause simultaneous abrasion of said metals.

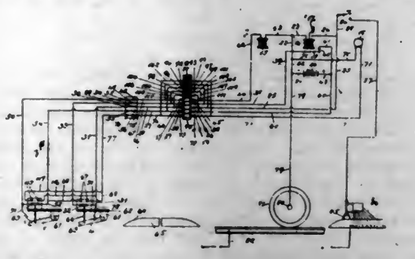
4. A renewal device for a pyrophoric igniter, comprising a cup formed of a metal having high frictional qualities, and a piece of pyrophoric alloy closely fitted in said cup, with its outer end flush with the rim thereof, the file resisting qualities of the metal of the cup being less than those of the alloy.

5. As an article of manufacture, a renewal device for a pyrophoric igniter, comprising a magnesium metal cup having a pyrophoric alloy inserted therein with its outer end flush with the rim of the cup.

[Claim 6 not printed in the Gazette.]

1,212,157. TRAIN-CONTROLLING DEVICE. THOMAS W. SCOTT, Baltimore, Md., assignor to The American Train Control Company, Baltimore, Md., a Corporation of Maryland. Filed Jan. 9, 1914. Serial No. 811,116. (Cl. 246—58.)

1. In a train controlling device the combination with a wheeled vehicle having a caution signal mechanism; a stop mechanism also on said vehicle; two contact shoes on the vehicle each shoe arranged to engage a separate series of ramp rails along the trackway; a shoe switch mechanically connected to one shoe; another shoe switch mechanically connected to the other shoe; a circuit reverser on the vehicle and provided with a series of contacts; each side of each shoe switch having connection with a contact of the circuit reverser; means for connecting the signal mechanism with two contacts of the circuit reverser and means for connecting the stop mechanism with two contacts of the circuit reverser whereby when the reverser is in one position one shoe switch will have connection with the stop mechanism and the other shoe switch have connection with the signal mechanism and when the reverser is in another position the one shoe switch will be connected with the signal mechanism and the other shoe switch will be connected with the stop mechanism.



2. In a train controlling device the combination with a wheeled vehicle having caution and stop mechanisms thereon, of two contact shoes on the vehicle each to successively engage a separate series of ramp rails along the trackway; a shoe switch for each shoe and mechanically operated thereby upon the engagement of the shoe with a ramp rail; a circuit reverser on the vehicle said reverser having a series of contacts; means electrically connecting the caution mechanism through the circuit reverser with one shoe switch at a time; means for electrically connecting the stop mechanism through the circuit reverser with the other of the shoe switches at a time while the vehicle is traveling in one direction, and means for operating the circuit reverser to reverse the connections between the two shoe switches and the caution and stop mechanisms when the direction of travel of the vehicle is reversed.

3. In a train controlling device the combination with a wheeled vehicle having a circuit reverser which latter is provided with a series of contacts; a caution mechanism on the vehicle; a stop mechanism also on the vehicle; a current supply on the vehicle; two ramp-rail contact shoes also on the vehicle; a shoe-switch for each contact shoe; connections between the current supply, caution mechanism and some of the reverser contacts; connections between the current supply, stop mechanism and other reverser contacts; connections between one of the shoe-switches and those contacts of the reverser with which the caution mechanism is connected; connections between the other shoe-switch and those contacts of the reverser with which the stop mechanism is connected; branches on opposite sides of the circuit reverser and including other contacts thereof whereby the shoe-switch previously connected with the caution mechanism may be connected with the stop mechanism and the shoe switch previously connected with the stop mechanism may be connected with the caution mechanism, and a connection from each contact shoe to a reverser contact both of said latter connections being independent of both shoe switches.

4. In a train controlling device the combination with a wheeled vehicle having a caution indicator and a stop mechanism and also having an audible signal thereon of a current supply on the vehicle; two contact shoes on the vehicle; a circuit reverser also on the vehicle; connections between the current supply, caution indicator, circuit reverser and one shoe when the latter is in a normal inoperated position; connections between the current supply, stop mechanism circuit reverser and the other shoe when the latter is also in a normal inoperated position and connections between the current-supply audible signal, circuit reverser and a shoe while the latter is in an operated position whereby an audible signal will be given each time the shoe is actuated.

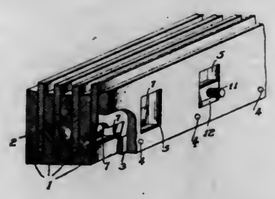
1,212,158. MANUFACTURE OF CELLULOSE. CHARLES N. WAITE, deceased, Wilmington, Del., by Cornelia B. Magoun, administratrix, West Vancouver, Canada, and JOSEF E. HEDIN, Wilmington, Del., assignors of one-third to William H. Sharp, Philadelphia, Pa. Filed Oct. 1, 1915. Serial No. 53,637. (Cl. 92—9.)

1. The process of producing cellulose which consists in preparing an alkaline solution, adding thereto less than one-half of one per cent. of a reducing agent, and employing the liquor thus produced for the treatment of cellulose-containing material, whereby the reducing agent prevents the free oxygen in such material from forming oxycellulose.

2. The process of producing cellulose which consists in preparing a solution of caustic soda, adding thereto a small quantity of sulfur, with formation of sodium sulfid, and employing the liquor thus produced for the digestion of cellulose-containing material, the quantity of sodium sulfid present being less than one-half of one per cent. and being, therefore, insufficient to act as the digesting agent, but sufficient to prevent the free oxygen in the material from forming oxycellulose during the process of digestion.

3. The process of producing chemical wood pulp, which consists in preparing a solution of caustic soda, adding thereto a small quantity, say about one-tenth of one per cent., of sulfur, with formation of sodium sulfid, and employing the liquor thus produced for the digestion of wood.

1,212,159. BED-PLATE. CHARLES IRVING WARE, Holyoke, Mass., assignor of one-half to Fred E. Maxfield, Holyoke, Mass. Filed May 10, 1916. Serial No. 96,552. (Cl. 92—22.)



1. A bed plate construction comprising filler and cutting bars, the cutting bars having wedge-shaped openings therethrough, wedge-shaped means passing through said openings for clamping the bars together for preventing lateral and vertical displacement of the cutting bars relative to the filler bars, and means extending through said openings for elevating the cutting bars relative to the filler bars.

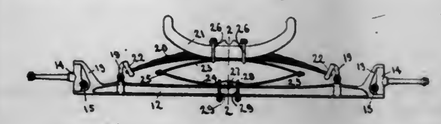
2. A bed-plate composed of filler and cutting bars, the filler bars having rectangular shaped openings therethrough, the cutting bars having wedge or dove-tailed shaped openings, the lower end of said openings corresponding with the lower edge of the cutting bars, securing bolts, wedge-shaped in cross section to engage the openings in the filler and cutting bars for clamping the same together, whereby the cutting bars are prevented from vertical and longitudinal movements.

3. A bed-plate for beating engines composed of filler and cutting bars, the filler bars having a rib secured to the lower side thereof, the filler bars having openings therethrough, their lower surface registering with the upper edge of the rib, cutting bars having openings therethrough and when assembled their lower edges registering with the upper edges of the ribs, and means passing through the openings of the bars for clamping the same together, and means comprising plates or wedges designed to be driven through the openings below the clamping means for elevating the cutting bars, as desired.

4. A cutting bar for bed plates, the lower edge of which is formed with wedge-shaped openings extending to the lower marginal edge of the same.

5. A bed plate composed of filler and cutting bars, the filler bars having openings therethrough, a rib secured to the lower side of the same, the cutting bars having wedge-shaped openings through the lower edge of the same, means comprising a bolt wedge-shaped in cross section for clamping the bars together, and means comprising plates or wedges adapted to be driven through the openings and above the ribs, for elevating the cutting bars, as described.

1,212,160. STEERING-AID ATTACHMENT FOR MOTOR-VEHICLES. WILLIAM A. FREDERICK, Boston, Mass., assignor to Twin-Rim Company, Boston, Mass., a Corporation of Massachusetts. Filed July 13, 1915. Serial No. 39,588. (Cl. 21—192.)



1. The combination with the front axle, chassis, and front supporting spring of a motor vehicle, the said axle having swinging wheel-carrying members at its ends, and steering connections with said members, of a spring toggle interposed between the said axle and supporting spring, and rigidly connected to said axle and supporting spring to prevent lateral movement of said members relatively to each other, said spring toggle having a constant tendency to collapse and pull the said axle and chassis toward each other.

2. In a motor-vehicle, the combination with the front axle and yieldingly-supported chassis, the said axle having swinging wheel-carrying members at its ends, and steering connections with said members, of means for opposing lateral movement of the chassis relatively to said axle and also exerting a yielding pull of the chassis and axle toward each other, said means comprising a pair of spring strips having a constant normal tendency to assume a substantially straight line, said strips being rigidly connected together at their ends and having intermediate portions rigidly secured to the chassis and axle respectively, whereby said strips constantly tend to pull the chassis and axle toward each other.

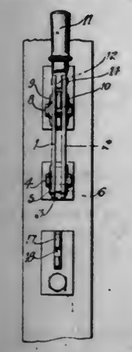
1,212,161. SWITCH. FRANK E. GETTS, Chicago, Ill., assignor to Electrical Engineers Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 4, 1915. Serial No. 53,873. (Cl. 175—282.)

1. In combination a pair of stationary switch terminals, a pair of separate moving switch blades, spring means at a plurality of points on said switch blades for pressing said blades against said terminals, and spacing means secured to said switch blades, said spacing means allowing free lateral movement of said blades between the outer ends thereof.

2. In combination a pair of stationary switch terminals, a pair of separate switch blades movable into engagement with both of said terminals, a spacing block between said blades, said block being of less width than the width of said terminal, and spring means operating independently of said spacing block to hold said blades firmly in engagement with the sides of both of said terminals, said blades having operating means secured thereto for moving said switch blades.

3. In combination a stationary terminal, a pair of switch blades pivoted on said terminal, spring means for pressing each of said blades against the sides of said

terminal, a second terminal, a spacing block between the outer ends of said switch blades, means for retaining said spacing block between said blades, said means allowing free lateral movement of said blades and spring means for pressing said blades against said spacing block, said block being of less width than the adjacent terminal.

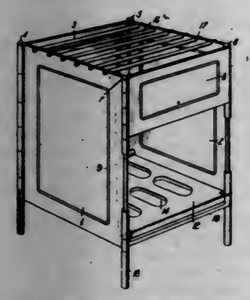


4. In combination a pair of stationary switch terminals of substantially the same thickness, a pair of separate substantially parallel switch blades pivoted on opposite sides of one of said terminals, spring means for pressing said blades against said one terminal, spring means operating independently of said first spring means for pressing said blades against the sides of said second terminal, and means for moving said switch blades in unison, said means comprising spacing means between said parallel switch blades, the outer ends of said blades being laterally movable with respect to each other.

5. In combination a pair of switch terminals of substantially the same thickness, a pair of separate substantially parallel switch blades pivoted on one of said terminals, spring means for holding said blades against said one terminal, spring means independent of said first spring means for holding said blades against the sides of said second terminal, a spacing block between the ends of said blades and means for retaining said spacing block in position between said blades, said means projecting from the side of said spacing block, the outer ends of the blades engaged by said spacing block being laterally movable with respect to each other.

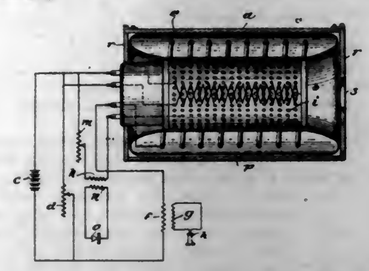
[Claims 6 to 9 not printed in the Gazette.]

1,212,162. CAMP-STOVE. ARMIN H. GREEN, Los Angeles, Cal. Filed Feb. 18, 1916. Serial No. 79,024. (Cl. 126—9.)



In a stove of the character described, a pair of sides and a front and back, said sides and front and back being hinged together, a bottom hinged to said back, said front being cut away for providing an opening, said bottom having a turned-over flange fitting over the lower part of said front for stiffening and holding in place the sides, each of said sides being provided with a row of notches at the upper edge, and vertical supporting bars having notches whereby necks are produced, said necks fitting in the notches in said sides, said bars having the notched portions interlocking, and sides acting as reinforcing and stiffening members in addition to article supporting members.

1,212,163. RELAY FOR UNDULATORY CURRENTS. ERIC MAGNUS CAMPBELL TIGERSTEDT, Copenhagen, Denmark. Filed Oct. 19, 1916. Serial No. 126,531. (Cl. 250—27.)



1. A relay for undulatory currents comprising an airtightly closed evacuated container, an anode mounted therein, a perforated auxiliary electrode arranged inside the said anode, a cathode arranged inside the said auxiliary electrode and adapted to be heated by an electric current and magnetically and electrically conducting means surrounding said container.

2. A relay for undulatory currents comprising an airtightly closed evacuated container, an anode mounted therein, a perforated auxiliary electrode arranged inside the said anode, a cathode arranged inside the said auxiliary electrode and adapted to be heated by an electric current and a mantle consisting of a magnetically and electrically conducting substance surrounding the said container.

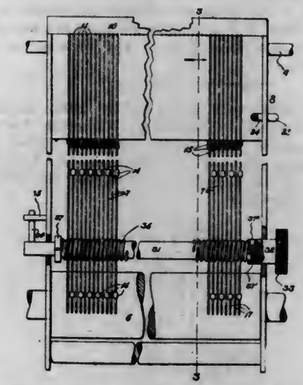
1,212,164. PIPE-LIGHTER. KARL WIEDEN, Ohligs, Germany. Filed Apr. 26, 1915, Serial No. 24,023. Renewed Dec. 8, 1916. Serial No. 135,885. (Cl. 67—7.1.)



1. A pipe lighter comprising a wick and wadding container, a benzin container fitting tightly into the lower end of said wick container, and having an opening in its upper end, a screw cap on said benzin container, a porous washer between said benzin container and said screw cap and a cap provided with lighting means on the upper part of said wick container.

2. A pipe lighter comprising a wick and wadding container, a benzin container fitting tightly into the lower end of said wick container and having an opening in its upper end, a screw cap on said benzin container, a porous washer between said benzin container and said screw cap, a cap on the upper end of said wick container, a steel striker on the upper end of said wick container and surrounding said wick and a pyrophorous body on said cap, for the purpose specified.

1,212,165. TRACKER MECHANISM. JOHN T. AUSTIN, Hartford, Conn., assignor to Austin Organ Company, Hartford, Conn., a Corporation of Maine. Filed Sept. 19, 1913. Serial No. 790,675. (Cl. 84—161.)



1. The combination of a contact bar, a perforated music sheet to travel over the contact bar, and a plurality of contact fingers automatically projectable through the perforations in the sheet to engage the contact bar and having a positive guide connection with said sheet.

2. The combination of a contact bar, a perforated music sheet to travel over said contact bar, and a plurality of resilient contact fingers automatically projectable through the perforations of the sheet and against said contact bar, said resilient contact fingers having a positive guide connection with said sheet.

3. The combination of a contact bar, a perforated music sheet to travel over the contact bar, and a plurality of contact fingers automatically movable through the perforations in the sheet to engage the contact bar, the sheet having longitudinally extending grooves intersected by the respective perforations and receiving the respective contact fingers.

4. The combination of a contact bar, a perforated music sheet to travel over said contact bar, and a plurality of resilient contact fingers automatically movable through the perforations in the sheet to engage the contact bar, the sheet having longitudinally extending guide means intersected by the respective perforations and with which said resilient contact fingers are respectively connected.

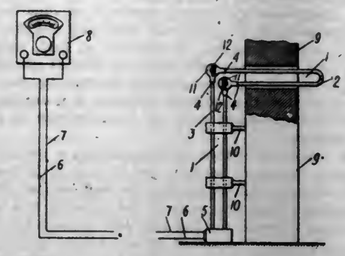
5. The combination of a contact bar, a plurality of contact fingers automatically movable toward the contact bar, and means for moving said contact fingers laterally toward or from each other.

[Claims 6 to 20 not printed in the Gazette.]

REISSUES.

14,248. THERMO-ELECTRIC COUPLE. WILLIAM H. BRISTOL, Waterbury, Conn., assignor to The Bristol Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 1, 1916. Serial No. 88,398. Original No. 811,819, dated Feb. 6, 1906, Serial No. 267,834, filed June 30, 1905. (Cl. 171—73.)

1. A thermo-electric couple separable or capable of division between its hot and cold ends, means for permanently mounting in place the cold end or section of the couple at a point substantially unaffected by variations in the temperature to be measured and means for detachably mounting the hot end or section directly upon the cold section.



2. In combination with a heated compartment, a thermo-electric couple separable or capable of division between its hot or cold ends, the hot end or section passing through a wall of said compartment into the zone thereof, whose temperature it is desired to ascertain and the remote end of the cold section being located on the exterior of the said wall near the base thereof the hot section being mounted directly on the cold section.

3. In combination with a heated compartment, a thermo-electric couple separable or capable of division between its hot or cold ends, the hot end or section passing through a wall of said compartment into the zone thereof, whose temperature it is desired to ascertain and the remote end of the cold section being located on the exterior of the said wall near the base thereof, the joint between the hot and cold section being external to said wall.

4. In combination with a heated compartment, having a vertical wall, a thermo-electric couple separable or capable of division between its hot and cold ends, the hot end or section passing through said wall into the compartment and the cold end or section being mounted substantially vertically upon said wall with its far end near the base thereof.

5. In combination with a heated compartment, having a vertical wall, a thermo-electric couple separable or capable of division between its hot and cold ends, the hot end or section passing through said wall into the compartment and the cold end or section being mounted substantially vertically upon said wall with its far end near the base thereof, and means for detachably joining the hot and cold ends at a point external to said wall.

6. In combination with a heated compartment, having a vertical wall, a thermo-electric couple separable or capable of division between its hot and cold ends, the hot end or section passing through said wall into the compartment and the cold end or section being mounted substantially vertically upon said wall with its far end near the base thereof, and means for detachably joining the hot and cold ends at a point external to said wall, said means being incapable of operative engagement in the reverse position.

7. In combination with a heated compartment, having a vertical wall with an aperture therein, a thermo-electric couple separable or capable of division between its hot and cold ends, said couple comprising a substantially vertical cold section and a substantially horizontal hot section passing through said aperture into the interior of the compartment and means for detachably joining the two sections at a point external to the wall whereby the hot section may be removed through said aperture without disturbing the cold section.

8. In combination with a heated compartment, having a vertical wall with an aperture therein, a thermo-electric couple separable or capable of division between its hot and cold ends, said couple comprising a substantially vertical cold section and a substantially horizontal hot section passing through said aperture into the interior of

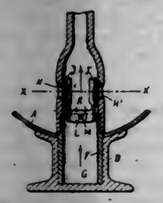
the compartment and means for detachably joining the two sections at a point external to the wall, whereby the hot section may be removed through said aperture without disturbing the cold section, the far end of the cold section of the couple being located near the base of the wall and remote from said aperture.

9. A thermo-electric couple separable or capable of division between its hot and cold ends and means for detachably connecting the extremities of said ends, the arms of one of the sections being of unequal lengths and always occupying the same relative position in space with reference to the other section, whereby it is incapable of coöperative engagement with the other section in the reverse position.

10. A thermo-electric couple comprising a primary section and a secondary section, and a joint including open slotted members and complementary members of different construction adapted to connect the primary and secondary sections between the hot and cold ends of the couple, one of said slotted members carried by the primary section and the other carried by the secondary section, whereby the sections are incapable of coöperative engagement in the reverse position.

11. A thermo-electric couple comprising a primary section and a secondary section and a joint adapted to connect the primary and secondary sections between the hot and cold ends of the couple, said joint including a slot in one extremity of the cold end and a slot in the opposite extremity of the hot end, and clamping means carried by the unslotted extremities, whereby the hot and cold ends are incapable of coöperative engagement in the reverse position.

14,244. PERCOLATOR-PUMP. JOHN B. GRIFFIN, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Apr. 19, 1916. Serial No. 92,318. Original No. 1,142,322, dated June 8, 1915, Serial No. 824,351, filed Mar. 13, 1914. (Cl. 53—3.)



1. In a percolator pump, the combination of a vertical tube provided with an orifice in its side and valve comprising the part of a tube adapted to fit the inside of said tube and having a depending leg or stem projecting angularly from the tubular part, and means near the center of the tube for pivotally supporting the free end of the leg or stem, the center of gravity in the entire valve being so located that the valve normally rests against the inside of the tube and closes the orifice, substantially as described.

2. In a percolator pump, the combination of a vertical tube provided with oppositely disposed orifices, a pin running crosswise of the tube near its axis, said pin being located below said orifices, and a pair of part tubular valves, each provided with an angularly extending and depending leg or stem pivotally mounted on said pin, the center of gravity of the valves being so arranged as to normally cause the valves to hold against the inside of the tube and close the orifices.

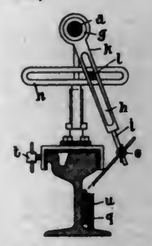
3. In a percolator pump, a well, an inlet thereto, an outlet therefrom, a valve for said inlet located in the path of movement to the outlet, and a support for said valve located between the bottom of said well and said inlet.

4. In a percolator pump, a chamber having an orifice in its side wall, a valve located within said chamber and gravity-actuated to normally close said orifice, and a support upon which said valve is free to rock located between said orifice and the bottom of the chamber, whereby the upward movement of the contents of the chamber acts upon and tends to close said valve against the orifice.

5. In a percolator pump, a vertical tube provided with an orifice, a closure for said orifice within said tube, a well below the orifice, circumferential extensions from the lower edge of both sides of the closure terminating at substantially opposite points, and supporting means on said tube between the bottom of said well and said orifice and with which said extensions are engaged.

6. In a percolator pump, a vertical tube, supporting points on the inner surface of said tube substantially opposite one another, an orifice in said tube above said supporting points, a well below said supporting points, a closure for the orifice, and oppositely disposed extensions at the lower part thereof carried by and rocking on said supporting points.

14,245. PROCESS AND APPARATUS FOR MAKING BRAZED JOINTS. FRIEDRICH WILHELM HEUSER, Gross-Lichterfelde, near Berlin, Germany. Filed Dec. 5, 1916. Serial No. 135,151. Original No. 1,169,484, dated Jan. 25, 1916, Serial No. 816,903, filed Feb. 6, 1914. (Cl. 219—12.)



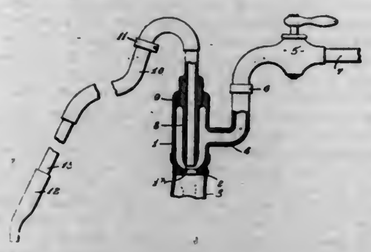
1. The method of brazing by use of the electric arc which comprises holding the working carbon so that its axis intersects, at all times, the molten end of the brazing material and simultaneously moving said carbon in a direction parallel to the line of the joint to be brazed while, at the same time, arranging a strip of good heat conducting material adjacent to the materials to be brazed and to the line of the proposed joint whereby the arc is stabilized.

2. An apparatus for producing brazed joints comprising, in combination, means for holding the working carbon at a definite angle with respect to the work, means for moving said carbon in a direction parallel to the line of the joint, and a strip of good heat conducting material adjacent to the materials to be brazed and to the line of the proposed joint.

3. An apparatus for producing brazed joints comprising, in combination, means for holding the working carbon at a definite angle with respect to the work, means for moving said carbon in a direction parallel to the line of the joint, and a strip of copper adjacent to the materials to be brazed and to the line of the proposed joint.

14,246. VACUUM CLEANING APPARATUS. WILLIAM H. JAKWAY, Syracuse, N. Y. Filed Dec. 5, 1910. Serial No. 595,839. Original No. 970,232, dated Sept. 13, 1910, Serial No. 520,528, filed Oct. 1, 1909. (Cl. 230—13.)

1. An apparatus for the purpose specified comprising an upright rigid chamber formed at its lower end with a contracted throat constituting the outlet thereof, and provided in its upper end with an opening, an air-conducting tube secured in said opening and arranged centrally and vertically within the chamber and concentric with the outlet-opening, the lower end of said tube terminating slightly above the outlet-opening and having its external diameter exceeding the diameter of the opening, to provide a ring-shaped orifice around the lower end of the air-tube, means for conducting water under pressure to the chamber, and a flexible discharge-tube attached to the outlet of the chamber and disposed in line with the air-tube, whereby the orifice is caused to direct the water from the chamber into the discharge-tube in the form of an inverted cone surrounding the adjacent end of the air-tube, said discharge-tube being entirely free below its attachment and independent of the air-tube whereby it is adapted to collapse to a greater or less degree to compensate for the difference in the atmospheric pressure and the pressure within the said air-tube as and for the purpose set forth.



2. In an apparatus for the purpose specified, the combination of means for conducting water under pressure and including an upright rigid chamber having a contracted outlet-opening in its lower end, an air-tube arranged centrally and vertically within the chamber and concentric with the outlet opening, the lower end of said tube terminating slightly above the outlet-opening and having its external diameter exceeding the diameter of said opening so as to produce a ring-shaped orifice around the air-tube for the passage of the water through the outlet, a flexible discharge tube connected to the outlet of the chamber and suspended therefrom, whereby the water is directed through the said orifice into the said discharge-tube in the form of an inverted cone surrounding the adjacent end of the air-tube, thus maintaining a partial vacuum at the lower end of the central tube so as to cause rapid and continuous exhaustion of air, said discharge-tube being entirely free below its attachment whereby it is adapted to collapse to a greater or less degree to compensate for the difference between the atmospheric pressure and the pressure within the air-tube so as to guard against disruption of the water-cone and the resultant destruction of the vacuum, substantially as and for the purpose specified.

3. In an apparatus for the purpose specified, the combination of an air-conducting tube, hydraulic means including a chamber surrounding the tube and provided in its lower end with an outlet-opening disposed slightly below the tube and concentric therewith and having a smaller diameter than the external diameter of the tube, and a flexible discharge-tube attached to the chamber at the opening and arranged axially in line with the air-conducting tube, whereby the water is directed into the discharge tube in the form of an inverted cone surrounding the adjacent end of the air-conducting tube so as to create a partial vacuum at the lower end of said air-tube and thus produce a rapid and constant exhaustion of air therefrom, said air-conducting tube being adjustable in relation to the outlet-opening, and the said discharge-tube being entirely free below the air-conducting tube and water directing means whereby it is adapted to collapse under variations in the pressure of air so as to guard against an in-rush of the external air through the discharge-tube and thus prevent disruption of the cone of water, substantially as and for the purpose described.

4. In an apparatus for the purpose specified the combination of a suction tube, and a chamber inclosing a portion of the tube and having an outlet located near one end of the tube and of less diameter than the same, the internal wall of said chamber adjacent said outlet extending at an angle approaching a right angle to the axis of the outlet, whereby fluid entering the chamber is projected by said internal wall near the outlet of the tube across said outlet in the form of a hollow flattened cone, substantially as and for the purpose described.

5. The combination with a suction tube, and a chamber inclosing a portion of the tube and having an outlet located in close juxtaposition to one end thereof and of less diameter than the same and an inlet for water under pressure, the internal wall of said chamber adjacent said outlet being disposed at an obtuse angle to the plane of the upper edge of said outlet whereby a fluid discharged through the latter will form a hollow inverted cone in advance of the end of the suction tube and with the latter substantially coincident with the base of the cone, of an automatic regulator for compensating for variation in pressure occurring in the suction tube, substantially as and for the purpose specified.

6. The combination with a suction tube and a chamber associated with one end portion of said suction tube and having an inlet for a fluid under pressure and an outlet in advance of the end of said tube and disposed relatively to said tube so that the fluid passing through said outlet will form a cone, of means for automatically compensating for variation in the atmospheric air pressure on opposite sides of the wall of said cone whereby rupture of the latter is prevented, substantially as and for the purpose set forth.

7. The combination with a suction tube and a chamber associated with one end portion of said suction tube, and having an inlet for water under pressure, and an outlet disposed relatively to said tube and in advance of the end thereof, so that a fluid passing through said outlet will form an inverted cone, of means for automatically compensating for variation in air pressure on opposite sides of the wall of said cone whereby rupture of the latter is prevented, said means comprising a tube depending from the chamber and provided with a flexible portion, substantially as and for the purpose described.

8. In an apparatus for the purpose specified, the combination with a chamber having an outlet, a conduit in communication with the chamber for supplying a fluid under pressure thereto and a suction tube having one end located in the chamber and in close juxtaposition to the outlet thereof, so that the fluid discharged through said outlet takes the form of an inverted cone having a thin wall, and an automatic regulator located externally of the chamber and operable by a variation occurring in the pressure on opposite sides of said cone, substantially as and for the purpose set forth.

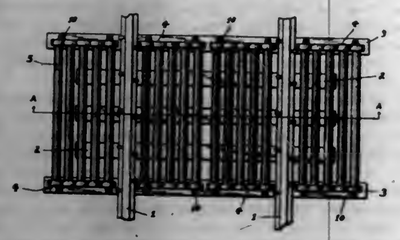
9. In an apparatus for the purpose specified, the combination with a chamber designed to have a fluid under pressure supplied thereto and provided with an outlet, and a suction tube terminating back of said outlet, the chamber and tube being so constructed that an inverted cone having a thin wall is provided at the end of the suction tube by the fluid discharged through the outlet, and an automatic regulator for preserving said cone from rupture, said regulator comprising a tube surrounding the outlet and provided with a flexible portion, substantially as and for the purpose described.

10. In an apparatus for the purpose specified, the combination with a chamber designed to have a fluid under pressure supplied thereto and provided with an outlet, and a suction tube terminating back of said outlet, the chamber and tube being so constructed that an inverted cone is provided at the end of the suction tube by the fluid discharged through the outlet, and an automatic regulator for preserving said cone from rupture, said regulator comprising a flexible tube secured at one end to the chamber about said opening, substantially as and for the purpose set forth.

11. In an apparatus for the purpose specified, the combination with a chamber designed to have a fluid under pressure supplied thereto and provided with an outlet, and a suction tube terminating back of said outlet, the chamber and tube being so constructed that an inverted cone is provided at the end of the suction tube by the fluid discharged through the outlet in the chamber, and an automatic regulator for preserving said cone from rupture, said regulator comprising a tube of flexible ma-

terial, said tube being of greater diameter than the said outlet and secured at one end to said chamber about said outlet, and depending therefrom, substantially as and for the purpose described.

14,247. CATTLE-GUARD. CALVIN SKINNER, Columbus, Ohio. Filed Aug. 9, 1916. Serial No. 114,067. Original No. 1,109,552, dated Sept. 1, 1914, Serial No. 813,565, filed Jan. 21, 1914. (Cl. 256—16.)



1. A cattle guard comprising, in combination with suitable cross ties, a plurality of longitudinally extending guard members spanning the distance between said cross ties, and end attaching means for said guard members comprising upstanding walls adapted to limit the longitudinal movement of said members and overhanging top walls loosely engaging the tops of said members adjacent their ends to permit their shifting movement toward or away from each other.

2. A cattle guard comprising, in combination with suitable cross ties, a plurality of longitudinally extending guard members spanning the distance between said cross ties, and a plurality of end pieces arranged to limit the longitudinal movement of said members and provided with laterally projecting flanges to loosely engage the tops of said members to prevent their removal and formed to permit movement of said members toward or away from each other in substantially their own plane.

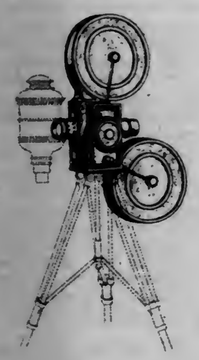
3. A cattle guard comprising, in combination with suitable cross ties, a plurality of longitudinally extending roller members spanning the distance between said cross ties, and a plurality of end pieces arranged to limit the longitudinal movement of said members and provided with laterally projecting semi-circularly shaped flanges for engaging the tops of said members, said flanges loosely engaging the tops of said members to permit of a limited rolling movement toward or away from each other.

4. A cattle guard comprising, in combination with suitable cross ties, a plurality of longitudinally extending rollers spanning the distance between said cross ties, and a plurality of end pieces engaging the top, sides and ends of said rollers, said end pieces being formed on their upper sides with semi-circular flange portions to loosely fit said rollers, the lower sides of said rollers lying directly upon the upper sides of said cross ties.

5. A cattle guard comprising, in combination with suitable cross ties, a plurality of longitudinally extending pipe sections spanning the distance between and lying directly upon said cross ties, and a plurality of end pieces of identical structure and of a length to engage half the required number of rollers between the track rails, said end pieces being disposed between and upon each side of the track rails, said end pieces being formed on their upper sides with semi-circular flange portions to loosely fit said rollers to permit their rotation.

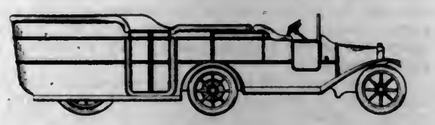
DESIGNS.

50,145. CASING FOR MOTION-PICTURE APPARATUS. LOUIS COATSWORTH, Chicago, Ill. Filed Nov. 7, 1916. Serial No. 130,074. Term of patent 3½ years.



The ornamental design for a casing for motion-picture apparatus, as shown.

50,146. VEHICLE. ROLLIE B. FAGEOL, Oakland, Cal. Filed May 3, 1916. Serial No. 95,278. Term of patent 14 years.



The ornamental design for a vehicle, as shown.

50,147. RAILROAD BULLETIN-BOARD. JAMES GAYLE, Carrollton, Ky. Filed Oct. 9, 1916. Serial No. 124,782. Term of patent 7 years.



The ornamental design for a railroad bulletin board, as shown.

50,148. CANDY TABLET OR THE LIKE. JAMES HARRIS, Wyoming, Ohio. Filed Nov. 9, 1916. Serial No. 130,482. Term of patent 3½ years.



The ornamental design for candy tablet or the like, substantially as shown.

50,149. CASING FOR AIR-PUMPS. JOHN T. JANETTE, Chicago, Ill. Filed Oct. 16, 1916. Serial No. 126,047. Term of patent 7 years.



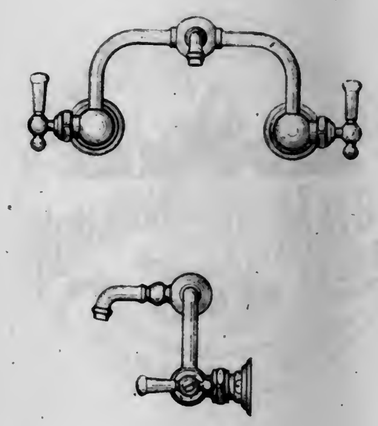
The ornamental design for a casing for air pumps, as shown.

50,150. CASING FOR AIR PUMPS AND FILTERS. JOHN T. JANETTE, Chicago, Ill. Filed Oct. 28, 1916. Serial No. 127,276. Term of patent 7 years.



The ornamental design for a casing for air pump and filter, as shown.

50,151. PLUMBING-FIXTURE. JOHN N. MORTIMER, Lakewood, Ohio, assignor to The Central Brass Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 26, 1916. Serial No. 127,958. Term of patent 7 years.



The ornamental design for a plumbing fixture, as shown.

50,152. CLOCK-CASE. JAMES NELSON SIMMS, Chicago, Ill. Filed Jan. 3, 1916. Serial No. 70,063. Term of patent 7 years.



The ornamental design for a clock case as shown.

50,153. SPOON, FORK, OR SIMILAR ARTICLE. SAMUEL G. WILKES, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation. Filed Oct. 9, 1916. Serial No. 124,744. Term of patent 3½ years.



The ornamental design for a spoon, fork or similar article, as shown.

TRADE-MARKS

PUBLISHED JANUARY 9, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 83,598. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BENDUS-COOPER & CO. INC., New York, N. Y. Filed Dec. 31, 1914.

MOONSHINE

Particular description of goods.—Metal-Polish.
Claims use since Sept. 30, 1914.

Ser. No. 84,099. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SUNSHINE POULTRY FARM, Shelby, Wis. Filed Jan. 25, 1915.



No claim being made to the words "Sunshine Poultry Farm, La Crosse, Wisconsin, I am the hen that lays Sunshine eggs" and the symbol of a hen except in connection with the other features of the mark.

Particular description of goods.—Single-Comb White Leghorn Chickens, Single-Comb White Leghorn Cocks, Single-Comb White Leghorn Cockerels, Single-Comb White Leghorn Hens, Single-Comb White Leghorn Pullets, Day-Old Chicks, Broilers, Capons, Hatching-Eggs, and Sterile Eggs.

Claims use since Mar. 30, 1914.

Ser. No. 88,776. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DENMARK CONDENSED MILK COMPANY, Denmark, Wis. Filed Aug. 24, 1915.

GEM

Particular description of goods.—Condensed Milk.
Claims use since July 1, 1915.

Ser. No. 89,384. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MANSFIELD MILLING CO., Mansfield, Ohio. Filed Sept. 22, 1915.



No claim being made to the words "Mansfield Milling Co.," "Flour," "Mansfield, Ohio" apart from the mark shown in the drawing.

Particular description of goods.—Wheat-Flour.
Claims use since Feb. 14, 1894.

Ser. No. 89,608. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) F. H. NOBLE & COMPANY, Chicago, Ill. Filed Oct. 2, 1915.

ADD-A-SLIDE

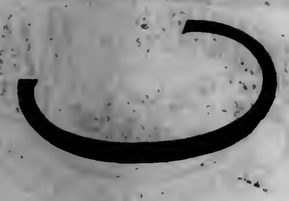
Particular description of goods.—Finger-Rings.
Claims use since Aug. 12, 1915.

Ser. No. 90,556. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE COVENTRY CHAIN COMPANY LTD., Coventry, England. Filed Nov. 10, 1915.



No claim being made to the word "Coventry" apart from the mark shown in the drawing.
Particular description of goods.—Drive-Chains of Ordinary Metal for General Purposes in the Transmission of Power.
Claims use since February, 1898.

Ser. No. 91,023. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SCHOLL MANUFACTURING COMPANY, Chicago, Ill. Filed Nov. 29, 1915.



Particular description of goods.—Corn-Pads, Corn-Plasters, Foot-Ointments, Bunion and Stiff-Joint Ointments, Foot-Powders, Foot-Bath Tablets, Chilblain-Lotions, Ingrowing-Toe-Nail Remedies, Corn-Salve, Callus-Salve, Foot-Lotion.
Claims use since Sept. 29, 1915.

Ser. No. 92,222. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) A. BOURJOIS & CO., INC., New York, N. Y. Filed Jan. 15, 1916.



Colored as shown, having flowers of pink and purple hues, leaves of green hues, and ornamentations of reddish and yellowish brown hues and gold, and a fancy female portrait of white and blue upon a background of dark blue and brown hues, no claim being made to the words "Savon" and "Parfumeurs à Paris" apart from the mark shown.
Particular description of goods.—Soap.
Claims use since Oct. 22, 1894.

Ser. No. 92,584. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) WILLIAM MILLS, Birmingham, England. Filed Jan. 31, 1916.



Particular description of goods.—Grenades, Bombs, Parts of Grenades and of Bombs, Fuses, Percussion-Caps, Detonators, Projectiles, and Releasing or Projecting Apparatus for Grenades, Bombs, or the Like.
Claims use since July 5, 1915.

Ser. No. 92,572. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) MAX KAMMERLING, New York, N. Y. Filed Feb. 1, 1916.



No claim being made to the words "Hi-Gloss Lemon Oil For Furniture & Pianos, For Victrolas & Fine Woodwork" apart from the mark shown in the drawing.
Particular description of goods.—Furniture-Polishes.
Claims use since Dec. 1, 1915.

Ser. No. 92,969. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) A. S. CAMPBELL COMPANY, Boston, Mass. Filed Feb. 19, 1916.

CELLO

Particular description of goods.—Hot-Water Bottles.
Claims use since Sept. 8, 1911.

Ser. No. 93,349. (CLASS 7. CORDAGE.) WRIGHT WIRE COMPANY, Worcester, Mass. Filed Mar. 6, 1916.

EXCELSIOR

Particular description of goods.—Picture-Cord, Wire Ropes and Cables.
Claims use since Jan. 1, 1912.

Ser. No. 93,635. (CLASS 12. CONSTRUCTION MATERIALS.) CONSOLIDATED COMPANY, Chicago, Ill. Filed Mar. 18, 1916.



Particular description of goods.—Wood Lath, Metal Lath, Corner-Beads, Bags of Lime, Bags of Sand, Bags of Stucco, and a Preparation Which is Known as Neatsand, Which is a Special Kind of Sand with Practically No Grit in It.
Claims use since on or about the 19th day of October, 1915.

Ser. No. 94,336. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THOMAS J. SWEET, Albion, N. Y. Filed Apr. 11, 1916.

Bi-more

Particular description of goods.—Canned Fruits, Canned Vegetables, Tomato Catsup, and Apple-Cider Vinegar.
Claims use since September, 1913.

Ser. No. 94,736. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JACOB MELICOW, New York, N. Y. Filed Apr. 26, 1916.

KEFIRLAC

Particular description of goods.—Predigested Food and Fermented-Milk Preparation.
Claims use since Dec. 1, 1914.

Ser. No. 95,953. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) STURTEVANT AEROPLANE CO., Boston, Mass. Filed June 17, 1916.

Sturtevant

No claim is made to the word "Sturtevant" apart from the mark shown in the drawing.
Particular description of goods.—Aeroplanes, Flying-Machines, and Parts Thereof.
Claims use since August, 1915.

Ser. No. 96,346. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CURTICE BROTHERS CO., Rochester, N. Y. Filed July 6, 1916. Under ten-year proviso.



Particular description of goods.—Canned Fruits and Vegetables.
Claims use since about the year 1870.

Ser. No. 96,754. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES A. MCATEER & SONS, INC., Pittsburgh, Pa. Filed July 22, 1916.



Particular description of goods.—Confectioners' Powdered Sugar.
Claims use since November, 1909.

Ser. No. 96,972. (CLASS 15. OILS AND GREASES.) WARREN OIL COMPANY, Warren, Pa. Filed July 29, 1916.

PURE QUIK

Particular description of goods.—Crude Petroleum.
Claims use since May 12, 1914.

Ser. No. 97,408. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARPLE BROS., Philadelphia, Pa. Filed Aug. 17, 1916.

MABRO

Particular description of goods.—Salted Nuts.
Claims use since about Oct. 1, 1915.

Ser. No. 97,440. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CHRIST A. ZOES, Chicago, Ill. Filed Aug. 19, 1916.

POLISHU

Particular description of goods.—A Liquid Shoe-Cleaner, a Liquid Shoe-Polish, and a Liquid Shoe-Dressing.
Claims use since May 1, 1916.

Ser. No. 97,649. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) PAIGE-DETROIT MOTOR CAR CO., Detroit, Mich. Filed Aug. 26, 1916.

PAIGE

No claim is made to the exclusive ownership of the word "Paige" except in association with the symbol shown in the accompanying drawing.
Particular description of goods.—Motor-Cars.
Claims use since on or about July 1, 1916.

Ser. No. 97,729. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) J. P. COCHRANE, Edinburgh, Scotland. Filed Aug. 31, 1916.

CHALLENGER

·BRAND·

No claim being made to the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—Iron Heads for Golf-Clubs.
Claims use since about August, 1908.

Ser. No. 97,730. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE DESMOND-STEPHAN MANUFACTURING CO., Urbana, Ohio. Filed Aug. 31, 1916.

Particular description of goods.—Grinding Material in the Nature of an Abrasive for Grinding-Wheel Dressers.
Claims use since Aug. 17, 1916.

Ser. No. 97,739. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CHARLES F. STEIN, Chicago, Ill. Filed Aug. 31, 1916.

EVER SHINE POLISH

I disclaim proprietary rights in the particular words "Evershine Polish" themselves.
Particular description of goods.—Polish for Pianos, Furniture, Floors, Automobiles, and other Articles Having a Varnished Surface.
Claims use since July 9, 1916.

Ser. No. 97,765. (CLASS 37. PAPER AND STATIONERY.) WORTENDYKE MANUFACTURING CO., Richmond, Va. Filed Sept. 1, 1916.

WESTOVER

No claim being made to the words "Toilet Tissue" apart from the mark as shown.
Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since July 1, 1916.

Ser. No. 97,974. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) WALTER HÖHN, New York, N. Y. Filed Sept. 13, 1916.

GAEA

Particular description of goods.—Pregnancy-Testers.
Claims use since May, 1915.

Ser. No. 98,177. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) YELLOW PINE MEDICINE CO., Montgomery, Ala. Filed Sept. 22, 1916.

Goodnight

Particular description of goods.—A Composition to be Applied to the Human Body to Prevent Mosquitos from Stinging Such Body.
Claims use since the 5th day of September, 1916.

Ser. No. 98,196. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) REISS BROTHERS & COMPANY, Chicago, Ill. Filed Sept. 23, 1916.

Absorbo

Particular description of goods.—Smoking-Pipes and Mouthpieces.
Claims use since Apr. 15, 1916.

Ser. No. 98,201. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DANIEL H. BOYKIN, Los Angeles, Cal. Filed Sept. 25, 1916.

DAN'S
KEEN-WHITE

No claim being made to the word "White" apart from the mark.
Particular description of goods.—A Preparation for Polishing Buck, Suede, Calf, Kid, Canvas, or Linen Shoes.
Claims use since Apr. 13, 1916.

Ser. No. 98,297. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NOCATEE CITRUS GROWERS' ASSOCIATION, Nocatee, Fla. Filed Sept. 28, 1916.

HONEY SWEET BRAND

The words "Brand" and "Honey Sweet" being disclaimed. The device of the trade-mark consists of a drawing of a little girl reaching forward to gather fruit from a tree. The fruit is represented by a drawing of disks scattered over a drawing of a tree. The whole is inclosed by a circle, within which are the words "Honey Sweet Brand."
Particular description of goods.—Oranges, Grape-Fruit, Lemons, and All Citrus Fruits.
Claims use since Nov. 10, 1915.

Ser. No. 98,298. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NOCATEE CITRUS GROWERS' ASSOCIATION, Nocatee, Fla. Filed Sept. 28, 1916.

GOLDEN CHAIN BRAND

The word "Brand" being disclaimed. The device of the trade-mark consists of a series of disks arranged in a circular form and joined together by links, as of a chain, and surrounding the words "Golden Chain Brand."
Particular description of goods.—Oranges, Grape-Fruit, Lemons, and All Citrus Fruits.
Claims use since Nov. 10, 1915.

Ser. No. 98,440. (CLASS 27. HOROLOGICAL INSTRUMENTS.) MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J., and New York, N. Y. Filed Oct. 5, 1916.

MESCO

Particular description of goods.—Electric Clocks and Horological, Astronomical, and Nautical Timepieces and Parts and Attachments Therefor.
Claims use since November, 1905.

Ser. No. 98,488. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) AMERICAN WOOL IMPROVEMENT ASSOCIATION, Salt Lake City, Utah. Filed Oct. 7, 1916.



No claim being made to the words appearing therein apart from the mark as shown in the drawing.
Particular description of goods.—Wool.
Claims use since Apr. 10, 1916.

Ser. No. 98,561. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FECHER AND MCGAVOCK, INC., Chicago, Ill. Filed Oct. 11, 1916.

GOLD KING

Particular description of goods.—Coffee.
Claims use since 1900.

Ser. No. 98,664. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MARTINS BIRMINGHAM, LIMITED, Birmingham, England. Filed Oct. 14, 1916.

PEARL-ZODIAC

Particular description of goods.—Golf-Balls.
Claims use since May, 1916.

Ser. No. 98,680. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SAMUEL H. CAMP, Jackson, Mich. Filed Oct. 16, 1916.



No claim being made to exclusive use of the words "Physiological Belt" nor to the name "Camp" except as displayed upon the shield.
Particular description of goods.—Abdominal Belts or Supports.
Claims use since April, 1916.

Ser. No. 98,720. CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE CLYDE CARS COMPANY, Clyde, Ohio, and New York, N. Y. Filed Oct. 17, 1916.



No claim is made to the representation of the nameplate apart from the mark as shown.
Particular description of goods.—Motor-Cars.
Claims use since the 6th day of October, 1915.

Ser. No. 98,782. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. S. BROWN MERC. CO., Denver, Colo. Filed Oct. 20, 1916.

JONQUIL

Particular description of goods.—Canned Tomatoes, Canned Salmon, Canned Refugee-Beans, Canned Peas, Canned Wax-Beans, Canned Hominy, Canned Pumpkin, Canned Sauer-Kraut, Canned Corn, Canned Sweet Potatoes, Canned Kidney-Beans, and Canned Pickles.
Claims use since September, 1916.

Ser. No. 98,879. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG CO., Green Bay, Wis. Filed Oct. 25, 1916. Under ten-year proviso.



Particular description of goods.—Toilet-Paper.
Claims use since Dec. 7, 1894.

Ser. No. 98,922. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) FRED A. DENNETT, Port Washington, Wis. Filed Oct. 27, 1916.

"UNITED"

Particular description of goods.—Phonographs and Phonograph-Records.
Claims use since Aug. 9, 1916.

Ser. No. 99,001. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GLOBE CANNING CO., Eastport, Me. Filed Oct. 31, 1916.

LEDA

Particular description of goods.—Canned Sardines.
Claims use since Sept. 21, 1916.

Ser. No. 99,003. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GLOBE CANNING CO., Eastport, Me. Filed Oct. 31, 1916.

SUVA

Particular description of goods.—Canned Sardines.
Claims use since Sept. 21, 1916.

Ser. No. 99,043. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) HORACE C. NICHOLS, Brookline, Mass. Filed Nov. 2, 1916.

HCN

Particular description of goods.—Sewer and Like Traps, Union-Sleeves, Union-Studs, Union Quarter-Bends, Tray-Legs, and Tray-Brackets.
Claims use since Jan. 4, 1913.

Ser. No. 99,057. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE BASTIAN-BLESSING COMPANY, Chicago, Ill. Filed Nov. 3, 1916.

REGO

Particular description of goods.—Regulating and Reducing Valves and other Metallic Valves for General Purposes.
Claims use since July 1, 1916.

Ser. No. 99,085. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) S. E. GOLDMAN CO. INC., New York, N. Y. Filed Nov. 4, 1916.



The picture being fanciful.
Particular description of goods.—Cotton Piece Goods.
Claims use since Aug. 15, 1916.

Ser. No. 99,173. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW ORLEANS COFFEE CO. LTD., New Orleans, La. Filed Nov. 8, 1916.

RAVEN

The mark is lined to indicate the color red.
Particular description of goods.—Syrup and Coffee.
Claims use since February, 1912.

Ser. No. 99,179. (CLASS 2. RECEPTACLES.) VIRGINIA MANUFACTURING CO., Norfolk, Va. Filed Nov. 8, 1916.



Particular description of goods.—Wooden Baskets, Wooden Tills for Shipping Fruits and Vegetables, Wooden Crates.
Claims use since Mar. 10, 1916.

Ser. No. 99,190. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) KENTUCKY WAGON MANUFACTURING CO., Louisville, Ky. Filed Nov. 9, 1916.



Particular description of goods.—Gasolene-Trucks.
Claims use since Feb. 1, 1915.

Ser. No. 99,210. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) FRICTIONLESS METAL CO., Chattanooga, Tenn. Filed Nov. 10, 1916.

OCTACON

No claim being made for the words "High Speed Bearing Metal Chemically Alloyed" apart from the mark shown.

Particular description of goods.—Chemically-Alloyed High-Speed Bearing Metal.

Claims use since on or about the 3d day of November, 1916.

Ser. No. 99,299. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) NORTH ATLANTIC METAL CORPORATION, New York, N. Y. Filed Nov. 14, 1916.

NORAMCO

Particular description of goods.—Babbitt Metal and Antifriction Metal.

Claims use since Nov. 1, 1915.

Ser. No. 99,309. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) DETROIT MARVEL BRASS MANUFACTURING CO., Detroit, Mich. Filed Nov. 15, 1916.

MARVEL

Particular description of goods.—Sewer-Gas Traps and Plumbing Connections.

Claims use since the 1st day of November, 1912.

Ser. No. 99,337. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORA COLE, Allentown, Pa. Filed Nov. 17, 1916.

Knickerbocker

Particular description of goods.—A Chemical Ink-Eraser.

Claims use since June 1, 1916.

Ser. No. 99,353. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 17, 1916.

Blue Rock

Particular description of goods.—Canned Salmon.

Claims use since the year 1912.

Ser. No. 99,407. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE HAMPDEN WATCH COMPANY, Canton, Ohio. Filed Nov. 20, 1916. Under ten-year proviso.

Hampden Watch Co.

Particular description of goods.—Watches and Watch-Movements.

Claims use since the 1st day of November, 1878.

Ser. No. 99,424. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) PASS & SEYMOUR, INC., Solvay, N. Y. Filed Nov. 20, 1916.

TULIP

Particular description of goods.—Electric-Lamp Receptacles.

Claims use since May 27, 1915.

Ser. No. 99,433. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN CAMPBELL & CO. INC., New York, N. Y. Filed Nov. 21, 1916.

BASEKO

Particular description of goods.—Chemicals, Dyestuffs, and Oils Used in Dyeing, Bleaching, and Finishing.

Claims use since Nov. 4, 1916.

Ser. No. 99,434. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN CAMPBELL & CO. INC., New York, N. Y. Filed Nov. 21, 1916.

LAKEKO

Particular description of goods.—Chemicals, Dyestuffs, and Oils Used in Dyeing, Bleaching, and Finishing.

Claims use since Nov. 4, 1916.

Ser. No. 99,435. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN CAMPBELL & CO. INC., New York, N. Y. Filed Nov. 21, 1916.

KROMEKO

Particular description of goods.—Chemicals, Dyestuffs, and Oils Used in Dyeing, Bleaching, and Finishing.

Claims use since Nov. 4, 1916.

Ser. No. 99,436. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN CAMPBELL & CO. INC., New York, N. Y. Filed Nov. 21, 1916.

SULFEKO

Particular description of goods.—Chemicals, Dyestuffs, and Oils Used in Dyeing, Bleaching, and Finishing.

Claims use since Nov. 4, 1916.

Ser. No. 99,437. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN CAMPBELL & CO. INC., New York, N. Y. Filed Nov. 21, 1916.

DIREKO

Particular description of goods.—Chemicals, Dyestuffs, and Oils Used in Dyeing, Bleaching, and Finishing.

Claims use since Nov. 4, 1916.

Ser. No. 99,438. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. JOHN CAMPBELL & CO. INC., New York, N. Y. Filed Nov. 21, 1916.

EKO

Particular description of goods.—Chemicals, Dyestuffs, and Oils Used in Dyeing, Bleaching, and Finishing.

Claims use since Nov. 10, 1916.

Ser. No. 99,439. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN CAMPBELL & CO. INC., New York, N. Y. Filed Nov. 21, 1916.

VATEKO

Particular description of goods.—Chemicals, Dyestuffs, and Oils Used in Dyeing, Bleaching, and Finishing.

Claims use since Nov. 4, 1916.

Ser. No. 99,440. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN CAMPBELL & CO. INC., New York, N. Y. Filed Nov. 21, 1916.

ACEKO

Particular description of goods.—Chemicals, Dyestuffs, and Oils Used in Dyeing, Bleaching, and Finishing.

Claims use since Nov. 4, 1916.

Ser. No. 99,490. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) WALDES & CO., Prague-Wrschowitz, Austria-Hungary. Filed Nov. 22, 1916.

Particular description of goods.—Cigarette-Paper.

Claims use since Jan. 25, 1916.

Ser. No. 99,518. (CLASS 5. ADHESIVES.) FECULOSE COMPANY OF AMERICA, Worcester, Mass. Filed Nov. 24, 1916.

Particular description of goods.—Adhesives, Adhesive Gums, Adhesive Sizings, Including Feculose.

Claims use since April, 1913.

Ser. No. 99,535. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CINCINNATI IRON & STEEL COMPANY, Cincinnati, Ohio. Filed Nov. 25, 1916.

CISCO

Particular description of goods.—Engine-Lathes, Stud-Lathes, Single-Purpose Lathes, Drills, Planers, and Grinders.

Claims use since February, 1903.

Ser. No. 99,567. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) PHILIP J. CLUNE, Ottawa, Ill. Filed Nov. 27, 1916.

Tru-Shape

Particular description of goods.—Catamenial Sacks.

Claims use since Mar. 4, 1916.

Ser. No. 99,620. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DIONAL SYNDICATE, London, England. Filed Nov. 29, 1916.

DIONAL

Particular description of goods.—Antiseptic Preparation for Healing Wounds, Cuts, and Abrasions and Stopping Bleeding.
Claims use since Sept. 19, 1916.

Ser. No. 99,662. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) H. R. MALLINSON & Co., New York, N. Y. Filed Dec. 1, 1916.

CARNIVAL

Particular description of goods.—Silk Piece Goods.
Claims use since July 15, 1916.

Ser. No. 99,663. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) H. R. MALLINSON & Co., New York, N. Y. Filed Dec. 1, 1916.

PIPING ROCK

Particular description of goods.—Silk Piece Goods.
Claims use since July 15, 1916.

Ser. No. 99,664. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) H. R. MALLINSON & Co., New York, N. Y. Filed Dec. 1, 1916.

MEADOW BROOK

Particular description of goods.—Silk Piece Goods.
Claims use since July 15, 1916.

Ser. No. 99,674. (CLASS 39. CLOTHING.) BOSTON RUBBER SHOE COMPANY, Boston and Malden, Mass. Filed Dec. 2, 1916.

Rival

Particular description of goods.—Boots and Shoes Having Fabric Uppers and Rubber Soles Attached Thereto by Vulcanization.
Claims use since 1900.

Ser. No. 99,688. (CLASS 38. PRINTS AND PUBLICATIONS.) R. E. TAYLOR, CORPORATION, New York, N. Y. Filed Dec. 2, 1916.

TAYLORS LIVE WIRE

The words "Taylors Live Wire."
Particular description of goods.—A House Organ Published Monthly.
Claims use since Oct. 1, 1915.

Ser. No. 99,714. (CLASS 38. PRINTS AND PUBLICATIONS.) THE MARCONI PUBLISHING CORPORATION, New York, N. Y. Filed Dec. 4, 1916.

THE WIRELESS AGE

Particular description of goods.—A Monthly Publication.
Claims use since Oct. 1, 1913.

Ser. No. 99,755. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE BRYANT ELECTRIC COMPANY, Bridgeport, Conn. Filed Dec. 7, 1916.

WONDOR

Particular description of goods.—Attachment-Plug Receptacles.
Claims use since Nov. 11, 1916.

Ser. No. 99,769. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE NATIONAL MALLEABLE CASTINGS COMPANY, Cleveland, Ohio. Filed Dec. 7, 1916.

CC

Particular description of goods.—Iron and Steel Castings.
Claims use since prior to October, 1909.

Ser. No. 99,770. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE OHIO BRASS COMPANY, Mansfield, Ohio. Filed Dec. 7, 1916.

MODOC

Consisting of the word "Modoc."
Particular description of goods.—Trolley-Wire Clamps.
Claims use since February, 1911.

Ser. No. 99,806. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) BOSTON AUTO GAGE COMPANY, Boston, Mass. Filed Dec. 9, 1916.

CHALLENGE

Particular description of goods.—Gages.
Claims use since Dec. 19, 1913.

Ser. No. 99,810. (CLASS 12. CONSTRUCTION MATERIALS.) EASTMAN, GARDINER & COMPANY, Laurel, Miss. Filed Dec. 9, 1916.

EGGO

Particular description of goods.—Yellow-Pine Lumber and Timber.
Claims use since Oct. 1, 1906.

Ser. No. 99,816. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) HOYT METAL COMPANY, St. Louis, Mo. Filed Dec. 9, 1916.

AGUILA

Particular description of goods.—Babbitt Metal.
Claims use since 1909.

Ser. No. 99,824. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) PABST BREWING COMPANY, Milwaukee, Wis. Filed Dec. 9, 1916.

PABLO

Particular description of goods.—A Non-Alcoholic Preparation, Which is an Artificially-Carbonated Beverage Compounded with Various Carbohydrates and Matter Derived from Hops, Which is Not Brewed or Fermented and Does Not Contain Any Malt or Alcohol at Any Stage of Its Manufacture.
Claims use since 1908.

Ser. No. 99,827. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNITED STATES LENS COMPANY, Geneva, N. Y. Filed Dec. 9, 1916.

EXPORTO

Particular description of goods.—Spectacle-Lenses.
Claims use since Oct. 28, 1916.

Ser. No. 99,892. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) F. HOFFMAN & SONS INC., Newark, N. J. Filed Dec. 13, 1916.

Etiquette

Particular description of goods.—A Non-Alcoholic Carbonated Beverage to be Sold as a Soft Drink.
Claims use since Mar. 15, 1916.

Ser. No. 99,903. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) DAVID W. STILES, La Fayette, Ga. Filed Dec. 13, 1916.

STI-LO

Particular description of goods.—A Non-Alcoholic Beverage to be Sold as a Soft Drink.
Claims use since the 1st day of September, 1916.

Ser. No. 99,919. (CLASS 2. RECEPTACLES.) THE BEAVER COMPANY, Buffalo, N. Y. Filed Dec. 14, 1916.

Bonnetiere

Particular description of goods.—Decorated Boxes.
Claims use since the 20th day of October, 1916.

Ser. No. 99,923. (CLASS 2. RECEPTACLES.) THE BEAVER COMPANY, Buffalo, N. Y. Filed Dec. 14, 1916.

Lingerette

Particular description of goods.—Decorated Boxes.
Claims use since the 20th day of October, 1916.

TRADE-MARK REGISTRATIONS GRANTED

JANUARY 9, 1917.

114,854. COTTON-SEED OIL FOR SCREW-CUTTING AND ALL OTHER LUBRICATING PURPOSES. THE AMERICAN COTTON OIL COMPANY, Guttenberg, N. J., and New York, N. Y.
Filed September 25, 1916. Serial No. 98,200. PUBLISHED NOVEMBER 7, 1916.

114,855. CERTAIN NAMED CLOTHING. EFFA B. AMSDEN, Minneapolis, Minn.
Filed September 7, 1916. Serial No. 97,831. PUBLISHED NOVEMBER 7, 1916.

114,856. CLIPPED WHITE OATS. ARMOUR GRAIN COMPANY, Jersey City, N. J., and Chicago, Ill.
Filed August 14, 1916. Serial No. 97,315. PUBLISHED OCTOBER 31, 1916.

114,857. CLIPPED WHITE OATS. ARMOUR GRAIN COMPANY, Jersey City, N. J., and Chicago, Ill.
Filed August 14, 1916. Serial No. 97,321. PUBLISHED OCTOBER 31, 1916.

114,858. INSULATED WIRE. ATLANTIC INSULATED WIRE & CABLE COMPANY, Jersey City, N. J., and Stamford, Conn.
Filed March 21, 1916. Serial No. 93,733. PUBLISHED NOVEMBER 7, 1916.

114,859. GRAPE-JUICE AND APPLE NECTAR. AUSTIN, NICHOLS & CO., INC., Brooklyn and New York, N. Y.
Filed September 19, 1916. Serial No. 98,070. PUBLISHED NOVEMBER 7, 1916.

114,860. POLISH FOR AUTOMOBILE-BODIES. GEORGE R. BARBER, Clarks Summit, Pa.
Filed August 10, 1916. Serial No. 97,237. PUBLISHED SEPTEMBER 12, 1916.

114,861. CHEMICAL FIRE-EXTINGUISHERS. THE BARGAR MFG. CO., Columbus, Ohio.
Filed September 21, 1916. Serial No. 98,132. PUBLISHED NOVEMBER 7, 1916.

114,862. FURNITURE, PIANO, AND AUTOMOBILE POLISH AND VARNISH-RENEWER. JOHN P. BARRON, Butte, Mont.
Filed June 9, 1916. Serial No. 95,748. PUBLISHED NOVEMBER 7, 1916.

114,863. NATURAL AND CARBONATED MINERAL WATER AND NON-ALCOHOLIC CARBONATED TONIC BEVERAGES SOLD AS SOFT DRINKS. BARTLETT SPRINGS CO., San Francisco, Cal.
Filed August 17, 1916. Serial No. 97,386. PUBLISHED NOVEMBER 7, 1916.

114,864. HARDWOOD LUMBER. THE BAYOU LAND & LUMBER COMPANY, Cincinnati, Ohio.
Filed September 5, 1916. Serial No. 97,782. PUBLISHED OCTOBER 31, 1916.

114,865. HAIR-NETS. J. S. BENDER CO., New York, N. Y.
Filed July 27, 1916. Serial No. 96,885. PUBLISHED NOVEMBER 7, 1916.

114,866. LADIES' SKIRTS, LADIES' SUITS, LADIES' COATS. BERNSTEIN, BAUM, CRAVIS & COMPANY, Philadelphia, Pa.
Filed January 27, 1916. Serial No. 92,481. PUBLISHED NOVEMBER 7, 1916.

114,867. READY-MIXED AND SOLID-BLOCK PAINTS. WAILES DOVE BITUMASTIC LIMITED, Newcastle-upon-Tyne, England.
Filed July 14, 1916. Serial No. 96,575. PUBLISHED NOVEMBER 7, 1916.

114,868. PLUSHES IN THE PIECE. SIDNEY BLUMENTHAL & COMPANY, New York, N. Y.
Filed September 21, 1916. Serial No. 98,129. PUBLISHED NOVEMBER 7, 1916.

114,869. PASTE PAINT, LIQUID PAINT, WOOD-STAINS, VARNISHES, ENAMELS, PUTTY, FLAT FINISHES, FILLERS, AND VARNISH-STAINS. THE A. BURDSAL CO., Indianapolis, Ind.
Filed July 24, 1916. Serial No. 96,776. PUBLISHED NOVEMBER 7, 1916.

114,870. REFINED PETROLEUM TO BE USED AS A REMEDY OR EMOLLIENT. CENTRAL COMMERCIAL COMPANY, Chicago, Ill.
Filed March 29, 1916. Serial No. 93,951. PUBLISHED JUNE 6, 1916.

114,871. NON-ALCOHOLIC CARBONATED BEVERAGES SOLD AS SOFT DRINKS. CHICAGO CONSOLIDATED BOTTLING COMPANY, Chicago, Ill.
Filed September 20, 1915. Serial No. 89,310. PUBLISHED FEBRUARY 29, 1916.

114,872. PHONOGRAPH. THE COMPTON-PRICE COMPANY, Coshocton, Ohio.
Filed June 28, 1916. Serial No. 96,198. PUBLISHED OCTOBER 31, 1916.

114,873. NON-ALCOHOLIC BEVERAGE TO BE SOLD AS A SOFT DRINK. EDWIN S. EBY, Lewistown, Pa.
Filed September 22, 1916. Serial No. 98,162. PUBLISHED NOVEMBER 7, 1916.

114,874. WORK-SHIRTS, NEGLIGÉE SHIRTS, AND UNDERSHIRTS, OVERALLS, JUMPERS, AND ROMPERS. EDSON MOORE & COMPANY, Detroit, Mich.
Filed August 17, 1916. Serial No. 97,407. PUBLISHED NOVEMBER 7, 1916.

114,875. NEGLIGÉE, WORK, AND UNDER SHIRTS. ELDER MANUFACTURING COMPANY, St. Louis, Mo.
Filed August 25, 1916. Serial No. 97,622. PUBLISHED NOVEMBER 7, 1916.

114,876. WOMEN'S, MISSES', AND CHILDREN'S BOOTS, SHOES, AND SLIPPERS MADE OF LEATHER AND LEATHER AND CLOTH. FAUNCE AND SPINNEY INC., Lynn, Mass.
Filed September 25, 1916. Serial No. 98,206. PUBLISHED NOVEMBER 7, 1916.

114,877. COMPOSITION HEELS, HEEL-LIFTS, AND SOLES. FIBERITE HEEL AND LEATHER CO., INC., Whitman, Mass.
Filed August 25, 1916. Serial No. 97,624. PUBLISHED NOVEMBER 7, 1916.

114,878. COTTON PIECE GOODS. J. A. FINN & COMPANY, New York, N. Y.
Filed August 25, 1916. Serial No. 97,623. PUBLISHED NOVEMBER 7, 1916.

114,879. ILLUMINATING AND LUBRICATING OILS AND GREASES. GALENA-SIGNAL OIL COMPANY, Franklin, Pa.
Filed September 13, 1916. Serial No. 97,972. PUBLISHED NOVEMBER 7, 1916.

114,880. BEARINGS AND BUSHINGS. GENERAL ALUMINUM & BRASS MANUFACTURING COMPANY, Detroit, Mich.
Filed August 26, 1916. Serial No. 97,639. PUBLISHED NOVEMBER 7, 1916.

114,881. WRITING-INK AND WRITING-INK IN TABLET FORM. THE GENERAL ECLIPSE COMPANY, Danielson, Conn.
Filed August 14, 1916. Serial No. 97,336. PUBLISHED OCTOBER 31, 1916.

114,882. GAGES AND MICROMETERS. GREENFIELD TAP AND DIE CORPORATION, Greenfield, Mass.
Filed March 23, 1916. Serial No. 93,792. PUBLISHED NOVEMBER 7, 1916.

114,883. CERTAIN NAMED MEASURING AND SCIENTIFIC APPLIANCES. F. A. HARDY & COMPANY, Chicago, Ill.
Filed May 31, 1916. Serial No. 95,548. PUBLISHED NOVEMBER 7, 1916.

114,884. CERTAIN NAMED MUSICAL INSTRUMENTS, STRINGS FOR SUCH INSTRUMENTS, AND BOWS FOR PLAYING THE SAME. HEINRICH TH. HEBERLEIN, Jr., Markneukirchen, Germany.
Filed July 13, 1914. Serial No. 79,757. PUBLISHED OCTOBER 24, 1916.

114,885. CERTAIN NAMED CLOTHING. HESS BROTHERS, Allentown, Pa.
Filed September 25, 1915. Serial No. 89,461. PUBLISHED NOVEMBER 7, 1916.

114,886. ROOFING MATERIAL IN THE FORM OF WATERPROOFED PAPER OR FELT SHEETS. H. H. HOPKINS COMPANY, Chicago, Ill.
Filed August 24, 1916. Serial No. 97,600. PUBLISHED OCTOBER 31, 1916.

114,887. LEATHER BOOTS AND SHOES. F. M. HOYT SHOE COMPANY, Manchester, N. H.
Filed September 22, 1916. Serial No. 98,166. PUBLISHED NOVEMBER 7, 1916.

114,888. COTTON BEDSPREADS. ITALIAN BED SPREAD Co., New York, N. Y.
Filed October 9, 1916. Serial No. 98,518. PUBLISHED NOVEMBER 7, 1916.

114,889. MINERAL WATER. JOHNSON BROS., Greenspring, Ohio.
Filed September 13, 1916. Serial No. 97,975. PUBLISHED NOVEMBER 7, 1916.

114,890. BOOTS AND SHOES OF LEATHER, RUBBER, FELT, OR OTHER FABRIC CONSTRUCTION. GEO. E. KEITH COMPANY, Brockton, Mass.
Filed August 21, 1915. Serial No. 88,742. PUBLISHED NOVEMBER 7, 1916.

114,891. NON-ALCOHOLIC BEVERAGES PUT UP IN CERTAIN NAMED RECEPTACLES AND DISPENSED AS SOFT DRINKS. CLAUS F. P. KORSELL, Chicago, Ill.
Filed September 25, 1916. Serial No. 98,212. PUBLISHED NOVEMBER 7, 1916.

114,892. CERTAIN NAMED ARTICLES HAVING PARTS PLATED WITH PRECIOUS METAL. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed July 29, 1916. Serial No. 96,957. PUBLISHED OCTOBER 31, 1916.

114,893. TONIC FOR THE HAIR. LARIVIÈRE AND JOURDAIN, Lowell, Mass.
Filed July 19, 1916. Serial No. 96,672. PUBLISHED OCTOBER 31, 1916.

114,894. KNITTED UNDERWEAR IN ONE AND TWO PIECE GARMENTS. LAX & BURGHEIMER IN'C., New York, N. Y.
Filed July 21, 1916. Serial No. 96,716. PUBLISHED NOVEMBER 7, 1916.

114,895. COKE. LEHIGH COKE COMPANY, South Bethlehem, Pa., and New York, N. Y.
Filed April 20, 1916. Serial No. 94,576. PUBLISHED OCTOBER 31, 1916.

114,896. BALLS FOR BALL AND TUBE MILLS. LOS ANGELES FOUNDRY COMPANY, Los Angeles, Cal.
Filed September 5, 1916. Serial No. 97,799. PUBLISHED NOVEMBER 7, 1916.

114,897. UNION-SUITS, UNDERSHIRTS, DRAWERS, AND PAJAMAS MADE OF TEXTILE MATERIAL. PHILIP A. LUCKETT, Salisbury, Md.
Filed March 23, 1916. Serial No. 93,801. PUBLISHED NOVEMBER 7, 1916.

114,898. TERNE PLATES. LYON, CONKLIN & CO. INC., Baltimore, Md.
Filed October 3, 1916. Serial No. 98,387. PUBLISHED NOVEMBER 7, 1916.

114,899. COTTON PIECE GOODS, NAINSOOKS, AND LONG-CLOTHS. R. H. MACY & Co., New York, N. Y.
Filed September 20, 1916. Serial No. 98,116. PUBLISHED NOVEMBER 7, 1916.

114,900. CERTAIN NAMED ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES. MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J., and New York, N. Y.
Filed August 31, 1916. Serial No. 97,733. PUBLISHED NOVEMBER 7, 1916.

114,901. CERTAIN NAMED JEWELRY AND PRECIOUS-METAL WARE. MAY & MALONE, Chicago, Ill.
Filed June 24, 1916. Serial No. 96,112. PUBLISHED OCTOBER 31, 1916.

114,902. CARD-INDEXES. MEILICKE CALCULATOR COMPANY, Chicago, Ill.
Filed August 4, 1916. Serial No. 97,086. PUBLISHED OCTOBER 31, 1916.

114,903. TALKING-MACHINES. MONTGOMERY WARD & Co., Inc., New York, N. Y., and Chicago, Ill.
Filed February 28, 1916. Serial No. 93,147. PUBLISHED OCTOBER 24, 1916.

114,904. DESK PAPER-WEIGHTS. BYRON W. MOSER, St. Louis, Mo.
Filed August 14, 1916. Serial No. 97,339. PUBLISHED OCTOBER 31, 1916.

114,905. CERTAIN NAMED CLOTHING. OPPENHEIM, COLLINS & COMPANY, NEW YORK, New York, N. Y.
Filed July 28, 1916. Serial No. 96,933. PUBLISHED NOVEMBER 7, 1916.

114,906. TALKING-MACHINE RECORDS. PAROQUETTE RECORD MFG. CO. INC., New York, N. Y.
Filed August 30, 1916. Serial No. 97,716. PUBLISHED OCTOBER 31, 1916.

114,907. GASOLENE, BENZIN, NAPHTHA, KEROSENE, MOTOR-SPIRIT, FUEL-OILS, AND LUBRICATING OILS AND GREASES. PETROLEUM PRODUCTS CO., OF CALIFORNIA, San Francisco, Cal.
Filed March 11, 1916. Serial No. 93,469. PUBLISHED NOVEMBER 7, 1916.

114,908. ORANGE MINERAL, A PIGMENT USED AS AN INK CONSTITUENT. PICHER LEAD COMPANY, Joplin, Mo.
Filed June 13, 1916. Serial No. 95,852. PUBLISHED OCTOBER 24, 1916.

114,909. HOG-RINGS AND PIG-RINGS. WILLIAM E. PRATT, Chicago, Ill.
Filed December 1, 1915. Serial No. 91,081. PUBLISHED NOVEMBER 7, 1916.

114,910. LACES AND COTTON GOODS IN THE PIECE. MEYER SMOLOWITZ, New York, N. Y.
Filed May 16, 1916. Serial No. 95,180. PUBLISHED NOVEMBER 7, 1916.

114,911. DISINFECTING-PAINT. TMCO MFG. CO. INC., New York, N. Y.
Filed June 2, 1916. Serial No. 95,603. PUBLISHED AUGUST 15, 1916.

114,912. WATCHES, WATCHCASES, ALL PARTS OF WATCHES AND WATCH-MOVEMENTS. WALTHAM WATCH COMPANY, Waltham, Mass.
Filed May 18, 1916. Serial No. 95,253. PUBLISHED OCTOBER 31, 1916.

114,913. CLOCKS AND WATCHES. WESTERN CLOCK Co., Peru, Ill.
Filed June 15, 1916. Serial No. 95,908. PUBLISHED OCTOBER 31, 1916.

114,914. CLOCKS AND WATCHES. WESTERN CLOCK Co., Peru, Ill.
Filed June 15, 1916. Serial No. 95,910. PUBLISHED OCTOBER 31, 1916.

114,915. TOILET-PAPER AND PAPER TOWELS. WORTENDYKE MANUFACTURING CO., Richmond, Va.
Filed September 1, 1916. Serial No. 97,763. PUBLISHED OCTOBER 24, 1916.

TRADE-MARK REGISTRATIONS RENEWED.

13,979. HORSESHOE-NAILS. SIMMONS HARDWARE COMPANY, St. Louis, Mo.
Registered January 11, 1887. Renewed January 11, 1917.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

JOLLIFFE *v.* WALDO *v.* VERMEER AND SCHORIK.

Decided December 18, 1916.

1. INTERFERENCE—ABANDONMENT OF APPLICATION BY WINNING PARTY WITHOUT MAKING INVENTION PUBLIC—JUDGMENT NOT A BAR.

Where the winning party in an interference without making the invention public permits his application to become abandoned, so that the public gets no benefit of it, he fails to complete the inventive act, and the judgment in the interference is not a bar to the grant of a patent for the invention to a losing party whose application has not become abandoned.

2. SAME—SAME—PRIOR KNOWLEDGE AS A BAR TO PATENT.

Prior knowledge, to invalidate a patent, must be prior knowledge of the actual thing—a physical embodiment of the invention—and must be public, (citing cases.)

ON PETITION. (Rehearing.)

TROLLEY-CATCHER.

Messrs. Seymour & Earle for Jolliffe.

Mr. George E. Waldo pro se.

Mr. John G. Elliott for Vermeer and Schorik.

EWING, *Commissioner:*

This is a petition to vacate a judgment awarding priority of invention to Vermeer and Schorik in the above interference. The issue of the interference reads as follows:

In an automatic trolley pole controller, the combination with a pivotal trolley pole, of a compressed air cylinder and a compressed air tank, whereby the pole is automatically moved into a clearance position, an emergency valve controlling the flowage of compressed air directly from the said tank to the said cylinder, a magnet controlled by the operating current, an armature controlled by the magnet for closing said valve, and a spring for returning the armature and opening the emergency valve when the current through the magnet is broken.

I have already handed down a preliminary memorandum, dated September 23, 1916, and an opinion denying the petition, dated November 2, 1916. It is upon this latter opinion that the petition for rehearing is predicated.

In interference No. 35,932, the junior party, Jolliffe, in his preliminary statement failed to overcome the filing date of either of the earlier parties, and after judgment against him he obtained Patent No. 1,089,414 for what remained to him. Waldo having failed to overcome the filing date of Vermeer and Schorik, a judgment of priority was rendered in their favor June 24, 1913, from which no appeal was taken. Waldo has, however, kept his application alive by appropriate action.

Vermeer and Schorik filed no preliminary statement in interference No. 35,932 and took no action after a letter of the Examiner dated July 26, 1913, so that their application has been abandoned for over two years.

As soon as he learned of the abandonment of their application Waldo on July 8, 1916, filed his petition praying that the judgment in favor of Vermeer and Schorik be set aside, that a judgment be entered awarding priority of invention of the subject-matter of the issue to him, and that the Primary Examiner be instructed to withdraw the final rejection of the claim which formed the issue of the interference and to allow the claim to him.

I directed that notice be given to Vermeer and Schorik, their attorney, and their assignee, Jacob Cejka.

My preliminary memorandum was forwarded to the parties, attorney and assignee, for their information. It contained the following:

If at any time prior to the abandoning of their application on July 26, 1914, Vermeer or Schorik or their assignee, published or put into public use the invention constituting the subject-matter of the issue of the interference, the substantial prayers of Waldo's petition must be denied. If, however, they in no way gave the invention to the public, then it is not clear upon what grounds Waldo can be denied a claim commensurate with the issue in interference.

The letter of notification addressed to Vermeer and Schorik was returned undelivered. Nothing was heard from the assignee. The attorney responded as follows:

CHICAGO, ILL., *October 16, 1916.*

Hon. Commissioner of Patents, Washington, D. C.

SIR: Concerning the application of George E. Waldo, trolley catchers, filed September 21, 1908, Serial No. 454,038 with reference to the letter of the Chief Clerk dated September 25, 1916, the attention of the Office is directed to the fact that the application of Herman Vermeer and Frank Schorik for trolley rope controller, Serial No. 413,530, was filed January 31, 1906; that subsequently and on September 1, 1908, an interference No. 29,264 was declared between said application of Vermeer and Schorick and the joint application of Roscoe Levens and Alfred H. Whatley, (981,865;) that a preliminary statement was filed therein, and that subsequently on December 11, 1908, judgment of priority was awarded in favor of Levens and Whatley; that said preliminary statement set forth:—

"that about November 1, 1907, they jointly commenced working on a working model which they completed and successfully operated on or about the first day of December, 1907, and that they showed and explained and operated said model in the presence of others on or about the first day of January, 1908; that on or about the first of February, 1908, they commenced the construction of a full sized operative device embodying their invention, and that the same was completed on or about the first day of July, 1908, and successfully operated in the presence of others, and have since continued the use of the same; that save this one full sized device they have not manufactured others for use or for sale, and that no applications for patents have been filed."

It will be observed that there is no assertion in the preliminary statement that they ever operated the device on a trolley car and concerning which I have no information, my impression being, however, that they did not.

In any event my file of their application shows that some time after the decision above referred to was rendered and long before the interference with the Waldo application, Vermeer had moved to his native country, Holland; that several letters were written to Schorick requesting him to come in with regard to the Waldo interference, none of which he replied to either directly or indirectly, and that finding I could not get in touch with Schorick, I wrote a number of letters addressed to Vermeer mailed to five different places in Holland, several of which were returned uncalled for, and as to others no reply was ever made.

I have no knowledge of the whereabouts of Schorick nor have I had for two or three years, and likewise of Cejka, their assignee of a one-third interest.

For the foregoing reasons no preliminary statement was filed by Vermeer and Schorick in the Waldo interference.

Respectfully,

(Signed) JNO. G. ELLIOTT.

I denied the petition in my opinion of November 2, 1916, on the ground that the judgment against Waldo was, or must be assumed, for the purpose of this proceeding, to have been properly entered, and that the Office should not set aside one of its own judgments. I stated that if I should allow Waldo a patent I would be obliged to overrule *ex parte Phelps*, (176 O. G., 525; 1912, C. D., 67.) I also cited the case reported without name in 1877, (C. D., 121; 12 O. G., 979,) *Humphrey* v. *Fichert*, (1904, C. D., 447; 112 O. G., 2094,) *Griffith* v. *Taylor*, (91 MS. Dec., 110,) showing that *ex parte Phelps* is in general accord with long established practice in the Office, and *Westinghouse* v. *Chartiers Valley Gas Co.*, (43 Fed. Rep., 582,) which applied such a judgment as is here under consideration, (page 588;) but I pointed out that the Nicholson application, referred to in that opinion, was at the date thereof an application pending in the Office. Serial No. 117,007, series of 1880, abandoned in 1894.

I then pointed out that Waldo was not without remedy, as he could appeal from the rejection of the claim by the Office, and also take proceedings under section 4915 of the Revised Statutes, where the judgment sought to be reopened would not be conclusive, citing *Morgan* v. *Daniels*, (153 U. S., 120.)

Waldo has replied that he has been through a long and arduous litigation involving the suggested remedy in the *Wende* v. *Horine* interference both in the Office and under section 4915, and if it became necessary for him to conduct the elaborate proceeding followed in that interference he would feel constrained to drop the matter. He also pointed out that *ex parte Phelps* was not a proceeding in an interference to reopen a judgment therein, but that it was an *ex parte* proceeding, whereas he has entitled his motion in the interference, and notice has been given to Vermeer and Schorik.

Waldo further argues that on the construction of the law which I have followed he would be the one person in the world who, having made this invention and without laches undertaken to give the benefit of it to the public, must be denied a patent, for any subsequent inventor coming into the Office after Vermeer and Schorik abandoned their application might obtain a patent without their application being cited against him, (*Corn Planter Case*, 23 Wall., 181.) This, he strenuously contends, is unfair to him.

There can be no doubt that the application of Vermeer and Schorik is not under the practice of the Office usable as an anticipation. It has frequently been argued that the *Corn Planter Case* turned on a question of pleading; but the Office has not so interpreted it, for since that case was decided (1875) no citations have been made of abandoned applications, which have accumulated in the Office to the number of nearly three-quarters of a million. The only ground upon which Waldo can be refused his patent is that a judgment of priority has been rendered against him in favor of Vermeer and Schorik, and as this would not apply to a subsequent inventor Waldo would be the one inventor of the subject-matter in the world to whom a patent must be refused.

In *ex parte Phelps* it was said:

> The subsequent condition of the prevailing party's case, however, is believed to have no effect upon the loser's right to a patent for the invention in controversy.
>
> After the termination of an interference on its merits it is, strictly speaking, the judgment that the losing party is not the first inventor rather than the application of his opponent that stand as a bar to the allowance of his claims to the invention. The interference record and, in fact, the applicant's own file show that he is not the first inventor of the subject-matter in dispute, and while reference may properly be made to the file of the winning party to determine the scope of the judgment, since it affects all matter which not only was, but might have been adjudicated, (*Blackford* v. *Wilder*, C. D. 1907, 491; 127 O. G., 1255; 28 App. D. C., 535,) nevertheless it is not this application itself nor its standing in the Office which constitutes this bar. The right of the unsuccessful party to the invention in issue is *res adjudicata* by reason of the judgment which stands of record against him.

I do not agree with this reasoning. As I view an interference proceeding where no question of originality or disclosure is raised, the judgment does not carry with it any finding against the defeated party which affects his standing as an inventor. The Office discovers two men claiming a patent and concludes that the right of one to obtain a patent is superior to the right of the other. Where both parties have nothing but applications, the judgment is in a sense interlocutory. Neither one has done everything that is required of the inventor. If the winning party makes his invention public, it doubtless is unimportant whether he thereafter abandons his application. He is abandoning to the public, (*Miller & England* v. *Walker Patent Pivoted Bin Co.*, 138 Fed. Rep., 919;) but where the winning party without making the invention public permits his application to become abandoned, so that the public gets no benefit from it, he fails to complete the inventive act, and the holding that the losing party may not have a patent is likely to result in the loss of public knowledge of the invention. Such an outcome is contrary to the theory of the patent system.

If the Waldo patent is granted and thereafter Vermeer and Schorik attempt to put the invention on the market and are sued under the patent what can they set up by way of defense?

They can set up no public use or publication, as is shown by Mr. Elliott's letter. They cannot set up their abandoned application under the *Corn Planter Case*. If they should plead the judgment, they would be met by the fact that following the judgment they have taken no effective steps to give the

public the benefit of the invention. If they were to set up prior knowledge by themselves, their attorney, or witnesses to their application, this could be no more influential than the knowledge of all the abandoned applications in the Office by the respective parties, attorneys, and witnesses thereto. Prior knowledge must be of the thing—a physical embodiment of the invention—not a drawing or description thereof or an application therefor, (*The Corn Planter Case*, cited; *Coffin* v. *Ogden*, 85 U. S., 420; *Northwestern Fire Extinguisher Company* v. *Philadelphia Fire Extinguisher Company*, 1 Banning and Arden, 177; *Lyman Ventilating and Refrigerating Co.* v. *Lalor*, Fed. Cas., 8632; *Ellithorp* v. *Robertson*, Fed. Cas., 4408; *Detroit Lubricator Mfg. Co.* v. *Renchard*, 9 Fed. Rep., 293,) and the knowledge or use relied upon must be public. (*Gayler* v. *Wilder*, 51 U. S., 477; *Matthes* v. *Burt*, 114 O. G., 764; 24 App. D. C., 265; *Acme Flexible Clasp Co.* v. *Cary Mfg. Co.*, 96 Fed. Rep., 344; *Boyd* v. *Cherry*, 50 Fed. Rep., 279; *Matheson* v. *Campbell*, 69 Fed. Rep., 597; *Bullock* v. *Jones*, Fed. Cas., 2132; *Heath* v. *Hildreth*, Fed. Cas., 6309; *Webster* v. *Sanford*, 44 O. G., 567; *Mason* v. *Hepburn*, 84 O. G., 147; 13 App. D. C., 86; *Thomson* v. *Weston*, 99 O. G., 864; 19 App. D. C., 373.)

A mere member of the public who should set up Vermeer and Schorik's work as defense, if sued on Waldo's prospective patent, would be met by the fact that the public had derived no knowledge of the invention from Vermeer and Schorik, but owed the knowledge of the invention to Waldo.

In my opinion of November 2, 1916, I expressed an unwillingness to overrule *ex parte Phelps*. On further consideration I am of opinion that it is distinguishable for the reason urged by Waldo—namely, that Phelps mistook his remedy. The effect of the judgment should be tried out in the interference, and Phelps, therefore, should have proceeded in the interference instead of proceeding *ex parte*.

The prayer of Waldo that a judgment of priority be entered in his favor over Vermeer and Schorik must be denied. The judgment was proper when entered, and an interference cannot be continued with an abandoned application.

But for reasons indicated above I am convinced that Waldo can no longer be denied a patent by reason of the judgment entered in the interference.

Waldo, however, as above indicated, was also in interference No. 30,027, with an application of Levens and Whateley, which has eventuated in Patent No. 981,865. Nothing can be allowed to him which is not patentable over that patent. The issue of that interference was, on Waldo's motion in response to an order to show cause, held to be unpatentable.

In considering this case I have examined *Marshall & Stearns Co.* v. *Murphy Mfg. Co.*, (199 Fed. Rep., 772,) which, however, turned on the point of acquiescence in the rejection resulting from an adverse decision in an interference.

The Examiner will act on Waldo's application in the light of this opinion.

As the action directed is exceptional and there may be information obtainable which has not reached the Office bearing upon the question whether Vermeer or Schorik or their assignee ever published or put into public use the invention, I will direct that this opinion be published forthwith.

The petition is granted to the extent indicated; but it is otherwise in all respects denied.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Cook reissue patent, No. 13,231, (original No. 946,596,) for shooting-glasses, *Held* not infringed. *Standard Optical Co.* v. *Cook*. 236 Fed. Rep., 548.

(U. S. D. C.) The Crum patent, No. 764,919, for a fruit-sorter, *Held* invalid for lack of invention, being anticipated by the Huntley patent, No. 538,330. *Skinner* v. *Campbell*, 236 Fed. Rep., 358.

(U. S. D. C.) The Maull patent, No. 1,071,472, claims 2, 3, 4, 5, 7, 15, and 16 *Held* invalid for anticipation, where the claims were covered by prior patents or machines covering them were made and sold more than two years before application. *Campbell* v. *Skinner*, 236 Fed. Rep., 359.

(U. S. D. C.) The Ramsey patent, No. 575,733, for a signal system for electric railroads, *Held* invalid because of publication more than two years before application, as well as public use for more than two years before application. *Williamson* v. *Electric Service Supplies Co.*, 236 Fed. Rep., 353.

(U. S. C. C. A.) The Watson patent, No. 702,754, for improvements in windows, *Held*, in view of the prior art, not to show invention. *Watson Fireproof Window Co.* v. *Biersach & Niedermeyer Co.*, 236 Fed. Rep., 346.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 2, 1917.

Mercantile Supply Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Joseph Burnett Co., of 36 India street, Boston, Mass., for registration of a trade-mark and trade-mark registered December 18, 1906, No. 58,651, to Mercantile Supply Company, of Middletown, N. Y., and the Office having failed to secure proof of service upon the said Mercantile Supply Company, and no satisfactory evidence of successorship having been filed, notice is hereby given that unless said Mercantile Supply Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1916.

Edwin A. Madge, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Edwin A. Madge, 533 Woodward avenue, Detroit, Mich., and the application of Harry

U. Strong, 914 Chestnut street, Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Edwin A. Madge at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Madge, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1916.

Frings & Zwietusch, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Columbia Brewing Co., 2120–2132 South C street, Tacoma, Wash., for registration of a trade-mark and trade-mark registered August 22, 1882, No. 9,619, to Frings & Zwietusch, Milwaukee, Wis., and a notice of such declaration sent by registered mail to said Frings & Zwietusch at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Frings & Zwietusch, their assigns or legal representatives, shall enter an appearance therein within thirty days of the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 23, 1916.

Earl J. Baker and Ernest C. Root take notice:

Letters suggesting claims for purposes of interference having been mailed to Ernest C. Root, Engineers Building, Cleveland, Ohio, (1365 Ontario street,) the attorney of record in an application filed by Earl J. Baker, and returned undelivered, and a telegram addressed to Earl J. Baker, 2077 East Seventy-seventh street, Cleveland, Ohio, not having been delivered, notice is hereby given that unless Ernest C. Root or Earl J. Baker shall furnish an address to which mail may be delivered to one or the other within thirty days from the first publication of this notice the interferences will be proceeded with as in case of default.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 27, 1916.

Mildred Lewless, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Eugene B. Walsh, 59 Howard avenue, Brooklyn, N. Y., and the patent to Mildred Lewless, 155 Harmon street, Brooklyn, N. Y., (Patent No. 1,102,934, issued July 7, 1914,) and a notice of such declaration sent by registered mail to said Mildred Lewless at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Lewless, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

F. W. H. CLAY, *Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 16, 1916.

John F. Doty, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Maryland Rubber Company, of 37 Hopkins Place, Baltimore, Md., for registration of a trade-mark and trade-mark registered July 12, 1887, No. 14,581, to John F. Doty, of 8 College Place, New York, N. Y., and a notice of such declaration sent by registered mail to said John F. Doty at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said John F. Doty, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

THE OFFICIAL GAZETTE OF THE United States Patent Office.

Vol. 234—No. 3. TUESDAY, JANUARY 16, 1917. Price—$5 per year.

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ISSUE OF JANUARY 16, 1917.

Patents	970—No.	1,212,166 to No.	1,213,135, inclusive.
Designs	60—No.	50,154 to No.	50,213, inclusive.
Trade-Marks	132—No.	114,916 to No.	115,047, inclusive.
Labels	15—No.	19,830 to No.	19,844, inclusive.
Prints	6—No.	4,599 to No.	4,604, inclusive.
Reissues	4—No.	14,248 to No.	14,251, inclusive.
Total	1187		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	.....	North Carolina	2	.....
Arizona	.....	.....	North Dakota	4	.....
Arkansas	3	1	Ohio	59	6
California	41	4	Oklahoma	4	2
Colorado	14	.....	Oregon	9	.....
Connecticut	26	1	Pennsylvania	86	9
Delaware	4	.....	Rhode Island	11	.....
Florida	9	.....	South Carolina	4	.....
Georgia	6	.....	South Dakota	2	.....
Idaho	2	.....	Tennessee	7	.....
Illinois	89	11	Texas	12	3
Indiana	18	1	Utah	4	.....
Iowa	23	1	Vermont	1	1
Kansas	20	.....	Virginia	7	1
Kentucky	4	.....	Washington	14	6
Louisiana	3	1	West Virginia	3	.....
Maine	5	2	Wisconsin	26	5
Maryland	15	5	Wyoming	.....	.....
Massachusetts	62	6	Alaska Territory	1	.....
Michigan	27	1	Canal Zone	.....	.....
Minnesota	16	3	District of Columbia	4	.....
Mississippi	5	.....	Hawaii Territory	.....	.....
Missouri	21	6	Philippine Islands	.....	.....
Montana	9	.....	Porto Rico	1	.....
Nebraska	7	5	U. S. Army	1	.....
Nevada	.....	.....	U. S. Navy	.....	.....
New Hampshire	4	1	Total to residents of the United States	955	147
New Jersey	73	9			
New Mexico	1	.....			
New York	181	56			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	1	Natal	.....	.....
Austria-Hungary	.....	.....	Netherlands	1	.....
Belgium	1	.....	New South Wales	3	.....
British India	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	18	.....	Portugal	.....	.....
Cape Colony	1	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	1	Scotland	1	1
Denmark	1	.....	South Australia	.....	.....
England	16	2	Spain	.....	.....
Finland	.....	.....	Sweden	4	.....
France	10	.....	Switzerland	3	.....
Germany	10	.....	Transvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	1	.....
India	.....	.....	Western Australia	.....	.....
Ireland	.....	.....	Total to residents of foreign countries	72	5
Italy	1	.....			
Luxemburg	.....	.....			
Mexico	1	.....			

Adverse Decisions in Interference.

PATENT NO. 1,172,914.

On December 15, 1916, a decision was rendered that Frank H. Steifel was not the first inventor of the subject-matter covered by claim 1 of his Patent No. 1,172,914, subject, "Linotype-slugs," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,191,177.

On December 15, 1916, a decision was rendered that Virgil S. Hardey was not the first inventor of the subject-matter covered by claims 4, 6, 15, 16, 18, 20, and 21 of his Patent No. 1,191,177, subject, "Electric metering system," and no appeal having been taken within the time allowed such decision has become final.

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 12, 1917.

Gross No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants and Flowers.	Nov. 1	Nov. 9	330
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	July 10	Oct. 26	611
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Dec. 21	Dec. 8	113
232	4. Conveyors; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Oct. 31	Dec. 15	232
167	5. Bookbinding; Harvesters; Jewelry; Music	Aug. 23	Dec. 15	203
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Sept. 5	Dec. 8	270
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Aug. 7	Nov. 1	509
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports	June 20	Sept. 14	1266
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	July 1	Dec. 4	549
154	10. Carriages and Wagons; Spring Devices	July 8	Dec. 12	512
	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Nov. 2	Dec. 26	90
222	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Sept. 1	Dec. 29	580
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Aug. 18	Nov. 27	512
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware Making; Tools; Wire Fabrics and Structure; Wire-Working.	Aug. 7	Dec 12	279
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 6	Dec. 29	208
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	June 19	Nov. 7	637
308	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Oct. 14	Dec. 22	143
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 2	Dec. 8	190
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Aug. 7	Sept. 15	443
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 14	Dec. 20	294
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Sept. 19	Nov. 28	287
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Aug. 5	Nov. 24	501
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	June 29	July 25	370
144	24. Apparel; Apparel Apparatus; Sewing-Machines	June 21	Nov. 11	403
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Oct. 26	Dec. 5	190
104	26. Electricity, Generation; Motive Power	Apr. 4	Oct. 18	667
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Dec. 2	Dec. 19	227
65	28. Internal-Combustion Engines	Aug. 9	Nov. 1	568
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	July 19	Nov. 20	112
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 2	Dec. 23	329
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Aug. 9	Nov. 7	291
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	June 14	Dec. 9	853
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Sept. 5	Dec. 7	375
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.			
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	June 23	Dec. 26	675
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Aug. 26	Sept. 15	785
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	June 3	Nov. 22	824
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Dec. 14	Dec. 15	156
321	39. Water Distribution	July 28	Nov. 17	333
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Rereptacles and Packages; Wooden Receptacles.	Sept. 12	Jan. 2	647
126	41. Railway Draft Appliances; Resilient Tires and Wheels	Aug. 31	Nov. 25	513
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	June 22	Nov. 23	357
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Nov. 7	Nov. 21	122

Oldest new case, Apr. 4: oldest amended, July 25.
Total number of applications awaiting action..... 18,499

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Nov. 29	Dec. 26	575
	Designs	Nov. 11	Dec. 13	414
	Labels and Prints	Dec. 22	Dec. 20	98

PATENTS

GRANTED JANUARY 16, 1917.

1,212,166. TYPE-WRITER RIBBON. JAMES TOWNSEND AMISS, Baton Rouge, La. Filed Feb. 17, 1916. Serial No. 78,883. (Cl. 197—172.)



1. In combination with a typewriter ribbon, a strip having an end secured to an end of the typewriter ribbon, and a gummed strip secured to the first strip, the end of one of the strips where the two strips are joined together extending for operating a reversing lever of a typewriter.

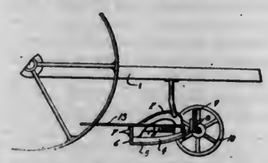
2. In combination with a typewriter ribbon, an elongated member having an end secured to an end of the typewriter ribbon and with a projecting portion extending from the body of the member between its ends for operating the reversing lever of a typewriter.

3. In combination with a typewriter ribbon, a gummed elongated member having an end secured to the typewriter ribbon and a projecting portion extending from the body of the member and between its ends for operating the reversing lever of a typewriter.

4. In combination with a typewriter ribbon, a strip gummed on its inner side and having an end secured to an end of the typewriter ribbon, and a second strip gummed on its outer side, the second strip adjacent an end being affixed to the other end of the first strip, with the said end of the second strip free to extend from the first strip, for the purpose specified.

5. In combination with a typewriter ribbon, a strip having an end secured to an end of the typewriter ribbon, and a second strip, the second strip adjacent an end thereof being affixed to the other end of the first strip, with the said end of the second strip free to extend from the first strip for the purpose specified, one of the strips being gummed.

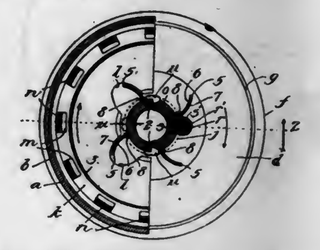
1,212,167. MOWER ATTACHMENT. ANDREW N. ANDERSON, Larson, N. D. Filed Jan. 15, 1914. Serial No. 812,316. (Cl. 56—31.)



An attachment for mowers, including a runner conforming to the base of the mower-shoe, said runner having a rear-end upstanding terminal secured to the guard-bar of the mower, an auxiliary wheel-axle carried bracket, said runner and said bracket having a slot and bolt adjusting connection therebetween, and an adjustable wheel-brace including slidably connected members, one member being connected to the wheel-axle and the other member being connected to said guard bar.

1,212,168. CREAM-SEPARATOR. SEVERIN C. ANKERHOLTH, Port Huron, Mich. Filed Feb. 13, 1914. Serial No. 818,596. (Cl. 233—35.)

1. In a cream separator, the combination of a rotary bowl shell, a central hollow shaft extending upward and downward on the inside of the bowl shell, and laterally projecting wings having their inner marginal portions secured to the hollow shaft, each of said wings extending from the periphery of said shaft outward laterally and having a rear surface facing inward toward the axial center and rearward with respect to the direction of rotation of the bowl shell.



2. In a cream separator, the combination of a rotary bowl shell, a central hollow shaft extending axially on the inside of the bowl shell and provided with a milk supply passage communicating with the interior of the bowl shell, and rearwardly curved blades having their inner edges secured to the hollow shaft, each of said blades extending from the periphery of said shaft outward laterally and having a concave rear surface facing inward toward the axial center and rearward with respect to the direction of rotation of the bowl shell.

3. In a cream separator, the combination of a rotary bowl shell provided with a cream outlet, a central hollow shaft fixed to and extending upward on the inside of the bowl shell and provided with a milk supply passage communicating with the interior of the bowl shell, and lateral accelerator wings rigidly attached to the hollow shaft and extending from the periphery of the shaft outward, and having rear curved surfaces facing inward toward the axial center and rearward with respect to the direction of rotation of the shaft, each of said wings being provided with an opening adapted to permit the passage of liquid from the front to the rear side of the wing.

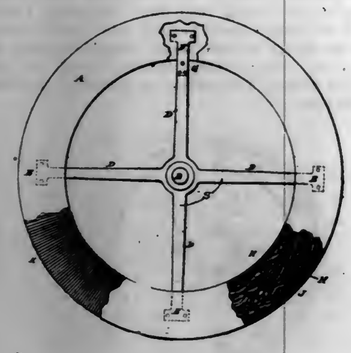
4. In a cream separator, the combination of a rotary bowl shell having top and side walls and a bowl bottom and provided with a cream outlet opening, a central hollow shaft fixed to the bowl bottom and extending upward therefrom on the inside of the bowl shell, said hollow shaft being provided with a milk supply passage communicating with the interior of the bowl shell above the level of the cream outlet opening, and accelerator blades fixed to the hollow shaft and each having a rear face extending from the periphery of the shaft outward laterally and facing inward toward the axial center and rearward with respect to the point of connection with the shaft and with respect to the direction of rotation of the bowl shell.

5. In a cream separator, the combination of a rotary separator bowl comprising in its construction a bowl shell having a cream outlet opening, a central hollow shaft on the inside of the bowl shell and provided with a milk supply passage having an opening communicating with the interior of the bowl shell, and lateral accelerator blades mounted on opposite sides of a milk supply opening in the shaft and in fixed relation to said shaft, each of said blades having a curved rear face extending from the pe-

riphery of the shaft outward laterally and facing inward toward the axial center and rearward with respect to the direction of rotation of the bowl.

[Claim 6 not printed in the Gazette.]

1,212,169. STEERING-WHEEL. CLINTON BATSHOLTS, Hoosick Falls, N. Y., assignor to Specialty Insulation Manufacturing Company, Hoosick Falls, N. Y. Filed Oct. 12, 1914. Serial No. 866,208. (Cl. 74—33.)



1. A steering wheel consisting of a spider and a rim mounted thereon, said rim comprising an annular core composed of fibrous material wound or laid up in a condensed plastic substance and covered with one or more layers of plastic material which is a non-conductor of electricity and a poor conductor of heat, substantially as specified.

2. A core for a steering wheel rim consisting of a coil of fibrous twine or cord having the interstices between its fibers and strands filled with a plastic substance, and externally shaped and hardened, substantially as specified.

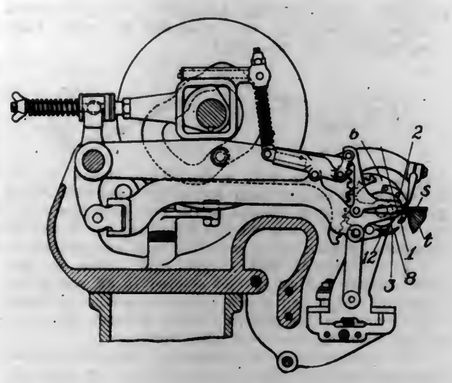
3. A core for a steering wheel rim consisting of a coil of fibrous twine or cord having the interstices oetween the fibers and strands filled with a plastic substance, and externally shaped and hardened, the whole being covered with one or more layers of an elastic, infrangible, plastic material which is a non-conductor of electricity and a poor conductor of heat, having a roughened non-slippable surface, substantially as specified.

4. A steering wheel consisting of a spider and a rim mounted thereon, said rim comprising an annular core composed of fibrous material wound or laid up in a plastic condensed substance and covered with one or more layers of plastic material which is a poor conductor of heat substantially as specified.

5. A steering wheel rim having a core consisting of a coil of fibrous twine or cord having the interstices between its strands and fibers filled with a condensed plastic substance and externally molded and condensed, the whole being covered with one or more layers of an elastic, infrangible, plastic material which is a poor conductor of heat, and molded under pressure with a roughened non-slippable surface to aid the hand grip, substantially as specified.

1,212,170. METHOD OF MAKING SHOES. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Nov. 9, 1912, Serial No. 730,439. Divided and this application filed Jan. 13, 1913. Serial No. 741,761. (Cl. 12—145.)

1. That improvement in methods of making shoes having a projecting sole and an outturned upper which consists in seizing and holding a portion of the margin of the upper at a point beyond the edge of the last, forcing the upper into the apex of the angle between the side of the last and the projecting margin of the sole, applying a strip of material to the exposed face of the flange of upper which lies upon the sole projection with the edge of the strip close in the apex of the angle, securing the strip to the sole to hold the upper in the apex of the angle, and repeating the operation progressively by seizing and holding, forcing into the angle and securing to the top face of the sole successive portions of the margin of the upper along the edge of the shoe.



2. That improvement in methods of making shoes which consists in assembling an upper over a last having a sole presenting a lateral projection beyond the edge of the last which the upper overlies and to which projection the upper is to be secured, and progressively lasting the shoe by repeated operations of seizing and holding a portion of the margin of the upper, supporting the sole margin on the face covered by the upper, applying pressure to the opposite face of the sole margin, and securing the upper to said face of the sole which is covered by the upper while the sole and upper are so held under pressure.

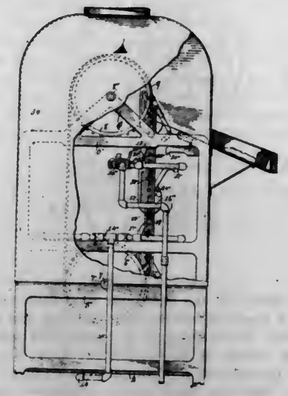
3. That improvement in methods of making shoes which consists in assembling an upper over a last having a sole projecting beyond the edge thereof, seizing a portion of the upper beyond the edge of the last, tensioning the upper in a direction outwardly from the side of the last in or substantially parallel with the plane of the last bottom, forcing the portion of upper that is being tensioned into the angle between the side of the last and the projecting margin of the sole, permanently securing the upper to the top face of the projecting margin of the sole, and repeating the steps of seizing, tensioning, forcing into the angle, and securing, progressively about the shoe.

4. That improvement in methods of making stich-down shoes which consists of the following steps performed in repeated cycles upon adjacent portions along the periphery of the shoe: first tensioning a portion of the freely projecting upper while forcing the tensioned portion against the side of the last and against the top face of the adjacent portion of the projecting margin of the sole, applying a strip of material to the exposed face of the outwardly projecting upper, and then permanently securing the strip and upper together and to the said face of the sole to hold the upper in the apex of the angle.

5. That improvement in methods of making shoes which consists in applying to the bottom of a last a sole which projects beyond the edge thereof, assembling an upper over the last, shaping the upper under tension into finally lasted position in the angle between the side of the last and the projecting margin of the sole, and permanently securing the tensioned upper approximately in the apex of the angle and to the top face of the projecting sole margin by securing means including a thread or cord, and repeating the lasting and permanently securing operations step-by-step progressively about the periphery of the shoe.

[Claims 6 to 14 not printed in the Gazette.]

1,212,171. DISH-CLEANSING APPARATUS. FRANK W. BEARDSLEY, Brooklyn, N. Y., assignor to Seaboard Specialty Corporation, New York, N. Y., a Corporation of New York. Filed Mar. 6, 1914. Serial No. 822,992. (Cl. 141—9.)



1. A dish-cleansing apparatus comprising a tank; an endless conveyer, and an open-work basket, said basket pivotally attached, above its center of gravity, to said conveyer and at all times depending vertically from the point of the pivot, and conveyable thereby into and out of said tank.

2. A dish-cleansing apparatus comprising a tank; an endless conveyer; an open-work basket pivotally attached, above its center of gravity, to said conveyer and at all times depending vertically from the point of the pivot; and means for affording, above the tank aforenamed, a field of cleansing fluid under pressure, said conveyer adapted to convey said basket, first through said field of cleansing fluid, and thereafter into and out of said tank.

3. A dish-cleansing apparatus comprising a tank; an endless conveyer; an open-work basket pivotally attached, above its center of gravity, to said conveyer and at all times depending vertically from the point of the pivot; and means for affording, above the tank aforenamed, a field of cleansing fluid under pressure, said conveyer adapted to convey said basket, first into and out of said tank, and thereafter through said field of cleansing fluid.

4. A dish-cleansing apparatus comprising a tank; an endless conveyer; an open-work basket pivotally attached, above its center of gravity, to said conveyer and at all times depending vertically from the point of the pivot; and means for affording, above the tank aforenamed, opposite fields of cleansing fluid, each under pressure, said conveyer adapted to convey said basket, first through one of said fields of cleansing fluid, thereafter into and out of said tank, and thereafter through the other of said fields of cleansing fluid.

5. A dish-cleansing apparatus comprising a tank; jet-terminals arranged oppositely thereabove; an endless dish conveyer, whose orbit passes between said oppositely arranged jet terminals, and means for conveying a cleansing fluid from the interior of said tank, under pressure, to, and for delivery at, each of said jet-terminals, the latter being adapted, each to deliver said cleansing fluid in the direction of the other.

[Claims 6 to 19 not printed in the Gazette.]

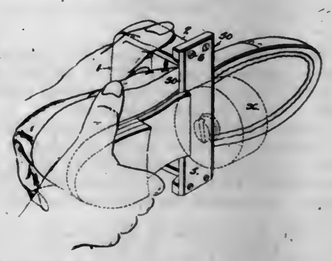
1,212,172. METAL BRIDGING DEVICE. HENRY CLEVELAND BECKNER and JOSEPH ALPHONSE AHLERS, Cincinnati, Ohio. Filed Aug. 23, 1916. Serial No. 116,474. (Cl. 20—9.)

The device of the character described, being a metal bridging tie pressed into a longitudinal half-round, semi-tubular shape, with a partial cut-off or excision made in the sides of the body, near the upper and lower ends thereof, at an angle of about 45 degrees thereto, the excisions in the sides being parallel with each other, and the edges of the cut-offs in the sides near the upper end being parallel with the edges of the cut-offs in the sides near the lower end of the device, the remaining part of the body at the lower end tapering from the place of excision and terminating in a sharp point in line with and in the same plane as the vertex of the convex side of the



body, said part performing the function of a spike or nail; the upper end of the device being turned above the place of excision in the sides, and projected forward over the concave side of the body and at right angles thereto, tapering from the place of excision and terminating in a sharp point performing the function of a spike or nail as at the lower end, and all as described in the above specification.

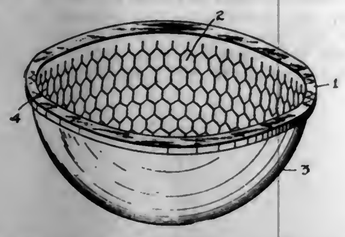
1,212,173. SHOEMAKER'S TOOL. LUDGER J. BEDARD, Minneapolis, Minn. Filed Apr. 19, 1916. Serial No. 92,154. (Cl. 12—103.)



1. A shoemaker's tool that comprises a wedge member adapted to be inserted across and beneath the front end of the shank part of the sole after the forepart of the sole has been cut off and a handle adapted to extend over the forepart of the shoe for holding the said member in operative relation to the shank sole as the latter is held up to a scouring roll.

2. A tool for the purpose described, comprising a U-shaped holder large enough to go over the forepart of a shoe, the ends of the said holder having lateral extensions and a flat plate removably secured at the opposite ends to the said extensions, the opposite sides of the said plate being beveled, said plate being adapted to be slipped under the shank portion of the sole after the forepart of the sole has been cut off.

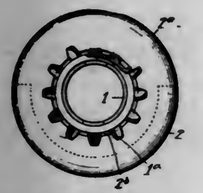
1,212,174. REINFORCED-GLASS ARTICLE OF MANUFACTURE. JOHN BRISWANGER, Steubenville, Ohio, assignor to Gill Brothers Company, Steubenville, Ohio, a Corporation. Filed Mar. 3, 1915. Serial No. 11,859. (Cl. 240—100.)



1. A hollow article of glassware of homogeneous character having a sheet of wire mesh embedded therein and lying wholly at one of the surfaces thereof, thereby providing an article of maximum strength without materially decreasing its capacity for transmitting light, and having smooth and uninterrupted outer and inner surfaces.

2. A lamp globe composed of homogeneous glassware and concavo-convex in form, said globe embodying a sheet of wire mesh embedded therein and lying wholly at the concave surface thereof, thereby providing a lamp globe of maximum strength without materially decreasing its capacity for transmitting light and having smooth and uninterrupted outer and inner surfaces.

1,212,175. ENGINE-STARTER. VINCENT BENDIX, Chicago, Ill. Filed Apr. 10, 1916. Serial No. 90,088. (Cl. 74—7.)



1. A pinion for the transmission of an engine starter comprising a pinion having its teeth at one end cut away, a disk fitted to the pinion at such cut-away portion, and means for securing the disk to the pinion.

2. A weighted pinion for the transmission of an engine starter comprising a pinion having its teeth at one end cut away, a weighted disk fitted to the pinion at such cut-away portion, a portion of the material of the pinion being rolled over against the disk to prevent the removal of the latter.

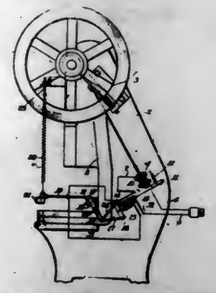
3. A weighted pinion for the transmission of an engine starter comprising a pinion having its teeth at one end partially cut away, and a weighted disk having a central opening fitting upon the pinion at its cut away portion, and means for preventing the removal of the disk from the pinion.

4. A weighted pinion for the transmission of an engine starter comprising a pinion having its teeth at one end partially cut away, and a weighted disk having a central opening fitting upon the pinion at its cut away portion, a portion of the material of the pinion being rolled over against the disk to prevent the removal of the latter.

5. A weighted pinion for the transmission of an engine starter comprising a pinion having its teeth at one end cut away to form right-angled recesses, a weighted disk having a central opening and adapted to fit in said recesses, and means for preventing the removal of the disk from the pinion.

[Claims 6 to 9 not printed in the Gazette.]

1,212,176. SAFETY DEVICE FOR PRESSES. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 25, 1913. Serial No. 763,577. (Cl. 164—107.)



1. In a device of the character described, the combination with a movable member for tripping the clutch of a press, of an electro-magnet for operating said movable member, a switch in the circuit of said electro-magnet opened by the operation of the electro-magnet, mechanical means for resetting said switch controlled by either of two members movable with the operator's hand, and a second switch in the electro-magnet circuit controlled by said members and arranged to be closed when both hands of the operator are out of the zone of danger.

2. In a device of the character described, the combination with a movable member for tripping the clutch of a press, of an electro-magnet for operating said movable member, a switch for controlling the circuit of said electro-magnet, mechanical means for closing said switch, hand-manipulated devices operating said means, said means being inoperative for closing the circuit of the electro-magnet when the hand-manipulated devices are individually operated, and operative for closing the circuit of the electro-magnet when the hand-manipulated devices are operated collectively and when both hands of the operator are out of the zone of danger.

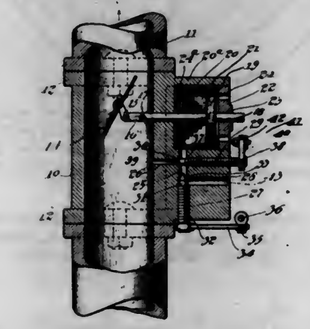
3. In a device of the character described, the combination with a movable member for controlling the clutch of a press, of an electro-magnet for operating said movable member, a switch opened by the movement of said electro-magnet, a movable member for causing said switch to be closed, a latch for operating the same, mechanism for operating the latch movable with the hands of the operator and operable for moving said movable member when either hand is moved toward the mechanism of the press, and a second switch closed by said mechanism, said mechanism being only operable to close the switch when both hands of the operator are moved out of the zone of danger.

4. In a device of the character described, the combination with a movable member, of an electro-magnet for operating said movable member, a switch opened by the movement of said electro-magnet, a slidable stop for controlling the restoring of the switch, means for operating said stop to permit a restoring of the switch, a second switch controlled by said means, a pair of movable members movable with the hands of the operator, and interdependent connections between the movable members and the slidable member for operating said slidable member to permit the restoration of the first switch upon the movement of either of the pair of movable members when the hands are moved toward the press and for closing the second switch only when both hands of the operator are moved out of the zone of danger.

5. In a device of the character described, the combination with a movable member for tripping the clutch of a press, of an electro-magnet for operating said movable member, a switch opened by said electro-magnet, an arm controlling the opening and closing of said switch, means tending to move said arm to close the switch after it has been once opened, a stop moved into the path of the switch when the same is opened, means for moving the stop out of the path of the switch, a second switch, a rocker arm centrally pivoted on said means, a movable member moving with one hand of the operator connected to one end of said rocker arm, a movable member moving with the other hand of the operator connected to the other end of said rocker arm, the connection being such that when one hand is moved toward the mechanism of the press the switch-controlling arm will restore the switch to closed position and when both hands are moved out of the zone of danger the second switch will be closed to cause the operation of said electro-magnet.

[Claims 6 to 9 not printed in the Gazette.]

1,212,177. GAS-ENGINE GOVERNOR. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 11, 1915. Serial No. 1,708. (Cl. 50—14.)



1. A controlling device for gas engines comprising an intake flow conduit, a throttle valve controlling the intake flow, pneumatic governing means for said valve actuated by variations in pressure of the intake flow, and manually controlled pneumatic means for controlling said governing means.

2. A controlling device for gas engines comprising an intake flow conduit, a butter-fly throttle valve controlling the intake flow, pneumatic governing means for said valve actuated by variations in pressure of the intake flow, and manually controlled pneumatic means for controlling said governing means.

3. A controlling device for gas engines comprising a throttle valve controlling the intake flow, and pneumatic means for controlling said valve including a variable pressure chamber, means affording communication between said chamber and the controlled gas, and manual means for controlling said communication.

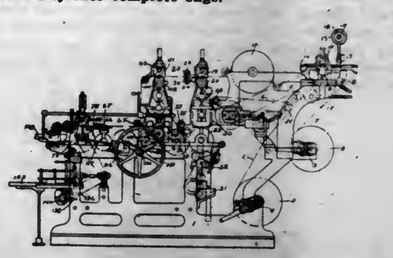
4. A controlling device for gas engines comprising a throttle valve controlling the intake flow, and pneumatic means for controlling said valve including a variable pressure chamber, means affording communication between said chamber and the atmosphere, and manually controlled means for controlling said communication.

5. A controlling device for gas engines comprising a throttle valve controlling the intake flow, and pneumatic means for controlling said valve including a variable pressure chamber, means affording communication between said chamber and the controlled gas, and manual means for controlling said communication, means affording communication between said chamber and the atmosphere, and manually controlled means for controlling said communication.

[Claims 6 to 12 not printed in the Gazette.]

1,212,178. PAPER-BAG MACHINE. FREDERICK H. BEROLD, Jr., Cincinnati, Ohio. Filed June 21, 1909, Serial No. 503,386. Renewed Nov. 6, 1916. Serial No. 129,914. (Cl. 93—13.)

1. In a paper bag machine, feeding mechanism for feeding two separate webs of paper, two cutting mechanisms for separately cutting the webs to form bag blanks, a former for partially folding the blanks when superimposed, a carrying cylinder, with means for grasping and holding thereon the superimposed blanks, and for folding same simultaneously into complete bags.



2. In a paper bag machine, feeding mechanism for feeding two separate webs of paper, two cutting mechanisms for separately cutting the webs to form bag blanks, a former for folding the sides of the blanks when superimposed, a rotatable carrying cylinder and a gripping means to hold the duplex blank thereon, comprising a fixed and a movable bar mounted lengthwise of the cylinder, with side arms and springs secured thereto to close said gripping means, with cams to operate said grippers during a portion of the rotation of said cylinder.

3. In a paper bag machine, feeding mechanism for feeding two separate webs of paper, two cutting mechanisms for separately cutting the webs to form bag blanks, a single former for folding the sides of the blanks when superimposed, a rotatable carrying cylinder and a gripping means to hold the duplex blank thereon, comprising a fixed and a movable bar mounted lengthwise of the cylinder, with means for opening and means for closing said movable bar at stated intervals during the rotation of the cylinder.

4. In a paper bag machine, feeding mechanism for feeding two separate webs of paper, two cutting mechanisms for separately cutting the webs to form bag blanks, a single former for folding the sides of the blanks when superimposed, a carrying cylinder with means for grasping and holding thereon the superimposed blanks, means for distributing glue to both of said blanks simultaneously, and mechanism for folding same into a duplex bag in one operation.

5. In a paper bag machine, feeding mechanism for feeding two separate webs of paper, two cutting mechanisms for separately cutting the webs to form bag blanks, means for superimposing said two webs with fold lines of the blanks coinciding, and mechanism for grasping and holding said blanks and for folding both blanks simultaneously into complete bags.

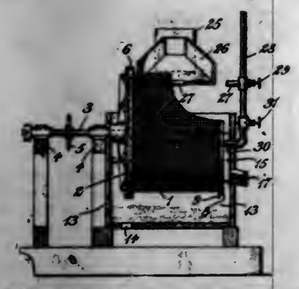
[Claims 6 to 8 not printed in the Gazette.]

1,212,179. REVOLVING SCREEN AND METHOD OF SCREENING. WALTER O. BORCHERDT, Austinville, Va., assignor to The New Jersey Zinc Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 7, 1916. Serial No. 70,807. (Cl. 83—56.)

1. The method of screening ore pulp and similar material, which comprises feeding the material mixed with water upon the upwardly moving portion of a revolving screen and thereby effecting a primary screening of the material and spraying water from below through said screen at a point on the upwardly moving portion of said screen above the point of feed of the material thereto to reintroduce water into the material and rearrange the particles thereof to effect a further or secondary screening of the material; substantially as described.

2. The method of screening ore pulp and similar material, which comprises feeding the material mixed with water upon the upwardly moving portion of a revolving screen and thereby effecting a primary screening of the material, spraying water from below through said screen at a point on the upwardly moving portion of said screen

above the point of feed of the material thereto to reintroduce water into the material and rearrange the particles thereof to effect a further or second screening of the material, collecting the material which has passed through the screen in a receptacle within said screen, spraying water through said screen at a point below said receptacle to remove material remaining on said screen, and collecting the material that has failed to pass through said screen in a receptacle below said screen; substantially as described.



3. The method of screening ore pulp and similar material, which comprises feeding the material mixed with water upon the upwardly moving portions of a revolving screen, spraying water from below through said screen at a point on the upwardly moving portion of said screen above the point of feed of the material thereto to reintroduce water into the material and rearrange the particles thereof to effect a further or secondary screening of the material, collecting the material which has passed through the screen in a receptacle within said screen and spraying water through the screen at a point in advance of the point of feed of material thereto and above said receptacle to clean said screen while permitting the water to flow into said receptacle; substantially as described.

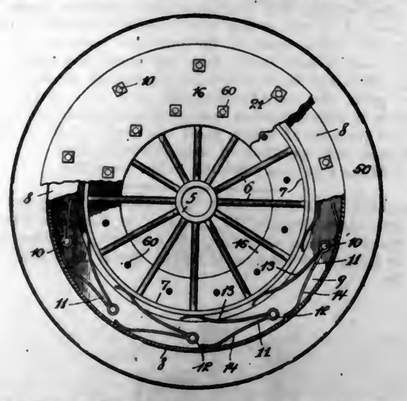
4. The method of screening ore pulp and similar material, which comprises feeding the material mixed with water upon the upwardly moving portion of a revolving screen and thereby effecting a primary screening of the material, spraying water from below through said screen at a point on the upwardly moving portion of said screen above the point of feed of the material thereto to reintroduce water into the material and rearrange the particles thereof to effect a further or secondary screening of the material, collecting the material which has passed through the screen in a receptacle within said screen, spraying water through said screen at a point below said receptacle to remove material remaining on said screen, collecting the material that has failed to pass through said screen in a receptacle below said screen, and spraying water through the screen at a point in advance of the point of feed of material thereto and above said receptacle within the screen to clean said screen while permitting the water to flow into said receptacle; substantially as described.

5. A revolving screen for ore pulp and similar material, comprising a screen drum, means for rotating said drum, means for feeding the material to be screened on the upwardly moving portion of the drum and one or more spraying devices within the drum discharging through the upwardly moving portion of said drum above the point of feed of the material thereto, whereby a further or secondary screening of material is effected; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

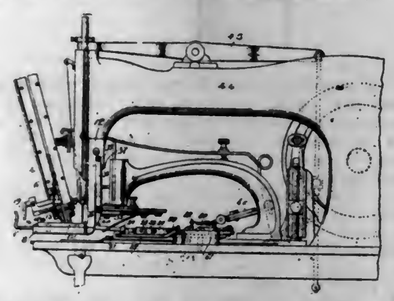
1,212,180. SPRING-WHEEL. PHILIP BRADY, New York, N. Y. Filed Dec. 21, 1915. Serial No. 67,973. (Cl. 152—37.)

A spring wheel comprising an inner wheel and an outer rim disconnected from said inner wheel, a plurality of springs interposed between said rim and wheel, each of said springs consisting of a socket portion and two spring leaves pointing in the same direction and in frictional engagement only with the said rim and wheel, removable



flanges for retaining the said inner wheel within the plane of the said outer rim, bolts for securing said flanges to the rim, said bolts passing through the socket portion of the springs for positioning the latter on the said rim.

1,212,181. BUTTON FEEDING AND ATTACHING DEVICE. JULIUS J. BRELL, New York, N. Y. Filed Aug. 25, 1914. Serial No. 858,438. (Cl. 112—32.)



1. In a machine of the class described, mechanism for feeding one button at a time, mechanism for clamping the button so fed, automatic mechanism for causing registration between the eyes of the button and the sewing-machine needle while the button is in the clamp and mechanism for releasing said button after the same is sewn to a fabric.

2. In a device of the class described, a clamp adapted to receive a button, a guide, and a slide moving in said guide and adapted to shift a button into said clamp and mechanism for causing a button hole to register with the needle while held in said clamp.

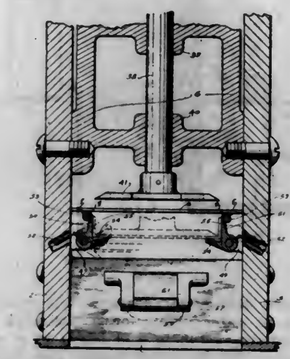
3. In a device of the class described, a clamp adapted to receive a button, a guide, adapted to deliver a button to said clamp, a slide in said guide for causing the button to move into said clamp, means for supplying the said guide with a button, after the return movement of said slide and mechanism for causing a button hole to register with the needle while held in said clamp.

4. In a device of the class described, a clamp adapted to receive a button, a guide adjacent to said clamp, a slide in said guide adapted to move a button into said clamp, a projection extending from said slide, means for engaging said projection for controlling the movement of buttons to said guide so that only one button at a time will enter said guide and mechanism for causing a button hole to register with the needle.

5. In a device of the class described, a trough to receive buttons and means for supporting the same, a slide mounted in said trough, a sewing machine with a needle and a clamp adjacent to said slide and trough, and mechanism for causing a button to turn in the clamp while under the needle so that a hole of the button will register with the needle.

[Claims 6 and 7 not printed in the Gazette.]

1,212,182. MACHINE FOR USE IN THE MANUFACTURE OF PAPER BOXES. AUGUSTUS FREDERICK BROOKS, Bedford, Ohio, assignor to Frederick Davenport, Cincinnati, Ohio. Filed Jan. 12, 1916. Serial No. 71,690. (Cl. 93—51.)



1. In a machine for bending and forming blanks, a male die, yielding means to impart a working movement thereto, positive means to impart an idle movement thereto, a pair of female dies spaced apart from each other horisontally, a second pair of female dies spaced apart from each other horizontally and also spaced apart vertically from the first mentioned pair of female dies; said female dies being operable by the male die to bend and form said blanks at an angle greater than a right angle.

2. In a machine for bending and forming blanks for paper boxes, a male die, yielding means to impart a working movement thereto, positive means to impart an idle movement thereto, a female die which is adapted to be operated by the male die to bend and form said blanks, first at right angles to the body portion and then at an acute angle thereto.

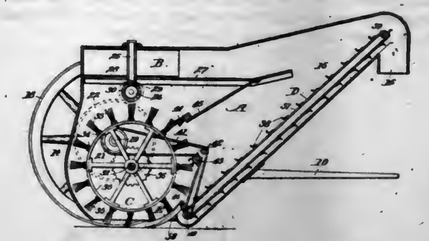
3. In a machine for bending and forming blanks for paper boxes, a male die, yielding means to impart a working movement thereto, positive means to impart an idle movement thereto, a female die which is adapted to be operated by the male die to bend and form said blanks, first at right angles to the body portion and then at an acute angle thereto and automatic means to feed and deliver the blanks between the dies.

4. In a machine for forming and bending blanks for making boxes and covers for same, a male die having clearance spaces formed therein, a female die made in two sections which are arranged at different planes with respect to each other, combined positive and yielding means for reciprocating the male die and forcing it to telescope with and directly operate the sections of the female die.

5. In a machine for forming and bending blanks for making boxes and covers for same, a male die having clearance spaces formed therein, a female die made in two sections which are arranged at different planes with respect to each other, combined positive and yielding means for reciprocating the male die and forcing it to telescope with and directly operate the sections of the female die and automatic means for periodically delivering a single blank between the dies.

[Claims 6 to 16 not printed in the Gazette.]

1,212,183. STREET SWEEPING AND CLEANING IMPLEMENT. MARTIN P. BRUMBAUGH, Juniata, Pa. Filed Apr. 25, 1916. Serial No. 93,505. (Cl. 15—17.)



1. In a street sweeping and cleaning implement, the combination with a sweeping mechanism, of an apron mounted on the implement consisting of a plurality of swingingly mounted dirt or dust receiving members whose free ends normally contact with the surface of the street, each of said members having upstanding and depending side flanges.

2. In a street sweeping and cleaning implement, the combination with a sweeping mechanism, of an apron mounted on the implement consisting of a plurality of swingingly mounted dirt or dust receiving members whose free ends normally contact with the surface of the street, each of said members having a slightly concaved body portion and upstanding and depending side flanges which slidably overlap the flanges of adjacent members whereby upon swinging movement of any of the said members, the dust and dirt are carried upwardly over the members and prevented from being forced between the members or beyond the sides of the members.

3. In a street sweeping and cleaning implement, the combination with a sweeping mechanism, of an apron consisting of a plurality of dirt or dust receiving members whose rear ends normally drag along the surface of the street, each of said members having upstanding tapering side flanges and also having depending tapering side flanges, the flanges of each member being slidable over the flanges of adjacent members.

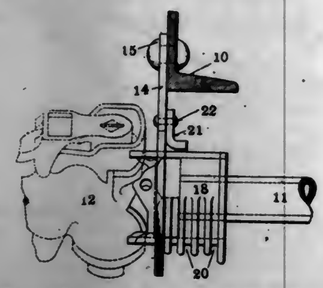
4. In a street sweeping and cleaning implement, the combination with a sweeping mechanism, of a horizontal shaft carried on the implement, and an apron consisting of a plurality of dirt or dust receiving members swingingly mounted on said shaft and whose rear ends normally drag along the surface of the street, whereby said members may swing on said shaft upon striking an obstruction or when falling into a depression in the surface of the street, each of said members having upstanding and depending flanges at its sides, and means for lifting the rear ends of said members together out of contact with the surface of the street.

5. In a street sweeping and cleaning implement, the combination with a sweeping mechanism, of a shaft mounted on the implement, and an apron consisting of a plurality of dirt and dust receiving members, the body portion of each of which includes slightly concaved upper and lower portions secured together, the upper portion having upstanding side flanges and the lower portion of each of said members having depending side flanges, one of said body portions formed to provide an ear for a swinging connection of the respective dust receiving member on said shaft.

1,212,184. ANGLE-COCK HOLDER. STERLING H. CAMPBELL, St. Louis, Mo., assignor to Railway Devices Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 1, 1916. Serial No. 128,870. (Cl. 188—8.)

1. In an angle cock holder, the combination with a receiver adapted to engage the head of an angle cock and prevent its rotation, of means adapted to engage the said receiver at different points in the direction of its length and positively securing it to a railway car.

2. In an angle cock holder, the combination with a receiver adapted to engage the head of an angle cock and prevent its rotation, of a plurality of recesses formed in said receiver in the direction of its length, and means adapted to engage with one of said recesses and thus positively secure said receiver to a railway car.

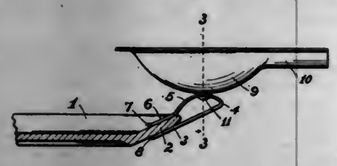


3. In an angle cock holder, the combination with a receiver adapted to engage the head of an angle cock and prevent its rotation, said receiver having recesses formed in the direction of its length, of a plate provided with an opening for the passage of said receiver, the edge of said opening being adapted to engage with said recesses, and means for holding said edge in engagement with said recesses.

4. In an angle cock holder, the combination with a receiver adapted to engage the body of the angle cock and prevent its rotation, said receiver being provided with recesses arranged in a direction of its length, of a plate provided with an opening for the passage of said receiver, the edge of said opening being adapted to engage with said recesses, and pivotally mounted means for holding said edge in engagement with said recesses.

5. In an angle cock holder, the combination with a receiver adapted to engage the head of an angle cock and prevent its rotation, of a removable member carried by said receiver and adapted to engage with the front face of the angle cock head and prevent the removal of the angle cock from the receiver, the body of said receiver being provided with a plurality of recesses, of a plate provided with an opening for the passage of the body of said receiver, the edge of said opening being adapted to engage with one of said recesses, and a member carried by said plate for holding said edge in engagement with said recesses.

1,212,185. ASH-TRAY. EDITH B. COBB, Cleveland, Ohio. Filed Nov. 22, 1915. Serial No. 62,757. (Cl. 131—51.)

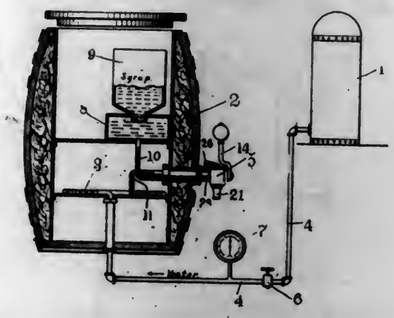


1. An ash tray comprising a bowl, a spring for attachment to a support, the spring having a curved portion forming an arc, and the bowl being provided with means for engaging said arc whereby the bowl may be slidably mounted but will be held in a set position by friction exerted by the springy action of the arc, substantially as described.

2. An ash tray comprising a bowl, a spring formed of flat material, the spring consisting of a straight lower side, the lower side being bent over and forming an arc then extending parallel with said lower side, and means carried by said bowl for engaging said arc of said spring, whereby it is slidably adjustable thereon but will be retained in a set position, substantially as described.

3. An ash tray comprising a bowl, a spring for attachment to a support, the spring having a curved portion, the curved portion of the spring being provided with a slot, a pin projecting from said bowl and adapted to slide in said slot of the spring, and the pin having a head for engaging the curved portion of the spring to hold said bowl in a set position, substantially as described.

1,212,186. LIQUID-DISPENSING APPARATUS. HARRY S. CORNISH, New York, N. Y., assignor of one-third to Horace B. Christian, Richmond, Va. Filed Aug. 19 1909. Serial No. 513,565. (Cl. 225—26.)



1. In a liquid dispensing apparatus, the combination with a source of water supply, of a dispensing faucet, means for delivering syrup to said faucet at a constant rate, a regulator for the water supply and means for indicating the position of said regulator.

2. In a liquid dispensing apparatus, the combination with a source of water supply, of a dispensing faucet, means for delivering syrup to said faucet, a pressure gage for the water supply, a regulator for the water supply adjustable in accordance with the indication of the pressure gage to dispense a drink of the same constituency under variations of pressure of the water and means for determining the position of the regulator for the variations of pressure.

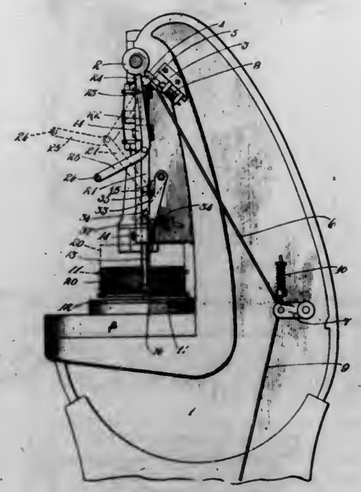
3. In a liquid dispensing apparatus, the combination with a source of liquid under pressure, of a dispensing faucet connected thereto, means for delivering a syrup to said faucet at a constant rate, means for simultaneously drawing said liquid and said syrup, a pressure gage for said pressure liquid, a regulator for said pressure liquid and a scale graduated in pounds pressure to correspond with said gage whereby drinks of the same constituency may be drawn under variations of pressure.

4. In a liquid dispensing apparatus, the combination with a source of liquid under pressure, of a dispensing faucet connected thereto, means for delivering a syrup to said faucet at a constant rate, means for simultaneously drawing said liquid and said syrup, a pressure gage for said liquid, a regulator on said faucet adapted to control the flow of pressure liquid, a disk graduated to correspond with said pressure gage and an indicator on said regulator whereby drinks of the same constituency may be drawn under variations of pressure.

5. In a liquid dispensing apparatus, the combination with a source of liquid under pressure, of a dispensing faucet connected thereto, means for delivering a syrup to said faucet at a constant rate, means for simultaneously drawing said liquid and said syrup, a pressure gage for said pressure liquid, a regulator for said pressure liquid, a scale graduated in pounds pressure corresponding with said pressure gage and an indicator for said regulator whereby drinks of the same constituency may be drawn in equal periods of time under variations of pressure or drinks of different constituencies may be drawn in the same periods of time.

[Claims 6 to 10 not printed in the Gazette.]

1,212,187. SAFETY DEVICE FOR PRESSES. WILLIAM COTTRELL, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 23, 1914. Serial No. 840,456. (Cl. 164—107.)



1. In a device of the character described, the combination with a tripping mechanism of a press, of a stripper for said press, means for raising said stripper to permit access to the dies of the press, and means operated by said raising means for locking said tripping mechanism against operation as long as the stripper is raised.

2. In a device of the character described, the combination with a press, of tripping mechanism therefor, a stripper for said press, a guard carried by said stripper for preventing the operator from getting his hands in a dangerous position as long as said stripper is in operative position, means for raising said stripper, and means for locking the tripping mechanism against operation when the tripper is raised.

3. In a device of the character described, the combination with a press, of tripping mechanism for said press, a stripper for said press, means for raising said stripper, and a stop moved in the path of the movable member of the tripping mechanism of the press when said stripper is raised to prevent the press from being tripped as long as the stripper is in a raised position.

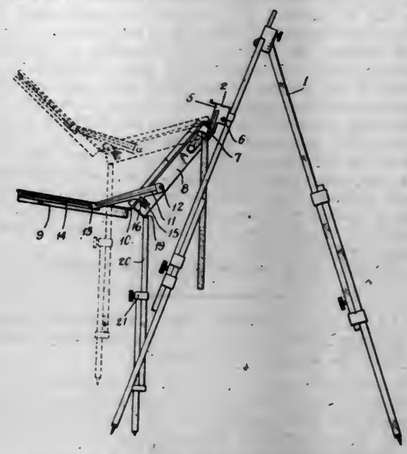
4. In a device of the character described, the combination with a press, of a tripping mechanism for said press, a stripper for said press, and an inter-lock between said stripper and tripping mechanism for preventing the tripping of the press when the stripper is moved to an inoperative position.

5. In a device of the character described, the combination with a press, of a normally stationary stripper for said press, a tripping mechanism for the press, means for moving said stripper, and means for locking said tripping mechanism against operation when said stripper is moved.

[Claims 6 to 17 not printed in the Gazette.]

1,212,188. PAINT-BOX AND SUPPORT. RICHARD H. COUPER, Newark, N. J. Filed Jan. 18, 1916. Serial No. 72,700. (Cl. 41—4.)

1. In a device of the character described, the combination of a paint-holding member, partitions dividing said member into a plurality of separate troughs each having a paint-receiving portion in which paint is deposited, and a bottom inclined downwardly therefrom when the member is in position for use in painting, and a water-tight end for each trough forming with the bottom a water-containing portion, whereby the water is retained in the lower end of the troughs out of contact with the paint but may be caused to flow in contact with the paint by tilting upwardly the lower end of said member.



2. In a device of the character described, the combination of a paint-holding member, partitions dividing said member from front to rear into a number of separate substantially parallel troughs of general V-shaped cross-section, each trough having an upper inclined end wall for supporting individual paint containers with their discharge openings adjacent the bottoms of the troughs and each trough having a bottom inclined downwardly from the paint-receiving portion when the member is in position for use in painting, and the troughs having water-tight lower end walls forming with the bottoms of the troughs water-containing portions, whereby the water is prevented from coming in contact with the paint until the lower end of the member is tipped upward to cause the water to flow in contact with the paint.

3. In a device of the character described, the combination of a paint-holding member, partitions dividing said member from front to rear into a number of separate substantially parallel troughs of general V-shaped cross-section, each trough having an upper inclined end wall for supporting individual paint containers with their discharge openings adjacent the bottoms of the troughs, each trough having a paint-receiving portion and a bottom inclined downwardly from the paint-receiving portion when the member is in position for use in painting, and the troughs having water-tight lower ends forming with the bottoms of the troughs water-containing portions, the troughs having flanges extending from the tops of their lower ends rearward to prevent the spilling of water when the member is held in a vertical position with the ends of the troughs downward, whereby the water is prevented from coming in contact with the paint until the lower end of the member is tipped upward to cause the water to flow in contact with the paint.

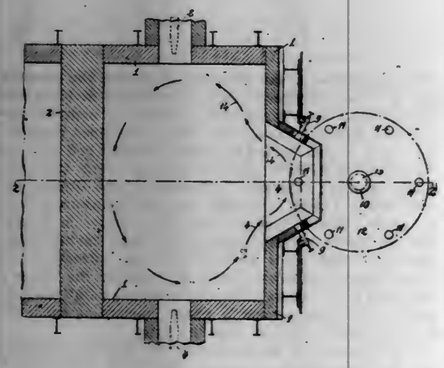
4. In a device of the character described, the combination of a paint-holding member having a surface inclining upwardly and rearwardly when the member is in position for use in painting, for receiving individual paint containers, partitions extending from said inclined surface and dividing the member into a number of individual troughs of general V-shaped cross-section, the troughs having upper paint-receiving portions and bottoms inclined downwardly therefrom when the member is in posi-

tion for use in painting, and water-tight lower end walls closing the ends of said troughs to form water-containing lower portions, whereby the water is prevented from coming in contact with the paint until the lower end of the member is tipped upward to cause the water to flow in contact with the paint.

5. In a device of the character described, the combination of a paint-holding member having a surface inclining upwardly and rearwardly when the member is in position for use in painting, for receiving individual paint containers, partitions extending from said inclined surface and dividing the member into a number of individual troughs, means for securing said paint containers in position on the inclined surface with their discharge openings adjacent the bottoms of the troughs, the troughs having upper paint-receiving portions and bottoms inclined downwardly therefrom when the member is in position for use in painting, and water-tight lower end walls closing the ends of said troughs to form water-containing lower portions, whereby the water is prevented from coming in contact with the paint until the lower end of the member is tipped upward to cause the water to flow in contact with the paint.

[Claims 6 to 21 not printed in the Gazette.]

1,212,189. METHOD FOR GATHERING GLASS. CHARLES F. COX, Bridgeton, N. J. Filed Sept. 19, 1912. Serial No. 721,138. (Cl. 49—77.)

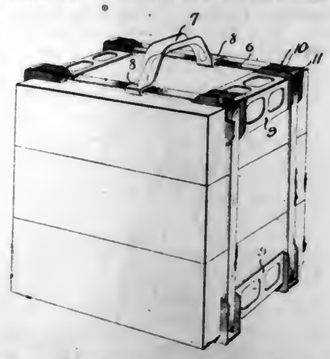


1. In the method of gathering glass which includes removing chilled glass from the gathering point and bringing a fresh supply of molten glass to such point, that improvement which comprises creating a circulation of glass away from such gathering point to a region of higher temperature, and back again to such gathering point by confining the glass in a suitable furnace and moving a gathering tool horizontally through said glass, substantially as and for the purpose described.

2. In the method of gathering glass which includes removing chilled glass from the gathering point and bringing a fresh supply of molten glass to such point, that improvement which comprises creating a circulation of glass away from such gathering point to a region of higher temperature, and back again to such gathering point by confining the glass in a suitable furnace and moving a gathering tool horizontally and uni-directionally through said glass, substantially as and for the purpose described.

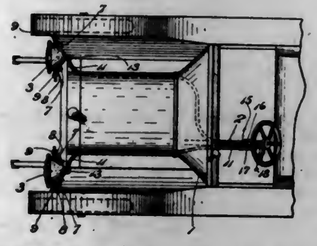
1,212,190. COMBINED PACKAGE-PROTECTOR AND STRAP-HOLDER. EDWARD E. DAVIS, Milwaukee, Wis. Filed Sept. 23, 1916. Serial No. 121,721. (Cl. 224—53.)

As an article of manufacture, a combined package protector and strap holder comprising an elongated angular plate, pairs of out turned transverse flanges at its end portions defining angular strap receiving channels and



retaining bolts connecting the angular outer portions of the flanges.

1,212,191. TILTING HEADLIGHT. CHARLES V. DEAN, Grand Rapids, Mich. Filed Mar. 21, 1916. Serial No. 85,610. (Cl. 240—61.)

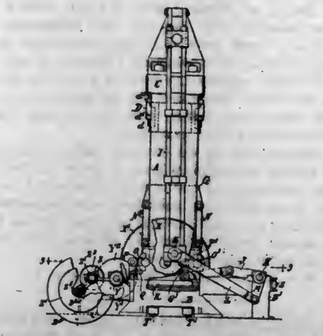


1. In combination in a motor vehicle having a steering post, a pair of brackets each having spaced apart vertical arms mounted at the front of said vehicle, a lamp mounted to turn on a substantially horizontal axis between said arms of each bracket, tubes having forward ends positioned back of the lamp and leading to and alongside of the steering post, wires one connected to the back of each lamp and passing through said tubes, and a lever pivotally mounted at one end on the steering post to which both of said wires are secured between the ends of the lever.

2. In combination in a motor vehicle having a steering post, a bracket adjacent the front of the vehicle having spaced apart vertical arms, a lamp mounted between said arms to turn on a substantially horizontal axis, a tube having its forward end located back of the lamp and leading to and alongside the steering post, a wire attached to the back of the lamp leading through the tube, a plate attached to the steering post, a second plate secured to and spaced a distance from the first plate, and a lever between and pivotally mounted at one end to the plates, the free end of said lever extending beyond the plates, said wire being secured to the lever between the ends thereof.

3. In combination in a motor vehicle, a bracket located adjacent the front of the vehicle having upright spaced apart arms, a lamp located between said arms, a lug secured to the lamp adjacent each arm, a U-shaped member having one leg connected to each lug, horizontal pivots on each arm seated in sockets in the other leg of said U-shaped member, a wire connected to the back of the lamp, a tube through which said wire passes, and a lever pivotally mounted on the vehicle with which the rear end of the wire connects for operation of the lamp, substantially as described.

1,212,192. DRAWING-PRESS. JOHN E. DOBSON, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed June 26, 1915. Serial No. 36,456. (Cl. 113—38.)



1. In a drawing press, a movable table, and a pair of rotary members located on opposite sides of the press, a crank pin on each rotary member, a rock shaft, connections from each crank pin to said rock shaft, and duplicate trains of toggles between said rock shaft and said table.

2. In a drawing press, a movable table and a crank pin on each side of the press, and operating connections between said respective crank pins and said table comprising a rock shaft, a rocking connection thereto from each crank pin, and a plurality of trains of toggles between said rock shaft and said table.

3. In a drawing press, a crank pin on each side of the press, a movable table and connections thereto from said respective crank pins comprising a rock shaft having a rocking connection to both of said crank pins, a toggle connected to said rock shaft, a toggle connected to the table and to a second rock shaft, and a rocking connection between the first toggle and the second rock shaft comprising a sliding abutment pivotally connected to the first toggle, and a toggle link pivotally connected to said slide, and a rocking arm on said second rock shaft and pivotally connected to said toggle link.

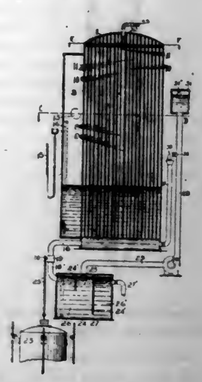
4. In a drawing press, a movable table and a crank pin on each side of said press for driving said table, and operating connections between each of said crank pins and said movable table comprising a rock shaft, a rocking connection from each crank pin thereto, a sliding abutment, two toggles connecting said sliding abutment and rock shaft, a second rock shaft, two toggles connecting the same and the table, rocking arms on said second rock shaft and two toggle links connecting the sliding abutment and said rocking arms.

5. In a drawing press having side frames, a movable table, main gears on the outside of each side of the frame, a crank pin on each gear and operating connections between each of said crank pins and said table comprising a rock shaft, a link connected to each of said crank pins for rocking said shaft, a slide and toggles operatively connected to said rock shaft and said slide, second rock shafts at the front and rear of the press, toggles between said second rock shafts and each corner of the table and rocking connections between said slide and said table toggles.

[Claims 6 to 12 not printed in the Gazette.]

1,212,193. APPARATUS FOR REMOVING SUSPENDED MATTER FROM GASEOUS FLUIDS. HENRY L. DOHERTY, New York, N. Y. Original application filed Apr. 13, 1911, Serial No. 620,861. Divided and this application filed Apr. 4, 1912. Serial No. 688,538. (Cl. 261—79.)

1. In apparatus for separating from a gaseous fluid particles suspended therein, the combination of two spiral passages having their walls substantially parallel, means for varying the free area of said spiral passages according to the volume of gaseous fluid passing through the same in a given time, and inlet and outlet passages for gaseous fluid.



2. In apparatus for separating from a gaseous fluid particles suspended therein, the combination of two parallel spiral passages, the said passages being in communication with each other at their inner extremities, means for varying the free area of said passages according to the quantity of gaseous fluid passing through the same in a given time, and inlet and outlet passages for gaseous fluid.

3. In apparatus for separating from a gaseous fluid particles suspended therein, in combination, a plurality of spiral passages, means for varying the free area of said spiral passages according to the volume of gaseous fluid passing therethrough in a given time, and inlet and outlet passages for said gaseous fluid.

4. In apparatus for separating from a gaseous fluid particles suspended therein, the combination of a plurality of spiral passages, the said passages being so arranged as to provide a continuous path for the said gaseous fluid through said apparatus, means for varying the free area of said spiral passages according to the volume of gaseous fluid flowing through the same in a given time, a passage for the entrance of said gaseous fluid to said apparatus and a passage for the discharge of said gaseous fluid from said apparatus.

5. In apparatus for separating from a gaseous fluid particles suspended therein, the combination of two spiral passages, the said passages being so connected as to provide a continuous path for the said gaseous fluid through said apparatus, means for varying the free area of said spiral passages according to the volume of gaseous fluid flowing through the same in a given time, an inlet passage for the gaseous fluid at one extremity of one of said spiral passages and an outlet passage for the gaseous fluid at the corresponding extremity of the other of said spiral passages.

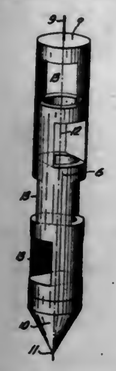
[Claims 6 to 42 not printed in the Gazette.]

1,212,194. PLUMB-BOB. ARCHER F. DUDUID, Montreal, Quebec, Canada. Filed July 28, 1913. Serial No. 781,598. (Cl. 33—216.)

1. A cylindrical plumb-bob having a plurality of diametric slots formed therethrough in staggered relation one to the other, said slots being each symmetrical on opposite sides of a vertical plane passing through a diameter of the bob.

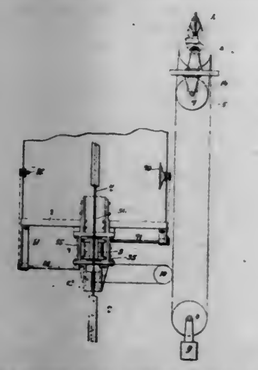
2. A cylindrical plumb-bob having a plurality of diametric slots formed therethrough, one above the other, said

slots being of such size and arrangement that there is always a clear view through one of said slots, the view



opening being symmetrically arranged on opposite sides of an imaginary line passing through the axis of the bob.

1,212,195. ELEVATOR SAFETY CONTROLLING MECHANISM. EDWARD L. DUNN, Worcester, Mass., assignor, by mesne assignments, to Standard Plunger Elevator Company, Worcester, Mass., a Corporation of Massachusetts. Filed Feb. 5, 1910. Serial No. 542,179. (Cl. 187—91.)



1. The combination in an elevator safety device with a car, retarding means, of a rope running with the car connected to actuate said retarding means, a governor, a plurality of traction wheels around which the rope runs for driving said governor, and means controlled by the governor for exerting a wedging action on one of said wheels whereby at a predetermined speed one of the wheels is automatically stopped, and said retarding means is operated by said rope.

2. The combination in an elevator safety device, with a car and guides, of gripping jaws, a drum carried by the car, a rope running with the car and connected to rotate said drum, connections between said drum and said jaws whereby rotation of said drum in either direction applies the jaws to said guides, a driving sheave, a governor driven by said rope through said sheave, and means for stopping the governor driving sheave at a predetermined speed of the governor to cause operation of the jaws by continued tension of the rope.

3. The combination in an elevator safety device, with a car and guides, of gripping jaws, a drum carried by the car, a rope running with the car, and connected to rotate said drum, cam connections between said drum and said jaws whereby rotation of said drum in either direction applies the jaws, a governor driven by said rope, means for disconnecting the governor at a predetermined speed, and means effective to stop the rope upon disconnection of the governor.

4. The combination in an elevator safety device, with a car and guides, of gripping jaws, a drum carried by the car, a rope running with the car, and connected to rotate said drum, worm gear and cam connections between said drum and said jaws whereby rotation of said drum in either direction applies the jaws, a governor driven by said rope, means for disconnecting the governor at a predetermined speed, and means effective to stop the rope upon disconnection of the governor.

5. The combination in an elevator safety device, with a car and guides, of gripping jaws, a drum carried by the car, a rope running with the car and connected to rotate said drum, worm gear and rotatable cam connections between said drum and said jaws, a governor driven by said rope, and means controlled by the governor for stopping the rope and actuating said jaws.

[Claims 6 to 25 not printed in the Gazette.]

1,212,196. FERTILIZER COMPOSITION AND PROCESS OF MAKING SAME. GEORGE H. EARP-THOMAS, Glen Ridge, N. J., assignor of one-half to Henry King Hannah, Montclair, N. J. Filed Nov. 10, 1914, Serial No. 871,291. Renewed Oct. 28, 1916. Serial No. 128,345. (Cl. 71—9.)

1. The process of forming a fertilizer, which consists in grinding eel grass, grinding phosphate rock, and thoroughly mixing the same.

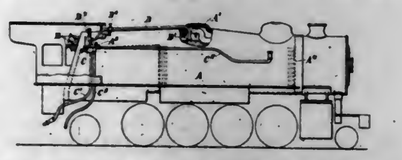
2. The process of forming a fertilizer, which consists in grinding eel-grass, grinding phosphate rock, thoroughly mixing the same together, and mixing humus therewith.

3. A fertilizer containing humus-forming material, eel-grass and additional amounts of phosphate, and compounds of potassium and nitrogen.

4. A fertilizer containing eel-grass and additional amounts of phosphate, and compounds of potassium and nitrogen.

5. A fertilizer comprising ground eel-grass and additional amounts of phosphate, and phosphate rock.

1,212,197. AUTOMATIC INJECTOR CONTROL FOR LOCOMOTIVES. WILLIAM ELMER, Buffalo, N. Y. Filed Oct. 29, 1915. Serial No. 58,590. (Cl. 122—451.)



1. In a locomotive boiler the combination with a manually controlled jet injector for supplying the boiler with feed water, of a steam supply pipe for said injector having its inlet open to the steam and water space of the boiler at the maximum desired height of water level therein.

2. In a locomotive boiler the combination with a manually controlled jet injector for supplying the boiler with feed water, of a steam supply pipe for said injector having its inlet open to the steam and water space of the boiler at the maximum desired height of water level therein and approximately midway between the sides of the boiler and approximately midway between the front and rear ends of the steam and water space of the locomotive.

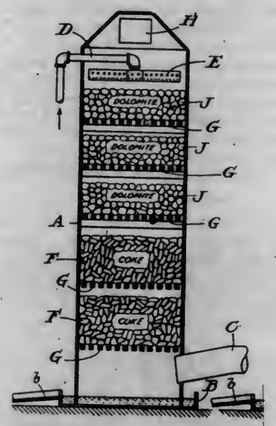
3. In a locomotive boiler the combination with a manually controlled jet injector for supplying the boiler with feed water, of a steam supply pipe for said injector having its inlet open to the steam and water space of the boiler at the maximum desired height of water level therein and approximately midway between the sides of the boiler and slightly in advance of a point midway between the front and rear ends of the steam and water space of the locomotive.

1,212,198. PLAYING-CARDS. MARK ATLEE ERMOLD, Haddon Heights, N. J. Filed Mar. 16, 1916. Serial No. 84,658. (Cl. 46—25.)



A pack of cards for a game based on a story, said pack being made up of groups and the cards in each group bearing identical titles corresponding with the characters in the story and differing from the titles on all other cards, the title on the cards in one group being the name of an unpleasant character in said story and indicating penalties, while those in the other groups indicate rewards.

1,212,199. METHOD OF REMOVING SULFUR DIOXID FROM METALLURGICAL SMOKE AND SIMILAR GASES. FREDERIC AUGUSTUS EUSTIS, Milton, Mass. Filed May 14, 1915. Serial No. 28,186. (Cl. 183—116.)



1. The method herein described of removing sulfur dioxid from metallurgical smoke and similar gases which contain small amounts of sulfur dioxid, said method consisting in passing through a flowing body of said gases a copious flow of water containing, in solution, a material adapted to promote absorption of sulfur dioxid, said water being sufficient in quantity as compared to the volume of gas, to cause with the aid of the absorbent a physical solution of the sulfur dioxid gas in the liquid.

2. The method herein described of removing sulfur dioxid from metallurgical smoke and similar gases which contain small amounts of sulfur dioxid, said method consisting in passing through a flowing body of said gases a copious flow of water in contact with a soluble material of such character that the resulting solution tends to promote absorption of sulfur dioxid, said water being sufficient in quantity as compared to the volume of gas, to cause with the aid of the absorbent a physical solution of the sulfur dioxid gas in the liquid.

3. The method herein described of removing sulfur dioxid from metallurgical smoke and similar gases which contain small amounts of sulfur dioxid, said method consisting in passing through a flowing body of said gases a copious flow of water in contact with successive and separated bodies of soluble material of such character that the solution thereby produced tends to promote absorption of sulfur dioxid, said water being sufficient in quantity as compared to the volume of gas, to cause with the aid of the absorbent a physical solution of the sulfur dioxid gas in the liquid.

4. The method herein described of removing sulfur dioxid from metallurgical smoke or similar gases which contain small amounts of sulfur dioxid, said method consisting in passing through a flowing body of said gases a copious flow of water, said flow passing first through a permeable body of soluble material of such character that the solution thereby produced tends to promote absorption of sulfur dioxid, and then through a permeable body of insoluble material, said water being sufficient in quantity as compared to the volume of gas, to cause with the aid of the absorbent a physical solution of the sulfur dioxid gas in the liquid.

5. The method herein described of removing sulfur dioxid from metallurgical smoke and similar gases which contain small amounts of sulfur dioxid, said method comprising passing through a flowing body of said gases a copious flow of water, said water being sufficient in quantity as compared to the volume of gas to cause with the aid of the absorbent a physical solution of the sulfur dioxid gas in the liquid, said flow of water passing in the presence of the gas first through a permeable body of soluble material, the solution of which tends to promote absorption of sulfur dioxid, and then through means to retard the flow and break up the water so as to present superficially extensive exposed surfaces in contact with the passing of gas.

1,212,200. POWER-JACK FOR AUTOMOBILES. DANIEL S. EVERETT, Jordan, N. Y. Filed Mar. 15, 1916. Serial No. 84,458. (Cl. 21—90.)



1. An automobile-jack comprising a power-wheel, a runway leading to said power-wheel and movable relatively thereto, and means for supporting a vehicle while one of its wheels lies in engagement with the power-wheel and the runway in order that the runway may be moved from engagement with the vehicle wheel without shifting the position of the wheel.

2. An automobile-jack comprising a power-wheel, a runway leading to said power-wheel and shiftable under the action of a vehicle wheel in turning, and supporting means for the vehicle adapted to engage the latter while a wheel of the vehicle lies in engagement with the power-wheel and the runway so that the vehicle wheel will be supported in engagement with the power-wheel after the runway has been shifted out of the path of the vehicle wheel on the turning of the latter.

3. An automobile-jack comprising a power-wheel, a movable runway leading to said power-wheel, and supporting means for a vehicle movable to engage the latter while a wheel of the vehicle lies in engagement with the runway and the power-wheel.

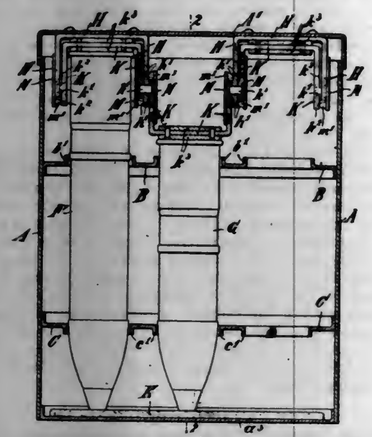
4. An automobile-jack comprising a power-wheel, a movable runway leading to said power-wheel, and a vehicle supporting-arm having one end engageable with the vehicle and the other end adjustably supported to cause the vehicle engaging end to engage or disengage the vehicle.

5. An automobile-jack comprising a frame, a power-wheel on the frame, a runway leading to the power-wheel

and movable on the frame, an arm having its upper end provided with a portion to engage a vehicle, and its other end shiftable on the frame in the direction of the length of the runway, the arm, when engaging a vehicle, lying at such an angle to the vertical that the weight of the vehicle swings the arm to throw the greater amount of the weight of the vehicle on the power-wheel.

[Claims 6 to 16 not printed in the Gazette.]

1,212,201. AMMUNITION-CHEST. WILLY FELLER, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Feb. 18, 1915. Serial No. 9,118. (Cl. 206—3.)



1. An ammunition chest having a fixed abutment and an adjustable abutment for holding securely between them in axial direction ammunition of different length.

2. An ammunition chest having a fixed abutment and a reversible abutment for holding securely between them in axial direction ammunition units of different length, there being also cylindrical bearings in the chest supporting the ammunition transversely with some play.

3. In an ammunition chest with fixed bottom and sides, a stirrup hinged in the chest, and means for securing said stirrup in either of two axially opposite positions, whereby ammunition units of different length may be suspended between said bottom and said stirrup, there being also cylindrical bearings in the chest supporting the ammunition transversely with some play.

4. In an ammunition chest with fixed bottom and sides and a lid; a bearing piece attached under the lid, depending shanks on said bearing piece, a stirrup journaled at the free ends of said shanks, and means for securing said stirrup in either of two diametrically opposite positions, whereby ammunition units of different length may be suspended between said bottom and said stirrup.

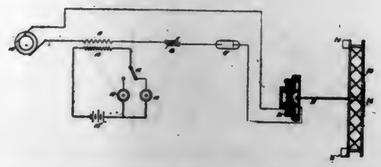
5. In an ammunition chest with fixed bottom and sides and a lid; a bearing piece attached under the lid, depending shanks on said bearing piece, a stirrup journaled at the free ends of said shanks and constructed to have two positions 180° apart from each other, a snap latch between said stirrup and said bearing piece for securing said stirrup in either one of said two positions.

[Claims 6 and 7 not printed in the Gazette.]

1,212,202. SUBMARINE, SUBTERRANEAN, AND AERIAL TELEPHONY. REGINALD A. FESSENDEN, Brookline, Mass., assignor to Submarine Signal Company, Portland, Me., a Corporation of Maine. Filed May 12, 1916. Serial No. 97,193. (Cl. 179—1.)

1. A tuned circuit comprising a source of ultra-audible high frequency current, a rectifier, an electromagnetic mechanism adapted to produce audible sounds and an amplifier having two windings, one winding of said amplifier being in said tuned circuit and a telephone transmitter in circuit with the other winding of the amplifier.

2. A tuned circuit comprising a source of ultra-audible high frequency current, a rectifier, an electromagnetic mechanism of substantially no self-induction adapted to produce audible sounds and an amplifier having two windings, one winding of said amplifier being in said tuned circuit and a telephone transmitter in circuit with the other winding of the amplifier.



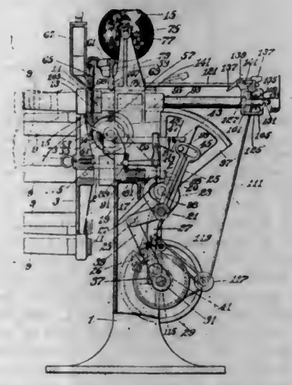
3. A tuned circuit comprising a source of ultra-audible high frequency current, a variable condenser, a rectifier, an electromagnetic mechanism adapted to produce audible sounds and an amplifier having two windings, one winding of said amplifier being in said tuned circuit and a telephone transmitter in circuit with the other winding of the amplifier.

4. A tuned circuit comprising a source of ultra-audible high frequency current, a variable condenser, a rectifier, an electromagnetic mechanism of substantially no self-induction adapted to produce audible sounds and an amplifier having two windings, one winding of said amplifier being in said tuned circuit and a telephone transmitter in circuit with the other winding of the amplifier.

5. A tuned circuit comprising a source of ultra-audible high frequency current, a variable condenser, a rectifier, an electromagnetic mechanism adapted to produce audible sounds and an amplifier having two windings, one winding of said amplifier being in said tuned circuit and a telephone transmitter in circuit with the other winding of the amplifier, and means connected to, and adapted to be vibrated by said electromagnetic mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,212,203. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 7, 1911. Serial No. 642,766. (Cl. 12—39.)



1. A machine for laying a lining piece in the heel seat of a shoe having, in combination, a laying member, a source of supply of cement, and mechanism actuated upon presentation of the shoe in operative relation to said machine for causing cement to be delivered from said supply into position to cause said lining piece to adhere to said heel seat when pressed thereagainst and the laying member to approach said heel seat.

2. A machine of the class described having, in combination, mechanism for applying a lining-piece to a shoe and automatic means for actuating said applying mechanism once for each shoe presented.

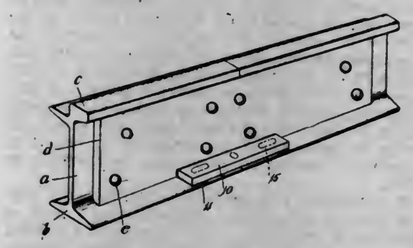
3. A machine of the class described having, in combination, mechanism for applying a lining-piece to a shoe, and automatic means arranged to become operative upon presentation of said shoe in operative relation to said machine for actuating said applying mechanism.

4. A machine of the class described having, in combination, a movable member, mechanism for applying a lining-piece to a shoe and automatic means arranged to become operative by movement of said member for actuating said applying mechanism, once for each shoe presented to be lined.

5. A machine for applying lining material to the heel seat of a shoe having, in combination, mechanism for applying cement to said material and means for operating said mechanism arranged to become operative upon presentation of said shoe in operative relation to said machine.

[Claims 6 to 60 not printed in the Gazette.]

1,212,204. RAIL-JOINT. CHESTER F. GAILOR, Baltimore, Md. Filed Feb. 25, 1915. Serial No. 10,895. (Cl. 239—4.)



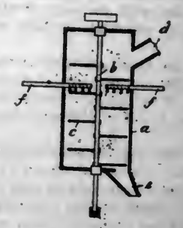
1. A welded rail joint, comprising the combination with a mechanically formed joint including fish plates overlapping and secured to the adjacent ends of rails by headed fasteners, of a welding plate overlapping the ends of the rail bases, and a welded connection between said welding plate and the bases of said rails.

2. A welded rail joint comprising the combination with a mechanically formed joint including fish plates overlapping and secured to the adjacent ends of rails by headed fasteners, of a plate located on and overlapping the ends of the rail bases, and a welded connection between said plate and the bases of said rails and a fish plate.

3. A rail joint comprising the combination with abutting rail ends and a plate located against a side of and overlapping said rail ends and secured thereto, of a rigid non-elastic member of welding material overlapping the abutting ends of the bases of said rails, and a welded connection between said member and the bases of said rails.

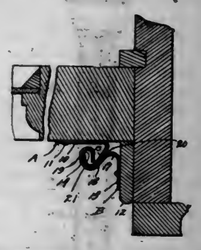
1,212,205. PROCESS OF FLAKING FRIABLE GROATS. NIELS GERL-HOLMEN, Frederiksberg, near Copenhagen, Denmark, assignor to Kjøver-Byggryn-Fabrikken Danmark, Ltd., Copenhagen, Denmark. Filed Sept. 17, 1913. Serial No. 790,172. (Cl. 99—10.)

1. The process for flaking friable groats which consists in coarsely grinding the grain and freeing the same from the finer particles, then subjecting the material under treatment to the action of steam to moisten and slightly heat the same, the steam treatment being continued for a period of time of such short duration that the groats retain their original chemical condition, and then rolling and drying the said material.



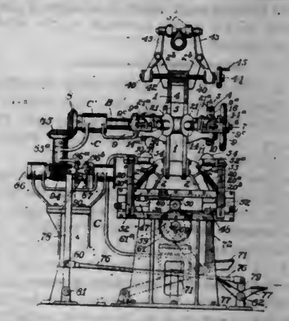
2. The process for flaking friable groats which consists in coarsely grinding the grain, then subjecting the material under treatment to the action of steam for a brief period of time of such duration that the groats retain their original chemical condition, and the integrity of the starch cells is maintained, and then rolling the said material.

1,212,206. WEATHER-STRIP. GROVER C. GILSTRAP, Claflin, Kans. Filed Dec. 28, 1915. Serial No. 69,056. (Cl. 20—69.)



A weatherstrip comprising a pair of metallic strips secured respectively to the sash and frame of a window, one of said strips having its unattached margin extended outwardly in a line bisecting the angle between the sash and frame and rolled to extend inwardly toward said margin, the other strip having its unattached margin extended in the same direction as the first margin and engaging therewith, the last-named margin being snugly fitted into and slidable within said rolled portion.

1,212,207. TIRE-STITCHING MACHINE. RICHARD GRIFFITH, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Mar. 9, 1916. Serial No. 83,209. (Cl. 154—10.)



1. An apparatus of the class described comprising a rotatable core, a carrier associated therewith and rotatable

about an axis parallel to the axis of said core, and stitching means carried by said carrier.

2. Apparatus of the class described comprising a rotatable core, a carrier associated therewith and rotatable about an axis parallel with the axis of said core, and a plurality of pairs of stitching devices carried by said carrier.

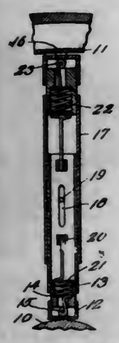
3. Apparatus of the class described comprising a rotatable core, a rotatable carrier associated therewith, and a plurality of pairs of stitching devices carried by said carrier and arranged to act at different distances from the axis of the carrier.

4. Apparatus of the class described comprising a rotatable core, a carrier associated therewith and rotatable about an axis parallel to the axis of said core, and a plurality of pairs of stitching devices carried by said carrier, and bead placing devices supported from said carrier.

5. Apparatus of the class described comprising a rotatable core, a carrier associated therewith and rotatable about an axis parallel to the axis of said core, and a plurality of pairs of stitching devices carried by said carrier, and trimming means carried by said carrier.

[Claims 6 to 17 not printed in the Gazette.]

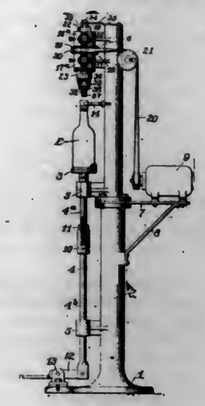
1,212,208. SPRING-WHEEL. DAVID H. GRIGG, Cloverdale, British Columbia, Canada. Filed Apr. 18, 1916. Serial No. 91,975. (Cl. 152—47.)



The combination of a wheel hub and rim; of oppositely disposed spaced ears formed on said hub and rim, cup-shaped socket members mounted between said ears, pivot pins passing through said ears and socket members to pivotally connect the ears and sockets, hollow spring seats screwed into said socket members, said spring seats being provided with openings therethrough, spoke sections secured to said spring seats and telescopically connected, springs mounted in said spring seats and having ends passing through the openings in the seats and connected to said pivots, the remaining ends of said springs being directed toward each other in alinement and threaded, and a turn buckle sleeve screwed on the said remaining end of the spring.

1,212,209. MACHINE FOR APPLYING BOTTLE-STOPPERS. JOSEPH HARRY GRUVER, Baltimore, Md., assignor to The Simplex Protective Stopper Co., Baltimore, Md., a Corporation of Maryland. Filed Apr. 13, 1914. Serial No. 831,549. (Cl. 113—5.)

1. In combination a non-rotary plunger having an enlarged head at its lower end to press on the bottle stopper, a rotating sleeve surrounding said plunger, both said plunger and sleeve being vertically movable, the latter being movable upwardly by contact of the head therewith when raised by the bottle, a spring exerting downward pressure on the plunger, a spinning member mounted on the sleeve intermediate of its length and having a spinning tool at its lower end, to be moved radially outward for its spinning action when the upper end of said member is moved radially inward, and means for moving said upper end inwardly and holding the sleeve with its spinning member to its work, consisting of an overhanging cam on the inner side of which the upper end of the spinning member bears, substantially as described.



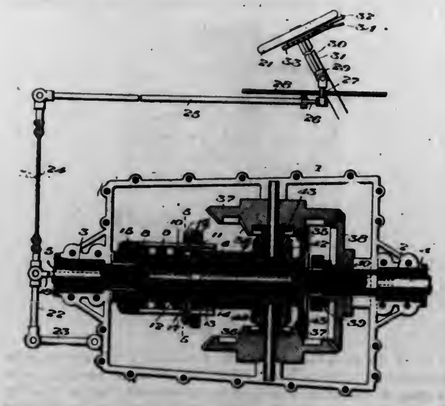
2. In combination in a machine for seating within a bottle mouth a stopper having an upstanding portion and an interior cover portion with a shoulder between said cover portion and said upstanding portion, and in combination a plunger having an inverted cup-shaped head at its lower end, the rim of which is adapted to bear on the shoulder of the stopper between the cover portion and the upstanding portion, means for yieldingly holding said plunger with its cup-shaped head to their work, a vertically movable sleeve rotatable about the plunger, a spinning member pivotally mounted on said sleeve normally overlying the inverted cup-shaped head, and a cam for operating the spinning member outwardly in respect to the cup-shaped head as the sleeve rises, substantially as described.

3. In combination in a machine for setting bottle stoppers in place, a non-rotating plunger having a head at its lower end to bear on the bottle stopper and a rotating sleeve surrounding the said plunger, a spinning member pivotally mounted at the lower end of the sleeve, a cam for operating said spinning member, said sleeve with the spinning member being vertically movable, and said inner plunger being vertically movable independently of the sleeve to bring its head in contact with the sleeve and thereafter rise with the same, means for yieldingly pressing the plunger downwardly, and adjustable stop means for changing the vertical position of the sleeve in relation to the plunger and its head, substantially as described.

4. In combination a plunger, a spinning tool, a rotary carrier for the spinning tool rotatable about the plunger, a cup-shaped member carried by the plunger and having a rim reaching downward therefrom, the said spinning tool overlying the cup-shaped member close to the plunger when in inoperative position and an inverted cup-shaped cam, the said spinning tool having a portion bearing on the inner side of said cup-shaped cam to be operated thereby, the said rotary carrier having vertical movement in respect to said cam, substantially as described.

5. In a machine of the class described, a frame, a journal bearing extending therefrom, a rotating shaft slidably journaled therein and carrying a spinning sleeve on its lower end, a central shaft slidably mounted within said rotating shaft and having a plunger at its lower end extending below said spinning sleeve, an adjustable collar on the upper part of said rotating shaft adapted to limit the downward movement of said shaft in its bearing, and a spring having one end secured to said frame and the other engaging the upper end of said central shaft to hold it against rotation and adapted to hold the two shafts normally in their respective lowermost positions, substantially as described.

1,212,210. TRANSMISSION-GEAR FOR AUTOMOBILES. EVERETTE MERLE HALBERT, Battle Creek, Mich. Filed Apr. 22, 1916. Serial No. 92,874. (Cl. 74—59.)



1. In a transmission gearing the combination of a driving shaft, a driven shaft, a member keyed to the driven shaft, clutch elements associated with said driving shaft, gearing connections between said driving shaft and the respective clutch elements, a shiftable element mounted on said member and adapted to selectively engage said clutch elements, and means for actuating the shiftable element, substantially as described.

2. In a transmission gearing the combination of a driving shaft, a driven shaft co-axial with the driving shaft, a member keyed to the driven shaft, clutch elements mounted on the driving shaft, connections between the respective clutch elements and said driving shaft, a shiftable element mounted on the member and adapted to selectively engage with said clutch elements; and means for actuating the shiftable element, substantially as described.

3. In a transmission gearing the combination of a driving shaft, a driven shaft co-axial with the driving shaft, a member keyed to the driven shaft, clutch elements mounted on the driving shaft and having sleeve portions, gearing connections between said sleeve portions and the driving shaft, a collar slidably mounted on said member, an element carried by said collar adapted to selectively engage with said clutch elements; and means for actuating the collar to shift the said element, substantially as described.

4. In a transmission gearing the combination of a driving shaft, a driven shaft co-axial with the driving shaft, a member keyed to the driven shaft, clutch collars mounted on the driving shaft and constructed with sleeves, gearing connections between said sleeves and the driving shaft, a collar slidably mounted on said member, pins carried by said slidable collar adapted to selectively engage with said clutch collars, and means for actuating the collar, substantially as described.

5. In a transmission gearing the combination of a driving shaft, a driven shaft, a casing keyed to the driven shaft, clutch elements located within said casing, gearing connections between the respective clutch elements and said driving shaft, a clutch element mounted on the casing and adapted to selectively engage with said clutch elements, and means for actuating the selective clutch element, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,212,211. ADJUSTABLE CONCRETE-FORM. JOHN P. HALGREN, Kansas City, Mo. Filed Apr. 17, 1916. Serial No. 91,594. (Cl. 25—124.)

1. In a concrete form construction, the combination of a pair of spaced molding walls adapted to be expanded or contracted to various diameters, a series of uprights adjustable horizontally along the inner and outer faces of said walls and provided with means for securing said uprights thereto in different horizontal positions for different diameters of forms, and band members arranged in circumferentially adjustable sections conforming to said inner and outer faces and secured to said uprights.



2. In a concrete form construction, the combination of a pair of spaced molding walls of flexible material adapted to be expanded or contracted to various diameters of form, a series of uprights provided with means for securing the same to said molding walls at different points horizontally along the latter, band members arranged in sections conforming to the inner and outer faces of said molding walls and adjustable circumferentially with reference to said walls, and means for adjustably securing said band sections to said uprights.

3. In a concrete form construction, the combination of a pair of spaced molding walls, a series of uprights adjustable horizontally along the inner and outer faces of said walls, band members arranged in sections extending between said uprights and conforming to said inner and outer faces, and band supporting members carried by said uprights and having adjustable connection with the adjoining ends of said band sections.

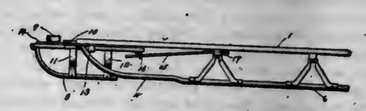
4. In a concrete form construction, the combination of a pair of spaced molding walls adapted to be expanded or contracted to different diameters, a series of uprights provided with connections for securing the same to the inner and outer faces of said walls and at different points circumferentially thereof, band members arranged in sections extending between said uprights and conforming to said inner and outer faces, and band supporting members carried by said uprights and having adjustable telescopic connection with the adjoining ends of said band sections.

5. In a concrete form construction, the combination of a pair of spaced molding walls adapted to be expanded or contracted to different diameters of form, a series of uprights provided with connections for securing the same to the inner and outer faces of said walls and at different points circumferenetially thereof, band members of T-shaped cross-section arranged in sections extending between said uprights and conforming to said inner and outer faces, and band supporting channel members carried by said uprights and formed to slidingly receive the adjoining ends of said band sections and provided with adjustable connections therewith.

[Claim 6 not printed in the Gazette.]

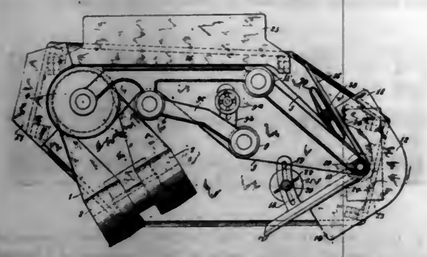
1,212,212. BOB-SLED. DANIEL Y. HALLOCK, York, Pa. Filed May 18, 1916. Serial No. 98,476. (Cl. 21—94.)

1. In a bobsled having a pair of runners each of which is stepped, the forward portion being on a higher horizontal plane than the rear portion.



2. In a bobsled having a pair of runners each of which is stepped, the forward portion being on a higher horizontal plane than the rear portion and an intermediate pivoted runner.

1,212,213. ABRADING-MACHINE. JOHN HALTERBECK, New York, N. Y., assignor to Gottfried Piel, New York, N. Y. Filed Sept. 4, 1912, Serial No. 718,546. Renewed June 8, 1916. Serial No. 102,602. (Cl. 51—5.)



1. In an abrading machine for concave surfaces, an abrading member for engaging the concave surface as the member and surface are moved relatively, a rigid guide placed on either side thereof at an angle to each other for engaging edges of the surface during the relative movement, said guides being spaced away from the path of the concave surface, means for adjusting the angle between the guides, and means for supporting the work to be held in engagement with the guides and the abrading member.

2. In an abrading machine for concave surfaces, an abrading member comprising a traveling belt for engaging the surface as the belt and surface are moved relatively, a guide having a flat bearing surface placed on either side thereof at an angle to each other for engaging edges of the surface during the relative movement, said guides being spaced away from the path of the concave surface, means for adjusting the angle between the guides, and means for supporting the work to be held in engagement with the flat bearing surfaces of the guides and the abrading member.

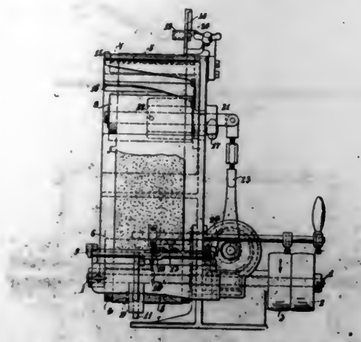
3. In an abrading machine for concave surfaces, an abrading member for engaging the concave surface as the member and surface are moved relatively, a guide placed on either side thereof at an angle to each other for engaging edges of the surface during the relative movement, said guides being spaced away from the path of the concave surface, means for adjusting the angle between the guides, and a tiltable table for supporting the work to be held in engagement with the guides and the abrading member.

4. In an abrading machine for concave surfaces, an abrading member comprising a traveling belt for engaging the surface as the belt and surface are moved relatively, a guide placed on either side thereof at an angle to each other for engaging edges of the surface during the relative movement, said guides being spaced away from the path of the concave surface, means for adjusting the angle between the guides, and a tiltable table for supporting the work to be held in engagement with the guides and the abrading member.

5. In an abrading machine for concave surfaces, a vertical roll, an abrading band passing thereover for engaging the concave surface as the surface and band are moved relatively, a pair of vertical guide plates on either side of the roll, placed at an angle to each other for engaging edges of the surface during the relative movement, said guide plates being spaced away from the path of the concave surface, means for adjusting the angle of the guide plates, and a table mounted adjacent said plates adapted to support the work against said roll and guide plates, the angle between the table and the guide plates being free of obstruction whereby work of any size or shape may be disposed in said angle.

[Claims 6 to 13 not printed in the Gazette.]

1,212,214. ABRADING-MACHINE. JOHN HALTERBECK, New York, N. Y., assignor to Gottfried Piel, New York, N. Y. Filed Oct. 31, 1913, Serial No. 798,401. Renewed Dec. 1, 1916. Serial No. 134,505. (Cl. 51—5.)



1. In an abrading machine, a plurality of spaced rolls disposed parallel to each other, an abrading member comprising a traveling belt passing about said rolls, a shaft for driving one of said rolls, another of said rolls being pivoted intermediate its width for oscillating about its axis of rotation, a cam movement between said shaft and said oscillating roll whereby said belt is given a slight edgewise movement while it is fed longitudinally.

2. In an abrading machine, the combination with a horizontally disposed roll adapted to have an abrading belt passed about the same, of a horizontally disposed table and a depending table adjacent said roll, said tables being adjustable relative to each other about the axis of said roll and an outwardly extending work guiding plate disposed at an angle to said axis.

3. In an abrading machine, an abrading member comprising a traveling belt, means for feeding said belt longitudinally relative to the work and automatic means alternately bearing first on one and then on the opposite edge of the belt for oscillating said belt edgewise while being fed across the work.

4. In an abrading machine, an abrading member comprising a traveling belt, guiding rollers rotatably mounted in set position for maintaining said belt in a set plane, and mechanism disposed between said rollers and engaging said belt to move the same laterally of its path of travel.

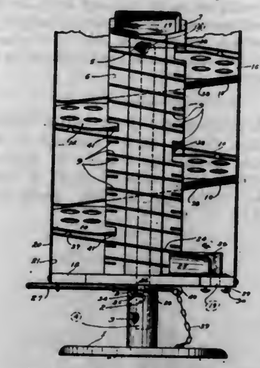
5. In an abrading machine, an abrading member adapted to be fed past the work and having a relatively quick longitudinal movement and a relatively slow transverse movement simultaneous with said longitudinal movement.

[Claims 6 to 8 not printed in the Gazette.]

1,212,215. COIN-ASSORTER. WILLIAM E. HARKNESS, Marion, Ohio. Filed Dec. 31, 1915. Serial No. 69,690. (Cl. 133—3.)

1. In a coin assorter, a supporting member having a plurality of series of inclined kerfs arranged around the exterior surface thereof in angular progressive relation with respect to each other, a plurality of series of perforated plates fitted to said kerfs in overlapping relation to each other forming separate courses, means made integral with the plates to prevent the overlapping portions from contacting with each other, and a single series of imperforate plates also forming a course around the supporting member.

2. In a coin assorter, a supporting member having a plurality of series of inclined kerfs arranged around the exterior surface thereof in angular progressive relation with respect to each other, a plurality of series of perforated plates fitted to said kerfs in overlapping relation with each other forming separate courses, means made integral with the plates to prevent the overlapping portions from contacting with each other, a single series of imperforate plates also forming a course around the supporting member, an inclosing casing for said plates, and means to impart an oscillating rotary movement to the supporting member and the mechanism carried thereby.



3. In a coin assorter, a supporting member having a plurality of series of inclined kerfs arranged around the exterior surface thereof in angular and progressive relation with respect to each other, a plurality of series of perforated plates fitted to said kerfs in overlapping relation to each other forming separate courses, means made integral with the plates to prevent the overlapping portions from contacting with each other, a single series of imperforate plates also forming a course around the supporting member, an inclosing casing for said plates, a bottom secured to the casing which is provided with a series of slots, guiding means forming a continuity of the paths of the courses from the terminals thereof to the slots in the bottom of the casing.

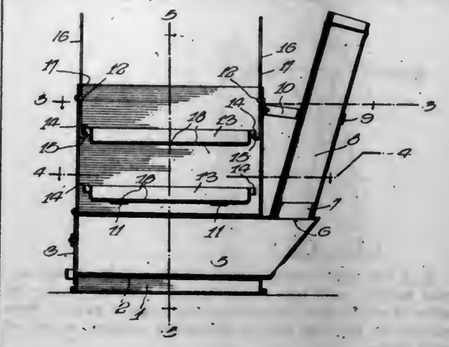
4. In a coin assorter, a supporting member having a plurality of series of inclined kerfs arranged around the exterior surface thereof in angular and progressive relation with respect to each other, a plurality of perforated plates fitted to said kerfs in overlapping relation to each other forming separate courses, means made integral with the plates to prevent the overlapping portions from contacting with each other, a single series of imperforate plates also forming a course around the supporting member, an inclosing casing for said plates, a bottom secured to the supporting member which is provided with a series of slots, guiding means forming a continuity of the paths of the courses from the terminals thereof to the slots in the bottom of the casing, and separate receptacles removably attached in alinement with and underneath said slots.

5. In a coin assorter, a pivotally hung supporting member provided with a plurality of series of inclined kerfs arranged and secured in spaced, angular and progressive relation with respect to each other around the exterior of the supporting member, a plurality of series of perforated plates fitted to said kerfs to overlap each other and form a plurality of separate courses the continuity of the paths thereof being interrupted because of the spaced relation of the plates with respect to each other.

[Claims 6 to 10 not printed in the Gazette.]

1,212,216. CANNING APPARATUS. EDWARD M. HARP, Dublin, Ga. Filed Jan. 17, 1916. Serial No. 72,573. (Cl. 126—346.)

A canning apparatus comprising a cooking tank, a guideway extending through said tank and opening through the front and rear sides thereof, a door closing the front end of said guideway, a fire box inserted removably into said guideway through the rear end thereof, said fire box having an open front end and a closed rear end, the latter projecting rearwardly beyond the tank and having an upstanding rigid collar, a rigid loop secured to the rear side of the tank and spaced above said collar, and a smoke pipe received slidably in said loop and telescoping with said collar, whereby said pipe normally holds the fire box against shifting in the guideway and whereby upward sliding of said pipe will permit removal of said fire box.



1,212,217. BOLTLESS TIE. PATRICK J. HARRIGAN, Harrisburg, Ill. Filed Aug. 7, 1916. Serial No. 113,681. (Cl. 238—5.)



1. A railroad tie having a portion on which the rail rests, an upstanding lug and an opening alongside said lug, an upstanding ear that engages in the opening, and rail fastening means engaging the lug and ear.

2. A railroad tie having a portion on which the rail rests, an upstanding lug and an opening between said portion and the lug, an upstanding ear engaged in the opening between the lug and a rail placed on said portion, and rail fastening means passing through the lug and ear.

3. A railroad tie having a portion on which the rail rests, an upstanding lug spaced from said portion, a detachable ear interposed between said lug and a rail placed on the portion, and a transversely disposed rail fastener spike passing through the lug and ear and overlying the base flange of the rail.

4. A railroad tie having a stop for engagement with one side of a rail, an upstanding lug on the opposite side of the rail, an ear that passes through the tie, said ear having a foot on the under side of the tie, and a retaining spike passing through the lug and engaging over the base flange of the rail.

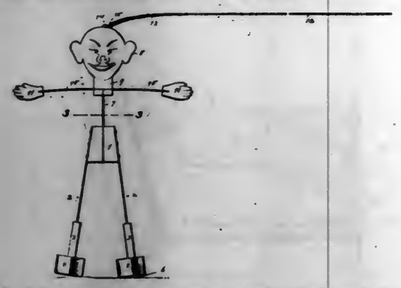
5. A railroad tie having a stop for engagement with one side of a rail, an upstanding lug on the opposite side of the rail, an ear formed of an upstanding doubled plate that passes through the tie, said plate having offset terminal portion on the under side of said tie, and a retaining spike that passes through the lug and engages over the base flange of the rail.

[Claims 6 to 8 not printed in the Gazette.]

1,212,218. TOY FIGURE. HENRY A. HART, Flushing, N. Y., assignor to The Strobel & Wilken Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 22, 1916. Serial No. 121,546. (Cl. 46—40.)

1. A toy figure comprising a trunk, spring legs carried thereby, shoes carried by the legs, and an anchoring member on one of said shoes.

2. A toy figure comprising a trunk, diverging spring legs carried thereby, shoes carried by the legs, and an anchoring member on one of said shoes.



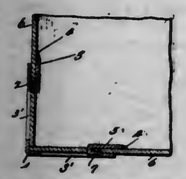
3. A toy figure comprising a trunk, a pair of legs carried thereby, said legs being formed of spring blades the sides of which face the sides of the trunk, a pair of shoes carried by the legs and an anchoring member on one of said shoes.

4. A toy figure comprising a trunk, a pair of spring legs carried thereby, a pair of shoes carried by the legs, a spring neck extending upwardly from the trunk, a head piece mounted on the spring neck, and a pair of spring arms carried by the head piece.

5. A toy figure comprising a trunk, a pair of spring legs carried thereby, a pair of shoes carried by the legs, an anchoring member on one of said shoes, a spring neck extending upwardly from the trunk, a head piece mounted on the spring neck, and a pair of spring arms carried by the head piece.

[Claims 6 to 8 not printed in the Gazette.]

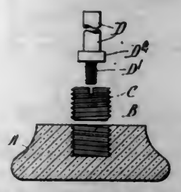
1,212,219. METAL CORNER FOR BOXES. ISIDORE M. HESCHELES, New York, N. Y. Filed Dec. 10, 1915. Serial No. 66,140. (Cl. 217—70.)



1. As a new article of manufacture a metal corner for boxes comprising a body, said body being bent along its central vertical axis so as to constitute a substantially L-shaped structure in longitudinal section, whereby said body will fit snugly upon the side corners of a box, V-shaped spurs struck from said body, the bases of said spurs being adjacent the ends of said body, the points of said spurs being adapted to be passed through the side walls of a box and then being bent so as to extend beyond the ends of said body, each spur being provided with an offset portion adjacent its base, said offset portion extending in a plane parallel to but at a distance beyond the inner portions of said body, whereby an increased binding action is presented adjacent each end of said body between the side portions and the major portions of said spurs, whereby the side movement of the body when positioned upon the side walls of a box will be prevented, thereby preventing the side edges of the spurs from cutting the side walls of the body which action would cause the body to become loose when in use, thus rendering it inefficient in operation.

2. As a new article of manufacture a metal corner for boxes comprising a body, said body being adapted to be positioned upon the corner of a box, spurs struck from said body, said spurs being adapted to be passed through the side walls of a box and be clamped so as to extend in planes parallel to the inner portions of said body, offset portions formed adjacent the bases of said spurs, the distance between the offset portions of said spurs and the main portions of said spurs being less than the distance between the body portion and the main portion of said spurs, whereby an increased binding action is presented upon the side walls so as to securely hold the body in a set position and prevent its accidental injury upon the side walls of a box, whereby the life of the box may be greatly prolonged as long as the body renders its maximum amount of efficiency.

1,212,220. SLIDING-SHOE FOR FURNITURE. WILLIAM T. HIGHT, Boston, Mass., assignor to William T. Hight, Boston, Mass., and George W. Hight, Quincy, Mass., Copartners doing business as W. T. Hight & Co., Boston, Mass. Filed Sept. 7, 1915. Serial No. 49,181. (Cl. 155—33.)



1. A furniture support consisting of a vitreous shoe and a fitting attached together, said shoe having an internally threaded bore, said fitting having a part comprising an externally-threaded portion and a relatively wide lower surface adapted to be held firmly against a relatively wide upper surface of the vitreous shoe by a screw-threaded engagement between said part and the internally threaded bore of said shoe, whereby said surfaces carry all of the weight of the furniture transmitted through the fitting.

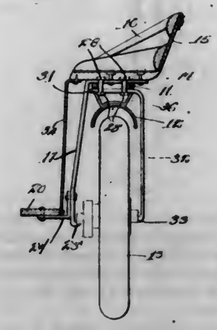
2. A furniture support comprising a vitreous shoe having on the upper side thereof a relatively wide screw-threaded flat-bottomed bore, and a fitting comprising a metallic spindle and an externally threaded flat-bottomed bushing, said spindle being fastened to the externally threaded flat-bottomed bushing screwed into and resting upon the bottom of said flat-bottomed bore.

3. A furniture support comprising a vitreous shoe having an internally threaded wide-bottomed opening therein and a fitting attached thereto, said fitting comprising a spindle having a shoulder and a threaded portion and a bushing having a recess and a threaded bore, the shoulder and the threaded portion of the spindle respectively entering and being in threaded engagement with the recess and threaded bore of the bushing having a lower surface fitting the bottom of said opening, said bushing having external threads adapting said bushing and shoe to be screwed firmly together with their said fitting surfaces in engagement.

1,212,221. SUPPLEMENTARY SEAT FOR MOTOR-CYCLES. LEWIS GARLAND HOBOOOD, Columbia, S. C. Filed May 2, 1914. Serial No. 835,939. (Cl. 208—24.)

1. An auxiliary seat of the character described comprising a chair, a foot-board, supports secured to said chair and to said foot-board, a protector extending from said chair to said foot-board, a clamping strip connected with one of said supports, a hook provided adjacent the lower end of the second support, and a support having its lower end portion provided with a hook and having its upper end portion connected with the upper end portion of said last-mentioned support to constitute a clamping element to coöperate with the upper end portion of said last-mentioned support.

2. An auxiliary seat for a motor-cycle including rear fork members and a luggage carrier comprising a chair, supports for said chair having their upper ends positioned above said luggage carrier, a foot rest connecting the lower ends of said supports, a clamping strip extending beneath said luggage carrier, bolts carried by one of said supports and engaging said clamping strip to hold the upper end of the support in tight engagement with the luggage carrier, a third support having its upper end portion extending beneath said luggage carrier and beneath the upper end portion of the remaining one of said first mentioned supports, bolts carried by the upper end portion of said last mentioned support and engaging the upper end portion of the third support to hold the two supports in tight engagement with the luggage carrier above and below the same, and means adjacent the lower end portions of said first mentioned supports engaging the rear fork members of the motor-cycle.



3. A seat of the character described comprising a chair, supports carried by said chair, a foot rest carried by said supports, a protector leading from said foot-rest to said chair, clamping members coöperating with said supports, one of said clamping members being extended to form a support, and attaching means positioned adjacent the lower end of said last-mentioned support and one of said first-mentioned supports.

4. An auxiliary seat for a motor cycle provided with a frame including a rear fork and a luggage carrier, said auxiliary seat comprising a chair, supports carried by said chair and resting upon said luggage carrier, a foot-rest carried by said supports, means for clamping one of said supports to said luggage carrier, a third support extending beneath said luggage carrier and connected with the upper end portion of one of said first-mentioned supports to clamp the same to said luggage carrier, and means provided adjacent the lower ends of said last-mentioned supports for engaging the rear forks of said motor cycle.

5. An auxiliary seat for a motor cycle including a rear fork and a luggage carrier, said seat comprising a chair, supports for said chair constituting clamps for removably connecting said chair with said luggage carrier, a foot-rest carried by certain of said supports, a guard leading from said chair to said foot-rest, and means adjacent the lower ends of certain of said supports for engaging the rear fork of said motor cycle.

1,212,222. CAP-SPINNING AND CAP-TWISTING MACHINE. JOHN HODGSON, Cleveland, Ohio, assignor of one-half to Tierney & Hodgson, New York, N. Y., a Firm composed of Frank A. Tierney, New York, N. Y., and William S. Hodgson, Brooklyn, N. Y. Filed Nov. 19, 1914. Serial No. 872,920. (Cl. 118—62.)

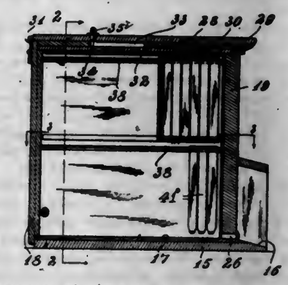
1. In a machine of the character described, in combination with the cap spindle, whirl, bobbin and lifter plate, a disk or washer on said spindle and plate and supporting the whirl, said disk or washer having a central vertical opening to receive the spindle, a dished upper surface leading from its onter edges downwardly directly to said central opening and transverse lugs extending upwardly from and above the body of the disk or washer to receive and support said whirl, said lugs extending from the edges of the disk or washer inwardly to the vertical plane of said opening and holding the whirl elevated sufficiently above the body of the disk or washer to expose the concave upper portion thereof and permit the introduction of oil to said concave portion without stopping the machine or elevating the whirl from the washer or the washer from said plate, and said lugs also being extended laterally beyond the lower end surface of the whirl resting on them.



2. In a machine of the character described, in combination with the cap spindle, whirl, bobbin and lifter plate, a disk or washer on said spindle and plate and supporting the whirl, said disk or washer having a central vertical opening to receive the spindle, a dished upper surface leading from its outer edges downwardly directly to said central opening, a recess in its lower side surrounding said opening and containing an absorbent pad, and transverse lugs extending upwardly from and above the body of the disk or washer to receive and support said whirl, said lugs extending from the edges of the disk or washer inwardly to the vertical plane of said opening and holding the whirl elevated sufficiently above the body of the disk or washer to expose the concave upper portion thereof and permit the introduction of oil to said concave portion without stopping the machine or elevating the whirl from the washer or the washer from said plate, and said lugs also being extended laterally beyond the lower end surface of the whirl resting on them.

3. As a new article of manufacture, a bearing for the cap spindle composed of a perforated base and a pair of diametrically opposed lugs thereon.

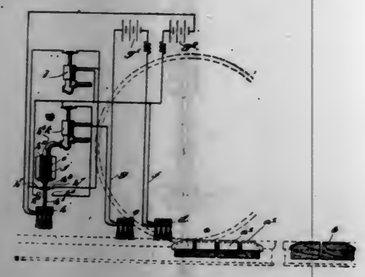
1,212,223. APIARY. MICHAEL HOFFMANN, South Bethlehem, Pa. Filed Apr. 27, 1916. Serial No. 93,842. (Cl. 6—2.)



In a beehive the combination with a structure having transverse rails disposed parallel within its interior, independent comb making frames slidably engaged on said rails, said frames having a symmetrical widened upper portion acting as separators between adjacent members

said frames having beveled upper ends, and plates also slidably on said rails whereby said frames may be held in close proximity.

1,212,224. ELECTRICALLY-OPERATED SPEED-CONTROLLING DEVICE FOR TRAINS. LAWRENCE WESLEY HORNE and WARREN NOBLE CRANE, New York, N. Y. Filed Aug. 5, 1913. Serial No. 783,039. (Cl. 246—58.)



1. A valve, an electrical circuit, and a source of electrical supply for said valve and brushes included in said electrical circuit, a second valve, an electrical circuit and a source of electric supply for said valve, and brushes included in said electrical circuit, means operated by said first mentioned valve for moving one of said brushes into the plane of the other said brushes, means for short circuiting the source of supply for said first mentioned valve to obtain said movement of said movable brush and means for short circuiting said movable brush with another said brush for operating said second valve.

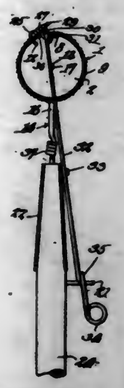
2. A device having a plurality of independent electrical circuits, a magnetically operated valve arranged in each said circuit, means for short circuiting one said valve to obtain an operation thereof, and means operated by said valve for short circuiting the other said valve to obtain an operation thereof.

3. An electrical speed controlling device comprising a plurality of brushes, a source of electric current supply for said brushes, an electric circuit in which each said brush is included, sectional track contact devices adapted to be bonded together as desired and to be engaged by said brushes, another and movable brush, a pressure operated rod secured to said brush for holding it normally away from the plane of contact, an electrically operated valve in said first mentioned circuit for controlling the pressure for said rod, and means for urging the return of said movable brush and an electrically operated relief valve arranged in a train line air pipe and means operated by said movable brush and one said first mentioned brush for opening the circuit through said relief valve as herein specified.

4. An electrical speed controlling device comprising a plurality of metallic brushes, electric circuits in which said brushes are included, a track contact device composed of a plurality of separated sections, in the path of certain of said brushes, an electrical circuit adjacent to said sections, a solenoid in said circuit and adapted to electrically connect alternate contact sections and certain of said brushes by the interruption of the electrical circuit through said solenoid as and for the purpose set forth.

5. A device having two batteries, three brushes electrically connected to said batteries, a pressure release valve in the electrical circuit of one said battery, means for moving one said brush, an electrically operated valve in another said electrical circuit and adapted to control the movement of said movable brush, means adjacent to a track and operable upon said brushes for short circuiting one said battery to operate said controlling valve, said means being adapted to close the circuit between one of said first mentioned brushes and the movable brush to operate said releasing valve.

1,212,225. FLY-TRAP. STEPHEN A. HUNT, Cave Spring, Ga. Filed July 15, 1916. Serial No. 109,497. (Cl. 43—22.)



1. A device for collecting flies from a ceiling and including a receptacle having an opening; a movable scoop located adjacent the opening; a support assembled with the receptacle; and an actuating member connected with the scoop to move the same toward and away from opened and closed positions.

2. A device for collecting flies from a ceiling and including a receptacle having an opening; a scoop located adjacent the opening and pivotally connected along one edge with a receptacle; a handle for the receptacle; and means assembled with the scoop for moving the scoop toward and away from closed positions with respect to the opening.

3. A device for collecting flies from a ceiling and including a receptacle having an opening; a movable scoop pivotally assembled with the receptacle and located adjacent the opening; a support assembled with the receptacle; an actuating member pivotally connected with the scoop; and means for mounting the actuating member for longitudinal sliding movement on the support.

4. A device for collecting flies from a ceiling and including a receptacle having an opening; a movable scoop located adjacent the opening; an actuating member connected with the scoop and constituting means for moving the scoop toward and away from the opening; a support connected with the receptacle; and interengaging elements on the support and on the actuating member for holding the actuating member in adjusted positions, thereby to maintain the scoop in an open position and in a closed position with respect to the opening.

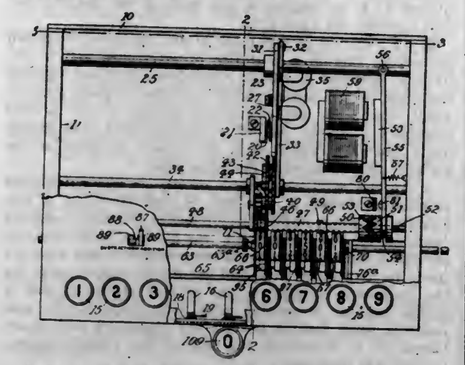
5. A device for collecting flies from a ceiling and including a receptacle comprising end walls and a body connected with the end walls, the transverse edges of the body being spaced apart to define an opening, and being extended inwardly toward the axis of the receptacle, to form leaders; a combined scoop and closure for the opening pivoted to the end walls; a support for the receptacle; and an actuating member connected with the scoop, and constituting means for moving the scoop toward and away from opened and closed positions with respect to the opening.

[Claims 6 and 7 not printed in the Gazette.]

1,212,226. CALCULATING-MACHINE. BENJAMIN F. HUTCHES, Jr., Allendale, N. J. Filed Sept. 29, 1910. Serial No. 584,409. (Cl. 235—92.)

1. In a calculating machine, a registering device, a driver adapted to be operatively connected thereto, means for actuating the driver, a driver-checking device, and electric means controlled by the driver for setting said checking device.

2. In a calculating machine, a registering device, a driver adapted to be operatively connected thereto, a key, electric means controlled thereby for actuating the driver, and electric means controlled by the key and driver for arresting the driver at a predetermined position.



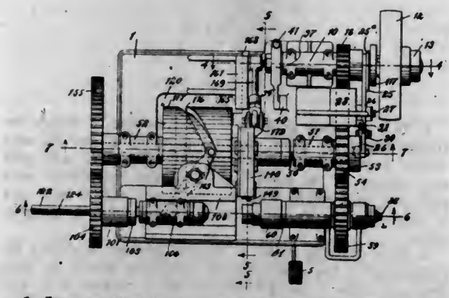
3. In a calculating machine, a registering device, a driver, means for operatively connecting the driver to said registering device, a checking device controlling said connecting means, means for actuating the driver, an electric circuit controlled by the driver and an electromagnet in said circuit and actuating the checking device.

4. In a calculating machine, a registering device, a driver adapted to be operatively connected thereto, means for actuating the driver, and electric means controlled by the driver for arresting the driver at a predetermined position.

5. In a calculating machine, a registering device, a driver, means for operatively connecting the driver to the registering device, a checking device controlling said connecting means, a key, adapted to actuate the driver, and an electromagnet controlled by the key and driver for actuating said checking means.

[Claims 6 to 21 not printed in the Gazette.]

1,212,227. ASSEMBLING-MACHINE. WILLIAM R. JEAVONS and ARNOLD R. WHITTAKER, Cleveland, Ohio. Filed Oct. 1, 1915. Serial No. 53,509. (Cl. 29—84.)



1. In apparatus for uniting wick tubes and spanners, the combination of means for supporting the wick tube and spanner in correct relation to each other, said means having opposed portions between which the rim of the spanner is confined, and having recesses on either side of the periphery of the spanner, a die member having two substantially parallel series of projections, the projections of one series being staggered with respect to those of the other, and mechanism for guiding the die member into contact with the circumference of the tube so that the projections thereof are caused to depress portions of the tube about the opposite sides of the periphery of the spanner into the aforesaid recesses of the supporting means.

2. In apparatus for uniting wick tubes and spanners, the combination of means for supporting the wick tube and spanner in correct relation to each other, and a member having two substantially parallel series of projections, said member being movable into contact with the circumference of the tube so that the projections thereof are caused to depress portions of the tube about the opposite sides of the periphery of the spanner, and ejecting mechanism for initiating the removal of the tube and spanner from the supporting means.

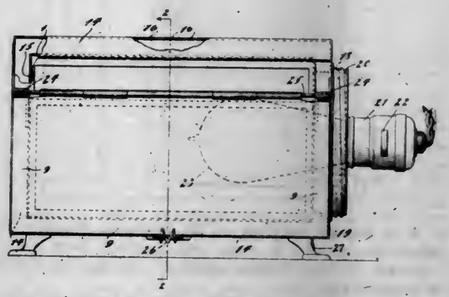
3. In apparatus for uniting wick tubes and spanners, the combination of means for supporting the wick tube and spanner in correct relation to each other, said means having opposed portions between which the rim of the spanner is confined, and having recesses on either side of the periphery thereof, a die member having two substantially parallel series of projections, the projections of one series being staggered with respect to those of the other, mechanism for guiding the die member into contact with the circumference of the tube so that the projections thereof are caused to depress portions of the tube about the opposite sides of the periphery of the spanner into the aforesaid recesses of the supporting means, and ejecting mechanism for initiating the removal of the tube and spanner from the supporting means.

4. In apparatus for uniting wick tubes and spanners, the combination of means for supporting the wick tube and spanner in correct relation to each other, said means being revoluble upon the longitudinal axis of the tube, a rotary die member having two series of peripheral projections, means for presenting the die member to the wick tube so that a series of its projections coöperate therewith on each side of the periphery of the spanner thereby to project portions of the wick tube about opposite sides of the spanner, and mechanism for rotating said supporting means and the rotary die member at the same peripheral speed.

5. In apparatus for uniting wick tubes and spanners, the combination of means for supporting the wick tube and spanner in correct relation to each other, said means being revoluble upon the longitudinal axis of the tube and having opposed portions between which the rim of the spanner is confined, said means being provided with recesses adjacent the opposite sides of the periphery of the spanner, a rotary die member having two series of peripheral projections, the projections of one series being staggered with respect to those of the other, means for presenting the die member to the wick tube so that a series of its projections coöperate therewith on each side of the periphery of the spanner thereby to project portions of the wick tube into the aforesaid recesses of the supporting means, and mechanism for rotating said supporting means and the rotary die member at the same peripheral speed.

[Claims 6 to 22 not printed in the Gazette.]

1,212,228. DARK-ROOM LANTERN. ROBERT JOHN, New York, N. Y., assignor, by mesne assignments, to Iconochrome Company of America, Inc., a Corporation of New York. Filed Apr. 26, 1915. Serial No. 24,038. (Cl. 240—20.)



1. A dark room lantern comprising a casing adapted to contain an illuminant having two windows in its front

face through which the rays from said illuminant are adapted to pass, a ray filter in the upper of said windows, and an outwardly swinging light-tight cover for the other of said windows pivoted along its upper horizontal edge.

2. A combination dark room lantern comprising a casing adapted to contain an illuminant, said casing having two windows in its front face one of said windows being vertically disposed and having an outwardly swinging light-tight cover therefor, the other of said windows being disposed above said last named window and having a ray filter mounted therein extending forwardly of and at an angle to said first named window.

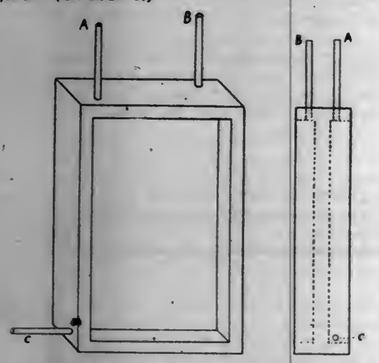
3. A combination dark room lantern comprising a casing containing an illuminant, said casing having an interior light reflecting surface and two windows in its front face, a ray filter in one of said windows, and a movable light-tight cover for the other of said windows, the illuminant and ray filter being so positioned that the transmitted light from the illuminant does not pass through the ray filter but the reflected light passes downwardly through the same.

4. A combination dark room lantern comprising a casing containing an illuminant, said casing having an interior reflecting surface and two windows in its front face, a movable light-tight cover for one of said windows and a ray filter in the other of said windows, the ray filter being disposed above, and extending forwardly from, said first named window at an angle thereto, and the illuminant and ray filter being so positioned that the transmitted light from the illuminant does not pass through the ray filter but the reflected light passes downwardly through the same.

5. A combination dark room lantern comprising a casing containing an illuminant, said casing having an interior reflecting surface and two windows in its front face, an outwardly-swinging light-tight cover for one of said windows and a ray filter in the other of said windows, the ray filter being disposed above, and extending forwardly from, said first named window at an angle thereto, and the illuminant and ray filter being so positioned that the transmitted light from the illuminant does not pass through the ray filter but the reflected light passes downwardly through the same.

[Claim 6 not printed in the Gazette.]

1,212,229. APPARATUS FOR THE PRODUCTION OF OXYGEN AND HYDROGEN GASES. WILLIAM JONES, New York, N. Y. Filed Oct. 16, 1913. Serial No. 795,515. (Cl. 204—9.)



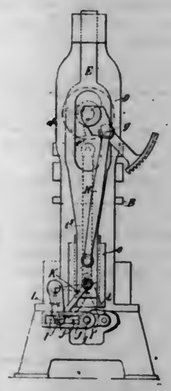
1. A bi-polar electrode of the character described designed to be used in series and in which there are no openings to form internal channels arranged to contain the electrolyte.

2. An electrolytic apparatus of the character described embodying therein a plurality of electrodes and a diaphragm between adjoining electrodes forming separate chambers for the separation of the different gases evolved, gas ducts leading from the several chambers, and separate conduits connecting with said gas ducts and so arranged as to be outside of the path of the electric current through the apparatus.

3. An electrolytic apparatus of the character described embodying therein a plurality of electrodes and a diaphragm between adjoining electrodes forming separate chambers for the separation of the different gases evolved, supply ducts for the electrolyte leading to the several chambers, a supply conduit connecting with said supply ducts and so arranged as to be outside the path of the electric current through the apparatus.

4. An electrolytic apparatus of the character described embodying therein a plurality of electrodes and a diaphragm between adjoining electrodes forming separate chambers for the separation of the different gases evolved, gas ducts leading from the several chambers and separate conduits connecting with said gas ducts, supply ducts for the electrolyte leading to the several chambers, and a supply conduit connecting with said supply ducts, said conduits being located beyond the electrodes and so arranged as to be outside the path of the electric current through the apparatus.

1,212,230. DRAWING-PRESS. WILLIAM KLOCKE, Brooklyn, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Mar. 6, 1916. Serial No. 82,427. (Cl. 113—46.)



1. In a drawing press, a moving member, a device for reciprocating the same, slotted operating means for said device, a reciprocating slide, a link pivoted to said slide and having at its outer end a sliding connection with said slot, and means whereby the outer end of said link is moved in the arc of a circle as said slide is reciprocated.

2. In a drawing press, a moving member, a device for reciprocating the same, slotted operating means for said device, a slide, a link pivoted thereto, a rocking arm, and a pivotal connection between said link and arm having a sliding connection with said slot.

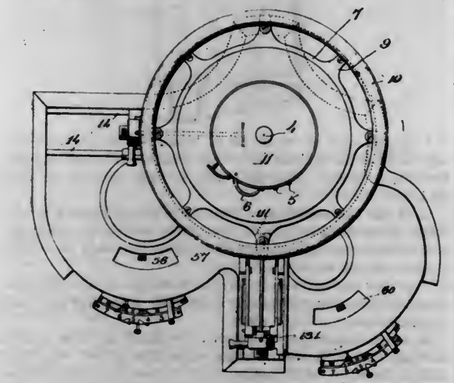
3. In a drawing press, a movable clamping member, an operating slide therefor and connections between the same comprising a rock shaft for reciprocating said clamping member, a slotted operating arm for said rock shaft, a link pivotally connected to said slide, a rocking arm, a pivotal connection between the said link and rocking arm, the said connected parts adapted to slide in the slot in said operating arm.

4. In a drawing press, a moving member, and means for moving same comprising a slide, a link pivoted thereto, a device connected to said moving member for reciprocating the same, and a slotted operating arm for said device, said link having a sliding connection in said slot and a rocking arm journaled in a fixed part and pivotally connected to the sliding end of said link.

5. In a drawing press a reciprocating clamping member, operating means for reciprocating the same including a slotted operating device, a plunger, operating means for the plunger and connections between said respective operating means including a reciprocating slide, a link pivoted to said slide and having at its outer end a sliding connection with said slot, and means whereby the outer end of said link is moved in the arc of a circle as said slide is reciprocated, said parts so arranged and combined that the slot in said operating device is substantially alined with the link during the working stroke of the plunger whereby a dwell of the clamping member is obtained during the drawing operation.

[Claims 6 to 20 not printed in the Gazette.]

1,212,231. CALCULATING APPARATUS. PAUL F. W. C. KRIPPENDORF, Lynn, Mass., assignor to Krippendorf Kalculator Company, Portland, Me., a Corporation of Maine. Filed Dec. 2, 1910. Serial No. 595,212. (Cl. 235—61.)



1. An apparatus for calculating areas of upper material for shoes, comprising a member movable an amount proportional to the number of shoes in question to determine one factor of the calculation, adjustable means for multiplying the factor so determined by a constant, a graduated member movable with said adjustable multiplying means to indicate its position, a plurality of different adjusting devices acting on said graduated member whereby the constant may be varied, and a registering device adapted to indicate the final result.

2. An apparatus for calculating areas of upper material for shoes, comprising a member movable an amount proportional to the number and length of the shoes in question to determine one factor of the calculation, adjustable means for multiplying the factor so determined by a constant, a graduated disk movable with said multiplying means to indicate its position, independent controlling devices acting on said disk to adjust its position, and a registering device adapted to indicate the final result.

3. A calculating apparatus comprising a plurality of independently operating registering devices, a common actuator therefor, a series of independently operative indicators adapted to determine the movements of the actuator according to unit measurements which are proportional respectively to the areas of the different parts subjected to calculation, means for changing the relation of each registering device independently of the other with respect to the actuator to multiply as required the result indicated by the registering device.

4. A calculating apparatus comprising a series of indicators graduated in multiples of units having a predetermined proportion to one another, an actuator operated by said indicators and having its movement equal to the cumulative movement of the indicators, a plurality of registering devices independently operated by said actuator, and means for changing the effective relation of each registering device independently of the other with respect to the actuator to multiply as required in securing the result indicated by the registering device.

5. A calculating appartaus comprising, in combination, a rotary plate constituting an actuator, a series of indicators adapted to govern successive movements of said plate in one direction, a plurality of independent wheels having peripheral contact with said plate, each wheel mounted to rotate on an axis extending radially with respect to the axis of said plate, a registering device for and operated by each wheel, and means for guiding the wheels for movement in divergent paths extending radially of the plate.

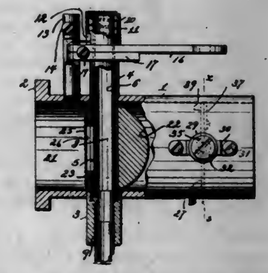
[Claims 6 to 31 not printed in the Gazette.]

1,212,232. WAGON. CICERO H. LA CROIX, Bannister, Tex. Filed Sept. 11, 1916. Serial No. 119,571. (Cl. 21—184.)



A vehicle having a plurality of trucks provided with pivotal front axles, and an intermediately jointed connection between the rear axle of the forward truck and the front axle of the rearward truck, tables supported respectively by the front and rear bolsters of said trucks, bunks pivotally mounted respectively upon said tables, the pivot of one of said bunks being mounted in a longitudinal slot in its table, and yielding means for maintaining the pivot of said last mentioned bunk in its normal position.

1,212,233. AIR AND GAS MIXER. SIEGFRIED LESCHZINER, Newark, N. J. Filed Sept. 30, 1915. Serial No. 53,229. (Cl. 48—180.)



1. An air and gas-mixer comprising a main casing, an outer throttling tube, provided with a discharge port, extending transversely through said casing, an inner throttling tube, provided with a discharge port, journaled within said outer throttling tube so as to rotate against the inner sides of said outer throttling tube to cause the respective discharge ports to register, a semi-spherical valve located within said main casing and secured to the outer throttling tube, said valve being provided with a discharge opening registering with the discharge opening in the outer throttling tube and means secured to the inner and outer throttling tubes extending outside of the main casing for operating said tubes and said valves.

2. An air and gas mixer comprising a main casing, an outer throttling tube, provided with a discharge port, extending transversely through said casing, an inner throttling tube, provided with a discharge port, journaled with-

in said outer throttling tube so as to rotate against the inner sides of said outer throttling tube to cause the respective discharge ports to register, a semi-spherical valve located within said main casing and secured to the outer throttling tube, said valve being provided with a discharge opening registering with the discharge opening in the outer throttling tube means secured to the inner and outer throttling tubes, extending outside of the main casing for operating said tubes and said valve, and means located on the outside of the main casing to be engaged by and to limit the movement of the means for operating the said inner and outer tubes.

3. An air and gas mixer comprising a main casing, an outer throttling tube, provided with a discharge port, extending transversely through said casing, an inner spring actuated throttling tube, provided with a discharge port, journaled within said outer throttling tube so as to rotate against the inner sides of said outer throttling tube to cause the respective discharge ports to register, a semi-spherical valve located within said main casing and secured to the outer throttling tube, said valve being provided with a discharge opening registering with the discharge opening in the outer throttling tube, means secured to the inner and outer throttling tubes extending outside of the main casing for operating said tubes and valve, and a spring actuated valve also located transversely within said main casing, provided with an opening, and adjustable means for closing said opening.

1,212,234. THERMOSTATIC REGULATOR. JOHN CHARLES LION, St. Marys, Pa. Filed Mar. 8, 1916. Serial No. 82,950. (Cl. 126—351.)



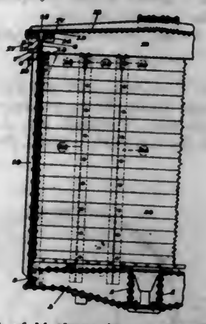
1. A thermostatic regulator embodying a valve, means for supporting said valve including a band to embrace an object, and a ribbon extending around said band and having one end anchored in place and the other end connected to the valve, said ribbon having a high co-efficient of expansion.

2. A thermostatic regulator embodying a yoke, a band terminally connected to said yoke and adapted to embrace an object, a valve carried by said yoke, and a ribbon having one end anchored to said yoke and having its other end connected to said valve, the ribbon extending around said band and having a high co-efficient of expansion.

3. A thermostatic regulator embodying a yoke, a band to embrace an object in conjunction with said yoke, means adjustably connecting the ends of said band and yoke to tighten them upon the object, a valve casing carried by said yoke and having a valve therein, a ribbon extending around said band and having a high co-efficient of expansion, one end of said ribbon being connected to said valve, and means adjustably connecting the other end of said ribbon and yoke.

4. A thermostatic regulator embodying a yoke having a pair of outstanding brackets provided with caps, a valve casing clamped in place by said caps, a spring pressed valve within said casing having a stem projecting slidably out of said casing, a channel-shaped band to embrace an object in connection with said yoke and having loops at its ends, U-bolts engaging said loops and having their terminals adjustably connected with the ends of said yoke, a ribbon extending around said band and having a high co-efficient of expansion, one end of said ribbon being attached to the valve stem and the other end having a loop, and a U-bolt engaging the last-mentioned loop and having its terminals adjustably connected with said brackets.

1,212,235. CAR CONSTRUCTION. BURNS D. LOCKWOOD, Bellevue, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 1, 1914. Serial No. 842,279. (Cl. 105—192.)



1. A car part of Y shape in cross section forming the top member of a load confining wall of the car, a plate extending across said part and a roof resting on said plate.

2. A car superstructure construction comprising a plurality of parts, portions of said parts diverging upwardly, a member extending across and connecting said parts and a roof secured to said member.

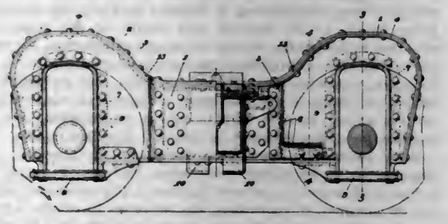
3. A car superstructure part of Y shape in cross section, a plate extending across and connected with said part and a roof resting on said plate.

4. A car superstructure part of Y shape in cross section having lateral flanges, a plate extending across said part and secured to said flanges and a roof secured to said plate and flanges.

5. A car superstructure part of Y shape in cross section having lateral flanges, a member secured to said flanges, and a roof adapted to rest on and be secured to said member.

[Claims 6 to 13 not printed in the Gazette.]

1,212,236. CAR-TRUCK. BURNS D. LOCKWOOD, Bellevue, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 24, 1915. Serial No. 68,525. (Cl. 105—248.)



1. In a car truck, a side frame, a pedestal at one end thereof, a reinforcing plate spaced apart from said side frame, and means integral with said side frame and with said reinforcing plate for securing them together, said means extending inwardly toward the longitudinal center line of the truck.

2. In a car truck, a side frame, a pedestal at one end thereof, a reinforcing plate spaced apart from said side frame and flange means integral with said side frame and with said reinforcing plate for securing them together.

3. In a car truck, a side plate, a pedestal at one end thereof, a reinforcing plate extending for a portion of the length of said side plate and spaced apart therefrom, and means integral with said side and reinforcing plates for securing said plates together, said means extending inwardly toward the longitudinal center line of the truck.

4. In a car truck, a side plate, a pedestal at one end thereof, a reinforcing plate extending for a portion of the length of said side plate and spaced apart therefrom, and flange means integral with said side and reinforcing plates for securing said plates together.

5. In a car truck, a side plate, a pedestal at one end thereof, a reinforcing plate spaced apart from said side plate, said side plate and reinforcing plate having inwardly extending flanges adapted to contact with and be secured to each other.

[Claims 6 to 16 not printed in the Gazette.]

1,212,237. NECKTIE. AARON MARCUS, Brooklyn, N. Y., assignor to Joseph Levy and Aaron Marcus, a Partnership doing business as Levy and Marcus, New York, N. Y. Filed Apr. 1, 1915. Serial No. 18,527. (Cl. 2—11.)



1. A necktie having separate ends with edges, an intermediate portion connecting the ends and covering part of their edges at the rear of the tie, with adjacent edges of the intermediate portion secured on the face of the tie.

2. In a necktie, a separate lining, separate ends with edges, and a separate intermediate portion connecting the ends and secured to the lining, the said intermediate portion also having overlapping edges secured together on the face of the tie and also secured over the edges of the ends at the back of the tie.

3. A necktie having a lining, ends cut on a bias and edges on said ends, and an intermediate portion cut straight, the intermediate portion having adjacent edges on the face of the tie and extended so as to cover parts of the edges of the ends at the back of the tie.

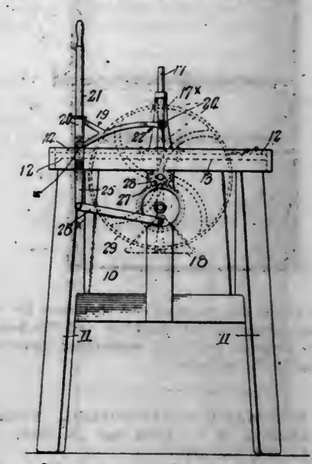
4. A necktie having ends with edges, an intermediate portion and a lining, the intermediate portion having overlapping edges on the face of the tie and connected to the ends by stitching, the intermediate portion being extended so as to cover the edges of the ends at the back of the tie.

1,212,238. GEARING. CLARENCE E. MEHLHOPE, Chicago, Ill. Filed Nov. 18, 1915. Serial No. 62,109. (Cl. 74—14.)

1. A gearing for washing machines and the like comprising, in combination with a support, an operating shaft depending into said support and capable of vertical reciprocating movement and of an alternating rotary movement, a lever arm, and means directly connecting said lever arm with said operating shaft by which the up and down movement of said lever arms is caused to vertically reciprocate said operating shaft and the horizontal displacement of the means connecting said lever arm with said shaft is used to impart an alternating rotary movement to said shaft.

2. In a gearing, in combination with a support, an operating shaft depending into said support and capable of a vertical reciprocating movement and an alternating rotary movement, a bell-crank lever having an arm connected with said operating shaft, a laterally extending pin on said operating shaft pivotally connected to said operating arm, whereby the up and down movement of said lever arm imparts both a vertical reciprocating movement to said operating shaft and an alternating rotary movement thereto.

3. In a gearing, in combination with a support, an operating shaft depending thereinto and capable of both a vertical reciprocating movement and an alternating rotary movement, a lever arm adapted for actuating said operating shaft, said lever arm having a fork embracing said operating shaft, a pin pivotally connected with one arm of said fork and a second pin engaged in a horizontally extending slot in the other arm of said fork.



4. In a gearing, in combination with a support and an auxiliary support hinged thereto, an operating shaft capable of both a vertical reciprocating movement and alternating rotary movement depending through said hinged support and being capable of vertical reciprocating movement and an alternating rotary movement with reference thereto, a shaft coaxial with the line about which said hinged support is adapted to swing, a lever arm fixed to said shaft, and extending toward said operating shaft, means connecting said lever arm with said operating shaft whereby the up and down movement of said lever arm imparts direct to said shaft both the vertical reciprocating movement and the alternating rotary movement, a fly wheel and high speed gearing connecting the same mounted on said support, means operatively connecting said high speed gearing with said shaft, including a detachable device whereby said hinged support may be swung upon said shaft notwithstanding the normal connection of said shaft with said high speed gearing.

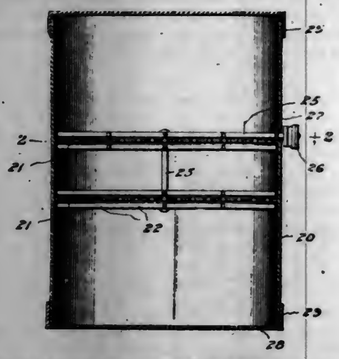
5. In a gearing in combination with a support, an operating shaft or plunger depending into said support and capable of a vertical reciprocating movement, a bell crank lever having an arm connected to said operating shaft or plunger, a fly wheel, gearing for operating said fly wheel at high speed, and means connecting said lever with said high speed gearing.

[Claims 6 and 7 not printed in the Gazette.]

1,212,239. FLOUR-SIFTER. HENRY L. MENDAL, Tampa, Fla. Filed Oct. 5, 1914. Serial No. 865,103. (Cl. 83—60.)

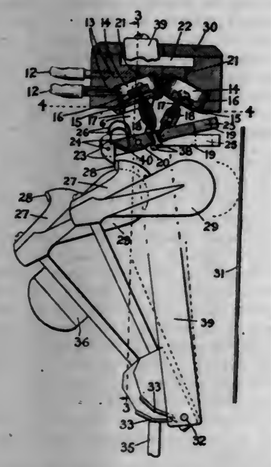
A reversible flour sifter comprising a hollow cylindrical body open at both ends and provided with removable covers for the same, said body being also provided with apertured partitions spaced from the center of the body and from the ends thereof and forming sieves, agitators arranged in pairs, the members of each pair being located at the upper and lower faces of the sieves and consisting of central hubs and radial arms, a radial arm of one of the agitators being extended through the hollow body and provided with an exteriorly arranged handle and a short vertical shaft consisting of a central body portion and terminal journals, the journals being extended through the partitions and through the hubs of the agitators and

connected with the latter and provided at their outer ends with heads engaging the agitators at the outer faces of the sieves, said body portion being of a length to extend across the space between the agitators at the inner



faces of the sieves and forming end shoulders for engaging the inner agitators, the shoulders and the heads cooperating to form a mutually supporting structure in each position of the agitator.

1,212,240. AUTOMATIC PLAYER-PIANO. THOMAS E. MONROE, Brooklyn, N. Y. Filed Apr. 23, 1915. Serial No. 23,546. (Cl. 84—160.)



1. In a player piano, the combination with strings, hammers, means for operating said hammers and a tracker bar provided with a series of ports operatively connected with said hammer-actuating mechanism; of a suction-chamber, a series of auxiliary suction chambers each provided with a diaphragm, a channel between said first named suction chamber and each of said auxiliary suction-chambers, devices operatively connected with each of said diaphragms and adapted to hold one of said hammers from moving backward when said diaphragm is in one position and to release said hammer and permit the same to move backward when said diaphragm is in another position, a second series of ports in said tracker bar, and a channel connecting each port of said second series with one of said auxiliary suction chambers.

2. In a player piano, the combination with strings, hammers, means for operating said hammers and a tracker bar provided with a series of ports operatively connected with said hammer-actuating mechanism; of a suction-chamber, a series of auxiliary suction-chambers each provided with a diaphragm, a channel between said first named suction chamber and each of said auxiliary suction chambers, a channel between each of said auxiliary suction chambers and the open air, devices operatively connected with each of said diaphragms and adapted to hold one of said hammers from moving backward when said diaphragm is in one position and to release said hammer and permit the same to move backward when said diaphragm is in another position, and a second series of ports in said tracker bar, said second series of ports opening into said second named channels.

3. In a player piano, the combination with strings, hammers, means for operating said hammers and a tracker bar provided with a series of ports operatively connected with said hammer actuating mechanism; of a suction chamber, a series of auxiliary suction chambers each provided with a diaphragm, a channel between said first named suction chamber and each of said auxiliary suction chambers, a channel between each of said auxiliary suction chambers and the open air, said second named channels being larger than said first named channels, devices operatively connected with each of said diaphragms and adapted to hold one of said hammers from moving backward when said diaphragm is in one position and to release said hammer and permit the same to move backward when said diaphragm is in another position, and a second series of ports in said tracker bar, said second series of ports opening into said second named channels.

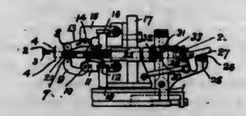
4. In a player piano the combination with strings, hammers, means for operating said hammers, and a tracker bar provided with a series of ports operatively connected with said hammer-actuating mechanism; of a suction-chamber, a series of auxiliary suction-chambers each provided with a diaphragm, a second series of ports in said tracker bar, a channel connecting each of said second series of ports with one of said auxiliary suction chambers, a channel connecting each of said auxiliary suction-chambers with said first named suction-chamber, said channel being smaller than the channel between said auxiliary suction-chamber and said tracker bar, and devices operatively connected with each of said diaphragms, and adapted to hold one of said hammers from moving backward when said diaphragm is in one position and to release said hammer and permit the same to move backward when said diaphragm is in another position, and a second series of ports in said tracker bar, said second series of ports opening into said second named channels, devices operatively connected with each of said diaphragms and adapted to hold one of said hammers from moving backward when said diaphragm is in one position and to release said hammer and permit the same to move backward when said diaphragm is in another position, said hammer-holding devices comprising a lever one end of which is adapted to engage with said hammer.

5. In a player piano the combination with strings, hammers, means for operating said hammers and a tracker bar provided with a series of ports operatively connected with said hammer-actuating mechanism; of a suction-chamber, a series of auxiliary suction-chambers each provided with a diaphragm, a second series of ports in said tracker bar, a channel connecting each of said second series of ports with one of said auxiliary suction-chambers, a channel connecting each of said auxiliary suction-chambers with said first named suction-chamber, said channel being smaller than the channel between said auxiliary suction-chamber and said tracker bar, and devices operatively connected with each of said diaphragms, and adapted to hold one of said hammers from moving backward when said diaphragm is in one position and to release said hammer and permit the same to move backward when said diaphragm is in another position, said hammer-holding devices comprising a lever provided with a pawl at one end adapted to engage with said hammer.

[Claims 6 to 20 not printed in the Gazette.]

1,212,241. BOX-COVERING MACHINE. JOHN WILLIAM NASMITH, Heaton Mersey, England. Filed May 7, 1914. Serial No. 836,899. (Cl. 93—54.)

1. In a machine for turning-in the edges of the coverings of boxes the combination of a table adapted to enter the box, which is inverted thereon; upper turning-in members adapted to press the lower edges of the covering on to the bottom of the box, while the latter is supported by the table; means for reciprocating the upper turning-in members; lower turning-in members adapted to fold the upper edges of the covering over the edges of the box sides and ends and to press the said covering against the inner faces of the box sides and ends; a frame adapted to support the sides and ends of the box; means of moving the said frame into contact with the sides and ends of the box on the table; and means adapted to lock the said frame in its supporting position during the forward and backward movements of the turning-in members.



2. In a machine for turning-in the edges of the coverings of boxes the combination of means for supporting the box, upper and lower members adapted to turn-in the edges of the box covering, a reciprocating support for the turning-in members, means for actuating the said support, a frame adapted to support the sides and ends of the box; a main frame upon which the working parts are mounted, and a latch adapted to coöperate with the main frame to lock the box supporting frame in its forward position.

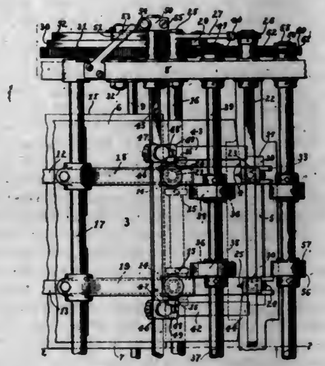
3. In a machine for turning-in the edges of the coverings of boxes the combination of means for supporting the box, upper and lower members adapted to turnin-in the edges of the box covering, a reciprocating support for the turning-in members, means for actuating the said support, a frame adapted to support the sides and ends of the box, a main frame, rods upon which the box side and end supporting frame is mounted the said rods being slidably mounted in the said main frame and in the reciprocating support for the turning-in members, a cross head fixed upon the rods that support each supporting frame member, a latch pivoted upon the said cross head and adapted to coöperate with the main frame to lock the box supporting frame in its forward position, a cam pivoted upon the said cross-head adapted to come into contact with the latch, a link pivotally connecting the reciprocating support for the turning-in members to the said cam whereby the latter is brought into contact with the latch to release the same upon the said reciprocating support sliding backward to cause the turning-in members to return after having performed their functions.

4. In a machine for turning-in the edges of the coverings of boxes the combination of a table adapted to enter the box, which is inverted thereon; upper turning-in members adapted to press the lower edges of the covering on to the bottom of the box, while the latter is supported by the table; lower turning-in members adapted to fold the upper edges of the covering over the edges of the box sides and ends and to press the said covering against the inner faces of the box sides and ends; a reciprocating support for the turning-in members, means for actuating the said support, a frame adapted to support the sides and ends of the box; a main frame, rods upon which the box supporting frame members are mounted the said rods being slidably mounted in the said main frame and in the reciprocating support for the turning-in members, a cross head fixed upon the rods that support each supporting frame member, a latch pivoted upon the said cross head and adapted to coöperate with the main frame to lock the box supporting frame in its forward position, a cam pivoted upon the said cross-head adapted to come into contact with the latch, a link pivotally connecting the reciprocating support for the turning-in members to the said cam whereby the latter is brought into contact with the latch to release the same upon the said reciprocating support sliding backward to cause the turning-in members to return after having performed their functions.

5. In a machine for turning-in the edges of the coverings of boxes the combination of a table adapted to enter the box, which is inverted thereon; upper turning-in members adapted to press the lower edges of the covering on to the bottom of the box, while the latter is supported by the table; lower turning-in members adapted to fold the upper edges of the covering over the edges of the box sides and ends and to press the said covering against the inner faces of the box sides and ends; a reciprocating support for the turning-in members, means for actuating the said support, a main frame, a box supporting frame and a latch adapted to coöperate with the main frame to lock the box supporting frame in its forward position.

[Claims 6 and 7 not printed in the Gazette.]

1,212,242. SHEET-SYNCHRONIZING MECHANISM. ABRAHAM NOVICK, Brooklyn, N. Y., assignor to F. L. Schmidt Company, New York, N. Y., a Corporation of New York. Filed Sept. 17, 1913. Serial No. 790,181. (Cl. 101—38.)



1. A device of the class specified including in combination means for advancing a sheet, means for positively stopping the sheet, intermittently operative means for subsequently advancing the sheet, means for removing said positive stopping means from engagement with the sheet, and means preceding said positive stopping means for first gradually stopping said sheet, for then releasing said sheet for engagement with said positive stopping means and for then holding said sheet in a state of rest during the removal of said positive stopping means and for finally releasing said sheet synchronously with the engagement of the sheet by the intermittently operative advancing means.

2. A device of the class specified including in combination means for advancing a sheet, means for positively stopping the sheet, means for removing said positive stopping means from engagement with the sheet, means for adjusting said positive stopping means crosswise of the machine, means for adjusting said positive stopping means lengthwise of the machine, means for gradually stopping the sheet and for thereafter releasing said sheet, means for adjusting said gradual stopping means crosswise of the machine, means for adjusting said gradual stopping means toward and from the sheet, and means for advancing the sheet after its release by said positive stopping means.

3. A device of the class specified including in combination means for advancing a sheet, a plurality of stop blades for gradually stopping the sheet, means for positively stopping the sheet, means for removing said positive stopping means from engagement with the sheet, intermittently operative means for advancing the sheet, means for causing said stop blades to first gradually stop the sheet, to then release the sheet for engagement with the positive stopping means, to then reengage the sheet and hold it in a state of rest during the removal of the positive stopping means from engagement with the sheet, and finally to release said sheet synchronously with the engagement of the sheet by the intermittently operative advancing means, and means for maintaining the sheet

in an approximately constant path of travel during the operation of the several recited instrumentalities.

4. A device of the class specified including in combination means for advancing a sheet, a plurality of stop blades for gradually stopping the sheet, means for positively stopping the sheet, means for removing said positive stopping means from engagement with the sheet, intermittently operative means for advancing the sheet, means for adjusting said stop blades crosswise of the machine, means for adjusting said stop blades in unison toward and from the sheet, means for adjusting said stop blades independently toward and from the sheet, and means for causing said stop blades to first gradually stop the sheet, to then release the sheet for engagement with the positive stopping means, to then reëngage the sheet and hold it in a state of rest during the removal of the positive stopping means from engagement with the sheet, and finally to release said sheet synchronously with the engagement of the sheet by the intermittently operative advancing means.

5. A device of the class specified including in combination continuously operative means for advancing a sheet, a plurality of stop blades for gradually stopping the sheet, means for adjusting said stop blades crosswise of the machine, means for adjusting said stop blades in unison toward and from the sheet, means for adjusting said stop blades independently toward and from the sheet, means for positively stopping the sheet, means for removing said positive stopping means from engagement with the sheet, means for adjusting said positive stopping means crosswise of the machine, means for adjusting said positive stopping means lengthwise of the machine, intermittently operative means for advancing the sheet, means for causing said stop blades to first gradually stop the sheet, to then release the sheet for engagement with the postive stopping means, to then reëngage the sheet and hold it in a state of rest during the removal of the positive stopping means from engagement with the sheet, and finally to release said sheet synchronously with the engagement of the sheet by the intermittently operative advancing means, and means for maintaining the sheet in an approximately constant path of travel during the operation of the several recited instrumentalities.

[Claims 6 to 9 not printed in the Gazette.]

1,212,243. GO-CART. GEORGE E. O'HEARN, Gardner, Mass., assignor to Heywood Brothers and Wakefield Company, Gardner, Mass., a Corporation of New Jersey. Filed Oct. 27, 1914. Serial No. 868,839. (Cl. 21—12.)



1. A vehicle of the class described having two sets of ground wheels, a handle bar for the propulsion of said vehicle, means for retaining said handle bar in operative position, with respect to either end of the vehicle, for the propulsion thereof on both sets of ground wheels, and means for retaining said handle bar in a position beyond said other positions whereby the propulsion of said vehicle on a single set of ground wheels is effected when said bar is held at the normal height.

2. A vehicle of the class described having ground wheels and a set of auxiliary wheels, a handle bar for the propulsion of said vehicle, means for retaining said handle bar in operative position with respect to either end of the vehicle, and means, actuated by the movement of the handle bar into operative position with respect to one end of the vehicle, for disposing said auxiliary wheels in operative position when said bar is held at the normal height.

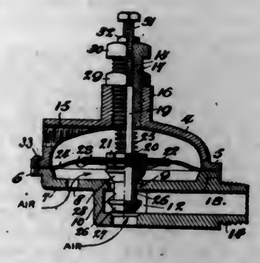
3. A vehicle of the class described having two sets of ground wheels and a single set of auxiliary wheels, a handle bar for the propulsion of said vehicle, means for supporting said handle bar in position for the propulsion of said vehicle on both sets of ground wheels, means for supporting said handle bar in position for the propulsion of said vehicle on a single set of ground wheels, and means, actuated by the movement of the handle bar from said first position to said second position, for disposing said auxiliary wheels in operative position.

4. A vehicle of the class described having two sets of ground wheels and a single set of auxiliary wheels, a handle bar for the propulsion of said vehicle, means for supporting said handle bar in operative position, with respect to either end of the vehicle, for the propulsion thereof on both sets of ground wheels, means for supporting said handle bar in operative position, with respect to one end of the vehicle, for the propulsion thereof on a single set of ground wheels, and means, actuated by the movement of the handle bar from one of said first mentioned positions to the other first mentioned position, or to the second mentioned position, for rendering said auxiliary wheels operative.

5. A vehicle of the class described, comprising a pair of longitudinally spaced axles on which are journaled ground wheels, a member through which the propelling force is applied to the vehicle, said member being movable into predetermined positions with respect to the frame of the vehicle, and means operatively connecting said member to one of said axles, whereby the movement of said member varies the longitudinal distance between said pair of axles.

[Claims 6 and 7 not printed in the Gazette.]

1,212,244. AUTOMATIC MIXTURE-REGULATOR FOR CARBURETERS. FREDERICK B. OLSON and HENRY G. GOSSELIN, Berlin, N. H. Filed Apr. 6, 1916. Serial No. 89,328. (Cl. 48—180.)



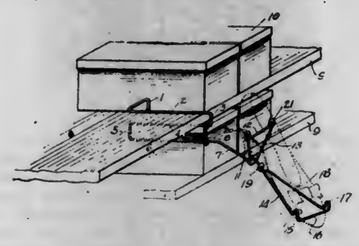
1. In combination with a carbureter having a throttle valve, of an auxiliary air admitting device connected to deliver air into the mixture after the same has been past the throttle valve, and means governed by the suction below the throttle valve for controlling the action of the auxiliary air admitting device.

2. In combination with the carbureter having a mixture discharge duct governed by a throttle valve, an auxiliary air device comprising a casing having air induction ports and an air eduction port, the latter being connected to deliver the air into the mixture above the throttle valve of the carbureter, said device including an air governing valve, and means connected with the carbureter discharge duct below the throttle valve for governing the action of such air valve.

3. In combination with the carbureter having a mixture discharge duct governed by a throttle valve, an auxiliary air device comprising a casing having air induction ports and an air eduction port, the latter being connected to deliver the air into the mixture above the throttle valve of the carbureter, said device including an air governing valve, a diaphragm to which said air valve is connected, said casing including a vacuum chamber at one side of the diaphragm, and a duct-connection between said chamber and the carbureter discharge duct below the throttle valve.

4. In combination with the carbureter having a mixture discharge duct governed by a throttle valve, an auxiliary air device comprising a casing having air induction ports and an air eduction port, the latter being connected to deliver the air into the mixture above the throttle valve of the carbureter, said device including an air governing valve, a diaphragm to which said air valve is connected, said casing including a vacuum chamber at one side of the diaphragm, a duct-connection between said chamber and the carbureter discharge duct below the throttle valve, and means for adjusting the effective action of said valve.

1,212,245. DISPLAY-RACK. ROBERT O'TOOLE, Birmingham, Ala. Filed Oct. 19, 1915. Serial No. 56,807. (Cl. 211—14.)



1. A display rack comprising a frame for supporting the article to be displayed, and a vertically disposed shelf engaging clamp connected to said frame and formed of wire bent in loops, all of which lie in the same vertical plane and at least one of which loops projects substantially out of the plane of the shelf to be received between and laterally braced by merchandise on the shelving.

2. A shoe display rack formed of bent wire and comprising a shoe supporting portion and a shelf engaging portion, the shoe supporting portion comprising means to engage and support a shoe for display, and said shelf engaging portion comprising a U-bend in the wire adapted to clamp over the outer edge of the shelf, the inner end of the under member of the bend being bent back in the plane of the U-bend and connected at its outer end to the display frame and means to support said bent back member from the outer end of the U-bend which engages the shelf.

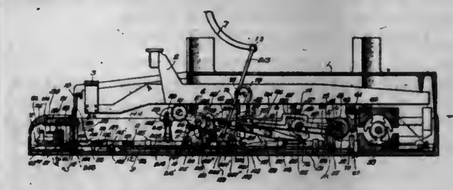
3. A shoe display rack formed of bent wire and comprising a shoe supporting portion and a shelf engaging portion, the shoe supporting portion comprising horizontal heel and sole supporting members having end stops to prevent the lateral displacement of the shoe, and said shelf engaging portion comprising wire bent like a wide letter S with its folds lying in a vertical plane at right angles to the shelf and with its top member adapted to engage the top face of the shelf and its bottom bend adapted to engage the bottom face of the shelf, the outer ends of the horizontal members of said bottom bend being connected together.

4. A shoe display rack formed of bent wire and comprising a display frame, and a shelf engaging clamp, said clamp being S-shaped in side elevation and adapted between the inner ends of its top and middle members to receive and clamp a shelf and having a link connecting the outer ends of its middle and bottom members, substantially as described.

5. A shoe display rack comprising a shoe supporting frame formed of bent wire and having integral therewith a shelf engaging member, said member being formed by bending the wire to form a substantial S-shape with its horizontal members elongated and lying substantially parallel and in the same vertical plane when in use, and means to support the outer end of the bottom member from the shelf, when the latter is in position between the two upper members.

[Claims 6 and 7 not printed in the Gazette.]

1,212,246. CALCULATING MECHANISM. EDWARD H. PALMER, Reading, and CLARENCE T. BERRY, Newton, Mass.; said Berry assignor to said Palmer; Emily M. Palmer and Harold V. Palmer, Reading, Mass., and Walter H. Roberts, Malden, Mass., executors of said Edward H. Palmer, deceased; said executors assignors to Emily M. Palmer and Harold V. Palmer, individually. Filed Nov. 14, 1908. Serial No. 462,584. (Cl. 235—59.)



1. The combination with a typewriting machine having key levers operable to cause writing of numbers, of a calculating apparatus consisting of a frame, number indicators, a plurality of automatic stop-motion devices connected to operate said indicators, and release members for the several stop-motion devices operable to permit actuation of the latter, said release members being spaced correspondingly to the key levers of the typewriting machine, and the said frame being constructed to support the typewriting machine with its key levers in position to engage and operate corresponding release members, when themselves operated.

2. The combination of a typewriting machine complete in itself having number key levers, and a calculating machine, also complete in itself, having a frame constructed to support the typewriting machine in a removable manner and constituting a sub base for the latter; said calculating machine comprising also counting numeral indicators, normally inoperative driving means therefor, and control devices for rendering said means operative, arranged beneath corresponding keys of the typewriting machine and operable by the latter through simple contact.

3. The combination with a typewriting machine having number keys, of a calculating apparatus including release levers, number indicators, power-driven means for operating said indicators, and a selector for making connection between any one of said number indicators and any one of said power-driven means, the typewriter number keys being engageable with said release levers respectively by simply placing the typewriting machine upon the calculating apparatus, a spring for actuating and a tape for governing said selector, said tape being detachably engageable with the typewriter carriage.

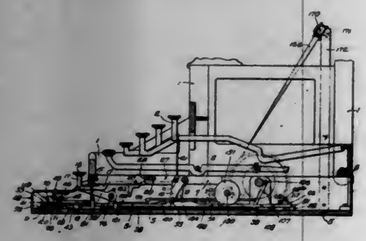
4. In combination, a calculating apparatus including a frame, indicators for representing sums, actuators representing the nine digits, intermediate connections by which any one of said actuators may drive any one of said indicators through a distance corresponding to the numerical value represented by said actuator, a selector for connecting said indicators in turn for operation by said actuators, release devices organized and arranged for permitting movement of the several actuators, a typewriting machine, a series of number keys therefor representing numbers from one to nine, said typewriting machine being placeable upon the calculating apparatus frame so

that each number key will be in a position to engage and actuate the corresponding release device of the mechanism, a carriage for the typewriter, and a detachable connection between said carriage and selector whereby the latter is governed in its action by the travel of the carriage.

5. In combination, a calculating apparatus base, indicators for representing sums, actuators representing the nine digits, intermediate connections by which any one of said actuators may drive any one of said indicators through a distance corresponding to the numerical value represented by said actuator, a selector for connecting said indicators in turn for operation by said actuators, a typewriting machine, a series of number keys therefor representing numbers from one to nine, said typewriting machine being placeable upon the calculating apparatus os that each number key will be in a position to permit actuation of the corresponding actuator of the mechanism, a carriage for the typewriter, and a flexible tape connected with said selector and detachably attached to said carriage for governing the action of said selector and causing sums to be totalized when figures are written in selected spaces on the paper carried by said carriage.

[Claims 6 to 75 not printed in the Gazette.]

1,212,247. CALCULATING MECHANISM. EDWARD H. PALMER and WILLIAM S. KINSLEY, Reading, Mass.; said Kinsley assignor to said Palmer; Emily M. Palmer and Harold V. Palmer, Reading, Mass., and Walter H. Roberts, Malden, Mass., executors of said Edward H. Palmer, deceased; said executors assignors to Emily M. Palmer and Harold V. Palmer, individually. Filed Dec. 16, 1909. Serial No. 533,443. (Cl. 235—59.)



1. In a calculating mechanism having indicators and ratchet pinions associated therewith, reciprocating racks for operating said pinions, said racks being movable toward and from the pinions, and movable abutments to cooperate with said racks to prevent their separation from the pinions at the end of their operative movement.

2. In a calculating mechanism having indicators and ratchet pinions associated therewith, reciprocating racks for operating said pinions, said racks being movable toward and from the pinions, pivotally mounted arms, and abutments carried by said arms to coöperate with said racks to prevent their separation from the pinions at the end of their operative movement.

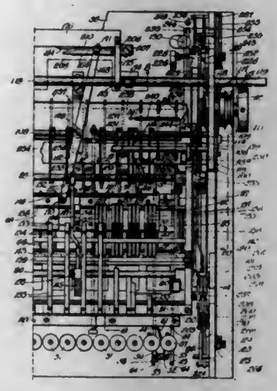
3. In a calculating mechanism having indicators and ratchet pinions associated therewith, reciprocating racks for operating said pinions in one direction only, pivotally mounted arms, abutments carried by said arms to coöperate with the racks to prevent their separation from the pinions at the end of their operative movement, and a ratchet tooth connected with each of said arms to actuate the pinion at the left for carrying.

4. In a calculating mechanism having indicators and ratchet pinions associated therewith, reciprocating racks for operating said pinions, pivotally mounted arms, abutments carried by said arms to coöperate with the racks to prevent their separation from the pinions at the end of their operative movement, a ratchet tooth connected with each of said arms to actuate the pinion at the left for carrying, said ratchet tooth having a cam-faced rear edge, and a fixed abutment to coöperate with said cam-faced edge to hold the ratchet tooth in engagement with said pinion at the left to prevent over-motion thereof when carrying.

5. In a calculating mechanism, a plurality of counting indicators, parallel slides for actuating said indicators, and a single movable member formed to act as a combined detent and actuator for each of said slides.

[Claims 6 to 66 not printed in the Gazette.]

1,212,248. CALCULATING-MACHINE. EDWARD H. PALMER and WILLIAM S. KINSLEY, Reading, Mass.; said Kinsley assignor to said Palmer; Emily M. Palmer and Harold V. Palmer, Reading, Mass., and Walter H. Roberts, Malden, Mass., executors of said Edward H. Palmer, deceased; said executors assignors to Emily M. Palmer and Harold V. Palmer, individually. Filed Aug. 2, 1912. Serial No. 712,872. (Cl. 235—59.)



1. A calculating machine having counters and means for carrying from one to another, lock devices to prevent over-motion of the counters, and means operated by the carrying mechanism to release the lock devices of the counter to which carrying motion is to be imparted.

2. A calculating machine having counters, means for intermittently rotating them, carrying mechanism including a spring-actuated bar having two arms, means cooperating with one arm to hold the rocking bar against movement by its spring and to release it when one counter completes one rotation, means coöperating with the other arm to impart one tenth of a rotation to the next counter, lock devices to prevent over-motion of the counters, and means operated by said rocking bar to release the lock device of the counter to which carrying motion is to be imparted.

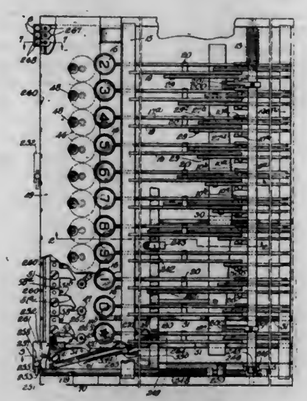
3. A calculating machine having counters, means for operating said counters, and a reciprocating actuating carriage extending transversely of said operating means, said carriage comprising two members movable relatively to each other and adapted to contact.

4. A calculating machine having an actuating carriage composed of two members yieldingly connected, means for moving said carriage, counters, and connections for controlling the actuation of individual counters by movements of said carriage.

5. A calculating machine having an actuating carriage composed of two members, means for positively moving one of said members, yielding connections for transmitting movement of the positively moved member to the other member, counters, and connections for controlling the actuation of individual counters by movements of the yieldingly operated carriage member.

[Claims 6 to 37 not printed in the Gazette.]

1,212,249. CALCULATING MECHANISM. EDWARD H. PALMER and WILLIAM S. KINSLEY, Reading, Mass.; said Kinsley assignor to said Palmer; Emily M. Palmer and Harold V. Palmer, Reading, Mass., and Walter H. Roberts, Malden, Mass., executors of said Edward H. Palmer, deceased; said executors assignors to Emily M. Palmer and Harold V. Palmer, individually. Filed Aug. 3, 1912. Serial No. 713,142. (Cl. 235—59.)



1. A calculating mechanism constructed to effect subtraction by means of addition, said mechanism including a series of counters, actuators for said counters, and shiftable connections to alter the effect of the actuators upon the counters according to whether an added or subtracted result is to be produced, said connections including a series of groups of differently proportioned compound levers.

2. A calculating apparatus comprising a series of indicators, a set of finger keys for actuating them, and adjustable connections whereby the said set of finger keys may cause the indicators to show the result of addition or the result of subtraction, said connections including a series of groups of differently proportioned compound levers.

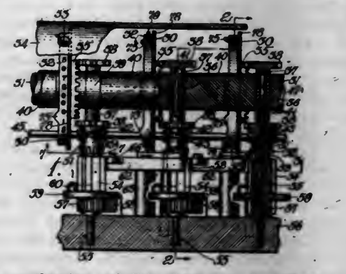
3. A calculating apparatus comprising a series of indicators, a set of finger keys for actuating them, and adjustable connections whereby the said set of finger keys may cause the indicators to show the result of addition or the result of subtraction, said connections including a series of groups of compound levers differently proportioned to cause the indicators to exhibit the differences between nine and the numerals of the keys when adjusted for subtraction.

4. A calculating mechanism for adding or subtracting comprising a series of indicators, a series of finger key members each having a single numeral thereon, and shiftable connections whereby any one of the key members may either actuate an indicator according to the numeral borne by said key member or to an amount equal to the difference between that numeral and nine, said connections including a series of groups of differently proportioned compound levers.

5. A calculating mechanism for adding or subtracting, comprising a series of indicators, a series of finger key members each having a single numeral thereon, and shiftable connections whereby any one of the key members may either actuate an indicator according to the numeral borne by said key member or to an amount equal to the difference between that numeral and nine, said connections including a rock-shaft having a series of pairs of arms spaced to permit but one arm at a time to be connected with a finger key member.

[Claims 6 to 8 not printed in the Gazette.]

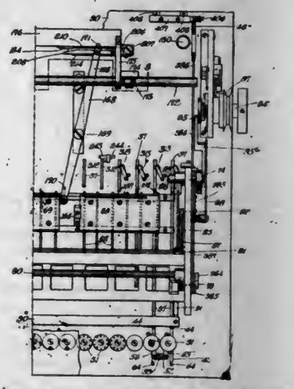
1,212,250. REVERSING-GEAR MECHANISM. EDWARD H. PALMER and WILLIAM S. KINSLEY, Reading, Mass.; said Kinsley assignor to said Palmer; Emily M. Palmer and Harold V. Palmer, Reading, Mass., and Walter H. Roberts, Malden, Mass., executors of said Edward H. Palmer, deceased; said executors assignors to Emily M. Palmer and Harold V. Palmer, individually. Filed Aug. 5, 1912. Serial No. 713,288. (Cl. 235—144.)



1. In mechanism of the character described, a wheel having projections, means for intermittently rotating said wheel, a pivoted stop arm adapted to be moved to and from position in the path of one of the wheel projections, a curved arm movable with the pivoted stop arm, said curved arm having a recess, and a swinging frame having a resetting member adapted to be engaged with said wheel, said swinging frame having an arm to engage the recess of said curved arm.

2. In mechanism of the character described, a wheel and means for intermittently actuating said wheel, said means including an actuating rack bar, a pinion engaged by said rack bar, a ratchet pinion, a pawl movable with the first mentioned pinion and engaging the ratchet pinion, and a lock movable with the rack bar to engage a tooth of the ratchet pinion to prevent overmotion thereof.

1,212,251. CALCULATING APPARATUS. EDWARD H. PALMER, deceased, by Emily M. Palmer and Harold V. Palmer, Reading, Mass., and Walter H. Roberts, Melrose, Mass., executors, and WILLIAM S. KINSLEY, Reading, Mass.; said Kinsley assignor to said Emily M. Palmer, Harold V. Palmer, and Walter H. Roberts, executors; said executors assignors to Emily M. Palmer and Harold V. Palmer, individually. Filed May 29, 1913. Serial No. 770,661. (Cl. 235—62.)



1. A combined typewriting machine and adding mechanism including selector mechanism, the entire adding mechanism being mounted in fixed lateral position relatively to the frame of the typewriting machine, an upright connected with the selector mechanism, and an adjustable coupler to connect the upright with the carriage

of the typewriting machine whereby columns of numerals printed in different lateral positions on the sheet mounted in said carriage may be totalized either by the same group, or separate groups of the indicators of the adding mechanism.

2. In a calculating mechanism having indicators and ratchet pinions associated therewith, reciprocating racks for operating said pinions, bars connected with the racks and having blunt portions to engage the pinions, pivotally mounted arms, and abutments carried by said arms to cooperate with said bars to prevent their separation from the pinions at the end of their operative movement.

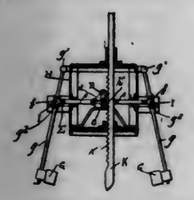
3. In a calculating mechanism having indicators and ratchet pinions associated therewith, reciprocating racks for operating said pinions in one direction only, bars connected with the racks and having blunt portions to engage the pinions, pivotally mounted arms, abutments carried by said arms to coöperate with said bars to prevent their separation from the pinions at the end of their operative movement, and a ratchet tooth connected with each of said arms to actuate the pinion at the left for carrying.

4. In a calculating mechanism having indicators and ratchet pinions associated therewith, reciprocating racks for operating said pinions, bars connected with the racks and having blunt portions to engage the pinions, pivotally mounted arms, abutments carried by said arms to cooperate with said bars to prevent their separation from the pinions at the end of their operative movement, a ratchet tooth connected with each of said arms to actuate the pinion at the left for carrying, said ratchet tooth having a cam-faced rear edge, and a fixed abutment to cooperate with said cam-faced edge to hold the ratchet tooth in engagement with said pinion at the left to prevent over motion thereof when carrying.

5. A calculating mechanism comprising in its construction a series of counters or indicators, slides for actuating them, a transverse bar for actuating the slides in one direction, a plate extending across all of said slides, key controlled means for reciprocating the plate a greater or lesser distance according to which key is operated, and a selective device for connecting any one of the slides with said plate to actuate such slide in the other direction.

[Claims 6 to 70 not printed in the Gazette.]

1,212,252. COAL-EMPTIER. MENOTTI PELLEGRINO, New York, N. Y. Filed May 29, 1912. Serial No. 700,496. (Cl. 37—50.)



1. In a coal emptier, upright push-bars adapted to be driven through the coal in a car to force the coal therefrom, hammers adapted to be knocked against the side of the car, and means, common to both the push-bars and the hammers, for simultaneously actuating them.

2. In a coal emptier, upright push-bars adapted to be driven through the coal in a car to force the coal therefrom, hammers adapted to be knocked against the side of the car, and power-driven means, common to both the push-bars and the hammers, for simultaneously actuating them.

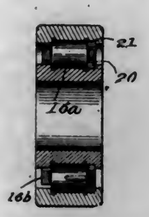
3. In a coal emptier, upright push-bars adapted to be driven through the coal in a car to force the coal therefrom, hammers, carried by hammer-rods, adapted to be knocked against the side of the car, and means, common to both the push-bars and the hammers, for simultaneously actuating them, said means including: a rotatable shaft, reciprocable rods, and mechanism connecting said shaft and rods, whereby movement of the former actuates the latter.

4. In a coal emptier, upright push-bars adapted to be driven through the coal in a car to force the coal therefrom, hammers, carried by hammer-rods, adapted to be knocked against the side of the car, and means, common to both the push-bars and the hammers, for simultaneously actuating them, said means including: a rotatable shaft, cranks carried by said shaft, reciprocable rods, and links connecting said shaft and rods.

5. In a coal-emptier, a box, upright push-bars projecting through said box, hammers adapted to be knocked against the sides of the car, hammer-rods carrying said hammers and pivoted to said box, and means, common to both the push-bars and the hammers, for actuating them simultaneously.

[Claim 6 not printed in the Gazette.]

1,212,253. ROLLER-BEARING. EDWIN A. PERKINS, Jamaica, N. Y. Filed Apr. 7, 1916. Serial No. 89,509. (Cl. 64—62.)



1. A roller bearing comprising the combination of an inner ring having a race for the rollers and having a shoulder integral with the ring to abut the rollers at one end, an outer ring having a race for the rollers and having an integral shoulder to abut the same ends of the rollers, said shoulders operating to take the end thrusts in the bearing on one end, said rings having opposite annular edges with recesses therein coöperating when opposite to each other to form a filling opening to permit the insertion of each roller by a longitudinal movement into the space between said races, means including a split ring mounted in one of said annular edges and projecting across the filling opening to prevent the rollers from shifting longitudinally in the races and thereby taking the end thrusts of the bearing at the other end, and a plurality of rollers in said races abutting said shoulders and said split ring, said rollers adjacent said split ring having substantially flat bearing faces flush with the inner face of said split ring whereby the said bearing faces of said rollers permit the free expansion or contraction of the split ring in the plane of the said bearing faces of the rollers.

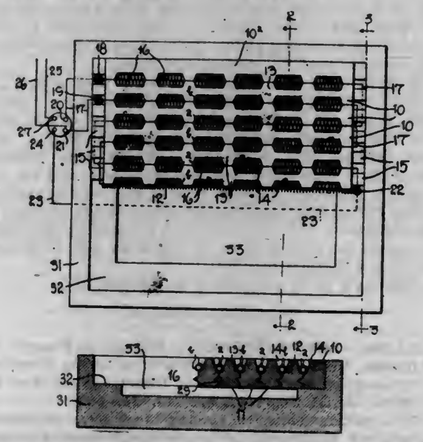
2. A roller bearing comprising the combination of an inner ring having a race for the rollers and having a shoulder integral with the ring to abut the rollers at one end, an outer ring having a race for the rollers and having an integral shoulder to abut the same ends of the rollers, said shoulders operating to take the end thrusts in the bearing at one end, said rings having opposite annular edges with recesses therein coöperating when opposite each other to form a filling opening to permit the insertion of each roller by a longitudinal movement into the space between said races, said annular edges having annular ring seats formed therein, and a split ring mounted in each of said annular ring seats and projecting across the edges of the filling opening to prevent the rollers from shifting longitudinally in the races, said split rings taking the end thrusts in the bearing at the other end, and a plurality of rollers in said races abutting said shoulders and said split rings, said rollers adjacent said split rings having substantially flat bearing faces flush with the inner faces of said split rings whereby the said bearing faces of said rollers permit the free expansion or contraction of said split rings in the plane of said bearing faces of said rollers.

3. A roller bearing comprising the combination of an inner ring and an outer ring with an annular opening between said rings, said rings each having a race for rollers and each having a projecting shoulder to abut the same ends of the rollers, the said rings adjacent the opposite ends of the rollers each having an undercut annular ring seat, an inner split ring tending to assume a relatively small diameter and expansible so as to be insertible through said annular opening and to enable the said ring to contract into the annular ring seat of said inner ring, an outer split ring tending to assume a relatively large diameter and contractible to permit the same to be inserted through said annular opening, so that said outer split ring can expand into the said ring seat of said outer ring, and a plurality of rollers abutting at one end against said shoulders and at the other end against said split rings.

4. A roller bearing comprising the combination of an inner ring and an outer ring with an annular opening between said rings, said rings each having a race for the rollers and each having a projecting shoulder to abut the same ends of the rollers, the said rings adjacent the opposite ends of the rollers each having an undercut annular ring seat, an inner split ring tending to assume a relatively small diameter and expansible so as to be insertible through said annular opening and to enable the said ring to contract into the annular ring seat of said inner ring, an outer split ring tending to assume a relatively large diameter and constructed so that its ends may overlap to permit the same to be inserted through said annular opening, and so that said outer split ring can expand into the said ring seat of said outer ring, said annular opening constructed of more than twice the width of said outer split ring to permit the overlapped ends of said outer ring to be passed therethrough.

5. A roller bearing comprising the combination of an inner ring having a race for the rollers and an outer ring having a race for the rollers, said bearing having an annular opening between said rings, with recesses in the annular edges thereof constructed to aline and form a filling opening to permit the insertion of the rollers by a longitudinal movement thereof into the space between the races, and a split ring retained by the annular edge on each side of said annular opening and projecting across the recesses to prevent a longitudinal shifting of the rollers in the bearing.

1,212,254. ELECTRIC HEATER. ALBERT W. PERSON and JULIUS E. PERSON, Harvard, Nebr. Filed Apr. 8, 1916. Serial No. 89,917. (Cl. 219—37.)



1. An electric heating element comprising a plurality of conjoined units of non-conducting material having interlocking engagement with each other, and formed to provide coil receiving channels.

2. An electric heating element comprising a plurality of conjoined units of non-conducting material, each unit having longitudinal grooves disposed on its opposite faces which, when the units are conjoined, provide longitudinally extending coil channels.

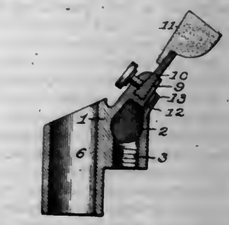
3. An electrical heating element comprising a series of conjoined units, each unit having oppositely disposed longitudinally extending grooves in its opposite faces which, when the units are conjoined, provide longitudinally extending coil channels, and each unit having notches on its side faces intersecting the grooves, which, when the units are conjoined, provide heat radiation openings.

4. An electrical heating element comprising a series of conjoined units, each unit having oppositely disposed longitudinally extending grooves in its opposite faces which, when the units are conjoined, provide longitudinally extending coil channels, and each unit having notches on its side faces intersecting the grooves, which, when the units are conjoined, provide heat radiation openings, each element being provided with a plurality of recesses and having corresponding projecting dowels which when the units are conjoined engage with the recesses to thereby hold the units in alinement.

5. An electrical heating element comprising a plurality of conjoined units, each unit having oppositely disposed grooves in its faces which when the units are conjoined provide longitudinally extending coil channels and each unit being provided on its ends with projecting non-conducting conductor supporting lugs smaller in cross section than the cross section of the units.

[Claims 6 to 19 not printed in the Gazette.]

1,212,255. WINDOW-WASHING APPLIANCE. GEORGE PHILIP, North Chicago, Ill. Filed Feb. 10, 1916. Serial No. 77,369. (Cl. 15—53.)

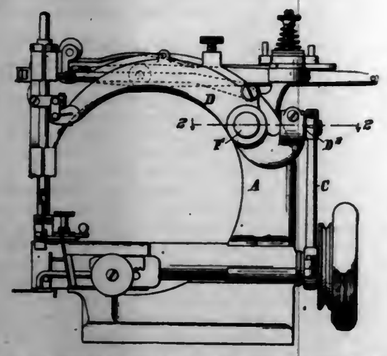


An elongated hollow stock for a window cleaning appliance constructed with an interior chamber which extends the whole length of the stock, with an inlet neck to said interior chamber, formed centrally on said stock, with a socket-sleeve also formed centrally on said stock and in immediate lateral relation to said inlet neck, with a rib extending the length of said stock and in an inclined position with relation to said inlet neck and said socket-sleeve, having a squeegee groove extending the entire length of said rib and a shoulder at the base of the rib, provided with a series of transversely arranged discharge holes communicating at their inner ends with said interior chamber and extending in lateral and approximately parallel relation to a side of said rib.

1,212,256. SEWING-MACHINE. RAYMOND L. PLUMLEY, Wilmington, Del., assignor to Frederick Osann Company, New York, N. Y., a Corporation of New York. Original application filed Apr. 17, 1915, Serial No. 21,985. Divided and this application filed Feb. 14, 1916. Serial No. 78,110. (Cl. 112—29.)

1. In a sewing machine, the combination with the needle lever and the frame of a pivotal connection between said lever and frame comprising a tapered socket in said lever, a tapered socket in said frame, a lever stud comprising a tapered portion fitting in said lever socket and a cylindrical extension from the small end of said tapered portion, and a split bushing fitting about said

extension and located in and externally tapered to fit in said frame socket.

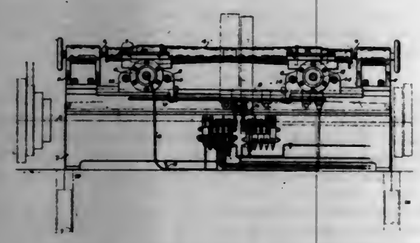


2. In a sewing machine, the combination with the needle lever and the frame of a pivotal connection between said lever and frame comprising a tapered socket in said lever, a tapered socket in said frame, a lever stud comprising a tapered portion fitting in said lever socket and a cylindrical extension from the small end of said tapered portion, a split bushing comprising a body portion fitting about said extension and located in and externally tapered to fit in said frame socket, and a threaded extension from the small end of said bushing, and a nut on said threaded extension and adapted to engage said frame and draw said bushing into the tapered socket thereof.

3. In a sewing machine, the combination with driving and driven elements of a rod connecting said elements and connected to each by a ball and socket joint, and a pair of helical springs interposed between one of said elements and said rod and acting on the latter in a direction generally parallel to, and at opposite sides of an axis, transverse to the length of the rod, of the joint between said rod and last mentioned element.

4. In a sewing machine, the combination with the needle lever, main driving shaft and needle lever eccentric carried thereby, of a connecting rod and ball and socket connections at the opposite ends thereof with said lever and eccentric, helical springs acting between said lever and connecting rod and extending generally parallel to, and located at opposite sides of an axis of the joint between the lever and connecting rod extending transversely to, and lying in a plane transverse to said rod, said lever being formed with sockets receiving the corresponding ends of said springs.

1,212,257. LATHE-OPERATING MECHANISM. EMANUEL POKORA, McKees Rocks, Pa. Filed Oct. 29, 1915. Serial No. 58,606. (Cl. 82—2.)



1. In a lathe, the combination of a work support, a cutter, fluid-pressure means for effecting a relative movement between said support and cutter in one direction, a stop for limiting said movement, a second fluid-pressure means for effecting a relative movement between said parts in another direction, a source of pressure fluid supply in communication with said first named moving means, and means operable by the pressure-fluid and at the conclusion of said first named movement for directing pressure-fluid from said source to said second-named moving means.

2. In a lathe, the combination of a work support, a cutter, fluid-pressure means for effecting a relative movement between said support and cutter in one direction, a stop for limiting said movement, a second fluid-pressure means for effecting a relative movement between said parts in another direction, a source of pressure-fluid supply including means for increasing the pressure upon the fluid when the resistance to the flow thereof is increased, a conduit between said supply and said first-named moving means, and means operable at the conclusion of said first-named movement and by the increased pressure upon the fluid for directing pressure-fluid from said source to said second-named moving means.

3. In a lathe, the combination of a work support, a cutter, fluid pressure means for effecting a relative movement between said support and cutter in one direction, a stop for limiting said movement, a second fluid-pressure means for effecting a relative movement between said parts in another direction, means for limiting said second-named movement, a reservoir for low pressure motive fluid, a reservoir for high-pressure motive fluid, a pump for taking fluid from the low to the high pressure reservoir and by continued action effective to increase the pressure upon the fluid in the high pressure reservoir when the flow therefrom is diminished, a conduit between said high pressure reservoir and said first-named moving means, means operable at the conclusion of said first named movement and by the increased pressure upon the fluid for directing pressure-fluid from the high pressure reservoir to said second-named moving means, and means operable at the conclusion of said second-named movement for directing to said low pressure reservoir the motive fluid utilized in effecting both of said movements.

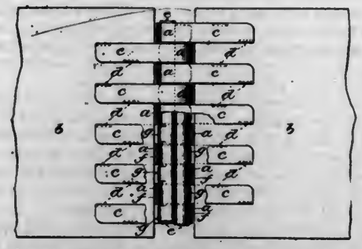
4. In a lathe, the combination of a work support, a cutter, a fluid-pressure cylinder and piston movable therein for effecting a relative movement between said support and cutter, means for limiting said movement, a second fluid-pressure cylinder and piston movable therein for effecting a relative movement between said support and cutter in another direction, a source of pressure-fluid supply including means for increasing the pressure upon the fluid when the flow from said supply is diminished, conduits between said cylinders and said source of supply, a valve in the conduit leading to said second-named cylinder, and means operable at the conclusion of said first-named movement and by the increase in pressure upon the pressure fluid for opening said valve.

5. In a lathe, the combination of a work support, a cutter, fluid-pressure mechanism for effecting a relative feed movement between said support and cutter, high and low pressure reservoirs for operating-fluid, a conduit between said mechanism and the high pressure reservoir, a conduit between said mechanism and the low pressure reservoir, a valve in said last named conduit, closed during said feed movement, and means operable at the conclusion of a feed movement for opening said valve to permit the flow of pressure-fluid from said mechanism to the low pressure reservoir.

[Claims 6 to 11 not printed in the Gazette.]

1,212,258. BELT-FASTENING. GEORGE E. PURPLE, La Grange, Ill., assignor to Flexible Steel Lacing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 11, 1912. Serial No. 730,555. (Cl. 24—33.)

1. A belt fastening comprising hinge loops attachable alternately to the ends of a belt and elongated lengthwise of the belt and a hinge pin removably fitted in said loops and composed of two longitudinal segments having rocker bearings on their inner sides and bearings fitting said loops on their outer sides, the diameter of the composite pin lengthwise of the belt between loop bearings on opposite sides thereof being greater than the diameter of the segments and the internal diameter of the loops transversely to the belt.



2. A hinge pin for belt fastenings composed of two longitudinal segments having rocker bearings on their inner adjoining sides and semicylindrical bearings on their opposite outer sides, the diameter of the composite pin between bearings on opposite sides thereof being greater than the diameter of the segments transversely thereto.

3. A belt fastening comprising hinge loops attachable alternately to the ends of a belt and elongated lengthwise of the belt and a hinge pin removably fitted in said loops and composed of two longitudinal segments having rocker bearings on their inner adjoining sides and semicylindrical bearings on their outer sides fitting said loops and alternating with raised lugs adapted to confine the segments in place lengthwise in said lugs under working conditions, the diameter of the composite pin between opposite bearings on the outer sides of the segments being greater than the diameter of the separate segments transversely thereto and adapted to prevent the segments from turning in the loops out of proper working position.

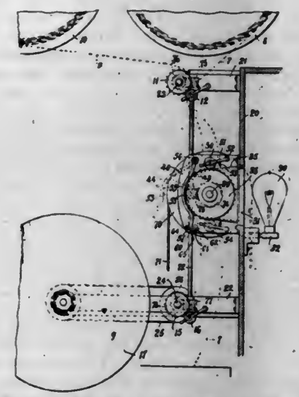
4. A hinge pin for belt fastenings composed of two longitudinal segments having rocker bearings on their inner sides and loop seats alternating with raised lugs on their outer sides, the shortest diameter of the composite pin passing through said segments transversely to their inner rocker bearing faces being greater than the longest diameter of the segments transversely to the belt.

5. The belt fastening comprising two members attachable to the ends of the belt and each having a series of approximately semicylindrical hinge loops elongated lengthwise of the belt and alternating with those of the other member, and an approximately cylindrical loose hinge pin detachably connecting said members and composed of two segments having rocker bearings on their inner sides and approximately semicylindrical bearings on their outer sides fitting said loops and provided with raised lugs alternating with the semicylindrical bearings and adapted to engage the loops and prevent longitudinal displacement of the segments in said members when the fastening is subjected to tension lengthwise of the belt.

1,212,259. FILM-PRINTING MACHINE. JOHN A. RAMSEY, New York, N. Y. Filed Dec. 29, 1915. Serial No. 69,136. (Cl. 95—15.)

1. In a machine of the character described, the combination with a light source, of a film support arranged to support superposed sections of negative and positive films in printing relation to said light source and movable to carry fresh sections of films into printing relation, means for disposing one of the films on said film support at a point in advance of the printing point and means for superposing the second film on said first previously placed film at a point between the printing point and the point where the first film is placed on the film support, whereby said second film is placed on a relatively fixed section of film and relative movement between the contacting sections of film is thereby avoided.

2. In a machine of the character described, the combination with a light source, of a film support arranged to support superposed sections of negative and positive films in printing relation to said light source and movable to carry fresh sections of films into printing relation, means for disposing one of the films on said film support at a point in advance of the printing point, means for superposing the second film on said first previously placed film at a point between the printing point and the point where the first film is placed on the film support, whereby said second film is placed on a relatively fixed section of film and relative movement between the contacting sections of film is thereby avoided, and means for operating the film support to advance fresh sections of films to the printing point.



3. In a machine of the character described, the combination with a light source, of a rotatably mounted film support arranged to support superposed sections of negative and positive films in printing relation to said light source, means for disposing one of the films on said film support at a point in advance of the printing point, and means for superposing the second film on said first previously placed film at a point between the printing point and the point where the first film is placed on the film support.

4. In a machine of the character described, the combination with a light source, of a rotatably mounted film support arranged to support superposed sections of negative and positive films in printing relation to said light source, means for disposing one of the films on said film support at a point in advance of the printing point, means for superposing the printed film on said previously placed film at a point between the printing point and the point where the first film is placed on the film support, and means for rotating the rotatable film support to advance fresh sections of film to the printing point.

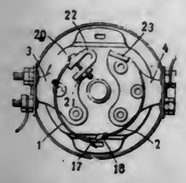
5. In a machine of the character set forth, the combination of a movably mounted film support arranged to support strips of film in superposed relation, means for disposing the inner film strip on said support at one point and means for superposing the second film strip on the first previously placed film strip at a point in rear of the point where the first film strip is placed on the film support considering the direction of movement of the film support.

[Claims 6 to 18 not printed in the Gazette.]

1,212,260. THERMOSTAT. HENRY E. REEVE, New York, N. Y. Filed July 26, 1912. Serial No. 711,749. (Cl. 200—31.)

1. In a thermostat, two curved thermostatic arms arranged one to expand inwardly and the other arranged to expand outwardly under influence of heat, means supporting each of said arms at one end and with the free ends of the arms closely adjacent and arranged to move toward each other on intersecting paths in the expansive action of said arms, the said free ends of the arms having contact tips and the contact tip carried by the free end of one

of the said arms being inclined with respect to the path of travel of the contact tip of the other arm, whereby to produce in the expansive movement of the thermostatic arms a sliding, wiping contact of one contact tip in engagement with the other.



2. In a thermostat, two expansible thermostatic arms, means supporting said arms with their free ends closely adjacent each other and movable toward each other on intersecting angles and guard devices for the free ends of said arms whereby to prevent accidental displacement of the free ends of said arms with respect to each other.

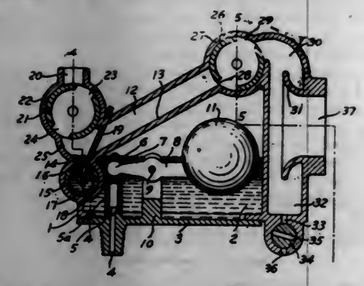
3. In a thermostat, a contact and a thermostatic arm supported at one end and free to expand longitudinally at its opposite end into engagement with the said contact, the said thermostatic arm being centrally slotted longitudinally throughout the working length thereof to divide the working length into two transversely separated parts and thereby prevent transversely continuous warping which otherwise would interfere with the free longitudinal expansion of the thermostatic arm.

4. In a thermostat, a pair of curved thermostatic arms arranged one to expand outwardly under influence of heat and the other arranged to expand inwardly under influence of heat and means supporting said curved arms with their free ends closely approaching each other with the free end of the outwardly expanding arm disposed inside the plane of the free end of the inwardly expanding arm whereby under influence of heat the free ends of the arms will travel in intersecting paths to produce a wiping contact.

5. In a thermostat, a supporting member having a slot with an offset portion and a thermostatic arm engaged in the said slot and provided with a projection interlocking with the offset in the slot to prevent longitudinal disengagement of the arm from said slot.

[Claims 6 and 7 not printed in the Gazette.]

1,212,261. CARBURETER. GEORGE E. RIBLET, Erie, Pa. Filed June 12, 1915. Serial No. 33,680. (Cl. 261—44.)



1. In a carbureter, the combination of a fuel inlet in the form of a horizontal slot; a mixing chamber of greater cross area than the slot having an inclined bottom wall leading from the slot the slot being at the bottom of the incline; and means for directing the main air supply admitted to the chamber to sweep the slot and then along the inclined wall.

2. In a carbureter, the combination of a fuel inlet in the form of an upwardly opening horizontal slot; a valve for varying the width of the slot; and a mixing chamber leading from the slot, the walls of the mixing chamber leading upwardly from both sides of the slot.

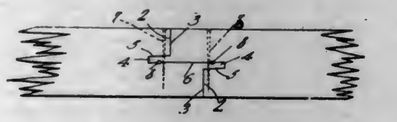
3. In a carbureter, the combination of a fuel inlet in the form of an upwardly opening horizontal slot; a valve for varying the width of the slot; a mixing chamber leading from the slot; the bottom wall of the mixing chamber being inclined and extending upwardly from the slot toward the discharge of the carbureter and means for directing the air admitted to the chamber to sweep the slot and the bottom wall of the mixing chamber.

4. In a carbureter, the combination of a fuel inlet in the form of an upwardly opening horizontal slot; a valve having a way therethrough and forming a closure for the slot for varying the width of the slot; and a mixing chamber leading from the slot, the bottom wall of the mixing chamber being inclined and extending upwardly from the slot toward the discharge of the carbureter.

5. In a carbureter, the combination of a fuel inlet in the form of a horizontal slot; and a vent at the end of the slot.

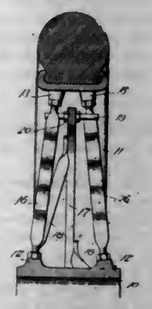
[Claims 6 to 10 not printed in the Gazette.]

1,212,262. JOINT FOR END-MATCHING LUMBER. BYRD C. ROCKWELL, Camden, Ark. Filed Feb. 24, 1915. Serial No. 10,290. (Cl. 20—92.)



A joint for end matching lumber, including two opposed members shiftable in the direction of their length toward each other into interlocked relation, each member having a stepped end forming non-alining transverse shoulders and a relatively thin tongue extending from the outer shoulder and capable of bending, there being a groove within the inner shoulder of the same proportions as the tongue and obliquely disposed relative to the longitudinal center of the member, the walls of the groove in each member constituting means for frictionally engaging and bending the tongue of the opposed member when inserted longitudinally into the groove, thereby to hold all portions of the tongue obliquely disposed relative to the longitudinal center of the members.

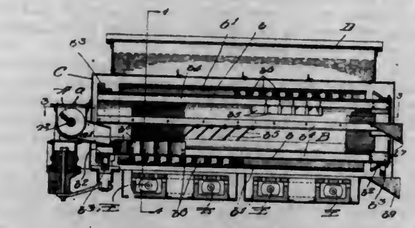
1,212,263. RESILIENT WHEEL. FREDRICH ROMAIN, Marias, Mont. Filed Nov. 2, 1914. Serial No. 869,967. (Cl. 152—51.)



A wheel including a hub, a rim, removably mounted spring spokes extending radially from the respective sides of the hub and converging toward and connected to the rim to effectively brace the rim to the hub and prevent lateral movement thereof, the spokes on one side being also arranged in staggered relation with the spokes on the other side, a hoop arranged between the spokes, rigid rods

extending in convergent relation from the opposite sides of the hub between said spokes terminating short of the rim and connected upon opposite sides of the hoop to prevent lateral movement of the hoop and to normally hold the hoop in spaced relation with the rim, and abutment pins extending transversely through the hoop at uniformly spaced intervals and arranged between the adjacent spokes so as to engage the outer end portions of said spokes.

1,212,264. SCREENING AND DRYING APPARATUS. NILS M. ROSENDAHL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Original application filed Jan. 22, 1913, Serial No. 743,430. Divided and this application filed July 28, 1913. Serial No. 781,460. (Cl. 83—56.)



1. In a portable paving-plant having a machine for treating the materials, a rotary drum provided with inner and outer walls, said walls spaced apart, the inner wall being longer than the outer wall and adapted to serve as a screen, the outer wall being imperforate, means for feeding materials to one end of said drum, within the said screen, rings on the ends of said screen, supporting rolls engaging said rings, and gearing applied to one end of said screen to rotate the drum, and devices at the other end of said drum for separately receiving the relatively coarse and fine materials therefrom, said screen having interior feed blades for causing the materials to move forward, and feed blades disposed between the said inner and outer walls to move the relatively fine materials forward, serving also to support the outer wall.

2. In a portable paving-plant having a machine for treating the materials, a rotary drum provided with inner and outer walls, said walls spaced apart, the inner wall being adapted to serve as a screen, the outer wall being imperforate, means for feeding materials to one end of said drum, within the said screen, devices at the other end of said drum for separately receiving the relatively coarse and fine materials therefrom, said drum being disposed horizontally, and said inner wall having imperforate end portions, means whereby said entire drum is supported by said end portions, and a plurality of parallel series of blades for supporting the outer wall on the inner wall, serving to propel the materials in the required direction.

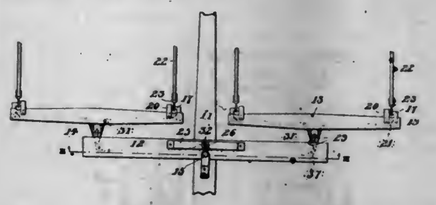
3. In a portable paving-plant having a machine for preliminarily treating the materials, a drum mounted to rotate about a horizontal disposed axis, having internal longitudinal rows of feed blades, said blades being disposed at angles oblique to the length of each row, with space between adjacent rows, thereby to feed the materials from one end to the other of said drum, a cylinder inside of said rows of blades, means to deliver the materials to one end of said drum, mechanism encircling said means to rotate said drum, and means to support said drum at the ends thereof.

4. In a portable paving-plant having a machine for preliminarily treating the materials, a drum mounted to rotate about a horizontally disposed axis, having internal longitudinal rows of feed blades, said blades being disposed at angles oblique to the length of each row, with space between adjacent rows, thereby to feed the materials from one end to the other of said drum, means to deliver the materials to one end of said drum, mechanism to rotate said drum, means to support said drum at the ends thereof, said drum comprising concentrically arranged cylinders, and each cylinder having said rows of blades secured to the inner surface thereof, one cylinder feeding to the other, and the outer wall being imperforate and of metal to withstand fire to heat the materials.

5. In a portable paving-plant having a machine for preliminarily treating the materials, a drum mounted to rotate about a horizontally disposed axis, having internal longitudinal rows of feed blades, said blades being disposed at angles oblique to the length of each row, with space between adjacent rows, thereby to feed the materials from one end to the other of said drum, a cylinder inside of said rows of blades, means to deliver the materials to one end of said drum, mechanism to rotate said drum, and means to support said drum at the ends thereof, said drum having an outer imperforate metal wall adapted to withstand fire to heat the materials.

[Claims 6 to 13 not printed in the Gazette.]

1,212,265. HORSE-DETACHER. JOHN M. RYBKA, Radisson, Saskatchewan, Canada. Filed May 31, 1916. Serial No. 100,841. (Cl. 21—75.)



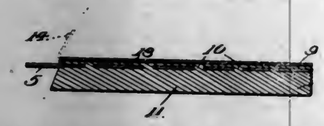
1. A device of the class described comprising a wagon tongue, a tubular cross tree centrally pivoted to the said tongue and having pairs of perforations through its forward side adjacent the opposite ends thereof, sheaves within the said cross tree arranged between the said pairs of perforations, tubular whiffletrees pivotally connected to the said cross tree intermediate the said perforations thereof and having slotted forward sides at each end, abutment blocks carried by the said whiffletrees adjacent the inner ends of the said slotted portion thereof, hooks pivotally attached to the opposite ends of the said whiffletrees swingingly arranged within the said slots with their free ends normally engaging the said blocks, the said hooks being right-angular in elevation with the outer end lying parallel to the whiffle-tree, closing springs for the said hooks mounted within the said whiffletrees connected to the hooks at points outwardly of their pivots, a stub shaft vertically journaled through the said cross tree forwardly of its pivotal connection, pulleys upon the said stub shaft within the said cross tree and operating cords carried by the said shaft pulleys running over the said cross tree pulleys and through the said perforations and whiffletrees and attached to the inner ends of the said hooks and operating means for the said stud shaft.

2. A horse detacher including a vehicle having a draft tongue, a cross tree connected to said tongue, a tubular whiffletree attached to each end of said cross tree, each whiffletree having slotted ends, spring-controlled right-angular hooks pivotally mounted in each whiffletree near each slotted end thereof, each hook having a portion extending through one of said slotted ends and a portion outside of and normally approximately parallel with said whiffletree, stop blocks for each of said hooks, and means operable from the driver's seat and connected to said hooks for swinging the same on their pivots.

1,212,266. HORSESHOE. LEE B. SCHRADER, Shelbyville, and ADOLPH P. SCHRADER, Evansville, Ind., and SAMUEL A. SCHRADER, Sapulpa, Okla. Filed May 19, 1916. Serial No. 98,525. (Cl. 168—28.)

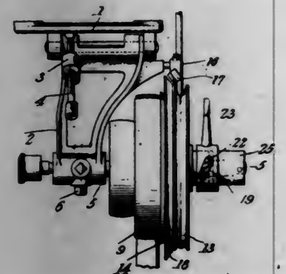
A horse shoe comprising, in combination, a sheet metal supporting plate of a size adapted to extend to the edge

of the hoof and provided with a plurality of apertures, a series of tangs cut from said plate and extending radially from the edge thereof and having apertures therein, a resilient pad molded above and below said plate and through the apertures thereof to form a cushion portion



above and a tread portion below the same, the said tangs being free from contact with the molded material and being adapted to be bent up around the hoof to support the shoe thereon, and a layer of protecting material between the hoof and the molded material.

1,212,267. CLUTCH DEVICE FOR POWER-TRANSMITTERS. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 25, 1911. Serial No. 604,572. (Cl. 192—8.)



1. A power transmitter including in combination, a driving member, a driven member, said members having opposed friction surfaces, a non-rotating sleeve on which said driven member is rotatably mounted, said sleeve having means for preventing lateral movement of said driven member on said non-rotating sleeve, means for shifting said sleeve to move said driven member laterally, said means including a second sleeve having a cam slot therein, a stud carried by said first named sleeve and engaging said cam slot, a spring for rotating said sleeve in one direction, and a treadle connection for rotating the sleeve in the opposite direction.

2. A power transmitter including in combination, a supporting bracket, a rod fixed to said bracket and projecting therefrom, a driving member, a sleeve fixed on said rod and having a ball bearing support for said driving member, a second sleeve splined to said rod, a driven member carried by said second sleeve, a ball bearing support on said second sleeve, said driven and driving members having opposed friction surfaces, means for moving said second sleeve longitudinally of said rod, including a third sleeve having a cam slot therein, a roller stud carried by said second sleeve and engaging said cam slot, a spring for rotating said third sleeve on said supporting rod, means for preventing said third sleeve from moving longitudinally of said rod, and means whereby said sleeve may be rotated against the tension of said spring for bringing said friction surfaces into driving contact.

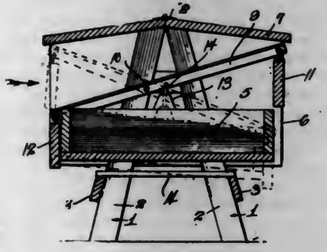
3. A power transmitter including in combination, a supporting bracket, a rod fixed to said bracket and projecting therefrom, a driving member, a sleeve fixed on said rod and having a ball bearing support for said driving member, a second sleeve splined to said rod, a driven member carried by said second sleeve, a ball bearing support on said second sleeve, said driven and driving members having opposed friction surfaces, means for moving said second sleeve longitudinally of said rod, including a third sleeve having a cam slot therein; a roller stud carried by said second sleeve and engaging said cam slot, a spring for rotating said third sleeve on said supporting rod, means for preventing said third sleeve from moving longitudinally of said rod, means whereby said sleeve may be rotated against the tension of said spring for bringing said friction surfaces into driving contact, and whereby the rotation of said sleeve under the action of the spring will cause said friction surfaces to be disengaged.

4. A power transmitter including in combination, a bracket, a stationary supporting stud carried thereby, a driving member, a driven member, said driving and driven members being mounted to rotate on said stud, a cam mounted to turn on said stud, devices coöperating with said cam for bringing the driving and driven members into contact and for releasing the same, an arm connected with the cam for moving said cam in one direction for bringing the driving and driven members into contact and for moving said cam in the opposite direction to release the driving and driven members.

5. A power transmitter including in combination, a bracket, a stationary supporting stud carried thereby, a driving member, a driven member, said driving and driven members being mounted to rotate on said stud, a cam mounted to turn on said stud, devices coöperating with said cam for bringing the driving and driven members into contact and for releasing the same, an arm connected with the cam for moving said cam in one direction for bringing the driving and driven members into contact and for moving said cam in the opposite direction to release the driving and driven members, a spring for moving the cam and arm in one direction, and a treadle for moving the cam and arm in the opposite direction against the tension of said spring.

[Claims 6 and 7 not printed in the Gazette.]

1,212,268. NEST. WILLIAM H. SHATTO, San Jose, Cal. Filed Mar. 10, 1916. Serial No. 83,364. (Cl. 119—50.)



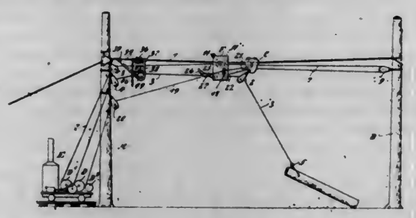
1. An automatic nest comprising a shelter, a frame supporting said shelter, a swinging frame pivotally mounted on said shelter supporting frame, a nest box disposed beneath said shelter and suspended from said swinging frame, said swinging frame being provided with transversely extending arms adapted to contact with the end edges of said nest box, closures carried by said swinging frame at the ends thereof and disposed directly beneath said arms.

2. An automatic nest comprising a shelter, a frame supporting said shelter, a swinging frame pivotally mounted on said shelter supporting frame, a nest box disposed beneath said shelter and suspended from said swinging frame, said swinging frame being provided with transversely extending arms adapted to contact with the end edges of said nest box, closures carried by said swinging frame at the ends thereof and disposed directly beneath said cross arms, stop bars carried by said shelter supporting frame and disposed directly beneath said nest box, the pivotal connection of said suspended nest box with said swinging frame being to one side of the connection of said swinging frame with said shelter supporting frame whereby a minimum downward movement of said nest box, limited by said stop bars, will cause said closures to intermittently obstruct the spaces between the top of said shelter and the edge of said nest box.

3. An automatic nest comprising a shelter, an upright frame consisting of posts arranged at each end of said shelter, a swinging frame pivotally mounted on said posts and consisting of longitudinally arranged arms, connecting arms extending transversely across said shelter and connecting said longitudinal arms, closures suspended from said connecting arms, a nest box suspended from said longitudinal arms, and a stop bar for limiting the downward movement of said nest box, said connecting arms adapted to contact with the edges of said nest box when said nest is operated.

4. An automatic nest comprising a frame, side walls carried by said frame, a nest box disposed between said side walls, a swinging frame pivotally mounted upon said stationary frame, connecting elements carried by the side edges of said nest box, and connected with said swinging frame at a point at one side of the pivotal connection of said swinging frame with said stationary frame, said swinging frame being provided with transversely extending bars of a substantial width adapted to contact intermittently with the end edges of said nest box, and closures swingingly mounted on said swinging frame directly beneath said bars.

1,212,269. CABLEWAY CONVEYING SYSTEM. WILLIAM M. SHAW, Greenville, Me. Filed Feb. 28, 1911. Serial No. 611,320. (Cl. 212—89.)



1. In a conveying system, a main cable, a slack-pulling carriage and a conveying carriage arranged to travel on the main cable, a hoisting and inhaul rope passing over both of said carriages, means for actuating said rope, a stop button on said rope, a part on the slack-pulling carriage which is impassable to said stop button, an outhaul rope connected to the conveying carriage whereby said stop button may be pulled into engagement with said part to cause the slack-pulling carriage to travel with the conveying carriage, a slack-pulling rope extending over the conveying carriage and connected to the slack-pulling carriage, and a second rope-engaging device on the slack-pulling carriage permitting free passage of the inhaul and hoisting rope when the carriages are outhauled, but constructed to engage said stop button to lock said rope to the slack-pulling carriage when the carriages are inhauled.

2. In a conveying system, in combination, a main cable, a conveying carriage, and a slack-pulling carriage on the main cable, a combined hoisting and inhaul rope passing over said carriages and movable lengthwise relative to the same, an outhaul rope connected to the conveying carriage, a plurality of rope engaging devices on the slack-pulling carriage to couple the combined hoisting and inhaul rope thereto to cause the slack-pulling carriage to be pulled by the said combined inhaul and outhaul rope in both directions, and means for automatically releasing one of said devices when the combined hoisting and inhaul rope and the slack-pulling carriage are moved in one direction.

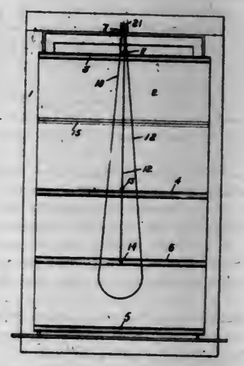
3. In a conveying system, in combination, a main cable, a conveying carriage, and a slack-pulling carriage on the main cable, a combined hoisting and inhaul rope passing over said carriages and movable lengthwise relative to same, an outhaul rope connected to the conveying carriage, a plurality of rope engaging devices on the slack-pulling carriage to couple the combined hoisting and inhaul rope thereto to cause the slack-pulling carriage to be pulled by the combined inhaul and outhaul rope in both directions, and means fixed to the main cable for automatically releasing one of said devices when the combined hoisting and inhaul rope and the carriages are moved in one direction.

4. In a conveying system, a main cable, a slack-pulling carriage, and a conveying carriage movable on the same, an outhaul rope for the load carriage, a combined hoisting and inhaul rope passing over said carriages and having a stop to coöperate with the conveying carriage when the latter is traversed on the main cable, and carrying a button, a rope-engaging device on the slack-pulling carriage to engage the button to couple the rope thereto when the carriages are outhauled, said device consisting of means impassable by the button, a second rope-engaging device on the slack-pulling carriage constructed to automatically disengage itself from the combined hoisting and inhaul rope when the latter is moved in a direction to engage the first mentioned rope-engaging device, and to automatically engage itself with the combined hoisting and inhaul rope when the latter is moved in the opposite direction, means for automatically releasing said second device at a predetermined point in the travel of the slack-pulling carriage, said releasing means including a lock to hold the slack-pulling carriage against movement at said predetermined point, said lock coöperating with said second rope-engaging device.

5. In a conveying system, a main cableway, a slack-pulling carriage, and a conveying carriage movable thereon, a hoisting rope having a stop and passing over both said carriages, a part on the slack-pulling carriage to permit free movement of the rope in one direction but coöperating with the stop to couple the slack-pulling carriage to said rope when the said rope is moved in the opposite direction, and a releasable part adapted to coöperate with the stop to couple the said rope and slack-pulling carriage when the said rope is moved in said first-mentioned direction.

[Claims 6 to 17 not printed in the Gazette.]

1,212,270. SHADE AND FIXTURE THEREFOR. EZRA B. SMITH, Chicago, Ill., assignor to H. B. Dodge & Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 11, 1914. Serial No. 861,160. (Cl. 156—10.)

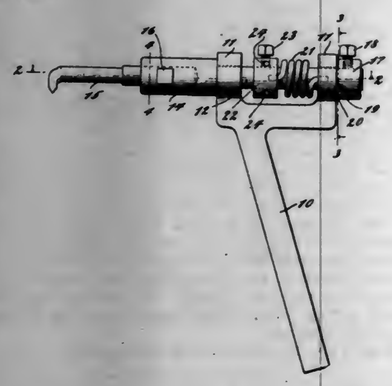


1. In combination, a shade provided with transverse sticks at the top, at the bottom and midway between the top and the bottom, and with a fourth transverse stick midway between the two lower sticks, the shade being creased transversely midway between the two upper sticks, two cords passing over stationary guides above the shade, one of the cords being attached to the upper stick and the other cord being attached to the second stick from the bottom of the shade, and an eye fixed to the stick at

the middle of the shade and loosely surrounding the latter cord, said guides being spaced apart in the direction at right angles to the plane of the shade, the cord which passes through the eye on the stick at the middle of the shade having no connection with the upper half of the shade.

2. In combination, a shade, two pulleys mounted above the shade on a fixed support with their axes spaced apart and lying parallel with the plane of the shade, a cord passing over one of the pulleys and fixed to the top of the shade, a second cord passing over the other pulley and fixed to the shade at a point near the lower end thereof, an eye fixed to the shade about midway between the top and bottom thereof and loosely surrounding said second cord, the said second cord being entirely free from the upper half of the shade.

1,212,271. TOOL-HOLDER. LOUIS SMITH, Brooklyn, N. Y. Filed Apr. 25, 1916. Serial No. 93,379. (Cl. 29—99.)



1. The combination of a tool holder body piece with a bearing therein, a rocking shaft in the bearing adapted to carry the tool and means for yieldingly holding the shaft against turning motion for the purpose of retracting the tool when it strikes an obstruction in the work.

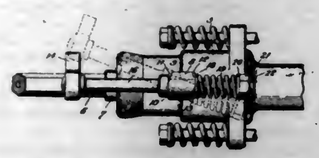
2. The combination of a tool holder body piece with a bearing therein, a rocking shaft in the bearing adapted to carry the tool and means for yieldingly holding the shaft against turning motion, such means comprising a spring coiled around the shaft and engaging the bearing at one end and fastened to the shaft at the other for the purpose of retracting the tool when it strikes an obstruction in the work.

3. The combination of a tool holder body piece with a bearing therein, a shaft mounted in the bearing and carrying the tool, means for yieldingly holding the shaft against turning motion, a collar fastened to the shaft and having an opening therein and a stop pin engaging the walls of the opening, said slot in the collar being longer than the width of the stop pin for the purpose specified.

4. The combination of a tool holder body piece having a bearing, a shaft mounted to turn therein and adapted to carry the tool, a spring coiled around the shaft, one end of the spring anchored to the body piece, an adjustable collar on the shaft to anchor the other end of the spring, a collar fastened to the shaft and having a slot therein and a stationary pin projected in the slot, the slot being longer than the width of the pin for the purpose specified.

5. The combination of a tool holder body piece with a bearing therein, a rocking shaft in the bearing adapted to carry the tool and means for yieldingly holding the shaft against turning motion, the shaft formed to carry the tool eccentrically for the purpose specified.

1,212,272. TOOL-RETAINER. WILLIAM A. SMITH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Aug. 29, 1916. Serial No. 117,484. (Cl. 121—20.)



1. In apparatus of the character set forth, the combination with a tool holding member, of a swinging tool retaining member mounted on the tool holding member and having its axis disposed transversely thereto, one of said members having angularly disposed seats, against which the other member bears accordingly as the retaining member is in its operative or inoperative position, and means for yieldingly urging the members into seating engagement to maintain the retaining member in both of said positions.

2. In apparatus of the character set forth, the combination with a tool holding member, of a swinging tool retaining member mounted on the tool holding member and having its axis disposed transversely thereto, said tool holding member having angularly disposed seats against which the tool retaining member is adapted to bear accordingly as said member is in its operative or inoperative position, and means for yieldingly urging the tool retaining member against said seats to hold said member in both its operative and inoperative positions.

3. In apparatus of the character set forth, the combination with a tool holding member having an ear, a tool retaining member mounted on the ear and swinging on an axis intersecting the ear and transverse to a tool mounted in the tool holding member, and coacting elements on the ear and tool retaining member to hold the latter either in an operative or inoperative position with respect to the tool.

4. In apparatus of the character set forth, a tool holding member having an ear and a swinging tool retaining member passing through the ear and having a pivotal movement therein on an axis intersecting the ear and transverse to a tool placed in the tool holding member.

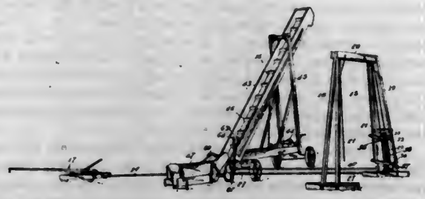
5. In apparatus of the character set forth, a tool holding member including an element having an opening therein disposed longitudinally of a tool held by said member and a tool retaining member having an element engaged in the opening and pivotally mounted therein, said element having a swinging movement on an axis transverse to a tool placed in the tool holding member and swinging in a plane disposed substantially longitudinally of such tool.

[Claims 6 to 14 not printed in the Gazette.]

1,212,278. PORTABLE ELEVATOR AND WAGON-DUMP. PLIN C. SOUTHWICK, Sandwich, Ill., assignor to Sandwich Manufacturing Co., Sandwich, Ill., a Corporation of Illinois. Filed Nov. 25, 1912. Serial No. 733,412. (Cl. 214—12.)

1. In a portable elevator and wagon dump, in combination, a suitable motor, an elevator, and a wagon dumping device, a power shaft leading from the motor, independent means for connecting the shaft with the mechanism of the elevator and with the mechanism of the dumping device, and locking means for preventing the simultaneous engagement of the connecting means.

2. In a portable elevator and wagon dump, in combination, a suitable motor, an elevator, and a wagon dumping device, a power shaft leading from the motor, a clutch for connecting the shaft with the elevator mechanism, a hand lever for controlling the clutch, a clutch for connecting the shaft with the mechanism of the dumping device, a lever for controlling such clutch, and a detent movable by the first-named lever for locking the second-named lever.



3. In a portable elevator and wagon dump, in combination, a suitable motor, an elevator, and a wagon dumping device, a power shaft leading from the motor, a clutch for connecting the shaft with the elevator mechanism, a hand lever for controlling the clutch, a clutch for connecting the shaft with the mechanism of the dumping device, a lever for controlling such clutch, and a detent movable by the first-named lever for locking the second-named lever and for preventing the movement of the first-named lever when the second-named lever is shifted to engage the clutch with which it is associated.

4. In a portable elevator and wagon dump, in combination, a suitable motor, an elevator, and a wagon dumping device, a power shaft leading from the motor, a clutch for connecting the shaft with the elevator mechanism, a hand lever for controlling the clutch, a clutch for connecting the shaft with the mechanism of the dumping device, a lever for controlling such clutch, an oscillatable plate movable into the path of both levers and having a recess for receiving the lever associated with the dumping device, and a shoulder engageable by the lever associated with the elevator mechanism when such lever is moved to disengage the clutch thereof.

5. In a portable elevator and wagon dump, in combination, a suitable motor, an elevator, and a wagon dumping device, a power shaft leading from the motor, a clutch for connecting the shaft with the elevator mechanism, a hand lever for controlling the clutch, a clutch for connecting the shaft with the mechanism of the dumping device, a lever for controlling such clutch, an oscillatable plate movable into the path of both levers and having a recess for receiving the lever associated with the dumping device, a shoulder engageable by the lever associated with the elevator mechanism when such lever is moved to disengage the clutch thereof, and a cam shoulder engageable by the last-named lever when shifted to engage said clutch.

1,212,274. CLOSURE MEANS FOR HERMETICALLY-SEALED JARS. GRAY STAUNTON, Muskegon, Mich., assignor to Staunton Jar Corporation, Buffalo, N. Y., a Corporation of New York. Filed May 3, 1913, Serial No. 765,186. Renewed June 9, 1916. Serial No. 102,800. (Cl. 215—80.)

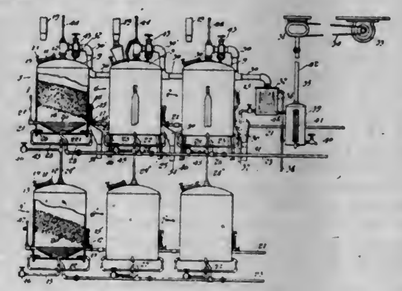
1. In a device of the character described, a vessel having an opening bounded by a vertically extended surface and an adjoining inwardly-inclined, tapering surface; a cover having an overhanging flange and an underlying vertical surface, affording an abutment and a seat for a packing ring respectively; and a packing ring, for insertion on said cover before sealing, adapted to be compressed to a wedge-shaped cross section by contact with the inwardly tapering surface of the jar, the narrower portion of the ring confronting the interior of the jar, the vertical wall of the cover being the other boundary of said ring when sealed.

2. In a device of the character described, a vessel having an opening bounded by a vertically extended surface and an adjoining inwardly-inclined, tapering surface; a cover having an overhanging flange and an underlying vertical surface, affording an abutment and a seat for a packing ring respectively; a packing ring, of rectangular cross section, when not compressed, for insertion on said cover before sealing, adapted to be compressed to a wedge-shaped cross section by contact with the inwardly tapering surface of the jar, the narrower portion of the ring confronting the interior of the jar, the vertical wall of



the cover being the other boundary of said ring when sealed, and a notch in said flange terminating inwardly in the plane of said ring seat along which to insert a pin to break the seal.

1,212,275. APPARATUS FOR DRYING GRAIN. GRAY STAUNTON, Muskegon, Mich. Filed Aug. 4, 1913, Serial No. 782,763. Renewed June 12, 1916. Serial No. 103,346. (Cl. 34—30.)



1. An apparatus of the character described, comprising a cylindrical, tight receiver, having closable receiving and discharge openings and a plurality of fluid injecting nozzles, in said receiver, each of which is adapted and arranged to project a fluid radially and tangentially with respect to said receiver, to create a series of whirls therein.

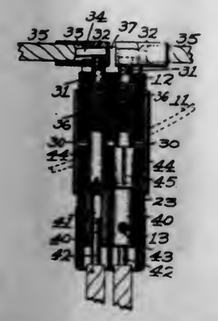
2. An apparatus of the character described, comprising an air tight materials receiver having closable receiving and discharge openings; a perforate bottom dividing said receiver into a materials chamber and a heating chamber; a plurality of air-injecting nozzles in the heating chamber, adapted to project the air in various directions to equalize the attenuation in said chamber and a heating coil interposed between said nozzles and bottom.

3. An apparatus of the character described, comprising an air tight materials receiver, having closable receiving and discharge openings; a perforate bottom dividing said receiver into a materials chamber and a heating chamber; a heating coil in the form of an inverted cone in said heating chamber; and air injecting nozzles within the space under the largest diameter of said coil and means to exhaust said receiver.

1,212,276. CONNECTOR. JASON C. STEARNS, Worcester, Mass. Filed Aug. 22, 1914. Serial No. 858,115. (Cl. 173—328.)

1. In a connector, a section of insulating material, a longitudinally spring-pressed plunger extending there-

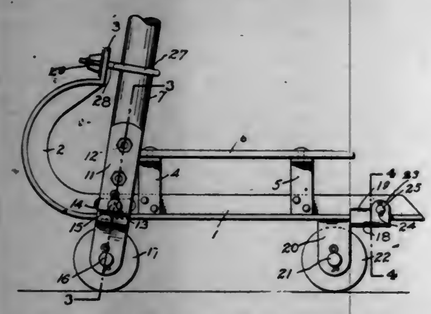
through, said plunger being screw-threaded at one end, and means for securing a conductor directly to said threaded end, said means comprising a nut longitudinally movable with but non-rotatable with said plunger and having a transverse opening therein to receive the conductor, and said screw-threaded plunger comprising the sole means for engaging and retaining said conductor in said nut.



2. In a connector, a section of insulating material, a pair of longitudinally spring-pressed plungers extending therethrough, and conductor-securing devices non-rotatably mounted in a single groove formed between parallel extensions of said insulating material, said devices having oppositely disposed longitudinal openings adapted to receive the ends of the conductors and having transverse threaded openings intersecting said longitudinal openings, and said plungers being screw-threaded at one end and extending through said transverse openings to engage and hold said conductors within said securing devices and to hold said devices in position in said section of insulating material.

3. In a connector, a shell and a section of insulating material secured therein, said section having a stud thereon, and said shell having an integral resilient tongue with a circumferential slot therein positioned to co-act with said stud to permit relative angular movement of said shell and section while preventing relative longitudinal movement thereof, said resilient tongue permitting separation of said shell and section when desired.

1,212,277. AMUSEMENT DEVICE. LUDWIG STEPHANY and OTTO GRUPP, Philadelphia, Pa. Filed Feb. 18, 1915. Serial No. 9,020. (Cl. 21—96.)



1. A device of the class described comprising a runner adapted to traverse ice and snow, a steering post connected to said runner adjacent to the forward end thereof, a roller carried by said steering post and disposed below the runner, a second roller, a detachable connection between the second-mentioned roller and the rear end portion of said runner, uprights secured to said runner and upstanding therefrom, and a foot rest carried by the upper ends of said uprights and spaced apart from said runner and parallel therewith.

2. A device of the class described comprising a runner adapted to traverse ice and snow and having the forward end thereof curved upwardly and formed with an upwardly extending flange, a steering post, a flexible connection between the lower end of said steering post and said runner, a roller, a detachable connection between said roller and said steering post, a second roller, and a detachable connection between the last-mentioned roller and the rear end portion of said runner.

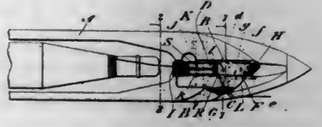
3. A device of the class described comprising in combination: an ice runner, detachable front and rear rollers, the front roller being movable with respect to said runner for steering purposes, a steering post connected with said front roller to turn the same laterally relatively to the runner, and means whereby the steering post may be connected non-rotatably with the runner when the rollers are detached.

4. A sled comprising a single integral runner formed from a T iron and having its front end bent upward to form a brace, an upright secured to the upright rib of the runner, means for attaching the upright to the brace, a handle bar carried by the upper end of the upright for tipping said runner to either side to maintain the balancing of the sled and change the direction of travel thereof, a foot board, and means for attaching said foot board to the runner.

5. A sled comprising a single integral runner formed from a T iron and having its front end bent upward to form a brace, an upright secured to the upright rib of the runner, means for attaching the upright to the brace, a handle bar carried by the upper end of the upright for tipping said runner to either side to maintain the balancing of the sled and change the direction of travel thereof, brackets secured to the upright rib of the runner and a foot board mounted thereon for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,212,278. LOOM-SHUTTLE. EDWARD S. STIMPSON, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me., a Corporation of Maine. Filed Aug. 6, 1914. Serial No. 855,455. (Cl. 139—46.)



1. An automatically threading shuttle having, in combination, a sheet metal threader with separated side walls, one of said walls having a hole, and a thread deflector fitting between said walls to hold them apart and having a nose entering said hole.

2. An automatically threading shuttle having, in combination, a threading passage; a beak at the eye or front side of the threading passage extending outwardly beyond and overhanging the slotted eye of the shuttle; a thread guard at the inner end of the threading passage; and an outer guard at the outer portion of said threading passage extending from the rear of the threading passage and overhanging the point of the beak, said guard having a loop retainer at its inner end extending abruptly across and over the threading passage and above and in line with the eye, and extending forwardly beyond the front wall of the threading passage.

3. An automatically threading shuttle having, in combination, a threading passage; a beak at the eye or front side of the threading passage extending outwardly beyond and overhanging the slotted eye of the shuttle; a thread guard at the inner end of the threading passage; and an outer guard at the outer portion of said threading passage extending from the rear of the threading passage and overhanging the point of the beak, said guard having a loop retainer at its inner end extending abruptly across and over the threading passage and extending forwardly beyond the front wall of the threading passage.

4. An automatically threading shuttle having, in combination, a threading passage; a slotted eye; a thread guard at the inner end of the threading passage; and an outer guard at the outer portion of said threading passage extending from the rear of the threading passage and overhanging said passage, said guard having a loop retainer at its inner end extending abruptly across and over the threading passage and extending forwardly beyond the front wall of the threading passage.

5. An automatically threading shuttle having, in combination, a threading passage; a slotted eye; an upwardly and rearwardly extending beak overhanging said passage; and a shoulder at the outer end of said passage having a longitudinal wall, a transverse wall, and an upper face, said longitudinal wall extending alongside the lower portion of the beak forward of the front wall of the threading passage and separated from said beak so as to constitute a narrow slit through which the thread passes on its way from the threading passage to the eye during the threading operation, said transverse wall being at the outer end of the threading passage and at the heel of the beak, and said upper face being located in a plane below the point of the beak and above the heel of the beak.

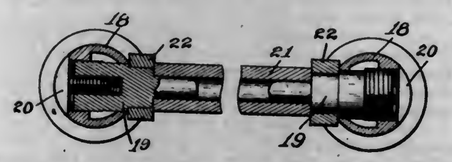
[Claim 6 not printed in the Gazette.]

1,212,279. BOOK OR CATALOGUE. CLARENCE N. STONE, Newton Highlands, Mass., assignor to Baird-North Co., Augusta, Me., a Corporation of Maine. Filed Oct. 15, 1915. Serial No. 55,936. (Cl. 11—19.)



In a book or catalogue, the combination with the several leaves thereof, of a leaf of relatively heavier stock bound into the book and provided with a series of circular openings of graduated finger-ring sizes having printed indicia adjacent each opening indicating the size of the opening related thereto and adapted for the insertion of the finger to measure its size.

1,212,280. CLOSET-BOWL AND COVER MOUNT. ALFRED E. STRINGER, Chicago, Ill. Filed Nov. 22, 1913. Serial No. 802,343. (Cl. 4—18.)



1. In a device of the class described attaching bolts having apertured internally threaded heads thereon, short stud shafts adjustably and rigidly secured transversely in the heads of each of said bolts, the outer ends of said stud shafts reduced in diameter, a hinge member fitted on the reduced ends of said stud shafts, and independent hinge members, one each secured upon said stud shafts and held from longitudinal movement thereon by said first mentioned hinge member.

2. In a hinge construction for seat and cover members of a closet bowl, attaching bolts adapted to secure the closet bowl upon a wall, hinge pintles secured adjustably and transversely in the heads of said attaching bolts and projecting toward one another in alinement, means projecting through an aperture in the heads of said attaching bolts and threading into said hinge pintles to clamp the same rigidly in said heads of said bolts, independent hinge members pivotally journaled on said hinge pintles, and a single hinge member journaled on both of the inner ends of said hinge pintles.

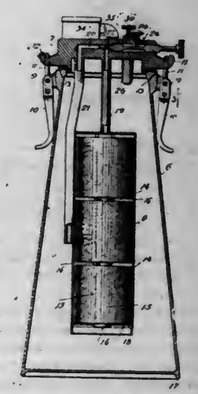
3. In a device of the class described in combination with a closet bowl, of a pair of attaching bolts for the bowl having apertured heads, hinge pintle members threaded into said apertures, locking screws threaded in said hinge pintle members and adapted to bear on the heads of the attaching bolts to retain the pintles in their adjusted position, and seat and cover hinge members or leaves journaled upon the hinge pintle members.

4. In an adjustable hinge member for cover and seat members of a closet bowl, a pair of attaching heads secured to the bowl, hinge pintles secured to the attaching heads, said pintles being capable of a lateral adjustment with respect to each other, means coöperating with the pintles and the attaching heads for positively retaining the pintles in their adjusted position, a hinge member slidably secured to each of the pintles and extending therebetween, a plurality of hinge leaves, one each journaled on said pintles and one carried by said hinge member.

5. In an adjustable hinge member for a cover and seat member of a closet bowl, attaching bolts adapted to secure the closet bowl upon the wall, pintles having threaded connections with the attaching bolts, said pintles being capable of a lateral adjustment with respect to each other, means coöperating with the pintles and in engagement with the attaching bolts for positively retaining the pintles in their adjusted positions, an open ended hinge member adapted to fit over the ends of the hinge pintles and slidably connected therewith, a plurality of hinge leaves, one each journaled on said pintles, and one carried by the open ended hinge member.

[Claims 6 to 13 not printed in the Gazette.]

1,212,281. GAS-GENERATOR. WILLIAM W. TALBOT, New York, N. Y., assignor to Frank T. Fowler, Chicago, Ill. Filed Feb. 3, 1916. Serial No. 75,940. (Cl. 23—10.)



1. In an apparatus for generating gas, a container a closure cap therefor, said cap having a duct or passage formed in the body thereof and extending laterally therein, a casing extending into said container, said duct or passage communicating at one end with said casing and at the other end with said container.

2. In an apparatus for generating gas, a container a closure cap therefor, said cap having a duct or passage formed in the body thereof and extending laterally therein, a casing extending into said container, said duct or passage communicating at one end with said casing and at the other end with said container, and a valve to control said duct or passage.

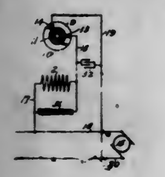
3. In an apparatus for generating gas, a container, a closure cap therefor, said cap having a duct or passage formed in the body thereof and extending laterally therein, a casing extending into said container, said duct or passage communicating at one end with said casing, and at the other end with said container, a valve to control said duct or passage, the stem of said valve being threaded into a passage formed in the body of said cap, and means to prevent said valve stem from being withdrawn from said passage without interfering with the adjustment of said valve.

4. In an apparatus for generating gas, a container, a closure cap therefor, said cap having a duct or passage formed in the body thereof and extending laterally therein, a casing extending into said container, said duct or passage communicating at one end with said casing and at the other end with said container, a valve to control said duct or passage, the stem of said valve being threaded into a passage formed in the body of said cap and having a reduced portion, and a set screw tapped through said cap and coöperating with said reduced portion to permit the adjustment of said valve but preventing it from being withdrawn.

5. In an apparatus for generating gas, a container, a closure cap therefor, said cap having a duct or passage formed in the body thereof and extending laterally therein, a casing extending into said container, said duct or passage communicating at one end with said casing and at the other end with said container, a cage having cartridge engaging portions, and means to retain said cage in said casing.

[Claim 6 not printed in the Gazette.]

1,212,282. ELECTRIC FAN AND MOTOR THEREFOR AND FOR OTHER PURPOSES. GEORGE S. TIFFANY, Summit, N. J., assignor to Gray Electric Company, New York, N. Y., a Corporation of Illinois. Filed Oct. 9, 1911. Serial No. 653,510. (Cl. 172—36.)



1. The combination with an electric motor and circuit controlling means for alternately making and breaking the motor circuit as the motor operates, of spark-annuling means affording a path for the extra current as the motor circuit is thus broken, a circuit controlling means for alternately making and breaking the motor circuit as the motor operates, comprising a circuit-closing contact of carbon and a circuit breaker of metal, substantially as described.

2. The combination with an electric motor, of a circuit interrupter having a circuit closing contact and a separate circuit breaking contact, for making and breaking the motor circuit, means for annulling the spark at the breaking of the circuit by said interrupter, and means for varying the relative duration of the open and closed circuit periods of the motor circuits by varying the relative positions of said circuit closing contact and said circuit breaking contact.

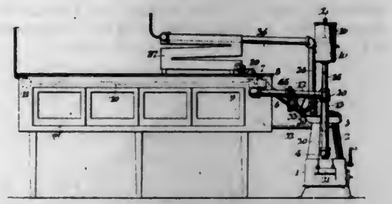
3. The combination with an electric motor, of circuit controlling means for alternately making and breaking the motor circuit as the motor operates, comprising a circuit closing contact and a circuit breaking contact one adjustable relatively to the other to vary the time of contact controlling the interrupted currents for operating said motor and thus varying the speed of the motor, substantially as described.

4. The combination with an electric motor and a rotary circuit breaker therefor, of circuit controlling means for alternately making and breaking the circuit as the motor operates, comprising a circuit closing contact and a circuit breaking contact both engaging the breaker as it rotates and one adjustable relatively to the other to vary the time of contact controlling the interrupted currents for operating said motor and thus varying the speed of the motor, substantially as described.

5. The combination with an electric motor and its rotating armature of means including a centrifugally movable weight for automatically positioning the armature in an unbalanced magnetic relation to the magnet as the motor circuit is broken and the armature comes to rest, whereby the motor becomes self starting on the closing of the circuit.

[Claim 6 not printed in the Gazette.]

1,212,283. APPARATUS FOR REGULATING THE TEMPERATURE OF INCUBATORS. ELLWOOD F. THUM, Philadelphia, Pa., assignor to Harold L. Watson, Newtown, Pa. Filed Oct. 8, 1913. Serial No. 794,011. (Cl. 237—4.)

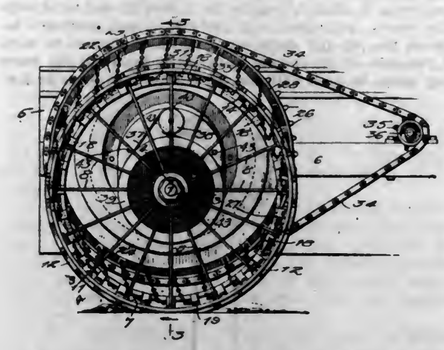


1. In a heating system for incubators, the combination of an incubator and a hot water heater; alternative pipes leading from the heater to the incubator; means connected with one of these pipes for cooling the water therein, a valve controlling the course of the water between these alternative pipes; a single thermostatic means for controlling said valve and also the draft of the heater, said means being actuated by the temperature of the water.

2. In a heating system for incubators, the combination of an incubator; a water system comprising heating pipes in said incubator, a hot water heater provided with a water jacket, ingress and egress pipes connecting the heating pipes with said water jacket; an alternative pipe connecting the egress pipe with said heating pipes; a cooling device interposed in said alternative pipe; a valve situated at the point where said alternative pipe meets the egress, whereby all or any part of the water circulating from the water jacket may be deflected through said cooling device, and a single thermostatic means actuated by the temperature of the water for controlling said valve and the draft of the heater.

3. In a heating system for incubators, the combination of an incubator; a water system comprising heating pipes in said incubator, a hot water heater provided with a water jacket, ingress and egress pipes connecting the heating pipes with said water jacket, an alternative pipe connecting the egress pipe with said heating pipes; a cooling device interposed in said alternative pipe; a valve situated at the point where said alternative pipe meets the egress pipe, whereby all or any part of the circulation from the water jacket may be deflected through said cooling device; a float in an open receptacle connected by a stand pipe to the water system, and rising or falling with the expansion or contraction of the water due to its temperature; and mechanical connections whereby said float controls both the valve and the draft of the heater.

1,212,284. TRACTOR DRIVE-WHEEL. ANDREW R. TKACH, Lakefield, Minn. Filed Jan. 7, 1916. Serial No. 70,825. (Cl. 21—207.)



1. In combination, a tractor wheel having a ring within the rim at the inner side of the wheel and coaxial with the wheel, radially arranged rollers between the wheel and the ring, a driving ring for connection with a motor arranged at the inner side of the wheel, a fixed disk upon which the driving ring is mounted and arranged eccentrically with respect to the wheel and having its eccentric portion above the axis of rotation of the wheel, and a series of flexible members connecting the driving ring to the wheel, each flexible member being connected to the wheel in rear of its connection with the ring, and being of a length to be taut at the front and rear sides of the wheel, the driving ring having a pair of parallel inwardly extending annular ribs coaxial with the driving ring, rollers journaled between the ribs in spaced relation on radial axes and corresponding in arrangement with the arrangement of the rollers of the wheel, the flexible members connecting each roller of the driving ring with the succeeding roller of the wheel.

2. In combination, a tractor wheel having a ring connected rigidly therewith, within the rim at the inner side of the wheel and coaxial with the wheel, a driving ring for connection with a motor arranged at the inner side of the wheel, a fixed disk upon which the driving ring is mounted and arranged eccentrically with respect to the wheel and having its eccentric portion above the axis of rotation of the wheel, and a series of flexible members connecting the driving ring to the wheel, each flexible member being connected to the wheel in rear of its connection with the driving ring, and being of a length to be taut at the front and rear sides of the wheel, an annular series of rollers journaled on axes radial to the axis of the wheel, an annular series of rollers journaled on the driving ring on axes radial to the axis of rotation of the driving ring, and the flexible members connecting the two series of rollers.

3. In combination, a tractor wheel having a ring connected rigidly therewith, within the rim at the inner side of the wheel and coaxial with the wheel, a driving ring for connection with a motor arranged at the inner side of the wheel, a fixed disk upon which the driving ring is mounted and arranged eccentrically with respect to the wheel and having its eccentric portion above the axis of rotation of the wheel, and a series of flexible members connecting the driving ring to the wheel, each flexible member being connected to the wheel in rear of its connection with the driving ring, and being of a length to be taut at the front and rear sides of the wheel.

4. In combination, a tractor wheel, a driving ring for connection with a motor, arranged adjacent to the wheel, a drum on which the ring is journaled, said drum being eccentric to the wheel for elevating the axis of rotation of the ring above that of the wheel, and a series of flexible members connecting the ring to the wheel, each flexible member being connected to the wheel in rear of its connection with the ring.

5. In combination, a tractor wheel, a driving ring for connection with the motor arranged adjacent to the wheel, a drum on which the ring is journaled, said drum being eccentric to the wheel for elevating the axis of rotation of the ring above that of the wheel, and a series of flexible members connecting the ring to the wheel, each flexible member being connected to the wheel in rear of its connection with the ring.

[Claims 6 and 7 not printed in the Gazette.]

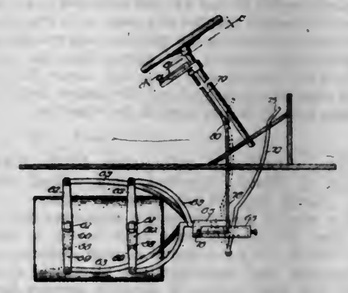
1,212,285. BURGLAR-ALARM. EDWARD STANLEY TOADVIN, New York, N. Y. Filed Apr. 27, 1915. Serial No. 24,287. (Cl. 116—44.)



1. In an alarm of the class described, a plate having spurs formed thereon, an alarm having a push pin carried by said plate, a depressible member resiliently carried by said plate, a lock on said depressible member for engagement with the push pin on said alarm and a U-shaped clamp for engagement with said base and depressible member, said clamp having a spur formed thereon for engagement with a movable closure.

2. In an alarm of the class described, a base plate, spurs formed thereon by slitting portions of the edges thereof, and bending said portions from the plane thereof, an alarm carried by said base plate, a flexible arm carried by said base plate, a push pin carried by said alarm and extending into the path of said arm, an offset on said arm, and a lip formed on said offset to engage under said push pin to lock said arm in depressed position.

1,212,286. CONTROLLING MEANS FOR MOTOR-DRIVEN VEHICLES. WILLIAM E. TULLAR, Chicago, Ill. Original application filed Mar. 6, 1912, Serial No. 681,917. Divided and this application filed June 5, 1914. Serial No. 843,122. (Cl. 74—58.)



1. In a device of the character described, the combination of a driving mechanism, a driven mechanism, a plurality of devices for transmitting power from the driving to the driven mechanism, and means actuating the said devices, said actuating means comprising a controlling member for each device adapted to move the said device to establish operative relationship between the said driving and driven mechanisms, an element adapted to engage with and actuate any desired controlling member, means adapted to move the said element to engage and disengage the said element with a desired member, and means for holding the said element in and out of engagement with the said member.

2. In a device of the character described, the combination of a driving mechanism, a driven mechanism, a plu-

rality of devices for transmitting power from the driving to the driven mechanism, and means actuating the said devices, said actuating means comprising a controlling member for each device adapted to move the said device to establish operative relationship between the said driving and driven mechanisms, an element adapted to move the said device to establish operative relationship between the said driving and driven mechanisms, an element adapted to engage with and actuate any desired member, means adapted to move said element into and out of engagement with the desired member, and an expansion spring for holding said element in engaged and disengaged relation with the said member.

3. In a device of the character described, the combination of a driving mechanism, a driven mechanism, a plurality of devices for transmitting power from the driving to the driven mechanism and means actuating the said devices, said actuating means comprising a controlling member for each device adapted to move the said device to establish operative relationship between the said driving and driven mechanisms, an element adapted to engage with and actuate any desired controlling member, an expansion spring for holding said element in engaged and disengaged position, and means adapted to move said element against the force of the said spring and to engage and disengage the said element with the desired member.

4. In a device of the character described, the combination of a driving mechanism, a driven mechanism, a plurality of devices for transmitting power from the driving to the driven mechanism, and means actuating the said devices, said actuating means comprising a controlling member for each device adapted to move the said device to establish operative relationship between the said driving and driven mechanisms, an element adapted to engage with and actuate any desired controlling member, an expansion spring for holding said element in engaged and disengaged position, means adapted to move said element against the force of the said spring, and means adapted to engage and disengage the said element with the desired member.

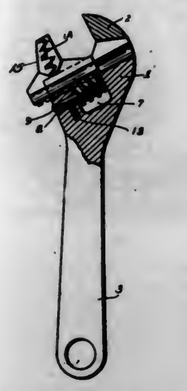
5. In a device of the character described, the combination of a driving mechanism, a driven mechanism, a plurality of devices for transmitting power from the driving to the driven mechanism, and means actuating the said devices, said actuating means comprising a rotatable member connected to each device adapted to move it into and out of operative relation between the said mechanisms, a link having one end attached to a rotatable member, an element adapted to engage with the other end of said link for actuating the said link and rotatable member, means for engaging and disengaging the said element with the end of said link, and means for holding the said element in engaged and disengaged position.

[Claims 6 to 21 not printed in the Gazette.]

1,212,287. COMBINED NUT AND PIPE WRENCH. WILBUR S. UPSON, Mansfield, Ohio. Filed Sept. 12, 1916. Serial No. 119,749. (Cl. 81—178.)

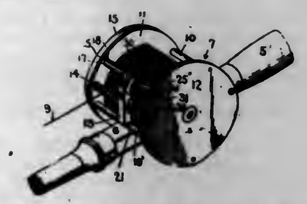
1. In a wrench provided with a stationary jaw, an integral head and handle, said head having a guideway formed therein and an angularly related aperture crossing said guideway and communicating therewith, a pin secured to said head, a spindle pivotally secured for oscillation to said pin, a worm cog screw loosely mounted on said spindle, in combination with a double-faced movable, separable and reversible jaw having a shoe provided with cog teeth, said shoe being adapted to be inserted in the guideway to slidably engage the guideway and mesh with the worm cog screw, and yielding means arranged between the pin and worm screw which is adapted to exert a pressure on the spindle to normally maintain the worm cog screw in mesh with the cog teeth of the movable jaw.

2. In a wrench provided with a stationary jaw, an integral head and handle, said head having a guideway formed therein and an angularly related aperture crossing said guideway and which communicates therewith, a pin secured to said head, a spindle pivotally secured for oscillation to said pin, a worm cog screw loosely mounted on said spindle, in combination with a double-faced movable, separable and reversible jaw having a shoe provided with cog teeth, said shoe being adapted to be inserted in the guideway to slidably engage the guideway and mesh with the worm cog screw, and yielding means arranged between the pin and worm screw which is adapted to exert a pressure on the spindle to normally maintain the worm cog screw in mesh with the cog teeth of the movable jaw.



3. In a wrench comprising an integral stationary jaw head and handle, said head being provided with an open guideway and an angularly related opening which crosses said guideway and communicates therewith, a pin secured to said head, a spindle having one end fitted within a slot formed in one of the walls surrounding said opening which is pivotally secured for oscillation to said pin, a worm cog screw mounted for rotation on the free end of said spindle, in combination with a double-faced movable, separable and reversible jaw provided with a series of cog teeth, and which can be slidably inserted in said guideway to engage the worm cog screw, and yielding means arranged between the pin and worm screw which is adapted to exert a pressure on the spindle to normally maintain the worm cog screw in mesh with the cog teeth of the movable jaw.

1,212,288. FISHING-REEL. GEORGE W. UPTON, Warren, Ohio. Filed May 7, 1914. Serial No. 837,097. (Cl. 242—84.4.)



1. A line carrier for a fishing reel, adapted to travel from side to side in front of said reel, and having prongs and an intermediate line receiving space so formed as to permit one prong to pass under said line when it is being wound in, and prevent its passing over a second prong until the line is slackened, in combination with line elevating deflectors attached to the said sides of said reel, for the purpose set forth.

2. In a reel of the kind described, the combination of a complete reel equipped with a mechanically rotated double threaded shaft at its front and means for distributing a fishing line when being wound on to the spool of said reel, consisting of a line carrier moved from side to side of said reel by coöperation of one of its members with said shaft; with a line receiving end for said carrier comprising a plurality of prongs spaced openly apart at their extremities; and a line supporting rod extending across said reel between the side plates thereof, in front of its spool, and so located that the inner edges of said prongs travel on a line below its top and adjacent parts of said prongs protrude above it, for the purpose set forth.

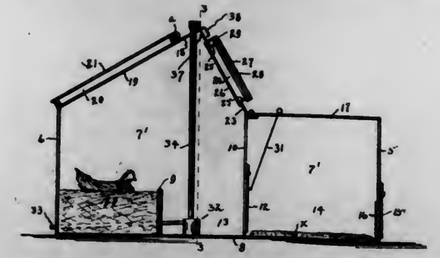
3. The combination of a complete fishing reel of the class described; with a horizontal rod permanently attached at its ends to the head and tail plates of the reel, extending across its front, and located high enough to receive and support a fish line when drawn taut from the top of the spool of the reel to the first guide of a fishing rod, and low enough to rest below the extreme upper parts of a line carrier positioned in front of it, as described.

4. The combination with a fishing reel having a carrier adapted to wind a fish line evenly on its spool when operated, of a rod extending in front of said spool and between the side plates of the reel and having protuberances at its extremities, adjacent to said plates, higher than the top line of said carrier, as and for the purpose described.

5. The combination of a complete fishing reel; a fishing rod, a guide on said rod; mechanism for driving a member from side to side in front of the spool of said reel; a fishing line wound around said spool and passed through said rod guide, with means attached to said member for receiving and retaining said line when it is taut and capable of immediate release through a permanent opening therein when the line is slack, and a member extending from plate to plate of said reel, horizontally, between said spool and said member, above the line of departure of said line from said spool when filled to said rod guide, and below the highest part of said member, as set forth and described.

[Claims 6 and 7 not printed in the Gazette.]

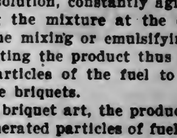
1,212,289. COMBINED HATCHING AND BROODING DEVICE. ARGIDIUS J. VAN ACKEREN, Cedar Rapids, Nebr. Filed Jan. 3, 1916. Serial No. 69,817. (Cl. 119—21.)



A device of the type described, including chambers for hatching and brooding purposes, with a feeding compartment therebetween, the hatching compartment and feeding chamber having oppositely inclined roofs, the roof of the feeding compartment being provided with a wire-netting-covered opening, said roof also having upset-flanges at the upper and lower edges of said wire-netting covered opening, a hinged frame having arranged therein a light transmitting member, said frame, with its light-transmitting member being arranged above said opening and supported upon said upset-flanges, said feeding chamber roof having a ventilating aperture therein near its upper edge, guarded by a hood in continuation of the hatching-chamber roof.

1,212,290. DRY GAS-METER. AART PIETER VISSER, The Hague, Netherlands. Filed Mar. 20, 1916. Serial No. 85,273. (Cl. 73—1.)

1. In a dry gas meter the combination of valves for controlling the gas distribution such valves being of the type which rise and fall from and to their seats, and means for operating said valves consisting of rotating oblique disks adapted to periodically engage and lift each of said valves from its seat.



2. In a dry gas meter the combination of valves for controlling the gas distribution such valves being of the type which rise and fall and to their seats and each having a downwardly facing rounded portion, and means for operating said valves consisting of rotating members adapted to periodically engage said rounded portions and lift said valves from their seats and at the same time to cause rotation of the same by rubbing engagement.

3. In a dry gas meter the combination of valves for controlling the gas distribution such valves being of the type which rise and fall from and to their seats, and means for operating said valves consisting of rotating members adapted to periodically engage and lift each of said valves from its seat, said valves being freely rotatable and being engaged by said rotatable members to cause their rotation by frictional engagement.

4. In a dry gas meter the combination of ball valves for controlling the gas distribution and means for operating said valves consisting of rotating oblique disks adapted to periodically engage the underside of said valves and lift them from their seats.

5. In a dry gas meter the combination of valves for controlling the gas distribution such valves being of the type which rise and fall from and to their seats, and means for operating said valves consisting of rotating members mounted on a common shaft adapted to periodically engage and lift each of said valves from its seat and at the same time to rotate it by rubbing engagement.

[Claim 6 not printed in the Gazette.]

1,212,291. MANUFACTURE OF BRIQUETS. FELIX A. VOGEL, New York, N. Y., assignor to General Briquetting Company, New York, N. Y., a Corporation of Maine. Filed July 22, 1916. Serial No. 110,655. (Cl. 44—1.)

1. That improvement in the art of making fuel briquets which consists in heating an oily material to approximately 250° F. or over, then adding thereto from time to time sulfite pitch solution, constantly agitating the mixture, maintaining the mixture at the original high temperature until the mixing or emulsifying is complete and finally incorporating the product thus produced with the finely divided particles of the fuel to be briqueted, and then forming the briquets.

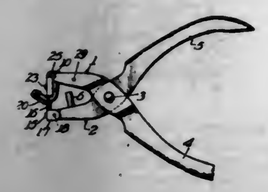
2. The improvement in the fuel briquet art which consists in heating an oily material to approximately 250° F. or over, then adding thereto from time to time concentrated sulfite pitch solution, constantly agitating the mixture and maintaining the mixture at the original high temperature until the mixing or emulsifying is complete and finally incorporating the product thus produced with the finely divided particles of the fuel to be briqueted, and then forming the briquets.

8. In the fuel briquet art, the product being essentially a body of agglomerated particles of fuel and a binder such as is produced by periodically adding a solution of sulfite pitch to a constantly agitated oily mass having a temperature of approximately 250° F. or over, and maintaining the mixture at the original high temperature until the mixing or emulsifying is complete.

1,212,292. NEEDLE-CUTTER. SAMUEL O. WADE, Chicago, Ill. Filed June 24, 1915. Serial No. 36,051. (Cl. 144—146.)

1. In a needle cutter, the combination of a pair of pliers, a knife pivoted to the outer end of one of the jaws, a face plate pivoted to the outer end of the other of the jaws of

the pliers, and a guide fastened to the face plate and having flanges passing around the edges of the knife blade for guiding the same parallel to the face plate.

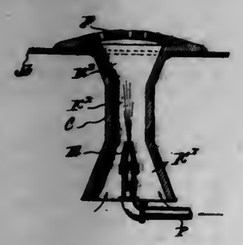


2. In a needle cutter, in combination, a pair of simple pliers hinged at a single point, a knife blade pivotally connected to the end of one jaw of the pliers, a face plate cooperating with said blade and having an opening therein for receiving the needle, said face plate being pivoted to the other jaw of the pliers, and a guide having flanges for guiding the knife parallel to the face plate, said guide being fastened to said face plate.

3. In a needle cutter, in combination, a pair of pliers pivotally connected together, a cutting blade pivoted to one of the jaws thereof, a face plate pivotally connected to the other jaw of the pliers and having an opening therein for receiving the inner end of the needle, one edge of said opening supporting the needle in opposition to the pressure of the blade in taking the cut, and a spring fastened to the jaw which supports the blade and pressing against the back of the blade to hold it in contact with the inner surface of the face plate.

4. In a needle cutter, in combination, a pair of pliers, a knife pivoted to one jaw thereof, a face plate pivoted to the other jaw thereof, a cross bar fastened to the jaw which supports the knife, and a spring fastened to said bar and abutting the back of the knife to hold the same pressed against the surface of the face plate, substantially as described.

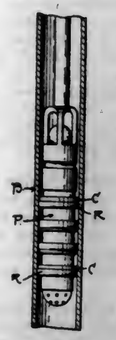
1,212,293. PORTABLE FORGE. ALBERT S. WALKER, Buffalo, N. Y., assignor to H. G. Trout Company, Buffalo, N. Y., a Corporation of New York. Filed Mar. 11, 1916. Serial No. 83,492. (Cl. 110—182.6.)



1. In a portable forge, in combination, a hearth, a grate therefor, a vertical draft tube having flaring upper and lower ends, connected to said grate, a nozzle projected into said draft tube and terminating near the top of the lower flare, said lower end of the draft tube being open, and means for supplying said nozzle with air under pressure, whereby additional air is induced through said flaring lower end and to the hearth.

2. In a portable forge, in combination, a hearth, a grate for said hearth, said grate constructed to afford more resistance to the passage of air at its center than at its periphery, an upwardly directed, substantially straight draft pipe leading to said grate, there being a flare at each end of said pipe, and an injector pipe entering said pipe from below and ending at about the top of the lower flare.

1,212,294. RETAINING-CUP. WILLIAM J. WALKER, Bolivar, N. Y., assignor of one-fourth to Ruthven H. Ball, Bolivar, N. Y. Filed Apr. 29, 1916. Serial No. 94,417. (Cl. 103—63.)



In combination with a pump barrel and a leather cup of a pump piston working in said barrel, a retaining cup adapted to snugly receive the lower portion of the leather cup, said retaining cup being formed of a metal capable of expansion under pressure and comprising a continuous annular member having its lower marginal portion provided with an inturned continuous annular flange, said annular flange and member being pressed out of sheet metal, the annular member being continued in cylindrical form to coact with the inner surface of the pump barrel to form a tight fit therewith.

1,212,295. CULTIVATOR-SHOVEL. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Mar. 2, 1915. Serial No. 11,458. (Cl. 97—11.)



1. A cultivator shovel comprising an equilateral blade, a shovel standard, a shank blade portion secured thereto, and means for securing the blade to the standard centrally below the shank with one of the edges of the blade in juxtaposition thereto, said means permitting the blade to be rotatably adjusted on an axis disposed centrally thereof to position any of its edges in juxtaposition to the shank whereby any of the apices of the blade may be positioned as the working point thereof, the shank being shaped to form a continuation of the shovel face of the blade when the same is in any of its adjusted positions.

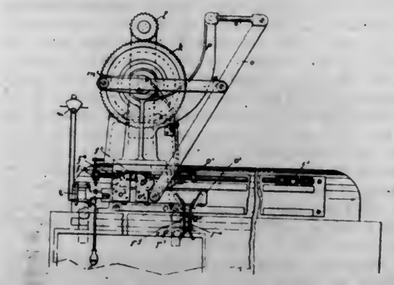
2. A cultivator shovel comprising a blade, a pivot bolt attached to the center of the blade, means for supporting the blade, including a block shaped to receive the rear face of the blade and provided with a vertically extending slot for the reception of said pivot bolt and, a shank blade-portion secured to the block above the blade and cooperating with the adjoining edge thereof so as to hold the blade against rotation on its pivot bolt and to form a continuation of the shovel surface of the blade, said slot in the block permitting the bolt to be secured in different positions in the slot so that when the blade becomes worn it may be adjusted and maintained in coöperative relation to the shank.

3. A cultivator shovel comprising an equilateral blade, a shovel standard, a shank blade-portion secured thereto, and means for rigidly securing the blade to the standard

centrally below the shank with one of the edges of the blade in juxtaposition to the shank said means permitting the blade to be rotatably adjusted on an axis disposed centrally thereof to position any of its edges in juxtaposition to said shank, the shank being shaped to form a continuation of the shovel face of the blade and being of less width than any of the cutting edges thereof.

4. A cultivator shovel comprising a blade the working face of which is in the form of a concave-spherical triangle, means for mounting the blade so that it may be rotatably adjusted on an axis disposed centrally thereof whereby to position any one of its vertices as the working point of the blade, a shank blade portion having a working face of less width than a side of the blade, and means for securing the shank centrally above the blade in juxtaposition thereto, said working face of the shank being shaped so as to form a continuation of the working face of the blade regardless of which vertex thereof is positioned as the working point and forming a central divide for passing the earth sidewise over the two uppermost vertices which form side-shank sections of the blade.

1,212,296. DEVICE FOR OPENING AND CLOSING DOORS. LOUIS T. WEISS and HUBERT F. FRANKLIN, Brooklyn, N. Y., assignors to Reliance Ball Bearing Door Hanger Company, New York, N. Y., a Corporation of New York. Filed Nov. 17, 1915. Serial No. 61,867. (Cl. 187—52.)



1. Devices for opening and closing sliding doors comprising in combination a prime mover, operative connections between the prime mover and the door including a clutch, a lug in operative relation with the door in certain positions to hold the door against sliding movement, and manually operable means to move the lug from its operative relation with the door and simultaneously to initiate operation of the prime mover and throw the clutch into operative position.

2. Devices for opening and closing doors comprising, in combination, an electric motor, operative mechanical connections between the motor and the door by which unidirectional rotation of the motor imparts opening and closing movements to the door, a single controlling switch in the circuit of the motor, manually operable means to close said switch and devices movable with the door to initiate automatically the opening of the switch.

3. Devices for opening and closing doors comprising, in combination, an electric motor, operative connections between the motor and the door including a clutch, a switch in the circuit of the motor, a cam for controlling the positions of the clutch and the switch, and means for imparting a rotative movement to said cam to alternately close and open the switch and throw the clutch into and out of operative positions respectively.

4. Devices for opening and closing doors comprising, in combination, an electric motor, operative connections between the motor and the door including a clutch, a shifter fork for the clutch, a switch in the circuit of the motor connected to said shifter fork, a rotatable cam engaging the fork and determining the position of the clutch and the switch, pawl and ratchet devices for imparting a step by step movement to said cam, a spring for maintaining the end of the shifter fork against the face of the cam, a spring for restoring the pawl to normal position after each movement thereof, and a single manually operable lever for rotating the cam to initiate the opening and closing movements of the door.

5. Opening and closing devices for elevator doors comprising an electric motor carried on the elevator, operative connections between the electric motor and the door including a clutch, a shifter fork engaging the clutch, a switch in the motor circuit actuated by the shifter fork, a manually operable rock shaft for closing said switch and simultaneously shifting the clutch, lugs carried adjacent opposite ends of the rock shaft and cams movable with the door and arranged to strike said lugs and oscillate the rock shaft as the door approaches its extreme positions of travel, whereby the switch and clutch are automatically operated.

[Claim 6 not printed in the Gazette.]

1,212,297. FOUNTAIN-PEN. WILLIAM A. WELTY, Waterloo, Iowa. Filed Mar. 16, 1916. Serial No. 84,608. (Cl. 120—46.)

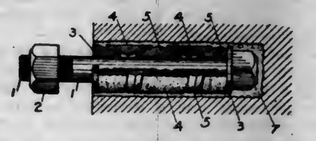


1. In a fountain-pen, a barrel having a longitudinal slot, an elastic compressible ink-reservoir in said barrel, a pressure-bar underlying said ink-reservoir and having one end bifurcated, a J-shaped lever having its longer member movably seated in the barrel-slot, its bent part mounted between the bifurcations of the pressure-bar, and its shorter member underlying the pressure-bar.

2. In a fountain-pen, a barrel having a longitudinal slot, an elastic compressible ink-reservoir in said barrel, a pressure-bar underlying the reservoir and having depending laterally-spaced lugs, and a J-shaped lever having its longer member seated movably in the barrel-slot, its shorter member located under the pressure-bar with its extremity located between the depending lugs thereof.

3. In a fountain-pen, a barrel having a longitudinal slot, an elastic compressible ink-reservoir in said barrel, a pressure-bar underlying the reservoir having depending laterally-spaced lugs and having one end bifurcated with the inner spacing of the bifurcations wider than its outer spacing, and a J-shaped lever whose longer member is seated in the barrel-slot to swing outwardly, its middle bent part passed through the wider spacing of the pressure-bar bifurcations, and its shorter member underlying the pressure-bar with extremity seated between said depending lugs.

1,212,298. EXPANSION-BOLT. MILTON T. WESTON, New York, N. Y. Filed Feb. 5, 1913. Serial No. 746,370. (Cl. 85—2.4.)



1. In an expansion bolt of the type described the combination with a bolt, of an inner spiral member adapted to be compressed in the direction of its axis, with a separate outer co-acting co-spiral member adapted to be expanded circumferentially by the compression of the inner member.

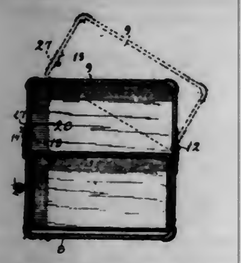
2. In an expansion bolt the combination of an outer spiral expansion member each convolution of which is wedge-shaped on its inner side, of a co-spiral inner member

each convolution of which is wedge-shaped on its outer side, and longitudinal compression means to cause circumferential expansion of the outer spiral member by the wedging action of the convolutions of the members.

3. In an expansion bolt, a resilient inner spiral member coöperating with a resilient co-spiral outer member having a soft alloy inlay on its outer surface, means for compressing both members longitudinally to expand the outer member to fill the anchorage hole, and means for releasing the longitudinal compression to allow the expansion members to free themselves from the anchorage hole.

4. In an expansion bolt the combination of a hollow cylindrical sleeve having an annular flange at one end and a tapped hole at the other to receive a stud or tap bolt, of co-spiral expansion members adapted to slip over said sleeve and to be expanded by longitudinal compression, of a collar also adapted to slip over said sleeve and to bear against the expansion members, and means for forcing said collar inwardly, thereby compressing the expansion members longitudinally between the collar and the annular flange.

1,212,299. TRUNK-LOCKING MEANS. GEORGE HENRY WHEARY, Racine, Wis. Filed Jan. 9, 1913. Serial No. 740,909. (Cl. 70—115.)



1. The combination with a trunk divided longitudinally of its length to form two hinged together members and also having a top cover member for one of the hinged together members, of locking means therefor comprising a locking means for the top cover member, a locking means for the trunk hinged together members remote from the top cover member, and a manually operable lock controlling means exposed in operable position when one of the members is swung to open position to permit the opening of the other member.

2. The combination with a trunk divided longitudinally of its length to form two hinged together members and also having a top cover member for one of the hinged together members, of a locking means therefor comprising a locking means for the top cover member, a locking means for the hinged together members remote from the top cover member, and a manually operable lock controlling means exposed in operable position adjacent to the top portion of the trunk when the top cover member is swung to open position to permit the opening of the hinged together members.

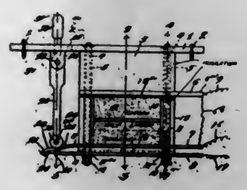
3. The combination with a trunk having an outer side cover and an outer top cover, of locking means therefor comprising a lock for one of the covers, a spring lock for the other cover, and a manually operable member positioned within the trunk and connected to the spring lock and extending to a point adjacent to the opening of the trunk covered by the cover to be first opened for unlocking the spring lock.

4. The combination with a trunk having an outer side cover and an outer top cover, of locking means therefor comprising a lock for the top cover, a plurality of locks for the side cover, and a manually operable slidable bar positioned within the trunk and connected to the locks of the side cover and extending to a point adjacent to the opening of the trunk covered by the top cover.

5. The combination with a trunk having an outer side cover and an outer top cover, of locking means therefor comprising a lock for the top cover, a plurality of locks for the side cover, and a manually operable slidable bar positioned within the trunk and having a flexible connection with the locks of the side cover and extending to a point adjacent to the opening of the trunk covered by the top cover.

[Claim 6 not printed in the Gazette.]

1,212,300. COMBINED CUT-OUT AND LIGHTNING-ARRESTER FOR TELEPHONE SYSTEMS. HARRY SPENCER WHEATON, Dallas, Iowa. Filed May 3, 1916. Serial No. 95,137. (Cl. 175—30.)

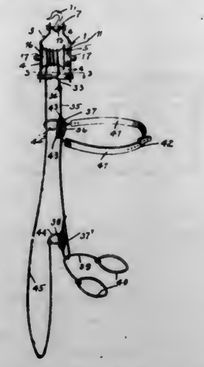


1. A combined cut-out and lightning arrester comprising a plate, an insulating body member adjacent thereto, plates adjacent the under part of the body, two sets of conducting plates, one set having connections with the main line and the ground, the other set having connection to the wires of a telephone receiver and bell, means for insulating the plates of one set from the plates of the other set, a series of resistance members between the ground and the main line connected plates and the plates adjacent the insulating body, insulated means extending through the first plate, the body, the plates adjacent the under part of said body and the two sets of plates for holding the parts together, the two sets of plates having yieldable terminal contacts, and means for throwing said contacts in and out of engagement.

2. A combined cut-out and lightning arrester comprising a plate, an insulating body member adjacent thereto, plates adjacent the under part of the body, two sets of conducting plates, one set having connections with the main line and the ground, the other set having connections to the wires of a telephone receiver and bell, means for insulating the plates of one set from the plates of the other set, a series of resistance members between the ground and the main line connected plates and the plates adjacent the insulating body, insulated means extending through the first plate, the body, the plates adjacent the under part of said body and the two sets of plates for holding the parts together, the two sets of plates having yieldable terminal contacts, and means for throwing said contacts in and out of engagement, said operating means comprising a lever having rollers at its lower end, the upper terminal contacts having crotch portions to receive said rollers, said resistance means comprising upper and lower sets of carbon members, and a plate between the upper carbon members and extending between the lower carbon members.

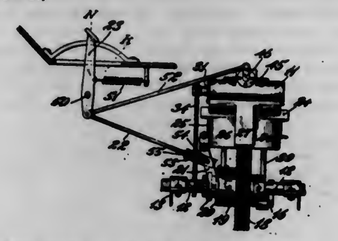
1,212,301. FIRE-ESCAPE. JACOB O. WICK, Clifford, N. D. Filed May 4, 1914. Serial No. 836,282. (Cl. 227—11.)

In a fire escape, the combination with a fixed pulley having a rope wound thereon and depending therefrom, of gripping means comprising a ring encircling the depending portion of said rope, a second ring disposed at right angles to and partially encircling said first named ring, said depending portion of the rope passing over the second named ring, through the first named ring, and over the opposite side of the second named ring, a body sling detachably connected to said second ring, and additional gripping means arranged beneath the first named means



embodying a pair of leg engaging rings for the purpose set forth.

1,212,302. POWER-BRAKE. ALLEN B. WILDER, St. Louis, Mo. Filed Sept. 16, 1915. Serial No. 50,922. (Cl. 188—5.)



1. A power brake for motor vehicles and the like comprising an air compressor, a valve mechanism for controlling the admission and exhaust of air to said compressor, said valve mechanism being automatically actuated by said compressor, a pressure chamber communicating with the exhaust of said compressor, and means arranged to be operated by the operator of the motor vehicle for regulating the supply of outside air to said valve mechanism.

2. A power brake for motor vehicles and the like comprising an air compressor, a valve mechanism automatically operated by said compressor and controlling the admission and exhaust of air thereto, the pressure chamber communicating with the exhaust of said compressor, a clutch device for operatively connecting said compressor to the wheels of the motor vehicle, and means arranged to be operated by the operator of the motor vehicle for operating said clutch and for regulating the supply of outside air to said valve mechanism.

3. A power brake for motor vehicles and the like comprising an air compressor having two cylinders, each of said cylinders having one end thereof open, a valve mechanism automatically operated by said compressor and controlling the admission and exhaust of air thereto, a pressure chamber communicating with the exhaust of said cylinders, and means arranged to be operated by the operator of the motor vehicle for regulating the supply of outside air to said valve mechanism.

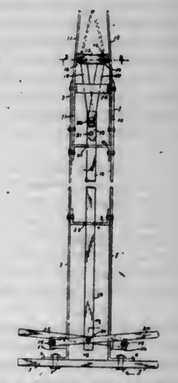
4. A power brake for motor vehicles and the like comprising an air compressor, a valve mechanism automatically operated by said compressor and controlling the admission and exhaust of air thereto, a pressure chamber communicating with the exhaust of said compressor, a valve for regulating the supply of outside air to said valve mechanism, a valve for regulating the exhaust of air from said pressure chamber, and means arranged to be operated by the operator of the motor vehicle for actuating said valves.

5. A power brake for motor vehicles and the like comprising an air compressor having two cylinders, pistons moving in said cylinders, means for operatively connecting said pistons to the wheels of the motor vehicle, a pressure chamber, a valve mechanism automatically operated by said compressor and controlling the supply of air to said cylinders and the exhaust of air from said cylinders to said pressure chamber, and means for regulating the supply of outside air to said mechanism and for regulating the exhaust of air from said pressure chamber.

[Claims 6 to 13 not printed in the Gazette.]

1,212,303. WEEDER. WILSON W. WILT, Elkhart, Ind. Filed May 24, 1915. Serial No. 30,035. (Cl. 55—148.)

1. The combination, in a weeder, of the resilient self opening jaws provided with independent brackets, and means connected with said brackets for actuating and forcing the jaws together.



2. The combination, in a weeder, of resilient self opening jaws provided with independent brackets, each of said brackets being rigidly secured to a jaw and projecting laterally therefrom to a point adjacent the opposite jaw, and means connected with said brackets for actuating and forcing the jaws together.

3. The combination, in a weeder, of resilient self opening jaws provided with independent laterally projecting brackets, each of said brackets projecting to a point adjacent the opposite jaw, and manually operable means connected with said brackets for actuating and forcing the jaws together.

4. The combination, in a weeder, of resilient opposed jaws normally open and convergent, each of said jaws being provided with a laterally projecting bracket, and means connected with said brackets for actuating and forcing the jaws together.

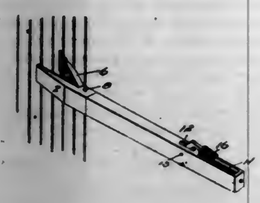
5. The combination, in a weeder, of a frame having spaced and opposed end members, resilient jaws rigidly secured to said frame end members and projecting therefrom in a normally open state, said jaws being provided with laterally projecting brackets, and means for closing said jaws said means comprising hand levers pivotally mounted upon said frame, and actuating rods connecting said levers with said jaw brackets.

[Claims 6 to 8 not printed in the Gazette.]

1,212,304. TUNING INSTRUMENT. CHARLES C. WOODS, Denver, Colo. Filed Mar. 31, 1916. Serial No. 88,050. (Cl. 84—43.)

1. The herein described piano tuning instrument comprising two jaws having their inner faces flat and their outer faces beveled, yielding means for throwing said jaws normally into contact with each other, and manually oper-

able devices for overcoming said means and opening the jaws, for the purpose set forth.



2. The herein described tuning instrument for pianofortes and the like, the same comprising two jaws pivotally connected with each other, a spring for throwing them normally into contact, and manually operable devices for swinging them open in opposition to the tension of said spring.

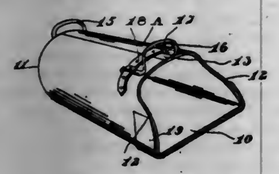
3. The herein described tuning instrument for pianofortes and the like, the same comprising two jaws pivotally connected with each other, a handle rigidly connected with and projecting from one jaw, a spring in said handle, connections between it and the other jaw for holding the latter normally in contact with the first-named jaw, and manually operable devices for overcoming the tension of the spring and swinging the movable jaw open, for the purpose set forth.

4. The herein described tuning instrument for pianofortes and the like, the same comprising two jaws pivotally connected with each other, a handle rigidly connected with and projecting from one jaw, a spring in said handle, a rod connecting the spring with the movable jaw for turning it on its pivot, and a thumb-piece pivoted in the handle and connected with said rod for moving the latter against the tension of the spring, for the purpose set forth.

5. In a tuning instrument for pianofortes and the like, the combination with a fixed jaw having a shank at its inner end and a pair of knuckles on its inner face with a cavity between, a movable jaw having a single knuckle pivoted between those on the fixed jaw, and a lug on the inner face of the movable jaw extending into said cavity; of a handle connected with said shank, a rod extending through the handle and connected with said lug, mechanical means for normally drawing upon said rod to throw the inner faces of the jaws into contact, and manual devices for overcoming said means and opening the jaws, for the purpose set forth.

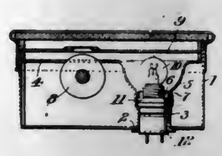
[Claims 6 and 7 not printed in the Gazette.]

1,212,305. GRAIN-SCOOP. JOHN HENRY WORSELL, Gull Lake, Saskatchewan, Canada. Filed June 7, 1916. Serial No. 102,361. (Cl. 65—36.)



A scoop of the class described provided with a flat bottom and having the sides at the front end inwardly inclined and bent to form a curvilinear top, the rear end of the scoop being circular and provided with a plurality of orifices through the top thereof, handles secured to the rear and front end of the scoop respectively, and a reinforcing rib embraced by the front handle and extending around the curvilinear top of the scoop, substantially as described.

1,212,306. ILLUMINATOR FOR SPEEDOMETERS AND GAGES. EDWARD S. ABRAHAMS, Indianapolis, Ind. Filed June 19, 1914, Serial No. 846,144. Renewed July 6, 1916. Serial No. 107,870. (Cl. 240—2.)



1. In an odometer or speedometer having a dial with openings therethrough and indicators maintained opposite the aforesaid openings through the dial, a plate having therethrough openings which register with the openings through the dial the plate being maintained to provide a space between the same and the dial said plate having a depressed portion, and a lamp maintained within the depressed portion of the plate.

2. In a device of the character set forth, a dial having sight openings therethrough, a plate that is spaced apart from and is maintained parallel with the dial said plate having a depressed portion to one side of its major portion and openings in alinement with the sight openings through the dial, indicators which extend through the openings formed in the plate, and an incandescent electric light maintained within the depressed portion of the plate to be located beneath the dial.

3. In a device of the character set forth, an opaque dial or plate having sight openings therethrough, indicators maintained below the sight openings, a plate having therethrough openings which are in alinement with the openings through the dial through which extend a portion of the indicators said plate also having a depressed portion, a lamp associated with the plate and means for maintaining the plate and dial separated to provide a light chamber.

4. In a device of the character set forth, an opaque dial having a sight opening therethrough the opposite sides of the sight opening being bent to be disposed at converging angles above the plane of the dial, a cylindrical indicator maintained so that its surface will be below the plane of the dial, an illuminating means maintained so that direct light rays therefrom will illuminate an exposed portion of the indicator and deflected light rays will illuminate the exposed portion of the indicator on the opposite side of the center of the indicator from that part thereof which is illuminated by the direct light rays.

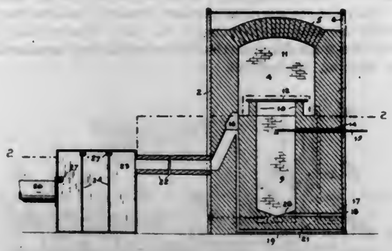
5. In a device of the character described, a casing, a dial having sight openings therethrough, a plate which is maintained parallel with the dial and is provided with openings which register with the sight openings through the dial said plate also having a depressed bowl-shaped portion with a hollow tubular wall, a member maintained in detachable engagement with the tubular wall, and a socket for an electric lamp associated with the hollow tubular wall of the plate and with its detachable engaging member.

1,212,307. CREMATION-FURNACE. GEORGE C. ADAMS, San Francisco, Cal. Filed Apr. 17, 1916. Serial No. 91,763. (Cl. 110—3.)

1. A cremation furnace having a casket chamber and supports for a casket therein, a furnace pit below said supports, and a fluid fuel burner directed downwardly into said furnace pit.

2. A cremation furnace having a furnace pit and a casket chamber above said pit, the sides of the pit having upward extensions into the casket chamber, bars for supporting a casket, supported by said extensions, the sides of the pit being otherwise disconnected with each other.

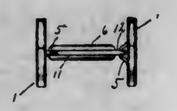
3. A cremation furnace having a casket chamber and supports for a casket therein, a furnace pit below said supports, a fluid fuel burner directed downwardly into said furnace pit, and a long, narrow air conduit leading into said furnace pit below said burner.



4. A cremation furnace having a casket chamber and supports for a casket therein, a furnace pit below said supports, a fuel burner directed downwardly into said furnace pit, a long, narrow air conduit leading to the bottom of said furnace pit and a long, narrow air conduit leading through the wall of said furnace pit and discharging immediately beneath a casket supported upon said supports.

5. A cremation furnace having a casket chamber and supports for a casket therein, a furnace pit below said supports, a fuel burner directed downwardly into said furnace pit, a long, narrow air conduit leading to the bottom of said furnace pit, an escape flue from one side of the casket chamber, and a long, narrow air conduit leading through the wall of said furnace pit and discharging beneath a casket supported upon said supports on the side of the casket chamber remote from said escape flue.

1,212,308. FASTENING DEVICE. CHARLES HENRY ALLEN, Attleboro, Mass. Filed Mar. 6, 1916. Serial No. 82,380. (Cl. 24—102.)

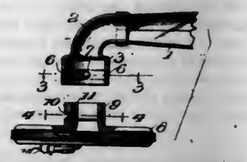


1. An extensible fastening device for soft cuffs and the like, comprising heads with loops upon their adjacent faces, relatively slidable interengaging links each having an end passed through one of said loops, said links being guided one upon the other, and resilient means in the links for restraining the same against movement in opposite directions, the same forming a compound flexible connecting member.

2. An extensible fastening device for soft cuffs and the like, comprising heads with loops upon their adjacent faces, relatively slidable interengaging links each having an end passed through one of said loops, said links being guided one upon the other, and resilient means in the links for restraining the same against movement in opposite directions, the same forming a compound flexible connecting member, the loops of the heads and the connecting member extending in the same plane to facilitate insertion in the buttonholes of the cuff.

3. A fastening device of the character designated, comprising heads having loops, a housing link composed of parallel shells spaced from each other with a connecting loop at one end and interlocked loops at the other end forming a post, said housing having side openings, a link slidable in said openings, one end of said housing being connected with one of said loops and one end of said link with the other loop, and a spring inclosed by said housing and link and abutting at one end against a post of the housing and at the other end against one end of the said link.

1,212,309. MEANS FOR SECURING A SOUND-BOX TO THE TONE-ARM OF TALKING-MACHINES. HARRY WOODWARD ARCHER, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed May 19, 1915. Serial No. 29,161. (Cl. 274—24.)



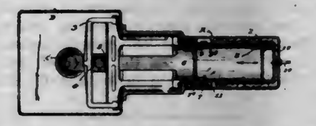
1. In a talking machine, the combination of a tone-arm having an exterior peripheral groove in the end or neck-portion thereof, a spring resting in said groove with its outer surface substantially flush with the outer surface of said neck-portion, a projection on said spring extending within the said neck-portion, and a sound-box having a hub extending within the said neck-portion and engaged and held in position by said projection.

2. In a talking machine, the combination of a tone-arm having an exterior annular groove in the end or neck-portion thereof, an annular split ring resting in said groove with its outer surface substantially flush with the outer surface of said neck-portion, a projection on said ring extending within the said neck-portion, and a sound-box having a hub extending within the said neck-portion and engaged and held in position by said projection.

3. In a talking machine, the combination of a tone-arm having an exterior annular groove in the end or neck-portion thereof, an annular split ring resting in said groove with its outer surface substantially flush with the outer surface of said neck-portion, a projection on said ring extending within the said neck-portion, and a sound-box having a hub extending within the said neck-portion and provided on its outer surface with a groove extending longitudinally thereof and registering with a second groove extending peripherally thereof, said peripheral groove being engaged by said projection when the parts are in operative position.

4. In a talking machine, the combination of a tone-arm having an exterior annular groove in the end or neck-portion thereof, a split spring ring resting in said groove with its outer surface substantially flush with the outer surface of said neck-portion, a pin rigidly secured to said spring ring and projecting through an opening in the bottom of said groove, and a sound-box having a hub extending within the said neck-portion and engaged and held in position by said pin.

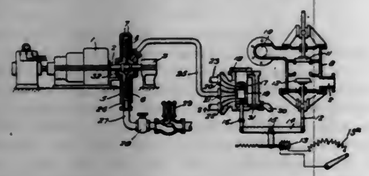
1,212,310. INTERNAL-COMBUSTION ENGINE. PHILIP AVILLA, San Francisco, Cal. Filed Nov. 17, 1915. Serial No. 61,922. (Cl. 123—74.)



1. In an internal combustion engine, a base, a cylinder surmounting the same, a hollow piston operating in the cylinder and having its inner end opened, a rotary crank shaft in the base, a transversely slotted frame having a pair of fixed arms fixedly secured to the piston, the crank of the shaft operating in the slot of the frame, a stationary piston arranged in the hollow piston and provided with fixed extensions connected concentrically to the shaft, said cylinder and hollow piston having ports to admit gas to the interior of the latter at the end of the outward reciprocation, a by-pass to transfer the gas from the hollow piston to the cylinder at the end of the power stroke, and means to ignite the charge thus introduced.

2. In an internal combustion engine of the character described, the combination with the cylinder, of a tubular main piston closed at the end adjacent to the cylinder head and having outward extensions on its opened end operating in grooves in the cylinder, a fixed interior piston slidably received in the open end of the main piston, a shaft, means connecting the shaft to the piston extensions to reciprocate the main piston, said cylinder and piston having ports to admit gas to the interior of the main piston at the end of its outward reciprocation, a by-pass to transfer the gas from the interior of the piston to the interior of the cylinder at the end of the power stroke, and means to ignite the charge thus introduced.

1,212,311. TURBINE-CONTROL MECHANISM. JAMES NICOLSON BAILEY, Stretford, England, assignor to The British Westinghouse Electric and Manufacturing Company, Limited, London, England. Filed Sept. 3, 1910. Serial No. 580,284. (Cl. 74—46.)



1. In combination with a prime mover, means for controlling the operation of the prime mover, a liquid brake for said prime mover, and means for delivering braking liquid to the brake and for simultaneously actuating the controlling means of the prime mover to shut off the actuating fluid thereto, and for simultaneously actuating the controlling means of the prime mover to deliver actuating fluid, and for connecting the interior of the brake with a region of low pressure.

2. In combination with a prime mover, controlling means therefor, a liquid brake for stopping the prime mover, a valve for delivering braking liquid to the brake, and means for simultaneously actuating said valve and said controlling means to stop said prime mover.

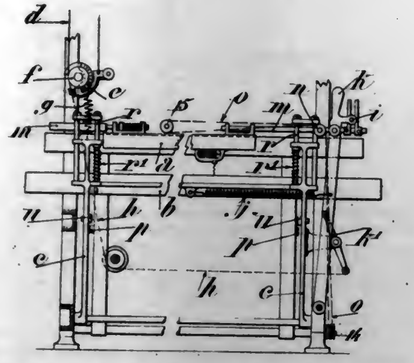
3. In combination with a prime mover, a regulating valve for controlling the delivery of motive fluid to the prime mover, an auxiliary valve for cutting off the fluid supply to the regulating valve and to said prime mover, a liquid brake for the prime mover, means for placing the interior of the brake in communication with a region of low pressure and for opening the auxiliary valve, and for cutting off communication between the interior of the brake and the region of low pressure, for delivering liquid to the brake and for closing the auxiliary valve.

4. In combination with a prime mover, a valve for cutting off the supply of motive fluid to the prime mover, a liquid brake for stopping the prime mover, means for simultaneously connecting the interior of the brake to a region of low pressure and for opening said valve, and for simultaneously cutting off communication between the interior of the brake and the region of low pressure, for delivering liquid to said brake and for closing the valve.

1,212,312. LOOM. ALEXANDRE BARBIER, Lyon, France. Filed May 27, 1913. Serial No. 770,115. (Cl. 139—68.)

1. The combination with a loom; of a figurer bar, shuttles therefor, a pivoted frame extending transversely of the loom, vertically slidable members upon said frame, buffers for said sliding members, arms adapted to turn on their axes and upon which said figurer bar is mounted, means for connecting said frame to the batten of the loom to impart a rocking movement thereto, means for imparting horizontal movement to said figurer bar and means operated by the jacquard mechanism of the loom for varying the amplitudes of said horizontal movement.

2. The combination with a loom; of a figurer bar, shuttles therefor, a pivoted frame extending transversely of the loom, vertically slidable members upon said frame, buffers for said sliding members, arms adapted to turn on their axes and upon which said figurer bar is mounted, means for connecting said frame to the batten of the loom to impart a rocking movement thereto, means for imparting horizontal movement to said figurer bar, and means for imparting vertically reciprocating movement to said figuring mechanism.



3. The combination with a loom of figuring mechanism, shuttles therefor, a pivoted frame extending transversely of the loom supporting said mechanism, means for imparting forward and backward rocking movement only to said frame, said frame being free from lateral movement, means for imparting horizontal movement of said figuring mechanism upon said frame, means for imparting a rising and falling movement to said figuring mechanism, and means operated by the jacquard mechanism of the loom for varying the amplitudes of said horizontal movement, said figuring mechanism being turnable through an angle to facilitate changing of the shuttles during weaving of the fabric ground.

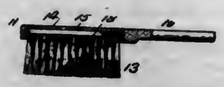
4. The combination with a loom of figuring mechanism, shuttles therefor, a pivoted frame extending transversely of the loom supporting said mechanism, means for imparting rocking movement to said frame, means for imparting horizontal movement to said figuring mechanism upon said frame, means for imparting a rising an falling movement to said figuring mechanism, means operated by the jacquard mechanism of the loom for varying the amplitures of said horizontal movement, said figuring mechanism being turnable through an angle to facilitate changing of the shuttles during weaving of the fabric ground, and means operated by the jacquard mechanism of the loom to bring said figuring mechanism into operation.

5. The combination with a loom of a figurer bar, shuttles therefor, a pivoted frame extending transversely of the loom, vertically slidable members upon said frame, buffer springs for said sliding members, horizontal arms adapted to turn on their axes carried by said members and upon which said figurer bar is mounted, means governed by the jacquard mechanism for connecting said frame to the batten of the loom to impart a rocking movement thereto, means for imparting horizontal movement to said figurer bar, means operated by the jacquard mechanism of the loom for varying the amplitudes of said horizontal movement, an inclined abutment, levers, rollers thereon adapted to roll on said abutment, rods connecting said levers to said horizontal arms, and means for imparting movement to said abutment to impart reciprocating rising and falling movements to said figurer bar.

[Claim 6 not printed in the Gazette.]

1,212,313. BRUSH. THOMAS F. BARRY, Newark, N. J., assignor to Rubber & Celluloid Harness Trimming Co., Newark, N. J., a Corporation of New Jersey. Filed Dec. 27, 1911. Serial No. 668,024. (Cl. 15—34.)

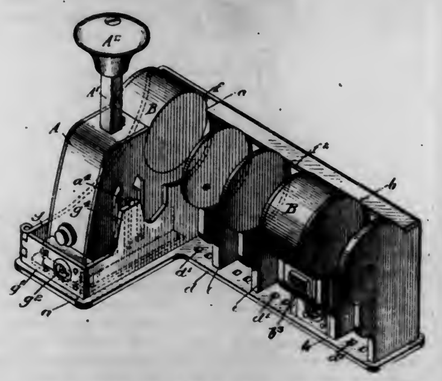
1. A brush comprising a handle, a head having therein an interior closed recess conforming generally in outline to the outline of the head, a set of tufts of bristles having their knot-ends extended through one face of the head and into said recess, a metal plate within said recess and through which said knot ends also extend, and a body of hard rubber heat-vulcanized on said knot-ends and confined within said recess and against one side of said plate, said tufts of bristles and body of hard rubber constituting a unit previous to insertion in the head.



2. A brush comprising a handle, a head having therein an interior recess conforming generally in outline to the outline of the head, a set of tufts of bristles having their knot-ends extended into said recess, a metal plate concealed within said recess and through which said knot-ends extend, a body of hard rubber heat-vulcanized on said knot-ends and confined within said recess and against one side of said plate, and a perforated plate at the other side of said metal plate closing one side of said recess and through which said tufts of bristles extend, said head and said perforated plate being of plastic material and connected in proper relation to each other, and said tufts and body of hard rubber constituting a unit previous to insertion in the head.

3. A brush comprising a handle and a head integral therewith of plastic material, said head having in its lower side a recess conforming generally to the outline of the head, a perforated plate of plastic material closing the open side of said recess, a metal plate on said perforated plate and concealed within said recess, a set of tufts of bristles extended at their knot ends through both of said plates and into said recess, and a body of heat-vulcanized hard rubber on the knot-ends of said tufts and the upper side of said metal plate and concealed within said recess.

1,212,314. STAMP-AFFIXER CABINET. JESSE STUART BATES, Rochester, N. Y., assignor to Multipost Company, Rochester, N. Y., a Corporation of New York. Filed May 1, 1913. Serial No. 764,759. (Cl. 216—11.)



1. The combination with a stamp affixer comprising a stamp affixing mechanism and a detachable stamp container, of a cabinet having a plurality of compartments each adapted to receive and secure a stamp container which is itself adapted to coöperate with the affixing mechanism and interchangeable with the containers in other compartments.

2. The combination with a stamp affixer comprising a stamp affixing mechanism as one element and a detachable stamp container as a second element, of a cabinet adapted to secure against unauthorized removal therefrom a plurality of said containers in position for independent selection and use interchangeably with each other on said affixer.

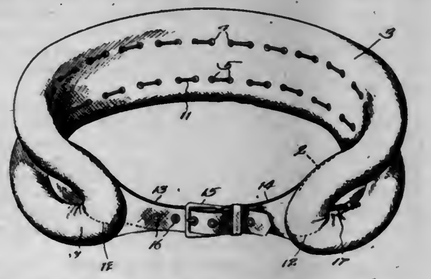
3. The combination with a stamp affixer comprising a stamp affixing mechanism and detachable stamp container provided with a lock which secures it to said affixing mechanism when in use, of a cabinet adapted to receive a plurality of said containers and provided with means whereby each of the containers is independently secured in the cabinet by its respective lock.

4. The combination with a stamp affixer comprising a stamp affixing mechanism as one element and a detachable stamp container fitted thereto as a second element, of a cabinet having an open side which is the counterpart of the portion of the container which connects with the affixing mechanism, said cabinet being adapted to receive and support the container when not in use on the affixing mechanism.

5. The combination with a stamp affixer comprising a stamp affixing mechanism as one element and a detachable stamp container as a second element, of a cabinet having a compartment in which the affixing mechanism may be secured and provided with other compartments in which a plurality of said second elements may be independently secured against unauthorized removal when not in use.

[Claims 6 and 7 not printed in the Gazette.]

1,212,315. LIFE-BELT. SWAN P. BJERRE, Chicago, Ill. Filed Aug. 28, 1916. Serial No. 117,147. (Cl. 9—17.)



1. The combination with an endless air tube provided with an air-inlet valve and doubled to form a pair of air-belts with intercommunicating ends common to both, and a casing supporting said air belts in their said relation.

2. The combination with an endless inner air tube doubled to form a belt with ends, said belt consisting of two separate air belts communicating with each other at their ends, a casing common to both and provided at its ends with means for securing said ends together, and means for lacing said separate air belts individually to said casing.

3. The combination with a doubled endless air tube provided with a valve, of a casing therefor provided with ends adapted to be temporarily fastened together and separately incasing between their ends the two runs of said doubled air tube.

4. The combination with an endless air tube doubled in the form of a belt with ends, of a casing for said tube, which casing, together with said air tube, forms a life preserver belt with substantially two waist-girdling air bands, and means for inflating or deflating same.

5. The combination with an endless tube adapted to be air-inflated, of a casing the ends of which are adapted to be coupled together and uncoupled, said casing supporting and covering said tube in the form of a double air belt.

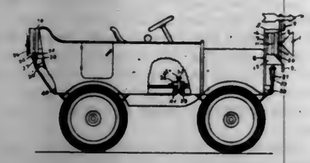
[Claims 6 to 8 not printed in the Gazette.]

1,212,316. DIRECTION-INDICATOR. CHARLES E. BOBERG, Fort Worth, Tex. Filed Sept. 15, 1914. Serial No. 861,798. (Cl. 116—31.)

1. Indicating mechanism comprising indicators, a rotatable shaft carrying said indicators, a pair of vertically

movable slides having coöperating slots therein, and a pin rigid with said shaft projecting in the slots in said slides.

2. Indicating mechanism for automobiles comprising indicators, a rotatable shaft carrying said indicators and provided with a pin rigid with the shaft, coöperating vertically movable slides having coöperating slots therein into which said pin projects, and means extending from the seat of the automobile to said slides for operating said slides.



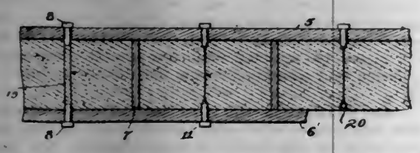
3. Indicating mechanism for automobiles comprising indicators, a rotatable shaft carrying said indicators, a pair of coöperating vertically movable slides having coöperating slots therein, operative connections between said slides and said indicators working in said slots, and selective members extending from the seat of the automobile and connected to said slides for turning said indicators to the right or to the left.

4. Indicating mechanism for automobiles comprising indicators, a rotatable shaft carrying said indicators and provided with a pin projecting therefrom, a pair of vertically movable slides engaging said pin and normally holding said shaft against rotation and provided with slots for permitting lateral movement of said pin and cam slots for causing said pin to move, and means for selectively moving said slides.

5. Indicating mechanism for moving vehicles comprising indicators, a rotatable shaft carrying said indicators and provided with a pin rigid therewith, a pair of coöperating slides having lateral slots and cam slots receiving said pin and normally holding the same against rotation, and means for selectively actuating said slides, one slide permitting the movement of said pin in the lateral slot and the cam slot of the slide being actuated causing said pin to move.

[Claims 6 to 8 not printed in the Gazette.]

1,212,317. CONCRETE-FORM FASTENER. JOSEPH C. BOEHM, Chicago, Ill. Filed Apr. 24, 1916. Serial No. 93,098. (Cl. 25—131.)



1. In a concrete form fastener, the combination with the forms, of a wire loop which is shorter than the distance between the forms, means for connecting the ends of the loop with the forms, and means for severing the ends of the loop below the surface of the wall.

2. In an apparatus of the character set forth, the combination of a wire loop for fastening forms, having one end terminating at a short distance from the inner face of the form, means for fastening the end of the loop to the form, and means for severing the end of the loop.

3. In a form fastener, the combination of a wire loop, a socket for fastening the end of the loop to the form, and means co-acting with said socket for severing the end of the loop within the inner surface of the form.

4. A fastener for concrete form ties, comprising a socket with a central opening adapted to receive a chisel, and a transverse hole through the inner end for receiving the fastening wire.

5. A fastening device for concrete form ties, comprising a socket having a head at one end thereof and closed at the opposite end, said socket being provided with a longitudinal aperture for receiving a cutting device, and being provided at its inner end with means for engagement with a fastening wire.

[Claims 6 and 7 not printed in the Gazette.]

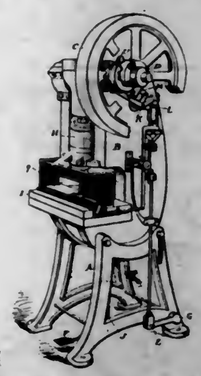
1,212,318. FIXTURE-LOOP. GEORGE A. BOOMER, Waterbury, Conn., assignor to The Plume & Atwood Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed May 17, 1916. Serial No. 97,998. (Cl. 248—30.)



1. A fixture loop having overlapping apertured ends, and a shouldered tubular member inserted in said apertured ends, the end of said member being headed down upon the overlapping ends.

2. A fixture loop having overlapping apertured ends, and a threaded tubular member provided with a shoulder, the end of said member being inserted in the overlapping apertured ends and headed thereon.

1,212,319. SAFETY DEVICE FOR POWER-PRESSES. WILLIAM BRETSNYDER, Chicago, Ill. Filed Dec. 22, 1913. Serial No. 808,192. (Cl. 164—107.)



1. A safety device for the purpose described, consisting of a plurality of rods and levers, constituting the connection between the treadle and the mechanism adapted to control the individual operations of the press—adapted to mechanically vary the distance between the said points during the operation of the press: a secondary lever pivotally attached thereto adapted to present a yielding constructive lever between the operator and the operative zone simultaneously with the functioning of the treadle; a clutch; said obstructive lever linked to a member of the said clutch; said clutch; said obstructive lever linked to a member of the said clutch; said clutch member provided with an extension adapted to intercept the travel of the toggle-levers, cause their collapse, and thereby effect the variation herein specified.

2. A safety device for hand-fed power punch presses, wherein the connecting means joining the treadle and the press operating mechanism, consists of a plurality of rods pivotally united by a plurality of toggle-levers, adjusted so as to permit an automatic increase of distance between the extreme points of attachment of the connecting-means; a lever assembled on the bed-plate adapted to effect the said increased length when any force is applied to move said lever out of a predetermined position.

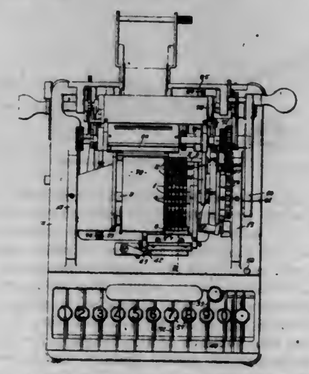
3. In combination with a hand-fed power punch press, a device constituting the connection between the treadle and press—controlling mechanism consisting of means for automatically increasing the distance between the points specified whereby the travel of the treadle may be neutralized and the normal effect of the treadle upon the press clutch nullified throughout the functioning of the treadle; a protective lever assembled upon the bed-plate adapted to be raised to a predetermined position by the treadle functioning; a trip-lever operated by the aforementioned lever adapted to effect the increased length of the said connecting mechanism when any force comes into contact with said protective lever—during every functioning of the press, except during the actual time of the descent of the punch; means to maintain said protective lever rigid during the descent of the punch.

4. A safety appliance for the purposes described embodying therein a lever mounted upon the bed-plate adapted to present an unobstructed approach to the punch when press is at rest and to present a yieldable obstructive barrier between the operator and the operative zone when the press is in action; a clutch controlling the movements of the said lever and conversely controlled by the said lever when any force is brought to bear upon the said obstructive carrier lever; a press connecting rod assemblage adapted to function said clutch and set the said obstructive lever in position of protection to the operator; a lever—forming an extension of one member of the said clutch—operated by the said obstructive lever—designed to effect a neutralizing of the treadle movement upon the press starting mechanism in the event the hand of the operator is within the operative zone of the punch.

5. A device of the character described embodying therein a plurality of coöperating toggle levers forming part of the treadle-connecting rod: a trip-lever operated from the bed-plate adapted to intercept the travel of the toggle-levers, alter their relative position and elongate the treadle-rod sufficiently to compensate the normal travel of the treadle.

[Claims 6 to 14 not printed in the Gazette.]

1,212,320. CALCULATING-MACHINE. WILLIAM H. BROWN, Syracuse, N. Y., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed June 6, 1910. Serial No. 565,197. (Cl. 235—60.)



1. In combination, in a recording machine, a movable element having gear teeth for engaging a toothed element, the teeth being normally disengaged from the toothed element and provided with type at their ends, said movable element being arranged to advance by gravity, and means for retaining the movable element in its starting position and for releasing said element, substantially as and for the purpose set forth.

2. In combination, in a recording machine, a wheel oscillating about a substantially horizontal axis and having a series of peripheral gear teeth for engaging a toothed element, the teeth being normally disengaged from the toothed element and provided with type at their ends, the wheel having a weighted portion arranged above and at one side of its axis and overbalancing the opposite portion of the wheel and thereby tending to advance the wheel by gravity, and means for retaining the wheel in its starting position and for releasing said wheel, substantially as and for the purpose described.

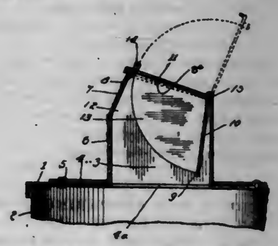
3. In combination, in a recording machine, a movable element having gear teeth for engaging a toothed element, the teeth being normally disengaged from the toothed element, a number of the teeth being provided with type at their ends, and another of the teeth being in advance of said number of teeth and being unprovided with type, the movable element being normally arranged with its tooth unprovided with type at the printing line, means tending to advance said element, and means for retaining the movable element in its starting position for releasing said element, substantially as and for the purpose specified.

4. In combination, in a recording machine, a substantially horizontal shaft, a wheel loosely mounted on the shaft and having an upper portion weighted and provided with a series of peripheral gear teeth for engaging a toothed element, a number of teeth being provided with printing characters at their ends, and another of the teeth being below said number of teeth and unprovided with a printing character, the weighted part being above and at one side of the axis of the shaft, and means for retaining the wheel in its starting position for releasing the wheel, substantially as and for the purpose set forth.

5. In a calculating machine, a series of elements shiftable laterally into denominational positions, the elements being movable individually in a direction at an angle to the shifting movements thereof into numerical positions, each element having means tending to actuate the same into numerical positions, means for normally holding the elements from movement by its actuating means, and means for controlling the shifting of said elements laterally and the releasing of said elements one by one, from holding means, substantially as and for the purpose described.

[Claims 6 to 56 not printed in the Gazette.]

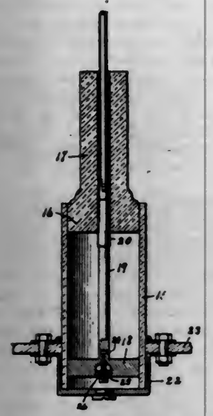
1,212,321. GARBAGE-CAN COVER. ALBERT BUCHHOLS, Milwaukee, Wis. Filed Apr. 5, 1915. Serial No. 19,395. (Cl. 220—115.)



In a device of the class described, the combination with a receptacle and a top therefor provided with an opening; of a housing permanently secured to said top and communicating with the opening in the latter, the rear wall of said housing being lower than the front wall thereof, whereby to provide rearwardly inclined upper edges on said housing, and the front wall of the housing having its upper portion thereof inclined rearwardly in a plane at substantially right angles to the plane of the upper edges of the housing, a cover for the housing hinged to the upper edge of the rear wall of the latter, a receiving plate formed integral with said cover at its hinged end and extending within the housing in a plane arranged at an obtuse angle to the plane of the cover proper, an inwardly projecting lip provided on the upper edge of the front wall of said housing adapted to contact with the receiving plate to limit the outward swinging movement

of said cover, side flanges connecting the cover with said receiving plate, whereby to form substantially a receptacle therebetween and a handle on the outer face of said cover.

1,212,322. DASH-POT. FREMONT H. BUCKINGHAM, Detroit, Mich., assignor to The Standard Computing Scale Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 31, 1916. Serial No. 87,920. (Cl. 74—69.)



1. In a dash pot, the combination of a cylinder of glass and a piston of hard non-corrosive metal.

2. In a dash pot, the combination of a cylinder of glass and a piston of hard non-corrosive metal, and means to control the escape of air from one end of the cylinder.

3. In a dash pot, the combination of a cylinder of glass and a piston of metal within the cylinder, the diameter of the piston being so nearly the diameter of the cylinder as to substantially prevent the passage of air between them when the adjacent surfaces of both are clean.

4. In a dash pot, the combination of a cylinder of glass having a tubular guide of glass at one end co-axial therewith, a piston within the cylinder, and a piston rod connected to said piston and extending out through said tubular guide, said rod being formed to make substantially an air-tight fit with the bore of said guide.

5. In a dash pot, the combination of a cylinder of glass having a tubular guide of glass at one end co-axial therewith, a piston within the cylinder, a piston rod connected to said piston and extending out through said tubular guide, said rod being formed to make an air-tight fit with the bore of said guide, and said piston forming an air-tight fit with the bore of said cylinder.

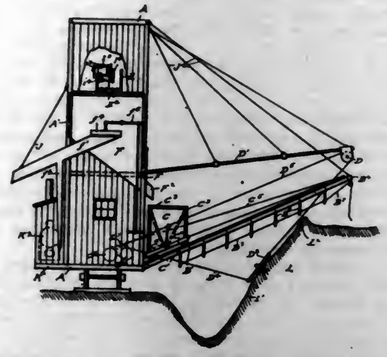
[Claim 6 not printed in the Gazette.]

1,212,323. MACHINE FOR PREPARING A BURNING BALLAST-PILE FOR COVERING. HENRY G. BUTLER, Wellington, Kans. Filed Nov. 1, 1911, Serial No. 658,037. Renewed Dec. 1, 1916. Serial No. 134,507. (Cl. 214—13.)

1. In a machine for preparing a ballast fire for covering, the combination of a coal feeding spreading and distributing boom and a coal baffle attached to said boom.

2. In a machine for preparing a ballast pile for covering, the combination of a car structure on wheels, a coal feeding spreading and distributing boom attached to said structure, a coal feeding spreading and distributing car on said boom, coal baffles attached to said boom and means for operating said car and baffles to properly feed, spread and distribute coal on said pile.

3. In an apparatus for ballast burning the combination of a car, a hopper on said car, means for unloading coal from a coal car placed in front of said car and delivering it to said hopper, a lateral track with a car thereon for conveying the coal from said hopper to be distributed onto the fire, a dragging apparatus on said car for dragging the face of the fire bank.

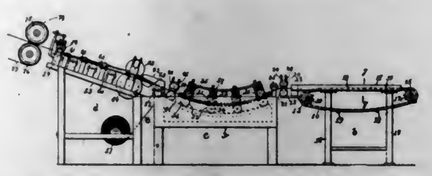


4. In a machine for ballast burning the combination of a car or movable support, an unloading apparatus at the front of said car for unloading coal from a coal car and delivering it to said car, a boom and a car thereon for conveying the coal from said car to a point over the fire bank, and a dragging or raking apparatus on said car arranged in front of said boom and said car on said boom.

5. In an apparatus for ballast burning the combination of car and the structure thereon, a coal hopper, in said structure, a coal unloading boom in front of said structure, a coal chute extending from the front of said structure to said hopper, a lateral boom with a coal car thereon for transporting and spreading coal from said hopper over the fire and a drag or raking apparatus on said car arranged in front of said boom and said car on said boom.

[Claims 6 to 16 not printed in the Gazette.]

1,212,324. APPARATUS FOR FORMING PROTECTED METAL SHEETS. JAMES H. CAFFREY, Beaver Falls, Pa., assignor to Asbestos Protected Metal Company, Beaver Falls, Pa., a Corporation of Massachusetts. Filed Oct. 14, 1914. Serial No. 866,685. (Cl. 154—1.)



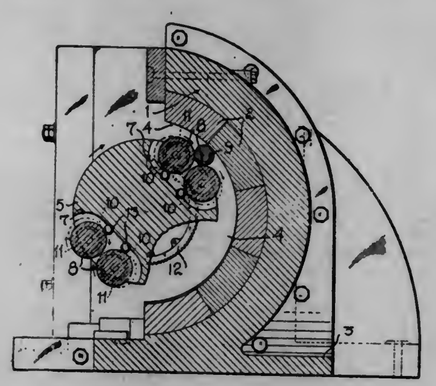
1. In an apparatus of the character described, in combination, a kettle for containing a bath of adhesive material, means for feeding a metal sheet into and out of said kettle to coat the same with adhesive material, means for applying to one surface of the coated metal sheet a layer of fibrous material of greater width than said metal sheet to leave portions of the said fibrous layer projecting beyond the sides of the metal sheet, and means for folding the projecting side portions of the fibrous layer over upon the other surface of the coated metal sheet, substantially as described.

2. In an apparatus of the character described, in combination, a kettle for containing a bath of adhesive material, means for feeding a metal sheet through said kettle to coat the same with adhesive material, means for applying to one surface of the coated metal sheet a layer of fibrous material of greater width than said metal sheet to leave portions of the said fibrous layer projecting beyond the sides of the metal sheet, and means for folding the projecting side portions of the fibrous layer over upon the other surface of the coated metal sheet.

3. In an apparatus of the character described, in combination, a kettle for containing a bath of adhesive material, means for feeding a metal sheet into and out of said kettle to coat the same with adhesive material, means for spreading the adhesive material evenly over the surfaces of said metal sheet, means for applying to one surface of the coated metal sheet a layer of fibrous material of greater width than said metal sheet to leave portions of the said fibrous layer projecting beyond the sides of the metal sheet, and means for folding the projecting side portions of the fibrous layer over upon the other surface of the coated metal sheet.

4. In an apparatus of the character described, in combination, a kettle for containing a bath of adhesive material, means for feeding a metal sheet through said kettle to coat the same with adhesive material, means for applying a surplus of adhesive material to one surface of the metal sheet between the sides of the latter, means for applying to one surface of the coated metal sheet a layer of fibrous material of greater width than said metal sheet to leave portions of the said fibrous layer projecting beyond the sides of the metal sheet, and means for folding the projecting side portions of the fibrous layer over upon the other surface of the coated metal sheet.

1,212,325. METAL-ROLLING MACHINE. DAVID A. CLARK, Baltimore, Md. Filed Mar. 6, 1916. Serial No. 82,488. (Cl. 80—18.)



1. A machine of the character described, including a concave, a revoluble carrier mounted in spaced relation thereto, and work supporting rollers carried by said carrier, for the purpose specified.

2. A machine of the character described, including a concave, a revoluble carrier, and work supporting rollers journaled in said carrier, and carried thereby and arranged in pairs, for the purpose specified.

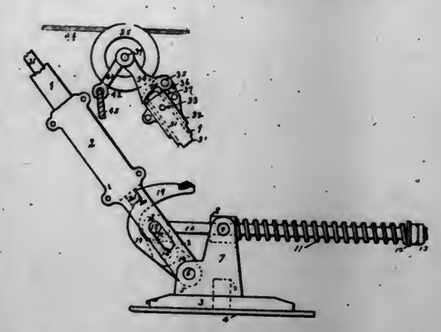
3. A machine of the character described, including a concave, a revoluble carrier, and a freely movable work supporting roller mounted on said carrier.

4. A machine of the character described, including a concave, a revoluble carrier disposed in spaced relation thereto, work supporting rollers journaled on said carrier, and means for positively imparting a revoluble movement to said rollers as they are moved around by the carrier.

5. A machine of the character described, including a concave, a revoluble carrier mounted in spaced relation thereto to produce a pass for the metal to be rolled, work supporting rollers journaled in said carrier, pinions carried by said rollers, and a stationary rack meshing with said pinions, for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

1,212,326. TROLLEY-POLE-CONTROLLING DEVICE. EDWARD ALBERT COLTON, Galesburg, Ill. Filed May 14, 1915. Serial No. 28,028. (Cl. 191—89.)



1. In a trolley pole controlling device, an erector spring, a support for sustaining the tension of said spring consisting of a toggle joint one member of which is extended beyond the knuckle of the toggle and forms a lever for supporting the weight at said knuckle caused by the tension of said erector spring; and means for retaining said supporting lever in its operative relation.

2. In a trolley pole controlling device, an erector spring, and a support for sustaining the tension of said spring consisting of a toggle joint one member of which is extending beyond the knuckle of the toggle and forms a lever for supporting the weight at said knuckle caused by the tension of said erector spring; and, in combination with said supporting lever, means controlled by the trolley wheel for retaining said lever in its toggle supporting position.

3. In a trolley pole controlling device an erector spring and a support for sustaining the tension of said spring consisting of a toggle joint one member of which is extended beyond the knuckle of the toggle and forms a lever for supporting the weight at said knuckle caused by the tension of said erector spring; and, in combination with said supporting lever, means controlled by the trolley wheel for retaining said lever in its toggle supporting position, and means, allowed to operate by escape of the trolley wheel from its power supplying wire, for releasing said lever and permitting collapse of the tension supporting toggle.

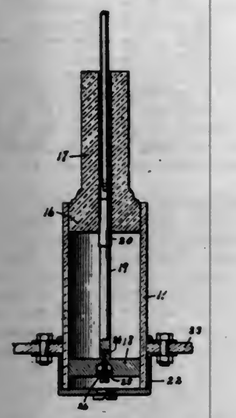
4. In a trolley pole controlling device, a hinged pole, an erector spring, a pin coupling the spring to the pole at a variable distance from the pole hinge and a support for sustaining the tension of said erector spring and for permitting the release of same; the said support consisting of a toggle joint in combination with and connecting the pole hinge and the coupling pin, said coupling pin being limitedly movable longitudinally of said pole and adapted to have its motion controlled by the toggle joint and the erector spring.

5. In a trolley pole controlling device, a support for sustaining the tension of the erector spring and for permitting the release of same, the said support consisting of a toggle joint in combination with the pole, the pole hinge, the erector spring, a retaining bolt in the pole and a coupling pin which forms the attachment of the erector spring to the trolley pole, said coupling pin being capable of limited motion longitudinally of said pole and of having its distance from the pole hinge controlled by the toggle joint and the erector spring; one member of said toggle connecting with said movable coupling pin and the other toggle member connecting the pole hinge with the knuckle pin of the toggle and being extended beyond said knuckle pin, forming a lever capable of being caught and held by the retaining bolt and of thus holding said movable coupling pin at the distance from the pole hinge necessary for operative tension of the spring.

[Claims 6 to 14 not printed in the Gazette.]

of said cover, side flanges connecting the cover with said receiving plate, whereby to form substantially a receptacle therebetween and a handle on the outer face of said cover.

1,212,322. DASH-POT. FREMONT H. BUCKINGHAM, Detroit, Mich., assignor to The Standard Computing Scale Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 31, 1916. Serial No. 87,920. (Cl. 74—69.)



1. In a dash pot, the combination of a cylinder of glass and a piston of hard non-corrosive metal.

2. In a dash pot, the combination of a cylinder of glass and a piston of hard non-corrosive metal, and means to control the escape of air from one end of the cylinder.

3. In a dash pot, the combination of a cylinder of glass and a piston of metal within the cylinder, the diameter of the piston being so nearly the diameter of the cylinder as to substantially prevent the passage of air between them when the adjacent surfaces of both are clean.

4. In a dash pot, the combination of a cylinder of glass having a tubular guide of glass at one end co-axial therewith, a piston within the cylinder, and a piston rod connected to said piston and extending out through said tubular guide, said rod being formed to make substantially an air-tight fit with the bore of said guide.

5. In a dash pot, the combination of a cylinder of glass having a tubular guide of glass at one end co-axial therewith, a piston within the cylinder, a piston rod connected to said piston and extending out through said tubular guide, said rod being formed to make an air-tight fit with the bore of said guide, and said piston forming an air-tight fit with the bore of said cylinder.

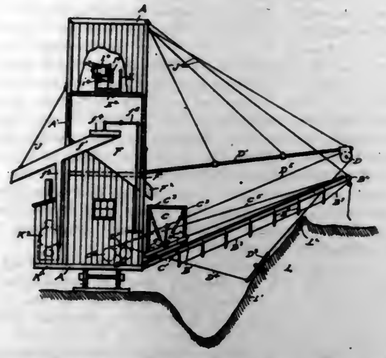
[Claim 6 not printed in the Gazette.]

1,212,323. MACHINE FOR PREPARING A BURNING BALLAST-PILE FOR COVERING. HENRY G. BUTLER, Wellington, Kans. Filed Nov. 1, 1911, Serial No. 658,037. Renewed Dec. 1, 1916. Serial No. 134,507. (Cl. 214—13.)

1. In a machine for preparing a ballast fire for covering, the combination of a coal feeding spreading and distributing boom and a coal baffle attached to said boom.

2. In a machine for preparing a ballast pile for covering, the combination of a car structure on wheels, a coal feeding spreading and distributing boom attached to said structure, a coal feeding spreading and distributing car on said boom, coal baffles attached to said boom and means for operating said car and baffles to properly feed, spread and distribute coal on said pile.

3. In an apparatus for ballast burning the combination of a car, a hopper on said car, means for unloading coal from a coal car placed in front of said car and delivering it to said hopper, a lateral track with a car thereon for conveying the coal from said hopper to be distributed onto the fire, a dragging apparatus on said car for dragging the face of the fire bank.

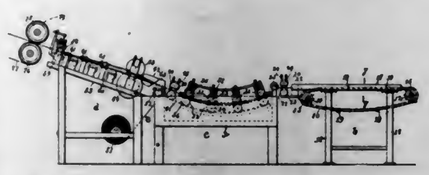


4. In a machine for ballast burning the combination of a car or movable support, an unloading apparatus at the front of said car for unloading coal from a coal car and delivering it to said car, a boom and a car thereon for conveying the coal from said car to a point over the fire bank, and a dragging or raking apparatus on said car arranged in front of said boom and said car on said boom.

5. In an apparatus for ballast burning the combination of car and the structure thereon, a coal hopper, in said structure, a coal unloading boom in front of said structure, a coal chute extending from the front of said structure to said hopper, a lateral boom with a coal car thereon for transporting and spreading coal from said hopper over the fire and a drag or raking apparatus on said car arranged in front of said boom and said car on said boom.

[Claims 6 to 16 not printed in the Gazette.]

1,212,324. APPARATUS FOR FORMING PROTECTED METAL SHEETS. JAMES H. CAFFREY, Beaver Falls, Pa., assignor to Asbestos Protected Metal Company, Beaver Falls, Pa., a Corporation of Massachusetts. Filed Oct. 14, 1914. Serial No. 866,685. (Cl. 154—1.)



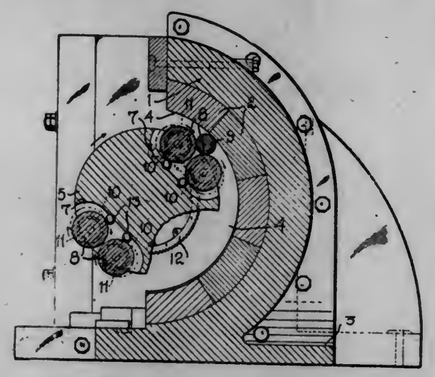
1. In an apparatus of the character described, in combination, a kettle for containing a bath of adhesive material, means for feeding a metal sheet into and out of said kettle to coat the same with adhesive material, means for applying to one surface of the coated metal sheet a layer of fibrous material of greater width than said metal sheet to leave portions of the said fibrous layer projecting beyond the sides of the metal sheet, and means for folding the projecting side portions of the fibrous layer over upon the other surface of the coated metal sheet, substantially as described.

2. In an apparatus of the character described, in combination, a kettle for containing a bath of adhesive material, means for feeding a metal sheet through said kettle to coat the same with adhesive material, means for applying to one surface of the coated metal sheet a layer of fibrous material of greater width than said metal sheet to leave portions of the said fibrous layer projecting beyond the sides of the metal sheet, and means for folding the projecting side portions of the fibrous layer over upon the other surface of the coated metal sheet.

3. In an apparatus of the character described, in combination, a kettle for containing a bath of adhesive material, means for feeding a metal sheet into and out of said kettle to coat the same with adhesive material, means for spreading the adhesive material evenly over the surfaces of said metal sheet, means for applying to one surface of the coated metal sheet a layer of fibrous material of greater width than said metal sheet to leave portions of the said fibrous layer projecting beyond the sides of the metal sheet, and means for folding the projecting side portions of the fibrous layer over upon the other surface of the coated metal sheet.

4. In an apparatus of the character described, in combination, a kettle for containing a bath of adhesive material, means for feeding a metal sheet through said kettle to coat the same with adhesive material, means for applying a surplus of adhesive material to one surface of the metal sheet between the sides of the latter, means for applying to one surface of the coated metal sheet a layer of fibrous material of greater width than said metal sheet to leave portions of the said fibrous layer projecting beyond the sides of the metal sheet, and means for folding the projecting side portions of the fibrous layer over upon the other surface of the coated metal sheet.

1,212,325. METAL-ROLLING MACHINE. DAVID A. CLARK, Baltimore, Md. Filed Mar. 6, 1916. Serial No. 82,488. (Cl. 80—18.)



1. A machine of the character described, including a concave, a revoluble carrier mounted in spaced relation thereto, and work supporting rollers carried by said carrier, for the purpose specified.

2. A machine of the character described, including a concave, a revoluble carrier, and work supporting rollers journaled in said carrier, and carried thereby and arranged in pairs, for the purpose specified.

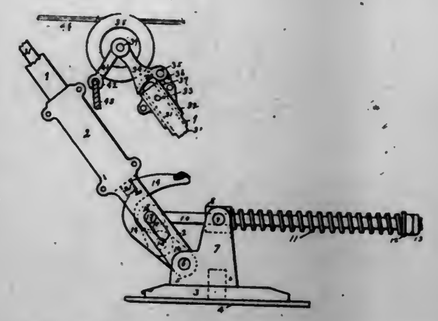
3. A machine of the character described, including a concave, a revoluble carrier, and a freely movable work supporting roller mounted on said carrier.

4. A machine of the character described, including a concave, a revoluble carrier disposed in spaced relation thereto, work supporting rollers journaled on said carrier, and means for positively imparting a revoluble movement to said rollers as they are moved around by the carrier.

5. A machine of the character described, including a concave, a revoluble carrier mounted in spaced relation thereto to produce a pass for the metal to be rolled, work supporting rollers journaled in said carrier, pinions carried by said rollers, and a stationary rack meshing with said pinions, for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

1,212,326. TROLLEY-POLE-CONTROLLING DEVICE. EDWARD ALBERT COLTON, Galesburg, Ill. Filed May 14, 1915. Serial No. 28,028. (Cl. 191—89.)



1. In a trolley pole controlling device, an erector spring, a support for sustaining the tension of said spring consisting of a toggle joint one member of which is extended beyond the knuckle of the toggle and forms a lever for supporting the weight at said knuckle caused by the tension of said erector spring; and means for retaining said supporting lever in its operative relation.

2. In a trolley pole controlling device, an erector spring, and a support for sustaining the tension of said spring consisting of a toggle joint one member of which is extending beyond the knuckle of the toggle and forms a lever for supporting the weight at said knuckle caused by the tension of said erector spring; and, in combination with said supporting lever, means controlled by the trolley wheel for retaining said lever in its toggle supporting position.

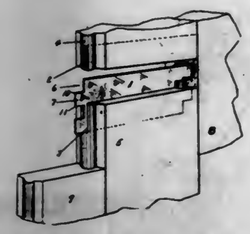
3. In a trolley pole controlling device an erector spring and a support for sustaining the tension of said spring consisting of a toggle joint one member of which is extended beyond the knuckle of the toggle and forms a lever for supporting the weight at said knuckle caused by the tension of said erector spring; and, in combination with said supporting lever, means controlled by the trolley wheel for retaining said lever in its toggle supporting position, and means, allowed to operate by escape of the trolley wheel from its power supplying wire, for releasing said lever and permitting collapse of the tension supporting toggle.

4. In a trolley pole controlling device, a hinged pole, an erector spring, a pin coupling the spring to the pole at a variable distance from the pole hinge and a support for sustaining the tension of said erector spring and for permitting the release of same; the said support consisting of a toggle joint in combination with and connecting the pole hinge and the coupling pin, said coupling pin being limitedly movable longitudinally of said pole and adapted to have its motion controlled by the toggle joint and the erector spring.

5. In a trolley pole controlling device, a support for sustaining the tension of the erector spring and for permitting the release of same, the said support consisting of a toggle joint in combination with the pole, the pole hinge, the erector spring, a retaining bolt in the pole and a coupling pin which forms the attachment of the erector spring to the trolley pole, said coupling pin being capable of limited motion longitudinally of said pole and of having its distance from the pole hinge controlled by the toggle joint and the erector spring; one member of said toggle connecting with said movable coupling pin and the other toggle member connecting the pole hinge with the knuckle pin of the toggle and being extended beyond said knuckle pin, forming a lever capable of being caught and held by the retaining bolt and of thus holding said movable coupling pin at the distance from the pole hinge necessary for operative tension of the spring.

[Claims 6 to 14 not printed in the Gazette.]

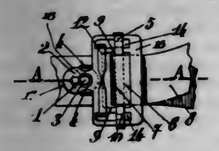
1,212,327. SPLINE-DOWEL FOR SILO-STAVES. FRED P. COBY, Saginaw, Mich., assignor to The McClure Company, Saginaw, Mich., a Corporation. Filed Apr. 15, 1913. Serial No. 761,235. (Cl. 217—96.)



1. The combination with tongue and grooved staves placed end-to-end and grooved at their abutting ends, of a flat metallic plate resting within the grooves in both of the staves and extending beyond the outer edges of the tongues at one side into and beyond the grooves at the other side and laterally extending spaced wings integral with the lateral edges of said metallic plate, the upper and lower edges of said wings being substantially horizontal and adapted to be received in the lateral edges of the adjacent staves.

2. The combination with tongue and grooved staves placed end-to-end and grooved at their abutting ends, of a metallic plate resting within the grooves in the ends of both staves and extending beyond the lateral edges of the staves, the lateral edges of said metallic plate being formed with laterally extending wings spaced apart, the upper and lower edges of said wings being substantially horizontal, said wings adapted to pass through the tongues of the adjacent staves and enter the bodies thereof.

1,212,328. BUCKLE. ARTHUR CÔTÉ, Lyon, France. Filed Sept. 18, 1913. Serial No. 790,384. (Cl. 24—196.)



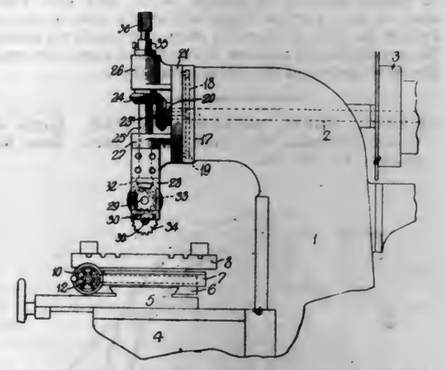
A buckle comprising in combination a plate having a rectangular aperture and two parallel transverse slots, a slidable member around which one end of the strap is adapted to be looped arranged transversely to said plate and having its ends turned over the edges thereof, a projection on each end of said transverse member engaging in the aforesaid slots, and a laterally slidable rabbeted locking bar having its ends engaging in said slots and adapted to be moved in one direction to press the loop against said transverse member or in the other direction, so that the rabbet thereof engages an edge of said plate whereby the strap is held against movement relatively to said plate and to said transverse member.

1,212,329. AUTOMATIC AUTOMOBILE-JACK. EDWARD ELLS CUNNINGHAM and HAZEN L. WILSON, St. Albans, W. Va. Filed May 8, 1916. Serial No. 96,132. (Cl. 254—89.)

An automobile jack embodying a base including parallel longitudinal side sills of angle iron having certain flanges projecting toward one another and other flanges projecting upwardly and stays attached to the first mentioned flanges, transverse rock shafts mounted in the second mentioned flanges adjacent the ends of the sills, a pair of jack arms mounted upon each shaft adjacent the sills and projecting upwardly, said arms having axle seats at their upper ends, the seats of the rear arms having extensions for the engagement of one axle of an automobile, links having forks at their ends straddling and pivoted to the arms at the opposite sides, one of the sills having an extension, an upwardly projecting segment carried by said extension having ratchet teeth, an upwardly projecting hand lever fulcrumed to said extension and having a pawl engageable with said segment, and a link connecting said lever and one of said forks.

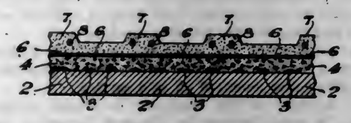


1,212,330. MILLING ATTACHMENT. JAMES A. DALY, Detroit, Mich. Filed Feb. 7, 1916. Serial No. 76,552. (Cl. 90—11.)



In a milling machine having an adjustable rotatable head, bearings carried thereby, and a spindle journaled in said bearings and driven from said milling machine; a cutter on said spindle, hangers carried by one of said bearings, a jack shaft journaled in said hangers and having its axis of rotation at right angles to said spindle, means for transmitting power from said spindle to said jack shaft, cone bearings carried by the lower end of said hangers, a cutter supported by said cone bearings and having its axis of rotation parallel with said jack shaft and at a right angle to the axis of rotation of the spindle cutter, and a pinion on said jack shaft adapted to impart movement to said cutter.

1,212,331. MANUFACTURE OF ARTIFICIAL-STONE STRUCTURES. PAUL E. DENIVELLE, New York, N. Y. Filed Oct. 20, 1915. Serial No. 56,879. (Cl. 25—155.)



1. A process for the manufacture of striated artificial stone structures which comprises depositing upon a prepared surface of desired form a series of narrow layers of plastic material, depositing upon said layers and upon the exposed surfaces therebetween a suitable material of such texture and consistency as will leave numerous small portions of said exposed surfaces out of contact with said material, binding together said layers and said material with a fluid cement, and allowing the mass to set.

2. A process for the manufacture of striated artificial stone structures which comprises depositing upon a prepared surface of desired form a series of narrow layers of plastic material of a certain color, depositing upon said layers and upon the exposed surfaces therebetween a suitable material of a different color and of such texture and consistency as will leave numerous small portions of said exposed surfaces out of contact with said material, binding together said layers and said material with a fluid cement, and allowing the mass to set.

3. A process for the manufacture of striated artificial stone structures which comprises depositing upon a prepared surface of desired form a series of narrow layers of plastic material, serrating the edges of the layers, depositing upon said layers and upon the exposed surfaces therebetween a suitable material of such texture and consistency as will leave numerous small portions of said exposed surfaces out of contact with said material, binding together said layers and said material with a fluid cement, and allowing the mass to set.

4. A process for the manufacture of striated artificial stone structures, which consists in depositing upon a prepared surface a series of veins of plastic material in simulation of the stone striations, depositing a loose lumpy material over the veining material to leave a porous body, binding the foregoing with a fluid cement, blotting up the excess seepage of the binding fluid to prevent all the interstices in the loose lumpy material from filling up, and allowing the mixture to set.

5. A process for the manufacture of striated artificial stone structures, which consists in preparing a mold of suitable outline with an isolator, forming veins of plastic material over this prepared surface, depositing loose, lumpy material over the veining to provide pockets, binding the pocket-forming material with the veining material, and leaving certain pockets exposed on the surface adjacent to the mold surface.

[Claims 6 to 10 not printed in the Gazette.]

1,212,332. TOY. WILLIAM T. ENSIGN and STEVEN A. ALMIDA, Chicago, Ill. Filed Apr. 14, 1916. Serial No. 91,192. (Cl. 46—40.)



1. A toy including a body having an axle journaled in bearings therein, a roller upon the axle and adapted to be arranged upon a support for the body, and a flexible operating shaft secured to the axle.

2. A toy including a comparatively light body, an axle journaled in bearing openings in the body, a comparatively heavy wheel secured to the axle adapted to rest upon the support for the toy, and a flexible shaft secured to the axle.

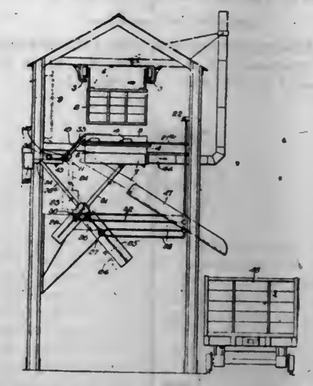
3. In a toy, a hollow body having angularly disposed openings, an axle journaled in said openings, a roller secured to the axle and resting upon the support for the toy, and a flexible member connected to one of the ends of the shaft for operating the shaft.

1,212,333. SINTERING APPARATUS. FREDERICK A. EUSTIS, Milton, Mass. Filed Aug. 18, 1915. Serial No. 46,031. (Cl. 266—21.)

1. A sintering apparatus comprising a pan, a cover for said pan, and means to force air under pressure from a blower or air pump into said pan between the cover and grate, thereby to produce a downward draft of air through the charge on the grate.

2. A sintering apparatus comprising a pan, a cover for said pan, and means to force air under pressure from a blower or air pump into said pan between the cover and grate, thereby to produce a downward draft of air through the charge on the grate, and means to lock the cover in closed position.

3. A sintering apparatus comprising a pan, a cover for said pan, and an air pipe extending into the apparatus between the cover and grate adapted to deliver air under pressure above the charge on the grate and thereby to produce a downward draft therethrough.



4. In a sintering apparatus, a sintering pan having a grate, a cover for said pan, a stack leading from below said grate, and an air delivery pipe extending into the apparatus between the cover and the grate adapted to deliver air under pressure above a bed of material on the grate, said air delivery pipe being movable away from its operative position over the grate.

5. In a sintering apparatus, a sintering pan having a grate, a cover hinged to swing to open and closed position on said pan, an air delivery pipe connected to said cover and swinging therewith, adapted to deliver air under pressure above a bed of material on said grate, an air supply pipe to which said air delivery pipe is connected, and a swivel joint between said air delivery and supply pipes.

[Claims 6 to 11 not printed in the Gazette.]

1,212,334. TREATMENT OF NICKEL ORES. FREDERIC A. EUSTIS, Milton, Mass. Filed Aug. 24, 1915. Serial No. 47,161. (Cl. 75—18.)

1. The method of recovering nickel from oxidized or silicate nickel-bearing ores, which comprises mixing the ore with a small proportion of sulfur-bearing material such as pyrite, and roasting the mixture in its raw state in a suitable furnace at such temperature and for such time that a relatively large amount of the nickel is made soluble while a relatively small amount of the gangue is made soluble.

2. The method of recovering nickel from an oxidized or silicate nickel-iron ore, which comprises mixing the ore with a small proportion of sulfur-bearing material such as pyrite, and roasting the mixture in its raw state in a suitable furnace at such temperature and for such time that a relatively large amount of the nickel is made soluble while a relatively small amount of the iron is made soluble.

3. The method of making the nickel in a nickel-iron ore soluble, which consists in mixing the ore with a small proportion of sulfur-bearing material such as pyrite, and roasting the mixture in its raw state in a suitable furnace at a temperature of from 400° C. to 500° C. for one hour or more.

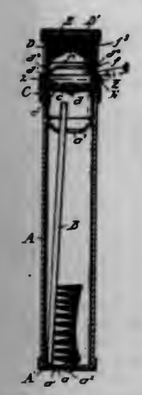
4. The method of making the nickel in a nickel-iron ore soluble, which consists in mixing the ore with a small proportion of sulfur-bearing material such as pyrite, and roasting the mixture in its raw state in a suitable furnace at a temperature of about 460° C. for about four hours.

5. The method of making the nickel and alumina in an oxidized or silicate ore containing nickel, alumina and iron, soluble, which consists in mixing the ore with a small proportion of sulfur-bearing material such as pyrite.

and roasting the mixture in its raw state in a suitable furnace at such temperature and for such time that a relatively large amount of the nickel and alumina is made soluble while a relatively small amount of the iron is made soluble.

[Claims 6 to 9 not printed in the Gazette.]

1,212,335. TOOTH-BRUSH HOLDER AND STERILIZER. ARTHUR FEINBERG, New York, N. Y. Filed July 25, 1916. Serial No. 111,120. (Cl. 132—11.)



1. In a device of the class described, the combination of a brush containing casing, a casing for containing a sterilizing agent, a rotatable coupling between said two casings for detachably securing them together, and valvular means coöperating with the coupling and automatically operable to open communication between the interiors of said casings when the casings are in assembled relation, but to shut off such communication when the casings are separated.

2. In a device of the class described, the combination of a brush containing casing, a casing for containing a sterilizing agent, a coupling rotatably secured to the sterilizer casing and provided with a threaded female portion adapted to receive the threaded portion of the brush containing casing, said coupling being adapted for rotation when the brush containing casing is screwed into engagement with or out of engagement of the threaded portion of the coupling, said coupling and sterilizer casing being provided with complementary apertures adapted to be brought into and out of alinement automatically by the attaching and detaching operations of the brush containing casing.

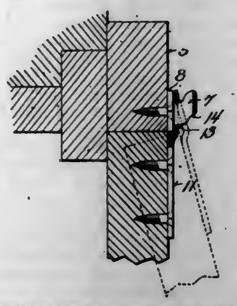
3. In a device of the class described, the combination of two chambers, one of which houses a brush and the other of which contains a disinfectant, means for detachably assembling said chambers, and valvular means operable, upon the removal of the brush chamber from the disinfectant chamber, to seal the disinfectant chamber and, by the assembling operation, to unseal said chamber and allow the fumes of the disinfectant to enter the other chamber.

4. In a device of the class described, the combination of two relatively movable chambers, one of which contains a disinfectant and the other a brush, means for securing the chambers in juxtaposition, means for sealing the brush chamber, and means for governing the passage of disinfecting fumes from the disinfectant chamber into the brush chamber, said governing means being controllable by relative movement between the chambers, to seal or unseal the chamber containing the disinfectant.

5. In a device of the class described, the combination of two chambers, one of which contains a disinfectant and the other a brush, means for sealing the brush chamber, means for governing the passage of disinfecting fumes from the disinfectant chamber into the brush chamber, and means independent of the means for governing the passage of disinfecting fumes from the disinfectant chamber into the brush chamber, for precluding the disinfectant from entering the brush chamber.

[Claims 6 to 11 not printed in the Gazette.]

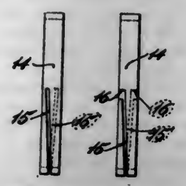
1,212,336. SWINGING-SASH HANGER. EDWARD J. FELLMAN, Milwaukee, Wis. Filed Jan. 26, 1916. Serial No. 74,306. (Cl. 16—48.)



1. A suspension device for outer sashes comprising a pair of hooks adapted for securement to a support and a pair of plates adapted for securement to a sash to extend thereabove and provided in their upper portions with longitudinal slots each having its side edges diverged, the bight portions of the hooks being of a height substantially equal to the length of the slots and of a width equal to the width of the reduced ends of the slots.

2. A suspension device for outer sashes comprising a pair of hooks adapted for securement to a support, a pair of plates adapted for securement to a sash to extend thereabove and provided in their upper portions with longitudinal slots each having its sides diverged, the height of the bight portions of said hooks being substantially equal to the length of the slots and the width of the hooks being substantially equal to the width of the narrowest portions of the slots, and the inner portion of the bottom of each hook being curved substantially coincident with the arc of pivotal movement of the adjacent edge of the slot.

1,212,337. PROCESS OF MANUFACTURING PISTON-RINGS. JOHN FLAMMANG, St. Louis, Mo., assignor to Inland Machine Works, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 5, 1915. Serial No. 59,769. (Cl. 29—148.)



1. The process of forming a piston ring having overlapping end portions which comprises splitting a solid ring in a long zigzag cut extending circumferentially, inverting the split ring thereby formed, treating the inverted ring to remove molecular strains, and reversing the inverted ring.

2. The process of forming a piston ring having overlapping tapered ends which comprises splitting a solid ring in a long diagonal line, inverting the split ring thereby formed, treating the inverted ring to remove molecular strains, and reversing the inverted ring.

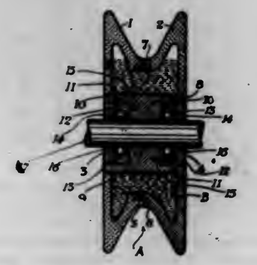
3. The process of forming a piston ring having overlapping spiral portions with tapered ends which comprises cutting a long spiral slot in the periphery of a solid ring, the ends of said slot terminating near the opposite sides of said ring, cutting notches in the opposite sides of said ring to intersect the ends of said slot, inverting the split ring thereby formed, treating the inverted ring to remove molecular strains, and reversing the inverted ring.

4. The process of forming a spiral piston ring which comprises forming a cylindrical helix, treating it to remove molecular strains and inverting it into a closed coil helix having its contacting edges under tension to force them together sidewise.

5. The process of forming a spiral piston ring which comprises forming an open coil cylindrical helix and inverting it into a closed coil helix, treating the inverted ring to remove molecular strains, and reversing the inverted ring.

[Claims 6 to 8 not printed in the Gazette.]

1,212,338. SELF-OILING BALL-BEARING TROLLEY-WHEEL. CARL FLATTER and WILLIAM L. CASE, Alton Park, Tenn., assignors of one-ninth to Charles H. Stephenson, Alton Park, Tenn. Filed Jan. 31, 1916. Serial No. 75,336. (Cl. 64—26.)



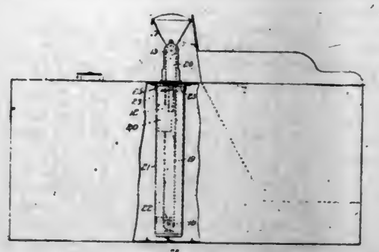
1. A trolley wheel comprising a hollow body forming a lubricant reservoir and having a peripheral trolley wire groove, a hub in said body provided on each face with a counter-bore, anti-friction bearings in said counter-bores, said hub having oil passages leading from said reservoir to said bearings, and an axle journaled in said hub and bearings.

2. A trolley wheel comprising a hollow body centrally apertured and forming a lubricant reservoir, said body having a peripheral trolley wire groove, a hub counter-bored on each face and driven into the central aperture of said hub, anti-friction bearings in said counter-bores, said hub having oil passages leading from said reservoir to said bearings, and an axle journaled in said bearings.

3. A trolley wheel comprising a hollow body centrally apertured and forming a lubricant reservoir, said body having a peripheral trolley wire groove, a hub counter-bored on opposite sides and driven into said central aperture, ball races in said counter-bores, balls in said races forming anti-friction bearings, collars driven into said counter-bores to hold said ball races in position, said hub having oil passages leading from said reservoir to said bearings, and an axle journaled in said bearings.

4. A trolley wheel comprising two substantially hollow centrally apertured halves threaded together to form an oil reservoir having a peripheral trolley wire groove, a pin holding said halves against movement relative to each other, a centrally apertured hub driven through the apertures in said reservoir and having passages connecting therewith, said hub having end counter-bores, ball races in said counter-bores each having a groove registering with one of said oil passages, means to prevent movement of said ball races relative to said hub, balls in said races forming anti-friction bearings, a collar driven in each counter-bore to hold said ball races in position, and an axle journaled in said collars, bearings and hub and lubricated from said oil reservoir.

1,212,339. WATER-SOFTENING APPARATUS FOR LOCOMOTIVES. FRANK C. FOSDICK, Chicago, Ill. Filed Sept. 8, 1916. Serial No. 118,958. (Cl. 210—19.)



1. The combination of a locomotive tender having a water tank, a chemical hopper mounted on the tank and communicating therewith, a rotary device to control the feed of chemicals from the hopper to the tank, a sprocket wheel having a one-way driving connection with said device, a sprocket wheel within the tank, a chain extending around said sprocket wheels, a float attached to the chain, and a tube inclosing a portion of said chain, said tube extending above the tank.

2. The combination of a locomotive tender having a water tank, a chemical hopper mounted on the tank and communicating therewith, a device to control the feed of chemicals from the hopper to the tank, a wheel, a one-way clutch between the wheel and the said device, and a float arranged to rotate the wheel, said float being located in the tank.

3. The combination of a locomotive tender having a water tank, a chemical-supplying means on the tender and communicating with the tank, a float within the tank operated by the rise of water in the tank to actuate the chemical-supplying means, and a casing within the tank, said casing inclosing and guiding the float, said casing communicating with the interior of the tank.

4. The combination of a locomotive tender having a water tank, chemical-supplying means on the tender and communication with the tank, a float within the tank and means operated by the rise of the float to actuate the chemical-supplying means during the period of such rise.

5. The combination of a locomotive tender having a water tank, a chemical hopper mounted on the tank and communicating therewith, a device to control the feed of chemicals from the hopper to the tank, two sprocket wheels arranged one above the other, one of said wheels being supported in the lower portion of the tank, a one-way clutch between the other wheel and the said device, an endless chain extending around said wheels, and a float attached to the chain, said float being located in the tank, said clutch being arranged to actuate said device in the upward movement of the float.

[Claims 6 to 9 not printed in the Gazette.]

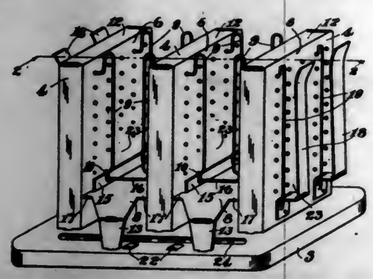
1,212,340. BREAD-TOASTER. ALLAN MCC. FLUHARTY, Indianapolis, Ind., assignor to The Cincinnati Galvanizing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 17, 1915. Serial No. 8,727. (Cl. 53—5.)

1. A bread toaster comprising a base having a series of apertures formed therein, a perforated tube mounted on the base over each of the apertures, means for supporting bread to be toasted between the tubes, baffle plates located between the means and the base, and means mounted on the base for distributing the heat uniformly to said tubes.

2. In a bread toaster the combination of a base, perforated tubes mounted on the base, and means adapted to support bread to be toasted between said tubes, the perforations of said tubes increasing in size from the center of each face of each tube to the edges thereof.

3. In combination in a bread toaster, a base, a series of perforated tubes mounted on the base, and means

adapted to support bread to be toasted between the tubes, the perforations of said tubes having funnel-shaped walls diverging from the interior of the tubes to the exterior thereof.

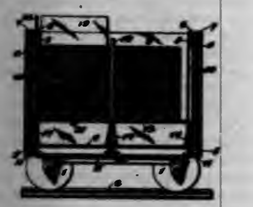


4. In combination in a bread toaster, a base having a series of apertures formed therein, a series of perforated tubes mounted on the base over the apertures and having their opposite ends closed, means for supporting bread to be toasted between the tubes, and baffle plates located between the means and the base, each perforation of the tubes being spaced from each of its adjacent perforations a distance greater than the greatest dimension of the perforations.

5. In combination in a bread toaster, a base, a series of perforated tubes mounted on the base, and means adapted to support bread to be toasted between the tubes, the perforations of the tubes having funnel-shaped walls diverging from the interior of the tubes to the exterior thereof, adjacent perforations of the tubes being spaced apart distances no less than the dimensions of the perforations.

[Claims 6 to 8 not printed in the Gazette.]

1,212,341. AUTOMATIC SHEET-METAL TANK. JAMES FOWLER, Granite City, Ill. Filed Aug. 14, 1916. Serial No. 114,931. (Cl. 266—7.)



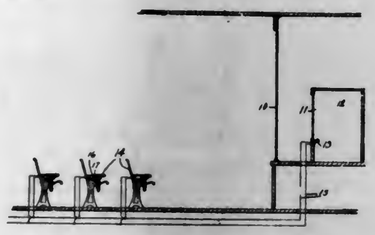
1. A tank for sheet metal, comprising a tank, a table within the tank adapted to receive and support superimposed sheets of metal and capable of vertical movement in the tank in order to support the uppermost plate at a constant level irrespective of the number of plates upon the table, and springs within the tank supporting the table and arranged to yield under the weight of the plates as they are successively placed on the table, whereby the uppermost plate is maintained at approximately a constant level irrespective of the number of plates thereon.

2. A tank for sheet metal, comprising a tank, a table within the tank arranged to receive and support superimposed sections of sheet metal and to support the sheet metal plates in position so that the uppermost one is at a constant level for manual discharge, and a series of springs within the tank supporting the table and arranged to yield under the weight of the sheet metal plates as they are successively placed on the table and to raise the table and the plates thereon as the plates are successively removed therefrom, whereby the uppermost plate is constantly maintained at approximately the same level.

3. A tank for sheet metal, comprising a tank adapted to contain an immersing liquid, a table within the tank arranged to support superimposed sections of sheet metal immersed within the liquid, and springs within the tank supporting the table and tensioned to support the table and the sections of sheet metal thereon in position to maintain the uppermost section of sheet metal constantly at approximately the same level as the sections are successively placed within the tank or removed therefrom.

4. A tank for sheet metal, comprising a transportable tank arranged to contain an immersing liquid and superimposed sections of sheet metal immersed therein, a table within the tank for supporting the superimposed sections of sheet metal, springs within the tank supporting the table and tensioned to maintain the uppermost section of sheet metal constantly at approximately the same level as the sections are successively placed upon the table or removed therefrom, and means for maintaining the table and the springs in proper relative position within the tank.

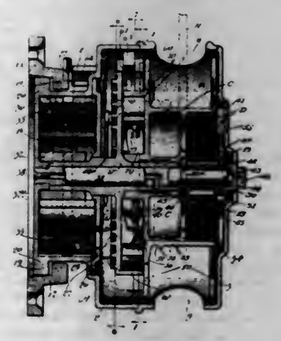
1,212,342. SOUND-TRANSMITTING SYSTEM FOR MOVING PICTURES. ELY D. GEORGE, San Francisco, Cal. Filed Aug. 2, 1916. Serial No. 112,836. (Cl. 179—1.)



1. The combination with the seats and screen of a moving picture theater, of a sound proof booth having a window whereby the occupant of the booth can observe the screen, receivers individual to the seats for the use of the audience, and a transmitter in said booth connected to the receivers.

2. The combination with the seats and screen of a moving picture theater, of a sound proof booth at that side of the screen opposite the seats and having a window facing the screen, receivers individual to the seats, and a transmitter within the booth electrically connected to the receivers.

1,212,343. TROLLEY-RETRIEVER. CHARLES E. GIERDING, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Mar. 23, 1914. Serial No. 826,491. (Cl. 191—93.)



1. A trolley retriever of the class described, having a spiral scroll closed at the outer end and an abrupt cam portion of less arcuate length than one complete turn, connecting its last two outer turns.

2. In a centrifugal trolley retriever, the combination of a retriever disk having a scroll closed at the outer end, spring mechanism tending to rotate said retriever disk in one direction, means for rotating said disk in the other direction and against the tension of said spring, a pivoted lever controlled by said scroll, a latch for locking said disk against rotation in the direction urged by said spring mechanism, and means controlled by said lever for setting said latch.

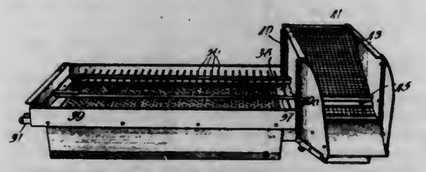
3. In a trolley retriever, the combination with a flanged retriever disk having a slot in the flange, of a fixed casing in which the disk is rotatable, having oppositely disposed stops therein, a pair of latch levers at a distance apart in said slot with their adjacent ends pivoted together, the outer ends of the levers projecting beyond the flange to engage said stops when the adjacent ends of the levers project inwardly from said flange, thereby preventing rotation of the disk in either direction with respect to the casing, and means to engage the inwardly projecting ends of the levers for allowing rotation of the disk.

4. In a trolley retriever of the class described, the combination with a rotary spring actuated service drum, of a retriever disk having a scroll, spring mechanism tending to rotate said retriever disk in one direction, means for rotating said disk in the other direction and against the tension of said spring mechanism, a lever controlled by said scroll, a latch for locking said disk against rotation in the direction urged by said spring mechanism, a pivoted member controlled by said lever for setting said latch, and means dependent upon the speed of rotation of the drum for actuating said latch to release the retriever disk.

5. In a trolley retriever of the class described, the combination of a retriever disk having a scroll, spring mechanism tending to rotate said retriever disk in one direction, means for rotating said disk in the other direction and against the tension of said spring, a lever controlled by said scroll, a latch for locking said disk against rotation in the direction urged by said spring mechanism, a pivoted member controlled by said lever for setting said latch, a service drum around which the trolley rope is wound, and means responsive to the rotative movements of said service drum for actuating said latch to interlock the retriever disk and the service drum.

[Claims 6 to 25 not printed in the Gazette.]

1,212,344. SCREEN. JOHN H. GILMAN and ALBERT E. GILMAN, Ottawa, Ill., assignors to King & Hamilton Company, Ottawa, Ill., a Corporation of Illinois. Original application filed Mar. 11, 1916, Serial No. 83,477. Divided and this application filed May 11, 1916. Serial No. 96,812. (Cl. 130—15.)



1. In a sheller, a frame supporting a shelled-corn riddle at the middle and one end thereof having a pair of screens, and at the other end on a higher level a cob riddle having two screens, the lower intermediate of the corn screens, the overflow from the upper corn screen discharging at its adjacent end upon the lower cob screen, and a plate below the lower cob screen to discharge on the lower corn screen.

2. In a sheller, a screen-frame supporting at the middle and one end thereof a pair of corn-screens, the lower one of finer mesh and inclined to discharge the shelled corn from one side thereof, and its overflow at one end upon the cob screen, a cob-screen supported at the other end of the frame and inclined to discharge in the opposite direction, and a plate beneath the cob screen discharging upon the lower corn screen.

3. In a sheller, a screen-frame supporting at the middle and one side thereof a shelled-corn screen, an imperforate inclined plate beneath the screen, and beneath the inclined plate another screen inclined in the opposite direction, and supporting at the other end thereof a cob-screen inclined to discharge in the opposite direction from the lowermost grain-screen.

4. In a sheller, a screen-frame supporting at the middle and one end thereof a shelled-corn screen, an inclined imperforate plate beneath the shelled-corn screen, and a finer corn-screen beneath the imperforate plate inclined in the opposite direction, and at the other end a pair of cob-screens, one below the level of the upper corn-screen and upon one end of which said upper corn-screen may discharge, and the other cob-screen above the level of the upper corn-screen.

5. In a sheller, a screen-frame inclined slightly along its length, a cob-screen secured at one end and extending transversely thereof, a finer cob-screen secured directly beneath the first cob-screen, a substantially horizontal grain-screen on a level between the two cob-screens and discharging material coarser than its perforations on the lower cob-screen.

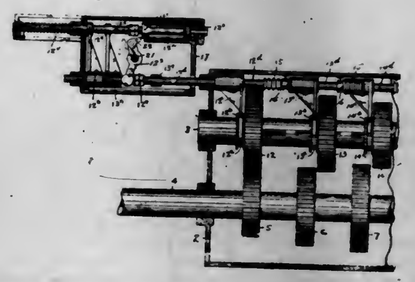
[Claims 6 and 7 not printed in the Gazette.]

1,212,345. MARLINESPIKE. CASSIUS G. HALL, Adams Center, N. Y., assignor to Ellen A. Titsworth, Adams Center, N. Y. Filed Aug. 18, 1916. Serial No. 115,735. (Cl. 114—225.)



A marlinespike thinner on one lateral edge than on the other, and tapered two-thirds of its length to a point, the tapered portion being scalloped and the scallops, except the one at the point, decreasing in size toward the point.

1,212,346. VARIABLE-SPEED GEARING. ELBERT J. HALL, Berkeley, Cal. Filed May 26, 1914. Serial No. 841,017. (Cl. 74—58.)



1. In a variable speed gearing, a plurality of transversely movable gears, a plurality of complementary gears adapted to be singly engaged by said movable gears, and power operated means arranged to move said movable gears transversely, the initial portion of a continuous movement of said means operating to disengage the engaged gears, and the following portion of the movement of said means operating to engage a pair of disengaged gears.

2. The combination with a plurality of alined gears of different diameters and a plurality of transversely movable complementary gears each adapted to engage one of said first named gears, of power operated means adapted

in the initial stage of a continuous movement to move the engaged gears out of mesh.

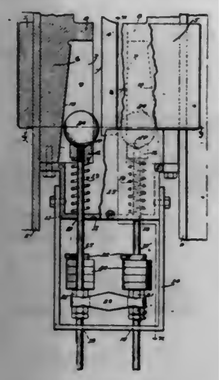
3. The combination with a shaft having a plurality of gears of different diameters secured thereto, and a parallel shaft having a plurality of gears of different diameters longitudinally movably mounted thereon, said gears being adapted to be engaged singly or in pairs, of power operated means for moving said movable gears into and out of mesh with the corresponding gears on the other shaft, said means being arranged to move the gears to neutral position in the initial stage of a continuous movement and to engage one set of gears in the second stage of said movement.

4. The combination with a variable speed gearing including complementary gears and other gears adapted to be moved transversely into and out of engagement with said complementary gears, of a rod attached to each of said movable gears, and power operated means for moving said movable gears into and out of engagement with said complementary gears, the initial movement of said means operating to move the engaged movable gear into neutral position, and the further movement of said means in the same direction operating to move another of said movable gears into engagement with its complementary gear.

5. The combination with a variable speed gearing including complementary gears and other gears adapted to be moved transversely into and out of engagement with said complementary gears, of a plurality of rods, each attached to one of said movable gears, an abutment on each of said rods, a rock shaft arranged transversely of said rods, a plurality of levers fixed to said rock shaft adapted to engage said abutments, and power operated means adapted in its initial movement to rock the rock shaft to move one of the rods in one direction, and by its further movement to move another rod in the opposite direction.

[Claims 6 to 9 not printed in the Gazette.]

1,212,347. SAFETY APPLIANCE FOR ELEVATORS. JAMES T. HALL, Coalinga, Cal., assignor of one-third to Bunting Iron Works, Coalinga, Cal., a Corporation of California, and one-third to G. T. Mountford, Coalinga, Cal. Filed Apr. 28, 1915. Serial No. 24,464. (Cl. 187—90.)



An elevator safety appliance for locking an elevator car against falling relative to the fixed guides between which it operates, the same comprising a pair of open blocks one carried at each side of the car and each provided with a vertically disposed interior chamber increasing in width toward the lower end thereof and adapted to receive the webs of the guides, friction engaging balls in said chamber and positioned one at each side of said guide web, floating plungers supporting said friction balls and for forcing the same toward the shallow end of said chamber, springs for supporting said plungers and balls carried thereby and adapted for actuating said plungers to move said balls into locked engagement with the guide webs on a rupture of the supporting means for the car, and weights carried by said plungers for maintaining said plungers, balls and springs in a condition of unstable equilibrium.

1,212,348. ADJUSTABLE TAPER BIT. CYRIL R. HANNAH, Anaheim, Cal., assignor of one-half to C. M. Baumgardner, Anaheim, Cal. Filed Nov. 30, 1914. Serial No. 874,610. (Cl. 145—124.)



1. In a taper bit, a blade adjustable to different angles with respect to the longitudinal center of the bit, said blade being freely movable radially of the bit and having a cutting and feeding lip adapted to engage at its outer face, the opening being bored and having said outer face inclined relative to the vertical axis of the bit.

2. In a boring tool, a shank, a blade mounted in said shank and freely movable in a substantially radial plane and having a surface arranged at an oblique angle to the axis of the shank and engaging the work for laterally moving the blade to progressively vary the diameter of the hole being bored.

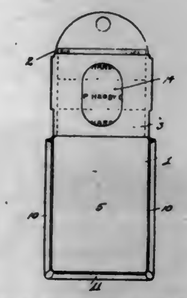
3. In a boring tool, a shank having feeding means on one end thereof, a blade freely radially movable upon said shank, and means carried by the blade and engaging the work to move the blade gradually to form a tapered opening.

4. In a boring tool, a shank, boring and feeding means on one end thereof, a blade freely movable radially of said shank and mounted angularly adjustably to provide for inclining one end thereof with reference to the axial line of the shank to vary the diameter of the opening being bored.

5. The combination with a bit, of a rotatable block pivotally secured thereto, a taper forming blade freely slidably carried by the block, and means for locking the block against movement.

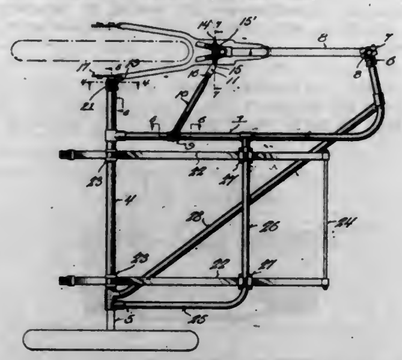
[Claims 6 to 8 not printed in the Gazette.]

1,212,349. COUPON-STRIP HOLDER. LAWRENCE P. HARDY, South Bend, Ind. Filed Jan. 26, 1915. Serial No. 4,561. (Cl. 211—37.)



A coupon strip holder including a backing plate provided with inwardly extending flanges at opposite sides and at the bottom thereof, a front plate provided with inwardly extending flanges adjacent the top thereof, the lower portion of said front plate being formed to provide a rectangular casing with side, top and bottom walls, the side and bottom walls being bent to form outwardly extending flanges, whereby when the two plates are assembled, the inwardly extending flanges at the top of the front plate will embrace the edges at the upper part of the back plate and the outwardly extending flanges at the sides and bottom of the rectangular casing will be engaged by the inwardly extending flanges at the opposite sides and bottom of the backing plate, thereby securing the two plates against other than endwise separation.

1,212,350. SIDE CAR FOR MOTOR-CYCLES. WILLIAM S. HARLEY, Milwaukee, Wis., assignor to Harley-Davidson Motor Co., Milwaukee, Wis. Filed Aug. 20, 1915. Serial No. 46,554. (Cl. 208—45.)



1. A motor-cycle side car including a frame formed of an inner side bar having its forward end bent outward and adapted for attachment to a motor-cycle frame, an axle member having a rigid connection with the rear end of said bar and adapted at one end for attachment to a motor-cycle frame, an outer side bar having an angular arm rigidly connected to the inner side bar at an intermediate point, the outer bar having its rear end rigidly fastened to the axle member and a diagonal bar connecting the outer portion of the axle member with the said outwardly bent forward end of the inner side bar.

2. In combination with a motor-cycle frame, a side car therefor having laterally directed frame extensions at the front and rear portions of one side, said extensions being of considerable length whereby to provide for vibratory cushioning movement, means for universally connecting said extensions with the frame of the motor-cycle and means connecting the side car with the motor-cycle to limit relative vertical pivotal movement thereof.

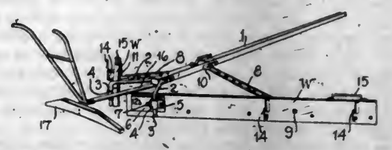
3. In combination with a motor-cycle frame, a side car therefor having laterally directed frame extensions at the front and rear portions of one side, said extensions being of considerable length whereby to provide for vibratory cushioning movement, means for universally connecting said extensions with the frame of the motor-cycle, and an arm extending from the motor-cycle and universally and adjustably connected with the intermediate portion of the car at a point inwardly of the pivotal connections of the said frame extensions.

4. In combination with a motor-cycle frame, a side car therefor having laterally directed frame extensions at the front and rear portions of one side, said extensions being of considerable length whereby to provide for vibratory cushioning movement, means for universally connecting said extensions with the frame of the motor-cycle, an arm projecting laterally from the motor-cycle above the side car and having its free end downwardly directed and pivotally connected with the side car.

5. In combination with a motor-cycle frame, a side car therefor having laterally directed frame extensions at the front and rear portions of one side, said extensions being of considerable length whereby to provide for vibratory cushioning movement, means for universally connecting said extensions with the frame of the motor-cycle, an arm pivoted to the motor-cycle above the side car frame and extending laterally from the motor-cycle, and the free end of the bar being downwardly directed and universally connected with the side car.

[Claim 6 not printed in the Gazette.]

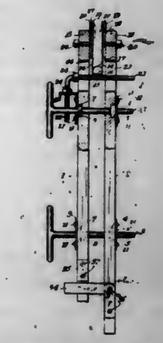
1,212,351. SCRAPER. HANS PETER HENSEN, Tecumseh, Mich. Filed Sept. 27, 1916. Serial No. 122,467. (Cl. 37—5.)



1. A device of the character described comprising, in combination, a draft pole, diverging arms secured to the rear portion of said pole, each of said arms terminating in a depending extension, a wing, and a clip pivotally engaged with the inner end portion of said wing and movable on a horizontal axis, said clip coacting with the extension of an arm for pivotally connecting the wing thereto for movement in a horizontal direction.

2. A device of the character described comprising, in combination, a draft pole, forwardly and outwardly inclined wings positioned at opposite sides of the draft pole and connected thereto, the inner ends of said wings being spaced apart to afford an exit opening, a resilient arm secured to the draft pole and extending rearwardly therefrom and terminating rearwardly of the inner ends of the wings, a leveling member disposed transversely of the pole and secured to the outer end of the arm, and an upstanding handle member carried by the leveling member.

1,212,352. BOOKBINDING DEVICE. CHARLES F. HILL, Janesville, Wis. Filed Sept. 21, 1914. Serial No. 862,649. (Cl. 11—2.)



1. In a device of the described class, the combination of a pair of vertical clamping members connected together by a plurality of screws, a pair of clamping plates, each plate being provided at its upper end with a series of guide notches, means securing said clamping plates to said vertical members, and means for moving said vertical members toward and from each other.

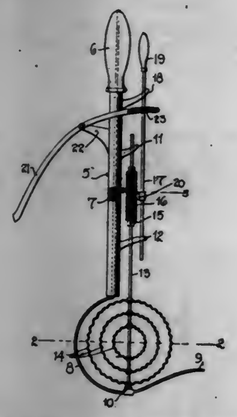
2. In a device of the described class, the combination of a pair of vertical clamping members, a pair of clamping plates each plate being provided at its upper edge with a series of guide notches, means securing said clamping plates to said vertical members, means for moving said vertical members toward and from each other, a pair of creasing plates, and means for temporarily securing said creasing plates to said clamping plates.

3. In a device of the described class, the combination of a pair of vertical members, a plurality of clamping screws connecting said members together, a pair of clamping plates secured to said vertical members, each clamping plate being provided at its upper edge with a series of guide notches, a bookholder, and means for supporting said bookholder at different elevations between said clamping plates.

4. In a device of the described class, the combination of a pair of vertical members each provided with two elongated slots for the reception of adjustable book supporting members, book supporting members, means for adjustably holding said book supporting members at any desired point of adjustment in said slots, a book holder for holding the book while being sewed, said book supporting members being adapted to be raised and lowered according to the width of the book being bound, a pair of notched clamping plates adapted to be supported from the upper ends of said vertical clamping members.

5. A bookbinding vise comprising two vertical clamping members, each provided with a plurality of vertical slots, means for supporting the upper ends of said clamping members in the same plane, an angular bracket affixed to the front side of one of said clamping members, an angular member comprising two screws connected together at right angles to each other, one of said screws being adjustably supported in said vertical slots and the other screw adjustably supported upon said angular bracket, a pair of horizontally arranged screws, means for retaining the horizontal member of said screws in a horizontal position, and means for adjusting and retaining said horizontal screws at a lower or higher plane in said slots, a pair of clamping screws revolubly supported from near the lower end of said clamping members.

1,212,353. GEARING. WILLIAM MICHAEL HOFFERBERTH, Redwood, N. Y. Filed Mar. 4, 1916. Serial No. 82,177. (Cl. 74—40.)

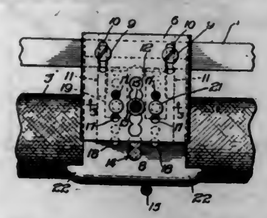


1. In combination, an elongated member having a lateral extension at one end and with spaced arms extending therefrom intermediate its length and in substantially vertical alinement with the lateral extension, a shaft rotatably disposed through certain of the arms and operatively engaged with the lateral extension, said shaft being provided with a spiral, and an endwise movable member disposed through certain of the arms and engageable with the spiral whereby reciprocation of the endwise movable member rotates the shaft.

2. In combination, an elongated member, a rod extending longitudinally through the handle and having a curved end portion projecting beyond the end of the handle and terminating in an upwardly inclined lateral portion, a bearing seat on the terminal portion of said rod, spaced arms projecting laterally from the handle, a rotatable shaft mounted in said arms and axially movable therethrough, a reciprocating rod, said rod and shaft being provided with coöperatively engaged means whereby the shaft is rotated in the reciprocation of said rod, and a lever pivotally mounted upon the handle and operatively connected to said rod to reciprocate the same.

3. In combination, an elongated member having a lateral extension at one end and with spaced arms extending therefrom intermediate its length and in substantially vertical alinement with the lateral extension, a shaft rotatably disposed through certain of the arms and operatively engaged with the lateral extension, said shaft being provided with a spiral, an endwise movable member disposed through certain of the arms and engageable with the spiral whereby reciprocation of the endwise movable member rotates the shaft and the beater element, and a rock lever supported by the handle and operatively engaged with the endwise movable member for imparting reciprocation to said movable member upon rocking of the lever.

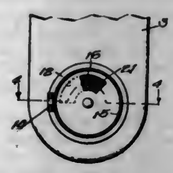
1,212,354. SHADE-FIXTURE. ALBERT H. HOVER, Chicago, Ill., assignor to Elias Olson, Chicago, Ill. Filed Sept. 13, 1915. Serial No. 50,287. (Cl. 156—27.)



1. In combination, two telescoped plates, the outer end of one of said plates being adapted to be attached to a bar for supporting a shade roller, the outer end of the other plate being formed into a rounded shoe adapted to lie parallel with said bar, said plates having registering elongated slots extending through the same and contracted in width at a plurality of points for the purpose of receiving a supporting cord having one end passing through the slots and its other end extending down past the shoe.

2. In combination, two flat telescoped plates, the outer end of one of said plates being adapted to be attached to a bar for supporting a shade roller, the outer end of the other plate being extended laterally in both directions and being bent downwardly into the form of a rounded shoe having rounded ends, and means for connecting said plates together in any one of a plurality of positions.

1,212,355. PHOTOGRAPHIC CAMERA. HARRY L. IDE, Springfield, Ill., assignor of one-half to Roy W. Ide, Springfield, Ill. Filed Mar. 15, 1916. Serial No. 84,274. (Cl. 95—10.)



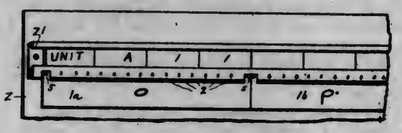
1. A camera of the roll film type including a casing; supply and winding film spools in the casing, the casing having an actinic light conveying passage; and a sensitized element for testing actinic light value coupled with a spool independently of the spool contents whereby successive portions thereof are brought to exposure position at the aforesaid passage.

2. A camera of the roll film type including a casing; supply and winding film spools in the casing, the casing having an actinic light conveying passage, the part of the casing having this passage being changeable in position to enable the adjustment of the location of said passage in the casing; and a sensitized element for testing actinic light value coupled with a spool independently of the spool contents whereby successive portions thereof are brought to exposure position at the aforesaid passage.

3. A camera of the roll film type including a casing; supply and winding film spools in the casing, the casing having an actinic light conveying passage at a spool head; and a sensitized element for testing actinic light value and carried by the spool head located at said passage whereby successive portions of the sensitized testing element are brought to exposure position at the aforesaid passage by the turning of the spool carrying said testing element.

4. A camera of the roll film type including a casing; supply and winding film spools in the casing, the casing having an actinic light conveying passage at a spool head, the part of the casing having this passage being changeable in position to enable the adjustment of the location of said passage in the casing; and a sensitized element for testing actinic light value and carried by the spool head located at said passage whereby successive portions of the sensitized testing element are brought to exposure position at the aforesaid passage.

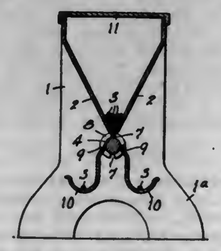
1,212,356. MUSICAL INSTRUCTION. THEODORE J. IRWIN, Fresno, Cal. Filed Dec. 29, 1915. Serial No. 69,186. (Cl. 84—89.)



1. In a musical educational device, the combination of a base, a member attached thereto having a longitudinal groove therein, such groove being open toward the front, a plurality of hooks equidistantly arranged in a row parallel to, and immediately under such groove, a time scale constructed to readily slide within said groove, the time scale having a plurality of equal divisions marked thereon and a plurality of cards having means thereon for hanging them on said hooks, said cards having musical symbols thereon, each card being of a length corresponding to the time value of the symbol printed thereon in relation to said time scale.

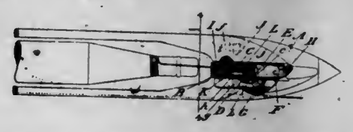
2. In a musical educational device the combination of a base, a row of hooks equidistantly arranged across said base, a groove in said base parallel to the row of hooks and above them, a time scale constructed to fit within the groove, and having equal divisions marked thereon corresponding to the distance between said hooks or multiples thereof, a card the length of such division and having printed thereon a musical symbol equal to a quarter note in time, and a plurality of additional cards having musical symbols printed thereon, the lengths of said cards being proportional to the time value of the symbols printed on them.

1,212,357. TOOTHPICK-HOLDER. FOREST JACKSON, Yetter, Iowa. Filed May 9, 1916. Serial No. 96,299. (Cl. 206—22.)



A tooth pick holder including end standards, a hopper arranged between the end standards and having a narrow discharge opening at the bottom thereof, a horizontal roller journaled between the end standards and extending across the discharge opening at the bottom of the hopper, said horizontal roller being formed with a longitudinal peripheral seat for the reception of a tooth pick and also with annular grooves intersecting the peripheral seat, means for rotating the roller to carry the tooth picks deposited in the peripheral seat away from the hopper, curved flanges projecting from the end standards under the roller for engaging the ends of the discharged tooth picks to support the said tooth picks with the middle portions thereof exposed, and ejecting fingers projecting from the curved flanges and extending into the annular grooves of the roller for positively ejecting the tooth picks from the longitudinal seat of the roller as the latter is rotated.

1,212,358. THREAD TENSION FOR LOOM-SHUTTLES. ROBERT JAMIESON, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me., a Corporation of Maine. Filed Oct. 5, 1915. Serial No. 54,216. (Cl. 139—46.)



1. An automatically threading loom shuttle having a block having two slots one in its bottom and the other in its front wall, a rough fibrous tension material fastened at one end in the bottom slot thence passing around the inner end, the floor, the outer end and a portion of the front wall of the block and fastened at its other edge in the slot in the front wall of the block.

2. An automatically threading loom shuttle having in its thread passage a block K having the slits *f* and *g* in its bottom and side walls respectively in combination with the fibrous tension material L fastened at one end in the slit *f* thence passing around the block K and fastened at its opposite end in the slit *g*.

3. An automatically threading loom shuttle having a block located in its threading passage, said block having two slits therein, which are in faces of the block which are alongside walls of the threading passage, in combination with tension material fastened at its opposite ends in said slits and extending between its two ends over all the exposed faces of the block, namely the floor, the outer wall and the inner wall of the said block.

1,212,359. PROCESS FOR THE MANUFACTURE OF FORMATES. SIDNEY H. KATZ and FRANK K. OVITZ, Pittsburgh, Pa. Filed May 16, 1916. Serial No. 97,902. (Cl. 23—24.)

1. The process of making formates by reaction of carbon monoxid with a caustic alkali, including the admixture with these reagents of a volatile alkali to act as an interchanger, substantially as described.

2. The process of making formates by bringing carbon monoxid in a gaseous state into intimate contact with an alkali hydroxid in solution, and simultaneously exposing both to a volatile alkali in the gaseous phase.

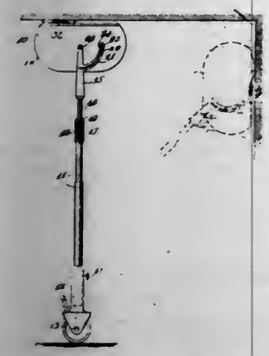
3. The process of making formates which comprises passing a current of gas containing carbon monoxid and ammonia against a counter-flowing divided stream of sodium hydroxid solution.

4. The process of making formates by passing downward through a closed vessel under pressure of from 10 to 20 atmospheres, a solution of sodium hydroxid in a divided state, and simultaneously passing upward therethrough a gas containing carbon monoxid and a gas containing ammonia.

5. The process of making formates by passing downward through a closed vessel under pressure of from 10 to 20 atmospheres, a solution of sodium hydroxid in a divided state, and simultaneously passing upward there-

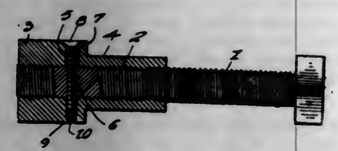
through a gas containing carbon monoxid and a gas containing ammonia, meantime keeping said reagents at a temperature of 150 to 220 degrees centigrade.

1,212,360. ROTARY BRUSH. WACLAW KENSTOWICZ, Chicago, Ill. Filed Oct. 22, 1915. Serial No. 57,294. (Cl. 91—41.)



The combination of a handle, an elongated receptacle carried by the outer end of the handle and adjustable angularly with respect thereto, a rotary brush mounted in the receptacle at one end thereof, the top of the receptacle being closed throughout a substantial portion of its length, leaving a top opening at the end of the receptacle carrying the brush, said brush being located partly beneath the top of the receptacle, the depth of the receptacle being less than the diameter of the brush, and the working portion of the brush projecting through the aforesaid top opening.

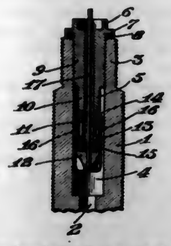
1,212,361. NUT-LOCK. JOHN T. KENNEDY, Soldier City, Kans. Filed Aug. 4, 1916. Serial No. 113,142. (Cl. 151—5.)



1. In a nut lock, the combination with a bolt, of a nut, a sleeve formed upon said nut and provided for receiving a section of the screw threaded portion of said bolt, said nut being provided with alining openings extending transversely therethrough, one of said openings being provided with internal screw threads, and a screw threaded locking pin adapted for insertion through said openings and an opening in the bolt for locking the nut upon said bolt.

2. In a nut lock, the combination with a bolt having a screw threaded shank, of a nut for mounting upon said shank, a sleeve formed upon and extending outwardy from one face of said nut and being provided for receiving a section of the screw threaded portion of said shank, said nut being provided with a pair of alining openings, said bolt being provided with a transversely extending opening and adapted for alinement with said nut carried opening, one of said openings formed in said nut being internally screw threaded, the other of said openings having a countersunk outer end, and a screw threaded locking pin extending through said opening for locking said nut against rotation upon said bolt, said locking pin having an enlarged head for seating in the countersunk portion of said opening.

1,212,362. VALVE. JESSE E. KEPPEL, St. Louis, Mo., assignor to Vulcan Valve Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 17, 1916. Serial No. 78,819. (Cl. 152—12.)



1. In a valve mechanism of the class described, a valve comprising a tubular shell adapted to be secured in a casing, a hollow valve member mounted to slide on the lower end of said shell, and having a side wall with an aperture, and a closed end, a gasket supported on said closed end, the lower end of said tubular member providing a valve seat adapted to form a sealing contact with said gasket, and means for limiting the opening movement of said valve member when said aperture is beyond the end of said shell to open communication through the said wall of said valve member and through the end of said shell.

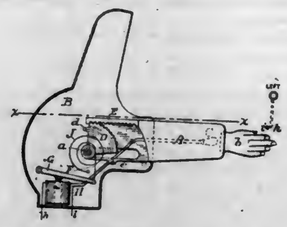
2. In a valve mechanism of the class described, a valve comprising a tubular shell adapted to be secured in a casing, a hollow valve member slidably secured on the lower end of said shell and having a side wall with an aperture, and a closed end, a gasket supported on said closed end, the lower end of said shell providing a valve-seat adapted to form a sealing contact with said gasket, a deflating stem secured to the closed end of said valve member and extending upward through said shell, and means for limiting the opening movement of the said valve member when said aperture is beyond the end of said shell to open communication through the side wall of said valve member and through the end of said shell.

3. In valve mechanism of the class described, a valve comprising a tubular shell adapted to be secured in a casing and provided near its lower end with an annular shoulder, a hollow valve-member slidably mounted on the lower end of said shell and having a side wall with an aperture, a closed outer end and a turned-in inner end for engaging said shoulder to limit the opening movement of said valve-member when the said aperture is below said shoulder, a gasket supported on said closed end, the lower end of said shell providing a valve-seat adapted to form sealing contact with said gasket, and a deflating stem secured to the closed end of said valve-member and extending upward through said shell.

4. In a valve mechanism of the class described, a tubular shell adapted to be secured in a casing, a hollow valve member slidably secured on the lower end of said shell, and having a side wall with an aperture, and a closed end, a gasket supported on said closed end, said tubular shell having an annular shoulder engaging said valve member, the lower end of said tubular member providing a valve seat adapted to form a sealing contact with said gasket, and means for limiting the opening movement of said valve member when said aperture is beyond said shoulder to open communication through the said wall of said valve member and through the end of said shell.

1,212,363. AUTOMOBILE SIGNALING DEVICE. LAURENCE J. KILLIAN, Boston, Mass. Filed Dec. 27, 1915. Serial No. 68,931. (Cl. 177—329.)

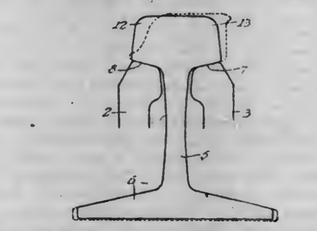
1. In a signaling device for motor driven vehicles, the combination of an imitation of a human forearm and translucent hand adapted to swing downward and slide outward, a toothed rack fixed to said forearm, a toothed segment engaging said rack, electric means for rotating said segment and for illuminating said hand, and a retractile spring, constructed and operating substantially as and for the purposes described.



2. In a signaling device for motor driven vehicles, the combination of an imitation human forearm and transparent hand adapted to slide horizontally, electric means for illuminating said hand and operating said forearm consisting of a magnet, a lever armature, a shaft, a steel ribbon connecting said lever armature and said shaft, a disk fixed to said shaft and means for connecting said disk and said forearm and hand, all construtced and operating substantially as described and for the purposes set forth.

3. In a signaling device for motor driven vehicles, the combination of an imitation of a human forearm and transshaft upon which said arm is mounted, a toothed segment fixed to said shaft, a toothed rack fixed to said arm and meshing with said segment, a magnet, a pivoted lever armature connected to said shaft by a steel ribbon, a source of electric current, a spiral spring adapted to restore to their original positions the aforesaid parts after they have been moved by the electric current operating upon said magnet, substantially in the manner and for the purposes described.

1,212,364. METHOD OF TREATMENT OF WORN STEEL RAILS. GEORGE LANGFORD, Joliet, Ill., assignor to American McKenna Process Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed May 14, 1915. Serial No. 28,096. (Cl. 80—65.)

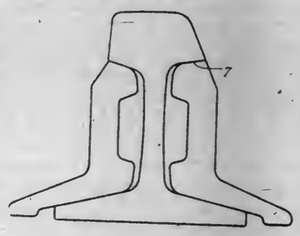


1. The process of renewing worn steel rails to render them usable for the purpose for which they were originally employed, which consists in heating the rails to a degree short of affecting the quality of the metal, then changing the contour of the head only, in amount depending upon the degree of wear, but leaving the flange and web substantially the same and restoring the fishing of the rail to the original or a suitable contour and then sawing off the ends of the rail.

2. The process of renewing worn steel rails to render them usable for the purpose for which they were originally employed which consists in heating the rails to a degree just short of affecting materially the quality of the metal, then redistributing the metal of the head into a shape following in general the contour of wear, and rounding the upper head corners of the rail in degree corresponding to the reduction of cross section of the rail, in order to fill the rolls entirely, the cross section of the web and flange being reduced as little as possible whereby a rail of substantially the same general dimensions and of the original or a suitable fishing is produced as the original rail.

3. The process of renewing worn steel rails to render them usable for the purpose for which they were originally employed which consists in heating the entire rail to a degree just short of materially affecting the quality of the metal, then redistributing the metal of the head into a symmetrical shape following in general the contour of wear, rounding the upper head corners and tapering the sides in degree corresponding to the reduction of cross section due to wear, restoring the original fishing and maintaining substantially the full width of the base of the head, the cross section of the flange being reduced as little as possible, whereby a rail of substantially the same general dimensions of outline, of fishing and of width of base is produced such that the rail may be employed in the same track with new rails.

1,212,365. METHOD OF TREATMENT OF WORN STEEL RAILS. GEORGE LANGFORD, Joliet, Ill., assignor to American McKenna Process Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed May 15, 1915. Serial No. 28,260. (Cl. 80—65.)



1. The process of treating worn rails to render them usable for the purpose for which they were originally employed and in connection with new rails, which consists in heating the rails to a degree short of injuriously affecting the quality of the metal, then forming the contour of the head only into an unsymmetrical shape having on one side the contour of the original head and on the other side a contour corresponding in general to the contour of wear, but leaving the flange and web substantially the same and forming a suitable fishing on the rail and then sawing off the ends.

2. The process of treating worn rails to render them usable in connection with rails having the original unworn cross-section and for the purpose for which they were originally employed, which consists in heating the rails to a degree short of injuriously affecting the quality of the metal, then distributing the metal of the head into an unsymmetrical shape, following on one side the general contour of wear, and on the other side the general contour of the original rail, the cross-section of the web and flange being altered as little as possible, whereby a rail of substantially the same general dimensions, with the exception of a narrower tread, as the original new rail, is produced.

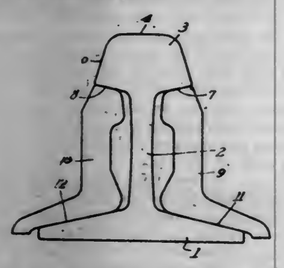
3. The process of treating worn rails to render them usable in connection with rails having the original cross-section, and for the purpose for which they were originally employed which consists in heating the rails to a degree short of materially affecting the chemical composition of the metal, then redistributing the metal of the head into an unsymmetrical shape following on one side the general contour of wear, and following on the other side the general contour of the original outline of the head, restoring substantially the original fishing and maintaining substantially the full width of the base of the head, the cross section of the flange being altered as little as possible, whereby a rail of substantially the same general dimensions of outline, with the exception of a narrower tread, and of width of base is produced, such that the rail may be employed in the same track with new rails.

4. The process of treating worn rails to render them usable as the inner rail on curves in connection with the original new rails which consists in heating the entire rail to a degree short of injuriously affecting the chemical composition of the metal, then redistributing the metal of the head into an unsymmetrical shape having on the gage side the general contour of the original rail head, and having on the outside a tapered face corresponding in general to the contour of wear and having a narrower tread than the original rail to reduce the friction between the wheels and the rail, restoring substantially the original fishing and maintaining substantially the full width of the base of the head, the cross-section of the flange and web being altered as little as possible, whereby a rail of substantially the same general dimensions with the exception of less width at the top of the head, and of width of base, is produced, such that the rail may be employed in the same track with new rail and with the same rail fittings.

5. The process of treating rails which have been worn to an unsymmetrical shape to render them usable for the purpose for which they were originally intended, which consists in heating them to a degree short of injuriously affecting the quality of the metal, then forming the metal of the head on the less worn side into a wear or service side, and forming the metal of the more worn side into a strength side having greater girder strength at the joints for the weight of metal than the service side, and forming the fishing on the strength side to give full width of bearing surface of the angle-bars, finishing the rail on all its surfaces and then sawing off the ends of the rail.

[Claims 6 to 8 not printed in the Gazette.]

1,212,366. RAILROAD-RAIL FOR USE ON CURVES. GEORGE LANGFORD, Joliet, Ill., assignor to American McKenna Process Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed May 19, 1915. Serial No. 29,042. (Cl. 239—14.)



1. A railroad rail of the class described comprising a rail substantially standard in all dimensions except as to the width of tread, the tread being narrower than the standard width.

2. A railroad rail for the purpose described having substantially standard web and flanges and a narrow tread, the head having a sloping side face on the outside of the rail said rail being of standard contour and dimensions on the gage side.

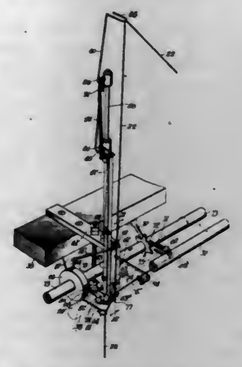
3. A railroad rail having substantially standard dimensions as to the height of the rail, the width of the base of the rail, thickness of the web, depth of head and flange, but having a narrow tread, said rail having full bearing surfaces between the base of the rail and the angle-bars for forming the joint, and a sloping side on the outside of the rail for controlling the width of tread.

4. In combination a track comprising a standard rail on the upper side of the curve, a tangent standard rail connected thereto, an inner narrow tread rail on the lower side of the curve and a tangent standard rail connected thereto, said narrow tread rail being standard in substatially all dimensions except as to width of tread.

5. A section of curved track comprising a standard outer rail and an inner rail having substantially standard dimensions throughout, except as to width of tread, said tread being narrower than the width of tread of the outer rail, this narrow tread rail being substantially standard as to height of rail, width of base, thickness of web and depth of flange.

[Claims 6 to 8 not printed in the Gazette.]

1,212,367. STOP-MOTION FOR KNITTING-MACHINES. OLIVIER LAROCHE, Hamilton, Ontario, Canada, assignor to Canadian Knitting Company Limited, Hamilton, Ontario, Canada, a Corporation of Canada. Continuation in part of application Serial No. 727,311, filed Oct. 23, 1912. This application filed Jan. 12, 1914. Serial No. 811,691. (Cl. 66—7.)



1. A stop-motion for knitting machines comprising a clutch-operating device, a support, a rockable shaft mounted on said support, adapted, when rocked, to actuate said device, an actuating shaft mounted on said support and continuously driven from the machine, a guide mounted on said support adapted for the passage of thread therethrough, a fixed support, a member movably mounted on said support and coöperating with said guide, said member being supported by the thread passing through said guide, and means, associated with said member, for interlocking said actuating shaft and said rockable shaft when said member moves, due to the breaking or severing of a thread, whereby said actuating shaft causes said rockable shaft to be rocked, and means operated upon an increase in the tension on the thread to sever the thread between the thread supported member and the thread supply.

2. The combination with a knitting machine, of mechanism for arresting the operation of said machine when the continuity of the yarn thread of the machine is broken, said mechanism including a clutch-operative device, a brake, latching means for actuating said device and said brake, a continuously rotating actuating shaft, having a projection thereon, a rockable shaft having a projection thereon, detent means for said latching means carried by said rockable shaft, a pair of vertically arranged guiding eyes, a movable member located, when in one of its positions, in the path of the projection of said actuating member and in operative relation with the projection of said rockable shaft, means resting upon said thread between said eyes and normally holding said movable member out of the path of the projection of the actuating member, whereby, when the continuity of such yarn thread is broken, said movable member effects a coupling between said rotating shaft and said rockable shaft, to remove said detent means from said latching means.

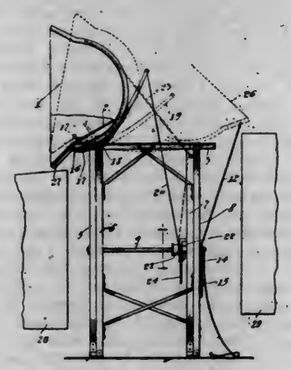
3. The combination with a knitting machine including a rotary needle-supporting head, of mechanism for arresting the operation of said machine when the continuity of the yarn thread of the machine is broken, said mechanism including a clutch operating device, a releasable brake, adapted, when, released, to bear upon said head, latching means for actuating said device and releasing said brake, a continuously rotating actuating shaft, having a projection thereon, a rockable shaft having a projection thereon, detent means for said latching means carried by said rockable shaft, a movable member located, when in one of its positions, in the path of the projection of said actuating member, and in operative relation with the projection of said rockable shaft, but normally held out of such position by said yarn thread, whereby, when the continuity of such yarn thread is broken, said movable member effects a coupling between said actuating shaft and said rockable shaft, to effect the removal of said detent from said latch.

4. The combination with arresting mechanism, of a rockable shaft, adapted, when rocked, to actuate said mechanism, an actuating shaft, a thread-supported member adapted, when released, to connect said first and second named shafts, whereby said first named shaft is rocked, a shears, a thread-controlled tension device for actuating said shears, and a device, controlled by said tension device, for rocking said first named shaft.

5. The combination with arresting mechanism, of a latch device adapted, when released, to actuate said mechanism, a rockable shaft adapted, when rocked, to release said latch, an actuating shaft, a thread-supported member adapted, when released, to connect said first and second named shafts, whereby said first named shaft is rocked, a shears, a thread-controlled tension device for actuating said shears, and a device, controlled by said tension device, for rocking said first named shaft.

[Claims 6 to 16 not printed in the Gazette.]

1,212,368. MOVABLE LOADING-HOPPER. ALBERT P. LEE, Chicago, Ill. Original application filed Jan. 8, 1914, Serial No. 810,964. Divided and this application filed May 4, 1914. Serial No. 836,152. (Cl. 214—1.)

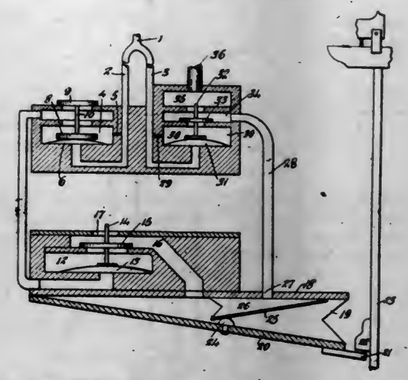


1. A device of the character described comprising a hopper carrying framework, a hopper adapted to roll on said framework from one limiting position to the other, and means adapted when said hopper is in a limiting position to elevate said hopper to withdraw a projecting portion of said hopper from discharged material, said means including a pin provided upon said hopper, and a pivotally mounted finger carried by said framework.

2. A device of the character described comprising a hopper carrying framework, a hopper adapted to roll on said framework from one limiting position to the other, and means adapted when said hopper is in a limiting position to elevate said hopper to withdraw a projecting portion of said hopper from discharged material, said means including a pin provided upon said hopper, a pivotally mounted finger carried by said framework, and a pawl and ratchet mechanism for operating said finger.

3. A device of the character described comprising a hopper carrying framework, a hopper adapted to roll on said framework from one limiting position to the other, and means adapted when said hopper is in a limiting position to elevate said hopper relative to said framework to thereby withdraw a projecting portion of said hopper from discharged material.

1,212,369. PLAYER-PIANO. JOSEPH LEISCH, Tryon, N. C., assignor to The John Church Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 21, 1913. Serial No. 762,606. (Cl. 84—160.)



1. In a player piano, a power pneumatic having a movable member, an air cushion stop for said movable member, means for varying the pressure of air in the said air cushion, and means independent from said varying means for deflating said air cushion whereby said cushion is withdrawn as a stop.

2. In a player piano, the combination with a series of power pneumatics and air cushion stops therefor, of means of exhausting the air in the air cushion stops in selected pneumatics of the series, and means of varying the pressure of the air in the remainder of the air cushion stops of said series without affecting said selected pneumatics and stops.

3. In a player piano, a power pneumatic having a movable member, an air cushion stop for said movable member, and means for varying the pressure of air in the said air cushion above or below atmosphere.

4. In a player piano, a power pneumatic having a movable member, an air cushion stop for said movable member, means for varying the pressure of air in the said air cushion above or below atmosphere, and means independent from the said varying means for deflating said air cushion whereby said cushion is withdrawn as a stop.

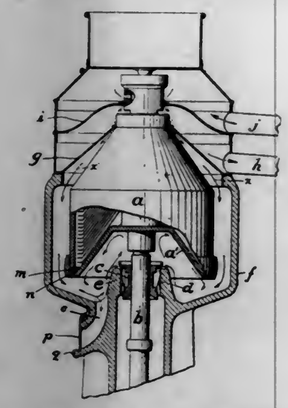
5. In a player piano, a power pneumatic having a movable member, an air cushion stop for said movable member, means for varying the pressure of air in the said air cushion above or below atmosphere, and means for deflating said air cushion comprising a vacuum chamber, a pouch therein, connection from the chamber to said cushion, and a valve on the pouch, said valve positioned to cut off the means of varying pressure and to open the connection between the vacuum chamber and said cushion.

[Claims 6 to 11 not printed in the Gazette.]

1,212,370. BOWL-CASING DRAIN FOR CREAM-SEPARATORS. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Feb. 11, 1916. Serial No. 77,560. (Cl. 233—21.)

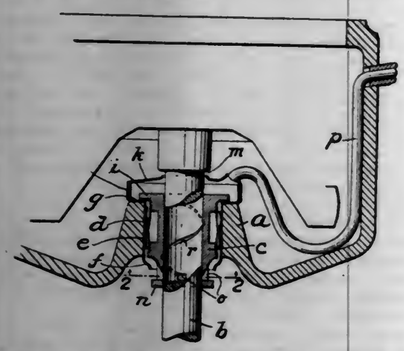
1. In a cream separator, the combination with a revoluble separator bowl, of a stationary bowl-casing surrounding the separator bowl and spaced therefrom, stationary skim milk and cream covers superimposed upon the casing, the separator bowl being provided with skim milk and cream discharge outlets, there being an opening

in the bowl casing below the bowl, the arrangement being such as to tend to establish air currents past the liquid outlets and through such opening thereby tending to cause an admixture of cream with the skim milk, and automatically acting means normally closing said opening and thus building up air pressure to minimize the establishment of said air currents but adapted to yield under pressure of liquid to open the passage and permit the liquid to escape.



2. In a centrifugalizing machine, the combination with a revoluble centrifugalizing bowl provided with an outlet, of a stationary bowl casing surrounding the centrifugalizing bowl and spaced therefrom, stationary covers superimposed upon the casing and adapted to receive the material discharged from the centrifugalizing bowl outlet, there being an opening in the bowl casing below the bowl, the arrangement being such as to tend to establish air currents past the bowl outlet and through such opening, thereby tending to cause a discharge of material below the covers, and automatically acting means normally closing said opening and thus building up air pressure to minimize the establishment of said air currents but adapted to yield under pressure of liquid to open the passage and permit the liquid to escape.

1,212,371. BEARING FOR CENTRIFUGAL CREAM-SEPARATORS. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed June 14, 1916. Serial No. 103,648. (Cl. 64—56.)



1. In a centrifugal separator, the combination with the bowl spindle and the casing bored to receive the spindle, of a bearing surrounding the spindle and provided near its lower end with a hole opening to the spindle, a spring between the bearing and the casing, a cap supported from the casing and extending over the top of the bearing and spaced a substantial distance therefrom and having a central orifice through which the spindle extends, and means at the lower part of the bore of the casing adapted to convey to said hole oil gravitating between the casing and the bearing, there being a helicoidal groove between the spindle and the bearing adapted to convey oil upwardly through the bearing to the space beneath the cap.

2. In a centrifugal separator, the combination with the bowl spindle and the casing bored to receive it, of a bearing surrounding the spindle and spaced from the casing and provided near its lower end with a hole opening to the spindle, a spring between the bearing and the casing, a flange at the upper end of the bearing overhanging said casing and spaced vertically therefrom to allow oil to pass inwardly to the space around the bearing, there being a helicoidal groove between the spindle and the bearing adapted to carry oil upwardly through the bearing, and a cap supported from the casing and extending over and outside the top of the bearing and spaced therefrom vertically and laterally.

3. In a centrifugal separator, the combination with the bowl spindle and the casing bored to receive it, of a bearing surrounding the spindle and provided on its inner face with a helicoidal groove, a flange at the lower end of the bearing, said bearing being orificed above the flange, a flange at the upper end of the bearing overhanging said casing and spaced therefrom vertically, a cap supported from the casing and extending outside and over the top of the casing and spaced therefrom vertically and laterally and orificed centrally to allow the extension therethrough of the spindle, a spring between the bearing and the casing, and a member extending inward from the bore of the casing adapted to convey oil to the lower flange of the bearing.

4. In a centrifugal separator, the combination with the bowl spindle and the casing bored to receive it, of a bearing surrounding the spindle, there being a helicoidal groove between the spindle and the bearing, a tubular shell fitting within the bore, a spring between the shell and the bearing, the bearing being orificed at its lower part to allow oil to pass to the spindle, a centrally orificed cap carried by the shell and overhanging and spaced from the bearing, and means to direct oil gravitating between the bearing and shell to the oil orifice in the bearing.

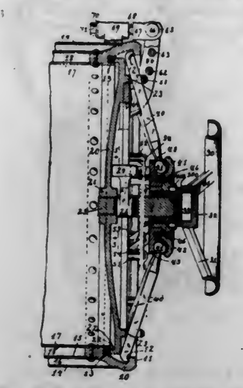
5. In a centrifugal separator, the combination with the bowl spindle and the casing bored to receive it, of a bearing surrounding the spindle, there being a helicoidal groove between the spindle and bearing, a tubular shell fitting within the bore, a spring between the shell and the bearing, the bearing being orificed at its lower part to allow oil to pass to the spindle, an extension at the top of the shell extending outwardly, upwardly and inwardly, said inward extension forming a cap being spaced vertically from the bearing, a flange at the upper part of the bearing overhanging the casing, said flange being spaced vertically from said outward extension of the shell and laterally from said upward extension of the shell, a flange on the bearing beneath the oil orifice therein, and an inwardly extending flange on the lower end of the shell overhanging the second named flange.

[Claim 6 not printed in the Gazette.]

1,212,372. FASTENER FOR STERILIZER-DOORS. JOHN MARION LIPTAY, Van Nest, N. Y., assignor to The Kny Scheerer Corporation, New York, N. Y., a Corporation of New York. Filed Feb. 9, 1916. Serial No. 77,165. (Cl. 70—3.)

1. Securing means for closures, comprising in combination with a closure, a bolt carrier and a lock carrier, one being internally, the other externally threaded, a hub interposed between the two and having externally and internally threaded engagement therewith, a securing bolt for the closure operated by the bolt carrier, and a holder for the bolt engaged thereby.

2. Securing means for closures, comprising in combination with the closure having an outwardly projecting bolt externally threaded, holding means engaged by the bolt, a lever carrier adapted to surround the bolt and provided with a central boss internally threaded, a hub intermediate the bolt and the lever carrier and externally and internally threaded to engage simultaneously the threads of the bolt and the lever carrier.



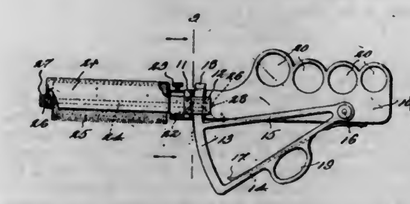
3. In a device of the character described, the combination with a series of radially arranged levers having terminal balls, of a carrier for the series comprising two plates each with registered recesses adapted to form sockets to retain such balls and means for securing the plates together and a hand wheel by which the levers may be moved circularly as a series at their socket ends, and a series of detents by which the levers are prevented from such circular movement at their outer ends.

4. In closure securing means, the combination with an outwardly flaring inturned annular rim, of a door substantially circular and of smaller diameter than said rim, and arranged within the rim, and a locking device by which the door is secured to the sterilizer, including a member projecting from the door at right angles to its general surface, a lever carrier movable along said member, a series of levers radially arranged from the carrier and adapted to engage the rim to lock the door, and means for moving the lever carrier including a rotary member having a hub externally and internally threaded, one set of threads being adapted to engage the projecting member and the other set of threads the carrier.

5. In a device of the character described, a door, a series of levers, a carrier therefor comprising socket plates, means for moving the levers rectilinearly and circularly, in combination with means for preventing either movement until the other movement is completed.

[Claims 6 to 14 not printed in the Gazette.]

1,212,373. TOOTH-BRUSH. GEORGE H. LOVE, Pueblo, Colo. Filed Jan. 29, 1916. Serial No. 75,150. (Cl. 15—37.)

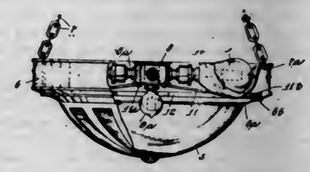


A brush comprising a handle provided with a transversely extending cut out forming a passage way, a brush housing releasably connected with said handle, a brush positioned in said housing and provided with a shaft having one end rotatably supported by said housing and having the opposite end portion extended through said passage way and rotatably supported by said handle, a gear carried by said brush shaft, and an actuating lever carried by said handle and provided with a rack bar extending through the passage way and having its teeth meshing with the teeth of said gear.

1,212,374. ALUMINUM ALLOY. WILLIAM A. MCADAMS, Bay Shore, N. Y. Filed Apr. 15, 1914, Serial No. 832,053. Renewed June 6, 1916. Serial No. 102,089. (Cl. 75—1.)

An aluminum alloy composed of aluminum, zinc and copper in substantially the proportion by weight of one hundred and eight parts aluminum, forty-six parts zinc and twenty parts copper.

1,212,375. ILLUMINATING APPLIANCE. EARL C. MCKINNIE, Chicago, Ill., assignor to National X-Ray Reflector Company, Chicago, Ill., a Corporation of Illinois. Filed May 19, 1913, Serial No. 768,394. Renewed June 17, 1916. Serial No. 104,236. (Cl. 240—78.)



1. An illuminating appliance comprising an annular rim having a continuous inwardly-extending flange at its lower peripheral edge; a translucent bowl supported from said flange; and a lighting unit arranged interiorly of said rim and bowl and embodying a central junction box, lights connected thereto, and radial box-supporting arms having their inner ends detachably connected to the under side of said box and their outer ends detachably connected with said flange.

2. An illuminating appliance comprising, an annular rim having a continuous inwardly-extending flange at its lower peripheral edge; a ring secured concentrically to said flange; a translucent bowl supported from said flange; and a lighting unit arranged interiorly of said rim and bowl and embodying a central junction box, lights connected thereto and radial box supporting arms having their inner ends detachably connected to the under side of said box and their outer ends provided with hooks which are detachably engaged with said ring.

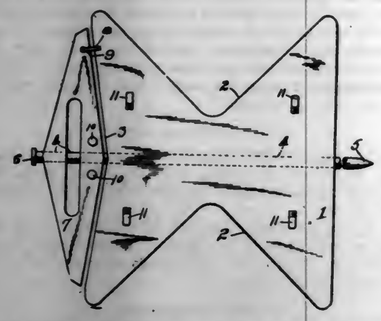
3. An illuminating appliance comprising, an annular rim having a continuous inwardly-extending flange at its lower peripheral edge; a translucent bowl supported from said flange; and a lighting unit arranged interiorly of said rim and bowl and embodying a central junction box, a plurality of horizontal lights and a depending light connected to said box, radial box supporting arms detachably connected at their inner ends to the under side of said box and at their outer ends to said flange, and a depending supporting element wherein the depending light is arranged detachably connected at its upper end to said box and at its lower end to the bottom of said bowl.

1,212,376. LINE-REEL. DENNIS MCNAMARA, Lexington, Mass. Filed June 12, 1916. Serial No. 103,254. (Cl. 242—96.)

1. In a line reel, the combination of a body, a handle separate from the body, a pivot pin loosely mounted through said body and handle, and means for optionally securing the handle to the body.

2. In a line reel, the combination of a pivot pin, a body of approximately rectangular shape rotatable on said pin,

a handle rotatably mounted on the pin separate from the body, and means for optionally securing the handle to said body.

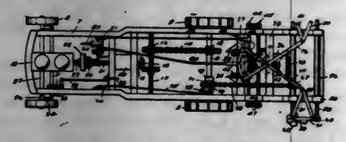


3. In a line reel, the combination of a headed pivot pin, a flat body of rectangular shape provided with oppositely disposed V-cuts rotatable on said pin, a handle rotatably mounted on the pin separate from said body, and means carried by said handle for optionally securing the body and handle together for common rotation.

4. In a line reel, the combination of a flat body of approximately rectangular shape provided with a flattened V-recess in one end, a pivot pin loosely secured through the body, a handle loosely mounted in relation to the body on said pin of the same thickness as said body and having its underface shaped to fit into said recess, and a fork catch rockably mounted in said handle and adapted to be moved into engagement with the lateral faces of the body so as to operatively connect the same to said handle.

5. In a line reel, the combination of a flat body of approximately rectangular shape provided with a flattened V-recess, a pivot pin loosely secured through the body, a handle loosely mounted in relation to the body on said pin of the same thickness as said body and having its underface shaped to fit into said recess, said handle being provided on each side face with two wrapping posts positioned equi-distant from its axis of rotation, and a forked catch rockably mounted in said handle and adapted to be moved into engagement with the lateral faces of said body so as to operatively connect the same to the handle.

1,212,377. AGRICULTURAL IMPLEMENT. JAMES M. MALACOVE, Tacoma, Wash. Filed Jan. 24, 1916. Serial No. 74,026. (Cl. 97—53.)



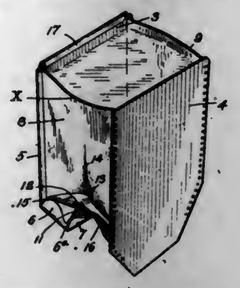
1. A device of the class described comprising a frame, hoes disposed on opposite sides of said frame, manually operated means for moving said hoes transversely of said frame, and power driven means for reciprocating said hoes lengthwise of said frame.

2. A device of the class described comprising a frame, plows secured to the medial portion of said frame, hoes disposed at the sides of said frame, means for adjusting said hoes transversely of said frame, and power driven means for reciprocating said hoes longitudinally of said frame.

3. A device of the class described comprising a frame, plows secured to said frame, means for raising and lowering said plows simultaneously, hoes disposed at the sides of said frame, means for reciprocating said hoes longitudinally of said frame, a clutch for disconnecting said reciprocating means and means for moving said hoes transversely of said frame.

4. A device of the class described comprising a frame, plows secured to said frame, means for raising and lowering said plows, telescoping rods extending transversely of said frame, hoes secured to said rods, means for moving said rods laterally of said frame and means for reciprocating said hoes.

1,212,378. COLLAPSIBLE DRINKING-CUP. LOUIS K. MEARKLE, Philadelphia, Pa., assignor to Duquesne Sales Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Mar. 15, 1915. Serial No. 14,535. (Cl. 65—58.)



1. A collapsible drinking cup composed of two stiff sides and two sides and bottom formed of flexible material, a plurality of compound inward and upward folds in the flexible material, with the underside of the topmost fold shorter than the bottom fold, substantially as described.

2. A collapsible vessel made with two stiff sides and two sides and bottom of folded flexible material, a pair of inward and upward folds laterally in the latter attached at the sides of the folds to the stiff sides so that the underside of the topmost fold is shorter than its upper side, and the upper side of the bottom fold is shorter than its bottom side, substantially as described.

3. A collapsible drinking cup composed of two stiff sides and two sides and bottom made of double folded flexible material attached to said stiff sides by clamping under flanges, the flange by which the under side of the upper of the folds of the flexible material is held being wider than the clamping flange on the upper side of the fold.

4. A collapsible drinking cup composed of two metal sides having inward bent clamping flanges and two sides and bottom formed of folded flexible material clamped under said flanges, said flexible material being provided with two compound upward and inward folds in the bottom, and said clamps arranged to prevent the entire straightening of the folding ridges when the vessel is distended.

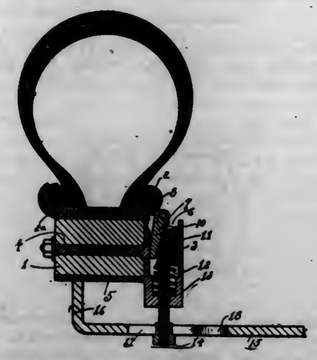
5. In a collapsible vessel composed of two metal sides and two sides and bottom made of folded flexible material clamped to said metal sides, a clamping flange, having its vertical part gradually widened toward the bottom, and below this a diagonal flange wider than the vertical flange at its middle portion and narrower at its bottom, ending in a notch, beyond which it has a short extension in a horizontal direction, whereby to prevent entire flattening of the folds when the cup is opened.

[Claim 6 not printed in the Gazette.]

1,212,379. QUICK-ACTING RETAINER FOR DEMOUNTABLE RIMS. CHRISTOPHER B. MICHEL, Oilfields, Cal. Filed Apr. 10, 1916. Serial No. 90,030. (Cl. 152—21.)

1. A retaining member for demountable rims comprising a box, a wedge arranged to engage the rim and having a retaining body projecting within the box, and a spring pressed binding member removably arranged between the retaining body and one side of the box, as described.

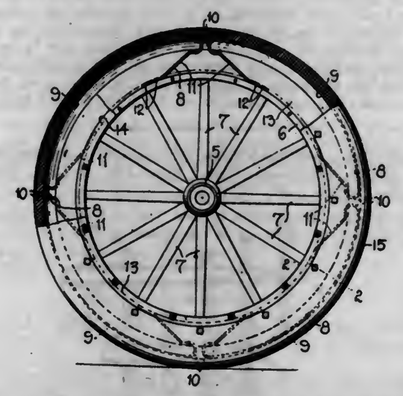
2. A retaining member for demountable rims comprising a wedge arranged to engage the rim, a tapered retaining body on the wedge, a box into which the retaining body projects, a spring pressed binding block movable in the box back of the retaining body, a pin on the block projecting through the box, and means on the pin for engagement by a tool for pulling the binding block from engagement with the retaining body, as described.



3. A retaining member for demountable rims comprising a wedge arranged to engage the rim, a retaining body on the wedge, a box into which the retaining body projects, under grips projecting outside of the box, and spring pressed means for frictionally binding the retaining body within the box to hold the wedge against the rim, as described.

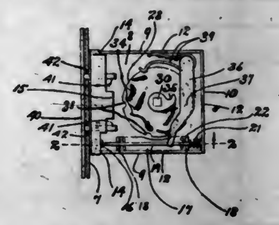
4. A retaining member for demountable rims comprising a box disposed adjacent the rim, a spring pressed wedge within the box, a spring pressed binding block within the box, a pin on the block extending through the box provided with an enlarged head, a tapered retaining member within the box engageable by the block, finger grips on the retaining body, and means on the retaining body engageable with the rim, as described.

1,212,380. WHEEL-TIRE. CHALMERS A. MILLER, Mapleton, Iowa. Filed Mar. 13, 1916. Serial No. 83,943. (Cl. 152—8.)



The combination with a vehicle wheel, of a tire therefor including a plurality of cushioning springs, each consisting of a resilient metal plate having an arcuately curved medial portion disposed in spaced concentric relation to the wheel rim, said plate at the opposite ends of such curved portion being provided with inwardly disposed semi-circular bends and the end portions of the plate being extended inwardly from said bends obliquely to the wheel rim and initially terminating in angular extremities disposed toward the medial portion of the spring and in the same general direction as the obliquely disposed end portions, said angular extremities being adapted to be fixed to said rim, and a flexible casing inclosing the said cushioning springs.

1,212,381. LOCK. EDWARD M. MILLER, Kent, Ohio. Filed May 4, 1914. Serial No. 836,133. (Cl. 70—18.)



1. In a chest lock, the combination with a plate having a hook shaped member rigidly secured thereto, of a lock casing provided with an opening for receiving said hook shaped member, a horizontally arranged locking bar supported in said casing and capable of rocking on its supports, said locking bar being adapted to engage with said hook shaped member, a bar mounted in said casing and free to slide in its mountings, one end of said slidable bar being arranged to engage with said locking bar and rock it out of engagement with said hook shaped member, means for resiliently holding said slidable bar against movement and means for actuating said bar.

2. In a chest lock, the combination with a plate having a hook shaped member of a casing provided with an opening for receiving said hook shaped member, a locking bar arranged in said casing and capable of rocking on its supports, said locking bar having an edge adapted to engage with said hook shaped member, means for resiliently holding said locking bar in engagement with said hook shaped member, a bar slidably mounted in said casing and having one end adapted to engage with said locking bar and rock said bar out of engagement with the said hook shaped member when the said slidable bar is moved longitudinally and means for actuating said bar.

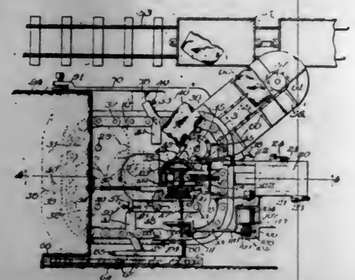
3. In a chest lock, the combination with a plate having hook shaped members, of a casing provided with an opening for receiving said hook shaped members, a horizontally arranged locking bar supported in said casing and capable of rocking on its supports, said locking bar having one edge adapted to engage with said hook-shaped members and having a tongue arranged at an angle to said bar, a bar slidably mounted in said casing and provided with a lug arranged to extend under said locking bar and engage with the tongue thereon and means for actuating said slidable bar to bring it into engagement with said tongue on said locking bar.

4. In a chest lock, the combination with a plate having hook shaped members rigidly secured thereto, of a casing provided with openings for receiving said hook shaped members, said casing having recesses in the sides thereof, the bottom walls of said recesses being inclined, a locking bar arranged in said casing and extending horizontally from side to side thereof and having its ends resting on the inclined wall of said recesses, one edge of said locking bar being adapted to engage with the hook shaped members of the plate, said locking bar being also provided with a tongue arranged at an angle thereto, a bar slidably mounted in said casing and provided at one end with a lug which extends under said locking bar and is adapted to engage with the tongue on said locking bar and means for actuating said slidable bar to bring it into engagement with said locking bar.

1,212,382. MINING-MACHINE. EDMUND C. MORGAN, Morgan Park, Ill. Filed Nov. 3, 1910. Serial No. 590,445. (Cl. 125—14.)

1. In a mining machine, the combination of means for cutting an incision in the material to be mined to effect

its breaking down, and horizontal conveyer flights operating in close proximity to and moving with said cutting means and extending in an opposite direction from the latter to convey the material back from the mine wall as soon as it is broken down.



2. In a mining machine, the combination of a chain cutter for producing a kerf in a mine wall, and conveyer flights extending laterally from said chain cutter inwardly or in a direction opposite to the cutters of said chain cutter, to convey the material away from the mine wall as soon as broken down.

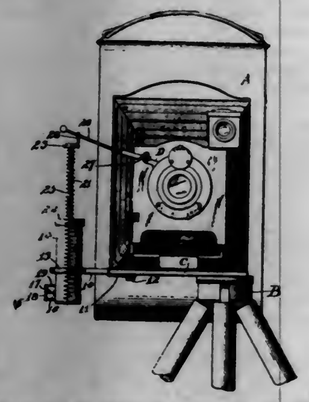
3. In a mining machine comprising an undercutting chain cutter, inwardly extending lateral conveyer flights connected to and movable with said chain cutter, and means for breaking down the material from a mine wall above the undercut into the path of said conveyer flights.

4. In a mining machine, the combination with cutting mechanism for producing a kerf in the material to be mined, and conveying mechanism extending backwardly from the mine wall and mounted on and movable with said cutting mechanism into the kerfs produced to act directly on the material as soon as broken down to convey the same back from the mine wall.

5. In a mining machine, the combination of a continuously operating endless cutter for cutting an incision in the material to be mined, and a plurality of conveyer flights extending backwardly from the mine wall and carried by said cutter and moving into the kerf produced thereby to take the material broken down and move it away from the mine wall.

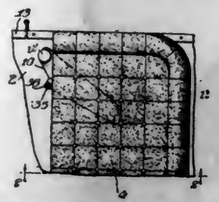
[Claims 6 to 51 not printed in the Gazette.]

1,212,383. AUTOMATIC SHUTTER-OPERATING DEVICE FOR PHOTOGRAPHIC APPARATUS. STEVEN NAGY, Northampton, Mass. Filed Sept. 13, 1916. Serial No. 119,897. (Cl. 161—26.)



In a device of the character described, the combination with a photographic apparatus including a shutter, of means to actuate said shutter comprising an air cylinder, a plunger operable in said cylinder, a connection between said shutter and said plunger, means to move said plunger in said cylinder, and means carried by said plunger whereby the speed of movement thereof may be varied, substantially as described.

1,212,384. AUTOMOBILE-TANK FILLER. JOHN L. NILSON and JOHN PRINCE, Chicago, Ill. Filed July 2, 1915. Serial No. 37,667. (Cl. 21—90.)



1. A fuel tank filler constructed and arranged for emplacement under a vehicle seat cushion and provided with a liquid fuel conduit and an air-conduit both adjustable in communication with the interior of said tank and having their inlet and outlet end, respectively, uncovered at the edge of said cushion.

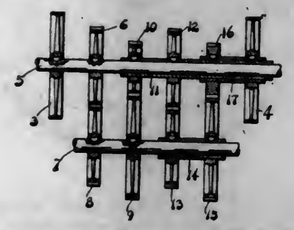
2. The combination with a fuel tank arranged under a driver's seat having a cushion thereon, of a conduit communicating with the inlet opening to said tank and arranged between said seat and cushion, said conduit having its inlet arranged in an exposed position.

3. The combination with a fuel tank arranged under a driver's seat covered by a seat cushion, of a filler conduit covered by said cushion and extending the inlet opening of said tank to an exposed or uncovered position.

4. The combination with a fuel tank of a self propelling vehicle having said tank underneath the driver's seat, of a fluid conducting and indicating device arranged between the seat and the cushion thereon by means of which the driver from his seat is enabled to refill said tank and note the quantity of liquid in said tank.

5. The combination with the seat and seat cushion of a self propelling vehicle, and a fuel tank covered by said seat and seat cushion, of a filler having an indicator thereon and an air passage therein communicating with the interior of said tank and permitting air to be expelled therefrom, said filler being covered by said cushion with the exception of its inlet and indicator, and means for operating said indicator by the liquid in said tank.

1,212,385. MECHANICAL MOVEMENT. THADDEUS A. NOLAN, Cincinnati, Ohio. Filed Jan. 8, 1916. Serial No. 70,920. (Cl. 74—7.)



1. In combination in a mechanical movement, a driving shaft, a secondary shaft, a sleeve rotatively mounted on the driving shaft, a sleeve rotatively mounted on the secondary shaft, a driven sleeve rotatively mounted on the first mentioned sleeve, motion communicating means secured to the shafts, a second motion communicating means secured to the secondary shaft and the first mentioned sleeve a third motion communicating means secured to the first and second mentioned sleeves, and a fourth motion communicating means secured to the second mentioned and driven sleeves, certain of said means varying in speed ratio to drive said first mentioned sleeve faster than said driving shaft, said second mentioned sleeve faster than the secondary shaft, and said driven sleeve faster than the said first mentioned sleeve.

2. In combination in a mechanical movement, a driving shaft, a secondary shaft, a sleeve rotatively mounted on the driving shaft, a sleeve rotatively mounted on the secondary shaft, a driven sleeve rotatively mounted on the first mentioned sleeve, a set of intermeshing gears secured to the shafts, a set of intermeshing gears secured to the secondary shaft and first mentioned sleeve, a set of intermeshing gears secured to the first and second mentioned sleeves, and a set of intermeshing gears secured to the second mentioned and driven sleeves, certain of said sets of gears varying in speed ratio to drive said first mentioned sleeve faster than said driving shaft, said second mentioned sleeve faster than the secondary shaft, and said driven sleeve faster than said first mentioned sleeve.

3. In combination in a mechanical movement, a driving shaft, a secondary shaft, a sleeve rotatively mounted on the driving shaft, a sleeve rotatively mounted on the secondary shaft, a driven sleeve rotatively mounted on the first mentioned sleeve, motion communicating means secured to the shafts, a second motion communicating means secured to the secondary shaft and the first mentioned sleeve, a third motion communicating means secured to the first and second mentioned sleeves, and a fourth motion communicating means secured to the second mentioned and driven sleeves, said means being adapted to drive the shafts at substantially the same speed, the first mentioned sleeve faster than the driving shaft, the second mentioned sleeve faster than the secondary shaft, and the driven sleeve faster than the first mentioned sleeve.

4. In combination in a mechanical movement, a driving shaft, a secondary shaft, a sleeve rotatively mounted on the driving shaft, a sleeve rotatively mounted on the secondary shaft, a driven sleeve rotatively mounted on the first mentioned sleeve, a set of intermeshing gears secured to the shafts, a set of intermeshing gears secured to the secondary shaft and first mentioned sleeve, a set of intermeshing gears secured to the first and second mentioned sleeves, and a set of intermeshing gears secured to the second mentioned and driven sleeves, said sets of gears being adapted to drive the shafts at substantially the same speed, the first mentioned sleeve faster than the driving shaft, the second mentioned sleeve faster than the secondary shaft, and the driven sleeve faster than the first mentioned sleeve.

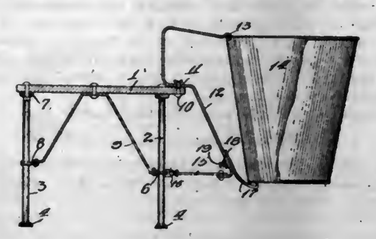
5. In combination in a mechanical movement, a shaft, a second shaft, a sleeve rotatively mounted on the first mentioned shaft, a sleeve rotatively mounted on the second mentioned shaft, a sleeve rotatively mounted on the second sleeve, and intermeshing sets of gears secured to the sleeves, certain of said sets of gears varying in speed ratio to drive said third mentioned sleeve faster than said first and second mentioned sleeves.

[Claims 6 to 8 not printed in the Gazette.]

1,212,386. MILKING-STOOL. PETER J. NORBERG, New Era, Mich. Filed Mar. 10, 1916. Serial No. 83,256. (Cl. 31—13.)

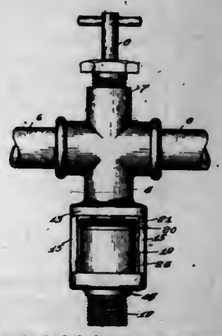
1. In a device of the class described, a stool seat, legs supporting the same, a bracket pivotally mounted on said seat and on the legs thereof, and means associated with said bracket and adapted to engage a pail at the top and bottom, said means being adjustable to engage pails of different sizes.

2. In a milking stool, a seat member, legs supporting the same, a bracket bar pivoted on the forward end of the seat member, a supporting bar pivotally associated with the front legs of the stool and connected to said bracket bar, an extension on the upper end of said bracket bar adapted to engage the upper end of a pail, and means adjustably mounted on the lower end of said bracket bar to



engage the lower end of a pail to support said pail in swinging adjustment with reference to said stool.

1,212,387. LUBRICATOR. WILLIAM W. NUGENT, Chicago, Ill. Filed Mar. 12, 1915. Serial No. 13,939. (Cl. 184—96.)



1. A sight feed lubricator comprising a transparent tube, a clamping ring having a screw-threaded hub, and means for supporting said transparent tube having a screw-threaded recess for receiving said screw-threaded hub, said clamping ring having an exposed surface adjacent one end of said tube for manually turning said hub in said recess.

2. A sight feed lubricator comprising a frame having a rectangular opening therethrough and a screw-threaded recess therein, a transparent tube in the opening in said frame adapted for movement laterally of the frame out of said opening, and a clamping ring having a hub threaded in said screw-threaded recess to effect adjustment of said clamping ring.

3. A sight feed lubricator comprising a frame having an opening extending transversely therethrough; a transparent tube in the frame and formed of a length adapted to pass laterally through said opening; and a clamping ring having a threaded connection with the frame holding the transparent tube in the frame and adapted when adjusted away from the transparent tube to permit the removal of the latter from the frame laterally and independently thereof.

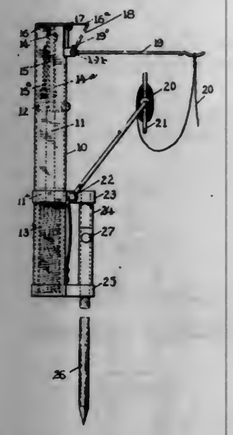
4. A sight feed lubricator comprising two spaced members; a transparent tube disposed between said members; the lower of said members having a flange extending upwardly around the transparent tube; and a clamping ring engaging the top of the transparent tube and having a threaded connection with one of the spaced members, the transparent tube being adapted to move laterally over the flange from between spaced members when the clamping ring is disengaged therefrom.

5. A sight feed lubricator comprising a frame having a vertical passage therethrough and a lateral opening intersecting the vertical passage; a transparent tube in said

opening in substantial axial alinement with the vertical passage; and a clamping ring having a threaded connection with the frame and engaging the transparent tube locking the latter in said opening, said clamping ring being adapted to be adjusted on its threaded connection with the frame to disengage the transparent tube permitting the latter to be removed laterally through said lateral opening from the frame.

[Claims 6 to 24 not printed in the Gazette.]

1,212,388. FISHING-TACKLE. ARTHUR W. OJERHOLM, Worcester, Mass. Filed Nov. 22, 1915. Serial No. 62,694. (Cl. 43—31.)



1. A device of the type described, including a supporting element, a pivoted tackle reel suspending element sustained in an outwardly and upwardly inclined position therefrom, a trip-element arranged to be sustained in an outstanding position from said supporting element, a pivoted closure for said tubular member having an extension adapted to engage an upwardly and outwardly inclined extension of said trip-element when the latter is in a set or horizontal position, said trip-element being adapted to have applied thereto the fishing line to provide, as a pull or "bite" delivers force to the line to effect the tripping operation.

2. A device of the type described, including a tubular supporting element, a pivoted element adapted to be upheld at an upwardly and outwardly inclined position from said supporting element, a trip-lever pivoted in position upon said supporting element and adapted to be actuated or tripped by the line of a fishing tackle when a pull is exerted thereon, said trip-lever having an upwardly and outwardly inclined extension at its pivoted end, a pivoted closure for said tubular supporting element adapted to engage said inclined extension of said trip-lever, a signal member pivotally attached to a slidable element within said tubular supporting element, and a resilient element within said tubular element adapted to project upwardly said slidable member into contact with said closure and actuate said signal, as the pull is exerted upon said fishing line.

1,212,389. BOTTLE-CAP REMOVER. WILLIAM O'NEILL, New York, N. Y., assignor of one-half to Simon Meyer, New York, N. Y. Filed Oct. 9, 1916. Serial No. 124,454. (Cl. 215—1.)

1. A bottle cap remover, comprising a lever adapted for attachment to the neck of a bottle, a cap lifting arm hingedly connected to the lever, and means for pressing said arm inward upon upward movement of the lever.

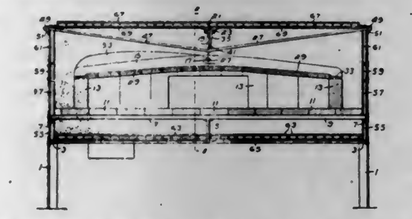
2. A bottle cap remover, comprising a lever having a pair of fulcrums adapted for engagement in sockets at opposite sides of a bottle-neck, a cap lifting arm hingedly connected to the lever, and means for pressing said arm inward upon upward movement of the lever.



3. A bottle cap remover comprising a substantially U-shaped lever having its side portions provided with oppositely disposed upright eyes and having its ends inturned, and a substantially inverted U-shaped lifting arm having its ends outturned and engaged in said eyes, one of the ends of said arm being extended laterally and bent back over the lever.

4. The combination of a bottle-neck having diametrically opposite sockets, a lever having a pair of fulcrums engaged in said sockets, a cap-lifting arm hingedly connected to the lever, and means for pressing said arm inward upon upward movement of the lever whereby to engage an edge of the cap and remove it from the bottle.

1,212,390. OVEN. ARTHUR D. ORDWAY, Newburyport, Mass. Filed Feb. 23, 1915. Serial No. 9,798. (Cl. 107—55.)



1. An oven comprising a frame, a chamber of suitable ceramic material carried thereby and including a crown, supporting bars for said crown resting freely on the walls of said chamber, and suspensory supporting means for said bars intermediate said ends.

2. An oven comprising a frame, a chamber of suitable ceramic material carried thereby and including a crown, supporting bars for said crown resting freely on the walls of said chamber, and suspensory supporting means for said bars intermediate said ends and means bracing said supporting means to sides of the frame.

3. An oven comprising a frame, a chamber of suitable ceramic material carried thereby and including a crown, supporting bars for said crown resting freely on the walls of said chamber, a beam extending transversely of said bars and from which the bars are suspended intermediate their ends and hanger truss means bracing said beam to sides of the frame.

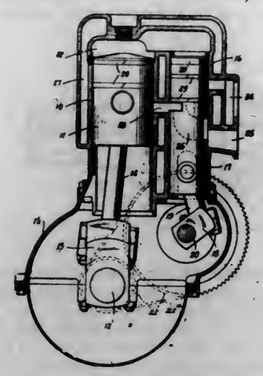
4. An oven comprising a frame, a chamber of suitable ceramic material carried thereby and including a multipartite crown, sectional bars supporting the elements of said crown and detachable suspending means for said sections.

5. An oven comprising a frame, a chamber of suitable ceramic material carried thereby and including a mutilpartite crown, sectional bars supporting the elements of said crown and having ends resting freely on the walls of said chamber and detachable suspending means for said sections remote from said ends.

[Claims 6 to 12 not printed in the Gazette.]

1,212,391. INTERNAL-COMBUSTION ENGINE. ALDEN E. OSBORN, New York, N. Y. Filed Dec. 29, 1914. Serial No. 879,589. (Cl. 123—75.)

1. An internal combustion engine comprising a cylinder having a combustion chamber at one end, a piston, an admission passage opening into the cylinder at an intermediate point in the piston stroke, a valve, and means for actuating the valve to open the admission passage in conjunction with the piston during the suction stroke and to close the admission passage independently of the piston at the end of the suction stroke.



2. An internal combustion engine comprising a cylinder, a piston, an admission passage at an intermediate point in the stroke of the piston, a combustion chamber, an exhaust port opening into the combustion chamber, a valve, and means for actuating the valve to independently control the exhaust port, to open the admission passage in conjunction with the piston during the suction stroke and to close said passage independently of the piston at the end of the suction stroke.

3. An internal combustion engine comprising a cylinder having a combustion chamber at one end, a piston, an admission passage opening into the cylinder at an intermediate point in the piston stroke, an exhaust port, a piston valve, and means for operating the piston valve at one-half the speed of the main piston to independently control the exhaust port to open the admission passage in conjunction with the main piston during the suction stroke and to close said passage at the end of said suction stroke independently of the piston.

4. An internal combustion engine comprising a pair of parallel cylinders, a driven shaft, a piston in one of said cylinders operatively connected to the shaft, a piston in the other cylinder adapted to reciprocate at one-half the speed of the first piston, an admission port, an exhaust port opening into the cylinder of the slow-moving piston at a point intermediate the stroke of said piston, and a passage between the cylinders beyond which the fast moving piston travels, and means for operatively connecting the slow-moving piston to the shaft, whereby said slow-moving piston is arranged to close said passage at the end of the suction stroke before it is covered by the fast-moving piston.

5. An internal combustion engine comprising a main cylinder, a valve cylinder adjacent thereto and communicating therewith at one end, a passage between the two cylinders intermediate their ends, a main piston in the main cylinder, a piston valve in the valve cylinder connected to reciprocate at one-half the speed of the main piston, an exhaust passage opening into the valve cylinder and adapted to be uncovered when the piston valve is at the outer end of its stroke, an admission port opening into the valve cylinder, at an intermediate point in the piston stroke, said valve piston being provided with a transverse passage to establish communication between the admission port and the passage between cylinders during the suction stroke and to close said passage independently of the main piston at the end of the suction stroke.

[Claims 6 to 8 not printed in the Gazette.]

1,212,392. DECALCOMANIA WINDOW-SIGN. OTTO PALM, Jr., New York, N. Y. Filed Oct. 28, 1914. Serial No. 869,120. (Cl. 41—22.)



1. A decalcomania window sign comprising a base member, a sign of the transfer type printed in reverse on said member, an opaque backing applied to said reversely printed sign, and a second sign printed positively on said backing, said two signs with their interposed backing being removable from said base member to effect their application to a window.

2. A decalcomania window sign comprising a base sheet of paper, a sign of the transfer type printed in reverse on said paper, a metal backing applied to said reversely printed sign and following the outline thereof, and a second sign printed positively on said backing, said two signs with their interposed backing being removable from said base member to effect their application to a window.

1,212,393. PNEUMATIC CONCENTRATING-TABLE. CLARENCE Q. PAYNE, New York, N. Y. Filed Aug. 18, 1916. Serial No. 115,590. (Cl. 83—54.)



1. In a pneumatic concentrating table, a table deck composed of a mineral septum, pervious to air under pressure and provided with a series of grooves along its upper surface filled with cementitious material, in combination with means for conveying the material to be separated across said table deck while subjected jointly to mechanical agitation and to air under pressure, substantially as described.

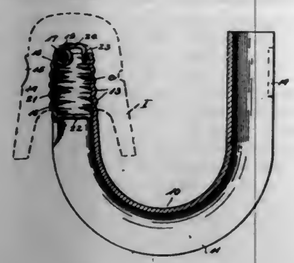
2. In a pneumatic concentrating table, a table deck composed of a mineral septum, pervious to air under pressure and provided with a series of grooves along its upper surface filled with cementitious material, in combination with means for blowing air through the pervious areas of the table deck, means for agitating the table deck in an inclined position, and means for feeding the material to be separated upon the surface of the table deck, substantially as described.

3. In a pneumatic concentrating table, a table deck composed of a mineral septum, pervious to air under pressure, and provided with a series of parallel grooves along its upper surface filled with cementitious material, in combination with means for agitating said table deck in a transversely inclined position, means for blowing air through the pervious areas of said table deck, means for feeding the material to be separated upon the surface of said table deck, stratifying the minerals contained in the material thus fed into horizontal layers by the joint action of mechanical agitation, and of air under pressure, and then separating the strata from each other by causing them to travel over the alternately cemented and uncemented areas of said table deck, substantially as described.

4. In a pneumatic concentrating table, a table deck composed of plates of accreted mineral particles forming a mineral septum and having a series of parallel grooves filled with cement, in combination with means for passing air through the uncemented areas of said table deck, means for reciprocating the table in a transversely inclined position, means for feeding the material to be separated upon said table deck, stratifying the minerals thus fed into horizontal layers by the joint action of air under pressure and of mechanical agitation, and then separating

the strata by causing them to travel diagonally over the alternately cemented and uncemented areas of said table deck, substantially as described.

1,212,394. INSULATOR-SUPPORT. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 6, 1916. Serial No. 89,365. (Cl. 151—14.)



1. In an insulator support, the combination with the insulator receiving end, of a locking lever pivoted on said end with one arm extending transversely thereover and the other arm extending longitudinally downwardly, engagement of the top of an insulator with the transverse arm of the lever causing clamping of the longitudinal lever arm against the insulator side.

2. In an insulator support, the combination with an insulator receiving end, of a clamping member pivoted thereon in the path of the top and sides of an insulator to exert upward and lateral clamping pressure against an insulator when it is applied.

3. In an insulator support, the combination with an insulator receiving end, a pivot member extending transversely across said end, a lever pivoted on said member and having one arm extending transversely across said end and above the top thereof and having another arm extending downwardly adjacent the side of said end, said downwardly extending arm being swung outwardly into clamping engagement with an insulator when the transverse arm is engaged by the insulator top.

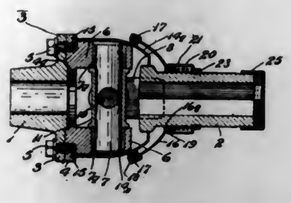
4. In an insulator support, the combination with an insulator receiving end of circular cross-section, a pivot member extending transversely across said end at the top thereof, a longitudinally extending slot in said end below said pivot member, and a lever pivoted to said pivot member and having an arm extending transversely and above said end and having another arm extending downwardly adjacent said slot, said lever being free to swing to carry its downwardly extending arm laterally outwardly through said slot when pressure is applied to the transverse arm.

5. In an insulator support, the combination with an insulator receiving end, of an insulator clamping member pivotally supported on said end and having a transverse arm and a longitudinal arm, said end having a slot for normally receiving said longitudinal arm, said transverse arm being in the path of the top of an insulator when applied to said end and when engaged by the top effecting swing of the clamping member to force its longitudinal arm outwardly through the slot and against the insulator side.

[Claims 6 to 8 not printed in the Gazette.]

1,212,395. UNIVERSAL JOINT. HARRY J. PERKINS, Grand Rapids, Mich. Filed Jan. 3, 1916. Serial No. 69,878. (Cl. 74—19.)

1. In combination, socket members, a ring detachably connected to one member and provided with an annular groove therein, a casing member having open ends and with the edges at one end seated in the groove, members secured to the casing member and projecting inwardly therefrom, means passed through the socket member and ring and engaging with said members to draw the casing member into the groove, a second casing member closing and partially covering the first casing member, universal joint connections between the socket members, means mounted on the other socket member for forcing the second casing member toward the first casing member, and a packing ring positioned between said casing members.



2. In combination, socket members, one member being provided with a flange having an annular recess, a ring provided with an annular projecting portion seating in the recess, means for detachably connecting the ring to the flange said ring having projecting lugs, a straight pin mounted between the lugs, the other socket member being provided with projecting lugs, a straight pin of smaller diameter than the first-mentioned pin carried by and located between said lugs and passing through the first pin, a center block around both pins and located between the lugs, and a removable pin passing through the center block and one of the straight pins.

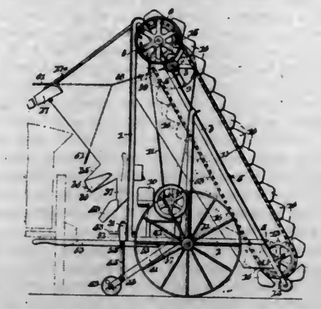
3. The combination, socket members, one of said members having a flange, a ring detachably secured to the flange and provided with an annular groove therein and lugs extending therefrom, a pin mounted in and between said lugs, the other socket member having lugs projecting therefrom toward the first lugs, a pin mounted in and between said last-mentioned lugs, one of said pins passing through the other, a center block surrounding the pins between the lugs and detachably secured to one of said pins, an inclosing casing covering the lugs and pins having an open end, the edges of which are seated in the groove in said ring, inwardly projecting screw-threaded members on said casing, and screws passing through the flange and ring and into said members to draw the edges of the casing into the groove.

4. In combination, socket members, a universal joint connection therebetween, a casing member having open ends detachably secured to one of the socket members and covering the universal joint, a second casing member loosely mounted on the other socket member covering the open end of the first casing member and extending partially thereover, a packing between said casing members, a second packing around said other socket member, a coil spring pressing said second packing against the second casing member, a housing for the spring and packing having a flange turned inwardly toward said other socket member, the spring bearing against the flange and a split ring around said other socket member detachably seated in a groove therein and engaging against the flange on the housing to hold the spring under compression.

1,212,396. ELEVATOR. CHARLES G. PFEIFFER and GEORGE W. PARKER, Jr., Philadelphia, Pa. Filed Apr. 27, 1912. Serial No. 693,708. (Cl. 193—6.)

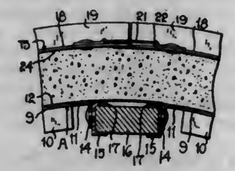
An elevator including in combination, an axle, supporting wheels for said axle, horizontal beams mounted on said axle, vertical beams carried by said axle and inclined beams supported by said horizontal beams and said vertical beams, said inclined beams extending from a point at one side of said axle to a point the other side thereof, an endless conveyer mounted on said inclined beams, means connected to said horizontal beams for engaging the

ground, and devices whereby said ground-engaging means may be adjusted for tilting said horizontal beams and



varying the position of the lower end of the conveyer relative to the ground.

1,212,397. SILO CONSTRUCTION. LUDVIG B. PIERSON, Poteet, Tex. Filed May 1, 1916. Serial No. 94,727. (Cl. 25—124.)



1. A mold for forming a vertical wall comprising two coacting mold members arranged in predetermined spaced relation, each of said mold members comprising a plurality of sections, the adjacent vertical margins of the sections being provided with vertical members substantially U-shape in cross section and arranged in downwardly converging planes, and a wedge member insertible between said U-shape members for holding adjacent sections in assembled relation.

2. A mold for forming a vertical wall comprising two coacting mold members arranged in predetermined spaced relation, each of said mold members comprising a plurality of sections, the vertical margins of the sections overlapping when in assembled relation, the adjacent vertical margins of the sections being provided with vertical members substantially U-shape in cross section and arranged in downwardly converging planes, and a wedge member insertible between said U-shape members for holding adjacent sections in assembled relation.

1,212,398. TRANSMISSION-GEARING AND SHIFTING MEANS THEREFOR. ROY A. RALPH, Auburn, N. Y. Filed Apr. 21, 1916. Serial No. 92,737. (Cl. 74—58.)



1. The combination with a transmission gearing having two gear-shifters, of a cam-block having two cam-grooves for engaging said gear-shifters, movement of the block acting to move one of said gear-shifters to shift the gearing from neutral to reverse and from neutral to low speed position, and to move the other gear-shifter to shift the gearing from neutral to intermediate speed position, and from neutral to high speed position, and means to move said cam block back and forth.

2. The combination with a transmission gearing having two gear-shifters, of a movable element to which both of said gear-shifters are connected and by which they are moved to shift the gearing, a longitudinally reciprocating shifting-bar connected with said movable element, actuating-means to move said bar in one direction, controlling-means therefor, and means for returning said bar against the force of its actuating-means.

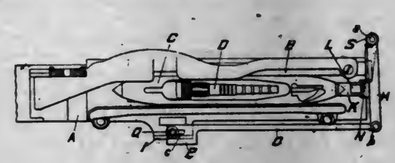
3. The combination with a transmission gearing having two gear-shifters, of a movable element to which both of said shifters are connected and by which they are moved to shift the gearing, a longitudinally reciprocating shifting-bar connected with said movable element, actuating-means to move said bar in one direction, controlling-means therefor, pedal-controlled escapement mechanism associated with said bar for controlling its movement in one direction, and means for returning said bar against the force of its actuating means.

4. The combination with a transmission gearing having two gear-shifters, of a movable element to which both of said shifters are connected and by which they are moved to shift the gearing, a longitudinally reciprocating shifting-bar connected with said movable element, actuating-means to move said bar in one direction, controlling-means therefor, and hand-operated means for returning said bar throughout its entire range of motion.

5. The combination with a transmission gearing having two gear-shifters, of a movable element to which both of said gear-shifters are connected and by which they are moved to shift the gearing, a longitudinally reciprocating shifting-bar connected with said movable element, actuating-means to move said bar in one direction, controlling means therefor, hand operated means for returning said bar throughout its entire range of motion, and power-operated means for returning said bar from any of its speed positions to neutral.

[Claims 6 to 23 not printed in the Gazette.]

1,212,399. AUTOMATIC WEFT-REPLENISHING LOOM. ALONZO E. RHOADES, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me., a Corporation of Maine. Filed Oct. 5, 1915. Serial No. 54,208. (Cl. 139—85.)



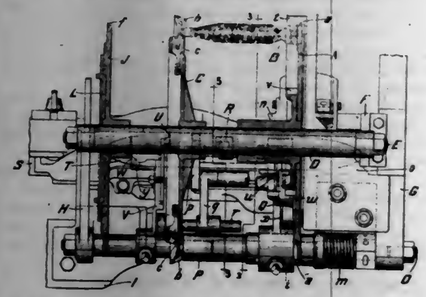
1. A weft replenishing loom having, in combination, a transferrer, a transferrer dog pivoted thereto, a lay, a bunter on the lay having a rearwardly and downwardly inclined front face and coöperating with said transferrer dog, a projection extending downwardly from the bunter having a downwardly and rearwardly inclined front face, a picker, a picker stick, a slotted deflector sliding above the bunter and having a downwardly and rearwardly inclined front face in the same plane as the downwardly and rearwardly inclined faces of the bunter and the bunter projections, a lever outside of the picker having an abutment against which the picker is moved by the shuttle entering the shuttle box at the replenishing side of the loom, a spring moving said lever toward the picker, a rod connecting the front end of said lever with said deflector, and a stud secured to said bunter and extending through the slot in said deflector.

2. A weft replenishing loom having, in combination, a transferrer, a transferrer dog, a lay, a bunter on the lay coöperating with said transferrer dog, a movable deflector alongside the bunter, a lever on the lay at the replenishing side of the loom coöperating with the picker to be

moved thereby when the shuttle enters the neighboring shuttle box, a rod connecting said lever with said deflector whereby said deflector is moved away from the bunter when the shuttle is correctly located in the shuttle box, and means for limiting the movement of the deflector in both directions.

3. A weft replenishing loom having, in combination, a transferrer, a transferrer dog, movable means located on the lay to control the action of the dog, and means governed by the position of the shuttle in the shuttle box at the replenishing side of the loom coöperating with said transfer controlling means so as to render said dog inoperative when the shuttle is improperly located in the shuttle box and to render said transferrer operative when the shuttle is properly located in the shuttle box.

1,212,400. AUTOMATIC WEFT-REPLENISHING LOOM. ALONZO E. RHOADES, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me., a Corporation of Maine. Filed Oct. 11, 1915. Serial No. 55,330. (Cl. 139—85.)



1. A weft replenishing loom having, in combination, a rotatable magazine adapted to contain filled weft carriers, said magazine having a head provided with sockets to receive the butts of the weft carriers, and a disk provided with yielding holders to retain the tips of weft carriers, said disk being between said head and the warp; a rotatable support rotating with said magazine and having weft end holders for the weft ends of the weft carriers in the magazine, said support being between the said disk and the warp; thread guides carried by said disk and support for the weft ends whereby said weft ends are held in definite positions; a transferrer to transfer the weft carriers one by one from said magazine to the working shuttle; and a thread placer and finger movable with said transferrer and normally located above the weft end extending from the lowermost weft carrier in the magazine and between the said disk and support, said thread placer being adapted to enter the chamber in the shuttle between the weft carrier therein and the threading end of the shuttle when said shuttle is at the replenishing side of the loom, and said thread finger being adapted to descend above the shuttle and to hold the weft end downwardly between the eye of the shuttle and the warp.

2. A weft replenishing loom having, in combination, a rotatable magazine adapted to contain filled weft carriers, said magazine having a head provided with sockets to receive the butts of the weft carriers, and a disk provided with yielding holders to retain the tips of the weft carriers, said disk being between said head and the warp; a rotatable support having weft end holders for the weft ends of the weft carriers in the magazine, said support being between the said disk and the warp; a transferrer to transfer the weft carriers one by one from said magazine to the working shuttle; and a thread placer and finger movable with said transferrer and normally located above the weft end extending from the lowermost weft carrier in the magazine and between the said disk and support, said thread placer being adapted to enter the chamber in the shuttle between the weft carrier therein and the threading end of the shuttle when said shuttle is at the replenishing side of the loom, and said thread finger being adapted to descend above the shuttle and to hold the weft end downwardly between the eye of the shuttle and the warp.

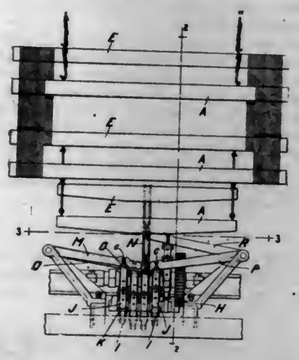
3. A weft replenishing loom having, in combination, a rotatable magazine adapted to contain filled weft carriers, said magazine having an outer head provided with sockets to receive the butts of the weft carriers, and an inner disk provided with yielding holders to retain the tips of the weft carriers, said disk being between said head and the warp; a rotatable support rotating with said magazine and having weft end holders for the weft ends of the weft carriers in the magazine, said support being between the said disk and the warp; and thread guides carried by said disk and support for the weft ends whereby said weft ends are held in definite positions.

4. A weft replenishing loom having, in combination, a rotatable magazine adapted to contain filled weft carriers, said magazine having an outer head provided with sockets to receive the butts of the weft carriers, and an inner disk provided with yielding holders to retain the tips of the weft carriers, said disk being between said head and the warp; and a rotatable support rotating with said magazine and having weft end holders for the weft ends of the weft carriers in the magazine, said support being between the said disk and the warp.

5. A weft replenishing loom having, in combination, a rotatable magazine adapted to contain filled weft carriers, said magazine having an outer head provided with sockets to receive the butts of the weft carriers, and an inner disk provided with yielding holders to retain the tips of the weft carriers, said disk being between said head and the warp; and a rotatable support having weft end holders for the weft ends of the weft carriers in the magazine, said support being between the said disk and the warp.

[Claims 6 to 17 not printed in the Gazette.]

1,212,401. HARNESS-MOTION FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me., a Corporation of Maine. Filed Oct. 12, 1915. Serial No. 55,391. (Cl. 139—78.)

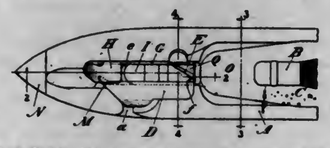


1. A loom having, in combination, a plurality of harnesses, a plurality of lengthwise extending treadles at the middle of the loom one for each harness, the middle treadle being directly connected to the middle of one of the harnesses by a direct vertical upwardly extending connector, and two groups of intermediate crosswise extending levers, the levers of one group being pivoted at one side of the loom and of the other group at the other side of the loom, each lever extending to the middle of the loom and being there connected by a vertical upwardly extending connector to the middle of its harness, and each lever being connected to its treadle by a vertical downwardly extending connector.

2. A loom having, in combination, a plurality of harnesses, a plurality of lengthwise extending treadles at the middle of the loom one for each harness, and two groups of intermediate crosswise extending levers, the levers of one group being pivoted at one side of the loom and of the other group at the other side of the loom, each lever extending to the middle of the loom and being there connected by a vertical upwardly extending connector to the middle of its harness, and each lever being connected to its treadle by a vertical downwardly extending connector.

3. A loom having, in combination, a plurality of harnesses, a plurality of lengthwise extending treadles at the middle of the loom one for each harness and two groups of intermediate crosswise extending levers, the levers of one group being pivoted at one side of the loom and of the other group at the other side of the loom, each lever extending to the middle of the loom and being there connected by an upwardly extending connector to the middle of its harness, and each lever being connected to its treadle by a downwardly extending connector.

1,212,402. AUTOMATICALLY-THREADING LOOM-SHUTTLE. ALONZO E. RHOADES, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me., a Corporation of Maine. Filed Oct. 12, 1915. Serial No. 55,392. (Cl. 139—46.)



1. A left-handed loom shuttle having the eye in the front side of the left-hand end and having a sheet metal threader with a front wall J; a read wall G; a beak M; a guard H, with a transversely extending inner edge e between the transverse plane of the shuttle eye and the neighboring tip of the shuttle; a recess F, in the rear wall G; and a supplementary hook E, formed integrally with the front wall of the threader at the inner edge thereof and bent rearwardly and also forwardly in the direction of the first flight of the shuttle when replenished with its point extending into the said recess F, thereby providing a flaring entrance Q, for the thread, and the upper edge of said supplementary hook extending downward from front to rear and said hook extending above the threading passage I, in the threader, said hook constituting the sole engaging means for the thread as it passes from the weft carrier on the first flight of the replenished shuttle.

2. A left-handed loom shuttle having a threading passage and an eye in the front side of the left-hand end; a guard overhanging the outer end of said passage with its transversely extending inner edge between the plane of the shuttle eye and the neighboring tip of the shuttle; a recess in one wall of said passage; a hook extending diagonally across the entrance of said passage and extending forwardly in the direction of the first flight of the shuttle when replenished and downwardly to its point which enters said recess and constituting the engaging means around which the thread reeves as it passes from the weft carrier on the first flight of the replenished shuttle.

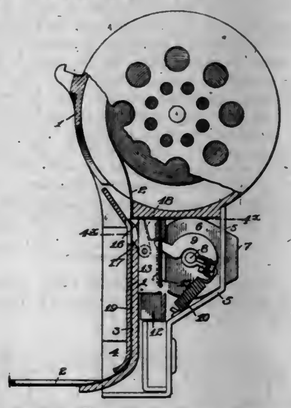
3. A left-handed loom shuttle having a threading passage and an eye in the front side of the left-hand end; a guard overhanging the outer end of said passage with its inner edge between the transverse plane of the shuttle eye and the neighboring tip of the shuttle; a wall, and a hook extending diagonally across the entrance of said passage and forwardly in the direction of the first flight of the shuttle when replenished and downwardly to its point and constituting the engaging means around which the thread reeves as it passes from the weft carrier on the first flight of the replenished shuttle.

4. An automatically threading left-handed shuttle having the eye in the front side of the left-hand end and a hook extending across the entrance of its threading passage, said hook extending from one side forwardly in the direction of the first flight of the shuttle when replenished with its upper edge inclined downwardly toward the point, thereby forming a flaring thread entrance between the hook and the opposite wall of said passage, and said hook constituting the engaging means around which the thread reeves as it passes from the weft carrier on the first flight of the replenished shuttle.

5. An automatically threading left-handed shuttle with the eye in the front side and at the left-hand end having a hook extending across its threading passage, said hook extending forwardly in the direction of the first flight of the shuttle when replenished with its upper edge inclined downwardly toward its point, and terminating at its point in a recess in the rear wall of said passage, and said hook constituting the engaging means around which the thread reeves as it passes from the weft carrier on the first flight of the replenished shuttle.

[Claim 6 not printed in the Gazette.]

1,212,403. REGISTERING DEVICE FOR STAMP-AFFIXERS. JOHN E. RICHMOND, Rochester, N. Y., assignor to Multipost Company, Rochester, N. Y., a Corporation of New York. Filed May 1, 1913. Serial No. 764,799. (Cl. 235—91.)



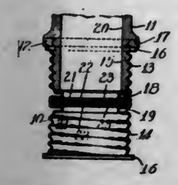
1. In a stamp feeding machine the combination with a stamp container having an apertured wall along which a stamp strip is fed, side walls extending laterally therefrom, of a bracket spaced from one of the side walls forming a guide-way opposite the aperture in the first mentioned wall, a U-shaped carriage guided between said bracket and open on its side adjacent the apertured wall and a plurality of independently movable fingers mounted in the carriage and projecting from the open side thereof and adapted to coöperate with the perforations in a stamp strip, a counter mechanism also located between the side walls and a connecting member between it and said carriage.

2. In a machine for feeding stamps the combination with a stamp container comprising an apertured wall along which the stamp strip is fed and side walls extending rearwardly therefrom, of a carriage guided in the corner between the apertured wall and one of the side walls, a plurality of fingers mounted on said carriage and coöperating with the perforation in a stamp strip, a counter mechanism mounted between said side walls and a connecting member between it and said carriage.

1,212,404. FILTER. ARTHUR C. ROBINSON, East Weymouth, Mass. Filed Apr. 11, 1916. Serial No. 90,475. (Cl. 210—6.)

1. A filter, consisting of a tube of thin metal screw-threaded to engage the screw-threaded outlet end of a faucet, filtering means inserted in the bore of said tube

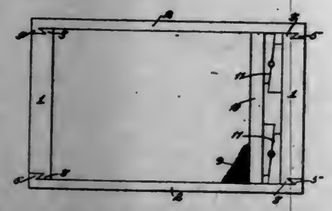
and a flange on the inlet end of said filter, said flange extending outwardly beyond said screw-threaded portion of said tube and terminating in a thin tubular portion.



2. In combination, a faucet terminating in a screw-threaded outlet portion and an annular flange on said faucet adjacent said screw-threaded portion, a washer on said screw threaded portion and bearing against said flange and a filter consisting of a tube of thin metal having screw-threaded engagement with said screw-threaded portion of said faucet, filtering means inserted in the bore of said tube and a flange extending outwardly beyond said screw-threaded portion of said tube and terminating in a thin tubular portion arranged to bear at one end thereof against said washer.

3. A reversible filter, consisting of a tube of thin metal screw-threaded at its opposite ends, a pair of annular flanges projecting into the bore of said tube between said screw-threaded portions, a plurality of screens of different mesh interposed between said flanges and a flange on each of the opposite ends of said filter, each of said flanges extending outwardly beyond said screw-threaded portions of said tube and terminating in a thin tubular portion, in combination with a faucet having a screw-threaded outlet portion constructed to be engaged by either of the screw-threaded ends of said filter, a flange on said faucet adjacent said screw-threaded outlet end and a washer on said screw-threaded outlet end arranged to be clamped thereagainst by either one of said tubular flanges.

1,212,405. CHASE FOR PRINTERS' USE. CLARENCE A. ROUSSEAU, Riverside, Cal. Filed June 21, 1916. Serial No. 104,879. (Cl. 101—25.)



1. A chase for printing presses comprising end members, side members associated therewith by means of interlocking joints having inclined coöperating faces, whereby outward movement of said end members causes inward movement of said side members, and means for retaining said end members and said side members in inter-locking relation.

2. A chase for printing presses comprising associated end and side members having at their end portions inclined inter-locking tongues adapted to unite said members in movable relation one to the other, and means for limiting the relative movement of said members and for retaining the same in inter-locking relation.

3. A chase for printing presses comprising end members, side members bent inwardly at their central portions and associated in limited movable relation with said end members by means of inter-locking tongues having inclined faces, whereby outward movement of said end members causes inward movement of said side members, and means for limiting the relative movement of said members and for retaining the same in inter-locking relation.

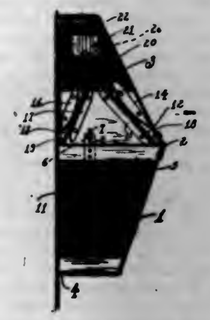
1,212,406. LAMP-HOLDER. WILLIAM G. SCHNEIDER, New York, N. Y., assignor to Wilbur A. Cochrane, Sea Cliff, Long Island, N. Y. Filed Jan. 2, 1914. Serial No. 810,093. (Cl. 248—42.)



1. A lamp holder consisting of a single piece of spring wire bent to form a bow projecting beyond the lamp when in position and dimensioned to provide a handle by which the holder and lamp may be carried, said bow comprising a pair of spring members one of which is formed to provide a part of a lamp socket and a supporting prong, and the other of which completes the socket and has a rounded bearing end located at a sufficient distance from the junction between the socket and the prong to form a throat through which the lamp may be forced into the socket against the tension of the bearing end and held therein by the spring of the members.

2. A lamp holder comprising a single piece of spring wire bent to form a bow handle comprising a pair of crossed spring members, one member being formed to provide a lamp socket and a supporting prong, the junction between the two being rounded, and the other member forming a part of the socket and having a rounded bearing end which is located at a sufficient distance from the junction between the socket and the prong to form a throat through which the lamp may be forced into the socket against the tension of the bearing end.

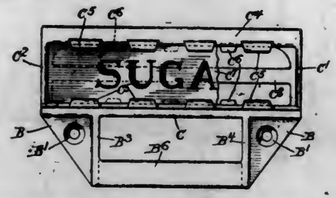
1,212,407. FLY-EXTERMINATOR. NATHANIAL SCHULTZ, Stockton, Cal. Filed May 20, 1916. Serial No. 98,794. (Cl. 43—22.)



1. A device of the character described comprising two cage sections hinged together in inverted relation to each other, the lower section having an entrance opening opposite the hinged end, the upper section being provided with removably inclined slides spaced apart at their upper ends to form an entrance from the lower section to the upper section, such slides being arranged to be removed when the lower section is opened on its hinges to allow the upper section to be cleaned.

2. A device of the character described comprising two cage sections hinged together in inverted relation to each other, the lower section having an entrance opening opposite the hinged end, inclined guides disposed in the upper section arranged in pairs, one guide of each pair being straight and the opposite guide being curved, slides arranged to be frictionally engaged between the guides, the upper ends of the slides being spaced apart to form an entrance from the lower to the upper sections, such slides being adapted to be removed when the lower section is opened on its hinges to allow the upper section to be cleaned.

1,212,408. DRAWER-PULL. WILLIAM G. SHERER, Chicago, Ill. Filed Sept. 11, 1916. Serial No. 119,419. (Cl. 40—8.)



1. The combination with a drawer pull of a card rack supported thereon comprising an open card containing frame and a reinforcing bar within the frame adapted to lie against the back of the card and disposed along the central line thereof.

2. The combination with a drawer pull of a card rack integral therewith comprising a reinforcing frame said frame being located above the drawer pull and comprising two vertically disposed bars, cross pieces joining them to form an open frame and means carried by said bars and cross pieces for holding the card in position.

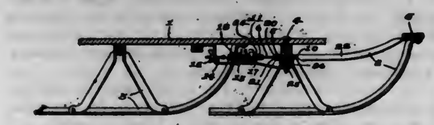
3. The combination with a drawer pull of a card rack integral therewith comprising a reinforcing frame said frame being located above the drawer pull and comprising two vertically disposed bars cross pieces joining them to form an open frame and means carried by said bars and cross pieces for holding the card in position said means comprising flanges on the cross pieces and lugs alternatingly projecting inwardly and outwardly on the bars.

4. The combination with a drawer pull of a card rack integral therewith comprising a reinforcing frame said frame being located above the drawer pull and comprising two vertically disposed bars cross pieces joining them to form an open frame and means carried by said bars and cross pieces for holding the card in position and a reinforcing strip supported in said frame behind the card parallel to and midway between said bars.

5. The combination with a drawer pull of a card rack integral therewith comprising a reinforcing frame said frame being located above the drawer pull and comprising two vertically disposed bars cross pieces joining them to form an open frame and means carried by said bars and cross pieces for holding the card in position said means comprising flanges on the cross pieces and lugs alternatingly projecting inwardly and outwardly on the bars and a reinforcing strip supported in the said frame behind the card parallel to and midway between said bars.

[Claims 6 and 7 not printed in the Gazette.]

1,212,409. COASTER. WILLIAM E. SHERWOOD, Canastota, N. Y. Filed Oct. 28, 1914. Serial No. 869,041. (Cl. 21—94.)



1. A coaster comprising a body, front and rear supporting members for the body, one being pivoted to the body, motion transmitting parts pivoted to the pivoted member on opposite sides of its pivot and partaking of the pivotal movement thereof, a lever connected to said parts and movable about axes located between the points said parts are connected to the lever, and spring means connected to the lever, substantially as and for the purpose set forth.

2. A coaster comprising a body, front and rear supporting members, one member being pivoted to the body, links connected to said member on opposite sides of its pivot, a cross piece connected to the links, and spring means connected to the cross piece, the cross piece being movable about axes located between the points of connection of the links to the cross piece and the center of the cross piece, substantially as and for the purpose described.

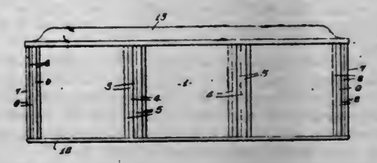
3. A coaster comprising a body, front and rear supporting members, one member being pivoted to the body, a lever, spring means connected to the lever between the ends thereof, connections between the arms of the lever and the pivoted member on opposite sides of the pivot thereof, and fulcrums for said lever located on opposite sides of the point the spring means is connected to the lever, substantially as and for the purpose set forth.

4. A coaster comprising a body, front and rear supporting members for the body, one member being pivoted, means connected to the pivoted member and to the body tending to hold the pivoted member in its central position and to resist pivotal movement thereof in either direction, said means comprising a lever pivotally connected to the pivoted member on opposite sides of the pivot thereof, spring means connected to the lever between the ends thereof, and fixed fulcrums for the lever located on opposite sides of the point the spring means is connected to said lever, substantially as and for the purpose described.

5. A coaster comprising a body, front and rear supporting members for the body, one member being pivoted to the body, a lever, spring means connected to the lever between the ends thereof, fixed fulcrums for the lever on opposite sides of the point the spring is connected to, and links connecting the arms of the lever to the pivoted member on opposite sides of the pivot thereof, substantially as and for the purpose specified.

[Claims 6 to 19 not printed in the Gazette.]

1,212,410. SHEET-METAL CASE. PATRICK D. SKAHEN, Syracuse, N. Y. Filed Sept. 22, 1911. Serial No. 650,773. (Cl. 27—7.)



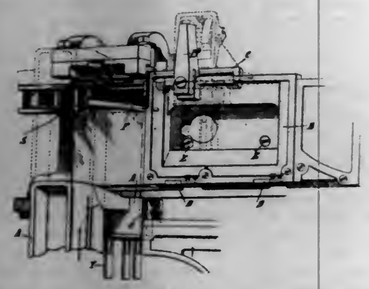
1. A sheet metal casing having walls which meet and form a corner, and a sheet metal reinforcing strip extending lengthwise of the corner and having a raised intermediate corrugation embracing the corner and extending full length thereof, and flat portions on opposite sides of the corrugation lying flat against the outer faces of the walls forming the corner and being secured thereto, substantially as and for the purpose specified.

2. A sheet metal case having walls which meet and form a corner, and a sheet metal reinforcing strip extending lengthwise of the corner and having a raised intermediate corrugation embracing the corner, and flat portions disposed on opposite sides of the corrugation and lying flat against the walls and being integrally secured to said walls, the walls at the corner engaging the inner face of the corrugation between the bases of the corrugation whereby distortion of the corrugation relatively to said walls is confined between the flat portions of the reinforcing strip and the line along which the corner engages the inner face of the corrugation, substantially as and for the purpose set forth.

3. A sheet metal case having walls comprising sheets which meet and form a corner, the margins of the sheets at the corner lapping and being secured together and extended outwardly from the corner forming a flange, and a corner reinforcing strip having an intermediate corrugation embracing the corner and portions on opposite sides

of the corrugation secured respectively to the sheets forming the corner, said flange engaging the inner face of the corrugation, substantially as and for the purpose set forth.

1,212,411. TYPOGRAPHICAL MACHINE. AUGUSTUS H. SMITH, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Mar. 23, 1914. Serial No. 826,547. (Cl. 199—7.)



1. In a typographical machine, the combination of a line receiving organ, a line transporter movable into and out of operative relation thereto, and interlocking devices formed on said parts to connect them directly and rigidly together in proper registration, the said interlocking devices adapted to be engaged and disengaged as the transporter moves into and out of operative relation to the receiving organ.

2. In a linotype machine, the combination of the first elevator A mounted to slide vertically in suitable guideways in the machine frame, the upper transfer channel B to receive the line from the transporter in its uppermost position, and interlocking devices formed on said parts to connect them directly and rigidly together in proper registration, the said interlocking devices adapted to be engaged and disengaged by the movement of the first elevator.

3. In a typographical machine, the combination of a line receiving organ, a line transporter movable into and out of operative relation thereto, and means whereby one of said parts is shifted by the other as the transporter arrives in operative relation to the receiving element to insure their proper registration at such time.

4. In a linotype machine, the combination of the first elevator A, the upper transfer channel B to receive the line therefrom, and means whereby the movement of the elevator brings the channel into proper receiving position.

5. In a typographical machine, the combination of a movable line transporter, a device to receive the line therefrom, and means whereby the movement of the transporter brings said device into proper receiving position.

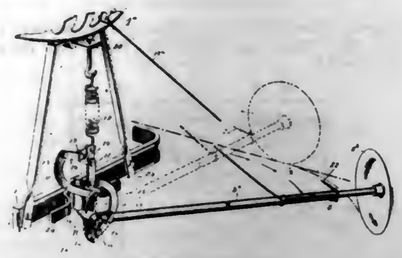
[Claims 6 to 13 not printed in the Gazette.]

1,212,412. LAND-MARKER. ORBIN F. SMITH, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Filed June 2, 1915. Serial No. 31,644. (Cl. 111—24.)

1. In a seeding machine and in combination with a frame, a marker rod pivoted thereto to swing up and down, an actuating spring for said rod, sustained by the frame, and devices connected to the spring and operatively connected to said rod, respectively on opposite sides of the axis of the latter.

2. In a seeding machine and in combination with a frame, a marker rod pivoted thereto to swing up and down, oppositely extending arms on the rod, an actuating spring for the rod, sustained by the frame, and connecting devices between the spring and arms.

3. In a seeding machine and in combination with a frame, a marker rod pivoted thereto to swing up and down, arms on the rod extending outwardly therefrom at its pivotal axis, an actuating spring for the rod, sustained by the frame, and connecting devices between the spring and arms.

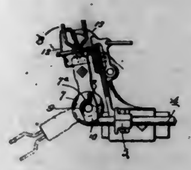


4. In a seeding machine and in combination with a frame, a marker pivoted thereto to swing up and down, oppositely extending arms on the rod, an actuating spring for the rod, sustained by the frame, links pivoted at one end respectively to said arms and operatively connected at their opposite ends to said spring.

5. In a seeding machine and in combination with a frame, a marker rod pivoted thereto to swing up and down, oppositely extending arms on said rod, an actuating spring for the rod, sustained by the frame, links pivoted at one end respectively to said arms, and straps jointed respectively to the opposite ends of the links and operatively connected with the spring.

[Claims 6 to 16 not printed in the Gazette.]

1,212,413. CHECK-WIRE-OPERATED MECHANISM FOR PLANTERS. ORBIN F. SMITH, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Original application filed June 2, 1915, Serial No. 31,644. Divided and this application filed Oct. 15, 1915. Serial No. 55,959. (Cl. 111—43.)



1. In a seeding machine, the combination of seed-discharging mechanism, a rocking check-shaft for operating the same, said check-shaft being in the form of a bar, round in cross-section and bent between its ends to form an integral crank arm adapted to be connected with the seed-discharging mechanism, and said bar having its end bent around to form an eye, and a check-fork detachably interlocked with said eye.

2. In a seeding machine, the combination of seed-discharging mechanism, a rocking check-shaft for operating the same, said shaft being provided at one end with an eye, and a check-fork removably mounted in said eye and rockable therein to doff the check-wire.

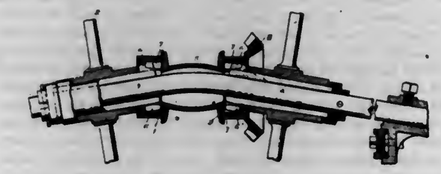
3. In a seeding machine, the combination of seed-discharging mechanism, a rocking check-shaft for operating the same, provided at one end with a bearing opening, and a check-fork provided with a lateral stud mounted loosely in said bearing opening.

4. In a seeding machine, the combination of seed-discharging mechanism, a rocking check-shaft for operating the same, provided at one end with a bearing opening, and a check-fork provided with a lateral stud mounted loosely in said bearing opening, said stud having a confining lug extending beyond the side of the bearing opening.

5. In a seeding machine, the combination of seed-discharging mechanism, a rocking check-shaft for operating the same, said check-shaft being provided at one end with a bearing having an opening through one side, and a check-fork provided with a stud mounted loosely in the bearing, said stud being provided with a confining lug adapted to pass through said opening, in interlocking the fork with the shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,212,414. SEEDING-MACHINE. ORBIN F. SMITH, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Original application filed June 2, 1915, Serial No. 31,644. Divided and this application filed Oct. 15, 1915. Serial No. 55,960. (Cl. 111—6.)



1. In a seeding machine, the combination of two oppositely extending relatively inclined wheel spindles, wheels mounted to rotate on the respective spindles, the adjacent ends of the hubs of which wheels are provided with lugs having outer surfaces curved outwardly in an axial direction, and an intermediate coupling sleeve surrounding at its ends the lugs on the hubs, and provided with lugs extending between those on the hubs.

2. In a seeding machine, the combination of oppositely extending relatively inclined wheel spindles, ground wheels mounted to rotate on the respective spindles, the adjacent ends of the hubs of which wheels are provided with lugs whose outer surfaces are curved axially from a center coincident with the axis of rotation, and an intermediate coupling sleeve surrounding at its ends the lugs on the hubs, and being provided with lugs extending between those on the hubs.

3. In a seeding machine, the combination of two oppositely extending relatively inclined wheel spindles, ground wheels mounted to rotate thereon, the adjacent ends of the hubs of which wheels are provided with lugs constituting sections of a sphere, and an intermediate coupling sleeve surrounding at its ends the lugs on the hubs, and being provided with lugs extending between those on the hubs.

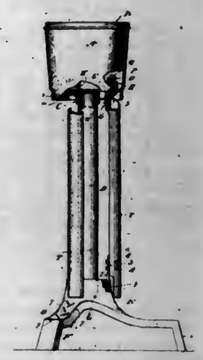
4. In a seeding machine, the combination of two oppositely extending relatively inclined wheel spindles, ground wheels mounted loosely thereon, the adjacent ends of the hubs of which wheels are provided with lugs curved outwardly at their sides and at their outer surfaces axially between their ends, and a coupling sleeve surrounding at its ends the lugs on the hubs, and provided with lugs extending between those on the hubs.

5. In a seeding machine, the combination of two oppositely extending relatively inclined wheel spindles, ground wheels mounted to rotate thereon, and an intermediate coupling sleeve, in the outer ends of which the adjacent ends of the hubs of said wheels extend, said sleeve being provided with inwardly extending annular shoulders against which the inner ends of the hubs are adapted to respectively abut.

[Claims 6 and 7 not printed in the Gazette.]

1,212,415. RUBBING-POST. ERNEST STARBUCK, Peoria, Ill., assignor, by direct and mesne assignments, to Edward M. Smith, Peoria, Ill. Filed Dec. 14, 1912. Serial No. 736,783. (Cl. 119—157.)

1. In a rubbing post, the combination of a support, an upright rubbing bar hingedly mounted on the support and adapted to swing, and mechanism arranged to measure a given quantity of fluid disposed above and directly engaged by a portion of the rubbing bar, the latter underhanging the place of discharge from said mechanism and adapted by pressure of the animal upon it to permit the operation of the mechanism for liberating and discharging such measured quantity of fluid directly upon that side of the rubbing bar against which the animal rubs.



2. In a rubbing post, the combination of a support, an upright rubbing bar mounted on a vertical axis on said support, and in position to be engaged by an animal, and mechanism arranged to measure a given quantity of fluid disposed above and directly engaged by a portion of the rubbing bar, the latter underhanging the place of discharge from said mechanism and adapted by pressure of the animal upon it to permit the operation of the mechanism for liberating and discharging such measured quantity of fluid directly upon that side of the rubbing bar against which the animal rubs.

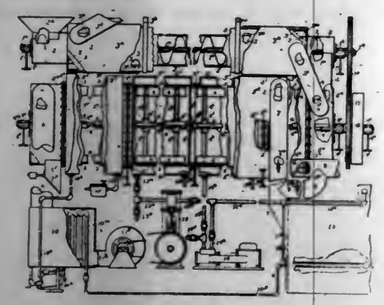
3. In a rubbing post, the combination with a receptacle for holding a fluid, a second smaller receptacle including an opening communicating with the first said receptacle, said second receptacle also having a discharge opening, a stem including spaced valves each adapted to cover one of the openings, said valves in their movement adapted to alternately close one and open the other of said openings, and a rubbing member having a part to engage and move the stem in the direction of one of the openings, means to hold it elastically in engagement with said stem and hold one of the valves on its seat, and means constantly tending to move the valves in opposition to the said rubbing member.

4. In a hog oiler, the combination of a pair of elevated receptacles for holding fluid there being an aperture connecting the two, there also being an outer exit-aperture for one of said receptacles, a valve adapted for closing the first said aperture, a second valve adapted for closing the said exit-aperture, said valves operating in unison to alternately close one and expose the other of the apertures, a rubbing member adapted to be operated by an animal rubbing upon it including a part to operate the valves, the same adapted to hold one of the valves seated and the other unseated, said rubbing member underhanging the exit-aperture to receive the fluid upon it, and means to operate the valves in opposition to the movement imparted by said rubbing member.

5. In a hog oiler, the combination of a pair of receptacles including a communicating opening between them, and including also an outer discharge opening from one of said receptacles, a pair of valves including a stem, one of said valves adapted to overlie and close the outer discharge opening, the other adapted to close the other opening, the latter being normally exposed, a rubbing member including means to hold it elastically in engagement with the stem, and means tending to operate the valves in opposition to the said rubbing member.

[Claims 6 to 23 not printed in the Gazette.]

1,212,416. APPARATUS FOR THE REDUCTION OF FISH-SCRAP, KELP, AND THE LIKE. GEORGE H. STILLSON, Port Townsend, Wash., assignor to Pacific Products Company, Seattle, Wash., a Corporation of Washington. Filed Dec. 21, 1915. Serial No. 68,091. (Cl. 34—5.)



1. In combination, a conveyer screw, a conveyer cylinder, a jacketed chamber surrounding said conveyer cylinder, a drying cylinder, a delivery chute connecting the delivery end of said conveyer cylinder and the receiving end of said drying cylinder, a revoluble paddle wheel in said drying cylinder, means to force a hot blast of air through said drying cylinder, and means to cause a heating medium to pass through the jacketed chamber surrounding said conveyer cylinder.

2. In combination, a conveyer screw, a conveyer cylinder, a jacketed chamber surrounding said conveyer cylinder, a drying cylinder, a chute connecting the delivery end of said conveyer cylinder with the receiving end of said drying cylinder, a jacketed chamber surrounding said drying cylinder, a paddle wheel mounted for revolution in said drying cylinder, means to cause a blast of hot air to pass lengthwise through said drying cylinder, means to cause a heating medium to pass lengthwise through the jacketed chamber around said conveyer cylinder, means to cause a heating medium to pass lengthwise through the jacketed chamber around said drying cylinder and means to cause said conveyer screw and said paddle wheel to revolve in timed relation.

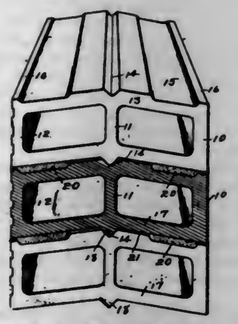
3. In combination, a conveyer screw, a conveyer cylinder, a jacketed chamber surrounding said conveyer cylinder, a drying cylinder, a chute between the delivery end of said conveyer cylinder and the receiving end of said drying cylinder, jacketed chambers in separate sections surrounding said drying cylinder, means to cause heating mediums of differing characters and temperatures to separately enter the jacketed chambers surrounding said drying cylinder, means to cause a heating medium to enter the jacketed chamber surrounding said conveyer cylinder, a paddle wheel mounted for revolution in said drying cylinder, and means to cause said paddle wheel and said conveyer screw to revolve in timed relation.

4. In combination, a conveyer screw, a conveyer cylinder, a jacketed chamber surrounding said conveyer cylinder, a drying cylinder, a chute connecting the delivery end of said conveyer cylinder with the receiving end of said drying cylinder, sectional jacketed chambers surrounding said drying cylinder, a paddle wheel mounted for rotation in said drying cylinder, a communicating air duct between said drying cylinder and said jacketed chamber surrounding said conveyer cylinder, means to cause a blast of hot air to pass through said drying cylinder and said jacketed chamber around said conveyer cylinder, means to cause the waste stack gases from a boiler furnace to pass through one of the sectional jacketed chambers around said drying cylinder, means to cause the exhaust steam from steaming mechanisms to separately pass through the remaining said sectional jacketed chambers around said drying cylinders, and means to cause said conveyer screw and said paddle wheel to revolve in timed relation.

5. In combination, a conveyer screw, a conveyer cylinder, a hopper on the receiving end of said conveyer cylinder, means for mounting said screw for rotation in said cylinder, a jacketed chamber around said conveyer cylinder, an air duct leading out of one end of said jacketed chamber, a drying cylinder, a communicating chute between the delivery end of said conveyer cylinder and the receiving end of said drying cylinder, an air duct leading from one end of said drying cylinder into the other end of said jacketed chamber around said conveyer cylinder, a paddle wheel mounted for rotation in said drying cylinder, sectional jacketed chambers around said drying cylinder, an automatically closable chute leading from the bottom of the other end of said drying cylinder, means to close the ends of said drying cylinder, an air-heating chamber, a communicating air duct between said air-heating chamber and said drying cylinder, steam coils within said air-heating chamber, means to force a blast of aid through said heating chamber, said drying cylinder and the said jacketed chamber around said conveyer cylinder, controllable means to cause the waste stack gases from a boiler furnace to pass through one of the sectional jacketed chambers around said drying cylinder, controllable means to cause the exhaust steam from a steam pump to pass through a second one of the said sectional jacketed chambers, controllable means to cause the exhaust steam from a steam engine to pass through a third one of said sectional jacketed chambers, means to cause the waste steam from said steam coils to pass through a fourth one of said sectional jacketed chambers, and means to cause said conveyer screw and said paddle wheel to revolve in timed relation.

[Claims 6 and 7 not printed in the Gazette.]

1,212,417. HOLLOW-TILE BUILDING-BLOCK. HALVER R. STRAIGHT, Adel, Iowa. Filed Feb. 17, 1913. Serial No. 749,057. (Cl. 72—41.)



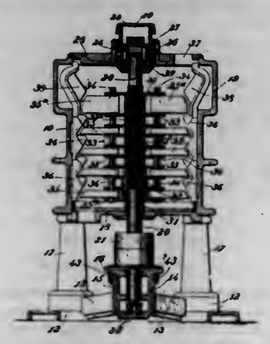
1. A wall composed of a series of layers of building blocks, each building block having its top and bottom surfaces inclined from a central longitudinal line downwardly and outwardly, the top surface of each being provided with a central longitudinal groove, and the under surface of each being provided with a central longitudinal rib, the rib on the upper layer being designed to rest in the groove on the layer below, the said rib being of such size as to hold the said layers of blocks spaced apart, a longitudinal layer of mortar near each edge between said layers of blocks, the said layers of mortar being of such width that an air space will be provided on each side of the central rib for the purposes stated.

2. In a building, the combination of a series of layers of building blocks, each building block having its top and bottom surfaces inclined from a central longitudinal line downwardly and outwardly, and the top surface of each being provided with a central longitudinal groove, and the under surface of each being provided with a central longitudinal rib, the rib on the upper layer being designed to rest in the groove on the layer below, the rib being of such size as to hold the said layers of blocks spaced apart, a longitudinal layer of mortar near each edge between said layers of blocks, the said layers of mortar being of such width that an air space will be provided for on each side of the central ribs, a series of bricks, the bricks being arranged in overlapping position at right angles to each other to form a corner, the blocks being arranged in horizontal rows in line with the bricks, one end of a layer of blocks being arranged against the flat edge of each brick, the said bricks and blocks being so proportioned with relation to each other that the brick is of a length substantially equal to the width of a block, of a height substantially the same as the height of a block, and of such width that a length of block combined with the width of a brick is substantially the same as the width of a block plus half the length of the block, for the purposes stated.

3. A wall composed of a series of layers of building blocks, each building block having its top and bottom surfaces inclined from a central longitudinal line downwardly and outwardly, the top surface of each being provided with two longitudinal grooves near the side edges thereof, a layer of mortar in each groove, said parts being so shaped and arranged that the blocks will be slightly spaced apart from each other between the edges of the two adjacent layers of cement or mortar, each block being also provided on its under surface with a longitudinal rib and on its upper surface with a longitudinal groove, the rib on the under layer being designed to enter the groove of the layer below and to divide the said space between the rows of mortar or cement into two separate dead air chambers, for the purposes stated.

4. A wall composed of hollow blocks each having a top and bottom surface inclined from a longitudinal line downwardly and outwardly, the upper surface of each block being provided near the sides thereof with longitudinal grooves, one of said grooves being nearer to the side of the block than the other and also with a central longitudinal groove, the under surface of said block being provided with a central longitudinal rib adapted to be received in said central groove in the upper surface of another block in a course, and adapted to hold the blocks spaced apart vertically, said blocks being arranged in courses with the blocks superposed one above the other and with mortar in said first described grooves and between the blocks near their side edges, so that dead-air spaces are provided between the blocks between the central groove and the other grooves.

1,212,418. ROTARY-BEATER MILL. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed July 27, 1916. Serial No. 111,648. (Cl. 83—11.)



1. In a rotary beater mill, the combination with a vertical mill casing having a feed opening at its upper part and provided with stationary crushing elements, of a vertical shaft in said casing, relatively massive or heavy pivoted beaters carried by said shaft in the upper part of said casing, and relatively light pivoted rotary beaters carried by said shaft below said heavy beaters.

2. In a rotary beater mill, the combination with a vertical mill casing having a feed opening at its upper part and provided with stationary crushing elements, of a vertical shaft in said casing, relatively massive or heavy pivoted beaters carried by said shaft in the upper part of said casing, and relatively light pivoted rotary beaters carried by said shaft below said heavy beaters, the upper part of the said mill casing affording a high chamber above said massive or heavy beaters so as to accommodate relatively large pieces of material to be crushed.

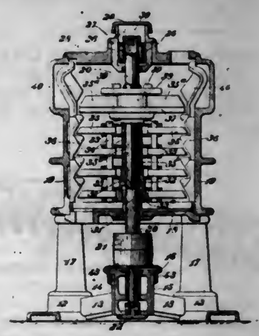
3. In a rotary beater mill, the combination with a vertical mill casing provided with stationary crushing elements, of a vertical shaft in said casing, relatively massive or heavy pivoted rotary beaters carried by said shaft in the upper part of said casing, and relatively light pivoted rotary beaters carried by said shaft below the said heavy beaters, the outer working ends or faces of said relatively light beaters being inclined relative to the axis of said shaft, and the inner faces of the said stationary crushing elements being also inclined to correspond to the working ends or faces of said beaters, and means for adjusting said shaft vertically to vary the distance between said beaters and stationary crushing elements.

4. In a rotary beater mill, the combination with a vertical mill casing provided with stationary crushing elements, of a vertical shaft in said casing, relatively massive or heavy rotary beaters carried by said shaft in the upper part of said casing, and relatively light pivoted rotary beaters carried by said shaft below the said heavy beaters, the outer working ends or faces of said relatively light beaters being inclined relative to the axis of said shaft, and the inner faces of the said stationary crushing elements being also inclined to correspond to the working ends or faces of said beaters, said stationary crushing elements forming a series of steps affording horizontal shelves, and means for adjusting said shaft vertically to vary the distance between said beaters and stationary crushing elements.

5. In a rotary beater mill, the combination with a vertical mill casing provided with stationary crushing elements, of a vertical shaft in said casing, relatively massive or heavy pivoted rotary beaters carried by said shaft in the upper part of said casing, and relatively light pivoted rotary beaters carried by said shaft below the said heavy beaters, said casing being provided at its top at one side with a feed hopper so as to enter the material between the outer ends of said heavy beaters and said stationary crushing elements.

[Claim 6 not printed in the Gazette.]

1,212,419. ROTARY-BEATER MILL. THOMAS L. STURTEVANT, Quincy, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed July 27, 1916. Serial No. 111,649. (Cl. 83—11.)



1. In a vertical rotary beater mill, the combination with a mill casing and a vertical shaft rotating therein, of a receiving and detaining table arranged in the upper part of the mill chamber and rotating with said shaft, rotary beaters above said table in the upper part of the mill chamber, hinged or pivoted rotary beaters below said table in the lower part of the mill chamber, said beaters being

connected with said shaft to rotate therewith, and stationary crushing elements coöperating with said beaters.

2. In a vertical rotary beater mill, the combination with a mill casing and a vertical shaft rotating therein, of a receiving and detaining table arranged in the upper part of the mill chamber and rotating with said shaft, hinged or pivoted rotary beaters above said table in the upper part of the mill chamber, hinged or pivoted rotary beaters below said table in the lower part of the mill chamber, said beaters being connected with said shaft to rotate therewith, and stationary crushing elements coöperating with said beaters.

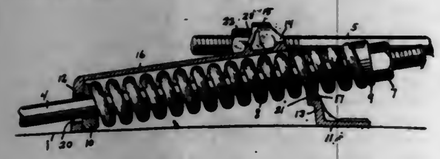
3. In a vertical rotary beater mill, the combination with a mill casing and a vertical shaft rotating therein, of a receiving and detaining table arranged in the upper part of the mill chamber and rotating with said shaft, rotary beaters above said table in the upper part of the mill chamber, hinged or pivoted rotary beaters below said table in the lower part of the mill chamber, said beaters having inclined outer ends and being connected with said shaft to rotate therewith, stationary crushing elements coöperating with said beaters and having inner face parts which are inclined reversely to the outer end faces of said beaters, and means for adjusting said shaft vertically to vary the position of said table and beaters relative to said stationary crushing elements.

4. In a vertical rotary beater mill, the combination with a mill casing and a vertical shaft rotating therein, of a receiving and detaining table arranged in the upper part of the mill chamber and rotating with said shaft, hinged or pivoted rotary beaters above said table in the upper part of the mill chamber, hinged or pivoted rotary beaters below said table in the lower part of the mill chamber, said beaters having inclined outer ends and being connected with said shaft to rotate therewith, stationary crushing elements coöperating with said beaters and having inner face parts which are inclined reversely to the outer faces of said beaters, and means for adjusting said shaft vertically to vary the position of said table and beaters relative to said stationary crushing elements.

5. In a vertical rotary beater mill, the combination with a mill casing, provided at its upper part with a feed opening for the introduction of material to be crushed, and a vertical shaft rotating in the chamber afforded by said casing, of a receiving and detaining table arranged in the upper part of the mill chamber and rotating with said shaft, relatively heavy crushing rotary beaters above said table in the upper part of the mill chamber, relatively light pulverizing rotary beaters below said table in the lower part of the mill chamber, said beaters being connected with said shaft to rotate therewith, and stationary crushing elements coöperating with said beaters.

[Claims 6 to 8 not printed in the Gazette.]

1,212,420. LUG FOR SILOS AND THE LIKE. EMIL C. TECKTONIUS, Racine, Wis., assignor to E. C. Tecktonius Manufacturing Company, Racine, Wis., a Corporation of Wisconsin. Filed July 24, 1916. Serial No. 110,875. (Cl. 217—95.)

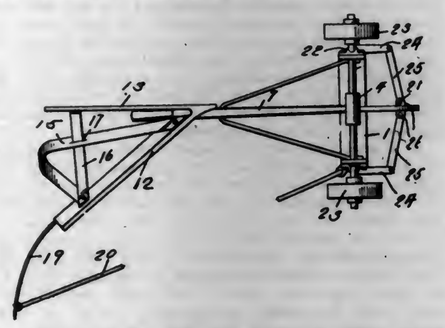


1. A hoop or band lug for silos and the like consisting of an integral casting having a base, an apertured rear wall, an arch springing from the base and provided with an apertured ear, and a curved web tension member connecting the arch with the base and the rear wall.

2. A hoop or band lug for silos and the like consisting of an integral casting having a base, an apertured rear wall, a front wall, an arch springing from the base between the front wall and the rear wall and provided with an apertured ear, a curved web tension member connecting the arch with the base and the rear wall, and bracing webs connecting the arch with the base and front wall.

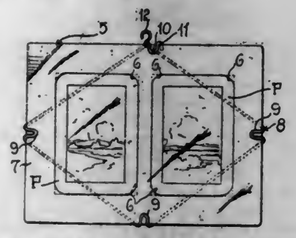
3. A hoop or band lug for silos and the like consisting of an integral casting having a base, a rear wall provided with an elongated aperture, a front wall, an arch springing from the base between the rear wall and the front wall and leaving an aperture between it and the front wall so that a hoop or band can extend through said aperture and the aperture in the rear wall in a line substantially tangent to the structure to which the lug is applied, the arch being provided with an apertured ear, a curved web tension member connecting the arch with the base and the rear wall, and bracing webs connecting the arch with the base and the front wall.

1,212,421. ROAD GRADING AND DITCHING PLOW. WILHELM TETZLOFF, New Richland, Minn. Filed Oct. 6, 1915. Serial No. 54,465. (Cl. 97—12.)



A plow of the class described, in combination with an arched frame, a threaded shaft associated with the frame, an axle carried by the frame, wheels mounted on the axle, a bearing carried by the axle and rotatably engaged by the lower end of the shaft, plates carried by the plow beam, said plates having fingers carried thereby, a nut engaged on the shaft and held against rotary movement by said fingers, as and for the purpose set forth.

1,212,422. PICTURE-HANGER. CHARLES H. THOMAS, York, Pa. Filed Mar. 25, 1916. Serial No. 86,768. (Cl. 40—145.7.)

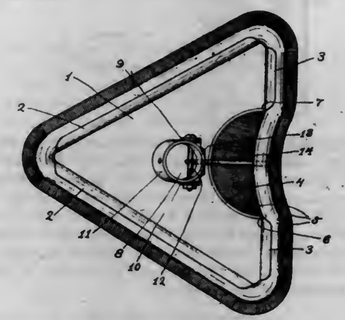


1. As an improved article of manufacture, a picture hanger formed from a single length of wire bent at intervals to provide inwardly projecting loops for engagement over the edges of a picture frame, one end of the wire being engaged under one of the loops and formed in its terminal with an outwardly projecting eye.

2. As an improved article of manufacture, a picture hanger constructed from a single length of wire bent into the form of a parallelogram and having inwardly projecting loops formed therein at the juncture of its sides for engagement over the edges of a picture frame, one terminal of said wire having an outwardly projecting eye formed therein, and the other terminal of the wire being formed into an inwardly projecting hook for engagement over the reverse side of the picture frame with respect to said loops.

3. As an improved article of manufacture, a picture hanger constructed from a single length of wire bent into the form of a parallelogram and having inwardly projecting loops formed therein at the juncture of its sides for engagement over the edges of a picture frame, one terminal of the wire being extended from one of said loops and formed into a hook for engagement over the opposite side of the picture frame, the other end of the wire being engaged under the latter loop therein and formed in its terminal with an outwardly projecting eye.

1,212,423. BLOCK FOR OILING-MOPS. JESSE E. THOMPSON, Kansas City, Mo., assignor to R. W. Morris Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed Aug. 13, 1915. Serial No. 45,279. (Cl. 15—13.)



1. In a mop block, a flat triangular plate, a flange rising from each edge of said plate, said flanges each forming a concave seat to retain a mop, the central portion of one of said flanges and a portion of the corresponding side of said plate removed and forming a semi-circular shaped recess, a lug near the center of said plate, a hole in said lug, a mop surrounding said plate and said flanges, and a screw having a screw thread connection in said lug and passing through one side of said mop and provided with a head bearing on the outer side of said mop, whereby said screw may be tightened and one side of said mop drawn slightly out of alinement tightening said mop to said flanges and holding it so that it cannot slip upward or downward.

2. A triangular plate, flanges rising from and integral with said plate, each of said flanges forming an outwardly facing concave seat, a handle connection on said plate, a lug rising from said plate, a recess in one side of said plate, a mop surrounding said block and resting in said outwardly facing concave seats, and a screw passing through one side of said mop and screw threaded in said lug, whereby one side of said mop may be drawn slightly out of alinement and said mop held rigidly in said concave seats.

3. In a mop block, a triangular shaped block, a groove in said mop, an endless mop stretched in said groove around said triangular shaped block, and means whereby a portion of said mop on one side of said triangular shaped block may be drawn slightly out of alinement tightening said mop on said block and retaining said mop in approximately triangular shape.

1,212,424. SCREEN FOR PICTURE REPRODUCTION AND MECHANISM FOR CURVING THE SAME. WILLIAM L. TILLOTSON, Denver, Colo. Filed Nov. 30, 1915. Serial No. 64,283. (Cl. 88—24.)

1. A screen of the character described, comprising a backing of suitable resilient material, and a suitable fabric facing adhesively secured thereto, and means connecting the diametrically opposite upper and lower corners of said screen for bowing the same and maintaining the same in a bowed position, said screen being self-supported when bowed and in a vertical position.

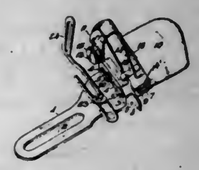


2. A screen of the character described, comprising a stiff but resilient backing of any suitable material, and a suitable fabric facing adhesively secured thereto, brackets secured to the upper and lower corners of one vertical edge of the screen, swiveled supports secured to the upper and lower corners of the opposite edge of the screen, rods hinged to said brackets, their opposite ends being threaded and passed loosely through said swiveled supports, and hand wheels on the threaded extremities of said rods, by which when they are screwed forcibly against said swiveled supports the bowing of the screen is effected.

3. A screen of the character described, comprising a stiff but resilient backing of any suitable material, and a suitable facing adhesively secured to said backing, metal strips secured along the vertical edges of said screen, rods hinged at one end to the upper and lower corners of said screen, supports on the opposite corners of said screen through which said rods pass loosely, and means carried by the outer free ends of rods for forcibly engaging said supports and sliding them inward on the rods whereby the screen is bowed.

4. A resilient screen, having rods hinged at one end to one of its vertical edges, apertured abutments on the opposite vertical edge of said screen, through which the free ends of said rods pass loosely, said free ends being threaded, and hand wheels on the threaded ends of said rods, adapted to be screwed forcibly against the said abutments to draw the said vertical edges of the screen toward each other and thereby bow the said screen.

1,212,425. BINDER. PHILIP TOMANEK, Newark, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed June 3, 1913. Serial No. 771,386. (Cl. 112—1.)



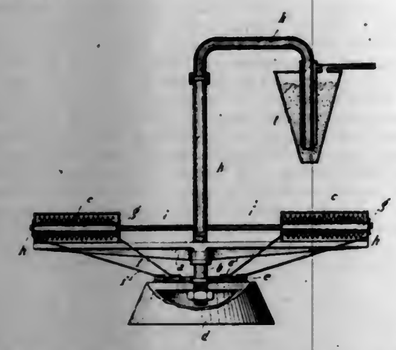
1. A sewing machine binder composed of relatively movable sections together forming a U-shaped channel, a hinge connection between said sections comprising a pivotal pin sustained by the outer convex face of one of said sections and disposed externally to and crosswise of said channel and in a line intermediate the overlapping walls thereof, and a spring for maintaining said sections yieldingly in normal relation.

2. In a sewing machine binder, a base-plate, a scroll-guide comprising two yieldingly connected sections mounted thereon adjustably lengthwise of the binder, said sections together forming a tape-channel having overlapping members with closed outer extremities and having an open-

ing between them communicating with the intermediate portion of the channel, a fabric-supporting plate rigidly attached to one of said sections, and an edge-guide affording a closure for said channel adjacent its receiving end.

3. In a sewing machine binder, in combination with a base-plate having a guide-aperture, a scroll-guide comprising two pivotally connected sections of which one is mounted on said base-plate, a steady-arm arranged transversely to the pivotal connection and carried by the other of said sections and adapted to enter the guide-aperture of the base-plate, and means for maintaining said sections in yielding relation.

1,212,426. PROCESS FOR PRODUCING HOMOGENEOUS BODIES OF CHEMICALLY-PURE TUNGSTEN METAL OF ANY DESIRED SHAPE. OTTO VOIGTLÄNDER and HUGO LOHMANN, Essen-on-the-Ruhr, Germany. Filed Dec. 2, 1913. Serial No. 804,206. (Cl. 204—64.)



1. The process of producing chemically pure metals, which comprises supplying a reducing charge containing metallic aluminum to a heated rotating chamber, and centrifugally compacting the resulting reduced metal.

2. The process of producing chemically pure metals, which comprises supplying to a heated chamber rotating at sufficient speed for centrifugal separation a reducing charge under the action of a gas.

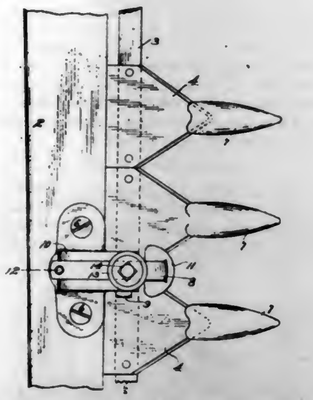
3. The process of producing chemically pure metals, which comprises electrically heating a furnace chamber, supplying a reducing charge to said heated chamber by means of a reducing gas while subjecting the chamber and charge to centrifugal action.

4. The process of obtaining chemically pure metals, which comprises supplying to a heated chamber rotating at sufficient speed for centrifugal separation a reducing charge containing aluminum under the action of a gas.

5. The process of producing chemically pure metals, which comprises inductively heating a furnace chamber, supplying a reducing charge containing aluminum to said heated chamber by means of a reducing gas, while subjecting the chamber and charge to centrifugal action.

1,212,427. MOWING-MACHINE. ROYAL A. WASS, Berkeley, Cal. Filed July 22, 1914, Serial No. 852,377. Renewed Oct. 31, 1916. Serial No. 128,808. (Cl. 56—44.)

1. In combination with the sickle bar and the knives of a mowing machine, a bracket borne by the machine, a bearing member pivoted to the bracket and having a foot which depends from the front end thereof and bears upon said knives, said bearing member having an upwardly extending projection at a point substantially over the pivotal point of said member, said projection being hollowed out to form a grease cup and being interiorly threaded and said member having a duct which leads from the grease cup through the bottom of the foot, a piston threaded into engagement with the threads of the grease-cup, and a set screw connected to the rear end of the member and bearing on a part of the machine to enable the degree of contact of the foot with the knives to be regulated.



2. In combination with the sickle bar and the knives of a mowing machine, a bracket borne by the machine, a bearing member, a transverse bolt passed through the bracket and member to provide a pivotal mounting for the latter, said bearing member having a foot which bears on the knives and also having a hollowed out portion at its top to provide a grease cup and further having a duct which leads from the cup through the bottom of the foot, and a closure for the grease-cup.

1,212,428. RECEPTACLE. HENRY E. WATSON, Chicago, Ill., assignor to Watson Development Company, Chicago, Ill., a Corporation of Illinois. Filed May 3, 1915. Serial No. 25,427. (Cl. 229—5.)



1. A receptacle comprising a flexible top portion, consisting of flexible material embedded in a flexible cement, and a stiff bottom portion.

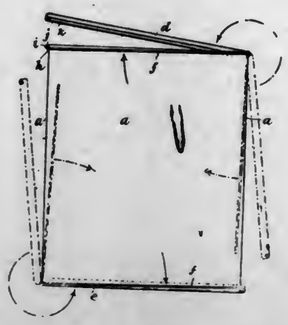
2. A receptacle comprising a flexible material embedded in flexible cement so as to form a flexible top portion, said cement containing fiber so as to add to the strength of the top portion, said cement containing mineral matter formed into a bottom thicker than the top portion.

3. A water-proof receptacle comprising a flexible top portion consisting of a flexible material embedded in a water-proof flexible cement, and a bottom portion, also formed of said cement.

4. A receptacle comprising flexible material formed into shape and open at the bottom, a flexible cement in which said flexible material is embedded, said cement extending across the open bottom portion of said flexible material.

5. A receptacle comprising a flexible top portion consisting of flexible material, a flexible cement in which said material is embedded, said cement being thin at the top so as to permit the flexible material to retain its flexibility so that the top of the receptacle may be formed into various shapes after the receptacle is completed, the cement at the bottom portion being thickened so as to form a stiff bottom, the sides of the receptacle being inclined so that it is larger at the top than at the bottom.

1,212,429. FOLDING BOX. SAUL WEINSTEIN, Paterson, N. J. Filed May 2, 1916. Serial No. 94,881. (Cl. 220—17.)



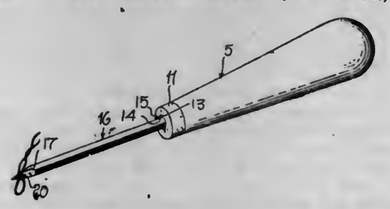
1. The combination of several walls hinged together to form an angular space and foldable into collapsed relation, and a rigid interior support holding said walls in the open position and movable to permit the collapse thereof, one of said walls having an inside transverse groove facing the relatively opposite wall and into which said support is sprung and another having means to hold the support against movement in a direction relatively transverse of said groove.

2. The combination of several walls hinged together to form an angular space and foldable into collapsed relation, and a rigid interior support holding said walls in the open position and movable to permit the collapse thereof, one of said walls having a transverse wire edge and an inside groove adjoining the same and facing the relatively opposite wall and into which said support is sprung and another of said walls having means to hold the support against movement in a direction relatively transverse of said groove.

3. The combination of several walls hinged together to form an angular space and foldable into collapsed relation, said walls having a transverse inside groove extending around the major part of said space and facing radially inward, and a rigid interior support holding said walls in the open position and movable to permit the collapse thereof and normally engaged in said groove.

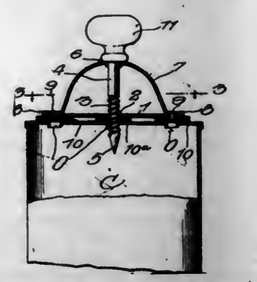
4. The combination of a series of rectangular side walls hinged together to form an annular space and foldable into collapsed relation, and rectangular end walls each hinged to a side wall, one at one free edge and the other at the relatively opposite free edge of said series, said end walls being foldable against said series when the latter are collapsed and in the space-forming position of the side walls forming a top and bottom and one of said end walls and the side walls other than that to which it is hinged having reversely projecting interlocking means adapted to be sprung past and in wiping contact with each other in moving said end wall on its hinge to or from perpendicular relation to said side walls.

1,212,430. TOOL. ELMER S. WEST, Ewing, Ky. Filed Mar. 11, 1916. Serial No. 83,656. (Cl. 145—61.)



The combination with a tool handle having a longitudinal bore, of a tool receiving socket member fitted in said bore and provided upon its open end with oppositely projecting lugs countersunk in the end face of the handle, and a ferrule secured upon the end of the handle and having an inwardly projecting flange engaged over said lugs to retain the socket member in the handle bore.

1,212,431. COMBINED CAN OPENER AND SEALER. JOSEPH H. WRAY, Salt Lake City, Utah. Filed May 10, 1915. Serial No. 27,186. (Cl. 220—67.)



A closure of the class described comprising an arched bar, a horizontal bar connecting the ends thereof, a pair of stoppers carried by the ends of said horizontal bars, and an attaching screw disposed between the arms of the arched bar, swiveled to said bar, and projecting loosely through the horizontal bar.

1,212,432. INSPECTION-OPENING FOR MATTRESSES, &c. CYRUS H. YOUNG, Nutley, N. J. Filed Apr. 14, 1916. Serial No. 91,105. (Cl. 5—13.)



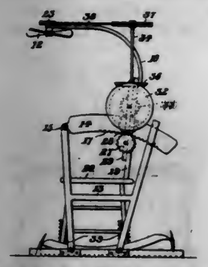
1. A cover for mattresses, pillows and the like, comprising an envelop of suitable fabric adapted to inclose the body thereof, having the meeting sides at a corner thereof provided with free ends adapted to abut and form an outstanding strip or rib, and detachable fastening devices carried by the adjacent margins of said ends to thereby permit the ready exposing of the interior or body of the mattress.

2. A cover for mattresses, pillows and the like, comprising an envelop of suitable fabric adapted to inclose the body thereof, having meeting free edges at a point in the side portion thereof adapted to abut to form a reinforced outstanding rib, and detachable fastening devices secured in the adjacent margins of said meeting edges, the opposite ends of said marginal portions being secured respectively to the top and bottom members of the envelop.

3. A mattress, pillow or like device, having a body portion and a cover or envelop of suitable material provided with top, bottom and side members, the meeting edges of the top and sides and of the bottom and sides having projecting marginal portions, one corner of the side member having an opening adapted to be closed by abutting the margins of the material upon either side of the opening to form an outstanding rib, and detachable fastening devices carried by said margins, the opposite ends of said

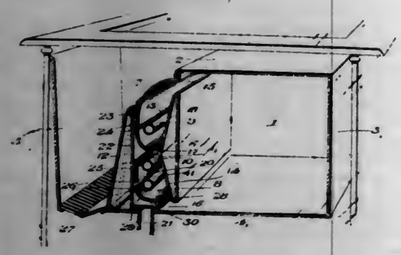
marginal portions being secured respectively to the adjacent projecting marginal portions of the top and bottom members.

1,212,433. CHAIR-OPERATED FAN. JOHN ZURVALECZ, Martin, Pa. Filed Sept. 13, 1915. Serial No. 50,426. (Cl. 230—7.)



A device of the type described, including a base, a rocking chair positioned upon said base, an upright frame secured upon said base, the rear member of which frame has a slot near its upper end, a pivoted segmental rack upon said frame having a toothed lower edge, said rack being received movably within said slot, a gear frame carried by the chair, a shaft journaled in said gear frame, a gear secured to said shaft within said frame and in mesh with the teeth of said segment, a second shaft journaled in said gear frame, a sheave secured to said second shaft within the frame and receiving in its peripheral groove the upper edge of said rack, a stub-shaft journaled in said gear frame and a gear mounted thereon outwardly of the frame, an outwardly positioned gear mounted on the first named shaft, in mesh with the last named gear, a beveled gear mounted on said second shaft, the hub of said beveled gear having peripheral teeth in engagement with the gear of the stub-shaft, an upright shaft journaled in said gear frame, a beveled gear carried by the upright shaft in engagement with the last named beveled gear, a forwardly curved arm carried by the back of said chair, a fan journaled in the forward end of said arm, and operative connections between the fan and upright shaft.

1,212,434. COMBINATION COAL AND GAS RANGE. WILLIAM ABIGT and EDWARD B. LEONARD, Evansville, Ind. Filed Jan. 12, 1916. Serial No. 71,712. (Cl. 126—36.)



1. In a combination coal and gas range, an oven, a fire-box for solid fuel, a flue for conducting the heat from the fire-box so that it will heat the oven, a multiple chamber or compartment casing located between the fire-box and the oven, the respective chambers of said casing being independently in communication with different parts of the oven, and gaseous fuel burners located in the respective compartments or chambers of said casing.

2. In a combination coal and gas range, an oven, a fire-box for solid fuel, a flue for conducting the heat from the fire-box so that it will heat the oven, a multiple chamber or compartment casing located between the fire-box and the oven, the respective chambers of said casing being independently in communication with different parts of the oven, gaseous fuel burners located in the respective compartments or chambers of said casing, an air chamber located adjacent the compartments of the casing and having ports communicating with the respective compartments, means for controlling the flow of gas to the respective burners, and an air damper operable in the air chamber and adapted for opening or closing all of said ports.

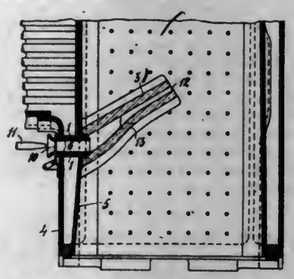
3. In a combination coal and gas range, an oven, a fire-box for solid fuel, a flue for conducting the heat from the fire-box so that it will heat the oven, a multiple chamber or compartment casing located beween the fire-box and the oven, the respective chambers of said casing being independently in communication with different parts of the oven, gaseous fuel burners located in the respective compartments or chambers of said casing, an air chamber located adjacent the compartments of the casing and having ports communicating with the respective compartments, means for controlling the flow of gas to the respective burners, an air damper operable in the air chamber and adapted for opening or closing all of said ports, and devices under the control of the respective burner-controlling means, each adapted to cause opening of the damper when the gas is turned on and closing of the damper when the gas is turned off from the given burner controlled by said means.

4. In a gas range, the combination with an oven, of a plurality of casings respectively in communication with different parts of the oven, independent gas burners in the respective compartments, means for independently controlling the admission of gas to the respective burners, and means common to all the casings adapted to jointly and independently control the admission of air to all of them.

5. In a gas range, the combination with an oven, of a plurality of casings respectively in communication with different parts of the oven, independent gas burners in the respective compartments, means for independently controlling the admission of gas to the respective burners, and means common to all the casings adapted to jointly and independently control the admission of air to all of them, said air controlling means being operable by the gas controlling means of any of the gas burners.

[Claims 6 to 10 not printed in the Gazette.]

1,212,435. LOCOMOTIVE-BOILER AND THE LIKE. ANDERS ANDERBERG, Malmö, Sweden. Filed Sept. 8, 1914, Serial No. 860,740. Renewed Dec. 6, 1916. Serial No. 135,484. (Cl. 110—76.)

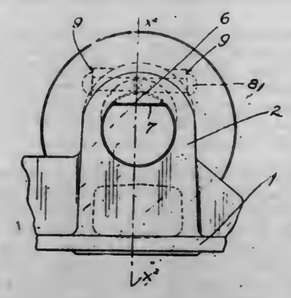


1. In a locomotive boiler the combination of a boiler, a fire box, a fire bridge extending inward and upward from the front wall of the fire box at a point below the boiler cylinder and provided with an air channel having an enlarged closed-wall chamber tapering upward from its lower front end adjacent to said front wall and said air channel also having discharge openings of smaller area than said chamber remote from said front wall, and a short straight air inlet pipe inserted in the boiler plate and the tube plate and opening at its front end into said enlarged chamber and at its rear end into the atmosphere underneath the cylindrical shell of the boiler.

2. In a locomotive boiler the combination of a boiler, a fire box, a fire bridge extending inward and upward from the front wall of the fire box at a point below the boiler cylinder and provided with an air channel having an enlarged closed-wall chamber tapering upward from its lower front end adjacent to said front wall and said air channel also having remote from said front wall discharge openings of smaller area than said chamber, and an air inlet for said air channel comprising two short pipes disposed one within the other and having insulating material between them, the outer pipe being inserted in the boiler plate and the tube plate and being exposed to the hot steam between said plates and the inner pipe opening at its front end into said air channel and at its rear end into the atmosphere and being exposed between said plates to the incoming cool air, said insulating material preventing uneven expansion and contraction of said outer pipe and thereby avoiding leakage strains at its joints with said plates.

3. In a locomotive boiler the combination of a boiler, a fire box, a fire bridge extending inward and upward from the front wall of the fire box at a point below the boiler cylinder and provided with a series of air channels having respectively enlarged closed-wall chambers tapering upward from its lower front end adjacent to said front wall, said air channels having respectively remote from said front wall discharge openings of smaller area than said chambers respectively, and short straight air inlet pipes inserted in the boiler plate and the tube plate and opening at their front ends into said enlarged chambers respectively and at their rear ends into the atmosphere underneath the cylindrical shell of the boiler.

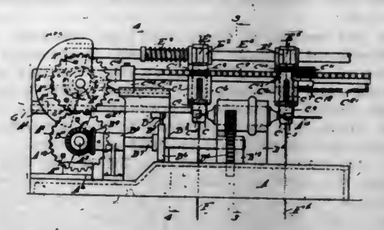
1,212,436. SIDE BEARING. FRANKLIN L. BARBER and EDWIN W. WEBB, Chicago, Ill., assignors to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 7, 1915. Serial No. 54,511. (Cl. 64—64.)



In a bearing of the kind described, the combination with a base flange having laterally spaced inner and outer hubs with axially alined axle seats, the outer of which seats is elongated, of an axle insertible into said seats by endwise movement through the elongated axle seat and having a notch in its inner end, a stop flange on the inner hub with which said notch interlocks to hold the axle against rotation and endwise movement in one direction, a stop flange outward of the outer end of the axle, said two stop flanges being located at diametrically opposite points, a pin passed through the elongated axle seat and coöperating with the stop flange on the outer hub to normally hold the axle against endwise displacement, and a roller located between said hubs and journaled on the axle.

1,212,437. WIRE-TIE-FORMING MACHINE. ADELMER MARCUS BATES, Chicago, Ill., assignor to Bates Valve Bag Company, Chicago, Ill., a Corporation of West Virginia. Filed Apr. 16, 1914. Serial No. 832,148. (Cl. 140—71.)

1. A wire twisting machine comprising a longitudinally slotted mandrel, means for feeding a length of wire into said slot, means for holding it there, and means for cutting it off and bending the free ends of the wire about the body of the wire to form an open loop.



2. A wire twisting machine comprising a longitudinally slotted mandrel, means for feeding a length of wire into said slot, means for holding it there, means for cutting it off and bending the free ends of the length of wire thus cut off about the body of the wire to form an open loop, and means for rotating the mandrel to twist the free ends about the body of the wire to close the loop.

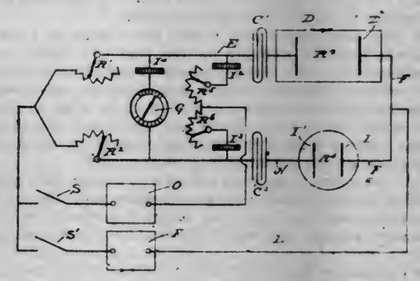
3. In a wire twisting machine, means for feeding out a fixed length of wire, means for cutting it off, means for holding it in position, means for bending the free ends of the length of wire thus cut off back across the body of the wire and rotating the free ends to twist them around the body to form a closed loop.

4. In a wire twisting machine, a longitudinally slotted rotatable mandrel, means for feeding a length of wire into said mandrel, means for cutting it off and means for bending the free ends of the length of wire thus cut off back across the body of the wire adjacent the two ends of the mandrel, fingers on the mandrel, and means for rotating it to bring said fingers into engagement with the free ends of the wire to twist them about the body of the wire.

5. In a wire bending machine, a rotatably mounted longitudinally slotted mandrel, a pair of forming heads located one at either end of the mandrel, means for feeding out a length of wire through said slot, means for cutting it off and means for twisting the free ends of the length of wire thus cut off about the forming heads to form open loops at either end thereof.

[Claims 6 to 35 not printed in the Gazette.]

1,212,438. METHOD OF AND MEANS FOR DETERMINING AND INDICATING THE DEPTH OF WATER. ARTHUR R. BAUER, North Haven, Conn. Filed Sept. 22, 1911. Serial No. 650,774. (Cl. 175—265.)



1. The method of determining and indicating the depth of water or the presence of metallic bodies or minerals adjacent to a floating ship which consists in measuring the conductivity of an electric circuit including the body of water surrounding the ship, substantially as described.

2. The method of determining and indicating the depth of water or the presence of metallic bodies or minerals adjacent to a floating ship which consists in establishing

an electric circuit through the water surrounding the ship and through an indicator controlled in operation by changes in conductivity in the circuit, substantially as described.

3. The method of determining and indicating automatically the depth of water adjacent to a floating ship, which consists in establishing an electric circuit including the water surrounding the ship and including an indicator subject to changes in conductivity in the circuit, and setting said indicator at an initial indication at a known depth of water, substantially as described.

4. The method of automatically determining and indicating the depth of water or the presence of metallic bodies or minerals adjacent to a floating ship, which consists in adjusting an electrical indicator in circuit with the water surrounding the ship to a certain position at a given depth of water, and preventing a change in said indicator by changes in conductivity of said circuit due to other causes than the depth of the water or the presence of metallic bodies or minerals in said water, substantially as described.

5. The method of determining and indicating automatically the depth of water adjacent to a floating ship, which consists in providing an electric circuit including the water surrounding said ship, and an electrical indicator, and constantly compensating for changes in the conductivity of the circuit due to causes other than the depth of water or the presence of metallic bodies in the water to prevent operation of the indicator by such other causes, substantially as described.

[Claims 6 to 32 not printed in the Gazette.]

1,212,439. GATE. ALBERT FRANK BEAURSGARD, West De Pere, Wis. Filed Sept. 1, 1916. Serial No. 118,062. (Cl. 39—62.)

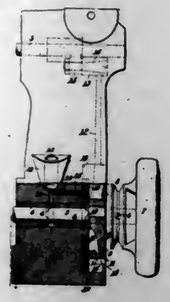


1. The combination with a post and a gate, of a gear segment mounted rockably on the post and rigidly secured to said gate, a second segment mounted rockably on the post and meshing with the other, an arm secured rigidly to said second segment and extending therefrom along one side of the gate, and a weight on said arm for operating the segments to raise the gate.

2. The combination with a post and a gate, of a gear segment mounted rockably on the post and rigidly secured to said gate, a second segment mounted on the post and meshing with the other, a rock shaft on which said second segment is secured, a pair of crank arms extending rigidly from the ends of said shaft and extending along opposite sides of the gate, and weights on said arms for operating the segments to raise the gate.

3. The combination with a post and a gate, said post having a slot formed through its upper end, of a pair of intermeshing gear segments mounted partially in said slot, one of said segments being rigidly secured to the gate, a pair of straps contacting with opposite sides of the post and projecting at their ends beyond said post, a bolt passing through one end of said straps and serving as a pivotal mounting for the segment secured to the gate, an additional bolt passing through the other ends of said straps and coöperating with the other bolt in retaining said straps in position on the post, a rock shaft on which the other segment is mounted, said shaft being supported rotatably by the aforesaid straps, and one or more weighted crank arms extending from said rock shaft into parallel relation with the gate.

1,212,440. LUBRICATING DEVICE. RUDOLPH BECKER, Roselle Park, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 5, 1916. Serial No. 95,537. (Cl. 74—1.)



1. A lubricating device comprising, in combination, a rotary cam-element formed with a cam surface and with a shoulder disposed angularly to its direction of movement and having an oil-directing connection with said surface, a follower for said cam-element contacting with said cam-surface, a fixed member, and an oil-absorbent pad sustained by said member in proximity to said shoulder.

2. A lubricating device comprising, in combination, a fixed member, an oil-absorbing pad sustained thereby, a rotary cam-element formed with a cam-surface and having a face provided with a shoulder for engagement with the adjacent face of said pad for collection of oil from the latter and delivery thereof to the cam-surface, and a follower for said cam-element contacting with said cam-surface.

3. A lubricating device comprising, in combination, a rotary cam-element formed with a cam-surface and with a laterally-open lubricant recess connected by an outwardly extending duct with said cam-surface, a follower for said cam-element contacting with said cam-surface, a fixed member or support, and an oil-absorbent pad sustained by said member or support in proximity to said cam-element.

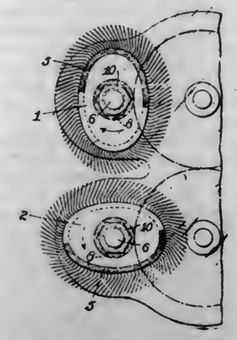
4. A lubricating device comprising, in combination, a shaft, a cam-element mounted thereon and formed with a cam-surface and with a laterally-open lubricant recess connected by an outwardly extending duct with said cam-surface, a follower for said cam-element contacting with said cam-surface, a bearing for said shaft formed with a surrounding cavity, and an oil-absorbent pad within said cavity, and in contact relation with the recessed face of said cam-element.

5. A lubricating device comprising, in combination, a rotary shaft, an eccentric mounted thereon and formed with a laterally-open lubricant recess having a side wall terminating in an abrupt shoulder and connected by an outwardly extending duct with the periphery of said eccentric, a pitman having a strap embracing said eccentric, a frame containing a bearing for said shaft and a projecting boss concentric with the latter, and an apertured oil-absorbent pad entered by and sustained upon said boss close to the recessed face of said eccentric.

1,212,441. TOBACCO-LEAF-STRIPPING MACHINE. FREDERICK I. BILLINGS and FREDERICK C. SCHOFIELD, Baltimore, Md. Filed Nov. 3, 1914. Serial No. 870,123. (Cl. 131—57.)

1. In a leaf stripping machine and in combination, a pair of stripping rolls, one of said rolls having a substantially continuous leaf-engaging surface, said continuous surface at different points about the axis of rotation being disposed at different distances from the said axis.

2. In a leaf stripping machine and in combination, a pair of stripping rolls each having a substantially continuous leaf-engaging surface which at different points about the axis upon which it turns, lies at different distances from said axis, and means for driving the rolls.



3. In a leaf stripping machine and in combination, a stripping roll having a substantially continuous leaf-engaging surface, said surface being provided by the outer ends of peripheral teeth arranged in spaced-apart coils, and said surface at different points about the axis of rotation being at different distances from said axis.

4. In a leaf stripping machine and in combination a stripping roll having a substantially continuous leaf-engaging surface made up of curved sections having no common center from which they are struck, substantially as described.

5. In a leaf stripping machine and in combination a pair of stripping rolls each having a substantially continuous leaf-engaging surface which at different points about the axis upon which it turns, lies at different distances from said axis, said rolls being so relatively disposed that at one point in the revolution of said rolls the point of greatest distance on one roll will be substantially opposite the point of least distance on the other roll, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,212,442. PROCESS FOR MAKING CLEANING COMPOUNDS. ARTHUR W. BISHOP, St. Louis, Mo. Filed Aug. 9, 1916. Serial No. 114,028. (Cl. 87—5.)

1. The herein described method of making a cleaning compound, which consists in forming an aqueous solution of the sudfid and hydro-oxid of sodium, in suitable proportions, adding manganese dioxid to eliminate the sulfurous odor, adding sodium chlorate and sifted soft coal ashes containing an acid in suitable proportions, whereby free chlorin is liberated, decanting the clear portion of the liquid after the expiration of a predetermined period, and adding oil of mirbane to the solution.

2. The herein described method of making a cleaning compound which consists in forming an aqueous solution of twenty parts of sodium sulfid and three parts of sodium hydro-oxid in one hundred and twenty parts of water, adding twenty-four parts of manganese dioxid, and agitating the combination until the sulfurous odor has been eliminated, adding three and one-half parts of sodium chlorate and three parts of sifted coal ashes containing an acid to the combination and permitting the same to settle for a predetermined time until free chlorin has been liberated, decanting the clear liquid thereafter and adding thereto four parts of oil of mirbane.

1,212,443. TOILET ARTICLE. JOHN A. BLAINE, Norfolk, Va. Filed Oct. 10, 1916. Serial No. 124,752. (Cl. 128—16.)

1. An implement of the character described, comprising a handle and a head, the latter having upon each of its opposite edges a longitudinal groove and rounded projections upon opposite sides of the groove.

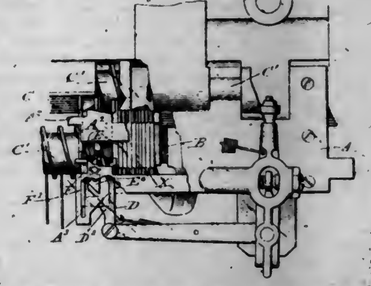
2. An implement of the character described, comprising a handle and a head each having longitudinal grooves upon its opposite edges and formed with rubbing surfaces upon opposite sides of the grooves.



3. An implement of the character described, comprising a handle and a head each having longitudinal grooves upon its opposite edges and formed with rubbing surfaces upon opposite sides of the grooves, the rubbing surfaces upon opposite sides of the head and handle being of different sizes.

4. An implement of the character described, comprising a handle and a head detachably united, the head and handle having upon their opposite edges longitudinal grooves and upon opposite sides of said grooves formed with separated rounded projections.

1,212,444. TYPOGRAPHICAL MACHINE. ROBERT O. BOARDMAN, Grand Rapids, Mich., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 17, 1915. Serial No. 28,521. (Cl. 199—7.)



1. In a typographical machine capable of handling type or matrices of variant fonts, the combination of a group or line of type or matrices, means coöperating therewith to detect the presence therein of a type or matrix of improper font, and matrix removing means actuated by said font detecting means for conducting the improper type or matrix from the machine.

2. In a typographical machine, the combination of a movable font-distinguisher, and matrix-removing means controlled thereby for conducting a type or matrix from the machine.

3. In a typographical machine, the combination of a font-distinguisher adjustable to different operative positions to correspond to type or matrices of different fonts, and matrix-removing means controlled by the font-distinguisher in any of its different positions for conducting a type or matrix from the machine.

4. In a typographical machine, the combination of distributing mechanism, means serving when active to control the delivery of type or matrices thereto and when inactive to permit their automatic removal from the ma-

chine, and means actuated by an improper type or matrix to render said controlling means inactive.

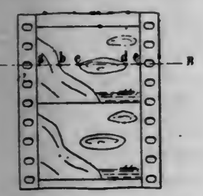
5. In a typographical machine, the combination of distributing mechanism, means serving when active to control the delivery of type or matrices thereto and when inactive to permit their automatic removal from the machine, and a movable font distinguisher to govern the action of said means.

[Claims 6 to 24 not printed in the Gazette.]

1,212,445. EGG-PRESERVING COMPOUND. HENRY D. BOSTOCK, Jacksonville, Fla. Filed June 13, 1916. Serial No. 103,559. (Cl. 99—8.)

The process of preserving eggs, the same consisting in immersing the eggs in a solution of *Desmodium tortuosum meibomia* in proportions of substantially one pound of *Desmodium tortuosum meibomia* to one gallon of water.

1,212,446. MOVABLE PLATE APPLICABLE TO THE MANUFACTURE OF POSITIVE CINEMATOGRAPH-FILMS AND PROCESS OF OBTAINING THE SAME. ABEL BOULARAN, *dit* DEVAL, Paris, France. Filed May 20, 1915. Serial No. 29,454. (Cl. 95—5.6.)



1. A process of manufacturing movable plates applicable, with the aid of suitable inks, to the continuous printing of positive cinematograph films, on supports of transparent material, consisting essentially in: applying to the front face of a positive photo-print film a layer of bichromated gelatin; applying to said layer, while still viscous, a strip of black paper; exposing for the desired time to the action of light, after drying, the back of the band thus prepared, so as to effect a gradual insolubilizing of the gelatin layer through the said film; subjecting the gelatin layer, after having been so exposed to the light, to the action of a mordant for preparing for the subsequent washing-away of the non-exposed portions; effecting such washing-away by immersion in hot water; and finally hardening by tanning the reliefs thus obtained, and definitely drying the band.

2. A process of manufacturing movable plates applicable, with the aid of suitable inks, to the continuous printing of positive cinematograph films, consisting essentially in: applying to the front face of a positive photo-print film a layer of bichromated gelatin; applying to said layer, while still viscous, a strip of black paper; exposing for the desired time to the action of light, after drying, the back of the band thus prepared, so as to effect a gradual insolubilizing of the gelatin layer through the said film; subjecting the gelatin layer, after having been so exposed to the light, to the action of calcium hypochlorite, for preparing for the subsequent washing-away of the non-exposed portions; effecting such washing-away by immersion in hot water; and finally hardening by tanning the reliefs thus obtained, and definitely drying the band.

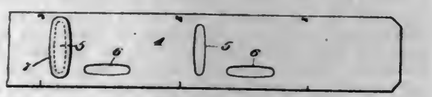
3. A process of manufacturing movable plates applicable, with the aid of suitable inks, to the continuous printing of positive cinematograph films, consisting essentially in: applying to, and uniting by pressure with, the front face of a positive photo-print film a band of bichromated gelatin, the contacting surfaces of said film and said gelatin band having previously been rendered viscous; applying to the said gelatin band, while still viscous, a strip of black paper; exposing for the desired time to the action of light, after drying, the back of the band thus prepared, so as to effect a gradual insolubilizing of the gelatin layer through the positive film; subjecting the gelatin layer, after having been so exposed to the light, to the action of a mordant, for preparing for the subsequent washing-away of the non-exposed portions; effecting such washing-away by immersion in hot water; and finally tanning the reliefs thus obtained by successively dipping the band so prepared in a bath of potassium bichromate, exposing it to the action of light, drying it, dipping it in a bath of chrome alum, again drying it, dipping it in a bath of formol, and definitely drying it.

4. A process of manufacturing movable plates applicable, with the aid of suitable inks, to the continuous printing of positive cinematograph films, consisting essentially in: applying to the front face of a positive photo-print film a band of bichromated gelatin; applying to the outer surface of said gelatin band, said outer surface having previously been rendered viscous, a strip of black paper; exposing for the desired time to the action of light, after drying, the back of the positive film, while the said gelatin band is kept against the front of said film, so as to effect a gradual insolubilizing of the gelatin band through the said positive film; separating said positive film from said gelatin band, after the latter has been so exposed to the light; subjecting the gelatin band to the action of calcium hypochlorite, for preparing for the subsequent washing-away of the non-exposed portions; effecting such washing-away by immersion in hot water; and finally tanning the reliefs thus obtained by successively dipping the band so prepared in a bath of potassium bichromate, exposing it to the action of light, drying it, dipping it in a bath of chrome alum, again drying it, dipping it in a bath of formol, and definitely drying it.

5. The herein-described process of manufacturing movable plates applicable, with the aid of suitable inks, to the continuous printing of cinematograph films, consisting essentially in: applying to the front face of a photo-print film a band of bichromated gelatin; applying to the outer surface of said gelatin band, said outer surface having previously been rendered viscous, a strip of black paper; exposing for the desired time to the action of light, after drying, the back of said photo-print film, while the said gelatin band is kept against the front of said film, so as to effect a gradual insolubilizing of the gelatin band through the said photo-print film; separating said photo-print film from said gelatin band, after the latter has been so exposed to the light; subjecting the gelatin band to the action of a mordant, for preparing for the subsequent washing-away of the non-exposed portions; effecting such washing-away by immersion in hot water; and finally hardening by tanning the reliefs thus obtained, and definitely drying the band.

[Claims 6 and 7 not printed in the Gazette.]

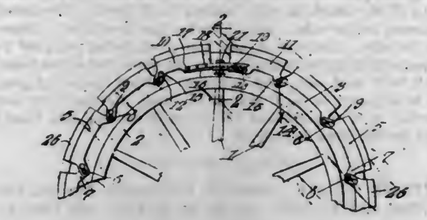
1,212,447. CUT-OUT FILM BLANKET-STRIP FOR AUTOGRAPH-CAMERAS. HENRY J. BROWN, New York, N. Y. Filed Mar. 30, 1915. Serial No. 18,098. (Cl. 95—9.)



1. An opaque blanket strip for photographic films, having a transverse slot along the end and a longitudinal slot along the side of each film section, for the purpose specified.

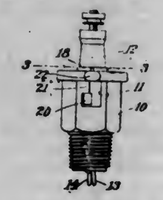
2. The combination, with an opaque blanket strip for photographic films said blanket strip having slots therein for autograph printing from the back of the camera, of pieces of paper covering said slots and having an opaque coating preparation which may be displaced to permit light to pentrate when scratched with a pointed instrument.

1,212,448. TIRE-GUARD. OBEDIAH H. BROWN, Ariel, Pa. Filed Apr. 10, 1916. Serial No. 90,179. (Cl. 152—16.)



A tire guard made up of pivotally connected trough-like intermediate and terminal sections; oppositely extended superposed interengaging racks on the inner ends of the terminal sections; and a clamping means for uniting the racks; the outer ends of the terminal sections being pivotally joined to the adjacent intermediate sections by pin and slot connections, the slots of said sections slanting at an acute angle to the radius of the guard, whereby when the terminal sections are drawn together circumferentially, the racks will move apart radially, thus facilitating the sliding movement of the racks on each other.

1,212,449. SPARK-PLUG. CYRUS L. BUNDY, East Orange, N. J., assignor of one-half to William Bohleber, New York, N. Y. Filed Apr. 16, 1915. Serial No. 21,805. (Cl. 123—169.)



1. In a spark plug, a bushing provided with a bayonet slot in the upper portion thereof, a core, and means for securing the core within the bushing comprising relatively movable sleeves surrounding said core and screw-threaded to each other, one of which is provided with lugs adapted to engage the bushing within the bayonet slot and the other of which engages with the core for effecting a movement of the same relative to the bushing.

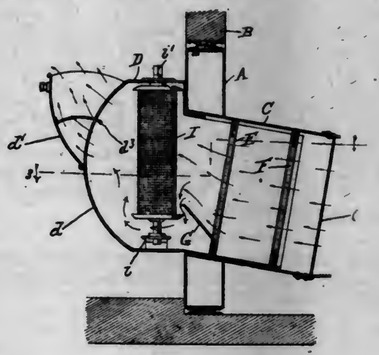
2. In a spark plug, a bushing provided with a bayonet slot in the upper portion thereof, a core, and means fixed to said core for securing the latter to the bushing comprising relatively movable sleeves one of which is provided with lugs adapted to engage the bayonet slot and the other of which is provided with a handle by which it is movable longitudinally with respect thereto.

3. In a spark plug, a bushing provided with a bayonet slot in the upper portion thereof, a core, and means fixed to said core for securing the latter to the bushing, comprising sleeves, the first of which is rotatable about but fixed against longitudinal movement on the core, and the second of which is screwthreaded to the first and provided with lugs adapted to engage the bayonet slot, and means on the first sleeve for rotating both of the sleeves to secure the core to and remove the same from the bushing.

4. In a spark plug, a bushing provided with a bayonet slot adjacent the upper end thereof and a shoulder at an intermediate portion, a removable core for said bushing provided with a shoulder adapted to rest upon the shoulder of the bushing, and means carried by said core adapted to secure the same to the bushing comprising a member adapted to engage the bayonet slot and a rotatable member normally resting upon the shoulder of the core and coöperating with the aforesaid member to force the core downwardly into fluid tight engagement with the shoulder of the bushing.

5. In a spark plug, a bushing provided with a bayonet slot adjacent the upper end thereof and an annular shoulder at an intermediate point, a removable core for said bushing provided with a shoulder normally resting upon the shoulder of the bushing, and means carried by said core for securing the samo to said bushing comprising a member engaging said slots and a second member engaging the first named member and movable longitudinally with respect thereto.

1,212,450. VENTILATOR APPARATUS. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed July 8, 1911. Serial No. 637,541. (Cl. 183—70.)



1. A ventilator comprising a box having an air intake chamber provided with a baffle plate for catching the dust, consisting of a sheet of cloth disposed in the path of the air, and rolls for the ends of said sheet, said rolls being disposed in position to cause the sheet to travel horizontally, and means for supporting said box in position with its outer side exposed to the atmosphere.

2. A window ventilator comprising a box having an air intake chamber provided with a baffle plate for catching the dust, consisting of a sheet of cloth disposed in the path of the air, rolls for the ends of said sheet, said rolls being disposed in position to cause the sheet to travel horizontally, together with means for preventing the air from passing over the upper edge of the cloth, bearing against the surface thereof, and means for supporting said box in position with its outer side exposed to the atmosphere.

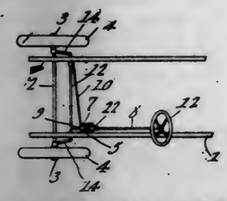
3. A window ventilator comprising a box having an air intake chamber provided with a baffle plate for catching the dust, consisting of a sheet of cloth disposed in the path of the air, rolls for the ends of said sheet, said rolls being disposed in position to cause the sheet to travel horizontally, together with means for preventing the air from passing around the rolls, bearing against the surface thereof, and means for supporting said box in position with its outer side exposed to the atmosphere.

4. A window ventilator comprising a box having an air intake chamber provided with a baffle plate for catching the dust, consisting of a sheet of cloth disposed in the path of the air, and rolls for the ends of said sheet, said rolls being disposed in position to cause the sheet to travel horizontally, said rolls having exposed upper ends for the operation thereof, and means for supporting said box in position with its outer side exposed to the atmosphere.

5. A ventilator comprising a box having an air intake chamber provided with a baffle plate for catching the dust, consisting of a sheet of cloth disposed in the path of the air, rolls for the ends of said sheet, said rolls being disposed in position to cause the sheet to travel horizontally, together with means for filtering the air before it strikes the said baffle plate.

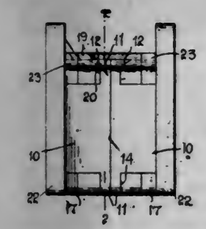
[Claim 6 not printed in the Gazette.]

1,212,451. STEERING DEVICE. JOHN R. BUTTWEILER, Freeport, Minn. Filed Feb. 10, 1916. Serial No. 77,465. (Cl. 21—194.)



In a motor propelled vehicle, a chassis; a ground wheel assembled therewith; a bearing carried by the chassis; a steering shaft journaled in the bearing; an operative connection between the steering shaft and the ground wheel; an oil tube carried by the bearing and discharging on the shaft; an arm secured to the tube and extended longitudinally of the shaft; a top member secured to the arm; a bottom member; shoes carried by the top and bottom members and engaging the steering shaft; rods secured to the bottom member and passing slidably through the top member; compression springs on the rods and abutting against the top member; and adjusting devices on the rods and engaging the springs.

1,212,452. CONCRETE CULVERT OR BRIDGE. SMITH C. CALDWELL, Roberts, Mont. Filed Aug. 23, 1916. Serial No. 116,512. (Cl. 72—52.)

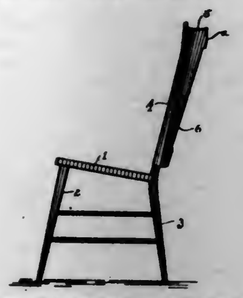


1. A culvert construction comprising side blocks formed at their extremities with dovetailed recesses, the recesses being defined on each side by ears having relatively divergent inner faces, the faces diverging toward the outer face of the block, a main bottom block having dovetailed recesses in its ends, a top block having dovetailed recesses in its ends, the bottom and top block being adapted to engage with the abutting ears of the side blocks and interlock with said ears, auxiliary bottom blocks adapted to be disposed on each side of the main bottom block and having ears engaging in the recesses of the side blocks and interlocking therewith, and end blocks, each comprising a main transversely extending portion formed upon its inner faces with a transversely extending flange, there being downwardly extending legs on each side of said main portion, the face of the main portion opposite the flange being formed at the junction of the legs with recesses adapted to receive the outer upper ears on the side blocks, the inner end walls of the recess being inclined to correspond to the inclination of the inner faces of the ears on the side blocks, whereby to interlock the end blocks with the side blocks.

2. A culvert construction comprising side blocks formed at their extremities with dovetailed recesses, the recesses being defined on each side by ears having relatively divergent inner faces, the faces diverging toward the outer face of the block, a bottom block having dovetailed recesses in its ends, and a top block having dovetailed recesses in its ends, the bottom and top block being adapted to engage with the abutting ears of the side blocks and interlock with said ears.

3. A culvert construction comprising side blocks formed at their extremities with dovetailed recesses, the recesses being defined on each side by ears having relatively divergent inner faces, the faces diverging toward the outer face of the block, a main bottom block having dovetailed recesses in its ends, a top block having dovetailed recesses in its ends, the bottom and top block being adapted to engage with the abutting ears of the side blocks and interlock with said ears, and auxiliary bottom blocks adapted to be disposed on each side of the main bottom block and having ears engaging in the recesses of the side blocks and interlocking therewith.

1,212,453. CHAIR. PETER P. CALLAGHAN, Lincoln, Cal. Filed May 20, 1916. Serial No. 98,810. (Cl. 155—3.)



1. A chair comprising a seat normally set at an inclination to the horizon and sloping from its front to its rear edge, front and rear legs on the chair, the lower ends of the legs being in the same plane, a back on the chair, such back comprising side posts and a filler portion between the posts, such filler portion curving rearwardly at its upper end and gradually extending toward the chair from its upper to its lower end, such filler portion being provided with a central slot, such slot being contracted at its center and flaring outwardly at its ends.

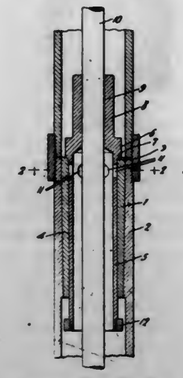
2. A chair comprising a seat normally set at an inclination to the horizon and sloping from its front to its rear edge, front and rear legs on the chair, the lower ends of the legs being in the same plane, a back on the chair, such back comprising side posts and a filler portion between the posts, such filler portion curving rearwardly at its upper end and gradually extending toward the chair from its upper to its lower end.

3. A chair comprising a seat normally set at an inclination to the horizon and sloping from its front to its rear edge, front and rear legs on the chair, the lower ends of the legs being in the same plane, a back on the chair, such back comprising side posts and a filler portion between the posts, such filler portion curving rearwardly at its upper end and gradually extending toward the chair from its upper to its lower end, such filler portion being provided with a central slot.

1,212,454. SAND-VALVE FOR DEEP-WELL PUMPS. SETH WATT CLARK, Findlay, Ohio. Filed Feb. 25, 1916. Serial No. 80,482. (Cl. 103—66.)

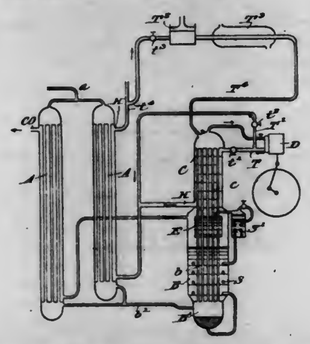
1. A device of the character described comprising a sleeve to fit tightly in the upper end of a pump barrel and having a valve seat at its upper end, a tubular shank slidable snugly within said sleeve and having an enlarged valve head at its upper end, said valve head being seatable upon the valve seat, said shank having an opening spaced below said head to move below the valve seat when said head is seated and to move above said valve seat when the valve head is raised, said head having a bore of smaller diameter than the bore of the shank for the passage of a piston rod therethrough, and a ring engaged upon the lower end of the shank below the sleeve and adapted to contact with the lower end thereof for limiting the upward movement of the shank.

2. A device of the character described comprising a sleeve tapered exteriorly to fit wedgedly in the upper end of a pump barrel and having a countersunk valve seat at the upper end of its bore, a tubular shank slidable snugly within said bore and having an enlarged valve head at its upper end, said valve head having an annular bevel seatable upon said seat, said shank having an opening below said head to move above said seat, and a ring



threaded upon the lower end of said shank below said sleeve and adapted to contact with the lower end of said sleeve for limiting the upward movement of the shank, said head having a bore of smaller diameter than the bore of said shank for the passage of a piston rod therethrough.

1,212,455. SEPARATION OF THE CONSTITUENTS OF GASEOUS MIXTURES. GEORGES CLAUDE, Paris, France, assignor to Societe L'Air Liquide (Societe Anonyme Pour L'Etude Et L'Exploitation Des Procedes Georges Claude), Paris, France. Filed May 23, 1914. Serial No. 840,585. (Cl. 183—115.)



1. A process of separation of the constituents of a mixture of gases liquefiable at very different temperatures which consists in passing the compressed and cooled gases through but in indirect contact with a quantity of the more readily condensable constituent in liquid form and under atmospheric or less pressure; subjecting the uncondensed residue to a still lower temperature and passing the more readily condensable constituent after liquefaction but while still under pressure through but in indirect contact with a quantity of the liquid under atmospheric or less pressure.

2. In a process of separation of the constituents of a mixture of gases liquefiable at very different temperatures by passing the compressed and cooled gases through but in indirect contact with a quantity of the more readily condensable constituent in liquid form and under atmospheric or less pressure; subjecting the uncondensed residue to a still lower temperature and passing the more readily condensable constituent after liquefaction but while still under pressure through but in indirect contact with separate and successive quantities of the liquid under atmospheric or less pressure.

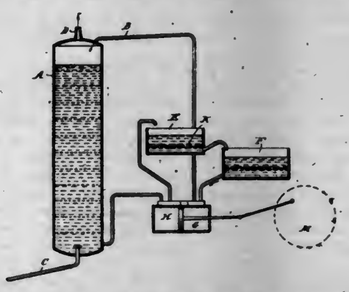
3. In a process of separation of the constituents of a mixture of gases liquefiable at very different temperatures by passing the compressed and cooled gases through but in indirect contact with a quantity of the more readily condensable constituent in liquid form and under atmospheric or less pressure; causing the more readily condensable constituent after liquefaction under pressure to come repeatedly into indirect contact with the compressed gas mixture under treatment by collecting in stages around the path pursued by the compressed gas mixture.

4. In a process of separation of the constituents of a mixture of gases liquefiable at very different temperatures by passing the compressed and cooled gases through but in indirect contact with a quantity of the more readily condensable constituent in liquid form and under atmospheric or less pressure; passing the more readily condensable constituent after liquefaction but while still under pressure through but in indirect contact with a quantity of the liquid under atmospheric or less pressure, and then causing the said readily condensable constituent to come into indirect contact with the compressed gas mixture under treatment by collecting in stages around the path pursued by the compressed gas mixture.

5. In a process of separation of the constituents of a mixture of gases liquefiable at very different temperatures by passing the compressed and cooled gases through but in indirect contact with a quantity of the more readily condensable constituent in liquid form and under atmospheric or less pressure; causing a stream of the unliquefied constituent derived from the separation to pass through the liquefied constituent before the latter is utilized to cool the gaseous mixture under treatment.

[Claims 6 to 12 not printed in the Gazette.]

1,212,456. PURIFICATION OF GASES. GEORGES CLAUDE, Paris, France, assignor to Societe L'Air Liquide (Societe Anonyme Pour L'Etude Et L'Exploitation Des Procedes Georges Claude), Paris, France. Filed June 20, 1914. Serial No. 846,285. (Cl. 183—117.)



1. A method of completely removing from impure gases in a single operation gaseous impurities which are both susceptible of being absorbed by the physical action of a liquid pressure and of reacting chemically with an appropriate substance in solution in the liquid, consisting in subjecting the same volume of impure gases under pressure in one and the same apparatus and at successive stages in the same operation first to the physical absorbing action of a liquid under pressure and then to the action of a chemical substance held in solution in the same volume of liquid, said substance being capable of chemically reacting with the impurities, so that the gases are first subjected to the physical absorbing action of the liquid under pressure, whereby a large proportion of the impurities are dissolved and held in solution in the liquid, and finally to a chemical reaction with the chemical substance in the liquid whereby the last traces of the impurities are removed.

2. A method of removing carbonic acid gas from impure gases in a single operation consisting in subjecting the same volume of impure gases under pressure in one and the same apparatus and at successive stages in their passage through the apparatus first to the physical absorbing action of a liquid under pressure whereby the major portion of the carbonic acid gas is dissolved and held in solution in the liquid, and thereafter to the action of a chemical substance capable of chemically reacting with carbonic acid gas and contained in the same volume of liquid whereby the last traces of carbonic acid gas are removed.

3. A continuous method of purifying gases containing gaseous impurities which are capable of being dissolved and held in solution in a liquid under the influence of pressure and also of chemically reacting with an appropriate substance in solution in the liquid, consisting in effecting, in one and the same apparatus and with one and the same liquid during the passage of the same volume of gas through the liquid, first the removal of part of the impurity in a volume of the gas under pressure by the absorbing action thereon of the liquid under pressure subsequent to its chemical reaction with traces of impurity remaining in a preceding quantity of the gas, and then the removal of the remaining traces of impurity in the aforesaid volume by the chemical action thereon of a succeeding volume of the liquid, the latter being then used to effect a removal, by absorption of part of the impurity of a succeeding quantity of the gas to be purified.

4. A continuous method of purifying gases containing carbonic acid or analogous gas from gases containing the same as impurity, consisting in subjecting the same volume of gases in one and the same apparatus to direct contact with a volume of water under pressure containing in solution a sufficient quantity of a substance capable of removing chemically from the gas the traces of impurity not removed by a preceding physical action of absorption by the same volume of water under pressure so as to effect first the removal of part of the impurity in a volume of the gas under pressure by the absorbing action thereon of the liquid under pressure subsequent to its chemical reaction with traces of impurity remaining in a preceding quantity of the gas, and then the removal of the remaining traces of impurity in the aforesaid volume by the chemical action thereon of a succeeding volume of the liquid, the latter being then used to effect a removal by absorption, of part of the impurity of a succeeding quantity of the gas to be purified.

5. A continuous method of purifying gases containing carbonic acid gas from air or gases containing the same as impurity, consisting in subjecting the same volume of gas in one and the same apparatus to direct contact with a stream of water under pressure containing in solution a small quantity of lime or sodium hydrate, so as to effect first the removal of part of the impurity in a volume of the air or gas under pressure by the absorbing action thereon of the solution under pressure subsequent to its chemical reaction with traces of impurity remaining in a preceding quantity of the air or gas, and then the removal of the remaining traces of impurity in the aforesaid volume by the chemical action thereon of a succeeding volume of the solution, the latter being then used to effect a removal, by absorption, of part of the impurity of a succeeding quantity of the air or gas to be purified.

[Claim 6 not printed in the Gazette.]

1,212,457. MECHANICAL EXPANSION-MOLD. BURGESS DARROW, Akron, Ohio, assignor to The Goodyear Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed May 10, 1916. Serial No. 96,606. (Cl. 18—45.)

1. In an apparatus for making tire casings, a rigid core to support a casing during the laying up process thereof and during the process of vulcanization, and means relatively compressible to afford a false exterior shape to said core prior to the said process of vulcanization.

2. In an apparatus for making tire casings, a rigid core to support a casing during the laying up process thereof and during the process of vulcanization, and flexible, nonmetallic pads adapted to prevent close conformation of the casing to the core prior to the process of vulcanization.



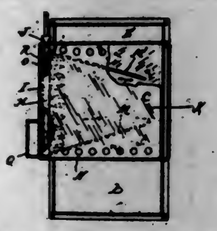
3. In an apparatus for making tire casings, a rigid core to support a casing during the process of laying the casing up thereon and during the process of vulcanization of the casing, annular pockets being formed in the core for accommodation of the casing toe flanges during the said vulcanization process, and relatively compressible means to prevent the entrance of the casing toe flanges into said core pockets during the said laying up process.

4. In an apparatus for making tire casings, a rigid core formed with lateral annular pockets, said core being adapted to support a tire casing during both the laying up and vulcanizing processes of the tire, and flexible means receivable in said core pockets so that the casing side walls may be laid up thereover in tangential dependence from the core, said flexible means being removable from the core pockets prior to the commencement of the vulcanizing process.

5. In an apparatus for making tire casings, a rigid core shaped to fit the interior of a finished tire casing, and pads in conformity to portions of the core to space the toe flanges of the tire casing from the said core portions during the laying up process of the casing, said pads being compressible to admit of removal without deformation of the casing, immediately prior to the vulcanizing process of the latter.

[Claims 6 and 7 not printed in the Gazette.]

1,212,458. COOK-STOVE. RANSOM W. DAVENPORT, Detroit, Mich., assignor to Detroit Stove Works, Detroit, Mich., a Corporation of Michigan. Filed Oct. 11, 1915. Serial No. 55,262. (Cl. 126—36.)



1. In a cook stove, the combination with an oven provided with top, end, bottom and rear flues, of a rear wall for said oven having a swell or rearward extension beyond the bottom flue and in front of the rear flue, and a gas burner located in said swell or rearward extension.

2. In a cook stove, the combination with an oven provided with top, end, bottom and rear flues, of a rear wall for said oven having a swell or rearward extension therein beyond said bottom flue and in front of said rear flue, a burner extending horizontally in said swell or rearward extension above the plane of the oven bottom, and a removable false bottom for said oven above said burner having means for intercepting the escape of gases to the front.

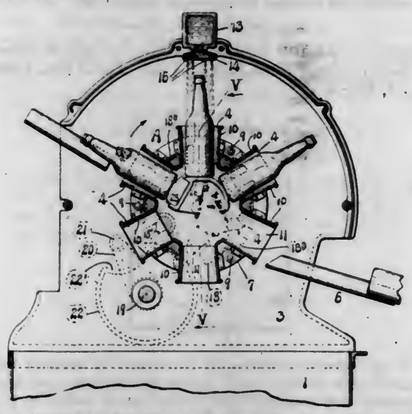
3. In a cook stove, the combination with an oven having a bottom flue and rear flue connected therewith, covering only a portion of the rear wall of the oven, of a swell or rearward extension of the oven rear wall beyond said bottom flue, a gas burner located in said rearward extension arranged horizontally above the oven bottom, an air inlet to the burner in the portion of said rear wall uncovered by said flue, and an outlet in the portion of said rear wall covered by said flue.

4. In a cook stove, the combination with an oven having a bottom flue and a rear flue connected therewith of less width than the rear wall of the oven, said rear wall having a swell or rearward extension beyond said bottom flue, a gas burner extending horizontally in said swell adjacent to the bottom of the oven, and connected draft dampers controlling draft openings in said rear wall, the inlet opening being at the bottom of the uncovered portion of said wall, and the outlet opening being in the covered portion opening into said flue.

5. In a cook stove, the combination with an oven, of a gas burner extending horizontally along the rear wall of said oven above the bottom thereof and having inwardly-directed jets, and a horizontal false bottom above said burner having a downturned flange at the front for preventing the forward escape of the combustion gases.

[Claims 6 to 11 not printed in the Gazette.]

1,212,459. BOTTLE-WASHING MACHINE. JOSEPH W. DAWSON, St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed May 24, 1915. Serial No. 30,007. (Cl. 141—7.)



1. A bottle washing machine comprising a bottle holder, a water discharging device adapted to discharge a stream of water onto the bottle at said bottle holder, a shaft supporting a portion of said bottle holder, and means for turning said shaft to tilt said bottle portion of the holder thereby exposing different parts of the bottle to said stream of water.

2. A bottle washing machine comprising a bottle holder, a water discharging device adapted to discharge a stream of water onto the bottle at said bottle holder, and means for oscillating a portion of said bottle holder to expose different parts of the bottle to said stream of water.

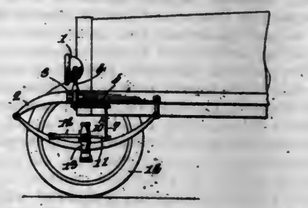
3. A bottle washing machine comprising a bottle carrier having bottle receiving pockets which are open at their inner ends, a bottle supporting device forming seats for the bottles confined by said bottle receiving pockets, a water discharging device arranged above said bottle carrier and above said bottle supporting device, said water discharging device being adapted to discharge streams of water onto the bottles, and means for moving said bottle supporting device to expose different parts of the bottles to said streams of water.

4. A bottle washing machine comprising a bottle carrier having bottle receiving pockets which are open at their inner ends, a bottle supporting device forming seats for the bottles confined by said bottle receiving pockets, a water discharging device arranged above said bottle carrier and above said bottle supporting device, said water discharging device being adapted to discharge streams of water onto the bottles, means for operating said bottle carrier intermittently to conduct the bottles along said bottle supporting device, and means for operating said bottle supporting device while the bottle carrier is at rest so as to move bottles confined by said pockets, thereby exposing different parts of each bottle to the streams of water.

5. A bottle washing machine comprising a rotary bottle carrier having bottle receiving members which are open at their inner ends, a bottle seat within said bottle carrier, a water discharging device adapted to discharge streams of water onto the bottles in said bottle carrier, and means for operating said bottle seat to move the bottles independently of the carrier, thereby exposing different parts of the bottles to the streams of water.

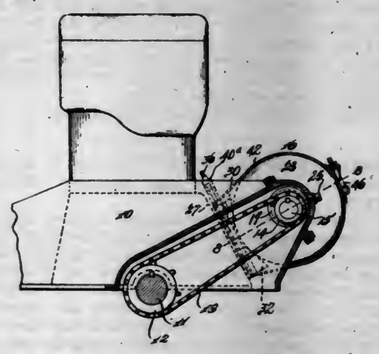
[Claims 6 and 7 not printed in the Gazette.]

1,212,460. HEADLIGHT FOR AUTOMOBILES. JOSEPH DEVINEZ, Lowell, Mass. Filed Aug. 10, 1916. Serial No. 114,262. (Cl. 240—62.)



A head light operating mechanism comprising a rotatable lamp supporting member, a rearwardly directed rod carried by said member, said rod being slotted longitudinally, a vertical member pivoted to a stationary support and having a reduced end engaged in the slot of said rod, a steering knuckle, an operating rod carried by said steering knuckle, and connections between said operating rod and said vertical member to swing the latter within said slot and cause rotation of said lamp supporting member upon operation of said steering knuckle.

1,212,461. MEANS FOR SUPPORTING AND ADJUSTING ROTARY DEVICES. JOHN F. DODGE, Detroit, and HORACE E. DODGE, Grosse Pointe, Mich., assignors to Dodge Brothers, Detroit, Mich., a Corporation of Michigan. Filed Aug. 15, 1916. Serial No. 114,978. (Cl. 64—52.)



1. In apparatus of the class described, the combination of supporting means, an adjustable member mounted on said means, a shaft adjustable by said member at one portion of its length, an adjustable support opposite another portion of said shaft located between said shaft and said supporting means, and releasable means associated with said adjustable support but located between said adjustable member and said adjustable support for

holding said shaft in a predetermined position relatively to it, said adjustable support and said releasable holding means being adapted for adjusting the shaft in accordance with the adjustment obtained by said adjustable member.

2. In apparatus of the class described, the combination of supporting means, an adjustable member mounted on said means, a shaft adjustable by said member at one portion of its length, an adjustable support opposite another portion of said shaft located between said shaft and said supporting means, and flexible means associated with said adjustable support but located between said adjustable member and said adjustable support for holding said shaft in a predetermined position relatively to it, said adjustable support and said flexible means being adapted for adjusting the shaft in accordance with the adjustment obtained by said adjustable member.

3. In apparatus of the class described, the combination of supporting means, an adjustable member mounted on said means, a shaft adjustable by said member at one portion of its length, two adjustable supporting members having seat surfaces inclined outwardly away from a point intermediate thereof and located between said shaft and said supporting means, and means associated with said supporting members but located between said adjustable member and said adjustable supporting members for centering said shaft toward said intermediate point, said adjustable supporting members and said centering means being adapted for adjusting the shaft in accordance with the adjustment obtained by said adjustable member.

4. In apparatus of the class described, the combination of supporting means, an adjustable member mounted on said means, a power device, the housing of which is adjustable by said member at one end, an adjustable support opposite another portion of said housing located between said housing and said supporting means, and releasable means associated with said adjustable support but located between said adjustable member and said adjustable support for holding said housing in a predetermined position relatively to it, said adjustable support and said releasable holding means being adapted for adjusting the housing in accordance with the adjustment obtained by said adjustable member.

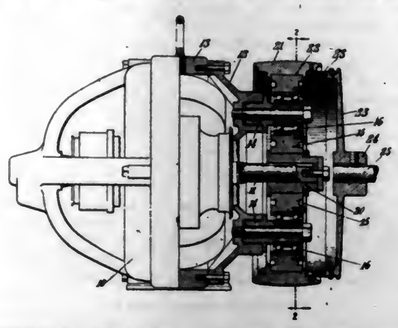
5. In apparatus of the class described, the combination of supporting means, an adjustable member mounted on said means, a power device having a housing which is adjustable by said member at one end, two adjustable supporting members having seat surfaces inclined outwardly away from a point intermediate thereof, and located between said housing and said supporting means, and means associated with said supporting members but located between said adjustable member and said adjustable supporting members for centering said housing toward said intermediate point, said adjustable supporting members and said centering means being adapted for adjusting the housing in accordance with the adjustment obtained by said adjustable member.

[Claims 6 to 37 not printed in the Gazette.

1,212,462. TRACTION-GEAR. WILLIAM T. DONNELLY, Brooklyn, N. Y. Filed Apr. 10, 1915. Serial No. 20,387. (Cl. 74—26.)

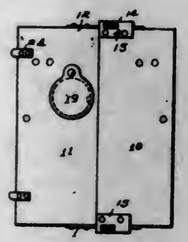
1. In combination: a driving, and a driven member; a continuous, annular and resilient circumscribing member rotatable with one of said members; a rotatable roll centrally located within said circumscribing member and about the other of said drive members; a plurality of intermediate rolls adapted to ride upon said central roll and the inner surface of said circumscribing member, the latter through its resiliency exerting upon the rolls a predetermined and permanent pressure to effect a transmission between the said driving and driven members; and a resilient connection included between the said circumscribing member and the corresponding drive member.

2. In combination: a driving, and a driven member; a continuous, annular and resilient circumscribing member rotatable with one of said members; a rotatable roll centrally located within said circumscribing member and about the other of said drive members; a plurality of intermediate rolls adapted to ride upon said central roll and the inner surface of said circumscribing member, the latter through its resiliency exerting upon the rolls



a predetermined and permanent pressure to effect a transmission between the said driving and driven members; and a cylinder fixedly secured to said circumscribing member, the wall thereof being resilient and the end provided with a central hub portion for external connection.

1,212,463. ARMOR FOR SOLDIERS. JUSTIN B. DORAN, Beaver, Iowa. Filed July 31, 1916. Serial No. 112,423. (Cl. 89—36.)



1. An armor comprised of two sheets of suitable metal placed edge to edge, and means for locking said sheets together, and adapted to hold said sheets locked in alinement with each other, or in position forming an obtuse angle with relation to each other.

2. An armor comprising a pair of plates adapted to be arranged with their side edges adjacent to each other, a strip on each end of one of said plates projecting beyond the side edge thereof made of resilient material, a receiving member on each end of the other plate adapted to receive the projecting end of one of said strips of said first plate, the projecting ends of said strips and the ends of the adjacent plate having coacting means for locking said plates together.

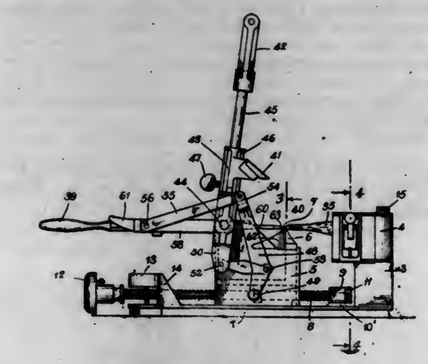
3. An armor comprising a pair of plates, adapted to be arranged with the side edge of one plate adjacent to the side edge of the other plate, strips of resilient material secured to the ends of one plate and projecting beyond the side edge thereof, channel-shaped members mounted on the end of the other plate near the side edge thereof adjacent to the first plate with the ends of the strips of said first plate received within the walls of said channel-shaped member, with the central portions of the channel shaped members spaced from the end of said plate to which the end of said channel-shaped members are secured, said channel-shaped member being adapted to receive the projecting ends of said resilient strip, said projecting end and the end of said second plate being provided with coacting locking means.

4. An armor comprising a pair of plates adapted to be arranged with the side edge of one plate adjacent to the side edge of the other plate, strips of resilient material secured to the ends of one plate and projecting beyond the side edge thereof, channel-shaped members mounted on the end of the other plate near the side edge thereof adjacent to the first plate with the ends of the strips of the first plate received within the walls of said channel-shaped members, with the central members of the channel-shaped portions spaced from the end of said plate to which the end of said channel-shaped member is secured, said channel-shaped member being adapted to receive the projecting ends of said resilient strip, said projecting ends and the ends of said second plate being provided with coacting locking means, as to be within the channel-shaped members when the plates are assembled and locked together.

5. An armor comprising a pair of plates, adapted to be arranged with the side edge of one plate adjacent to the side edge of the other plate, strips of resilient material secured to the ends of one plate and projecting beyond the side edge thereof, channel-shaped members mounted on the end of the other plate near the side edge thereof adjacent to the first plate with the ends of said strips of the first plate received within the walls of said channel-shaped member, with the central portions of said channel-shaped member spaced from the end of said plate to which the end of said channel-shaped member is secured, said channel-shaped member being adapted to receive the projecting ends of said resilient strip, said projecting ends and the ends of said second plate being provided with coacting locking means, each of said shannel-shaped members having in its side wall spaced from the ends of the second plate, diagonally alined openings adapted to receive the projecting ends of said resilient strips for permitting said plates to be locked together at obtuse angles with relation to each other.

[Claims 6 to 8 not printed in the Gazette.]

1,212,464. OYSTER-SHUCKING MACHINE. BRUCE V. EDWARDS, Newark, N. J., assignor to Oliver S. Campbell, New York, N. Y. Filed Oct. 17, 1916. Serial No. 126,120. (Cl. 17—31.)



1. In oyster shucking apparatus, the combination of an oyster-holding device, from which the end of the oyster opposite to the hinge is adapted to extend rearwardly, a carriage mounted to the rear of said device, an opening knife carried by said carriage, positioning means for said carriage, adapted to move said carriage to aline the axis of said knife with a line passing from the bill of an oyster held in said holding device, through the eye thereof regardless of the shape of the oyster, and means for advancing said knife rearwardly to open the oyster, substantially as set forth.

2. In oyster shucking apparatus, the combination of an oyster-holding device, a carriage, shearing devices carried thereby for cutting off the bill of the oyster, a knife carried by the carriage in alinement with the opening thus made, means for adjusting the position of the carriage, and lever means for operating the shearing devices and advancing said knife, substantially as set forth.

3. In oyster shucking apparatus, the combination of an oyster-holding device, a carriage, a guiding edge thereon, a knife, the forward portion of which is adapted to slide over said edge in entering the oyster, a hand lever pivoted on said carriage, an operating connection between said lever and the rear portion of said knife, arranged to permit free vertical movement to said rear portion as said knife advances over said edge, and means for adjusting the position of said carriage, substantially as set forth.

4. In oyster shucking apparatus, the combination of a support having an anvil, a hand lever pivoted on said support, an opening knife adapted to slide over said anvil, and an operating connection between said lever and the rear portion of said knife, arranged to reciprocate said knife as said lever is operated, and to permit free vertical movement to said rear portion under manual control during the reciprocation of the knife, substantially as set forth.

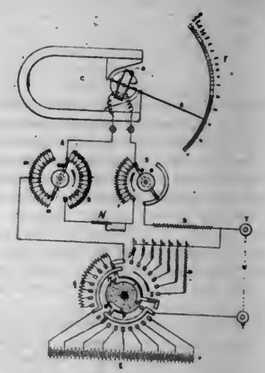
5. In oyster shucking apparatus, the combination of a support, having a guiding edge thereon, a knife, the forward portion of which is adapted to slide over said edge, a hand lever pivoted on said support, a cross member extending from the rear of said knife, and a multiplying pivoted link and lever connection between said hand lever and cross member, arranged to permit free vertical movement to the rear portion of said knife, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,212,465. [WITHDRAWN.]

1,212,466. [WITHDRAWN.]

1,212,467. TESTING OF INSULATION. SYDNEY EVERSHED, Chiswick, London, England. Filed Mar. 21, 1914. Serial No. 826,372. (Cl. 175—183.)



1. A method for the diagnosis of the insulation in installed systems and appliances which consists in applying to the insulation a plurality of suitable and different voltages and measuring the resistances or quantities related thereto at each voltage.

2. A method for the diagnosis of insulation which consists in applying to the insulation several different voltages and measuring the resistances or quantities related thereto at each voltage the voltages being so chosen that the location of the point or region of inflection on the characteristic curve is ascertained with regard to an assigned voltage.

3. A method for the diagnosis of insulation which consists in applying to the insulation several different voltages and measuring the resistances or quantities related

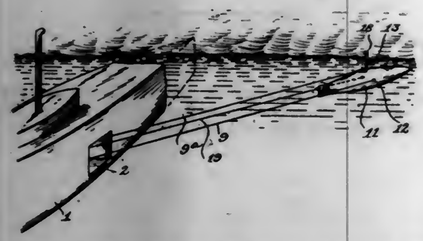
thereto at each voltage, the voltages being so chosen that the point or region of inflexion on a curve connecting resistance of conductance and voltage applied is included.

4. A method of testing insulation which consists in connecting the insulator in circuit with an adjustable source of electromotive force and a galvanometer of adjustable sensibility; adjusting the galvanometer deflection to a convenient initial reading upon a scale divided in units of resistance (or conductance); successively adjusting the electromotive force to a series of different voltages and simultaneously adjusting the galvanometer so that throughout the said series it shall indicate, by units of the same magnitude, the values of the insulation resistance or conductance corresponding to the series of electromotive forces.

5. A method of testing insulation which consists in connecting the insulator in circuit with an adjustable source of electromotive force and a galvanometer of adjustable sensibility; adjusting the galvanometer deflection to a convenient initial reading upon a scale divided in units of resistance (or conductance); successively adjusting the electromotive force to a series of different voltages and simultaneously adjusting the galvanometer so that throughout the said series it shall indicate, by units of the same magnitude, the values of the insulation resistance or conductance corresponding to the series of electromotive forces, and in terms of the initial reading.

[Claims 6 to 11 not printed in the Gazette.]

1,212,468. TORPEDO. ALFRED EXTRAND, Aberdeen, Wash. Filed Aug. 14, 1915. Serial No. 45,542. (Cl. 114—21.)

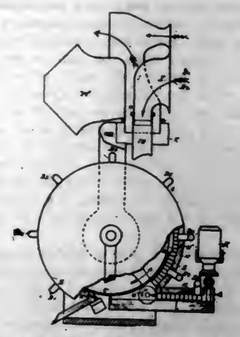


1. The combination of a parent vessel provided with a lock-chamber, an automobile torpedo adapted to be launched from the lock-chamber, lines for guiding and retrieving the torpedo extending from the parent vessel through the lock-chamber and laterally attached to the torpedo, a depressible signal mounted on the torpedo, a line leading from the parent vessel through the lock-chamber to the signal, a winding mechanism on the parent vessel operating to simultaneously wind and unwind the guiding and signal lines, and means for varying the tension on said lines to guide the torpedo and to depress the signal.

2. The combination of a parent vessel provided with a lock-chamber, an automobile torpedo adapted to be launched from the lock-chamber, a telescopic signal mounted on the torpedo, a spring normally extending the telescopic signal, a line leading from the movable member of the telescopic signal to the parent ship, means on the parent ship for paying out the line during the progress of the torpedo, and means for restraining the line to telescope the movable member of the signal against the action of said spring.

1,212,469. EVAPORATING APPARATUS. JOHN H. FEDELER, New York, N. Y. Filed Nov. 26, 1909, Serial No. 530,049. Renewed June 9, 1916. Serial No. 102,795. (Cl. 127—9.)

1. In an evaporating apparatus, a traveling carrier adapted to receive the substance to be evaporated, and means for passing a current of air back and forth across the substance in direct contact therewith and transversely of the carrier.



2. In an evaporating apparatus, a rotatable cylinder adapted to receive on its surface the substance to be evaporated and means for passing a current of air back and forth across the surface of said cylinder.

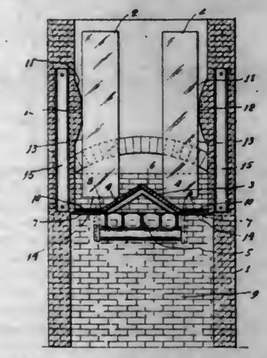
3. In an evaporating apparatus, a traveling carrier adapted to receive the substance to be evaporated, and means for passing a current of air back and forth across the substance in direct contact therewith and transversely of the carrier, said means comprising a wall adjacent said carrier, and provided with a plurality of plates secured thereto and arranged with their inner edges closely adjacent the said carrier.

4. In an evaporating apparatus, a traveling carrier adapted to receive the substance to be evaporated, and means for passing a current of air back and forth across the substance in direct contact therewith and transversely of the carrier, said means comprising a wall adjacent said carrier, and provided with a plurality of staggered plates secured thereto and arranged with their inner edges closely adjacent the said carrier.

5. In an evaporating apparatus, a traveling carrier adapted to receive the substance to be evaporated, and means for passing a current of air back and forth across the substance in direct contact therewith and transversely of the carrier, said means comprising a wall adjacent said carrier, and provided with a plurality of plates secured thereto extending transversely of the direction of movement of the carrier, and arranged with their inner edges closely adjacent the said carrier.

[Claims 6 to 17 not printed in the Gazette.]

1,212,470. APPARATUS FOR TREATING STEEL INGOTS. EDWARD J. FLYNN, Jr., Woodlawn, Pa. Filed Mar. 10, 1916. Serial No. 83,308. (Cl. 263—6.)

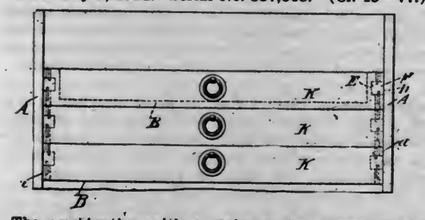


1. An apparatus for the purpose set forth comprising a soaking pit having its bottom provided with upwardly extending supporting portions and each side wall with an inwardly extending abutment, said supporting portions adapted to contact with the inner corners of a pair of opposed ingots and each abutment adapted to contact with the outer side of each ingot of said opposed ingots for maintaining these latter in an upright position at each side of the center of the pit and spaced from each other and spaced from said sides and bottom to obtain an equal distribution of heat around the ingots.

2. An apparatus for the purpose set forth comprising a soaking pit having the intermediate portion of its bottom gradually increasing in height from each end toward the center to provide a pair of ingot supports to the lower ends of which are hingedly attached downwardly swinging dumping portions, said pit further having each side wall provided with an inwardly extending abutment, said ingot supports adapted to contact with the inner corners of a pair of opposed ingots for maintaining these latter in an upright position and spaced from each other and further spaced from said sides and bottom to obtain an equal distribution of heat around said ingots.

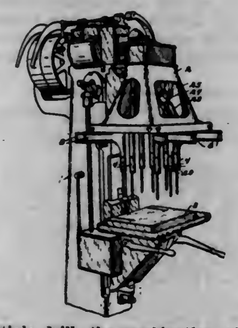
3. An apparatus for the purpose set forth comprising a soaking pit having the intermediate portion of its bottom gradually increasing in height from each end toward the center to provide a pair of supports, said pit further having each side wall provided with an inwardly extending abutment, said supports adapted to contact with the inner corners of a pair of opposed ingots and said abutments adapted to contact with the outer sides of said opposed ingots for maintaining these latter in an upright position and spaced from each other and further spaced from said sides and bottom to obtain an equal distribution of heat around said ingots.

1,212,471. DRAWER-SUPPORT. LEIGHTON H. FORBES, Rochester, N. Y., assignor to American Drafting Furniture Co., Rochester, N. Y., a Corporation of New York. Filed May 9, 1914. Serial No. 837,368. (Cl. 45—77.)



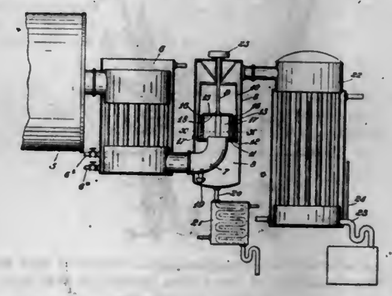
The combination with a casing and a drawer therein, the adjacent faces of the said parts being spaced apart and having grooves cut therein, of a support sliding in said grooves and having longitudinal recesses in its upper and lower sides in the space between the faces of the drawer and cabinet, said recesses terminating short of the ends of the support, and plates each having an edge lying in one of said recesses and attached respectively to the casing and drawer.

1,212,472. DRILL. WILLIAM R. FOX, Grand Rapids, Mich. Filed Jan. 23, 1914. Serial No. 813,855. (Cl. 77—24.)



In a multiple drill, the combination of a plurality of drill spindles, a plurality of spindle driving shafts, driving means therefor, a plurality of shafts flexibly connecting said spindles with said spindle driving shafts, and quickly detachable means connecting said spindle driving shafts and said connecting shafts, all coacting substantially as described and for the purpose specified.

1,212,473. CENTRIFUGAL SEPARATOR. EDWARD HOUSTON FRENCH, Smethport, Pa. Filed Nov. 2, 1910. Serial No. 590,324. (Cl. 210—25.)



1. In means for removing tars and oils from vapors obtained in the destructive distillation of wood, the combination of a rotary drum having a vapor inlet and provided with an opening in its side, said opening having a screen device therein, a wing projecting from the inner side of said drum adjacent said opening to direct the tar and oil particles through the screen, and a drum open at its upper end surrounding said rotary drum against which said particles are gathered.

2. In means for removing tars and oils from vapors obtained in the destructive distillation of wood, the combination of a rotary drum having a vapor inlet and provided with an opening in its side, said opening having a screen, a wing projecting from the inner side of said drum adjacent said opening to direct the tar and oil particles through the screen, and a drum tapering toward and open at its upper end surrounding said rotary drum against which said particles are gathered.

3. In means for removing tars and oils from vapors obtained in the destructive distillation of wood, a perforated rotary drum provided with a wing projecting from its inner side to direct the tar and oil particles through the perforations, downwardly and outwardly inclined slats beyond said perforations, and a surface against which said particles are gathered beyond said drum.

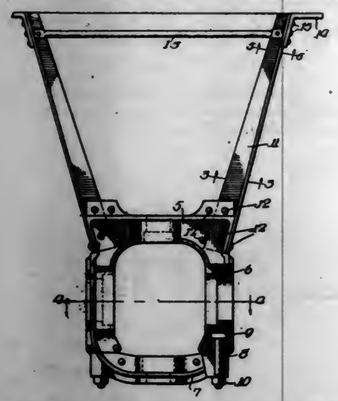
1,212,474. SHAFT-HANGER. HENRY P. GALE, Oneida, N. Y. Filed June 2, 1916. Serial No. 101,247. (Cl. 64—14.)

1. In a shaft hanger the combination of a head comprising integral complementary sections secured together back to back and forming the top and sides of said head and a bottom member secured to said sides, and legs consisting of angle bars secured together in complementary relation, the abutting flanges of said angle bars being secured between the complementary sections of said head.

2. In a shaft hanger the combination of a head comprising integral complementary sections secured together back to back and forming the top and sides of said head and a bottom member consisting of complementary sections secured together to said sides, legs consisting of angle bars secured together in complementary relation, the abutting flanges of said angle bars being secured between the complementary sections of said head, and feet consisting of angle bars secured to said legs.

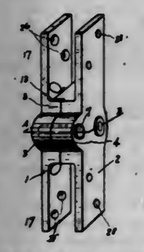
3. In a shaft hanger, the combination of a head consisting of integral complementary sections secured together back to back and forming the top and sides of said head and a bottom member secured to said sides, legs consisting of angle bars secured together in complementary

relation and having their flanges tapered in opposite directions, the abutting flanges of said angle bars being



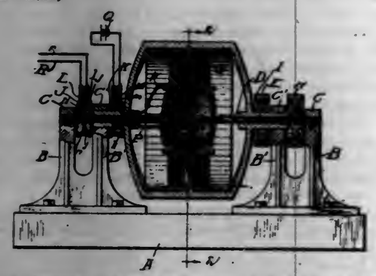
secured between the complementary sections of said head, and feet consisting of angle bars secured to said legs.

1,212,475. PIVOT-HINGE FOR WINDOW-SASHES. ROBERT ABBIE GILLIES, Burnaby, British Columbia, Canada. Filed May 4, 1916. Serial No. 95,368. (Cl. 16—142.)



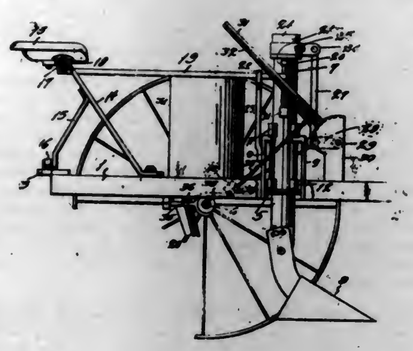
A hinge comprising a plate member provided with a plurality of depressions arranged circularly on its inner face and having an inwardly extending portion one edge of which is formed are shaped, a plate member having an inwardly extending portion one edge of which is adapted to be mounted on the arc shaped edge of the first mentioned inwardly extending portion, means for pivotally connecting both plate members together, the axis of said pivotal connection being beyond the edge of the plates and a spring plunger carried by the last mentioned plate member adapted to co-act with the depressions in the first mentioned plate member and lock said members together in any desired position.

1,212,476. DYNAMO. VICTOR C. GOODRIDGE, Chicago, Ill. Filed Sept. 2, 1913. Serial No. 787,692. (Cl. 171—252.)



In a dynamo, the construction and arrangement of parts, comprising an integral U-shaped standard, a shaft journaled in the outer arm thereof, a hollow shaft concentric with the first-named shaft journaled in the inner arm thereof, one member of the dynamo electric machine secured to the outer shaft and another member of the dynamo electric machine secured to the inner shaft, and collecting devices for said members mounted on said shafts, at least one of which is located between the arms of said U-shaped standard.

1,212,477. PLANTER. EDWARD J. GRUBEN, Royston, Tex. Filed Apr. 4, 1916. Serial No. 88,916. (Cl. 111—6.)



1. The combination in a planter of a vertically adjustable and rotatable mast, a furrow opener attached to said mast, a swinging seat, and rotating means interposed between the seat and the mast and connected therewith.

2. The combination with a wheeled frame, of a vertically adjustable mast, a furrow opener attached to said mast, a seed dropping clutch mechanism, and adjusting lever having connection with the mast for adjusting the same and also connected with the clutch mechanism for shifting the same, and means for rotating the mast.

3. In a planter, a vertical mast, a furrow opener attached to said mast, a roller guide frame in which the mast is both rotatable and slidable vertically, a swinging seat, and a rotating structure connected with the seat and also with the mast for rotating the latter, said structure being supported in a fixed horizontal position, the most being slidably connected therewith.

4. In a planter the combination of a frame, a guide frame mounted on the frame and having a plurality of rollers, a cylindrical mast passing through the guide frame and engaging the rollers, a furrow opener attached to said mast, means for vertically adjusting the mast, a swinging seat mounted on the frame, a roller support for the seat, a track mounted on the frame and supporting said roller support, a pair of forwardly extending links pivotally connected with the seat, lateral members carried by the mast for rotating the same, and connections slidably engaged by the links and attached to the lateral members.

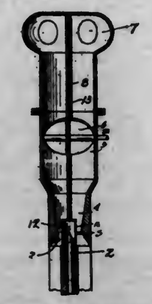
1,212,478. CARBURETER. ELBERT J. HALL, West Berkeley, Cal. Filed May 15, 1911. Serial No. 627,159. (Cl. 123—52.)

1. The combination with a carbureter and a manifold, of means for dividing both the carbureting chamber and the manifold into two independent chambers each of which chambers has independent connection for supplying gas to one or more cylinders of an engine.

2. In a carbureter, a hydrocarbon inlet, a vertical wall provided at its lower end with a cylindrical portion adapted to cover the hydrocarbon inlet, said cylindrical portion being provided with apertures on opposite sides of said wall, and an air inlet concentric with said cylinder.

3. In an internal combustion engine, a carbureter, a manifold connected to said carbureter and to which the hydrocarbon conductors are connected and a vertical wall dividing said manifold into two independent chambers and extending from the top of the manifold downwardly into the carbureter to a point adjacent the hydrocarbon inlet therein.

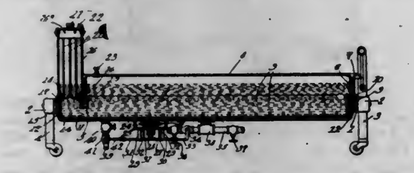
4. The combination with a carbureter and manifold, of a butterfly valve arranged to control the passage of carbureted mixture through the manifold, and a vertical wall arranged within said carbureter and manifold and extending for the length of the manifold arranged at right angles to the axis of the valve, half of said valve being disposed on each side of said wall.



5. The combination with a carbureter and a manifold attached thereto, of a central vertical wall dividing the manifold and carbureting chamber into two parts and extending downwardly below the hydrocarbon inlet, a hydrocarbon inlet, an air inlet adjacent said hydrocarbon inlet and means into which said hydrocarbon inlet discharges for causing an equal feed of hydrocarbon to the two chambers on opposite sides of the wall.

[Claims 6 to 9 not printed in the Gazette.]

1,212,479. HYDRAULIC BED. SAMUEL N. HALL, Memphis, Tenn. Filed Oct. 7, 1914. Serial No. 865,571. (Cl. 5—1.)



1. A bed comprising a frame; a bottom assembled therewith, a flexible mattress; securing elements connecting the periphery of the mattress with the frame whereby the frame, the bottom and the mattress will define a fluid receiving compartment; the mattress upstanding above the upper edge of the frame thereby to avoid a direct suspension of the mattress from the securing elements and to prevent the mattress from sagging in a trough-like form with the securing elements as opposed points of suspension.

2. A bed comprising a frame; a bottom assembled therewith; a flexible mattress; securing elements connecting the periphery of the mattress with the frame whereby the frame, the bottom and the mattress will define a fluid receiving compartment; the mattress upstanding above the upper edge of the frame thereby to avoid a direct suspension of the mattress from the securing elements and to prevent the mattress from sagging in a trough-like form with the securing elements as opposed points of suspension; and a rail secured to the frame, the rail being upwardly extended to a point adjacent the upper surface of the mattress.

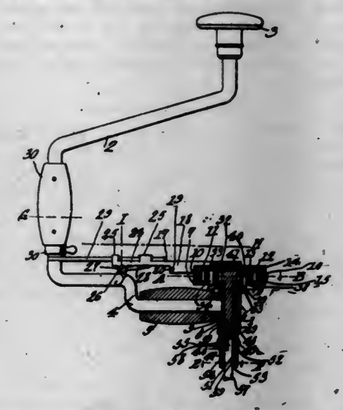
3. A bed embodying a flexible mattress; means for supplying liquid to the mattress; and an upright tank communicating with the interior of the mattress and adapted to contain liquid under a varying head, thereby to vary the flexibility of the mattress.

4. A bed embodying a flexible mattress; means for supplying liquid to the mattress; and an upright expansion tank communicating with the mattress; the tank being provided with a valve whereby the air at the top of the tank may be discharged, wholly or in part, thereby to vary the liquid head in the tank.

5. A bed embodying a hollow flexible mattress; an upright expansion tank communicating with the mattress; a splash plate upstanding in the tank; and means for supplying liquid to the compartment defined by the tank and the mattress.

[Claim 6 not printed in the Gazette.]

1,212,480. BIT-BRACE. SAMUEL N. HALL, Memphis, Tenn., and CARL M. PETERSEN, Washington, D. C., assignors to said Samuel N. Hall. Filed Dec. 8, 1914. Serial No. 876,174. (Cl. 145—68.)



1. The combination with a sleeve, a tubular stem mounted for rotation therein, and a gear case revoluble with the stem, of a chuck spindle mounted for rotation within the stem, speed multiplying gearing within the case for actuating the spindle, a crank arm connected to the sleeve, and means operating independently of the crank arm for actuating the gearing.

2. The combination with a sleeve, a tubular stem mounted for rotation therein, and a gear case revoluble with the stem, of a chuck spindle mounted for rotation within the stem, speed multiplying gearing within the case for actuating the spindle, a crank arm connected to the sleeve, means operating independently of the crank arm for actuating the gearing, and means carried by the gear case for engaging the sleeve to hold the case against rotation relative thereto.

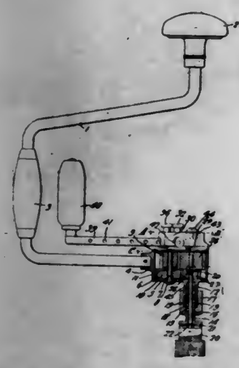
3. The combination with a sleeve, a tubular stem mounted for rotation therein, and a gear case revoluble with the stem, of a chuck spindle mounted for rotation within the stem, speed multiplying gearing within the case for actuating the spindle, a crank arm connected to the sleeve, means operating independently of the crank arm for actuating the gearing, and means carried by the gear case for locking the gearing against operation within the gear case, and means upon the sleeve for engagement by said locking means when the gearing is released, for holding the gear case against rotation relative to the sleeve.

4. The combination with a sleeve, and a crank arm fixedly connected to the sleeve, said crank arm having an offset grip portion extending radially from the sleeve, of a tubular stem mounted for rotation within the sleeve, a gear case carried thereby, a ratchet disk constituting a closure for the gear case, an internal gear depending from the ratchet disk and within the gear case, means for

rotating said ratchet disk with or independently of the crank arm, a chuck spindle mounted for rotation within the tubular stem, gearing within the case for transmitting motion to the spindle from the internal gear, means carried by the gear case for engaging the disk to lock the gearing against operation, and means upon the sleeve for engagement by said locking means when the gearing is released, to hold the gear case and stem against rotation relative to the sleeve during the rotation of the internal gear.

5. The combination with a sleeve, a crank arm fixedly connected thereto, of a tubular stem mounted for rotation within the sleeve, a gear case carried thereby, a disk constituting a closure for the gear case, an internal gear depending from and revoluble with the disk, said gear being located within the case, a chuck spindle mounted for rotation within the stem, a gear thereon, speed multiplying means within the gear case for transmitting motion from the internal gear to the spindle, a locking pin slidably mounted in the gear case and adapted to engage the disk to hold the gears against operation, and means upon the sleeve for engagement by the pin to hold the case against rotation relative to the sleeve when the gears are unlocked, and means for rotating the disk when the gears are disengaged.

1,212,481. BIT-BRACE. SAMUEL N. HALL, Memphis, Tenn. Filed July 15, 1915. Serial No. 40,053. (Cl. 145—68.)



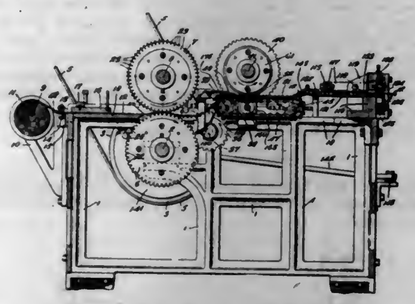
1. A bit brace including a gear case, an exteriorly threaded tubular extension connected thereto and having a flared end, a sleeve adjustable longitudinally within the extension and having spaced annular grooves, a locking ball within the flared end and adapted to be seated in one of the grooves, means adjustably engaging the extension for holding the ball in one of the grooves to lock the sleeve against longitudinal movement, a chuck carrying stem revoluble within and movable with the sleeve, speed multiplying gears within the case, means for rotating one of the gears, and means controlled by the longitudinal movement of the stem for coupling said stem to either of two gears thereby to drive the stem at either of two speeds.

2. A bit brace including a gear case, a chuck carrying stem therein, superposed gears on the stem, one of said gears constituting a drive gear, connected gears mounted for rotation in the case, one of said connected gears being constantly in mesh with the drive gear and the other one of said gears constituting means for transmitting motion to the other gear on the stem, means for shifting the stem to uncouple it from the last named gear thereon and couple it to the drive gear, a ratchet disk revoluble with the drive gear, a member revolubly mounted upon the disk, a crank arm connected to said member, a pawl carried by the member for engagement with the ratchet disk, and means carried by said member for engaging the gear case to hold the member against rotation relative to the case.

3. A bit brace including a gear case, a yoke connected to the case, a stem slidably and revolubly mounted in the case, a drive gear within the case and upon the stem, speed multiplying gearing within the case and coöperating with the drive gear, means for shifting the stem to rotate the same at either of two speeds from the drive gear through the speed multiplying gearing, means for locking the drive gear against rotation relative to the case thereby to provide a direct drive to the spindle from the drive gear, and means for rotating the said drive gear when unlocked.

4. A bit brace including a gear case, an exteriorly threaded tubular extension connected thereto, a sleeve adjustable longitudinally within the extension and having spaced annular grooves, a locking means carried by the tubular extension and adapted to be seated in one of the grooves, a member adjustably engaging the extension for holding the locking means in one of the grooves to lock the sleeve against longitudinal movement, a chuck carrying stem revoluble within and movable with the sleeve, speed multiplying gears within the case, means for rotating one of the gears, and means controlled by the longitudinal movement of the stem for coupling said stem to either of two gears thereby to drive the stem at either of two speeds.

1,212,482. APPARATUS FOR MAKING RADIATOR-STRIPS. HERBERT CHAMPION HARRISON, Lockport, N. Y. Filed Nov. 29, 1915. Serial No. 64,082. (Cl. 153—77.)



1. In a machine for making radiator strips the combination of a pair of dies adapted to form open corrugations in said strips; a traveling chain of dies, provided with parallel disposed compression surfaces adapted to close said open corrugations, and with angularly disposed surfaces adapted to further shape said corrugations; and a roller die member coacting with said chain of dies, substantially as described.

2. In a machine for making radiator strips the combination of a power shaft; a roller die member connected to said shaft; a second shaft; a second roller die member carried by said second shaft and coacting with said first named die member to provide open corrugations in said strips; guides for leading said strips to said die members; a chain of dies provided with surfaces adapted to close and further shape said corrugations; and a compression die member coacting with said chain of dies, substantially as described.

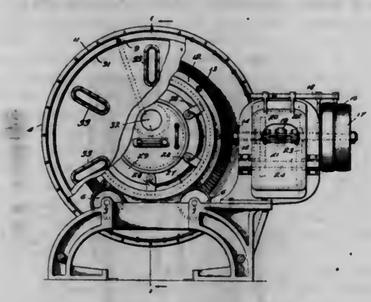
3. In a machine for making radiator strips the combination of a power shaft; a roller die member connected to said shaft; a second shaft, a second roller die member carried by said second shaft and coacting with said first named die member to provide open corrugations in said strips; guides for leading said strips to said die members; a chain of dies provided with surfaces adapted to close and further shape said corrugations; means to deflect said strip after it leaves said first named dies and to cause it to be subjected to the action of said chain of dies; and a compression die member coacting with said chain of dies, substantially as described.

4. In a machine for making radiator strips the combination of a set of roller dies; means for feeding a strip of thin sheet metal to said dies; a second set of closely spaced individual dies; rotating means around which said individual dies move, located above the path of movement of said strip through said first named dies and adapted to cause said individual dies to separate or open out from each other; a deflecting means for causing the ends of said strip after leaving said first named dies to rise and to enter between said separated dies; and additional deflecting means for further causing said end to follow the path of travel of said dies to facilitate the subsequent entry of portions of said strip between said dies, substantially as described.

5. In a machine for making radiator strips the combination of a pair of roller dies; means for feeding a strip of sheet material through said dies; a chain of dies; a third roller die coacting with said chain of dies; means for continuously moving all of said dies in unison; upwardly extending means to cause the ends of said strip to be deflected after leaving said pair of dies; and additional deflecting means to cause said strips to automatically be subjected to the action of said other dies, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,212,483. VACUUM-CHURN. ERNEST B. HELLER, New York, N. Y., assignor, by mesne assignments, to The Vacuum Churn Corporation, New York, N. Y., a Corporation of New York. Filed Feb. 18, 1914, Serial No. 819,443. Renewed June 19, 1916. Serial No. 104,571. (Cl. 31—66.)



1. In a churn the combination of an outer sealed chamber; means to admit a fluid to said outer chamber; an inner sealed chamber; means to introduce cream into said inner chamber; hollow dashers located in said inner chamber and communicating with said outer chamber; means to exhaust the air from said inner chamber after the cream has been placed therein, and means to rotate said chambers, substantially as described.

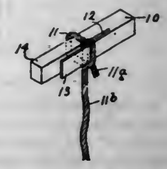
2. In a churn the combination of an outer chamber; means to exhaust the air from said outer chamber; means to admit a fluid to said outer chamber; an inner chamber concentric with said outer chamber; means to exhaust the air from said inner chamber; means to introduce cream into said inner chamber; hollow dashers located in said inner chamber extending through the walls thereof and communicating with said outer chamber; and means to rotate said chambers, substantially as described.

1,212,484. PROCESS OF MANUFACTURING FERTILIZER OUT OF STEFFENS WASTE WATER, &c. EMILE HERZKA, Arecibo, Porto Rico. Filed Oct. 24, 1916. Serial No. 127,352. (Cl. 71—9.)

1. The process of manufacturing fertilizer out of Steffens waste water, osmosis water, and other similar waste waters resulting in the process of extracting sugar from beet sugar molasses consisting in concentrating the above mentioned waste waters to 55° Brix, and acidifying same with the quantity of sulfuric acid chemically equivalent to the lime and alkaline content of the waste waters, and adding calcium superphosphate and sawdust, and subjecting the mixture to a drying process.

2. The process of manufacturing fertilizer out of Steffens waste water, osmosis water, and other similar waste waters resulting in the process of extracting sugar from beet sugar molasses consisting in concentrating the above mentioned waste waters to 55° Brix, and acidifying same with the quantity of sulfuric acid chemically equivalent to the lime and alkaline content of the waste waters and adding calcium superphosphate and nitrogen-containing animal wastes and sawdust and subjecting the mixture to a drying process.

1,212,485. TOGGLE FOR USE IN STRETCHING LEATHER. AUSTIN G. HILL, Chelsea, Mass. Filed May 18, 1914. Serial No. 839,237. (Cl. 149—21.)



1. A toggle for use in stretching hides and the like comprising a head formed with a cord recess and a cord having one end thereof arranged within said recess with the adjacent portion of said cord extending from said end around the exterior of said head and through said recess, so that the strain on the cord causes said adjacent portion alone to clamp and hold said end against slipping out of the recess when the toggle is in use.

2. A toggle for use in stretching hides and the like comprising a head and a cord, the head being formed with a longitudinal cord receiving slot near one side so as to provide a resilient tongue, and the cord extending through said slot and wound around the body and tongue of the head so that the strain on the cord while the toggle is in use acts through the tongue to clamp the cord against slipping.

3. A toggle for use in stretching hides and the like comprising a head of wood or the like and a cord, the head being formed with a longitudinal cord receiving slot near one side so as to provide a resilient tongue, and the cord being wound around both the body and tongue of the head with both ends of said winding extending through said slot so that the strain on the cord while the toggle is in use acts through the tongue to clamp the cord to the head.

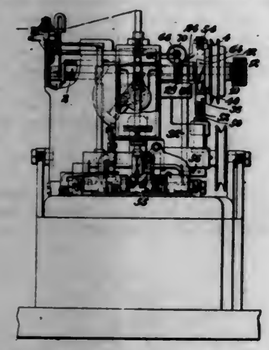
1,212,486. STOPPING MECHANISM. GEORGE S. HILL, Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Apr. 27, 1914, Serial No. 834,720. Divided and this application filed Mar. 18, 1916. Serial No. 85,135. (Cl. 74—46.)

1. A machine of the class described, having, in combination, a shaft, mechanism for automatically throwing off the power, stopping devices for stopping the shaft in a definite position, and means within convenient reach of the operator for adjusting the timing of the power throw-off mechanism with relation to the stopping position.

2. A machine of the class described, having, in combination, a shaft, mechanism for automatically throwing off the power, a stop cam on the shaft, a retarding and stopping plunger coöperating with the cam to stop the shaft in a definite position, and means within convenient reach of the operator for adjusting the timing of the power throw-off mechanism with relation to the stopping position.

3. A machine of the class described, having, in combination, a shaft, mechanism for automatically throwing off the power, a stop cam on the shaft having an eccentric

braking portion and a stopping depression, a spring pressed plunger coöperating with the cam to retard and stop the shaft, and means within convenient reach of the operator for adjusting the timing of the power throw-off mechanism with relation to the stopping position.

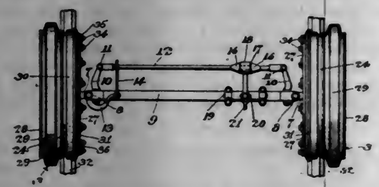


4. A machine of the class described, having, in combination, a shaft, driving mechanism therefor, mechanism for automatically throwing off the power and for retarding and stopping the shaft in a definite position, and devices for regulating the relative operation of the power throw-off and the retarding and stopping mechanism arranged for manual adjustment by the operator while running the machine.

5. A machine of the class described, having, in combination, a shaft, driving mechanism therefor, stopping devices for stopping the shaft in a definite position when the power is thrown off, a rocking cam sleeve for throwing off the power, a coöperating stationary cam disk, an adjusting shaft connected to adjust the stationary disk and provided with a head within convenient reach of the machine operator.

[Claims 6 and 7 not printed in the Gazette.]

1,212,487. TRANSPORTATION SYSTEM. WILLIAM F. HOLT, Redlands, Cal. Filed Mar. 13, 1916. Serial No. 83,731. (Cl. 105—143.)



1. The combination with a pair of rails, of front and rear wheels having flanged treads fitting said rails, said wheels also having plain resilient treads of larger outside diameter than the flanged treads, an axle dirigibly connected to the front wheels, means to steer the front wheels, means to lock said steering means against movement, a vehicle frame, an engine mounted on said frame, and driving gear connecting the engine to the rear wheels.

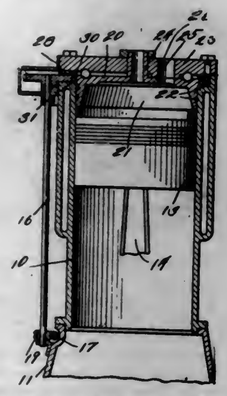
2. A track system having main line rails and having switch rails, said switch rails terminating in beveled ends, a wheeled vehicle, the wheels of said vehicle having flanged railroad treads properly spaced to fit the rails and said wheels having resilient tires of greater diameter than said railroad treads, an engine on the vehicle operatively connected to said wheels, means to steer the front wheels when the wheels are off of the rails, and means to lock the steering means when the wheels are on the rails to hold the front wheels against steering movement.

3. A wheel comprising a felly, an outer ring fitting on said felly, an intermediate ring fitting on the first named ring and provided with beveled edges, outer rings fitting on the first named ring at the respective sides of the first named ring and provided with beveled inner edges, a flanged metal rim provided with beveled faces fitting the beveled edge of one of said outer rings and fitting one beveled edge of the intermediate ring, an annular metal tread having an outwardly extending flange and having beveled faces fitting the beveled edge of the other of said outer rings and fitting the other edge of the intermediate ring, a resilient tire of larger outside diameter than the flange of the annular tread seated on the flanged metal rim, and means to hold the outer rings toward said intermediate ring.

4. A wheel comprising a felly, a resilient tire, an annular metal tread having a flange of less diameter than the tire, and means independently and detachably holding said tire and metal tread in place on the felly.

5. In combination, a vehicle frame, front wheels dirigibly connected to the frame, rear wheels rotatively mounted on the frame, each of said wheels having a felly and having a resilient tire and having an annular flanged metal tread of less diameter than the resilient tire and having means independently and detachably holding said tire and metal tread in place on the felly, an engine mounted on the frame, driving connections between the engine and rear wheels, means to steer the front wheels, and means to lock the steering means to hold the front wheels against steering movement when the flanged treads are on the rails of a railroad track system.

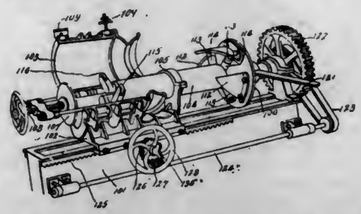
1,212,488. INTAKE AND EXHAUST VALVE FOR GAS-ENGINES. HOWARD H. HUGHES, Madrid, Iowa. Filed Apr. 4, 1916. Serial No. 88,962. (Cl. 123—80.)



An explosive engine including a cylinder, a rotatable disk mounted on the inner face of the head of the cylinder and formed with a central hollow stub shaft disposed through the head, said stub shaft being arranged to receive the spark plug, said disk having teeth around its periphery and a depending flange therebelow, packing rings mounted in the outer face of the flange, the cylinder having an opening in one side above the packing rings, and a driving gear engaging said teeth through said opening.

1,212,489. CAN-SURFACE PRESSER AND EVENER. THADDEUS A. JACKSON, Brooklyn, N. Y. Filed Mar. 10, 1916. Serial No. 83,378. (Cl. 153—81.)

1. A can pressing machine comprising a shell having a cylindrical portion adapted to incase the cylindrical portion of a can, a driving shaft concentric with said shell, a plurality of arms connected with said shaft, a roller on the outer end of each arm; the shell being supported for movement axially relative to said shafts and means for shifting the arms to move the rollers in different opposed directions to and from the inner wall of the shell during the rotation of the driving shaft, whereby the rollers can be swung inwardly for their insertion through the reduced neck of the can, and can be swung outwardly for adjustably engaging the inner surface of the wall of the can, while being carried around by means of the driving shaft, and during the movement of the shell and can longitudinally with the shafts.



2. A can pressing machine comprising a shell having a cylindrical portion adapted to incase the cylinder portion of the can, a driving shaft concentric with said shell, a plurality of arms connected with said shaft, a roller on the outer end of each arm, means for shifting the arms to move the rollers to and from the axis of the shell during the rotation of the shaft, whereby the rollers can be swung toward the axis for insertion in the reduced neck of the can, and can be swung outwardly from the axis for engagement with the inner wall of the can, and means for moving the shell axially to cause the rollers to engage the inner wall of the can during the rotation of the main shaft whereby the rollers are carried around to engage such wall.

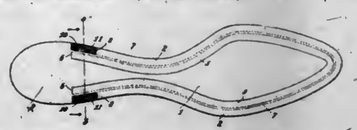
3. A can pressing machine comprising a shell having a cylindrical portion adapted to incase the cylinder portion of the can, a driving shaft concentric with said shell, a plurality of arms connected with said shaft, a roller on the outer end of each arm, means for shifting the arms to move the rollers to and from the axis of the shell during the rotation of the shaft, whereby the rollers can be swung toward the axis for insertion in the reduced neck of the can, and can be swung outwardly from the axis for engagement with the inner wall of the can, means for moving the shell axially to cause the rollers to engage the inner wall of the can during the rotation of the main shaft whereby the rollers are carried around to engage such wall, and a roller on one of said arms adapted to engage the inner wall at the end of the can.

4. A can pressing machine comprising a shell having a cylindrical inner wall adapted to incase the cylinder portion of the can, a driving shaft concentric with said shell, a casing carried by said driving shaft, a plurality of rock shafts mounted in said casing beyond the axis thereof, an arm on one end of each rock shaft, and a roller on the outer end of each arm that is swung to and from the axis of the shell by the swinging of its supporting shaft, whereby the rollers can be swung toward the axis for insertion in the reduced neck of the can, and can be swung outwardly from the axis for engagement with the inner wall of the can, upon longitudinal movement of the can relative to the rollers.

5. A can pressing machine comprising a shell having a cylindrical inner wall adapted to incase the cylinder portion of the can, a driving shaft concentric with said shell, a casing carried by said driving shaft, a plurality of rock shafts mounted in such casing beyond the axis thereof, an arm on one end of each rock shaft, a roller on the outer end of each arm that is swung to and from the axis of the shell by the swinging of its supporting shaft, whereby the rollers can be swung toward the axis for insertion in the reduced neck of the can, and can be swung outwardly from the axis for engagement with the inner wall of the can, upon longitudinal movement of the can relative to the rollers, and means for moving the shell axially to cause the rollers to engage the inner wall of the can during the rotation of the main shaft whereby the rollers are carried around to engage such wall.

[Claims 6 to 9 not printed in the Gazette.]

1,212,490. INSOLE-BLANK AND METHOD OF PREPARING IT. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 7, 1914. Serial No. 855,591. (Cl. 12—146.)



1. An insole blank for boots and shoes having an elongated unlipped recess in its flesh side located at each side of the shank adjacent the breast line and having a length less than the length of the shank to receive the ends of the counter and welt.

2. An insole blank for boots and shoes having an unlipped recess in its flesh side located at each of the shank, the rear end of the recess being located adjacent the breast line, and the forward end lying wholly within the shank portion to receive the ends of the counter and welt, and of a width substantially equal to the width of the desired feather at this point.

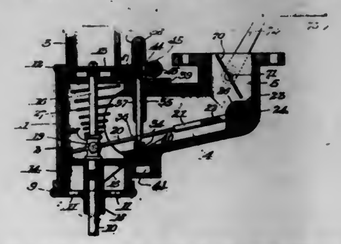
3. An insole blank for boots and shoes having a stitch receiving rib comprising a between-substance extending throughout the shank and forepart, a channel along the entire inner edge of the between-substance, a lip along the greater portion of the outer edge of the between-substance, and a shoulder along the remaining portion of the outer edge of the between-substance in the rear of the lip at the two shank ends thereof.

4. An insole blank for boots and shoes having a continuous channel extending throughout the shank and forepart, and a parallel, continuous lip outside the channel but of less length than the channel.

5. The method of preparing insole blanks for boots and shoes which comprises channeling an insole to form a marginal lip and raising the lip to provide a stitch receiving rib and in cutting an elongated portion corresponding to the lip from substantially the breast line of the insole forward on both sides of the shank to form a recess for the reception of the ends of the counter and welt.

[Claim 6 not printed in the Gazette.]

1,212,491. AUTOMATICALLY-OPERATING CARBURETER. CHARLES E. JOHNSON, Denver, Colo. Filed Dec. 27, 1915. Serial No. 68,914. (Cl. 261—50.)



1. In a carbureter, the combination with a casing, having an air intake and a fuel inlet, of an automatically controlled air intake valve, a fuel valve, means for raising said fuel valve, a pivot pin, an arm rigidly connected at one end to said pin and having a connection at its other end with the intake valve, a lever secured upon the opposite end of said pin, and an adjustable shoe on said lever for engaging said fuel valve raising means, when the said pin is turned by the raising of the intake valve.

2. In a carbureter, the combination with a casing having an air intake and a fuel inlet, an automatically controlled intake valve and a fuel valve, of means for lifting said fuel valve, an operating rock lever connected to said valve lifting means, a pivot pin, a rock arm secured to said pin at one end and connected at its other end with

the said air intake valve, whereby the pin is rocked by the movement of said rock arm, a bar secured at one end to the opposite end of said pin, and an adjustable shoe on the opposite end of said bar for engaging said fuel valve operating rock lever.

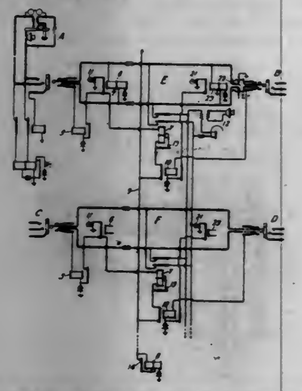
3. In a carbureter, the combination with a casing having an air intake, a fuel inlet, an air intake valve and a fuel inlet valve, of rocking means for lifting said fuel valve, means operated by the intake valve for operating said fuel valve lifting means, and adjustable means connected with the said valve lifting means and engaged by intake valve operated means for varying the lifting movement of said fuel valve.

4. In a carbureter, the combination with a casing having an air intake, a fuel inlet, an automatically controlled air intake valve and a fuel inlet valve, of rocking means for operating said fuel valve, means operated by the air intake valve for operating said racking means, adjustable means connected with the rocking means for varying the rocking movement imparted to the same by the air intake valve operated means, and adjustable means carried by the air intake valve operated means, for increasing the throw of the said fuel valve rocking means proportionately to the rise of the air intake valve.

5. In a carbureter, the combination with a casing having an air intake, a fuel inlet, an air intake valve and a fuel inlet valve, of a rock arm having a finger for lifting said fuel valve, a bell crank form of lever pivotally connected to one end of the said rock arm, while the extremity of its horizontal portion is adjustably connected to the other end of said rock arm, and means operated by the air intake valve for engaging the depending end of said bell crank lever to rock the same together with the fuel valve operating rock arm.

[Claims 6 to 13 not printed in the Gazette.]

1,212,492. TELEPHONE-EXCHANGE SYSTEM. LEWIS H. JOHNSON, Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 26, 1916. Serial No. 99,976. (Cl. 179—73.)



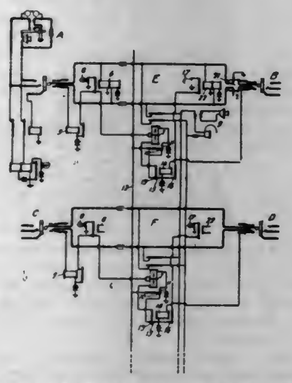
1. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a relay having an operating winding associated with each link circuit operating upon connection thereof with a calling line to include the operator's telephone set in circuit therewith, a circuit multipled to and normally including the operating winding of each relay, and means in said circuit operating upon the operation of any one of said relays to increase the resistance of said circuit to prevent the operation of the relay of another link circuit when connected with another line.

2. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a relay having an operating winding associated with each link circuit operating upon connection thereof with a calling line to include the operator's telephone set in circuit therewith, an operating circuit, a branch from said operating circuit for each relay and normally including the operating winding thereof, and means in said circuit operating upon the operation of any one of said relays to alter the resistance of said circuit to prevent the operation of the relay of another link circuit when connected with another line.

3. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a relay having an operating winding associated with each link circuit operating upon connection thereof with a calling line to include the operator's telephone set in circuit therewith, a circuit multipled to and normally including the operating winding of each relay, and a common relay in said circuit operating upon the operation of any one of said individual relays to alter the resistance of said circuit to prevent the operation of the relay individual to another link circuit when connected with another line.

4. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a relay having an operating winding associated with each link circuit operating upon connection thereof with a calling line to include the operator's telephone set in circuit therewith, a circuit multipled to the operating winding of each relay, and a double wound common relay having one winding normally short-circuited in said circuit operating upon the operation of any one of said individual relays to remove the short circuit and include both windings in said circuit to prevent the operation of the relay individual to another link circuit when connected with another line.

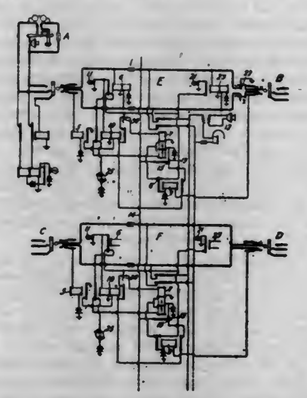
1,212,493. TELEPHONE-EXCHANGE SYSTEM. LEWIS H. JOHNSON, Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 26, 1916. Serial No. 99,977. (Cl. 179—73.)



1. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a relay having operating and neutralizing windings associated with each link circuit operating upon connection thereof with a calling line to include the operator's telephone set in circuit therewith, and contacts on one of said relays engaged upon the operation thereof to close a break in circuit with the neutralizing winding of the relay of another link circuit preventing the operation thereof when said another link circuit is connected wth another line.

2. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a relay having an operating winding and associated with each link circuit operating upon connection thereof with a calling line to include the operator's telephone set in circuit therewith, and a neutralizing winding for the relay of another link circuit whose circuit is prepared by the operation of the relay of the busy link circuit to prevent the operation of the relay of said another link circuit when connected with another line.

1,212,494. TELEPHONE-EXCHANGE SYSTEM. LEWIS H. JOHNSON, Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 26, 1916. Serial No. 99,978. (Cl. 179—73.)



1. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a listening relay for each link circuit operating upon the connection thereof with a calling line to include the operator's telephone set in circuit therewith, and a second relay conditioned for operation upon the operation of the listening relay of a busy link circuit and operated upon the connection of another link circuit with another line to prevent the actuation of the listening relay thereof.

2. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a listening relay for each link circuit operating upon the connection thereof with a calling line to include the operator's telephone set in circuit therewith, and a second relay conditioned for operation upon the actuation of the listening relay of a busy link circuit and operated upon the connection of another link circuit with another line to open the circuit of and prevent the actuation of the listening relay thereof.

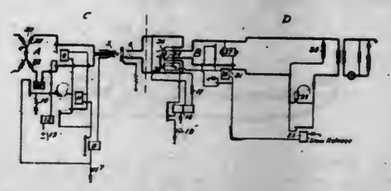
3. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a listening relay for each link circuit operating upon the connection thereof with a calling line to include the operator's telephone set in circuit therewith, a second relay for each link circuit, and a circuit for each second relay open at two points, the operation of the listening relay of a busy link circuit closing one break in the circuit of the second relay of another link circuit, the second break thereof being closed upon the connection of said another link circuit with another line to actuate said second relay thereof and prevent the operation of the listening relay thereof.

4. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a listening relay for each link circuit operating upon the connection thereof with a calling line to include the operator's telephone set in circuit therewith, and a second relay for each link circuit, the second relay of another link circuit being conditioned for operation upon the operation of the listening relay of a busy link circuit and operating upon the connection of said another link circuit with another line to prevent the operation of the listening relay thereof.

5. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits for interconnecting the lines, an operator's telephone set, a listening relay for each link circuit operating upon the connection thereof with a calling line to include the operator's telephone set in circuit therewith, a second relay conditioned for operation upon the operation of the listening relay of a busy link circuit and operated upon the connection of another link circuit with another line, a signaling device associated with said another link circuit, and interrupter mechanism brought into circuit with the signaling device upon the operation of said second relay.

[Claims 6 and 7 not printed in the Gazette.]

1,212,495. TELEPHONE-EXCHANGE SYSTEM. LEWIS H. JOHNSON, Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed July 24, 1916. Serial No. 111,010. (Cl. 179—44.)



1. The combination with two telephone switchboards connected together by a pair of conductors, means at one of said boards adapted to complete a circuit for said conductors and to apply ringing current over said conductors to said other board, a signaling device operated thereby, a listening key, an operator's receiver, a relay operated upon the actuation of the listening key to short-circuit the receiver, means for disconnecting ringing current from the circuit, and a relay operating thereupon to include the operator's telephone set in the circuit, the operation of said second mentioned relay permitting the first mentioned relay to release and remove the short circuit from the receiver.

2. A telephone exchange system comprising a pair of conductors joining two switchboards, a source of ringing current at one board, means thereat for impressing current from said source over said conductors, a signaling device at the other board operated thereby, an operator's telephone set thereat, a listening key, a relay operated upon the actuation of the listening key to establish a short circuit for the receiver of the operator's set, means rendered effective by the actuation of the listening key to disconnect the ringing current from the circuit, and means operating thereupon to include the telephone set in circuit with said conductors and thereafter remove the short circuit from the receiver.

3. A telephone exchange system comprising a trunk circuit extending from one telephone switchboard to a second board, means at one of said boards for applying ringing current over said trunk to the other board, a switch actuated by the operator at that board for disconnecting the ringing current from the trunk, an operator's telephone set, means operated upon the actuation of the switch to short-circuit the receiver of the operator's telephone set, and means operating upon the removal of the ringing current to connect the operator's telephone set to the trunk circuit and thereafter cause the removal of the short circuit from the receiver.

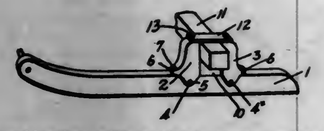
4. A telephone exchange system comprising a trunk circuit extending from one telephone switchboard to a second board, means at one of said boards for applying ringing current over said trunk to the other board, a switch actuated by the operator at that board for disconnecting the ringing current from the trunk, an opera-

tor's telephone set, a relay operated by the actuation of the switch to short-circuit the receiver of the operator's telephone set, and means operating upon the removal of the ringing current to connect the operator's telephone set to the trunk circuit and thereafter cause the removal of the short circuit from the receiver.

5. A telephone exchange system comprising a trunk circuit extending from one telephone switchboard to a second board, means at one of said boards for applying ringing current over said trunk to the other board, a switch actuated by the operator at that board for disconnecting the ringing current from the trunk, an operator's telephone set, a relay operated by the actuation of the switch to short-circuit the receiver of the operator's telephone set, and a relay operating upon the removal of the ringing current to connect the operator's telephone set to the trunk circuit and thereafter cause the removal of the short circuit from the receiver.

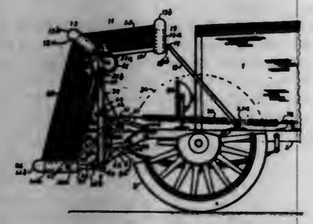
[Claims 6 to 10 not printed in the Gazette.]

1,212,496. SLEIGH-RUNNER. FLORIAN JONISH, Wavy Creek, Saskatchewan, Canada. Filed Sept. 20, 1916. Serial No. 121,260. (Cl. 21—48.)



The combination with a sleigh runner, of a pair of standards carried by the sleight runner having vertical opposing ribs, a block carried by the sleigh runner between the standards and having grooves into which the vertical ribs of the standards extend, a bolster end resting upon the block and also provided with vertical grooves into which the ribs of the standards extend, a plate extending between the top of the standards, and vertical bolts extending through the plate, standards and sleigh runner.

1,212,497. VEHICLE-FENDER. MARCUS L. KEIZUR, Baker, Oreg. Filed May 2, 1916. Serial No. 94,907. (Cl. 105—127.)



1. The combination of a vehicle with an automatic pliable net fender comprising a rearwardly depressible and tilting upper frame member of two parts, supporting a pliable net, and in pivotal connection with the arms of a transverse rockshaft secured to the car by means of forwardly projecting brackets, the said upper frame member supporting the upper border of a main pliable net, and additional net supporting means comprising a lower frame member in pivotal connection with pendant links extending downward from upright brackets immovably secured to the side frames of the car and loosely secured on the said rock shaft supporting the lower border of the said main pliable net.

2. The combination of a vehicle with an automatic pliable net fender comprising a rearwardly depressible and tilting upper frame member of two parts, supporting a pliable net, and in pivotal connection with the arms of a transverse rockshaft secured to the car, the said upper frame member supporting also the upper border of a main pliable net, a lower frame member supporting the lower border of a main pliable net and in pivotal and extensible connection with pendant links pivotally secured to and extending downward from upright brackets immovably secured to the side frames of the car in an upright position, said pendant links supporting the heel of said lower frame member, and means comprising oblique folding pivotal connecting rods connecting the forward part of the lower frame member with the said upright brackets comprising means whereby the lower frame member will be held forward as the upper portion of the fender is rearwardly depressed.

3. The combination of a vehicle with an automatic pliable net fender comprising a rearwardly depressible and tilting upper frame member of two parts, the said parts comprising a near vertical and an oblique part, each part having arms rigidly secured thereto and rigidly joined to a horizontally positioned bar which in turn is pivotally connected at its forward portion to the upper ends of the arms of a transverse rockshaft secured to the car, the said vertical and oblique parts comprising the upper frame member and supporting a short net and providing also the upper support of the main pliable net, a lower frame member in pivotal connection with upright brackets rigidly secured to the side frames of the car supporting the lower border of the main pliable net, and means for effecting the complete rearward depression of the upper portion of the fender including means for supporting the fender in its rearwardly depressed position.

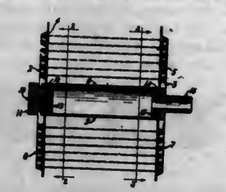
4. The combination of a vehicle with an automatic pliable net fender comprising a rearwardly depressible and tilting upper frame member including an oblique forward member and a normally nearly vertical member adapted to be inclined rearwardly, said members being rigidly linked together in angular relation and pivotally connecting with the arms of a transverse rockshaft secured to the car, the forward part of the upper frame member supporting the upper border of the main pliable net, and a lower frame member in pivotal connection with upright brackets, connecting means including hangers pendant to said upright brackets and further including oblique folding pivotal connecting rods connecting the forward portion of the lower frame member of the fender with said upright brackets and means comprising pliable swing supports secured to the forward outer corners of the upper frame member and attached to the forward outer corners of the extensible lower frame member as yielding swing supports therefor.

5. The combination of a vehicle with an automatic pliable net fender comprising a rearwardly depressible and tilting upper frame member including an oblique forward member and a normally nearly vertical member adapted to be inclined rearwardly, said members being rigidly linked together in angular relation and pivotally connecting with the arms of a transverse rockshaft secured to the car, the forward part of the upper frame member supporting the upper border of the main pliable net, and a horizontally positioned lower frame member in pivotal and extensible connection with upright brackets, connecting means including hangers pendant to the said upright brackets and further including oblique folding pivotal connecting rods connecting the forward portion of the lower frame member of the fender with said upright brackets, pliable swing supports connecting the lower frame member with the upper frame member, and means comprising circular hangers pivotally secured to the upper frame member and to which the upper ends of the pliable side supports are attached comprising means whereby the said pliable side supports are adapted to swing clear of the upper frame member as the fender is moved rearwardly into the carrier position.

[Claims 6 to 19 not printed in the Gazette.]

1,212,498. DEVICE FOR DEVELOPING ROLL-FILMS. LE ROY W. KELSAY, New York, N. Y., assignor of one-half to John L. Grindle, New York, N. Y. Filed Feb. 29, 1916. Serial No. 81,251. (Cl. 95—90.5.)

1. In a device of the character described, a holder provided with a spiral groove having inclined walls, for receiving the edge of a film, whereby the film may be wound thereon so that there will be a space between consecutive layers, and means for holding the film in the spiral groove.



2. In a device of the character described, a holder comprising a pair of spaced end members having evenly set spirals thereon for guiding a film as it is wound on the holder, the turns of the spiral being fixedly secured in positions definitely separated by a space wider than the thickness of a film, and means for holding said members in a given position.

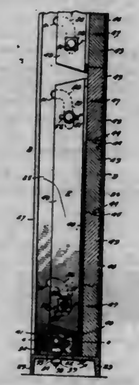
3. In a device of the character described, a holder provided with a pair of spaced end members provided with registering spiral grooves having inclined walls and means for holding said ends in a predetermined position.

4. In a device of the character described, a holder provided with a pair of spaced end members provided with registering spiral grooves having substantially continuous inclined walls, with smooth bottom faces and means for holding said end members in a predetermined position.

5. In a device of the character described, a holder provided with end members as set forth and presenting spiral grooves registering one with the other and adapted to receive the edges of a film, said grooves having the same spiral form, whereby the film may be started in the outer groove and moved so as to be spirally wound, therein, and means for holding said end members spaced a predetermined distance apart.

[Claims 6 to 11 not printed in the Gazette.]

1,212,499. FORM FOR CONCRETE CONSTRUCTION. FRANK P. KEMON, Atlantic City, N. J. Filed Mar. 30, 1916. Serial No. 87,769. (Cl. 25—131.)



1. In forms for concrete construction, the combination of main supports in spaced relation, each support provided with a longitudinally extending flange and a plurality of ways extending through the body of said supports, each way being substantially L-shaped with the walls of one portion inclined toward and with the closed end thereof nearest said flange, panels in abutting relation with the flanges of said supports with their sides adjacent said ways, angle bars in abutting relation with the outer faces of said panels, each bar provided with perforations to aline with said ways in said supports, and securing devices passing through said ways and alined perforations.

2. In forms for concrete construction, the combination of main supports in spaced relation, each support provided with a flange extending longitudinally of and at each side, and a plurality of ways extending through the said body of each support, each way being substantially L-shaped with the walls of one portion inclined toward and with the closed end thereof nearest said flanges, panels in abutting relation with the flanges of said supports with their sides adjacent said ways, angle bars in abutting relation with the outer faces of said panels, each bar provided with perforations to aline with the said ways in said supports, and securing devices passing through said ways and alined perforations.

3. A form for concrete construction comprising in combination, a base, uprights secured thereto in spaced relation, each upright provided with a longitudinally extending flange and a plurality of ways extending through the body of said upright, each way being substantially L-shaped with the walls of one leg inclined toward and with the closed end thereof nearest said flange, panels in abutting relation with the flanges of said uprights with their sides adjacent said ways, angle bars in abutting relation with the outer faces of said panels, each bar provided with perforations to aline with the said ways in said uprights, and securing devices passing through said ways and alined perforations.

4. A form for concrete construction comprising in combination, a base, uprights secured thereto in spaced relation, each upright provided with a flange extending longitudinally of and at each side and a plurality of ways extending through the body of the uprights, each way being substantially L-shaped with the walls of one of the legs inclined toward and with the closed ends thereof nearest said flanges, panels in abutting relation with the flanges of said uprights with their sides adjacent said ways, angle bars in abutting relation with the outer faces of said panels, each bar provided with perforations to aline with the said ways in said uprights, and securing devices passing through said ways and alined perforations.

5. In forms for concrete construction, the combination of main supports comprising rolled metal sections each including a web and a flange extending longitudinally thereof, each section provided with a plurality of transverse L-shaped ways in its web with the walls of one leg of each way inclined toward and with its closed end nearest said flange, panels in abutting relation with the flanges of said supports with their sides adjacent said ways, angle bars in abutting relation with the outer faces of said panels, each bar provided with perforations to aline with the said ways in said supports, and securing devices passing through said ways and alined perforations.

[Claims 6 to 16 not printed in the Gazette.]

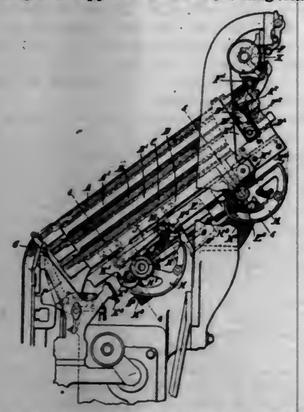
1,212,500. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Feb. 24, 1915. Serial No. 10,215. (Cl. 199—7.)

1. In a typographical machine, the combination of a plurality of magazines, and means for shifting them to bring one or another into operative position, the said means comprising a pair of rotary cams arranged at each end of the magazines and mounted to rotate about a horizontal axis.

2. In a typographical machine, the combination of a plurality of magazines, means for shifting them to bring one or another into operative position, the said means comprising a pair of rotary cams arranged at each end of the magazines and mounted to rotate about a horizontal axis, and connections whereby the several pairs are caused to rotate in unison.

3. In a typographical machine, the combination of a plurality of magazines, a supporting frame sustained by the machine frame, and means for shifting the magazines toward and from the supporting frame to bring one or another into operative position, the said means comprising two pairs of rotary cams journaled in the supporting frame and arranged at opposite ends of the magazines.

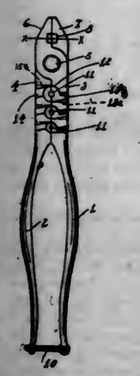
4. In a typographical machine, the combination of a plurality of magazines, a supporting frame sustained by the machine frame, and means for shifting the magazines toward and from the supporting frame to bring one or another into operative position, the said means including a system of rotary cams journaled in the supporting frame and arranged at opposite ends of the magazines.



5. In a typographical machine, the combination of a plurality of magazines, two pairs of peripheral segmental cams arranged at the opposite ends of the magazines for shifting them to bring one or another into operative position, and means to prevent overthrow of the cams.

[Claims 6 to 28 not printed in the Gazette.]

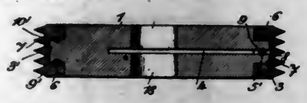
1,212,501. COMBINATION PLIERS AND WIRE-SPLICER. GEORGE D. KENNEDY, Sonora, Cal. Filed May 13, 1916. Serial No. 97,283. (Cl. 140—121.)



A wire working tool comprising pivoted jaws arranged for face to face contact and with a transverse orifice extending transversely between and formed in the contacting faces, the orifice terminating in a circular recess having a pair of slots extending laterally therefrom, one slot being the same depth as the recess and the other varying steadily in depth from its inner end at the bottom of the recess to the edge of the tool where it terminates at a depth less than the depth of the recess by an amount equal to the diameter of the wire to be worked on.

1,212,502. DRESSING-HAMMER. CONRAD KERN, Zurich, Switzerland. Filed Feb. 16, 1915. Serial No. 8,664. (Cl. 125—19.)

1. A dressing hammer comprising a hammer body having a tenon formed thereon, a detachable head having a cutting face on one side, and a cavity in the opposite side to receive the tenon and adapted to permit angular movement of the head, said cavity being of greater depth than the length of the tenon whereby said opposite side of the head engages the hammer body, and means to move the tenon into engagement with the sides of the cavity to lock the head onto the body.



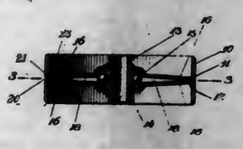
2. A dressing hammer comprising a body portion having an integral tenon and a central longitudinal slot extending through the tenon, a detachable head having a cutting face on one side, and a cavity in the opposite side to receive the tenon and adapted to permit angular movement of the head, said cavity being of greater depth than the length of the tenon whereby said opposite side of the head engages the hammer body, and means to spread the tenon to engage the sides of the cavity and lock the head onto the body.

3. A dressing hammer comprising a body portion having an integral tenon and a central longitudinal slot extending through the tenon, a detachable head having a cutting face on one side, and a cavity in the opposite side having inwardly diverging walls and adapted to receive the tenon, said cavity being of greater depth than the length of the tenon whereby said opposite side of the head engages the hammer body, and means to force the tenon against said diverging walls to lock the head onto the body.

4. A dressing hammer comprising a body portion having an integral tenon and a central longitudinal slot extending through the tenon, a detachable head having a cutting face on one side, and a cavity in the opposite side having inwardly diverging walls and adapted to receive the tenon, said cavity being of greater depth than the length of the tenon, whereby said opposite side of the head engages the hammer body, and a tapering pin passing transversely through the tenon and head.

5. A dressing hammer comprising a body portion having an integral longitudinally slotted tenon extending beyond the end of the body, a detachable head having a cutting face on one side and a cavity in the opposite side to receive the tenon and adapted to permit angular movement of the head, the outer diameter of the cavity being greater than the normal diameter of the tenon, the walls of the cavity diverging inward and of a greater length than that of the tenon, and means to force the tenon into engagement with the walls of the cavity, whereby the opposing faces of the head and body are held in contact.

1,212,503. BALL-BEARING ROLLER. EMIL KLAHN, Hoboken, N. J. Filed Jan. 19, 1910. Serial No. 538,835. (Cl. 64—17.)



1. A wheel, comprising a rim, a web portion to support same and composed of two plates, means whereby said plates may be maintained apart substantially at the rim, a sleeve, a single set of balls arranged about said sleeve and adapted to be held in position by said plates, and means to secure the plates to each other and to draw the same together to provide the desired pressure upon said balls.

2. A wheel, comprising a rim, a web portion to support same and composed of two plates, one of which is yieldable relatively to the other, means whereby said plates may be maintained apart substantially at the rim, a sleeve, a single set of balls arranged about said sleeve and adapted to be held in position by said plates, and means to secure the plates to each other and to draw the same together to provide the desired pressure upon said balls.

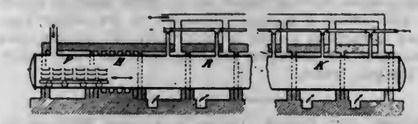
3. A wheel, comprising a rim, a web portion to support same and composed of two plates held in frictional engagement therewith, means whereby said plates may be maintained apart substantially at the rim, a sleeve, a single set of balls arranged about said sleeve and adapted to be held in position by said plates, and means to secure the plates to each other and to draw the same together to provide the desired pressure upon said balls.

4. A wheel, comprising a rim, a web portion to support same and composed of two plates forming a slight angle with each other, means whereby said plates may be maintained apart substantially at the rim, a sleeve, a single set of balls arranged about said sleeve and adapted to be held in position by said plates, and means to secure the plates to each other and to draw the same together to provide the desired pressure upon said balls.

5. A wheel, comprising a rim, a web portion to support same and composed of two plates held in frictional engagement therewith, means whereby said plates may be maintained apart substantially at the rim and be held against angular displacement in the plane of the wheel, a sleeve, a single set of balls arranged about said sleeve and adapted to be held in position by said plates, and means to secure the plates to each other and to draw the same together to provide the desired pressure upon said balls.

[Claims 6 to 11 not printed in the Gazette.]

1,212,504. PROCESS OF PREPARING NITROGEN COMPOUNDS. CONSTANTIN KRAUSS, Cologne-Braunsfeld, and PAUL STAEHELIN, Knapsack, near Cologne, Germany. Filed Dec. 6, 1913, Serial No. 805,180. Renewed Dec. 8, 1916. Serial No. 135,900. (Cl. 23—13.)

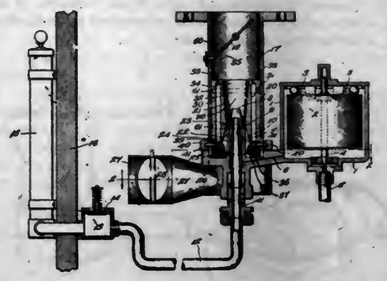


1. A process for the continuous production of nitrogen compounds which consists in subjecting the material to be combined with nitrogen in pulverized state, to a preliminary heating, passing the material through a heat of reaction temperature, then passing the material to a point of critical temperature, and subsequently cooling the resultant mass, all in the path of a current of nitrogen gas flowing in a direction opposite to that of the travel of the material.

2. A process for the continuous production of nitrogen compounds which consists in subjecting carbid, in pulverized state, to a preliminary heating, passing the partially heated carbid through a heat of reaction temperature, then passing the mass to a point of critical temperature, and subsequently cooling the resultant mass, all in the path of a current of nitrogen gas flowing in a direction opposite to that of the travel of the carbid.

1,212,505. CARBURETER. EDWARD KNAUSS, Mount Vernon, N. Y., assighor, by direct and mesne assignments, to The K. P. Manufacturing Company, Inc., New York, N. Y., a Corporation of New York. Filed June 16, 1915, Serial No. 34,502. Renewed June 9, 1916. Serial No. 102,791. (Cl. 261—46.)

1. In a carbureter the combination of a fuel supply; inner and outer concentric nozzles providing an annular space between them, said outer nozzle being outwardly tapered; connections between said supply and said annular space; hand operated means adapted to be located on the dashboard of a vehicle to cause air to pass through said inner nozzle and to suck fuel out of said space; a second air supply; and adjustable sliding automatic means reversely tapered on its inside surrounding said outwardly tapered nozzle for controlling said second supply, substantially as described.



2. In a carbureter the combination of a fuel supply; inner and outer concentric nozzles providing an annular space between them; connections between said supply and said annular space; an automatic regulator provided with inner and outer walls spaced apart to provide an annular space between them open at its bottom, and with a chamber surrounding the delivery ends of said nozzles forming an annular passage outside of said outer nozzle; means to cause air to pass through said inner nozzle and annular passage and to suck fuel out of said space; means for adjusting said regulator to vary said passage, and means to permit air to enter said second named annular space substantially as described.

3. In a carbureter the combination of a fuel supply; inner and outer concentric nozzles having a space between them; a connection between said space and said supply; an exhaust pipe in which said nozzles are located; and an automatic regulator in said exhaust pipe surrounding said nozzles and slidingly movable in said pipe, said regulator provided with an annular chamber and a plurality of perforations leading to said chamber; and means controlling the admission of air to said chamber, substantially as described.

4. In a carbureter the combination of a fuel supply; inner and outer nozzles connected with said supply and adapted to hold a thin film of fuel between them; said outer nozzle having an outer tapered surface; an exhaust pipe in which said nozzles are located; a slidable automatic regulator provided with a restricting surface surrounding said nozzles and located in said exhaust pipe; an air supply connected to said regulator; and an additional air supply connected to said inner nozzle, substantially as described.

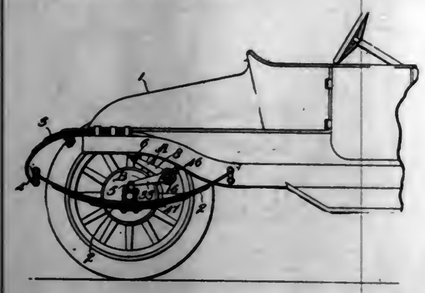
5. In a carbureter the combination of a fuel supply; inner and outer nozzles connected with said supply and adapted to hold a thin film of fuel between them; said outer nozzle having an outer tapered surface; an exhaust pipe in which said nozzles are located; a slidable automatic regulator having upwardly and downwardly flaring inner surfaces, said regulator also provided with a restricting surface surrounding said nozzles and located in said exhaust pipe; an air supply connected to said regulator; an additional air supply connected to said inner nozzle; and means to adjust said regulator up and down to predetermined position substantially as described.

[Claim 6 not printed in the Gazette.]

1,212,506. SHOCK-ABSORBER FOR MOTOR-VEHICLES. EDWARD KNAUSS, Mount Vernon, N. Y., assignor, by direct and mesne assignments, to The K. P. Manufacturing Company, Inc., New York, N. Y., a Corporation of New York. Filed June 22, 1915, Serial No. 35,569. Renewed June 9, 1916. Serial No. 102,792. (Cl. 21—105.)

1. In a shock absorber, the combination of a pair of relatively movable arms, each arm comprising two members; means for pivoting said arms at an angle to each other; a spring located between the members of one arm adapted to resist a relative movement of said arms in

one direction, and to assist said movement in an opposite direction; and friction generating means located between said last named members and each of the members of said other arm adapted to resist said movement in both directions, substantially as described.



2. In a shock absorber the combination of a pair of lever arms; a pivot member joining said arms; a spring one end of which is connected to one of said arms and the other end of which is connected to said pivot member; a movable connection between the other of said arms and said pivot member; and friction means associated with said arms adapted to resist relative motion thereof, substantially as described.

3. In a shock absorber the combination of a pair of relatively movable arms, each arm comprising two members; means for pivoting said arms at an angle to each other; a spring located between the members of one arm adapted to resist a relative movement of said arms in one direction and to assist said movement in an opposite direction; friction generating means located between said last named members and each of the members of said other arm adapted to resist said movement in both directions; means to adjust the tension of said spring; and means to adjust said friction generating means; substantially as described.

4. In a shock absorber the combination of a pair of relatively movable arms; a spring controlling the movement of said arms; a friction generating means for controlling the movement of said arms, and of said spring in one direction; means to adjust the tension of said spring; and means comprising a spring member for adjusting the pressure of said friction generating means, substantially as described.

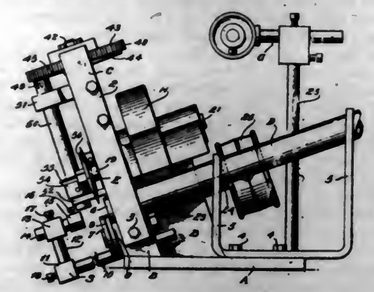
5. In a shock absorber the combination of a pair of relatively movable arms; a spring controlling the movement of said arms; a pivot member holding said arms and spring together; one end of said spring being attached to one of said arms and the other end to said pivot member; a friction generating means for controlling the movement of said arms and of said spring in one direction; means comprising a pawl carried by the other of said arms and a ratchet carried by said pivot member to adjust the tension of said spring; and means comprising a spring member for adjusting the pressure of said friction generating means, substantially as described.

1,212,507. AUTOMATIC PIPE-CUTTING MACHINE. VICTOR R. KOONTZ, Waynesboro, Pa. Filed July 13, 1914. Serial No. 850,715. (Cl. 164—61.)

1. The combination with an inclined pipe guide along which the pipe is fed by gravity into cutting position, of a rotary cutter arranged substantially at right angles to the guide, a stop for the forward end of the pipe, means for raising and lowering the cutter to and from the pipe, and means for imparting rotary movement to the cutter.

2. The combination with means for supporting the pipe to be cut, of cutter mechanism, and means for bodily moving the cutter mechanism to and from a pipe, said means including a cam wheel, a plunger connected with the cutter and bearing at one end against the cam wheel, and mechanism for driving the cam wheel.

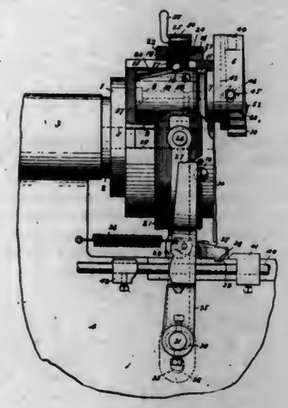
3. The combination with a support for a pipe to be cut, of means for holding the pipe in cutting position, a rotary cutter, a cutter shaft, a rocker arm connected with the cutter shaft, a shaft carrying the rocker arm, a gear wheel on said shaft, a gear pinion on the cutter shaft meshing with the gear wheel and driven therefrom, a drive shaft, and a pinion on the drive shaft meshing with and imparting motion to the gear wheel.



4. The combination of a support for a pipe, means for holding the pipe in position to be cut, a rotary cutter, a shaft carrying the cutter, a pivotally mounted rocker arm supporting said shaft, a plunger connected to said arm, and means for reciprocating said plunger.

5. The combination of a support for a pipe, means for holding the pipe in position to be cut, a rotary cutter, a shaft carrying the cutter, a pivotally mounted rocker arm supporting the cutter shaft, a shaft carrying the rocker arm, a gear wheel on the last named shaft, a pinion on the cutter shaft meshing with the wheel and driven therefrom, a drive shaft, a pinion on the drive shaft to rotate the gear wheel, a plunger connected to the rocker arm, means comprising a cam to reciprocate the plunger, and connections for operating the cam from the shaft carrying the gear wheel.

1,212,508. DIE-HEAD. VICTOR R. KOONTZ, Waynesboro, Pa. Filed Dec. 12, 1914. Serial No. 876,963. (Cl. 10—100.)



1. The combination of a movable body, means for carrying one or more chasers supported by the body, said body and said carrying means being shaped to engage each other interchangeably for operation in opposite directions, whereby the same carrying means can be employed, regardless of the direction of operation of the body.

2. In a construction of the kind described, a chaser carrier having means for receiving and holding a chaser, and a cylindrical section having a pair of spiral grooves extending in opposite directions in its circumferential surface.

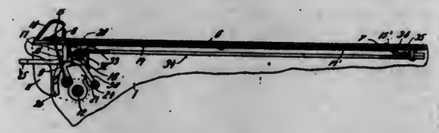
3. The combination of a body having a bore, a chaser carrier having means for receiving and holding a chaser, and a cylindrical portion to be received in said bore, said portion being detachable, means for securing the said portion to the carrier and means for locking the securing means.

4. In a construction of the kind described, the combination of a chaser block having a longitudinal groove therein, said groove having an inclined bottom, a chaser in said groove, the opposite walls of said groove having interrupted threads thereon, an adjusting screw engaging said threads, said block having recesses on either side of said groove, a locking block to fit into either recess to engage the chaser and means for securing said block to the chaser block.

5. In a construction of the kind described, a chaser carrier having a transverse projection at one end, a swivel plate, means for pivotally securing the swivel plate to one side of the projection, said swivel plate having transversely extending teeth, a chaser having teeth on one side to engage the teeth of the swivel plate, means for adjustably securing the chaser to the swivel plate, and means carried by the projection for adjusting the swivel plate around the means for pivotally securing the plate to the projection.

[Claims 6 to 9 not printed in the Gazette.]

1,212,509. MANIFOLDING DEVICE. ALBERT KRAUTH, Hamilton, Ohio. Filed Feb. 27, 1915. Serial No. 10,917. (Cl. 11—36.)



1. In a manifolding machine, a pair of side frames, a writing-table interveningly connected to said side frames over which a strip of paper having apertures spaced longitudinally is drawn, a member yieldingly urged toward a face of said paper adapted to engage through a registering aperture in the paper to intercept its progress, a rocking tearing-blade across which a withdrawn length of paper is severed from the strip, and means connecting said tearing-blade and member for moving both to a position of release coördinately with the movement of one.

2. In a manifolding machine, a frame structure having a writing-table as a portion thereof, over which a strip of paper is drawn, the paper provided with longitudinally spaced apertures, a tearing-blade hingedly mounted upon the frame structure having its cutting edge spanning the writing-table and across which the paper is transversely severed, and means adapted to intersect the paper through a registering aperture to arrest its progress controllably connected with said tearing-blade for moving both to a position of release coördinately with the movement of one.

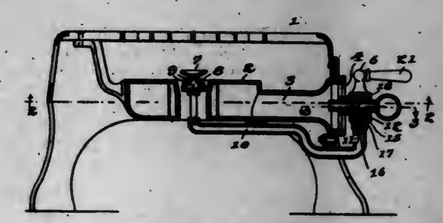
3. In a manifolding machine, a frame structure having a writing-table as a portion thereof, over which a strip of paper is drawn, the paper provided with measured spaced apertures longitudinally therewith, a plurality of yielding means mounted with respect to the writing table and in a spaced relation longitudinally of the table, the spacing corresponding to the aperture spacing longitudinal of the paper to intersect the paper through the relative registering apertures to retain an intervening area of paper against movement upon said writing table, and means for moving said means to positions of paper release.

4. In a manifolding machine, a frame structure, a writting table supported thereby over which a strip of paper is drawn, the paper provided with definitely spaced apertures longitudinally therewith, a movable tearing-blade having its cutting edge extended transversely across the writing-table and at one end thereof, means movable to intersect the paper through a plurality of registering apertures with an area of paper upon the writing-table longitudinally intervening and arrested against movement, and coupling devices connecting said tearing-blade and said means for simultaneously controlling both with the control of one.

5. A device of the nature disclosed combining a frame, a writing-table over which a strip of paper is drawn, the strip having apertures predeterminately spaced longitudinally, a plurality of members mounted to engage through apertures in the table and said members relatively spaced longitudinally of the table, the spacing corresponding to the paper aperture spacing and each member, yieldingly urged toward a face of said paper to engage through registering apertures in the paper confining a portion intervening said yielding members upon the table and means for simultaneously retracting said members for paper disengagement.

[Claims 6 to 9 not printed in the Gazette.]

1,212,510. GAS-BURNER. MAX KRAVITZ, Philadelphia, Pa. Filed May 2, 1916. Serial No. 94,964. (Cl. 158—115.)



In a gas stove or range, the combination, with a main burner, an auxiliary burner inclosed thereby, a main supply pipe, feed conduits leading to the respective burners, a valve casing provided with an inlet port communicating with the main gas supply pipe and with discharge ports communicating respectively with said feed conduits, and a plug valve mounted in said casing and provided with a diametrically extending port for connecting said inlet port with the discharge port leading to the main burner conduit, said plug having also a vertical feed port opening through one of its sides and its bottom, said port being adapted for connecting the inlet passage of the valve casing with the auxiliary burner feed conduit, said valve passages being so disposed as to adapt the valve to be moved to different feed positions to connect one or the other of said burners with the main supply pipe and to a third position to cut off communication between both burners and the main supply pipe.

1,212,511. KEY-RING HOLDER. AUGUST KROPP, Bryan, Tex. Filed Dec. 8, 1915. Serial No. 65,763. (Cl. 24—3.)



1. A key ring holder comprising a plate bent oppositely at its ends to form two oppositely extending hooks, a

spring within one hook, and a lever pivotally connected with the plate and having one end in constant engagement with the spring to positively hold it in its upper and lower positions, and the other end operating to close one of the hooks when in one of its positions.

2. A key ring holder comprising a strip of spring metal, the ends of which are bent into hooks, the center of which has a slot, one hook having an inwardly extending stud and the other having a hole through its end, a spring secured within one hook with its free end between the slot and stud, and a lever extending through the slot pivotally connected to the holder with one end constantly bearing upon the spring and the other end having a pin in position to pass through the hole in the end of one hook.

1,212,512. FOLDING CRIB OR CRADLE. ANTON KRUGER, Crafton, Pa. Filed Mar. 7, 1916. Serial No. 82,604. (Cl. 5—58.)



1. A folding crib or cradle comprising a rectangular frame having corner extensions, side members hinged to said frame capable of folding inwardly, a pair of supporting legs at each end of said frame pivotally connected with said extensions, each of said supporting legs formed of a pair of hinged sections foldable outwardly, ends carried by said pairs of legs and foldable outwardly therewith and said ends of legs capable of folding under said frame.

2. A folding crib or cradle comprising a rectangular frame having corner extensions, side members hinged to said frame capable of folding inwardly, a pair of supporting legs at each end of said frame pivotally connected with said extensions, each of said supporting legs formed of a pair of hinged sections foldable outwardly, ends carried by said pairs of legs and foldable outwardly therewith and said ends of legs capable of folding under said body, and means for maintaining said legs in an upright position when said side members and ends are set up in an upright position.

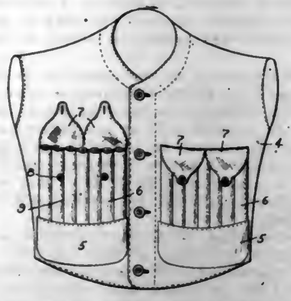
3. A folding crib or cradle comprising a rectangular frame having corner extensions, side members hinged to said frame capable of folding inwardly, a pair of supporting legs at each end of said frame pivotally connected with said extensions, each of said supporting legs formed of a pair of hinged sections foldable outwardly, ends carried by said pairs of legs and foldable outwardly therewith and said ends of legs capable of folding under said frame, and detachable means for maintaining said legs in an upright position when said side members and ends are set up in an upright position.

4. A foldable crib or cradle comprising a rectangular frame provided with corner extensions, side members pivotally connected to said frame and foldable inwardly, two pairs of supporting legs, means for pivotally connecting a pair of supporting legs with said extensions, each of said supporting legs consisting of an upper and a lower section hinged together and with the upper section foldable outwardly, an end connected to the upper section of each pair of legs, said pivots and extensions providing for folding said legs with said ends under said frame.

5. A folding crib or cradle comprising a rectangular frame provided with corner extensions, two pairs of supporting legs, means for pivotally connecting a pair of supporting legs with said extensions, each of said pair of supporting legs consisting of an upper and a lower section hinged together and with the upper section folding outwardly, an end connected to the upper sections of each pair of legs, side members pivotally connected to said frame and foldable inwardly, said pivots and extensions providing for folding said legs with said ends under said frame, and means for maintaining said legs extended.

[Claims 6 and 7 not printed in the Gazette.]

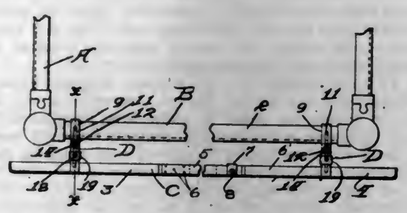
1,212,513. AMMUNITION-POCKET FOR HUNTING-COATS AND THE LIKE. RICHARD A. LANGERMAN, Louisville, Ky. Filed Aug. 11, 1916. Serial No. 114,360. (Cl. 224—14.)



1. In a hunting coat or jacket, a body portion, a strip of material secured to the said garment by parallel fastenings, spaced apart and the material between the fastenings being loose and forming loops, said loops with the garment constituting pouches for the reception of ammunition, covers for the upper ends of said pouches, and a cup inclosing or embracing the lower ends of said pouches and in spaced relation to the lower ends of said pouches and to the sides to permit the removal of ammunition from the bottom of said pouches, said cup constituting supporting means for the ammunition.

2. In a hunting coat or jacket, a body portion, a strip of material secured to the said garment by parallel fastenings, spaced apart and the material between the fastenings being loose and forming loops, said loops with the garment constituting pouches for the reception of ammunition, covers for the upper ends of said pouches, a cup secured to the garment and embracing the lower ends of the said pouches, said cup having its upper edge standing away from the ends and surfaces of the said pouches and forming a clearance for the insertion of the hand of an operator.

1,212,514. GUARD. GEORGE W. LATHROP, St. Paul, and HERMAN F. ABELS, Mahtomedi, Minn. Filed Jan. 15, 1915. Serial No. 2,336. (Cl. 5—41.)

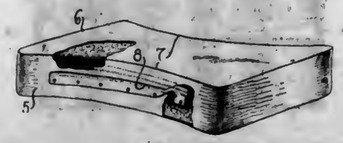


1. In combination with an article of furniture having a lateral supporting member, a guard rail consisting of a pair of sections, one of said sections having an extension and the other of said sections slidably disposed upon said extension, said sections and said extension having their edges disposed in the same vertical plane to form a buffer surface of substantially unbroken continuity, and supports extending laterally from said guard rail and detachably secured to said supporting member.

2. As a new article of manufacture, a guard rail for furniture, comprising, a bar, a supporting member having a hook at one end and an elongated opening extending substantially throughout the length thereof, and a pair of members reciprocably disposed and adapted to be secured within the opening, one of said members being secured to said guard rail and the other of said members coacting with the hook end of said support to secure it to an object.

3. In combination with a bed stead having a horizontal supporting angle iron bar, a guard rail positioned alongside of said bar, and a supporting member holding said rail away from said bar, consisting of an arm having a hook on one end adapted to engage over an edge of said bar and slotted longitudinally, a shoulder piece secured through said slot in selected position against a side of said bar to secure said arm thereon, and a clip fastened to said guard rail and secured through said slot to hold said rail in adjusted positions on said arm to and from said supporting angle bar.

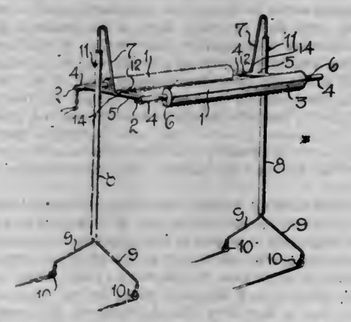
1,212,515. PILLOW. SHELDON LEAVITT, Chicago, Ill. Filed Apr. 27, 1916. Serial No. 93,939. (Cl. 5—15.)



1. A pillow having a case consisting of opposed body walls and a marginal wall of uniform width connected to the edges of said body walls, the opposite longitudinal portions of the marginal wall and the corresponding edges of the body walls being inwardly curved from the opposite ends of the pillow to its center and one of the longitudinal portions of the marginal wall having a slit therein and closure means for the same, and a suitable packing adapted to be inserted within the case or removed therefrom through said slit, said case when packed assuming a box-like form having concave longitudinal edges, substantially as and for the purpose specified.

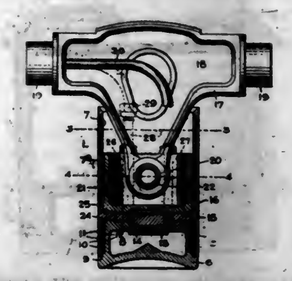
2. A pillow having a case including opposed body walls and a marginal wall connected to the body walls at their edges, one of the longitudinal edges of the body walls and the corresponding portion of shid marginal wall being concavely curved from the opposite ends of the pillow to its center, said marginal wall being provided with a slit and closure means therefor, and suitable packing material adapted to be inserted in or removed from the case through said slit, said case when packed assuming a box-like form having a concave side wall, as and for the purpose specified.

1,212,516. QUILTING-FRAME. VALLIE D. LEMONS, Pontotoc, Miss. Filed Mar. 20, 1915. Serial No. 15,923. (Cl. 112—14.)



A device of the character described comprising uprights having their upper end portions tubular, said uprights being movable upon the surface supporting the same, an inverted V-shaped member coacting with each of the uprights, said member being resilient, one stem thereof being telescopically engaged with the upright, a cross bar secured to the lower end of the second stem, and rollers provided with engaging means and rotatably supported by the cross bars.

1,212,517. ENGINE-PISTON. HERMANN LEMP and HENRY W. STOCK, Erie, Pa., assignors to General Electric Company, a Corporation of New York. Filed June 1, 1915. Serial No. 31,377. (Cl. 123—193.)



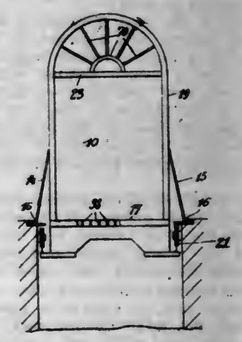
1. In a piston of the trunk type, the combination of a body member, a head fastened thereto, packing rings between the head and body member, a cup-shaped member fitted within the body member and fastened thereto, and a connecting member pivotally joined to the cup-shaped member.

2. The combination of a piston of the trunk type having a hollow head, a member fitted within the wall thereof and resting on the head, bolts securing said member to the head, some of said bolts being hollow and communicating with the space in the head for conveying cooling medium, a cross-head, and means pivotally connecting the cross-head to said member.

3. The combination of a piston of the trunk type comprising a head and a body member, a cup-shaped member fitted within the body member, bolts connecting said head, body member, and cup-shaped member together, a cross-head, and means pivotally connecting the cross-head to the cup-shaped member.

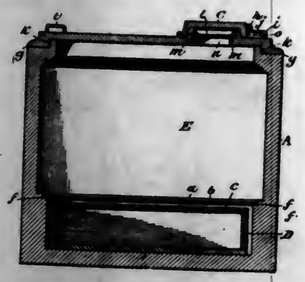
4. The combination of a piston of the trunk type comprising a hollow head and a body member, a cup-shaped member fitted within the body member, bolts connecting said head, body member, and cup-shaped member together, some of said bolts being hollow and communicating with the space in said head for conveying cooling medium, a cross-head, and a wrist pin pivotally connecting it to the cup-shaped member.

1,212,518. SIDEWALK-ELEVATOR. JENS S. LINDHOLM, Brooklyn, N. Y. Original application filed Sept. 22, 1915, Serial No. 51,923. Divided and this application filed Feb. 15, 1916. Serial No. 78,367. (Cl. 187—1.)



A sidewalk elevator comprising a platform and bow irons, a safety open-work top between said bow irons and protecting bars secured at the front of the said elevator to the one bow iron thereof.

1,212,519. GRAVE-VAULT. ANTON A. LINQUIST, Garfield township, Clay county, Kans. Filed Apr. 3, 1916. Serial No. 88,750. (Cl. 72—7.)



In a grave vault the combination with a main receptacle constructed of any weather and water resisting material and provided with a cover of a similar material, the secondary receptacle within the main receptacle for reception of the casket containing the corpse, said secondary receptacle being also constructed of a weather and water resisting material, the side walls thereof spaced from the walls of said main receptacle, the cover thereto provided with a transparent section, the chamber above said secondary receptacle, the transparent partition between said space and secondary receptacle, the opening through the cover to the main receptacle into said chamber, the transparent plate closing said opening and the protecting cover over said plate, all as and for the purpose set forth.

1,212,520. SPREAD-ROLLER. FRANK W. LOGSDON, Colfax, Iowa. Filed June 26, 1916. Serial No. 105,861. (Cl. 54—73.)



1. In a device of the class described, a frame having opposite spaced resilient side members, an end member integral therewith, a roller rotatably supported between said side members, a second parallel roller rotatably supported between said side members and detachably mounted thereon, and detachable means for locking said side members against spreading.

2. In a device of the class described, a frame having opposite spaced resilient side members, an end member integral therewith, a roller rotatably supported between said side members, a second parallel roller rotatably supported between said side members and detachably mounted thereon, and detachable means for locking said side members against spreading, said means and the ends of said side members being adapted to receive between them a spreader strap, which prevents the removal of said means.

3. A spread roller comprising a frame having an end member, opposite spaced resilient side members, a pair of rollers rotatably supported between said side members in spaced relation, one of said rollers being removable when the side members are spread apart, said side members having free ends inclined toward each other, and then extended away from said end member in parallel relation with each other, and then extended toward each other in alinement with each other and parallel with said end member, and a retaining device comprising opposite spaced side members and connecting end members, said retaining device being adapted to receive the parallel ends of said side members, so that a spreader strap may be inserted between the side of the retaining device, the last described parallel portions of the side members, and the opposite inwardly extending portions of the free ends of said side members, whereby the spreader strap will hold said retaining device against removal from said frame.

1,212,521. COIN-BOX. ALBERT LONSON, Callaway, Minn. Continuation in part of application Serial No. 33,779, filed June 12, 1915. This application filed Mar. 16, 1916. Serial No. 84,636. (Cl. 133—11.)



1. A coin box comprising a body member or receptacle and a nest for the coins having spaced transverse grooves adapted to receive the coins with each groove separated at the top edges from each neighboring groove by a narrow ridge or wall, and said nest also having a substantially central longitudinal groove in the face remote from the first-named grooves and intersecting said first-named grooves up to the separating narrow ridges or walls and dividing the nest into two longitudinal sections joined by said narrow ridges or walls bridging the longitudinal groove, and a bar of suitable cross-section and of a length substantially coincident with the longitudinal groove and constituting a partition dividing each transverse groove into coin receiving pockets between the bar and the sides of the body member or receptacle.

2. A coin box comprising a body member or receptacle with a nest therein for coins having a longitudinal series of transverse grooves in one face and a longitudinal groove in the face remote from the first-named grooves and intersecting them from their bottom portions for a portion of the distance to the tops of the grooves, and a bar formed separately from the nest and substantially coincident in length with and lodged in the longitudinal groove to constitute a partition common to the first-named grooves and dividing each of them into coin-receiving pockets between the bar and the sides of the body member or receptacle.

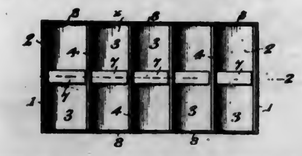
3. A coin box comprising a body member or receptacle with a block therein formed on the exposed face into a longitudinal series of transverse grooves shaped to receive coins on edge and provided with a longitudinal groove of substantially rectangular cross-section in the face remote from the coin receiving grooves and of a height to intersect said coin receiving grooves, and a bar of substantially rectangular cross-section lodged in the longitudinal groove and of a length to be common to a plurality of the transverse grooves and constituting a partition dividing each transverse groove into coin receiving pockets between the bar and the sides of the body member or receptacle.

4. A coin holding means, comprising a block having a series of transverse grooves in one face shaped to receive coins on edge and a groove in the opposite face extending longitudinally of the series and intersecting or cutting the first-named grooves from the bottoms of the latter toward the tops thereof and stopping short of the tops of the grooves, and a bar of a length equal to the combined widths of a plurality of the transverse grooves and adapted to the longitudinal groove to constitute a partition for the transverse grooves dividing them into coin receiving pockets between the bar and the ends of the transverse grooves.

5. The combination with a tray-like body, of a nest therein having spaced parallel transversely arranged grooves forming pockets, the said nest being formed with a slide-way medially thereof and longitudinally disposed, and a reversible partition insertible in the slide-way and having a plurality of notches in one longer edge to register with the pockets.

[Claim 6 not printed in the Gazette.]

1,212,522. COIN-BOX. ALBERT LONSON, Callaway, Minn. Original application filed Mar. 16, 1916, Serial No. 84,636. Divided and this application filed Sept. 11, 1916. Serial No. 119,524. (Cl. 133—11.)



1. A coin box comprising a body member or receptacle and a nest for coins having spaced transverse grooves adapted to receive the coins with each groove separated at the top edges from each neighboring groove by a narrow ridge or wall, and said nest also having a substantially central longitudinal groove in the face remote from the first-named grooves and intersecting the first named grooves up to the separating narrow ridges or walls, and a bar formed separately from the nest and lodged in the longitudinal groove, said bar being of angular cross-section with its long faces plane.

2. A coin box comprising a body member or receptacle, and a nest having spaced transverse grooves adapted to receive coins with each groove separated at the top edges from each neighboring groove by a narrow ridge or wall, and said nest also having a substantially central longitudinal groove in the face remote from the first named grooves and entering said first named grooves from the bottoms thereof up to the separating narrow ridges or walls, and a permanently located bar formed separately from the nest and lodged in the longitudinal groove up to the narrow ridges or walls separating the grooves, said bar being of substantially constant cross-section throughout and constituting a partition permanently dividing each transverse groove into coin receiving pockets between the bars and the sides of the body member or receptacle.

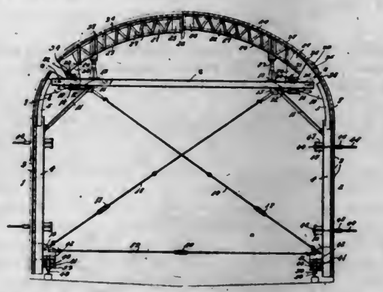
3. A coin box comprising a body member or receptacle with a nest therein for coins having a longitudinal series of transverse grooves in one face and a longitudinal groove in the face remote from the first named grooves and intersecting the latter from their bottom portions for a portion of the distance to the tops of the grooves, and a bar of substantially constant cross-section throughout with all its long faces plane, said bar being formed separately from the nest and substantially coincident in length with and permanently lodged in the longitudinal groove to constitute a fixed partition common to the first named grooves and dividing each of them into coin receiving pockets between the bar and the sides of the body member or receptacle.

4. A coin box comprising a body member or receptacle with a nest therein for coins having a longitudinal series of transverse grooves in one face and a longitudinal groove of substantially rectangular cross section in the face remote from the first named grooves and intersecting the latter from their bottom portions for a portion of the distance to the tops of the grooves, and a bar of substantially rectangular cross section and longitudinally plane throughout and of a length, width and thickness corresponding to the similar dimensions of the longitudinal groove and permanently lodged therein to constitute a fixed partition common to the first named grooves and dividing each of them into coin receiving pockets between the bar and the sides of the body member or receptacle.

5. A coin receiving means comprising a block having series of transverse grooves in one face adapted to receive coins on edge and a groove in the opposite face extending longitudinally of the series and intersecting or cutting the first named grooves from the bottoms of the latter toward the tops thereof and stopping short of the tops of the grooves, and a bar of a length equal to the combined widths of a plurality of the transverse grooves and of substantially constant cross section corresponding to the largest cross-section of the longitudinal groove, said bar being permanently lodged in the longitudinal groove and constituting a fixed partition for the transverse grooves dividing them into coin receiving pockets between the bar and the ends of the transverse grooves.

[Claim 6 not printed in the Gazette.]

1,212,523. TUNNEL-MOLD FORM. HOWARD B. LOXTERMAN, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Hoboken, Pa., a Corporation of New Jersey. Filed Apr. 25, 1916. Serial No. 93,865. (Cl. 25—131.6.)



1. A tunnel mold comprising a pair of side mold forms, a beam carried by the side forms connecting the upper ends thereof and having a slip connection with the side forms, an arch form above the side forms, and means for adjustably supporting the arch form upon the beam whereby the arch form may be raised and lowered.

2. A tunnel mold comprising a pair of side mold forms, a beam carried by the side forms connecting the upper ends thereof and having a slip connection with the side forms, means secured to the beam for moving the side forms with respect to the beam, an arch form above the side forms, and means for adjustably supporting the arch form upon the beam whereby the arch form may be raised and lowered.

3. A tunnel mold comprising a pair of side mold forms, a beam carried by the side forms connecting the upper ends thereof and having a slip connection with the side forms, an arch form adjustably supported upon the beam, wheels for supporting the side forms mounted for relative lateral movement therewith, and means secured to the beam for moving the side forms with respect to the beam.

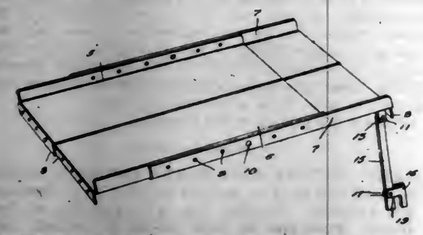
4. A tunnel mold comprising a pair of side mold forms, a beam carried by the side forms connecting the upper ends thereof and having a slip connection with the side forms, an arch form adjustably supported upon the beam, wheels for supporting the side forms mounted for relative lateral movement therewith, and means secured to the upper and lower ends of each side form connecting with the rear and fore ends of the beam respectively, for moving the side forms with respect to the beam.

5. A tunnel mold comprising a pair of side forms, a beam carried by the side forms connecting the upper ends thereof and having a slip connection with the side forms, an arch form supported upon the beam, diagonal braces secured to the side forms and having a slip connection with the beam and means carried by the beam for moving the side forms and braces with respect to the beam.

1,212,524. APRON. CHARLES T. LUCAS, Cimarron, Kans. Filed Aug. 19, 1916. Serial No. 115,823. (Cl. 193—40.)

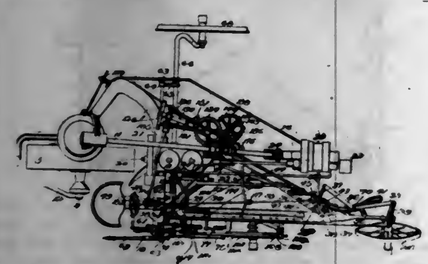
An apron including two sections, each section being made from a single sheet of material and having one longitudinal wall bent at right angles thereto and the opposite ends bent at right angles to the wall and aper-

tured, said sections when assembled fitting telescopically for transverse adjustment, and fastening devices entering



the apertures of the bent ends to hold the sections in adjusted position.

1,212,525. TRACTOR. ALEXANDER MCCREERY, Hiawatha, Kans. Filed May 25, 1915. Serial No. 30,404. (Cl. 21—114.)



1. In a machine of the character described, a main frame, front and rear wheels, an intermediate land wheel disposed constantly parallel to the longitudinal plane of the frame, the several wheels being so disposed that in any position of the front and rear wheels prolongations of the axes of all the wheels will intersect at a point coinciding with the center about which the machine is adapted to turn, and connecting means between the front and rear wheels to effect a simultaneous turning thereof in opposite directions.

2. In a machine of the character described, a steering wheel having an arm projecting laterally therefrom, a longitudinally disposed cam, a member directed in its movements by the said cam, and connecting means between such member and arm for moving the latter to turn the steering wheel.

3. In a machine of the character described, the combination of a steering wheel having an arm projecting laterally therefrom, a longitudinally disposed cam, a member mounted in such cam, connecting means between the member and arm of the steering wheel, and means for moving the member along the cam.

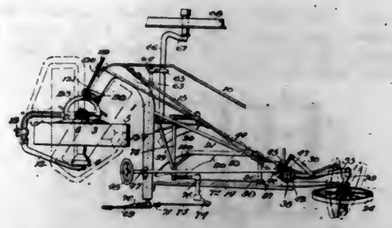
4. In combination, a steering wheel having a laterally extending arm, a cam guide, a member mounted in the cam guide, a link connecting such member with the lateral arm, a second link connected with the member, and means for moving the second link to shift the member along the cam guide.

5. In combination, a steering wheel having a lateral arm, a guide formed with a cam slot, a member arranged to operate in the cam slot, a link connecting the member with the arm, a second link connected with the member, and means for operating the second link to move the member along the cam slot.

[Claims 6 to 26 not printed in the Gazette.]

1,212,526. WHEEL-PLOW. ALEXANDER MCCREERY, Hiawatha, Kans. Original application filed May 25, 1915, Serial No. 30,404. Divided and this application filed Sept. 22, 1915. Serial No. 51,958. (Cl. 97—36.)

1. In a machine of the character described, a main frame, front and rear wheels positively connected for simultaneous adjustment to admit of the machine making a short turn, and shovel plows mounted upon the main frame and provided with longitudinally curved landsides to admit of the machine turning with a minimum amount of resistance.



2. In combination, a frame, a shaft having a crank portion, a beam mounted upon the crank portion of the shaft, a second beam, a two-part bracket having corresponding ends brought together about the crank portion of the shaft and having the parts attached to the respective beams, and means for turning the shaft to effect a raising or a lowering of the beams.

3. In combination, a crank shaft, a beam mounted upon the crank portion of the crank shaft, a second shaft paralelling the crank shaft, connecting means between the two shafts to cause them to turn together, a third shaft having a crank axle upon which is mounted a supporting wheel, gearing between the second and third shafts, and an operating lever connected with the second shaft.

4. In combination, a crank shaft, a beam mounted upon the crank portion of the crank shaft, an arm projecting from the crank shaft, a second shaft, an operating lever mounted upon the second shaft to turn therewith, an adjustable connection between the operating lever and arm of the crank shaft, a latch mounted upon the operating lever, a toothed segment to be engaged by the latch, a tappet for operating the latch and adapted to be thrown into or out of the path thereof, and a support for the tappet.

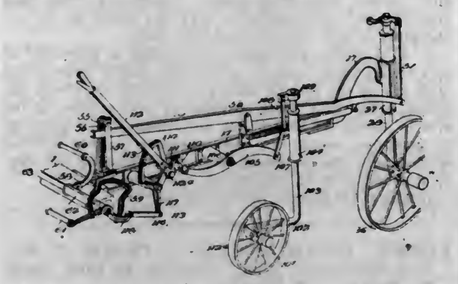
5. In combination, a crank shaft having an arm projecting therefrom, a beam mounted upon the crank shaft, a second shaft having an arm projecting therefrom, an operating lever secured to the second shaft, a toothed segment, a latch mounted upon the operating lever and adapted to engage the toothed segment, a support having yieldable connection with the second shaft, a tappet mounted upon the support and adapted to be thrown into and out of the path of the latch, a third shaft having a crank portion, and connecting means between the crank portion of the third shaft and the arm of the second shaft for turning the latter whether the third shaft is turned to the right or to the left.

[Claim 6 not printed in the Gazette.]

1,212,527. GAGE-WHEEL-ADJUSTING MECHANISM. ALEXANDER MCCREERY, Hiawatha, Kans. Original application filed May 25, 1915, Serial No. 30,404. Divided and this application filed Sept. 22, 1915. Serial No. 51,959. (Cl. 97—36.)

1. In combination, a main frame, a standard mounted upon the main frame and adapted to have a vertical movement imparted thereto and provided at its lower end with a crank axle upon which a gage wheel is mounted, a lever mounted upon the main frame, a link connection between the lever and standard, a toothed segment pivotally mounted on the main frame, an operating lever eccentrically pivoted upon the toothed segment and having connection with the first-mentioned lever, a latch mounted upon the operating lever and adapted to engage the toothed segment, and means mounted on the main frame eccentrically to and operatively connected with the segment for adjusting the same in its own plane.

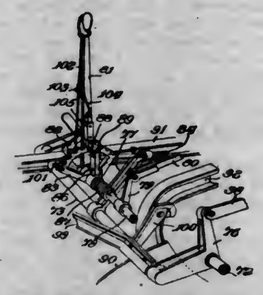
2. In combination, a vertically adjustable gage wheel, a lever having connection with the gage wheel to effect vertical adjustment thereof, a pivotally mounted toothed segment having a fixed center of rotation, an operating lever pivoted eccentrically upon the toothed segment and having connection with the first-mentioned lever, a latch mounted upon the operating lever and adapted to engage the toothed segment to lock the lever to the segment for movement therewith, pedals, and connecting means between the pedals and the toothed segment.



3. In combination, a main frame, a vertically adjustable supporting member therefor, a lever fulcrumed intermediate its ends upon the main frame and connected at its front end with the vertically adjustable supporting member, a toothed segment pivotally mounted on the main frame in rear of said lever, an operating lever pivoted eccentrically upon the said segment and having connections with the rear end of the first-mentioned lever, a latch carried by the operating lever to lock the same to the segment for movement therewith, an arm depending from the segment, a rocking member mounted upon the main frame in rear of the segment, a link connecting said member with the arm depending from the segment, and means for actuating said rocking member.

4. In combination, a main frame, supporting wheels mounted upon the main frame and adapted to be adjusted vertically, a beam having connection with one of the supporting wheels, locking means for the beam, a lever having connection with the remaining supporting wheel, an operating lever having connection with said first mentioned lever, a toothed segment pivotally mounted and having the operating lever pivotally mounted thereon, a latch carried by the operating lever and adapted to engage the toothed segment, pedals having connection with the toothed segment, and a cam having connection with the pedals and adapted to operate the locking means for the before-mentioned beam.

1,212,528. LEVER AND LOCKING MECHANISM. ALEXANDER MCCREERY, Hiawatha, Kans. Original application filed Sept. 22, 1915, Serial No. 51,958. Divided and this application filed Apr. 25, 1916. Serial No. 93,477. (Cl. 74—39.)



1. In combination, a shaft, an operating lever connected with the shaft, a toothed segment, a latch mounted upon the operating lever and adapted to engage the toothed segment, a tappet adapted to release the latch from the toothed segment whereby the lever and shaft may be moved, and means for operating the tappet.

2. In combination, a shaft, an operating lever connected with the shaft, a toothed segment, a latch mounted upon the operating lever and adapted to engage the toothed segment, a support, a tappet mounted upon the support and adapted to be thrown into and out of the path of the latch for actuating the latter when it is required to disengage the latch from the toothed segment to admit of the operating lever and shaft moving, and means for operating the tappet.

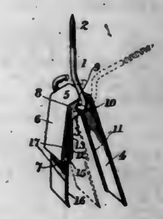
3. In combination, a shaft, an operating lever mounted upon the shaft, a toothed segment, a latch mounted upon the operating lever and adapted to engage the segment, a second latch mounted upon the lever and adapted to engage the rear end of the segment, a tappet adapted to raise the first-mentioned latch to release the same from the segment, and means for operating the tappet.

4. In combination, a shaft, a lever mounted upon the shaft, a toothed segment, a latch mounted upon the lever and adapted to engage the segment, a second latch pivoted to the lever and adapted to engage the rear end of the segment, a tappet having a yieldable connection with the shaft and adapted to engage the first-mentioned latch to release the same from engagement with the segment, and means for rotating the shaft.

5. In combination, a shaft, a lever mounted upon the shaft, a segment, a latch mounted upon the lever and adapted to engage the segment, a second latch pivoted to the lever and adapted to engage the rear end of the segment, a tappet carried by the shaft and constructed to ride under the first-mentioned latch to release the same from the segment and to engage the side of said latch whereby to move the latch and the lever rearwardly, and means for rotating the shaft.

[Claim 6 not printed in the Gazette.]

1,212,529. GARMENT-SUPPORTING CLASP. JOHN MCILVENNY, Norwich, Conn. Filed Nov. 17, 1915. Serial No. 62,012. (Cl. 24—253.)



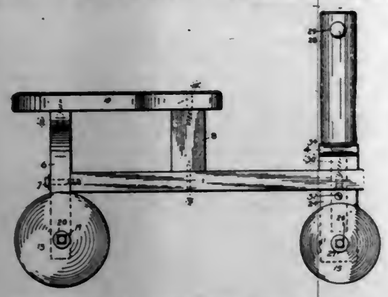
1. A clasp comprising a rigid frame having spaced arms, one of which has its extremity turned inward toward the other arm to form a fixed jaw, a movable jaw member pivoted at one end between the arms of the frame and having an outwardly offset portion intermediate of its ends and opposite the fixed jaw, said offset portion constituting a movable jaw, said pivoted member also having a finger piece extending beyond the offset, and resilient means for pressing the movable jaw against the fixed jaw.

2. A clasp comprising a rigid frame having spaced arms, one of which constitutes a fixed jaw, a pivotal axle carried by the frame and arranged between the arms, a movable jaw member pivoted on said axle, and a spring coiled about the axle and having its ends bearing against the movable jaw member and one arm of the frame for pressing said movable jaw member against the other arm of the frame.

3. A clasp comprising a rigid frame having spaced arms, one of which constitutes a fixed jaw, and lateral flanges in the crotch at the junction of said arms, a pivotal axle passed through said flanges, a movable jaw member pivoted on said axle between said flanges, and a spring coiled about the axle and having its ends bearing

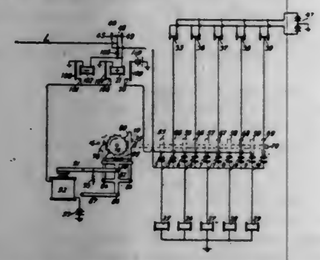
against the movable jaw member and one arm of the frame for pressing said movable jaw member against the other arm of the frame.

1,212,530. CHILD'S PUSH-CAR. CHARLES J. MCKNIGHT, Greensburg, Pa., assignor to Greensburg Swing Company, Greensburg, Pa., a Corporation of Pennsylvania. Filed Oct. 28, 1916. Serial No. 128,252. (Cl. 21—191.)



A child's push car comprising a body portion, a vertically disposed support secured against the rear end thereof and projecting above and below said body portion, rear wheels supported from the lower end of said support, an upright mounted upon and connected with said body portion, a seat member connected with the top of said support and with the top of said upright, a steering post extending down through the forward part of said body portion, and a pair of front wheels connected with said steering post.

1,212,531. SELECTING MECHANISM. FRED R. MCMURRY, Westwood, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Feb. 26, 1915. Serial No. 10,673. (Cl. 177—380.)



1. A selecting mechanism comprising a plurality of switches, cams for actuating said switches, an electromagnet, and step-by-step apparatus coöperating therewith and controlled by the cam-actuated switches for effecting the rotation of said cams.

2. A selecting mechanism comprising a plurality of sets of switches, current-polarity controlling means coöperating with one of said sets of switches, an electromechanism coöperating with another of said sets of switches, mechanism for simultaneously actuating switches from both sets, and an electromagnet controlled by the first of said sets of switches for operating said mechanism.

3. A selecting mechanism adapted for use as a current impulse transmitter and receiver comprising a plurality of sets of switches, impulse controlling circuit connections coöperating with said switches of one of the sets, electromechanism coöperating with said switches of another of the sets, a device for simultaneously operating a plurality of said switches, there being at least one switch from at least two sets and an electromagnet for operating said device.

4. A selecting mechanism for producing a succession of current impulses comprising a source of current, a plurality of switches coöperating therewith and adapted to be operated in succession, a plurality of cams for actuating said switches, an electromagnet and step-by-step apparatus coöperating therewith for rotating said cams a plurality of steps to actuate said switches successively, and current controlling means coöperating with said switches and said source to vary the effect of the cooperation of said switches and said cams.

5. A selecting mechanism comprising a plurality of sets of switches, current controlling means coöperating with one of the sets to form a succession of current impulses, a selecting device coöperating with another of the sets to selectively control the performance of a plurality of functions, means for simultaneously closing switches of both sets, and an electromagnet for insuring the step-by-step operation of said switch closing means.

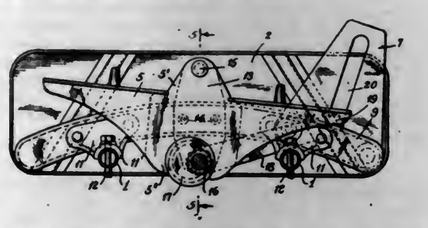
[Claim 6 not printed in the Gazette.]

1,212,532. DENTAL MOUNTING. CHARLES C. MANNING, Minneapolis, Minn. Filed Oct. 20, 1916. Serial No. 126,711. (Cl. 32—12.)



A dental backing having a tubular stem, a tooth facing, means for securing the tooth facing to said backing, and a bridge having a bore into which the tubular stem of said backing is inserted and upset to secure the backing to the bridge.

1,212,533. CAR-SEAT. RICHARD B. MARSH, Philadelphia, Pa., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Aug. 10, 1915. Serial No. 44,674. (Cl. 155—2.)



1. In a car-seat, the combination of a pair of cross rails, an end plate secured to the aisle ends of the same, a curved track supported on said rails, facing outwardly, and spaced inwardly from said plate, a back-supporting standard extending between said plate and track, having bearing means therefor mounted on said track, a seat-cushion extending above said track, a rocker supporting said seat, and means for operating said rocker, comprising a lever connected to said standard, and extending between said standard and end plate, substantially as set forth.

2. In a car-seat, the combination of a pair of cross rails, means for supporting the same, comprising a pedestal spaced inwardly from the aisle end of said rails, an aisle end plate secured to the ends of said rails, brackets secured on said rails substantially above said pedestal, a curved track secured on said brackets, a back-supporting standard extending between said plate and track, having supporting means therefor extending inwardly therefrom, movably mounted on said track, a seat-cushion extending over said track into close proximity to said standard, rocker means supporting the same supported from said cross rails above said pedestal, and operating connections between said rocker means and standard, substantially as set forth.

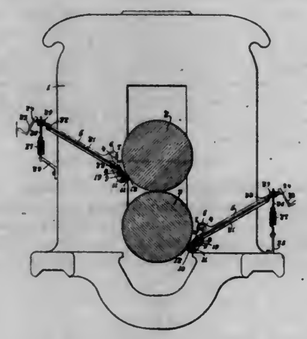
3. In a car-seat, the combination of a pair of cross rails, means for supporting the same, comprising a pedestal adjacent the aisle end of said rails, an aisle end plate secured to the ends of said rails, a curved track supported on said rails, inwardly from said end plate, a back, a back-supporting standard having supporting means therefor extending inwardly therefrom, movably mounted on said track, a seat-cushion extending above said track, rocker means supporting the same above said cross rails, a lever mounted on the outer side of said standard, having pin and slot connection therewith, a rock-shaft operated by said lever, and means for operating said rocker means when said rock-shaft is operated, substantially as set forth.

4. In a car-seat, the combination of a pair of cross rails, means for supporting the same, comprising a pedestal adjacent the aisle end of said rails, an aisle end plate secured to the ends of said rails, a curved track supported on said rails, approximately over said pedestal, a seat cushion above said track, a back, of less length than said seat cushion, a standard secured to the end of said back and extending around the end of said seat cushion, rollers extending inwardly from said standard, supported on said track, a rocker supporting said seat, and means for operating said rocker, comprising a lever having a sliding connection with said standard, between said standard and end plate, substantially as set forth.

5. In a car-seat, the combination of a curved channel track having its flanges directed outwardly, a pair of brackets secured to and supporting said track, adapted to be secured on a pair of cross rails, a bracket centrally secured to the rear surface of the vertical web of said track, and a rocker pivotally secured to said last-named bracket, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

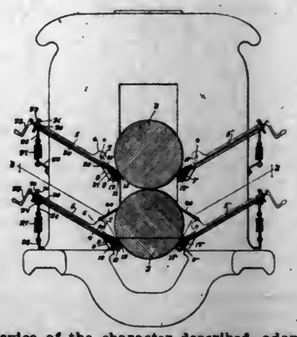
1,212,534. ROLL-POLISHER. ARTHUR J. MASKREY, Canton, Ohio. Filed Nov. 15, 1915. Serial No. 61,470. (Cl. 80—1.)



1. In a roll polishing device, in combination with a rolling mill, a pair of levers pivoted upon the housings of said mill, a guide trough carried between the lower extremities of said levers, a pair of polishing blocks slidably mounted within said guide trough, means connected to the upper extremities of said levers for holding said polishing blocks in contact with the face of the roll, and means for simultaneously moving said polishing blocks toward or away from each other.

2. In a roll polishing device, in combination with a rolling mill, a pair of levers pivoted upon the housings of said mill, a guide trough carried between the lower extremities of said levers, a pair of polishing blocks slidably mounted within said guide trough, the inner extremities of said polishing blocks being beveled and adapted to fit together, means connected to the upper extremities of said levers for holding said polishing blocks in contact with the face of the roll and means for moving said polishing blocks longitudinally within said guide trough.

1,212,535. ROLL-POLISHER. ARTHUR J. MASKREY, Canton, Ohio. Filed Jan. 28, 1916. Serial No. 74,768. (Cl. 80—1.)



1. A device of the character described, adapted to polish the surface of a roll during the operation of the mill, said device comprising in combination with said roll, a plurality of polishing blocks located at each side of the roll, said blocks being located in staggered relation to each other.

2. A device of the character described adapted to polish the surface of a roll during the operation of the mill, said device comprising in combination with said roll, a plurality of polishing blocks mounted upon a frame upon one side of said roll and a plurality of grinding blocks mounted upon a frame at the other side of said roll.

3. A device of the character described adapted to polish the surface of a roll during the operation of the mill, said device comprising in combination with said roll, a plurality of polishing blocks mounted upon a frame upon one side of said roll and a plurality of grinding blocks mounted upon a frame at the other side of said roll, and individual means for moving different combinations of said blocks into contact with the roll.

4. A device of the character described adapted to polish the surface of a roll during the operation of the mill, said device comprising in combination with said roll, a plurality of grinding blocks mounted at one side of said roll and adapted to grind the surface of the roll adjacent each end thereof and a plurality of polishing blocks mounted at the other side of said roll and adapted to polish the entire surface of the roll.

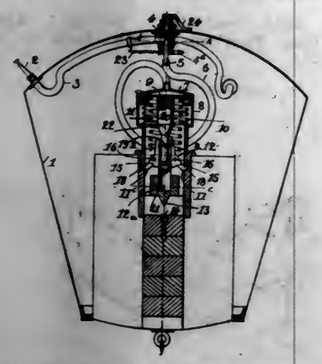
5. A device of the character described adapted to polish the surface of a roll during the operation of the mill, said device comprising in combination with said roll, a frame located at one side of the roll, grinding blocks mounted in said frame adjacent each extremity of the roll, a second frame mounted at the opposite side of the roll, a plurality of polishing blocks mounted in said second frame and extending the entire length of the roll, and means for holding said blocks in contact with said roll.

[Claims 6 to 13 not printed in the Gazette.]

1,212,536. FIRING MECHANISM FOR AUTOMATIC SUBMARINE MINES. GIUSEPPE MATRICARDI, Pallanza, Italy, assignor to Société Harle & Cie., Paris, France, a Corporation of France. Filed Feb. 6, 1911. Serial No. 606,772. (Cl. 102—3.)

1. In a submarine mine, a firing mechanism comprising a reciprocatory part, a detonating hammer and means operated by the reciprocatory part for releasing the hammer, in combination with a chamber in which the reciprocatory part works, a pipe communicating with the said chamber, and yielding means for preventing a movement

of the reciprocatory part before a minimum pressure against the same is attained, a safety cock for preventing water from reaching the chamber, and means for opening the cock after a predetermined period of submersion.



2. In a submarine mine, a firing mechanism comprising a piston, a detonating hammer and means operated by the piston for releasing the hammer, in combination with a closed cylinder in which the piston works, means for trapping air communicating with the cylinder, a frangible member closing said pipe and projecting from the mine and yielding means for preventing the movement of the piston before a minimum pressure against the same is attained.

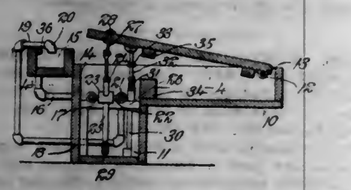
3. In a submarine mine, a firing mechanism comprising a piston, a detonating hammer and means operated by the piston for releasing the hammer, in combination with a closed cylinder in which the piston works, an air-trapping pipe communicating with the cylinder, a frangible member closing said pipe and projecting from the mine and a spring opposing the movement of the piston until a given pressure is exerted thereon.

4. In a submarine mine, a firing mechanism comprising a piston, a detonating hammer and means operated by the piston for releasing the hammer, in combination with a closed cylinder in which the piston works, a water pipe communicating with the cylinder, a frangible member closing said pipe and projecting from the mine, and yielding means for preventing the movement of the piston before a minimum pressure against the same is attained, and a safety cock for preventng water from reaching the cylinder.

5. In a submarine mine, a chamber, an air-trapping pipe communicating therewith and a horn closing the said pipe and projecting from the mine, in combination with a reciprocatory part arranged in the chamber, the projecting horn being provided with a weakened portion, whereby the rupture and the opening of the pipe to water will be caused by an impact against the horn.

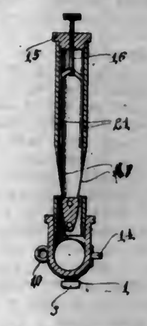
[Claims 6 to 8 not printed in the Gazette.]

1,212,537. STOCK-WATERING DEVICE. VICTOR A. MILLER, Akron, Ohio. Filed Sept. 12, 1916. Serial No. 119,731. (Cl. 119—76.)



In a stock watering device, a trough, a water conduit for conveying water to the trough, a conduit for conveying water from the trough, a normally closed rotary valve in the first conduit, a normally open rotary valve in the second conduit, a stem extending between and connecting the valves for effecting simultaneous rotation thereof, a depressible platform, vertical hollow standards disposed below the platform, plunger rods carried by the platform and slidable vertically in the standards, collars on the rods, coil springs encircling the rods between the collars and the upper ends of the standards, crank arms carried by the said stem and extending radially therefrom in opposite directions, a link pivotally connected with the platform and to one of the crank arms, and a spring connected to the other crank arm and having its other end secured adjacent the standards.

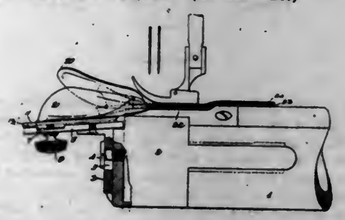
1,212,538. WARNING-SIGNAL. CHARLES F. MILLER, Deepcreek, Wash. Filed July 25, 1916. Serial No. 111,185. (Cl. 116—1.)



1. A warning signal adapted to be operated by fluid pressure, consisting of a tubular sounding member, means for introducing fluid pressure thereto, and a device carried by the said member for removing foreign deposits from the interior surface thereof consisting of a rotatable closure, scraper members carried thereby, and means for spreading said scraper members.

2. A warning signal adapted to be operated by fluid pressure, consisting of a tubular sounding member, means for introducing fluid pressure thereto, and a device carried by the said member for removing foreign deposits from the interior surface thereof consisting of a screw-cap, scraper members carried thereby, a screw-bar mounted in said cap, and pivoted arms secured to said bar and said scraper means.

1,212,539. SEWING-MACHINE FOLDER. GEORGE E. MOLYNEUX, Bayonne, and GEORGE S. GATCHELL, Roselle Park, N. J., assignors to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 1, 1913. Serial No. 751,406. (Cl. 112—10.)



1. A lap-seam felling attachment comprising oppositely curved work-folding portions extending in substantially parallel directions from the receiving to the delivery ends of the folder and two edge-guiding portions arranged one above the other and coöperating with said work-folding portions to make a lap-seam.

2. A folder comprising oppositely curved work-folding portions extending in substantially parallel directions from the receiving to the delivery ends of the folder and edge-guiding portions arranged in overlapping relation and coöperating with said work-folding portions to make a lap-seam, said edge-guiding portions converging toward each other from the receiving to the delivery end of the folder.

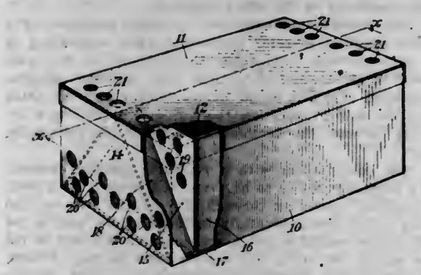
3. A folder comprising oppositely curved work-folding portions extending in substantially parallel directions from the receiving to the delivery ends of the folder, edge-guiding portions coöperating therewith to make a lap-seam, and work-supporting aprons coöperating with said work-folding portions.

4. A folder comprising a work-supporting apron, a work-folding portion extending upwardly therefrom, a downwardly concaved edge-guiding portion carried by said work-folding portion, a second and upwardly concaved edge-guiding portion below the first-mentioned edge-guiding portion, and a second work-folding portion extending upwardly from said second edge-guiding portion, said work-folding portions extending in directions which are substantially parallel from front to back of the folder.

5. A folder for forming lap-seam hems having two work-supporting aprons, a work-folding portion therebetween, a downwardly concaved edge-guiding portion extending from said work-folding portion, a second and upwardly concaved edge-guiding portion below the first mentioned edge-guiding portion, and a second work-folding portion extending upwardly from said second edge-guiding portion, said work-folding portions extending in directions which are substantially parallel from front to back of the folder.

[Claims 6 to 9 not printed in the Gazette.]

1,212,540. COOP FOR THE TRANSPORTATION OF LIVE CHICKS. HERBERT L. G. MOORE, Hohokus, N. J. Filed July 25, 1914. Serial No. 853,010. (Cl. 119—19.)



1. A device for the transportation of live chicks, consisting of a box having openings in its end walls below their longitudinal centers, a compartment within the box provided with openings in its end walls above their longitudinal centers, and triangular members located between the end walls of the box and the end walls of the inner compartment for spacing said walls a predetermined distance and causing the air entering through the majority of openings in the end walls of the box to be directed into the inner compartment through a lesser number of openings in the end walls of the inner compartment without closing or partially closing any of said openings.

2. A device for the transportaiton of live chicks, consisting of a box having openings in its end walls below their longitudinal centers, a compartment within the box provided with openings in its end walls above their longitudinal centers, and adjustable triangular members located between the end walls of the box and the end walls of the inner compartment for spacing said walls a predetermined distance and causing the air entering through the majority of openings in the end walls of the box to be directed into the inner compartment through a lesser number of openings in the end walls of the inner compartment without closing any of said openings.

3. A coop provided with a removable cover, a chick compartment inside the coop having end walls provided with spaced openings, said walls being spaced a predetermined distance from the end walls of the coop forming air chambers one at each end of the coop extending transversely the full width thereof, the end walls of the coop having spaced openings below their longitudinal centers, and said cover having transversely spaced openings adjacent each end communicating with said air chambers.

4. A coop provided with a removable cover, a chick compartment inside the coop having end walls provided with spaced openings, said walls being spaced a predetermined distance from the end walls of the coop forming air chambers one at each end of the coop extending transversely the full width thereof, the end walls of the coop having spaced openings below their longitudinal centers, and said cover having transversely spaced openings adjacent each end and communicating with said air chambers, and adjustable means located within said air chambers whereby said openings in the cover may be closed.

5. A coop provided with a removable cover, a chick compartment inside the coop having end walls provided with spaced openings, said walls being spaced a predetermined distance from the end walls of the coop forming air chambers one at each end of the coop extending transversely the full width thereof, the end walls of the coop having spaced openings below their longitudinal centers, and said cover having transversely spaced openings adjacent each end communicating with said air chambers, and approximately triangular members located within said air chambers whereby said openings in the cover may be closed.

[Claims 6 and 7 not printed in the Gazette.]

1,212,541. THERAPEUTICAL APPLIANCE. FREDERICK H. MORSE, Boston, Mass., assignor to Allen-Chapman Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 28, 1916. Serial No. 74,947. (Cl. 174—89.)



1. An applicator of the class described, comprising an insulating base element, a conductive contact member disposed through said base element, a metallic terminal extending substantially over one side of said base element and connected to said contact member, and an absorbent pad disposed over said metallic terminal and secured to said base element.

2. An applicator of the class described, comprising an insulating base element, a metallic element disposed on one side of said base element and having a socket member, a heat insulated member disposed over said metallic element and a protective covering for said heat insulated member and secured to said base element.

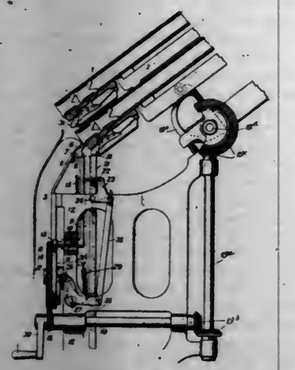
3. An applicator of the class described, comprising a flexible insulating base element, a metallic screen disposed on one side of said base element, within the margins thereof, a socket member connected to said screen, and projecting through said base, and a pad member disposed over said screen.

4. An applicator of the class described, comprising an insulating base element, an electrode of metallic gauze disposed within the margins of said base element, and a heat insulated member covering said electrode.

5. An applicator of the class described, comprising a flexible insulating base element, a flexible electrode of metallic gauze disposed thereon, and an absorbent heat insulated member covering said electrode.

[Claim 6 not printed in the Gazette.]

1,212,542. TYPOGRAPHICAL COMPOSING-MACHINE. CARL MUEHLEISEN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Mar. 29, 1915. Serial No. 17,583. (Cl. 199—7.)



1. In a typographical composing machine, the combination with a plurality of magazines and an assembler plate one of which is movable relatively to the other so that the assembler plate can receive matrices from any of the magazines, of a switch intervening the magazines and assembler plate and means operative to automatically adjust the switch angularly to approximately the plane of each selected magazine.

2. In a typographical composing machine, the combination with a plurality of magazines and an assembler plate, means for adjusting the former relatively to the latter so that the assembler plate can receive matrices from any of the magazines, of a switch intervening the magazines and assembler plate, and automatic means operative to adjust the switch to approximately the plane of each selected magazine during the adjustment of the magazines.

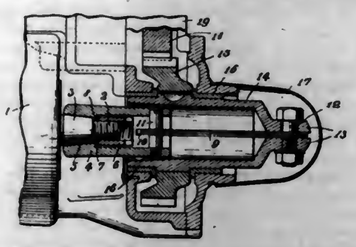
3. In a typographical composing machine, the combination with a plurality of magazines, an assembler plate receiving matrices from the respective magazines, and manual means operative to alternatively move each of the magazines into operative relationship to the assembler plate, of a switch intervening the magazines and assembler plate, and means operatively connecting the switch to the aforesaid manual means whereby it is adjusted to approximately the plane of each magazine as it is brought into operative relationship to the assembler plate.

4. In a typographical composing machine, the combination with a plurality of magazines, a bank of escapements on each magazine, escapement reeds adapted to actuate the said escapements, an assembler plate receiving matrices from the respective magazines, and manual means operative to alternately move each magazine into operative relationship to the assembler plate, of a switch intervening the magazines and assembler plate, means operatively connecting the switch to the aforesaid manual means whereby it is adjustable to approximately the plane of each magazine as it is brought into operative relationship to the assembler plate, and means operatively connected to the said manual means, operative to adjust the escapement reeds to the respective banks of escapements to be actuated by them.

5. In a typographical composing machine, the combination with a plurality of magazines, a bank of escapements on each magazine, escapement reeds adapted to actuate the said escapements, an assembler plate receiving matrices from the respective magazines, and manual means operative to alternatively move each magazine into operative relationship to the assembler plate, of a switch intervening the magazines and assembler plate, and a cam operatively connected to the aforesaid manual means whereby the switch is adjusted to approximately the plane of each magazine as it is brought into operative position.

[Claims 6 to 10 not printed in the Gazette.]

1,212,543. FLEXIBLE COUPLING. JAMES M. NAUL, Plainfield, N. J., assignor to Bosch Magneto Company, New York, N. Y., a Corporation of New York. Filed Mar. 10, 1916. Serial No. 83,372. (Cl. 64—13.)



1. The combination with two rotatable members, of a flexible coupling therefor preventing axial separation of the members and permitting disalinement of the axes thereof in all angular directions, said coupling comprising a flexible element pivotally connected to one member and rigidly fastened to the other member.

2. The combination with two rotatable members, of a spring coupling therefor preventing axial separation of the members and permitting disalinement of the axes thereof in all angular directions, said coupling comprising a flat spring rigidly fastened to one member and pivotally connected to the other member.

3. The combination with two rotatable members, of a flexible coupling therefor preventing axial separation of the members and permitting disalinement of the axes thereof in all angular directions, said coupling comprisble element fastened to the other member and extending along the axis of rotation thereof, and a pivot pin extending through the flexible element and the cylindrical device.

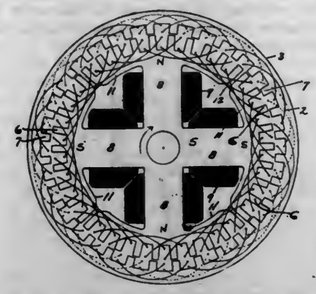
4. The combination with a rotatable gearing element, and a rotatable device to be connected thereto, of a flexible coupling extending through the gearing element and having a flat spring pivotally fastened at one end to the shaft of the rotatable device, and a sleeve fastened to the other end of the spring and carrying the gearing element, the spring being capable of swinging movements in one direction and bending movements in another direction.

5. The combination with a rotatable gearing element, and a rotatable device having a shaft to be connected to the gearing element, of a flexible coupling extending through the gearing element and having a spring fastened thereto, said coupling also having a hollow cylindrical member to which the spring is pivotally connected and which is fastened to the shaft against relative movement in an axial direction, for the purpose described.

[Claim 6 not printed in the Gazette.]

1,212,544. DYNAMO-ELECTRIC MACHINE. ALFONS H. NEULAND, San Francisco, Cal. Filed Dec. 26, 1914. Serial No. 879,097. (Cl. 171—252.)

1. In a dynamo electric machine of the commutating type, the combination of means, including a rotatable element, for producing a progressive magnetic field having a higher angular velocity than said rotatable element, a circumferentially distributed induced winding arranged to be cut by said field and having a current generated therein, a commutator connected to said winding and brushes wiping said commutator, said winding, commutator and brushes being arranged so that a current enters the induced winding through said commutator at a larger number of equidistant points on the circumference of the commutator than there are pole pairs and is concentrated in the circumferentially distributed induced winding at a smaller number of points, the point of maximum current in said induced winding being caused to progress at a higher angular velocity than the angular velocity of the commutator with respect to the brushes.



2. In a dynamo electric machine of the commutating type, means, including a rotatable element, for producing a progressing magnetic field of higher angular velocity than the rotatable element, a circumferentially distributed induced winding arranged to be cut by said field and have a current generated therein, a commutator connected to said winding and brushes wiping said commutator, said winding, commutator and brushes being arranged to permit the induced winding to be entered by current through a larger number of equidistant points on the circumference of the commutator than there are pole pairs, to concentrate the current at as many points in the winding as there are induced winding poles and to cause the point of maximum current in the winding to progress at a higher angular velocity than the angular velocity of the commutator with respect to the brushes.

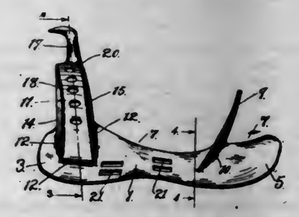
3. In a dynamo electric machine of the commutating type, means, including a rotatable element, for producing a magnetic field having a higher angular velocity than the rotatable element, a circumferentially distributed induced winding composed of a plurality of circumferentially distributed independent circuits, each circuit being composed of a plurality of circumferentially distributed coils, a commutator associated with said circuits having as many sets of segments as there are independent circuits, each set being composed of as many evenly spaced segments as there are coils per circuit, a plurality of stationary positive and negative brushes wiping said commutator, said brushes being spaced to produce rotating positive and negative contact points between the brushes and each set of segments having higher angular velocity than the commutator, the said circuits being arranged with respect to each other so that a current entering the induced winding through the commutator at a larger number of equidistant points than there are inducing winding poles will be concentrated at as many points in the winding as there are induced winding poles and only in those coils which have proper polarity and relation with respect to the field.

4. In a dynamo electric machine of the commutating type, the combination of means for producing a magnetic field, a circumferentially distributed induced winding arranged to be cut by said field and have a current generated therein, a commutator connected to said winding and brushes wiping said commutator, said brushes being arranged so that a current enters the induced winding through said commutator at a larger number of equidistant points on the circumference of the commutator than there are pole pairs and is concentrated in the induced winding at a smaller number of points, the point of maximum current in the induced winding being caused to progress at a higher angular velocity than the angular velocity of the commutator with respect to the brushes.

5. In a dynamo electric machine of the commutating type, the combination of means for producing a magnetic field, a circumferentially distributed induced winding composed of a plurality of circumferentially distributed independent circuits, each circuit being composed of a plurality of circumferentially distributed coils, a commutator associated with said circuits composed of as many sets of segments as there are independent circuits, each set being composed of as many evenly spaced segments as there are coils per circuit, a plurality of stationary positive and negative brushes, spaced to produce rotating positive and negative contact points between the brushes and each set of segments having higher angular velocity than the commutator, the said circuits being arranged with respect to each other so that a current entering the induced winding through the commutator at a larger number of equidistant points than there are induced winding poles will be concentrated at as many points in the winding as there are induced winding poles, and only in those coils which have proper polarity and relation with respect to the field.

[Claims 6 to 11 not printed in the Gazette.]

1,212,545. RIDING-SADDLETREE. CHRISTOPHER NICKEL, Denver, Colo. Filed Mar. 6, 1915. Serial No. 12,584. (Cl. 54—44.)



1. As an article of manufacture, a saddle tree, including a base, and an upwardly disposed hollow pommel member, consisting of a peripheral wall and spaced arched supporting walls, said elements being molded as an integrally formed whole, by the process of founding, from a suitable molten metal substantially as described, whereby there results a finished saddle tree of inseparable parts, and without further substantial manipulation, substantially as described.

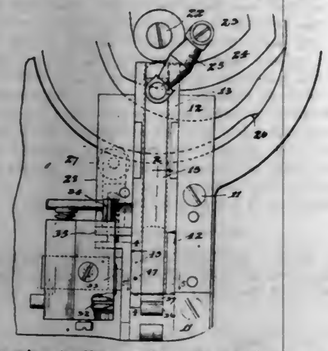
2. As an article of manufacture, a saddle tree, including a base, a cantle element, a hollow pommel member, consisting of a peripheral wall and spaced arched supporting walls therefor, and a horn surmounting said pommel member, said elements being molded as an integrally formed whole, by the process of founding, from a suitable molten metal substance having the properties of lightness and toughness when set, whereby, upon the cooling of said metal substance, there results a finished saddle tree of inseparable parts, and without further substantial manipulation, substantially as described.

1,212,546. STAPLING-MACHINE. JOSEPH PAGLIARUL, Chicago, Ill., assignor to Joseph E. Smyth, Chicago, Ill. Filed June 30, 1915. Serial No. 37,150. (Cl. 1—2.)

1. In a stapling machine, the combination of a device for severing a staple length from a continuous wire supply, a forming anvil having an outwardly extending open slot to admit the wire-blank and discharge the formed staple, a forming plunger having a pair of forks spaced apart to receive the anvil, and a stationary abutment on the side of the anvil remote from the severing device, having a surface inclined in a direction transverse to the line of feed of the wire for guiding the free end of the wire-staple into the operating field of said plunger.

2. In a stapling machine, the combination of a device for severing a staple length from a continuous wire supply, a forming anvil having an outwardly extending open slot to admit the wire-blank and discharge the formed staple, a forming plunger having a pair of forks spaced apart to

receive the anvil, and a stationary abutment on the side of the anvil remote from the severing device, having a surface inclined in a direction transverse to the line of feed of the wire for guiding the free end of the wire-staple into the vertical plane necessary for the correct formation of the staple by the forming devices, said forming plunger having one of its forks beveled off to avoid the abutment upon its downward forming stroke.



3. In a wire-stapling machine, the combination of a reciprocatory shear for severing the staple length from a continuous wire supply, a spring-pressed forming anvil having an outwardly extending open slot to admit the wire length and discharge the formed staple, a forming plunger adapted to reciprocate to straddle said anvil and shape the blank into staple form, and a resilient depending presser-member on the lower end of said fork to resiliently engage the blank before it is severed.

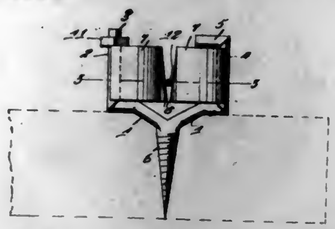
4. In a wire-stapling machine, the combination of a reciprocatory shear for severing the staple length from a continuous wire supply, a spring-pressed forming anvil having an outwardly extending open slot to admit the wire length and discharge the formed staple, a forming plunger adapted to reciprocate to straddle said anvil and shape the blank into staple form, and a downwardly projecting spring-pressed insert in the lower end of said former adapted to engage and resiliently press the unsevered staple blank down upon the anvil before the shear severs the blank from the continuous wire supply and before the lower end of said former bends the blank.

5. In a stapling machine, the combination of a reciprocatory shear, a forming anvil, a former having a pair of lower extensions adapted to reciprocate and straddle the anvil to form a wire blank into suitable form, one of said lower extensions being drilled out from its lower end, a notched pin located in said drilled hole and having its outer end extending below the lower end of said former, resilient means tending to force out said pin, and means for limiting the outward movement of said pin and maintaining the latter with its notch in alinement with the direction of wire feed, said pin being suitably arranged to resiliently engage and press down the blank into contact with the anvil before severing takes place.

1,212,547. AUTOMATIC INSULATOR. RUFUS A. PARENT, South Tacoma, Wash. Filed May 23, 1916. Serial No. 99,361. (Cl. 173—314.)

1. An insulator of the class described, comprising a plurality of blocks, means for supporting said blocks, wedging ribs formed upon the inner faces of said blocks, said ribs being enlarged at their lower portions and tapering toward their outer portions, thereby providing an enlarged entrance therebetween, whereby a wire may be passed between said ribs until the same becomes wedged, thereby causing the wire to be efficiently supported by said blocks.

2. An insulator of the class described, comprising a plurality of blocks, means for supporting said blocks, said blocks comprising elongated bodies, wedging ribs formed upon the inner faces of said blocks, said wedging ribs having widened enlarged lower portions, said ribs tapering so as to be considerably reduced at their outer ends, thereby providing a widened entrance opening, the ends of said blocks being formed in a plane to the rear of the inner bearing faces of said wedging ribs, whereby a wire may be quickly and easily passed between the outer portions of said ribs and then by being moved inwardly thereon will finally wedge between the ribs and thus be retained by the insulator.



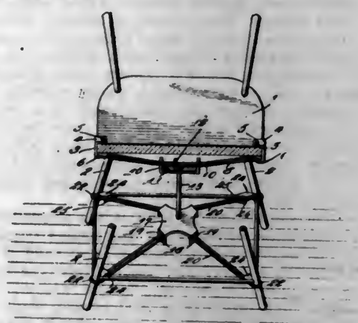
3. An insulator of the class described, comprising a plurality of blocks, said blocks provided with channels in their side portions, a frame supporting said blocks and fitting within said channels, whereby said blocks will be held in engagement with each other, and means carried by said blocks for gripping a wire and automatically holding the same therebetween.

4. An insulator of the class described, comprising a plurality of blocks having vertical channels in their outer side portions, a frame having base arms fitting upon said blocks for supporting the same, vertical fingers extending from said base arms and fitting within said channels, whereby said blocks will be held against side displacement, and means carried by said blocks for engaging a wire and holding the same in engagement with the insulator.

5. An insulator of the class described, comprising a plurality of blocks, said blocks having vertical channels in their side portions, a frame comprising base arms, vertical fingers carried by said base arms, means for supporting said frame, said fingers fitting within said channels, whereby said blocks will be efficiently supported, and means for holding said blocks from accidentally moving from engagement with said frame.

[Claims 6 to 8 not printed in the Gazette.]

1,212,548. CHAIR-BRACE. RUFUS A. PARENT, South Tacoma, Wash. Filed May 23, 1916. Serial No. 99,362. (Cl. 155—3.)

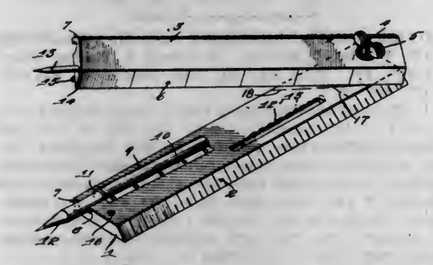


1. In combination with a chair provided with a bottom, a plurality of hanger plates, a hanger wire connected to said hanger plates, a junction plate, a bracing wire, said junction plate provided with a plurality of depending flanges, each flange provided with an aperture formed therein, said bracing wire provided with a plurality of diverging strands, the strands of said wire passing through said apertures, guiding plates mounted upon the diverging ends of said strands, said strands being wound around the legs of said chair to constitute a loop, each guiding plate provided with a rolled portion engaging said loop, and each guiding plate provided with means straddling said strands for holding the diverging strands against accidental displacement from the legs of said chair.

2. As a new article of manufacture, a chair brace comprising a hanger member, a junction plate, a bracing wire adapted to be secured to the legs of a chair, said bracing wire comprising a plurality of pairs of diverging strands, each pair of diverging strands terminating in a loop at the outer end thereof for fitting around the leg of a chair, a guiding plate provided with a rolled portion engaging said loop, each guiding plate provided with a depending flange having an aperture formed therein, and said strands passing through said aperture for holding the strands of each pair in substantial parallel relation.

3. As a new article of manufacture, a chair brace comprising a hanger member, a junction plate, a bracing wire carried by said junction plate and provided with a plurality of pairs of diverging strands, each pair of strands provided with a loop adapted to engage the legs of a chair, a guiding plate carried by each pair of strands and provided with a rolled portion engaging said loop, and each guiding plate also provided with a plurality of folded ears for constituting guiding means for holding the strands of each pair in a substantial parallel relation with respect to each other.

1,212,549. COMBINATION RULE, COMPASSES, SQUARE, AND ANGLE. RUFUS A. PARENT, South Tacoma, Wash. Filed May 29, 1916. Serial No. 100,614. (Cl. 33—106.)

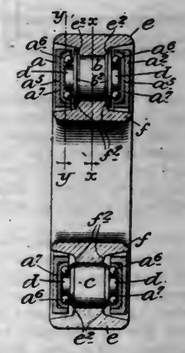


1. As a new article of manufacture, a ruler comprising a primary section and an auxiliary section, means for locking one section in an adjusted position with respect to the other section, one of said sections provided with a pocket, means coöperating with said pocket for firmly soldering a marking device in engagement therewith, means carried by the other section to secure a pivot point thereto, one of said sections provided with a socket formed upon the inner face thereof, the other section being provided with a pin adapted to fit in said socket and firmly hold said sections in a closed position against accidental swinging movement.

2. As a new article of manufacture, a ruler comprising a primary and an auxiliary section, means for pivotally connecting said sections together, one face of each section provided with an inclined edge, said primary section provided with a longitudinally extending pocket, a metallic spring jaw secured to one of said sections and fitting in said pocket to constitute an efficient grip for holding a marking device in engagement therewith, said other section having a socket registering with said spring jaw of said first mentioned section, said other section provided with a pocket to secure a pivot point therein, and means for holding said sections in a closed position against accidental swinging movement.

3. As a new article of manufacture, a ruler comprising a primary and an auxiliary section, means for pivotally connecting said sections together, one face of each section provided with an inclined edge, said primary section provided with a longitudinally extending pocket, a metallic spring jaw secured to one of said sections and fitting in said pocket to constitute an efficient grip for holding a marking device in engagement therewith, a socket formed in said other section registering with said spring jaw of said first mentioned section, said other section provided with a pocket to secure a pivot point therein, means for holding said sections in a closed position against accidental swinging movement, and one of said sections provided with indicating marks formed thereon for facilitating the adjustment of one section at an angle with respect to the other section.

1,212,550. ROLLER-BEARING. JULIUS AUGUSTUS PERKINS, Omaha, Nebr. Filed Dec. 10, 1912, Serial No. 735,901. Renewed June 9, 1916. Serial No. 102,797. (Cl. 64—62.)



1. A bearing, comprising an outer solid ring having a centrally arranged, inwardly directed, member presenting a cylindrical bearing surface, an inner solid ring having a centrally arranged outwardly directed, member presenting a cylindrical bearing surface, a plurality of cylindrical rollers operating on said bearing surfaces and provided, each, with end flanges of greater diameter than said rollers impinging on corresponding edges of said members to take end thrust, a plurality of unflanged rollers, and means for guiding said rollers.

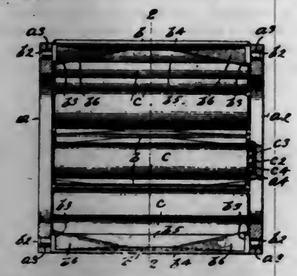
2. A bearing, comprising an outer solid ring having an inwardly directed member presenting a cylindrical bearing surface, an inner solid ring having an outwardly directed member presenting a cylindrical bearing surface, a plurality of rollers operating on said surfaces and provided, each, with end flanges of greater diameter than said rollers impinging on corresponding edges of said members, said member edges and the inner surfaces of said flanges being similarly inclined, a plurality of unflanged rollers, and means for guiding all of said rollers.

3. A bearing, comprising an outer solid ring having an inwardly directed member presenting a cylindrical bearing surface, an inner solid ring having an outwardly directed member presenting a cylindrical bearing surface, said rings being outwardly flared from said members to permit the escape of foreign matter, a plurality of rollers operating on said surfaces and provided, each, with end flanges impinging on corresponding edges of said members to take end thrust, a plurality of unflanged rollers, and means for guiding said rollers.

1,212,551. ROLLER-BEARING CAGE. JULIUS A. PERKINS, New York, N. Y. Filed May 6, 1913, Serial No. 765,782. Renewed June 9, 1916. Serial No. 102,798. (Cl. 64—62.)

1. As an article of manufacture, for spanning the space between two elements and adapted to take any torsional strain therebetween, a rib of T-formation centrally of its length, end bases of substantially greater area than the cross-sectional area of said central portion and substantially triangular in configuration, and inclined portions

extending from the edges of said bases toward said central rib portion, the material of said inclined portions being within lines drawn between diagonal shoulders of said bases to effect a minimum of weight and maximum of strength, and means for connection of said rib with said elements.

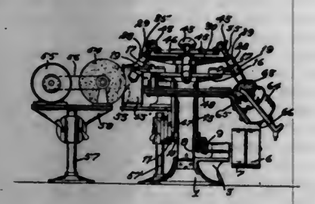


2. A cake for roller bearings, comprising end plates and connecting ribs, each of said ribs comprising a T-shaped central portion, bases of greater cross-sectional areas than said central portions, and inclined portions joining said end bases and said central portions and being confined within lines drawn between diagonal shoulders of said bases to reduce the weight of said rib to a minimum.

3. A cage for roller bearings, comprising end plates, having bores therethrough, and connecting ribs having end tenons locked in said bores, each of said ribs comprising a T-shaped central portion, end bases of substantially greater cross-sectional areas than said central portion, and inclined portions joining said bases and central portions and being confined within lines drawn between diagonal shoulders of said bases to reduce rib weight to a minimum.

4. A cage for roller bearings, comprising end plates and connecting ribs secured thereto, each of said ribs comprising a central T-shaped portion, end bases of substantially greater cross-sectional areas than said central portion, the peripheral portion of said rib being of the same peripheral dimension as said end bases, and inclined portions joining said bases and central portion, the inclination thereof being approximately that of a line drawn between diagonal shoulders of said end bases whereby excess material and weight is eliminated.

1,212,552. GRINDING-MACHINE. ROBERT D. PIKE, San Francisco, Cal. Filed Mar. 20, 1916. Serial No. 85,375. (Cl. 51—10.)



1. In an apparatus for the described purpose, the combination with a plurality of grinding means, of a device for holding the work to be ground, mechanism for moving said holding device to carry the work successively into and out of the spheres of action of the grinding means, means for correctly positioning said work within said holding device prior to the first grinding operation, and means for re-positioning said work within said holding device after said first grinding operation.

2. In an apparatus for the described purpose, the combination with a plurality of grinding means, of a device for holding the work to be ground, mechanism for moving said holding device to carry the work successively into and out of the spheres of action of the grinding means, means for correctly positioning said work within said holding device prior to the first grinding operation, and means for actuating said holding device to cause the same to release said work after said first grinding operation, to enable said work to be re-positioned within said holding device.

3. In an apparatus for the described purpose, the combination with adjustable grinding means, of a device for holding the work to be ground, means for rotating said holding device upon its axis, mechanism for moving said holding device to carry the work into and out of the sphere of action of the grinding means, and means for universally adjusting said grinding means relative to said work.

4. In an apparatus for the described purpose, the combination, with a plurality of grinding means, of a device for holding the work to be ground, mechanism for carrying said holding device into and out of the sphere of action of the grinding means, means for adjusting said holding device on said carrying mechanism, and adjustable devices for correctly positioning the work within said holding device.

5. In an apparatus for the described purpose, the combination with a plurality of grinding means, of a device for holding the work to be ground, rotatable carrying mechanism for moving said holding device into and out of the sphere af action of the grinding means, and adjustable devices for correctly positioning the work within said holding device before being carried into engagement with the grinding means.

[Claims 6 to 19 not printed in the Gazette.]

1,212,553. HEAT TREATMENT AND MANUFACTURE OF WOVEN SCREENS. WINFIELD S. POTTER, Pittsburgh, Pa. Filed May 12, 1914. Serial No. 838,029. (Cl. 148—21.)

1. The method of producing from a rolled steel bar, rod, or wire, a corresponding crimped bar, rod, or wire, for woven screens, which comprises heating the rolled bar, rod, or wire, to such a temperature as to relieve the strains incident to the rolling operation and to bring into solid solution in the metal such carbids as may have segregated therein, working the bar, rod, or wire, sufficiently to condense and refine any coarsely regrained portions thereof and ultimately crimping it.

2. The method of producing from a rolled steel bar, rod, or wire, a corresponding crimped bar, rod, or wire, for woven screens, which comprises heating the rolled bar, rod, or wire, to such a temperature as to relieve the strains incident to the rolling operation and to bring into solid solution in the metal such carbids as may have segregated therein, working the bar, rod, or wire, sufficiently to condense and refine any coarsely regrained portions thereof and ultimately crimping it, the working being incidental to the crimping.

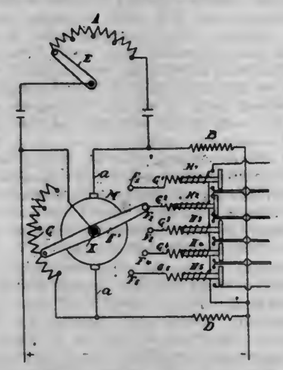
3. The method of producing from a rolled steel bar, rod, or wire, a corresponding crimped bar, rod, or wire, for woven screens, which comprises heating the rolled bar, rod, or wire, to such a temperature as to relieve the strains incident to the rolling operation and to bring into solid solution in the metal such constituents as may have segregated therein, working the bar, rod or wire sufficiently to condense and refine any coarsely regrained portions thereof, and ultimately crimping it while still hot, and subsequently heat-treating the metal to bring it to the desired final condition.

4. The method of producing from a rolled steel bar, rod, or wire, a corresponding crimped bar, rod, or wire, for woven screens, which comprises heating the rolled bar, rod, or wire, to such a temperature as to relieve the strains incident to the rolling operation and to bring into solid solution in the metal such constituents as may have segregated therein, working the bar, rod or wire sufficiently to condense and refine any coarsely regrained portions thereof, and ultimately crimping it while still hot, and subsequently heat-treating the metal to bring it to the desired final condition, the heat-treatment being preceded by a reheating operation.

5. The method of producing from a rolled steel bar, rod, or wire, a corresponding crimped bar, rod, or wire, for woven screens, which comprises heating the rolled bar, rod, or wire, to such a temperature as to relieve the strains incident to the rolling operation and to bring into solid solution in the metal such constituents as may have segregated therein, working the bar, rod, or wire sufficiently to condense and refine any coarsely regrained portions thereof, and ultimately crimping it while still hot, and subsequently heat-treating the metal to bring it to the desired final condition, the hot crimping being preceded by a reheating operation.

[Claim 6 not printed in the Gazette.]

1,212,554. ELECTRICAL CONTROL MECHANISM. CHARLES PRACHE, Paris, France. Filed Aug. 19, 1913. Serial No. 785,512. (Cl. 172—289.)



1. In remote control mechanism, the combination of a Wheatstone bridge having two variable resistances, one of said variable resistances being located at the control station, the other variable resistance being located at the controlled station, a sluggish relay, and an electric device connected in circuit with the bridge, the device operating in response to variations in the resistance at the control station and having a part coöperating with the variable resistance at the controlled station to restore the electrical balance of the bridge and to bring the electric device to rest for a sufficient time to operate the relay.

2. In a remote control mechanism, the combination of a sluggish relay, a device comprising two variable resistances, and an electric device controlling said relay and connected in circuit with said resistances and responsive to variations of one of said resistances and having a part coöperating with the other resistance to bring the electric device to rest for a sufficient period to cause the operation of the relay.

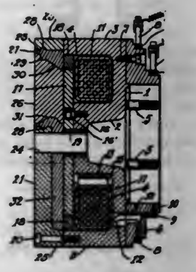
3. In a remote control mechanism the combination of a plurality of sluggish relays controlling separate circuits, two circuits in parallel, each circuit comprising a variable resistance, and an electric device capable of causing the operation of any one of said relays, said electric device being connected with said variable resistances and operating in response to variations of one of said resistances, said device having a part coöperating with the other resistance to bring said device to rest at a predetermined point and for a sufficient period to cause a selected relay to operate.

4. In a remote control mechanism, the combination of two circuits in parallel, each circuit including a variable resistance, a plurality of devices to be controlled, and means in circuit with said resistances and operating in response to the variation of one of said resistances to cause the operation of a selected one of said devices.

5. In a remote control mechanism the combination of a Wheatstone bridge having variable resistance in two of the limbs thereof, an electric motor connected in circuit with the neutral conductor of the bridge, and a plurality of relays controlling separate circuits said motor being capable of causing the energization of any selected relay and operating in response to variations of one of said resistances, said motor carrying a part coöperating with the other variable resistance to bring said motor to rest at a predetermined point to cause the operation of a selected relay.

[Claims 6 to 8 not printed in the Gazette.]

1,212,555. MAGNETIC CHUCK. GEORGE G. PRAGST, Providence, R. I., assignor to D. & W. Fuse Company, Providence, R. I., a Corporation of Rhode Island. Filed Nov. 9, 1914. Serial No. 870,977. (Cl. 175—21.)



1. An article of the character described, comprising a shell having an inwardly extending hollow hub, an inwardly extending peripheral flange and an annular recess between said hub and flange, a magnet-coil in said recess, a pole-plate secured upon the free end of said hub and having a central opening and a strip of non-magnetic material secured upon the periphery and arranged to engage the inner periphery of the flange, and a bushing extending through the central opening in said pole-plate and hollow hub.

2. A work-holding plate for a magnetic chuck, comprising a plate of magnetic material having a series of openings therein and an inwardly extending peripheral flange, pole pieces in said openings having their inner faces flush with the free end of said flange and held in said openings by non-magnetic material.

3. A work-holding plate for a magnetic chuck, comprising a plate of magnetic material having a series of openings therein and an inwardly extending peripheral flange, pole pieces in said openings having their inner faces flush with the free end of said flange and a seam of non-magnetic material interposed between the pole pieces and the plate and filling the interior of the plate surrounding the pole pieces flush with said free end of the flange.

4. A magnetic chuck comprising a single pole of one polarity and a single pole of the opposite polarity, and a work-holding plate having a plurality of pole pieces mounted therein and adapted to contact with one of said poles and a portion adapted to contact with the other pole.

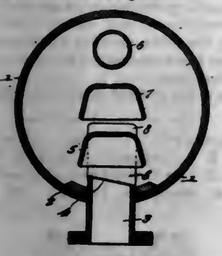
5. A magnetic chuck comprising a single pole of one polarity and a single pole of the opposite polarity, and a work-holding plate having a plurality of pole-pieces adapted to contact with one of said poles and a portion adapted to contact with the other pole, with non-magnetic material located between said work-holding plate and said first-mentioned pole.

[Claims 6 and 7 not printed in the Gazette.]

1,212,556. STEAM-GENERATOR. CHARLES RADIGUER, St.-Denis, France, assignor to The Societe Anonyme des Etablissements Delauney-Belleville, St.-Denis, France, a Corporation of France. Filed Feb. 1, 1915. Serial No. 5,557. (Cl. 122—491.)

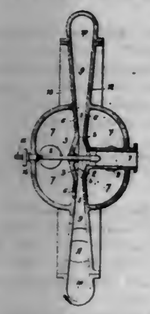
1. In steam generators composed of elements having two coils, the combination of a purifier, and steam out-

jet pipes for the upper tubes of each element, said outlet pipes projecting into the purifier and having oblique extremities inclined from front to rear and ending flush at the front of the bottom of the purifier.



2. In steam generators composed of elements having two coils, the combination of a purifier, steam outlet pipes for the upper tubes of each element, the said outlet pipes projecting into the purifier and having oblique extremities inclined from front to rear and ending flush at the front of the bottom purifier, and a baffle plate placed over each outlet pipe slightly above the extremity thereof.

1,212,557. APPARATUS FOR MIXING AND CONVEYING FLUIDS. JEAN ALEXANDRE REY, Paris, France. Filed Dec. 28, 1911. Serial No. 668,373. (Cl. 230—13.)



1. In an apparatus for mixing and compressing fluids, the combination with two disks placed opposite each other, of a chamber in communication with the space between said disks at their peripheries, the walls of said disks starting from their axes, being first convergent, then divergent, said disks having a series of narrow orifices adjacent to their points of nearest approach to each other, one of the disks being provided at its axis with means for supplying motive fluid, the angle of divergence of the walls of the disks, substantially throughout their entire extent, being less than the angle of divergence of a jet of similar fluid in free space in which there exists a pressure no greater, substantially, than atmospheric pressure.

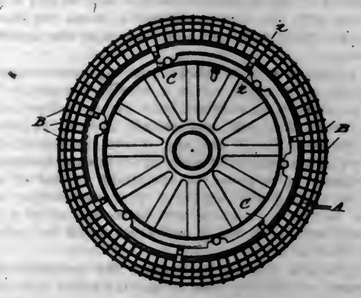
2. In an apparatus for mixing and compressing fluids, the combination with two disks placed opposite each other, of a chamber in communication with the space between said disks at their peripheries and arranged to form an annular conductor to receive the mixed fluid, and provided with an outlet, the walls of the disks, starting from their axis, being first convergent, then divergent, said disks having a series of narrow orifices adjacent to their points of nearest approach to each other, one of the disks being provided at its axis with means for supplying a motive fluid, the angle of divergence of the walls of the disks, substantially throughout their entire extent, being less than the angle of divergence of a jet of similar fluid in free space in which there exists a pressure no greater, substantially than atmospheric pressure.

3. In an apparatus for mixing and compressing fluids, the combination with two disks placed opposite each other, of a chamber in communication with the space between said disks at their peripheries, the walls of the disks, starting from their axis, being first convergent, then divergent, said disks having a series of narrow orifices adjacent to their points of nearest approach to each other, one of the disks being provided at its axis with means for supplying said motive fluid, the angle of divergence of the walls of the disks, substantially throughout their entire extent, being less than the angle of divergence of a jet of similar fluid in free space in which there exists a pressure no greater, substantially, than atmospheric pressure, means for supplying induced fluid to said orifices, and means for varying the distance apart of the disks.

4. Apparatus for mixing and compressing fluids comprising disk-like members arranged with their mating faces in relatively close proximity to inclose a volume of revolution, the space between said members comprising a central admission chamber with walls converging radially outward to a constricted peripheral or circumferential port, and an annular diffusing chamber extending beyond said peripheral port with walls diverging radially therefrom, a relatively wide circumferential discharge conductor in communication with said diffusing chamber and provided with a discharge outlet, means for supplying a motive or impelling fluid to said admission chamber, and induction ports in annular arrangement extending through the walls of said diffusing chamber at a location near said constricted peripheral port, the angle at which the walls of said diffusing chamber diverge being substantially throughout their entire extent somewhat less than that which the jet of impelling fluid would form if allowed to escape from said constricted port into an unconfined space in which prevails a pressure substantially lower than that of the impelling fluid.

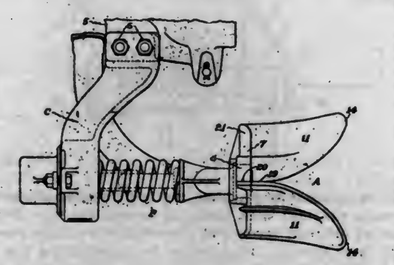
5. Apparatus of the character described comprising a substantially circular central chamber having walls radially convergent toward a constricted opening extending circumferentially around said chamber, an inlet for admitting motive fluid to said chamber, an annular diffusing chamber extending outwardly beyond said central chamber and communicating therewith through said constricted opening, the space between the walls of said diffusing chamber being axially adjustable, said walls diverging radially from said opening substantially throughout their entire extent and at an angle somewhat less than the angle formed by the jet of impelling fluid, if left to itself fluid induction apertures extending through the walls of the diffusing chamber near said constricted opening, and conduit means for receiving and leading away mixed fluids discharged from the outer periphery of said diffusing chamber.

1,212,558. COVER FOR AUTOMOBILE-TIRES. GRANT RIDDLE, Riddle, Idaho. Filed May 9, 1916. Serial No. 96,352. (Cl. 152—14.)



A tire armor comprising a plurality of strands adapted to extend circumferentially of a wheel, and a plurality of transversely disposed strands threaded through the first named strands, the intersecting portions of the circumferential strands and the transverse strands being welded one to the other.

1,212,559. AUTOMATIC TRAIN-PIPE CONNECTOR. JOSEPH V. ROBINSON, Chevy Chase, Md. Filed Mar. 19, 1914, Serial No. 825,837. Renewed Oct. 9, 1916. Serial No. 124,684. (Cl. 188—13.)



1. In an automatic train pipe connector, the combination of a support, and a coupling head carried by said support, said head being provided with diagonally spaced forwardly extending, outwardly diverging spiral shaped guiding prongs.

2. In an automatic train pipe connector, the combination of a support, and a coupling head carried by the support, said head being provided with forwardly extending guiding prongs, each of said prongs being spiral shaped and each being curved gradually to approximately the point 13 and thence abruptly to its forward extremity substantially as described.

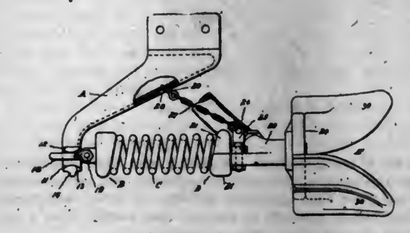
3. In an automatic train pipe connector, the combination of a support, a coupling head carried by said support, said head being provided with a coupling face and having at its side a portion extending rearwardly of the head and substantially at a right angle to said face and lying entirely in the vertical plane, said head being rounded from the upper extremity of said portion to approximately the center of the head, and a pair of diagonally spaced forwardly extending guiding prongs for said head, each prong having a bearing surface lying in the vertical plane and extending forwardly of the face of the head and substantially at a right angle thereto for a short distance to constitute a bearing surface for coöperating with said portion at the side of said head in coupling, said prongs having a variable curve in the horizontal plane and having also a convex guiding face which approaches gradually toward the horizontal plane from both edges throughout substantially the full length of the prong.

4. In an automatic train pipe coupling, the combination of a base, a coupling head, a support connected with the base and head and adapted to permit movement of the head in various directions, said head being rectangular in outline and provided with diagonally spaced guiding prongs, each of which is provided with an outer and inner guiding edge and extends forwardly of said head at a right angle thereto for a short distance and thence flares outwardly, said inner guiding edges of the prongs being curved slightly in the vertical plane where they leave the face of said coupling head and constituting the only portion of the prongs which is curved in said plane at the face of said head, the curve of such edges changing as the edges approach the forward extremity of the prong from an abrupt curve to a gradual curve encompassing substantially the whole face of the prong.

5. In an automatic train pipe coupling, the combination of a yieldable support, a rectangular shaped coupling head carried by said support and provided with a coupling face and having at its sides portions lying in the vertical and horizontal planes and extending rearwardly of the head and substantially at a right angle to said face, and diagonally spaced forwardly projecting outwardly extending guiding prongs for said head, each prong having an outer and inner guiding edge and being provided at its base with surfaces lying also in the vertical and horizontal planes and extended forwardly of said coupling face and approximately at a right angle thereto to constitute complementary surfaces for mating with said portions at the sides of the head of a mating coupling, said outer and inner guiding edges of the prongs being curved slightly in the vertical plane where they leave the face of said head and constituting the only portions of the prongs which are curved in said plane at the face of said head, the curve of said edges changing as the edges approach the forward extremity of the prong from an abrupt curve to a gradual curve encompassing substantially the whole face of the prong, whereby accurate vertical and lateral alinement of said complementary surfaces of the prongs with said portions at the sides of the coupling head is assured under all conditions of service in advance of meeting of the faces of mating heads.

[Claim 6 not printed in the Gazette.]

1,212,560. AUTOMATIC TRAIN-PIPE CONNECTOR. JOSEPH V. ROBINSON, Chevy Chase, Md. Filed Oct. 15, 1914. Serial No. 866,824. (Cl. 188—13.)



1. In an automatic train pipe connector, the combination of a coupling head, a fluid conduit extending from said head and provided with a seat arranged at one side of the conduit and having on its inner face a semi-circumferential groove, a spring mounted in said groove for extending and placing said head under pressure, means for securing the spring in said groove, and a base against which said spring acts in service.

2. In an automatic train pipe connector, the combination of a coupling head, a fluid conduit extending from said head and provided with a seat arranged at one side of the conduit and having on its inner face a semi-circumferential groove, a spring mounted in said groove, means for locking the spring in the groove, a second seat for the spring and in which the spring is mounted, and a base by which said second seat is carried.

3. In an automatic train pipe connector, the combination of a coupling head, a fluid conduit extending from said head and provided with a seat comprising halves each half having on its inner face a semi-circumferential groove, a spring secured between said halves, a second seat for said spring comprising halves each having on its inner face a semi-circumferential groove, means for securing said spring between such halves, and a base on which said second seat is loosely mounted.

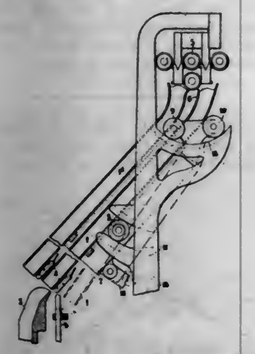
4. In an automatic train pipe connector, the combination of a coupling head, a fluid conduit extending from said head and provided with a seat, a second seat, a base by which said second seat is carried, flexible means connected with said conduit for supporting said head against downward movement from the uncoupled position, and a spring interposed between said seats and mounted therein for extending said head, said spring being adapted to permit tilting of the head downwardly from the uncoupled position with the point of connection of said flexible means with said conduit as the fulcrum.

5. In an automatic train pipe connector, the combination of a coupling head, a fluid conduit extending from said head and provided with a seat, a spring secured in said seat, a second seat in which said spring is secured,

a base by which said second seat is carried, and means for causing said spring to yield upwardly intermediate its ends when opposing connectors couple up under a condition of vertical disalinement.

[Claims 6 to 9 not printed in the Gazette.]

1,212,561. TYPOGRAPHICAL COMPOSING AND DISTRIBUTING MACHINE. KARL RÖGER, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 8, 1914. Serial No. 849,634. (Cl. 199—7.)



1. In a typographical composing and distributing machine, the combination with a magazine, and means operative to move that magazine flatwise, of fixed cam-shaped guiding means adapted to convert that motion into a curvilinear motion other than a circular one.

2. In a typographical composing and distributing machine, the combination with a magazine, and means operative to move that magazine flatwise, of fixed cam-shaped guides adapted to guide the magazine curvilinearly otherwise than circularly.

3. In a typographical composing and distributing machine, the combination with a magazine supporting frame, and means for moving the frame up and down in the machine, of fixed cam-shaped guiding means adapted to convert that motion into a curvilinear motion other than a circular one.

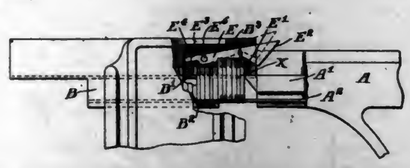
4. In a typographical composing and distributing machine, the combination with a plurality of superposed magazines, capable of moving fore and aft independently of each other, and means operative to move those magazines flatwise, of fixed cam-shaped guides adapted to guide each magazine curvilinearly otherwise than circularly and independently of another magazine.

5. In a typographical composing and distributing machine, the combination with a plurality of superposed magazines some of them arranged in a group independently of another of them, the group being movable fore and aft as a single entity independently of the magazine outside of that group, and means operative to move the magazines flatwise, of fixed cam-shaped guides adapted to guide the group of magazines and the magazine outside that group, in respectively different curvilinear paths other than circular paths.

[Claims 6 to 12 not printed in the Gazette.]

1,212,562. TYPOGRAPHICAL MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Feb. 24, 1915. Serial No. 10,165. (Cl. 199—7.)

1. In a linotype machine, the combination of the first elevator provided with means to sustain the type or matrices at different levels therein, a device to transfer them therefrom, and a movable member carried by the elevator or matrices as they enter the elevator and thus displaced thereby.



2. In a linotype machine, the combination of the first elevator provided with means to sustain the type or matrices at different levels and also with a retaining pawl to hold them therein, and a device for transferring the type or matrices from the elevator, the said retaining pawl acting upon the type or matrices to bring them to a common level during their transfer.

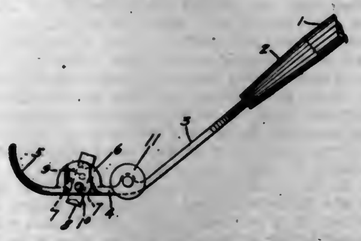
3. In a linotype machine, the combination of the first elevator provided with means to sustain the type or matrices at different levels and also with a retaining pawl to hold them therein, and a device for transferring the type or matrices from the elevator past the retaining pawl, the said pawl being formed with an inclined surface to engage the elevated type or matrices during their transfer and depress them to the level of the lower ones.

4. In a linotype machine, the combination of the first elevator provided with means to sustain the type or matrices at different levels and also with a movable retaining pawl to hold them therein, and a device for transferring the type or matrices from the elevator past the retaining pawl, the said pawl being formed with an inclined surface to engage the type or matrices during their transfer and bring them to a common level and also with an oppositely inclined surface adapted to be engaged by the type or matrices as they enter the elevator and thus be displaced thereby.

5. In a linotype machine, the combination of the first elevator provided with means to sustain the type or matrices at different levels therein, a device for transferring them therefrom, a movable member carried by the elevator and having an inclined surface which is engaged by the elevated type or matrices during their transfer so as to be displaced thereby, and a stop to limit the displacement of said member, the inclined surface of said member acting in the limited position thereof to depress the elevated matrices to the level of the lower ones.

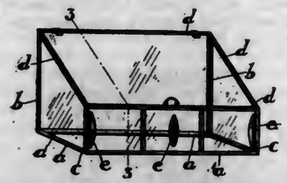
[Claims 6 to 9 not printed in the Gazette.]

1,212,563. COMBINED WEEDER AND CULTIVATOR. ELIJAH F. ROWE, Big Falls, Minn. Filed Aug. 26, 1915. Serial No. 47,457. (Cl. 97—42.)



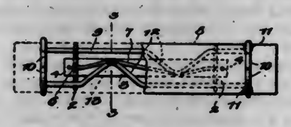
A cultivator having a ground-engaging runner and a ground-engaging tool, said ground-engaging tool being mounted intermediate the ends of said runner, the front and rear portions of the runner thereby forming stops to limit the depth of cut of the ground-engaging tool.

1,212,564. DENTAL-MOTOR HOOD. FORREST C. ROWE, Concord, N. H. Filed May 10, 1916. Serial No. 96,729. (Cl. 51—7.)



A protective hood for dental engines, comprising a transparent housing having one of its walls made of yielding material, as celluloid, and having armholes in said yielding material.

1,212,565. LOOSE-LEAF BINDER. JOHN SCHADE, Jr., Brooklyn, N. Y., assignor to National Blank Book Company, Holyoke, Mass., a Voluntary Trust Association of Copartnership having as trustees J. W. Towne, F. B. Towne, E. S. Towne, J. M. Towne, and F. W. Wilson. Filed June 12, 1915, Serial No. 33,718. Renewed Nov. 27, 1916. Serial No. 133,813. (Cl. 129—24.)



1. In a device of the character described, a rigid support, prong-carrying members rockably mounted thereon, and an end thrusting bow spring member engaging each prong-carrying member at single points that have staggered relation.

2. In a device of the character described, a rigid support, prong-carrying members rockably mounted thereon and each having a crank portion extending toward the other member in staggered relation to the crank portion thereof, and an end thrusting bow spring engaging each crank portion of the prong-carrying members.

3. In a device of the character described, a rigid support, prong-carrying members rockably mounted thereon and each having a crank portion extending toward the other member in staggered relation to the crank portion thereof, each crank portion having a grooved seat, and an end thrust bow spring engaging in the grooved seat of the prong-carrying members.

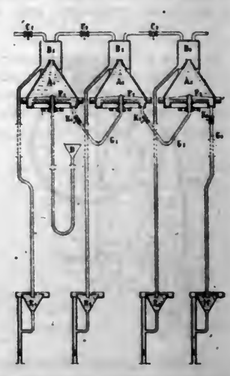
4. In a device of the character described, a support, a longitudinally arranged spring thereon, and companion prong-carrying members journaled on the support on opposite sides of the spring and each having a crank portion offset with respect to the crank portion of the other member and engaged with the spring.

5. In a device of the character described, a support including spaced bridges, a wire spring mounted between the bridges in a spring manner, and a prong-carrying member journaled on the bridges on each side of the spring and formed with an inwardly extending portion staggered relative to the corresponding portion of the other member and engaging the spring to distort the same in reverse directions.

[Claim 6 not printed in the Gazette.]

1,212,566. SEPARATING FINELY-DIVIDED ORE MIXTURES IN VACUUM SEPARATING VESSELS OR CHAMBERS. FRIEDRICH ARTHUR MAXIMILIAN SCHIECHEL, Frankfort-on-the-Main, Germany. Filed June 25, 1915. Serial No. 36,213. (Cl. 83—85.)

1. The process of separating ore pulp, which includes subjecting a collection of such pulp to a vacuum sufficient to remove part of the metallic particles, and then subjecting the collection to another and higher vacuum to remove metallic particles remaining after the first removal.



2. The process of separating ore pulp, which includes subjecting a collection of such pulp to a vacuum sufficient to remove part of the metallic particles but insufficient to cause undesirable ebullition at the surface of the pulp-liquid, and then subjecting the collection to another and higher vacuum to remove metallic particles remaining after the first removal.

3. The process of separating pulp, which comprises subjecting the pulp to successive vacuum treatments, whereby each treatment withdraws part of the metallic bodies in the pulp, with each successively applied vacuum higher than the one immediately preceding, and at each treatment simultaneously withdrawing concentrates in the pulp, the withdrawn bodies being kept separated from the withdrawn concentrates during the carrying out of the process.

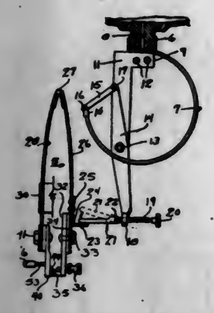
4. An apparatus for separating ore pulp, including, in combination, a plurality of separation chambers, each chamber being shaped as an upright cone with a discharge orifice at its top, a vacuum bell for each chamber overlying the same, conduits connecting the bells in series, a pressure pump associated with one of the conduits and directly serving one of the bells, conduits connecting the chambers in series, and valves in the conduits first mentioned independently adjustable to permit the pressure pump to establish different degrees of vacuum in the various bells.

5. An apparatus for separating ore pulp, including, in combination, a plurality of separation chambers, each chamber being shaped as an upright cone with a discharge orifice at its top, a vacuum bell for each chamber overlying the same, conduits connecting the bells in series, a pressure pump associated with one of the conduits and directly serving one of the bells, conduits connecting the chambers in series, and valve in these conduits and in the conduits first mentioned and operable to establish different degrees of vacuum in the various chambers and at the same time maintaining a desired liquid level in one of the chambers while permitting a flow of liquid from the chamber last mentioned to an adjacent chamber through one of the conduits last mentioned.

1,212,567. ELECTRIC SWITCH. DANIEL SCHNEIDER, Spokane, Wash., assignor, by mesne assignments, to The Modern Threshing Cylinder Company, Spokane, Wash., a Corporation. Filed Apr. 1, 1916. Serial No. 88,278. (Cl. 175—308.)

1. In a device of the character described, a source of electricity, an electric circuit, a Bourdon tube, means adapted to admit gas to the interior of said tube, means adapted to normally hold said circuit closed, means adapted to automatically open said circuit at a predetermined pressure of said gas, said means comprising a closed extremity provided on said tube, a switch interposed in said circuit and comprising a stationary contact member, a

movable contact member, and means adapted to adjustably connect said closed extremity and said movable member.



2. In a device of the character described, a source of electricity, an electric circuit, a Bourdon tube, means adapted to admit gas to the interior of said tube, means adapted to normally hold said circuit closed, means adapted to automatically open said circuit at a predetermined pressure of said gas, said means comprising a closed extremity provided on said tube, a switch interposed in said circuit and comprising a stationary contact member, a movable contact member, means adapted to adjustably connect said closed extremity and said movable member, and means for adjusting said means for automatically breaking said circuit to allow said last mentioned means to actuate at different predetermined pressures of said gas.

3. In an electric switch, a stationary contact member, a movable contact member hinged to said stationary member, a unitary means normally holding said movable member in contact with said stationary member and adapted to withdraw said movable member from contact with said stationary member at a predetermined time, said means comprising a Bourdon tube, a lever, a link connecting one extremity of said tube to one extremity of said lever, and hook means connecting said lever and said movable contact member.

4. In an electric switch, a resilient curved hollow tube, means adapted to admit gas to said tube, a closed terminal provided on said tube, a link pivotally connected with said closed terminal, a stationary contact member, a movable contact member hinged to said stationary member and normally held by the resiliency of said tube in contact with said stationary member, a pivotally supported lever connected to said link, and hook means connecting said lever and said movable contact member.

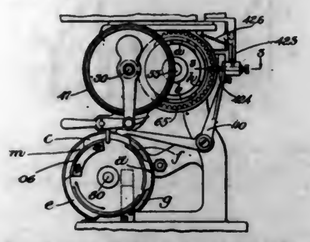
5. In an electric switch, a resilient curved hollow tube, means adapted to admit gas to said tube, a closed terminal provided on said tube, a link pivotally connected with said closed terminal, a stationary contact member, a movable contact member hinged to said stationary member and normally held by the resiliency of said tube in contact with said stationary member, a pivotally supporting lever connected to said link, an adjustment screw threadably mounted on said lever, and a hook member pivoted to said adjustment screw and movably attached to said hinged supporting arm.

[Claims 6 and 7 not printed in the Gazette.]

1,212,568. INSTRUMENT-ACTUATING DEVICE FOR KNITTING-MACHINES. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Aug. 30, 1915. Serial No. 47,951. (Cl. 66—21.)

1. A knitting machine having in combination a movable member or instrument, an actuating device therefor moving in a fixed path, a follower for said actuating device forming a part of and movable with said movable member, and pattern-controlled means for shifting said follower from said path into idle positions out of contact with said device on each side of said path.

2. In a knitting machine, the combination of a movable member, an actuating cam therefor rotating in a circular path, a follower for said actuating cam connected to said member, and pattern controlled means for shifting said follower from said circular path into idle positions on each side thereof.



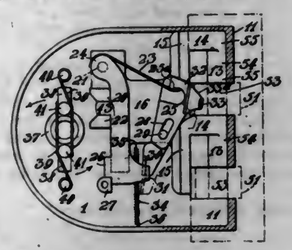
3. A knitting machine having a frequently actuated part for effecting changes in the knitting, an actuating device rotating in a circular path, and a follower forming part of and movable with a connection between said actuating device and said part, in combination with means for positioning said follower in said circular path, wholly inside of said path, and wholly outside of said path, at predetermined times, whereby respectively to actuate and to render idle in two different positions said frequently actuated part.

4. A knitting machine having a frequently actuated part such as a movable needle cam, an actuating cam rotating in a circular path, and a hooked follower forming part of a connection between said actuating device and said part, having an opening therein, in combination with means for positioning said follower with its free end in said circular path, with its opening in said path, and with its free end outside of said path, at predetermined times, respectively to actuate said part, and to hold said part idle in two different positions.

5. A knitting machine having a member adapted to be actuated at frequent intervals, in combination with means for holding said member in different idle positions comprising a carrier for said member, an actuating cam for said carrier rotating in a circular path, a hooked follower on said carrier movable in the plane of rotation of said cam, and pattern means for positioning said follower to contact with and be moved by said actuating cam, and in any of a plurality of idle positions in said plane of rotation and out of operative contact with said cam.

[Claims 6 and 7 not printed in the Gazette.]

1,212,569. LOCK. SAMUEL SEGAL, New York, N. Y. Filed Apr. 22, 1916. Serial No. 92,820. (Cl. 70—64.)



1. A door lock having locking mechanism, a casing therefor, a keeper, a bolt adaptable to move in and out of said keeper, said mechanism including a pawl to maintain said bolt out of said keeper, a spring for moving said bolt into locked position, a detent carried by said bolt adapted to engage said pawl, and said detent being actuated by said keeper upon the closing of the door to release said pawl for permitting said spring to move said bolt into said keeper.

2. A door lock having locking mechanism, a casing therefor, a keeper, a bolt adaptable to move in and out of said keeper, said mechanism including a pawl to maintain said bolt out of said keeper, a spring for moving said bolt into locked position, a detent fulcrumed on said bolt adapted to engage said pawl, and said detent being actuated by said keeper upon the closing of the door to swing about its fulcrum and to release said pawl for permitting said spring to move said bolt into said keeper.

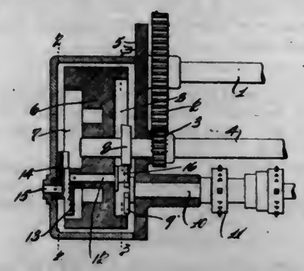
3. A door lock having locking mechanism, a casing therefor, a keeper, a bolt adaptable to move in and out of said keeper, said mechanism including a pawl to maintain said bolt out of said keeper, a spring for moving said bolt into locked position, a detent for engaging said pawl adapted to be swung about a fulcrum and also to be shifted longitudinally, means to swing said detent about its fulcrum upon closing of the door to release said pawl for permitting said spring to move said bolt into said keeper, and means to actuate said detent longitudinally upon the unlocking of said bolt without affecting said pawl.

4. A door lock having locking mechanism, a casing therefor, a keeper, a bolt adaptable to move in and out of said keeper, said mechanism including a pawl to maintain said bolt out of said keeper, a spring for moving said bolt into locked position, a detent adapted to engage said pawl, said detent being actuated upon the closing of the door to release said pawl for permitting said spring to move said bolt into said keeper, and said detent being actuated upon the unlocking of said bolt without affecting said pawl.

5. A door lock having locking mechanism, a casing therefor, a keeper, a bolt adaptable to move in and out of said keeper, said mechanism including a pawl to maintain said bolt out of said keeper, a spring for moving said bolt into locked position, a detent for engaging said pawl adapted to be swung about a fulcrum and also to be shifted longitudinally, said keeper swinging said detent about its fulcrum upon closing of the door to release said pawl for permitting said spring to move said bolt into the keeper, and said keeper actuating said detent longitudinally upon the unlocking of said bolt without affecting said pawl.

[Claims 6 to 14 not printed in the Gazette.]

1,212,570. INTERMITTENT MECHANICAL MOVEMENT. MICHAEL SEGEL, New York, N. Y. Filed June 13, 1918. Serial No. 773,382. (Cl. 74—41.)



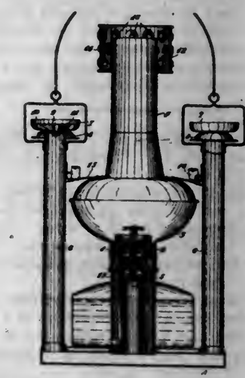
1. The herein described intermittent mechanical movement consisting of a continuously rotating shaft and an intermittently rotatable shaft, grooves on the intermittent shaft, a mechanism carried by the continuously rotating shaft, consisting of a member having a ridge, said ridge being shaped to fit the grooves in the intermittent shaft, and said ridge being carried and slid into a groove of the intermittent shaft at intervals by the rotation of the continuously rotating shaft.

2. The herein described intermittent mechanical movement consisting of a continuously operating shaft, a wheel mounted thereon, an intermittent shaft, an oscillating member mounted on said wheel, and means to guide said oscillating member to engage the intermittent shaft, and means for normally locking the intermittent shaft when not engaged.

3. The herein described intermittent movement consisting of a continuously rotating shaft, a flywheel or disk thereon, an intermittent shaft, a grooved member carried by said intermittent shaft, a pivotally mounted tongue carried by said disk adapted to engage the intermittent member at intervals, and means for guiding said pivotally mounted member during its operation properly as described.

4. The herein described intermittent mechanical movement, consisting of an intermittently rotatable shaft and a continuously operatable shaft, a pivotally mounted member carried thereby, said member having at least one elongated ridge, said ridge engaging said intermittently operated shaft, a support frame for both shafts, and guide members carried by said frame and the ridge member to aline the ridge member with the engagement elements of the intermittent shaft and means to lock the intermittent shaft when not engaged by said ridge member.

1,212,571. LAMP FOR MINERAL OILS. CHARLES SEPULCHRE, Herstal, Belgium. Filed Dec. 9, 1913. Serial No. 805,583. (Cl. 67—58.)



1. In a lamp of the character described, the combination of a burner, a chimney, an air supply tube, and means at the inlet end of said tube for controlling the admission of air thereto comprising two oppositely arranged funnel-like members, and a conical shaped guide positioned within said members with its apex directed into the mouth of the tube.

2. In a lamp of the character described, the combination with an air supply tube, of a conical shaped guide arranged at the inlet end of the tube with its apex directed into the tube, and means surrounding and adapted to direct currents of air against said guide.

3. In a lamp of the character described, the combination with a substantially vertical air supply tube, of a conical shaped guide arranged at the inlet end of the tube with its apex extending downward into the tube, and two oppositely arranged, vertically separated, members respectively surrounding the base and apex of said guide.

4. In a lamp of the character described, the combination of a burner, a chimney, an air supply pipe, provided at its inlet end with means controlling the admission of air thereto, and a casing surrounding the upper end of the chimney and provided with closed ends and an intermediate series of laterally extending tubular conical projections.

1,212,572. FOOT-SCRAPER. PHILIP H. SHERIDAN, Fort Myer, Va. Filed June 5, 1914. Serial No. 843,197. (Cl. 15—2.)

1. In a foot scraper, the combination of a spring secured to the bottom of a support and having a lat-

formation at the free end, a scraper frame hinged to the support and having a catch piece to engage the spring in one position and a projection to engage it in a position at right angles thereto.



2. In a foot scraper, the combination of a scraper-piece with arms at each side joined by a bar hinged to a support, a projection on the bar, a flat spring whose free end is engaged by the bar or by the projection, depending upon the position of the scraper.

3. In a foot-scraper, the combination of a substantially D-shaped frame hinged to a substantially horizontal support by its straight top part, an outwardly projecting part at the top of the D-frame, a catch piece also secured to the top of the D-frame, a flat spring having a notch at the outer end and working in conjunction with the D-frame, so that when the frame is released and dropped the catch piece will engage the notch in the spring, and when the D-frame is turned up out of the way the projection will engage the notch in the flat spring so as to lock out of position the scraper until released for operation.

1,212,573. MANUFACTURE OF FERTILIZERS. DAVID SHIELDS, Edgeworth, Pa. Filed Nov. 23, 1916. Serial No. 132,998. (Cl. 71—9.)

1. The method of manufacturing fertilizer which consists in mixing carbonaceous material in finely divided condition with subterranean salt water, subjecting the mixture to a temperature approximating the boiling-point of water, and adding to the so-treated material clay in finely divided condition.

2. The method of manufacturing fertilizer which consists in subjecting the carbon component of a mixture of finely divided coal and finely divided clay to the action of subterranean salt water while at a temperature of 212° F.

1,212,574. AUTOMATIC RADIATOR-VALVE AND HUMIDIFIER. CLARENCE C. SHIPP, Indianapolis, Ind. Filed July 25, 1916. Serial No. 111,316. (Cl. 237—78.)



1. In combination, with a steam and hot water radiator, a pan for receiving the air and water discharged from said radiator, an air and water conductor-means communicating with the interior of the radiator and discharging into said pan, a valve holding tube interposed in said conductor-means, a valve arranged within said tube for controlling the flow of air and water toward the pan, means actuated by the rise and fall of the water level within said pan for operating said valve, and a discharge pipe communicating with the hollow tube above the valve and having its discharge end terminating within and below a determined minimum water level within said pan.

2. In combination, with a steam and hot water radiator, a pan for receiving the air and water discharged from said radiator, an air and water conductor-means communicating with the interior of the radiator and discharging into said pan, coils in said air and water conductor-means for converting the incoming steam into water, a valve holding tube interposed in said conductor-means, a valve arranged within said tube for controlling the flow of air and water toward the pan, means actuated by the rise and fall of the water level within said pan for operating said valve, and a discharge pipe communicating with the hollow tube above the valve and having its discharge end terminating within and below a determined minimum water level within said pan.

3. In combination, with a steam and hot water radiator, a pan for receiving the air and water discharged from said radiator, an air and water conductor-means communicating with the interior of the radiator and discharging into said pan, a valve holding tube interposed in said conductor-means, a valve arranged within said tube for controlling the flow of air and water toward the pan, means actuated by the rise and fall of the water level within said pan for operating said valve, means for guiding said operating means in a determined path of travel, and a discharge pipe communicating with the hollow tube above the valve and having its discharge end terminating within and below a determined minimum water level within said pan.

4. In combination, with a steam and hot water radiator, a pan for receiving the air and water discharged form said radiator, an air and water conductor-means communicating with the interior of the radiator and discharging into said pan, a valve holding tube interposed in said conductor-means, a valve arranged within said tube for controlling the flow of air and water toward the pan, means actuated by the rise and fall of the water level within said pan for operating said valve, a discharge pipe communicating with the hollow tube above the valve and having its discharge end terminating within and below a determined minimum water level within said pan, and check-means interposed in the conductor-means for closing the passageway within the latter against back travel of the air and water.

1,212,575. MAGNESIUM CEMENT. WILLIAM G. F. SIEMANN, Baltimore, Md., assignor to Mary V. Gault, Baltimore, Md. Filed May 10, 1916. Serial No. 96,619. (Cl. 106—29.)

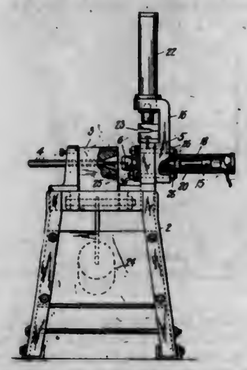
The herein described magnesium cement consisting of magnesium oxid, colophonium, magnesium sulfate, salt, kieselguhr, carbonate of barium, fiber, carbon bi-sulfid and water.

1,212,576. DRILL-SHARPENING MACHINE. JAMES H. SINCLAIR and HARRY L. SINCLAIR, Denver, Colo. Filed Jan. 10, 1916. Serial No. 72,960. (Cl. 76—5.)

1. In a drill-sharpening machine, the combination with a support and a dolly mounted thereon, of a guiding and retaining device comprising two members hinged on said support and having complementary recesses which in the closed position of said members provide a passage for a part of said dolly.

2. In a drill-sharpening machine, the combination with a support and a dolly mounted thereon, of a guiding and retaining device comprising two members hinged on said support and having complementary recesses which in the closed position of said members provide a passage for a part of said dolly, and a third member for locking the first-mentioned members in their said closed position.

3. In a drill-sharpening machine, the combination with a support and a dolly mounted thereon, of bolts on said support at opposite sides of said dolly, and a guiding and retaining device comprising two members pivoted on one of said bolts, the said members having complementary recesses which in the closed position of the members provide a passage for a part of said dolly, and slots adapted to admit the other bolt, and a third member mounted on the last-mentioned bolt in engagement with opposite edges of said members to lock them in their said closed position.

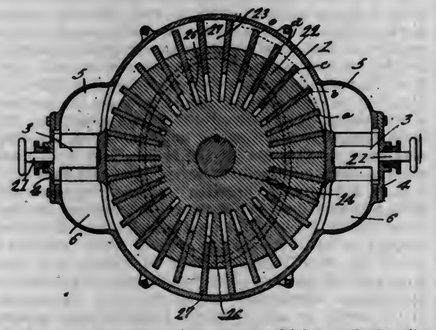


4. In a drill-sharpening machine, the combination with a support and a dolly mounted thereon, of bolts on said support at opposite sides of said dolly, and a guiding and retaining device comprising two members pivoted on one of said bolts, the said members having complementary recesses which in the closed position of the members provide a passage for a part of said dolly, and slots adapted to admit the other bolt, and a third member mounted on the last-mentioned bolt in engagement with said members to lock them in their said closed position.

5. A device for guiding and retaining dollies of drill-sharpening machines comprising a pair of members hinged at one of their ends and having complementary recesses which in the closed position of said members provide a passage for a part of a dolly, and a third member adapted to lock the first-mentioned members in their said closed position.

[Claims 6 to 12 not printed in the Gazette.]

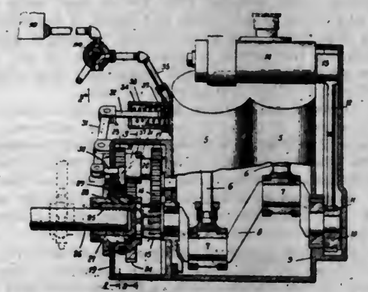
1,212,577. TRANSMISSION FOR MOTOR-VEHICLES. JOHN H. SMITH, Richmond, Va., assignor of one-half to B. Aurelius Gill, Richmond, Va. Filed Oct. 16, 1914. Serial No. 866,987. (Cl. 138—22.)



1. In a transmission for motor vehicles and the like, an elliptical casing having a pressure inlet adjacent each end of the minor axis thereof and a pressure outlet adjacent each end of said minor axis, a cylindrical rotor engaging the wall of the casing at each end of the minor axis of said casing, and between the pressure inlets and outlets, and a plurality of radially disposed pistons carried by the rotor and movable successively to positions to divide the interior of the casing into diametrically opposed pressure chambers each extending through approximately 90 degrees, there being a plurality of pistons disposed in stepped relation within each pressure chamber at all times during the actuation of the rotor.

2. In a transmission for motor vehicles and the like, an elliptical casing having a pressure inlet adjacent each end of the minor axis thereof and a pressure outlet adjacent each end of said minor axis, a cylindrical rotor engaging the wall of the casing at each end of the minor axis of said casing, and between the pressure inlets and outlets, and a plurality of radially disposed pistons carried by the rotor and movable successively to positions to divide the interior of the casing into diametrically opposed pressure chambers each extending through approximately 90 degrees, there being a plurality of pistons disposed in stepped relation within each pressure chamber at all times during the actuation of the rotor, there being elliptical guide channels within the side walls of the casing, projecting members on the pistons and working within said channels, a fluid forcing means, means for conducting fluid from said forcing means to the pressure inlet, and means for conducting fluid from the pressure outlets to said fluid forcing means.

1,212,578. STARTING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. GREGORY J. SPOHRER, East Orange, N. J., assignor to The Motor-Compressor Company, a Corporation of Delaware. Filed July 21, 1914. Serial No. 852,152. (Cl. 74—59.)



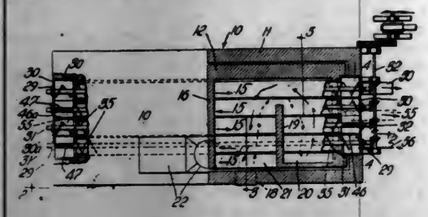
1. The combination of a motor having a shaft, a second shaft mounted in alinement with the motor shaft and adapted to drive and be driven by the same, a clutch for connecting the two shafts for simultaneous rotation, a counter-shaft, a gear adapted to slide axially on the counter-shaft and connected to the counter-shaft by a spiral thread, and means including the said axially movable gear and the counter-shaft for connecting the shaft of the motor to said second shaft whereby the motor may drive the second shaft and be disconnected therefrom when the speed of the second shaft exceeds the speed of the motor shaft; substantially as described.

2. The combination of a motor having a shaft, a second shaft mounted in alinement with the motor shaft, a movable clutch member for connecting the two shafts for simultaneous rotation, a gear on the motor shaft, a second gear on the second shaft, a counter-shaft, two gears mounted on the counter-shaft, one of which is movable axially upon the counter-shaft and connected thereto by a spiral thread, said gears on the counter-shaft coöperating with the said gears upon the motor shaft and the second shaft, one meshing directly with its coöperating gear and the other connected to its coöperating gear through an idler gear; substantially as described.

3. The combination of a convertible motor compressor having a shaft, a second shaft adapted to drive and be driven by the shaft of the motor compressor, means for connecting the two shafts together for simultaneous rota-

tion in the same direction, and automatic means for connecting the shaft of the motor compressor to said second shaft for simultaneous rotation in opposite directions, said last named means being actuated automatically to disconnect the second shaft from the motor shaft when the speed of the second shaft exceeds that of the motor shaft; substantially as described.

1,212,579. DISTILLING APPARATUS FOR KELP AND THE LIKE. JOHN C. W. STANLEY, Santa Cruz, Cal. Filed Mar. 7, 1916. Serial No. 82,573. (Cl. 203—6.)

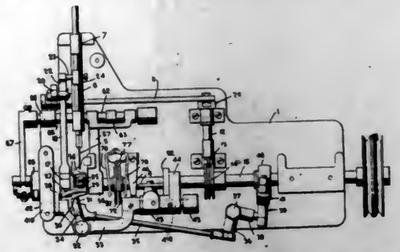


1. In an apparatus for destructive distillation, the combination of a furnace, boxes arranged one at each end of the furnace, a plurality of tubes extending longitudinally of and through the furnace and communicating at opposite ends with said boxes, means to move material back and forth through said tubes between the said boxes, means to introduce material to be distilled into one of said boxes at the end of one of said tubes, means to discharge solid material from one of said boxes at the end of another of said tubes, and means to discharge gases from said boxes, said boxes having transverse partitions separating the points of communication of the several tubes with the boxes, and said boxes being open above said partitions to allow free passage of gases.

2. In an apparatus for destructive distillation, a furnace, a pair of boxes arranged one at each end of the furnace, a plurality of tubes arranged in a common horizontal plane alongside of each other longitudinally of and through the furnace and communicating at their opposite ends with said boxes, means for carrying material back and forth between the boxes through the tubes, said means embodying spiral screw conveyers one in each of said tubes and means to rotate said conveyers all in the same direction, the conveyers in adjacent tubes being pitched in opposite directions so that material may be carried in opposite directions between the boxes in adjacent tubes, means for feeding material to be distilled into one of said boxes over the end of one of said conveyers, a paddle at the other end of said conveyer adapted to move the material from that end of the said conveyer transversely over to the conveyer in the next adjacent tube, vents for gases from said boxes, and discharge means for the final solid product at the end of the tube through which the material is last conveyed.

3. In an apparatus for destructive distillation, a furnace a pair of boxes arranged one at each end of the furnace, a plurality of tubes arranged in a common horizontal plane alongside of each other longitudinally of and through the furnace and communicating at their opposite ends with said boxes, means for carrying material back and forth between the boxes through the tubes, said means embodying spiral screw conveyers one in each of said tubes and means to rotate said conveyers all in the same direction, and bearings for said conveyers in the outer walls of said boxes, and said boxes being arranged with their outer walls exterior of the furnace so that the boxes and said bearings may be kept comparatively cool, the conveyers in adjacent tubes being pitched in opposite directions so that material may be carried in opposite directions between the boxes in adjacent tubes, means for feeding material to be distilled into one of said boxes over the end of one of said conveyers, a paddle at the other end of said conveyer adapted to move the material from that end of the said conveyer transversely over to the conveyer in the next adjacent tube, vents for gases from said boxes, and discharge means for the final solid product at the end of the tube through which the material is last conveyed.

1,212,580. BUTTONHOLE-FINISHING MACHINE. LAWRENCE ST. CLAIR, Haverhill, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Apr. 21, 1916. Serial No. 92,734. (Cl. 112—4.)



1. In a machine for finishing buttonholes, the combination with a work support having a work-bending groove, of a bender to bend the work into the groove, a horizontally-reciprocating needle operating beneath the work support, a looper for manipulating a looper thread, a rocking frame on which said looper is pivotally mounted, means to oscillate the looper in timed relation with the movements of the needle, and means to rock said frame.

2. In a sewing machine, the combination with a work support having a work-bending groove, of a bender for bending the work into said groove, a horizontally-reciprocating needle operating beneath the work support, a driving shaft beneath the work support extending at right angles to the needle, an oscillatory frame having a fork rigid therewith, a cam on said driving shaft coöperating with said fork to oscillate the frame, a looper pivoted to the frame, means for oscillating the looper by rotation of the driving shaft, and means to actuate the needle.

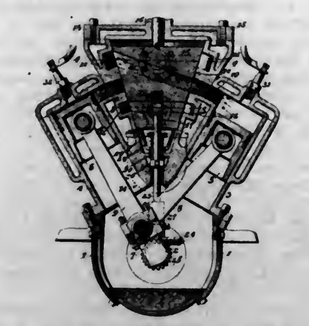
3. In a machine for finishing buttonholes, the combination with a work support having a work-bending groove, of a bender for bending the work into said groove, said groove having an opening therein beneath the bender, means to feed the work, and rolls occupying the opening in the groove and on which the work is sustained when acted on by the bender, said rolls having their axes extending at right angles to the feeding movement, and stitch-forming mechanism.

4. In a buttonhole finishing machine, the combination with a frame provided with a work support having a work-bending groove, of a driving shaft beneath the work support, a horizontally-reciprocating needle situated beneath the work support, means to actuate said needle from the driving shaft, a looper pivoted to oscillate in a direction at substantially right angles to the movement of the needle, an arm connected to said looper, an elbow-lever pivoted to the frame, a link connecting one arm of said lever to the arm of the looper, and a connection between the other arm of said lever and said shaft.

5. In a buttonhole finishing machine, the combination with a frame provided with a work support having a work-bending groove, of a driving shaft beneath the work support, a horizontally-reciprocating needle situated beneath the work support, means to actuate said needle from the driving shaft, a looper pivoted to oscillate in a direction at substantially right angles to the movement of the needle, an arm connected to said looper, an elbow-lever pivoted to the frame, a link connecting one arm of said lever to the arm of the looper, a connection between the other arm of said lever and said shaft, and a take-up mechanism for the looper thread mounted on said shaft.

[Claim 6 not printed in the Gazette.]

1,212,581. INTERNAL-COMBUSTION ENGINE. JAMES OSBORN STEPHENS, Big Island, Va., assignor of one-third to John Marvin Stephens and one-third to Harry Randolph, McComas, W. Va. Filed Jan. 3, 1916. Serial No. 69,904. (Cl. 123—55.)



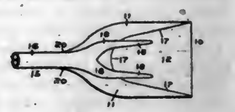
1. The combination of an engine body having a cylinder and a conical valve recess adjacent to the cylinder, and a conical valve inclosed within the cylinder, and having a square opening in its lower smaller end, a shaft connected with the valve having a square upper end fitting into the square opening of the valve and having a fixed washer adjacent to the lower end of the valve, a bearing in the cylinder for said shaft preventing its upward movement, a collar rigidly connected to the valve, said collar being spaced from the lower end of the valve and disposed about the said shaft below said washer, and a compression screw located between the collar and the washer to hold the valve properly seated within the valve recess at all times.

2. In an engine, the combination of a cylinder having a port and a conical valve recess at one side communicating with the port, a piston within the cylinder, a power shaft with which the piston is connected, said valve recess having vertically spaced annular chambers, a conical valve seated in the recess and having diagonal passages establishing communication between the said annular chamber and the cylinder port and located wholly between the ends of the valve, upper and lower shafts projecting vertically and axially from the said valve, ignition means controlled by the upper shaft, and a connection between the lower shaft and the said collar shaft for rotating the said valve.

3. In an engine, the combination of a cylinder having a port and a conical valve recess at one side communicating with the port, a piston within the cylinder, a power shaft with which the piston is connected, said valve recess having vertically spaced annular chambers, a conical valve seated in the recess and having diagonal passages establishing communication between the said annular chamber and the cylinder port and located wholly between the ends of the valve, upper and lower shafts projecting vertically and axially from the said valve, ignition means controlled by the upper shaft, and a connection between the lower shaft and the said collar shaft for rotating the said valve, said lower shaft having a longitudinally adjustable connection with the lower end of the valve, and a spring engaging the valve and engaging a portion of the said lower shaft whereby to adjust the valve relatively to the said shaft and maintain the former properly seated within the valve recess at all times.

1,212,582. SHOVEL AND SCOOP. JOHN S. SURBAUGH, Vincennes, Ind. Filed Jan. 19, 1915. Serial No. 3,097. (Cl. 55—147.)

1. A shovel or scoop blade comprising a unit blank provided with an integral shank, said blank being crimped to provide a flat portion with raised sides and back, said shank being rolled into a hollow tube, adapted to receive a handle, said tube having its inner end bifurcated, said bifurcated ends entering the flat portion of the blank at different points.



2. A shovel or scoop blade comprising a unit blank provided with an integral shank, said blank being crimped to provide a flat portion with raised sides and back, said shank being rolled into a hollow tube, adapted to receive a handle, and extending across the raised back member in the form of a strengthening roll and being bifurcated to provide an increased number of strengthening rolls to enter the flat portion of the blank at different points.

3. A shovel or scoop blade comprising a unit blank provided with an integral shank, said blank being crimped to provide a flat portion with raised sides and back, said shank being rolled into a hollow tube, adapted to receive a handle, and extending across the raised back member in the form of a strengthening roll and thence forked to provide an increased number of strengthening rolls to enter the flat portion of the blank at different points.

4. A shovel or scoop blade comprising a unit blank provided with an integral shank, said blank being crimped to provide a flat portion with raised sides and back, said shank being rolled into a hollow tube adapted to support a handle and extending into the raised back in the form of a strengthening roll and thence forked to provide an increased number of strengthening rolls extending into the flat portion of the blade.

5. A sheet metal shovel blade pressed to form a bottom, a rear wall, a handle socket merging into said rear wall, and ribs merging into said handle socket at said rear wall, said ribs being separated from each other at the junction of said rear wall and bottom.

[Claims 6 to 8 not printed in the Gazette.]

1,212,583. METHOD OF AND APPARATUS FOR PREVENTING WARPING AND TWISTING OF LUMBER DURING KILNING. DANIEL R. TANNER, La Grande, Oreg. Filed Feb. 24, 1916. Serial No. 80,316. (Cl. 34—26.)



1. In a mechanism for preventing warping and twisting of lumber during drying, apparatus exerting a substantially constant follow-up action at different points along the load of material during shrinkage and irrespective of the reduction of volume thereof and also exerting a variable pressure at different longitudinal and elevational points along the load, whereby the lumber is prevented both from warping and also twisting during the drying operation, substantially as described.

2. In a mechanism for preventing twisting of lumber during drying, apparatus exerting a substantially constant follow-up pressure with variable action at different longitudinal and elevational points along the load of lumber, whereby the lumber is prevented from twisting during the drying operation, substantially as described.

3. In a mechanism for preventing twisting of lumber during drying, apparatus exerting a substantially constant follow-up pressure on both sides of the load of lumber and with variable action at different longitudinal and elevational points on both sides thereof thereby preventing twisting of the lumber while it is drying, substantially as described.

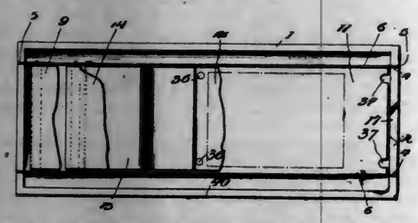
4. In a mechanism for preventing twisting of lumber during drying, apparatus exerting a substantially constant follow-up pressure on both sides of the load of lumber and at the top and bottom of such sides with a vari-

able action at different longitudinal and elevation points on both sides thereof, thereby preventing twisting of the lumber during drying, substantially as described.

5. In a mechanism for preventing warping and twisting of lumber during drying, apparatus exerting a substantially constant follow-up pressure at different points along both sides of a rectangular load of lumber to be dried and irrespective of variation of shrinkage and reduction of volume and also exerting stress in different directions at opposite ends of the load to prevent twisting during drying of the lumber, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

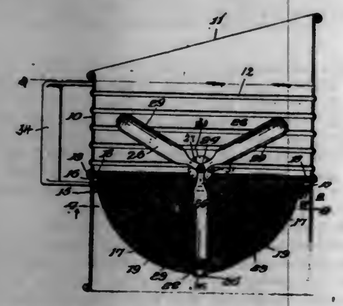
1,212,584. AUTOGRAPHIC SALES-REGISTER. ROBERT W. TEMPLE, Cheboygan, Mich. Filed Oct. 5, 1916. Serial No. 123,957. (Cl. 11—36.)



1. In a device for the purpose set forth, the combination of a casing having notches in the upper edges of its end walls, a support provided at its ends with tongues adapted to seat in said notches, a table carried by said support, and record strips mounted in said support and disposed to rest upon and travel over the said table.

2. In an apparatus for the purpose set forth, the combination of a casing, a support suspended within the casing, web-carrying rollers mounted in said support, a table in the support above said web-carrying rollers, a duplicating medium disposed adjacent the inner end of said table and adapted to extend between the said webs, and a guide for said duplicating medium disposed within the support and extending over the end of the table.

1,212,585. COMBINED SIFTER AND MIXER. SOZABURO TODA, Erie, Pa. Filed June 14, 1915. Serial No. 34,003. (Cl. 83—60.)



1. In a device of the class described, a shell having an inwardly opening annular channel, a member of foraminous material, a partition member extending transversely of the shell and having a plurality of openings and rolled at its edges over the edge of the foraminous member, the rolled over edge of the partition member frictionally engaging in the channel, and a cut off member coacting with the partition member.

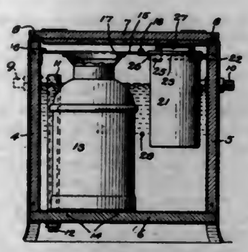
2. In a device of the class described, a shell having an inwardly opening annular bead and transverse slots, a frame having projections engaging in said slots and thereby mounted for oscillation within said shell, a cup-shaped member supported by said frame and movable therewith, said movable cup-shaped member having a plurality of openings spaced apart, another cup-shaped member having its rim rolled over and frictionally engaging in said annular bead and supported thereby within the shell, said frictionally supported cup-shaped member bearing within the movable cup-shaped member and said frictionally supported cup-shaped member having a plurality of openings registering with the openings of the movable cup-shaped member when in one position and closed by the spaces between said openings when in another position, and an agitator operating within the shell and within the frictionally supported cup-shaped member.

3. In a device of the class described, an inclosing shell having an inwardly opening encircling channel and oppositely disposed slots, a transverse member having its rim rolled over and frictionally supported thereby in said channel and having a plurality of openings, and a cut-off member having projections engaging in said slots and mounted for rotation thereby relative to said transverse member and having openings adapted to register with the openings of the same.

4. In a device of the class described, an inclosing shell having an inwardly opening encircling bead, a transverse member having a plurality of openings and with its edge rolled over and engaging in said bead, a screen member bearing upon said transverse member and with its edge received in the rolled over edge of the same and supported thereby, a member rotative relative to said transverse member and having openings adapted to register with the openings of the transverse member, and an agitator within the shell.

5. In a device of the class described, a shell, a cup-shaped member mounted for oscillation within said shell and having a plurality of openings spaced apart, and another cup-shaped member rigidly supported within the shell and bearing within the movable cup-shaped member, said rigidly supported cup-shaped member having a plurality of openings registering with the openings of the movable cup-shaped member when in one position and closed by the spaces between said openings when in another position, said shell adapted to support an agitator therein.

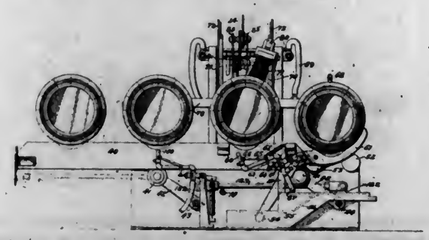
1,212,586. CREAM-STORING CABINET. THEODORE L. VALERIUS, Fort Atkinson, Wis., assignor to The Creamery Package Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 28, 1916. Serial No. 80,788. (Cl. 217—36.)



1. A cream cabinet comprising, in combination, a box having a cover and adapted to contain a suitable cooling means and a can, a member hinged to said box below the cover and having an opening through which cream may be poured into the can, said opening being bounded by a flange extending into the mouth of the can, and means for locking said member in engagement with the mouth of the can.

2. A cream cabinet comprising, in combination, a box having a cover and adapted to contain suitable cooling means, a bracket fixed in said cabinet and having an opening therein, a primary storage receptacle adapted to be inserted in said opening, means for locking the primary receptacle against floating, a main storage receptacle, a plate hinged to the box for movement in a vertical plane, said plate having an opening through which cream may be poured into the main receptacle, means on the lower side of said plate adapted to extend into the mouth of the main receptacle, and means for locking said plate to hold the main receptacle against floating.

1,212,587. BARREL-WASHING MACHINE. CHARLES B. VAN HORN, Philadelphia, Pa. Filed July 24, 1913. Serial No. 780,975. (Cl. 141—6.)



1. In a barrel washing machine, the combination of a frame, a barrel conveyer, sets of rotating rolls upon the frame for revolving the barrel at different working positions, means for vertically moving and reciprocating the conveyer at timed intervals, a pivoted vertically movable barrel lifting device upon the conveyer, and an inclined surface upon the frame in the path of forward travel of the lifting device for tilting the lifting device to deliver a barrel therefrom to one of said sets of supporting rolls.

2. In a barrel washing machine, the combination of a frame, a barrel conveyer mounted for vertical and reciprocatory motion on the frame, sets of revolving rollers upon the frame for supporting and rotating the barrel at different working positions, a pivoted, vertically tilting barrel lifting device at the rear end of the conveyer, said lifting device having an arm projecting therefrom, and a fixed cam abutment upon the frame adapted for engagement with said arm on the preliminary forward motion of the conveyer to tilt said barrel lifting device to delivery position.

3. The combination, in a barrel washing machine, of a frame having separated sides, independent sets of rotatable supports for barrels journaled upon the respective sides, a barrel conveyer arranged to move vertically and horizontally between said separated frame sides and the said sets of independent rotatable barrel supports, means for raising and lowering said conveyer, means for reciprocating said conveyer, a pivoted barrel lifting device at the receiving end of said conveyer, and means upon the frame for engagement with said barrel lifting device to tilt the same for the delivery of a barrel to the conveyer.

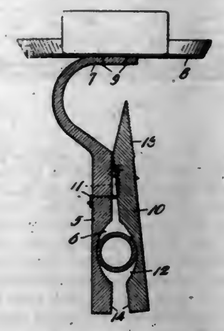
4. In a barrel washing machine, the combination of a frame, a barrel conveyer, means for raising and lowering said conveyer in the frame, roller supports for said conveyer, a horizontal rack slidable vertically upon the conveyer, a pinion in engagement with said rack, and means for operating said pinion to reciprocate the conveyer longitudinally.

5. In a barrel washing machine, the combination of a frame, a barrel conveyer, roller supports for said conveyer, rocking arms carrying said roller supports, means for rocking said arms to raise and lower the conveyer, and means for reciprocating the conveyer longitudinally in said frame.

[Claims 6 to 8 not printed in the Gazette.]

1,212,588. SOAP-TRAY. CHARLES VOLHARD, San Francisco, Cal. Filed May 3, 1916. Serial No. 95,161. (Cl. 45—28.)

1. In a device of the class described, a tray, a post depending from said tray, an arm pivoted to said post, means for yieldably holding said arm engaged with said post, said arms and post being provided with pipe engaging portions, substantially as described.



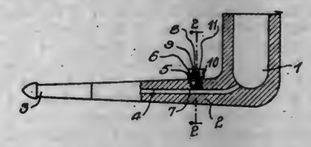
2. In a device of the class described, a post having a curved portion at its upper end, an arm pivoted inwardly from one end to said post at the base of the curved portion, the rear end of said arm providing a finger grip, a spring for normally holding said arm against said post, said arms and post being provided with pipe engaging portions, substantially as described.

1,212,589. COMBINATION MANICURING IMPLEMENT. EDWARD F. VOSS, Walworth, Wis. Filed Oct. 19, 1914. Serial No. 867,467. (Cl. 30—23.)



An implement for squeezing pimples, blackheads, and the like comprising a pair of crossed pivoted shanks, the corresponding ends of the shanks being formed with heel portions, having conical sockets in their opposing faces, and conical rubber blocks secured in said sockets, said blocks having flanges at their bases which cover the said opposing faces of the heel portions to prevent contact of said faces with the skin of the user.

1,212,590. TOBACCO-PIPE. EDWARD WAIGAND, Nampa, Idaho. Filed Feb. 1, 1916. Serial No. 75,538. (Cl. 131—12.)



In a tobacco pipe of the class described, the upper side of the stem of which adjacent the bowl thereof being provided with a transversely extending air inlet opening communicating with the bore thereof, a tube having its lower end secured in said opening, the upper end of said tube projecting upwardly from said stem and having an elongated aperture in one side thereof, and a cap snugly fitted over the open upper end of said tube, said cap being adapted to rotate thereon and having an elongated aperture in one of its sides adapted to partially or completely register with the aperture in said tube according to the relative position of said cap, whereby to regulate the amount of air allowed to pass into the bore of said stem and mix with the smoke drawn therefrom.

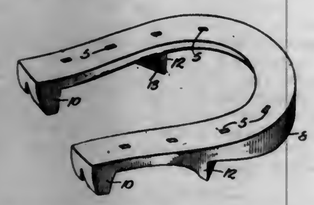
1,212,591. DOOR. EUGENE W. WALSH, New York, N. Y. Filed Sept. 11, 1915. Serial No. 50,145. (Cl. 20—20.)



1. In a door, the combination with a pair of folding elements each beveled at the joint on the inner side thereof, of cylindrical joint hinges having leaves attached to the beveled edges of said elements, the cylindrical portion of each of said hinges being disposed in the plane of the front of said door elements, pivot pins carried by said hinges and extending therefrom, cylindrical joint rods registering with and forming continuations of the cylindrical portion of said hinges, said rods being separate from the door elements and filling the unoccupied spaces along the edges thereof.

2. A folding door comprising two main elements, one being hinged to a door jamb, the other having an edge mating the opposite jamb, a cleat attached to the hinged elements and so located as to cover the joint between said element and the jamb when the door is closed, a second cleat attached to the interior of the opposite jamb whereby the joint thereat is covered when the door is closed, flanges extending from each of said door elements and so located as to cover the joints at the outer sides of the jambs when the door is closed, hinges disposed between said door elements and connected thereto, and means combined with the hinges whereby the joint between said door elements is covered.

1,212,592. HORSESHOE. GEORGE J. WALSH, Brooklyn, N. Y. Filed Dec. 28, 1912, Serial No. 739,014. Renewed Aug. 22, 1916. Serial No. 116,389. (Cl. 168—24.)

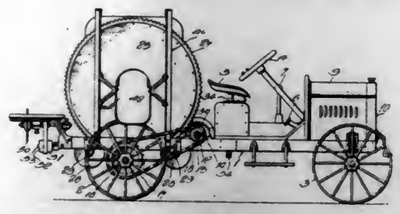


A horse shoe of the usual U-shaped configuration having heel calks and having its lower face at the outer edge thereof flanked with a flange which extends continuously from the heel calks around the front of the shoe, the edge of said flange at the front of the shoe being sharp and said edge lying in the plane of the ends of the heel calks and thence sloping gradually to the forward sides of the heel calks, and a single fulcrum calk located midway between each heel calk and the middle of the said sharpened edge and having its edge substantially in the plane of the said sharp edge of the flange and the ends of the heel calks and disposed obliquely to the median line of the shoe and the forward edges of the heel calks, and the sharp edge of the flange.

1,212,593. DRIVING MEANS FOR CEMENT-MIXERS. ERNEST F. WEGE and HENRY WEGE, La Crosse, Wis. Filed Mar. 30, 1916. Serial No. 87,809. (Cl. 21—114.)

1. In combination, a rotary drum having a pair of longitudinally spaced driving members permanently secured against independent rotation, a pair of shaft sections, driving connections between said shaft sections and driving members, and means for rotating said shaft sections including means for permitting said sections to fluctuate in speed to at all times equalize the driving power on the two driving members.

2. In combination, a rotary drum having a pair of longitudinally spaced driving members permanently secured against independent rotation, a pair of shaft sections, driving connections between said shaft sections and driving members, and differential gearing for rotating said shaft sections and permitting fluctuation in the speeds thereof to at all times equalize the driving power on the two driving members.



3. In combination, a rotary drum having a pair of longitudinally spaced driving gears permanently secured against independent rotation, a pair of shaft sections having pinions meshing with said gears, and means for driving said shaft sections including means for permitting said sections to fluctuate in speed to at all times equalize the driving power on the two driving gears.

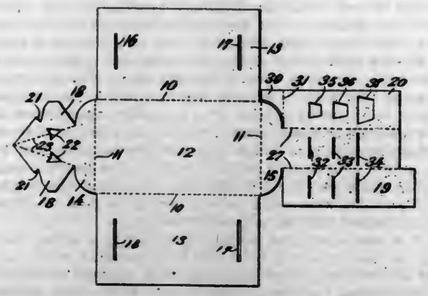
4. In combination, a portable truck having a pair of independently rotatable driving wheels, a rotary drum mounted on said truck and having a pair of longitudinally spaced driving members permanently secured against independent rotation, a pair of shaft sections for driving either said wheels or said driving members at will, a power plant on the truck, and means for driving said shaft sections from said power plant, including means for permitting said sections to fluctuate in speed to equalize the driving power thereof whether this power be exerted on the wheels or said driving members.

5. In combination, a portable truck having a pair of independently rotatable driving wheels, a rotary drum mounted on said truck and having a pair of longitudinally spaced driving members permanently secured against independent rotation, a pair of shaft sections for driving either said wheels or said driving members, at will, differential gearing connecting the two shaft sections for permitting the same to fluctuate in speed to equalize the driving power thereof whether this power be exerted on the wheels or on said driving members, and a power plant on the truck for driving said gearing.

[Claims 6 to 8 not printed in the Gazette.]

1,212,594. ENVELOP. JAMES E. WHITE, Walker, Minn. Filed Mar. 1, 1916. Serial No. 81,481. (Cl. 229—82.)

1. An envelop provided with a body portion including upper and lower wings and end wings, the end wings being provided with side flaps, one of the side flaps of one of the end wings being extended beyond the outer end of the end wing and the second side flap of the end wing being extended inwardly beyond the inner end of the first mentioned side flap thereof, one of said end wings being provided with openings and the second end wing being provided with side notches forming abutment shoulders, said upper and lower wings being folded and provided with registering slots, a key formed from a blank doubled intermediate its length, said key being provided with abutment shoulders and having a cutout forming a pocket, the key being threaded through the registering openings formed in the end wing having the extensions, said last mentioned end wing being threaded through the registering slots formed in said upper and lower wings and the remaining end wing being threaded through one of the sets of registering slots in said upper and lower wings and having its inner end passing through the pocket of said key with its shoulders in interlocking engagement with said key upon opposite sides of the pocket and with the shoulders of said key in interlocking engagement with the end wing having the extensions.

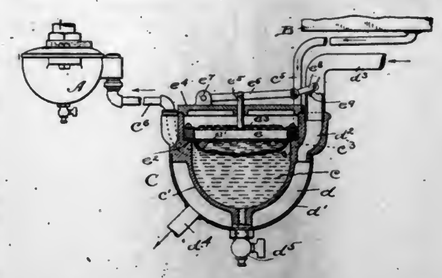


2. An envelop comprising a body portion having upper and lower wings and end wings, the end wings being provided with side flaps folded to provide end tongues, one of said tongues being provided with side notches forming a head having abutment shoulders, and the second tongue being provided with openings and having one of its side flaps provided with an outer extension forming a tab and the second flap with an inner extension forming a second tab, said upper and lower wings being folded and provided with registering openings, a key threaded through the openings of said second tongue and provided with side notches forming abutment shoulders for interlocking engagement with the tongues, said key being provided with a cutout forming a pocket, said tongue and key being threaded through the openings of the upper and lower wings with the tabs extending out through the openings of the wings, the first mentioned tongue being threaded through one set of registering openings in said upper and lower wings and having its inner end passing through the pocket of said key for interlocking engagement between the key and shoulders of the tongues, the tabs being then removed.

3. An envelop comprising a body portion including upper and lower wings and end wings, said upper and lower wings being folded and provided with registering slots, one of said end wings being provided with side flaps folded to provide a tongue having side notches providing a head having abutment shoulders at its inner end, the second end wing being provided with side flaps folded and provided with registering openings forming passageways in the second tongue, said second tongue being passed through the registering openings of said upper and lower wings, a key passed through the passageways of the second tongue and provided with side notches forming shoulders for interlocking engagement with the second tongue, and said first mentioned tongue being passed through certain of the registering openings of said upper and lower wings and through the pocket of said key for interlocking engagement between the key and the abutment shoulders of the first mentioned tongue.

4. An envelop comprising a body portion including upper and lower wings and end wings, said upper and lower wings being folded and provided with registering openings, one of said end wings forming a tongue provided with a head having abutment shoulders and the second end wing providing a tongue having passageways formed therein, a key passed through the passageways of said second tongue and provided with abutment shoulders for interlocking engagement with the second tongue, said key being provided with a pocket, said second tongue being threaded through the openings of said upper and lower wings and said first mentioned tongue being passed through one set of openings in said upper and lower wings and through the pocket in said key for interlocking engagement between the key and the shoulders of the tongue.

1,212,595. REGULATED FUEL-HEATING DEVICE. JOSEPH A. WILLIAMS, Cleveland, Ohio, assignor to The K. W. Ignition Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 8, 1911. Serial No. 631,891. (Cl. 236—6.)



1. In a fuel heating and heat regulating device for a fuel feed system of an internal combustion engine, a bowl-shaped fuel chamber having inlet and outlet connections near the top thereof, a heating chamber arranged about the fuel chamber and provided with inlet and outlet connections for a heating medium, a hermetically sealed heat regulating chamber seated in the top of the fuel chamber and provided at the top with a flexible diaphragm, and mechanism connected with said diaphragm for controlling the supply of heating medium to the heating chamber.

2. In a fuel heating and heat regulating device for an internal combustion engine, a bowl-shaped fuel chamber having inlet and outlet connections, a heating chamber surrounding the side and bottom of the fuel chamber having inlet and outlet connections for a heating medium, a third chamber hermetically sealed and provided at the top with a flexbile diaphragm, said third chamber being seated in the fuel chamber so that its lower wall will be in engagement with the fuel in said fuel chamber, a valve in the connection leading to the heating chamber, and mechanism connected to said diaphragm for actuating the valve.

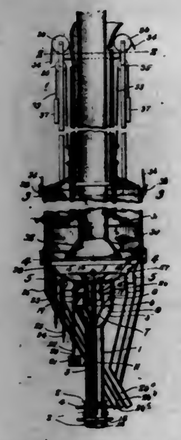
3. In a fuel heating and heat regulating device for a fuel feed system of an internal combustion engine, a bowl-shaped fuel chamber having inlet and outlet connections, a heating chamber arranged about a portion of the fuel chamber, said heating chamber being provided with inlet and outlet connections, a sealed chambered member forming a closure for the said fuel chamber, a volatile fluid within said chambered member, a flexible diaphragm forming a part of said chambered member, and mechanism connected with said diaphragm for controlling the supply of heating medium to the heating chamber.

4. In a fuel heating and heat regulating device for an internal combustion engine, a bowl-shaped fuel chamber having inlet and outlet connections, a heating chamber surrounding a portion of said fuel chamber, said heating chamber having inlet and outlet connections for a heating medium, a sealed chambered member forming a closure for the said fuel chamber, a volatile fluid within said chambered member, a flexible diaphragm forming a part of said chambered member, a valve in the connection leading to the heating chamber, and lever mechanism connected with the said diaphragm for actuating the valve.

1,212,596. DUST-SEPARATOR. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 3, 1916. Serial No. 75,966. (Cl. 183—54.)

1. A dust separator comprising an inlet pipe having helically arranged blades at its inner end in combination with means for flexing or warping said blades so as to regulate the angularity of the entering blasts of dust laden air.

2. A dust separator comprising a separating chamber, and an inlet pipe leading thereinto, a series of helically arranged blades in the inlet pipe, the lower ends of which are fixed and whose upper ends are movable, said upper ends being connected to an adjustable part whereby the angularity of the discharging blasts of dust laden air may be regulated.



3. A dust separator comprising a separating chamber, an inlet pipe leading thereinto, spiral blades arranged in the inner end of said pipe, means for adjusting the upper ends of said blades, a spreading plate located immediately above the upper ends of said blades, and means for adjusting said spreading plate independent of any adjustment of said blades.

4. A dust separator comprising a separating chamber, an inlet pipe leading thereinto, means located in the inner end of said inlet pipe for imparting a whirling motion to the dust laden air as it enters said chamber, and a series of separating flanges of gradually increasing angularity from which the dust laden air is impelled.

5. A dust separator comprising a separating chamber, an inlet pipe leading thereinto, means located in the inner end of said inlet pipe for imparting a whirling motion to the dust laden air as it enters said chamber, a series of separating flanges of gradually increasing angularity from which the dust laden air is impelled, and means for adjusting the flanges relative to each other.

[Claims 6 and 7 not printed in the Gazette.]

1,212,597. COIN-ACTUATED CLOCK-BANK. FENTON WRIGHT, Kansas City, Mo. Filed Nov. 27, 1915. Serial No. 63,777. (Cl. 194—54.)



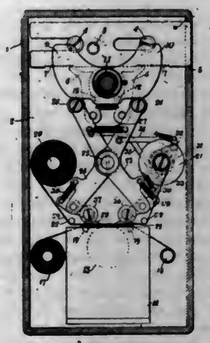
1. A coin controlled mechanism including a casing having an opening, a stop plate rotatably mounted in the casing and having an opening adapted to register with that of the casing, means for normally holding the stop plate with its opening out of registration with that of the casing, the casing being formed with a coin admitting slot, a locking plate mounted in the casing and coacting with one wall thereof to form a passage for a coin admitted through the slot, a locking lug carried by the locking plate, and a spring pressed lever normally engageable with the locking lug upon turning of the stop plate, said lever being engageable by a coin admitted through the slot to be moved to a position where it will not engage the lug.

2. A coin controlled mechanism including a casing having an opening, a stop plate rotatably mounted in the casing and having an opening adapted to register with that of the casing, means for normally holding the stop plate with its opening out of registration with that of the casing, the casing being formed with a coin admitting slot, a locking plate mounted in the casing and coacting with one wall thereof to form a passage for a coin admitted through the slot, a locking lug carried by the locking plate, and a spring pressed lever normally engageable with the locking lug upon turning of the stop plate, said lever being engageable by a coin admitted through the slot to be moved to a position where it will not engage the lug, and a guard wall located adjacent one wall of the casing and provided with a slot through which the coin admitted is discharged into the body of the casing.

3. A coin controlled mechanism including a casing having an opening, a stop plate rotatably mounted in the casing and having an opening adapted to register with that of the casing, the casing being formed with a coin admitting slot and passage, and a locking lever normally holding the stop plate against turning and engageable by a coin moving through the passage to release the stop plate.

4. A coin controlled mechanism including a casing having an opening, a stop plate rotatably mounted in the casing and having an opening adapted to register with that of the casing, means for normally holding the stop plate with its opening out of registration with that of the casing, the casing being formed with a coin admitting slot and passage, a lug projecting within the casing, a locking lever pivoted upon the stop plate and normally engaging the lug to prevent rotation of the stop plate, the lever being engageable by a coin forced into the passage and by such engagement to be moved out of engagement with the lug and free the stop plate, and means for turning the stop plate when freed.

1,212,598. RECORDING-LOCK. BERNARD H. ZIEHLER and JAMES C. DAWLEY, Dayton, Ohio; said Dawley assignor to said Ziehler. Filed Oct. 26, 1914. Serial No. 868,739. (Cl. 234—1.)



1. In a device of the character described, a bolt, a recording device, a knob normally disconnected from said bolt and said recording device, and key-controlled means to operatively connect said knob with said bolt and said recording device.

2. In a device of the character described, a bolt, a recording device, a knob normally connected with said bolt and said recording device, a second knob normally disconnected from said bolt and said recording device, and key-controlled means to connect said secong knob with said bolt and said recording device.

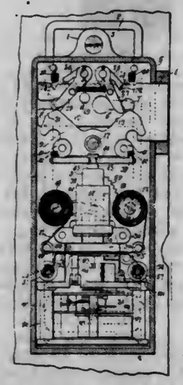
3. In a device of the character described, a bolt, a recording device, a knob normally connected with said bolt and said recording device, a second knob normally disconnected from said bolt and said recording device, key-controlled means to connect said second knob with said bolt and said recording device, and means to indicate on said record which knob was actuated to make a particular record.

4. In a device of the character described, a bolt, a recording device, a knob normally connected with said bolt and said recording device, a second knob normally disconnected from said bolt and said recording device, key-controlled means to connect said secod knob with said bolt and said recording device, and means to indicate on each record the direction in which the bolt was moved when said record was made.

5. In a device of the character described, a bolt, a recording device comprising type carriers, a roller platen movable across said type carriers, and a single device to actuate said bolt and impart operative movement to said platen.

[Claims 6 to 62 not printed in the Gazette.]

1,212,599. LOCK. BERNARD H. ZIEHLER and DON RAY ROWE, Dayton, Ohio; said Rowe assignor to said Ziehler. Filed Feb. 20, 1915. Serial No. 9,714. (Cl. 70—46.)



1. In a lock, a bolt-actuating device therefor, key-controlled locking means to prevent the actuating device from imparting movement to said bolt, and a device controlled by the locking means to prevent the removal of the key while said locking means is in an inoperative position and to release said key when said locking means assumes an operative position.

2. In a lock, the combination, with a bolt, bolt-actuating mechanism, and a key-controlled device to lock said bolt-actuating mechanism against movement, of means controlled by said bolt actuating mechanism to prevent the removal of the key from said key-controlled device while said bolt-actuating mechanism is unlocked.

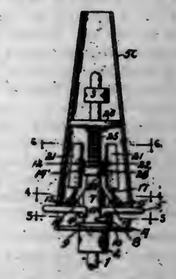
3. In a lock, the combination, with a bolt, a locking device to prevent the operation of said bolt and a key to control the movement of said locking device into and out of operative position, of means controlled by the position of said locking device to prevent the removal of said key after said locking device has been moved into its inoperative position.

4. In a lock, the combination, with a bolt, actuating mechanism for said bolt, and a key-controlled device to lock said actuating mechanism against movement, of means to prevent the removal of the key from said key-controlled device after said actuating mechanism has been released and before said actuating mechanism has been operated.

5. In a lock, the combination, with a bolt, means to lock said bolt normally against movement comprising a key barrel, a locking member, and a part carried by said key barrel to control the movement of said locking member, of means to prevent the return of said Key barrel to its normal position after it has been actuated and before said locking member has been moved into locking relation to said bolt.

[Claims 6 to 50 not printed in the Gazette.]

1,212,600. WINDING-HEAD APPARATUS. JACOB K. ALTEMUS, Philadelphia, Pa. Filed Jan. 8, 1915. Serial No. 1,075. (Cl. 242—46.3.)



1. In a winding head, a spindle, a form rest and form gripper means carried thereby, gripper actuating means rotatable independently on said spindle, a form steadying member slidably mounted on said spindle, and a coil spring surrounding said spindle and bearing against said gripper actuating means and said form steadying member.

2. In a winding head, a spindle, a form rest rotatable therewith, radially movable form gripper means on said rest, and means concentrically movable on said spindle for actuating the form gripper means, said actuating means having a cam face in direct engagement with said gripper means.

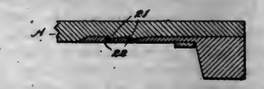
3. In a winding head, a spindle, a form rest rotatable therewith, radially movable form grippers on said rest, gripper actuating means rotatable on said spindle, and means whereby the grippers are actuated upon rotation of said actuating means, said actuating means being movable longitudinally of said spindle to entirely become disengaged from said grippers.

4. In a winding head, a spindle, a form rest rotatable therewith, radially movable form grippers on said rest, means rotatable on said spindle for actuating said grippers, a steadying member slidable on said spindle, yielding means exerting pressure upon the steadying member and gripper actuating means, said gripper actuating means being movable longitudinally of said spindle to entirely become disengaged from said grippers.

5. In a winding head, a spindle, a form rest rotatable therewith and having a radial slot, form grippers on said rest, means rotatable on said spindle for actuating said grippers, a handle on said gripper actuating means, said handle being movable beneath the form rest on either side of said radial slot to rotate said gripper actuating means, said handle being movable through said radial slot to engage and disengage the gripper actuating means from operative relation with the grippers.

[Claims 6 to 8 not printed in the Gazette.]

1,212,601. HORSESHOE. DAVID SPENCER ANTHONY, Sioux City, Iowa. Filed June 10, 1916. Serial No. 102,897. (Cl. 168—31.)



1. A horseshoe having in its under surface a channel and an integral cross-bar extending across the bottom of the channel, and a calk having an integral tongue or key driven into the channel and between the top surface of the latter and the cross-bar.

2. A horseshoe having in its under surface a channel and an integral cross-bar extending across the bottom of

the channel, a calk having an integral tongue or key driven into the channel and between the top surface of the latter and the cross-bar, and inter-locking surfaces between the shoe and the calk.

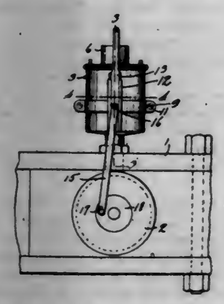
3. A horseshoe having a channel in its under surface and a bar extending across the channel, in combination with a calk having a wedge-shaped tongue driven into the channel and wedging between the top of the latter and the cross-bar, and means for locking the calk in place.

4. A horseshoe having a channel in its under surface and a bar extending across the channel in combination with a calk having a wedge-shaped tongue driven into the channel and wedging between the top of the latter and the cross-bar, and means for effecting the self-locking of the calk in driving the same home.

5. A horseshoe having in its under surface a channel and an integral bar extending across the channel intermediate its ends, in combination with a calk having a tongue driven into the channel, and the tip of the tongue being upset to interlock with the horseshoe.

[Claims 6 to 10 not printed in the Gazette.]

1,212,602. OILER FOR CRANK-PINS. CLAYTON L. AVERY, Tecumseh, Mich. Filed June 23, 1916. Serial No. 105,469. (Cl. 184—27.)



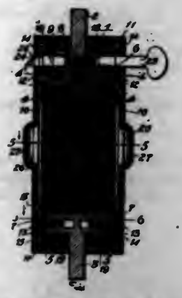
1. The combination with a connecting rod and its wrist pin, of an oil cup mounted on the connecting rod and having communication with the wrist pin, a feeder pin mounted in the cup for reciprocating movement, a clamp secured to the cup and having a vertically extending guide thereon, an arm slidably mounted in said guide and adapted to reciprocate vertically, said arm being connected to the upper end of the feeder pin, a disk secured to the wrist pin and a connecting rod secured, pivotally, to the lower end of the aforementioned arm and to the aforementioned disk and eccentrically of the latter.

2. The combination with a rod and its wrist pin, of an oil cup mounted on the connecting rod and communicating with the wrist pin, a feeder pin mounted in the oil cup for reciprocating movement, a guide mounted on the outer side of the cup, an arm slidably mounted in the guide and having connection to the upper end of the feeder pin, a disk secured to the wrist pin and means connected to the lower end of the aforementioned arm and to the disk eccentrically of the latter to reciprocate the arm upon the movement of the disk.

1,212,603. FUSE. HOWARD H. BAKER, Buffalo, N. Y. Filed Mar. 8, 1915, Serial No. 12,744. Renewed Dec. 7, 1916. Serial No. 135,701. (Cl. 175—273.)

1. The combination of a fuse block of insulating material, rigid sockets mounted on said block, a supporting plate of insulating material, and two pairs of jaws which are arranged on said plate and the members of each pair being adapted to engage one of said sockets and to receive one end of a fusible member between the same, the cooperating surfaces of said jaws and sockets being constructed to produce a wedging action on said jaws whereby the members of each pair are pressed toward each other and against opposite sides of the fuse between the same.

2. The combination of a fuse block of insulating material, two rigid metal sockets arranged in said block, a supporting plate, two rigid pairs of metal clamping jaws mounted on said plate and the members of each pair being constructed to engage by a wedge action with one of said sockets, and a fusible member having a longitudinal body and laterally projecting tabs at its ends each of which is adapted to be gripped between the jaws of one of said pairs, and said block being provided with a fuseway which places corresponding lateral sides of said sockets in communication and is adapted to receive the longitudinal body of said fusible member.



3. The combination of a fuse block of insulating material, two rigid metal sockets arranged in said block, a supporting plate, and two rigid pairs of metal clamping jaws mounted on said plate and the members of each pair being constructed to engage by a wedge action with one of said sockets and to grip between them one end of a U-shaped fuse strip and said block having a fuseway extending between said sockets and adapted to receive the central part of the U-shaped fuse strip.

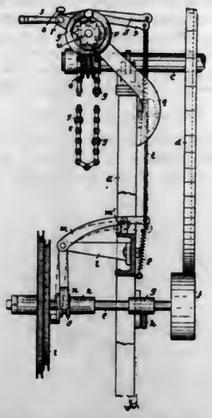
4. The combination of a block of insulating material which is provided with a fuseway adapted to receive the central part of a U-shaped fuse strip, two metal sockets mounted on the block at opposite ends of the fuseway, two pairs of clamping jaws adapted to grip opposite ends of said fuse strip and to engage by a wedge action with said sockets, and a supporting plate on which said jaws are moutned and which is provided with a vent opening, said fuseway being arranged on one side of said sockets and said vent opening so as to produce an angular path from said fuse to the atmosphere for the escape of the gases when the fuse burns out.

5. The combination of a fuse block of insulating material, rigid sockets mounted on said block, and two pairs of rigid jaws, the members of each pair being adapted to engage one of said sockets and to receive one end of a fusible member between the same, the coöperating surfaces of each pair of jaws and the companion socket being constructed to produce a wedging action on the respective jaws whereby the members of each pair are pressed toward each other and against opposite sides of the fuse between the same.

1,212,604. CONTROL DEVICE FOR WARPING-MACHINES. EDWARD BLOOM, Paterson, N. J. Original application filed Mar. 21, 1914, Serial No. 826,142. Divided and this application filed Apr. 30, 1915. Serial No. 24,883. (Cl. 74—46.)

1. A warping machine including, in combination, a frame, a reel journaled therein, means to rotate the reel including clutch members forming a clutch connection and one being withdrawable out of clutching engagement with the other, and means, including a repeating mechanism, for transmitting withdrawing motion from the reel to the first-named clutch member.

2. A warping machine including, in combination, a frame, a reel journaled therein, means to rotate the reel including clutch members forming a clutch connection and one being withdrawable out of clutching engagement with the other, and means including a disconnective clutch connection for transmitting withdrawing motion from the reel to said first-named member.

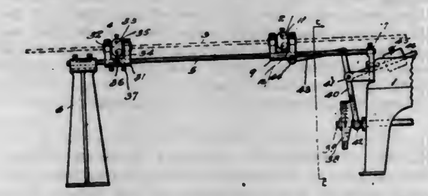


3. A warping machine including, in combination, a frame, a reel journaled therein, means to rotate the reel including clutch members forming a clutch connection and one being withdrawable out of engagement with the other, and means, including a disconnective clutch connection and a repeating mechanism, for transmitting withdrawing motion from the reel to said first-named member.

4. A warping machine including, in combination, a frame, a reel shaft journaled therein, a reel carried by said shaft, a repeating mechanism operatively connected with and driven by the reel shaft, a lever engaged with the repeating mechanism, means to rotate the reel including clutch members forming a clutch connection and one being withdrawable out of clutching engagement with the other, another lever fulcrumed in the frame and engaged with the first-named clutch member, and a link connecting said levers.

5. A warping machine including, in combination, a frame, a reel journaled therein, means to rotate the reel including clutch members forming a clutch connection and one being withdrawable out of clutching engagement with the other, means for transmitting withdrawing motion from the reel to the first-named member, including a repeating mechanism, disconnective power-transmitting mechanism connecting the repeating mechanism and reel, back and forth moving means actuated by the pattern-mechanism and operatively connected with the first-named clutch member, and a detent normally active to lock the last-named means against return upon movement in one direction.

1,212,605. FEEDING MECHANISM FOR NUT-MAKING MACHINES. HARRISON M. BRIGHTMAN, Columbus, Ohio. Filed July 7, 1916. Serial No. 107,949. (Cl. 10—72.)



1. In a feeding mechanism and in combination, a carriage comprising a frame and a pair of spaced eccentric gripping members, one of which is stationary and adjustable, while the other member is spring pressed to co-act with the stationary member.

2. In a feeding mechanism the combination with a supporting frame of a pair of eccentric gripping rolls one of which is stationary and the other spring pressed to co-act with the stationary roll.

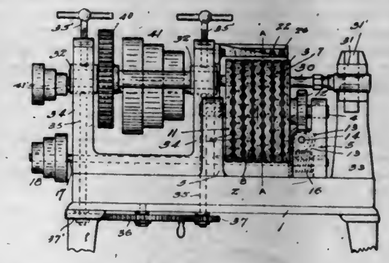
3. In a feed mechanism the combination with a supporting frame and a housing through which the work is adapted to pass, of a pair of eccentric gripping rolls supported in the housing, a pair of rotatable and adjustable bushings for each roller in the housing, and one of said rolls having a spring attached to one of the bushings urging it to gripping action.

4. In a feed mechanism the combination with a supporting frame and a housing having open bosses seated in the frame, of a pair of eccentric rollers one of which is spring pressed to co-act with the other and each roller having an axle, a pair of bushings for each axle supported in the housing, one of said bushings having means for adjusting the tension of the spring pressed gripping roller, and another bushing having means co-acting with a portion of the other roller for adjusting the eccentricity of the roller.

5. The combination in an intermittent feed mechanism with a pair of supporting rods and a stationary adjustable retaining device for the work, of a reciprocating carriage having a pair of perforated lugs slidable on the rods, and a pair of rollers supported in the carriage one of which is eccentric and adapted to grip the work on the working stroke of the carriage.

[Claim 6 not printed in the Gazette.]

1,212,606. NUT-CASTELLATING MACHINE. HARRISON M. BRIGHTMAN, Columbus, Ohio. Filed July 7, 1916. Serial No. 107,950. (Cl. 10—72.)



1. The combination with a revolving carrier having pockets for nuts therein and a rotary cutter, of an adjustable housing, and a flexibly supported presser foot in the housing to retain nuts in the carrier while being cut by the cutter.

2. The combination with a revolving carrier and rotary cutter of a housing formed with guide flanges, a presser foot movable between said flanges and adapted to retain nuts in the carrier while being cut, perforated lugs on the housing, and pivoted, spring actuated guide bars in said lugs and pivoted to the presser foot.

3. The combination with a revolving nut carrier, of a shaft and cutter thereon and means for driving the shaft, vertically arranged slidable bearing blocks for said shaft, lower screw bars for lifting said blocks to adjust the position of the cutter, and upper screw bars for clamping the blocks in adjusted position.

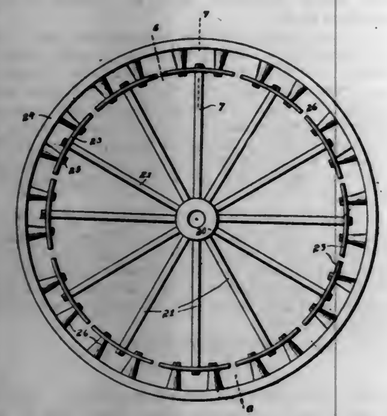
4. In a nut castellating machine a rotary carrier comprising a cylindrical drum having a series of spaced circumferential grooves, spaced rings fixed to the periphery of the drum registering with the grooves, and complementary notches on said rings forming pockets of less depth than the grooves, and means co-acting with the grooves for ejecting nuts from the pockets.

5. The combination in a nut castellating machine with a revolving carrier having grooves therein, spaced rings each having notched edges to form pockets registering with said grooves, a cutter, means for retaining the nuts

in the pockets, and a pawl located in each groove of the carrier adapted to eject the nuts from the pockets.

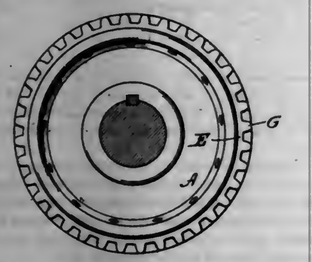
[Claim 6 not printed in the Gazette.]

1,212,607. SPRING-WHEEL. GEORGE B. BURCH, Ballagh, Nebr. Filed Dec. 27, 1912, Serial No. 738,917. Renewed June 29, 1916. Serial No. 106,619. (Cl. 152—28.)



A resilient wheel comprising a hub, spokes radiating from the opposite ends of said hub and having their outer ends connected, a rim having a series of blocks rigidly connected thereto, a series of spring plates having their centers connected to the spokes, said plates having their outer ends slotted adjacent the ends, and bolts passing through said slots into said blocks.

1,212,608. COMPOSITE GEAR. CHARLES H. CALKINS, Ludlow, Mass., assignor to Baush Machine Tool Company, a Corporation of Massachusetts. Filed Aug. 8, 1916. Serial No. 113,718. (Cl. 74—41.)



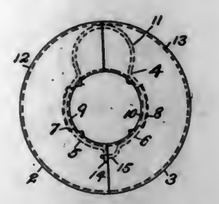
1. A gear having a center of comparatively strong metal and teeth of comparatively weak anti-friction material formed in a ring of such material extending around the center, said parts having shoulders engaging each other transversely to prevent relative axial movement and one of said parts having projections entering openings in the other to prevent relative circumferential movement.

2. A gear having a center of comparatively strong metal with an annular shoulder on its outer face and a cast iron ring of comparatively weak anti-friction material on said center in engagement with said shoulder, one of said parts having also projections entering openings in the other and extending toward the axis.

3. A gear having a center of comparatively strong metal with an annular groove in its outer face, and a ring of comparatively weak anti-friction material cast in said groove, said center having also openings extending toward the axis and said ring having projections cast therewith and entering said openings.

4. A gear having a center A of cast iron with an annular groove B extending around the rim thereof and with holes in said rim and a bronze ring E cast in said groove and with projections entering the holes in the rim of the cast iron center, so as to firmly anchor the bronze ring on the cast iron center, said rim having teeth cut therein.

1,212,609. FLOOR OR CEILING PLATE. EDWARD E. CLAUSSEN and JOSEPH C. HAMMER, Hartford, Conn. Filed Apr. 11, 1916. Serial No. 90,465. (Cl. 126—317.)



1. A floor or ceiling plate comprising segmental sections adapted when closed to abut at their ends, and a bowed spring extending across one of the butt joints and permanently connected with the sections at opposite sides of the joint which it crosses, said spring acting to apply a constant closing effect to the sections when they are opened.

2. A floor or ceiling plate comprising segmental sections adapted when closed to abut at their ends, and a bowed spring extending across one of the butt joints and rigidly connected with the respective sections at opposite sides of the joint which it crosses, said spring serving to hingedly connect the sections and acting to constantly close them when they are opened.

3. A floor or ceiling plate comprising segmental sections adapted when closed to abut at their ends, and a bowed spring extending across one of the butt joints, the sections having means for connecting the spring therewith at opposite sides of the butt joint which said spring crosses and for retaining the spring in fixed relation with said sections as they are opened, the spring acting as a hinge for the sections and to constantly close them when they are opened.

4. A floor or ceiling plate comprising segmental sections adapted when closed to abut at their ends, and a bowed spring extending across one of the butt joints and permanently connected with the respective sections at opposite sides of the butt joint which it crosses, the spring connecting the sections for swinging movement in transverse directions and acting to constantly close them when they are opened.

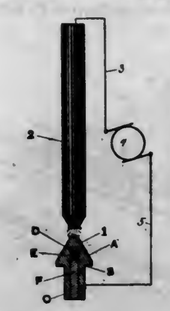
5. A floor or ceiling plate comprising segmental sections adapted when closed to abut at their ends, and a bowed spring extending across one of the butt joints, the sections having means for connecting the spring therewith at opposite sides of the butt joint which it crosses and for retaining the spring in fixed relation with said sections as they are opened, the spring acting as a hinge for the sections and to constantly close them when they are opened, said spring extending from the free end of one of the sections and being adapted to engage the other section to hold the two sections closed.

[Claims 6 and 7 not printed in the Gazette.]

1,212,610. ELECTRODE. CHARLES W. DAKE, Chicago, Ill., assignor to Pyle-National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Filed Jan. 31, 1914. Serial No. 815,600. (Cl. 176—121.)

1. In an arc lamp electrode, means for changing the color of the arc when one of the electrodes has been consumed to a certain fixed point and means for subsequently extinguishing the arc.

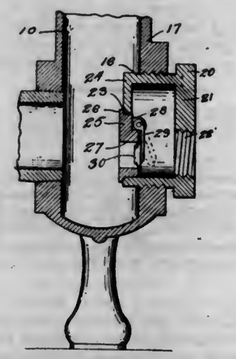
2. An arc lamp electrode comprising a metallic shell, a plug contained therein and embedded in the body thereof, said plug being made up of a material which when exposed to the action of the arc changes its color and a lower insulation plug which extinguishes the arc.



3. An arc lamp electrode comprising a metallic shell, a plug contained therein and embedded in the body thereof, said plug being made up of a material which when exposed to the action of the arc changes its color, and an insulating plug beneath supporting said color plug.

4. An arc lamp electrode comprising a conducting body, a plug contained therein embedded in the body thereof and removed from the normal arcing point, said plug being made up of a material such that when exposed to the action of the arc it changes the color of the arc, an insulating plug adapted to interrupt the current and extinguish the arc when the color plug has been burned away.

1,212,611. STEAM-HEATING APPARATUS. EDWARD L. DAVIS, Schenectady, N. Y. Filed Sept. 14, 1914. Serial No. 861,574. (Cl. 137—103.)



1. In steam heating apparatus, a bushing and valve casing to engage within the outlet of radiators comprising a cylindrical exteriorly threaded hollow casting having integral closing plates at each end, one having a tapped opening for pipe connection, the other having an inlet port formed therein to receive the return from a radiator, and a valve within the casing movably mounted for engagement over the port yieldably for egress of water.

2. A device for the purpose described comprising a bushing and casing consisting of an exteriorly threaded hollow cylindrical element having head portions thereacross at each end, and constructed to be screwed into the bottom of a radiator unit, one of the heads having an interior threaded opening therethrough coincident at one side with the inner surface of the cylindrical portion mentioned, the other head having an opposed opening therein, a ported element fixed in the last named opening, and a check valve mounted on the inner side thereof, to close the port in said ported element, and yieldable to pressure therethrough.

1,212,612. METHOD OF SEPARATING BENZENE SULFONIC ACID FROM SULFURIC ACID AND OF CONVERTING THE BENZENE SULFONIC ACID INTO A SALT. LOUIS M. DENNIS, Ithaca, N. Y. Filed Dec. 18, 1915. Serial No. 67,535. (Cl. 23—24.)

1. A method of separating benzene sulfonic acid from sulfuric acid consisting in treating a mixture of the acids with a solvent which dissolves but one of them.

2. A method of separating benzene sulfonic acid from sulfuric acid consisting in treating a mixture of the acids with a solvent which dissolves the benzene sulfonic acid but not the sulfuric acid.

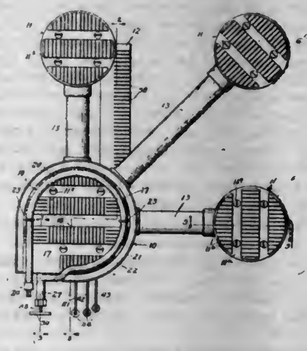
3. A method of separating benzene sulfonic acid from sulfuric acid consisting in treating a mixture of the acids with an organic solvent which dissolves the benzene sulfonic acid but not the sulfuric acid.

4. A method of separating benzene sulfonic acid from sulfuric acid consisting in treating a mixture of the acids with benzene.

5. A method of making a salt of benzene sulfonic acid consisting in dissolving the benzene sulfonic acid in a solvent in which the salt is not soluble and treating the solution with a suitable compound to form the salt.

[Claims 6 to 13 not printed in the Gazette.]

1,212,613. OIL-BURNER. ALBERT P. DORAN, Chicago, Ill. Filed Apr. 20, 1916. Serial No. 92,368. (Cl. 158—8.)



1. A device of the character described, comprising a main burner having a hollow casing provided with burner openings, a generator for converting a liquid hydrocarbon oil into a combustible gaseous form and adapted to supply such gas to the hollow casing of said main burner, an auxiliary burner having a hollow casing provided with burner openings, a conduit connecting said auxiliary burner with said main burner for supplying the hollow casing of the auxiliary burner with gas from the hollow casing of the main burner, a valve member interposed between said generator and said main burner, and valve means for controlling the supply of gas from the main burner to the auxiliary burner.

2. A device of the character described, comprising a main burner having a hollow casing provided with burner openings, a generator for converting a liquid hydrocarbon oil into a combustible gaseous form and adapted to supply such gas to the hollow casing of said main burner, a plurality of auxiliary burners, each having a hollow casing provided with burner openings, a conduit connecting each auxiliary burner with said main burner, said conduits serving to supply the hollow casing of each auxiliary burner with gas from the hollow casing of said main burner, a valve member interposed between said generator

and said main burner, and valve means for controlling the supply of gas from said main burner to each auxiliary burner.

3. A device of the character described, comprising a main burner having a hollow casing, the top wall of which is provided with burner openings, a generator for converting a liquid hydrocarbon oil into a combustible gaseous form and adapted to supply such gas to the hollow casing of the main burner, said generator embracing a hollow conduit having a single convolution located above the top wall of said main burner, an auxiliary burner having a hollow casing provided with burner openings, a pipe connecting said auxiliary burner with said main burner for supplying the hollow casing of the auxiliary burner with gas from the hollow casing of said main burner, a valve member interposed between said generator and said main burner, and valve means for controlling the supply of gas from the main burner to the auxiliary burner.

4. A device of the character described, comprising a main burner having a hollow casing, the top wall of which is provided with burner openings, a generator for converting a liquid hydrocarbon oil into a combustible gaseous form and adapted to supply such gas to the hollow casing of the main burner, said generator embracing a hollow conduit having a single convolution located above the top wall of said main burner, a plurality of auxiliary burners, each having a hollow casing provided with burner openings, a pipe connecting each auxiliary burner with said main burner, said pipes serving to supply the hollow casing of each auxiliary burner with gas from the hollow casing of said main burner, a valve member interposed between said generator and said main burner, and valve means for controlling the supply of gas from said main burner to each auxiliary burner.

5. A device of the character described, comprising a main burner having a hollow casing, the top wall of which is provided with one or more burner openings, a generator for converting a liquid hydrocarbon oil into a combustible gaseous form, embracing a hollow conduit having a single convolution located above the top wall of said main burner, a plurality of auxiliary burners, a pipe connecting each auxiliary burner with said main burner, a valve member interposed between said conduit and said main burner, and a valve member for each of said auxiliary burners, said last named valve members being located in the hollow casing of the main burner.

[Claims 6 to 12 not printed in the Gazette.]

1,212,614. ART OF CURING MEATS. GEORGE F. DORAN, Omaha, Nebr. Original application filed Dec. 13, 1915, Serial No. 66,506. Divided and this application filed Apr. 29, 1916. Serial No. 94,486. (Cl. 99—1.)

1. The herein described improvement in the art of curing meats, which comprises treating the meats with a pickling liquor to which has been added soluble nitrites in the form of the chemical salts.

2. The herein described improvement in the art of curing meats, which comprises treating the meats with a pickling liquor to which has been added alkali metal nitrites in the form of the chemical salts.

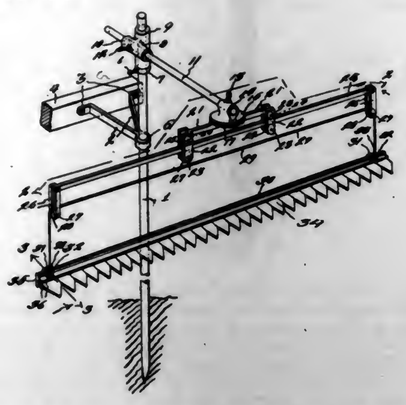
3. The herein described improvement in the art of curing meats, which comprises treating the meats with a pickling liquor to which has been added sodium nitrite in the form of the chemical salts.

4. The herein described process of curing meats, which comprises treating the same with a pickling liquor containing soluble nitrites in the form of the chemical salts.

5. The herein described process of curing meats, which comprises preparing a pickling liquor consisting of a salt brine solution, an alkali metal nitrate, and an alkali metal nitrite in the form of the chemical salt, and treating the meat with the pickling liquor so prepared.

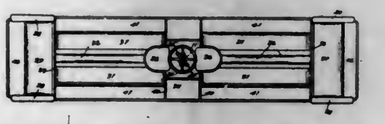
1,212,615. SICKLE-BLADE HOLDER. PETER ECKMAN, Greeley, Colo. Filed Oct. 9, 1916. Serial No. 124,700. (Cl. 51—8.)

1. In a holder as set forth, the combination of a vertical support and a laterally extending rod swivelly mounted upon the support to oscillate horizontally, of a transversely disposed member carried by the outer end of said rod and having anti-frictional guides, a transverse bar mounted movable in said guides and carrying pulleys at its outer end, a cable passing over said pulleys, and a blade carrying channel bar connected to the opposite ends of said cable.



2. In a support of the kind set forth, the combination of a vertical standard and a laterally extending rod swivelly mounted upon said standard to oscillate horizontally, means to support the lateral rod in different positions upon said standard, of a member adjustably carried by the outer end portion of the rod, said member consisting of two disks and means for axially connecting one disk to the other, whereby one may be held adjustably with relation to the other, one of said disks having oppositely extending arms provided with anti-frictional guides at their outer ends, a transverse bar movable in said guides, pulleys carried by the outer ends of said bar, a cable passing over said pulleys and a blade receiving and holding bar connected to the opposite ends of said cable.

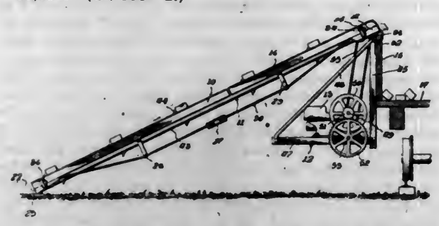
1,212,616. VEHICLE. ROLLIN B. FAGEOL, Oakland, Cal. Filed July 26, 1915. Serial No. 41,824. (Cl. 21—90.)



1. A passenger carrying vehicle having a plurality of sets of supporting wheels, certain of said wheels capable of driving the vehicle in either direction, and all of said wheels capable of simultaneous pivotal movement in the steering thereof, to insure a uniform steering of the vehicle when traveling in either direction, said vehicle including a passenger carrying body provided with passenger carrying seats and formed intermediate of its ends with a transversely disposed vehicle controlling and steering station, means whereby the operator may be seated on either side of said controlling station, enabling the operator to face the direction of travel of said vehicle.

2. A passenger carrying vehicle having steering and supporting wheels and capable of driving in either direction and including a body provided with longitudinally disposed outwardly facing passenger carrying side seats, an outwardly facing passenger carrying seat at each end of the body, said body formed intermediate of its ends with a transversely disposed vehicle controlling station extending for the full width of the body, vehicle controlling means extending centrally of said station, and an operator's seat on each side of said controlling station, one facing toward each end of the vehicle enabling the operator to face toward either end of the vehicle in the direction of travel of the same and with the controlling means in advance of the operator.

1,212,617. TIE-LOADING MACHINE. WALTER A. FLOWERS, Riverside, Tenn. Filed Apr. 1, 1916. Serial No. 88,351. (Cl. 193—2.)



1. A machine of the character described including a skidway having means at one end for engagement with the side of a car, a supporting bracket having means for supporting engagement with the side of a car, an endless conveyer mounted upon the skidway, and means mounted upon the supporting member and operatively connected to the conveyer to drive the latter.

2. A machine of the character described including a skidway having parallel spaced side members, hooks secured to the members at one end for engagement with the side of a car to hold the skidway at an inclination to the ground, an endless chain conveyer mounted upon the skidway, means for driving the conveyer, and means for supporting the driving means from the side of the car in operative position with respect to the skidway.

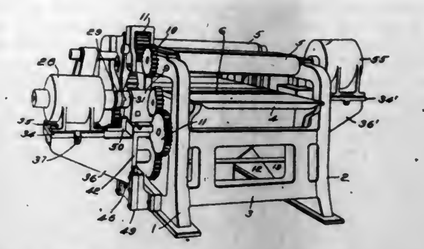
3. A machine of the character described including a skidway having spaced side members formed in their upper faces with longitudinal channels, reinforcing strips extending along the upper faces of the side members and having instruck portions seating in the channels, an endless chain conveyer including conveyer chains having their upper stretches seating in the instruck portions of the reinforcing strips to lie flush with the outer faces of such strips, conveyer lugs extending from the chains, and means for driving the conveyer.

4. A machine of the character described including a skidway adapted to rest at one end upon the ground, hooks carried by the opposite end of the skidway for engagement with the upper edge of a car wall, an endless chain conveyer mechanism on the skidway including a drive shaft, a support having upwardly directed arms adapted to engage against the outer face of a car wall, hooks carried by the arms for engagement over the edge of the car wall, a prime mover mounted upon the support, and driving means between the prime mover and drive shaft of the conveyer.

5. A machine of the character described including a skidway and a supporting platform adapted for independent detachable application to a car, an endless conveyer carried by the skidway, a source of power carried by the platform, and operative connection between the source of power and conveyer.

1,212,618. WOOD-PLANING MACHINE. ARTHUR E. FOLSOM, Winchendon, Mass., assignor to William M. Whitney, Winchendon, Mass. Filed Dec. 29, 1913. Serial No. 809,197. (Cl. 144—130.)

1. In a machine of the character described, the combination of a table and a cutter cylinder, work-engaging means opposed thereto, means for effecting simultaneous adjustment of the table and cutter cylinder toward and from the opposed work-engaging means for varying thickness of the work, means for effecting adjustment of the cutter relative to the table to vary the depth of cut, a self-contained motor movable with the table and cutter as they are adjusted for thickness of work, and connections between the motor and cutter to effect movement of the motor with the cutter as the latter is moved relatively to the table to vary the depth of cut.



2. In a machine of the character described, the combination of a table and a cutter cylinder, work-engaging means opposed thereto, means for effecting simultaneous adjustment of the table and cutter cylinder toward and from the opposed work-engaging means for varying thickness of the work, means for effecting adjustment of the cutter relative to the table to vary the depth of cut, a self-contained motor movable with the table and cutter as they are adjusted for thickness of work, connections between the motor and cutter to effect movement of the motor with the cutter as the latter is moved relatively to the table to vary the depth of cut, and means for adjusting the motor in a plurality of directions independently of the cutter cylinder.

3. In a machine of the character described, the combination of a cutter shaft and cutter, a table over which the work is fed, journals for supporting the ends of the cutter shaft, means for independently adjusting the journals with respect to the table to vary the depth of cut at either side of the table, a self-contained motor and its shaft, a flexible coupling operatively connecting the motor shaft and cutter shaft end to end and permitting adjustment of the cutter shaft while said shafts are operatively connected, and means for adjusting the motor and its shaft in a plurality of directions independently of the cutter shaft.

4. In a machine of the character described, the combination of a table and a cutter cylinder, work-feeding means opposed thereto, means for adjusting the table and cutter cylinder together toward and from the plane of the work-feeding means for variations in thickness of work, means for adjusting the cutter and table relatively for varying the depth of cut, means for separately adjusting the end of the cutter cylinder for varying the plane of cut, a self-contained motor mounted for movement with the table and cutter cylinder as they are adjusted for variations in thickness of the work, and for movement with the cutter cylinder independently of the table as the cutter cylinder is moved relatively to the table to vary the depth of cut, and means for adjusting the motor independently of the cutter cylinder.

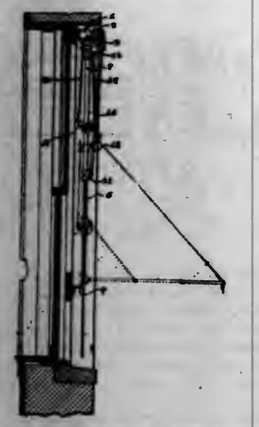
5. In a machine of the character described, the combination of a main frame, a slide frame vertically adjustable on the main frame, a cutter cylinder and shaft carried by the vertically adjustable slide frame, an apron depending from the slide frame and secured thereto, a bracket adjustably secured to the depending apron, a plate adjustably mounted on the bracket, a self-contained motor and shaft secured to the plate for adjustment therewith relative to the bracket, and also adjustable with the bracket, a flexible coupling connecting the motor shaft and cutter cylinder shaft end to end, and means for adjusting the cutter cylinder relative to the slide frame.

[Claim 6 not printed in the Gazette.]

1,212,619. AWNING. CHARLES L. FOORD, Dallas, Tex. Filed Mar. 30, 1915. Serial No. 17,979. (Cl. 156—44.)

1. In an awning, a collapsible frame, forming the hood forming means, and a support whereon the frame is ar-

ranged to slide combined with means for locking the frame to prevent collapsing until the frame reaches a prescribed point in its upward travel.

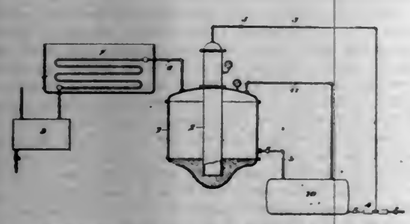


2. In an awning, a collapsible frame forming the hood forming means, and two vertically disposed rods whereon said frame is arranged to slide, combined with means for locking the frame, against collapse of said frame, until the frame reaches a prescribed point in its upward travel.

3. In an awning, two vertically disposed rods, two sets of sleeves arranged to slide upon said rods, a hood forming frame pivotally suspended from said sleeves, a pair of diagonal braces constituting the collapsing means for said frame and a slide for one end of each brace, said slides arranged to slide on the sleeves intermediate of their ends, combined with means for locking the slides to their respective sleeves to prevent movement of said slides independently of the sleeves.

4. In an awning, two vertically disposed rods, two sets of sleeves arranged to slide upon said rods, a hood forming frame pivotally suspended from said sleeves, a pair of diagonal braces constituting the collapsing means for said frame and a slide for one end of each brace, said slides arranged to slide on the sleeves intermediate of their ends, combined with means for locking the slides to their respective sleeves to prevent movement of said slides independently of the sleeves and a means for automatically releasing said locking means when said sleeves are elevated to their highest position in said rods.

1,212,620. METHOD OF AND APPARATUS FOR DISTILLING HYDROCARBONS. HANS A. FRASCH, New York, N. Y. Filed Apr. 16, 1915. Serial No. 21,655. (Cl. 196—25.)



1. The method of distilling hydrocarbons, which consists in exposing the hydrocarbons to the temperature of volatilization while confined within a retort which is arranged within a distilling apparatus containing an internal heating medium fluid in character and maintained at the necessary temperature to effect volatilization of the hydrocarbons without itself being volatilized, said retort being immersed into and its outlet being sealed by the fluid heating medium, accumulating the resulting vapor in the retort until a desired pressure is obtained, and then passing the vapor together with the nonvolatilized residue through the immersed outlet of the retort and through the body of the heating medium into the body of the distilling apparatus, and subsequently condensing the vapor.

2. The method of distilling hydrocarbons, which consists in exposing the hydrocarbons to the temperature of volatilization while confined within a retort which is arranged within a distilling apparatus containing an internal heating medium fluid in character and maintained at the necessary temperature to effect volatilization of the hydrocarbons without itself being volatilized, said retort being immersed into and its outlet being sealed by the fluid heating medium, accumulating the resulting vapor in the retort until a desired pressure is obtained, and then passing the vapor together with the nonvolatilized residue through the immersed outlet of the retort and through the body of the heating medium into the body of the distilling apparatus and therein continuing the operation under reduced pressure, and subsequently condensing the vapor.

3. The method of converting hydrocarbons of heavier specific gravity and higher boiling point into products of lighter specific gravity and lower boiling point, which consists in exposing the heavy hydrocarbons while confined within a retort arranged within a distilling apparatus to the temperature of decomposition by means of an internal heating medium consisting of a fusible substance in which the discharge end of the retort is immersed and having a melting point high enough to decompose the hydrocarbon, applying heat to the distilling apparatus to bring the heating medium into a molten state and to a temperature high enough to decompose the hydrocarbon, and by the pressure of the vapor within the retort forcing the resulting vapor together with the nonvolatilized residue from the retort and through the body of the molten heating medium into the distilling apparatus, and subsequently condensing the vapor.

4. In the method of distilling hydrocarbons in a retort within a distilling apparatus by means of a fluid heating medium, the step of resisting the escape of the vapor from the retort by immersing its outlet in the fluid heating medium and by the depth of such immersion obtaining any desired difference of pressure within the retort and the distilling vessel.

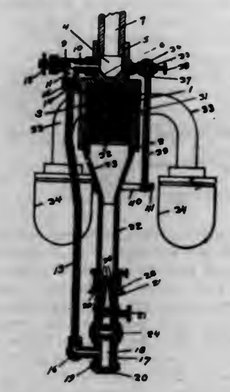
5. An apparatus for distilling hydrocarbons, having a distilling vessel containing a fluid heating agent, and a retort containing the hydrocarbon to be distilled, said retort exposed to the heat within said distilling vessel and having its outlet submerged in said fluid heating agent and discharging its contents into said distilling vessel through the heating agent as said contents are volatilized therein.

[Claim 6 not printed in the Gazette.]

1,212,621. GAS-LAMP. WILLIAM JESSE HENRY FULLER, Toronto, Ontario, Canada. Filed Sept. 22, 1915, Serial No. 52,124. Renewed June 12, 1916. Serial No. 103,342. (Cl. 67—50.)

1. In a gas lamp, a receiving chamber having an inlet connected to a gas supply and an outlet connected to a by-pass, said receiving chamber having an outlet, a mixing chamber partitioned from said receiving chamber and having a tubular lower extension, a screen lining and valve controlled air holes toward the lower end of said extension, a key valve in said extension having a ratchet control, a by-pass pipe connecting said receiving chamber with said extension, valves controlling said outlet from the receiving chamber, burners connected with said mixing chamber and in proximity to said by-pass pipe and pilot burners adjacent to the aforesaid burners and connected with the outlet from said receiving chamber.

2. In a gas lamp, a receiving chamber having an inlet connected to the gas supply, a mixing chamber partitioned from said receiving chamber and having a tubular lower extension, a screen lining in said mixing chamber, valve controlled air holes toward the lower end of said extension, a key valve in said extension having a ratchet control, a T-cock from said receiving chamber, a by-pass pipe extending downwardly from said T-cock and connecting said receiving chamber with said extension, a valve in the outer end of said T-cock controlling the supply of gas from the receiving chamber to said by-pass pipe, burners connected with said mixing chamber and in proximity to said by-pass pipe and pilot burners adjacent to the aforesaid burners and connected with an outlet from said receiving chamber.



3. In a gas lamp, a receiving chamber having an inlet connected to the gas supply, a mixing chamber partitioned from said receiving chamber and having a tubular lower extension, a screen lining in said mixing chamber, valve controlled air holes toward the lower end of said extension, a nozzle screw threaded into the lower end of said extension, a valve cock secured to the lower end of said nozzle, a key valve in said valve cock having a ratchet control, an operating chain secured to said ratchet control, a valve in said valve cock above said key valve controlling the supply of gas to said nozzle, a T-cock from said receiving chamber, a by-pass pipe extending downwardly from said T-cock and connected with said valve cock and connecting said receiving chamber with said mixing chamber, a valve in the outer end of said T-cock controlling the supply of gas from the receiving chamber to said by-pass pipe, burners connected with said mixing chamber and in proximity to said by-pass pipe, pilot burners adjacent to the aforesaid burners and connected with an outlet from said receiving chamber and a globe closing in the whole from the lower end.

4. In a gas lamp, a receiving chamber having an inlet connected to the gas supply, a mixing chamber partitioned from said receiving chamber and having a tubular lower extension, a screen lining in said mixing chamber, valve controlled air holes toward the lower end of said extension, a nozzle screw threaded into the lower end of said extension, a valve cock secured to the lower end of said nozzle, a key valve in said valve cock having a ratchet control, an operating chain secured to said ratchet control, a valve in said valve cock above said key valve controlling the supply of gas to said nozzle, a T-cock from said receiving chamber, a by-pass pipe extending downwardly from said T-cock and connected with said valve cock and connecting said receiving chamber with said mixing chamber, a valve in the outer end of said T-cock controlling the supply of gas from the receiving chamber to said by-pass pipe, burners connected with said mixing chamber and in proximity to said by-pass pipe, a T-cock secured in an outlet from said receiving chamber, a pipe extending downwardly therefrom and terminating adjacent to said burners, pilot burners from said pipe adjacent to the aforesaid burners, a valve regulating the supply of gas to said pilot burners and a globe closing in the whole from the lower end.

5. In a gas lamp, a mixing chamber of substantially inverted cup shape, a receiving chamber formed by a cylindrical projection from the upper end of said mixing chamber, a supply pipe connecting said receiving chamber with the gas supply, an outlet from said receiving chamber, a T-cock secured in said outlet, a by-pass pipe extending downwardly from said T-cock and secured therein in a cone and cup connection, a valve in said T-cock regulating the supply of gas to said by-pass pipe, a screen lining in said mixing chamber, a cone shaped lower extension from said mixing chamber, a pipe secured in said extension and extending downwardly therefrom, air holes in said pipe adapted to be closed by a valve adjustably secured on said pipe, a nozzle extending upwardly into said pipe, a valve-cock threaded onto the lower end of said nozzle and having a valve regulating the supply of gas to said nozzle, a key valve in said valve cock having a ratchet control, a chain secured to said ratchet for operating said key valve, a hollow coupling secured in an outlet adjacent to the lower end of said valve-cock and connecting said valve-cock with said by-pass pipe and completing the passage for the gas from the receiving chamber to the mixing chamber, a cap closing in the lower end of said valve-cock and burners connected with said mixing chamber and in proximity to said by-pass pipe.

[Claim 6 not printed in the Gazette.]

1,212,622. BUCKLE. GEORGE LEWIS GILBERTHORPE, Chatswood, near Sydney, New South Wales, Australia, assignor to Gilberthorpe Buckle Limited, Sydney, New South Wales, Australia, a Corporation of New South Wales, Australia. Filed July 31, 1914. Serial No. 854,312. (Cl. 24—191.)



1. A buckle frame having four fixed transverse bars, the two middle ones being arranged with a considerable interval between them and the other two bars being arranged as keeper bars in proximity to the said two middle bars, to be used as described, in combination with a pair of reversible tumbler plates arranged to bind said strap against said middle bars in one of the positions of said tumbler plates, one of said tumbler plates being provided with a slot and the other with a hooked part for entering said slot to lock said tumblers against endwise or lateral separation.

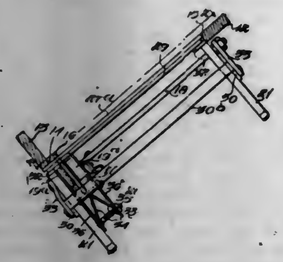
2. A buckle frame having a pair of raised rigid side-parts and four transverse bars, in combination with a pair of reversible tumbler plates, pivoted near their middle points to said side parts and arranged to grip a strap against the two middle bars, the strap being attached to one of said middle bars and passed between them and the other two bars, which serve as keepers, and the said tumbler plates being constructed to interlock with each other by a hook and a slot when in their gripping position.

3. A buckle frame provided with a pair of raised rigid side parts and four rigid transverse bars, two of these bars being an attachment bar and a seating bar arranged with a considerable interval between them, and the other two bars being keeper-bars arranged at slight intervals from the other bars for the passage of a strap between them, and means for gripping a strap against said seating bar at least, said means being pivoted to said raised side parts.

1,212,623. SIGNATURE-MARKING MEANS FOR PAPER-FOLDING MACHINES. CLAUDE U. GILSON, Wellesley, Mass. Filed Feb. 5, 1915. Serial No. 6,260. (Cl. 101—83.)

1. In a device of the character stated, in combination, a back-supporting member and an end-supporting mem-

ber collectively forming a two-sided signature guiding support, said back-supporting member being inclined to cause an endwise movement, by gravitation, of signatures deposited endwise thereon and bring the inner ends of said signatures against said end-supporting member and thus cause the automatic alinement of the signatures, and a marking member arranged to mark signature backs guided by said support.



2. In a device of the character stated, in combination, a back-supporting member and an end-supporting member collectively forming a two-sided signature-guiding support, said back-supporting member being inclined to cause an endwise movement, by gravitation, of signatures deposited edgewise thereon and bring the inner ends of said signatures against said end-supporting member and thus cause the automatic alinement of the signatures, a marking member arranged to mark signature backs guided by said support, one of the parts called respectively the back-supporting member and the marking member being movable relatively to the other, to vary the distance between the marks and the inner ends of the signatures, and means for retaining said movable member in any one of a plurality of predetermined positions.

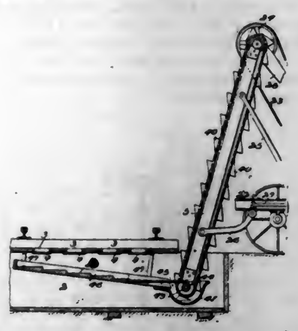
3. In a device of the character stated, in combination, a back-supporting member and an end-supporting member collectively forming a two-sided signature-guiding support, said back-supporting member being inclined to cause an endwise movement, by gravitation, of signatures deposited edgewise thereon and bring the inner ends of said signatures against said end-supporting member and thus cause the automatic alinement of the signatures, a marking member arranged to mark signature backs guided by said support, the marking member being movable relatively to the end-supporting member to vary the distance between the marks and the inner ends of the signatures, and means for retaining the marking member in any one of a plurality of predetermined positions.

4. In combination, a signature-back-support, a signature guide adapted to direct a group of signatures in a predetermined path on said support, a marker adapted to mark the backs of signatures moving in said path, marker-supporting means permitting the adjustment of said marker in a path transverse to the path of the signatures, and positioning means for selectively confining said marker in either of a series of predetermined positions at different distances from said guide, said positioning means including a series of stop members confined against movement in the path of the marker, and a complemental stop member movable with the marker and arranged to coact with a member of said marker-supporting means for yieldingly holding said marker in predetermined positions.

5. In combination, a signature-back-support having a series of marker-receiving and confining slots interrupting its continuity, said slots being at different distances from said guide, a marker adapted to enter either of said slots, and marker-supporting means adapted to support the marker in separable engagement with either of the slots.

[Claims 6 to 12 not printed in the Gazette.]

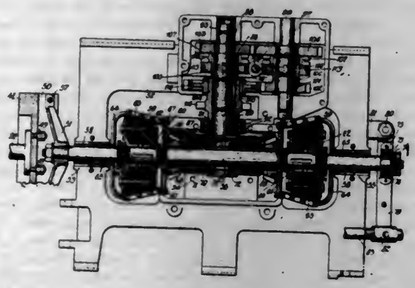
1,212,624. CAR-UNLOADING APPARATUS. EDWARD C. GLEDHILL, Galion, Ohio. Original application filed Mar. 31, 1914, Serial No. 828,551. Divided and this application filed July 28, 1914. Serial No. 853,699. (Cl. 193—5.)



1. The combination with a receiving box having its top open at one end and provided with a discharge opening for the passage of material deposited upon said top, of a truck, an elevator carried by the truck and having its lower end extending through the open end of the top of the receiving box, a boot carried by the lower end of the elevator, a feeding table having its discharge end positioned above the boot, links forming a pivotal connection between the feeding table and the receiving box, means for driving the elevator, a connection between the elevator and the feeding table for imparting a reciprocatory motion to said table, and a connection between the elevator and truck for adjusting the lower end of the elevator longitudinally of the receiving box.

2. The combination with a receiving box adapted to be positioned beneath a vehicle runway and having its top open at one end and provided with a discharge opening for the passage of material deposited upon said top, of an elevator having its lower end extending through the open end of the top and including a shaft, a boot carried by the lower end of the elevator, a feeding table suspended from the top of the receiving box and mounted for reciprocating movement therein, a crank secured to the elevator shaft, a pitman forming a connection between the crank and feeding table, and means connected with the elevator for adjusting said elevator together with the boot and feeding table longitudinally of the receiving box.

1,212,625. GEARING FOR LOCOMOTIVES. LELAND F. GOODSPEED, Milwaukee, Wis., assignor to Milwaukee Locomotive Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 18, 1912. Serial No. 671,852. (Cl. 74—59.)



1. In gearing mechanism for a locomotive, a fly wheel having a slot and driven by the driving motor, a longitudinally shiftable shaft, clutch members on said shaft, a gear associated with each clutch member, an operative connection for transmitting motion between said gears and the load, means carried by said shaft and disposed in said slot in said fly wheel for driving said shiftable shaft.

2. In gearing for a locomotive, a driving wheel having a flange, with diametrically disposed slots therein, a longitudinally shiftable shaft, clutch members operated by shifting said shaft, a spider on said shiftable shaft having arms movable in said slots and means driven by said shaft through said clutch member for transmitting motion to a power shaft.

3. In combination, a clutch, a lever for shifting said clutch, a screw-threaded part on said lever, an operating rod having a screw-threaded part coöperating with said first named screw-threaded part, change gears, a sleeve keyed on said rod, a hand wheel on said sleeve, and an operative connection between said sleeve and said change gears whereby shifting of the sleeve secures a change in gear relation and angular movement of said sleeve secures operation of the clutch.

4. In combination, a driving wheel having a flange and slots diametrically disposed in said flange, a longitudinally shiftable shaft, said shaft being substantially in line with the axis of said driving wheel, a spider on said shaft, said spider having arms disposed in said slots, clutch members on said shaft, said clutch members being brought into action by longitudinal movement of said shaft, a lever for shifting said shaft, and means driven by said clutch members for alternately driving a power shaft.

5. In gearing for a locomotive, a driving wheel having a plurality of diametrically disposed slots, a longitudinally shiftable shaft, a spider having rigid arms disposed in said slots, said spider secured to said shaft, clutch members connected to said shaft, opposing clutch members associated with said first named clutch members, transmission mechanism, gearing between said transmission mechanism and said opposing clutch members, and means to shift said shaft to operate said first named clutch members to bring one or the other of them into engagement with its respective opposing clutch member.

[Claim 6 not printed in the Gazette.]

2. In a locomotive, a power shaft, a sleeve on said power shaft, a gear loose on said sleeve, a gear keyed on said sleeve, a gear on said shaft, a counter-shaft, a gear tight on said counter-shaft meshing with the gear on said power shaft, a gear tight on said counter-shaft meshing with the gear loose on said sleeve, a gear loose on said counter-shaft and meshing with the gear keyed on said sleeve, clutch means between the gear loose on and one of the gears tight on said counter-shaft, clutch means between the gear keyed on said sleeve and the gear on the power shaft, and clutch means between the gear loose on said sleeve and said sleeve, and means for operating said clutches to throw in any one and to simultaneously throw the other two out.

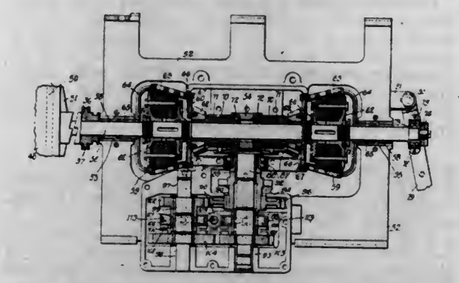
3. In a locomotive, a power shaft, a sleeve on said power shaft, a gear loose on said sleeve, a gear keyed on said sleeve, a gear on said shaft, a counter-shaft, a gear tight on said counter-shaft meshing with the gear on said power shaft, a gear tight on said counter-shaft meshing with the gear loose on said sleeve, a gear loose on said counter-shaft and meshing with the gear keyed on said sleeve, clutch means between the gear loose on and one of the gears tight on said counter-shaft, clutch means between the gear keyed on said sleeve and the gear on the power shaft, and clutch means between the gear loose on said sleeve and said sleeve, and means for operating said clutches to throw in any one and to simultaneously and automatically throw the other two out.

4. In a locomotive, a power shaft, a sleeve on said power shaft, a gear loose on said sleeve, a gear keyed on said sleeve, a gear on said shaft, a counter-shaft, a gear tight on said counter-shaft meshing with the gear on said power shaft, a gear tight on said counter-shaft meshing with the gear loose on said sleeve, a gear loose on said counter-shaft and meshing with the gear keyed on said sleeve, clutch means between the gear loose on and one of the gears tight on said counter-shaft, clutch means between the rear keyed on said sleeve and the gear on the power shaft, and clutch means between the gear loose on said sleeve and said sleeve, an operating shaft, a plurality of cam plates carried thereby, said plates having cam grooves therein and a follower for said grooves connected with said clutch members.

5. In a locomotive, a power shaft, a sleeve on said power shaft, a gear loose on said sleeve, a gear keyed on said sleeve, a gear on said shaft, a counter-shaft, a gear tight on said counter-shaft meshing with the gear on said power shaft, a gear tight on said counter-shaft meshing with the gear loose on said sleeve, a gear loose on said counter-shaft and meshing with the gear keyed on said sleeve, clutch means between the gear loose on and one of the gears tight on said counter-shaft, clutch means between the gear keyed on said sleeve and the gear on the power shaft, and clutch means between the gear loose on said sleeve and said sleeve, an operating shaft, a plurality of cam plates carried thereby, said cam plates having cam grooves therein, a follower for one groove connected with the gear loose on said counter-shaft, a follower for another groove connected with the gear keyed on said sleeve, and a follower for the other groove connected with the gear loose on said sleeve.

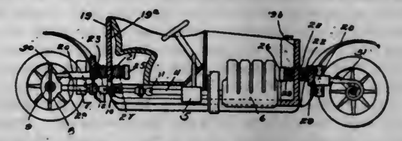
[Claim 6 not printed in the Gazette.]

1,212,626. GEARING FOR LOCOMOTIVES. LELAND F. GOODSPEED, Milwaukee, Wis., assignor to Milwaukee Locomotive Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 18, 1912. Serial No. 671,853. (Cl. 74—59.)



1. In a locomotive, a power shaft, a sleeve on said power shaft, a gear loose on said sleeve, a gear keyed on said sleeve, a gear on said shaft, a counter shaft, a gear tight on said counter shaft meshing with the gear on said power shaft, a gear tight on said counter shaft meshing with the gear loose on said sleeve, a gear loose on said counter-shaft and meshing with the gear keyed on said sleeve, clutch means between the gear loose on and one of the gears tight on said counter-shaft, clutch means between the gear keyed on said sleeve and the gear on the power shaft, and clutch means between the gear loose on said sleeve and said sleeve, and means for operating said clutches.

1,212,627. TRANSMISSION MECHANISM FOR MOTOR-VEHICLES. WILLIAM B. GOODWIN, Columbus, Ohio. Filed Dec. 5, 1914. Serial No. 875,555. (Cl. 21—90.)

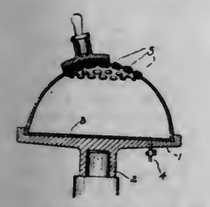


1. In combination in a motor vehicle, a body chassis, a running gear chassis, an engine mounted on the body chassis, a driving axle mounted on the running gear

chassis, means connecting the running gear chassis to the primary chassis and adapted to permit relative longitudinal and rotatory motion of said chassis, means for movably mounting said driving axle relatively to said running gear chassis, a driving shaft connecting with said engine, a driven shaft connecting with said driving axle and movable therewith, and an intermediate telescopic shaft connected with said driving and said driven shafts and adapted to permit relative movement of said driving axle and driven shaft with said engine and said driving shaft.

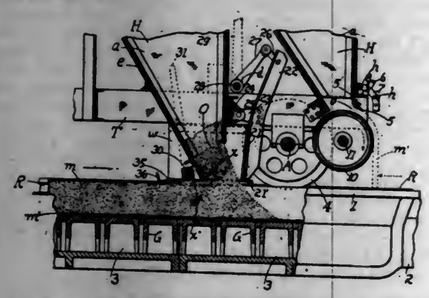
2. A motor vehicle comprising a body chassis, a running gear chassis yieldingly secured to the body chassis beyond the limits thereof, an engine mounted on said body chassis, a driving shaft connected with said engine, a driven shaft mounted on said running gear chassis, and means connecting said driving and driven shafts and adapted to permit relative movement of said chassis.

1,212,628. SMOOTHING-HEAD FOR MANUFACTURING EYEGLASS-LENSES. HENRY ORFORD GOWLLAND, Montreal, Quebec, Canada. Original application filed Mar. 3, 1915, Serial No. 11,925. Divided and this application filed June 14, 1915. Serial No. 34,123. (Cl. 51—1.)



A rotary smoothing tool for finishing lenses, consisting of a pneumatically inflated convex head and a plurality of separate and independent smoothing elements separately secured to the working face of said head in spaced apart relation.

1,212,629. CHARGE-CAR. JOHN E. GREENAWALT, Denver, Colo. Filed Aug. 5, 1914. Serial No. 855,183. (Cl. 214—1.)



1. In a traveling charge-car, a holder having inclosing walls and open at the bottom, a movable gate disposed across said open bottom on one side of one of the inclosing walls aforesaid for supporting the charge in the holder, and a movable member on the opposite side of said wall operating to be depressed below the bottom edge of said wall and below the level of the discharged material cut off by said edge whereby said member may serve as a leveler.

2. In a traveling charge-car, a holder having inclosing walls and open at the bottom, a movable gate disposed across said open bottom on one side of one of the inclosing walls aforesaid for supporting the charge in the holder, and an oscillating member on the opposite side of said wall adapted to be depressed below the lower or bottom edge of said wall whereby said member may serve as a leveler.

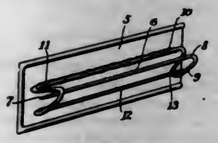
3. In a traveling charge-car, a holder having inclosing walls and open at the bottom, a movable gate disposed across said open bottom on one side of one of the inclosing walls aforesaid for supporting the charge in the holder, and an oscillating member disposed on the opposite side of said wall out of range of the path of discharge of the material, and adapted to be depressed below the bottom edge of said wall and below the level of the discharged material cut off by said edge, whereby said member may serve as a leveler.

4. In a traveling charge-car, a holder having inclosing walls and open at the bottom, a movable gate disposed across said open bottom on one side of one of the inclosing walls aforesaid for supporting the charge in the holder, an oscillating member having its axis of rotation disposed on the opposite side of said wall and between said wall and the free edge of the member, said free edge operating to be depressed below the bottom edge of said wall and below the discharged material cut off by said edge, whereby the bottom edge of the wall serves as a cutting edge and the depressed member serves as a leveler with a travel of the car in proper direction.

5. In a traveling charge-car, a holder for the charge, a door or gate supporting the charge in the holder for a closed position of the gate and releasing the charge with an opening of the gate, and means on the car outside the holder and positioned out of range of the path of discharge from the holder, for leveling the discharged material along a plane depressed below the level of the discharged material cut off by the passage of the car thereover.

[Claims 6 to 18 not printed in the Gazette.]

1,212,630. FASTENING DEVICE. GEORGE L. GUILLET, Rochester, N. Y., assignor to Bastian Brothers Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 17, 1915. Serial No. 51,192. (Cl. 24—150.)



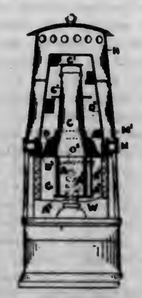
In combination with a badge, a fastening device formed from a single piece of wire and having an intermediate shank portion secured to the badge, retaining loops at opposite ends of the shank portion, one of said loops extending downwardly and the other of said loops extending outwardly, a pin extending from each loop, the pin on the downwardly turned loop being nearer the badge and also lower than the other pin.

1,212,631. SAFETY-LAMP. ERNEST ARTHUR HAILWOOD, Churwell, near Leeds, England. Filed Aug. 11, 1914. Serial No. 856,168. (Cl. 240—18.)

1. In miners' safety lamps, a chimney, an inner glass suspended therefrom by means of a framework having a base piece in which a combustion aperture is formed, said framework having a spring acting kink at one side adapted to form a spring suspension for the inner glass.

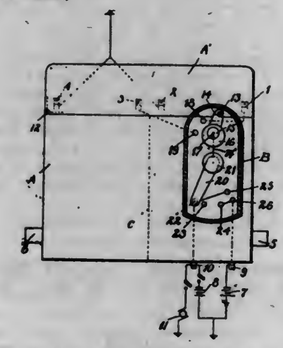
2. In a miner's safety lamp, the combination with the usual lamp burner, outer glass supported thereon, inner metallic chimney, gauze covering over the same and hood connected to said lamp body and disposed over the chimney and gauze; of an inner glass suspended from the chimney, said inner glass having a reduced opening in its base below which the burner of the lamp is located to permit the flange to extend through said opening and also to permit the entrance of air thereto for combustion.

3. In combination with a lamp having an outer glass, a burner and a chimney, an inner glass interposed between the chimney and the burner, a framework carried by the chimney and extending downward, and a plate carried by the framework extending under the inner glass and provided with an aperture of less dimension than the inner glass and so arranged that the flame from the burner may extend therethrough.



4. In combination with a lamp having a burner, an outer glass disposed around the burner, a chimney disposed above the burner, a gauze mantle disposed around the lower end of the chimney, an inner glass disposed between the lower end of the chimney and a point above the burner, resilient means carried by the chimney and extending underneath the inner glass and provided with an aperture of a size smaller than that of the inner glass and so arranged above the burner that the flame therefrom may enter the aperture.

1,212,632. COMBINED SWITCH AND LOCK DEVICE. THEODORE A. HAMMOND and WILLIAM P. HAMMOND, Passaic, N. J. Filed Oct. 9, 1906. Serial No. 338,164. (Cl. 175—282.)

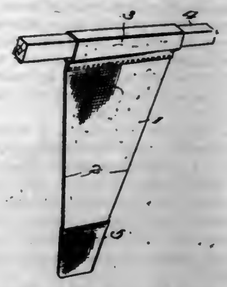


1. A switch and switch locking device of the character described, including a receptacle, a cover for the receptacle, a key-operated lock including a rotary element, and means fixedly associated with the rotary element for selectively making and breaking the circuit and for locking the receptacle cover.

2. A device of the character described including a receptacle, a cover for the receptacle, a switch mechanism arranged within the receptacle and including a swinging switch arm, a key operated lock including a rotary member carrying the swinging switch arm, and a keeper adapted to be engaged by the swinging switch arm to lock the cover of the receptacle in a closed position when the switch mechanism is in predetermined position.

1,212,633. PORTABLE DAM. GEORGE W. HANNA, Vale, Oreg. Filed Aug. 8, 1916. Serial No. 113,761. (Cl. 137—66.)

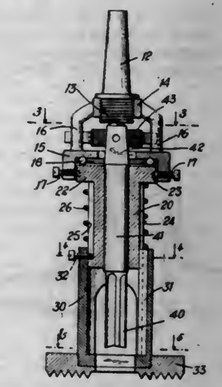
1. In a dam of the class described, a flexible body member provided with means for the support of its upper end, and an anchoring member at the lower end of the body member of coarsely woven material.



2. In a dam of the class described, a flexible body member, and a flexible anchoring member at the lower end of the body member, of coarsely woven material.

3. In a dam of the class described, a flexible body member of relatively closely woven material, and a terminal anchoring member connected therewith and of relatively coarsely woven material, readily penetrable.

1,212,634. SQUARE-HOLE DRILL. CHARLES F. HATHAWAY, New York, N. Y., assignor to Angular Drill and Machine Corporation, Rochester, N. Y., a Corporation of New York. Filed Aug. 13, 1914. Serial No. 856,537. (Cl. 77—61.)



1. A square hole drill comprising a rotary circular guide supporting housing, a non-rotary guide having an annular collar within the end portion of said housing, an antifrictional bearing between said collar and the housing, a pair of posts parallel with the axis of rotation, a hub from which said posts extend, a cutting tool extending through the guide and between said posts, and a floating yoke constructed with a socket arranged to receive the end of the cutting tool and having arms loosely embracing opposite sides of the posts.

2. A square hole drill comprising a rotary circular guide supporting housing, a non-rotary guide having an annular collar within the end portion of said housing, said collar being constructed with a peripheral groove, screws projecting laterally through said housing into said groove, an antifrictional bearing between said collar and the housing, a pair of posts parallel with the axis of rotation, a hub from which said posts extend, a spindle to which said hub is affixed, a cutting tool extending through the guide and between said posts up to and against the spindle, and a floating yoke constructed with a socket arranged to receive the end of the cutting tool and having bifurcated arms loosely embracing opposite sides of the posts.

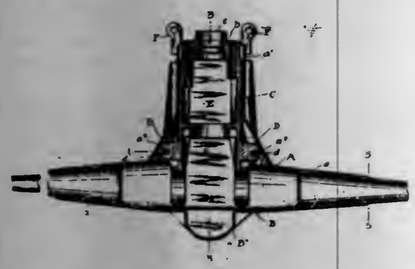
3. A square hole drill comprising a rotary housing, a pair of posts extending from the housing parallel with the axis of rotation, a non-rotary tool guide mounted on the housing but arranged to permit the rotation thereof, said guide being provided with a longitudinal opening, a cutting tool projecting through the guide and a floating yoke constructed with a socket arranged to receive the end of the cutting tool and having bifurcated arms loosely embracing opposite sides of the posts.

4. A square hole drill comprising a rotary housing, a pair of posts extending from the housing parallel with the axis of rotation, a non-rotary guide connected with the housing, said guide being provided with a longitudinal opening, a cutting tool projecting through the guide, a floating yoke constructed with a socket to receive the end of the cutting tool and having arms loosely embracing the posts and a clamp bracket longitudinally movable in relation to the guide.

5. A square hole drill comprising a rotary housing, a pair of posts extending from the housing parallel with the axis of rotation, a non-rotary guide connected with the housing, said guide being provided with a longitudinal opening of square cross-section, an anti-friction bearing between the housing and the guide, a cutting tool projecting through the guide, a floating yoke constructed with a socket to receive the end of the cutting tool and having arms loosely embracing the posts and a clamp bracket longitudinally movable in relation to the guide, said clamp bracket having gripping means for engaging the object to be drilled.

[Claims 6 to 11 not printed in the Gazette.]

1,212,635. REAR-AXLE AND TRANSMISSION CONSTRUCTION. JAMES G. HEASLET, Detroit, Mich., assignor to The Studebaker Corporation, a Corporation of New Jersey. Filed Jan. 22, 1916. Serial No. 73,543. (Cl. 21—90.)



1. In a structure of the class described, the combination of a hollow rear axle provided with a forwardly extending casing and having, at its back, an opening in alinement with the forwardly extending casing, a carrier member within said axle and casing, and removable therefrom through the opening in the former, motor car transmission mechanism mounted on and carried by the carrier member, and differential mechanisms also mounted on and carried by said carrier member, whereby the carrier member with the associated transmission and differential may be inserted into or removed from the axle and casing as a unit.

2. In a structure of the class described, the combination of a hollow rear axle provided with a forwardly extending casing and having, at its back, an opening in alinement with the forwardly extending casing, a carrier member within said axle and casing, and removable therefrom through the opening in the former, motor car transmission mechanism mounted on and carried by the carrier member, and differential mechanisms also mounted on and carried by said carrier member, whereby the carrier member with the associated transmission and differential may be inserted into or removed from the axle and casing as a unit, and means for rigidly securing the carrier in position and simultaneously attaching the torque rods of the vehicle to the carrier member.

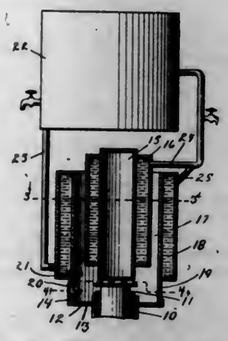
3. In a structure of the class described, the combination of a hollow rear axle provided with a forwardly extending casing and having, at its back, an opening in alinement with the forwardly extending casing, a carrier member within said axle and casing, and removable therefrom through the opening in the former, motor car transmission mechanism mounted on and carried by the carrier member, and differential mechanisms also mounted on and carried by said carrier member, whereby the carrier member with the associated transmission and differential may be inserted into or removed from the axle and casing as a unit, pockets in the interior of the casing, and projections on the carrier member adapted to seat in said pockets to properly position the carrier member within the casing.

4. In a structure of the class described, the combination of a hollow rear axle provided with a forwardly extending casing and having, at its back, an opening in alinement with the forwardly extending casing, a carrier member within said axle and casing, and removable therefrom through the opening in the former, motor car transmission mechanism mounted on and carried by the carrier member, and differential mechanisms also mounted on and carried by said carrier member, whereby the carrier member with the associated transmission and differential may be inserted into or removed from the axle and casing as a unit, pockets in the interior of the casing, projections on the carrier member adapted to seat in said pockets to properly position the carrier member within the casing, and bolts passed through the pockets and projections to secure the carrier member in position.

5. In a structure of the class described, the combination of a hollow rear axle provided with a forwardly extending casing and having, at its back, an opening in alinement with the forwardly extending casing, a carrier member within said axle and casing, and removable therefrom through the opening in the former, motor car transmission mechanism mounted on and carried by the carrier member, and differential mechanisms also mounted on and carried by said carrier member, whereby the carrier member with the associated transmission and differential may be inserted into or removed from the axle and casing as a unit, pockets in the interior of the casing, projections on the carrier member adapted to seat in said pockets to properly position the carrier member within the casing, and bolts passed through the pockets and projections to secure the carrier member in position, said bolts also serving to attach the torque rods of the vehicle to the carrier member.

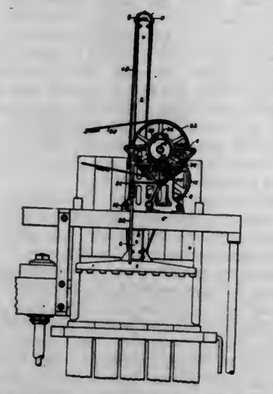
[Claims 6 to 10 not printed in the Gazette.]

1,212,636. WATER-HEATER. HERMAN J. HEIDGERKEN, Philipsburg, Mont. Filed Jan. 26, 1914. Serial No 814,510. (Cl. 122—161.)



In a water heater, a flue, a source of heat within the lower end of the flue, a water chamber formed on and surrounding the flue, a dead air chamber disposed centrally within the flue and spaced therefrom, a water chamber formed on and surrounding the dead air chamber and spaced from the wall of the flue, a conduit connecting the water chambers, a reservoir, connections between the bottom of the first water chamber and the reservoir, connections between the top of the second water chamber and the reservoir and connections between the first-named water chamber and the last-named connections to the reservoir.

1,212,637. TRAMPER FOR COTTON-PRESSES. NELSON B. HENRY, Dallas, Tex., assignor to The Murray Company, Dallas, Tex., a Corporation of Texas. Filed Nov. 27, 1915. Serial No. 63,712. (Cl. 100—25.)



1. In a tramper for cotton presses, a tramper foot, a frame carrying said foot, a fixed framework wherein said frame is adapted to reciprocate, a chain arranged on said frame and having its ends secured to the fixed framework combined with means for winding and unwinding said chain on said frame to thereby reciprocate said frame in the fixed framework.

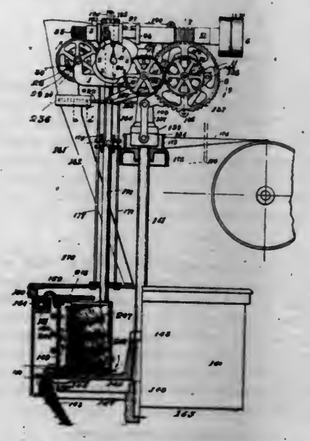
2. In a device of the character described, a frame, a sprocket arranged at the top, and a sprocket arranged at the base of said frame, an intermediate sprocket, a chain carried over the top sprocket, under the bottom sprocket and over the intermediate sprocket, a fixed framework in which the frame is arranged to reciprocate, a means for securing the ends of the chain to said fixed framework and a means for winding and unwinding the chain on the frame to thereby elevate and depress said frame in the fixed frame-work.

3. In a device of the character described, a fixed frame-work, a frame carrying the tramper foot and arranged to reciprocate in the frame-work, a chain arranged to reciprocate the frame, said chain having its ends secured to the fixed frame-work, a gear controlling the operation of the chain and a driving mechanism arranged to drive the gear alternately in reverse directions.

4. In a device of the character described, a tramper foot, a frame carrying the tramper foot, a fixed frame work wherein said frame is adapted to reciprocate, a chain arranged on said frame and having its ends secured to the fixed frame work, a means for winding and unwinding said chain on said frame to thereby reciprocate said frame in the fixed frame work, in combination with means carried by said frame and adapted at the limit of either stroke of said frame to stop the movement of said chain operating means.

1,212,638. METHOD OR PROCESS OF SEPARATING LIQUIDS FROM SOLIDS. HOMER A. HERR, Philadelphia, Pa. Original application filed Sept. 21, 1908, Serial No. 456,063. Divided and this application filed Dec. 23, 1915. Serial No. 68,333. (Cl. 210—25.)

1. The process of separating liquids from solids which consists of putting an unseparated mass in a rotating vessel, rotating the vessel at high separating speed at which speed the liquid is passed from the solids and the vessel, reducing the speed of the vessel to a predetermined slow speed, maintaining the vessel at the slow speed for a predetermined time, removing the solids from the wall of the vessel at the slow speed, exposing a port in the vessel after the high speed, conducting the solids as removed from the wall of the vessel to the bottom and thereover to said exposed port by the force inherent in the rotating mass.



2. The method of separating liquids from solids which consists in putting an unseparated mass in a vessel, rotating the vessel at a high predetermined speed for a predetermined time, during which time the liquids are separated from the solids, reducing the speed of the vessel to a predetermined slow speed, scraping the wall of the vessel while rotating at the slow speed, exposing a discharge port in the said vessel when the speed is reduced and passing the solids through the said port from the said shell by the force inherent in the mass.

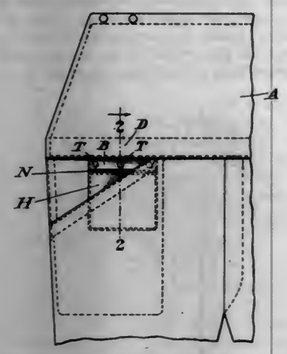
3. The process of separating liquids from solids which consists of putting an unseparated mass in a rotating vessel, rotating the vessel at a high separating speed, maintaining the high speed for a predetermined time, conducting the separated liquid from the vessel at high speed, reducing the speed of the vessel to a predetermined slow speed, scraping the separated material from the shell of the vessel at said predetermined slow speed, maintaining said slow speed for a predetermined time, opening a port in the vessel after high speed and conducting the separated solids, as scraped from the said wall over the bottom of the vessel, to said port by the force inherent in the rotating mass.

4. The process of separating liquids from solids comprising putting an unseparated material in a vessel, rotating the vessel and the material at a high predetermined speed during which speed the liquid is separated from the solids by virtue of the speed of the mass of the vessel, reducing the speed, maintaining a reduced speed for a predetermined time, removing the separated solids from said wall by a scraper, while the vessel is rotating at the slow speed, opening a port in the vessel; passing the solids, as removed, from the shell of the vessel to and through the said port at the said slow speed.

5. The process of separating liquids from solids comprising putting an unseparated material in a rotating vessel, passing the liquid out of the vessel at a high speed by centrifugal force, reducing the speed of the vessel, rendering available a port in the vessel for the passing of solids, changing the position of the solids in the vessel while rotating at the reduced speed from the shell wall of the vessel to the bottom and passing said solids out of the vessel at the reduced speed through the available port after their position is changed by force acquired by rotation.

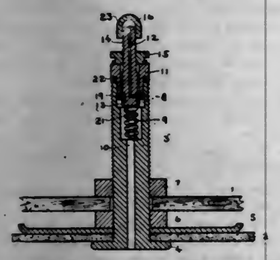
[Claims 6 to 20 not printed in the Gazette.]

1,212,639. POCKET FOR OVERALLS. WILLIAM A. HESTER, Evansville, Ind. Filed Oct. 29, 1915. Serial No. 58,596. (Cl. 2—15.)



In combination with overalls having a band with a depending intermediate flap having eyelets and a pocket supported from said band, of a supplemental detachable pocket having a flap projecting above the opening in said pocket and having eyelets, and separable fastening devices passed through the eyelets in the overlapped flaps and securing the flaps together in overlapped condition, said fastening means being independent and disconnected from the pocket proper.

1,212,640. AIR-VALVE FOR PNEUMATIC TIRES. ERNST ALFRED HILDING, Lidköping, Sweden, assignor to Aktiebolaget Svenska Luftventiler, Lidköping, Sweden. Filed Sept. 12, 1916. Serial No. 119,623. (Cl. 152—12.)



1. An air valve for pneumatic tires comprising an outer sleeve attached to a tire and communicating with the interior of said tire, an air supply pipe extending within said sleeve, said supply pipe having a bore ending adjacent the inner end of the pipe and lateral openings from said bore communicating with the interior of said sleeve, a head at said inner end of the supply pipe, a nut closing the outer sleeve about the supply pipe, an elastic washer disposed about the supply pipe between and bearing against the inner annular end surface of said nut and the head of the supply pipe and covering the lateral openings of said supply pipe, and a lock nut disposed on the air supply pip bearing against the first mentioned nut so as to compress the elastic washer between the end surface of said nut and the head of the supply pipe.

2. An air valve for pneumatic tires comprising an outer sleeve attached to a tire and communicating with the interior of said tire, an air supply pipe extending within said sleeve, said supply pipe having a bore ending adjacent the inner end of the pipe and lateral openings from said bore communicating with the interior of said sleeve, a head at said inner end of the supply pipe, a nut closing the outer sleeve about the supply pipe, said supply pipe having an annular recess on the exterior thereof with which said lateral openings communicate, an elastic washer disposed about the supply pipe in said recess so as to cover said lateral openings and bearing against the head of the supply pipe and the inner annular end surface of the said nut, and a lock nut disposed on the air supply pipe bearing against the first mentioned nut so as to compress the elastic washer between the end surface of said nut and the head of the supply pipe.

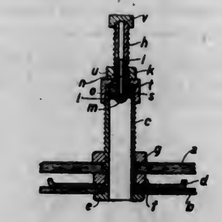
3. An air valve for pneumatic tires comprising an outer sleeve attached to a tire and communicating with the interior of said tire, an air supply pipe extending within sid sleeve, said supply pipe having a bore ending adjacent the inner end of the pipe and lateral openings from said bore communicating with the interior of said sleeve, a head at said inner end of the supply pipe, a nut closing the outer sleeve about the supply pipe, said supply pipe having an annular recess on its exterior with which said openings communicate, the annular surface of said head which faces the said recess having a cavity formed thereon, an elastic washer disposed about the supply pipe in said recess covering the said openings and between and bearing against the head and the inner annular end surface of the nut, and a lock nut about the air supply pipe bearing against the first mentioned nut so as to compress the elastic washer between the end surface of said nut and the head of the supply pipe.

4. An air valve for pneumatic tires comprising an outer sleeve atached to a tire and communicating with the interior of said tire, an air supply pipe extending within said sleeve, said supply pipe having a bore ending adjacent the inner end of the pipe and lateral openings from said bore communicating with the interior of said sleeve, a head at said inner end of the supply pipe, a nut closing the outer sleeve about the supply pipe, said supply pipe having an annular recess on its exterior surface with which said openings communicate, the annular surface of said head which faces the said recess having a cavity formed thereon, an elastic washer disposed about the supply pipe in said recess so as to cover the said openings and bearing against the said head and the inner annular end surface of the nut, a lock nut disposed about the air supply pipe and bearing against the first mentioned nut so as to compress the elastic washer between the end surface of said nut and the head, shoulders formed within the outer sleeve beyond the supply pipe head of such a width that the head can be pushed freely therebetween, the elastic washer being of a larger width so that it cannot pass by said shoulders, and arranged to close the space between said shoulders and the rear edge of said recess of the supply pipe, when pushed in, uncovering the said lateral openings.

5. An air valve for pneumatic tires comprising an outer sleeve attached to a tire and communicating with the interior of said tire, an air supply pipe extending within said sleeve, said supply pipe having a bore ending adjacent the inner end of the pipe and lateral openings from said bore communicating with the interior of said sleeve, a head at said inner end of the supply pipe, a nut closing the outer sleeve about the supply pipe, an elastic washer disposed about the supply pipe between and bearing against the inner annular end surface of said nut and the head of the supply pipe, covering the said lateral openings of the bore in the supply pipe, a lock nut disposed on the air supply pipe bearing against the first mentioned nut so as to compress the elastic washer between the end surface of said nut and the head, a spring disposed between and bearing against the head and a shoulder within the outer sleeve so as to maintain the air supply pipe in its ordinary position, as and for the purpose set forth.

1,212,641. AIR-VALVE FOR PNEUMATIC TIRES. ERNST ALFRED HILDING, Lidköping, Sweden, assignor to Aktiebolaget Svenska Luftventiler, Lidköping, Sweden. Filed Sept. 12, 1916. Serial No. 119,624. (Cl. 152—12.)

1. An air valve for pneumatic tires comprising an outer sleeve attached to and leading from within the tire, an air supply pipe, means for attaching said air supply pipe to the outer sleeve, a member having a longitudinal bore closed at its inner end attached to the air supply pipe so as to form by means of the bore an extension of the air passage of said air supply pipe, the said member having lateral orifices diverging from the bore thereof, a head on said member adjacent said lateral orifices, an elastic washer positioned about said member so as to cover the lateral orifices therein and to bear against the head of said member, and the inside of said means for attaching the air supply pipe, and a lock nut about the air supply pipe bearing against the said attaching means so as to compress the elastic washer between the bottom thereof and the said head.



2. An air valve for pneumatic tires comprising an outer sleeve attached to and leading from within the tire, an air supply pipe, a member having a longitudinal bore closed at its inner end loosely attached to the air supply pipe so as to form by means of the bore an extension of the air passage of said air supply pipe, the said member having lateral orifices diverging from the bore thereof, a head on said member adjacent said lateral orifices, an elastic washer positioned about said member so as to cover the lateral orifices therein and to bear against the head of said member, a cap nut closing the bore in the outer sleeve outside the air supply pipe to which said air supply pipe is attached, said cap nut having an annular bottom which serves as the rear seating for said elastic washer said cap nut so as to compress the elastic washer between the said cap nut so as to compress the elastic washer between the bottom of the cap nut and the said head.

3. An air valve for pneumatic tires comprising an outer sleeve attached to and leading from within the tire, an air supply pipe, a member having a longitudinal bore closed at its inner end, screwed within the inner end of the air supply pipe so as to form by means of the bore an extension of the air passage of said air supply pipe, said member having lateral orifices diverging from the said bore, a head on said member adjacent said lateral orifices, an elastic washer positioned about said member so as to cover the lateral orifices therein and to bear against the head of the said member, a cap nut closing the bore in the outer sleeve outside the air supply pipe, said cap nut having an annular bottom which serves as the rear seating for said elastic washer, and a lock nut about the air supply pipe bearing against the said cap nut so as to compress the elastic washer between the bottom of the cap nut and the said head.

4. An air valve for pneumatic tires comprising an outer sleeve attached to and leading from within the tire, an air supply pipe, a member having a longitudinal bore closed at its inner end attached to the air supply pipe so as to form by means of the bore and extension of the air passage of said air supply pipe, said member having lateral orifices diverging from the said bore, a head on said member adjacent said lateral orifices, an elastic washer positioned about said member so as to cover the lateral orifices therein and to bear against the head of the said member and the inner walls of the said outer sleeve, a cap nut closing the bore in the outer sleeve outside the air supply pipe, said cap nut having an annular bottom which serves as the rear seating for said elastic washer, and a lock nut about the air supply pipe bearing against the said cap nut so as to compress the elastic washer between the bottom of the cap nut and the said head.

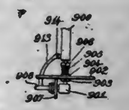
1,212,642. DIRIGIBLE HEADLIGHT. HARRY F. HOFFMAN, Allentown, Pa. Original application filed Feb. 15, 1916, Serial No. 78,504. Divided and this application filed May 6, 1916. Serial No. 95,854. (Cl. 240—61.)



1. A dirigible headlight including a bracket adapted for attachment to a vehicle and provided with a substantially ring shaped upper terminal formed with alined sockets, a light casing seating within the ring and having trunnions engaging in the sockets, spaced stops projecting from the casing and engageable with opposite sides of the ring to limit swinging movement of the casing in both directions, and means for controlling movement of the casing.

2. A dirigible headlight including a bracket adapted for attachment to a vehicle, a headlight swingingly supported by the bracket for turning movement, a pipe having one end disposed adjacent the light and bent into substantially semicircular formation, spaced piston heads mounted in the curved end of the pipe, an arcuate connection between the piston heads conforming in curvature to the curvature of the pipe, a link connecting one of the heads with the light, and means for supplying fluid under pressure behind the other piston head to operate the light.

1,212,643. FABRIC COATING, DRYING, AND SOLVENT-RECOVERY APPARATUS. CHARLES F. HOPEWELL, Newton, Mass. Filed Oct. 27, 1911. Serial No. 657,176. (Cl. 34—3.)



1. An apparatus of the class described comprising a rotary heated drum, means for guiding the coated fabric around said drum with its back against the same and means for maintaining a volume of gas containing a solvent in contact with the face of said coating whereby the drying of the face of the coating will be retarded and the expulsion of volatile material from the coating will proceed from the fabric toward the face of the coating.

2. An apparatus of the class described comprising a rotary drum, means for guiding the coated fabric around said drum with its back against the same and means for maintaining a volume of gas containing a solvent in contact with the face of said coating throughout the entire heated area whereby the drying of the face of the coating will be retarded and the expulsion of volatile material from the coating will proceed from the fabric toward the face of the coating.

3. In an apparatus of the class described comprising a vaporizing chamber, a rotary heated drum located in said vaporizing chamber, means for guiding the coated fabric around said drum with its back against said heated drum and means for maintaining in contact with the face of said coating a circulating current of gas containing a solvent whereby the drying of the face of the coating will be retarded and the expulsion of volatile materials from the coating will proceed from the fabric toward the face of the coating.

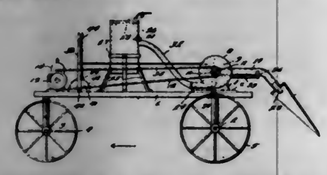
4. In an apparatus of the character described comprising a vaporizing chamber and heating means in said chamber consisting of a series of heating elements of progressively increasing temperature, means for guiding the coated fabric over said heating means with its back to-

ward the same and in a direction whereby the fabric will be subject to the influence of gradually increasing temperature and means for maintaining in contact with the face of said coating a volume of gas containing a solvent whereby the drying of the face of the coating will be retarded and the coating will proceed from the fabric toward the face of the coating.

5. In an apparatus of the class described, a vaporizing chamber, a plurality of rotary heated mangles located within said vaporizing chamber, means for maintaining successive sections of said mangles at successively higher temperatures, means for guiding the coated fabric through said vaporizing chamber with its back against the rotary elements of said mangles, means for maintaining in contact with the face of said coating a circulating current of gas containing a solvent whereby the drying of the face of the fabric will be retarded and the expulsion of volatile materials from the coating will proceed from the fabric toward the face of the coating.

[Claims 6 to 27 not printed in the Gazette.]

1,212,644. SEED-GATHERER. JOSEPH G. JOHNSON, Eustis, Fla. Filed June 1, 1916. Serial No. 101,082. (Cl. 56—117.)



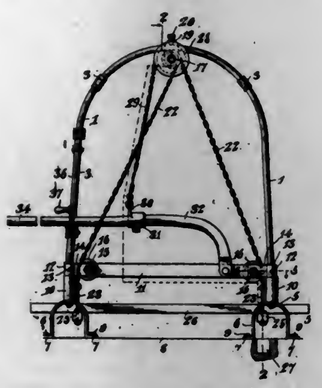
In a seed gathering machine, the combination of a wheel supported frame and a receptacle thereon, of a pneumatic device mounted upon the frame and having a pipe communicating with the receptacle, a tubular suction arm pivotally carried by the casing of the pneumatic device, said arm having at its free end a broad fan-like suction member to drag over the tops of the crop, whereby the seed may be sucked through the arm into the pneumatic device and blown into said receptacle, and means for raising and lowering said arm, said means comprising a pivoted bell crank lever having a long and short arm, the free end portion of the long arm terminating in a semicircular member fitting under the lower part of the tubular suction arm, and having an anti-frictional roller to engage the arm and means connected to the short arm for raising and lowering said bell crank lever.

1,212,645. TOOTH-BRUSH HOLDER. ARTHUR L. KANE and JOHN J. O'NEIL, Newport, R. I. Filed Jan. 25, 1915. Serial No. 4,337. (Cl. 132—11.)



A tooth brush holder comprising a base, a shank formed of flexible sheet metal and adapted to be bowed outwardly to conform to the curvature of various tooth brush handles of different forms, a casing connected to said shank, and a spring actuated door for said casing having an aperture therein to accommodate the handle of the tooth brush, and a finger hold on the opposite end to operate said door, said door having lugs formed thereon, and a pin extending through said lugs and through the lugs formed on the casing, and spring encircling said pin for normally holding the door closed, said shank having key hole slots in its upper and lower ends for removably securing the same to the base, and permitting the same to be readily bowed outwardly to conform to the curvature of tooth brush handles of different forms.

1,212,646. SUPPORTING DEVICE FOR AUTOMOBILES. HENRY C. KINO, Washington, Kans. Filed Sept. 23, 1915. Serial No. 52,220. (Cl. 254—144.)



1. A device for lifting and supporting automobiles, comprising connected side frames spaced apart a distance to admit the passage of an automobile through the device from end to end, with each side frame composed of basic members and a frame structure rising therefrom and connected at the lower ends to said basic members, another frame disposed horizontally and comprising transverse and longitudinal beams with the longitudinal beams spaced apart transversely of the length of the device and normally located to underride the axle portions of the automobile and having the ends of the transverse beams entering the basic members, a windlass extending transversely across the top intermediate of the length of the device, flexible connections extending from the windlass to the end portions of each transverse beam of the second-named frame and along the connected side frames out of the path of the automobile, and windlass operating means at one side of the device at a lower level than the windlass and within reach of an operator.

2. A lifting structure for automobiles comprising side frames spaced apart by a distance sufficient to permit the passage of an automobile between the frames, arch basic supports for the side frames, transverse beams having the ends entering the arch supports, longitudinal beams connecting the transverse beams and spaced apart to underride the axles of an automobile between the wheels thereof, a windlass structure centrally located at the top of the side frames and connected to and sustaining the transverse bars, and a lever structure connected to the windlass and located at a lower level than said windlass and provided with means for the manipulation of the lever by an operator.

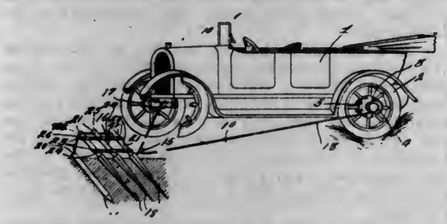
3. A lifting structure for automobiles, comprising side frames spaced apart by a distance sufficient to permit the passage of an automobile between the frames, arch basic supports for the side frames, transverse beams having the ends entering the arch supports, longitudinal beams connecting the transverse beams and spaced apart to underride the axles of an automobile between the wheels thereof, a windlass structure centrally located at the top of the side frames and connected to and sustaining the transverse bars, and a lever structure connected to the windlass and located at a lower level than said windlass and provided with means for the manipulation of the lever by an operator, one of the side frames being provided with a latch member for engaging the operating lever to hold the automobile in the elevated position.

4. An automobile lifting structure comprising arch side frames, connecting members for the arch frames near the top thereof and across the leg portions of each arch frame near the bottom thereof, arch basic supports for the arch frames, cross beams having the ends entering the arch basic supports, longitudinal beams on the cross beams and spaced apart by a distance less than the spread of the wheels of an automobile, a windlass structure centrally located at the crown portions of the arch frames, flexible strands extending from the windlass to the respective cross beams and including non-flexible members extending through and guided by the basic arch supports, a lever carried by one of the brace members, a drum on the windlass, a flexible strand extending from the lever to the drum and related thereto to cause winding of the first-named flexible strands on the windlass by the unwinding of the second named flexible strand from the drum, and latch means for holding the operating lever in the position to which it is moved to elevate an automobile.

5. A lifting structure for automobiles comprising side frames spaced apart by a distance sufficient to permit the passage of an automobile between the frames, arch basic supports for the side frames, transverse beams having the ends entering the arch supports, longitudinal beams connecting the transverse beams and spaced apart to underride the axles of an automobile between the wheels thereof, a windlass structure located at the top of the side frames and connected to and sustaining the transverse bars, and means for operating the windlass structure.

[Claims 6 to 8 not printed in the Gazette.]

1,212,647. EMERGENCY DRAFT APPLIANCE FOR AUTOMOBILES. ELIE H. KNOWLES, Malone, Fla. Filed Apr. 8, 1915. Serial No. 19,974. (Cl. 242—95.)



An emergency draft windlass for the purpose set forth provided with a flexible draft member, comprising a drum having an annular flange at its inner end and fitting over the outer end of the hub of a wheel with the flange in contact with the spoke, a plate consisting of two sections adjacent the inner face of the wheel and engaging the inner portion of the hub, said flange and the plate having registering radial T-shaped slots alternating with the spoke and having their T portions nearer the center of the hub, fastening means engaging the registering slots to clamp the flange and the plate to opposite sides of the spokes, said fastening means comprising devices, each being constructed of a single strip of heavy sheet steel, bent upon itself midway its ends to form a loop having arms, which permanently engage each other a short distance, and beyond their engagement diverge outwardly and subsequently laterally in opposite directions for engaging the T-portions of the slots of said flange, the arms adjacent the loop being yieldable and engaging the T-portions of the slots of said plate, thereby clamping the drum securely in place.

1,212,648. COMPOSITION FOR PURIFYING LIQUIDS. ARTHUR H. KRIEGER, Los Angeles, Cal., assignor to Kieselguhr Company of America, Los Angeles, Cal., a Corporation of California. Filed Sept. 27, 1915. Serial No. 52,822. (Cl. 210—1.)

1. A composition for purifying liquids comprising a mixture of mineral colloid and a porous carrier material.

2. A composition for purifying liquids comprising a mixture of hydrous aluminum silicate and kieselguhr, both in finely divided condition.

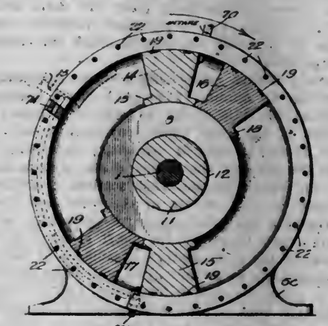
3. A composition for purifying liquids comprising a mixture of finely divided kieselguhr and a mineral colloid.

4. A composition for purifying liquids comprising a mixture of finely divided kieselguhr and finely divided colloidal clay, in substantially equal proportions.

5. A composition of matter consisting of finely divided kieselguhr intimately mixed with finely divided colloidal clay.

[Claim 6 not printed in the Gazette.]

1,212,649. ROTARY ENGINE. MARDIROS ARADOOR KRIKORIAN, New York, N. Y. Filed Dec. 7, 1915. Serial No. 65,522. (Cl. 123—11.)



1. A rotary engine, comprising a stator consisting of a casing having an annular passage, a shaft journaled in the casing at the axis of the passage, a sectional rotor, each section of the rotor being journaled loosely on the shaft and having a pair of oppositely extending blades moving in the passage, the blades of one section alternating with the blades of the other section, a driving connection between each section of the rotor and the shaft for constraining the shaft to move forwardly with the rotor section and to permit the shaft to move forwardly independent of the rotor section, the blades of the section serving alternately as pistons upon which the motive fluid may act to drive the section forwardly, and as abutments for the motive fluid, a normally operative connection between each rotor section and the shaft for constraining the section to move forwardly with the shaft and for permitting the shaft to move forwardly independently of the section, said connection comprising a cam plate, a cam disk adjustably connected with the shaft adjacent to each rotor section, a pin mounted to move laterally in each rotor section, each disk having recesses in its periphery for engagement by the pin of the adjacent section, and a spring normally pressing each pin into engagement with the cam disk; and means in connection with the casing and adjustable with respect thereto for retracting the pins at predetermined points to release the sections from the shaft when the blades of the sections are in abutment position, each cam plate having means for engaging the pin of the section to check the movement of the section when the blades are in abutment position, said casing having an inlet for the motive fluid, and an igniting device opposite the said inlet, and having an exhaust between the spark plug and the inlet and adjacent to the inlet.

2. A rotary engine, comprising a stator consisting of a casing having an annular passage, a shaft journaled in the casing at the axis of the passage, a sectional rotor, each section of the rotor being journaled loosely on the shaft and having a pair of oppositely extending blades moving in the passage, the blades of one section alternating with the blade of the other section, a driving connection between each section of the rotor and the shaft for constraining the shaft to move forwardly with the rotor section and to permit the shaft to move forwardly independent of the rotor section, the blade of the sections serving alternately as pistons upon which the motive fluid may act to drive the section forwardly, and as abutments for the motive fluid, a normally operative connection between each rotor section and the shaft for constraining the section to move forwardly with the shaft and for permitting the shaft to move forwardly independently of the section, said connection comprising a cam disk adjustably connected with the shaft adjacent to each rotor section, a pin mounted to move laterally in each rotor section, each disk having recesses in its periphery for engagement by the pin of the adjacent section, and a spring normally pressing each pin into engagement with the cam disk, and means in connection with the casing and adjustable with respect thereto for retracting the pins at predetermined points to release the sections from the shaft when the blade of the sections are in abutment position, and having means for engaging the pins to check the sections in abutment position.

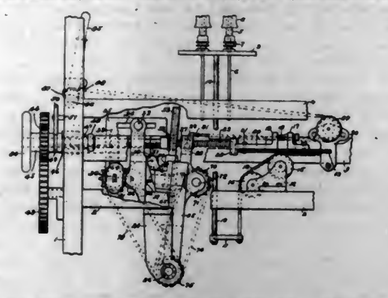
3. A rotary engine, comprising a stator consisting of a casing having an annular passage, a shaft journaled in the casing at the axis of the passage, a sectional rotor, each section of the rotor being journaled loosely on the shaft and having a pair of oppositely extending blades moving in the passage, the blades of one section alternating with the blades of the other section, a driving connection between each section of the rotor and the shaft for constraining the shaft to move forwardly with the rotor section and to permit the shaft to move forwardly independent of the rotor section, the blades of the section serving alternately as pistons upon which the motive fluid may act to drive the section forwardly, and as abutments for the motive fluid, a normally operative connection between each rotor section and the shaft for constraining the section to move forwardly with the shaft and for permitting the shaft to move forwardly independent of the section, and means controlled by the forward movement of the shaft for releasing the connection when the blades of the rotor sections are in abutment position.

4. A rotary engine, comprising a stator consisting of a casing having an annular passage, a shaft journaled in the casing at the axis of the passage, a sectional rotor, each section of the rotor being journaled loosely on the shaft and having a pair of oppositely extending blades moving in the passage, the blades of one section alternating with the blades of the other section, a driving connection between each section of the rotor and the shaft for constraining the shaft to move forwardly with the rotor section and to permit the shaft to move forwardly independently of the rotor section, the blades of the section serving alternately as pistons upon which the motive fluid may act to drive the section forwardly, and as abutments for the motive fluid, and means controlled by the relative forward movement of the shaft with respect to the rotor sections for connecting the said sections to the shaft at predetermined points in the travel of the sections.

5. A rotary engine, comprising a stator having an annular passage, a sectional rotor, each section having a pair of oppositely extending blades moving in the passage, and the blades of the sections alternating, a shaft upon which the sections are journaled, a driving connection between each rotor section and the shaft for constraining the shaft to move forward with the sections and for permitting the shaft to move forward independently of the sections, and means controlled by the relative movement forward of the shaft with respect to each rotor section for connecting the section to the shaft at predetermined points in the travel of the section, to constrain the section to move with the shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,212,650. BUILDING-MOTION FOR SPINNING OR WINDING MACHINES. HARRY A. LEONARD, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed June 23, 1915. Serial No. 35,836. (Cl. 242—43.6.)



1. In a machine of the character described, the combination of a builder cam, a traverse member, a movable frame between the builder cam and traverse member, motion transmitting devices between the movable frame and builder cam to transmit motion to the frame from the cam, and means for automatically moving said devices longitudinally and also transversely of the movable frame to effect variable movements to said frame and traverse member.

2. A builder motion for spinning or winding machines, comprising a cam, a traverse member, a movable frame between the cam and traverse member, a traverse slide movable longitudinally of the said frame, a bunch builder slide mounted for movement transversely of said frame, and means for transmitting movement from said cam through the bunch builder slide to the traverse member.

3. A builder motion for spinning or winding machines, comprising a cam, a traverse rod, a swing frame between the cam and traverse rod, a traverse slide movable longitudinally of the swing frame, a bunch builder slide mounted for movement transversely of said frame, means for transmitting movement from said cam through the bunch builder slide to the traverse rod, and means for effecting movement of the bunch builder slide transversely of the swing frame.

4. In a spinning or winding machine, the combination of a series of spindles for supporting filling carriers to be wound with filling, a traverse rod for effecting relative traverse movement of the filling carriers and filling as the latter is wound thereon, a cam for moving the traverse rod, and means between the cam and traverse rod for modifying the movement transmitted to said rod by the cam, comprising a swing frame, a traverse slide mounted thereon, and a bunch builder slide mounted on the traverse slide.

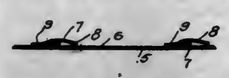
5. A builder motion for spinning or winding machines, comprising a cam, a traverse rod, a swing frame between the cam and traverse rod, a traverse slide movable longitudinally of the swing frame, a part carried by the traverse slide and through which the motion of the cam is transmitted to the swing frame, means for moving the traverse slide in one direction and said part in another direction to effect a number of movements of minimum traverse to said traverse rod, then a maximum traverse, then a plural number of medium traverses of gradually increasing length and thereafter a series of service traverses of uniform length.

[Claims 6 to 26 not printed in the Gazette.]

1,212,651. CONVEYER-BELT. GEORGE F. LUCORE, Arriba, Colo. Filed Sept. 21, 1916. Serial No. 121,465. (Cl. 193—4.)

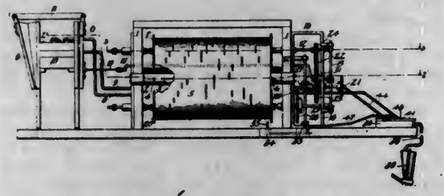
1. The combination with a conveyer belt having cross-slats, of guards composed of strips of flexible material which are fastened at one of their ends to the belt and lie across the end-portions of the slats thereof, free to separate from the belt and the slats at their opposite ends.

2. The combination with a conveyer-belt having cross-slats, of guards composed of strips of flexible material which are fastened at one of their ends to the belt and lie across the end-portions of the slats thereof, free to separate from the belt and the slats at their opposite ends, said strips overlapping at their outer edges, the longitudinal edge of the belt, adjacent which they are applied.



3. The combination with a conveyer belt having cross-slats, of guards composed of strips of flexible material which are fastened at one of their ends to the belt and lie across the end-portions of the slats thereof, free to separate from the belt and the slats at their opposite ends, the outer edges of the strips extending slantingly beyond the longitudinal edge of the belt, adjacent which they are applied.

1,212,652. DUST-REMOVER FOR TRACKING DEVICES. ENDFRED LUNDBERG, Toronto, Ontario, Canada, assignor, by direct and mesne assignments, of one-half to Otto Higel Company, Inc., Buffalo, N. Y., a Corporation of New York, and one-half to George P. Brand, New York, N. Y. Filed Aug. 7, 1915. Serial No. 44,138. (Cl. 84—161.)



1. The combination with a tracking device for a music sheet, including shifting means for maintaining proper registration between the sheet and the tracker and a controlling duct for said shifting means, of cleaning means for said duct, comprising a wind-inducing device and means for establishing or cutting off communication between said duct and said wind-inducing device.

2. The combination with a tracking device for a music sheet, including shifting means for maintaining proper registration between the sheet and the tracker and a controlling duct for said shifting means, of cleaning means for said duct, comprising a suction device, and a valve-controlled connection between said suction device and said controlling duct.

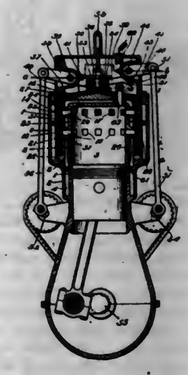
3. The combination of a tracker, music and take-up rolls, mechanism for alternately driving said rolls to wind a sheet upon the take-up roll and rewind it upon the music roll, controlling means for said driving mechanism, a tracking device for the music sheet including shifting means for maintaining proper registration between the sheet and the tracker and a controlling duct for said shifting means, and a pneumatic cleaning device connected with said duct and controlled by said controlling means.

4. The combination of a tracker, music and take-up rolls, mechanism for alternately driving said rolls to wind a sheet upon the take-up roll and rewind it upon the music roll, controlling means for said driving mechanism, a tracking device for the music sheet including shifting means for maintaining proper registration between the sheet and the tracker and a controlling duct for said shifting means, and a suction device connected with said duct and controlled by said controlling means.

5. The combination of a tracker, music and take-up rolls, mechanism for alternately driving said rolls to wind a sheet upon the take-up roll and rewind it upon the music roll, controlling means for said driving mechanism, a tracking device for the music sheet including, shifting means for maintaining proper registration between the sheet and the tracker and a controlling duct for said shifting means, a suction chamber, a connection between said chamber and said duct, and a valve controlling said connection and operatively connected with said controlling means to establish communication between said duct and said chamber when the driving mechanism is shifted to rewind the music sheet.

[Claims 6 to 9 not printed in the Gazette.]

1,212,653. INTERNAL-COMBUSTION ENGINE. JAMES HARRY KEIGHLY MCCOLLUM, Toronto, Ontario, Canada, assignor to George H. Gooderham, John Wycliffe Lowes Forster, and The Argylls Limited, Alexandria, Scotland. Filed May 29, 1909. Serial No. 499,216. (Cl. 123—81.)



1. In an internal combustion engine, a cylinder having inlet and exhaust ports, a piston operating in said cylinder, and a cylindrical valve separate from the piston and having suitable ports, said valve being operated with a combined reciprocal and lateral movement causing the valve ports to travel in a substantially circular path on the surface of the cylinder.

2. In a four cycle internal combustion engine, a cylinder having inlet and exhaust ports, a piston operating in said cylinder, and a cylindrical valve arranged substantially co-axial with said piston and separate therefrom and operated with a combined reciprocal and partial rotary movement causing the valve port to travel in a substantially circular path one diameter of which is parallel with the axis of the cylinder.

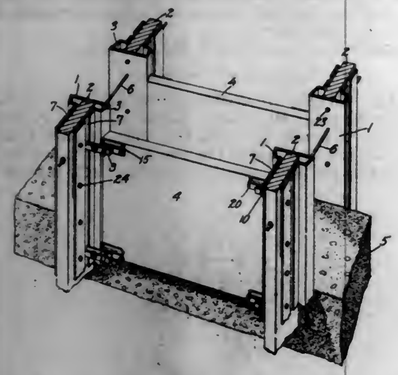
3. In a four cycle internal combustion engine, a cylinder having inlet and exhaust ports, a piston operating in said cylinder, a cylindrical valve having ports to cooperate with the cylinder ports, and means for moving said valve so that the port thereof travels in a substantially circular path one diameter of which extends longitudinally of the cylinder.

4. In an internal combustion engine, a cylinder having inlet and exhaust ports, a piston operating in said cylinder, a cylindrical valve separate from the piston, and means operatively connected with said piston for imparting to said valve a substantially circular movement one diameter of which extends longitudinally of the cylinder to control the inlet and exhaust.

5. In an internal combustion engine, a cylinder having inlet ports and exhaust ports circumferentially arranged and at right angles to the axis of the cylinder, a piston operating in said cylinder, a cylindrical valve having ports adapted to register with the said cylinder ports, and means for operating said valve to move the valve ports laterally into and out of longitudinal alinement with the cylinder ports and longitudinally to move said valve ports into and out of lateral alinement with said cylinder ports, to open and close the inlet, to retain the gases during compression and firing and to open and close the exhaust.

[Claims 6 to 28 not printed in the Gazette.]

1,212,654. CONCRETE-FORM. STEWART R. MCKAY, Perth Amboy, N. J., assignor to McKay Concrete Form Company, Sewaren, N. J., a Corporation of New Jersey. Filed June 19, 1912. Serial No. 704,472. (Cl. 25—131.)



1. The combination with main supports or members, composed of hollow metal beams having lateral flanges and dovetailed grooves, said flanges being beveled, of an adjustable plate whose edges are beveled to correspond with the bevel of the said flanges, and whose position can be changed along the length of the said beams, and fastening means on said plate for engaging the dovetailed grooves in the beams, said fastening means consisting of pivoted fingers engaging the grooves and a spring-provided knob carrying also a bar and arranged to hold the pivoted fingers closely in engagement with the beams.

2. The combination with hollow metal members having dovetailed, longitudinal, lateral flanges, of an adjustable plate, and fastening means thereon consisting of movable fingers engaging the grooves, said fingers being pivoted together, a plate to which one of the fingers is pivoted, and a spring-provided knob having a bar at one end thereof for assisting in locking the fingers in engagement with the dovetailed grooves.

3. The combination with main members having grooves, of an adjustable plate, and fastening means thereon engaging the main members and composed of interpivoted parts which expand in the main members, and a spring-provided knob having a bar engaging a slotted plate and operated to control the action of the expanding fingers.

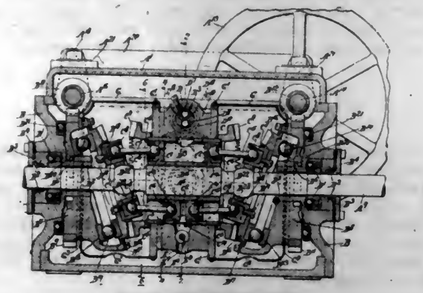
4. In a form of the character described, the combination of a pair of posts each consisting of a plurality of telescoping sections and each post having an inner face presented toward the material to be molded and a lateral seat, a plate interposed between said posts and adjustable longitudinally of said seats, and means for clamping said plate to said posts with its inner face in substantially the plane of the inner faces of the posts, the seats and the ends of the plate coöperating to provide an increasing clearance between the ends of the plate and the seats as the plate is moved outwardly with respect to the seats.

5. In a form of the character described, the combination of a pair of posts, a plate adapted to be inserted between said posts, said posts and said plate having coöperating beveled surfaces providing an increasing clearance between the ends of the plate and the posts as the plate is moved outwardly, and clamping devices for securing the plate to the posts.

[Claims 6 to 13 not printed in the Gazette.]

1,212,655. HYDRAULIC TRANSMISSION DEVICE. WILLIAM E. MAGIE, Evansville, Ind., and WALTER FRAIS, Milwaukee, Wis. Filed Jan. 8, 1914. Serial No. 810,928. (Cl. 138—22.)

1. In a hydraulic transmission device a power member containing a group of cylinders, a shaft on which such cylinders are mounted and with which they operate, an inclosing valve port ring about the cylinders, a circulatory system with a loose connection between the same and the ring whereby all the parts are suspended on the shaft.



2. In a hydraulic transmission device a power member containing a group of cylinders, two pistons acting in each such cylinder, a shaft on which such cylinders are mounted and with which they operate, an inclosing valve port ring about the cylinders, a circulatory system with a loose connection between the same and the ring whereby all the parts are suspended on the shaft.

3. In a hydraulic transmission a cylinder barrel, a series of pistons therein, a shaft upon which the barrel is mounted, a driving plate, and a driving connection between the plate and the barrel comprising a pair of beveled gears one on the plate and one on the barrel, a ball and socket connection between the swash plate and the shaft.

4. In a pressure transmission system a pressure relief member comprising a chamber communicating with the system, a plug within said chamber, yielding means to resist movement of said plug, and a relief passage through said plug closed by the wall of said chamber adapted to be opened only after the plug has been displaced.

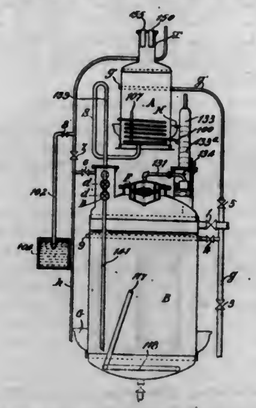
5. A hydraulic transmission system having two zones of different pressures, an elongated chamber interposed between them, a plug slidably mounted within said chamber, yielding means for resisting displacement of said plug in either direction, pressure relief passages contained within said plug communicating each with one of said zones, a discharge from the opposed end of each passage, said discharges being closed by the wall of the chamber when the plug is in the normal position, and adapted each to be opened by the movement of the plug in one direction or the other.

1,212,656. PURE-CULTURE APPARATUS FOR YEAST, MUCORINI, MOLDS, BACILLI, &c. JEAN HENRI PASCAL MAGNÉ, Mexico, Mexico. Filed June 19, 1916. Serial No. 104,645. (Cl. 195—17.)

1. In an apparatus of the class described, the combination of the smaller initial vat, the larger secondary vat, means for supplying steam to the vats, means for conducting air under pressure to the vats, a sterilizing mechanism for said air having a sterilizing medium arranged to be enveloped by the volume of steam utilized in the vats, an air-drying or separating device, and a duct for taking air therefrom to the aforesaid air-conducting means.

2. In an apparatus of the class described, the combination of the smaller initial vat, the larger secondary vat, means for introducing steam to the vats, an air-sterilizing mechanism having an air chamber containing a sterilizer and arranged to be enveloped by the steam in one of the vats, a second air sterilizer containing a sterilizing fluid, means for drying or separating the air from moisture, and a duct for taking the air therefrom to either or both of the vats.

3. In an apparatus of the class described, the combination of the smaller initial vat, the larger secondary vat, means for taking liquid from either vat to the other, means for conducting steam to the vats, air-sterilizing mechanism having a primary sterilizing device and a secondary sterilizing device, both adjacent to the steam chamber in a vat and one arranged to be enveloped by the steam therein, an elongated air-drying apparatus communicating with the said sterilizing devices, and a duct for taking the air therefrom to either of the vats.



4. In an apparatus of the class described, the combination of the smaller initial vat, the larger secondary vat, means for conducting liquid from one of said vats to the other, an air-sterilizing mechanism, a duct for supplying air thereto, a duct for taking air therefrom to the interiors of the vats, and automatically acting means for preventing the back flow of gases or moisture from the vats toward the air-sterilizing mechanism.

5. In an apparatus of the class described, the combination of the smaller initial vat, the larger secondary vat, means for conducting fluid from one of said vats to the other, an air-sterilizing mechanism having a primary sterilizing chamber with an inlet orifice and an outlet orifice, means for holding a stratum of sterilizing or filtering fiber in integral condition at points remote from the orifices, said fiber holder being inclosed but arranged to be surrounded by the steam in one of the vats, a duct from the air sterilizer communicating with the vats, and automatically acting devices for preventing gas or moisture from flowing backward from the vats toward the air-sterilizing means.

[Claims 6 to 21 not printed in the Gazette.]

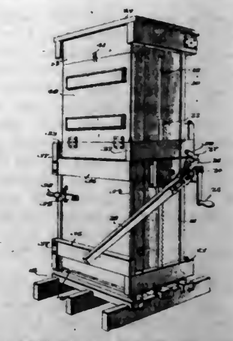
1,212,657. CHAIR-SEAT. FRANKLIN S. MARI and HARRY R. MILLER, Canton, Ill. Filed Apr. 24, 1916. Serial No. 93,218. (Cl. 155—4.)



A seat having a frame with an opening therein, plates secured to said frame and having their inner marginal edges projecting over the marginal edges of the opening and bent U-shaped in cross section, said bent portions being provided with oppositely disposed notches, wires passing through said notches in oppositely disposed plates, and a woven top covering said plates and wires and fastened to the frame about the outer edges of said plates.

1,212,658. BALING-PRESS. JOSEPH A. MARX and FLOYD E. HOLDEN, Saginaw, Mich., assignors to Lenmar Manufacturing Company, Saginaw, Mich. Filed July 10, 1914. Serial No. 850,196. (Cl. 100—5.)

A baling press comprising a box having a hinged front and slotted sides, a follower, a pair of exteriorly arranged rack bars having portions passing through the slots of said sides and bearing under said follower, gears meshing with said rack bars, plates mounted upon said sides and holding said rack bars in the slots, a shaft



supported by said plates and directly connected to both gears, means for rotating said shaft and brace rods connected to said box and certain of which bearing upon said plate to prevent outward movement thereof.

1,212,659. BATH-TUB ATTACHMENT. FRANK MAYCOMBER, South Jacksonville, Fla. Filed July 26, 1916. Serial No. 111,508. (Cl. 4—24.)

1. The combination with a bath tub having a common inlet and outlet opening in one of its end walls at the lower end thereof, of a vertically disposed housing exteriorly fixed to said end wall, said opening communicating with the lower end of the housing, a drain pipe connection at the lower end of said housing, a manually operable valve to close said drain pipe, and water supply pipes extending into the housing and provided with discharge nozzles to eject streams in divergent directions through the opening in the wall of the tub.

2. The combination with a bath tub having a slot in one of its end walls at the upper surface of the bottom of the tub, of a vertically disposed housing exteriorly fixed upon said end wall, a drain pipe connection at the lower end of said housing, said slot communicating with the interior of the housing, water supply pipes extending into the housing, said pipes being provided with discharge nozzles opposed to the opposite ends of said slot to eject water into the tub, and a manually operable valve member to open or close the drain pipe connection.

3. The combination with a bath tub having a slot in one of its end walls at the upper surface of the bottom of the tub, of a vertically disposed housing exteriorly fixed upon said end wall, a drain pipe connection at the lower end of said housing, said slot communicating with the interior of the housing, water supply pipes extending into the housing, said pipes being provided with discharge nozzles opposed to the opposite ends of said slot to eject water into the tub, a vertically movable overflow pipe arranged within the housing, the lower end of said pipe normally closing communication between the drain pipe and

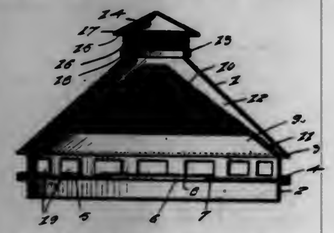
the interior of the housing, guide means for said pipe, and manually operable means to lift the pipe and permit the water to drain from the tub through the slot in the wall thereof.

4. The combination with a bath tub having a slot in one of its end walls at the upper surface of the bottom of the tub, of a vertically disposed housing fixed to the exterior of said wall, said slot communicating with the lower end of the housing, a drain pipe connection secured to the lower end of the housing, hot and cold water supply pipes extending into the housing and provided with obliquely disposed nozzles to discharge water in divergent directions through the opposite ends of said slot, an overflow-pipe vertically movable in the housing, the lower end of said pipe constituting a valve to normally close the drain pipe connection, guide means for said pipe, and manually operable means to raise the pipe and permit the water to drain through the slot in the wall of the tub into the drain pipe.

5. The combination with a receptacle having a common inlet and outlet opening at the base thereof, of water supply means including pipes arranged to discharge water under pressure in divergent streams through said opening over the surface of the bottom wall of the receptacle and toward the opposite side walls thereof.

[Claim 6 not printed in the Gazette.]

1,212,660. COMBINED RECEPTACLE-COVER AND INSECT-TRAP. FRED D. MEADE, Lake Charles, La. Filed Mar. 15, 1916. Serial No. 84,401. (Cl. 43—22.)

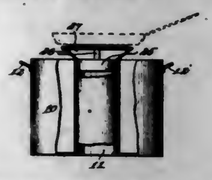


1. A device of the class described comprising a hollow body adapted to engage over the open end of a receptacle and having its upper end open and its lower end provided with a depending cylindrical portion, the said depending cylindrical portion having a plurality of openings therein and having an outwardly depressed annular rib formed therein and located below the openings, a disk positioned within the cylindrical portion and having its peripheral edge extending into the interior of the rib, the said disk having a central opening therein, a piece of foraminous material covering the opening in the disk, a body positioned within the first-mentioned body and located above the disk and formed of foraminous material and having its opposite ends open, and a removable top piece closing the upper end of the first-mentioned body.

2. A device of the class described comprising a hollow conical shaped body having a depending hollow cylindrical portion carried by the lower end thereof and disposed inwardly of the lower end of the conical body and provided with a plurality of openings located adjacent the upper end thereof, the said hollow portion having an annular rib bent outwardly therefrom at a point below the openings and adapted to rest on the upper edge of a receptacle, the said hollow conical body having a trapping chamber communicating with the interior thereof and located above the cylindrical portion, a disk positioned within the cylindrical portion and having its peripheral edge received by the interior of the annular rib, the said disk being adapted to overlie the exterior of the receptacle and having a central opening therein, and a piece of foraminous material overlying the opening in the disk.

3. A device of the class described comprising a hollow conical shaped body having its lower end provided with an internal annular shoulder, and a cylindrical portion depending from the inner edge of the annular shoulder and provided with a plurality of openings, a frusto-conical shaped body located within the first-mentioned body and in spaced relation thereto and having its lower end integrally secured to the point of juncture between the annular shoulder and the depending cylindrical portion, and a hollow conical shaped body fitted within the first-mentioned hollow conical body and in spaced relation thereto and formed of foraminous material and having its lower end fitting over the upper end of the frusto-conical shaped body.

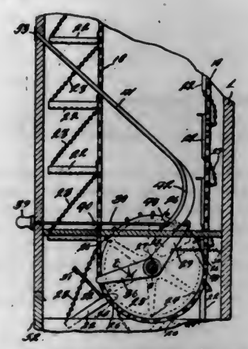
1,212,661. COMBINATION COOKING UTENSIL. HENRY LLOYD MENDAL, Tampa, Fla., assignor of one-fourth to Kate M. Langley, Baltimore, Md. Filed June 18, 1914. Serial No. 845,919. (Cl. 53—1.)



1. The combination with a cooking utensil, including a vertically disposed heat conducting flue, of a collar frictionally engaging the inner wall of said flue, a plurality of arms extending upwardly and outwardly from said collar and engageable with the upper edge of said heat conducting flue and a supporting plate carried by said arms above the upper edge of said flue, whereby by reason of their engagement with the upper edge of said flue, said arms serve to relieve said collar of the weight of said plate.

2. The combination with a cooking utensil, including a heat conducting flue open at its upper end, of a pan supporting plate, a collar fitting within said flue, a plurality of supporting arms connecting said collar and said plate and disposed diagonally to ride upon the upper edge of said flue, said supporting arms retaining said plate in spaced relation to the upper edge of said flue thereby permitting the heat products to escape from said flue beneath said plate and said arms relieving said collar of the weight of said plate, substantially as described.

1,212,662. VENDING-MACHINE. RAYMOND L. MEYERS, Miller, Ind. Filed Apr. 19, 1916. Serial No. 92,204. (Cl. 194—91.)



1. In a package vending machine, the combination of a revoluble member provided with a plurality of L-shaped lugs and a shaft on which said revoluble member is mounted, of a detent bearing frictionally on said revoluble member to retard the same in its movement, a rocking lever spring tensioned comprising two arms and adapted to be shifted axially on said shaft when rocked, one of said arms having a lateral lug, means to hold a coin to be contacted with by one arm of said lever to shift the lever, whereby the lateral lug may engage one of the L-shaped lugs of the revoluble member, substantially at the same time the extremity of the other arm engages the detent to disengage the detent from the revoluble member, whereby the revoluble member may be actuated, and means for rocking said lever.

2. In a package vending machine, the combination of a revoluble member provided with a plurality of L-shaped lugs and a shaft on which said revoluble member is mounted, of a detent bearing frictionally on said revoluble member to retard the same in its movement, a rockable spring tensioned device carried by said shaft and designed to be shifted axially when rocked on said shaft, means to hold a coin to be engaged by said device when rocked to shift said device, said device having means to engage one of the L-shaped lugs of the revoluble member and means to engage the detent when the device is rocked and shifted, to disengage the detent from the revoluble member, whereby the member may be actuated, and means for rocking said device against the action of its spring.

3. In a package vending machine, the combination of a revoluble member provided with a plurality of L-shaped lugs and a shaft on which said member is mounted, of a detent bearing frictionally on said member to retard the same in its movement, a rockable spring tensioned device carried by said shaft and designed to be shifted axially when rocked on said shaft, means to hold a coin which is engaged by said device when rocked to shift the device, said device having an arm to engage one of the L-shaped lugs of said member and means to engage said detent to disengage the detent from the member, whereby the member may be actuated, and means for rocking said device against the action of its spring.

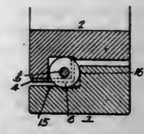
4. In a package vending machine, the combination of a revoluble member provided with a plurality of L-shaped lugs and a shaft on which said member is mounted, of a detent bearing frictionally on said member to retard the same in its movement, a rocking lever mounted on said shaft and adapted to be shifted axially when rocked on said shaft, said rocking lever comprising two arms, the extremity of one of which having a lateral lug to engage one of the L-shaped lugs of said member, an element to hold a coin to be engaged by one of the arms of the lever for shifting the lever when rocked, so that the lateral lug engages one of the L-shaped lugs to actuate the revoluble member, and means for rocking said lever, whereby the other arm thereof may disengage the detent from the member sumultaneously with the engagement of the lateral lug with one of the L-shaped lugs.

5. In a package vending machine, the combination of a revoluble member provided with a plurality of elements and a shaft on which said member is mounted, of a detent bearing frictionally on said member to retard the same in its movement, a rocking device carried by said shaft and designed to be shifted axially when rocked on said shaft, means to hold a coin to be engaged by said device when rocked to shift the device, said device having means to engage one of the elements of said member and provided with an arm to engage the detent to release the detent from engagement to said member, whereby the member may be actuated, and means for rocking said device whereby its means may engage one of the elements substantially simultaneously with the releasing of the detent to actuate the member.

[Claim 6 not printed in the Gazette.]

1,212,663. DOOR BUMPER AND RETAINER. ERNEST R. MITCHELL, Philadelphia, Pa., assignor to Mitchell Specialty Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 23, 1914. Serial No. 863,187. (Cl. 16—77.)

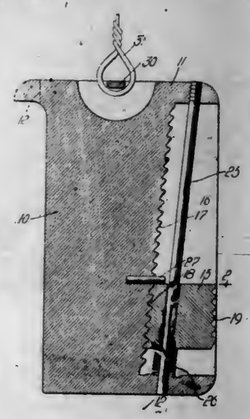
1. The combination of a frame; a door; a supporting structure mounted on one of said parts; and a resilient roller mounted on said structure with its axis parallel to that of the door in position to simultaneously engage two surfaces substantially at right angles to each other on the other part when the door is closed.



2. The combination of a frame; a door; one of said parts having at its edge two surfaces substantially at right angles to each other; and the other having a rubber roller mounted with its axis parallel to that of the door in position to simultaneously engage both of said surfaces when the door is closed.

3. The combination of a frame; a door; rabbets respectively formed on two adjacent edges of said door and frame; with a roller mounted on one of said members with its axis parallel to the lines of said edges and in a position for its cylindrical surface to simultaneously and yieldingly engage portions both of the rabbet and of the edge of the other member.

1,212,664. HEAVING-PLUG. EUGENE B. NOBLE, Los Angeles, Cal. Filed Aug. 16, 1916. Serial No. 115,174. (Cl. 166—13.)



1. A heaving plug comprising a body having a plurality of vertical slip ways therein, each of said ways being provided with teeth, and slips vertically movable in said ways having teeth coöperating with the teeth of the ways and having teeth for engaging a casing.

2. A heaving plug comprising a body having a plurality of vertical slip ways therein, the back wall of each of said ways extending upwardly and outwardly and being provided with upwardly facing teeth, slips adapted for vertical movement in said ways having teeth on their back faces adapted to engage the upwardly facing teeth of the ways so as to prevent downward movement but allow upward movement of the slips.

3. A heaving plug comprising a body having a plurality of vertical slip ways therein, the back wall of each of said ways extending upwardly and outwardly and being provided with upwardly facing teeth, slips adapted for vertical movement in said ways having teeth on their back faces adapted to engage the upwardly facing teeth of the ways so as to prevent downward movement but allow upward movement of the slips, and spring means to move the slips upwardly in the ways.

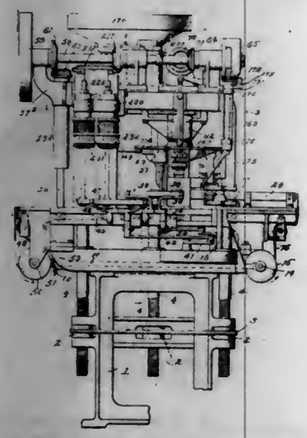
4. A heaving plug comprising a body having a plurality of vertical slip ways therein, the back wall of each of said ways extending upwardly and outwardly and being pro-

vided with upwardly facing teeth, slips adapted for vertical movement in said ways having teeth on their back faces adapted to engage the upwardly facing teeth of the ways so as to prevent downward movement but allow upward movement of the slips, spring means to move the slips upwardly in the ways, and breakable means for normally holding the slips down against the upward action of the springs.

5. A heaving plug comprising a body having a plurality of vertical slip ways therein, the back wall of each of said ways extending upwardly and outwardly and being provided with upwardly facing teeth, slips adapted for vertical movement in said ways having teeth on their back faces adapted to engage the upwardly facing teeth of the ways so as to prevent downward movement but allow upward movement of the slips, spring means to move the slips upwardly in the ways, breakable means for normally holding the slips down against the upward action of the springs, and breakable suspension means for the body, so that the body may be lowered into a casing and said means broken by upward pull after the plug has been set in position in the casing.

[Claims 6 and 7 not printed in the Gazette.]

1,212,665. CAP-MAKING AND BOTTLING MACHINE. ELOF NORDSTROM, Newark, N. J., assignor to American Dan Stopper Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 31, 1915. Serial No. 48,210. (Cl. 113—1.)



1. In a machine of the character described, the combination with means for applying caps to vessels, of means for securing caps to said vessels, means for feeding vessels to and from said cap-applying means, and means operating at a different rate of speed for feeding a different number of vessels from the first mentioned feeding means to and from said cap-securing means, each of said feeding means being adapted to move said vessels in one direction only.

2. In a machine of the character described, cap-applying means which act at relatively short intervals, cap-securing means which act at relatively long intervals on a relatively larger number of vessels, means for feeding vessels to and from said cap-applying means, and means for feeding said vessels to and from said cap-securing means, said feeding means being adapted to move the vessels only in one direction.

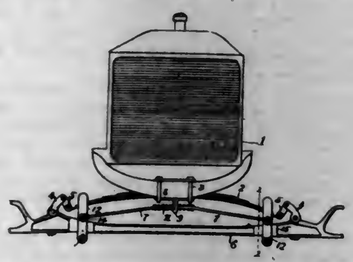
3. In a machine of the character described, the combination with blank forming means, of a cap shaping die, means for moving said blank forming means and cap shaping die into and out of juxtaposition, means for displacing a blank from said blank forming means and shaping it into a cap in said die, means for feeding vessels into and out of position to have caps applied thereto, and means for displacing caps from said dies on to said vessels.

4. In a machine of the character described, blank-forming means, a cap shaping die, means for bringing said blank-forming means and cap-shaping die into suitable relative positions to have a blank displaced from said blank-forming means into said cap-shaping die, means whereby said die and a receptacle may be brought into suitable relative positions to have a cap in said die applied to said receptacle, and means for applying caps from said die to receptacles.

5. In a machine of the character described, blank-forming means, a cap shaping die, means for bringing said blank-forming means and cap-shaping die into suitable relative positions to have a blank displaced from said blank-forming means into said cap-shaping die, means whereby said die and a receptacle may be brought into suitable relative positions to have a cap in said die applied to said receptacle, and means for applying caps from said die to receptacles, said cap-shaping die being presented downwardly and suitably mounted to move successively into positions over said blank-forming means and a receptacle to be capped.

[Claims 6 to 47 not printed in the Gazette.]

1,212,666. COMBINED ANTISWAYING AND SPRING-GUARD DEVICE FOR AUTOMOBILES. FRED L. ORDWAY, Old Orchard, Me., assignor of one-half to Louis Mansey, Old Orchard, Me. Filed Aug. 4, 1916. Serial No. 113,050. (Cl. 267—52.)



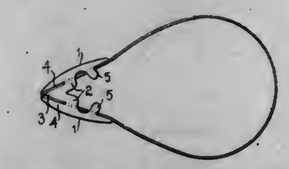
1. The herein described spring guard and anti-swaying device for automobiles of the class described consisting of a two part clamp embracing the axle and secured near each end thereof and loosely inclosing the spring, a clip secured on the central portion of the spring, a pair of rods connecting said clamp and said clip and a coiled spring on each rod for resisting the lateral movement of the spring in one direction.

2. The herein described combined spring guard and anti-swaying device for automobiles consisting of a two part clamp embracing the axle, and loosely inclosing the spring and secured to the axle near each end thereof, a clip secured on the central portion of the spring and having lateral openings, rods connecting with said clamps and extending through said openings and coiled springs on said rods for resisting the lateral movement of said springs in both directions.

3. The herein described combined spring guard and anti-swaying device for automobiles of the class described, consisting of a pair of two part clamps embracing the axle near each end and loosely inclosing the spring, a bolt extending through each clamp and crossing above the axle for securing the clamp near each end of the axle, a clip secured to the central portion of the spring and having lateral openings therein, a pair of rods extending in opposite directions through said openings and having eyes at their outer ends through which said bolts pass, the inner ends of said rods being provided with coiled springs for resisting the lateral motions of said spring.

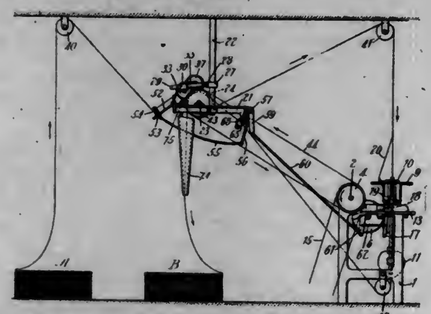
4. The herein described anti-swaying device for automobiles of the class described, consisting of a clip secured to the central portion of the spring having lateral openings, a pair of rods extending through said openings, one rod toward each side of the automobile, the outer ends of said rods being secured to the axle and coiled springs on the inner ends of said rods for resisting the lateral movement of said spring and the attached parts.

1,212,667. CUFF-BUTTON. JAMES H. ORPIN, Providence, R. I. Filed June 28, 1916. Serial No. 106,419. (Cl. 24—102.)



In combination with a cuff provided with button-holes, a cuff button adapted to be disposed through said button-holes and comprising a pair of converging shanks adapted to overlie the outer faces of the cuff, a stud interposed between said shanks at a predetermined point intermediate their lengths and provided with a substantially V-shaped extension disposed toward the converging ends of the shanks, the side walls of the extension being substantially parallel with the opposed walls of the shanks and affording open-ended slots, said slots being of such a length as to cause the outer edges of the cuff to be substantially flush with the converging ends of the shanks, and inwardly and rearwardly directed tongues carried by the shanks adjacent the rear ends thereof and having their free extremities rounded, the rear edges of the tongues at their junction with the shanks and the inner ends of the slots being spaced apart a distance equal to the length of the button-holes of the cuff, said stud, extension and tongues occupying the same plane as the shanks.

1,212,668. APPARATUS FOR UNWRAPPING YARN-CHAINS. HERBERT W. OWEN, Lewiston, Me., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed July 1, 1915. Serial No. 37,579. (Cl. 28—6.)



1. In an apparatus for unwrapping yarn-chains, the combination of unwrapping mechanism for unwinding a cord or thread from the yarn-chain, a receiver for said cord or thread, means acting upon the wrapped portion of the yarn-chain before it reaches the unwrapping mechanism for positively drawing the wrapped chain from a source of supply and feeding it toward the unwrapping mechanism, and means acting upon the yarn-chain after it has been unwrapped for pulling upon and mtintaining the yarn-chain under uniform tension as it is fed toward the unwrapping mechanism by said drawing and feeding means.

2. In an apparatus for unwrapping yarn-chains, the combination of unwrapping mechanism for unwinding a cord or thread from the yarn-chain, a receiver for said cord or thread, means acting upon the wrapped portion of the yarn-chain before it reaches the unwrapping mechanism for positively drawing the wrapped chain from a source of supply and feeding it toward the unwrapping mechanism, means for varying the action of the feeding means upon the wrapped yarn chain to vary the speed at which the wrapped portion of the chain shall be fed toward the unwrapping mechanism, and means acting upon the yarn-chain after it has been unwrapped for maintaining the yarn chain under uniform tension as it is supplied by said drawing and feeding means.

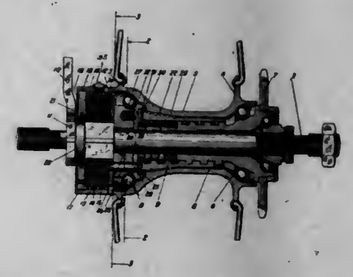
3. In an apparatus for unwrapping yarn-chains, the combination of unwrapping mechanism for unwinding a cord or thread from the yarn-chain, a receiver upon which said cord or thread is wound as it comes from the yarn-chain, means acting upon the chain before it reaches the said mechanism from a source of supply and feeding it toward the unwinding mechanism, and means having a surface speed greater than the speed of the chain for drawing it from the unwrapping machine.

4. In an apparatus for unwrapping yarn-chains, the combination of unwrapping mechanism for unwrapping a cord or thread from a plural number of the chains, a receiver for said cord or thread, means acting upon the wrapped portion of the chain for positively drawing the wrapped chains from a source of supply and feeding them toward said unwrapping mechanism, means for separating the chains, and means acting separately upon the unwrapped portion of the separated yarn chains for maintaining them under uniform tension as the wrapped chains approach the unwrapping mechanism, as they are unwrapped by said mechanism, and as they pass from said mechanism after being unwrapped.

5. In an apparatus of the class described, the combination of unwrapping mechanism, means acting upon the wrapped portion of the yarn chain for positively drawing it from a source of supply and feeding it toward the unwrapping mechanism, connections between said means and mechanism for causing them to be driven at proportional speeds to maintain the angular departure of the wrapping cord or thread from the yarn chain substantially constant, and means acting upon the unwrapped portion of the yarn chain for pulling upon and maintaining the yarn chain under unvarying tension as it travels to and through the unwrapping mechanism.

[Claims 6 to 31 not printed in the Gazette.]

1,212,669. COASTER-BRAKE. VICTOR W. PAGE, Bristol, Conn., assignor to The New Departure Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Oct. 8, 1912. Serial No. 724,532. (Cl. 208—57.)



1. In a braking mechanism, an axle, a part rotatable thereabout, a brake for said part, means for actuating the brake, means for connecting said brake and actuating means, means for normally holding said connecting means in position to release said brake, and common means for supporting said connecting means and said holding means, and for supporting said part upon said axle; substantially as described.

2. In a cycle hub provided with a brake, an axle, a bearing carried by said axle and stationary thereon, a spoke-carrying-wheel-hub shell directly carried by said bearing for rotation about said axle; said shell being adapted to sustain the loads transmitted by said spokes, and certain of said bearing's load lines, radial to the axle and extending thereto from portions of said bearing immediately sustaining said loads, being coincident with certain of the bearing points of said bearing upon said axle, and the bearing providing supporting material continuous along such lines; a braking means for said shell upon the one side of said bearing, a brake operating means upon the other side of said bearing, at least one of said means being received within said shell, and means for operatively connecting said operating means and said braking means, such connecting means extending from one side of said bearing to the other; substantially as described.

3. In a coaster brake, an axle, a bearing carried by said axle and stationary thereon, a spoke-carrying-wheel-hub-shell directly carried by said bearing for rotation about said axle; said shell being adapted to sustain the loads transmitted by said spokes, and certain of said bearing's load lines, radial to the axle and extending thereto from portions of said bearing immediately sustaining said loads, being coincident with certain of the bearing points of said bearing upon said axle, and the bearing providing supporting material continuous along such lines; a braking means for said shell upon the one side of said bearing, a brake operating means upon the other side of said bearing, means for operatively connecting said operating means and said braking means, such connecting means extending from one side of the bearing to the other, a driver for said shell carried by said axle for rotation independently of said shell, and means whereby when said driver rotates in the one direction it drives the shell, when said shell overruns the driver said shell is free to coast and when said driver rotates in the other direction it operates the brake operating means to thereby apply the braking means to said shell; substantially as described.

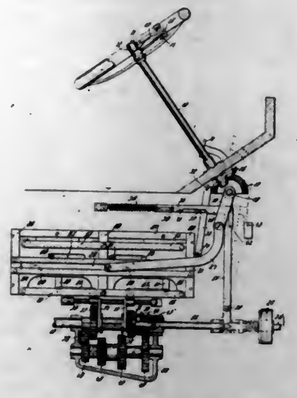
4. In a cycle hub, an axle, a bearing carried by said axle, a spoke-carrying hub shell carried by said bearing for rotation about said axle, said bearing providing supporting material along certain of the radial load lines of said bearing and extending from the parts of the bearing directly supporting the load of said shell to parts of the bearing adjacent the axle, a brake for said shell at the one side of the bearing, an actuating means for said brake at the other side of the bearing, and means for connecting said actuating means and said brake and comprising a pin slidably carried in the said material of the bearing and operatively connected at its opposite ends with said actuating means and said brake; substantially as described.

5. In a cycle hub, an axle, a bearing comprising a substantially solid portion carried by said axle, a spoke-carrying hub shell carried by said bearing for rotation about said axle, said bearing portion extending throughout its circumferential length in a substantially solid mass substantially radially from said axle to the face supporting said shell, a brake for said shell at the one side of said bearing, an actuating means for said brake at the other side of said bearing, and means for connecting said actuating means and said brake and comprising a pin slidably carried in said bearing portion and operatively connected at its opposite ends with said actuating means and said brake; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,212,670. TRANSMISSION CONTROL FOR AUTOMOBILES. RICHARD P. PALMER, Cincinnati, Ohio, assignor of one-half to Charles R. Palmer, Cincinnati, Ohio. Filed Nov. 13, 1914. Serial No. 871,999. (Cl. 74—58.)

1. A variable ratio gearing comprising a plurality of gears, a clutch for the transmission control of said gears, actuating means for said clutch, shifting means for said gears, and actuating means for said shifting means adapted to be connected with and disconnected from said clutch actuating means during a part of the clutch releasing movement, thereby moving under tension with said clutch actuating means in one shifting motion and independently in an alternate shifting motion.



2. A variable ratio gearing comprising a plurality of gears, a clutch for the transmission control of said gears, actuating means for said clutch, shifting means for one of said gears movable to a plurality of shifting positions, selector means for determinately controlling said shifting means in its motion to each shifting position, and actuating means for said shifting means adapted to be connected with and disconnected from said clutch actuating means, for moving said actuating means in alternate directions during a part of a clutch releasing movement.

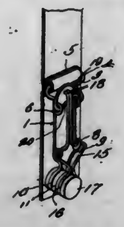
3. In a transmission-gear shifting-mechanism, the combination of a gear-shifting member, movable between neutral and active positions; a lever operable from a driver's station; means movable in one direction for coöperating with the shifter member to move it to neutral position and movable in another direction for selectively coöperating with said shifter member to move it to active position; means to impart such dual movements to the first mentioned means upon unidirectional movement of the lever; and means controllable from the driver's station for selectively conditioning the first-mentioned means to move the shifting member to active position.

4. In a structure of the character described, the combination with a clutch; a clutch lever movable one way to disengage the clutch and the other way to restore it; and selective transmission gearing; of a gear shifter movable between neutral and active positions; a part movable in two directions, respectively to, first, coöperate with the shifter member to move it to neutral position and, second, to coöperate, if set therefor, with the shifter member to move it to an active position; means for translating one-way, clutch-disengaging movement of the clutch lever into the stated two-way movement of said part; and means for setting said part at will for its second-stated coöperation with the gear shifter.

5. The combination with an automobile clutch and selective transmission gear, of a gear shifter comprising two shifter members respectively engaging movable elements of the transmission, said shifter members being axially movable in either direction from neutral mid-position, moving means for said shifter members selectively connectible therewith to move them in either direction from neutral, and invariably operable, preliminarily to connection, to position both shifters in neutral, a power lever associated with the clutch to control the same and connectible with the shifter means to control their preliminary movement, and automatic means to free said shifter moving means from the power lever and effect their further movement.

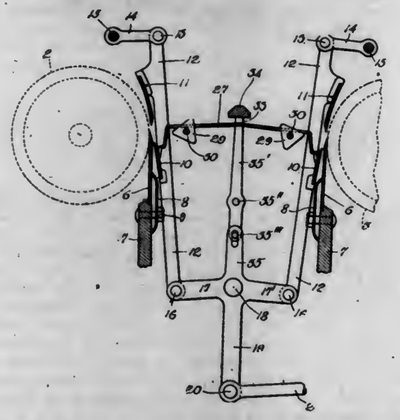
[Claims 6 to 14 not printed in the Gazette.]

1,212,671. CLASP FOR HOSE-SUPPORTERS. RAYMOND M. PARRETT, Stephenson, Mich. Filed Sept. 14, 1915. Serial No. 50,678. (Cl. 24—262.)



A garment fastener formed of wire bent centrally to provide a horizontal suspending and pivoting bar, the opposite ends of said bar curved downwardly and directed inwardly toward one another, parallel supporting arms having one of their ends formed integrally with the inwardly directed ends of the said first named bar, said supporting bars looped near their upper and lower ends, an extension formed on the lower ends of said bars below the loops, a friction pad supported by the extension, a second pair of abutting parallel arms having their lower ends directed outwardly and inclined inwardly, a second extension formed on the inclined portions of said arms, a second friction pad carried by said second extension, said outwardly directed portion of the last named arms pivotally secured in the loops near the lower ends of the bars, and means pivotally mounted in the loops near the upper ends of the bars and engaging the parallel second arms for moving the friction pads into and out of engagement with one another.

1,212,672. COTTON-GIN. NORMAN PAIN PEARSE, London, England. Filed Sept. 25, 1911. Serial No. 651,064. (Cl. 13—7.)



1. In a ginning apparatus, a ginning roll, a doctor, and oppositely facing clearers mounted in ginning relation to said doctor, a pivoted link mounting for said clearers arranged to direct the movement thereof in a path substantially tangent to the roll at substantially unvarying distances from the roll periphery throughout the range of the movement, and means for imparting vibratory movement to said clearer mechanism.

2. In a ginning apparatus, a ginning roll, a doctor, opposite clearers adapted to be brought alternately into ginning relation with said doctor, and a mounting for said clearers to cause them to move across the roll at a substantially unvarying distance therefrom, said means consisting in a link to which the clearers are fixed and link arms pivotally connected to said link at its ends and extending at opposite sides thereof with connections to fixed pivots.

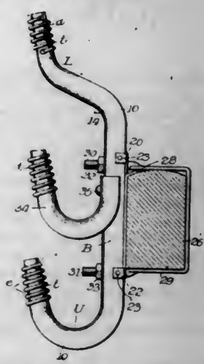
3. In a ginning apparatus, a ginning roll, a doctor, a seed grid arranged to constitute means for directing the cotton to the ginning point, and opposite spaced apart clearers mounted in ginning relation with said doctor, both of said clearers being members adapted to ease and loosen the cotton at the doctor edge, one of said members being constructed and arranged to coöperate with the seed grid for the escape of seeds.

4. In a ginning apparatus, a pair of horizontally spaced apart ginning rolls arranged side by side, a common chute for supplying cotton to said rolls, doctors, and clearer mechanism coöperative with said rolls, and a reciprocatory pusher mounted intermediate of said rolls for apportioning the cotton equally to each, said pusher and said clearer mechanism having a common mounting and actuating means.

5. In a ginning apparatus, a pair of horizontally spaced apart ginning rolls arranged side by side, a common chute for supplying cotton to said rolls having a horizontally extending seed grid in the bottom thereof, doctors and clearer mechanism coöperative with said rolls, a reciprocatory pusher mounted intermediate of the rolls for apportioning the cotton equally to each, and rotary forwarding means between said pusher and each roll for advancing the cotton to the ginning surface.

[Claims 6 to 12 not printed in the Gazette.]

1,212,673. INSULATOR-SUPPORTING BRACKET. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 6, 1916. Serial No. 89,367. (Cl. 173—321.)



1. An insulator supporting bracket comprising a body part and an end part extending forwardly and upwardly therefrom, said body and end parts being of channel shaped cross-section and open at the back and the upper end of the end part being formed to receive an insulator or insulator supporting thimble, a base plate of sheet metal extending across the open back of the body part and having ears extending therefrom and being secured to the body part by said ears, and bolt holes through said body part.

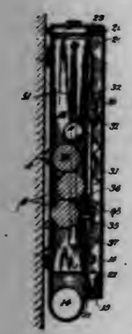
2. An insulator supporting bracket comprising a body part and an end part bent forwardly and upwardly, said bracket being of a single piece of sheet metal and of channel shaped cross-section open at the back, the end of the end part being formed to receive an insulator or insulator supporting thimble, a base plate extended across the back of the body part, ears stamped from said back plate by means of which said plate is secured to the body part, tongues deflected rearwardly from said base plate to engage with the top of a support to which the bracket is secured, and bolt holes through said body part.

3. An insulator supporting bracket comprising a body part bent transversely to arch shaped cross-section and

having insulator receiving ends, a sheet metal plate applied to the edges of said body part and having wings deflected therefrom for engaging with the sides of the body part, there being registering bolt holes through said body part and plate.

4. An insulator supporting bracket comprising a sheet metal body part bent transversely to arch cross-section and having an insulator receiving end, a backing plate of sheet metal bridging the edges of the body part and permanently secured thereto, said body part and plate having registering bolt holes.

1,212,674. VENDING-MACHINE. ROGER W. PERRIN, New York, N. Y., assignor to Theatre Vending Machine Corporation, New York, N. Y., a Corporation of New York. Filed Dec. 27, 1915. Serial No. 68,676. (Cl. 194—48.)



1. In a vending machine, in combination, an article magazine, an article operated article retaining cradle to retain the articles in the magazine, by the retention of one article on the cradle, said cradle being adapted to be rocked by the weight of an article thereon to deliver the article to the customer, a restraining means for preventing the last mentioned rocking movement of the cradle; and a coin chute adapted to receive coins and direct the coins by a rolling action on the edge of the chute down the chute and in such direction to cause the edge of coins of proper size to impact against the last mentioned means, said coin chute having the edge upon which the coins roll so disposed with respect to the last mentioned means that descending coins of smaller diameter roll down the chute without affecting the beforementioned cradle restraining means.

2. In a vending machine, in combination, an article magazine, an article operated article retaining cradle pivoted in the side walls of the magazine and adapted to retain one article on the cradle, said cradle on being rocked in one direction delivering an article to the customer and when rocked in the opposite direction receiving an article from the article magazine, means for restraining the cradle against the first mentioned rocking movement, said means comprising a pivoted detent having a preponderance of weight on one side of its pivot and adapted to be tripped by a deposited coin and to be thereafter rocked by gravity to return to detaining position upon the rocking of the cradle to receive an article from the article magazine.

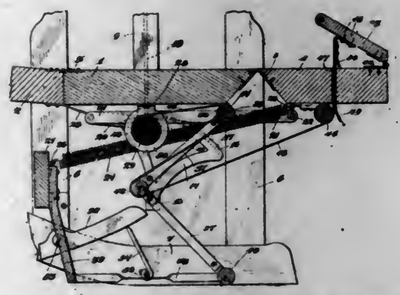
3. In a vending machine, in combination an article magazine; an article operated article retaining cradle therein to retain one article on the cradle, said cradle upon being rocked in one direction delivering an article to the customer and when rocking in the opposite direction receiving an article from the article magazine, means for restraining the said cradle against the first mentioned rocking movement, said means comprising a detent adapted to be tripped by impact from a coin and to thereafter automatically return to detaining position upon the rocking of the cradle to receive an article from the magazine, and a coin chute adapted to direct coins with a rolling action against said detent.

4. In a vending machine, in combination, an article magazine, an article operated article retaining cradle to retain one article on the cradle, said cradle on being rocked in one direction delivering an article to the customer and when rocked in the opposite direction receiving an article from the article magazine, means for restraining the cradle against the first mentioned rocking movement, said means comprising a detent adapted to be tripped by a coin and to thereafter automatically return to detaining position upon the rocking of the cradle to receive an article from the magazine.

5. In a vending machine, in combination, an article magazine, a cradle pivoted in the lower part of the article magazine, said cradle having upper and lower article engaging portions, said lower portion being adapted to retain one article thereon, said cradle being adapted to be rocked by the weight of the article on the lower portion to discharge the article thereon and to concurrently swing the upper portion to a position to prevent the descent of articles from the magazine, said cradle being thereafter rocked by the weight of articles in the magazine to a position in which the upper portion of the cradle permits the descent of an article to engagement with the lower portion of the cradle.

[Claims 6 to 11 not printed in the Gazette.]

1,212,675. CONVERTIBLE CHAIR. GEORGE W. PETTYJOHN, Woodbury, N. J. Filed Jan. 5, 1916. Serial No. 70,337. (Cl. 155—6.)



1. In a chair, the combination with supports, rockers carrying the supports, of a seat secured to the supports, a back, arms pivotally connected to the rockers, a shaft supported by the rockers and having fingers thereon engaging the arms, and a lever on one end of the shaft adapted to move the shaft and arms to hold the chair against rocking movement, substantially as described.

2. In a chair, the combination with supports, rockers carrying the supports, of a seat secured to the supports, a back, a foot rest hinged to the seat, a foot lever connected to the foot rest, and chair rocking means located under the chair and operatively connected to the foot lever, substantially as described.

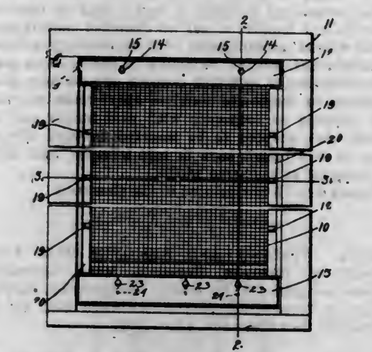
3. In a chair, the combination with supports, rockers carrying the supports, of a seat secured to the supports, a back, a foot rest hinged to the seat, a toggle lever under the chair, and a foot lever connected to the foot rest and operatively engaging the toggle lever to rock the chair when the foot lever is moved, substantially as described.

4. In a chair, the combination with supports, rockers carrying the supports, of a seat secured to the supports, a back, a foot rest hinged to the seat, a drum mounted under the chair, a toggle lever connected to the chair and having one end engaging the floor, a foot lever connected to the foot rest, and a flexible device connected at one end to the drum, and at its other end to the foot rest and between its ends operatively engaging the toggle lever, substantially as described.

5. In a chair, the combination with supports, rockers carrying the supports, of a seat secured to the supports, a back, a foot rest hinged to the seat, a drum supported under the chair, a spring tending to turn the drum in one direction, a latch bolt locking the drum against turning movement, a toggle lever located below the chair and having its lower end engaging the floor, a foot lever hinged to the foot rest, a strap secured to the drum and to the foot lever and between its ends engaging the toggle lever, and rollers on the toggle lever around which the strap is passed, substantially as described.

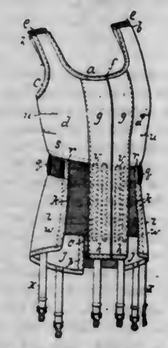
[Claims 6 to 9 not printed in the Gazette.]

1,212,676. WINDOW-SCREEN. ROSWELL H. PORTER, Weston, Mich. Filed Jan. 14, 1916. Serial No. 72,118. (Cl. 156—14.)



The combination with a window frame, of a strip of wire screening adapted to fit within the frame and having suitable stiffening means at its upper and lower end, means for detachably securing the ends of the screen to the window frame, and angle plates detachably carried by the sides of the window frame and having serrated portions for engaging and holding the marginal edges of the screen.

1,212,677. COMBINED BRASSIÈRE AND GIRDLE. BIANCA PRINCE and HENRIETTA PRINCE, New York, N. Y. Filed Dec. 9, 1915. Serial No. 65,885. (Cl. 2—73.)



1. In a garment of the kind described, the combination with a brassière, of a girdle extending from the lower portion of the brassière, and an elastic connection between the brassière and the girdle, said connection being elastic lengthwise of the garment.

2. In a garment of the kind described, the combination with a brassière having elastic members disposed in the back thereof, of a girdle extending from the lower portion of the brassière and adapted to girdle the hips, and an elastic connection between the girdle and the brassière.

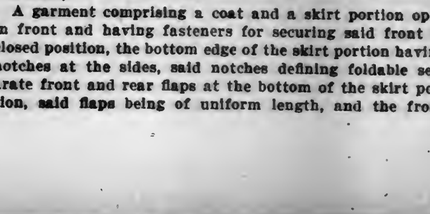
3. In a garment of the kind described, the combination with a brassière, of a girdle extending from the lower portion of the brassière, elastic connections between the brassière and the girdle, and elastic members arranged along the front and back of the girdle.

4. In a garment of the kind described, the combination with a brassière, of a girdle extending from the lower portion of the brassière and adapted to loop the hips, elastic connections between the brassière and girdle, and elastic members along the back of the brassière and the back and front of the girdle.

5. In a garment of the kind described, the combination with a brassière, of a girdle extending from the lower portion of the brassière, elastic strips between the brassière and the girdle, and an elastic band free of said strips and adapted for circumferential expansion.

[Claim 6 not printed in the Gazette.]

1,212,678. DRAG-SAW. ALFRED R. PUTNAM, Valparaiso, Ind. Filed July 28, 1914. Serial No. 853,621. (Cl. 143—68.)



1. In a drag saw, a suitable source of power, a pitman connected to said source of power, a suitable support, a rod connected to said pitman and slidably mounted on said support, an angular saw head connected to said rod, cutting blades formed on the saw head, and a saw connected to the saw head.

2. In a drag saw, a suitable source of power, a support detachably secured to said source of power, a casing revolubly mounted on said support, a rod slidably mounted in said casing, a pitman connecting said rod to said source of power, an angular saw head connected to said rod, cutting blades formed on said saw head, and a saw connected to said saw head.

3. In a drag-saw, a suitable source of power, braces detachably connected to said source of power, skids attached to said braces, a casing revolubly mounted on said skids, a rod slidably mounted in said casing, a pitman connecting said rod to said source of power, a saw connected to said rod, and mechanism for revolving said casing to revolve the saw on its longitudinal axis.

4. In a drag-saw, a suitable source of power, driving mechanism connected to said source of power, skids connected to said driving mechanism and adapted to support the same upon the ground, a saw connected to said driving mechanism, mechanism mounted on said skids for revolving the saw on its longitudinal axis, and means for lifting said driving mechanism when the same is to be transported.

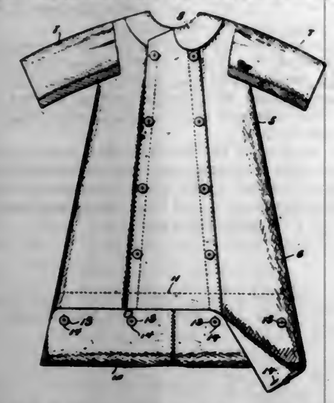
5. In a drag-saw, a suitable source of power, saw driving mechanism connected to said source of power, a support for said driving mechanism, a casing mounted on said support, and mechanism for revolving said casing to revolve the saw on its longitudinal axis.

[Claim 6 not printed in the Gazette.]

1,212,679. GARMENT. ELSIE M. RASH, New Providence, Iowa. Filed Jan. 18, 1916. Serial No. 72,736. (Cl. 2—41.)

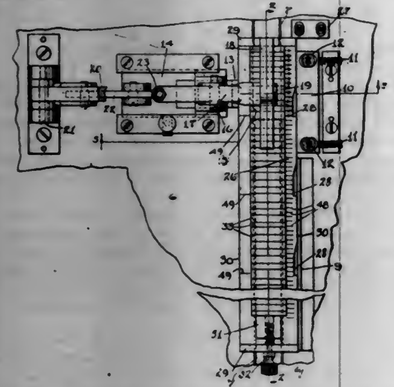
A garment comprising a coat and a skirt portion open in front and having fasteners for securing said front in closed position, the bottom edge of the skirt portion having notches at the sides, said notches defining foldable separate front and rear flaps at the bottom of the skirt portion, said flaps being of uniform length, and the front

flaps being foldable inward between the rear and the folded front portion of the garment beneath said folded front portion, and the rear flap being foldable over and on



the outside of the front of the skirt portion to close the same at the bottom, and means for fastening said rear flap in folded position.

1,212,680. TYPOGRAPH MECHANISM. WILLIAM A. READE and FREDERICK METCALF, Cleveland, Ohio, assignors to Ludlow Typograph Company, Cleveland, Ohio, a Corporation of Maine. Filed Apr. 12, 1915. Serial No. 20,607. (Cl. 199—10.)



1. In a typograph machine, the combination of slug-casting mechanism; a set of detached matrix-bars; an independent member arranged to receive and hold in selected relation a sufficient number of said bars to form a plurality of composite matrices apart from, but respectively adapted to coöperate with, said casting mechanism; and means adapted to locate said member with a desired group of bars in proper relation to said casting mechanism.

2. In a typograph machine, the combination of slug-casting mechanism including a mold formed with a casting slot; a set of detached matrix-bars; an independent member arranged to receive and hold in selected relation a sufficient number of said bars to form a plurality of composite matrices apart from, but respectively adapted to coöperate with said mold; and means adapted to locate said member with a desired group of bars properly alined with the slot in said mold.

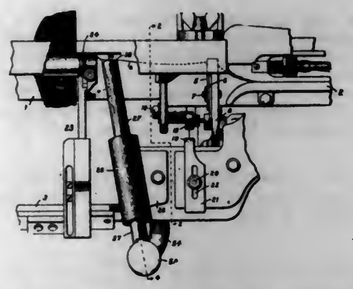
3. In a typograph machine, the combination of slug-casting mechanism including a mold formed with a casting slot; a set of detached matrix-bars; an independent member arranged to receive and hold in selected relation a sufficient number of said bars to form a plurality of composite matrices apart from, but respectively adapted to coöperate with said mold; means adapted to locate said member with a desired group of bars properly alined with the slot in said mold; and means adapted to clamp such group of bars, thus held, against said mold.

4. In a typograph machine, the combination of slug-casting mechanism adapted to cast a slug or type-bar of predetermined length; a set of detached matrix-bars of various widths corresponding with the characters thereon; an independent member arranged to receive and hold in selected relation a sufficient number of said bars to form a plurality of composite matrices apart from, but respectively adapted to coöperate with said mold; and blank division bars adapted to be inserted between successive groups of said matrix-bars in said member.

5. In a typograph machine, the combination of slug-casting mechanism adapted to cast a slug or type-bar of predetermined length; a set of detached matrix-bars of various widths corresponding with the characters thereon; an independent member arranged to receive and hold in selected relation a sufficient number of said bars to form a plurality of composite matrices apart from, but respectively adapted to coöperate with said mold; and blank division bars adapted to be inserted between successive groups of said matrix-bars in said member, said division bars being all of the same width.

[Claims 6 to 15 not printed in the Gazette.]

1,212,681. FILLING-END REMOVER FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Oct. 29, 1914. Serial No. 869,206. (Cl. 139—85.)



1. In a filling replenishing loom, the combination of filling parting means for parting the filling between the cloth selvage and adjacent shuttle-box, a conduit having an entrance between the cloth selvage and adjacent shuttle-box across which the filling to be parted extends, and means for producing currents of air into said entrance to act upon the filling extending across the same and carry said filling into the conduit after it has been parted.

2. In a filling replenishing loom, the combination of two filling parters to part the filling adjacent the cloth selvage and filling carrier respectively, a conduit having an entrance located between said two parters and across which the filling to be parted extends, means for producing currents of air into said entrance to act upon the filling extending across the same and carry the filling into the conduit after it is parted, and a receiver to receive the filling ends from said conduit.

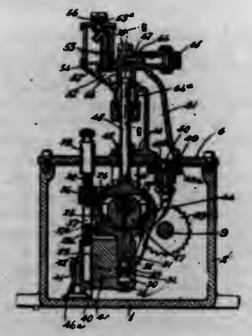
3. In a filling replenishing loom, the combination of the lay and shuttle-boxes, a filling end conduit, means for supporting said conduit with its entrance between the cloth selvage and a shuttle-box, means for producing currents of air into said entrance to act upon the filling between the cloth selvage and shuttle-box, means for parting the filling adjacent the shuttle to permit the ingoing currents of air to carry the parted end of the filling into the conduit and hold it while the filling is still connected to the cloth selvage, and means for parting the filling adjacent the cloth selvage.

4. In a filling replenishing loom, the combination of a filling parter to part the filling at a point remote from the cloth selvage, a filling parter to part the filling adjacent the cloth selvage, and pneumatic means between said two filling parters to act upon the filling end and remove it after it has been parted.

5. In a filling replenishing loom, the combination of two filling parters to part the filling at points different distances from the cloth selvage, a tube having an entrance portion, means for supporting said tube with said entrance portion normally in operative position between said thread parters, and means for inducing currents of air through said tube to act upon the filling end and remove it after it has been parted.

[Claims 6 to 17 not printed in the Gazette.]

1,212,682. MECHANICAL OIL-PUMP. HENRY RITTER, Cincinnati, Ohio, assignor to The Lunkenheimer Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 29, 1915. Serial No. 63,937. (Cl. 184—27.)



1. In a force feed lubricator, an oil reservoir, a lid therefor, mechanism mounted on the lid and depending into the reservoir for raising oil to a sight feed, a sight feed mounted on the top of the lid, and a force pump mounted on top of the lid, to force the oil that falls from said feed into the machine to be lubricated.

2. In a force feed lubricator, an oil reservoir, a lid therefor, mechanism mounted on the lid and depending into the reservoir for raising oil to a sight feed, a sight feed mounted on the top of the lid, and a force pump mounted on the top of the lid, and means for actuating the force pump mounted on the lid and depending therefrom, said pump having a vertically reciprocating rod connected to the said means.

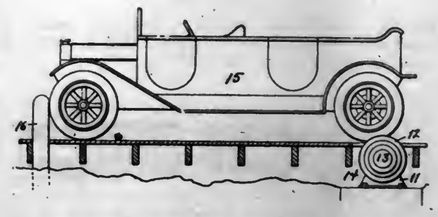
3. In a force feed lubricator, an oil reservoir, a lid therefor, mechanism mounted on the lid and depending into the reservoir for raising oil to a sight feed, a sight feed mounted on the top of the lid, and a force pump mounted on the top of the lid, and means for actuating the force pump mounted on the lid and depending therefrom, said pump having a vertically reciprocating rod connected to the said means, a cross shaft in said reservoir and separable connection from said shaft to said actuating means.

4. In a force feed lubricator, an oil reservoir, a lid therefor, mechanism mounted on the lid and depending into the reservoir for raising oil to a sight feed, a sight feed mounted on the top of the lid, and a force pump mounted on top of the lid, and means for actuating the force pump mounted on the lid and depending therefrom, a cross shaft in said reservoir and separable connection from said shaft to said actuating means.

5. In a force feed lubricator, an oil reservoir, a lid therefor, a force pump mounted on top of said lid, means in the reservoir for raising oil to said pump, said pump having a pump rod and means in the reservoir for actuating said rod.

[Claims 6 to 15 not printed in the Gazette.]

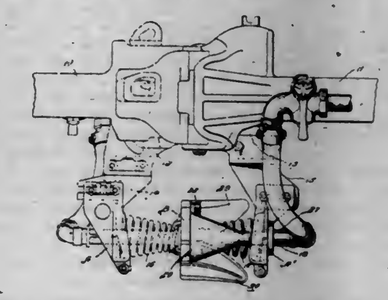
1,212,683. TRANSMISSION APPARATUS. D. RUSSELL ROBINSON, Osceola, Iowa, assignor of one-third to Emil Jarl, Osceola, Iowa. Filed Jan. 8, 1915. Serial No. 1,111. (Cl. 21—90.)



1. Transmission apparatus comprising friction mechanism, tracks pivoted on said friction mechanism and idler grooved wheels interposed between said tracks and friction mechanism, said tracks and idler wheels being connected and adapted to be raised and lowered relative to the axis of the friction mechanism.

2. Transmission mechanism comprising friction mechanism, arms pivoted to and leading from said friction mechanism, a shaft in said arms, grooved idler wheels on said shaft and tracks leading toward said idler wheels, said arms, shaft and idler wheels being adapted to be moved through an arc relative to the axis of the friction mechanism.

1,212,684. AUTOMATIC TRAIN-PIPE COUPLING. JOSEPH V. ROBINSON, New Haven, Conn. Filed Dec. 21, 1912, Serial No. 738,014. Renewed Apr. 11, 1916. Serial No. 90,522. (Cl. 188—13.)



1. In an automatic train pipe coupling, the combination with a perforated coupling head, of means on said head for interchangeably receiving a perforated coupling head of different construction and for maintaining said last mentioned head in place with said perforations substantially alined.

2. In an automatic train pipe coupling, the combination with a perforated coupling head, of spaced shoulders connected with said head for interchangeably receiving a perforated coupling head of different construction and for maintaining said last mentioned head in place with its perforation alined with the perforation of the first mentioned head.

3. In an automatic train pipe coupling, the combination with a coupling head, of means for interchangeably receiving a coupling head of a different type, said means comprising a support connected with the first mentioned head and having a seat with which the guides of the last mentioned head register in coupling.

4. In an automatic train pipe coupling, the combination with a coupler of one construction, of means for adapting said coupler to couple with a coupler of a different construction comprising auxiliary guides on the former coupler for receiving the usual guides upon the latter coupler.

5. In an automatic train pipe coupling, the combination with a coupler having the usual guiding members, of auxiliary guides adapted to coöperate with the guide members of a coupler of another type.

[Claims 6 to 19 not printed in the Gazette.]

1,212,685. FLEXIBLE METAL TUBING. JOSEPH V. ROBINSON, Washington, D. C. Filed Mar. 8, 1913. Serial No. 753,085. (Cl. 137—75.)



1. A flexible tube comprising a series of separately formed rings, arranged side by side in coaxial relation, each ring having a rolling contact with abutting rings, and flexible, inextensible, means holding the ring sections in contacting relation.

2. A flexible tube comprising a series of coaxially arranged separately formed rings, a second series of similar rings of different diameter than the rings in the first said series, the two series of rings being alternately arranged so that the members of one series are positioned between and in contact with members of the other series, and flexible, inextensible, means holding the rings of one series in contacting relation to those of the other series.

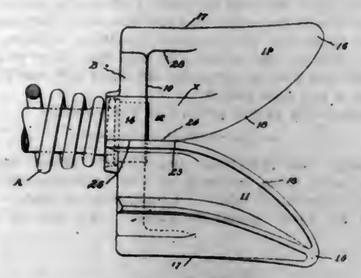
1,212,686. AUTOMATIC TRAIN-PIPE CONNECTOR. JOSEPH V. ROBINSON, Chevy Chase, Md. Filed Dec. 6, 1913. Serial No. 805,158. (Cl. 188—13.)

1. An automatic train pipe coupling head, comprising an oval shaped coupling face having diagonally spaced thereon a pair of flaring guiding prongs provided with portions 12 that extend forwardly of the face of the head, at a right angle thereto, and lie entirely in the vertical plane and project from the inner face of the prong inwardly toward the coupling head for mating with corresponding surfaces 14 of an opposing head to lock the heads against relative angular movement when coupled.

2. An automatic train pipe coupling head, comprising a coupling face having round corners and provided with forwardly extending outwardly diverging guiding prongs each prong having on its inner face an inwardly projecting surface 12 lying in the vertical plane and having also a shoulder 24 lying in the horizontal plane, said surface 12 being adapted to mate with a complementary surface 14 at the side of an opposing coupling head and said shoulder 24 being adapted to mate with a complementary shoulder 26 at the side of said opposing head to lock such head against relative angular movement when coupled.

3. An automatic train pipe coupling head, comprising a coupling face having round corners and provided with diagonally spaced forwardly extending outwardly diverging guiding prongs, each prong being provided with a portion 12 extending forwardly of the head and at a right angle to the face thereof to approximately the point 13, and thence flaring outwardly gradually to approximately the point 15, and thence flaring outwardly abruptly to approximately the point 16, the portion of said prongs which flares abruptly being substantially of the same length as the portion thereof which flares gradually.

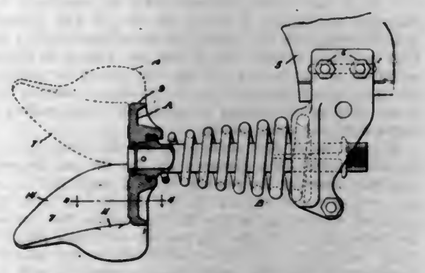
4. An automatic train pipe coupling head, comprising a coupling face having round corners and provided with diagonally spaced forwardly extending outwardly diverging guiding prongs, the rear faces of which are slightly concaved, each prong being provided with a portion 12 extending forwardly of the head and at an angle to the face thereof to approximately the point 13, and thence flaring outwardly gradually to approximately the point 15, and thence flaring outwardly abruptly to approximately the point 16, each of said prongs being provided with upper and lower guiding edges which edges are curved in the vertical plane and which curves change as they approach the forward extremity of the prong from a comparatively abrupt curve to a gradual curve encompassing the whole face of the prong, substantially as and for the purpose described.



5. An automatic train pipe coupling head, comprising a coupling face having round corners and provided with diagonally spaced forwardly extending outwardly diverging guiding prongs, each prong being provided with a portion 12 extending forwardly of the head and at an angle to the face thereof to approximately the point 13, and thence flaring outwardly gradually to approximately the point 15, and thence flaring outwardly abruptly to approximately the point 16, each of said prongs being provided with upper and lower guiding edges which edges are curved in the vertical plane to different extents, whereby the distance from a vertical line parallel to the face of said head and tangent to the curve of the upper one of such edges to the point *a* of said edge is less than the distance from a like line tangent to the curve of the lower one of said edges to the point *b* of such lower edge.

[Claims 6 and 7 not printed in the Gazette.]

1,212,687. AUTOMATIC TRAIN-PIPE CONNECTOR. JOSEPH V. ROBINSON, Chevy Chase, Md. Original application filed June 10, 1912, Serial No. 702,818. Divided and this application filed Mar. 31, 1914, Serial No. 828,611. Renewed May 1, 1916. Serial No. 94,758. (Cl. 188—13.)



1. An automatic train pipe connector head having guiding prongs extending forwardly and outwardly of the head in the horizontal plane, and having also auxiliary guiding prongs extending vertically and laterally of the head in the vertical plane.

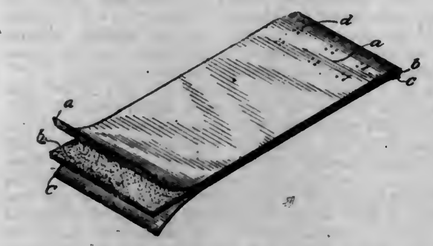
2. An automatic train pipe connector head having guiding prongs extending forwardly and outwardly of the head in the horizontal plane, and having also guiding prongs extending from the top and bottom of the head substantially in a vertical plane and flaring laterally of the head.

3. An automatic train pipe connector head having guiding prongs extending forwardly and outwardly from the head and having also an auxiliary guiding prong, said auxiliary prong being connected with the top of said head and being connected also with an edge of said first mentioned guiding prong and extending upwardly from the head and flaring laterally therefrom.

4. An automatic train pipe connector head of oblong outline having a pair of diagonally spaced forwardly extending outwardly diverging guiding prongs, and having also a pair of auxiliary guiding prongs integral with the top and bottom of the head and integral also with the edges of the first mentioned prongs that lie at the top and bottom of said head, said auxiliary guiding prongs being extended substantially perpendicularly to the face of the head and flared laterally therefrom to prevent jamming of the heads in coupling under conditions of severe disalining.

5. An automatic train pipe connector head having guiding prongs provided with base portions 8 which extend forwardly of the head and at substantially a right angle thereto for a short distance to constitute sockets for closely engaging a correspondingly shaped surface 9 of a coöperating head to prevent relative angular movement between the faces of coupled heads, said prongs being provided with lateral shoulders 12 lying in a horizontal plane and connected with said base portions by curved portions 13.

1,212,688. ARTICLE OF MANUFACTURE SUITABLE FOR USE AS A PACKING OR FILLING FOR BOXES. ARNOLD GEDALJAH RONA and ALFRED HERFURTH, New York, N. Y. Filed Jan. 13, 1916. Serial No. 71,889. (Cl. 154—55.)



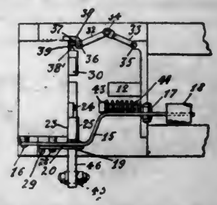
1. As an article of manufacture, a layer of textile raw material, and a layer of paper above and below said raw material, each layer being indented toward and adhesively secured to said raw material.

2. As an article of manufacture, a plurality of sheets of paper and cotton waste interposed between said sheets of paper and indentively and adhesively secured to the inner faces of said sheet.

3. As an article of manufacture, a plurality of sheets of paper, cotton wadding interposed between said sheets and secured thereto, said sheets being indented and forming a composite mass.

1,212,689. NUT-MAKING MACHINE. CHARLES R. ROOF, Los Angeles, Cal., assignor to Standard Nut Manufacturing Co., Dover, Del., a Corporation of Delaware. Filed May 12, 1915. Serial No. 27,504. (Cl. 164—12.)

1. In a bar guiding and clamping device for nut making machines, a fixed jaw, a reciprocating jaw, a blank nut cutting tool on said reciprocating jaw, a cam lever pivoted at one end on said fixed jaw, a weight on the other end of said cam lever, a cam lever engaging roller on said reciprocating jaw, a pair of guide blocks pivoted on said fixed jaw movable toward and away from each other, an adjustable connection between said blocks and said cam lever, a movable gage block, a pair of links pivoted to said reciprocating jaw, a lost motion connection between said gage block and said pair of links, and a bar clamping mechanism holding said bar in an adjusted position in advance of said tool, said bar clamping mechanism comprising a plunger body slidably mounted in the reciprocating jaw, and a spring tending to hold said clamping mechanism against said bar.



2. In a bar guiding and clamping device for nut making machines, a fixed jaw, a reciprocating jaw, a blank nut cutting tool on said reciprocating jaw, a bar supporting anti-friction roller, a cam lever pivoted at one end on one of said jaws, a cam lever engaging element mounted on the other jaw for raising and lowering said cam lever, a pair of guide blocks movably mounted on said fixed jaw, an adjustable connection between said cam lever and said guide blocks, a movable gage block, a pair of links connected to said reciprocating jaw, a lost motion connection between said gage block and said pair of links, and a bar clamping mechanism holding said bar in an adjusted position in advance of said tool.

3. A bar guiding and clamping device for nut making machines, a fixed jaw, a reciprocating jaw, a blank nut cutting tool on said reciprocating jaw, a cam lever pivoted at one end on said fixed jaw, a cam lever engaging roller on said reciprocating jaw, a pair of guide blocks pivoted on the fixed jaw movable toward and away from each other, an adjustable connection between said blocks and said cam lever, a gage block, means pivoted to the reciprocating jaw for operating said gage block, a lost motion connection between said gage block and said means, and a bar clamping mechanism mounted in said reciprocating jaw for holding said bar in an adjusted position in advance of said tool.

4. In a bar guiding and clamping device for nut-making machines, a fixed jaw, a reciprocating jaw, a blank nut-cutting tool on said reciprocating jaw, a pair of guide blocks on the fixed jaw movable toward and away from each other, means connected to said reciprocating jaw for operating said guide blocks, a movable gage block, means connected to said reciprocating jaw for operating said gage block, and a lost-motion connection between said gage block and said means.

5. In a bar guiding and clamping device for nut making machines, a fixed jaw, a reciprocating jaw, a blank nut cutting tool on said reciprocating jaw, a cam lever pivoted at one end on said fixed jaw, a cam lever engaging roller on said reciprocating jaw, means for holding said cam lever in engagement with said roller, a pair of guide blocks on said fixed jaw movable toward and away from each other, a connection between said blocks and said cam lever, a movable gage block, means for operating said gage block connected to said reciprocating jaw, and a bar clamping mechanism engaging said bar between said guide blocks and said gage block.

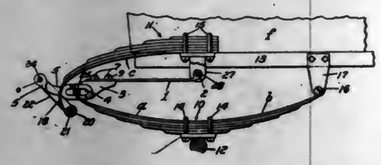
[Claims 6 to 8 not printed in the Gazette.]

1,212,690. VEHICLE-SPRING. PERCIVAL L. ROOKLEDGE, Hollister, Cal. Filed Feb. 9, 1915. Serial No. 7,142. (Cl. 267—27.)

1. A spring for resiliently separating two bodies comprising a lever spring having three connections, one of which is slidable, said lever spring being connected through two of said connections with one of said bodies and through the remaining connection with the opposite body, said lever spring being fulcrumed at the slidable connection.

2. The combination with two spring arms, of a lever spring having three connections, said lever spring being connected through two of said connections with one of

said spring arms and through one of said connections with the opposite spring arm, the connection with said opposite spring arm being slidable and intermediate the other two connections, said lever spring being fulcrumed by the slidable connections.



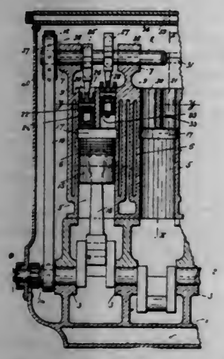
3. The combination with two bodies to be separated, of a half-elliptic spring connected between its ends with one of said bodies and connected at one end with the other of said bodies, a lever spring slidably fulcrumed intermediate its ends to the other end of said half-elliptic spring, a spring arm connected to the other of said bodies, a link connecting the end of said spring arm with one arm of said lever spring, and means connecting the other arm of the lever spring with said other body.

4. The combination with two bodies to be separated, of a half-elliptic spring connected between its ends with one of said bodies and connected at one end with the other of said bodies, a lever spring slidably fulcrumed intermediate its ends to the other end of said half-elliptic spring, a spring arm connected to the other of said bodies, and extending around the sliding fulcrum, a link connecting the end of said spring arm with one arm of said lever spring, and means connecting the other arm of the lever spring with said other body.

5. The lever spring set forth adapted to form part of a spring for yieldingly separating two bodies, which lever spring consists of a slotted shank having a connection at one end, and a resilient arm fixed at one end to the other end of the shank; said resilient arm having a connection at its other end and the slot of the shank being intermediate between said end connections.

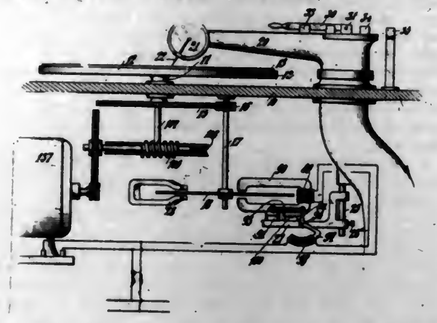
[Claims 6 to 11 not printed in the Gazette.]

1,212,691. INTERNAL-COMBUSTION ENGINE. ABE L. ROQUEMORE and OSCAR M. FALLWELL, Palestine, Tex. Filed May 2, 1916. Serial No. 94,926. (Cl. 123—59.)



In an internal combustion engine, a power cylinder, two valve cylinders arranged side by side at one end of the power cylinder, a crankshaft, a chamber wider than the two valve cylinders and projecting from their outer end portions and provided with an end plate arranged in the same plane as the said crankshaft and having bearings for it to revolve in, the said cylinders and chamber being provided with a water jacket which extends from the other end portion of the power cylinder to the underside of the said end plate and shaft bearings, a cover secured to the said end plate and closing the said chamber, piston valves slidable in the valve cylinders, and means for operating the said valves from the crankshaft.

1,212,692. SPEED-REGULATOR FOR PHONOGRAPHS. ALBERT RUCKGABER, Brooklyn, N. Y. Filed Mar. 6, 1914. Serial No. 822,933. (Cl. 74—13.)



1. In a phonograph having a record-disk, a movable tone-arm, means for moving the record-disk, a rotary member rotated with the record-disk, and means movable by the tone-arm, the last-named means and rotary member being movable in respect to each other, and being in magnetic relation with respect to each other, for the purpose of regulating the speed of the record-disk.

2. In a phonograph having a record-disk, means for moving the same, a tone-arm, a rotary member rotatable with the record-disk, and a magnetic member movable by the tone-arm in respect to the rotary member, thereby causing a braking action on the rotary member.

3. In a phonograph, the combination of a record disk, means for moving the same, and a stylus relatively movable to said record disk, with a member movable with said record disk, and a magnetic member coacting with said first-named member and in magnetic relationship therewith, one of said members being movable in respect to the other, the action of said magnetic member upon said first named member being automatically changed to correspond with, and to compensate for, any tendency to change the relative linear velocity of the record line to the stylus from a predetermined relative linear velocity of the record line to the stylus, so as to obtain a predetermined linear velocity of the record line in respect to the stylus at any position of the stylus in respect to the record line.

4. In a phonograph having a stylus, a record-disk, and means for moving the same, a rotatable metallic member rotating with the record-disk, and a magnetic member, movable in respect to the metallic member, and means for causing the movement of the magnetic member in respect to the metallic member to correspond to the movement of the stylus in respect to the record-disk.

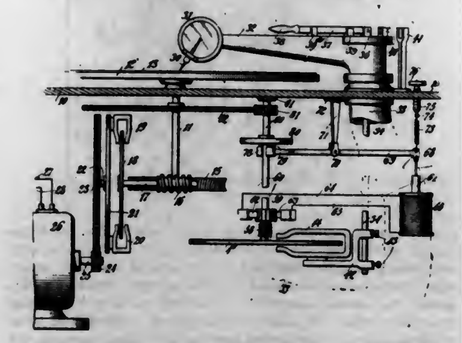
5. In a phonograph having a stylus, a record-disk, and means for moving the same, a metal braking disk moved by said means, a magnetic braking member coöperating with said metal disk, a support for the stylus, a support for the magnetic braking member, and a connecting member for the stylus and braking-member supports.

[Claims 6 to 12 not printed in the Gazette.]

1,212,693. SPEED-REGULATOR FOR PHONOGRAPHS. ALBERT RUCKGABER, Brooklyn, N. Y. Filed Aug. 7, 1914. Serial No. 855,618. (Cl. 74—13.)

1. In a phonograph having a record disk, a stylus, and means for rotating the record disk, means actuated by said first named means for producing an electromotive force by electromagnetic induction, and means acted upon by the electric energy corresponding to the produced electromotive force, said means operating to vary the speed of rotation of the record disk on the variation of the induced electromotive force.

2. In a phonograph having a record disk, a stylus, and means for rotating the record disk at a constant linear velocity relatively to the stylus, means actuated by said first named means for producing an electromotive force by electromagnetic induction, and means acted upon by the electric energy corresponding to the produced electromotive force, said means operating to vary the speed of rotation of the record disk on the variation of the induced electromotive force from that electromotive force produced corresponding to a constant linear velocity of the record line and stylus relatively to each other.



3. In a phonograph, the combination of a record medium, a medium coacting therewith, and members coacting with each other and in magnetic relationship with each other, with means for changing the position of one of said members relatively to the other, upon the change of the position of the coacting medium upon the record medium, means capable of changing the linear velocity of the record medium and the coacting medium relatively to each other, on the change of position of one of said members relatively to the other, and means on one of the members for inducing therein when in magnetic relationship with the other member an electromotive force, for controlling said last-named means.

4. In a phonograph having a record disk, a movable tone-arm, means for moving the record disk, a rotary member rotated with the record disk, means movable by the tone-arm, the last-named means and rotary member being movable with respect to each other and being in magnetic relationship to each other for the purpose of regulating the speed of the record disk, means moved by the rotary member for inducing therein, when in magnetic relationship with the other member, an electromotive force, and means for utilizing the electric energy generated, for controlling the movement of the rotary member and record disk.

5. In a phonograph having a record disk, means for actuating the record disk, and a movable tone-arm, a magnet movable with the tone-arm, a coil of wire movable to cut the lines of force of the magnet for generating an electric current, means actuated by said current, and means actuated by said last-named means and operating on the means for rotating the record disk.

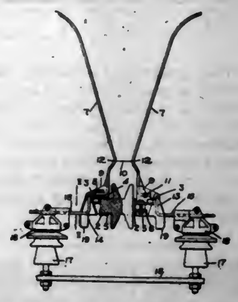
[Claims 6 to 12 not printed in the Gazette.]

1,212,694. FUSE. ALF SCHAANNING and STANLEY AUSTEN STIGANT, Manchester, England, assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 2, 1916. Serial No. 134,630. (Cl. 175—30.)

1. The combination with an insulator having a conducting cup member mounted on each end thereof, of horn members operatively connected to the cup members and adapted to receive a fusible conductor.

2. The combination with stationary terminal members, of an insulator having a conducting cup at each end thereof to receive the stationary terminal members, and means for securing a fusible conductor to the said cups.

3. The combination with stationary terminal members, of an insulator of substantially bobbin shape, a conducting cup secured to each end of the insulator having means for receiving the said terminal members, a horn member secured to each of the conducting cups, and a fusible conductor connected between the horn members.

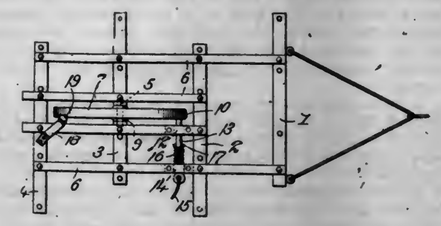


4. The combination with upwardly extending terminal members, of conical conducting cups for receiving the terminal members, an insulating member for securing the cups together, horn gap members secured to the said cups, and a fusible conductor secured to the horn gap members.

5. The combination with two stationary insulators, and upwardly extending contact members mounted thereon, of an insulating member having horn gap members mounted thereon, and means secured to each end of the insulating member whereby the horn gap members are maintained in a predetermined position and in electrical connection with the upwardly extending contact members.

[Claim 6 not printed in the Gazette.]

1,212,695. DEVICE FOR RAISING HARROWS. MICHAEL G. SCHMITZ, Medicine Lake, Mont. Filed May 12, 1916. Serial No. 97,096. (Cl. 55—34.)



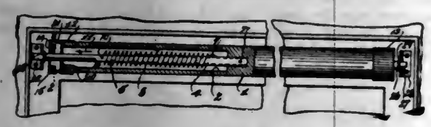
The combination with a harrow having a plurality of tooth carrying bars, of a shaft, a semi-circular rim rotatably mounted on said shaft and having teeth on the forward end thereof, the portion of the rim which is located forwardly of the shaft being of greater weight than the portion which is located rearwardly thereof, a spring pressed rod for normally preventing the downward movement of the forward end of the rim and a spring detent for preventing the movement of the rim in the opposite direction.

1,212,696. ADJUSTABLE SHADE-ROLLER. GEORGE SCHULER and EMIL KRAEMER, Woodside, N. Y. Filed June 27, 1916. Serial No. 106,096. (Cl. 156—36.)

1. A shade-roller comprising a body portion, an extensible spindle carried thereby, and a spring carried by the spindle arranged to rewind the roller and to tend to constantly extend said spindle.

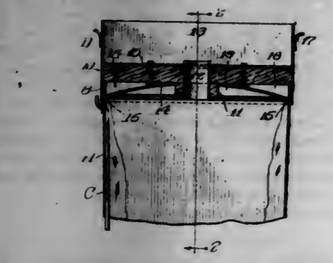
2. A spindle for shade-rollers consisting of a plurality of slidably connected members, a rewinding spring carried by said spindle and secured at one of its ends to one of said spindle members and at the other end to the co-

operating spindle member, said spring acting, after having been secured, to extend said spindle-members.



3. A shade roller comprising a tubular body portion, an extensible spindle carried therein and consisting of two telescopic members, a helical spring surrounding said spindle and attached at its ends to these members respectively and arranged to rewind said roller and tend to continuously extend said spindle, caps for the ends of said tubular body and a trunnion protruding through one of said caps, the outer part of the said spindle extending through the other cap as set forth.

1,212,697. MEANS FOR PRODUCING RAW-WATER ICE. GILBERT SELLERS, Chicago, Ill. Filed Nov. 13, 1915. Serial No. 61,318. (Cl. 62—159.)



1. In combination, an open topped ice can, and a closing medium for said opening, said closing medium having means protruding into said ice can adjacent to the inner walls thereof and adapted to be sealed against leakage, said closing medium also having an annular insulating member extending into said ice can and a receptacle in tubular connection with the interior of said annular member.

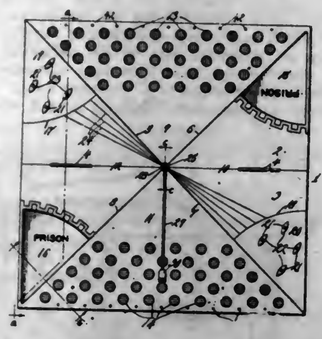
2. In combination, an ice can, a cover, downwardly extending means on said cover adapted to be ice-sealed against leakage, a downwardly projecting tubular boss on said cover, and a receptacle in tubular connection with said boss.

3. In combination, an ice can, a cover, a receptacle thereon, an inverted dish-shaped pan depending from said cover, said pan having its marginal edges in adjacency to the inner walls of said can adapted to be ice-sealed against leakage, there being a tubular connection between said pan and said receptacle.

1,212,698. GAME APPARATUS. MARCUS SHARP, Camden, N. J. Filed June 13, 1916. Serial No. 103,555. (Cl. 46—59.)

1. A game apparatus, comprising a board having a plurality of sections marked thereon, spots marked on said sections, members designed to be placed on said spots, said spots being arranged in two groups oppositely disposed, a member electrically attached to said board and operative when the elastic attachment is stretched to be projected across the spaces having said spots thereon, substantially as described.

2. A game apparatus, comprising a board having a plurality of sections marked thereon, spots marked on said sections, members designed to be placed on said spots, said spots being arranged in two groups oppositely disposed, a member elastically attached to said board and operative when the elastic attachment is stretched to be projected across the spaces having said spots thereon, certain of the other sections having pointed members pivotally attached thereto and so positioned as to be struck and rotated by said elastically connected member, substantially as described.



3. A game apparatus, comprising a board having a plurality of sections marked thereon, spots marked on said sections, members designed to be placed on said spots, said spots being arranged in two groups oppositely disposed, a member elastically attached to said board and operative when the elastic attachment is stretched to be projected across the spaces having said spots thereon, certain of the other sections having pointed members pivotally attached thereto and so positioned as to be struck and rotated by said elastically connected member, and means for securing said elastic attachment to the board, and a plurality of lines marked on said board, each of said lines being included in a plane extending through the axis of one of said pivoted members and through said means, substantially as described.

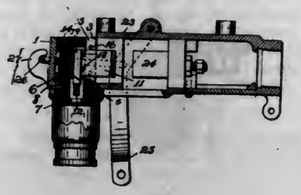
4. A game apparatus, comprising a board having a plurality of sections marked thereon, spots marked on said sections, members designed to be placed on said spots, said spots being arranged in two groups oppositely disposed, a member elastically attached to said board and operative when the elastic attachment is stretched to be projected across the spaces having said spots thereon, certain of the other sections having pointed members pivotally attached thereto, and so positioned as to be struck and rotated by said elastically connected member, and other of said sections being marked to form prisons, substantially as described.

5. A game apparatus, comprising a board having a plurality of sections marked thereon, spots marked on said sections, members designed to be placed on said spots, said spots being arranged in two groups oppositely disposed, a member elastically attached to said board and operative when the elastic attachment is stretched to be projected across the spaces having said spots thereon, certain of the other sections having pointed members pivotally attached thereto, and so positioned as to be struck and rotated by said elastically connected member, and other of said sections having recesses forming prisons into which the said first members may be inserted, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,212,699. ELECTRICAL CONNECTION. ELDA G. SMITH, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Original application filed Oct. 28, 1911, Serial No. 787,207. Divided and this application filed Jan. 8, 1914. Serial No. 810,998. (Cl. 173—338.)

1. An electrical connection comprising a support including a wall having an opening therethrough, a block of insulation mounted on one side of said wall and having a socket alined with the opening, and also having a groove opening through a face thereof, the groove being alined in a lengthwise direction with the socket and with said opening, a block of insulation mounted on the other side of the wall and having a nipple extending through the opening and into the socket, and also having a passage extending through the nipple in line with the groove, a terminal mounted on the first-mentioned block and having its base lying in the groove, the terminal projecting beyond said face of the block in which the groove is formed, and a stem connected to the terminal and extending lengthwise of the groove and into the nipple, substantially as and for the purpose specified.



2. The combination with a socket, of an electrical connection movable into the socket and comprising a support in the form of a box open at its top and one end, means on the closed end of the box by which the box is moved into and out of the socket, insulation mounted in the corner of the block formed by the closed end and the bottom of the box and said bottom being formed with openings therethrough, terminals supported by the insulation on the side thereof toward the open end of the box, stems connected to the terminals and extending toward the openings in the bottom of the box, insulation mounted on the bottom of the box, and a housing mounted on the bottom of the box and inclosing the insulation and the wires connected to the stems, substantially as and for the purpose set forth.

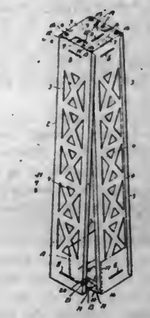
3. An electrical connection comprising a support including a box open at its top and at one end and having openings in its bottom, insulation extending crosswise of the box and located in the corner formed by the closed end of the box and the bottom thereof, the insulation being formed with grooves in its front face toward the open end of the box, the grooves being alined in a lengthwise direction with the openings in the bottom of the box, terminals having their bases extending into the grooves, the terminals extending beyond the face of the insulation in which the grooves are formed, stems connected to the terminals and extending lengthwise of the grooves toward the openings in the bottom of the box, and insulation mounted on the outer side of the box and having perforations alined with the holes in the bottom of the box, substantially as and for the purpose described.

4. The combination with a socket, of an electrical connection movable into the socket and comprising a box open at one end and having perforations in its bottom, means at the closed end of the box by which the box is moved into and out of the socket, and a housing mounted on the box over the perforations, insulation mounted in the box, terminals mounted on the insulation, stems connected to the terminals and extending through the bottom, and a block of insulation mounted on the bottom within the housing, substantially as and for the purpose set forth.

1,212,700. TOY CONSTRUCTION MEMBER. WALTER B. SMITH, New Haven, Conn. Filed Apr. 20, 1916. Serial No. 92,474. (Cl. 189—34.)

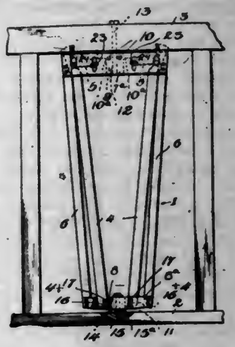
1. As a new article of manufacture, toy-construction members comprising girder-members and end-coupling members, the said girder-members being provided at their respective ends with inwardly projecting assembling-fingers, and the said coupling-members being formed with slots for the reception of the said assembling-fingers, and means for holding the said fingers in place in the said slots after their introduction thereinto.

2. As a new article of manufacture, toy-construction members comprising girder-members and male and female end-coupling members, the said girder-members being furnished at their respective ends with inwardly projecting assembling-fingers, and with coupling-slots located adjacent thereto, and the said male and female end-coupling



members being formed with slots for the reception of the said assembling-fingers, and respectively formed also with coupling-tongues and coupling-slots.

1,212,701. STANCHION. GEORGE SOLIDAY, Orrville, Ohio. Filed Nov. 13, 1915. Serial No. 61,287. (Cl. 119—150.)



1. In combination with an upper beam having a recess therein, a stanchion including a frame mounted to rotate with reference to said beam and having a stanchion bar swingably mounted therein, and a member mounted at its opposite ends in the frame for movement into and out of engagement with the bar and recess for locking the bar in operative position and the frame from rotation when the bar is in inoperative position.

2. In combination with an upper beam having a pair of recesses therein, a stanchion including a frame mounted to rotate with reference to said beam and having a pair of stanchion bars swingably mounted therein, and a pair of locking members mounted at their opposite ends for movement into engagement with the bars and recesses for locking the bars in holding position and the frame from rotation, the frame being free to rotate when the bars are in operative position and locked when the bars are in inoperative position.

3. In combination with an upper beam having a recess therein, a stanchion including a frame mounted to rotate with reference to said beam and having a stanchion bar swingably mounted therein and an L-shaped locking member movably mounted at its opposite ends, one end of which is adapted to lock the stanchion bar in holding position and the other end of which is adapted to lock the frame in fixed position by engaging with the recess in the beam.

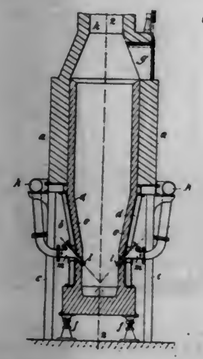
4. In combination with an upper beam having a recess therein, a stanchion including a frame mounted to rotate

with reference to said beam and having a stanchion bar swingably mounted therein, and a locking member movably mounted at its opposite ends in the frame having a horizontal portion normally lying slightly below the upper end of the stanchion bar for locking it in operative position, and an upright portion at its outer end movable by the stanchion bar into engagement with the recess in the beam to lock the frame in fixed position as the stanchion bar swings into inoperative position.

5. In combination with an upper beam having recesses therein, a stanchion including a frame mounted to rotate with reference to said beam and having stanchion bars swingably mounted therein and a locking member for each of the bars and the frame movably mounted at its opposite ends in the frame and having a horizontal portion normally engaging at its inner end with the stanchion bar and an upright portion movable by the stanchion bars into engagement with the recesses in the beam for locking the frame from rotation as the stanchion bars swing into inoperative position, and a handle on the inner end of the locking member extending through the frame.

[Claim 6 not printed in the Gazette.]

1,212,702. MANUFACTURE OF ALKALI AND ALKALINE-EARTH METAL SULFIDS. HEINRICH SPECKETER and WILHELM HOFMANN, Griesheim, Germany, assignors to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany, a Corporation of Germany. Filed Dec. 17, 1910. Serial No. 597,880. (Cl. 23—13.)

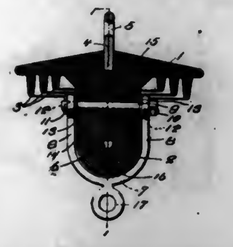


1. The herein described improvement in the method of manufacturing alkali-metal sulfids by heating a mixture of carbonaceous material and an alkali metal sulfate consisting in providing in the mixture an amount of carbonaceous material in sufficient excess of that consumed in the melting operation to subsequently reduce any unreduced sulfate or bisulfate which may remain in the melt.

2. The herein described method of manufacturing alkali-metal sulfids comprising heating in a shaft furnace a mixture of carbonaceous material and an alkali-metal sulfate while introducing air to the furnace under such control that it will maintain combustion of the carbonaceous material without causing oxidation of the sulfid produced thereby, the amount of carbonaceous material in the mixture being such that a portion thereof will pass off in the melt.

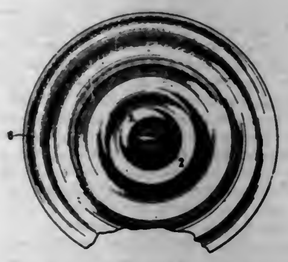
1,212,703. DISK-TYPE CHAIN INSULATOR. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Sept. 21, 1912. Serial No. 721,693. (Cl. 173—366.)

1. In a disk type insulator, the combination comprising a disk of insulating material having an integrally formed lobe pendant therefrom, a strain member extending from the upper side of said disk, a strain member extending from the lower side of said disk, said last mentioned strain member being U-shaped and comprising spaced end portions extending and terminating upon opposite sides of said lobe, and a separately formed straight pivot rod extending through a straight aperture formed through the material of the lobe from one of said spaced end portions to the other, said pivot rod being connected with said spaced end portions to form a pivotal connection between said second strain member and said lobe.



2. In a chain insulator, the combination comprising a plurality of separately formed units, each unit being formed of a body of insulating material and having a pair of strain members pivotally interlinking with each other within the body of insulating material, each strain member having a pivot portion at its outer end, and the pivot portions at the outer ends of the strain members of at least some of said units being disposed in substantially right angular relation to the portions of the strain members constituting the pivots within the respective units, for the purpose described.

1,212,704. DISK STRAIN-INSULATOR. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Dec. 31, 1912. Serial No. 739,485. (Cl. 173—366.)



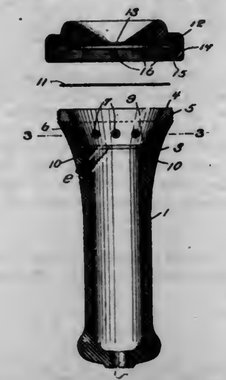
1. An insulator comprising a body, an annular flange formed on said body, the material of said flange being formed with bends concentrically of the body to provide a plurality of ridges and depressions on the opposite surfaces of said flange concentrically of the body, the ridges on one surface being disposed opposite the depressions on the other surface, the ridges being formed relatively higher toward the periphery of the flange than near the body, the outer annular surface of the outermost ridge being inclined from its lower annular edge upwardly and inwardly toward the body in substantial frusto-conical shape, and an annular flange formed on said relatively inclined surface intermediate the height thereof, being inclined oppositely to the inclination of the outer surface of said ridge to provide an annular V-shaped groove on the inclined outer surface of said outermost ridge.

2. In a disk type insulator, the combination with a centrally disposed body portion of insulating material having attaching means thereon, of an annular flange bent substantially concentrically of the body into serpentine cross section forming a series of annular ridges and depressions at opposite sides theerof, and the material of the flange being of gradually decreasing thickness away from the body portion, and said flange being connected to the body

intermediate the planes of the ends of the body, substantially as shown and described.

3. In a disk type insulator, the combination with a centrally disposed body portion of insulating material having attaching means thereon, of an annular flange bent substantially concentrically of the body into serpentine cross section forming a series of annular ridges and depressions at opposite sides thereof, said flange being connected to the body at a plane substantially midway between the opposite ends of the body, the first bend of the flange being toward the plane of one end of the body, the next bend being toward the opposite end of the body, the third bend being toward the first end of the body, and so on to the periphery of the flange, and all of said bends terminating short of the planes of the ends of the body.

1,212,705. TELEPHONE-RECEIVER CASING. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Jan. 13, 1913. Serial No. 741,862. (Cl. 179—179.)



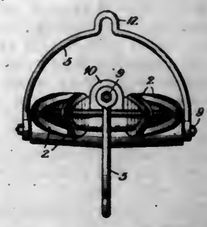
1. A telephone receiver casing, comprising a hollow cylindrical member open at one end, said cylindrical member being formed with a shoulder interiorly thereof adjacent said open end, a separately formed reinforcing ring arranged within said open end, said reinforcing ring having a flange-like part at its outer end for engaging the receiver cover and having a flange-like part at its inner end for engaging said shoulder, the intermediate portion of said reinforcing ring lying in close contact with the adjacent surface portion of the receiver casing throughout its extent, and there being openings formed through said adjacent portion into which portions of the material of the receiver casing are molded so as to comprise means for positively fixing the intermediate portion rigidly in contact with the receiver casing.

2. A telephone receiver casing, comprising a hollow cylindrical member having a flaring opening at one end, a separately formed reinforcing member set into said flaring opening, said reinforcing member being provided with openings into which material of the receiver and casing is molded whereby said parts are permanently locked together, said reinforcing member being provided with an internal shoulder overlying a portion of said receiver casing, said shoulder having a threaded opening and said receiver casing having a threaded opening which forms a continuation of the opening in the reinforcing member, said threaded openings being adapted to receive a screw for supporting the receiver mechanism, and the wall of said latter opening being adaped frictionally to resist the loosening the said screw.

1,212,706. DISK STRAIN-INSULATOR. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Apr. 9, 1913. Serial No. 759,939. (Cl. 173—366.)

1. A disk type strain insulator comprising a disk of insulating material, oppositely disposed strain members attached thereto, and strengthening ribs formed upon one surface of said disk, continuing across the periphery thereof, and continuing along the opposite surface of said disk.

2. A disk insulator comprising a disk of insulating material and a plurality of strengthening ribs formed upon the upper surface of said disk radiating from the center thereof, continuing across the periphery thereof, and continuing along the opposite surface of the disk to ward the center thereof.



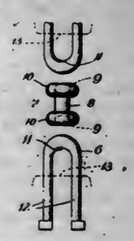
3. A disk type insulator comprising a substantially flat body of insulating material, reinforcing members formed upon the opposite surfaces of said disk extending entirely across said surfaces, the reinforcing member upon one surface being in substantially right angular relation to the reinforcing member on the other surface of the disk, and strain members carried by said reinforcing members projecting beyond the periphery of the disk.

4. A disk type insulator comprising a substantially flat body of insulating material, reinforcing members formed upon the opposite surfaces of said disk extending entirely across said surfaces, the reinforcing member upon one surface being in substantially right angular relation to the reinforcing member on the other surface of the disk, and a plurality of reinforcing ribs formed upon the opposite surfaces of said disk radiating from the center thereof.

5. A disk type insulator comprising a substantially flat body of insulating material, reinforcing members formed upon the opposite surfaces of said disk extending entirely across said surfaces, the reinforcing member upon one surface being in substantially right angular relation to the reinforcing member on the other surface of the disk, means projecting from the ends of said reinforcing members adapted for the attachment of cables or the like, and reinforcing ribs formed upon said disk radiating from the center thereof.

[Claims 6 to 19 not printed in the Gazette.]

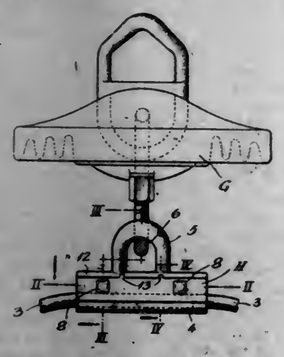
1,212,707. DETACHABLE CONNECTION FOR CHAIN-LINKS. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Apr. 9, 1913. Serial No. 759,940. (Cl. 173—28.)



1. A connecting member for insulators or other members, said connecting member comprising a body portion for extending between the members to be connected, a pair of heads one adjacent each end of said body portion both offset from said body portion in the same lateral direction, said heads being elongated and each extending longitudinally in a plane at right angles to the longitudinal direction of the body portion, and a pair of extensions from said body portion projecting laterally therefrom toward said heads respectively and merging into the surfaces of said heads which face toward the body portion.

2. In a device of the class described, the combination with a pair of spaced apertured members, the apertures in said spaced members being elongated and the axes of the longest dimension of said apertures being substantially in alinement, of a connecting member for connecting said spaced members together, said connecting member comprising a body portion extending longitudinally between said spaced members at one side thereof, a pair of extensions extending laterally from the end portions of said connecting member and each projecting through one of said elongated openings, and a pair of elongated heads one formed upon the projecting end of each of said extensions, said elongated heads each extending longitudinally in a plane transverse to the longitudinal plane of the body portion of the connecting member and being of a length greater than the length of the smaller diameters of the elongated openings, and said heads each being also longer than the length of the longer diameters of said elongated openings, but the distance from one side of said extensions to the opposite end of said heads being relatively shorter than the length of the longer diameters of said elongated openings, all for the purpose set forth.

1,212,708. WIRE-CLAMP. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Dec. 8, 1913. Serial No. 805,368. (Cl. 24—135.)

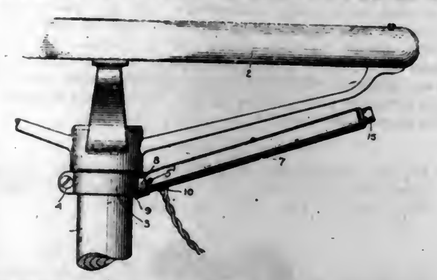


A device of the class described, comprising a body member terminating at its lower end in an outwardly and upwardly turned flange forming a pocket adapted to receive and support a length of wire, said pocket being of a depth so that the wire projects above said flange, a clamp member having a portion adapted to engage said wire, said clamp member being provided with openings and said body member with sockets, and bolts passing through said openings and into said sockets for clamping said parts together.

1,212,709. ELECTRIC-HORN CONTROL. BENJAMIN FRANKLIN STEPHENSON, Edmonton, Alberta, Canada. Filed Oct. 30, 1915. Serial No. 58,807. (Cl. 200—27.)

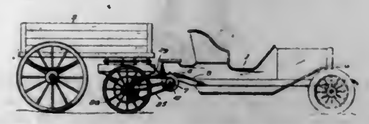
1. In a control for electric horns, the combination with the steering post of an automobile and the wirings for the horn, of a member bent upon itself forming a tubular member and a pair of clamping arms, whereby a clamping bracket is produced, means for clamping said arms against said post, a tubular member fitting over the tubular portion of said bracket, said tubular member being provided with an aperture whereby the wires of said horn may be inserted into the tubular member, a switch arranged in the tubular member near the end opposite said bracket, and a button arranged in the end of the tubular member and projecting therefrom, said button being adapted to be pressed inwardly closing said switch, the outer end of said tubular member extending to a point adjacent said steering wheel.

2. In a controlling device for electric horns, the combination with a steering wheel and post and the wires of said horn, of a tubular member for receiving one end of said wires, said tubular member being formed with a projecting overhanging member, a clamping bracket frictionally held in said tubular member and arranged to clamp said steering post, said overhanging portion extending beneath said bracket whereby the tubular member cannot rotate, said tubular member being arranged at such an angle as to cause the outer end to be adjacent the



periphery of said steering wheel, a switch connected with said wires and arranged in said tubular member and adjacent the outer end thereof, said switch being formed with a spring for normally maintaining the contacts separate, and a movable button arranged in the outer end of said tubular member, said button being adapted to be pressed for closing said switch, said spring moving said button when released so as to open said switch.

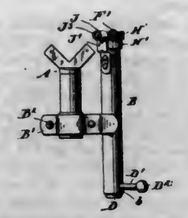
1,212,710. MOTOR-TRACTOR. GEORGE J. STOLL, Louisville, Ky. Filed Mar. 26, 1915. Serial No. 17,205. (Cl. 21—90.)



In combination, a motor vehicle, a truck, bowed springs connected to the forward axle of the truck and extending along opposite sides of the motor vehicle, means at the intermediate portion of each spring detachably securing the same to the respective side of the rear end of the motor vehicle, means at the forward end of each spring detachably securing the same to the respective side of the motor vehicle in advance of the first-mentioned securing means, the said springs yieldably supporting the rear end of the said motor vehicle, and means yieldably resisting up and down movement of the rear end of the motor vehicle with relation to the truck comprising spaced resilient rods secured at their upper ends to the truck and inclined downwardly and forwardly and secured at their lower ends to the motor vehicle, the said rods being provided in their intermediate portions each with a coil.

1,212,711. LIGHTING DEVICE. ELMER E. TAGGART, Syracuse, N. Y. Filed May 20, 1916. Serial No. 99,000. (Cl. 67—20.1.)

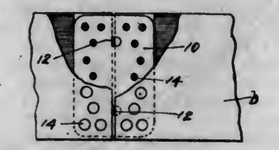
1. In a device of the character set forth, a loosely mounted rotatable abraiding wheel, a carrier adapted to present a body of sparking material thereto in frictional contact therewith, an annular flange on said wheel, a clutch member inclosed by said flange and having angular peripheral notches, rolling members in such notches adapted to move idly with said clutch member and out of engagement with said flange when said clutch member is rotated in one direction, and to coact with said clutch member and engage said flange and rotate said wheel when said clutch member is rotated in the opposite direction, manually operated means for partially rotating said clutch member in such one direction, and spring actuated means for partially rotating said clutch member in such opposite direction when such manually operated means is released.



2. In a device of the character set forth, a loosely mounted rotatable abrading wheel, a carrier adapted to present a body of sparking material thereto in frictional contact therewith, an annular flange on said wheel, a clutch member inclosed by said flange and having angular peripheral notches, rolling members in such notches adapted to move idly with said clutch member and out of engagement with said flange when said clutch member is rotated in one direction, and to coact with said clutch member and engage said flange and rotate said wheel when said clutch member is rotated in the opposite direction, manually operated means for partially rotating said clutch member in such one direction, and a torsional spring opposing such manual rotation and serving to rotate said clutch member in such opposite direction when said manually operated means is released.

3. In a device of the character set forth, a tubular casing, a fixed collar therein at one end, a plug loosely inclosed in the other end, an arm on said plug extending through a circumferential slot in said casing, a torsional spring attached at one end to said collar and at the other to said plug, a rod fixed in said plug and extending axially of said casing and through said collar, a clutch member fixed on said rod and having angular peripheral notches, a rotatable abrading wheel loosely mounted on said rod, an annular flange on said wheel inclosing said clutch member, rolling members in such notches adapted to coact with said clutch member and flange, and a carrier adapted to contain a body of sparking material and present it to said wheel in frictional contact with the latter.

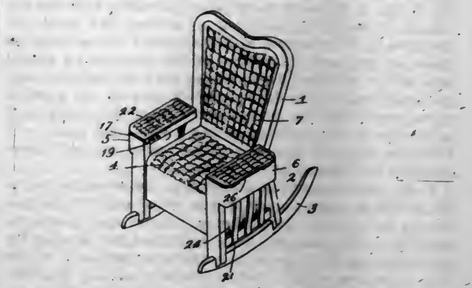
1,212,712. BELT-FASTENER. WALTER O. TALCOTT, Providence, R. I., assignor of one-half to Mancel W. Talcott, Providence, R. I. Filed Jan. 13, 1916. Serial No. 71,886. (Cl. 24—31.)



1. A belt fastener comprising a plate adapted to be inserted between the belt layers, said plate being provided with one or more rivet holes for receiving fastenings passed through each end of the belt, and a gage member raised above the plane of said plate adapted to engage the belt ends to serve as a templet for positioning the holes and the rivets in the belt.

2. A belt fastener comprising a sheet metal plate adapted to be readily inserted between the belt layers, said plate being provided with one or more rivet holes for receiving fastenings passed through each end of the belt, and one or more gage lips raised from the body of the stock intermediate its ends to engage the belt ends and serve as a templet for first punching the rivet holes in the belt end then as a gage for positioning the plate between the layers, to cause its rivet holes to register with those in the belt.

1,212,713. SEWING-CHAIR. DELLA F. TINSLEY, Kansas City, Mo. Filed Apr. 3, 1916. Serial No. 88,648. (Cl. 155—26.)

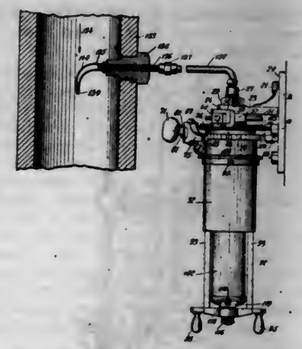


1. In a sewing chair, an arm embodying a chest with an opening in the bottom thereof, and a flexible pocket suspended from said arm and communicating with the opening in the bottom of the chest.

2. In a sewing chair, an arm embodying a chest with an opening in the bottom thereof, a lid to close said chest, a flexible pocket suspended from said arm and communicating with the opening in the bottom of the chest, and strips secured to the chair to reinforce said pocket.

3. In a sewing chair, an arm embodying a chest having compartments and an opening therein, a lid to close said chest and provided with means for holding different articles, and a flexible pocket suspended from said arm and communicating with the opening in the chest.

1,212,714. AUTOMATIC OILER. WALTER F. VAN GUYSLING, Albany, N. Y. Filed June 3, 1915. Serial No. 31,821. (Cl. 184—37.)



1. An oiler comprising a piston, an outlet connected to the piston, a container adapted to coöperate with the piston, a connection comprising a ratchet and pawl, responsive to the machine to be lubricated for causing the piston to approach the bottom of the container, a weight arm pivotally supported near the pawl and adapted to be elevated to hold the pawl in engagement with the ratchet teeth and adapted when released from its elevated position to hold the pawl out of engagement with the ratchet teeth.

2. An oiler comprising a piston, an outlet connected to the piston, a container adapted to coöperate with the piston, a connection comprising a ratchet and pawl, responsive to the machine to be lubricated for causing the piston to approach the bottom of the container, a weight arm pivotally supported near the pawl and adapted to be elevated to hold the pawl in engagement with the ratchet teeth and adapted when released from its elevated position to hold the pawl out of engagement with the ratchet teeth; and a trigger dependent upon a predetermined

relative position of the piston and container for releasing the arm.

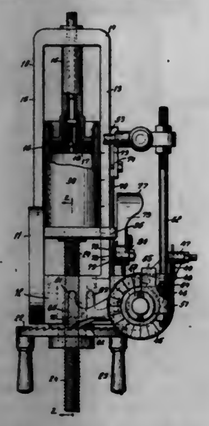
3. An oiler comprising a piston, an outlet connected to the piston, a container adapted to coöperate with the piston, a connection comprising a ratchet and pawl, responsive to the machine to be lubricated for causing the piston to approach the bottom of the container, a weight arm, and a crescent-shaped rocker coaxially pivoted near the pawl, said rocker being adapted to hold the pawl in engagement with the ratchet teeth when the weight arm is fulcrumed on one horn of the rocker, and means for releasing the arm from the rocker when the piston approaches the bottom of the container.

4. An oiler comprising a piston, an outlet connected to the piston, a container adapted to coöperate with the piston, a connection comprising a ratchet and pawl, responsive to the machine to be lubricated for causing the piston to approach the bottom of the container, a weight arm, a crescent-shaped rocker coaxially pivoted near the pawl, said rocker being adapted to hold the pawl in engagement with the ratchet teeth when the weight arm is fulcrumed on one horn of the rocker, and a trigger dependent upon a predetermined relative position of the piston and container for releasing the arm.

5. An oiler comprising a piston, an outlet connected to the piston, a container adapted to coöperate with the piston, a connection comprising a ratchet and pawl, responsive to the machine to be lubricated for causing the piston to approach the bottom of the container, a pivoted weight arm, a crescent-shaped rocker coaxially pivoted with the weight arm and adapted to hold the pawl in engagement with the ratchet teeth when the weight arm is fulcrumed on one horn of the rocker, said weight arm being adapted to act directly upon the pawl to hold it out of engagement with the ratchet teeth when the weight arm is released from the rocker horn.

[Claims 6 to 45 not printed in the Gazette.]

1,212,715. FORCE-FEED LUBRICATOR. WALTER F. VAN GUYSLING, Albany, N. Y. Filed Sept. 9, 1916. Serial No. 119,156. (Cl. 184—37.)



1. A force feed lubricator comprising a frame, a stationary piston supported thereby, an internally threaded collar in said frame arranged to be rotated by the movement of the machine to which the lubricator is to be applied, a screw passing through the collar, an oil receptacle and coöperating means for holding said receptacle on said screw in alinement with said piston.

2. A force feed lubricator comprising a frame, a stationary piston supported thereby, an internally threaded collar in said frame arranged to be rotated by the movement of the machine to which the lubricator is to be applied, a screw passing through the collar, said screw having a head guided by the frame and arranged to prevent the screw from turning, an oil receptacle having a base, and coöperating means for holding said base and said screw head together to hold the oil receptacle in alinement with said piston.

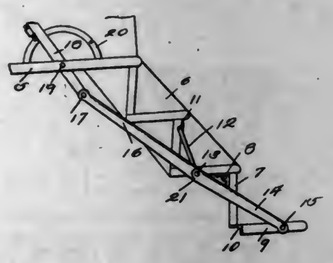
3. A force feed lubricator comprising a frame, a stationary piston supported thereby, an internally threaded collar in said frame arranged to be rotated by the movement of a machine to which the lubricator is to be applied, a screw passing through the collar, said screw having a flat rectangular head, an oil receptacle having a rectangular base fitting onto said screw head, a screw projecting from the screw head and a slot provided in said base for receiving said screw, a similar screw projecting from said base and a slot in screw head provided to receive the latter screw, said screws and slots being arranged to hold the receptacle in alinement with said piston.

4. A force feed lubricator comprising a frame, a stationary piston supported thereby, an internally threaded collar in said frame arranged to be rotated by the movement of a machine to which the lubricator is to be applied, a screw passing through the collar, said screw having a flat rectangular head, an oil receptacle having a rectangular base fitting onto said screw head, a screw projecting from the screw head and a slot provided in said base for receiving said screw, a similar screw projecting from said base and a slot in screw head provided to receive the latter screw, said screws and slots being arranged to hold the receptacle in alinement with said piston, said base projecting from one side of the frame and means engaged by said projecting portion of the base for automatically stopping rotation of said collar.

5. A force feed lubricator comprising a frame, having a base portion, parallel side portions and an intermediate portion forming a stationary hollow piston, an internally threaded collar in said base portion, driving mechanism connected to rotate said collar, a screw passing through said collar, said screw having a head fitted between the parallel portions of the frame, an oil receptacle having a base fitted between the parallel side portions of the frame, and means for attaching said receptacle to said screw head in alinement with said piston.

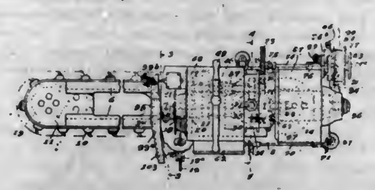
[Claims 6 to 11 not printed in the Gazette.]

1,212,716. CAR-STEP. CHARLES D. WABEL, Henry, Ill. Filed Apr. 21, 1916. Serial No. 92,695. (Cl. 105—86.)



The combination with a set of fixed steps, of a step and riser hinged to fold face to face, said riser being also hinged to the front edge of the lower fixed step, to fold thereunder, a shaft extending across said fixed steps above the lower step, depending arms on the extremities of said shaft, links connecting the lower ends of said arms and the forward covers of the foldable step, a second link extending rearwardly and upwardly from the connection between said arms and the first mentioned links, and means to operate said second link to fold and unfold said step, the abutting ends of said links being formed to lock the foldable step in open or folded position.

1,212,717. MINING-MACHINE. CARL J. E. WAXBOM, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Sept. 18, 1913. Serial No. 790,442. (Cl. 125—14.)



1. In a mining machine, the combination of a bed frame, power driven cutting apparatus projecting from the inner end of the bed frame, a power actuated cable arranged to exert a forward draft on the inner part of the bed frame to propel the machine along the face of the coal, a winding drum on the bed frame, a retarding cable having one of its ends attached to the winding drum and being adapted and arranged to extend rearward from the machine to an anchor and exert a retarding draft on the outer part of the bed frame, and power actuated driving devices for the said drum rotating in a direction to wind up the retarding cable, said driving devices comprising an adjustable friction transmission clutch adapted either to transmit the rotation of the driving devices so as to cause rotation of the drum in the direction to wind up the retarding cable or to permit rotation of said drum in the opposite direction with various degrees of frictional resistance as the machine is advanced along the face of the coal in the cutting operation.

2. In a mining machine, the combination of a bed frame, cutting apparatus projecting from the inner end of the bed frame, a winding drum mounted on the bed frame, a feed cable having one end secured to said winding drum and adapted to exert a forward draft on the inner part of the bed frame to propel the machine along the face of the coal, a second winding drum mounted on the bed frame, a retarding cable having one of its ends attached to the last named winding drum and being adapted and arranged to extend rearward from the machine to an anchor or the like and exert a retarding draft on the outer part of the bed frame, a motor on the bed frame, driving connections between the motor and the cutting apparatus, driving connections between the motor and the first named winding drum, and driving connections between the motor and the retarding cable drum rotating in a direction to wind up the retarding cable, said devices comprising an adjustable friction transmission clutch adapted either to transmit the rotation of the driving devices so as to cause rotation of the drum in the direction to wind up the retarding cable or to permit rotation of the drum in the opposite direction with various degrees of frictional resistance as the machine is advanced along the face of the coal in the cutting operation.

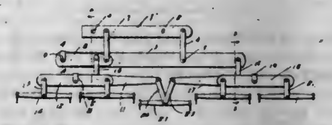
3. In a mining machine, the combination of a bed frame, cutting apparatus projecting from the inner end of the bed frame, a cable arranged to exert a forward draft on the inner part of the bed frame to propel the machine along the face of the coal, a winding drum to which one end of the said cable is connected, a retarding cable arranged to exert a rearward draft on the outer part of the bed frame, a winding drum on the bed frame to which one end of the retarding cable is connected, a motor on the bed frame, driving connections between the motor and the cutting apparatus, driving connections comprising a disengageable clutch between the motor and the first named winding drum, and driving connections between the motor and the retarding cable drum rotating in a direction to wind up the retarding cable, said devices comprising an adjustable friction transmission clutch adapted either to transmit the rotation of the driving devices so as to cause rotation of the drum in the direction to wind up the retarding cable or to permit rotation of the said drum in the opposite direction with various degrees of frictional resistance as the machine is advanced along the face of the coal in the cutting operation.

4. In a mining machine, the combination of a bed frame, cutting apparatus projecting from the inner end of the bed frame, a power actuated cable arranged to exert a forward draft on the inner part of the bed frame to propel the machine along the face of the coal, a winding drum on the bed frame, a retarding cable having one of its ends attached to the winding drum and being adapted and arranged to extend rearward from the machine to an anchor or the like and exert a retarding draft on the outer part of the bed frame, and power actuated driving devices for the said winding drum rotating in a direction to wind up the retarding cable, said devices comprising adjustable yieldable friction parts adapted when tightened to cause rotation of the drum in the direction to wind up the retarding cable and when loosened to permit rotation of the drum in the opposite direction with various degrees of frictional resistance.

5. In a mining machine of the class described, the combination of the bed frame, the cutting apparatus carried thereby, means for moving the frame and cutting apparatus bodily, laterally, along the coal during operation, yielding means for adjustably retarding the advance of the frame, and power actuated devices independent of the feeding devices for causing the retarding devices to bodily move the frame backward while the cutting apparatus is in action.

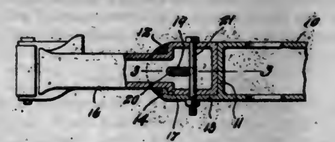
[Claims 6 to 9 not printed in the Gazette.]

1,212,718. DRAFT-EQUALIZER. WILLIAM WELLS, Doland, S. D. Filed Sept. 16, 1916. Serial No. 120,566. (Cl. 21—76.)



A draft equalizer comprising a cross clevis having a double point hitched to a plow, a timber pivoted to one end of the cross clevis and having a long and short end, an equalizing lever pivoted to the short end of the timber and having a long and short end, means for hitching a pair of horses to the short end of the equalizing lever, a balancing bar pivoted at one end thereof to the longest end of the timber, means for pivotally connecting the other end of the bar to the cross clevis, an equalizing lever pivoted to the bar and having a long and short end, means for hitching a pair of draft animals to the short end of the second mentioned equalizing lever, and means for hitching a fifth draft animal to the longer ends of the equalizing levers so that the fifth draft animal will equalize the pull of the remaining draft animals.

1,212,719. DRAW-BAR CONNECTION. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Transom Draft Gear Company, St. Louis, Mo., a Corporation of Delaware. Original application filed Mar. 1, 1915, Serial No. 11,360. Divided and this application filed June 30, 1915. Serial No. 37,199. (Cl. 213—42.)



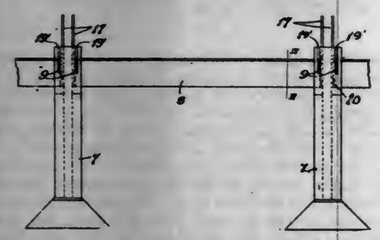
1. In a connection of the class described, a draw bar extension provided at its outer end with a pocket which is open front and top, a coupler shank, the rear end of which fits snugly within said pocket and is movable into

and out of the same by a relative vertical movement between the two parts, and interlocking means for rigidly securing the parts to each other, which interlocking means comprises a transversely disposed member which passes through the coupler shank and through the walls to the sides of the pocket in the draw bar extension, and a vertically disposed member which passes through the coupler shank and through the wall below the pocket in said draw bar extension.

2. In a connection of the class described, a draw bar extension, a pair of vertically disposed side walls integral with the outer end of said extension, a bottom plate connecting the lower portions of said walls, which walls and bottom plate form a pocket open at front and top, a coupler shank the rear end of which fits snugly within said pocket, a transversely disposed key seated in the rear end of the coupler shank and in the walls to the sides of the pocket, and a vertically disposed member passing through the rear portion of the coupler shank and through the bottom plate, which vertically disposed member engages the key to lock the same against withdrawal.

3. In a connection of the class described, a draw bar extension, a pair of vertically disposed side walls integral with the outer end of said extension, a bottom plate connecting the lower portions of said walls, which walls and bottom plate form a pocket open at front and top, a coupler shank the rear end of which fits snugly within said pocket, a transversely disposed key seated in the rear end of the coupler shank and in the walls to the sides of the pocket, the ends of which key are flush with the outer faces of said side walls, and a vertically disposed member passing through the rear portion of the coupler shank and through the bottom plate, which vertically disposed member engages the key to lock the same against withdrawal.

1,212,720. STRUCTURAL SYSTEM. ANSON B. WETHERELL, Pittsburgh, Pa. Filed Mar. 14, 1913. Serial No. 754,285. (Cl. 189—36.)

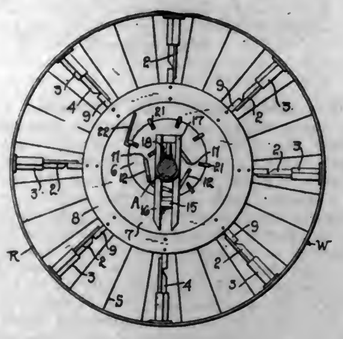


1. In metal structural work, the combination of an upright flanged beam, a laterally extending member carried by a flange of the beam having corrugations adjacent the end supported on the flange, and a laterally extending rider having a corrugated end portion adapted to fit the corrugations on the said member and inserted between the beam and the corrugated end of said member.

2. In metal structural work, the combination of an upright flanged beam, a pair of laterally extending members supported on the flanges of the beam with their ends lying adjacent the beam and provided with corrugations, and a rider provided with a corrugated portion adapted to lie between the beam and the corrugated ends of said members and engage the corrugations thereof, and means for supporting the rider against relative downward vertical displacement.

1,212,721. TRACTOR-WHEEL. ARTHUR T. WILDEY, Honcut, Cal., assignor of one-third to J. B. Johnson, Marysville, Cal. Filed Apr. 3, 1916. Serial No. 88,625. (Cl. 21—210.)

1. In combination with an axle and a traction wheel mounted thereon, a grouter supported by the rim of the wheel and adapted to extend therethrough, an eccentric disk loosely mounted on the axle, means for causing the disk to rotate in unison with the wheel, a second eccentric disk rotatably supported by the first disk, arms carried by one of the eccentric disks and overlying the second eccentric disk, a releasable catch carried by the second eccentric disk and coacting with the arms of the other eccentric disk for holding the disks against relative independent movement in one direction, an annular member rotatably supported by the second disk, and operative connections between the annular member and the grouter.



2. In combination with an axle and a traction wheel mounted thereon, a grouter supported by the rim of the wheel and adapted to extend therethrough, an eccentric disk loosely mounted on the axle, means for causing the disk to rotate in unison with the wheel, a second eccentric disk rotatably supported by the first disk, arms carried by one of the eccentric disks and overlying the second eccentric disk, a releasable catch carried by the second eccentric disk and co-acting with the arms of the other eccentric disk for holding the disks against relative independent movement in one direction, an annular member rotatably supported by the second disk, coacting means carried by the axle and the second disk for causing the annular member to travel in substantially a straight path upon rotation of the first named disk with the wheel, and operative connections between the annular member and the grouter.

3. In combination with an axle and a traction wheel mounted thereon, a grouter supported by the rim of the wheel and adapted to extend therethrough, an eccentric disk loosely mounted on the axle, means for causing the disk to rotate in unison with the wheel, a second eccentric disk rotatably supported by the first disk, an annular member rotatably supported by the second disk, parallel members fixed to the axle and overlying the second disk, a lug carried by the second disk extending between the parallel members whereby the annular member is caused to travel in substantially a straight path upon rotation of the first named disk with the wheel, and an operative connection between the annular member and the grouter.

4. In combination with an axle and a traction wheel mounted thereon, a grouter supported by the rim of the wheel and adapted to extend therethrough, an eccentric disk loosely mounted on the axle, a toothed wheel carried by the wheel and concentric to the axle, a movable pin carried by the disk and adapted to coact with the toothed wheel, means for adjusting the pin into engagement with the toothed wheel, and means under control of the eccentric disk for imparting in and out movement to the grouter.

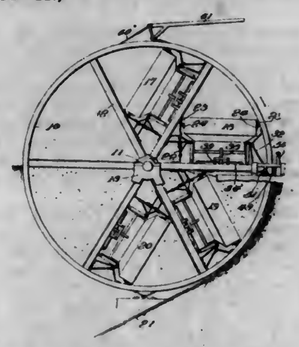
5. In combination with an axle and a traction wheel mounted thereon, a grouter supported by the rim of the wheel and adapted to extend therethrough, an eccentric disk loosely mounted on the axle, a toothed wheel carried by the wheel and concentric to the axle, a movable pin carried by the disk and adapted to coact with the toothed wheel, means for adjusting the pin into engagement with the toothed wheel, said pin being normally out of contact with the toothed wheel, and means under control of the eccentric disk for imparting in and out movement to the grouter.

[Claims 6 and 7 not printed in the Gazette.]

1,212,722. FOOD PRODUCT. RUSSELL WILES, Riverside, Ill. Filed Dec. 26, 1914. Serial No. 879,103. (Cl. 99—5.)

The herein described water-soluble dry food powder consisting of the solid constituents of fermented malt liquor in the quantity and relative proportions which they bear to each other in such liquor, such solid constituents being chemically substantially unchanged, whereby a water solution of the powder, when carbonated, has substantially the original properties of the fermented liquor except for the alcohol content.

1,212,723. COAL-TIPPLE. THOMAS J. WILLIAMS, Coalwood, W. Va. Filed Nov. 16, 1915. Serial No. 61,803. (Cl. 214—11.)



1. A device of the character described including a rotary dumping element, stop mechanism carried thereby for a car upon the said element, stop mechanism for the dumping element, and releasing means for said last mentioned stop mechanism operable by a car moving off of the dumping element and engaging with the said means.

2. A device of the character described including a rotary dumping element, stop mechanism therefor, and means engageable by a series of cars successively discharged from the said element for actuating the said stop mechanism to release the said element by a step by step movement.

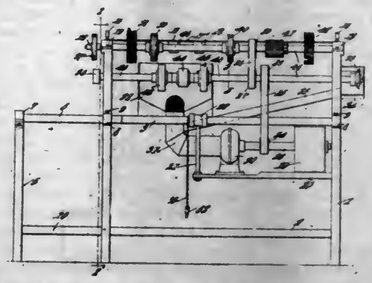
3. A device of the character described including a rotary dumping element, stop mechanism therefor, and means engageable by a car discharged from the said element for actuating the stop mechanism to release the said element with the said stop mechanism normally urged to engage the dumping element for arresting said element in its rotary movement at a predetermined point.

4. A device of the character described including a rotary dumping element, stop mechanism normally urged to engage the said element for arresting the said element in its rotary movement at predetermined points, and means engageable by cars discharged from the said element for actuating the said stop mechanism to release the said element.

5. A device of the character described including a rotary dumping element provided with a platform, stop mechanism carried by the platform and normally urged to active position for engagement with the wheels of a car thereon, means engageable by a car moving onto the platform for shifting the said stop mechanism to inactive position, stop mechanism for the dumping element, and means engageable by a car moving off of the platform for releasing the said last mentioned stop mechanism and freeing the dumping element for rotary movement.

[Claims 6 to 13 not printed in the Gazette.]

1,212,724. SHOE-FINISHING MACHINE. JOSEPH C. WISE, North Yakima, Wash., assignor of one-half to Donald J. Fisher, Portland, Oreg., and one-half to Frank B. Ketchum, North Yakima, Wash. Filed Oct. 30, 1915. Serial No. 58,862. (Cl. 12—1.)



1. A shoe finishing machine embodying a main frame composed of end standards and longitudinal stays connecting them, a stitcher stand embodying a standard and horizontal members attached thereto and slidably engaging one of the standards above the main frame, and means carried by said standard of the main frame for clamping said members.

2. A shoe finishing machine embodying a main frame composed of end standards and longitudinal stays connecting them, and a reversible stitcher stand embodying a standard and horizontal members attached thereto and projecting in one direction therefrom, each of the standards of the main frame having portions for receiving and clamping said members of the stitcher stand.

3. A shoe finishing machine embodying a main frame composed of end standards and a pair of longitudinal stays connecting them between their upper and lower ends, a longitudinal shaft journaled in the standards above said stays and having shoe finishing means thereon, a shelf attached at one end to one standard below said stays, hangers connecting the other end of said shelf and said stays, a motor upon said shelf having a shaft operatively connected with the aforesaid shaft, an exhaust fan mounted upon said shelf and connected to the motor shaft, and a hood coöperable with said shoe finishing means and having a conduit connected to said fan.

1,212,725. MOLD FOR VULCANIZED-RUBBER DENTAL PLATES. GEORGE M. WOLPE, Indianapolis, Ind. Filed Jan. 11, 1915. Serial No. 1,623. (Cl. 18—38.)

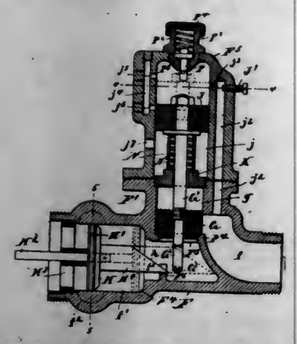
A mold employed for vulcanizing rubber, having its body composed of plaster of Paris and zinc oxid.

1,212,726. LOCOMOTIVE DRIFTING DEVICE. GEORGE W. WYMAN, Wilmington, Del. Filed Apr. 19, 1916. Serial No. 92,120. (Cl. 121—14.)

1. In a device of the character set forth, an auxiliary pipe leading steam from the boiler to the steamchest of an engine, a checkvalve in said pipe actuated by steamchest pressure and adapted to close said pipe, a second checkvalve in said pipe actuated by boiler pressure and adapted to close said pipe, and means operated by the difference in such pressures for automatically closing one of said valves and opening the second when the engine is running, closing said second valve and opening the other when the engine is stopped, and holding both of said valves open when the engine is drifting.

2. In a device of the character set forth, an auxiliary pipe leading steam from the boiler to the steamchest of an engine, a checkvalve in said pipe subject to steamchest pressure and arranged to seat in one direction and close said pipe, a second checkvalve in said pipe actuated by boiler pressure in said pipe and arranged to seat in the opposite direction and close said pipe, and means automatically operated by the difference in such pressures for

closing one of said valves and opening the second when the engine is running, closing said second valve and opening the other when the engine is stopped, and holding both of said valves open when the engine is drifting.



3. In a device of the character set forth, an auxiliary pipe leading steam from the boiler to the steamchest of an engine, a checkvalve in said pipe subject to steamchest pressure and arranged to seat in one direction and close said pipe, a second checkvalve in said pipe of less area than the first, arranged to seat in the opposite direction and close said pipe, and actuated by boiler pressure in said pipe, and means actuated by the closing of said first checkvalve for opening said second checkvalve, and means operated by the difference in effective pressures on said valves for automatically closing the first of said checkvalves and opening the second when the engine is running, closing the second of said checkvalves and opening the first when the engine is stopped, and opening both of said checkvalves when the engine is drifting.

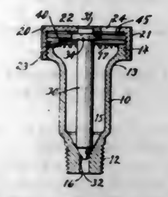
4. In a device of the character set forth, an auxiliary pipe leading steam from the boiler to the steamchest of an engine, a casing in said pipe having two oppositely arranged valveseats therein, a checkvalve on the steamchest side of said casing arranged to coact with one of said seats to close said pipe under steamchest pressure, a second checkvalve on the boiler side of said casing arranged to coact with the other of said seats to close said pipe and operated by boiler pressure, means actuated by the closing movement of said first checkvalve for opening said second checkvalve, yielding means for supporting said second checkvalve in the open position, and means subject to boiler pressure and acting in opposition to said yielding means for closing said second checkvalve.

5. In a device of the character set forth, a casing having a passage therethrough in communication at one end with a steam boiler and at the other with the steamchest of an engine, a vertically movable checkvalve arranged to close said passage from such boiler by a downward movement, a horizontally movable checkvalve arranged to close said passage to such steamchest by a movement toward said vertical valve, a piston carried by said vertical valve and movable vertically in a cylinder in said casing, said cylinder having exhaust ports, and an inlet port in communication with such boiler, said ports arranged to be opened and closed by the movements of said piston, and means carried by said horizontal valve for lifting said vertical valve and piston by the closing movement of said horizontal valve.

[Claims 6 to 14 not printed in the Gazette.]

1,212,727. PRIMING-CUP. OSCAR ZERK, Cleveland, Ohio, assignor, by mesne assignments, to George W. Bowen, Auburn, N. Y. Filed Apr. 3, 1913. Serial No. 758,551. (Cl. 137—4.)

1. In a device of the character described, the combination of a cup having a cavity, a cap threading on the cup and having a central rod secured thereto and coöperating with a seat at the base of the cavity in the cup, and a spring detent carried by the cap within the same and coacting with the cup, substantially as and for the purpose set forth.

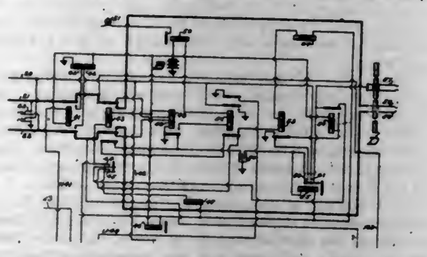


2. In a device of the character described, the combination of a cup having a cavity and having an external thread, a cap having a wall with an internal thread screwing onto the external thread, a central rod rigidly secured to the cap and coöperating with a seat at the base of the cavity in the cup, a washer-like spring surrounding the rod and having a downward projection, and notches in the upper edge of the cup with which such projection may coact.

3. In a device of the character described, the combination of a cup having an external thread and a notched upper edge, a cap having a wall internally threaded and screwing onto the cup, a central rod rigidly secured to the cap and acting as a valve on a seat near the lower end of the cup, a spring within the cap surrounding the rod and rotatable therewith and clamped between a shoulder on the rod and the head of the cap, said spring having a downward projection coöperating with the notches in the upper edge of the cup.

4. In a device of the character described, the combination of a cup having an external thread, a cap having a wall with an internal thread screwing onto the external thread, a central rod having its upper end upset in the cap and coöperating at its lower end with a seat at the base of the chamber in the cup, a spring detent for locking the cap to the cup, comprising a spring clamped by the rod to the head of the cap and rotatable therewith, said spring having a projection and there being notches in the upper edge of the cup with which such projection coöperates.

1,212,728. TELEPHONE-EXCHANGE SYSTEM. WALTER P. ALBERT, Chicago, Ill., assignor, by mesne assignments, to James R. Garfield, trustee, Cleveland, Ohio. Filed Dec. 16, 1912. Serial No. 737,100. (Cl. 179—27.)



1. In a telephone exchange system, the combination of a calling and a called subscriber's station, said calling station being equipped with sending means, automatic switches adapted to be controlled by such sending means for establishing a connection between the calling and called lines, an operator's position, means responsive to the initiation of a call to connect the calling line to such operator's position, and means controlled by the operation of such sending means to prevent the operation of such connecting means.

2. In a telephone exchange system, the combination of a calling and a called subscriber's station, said calling station being equipped with a sending device and the usual switchhook, automatic switches adapted to be controlled by such sending means for establishing a connection between the calling and called lines, an operator's position, means responsive to the operation of the switchhook to connect the calling line to such operator's position, means controlled by the subsequent operation of the sending device to prevent the operation of such connecting means.

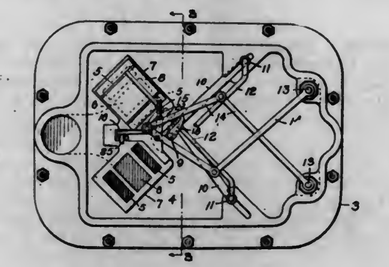
3. In a telephone exchange system, in combination, a calling and a called subscriber's station, automatic switching mechanism, line circuits from said stations terminating in the automatic switching mechanism, means at the calling station for closing a line circuit, a sending device at each station for operating the switching mechanism to interconnect the line circuits, an operator's position, means for connecting the calling line to the operator's position after the line circuit is closed and on a failure to operate said sending device at the calling station, and means accessible to the operator for completing the connection from the calling to the called subscriber.

4. In a telephone exchange system the combination of subscribers' lines, impulse sending means associated with certain of said lines, an operator's position and means for connecting the lines to the operator's position comprising automatic switching mechanism arranged to be rendered active upon origination of a call on one of said lines and on a failure to operate the impulse sending means associated with the line calling and additional means under control of the operator for interconnecting said lines.

5. In a telephone exchange system the combination of calling and called subscribers' lines and stations, impulse sending means associated with the lines and adapted to be actuated by the subscribers, an operator's position and means for connecting a calling subscriber's line to the operator's position comprising special automatic switching mechanism, means for rendering the special automatic switching mechanism active after an interval and upon a failure of the calling subscriber to operate the sending means associated with the calling line, a signal at the operator's position adapted to indicate when a calling subscriber's line becomes connected to the operator's position, and means whereby the operator may complete the connection from the calling to the called subscriber and release the special automatic switching mechanism.

[Claims 6 to 32 not printed in the Gazette.]

1,212,729. GAS-METER. JAMES R. ARMSTRONG, Pittsburgh, Pa., assignor to Equitable Meter Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 31, 1915. Serial No. 42,940. (Cl. 73—1.)



1. In a gas meter, the combination of a valve-actuating crank shaft, a tangent post rotatable with the shaft, means for varying the position of the post relatively to the shaft and a plurality of flag-rods each pivotally connected to the tangent post, whereby adjustment of the post relatively to the crank shaft correspondingly adjusts the connection between said shaft and each of the flag rods.

2. In a gas meter, the combination of a valve-actuating crank shaft, a tangent post, a tangent post support adjustably secured to said shaft, support adjusting means, and a plurality of flag rods each pivotally connected to the post, whereby adjustment of the post support relatively to the crank shaft correspondingly adjusts the connection between said shaft and each of the flag rods.

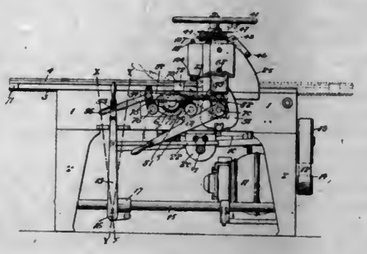
3. In a gas meter, the combination of a valve-actuating crank shaft, a tangent post, a post support secured to the shaft and also movable relatively thereto in direction to at once change the angular position of the post and to vary the distance between the post and shaft, support moving means, and a plurality of flag rods each pivotally connected to the post, whereby movement of the post support relatively to the crank shaft correspondingly varies the connection between the shaft and each flag rod.

4. In a gas meter, the combination of a meter casing having an opening through which an adjusting tool may be entered, a valve-actuating crank shaft, a tangent post movable with and adjustable relatively to the crank shaft, stop means for holding the shaft against backward movement, and post adjusting means accessible through the casing opening when the shaft is being held against backward movement.

5. In a gas meter, the combination of a meter casing having an opening through which an adjusting tool may be entered, a valve-actuating crank shaft, a tangent arm rotatable with the shaft and a tangent post carried by the arm, a stop device in the path of the arm and adapted to be displaced by forward movement of the arm but adapted to prevent backward movement thereof, the post being adjustable relatively to the crank shaft, and post adjusting means rotatable with the shaft and having position accessible through the casing opening when the tangent arm is being held against backward movement by the stop device.

[Claims 6 to 11 not printed in the Gazette.]

1,212,730. PRINTING-PLATE-SHAVING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed July 21, 1909. Serial No. 508,866. (Cl. 90—25.)



1. In a machine of the character described, a knife carrying head, head raising and lowering mechanism, a reciprocating bed, a brake therefor, brake applying mechanism and a common manually operated lever connected to both the head raising and lowering mechanism and the brake applying mechanism for operating them.

2. In a machine of the character described, a knife carrying head, head raising and lowering mechanism, a reciprocating bed, a brake therefor, brake applying mechanism, means controlled by the bed for automatically operating the brake applying mechanism as the bed reaches predetermined points in its reciprocatory movements, and a manually operated lever connected to the head raising and lowering mechanism and to the brake applying mechanism.

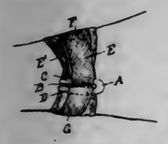
3. In a machine of the character described, a knife carrying head, head raising and lowering mechanism, a reciprocating bed, a brake therefor, brake applying mechanism, means controlled by the bed for automatically operating the head raising and lowering mechanism and the brake applying mechanism as the bed reaches predetermined points in its reciprocatory movements, and a manually operated lever connected to the brake applying mechanism.

4. In a machine of the character described, a knife carrying head, head raising and lowering mechanism, a reciprocating bed, a brake therefor, brake applying mechanism, means controlled by the bed for operating the head raising and lowering mechanism and the brake applying mechanism as the bed reaches predetermined points in its reciprocatory movements and a manually operated lever connected to the head raising and lowering mechanism and to the brake applying mechanism.

5. In a machine of the character described, a knife carrying head, head raising and lowering mechanism, a reciprocating bed, a motor for driving it, and means controlled by the bed for automatically operating the head raising and lowering mechanism and stopping the motor as the bed reaches predetermined points in its reciprocatory movements.

[Claims 6 to 18 not printed in the Gazette.]

1,212,731. SURGICAL BANDAGE AND FASTENER THEREFOR. RENVE H. BANKS, Pittsburgh, Pa. Filed July 10, 1916. Serial No. 108,471. (Cl. 128—3.)



1. A fastener for surgical bandages comprising a substantially flat plate-like device slotted inwardly at one end to form parallel arms with the arms tapering in width toward the open end of the slot and formed with pointed extremities to facilitate entering the arms beneath the folds of the bandage, the inner edge of one arm being smooth and the inner edge of the other arm shaped to obtain a biting hold on the bandage, for the purpose described.

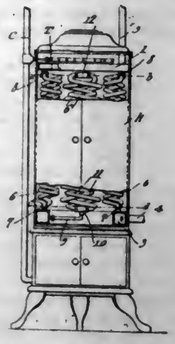
2. A surgical bandage fastener consisting of a member providing an end finger hold by which the member can be grasped and inserted in, removed from, slipped along and reversed on the bandage; said member embodying elongated thin flat longitudinal arms having their free ends reduced for easy insertion between plies of the bandage, one of said arms formed to permit free sliding contact with the bandage and the other arm having its longitudinal edge formed to bite and hold the bandage ply engaged thereby.

3. A surgical bandage adjusting and holding device consisting of a longitudinally-elongated approximately U-shaped comparatively-thin blade-like member the closed end of which forms a finger hold, the free ends of both arms of the member being reduced for insertion between different plies of the bandage.

4. A fastener for adjusting and holding a surgical bandage wrapped on a bandaged part, said fastener consisting of a member providing an end finger hold and two elongated flat blade-like longitudinal arms spaced apart to provide an intervening slot to receive the looped free end as well as an inner ply of the bandage, one of said arms formed to extend through the looped free end of the bandage to exert pull on the bandage in the direction in which it is wrapped around the bandaged part, the other arm having its free end shaped for ready insertion beneath a ply of the bandage and having its longitudinal edge formed to permit movement beneath said ply in the direction in which it is wrapped and to bite into the bandage against movement in the opposite direction, substantially as described.

1,212,732. FLUID-HEATER. ADOLF BELER, Pittsburgh, Pa. Filed Nov. 12, 1915. Serial No. 61,130. (Cl. 122—249.)

1. A fluid heater including a ring-like fluid receptacle, a circular series of coils in communication with said receptacle, said coils being disposed in pairs, the coils of each pair interfitting, centrally disposed coils surrounded by said series of coils and communicating with the receptacle, all of the coils overhanging the opening surrounded by the receptacle.

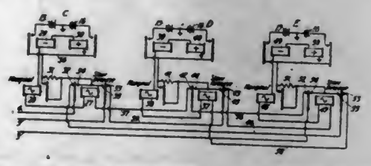


2. A fluid heater including a ring-like fluid receptacle having a space therethrough for the passage of hot products of combustion, a circular series of coils connected to the receptacle, said coils being arranged in pairs, the coils of each pair interfitting, a coil supported at the center of the space surrounded by the receptacle and communicating with the receptacle, and means for directing fluid to and from the receptacle and coils.

3. A fluid heater including a fluid receptacle having a space extending therethrough for the passage of hot products of combustion, a circular series of coils communicating with the receptacle, said coils being arranged in pairs, the coils of each pair interfitting, a central coil communicating with the receptacle and surrounded by said circular series of coils, all of the coils overhanging the space for direct contact with the hot products of combustion flowing through the space.

4. A fluid heater including a casing, a fluid receptacle in the upper portion thereof and having vent openings therethrough for products of combustion, a ring-like fluid receptacle in the lower portion of the casing, a circular series of coils interposed between and communicating with the receptacles, said coils being arranged in pairs, the coils of each pair interfitting, and a coil interposed between the receptacles and surrounded by said circular series of coils, all of said coils overhanging the space surrounded by the ring-like receptacle and all of the coils communicating with both of the receptacles.

1,212,733. TELEGRAPH SYSTEM. JOHN H. BELL, East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 16, 1916. Serial No. 97,762. (Cl. 178—73.)



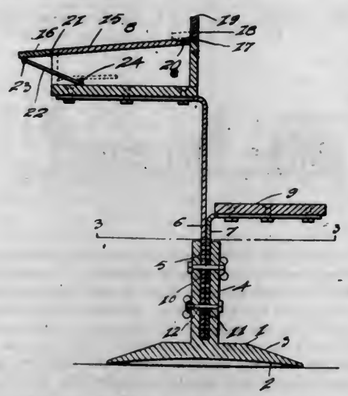
1. In a telegraph repeating system, sources of current, a plurality of line sections, a plurality of line relays for each one of said line sections for repeating telegraphic signals respectively into the other ones of said line sections, and a repeating line relay for each line section adapted to remain inert when traversed by signal impulses of strengths less than a predetermined amount and to respond only to currents in excess of the predetermined strength.

2. In a telegraph repeating system, sources of current, a plurality of line sections, a plurality of line relays for each line section to repeat telegraphic signals respectively from one line into the other lines, a current strength regulating means for each line section, and a line relay for each line section to control the operativeness of said regulating means.

3. In a telegraph repeating system, sources of current, a plurality of line sections, a plurality of line relays for each one of said lines for respectively repeating telegraphic signals from any one of said lines into the other lines, an additional line relay for each of said line sections inert under current of one strength but operative under currents of another strength, and means controlled by the last mentioned relay to respectively cause the strength of repeated currents to correspond with the strength of the current received through said additional relay.

4. In a telegraph repeating system, sources of current, a plurality of line relay groups each comprising a universal current slow-release relay, a universal current marginally adjusted relay and a plurality of polarized relays, a line section for each of said relay groups, contacts operated by the switching relay of any group to disable the relays of the other groups and to join the line sections of the disabled groups one with another, contacts operated by the poralized relays for including said sources of current with said joined line circuits, a resistance unit for each relay group included in the path by which current from said sources may reach the joined line circuits, and contacts operated by said marginally adjusted relay for controlling the operativeness of said resistance unit.

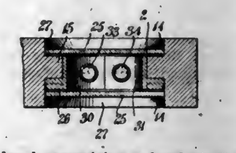
1,212,734. COMBINED DESK AND SEAT. BENJAMIN K. BLOOMFIELD, Brady, Tex., assignor of one-half to George P. Callan, Brady, Tex. Filed Nov. 20, 1915. Serial No. 62,554. (Cl. 155—34.)



A combined desk and seat including a base having a standard provided with a socket, vertically adjustable bars or members arranged in the said socket and having oppositely extending arms, a desk carried by one of the bars or members, a seat mounted on the other bar or member and reversely arranged fastening devices piercing the standard and the said bars or members common to the same for securing the said bars or members in their vertical adjustment.

1,212,735. SPIRIT-LEVEL. CHRISTIAN BODMER and ALBERT W. RITTER, New Britain, Conn., assignors to The Stanley Rule and Level Company, New Britain, Conn., a Corporation of Connecticut. Filed May 31, 1916. Serial No. 100,749. (Cl. 33—211.)

1. A spirit level comprising a level stock having a bore therethrough and supporting webs in said bore, a tube support seated in said bore and having a flange bearing on the webs aforesaid, fastenings extending through said flange into the webs, cover plates engaging the ends of the tube support and fastenings engaged in the level stock and confining said cover plates to the ends of the tube support.



2. A spirit level comprising a level stock having a bore therethrough and supporting webs in said bore, a tube holder having a supporting flange disposed intermediate the ends of the same and bearing on the supporting webs aforesaid and securing means extending through the supporting flange into the supporting webs having head portions disposed below the plane of the adjacent end of the tube holder and cover plates engaging the ends of said tube holder.

3. A spirit level comprising a level stock counterbored from opposite sides to thereby leave a supporting web in the bore thus provided, said web being recessed at opposite points to separate said web into oppositely disposed supporting shelves, an annular tube holder having a flange resting on said oppositely disposed supporting shelves and bosses received in the recesses between said shelves and a spirit tube mounted in said bosses in the annular support.

4. A spirit level comprising a level stock counterbored from opposite sides to thereby leave a supporting web in the bore thus provided, said web being recessed at opposite points to separate said web into oppositely disposed supporting shelves, an annular tube holder having a flange resting on said oppositely disposed supporting shelves and bosses received in the recesses between said shelves, a spirit tube mounted in said bosses in the annular support, the supporting flange of said tube holder being disposed intermediate the ends of the annular portion of said holder, securing means extended through the supporting flange into the shelves having head portions disposed below the plane of the adjacent end of the annular member and cover plates engaging the ends of said annular portion of the tube holder.

5. In combination with a level stock having a bore therethrough and supporting webs at opposite sides of said bore, a tube holder seated in said bore having a flange bearing on said supporting webs and provided with elongated openings therethrough, fastenings passed through said elongated openings into the supporting webs and raised shoulders on said tube holder arranged to be engaged by a tool for shifting said holder relatively to said fastening means.

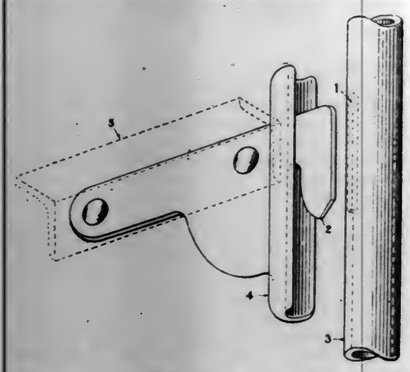
[Claim 6 not printed in the Gazette.]

1,212,736. METAL-BED FASTENING. WILLIAM T. BONNER, San Francisco, Cal. Filed Feb. 23, 1912. Serial No. 679,524. (Cl. 5—55.)

1. In combination with a hollow metal bed post having a vertical slot and a side rail, a vertical member connected to the side rail and having two opposed relatively long continuous vertical bearing edges which are adapted to engage the periphery of the bed posts throughout their length and at two spaced points, and directly at the front face or portion of the bed post whereby the member can be applied to posts of varying diameters and regardless of the diameter will still engage the front face of the post, and a hook connected to the member and adapted to engage in the slot of the bed post to draw said spaced vertical edges against the periphery of the bed post.

2. In combination with a hollow metal bed post having a vertical slot and a side rail, a member connected to said side rail having an outwardly inclined hook connected thereto adapted to draw the member and the bed post together forcibly when the hook is forced against the lower edge of said slot, and a crescent shaped shoulder carried by said member having arms with rounded ends

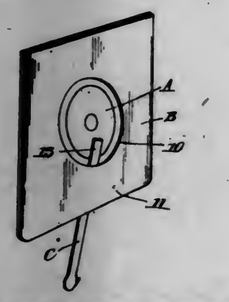
projecting toward and contacting with the outer face of the bed post, said shoulder being long relatively to said hook and being arranged vertically and the radius of curvature of said shoulder on the side toward the bed post being less than the radius of curvature of the post whereby the shoulder contacts with the post only at its ends along two vertical lines and whereby the shoulder is adapted to coöperate with posts of different diameters.



3. In combination with a hollow metal bed post having a vertical slot, of a member for connection to said side rail having an outwardly inclined hook united therewith adapted to draw the members and the bed post together forcibly when the hook is forced against the lower edge of said slot, said member having a crescent shaped shoulder thereon, said shoulder having arms with rounded ends projecting toward and contacting with the front outer face only of the bed post, the distance between the lines of contact of said arm with the post being materially less than the diameter of the post and said shoulder extending above the hook, the distance between the throat of the hook and the top of the bearing being greater than the length of the hook.

4. As an article of manufacture, a member for connecting the hollow metal bed post with a side rail of a bed, said member comprising in combination an outwardly inclined hook, a crescent shaped portion rigid with said hook having rounded ends for engaging with the front outer face of the bed post, said crescent shaped shoulder extending above the throat of the hook a distance greater than the length of the hook.

1,212,737. DEVICE FOR RIFLE AND MACHINE-GUN INSTRUCTION. JAMES ROBERT BOWEN, Ottawa, Ontario, Canada. Filed May 15, 1916. Serial No. 97,693. (Cl. 35—12.)



1. A device for rifle and machine gun instruction comprising a miniature target, an element associated therewith adapted to represent the rear sight of a rifle or machine gun, and a movable element movable over the target and adapted to represent the fore sight of the rifle or machine gun.

2. A device for rifle and machine gun instruction comprising a casing having an aperture therein designed to represent the rear sight of a rifle or machine gun, a miniature target removably held in the casing and a member adapted to be inserted in the casing and over the face of the target having the ends shaped to represent the fore sight of a rifle or machine gun.

1,212,738. LIQUID COATING COMPOSITION. ARTHUR L. BROWN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 10, 1914. Serial No. 876,437. (Cl. 134—26.)

1. A liquid coating composition containing a phenolic condensation product and a greater portion of a drying oil.

2. A liquid coating composition containing a phenolic condensation product and an amount of Chinese wood oil, greater than that required to catalytically produce the said condensation product.

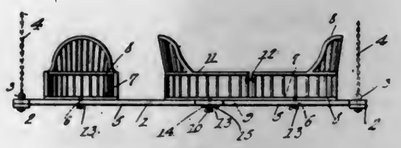
3. A liquid coating composition containing a phenolic condensation product, a drier, and a drying oil, the drying oil being present in greater proportion than the condensation product.

4. A liquid coating composition containing a phenolic condensation product, Chinese wood oil and a drier, the Chinese wood oil being present in greater proportion than the condensation product.

5. A liquid coating composition containing a phenolic condensation product, a drying oil, and a lead-manganese drier.

[Claims 6 to 27 not printed in the Gazette.]

1,212,739. SWING. LUCIOUS D. BURLINGHAM, Hubbard, Ohio. Filed Dec. 30, 1914. Serial No. 879,750. (Cl. 155—35.)



The combination with a support and a means for mounting the support for swinging movement, of a pair of end chairs and an intermediate chair carried by the support, all of the chairs including arms; means for mounting all of the chairs on the support for rotation on vertical axes, whereby the arms of the intermediate chair may be made to coöperate with the arms of either end chair to form a crib, and whereby the remaining chair will form an operator's chair; and means for locking the intermediate chair to either end chair when the arms of the intermediate chair and the arms of either end chair coöperate to form a crib.

1,212,740. METAL CORNER-BEAD. NORRIS ELMORE CLARK, Plainville, Conn. Filed May 17, 1912. Serial No. 698,078. (Cl. 72—121.)

1. A corner bead formed of a strip of metal and having a rounded outer edge, spaced lugs projecting rearwardly from said rounded outer edge and bendable attaching arms cut longitudinally from the edge portions of the strip between the positioning lugs, each of said arms being integrally united with a lug at one end and free from said strip for the rest of its length, said arms being folded back against the lugs and flaring outwardly therefrom to provide a corner receiving angle in rear of the said lugs, and the sides of the bead in rear of the outer edge thereof being indented to provide shoulders and lateral channels.

2. A corner bead formed of a strip of metal and having a rounded outer edge and rearwardly projecting spaced lugs and arms cut from the sides of the strip and folded over against the lugs and flaring outwardly and leaving openings for the plaster, the sides of the bead being bent inward slightly in rear of the edges so as to form lateral channels and longitudinally extending side wires secured to the outer ends of the arms.

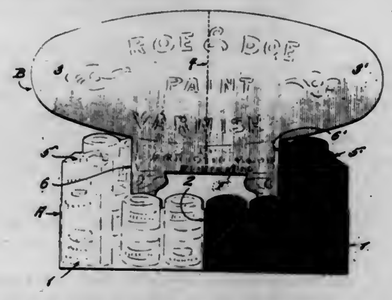


3. A corner bead formed of a strip of metal and having a rounded outer edge and rearwardly projecting spaced lugs and arms cut from the sides of the strip and folded over against the lugs and flaring outwardly and leaving openings for the plaster, the sides of the bead being bent inward slightly in rear of the edges so as to form lateral channels and longitudinally extending side wires secured to the outer ends of the arms by means of tangs cut from the arms and curled around the wires.

4. A corner bead comprising a body portion and arms cut out longitudinally from the side of the body portion, said arms being bent backward substantially at right angles to the front edge of the body portion and extending on divergent lines in rear of the body portion, and said arms being narrowed at their point of attachment to the body portion to facilitate bending of the same.

5. In a corner bead construction, a folded body having its central portion formed to constitute an edge protecting member and having projecting side portions with small integral tangs punched therefrom adjacent the rear edges thereof whereby other members may be secured to said parts by means of said tangs, the bending outward of said tangs leaving small holes in said parts suitable for the reception of fastening nails.

1,212,741. ADVERTISING DEVICE. PAUL COMPTON, St. Louis, Mo. Filed June 5, 1916. Serial No. 101,763. (Cl. 40—126.)



1. In a foldable device of the character described, a base section provided with diverging board members, said diverging board members being hinged together and having rear vertical extensions, and an upper board section extending across said base section, the vertical extensions of the diverging board members of the base section being hinged to said upper board section.

2. In a foldable device of the character described, a substantially V-shaped base display section comprising a pair of board members hinged to each other at the front of the device, and an upper display section extending across said substantially V-shaped base section and hinged to each of said board members, said upper section comprising a pair of board members hinged together at a point to the rear of the apex of the base section.

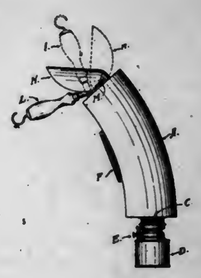
3. In a device of the character described, a foldable base section comprising diverging board members, a foldable upper section extending across said base section, said upper section comprising board members hinged to each other and secured to the diverging board members of the base section, and means for preventing the board members of the upper section from turning on their hinge, thereby retaining all of said board members in their unfolded positions.

4. In a foldable device of the character described, a base section, an upper section supported by said base section, said upper section including board members hinged to each other; and a retaining flap hinged to said board members, said retaining flap being adapted to lie at an angle to the axis of the hinge of the board members so as to retain the device in its unfolded condition.

5. In a device of the character described, a foldable base section comprising diverging board members, a foldable upper section extending across said base section, said upper section comprising board members hinged to each other and secured to the diverging board members of the base section, and means for preventing the board members of the upper section from turning on their hinge, thereby retaining all of said board members in their unfolded positions, said means including a flap secured to said upper section at points on opposite sides of the axis of the last mentioned hinge and adapted to lie at an angle to said axis.

[Claim 6 not printed in the Gazette.]

1,212,742. VULCANIZER. CHARLES LOUIS COOPER, Moran, Kans. Filed Aug. 11, 1916. Serial No. 114,370. (Cl. 18—18.)

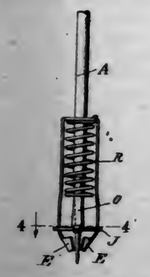


The combination in a vulcanizer of an inside form an outside form and a tube surface, in one body, having the heater attached direct.

1,212,743. SCREW-HOLDING DEVICE. JOHN W. COWELL, Chicago, Ill. Filed Jan. 14, 1916. Serial No. 72,125. (Cl. 145—52.)

A removable screw driver attachment, comprising a collar having a pair of projecting screw engaging arms, a slotted disk through which the shank portion of the

screw driver and said arms are adapted to pass, hinged fingers upon said disks projecting toward the collar, and a



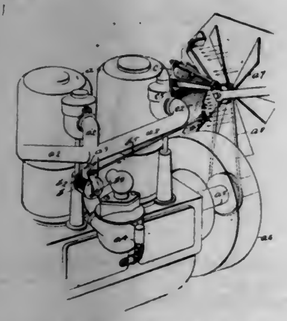
coiled spring about said fingers and designed to bear against the collar.

1,212,744. FOUNTAIN-PEN. SETH S. CROCKER, Wollaston, Mass. Filed Feb. 12, 1916. Serial No. 78,001. (Cl. 120—46.)



A fountain-pen comprising a pen-barrel having a pen section in one end, and an opening in its opposite end, an elastic ink sack in the barrel connected to said pen section, a presser-bar arranged at one side of said sack, a supporting bar connected to said presser-bar adjacent the pen section end of the barrel, and extending to the opposite end thereof, and an operating lever connected at an intermediate point therein to said supporting bar and having its opposite portions extending at an angle to each other, one portion through the open end of the barrel, and the other into engagement with said presser-bar between the point of connection of the supporting bar therewith and its opposite end.

1,212,745. AIR-INTAKE. SAMUEL CLARK CROCKETT, Bozeman, Mont., assignor to Fred Leathers, Howard, Pa. Filed May 20, 1914. Serial No. 839,848. (Cl. 123—123.)



1. The combination with a gas or oil engine provided with a plurality of cylinders, a manifold intake, a carbureter, a crank-shaft, and a fan actuated thereby; of auxiliary air supply means to said cylinders, and means actuated by said fan to control said auxiliary air supply.

2. The combination with a gas or oil engine provided with a plurality of cylinders, a manifold intake, a carbureter, a crank-shaft, and a fan actuated thereby; of a valve in said manifold, said manifold having a port adapted to be closed by said valve, means actuated by said fan to control said auxiliary air supply, and means for returning said valve to normal position after having been moved therefrom.

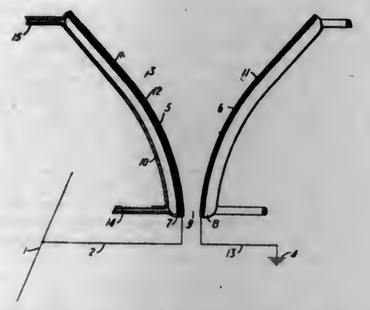
3. The combination with a gas or oil engine provided with a plurality of cylinders, a manifold intake, a carbureter, a crank-shaft, and a fan actuated thereby; of a valve in said manifold, said manifold having a port adapted to be closed by said valve, and a pivotally mounted vane in operative connection with said valve and in the path of the air forced through said fan whereby said vane is moved to control said auxiliary air supply.

4. The combination with a gas or oil engine provided with a plurality of cylinders, a manifold intake, a carbureter, a crank-shaft, and a fan actuated thereby; of a valve in said intake, said manifold having a port adapted to be closed by said valve, a pivotally mounted vane in operative connection with said valve and in the path of the air forced through said fan, whereby said vane is moved to control said valve and the auxiliary air supply, and means for adjusting said vane.

5. In an internal combustion engine having an air circulating fan, the combination of an intake manifold for supplying combustible mixture to the engine, of means for regulating the ingredients of the mixture, said means including a valve, a vane pivotally mounted and which is adapted to be actuated by air currents produced by said fan, and operative connections between said valve and said vane.

[Claims 6 to 9 not printed in the Gazette.]

1,212,746. LIGHTNING-ARRESTER. DAVID C. DAVIS, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 29, 1915. Serial No. 24,722. (Cl. 175—30.)



1. A horn-gap discharge terminal comprising an elongated member of magnetizable material, and a high-resistance and refractory conductor disposed thereupon but insulated therefrom, said refractory conductor constituting the discharge terminal.

2. A horn-gap discharge terminal comprising an elongated tubular member of magnetizable material, said tubular member having inlet and outlet openings for the circulation therethrough of cooling fluid, and a high-resistance refractory conductor disposed longitudinally thereon but insulated therefrom, said high-resistance conductor constituting a portion of the discharge terminal.

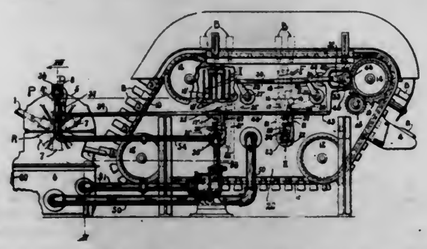
3. A lightning arrester comprising diverging terminal members of magnetizable material, and a refractory conductor of high specific resistance disposed on the arcing surface of each of said terminal members but insulated therefrom, said high resistance conductors constituting the discharge terminals for the arc.

4. A lightning arrester comprising diverging terminal members of magnetizable material and tubular form, said tubular members being provided with inlets and outlets for the circulation therethrough of cooling fluid, and refractory conductors of high specific resistance disposed on the arcing surfaces of said terminal members, said high-resistance conductors constituting the discharge terminals for the arc.

5. The combination with electric circuit conductors, of a lightning arrester which affords circuit connections between the same and ground, said lightning arrester comprising diverging terminal members of magnetizable material, and a refractory conductor of high specific resistance disposed on the arcing surface of each of said terminal members but insulated therefrom, said high-resistance conductors constituting the discharge terminals for the arc, whereby the resistance of the ground circuit is caused to increase after the occurrence of a disruptive discharge.

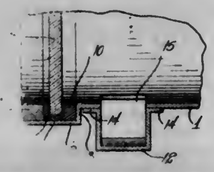
[Claims 6 and 7 not printed in the Gazette.]

1,212,747. BOTTLE-WASHING APPARATUS. JOSEPH W. DAWSON, St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed May 24, 1915. Serial No. 30,008. (Cl. 141—7.)



A bottle washing apparatus comprising a device for washing the outer faces of the bottles, a water receiver adapted to receive the water which passes from said device, a pair of bottle washing devices adapted to wash the inner faces of the bottles, a reservoir common to said pair of bottle washing devices adapted to receive the water which passes from the interior of the bottles, an overflow pipe for conducting water from said reservoir to said water receiver, and means for forcing water from said water receiver to one of the pair of bottle washing devices and also to the device for washing the outer faces of the bottle.

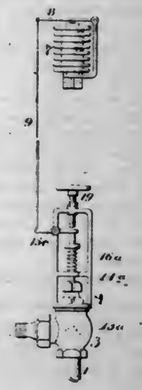
1,212,748. HEADLIGHT. JAMES C. DAY, Montpelier, Ohio. Filed Apr. 20, 1916. Serial No. 92,505. (Cl. 240—41.)



1. In a headlight, the combination with a cylindrical body having an enlarged annular end connected by an annular wall to the body, a glass panel arranged in the enlarged end and slightly less in diameter than the enlarged end, a cushioning ring of the same width as the thickness of the panel, said ring surrounding the periphery of the panel whereby the expansion of the panel is permitted, the edge of said panel being spaced away from the said connecting wall for providing an annular space in said enlarged end, an annular gasket of resilient material arranged in the said space for relieving said panel of lateral vibration, and a closure for the enlarged end for holding said panel in proper position in said enlarged end.

2. In a headlight, the combination with a cylindrical body having an enlarged annular end connected by an annular wall to the body, a glass panel arranged in the enlarged end and slightly less in diameter than the enlarged end, a cushioning ring of the same width as the thickness of the panel, said ring surrounding the periphery of the panel whereby the expansion of the panel is permitted, the edge of said panel being spaced away from the said connecting wall for providing an annular space in said enlarged end, an annular gasket of resilient material arranged in the said space for relieving said panel of lateral vibration, a closure for the enlarged end for holding said panel in proper position in said enlarged end, and an elastic ring carried by said closure and of the same inner and outer diameter as the said annular gasket, said elastic ring contacting with the panel when said closure is closed for aiding said gasket in relieving the vibration of said panel and for permitting the easy extraction of said panel when said closure is open.

1,212,749. STEAM-HEATING SYSTEM. JOHN B. DOBSON, Atlanta, Ga., assignor to Warren Webster & Company, a Corporation of New Jersey. Filed May 3, 1913. Serial No. 765,204. (Cl. 236—6.)



1. In a heating system, the combination of a radiator, with a steam supply valve having a spring actuated valve piece upon the radiator to mechanically tend to vary the admission of steam to the radiator, a thermostatically operated motor device at a distance from the radiator, a guiding device fixed to the radiator in horizontal alinement with the valve, connecting means between the thermostatically operated motor device and the spring actuated valve piece consisting of a flexible cable guided about the guiding device to pull in a horizontal direction upon the valve whereby the action of the spring is opposed and controlled to overcome in an automatic manner to change the supply of steam to the radiator to suit the requirements of the changing temperature of the room, and hand operable means for opening or closing the valve independently of the automatic means.

2. In a heating system, the combination of a radiator, with a steam supply valve having a spring actuated valve piece to mechanically tend to reduce the admission of steam to the radiator, a hand operated part on the supply valve to manually adjust the normal opening of the valve to be permitted and to shut off all supply of steam at will, a thermostatically operated motor device at a distance from the radiator, and connecting means between the thermostatically operated motor device and hand adjusting part of the spring actuated valve piece whereby the action of the spring is continually opposed and controlled or overcome in an automatic and continuous manner to reduce the supply of steam to the radiator gradually and to such extent only to suit the requirements of the changing temperature of the room, said automatic adjustment of the valve piece being impressed upon the valve as a

whole in addition to the manual adjustment and to partially close the valve only at any time.

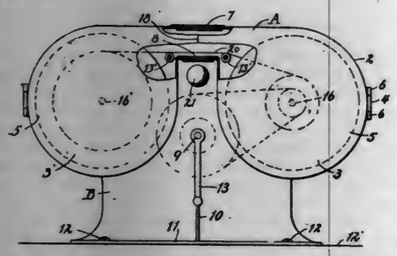
3. In a heating system, the combination of a radiator, a valve for supplying steam thereto having a movable valve piece, a spring to move the valve piece to increase the supply of steam to the radiator to a maximum, a thermostatic motor at a distance from the radiator, means connecting the thermostatic motor with the valve piece to automatically oppose the action of the spring above the normal temperature required and vice versa to reduce the steam supply from a maximum to minimum normal supply, and hand operated means independent of the spring and motor for adjusting the normal maximum permissible opening of the valve while maintaining the automatic control thereof and also for fully closing the valve to shut off the steam supply without affecting the thermostatic motor and its connections.

4. The combination of a radiator, a steam supply globe valve therefor having a rotatable valve stem, hand operable means for rotating the valve for more than one revolution, a spring constantly acting to rotate the stem in one direction to open the valve, a thermostatic motor at a distance from the valve, a flexible connection between the thermostatic motor and valve stem to rotate it in opposition to the spring to reduce the supply of steam but not close the valve, means between the valve stem and flexible connection to permit the hand adjustment of the stem to close the valve, and means for guiding the flexible connection.

5. The combination of a radiator, a steam supply valve therefor having a rotatable stem and valve piece, an arm frictionally held to the rotatable stem whereby the valve piece may be adjusted upon the stem, a spring constantly acting on the arm to rotate the stem in one direction, means to limit the movement of the arm, a thermostatic motor, and a connection between the motor and the arm whereby the latter is moved in opposition to the spring when the temperature adjacent to the motor is too high and vice versa.

[Claims 6 and 7 not printed in the Gazette.]

1,212,750. FIREPROOF FILM-REWINDER. WALTER E. EGGLESTON and LEON L. CHAUNCEY, Binghamton, N. Y. Filed Aug. 7, 1915. Serial No. 44,352. (Cl. 242—55.)

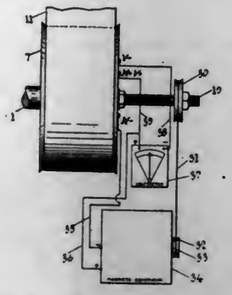


1. In a device of the class described, a casing open at its front and formed with two chambers each adapted to receive a film reel, said chambers being connected together at their upper ends by a narrow passageway, said passageway conducting the film from one reel to the other, anti-friction rollers at each end of the passageway, and a pair of hinged doors for closing the open end of the chambers, said doors being provided with extensions to close the open end of the narrow passageway.

2. In a device of the class described, a casing open at its front and formed of two spaced chambers connected together at their upper ends by a narrow passageway, said chambers being adapted to receive the film reel and the passageway serving to conduct the film from one reel to the other, alining sight openings in the top and bottom walls in the passageway, and illuminating means beneath the sight openings and disposed in the space between the two chambers.

3. In a device of the class described, a casing open at its front and formed with two spaced chambers each adapted to receive a film reel, said chambers being connected at their open ends by a narrow passage way, said passage way conducting the films from the reel in one chamber to the reel in the other chamber; a pair of hinged doors for closing the open fronts of the chambers, said doors being provided with meeting extensions to close the open front of the narrow passage way.

1,212,751. TRANSMISSION-DYNAMOMETER. FRANCIS DEWEY EVERETT, Saranac Lake, N. Y. Filed Dec. 13, 1915. Serial No. 66,431. (Cl. 73—15.)



1. A transmission dynamometer, comprising a direct current magneto generator, a shaft in which the power is to be measured, means for driving said generator from said shaft, means for producing relative motion between two devices connected with said shaft, proportional to the torque in said shaft, and said two devices, and a voltmeter for the reading of the horsepower transmitted, and a resistance coil, and electrical circuits connecting said resistance coil and said magneto generator in series, and connecting said voltmeter, to measure the voltage drop in a variable portion of said resistance coil, by means of a moving contact, whose movement, relative to the resistance coil, is controlled by the two devices above mentioned.

2. A transmission dynamometer, comprising a direct current magneto generator, a shaft in which the power is to be measured, means for driving said generator from said shaft, means for producing relative motion between two devices connected with said shaft, proportional to the torque in said shaft, and said two devices, and a fixed resistance coil, and a contact, forming an electrical connection, whose position on the resistance coil is controlled by the mechanical connection of said contact and said resistance coil to the two devices above mentioned, and a voltmeter for the reading of the horsepower transmitted, and electrical circuits, connecting said resistance coil's terminals to those of said magneto generator, and connecting said voltmeter to a terminal of said resistance coil and to said contact.

3. In a transmission dynamometer, or apparatus for measuring power transmitted in a shaft, a direct current magneto generator, giving a voltage proportional to its speed, and driven from the shaft in which the power is to be measured, and said shaft, and means for driving said generator from said shaft, and mechanical means producing relative motion between two devices on said shaft, proportional to the torque in said shaft, and said two devices, and a fixed resistance coil, attached to one of said two devices, and a contact bearing on said resistance coil and attached to the other of said two devices, and a voltmeter for the reading of the horsepower transmitted, and electrical circuits connecting said resistance coil in a closed loop with the armature of said magneto generator, and connecting said voltmeter in shunt with the variable portion of said resistance coil.

4. A transmission dynamometer, comprising a shaft driven from a pulley, or other source of rotating power.

by means of springs, and said springs, a contact, and a resistance coil, mechanically connected, one to said driven shaft, and the other to said pulley, or other source of rotating power, so that a relative movement is produced between said contact and said resistance coil, depending on the change in said springs, due to the force transmitted through them to said driven shaft, and a direct current magneto generator, whose armature is set in rotation through mechanical connections to the driven shaft, and said connections, and electrical connections between said resistance coil and said magneto generator, forming a closed circuit of fixed resistance, and an electrical measuring instrument, electrically connected between one terminal of the above mentioned resistance coil and the sliding contact, and said electrical connections, said measuring instrument to indicate a value bearing a constant relation to the product of the speed of rotation of the driven shaft, and the torque in said shaft, irrespective of how the speed of one, or the other, or both may vary.

1,212,752. FLOATING FLY OR BAIT. JOHN P. FIEHIG, Candor, N. Y. Filed May 18, 1916. Serial No. 98,304. (Cl. 43—30.)



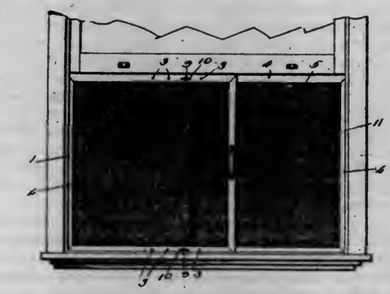
1. In a floating fly or artificial bait—a fly body composed of kapok and bound to the hook with strands or threads of kapok and silk.

2. In a floating fly or artificial bait, a body portion composed entirely of kapok and bound with any suitable material.

3. In a floating fly or artificial bait, a fly or body portion composed of kapok.

4. In a floating fly or artificial bait, a fly or body portion composed of kapok and which body portion is bound to the hook by strands composed of the same substance.

1,212,753. WINDOW-SCREEN. SIDNEY FISHER, West Danby, N. Y. Filed May 8, 1916. Serial No. 96,149. (Cl. 156—38.)

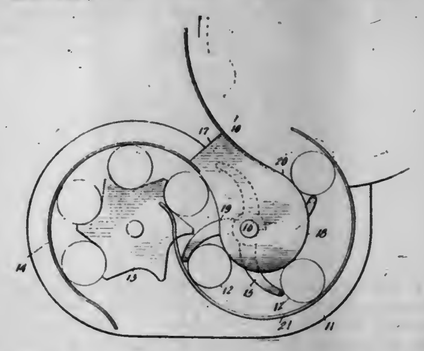


1. A foldable screen adapted to be inserted and removed with one hand, and comprising a plurality of screen frame members, one of the screen frame members overlapping the other, hinge straps attached to the second screen member, means adjustably engaging the straps to any one of several overlapped positions on the first screen member, the overlapping screen frame having a handle affixed to its upright portion, to permit of easy manipulation of the screen with one hand.

2. A screen member having a handle mounted on its frame portion, and having opposite orifices correspondingly positioned in its upper and bottom frame portions, a second screen member overlapping the first screen member, hinges attached to the second screen member, said hinges having slotted strap members, and adjustable fastening means for securing the aforesaid strap members in the desired adjusted position to the first screen member, for the purposes described.

3. A screen member having a plurality of spaced correspondingly positioned orifices in its upper and bottom frame portions, a handle member on the aforesaid screen member, a second screen member having a portion thereof overlapping the first screen member, hinges secured to the second screen member, the free straps of said hinges having slotted portions, manually adjustable fastening means adjustably securing the slotted straps in the desired adjusted relation to any of the plurality of orificed portions of the first screen, whereby to permit of manipulating the screen with one hand, to permit of its accurate adjustment to prevent rattling and to prevent its being removed from the window from the outside.

1,212,754. CAN-FEEDING MECHANISM. PAUL W. FLEISCHER, West Hoboken, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 18, 1914. Serial No. 819,309. (Cl. 113—115.)



1. A can feeding mechanism of the character described including, in combination: a supporting table; a guideway above said table and along which the articles are adapted to be advanced; an article propelling and gradually accelerating member movable in a path over said table in the guideway, said member being rotatable about an axis perpendicular to the table and located eccentrically of said guideway, and a moving can carrier to which the cans are delivered by said accelerating member, substantially as specified.

2. A can feeding mechanism of the character described including, in combination: a curved guideway along which the articles are adapted to be advanced; a rotatable member having propelling arms extending within said guideway and adapted to advance and gradually accelerate the articles therealong, said member being rotatable about an axis disposed eccentrically to said curved guideway, and a moving can carrier to which the cans are delivered by said accelerating member, substantially as specified.

3. A can feeding mechanism of the character described including, in combination: a stationary table; a uniformly rotatable, multiple-arm spider for advancing articles over said table; means coöperating with the said spider for gradually accelerating the speed of the articles as the same are advanced by the spider, and a can-moving device hav-

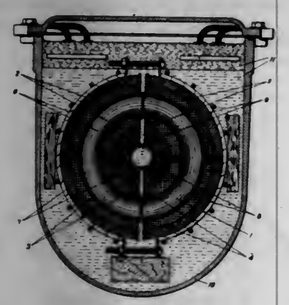
ing substantially the ultimate accelerated speed of said spider and arranged to receive the cans advanced thereby.

4. A can feeding mechanism of the character described including, in combination: a stationary table; a uniformly rotatable, multiple-arm spider for advancing articles over said table; and means for gradually accelerating the speed of the articles as the same are advanced by the spider, said means including a relatively stationary curved guideway arranged eccentrically to the axis of rotation of the spider, and a can-moving device having substantially the ultimate accelerated speed of said spider and arranged to receive the cans advanced thereby.

5. A can feeding mechanism, comprising a uniformly rotatable radial arm, and combined therewith means causing the cans to be engaged by said arm at points nearer to and farther from the center of rotation, to effect retardation and acceleration of the feeding of the cans, and a can-moving device having substantially the ultimate accelerated speed of said arm and arranged to receive the cans advanced thereby.

[Claims 6 to 13 not printed in the Gazette.]

1,212,755. METHOD OF MANUFACTURING INDUCTANCE-COILS. WILLIAM FONDILLER, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 12, 1914. Serial No. 861,400. (Cl. 178—46.)



1. The method of manufacturing inductance coils which consists in subjecting the core material to a baking temperature, assembling the said material into a core, placing windings on the core, and subsequently heating the coil at a temperature approximately the same as the preliminary baking temperature.

2. The method of manufacturing inductance coils which consists in subjecting the core material to a baking temperature, placing windings on the core, baking the coil, and impregnating the coil in insulating compound, the maximum temperature of the core during the baking and impregnating steps being approximately the same as the preliminary core baking temperature.

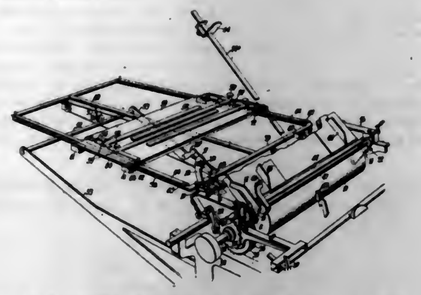
3. The method of manufacturing inductance coils which consists in subjecting the core material to a baking temperature, placing a plurality of line winding sections on the core, comparing the inductances of the line winding sections with a standard inductance, and heating the coil at a temperature approximately the same as the preliminary core-baking temperature.

4. The method of manufacturing inductance coils which consists in subjecting the core material to a baking temperature, coating the said material with an insulating film, assembling the said material into a core, placing windings on the core, and heating the coil at a temperature approximately the same as the preliminary core-baking temperature.

5. The method of manufacturing inductance coils which consists in subjecting hard drawn iron wire to a baking temperature, forming the wire into a core, winding the core with insulated wire and heating the coil at a temperature approximately the same as the preliminary core wire baking temperature.

[Claim 6 not printed in the Gazette.]

1,212,756. TYPE-WRITING MACHINE. BENJAMIN P. FORTIN, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 15, 1915. Serial No. 50,765. (Cl. 197—126.)



1. In a typewriting machine, the combination with a platen, of means for advancing material thereto, said means comprising a carriage movable toward and from the platen, a supporting frame for the carriage, guide rails, means to secure said rails in parallelism on the frame, grooved guide-rollers on the carriage arranged with their axes perpendicular to the plane of said supporting frame to run on said guide-rails, the latter arranged with their guiding edges in parallelism for the correct guidance of the carriage.

2. In a typewriting machine, the combination with a platen and a platen carriage, of means for advancing material to the platen, comprising an auxiliary carriage movable toward and from the platen, a frame on which said auxiliary carriage is mounted, said frame secured to the platen carriage to travel therewith as the platen is advanced in letter-feeding direction, said frame formed of tubular material, guide-rails on which said auxiliary carriage is guided, and means for securing said rails to the frame with their guiding edges parallel and extending perpendicular to the direction of travel of the platen carriage for guiding said auxiliary carriage.

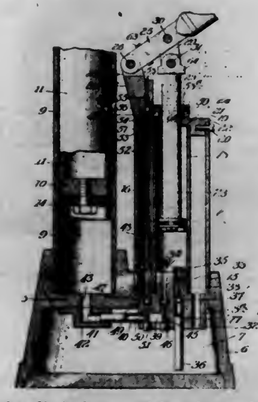
3. In a typewriting machine, the combination with a roller platen and a platen carriage, of an auxiliary carriage for holding transfer material between the plies of a work-piece during the line-space feed of the transfer material and work-piece, and for shifting the transfer material at intervals backward along the work-piece, a supporting frame for said auxiliary carriage attached to the platen carriage and traveling therewith, and extending rearwardly therefrom, said supporting frame also forming a table over which the work-piece is guided, said auxiliary carriage comprising a body of sheet material, trucks secured to said body and carrying grooved guide-rollers arranged with their axes perpendicular to the plane of the supporting frame, guide-rails, and means to secure the guide-rails on the supporting frame with their guiding edges parallel and perpendicular to the direction of travel of the platen carriage, said rollers running on said rails to thereby guide the auxiliary carriage and hold it on the supporting frame.

4. In a typewriting machine, a carriage for sheet material to be fed to the platen, said carriage comprising a horizontally disposed body of sheet material, trucks, each comprising a body of sheet material, said trucks arranged beneath the body of said carriage and removably attached thereto, and rollers journaled in the said trucks, with their axes perpendicular to the body of the carriage.

5. In a typewriting machine, a carriage for sheet material to be fed to the platen, said carriage comprising a horizontally disposed body of sheet material, trucks, each comprising a body of sheet material, said trucks arranged beneath the body of said carriage and removably attached thereto, and rollers journaled in the said trucks, with their axes perpendicular to the body of the carriage, said trucks comprising guards depending from the outer edges thereof and having inturned portions providing journal bearings for the axes of said rollers.

[Claims 6 to 9 not printed in the Gazette.]

1,212,757. HYDRAULIC JACK. HERMAN W. FREESE, Chicago, Ill., assignor, by mesne assignments, to Carl A. Waldron, trustee, Chicago, Ill. Filed Nov. 5, 1914. Serial No. 870,319. (Cl. 138—9.)



1. A hydraulic-jack comprising, in combination, a cylinder, a piston movable in said cylinder, a reservoir for fluid, a reciprocating pump in communication with said reservoir and said cylinder, means for actuating said pump, a passage communicating with said cylinder and reservoir, a check-valve in said passage for controlling the latter, adjustable means extending into the path of movement of the pump-actuating means for limiting the movement of said pump-actuating means, and means operated by said pump-actuating means when said adjustable means are adjusted out of position for limiting the movement of said pump-operating means, for actuating said valve, for the purpose set forth.

2. A hydraulic-jack comprising, in combination, a cylinder, a piston movable in said cylinder, a reservoir for fluid, a pump-barrel, a piston movable therein having an operating handle, said pump-barrel being in communication with said reservoir and said cylinder, a passage through which the fluid introduced into said cylinder is returned to said reservoir, a valve in said passage, adjustable means extending into the path of movement of the pump-actuating means limiting the movement of said handle, and means operated by said handle when said adjustable means are adjusted to a position in which the movement of said handle is unobstructed thereby, for actuating said valve to open said passage.

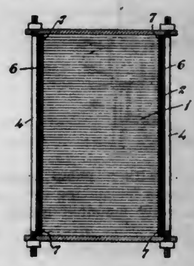
3. A hydraulic-jack comprising, in combination, a cylinder, a piston movable therein, a receptacle for fluid, a pump for pumping fluid from said receptacle into said cylinder, an elongated chamber communicating with said cylinder and through an outlet with said receptacle, the only outlet of said chamber being between said valves, a check-valve in the lower portion of said chamber normally closing the latter to said cylinder, a reciprocable rod in said chamber engaging said check-valve, a check-valve in the upper portion of said chamber and located above the liquid in said chamber when the device is in upright position and adapted when operated to actuate said rod and open said first-named check-valve, and means for actuating said second-named check-valve.

4. A hydraulic jack comprising, in combination, a cylinder, a piston movable in said cylinder, a reservoir for fluid, a reciprocating pump in communication with said reservoir and cylinder, means for actuating said pump, a passage communicating with said cylinder and reservoir, a check-valve in said passage for controlling the latter, a member mounted on said pump and adjustable rotatably, means serving to hold said member at one elevation when rotatably adjusted to a certain position, and to hold it in a lower elevation when adjusted to another position, said member coöperating with said pump-actuating means for limiting the movement of the latter, and means operated by said pump-actuating means, when said member is in its lowermost position for actuating said valve, for the purpose set forth.

5. A hydraulic jack comprising, in combination, a cylinder, a piston movable in said cylinder, a reservoir for fluid, a reciprocating pump in communication with said reservoir and cylinder, means for actuating said pump, a passage communicating with said cylinder and reservoir, a check-valve in said passage for controlling the latter, a rotatable member mounted on the upper end of said pump and provided with lugs, said pump being provided on its upper surface with stepped surfaces adapted to coöperate with said lugs whereby upon rotatably adjusting said member the latter may be caused to extend at different heights, said member being positioned to limit the movement of said pump-actuating means, and means operated by said pump-actuating means when said member is in lowermost position for actuating said valve, for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,212,758. METALLIC CRATE. JOHNATHAN R. FREEZE, Middletown, Ohio, assignor to The American Rolling Mill Company, Newark, N. J. Filed Apr. 3, 1916. Serial No. 88,513. (Cl. 220—111.)

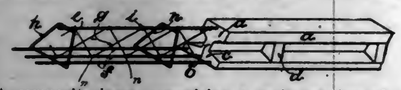


1. A crate for disks comprising, a jacket adapted to snugly encompass the periphery of the disks to be crated, heads larger than the jacket and disposed at the ends of the jacket, and a circumferential series of bolts disposed closely alongside the jacket and extending through the heads and serving to draw the heads toward each other and to prevent displacement of the jacket, combined substantially as set forth.

2. A crate for disks comprising a jacket adapted to snugly encompass the periphery of the disks to be crated, heads larger than the jacket and disposed at the ends of the jacket, a circumferential series of bolts disposed closely alongside the jacket and extending through the heads and serving to draw the heads toward each other and to prevent displacement of the jacket, a paper lining for the jacket, and inward folds at the upper and lower ends of the jacket engaging the inner surface of the lining, combined substantially as set forth.

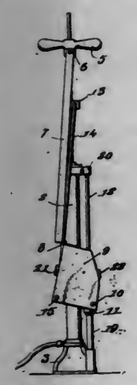
3. A crate for disks comprising a jacket adapted to snugly encompass the periphery of the disks to be crated, heads larger than the jacket and disposed at the ends of the jacket, a circumferential series of bolts disposed closely alongside the jacket and extending through the heads and serving to draw the heads toward each other and to prevent displacement of the jacket, and a lining secured to the interior of said jacket, combined substantially as set forth.

1,212,759. COMPOSITE BEAM. PHILIP BLAIR FROST, Sheffield, and FREDERICK RINGS, Liverpool, England. Filed May 25, 1915. Serial No. 30,280. (Cl. 72—61.)



A composite beam comprising a main portion of concrete material having a web, top and bottom members, and lugs which project laterally from the said parts, reinforcing rods extending longitudinally in the said top and bottom members, loops formed of rods and secured at intervals to the said longitudinal rods and holding them suitably spaced apart and extending within the said lugs, and wires arranged diagonally and crosswise of each other and secured to certain of the rods in the top and bottom members and extending longitudinally in the said web.

1,212,760. AIR-PUMP ATTACHMENT. COE SMITH GARDNER, De Land, Fla., assignor of one-half to George H. Foote, Jr. Filed June 28, 1913. Serial No. 776,331. (Cl. 230—27.)



1. The combination with a pump body and a piston structure therefor, means for moving said piston structure comprising a reciprocally mounted handle, a power increasing element, and means pivotally connecting said piston to said handle through said power increasing element.

2. In combination, a pump body and a piston structure therefor, manual means for moving the piston structure toward a final pumping position, slidably supported mechanism connected with the piston structure and actuated by the operating means for increasing the manual thrust applied by said means as the piston structure approaches a final pumping position.

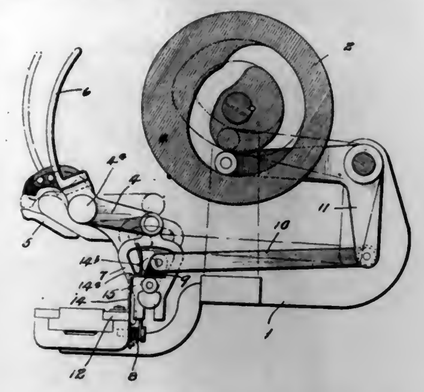
3. In combination, a pump body, and a piston structure therefor, means for moving said structure, bodily reciprocating mechanism movable with said means, stop means to limit movement of said mechanism, and means connecting said mechanism with said first mentioned means to increase the thrust on said structure by a continued movement of said means.

4. In combination, a pump body and a piston structure therefor, means for moving said structure, mechanism movable bodily with said means, guide means for said mechanism, stop means to limit the movement of said mechanism, and means connecting said mechanism with said first mentioned means to increase the thrust on said structure by a continued movement of said means.

5. In combination, a pump body, and a piston structure therefor, operating means for said piston structure, mechanism movable bodily according to the movement of said operating means, guide means for said mechanism, means for limiting the movement of the said mechanism as the piston structure approaches a final pumping position, and means connecting said mechanism with said operating means, said last mentioned means adapted to actuate said mechanism by a continued movement of said operating means to increase the thrust on said piston structure.

[Claims 6 to 18 not printed in the Gazette.]

1,212,761. PRESSER CONTROL FOR SEWING-MACHINES. JOSEPH J. GOELLNER, St. Louis, Mo., assignor to Landis Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 10, 1916. Serial No. 114,211. (Cl. 112—20.)



1. In combination with the presser foot and attached thread measure frame, of a resilient retaining member adapted to engage the frame and retain it in its lowered position, and a reciprocating member movable during operation of the machine and adapted to engage the retaining member to release the measure frame.

2. In a sewing machine in combination with the presser foot and the thread measure frame shiftable therewith, of a resiliently operating retaining member arranged to engage the frame when the presser foot is raised, and having a portion engageable by the thread throw-off mechanism to release said frame and permit the movement of the presser foot to operative position.

3. In a sewing machine in combination with the presser foot, the thread-measuring frame movable therewith, and the throw-off mechanism mounted on said frame, of a retaining member mounted on a stationary portion of a machine and arranged to retain the presser foot in raised position, said retaining member having a portion operable by the throw-off mechanism to release the presser foot.

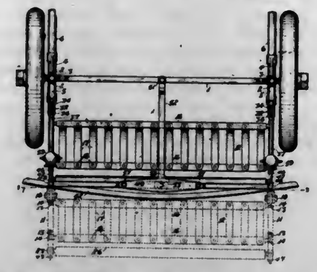
1,212,762. CAR-FENDER. HENRY S. GRACE, San Francisco, Cal. Filed Apr. 5, 1916. Serial No. 89,126. (Cl. 105—130.)

1. In combination with a vehicle, a fender mounted to move transversely on the front end of the vehicle, and means for projecting said fender forwardly automatically by impact of a part thereof against an object in front of the car.

2. In combination with a vehicle, a fender mounted thereon to swing about a vertical axis, and means for projecting said fender forwardly automatically by impact of a part thereof against an object in front of the car.

3. In combination with the front wheels of a vehicle, said wheels being turnable about vertical axes, a fender, a support therefor, means for projecting said fender forwardly from its normal position on said support, and means whereby said fender can move transversely with the turning of the wheels about vertical axes.

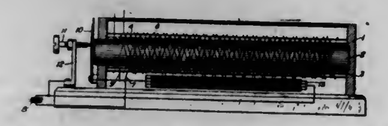
4. In combination with the front wheels of a vehicle, said wheels being turnable about vertical axes, a fender, a support therefor, means for projecting said fender forwardly from its normal position on said support, and means whereby said fender can swing about a vertical axis with the turning of said wheels about vertical axes.



5. In combination with a wheeled vehicle, a fender, and means for movably supporting said fender upon a central and two terminal vertical axes closely adjacent to the front wheels of the vehicle.

[Claims 6 to 16 not printed in the Gazette.]

1,212,763. DEVICE FOR LOCATING CONCEALED CONDUCTORS. FRANK J. GREGORY, New York, N. Y. Filed Aug. 26, 1915. Serial No. 47,419. (Cl. 175—183.)



Apparatus for locating concealed conductive material, comprising an induction coil having both the primary and the secondary windings of a few turns of comparatively large wires, in connection with an interrupter whereby to induce a high frequency current of large amperage, and a detector device consisting of a locating member having a magnetic core surrounded by a coil of considerable length of fine wire that is in closed circuit with a telephone receiver, whereby upon bringing the locator with the plane of its coil parallel or coincident with the concealed conductor that is traversed by said induced current the receiver will be caused to sound.

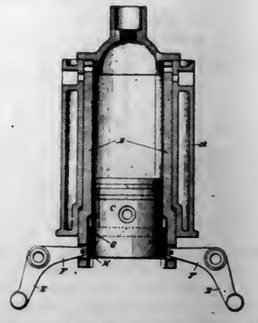
1,212,764. GUIDE-RING FOR ELASTIC-FLUID ENGINES. CHARLES R. GREUTER, Saugus, Mass., assignor, by mesne assignments, to John T. Pratt, New York, N. Y. Filed Jan. 21, 1914. Serial No. 813,378. (Cl. 123—75.)

1. In an elastic fluid engine, the combination with a cylinder fitted with internal, longitudinally sliding valves, of an elastic packing ring in the cylinder near the crank end, held in place by a guide ring fastened to the cylinder, for the purpose of holding the valves closely in contact with the walls of the cylinder.

2. In an elastic fluid engine, the combination with a cylinder fitted with longitudinally sliding valves embedded in the walls of the cylinder, of an elastic packing ring, fitted to the curved surfaces of the valves, and held in place by a guide ring fastened to the cylinder, for the purpose of holding the valves closely to their seats.

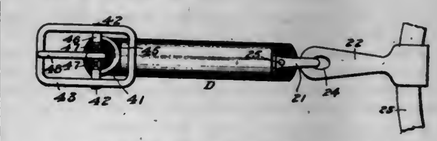
3. In an elastic fluid engine, the combination with a cylinder fitted with internal longitudinally sliding valves, of an elastic packing ring in and fixedly connected with the cylinder, for the purpose of creating such a degree of friction upon the valves as to check the inertia effects and minimize the shock upon the moving parts of the mechanism.

4. In an elastic fluid engine, the combination with a cylinder fitted with internal, longitudinally sliding valves, of a ring within said cylinder at the crank end thereof, said ring being arranged to hold the valves in contact with the cylinder walls.



5. In an elastic fluid engine, the combination with a cylinder fitted with internal, longitudinally sliding valves, of a ring within said cylinder at the crank end thereof, said ring being arranged to hold the valves in contact with the cylinder walls, and means for holding said ring in position.

1,212,765. HARNESS ATTACHMENT. FRANCIS E. GRIFFETH, Athens, Ga. Filed Sept. 9, 1913. Serial No. 788,924. (Cl. 24—178.)



1. A device of the class described comprising a draft rod terminating at one end thereof in a forked shaped portion, a cross-bar extending transversely of said forked shaped portion and integral therewith, adapted to pivotally engage the sides of a buckle, said cross bar being provided with lugs to engage the tongue of a buckle and retain the same against accidental displacement.

2. A draft rod composed of a single piece of metal formed to produce an elongated shank and a substantially semi-circular shaped loop at one end thereof, said loop being provided with a transversely arranged cross-bar having a plurality of integral lugs adapted to retain a tongue of a buckle against displacement and pivotally mounted on said cross-bar between the lugs, said loop being provided also with a plurality of integral projections for pivotally mounting the buckle.

1,212,766. [WITHDRAWN.]

1,212,767. COMBINATION-LOCK. MICHAEL HALEY, Newburyport, Mass., assignor of one-half to Charles S. Spaulding, Newburyport, Mass. Filed Aug. 4, 1915. Serial No. 43,606. (Cl. 70—53.)

1. A combination lock for a closure for an opening, having, in combination, a receptacle having an opening, a closure constructed to be secured in said opening by a relative rotary movement of the receptacle and closure, a cover mounted on said closure to have a free rotary movement relatively to said closure, and means whereby the closure may be keyed to the cover to lock the cover to the closure so that the cover and receptacle may be relatively rotated to remove the closure.

2. A combination lock comprising a closure constructed to be relatively secured in the opening of a receptacle to

be locked; a member pivotally secured to the closure and covering it so as to render it inaccessible, and means for locking the closure and said member together against relative rotation so that by the rotation of said member the closure may be rotated and released from the receptacle.

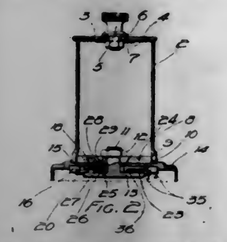


FIG. 2.

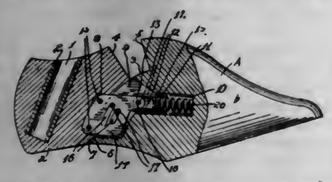
3. A combination lock comprising a closure having peripheral threads adapted to be screwed into threads of an opening of a receptacle to be locked, a cover for concealing the closure which is loosely pivoted to the closure, and means for locking the cover to the closure whereby a movement may be imparted to the cover to screw the closure out of the opening.

4. A combination lock comprising a closure provided with a key-hole and constructed to be rotatably secured in an opening of a receptacle to be locked, a cover held against said closure for rotary movement relatively to the closure and provided with a key-hole adapted to be axially alined with the closure key-hole, and means by which the key-holes may be alined to receive a key to lock the cover to the closure and permit the closure to be removed from the receptacle.

5. A combination lock comprising a closure constructed to be rotatably secured in an opening of a receptacle to be locked, a cover pivoted to said closure, a key-hole plate pivoted to said closure, said closure, cover and key-hole plate being provided with key-holes, and means by which the key-holes in said cover, key-hole plate and closure may be alined to receive a key to lock them together.

[Claims 6 to 15 not printed in the Gazette.]

1,212,768. INTERCHANGEABLE LAST. PATRICK H. HICKMAN, Irvington, N. J., assignor of one-half to Thomas Aloysius Hickman, Irvington, N. J. Filed Dec. 30, 1914. Serial No. 879,744. (Cl. 12—136.)



1. In a last, a pair of movable sections, a plate fixed to one section and having a sliding connection with the other section and a spring actuated sleeve pivoted to said plate and exerting pressure at all times against the same for retaining said sections in their extended position.

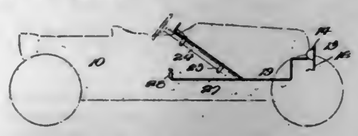
2. In a last, a pair of movable sections, a plate fixed to one of said sections and having a sliding connection with the other section, an extension provided on said plate and a spring actuated sleeve carried by one section and pivotally connected to the extension, said sleeve embracing said extension and exerting pressure against the same at all times.

3. In a last, a pair of movable sections, said sections having recesses in the adjacent sides thereof, a plate rigidly connected within one recess and movably connected within the other recess, one of said recesses having a socket opening therein, a sleeve slidable within said socket and pivotally connected to the plate, and a spring disposed within the socket and engaging the sleeve for yieldingly forcing the same in the direction of said plate for retaining the sections in extended position.

4. In a last such as described, a pair of movable sections, means for limiting the movement of said sections in opposite directions, said sections having recesses provided in the meeting edges thereof and disposed in registration, a plate disposed within said recesses and rigidly secured to one section and movably connected to the other section, an extension formed upon one edge of said plate, one of said sections having a socket formed therein opening into the adjacent recess, a sleeve arranged within said socket, a pivotal connection between said sleeve and the extension, an annular flange formed within said sleeve, and a spring disposed within the adjacent ends of the sleeve and socket and engaging the flange for yieldingly retaining the sections in their extended position.

5. In a last, a pair of movable sections, a plate fixed to one of the sections and having a sliding connection with the other section, said plate being provided with a reduced rounded extension, a sleeve pivotally connected to said extension and embracing the same and engaging the plate, and a spring interposed between the last and the sleeve to hold the sleeve at all times in contact with the plate.

1,212,769. DIRIGIBLE HEADLIGHT. HARRY F. HOFFMAN, Allentown, Pa. Filed Feb. 15, 1916. Serial No. 78,504. (Cl. 240—61.)



1. A dirigible headlight for vehicles including a light supported for turning movement, means for limiting the amount of its movement in either direction, means normally holding it in one position, and manually controlled fluid pressure means for moving it to its other position, said latter means including a pipe extending into proximity to the light, a piston movable in the pipe toward the extended end thereof under fluid pressure in the pipe, and a link pivotally connecting the piston and light.

2. A dirigible headlight for vehicles including a light mounted for limited turning movement about a vertical axis, whereby it may be swung to direct its rays ahead of the vehicle or to the side thereof, means normally holding the light in the first of such positions, a pipe projecting at one end to a point adjacent the light and at its other end to a point adjacent the driver's seat, a piston in the former end of the pipe, connecting means between the piston and light, whereby reciprocation of the piston will turn the light, a cylinder closing the opposite end of the pipe, and a plunger closely fitted in the cylinder, the pipe and cylinder below the plunger being filled with a relatively non-compressible fluid, whereby depression of the plunger will transmit force through the fluid to move the piston.

3. A dirigible headlight system for vehicles including a pair of headlights adapted to be mounted for swinging movement, pipes disposed each with one end adjacent one of the lights, pistons in the pipes, operative connection between the pistons and lights, the opposite ends of the pipes being forked and each fork being closed by a cylinder, a hand operated plunger operating in one cylinder of each fork, and a foot operated plunger mounted in the other cylinder of each fork, the pipes and cylinders below the plungers being filled with a liquid, whereby depression of any plunger will act through the fluid in its pipe system to operate a piston and correlated light.

4. A dirigible headlight for vehicles including a light mounted for limited turning movement about a vertical axis whereby it may be swung to direct its rays ahead of the vehicle or to the side thereof, means normally holding the light in the first of said positions, a pipe projecting at one end to a point adjacent the light and at its other end to a point adjacent the driver's seat, a piston in the former end of the pipe, operative connection between the piston and light, a cylinder closing the opposite end of the pipe and provided with an inwardly directed abutment, a plunger fitting closely within the cylinder and having a helical groove to receive the abutment whereby turning of the plunger will cause its reciprocation in the cylinder, and means for manually turning the plunger whereby when the cylinder below the plunger and the pipe is filled with a relatively non-compressible fluid the movement of the plunger will be transmitted to the piston.

5. A dirigible headlight for vehicles including a light mounted for turning movement, a pipe projecting at one end to a point adjacent the driver's seat, a piston in the other end of the pipe, operative connection between the piston and light, a cylinder closing the opposite end of the pipe, and a manually operable plunger in the cylinder whereby when the cylinder below the plunger and the pipe are filled with a relatively non-compressible fluid movement may be transmitted from the plunger to the piston.

[Claim 6 not printed in the Gazette.]

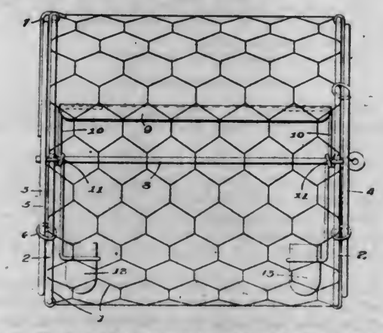
1,212,770. PROCESS OF MAKING SMOKELESS POWDERS. DMITRIE S. KONDRATIEFF, Wilmington, Del., assignor of one-half to Bernard Edelhertz, New York, N. Y. Filed Nov. 16, 1916. Serial No. 131,668. (Cl. 52—3.)

1. In the art of making smokeless gun and rifle powders, from nitrocellulose, that step which consists in adding alcohol and ether to the wet nitrocellulose, unsubjected to any other process of drying or dehydration except centrifuging, for the purpose of bringing about the condition required for the proper gelatinization necessary to produce an alcohol ether smokeless powder.

2. In the art of making smokeless gun and rifle powders, from nitrocellulose, that step which consists in adding alcohol and ether to the wet nitrocellulose, after centrifuging, without subjecting such nitrocellulose to any other process of either thorough or partial drying or dehydration, or to any process of drying with alcohol by percolation with pressure, for the purpose of bringing about the condition required for the proper gelatinization necessary to produce an alcohol ether smokeless powder.

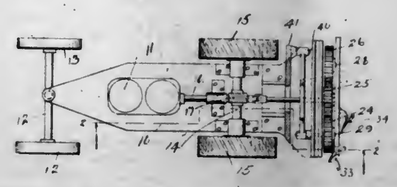
3. In the art of making smokeless gun and rifle powders, from nitrocellulose, that step which consists in adding simultaneously alcohol and ether to the wet nitrocellulose, immediately after centrifuging, without subjecting such nitrocellulose to any other process of either thorough or partial drying or dehydration, or to any process of drying with alcohol by percolation with pressure, for the purpose of bringing about the condition required for the proper gelatinization necessary to produce an alcohol ether smokeless powder.

1,212,771. MOBILE POULTRY AND ANIMAL CAGE. ARTHUR S. HOLLAND, Homer, N. Y. Filed Feb. 5, 1915. Serial No. 6,213. (Cl. 119—15.)



A poultry and animal cage consisting of a cylindrical body rollable along the ground, one of the ends thereof being removable and the walls of the cylinder being reticulated so that the bird or animal therein can feed off the ground through said walls, and means located in the cylinder for supporting food and water receptacles, said means being non-rotatable with the cylinder, substantially as and for the purpose set forth.

1,212,772. PLOWING-MACHINE. HERMAN HORMAN, Arnold Mills, R. I. Filed Apr. 21, 1916. Serial No. 92,758. (Cl. 97—53.)



1. In a plowing machine, a tractor, a plow carrying member, one or more plows mounted on said member, means for moving said member in a circular path, a slidable member in which said circularly movable member is mounted and means for imparting to said latter member a reciprocatory motion.

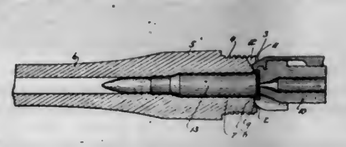
2. In a plowing machine, a tractor, a plow carrying member, one or more plows mounted on said member, means including a set of gears for moving said member in a circular path, a slidable member in which said circular movable member is mounted and means for imparting to said latter member a reciprocatory motion.

3. In a plowing machine, a tractor, a plow carrying member, one or more plows mounted on said member, means including a set of gears for imparting a circular movement to said member, a slidable member carrying said plow carrying member, and means for reciprocating said sliding member in a direction transverse to the movement of said tractor.

4. In a plowing machine, a tractor, a plow carrying member, one or more plows mounted on said member, means including a set of gears for imparting a circular movement to said member, a slidable member carrying said plow carrying member, a crank rotated by one of said gears and a rod connected to said crank for causing said sliding member to reciprocate in a direction transverse to the movement of said tractor.

5. In a plowing machine, a tractor, a frame on the rear of said tractor, a plate mounted to slide transversely in said frame relative to the movement of the tractor, a set of gears carried by said plate, a plow supported by said gears, means for reciprocating said plate, and means for rotating said gears thereby imparting to said plows a combined longitudinal and circular motion.

1,212,773. FIREARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Oct. 23, 1916. Serial No. 127,077. (Cl. 42—25.)



In a firearm, the combination with a breech-bolt adapted to be rotated for locking and unlocking it, and provided with a forwardly projecting cartridge-retaining abutment, of a gun-barrel formed with a segmental clearance-recess for the reception and rotary movement of the said abutment, the said recess being separated from the rear portion of the cartridge-chamber in the gun-barrel by a car-

tridge-supporting wall, and a cartridge-extractor co-acting with the said abutment in the extraction of the spent-cartridges.

1,212,774. MAGNETICALLY-CONTROLLED MERCURY-VAPOR APPARATUS AND THE LIKE. JULIUS JONAS, Baden, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland. Filed Sept. 12, 1914. Serial No. 861,467. (Cl. 175—363.)



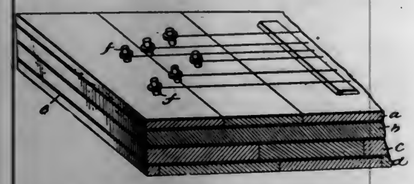
1. In combination a mercury vapor apparatus or the like, a controlling electromagnet disposed in proximity thereto, means for supplying current of varying direction to said magnet and means for interrupting the electric arc of the vapor apparatus, only once during one period of the exciting current.

2. In combination a mercury vapor lamp or the like including a guiding tube for the arc, an electromagnet with tapering pole faces disposed in proximity to said tube but eccentric thereto and means for supplying an alternating current to the winding of said electromagnet in such a manner that once for every period of this current the arc is driven into a field of such density that it is broken.

3. In combination a mercury vapor lamp or the like, including a guiding tube for the arc, an electromagnet with two windings and with tapering pole faces, said magnet being disposed in proximity to said tube but eccentric thereto, means for supplying an alternating current to one winding of the electromagnet, and means for supplying a direct current to the other winding of the electromagnet, the currents being such that once for every period of this current the arc is driven into a field of such density that it is broken.

4. In combination a mercury vapor lamp or the like including a guiding tube for the arc, an electromagnet disposed in proximity to said tube but eccentric thereto, two windings on said magnet, means for supplying an alternating current to one winding and means for supplying a direct current to the other winding, the currents being such that once for every period of this current the arc is driven into a field of such density that it is broken.

1,212,775. PIANO WREST-PLANK. JACOB KANTOR, Port Elizabeth, Cape Colony, South Africa. Filed July 14, 1914. Serial No. 851,021. (Cl. 84—28.)



1. A wrest plank for musical instruments consisting of alternate layers of wood and woven fabric combined by gluing.

2. A wrest plank for musical instruments consisting of alternate plane layers of wood and linen bagging combined by gluing.

3. A wrest plank for musical instruments comprising in combination four superposed layers of wood, the top and bottom layers being thinner than the intermediate layers, layers of linen bagging disposed between said layers of wood and the whole combined by a gluing material.

4. The combination with a wrest plank consisting of four superposed layers of wood, the top and bottom layers being thinner than the intermediate layers, layers of linen bagging disposed between said layers of wood and the whole combined by a gluing material, of a series of pegs inserted into said plank for the attachment of strings thereto.

5. A wrest plank for musical instruments comprising in combination, four superposed layers of wood, the top and bottom layers being thinner than the intermediate layers, one of the intermediate layers of wood having the grain running longitudinally of the wrest plank and the remaining layers of wood having their grain running transversely of the wrest plank, layers of textile fabric disposed between said layers of wood, and the whole being held together by gluing material.

[Claims 6 and 7 not printed in the Gazette.]

1,212,776. EYEGLASSES. MORRIS KAPLAN, New York, N. Y. Filed Apr. 22, 1916. Serial No. 92,872. (Cl. 88—47.)



1. In an eye-glass the combination with a lens mounting having a strap to engage the rim of the lens, of a vibratory device carried by the mounting for engagement with another portion of the rim of the lens, and means coöperating with the device to force it against the rim of the lens.

2. In an eye-glass the combination with a lens mounting having a strap to engage the rim of the lens, of a detent pivoted to the mounting for engagement with another portion of the rim of the lens, and means on the mounting for forcing the detent against the rim of the lens.

3. In an eye-glass the combination with a lens mounting having a strap to engage the rim of the lens, of a detent pivoted to the mounting for engagement with another portion of the rim of the lens, and a clamp coacting with the detent for forcing it against the rim of the lens.

4. In an eye-glass the combination with a lens mounting having a strap to engage the rim of the lens, of a detent pivoted to the mounting for engagement with another portion of the rim of the lens, and a bifurcated clamp to coact with the detent to hold the lens in fixed relation with the mounting.

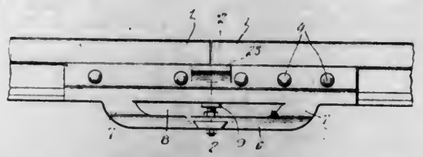
5. In an eye-glass the combination with a lens mounting having a strap to engage the rim of the lens, of a wedge shaped detent pivoted to the mounting for engagement with another portion of the rim of the lens, and a clamp coacting with the wedge for holding the lens in fixed relation to the mounting.

[Claim 6 not printed in the Gazette.]

1,212,777. RAIL-JOINT. WILLIAM F. C. KARSTEN, Milwaukee, Wis. Filed Sept. 21, 1916. Serial No. 121,456. (Cl. 239—12.)

1. In a rail joint, fish plates disposable at opposite sides of the rails, a strut beneath the rails at the point of juncture thereof, coacting members adjustable vertically upon the strut, and tensional members having their intermediate portions engaged between the co-acting members and their opposite ends formed integral with the fish plates.

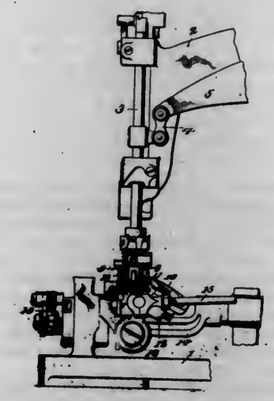
2. In a rail joint, fish plates disposable at opposite sides of the rails, a depending strut located at the juncture of the rails, said strut being exteriorly threaded, coacting members mounted on the strut for vertical movement, means for retaining the members in position subsequent to adjustment, and tensional members having their intermediate portions engaged between the adjustable members and their opposite sides formed integral with the fish plates.



3. In a rail joint, fish plates disposable at opposite sides of the rails, a compression block located beneath the rails at the point of juncture thereof, a threaded strut having its upper end seated in the compressing block, a wedge block mounted on the strut for vertical movement, a jam nut mounted on the strut adapted to engage the wedge block to retain the same in position subsequent to adjustment, a bridge member mounted on the strut beneath the wedge block, for co-action therewith, and tensional members having their intermediate portions engageable between the wedge block and bridge member and its opposite ends formed integral with the fish plates.

4. In a rail joint, fish plates disposable at opposite sides of the rails, a compression block located beneath the rails at the point of juncture thereof, a vertical exteriorly threaded strut having its upper end engaged against the compression block, tensional members having their intermediate portions disposed at opposite sides of the strut and their opposite ends formed integral with the fish plates, a wedge block mounted on the strut for vertical adjustment and adapted to engage the upper sides of the tensional members, a jam nut on the strut engaging the wedge block to force the same downward thereby urging the intermediate portions of the tensional members downward to place the same under strain, a bridge member mounted on the strut for vertical movement and beneath the wedge block, to engage the tensional members to prevent spreading thereof, and a jam nut mounted on the strut adapted to engage the bridge member to retain the same in position subsequent to adjustment.

1,212,778. NEEDLE-GUARD FOR SEWING-MACHINES. LOUIS B. KETCHAM, Binghamton, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 14, 1913. Serial No. 767,703. (Cl. 112—29.)



1. The combination with stitch-forming mechanism including a vertically reciprocating needle and a looper coöperating therewith, of a needle guard, and means for moving the needle guard into contact with the needle and upwardly with the needle while in contact therewith, whereby said needle is held in proper position relative to the looper as the looper enters the needle loop.

2. The combination with stitch-forming mechanism including a needle and a looper coöperating therewith, of a needle guard, a supporting fork therefor, an eccentric, means carried by the fork and engaging said eccentric, whereby said fork is positively moved back and forth and up and down, said needle guard being adapted to engage the needle and move therewith, so as to properly hold the needle in position for the passing of the loop.

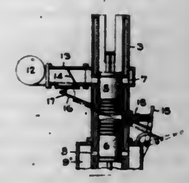
3. The combination with stitch-forming mechanism including a needle and a looper coöperating therewith, of a needle guard, a supporting fork therefor, an eccentric, means carried by the fork and engaging said eccentric, whereby said fork is positively moved back and forth and up and down, said needle guard being adapted to engage the needle and move therewith, so as to properly hold the needle in position for the passing of the loop, and means whereby said needle guard may be adjustably attached to its supporting fork.

4. The combination with stitch-forming mechanism including a needle and a looper coöperating therewith, of a needle guard, a supporting fork therefor, means for pivotally supporting the rear end of said fork, an eccentric engaging the front end of said fork for moving said fork up and down and back and forth, said needle guard being adapted to engage and move with the needle for holding the same in position for the passing of the looper.

5. The combination with stitch-forming mechanism including a needle and a looper coöperating therewith, of a needle guard, a supporting fork therefor, means for pivotally supporting the rear end of said fork, an eccentric engaging the front end of said fork for moving said fork up and down and back and forth, said needle guard being adapted to engage and move with the needle for holding the same in position for the passing of the looper, and means whereby said needle guard may be attached to said supporting fork, so that said needle guard may be adjusted vertically and also adjusted transversely of the path of travel of the looper.

[Claims 6 to 11 not printed in the Gazette.]

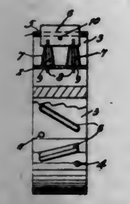
1,212,779. STARTING MECHANISM FOR MULTI-CYLINDER INTERNAL-COMBUSTION ENGINES. OSKAR LASCHE, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 17, 1915. Serial No. 8,718. (Cl. 123—181.)



1. In an internal combustion engine, the combination of a plurality of cylinders having exhaust and scavenging ports, a receiver communicating with the scavenging ports, fuel admission means, valve means for supplying starting air to some of said cylinders, and means for throttling or closing the exhausts of the other cylinders during the starting period.

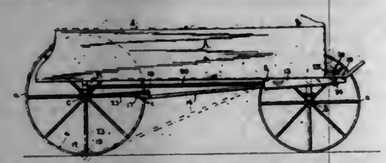
2. In a high compression internal combustion engine, the combination of a plurality of cylinders having exhaust and scavenging ports, a common receiver communicating with the scavenging ports of all the cylinders, a pump for supplying air to the receiver, an exhaust manifold, pipes connecting the exhaust ports thereto, air starting valves connected with some of said cylinders, and shut-off valves in the pipes of the other cylinders.

1,212,780. AUTOMOBILE TRUCK. GEORGE H. W. LINDHORST, Bellingham, Wash. Filed Aug. 21, 1915. Serial No. 46,624. (Cl. 21—212.)



A wheel comprising a hub, an outer rim, an inner rim, spokes extending from the hub through the inner rim to the outer rim, a plurality of cleats extending through openings formed in the outer rim, said cleats being arranged at an angle to the horizontal plane of the periphery of the outer rim, a pair of rubber blocks interposed between the inner end of each cleat and the inner rim, each rubber block being tapered to form a wide base to rest on the inner rim, pins secured to the cleats and extending through the rubber blocks and the inner rim, and pins extending through the cleats inside the outer rim to prevent said cleats falling from their openings.

1,212,781. VEHICLE-BRAKE. MOSES LUCE, Ellington, near Sinclairville, N. Y. Filed July 21, 1914. Serial No. 852,222. (Cl. 21—8.)



1. An emergency brake including in combination, a housing, a drag bar having one end slidably held within said housing, a stop to limit the excursion of said drag bar, a detent to hold said bar in said housing, and a supporting bar pivotally securing one end to said drag bar, all arranged as and for the purpose set forth.

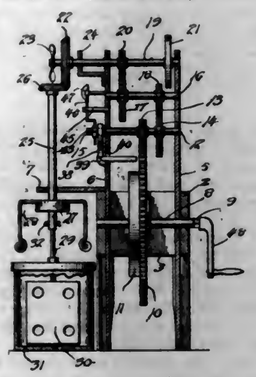
2. An emergency brake including in combination with a vehicle, a housing, a drag bar having one end slidably held within said housing, a stop to limit the excursion of said bar, a detent to hold said bar within said housing, a spring exerting a force to normally withdraw said bar form said housing, a swinging supporting bar pivotally secured to said vehicle at one end the remaining end being secured to said drag bar, and means to force said drag bar into engagement with said detent.

3. An emergency brake including in combination, a housing, a drag bar having one end slidably held within said housing, a stop to limit the excursion of said drag bar, a detent to hold said bar within said housing, a spring exerting a force to normally withdraw said bar from said housing, and a swinging supporting bar pivotally secured at one end to said drag bar, all arranged substantially as and for the purpose set forth.

4. An emergency brake including in combination with a vehicle, a housing, a drag bar having one end slidably held within said housing, a stop to limit the excursion of said bar, a detent to hold said bar within said housing, a spring exerting a force to normally withdraw said bar from said housing, a swinging supporting bar pivotally secured to said vehicle at one end the remaining end being secured to said drag bar, and a pliable member secured to said drag bar to force the same into engagement with said detent.

5. The combination with a vehicle body and its rear axle, of a housing secured to said vehicle body including a channel, a drag bar having a outstanding trunnion arranged to slide within said channel, a detent within said housing to hold said drag bar in retracted position, a spring normally forcing said bar outward, a swinging supporting bar secured to said rear axle, at one end, the other end being secured to said drag bar, the length of said swinging supporting bar being greater than the radii of the wheels carried by said axle.

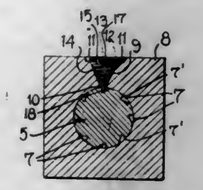
1,212,782. SPRING-MOTOR. CHARLES L. MCDONAL, Monticello, Miss., assignor of one-half to James W. Penington, Brookhaven, Miss. Filed Mar. 31, 1916. Serial No. 88,077. (Cl. 185—37.)



1. In a spring motor, a counter-shaft arranged adjacent the driving shaft of the motor and intergeared therewith, an audible signal arranged in proximity with said counter-shaft, signal operating means movably mounted upon the counter-shaft, and a lever arranged upon the motor frame engageable with said operating means and the motor spring for moving the operating means into position for operating the audible signal upon expansion of the motor spring.

2. In a spring motor having a counter-shaft arranged adjacent the driving shaft thereof and intergeared therewith, an audible signal arranged in proximity to said counter-shaft, a hammer for said signal, a star wheel slidably mounted upon the counter-shaft engageable at times with said hammer, and a lever arranged upon the motor frame engageable with said star wheel and the motor spring for moving the star wheel into position for engaging the hammer upon expansion of the motor spring.

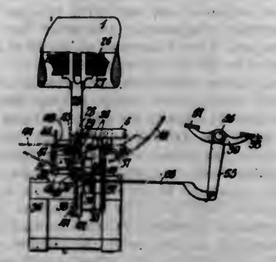
1,212,783. NUT-LOCK. GLENN S. MCGONEGAL, Woodburn, Oreg. Filed July 5, 1916. Serial No. 107,650. (Cl. 151—11.)



1. In combination, a bolt provided in its periphery with a longitudinal groove, a nut threaded upon the bolt and having a socket in one of its side faces and an orifice at the base of the socket opening into the bore of the nut, a disk having diametrically opposed lugs, the wall of the socket in the nut being provided with opposed, spiral grooves to receive said lugs and recesses at one end of the groove in which the lugs have locking engagement, and a yieldable element carried by the disk and having a portion projecting through said orifice for locking engagement in the groove in the bolt.

2. In combination, a bolt having a plurality of spaced longitudinal grooves in its periphery, a nut threaded upon the bolt provided with a socket in one of its side faces, and an orifice leading from the socket to the bore of the nut, a disk, a coiled spring fixed to said disk, and having one of its ends axially projected to extend through the orifice in the nut and into engagement with one of the grooves in the bolt, and coacting means on the disk and the wall of said socket to detachably lock the disk within the socket.

1,212,784. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, East Orange, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 14, 1915. Serial No. 27,975. (Cl. 197—155.)



1. In a typewriting machine, the combination with a universal bar; of a ribbon vibrator; a toggle; a toggle support; one arm of the toggle being connected to the ribbon vibrator to actuate the latter and another arm of the toggle being pivoted to the toggle support; and means forming a direct connection from a point of said toggle, intermediate said support and said vibrator-connection, to the universal bar, by which the motion of the bar is transmitted without change in direction to the toggle.

2. In a typewriting machine, the combination with a universal bar; of a ribbon vibrator; a toggle; a toggle support; one arm of the toggle being connected to the ribbon vibrator to actuate the latter and another arm of the toggle being pivoted to the toggle support; and means whereby the toggle may be directly connected at different points thereof, intermediate said support and said vibrator-connection, to the universal bar, for transmitting the motion of the bar to the toggle.

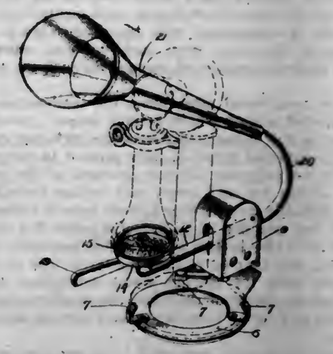
3. In a typewriting machine, the combination with a universal bar; of a ribbon vibrator; a toggle; a toggle support; one arm of the toggle being connected to the ribbon vibrator to actuate the latter and another arm of the toggle being pivoted to the toggle support; a switch connected to the universal bar; connecting devices for connecting the switch directly to the toggle at different points of the toggle, whereby the motion of the universal bar may be transmitted to the toggle; and a guideway on which the switch is movable from one to another of said connecting devices.

4. In a typewriting machine, the combination with a universal bar; of a ribbon vibrator; a toggle; a toggle support; one arm of the toggle being connected to the ribbon vibrator to actuate the latter and another arm of the toggle being pivoted to the toggle support; a slotted bracket carried by the universal bar; a switch mounted to slide in said slot; connecting devices for connecting the switch directly to the toggle at different points of the toggle, whereby the motion of the universal bar may be transmitted to the toggle; and means for sliding the switch in said slot from one to another of the connecting devices.

5. In a typewriting machine, the combination with a universal bar; of a ribbon vibrator; a toggle; a toggle support; one arm of the toggle being connected to the ribbon vibrator to actuate the latter and another arm of the toggle being pivoted to the toggle support; a slotted bracket carried by the universal bar; a switch mounted to slide in said slot; connecting devices for connecting the switch directly to the toggle at different points of the toggle, whereby the motion of the universal bar may be transmitted to the toggle; and key-controlled connections for sliding the switch in said slot between the positions at which it is connected to the toggle.

[Claims 6 to 27 not printed in the Gazette.]

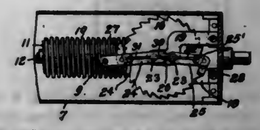
1,212,785. TELEPHONE ATTACHMENT. JOHN L. MCMILLAN, Syracuse, N. Y. Filed May 6, 1914. Serial No. 836,639. (Cl. 179—147.)



1. The combination with a telephone desk set including a base, a receiver hook switch supported thereby and a receiver carried by said hook switch; of a separate and detachable support for said base; an amplifying horn pivotally mounted on said support and having a mouth piece adapted to move into operative relation with the ear piece of the receiver and then lift said receiver to free the hook switch; and a latch for holding said horn in said last named position.

2. The combination with a telephone desk set including a base, a hook switch carried thereby and a receiver supported by the hook switch; of a supporting member releasably clamped to said base; a sound amplifying horn pivotally mounted on said support having a mouth piece movable by the movement of said horn to engage the ear piece of said receiver and then lift the latter to free the hook switch; and an impositive latch for alternately holding said horn in and out of its receiver elevating position.

1,212,786. SPRING-MOTOR ESCAPEMENT. FRANK MAGIDSON, Brownsville, Pa., assignor of one-half to Jacob Davis, Uniontown, Pa. Filed Jan. 19, 1916. Serial No. 72,933. (Cl. 185—46.)



1. In an escapement mechanism, the combination of a spring-impelled ratchet wheel, a lever support, two levers each pivoted to the support and extending, respectively, toward opposite sides of the ratchet wheel, the levers connected together for simultaneous movement, and dogs carried by the levers and operated by the latter to alternately engage the wheel teeth for limiting the escapement thereof.

2. In an escapement mechanism, the combination of a spring-impelled ratchet wheel, a lever support, levers extending across the face of the wheel to opposite sides thereof, the levers arranged end to end with their adjacent ends jointed together and with each lever pivoted to the support adjacent to said joint, and spring-actuated dogs pivoted to the levers and adapted to be operated by the oscillations of the levers whereby the ratchet wheel is engaged by first one dog and then the other for affording step-by-step escapement.

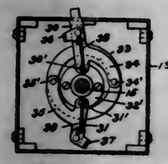
3. In an escapement mechanism, the combination of a spring-impelled ratchet wheel, a lever support, two levers arranged end to end and extending to opposite portions of the wheel, the levers jointed together at their adjacent ends and each fulcrumed to the support adjacent to said joint, dogs pivoted to the levers for engaging opposite portions of the ratchet wheel, and a spring for each dog having fixed position with the free portion of the spring connected to its dog, each lever when in one position maintaining its dog and spring in such position that the dog is held in engagement with the ratchet wheel while movement of the lever from such position causes the spring to move the dog out of engagement with the ratchet wheel.

4. In an escapement mechanism, the combination of a spring-impelled ratchet wheel, a lever support, two levers fulcrumed to the support and with the adjacent ends of the levers connected together, dogs pivoted to the respective levers for engaging opposite portions of the ratchet wheel, a spring for each lever, each spring having fixed position with the free portion thereof loosely engaged by the lever and adapted to be deflected when the lever is oscillated, said free portion of the spring connected to the pivoted dog and adapted to turn the latter into or out of engagement with the ratchet wheel determined by the direction of movement of the lever, the relative movement of the lever and spring resulting in said turning movement of the dog.

5. In an escapement mechanism, the combination of a spring-impelled ratchet wheel, a lever support, two levers each fulcrumed to the support and with the adjacent ends of the levers connected together, ratchet wheel engaging dogs pivoted to the respective levers, each lever having an aperture adjacent its dog, and a spring for each lever having a fixed support with the free portion of the spring extending through the lever aperture and connected to the pivoted dog, each lever when oscillating adapted to laterally deflect its spring and the movement of the latter within the lever aperture operating to turn the pivoted dog mounted on such lever either into or out of engagement with the ratchet wheel determined by the direction of movement of the lever.

[Claims 6 to 9 not printed in the Gazette.]

1,212,787. SPRING-MOTOR MECHANISM. FRANK MAGIDSON, Brownsville, Pa., assignor of one-half to Jacob Davis, Uniontown, Pa. Filed Mar. 22, 1916. Serial No. 85,832. (Cl. 185—46.)



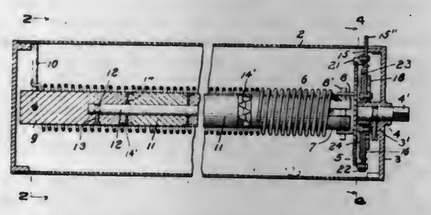
1. A spring motor mechanism comprising a spring-impelled ratchet wheel, two levers extending to different portions of the periphery of the wheel and each having a fixed pivotal mounting, a connecting device to which each lever is pivoted, said device extending around the wheel-axis and adapted to move bodily when the levers are moved, reversely disposed dogs pivoted to the levers and adapted to engage different portions of the ratchet wheel, and a spring for each dog actuated by the movement of the lever carrying such dog for moving the latter alternately into and out of engagement with the ratchet wheel.

2. A spring motor mechanism comprising a spring-impelled ratchet wheel, two levers having fixed pivotal supports at opposite sides of the axial center of the wheel and extending from their supports toward different portions of the wheel periphery, a bodily movable link extending around the wheel axis and with opposite portions thereof connected to the respective levers, reversely disposed dogs pivoted to the levers, springs actuated by the movements of the levers for engaging one dog with the said wheel and simultaneously disengaging the other dog therefrom, and a body mounted to oscillate and operatively connected to one of the levers.

3. A spring motor mechanism comprising a spring-impelled shaft, a ratchet wheel secured to said shaft, a fixed support extending to opposite sides of the shaft, levers pivoted at their inner ends to the support and with their free portions extending toward different portions of the wheel periphery, a bodily movable link extending around said shaft and at opposite sides of the latter pivotally connected to the respective levers whereby the free portions of the levers are caused to move simultaneously in the same direction, reversely disposed dogs pivoted to the respective levers, means actuated by the movements of the levers for engaging one dog with the ratchet wheel and simultaneously disengaging the other dog therefrom and vice versa, and a body mounted to oscillate and operatively connected to one of the levers.

4. A spring motor mechanism comprising a spring-impelled ratchet wheel, two levers having fixed pivotal mounting at opposite sides of the wheel axis and extending in opposite directions therefrom, a bodily movable link extending around the wheel axis, arms extending in opposite directions from the respective levers with said arms pivotally connected to opposite portions of said link, reversely disposed dogs pivotally mounted on the respective levers, springs actuated by the movements of the levers for engaging one dog with the ratchet wheel and simultaneously disengaging the other dog therefrom and vice versa, and a body mounted to oscillate and operatively connected to one of the levers.

1,212,788. SPRING-MOTOR. FRANK MAGIDSON, Brownsville, Pa., assignor of one-half to Jacob Davis, Uniontown, Pa. Original application filed Mar. 22, 1916, Serial No. 85,832. Divided and this application filed July 15, 1916. Serial No. 109,423. (Cl. 185—37.)



1. In a spring motor mechanism, the combination of spool-like core-forming sections arranged end to end, a shaft on which the several sections are mounted and upon which all of the sections are rotatable excepting one of the end sections, a support for the shaft and core sections to which the non-rotatable end core section is secured, a rotatable power transmitting device, and a coiled spring embracing the core sections and with means for anchoring that end of the spring which embraces the non-rotatable core section and with the opposite end of the spring connected to the power transmitting device.

2. In a spring motor mechanism, the combination of spool-like core-forming sections arranged end to end, a shaft on which the several sections are mounted and upon which all of the sections are rotatable excepting one of the end sections, means connected to the opposite end sections for transmitting power, and a coiled spring embracing the core sections and with means for anchoring that end of the spring which embraces the non-rotatable core section and with the opposite end of the spring secured to the power-transmitting end section of the core.

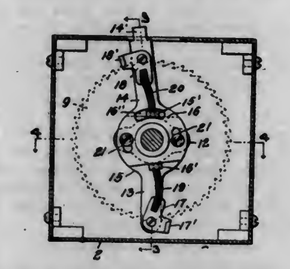
3. In a spring motor, the combination of an elongated coiled spring, power transmitting means connected to the spring, a spool-like core upon which the spring is wound and consisting of a series of core sections arranged end to end, and a washer-like part interposed between the ends of adjacent sections and with projections on said interposed part extending over the core sections for preventing convolutions of the spring from working between the sections.

4. In a spring motor mechanism, the combination of an elongated casing, a shaft journaled in one end thereof, a core at one end secured to the said shaft and extending into the casing therefrom, a supporting arm projecting laterally from the inner end of the core and engaging opposite walls of the casing, a rotatable power transmitting device, and a spring coiled around the core and at one end connected to the power transmitting device and at its opposite end secured to said core supporting arm, said core formed in sections rotatable relatively to each other whereby the power transmitting device is adapted to rotate relatively to the supported inner portion of the core.

5. In a spring motor mechanism, the combination of an elongated coiled spring, a core for the spring consisting of end and intermediate sections with opposite ends of the spring secured, respectively, to the end sections of the core, a shaft extending into and rotatable within the end core sections and with the intermediate sections rotatable on said shaft, means for holding one of the end core sections from rotating, and a power transmitting device rotatable with the other end core section.

[Claims 6 and 7 not printed in the Gazette.]

1,212,789. ESCAPEMENT FOR SPRING-MOTORS. FRANK MAGIDSON, Brownsville, Pa., assignor of one-half to Jacob Davis, Uniontown, Pa. Filed July 15, 1916. Serial No. 109,424. (Cl. 185—46.)



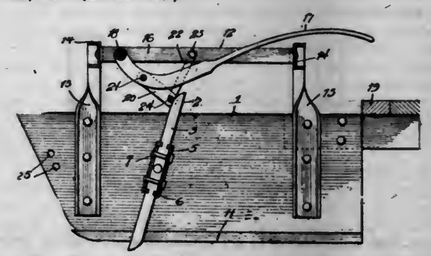
1. The combination of a ratchet wheel, two supports adjacent opposite portions of the wheel periphery with one support immovable and the other adapted to oscillate concentrically with the wheel, dogs pivoted to the supports and adapted to coöperate with opposite portions of the wheel, and means connecting the dogs with the vibrating support whereby they are actuated simultaneously in reverse directions with one dog engaging the wheel and the other dog disengaging the same.

2. An escapement mechanism comprising a spring impelled ratchet wheel, two pivoted dogs adapted to cooperate with different portions of the wheel, an immovable support for one dog, an oscillating support for the other dog, an actuating spring for each dog connected at one end thereto, and holding devices for the opposite ends of said springs, the holding device for that spring which coöperates with the dog mounted on the immovable support being adapted to oscillate, and the holding device for that spring which coöperates with the dog mounted on the oscillating support being immovably held.

3. An escapement mechanism comprising a spring impelled ratchet wheel, two supports extending radially and in different directions from the wheel center, one of the supports being immovable and the other support adapted to oscillate about the wheel center, two dogs pivoted respectively to the supports and adapted to coöperate with different portions of the wheel periphery, an actuating spring for each dog connected thereto and extending toward the wheel center, and securing devices for the inner ends of the springs, the securing device for the spring of that dog pivoted to the immovable support being adapted to vibrate, and the securing device for the spring of that dog pivoted to the vibrating support being immovable.

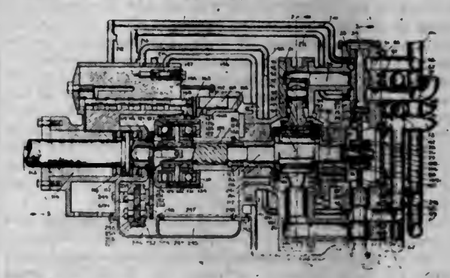
4. The combination of a spring impelled ratchet wheel, two supports extending radially from the wheel center with one support adapted to oscillate about said center and with the other support immovable, two dogs pivoted to the respective supports and adapted to coöperate with opposite portions of the wheel periphery, actuating springs secured at their outer ends to the dogs and extending inwardly toward the wheel center, holding means on the immovable support for the inner end of the spring that coöperates with the dog of the movable support and holding means on the movable support for the inner end of the spring that coöperates with the dog of the immovable support.

1,212,790. RAKE. THOMAS RICHARD MANDERSCHEID, Terrebonne, Oreg. Filed July 26, 1915. Serial No. 42,020. (Cl. 56—80.)



In a rake, spaced parallel runners, a transverse rotatable rake head journaled at its ends in the runners, transverse frame bars connecting the runners, central longitudinal bars connecting the frame bars, a manually operable lever journaled between said longitudinal bars, links pivoted to the lever at opposite sides of said lever forming a toggle with said lever, and a detaining U-shaped member having its terminal pivoted to the longitudinal bars and its bight portion connected to the links and engaging the teeth of the rake head to prevent rotation thereof, said U-shaped member being movable out of such engagement by manipulation of the lever.

1,212,791. VARIABLE-CAPACITY PUMP. CHARLES M. MANLY, Brooklyn, N. Y. Filed Feb. 4, 1911. Serial No. 606,618. (Cl. 103—85.)



1. In a pump, the combination with multiple cylinders grouped into multiple sets to supply fluid pressure to separate multiple circuits, of means for interconnecting and disconnecting the said multiple circuits, substantially as described.

2. In a pump, the combination with multiple fluid pressure generating elements, of passages connecting the fluid pressure to separable multiple circuits, and means for interconnecting and disconnecting the said passages, substantially as described.

3. In a pump, the combination with multiple fluid pressure generating elements, of means for varying the volume of fluid pressure generated per cycle of operation

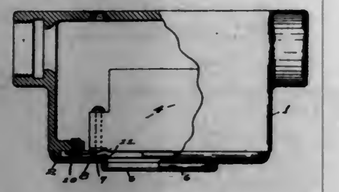
of the said pressure generating elements, and means for connecting the fluid pressure to separable circuits, substantially as described.

4. In a pump, the combination with multiple cylinders, of means for connecting the said cylinders in a multiple number of separable groups with an odd number of cylinders in each group, substantially as described.

5. In a pump, the combination with multiple cylinders, of means for connecting the said cylinders in a multiple number of separable groups with a multiple number of cylinders in each group, substantially as described.

[Claims 6 to 59 not printed in the Gazette.]

1,212,792. HINGE CONSTRUCTION. FLORIAN J. MANTEL, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 10, 1914. Serial No. 823,698. (Cl. 220—12.)



1. The combination of a plate having an opening therethrough, a cover or lid for the opening, the cover or lid having a hinge leaf extending under the margin of the plate around the opening, and bearing on the edge of the wall around said opening, and a spring secured to the inner side of the plate and engaging the hinge leaf to press and hold the same against said edge and hence hold the cover or lid from removal, substantially as and for the purpose described.

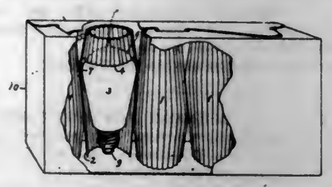
2. The combination of a plate having an opening, and a notch in the margin of the wall around the opening, and a cover or lid for the opening having a hinge leaf formed with an angle between its ends, the hinge leaf being seated at the apex of its interior angle against the bottom of the notch, and a spring secured to the inner side of the plate and having a flange opposed to the open side of the notch and engaging the hinge leaf, substantially as and for the purpose specified.

3. The combination of a plate having an opening and a notch in the margin of the wall around the opening, a cover or lid for the opening having a hinge leaf formed with an angle between its ends, the hinge leaf being seated at the apex of its interior angle against the bottom of the notch, and a spring secured to the plate and bearing against the outer side or leg of the angle of the leaf and having an angular flange engaging the inner side or leg of the angle of the leaf adjoining the cover or lid for holding the leaf in the notch with the apex of the interior angle thereof seated against the bottom of the notch, substantially as and for the purpose set forth.

4. The combination of a plate having an opening and a notch in the margin of the wall around the opening, a cover or lid for the opening having a hinge leaf formed with an angle between its ends, the hinge leaf being seated at the apex of its interior angle against the bottom of the notch, a spring secured to the inner side of the plate and having a flange opposed to the open side of the notch and engaging the hinge leaf, the portion of the hinge leaf near the apex of the angle therein movably fitting the notch and the leaf being formed with laterally extending lugs extending beyond the sides of the notch, substantially as and for the purpose described.

5. The combination of a plate having an opening and a notch in the margin of the wall around the opening, a cover or lid for the opening having a hinge leaf formed with an angle between its ends, the hinge leaf being seated at the apex of its interior angle against the bottom of the notch, and a spring secured to the inner face of the plate and bearing against the outer side or leg of the angle of the leaf and having an angular flange, the angle of the spring extending around the exterior angle of the leaf and the flange engaging the inner side of the angle of the leaf adjoining the cover or lid for holding the leaf in the notch with the apex of the interior angle thereof seated against the bottom of the notch, the leaf being formed with laterally extending lugs at its free ends extending beyond the ends of the notch, substantially as and for the purpose specified.

1,212,793. PACKING FOR INCANDESCENT-LAMP BULBS AND THE LIKE. FRED C. MARCH, Warren, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Apr. 7, 1913. Serial No. 759,400. (Cl. 229—90.)



A packing for incandescent lamp bulbs comprising a cylindrical corrugated wrapper adapted to be expanded and distorted out of its cylindrical form by the bulging portion of the lamp bulb upon insertion thereof and a single reinforcing ring of expansible material adapted to be inserted in one end of the wrapper to reduce the area thereof and to be engaged by the tip end of the bulb and expanded thereby to conform to the shape of the interior of the wrapper and lamp bulb, whereby said ring is maintained in a definite position by the gripping action between said ring and wrapper to support and suspend the lamp bulb against accidental movement in the wrapper during handling.

1,212,794. GAME APPARATUS. JOHN G. MARK, Niles, Mich. Filed Feb. 26, 1916. Serial No. 80,607. (Cl. 46—59.)



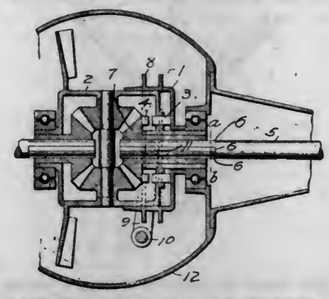
1. A device of the class described, comprising a base adapted to support a quoit in substantially horizontal disposition thereon, and upper and lower means on said base for engaging the top and bottom respectively of such quoit near one edge thereof and at points in different vertical planes, one of said upper and lower means being movable relatively to the other for simultaneously throwing and positively overturning the quoit.

2. The combination of a base adapted to support a quoit in horizontal disposition thereon, shoulders on said base for engaging the top and bottom respectively of such quoit near one edge, and means for moving one of said shoulders relatively to the other for simultaneously throwing and overturning the quoit.

3. The combination of a base adapted to support a quoit in horizontal disposition thereon, a hooked stop mounted on said base for engaging the front edge of such quoit, and a spring arm mounted on said base and coacting with said stop for throwing and overturning such quoit.

4. The combination of a horizontally disposed base adapted to support a quoit in horizontal disposition thereon, a hooked stop mounted on one end of said base adapted to abut and overhang the front edge of the quoit, a bent lever on said base disposed to rock in a vertical plane for flipping such quoit, and means for loosely pivoting said arm to said base, said means being positioned so as to support the rear edge of such quoit in elevated position.

1,212,795. DEVICE FOR LOCKING THE DIFFERENTIAL GEAR IN MOTOR-CARS. HEINRICH MAYER and GUSTAV SCHLATTER, Arbon, Switzerland, assignors to Firm Adolph Saurer, Arbon, Switzerland. Filed Mar. 21, 1916. Serial No. 85,634. (Cl. 74—34.)

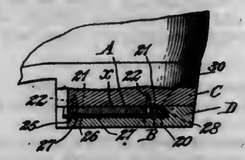


1. In a locking device for differential gearing, the combination of a divided axle, differential gearing connecting the sections of the axle including a rotatable cylindrical casing, a cylindrical clutch member entirely supported by and axially movable on the periphery of the casing, clutch teeth on the clutch member adapted to be moved into locking engagement with one of the gears of the differential.

2. In a locking device for differential gearing, the combination of a divided axle, differential gearing connecting the sections of the axle including a rotatable cylindrical casing, a cylindrical clutch member entirely supported by and axially movable on the periphery of the casing and out of engagement with the hub of the latter, said clutch member having an end wall parallel to the end of the casing, clutch teeth on said end wall projecting through the end of the casing, clutch teeth on one of the gears of the differential, means to axially slide the clutch member on the casing to move the clutch teeth into and out of engagement, and means to rotate the casing.

3. In a locking device for differential gearing, the combination of a divided axle, differential gearing connecting the sections of the axle including a cylindrical casing having vertical end walls, bearings for the casing in close proximity to said end walls, means to rotate the casing, a clutch member having a cylindrical sleeve portion slidably mounted on the periphery of the casing and having an end wall disposed at right-angles to the axis of the casing extending between the latter and one of the bearings, short clutch teeth on said end wall projecting through one end of the casing, clutch teeth on one of the gears of the differential, means within the planes of the ends of the casing adapted to axially slide the clutch sleeve on the casing to move the clutch teeth on the end wall of the sleeve into and out of engagement with the teeth on said gear.

1,212,796. DETACHABLE HEEL. SILVESTRO MILANO, New York, N. Y., assignor of one-half to George E. H. Werham, South Nyack, N. Y. Filed Dec. 13, 1911. Serial No. 665,464. (Cl. 36—36.)



1. In a heel for footwear embodying a fixed part and a movable part, coöperating plates one on the fixed part and the other on the movable part, the area of said coöperating plates being less than the area of the parts on which they are respectively positioned and the marginal edge of each plate being within the margin of the part to which the plate is applied, resilient means integral with one of said plates for detachably coupling the plates, and means coöperating with said plates and positioned exteriorly thereto for relieving said coupling means from a substantial part of the strain exerted by one part upon the other part due to a twisting movement of one part relatively to the other, whereby said plates are precluded from becoming accidentally separated by twisting strains.

2. A heel for footwear embodying a fixed part and a movable part, coöperating plates one of which is on the fixed part and the other on the movable part, one of said plates having a chamber, each plate being provided with inturned flanges, one of which plates is arranged to slide within the other plate, and a core or filler occupying said chamber of one plate and precluding the plate from collapsing under the pressure and strain to which the plate is subjected when in use.

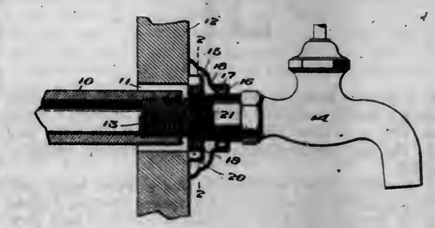
3. A heel for footwear embodying a fixed part and a movable part, coöperating plates, one of which is attached to the fixed part and the other plate is attached to the movable part, one of said plates being flanged and united to one of said parts to produce an intervening chamber, and a removable core or filler occupying said chamber and supporting said flanged plate against collapsing under the pressure and strain to which the plate is subjected when the device is in use.

4. A heel for footwear embodying a fixed part and a movable part, and coöperating plates arranged to detachably secure the movable part to the fixed part, one of which plates is attached to the movable part, the other of said plates being composed of two sections detachably united together, said sections being attached to the fixed part of the heel, one of said sections having a core integral therewith, and the other of said sections having a removable core.

5. A heel for footwear embodying a fixed part and a movable part, coöperating plates, one of which is attached to the fixed part, and the other plate to the removable part, said plates being provided with coöperating inturned flanges arranged to secure the movable part to the fixed part, said fixed plate being chambered, a core filling the chamber of said plate, the flange of one plate being provided with a slot, and a thrust stud on the other plate, said thrust stud fitting in said slot so as to relieve one plate from a part of the strain brought upon the flanges by a twisting movement of one part of the heel relatively to the other part of said heel.

[Claims 6 and 7 not printed in the Gazette.]

1,212,797. WALL-FITTING FOR COCKS. PHILIP MUELLER and ANTON C. SCHUERMANN, Decatur, Ill. Continuation of application Serial No. 806,774, filed Dec. 15, 1913. This application filed Mar. 2, 1916. Serial No. 81,688. (Cl. 137—111.)



1. In a wall fitting, a faucet having a shank engaging through an opening in a wall and adapted for attachment to a supply pipe, a canopy movable longitudinally on the shank for engagement against the wall to cover the opening, and a retaining device adjustably secured on said shank within the canopy for engagement with said wall to hold the faucet in position, said device having adjusting means on its periphery adjacent to its inner end to

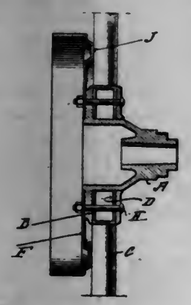
permit access thereto between the wall and the canopy upon the slight separation of the latter from the wall.

2. In a wall fitting, a faucet having a shank for engagement through an opening in a wall and adapted for attachment to a supply pipe, said shank having relatively fine threads adjacent to its inner end, a collar internally threaded for engagement with said fine threads of the shank, said collar having radially extending lugs adapted for engagement against said wall to hold the shank firmly in place, said lugs having tool receiving openings in their outer ends to increase the radial purchase of the tool on the collar, and a canopy slidable on said shank adapted to inclose said collar and the lugs carried thereby.

3. In a fitting of the class described, the combination with a faucet having a shank adapted to pass through a wall opening and engage a supply pipe; of a collar adjustably mounted on the faucet shank and adapted to bear against the retaining wall to clamp the fitting firmly in place; and a canopy of thin bendable metal disconnected from said collar and slidably mounted on the faucet shank and having an extended bearing thereon, said canopy being adapted to seat against the wall surface, inclose and cover said collar and opening, and adjust itself by body distortion to the angular position of the faucet relative to the wall.

4. In a wall fitting, the combination with a faucet having a shank engaging through an opening in a wall and adapted for attachment to a supply pipe, and a canopy longitudinally movable upon said shank adapted to engage the wall over said opening, of a retaining collar adjustably fixed on the shank separately and independently of said canopy and located within the canopy for binding engagement against said wall to hold the faucet in place, said collar having a convex or spherical seat for engagement with the edge of the opening in the wall to permit the collar to adjust itself over the opening upon angular displacement of the faucet relative to the wall.

1,212,798. VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed May 28, 1915. Serial No. 30,936. (Cl. 21—69.)

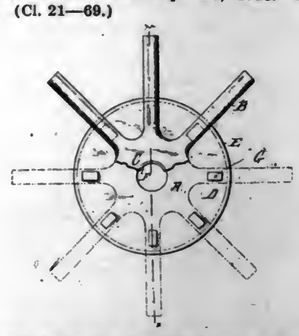


1. A vehicle wheel of metal having a wheel body, comprising a hollow nave and tubular spokes thereon, a brake disk, and a circular rib upon and concentric with said disk: the said spokes being each homogeneously united to said rib.

2. A vehicle wheel of metal having a wheel body, comprising a hollow nave and tubular spokes thereon, a brake disk, a circular rib upon and concentric with said disk, the said spokes being each homogeneously united to said rib, a hub, a flange on said hub interposed between said disk and said nave, and means for securing together said nave, hub flange and disk.

3. A vehicle wheel of metal, having a hub, spokes, a brake disk, and an annular rib struck up from the outer face of said disk near the circumferential periphery thereof: the said spokes being each homogeneously united to said rib.

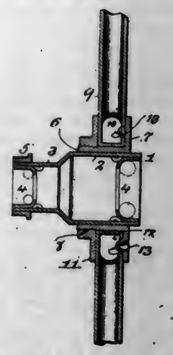
1,212,799. VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed Sept. 27, 1915. Serial No. 52,798. (Cl. 21—69.)



1. A metal wheel for vehicles having a hollow sheet metal body, comprising a nave and tubular spokes thereon, a brake disk, and a plurality of spacing blocks interposed between said spokes and said disk.

2. A metal wheel for vehicles having a hollow sheet metal body, comprising a nave and tubular spokes thereon, a brake disk, a flange surrounding said nave opening and welded to said disk, and a plurality of spacing blocks interposed between said spokes and said disk.

1,212,800. METAL VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 17, 1915. Serial No. 61,894. (Cl. 21—31.)



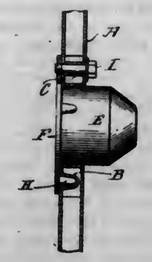
1. A demountable metal wheel for vehicles having a hollow sheet metal body, comprising a nave with openings in its rear wall and tubular spokes on said nave, a hub receiving said wheel body, a flange on said hub, studs on said flange entering said nave openings, and means for removably securing said wheel body on said hub.

2. A demountable metal wheel for vehicles having a hollow sheet metal body, comprising a nave with openings in its rear wall and tubular spokes on said nave, a hub receiving said wheel body, a flange on said hub, studs integral with said flange entering said nave openings, and means for removably securing said wheel body on said hub.

1,212,801. METAL VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed Mar. 2, 1916. Serial No. 81,586. (Cl. 21—31.)

1. A demountable metal vehicle wheel, comprising a hollow nave having a central opening for receiving a hub, spokes on said nave, sockets in one face of said nave disposed around said hub opening, a cylindrical hub entering said opening, a flange on said hub, projections on said flange entering said sockets, and a removable bolt securing said flange to said nave.

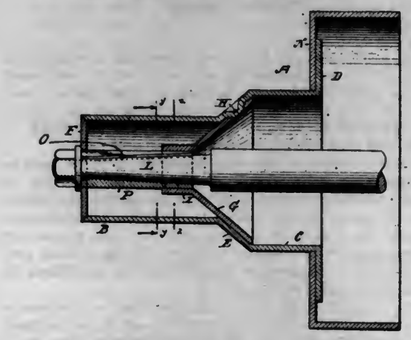
2. A demountable metal vehicle wheel, comprising a hollow nave having a central opening for receiving a hub, spokes on said nave, struck up sockets in one face of said nave disposed around said hub opening, a cylindrical hub entering said opening, a flange on said hub, struck up projections on said flange entering said sockets, and a removable bolt securing said flange to said nave.



3. A demountable metal vehicle wheel, comprising a hollow nave having a central opening for receiving a hub, spokes on said nave, struck up sockets in one face of said nave disposed around said hub opening, a cylindrical hub entering said opening, a flange on said hub having a threaded opening, struck up projections on said flange entering said sockets, and a bolt headed at one end and threaded near the other end, passing through said nave and entering said threaded flange opening.

4. A demountable metal vehicle wheel, comprising a hollow nave of thin metal having a central opening for receiving a hub, spokes on said nave, struck up sockets in one face of said nave disposed around said hub opening, a cylindrical hub entering said opening, a flange on said hub having a threaded opening, struck up projections on said flange entering said sockets, an interior tube secured in and extending from face to face of said nave and open at both extremities, and a bolt headed at one end and threaded near the other end, passing through said tube and entering said threaded flange opening.

1,212,802. METAL HUB FOR VEHICLE-WHEELS. THOMAS E. MURRAY, New York, N. Y. Filed Apr. 1, 1916. Serial No. 88,225. (Cl. 21—69.)



1. A hollow metal hub having a central opening in its front wall, a collar fixed within said hub having a central tubular projection of polygonal cross section, a driving axle shaft fitting in said projection and extending through said wall opening, and means for securing said hub on said axle shaft.

2. A hollow metal hub having a central polygonal opening in its front wall, a collar fixed within said hub having a central tubular projection of polygonal cross section, a driving axle shaft fitting in said projection and said wall opening, and means for securing said hub on said axle shaft.

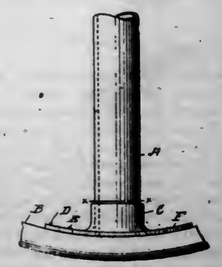
3. A hollow metal hub having a central polygonal opening in its front wall, a collar fixed within said hub having a central tubular projection of polygonal cross section, a driving axle shaft, a polygonal sleeve secured on said shaft and fitting in said projection and said wall opening, and means for securing said hub on said axle shaft.

4. A hollow metal hub having a central polygonal opening in its front wall, a collar fixed within said hub having a central tubular projection of polygonal cross section, a driving axle shaft, a polygonal sleeve having a longitudinal key-way and fitting in said projection and said wall opening, a key on said axle shaft received in said key-way, and means for securing said hub on said axle shaft.

5. A hollow metal hub having an axle-supporting opening in its outer wall and formed with an inner section, an outer section of less diameter than said inner section and a middle tapering section uniting said outer and inner sections, a tapered collar seated and secured in said middle section, and an axle-receiving sleeve centrally disposed in and carried by said collar.

[Claim 6 not printed in the Gazette.]

1,212,803. METAL VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed June 17, 1916. Serial No. 104,171. (Cl. 21—69.)



1. A metal vehicle wheel, comprising a spoke, a rim, and a flange on the outer end of said spoke and secured to said rim at two spots disposed in the circumferential line of said rim, the said spoke and flange being free from said rim between said spots for a distance sufficient to cause shock or strain applied to the joint between rim and spoke to be counteracted by the resiliency of the metal intervening between said spots.

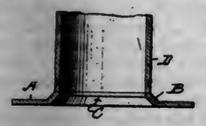
2. A metal vehicle wheel, comprising a hollow spoke, a rim, and a flange on the outer end of said spoke and homogeneously united to said rim at two spots disposed 180 degrees apart in the circumferential line of said rim, the said spoke and flange being free from said rim between said spots for a distance sufficient to cause shock or strain applied to the joint between rim and spoke to be counteracted by the resiliency of the metal intervening between said spots.

3. A metal vehicle wheel, comprising a spoke, a rim, a sleeve on the outer portion of said spoke, and a flange on said sleeve homogeneously united to said rim at two spots disposed in the circumferential line of said rim, the said flange and the butt end of said spoke between said spots being free from said rim for a distance sufficient to cause shock or strain applied to the joint between rim and spoke to be counteracted by the resiliency of the metal intervening between said spots.

1,212,804. METHOD OF FLANGING THE END OF A METAL TUBE. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 4, 1916. Serial No. 129,456. (Cl. 219—10.)

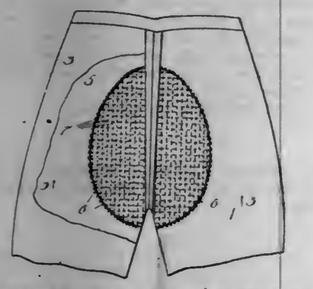
The method of flanging the end of a metal tube, which consists in, first, integrally forming on the surface of a metal plate a circular rib registering with the butt end

of said tube, second, removing the material of said plate inclosed by said rib, and third, placing the said tube end



in contact with said rib and electrically welding said tube and rib at said joint.

1,212,805. REINFORCED GARMENT. MARC NEWMAN, Chicago, Ill. Filed July 3, 1916. Serial No. 107,455. (Cl. 2—81.)



1. A garment having a reinforcing patch of the same material applied directly thereto and united to the fabric thereof by closely spaced lines of stitching extending only partially through the exposed fabric of the garment and invisible from the exterior thereof and forming in effect a fabric of double thickness, and having a lining overlapping the edge of the patch and united therewith by the same kind of stitching, substantially as described.

2. A garment having a reinforcing patch of the same material applied directly thereto and united to the fabric thereof by closely spaced lines of stitching extending only partially through the exposed fabric of the garment and invisible from the exterior thereof, and forming in effect a fabric of double thickness, and having a lining lapping the edge of the patch and united thereto by stitching, substantially as described.

1,212,806. COMBINATION HOT AND COLD WATER FAUCET. WILLIAM G. NEWTON, New Haven, Conn., assignor to The Peck Bros. & Co., New Haven, Conn., a Corporation. Filed Jan. 28, 1916. Serial No. 74,728. (Cl. 137—26.)



1. A valve-outfit for wash basins, comprising two independently organized vertically arranged valve-structures respectively adapted to be connected at their lower ends with a hot and a cold water supply-pipe and one having a single nozzle, and each having an independently operable valve closing against the pressure of the water, and the said valve-outfit also comprising a water-pipe leading from one valve-structure into the other, whereby water may be drawn through the said nozzle from either valve-structure by operating its particular valve, or through the said nozzle from both valve-structures by operating both valves.

2. A valve-outfit for wash-basins, comprising two independently organized valve-structures one of which is nozzleless and furnished with a long valve-stem provided at its lower end with a valve closing against the water-pressure, and the other having two independent water-passages, a single nozzle communicating with both of the said passages, and a valve closing against the water-pressure, and the two structures being connected by a water-pipe one end of which is connected with the nozzleless structure at a point above the valve thereof, and the other end of which is connected with the other structure so as to lead into one of the water-passages thereof at a point below the valve of the said structure, whereby water may be drawn through the nozzle from either structure or simultaneously from both structures.

3. A valve-outfit for wash basins, comprising two independently organized valve structures having independent manually operable valves, one structure being nozzleless and the other structure having a nozzle and two independent concentric water-passages the upper ends of which communicate with the said nozzle, and the nozzleless structure being connected at its lower end by a pipe with the outer water-passage of the other structure, whereby water may be drawn through the nozzle from either structure or simultaneously from both structures.

4. The combination with a wash-basin slab having two faucet-openings, of two independently organized vertically arranged valve-structures mounted in the said openings and respectively adapted to be connected at their lower ends with hot and cold water supply pipes, and one of such structures having a single nozzle and each structure having an independently operable valve for controlling the water admitted through its supply-pipe and both of the said valves closing against the pressure of the water; and a water pipe located below the said slab and leading from the nozzleless structure to the structure having a nozzle, whereby water may be drawn through the said nozzle from either valve-structure by operating its particular valve or simultaneously from both valve-structures by operating both valves.

1,212,807. MACHINE FOR SLICING AND GOUGING HEEL-BLANKS. DENNIS PARKS, St. Louis, Mo. Filed July 22, 1915. Serial No. 41,316. (Cl. 12—46.)



1. In a machine of the class described, a stationary cutter, means for supporting an independent heel-blank with its upper flat side in inclined relation thereto, and with a portion extending across the plane of the cutter, and a reciprocable member for forcing the heel-blank in a right line into contact with and over said cutter.

2. In a machine of the class described, a cutter, means for supporting a heel-blank with its upper flat side in inclined relation thereto and with a portion extending below the plane of the cutter, means for automatically clamping the heel-blank in such position, and means for effecting relative movement between the heel-blank and the cutter in a horizontal plane while the heel-blank is held in its clamped position.

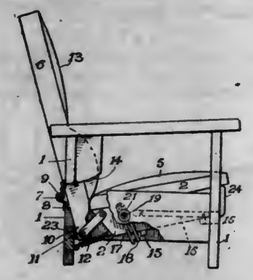
3. In a machine of the class described, a stationary cutter, means for supporting a heel-blank in an inclined position relative thereto, means for advancing the heel-blank in a right line toward said cutter, a clamp movable with said advancing means for holding the heel-blank in a fixed position while being advanced, and means for automatically releasing said clamp.

4. In a machine of the class described, a stationary cutter, a support for heel-blanks located below the plane of said cutter a distance equal to the thickness of the material to be cut from the heel-blank, a pusher for forcing the heel-blank toward the cutter, a clamp movable with the pusher for holding the heel-blank in fixed position during its movement toward the cutter, and means for simultaneously moving said clamp and pusher.

5. In a machine of the class described, a cutter, a support for heel-blanks located below the plane of said cutter, a movable pusher located above said support and adjustable to permit a heel-blank to rest on said support only when one edge portion of said heel-blank rests on said cutter, heel-blank clamping means movable with said pusher, and means for reciprocating said pusher toward and from the cutter.

[Claims 6 to 17 not printed in the Gazette.]

1,212,808. ADJUSTABLE CHAIR. DE WATT PEPPER, New Milford, Conn. Filed May 31, 1916. Serial No. 100,906. (Cl. 155—28.)

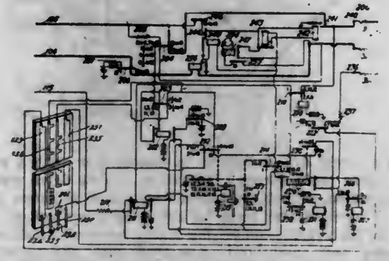


1. In a chair, the combination of a stationary frame, a seat pivotally connected at its front edge to the front of said frame and capable of swinging movements from said pivotal point, integral cross bars carried by said seat and having their ends extending beyond the respective seat sides, and integral cleats common to the cross bars secured to the stationary frame and against which said cross bars abut when the seat is swung to horizontal position.

2. In a chair, a frame, a seat pivoted at its front to the frame, a back pivoted to the frame, links pivoted to the back and seat, a bar pivoted at one end to the seat and having its other end slotted, a bolt connected to the frame and extending through the slot of said bar and having a head engaging the bar, and a nut on the bolt for engaging the frame whereby to bind the bar against the frame.

3. In a chair, a frame, a seat pivoted at its front to the frame, a back pivoted to the frame, links pivoted to the back and seat, a bar pivoted at one end to the seat, and means to clamp the bar against the frame to lock same.

1,212,809. TELEPHONE-EXCHANGE SYSTEM. FRANK N. REEVES, Newark, N. J., and ALBEN E. LUNDELL, New York, N. Y., assignors, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 11, 1915. Serial No. 50,170. (Cl. 179—18.)



1. In a telephone exchange system, the combination with a plurality of lines, a plurality of automatic power-driven switches for interconnecting said lines, driving circuits for said switches, and a sender for controlling the operation of said switches by means of revertive impulses, of a single relay to coöperate with said sender for directly controlling the driving circuit of each switch in succession.

2. In a telephone exchange system, the combination with a plurality of lines, a plurality of automatic power-driven switches for connecting said lines, driving magnets for said switches, circuits for energizing said magnets, and a sender for controlling the operation of said switches by means of revertive impulses, of a single relay coöperating with said sender and controlling at a front contact the magnet energizing circuit of each switch in succession.

3. In a telephone exchange system, the combination with a plurality of lines, a plurality of automatic switches for interconnecting the same, and a fundamental circuit comprising a stepping relay and a control relay for jointly supervising the operation of each of said switches, of a commutator associated with each switch for intermittently shunting said stepping relay but maintaining energized said control relay during the advance of its associated switch.

1,212,810. MATCH-STRIKER. PERCIVAL SEWELL ROBARTS, Ottawa, Ontario, Canada. Filed Jan. 28, 1916. Serial No. 74,924. (Cl. 206—36.)

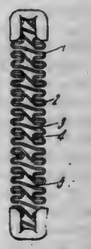


1. A device of the class described comprising a piece of metal cut to form a body-portion having the opposite ends folded to receive securing pins and provided with side flanges to hold, in combination with said folded ends, an abrasive material.

2. The combination with a plate folded at opposite ends and provided with side flanges of an abrasive material adapted to fit therein, securing pins extending through said folded ends and inwardly bent across the back of said plate.

3. The combination with a plate folded at both ends and formed with side flanges of two lengths of wire formed with pointed ends fixedly secured and extending horizontally through said folded ends, the pointed ends of said wires being bent inwardly beneath said plate, an abrasive material for said plate.

1,212,811. GARMENT-STAY. WILLIAM J. ROCHE, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed June 22, 1914. Serial No. 846,588. (Cl. 2—76.)



1. A garment stay, comprising wire bent back and forth to form a series of loops lying at the edges of the stay and connected by transverse portions or crossings, the wire at the closed ends of the loops along both edges of the

stay being bent inwardly nearly to the center line of the stay to form a reëntrant portion in each loop.

2. A garment stay, comprising wire bent back and forth to form a series of loops lying at the edges of the stay and connected by transverse portions or crossings, the wire at the closed ends of the loops along both edges of the stay being bent inwardly nearly to the center line of the stay to form a reëntrant portion in each loop, the crossing portions of the wire being bent or deflected in the plane of the stay toward its ends.

3. A garment stay, comprising wire bent back and forth to form a series of loops lying at the edges of the stay and connected by transverse portions or crossings, the wire at the closed ends of the loops along both edges of the stay being bent inwardly nearly to the center line of the stay to form a reëntrant portion in each loop, the crossing portions of the wire being bent or deflected in the plane of the stay and lying substantially parallel to each other from edge to edge of the stay toward its ends.

1,212,812. GARMENT-STAY. WILLIAM J. ROCHE, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed July 21, 1914. Serial No. 852,253. (Cl. 2—76.)



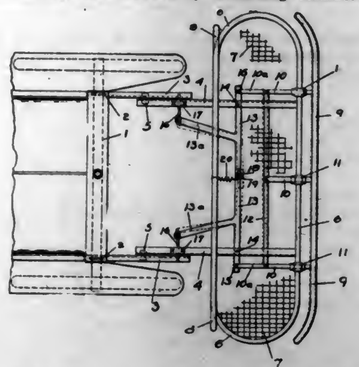
1. A garment stay, comprising a plurality of wires bent back and forth in opposite directions in zigzag form to form a series of return loops lying along the edges of the stay and extending toward its middle line and transversely extending crossing portions connecting said loops, the return loops on the edges of the stay being disposed in pairs opposite each other.

2. A garment stay, comprising a plurality of wires bent back and forth in opposite directions to form a series of edge loops and crossing portions, the edge loops being returned toward the center line of the stay and the wires being intertwined with each other.

3. A garment stay, comprising a plurality of wires bent back and forth in opposite directions to form a series of return loops lying along the edges of the stay and transversely extending crossing portions, the return loops on the edges of the stay being disposed in pairs opposite each other, all of said loops also extending toward the same end of the stay.

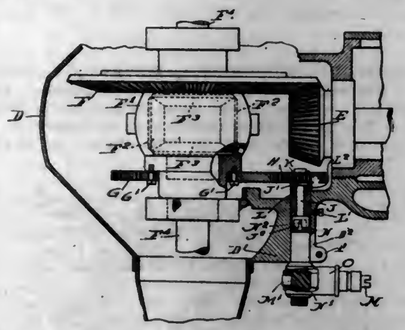
1,212,813. VEHICLE-FENDER. FRED B. ROLAND and CHARLES D. CHANDLER, Portland, Oreg. Filed Feb. 8, 1915. Serial No. 6,726. (Cl. 105—130.)

A vehicle fender comprising a duality of supporting members rigidly secured to the front axle of the said vehicle, and having orifies adjacent the front end thereof; a duality of extension members pivoted respectively upon said supporting members, and having orifices therein adapted to register with said orifices in the supporting members when said extension members are in alinement therewith; a duality of pins each mounted within its respective orifice in one of said extension members and adapted to extend therefrom into the adjacent orifice in the supporting member adjacent thereto; a horizontally disposed frame mounted upon said extension members, said frame being covered with woven fabric or mesh; a vertically disposed frame secured to the rearward side of said horizontally disposed frame, said vertically disposed frame being covered with woven fabric or mesh; a trinity of bearings mounted upon the forward end of said horizontally disposed frame, one of said bearings being centrally disposed, and the other two of said bearings being disposed respectively upon the outside of said extension members; a contact bar substantially equal in length to said horizontally disposed frame, and horizontally disposed in front of and in substantially the same plane as said frame; rearwardly extending members integral with said contact bar, each slidably mounted within one of said bearings; a bar substantially parallel to said contact bar and connecting said rearwardly extending members; a



duality of T shaped bell cranks, each pivoted upon one of said extension members, each of said bell cranks having a rearwardly extending arm pivotally connected to the adjacent one of said pins, and a transversely disposed arm overlapping the transversely disposed arm of the adjacent bell crank, one of said transversely disposed arms having a longitudinal slot therein, and the corresponding transversely disposed arm having fixed therein a pin adapted to engage said slot; and a spring adapted to hold said pins engaged with the orifices in said supporting members until same are withdrawn by said contact bar meeting with some obstruction.

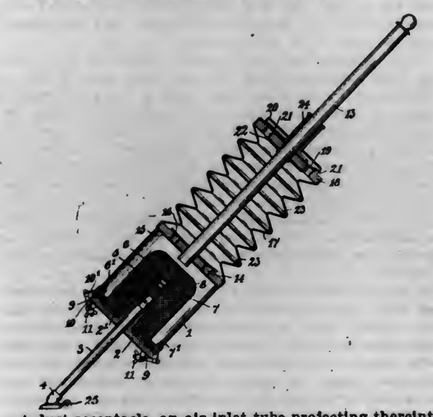
1,212,814. SPEEDOMETER DRIVE-TRAIN. FRANK A. ROSS, Evanston, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Mar. 11, 1914. Serial No. 823,888. (Cl. 74—7.)



In a power driven vehicle, in combination with a principal gear train through which the vehicle drive wheels are actuated, a fixed housing inclosing such principal gear train; a second gear train for actuating a mechanism carried by the vehicle, comprising a gear mounted within said housing and operatively connected with the principal train, the housing having an opening or aperture from its cavity to the outside; a shaft and a sleeve in which it is

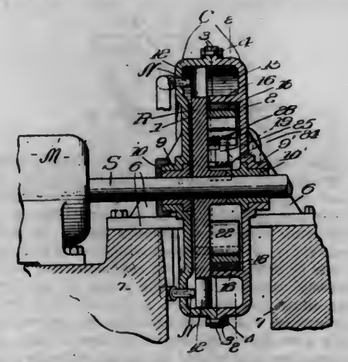
journaled, adapted to extend in and close the inner end of the aperture of the housing, and means exteriorly accessible for making said sleeve fast to the housing in said aperture; a pinion on said shaft at the inner end of the sleeve within the housing, and a coupling member on the shaft at the outer end of the sleeve adapted to serve as a stop-collar for preventing the shaft from escaping inwardly from the sleeve; a second gear housing, one end of which is adapted to be inserted from the outside of the principal housing into said aperture and to close the outer end thereof, a shaft in said second housing journaled in the end portion thereof which enters the aperture in the principal housing, and a coupling member on the end of said shaft adapted to coöperate with the coupling member on the outer end of the first mentioned shaft, and means for securing said second housing in the aperture of the first housing with said coupling members engaged with each other within said aperture.

1,212,815. DOMESTIC CLEANING APPLIANCE. CARL HERRMANN ROTH, Southport, England. Filed June 29, 1914. Serial No. 847,948. (Cl. 183—37.)



A dust receptacle, an air inlet tube projecting thereinto, and an outlet therefrom, a bracket mounted on said inlet tube within said receptacle and having a portion opposite the end of the tube and adjacent thereto, and a disinfectant supported in said portion of the bracket.

1,212,816. CONTROLLING DEVICE FOR TURBINES. SAMUEL W. RUSHMORE, Plainfield, N. J. Filed Sept. 28, 1911. Serial No. 651,819. (Cl. 74—45.)



1. In combination, a stationary member having a braking surface, a rotary member, a braking element pivotally connected to the rotary member and having a brake shoe in juxtaposition to said braking surface, whereby the centrifugal force of the rotary member will apply the brake shoe to said braking surface with more or less pressure depending upon the speed of rotation of the rotary member, and a counterweight arranged to partly offset the centrifugal effect of said brake shoe.

2. A turbine including a stationary member having a braking surface, a rotary blade carrying member, and a braking element pivotally connected to the rotary member and having a brake shoe in juxtaposition to said braking surface, whereby the centrifugal force of the rotary member will apply the brake shoe to said braking surface with more or less pressure depending upon the speed of rotation of the rotary member, and a weight carried by said braking element to limit its braking action.

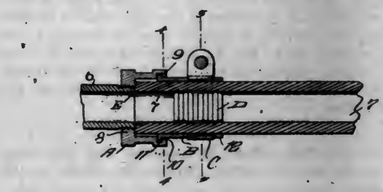
3. In a turbine, a stationary casing having a braking surface, and a steam inlet and a steam outlet, a rotary blade carrying member within said casing, and a braking element pivotally connected to the rotary member in the path of the steam and having a brake shoe in juxtaposition to said braking surfaces whereby the centrifugal force of the rotary member will apply the brake shoe to said braking surface and whereby the steam passing to the outlet will lubricate the braking surfaces.

4. In a controlling device for turbines, a casing inclosing a steam chamber, a rotary member arranged in said chamber, an annular braking flange within the chamber, centrifugally acting brake-shoes pivotally carried on the rotary member to engage said flange when the speed becomes excessive, said brake-shoes having an enlarged braking area, counter-balance weights carried by the shoes to limit their centrifugal action, stop-lugs on the rotor and retractile springs normally to hold the shoes in retracted position in engagement with the lugs, said parts being arranged to permit the access of the steam to the braking parts thereby to be subjected to the action thereof.

5. A controlling device for turbines and the like having a stationary member, a rotary member, centrifugally acting brake-shoes carried by said rotary member frictionally to engage said stationary member, said brake-shoes having an enlarged braking area, counter-weights to oppose the centrifugal action of said shoes in order to limit the braking and retractile springs normally to hold the shoes in retracted position.

[Claims 6 to 8 not printed in the Gazette.]

1,212,817. HOSE-COUPLING. CALVIN LEE RUSSELL, Tulare, Cal. Filed Mar. 17, 1915. Serial No. 14,949. (Cl. 137—28.)



1. The combination with a hose having a squared end, and an externally threaded coupling member having a squared end, of a collar arranged on the hose having a threaded inwardly extending flange resting against the end of the hose, said flange being of an internal diameter greater than the internal diameter of the hose at its end, a sleeve arranged on the hose, means securing the sleeve against longitudinal movement relative to the hose, and an interlocking swivel connection between the sleeve and collar, retaining the collar against longitudinal movement and allowing rotary movement thereof, whereby the squared end of the hose may be forced into engagement with the squared end of the coupling member.

2. The combination with a hose having a squared end, and an externally threaded coupling member having a squared end, of a collar arranged on the hose having a

threaded inwardly extending flange resting against the end of the hose, said flange being of an internal diameter greater than the internal diameter of the hose at its end, means anchored on the hose having an interlocking swivel connection with the collar, retaining the latter against longitudinal movement and allowing rotary movement of the collar, whereby said collar may be turned upon the coupler member in order that the squared end of the hose may be forced against the squared end of the coupler member.

1,212,818. PROCESS OF MAKING SOFT TRANSPARENT SODIUM OIL-SOAPS. JAMES W. RYDER, New York, N. Y., assignor to Specification Soap & Oil Co., Inc., New York, N. Y., a Corporation of New York. Filed July 12, 1915. Serial No. 39,257. (Cl. 87—16.)

1. The process of producing soft, transparent sodium soaps from vegetable oils directly during manufacture consisting in preparing the oil by admixing a few per cent. of denatured alcohol therewith, saponifying the mixture of oil and alcohol by caustic soda lye, adding water up to about one half of the quantity of the mixture, and boiling the resulting mass until perfectly saponified, transparent soft soap is obtained.

2. The process of producing soft, transparent sodium soaps from vegetable oils directly during manufacture consisting in saponifying the oil by caustic soda lye, adding water up to about one half the quantity of the mixture, and boiling the resulting mass until perfectly saponified, transparent soft soap is obtained.

3. The process of producing soft, transparent sodium soaps from vegetable oils directly during manufacture consisting in preparing the oil by heating it to about 100–110° F. and then incorporating a few per cent. of alcohol therewith, saponifying the mixture by caustic soda lye, adding water up to about one half of the quantity of the mixture, and boiling the resulting mass until perfectly saponified, transparent soft soap is obtained.

4. The process of producing soft transparent soap of various consistency from vegetable oils directly during its manufacture consisting in heating about 100 pounds of vegetable oil to a temperature of from 100–110° F., incorporating with the heated oil about 3 pounds of denatured alcohol, admixing then about 50 pounds of caustic soda lye of 36° B. having a temperature of from 60–90° F., adding about 30–60 per cent. of water, and boiling the resulting mass until transparent soap of the desired consistency is obtained.

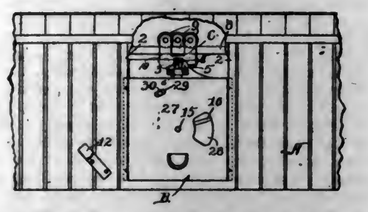
5. The process of producing soft, transparent sodium soaps from vegetable oils directly during manufacture consisting in preparing the oil at a temperature of 100–110° F. by admixing therewith a few per cent. of alcohol, saponifying the mixture by caustic soda lye having a temperature of from 60 to 90° F., adding water up to about one half of the quantity of the mass, and boiling the resulting mass until perfectly saponified, transparent soft soap is obtained.

1,212,819. NIPPLE. FRED S. SAKANAI, San Francisco, Cal. Filed Mar. 3, 1916. Serial No. 81,927. (Cl. 128—18.)



A nursing nipple including a hollow body constructed of resilient material, a mouthpiece formed upon said body, a hollow conical extension formed upon said body and extending into the same, the walls of said conical extension being equal in thickness to the thickness of the body, said conical extension having a split formed in its side, sides of said split diverging as they extend inwardly into the interior of the conical extension for weakening the extension to allow free spreading movement of the sides of the split upon sudden action upon the mouthpiece.

1,212,820. GRAIN-DOOR FOR CARS. HANS SATHER, St. Paul, Minn. Filed Sept. 18, 1915. Serial No. 51,491. (Cl. 20—31.)

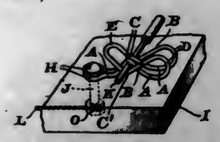


1. In combination with a grain car and its door opening, rails supported along the inner side wall of the car adjacent to the top of the door opening, a bracket slidably supported upon said rails, a door having pivotal and vertically slidable support upon said bracket, outwardly projecting locking pins slidably supported upon the face of the door, and actuating mechanism supported upon the door for forcing said door downwardly into contact with the threshold and said pins outwardly into engagement with the sides of the door opening.

2. In combination with a grain car and its door opening, rails supported along the inner side wall of the car adjacent to the top of the door opening, a bracket slidably supported upon said rails, a door having pivotal and vertically slidable support upon said bracket, outwardly projecting locking pins slidably supported upon the face of the door, outwardly slidable plates supported upon the inner face of the door, and mechanism supported upon the door and actuatable to force said door downwardly against the threshold and said pins and plates outwardly to make contact respectively with the sides of the door opening and with the inner wall of the car along the door opening.

3. In combination with a grain car and its door opening, rails supported along the inner wall of the car adjacent to the top of the door opening, a door having vertically and horizontally slidable pivotal support upon said rails, outwardly slidable pins and plates supported upon the door, means for shoving said door downwardly into contact with the threshold and said pins and plates outwardly into contact with the sides of the door opening, and means locking said actuating means against more than a partial movement of said parts, for the purpose set forth.

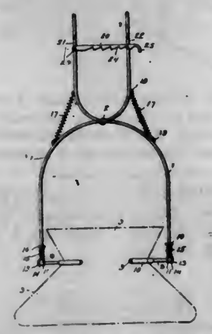
1,212,821. SPRING FASTENING DEVICE. JOHN SCHADE, Jr., Brooklyn, N. Y. Original application filed Mar. 13, 1913, Serial No. 754,128. Divided and this application filed Dec. 23, 1914. Serial No. 878,653. (Cl. 173—259.)



A spring fastening device for electrical conductors, made of spring wire looped on itself to form opposing body and spring members, each composed for substantially their length of parallel wires, and both having angular wire retaining portions at opposite points, the respective wires of said retaining portions lying closely adjacent each other, side by side, whereby the conductor may be inserted transversely between all of the wires of said retaining portions when said body and spring members are forced into coöperative relationship, at least one of said angular retaining portions being shaped to form a right angle or less, having opposing points of contact with the conductor at tangents to the conductor lying in a plane nearer to the center of the conductor than to the apex of the said angular retaining portion, thereby causing the conductor

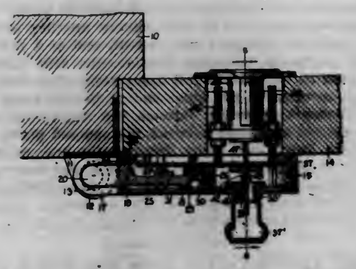
to become firmly wedged within the angle of said retaining portion and gripped and held in defined position between the opposing points of contact on the separate wires of said retaining portion, one of said body or spring members extending beyond the angular wire retaining portion of said member and in a direction away from the loop of the fastening device, said extension having a broadened foot adapted to lie flat upon a base or support, and acting to maintain the device upright and restrain it, when fastened, from tipping sidewise under transverse strain, whereby the fastening device may be secured to a base or support.

1,212,822. CUSPIDOR-CARRIER. AUGUST C. SCHLEPP, Java, S. D. Filed May 7, 1915. Serial No. 26,565. (Cl. 57—111.)



A cuspidor carrier including a pair of curved cuspidor engaging jaws, each jaw provided centrally on its convex face with a laterally extending stem, said stem having its outer end substantially rectangular in cross section, pivotally connected levers, said levers provided with key-hole slots adjacent their lower ends, said key-hole slots adapted to receive the rectangular portions of the stems of the cuspidor engaging jaws therein so as to permit the cuspidor to be suspended from the jaws and held in either an upright or inverted position, said slots and levers also permitting the jaws to be arranged in the plane of the levers so that the latter will project laterally from the cuspidor and spring means arranged around the levers and engaging the stems of the jaws to secure the jaws in either of said positions with relation to the levers.

1,212,823. LOCK. SAMUEL SEGAL, New York, N. Y., assignor to Burglar Proof Lock and Hardware Corporation, New York, N. Y., a Corporation of New York. Filed Dec. 11, 1914. Serial No. 876,644. (Cl. 70—46.)



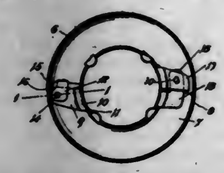
1. In a lock, the combination with a keeper, a casing, a bolt slidable transversely of the longer axis of the casing, said bolt having a hook interlocking with said keeper, a guide flange carried by said bolt on one side thereof toward the end, a second guide flange carried by said bolt on the opposite side thereof near the other end, parallel guide flanges carried by said casing and arranged to be engaged by the guide flanges on said bolt for guiding the bolt in its movement, a catch pivoted to said bolt on the opposite side of the bolt from said last named flange, means carried by the casing and arranged to be engaged by the pivoted catch for maintaining the bolt in its shifted position, and means for simultaneously releasing the catch and for shifting the bolt in a direction parallel with the guide flanges.

2. In a lock, the combination with a keeper, a casing, a bolt slidable transversely of the longer axis of the casing, said bolt having a hook interlocking with said keeper, the body portion of the bolt being substantially of the same width as that of the casing, a guide flange on one side of said bolt, a guide flange carried by the casing and arranged to coöperate with the guide flange on the bolt, said bolt having a flat shank provided with a guide flange, a second guide flange carried by said casing and arranged to be engaged by the last named guide flange on the shank, a pivoted catch carried on one side of said shank between the latter and the casing, a stop pin carried by the shank on the same side thereof, a spring for placing said catch under tension, one end of the spring bearing against said stop pin, lugs carried by said casing and arranged to be engaged by said catch for holding the bolt in its shifted positions, and means for releasing the catch from the lugs and for simultaneously forcing the bolt in a direction parallel to the guide flanges.

3. In a lock, the combination with a keeper, a casing, a bolt slidable transversely of the longer axis of the casing, said bolt having a hook interlocking with said keeper, the body portion of the bolt being substantially of the same width as that of the casing, a guide flange on one side of said bolt, a guide flange carried by the casing and arranged to coöperate with the guide flange on the bolt, said bolt having a flat shank provided with a guide flange, a second guide flange carried by said casing and arranged to be engaged by the last named guide flange on the shank, a pivoted catch carried on one side of said shank between the latter and the casing, a stop pin carried by the shank on the same side thereof, a spring for placing said catch under tension, one end of the spring bearing against said stop pin, lugs carried by said casing and arranged to be engaged by said catch for holding the bolt in its shifted positions, means for releasing the catch from the lugs for simultaneously forcing the bolt in a direction parallel to the guide flanges, said last named means comprising a pair of pivoted actuators, each actuator having fingers adapted for independent manipulation of the bolt, both of said actuators being mounted on an axis parallel with the pivotal axis of said spring catch and at right angles to the line of movement of the bolt.

4. In a lock, the combination with a keeper, a casing, a bolt slidable transversely of the longer axis of the casing, said bolt having a hook interlocking with said keeper, the body portion of the bolt being substantially of the same width as that of the casing, a guide flange on one side of said bolt, a guide flange carried by the casing and arranged to coöperate with the guide flange on the bolt, said bolt having a flat shank provided with a guide flange, a second guide flange carried by said casing and arranged to be engaged by the last named guide flange on the shank, a pivoted catch carried on one side of said shank between the latter and the casing, a stop pin carried by the shank on the same side thereof, a spring for placing said catch under tension, one end of the spring bearing against said stop pin, lugs carried by said casing and arranged to be engaged by said catch for holding the bolt in shifted positions, means for releasing the catch from the lugs for simultaneously forcing the bolt in a direction parallel to the guide flanges, said last named means comprising a pair of lugs carried by said bolt, an extension carried by said catch disposed between said lugs in the locking position of the catch, a pair of pivoted actuators, each actuator having fingers adapted to engage said catch extension for releasing the catch and for engaging one of the lugs of the bolt to move the latter with the pivoted axis of said spring catch.

1,212,824. CEILING-PLATE. ALBERT L. SESSIONS, Bristol, Conn. Filed Apr. 15, 1913. Serial No. 761,239. (Cl. 126—317.)



1. A ceiling plate including two sections of equal lengths united to form an annulus, two of the diagonally opposite ends of the sections having members projecting beyond the edges thereof, one of said members being provided with an opening and the other with a depression, the other two diagonally opposite ends having members formed on the inner edges of the sections and folded over the same with the outer side edges lying substantially parallel with the ends of the sections and spaced inwardly thereof, one of said last named members having an opening therein adapted to register with the opening in the first named member, a pivot pin passing through said openings and a teat formed on the other one of the last named members adapted to be received in the depression in one of the first named members, whereby the sections are hinged at one end and releasably engaged at the other end.

2. A ceiling plate including two sections united to form an annulus, two of the diagonally opposite ends of the sections having members projecting beyond the edges thereof, the other two diagonally opposite ends having members formed on the inner edges of the sections and folded over the same with the outer side edges lying substantially parallel with the ends of the sections and spaced inwardly thereof, and means for hinging one set of opposed ends and detachably connecting the other set of opposed ends.

1,212,825. COMPOUND FOR COVERING THE TOP OF MOLTEN METAL IN INGOT-MOLDS. JAMES E. SHEAFFER, Burnham, Pa. Filed Apr. 20, 1916. Serial No. 92,514. (Cl. 22—216.)

1. A compound for protecting the exposed surface of molten steel in an ingot mold, said compound consisting of a mixture of pulverized coal with a hydrocarbon, the coal being in excess, and the hydrocarbon preventing the coal from bridging over the steel in the ingot mold as it cools.

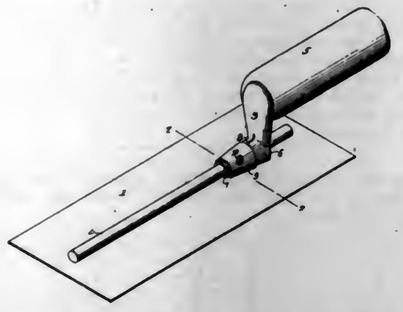
2. A compound for protecting the exposed surface of molten steel in an ingot mold, said compound consisting of a mixture of pulverized anthracite coal and petroleum oil, the anthracite coal being in excess.

3. A compound for protecting the exposed surface of molten steel while in an ingot mold, said compound consisting of a mixture of pulverized anthracite coal and petroleum oil in about the proportion of one quart of petroleum to one hundred pounds of anthracite coal.

1,212,826. TROWEL. WILLIAM SMITH, Philadelphia, Pa., assignor to Henry Disston & Sons, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 1, 1916. Serial No. 112,559. (Cl. 72—136.)

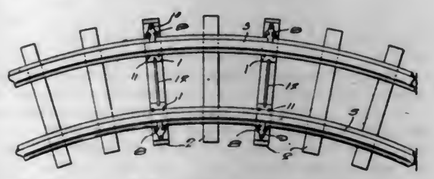
1. The combination in a trowel, of a blade; a longitudinally arranged bar centrally located at the back of the trowel and secured thereto, said bar having undercut edges; a handle having a longitudinal extension engaging the bar and split throughout its length so as to form yielding sections, the outer surface of said extension being tapered longitudinally; and a tapered sleeve open at its under side and encircling the tapered portion of the extension of the handle so that when the sleeve is driven onto the tapered portion it will cause the yielding portions of the handle to firmly grasp the bar throughout the length of the extension.

2. The combination in a trowel, of a blade; a bar secured to the back thereof; a handle having a split tapered portion adapted to the bar; a sleeve arranged to move lon-



gitudinally on the tapered portion and to contract it so that the handle will be clamped to the bar, said tapered portion being slotted; and a pin on the sleeve extending into the slot to limit the movement of said sleeve.

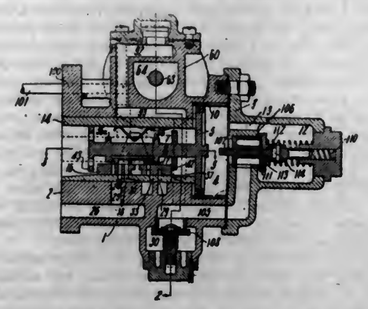
1,212,827. COMBINED RAIL BRACE AND TIE. WILLIS J. SMITH, St. Olaf, Iowa, assignor of one-half to J. J. Tayek, Froelich, Iowa. Filed Jan. 4, 1916. Serial No. 70,188. (Cl. 238—2.)



The combination with a rail tie, of a pair of tie plates positioned, respectively, at the opposite ends of the tie and each having each of the opposite ends thereof provided with a pair of opposed openings, and another opening alining with the space between the adjacent pair and located adjacent the terminal of the end of the plates, the said plates being adapted to engage beneath the companion rails of a track and having their under sides provided with intersecting ribs for engaging in the tie, rail braces mounted on the outer ends of the plates and each including a substantially triangular shaped base portion having its large end adapted to engage over the longitudinal edge of the base flange of a rail, a rail-engaging portion projecting upward from the base portion, the said base portion of the rail brace being provided with a pair of openings located, respectively, on opposite sides of the rail-engaging portion, and also having another opening located adjacent the apex end thereof, and at a point in advance of the rail-engaging portion, the said openings in the base portion of the rail brace registering with the adjacent openings in the outer end of the tie plate, fastening elements extending through the registering openings, a tie rod extending between the opposed plates and having its outer ends bent downwardly and extended through the openings in the terminals of the inner ends of the plates and engaging in the tie, and rail-engaging elements extending through the pairs of opposed openings at the inner ends of the plates and engaging in the tie.

1,212,828. TRIPLE VALVE. JACOB RUSH SNYDER, Pittsburgh, Pa., assignor to Pittsburgh Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 13, 1914. Serial No. 818,567. (Cl. 188—15.)

1. In a fluid pressure brake, the combination of a train pipe, a pair of brake cylinders, two reservoirs on a car, and means operative by variation in train pipe pressure and arranged on service reduction of train pipe pressure to connect first one and then the other of said reservoirs to one of said brake cylinders, and upon reduction of train pipe pressure after full service application to connect one of said reservoirs to the other brake cylinder.



2. In a fluid pressure brake, the combination of a train pipe, a pair of brake cylinders, two reservoirs on a car, and means operative by variations in train pipe pressure and arranged on service reduction of train pipe pressure to connect first one and then the other of said reservoirs to one of said brake cylinders, upon reduction of train pipe pressure after full service application to connect one of said reservoirs to the other brake cylinder, and upon emergency reduction of train pipe pressure to connect both of said reservoirs to both of said brake cylinders.

3. In a fluid pressure brake, the combination of a train pipe, a pair of brake cylinders, two reservoirs on a car, and means operative by variations in train pipe pressure and arranged on service reduction in train pipe pressure to connect first one and then the other of said reservoirs to one of said brake cylinders, upon reduction of train pipe pressure after full service application to connect one of said reservoirs to the other brake cylinder, and upon emergency reduction of train pipe pressure to connect both of said reservoirs and a source of pressure to both brake cylinders.

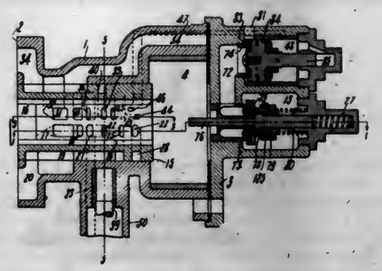
4. In a fluid pressure brake, the combination of a train pipe, a pair of brake cylinders, two reservoirs on a car, and means operative by variations in train pipe pressure and arranged on service reduction of train pipe pressure to connect first one and then the other of said reservoirs to one of said brake cylinders, and upon reduction of train pipe pressure after full service application to connect one of said reservoirs to the other brake cylinder, said means including a supplementary valve device controlled by variations in reservoir pressure and arranged to maintain brake cylinder pressure against leakage.

5. In a fluid pressure brake, the combination of a train pipe, a pair of brake cylinders, two reservoirs on a car, and means operative by variations in train pipe pressure and arranged upon service reduction in train pipe pressure to connect first one and then the other of said reservoirs with one of said brake cylinders, and upon reduction of train pipe pressure after full service application to connect one of said reservoirs to the other brake cylinder, said means including a supplementary valve device controlled by variations in the pressure of the other of said reservoirs and arranged to maintain brake cylinder pressure against leakage.

[Claims 6 to 16 not printed in the Gazette.]

1,212,829. AIR-BRAKE-CONTROL VALVE. JACOB RUSH SNYDER, Pittsburgh, Pa., assignor to Pittsburgh Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 13, 1914. Serial No. 818,571. (Cl. 188—15.)

1. An air brake valve having connections to the train pipe, brake cylinder, atmosphere, a supplementary reservoir, and an auxiliary reservoir, valve mechanism controlling connections from the train pipe to both of said reservoirs and arranged on an increase of train pipe pressure to restrict the connection from the train pipe to the supplementary reservoir and increase the connection from the train pipe to the auxiliary reservoir, and yielding means for moving said valve to increase the connection from the train pipe to the supplementary reservoir and restrict the connection from the train pipe to the auxiliary reservoir.



2. Air brake valve mechanism having connections to the train pipe, brake cylinder, atmosphere, auxiliary reservoir, and a supplementary reservoir, a movable abutment operating under variations in train pipe pressure and controlling a feeding groove from the train pipe to the auxiliary reservoir, a valve operated by said movable abutment and controlling connections from the train pipe to both the supplementary and the auxiliary reservoir and arranged on increase in train pipe pressure to restrict the connection from the train pipe to the supplementary reservoir and open a connection from the train pipe to the auxiliary reservoir, and yielding means to move said valve and increase the connection from the train pipe to the supplementary reservoir and reduce the connection from the train pipe to the auxiliary reservoir.

3. Air brake valve mechanism having connections to the train pipe, brake cylinder, atmosphere, an auxiliary reservoir and a supplementary reservoir, valve mechanism controlling connections from the train pipe and arranged on increase of train pipe pressure to connect the train pipe to the supplementary reservoir through a restricted connection in said valve mechanism, and yielding means for moving said valve to increase the connection from the train pipe to the supplementary reservoir.

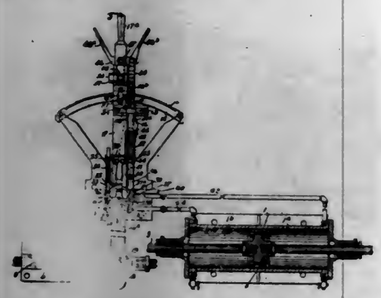
4. In valve reversing mechanism, the combination of to the train pipe, atmosphere, brake cylinder, and a reservoir, a movable abutment operating under variations of train pipe pressure, a graduating stem adapted to be contacted by said movable abutment, a graduating spring acting against said graduating stem, and a second spring arranged to resist the movement of said graduating stem after a predetermined movement of the latter, and a valve actuated by said movable abutment and arranged in service reductions to establish communication from the reservoir to the brake cylinder, and upon greater reductions to establish communication from the reservoir to the brake cylinder and vent pressure from the reservoir side of said piston, said graduating stem and springs being arranged under service reductions in pressure to move against the resistance of one of said springs, and in further reductions in train pipe pressure to encounter the resistance of the second spring.

5. An air brake valve mechanism having connections to the train pipe, atmosphere, a brake cylinder, an auxiliary reservoir and a supplementary reservoir, a movable abutment actuated by variations in train pipe pressure, and a valve actuated by said movable abutment and controlling ports arranged whereby upon increase in train pipe pressure communication is established from the train pipe to the auxiliary reservoir and to the supplementary reservoir, and yielding means for moving said valve to

break the connection from the train pipe to the auxiliary reservoir and to increase the communication from the train pipe to the supplementary reservoir.

[Claims 6 to 15 not printed in the Gazette.]

1,212,830. STEAM-ENGINE REVERSING-GEAR. JACOB RUSH SNYDER, Pittsburgh, Pa., assignor to Percy E. Donner, Pittsburgh, Pa. Filed Mar. 25, 1916. Serial No. 86,679. (Cl. 121—98.)



1. In valve reversing mechanism, the combination of a reversing fluid pressure motor, a reversing rod actuated thereby, a locking device for said rod, valve mechanism controlling the supply and exhaust of fluid pressure to and from the two sides of said motor, an actuating handle, means for locking said handle in its various positions, and connections between the handle locking means and the valve mechanism and the rod locking device, so arranged as to leave the valve mechanism and the rod locking device undisturbed when unlocking the handle and moving the handle to the desired position, and to actuate the rod locking device and valve mechanism to release the rod locking device and admit fluid pressure to one side of the motor when the handle locking means assumes a position for locking the handle.

2. In valve reversing mechanism, the combination of a reversing fluid pressure motor, a reversing rod actuated thereby, a locking device for said rod, valve mechanism controlling the supply and exhaust of fluid pressure to and from the two sides of said motor, an actuating handle, means for locking said handle in its various positions, connections between the handle locking means and the valve mechanism and the rod locking device, so arranged as to leave the valve mechanism and the rod locking device undisturbed when unlocking the handle and moving the handle to the desired position, and to actuate the rod locking device and valve mechanism to release the rod locking device and admit fluid pressure to one side of the motor when the handle locking means assumes a position for locking the handle, and means actuated from the reversing rod when it has moved the desired distance for releasing said spring and enable the latter to restore the rod locking device to locking condition and the valve mechanism to normal condition to release fluid pressure from the reversing motor.

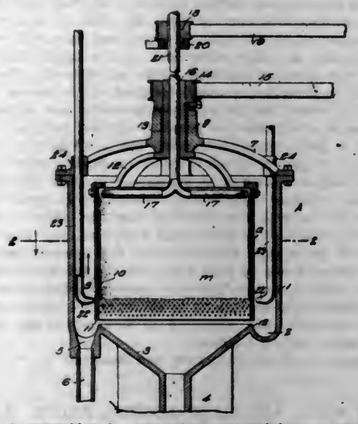
3. In valve reversing mechanism, the combination of a reversing fluid pressure motor, a reversing rod actuated thereby, a locking device for said rod, valve mechanism for controlling the supply and exhaust of fluid pressure to and from the two sides of said motor, an actuating handle, means for locking said handle in its various positions, connections between the handle locking means and the valve mechanism and the rod locking device so arranged as to maintain the rod locking device in locking condition and the reversing motor exhausted when moving the handle to the desired position, a spring put under tension by the act of releasing the handle locking means in order to move the handle, said spring acting when the handle locking means assumes a position to again lock the handle to release the rod locking device and admit fluid pressure to one side of the reversing motor, a second spring put under tension when the handle locking means assumes a position to lock the handle, and means actuated from the reverse rod when it has moved to the desired distance for releasing said second named spring and enable it to restore the rod locking device to its locking condition and the valve mechanism to its normal condition to exhaust fluid pressure from the reversing motor.

4. In valve reversing mechanism, the combination of a reversing fluid pressure motor, a reversing rod actuated thereby, a locking device for said rod, valve mechanism for controlling the supply and exhaust of fluid pressure to and from the two sides of said motor, an actuating handle, means for locking said handle in its various positions, connections between the handle locking means and the valve mechanism and the rod locking device so arranged as to maintain the rod locking device in locking condition and the reversing motor exhausted when moving the handle to the desired position, a spring put under tension by the act of releasing the handle locking means in order to move the handle, said spring acting when the handle locking means assumes a position to again lock the handle to release the rod locking device and admit fluid pressure to one side of the reversing motor, a second spring put under tension when the handle locking means assumes a position to lock the handle, and means actuated from the reverse rod when it has moved to the desired distance for releasing said second named spring and enable it to restore the rod locking device to its locking condition and the valve mechanism to its normal condition to exhaust fluid pressure from the reversing motor.

5. In valve reversing mechanism, the combination of a reversing fluid pressure motor, a reversing rod actuated thereby, a locking device for said rod, valve mechanism for controlling the supply and exhaust of fluid pressure to and from the two sides of said motor, an actuating handle, means for locking said handle in its various positions, connections between the handle locking means and the valve mechanism and the rod locking device so arranged as to maintain the rod locking device in locking condition and the reversing motor exhausted when moving the handle to the desired position, a spring put under tension by the act of releasing the handle locking means in order to move the handle, said spring acting when the handle locking means assumes a position to again lock the handle to release the rod locking device and admit fluid pressure to one side of the reversing motor, a second spring put under tension when the handle locking means assumes a position to lock the handle, and means actuated from the reverse rod when it has moved to the desired distance for releasing said second spring and enable it to restore the rod locking device to its locking condition and the valve mechanism to its normal condition to exhaust fluid pressure from the reversing motor.

[Claims 6 to 15 not printed in the Gazette.]

1,212,831. CENTRIFUGAL SEPARATOR. MARK R. SPELMAN, Hyde Park, N. Y. Filed July 30, 1915. Serial No. 42,746. (Cl. 210—25.)



1. A centrifugal separator comprising a rotatable basket, a device disposed within the basket for supplying to the wall of the basket the material to be separated, and means for relatively axially moving the basket and the device for distributing the material over the internal surface of the basket.

2. A centrifugal separator comprising a rotatable basket, a device extending into the basket from the top for supplying thereto material to be separated, means for rotating said device, and means for relatively axially moving the device and basket for distributing over the internal surface of the latter the material to be separted.

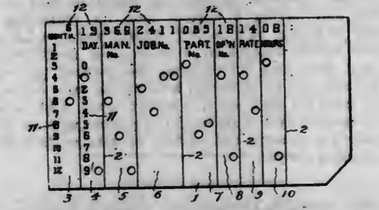
3. A centrifugal separator comprising a rotatable basket, means for suspending and rotating the basket from the top, a pipe extending into the basket and movable axially with respect to the latter, a nozzle on the lower end of the pipe and disposed in the basket for supplying thereto material to be separated, and means for rotating the nozzle.

4. A centrifugal separator comprising a basket, a surrounding well, a support on the top of the well from which the basket is rotatably suspended, a pipe extending into the top of the basket and slidable axially thereof, and means on the lower end of the pipe for discharging against the internal surface of the wall of the basket the material to be separated.

5. A centrifugal separator comprising a basket rotatable on a vertical axis for separating liquid from solid material, and a plurality of means disposed outside the basket for discharging fluid through the wall of the basket to dislodge material from the internal surface thereof, said means being so spaced with respect to each other that the lateral pressures produced on the basket by the said fluid are balanced.

[Claims 6 to 15 not printed in the Gazette.]

1,212,832. RECORD ELEMENT FOR TABULATING SYSTEMS. CHARLES W. SPICER, Washington, D. C. Filed July 15, 1911. Serial No. 638,716. (Cl. 11—15.)

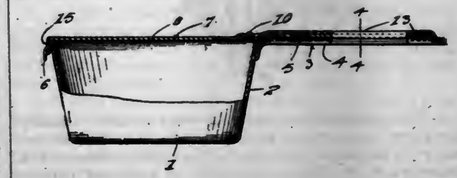


1. A record element for tabulating systems divided into fields and having columns of indicia in said fields, certain of said indicia indicated by punch apertures in each column to produce a readable item, which punch apertures serve as a means for controlling the operation of a tabulating machine, and a printed item in each field, each character of the printed item being a duplicate of the character indicated by the punch aperture in the column with which it is associated and serving to readily identify the character indicated by said punch aperture.

2. A record element for tabulating systems having a plurality of columns of indicating indicia, certain of said indicia in each column indicated by a punch aperture to produce a single readable character, and a single printed item or character arranged at the head of each column, said printed character being a duplicate of the character indicated by the punch aperture in the column in which said printed character is located, whereby said characters are associated in such a manner as to be readily identified one with the other.

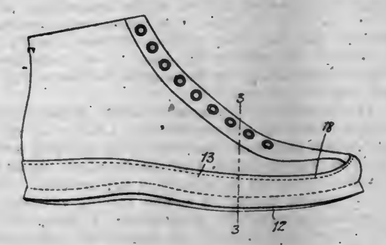
1,212,833. PAN-COVER. EMORY F. STACKHOUSE, Kensington, Ohio. Filed Mar. 30, 1915. Serial No. 18,046. (Cl. 53—8.)

In combination, a stew pan, a handle rigidly secured on the stew pan, a hook rigidly secured to said stew pan at a point diametrically opposite from said handle, said handle provided with a central longitudinal extending upstanding rib, which terminates short at each end of said handle, of a cover, said cover comprising a circular body, a recess formed in its peripheral edge, a handle rigidly secured to said circular body, a loop formed on the edge of said body at a point diametrically opposite from said handle, said loop adapted to engage the hook of the pan for holding said body in position, said handle of the cover provided with a central longitudinally extending rib which terminates short at each of its ends, said rib defining a groove which is adapted to receive the upstanding rib of the handle of the stew pan for fastening said



cover on to said pan, said handle of the cover completely covering the handle of the stew pan and the portion on opposite sides of the central longitudinally extending rib of the cover handle resting upon the upper face of the portions extending on opposite sides of the upstanding longitudinally extending rib of the stew pan handle, thus preventing any lateral movement of the handle when clasped for moving the pan.

1,212,834. SPORTING-SHOE. WALTER T. STALL, Brockton, Mass., assignor to Walter T. Stall and Charles H. Dean, Brockton, Mass., Copartners doing business as Stall & Dean Manufacturing Company. Filed Mar. 9, 1916, Serial No. 83,051. Renewed Nov. 29, 1916. Serial No. 134,209. (Cl. 36—14.)



1. A shoe having an inelastic non-vulcanizable body comprising an insole and an upper, and an elastic removable bottom composed of a one-piece rubber outer sole and a continuous upwardly projecting textile fabric flange bearing on and vulcanized directly to said outer sole, surrounding the insole and the lower marginal portion of the upper, and secured to the upper by exposed stitches, said bottom being attached without vulcanizing heat, and separable as one part from the body when said stitches are removed.

2. As an article of manufacture, a shoe bottom composed of a one-piece rubber outer sole and a continuous upstanding textile fabric flange bearing on and vulcanized directly to said outer sole, and adapted to hold attaching stitches engaged with the marginal portion of a shoe upper, so that the rubber outer sole may be renewably secured to a shoe body.

3. As an article of manufacture, a shoe bottom composed of a one-piece rubber outer sole and a continuous strip of textile fabric wider than the thickness of the sole, covering and vulcanized to the edge of the sole and projecting above the sole to form a flange adapted to be stitched to the marginal portion of a shoe upper, the joint formed by the vulcanization of the strip to the edge of the sole being substantially in alinement with the projecting portion of the strip.

1,212,835. BROADCAST SEEDER. BENJAMIN M. STEELE, Peoria, Ill., assignor to Peoria Drill and Seeder Company, a Corporation of Illinois. Filed Apr. 23, 1915. Serial No. 23,331. (Cl. 111—38.)



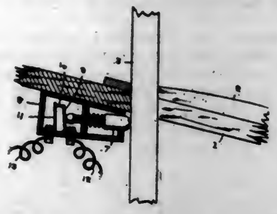
1. In combination, a hopper, a chute member, a casing interposed therebetween having an inlet, a restricted passageway therein and an outlet, a peripherally flanged disk supported to facilitate the travel of a limited portion thereof through the lower end of the hopper and also a limited portion, including the peripherally flanged part, through the restricted passageway, and a valve disposed at the inlet opening and related thereto and to the flanged carrying surface of the disk that by spacing the same in a graduated manner from the inner face of the said flanged part graduated quantities of grain as desired may be fed into the restricted passageway and the body of the grain in the hopper will be held by the valve body from bearing except upon a limited portion of the surface of said disk.

2. In combination, a hopper, a chute, a casing provided with an outlet and an inlet communicating respectively with the outlet from the hopper and with the chute, said casing being provided with a channelway and expanded at approximately the inlet to said channel, a rotatable disk supported in the casing provided with a peripherally flanged portion channeled on its inner surface and disposed relative to the casing and the hopper to travel through the expanded portion of the channelway of the casing, a valve at the inlet of the channelway adjustable, relative to the inner face of the peripheral flange of the disk member to regulate the quantity of grain passing to said channelway, a chute adapted to receive the discharge from the casing.

3. In combination, a hopper, a casing provided with a channelway therein and expanded in advance of the entrance to said channelway and also provided with an outlet portion communicating with the discharge end of said channelway expanded for clearance and provided with a deflector portion having an escape opening therethrough and inclined toward the channelway, a rotatable disk member disposed relative to the hopper and the channelway in the casing to travel through both said hopper and said channelway, a valve at the entrance to the channelway to the casing adjustable relative to the inner face of the flange of the disk to regulate the quantity of the grain admitted to said channelway, and a chute adapted to receive discharge from the outlet of the casing.

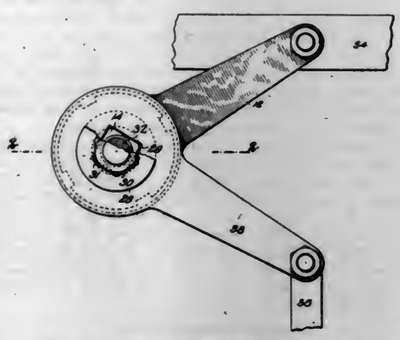
4. In combination with a hopper and with rotatable fan distributers of a rotatable seed carrying member interposed therebetween comprising a disk member and flanges, extending laterally each side from the periphery, said disk having interior ribs, a casing inclosing a portion of said feeding member, having a wall conformatory to the peripheral flanges of said feeding wheel, a wall spaced therefrom and lying between the axial center of said wheel, and said peripheral wall, and said closure walls connecting said peripheral, and interior wall, discharge openings at either side of the casing comprising laterally extended flanged portions from said casing, and an inclined deflector member forming part of said casing having a bearing toward the outer ends of the outlet openings, and provided with an opening into each, communicating with the interior of the casing, a wall member conformatory to the shape and width of the flange member of the feed wheel, overlying said wheel at communicating point between the feed proper and said feed wheel and an adjustable valve for limiting the size of the opening into the channelway of the casing.

1,212,836. LIGHTING SYSTEM FOR VEHICLES. GEORGE GORDON STEWART, Roseburg, Oreg. Filed July 20, 1915. Serial No. 40,849. (Cl. 200—27.)



An automatic circuit closing mechanism adapted to be actuated by the lever of the gear shifting mechanism of a vehicle, comprising a housing adapted to be secured to the under side of the bottom of the vehicle, and provided with a partition wall, a straight contact plate secured upon the bottom of and within said housing adjacent the front end wall thereof, a second contact plate also secured upon the bottom of and within said housing adjacent the partition wall within said housing and provided with an angularly disposed contact end or finger, said contact plates being connected with a suitable source of electrical supply and disposed in spaced parallel relation to each other with the contact end of said second contact plate being normally out of contact with the first contact plate, a plunger rod formed with an enlarged elongated head slidably mounted in the rear end wall of said housing and provided with a rounded end projecting outwardly therethrough, the reduced portion of said plunger rod being slidably mounted through the partition wall of said housing and having a button upon its projecting end adapted to engage said second contact plate, and a compression spring interposed between said partition wall and said head and surrounding the reduced portion of said plunger rod for normally holding the same outwardly in the path of said lever, whereby when said lever is moved against said plunger rod the same will be forced inwardly for causing the contact of said contact plates for closing a circuit.

1,212,837. SHOCK-ABSORBER. JAMES Y. STEWART, Van Houten, N. Mex. Filed Dec. 14, 1915. Serial No. 66,714. (Cl. 21—105.)



In a shock absorber, a casing having sides and a head with an opening, an arm extending from the casing, radial ribs extending inwardly around the side of the casing, a bolt rotatably disposed at the opening in the head and provided with a shoulder, two companion cam members disposed in the casing around the bolt, one of the cam members engaging the shoulder of the bolt to rotate with the latter, and the other cam member having recesses in its periphery in which the ribs are disposed, the ribs being disposed apart in the periphery of the cam member to permit

of the rotation of one of the cam members relatively to the other to adjust the cam surfaces of one of the cam members relatively to the cam surfaces of the other cam member, a spring disposed within the casing against the outer cam member and around the bolt, a second head disposed at the spring for closing the casing, the second head engaging the shoulder of the bolt for rotating the latter, an arm extending from the second mentioned head, a nut on the bolt at the side of the second mentioned head for holding the second mentioned head in position, and a plurality of disks disposed around the bolt between the cam members and the first mentioned head, alternate disks having recesses in their peripheries in which the ribs on the casing are disposed, the remaining disks engaging the shoulder on the bolt to rotate therewith, the number of the disks employed being determined by the amount of free play desired between the said two arms.

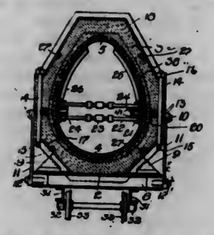
1,212,838. PROCESS OF MOLDING PLASTICS. EDWARD GILES STONE and ERNEST JOSHUA SIDDELEY, Sydney, New South Wales, Australia. Original application filed Mar. 13, 1913, Serial No. 754,006. Divided and this application filed Mar. 18, 1915. Serial No. 15,315. (Cl. 25—1.)

1. A process for molding plastics comprising, supplying air under pressure to an air tight reservoir containing the material to be molded and, next, feeding this material to a suitable mold while under such pressure, allowing the simultaneous escape of air and moisture freely through perforations in all parts of said mold.

2. A process for molding plastics, consisting of the following steps, first, supplying air under pressure to an air tight receptacle or reservoir containing the material to be molded, second, feeding this material to a suitable mold while simultaneously supplying air under pressure directly to said mold and allowing the escape of air and moisture through holes to all parts of said mold.

3. A process for molding plastics consisting in feeding plastic material to a mold from which air and moisture are free to escape at all points and jarring said mold to prevent adhesion of such material.

1,212,839. MOLD. EDWARD GILES STONE and ERNEST JOSHUA SIDDELEY, Sydney, New South Wales, Australia. Original application filed Mar. 13, 1913, Serial No. 754,006. Divided and this application filed Mar. 18, 1915. Serial No. 15,316. (Cl. 25—127.)



1. The combination of an upper mold section and a lower mold section, together making up the body of the outer shell of a mold, with two end pieces normally held against the ends of said sections to close the ends of the mold, bolts fastening said sections together and additional bolts fastening said end pieces in position, each bolt being provided at one end with a tightening nut and at the other end with a slot and transverse wedge to facilitate fastening and unfastening the aforesaid parts.

2. In combination with the sectional outer part of a mold and the sectional hollow core thereof, a pair of end pieces fitting against the ends of said outer part and said core to complete said mold and grooved to receive the ends of said core and bolts passing through said end pieces longitudinally of said mold to fasten the foregoing parts together, said bolts being provided with tightening means and with additional means for facilitating attachment and detachment.

3. A mold comprising an outer part consisting of an upper and a lower section, detachable means for securing said sections together, a core and end pieces in combination with a supporting truck receiving the lower section and links pivoted to said lower section and truck whereby said mold may be swung from its horizontal position on said truck to a vertical position on the ground.

4. A mold having trunnions, in combination with a supporting truck having lateral pivot pins and a pair of links extending from said trunnions to said pins and permitting said mold to be swung from its horizontal position on said truck to an upright position on the ground.

5. A mold having trunnions, in combination with a supporting truck having lateral pivot pins, a pair of links extending from said trunnions to said pivot pins and permitting said mold to be swung from its horizontal position on said truck to an upright position on the ground and an additional pair of links attached to said trunnions and detachably connected at their other ends to said truck, in order that they may be freed from the latter and used as handles for turning said mold into an upright position or back again into its position on the truck.

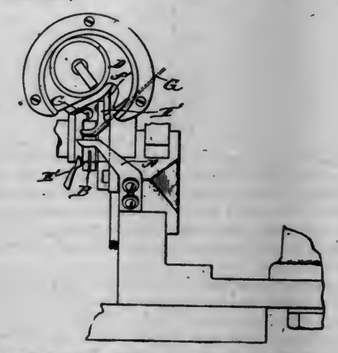
1,212,840. BUILDING-BLOCK AND METHOD OF MAKING THE SAME. FRANCIS J. STRAUB, New Kensington, Pa. Filed Nov. 9, 1915. Serial No. 60,513. (Cl. 106—24.)

1. The herein described process of making building blocks and the like consisting in crushing or grinding an original mass of coal cinder and ashes without separation, mixing the entire mass of coarse and fine material with a suitable proportion of cement and water, and molding and drying the same in block form.

2. A building block composed of a mixture of coarse and fine coal cinder and ashes, retaining all of the original mass, cement, and water.

3. A building block consisting of a mixture of coal cinders and ashes taken in its original composition as products of combustion and crushed to a consistency ranging from dust to lumps of about three quarter inch in size and retaining all of the original mass in its natural resulting combination, and then mixed with a suitable proportion of cement and water and molded in block form, substantially as set forth.

1,212,841. SEWING-MACHINE. KARL A. STRITTER, Nahant, Mass. Filed Dec. 30, 1914. Serial No. 879,642. (Cl. 112—20.)



In a sewing machine for attaching outer-soles, in combination, a shoe guiding work rest; a single needle; a presser foot, a welt guide constructed with means for guiding a grooved welt strip into position on the treaside of the outer sole, said guiding means including guide tube leading toward the needle and a projection c the work-engaging face of the presser foot located whol

and immediately between the delivery end of said tube and said needle for engaging the groove of the welt strip to guide the latter into the path of the needle as it leaves said tube so that said welt strip receives the sole attaching stitches and is sewed to the sole at the same time that the sole is sewed to the upper portion of the shoe.

1,212,842. HAT. JOSEPH STRONGE, St. Paul, Minn. Filed July 1, 1916. Serial No. 107,148. (Cl. 2—149.)



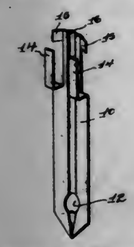
1. A hat having a soft, perforated brim provided with a monocle of transparent material, and a frame of flexible material applied to the margin of the perforation and adapted to secure the monocle in place.

2. A hat having a soft brim adapted to be turned down over the brow of a wearer, a monocle over an opening in said brim and means for holding the monocle in place.

3. In a hat having a pendent brim, a monocle inserted in the front of said brim and held in place by a marginal application of ornamental fabric.

4. A hat having a soft brim adapted to be turned down over the brows of the wearer, a monocle in a perforation in the front of said brim, and an irregular border of applied flexible material adapted to hold the monocle in place.

1,212,843. GUIDE-BAR SUPPORT FOR CONCRETE-GAGES. HENRY C. STRUCHEN, St. Paul, Minn. Filed Feb. 21, 1916. Serial No. 79,574. (Cl. 248—30.)



1. A guide-bar support for a concrete gage comprising a sheet metal strip pointed at its lower end and adapted to be driven into a form for concrete floors, an arm cut and offset from said strip to receive a guide-bar and a pliable retaining clip formed by the metal at the top of the strip, said clip being adapted to be bent over the guide bar on said arm.

2. A guide-bar support for a concrete gage formed from a strip of sheet metal pointed at its lower end and reinforced by a central longitudinal corrugation therein, arms offset from said strip and formed by cuts extending inward from opposite edges of the strip, then downward, and retaining clips above the arms to hold a guide therein.

3. A guide-bar support for a concrete gage formed from a strip of sheet metal, said strip being pointed at one end and having a central longitudinal corrugation therein, and also having supporting arms cut and offset from said strip, portions of the strip above said arms serving as retaining clips for guides adapted to be carried in said arms.

4. A guide-bar support for a concrete gage adapted to be driven into forms for concrete floors, said gage comprising a sheet metal strip pointed at its lower end and perforated near said end, said strip having an arm near its upper end to carry a guide, said arm being cut and offset from the strip, the metal at the upper end of the strip forming a driving head and also forming a pliable retaining clip to hold the guide within the arm.

5. A guide-bar support for a concrete gage comprising a strip of sheet metal pointed at its lower end and having right-angled slits cut in the margins near its upper end to form arms, said arms being bent outward, then upward and together with said strip adapted to embrace the lower edge and sides of a guide bar, and retaining clips at the upper end of the strip to hold the guide against upward movement.

[Claims 6 and 7 not printed in the Gazette.]

1,212,844. CONTINUOUS FILTER-PRESS. DANIEL BERNARD SWEENEY, Bayonne, N. J. Filed Mar. 22, 1916. Serial No. 85,814. (Cl. 210—13.)



1. In a filter press, the combination of a cylindrical filter casing; a rotary screw disposed longitudinally of the casing; feed and discharge pipes at opposite ends of the casing; and means engaging said screw at points along the side thereof for holding the screw out of contact with the sides of the casing.

2. In a filter press, the combination of a cylindrical filter casing; a continuous rotary screw disposed longitudinally of the casing; feed and discharge pipes at opposite ends of the casing; and means engaging said screw at points along the side thereof for holding the screw out of contact with the sides of the casing.

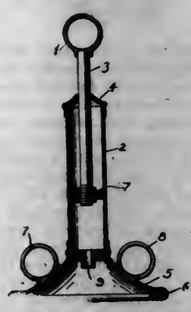
3. In a filter press, the combination of a cylindrical filtering casing; a screw conveyer in said casing; feed and discharge pipes at opposite ends of the casing; and means engaging a plurality of points of the screw for holding it out of contact with the casing.

4. In a filter press, the combination of an elongated perforated cylindrical casing; a layer of canvas lining the casing; a screw conveyer in the casing; ribs for holding the conveyer from the canvas; means for rotating the conveyer; and a feed pipe and a discharge pipe communicating with opposite ends of the conveyer.

5. In a filter press, the combination of a cylindrical filtering casing; comprising segments; a screw conveyer in said casing; and strips placed between said segments and holding the screw from the sides of the casing.

[Claims 6 to 15 not printed in the Gazette.]

1,212,845. MASSAGE APPARATUS. EDWIN R. TALLEY, Grinnell, Iowa. Filed May 6, 1916. Serial No. 95,864. (Cl. 128—16.)



A cylindrical pump chamber provided at one of its ends with an open bell or funnel-shaped chamber, a piston

within the chamber, the upper end of the piston being provided with a ring to receive the thumb of the operator, and the upper face of the bell-shaped chamber being provided with openings to receive the fingers of the operator, substantially as shown and described.

1,212,846. REFRACTORY PRODUCT AND METHOD OF MANUFACTURING THE SAME. ARTHUR P. TAYLOR and JAMES DONALD RUNYAN, Cincinnati, Ohio, assignors to The Charles Taylor Sons Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 8, 1915. Serial No. 65,784. (Cl. 106—10.)

1. In the manufacture of refractory products, the method which comprises the steps of separating from flint clay the impurities contained therein, then mixing the purified clay with a kaolin bond, and then shaping and firing, substantially as described.

2. The herein described improvement in the manufacture of refractory products, comprising calcining clay, removing therefrom impurities made visible by the calcining operation, then mixing the calcined clay with a kaolin bond, shaping, and then firing, substantially as described.

3. The herein described method of manufacturing refractory products, comprising calcining clay, removing therefrom the impurities made visible by the calcining operation, mixing the calcined and purified clay with a bond consisting in part of a kaolin of relatively high refractory qualities and another kaolin of a relatively high plastic character, and then shaping and firing, substantially as described.

4. The herein described improvement in the manufacture of refractory products, comprising purifying flint clay to remove therefrom the impurities contained therein, mixing the purified clay with a bond consisting in part of a kaolin of relatively high refractory qualities and another kaolin of a relatively high plastic character, and then shaping and firing, substantially as described.

5. In the manufacture of refractory products, the method comprising mixing flint clay with a bonding material composed of two different kaolins of different refractory properties, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,212,847. MANUFACTURE OF PLASTIC PRODUCTS. ARTHUR P. TAYLOR and JAMES DONALD RUNYAN, Cincinnati, Ohio, assignors to The Charles Taylor Sons Company, Cincinnati, Ohio, a Corporation of Ohio. Original application filed Dec. 8, 1915, Serial No. 65,784. Divided and this application filed July 11, 1916. Serial No. 108,707. (Cl. 252.)

1. In the manufacture of refractory products, the improvement which consists in calcining flint clay, and thereby rendering visible the impurities contained therein, and then separating out such impurities before using the clay, substantially as described.

2. In the manufacture of refractory products, the method which consists in treating raw flint clay to effect a discoloration of the impurities contained therein, and then removing the impurities as described.

1,212,848. SAFETY ATTACHMENT FOR WELL-DRILLING TOOLS. JAMES C. THERIOT, Taft, Cal. Filed June 30, 1915. Serial No. 37,285. (Cl. 255—28.)

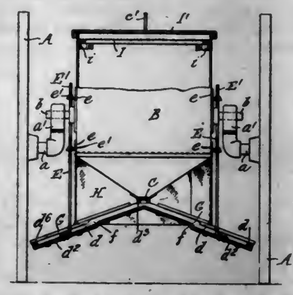
1. A device of the character described including a hollow drill shaft, a drill bit mounted at the lower end of the shaft, a valve cage intermediate the ends of the shaft, a valve within the cage, a conductor pipe within the shaft below the valve, the valve controlling the flow of water through the conductor pipe and means to allow the valve to automatically close upon accidental disconnection of the drill bit from the shaft.

2. A device of the character described including a hollow shaft, a drill head at the lower end of the shaft, a drill bit carried by the head, a conductor pipe swivelly connected to the drill head and disposed within the drill shaft, a valve cage intermediate the ends of the shaft, a pipe connecting the lower end of the valve cage with the conductor pipe, a valve within the cage, a valve seat at the upper end of the pipe connecting the cage with the conductor pipe and means to hold the valve out of en-



gagement with the valve seat under normal working conditions and allowing the valve to operate upon accidental disconnection of the drill bit from the shaft.

1,212,849. SAND-SPREADING DEVICE. JOHN M. THOMPSON, Buffalo, N. Y. Filed Mar. 7, 1916. Serial No. 82,708. (Cl. 111—34.)



1. In a device for spreading sand or analogous material, the combination with a cart, of a hopper mounted on said cart, a discharge opening in the bottom of said hopper, a distributing screen arranged below said hopper and comprising two screen portions inclining downwardly from below said opening and extending substantially from said opening to the sides of the device, the meshes of the screen being such that part of the sand passes through the screen and part of the sand passes over the surface of the screen, and means for controlling the discharge of sand from said hopper to said screen, the vibrations or shocks caused by the passing of the cart over the surface to be sanded assisting the passage of the sand through the meshes of the screen.

2. In a device for spreading sand or the like, the combination with a cart having bearing seats at its opposite sides, of a hopper removably mounted on said cart and having laterally projecting portions adapted to enter said seats for removably supporting said hopper on said cart, and sand spreading means mounted on said hopper including a distributing screen arranged below the hopper and on which the sand from the hopper passes, said screen having meshes which are so proportioned that part of the sand passes through the meshes and part of the sand passes over the surface of the screen whereby sand will be distributed by substantially all of the meshes of the screen.

3. In a device for spreading sand or analogous material, the combination with a cart adapted to be moved

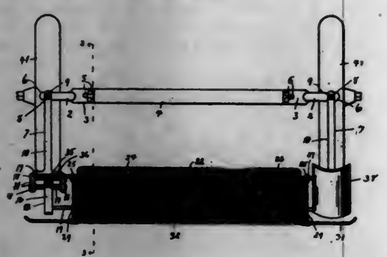
over the surface on which the material is to be spread, of a hopper mounted on said cart, a discharge opening in the bottom of said hopper, a distributing screen arranged below said hopper and upon which sand is discharged from the hopper and through the meshes of which the material falls on the surface on which the material is to be spread, and connections between said distributing screen and said hopper, said connections being adjustable to vary the angular relation of said screen relative to the discharge opening in said hopper.

4. In a device for spreading sand or analogous material, the combination with a cart adapted to be moved over the surface on which the material is to be spread, of a hopper mounted on said cart, a discharge opening in the bottom of said hopper, a distributing screen arranged below said hopper and upon which sand is discharged from the hopper and through the meshes of which the material falls on the surface on which the material is to be spread, and supporting rods secured at their lower ends to said distributing screen and adjustably secured at their upper portions to said hopper.

5. In a device for spreading sand or analogous material, the combination with a cart, a hopper mounted on said cart, a discharge opening in the bottom of said hopper, a distributing screen below said opening in the hopper and comprising a part inclining downwardly from said discharge opening, means for supporting said screen on said hopper, and means for adjusting said supporting means to vary the position of the screen relatively to said hopper.

[Claims 6 to 12 not printed in the Gazette.]

1,212,850. AUTOMOBILE-FENDER. RAY THROCKMORTON, Philadelphia, Pa. Filed Sept. 27, 1916. Serial No. 122,401. (Cl. 105—250.)



1. An automobile fender comprising a pair of supports having extensions projecting over the wheels of the vehicle to which the fender is attached, forwardly projecting reaches journaled on said supports, so as to rotate from side to side with the wheels of the vehicle, skids slidably mounted upon the reaches, means for detachably suspending said skids, means for actuating the aforementioned means, whereby the skids may be dropped, and a fender apron disposed between the skids.

2. An automobile fender comprising a pair of supports having extensions projecting over the wheels of the vehicle to which the fender is attached, forwardly projecting reaches journaled on said supports, so as to rotate from side to side with the wheels of the vehicle, skids slidably mounted upon the reaches, trigger bars connected with said means, whereby said means may be actuated to permit the descent of the skids, a trigger rod connected with said trigger bars and disposed transversely across the front of the device, a fender apron situated between the skids, and a fender screen projecting upwardly from said apron at the rear thereof.

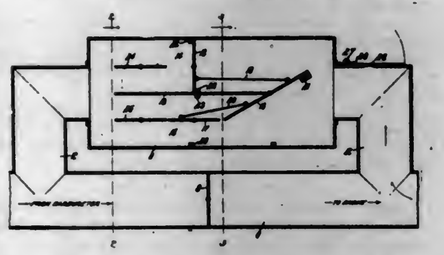
3. A vehicle fender consisting of a pair of supports having extensions projecting over the wheels of the vehicle to which the fender is attached, arcuate forked reaches pivoted to said supports above the pivot points of the wheels of the vehicle, skids slidably mounted on said forked reaches, a rod having its ends movably attached to said skids, a locking device carried by said rod, means carried by the forked reaches adapted to be attached to said locking means for suspending the skids, means for actuating said locking means when the fender strikes a person or object, a fender apron situated between the skids, and a vertical fender screen also situated between said skids at the rear of the fender apron.

4. A vehicle fender consisting of a pair of supports having extensions projecting over the wheels of the vehicle to which the fender is attached, arcuate forked reaches pivoted to said supports above the pivot points of the wheels of the vehicle, skids slidably mounted on said forked reaches, a rod having its ends movably attached to said skids, a locking device carried by said rod, means carried by the forked reaches adapted to be attached to said locking means for suspending the skids, another rod having its ends movably attached to the skids parallel with the first named rod and spaced therefrom, trigger bars connected with the locking means, a trigger rod attached to said trigger bars whereby the locking means will be actuated when the trigger rod strikes a person or object, and a mesh covering certain parts of the apparatus to form a fender apron.

5. A vehicle fender consisting of a pair of supports having extensions projecting over the wheels of the vehicle to which the fender is attached, arcuate forked reaches pivoted to said supports above the pivot points of the wheels of the vehicle, skids slidably mounted on said forked reaches, a rod having its ends movably attached to said skids, a locking device carried by said rod, means carried by the forked reaches adapted to be attached to said locking means for suspending the skids, another rod having its ends movably attached to the skids parallel with the first named rod and spaced therefrom, trigger bars connected with the locking means, a trigger rod attached to said trigger bars whereby the locking means will be actuated when the trigger rod strikes a person or object, a fender apron arranged between the first named rod, the trigger rod and the trigger bars, a vertical frame connected with the first named rod, a mesh disposed across the space between said rod and frame to form a fender screen, and shields or guards carried by the front walls of the skids of sufficient length and width to cover the forked portion of the reaches.

[Claims 6 to 8 not printed in the Gazette.]

1,212,851. INTERNAL-COMBUSTION-ENGINE GOVERNOR. GEORGE WALLIS TOPPING, Brooklyn, N. Y. Filed May 1, 1916. Serial No. 94,656. (Cl. 123—122.)

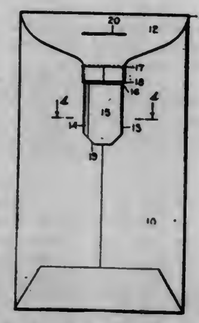


1. An apparatus as characterized comprising a manifold pipe for operatively connecting an engine with a carbureter; a valve operable to close said pipe; means embodying a series of passages operatively connected with said pipe at opposite sides of said valve forming a by-pass around said valve; a series of valves for closing said passages; a pressure-actuated member operatively mounted for extension partially across said passages and operated by fluid passing therethrough, said member being operatively connected with said valves for closing said passages for operating the same for relatively reverse results; and yielding means operatively connected with said member for normally disposing the same to open one of said passage-controlling valves and to close the other of said passage-controlling valves.

2. An apparatus as characterized comprising a manifold pipe for operatively connecting an engine with a carbureter; a valve operable to close said pipe; means embodying a series of passages operatively connected with said pipe at opposite sides of said valve forming a by-pass around said valve; a series of valves for closing said passages; a pressure-actuated member operatively mounted for extension partially across said passages and operated by fluid passing therethrough, said member being operatively connected with said valves for closing said passages for operating the same for relatively reverse results; yielding means operatively connected with said member for normally disposing the same to open one of said passage-controlling valves and to close the other of said passage-controlling valves, and a plurality of manually controlled auxiliary valves disposed in said passages for controlling the flow therethrough for regulating the proportionate pressure of said fluid on said member.

3. An apparatus as characterized comprising a delivery pipe for a carbureter; a by-pass member having a plurality of passages operatively connected with said by-pass member at both ends thereof; a plurality of passage-closing valves pivotally mounted in the passages in said by-pass member; a pressure actuated pivotally disposed member operatively connected with each of said valves for alternating the active positions; and means for automatically rocking said member to a position wherein one of said passage-closing valves is opened and one of said passage-closing valves is closed.

1,212,852. ENVELOP. FRANK L. TOUPAL, Chicago Heights, Ill. Filed Apr. 27, 1916. Serial No. 93,900. (Cl. 229—84.)



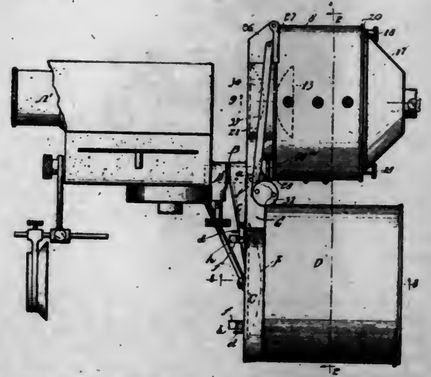
1. An envelop having a body with an open end and with two slots spaced apart and adjacent the said open end, a flap extending from the body for inclosing the said open end and having a slot and a tongue extending from the flap the sides of the tongue at a distance from the flap having lateral extensions which are bent in the direction of each other and secured together, the tongue being normally disposed down through one slot and up through the other slot in the envelop body, with the inner edges of its bent side disposed substantially at one of the slots in the body, the tongue being then bent back and having its end extending into the slot in the flap.

2. An envelop having a body with an open end and with two slots spaced apart and adjacent the said open end, a flap extending from the envelop for inclosing the said open end and having an extending tongue, the sides of the tongue at a distance from the flap having lateral extensions which are bent in the direction of each other and secured together so that when the tongue is disposed down through one slot and up through the other, the inner edges of the bent sides of the tongue will be disposed substantially at one of the slots in the body for the purpose specified.

3. An envelop having a body with an open end and with two slots spaced apart and adjacent the said open end, a flap extending from the envelop for inclosing the said open end and having a tongue normally extending down through one slot and up through the other slot, the tongue being provided with a shoulder spaced from the flap and disposed beyond the slots for engaging the envelop at the slots for locking purposes.

4. An envelop having a body with an open end and with two slots spaced apart and adjacent the said open end, a flap extending from the body for inclosing the said open end and having a slot, and a tongue extending from the flap and normally disposed down through one slot and up through the other slot in the envelop body and then bent back and having its end extending into the slot in the flap, the tongue being provided with a shoulder spaced from the flap and disposed beyond the slots in the body for engaging the body at its slots.

1,212,853. CONDENSING-LENS FOR CINEMATOGRAPHS. ALEXANDER FERDINAND VICTOR, Davenport, Iowa. Filed Mar. 23, 1916. Serial No. 86,049. (Cl. 88—24.)



1. The combination with a picture projecting machine comprising lantern-slide projecting apparatus and moving picture projecting apparatus, of condensers therefor, and means for separating the lenses of the condenser for the lantern slide projector and combining one of its lenses with a complementary condensing lens to form the moving picture condenser, and vice versa.

2. The combination with a picture projecting machine comprising lantern slide projecting apparatus and moving picture projecting apparatus, of condensers therefor, and means for separating the lenses of the condenser for the lantern slide projector and combining the rear condensing lens thereof with the forward complementary condensing lens of the moving picture condenser, and vice versa.

3. The combination with a picture projecting machine comprising lantern slide projecting apparatus and moving picture projecting apparatus, of a condenser for the former employing two lenses of different sizes and convexity, and a condenser for the latter employing two lenses corresponding in size and convexity to the smaller lens of the condenser of said lantern slide projector, and means for separating the lens of the lantern slide condenser and combining the rear smaller lens thereof with the complementary lens of the moving picture projector, and vice versa.

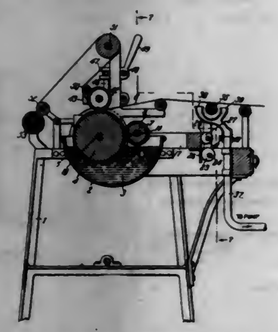
4. The combination with a picture projecting machine comprising lantern slide projecting apparatus and moving picture projecting apparatus, of a condenser for the former employing a forward stationary lens and a rear smaller lens of greater convexity, and a condenser for the latter employing two lenses corresponding in diameter and convexity to the smaller lens of the first mentioned condenser, and means for separating the rear lens of the condenser of the lantern slide projector and combining it

with the forward lens of the moving picture projector, and vice versa.

5. The combination with a picture projecting machine comprising lantern slide projecting apparatus and moving picture projecting apparatus, of a condenser for the former employing a forward stationary lens and a rear movable smaller lens of greater convexity, and a condenser for the latter employing two movable lenses corresponding in diameter and convexity to the smaller lens of the first mentioned condenser of the lantern slide projector, and means for separating the rear lens of the condenser of the lantern slide projector and combining it with the forward lens of the moving picture projector, and vice versa.

[Claims 6 to 18 not printed in the Gazette.]

1,212,854. SILK-FINISHING MACHINE. GIUSEPPI PETER VUONO, New York, N. Y. Filed Feb. 4, 1916. Serial No. 76,115. (Cl. 91—13.)



1. In a silk finishing machine of the character described, a container for receiving paste, a paste roller, a presser roller for pressing the silk fed through the machine against said paste roller, a controlling roller for controlling the amount of material taken up from said container and applied to the silk, a guide for supporting and guiding the movement of the controlling roller toward and from the paste roller, means acting on the guide for giving the same a tendency to move away from the paste roller, a cam for adjusting the position of the guide against the action of said means, and an eccentrically mounted many-sided member arranged so that one of the sides will engage said guide for locking the guide in its adjusted position.

2. In a silk finishing machine of the character described, a paste roller, a container for receiving paste which is adapted to be taken up by the paste roller, a presser roller pressing the silk fed through the machine against said paste roller, a controlling roller for regulating the amount of paste applied to said silk, a supporting and guiding member for supporting and guiding the controlling roller, an eccentric adapted to move the guiding member toward said paste roller, and an eccentric locking member having a plurality of flat faces adapted to engage said guiding member at different times according to the position to which it has been moved by the eccentric member.

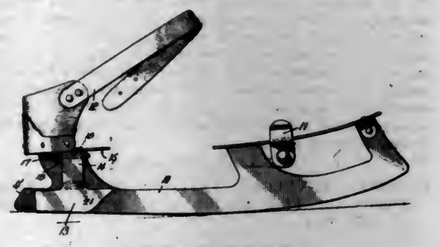
3. In a silk finishing machine of the character described, a paste receptacle, a paste roller for receiving paste from the receptacle, a presser roller for pressing silk against the paste roller, a controlling roller, a sliding guide for supporting the controlling roller and for moving the same toward and from the paste roller, resilient means acting on said guide for forcing the same away from the paste roller, a fixed stationary pin for guiding the resilient means, said pin extending into a bore in the guide whereby the guide is held against any movement except a movement toward and from the paste roller, means for moving the guide toward the paste roller, and means for locking the guide against a return movement.

4. In a silk finishing machine of the character described, a paste roller, means for controlling the amount of paste supplied thereto, a container for supplying paste to the paste roller, a presser roller, means for guiding the silk to the presser roller, and means for removing lint and other foreign matter from the silk as the silk passes to the presser roller, said means including a brush and a suction member.

5. In a silk finishing machine of the character described, a paste container, a presser roller, a controlling roller, means for guiding silk to the presser roller, and a vacuum or suction member arranged with an open mouth adjacent one side of the silk as the same passes to the paste roller whereby lint and other foreign matter is removed from the silk immediately previous to its passage to the presser roller.

[Claims 6 and 7 not printed in the Gazette.]

1,212,855. ICE-SKATE. MURRAY A. WACHS, New York, N. Y. Filed Feb. 11, 1916. Serial No. 77,606. (Cl. 46—50.)



1. The combination with a skate having a main runner, of an auxiliary runner pivoted to the skate on an axis parallel to the main runner.

2. The combination with a skate including a heel plate and a main supporting runner to which the heel plate is connected, of a pair of auxiliary runners pivoted to the heel plate on opposite sides of the main runner and movable at their lower edges toward and from said main runner.

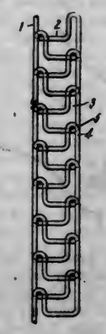
3. In a skate, the combination of a main runner, a heel plate rigidly connected to the runner, a pair of auxiliary runners connected to the heel plate by horizontal pivots parallel to the main runner and movable toward and from the main runner at their lower edges, and means between the main and auxiliary runners to lock the auxiliary runners in rigid vertical position, substantially as set forth.

1,212,856. GARMENT-STAY. FRANK L. O. WADSWORTH, Pittsburgh, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed July 21, 1914. Serial No. 852,256. (Cl. 2—76.)

1. A garment stay, comprising wire bent back and forth across the stay to form two series of loops lying along the edges of the stay, each edge loop overlapping the next crossing portion and comprising two parallel portions of the wire extending longitudinally of the stay and joined by a curved end portion, and a series of transversely extending parallel crossing portions connecting successive loops on opposite edges of the stay.

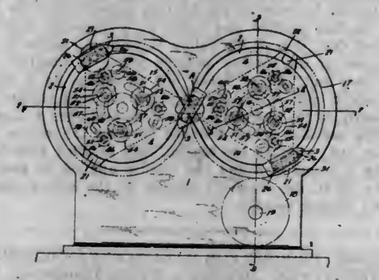
2. A garment stay, comprising wire bent back and forth across the stay to form two series of loops lying along the edges of the stay, each edge loop overlapping the next crossing portion and comprising two parallel portions of the wire extending longitudinally of the stay and joined by a curved end portion, and a series of transversely extending parallel crossing portions, each of said crossing portions extending from the inner of the two longitudinal wire portions of one edge loop to the outer wire portion of the next adjacent edge loop on the other edge of the stay.

3. A garment stay, comprising wire bent back and forth across the stay to form two series of loops lying along the edges of the stay, each edge loop comprising two parallel portions of the wire extending longitudinally of the stay and joined by a curved end portion, and a series of transversely extending parallel crossing portions connecting successive loops on opposite edges of the stay, each of said edge loops overlapping a plurality of the next adjacent crossing portions of the wire.



4. A garment stay, comprising wire bent back and forth across the stay to form two series of loops lying along the edges of the stay, each edge loop comprising two parallel portions of the wire extending longitudinally of the stay and joined by a curved end portion, and a series of transversely extending parallel crossing portions, each of said crossing portions extending from the inner of the two longitudinal wire portions of one edge loop to the outer wire portion of the next adjacent edge loop on the other edge of the stay, each of said edge loops overlapping a plurality of the next adjacent crossing portions of the wire.

1,212,857. MACHINE FOR MAKING GARMENT-STAYS. FRANK L. O. WADSWORTH, Pittsburgh, Pa., assignor to The Spirella Company, a Corporation of Pennsylvania. Filed Feb. 19, 1915. Serial No. 9,431. (Cl. 140—91.)



1. Wire bending apparatus, comprising loop-forming pins, a wire-carrying shuttle movable in a path to coil the wire around said pins, and means for twisting the unformed portion of the wire while coiling the same.

2. Wire bending apparatus, comprising loop-forming pins, a wire-carrying shuttle, means for moving said shuttle in a path to coil the wire around said pins, and means for twisting the unformed portion of the wire as it is coiled around said pins.

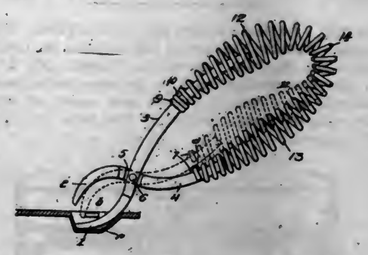
3. Wire bending apparatus, comprising loop-forming pins, a wire-carrying shuttle, means for moving said shuttle to coil the wire around said pins into loops or eyes and crossing portions, and means for twisting the last formed crossing portion of the wire as the latter is coiled around said pins.

4. Wire bending apparatus, comprising loop-forming pins, a wire-carrying shuttle, means for moving said shuttle in a figure-8 path around said pins, and means for twisting the unformed portion of the wire while coiling it around said pins.

5. Wire bending apparatus, comprising loop-forming pins, a plurality of wire-carrying shuttles, means for moving said shuttles successively around a path to coil the wires carried thereby successively around said pins into figure-8 coils, and means for twisting the unformed portion of each wire as it is coiled around said pins.

[Claims 6 to 17 not printed in the Gazette.]

1,212,858. STOVE-LID PLIERS. ERVIN WEBER, Wilkinsburg, Pa. Filed Jan. 21, 1914. Serial No. 813,525. (Cl. 126—323.)



A device of the kind described consisting of a pair of pivoted arms, each arm being curved in one direction and having a jaw curved in an opposite direction, one of said arms being of a less length than the other arm, a coiled spring bent into U-formation to provide a pair of legs, the convolutions of the legs of said spring gradually increasing in diameter as they recede from the bight portion of the spring and decreasing at the outer ends of the legs, and means for securing the outer ends of said spring legs in embracing relation upon the arms, the spring leg engaging the longer arm for a greater distance than the leg embracing the shorter arm, the wider convolutions of the last-named leg being out of contact with either arm, and the spring leg on the shorter arm being longer than the spring leg on the longer arm.

1,212,859. ROASTING APPARATUS. ADOLF WEISS, Brooklyn, N. Y., assignor to Robert J. Masbach, New York, N. Y. Filed July 12, 1916. Serial No. 108,787. (Cl. 34—5.)



1. In roasting apparatus of the character designated the combination of a rotatable roasting drum formed with a hinged door, latch mechanism on the drum for holding said door closed, and trip mechanism supported independent of said drum and adapted to be set to trip the said latch mechanism on the drum, for the purpose described.

2. In roasting apparatus of the character designated, the combination of a rotatable roasting drum formed with two hinged doors one overlapping the other, latch mechanism on the drum for holding said doors closed, and trip

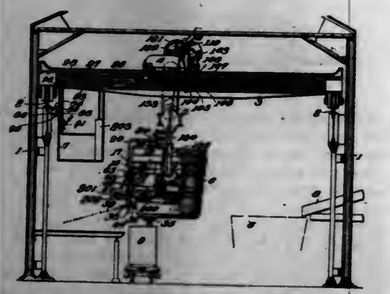
mechanism supported independently of said drum and adapted to be set to trip the said latch mechanism on the drum.

3. In roasting apparatus of the character designated, the combination of a rotatable roasting drum formed with a hinged door, spring latch mechanism on the drum for holding said door closed, and trip mechanism supported independent of said drum and adapted to be set to trip the said spring latch mechanism on the drum, for the purpose described.

4. In roasting apparatus of the character designated, the combination of a rotatable roasting drum formed with two hinged doors one overlapping the other, spring latch mechanism on the drum for holding said doors closed, and trip mechanism supported independently of said drum and adapted to be set to trip the said spring latch mechanism on the drum.

1,212,860. LADLE-STOPPER-OPERATING MECHANISM. GEORGE ALEXANDER WETTENGEL, St. Louis, Mo. Filed Oct. 28, 1915. Serial No. 58,402. (Cl. 22—85.)

1. The combination with a portable ladle having a nozzle and a stopper for closing said nozzle, of electrical power operated means carried by said ladle for actuating said stopper.



2. The combination with a portable ladle having a nozzle and a stopper for closing said nozzle, of electrical power operated means carried by said ladle for raising and lowering said stopper.

3. The combination with a ladle having a nozzle and a stopper for closing said nozzle, of a sliding plate arranged on said ladle, means connecting said plate and said stopper, and electrical power operated means for raising and lowering said plate.

4. The combination with a ladle having a nozzle and a stopper for closing the same, of electrical power operated means for raising and lowering said stopper, and means connecting said operating means and said stopper, said operating means comprising a motor, a nut secured to said ladle, and a screw passing through said nut and operable by said motor for raising and lowering said connecting means.

5. The combination with a ladle having a nozzle and a stopper for closing the same, of electrical power operated means for raising and lowering said stopper, and means connecting said operating means and said stopper, said operating means comprising a motor having a screw, a nut secured to said ladle and engaging said screw, a plurality of conductor tubes carried by said nut and one of which is provided with a non-conducting projection, and a brush carried by said screw and adapted to electrically connect said tubes when not engaged by said projection.

[Claims 6 to 13 not printed in the Gazette.]

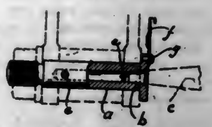
1,212,861. MEANS FOR PROTECTING CORNS. PAUL WETZEL, New Rochelle, N. Y. Filed Mar. 30, 1916. Serial No. 87,704. (Cl. 128—28.)

1. An elongated corn protector having an end slightly concave so that the protector may be disposed wholly at the rear of a corn and in close proximity to the rear of the corn to remove pressure from the corn without confining the sides of the corn.



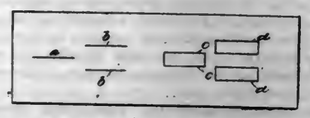
2. An elongated corn protector having one end slightly concave so that the protector may be disposed wholly at the rear of a corn and in close proximity to the corn at its rearward portion for removing pressure from the corn without confining the sides thereof, and with the other end of the protector convex, to assist in the movement of the shoe over the protector.

1,212,862. LUBRICATION OF BEARINGS. HAROLD S. WHEELER, Tacoma, Wash. Filed Mar. 29, 1916. Serial No. 87,410. (Cl. 67—27.)



A bearing member closed at one end, hollow for part of the way and open at the opposite end, the said interior hollow portion providing an unobstructed reservoir for containing a heavy lubricant, a passage-way connecting the hollow interior of the bearing member and its exterior bearing surface and being of a diameter relatively smaller than that of the hollow interior, a closure for the open end of the bearing member, which is adapted to fit into said end and be taken out therefrom by a sliding movement, and means for securing the said closure permanently to the bearing member, the said open end of the bearing member being designed to take the nozzle of a grease gun, whereby the bearing may be filled with heavy oil by a grease gun and the closure applied to keep the heavy oil in the reservoir formed by the hollow interior of the bearing member.

1,212,863. PROCESS FOR MAKING EXPANDED-METAL STRUCTURES. HERBERT E. WHITE, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a Corporation of Ohio. Filed June 14, 1913. Serial No. 773,651. (Cl. 164—6.5.)



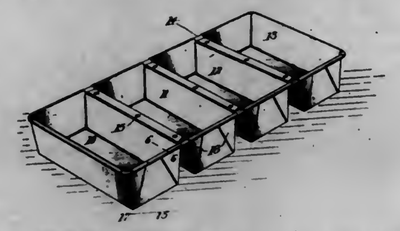
1. The method of making expanded metal structures which consists in slitting the portion of the blank to be expanded, stretching longitudinally the metal of the strands formed by the slits and deforming the slitted and stretched material into unbroken undulations, and subsequently spreading the blank laterally to thereby open the slits into meshes.

2. The method of making expanded metal structures which consists in longitudinally slitting the portion of the blank to be expanded, stretching longitudinally the metal of the strands formed by the rows of slits and deforming the slitted and stretched material into unbroken undulations displaced to the side of the blank, and then acting on the blank to cause the displaced portion to spread, thereby opening the slits into meshes.

3. The method of making expanded metal structures which consists in longitudinally slitting the portion of the blank to be expanded, and, simultaneously with the slitting operation, stretching the metal of the strands formed by the slits and deforming the slitted and stretched material into unbroken undulations, without opening the slits, and subsequently spreading the sheet laterally to thereby open the slits into meshes.

4. The hereindescribed method of opening portions of a sheet blank into expanded metal open-work comprising meshes of substantially diamond form, which consists in slitting the portion to be expanded, and, simultaneously with the slitting operation, stretching the strands formed by the slits and deforming the slitted and stretched material into unbroken undulations, and then acting on the blank to cause the stretched and deformed portion to be opened into meshes and thereby brought into a widened plane.

1,212,864. BAKING-PAN. ANTHONY J. WILL, Baltimore, Md., assignor to The August Maag Company, Baltimore, Md., a Corporation of Maryland. Filed Aug. 22, 1914. Serial No. 858,097. (Cl. 53—6.)

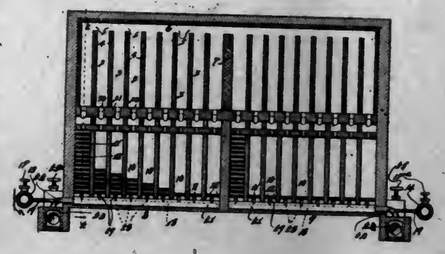


1. A series of rectangular baking pans arranged side by side and each having flanges on all four sides, a reinforcing member surrounding the series of pans, each of the end pans of the series having the flanges on three of its sides turned over said member and each of the intermediate pans having the flanges on two of its sides turned over said member, the remaining flanges being folded, overlapped and secured directly together in pairs throughout substantially their full length.

2. A series of rectangular baking pans formed from blanks of uniform size having flanges on all of their sides, a reinforcing member surrounding the series of pans, each of the end pans of the series having the flanges on three of its sides turned over said member and each of the intermediate pans having the flanges of two of its sides turned over said member, the remaining flanges being folded, overlapped and riveted together in pairs throughout substantially their full length.

1,212,865. COKE-OVEN. LOUIS WILPUTTE, New York, N. Y. Filed July 31, 1912. Serial No. 712,377. (Cl. 202—9.)

1. A coke oven structure comprising coking chambers with a plurality of heating flues, a plurality of regenerators one individual to and connected to one end of each of said flues, said flues being arranged in sets each comprising a plurality of flues connected together at their ends remote from those to which the regenerators are connected and means for maintaining a flow alternately in opposite directions through said flues and regenerators comprising outlet connections to the regenerators for conveying waste gas away from the latter, air supply connections to the regenerators including a separate air inlet for each regenerator.



2. A coke oven structure comprising coking chambers with a plurality of heating flues, a plurality of regenerators one individual to and connected to one end of each of said flues, said flues being arranged in sets each comprising a plurality of flues connected together at their ends remote from those to which the regenerators are connected and means for maintaining a flow alternately in opposite directions through said flues and regenerators comprising outlet connections to the regenerators for conveying waste gas away from the latter, air supply connections to the regenerators including a separate air inlet for each regenerator, and means for supplying air in proportional amounts to the air inlets of the separate regenerators.

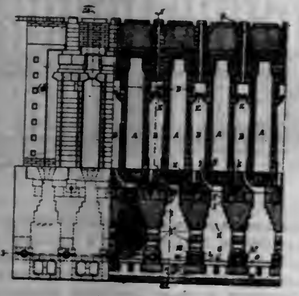
3. A coke oven structure comprising coking chambers with a plurality of heating flues, a plurality of regenerators one individual to and connected to one end of each of said flues, said flues being arranged in sets each comprising a plurality of flues connected together at their ends remote from those to which the regenerators are connected and means for maintaining a flow alternately in opposite directions through said flues and regenerators comprising outlet connections to the regenerators for conveying waste gas away from the latter, air supply connections to the regenerators including a separate air inlet for each regenerator, and means for supplying combustible gas in proportional amounts to the different flues of each group.

4. A coke oven structure comprising coking chambers with a plurality of heating flues, a plurality of regenerators one individual to and connected to one end of each of said flues, said flues being arranged in sets each comprising a plurality of flues connected together at their ends remote from those to which the regenerators are connected and means for maintaining a flow alternately in opposite directions through said flues and regenerators comprising outlet connections to the regenerators for conveying waste gas away from the latter, air supply connections to the regenerators including a separate air inlet for each regenerator, and combustible gas supply connections including a separate gas supply nozzle for each flue.

1,212,866. COKE-OVEN AND METHOD OF OPERATING THE SAME. LOUIS WILPUTTE, New York, N. Y. Filed Apr. 26, 1913. Serial No. 763,714. (Cl. 202—9.)

1. The method of regulating the distribution of the heating gases among the heating flues of a regenerative coke oven of the type in which the heating flues are arranged in sets, each consisting of two groups with the flues in each group connected at one end to the corresponding ends of all the flues in the other group of the same set, which consists in causing the air entering and the off gases leaving each group of heating flues to flow externally of the flues in divided streams along flow paths such that the stream of air entering any one flue flows to the flue along a path separate not only from the paths followed by streams of air simultaneously entering other flues in the same group, but also separate from the path of flow followed by the off gases leaving the flue when the

direction of flow therethrough is reversed, and regulating the distribution of flow in one direction through each group of flues by regulating the capacity of the separate paths traversed by the last mentioned flow and not traversed by the flow in the opposite direction through said group of flues.



2. In a regenerative coke oven, having coking chambers, heating walls at the sides of said chambers, two groups of heating flues in each heating wall, a passage to which one end of each of said flues is connected and regenerators to which the opposite ends of the flues are connected, the two groups of heating flues in each wall being connected to different regenerators, the improvement which consists in means for regulating the distribution among the flues of the heating gases passing into them from said passage combined with other means regulating the distribution among the flues of the fluid passing into them from the regenerators.

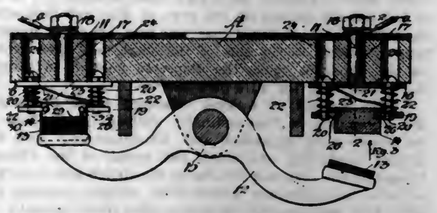
3. In a regenerative coke oven, having coking chambers, heating walls at the sides of said chambers, two groups of heating flues in each heating wall, a passage to which one end of each of said flues is connected and regenerators to which the opposite ends of the flues are connected, each group of heating flues being connected to a regenerator or set of regenerators different from the regenerators or set of regenerators to which the other group in the same wall is connected, the improvement which consists in means for regulating the distribution among the various flues of each group of the fluid passing through them from and into the corresponding regenerator or set of regenerators, comprising a set of regulable devices located in, and another set of regulable devices located out of the paths of flow of the fluid with one of the two directions of flow of the latter through said groups of flues.

4. In a regenerative coke oven, having a coking chamber, a heating wall at the side of said chamber, two groups of heating flues in said heating wall, and a passage to which one end of each of the flues in both groups is connected, a set of regenerators to which the opposite ends of the flues in one group are connected, and another set of regenerators to which the opposite ends of the flues in the other group are connected, each regenerator being connected to a part only of the flues in the group to which the corresponding set of regenerators is connected.

5. In a regenerative coke oven, having coking chambers, heating walls at the sides of said chambers, two groups of heating flues in each heating wall, and a passage to which one end of each of the flues in both groups is connected, a set of regenerators to which the opposite ends of the flues in one group in each heating wall are connected, and another set of regenerators to which the opposite ends of the flues in the other groups are connected, each regenerator being connected to a part only of the flues in each group to which the corresponding set of regenerators is connected and being connected to the correspondingly located flue or flues in the different heating walls.

[Claims 6 to 20 not printed in the Gazette.]

1,212,867. ELECTRIC-SWITCH CONTACT-HOLDER. ADOLF P. WITTE, Chicago, Ill., assignor of one-half to Maurice S. Dick, Chicago, Ill. Filed Feb. 11, 1916. Serial No. 77,731. (Cl. 175—282.)



1. A carbon contact block holder, comprising a supporting plate, having a screw threaded stem, and arranged to be fixedly secured to a support, a carbon contact block holding plate, having a rectangular notch extending in from one edge adapted to receive a grooved carbon block with the edges adjacent the notch of the notched plate entering the grooves of the carbon block, two headed pins secured to said block holding plate, and slidably guided in apertures in said supporting plate; the heads of said pins being arranged to limit movement of said block holding plate in one direction, springs interposed between said plates, and a latch adapted to be secured to said block holding plate in front of said notch, to thereby removably hold the block in place.

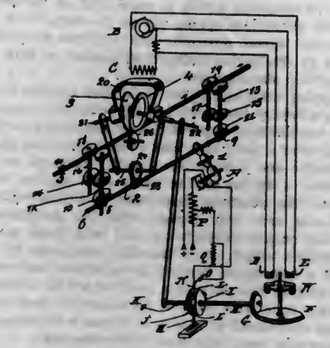
2. A carbon contact block holder, comprising a fixed supporting plate, having a pair of apertures therein, a carbon block holding plate, having an upwardly opening notch formed therein and having a pair of headed pins sliding in said apertures; the heads of said pins being arranged to strike against the supporting plate to thereby limit movement of the block holding plate in one direction, springs interposed between said plates, a grooved carbon contact block removably held in the notch of said block holding plate, and a latch removably secured to said holder above the block whereby the carbon block may be removed without removal of the holder from its support.

1,212,868. PUMP-ROD CONNECTOR. GEORGE T. WOHLFORD, Wiggins, Colo. Filed Apr. 12, 1916. Serial No. 90,721. (Cl. 74—17.)



As a new article of manufacture, a connector for pump rods and the like, the same comprising a single piece of rod metal, one end of which constitutes a connecting pin, the rod being bent upon itself at one end of the pin whereby to form a loop constituting a finger piece and a means for connecting the connector with a displacement preventing device, and said rod being further bent laterally from the loop to form an abutment limiting the movement of the pin to its operative connecting position, after which the rod is bent to form an arm parallel with the pin and having a laterally extending extremity constituting a locking element whereby to prevent displacement of the connector when disposed in operative position.

1,212,869. ELECTRIC WELDING-MACHINE. HARRY R. WOODROW, New York, N. Y., assignor to Thomas E. Murray, New York, N. Y. Filed Oct. 23, 1916. Serial No. 127,096. (Cl. 219—6.)



1. An electric welding machine, comprising means for progressively forming a welded joint, and means for automatically controlling the speed of progression of said joint proportionately to the amount of current energy delivered to said joint.

2. An electric seam-welding machine, comprising a direct current motor, rotary electrodes, means actuated by said motor for progressively feeding said seam to said electrodes, an alternating current generator supplying welding current to said electrodes, a differential gear, means for transmitting motion from said feeding means to one of the opposing pinions of said differential gear, a wattmeter in circuit with said generator, means for transmitting motion from said wattmeter to the opposite pinion of said differential gear, and means controlled by the connection pinions of said differential gear for varying the speed of said direct current motor.

3. An electric seam-welding machine, comprising a direct current motor, rotary electrodes, means actuated by said motor for progressively feeding said seam to said electrodes, an alternating current generator supplying welding current to said electrodes, a differential gear, means for transmitting motion from said feeding means to one of the opposing pinions of said differential gear, a wattmeter in circuit with said generator, means for transmitting motion from said wattmeter to the opposite pinion of said differential gear, a resistance, a switch actuated by the connection pinions of said differential gear, and a resistance across the terminals of said switch.

4. An electric seam-welding machine, comprising a direct current motor, rotary electrodes, means actuated by said motor for progressively feeding said seam to said electrodes and for rotating said electrodes, an alternating current generator for supplying welding current to said electrodes, a differential gear, means for transmitting motion from one of said rotary electrodes to one of the opposing pinions of said differential gear, a wattmeter in circuit with said generator, means for transmitting motion from said wattmeter to the opposite pinion of said differential gear, and means controlled by the connection pinions of said differential gear for varying the speed of said direct current motor.

5. An electric tube-welding machine, comprising welding electrodes, means for progressively and longitudinally feeding to said electrodes a tube to be seam-welded, and means for automatically controlling the speed of said tube proportionately to the amount of current energy delivered at the welded joint.

1,212,870. DEVICE FOR PICKING UP OR LIFTING PINS, NEEDLES, &c. WILLIAM ZOLPER, Wilmington, Del. Filed June 15, 1916. Serial No. 103,730. (Cl. 175—21.)

A device for lifting pins and needles consisting of a plate of magnetic material having therethrough an opening forming an enlarged chamber, a head disposed freely within said chamber, and a flexible carrier passed through



said opening in the plate and having said head secured thereto in said chamber, said plate being adapted to rest on said head and roll thereon.

1,212,871. BOTTLE-STOPPER. LEONARD G. ABBOTT, Boston, Mass. Filed Oct. 11, 1916. Serial No. 124,943. (Cl. 215—18.)

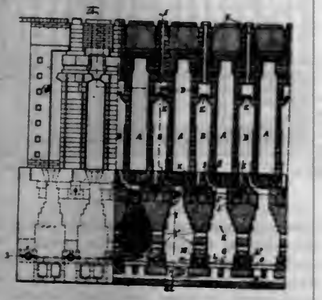


1. A bottle stopper including a thimble having an annular flange at its outer end and an inwardly directed flange at its inner end whereby the base of the thimble is reduced, a hollow sleeve closed at its outer end and internally threaded slidably received in said thimble, a U-shaped cam member straddling the outer end of the sleeve and pivotally connected thereto, the cam spacing the inner end of the sleeve from the inner thimble flange at all times, a screw passed through the inner end of the thimble and threaded into the sleeve, a head formed on the inner end of the screw, and a rubber plug mounted on the screw and engaged at its ends by the screw head and thimble, the cam adapted to forcibly engage the thimble to expand the rubber plug laterally of the thimble and screw head.

2. A bottle stopper comprising a shouldered thimble, an internally threaded sleeve slidable in the upper part of the thimble, a cam pivoted to the upper end of the sleeve, a screw entering the lower end of the thimble and engaging the sleeve, a head formed integral with the screw and a rubber plug surrounding the screw between its head and the thimble, the lower end of the bore in the thimble being contracted to nearly the diameter of the screw whereby undue lateral movements of the screw are obviated.

3. A bottle stopper comprising a shouldered thimble, a sleeve slidable within the thimble having an internally threaded hole reaching nearly to its upper end, a cam consisting of two cam-members at opposite sides of the upper end of the sleeve, a rivet passing through the two cam-members and the solid end of the sleeve, a beaded screw entering the lower end of the thimble and engaging the sleeve, and a rubber plug on the screw between its head and thimble the sleeve and screw being relatively adjustable to vary the expansive force of the rubber plug.

direction of flow therethrough is reversed, and regulating the distribution of flow in one direction through each group of flues by regulating the capacity of the separate paths traversed by the last mentioned flow and not traversed by the flow in the opposite direction through said group of flues.



2. In a regenerative coke oven, having coking chambers, heating walls at the sides of said chambers, two groups of heating flues in each heating wall, a passage to which one end of each of said flues is connected and regenerators to which the opposite ends of the flues are connected, the two groups of heating flues in each wall being connected to different regenerators, the improvement which consists in means for regulating the distribution among the flues of the heating gases passing into them from said passage combined with other means regulating the distribution among the flues of the fluid passing into them from the regenerators.

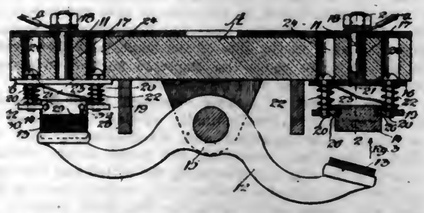
3. In a regenerative coke oven, having coking chambers, heating walls at the sides of said chambers, two groups of heating flues in each heating wall, a passage to which one end of each of said flues is connected and regenerators to which the opposite ends of the flues are connected, each group of heating flues being connected to a regenerator or set of regenerators different from the regenerators or set of regenerators to which the other group in the same wall is connected, the improvement which consists in means for regulating the distribution among the various flues of each group of the fluid passing through them from and into the corresponding regenerator or set of regenerators, comprising a set of regulable devices located in, and another set of regulable devices located out of the paths of flow of the fluid with one of the two directions of flow of the latter through said groups of flues.

4. In a regenerative coke oven, having a coking chamber, a heating wall at the side of said chamber, two groups of heating flues in said heating wall, and a passage to which one end of each of the flues in both groups is connected, a set of regenerators to which the opposite ends of the flues in one group are connected, and another set of regenerators to which the opposite ends of the flues in the other group are connected, each regenerator being connected to a part only of the flues in the group to which the corresponding set of regenerators is connected.

5. In a regenerative coke oven, having coking chambers, heating walls at the sides of said chambers, two groups of heating flues in each heating wall, and a passage to which one end of each of the flues in both groups is connected, a set of regenerators to which the opposite ends of the flues in one group in each heating wall are connected, and another set of regenerators to which the opposite ends of the flues in the other groups are connected, each regenerator being connected to a part only of the flues in each group to which the corresponding set of regenerators is connected and being connected to the correspondingly located flue or flues in the different heating walls.

[Claims 6 to 20 not printed in the Gazette.]

1,212,867. ELECTRIC-SWITCH CONTACT-HOLDER. ADOLF P. WITTE, Chicago, Ill., assignor of one-half to Maurice S. Dick, Chicago, Ill. Filed Feb. 11, 1916. Serial No. 77,731. (Cl. 175—282.)



1. A carbon contact block holder, comprising a supporting plate, having a screw threaded stem, and arranged to be fixedly secured to a support, a carbon contact block holding plate, having a rectangular notch extending in from one edge adapted to receive a grooved carbon block with the edges adjacent the notch of the notched plate entering the grooves of the carbon block, two headed pins secured to said block holding plate, and slidably guided in apertures in said supporting plate; the heads of said pins being arranged to limit movement of said block holding plate in one direction, springs interposed between said plates, and a latch adapted to be secured to said block holding plate in front of said notch, to thereby removably hold the block in place.

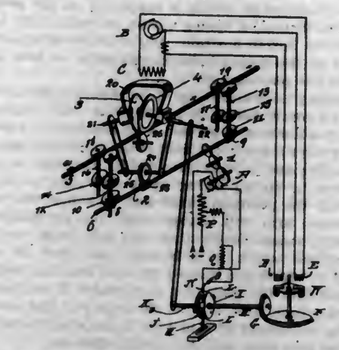
2. A carbon contact block holder, comprising a fixed supporting plate, having a pair of apertures therein, a carbon block holding plate, having an upwardly opening notch formed therein and having a pair of headed pins sliding in said apertures; the heads of said pins being arranged to strike against the supporting plate to thereby limit movement of the block holding plate in one direction, springs interposed between said plates, a grooved carbon contact block removably held in the notch of said block holding plate, and a latch removably secured to said holder above the block whereby the carbon block may be removed without removal of the holder from its support.

1,212,868. PUMP-ROD CONNECTOR. GEORGE T. WOHLFORD, Wiggins, Colo. Filed Apr. 12, 1916. Serial No. 90,721. (Cl. 74—17.)



As a new article of manufacture, a connector for pump rods and the like, the same comprising a single piece of rod metal, one end of which constitutes a connecting pin, the rod being bent upon itself at one end of the pin whereby to form a loop constituting a finger piece and a means for connecting the connector with a displacement preventing device, and said rod being further bent laterally from the loop to form an abutment limiting the movement of the pin to its operative connecting position, after which the rod is bent to form an arm parallel with the pin and having a laterally extending extremity constituting a locking element whereby to prevent displacement of the connector when disposed in operative position.

1,212,869. ELECTRIC WELDING-MACHINE. HARRY R. WOODROW, New York, N. Y., assignor to Thomas E. Murray, New York, N. Y. Filed Oct. 23, 1916. Serial No. 127,096. (Cl. 219—6.)



1. An electric welding machine, comprising means for progressively forming a welded joint, and means for automatically controlling the speed of progression of said joint proportionately to the amount of current energy delivered to said joint.

2. An electric seam-welding machine, comprising a direct current motor, rotary electrodes, means actuated by said motor for progressively feeding said seam to said electrodes, an alternating current generator supplying welding current to said electrodes, a differential gear, means for transmitting motion from said feeding means to one of the opposing pinions of said differential gear, a wattmeter in circuit with said generator, means for transmitting motion from said wattmeter to the opposite pinion of said differential gear, and means controlled by the connection pinions of said differential gear for varying the speed of said direct current motor.

3. An electric seam-welding machine, comprising a direct current motor, rotary electrodes, means actuated by said motor for progressively feeding said seam to said electrodes, an alternating current generator supplying welding current to said electrodes, a differential gear, means for transmitting motion from said feeding means to one of the opposing pinions of said differential gear, a wattmeter in circuit with said generator, means for transmitting motion from said wattmeter to the opposite pinion of said differential gear, a resistance, a switch actuated by the connection pinions of said differential gear, and a resistance across the terminals of said switch.

4. An electric seam-welding machine, comprising a direct current motor, rotary electrodes, means actuated by said motor for progressively feeding said seam to said electrodes and for rotating said electrodes, an alternating current generator for supplying welding current to said electrodes, a differential gear, means for transmitting motion from one of said rotary electrodes to one of the opposing pinions of said differential gear, a wattmeter in circuit with said generator, means for transmitting motion from said wattmeter to the opposite pinion of said differential gear, and means controlled by the connection pinions of said differential gear for varying the speed of said direct current motor.

5. An electric tube-welding machine, comprising welding electrodes, means for progressively and longitudinally feeding to said electrodes a tube to be seam-welded, and means for automatically controlling the speed of said tube proportionately to the amount of current energy delivered at the welded joint.

1,212,870. DEVICE FOR PICKING UP OR LIFTING PINS, NEEDLES, &c. WILLIAM ZOLPER, Wilmington, Del. Filed June 15, 1916. Serial No. 103,730. (Cl. 175—21.)

A device for lifting pins and needles consisting of a plate of magnetic material having therethrough an opening forming an enlarged chamber, a head disposed freely within said chamber, and a flexible carrier passed through



said opening in the plate and having said head secured thereto in said chamber, said plate being adapted to rest on said head and roll thereon.

1,212,871. BOTTLE-STOPPER. LEONARD G. ABBOTT, Boston, Mass. Filed Oct. 11, 1916. Serial No. 124,943. (Cl. 215—18.)

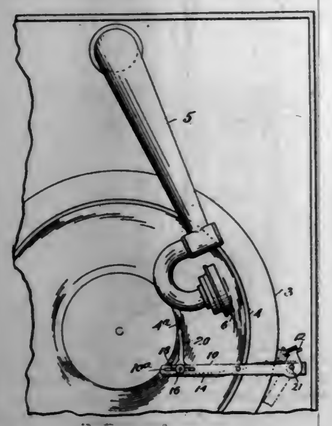


1. A bottle stopper including a thimble having an annular flange at its outer end and an inwardly directed flange at its inner end whereby the base of the thimble is reduced, a hollow sleeve closed at its outer end and internally threaded slidably received in said thimble, a U-shaped cam member straddling the outer end of the sleeve and pivotally connected thereto, the cam spacing the inner end of the sleeve from the inner thimble flange at all times, a screw passed through the inner end of the thimble and threaded into the sleeve, a head formed on the inner end of the screw, and a rubber plug mounted on the screw and engaged at its ends by the screw head and thimble, the cam adapted to forcibly engage the thimble to expand the rubber plug laterally of the thimble and screw head.

2. A bottle stopper comprising a shouldered thimble, an internally threaded sleeve slidable in the upper part of the thimble, a cam pivoted to the upper end of the sleeve, a screw entering the lower end of the thimble and engaging the sleeve, a head formed integral with the screw and a rubber plug surrounding the screw between its head and the thimble, the lower end of the bore in the thimble being contracted to nearly the diameter of the screw whereby undue lateral movements of the screw are obviated.

3. A bottle stopper comprising a shouldered thimble, a sleeve slidable within the thimble having an internally threaded hole reaching nearly to its upper end, a cam consisting of two cam-members at opposite sides of the upper end of the sleeve, a rivet passing through the two cam-members and the solid end of the sleeve, a headed screw entering the lower end of the thimble and engaging the sleeve, and a rubber plug on the screw between its head and thimble the sleeve and screw being relatively adjustable to vary the expansive force of the rubber plug.

1,212,872. AUTOMATIC BRAKE MECHANISM FOR PHONOGRAPHS. FRANK H. ADAMS, Cleveland, Ohio. Filed Jan. 22, 1915, Serial No. 3,673. Renewed Dec. 1, 1916. Serial No. 134,500. (Cl. 74—46.)



1. A stopping attachment for disk phonographs of the type having a rotary turntable and pivoted tone arm, comprising in combination a pivoted arm adapted to extend horizontally over a part of a disk upon the phonograph turntable, a spring for swinging said arm away from said position, restraining means preventing the spring-induced movement of said arm, a brake for stopping the phonograph which is moved in the brake applying direction by the spring-induced movement of said arm, a trip finger carried by said arm and adapted to project into the path of a part of the phonograph which is carried by the tone arm thereof, and means whereby the trip finger by its movement releases said arm from said restraining devices.

2. A stopping attachment for disk phonographs of the type having a rotary turntable and pivoted tone arm, comprising in combination a pivoted arm adapted to extend horizontally over a part of a disk upon the phonograph turntable, a spring for swinging said arm away from said position, restraining means preventing such spring induced movement, a brake for stopping the phonograph which is moved in the brake applying direction by the spring induced movement of said arm, a trip finger which is adjustable lengthwise of said arm and adapted to project into the path of a part of the phonograph which is carried by the tone arm thereof, and means whereby the trip finger by its movement releases said arm from said restraining devices.

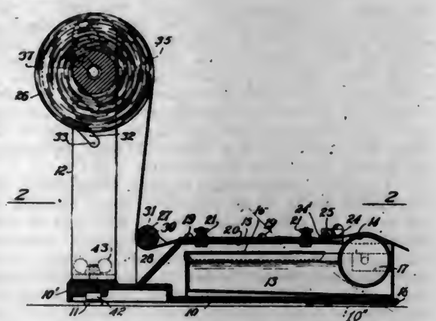
3. A stopping attachment for disk phonographs of the type having a rotary turntable and pivoted tone arm, comprising in combination a pivoted arm adapted to extend horizontally over a part of a disk record upon the phonograph turntable, a bracket arm to which said arm is pivoted, which bracket arm is provided with an arc-shaped edge in which there is a notch, a catch lever pivoted to said arm and having a finger adapted to enter said notch, a cam pivoted to said arm in position to engage with said catch lever, a trip finger connected with said cam and adapted to project into the path of a part of the phonograph which is supported on the swinging tone arm thereof, a spring acting to swing said arm away from its initial position and a brake adapted to be operated by the spring-induced movement of said arm, for stopping the phonograph.

4. A stopping attachment for disk phonographs of the type having a rotary turntable and pivoted tone arm, comprising in combination a pivoted arm adapted to extend horizontally over a part of a disk record upon the phonograph turntable, a bracket arm to which said arm is pivoted, which bracket arm is provided with an arc-shaped edge in which there is a notch, a catch lever pivoted to said arm and having a finger adapted to enter said notch, a cam pivoted to said swinging arm on a pivot which is adjustable lengthwise of the arm, a trip finger connected with said cam and adapted to project into the path of a part of the phonograph which is supported on the swinging tone arm thereof, a spring acting to swing said arm away from its initial position, and a brake adapted to be operated by the spring induced movement of said arm for stopping the phonograph.

5. A stopping attachment for disk phonographs of the type having a rotary turntable and pivoted tone arm, comprising in combination a pivoted arm adapted to extend horizontally over a part of a disk record upon the phonograph turntable and a brake arm rigidly fastened to said swinging arm, a spring acting upon said arm to swing it away from the position stated and to a position such that the brake arm will engage with the periphery of the turntable, means restraining said arm from moving in the direction which it is impelled to move by said spring, and a trip finger carried by said arm and adapted to project into the path of a part which is carried by the swinging tone arm of the phonograph, and means whereby the movement of said trip finger will disconnect the swinging arm from said restraining devices.

[Claim 6 not printed in the Gazette.]

1,212,873. STRIP-SERVING DEVICE. HARRY A. ADAMS, Boston, Mass., assignor to John F. Ryan, Bellows Falls, Vt. Filed June 22, 1914. Serial No. 846,511. (Cl. 91—14.5.)



1. A strip serving device including in combination a device for rendering tape adhesive and a holder for a supply roll of tape comprising a standard, at each end of the axis of the supply roll, movable in the direction of the axis to various positions for holding rolls of different width of tape, and stub axles supported by said standards and adapted to penetrate the adjacent ends of the roll only a short distance, thereby being capable of holding rolls of either wide or narrow tape, and a base and a device thereon for engaging the standards at a plurality of locations, in symmetrical pairs, at equal distances each side of the position of closest approach.

2. A strip serving device including in combination a device for rendering tape adhesive and a holder for a supply roll of tape comprising a standard adjacent to each end of the axis of the supply roll, stub axles adapted to penetrate the adjacent ends of the roll; and plates on saiad axles, perpendicular thereto, intervening between the roll and the adjacent standards, adapted to inclose between them the central part of the roll, the whole being arranged and adapted for the said axles to let the roll slip around them and for the plates to be spring-pressed together.

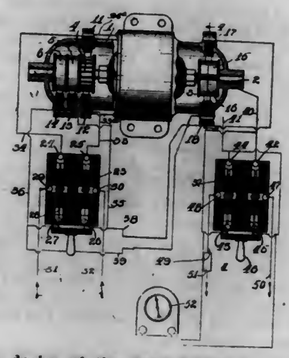
3. A strip serving device including in combination a device for rendering tape adhesive and a holder for a supply roll of tape, comprising a standard at each end of the axis of the roll; a plate adapted to fit between the standard and the roll at each end of the roll; and pins projecting from said plates extending inwardly to form stub axles penetrating the roll, and extending outwardly to be supported in the adjacent standard, said inwardly and outwardly extending parts being removable and replaceable with the plate to which they are attached as a single unit.

4. A strip serving device including in combination a device for rendering tape adhesive and a holder for a supply roll of tape, comprising a standard at each end of the axis of the roll; a plate adapted to fit between the standard and the roll at each end of the roll; and pins projecting from said plates extending inwardly to form stub axles penetrating the roll, and extending outwardly to be supported in the adjacent standard, the outward projection having a screw and nut clamp, whereby the plate and stub axle may be held on the standard, by compression of the standard between the plate and said nut, outside of the standard.

5. A strip serving device including in combination a device for rendering tape adhesive and a holder for a supply roll of tape, comprising a standard at each end of the axis of the roll; a plate adapted to fit between the standard and the roll at each end of the roll; and pins projecting from said plates extending inwardly to form stub axles penetrating the roll, and extending outwardly to be supported in the adjacent standard, the outward projection having a screw clamp for engaging the standard; and there being a lug on each plate, adapted to engage the standard to prevent rotation thereof with respect to the standard.

[Claims 6 to 22 not printed in the Gazette.]

1,212,874. MECHANICAL RECTIFIER. FRANK ADSIT, Chicago, Ill. Filed Sept. 15, 1913. Serial No. 789,764. (Cl. 175—364.)



1. In a device of the class described a self-starting synchronous motor adapted to be operated by an alternating current, a plurality of commutators on the shaft of said motor, slip rings adjacent one of said commutators, and means connected with said last mentioned commutator and with said rings adapted to transfer said alternating current independently of said motor to another of said commutators to be thereby rectified into a direct current.

2. In a device of the class described a motor, a plurality of multiple segment commutators mounted on either end thereof, multiple sets of brushes connected to said commutators, one set thereof adapted to receive an alternating current therethrough and another set adapted to take off a direct rectified current from one of said commutators.

3. In a device of the class described a motor, commutators on each end of the armature shaft thereof and insulated therefrom, an alternating current circuit, slip rings connected to one of said commutators at one end of said armature shaft tending to drive the motor shunted across said alternating current circuit, and brushes connected to the commutator at the other end of said shaft to lead the alternating current through said commutator, and brushes bearing upon said commutator adapted to take off a direct rectified current therefrom.

4. In a device of the class described a plurality of multiple segment commutators, means rotating the same in phase with an alternating current, and brushes bearing on one of said commutators adapted to lead an alternating current thereto and another pair of brushes to take a rectified direct current therefrom.

5. In a device of the class described for use with a source of alternating current, a motor, a multiple segment commutator mounted on the shaft thereof, slip rings mounted on said shaft adjacent to said commutator, said commutator and rings insulated from said shaft and from each other, said motor, rings and commutator adapted to be rotated as a unti by said alternating current, a second commutator mounted on said shaft, brushes bearing on said second commutator adapted to introduce an alternating current thereto, and brushes bearing on said second commutator at an angle to said first mentioned brushes adapted to take off the rectified current therefrom.

[Claim 6 not printed in the Gazette.]

1,212,875. INTERNAL-COMBUSTION ENGINE. ANDERS J. ANDERSON, Colville, Wash., assignor of one-half to Christian Borup, Colville, Wash. Filed Sept. 6, 1916. Serial No. 118,652. (Cl. 123—80.)



1. In an internal combustion engine, the combination of a cylinder head having ports, a superimposed partition plate having ports, a cover plate having ports, disks disposed between the cylinder head, partition plate and cover plate respectively, said disks having openings, and means for rotating the disks in opposite directions.

2. In an internal combustion engine, the combination of a cylinder head having ports, a superimposed partition plate having ports, a cover plate having ports, disks disposed between the cylinder head, partition plate and cover plate respectively, said disks having openings, and associated means for effecting the movement of the lower disk against the adjacent partition to form a gas seal.

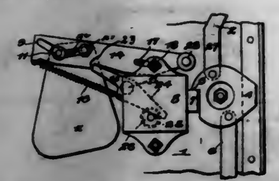
3. In an internal combustion engine, the combination of a cylinder having a ported head, a piston in the cylinder adapted to perform a compression stroke, a partition plate having ports and an annular depending flange arranged to engage the cylinder head and forming a recess, a cover plate having ports, and an annular depending flange arranged to engage a partition plate and forming a recess, a disk having ports located in the recess between the cover and partition plates, a second disk having ports disposed in the recess between the partition plate and cylinder head, said disk being of lesser thickness than the depth of the recess, a sleeve for rotating the first-named disk in one direction, and a shaft extending through the sleeve and having a loose connection with the lower disk for rotating the disk in the opposite direction and for permitting the disk to move against the partition when the piston performs a compression stroke.

4. In an internal combustion engine, the combination of a cylinder having a ported cylinder head, the wall of the cylinder extending beyond the head to form a recess, a piston movable within the cylinder, a superimposed par-

tition plate having an annular flange forming a recess, said partition plate having ports, a cover plate having ports, and an annular flange engaging the partition plate and forming a recess, a disk having openings disposed between the cover plate and the partition, a sleeve for rotating the disk, a second disk having openings and a central aperture, said disk being located between the partition plate and the cylinder head, said disk being of a lesser thickness than the depth of its recess, a shaft passing through the sleeve, and having a non-circular end for loose engagement with the lower disk for permitting the disk to move against the adjacent partition plate when the piston performs a compression stroke.

5. In an internal combustion engine, the combination of a cylinder having a cylinder head, a superimposed partition plate, a cover plate, the cover and partition plates and the cylinder head having alining exhaust ports and other laterally extending exhaust ports at opposite points, portions of these ports being in alinement, disks disposed between the cover, partition plates and cylinder head, said disks having openings at diametrically opposite points and means for rotating the disks in opposite directions.

1,212,876. AUTOMATIC INDICATOR FOR LOCKERS. JOSEPH B. ARMITAGE, Pawtucket, R. I., assignor to Narragansett Machine Company, Pawtucket, R. I., a Corporation of Rhode Island. Filed Oct. 21, 1915. Serial No. 57,211. (Cl. 40—66.)



1. In combination with a door provided with a sight opening, a turn plate rotatable thereon having a projection, a vertically movable latch bolt pivoted to the plate, of a lock on the door including a bolt adapted to be moved into the path of the projection on the turn plate and a key-receiving barrel formed with a transverse slot, an indicator pivoted to the door for movement across the sight opening thereof, an actuator slidably mounted for movement against the latch bolt and provided with a cam slot, a lug carried by the indicator and engaging in the cam slot of the actuator, the latter being provided with a keeper, a trip pawl pivoted between its ends and having one end engaging with the keeper of the actuator and its opposite end resting in the slot of the lock barrel, a spring connected with the actuator and pawl to render the same spring actuated, and a pair of keys for the lock one only of which being adapted for raising the end of the trip pawl from the slot of the lock barrel to release the actuator.

2. In combination, a lock, a pivoted indicator, an actuator for the indicator having a cam part, a lug on the indicator for coöperation with the cam part of the actuator, means for operating the lock, and means under control of the first means for operating the actuator.

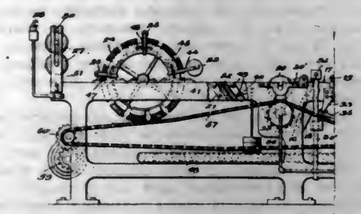
3. In combination, a lock, a pivoted indicator, an actuator for the indicator having a guide slot and a cam slot, a guide pin operable in the guide slot of the actuator, a lug on the indicator engaging in the cam slot of the actuator, a keeper on the latter, a trip member engaging with the keeper, and means for operating the trip member and lock.

4. In combination, a door, a latch member thereon, a lock for the latch member, an indicator, means for operating the lock and moving the indicator from normal position, and means operable by the latch member to return the indicator to normal position.

5. In combination, a door, a lock, a latch member, an indicator, a slidably mounted actuator connected to the indicator and adapted for movement against the latch member, a trip member releasably holding the actuator in normal position, means for operating the lock and trip member to release the actuator, and means for operating the latch to return the actuator to normal position.

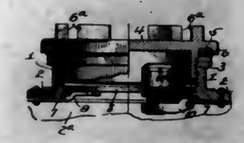
[Claim 6 not printed in the Gazette.]

1,212,877. MACHINE FOR GLAZING AND FINISHING YARNS, THREADS, AND TWINES. ERNEST E. ASPINWALL, Pawtucket, R. I. Filed Oct. 21, 1915. Serial No. 57,076. (Cl. 28—7.)



In a machine of the character described, a frame having spaced upper bars, arcuate strip-like supports having inwardly and outwardly extending radial foot-portions on their ends secured to the frame bars, each support being provided with a series of circumferentially spaced arc-shaped slots, independently adjustable brackets secured in the support slots in radial disposition, rollers supported by the brackets, and a brush journaled on the frame bars between the foot portions of the arcuate supports and in concentric relation with the latter.

1,212,878. CLOSURE FOR GASOLENE OR OTHER LIQUID TANKS. PETER F. AUGENBRAUN, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed July 1, 1915. Serial No. 37,614. (Cl. 220—124.)



1. The combination of a ring having an internal annular lip, a closure plate seated on the lip, a lock actuated bolt for locking said plate to the lip, and a readily detachable cap secured to the outer end of the ring for sealing the same and also for concealing the closure plate and its lock.

2. The combination of a ring having an internal annular lip, a closure plate resting on said lip, a lock actuated bolt for locking said plate to the lip, and a readily detachable air tight cap secured to the ring for sealing the same and also for concealing the closure plate and its lock.

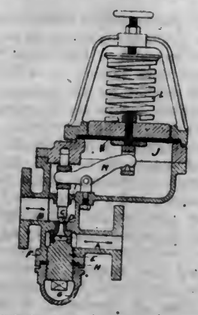
3. The combination of a ring having an internal annular lip, a closure plate resting on said lip and provided with a rigid clamp and a movable bolt coacting with the clamp to lock the closure plate in place, a lock carried by said plate for actuating the bolt and a freely detachable cover secured to the upper end of the ring and hermetically sealing the same.

4. The combination of a tank having an intake opening, a readily removable cap for hermetically sealing said opening and an independent closure for said opening comprising a plate, a bolt for locking said plate within the opening and a lock for actuating the bolt, the said closure and lock being concealed by the cap.

1,212,879. REDUCING-VALVE. JOHN AULD and JOHN GRAHAM, Glasgow, Scotland. Filed Mar. 5, 1913. Serial No. 752,124. (Cl. 137—4.)

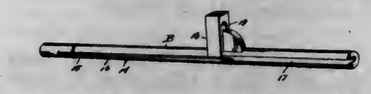
The combination in a valve, of a casing having inlet and outlet passages and a threaded opening; a valve seat

mounted in a shouldered cavity in said casing and having a passage communicating with the inlet and outlet passages; a plug threaded into said opening and having a threaded portion projecting outside of the same, said plug engaging the valve seat to hold it against the shoulder



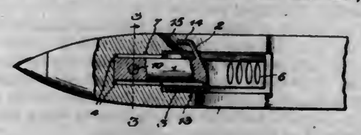
of its cavity and being provided with a wrench-receiving head; with a cap threaded on the projecting portion of the plug so as to cover the head thereof; and packing between the edge of the cap and the adjacent portion of the casing.

1,212,880. SICKLE-BAR FOR MOWING-MACHINES. ALONZO D. BALDWIN, Latham, Kans. Filed Feb. 1, 1916. Serial No. 75,592. (Cl. 56—44.)



The combination with a finger bar having recesses in the fingers thereof, a rod in the recesses, said rod being provided with a recess opening through the side and one end thereof, said recess having a contracted mouth, a metallic lining in the recesses of the fingers surrounding the rod and including the holding lip, a plurality of knives projecting through the mouth of the rod and having enlarged inner ends disposed in the recess of the rod, the holding lip of the lining bearing against the upper sides of said knives to support same against a tendency to move upward, a head having a tongue slidable in the recess in the rod and adapted to bear against the end knife, and means for adjusting the head longitudinally of the rod to bind the knives against each other end to end.

1,212,881. SHUTTLE. LUTHER C. BALDWIN, Providence, R. I., assignor to U. S. Bobbin & Shuttle Company, Providence, R. I., a Corporation of New Jersey. Filed Mar. 6, 1916. Serial No. 82,273. (Cl. 139—27.)



1. In combination with a shuttle having a longitudinal hole and a cross hole intersecting the first hole, a stem, a guide secured to the front end of the stem and having an inclined part, the top end of which is turned outwardly to engage the shuttle and having a base which underlies the stem and extends on opposite sides thereof, a pair of separate jaws having concavo-convex shanks engaged on opposite sides of the stem and in said longitudinal hole and seating on the side portions of the base of the guide, said jaw shanks and stem having registering openings which aline with the cross hole, and a bolt passed through said registering openings and cross hole.

2. In combination with a shuttle having a longitudinal opening, a stem having a guide, a pair of jaws having concavo-convex shanks engaged on opposite sides of the stem, and means to secure the parts in the shuttle opening extending through the shanks, stem, and shuttle.

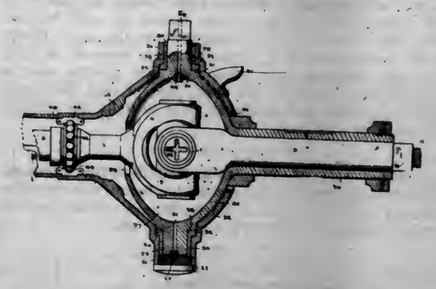
3. In combination with a shuttle having a longitudinal round opening, a stem, and a pair of jaws having shanks which conformably fit over said stem, said jaws when engaged with said stem having a substantially circular cross-section so as to be capable of being driven in the opening.

4. In combination with a shuttle having a longitudinal opening, a stem, and a pair of jaws having shanks which latter fit over said stem and have free side edges which confront each other, the stem and shanks being received in said opening.

5. In combination with a shuttle having a longitudinal opening, a stem, and a pair of jaws having shanks which latter fit over said stem so as to substantially inclose the entire periphery thereof and being received in said opening.

[Claims 6 and 7 not printed in the Gazette.]

1,212,882. COMBINATION POWER AND STEERING KNUCKLE. HENRY W. BARGER, Toledo, Ill. Filed Dec. 31, 1915. Serial No. 69,658. (Cl. 21—90.)



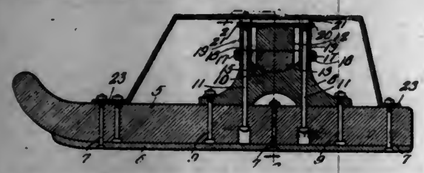
1. A combined power and steering knuckle comprising the combination of an axle formed in sections, a universal joint connecting said axle sections, a housing through which said axle extends and in which said universal joint is rotatably mounted, a sleeve integral with said housing for the reception of a portion of said axle, pivot posts at the upper and lower ends of said housing, said pivot posts having ports extending longitudinally therethrough, an extension at the inner end of the port of the upper post, a cap screw at the outer end of the port of the lower post, a casing surrounding said housing and having tubular extensions to receive said pivot posts, bushings between said pivot posts and extensions, and a closure cap for the open end of the lower tubular extension.

2. A combined power and steering knuckle comprising a hollow housing having a pivot post at its upper and lower ends, a casing surrounding said housing and having a tubular extension at its upper and lower ends, a bushing between each pivot post and tubular extension, said pivot posts and extensions having shoulders, said bushings having flanges to engage said shoulders, the upper bushing being of less length than the height of the pivot post and tubular extension to form a channel, each pivot post having a vertically extending port, an extension plug at the inner end of the port of the upper pivot post, a closure for the lower end of the port of the lower pivot post, and a closure cap for the lower end of the lower tubular extension.

1,212,883. OSCILLATING BOB-KNEE. CHARLES E. BARNES, Hancock, N. Y. Filed Mar. 9, 1916. Serial No. 83,161. (Cl. 21—48.)

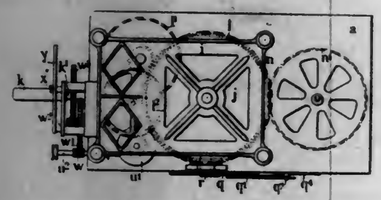
1. A bob knee comprising in combination with a runner and a sleigh beam, a bearing block carried by said runner and having a concaved seat, pins extending through said

runner and said block, sleeves mounted upon the upper ends of said pins, a bearing plate mounted upon the lower face of said beam and having a convex face fitted to said concave bearing face, said sleeves providing columns to confine said beam and bearing plate within the limits of said concave bearing face, loops formed on said bearing plate and surrounding said sleeves above the upper limits of the bearing block, and a retaining plate secured on said pins and confining said beam and said sleeves.



2. A bob knee comprising in combination with a runner and a sleigh beam, a bearing block carried by said runner and having a concaved seat, pins extending through said runner and said block, sleeves mounted upon the upper ends of said pins, a bearing plate mounted upon the lower face of said beam and having a convex face fitted to said concave bearing face, said sleeves providing columns to confine said beam and bearing plate within the limits of said concave bearing face, loops formed on said bearing plate and surrounding said sleeves above the upper limits of the bearing block, a retaining plate secured on said pins and confining said beam and said sleeves, and a guide groove formed in the upper face of said beam and coöperating with said retaining plate to limit the vertical movement of said loops.

1,212,884. AUTOMATIC APPARATUS FOR AERIAL PHOTOGRAPHY. AUGUSTE BLAISE BARON and CHARLES MARIE ARTHUR GUINARD, Paris, France. Filed Dec. 8, 1912. Serial No. 734,674. (Cl. 88—17.)



1. A panoramic photographic apparatus for recording on a film, grounds overflown by an aerial machine, comprising a box having an opening in its bottom and inclosing a dark camera, an objective at the base of said dark camera opposite the opening of the box, a variable speed motor adjustable at will for the automatic intermittent unwinding of the film, and a shutter for the objective, actuated by the motor at the moment of the stopping of the film.

2. A panoramic photographic apparatus for recording on a film, grounds overflown by an aerial machine, comprising a box having an opening in its bottom and inclosing a dark camera, an objective at the base of said dark camera opposite the opening of the box, a variable speed motor adjustable at will, wheels for the transmission of movement, a ball regulator, a movable rod for stopping the motor, and a shutter for the objective.

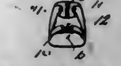
3. A panoramic photographic apparatus for recording on an endless film, grounds overflown by an aerial machine, comprising a box inclosing a dark camera, an objective at the base of said dark camera, a motor for the automatic intermittent unwinding of the film, wheels for the transmission of movement, one of which is secured at the base of the barrel and is toothed on a part of its periphery only, another toothed wheel gearing with the wheel of the barrel, an axle supporting this second wheel and on which is mounted the winding drum of the wheel in order that said drum should be driven only when the teeth of the wheel of the drum are in gear with the wheel supporting the axle of the drum, a movable rod for stopping the motor, a ball regulator for regulating the movement of the motor, and a shutter for the objective, controlled by the motor.

4. A panoramic photographic apparatus for recording on an endless film, grounds overflown by an aerial machine, comprising a box inclosing a dark camera, an objective at the base of said dark camera, a variable speed motor adjustable at will, wheels for the transmission of movement, a ball regulator, means for intermittently drawing along the film and for causing the taking of the image to correspond to the stopping moment of the film for obtaining a succession of images the edges of which overlap each other so as to obtain a non-interrupted representation of the overflown grounds, and a shutter for the objective.

5. A panoramic photographic apparatus for recording on an endless film, grounds overflown by an aerial machine, comprising a box inclosing a dark camera, an objective at the base of said dark camera, a variable speed motor adjustable at will constituted by a spring barrel, wheels for the transmission of movement, a ball regulator, a device for slowing down at will the speed of the motor, constituted by a bent lever, a plate integral with the regulator and on which presses the lever, a screw for the displacement of the bent lever, a toothed pinion mounted on this screw, wheels for the transmission of movement for actuating an index, a graduated sector arranged behind the index and opposite one of the graduations of which the index is brought by the displacement of the screw, and a shutter for the objective actuated by the motor at the moment the film stops.

[Claims 6 to 10 not printed in the Gazette.]

1,212,885. ARTIFICIAL TOOTH. COLDWELL C. BEEBE, Racine, Wis. Filed Sept. 8, 1915. Serial No. 49,441. (Cl. 32—9.)

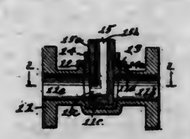


1. An artificial tooth comprising a facing member and a backing member having meeting faces intersecting the labial and lingual faces and disposed at an acute angle to the base face of the tooth, the facing member being provided in its medial and distal faces with grooves extending toward and taperingly enlarged toward the base face and being further provided in said base face rearwardly of the said grooves with a transverse groove having its sides extended laterally in the medial and distal faces and having its bottom curved whereby the bearing surface of the transverse groove approximates the combined bearing faces of the medial and distal face grooves, and portions carried by the backing member to engage in said grooves whereby strain incident to longitudinal pressure on the tooth, is equally distributed in the transverse groove and in the medial and distal grooves.

2. As an article of manufacture, a backing member having its top face adapted for securement to a crown cap member, the adjacent portions of its labial and its medial and distal faces being inwardly offset and provided with a curved horizontal groove forming an under cut in said offset face portions and said backing member being formed for attachment of a facing member thereto.

1,212,886. TEST-PLUG. ROBERT SANFORD BENSON, West Paris, Me. Filed Jan. 24, 1916. Serial No. 73,891. (Cl. 137—77.)

1. As an article of manufacture, for use in a pipe line at intervals, a coupling having a longitudinal passage therethrough and a port in the side thereof, a plug arranged laterally in said coupling and extended outwardly through said port, said plug having an axial passage extended inwardly from the outer end thereof and a transverse passage connecting said axial passage with one end of the longitudinal passage in said coupling, and means on the exterior end of said plug for connection with a pipe or hose.



2. As an article of manufacture, for use in a pipe line at intervals, a coupling having a longitudinal passage therethrough, a port in the side thereof, and a recess diametrically opposite said port, a plug seated in said recess and extended outwardly of said port, said plug having an axial passage extended inwardly from the outer end thereof and a transverse passage connecting said axial passage with one end of the longitudinal passage through said coupling, and means on the outer end of said plug for pipe or hose engagement.

3. As an article of manufacture, for use in a pipe line at intervals, a coupling having a longitudinal passage therethrough, a port in the side thereof, a flange around said port and a recess diametrically opposite said port, said flange being screw threaded, a plug seated in said recess and extended outwardly of said port, said plug having an axial passage extended inwardly from the outer end thereof and a transverse passage connecting said axial passage with one end of the longitudinal passage through said coupling, and means on the outer end of said plug for pipe or hose engagement.

4. As an article of manufacture, for use in a pipe line at intervals, a coupling having a longitudinal passage therethrough, a port in the side thereof, and a recess diametrically opposite said port, a ported sleeve seated in said recess and extended through said port, a plug in said sleeve having an axial passage extended from the outer end thereof and a transverse passage connecting said axial passage with a port in said sleeve and with one end of the longitudinal passage in said coupling, and means on the outer end of said plug for pipe or hose engagement.

5. As an article of manufacture, for use in a pipe line at intervals, a coupling having a longitudinal passage therethrough, a port in the side thereof, and an angular recess in the position of said port, an angular plug in said recess, a wedge for locking said plug in position, and means on the outer end of said plug for pipe or hose connection, said plug having an axial passage and a transverse passage connecting said axial passage with one end of the longitudinal passage through said coupling.

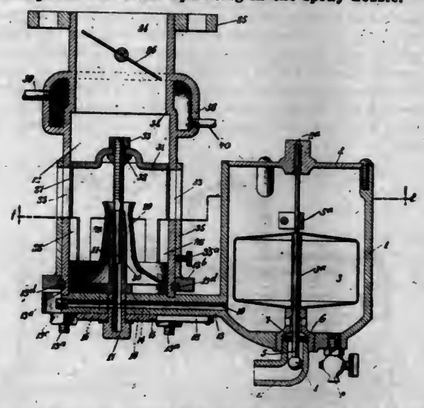
[Claims 6 to 9 not printed in the Gazette.]

1,212,887. CARBURETER. ABRAM SCHENCK BERGEN, Huntington, N. Y. Filed Nov. 25, 1912. Serial No. 733,347. (Cl. 261—48.)

1. A carbureter comprising in combination, a cylindrical mixing chamber having air ports in its side wall, an inverted piston valve mounted therein and adapted to be actuated by the suction of the engine, said piston valve having air ports in its side wall adapted to variably register with those in the wall of the mixing chamber when the piston valve is elevated, an air nozzle centrally mounted in said piston valve and discharging into said mixing chamber, said air nozzle having air admission ports in communication therewith, a spray nozzle surrounded by and discharging into said air nozzle, and a needle valve carried by said piston valve and operating in the spray nozzle.

2. A carbureter comprising in combination, a chamber having air ports in its wall, a hollow piston valve slidably fitting the inner side of the chamber and having air ports variably registering with those in the wall of the latter, said hollow piston valve carrying therewith an internally arranged air nozzle in communication with the other air, a spray nozzle in communication with the fuel supply and extending into said air nozzle, and a needle valve carried by the piston valve and operating in the spray nozzle.

3. A carbureter comprising in combination, a chamber having air ports in its wall, and in its bottom, a hollow piston valve slidably registering inside of the chamber and having lateral air ports, said hollow piston valve carrying therein an internally arranged air nozzle in communication with the bottom air ports and presenting a piston surface over said bottom air ports, a spray nozzle extending into the air nozzle, and a needle valve carried by the piston valve and operating in the spray nozzle.



4. A carbureter comprising in combination a float feed chamber provided with a base, a cylindrical mixing chamber provided with a flange at its upper end, adapted to be secured to the intake pipe of an explosive engine, a circumferential groove near the lower end of said mixing chamber, a divided ring adapted to fit into said groove, a collar adapted to fit around said mixing chamber and contact with said divided ring when inserted in said groove, and means for securing said collar to said base.

1,212,888. MENTHOLATED OR MINTED CATHARTIC SALTS. CHARLES SAMUEL BERRY, Tuckerman, Ark., assignor of one-third to L. T. Slayden and one-third to J. S. Graham, Tuckerman, Ark. Filed July 5, 1916. Serial No. 107,690. (Cl. 167—7.)

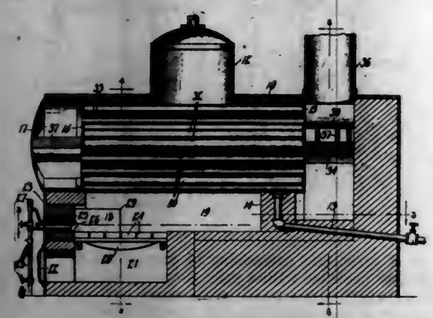
1. The process of making mentholated cathartic salts, consisting of taking equal parts of menthol crystals, oil of peppermint, and oil of spearmint, adding the menthol to approximately one thousand parts of cathartic salts and then triturating the same, and during such trituration slowly adding, by drops, the oils of peppermint and spearmint until the composition is thoroughly mixed and a perfect blend of mint is distributed throughout the salts.

2. As a composition of matter, a mentholated cathartic salts compounded in the following approximate proportions and consisting of equal parts of menthol crystals, oil of peppermint, and oil of spearmint, to approximately one thousand parts of cathartic salts.

1,212,889. STEAM-GENERATOR. WILLIAM NEWTON BEST, Brooklyn, N. Y., assignor to Marcia Walther Dresser, Brooklyn, N. Y. Filed Aug. 12, 1916. Serial No. 114,536. (Cl. 122—75.)

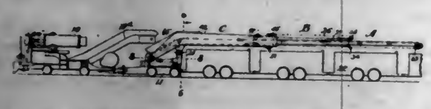
1. A steam generator including a shell having four groups of flues extending substantially horizontally therethrough, one of said groups being disposed adjacent the lower portion of the shell, one being arranged adjacent the upper portion of the shell and the other two being disposed above the lowermost group and at substantially the same elevation and upon opposite sides of the vertical, medial plane, means at one end of said shell for connecting the uppermost group with one of the side groups and the lowermost group with the other side group and means at the opposite end of the shell for connecting together the two side groups whereby gases may be delivered through all of said groups in series.

2. A steam generator including a shell having four groups of flues extending substantially horizontally therethrough, one of said groups being disposed adjacent the lower portion of the shell, one being arranged adjacent the upper portion of the shell and the other two being disposed above the lowermost group and at substantially the same elevation and upon opposite sides of the vertical, medial plane, means at one end of said shell for connecting the uppermost group with one of the side groups and the lowermost group with the other side group and means at the opposite end of the shell for connecting together the two side groups whereby gases may be delivered through all of said groups in series, and means for delivering hot gases to one end of the lowermost group whereby the hottest gases are applied to the lowermost course and one side course receives more heat than the other.



3. A steam generator, including a shell having a plurality of substantially horizontal flues extending therethrough and including a group at the lower portion of the shell and two groups at a higher level and disposed side by side, means for delivering the heated gases beneath the shell to the rear end of said lower group, means for directing the gases from the opposite end of said lower group to the adjacent end of one of said second mentioned groups, means for directing the gases into the other of said second mentioned groups after they have passed through the first of said second mentioned groups and means for delivering the gases from last of said two groups to the stack.

1,212,890. CONVEYER. FRANK BILLINGS, Cleveland, Ohio. Filed Mar. 19, 1913. Serial No. 755,274. (Cl. 193—4.)



1. In a conveying apparatus, a truck, a turn table swiveled to said truck, a conveyer supported by said turn table, said conveyer comprising a frame pivotally connected at its forward end to the turn table, said frame inclining upwardly from the pivoted end and thence extending substantially horizontally, the horizontally extending part being composed of plurality of telescopic sections, and means for maintaining the free end of the conveyer at a desired elevation, comprising an adjustable fulcrum between the forward portion of the conveyer and said turn table.

2. A conveyer comprising a conveyer frame, and an endless belt carried thereby, the frame being composed of a plurality of telescopic sections, rollers carried by said sections for supporting the belt, the said rollers of one section being mounted for movement vertically so as to be movable out of the path of movement of the next adjacent section when the frame is being collapsed.

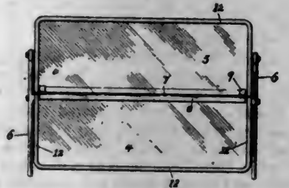
3. Conveying apparatus comprising a collapsible frame including a pair of telescopic sections, a belt supported thereby, the two sections having rollers which support the belt, a support for a roller of one section, said support being movably connected to the said section so that the roller carried by the support may move out of the path of movement of the other section when the frame is collapsed.

4. A conveying apparatus comprising a collapsible frame, a belt carried thereby, said frame comprising a plurality of telescopic sections having belt supporting rollers, movable frames carrying part of said rollers and connected to the sections of the conveyer frame whereby the rollers may be elevated when the conveyer frame is being collapsed.

5. A conveying apparatus comprising a collapsible frame, and a belt carried thereby, said frame comprising a pair of telescopic sections, one section having a roller for supporting a part of the belt, a pivoted frame supporting the roller, said frame having a portion in the path of movement of the other section so that the said roller will be elevated when the frame is collapsed.

[Claim 6 not printed in the Gazette.]

1,212,891. WEATHER-SHIELD FOR MOTOR-CARS. FRANK S. BLIVEN, Baltimore, Md. Filed Oct. 30, 1915. Serial No. 58,751. (Cl. 21—148.)

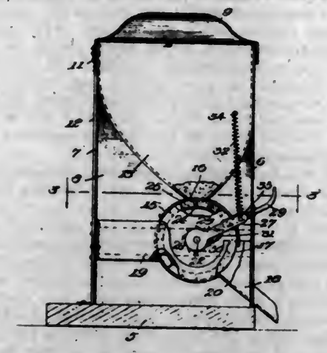


1. In combination in a wind-shield, two glass sections with means for adjusting the sections, the adjacent edges of the glass sections being unframed so that the central portion of the wind-shield is clear and transparent, means for closing the clearance opening between the sections in the form of a transparent strip of flexible material, and means for holding the transparent strip in position in the form of horizontally spaced members extending between adjacent surfaces of the pivoted glass sections.

2. In combination in a wind-shield, two glass sections with means for adjusting the sections to open and close the wind shield, means for closing the clearance opening between the sections in the form of a transparent strip of flexible material, and means for holding the transparent strip in position in the form of horizontally spaced clips to be inserted between the adjacent surfaces of the pivoted glass sections.

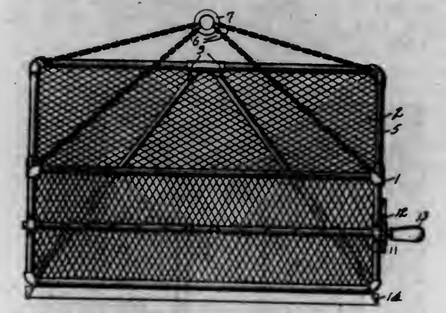
1,212,892. TEA-CANISTER. THOMAS JOHN BOUREK, Helena, Mont. Filed Nov. 12, 1914. Serial No. 871,839. (Cl. 221—107.)

A device of the class described comprising a canister, having slots of different lengths provided in one wall thereof, a container disposed within the canister, a circular casing disposed beneath the container and having an inlet opening communicating with said container, a spout extending from the circular casing through one wall of the circular canister, said circular casing provided with an exit opening communicating with said spout and in spaced relation to said inlet opening, a shaft journaled within the canister and extending centrally and transversely through said circular casing, a feed wheel secured on the shaft within the circular casing and provided with a plurality of pockets along its periphery, a pair of ratchet wheels secured to said shaft on opposite sides of the feed wheel, a lever swiveled upon said shaft adjacent each ratchet wheel, means adapted to lock the levers with the ratchet wheels when the former are moved in one direction and adapted to allow movement of the levers relatively to the ratchet wheels in the opposite direction, means for normally maintaining said levers



in raised position, said levers extending each through one of the slots in the canister, the length of said slots adapted to determine the path of movement of the levers.

1,212,893. HEADER-BARGE. WILLIAM BOYD, ABRAHAM L. DELAPP, and JESSE J. DELAPP, Okmulgee, Okla. Filed Dec. 17, 1915. Serial No. 67,451. (Cl. 21—74.)

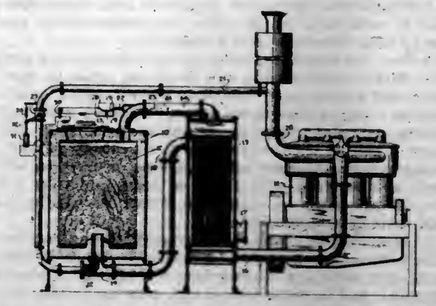


A header barge including a tubular piping frame, said frame comprising a front oblong portion, a rear oblong portion having a relatively greater height than the front portion, metallic tubes interposed between said portions connecting the bottoms thereof at right angles, metallic tubes interposed between the tops of the front and rear portions of the frame whereby an obtuse angle is formed at the front connection and an acute angle formed with relation to the rear portion, a wire mesh covering for the sides and end of said frame, oppositely disposed trap floors, a floor member secured centrally upon the bottom of said frame providing means for hingedly connecting said trap floors, a windlass mounted upon both sides of said frame, and a winding cable interposed between each of said floors and said windlasses for a purpose specified.

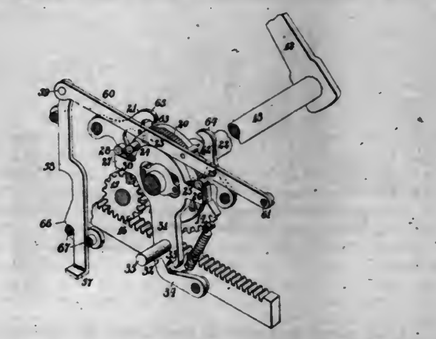
1,212,894. PRODUCER-GAS-ENGINE SYSTEM. CHARLES S. BRADLEY, New York, N. Y. Filed Feb. 3, 1914. Serial No. 816,352. (Cl. 48—76.)

1. Apparatus of the character described, comprising in combination a producer, an engine, means for introducing fresh air into said producer, means for transferring heat from the producer gas to the fresh air and delivering the cooled producer gas to said engine, means for introducing burnt gas from said engine into said producer and automatic means for controlling the proportion of burnt gas to fresh air supplied to said producer.

2. Apparatus of the character described, comprising in combination a producer, an engine, means for introducing fresh air into said producer, means for transferring heat from the producer gas to the fresh air and delivering the cooled producer gas to said engine, means for introducing burnt gas from said engine into said producer and means for controlling the proportion of burnt gas to fresh air supplied to said producer by the temperature of the producer gas.



1,212,895. COMPUTING-MACHINE. FREDERICK A. HART, Jersey City, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed June 28, 1911, Serial No. 635,762. Renewed Jan. 21, 1913. Serial No. 743,421. (Cl. 235—129.)



1. In a machine of the character specified, the combination, with a driving part; of a device for manually operating said driving part; a motor for automatically operating said driving part; a full-stroke device associated with said driving part and effective at the operation of said manual device; controlling means for alternatively connecting or disconnecting said motor with or from said driving part; and means operated automatically, consequent upon the connection of the motor, for rendering said full-stroke device ineffective.

2. In a machine of the character specified, the combination, with a driving part; of a device for manually operating said driving part; a motor for automatically operating said driving part; a full-stroke device associated with said driving part and comprising pawl-and-ratchet mechanism, said full-stroke device effective at the operation of said manual device; controlling means for alternatively connecting or disconnecting said motor with or from said driving part; and means operated consequent upon the connection of the motor, for preventing engagement between the component members of said pawl-and-ratchet device, to render said full-stroke ineffective.

3. In a machine of the character specified, the combination, with a driving part; of a device for manually operating said driving part; a motor for automatically operating said driving part; a full-stroke device associated with said driving part, and effective at the operation of

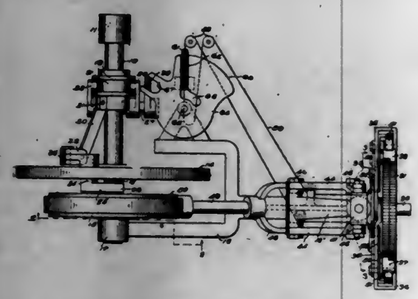
said manual device; gearing driven by said motor and adapted for connection with said driving part, to actuate the same; a frame carrying said gearing movable into and out of position to effect such connection; and means operated by said frame at its connecting movement, for rendering said full-stroke device ineffective.

4. In a machine of the character specified, the combination, with a driving part; of a device for manually operating said driving part comprising a shaft, and a handle therefor; and a full-stroke device associated with said driving part and comprising a ratchet secured to said shaft, a pair of oppositely-facing pawls capable of alternately engaging said ratchet, and a lever mounted on said shaft and provided with a pair of arms to engage and operate said pawls in alternation during the rotation of said shaft by said handle.

5. In a machine of the character specified, the combination, with a driving part; of a device for manually operating said driving part comprising a shaft, and a handle therefor; and a full-stroke device associated with said driving part and comprising a toothed, reciprocating member secured to said shaft, a pair of pawls coöperating with said member, one in each direction of movement thereof, and a controller pivoted on said shaft for operation thereby and acting to operate said pawls in alternation during the operation of said manual device.

[Claims 6 to 11 not printed in the Gazette.]

1,212,896. POWER-TRANSMISSION DEVICE. GLENN C. BROWN, Nashville, Tenn. Filed June 28, 1915. Serial No. 36,699. (Cl. 74—54.)



1. In power transmitting mechanism, the combination of a driving shaft, a driven shaft adapted to be adjusted to any desired angle with respect to the driving shaft, and intermittent grip devices between the driving and driven shafts whereby the driven shaft may be actuated from the driving shaft in either direction irrespective of the angle of adjustment thereof.

2. In power transmitting devices, the combination of driving means adapted to operate continuously in a certain direction, a driven shaft adapted to be adjusted in any desired angle with respect to the driving means, intermittent grip ratchet devices associated with the driven shaft, and actuating means between the driving means and the intermittent grip ratchet devices whereby the driven shaft may be actuated in either direction irrespective of the angle of adjustment thereof.

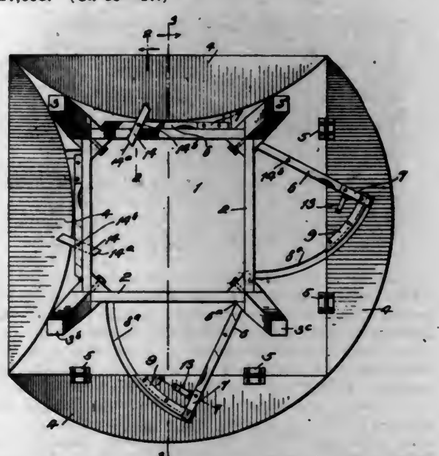
3. In power transmitting mechanism, the combination of a driving shaft having constant rotation in a certain direction, a driven shaft adapted to be disposed at any desired angular relation to the driving shaft, a double ratchet wheel connected to the driven shaft, a pair of pawls coöperating with the opposite sides of the ratchet wheel, a variable eccentric driven by the driving shaft, connections between the eccentric and the pawls serving to cause the pawls to rotate the ratchet wheel in proportion to the eccentricity of the eccentric, means to vary the throw of the eccentric, means to shift the pawls for reversing the direction of rotation of the driven shaft, and means connected to the pawl shifting devices and the eccentric throwing means to prevent the shifting of the pawls while the driven shaft is rotated.

4. In power transmitting mechanism, the combination of driving means, an oscillating bell crank, connections between the driving means and the bell crank to cause the oscillation thereof, a driven shaft, means associated with the driven shaft serving to mount one end thereof to adapt the shaft to be extended in any suitable direction, and pawl and ratchet mechanism between the driven shaft and said bell crank whereby the shaft will be driven in either direction from the bell crank irrespective of the angle of adjustment thereof.

5. In power transmitting mechanism, the combination of a frame having a fork at one end, a knuckle swiveled in said fork adapting it to swing in an arc of a circle therearound, a driven shaft at one end connected to said knuckle, a reciprocatory member movable longitudinally of the knuckle, pawl and ratchet means between the reciprocatory member and the driven shaft adapted to cause the driven shaft to be rotated constantly in a certain direction coincidentally with the reciprocation of said member, driving means, and connections between the driving means and said reciprocatory member serving to cause the member to reciprocate to different distances with a corresponding variation in speed of the driven shaft irrespective of the angle of adjustment of the driven shaft or rate of speed of the driving means.

[Claim 6 not printed in the Gazette.]

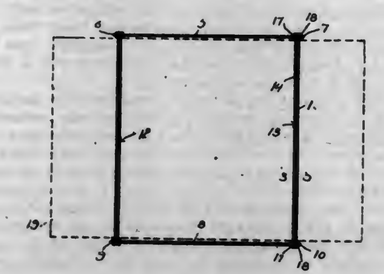
1,212,897. CONVERTIBLE TABLE. HARLOW R. BROWN, Yonkers, N. Y., assignor to Philip Strobel & Sons, Inc., New York, N. Y. Filed Mar. 29, 1915. Serial No. 17,653. (Cl. 45—47.)



1. In a convertible table the combination with a suitable frame, a table top having relatively stationary extensions extending beyond said frame, an extension leaf hinged at the edges of each stationary extension and adapted to fold in a semi-circular path beneath said extension, a leaf-supporting bracket hinged to swing in a horizontal direction only and having its upper edge substantially flush with the under surfaces of the stationary extension and folding leaf when the latter is in extended position, an arc-shaped track in the under surface of the extension leaf and a registering arc-shaped track in the under surface of the stationary extension, and a bearing iron secured to the leaf-supporting bracket and bearing on the upper surface of the track in the under surface of the extension leaf when the same is extended.

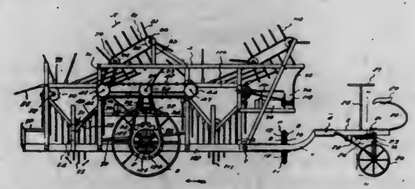
2. In a convertible table the combination with a suitable frame, a table top having relatively stationary extensions extending beyond said frame, an extension leaf hinged at the edges of each stationary extension and adapted to fold in a semi-circular path beneath said extension, a leaf-supporting bracket hinged to swing in a horizontal direction only and having its upper edge substantially flush with the under surface of the stationary extension and folding leaf when the latter is in extended position, an arc-shaped track in the under surface of the extension leaf, a registering arc-shaped track in the under surface of the stationary extension, and a dog pivotally mounted in said leaf-supporting bracket and adapted to engage said leaf when in its folded position.

1,212,898. SIGN-HOLDER. JIMMY BROWN, Jr., Blossburg, Ala. Filed Aug. 27, 1915. Serial No. 47,662. (Cl. 40—125.)



A sign holder comprising a frame composed of a pair of spaced parallel side bars, attaching pins formed integrally with opposite ends of said side bars and extending rearwardly from the device, end bars having their opposite ends looped about the side bars, the loops of the end bars being positioned adjacent the attaching pins, clamp bars adjacent the end bars, angular extensions at the opposite ends of the clamp bars for disposing said clamp bars slightly in advance of the end bars and loops on the extensions surrounding the side bars to hold the clamp bars in position.

1,212,899. COTTON-PICKER. JOSEPH P. BROWN, Frederick, Okla. Filed Aug. 31, 1915. Serial No. 48,340. (Cl. 56—118.)



1. In a cotton picker, the combination of a supporting frame, substantially triangularly shaped tracks carried by said frame and being disposed in a forward pair and a rearward pair, a plurality of auxiliary frames for travel on said tracks, means for causing said auxiliary frames to travel over said tracks, a plurality of cotton picking spindles carried by each of said auxiliary frames, said frames being pivotally supported for permitting said spindles to assume a vertical position when in a cotton picking position, the spindles carried by the frames for travel about said rearward track being disposed staggeredly to the spindles carried by the auxiliary frames for travel on said forward pair of tracks, means for automatically moving said spindles from a vertical position into an angled position with respect to the vertical after movement out of a cotton picking position, means for stripping the cotton from said spindles when in an angled position, and means for rotating said spindles while positioned vertically.

3. In a cotton picker, the combination of a supporting frame, substantially triangularly shaped tracks carried by said frame and being disposed in a forward pair and a rearward pair, a plurality of auxiliary frames for travel on said tracks, means for causing said auxiliary frames to travel over said tracks, a plurality of cotton picking spindles carried by each of said auxiliary frames, said frames being pivotally supported for permitting said spindles to assume a vertical position when in a cotton picking position, the spindles carried by the frames for travel about said rearward track being disposed staggeredly to the spindles carried by the auxiliary frames for travel on said forward pair of tracks, means for automatically moving said spindles from a vertical position into an angled position with respect to the vertical after movement out of a cotton picking position, endless belts carried by said supporting frame, a plurality of spaced stripping fingers carried by said belts and positioned for travel between said picking spindles when the latter are in an angled position for stripping the cotton from said spindles.

4. In a cotton picker, the combination of a supporting frame, substantially triangularlarly shaped tracks carried by said frame and being disposed in a forward pair and a rearward pair, a plurality of auxiliary frames for travel on said tracks, means for causing said auxiliary frames to travel over said tracks, a plurality of cotton picking spindles carried by each of said auxiliary frames, said frames being pivotally supported for permitting said spindles to assume a vertical position when in a cotton picking position, the spindles carried by the frames for travel about said rearward track being disposed staggeredly to the spindles carried by the auxiliary frames for travel on said forward pair of tracks, means for automatically moving said spindles from a vertical position into an angled position with respect to the vertical after movement out of a cotton picking position, endless belts carried by said supporting frame, a plurality of spaced stripping fingers carried by said belts and positioned for travel between said picking spindles when the latter are in an angled position for stripping the cotton from said spindles, troughs carried by said frame for receiving the cotton from said stripping fingers, endless conveyers positioned within said troughs, and cotton sacking means carried by said supporting frame for receiving the cotton from said troughs.

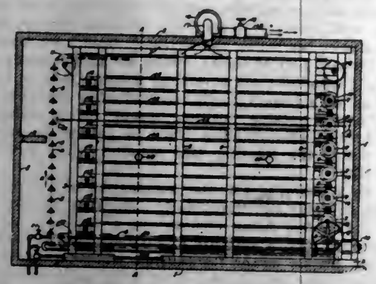
5. In a cotton picker, the combination, of a supporting structure, a plurality of auxiliary frames, a plurality of cotton picking spindles carried by each of said frames, gears mounted upon said spindles, rack bars carried by said supporting structure, gears meshing with said rack bars, means for causing said gears to travel over said rack bars, and beveled gears connecting said spindle-carried gears and said last named gears for rotating said spindles by the travel of said last named gears over said rack bars, said spindle-carried gears meshing for rotating each spindle in a direction oppositely to the rotation of the spindle next thereto.

[Claims 6 to 12 not printed in the Gazette.]

1,212,900. METHOD OF COOLING AND TREATING BREAD. WINFIELD M. CAMPBELL, Kansas City, Mo. Filed Mar. 13, 1916. Serial No. 83,789. (Cl. 107—54.)

1. In the method of cooling and treating bread, the herein described process, which consists of subjecting hot

bread successively to a range of cooling temperatures each in succession being lower in degree throughout the cooling process.



2. In the method of cooling and treating bread, the herein described process, which consists of subjecting hot bread successively to a range of cooling temperatures, each in succession lower in degree throughout the cooling process, which process takes place during a predetermined period of time.

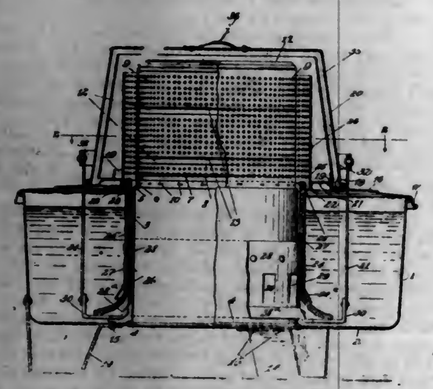
3. In the method of cooling and treating bread, the herein described process, which consists of conveying hot bread through successive atmospheres the temperatures of which are uniformly lower in degree than that of the bread throughout the cooling process.

4. In the method of cooling and treating bread, the herein described process, which consists of subjecting hot bread successively to a range of temperatures each lower in degree than that of the bread whereby the cooling of the bread takes place gradually.

5. In the method of cooling and treating bread, the herein described process, which consists of subjecting the hot bread to a range of cooling temperatures whereby substantially uniform measures of heat are taken from the bread during successive uniform periods of time.

[Claim 6 not printed in the Gazette.]

1,212,901. STOVE. LEE S. CHADWICK, East Cleveland, Ohio, assignor to The Cleveland Foundry Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 23, 1914. Serial No. 852,613. (Cl. 158—88.)



1. In a stove of the character described, the combination of an open-top reservoir, a tube extending vertically through the reservoir and having a perforated cap at the upper end thereof, a perforated commingling tube mounted on the upper end of the first mentioned tube, with the cap projecting into and extending across the bottom of said commingling tube, a cap for the commingling tube, one or more perforated diaphragms between said caps, a removable cover for the reservoir adapted to rest upon the top of the same, and an outer perforated commingling tube carried by and movable with said cover.

2. In a stove of the character described, the combination of an open-top reservoir, a tube extending vertically through the reservoir and having a perforated cap at the upper end thereof, a perforated commingling tube mounted on the upper end of the first mentioned tube, with the cap projecting into and extending across the bottom of said commingling tube, a cap for the commingling tube, a removable cover for the reservoir adapted to rest upon the top of the same, and an outer perforated commingling tube carried by and movable with said cover.

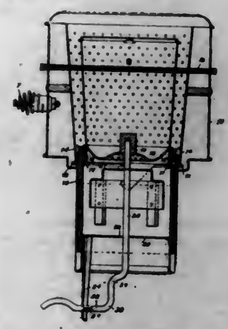
3. In a stove of the character described, the combination of an open top reservoir, a vertical tube extending therethrough, a perforated inner commingling tube extending above the first mentioned tube, a cover which is adapted to rest on top of the reservoir, a perforated outer commingling tube carried by said cover, a tube depending from the cover and forming with the first mentioned tube a wick space, and a wick for said space.

4. In a stove of the character described, the combination of an open top reservoir, a vertical tube extending therethrough, a perforated inner commingling tube extending above the first mentioned tube, a cover which is adapted to rest on top of the reservoir, a perforated outer commingling tube carried by said cover, a tube depending from the cover and forming with the first mentioned tube a wick space, a wick for said space, and means for holding the wick in frictional engagement with one of the wick tubes thereby to maintain the wick in any adjusted position.

5. In a stove of the character described, the combination of a reservoir, a wick tube therewithin, a perforated inner commingling tube above the wick tube, a removable cover for the reservoir, a perforated outer commingling tube carried by said cover, a tube depending from the cover and forming with the first mentioned tube a wick space, a wick between said tubes, and a wick raiser carried by the cover and operatively connected to said wick.

[Claims 6 to 20 not printed in the Gazette.]

1,212,902. LIFTING DEVICE FOR COMBUSTION-TUBES. LEE S. CHADWICK, East Cleveland, Ohio, assignor to The Cleveland Foundry Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 7, 1915. Serial No. 49,405. (Cl. 158—90.)



1. The combination with a burner and combustion tubes, of a lifting rod connected at its upper end with said tubes, said rod having a vertical and lateral tilting movement, and means attached to said burner for supporting said rod in its raised and shifted position.

2. The combination with a burner and combustion tubes, of a lifting rod connected at its upper end with said tubes, a guide for said rod within said burner, said guide being slotted to permit a limited lateral movement of said rod and means attached to said burner for supporting said rod in its raised and shifted position.

3. The combination with a burner and combustion tubes, of a lifting rod connected at its upper end with said tubes, said rod having a vertical and lateral tilting movement, the lower end of said rod being projected outwardly beyond the burner, and means attached to said burner for guiding the vertical and outwardly projected portions of said rod.

4. The combination with a burner and combustion tubes, of a lifting rod connected at its upper end with said tubes, the lower end being projected outwardly below the bottom of the burner and means attached to said burner for guiding the vertical and the outwardly projected portion of said lifting rod, said rod having a vertical and laterally tilting movement, the outwardly projecting portion of said rod and that portion of the guiding means coöperating therewith being shaped to hold said rod in its elevated and tilted position.

5. The combination with a burner and combustion tubes, of a perforated diaphragm attached to the inner combustion tube, a thimble carried by said diaphragm, and a lifting rod extending upwardly through the burner and having its upper end fitted in said thimble, a slotted guide carried by said burner whereby said rod has a vertical and lateral movement and means carried by the burner for locking the lower end of said lifting rod in its raised and shifted position.

[Claims 6 to 9 not printed in the Gazette.]

1,212,903. TOY. PETERSON H. CHERRY, Los Angeles, Cal. Filed Mar. 1, 1916. Serial No. 81,545. (Cl. 167—12.)



1. A burner for aromatic material, comprising a barrel in which the aromatic material may be compacted, a bowl surrounding the upper end of said barrel in such a position as to catch any particles of aromatic material that may fall from said barrel, a plunger in said barrel, and a base in which the lower end of said plunger is secured.

2. A burner for aromatic material, comprising a barrel in which the aromatic material may be compacted, a bowl surrounding the upper end of said barrel in such a position as to catch any particles of aromatic material that may fall from said barrel, a cap surrounding said bowl and provided with an aperture in the top through which smoke rings may be projected, a plunger in said barrel, and a base in which the lower end of said plunger is secured.

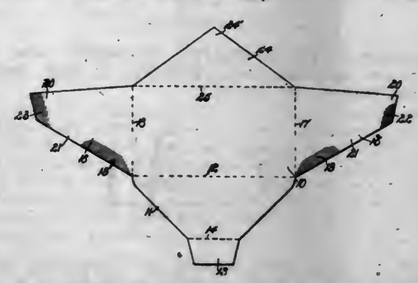
3. A burner for aromatic material, comprising a barrel in which the aromatic material may be compacted, a bowl surrounding the upper end of said barrel in such a position as to catch any particles of aromatic material that may fall from said barrel, a cap surrounding said bowl, a flaring mouthpiece secured in the top of said cap, a plunger in said barrel, and a base in which the lower end of said plunger is secured.

4. A burner for aromatic material, comprising a barrel in which the aromatic material may be compacted, a bowl surrounding the upper end of said barrel in such a position as to catch any particles of aromatic material that may fall from said barrel, friction means for locking said bowl at various positions on said barrel, a plunger in said barrel, and a base in which the lower end of said plunger is secured.

5. A burner for aromatic material, comprising a barrel in which the aromatic material may be compacted, a bowl surrounding the upper end of said barrel in such a position as to catch any particles of aromatic material that may fall from said barrel, friction means for locking said bowl at various positions on said barrel, a plunger in said barrel, a cap surrounding said bowl and provided with an aperture in the top through which smoke rings may be projected, a plunger in said barrel, and a base in which the lower end of said plunger is secured.

[Claims 6 to 10 not printed in the Gazette.]

1,212,904. ENVELOP. CYRIL ASHWORTH CHESTERTON, Somerset, Manitoba, Canada. Filed July 15, 1916. Serial No. 109,500. (Cl. 229—76.)



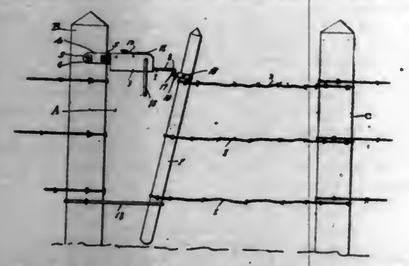
1. The herein described envelop comprising a front panel, a bottom flap foldable against the inner face of the front panel, a sealing tongue carried by the end of the bottom flap and foldable outwardly and downwardly upon the outer face thereof, said sealing tongue being free from the bottom flap except along its folding line connection therewith, end flaps foldable inwardly from the ends of the front panel upon the outer face of the bottom flap and gummed thereto from their folding lines to points substantially midway between said folding lines and the tips of the end flaps, said tips of the end flaps being gummed respectively to the outer surface of the sealing tongue and the outer surface of one of the tips, but being otherwise free from the bottom flap, and a sealing flap foldable rearwardly and downwardly over the end flaps and tongue in position to be secured to the reinforcements provided by the overlapping of the sealing tongue and tip ends of the end flaps.

2. In an envelop, the combination of a front panel, a bottom flap foldable upwardly against the inner face of the front panel and having an extension forming a tongue foldable outwardly and downwardly loosely upon the outer face of the main portion of the bottom flap, end flaps foldable to overlap each other and the loose tongue extension, said end flaps being gummed to each other and to the outer face of the tongue but being free therewith from the bottom flap directly adjacent and surrounding the tongue, a sealing flap foldable rearwardly and downwardly from the upper edge of the front panel and having a point overlapping the tongue and the ends of the end flaps between, and a metal clenching fastener outside of the bottom flap and passing through the tongue, the overlapping ends of the end flaps, and the point of the sealing flap, locking them together.

1,212,905. WIRE-GATE-HOLDING DEVICE. JOSEPH M. CHMELAR, Roy, Mont. Filed Sept. 27, 1916. Serial No. 122,429. (Cl. 70—121.)

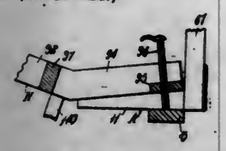
A combined gate closing and holding device consisting of a U-shaped casing adapted to be mounted on a gate post, a gate engaging rod slidably mounted within the casing and provided with teeth, a wheel mounted within the casing and having teeth thereon for engaging the

teeth on the rod so as to effect movement of the rod when the wheel is rotated, a manipulating element for



the wheel, and a pawl located within the casing and engaging the teeth on the wheel.

1,212,906. TRENCH-FILLING MACHINE. JOEL B. CLARK, Bancroft, Iowa. Filed Feb. 6, 1913. Serial No. 746,620. (Cl. 37—24.)



In a trench filling machine, the combination of a wheeled truck, a frame extending longitudinally of the truck and forwardly thereof, said frame being freely supported on the truck for rocking movement, adjusting screws mounted in the frame at the inner end thereof and engaging the truck, scraping devices pivotally supported by the frame at each side thereof, means for raising and lowering the outer end of the frame, and means for operating said scraping devices.

1,212,907. BATTERY-LAMP. WILLIAM R. CLYMER, Cleveland, Ohio, assignor to National Carbon Company, a Corporation of New Jersey. Filed June 5, 1914. Serial No. 843,147. (Cl. 240—8.5.)



1. In an electric flashlight, a tubular member, a lamp reflector, a lens cap adjustable on said tubular member, a lens in said cap and a spring located between the reflector and the lens adapted to press the lens against the cap to allow adjustment of the position of the cap on the tubular member.

2. In an electric flashlight, a battery casing, a cap adjustable thereon, a contact closer secured to but insulated from said cap, a resistance in the cap and means to short circuit the resistance when said cap is adjusted on the casing a predetermined amount.

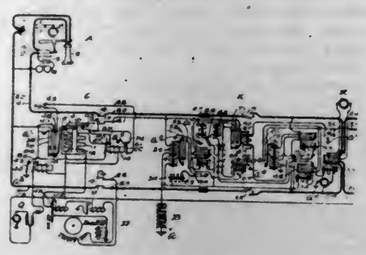
3. In an electric flashlight, a battery casing containing a seal and cap thereon, a contact closer secured to but insulated from said cap, a resistance inside the cap, a spring adapted to contact with a terminal of said battery, a contact member connected to said closer adapted to contact with said terminal when the cap is adjusted on the casing a predetermined amount, and a resistance connected between said spring and said contact member.

4. In an electric flashlight, a battery casing containing a cell, a cap adjustable thereon, an insulating disk inside the cap, a contact closer secured to said insulating disk, a coil spring inside the cap secured to the disk, a second coil spring secured to the contact closer, a coil of resistance wire secured to said disk, and connected to each of said springs.

5. In an electric flashlight, a battery cap having an insulating disk, a contact closer secured to the disk, a coil spring secured to the disk, a second coil spring of less axial length than the first spring secured to said contact closer, and a resistance wire wound on said disk having one end connected to one spring and the other end to the other spring.

[Claims 6 and 7 not printed in the Gazette.]

1,212,908. AUTOMATIC TELEPHONE SYSTEM. JEROME E. COOLEY, Manhattan, Kans., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 23, 1914. Serial No. 813,933. (Cl. 179—18.)



1. In a telephone system, a plurality of subscribers' lines, an automatic connector switch for establishing connection with a called line, said switch provided with operating magnets for moving the switch first to elect a group of lines and for thereafter moving the switch to pick out a line in the elected group, said switch controlled over two sides of a calling line in series, means for extending a connection from a calling line to said connector switch, and means for automatically releasing said last connection upon said connector attempting to establish connection with a called line which is busy.

2. In a telephone system, a plurality of subscribers' lines, an automatic connector switch for establishing connection with a called line, said switch provided with operating magnets for moving the switch first to elect a group of lines and for thereafter moving the switch to pick out a line in the elected group, means for extending a connection from a calling line to said connector switch, said connector switch controlled over two sides of the calling line in series, means for automatically releasing said last connection upon said connector attempting to establish connection with a called line which is busy, and means controlled by the release of said last connection for releasing said connector.

3. In a telephone system, a subscriber's line, a line switch individual thereto, means for operating said switch to extend a connection from said line, a busy signaling machine associated with said switch, and means controlled by the release of said switch for connecting said busy signaling machine with the calling line.

4. In a telephone system, a subscriber's line, a line switch individual thereto, a busy signaling machine associated with said switch, means for operating said switch, means for releasing said switch when an attempt is made to establish connection with a busy line, and means controlled by the release of said switch for connecting said busy signaling machine with the calling line.

5. In a telephone system, a subscriber's line, a line switch individual thereto, a busy signaling machine associated with said switch, means for operating said switch, means for releasing said switch when an attempt is made to establish connection with a busy line, means controlled by the release of said switch for connecting said busy signaling machine with the calling line, and means controlled by the replacing of the receiver on the hook at the calling substation for disconnecting said busy signaling machine from the calling line.

[Claims 6 to 43 not printed in the Gazette.]

1,212,909. FRUIT AND POTATO GATHERER. JAMES WITHERSPOON COOPER, Mayesville, S. C. Filed Nov. 14, 1914. Serial No. 872,223. (Cl. 56—99.)



A device for selecting and lifting fruit from the ground comprising a handle, and a flexible wire loop at one end of said handle arranged in a plane angular to the longitudinal axis of said handle, the ends of said loop being bent parallel to and secured to the handle, said loop being designed to be bent into different shapes to hold and lift fruit of different sizes.

1,212,910. HOG-STY. JAMES M. CORNETT, Kewanee, Ill. Filed Mar. 12, 1914. Serial No. 824,188. (Cl. 119—63.)

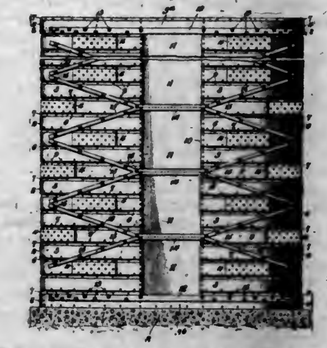


1. In a structure of the class described, spaced supports, a trough arranged between the supports, a barrier mounted between the supports and arranged for movement to position with its lower end lying at either side of the said trough, coöperating means upon the said supports and the said barrier for maintaining the barrier in upright position and permitting upward movement of the barrier in its movement from one position to the other, a shaft mounted upon the barrier and having cranked ends journaled upon the said supports, and means operatively connected with the said shaft for oscillating the same upon its said cranked ends.

2. In a structure of the class described, spaced supports, a trough arranged between the supports, a barrier mounted upon the supports, coacting means upon the barrier and supports for maintaining the barrier in upright position, a shaft mounted upon the barrier and having cranked ends journaled upon the support, an actuating lever, and operative connection between the lever and the said shaft for oscillating the latter whereby to position the barrier at either side of the said trough.

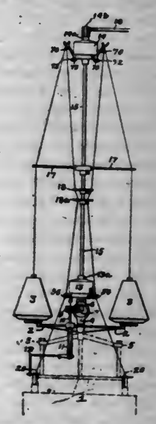
1,212,911. SILO. WILLIAM CRAINE, Brookfield, N. Y. Filed June 1, 1916. Serial No. 101,192. (Cl. 217—4.)

1. In a building having an inner wall embodying a plurality of upright staves arranged edge to edge, an outer covering in the form of separate transversely divided hoops surrounding the staves closely at right angles to the staves and securely fastened thereto, each hoop comprising a plurality of individual strips or segments of single thickness arranged end to end, and metallic fastening plates each of a breadth corresponding to that of a hoop and of a length to overlap and strongly connect the adjacent ends of the hoop segments, said plates being securely fastened to and connecting the ends of the hoop segments together, each hoop having one long edge grooved and the other in the form of a tongue with the tongue edges of the hoops seated in the grooves of the neighboring hoops, and each plate being longitudinally bent to fit the tongue edge of the hoop and enter the groove of the next hoop in order.



2. In a building having an inner wall of upright staves with their upright edges in contact and having an upright door opening, an outer covering of separate wooden hoops of single thickness with their long edges in contact, each hoop comprising a plurality of segments and connecting plates joining the segments with the hoops stopping at the door opening and said hoops and their connecting plates being securely fastened to the staves, and metallic strips extending across the door opening and beyond said door opening having their terminal portions longitudinally divided and divergent, the divergence of the terminal portions of the strips beginning closely adjacent to the door opening, and said divergent terminal portions spanning a plurality of hoops and longer than the combined width of a plurality of staves, and fastening devices extending through the strips on opposite sides of the door opening and through the hoops and staves.

1,212,912. STOP-MOTION FOR KNITTING-MACHINES. FRANK CRAWFORD, Sr., New Brunswick, N. J., assignor to The Crawford Manufacturing Company, New Brunswick, N. J., a Corporation of New Jersey. Filed Nov. 27, 1915. Serial No. 63,796. (Cl. 66—7.)



1. The combination in a stop motion for knitting machines, of a single spring-actuated mechanism; controlling means for stopping the machine; a single trip mechanism for holding the spring in tension; two stop motions, one arranged above the other, the upper stop motion having a rotating device mounted on a shaft having an arm at its lower end arranged to come in contact with the trip

mechanism; a series of stop motion levers arranged to release the rotating device when extra tension is applied to a thread of a series, the other stop motion having a rotating device and having a pin arranged to actuate the trip mechanism when the device is rotated; and a series of arms arranged to release the rotating device when a thread breaks so that the machine will be stopped when a thread is under excessive tension or when it is broken.

2. The combination in a stop motion for knitting machines, of a spring-controlled trip mechanism; controlling means for stopping the machine actuated by said trip mechanism; a single means for holding the spring in tension; two stop motions, one located above the other, each stop motion having a rotatable disk; a pin arranged off center carried by the lower disk and arranged to engage the trip mechanism; a shaft carrying an upper disk and having a pin also arranged off center to engage the trip mechanism; an arm over which the thread passes and arranged to hold the upper disk; a trip lever for holding the lower disk; means for independently turning one disk when a thread breaks or a loose end occurs; and means for turning the other disk when a thread is under excessive tension, whereby the disks are free to rotate causing their pins to actuate the trip mechanism.

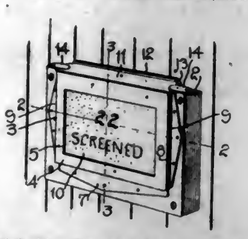
3. The combination in a stop motion for knitting machines, of a casing supported by the machine; a single trip mechanism in the casing; a lever held in position by the thread leading from the bobbins to the knitting machine; a standard projecting from the casing; a second casing supported by the standard; lever mechanism on the second casing over which the thread passes; a rotatable shaft extending through the standard and connected to the upper lever mechanism, each mechanism having an arm for independently actuating the trip mechanism when a thread breaks or excessive tension is applied to the thread.

4. The combination in a stop motion, of two casings; a hollow standard connecting the two casings; a shaft in the lower casing; an arm on the shaft; means connecting said arm with the shifting mechanism of the machine to which the stop motion is applied; a notched lever pivotally mounted on the upper casing over which the thread is passed; a spring-controlled shaft having an arm arranged to hold the lever in its raised position; a second arm on said shaft arranged to engage a disk; a shaft extending through the standard to which the disk is attached; a trip arm on the lower end of said shaft; trip mechanism in the lower casing arranged to be actuated by said arm when a thread is under excessive tension; a pivoted arm mounted on the lower casing and having a hook; thread guides between which the hook extends so that the thread will pass over the guides and under the hook; a spring-controlled shaft held in tension by said lever; an arm at the upper end of said shaft; a trip plate arranged to be actuated by said arm and having a trip pin, also engaging the trip mechanism so that, when a thread is under excessive tension, the upper device will actuate the trip mechanism and when a thread breaks, or a loose end appears, the lower device will actuate the trip mechanism.

5. The combination in a stop motion for knitting machines, of a casing mounted above the knitting machine; a shaft mounted in the casing; a disk carried by the shaft and located within the casing; a vertical shaft also located in the casing and having an arm arranged to engage the disk and having a second arm extending on the outside of the casing; a lever pivoted to the casing and arranged to receive a thread, said lever engaging the arm of the shaft on the outside of the casing; a second casing; trip mechanism therein consisting of a trip lever; a compound lever held by the said trip lever; a shaft controlled by the compound lever; a spring connected to the shaft and held under tension by the compound lever; controlling means for stopping the machine coupled to the shaft, the first mentioned shaft having an arm arranged to engage the trip lever so that when the other lever is drawn down it will release the mechanism and will stop the rotation of the machine.

[Claims 6 to 12 not printed in the Gazette.]

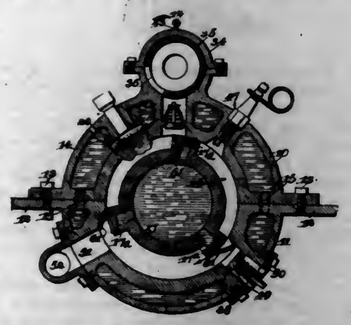
1,212,913. LABEL-HOLDER FOR RAILWAY-CARS. WILLIAM CURRY, Port Morien, Nova Scotia, Canada. Filed Oct. 16, 1915. Serial No. 56,248. (Cl. 40—17.)



1. A label holder for car labels comprising a label casing having a display opening upon its face and being open at its upper end, a base plate upon which the casing is mounted, the casing having its upper edge adjacent the upper edge of the base plate, a pintle having its ends downwardly bent and forced into the upper edge of the base plate, and a lid for the casing having a bead inclosing said pintle.

2. A label holder for car labels comprising a base plate, a casing composed of a sheet of metal having a display opening, the sheet being bent at each end to provide reentrant guide portions disposed relatively close to the face of the sheet and on each side of said openings the margin of the sheet being again rebent outward to form attaching flanges attached to said base plate, the lower end of the sheet being bent to form a bottom for the space in which the card is disposed and also an attaching flange, and a cover for the top of the casing.

1,212,914. EXPLOSION-ENGINE. MARK S. DARLING, Conrad, Mont. Filed June 3, 1916. Serial No. 101,566. (Cl. 60—37.)



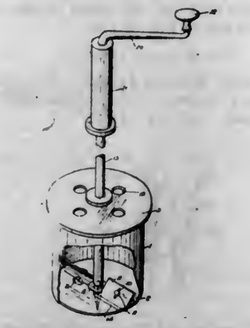
1. In an engine, a stator, a gas receiving tank connected therewith, a rotor mounted in said stator and forming therewith a plurality of explosion chambers, said stator having gas outlet ports connecting said chambers with the interior of said tank, and normally closed valves for controlling the passage of gas through said ports and opened by the force of the explosion in said chamber.

2. In an engine, a sectional stator, a tank forming a portion of the sections of the stator for receiving burned gases, a rotor mounted in said stator and forming therewith a plurality of explosion chambers and sections, and a gas outlet valve for connecting each of the explosion chambers and sections with the interior of said tank.

3. In an engine, a sectional stator, a tank forming a portion of the sections of the stator for receiving burned gases, a rotor mounted in said stator and forming therewith a plurality of explosion chambers and sections, a gas outlet valve for connecting each of the explosion chambers with the interior of said tank, and a rotary valve also mounted in said stator for controlling the supply of mixture to the explosion chamber.

4. In an engine, a stator, a rotor mounted in said stator and having partitions forming explosion sections, a packing element interposed between said stator and each of said partitions for preventing the explosive mixture from passing from one section to another, said packing element comprising a split ring having a groove on one face and a tongue on the other adapted for engaging similarly formed tongues and grooves in the stator and partitions.

1,212,915. ICE-SHAVING DEVICE. WILLIAM R. DAUGHTRY, Birmingham, Ala. Filed Sept. 2, 1915. Serial No. 48,622. (Cl. 83—62.)



1. In a device of the character described, a cylindrical receptacle adapted to be placed upon the ice and rotated, the bottom of the receptacle having shaving means for cutting and directing the cut ice into the receptacle upon the rotation thereof, a detachable top and a crank device comprising a shaft made fast to the top and extending centrally through the receptacle and below the bottom thereof, a drill point on the lower end of said shaft, a positive driving and thrust connection between the shaft and the receptacle, a crank at the extreme end of said shaft, and a thrust spool mounted to turn on the shaft adjacent to its crank, said top being adapted to center the shaft in the receptacle.

2. In a device of the character described, a rotary cylindrical receptacle adapted to be placed upon the ice and rotated, and having its bottom provided with cutting devices adapted to shave the ice upon the rotation of the receptacle, there being openings in the bottom of the receptacle opposite the cutting devices to permit the shaved ice to enter the receptacle, a detachable cover which engages the top of the receptacle and has a centering flange which fits snugly in the upper end of the receptacle, and a crank means detachably connected to the receptacle for rotating the same, said means comprising an elongated shaft having a crank at its upper end, a thrust collar adjacent to the crank and having at its lower end a drill point, said shaft being adapted to project centrally through the receptacle with its drill point projecting below the bottom of the receptacle and its intermediate portion made fast to and centered by the receptacle top, and a driving and thrust connection between the shaft and the receptacle bottom, substantially as described.

1,212,916. LEAF-SPRING. WILLIAM F. DELEHANTY, Boston, Mass. Filed Feb. 12, 1916. Serial No. 77,942. (Cl. 267—33.)

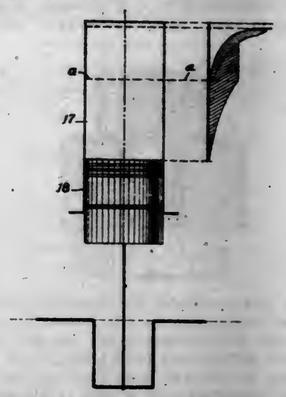


1. A spring comprising a series of superposed leaves, all having terminal eyes and all save the upper one having lateral lugs, blocks separating the springs at the middle, and links applied pivotally to the said lugs and eyes, and thus connecting the end portions of the leaves, but holding them separated as described.

2. A spring comprising a series of superposed leaves, the upper two having their ends formed as upturned eyes, all the leaves except the upper one having lateral lugs, and links applied to said eyes and lugs, and thus pivotally connecting the end portions of the springs and holding them spaced apart, as described.

3. A spring comprising a series of superposed leaves of different lengths, and links pivotally connected to the ends of each of the shorter leaves and also pivotally connected to a longer leaf, said links being of such a length as to hold the ends of the leaves spaced from each other while permitting the leaves to freely flex as load is applied.

1,212,917. METHOD OF INCREASING THE EFFICIENCY OF INTERNAL-COMBUSTION MOTORS. KNUD DE LONY, Bridgeport, Conn., assignor to Johannes Schiott, Greens Farms, Conn. Filed Oct. 29, 1915. Serial No. 58,616. (Cl. 123—26.)



1. The method of increasing the efficiency of an internal-combustion motor in which the combustion begins when the volume is predetermined and the pre-compression at a maximum, which consists in introducing air under pressure into the working space of the cylinder after the combustion is completed, thereby maintaining the pressure substantially constant during such introduction of air, and thereafter, in order to accomplish further work, expanding the gases adiabatically.

2. The herein-described process of operating internal-combustion engines, which consists in compressing the charge, then igniting the charge while under its maximum compression, introducing relatively cool air under pressure into the working space of the cylinder after completion of combustion and during the working stroke of the piston, whereby the pressure within the cylinder will not be decreased during the introduction of such air while at the same time the cylinder contents will be cooled, and thereafter expanding the gases adiabatically to atmospheric pressure, or thereabout, for the performance of additional work.

3. The herein-described process of operating internal combustion engines wherein pre-compression is effected by the working piston to a predetermined volume and maximum degree, which consists in igniting the fuel within said volume, introducing relatively cool air under compression into the working space of the cylinder after combustion is completed, and thereby maintaining the pressure substantially constant within the cylinder during the introduction of such air, and finally adiabatically expanding the cylinder contents to atmospheric pressure, or thereabout, in the performance of other work, thereby increasing the expansion ratio and the efficiency of the motor.

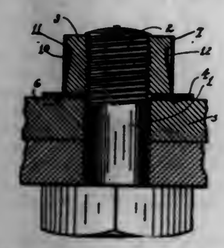
4. The herein-described process of operating internal combustion engines of the Otto or Diesel type, which con-

sists in introducing highly compressed, relatively cool air into the working space of the cylinder after the charge is combusted and thereby maintaining the working pressure within the cylinder during the introduction of such air, and thereafter adiabatically expanding the cylinder contents to atmospheric pressure, or thereabout, in the performance of other work, thereby increasing the expansion ratio and the efficiency of the motor.

5. The herein-described process of operating internal combustion engines working on the Diesel or Otto cycle, which consists, after combustion of the fuel is completed, in maintaining the pressure substantially constant for a predetermined time and also in increasing the expansion ratio, by introducing relatively cool compressed air into the working space of the cylinder for so long a time as pressure is to be maintained, and thereafter adiabatically expanding the cylinder contents to atmospheric pressure, or thereabout, in the performance of further work.

[Claims 6 to 8 not printed in the Gazette.]

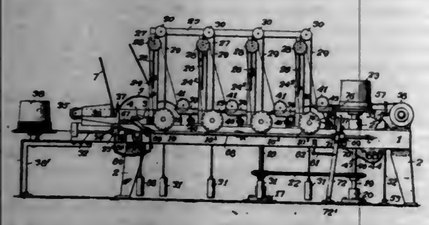
1,212,918. NUT-LOCK. GEORGE DOBBINS, Stockton, Cal., assignor of one-fourth to J. B. Freeman, Stockton, Cal. Filed June 19, 1916. Serial No. 104,432. (Cl. 151—55.)



1. A nut lock comprising the combination with a bolt, of a washer fixed stationary with respect to the bolt and being provided with orifices, a nut mounted on the bolt and provided with recesses in its sides, a band fitted over the nut, lugs on the band projecting into the orifices in the washer, and spring clips carried by the band and engageable with the recesses in the nut to hold the band so that the lugs cannot be withdrawn from the orifices.

2. A nut lock comprising the combination with a bolt, of a washer fixed stationary with respect to the bolt, a nut mounted on the bolt and provided with recesses in its sides, a band fitted over the nut and fixed stationary with respect to the washer, and spring clips carried by the band and engageable with the recesses in the nut, such spring clips being provided with orifices.

1,212,919. CONTINUOUS-WIRE-DRAWING MACHINERY. JAMES P. DOOLEY, Worcester, Mass., assignor to Wright Wire Company, Worcester, Mass., a Corporation of Massachusetts. Filed Dec. 26, 1913. Serial No. 808,691. (Cl. 205—14.)



1. In a continuous wire drawing machine, a series of positively rotated drawing drums, a series of drawing dies one less in number than said drums, and arranged in alternating relation thereto, a movable tension device for the wire, arranged between each die of the series and the preceding drum, means, responsive to tension on the wire while being drawn onto the first drum of the series, for stopping the operation of the machine, and means actuated by the breakage of the wire between the last drawing drum and the last die of the series for stopping the operation of the machine.

2. In a continuous wire drawing machine, the combination with a series of drawing dies and a series of positively rotating drawing drums, alternating with said drawing dies, of a movable tension device interposed between each drum and die, a reel from which the wire is fed to the first drawing die and drum of the series, means responsive to tension on the wire between said reel and said die and drum for stopping the operation of the machine, and means responsive to breakage of the wire between the last die and the last drum of the series for stopping the operation of the machine.

1,212,920. SAFETY WATCH-GUARD. WILLIAM EGBERT DOOLITTLE, New Britain, Conn. Filed Apr. 1, 1916. Serial No. 88,316. (Cl. 24—3.)



1. In a safety watch guard, the combination of an S-shaped member forming two hooks, one of which is adapted to receive the ring of the watch while the other is adapted to embrace the edge of a pocket, a lever mounted adjacent to the upper end of this last mentioned hook, said lever having at its lower end an outwardly turned retaining point, a second lever pivotally connected to the lower outer end of said last mentioned hook, and extending, when in upward position, into proximity to the upper end of said first mentioned lever.

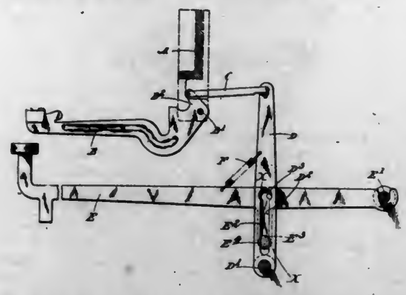
2. In a safety watch guard, the combination of an S-shaped member forming two hooks, one of which is adapted to receive the ring of the watch while the other is adapted to embrace the edge of a pocket, a lever mounted adjacent to the upper end of this last mentioned hook, said lever having at its lower end an outwardly turned retaining point, a detent movable relatively to said lever and adapted to close the ring-containing hook.

3. In a safety watch guard, the combination of an S-shaped member forming two hooks, one of which is adapted to receive the ring of the watch while the other is adapted to embrace the edge of a pocket, a lever mounted adjacent to the upper end of this last mentioned hook, said lever having at its lower end an outwardly turned retaining point, a detent mounted so as to be movable relatively to said lever and adapted to close the ring-containing hook, and a spring housed within said detent and acting to move said detent and point in opposite directions.

4. In a safety watch guard, the combination of an S-shaped member forming two hooks, one of which is adapted to receive the ring of the watch while the other is adapted to embrace the edge of a pocket, a lever mounted adjacent to the upper end of this last mentioned hook, said lever having at its lower end an outwardly turned retaining point, a detent adapted to close the ring-containing hook, a spring housed within said detent and acting to move said detent and point in opposite directions, said detent and lever being mounted so as to be movable about a common axis.

5. In a safety watch guard, the combination of an S-shaped member forming two hooks, one of which is adapted to receive the ring of the watch while the other is adapted to embrace the edge of a pocket, a lever mounted adjacent to the upper end of this last mentioned hook, said lever having at its lower end an outwardly turned retaining point, a detent adapted to close the ring-containing hook, a spring housed within said detent, and acting to move said detent and point in opposite directions, said detent and first mentioned lever being mounted so as to be movable about a common axis, the bearing of said parts being furnished by projections upon said lever extending through the walls of said detent and said S-shaped member having recesses engaged by said projections.

1,212,921. TYPE-BAR ACTION. HERBERT ETHERIDGE, London, England, assignor to The Bar-Lock Typewriter Company Limited, London, England. Filed Mar. 22, 1916. Serial No. 85,806. (Cl. 197—28.)



1. In type-bar mechanism for a typewriter, the combination of, a type-bar, a pivoted sub-lever operatively connected therewith, a key-lever situated approximately at right-angles to the sub-lever and having a tongue which lies approximately parallel with the sub-lever, a projection secured to the tongue and having sliding engaged with a driving-face on the sub-lever, the arrangement of the parts being such that the said projection travels in a path which is toward the point of pivoting of the sub-lever but inclined also to one side of the same in the direction in which the sub-lever is to be moved whereby the sub-lever is swung about its pivot with an accelerated movement which may be made to continue throughout the whole of the stroke and the tongue allows the projection to be situated at different points along its length, substantially as and for the purpose set forth.

2. In type-bar mechanism for a typewriter, the combination of, a type-bar, a pivoted sub-lever in the form of a plain arm so that it can be shortened as required, said sub-lever being operatively connected with the type-bar and having a slot radial to its pivot, a key-lever situated approximately at right-angles to the sub-lever and having a tongue which lies approximately parallel with and at the side of the sub-lever, a projection secured to the tongue and engaging the slot in the sub-lever, the arrangement of the parts being such that the said projection travels in a path which is toward the point of pivoting of the sub-lever but inclines also to one side of the same in the direction in which the sub-lever is to be moved whereby the sub-lever is swung about its pivot with an accelerated movement which may be made to continue throughout the whole of the stroke and the tongue allows the projection to be situated at different points along its length, substantially as and for the purpose set forth.

1,212,922. RAILROAD CROSS-TIE. EDWARD EVERETT, Pittsburgh, Pa. Filed July 13, 1916. Serial No. 109,028. (Cl. 238—5.)



1. A railway cross-tie having a one piece body, having substantially co-extensive upper and lower bearing portions, the end portions of which are partially severed, the remaining end portions being bent at right angles to the longitudinal axis of the body and adapted to contact with said body.

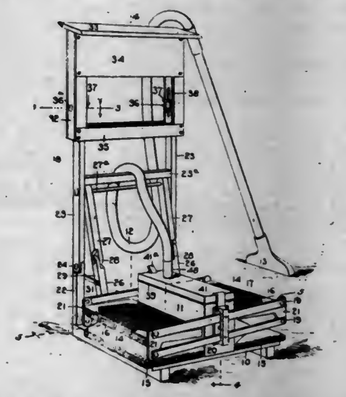
2. A railway cross-tie comprising a one piece body having substantially co-extensive upper and lower bearing portions, the end portions thereof being partially severed, the unsevered portion being bent at right angles to the longitudinal axis of the body, and rail clamps arranged upon the upper face of said body, said clamps openings in the same direction.

3. A metallic cross tie comprising parallel flanges and a connecting web, said flanges projecting at opposite ends beyond said web and bent at right angles in reverse directions thereby providing a flat surface at each end of the tie.

4. A metallic cross-tie I shape in cross section, the head projecting at one end and the base projecting at the opposite end, said projecting ends being bent at right angles in opposite directions.

5. A railway cross-tie comprising a one piece body having substantially coextensive upper and lower bearing portions, the end portions thereof being partially severed, the unsevered portions being bent at right angles to the longitudinal axis of the body, and rail clamps upon the upper face of said tie, said clamps opening in the same direction, one of said clamps being arranged adjacent one end of the body, and the other clamp arranged some distance from the opposite end of said tie.

1,212,923. PUMPING MECHANISM FOR VACUUM-CLEANERS. ANDREW J. FAUCHER, Wichita, Kans. Filed Dec. 31, 1915. Serial No. 69,663. (Cl. 230—2.)



1. A vacuum cleaner including a base, pneumatics at the sides of the base, an intake chamber between the pneumatics and rising above the same, levers connecting the pneumatics, said levers being fulcrumed at the front and back of the intake chamber and disposed below the top of the latter, and a foldable seat structure on the base adapted to be raised to an erect position so that the feet of an operator may rest on the bellows and operate the same, the intake chamber being adapted to support the seat structure in the lowered position.

2. A vacuum cleaner including a base, pneumatics at the sides of the base adapted to be operated by the feet of an operator, an intake chamber located between the pneumatics and rising above the same, and a folding seat structure adapted to be lowered, when not in use, to a position resting on top of the intake chamber and adapted to be raised to an erect position for the operator to rest on the seat whereby the feet of the operator may be placed on the pneumatics to operate the same.

3. A vacuum cleaner, including a base, an intake chamber on the base, foot-operated pneumatics on the base below the intake chamber, and a folding seat structure to seat an operator for the operation of the pneumatics by the feet of the operator, said seat structure having a vertically adjustable upper portion and being foldable downward to bring the lower adjustable portion of the seat structure to rest on the intake chamber.

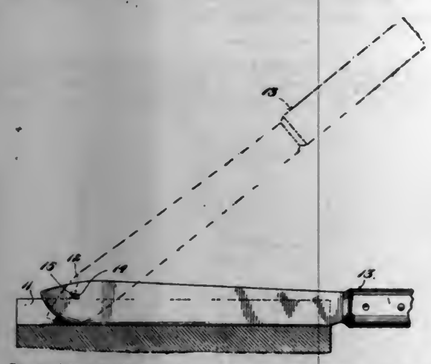
4. A vacuum cleaner including a base, foot-operated pneumatics, and a seat structure on the base, the said

seat structure being foldable to a lowered position over the pneumatics or to an erect position to seat an operator and permit the operation of the pneumatics by the feet of the operator.

5. A vacuum cleaner including a base, pneumatics on the base, adapted to be operated by the feet of an operator, and a seat structure foldable to a lowered position above the pneumatics or to an erect position to dispose the feet of the operator for operating the pneumatics, said seat structure comprising standard sections in fixed relation to the base, upper standard sections pivoted to the fixed sections and carrying the seat, and braces composed of upper and lower sections pivoted to each other, the lower sections being pivoted at their lower ends to the base and the upper sections being pivoted at their upper ends to the pivoted standard sections.

[Claim 6 not printed in the Gazette.]

1,212,924. BACON-SLICER. ELBA C. FIREBAUGH, Kouts, Ind. Filed Apr. 27, 1916. Serial No. 93,994. (Cl. 17—24.)



In a bacon slicer, the combination with a block of wood having an elongated kerf in its upper face and extending throughout its entire length, of staples engaged in the upper face of the block on opposite sides of the kerf and alined at right angles to the kerf, a pivot pin removably inserted through the staples across the kerf, and resting on the face of the block, and a knife having an aperture near the point of the blade mounted in and extending beyond one end of the kerf, said pivot pin being removably inserted through the blade aperture whereby the knife may be swung on the pivot pin from and to the bottom of the kerf substantially as and for the purpose set forth.

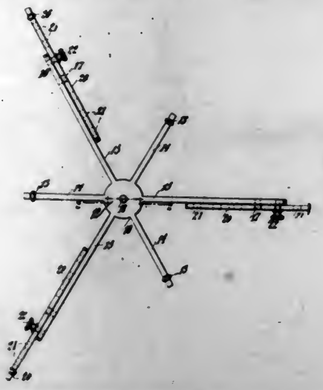
1,212,925. AIR-PROOF COMPOSITION. WALTER O. FLECKNER, Cloverdale, Cal. Filed May 18, 1916. Serial No. 98,412. (Cl. 106—8.)

1. The hereindescribed process of producing a plastic composition for forming an air and liquid tight joint or connection which consists in cooking together resin and tallow until the ingredients are well melted, allowing the mixture to cool and then beating the mixture until it assumes a white color.

2. The herein described process of producing a plastic composition for forming an air and liquid tight joint or connection which consists in cooking together resin and tallow until the ingredients are well melted, allowing the mixture to cool and then beating the mixture until it assumes a white color, and adding a few drops of oil of anise.

1,212,926. ADJUSTABLE REVOLVING-CARRIER SUPPORT. OSCAR FLEICH, Brooklyn, N. Y. Filed July 13, 1915. Serial No. 39,638. (Cl. 45—26.)

1. A carrier comprising a hub, a plurality of arms extending radially therefrom, a roller mounted adjacent the end of each alternate arm and extending appreciably above its upper surface, a pin extending from each intermediate arm, an extension bar for each intermediate arm, and having an aperture to receive the pin of the corresponding intermediate arm, means associated with each pin for securing an extension bar to the corresponding intermediate arm, a roller mounted adjacent the free end of each extension bar, and extending appreciably above the surface thereof, and a plate resting upon said rollers and revoluble about the said hub.



2. A carrier comprising a hub, a plurality of arms extending radially therefrom, a roller mounted adjacent the free end of each alternate arm and extending appreciably above its upper surface, pins in spaced positions extending from each intermediate arm adjacent the end thereof, an extension bar for each intermediate arm, each extension bar being provided with spaced holes to receive the pins on the corresponding intermediafe arm, means for securing each extension bar in any one of a number of positions to its intermediate arm, a roller mounted in the end of each extension bar and extending appreciably above its upper surface, and a revoluble plate resting upon the said rollers.

3. A carrier comprising a hub, a plurality of arms extending radially therefrom, a roller mounted adjacent the free end of each alternate arm and extending appreciably above its upper surface, pins in spaced positions extending from the said intermediate arms adjacent the ends thereof, an extension bar for each intermediate arm, each extension bar being provided with spaced holes to receive the pins on the corresponding intermediate arm, means for securing each extension bar in any one of a number of positions to its intermediate arm, a roller mounted in the end of each extension bar and extending appreciably above its upper surface, a plate resting upon the said roller, and means for centering said plate on the said hub.

4. A carrier comprising a hub, a plurality of short arms extending radially therefrom, a roller mounted adjacent the end of each short arm and extending appreciably above its upper surface, a plurality of long arms extending radially from the said hub and intermediate of the said short arms, spaced pins projecting from the said long arms adjacent the ends thereof, an extension bar for each long arm, each extension bar being provided with a series of holes adapted to receive the pins on the corresponding long arm, means coacting with one of the said pins for securing each extension bar in any one of a number of positions to its long arm, a roller mounted adjacent the free end of each extension bar and extending appreciably above the upper surface thereof, and a plate resting upon the said rollers.

5. A carrier comprising a hub, short arms projecting therefrom, a roller mounted adjacent the end of each short arm, long arms also projecting from the said hub and intermediate of the short arms, laterally projecting pins on each long arm, an extension bar for each long arm, each extension bar being provided with a series of holes adapted to receive the pins on the corresponding long arm, a nut for securing each extension bar to its long arm by engaging with one of the said pins thereon, a roller mounted adjacent the free end of each extension bar, and a plate resting upon said rollers.

[Claim 6 not printed in the Gazette.]

1,212,927. VACCINATING DEVICE. THOMAS ARTHUR FLOOD, Salt Lake City, Utah. Filed Aug. 16, 1916. Serial No. 115,179. (Cl. 128—28.)



1. A device of the class described, comprising a casing formed of separable members one of which is provided with an orifice, means in said casing and projected through said orifice for scarifying a surface, means for applying virus to the scarified surface, and means for actuating said scarifying and applying means.

2. A device of the class described, comprising a casing formed of separable members one of which is provided with an orifice, means in said casing and projected through said orifice for scarifying a surface, and means for actuating said scarifying means in predetermined degree in each of two directions.

3. A device of the class described, comprising a casing formed of separable members one of which is provided with an orifice, means in said casing and projected through said orifice for scarifying a surface, and a cord in operative connection with said scarifying means for actuating the same.

4. A device of the class described, comprising a casing formed of separable members one of which is provided with an orifice, means in said casing and projected through said orifice for scarifying a surface, a shaft connected with said scarifying means, and a cord wound on said shaft for rotating the same to actuate said scarifying means.

5. A device of the class described, comprising a casing formed of separable members, one of which is provided with an orifice, a shaft rotatable in said casing, a toothed disk carried by said shaft and projected through said orifice to scarify a surface, and means for rotating said shaft to actuate said disk.

[Claims 6 to 9 not printed in the Gazette.]

1,212,928. PROCESS OF MANUFACTURING DIPHENYLAMIN. BERNHARD JACQUES FLURSCHEIM, New York, N. Y. Filed June 24, 1916. Serial No. 105,588. (Cl. 23—24.)

1. The process of manufacturing diphenylamin comprising the heating of anilin in the presence of ferric chlorid.

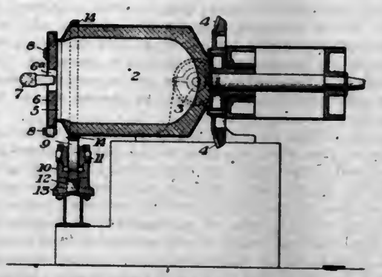
2. The process of manufacturing diphenylamin comprising the heating of anilin in the presence of ferric chlorid and a catalyst.

3. The process of manufacturing diphenylamin comprising the heating of anilin in the presence of ferric chlorid and finely divided copper.

4. The process of manufacturing diphenylamin comprising the heating of anilin in the presence of ferric chlorid, finely divided copper and iodin.

1,212,929. PUDDLING-FURNACE. EDWARD L. FORD, Youngstown, Ohio. Filed Sept. 22, 1915. Serial No. 51,999. (Cl. 266—34.)

1. A puddling furnace having one end permanently closed and the other end provided with a large opening, said furnace being carried by supports which permit it to rotate and tip respectively on different axes, an annular cover detachably secured to the said open end and rotating with said furnace, said cover acting to decrease the opening of said end during the puddling operation, but which can be removed to permit of the removal of the finished puddle ball, and a fuel pipe arranged to discharge fuel through the opening of said cover into the furnace, the opening being arranged to allow the products of combustion to escape therethrough, substantially as described.



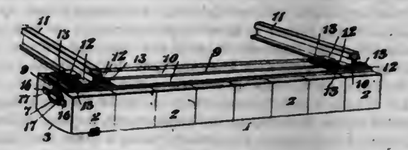
2. A puddling furnace having one end permanently closed and the other end provided with a large opening, said furnace being carried by supports which permit it to rotate and tip respectively on different axes, an annular cover detachably secured to the said open end and rotating with said furnace, said cover acting to decrease the opening of said end during the puddling operation, but which can be removed to permit of the removal of the finished puddle ball, and a pipe projecting into the opening of said cover and arranged to discharge fuel into the furnace, the opening being arranged to allow the products of combustion to escape therethrough, substantially as described.

3. A rotary tipping puddling furnace, carried by supports which permit it to rotate and tip respectively on different axes, said furnace having one end closed and the other end provided with a fuel inlet, an outlet for the products of combustion, and a single supporting structure arranged underneath the free end of the furnace, said support being rotatable in a horizontal plane and having a plurality of supporting rollers, substantially as described.

4. A rotary tipping puddling furnace carried by supports which permit it to rotate and tip respectively on different axes, said furnace having one end closed and the other end provided with a fuel inlet, an outlet for the products of comoustion, and a single supporting structure arranged underneath the free end of the furnace, said support being arranged to tilt in one plane and rotate in another plane and having a plurality of supporting rollers, substantially as described.

5. A rotary tipping puddling furnace carried by supports which permit it to rotate and tip respectively on different axes, said furnace having one end closed and the other end provided with a fuel inlet, an outlet for the products of combustion, and a single supporting structure arranged underneath the free end of the furnace, said support being arranged to tilt in a vertical plane and having a plurality of supporting rollers, substantially as described.

1,212,930. RAILWAY-TIE. ARTHUR FOUNTAIN, Pawhuska, Okla. Filed Sept. 2, 1916. Serial No. 118,190. (Cl. 238—3.)



1. A railway tie comprising a metal core piece with a suppporting portion for rails, and a body member com-

posed of a plurality of blocks strung upon and held together by the core piece.

2. A railway tie comprising a metal core piece with a supporting portion for rails, and a body member composed of a plurality of blocks strung upon and held together by the core piece, the blocks having those faces constituting the lower face of the tie convexly rounded.

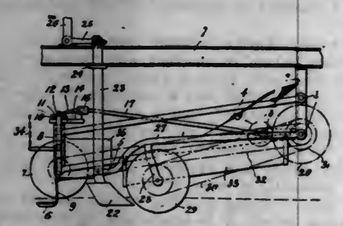
3. A railway tie comprising a series of alined blocks with alined passages therethrough opening at the tops of the blocks, and a tubular core piece extending lengthwise of the blocks and provided with means at the ends for holding the blocks together on the core piece and said core piece having rail supporting means at the top of the tie.

4. A railway tie consisting of a series of blocks of concrete or like material, each with a passage therethrough near what constitutes its upper face and opening to the exterior of the block through said upper face with the lower face of the block convexly rounded, and a metal core of tubular form of substantially the same length as the combined length of the assembled blocks and having a neck and a flange portion extending through and along the top of the blocks and constituting a supporting means for the rails.

5. A railway tie comprising a series of blocks with passages lengthwise therethrough and opening through the tops of the blocks and a rail supporting core piece of tubular form and extending lengthwise through the passages and alining the blocks and holding them together, said core piece having a neck portion extending lengthwise of the blocks and through the top of the blocks and there provided with oppositely directed flanges forming rail supports, the tubular member being provided with a longitudinally extended strip of a width to reach to a point close to the bottom of the interior of the tubular member to constitute a stiffening and abutting means.

[Claims 6 and 7 not printed in the Gazette.]

1,212,931. MACHINE FOR CUTTING OFF THE TOPS OF BEETS AND THE LIKE. OLOF FRANKMAN, Marieberg, Sweden. Filed Mar. 27, 1916. Serial No. 87,082. (Cl. 55—107.)

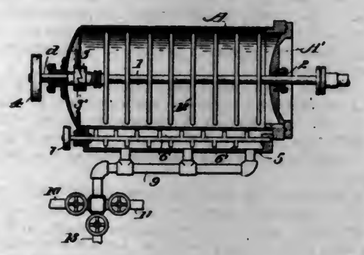


1. In a beet topping machine, the combination of a main frame, a shaft mounted on the main frame, a tilting frame mounted on the shaft, a roller mounted in the tilting frame, means between the shaft and the roller for rotating the latter, a slide carried by the tilting frame and located over the roller, a horizontal crank arm mounted on the tilting frame and pivoted at one end to the slide, a link connected to the opposite end of the crank arm, means for reciprocating the link from the shaft, a shank depending from the slide, a vertically adjustable knife on the shank, said knife extending below and at an angle across the path of movement of the roller, a rotating cutter depending from the tilting frame in advance of the roller, a plow share supported on the main frame between the shank and the rotating cutter, and means for raising and lowering the tilting frame.

2. In a beet topping machine, the combination of a main frame, a shaft mounted in the main frame, a supplemental frame mounted in the main frame, a roller mounted in the rear of the supplemental frame, a slide including a pair of parallel legs mounted above the roller, a shank depending from the slide to a point below the plane of the bottom of the roller, a knife extending at an angle from the shank and across the path of movement of the roller, a crank pivoted to the supplemental frame and connected to the slide, a connection between the crank and the shaft including a rod and universal joint for reciprocating the slide, and means in advance of the shank for removing the earth from the path of said shank.

3. In a beet topping machine, the combination of a main frame, a shaft mounted therein, a supplemental frame mounted on the shaft, a roller mounted in the rear of the supplemental frame, a knife mounted in rear of and below the center of the roller and extending across the path of movement of the roller, means between the knife and the shaft for reciprocating said knife, a trough supported by the supplemental frame between the shaft and the roller to depress the beet tops, a rotating cutter mounted in advance of the roller and to one side of the trough, a plow-share in rear of the rotating cutter, and means for raising and lowering the plow share.

1,212,932. FILTERING APPARATUS. ALBERT LEGRAND GENTER, Salt Lake City, Utah, assignor to Kelly Filter Press Company, Salt Lake City, Utah, a Corporation of Utah. Filed Mar. 11, 1916, Serial No. 83,606. Renewed Dec. 16, 1916. Serial No. 137,445. (Cl. 210—13.)



1. In a filtering apparatus of the character described, the combination with a shell or casing and a carrier slidably mounted relatively thereto, and provided with filter leaves and a central hollow shaft which communicates with the interior of said leaves, of a driving shaft mounted in one end of the shell, and engageable clutch members between said driving shaft and the inner end of said hollow shaft.

2. In a filtering apparatus of the character described, the combination with a shell or casing and a carrier slidably mounted relatively thereto, and provided with filter leaves and a central hollow shaft which communicates with the interior of said leaves, of a driving shaft entering one end of the shell or casing, and clutch members on the opposed ends of said shafts adapted to operatively engage substantially simultaneously with the seating of the carrier within the shell or casing.

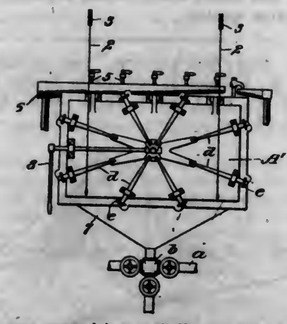
3. In a filtering apparatus of the character described, the combination with a shell or casing and a carrier slidably mounted relatively thereto, and provided with filter leaves and a central hollow shaft which communicates with the interior of said leaves, of a driving shaft entering one end of the shell or casing, and clutch members on the opposed ends of said shafts adapted to operatively engage substantially simultaneously with the seating of the carrier within the shell or casing, and to disengage by and in unison with the outward movement of the carrier relatively to said shell or casing.

4. In a filtering apparatus of the character described, the combination with a shell or casing and a carrier slidably mounted relatively thereto, and provided with filter leaves, of a pair of alined shafts, one of said shafts being a drive shaft and the other a driven shaft said driven shaft being hollow and provided with filtering agents, and coacting clutch members fixed to the opposed ends of the shafts and engageable and disengageable by and in unison with the sliding movement of the carrier.

5. In filtering apparatus of the character described, a solution-containing shell or casing having a trough extending along its bottom and opening at the top into the bottom of the shell, a solution-supply pipe connecting with said trough, an agitator mounted in the trough and adapted to maintain the solid constituents of the solution in suspension, and filtering agencies mounted in the shell or casing.

[Claim 6 not printed in the Gazette.]

1,212,933. FILTERING APPARATUS. ALBERT LEGRAND GENTER, Salt Lake City, Utah, assignor to Kelly Filter Press Company, Salt Lake City, Utah, a Corporation of Utah. Filed Mar. 11, 1916. Serial No. 83,607. (Cl. 210—13.)



A filter press comprising a shell or casing of substantially rectangular form having permanent ends and one permanent side and a top; a bottom inclining from the sides and ends to a central point; a pipe connecting with the lowest point of the bottom having a plurality of valve-controlled branches, said shell or casing adapted to inclose filter mediums each having a valve-controlled filtrate outlet and said casing having only one open side; a head forming a closure for the open side of the casing and hingedly secured thereto along its upper longitudinal edge; a locking mechanism for securing the head in closed position against the open side of the casing; and a counterweight connected to the free side of said head adapted to elevate the head about its hinged connection when the locking mechanism is released.

1,212,934. PROCESS OF ORNAMENTING COATED PAPER. MANUEL A. T. GILLBEE, Philadelphia, Pa., assignor to A. M. Collins Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 16, 1915. Serial No. 51,094. (Cl. 41—19.)



1. The process of ornamenting paper sheets, which consists in coating the same, drying the coating, subjecting the coated sheets to pressure, and effecting slip of the sheets while undergoing such pressure whereby indefinite areas of the coated surface are impressed or compressed in varying degrees of depth.

2. The process of ornamenting paper sheets, which consists in coating the same, drying the coating, subjecting the coated sheets to rolling pressure, and effecting slip of the sheets while undergoing such rolling pressure whereby indefinite areas of the coated surface are impressed or compressed in varying degrees of depth.

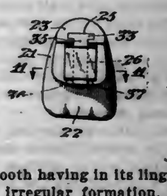
3. The process of ornamenting paper sheets, which consists in coating the same, drying the coating, placing impression pads in contact with the coated surface, subjecting the coated sheets to pressure, and effecting slip of the pads and sheets while undergoing such pressure whereby indefinite areas of the coated surface are impressed or compressed in varying degrees of depth.

4. The process of ornamenting paper sheets, which consists in coating the same, drying the coating, placing impression pads in contact with the coated surface; subjecting the coated sheets to rolling pressure, and effecting slip of the pads and sheets while undergoing such rolling pressure whereby indefinite areas of the coated surface are impressed or compressed in varying degrees of depth.

5. The process of ornamenting paper sheets, which consists in coating paper stock of a dark shade or tone with a coating material of a light shade or tone, drying the coating, then subjecting the coated sheets to pressure between sheets or pads of fabric having an irregular or uneven surface, and effecting slip of the coated sheets while undergoing such pressure.

[Claims 6 to 9 not printed in the Gazette.]

1,212,935. ARTIFICIAL TOOTH. THOMAS F. GLENN, Ardmore, Pa. Filed Jan. 24, 1916. Serial No. 73,770. (Cl. 32—9.)



1. An artificial tooth having in its lingual face a "bite" surface of natural irregular formation, a surface adjoining said "bite" surface extending gingivally therefrom and in oblique relation thereto, and an undercut recess in the surface adjoining said "bite" extending continuously from near said "bite" gingivally, and providing a lingual opening in the form of a relatively narrow slot.

2. An artificial tooth having in its lingual face a "bite" surface of natural irregular formation, a surface adjoining said "bite" surface extending gingivally therefrom in oblique relation thereto, and a recess in said lingual face, approximating said "bite" surface and extending gingivally through said tooth and affording an elongated lingual opening therein.

3. The combination with an artificial tooth having a "bite" surface of natural irregular formation, a surface disposed longitudinally and extending gingivally from the linguo-gingival termination of said "bite" in relatively oblique relation thereto, and an undercut recess approximating said "bite" surface and extending gingivally through the tooth and affording an elongated lingual opening therein, of an anchor member engaged in said recess and extended through said opening and having means providing a backing overlying the lingual face of said tooth, exclusive of the "bite."

4. The combination with an artificial tooth having a "bite" surface, of natural irregular formation, a surface disposed longitudinally and extending gingivally from the linguo-gingival termination of said "bite" in relatively oblique relation thereto, and an undercut recess approximating said "bite" surface and extending gingivally through the tooth and affording an elongated lingual opening therein, of an anchor member engaged in said recess and extended through said opening lingually beyond the lingual plane of said tooth.

5. The combination with an artificial tooth having a natural irregular "bite" surface, a "ridge-lap" surface, a plane "shut" surface extending longitudinally and intersecting said "bite" and "ridge-lap," and an undercut recess approximating said "bite" surface and ex-

tending gingivally through the tooth and providing an elongated opening in said "shut," terminating in a relatively broader opening in the "ridge-lap," of a backing comprising a plate overlying said "shut" and having a projection substantially conforming to said recess.

[Claims 6 to 9 not printed in the Gazette.]

1,212,936. INDIVIDUAL SHAVING-CUP. JACQUES C. GOLDENBERG and ABRAHAM I. KELLER, Brooklyn, N. Y., assignors to Individual Sanitary Shaving Cup Co., a Corporation of New York. Filed July 17, 1913, Serial No. 779,541. Renewed June 12, 1916. Serial No. 103,340. (Cl. 132—15.)

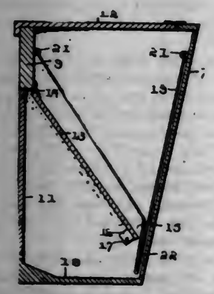


1. An individual sanitary shaving cup comprising an upstanding wall having an inwardly extending ridge formed at the bottom thereof, a removable bottom portion having a short upstanding wall formed with a peripheral groove adapted to be snapped over the ridge and fitting therewith, and an individual portion of soap in said removable bottom portion and retained therein.

2. An individual sanitary cup comprising an upstanding wall of fibrous material, said wall being provided with an inwardly extending ridge at the bottom thereof, a removable bottom portion having a peripheral groove formed thereon adapted to snap over the ridge to be engaged and held thereby, and an individual portion of soap consisting of a pasty mass filling up the groove within the removable bottom and retained therein.

3. An individual sanitary shaving cup comprising an upstanding wall of flexible fibrous material, a comparatively stiff removable bottom portion secured within the bottom of the wall maintaining the latter in shape, there being interengaging portions on the wall and bottom whereby the two are interlocked, and an individual portion of soap within the removable bottom portion securely maintained in place by the interengaging portion of said bottom portion.

1,212,937. FEED-HOPPER. ALLEN H. GOOD, Spring City, Pa. Filed Mar. 11, 1916. Serial No. 83,581. (Cl. 119—53.)



1. A feed hopper having an opening in the front wall thereof, a feed regulator plate pivotally mounted in said hopper, and a door hinged in said opening and adapted to engage and actuate said regulator plate.

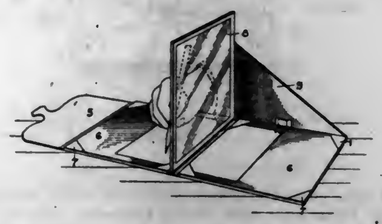
2. A hopper having an opening in the front wall thereof, an inclined regulator plate pivotally mounted in said hopper, means for varying the position of said regulator plate with relation to the rear wall of the hopper, and a door hinged in said opening and adapted to engage and actuate said regulator plate.

3. A feed hopper having an opening in the front wall thereof, an inclined regulator plate pivotally mounted in said hopper, and a polygonal block eccentrically pivoted in said hopper and adjustably supporting the lower free end of said regulator plate.

4. A feed hopper including a body, an inclined regulator plate pivotally mounted in said body and terminating in spaced relation to the rear wall of the latter to provide a discharge opening, and a plurality of agitators pivotally secured to the front and rear walls of said hopper and having V-shaped lower terminals extending downwardly through said discharge opening and movable at right angles to said pivoted plate.

5. A feed hopper including a body, an inclined regulator plate arranged in said body and terminating in spaced relation to the rear wall of the latter to provide a discharge opening, a door pivotally secured in said body adapted to engage and actuate said regulator plate, and a plurality of agitators pivotally mounted in the upper portion of said hopper and extending downwardly through said discharge opening.

1,212,938. COPYING DEVICE. LEO GRUBMAN, Brooklyn, N. Y., assignor of one-half to Joseph Stein, New York, N. Y. Filed Dec. 2, 1914. Serial No. 875,201. (Cl. 88—24.)



1. A support and a colored transparent medium adapted to be held at right angles to said support, said support being adapted to receive upon one side of said medium the object to be copied and upon the other side of said medium the material upon which the copy is to be made.

2. In a copying device of the class described, a folder, pads reinforcing the sides of said folder, a transparent medium foldably mounted between the pads on said folder, and means for maintaining said transparent medium erect when said folder is unfolded, substantially as and for the purpose set forth.

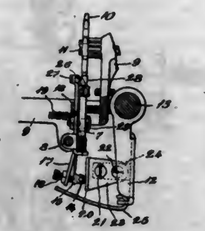
3. In a copying device of the class described, a folder, pads reinforcing the sides of the folder, a transparent medium foldably secured to said folder between said pads, a support in foldable connection with said transparent medium, and a foldable tongue on said support adapted to engage between said folder and one of the pads whereby the transparent medium is maintained in upright position with reference to said folder when the same is open, said folder having means for preventing an accidental folding of said folder when the same is unfolded.

4. In a copying device of the class described, a foldable support, a transparent medium foldably mounted in the fold of the support, and means having a portion engageable between the support and one of said pads for maintaining said transparent medium in erect position when said support is unfolded.

5. In a copying device of the class described, a foldable support, a transparent medium, foldable means between said transparent medium and said foldable support and foldable along the side thereof or movable to a position at right angles thereto whereby the transparent medium can be maintained in erect position when the support is unfolded.

1,212,939. CARRIAGE-FEED MECHANISM. GEORGE F. HANDLEY, Glendale, Long Island, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 7, 1914. Serial No. 855,590. (Cl. 197—88.)

1. An escapement rocker plate for typewriting machines provided with a spring-supported contact roller adapted to engage the universal bar of the machine, and provided also with an adjusting screw operating on the spring to vary the position of the roller relatively to the rocker plate.

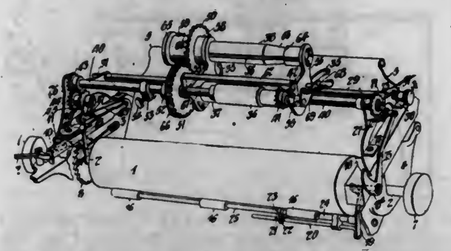


2. The combination with the universal bar of a typewriting machine, of an escapement rocker plate, a spring secured thereto, a roller carried by the outer end of the spring and adapted to make contact with the universal bar, and an adjusting screw carried by the plate and bearing on the spring in rear of the roller for varying the position of the roller between the rocker plate and universal bar.

3. A carriage feed mechanism for typewriters comprising an escapement rocker plate, a universal bar adapted to be actuated by all of the type keys, a spring secured to the rocker plate, a roller carried at the end of the spring arranged to contact with the universal bar and an adjusting screw passing through the rocker plate and bearing against the spring for varying the distance between the roller and rocker plate.

4. A carriage feed mechanism for typewriters, comprising a vertically arranged escapement rocker plate having a rearwardly bent portion at its lower end, a spring attached to the rocker plate and carrying an anti-friction roller, and a universal bar provided with a contact plate engaged by said rocker.

1,212,940. TYPE-WRITING MACHINE. FREDERICK A. HART, Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 9, 1914. Serial No. 870,972. (Cl. 197—132.)



1. The combination with a platen and a line-space mechanism for rotating the platen, said mechanism comprising adjusting means for varying the extent the platen is rotated by an operation of the line-space mechanism, of means for feeding a strip or web over the rotatable printing surface of the platen, and means to prevent the web from being fed by the platen, said web-feeding means operable by said line-space mechanism to feed the web forwardly the same distance at each operation of the line-space mechanism regardless of the distance the platen is rotated by said operation.

2. The combination with a platen and line-space mechanism for rotating the platen, said mechanism comprising adjusting means for regulating the distance the platen is rotated at each line-space operation, of means for feeding a web or strip over the platen, comprising feed rolls between which the web extends after passing over the platen, gearing between said feed rolls and the line-space mechanism operable to rotate the feed rolls to advance the web the same extent at each line-space operation independently of the extent of rotation of the platen, and means at the introductory side of the platen for placing tension on said web sufficient to prevent it from being fed forwardly by the platen, so that the web is advanced at the peripheral speed of the said feed rolls.

3. In a typewriting machine, the combination with a roller platen and line-space mechanism for rotating the platen, of means for feeding a web or strip over the platen, said means comprising a web-feeding device to draw the web over the platen, a tension device for applying tension to the web at the introductory side of the platen sufficient to prevent the web from being drawn forwardly by the platen as the latter rotates, and means operated by the line-space mechanism to actuate said web-feeding device.

4. In a typewriting machine, the combination with a platen and a line-space mechanism for imparting step-by-step rotations to the platen, of a tally strip mechanism comprising a support for a supply roll, a feeding roll couple to which the web extends from the supply roll after passing around the platen, a winding spool or spindle on which the web is wound after passing between the rolls of said couple, a gear train between said couple and the line-space mechanism, for driving said couple at each line-space operation, gearing for rotating the winding spindle when said couple is driven, to wind the strip as it is advanced by said couple, said gearing comprising a slip connection, and a tension device applied to said supply roll to retard its rotation and place tension on the web sufficient to prevent it from being drawn forwardly with the platen at a greater speed than it is advanced by said couple.

5. The combination with a rotary platen, platen feed rolls for feeding a work-sheet over the platen, and means for rotating the platen, of means for feeding a web or strip which passes around the platen between the platen and work-sheet, said means comprising a winding-spool to receive the web as it is fed over the platen, means to rotate said winding spool, and means at the introductory side of the platen to place tension on said web sufficient to prevent the web from being advanced by the platen.

[Claims 6 to 49 not printed in the Gazette.]

1,212,941. FIGURE TOY. HENRY A. HART, New York, N. Y. Filed Aug. 11, 1916. Serial No. 114,362. (Cl. 46—40.)



1. A toy comprising a figure made of a flat piece and having a contour formed of contiguous surfaces at an angle to each other and of spaced points and recesses whereby the figure can be set up in different positions.

2. A toy comprising a plurality of figures made of flat pieces and having a contour composed of spaced points, recesses, supporting surfaces and projections, whereby the figures can be set up edgewise on a flat surface, or one figure supported on another, with the projections of one figure engaging in the recesses of the other figure.

3. A toy representing a figure with the body bent back and the legs bent toward the head but spaced therefrom, whereby the legs and back form a recess, the front edges of the leg and body portions being formed of flat surfaces, contiguous flat surfaces being disposed at an obtuse angle to each other, the head and toes of the figure also constituting a supporting base on which the figure can rest.

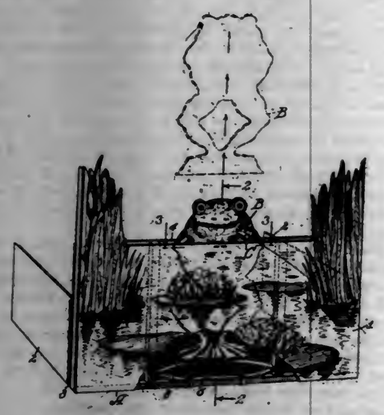
4. A toy representing a figure with the body bent back and the legs bent toward the head but spaced therefrom,

whereby the legs and back form a recess, the front edges of the leg and body portions being formed of flat surfaces, contiguous flat surfaces being disposed at an obtuse angle to each other, the head and toes of the figure also constituting a supporting base on which the figure can rest, said figure having a member representing the arms raised forwardly above the head.

5. A toy in the form of a figure made of a flat piece and having the legs of the figure disposed at approximately right-angles to the body, whereby the feet and head constitute spaced points on which the body can be supported, the front edge of the legs, body and arms being so shaped as to provide a plurality of supporting points and intermediate shallow bights.

[Claims 6 to 8 not printed in the Gazette.]

1,212,942. TARGET TOY. HENRY A. HART, New York, N. Y. Filed Aug. 26, 1916. Serial No. 117,024. (Cl. 124—15.)



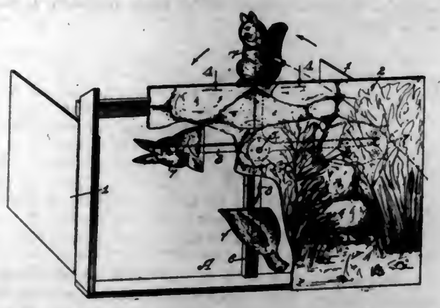
1. A target toy comprising a supporting section representing a frog pond, a movable section normally held on the supporting section and representing a frog floating in the pond, means normally under tension for projecting the frog into the air when hit by a projectile, and catch means normally holding the frog in set position on the supporting section.

2. A target toy comprising a supporting section and having a pocket, an object to be hit by a projectile and mounted in the pocket, with a portion extending out of the same, catch means for releasably holding the object in the pocket, and a spring in the pocket held under tension when the catch means are engaged, said catch means being adapted to be released by lateral movement of the object under the impact of a projectile, whereby the object is thrown into the air.

3. A target toy comprising a supporting section, an object adapted to be hit by a projectile, means for mounting the object on the supporting section, with the upper part of the object exposed above the top of the said section, whereby the exposed part can be hit by a projectile, and means for bodily projecting the object upwardly clear of the supporting section when the object is hit.

1,212,943. DISAPPEARING AND RECURRING REVOLVING-TARGET TOY. HENRY A. HART, New York, N. Y. Filed Aug. 26, 1916. Serial No. 117,025. (Cl. 124—15.)

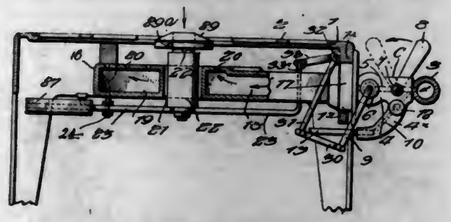
1. A target of the class described comprising a supporting frame, a rotary structure mounted thereon and including a plurality of target elements so arranged that one element at a time is exposed to view, a catch mounted on the frame for normally preventing rotation of the structure in one direction and permitting free rotation in the opposite direction, and a coiled spring connected with the structure and tending to turn the same, each target element including a resilient arm adapted to yield when the target element thereof is struck, to permit the said structure to rotate one step.



2. A target comprising a frame, the front of which represents a wall, a rotary structure including a plurality of resilient arms and a target member on the outer end of each arm, means for mounting the structure in such position that one target member is exposed at the top of the said wall, means tending to rotate the structure, and a catch arranged on the frame in a position to engage the outer portion of the arm of that element exposed to view, whereby a projectile striking such member will cause the arm to move out of engagement with the catch and permit the structure to rotate until the next arm engages the catch.

3. A target comprising a supporting structure, a rotatable resilient member carrying on its outer end an object adapted to be struck, means for turning the member, and a catch normally engaging the member at a point disposed inwardly from the object for preventing turning thereof and from which the member disengages when the said object is struck by a projectile, whereby the said object disappears from view.

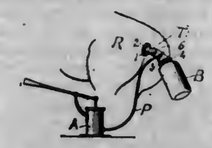
1,212,944. GAS-BURNING STOVE. CHARLES A. HARTMANN, Washington, D. C. Filed Nov. 2, 1915. Serial No. 59,203. (Cl. 126—52.)



1. In a gas stove, a burner having a central opening, a lever disposed beneath said burner, the ends of the lever projecting beyond the burner, a post carried by said lever near the central part thereof, said post being arranged to extend through said central opening, a stop cock disposed at the front of the stove for controlling the flow of gas to the burner, connections between one end of said lever and said stop cock for operating the latter on the movement of the post, an adjustable counterweight carried by the opposite end of the lever at the rear of the stove for normally retaining the post in a raised position, a fulcrum bar for said lever disposed between said adjustable weight and said post, means carried by the lever for preventing longitudinal movement thereof with respect to said fulcrum bar, and a cap resting loosely on said post and adjustable with respect thereto to different positions to change the effective length of the post.

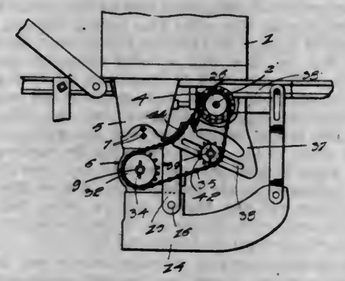
2. In a gas stove cover, a plurality of burners, each burner having a central opening, a lever disposed beneath each burner, the ends of the lever projecting beyond the burner, a post carried by each lever near the central part thereof, said posts being arranged to extend through the openings of their respective burners, a stop cock for each burner disposed at the front of the stove for controlling the flow of gas to the burner, connections between one end of each of said levers and its individual stop cock for operating the latter on the movement of the post, a fulcrum bar common to each of said levers, the ends of said fulcrum bar being provided with openings arranged to receive said levers, means carried by the levers for preventing longitudinal movement thereof through the openings and an adjustable counterweight carried by each lever on the opposite side of the fulcrum bar from the post.

1,212,945. VACUUM SERUM-EXTRACTOR. THOMAS P. HASLAM, Manhattan, Kans., assignor to The Kansas State Agricultural College, Manhattan, Kans., a Corporation. Filed Oct. 30, 1915. Serial No. 58,931. (Cl. 128—9.)



A device of the class described comprising a curved tubular body open at both ends, such open ends being at least as large as the intermediate portions of the body, a mouthpiece at one end adapted to be applied to the body of an animal, and means at the other end for attaching a suitable receptacle, whereby a free open passage between the mouthpiece and receptacle is provided, and an air exhaust pump connected with said tubular body.

1,212,946. PLANTER. WILLIAM D. HEFLIN, Sardis, Miss. Filed Feb. 18, 1916. Serial No. 79,159. (Cl. 111—7.)



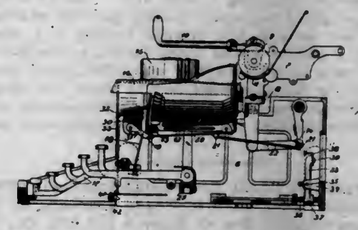
1. The combination with a planter including a supporting structure, seed dispensing means and means for operating said seed dispensing means, of a sprocket operatively connected to said operating means, a casing for receiving the seeds from said dispensing means, a shaft mounted in said casing, a valve member carried by said shaft, a sprocket mounted upon said shaft, a chain connecting said sprocket for rotating said shaft and valve member upon operation of said operating means, an adjustable means for regulating the tension of said chain for permitting the changing of said sprockets for altering the speed of rotation of said shaft and said valve member for regulating the deposit of seed from said casing.

2. The combination with a planter including a supporting structure, seed dispensing means and means for operating said seed dispensing means, of a sprocket operatively connected to said operating means, a casing carried by said supporting structure for receiving seeds from said dispensing means, a shaft mounted in said casing, a valve member carried by said shaft, said valve member including a hub and a plurality of radiating blades connected to said hub, a sprocket mounted upon said shaft, a chain connecting said sprocket for rotating said shaft and valve member upon operation of said operating means, one side of said casing being detachably connected to the body of the casing whereby said valve member may be removed from said shaft and the interior of said casing for replacing it with another valve member as desired.

3. The combination with a planter including a supporting structure, seed dispensing means, and means for operating said dispensing means, of a rotary valve for receiving seed from said seed dispensing means, a sprocket operatively connected to said operating means, a second sprocket operatively connected to said valve, a chain passing about said sprockets, a bracket attached to said supporting structure and provided with an inclined slot, a pin mounted in said slot, means for holding said pin in adjusted positions within said slot, an idler sprocket rotatably carried by said pin and engaging one run of said sprocket chain for holding said chain taut, said slot permitting of adjustment of said idler to regulate said chain for different size sprockets.

4. The combination with a planter including a supporting structure, a seed dispensing means, and means for operating said seed dispensing means, of a rotary valve for receiving seed from said seed dispensing means, a sprocket operatively connected to said operating means, a second sprocket operatively connected to said valve, a sprocket chain passing about said sprocket, a bracket attached to said supporting structure and provided with an inclined slot, a pin mounted in said slot, means for holding said pin in adjusted position within said slot, an idler sprocket rotatably carried by said pin and engaging one run of said sprocket chain for holding said sprocket chain taut, said slot permitting of adjustment of said idler to regulate said chain for different size sprockets, an arcuate guide extension formed upon said bracket and engaging the run of said chain opposite to that engaged by said idler.

1,212,947. TYPE-WRITING MACHINE. EDWARD B. HESS and LEWIS C. MYERS, Brooklyn, N. Y., assignors to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Original application filed May 3, 1915, Serial No. 25,384. Divided and this application filed Apr. 14, 1916. Serial No. 91,060. (Cl. 197—33.)



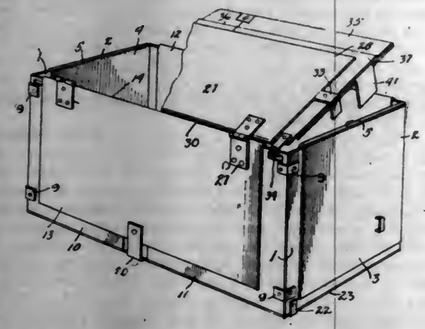
1. In a typewriting machine, the combination with the type bars and the universal bar to which they are connected of an upright frame pivotally supported between its upper and lower ends, a plate attached to and vertically adjustable on said frame, springs connecting the type bars with said plate and tending to pull the upper part of the plate forwardly and means carried by the lower portion of said frame for limiting its movement.

2. In a typewriting machine, the combination with the type bars and a universal bar to which they are connected, of an upright rocking frame pivotally supported between its upper and lower ends within the machine casing, springs connecting the type bars with the upper portion of said rocking frame and tending to pull the upper part thereof forward, and a set screw within the machine casing carried by the lower portion of said rocking frame for limiting its movement.

3. In a typewriting machine, the combination with the type bars and a universal bar to which they are connected, of an upright rocking frame pivotally supported between

its upper and lower ends within the machine casing, springs connecting the type bars with the upper portion of said rocking frame and tending to pull it forward, and a set screw extending through the lower portion of said rocking frame and engaging the inner rear wall of the machine casing.

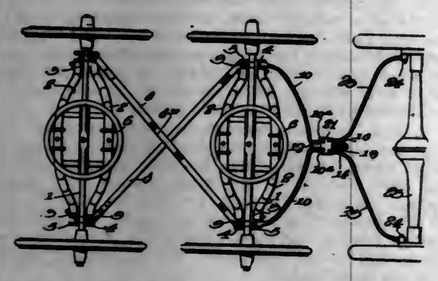
1,212,948. PARCEL-POST MAIL-BOX. ALBERT R. HESSE, Kelso, Minn. Filed May 11, 1914. Serial No. 837,814. (Cl. 220—17.)



1. A mailing box comprising an expansible body portion and a cover hinged thereto, the said cover consisting of a member comprising upper and lower plates, a pair of plates mounted between the plates of the said member and slidable longitudinally thereof, each of said last mentioned plates having a clip on one end thereof arranged to engage the adjacent end of the box, a second pair of plates slidably mounted between the plates of the said member and movable relatively thereto, the said last mentioned plates having clips on the ends thereof arranged to engage the ends of the box, and an additional clip arranged to engage the forward side of the box.

2. In a mailing box, the combination with an expansible body portion including a back which consists of a pair of spaced plates and a pair of slides mounted between said plates and movable with relation thereto, of a cover including a pair of spaced plates hinged to the first mentioned pair of plates a pair of sliding plates mounted between the last mentioned pair of plates and hinged to the aforementioned slides and an additional pair of sliding plates mounted between the last mentioned pair of plates.

1,212,949. TRAILER RUNNING-GEAR AND TOWING CONNECTION. OTTO H. HESSE, Leavenworth, Kans., assignor to The Wm. G. Hesse & Son Mfg. Co., Incorporated, Leavenworth, Kans. Filed Apr. 21, 1916. Serial No. 92,724. (Cl. 21—137.)



1. In combination with a short turn trailer consisting of front and rear axle units and cross reaches connecting said units and fifth wheels on which said axles turn; and in combination with a towing vehicle having a fixed towing axle; a coupling device consisting of a pair of coupling members connected with one of said trailer axle units for movement on a horizontal axis, a second pair of coupling members adapted for connection with the towing vehicle, a body carried by one pair of coupling members and having a V-shaped longitudinal opening and a flat outer face, a draw bar carried by the other pair of members and having a head provided with a flat surface to engage said flat face, said draw bar projecting through said opening and a buffer spring on said draw bar continuously tending to pull said flat surface into engagement with said flat face.

2. In combination with a short-turn trailer consisting of front and rear axle units and crossed reaches connecting said units and fifth wheels on which said axles turn; and in combination with a towing vehicle having a fixed towing axle; of a coupling member consisting of a pair of coupling irons connected with one of said trailer axle units for movement on a horizontal axis, a second pair of coupling members adapted for connection with the towing vehicle, a draw bar connection between said pairs of coupling members, said draw bar connection comprising a bolt secured to one pair of coupling members, a body carried by the other pair of coupling members and having a passage through the same, the side walls of said passage diverging, said bolt passing through said passage, a buffer spring on said bolt and an adjusting nut coöperating with said buffer spring.

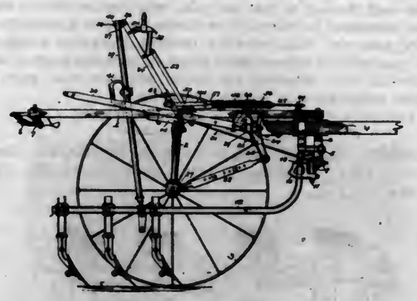
3. In combination with a short-turn trailer running gear, the axles of which are pivoted on fifth wheels and a towing vehicle, the rear axle of which is relatively fixed, of a coupling connection between said fixed axle and one of the axles of the trailer, said coupling connection comprising a pair of bow members pivoted to the trailer axle on a horizontal axis, a second pair of bow members pivoted to the towing vehicle on a horizontal axis and a buffer draw bar connection between said pair of bow members which comprises a body having a longitudinally V-shaped passage and a flat face normal thereto, a draw bolt passing through said passage and having a flat head to engage said flat face, and a buffer spring on said draw bolt to continuously tend to bring said flat head and flat face into engagement, said bow members and said draw bar connection being so designed that the distance between the towing vehicle axle and the adjacent trailer axle is equal to the distance between the centers of the trailer axles whereby said buffer draw bar connection will lie in substantially the mid-position between the towing vehicle axle and the trailer axle to cause the trailer wheels to track with the wheels on the axle of the towing vehicles substantially as shown and described.

4. A towing connection which includes a body having a V shaped opening, means for connecting said body to a vehicle, said body having a flat end face, a draw bar having a head provided with a flat surface to engage said flat face, said draw bar projecting through said opening and a buffer spring for holding said draw bar under tension to continuously tend to bring said head into engagement with said body.

5. In a towing connection for vehicles, a body having a passage through the same diverging from one end toward the other, arms projecting from said body, means adapted for connecting said arms to a vehicle, a draw bar projecting through said body passage, said draw bar having a head to engage said body, a buffer spring on said draw bar in engagement with said body said spring being adapted to hold said head in engagement with said body and tending to bring said draw bar into alinement regardless of the divergence of the slot, and a towing connection between said draw bar and another vehicle, said towing connection being such that said draw bolt will always lie in the same longitudinal position with relation to the adjacent axle of the vehicle with which it is directly connected.

[Claims 6 to 12 not printed in the Gazette.]

1,212,950. CULTIVATOR. EDWARD M. HEILMAN, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed July 6, 1915. Serial No. 38,768. (Cl. 97—35.)



1. In a cultivator, the combination with a wheeled frame, and a cultivator beam pivotally connected therewith and provided with a soil engaging member, of a pivoted mast, a pendulum connecting said mast with the beam, a link pivoted to the mast, a spring connected with said link and with the frame, a pivoted stop arm to engage the under side of said link, a hand lever on the mast, a rod connecting the hand lever with said stop arm, and means for locking said hand lever at different adjustments.

2. In a cultivator, the combination with a wheeled frame, and a pivoted cultivator beam provided with a soil-engaging member, of a pivoted mast, a pendulum connecting said mast with the cultivator beam, a link connected with the mast, a spring connected with said link and the frame, a stop arm under said link, and a stop on the mast to engage over said link when the mast is shifted to raise the cultivator beam.

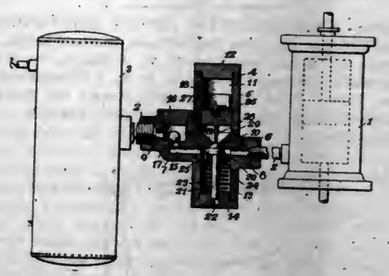
3. In a cultivator, the combination with a wheeled frame, and a cultivator beam provided with a soil-engaging member, of a mast pivoted at the frame, a pendulum connecting said mast with the cultivator beam, a yielding connection between the mast and the frame, a rock-shaft, an arm on said rock-shaft, an extensible connection between said arm and the mast, said extensible connection comprising relatively movable members having coöperating limiting stops, and means for rocking said shaft.

4. In a cultivator, the combination with a frame, crank-axle members mounted thereon, wheels in which said crank axle members are mounted, and a cultivator beam pivotally connected with the frame, of a mast pivoted on the frame, a pendulum connecting said mast with the beam, a rock-shaft supported by the frame, depending arms on said rock shaft, connections between said arms and the crank axle members, an upwardly projecting arm on said rock shaft, a connection between said last-mentioned arm and the mast, said connection comprising relatively movable members provided with limiting means, a lever connected with said rock shaft, and means for locking said lever.

5. In a cultivator, the combination with a frame, wheels, crank-axle members mounted on said frame and having bearings in said wheels, a cultivator beam pivotally connected with the frame, raising devices mounted on the frame and connected with the beam, and a counterbalancing spring connected with said raising devices, of a rock shaft supported by the frame, connections between said rock-shaft and crank axle members, connections between said rock-shaft and raising devices, said connections comprising relatively movable members provided with limiting means, a single lever connected with said rock shaft whereby the wheels may be shifted and the beam counterbalanced and the raising devices operated simultaneously by the operation of said single lever, and means for locking said lever.

[Claims 6 to 8 not printed in the Gazette.]

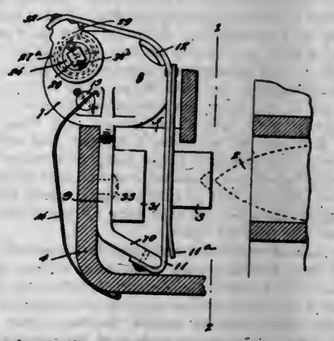
1,212,951. RELIEF-VALVE FOR COMPRESSOR SYSTEMS. ARTHUR O. HIGINBOTHAM, Worcester, Mass., assignor to Charles B. Foster and Company, Worcester, Mass., a Copartnership consisting of Charles B. Foster, Arthur O. Higinbotham, and Jerome R. George. Filed May 1, 1914. Serial No. 835,655. (Cl. 137—53.)



1. A relief valve for compressor systems, comprising a passage for connecting a compressor and a storage tank, a chamber in communication with said storage tank having a valve controlled opening for connecting it with said passage, and having an opening to the atmosphere, and means actuated by a predetermined pressure of air in said chamber for exhausting the air from said compressor through said valve controlled opening to the atmosphere.

2. A relief valve for compressor systems, comprising a passage for connecting a compressor and a storage tank, a chamber having an opening into said passage and an opening to the atmosphere, a valve for normally closing said first mentioned opening, a passage connecting said chamber with said storage tank, and a piston within said chamber having an extension adapted to open said valve when the pressure of air in said tank reaches a predetermined point.

1,212,952. SHUTTLE-CHECK. HARRY H. HODGMAN, Nasonville, R. I. Filed May 8, 1916. Serial No. 96,220. (Cl. 139—22.)



1. In a loom, the combination of a packing box, and a shuttle check comprising a body resting on a wall of and in the box, a spring-plate carried by said body and disposed outside said wall and grasping the exterior of the box, and shuttle checking means carried by the body.

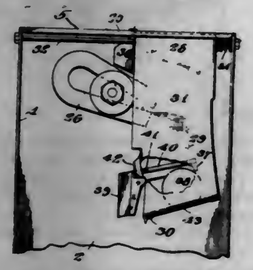
2. In a loom, the combination of a packing box, a shuttle check body comprising an offset plate resting on the side wall of the box, and a depending arm resting in the box and against the end wall thereof, a spring plate connected with said plate of the body and resting outside said end wall and grasping the end of the box, and shuttle checking means arranged in front of the body arm and connected with said arm and the plate of the body.

3. The combination in a loom, of a packing box, and a shuttle-check resting in and on said box and having a

spring portion grasping the exterior of the box to assist in holding the check in position.

4. In a shuttle check, the combination of a body having a plate and an arm depending therefrom, a bolt connected with and extending laterally from said plate, and a spring plate connected with the bolt and constructed and arranged to grasp the packing box of a loom.

1,212,953. COIN-DETECTING DEVICE FOR VENDING-MACHINES. MAURICE HOFHEIMER, Baltimore, Md., assignor, by mesne assignments, to Autosales Gum and Chocolate Company, New York, N. Y., a Corporation of New York. Filed Nov. 18, 1910, Serial No. 593,030. Renewed June 16, 1916. Serial No. 104,118. (Cl. 194—102.)



1. In a coin-controlled machine, the combination of a movable gate having a transverse flange at the bottom for receiving and guiding the deposited coin into operative position, a fixed rail having an edge or shoulder in alinement above said flange and substantially parallel therewith, said shoulder and said flange being so spaced apart that disks of less than the prescribed diameter pass into the space between said shoulder and said flange, means on said fixed rail for retaining a trapped disk within said space, said rail and said flange being so arranged that a coin or disk of proper diameter overlaps said shoulder and is held by said rail out of said trapping space, and means for operating said gate to release said trapped disks.

2. In a coin-controlled machine, the combination of a movable gate having a transverse flange at the bottom for receiving and guiding the deposited coin into operative position, a fixed rail having an edge or shoulder in alinement above said flange and substantially parallel therewith, said shoulder and said flange being so spaced apart that disks of less than the prescribed diameter pass into the space between said shoulder and said flange, means on said fixed rail for retaining a trapped disk within said space, said rail and said flange being so arranged that a coin or disk of proper diameter overlaps said shoulder and is held by said rail out of said trapping space, and means for causing operation of said gate by the entering coin to release the trapped disks.

3. In a coin-controlled machine, the combination of a movable gate having a transverse flange at the bottom for receiving and guiding the deposited coin into operative position, a fixed rail having an edge or shoulder arranged above said flange and so spaced therefrom that disks of scant diameter are caught and held between said shoulder and said flange, and coöperating means on said gate and said rail for separating the same to release the trapped disks.

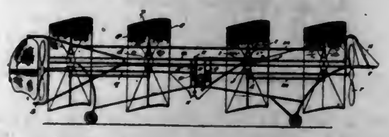
4. In a coin-controlled machine, the combination of a movable gate having a transverse flange at the bottom for receiving and guiding the deposited coin into operative position, a fixed rail having an edge or shoulder arranged above said flange and so spaced therefrom that disks of scant diameter are caught and held between said shoulder and said flange, a cam on said rail, a lip on said gate arranged to ride over said cam to cause operation of said gate and rail, whereby trapped disks are released, and means for actuating said gate to cause coöperation of said cam and lip.

5. In a coin-controlled machine, the combination of a movable gate having a transverse flange at the bottom for receiving and guiding the deposited coin into operative position, a fixed rail having an edge or shoulder in alinement above said flange and substantially parallel therewith, said shoulder and said flange being so spaced apart that disks of less than the prescribed diameter pass into the space between said shoulder and said flange, means on said fixed rail for retaining a trapped disk within said space, said rail and said flange being so arranged that a coin or disk of proper diameter overlaps said shoulder and is held by said rail out of said trapping space, and means for operating said gate to release said trapped disks, a cam on said gate, and a lip on said rail arranged to ride over said cam to cause operation of said gate and rail, whereby trapped disks are released, and means for actuating said gate to cause coöperation of said cam and lip.

6. In a coin-controlled machine, the combination of a movable gate having a transverse flange at the bottom for receiving and guiding the deposited coin into operative position, a fixed rail having an edge or shoulder arranged above said flange and so spaced therefrom that disks of scant diameter are caught and held between said shoulder and said flange, a cam on said rail, and a lip on said gate arranged to ride over said cam to cause operation of said gate and rail, whereby trapped disks are released, said gate having a portion extending into the path of the entering coin, whereby the latter actuates said gate to cause coöperation of said cam and lip.

[Claims 6 to 16 not printed in the Gazette.]

1,212,954. AEROPLANE. ALLEN G. HOLDER, Jr., Lucedale, Miss. Filed Apr. 8, 1916. Serial No. 89,843. (Cl. 244—12.)



1. In an aeroplane, the combination of a frame carrying propelling mechanism; a plurality of annular planes each tiltable on the horizontal axis of the frame; and means for tilting the planes on their axes forwardly and backwardly; the upper part of each of said planes being curved downwardly and backwardly and the lower part being similarly curved, these curves gradually merging into an approximately cylindrical shape at the sides.

2. In an aeroplane, the combination of a frame carrying propelling mechanism; a plurality of annular planes each tiltable on the horizontal axis of the frame; and means for simultaneously tilting the planes forwardly and backwardly on their axes; the upper part of each of said planes being curved downwardly and backwardly and the lower part being similarly curved, these curves gradually merging into an approximately cylindrical shape at the sides.

3. In an aeroplane, the combination of a frame carrying propelling mechanism; a plurality of annular planes each tiltable on the horizontal axis of the frame, said planes being arranged in tandem on the frame; and means for tilting the planes on their axes forwardly and backwardly; the upper part of each of said planes being curved downwardly and backwardly and the lower part being similarly curved, these curves gradually merging into an approximately cylindrical shape at the sides.

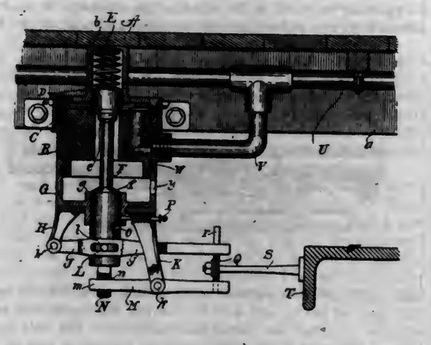
4. In an aeroplane, the combination of a frame; a plurality of annular planes tiltably mounted on said frame and surrounding the same; means for simultaneously tilting these planes forwardly and backwardly; and propelling means mounted on the frame; the upper part of each of said planes being curved downwardly and backwardly and the lower part being similarly curved, these curves gradually merging into an approximately cylindrical shape at the sides.

5. In an aeroplane, the combination of a frame; a plurality of annular planes pivotally mounted thereon; means for tilting these planes simultaneously forwardly and backwardly and to the same degree; propelling mechanism mounted on the frame at a point between the planes and arranged to depend from the frame so as to bring the center of gravity below the geometrical axis of the aeroplane; the upper part of each of said planes being curved downwardly and backwardly and the lower part being similarly curved, these curves gradually merging into an approximately cylindrical shape at the sides.

[Claim 6 not printed in the Gazette.]

1,212,955. SAFETY AIR-BRAKE VALVE. WILLIAM S. INGRAM, Raleigh, N. C. Filed June 10, 1916. Serial No. 102,843. (Cl. 188—2.)

1. In a safety air brake valve, the combination with a car frame and car truck, of a casing having a valve seat, a valve controlling the said seat and having a stem portion projecting below the casing, the said casing having a chamber above the valve, a train pipe, a pipe connecting the said chamber and train pipe, upper and lower levers pivotally connected with the said casing and valve stem below the casing, and means carried by the said car truck and arranged between the ends of the levers whereby the levers will be moved and the said valve unseated when the truck moves up or down with respect to the car.



2. In a safety air brake valve, the combination with a car frame and car truck, of a casing having a valve seat, a valve controlling the said seat and having a stem portion projecting below the casing, the said casing having a closed chamber above the valve, a train pipe, a pipe connecting the said chamber with the train pipe, the said casing having an opening to the atmosphere below the said valve, upper and lower levers pivotally connected with the said valve stem and with the casing on opposite sides of the valve stem, and means carried by the said car truck and arranged between the ends of the levers whereby the levers will be moved and the said valve unseated when the truck moves up or down with respect to the said car frame.

3. In a safety air brake valve, the combination with a car frame and car truck, of a casing having a valve seat, a valve controlling the said seat and having a stem portion projecting below the casing, the said casing having a closed chamber above the valve, a train pipe, a pipe connecting the said chamber with the train pipe, the said casing having an opening to the atmosphere below the valve, upper and lower levers pivotally connected with the said valve stem and with the casing upon opposite sides of the valve stem, and means carried by the said car truck and arranged between the ends of the levers whereby the levers will be moved and the said valve raised from its seat when the truck moves up or down with respect to the said car frame, the said valve-raising means comprising a straight middle portion and wedge-shaped ends whereby the said levers are moved and the valve unseated when the truck turns horizontally with respect to the car frame.

4. In a safety air brake valve, the combination with a car frame and car truck, of a casing having a valve seat, a valve controlling the said seat and having a stem portion projecting below the casing, the said casing having a closed chamber above the valve, a train pipe, a pipe connecting the said chamber with the train pipe, the said casing having an opening to the atmosphere below the valve, upper and lower levers pivotally connected with the said valve stem and with the casing on opposite sides of the valve stem, means carried by the said car truck and arranged between the ends of the levers whereby the levers will be moved and the said valve raised from the said seat when the truck moves up or down with respect to the said car frame, and releasable means borne by the casing and the valve stem for holding the said valve in a predetermined raised position.

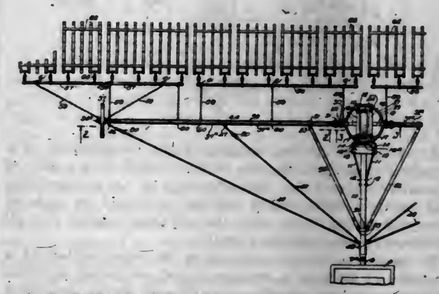
1,212,956. RAZOR-BLADE HOLDER. ROBERT ARTHUR JOHNSTONE, Ness City, Kans. Filed June 13, 1916. Serial No. 103,524. (Cl. 30—12.)



1. A razor including an arm having parallel blade engaging jaws at one end, and a socket extending longitudinally thereof, a blade mounted between said jaws, and a carrying and ejecting device for said blade including a flat elongated member having one of its edges reduced to provide a recess of a length substantially equal to that of said blade whereby to receive a portion thereof, said device being inserted into said socket and having its reduced portion interposed between the inner longitudinal end of said jaws and the inner edge of the blade.

2. A razor including an arm having parallel blade engaging jaws at one end and a socket extending longitudinally thereof, a blade mounted between said jaws, and a carrying and ejecting device for said blade including a flat elongated member having one of its edges reduced to provide a recess of a length substantially equal to that of said blade whereby to receive a portion thereof, said device being inserted into said socket and having its reduced portion interposed between the inner longitudinal end of said jaws and the inner edge of said blade, and a transverse stop flange carried by the outer extremity of said elongated member and adapted to engage the adjacent transverse edges of said jaws.

1,212,957. HARROW-EVENER. WILLIAM H. JONES, Nelson, Cal. Filed July 24, 1915. Serial No. 41,746. (Cl. 55—84.)



1. A device of the character described, comprising a carrying wheel for engaging the ground, a stub shaft extending through said carrying wheel, bearings engaging said stub shaft, supporting bars connected with said bearings, a circle bearing, means for connecting said circle bearing rigidly to said supporting bars, a pair of draft beams, a circle bearing carried by each of said draft beams and engaging said first mentioned circle bearing, harrow mechanism connected to said draft beams, and a tongue connected to said supporting bars for the purpose of dragging the device over ground.

2. A device of the character described, comprising a frame, a wheel mounted in the frame, a pair of draft beams pivoted to the frame to stand in alinement or at an angle to the line of draft, and means for holding the draft beams in position.

3. A device of the character described comprising a tongue, a wheel supported bearing circle, connections from said tongue to said bearing circle, a pair of draft beams, a circle bearing connected with each of said draft beams and mounted loosely upon said first mentioned circle bear-

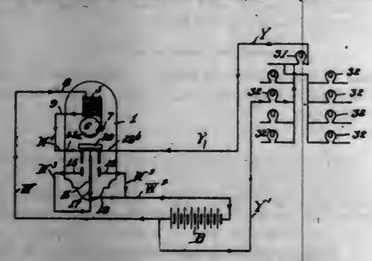
ing and externally concentric to the same, so that said draft beams may be moved upon said first mentioned circle bearing as a center and braces connecting the tongue with the draft beams.

4. A device of the character described, comprising a frame provided with a tongue, a wheel mounted in the frame, oppositely arranged draft beams carried by the frame, wheels on the outer ends of the draft beams, braces connecting the tongue with the draft beams, harrow sections, and flexible connections between the harrow sections and the draft beams.

5. A device of the character described comprising a carrying wheel provided with a hub, a stub shaft extending through said hub, bearings of substantially U-form disposed upon opposite sides of said hub and engaging said stub shaft, brace bars connected with said bearings, a circle bearing secured rigidly to said brace bars, braces connected with said circle bearing, supporting bars secured to said braces, a tongue, connections from said tongue to said supporting bars, a pair of draft beams, a circle bearing carried by each of said draft beams and loosely engaging said first mentioned circle bearing, so as to allow said draft beams to move relatively to said first mentioned circle bearing, means for bracing said draft beams in order to limit relative movements thereof, and harrow mechanism connected with said draft beams for the purpose of operating upon the earth.

[Claims 6 to 10 not printed in the Gazette.]

1,212,958. ALARM SYSTEM. CARL A. KALLNBACH, Detroit, Mich., assignor to The Kallnbach Automatic Fire Alarm Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 8, 1913. Serial No. 766,251. (Cl. 177—355.)



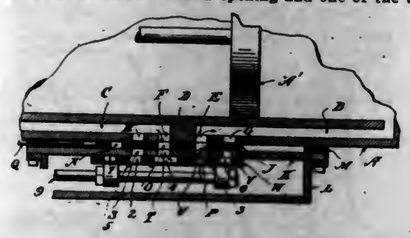
1. An alarm system comprising the combination of a plurality of electric circuits each provided with a pair of successively operating thermostats and an annunciator, said circuits furthermore having connected in parallel therewith respectively, each its individual signal and all additionally one common signal.

2. An alarm system comprising the combination of a plurality of circuits, a common signal connected in series with each of said circuits, a particular signal connected in series with each such circuit, a local signal connected in parallel with each such circuit, and a corresponding number of pairs of thermostats for successively controlling said circuits respectively, and each adapted invariably to effect three distinct signals simultaneously.

3 An alarm system comprising in combination, a plurality of outlying electric circuits each including a pair of local thermostats and a local annunciator, and a corresponding number of lines connected in parallel therewith respectively, each of said parallels including a common signal and a distinct designating signal, said common signal and all of said designating signals being placed together.

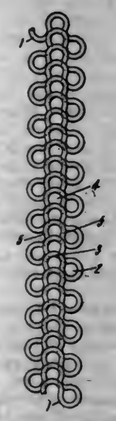
1,212,959. VALVE STRUCTURE FOR STEAM-ENGINES. SOLOMON KING and JOSEPH KING, Tazewell county, Ill. Filed July 13, 1914. Serial No. 850,684. (Cl. 136—12.)

In a reversing mechanism, the combination with an engine cylinder and its steam chest, said cylinder including two pairs of ports extending through its wall, each pair of ports communicating with and being common to a single separate passage leading to each end of the cylinder cavity, a place spaced from said wall and provided with openings corresponding in number and position to said ports in said cylinder wall and adapted to communicate with the cylinder cavity, a valve lying in the space between said plate and said wall adapted for reversing the direction of travel of the steam to said cylinder, the same being provided with two openings spaced whereby each is adapted in one position of the valve to register with one of the ports of each pair of ports in said wall, and being provided also with an opening between said two openings whereby in another position of the valve the said opening and one of the two



said openings will register with a different port of each said pair of ports, and a valve having two openings, each adapted to direct the steam into any one of the four openings of the said plate, there being a groove in one of the walls of the steam chest and an exhaust port communicating with and extending out of said groove, said valve adapted to overlie and cover said recess, and a series of three recesses in that face of the valve lying upon the said plate, each of said recesses adapted to register with a port of said plate constituting an exhaust port, said recesses both opening through the valve at its side overlying the groove and communicating with said groove in any position of said valve.

1,212,960. GARMENT-STAY. JOHN F. KITCHEN, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed July 21, 1914. Serial No. 852,247. (Cl. 2—76.)



1. A garment stay, comprising wire bent back and forth across the stay to form two rows of closed loops or eyes lying along the edges of the stay and bent or deflected along the middle line of the stay to form a row of open loops, said open loops all pointing in the same direction longitudinally of the stay having their sides substantially parallel to the middle line of the stay, and successive open loops along the middle line of the stay overlapping each other.

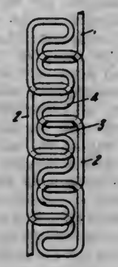
2. A garment stay, comprising wire bent back and forth across the stay to form two rows of closed loops or eyes lying along the edges of the stay and a row of open loops lying along the middle line thereof, the closed end of each of the open loops along the middle line of the stay overlapping the open end of the next adjacent loop.

3. A garment stay, comprising wire bent back and forth across the stay to form two rows of closed loops or eyes lying along the edges of the stay and a row of open loops lying along the middle line thereof having their ends rounded and their sides substantially parallel to the middle line of the stay, each of said open loops being disposed longitudinally of the stay between the next adjacent loops along the opposite edges thereof.

4. A garment stay, comprising wire bent back and forth across the stay to form two rows of closed loops or eyes lying along the edges of the stay and a row of open loops lying along the middle line thereof having their ends rounded and their sides substantially parallel to the middle line of the stay, said loops being disposed in diagonal rows inclined alternately in opposite directions.

5. A garment stay, comprising wire bent back and forth across the stay to form two rows of closed eyes or loops alternately disposed in progressive arrangement and a row of open loops lying along the middle line of the stay and having the sides of said open loops substantially parallel to the middle line of the stay, whereby to provide a series of parallel overlapping wire portions extending from end to end of the stay.

1,212,961. GARMENT-STAY. JOHN F. KITCHEN, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed July 21, 1914. Serial No. 852,248. (Cl. 2—76.)



1. A garment stay, comprising wire bent to form a series of loops lying in alternate order along the two edges of the stay, each loop having an outer longitudinal portion on one edge of the stay and at each end of said longitudinal portion a transverse portion extending toward the opposite edge of the stay, each transverse portion being connected to a transverse portion of the next succeeding loop on the other edge of the stay by an S-shaped bend whose middle portion extends transversely to the length of the stay.

2. A garment stay, comprising wire bent to form a series of loops lying in alternate order along the two edges of the stay, each loop having an outer straight longitudinal portion on one edge of the stay and at each end of said longitudinal portion a transverse portion extending beyond the center line of the stay toward its opposite edge, each transverse portion being connected to a transverse portion of the next succeeding loop on the other edge of the stay by an S-shaped bend whose middle portion extends transversely to the length of the stay.

3. A garment stay, comprising wire bent to form a series of loops lying in alternate order along the two edges of the stay, each loop having an outer straight longitudinal portion on one edge of the stay and at each end of said longitudinal portion a transverse portion extending toward the opposite edge of the stay, each transverse portion being connected to a transverse portion of the next succeeding loop on the other edge of the stay by an S-shaped bend whose middle portion extends transversely to the length of the stay, the transverse portions of successive loops along each edge of the stay overlapping each other.

4. A garment stay, comprising wire bent to form a series of loops lying in alternate order along the two edges of the stay, each loop having an outer straight longitudinal portion on one edge of the stay and at each end of said longitudinal portion a transverse portion extending beyond the center line of the stay toward its opposite edge, each transverse portion being connected to a transverse portion of the next succeeding loop on the other edge of the stay by an S-shaped bend whose middle portion extends transversely to the length of the stay, the transverse portions of successive loops along each edge of the stay overlapping each other.

1,212,962. SWIVEL-SOCKET FOR OIL AND GAS WELL DRILLS. JAMES H. KUHNS, Tulsa, Okla. Filed Sept. 16, 1915. Serial No. 51,020. (Cl. 255—26.)



1. A device of the class described, comprising an upper and a lower section threadedly connected together, and provided with alining bores, the bore in the lower section being of a larger diameter than the bore in the upper section, an extension carried by the upper section and arranged within the bore in the lower section, said extension being provided with a passageway communicating with the bores in the sections, and a cable extending through the upper section and into the lower section and being provided with a collar arranged within the lower section adapted to engage and swivel against the said extension, said cable being babbitted within the collar.

2. A device of the class described comprising a pair of detachably connected sections, said sections being provided with alining bores, an extension formed on one of the sections and extending within the bore in the other section, and being provided with a passageway communicating with the bores in the sections, a flexible element extending through the bore in the said one section and into the bore in the other section and being provided with a swivel member adapted to engage against said extension.

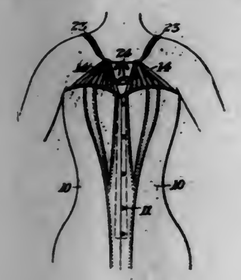
3. A device of the class described, comprising a pair of hollow sections detachably connected together, an extension formed on one of the sections and extending within the other and provided with a passage connecting the interiors of the sections, and a flexible element extending into the sections and being provided with a swivel member adapted to engage against said extension.

4. A device of the class described, including an upper and a lower section provided with alining bores, the bore in the lower section being larger than the bore in the upper section, said upper section being provided with a tapered externally threaded portion screwed into an in-

ternally threaded tapered socket in the lower section and having a tapered extension projecting into the bore of the lower section, a cable extending through the upper section into the lower section, and a collar carried by the cable within the lower section and adapted to engage against said extension.

5. A device of the class described including an upper and a lower section, said sections being provided with alining bores, an extension formed on one of the sections extending within the other and provided with a passage connecting the bores in the sections, a flexible element extending into the sections and provided with a swivel member adapted to engage against the extension, the section in which the swivel member operates being provided with means whereby it may be drained.

1,212,963. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Sept. 14, 1916. Serial No. 120,064. (Cl. 2—73.)



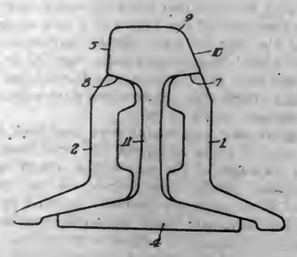
1. In an apparel corset and in each corset body half, a bust form projecting from the upper front edge of the garment, a back flesh retainer attached to the upper portion of the garment and extending from approximately the rear lacing edge toward the axillary line, and means associated with the said back flesh retainer and the corresponding bust form for adjusting the same to position.

2. In an apparel corset and in each corset body half a bust form extending from the upper front edge of the garment, a back flesh retainer projecting upwardly from the garment and extending from approximately the rear lacing edge toward the axillary line, and means connected to the back flesh retainer and associated with the bust form for adjustably connecting and securing the same in position.

3. In an apparel corset and in each corset body half, a bust form, comprising tapes secured to the upper front edge of the garment in spaced positions, and converging to a point in which they are connected together, a back flesh retainer comprising series of tapes secured to the upper rear edge of the garment in spaced positions and converging to a point in which they are connected, and means connected to and extending from the tapes of the back flesh retainer, and associated with the corresponding bust form to adjust and maintain the back flesh retainer and bust form in position.

4. In an apparel corset and in each corset body half, a bust form comprising a series of tapes, each secured at one end to the upper front edge of the garment, extending therefrom and secured together at their opposite ends to a loop, a back flesh retainer comprising a series of tapes each connected at one end to the upper rear edge of the garment, and a shoulder strap secured at one end to the opposite ends of the straps comprising the back flesh retainer and passing through the loop connected to the straps forming a bust form, the opposite ends of the said shoulder straps being adapted to be secured together to adjust and maintain the said back flesh retainers and bust forms in position.

1,212,964. STEEL RAIL FOR RAILROADS OR THE LIKE. GEORGE LANGFORD, Joliet, Ill., assignor to American McKenna Process Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed May 19, 1915. Serial No. 29,041. (Cl. 239—14.)



1. A railroad rail comprising a service or wearing side and a strength side, the service side comprising head, web and flange portions of substantially standard dimensions, the strength side comprising a flange portion similar in all substantial respects to the flange portion of the service side, a web portion of greater height than the web portion of the other side, and a head portion having full bearing surfaces for the angle-bars, but comprising less metal than the head portion of the other side said rail comprising less metal per unit of length than a standard rail.

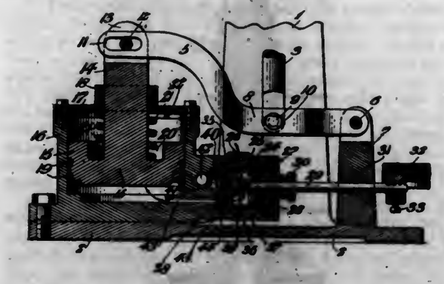
2. A railroad rail adapted for use in connection with standard rails, comprising a service side, and a strength side, said service side comprising head, flange, and web portions of substantially standard dimensions, so as to match up with standard rails, said strength side comprising a head portion of substantially standard width, a flange portion of substantially standard dimensions and a web portion of greater depth than the web of a standard rail.

3. A railroad rail adapted for use in connection with standard rails, comprising a service side and a strength side, said service side comprising head, flange, and web portion of substantially standard dimensions, so as to match up with a standard rail, said strength side comprising a head portion of substantially standard width to give full bearing surface for the angle-bar, and a tapered side to reduce the tread of the rail and to produce a lighter rail head, a flange portion of substantially standard dimension, and a web portion of greater depth than the web of a standard rail, whereby said rail has its gage side substantially in conformity with standard contour and dimensions, but the entire rail is lighter per unit of length than a standard rail.

4. In a railroad track, a rail substantially standard in all of its dimensions except as to a decrease of tread surface, said dimensions including flange, web, and fishing, the inner side of the head of said rail conforming to the outline of a new standard rail, and the outer side of the head having substantially the same width at the base thereof and the same contour of the parts joining the web, but having its side face tapered in toward the top to conform to the general contour of wear of a worn rail, the depth of head being substantially standard, a standard rail placed end to end with said rail, and standard angle-bars joining the same to form a continuous track.

5. A railroad rail substantially standard in all its dimensions except as to the head and the fishing of one side, said head being unsymmetrical, the inner side of said head conforming substantially to the outline of a new standard rail, and the outer side of said head having its side sloped inward but being of substantially standard width and contour at the base thereof, the fishing, the web and the base of said rail being substantially standard in all respects so as to be capable of use with standard fittings such as may be employed with new standard rails.

1,212,965. MEANS FOR CONTROLLING AN ACTUATING-ROD. CHESTER S. LEONARD and CHARLES O. REEPS, Philadelphia, Pa., assignors to The Willey Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 19, 1915. Serial No. 35,185. (Cl. 138—10.)



1. A device of the character stated, comprising in combination,—a piston cylinder,—a valve casing extending laterally from and having a fluid passage extending into said cylinder, and provided with fluid inlet and exhaust ports,—a piston within said cylinder,—an actuating lever connected at one end with the piston rod, and fulcrumed at the other end externally of the cylinder,—an actuating rod connected with said lever between its fulcrum and its connection with the piston,—a rotary valve within the valve chamber,—a valve recess in the face of the rotary valve,—an oppositely corresponding recess in the valve-face of the casing,—a valve-rotating rod,—and a foot treadle for rotating said rod and valve.

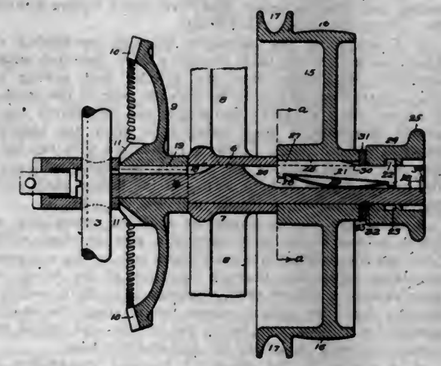
2. A device of the character stated, comprising in combination,—a piston cylinder,—a valve casing extending laterally from and having a fluid passage extending into said cylinder, and provided with fluid inlet and exhaust ports,—a piston within said cylinder,—a spring within the cylinder acting upon one end of the piston,—an actuating lever connected at one end with the piston rod and fulcrumed at the other end externally of the cylinder,—an actuating rod connected with said lever between its fulcrum and its connection with the piston,—a rotary valve within the valve chamber,—a spring within the valve chamber acting against the valve,—a valve recess in the face of the valve,—an oppositely corresponding recess in the valve face of the casing,—a valve-rotating rod,—and a foot treadle for rotating said rod and valve.

3. A device of the character stated, comprising in combination,—a piston cylinder,—a valve casing extending laterally from and having a fluid passage extending into said cylinder, and provided with fluid inlet and exhaust ports,—a piston within said cylinder,—an actuating lever connected at one end with the piston rod and fulcrumed at the other end externally of both the cylinder and the valve chamber and intermediately of the valve chamber and the foot treadle,—an actuating rod connected with said lever between its fulcrum and its connection with the piston,—a rotary valve within the valve chamber,—a valve recess in the face of the rotary valve,—an oppositely corresponding recess in the valve-face of the casing,—a valve-rotating rod,—a bearing for said rod in the external end of the valve chamber,—another bearing for said rod in the fulcrum support of the actuating lever,—and a foot treadle for rotating said rod and valve.

4. A device of the character stated, comprising in combination,—a piston cylinder,—a valve casing extending laterally from and having a fluid passage extending into said cylinder,—a fluid inlet port leading into the valve casing to the rear of the valve,—a fluid exhaust port leading out from said casing in advance of the valve,—a piston within said cylinder,—an actuating lever connected at one end with the piston rod, and fulcrumed at the other end externally of the cylinder,—an actuating rod connected with said lever between its fulcrum and its connection with the piston,—a rotary valve within the valve chamber provided with a valve aperture adapted to register with the fluid passage of the valve casing,—a valve recess in the face of the rotary valve,—an oppositely corresponding recess in the valve-face of the casing,—a valve-rotating rod,—and a foot treadle for rotating said rod and valve.

5. A device of the character stated, comprising in combination,—a piston cylinder,—a valve casing extending laterally from and having a fluid passage extending into said cylinder,—a fluid inlet port leading into the valve casing to the rear of the valve,—a fluid exhaust port leading out from said casing in advance of the valve,—a piston within said cylinder,—an actuating lever connected at one end with the piston rod, and fulcrumed at the other end externally of the cylinder,—an actuating rod connected with said lever between its fulcrum and its connection with the piston,—a rotary valve within the valve chamber provided with a valve aperture adapted to register with the fluid passage of the valve casing,—a crescent-shaped valve recess in the face of the rotary valve,—an oppositely corresponding crescent-shaped recess in the valve-face of the casing,—a valve-rotating rod,—and a foot treadle for rotating said rod and valve.

1,212,966. CLUTCH MECHANISM FOR POWER-MACHINES. GEORGE O. LEOPOLD, Philadelphia, Pa., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 25, 1916. Serial No. 74,250. (Cl. 192—6.)

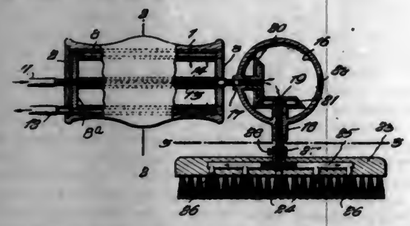


1. The combination of a bearing; a shaft mounted in the bearing and having a longitudinal slot therein; a washer on the shaft; means for holding the washer in position; a pulley loosely mounted on the shaft between the washer and the bearing and having a longitudinal slot therein arranged to aline with the slot in the shaft; a loose sleeve on the end of the shaft; a key mounted in the slot and engaged by the sleeve, said key having undercut projections at the back; a spring located between the two undercut projections and resting on the base of the slot of the shaft and tending to lift the key; a section of the upper surface of the key being inclined so that if the sleeve is pulled out, the key is withdrawn from engagement with the pulley by the inclined surface passing under the washer.

2. The combination of a shaft having a longitudinal slot therein; a pulley loosely mounted on the shaft and arranged to aline with the slot in the pulley; a key in the slot of the shaft arranged to extend into the slot of the pulley; a spring back of the key; means for depressing the key when said key is moved longitudinally; a sleeve loose on the shaft and having a hand hold by which it can be grasped, said sleeve having an internal groove therein, the key having a projection extending

into the groove; and a screw located in the end of the shaft and having a head extending over the slot and forming a stop to limit the outward movement of the key and the sleeve.

1,212,967. SELF-MOISTENING AND SELF-SOAPING BRUSH. SAMUEL LIGHT and WILLIAM EICHELBERGER, Pierce, W. Va. Filed Sept. 16, 1916. Serial No. 120,485. (Cl. 15—51.)



1. A device of the character specified comprising a brush having in the back thereof a pipe connected with branches discharging into the bristles, and having a nipple extending outwardly through the back of the brush, a water motor, a soap casing having a hollow shaft extending into the casing and a hollow shaft connected with the nipple of the brush and extending into the casing, bevel gears on the shaft and meshing together for constraining the brush to rotate when the water motor is rotated, the water flowing from the motor into the soap casing and into the brush, said bevel gears having means for cutting the soap as they rotate.

2. A device of the character specified comprising a brush having in the back thereof a pipe provided with branches discharging into the bristles and having a nipple extending outwardly through the back of the brush, a hollow shaft engaging the nipple and detachably connected therewith, a soap casing into which the hollow shaft extends, a motor having a connection with the hollow shaft in the casing for rotating the same, said casing being adapted to hold soap, and the hollow shaft and motor shaft having means for grinding the soap.

3. A device of the character specified comprising a brush having in the back thereof a pipe provided with branches discharging into the bristles and having a nipple extending outwardly through the back of the brush, a soap casing, a hollow shaft engaging the nipple and extending into the casing, means for rotating the shaft, means for delivering water to the casing, and means in connection with the shaft for grinding the soap.

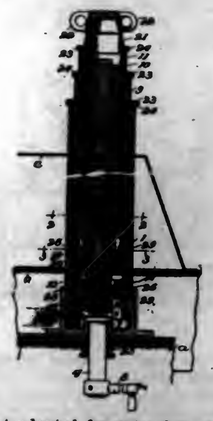
4. A device of the character specified comprising a motor, a brush, a driving connection between the motor and the brush for rotating the brush, a casing inclosing the driving connection and adapted to contain soap to be ground by the said connection, and means in connection with the motor and the brush for discharging water into the casing, and for discharging soap and water from the casing into the bristles of the brush.

5. A brush having means for discharging soap and water into the bristles thereof, and means in connection with the brush for rotating the brush, for grinding soap, and for delivering the ground soap and water into the discharging means of the brush, said means comprising a motor having a driving connection with the brush and serving as a handle for supporting the brush, and a casing inclosing the driving connection and adapted to contain soap to be ground by the said connection.

[Claim 6 not printed in the Gazette.]

1,212,968. TELESCOPIC MAST. ORIN P. LIVELY, Portsmouth, Va. Filed Feb. 28, 1916. Serial No. 81,039. (Cl. 182—14.)

1. A support adapted for extension and retraction and capable of sustaining the applicable load at any point within its range of movement, comprising telescopic outer sections, telescopic driving sections, splines connecting both sets of sections in pairs, and an actuator for the driving sections.



2. A support adapted for extension and retraction and capable of sustaining the applicable load at any point within its range of movement, comprising telescopic outer sections, telescopic driving sections, splines connecting mated sections, means for operating the driving sections, and means for insuring the prompt return of the outer sections in response to retraction of the driving sections.

3. A support adapted for extension or retraction, comprising telescopic outer sections, telescopic inner sections, and positive means including spline connections for advancing or retracting both sets of sections without rotating the outer sections.

4. A collapsible mast, comprising telescopic mast sections, telescopic driving sections contained within the mast sections, and a screw coöperating with said driving sections to raise or lower the mast sections.

5. A collapsible mast, comprising telescopic mast sections, telescopic driving sections contained within the mast sections, a screw coöperating with the driving sections to raise and lower the mast sections, and splines to prevent rotation of the latter.

[Claims 6 to 10 not printed in the Gazette.]

1,212,969. PROCESS OF MAKING TABLE-KNIVES AND PRODUCT THEREOF. JOSEPH FREDRICK LAMB and HENRY FAGAN, New Britain, Conn., assignors to Landers, Frary & Clark, New Britain, Conn., a Corporation. Continuation of application Serial No. 783,576, filed Aug. 7, 1913. This application filed June 23, 1916. Serial No. 105,464. (Cl. 76—104.)



1. The process of securing handles to the blades of table cutlery comprising providing a blade member having a shank at one end, providing a handle member having a head at one end, the said head being wider than the said shank and having a transverse slot extending for the entire width of the said head, inserting the said shank in the said slot, and compressing the said head so as to close the end wall portions of the said slot over against the lateral edges of the said shank.

2. The process of securing handles to the blades of table cutlery comprising providing a blade member having a shank at one end, providing a handle member having a head at one end, the said head being wider than the said shank and having a transverse slot extending for the entire width of the said head, inserting the said shank in the said slot, compressing the said head so as to close the end wall portions of the said slot over against the lateral edges of the said shank, and the said lateral edges of the said shank being divergent outwardly from the junction with the body portion of the said blade member.

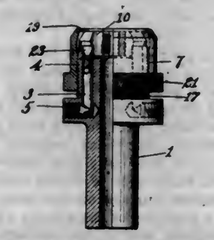
3. The process of securing handles to the blades of table cutlery comprising providing a blade member having a shank at one end, providing a handle member having a head at one end, the said head being wider than the said shank and having a transverse slot extending for the entire width of the said head, inserting the said shank in the said slot, compressing the said head so as to close the end wall portions of the said slot over against the lateral edges of the said shank, and the said shank having a plurality of holes into which material of the said head is forced.

4. The process of securing handles to the blades of table cutlery comprising providing a blade member having a shank at one end and a handle member having a head at one end, the said shank having divergent lateral edges and being provided with a plurality of holes, the said head being wider than the said shank and having a transverse slot, inserting the said shank centrally in the said slot, and compressing the material of the said head so as to inclose the said shank.

5. The process of securing a handle to a blade, comprising providing a blade member having a shank at one end and a handle member blank having a head at one end, the said head being wider than the said shank and having a transverse slot, inserting the said shank centrally in the said slot and compressing the said head so as to form a bolster that incloses the said shank, and the said head being of fanciful form at the middle portions of the lateral faces and having protuberances at the edge portions of the said lateral faces whereby material is provided for bringing the said edge portions into conformity with the said fanciful form in the finished bolster.

[Claim 6 not printed in the Gazette.]

1,212,970. THREADING-DIE AND HOLDER. HENRY M. LOOMER, Beverly, Mass. Filed Nov. 6, 1911. Serial No. 658,871. (Cl. 10—119.)



1. A button threading die and holder having, in combination, a shank, a wedge-shaped member for spreading the die, adjusting means for said wedge-shaped member, means for maintaining said wedge-shaped member in proper alinement, a head on said shank, conically recessed, oppositely disposed surfaces on said die which are capable of alternately registering with said recessed head, a retaining cap for maintaining said die against said head and a yielding member to connect the members of said die when removed from said head.

2. A button die and holder having, in combination adjustable members mounted in and supported by the holder and constructed and arranged to vary the depth of cut of the die, each of said members being provided with two angularly disposed plane surfaces for engagement with corresponding faces on the die.

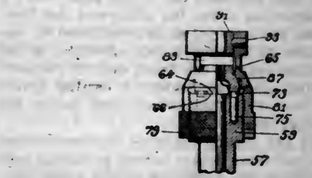
3. A button die and holder having, in combination, wedge-shaped members and screws for adjusting said members, said screws being located externally to the die and at an angle to the wedge-shaped members, all so constructed and arranged that the peneration of the cutting points into the work may be proportionally adjusted by means external to the die and located at an angle to its axis.

4. A button threading die, a die holder and a cap so constructed and arranged with relation to each other that the die is automatically centered by co-acting cone faces on the die and holder and is brought into a plane at right angles to the axis of the holder by co-acting flat faces on the die and cap.

5. The combination of a threading die formed in sections having thread cutting portions, a holder for said die, a cap for said holder, separating wedges carried by the holder for spreading the sections of the die apart, adjusting means for adjusting said separating wedges, said holder and cap tending to force the thread cutting portions of said die sections to penetrate into the work and said separating wedges serving as a stop for the penetration of said thread cutting die sections.

[Claims 6 to 11 not printed in the Gazette.]

1,212,971. THREADING-DIE AND HOLDER. HENRY M. LOOMER, Beverly, Mass. Filed June 14, 1915. Serial No. 33,946. (Cl. 10—119.)



1. The combination of a threading die having a base provided with a plane face and having prongs extending from the base, the prongs being provided with a cutting thread the axis of which is perpendicular to said plane face, a die holder having a plane seat, and a cap for the holder constructed and arranged to hold the plane face of the die against the plane seat in the holder and also constructed and arranged to adjust the depth of cut of the die by the position of said cap upon the holder.

2. The combination of a threading die having a base provided with a plane face and having prongs extending from the base, the prongs being provided with a cutting thread the axis of which is perpendicular to said plane face, a die holder having a plane seat perpendicular to its axis, and a cap for the holder constructed and arranged to hold the plane face of the die against the plane seat in the holder and also constructed and arranged to force the prongs together to increase equally their penetration into the work.

3. The combination of a threading die having a base provided with a plane face and having prongs extending from the base, the prongs being provided with cone surfaces and with a cutting thread the axis of which is perpendicular to said plane face, an externally threaded die holder having a plane seat perpendicular to its axis, and an internally threaded cap for the holder, said cap having a cone surface thereon constructed and arranged to engage the cone surfaces of the prongs and spring said prongs in order to vary equally their depth of cut, said cap being also constructed and arranged to hold the plane face of the die against the plane seat in the holder.

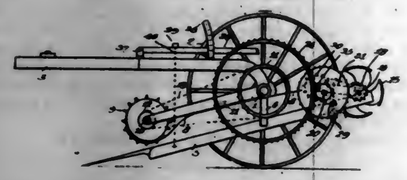
4. Thread cutting apparatus, having, in combination, a pronged threading die, a die holder and a cap, said die and holder having a sliding connection constructed and arranged to permit the die to traverse the axis of the holder transversely to position the die and cap initially in concentric relation and so that adjustment of the cap causes an equal penetration of each prong of the die into the work.

5. The combination of a pronged threading die, a holder therefor, a cap for said holder, means constructed and arranged to permit the die to move transversely in the holder and to prevent relative angular movement between the die and holder, said die, holder and cap being con-

structed and arranged to bring the die into coaxial alinement with the holder and then to force the prongs of the die together to increase their penetration into the work.

[Claims 6 to 18 not printed in the Gazette.]

1,212,972. GATHERING AND CUTTING DEVICE. DANIEL H. LUCE and BERT S. JANES, Harbor Creek township, Erie county, Pa. Filed May 22, 1916. Serial No. 99,030. (Cl. 55—118.)



1. In a gathering and cutting machine, the combination of a guide-way; a gathering device having gathering projections extending from the front end of the guide-way; a crowding device operating above the guide-way for forcing and compressing the material as it is gathered by the gathering device into the guide-way, said crowding device being arranged to the rear of the front ends of the projections forming the gathering device; a cutting device arranged at the rear of the guide-way; and means for actuating the cutting device.

2. In a gathering and cutting machine, the combination of a guide-way; a gathering device having gathering projections extending from the front end of the guide-way; a crowding wheel operating on the material to the rear of the front ends of the projections forming the gathering device for compressing and forcing the material into the guide-way; a cutting device arranged at the rear of the guide-way; and means for actuating the cutting device.

3. In a gathering and cutting machine, the combination of a guide-way; gathering projections extending from the front end of the guide-way; a crowding wheel operating over the front end of the guide-way; a cutting device arranged at the rear of the guide-way; traction wheels on which the guide-way is mounted; and means for driving the cutter from the traction wheels.

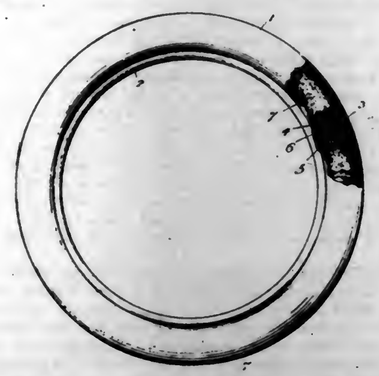
4. In a gathering and cutting machine, the combination of a guide-way wider at the front than at the rear; gathering projections extending from the front of the guide-way; a gathering wheel over the guide-way; a guide plate over the guide-way; a cutting wheel arranged at the rear of the guide-way; traction wheels on which the guide-way is mounted; a driving connection between a traction wheel and the cutter; and a driving connection between a drive wheel and the crowding device.

5. In a gathering and cutting machine, the combination of a guide-way wider at the front than at the rear; gathering projections extending from the front of the guide-way; a gathering wheel over the guide-way; a guide plate over the guide-way; a cutting wheel arranged at the rear of the guide-way; traction wheels on which the guide-way is mounted; a driving connection between a traction wheel and the cutter; a driving connection between a drive wheel and the crowding device; and an auxiliary crowding device at the rear of the guide-way.

[Claims 6 and 7 not printed in the Gazette.]

1,212,973. VEHICLE-TIRE. WILLIAM T. LUPTON and JAMES McS. LUPTON, Martinsburg, W. Va., and JOHN W. JOLLIFFE, Clear Brook, Va. Filed Jan. 28, 1914. Serial No. 814,994. (Cl. 152—18.)

1. A tire armor comprising substantially parallel wire strands and hinge members of sheet metal having their ends recurved about adjacent strands, said hinge members before application to said strands being formed with their ends of less width than the central portion thereof to provide space between the ends of adjacent hinge members for the prevention of friction when the structure is assembled.



2. A tire armor comprising substantially parallel wire strands and hinge members of sheet metal having their ends recurved about adjacent strands and closely embracing the same, said hinge members leaving open the space between the strands and the recurved ends of said hinge members on one side of said hinge members and forming a substantially smooth surface on the opposite side of the strands, the plurality of hinge members being arranged with all of the ends thereof on one side of the strands, the surface opposite thereto being composed of a plurality of the smooth central surfaces of each hinge member.

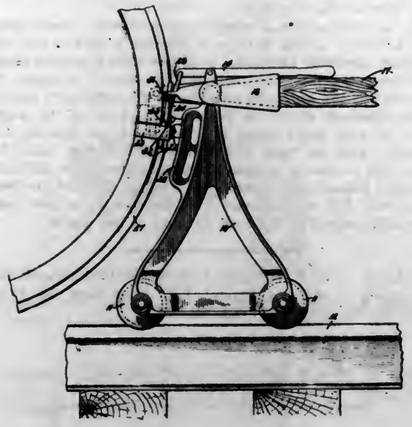
3. A tire casing provided with an armor embedded therein, comprising substantially parallel wire strands and hinge members of sheet metal having their ends recurved about adjacent strands and closely embracing the same, said hinge members leaving open the space between the strands and the recurved ends on one side of said hinge members and forming a substantially smooth surface on the opposite side of the strands, the plurality of hinge members being arranged with all of the ends thereof on one side of the strands, the surface opposite thereto being composed of a plurality of smooth central surfaces of each hinge member.

4. A tire casing provided with a tire armor embedded therein comprising a single wire wound into a form substantially that of a pneumatic tire casing, the two ends of the wire being at opposite sides of the structure, and hinge members of sheet metal having their ends recurved about adjacent strands, successive members on one strand extending in opposite directions and recurved about the adjacent strand on either side to closely embrace the same and present a smooth surface on the inner side of said armor formed of a plurality of the smooth central portions of said hinge members, said hinge members before application to said strands being formed with their ends slightly reduced in width to provide space between said ends and prevent friction when the structure is complete.

1,212,974. CAR-MOVER. CHARLES McCARTER, Decatur, Ill., assignor of one-half to Charles F. Evans, Decatur, Ill. Filed Apr. 25, 1916. Serial No. 93,880. (Cl. 105—132.)

1. A car mover comprising a frame, a lever fulcrumed on the frame, a clamp for engaging the sides of a car wheel operable by the movement of the lever, and a boss extending from the frame for guiding the movement of the clamp.

2. A car mover comprising a frame, rollers therefor for riding on a rail, a double crank shaft mounted to rock in the frame, the two cranks being directed oppositely, one of said cranks having a socket, a lever engaging said socket whereby the shaft may be rocked, a lug extending from said socket having crank in a direction parallel to the second crank, said lug being shorter than said second crank, and a clamp suspended from said lug and second crank to engage or disengage the sides of a car wheel when said shaft is rocked.



3. A car mover comprising a frame, rollers therefor for riding on a rail, a bearing at the top of the frame disposed transversely thereof, a double crank shaft in said bearing, the two cranks being disposed oppositely, one of said cranks having a socket, a lever engaging said socket, a lug extending from said crank having a socket in the same direction with the second crank, said lug being of a shorter length than said second crank, a clamp for engaging the sides of a car wheel, links connecting said clamp to the lug and said second crank, and means for moving the clamp between the lug and the second crank.

4. A car mover comprising a frame, rollers therefor for riding on a rail, a clamp for engaging the sides of a car wheel, a lever fulcrumed on the frame, and means for connecting the lever to the ends of the clamp so that one end of the clamp has a greater movement than the other during the movement of the lever, whereby said clamp may be caused to engage or disengage the car wheel.

5. A car mover comprising a frame, a movable clamp having a fixed jaw and a movable jaw for engaging the sides of a car wheel, a rocking shaft on the frame engaging the fixed and movable jaws of the clamp, and means for actuating the shaft whereby the jaws are caused to engage or disengage the car wheel, said clamp having means for guiding the movement of the clamp.

[Claims 6 to 10 not printed in the Gazette.]

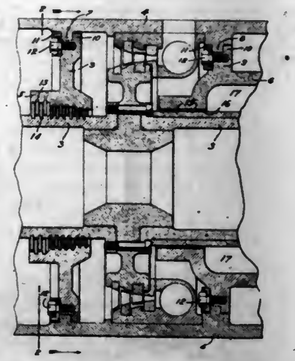
1,212,975. ELASTIC-FLUID TURBINE. JOHN A. MACMURCHY, Wilkinsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Aug. 25, 1913. Serial No. 786,494. (Cl. 253—69.)

1. In a turbine, a casing divided on a plane passing through the axis of the rotor inclosed therein, an internal cylinder coöperating with the rotor and divided in semicircular sections, and clamping means for removably securing each section of the internal cylinder to one of the sections of the casing.

2. In a turbine, an inclosing casing for the rotor of the turbine, an internal cylinder within the casing and surrounding the rotor, and means for removably clamping the cylinder to an imperforate part of the casing.

3. In a turbine, an inclosing casing for the rotor element of the turbine provided with a cylinder supporting shoulder on the inner face thereof, an internal cylinder mounted on said shoulder, and means for gripping said shoulder and for removably securing the cylinder thereto.

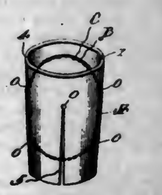
4. In a turbine, an inclosing casing for the rotor element of the turbine, having an internal annular shoulder formed thereon, an internal cylinder located within the casing and surrounding and coöperating with the rotor element, and a clamp ring mounted on the internal cylinder for engaging the shoulder and for removably mounting the cylinder on the casing.



5. In a turbine, an inclosing casing for the rotor of the turbine, having an imperforate cylinder-mounting shoulder formed thereon, an internal cylinder located within the casing and surrounding the rotor, and means for clamping said cylinder to said shoulder.

[Claim 6 not printed in the Gazette.]

1,212,976. EGG-HOLDER. GUSTAVE HUGER MAGER, New Orleans, La. Filed Mar. 22, 1916. Serial No. 85,895. (Cl. 217—29.)



1. An egg container adapted to contain individual eggs, comprising a tapered hollow shell provided with oppositely disposed slots in the sides thereof, and a resilient band engaging in said slots and being adapted to engage the opposite ends of the egg, substantially as described.

2. An egg container adapted to contain individual eggs, comprising a tapered hollow shell provided with oppositely disposed slots in the sides thereof, and a resilient band engaging in said slots and being adapted to engage the opposite ends of the egg, the said hollow shell being also provided with an elongated slot extending through the smaller end thereof, and adapted to permit the expansion or contraction of the smaller end of said tapered shell, substantially as described.

3. An egg container adapted to contain individual eggs, comprising a pyramidal hollow shell provided with oppositely disposed slots in the sides thereof, and a resilient band engaging in said slots and adapted to engage the opposite ends of the egg, substantially as described.

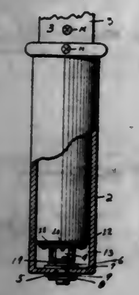
4. An egg container adapted to contain individual eggs, comprising a hollow pyramidal shell provided with oppositely disposed slots in the sides thereof, and a resilient band engaging in said slots and being adapted to engage the opposite ends of the egg, the said hollow shell being also provided with an elongated slot extending through the small end thereof, and adapted to permit the expansion or contraction of the smaller end of said tapered shell, substantially as described.

5. A blank adapted for use with egg containers of the character described, comprising a wedge-shaped strip pro-

vided with short slots on its opposite edges and an elongated slot extending from the narrow side of said wedge, substantially as described.

[Claim 6 not printed in the Gazette.]

1,212,977. WHIP-LOCK. HENRY T. MALLEN, Chillicothe, Ill. Filed Jan. 6, 1916. Serial No. 70,677. (Cl. 21—130.)



1. In a whip lock, in combination, a whip socket, a whip, a bracket member attached to the bottom of the whip, a portion thereof spaced from the butt and provided with a centrally disposed opening and a slotted way from the periphery of said opening, a post member attached to the bottom of the whip socket and extending upwardly therefrom, provided with a winged member radiating therefrom for correlation and entrance through the slot in the bracket member.

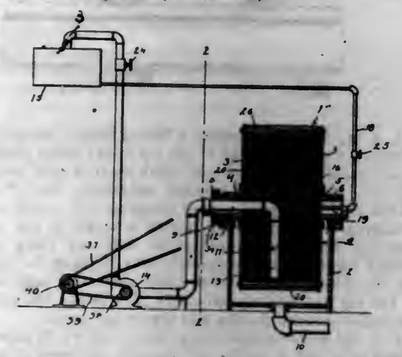
2. In a whip lock, in combination, a whip socket, a whip, a post member secured to and extending upwardly from the bottom of the whip socket and provided with a plurality of laterally disposed lugs of varying width, a bracket member attached to and spaced from the butt of the whip, provided with a centrally disposed opening for register with the post member and with slots radiating from the periphery of said opening, said slots in the bracket and the lugs on the post adapted to register for entrance of the post into the bracket member for establishing a lock.

3. In a whip lock, in combination, a whip socket, a whip, a post secured to and extending upwardly from the bottom of the whip socket provided with a plurality of stud members of varying width extending laterally therefrom, a bracket member attached to the butt of the whip and a portion thereof spaced therefrom, said bracket member being provided with an opening for register with the post member, and with plural slots of varying width radiating from the periphery of said opening and conforming one of each of said slots with one of each of said winged members on the post, whereby entrance of the post may be had through the opening and slots in the bracket to effect a lock, and a slide member upon the bracket adapted to be passed over a slot member in said bracket to prevent entrance of the post member into the opening in the bracket, or to be moved from such closure to permit entrance of the parts named.

4. In a whip lock, in combination, a whip socket, a whip, a post secured to and extending upwardly from the bottom of the whip socket provided with a plurality of stud members of varying thickness extending laterally therefrom, a bracket member attached to the butt of the whip and a portion thereof spaced therefrom, said bracket member being provided with an opening for register with the post member, and with plural slots radiating from the periphery of said opening and conforming one of each of said slots with one of each of said winged members on the post, whereby entrance of the post may be had through the opening and slots in the bracket to effect a lock, a slide member upon the bracket adapted to be passed over a slotted member in said bracket to prevent entrance of the post member into the opening in the bracket, or to be moved from such closure to permit entrance of the parts named, and markings respectively upon the whip and whip socket as a guide for entrance and withdrawal of the interlocking members.

5. In combination, a whip, a whip socket, a post member attached to the bottom of the whip socket and extending upwardly therefrom provided with a winged member extending laterally therefrom, a bracket attached to the butt of the whip, the same being provided with spaced walls disposed above the plane of the butt of the whip, each of said walls being provided with an opening for register with the post and with a slotted way radiating from the periphery of said openings disposed in different vertical planes, said slotted ways being designed for register with the winged member on the post by proper relative adjustment to facilitate locking of the parts.

1,212,978. PULP SAVING AND WASHING MACHINE. JOSEPH E. MALONE, Bristol, Va. Filed Sept. 30, 1916. Serial No. 123,037. (Cl. 92—36.)



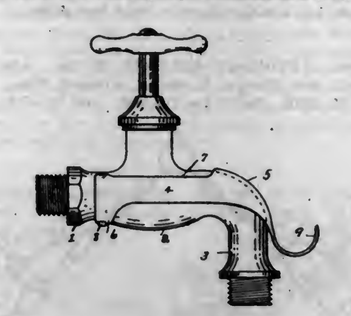
1. A machine of the class described including a receptacle, a rotary cylinder operating in the receptacle and having imperforate sides and the foraminous periphery, a suction pipe extending through the cylinder at one side thereof and having a depending arm terminating adjacent to the bottom of the cylinder, and a pipe extending through the opposite side of the cylinder and provided with a nozzle having a slit and arranged to direct the liquid against the interior of the cylinder for removing material from the exterior of the same.

2. A machine of the class described including a receptacle, a rotary cylinder having solid sides and a foraminous periphery operating in the receptacle, said cylinder being provided with hollow journals, a suction pipe extending through one of the hollow journals and operating within the cylinder and a spray or jet pipe extending through the other hollow journal and having a nozzle arranged to discharge against the inner face of the periphery of the cylinder.

3. A machine of the class described including a receptacle, a supply pipe connected with the receptacle at the bottom thereof, a cylinder having a foraminous periphery and operating in the receptacle, an elevated storage tank, a suction pipe operating within the cylinder and connected with the storage tank, and a spray or jet pipe also connected with the storage tank and having a nozzle operating within the cylinder.

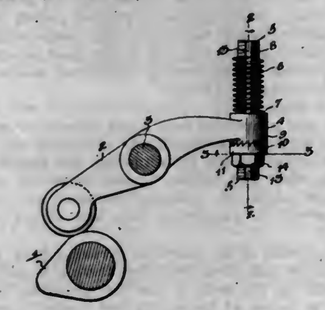
1,212,979. RECEPTACLE-SUPPORTING FAUCET ATTACHMENT. COLIN MANN, Boothbay Harbor, Me. Filed June 2, 1916. Serial No. 101,374. (Cl. 137—4.)

A receptacle supporting faucet attachment comprising a main body part adapted to conform to the enlarged valve containing section of the faucet, a bearing adapted to conform to the downwardly curved nozzle portion of the faucet, means adapted to engage the underside of the faucet back of the enlarged part thereof and a receptacle



support, said attachment being provided with an opening to admit the faucet.

1,212,980. TAPPET FOR VALVES. RODNEY W. MANNING, Riverside, R. I. Filed June 26, 1916. Serial No. 105,999. (Cl. 74—47.)



1. In a device of the character described, a lever pivoted between its ends, an internally threaded sleeve part on one end thereof having an annular series of ratchet teeth on its lower edge, an externally threaded rod engaged with the threads of the sleeve part and provided with a longitudinal key way, a disk having an inwardly extending key slidably engaged in the way of the rod and a series of ratchet teeth interlocking with the sleeve teeth, a nut threaded on the rod for serving as a keeper to the disk, and a spring tending to turn the rod.

2. In a device of the character described, a lever pivoted between its ends, an internally threaded sleeve part on one end thereof having an annular series of ratchet teeth on its lower edge, an externally threaded rod engaged with the threads of the sleeve part and provided with a longitudinal key way, a disk element slidable on the rod in interlocking relation with the key way, said disk having a part for engaging the ratchet teeth of the sleeve, means releasably holding the disk part in engagement with the teeth of the sleeve, and means for rotating the rod in the sleeve part.

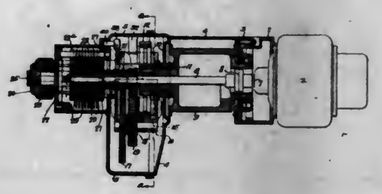
3. In a tappet for overhead valves, a lever having a sleeve part, a rod threaded through the sleeve part, a torsional spring on one end of the rod secured thereto and to the sleeve part, a disk on the other end of the rod having teeth engaging the sleeve part, and means releasably holding the disk teeth in engagement with the sleeve part, said disk being mounted on the rod for sliding only.

4. In a tappet for overhead valves, a lever having a sleeve part, a rod threaded through the sleeve part, a torsional spring on one end of the rod secured thereto and to the sleeve part, a disk disposed on the opposite end of the rod for sliding only and provided with means for interlocking with the sleeve part, and means for holding the disk on the rod.

5. In a tappet, a lever having a sleeve part on one end provided with a series of ratchet teeth, a rod threaded in the sleeve part, spring means tending to rotate the rod for advancing the latter in the sleeve part, means slidable on the rod for engaging the teeth of the sleeve part, and means releasably holding the second means in engagement with the teeth of the sleeve part.

[Claims 6 and 7 not printed in the Gazette.]

1,212,981. HOISTING MECHANISM. FRANK MARIS and CHARLES E. MARIS, Lansdowne, Pa., assignors to Anna Pickering Maris and Elizabeth Pennock Maris, Lansdowne, Pa. Filed Oct. 6, 1914. Serial No. 865,330. (Cl. 254—168.)



1. The combination in a hoisting apparatus of a motor; a drum; means including a bodily rotatable structure for transmitting power from the motor to the drum; and holding mechanism automatically actuated by bodily rotation of said structure for preventing revolution of said drum under predetermined conditions.

2. The combination in a hoisting apparatus of a motor; a drum; gearing of which a portion is bodily rotatable connecting the motor and the drum; and holding mechanism actuated by bodily rotation of a portion of said gearing for preventing revolution of said drum under predetermined conditions.

3. The combination in a hoisting apparatus of a motor; a drum; means including gearing for transmitting power from the motor to the drum; a holding clutch; and a lever mechanism actuated by said gearing for causing said power transmitting means to apply the clutch to prevent revolution of the drum under predetermined conditions.

4. The combination in a hoisting apparatus of a motor; a drum; means for operatively connecting said motor and drum, including gearing and a rotatable member supporting a portion of said gearing and mounted to exert a pressure proportional to the load on the drum; with a clutch actuated by bodily rotation of said portion of the gearing for preventing rotation of the drum under predetermined conditions.

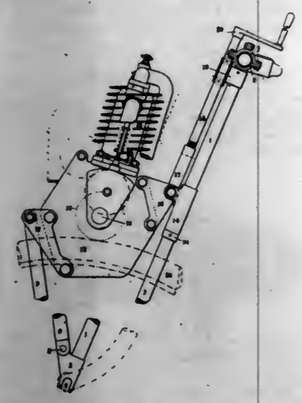
5. The combination in a hoisting apparatus of a motor; a drum; a rotatably mounted frame; gearing carried by the frame for operatively connecting the motor and the drum; and means actuated by the frame when the drum tends to turn in one direction, for preventing revolution of said drum.

[Claims 6 to 18 not printed in the Gazette.]

1,212,982. MOTOR ATTACHMENT FOR CYCLES. RAYMOND (GEORGES AIMÉ MAUCLAIRE, Asnières, France. Filed June 17, 1914. Serial No. 845,528. (Cl. 21—90.)

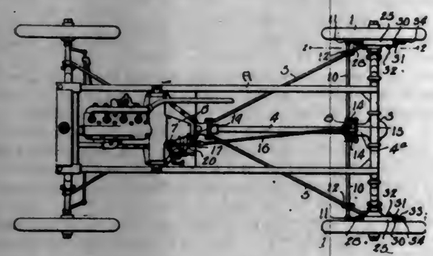
1. In a removable motor unit, capable of being fitted rapidly to a cycle, means for attaching a motor unit to a cycle, consisting of a pair of stays clamped to part of the cycle, slides on the said stays to which part of the motor crank case is pivoted, a nut connected to the slides, a longitudinally fixed screwed rod provided with a crank handle and screwing into said nut, and a second pair of stays pivoted at their lower ends to the first mentioned stays and pivoted at their upper ends to part of the motor crank case.

2. In a removable motor unit, capable of being fitted rapidly to a cycle, means for attaching a motor unit to a cycle, consisting of a pair of stays clamped to part of the cycle, slides on the said stays to which part of the motor crank case is pivoted, a nut connected to the slides, a longitudinally fixed screwed rod provided with a crank handle and screwing into said nut, and a second pair of



stays pivoted at their lower ends to the first mentioned stays and pivoted at their upper ends to part of the motor crank case, the said first stays being clamped at their upper ends to the handle bar and provided at their lower ends with slotted lugs to be fixed to the axle of the front wheel.

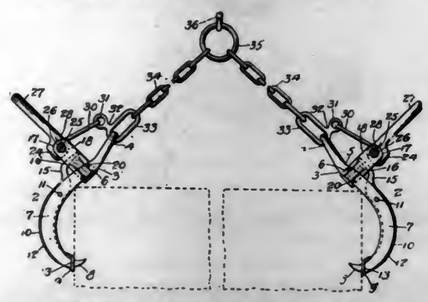
1,212,983. VEHICLE-BRAKE ATTACHMENT. WILLIAM H. MAYO, Royalton, Vt. Filed Feb. 4, 1916. Serial No. 76,107. (Cl. 21—8.)



1. A service brake attachment for automobiles of the Ford type which are characterized by a foot pedal operated service brake acting upon the transmission and an emergency brake including standard brake drums on the rear wheels, said brake attachment including auxiliary brake drums fitted over the standard brake drums and centered upon the wheels thereby, brake bands for the auxiliary brake drums, an auxiliary lever mounted upon the transmission case, an operative connection between the auxiliary lever and the brake bands, and an operative connection between the auxiliary lever and the standard service brake foot pedal.

2. A service brake attachment for automobiles of the Ford type which are characterized by a foot pedal operated service brake acting upon the transmission and an emergency brake including standard brake drums on the rear wheels, said brake attachment including auxiliary brake drums fitted upon the standard brake drums and centered upon the wheels thereby, a detachable bearing clip clamped upon the drive shaft housing, bearing clips clamped upon the radius rods, brake shafts journaled upon the bearing clips, brake bands applied to the auxiliary brake drums and operatively connected to the brake shafts, and an operative connection between the brake shafts and the standard service brake foot pedal.

1,212,984. AUTOMATIC-RELEASE HOOK. ANTON F. MAZOCH and EDWARD SLADECEK, Granger, Tex. Filed June 15, 1916. Serial No. 103,906. (Cl. 57—9.)



1. An automatic release hook comprising two hook members, flexible means for supporting and joining said hook members, spring actuated pivoted guards for said hook members, means for moving and temporarily holding the guards beyond the ends of the hook members and means operated by the flexible connecting means for releasing the last named means.

2. In a device of the character stated, a pair of hook members each comprising twin hooks, guards for said hook members, means for automatically operating said guards in one direction, means for actuating said guards in the other direction, and flexible means connected with the last named means for releasing the same and with the hook members for supporting them and joining them together.

3. In a device of the character stated, a hook, supporting means for said hook connected thereto, a spring actuated guard for the hook, a cam for operating the guard against the action of the spring and means connected to the supporting means and the cam for releasing said cam.

4. In a device of the character stated, a hook, a guard therefor, a spring for actuating said guard in one direction, a cam for actuating said guard in the opposite direction, and means connected to the hook and cam for supporting the hook and releasing the cam.

5. In a device of the character stated, a pair of hook members each comprising twin hooks consisting of an eye, diverging portions projecting from said eye, parallel portions or shanks, diverging arcuate hook arms terminating in tines smaller than the arms, thereby forming shoulders, guards pivoted to said hook arms, means for normally forcing said guards in that direction which will cause them to project beyond the ends of the tines, a cam for forcing the guards in the opposite direction, and means connected to the eye of the hook member and to the cam for supporting and joining the hook members, and releasing the cams.

[Claims 6 to 9 not printed in the Gazette.]

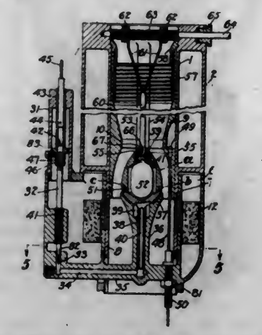
1,212,985. SHOE-SOLE. LEON F. MONTGOMERY, Fort Recovery, Ohio. Filed Nov. 23, 1915. Serial No. 62,982. (Cl. 36—31.)



1. A shoe sole comprising a cut piled fabric having the weft fibers normal to one surface of its basis, said fabric having the outer edge of its weft fibers removed so that a portion of the basis projects beyond said fibers, and a marginal strip secured around the weft fibers and against said projecting portion of said basis to prevent the spreading and lateral movement of the fibers.

2. A shoe sole comprising a cut piled fabric having the weft fibers normal to one surface of its basis, a rubber compound filling for the fabric, said fabric having the weft fibers removed at the outer edge, a marginal strip secured around said outer edge having its inner vertical edge abutting the weft fibers to prevent the spreading thereof, said strip being formed integral and extending around the sole and heel, and means to secure the free ends of said strip together.

1,212,986. CARBURETER. WILLIAM J. P. MOORE, New York, N. Y. Filed Apr. 2, 1915. Serial No. 18,657. (Cl. 261—12.)



1. In a carbureter, the combination of a main casing, a valve seat movable therein, means for moving said valve seat, a ring inserted in the casing, a resilient connection attached to the ring and also to the seat, and acting to return the seat after it has been moved by the aforesaid means, a float valve arranged movably with relation to the valve seat, a fuel chamber, a float therein, means for admitting fuel to said chamber, and a needle valve for allowing the fuel to pass from the fuel chamber into the mixing chamber.

2. In a carbureter, the combination of a main casing, a valve seat reciprocable therein, means for moving it, a ring inserted in the casing, resilient means attached to the ring and to the seat for the purpose of returning the seat after its movement, a valve having a limited floating movement with relation to the seat, a fuel chamber, a float therein, means for admitting fuel to the chamber, and a needle valve for allowing the fuel to pass from the chamber into the mixing chamber.

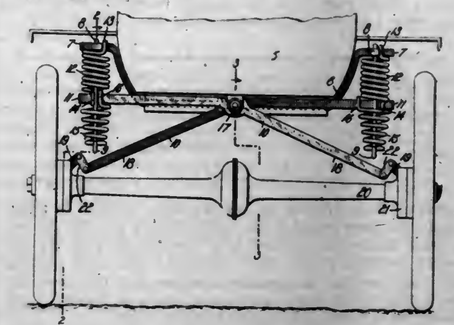
3. In a carbureter, the combination of a main casing, a valve seat consisting of a Venturi tube movable therein, a floating valve within the Venturi tube, a yielding connection between the tube and the casing for urging the seat away from the valve to provide a wider opening, a ring within the casing to which the yielding connection is attached, means for moving the tube nearer the valve to contract the opening, a fuel chamber, a float within said chamber, means for admitting fuel to the chamber, a needle valve for allowing the fuel to pass from the chamber into the mixing chamber.

4. In a carbureter, the combination of a main casing, a Venturi tube movable therein, a floating valve within the Venturi tube, means for moving said Venturi tube, a ring within the casing, resilient means attached to the said ring and to the Venturi tube for the purpose of returning said Venturi tube after it is moved by the aforesaid means, a fuel chamber, a float therein, a valve for admitting fuel to the chamber, a needle valve for allowing the fuel to pass from the chamber into the mixing chamber, and means for operating the valves.

5. In a carbureter, the combination of a main casing, a Venturi tube movable therein, a floating valve within the Venturi tube, means for moving said Venturi tube so as to contract the opening between it and the valve, resilient means for returning it after such movement, means inserted in the casing to which means said resilient means is attached by a few of its coils, a fuel chamber, a float therein, and a valve operated by the float for admitting fuel to said chamber, together with means for allowing the fuel to pass from said chamber to the mixing chamber.

[Claims 6 to 20 not printed in the Gazette.]

1,212,987. VEHICLE-SPRING. LLOYD E. MORROW, Sanford, Fla. Filed May 11, 1916. Serial No. 96,807. (Cl. 267—8.)



1. In a vehicle spring, a vehicle body, vertically disposed springs one connected to each side of the body, an axle, and two transversely disposed supporting means connected with the axle one at each side of the vehicle body, each supporting means having a horizontal arm disposed in engagement with a spring at the side of the body which is opposite the side at which it is connected with the axle.

2. In a vehicle spring, a vehicle body, vertically disposed springs one connected to each side of the body, an axle, and transverse levers of the first class having one set of arms connected with the ends of the axle and their other arms disposed horizontally and engaging the springs for the purpose specified.

3. In a vehicle spring, a vehicle body, springs one connected to each side of the body, an axle, and two transverse levers of the first class pivoted together substantially at the central longitudinal line of the vehicle body and having one set of arms connected with the ends of the axle and their other arms connected with the springs for the purpose specified.

4. In combination with an axle and a vehicle body, two vertical springs connected with the vehicle body one at each side, two transverse levers of the first class, means connecting one set of arms of the levers with the ends of the axle, the other set of lever arms being disposed horizontally and engaging the springs.

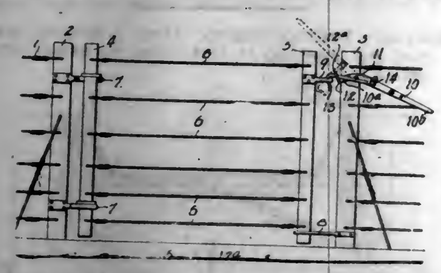
5. In combination with a vehicle body and an axle, a cradle in which the body is supported and having horizontally disposed offset portions, two transverse levers, means connecting one set of arms of the levers with the ends of the axle, the other arms being disposed horizontally, and springs disposed between and connecting the said other arms of the levers and the said offset portions of the cradle.

[Claims 6 to 17 not printed in the Gazette.]

1,212,988. WIRE-GATE FASTENER. ARCHIBALD J. MURRAY, Unity, Oreg. Filed Jan. 10, 1916. Serial No. 71,256. (Cl. 39—74.)

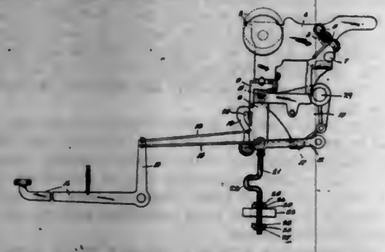
The herein described wire gate fastener, including a looped keeper adapted to be applied to the end bar of a flexible wire gate, a headed pivot bolt adapted to be applied to the latch post, a locking lever pivotally mounted upon the said pivot bolt and provided at the pivot end thereof with an extension which is arranged at an angle to the body portion of the locking lever, said extension terminating in a laterally projecting arm which is pro-

vided at the end thereof with an upwardly extending guard finger, and a hooked member pivotally connected to the locking lever at a point spaced from the pivot bolt and on the opposite side from the extension, said hook member being adapted to engage the looped keeper to draw the gate taut, and the body portion of the hook member being offset outwardly to clear the head of the pivot bolt, the



swinging movement of the locking lever incident to tightening the gate bringing the hook member slightly beyond a dead center position and into engagement with the laterally projecting arm, the pull of the gate then holding the hook member in operative position and the upwardly projecting guard finger preventing the hook member from becoming laterally disengaged from the arm.

1,212,989. CARRIAGE-SHIFT STOP FOR TYPE-WRITING MACHINES. LEWIS C. MYERS, Brooklyn, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Sept. 25, 1914. Serial No. 863,439. (Cl. 197—81.)



1. In a typewriter, a shiftable carriage supporting frame, a rod secured to said frame and having a shock absorbing offset mediate its ends, means for shifting the carriage shift frame and means applied to the rod for stopping the carriage in its two set positions.

2. In a typewriter, a shiftable carriage supporting frame, a rod secured to said frame and having a shock absorbing offset mediate its ends connected at its upper end to the carriage shift frame, means for shifting the carriage shift frame and means applied to the lower part of the rod for stopping the carriage in its two set positions.

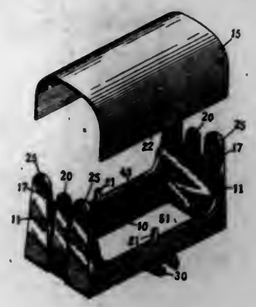
3. In a typewriter, a shiftable carriage supporting frame, a rod secured to said frame and having a shock absorbing offset mediate its ends connected at its upper end to the carriage shift frame, means for shifting the carriage, a lug on the main frame of the machine through which the lower part of the rod passes, and means on the lower part of the rod for adjustably stopping it in two directions.

4. In a typewriter, a shiftable carriage supporting frame, a rod secured to said frame and having a shock absorbing offset mediate its ends connected at its upper end to the carriage shift frame, means for shifting the carriage shift frame, a lug on the main frame of the machine through which the lower part of the rod passes and adjustable nuts on the rod above and below the lug.

5. In a typewriter, a shiftable carriage supporting frame, a rod secured to said frame and having a shock absorbing offset mediate its ends connected at its upper end to the carriage shift frame, means for shifting the carriage shift frame, a lug on the main frame of the machine through which the lower part of the rod passes, adjustable nuts on the rod above and below the lug and sound deadening washers on the rod between the nuts and the lug.

[Claim 6 not printed in the Gazette.]

1,212,990. CONCRETE-INSERT. HENRY B. NEWHALL, Jr., Plainfield, and HENRY W. PLEISTER, Westfield, N. J.; said Pleister assignor to said Newhall. Filed May 21, 1915. Serial No. 29,474. (Cl. 72—105.)



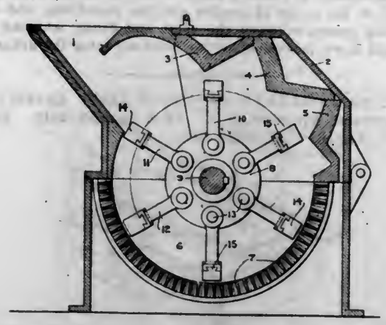
1. A concrete insert comprising a skeleton frame for supporting a hanger and having lugs on the sides thereof and a cover having openings to receive said lugs, said lugs projecting through said openings in the cover having downturned hooked ends to thereby draw the cover down on the skeleton frame.

2. A concrete insert comprising a relatively heavy metal frame having spaced apart supporting ledges, closed ends connecting said ledges in spaced apart relation, and upstanding bendable lugs on said closed ends, an arched sheet metal cover engaging said closed ends and forming in conjunction therewith a closed chamber above the ledges, certain of the upstanding lugs on said closed ends being bent over said cover to hold the same in place and others of said lugs being bent outwardly to form laterally extending anchorages and a fixture support extending up into the closed chamber and supported by the supporting ledges.

3. A concrete insert comprising a relatively heavy load-supporting skeleton frame open at the top and having supporting ledges spaced apart by a slot extending substantially the full length of the frame and closed ends connecting said ledges in such spaced relation provided with arched upper edges, a relatively light arched cover fitted over the closed ends of the frame and bearing on the arched upper edges of said closed ends and thereby braced and supported by said closed ends, said cover extending down over the sides of the frame and thereby forming in connection with said sides and closed ends a closed chamber above the supporting ledges and upstanding lugs on the closed ends of the frame engaging the ends of the cover to prevent endwise displacement of said cover from the arched supporting edges of the closed ends of the frame and adapted further to guide the cover down into proper engagement over the closed ends and sides of frame.

1,212,991. IMPACT-PULVERIZER. RAY C. NEWHOUSE, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Oct. 20, 1911. Serial No. 655,716. (Cl. 83—11.)

1. In combination, a rotary shaft, and a series of ball-shaped beaters suspended from said shaft, each of said beaters comprising a pair of spaced radial suspension arms and a cross-bar detachably secured to the outer ends of said arms and extending longitudinally of said shaft, and the bars of successive beaters being of different thicknesses.



2. In combination, a rotary element, a pair of arms each having a threaded end, a pivot for suspending said arms from said element, and a beater having threaded sockets engaging said threaded arm ends, said pivot serving to lock said arms against movement relative to said beater.

3. In combination, a rotor comprising a plurality of beaters of progressively different thickness, diametrically opposite beaters being of substantially like thickness.

4. In combination, a rotor comprising several series of beaters, each beater comprising a plurality of spaced suspension arms and a bar secured to said arms, the bars of successive beaters of each series being of different thickness, and diametrically opposite beaters of said rotor being of like thickness.

1,212,992. ANTIFRICTION DEVICE. ADELAIDE E. O'BRIEN, St. Louis, Mo. Filed Oct. 9, 1915. Serial No. 55,045. (Cl. 64—38.)



1. An anti-friction device comprising a hollow open-ended member, consisting of a flange having a plurality of resilient V shaped members depending from its inner edge, and forming the walls defining said hollow member, certain of said resilient V shaped members being formed with a perforation, and a roller including a pair of trunnions rotatably mounted in the perforations of the hollow member, the perforation bearing resilient members adapted to be pressed apart in opposite directions to allow the trunnions to enter said perforations or to be removed therefrom.

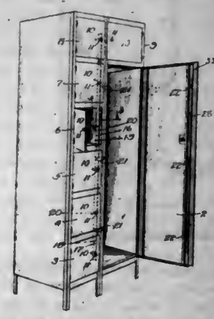
2. In combination with a support having a pit, an anti-friction device comprising a hollow member open at each end and having a dentated lateral wall and a flange, said flange being borne adjacent the outer end of said hollow member and the dentations of said wall being directed away from said flange, and a roller revolubly mounted in said member, the points of said dentations being for driving engagement into the bottom wall of said pit in the support so as to extend in the latter beyond the pit to frictionally hold the hollow member in position therein.

3. In combination with a support having a pit, an anti-friction device comprising a hollow member open at each end and having a dentated lateral wall and a flange, said flange being borne by one end of said wall and being adapted to surround the opening at one of the ends of said member, the dentated portions of said wall extending away from said flange, and a roller revolubly mounted in said member and disposed so that its bottom is spaced away from the plane that lies tangentially of the points of said dentations, the points of said dentations being for driving engagement into the bottom wall of said pit in the support so as to extend in the latter beyond the pit frictionally to hold the hollow member in position in said pit.

4. In combination with a support having a pit, an anti-friction device comprising a hollow member open at each end and having a dentated lateral resilient wall and an annular flange extending therefrom, said flange being borne adjacent the outer end of said hollow member and the dentations of said resilient wall being directed away from said flange, and a roller revolubly mounted in the resilient member, said wall designed to be sprung into said pit for frictional engagement with the inner surface of the pit, said flange adapted to limit the depth that the wall may enter said pit.

5. In combination with a support having a pit, an anti-friction device comprising a hollow member open at each end and having a dentated lateral wall and a flange, said flange being borne adjacent the outer end of said hollow member and the dentations of said wall being directed away from said flange, and a roller revolubly mounted in said member, the extreme inner ends of said dentations being for driving engagement into the bottom wall formed by said pit in the support so as to extend in the latter beyond said pit to frictionally hold said hollow member in position, said flange being adapted to limit the depth to which said dentations may enter into said bottom wall.

1,212,993. LOCKER AND CABINET. JOHN B. O'CONNOR, Aurora, Ill., assignor to Lyon Metallic Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed May 18, 1916. Serial No. 98,268. (Cl. 45—37.)



1. The combination, with a community locker, of a plurality of individual lockers grouped adjacent to the community locker and all provided with doors, the individual lockers having individual locking means, operable from the outside, and the community locker having locking means operable from the inside of each of the individual lockers, whereby any tenant of the individual lockers may also have access to the community locker after opening his individual locker, but access to the community locker may be had only after one of the individual lockers has been opened.

2. In a structure of the class described, the combination of an upright community locker, a stack of individual lockers arranged at the side of the community locker, said lockers all having doors, locking means for the doors of the individual lockers, latching means for holding the door of the community locker closed and releasing means for releasing said latching means, said releasing means being accessible solely from the inside of the individual lockers.

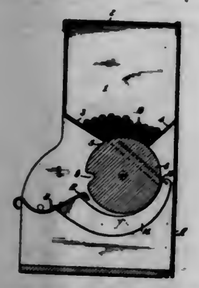
3. In a structure of the class described, the combination of a set of individual lockers, a community locker arranged adjacent to said individual lockers and separated therefrom by a partition, all of said lockers having doors, a releasing bar slidably mounted adjacent to said partition and having handles for its operation extending into the inside of each of the individual lockers, and locking mechanism for the community locker door, the last mentioned locking mechanism being releasable by said releasing bar.

4. In a structure for safe storage, the combination of an upright community locker, a stack of individual lockers arranged at the side of the community locker and separated therefrom by a partition, all of said lockers having doors and locking means for holding them closed, the doors of the individual lockers having individual locks operable from the outside, and releasing means mounted upon said partition, back of the doors, for releasing the locking means of the community locker door, said releasing means being accessible from the inside of each of the individual lockers, whereby said releasing means is out of reach when the doors of the individual lockers are closed, and the doors of the individual lockers swinging away from said partition when moving to open position.

5. In a multiple locker structure, the combination of a stack of individual lockers, a community locker arranged vertically alongside of the stack of individual lockers, all of said lockers having doors, the doors of the individual lockers having individual locks operable from the outside, latches on the inside of the community locker door, keepers on the inside of the community locker in position to be engaged by said latches, and means, a portion whereof extends into the inside of each of the individual lockers for detaching the latches from the keepers.

[Claims 6 and 7 not printed in the Gazette.]

1,212,994. DISPENSING MATCH-HOLDER. CALEB H. ODELL, New York, N. Y. Filed Feb. 18, 1916. Serial No. 79,037. (Cl. 206—22.)



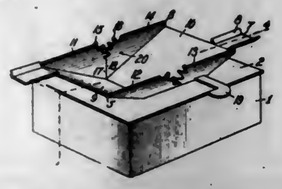
1. A device of the class described comprising a supporting structure including a hopper open at its bottom, a reciprocatory element forming a valve at the opening of the hopper and provided with a pocket for picking up an article from the hopper, and a combined actuator and receiver in the form of a single member mounted on the structure and operatively connected with the element for imparting movement thereto and arranged to receive the dispensed article.

2. An article dispensing device comprising a casing formed with a hopper at its top which has an opening in its bottom and also formed with an open front below the hopper, a swinging shelf in the opening of the casing, and a rotary dispensing element operatively connected with the shelf to receive an article from the hopper and discharge it upon the shelf, said shelf constituting the actuator for the dispensing element, and the axis of the dispensing element being spaced from the axis on which the shelf swings.

3. An article dispensing device comprising a casing containing a hopper having a discharge opening in its bottom, a drum under the opening and forming a valve therefor and provided with a longitudinal pocket to receive an article through the opening, said opening being of such size that a plurality of articles will constantly rest on the drum, a swinging shelf pivoted in front of the drum and adapted to swing on an axis parallel with the drum, an arm connected with the bottom of the shelf and extending rearwardly therefrom, and a link connected with the arm and with the drum for oscillating the latter by the swinging of the shelf, whereby an article is carried by the drum from the hopper and dropped on the shelf.

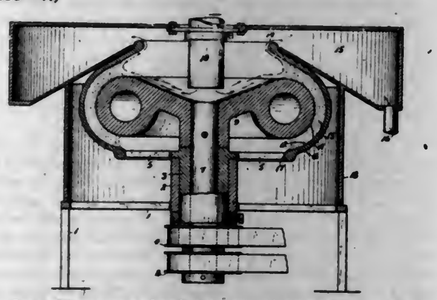
4. An article dispensing device comprising a casing having an open bottom hopper, a drum journaled under the hopper to form a valve therefor and provided with means for picking up an article in the hopper and moving it therefrom, a pivoted shelf disposed in the casing in front of the drum to receive articles therefrom, and connecting means between the shelf and drum, whereby the up and down movement of the shelf actuates the drum.

1,212,995. ASH-TRAY AND CIGAR-REST. ERNEST OLDENBUSCH, Brooklyn, N. Y. Filed Jan. 26, 1916. Serial No. 74,316. (Cl. 131—51.)



In a device of the character described, a box or container having a lid provided with an aperture, and a preliminary ash tray arranged so as to fill said aperture when in operative position, said ash tray comprising a pair of bottom members contacting at their adjacent edges and a pair of upstanding sides having interlocking geared positions so that when one bottom is raised the other will also be raised, each of said bottoms having a horizontal extension projecting beyond said box and acting in the double capacity of a cigar rest and as a handle for moving the preliminary tray.

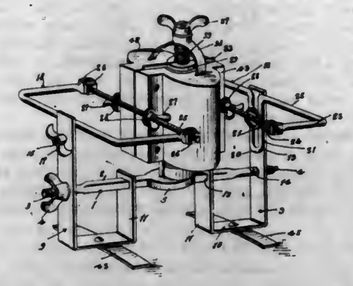
1,212,996. FILTER. THOMAS HARRY PARKER, San Francisco, Cal. Filed Apr. 8, 1916. Serial No. 89,808. (Cl. 233—7.)



1. In a filter a core, having a central depression, a shaft carrying said core and rotatable therewith, a shell projecting over and surrounding said core and provided with an upper opening having an edge and a lower opening, a rotatable sleeve penetrated therethrough by said shaft and upwardly carrying said shell, a receptacle provided with a lower opening surmounting said core and shell, and having a base inclining downwardly from and below the said edge of said shell, and a casing surrounding said shell and sleeve.

2. In a filter a core having a central inclined depression, a shaft carrying said core and rotatable therewith, a shell projecting over and surrounding said core, and provided with an upper opening having an edge and a lower opening, a rotatable sleeve penetrated therethrough by said shaft and upwardly carrying said shell, a receptacle provided with a lower opening surmounting said core and shell, and having a base inclining downwardly from and in alinement with said edge of said shell; a casing surrounding said shell and sleeve, and a pipe extending downwardly through said receptacle and in proximity to the center of said inclined depression.

1,212,997. CASTING DEVICE. WILLIAM E. PATE, Garysburg, N. C., assignor of one-half to William T. Whitehead, Weldon, N. C. Filed Sept. 6, 1916. Serial No. 118,685. (Cl. 22—123.)



1. A device of the class described comprising a bar, a pair of U-shaped frames slidable on the bar, means to adjust said frames on said bar, the outer arms of the frames extending upwardly beyond the inner ends of the arms of the frames, brackets adjustable on the upper ends of the outer arms, a core supported centrally of the bar, threaded bars carried by the brackets, and clamps on the threaded bars for holding bearing boxings in position around the core.

2. In a device of the class described, a bar, a core removably secured centrally to the bar, a pair of U-shaped frames adjustably mounted on the bar, the outer arms of the frames extending upwardly beyond the inner ends of the arms of the frames, brackets adjustably attached to the upwardly extending arms, arms projecting inwardly from the brackets toward the core, threaded bars carried by the inner ends of the last mentioned arms, and clamps on the threaded bars for holding bearing boxes in place around the core.

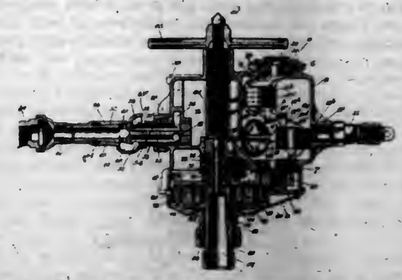
3. In a device of the class described, a bar, a pair of U-shaped frames slidable on the bar, upward extensions on the outer arms of said frames, means to adjust said frames longitudinally of the bar, a core extending upwardly from the central portion of the bar, a dividing plate carried by the core, an inverted yoke adjustable on the upper end of the core, adjustable brackets vertically adjustable on the upward extensions, horizontally extending threaded bars carried by the brackets, and clamps adjustable on the threaded bars to hold bearing boxes in place around the core the holding of said boxes being assisted by the yoke.

4. In a device of the class described, a bar, a pair of U-shaped frames slidable on the bar, upward extensions on the outer arms of said frames, means to adjust said frames longitudinally of the bar, a core extending upwardly from the central portion of the bar, a dividing plate carried by the core, an inverted yoke adjustable on the upper end of the core, brackets vertically adjustable on the upward extensions, horizontally extending threaded bars carried by the brackets, and clamps adjustable on the threaded bars to hold bearing boxes in place around the core the holding of said boxes being assisted by the yoke.

5. A device of the class described comprising a pair of U-shaped frames, a bar connecting said frames, extensions on the outer arms of said frames, means to adjust the frames longitudinally of the bar, vertically adjustable arms at the upper ends of the extensions, the said arms extending toward each other, bars connecting the extreme inner ends of said arms, thumb nuts adjustable on said bars, a core supported centrally of the first mentioned bar and clamping washers actuated by the thumb nuts for engaging the flanges of bearing boxes to hold the same in place on the device and surrounding the core.

[Claim 6 not printed in the Gazette.]

1,212,998. FLUID-MOTOR DRILL. CAID H. PECK, Athens, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 7, 1912. Serial No. 682,173. (Cl. 121—27.)



1. In a fluid pressure engine the combination of a casing, a crank-shaft having bearings therein, a plurality of sets of cylinders radiating from said crank-shart, and pistons having connections with said crank-shaft, said casing being divided substantially through said bearings, said casing having a cap inclosing the ends of the divided casing.

2. In a fluid pressure engine, the combination of a casing, a crank-shaft having bearings therein, a plurality of sets of cylinders in said casing radiating from said crank-shaft, said sets forming an angle to each other, and pistons having connections with said crank-shaft, said casing being divided through said bearings and across said median line of said angle, said casing having a cap inclosing the ends of the divided casing.

3. In a fluid pressure engine, the combination of a casing, a crank-shaft having bearings therein, a plurality of cylinders in said casing radiating from said crank-shaft and forming an angle with each other, and pistons and connections with said crank-shaft, said casing having a division substantially through said bearings and outside of said angle, said casing having a cap inclosing the ends of the divided casing.

4. In a fluid pressure engine, the combination of a casing, a crank-shaft having bearings therein, a plurality of cylinders in said casing radiating from said crank-shaft and forming an angle with each other, and pistons and connections with said crank-shaft, said casing being divided on a line passing through said bearings and substantially perpendicular to the median line of said angle, said casing having a cap inclosing the ends of the divided casing.

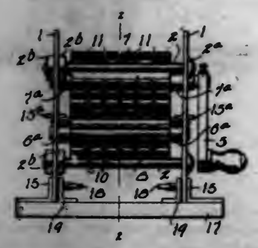
5. In a fluid pressure engine, the combination of a divided casing, a crank-shaft having bearings therein, cylinders in said casing radiating from said crank-shaft and at an angle to each other, said casing having a cap covering said crank-shaft bearings and inclosing the ends of the divided casing.

[Claims 6 to 8 not printed in the Gazette.]

1,212,999. NOISELESS BEEFSTEAK-CONDITIONER. FLOYD R. PEELER, Chester, S. C. Filed July 3, 1915. Serial No. 37,935. (Cl. 17—29.)

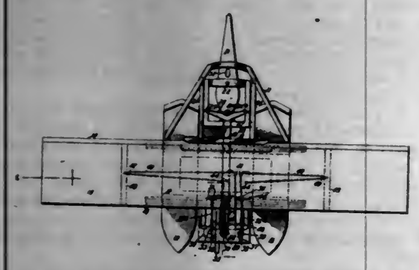
1. A meat tenderer including a supporting frame, a pair of drums journaled upon the supporting frame, a peripheral row of longitudinally extending ribs of substantially the same height projecting from each of the drums, the ribs of the two drums being arranged to mesh with each other and being formed with corresponding peripheral rows of angular notches arranged in planes transverse to the axes of the drums, the notches in the ribs of one of the drums being V shaped while the notches in the ribs of the opposite drum are rectangular, and the mouths of the V shaped notches being wider than the mouths of the rectangular notches so that the sharp corners at the outer ends of the rectangular notches will project between the sides of the V shaped notches and cooperate therewith to cut and tear the meat.

2. A meat tenderer including a supporting frame, a pair of drums journaled upon the supporting frame, a peripheral row of longitudinally extending ribs of the same height projecting from each of the drums, the ribs of the two drums being arranged to mesh with each other as the drums are rotated and being formed with corresponding peripheral rows of angular notches arranged in planes transverse to the axes of the drums, the notches



in the ribs of one of the drums being V shaped and extending entirely to the bases of the ribs while the notches in the ribs of the opposite drum are rectangular and do not extend entirely to the bases of the ribs, the mouths of the V shaped notches being wider than the mouths of the rectangular notches, so that the sharp corners at the outer ends of the rectangular notches will project between the sides of the V shaped notches and coöperate therewith to cut and tear the meat.

1,213,000. HYDROAEROPLANE. LOUIS PHILIP PERRW, North Tonawanda, N. Y. Filed Jan. 21, 1916. Serial No. 73,324. (Cl. 244—29.)



1. A flying machine including separate spaced body sections rigidly connected, a structure slidable in a fore and aft direction between said body sections, and a rudder carried by said slidable structure.

2. A machine of the class described including two buoyant boat-like body sections spaced apart and disposed parallel with each other at opposite sides of the longitudinal center of the machine, a frame supported on said body sections and provided with a plane, means to shift said frame and plane transversely, a structure slidable in a fore and aft direction between said buoyant body sections, and a buoyant boat-like rudder carried by said slidable structure at the rear end of the latter.

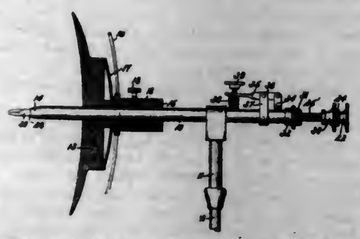
3. A machine of the class described including a buoyant body, planes supported on the body, a structure slidable on the body in a fore and aft direction, and a boat-like rudder carried by said slidable structure.

4. A machine of the class described including a body, a frame transversely slidable on the body, said frame having a plane thereon and movable bodily therewith, a structure slidable in a fore and aft direction on said body beneath the said slidable frame, a rudder carried by said structure, a flexible element connected with said rudder and extending therefrom forwardly to the front of said slidable structure, means on the forward end of the slidable structure for actuating said flexible element, and means for laterally moving the transverse sliding frame and the plane, said last-mentioned means including a drum on the said slidable structure, means for turning said drum, a flexible element wound on said drum and extending rearwardly therefrom in the form of a double strand, guide means on the said slidable structure with which said last-mentioned flexible element has running engagement, the said strands of said element extending laterally in opposite directions and having running engagement with the transversely sliding frame at opposite sides of the longitudinal center of the machine, the strands being returned on themselves and made fast to the said slidable structure.

5. A machine of the class described including separated buoyant body sections, a plane supported on said body sections, a buoyant body-like rudder in the rear of the said body sections, ground wheels on the buoyant body sections, and a steering ground wheel on the buoyant rudder.

[Claim 6 not printed in the Gazette.]

1,213,001. THERAPEUTIC APPARATUS. HERMAN B. PHILIPS, New York, N. Y., assignor to Ralph S. Philips, New York, N. Y. Filed May 2, 1916. Serial No. 94,876. (Cl. 128—28.)



1. The combination of a cannula, a trocar carried by the cannula, and comprising two separable parts, means to adjust the trocar so as to project the point thereof beyond the point of the cannula for making an incision, means to clamp the cannula to the patient for drainage operation, and means to secure one part of the trocar wholly within the outer end of the cannula when the other part is separated therefrom during said drainage operation.

2. The combination of a cannula, a trocar carried within the cannula and comprising a rod and a head detachably connected together, means to adjust the trocar longitudinally of the cannula to cause the point thereof to project beyond the point of the cannula for introducing the cannula, and means carried by the outer end of the cannula to lock the head of the trocar wholly within the outer end of the cannula when the rod is detached during drainage operation.

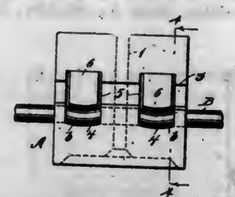
3. The combination of a cannula having a smooth cylindrical bore, a curette slidably fitted in said bore, a trocar slidably fitted within the curette, and means to adjust the trocar and curette independently of each other longitudinally of the cannula.

4. The combination of a cannula having a smooth cylindrical bore, a curette slidably fitted in said bore, means connected to the curette to move it longitudinally of the cannula, means to limit such movement of the curette, and a trocar slidably fitted within the curette and adjustable lengthwise thereof independently of the adjustments of the curette.

5. The combination of a cannula having a smooth cylindrical bore, a curette slidably fitted in said bore and movable outwardly along said bore, means carried by the outer end of the cannula to limit the outward movement of the curette, means carried by the cannula to prevent all movement of the curette when in its outer position, and a trocar carried within the curette and adjustable longitudinally thereof.

[Claims 6 to 8 not printed in the Gazette.]

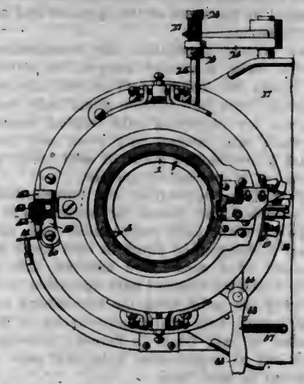
1,213,002. INSULATOR. FRANK C. PIERCE, Campbird, Colo. Filed May 31, 1916. Serial No. 100,796. (Cl. 173—313.)



1. An insulator comprising a block of insulating material having a horizontal passage several times greater in height than in width, and the passage being provided with a side opening intermediate the top and bottom of the passage, whereby wire-receiving seats are provided by the passage at points above and below the opening, there being another horizontal passage extending transversely of the block and crossing the first-mentioned passage, and a wedge driven longitudinally into the second-mentioned passage to clamp a wire against either of the said seats.

2. An insulator of the class described comprising a body having a passage extending from one side thereof to the other, and the passage being in height several times greater than the width of the passage to provide wire-receiving seats at the top or bottom of the passage, there being a second passage extending through the body transversely to the first passage, and a wedge disposed in the second passage to clamp the wire against either of the seats of the first passage.

1,213,003. CIRCULAR FASHIONING KNITTING-MACHINE. ALBERT M. PIGEON, Philadelphia, Pa., assignor to Pigeon Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 25, 1911. Serial No. 629,260. (Cl. 66—24.)



1. In a knitting machine, the combination of a needle cylinder, a series of needles having butts or the like carried thereby, a narrowing picker coöperating with said needle butts, said picker having a shoulder adapted to engage a needle butt at the lower active level, means for supporting said picker whereby the movement of the needle cylinder operates through the needle engaging the shoulder on the picker to move said picker to raise said butt to the full idle level, the upper face of said picker when raised to full extent being substantially in line with the under face of the butts of the idle needles, whereby said picker may pass underneath said butts and clear the same.

2. In a knitting machine, the combination of a needle cylinder; a series of needles having butts or the like carried thereby; a narrowing picker, said narrowing picker having a shoulder adapted to be engaged by the butt of the needle; means for pivoting said picker whereby the same swings about an inclined axis and carries the needle butt from a lower level to an idle level, the outer upper end of the picker being chamfered to clear the butts of the idle series and allow the butt of the needle to be raised to full idle level without disturbing the other idle needles.

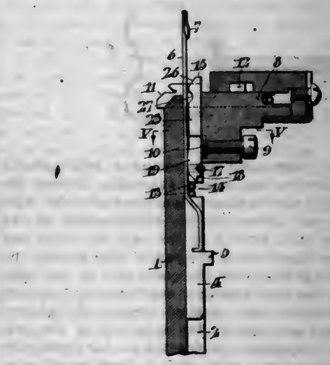
3. In a knitting machine, the combination of a needle cylinder; a plurality of needles carried thereby; needle jacks for engaging and moving said needles, each needle jack having a butt formed with a square onter lower corner; a picker having a shoulder for engaging the square corner of said butt; means for pivoting said picker, so that the same swings about an inclined axis to carry the needle from a lower level to an idle level, the upper end of said picker being chamfered to clear the butts of the already inactive series of needles.

4. In a knitting machine, the combination of a needle cylinder; a series of needles having long butts and a series of needles having short butts carried by said needle cylinder; a raising cam for lifting the needles having long butts to idle level; a lowering cam for moving the needles with the long butts to active position, said cams being rigidly attached to a pivoted bracket on opposite sides of the pivotal point thereof, whereby when one cam is thrown into action, the other cam is positively thrown out of action; a narrowing picker; and a cam plate carried by the bracket supporting the raising and lowering cams for engaging and moving the picker to inactive position upon the moving into action of the lowering cam.

5. In a knitting machine, the combination of a needle cylinder, a plurality of needles having butts or the like carried by the cylinder, a widening picker, a pivoted yoke supporting said widening picker, a pivoted plate engaging said yoke, the axis of the plate and the axis of the yoke being substantially at right angles to each other; a stop for limiting the upward swinging movement of the plate; a stop for limiting the upward swinging movement of the yoke; a spring engaging the picker for normally holding the yoke and plate in engagement with the stops, said picker consisting of a finger having oppositely disposed overhanging ledges adapted to engage two needle butts, said picker having a notched working end to engage a needle butt at the inactive level and through the movement of the cylinder depress said needle to full active level, said picker having its lower face cut away to clear the needles when said needles are at full lower level.

[Claims 6 to 11 not printed in the Gazette.]

1,213,004. KNITTING-MACHINE. ALBERT M. PIGEON, Norristown, Pa., assignor to Wildman Mfg. Co., Norristown, Pa., a Corporation of Pennsylvania. Filed Apr. 8, 1915. Serial No. 20,053. (Cl. 66—21.)



1. In a knitting machine, the combination of a needle cylinder, a series of spring beard needles carried thereby,

and means for engaging the beards of the needles for closing said needle beards for shedding the yarn loops over the same and for engaging the beards of the needles when said needles are at the lower end of their stroke for preventing vibration of the needle beards upon reversal of the movement of the needles.

2. In a knitting machine, the combination of a needle cylinder, a series of spring beard needles carried thereby, a beard presser for each needle mounted on the needle cylinder and having means for engaging and closing the beard of the needle for shedding the yarn loops over the same, and means for engaging the needle beard when the needle is at the lower end of its reciprocation for preventing vibration of said needle beard upon the reversal of the movement of the needle.

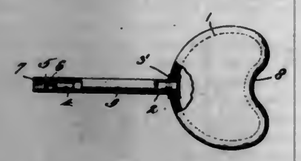
3. In a knitting machine, the combination of a needle cylinder, a series of spring beard needles carried thereby, a beard presser for each needle mounted on the needle cylinder, means for engaging said beard pressers for causing said pressers to close the beards for shedding the yarn loops over the same, and said pressers having means for engaging the needle beards when the needles are at the lower end of their reciprocation for preventing vibration of said needle beards upon the reversal of the movement of the needles.

4. In a knitting machine, the combination of a needle cylinder having needle grooves therein, a series of spring beard needles located in said grooves, a beard presser for each needle located in each needle groove, cams for engaging the upper ends of said beard pressers for swinging the same to close the beards of the needles to permit the yarn loops to pass over the same, said beard pressers having means for engaging the spring beards and placing the same under tension while the needles are at the lower end of their stroke.

5. In a knitting machine, the combination of a needle cylinder having a series of spaced partitions forming needle grooves, spring beard needles located in said grooves, said partitions being cut away at the upper ends thereof to a point below the lowest extreme position of the needle beards during the reciprocation of the needles, a beard presser for each needle located between the partitions on the cylinder, said beard pressers being thickened above the ends of the cut away partitions, so as to provide a wide bearing surface for engaging the beard of the needle.

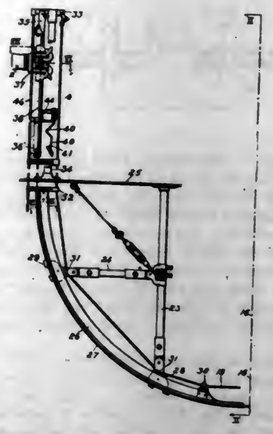
[Claims 6 to 9 not printed in the Gazette.]

1,213,005. OBSTETRICAL INSTRUMENT. ALBERT H. PILLSBURY, Lyndon Station, Wis., assignor of one-half to Victor Czeskleba, Lyndon Station, Wis. Filed Dec. 22, 1914. Serial No. 878,590. (Cl. 128—27.)



An obstetrical instrument comprising a substantially heart-shaped inflatable pad, a tube extending through the apex end of the pad and having its inner end provided with a flange curved to conform to the configuration of the inner wall of the apex portion of the pad, the outer end of the tube being spaced from the pad, a pipe having one end detachably engaging over the outer end of the tube, the said end of the pipe having a substantially concavo-convex flange thereon, the concaved surface of which is adapted to engage and receive the apex end of the pad, the said flanges coöperating to provide an air-tight joint between the pad and the tube, and a check valve associated with the opposite end of the pipe.

1,213,006. UPSEND WIRE-LINE CARRIER. FRANK D. POWELL, Boston, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Dec. 4, 1913. Serial No. 804,768. (Cl. 186—9.)



1. In store service apparatus, the combination of a high level station and a low level station with a carrier, a track between said stations having an upwardly directed curve therein around which said carrier may travel, means for propelling said carrier along said track from the station at the lower level around said curve to the station at the higher level, and means at the high level station for latching it against inadvertent downward displacement, said latching means having provisions for automatically releasing said carrier when the carrier itself is alone engaged by the hand of the operator and actuated to despatch the same.

2. In store service apparatus, the combination of a station with a track, a carrier adapted to travel along said track, means for locking said carrier against inadvertent despatch from said station along said track, and co-acting means for rendering said locking means inoperative to retain said carrier, only when said carrier is propelled past a determined point in said track at a velocity in excess of a determined amount.

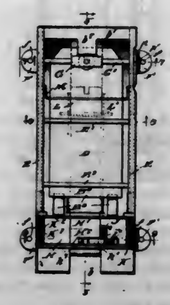
3. In store service apparatus, the combination of a track with a carrier and means for holding said carrier against despatch along said track unless said carrier is propelled past a determined point in said track at a velocity in excess of a determined amount, said holding means having a carrier engaged part operative to free the carrier engaging the same from the restraining action of said holding means, only when said carrier is propelled past said point in said track in manner aforesaid, said carrier being out of engagement with said part after it leaves said point in said track.

4. In store service apparatus, the combination of a track with a carrier and means for holding said carrier against despatch along said track unless said carrier is propelled past a determined point in said track at a velocity in excess of a determined amount, said holding means having an operating part adapted for engagement with said carrier before the latter reaches said point, said operating part having a bias for a determined position and being displaced from said position by the passing carrier.

5. In store service apparatus, the combination of a track with a carrier, and means for holding said carrier against movement along said track in a determined direction, when said carrier is in actual engagement with said holding means, until said carrier has first been moved in a direction opposite that aforesaid and thereafter driven in said determined direction at a speed in excess of a determined amount.

[Claims 6 to 18 not printed in the Gazette.]

1,213,007. BAGGAGE-CHECK PROTECTOR. WALDO E. PULLARD, Cumberland, Md. Filed June 3, 1916. Serial No. 101,578. (Cl. 40—15.)



1. In a baggage check protector, the combination of a main frame, a locking slide movable in the frame and carrying an upstanding pin on which the eyelet of a baggage check may be disposed, a shield carried by the frame and into which the said pin is movable in the locked position of the slide, and locking means for securing the slide in locked position.

2. In a baggage check protector, the combination of a main frame, a locking slide movable in the frame and carrying an upstanding pin on which the eyelet of a baggage check may be disposed, a shield mounted in the frame above the slide, and having a slot into which the said pin of the slide is movable in the locked position, said shield also having a limited rotary movement to permit the baggage check to be effectively guided thereunder, and locking means for securing the slide in locked position.

3. In a baggage check protector, the combination of a frame, a slide movable in the frame and having a baggage check engaging portion, a shield carried by the frame and beneath which said engaging portion of the slide is movable to locked position, and means for locking the slide.

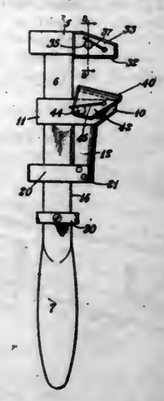
4. In a baggage check protector, the combination of a main frame, a slide movable in the frame and having a baggage check engaging portion, a shield carried by the frame and beneath which said engaging portion of the slide is movable to locked position, means for locking the slide, and a slide frame adjustable in the main frame and adapted to receive the baggage check thereunder.

5. In a baggage check protector, the combination of a main frame including a base plate having side flanges, a locking slide having guided movement in the base plate to and from locked position, and provided with an upstanding pin on which the eyelet of the baggage check may be disposed, means for locking the slide, and a shield carried by the frame and having a lower slot into which the said pin is projected when the slide is moved to locked position, said shield having a limited rotary movement with respect to the slide and the main frame, and receiving the engaged portion of the baggage check thereunder.

[Claims 6 and 7 not printed in the Gazette.]

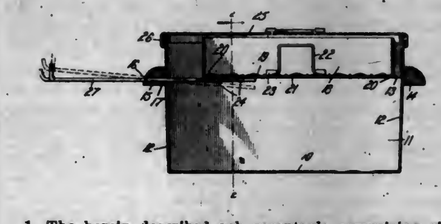
1,213,008. WRENCH. JOHN C. PURCELL, Bellevue, Ohio. Filed Nov. 3, 1915. Serial No. 59,373. (Cl. 81—180.)

In a wrench, the combination with a pair of jaws, of an attachment comprising a channel-shaped member having serrations on its external intermediate face, the wings of said member being integral therewith and adapted to lie on the two sides of one of the jaws, a removable pin extending through both wings and the intermediate jaw, and a spring secured to said attachment and adapted to



lie in a groove in said pin for temporarily holding it in place.

1,213,009. ASH RECEPTACLE AND SIFTER. PATRICK F. QUINN, New York, N. Y. Filed Feb. 2, 1916. Serial No. 75,675. (Cl. 83—60.)



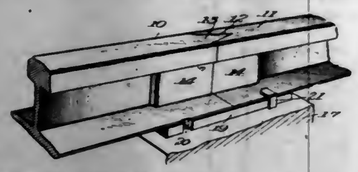
1. The herein described ash receptacle comprising side and end walls and a bottom connecting and inclosing said walls, inwardly projecting ledges on the inner surface of the side walls below the upper edges thereof, a pair of rigid handles for the receptacle connected to the end walls thereof, one end wall having a slot formed therein and the adjacent handle covering said slot and being provided with a slot wider than the other slot, the lower edges of the slots being in the horizontal plane of the ledges, a pan having a reticulated bottom supported for reciprocation on the side ledges, a cover for the receptacle inclosing said pan, and a shaker projecting inwardly through said slots and interlocking with the lower face of the pan for manipulating the same from the outside when the receptacle is closed.

2. The herein described ash receptacle comprising a device having connected side and end walls and a bottom, one of the ends having a slot, a pair of ledge supports formed upon the side walls in the same horizontal plane as said slot, a pan having a reticulated bottom supported upon said ledges, the pan being shorter than the receptacle, a shaker extending inwardly through said slot, said pan having a central longitudinal rib, means to cause the inner end of the shaker to interlock with said rib whereby the pan may be manipulated from the outside, and a cover for the receptacle.

3. The herein described ash receptacle comprising a main ash receiver, the main portion of which is tapered downwardly, said receiver having side walls provided with offsets forming ledges in the same horizontal plane, a pan of a width substantially equal to the width of the receiver at its upper portion, and of a length shorter than the receiver, said pan being provided with a central longitudinal reinforcing rib having its ends interlocked with the ends of the pan, a bail secured to said pan rib

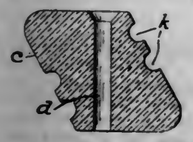
extending upwardly from the middle portion thereof, a lug projecting downwardly from one end of the rib, said pan having a reticulated bottom supported upon said rib, a shaker extending through one end of the receiver and having a hole to receive and interlock with said lug whereby the pan may be reciprocated longitudinally upon said ledges from the outside of the receiver, and a cover for the receiver.

1,213,010. RAIL-JOINT. MARTIN FRANK RADOVAN, McCarthy, Alaska. Filed July 17, 1915. Serial No. 40,457. (Cl. 239—2.)



The combination of a railroad tie and the meeting ends of two rails, provided in the bottom thereof with tapered openings, a rail chair substantially the width of said tie and having flanges formed at its outer longitudinal edges and of a height substantially the same as the thickness of the longitudinal edges of the bases of said rails, said flanges engaging the said longitudinal edges of the rails and being provided with notches, fastening means driven into said tie and engaging in said notches for securing said chair and the rail to said tie, and tapering lugs extending from said chair and adapted to be inserted into the openings in the bottoms of said rails, said lugs being of a smaller area than said openings.

1,213,011. DEVICE FOR CONNECTING OUTSIDE WIRES TO BUILDINGS. PHILIP C. RAGOTZKY, Philadelphia, Pa. Filed July 6, 1916. Serial No. 107,741. (Cl. 173—28.)

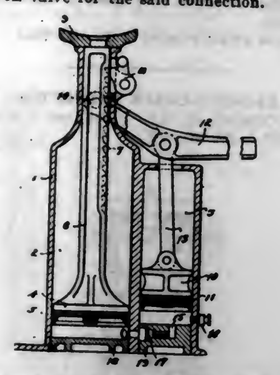


1. A device for attachment to buildings to permit of the direct connection thereto of exterior wires, comprising a circumferentially grooved knob having one end face extending at an oblique angle to the longitudinal direction of extension of the circular grooved face and provided with an orifice extending between the end faces, and perpendicular to the obliquely extending end face.

2. A device for attachment to buildings to permit of the direct connection thereto of exterior wires, comprising an integral circumferentially grooved knob having its end faces extending in parallel planes at oblique angles to the direction of longitudinal extension of the circular grooved face and provided with an orifice extending between said end faces at right angles thereto for the reception of a securing screw.

1,213,012. COMBINED AUTOMOBILE-JACK AND TIRE-PUMP. WILLIAM F. RAWLINGS, Cleveland, Ohio. Filed July 7, 1914. Serial No. 849,556. (Cl. 138—9.)

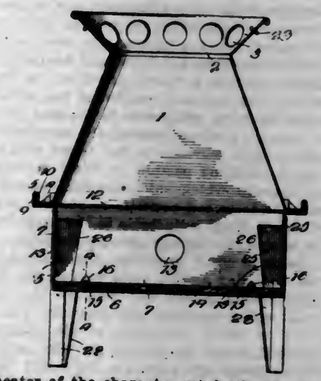
1. In combination in an automobile jack, a fixed jack member, a relatively movable lifting member, manually releasable catch means for holding the lifting member at any desired position, air operated means for moving the lifting member upward, an air pump carried by said fixed jack member for supplying air to the air operated means, a connection leading from the jack whereby the air compressed by the pump may be supplied for use in other relations and the pump operated to supply such air while the catch holds the lifting member in elevated position, and a cut-off valve for the said connection.



2. In combination in an automobile lifting and pumping device, a cylinder, a lifting member, an air pump for supplying air to the cylinder to move the lifting member, a catch for holding the lifting member of the jack in elevated position, and a supply connection provided with a valve leading from the cylinder.

3. In combination in an automobile lifting and pumping device, a pneumatic jack including a cylinder and piston, an air pump carried by the cylinder, a supply connection from the pump to the cylinder, a check valve in the connection, a catch for holding the lifting member of the jack in elevated position, a connection provided with a cut off valve leading from the cylinder whereby the air supplied by the pump may be conducted away for use in other relations, and a bleed passage provided with a valve for permitting an escape of air from the jack to lower the said lifting member after the catch is released.

1,213,013. HEATER. MARK G. RAY, Jacksonville, Fla. Filed Sept. 22, 1915. Serial No. 51,908. (Cl. 126—4.)



In a heater of the character set forth, the combination of an ash pan having an outwardly extending shelf along its upper edge, a grate resting on said outwardly extending shelf, and a body having an outwardly extending shelf around its lower edge resting upon the grate over the outwardly extending shelf of the ash pan, the outwardly extending shelves of the body and the ash pan being clamped together to secure the grate.

1,213,014. GOLF-STICK GRIP. GEORGE A. REES, Chicago, Ill. Filed Nov. 11, 1915. Serial No. 60,817. (Cl. 46—4.)

1. A golf club adapted to be grasped by the hand, having an enlarged yielding fingerhold adapted to be grasped only by one or more of the fingers of the hand not utilized in delivering the stroke, said fingerhold preventing the said fingers from exerting objectionable pressure on said club.



2. A golf club adapted to be grasped by the hand, having an enlarged yielding bulb-like fingerhold adapted to be grasped only by one or more of the fingers of the hand not utilized in delivering the stroke, said fingerhold preventing the said fingers from exerting objectionable pressure on said club.

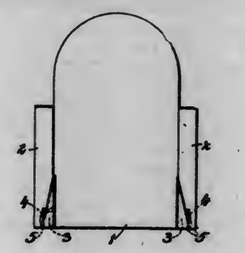
3. A golf club adapted to be grasped by the hand, having an enlarged yielding fingerhold adapted to be grasped by one or more of the fingers of the hand not utilized in delivering the stroke, said fingerhold preventing the said fingers from exerting objectionable pressure on said club, said fingerhold having an air cushion between it and said club.

4. A golf club adapted to be grasped by the hand, having an enlarged yielding bulb-like fingerhold adapted to be grasped by one or more of the fingers of the hand not utilized in delivering the stroke, said fingerhold preventing the said fingers from exerting objectionable pressure on said club, said fingerhold having an air cushion between it and said club.

5. A golf club adapted to be grasped by the hand, having an enlarged yielding adjustable fingerhold adapted to be grasped by one or more of the fingers of the hand not utilized in delivering the stroke, said fingerhold preventing the said fingers from exerting objectionable pressure on said club.

[Claim 6 not printed in the Gazette.]

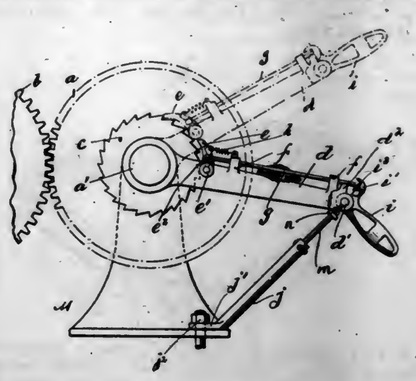
1,213,015. ADVERTISING-CARD. CHARLES REESE, Stapleton, N. Y., assignor to Nevins-Church Press, a Corporation of New Jersey. Filed Aug. 23, 1915. Serial No. 46,809. (Cl. 40—149.)



1. A display card formed from a single sheet comprising a body portion, supporting legs cut from the side edges of the card and adapted to be folded back at an angle to said card into supporting position, said legs carrying members at an angle thereto, and adapted to be folded at their point of union with said legs toward the body of the card, the free ends of said members being adapted to interlock with the base of said card.

2. A display card formed from a single sheet comprising a body portion, supporting legs cut from the side edges of the card and adapted to be folded back at an angle thereto into supporting position with reference to the card, said legs being provided with offset members adapted to be folded at their points of union with said legs toward the base of the card and interlocked at their free ends with the base of said card so as to space the outer ends of said legs from the base of said card.

1,213,016. SHOCK-ABSORBER FOR STARTING MECHANISM. ROBERT REINER, Weehawken Heights, N. J. Filed Aug. 11, 1916. Serial No. 114,373. (Cl. 74—16.)



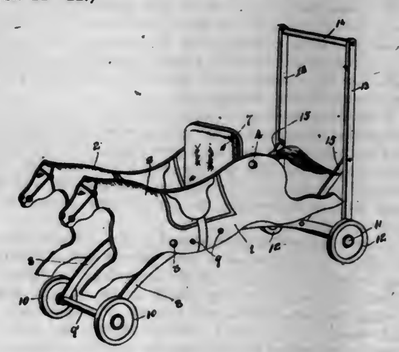
1. In a motion starting mechanism, the combination with a freely swinging crank arm, of a shock absorbing support therefor, consisting of a tubular foot and a member movably and resiliently guided therein.

2. In an embroidering machine, the combination with a freely swinging motion starting arm, of a movable resiliently supported member adapted to receive the thrust of said arm when the latter is dropped from its operative position.

3. In an embroidering machine, the combination with a freely swinging motion starting arm, of a tubular member and means movably and resiliently supported therein and adapted to receive the thrust of said arm when the latter is dropped from its operative position.

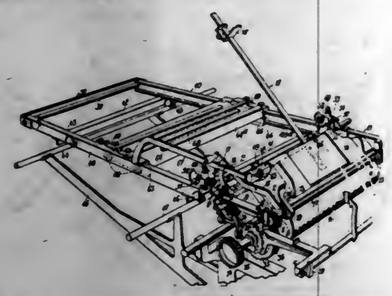
4. In an embroidering machine, a freely swinging motion starting arm, a tubular member, means movably and resiliently guided in said member and means on said arm so positioned as to strike the said first named means when said arm is dropped from its operative position.

1,213,017. DOLL-CARRIAGE. PETER J. REINERT, Detroit, Mich. Filed May 9, 1916. Serial No. 96,436. (Cl. 21—12.)



A toy carriage comprising a body member having a seat, arched bars secured to the sides of the body and having intermediate portions bearing directly against the seat to brace the same, an axle mounted in the forward ends of the bars, an axle mounted in the opposite ends of the bars, a handle mounted on the last named axle and separated from the wheels of the axle by the said rearwardly extending portions of the bars, and a brace connecting the handle bars with the said arched bars.

1,213,018. TYPE-WRITING MACHINE. CHARLES DE LOS RICE, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 25, 1915. Serial No. 47,227. (Cl. 197—126.)



1. In a typewriting machine, a platen, a platen carriage, a carriage for holding transfer material between the plies of a work-piece during line-space feed of the latter and for drawing the transfer material at intervals backward along the work-piece, a table on which the carriage for the transfer material moves, and a latch for detachably connecting the table to the platen carriage, said latch comprising a finger on one of said connectible elements adapted to be interlocked with the other of said elements.

2. In a typewriting machine, a platen, a platen carriage, a carriage for holding transfer material between the plies of a work-piece during line-space feed of the latter and for drawing the transfer material at intervals backward along the work-piece, a table on which the carriage for the transfer material moves, a latch for detachably connecting the table to the platen carriage, said latch comprising a pin on one of said connectible elements adapted to be interlocked with the other of said elements, and means for holding said pin in interlocked position against accidental displacement.

3. In a typewriting machine, a platen, a platen carriage, a carriage for holding transfer material between the plies of a work-piece during line-space feed of the latter and for drawing the transfer material at intervals backward along the work-piece, a table on which the carriage for the transfer material moves, a latch for detachably connecting the table to the platen carriage, said latch comprising a pin on one of said connectible elements adapted to be interlocked with the other of said elements, and a spring-pressed ball adapted to engage a notch in said pin for holding said pin in interlocked position against accidental displacement.

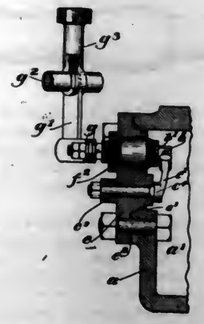
4. In a typewriting machine, a platen, a frame on which the platen is supported, a table over which a work-piece may be fed to the platen, a pin carried by the table, a receiver for the pin on the platen frame, and means whereby the pin may be shifted into and out of engagement with said receiver to connect and disconnect the table and platen.

5. In a typewriting machine, a platen, a frame on which the platen is supported, a table over which a work-piece may be fed to the platen, a pin carried by the table, a receiver for the pin on the platen frame, means whereby the pin may be shifted into and out of engagement with said receiver to connect and disconnect the table and platen, and means for holding the pin in operative position.

[Claims 6 to 12 not printed in the Gazette.]

1,213,019. SPARKING DEVICE. ANDREW L. RIKER, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed Jan. 19, 1907. Serial No. 353,021. (Cl. 123—153.)

1. A sparking device for internal combustion engines comprising a stationary and movable contact supported by an igniter plate, the latter having a tapered seat in the cylinder walls, the said stationary contact being sustained by an outwardly contracted tapered plug, insulation material between the walls of the contact and the tapered plug, the latter having a correspondingly tapered seat in the said plate.



2. A sparking device for internal combustion engines comprising relatively movable contact members; a plug to support one of them having an insulating layer interposed between the body of the plug and its contact member; means to secure the contact member rigidly to the plug so as to be substantially unitary and removable therewith; but separate from and independent of the other contact member and means for securing the plug with its substantially unitary contact member in a tapered seat in the cylinder wall.

3. A sparking device for an internal combustion engine comprising a metallic support, a removable plug structure having an interior electrode member, an exterior, tapered, metallic plug contracted from the contact end thereof toward the exterior and having a correspondingly tapered seat in the metallic support, an insulator for insulating said contact member from the plug and from the metallic support when installed, a nut threaded onto said electrode member fixedly to secure said electrode member to said metallic plug, and a nut threaded onto said plug and engaging said metallic support for removably securing said plug in its tapered seat in the metallic support.

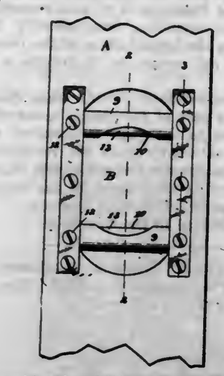
4. A sparking device for an internal combustion engine comprising a metallic support, a removable plug structure having an interior electrode member, an exterior, tapered, metallic plug contracted from the contact end thereof toward the exterior and having a correspondingly tapered seat in the metallic support, an insulator for insulating said electrode member from the plug and from the metallic support when installed, means fixedly to secure the electrode member to the metallic plug, and independent and distinct means removably to secure the plug in its tapered seat in the metallic support, each of said means being accessible from the outer face of said metallic support without disturbing the other of said means.

5. A sparking device for an internal combustion engine comprising a metallic support, a removable plug structure having an interior electrode member, an exterior, tapered, metallic plug contracted from the contact end thereof toward the exterior and having a correspondingly tapered metal to metal seat in the metallic support, an insulator for insulating said electrode member from the plug and from the metallic support when installed, means fixedly to secure the electrode member to the metallic plug, and independent and distinct means removably to secure the plug in its tapered seat in the metallic support without disturbing the first-mentioned means.

[Claim 6 not printed in the Gazette.]

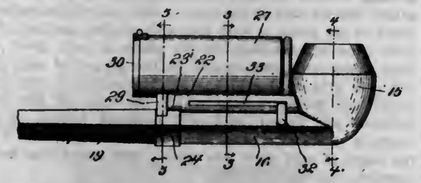
1,213,020. LEVEL. WILLIAM A. ROESKE, McKee City, N. J. Filed Mar. 10, 1916. Serial No. 83,431. (Cl. 33—211.)

1. The combination with a plumb beam having an elongated opening therein and also having countersunk portions at the longer edges of the opening, inner and outer clamping strips secured in the countersunk portions at one side of the plumb beam, and spirit levels having ear extremities engaged between the inner and outer clamping strips.



2. The combination with a plumb beam having an elongated opening therein and also having countersunk portions at the longer edges of the opening, inner and outer clamping strips secured in the countersunk portions at one side of the plumb beam, spirit levels having ear extremities engaged between the inner and outer clamping strips, and fasteners securing the inner and outer clamping strips in the countersunk portions and detachably passed through the ear extremities of the spirit level.

1,213,021. SMOKING-PIPE. WALTER C. ROGERS, Kilkenny, Minn. Filed Apr. 6, 1916. Serial No. 89,392. (Cl. 131—12.)



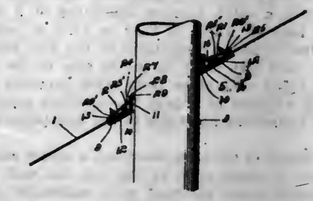
1. A smoking pipe comprising a stem and a bowl, a magazine supported on the stem adjacent to the bowl, a guide tube intermediate the bowl and the magazine, said tube being in communication with the bowl and also with the magazine, and a plunger operating in the guide tube to transfer the contents of the magazine to the bowl.

2. In a smoking pipe, a bowl having a stem provided with the customary longitudinal bore, said stem having also a recess communicating with an aperture in the bowl above the longitudinal bore, a guide tube fitted in the recess and extending into the aperture of the bowl, said guide having a longitudinal slot and flanges adjacent thereto, a magazine supported on the flanges and having a slot communicating with the slot in the tubular guide, and a manually operable plunger movable in the longitudinal guide.

3. In a smoking pipe, a bowl having a stem provided with the customary longitudinal bore, said stem having also a recess communicating with an aperture in the bowl above the longitudinal bore, a guide tube fitted in the recess and extending into the aperture of the bowl, said guide having a longitudinal slot and flanges adjacent thereto, a magazine supported on the flanges and having a slot communicating with the slot in the tubular guide, and a manually operable plunger movable in the longitudinal guide, said plunger having a handle and the tubular guide having a slot through which the handle extends.

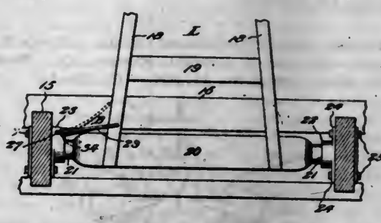
4. A smoking pipe comprising a bowl and a stem, the latter having an annular groove and the bowl having an aperture communicating with said annular groove, a ferrule on the stem, a tubular guide extending at one end into the aperture of the bowl and provided at its other end with notches engaging the ferrule, said tubular guide having a longitudinal slot and flanges adjacent thereto, a magazine supported and secured on the flanges and having a longitudinal slot communicating with the slot of the tubular guide, a plunger slidable in the tubular guide and having in its underside a recess to accommodate the ferrule, and means for operating the plunger.

1,213,022. TENT ATTACHMENT. JOHN A. ROSSI, North Yakima, Wash. Filed June 20, 1916. Serial No. 104,787. (Cl. 108—26.)



An attachment for a tent comprising a plate forming a body and having an opening therein, a collar surrounding said opening, convoluted clamping members connected with the plate and arranged circumferentially about said opening, a cover plate for connection with the first mentioned plate and having a flange for connection with the collar, a frame for disposition within said opening, and fingers on said frame to be received between the collar and flange.

1,213,023. HAY-RIGGING. LOUIS F. RUNYAN, Lebanon, Ohio. Filed Apr. 18, 1916. Serial No. 92,029. (Cl. 21—74.)



1. The combination with a hay rack having side sills, of socket members mounted on the inner opposed faces of said sills, one of said socket members being open at the top, a hay ladder having a rock shaft provided with terminal trunnions engaging the socket members, and a latch member swingingly connected with the socket member which is open at the top, said latch member having a portion extending through the wall portion of the socket near the open end thereof and lying in the path of one of the trunnions of the rock shaft of the hay ladder.

2. The combination with a hay rack having side sills, of socket members mounted on the inner opposed faces of said sills, one of said socket members being open at the top, a hay ladder having a rock shaft provided with terminal trunnions engaging the socket members, and a latch member swingingly connected with the socket member which is open at the top, said latch member having a portion extending through the wall portion of the socket near the open end thereof and lying in the path of one of the trunnions of the rock shaft of the hay ladder, said latch member having an offset adapted to engage the hay ladder to sustain the same in a raised position.

3. The combination with a hay rack having side sills, of socket members mounted on the inner opposed faces of said sills, one of said socket members being open at the top, a hay ladder having a rock shaft provided with terminal trunnions engaging the socket members, and a

latch member swingingly connected with the socket member which is open at the top, said latch member having a portion extending through the wall portion of the socket near the open end thereof and lying in the path of one of the trunnions of the rock shaft of the hay ladder, said latch member having an offset adapted to engage the hay ladder to sustain the same in a raised position, said latch member being also provided with means whereby it may be locked securely with respect to the socket member.

4. In a device of the class described, a socket member of substantially U-shape open at the top, the wall portion of said socket being provided with oppositely disposed registering apertures and with an additional aperture adjacent to one of the first mentioned apertures, in combination with a latch member consisting of a resilient yoke, one limb of which is bent to form a rock shaft engaging the registering apertures in the wall portion of the socket, said rock shaft extending also in the path of the other limb; said other limb being provided with a locking lug adapted to engage the aperture adjacent to one of the registering apertures in the wall portion of the socket.

5. In a device of the class described, a socket member of substantially U-shape open at the top, the wall portion of said socket being provided with oppositely disposed registering apertures and with an additional aperture adjacent to one of the first mentioned apertures, in combination with a latch member consisting of a resilient yoke, one limb of which is bent to form a rock shaft engaging the registering apertures in the wall portion of the socket, said rock shaft extending also in the path of the other limb; said other limb being provided with a locking lug adapted to engage the aperture adjacent to one of the registering apertures in the wall portion of the socket; the wall portion of the socket being equipped with a stop member lying in the path of the latch member, said stop member being so disposed as to intercept the latch member about the time when the locking lug engages the aperture.

1,213,024. INSECT-EXTERMINATOR. CALVIN T. RUSSELL and JOHN N. RUSSELL, Kinston, Ala. Filed Aug. 31, 1916. Serial No. 117,924. (Cl. 43—1.)



1. An insect exterminator of the class described comprising a frame, runners secured thereto in spaced relation, receptacles mounted upon said runners and having slotted flanges, means arranged in the slots to adjustably connect the receptacles to the runners, and knocking elements carried by the frame intermediate the receptacles for dislodging insects to be received by said receptacles.

2. An insect exterminator of the class described comprising a frame adapted to be moved over plants to be operated upon, spaced receptacles carried thereby, each of said receptacles having its longitudinal edges bent inwardly of the receptacle into contiguous spaced relation to provide a constricted opening thereinto, and means arranged intermediate the receptacles for knocking insects into said opening.

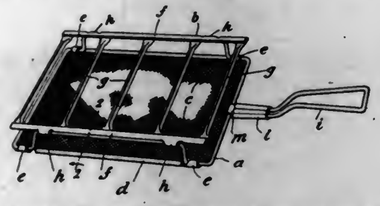
3. An insect exterminator of the class described comprising a frame adapted to be moved over plants to be operated upon, spaced receptacles mounted on said frame, each of said receptacles having the material of its bottom extending to a point substantially centrally of the frame and then bent back toward the inner portion of the receptacle to provide a receiving surface to catch the insects, the material of the upper portion of the receptacles terminating substantially at the central portion of the bottom and coöperating with the bent portion of the bottom aforesaid to provide a mouth for the receptacle, and means for dislodging insects from the plants onto the receiving surface for delivery into the receptacle opening.

4. An insect exterminator of the class described comprising a frame, a pair of receptacles mounted in spaced relation upon said frame, each of said receptacles having a lateral opening extending longitudinally thereof and formed by bending the lateral edges of the receptacle back and inwardly of the receptacle to provide a constricted opening.

5. An insect exterminator of the class described comprising a frame, a pair of receptacles mounted thereupon in spaced relation to each other, vibratory wing extensions projecting outwardly from the receptacles and inclined downwardly toward the same, and resilient means detachably connecting said wings to the receptacles and holding said wings in offstanding position.

[Claim 6 not printed in the Gazette.]

1,213,025. TOASTER. THOMAS SABELBERG, Port Melbourne, Victoria, Australia. Filed Nov. 24, 1916. Serial No. 133,247. (Cl. 53—5.)

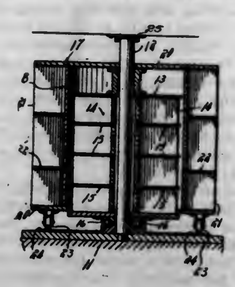


1. A toasting utensil comprising in combination a grid, a sheet of wire mesh spaced from said grid and parallel thereto, an integral frame including a handle and comprising a single wire shaped to form said handle and extending around the grid and sheet members, at the outer edges thereof and a portion of the wire lying substantially in the plane of said grid and another portion of the wire lying substantially in the plane of said sheet, said wire being bent transversely to the planes of said sheet and said grid, said grid having cross-members and sheet-metal side members into which the ends of the cross-members are folded, said side members having tongues clasping said wire, and sheet metal strips into which the edges of said sheet are folded, said strips also having tongues clasping said wire.

2. A toasting utensil comprising in combination a grid, a sheet of wire mesh spaced from said grid and parallel thereto, an integral frame including a handle and comprising a single wire shaped to form a handle and extending around the grid and sheet members, at the outer edges thereof and a portion of the wire lying substantially in the plane of said grid and another portion of the wire lying substantially in the plane of said sheet, said wire being bent transversely to the planes of said sheet and said grid, said grid having cross-members and sheet-metal side members into which the ends of the cross-members are folded, said side members having tongues clasping said wire, and sheet metal strips into which the edges of said sheet are folded, said strips also having tongues clasping said wire and a sheet clip clasping the two portions of said wire forming the handle at the base of the handle.

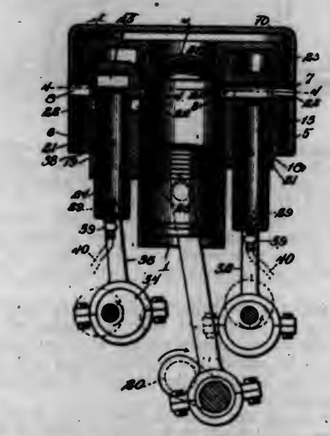
3. A toasting utensil comprising in combination a grid, a sheet of wire mesh spaced from said grid and parallel thereto, an integral frame including a handle and comprising a single wire shaped to form a handle and extending around the grid and sheet members, at the outer edges thereof and a portion of the wire lying substantially in the plane of said grid and another portion of the wire lying substantially in the plane of said sheet, said wire being bent transversely to the planes of said sheet and said grid, said grid having cross-members and sheet-metal side members into which the ends of the cross-members are folded, said side members having tongues clasping said wire, and sheet metal strips into which the edges of said sheet are folded, said strips also having tongues clasping said wire and a sheet clip clasping the two portions of said wire forming the handle at the base of the handle, said clip also covering the opening at the junction of the handle with the main body of the handle.

1,213,026. STORE-SHELF. NELS H. SANDE, Scarville, Iowa. Filed July 7, 1915. Serial No. 38,565. (Cl. 211—21.)



A store shelf device comprising a vertical shaft, a drum including a central sleeve rotatably embracing the shaft, radial shelves and vertical partitions emanating from the sleeve, a second drum including an inner circular wall disposed concentrically around the first drum and having a vertical opening the entire length of said drum to permit access to the inner drum, vertical partitions and horizontal shelves extending outwardly from the said circular wall, casters supporting the outer drum, ball bearings supporting the inner drum, a disk disposed at the top of the outer drum and forming a part thereof, said disk receiving the said shaft therethrough, and a spacing sleeve on the shaft between the said disk and the top of the inner drum.

1,213,027. VALVE MECHANISM FOR INTERNAL-COMBUSTION MOTORS. LOUIS P. SAVAGE, Laporte, Ind. Filed Feb. 7, 1916. Serial No. 76,732. (Cl. 123—75.)

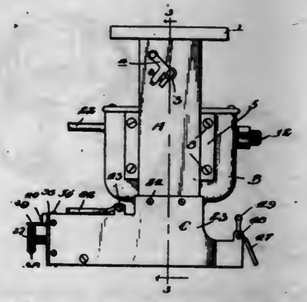


1. In a valve mechanism for internal combustion motors, the combination with a cylinder having a port therein, of a valve for coöperation with said port, said valve comprising sliding, telescopically connected parts having coöperating ports, the inner valve part consisting of a hollow body forming a reservoir, and means for supplying oil through said reservoir to the working surfaces of the valve parts.

2. In a valve mechanism for internal combustion motors, a cylinder having a port therein, a casing provided with a coöperating port, telescopically connected valve members operating in said cylinder, one of said valve members forming an oil reservoir, means for simultaneously reciprocating said valve parts in opposite directions, and means for supplying oil under pressure to said oil reservoir and from thence to the surfaces of the valve members.

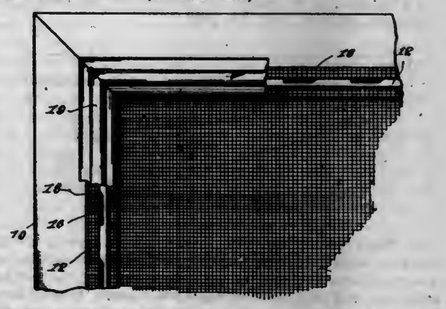
3. In a valve mechanism for internal combustion motors, a cylinder having a port therein, a casing upon the exterior of said cylinder, a valve in said casing composed of sliding, telescopically connected parts having coöperating ports, the inner valve part comprising a hollow body forming an oil reservoir having an oil discharge port therein, means for supplying oil to said reservoir, and means for simultaneously reciprocating the valve members in opposite directions in unison.

1,213,028. CARBURETER. FREDRICK SCHLUETER and CLARENCE MERICLE, Detroit, Mich. Filed Feb. 9, 1916. Serial No. 77,223. (Cl. 261—64.)



In a carbureter, the combination of a substantially vertical carbureting chamber of a tubular formation, a horizontally elongated air chamber at right angles to the bottom of said carbureting chamber projecting on opposite sides thereof and having an outlet of the cross sectional capacity of the carbureting chamber, a fuel containing bowl arranged exteriorly of both the carbureting chamber and the air chamber, said bowl having an outlet nozzle discharging upwardly within the carbureting chamber, said air chamber being formed with an air inlet orifice in the bottom thereof, an inwardly opening spring seated flap valve for said orifice, tensioning means for said valve, a pressure relief opening in the top wall of said air chamber, a valve for the last named opening, and a strangler valve-controlled air inlet at one end of said air chamber.

1,213,029. SCREEN-WIRE FASTENER. WALTER W. SCHMIDT, Fond du Lac, Wis. Filed Feb. 8, 1916. Serial No. 77,061. (Cl. 156—14.)

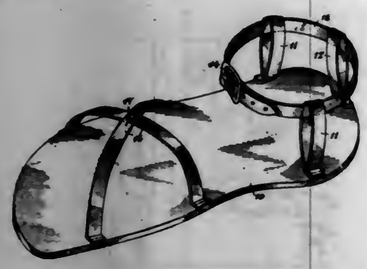


1. Means for securing screen wire to a frame including a continuous metallic strip stamped to provide a plurality

of securing tangs of uniform width throughout their length, said tangs being adapted to be driven through the mesh of the fabric into said frame, said strip having rounded edges and adapted together with said fabric to be received within a groove in said frame, and a molding secured to the frame and covering said strip and groove.

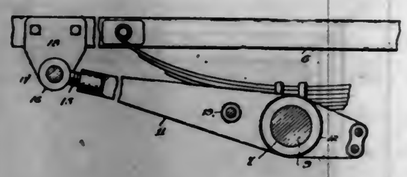
2. Means for securing screen wire to a frame having a groove therein, including a continuous metallic strip stamped along one of its longitudinal edges to provide a plurality of securing tangs, the latter being arranged at right angles to the strip and of uniform width throughout the major portion of their length, and adapted to be driven through the mesh of the fabric and groove into said frame, said strip having rounded edges and adapted to be fitted in said groove thereby crimping the fabric therein, and a molding secured to said frame and covering said strip and groove.

1,213,030. BAREFOOT HOUSE-SHOE. FRANK FINNIS SKINNER, Pine Bluff, Ark. Filed June 17, 1916. Serial No. 104,260. (Cl. 36—1.)



A bare-foot shoe comprising a sole extending from heel to toe, straps secured to the sides of the sole, for connecting the toe portion of the sole to the foot, flexible loops secured in spaced apart relation at the sides and back of the heel portion and extending upwardly, said loops being open from top to bottom and capable of being folded flat upon the sole without interference one with the other, and a detachable ankle strap threaded through said loops and adapted to encircle the ankle to retain the loops in extended position and the heel portion upon the foot, whereby upon removal of the ankle strap the loops and the toe straps may be collapsed upon the sole, and a pair of such shoes placed one upon the other with the sides of the soles remote from the straps and loops outermost, and the ankle straps utilized for securing a pair of the shoes in superimposed relation, the ankle straps being passed about the two shoes at the intermediate portion thereof.

1,213,031. VEHICLE TORSION-ARM. ALBERT D. SMITH, Chicago, Ill., assignor to Smith Form-a-Truck Company, a Corporation of Delaware. Filed Feb. 19, 1916. Serial No. 79,309. (Cl. 21—182.)



1. The combination with a vehicle axle having an integrally formed locking member projecting therefrom, of a torsion arm having a hole through one end thereof for receiving said axle, and having an integrally formed locking member for engagement with the projection on said axle.

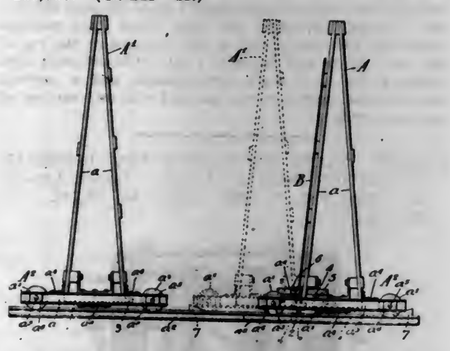
2. A vehicle axle having a bearing with a projection thereon, and a torsion arm engaging with said bearing and having a groove for receiving said projection, to prevent the longitudinal movement of the arm while permitting its oscillation.

3. The combination of a vehicle axle having an integrally formed semi-circular lug and a torsion arm engaging with said axle, and having a semi-circular lip forming a groove to receive said lug, the arrangement being such that the lip may be slipped past the lug when the arm is in one position, and will then engage with the lug when the arm is swung around to normal position.

4. In a motor vehicle, the combination of a frame, an axle having a bearing thereon, said bearing being provided with a semi-circular lug at its inner end, a distance rod or arm having a hub for engagement with said bearing, said hub being provided with a semi-circular lip on its inner end, and having a groove for receiving said lug, and adjustable means for securing the other end of the arm to the frame of the vehicle.

5. In a device of the character set forth, the combination with a vehicle axle having a circumferentially arranged segmental lug projecting upwardly therefrom, and a torsion arm having a hub engaging with the axle, said hub being provided with a segmental projection having a groove therein for receiving the lug when the arm is turned to bring the projection at the top of the axle.

1,213,032. RACK FOR HANDLING PLATE-GLASS. CARLTON L. SMITH, Saginaw, Mich., assignor to Saginaw Plate Glass Company, Saginaw, Mich., a Corporation of Michigan. Filed June 29, 1916. Serial No. 106,706. (Cl. 248—41.)



1. An apparatus for handling plate glass comprising movable racks constructed and arranged to be positioned facing each other with the bottoms of their adjacent sides in close proximity, substantially as described.

2. An apparatus for handling plate glass comprising movably supported racks constructed and arranged to be positioned facing each other with the bottoms of their adjacent sides in close proximity, substantially as described.

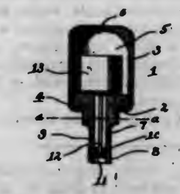
3. An apparatus for handling plate glass comprising racks, trucks on which said racks are supported, and tracks for said trucks, constructed and arranged to permit said racks to be moved into position facing each other with the bottoms of their adjacent sides in close proximity, substantially as described.

4. An apparatus for handling plate glass, comprising racks, trucks on which said racks are supported and tracks on which said trucks are movable toward and from each other, the tracks for the trucks which support different racks being arranged out of line to permit said racks to be moved into positions with the bottoms of their adjacent sides in close proximity, substantially as described.

5. An apparatus for handling plate glass, comprising movable racks constructed and arranged to be positioned facing each other with the bottoms of their adjacent sides in close proximity, and separate supports on which the lower edges of the plates of glass are adapted to rest, substantially as described.

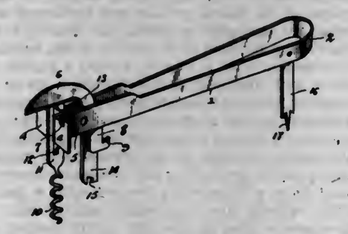
[Claims 6 to 13 not printed in the Gazette.]

1,213,033. AUTOMATIC WATER-VALVE. WILLIAM A. SOUERS, Johnston City, Ill. Filed Oct. 6, 1915. Serial No. 54,419. (Cl. 137—122.)



The herein described valve for use in connection with a hot water system and comprising a casing having a cap and a base, said cap being formed with a chamber and being provided with a minute constantly open air escape leading downwardly therefrom, the said base having a downwardly extending nipple stem provided with a bore extending therethrough and with a valve seat near its lower end, the capacity of the said bore exceeding that of said air escape opening, in combination with a valve to close upwardly against the valve seat and having an upwardly extending stem only partly filling and loosely arranged and for vertical movement in the bore, and a float at the upper end of the stem and attached thereto and arranged above the base and in the chamber of the cap, said float, when at the lower limit of its movement, causing the valve to open downwardly from the valve seat.

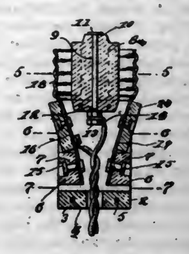
1,213,034. HOUSEHOLD IMPLEMENT. FORREST S. SOWERS, Oak Park, Ill. Filed May 8, 1915. Serial No. 26,798. (Cl. 65—51.)



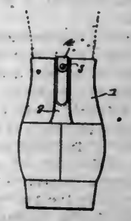
A tool of the character described comprising an elongated strip of material bent to provide a handle including spaced convergently disposed limbs, a rivet passed transversely through said limbs adjacent their extremities, a stopper extracting element embodying an elongated rectangular portion, and a reduced spiral portion projecting centrally from one end of said rectangular portion, the latter mentioned portion being longitudinally slotted to receive said rivet, one wall of said slot having spaced notches to interchangeably engage said rivet for adjusting the extracting element relative to the handle, a substantially flat arm arranged between the limbs of the handle, and pivoted to one of said limbs to normally lie parallel therewith, and to depend therefrom in parallelism with the extracting element for use with the latter, and said arm having a notch in its lower edge to engage the mouth of the bottle for the purpose described.

1,213,035. INSTANTANEOUS ELECTRIC-SOCKET ATTACHMENT. PHILIP STROUP, Cleveland, Ohio. Filed Nov. 22, 1915. Serial No. 62,871. (Cl. 173—360.)

In a device of the character described, a two part block bolted together, one of said parts being formed with a pair of spaced lugs for spacing the parts, leaf springs each having one end secured to a lug and its other end formed into a contact and a button secured to each spring and working between said parts.

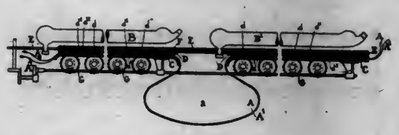


1,213,036. SHOE. JOSEPH GARFIELD TAYLOR, Jr., Springfield, Ill. Filed May 22, 1915. Serial No. 29,858. (Cl. 36—45.)



The combination with a shoe, of a rear reinforcing strip stitched along its marginal edges and transversely of its intermediate portion in an arcuate shape to form a pocket, the mouth of said pocket being flush with the top edge of the shoe and a tab secured to said shoe to form a closure for the pocket.

1,213,037. PHOTOGRAPHIC-PRINTING APPARATUS. JOHN EDWARD THORNTON, West Hampstead, London, England, assignor to John Owden O'Brien, Manchester, England. Filed June 8, 1915. Serial No. 32,949. (Cl. 95—75.)



1. Apparatus for printing cinematograph films comprising a light of high actinic and low heating power, a bed over which the films travel, means to hold the films in intimate contact during each exposure with more than two exposure apertures and a plurality of spaces one between each pair of apertures, feeding and registering means to engage the perforations in the films to carry them forward, and a movable shutter interposed to cut off the light during the movement of the film, substantially as described.

2. Apparatus for printing cinematograph films comprising a light of high actinic and low heating power, a bed over which the films travel; means to hold the films in intimate contact during each exposure; a movable grid interposed between the light and the exposure aperture to cause the light rays to strike the film perpendicularly and thereby insure a sharp image; feeding and registering sprockets to engage the perforations in the films to carry them forward; and a movable shutter interposed to cut off the light during the movement of the film, substantially as described.

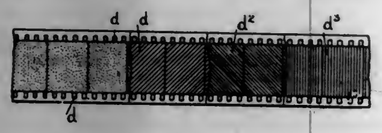
3. Apparatus for printing cinematograph films wherein a plurality of exposures, more than two, take place simultaneously, comprising means for forming a loop in the films in the plurality of spaces between each pair of exposure apertures to permit of registration of the perforations in the films, and means to intermittently draw the films forward after each exposure a distance equal to the number of pictures printed, substantially as described.

4. Apparatus for printing cinematograph films in which a large number of pictures are printed at a time and in which the films are exposed to the light of a mercury lamp tube at a number of printing points with loops between each printing point, means for bringing a picture section of the film to an exposure aperture adjacent to a lamp at each forward movement of the film; means for arresting the film opposite the exposure aperture for sufficient time to give the desired exposure; a grid; means for making such exposure through said grid, the grid being moved during the entire period of exposure, a shutter for cutting off the light, and means for finally shifting the film, during the period in which the light is cut off by said shutter, forward a distance equal to the number of pictures printed, in such a manner that no picture space shall appear more than once at a printing point, substantially as described.

5. Apparatus for printing cinematograph films, comprising a mercury vapor lamp; beds over which the films are passed in series of loops to present a number of printing points at intervals along the length of the film, means to maintain said films in intimate contact against said beds, said clamping means having a series of exposure apertures equivalent to the number of printing points, to expose all simultaneously, and a shutter to cut off the light while the film is shifted between exposures; and feeding and registering devices to engage the perforations in the film and feed the film intermittently forward a distance equal to the length of the number of the pictures printed, substantially as described.

[Claim 6 not printed in the Gazette.]

1,213,038. FILM FOR MOTION-PICTURES AND METHOD OF MAKING THE SAME. JOHN EDWARD THORNTON, West Hampstead, London, England, assignor to John Owden O'Brien, Manchester, England. Original application filed Nov. 26, 1912, Serial No. 733,633. Divided and this application filed July 3, 1915. Serial No. 38,016. (Cl. 88—19.5.)



1. The method of producing films for motion or cinematograph pictures which consists in preparing simultaneously upon a negative a plurality of section color pictures, printing a film strip from one of such section picture negatives in its correct collor, re-coating and resensitizing the film and again printing from another of these negatives in another color superimposed upon the first printed picture and so on to form a complete multicolor picture substantially as described.

2. The hereindescribed improvement in the art of producing films for motion or cinematograph pictures by the use of a negative with two or more section color pictures, which comprises printing a film strip from one of these color sections in its correct color, re-coating and resensitizing the film, and again printing from another of these color sections in another color, and so on to form a complete multi-color picture substantially as described.

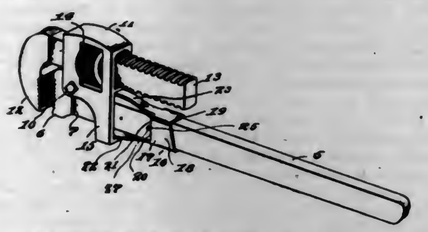
3. A multi-color single width continuous film tape for moving or cinematograph pictures, comprising a transparent base having thereon a series of complete photographic pictures in natural colors, each picture embodying a plurality of color section photographs in different color layers accurately registered and superimposed, substantially as described.

4. A multi-color single width continuous film tape for moving or cinematograph pictures, comprising a transparent base having thereon a series of complete photographic pictures in natural colors, each picture comprising a plurality of section photographs in different colors and in different color layers in accurately registered and superimposed relation, substantially as described.

5. A complete multi-color single width film for cinematograph or motion pictures, comprising a transparent base having thereon a series of complete photographic pictures, each picture embodying superimposed color section photographs in different colors and in different layers, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

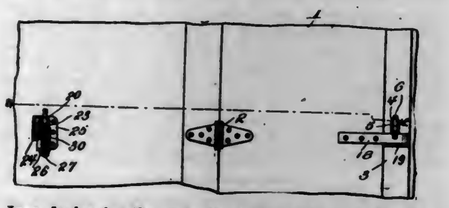
1,213,039. WRENCH. JOHN WILLIAM TOOHEY, Berlin, N. H., assignor of one-half to John S. Myers, Berlin, N. H. Filed Jan. 4, 1916. Serial No. 70,138. (Cl. 81—103.)



1. In combination with a wrench, a frame pivoted thereto carrying a slidably adjusted jaw, of a spring constructed of an integral piece of material and embodying a body portion bent around the handle portion of the wrench, said strip being formed with a pair of diametrically opposed arms extending longitudinally of and at the opposite edge faces of the handle portion and positioned within said frame for normally retaining the slidable jaw in proper longitudinal position with relation to the handle.

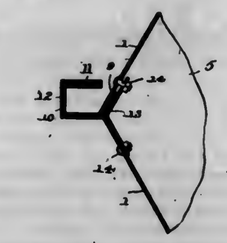
2. In combination with a wrench, having a handle portion provided with angularly disposed pins, a frame pivotally connected with said handle portion and carrying a slidably adjusted jaw, of a spring constructed of an integral piece of material and embodying a body portion bent around the handle portion of the wrench and confined between said pins for preventing any accidental movement thereof, said body portion being formed with a pair of diametrically opposed arms extending longitudinally of and at the opposite edge faces of the handle portion and positioned within the frame for normally retaining the slidably jaw in proper longitudinal position with relation to the handle.

1,213,040. DOOR-LATCH. NATHANIEL TWOMBLY, Eastonville, Colo. Filed May 24, 1915. Serial No. 30,186. (Cl. 70—45.)



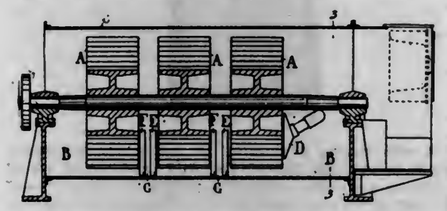
In a device for the purpose set forth, a plate having a bracket secured thereon, a latch including a body portion pivotally secured between the bracket and plate, said latch having one of its ends formed with a hook and an upwardly and downwardly curved finger engaging portion extending from the hook, the second end of the hook comprising a thumb engaging extension and the said end at a distance from the rounded portion thereof being provided with an elongated opening, a second bracket upon the plate also provided with a registering elongated opening, a convolute spring upon the last mentioned bracket and contacting with the latch, a member loosely passing through the openings and through the convolutions of the spring, and adjustable elements upon the opposite ends of the said member.

1,213,041. GRAIN-TANK. WALTER R. VECKRUISE, La Grange, Ill. Filed Jan. 12, 1915. Serial No. 1,820. (Cl. 220—125.)



A tank of the class described embodying a vertical wall constructed from a plurality of sections, the marginal edge of one section being bent upon itself to provide an angular extension, said extension terminating exteriorly and laterally of said tank to provide a U-shaped locking rib terminating in a return flange, the marginal edge of the adjacent section being extended exteriorly and laterally of said tank to provide a second U-shaped locking rib, said last named rib fitting within the first mentioned rib and interlocking therewith by the return flange of the former mentioned rib, and retaining the second mentioned rib over the angular extension of the first mentioned rib, and a reinforcement disposed exteriorly of the tank and having connection with said sections and overlying the annular extension.

1,213,042. FLUID-COOLING APPARATUS. GEORGE HENRY WALKER, Worcester, England, assignor to Heenan & Froude, Limited, Manchester, England. Filed Jan. 11, 1916. Serial No. 71,554. (Cl. 261—92.)



1. A cooler, comprising a plurality of liquid containing compartments, a rotor in each of said compartments, and means for delivering liquid from one compartment at a point adjacent to where the rotor in said compartment enters the liquid therein, to the adjacent compartment at a point adjacent to where the rotor in the latter compartment emerges from the liquid therein.

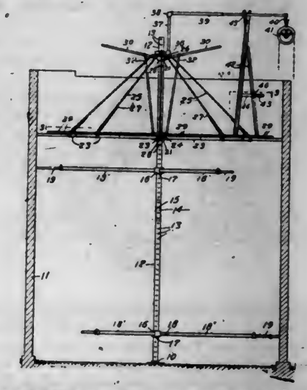
2. In a cooler, a tank divided into compartments, a rotor divided into sections, one in each compartment, and means to direct the flowing water into each compartment of the tank adjacent to the rising side of the rotor and to direct the flowing water out of the compartment adjacent to the falling side of the rotor.

3. In a cooler, a tank divided into liquid containing compartments, a rotor divided into sections, one in each compartment, baffle plates arranged in the tank, and means to direct the flow of the liquid into each compartment at the side at which the plates of the rotor emerge from the water and the flow of the water out of each compartment at the side at which the plates of the rotor reenter the water in the tank.

4. A cooler comprising a tank, weir plates arranged in pairs therein, the tank having compartments between adjoining pairs of said plates, each weir plate having a portion of its upper edge cut away, the plates of each pair being spaced and having the said cut-away portions at relatively opposite ends thereof for directing liquid to flow from one compartment at an end opposite to where it enters the succeeding compartment.

5. In a cooler, a tank, partitions in said tank dividing the latter into compartments, each partition comprising a plurality of weir plates arranged in spaced relation, each weir plate having portions of its upper edge cut away, the adjacent plates of each partition having said cut-away portions at relatively opposite ends for permitting the liquid to flow out of one compartment along the space between said plates and into the next compartment, substantially as and for the purpose set forth.

1,213,043. SCAFFOLD. GEORGE WASHINGTON WALKER and ERASTUS HARKNESS HARRY, Gibson City, Ill.; said Harry assignor to said Walker. Filed Mar. 16, 1916. Serial No. 84,584. (Cl. 20—81.5.)



1. A scaffolding apparatus comprising a sectional standard having a plurality of openings therein, upper and lower sleeve members mounted on said standard and relatively adjustable to each other, means engaging the openings in said standard for supporting said sleeve members in adjusted positions, a plurality of sectional and resilient platform board supporting arms extending radially from said lower sleeve member and engaging the wall of a structure, flexible brace connections between said arms and the upper sleeve member, a device for adjusting said upper and lower sleeve members relative to each other, said device including oppositely disposed levers pivoted to said upper sleeve member, and connections between said levers and the lower sleeve member whereby the upper sleeve member is raised when the levers are lowered and the lower sleeve member raised when the levers are raised.

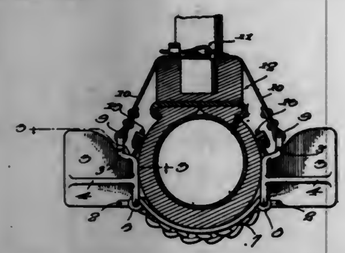
2. A scaffolding apparatus comprising a standard, upper and lower platform supporting sleeve members mounted upon said standard and adjustable relative to each other, resilient supporting arms extending from one of said members and having their outer ends in contact with the wall of a structure when said arms are in horizontal position, and means for alternately shifting said arms from horizontal to diagonal positions and adjusting said sleeve members whereby to raise the apparatus.

3. A scaffolding apparatus comprising a standard, upper and lower sleeve members mounted upon said standard and adjustable relative to each other, resilient platform supporting arms extending from one of said sleeve

members and having their outer ends in contact with the wall of a structure when the arms are in substantially horizontal position, flexible connections between said upper sleeve member and said supporting arms and lever connections between said sleeve members adjustable in one direction for raising said upper sleeve member and exerting upward pull on said flexible connections to disengage the outer ends of said platform supporting arms and adjustable in the opposite direction to raise said lower sleeve member to again cause the outer extremities of said platform supporting arms to engage the wall of the structure.

4. A scaffolding apparatus comprising a standard, upper and lower sleeve members mounted thereon and adjustable relative to each other, resilient platform supporting arms extending from one of said sleeve members and having their outer ends in contact with the wall of a structure when the arms are in a substantially horizontal position, and means for adjusting said sleeve members relative to each other whereby to raise the outer ends of said supporting arms out of contact with said structure wall, said means being also operated to raise the sleeve member to which said supporting arms are connected after the outer ends of said arms have been raised whereby said ends are again caused to contact the structure wall.

1,213,044. DETACHABLE SHOE FOR THE WHEELS OF SELF-PROPELLED VEHICLES. JESSE C. WEAVER, Oakland, Nebr. Filed Nov. 11, 1915. Serial No. 60,879. (Cl. 152—14.)



1. A shoe of the class described designed for use in connection with vehicle wheels carrying anti-skid chains having circumferential and transverse portions; comprising a pair of frames adapted to be disposed on the opposite sides of the tire of the wheel and being offset laterally outwardly intermediate their widths to adapt them to receive the transverse portions of said chains, means connecting the inner ends of said frames and having their points of connection with the latter offset laterally from the same to provide for the reception of the circumferential portions of said chains, means connecting the outer ends of said frames, and mud lugs on the outer sides of the latter.

2. An article of manufacture of the class described comprising an open triangular frame, the central portion of one of its ends being offset laterally to form strap receiving portions on the opposite sides of said central portion, the portions of the sides of said frame forming the angle at the other end thereof being also offset laterally and provided with a strap receiving loop, and a lug extending laterally from one side of said frame.

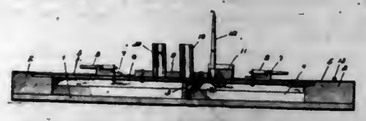
1,213,045. FIXATION OF ACID COLORS ON COTTON. FREDERICK WILLIAM WEEKS, Edgworth, England. Filed Aug. 12, 1916. Serial No. 114,622. (Cl. 8—13.)

1. In the dyeing or printing of cotton fabrics with acid dyestuffs, the method of treating the fabrics with fixing agents or mordants consisting of condensation products formed by the interaction of amins and aldehydes.

2. In the dyeing or printing of cotton fabrics with acid dyestuffs, the method of treating the fabric with fixing agents or mordants consisting of condensation products formed by the interaction of amins and aldehyde compounds which yield an aldehyde when steamed or heated.

3. In the dyeing of cotton fabrics with acid dyestuffs, the method of treating the fabric with fixing agents or mordants formed by the interaction of amins and aldehydes, the materials for forming said fixing agents or mordants being mixed in the padding bath with the acid dyestuffs.

1,213,046. TOY WAR-SHIP. HORACE THOMAS WELCH, Quebec, Quebec, Canada. Filed Feb. 7, 1916. Serial No. 76,719. (Cl. 46—37.)



A toy simulating a vessel comprising a hull having a bottom provided at its ends with blocks and at a point between its ends with a transversely disposed partition beam, the said hull also having side walls which extend above the upper surfaces of the inner ends of the said blocks and above the upper edge of the partition beam, a woven fabric applied to the bottom and side walls of the hull and extending over the block, a coating of waterproof material applied to said fabric, a deck adapted to be fit snugly between the upper edge portions of the side walls of the hull and engaging the fabric at the inner ends of the said blocks and resting upon the upper edge of the partition beam, a woven fabric covering the deck, and a waterproof coating applied to the fabric on the deck whereby the deck when applied to the hull serves as a waterproof seal for the same.

1,213,047. HOSIERY. ELIZABETH WERM, Swoyersville, Pa. Filed Sept. 10, 1913. Serial No. 789,151. (Cl. 2—23.)

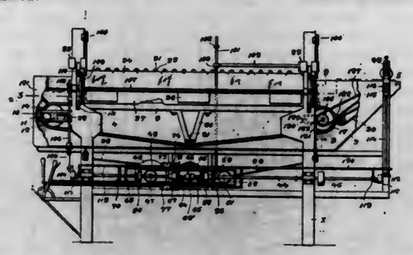


A sock having a plurality of spaced annular elastic bands in the cuff thereof, and said bands being spaced distances decreasing progressively from the extremities of the cuff to the center thereof, all of said bands being normally of the same thickness and tension.

1,213,048. WASHING-MACHINE. EDWIN WESSMAN, New York, N. Y. Filed Oct. 8, 1915. Serial No. 54,794. (Cl. 68—20.)

1. A washing machine comprising a traveling carrier adapted to receive the articles to be washed, scrubbing mechanism above the carrier and coöperating therewith and movable across the carrier to scrub the articles thereon and embodying vertical stems, scrubber heads on the lower ends of said stems, respectively, and a flexible sheet interconnecting all of said scrubber heads and closing the spaces between the same.

2. A washing machine comprising a traveling carrier adapted to receive the articles to be washed, scrubbing mechanism above the carrier and coöperating therewith and movable across the carrier to scrub the articles thereon and embodying vertical stems, scrubber heads on the lower ends of said stems, respectively, a flexible sheet interconnecting all of said scrubber heads and closing the spaces between the same, and springs surrounding said stems and acting to permit upward movement of the stems and scrubber heads under the action of the articles being washed.



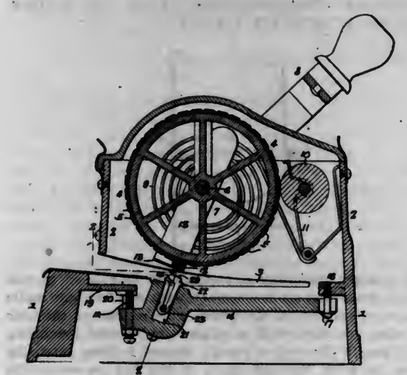
3. A washing machine comprising a carrier adapted to receive the articles to be washed, scrubbing mechanism cooperating with said carrier and arranged above the latter, and means for moving said scrubbing mechanism transversely of the carrier to scrub the articles on the carrier.

4. In a washing machine, a receptacle adapted to contain a washing medium, a carrier in said receptacle adapted to receive the articles to be washed, scrubbing mechanism above said carrier and coöperating therewith to scrub the articles thereon, means for reciprocating said scrubbing mechanism and carrier in relatively reverse directions to scrub the articles on the carrier, and means for moving the carrier longitudinally of the scrubbing mechanism to discharge the washed articles from the machine and bring unclean articles into position to be washed.

5. In a washing machine, a receptacle adapted to contain a washing medium, a carrier in said receptacle adapted to receive the articles to be washed, scrubbing mechanism above said carrier and coöperating therewith to scrub the articles thereon, means for actuating said scrubbing mechanism to scrub the articles on the carrier, and means on the respective sides of the carrier to throw the articles toward the center of the latter.

[Claims 6 to 12 not printed in the Gazette.]

1,213,049. MACHINE FOR PRINTING AND SCARRING PAPER. JOHN WHITAKER, North Wales, Pa. Filed Oct. 4, 1916. Serial No. 123,679. (Cl. 101—57.)



1. In an apparatus for scarring checks and other papers, a platen having fiber piercing elements; means for pressing the check against the platen to thereby cause said elements to pierce the paper; and means coacting with the first named means for moving platen elements laterally substantially simultaneously with the piercing of the paper to thereby open the fibers of the pierced paper and thus scar the check.

2. In an apparatus for scarring checks and other papers a movable platen consisting of a series of elements each element having a scarring surface; a support therefor; and means for pressing the check against the platen so that the surface of the latter will penetrate the paper, said support including means for causing the elements of the platen to move laterally substantially simultaneously with the penetration of the paper to thereby separate the fibers of the paper and thus scar the check.

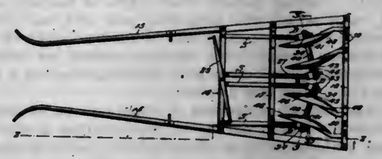
3. In an apparatus for printing and scarring paper, the combination of a type form for making an impression; a platen having fiber piercing elements; and means co-acting with the type form for displacing platen elements laterally to cause them to open up the fibers of the penetrated paper substantially simultaneously with the making of the impression.

4. In an apparatus for printing and scarring paper, the combination of a type form; means for inking the form; and a yielding platen having laterally moving piercing elements constructed to pierce the paper and substantially simultaneously open the fibers thereof as the impression is being made.

5. The combination in apparatus for printing and scarring paper, of a type form having smooth faced type thereon; means for inking the type; a sectional platen; means for moving one element of the printing couple toward the other to cause an impression to be made on the paper between the elements, each section of the platen having a piercing device to pierce the paper; and means to cause sections of the platen to move laterally to open up the fibers of the paper as an impression is being made.

[Claims 6 to 16 not printed in the Gazette.]

1,213,050. CULTIVATOR. WILLIAM S. WHITE, Tracy City, Tenn. Filed May 2, 1916. Serial No. 94,957. (Cl. 97—37.)



1. In a cultivator, a frame having standards, boxes carried by the standards, bearing sleeves in the boxes, an axle of non-circular cross section having rounded spindles engaging the boxes, a spacing sleeve on the non-circular portion of the axle, disks mounted on the non-circular portion of the axle, washers interposed between the disks and the ends of the spacing sleeve, washers mounted on the non-circular portion of the axle adjacent to the outer faces of the disks, keys driven transversely through the axle and engaging the last mentioned washers to clamp the disks between said last mentioned washers and the first mentioned washers, and additional washers mounted on the non-circular portion of the axle between the keys and the bearing sleeves.

2. In a cultivator, a frame, standards carried by the frame, each standard consisting of a triangular frame composed of a member bent to form two sides of the frame and a second member secured on the first member to form the third side of the frame and constituting a brace, a portion of the first member being extended below the second member to form a shank and the lower extremity of the second member constituting a shoulder, in combination with a bearing box having a socket engaging the shank, the latter being provided with a key to retain the box in position.

1,213,051. METHOD OF MAKING DIAPHRAGMS. CLARENCE S. WICKES, Merchantville borough, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Sept. 20, 1912. Serial No. 721,415. (Cl. 18—56.)

1. The method of making a diaphragm for acoustical instruments which consists in impregnating a sheet of fibrous material with a thermo-plastic condensation product of phenol and formaldehyde in solution, forming a disk from the same, superposing upon the edge portion of said disk an annulus of similarly impregnated sheet material, subjecting said disk and annulus to heat and pressure to change said condensation product into a further condensation product and to form thereby an integral homogeneous infusible implastic diaphragm, having a stiffening rim.

2. The method of making a diaphragm for acoustical instruments which consists in impregnating a sheet of fibrous material with a thermo-plastic condensation product of phenol and formaldehyde in solution, forming a disk from the same, superposing upon the edge portion of said disk an annulus of similarly impregnated sheet material, subjecting said disk and annulus to heat and pressure in a mold to further condense said condensation product, and to form thereby an integral homogeneous infusible implastic diaphragm having a stiff substantially integral rim.

3. The method of making a diaphragm for acoustical instruments which consists in impregnating a sheet of fibrous material with a condensation or reaction product of phenol and formaldehyde, forming a disk from the same, superposing upon the edge portion of said disk a plurality of annuli formed from sheets of material similarly impregnated and subjecting said disk and annuli to heat and pressure to further condense said condensation or reaction product and to form thereby an integral homogeneous infusible implastic diaphragm having a stiff substantially integral rim.

4. The method of making a diaphragm for acoustical instruments which consists in impregnating a sheet of fibrous material with a condensation or reaction product of phenol and formaldehyde, forming a disk from the same, superposing upon the edge portion of said disk a plurality of annuli formed from sheets of material similarly impregnated, and subjecting said disk and annuli to heat and pressure in a mold to further condense said condensation product and to form thereby an integral homogeneous infusible implastic diaphragm having a stiffening rim at the edge thereof.

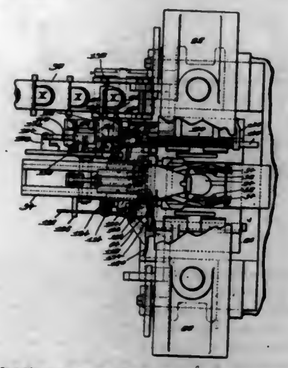
5. The method of forming a diaphragm for acoustical instruments which consists in impregnating a sheet of fibrous material with a thermo-plastic condensation or reaction product of phenol and formaldehyde, forming a disk from the same, placing upon the opposite faces of said disk and adjacent the edges of the same, a plurality of superposed annuli formed from sheet material similarly impregnated, subjecting said disk and annuli to heat and pressure in a mold conforming generally to the form of said superposed disk and annuli to change the form of said material to that of the mold and to change said condensation product into an implastic product, thereby to form an integral homogeneous infusible implastic diaphragm, having a stiff substantially integral rim.

[Claims 6 to 11 not printed in the Gazette.]

1,213,052. FEED MECHANISM. ERASTUS E. WINKLEY, Lynn, Mass. Filed Apr. 1, 1915. Serial No. 18,496. (Cl. 12—48.)

1. The combination, with a heel-compressor and mechanism for advancing heels to the compressor, of means for transferring the heels, from the advancing mechanism to the compressor, said means being constructed and arranged to invert the heels before their introduction into the compressor, so that they may be received, by the advancing mechanism, in a position the reverse of that in which the compressor is arranged to operate on them.

2. The combination, with a heel-compressor, of means, including a conveyer, for carrying heels to, and feeding them into, the compressor, said means being constructed and arranged to seize the heels by their lateral surfaces and invert them after they are placed on the conveyer and before they are received by the compressor, so that the heels may be loaded on the conveyer in a position the reverse of that in which the compressor is arranged to operate on them.



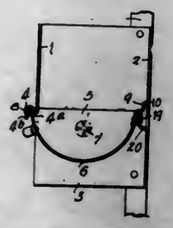
3. Heel-feeding means, having, in combination, a heel-compressor having a table and feed slide, a conveyer arranged adjacent said table and feed-slide; and means, actuated by connection, and in timed coöperation, with the table of the compressor, for transferring a heel from the conveyer to the feed-slide.

4. Heel-feeding means, having, in combination, a conveyer which may support heels in substantially horizontal position; a clamp, for seizing the heels of the conveyer, mounted on a substantially horizontal pivotal axis; and means for rocking the clamp about said axis to first place it above the conveyer in position to grip a heel and then cause it to remove the heel from the conveyer and simultaneously invert the heel.

5. Heel-feeding means, having, in combination, a conveyer which may be loaded with heels; a heel receiving member, and means for seizing the heels on said conveyer successively, and simultaneously inverting them and depositing them in a fixed position upon the receiving member for presentation to a machine for operating on said heels.

[Claims 6 to 13 not printed in the Gazette.]

1,213,053. SELF-CLEANING MANGER. GEORGE W. WOOLDRIDGE, Clarksville, Iowa. Filed July 7, 1916. Serial No. 107,979. (Cl. 119—61.)

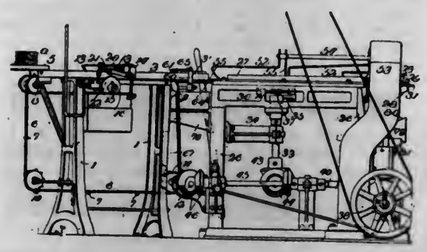


1. A manger including a rectangular box open at the top and bottom thereof and formed with opposed side walls and opposed end walls, the lower edge of one of the side walls being provided with a longitudinal socket extending the full length thereof, a trough shaped bottom pivotally mounted between the end walls of the box so as to tilt about a longitudinal axis, one of the edges of the bottom member being received within the before mentioned socket of the side member when the bottom member is in normal position, and the bottom member being adapted to be swung into a vertical or an inverted position when cleaning the manger, and latch means for locking the bottom member in normal position.

2. A manger including a rectangular box open at the top and bottom thereof and formed with opposed side walls and opposed end walls, the lower edge of one of the side walls being returned upwardly and downwardly to provide a downwardly opening spring socket extending the full length thereof, a trough shaped bottom member pivotally mounted between the opposed end walls so as to be tiltable about a longitudinal axis and susceptible of being swung into a vertical or inverted position when cleaning the manger, the longitudinal edges of the trough shaped bottom being reinforced, one of the reinforced longitudinal edges being engaged by the before mentioned spring socket at the lower edge of one of the sides when the bottom member is in closed position, and a latch member at the opposite edge of the trough shaped bottom member for locking the bottom member in a closed position.

3. A manger including a rectangular box open at the top and bottom thereof and formed with opposed side walls and opposed end walls, the lower edge of one of the side walls being returned upwardly and then downwardly to provide a spring socket extending the full length thereof, while the opposite side wall is provided with an upwardly extending lip, a trough shaped bottom member pivotally mounted between the opposed end walls so as to turn about a longitudinal axis and be susceptible of being swung into a vertical or inverted position when cleaning the manger, one of the longitudinal edges of the trough shaped bottom being received within the before mentioned spring socket at the lower edge of one of the side plates when the bottom is closed, and a depending lip at the opposite edge of the trough shaped bottom for engaging the lip at the opposite side of the manger box.

1,213,054. APPARATUS FOR FORMING PAPER CONTAINER-BODIES. WILBUR L. WRIGHT, Baltimore, Md., assignor to The Paper Vessels Company, Baltimore, Md., a Corporation of Maryland. Filed Jan. 18, 1916. Serial No. 72,710. (Cl. 93—79.)



1. Apparatus for forming container bodies with longitudinal permanent cemented seams from flat paper material blanks, comprising a continuously moving conveyer for successively carrying forward flat blanks at regular intervals and for delivering the same at a transfer station, a device for depositing a stripe of liquid cement along one longitudinal edge of each blank while being carried forward by said conveyer, a reciprocating step by step conveyer for successively receiving blanks from said transfer station and carrying the same forward step by step at regular intervals, and body forming mechanism to which said blanks are successively delivered at regular intervals by said reciprocating conveyer.

2. Mechanism for pressing a flat paper material blank into permanent container body form with its longitudinal edges cemented together and flattened to form a tight seam, in combination with a liquid cement applying device for depositing a stripe of cement along the longitudinal edge of a flat paper material blank, and blank conveying means for successively carrying blanks through said device to receive cement and for simultaneously conveying a multiplicity of said blanks along an extended path of movement from said device to said mechanism, while maintaining said blanks spaced apart and arranged in succession, and successively delivering said blanks at uniform intervals to said mechanism.

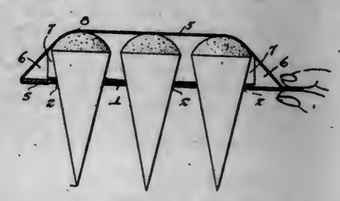
3. Container body forming mechanism for pressing a flat paper material blank having liquid cement applied to a side face of one longitudinal edge into permanent container body form with the longitudinal edges of the blank overlapping and compressed together to form a permanent tight seam, in combination with a cement applying device located remotely from said mechanism for applying cement to a longitudinal edge portion of each blank, and conveyer mechanism for successively receiving blanks from said device and conveying the same along an extended path to said mechanism and exposing the cement on said blanks to setting influences while in transit, said conveyer mechanism embodying means to prevent the cement on said blanks contacting with other surfaces while in transit.

4. A cement applying device for depositing an unbroken stripe of liquid cement along the lower face of a longitudinal edge of a continuously moving flat paper blank, and apparatus for successively moving blanks through said device and along an extended path of movement without contacting the cement on their lower faces, said apparatus constructed and arranged to simultaneously move forward a multiplicity of successively arranged spaced blanks and to deliver the same at uniform intervals into container body forming mechanism with the cement at the under faces of the blanks, in comoination with mechanism for pressing said blanks into permanent container body form with the longitudinal edge to which the cement is applied overlapping and superimposed on the opposite longitudinal edge of each blank and compressed thereto to form a tight permanent cemented seam.

5. A longitudinally elongated conveyer table provided with a continuously moving endless conveyer having uniformly spaced projecting pushers for engaging the rear edges of flat paper material blanks, a liquid cement applying device arranged on said table for depositing a stripe of liquid cement along a longitudinal edge of each blank moved along said table by said conveyer, said table embodying a longitudinal edge guide against which said blanks are alined as they are propelled along the table by said conveyer, transfer means receiving the blanks successively from said table, and a step by step conveyer successively receiving the blanks from said transfer device, in combination with mechanism successively receiving the blanks from said step by step conveyer, said mechanism being constructed and arranged to successively press the blanks into permanent container body form with their edges overlapping and cemented together.

[Claims 6 to 34 not printed in the Gazette.]

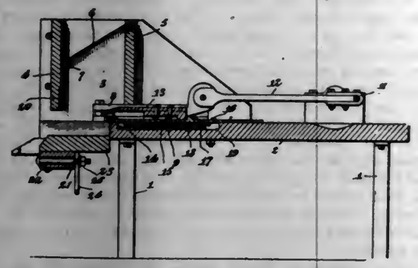
1,213,055. ICE-CREAM-CONE SUPPORT. JOSEPH YOST, Ashland, Pa., assignor of one-half to Charles A. Whipple, Ashland, Pa. Filed Jan. 18, 1916. Serial No. 72,872. (Cl. 224—48.)



An ice cream cone support comprising a plate having a series of cone receiving openings, and a sheet of paper of a substantially rectangular outline having one edge

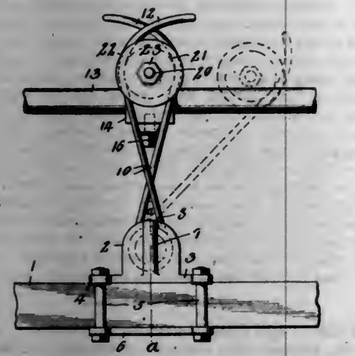
portion attached to one edge portion of said plate, there being side flaps depending from said sheet of paper when the latter is folded over the cones.

1,213,056. CORN-SLICER. ADAM H. ZORGER, Shermans Dale, Pa. Filed Feb. 29, 1916. Serial No. 81,239. (Cl. 146—7.)



A corn slicer comprising a platform, a hopper mounted thereon, a block supported from the platform and located below the outlet of the hopper, a carriage mounted for reciprocatory movement upon the platform, means for moving the carriage, a blade mounted upon the carriage, a follower slidably mounted upon the platform and normally lying below the cutting edge of the blade, said follower having a shank provided with an upstanding lug adapted to be encountered by the carriage when the same moves in a direction away from the hopper and a spring connected with the shank and the platform and being under tension with a tendency to normally hold the lug toward the adjacent edge of the carriage.

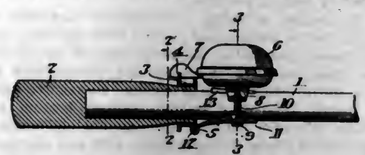
1,213,057. STEERING DEVICE. ANGEL AFANADOR, Lincoln, Nebr. Filed Aug. 31, 1915, Serial No. 48,247. Renewed Oct. 30, 1916. Serial No. 128,636. (Cl. 21—200.)



A steering gear attachment for motor vehicles comprising a housing secured to the rear wall of the axle and having a slot formed in the rear wall of said housing, depressions formed in the upper and lower walls of said housing, coiled springs within said housing and having the adjacent extremities thereof extending through said slot and rearwardly therefrom, each of the remaining extremities being bent at right angles to said coils and lying in said depressions, a roller journaled on the steering rod and lying between the adjacent extremities of the steering rod.

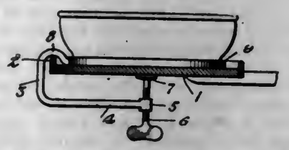
1,213,058. BICYCLE-BELL RINGER. JAMES ALUKONIS, Nashua, N. H. Filed Aug. 21, 1915. Serial No. 46,749. (Cl. 116—55.)

In combination with a handle bar and a handle revolubly mounted thereon, a head at the inner end of the handle, having radial tappets and also having an annular flange; a holder bearing against one side of the bar and having a grooved end, the groove of which is engaged by



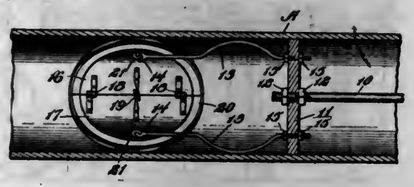
the said flange, and a bell having an arm for operation by the tappets and also having an attachment clip, said clip engaging the handle bar and also engaging and securing the holder.

1,213,059. DISH-HOLDER. PAUL I. BACHMANN, Oak Park, Ill., assignor of one-fifth to Henry C. Schaefer, Appleton, Mo. Filed Sept. 14, 1915. Serial No. 50,653. (Cl. 65—61.)



A dish holder comprising a ring, having a depression formed in the inner wall thereof, an arcuate flange formed on the inner wall of said ring, a spring-pressed latch pivotally mounted within said depression, a flange formed on said latch, a handle formed on said latch and extending through said ring, a bracket formed on said ring and depending therefrom, the said bracket being of substantially L-shaped configuration and having its horizontal portion lying parallel with said ring, and a thumb screw threaded into the free end of said horizontal portion and vertically disposed therein.

1,213,060. BOILER-TUBE PLUG. WILMER J. BAKER, Wakefield, Mass., assignor of one-half to Charles H. Baker, Plattsburg, N. Y. Filed June 6, 1916. Serial No. 102,040. (Cl. 137—76.)

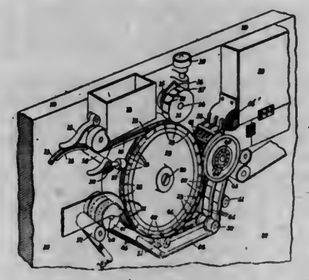


1. An apparatus of the class described comprising an operating rod adapted to be inserted within a boiler tube, a member carried by one end of the rod and constituting a guide therefor, a closure associated with the rod to be inserted therewith within the tube, and including a plurality of yieldably supported sections adapted to expand into engagement with one end of the tube when projected therefrom, a second closure adjustably mounted upon the rod for engagement with the opposite end of the tube, and means on the rod for holding said closures in effective engagement with the opposite ends of the tube.

2. A device of the class described comprising an operating rod adapted to be inserted within a boiler tube, a member carried by one end of the rod and constituting a guide therefor, a closure associated with the rod and adapted to be inserted therewith within said tube, and including a plurality of hingedly connected sections, a yieldable means connected with said sections to automatically expand the latter into engagement with one end of the tube when projected therefrom, a second closure adjustably mounted upon the rod for engagement with the opposite end of the tube, and means on the rod for holding said closures in operative position.

3. A device of the character described comprising an operating rod adapted to be inserted within a boiler tube, a member carried by one end of the rod and constituting a guide therefor, arms projecting from said member, a closure supported by said arms for insertion within the tube with said rod, and including yieldably supported members adapted to automatically expand into engagement with one end of the tube when projected therefrom, a second closure adjustably mounted on said rod for engagement with the opposite end of the tube, and means for holding said closures in operative position.

1,213,061. APPARATUS FOR APPLYING TIPS TO CIGARETTES. THOMAS WILLIAM BALDWIN, Crayford, England, assignor to British-American Tobacco Company Limited, Westminster, England. Filed Dec. 5, 1916. Serial No. 135,216. (Cl. 131—39.)



1. In a cigarette tipping machine, the combination with a movable tip carrier, of a movable cigarette carrier arranged to hold the cigarette in engagement with a tip on the tip carrier, said carriers moving at different speeds to effect the rolling of the cigarette while in engagement with the tip to wrap the latter on the cigarette.

2. In a cigarette tipping machine, the combination with a movable tip carrier, of a movable cigarette carrier arranged to hold the cigarette in engagement with a tip on the tip carrier, said carriers moving at different speeds in the same direction to effect the rolling of the cigarette while in engagement with the tip to wrap the latter on the cigarette.

3. In a cigarette tipping machine; the combination with a movable carrier serving to hold a plurality of independent tips, of a cigarette carrier moving at a different speed of travel and arranged to bring a plurality of cigarettes severally into engagement with said tips and effect, by said difference of speed of travel, the rolling of the cigarettes to wrap the tips thereon.

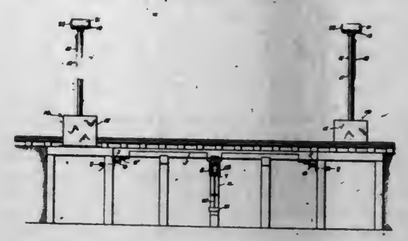
4. In a cigarette tipping machine, the combination with means for feeding and carrying cigarette tips, of means for severally feeding the cigarettes and a traveling band receiving the cigarettes from the feeding means and bringing them into rolling engagement with the tips to wrap the latter severally on the cigarettes.

5. In a cigarette tipping machine, the combination with a constantly moving tip carrier and means for continuously feeding thereto the cigarette tips, of a constantly moving conveyer for the cigarettes and means for continuously feeding the cigarettes severally thereto, said conveyer being arranged to travel past the tip carrier and severally roll the cigarettes in engagement with the several tips to wrap the latter on the cigarettes.

[Claims 6 to 15 not printed in the Gazette.]

1,213,062. BRIDGE SIGNAL APPARATUS. NOAH O. BATY, Springfield, Mo. Filed Feb. 8, 1916. Serial No. 76,983. (Cl. 177—339.)

1. In signal apparatus of the class described, a semaphore, an operating rod connected to the signal blade of the semaphore, a lever pivoted between its ends and having one end connected to said rod, a pin projecting outwardly from the rod end of said lever, an arm adapted for rotary movement, an electric motor, connections between said motor and arm for operating the arm to engage said pin to swing the lever to move the signal blade to danger position, a normally open electric circuit for said motor, a relay controlling said circuit, and a float actuated circuit closer controlling said relay.



2. In signal apparatus of the class described, a semaphore, an operating rod connected to the signal blade of the semaphore, a lever pivoted between its ends and having one end connected to said rod, a pin projecting outwardly from the rod end of said lever, an arm adapted for rotary movement, an electric motor, connections between said motor and arm for operating the arm to engage said pin to swing the lever to move the signal blade to danger position, a normally open electric circuit for said motor, a relay controlling said circuit, a bridge structure, fusible conductors extending longitudinally of the bridge structure and connected with said relay, and a source of energy connected in said fusible conductors and holding said relay normally energized.

3. In signal apparatus of the class described, a semaphore, an operating rod connected to the signal blade of the semaphore, a lever pivoted between its ends and having one end connected to said rod, a pin projecting outwardly from the rod end of said lever, an arm adapted for rotary movement, an electric motor, connections between said motor and arm for operating the arm to engage said pin to swing the lever to move the signal blade to danger position, a normally open electric circuit for said motor, a relay controlling said circuit, a bridge structure, fusible conductors extending longitudinally of the bridge structure and connected with said relay, a source of energy connected in said fusible conductors and holding said relay normally energized, and means carried by the bridge structure and connected in said fusible conductors and operable upon movement of the bridge structure to break the continuity of said conductors whereby the relay will be deënergized.

4. In signal apparatus of the class described, signal mechanism, a motor controlling the operation of said signal mechanism, an electroresponsive device controlling the operation of said motor, a bridge structure, fusible conductors extending longitudinally of the bridge structure and connected with said relay, and a source of energy connected in said fusible conductors and holding said relay normally energized.

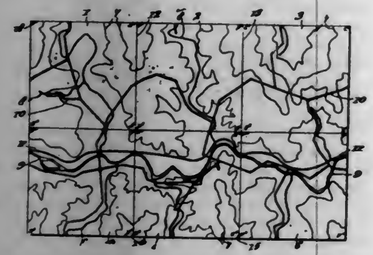
5. In signal apparatus of the class described, signal mechanism, a motor controlling the operation of said signal mechanism, an electroresponsive device controlling the operation of said motor, a bridge structure, conductors extending longitudinally of the bridge structure and connected with said relay, a source of energy connected in said conductors and holding said relay normally energized, and means carried by the bridge structure and connected in said conductors and operable upon movement of the bridge structure to break the continuity of said conductors whereby the electroresponsive device will be deënergized.

1,213,063. PORTABLE SQUARE. CHARLES A. BENSON, Chicago, Ill. Filed Jan. 30, 1911. Serial No. 605,664. (Cl. 33—114.)



In a device of the class described, a main section provided with a plurality of holes, a separable section provided with a plurality of dowel pins to register with said holes in the main section, one of said dowel pins provided with screw threads, the main section provided with a perforation into which the extremity of the threaded dowel pin extends, a threaded retaining pin on the main section located in the perforation of the main section into which the threaded dowel pin extends and in axial alinement with the threaded dowel on the separable section and a screw shell or nut arranged to be screwed from one to the other of the two alined threaded pins.

1,213,064. MAP. ALFRED W. BJORNSTAD, U. S. Army. Filed Mar. 13, 1916. Serial No. 83,857. (Cl. 35—6.)

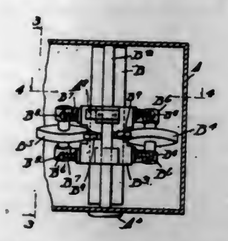


1. A map composed of sections bearing representations of physical features, the intersections of such representations having the same relative location in a plurality of said sections whereby when the several sections are interchanged a representation on one section will coincide or harmonize with a representation on the adjacent section.

2. A map composed of sections bearing representations of dissimilar physical features, the intersections of such representations having the same relative location in a plurality of edges of said sections whereby the sections are rendered interchangeable to vary the terrain, and, when interchanged the representations on one section will coincide and harmonize with the representations on adjacent sections.

3. A compact map for military instruction including sections bearing representations of physical features, the intersections of such representations having the same relative location in a plurality of said sections whereby, when the several sections are interchanged, a representation on one section will coincide or harmonize with a representation on the adjacent section; and identifying marks on said sections for preserving a record of the combinations used.

1,213,065. SPEEDOMETER. GUY W. BLACKBURN, Elgin, Ill. Filed Apr. 17, 1914. Serial No. 832,434. (Cl. 264—1.)



1. A speed indicator comprising a rotating slotted spindle and means for rotating it, a carrier, and means comprising said spindle for lifting said carrier against the force of gravity.

2. A speed indicator comprising a rotating slotted spindle and means for rotating it, the effective circumference of the spindle progressively decreasing upwardly, a carrier in contact with said spindle, and means comprising said spindle for raising said carrier.

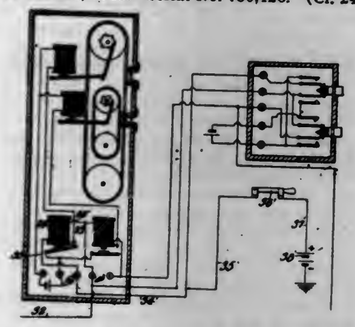
3. A speed indicator comprising a carrier adapted to move vertically, means for raising said carrier, said means comprising a slotted spindle adapted to be intermittently in contact with said carrier.

4. A speed indicator comprising a spindle having a slot in the surface thereof increasing in width from the lower end thereof upwardly, and a carrier free to slide parallel with the axis of the spindle and in contact therewith.

5. A speed indicator comprising a vertical spindle having a slotted surface, and a carrier free to slide therealong and provided with means for engaging said surface.

[Claims 6 to 25 not printed in the Gazette.]

1,213,066. WIRELESS AUTOMATIC RAILWAY REGISTERING SYSTEM. CLINTON L. BOPP, Waterloo, Iowa. Filed Feb. 24, 1913. Serial No. 750,426. (Cl. 246—30.)



1. A wireless system for train signals comprising means carried by the train to maintain a zone of influence, a stationary relay, an open circuit including said relay and responsive to the influence, means for closing said circuit when the train comes within a predetermined distance of the circuit, and means for opening said circuit when the train passes a predetermined point.

2. A wireless system for train signals comprising means carried by the train to maintain a zone of influence, a stationary relay, a battery, an element responsive to the influence, a circuit including said relay, battery and element responsive to the influence, electromagnetic means to open said circuit at the responsive element, a second battery, a second circuit including said electro-magnetic means and second battery, and means to short circuit the second battery and thereby deënergize the electromagnetic means to prevent the same from opening the first named circuit.

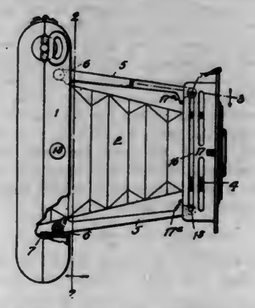
3. A wireless signaling system for trains comprising means upon the train for maintaining a zone of influence, a coherer responsive to the influence and adapted to respond when the train is within a predetermined distance from the coherer, a relay, a battery, a circuit including said coherer, relay and battery, said circuit adapted to be closed when the coherer responds, electromagnetic means for agitating the particles of the coherer, a second battery, an insulated rail section of the track over which the train passes, a wire running from each side of the second named battery to the rails of the insulated section respectively, a second circuit including said agitating means and the second named battery, and means for closing said circuit when the relay is energized.

4. In a wireless signaling system for trains, means carried by the train to set up a zone of influence, a relay, a battery, a circuit including said relay and battery, an element responsive to the influence located within said circuit adapted to close the circuit when the train is within a predetermined distance from said element, an insulated track section in the track over which the train passes, a second battery, a connection between one side of the battery and one of the rails of the insulated section, a connection between the other side of the battery and the other rail of the insulated section, means adapted to break said circuit at the element responsive to the influence, a second circuit including said second named battery and said means for breaking the circuit at the responsive element, and means controlled by the relay adapted to close said second named circuit as the relay is energized.

5. A wireless system for signaling trains comprising means on the train to maintain a zone of influence, a stationary element located along the track and responsive to the zone of influence, a battery, a relay, a circuit including said responsive element, battery, and relay, an electromagnet, a second battery, means controllable by the electromagnet to interrupt the path through the responsive element, an armature controlled by the relay, a circuit including said electromagnet, said second battery, said armature when the relay is energized, and means to short circuit the second battery when the train approaches a predetermined point.

[Claims 6 and 7 not printed in the Gazette.]

1,213,067. CAMERA. CARL BORNMANN, Binghamton, N. Y., assignor to Ansco Company, Binghamton, N. Y., a Corporation of New York. Filed May 6, 1916. Serial No. 95,762. (Cl. 95—39.)



1. In a folding camera provided with a bellows, lens casing and co-acting parts, spring actuated arms pivotally supported at one end upon the camera body and slidably engaged at their other end with the lens supporting structure and adapted to project the lens and bellows, and means upon the camera body to hold the parts when closed against the stress of the springs.

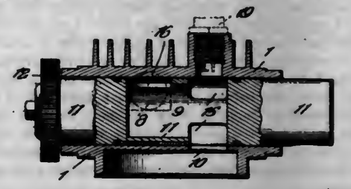
2. In a folding camera provided with a bellows, lens casing and co-acting parts, spring actuated arms pivotally supported at one end upon the camera body and engaging the lens casing at their other ends, shoulders on the free ends of the arms adapted when extended to engage some part of the lens casing and thus determine the position of the lens as projected, and means upon the camera body to hold the parts when closed against the stress of the springs.

3. In a folding camera provided with a bellows, lens casing and co-acting parts, spring actuated arms pivotally supported at one end upon the camera body and engaging the lens casing at their other ends, slotted brackets on the lens casing, pins on the free ends of the arms which work in the slots of the brackets and means upon the camera body to hold the parts when closed against the stress of the springs.

4. In a folding camera provided with a bellows, lens casing and co-acting parts, spring actuated arms pivotally supported at one end upon the camera body, U-shaped brackets upon the lens casing, each member of which brackets is slotted, a pin upon the free end of each arm, which works in the slot in one of the members of each U-shaped bracket and means upon the camera body to hold the parts when closed against the stress of the springs.

5. In a folding camera provided with a bellows, lens casing and co-acting parts, spring actuated arms pivotally supported at one end upon the camera body and engaging the lens casing at their other ends, shoulders upon the free ends of the arms which automatically cause the lens casing and co-acting parts to assume and maintain positions parallel to that of the focal plane of the camera and means upon the camera body to hold the parts when closed against the stress of the springs.

1,213,068. INTERNAL-COMBUSTION ENGINE. WALTER BOX, Georgetown, Tex. Filed Feb. 11, 1916. Serial No. 77,735. (Cl. 123—80.)



1. In combination with the cylinder of an internal combustion engine having a substantially cylindrical valve chamber at the outer end thereof and extending transversely thereof, said cylinder having a port opening into the combustion chamber and a cylinder having alined oppositely extending inlet and exhaust ports at the valve chamber and at right angles to the port leading to the cylinder and offset longitudinally with respect to the first named port and having igniting mechanism at the opposite side of the chamber from the first named port, of a rotary valve in the chamber and extending at its ends beyond the said chamber and having at one end a gear ring for connecting with means for rotating the valve continuously in one direction, the ends of the valve being solid and the intermediate portion being chambered, said valve having annular packing grooves at the inner ends of the solid portions, and packing rings in the grooves, said valve having a radial longitudinally extending slot forming a port at the end of the chambered portion adjacent to the gear ring, and having a depression extending longitudinally of the valve at said port and from one side thereof around the valve to near the other side thereof, a packing ring in the depression, said port registering with the inlet and the exhaust, and the valve having oppositely arranged ports at the other end of the chambered portion registering with the spark plug and the first named port of the cylinder.

2. In combination with the cylinder of an internal combustion engine having a substantially cylindrical valve

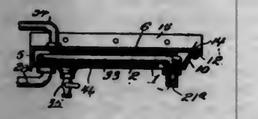
chamber at the outer end thereof, and having a port leading from the chamber into the cylinder, said chamber having oppositely extending inlet and exhaust ports, and having igniting mechanism opposite the first-named port, a valve mounted to rotate in the chamber and of substantially cylindrical form, said valve being chambered intermediate its ends and having a port adapted to register in alternation with the inlet and the exhaust and having oppositely arranged ports for registering with the first named port and the igniting mechanism, the valve having means for sealing the port with which the first named port is out of register.

3. In an internal combustion engine, a cylinder, a head therefor, a spark plug disposed in said head, said head being provided with a bore and having intake and exhaust passages communicating with the bore, and a port extending from the bore to the interior of the cylinder, a cylindrical valve closed at its ends and having a hollow portion intermediate its ends, said valve being arranged to enter the bore and being provided with a port arranged to register with the intake and exhaust passages, a second port arranged to register with the port leading into the cylinder, and a third port arranged to register with the spark plug.

4. In an internal combustion engine, a cylinder, a head therefor, a spark plug disposed in the head, said head being provided with a bore and having intake and exhaust passages communicating with the bore, and a port extending from the bore to the interior of the cylinder, a hollow portion intermediate its ends, said valve being arranged to enter the bore and being provided with a port arranged to register with the intake and exhaust passages, a second port arranged to register with the port leading into the cylinder, and a third port arranged to register with the spark plug, said second named and said third named ports being disposed on opposite sides of the valve.

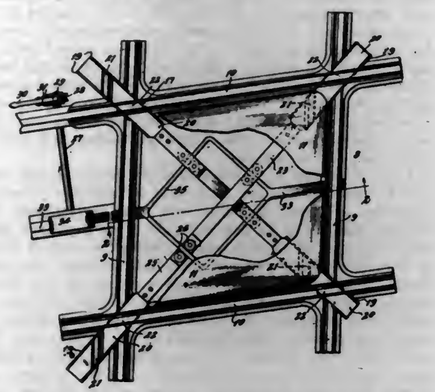
5. In an internal combustion engine, a cylinder, a head therefor, a spark plug disposed in the head, said head being provided with a bore and having intake and exhaust passages communicating with the bore, a port extending from the bore to the interior of the cylinder, a hollow portion intermediate its ends, said valve being arranged to enter the bore and being provided with a port arranged to register with the intake and exhaust passages, a second port arranged to register with the port leading into the cylinder, and a third port arranged to register with the spark plug, said second named and said third named ports being disposed on opposite sides of the valve and being in alinement.

1,213,069. AUTOMOBILE-HEATER. JOHN J. BRENT, Alton, Kans. Filed Oct. 2, 1914. Serial No. 864,664. (Cl. 220—8.)



A device of the class described consisting of an oblong metal sheet, said sheet being provided with longitudinally separated integral parts forming respectively a rectangular top portion, a relatively narrow rear wall integral with said top portion, a bottom portion integral with said back wall and a front portion integral with said bottom portion, said bottom portion being rectangular but of a smaller size relatively to the top portion, said rear wall being of the same width as said bottom portion, said front wall terminating in a forwardly bent flange disposed parallel with the bottom portion, the outer end of said top portion contacting with and being secured upon said flange, said bottom portion being also formed with lateral extensions, said rear wall having opposite extensions forming tongues slit with respect to the bottom and top portion, each of the extensions of said bottom portion being bent upwardly to provide side walls at right angles to the bottom portion and having right angular flanges upon which are secured the opposite side edges of the top portion, said tongues being bent around so as to lap over the side walls, said side walls having end tongues at right angles to the first-named tongue and lapping over said front wall.

1,213,070. RAILROAD-CROSSING. DAVID BROWN, Eldorado, Ill. Filed Dec. 6, 1915. Serial No. 65,358. (Cl. 104—116.)

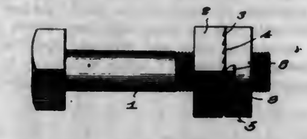


1. In a railroad crossing including angularly disposed spaced pairs of connected rails, said crossing at the corners thereof having angularly arranged gaps, overlapping members having their ends arranged in the gaps, angularly disposed short rails upon the rails of the said members whereby to fill the gaps at the corners of the crossing, anti-frictional rollers upon the overlapping members, a rectangular frame having its arms engaging with the rollers, guide members for the frame, means for moving the frame longitudinally of the crossing to cause the arms thereof to move the overlapping members by virtue of contact of the rollers upon the said overlapping members, whereby to bring the respective short rails of the overlapping members to fill the gaps of the crossing.

2. In a railway crossing, spaced pairs of angularly disposed rails having a central connecting plate and being provided with angularly disposed gaps at the corners of the crossing, the side walls provided by the gaps having longitudinal grooves, members having tongues received in the grooves and movable longitudinally of the gaps, plates connecting the diagonally opposite pairs of members, yokes secured to the plates, roller members arranged in pairs and journaled between the yokes and plates, angularly disposed short rails formed upon the referred to members in the gaps of the crossing and disposed to register with the respective rails of the crossing when the said members are moved diagonally of the crossing, a substantially rectangular frame having its arms engaged between the respective pairs of rollers, a rack bar connected with the frame, bearings for said rack bar, a toothed wheel co-engaging with said rack bar, and means for rotating the wheel to move the frame longitudinally, as and for the purpose set forth.

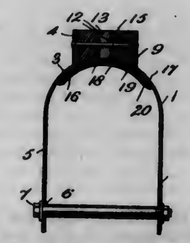
1,213,071. LOCK-NUT. WILLIAM A. BUCKNER, Fresno, Cal. Filed Mar. 14, 1916. Serial No. 84,187. (Cl. 151—15.)

The combination with a bolt and a nut screwed on the bolt, said nut having its outer face depressed to provide straight shoulders and angular walls connecting the shoulders, of a locking nut also screwed upon the bolt, said locking nut having its inner face arranged at an angle with respect to its outer face, the thickened side or corner of the locking nut being cut away but being formed with a longitudinally extending tooth which has its inner edge project slightly beyond the angular inner face of the locking nut and which has its engaging face angular, the said tooth adapted to ratchet over the teeth of the first mentioned nut until the locking nut is brought



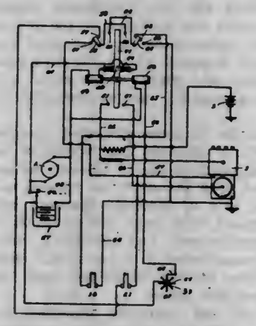
into frictional contact with the said nut, and then cause both the nut and the locking nut to cant toward each other to compress their threads against the threads of the bolt, thereby tending to close the threads and preventing any loosening of the nuts.

1,213,072. TIRE-ARMOR. COLIN CAMPBELL, Yonkers, N. Y. Filed Sept. 3, 1915. Serial No. 48,907. (Cl. 152—10.)



A protector for tires comprising a casing extending around the tire and detachable therefrom, said casing having passages therein, and tread elements freely removable in said passages and projecting beyond said casing, each of said elements comprising a shell, a concavo-convexed base flange bearing against the under side of said casing, the walls of the shell having portions passing through the flange and upset against the under side thereof, the said flange closing against the bottom of the shell, and a facing of pliable material extending entirely over one side of the flange and over said upset portions of the shell.

1,213,073. SWITCH. MINUS CARR, Maud, Miss. Filed Jan. 28, 1916. Serial No. 74,817. (Cl. 123—148.)



1. A controller for electrical ignition systems comprising a ball governor, a switch, an electro-mechanical means coöperating with said governor and switch for alternately throwing the battery and magneto of the ignition system in circuit with the spark plugs, means for short circuiting said switch independent of said governor.

2. A controller for electrical ignition systems comprising a ball governor, a switch, an electro-mechanical means coöperating with said governor and switch for alternately throwing the battery and magneto of the ignition system in circuit with the spark plugs, and lock controlled means for short circuiting said switch.

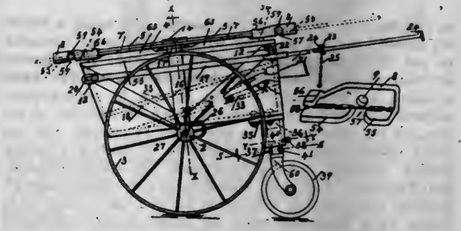
3. A controller for electrical ignition systems comprising a ball governor, a magneto switch and a battery switch controlled by said governor, an electro-mechanical means acting through said switches for alternately connecting the battery or magneto of the ignition system in circuit with the spark plugs, and an auxiliary switch for short circuiting said magneto and battery switches.

4. A controller for electrical ignition systems comprising a ball governor, a magneto switch and a battery switch controlled by said governor, an electro-mechanical means acting through said switches for alternately connecting the battery or magneto of the ignition system in circuit with the spark plugs, and independent auxiliary switch for each of said magneto and battery switches for short circuiting the same.

5. A controller for electrical ignition systems including a battery and a magneto comprising a variable speed device, electro-mechanical means for alternately connecting the battery or magneto of the ignition system in circuit with the spark plug, and self-locking means under the control of said governor for rendering a portion of said first means active.

[Claims 6 to 11 not printed in the Gazette.]

1,213,074. ARMORED VEHICLE. STUART J. CLARK, Auburn, Ill., assignor of one-eighth to O. A. Wineman, one-eighth to Henry Harris, one-eighth to Carl Brenner, one-eighth to C. E. Ogg, one-eighth to D. T. Queen, and one-eighth to L. J. Foster, Auburn, Ill. Filed Jan. 17, 1916. Serial No. 72,501. (Cl. 89—36.)



1. In an armored vehicle, the combination of an axle, supporting wheels rotative on the axle; a pivot at right angles to the axle and extended beyond the peripheries of the wheels; and a shield adapted to rotate on said pivot in a plane parallel to the axle and clear of the peripheries of the wheels.

2. A machine of the class described comprising a vehicle provided with an axle and supporting wheels rotative on the axle; a pivot at right angles to the axle; a central shield-section rotative on said pivot in a plane parallel to the axle and beyond and clear of the peripheries of the wheels; and wing-sections hinged on opposite edges of the central section.

3. In an armored vehicle, the combination of a box having a compartment for food and munitions and compartments for arms; an axle supporting the box; supporting wheels rotative on the axle; and a shield connected with and adapted to rotate on the box on an axis at right angles to the axle of the machine.

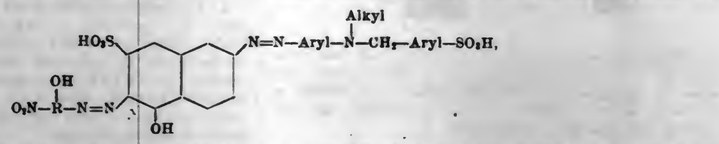
4. In an armored vehicle, the combination of a box, an axle, supporting wheels and a pivot at right angles to the top plane of the box and extended beyond the peripheries of the wheels; with a shield rotative on said pivot beyond and clear of the peripheries of the wheels and parallel to the axle of the machine.

5. In an armored vehicle, the combination of a box and supporting wheels; a bail connected with the box and having a rear handle adapted for simultaneous use by two men and two forward handles each adapted for use by one man; and a shield mounted on the box and adapted to protect all the men using the handles.

[Claims 6 to 13 not printed in the Gazette.]

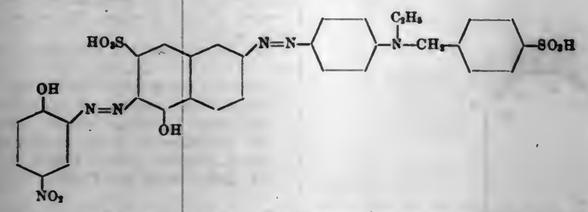
1,213,075. DISAZO DYES. ALBERT CLAUSIUS, Dessau in Anhalt, BERNHARD SCHÖNER, Barackenlager Rothemark, near Wittenberg, and OTTO SIEBERT, Dessau in Anhalt, Germany, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Aug. 26, 1916. Serial No. 117,105. (Cl. 8—1.)

1. The new disazo dyes which derive from a derivative of 2-aminophenol containing the nitro-group, 2-amino-5-naphthol-7-sulfonic acid and alkyl-aralkyl-arylamin-sulfonic acid and correspond to the general formula:



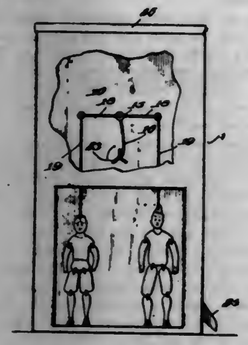
where R means a radical of the benzene series substituted or not; in the shape of pulverized dry sodium salts being blackish powders soluble in water with a violet color changing to red by ammonium- or sodium-hydroxid; the aqueous solution becoming reddish and separating the dye when acidified by hydrochloric acid; soluble in concentrated sulfuric acid to green solutions which on addition of ice change the color over blue and violet to reddish the dyes being precipitated; being destroyed by strong reducing agents yielding a diaminophenol compound, 2.6-diamino-5-naphthol-7-sulfonic acid and an aminoaryl-alkyl-aralkylamin-sulfonic acid; dyeing wool from an acid bath violet tints which by a treatment with an alkali metal bichromate turn to black shades.

2. The new disazo dye which derives from 4-nitro-2-aminophenol, 2-amino-5-naphthol-7-sulfonic acid and ethylbenzylanilin-4'-sulfonic acid and probably corresponds to the formula:



in the shape of pulverized dry sodium salt being a blackish powder, soluble in water with a violet color changing to red by ammonium- or sodium-hydroxid; the aqueous solution becoming reddish and separating the dye when acidified by hydrochloric acid; soluble in concentrated sulfuric acid to a green solution which on addition of ice changes the color over blue and violet to reddish, the dye being precipitated; being destroyed by strong reducing agents yielding 2.4-diaminophenol, 2.6-diamino-5-naphthol-7-sulfonic acid and 4-aminoaryl-ethyl-benzylamin-4'-sulfonic acid; dyeing wool from an acid bath violet tints which by a treatment with an alkali metal bichromate turn to black shades.

1,213,076. SAND-MILL TOY. HENRY J. COLE, Gainesville, Tex. Filed Oct. 13, 1916. Serial No. 125,481. (Cl. 46—40.)



1. A toy of the character described comprising a receptacle, a partition dividing the receptacle into compartments, a sand wheel journaled in one of said compartments, movable figures suspended in the other of said compartments, an element supporting said figures and mounted for rocking movement, and an actuating member carried by the shaft of said wheel and disposed in the last mentioned compartment to rock said element upon rotation of the wheel.

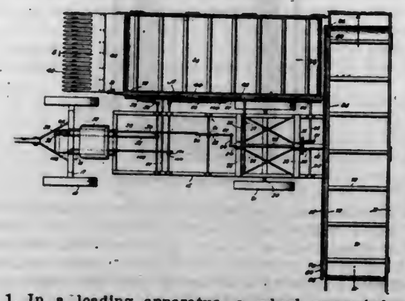
2. A toy of the character described comprising a receptacle, a partition dividing the receptacle into compartments, a shaft journaled in one of said compartments, a sand wheel fixed upon the shaft, an element arranged within the other compartment for rocking movement and actuated by the adjacent terminal of said shaft, movable figures suspended from said element, and a hopper disposed within the first mentioned compartment above said wheel.

3. A toy of the character described comprising a receptacle, a partition dividing the receptacle into compartments, a shaft journaled in one of the compartments, and extending a slight distance within the other compartment, a sand wheel fixed upon the shaft, an element arranged within the last mentioned compartment for rocking movement and actuated by the adjacent terminal of said shaft, movable figures suspended from said element, a hopper disposed within the first mentioned compartment above said wheel, and a cover closing the receptacle and having an opening immediately above said hopper.

4. A toy of the character described comprising a receptacle, a partition dividing the receptacle into compartments, a fixed shaft in one of the compartments, an element mounted upon the shaft for rocking movement and embodying a pair of laterally disposed arms, movable figures suspended from said arm, a shaft journaled in the other compartment and projecting within the first mentioned compartment to actuate said element, a sand wheel fixed upon the last mentioned shaft, and a hopper disposed above said wheel.

5. A toy of the character described comprising a receptacle, a partition dividing the receptacle into compartments, a shaft journaled in one of the compartments and having an angular shaped terminal disposed within the other compartment, a sand wheel fixed upon the shaft, a second shaft in the other of said compartments, an element constructed from a single length of wire mounted upon the shaft for rocking movement, and formed to provide a pair of laterally disposed arms, and a portion disposed in the path of movement of the angular shaped terminal of the first mentioned shaft to be actuated thereby, movable figures suspended from said arms, and a hopper arranged within the receptacle above said wheel.

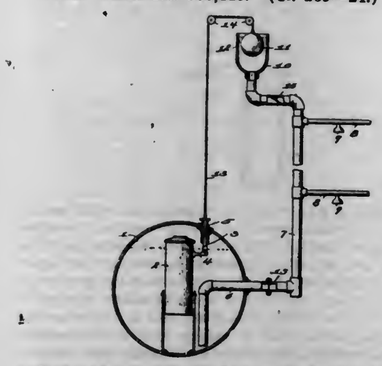
1,213,077. LOADING APPARATUS. JOHN F. COLLIER, South Aberdeen, Wash. Filed June 7, 1915. Serial No. 32,666. (Cl. 193—4.)



1. In a loading apparatus, a wheel supported main frame having longitudinal sills and front and rear brackets supported on said sills, a shaft supported by and extending laterally from the sills, a second shaft supported by the front upright and extending laterally with respect to the main frame, a conveyer frame supported on the projecting portions of said shafts in a downwardly and forwardly inclined position, a longitudinal shaft supported on the front and rear uprights, and a second conveyer frame supported on said longitudinal shaft with its receiving end below and adjacent to the discharge end of the first mentioned conveyer frame; conveyers guided in said frames, and means for driving said conveyers.

2. In a loading device of the class described, a wheel supported main frame having front and rear A-shaped brackets, a longitudinal rock shaft supported at the apices of said brackets, a conveyer frame carried by the shaft, means for rocking the shaft to adjust the conveyer frame, an endless conveyer in the frame, and means for transmitting motion from a ground wheel of the frame to the conveyer, said means including a sleeve mounted for rotation in the rock shaft, and sprocket wheels on said sleeve.

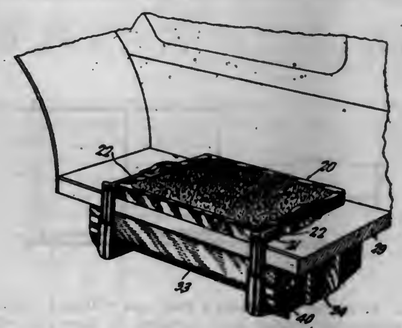
1,213,078. STATIONARY FIRE-EXTINGUISHER SYSTEM. ROBERT L. COONEY, Atlanta, Ga. Filed Sept. 5, 1914. Serial No. 860,446. (Cl. 169—24.)



1. A chemical mixing fire extinguisher system including a tank, an invertible acid bottle arranged therein, a movable controlling element for the acid bottle, a distributing pipe leading from the tank, a vertical pipe connected to and extending upwardly from said distributing pipe and having valved normally closed leaders or laterals, a vessel fitted upon the upper end of said vertical pipe, the vessel and the vertical pipe together with its leaders or laterals containing a non-freezing liquid, a float arranged within the vessel, and a cord connecting the float and the controlling element externally of the vertical pipe and operative to move the controlling element upon the descent of the float.

2. A fire extinguisher system including fire extinguisher agent supply means having a movable controlling element, a distributing pipe leading from said supply means, a vertical pipe connected to and extending upwardly from said distributing pipe and having valved normally closed leaders or laterals, a vessel fitted upon the upper end of the vertical pipe, the vessel and the vertical pipe together with its leaders or laterals containing a non-freezing liquid, a float arranged within the vessel, and a cord connecting the float and the controlling element externally of the vertical pipe and operative to move the controlling element upon the descent of the float.

1,213,079. AUTO-MAT HOLDER. ERNEST W. CRUIKSHANK, Baltimore, Md. Filed Oct. 29, 1915. Serial No. 58,673. (Cl. 21—55.)



1. An auto mat holder having a carrier provided with a mat engaging element, and a guide provided with means for attachment to an auto running board or step, and in which the carrier is mounted to support the mat engaging element close to and above the running board or step, said mat engaging element being reversible with relation to the carrier to permit of inverting the mat.

2. An auto mat holder having a carrier provided with a mat engaging element, and a guide provided with means for attachment to an auto running board or step, and also provided with means for supporting and guiding the carrier to position the mat engaging element close to and above and below the running board or step, said mat engaging element being reversible to permit of inverting the mat.

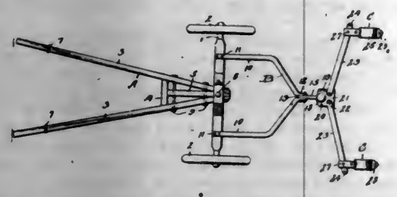
3. An auto mat holder having a mat carrier, and a guide provided with means for attachment to an auto running board or step and having connected guiding elements located below the plane of the auto running board or step to which it is attached, said carrier being mounted in said guiding elements for holding a mat close to the plane of the auto running board or step and for positioning said mat either above or below the same, and said carrier including a reversible mat engaging element to permit of inverting the mat.

4. An auto mat holder having a carrier provided with mat engaging means, and a guide for the carrier provided with means for attachment to an auto running board or step and having upper and lower ways for guiding and holding the carrier with said mat engaging means in planes above and below the running board or step.

5. An auto mat holder having a mat-seat and means for attachment to an auto running board, the latter having guiding devices upon which the former is mounted for movement into positions above and below the plane of the running board.

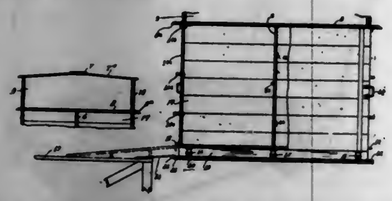
[Claims 6 to 12 not printed in the Gazette.]

1,213,080. AUTOMOBILE TRAILER-TRUCK AND HITCH FOR SAME. ALEXANDER R. CURTIS, Minneapolis, Minn. Filed Oct. 12, 1915. Serial No. 55,497. (Cl. 21—120.)



In an automobile trailer truck, an axle, wheels thereon, automobile body supporting means embodying rearwardly diverging beams having a fixed relation to each other and pivotally connected at its forward end to said axle, chains adjustable longitudinally of said beams for securing the same to the frame of the trailing automobile, and a draft tongue extending forwardly from said axle.

1,213,081. BOX-CAR. JESSIE M. DOBBINS and GEORGE DOBBINS, Stockton, Cal. Filed Oct. 26, 1915. Serial No. 57,937. (Cl. 105—15.)



1. A box car comprising a floor and ceiling, a plurality of transverse division walls between the floor and ceiling dividing the car into a plurality of transverse sections, an independent compartment removably disposed in each section, and an independent sealing bar for each section extending from the division wall on one side of the section to the division wall on the other side, such sealing bars holding the independent compartments in their respective sections, as described.

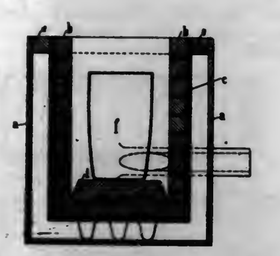
2. A box car comprising a floor and ceiling, a plurality of transverse division walls dividing the car into a plurality of transverse sections, an independent compartment removably disposed in each section, each compartment having a hinged end door arranged to be opened for access into the compartment, as described.

3. A box car comprising a floor and ceiling, a plurality of transverse division walls dividing the car into a plurality of transverse sections, an independent compartment removably disposed in each section, each compartment having a hinged end door arranged to be opened for access into the compartment, such end doors being provided with projecting pins arranged to support the end doors when opened whereby the same may be used as a platform leading into the compartment, as described.

4. A box car comprising a floor and ceiling, a plurality of transverse division walls between the floor and ceiling dividing the car into a plurality of sections, an independent inclosed compartment removably disposed in each section, the ends of said inclosed compartments forming the side walls of the car when all the compartments are in their respective sections, such ends being hinged whereby they may be opened for allowing access to the interior of the compartments, as described.

1,213,082. FURNACE. FRITZ DOBRINCKEL, Essen-on-the-Ruhr, Germany. Filed June 17, 1916. Serial No. 104,345. (Cl. 158—7.)

1. In a furnace, the combination of a cup-shaped casing; and a small vessel disposed co-axially in said casing and forming a narrow annular space therewith and comprising an outer jacket and a refractory lining, said vessel being spaced from the bottom of the casing and provided with a plurality of fine apertures disposed up and down and around the vessel.

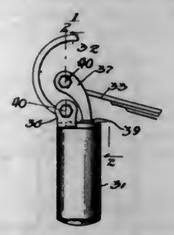


2. In a furnace, the combination of a cup-shaped casing; and a small vessel disposed co-axially in said casing and forming a narrow annular space therewith, said vessel being spaced from the bottom of the casing and provided with a plurality of fine radial apertures disposed up and down and around the vessel.

3. In a furnace, the combination of a cup-shaped casing having an aperture therein; a pipe junction joining said aperture tangentially to said casing; and a small vessel disposed co-axially in said casing and forming a narrow annular space therewith, said vessel being spaced from the bottom of the casing and provided with a plurality of fine apertures disposed up and down and around the vessel.

4. In a furnace, the combination of a cup-shaped casing having an aperture therein; a pipe junction joining said aperture tangentially to said casing; and a small vessel disposed co-axially in said casing and forming a narrow annular space therewith and comprising an outer jacket and a refractory lining, said vessel being spaced from the bottom of the casing and provided with a plurality of fine radial apertures disposed up and down and around the vessel; an annular plate disposed gas-tight in the upper end of said annular space; and a stand in the bottom of the vessel.

1,213,083. SHOCK-ABSORBER. THOMAS I. DUFFY, Chicago, Ill. Filed Sept. 3, 1915. Serial No. 48,787. (Cl. 267—37.)



1. In a spring mounting, the combination with spaced lugs to receive therebetween a spring eye, and provided with apertures, one of which is screw-threaded and the other plain, of a shackle bolt extending through said apertures, said bolt provided with an intermediate spring eye bearing and at one end with a screw-threaded portion to engage said screw-threaded aperture and at its other end with an enlarged bearing to engage said plain aperture and to form between the spring eye bearing and said enlarged bearing a shoulder, a bushing removably applied over said bolt between said shoulder and the inner face of the opposite lug, the bolt being further provided exterior to said enlarged bearing with a shouldered portion to engage the outer face of the adjacent lug.

2. In a spring mounting, the combination with spaced lugs to receive therebetween a spring eye, and provided

with apertures, one of which is screw-threaded and the other plain, of a shackle bolt extending through said apertures, said bolt provided with an intermediate spring eye bearing and at one end with a screw-threaded portion to engage said screw-threaded aperture and at its other end with an enlarged bearing to engage said plain aperture and to form between the spring eye bearing and said enlarged bearing a shoulder, a bushing removably applied over said bolt between said shoulder and the inner face of the opposite lug, the bolt being further provided exterior to said enlarged bearing with a shouldered portion to engage the outer face of the adjacent lug, and means engaging the screw-threaded end of the bolt to lock it in place.

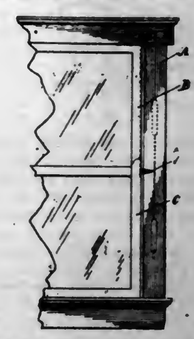
3. In a spring mounting, the combination with spaced lugs to receive therebetween a spring eye, and provided with apertures, one of which is screw-threaded and the other plain, of a shackle bolt extending through said apertures, said bolt provided with an intermediate spring eye bearing and at one end with a screw-threaded portion to engage said screw-threaded aperture and at its other end with an enlarged bearing to engage said plain aperture and to form between the spring eye bearing and said enlarged bearing a shoulder, a bushing removably applied over said bolt between said shoulder and the inner face of the opposite lug, the bolt being further provided exterior to said enlarged bearing with a shouldered portion to engage the outer face of the adjacent lug, said bolt being provided with an axial oil opening connected to a radial opening which opens on the bearing face of the bolt and the bushing provided with an opening adapted to register therewith, and means to non-rotatively interlock the bushing to the bolt while permitting it to be removed endwise therefrom.

4. A shackle bolt for shock absorbers for vehicle springs provided with an exterior spring eye bearing portion and provided near one end with a shouldered portion and provided at its other end with a screw-thread, an adapter bushing fitted over the bearing portion of the bolt, a grease cup at one end of the bolt, the bolt provided with a passage connecting the grease cup with the bearing surface of the bolt, said bushing being provided with an opening adapted to register with the terminal of the grease passage, and non-rotative interlocking connections between the adapter bushing and said bolt.

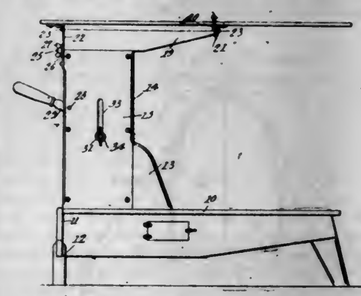
5. A shackle bolt for shock absorbers for vehicle springs provided with a spring eye bearing, with a shoulder near one end and a screw-thread at the other end, a cylindric bearing exterior to said shoulder of greater diameter than the spring eye bearing, an inwardly facing shoulder exterior to and larger in diameter than the cylindric bearing, and a bushing of an internal diameter to closely fit over the spring eye bearing portion of the bolt and of a length to extend between the first-mentioned shouldered portion of the bolt and the screw-thread thereof.

1,213,084. AUTOMATIC CONTROLLING MEANS FOR WINDOW-SASHES. HENRY B. ELLIOTT, Cincinnati, Ohio, assignor of one-half to Louis N. Chipman, Cincinnati, Ohio. Filed May 13, 1916. Serial No. 97,394. (Cl. 16—18.)

In automatic controlling means for window sash and in combination; a window frame; sash pulleys attached thereto; ropes mounted on said pulleys; window sash having perforated racks attached thereto attached to one end of said ropes and weights attached to the other end; the weight of the upper sash being greater than that of the combined weight of the weights controlling the same; the weight of the lower sash being less than that of the combined weight of the weights controlling the same; sash lock-boxes similar in construction attached to said frame, the bolt of one box being adapted to engage the rack attached to one sash and the bolt of the other box being adapted to engage the rack attached to the other sash, said boxes being positioned on the overlapping line of said sashes, one of said boxes having its bolt end upward and the other box having its bolt end downward; a sash lock-box operating bar attached to said lock-boxes said bar being adapted to operate the locking bolt in each of said boxes, one of said bolts being moved by a turn of said bar one way and the other one of said bolts being moved by a turn of said bar the other way, said bar having an end-bearing metal piece at one end and a bearing sleeve at the other; a lock-box operating bar key having a spring portion adapted to engage said window frame and hold said locking bolts out of a normal locking position.



1,213,085. COMBINATION-TABLE. CHARLES D. EVANS, Kings Mountain, Ky. Filed June 22, 1915. Serial No. 35,513. (Cl. 45—110.)

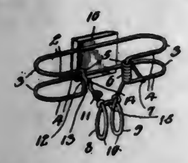


A table of the character described, comprising a stand, a hollow pedestal rising from said stand and having longitudinally disposed inner guide grooves in the sides thereof, a post movable in said pedestal and having side cleats engageable in the guide grooves, a crown on the upper end of the post, a table top upon the crown, one of said side cleats being recessed, a hand operable lever pivoted in the pedestal and projected into the recess, a link pivoted to the inner end of the lever, one side of the pedestal being longitudinally slotted, a threaded bolt pivotally connecting the link to the recessed cleat and projected through the slot exteriorly of the pedestal and a winged nut adjustably engaged on the bolt for contact with the pedestal to hold the bolt in its adjusted position in the slot for locking the lever and the post against movement.

1,213,086. NECKTIE-HOLDER. ANTHONY FAUGNO, Lexington, Mass. Filed Mar. 3, 1916. Serial No. 81,939. (Cl. 24—81.)

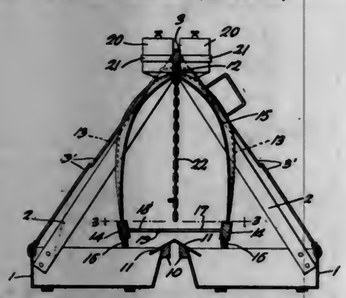
1. A necktie holder including a substantially rectangular body having an open side, a wire spring coiled around one of the ends of the said open side and one of the convolutions of the said spring contacting with one of the longitudinal members of the body, the second end of the coil being extended and bent upon itself to provide spring jaws which exert a tension toward each other, the end member of one of the jaws being extended and bent to provide a lip, and said lip adapted to engage with the

second end member of said triangular body at the open side of the body.



2. In a necktie holder, a body formed from a strand of wire bent to provide parallel longitudinal members arranged in pairs and spaced from each other and said pairs terminating and being connected upon one of the sides of the body at an approximately equal distance from the center of the body, a wire coiled around one of the connecting portions of the spaced parallel members and having one of the end coils thereof contacting with one of the said longitudinal members, the second end of the coil being bent upon itself to provide spring jaws which exert a tension toward each other and the inner and contacting members of the jaws being centrally bulged outwardly, the strand at the outer jaw being rounded upon itself and bent to provide a hook, a reinforcing member for the jaws, and the other connecting element for the parallel members being rounded to provide a lip that is adapted to receive the hook.

1,213,087. BOLL-WEEVIL AND SQUARE COLLECTOR. JAMES HOWARD FIKE, Autaugaville, Ala. Filed Oct. 2, 1916. Serial No. 123,334. (Cl. 43—1.)



1. An insect collector embodying a pair of pans movable along opposite sides of a row of plants, an arch-like frame connecting said pans, an arch-like hood suspended from said frame to pass over the plants, means for shaking the plants within the hood to dislodge insects therefrom so that they drop into the pans, the hood embodying a sheet of absorbent material, and means for supplying an emulsion to said hood.

2. An insect collector embodying a pair of pans movable along opposite sides of a row of plants, an arch-like frame secured to and connecting said pans, an arch-like hood suspended from the upper portion of said frame to pass over the plants, the side portions of the hood hanging above the pans between the inner and outer sides thereof and being movable toward and away from one another between the inner and outer sides of the pans, and rods having their ends secured to the side portions of the hood and having their intermediate portions of sinuous form to provide a sinuous slot above the inner sides of the pans.

3. An insect collector embodying a pair of pans movable along opposite sides of a row of plants, an arch-like frame secured to and connecting said pans, an arch-like hood suspended loosely from the upper portion of said frame with its side portions movable toward and away from one another above the pans between the inner and outer sides thereof, and springs connecting the forward portions of the hood and pans to hold the side portions of the hood yieldably in place.

1,213,088. TOOL-HOLDER. EDWARD C. FISHER, Burr Oak, Kans. Filed June 22, 1916. Serial No. 105,309. (Cl. 24—3.)



1. A tool holder comprising a strip of spring metal having a straight intermediate portion and having its two ends curved forwardly to grip a tool therebetween, and a stiff attaching plate contacting with the rear side of said straight portion of the strip, said plate having integral claws clenched around the edges of the aforesaid strip at the juncture of the straight and curved portions thereof, whereby said strip is secured in position and is reliably held against longitudinal shifting.

2. A tool holder comprising a stiff attaching plate having a pair of openings formed therethrough, attaching bolts passed rearwardly through said openings and having their heads countersunk in the front side of said plate, and a strip of spring metal contacting with the front side of said plate and with said heads of the bolts to frictionally hold the latter against rotation, said plate having integral claws clenched around the edges of said strip to retain the latter in position, and the ends of said strip being curved to grip a tool therebetween.

1,213,089. BALL-BEARING. RUDOLPH H. FOX, New Britain, Conn., assignor to The Fafnir Bearing Company, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 29, 1915, Serial No. 63,939. Renewed Dec. 13, 1916. Serial No. 136,652. (Cl. 64—36.)



1. A ball bearing comprising a bearing member having annular shoulders facing toward each other and providing opposed ball tracks, a pair of bearing rings concentrically disposed with respect to said shouldered ring member and having ball tracks confronting the ball tracks on said shouldered member, said bearing rings being movable bodily toward each other to admit a row of balls between confronting sets of the ball tracks, a spreading ring engaged between the bearing rings and holding the same spread apart with the ball tracks thereon in proper cooperative relation with the confronting ball tracks on the shouldered member, said spreading ring being radially displaceable from in between the bearing rings to permit the bodily movement of said bearing rings toward each other, and one of said rings having recesses in the face thereof at the points where the spreading ring and bearing rings overlap when said spreading ring is radially displaced, whereby to permit the bearing rings being moved toward each other far enough to admit the row of balls aforesaid.

2. A ball bearing comprising a bearing member having annular shoulders facing toward each other and providing opposed ball tracks, a pair of bearing members concentrically arranged with respect to said shouldered bearing member and having ball tracks confronting the ball tracks on said shouldered bearing member, said bearing members being displaceable axially toward each other to admit a row of balls between a confronting set of ball tracks, a spreading member made in a single piece and engaged under pressure between said bearing members and holding the same spread apart with the ball tracks thereon in proper cooperative relation with the confronting ball tracks on the shouldered bearing member, one of said members having means for enabling the displacement of said one-piece spreading member from its spreading position in between said bearing members to permit said bearing members being brought toward each other for the purpose of opening up the ball raceways.

3. A ball bearing comprising a ring member having annular shoulders facing toward each other and providing opposed ball tracks, a pair of bearing rings concentrically arranged with respect to said shouldered ring member and having ball tracks confronting the ball tracks on said shouldered ring member, said bearing rings being displaceable axially toward each other to admit a row of balls between a confronting set of ball tracks, a spreading ring engaged between said bearing rings and holding the same spread apart with the ball tracks thereon in proper cooperative relation with the confronting ball tracks on the shouldered ring member, and detachable means for securing said spreading ring against displacement from between the bearing rings.

4. A ball bearing comprising a ring member having annular shoulders facing toward each other and providing opposed ball tracks, a pair of bearing rings concentrically arranged with respect to said shouldered ring member and having ball tracks confronting the ball tracks on said shouldered ring member, said bearing rings being displaceable axially toward each other to admit a row of balls between a confronting set of ball tracks, a spreading ring engaged between said bearing rings and holding the same spread apart with the ball tracks thereon in proper cooperative relation with the confronting ball tracks on the shouldered ring member, and a securing screw engaged in one of the bearing rings and engaging the spreading ring to thereby hold said spreading ring against displacement from between the bearing rings.

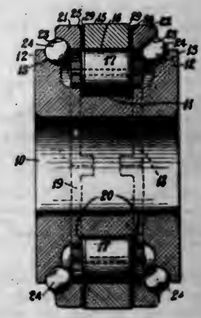
5. A ball bearing comprising a member having oppositely facing annular shoulders providing opposed ball tracks, a bearing member arranged in concentric relation to said shouldered member having a ball track confronting one of the tracks on the shouldered member and forming in connection therewith a race-way for a row of balls, a row of balls in said race-way, a second concentric bearing member separated from and independent of the first bearing member, having a ball track confronting the other ball track of the shouldered member and forming in connection therewith a race-way for a second row of balls, and a plurality of spreading screws mounted in one of said bearing members and projecting laterally therefrom into engagement with the adjoining face of the other bearing member.

[Claims 6 to 10 not printed in the Gazette.]

1,213,090. BALL-BEARING. RUDOLPH H. FOX, New Britain, Conn., assignor to The Fafnir Bearing Company, New Britain, Conn., a Corporation of Connecticut. Filed Apr. 5, 1916. Serial No. 89,038. (Cl. 64—62.)

1. In a bearing of the character set forth, the combination with radially opposed load supporting members and rolling elements between said members, the whole thus constituting a radial bearing, of thrust shoulders at the opposite sides of said radial bearing fixed in relation to one of the members of said bearing, facing toward each other and providing opposed thrust receiving ball tracks, concentrically arranged thrust members at the opposite sides of the other member of the radial bearing having ball tracks confronting the thrust receiving ball tracks, balls engaging said ball tracks, spreading members interposed between the last mentioned member of the radial bearing and the concentric thrust members at the opposite sides of the same, and said last mentioned member of the radial bearing having means for securing said spreading members in their spreading engagement between the radial bearing member and the thrust members.

2. In a bearing of the character set forth, the combination with radially opposed load supporting members and rolling elements between said members, the whole thus constituting a radial bearing, of thrust shoulders at the opposite sides of said radial bearing fixed in relation to one of the members of said bearing, facing toward each other and providing opposed thrust receiving ball tracks, concentrically arranged thrust members at the opposite sides of the other member of the radial bearing having ball tracks confronting the thrust receiving ball tracks, balls engaging said ball tracks, and spreading rings at the opposite sides of the last mentioned member of the radial bearing interposed between said member and the concentric thrust members to thereby hold said members spread apart in proper engagement with the thrust receiving balls.



3. In a bearing of the character set forth, the combination with radially opposed load supporting members and rolling elements between said members, the whole thus constituting a radial bearing, of thrust shoulders at the opposite sides of said radial bearing, fixed in relation to one of the members of said bearing facing toward each other and providing opposed thrust receiving ball tracks, concentrically arranged thrust members at the opposite sides of the other member of the radial bearing having ball tracks confronting the thrust receiving ball tracks, balls engaging said ball tracks, spreading rings at the opposite sides of the last mentioned member of the radial bearing interposed between said member and the concentric thrust members to thereby hold said members spread apart in proper engagement with the thrust receiving balls, said radial bearing member being of larger diameter than the thrust members at opposite sides thereof and provided with shoulders overlying the spreading rings to thereby retain said spreading rings in proper position.

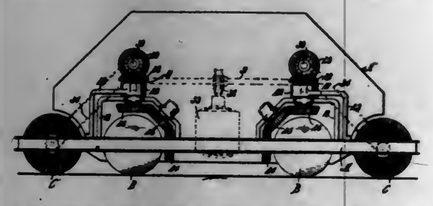
4. A bearing comprising a channeled member having annular shoulders facing toward each other and providing opposed thrust receiving ball tracks, a pair of bearing members concentrically arranged with respect to said channeled member having ball tracks confronting the ball tracks on said channeled member, said bearing members being displaceable axially toward each other to admit a row of balls between a confronting set of ball tracks, balls engaged between the confronting sets of ball tracks, and spreading means comprising a one-piece spreading member interposed between said bearing members and holding the same spaced apart with the ball tracks thereon in proper cooperative relation with the confronting ball tracks on the channeled bearing member, one of said members having means for enabling the displacement of said one-piece spreading member from its spreading position in between said bearing members to thereby permit said bearing members being brought toward each other for the purpose of opening up the ball race-ways.

5. In a bearing of the character set forth, the combination with radially opposed load supporting members and rolling elements between said members, the whole thus constituting a radial bearing, of thrust shoulders at the opposite sides of said radial bearing, fixed in relation to one of the members of said bearing facing toward each

other and providing opposed thrust receiving tracks, concentrically arranged thrust members at the opposite sides of the other member of the radial bearing having tracks confronting the thrust receiving tracks, rolling elements engaging said confronting tracks, spreading rings at the opposite sides of the last mentioned member of the radial bearing interposed between said member and the concentric thrust members to thereby hold said members spread apart in proper engagement with the thrust receiving rolling elements, said radial bearing member having parts softer than the other parts of said member and extending beyond the peripheral portions of the spreading rings at opposite sides of the same and turned over said spreading rings to thereby maintain the same in position.

[Claims 6 and 7 not printed in the Gazette.]

1,213,091. SHIP-CLEANING DEVICE. PHILLIP GANZ, Des Moines, Iowa. Filed Apr. 5, 1916. Serial No. 89,037. (Cl. 114—222.)



1. A cleaning machine of the class described comprising a frame, a cleaning device mounted thereon, magnetic traction rollers for driving the machine over a magnetic surface to which the machine is held by the rollers, means for mounting each roller to swing on two right-angularly disposed axes transverse to the axis of rotation of the rollers, and means for driving the rollers.

2. In a machine of the class described, the combination of a magnetic traction roller, a frame in which the roller is rotatably mounted, a yoke in which the frame is pivotally mounted on an axis at right-angles to the roller, a bearing in which the yoke is mounted to turn on an axis transverse to that on which the frame swings, a magnet within the roller, and means for supplying current thereto.

3. A machine of the class described comprising a body frame, a magnetic traction roller, a secondary frame in which the roller is journaled, a yoke in which the frame is pivotally mounted, a bearing bracket in which the yoke is pivotally mounted, a gear connected with the roller, a pinion meshing with the gear and journaled on the yoke, a driving shaft journaled on the yoke, and transmission means between the shaft and pinion for applying power to the roller.

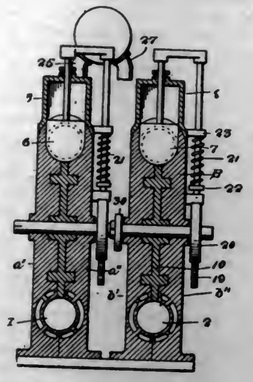
4. A magnetic traction roller, a mounting therefor, and a stationary magnetic winding in the roller.

5. A magnetic traction roller, a mounting therefor, a stationary magnetic winding in the roller, said roller having between its ends a circumferential groove, and gear teeth forming one side of the groove.

[Claims 6 and 7 not printed in the Gazette.]

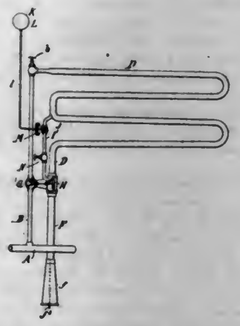
1,213,092. ROTARY INTERNAL-COMBUSTION ENGINE. BERNARD F. GEBHARDT, Freeport, N. Y. Filed Nov. 2, 1915. Serial No. 59,234. (Cl. 123—14.)

1. In an engine of the class specified, a stationary casing comprising an annular compression chamber, an annular combustion chamber concentric therewith and located at one side thereof, a rotor embodying a piston carried on the periphery thereof and mounted in the compression chamber, a like rotor carrying a piston working in the combustion chamber, a common central shaft on which both of said rotors are fixedly mounted, a sliding cut-off movable across the compression chamber, a like cut-off slidable across the combustion chamber in transverse alinement with the first named cut off, means connected with the engine shaft for opening and closing said cut-offs in unison, and means for transferring a charge from the compression chamber to the combustion chamber.



2. In an engine of the class specified, a stationary casing comprising an annular compression chamber, an annular combustion chamber concentric therewith and located at one side thereof, a rotor embodying a piston carried on the periphery thereof and mounted in the compression chamber, a like-rotor carrying a piston working in the combustion chamber, a common central shaft on which both of said rotors are fixedly mounted, a sliding cut-off movable across the compression chamber, a like cut-off slidable across the combustion chamber, rack and sector gear mechanism actuated by the engine shaft for opening and closing said cut-offs in unison, means for transferring a charge from the compression chamber to the combustion chamber.

1,213,093. CAR-HEATING SYSTEM. EDWARD E. GOLD, New York, N. Y., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Jan. 27, 1913. Serial No. 744,529. (Cl. 236—19.)

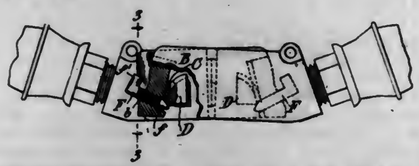


1. In a steam car heating system, a supply pipe, a radiator connected thereto, an admission valve in said supply pipe, a thermostat at the outlet responsive to variations in the temperature of the discharge from said radiator for controlling said admission valve, a by-pass connected to said radiator and leading to said thermostat and adapted when open to provide a short path for the heating medium to said outlet and to divert the same from part of the radiator, a valve in said by-pass and thermostatic means controlled by the temperature within the car and adapted to operate said valve, whereby the heating area of the radiator is regulated by the temperature in the car, and the heating activity of the radiator is regulated by the temperature of the discharge from said radiator.

2. In a steam car heating system, a supply pipe, an admission valve therein, a radiator connected thereto and having an outlet, a by-pass connected to said radiator and leading to said outlet, thermostatic means in line with the discharge from said outlet and adapted to control said admission valve, a valve in said by-pass and thermostatic means located in the car and responsive to variations in the temperature therein and adapted to control said valve, whereby the heating area of the radiator is regulated by the temperature in the car and the heating activity of the radiator is regulated by the temperature of the heating medium.

3. In a steam car heating system, a train pipe, a branch therefrom having radiating surface, an admission valve in said branch, thermostatic means at the outlet of said branch responsive to variations in the temperature of the discharge therefrom for controlling said admission valve, a by-pass connected to said branch on the radiator side of the admission valve and leading to said thermostat, a valve in said by-pass and thermostatic means controlled by the temperature within the car and adapted to operate said valve, and a hand-operated valve in said by-pass, whereby the heating activity of the radiator is regulated by the temperature of the heating medium in said radiator and by the temperature in the car.

1,213,094. HOSE-COUPLING. EDWARD E. GOLD, New York, N. Y., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed May 11, 1916. Serial No. 96,766. (Cl. 137—89.)



1. A lock for mating couplers, each having a body, a lug thereon and an arm carrying a projection and adapted to engage the lug on the mating coupler when coupled, said lock comprising a longitudinally moving bolt inclined relatively to the longitudinal axis of the coupler and mounted in a recess in said arm and adapted to engage beneath a portion of the lug on the mating coupler to prevent unlocking, and means for maintaining said bolt unyieldingly in locking position whereby a positive lock is produced.

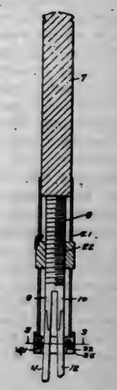
2. In combination with mating hose couplers which have an extending arm, a projection thereon and a lug on the body of the mating coupler behind which the said projection is adapted to pass to hold the couplers together, means for positively locking the said couplers in coupling position, comprising a longitudinally moving bolt mounted in a recess in the said arm and inclined relatively to the longitudinal axis of the coupler, said bolt adapted to be moved in its recess to engage beneath a portion of the said lug and having its engaging surface tapered to provide a quick take-up and compensate for wear in the parts, and means for maintaining said bolt unyieldingly in locking position whereby a positive lock is produced.

3. In combination with hose couplers, each having a body, an extending arm thereon, a projection on said arm, and a lug on the coupler-body adapted to be engaged by the projection on the arm to hold the couplers together, means for positively locking the said couplers together, comprising a threaded bolt mounted in the said arm, and having an offset head forming a handle, and having its forward end tapered and adapted to be forced beneath a portion of the lug of the mating coupler in order to hold the said mating couplers in coupling position, and the head of said bolt being located nearer the outside of the arm than the point is, whereby the bolt is inclined horizontally relative to the longitudinal axis of the coupler and the said point is in position to engage the lug of the mating coupler and the head is in position for turning the bolt.

4. In combination with hose couplers, each having a body, an extending arm thereon, a projection on said arm, and a lug on the coupler-body adapted to be engaged by the projection on the arm to hold the couplers together, means for positively locking the said couplers together, comprising a threaded bolt mounted in the said arm and inclined vertically relative to the longitudinal axis of the coupler, and having its forward end tapered and adapted to be forced beneath a portion of the lug of the mating coupler in order to hold the said mating couplers in coupling position.

5. In combination with hose couplers, each having a body, an extending arm thereon, a projection on said arm, and a lug on the coupler-body adapted to be engaged by the projection on the arm to hold the couplers together, means for positively locking the said couplers together, comprising a threaded bolt mounted in the said arm and having an offset head forming a handle and said bolt inclined vertically and horizontally relative to the longitudinal axis of the coupler, and having its forward end tapered and adapted to be forced beneath a portion of the lug of the mating coupler in order to hold the said mating couplers in coupling position.

1,213,095. RULING-PEN. FRANCIS R. GOOD, Philadelphia, Pa., assignor of one-half to John E. Vollmer, Long Beach, Cal. Filed Mar. 15, 1916. Serial No. 84,334. (Cl. 120—109.5.)



1. In a pen, a shank provided with threads, adjustable nibs mounted thereon having ends inclined away from each other, a slide engaging the threads on said shank having nib adjusting means swiveled thereon, said means engaged with the inclined ends of said nibs.

2. In a pen, a shank provided with threads, resilient nibs having ends inclined away from each other, a slide on said shank engaging the inclined ends of said nibs for adjusting the distance therebetween, a collar rotatably secured to said slide provided with threads on its interior engaging the threads on said shank.

1,213,096. PNEUMATIC TIRE. BERNARD GRANVILLE, New York, N. Y. Filed Dec. 4, 1915. Serial No. 65,001. (Cl. 152—33.)

1. An armored pneumatic tire embodying the following elements, to-wit: a rigid puncture-resisting rim formed of a single continuously integral annulus having marginal inwardly extending approximately parallel flanges, and a flexible annular inflatable body having an internal pressure chamber extending radially outward between the

side flanges and circumferentially extending projections at opposite sides of said chamber having approximately parallel side faces seating against the rim flanges and peripheral faces seating against portions of the rim adjacent the flanges, the relative proportions of the rim and body being such that internal pressure in the chamber tends to move the projections of the body laterally and radially into contact with the inner faces of the flanges and adjacent portions respectively of the rim, the rim being held against movement relatively to the body both radially and circumferentially only by frictional engagement of the opposing faces of the rim and body.



2. An armored pneumatic tire, comprising a flexible annular inflatable body, and a floating rigid armor rim mounted on the periphery of said body, said rim consisting of a continuously integral piece of metal formed with oppositely facing engaging faces extending longitudinally of the tire in planes approximately parallel to the plane of the axis of the tire, and the flexible body being formed with approximately parallel faces to bear against said engaging faces of the rim, whereby the rim is held against lateral displacement relatively to the body, unsupported side walls of the flexible body extending radially outward from the wheel felly to the rim, and the rim being supported and held against lateral displacement relatively to the wheel felly solely by the flexible body, and being free to move radially outward relatively to the flexible body under excessive shock.

3. An armored pneumatic tire, comprising a flexible annular inflatable body, and a floating rigid armor rim mounted on the periphery of said body, said rim consisting of a continuously integral piece of metal formed with integral inwardly extending approximately parallel side flanges and with its intermediate or main portion between the flanges transversely flat adjacent the flanges and having a central circumferentially extending outward bulge, and having a cushion tread on its peripheral face, and the flexible body being formed with shoulders to fit between and to bear outwardly against said side flanges, whereby the rim is held against lateral displacement relatively to the body, the unsupported side walls of the flexible body between the wheel felly and the rim being adapted to prevent lateral displacement of the rim relatively to the wheel felly, and the rim being supported and held against lateral displacement relatively to the wheel felly solely by the flexible body.

4. An armored pneumatic tire, comprising a flexible annular inflatable body, and a floating rigid armor rim mounted on the periphery of said body, said rim consisting of a continuously integral metal annulus formed with integral inwardly extending side flanges providing lateral bearing faces approximately parallel to the plane of the axis of the tire and with portions adjacent the flanges providing cylindrical bearing faces, and having a cushion tread secured to its peripheral face, and the flexible body being formed with circumferentially extending outwardly projecting portions forming shoulders to fit between and having approximately parallel side faces to bear laterally outward against said flanges and peripheral faces to bear radially outward against said cylindrical bearing faces of the rim, the unsupported side walls of the flexible body between the wheel felly and the rim being adapted to prevent lateral displacement of the rim relatively to the wheel felly, and the rim being supported and held against lateral displacement relatively to the wheel felly solely by the flexible body and being held against movement relatively to the body only by frictional engagement of the opposing faces of the rim and body.

5. An armored pneumatic tire, comprising a flexible annular inflatable body, and a floating rigid armor rim mounted on the periphery of said body, said rim consisting of a continuously integral metal annulus formed with integral inwardly extending side flanges approximately parallel to the plane of the axis of the tire and having a cushion tread secured to its peripheral face, and the flexible body being formed with circumferentially extending outwardly projecting portions forming shoulders to fit between and having approximately parallel faces to bear outwardly against said side flanges, whereby the rim is held against lateral displacement relatively to the body, the rim being supported and held against lateral displacement relatively to the wheel felly solely by the flexible body, and the side flanges of the rim extending inward about the body to support the same and leaving unsupported only comparatively narrow portions of the side walls of the body between the wheel felly and the rim flanges extending approximately parallel to the plane of the axis of the tire, whereby side roll of the tire is substantially prevented.

[Claim 6 not printed in the Gazette.]

1,213,097. NUT-LOCK. FREDRICK P. GRAVES, Bicknell, Ind., assignor of forty-five one-hundredths to Novie P. Cleveland, Bicknell, Ind. Filed June 20, 1916. Serial No. 104,729. (Cl. 151—25.)



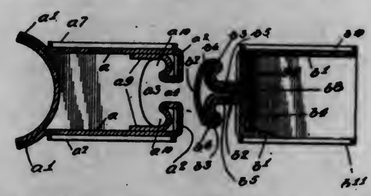
In a nut lock, a nut having a threaded neck portion of approximately one-half of the width of the nut and which surrounds the bore of the nut or the inner threads thereof, the shoulder of the nut at the juncture of the neck therewith having a spring pressed pin and being further provided with an angular pivoted dog received in an opening which communicates with the bore of the nut, and one end of the dog being normally projected over the shoulder, and a locking collar threaded upon the neck and having its inner face provided with spaced depressions, said collar adapted to contact with the projecting end of the dog to swing the same to cause the opposite end thereof to enter the bore of the nut to engage with the threads of the bolt and one of the referred to depressions adapted to receive the mentioned pin of the nut.

1,213,098. BED-FRAME CORNER-BLOCK. WILLIAM J. GROTENHUIS, Chicago, Ill. Filed Jan. 6, 1913. Serial No. 740,357. (Cl. 5—55.)

1. In corner block construction for bed frames, a pair of coupling elements consisting of a resilient post section and a side rail section having engaging surfaces inclined in a direction to force the sections away from each other, when the rail section is dropped into place, and provided with interlocking means subject to a tightening action by the wedging engagement of said surfaces, having engaging portions and shoulders whereby the rail section compresses and holds the post section against lateral spread.

2. In corner block construction for bed frames, a pair of coupling elements consisting of a post section and a side rail section having engaging surfaces inclined in a direction to force the sections away from each other, when the rail section is dropped into place, provided with interlocking means subject to a tightening action by the

wedging engagement of said surfaces, having engaging portion and shoulders whereby the rail section compresses and holds the post section against lateral spread, said surfaces being four in number, one at each side of the longitudinal center line of each element, one pair of surfaces being separated by a vertical slot, and the other pair of surfaces being separated by a neck which enters said slot when the two sections are brought together, and said means including mutually engaging shoulders at opposite sides of said slot and neck, which shoulders are held together by the pull exerted on said neck by the engagement of said surfaces.



3. In corner block construction for bed frames, a pair of coupling elements consisting of a post section and a side rail section having engaging surfaces inclined in a direction to force the sections away from each other, when the rail section is dropped into place, provided with interlocking means subject to a tightening action by the wedging engagement of said surfaces, having engaging portions and shoulders whereby the rail section compresses and holds the post section against lateral spread, said elements having their coöperating portions made of sheet metal, the sheet metal being doubled back upon itself to form the said interlocking means.

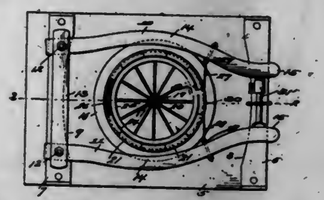
4. In corner block construction for bed frames, a pair of coupling elements consisting of a post section and a side rail section having engaging surfaces inclined in a direction to force the sections away from each other, when the rail section is dropped into place, provided with interlocking means subject to a tightening action by the wedging engagement of said surfaces, having engaging portions and shoulders whereby the rail section compresses and holds the post section against lateral spread, said surfaces being external of said elements, said interlocking means having engaging shoulders which are disposed between the said surfaces and the end of the bed frame, said elements having their coöperating portions made of sheet metal, the sheet metal being bent upon itself to form the said interlocking means.

5. In corner block construction for bed frames, a pair of coupling elements consisting of a post section and a side rail section having engaging surfaces inclined in a direction to force the sections away from each other, when the rail section is dropped into place provided with interlocking means subject to a tightening action by the wedging engagement of said surfaces, having engaging portions and shoulders whereby the rail section compresses and holds the post section against lateral spread, said surfaces being four in number, one at each side of the longitudinal center line of each element, one pair of surfaces being separated by a vertical slot, and the other pair of surfaces being separated by a neck which enters said slot, when the two sections are brought together said means including mutually engaging shoulders at opposite sides of said slot and neck, which shoulders are held together by the pull exerted on said neck by said surfaces, said elements having their coöperating portions made of sheet metal, the sheet metal being bent upon itself to form the said interlocking means.

[Claims 6 to 10 not printed in the Gazette.]

1,213,099. COLD-TIRE SETTER. BRYANT P. HARRINGTON, Morven, Ga., assignor of one-half to William Turner Gaulden, Quitman, Ga. Filed Aug. 9, 1916. Serial No. 113,918. (Cl. 78—56.)

1. In a cold tire setter, the combination of a table having a wheel support thereon, tension arms movably disposed in opposite positions relatively to each other, tire setting segments arranged to circumscribe the tire, flexible means engaging the outer edges of the segments and having the terminals thereof respectively connected to the tension levers, and means for expanding the tension levers and exerting a tension on the said flexible means and the segments.



2. In a cold tire setter, the combination of a table having a wheel support, tension levers arranged at opposite portions of said support, setting segments disposed on the support to equally bear on all portions of the tire to be set and arranged to circumscribe the tire, means connected to the levers and engaging the segments for equally compressing the latter relatively to a tire, and means for expanding the lever to set up a compressing action of the segments.

3. In a cold tire setter, the combination of wheel supporting means, opposed tension levers arranged in operative relation on the wheel supporting means, tire engaging compressing segments primarily loosely arranged in relation to the tire to be set, and means for exerting a tension on the levers and on the said segments.

4. In a cold tire setter, the combination of a wheel support, tension levers disposed in opposite positions relatively to said support, the levers being fulcrumed at one end of each and the opposite ends free, means for engaging the free ends of the levers to expand the latter, a plurality of tire compressing segments arranged on the wheel supporting means primarily in loose condition with relation to the tire to be set, and means connected to the said levers and engaging the segments for equally forcing the latter inwardly against the tire.

5. In a cold tire setter, the combination of a wheel supporting means, a plurality of tire compressing segments arranged to loosely circumscribe a wheel tire and unattached with relation to the supporting means, the said segments completely surrounding the tire to be set, and yielding means passing around and engaging the outer portions of all of the segments and provided with contracting devices connected thereto to effect a uniform pressure of the segments relatively to the tire to be set.

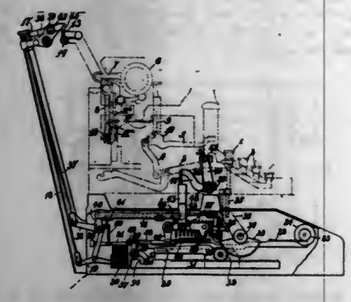
[Claim 6 not printed in the Gazette.]

1,213,100. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed July 3, 1911. Serial No. 636,593. (Cl. 235—60.)

1. In a combined typewriting and computing machine having a typewriter carriage, numeral keys and computing mechanism; an obstructing means for the keys comprising a device normally tending to obstruct said keys, a latch restraining said obstructing device, and means dependent on the movement of the carriage for releasing the latch.

2. In a combined typewriting and computing machine having a typewriter carriage, numeral keys, computing mechanism and a manually controlled general operator for running numbers into the computing mechanism; and comprising in combination, a device normally tending to obstruct said keys, a latch restraining said obstructing device, means dependent upon the movement of said carriage for releasing said latch to permit said device to obstruct the keys to warn the operative to operate the

general operator, and means controlled by said general operator for releasing said keys from said obstructing device.



3. In a combined typewriting and computing machine having a typewriter carriage, numeral keys, computing mechanism and a manually controlled general operator for running numbers into the computing mechanism; and comprising in combination, a device normally tending to obstruct said keys to warn the operative to operate said general operator, a latch restraining said obstructing device, means dependent upon the movement of said carriage for releasing said latch, means controlled by said general operator for releasing said keys from said obstructing device, and a spring for returning said latch to the position where it is effective to restrain the obstructing device.

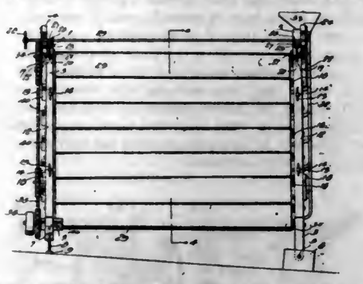
4. In a combined typewriting and computing machine having a typewriter carriage, numeral keys, computing mechanism and a manually controlled general operator for running numbers into the computing mechanism; and comprising in combination, a bar for locking said keys at the end of a line of writing, an independent device normally tending to set said line-locking bar to operative position, said bar being movable to operative position independently of said bar-setting device, a latch restraining said bar-setting device, and means dependent upon the writing of a digit in the units place in a column for releasing said latch to permit said locking device to become effective to warn the operative to operate said general operator.

5. In a combined typewriting and computing machine having a typewriter carriage, numeral keys, computing mechanism and a manually controlled general operator for running numbers into the computing mechanism; and comprising in combination, a bar for locking said keys at the end of a line of writing, an independent device normally tending to set said line-locking bar to operative position, said bar being movable to operative position independently of said bar-setting device, a latch restraining said bar-setting device, means dependent upon the writing of a digit in the units place in a column for releasing said latch to lock the keys to warn the operative to operate the operator, and means dependent upon the movement of said general operator for replacing said bar-setting device under the control of said latch.

[Claims 6 to 33 not printed in the Gazette.]

1,213,101. SEED CLEANER AND SEPARATOR. WILLIAM F. HARTRAMPF, Forest Grove, Oreg. Filed July 3, 1916. Serial No. 107,394. (Cl. 130—18.)

A seed cleaning machine comprising a frame including a pair of vertically movable upright bars, vertically spaced rollers whose ends are supported by said bars, and a seed handling belt having portions trained around the rollers; upper and lower parallel links at each end of the frame pivoted at their rear ends to said frame and pivoted at or near their front ends to said vertically movable bars, the upper links being extended forwardly beyond said bars, rigid arms projecting forwardly from the frame above said upper links, a longitudinally disposed shaft carried by said arms, and means operable from said shaft for raising and lowering the upper links in unison, said means



being connected with the projecting front ends of said links.

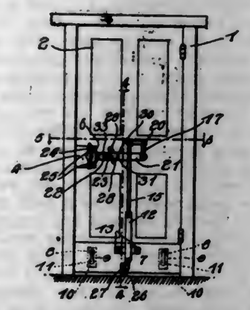
1,213,102. RECEPTACLE. JULIA HILL, Valley Junction, Iowa. Filed Aug. 4, 1915. Serial No. 43,687. (Cl. 224—28.)



1. In a device of the class described, a flexible strip for connection with a receptacle, said strip having a slot adjacent one end thereof, a protective flap formed integral with the other end of said strip and to underlie the slotted portion thereof, and a spring latch on said strip to extend through said slot and to bear on said flap.

2. In a device of the class described, a flexible strip for connection with a receptacle and having a slot adjacent one end thereof, a protective flap formed integral with the opposite end of said strip to underlie the slotted portion thereof, a spring latch on said flap having a locking rib to extend through said slot and bear on said flap, and an operating lip on said latch in advance of said rib extending beyond said flap to overhang said slot.

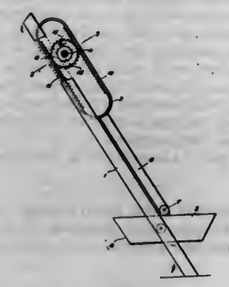
1,213,103. WEATHER-STOP. PETER L. HUDSON, Effingham, Ill. Filed July 6, 1916. Serial No. 107,821. (Cl. 20—68.)



1. A device of the class described comprising a horizontal weather stop and means for mounting it for vertical movement on the lower end of a door, a horizontally movable bar having a horizontal slot, a fastener passing through said slot for connecting the bar slidably with the door above the weather stop, a locking member for said bar, the aforesaid fastener serving as a mounting for said member, and operating connections between said bar and the weather stop for moving the latter vertically when said bar is moved horizontally.

2. A device of the class described comprising a horizontal weather stop and means for mounting it for vertical sliding on the lower edge of a door, an operating bar for said stop, said bar having a longitudinally extending slot, a fastener passing through said slot for connecting the bar slidably with the door, a stop on said bar adjacent one end of its slot, a double acting locking member pivotally mounted on said fastener and having a shoulder to abut said stop when said member is swung to one position to prevent movement of the operating bar in one direction, other stops respectively on the bar and locking member for holding said bar against movement in the other direction when said locking member is swung to its reverse position, and operating connections between said bar and the stop.

1,213,104. WAVE-MOTOR. ALEXANDER S. HULDEN, Great Falls, Mont. Filed July 7, 1915. Serial No. 38,504. (Cl. 253—10.)

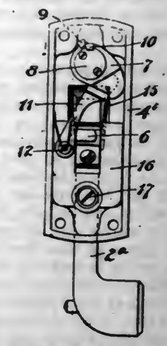


1. The combination with a shaft journaled in bearings, two toothed wheels loosely arranged upon the shaft, ratchet wheels rigidly secured to the shaft and disposed one adjacent each of the respective toothed wheels, spring pressed pawls upon the toothed wheels engaging with the respective ratchet wheels, of two parallel standards arranged at an inclination and having their inner faces channeled longitudinally, a float disposed between the standards, said float having its opposite ends beveled, short shafts upon the sides of the float, roller wheels upon the said shafts received within the channels of the standards, a rod pivotally secured to the upper face and approximately central of the float and disposed parallel with the standards, said rod having its free end provided with a yoke-shaped extension, the arms provided by the extension being formed adjacent their diametrically opposite edges with a pair of rack bars, and one of said rack bars adapted to co-act with one of the respective toothed wheels upon the shaft.

2. A wave motor comprising a pair of spaced standards arranged on an incline to the perpendicular, each of said standards being provided on their confronting faces with channels, a float pivotally and slidably mounted within said channels, a shaft journaled adjacent to one end of the standards and connecting the same, a rod arranged parallel to the standards and having one end thereof pivotally connected to said float at one side of its pivot, and a connection between the other end of the rod and the shaft for imparting a continuous rotary motion to the shaft when the float is moved.

1,213,105. PANIC-BOLT DOG. NORMAN B. HURD, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 5, 1916. Serial No. 76,338. (Cl. 70—120.)

1. In a lock of the character described, a latch bolt, a pivotally mounted latch bolt retracting means, a pivotally mounted dog adjacent thereto and arranged to operatively engage and hold the same in the latch retracting position, a hold back device movable into position preventing operation of said dog and means for shifting said hold back device out of said holding position.



2. In a lock of the character described, a pivotally mounted retracting lever, a pivoted dog arranged to engage and hold the retracting lever and a pivoted holding lever arranged to engage and hold the pivoted dog.

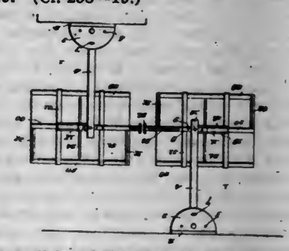
3. In a lock of the character described, a bracket, a bolt retracting member including a spring pressed arm pivotally mounted to swing in said bracket, a dogging device pivotally mounted in said bracket and arranged to coöperate with said bolt retracting member to hold it in a predetermined position, and a key operated means cooperating with said dog to move the same from the dogging to the non-dogging position, with means on the bracket to prevent the movement of said dog into its operative position until said arm has reached its predetermined position.

4. In a lock of the character described, a bracket, a movable bolt operating member carried thereby, dogging means for said bolt operating member comprising a swinging arm mounted in said bracket adjacent to the mounting for said bolt operating member, with means on the bracket to hold said dogging member against movement until said bolt operating member has been moved to a predetermined position, said holding means being operable by said bolt operating member.

5. In a lock of the character described, a bracket, a latch retracting lever comprising an arm pivotally mounted on said bracket, a dog pivotally mounted in said bracket on an axis at right angles to the pivot of the latch retracting lever and disposed at one side of the normal path of movement of the arm of the latch retracting lever and key operated means for rotating said dog on its pivot to carry the same into the path of movement of the arm of the latch retracting lever.

[Claim 6 not printed in the Gazette.]

1,213,106. MAIL-BAG-DELIVERY APPARATUS. BEN KAECH, Brooklyn, Wis. Filed Aug. 2, 1916. Serial No. 112,819. (Cl. 258—19.)



1. In a mail bag delivery apparatus, complementary devices carried by the train and station respectively, each embodying an arm mounted for swinging movement to active and inactive positions, a bar on the outer end of said arm capable of swinging movement to active and in-

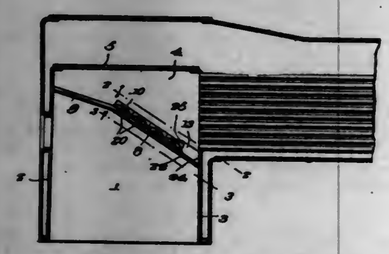
active position, a ring carried by said bar and detachable therefrom, lock mechanism holding said ring to said bar, and means on each bar for releasing the lock mechanism on the other bar to release said ring whereby the ring connected to one bar may be delivered to the other bar.

2. In mail bag delivery apparatus, complementary devices carried by the train and station respectively, each embodying an arm mounted for swinging movement to active and inactive positions, a bar on the outer end of said arm capable of swinging movement to active and inactive position, a ring carried by said bar and detachable therefrom, lock mechanism holding said ring to said bar, means on each bar for releasing the lock mechanism on the other bar to release said ring whereby the ring connected to one bar may be delivered to the other bar, and coöperating means on said ring and bar for holding the delivery ring on the bar against swaying.

3. In mail bag delivery apparatus, companion devices carried by the train and at the station respectively, each device embodying an arm, a bar on the outer end of said arm, a carrier ring suspended from said bar, means locking said carrier ring on said bar, a flag connected to said locking means, and an impact head on said bar, the impact head on each bar being adapted to engage the flag on the other bar to relieve the said ring of the influence of said locking means whereby the ring on each bar may be delivered to the other bar.

4. In mail bag delivery apparatus, companion devices carried by the train and at the station respectively, each device embodying an arm, a bar on the outer end of said arm, a carrier ring suspended from said bar, means locking said carrier ring on said bar, a flag connected to said locking means, an impact head on said bar, the impact head on each bar being adapted to engage the flag on the other bar to relieve the said ring of the influence of said locking means whereby the ring on each bar may be delivered to the other bar, and coöperating means on each ring and bar to hold the delivered ring against swaying on the bar.

1,213,107. ARCH FOR LOCOMOTIVE-BOILER FURNACES. LOUIS S. KENNEDY, Sandy Ridge, Pa. Filed July 11, 1916. Serial No. 108,639. (Cl. 110—87.)



1. A locomotive fire box arch comprising spaced supporting elements, and transverse rows of bricks of refractory material resting upon and supported by said elements entirely free and clear of the fire box at the sides of the arch, the bricks of each row having lateral abutment surfaces with interlocking elements, arranged wholly within the plane thereof so that the bricks of each row are held from relative independent vertical displacement and means for retaining the side bricks in spaced relation from the side walls of the fire box.

2. A locomotive fire box arch comprising spaced supporting members, bricks of refractory material resting upon and supported by said members, said bricks having outer edge portions spaced clear from the sides of the fire box and formed to provide vertical passages between the edge portions of adjacent bricks and also between the same and the sides of the fire box, and having grooves in their undersides extending uninterruptedly across the fire box between said passages, and means for retaining the side bricks in spaced relation from the side walls of the fire box.

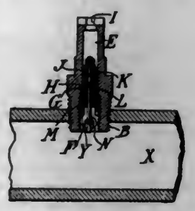
3. A locomotive fire box arch comprising supporting elements, and bricks of refractory material resting on and supported by said elements, the bricks adjacent to the sides of the fire box having their edges formed to provide vertical flues and their undersides beveled to form sloping surfaces leading to said flues, and said bricks having grooves in their undersides extending across the fire box between the flues.

4. A locomotive fire box arch comprising side and intermediate supports, and a refractory body of bricks resting on said supports, said bricks consisting of outer or side bricks resting upon the outer supports at a point between their outer and inner edges and provided with projections engaging said supports to hold them from relative lateral movement, and intermediate bricks disposed above the intermediate supports, the adjacent faces of the side and intermediate bricks being provided with interlocking connections, said connections serving to hold the bricks against upward movement under pressure.

5. A locomotive fire box arch comprising spaced supporting elements, and rows of fire bricks supported upon said elements, entirely free and clear of the fire box at the sides of the arch, said bricks being provided with means to engage the supporting elements to hold the arch from sidewise displacement and having interlocking connections within the plane thereof for holding said bricks against upward displacement.

[Claims 6 and 7 not printed in the Gazette.]

1,213,108. VALVE FOR RADIATORS OR THE LIKE. HOWARD KEYNTON, West Hoboken, N. J. Filed Feb. 9, 1912. Serial No. 676,509. (Cl. 137—122.)



1. A valve for radiators or the like comprising a casing having means thereon adapted to engage a part to which the valve is to be attached, and a central bore, a shoulder in said bore, a valve proper provided with a resilient packing, and a separable valve seat having a packing adapted to engage said shoulder, said valve proper and valve-seat being adapted to be inserted in said bore from the inner end thereof, and said valve proper being adapted to open outwardly to provide a vent from the interior of the radiator to the atmosphere, and to close inwardly to prevent entrance of air from the atmosphere when the pressure in the radiator falls below atmospheric pressure.

2. A valve for radiators or the like, comprising a casing having means thereon adapted to engage a part to which the valve is to be attached, and a central bore, said casing having screw-threads at the inner end of said bore and a shoulder within said bore, a valve proper provided with a resilient packing, a separable valve-seat, said valve proper and valve seat being adapted to be inserted in said bore from the inner end thereof, and a screw-threaded member adapted to engage the screw threads in said bore to hold said valve-seat against said shoulder, said valve proper being adapted to open outwardly to provide a vent from the interior of the radiator to the atmosphere, and to close inwardly to prevent entrance of air from the atmosphere when the pressure in the radiator falls below atmospheric pressure.

3. A valve for radiators or the like, comprising a casing having means thereon adapted to engage a part to which the valve is to be attached, and a central bore, a valve proper in said bore, a valve stem, a vent in said bore, said valve proper being adapted to open outwardly to allow exit of fluid to the atmosphere, and to close inwardly to prevent entrance of air from the atmosphere when the pressure in the radiator falls below atmospheric pressure, and means on said valve stem for preventing said valve proper from closing said vent when pressed away from its seat.

4. A valve for radiators or the like, comprising a casing provided with exterior screw-threads adapted to engage a part to which the valve is to be attached, and a central bore, said casing having screw-threads at the inner end of said bore and a shoulder within said bore, a valve proper provided with a resilient packing, a separable valve-seat, said valve proper and valve seat being adapted to be inserted in said bore from the inner end thereof, and a screw-threaded member adapted to engage the screw threads in said bore to hold said valve-seat against said shoulder, said valve proper being adapted to open outwardly to provide a vent from the interior of the radiator to the atmosphere, and to close inwardly to prevent entrance of air from the atmosphere when the pressure in the radiator falls below atmospheric pressure.

5. A valve for radiators or the like, comprising a casing having means thereon adapted to engage a part to which the valve is to be attached, and a central bore, a valve proper provided with a resilient packing, and a separable valve seat having a packing adapted to engage said casing, said valve proper and valve seat being adapted to be inserted in said bore from the inner end thereof, said valve proper being adapted to open outwardly to provide a vent from the interior of the radiator to the atmosphere, and close inwardly to prevent entrance of air from the atmosphere when the pressure in the radiator falls below atmospheric pressure.

1,213,109. SHOE-BUCKLE. AXEL KILSTROM, Providence, R. I. Filed Aug. 24, 1916. Serial No. 116,684. (Cl. 24—206.)



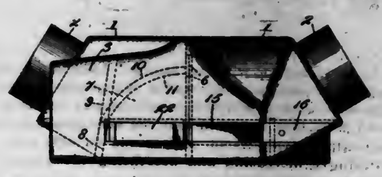
1. In a device of the class described two members adapted to slide one on the other, one of said members having a plurality of longitudinally spaced transversely extending cross bars inclined inwardly and forwardly from their rear to their front edges, a spring tongue fixed at one end to one end of the other member and having a hook at its free end for engaging the rear edge of said cross bars to hold the members in locked position, said tongue overlying the member carrying it and disposed in a plane parallel therewith and movable laterally outward to release it from said bars, and fingers extending over and engaging the outer face of said tongue for limiting its outward movement.

2. In a device of the class described two members adapted to slide one on the other, one of said members having a plurality of longitudinally spaced transversely extending cross bars, the other member comprising two parallel superposed elements connected at one end and one being yieldable relatively to the other, fingers carried by one of said elements and having inturned hook-shaped terminals, the other element having slots to receive said terminals whereby the outward movement of the yieldable element is limited.

3. A buckle of the class described, comprising a member provided with a plurality of longitudinally spaced laterally extending cross bars inclined downwardly and forwardly from their rear to their front edges and having slots formed between them, longitudinal grooves extending throughout the length of the side edges of said member, a member having a spring tongue connected at one end thereto and extending substantially parallel therewith and provided at its free end with an inturned hook for interlocking engagement with the cross bars of said first-mentioned member, lugs extending laterally from said tongue beyond the side edges of the member with which it is connected, inturned laterally extending stops carried by said member, said tongue having slots with which said stops are engaged, the edges of said member outside said slots being bent inwardly and the edges thereof in advance of said stops being rolled inwardly to provide guide edges for insertion in the grooves of the first-mentioned member, and means for connecting said members to the article to which the buckle is to be attached.

4. In a buckle of the class described two members adapted to slide one on the other, one of said members being in the form of a substantially rectangular plate curved longitudinally throughout its length and having a convex outer face with its edges turned laterally outward and shaped to form longitudinal channels at each side thereof, the convex portion of said plate between said channels being slotted transversely to form cross bars, the other member being in the form of a longitudinally curved plate having an attaching loop at one end, and a spring tongue secured at one end to the loop carrying end of said plate and arranged substantially parallel with the outer face thereof, the free end of said tongue being rolled inwardly to form a hook positioned near the free end of the plate, the end of said plate opposite said hook being bulged outwardly to form a hook receiving recess having its side edges rolled inwardly to form hooks for engaging the channel of the other member, fingers projecting laterally outward from the side edges of said plate intermediate its ends, the terminals of said fingers being inturned to form hooks, said tongue having slots intermediate its ends to receive the hook ends of said fingers whereby the outward movement of the tongue is limited.

1,213,110. HOSE-COUPLING FOR CARS. CHARLES H. KLOTZ, Washington, D. C., assignor, by direct and mesne assignments, to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Feb. 28, 1916. Serial No. 80,953. (Cl. 137—89.)



1. In a pipe coupling the combination of a pair of complementary coupling members each having on one face thereof a locking lug provided with a curved groove and locking edge, and on the other face thereof an arm provided with a straight groove and locking edge member, the said curved groove and curved locking edge of the one coupling member adapted to be engaged by the said straight edge and straight groove respectively of the other coupling member; and means to positively lock the said coupling members firmly in position, comprising a member mounted in a channel extending longitudinally of said arm and having an inclined locking face, said member adapted to be moved into locking engagement with the lug of the mating coupler when the couplers are brought together, and to positively lock them in such position, and said inclined locking face adapted to hold the parts tightly together and to compensate for wear.

2. A coupling head provided on one face thereof with a locking lug having a lower face against which a sliding locking member may take, said head also having extending from another face thereof an arm provided with a slot extending substantially lengthwise of the coupling and a sliding locking member in said slot having an inclined locking surface, substantially as described.

3. A coupling head provided on one face thereof with a locking lug having a curved groove and locking edge as well as a flat lower surface against which a sliding lock

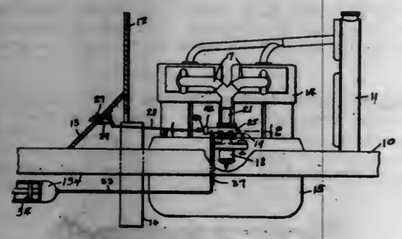
ing wedge may take, said head also having extending from another face thereof an arm provided with a slot extending longitudinally of the coupling, a sliding wedge in said slot, and a straight locking groove and edge located near the end of said arm, substantially as described.

4. In a pipe coupling, the combination of a pair of matching coupling heads each provided on one face thereof with a locking lug having a curved groove and locking edge, as well as a flat surface adapted to be engaged by a locking wedge, and each of said heads having extending from another face thereof an arm having a slot, a sliding wedge in said slot, and near the end of said arm an inclined straight groove and locking edge, the last named locking edge of the one head adapted to engage the first named curved groove of the other head, and the said wedge of the one head adapted to engage the flat surface of the locking lug of the other head, substantially as described.

5. A pipe coupling head having extending from one face thereof an arm having a slot provided with grooves, and a wedge provided with ridges adapted to move in said grooves, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,213,111. VALVE CONSTRUCTION. BENJAMIN G. KRAMER, Anderson, Ind., assignor to Kramer Vacuum Brake Company, Anderson, Ind., a Corporation. Filed Jan. 24, 1916. Serial No. 73,907. (Cl. 123—198.)



1. In combination with an internal combustion engine having an intake manifold, and a carbureter thereon, of a cylinder, a valve adapted to alternately connect said cylinder with said manifold and the atmosphere so as to operate the piston therein, and means on said valve for automatically increasing and decreasing the quantity of gas entering said manifold so that said engine will be throttled down when the valve is opened to the manifold.

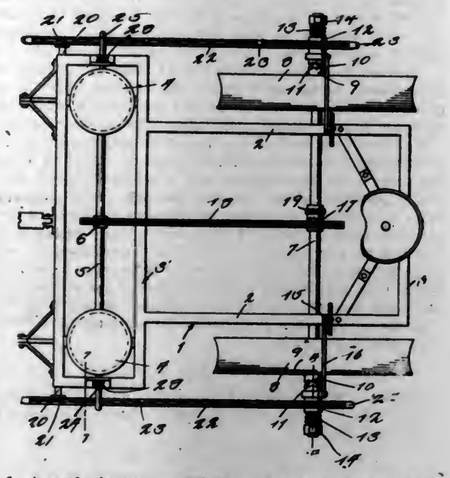
2. In combination with an internal combustion engine having an intake manifold, of a valve construction including a housing having a cylinder therein, a butterfly valve in said manifold, a port extending through said cylinder to said manifold, a piston in said cylinder adapted to open and close said ports, a second port in said cylinder, means for operating said piston, and direct means on said piston for automatically opening and closing said butterfly valve when said piston is operated.

3. In combination with an internal combustion engine having an intake manifold, of a valve construction including a housing having a cylinder therein, a butterfly valve in said manifold, a port extending through said cylinder to said manifold, a piston in said cylinder adapted to open said ports, a second port in said cylinder, means for operating said piston, and a lug extending from said butterfly valve adapted to be engaged by said piston for closing said valve when said manifold port is opened.

4. In combination with an internal combustion engine having an intake manifold, of a valve construction including a housing having a cylinder therein, a butterfly valve in said manifold, a port extending through said cylinder to said manifold, a piston in said cylinder adapted to open and close said ports, a second port in said cylinder, means for operating said piston, a lug extending from said butterfly valve, and a projecting member on said piston adapted to engage said lug for closing said valve when said manifold port is opened.

5. The combination with an internal combustion engine having an intake manifold, of a valve construction including a housing having a cylinder therein, a port extending through said cylinder and opening into said manifold, a piston in said cylinder, a second port in said cylinder open to the atmosphere, and means for operating said piston so that it will slide in said cylinder whereby one of said ports will be brought into communication with the manifold.

1,213,112. CORN-PLANTER. ROMAN KUESS, Chickasaw, Ohio. Filed July 17, 1916. Serial No. 109,748. (Cl. 111—6.)

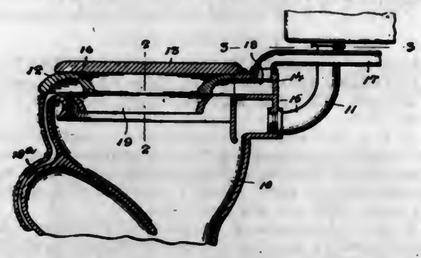


1. A seed planter comprising a frame, a wheeled axle supporting the frame, a supplemental frame, hoppers supported by the supplemental frame, shafts associated with the hoppers for controlling the movement of the feed plates of the hoppers, said shafts having fingers carried by their outer ends, webs disposed between the fingers, sprocket wheels associated with the supplemental frame, sprocket wheels carried by the axle, chains connecting the said sprocket wheels and having tappets carried thereby said chains being engaged between the fingers, said tappets being adapted to engage the webs to rock the shafts, and means for returning the shafts to their normal position after being rocked.

2. A seed planter comprising a frame, a wheeled axle supporting the frame, a supplemental frame, hoppers supported by the supplemental frame, shafts associated with the hoppers for controlling the movement of the feed plates of the hoppers, fingers carried by the shafts, webs disposed between the fingers, idler sprocket wheels supported by the supplemental frame, driving sprocket wheels carried by the axle, chains connecting said sprockets and having tappets carried thereby for engaging the webs to rock the shafts, means for returning the shafts to their normal positions after being rocked, and means for disconnecting either or both of the driving sprocket wheels, as and for the purpose set forth.

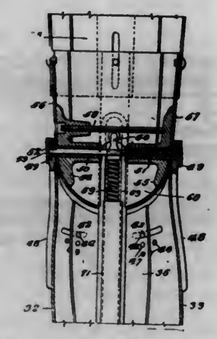
1,213,113. TOILET. JOHN LANGE, Jr., Des Moines, Iowa, assignor of one-third to C. J. Fredrickson and one-third to A. F. Swan, Des Moines, Iowa. Filed Apr. 26, 1915. Serial No. 23,898. (Cl. 4—21.)

In a device of the kind described, in combination a bowl, a substantially inverted U-shaped seat formed with an interior channel adapted to communicate with the interior of said bowl, a rim formed upon and projecting downwardly from the upper curved portion of said bowl, and forming an opening, said bowl being formed at its front side with an elongated vent passage taking in air at its lower end and opening out of the top of the bowl, said rim being formed with an opening adjacent said



passage, and a lip formed at the forward end of said seat and enlarging the channel of the latter, said seat engaging said bowl and causing its enlarged channel to connect said passage and the opening in said rim and also to communicate with the opening through said rim.

1,213,114. ARTIFICIAL LIMB. LOUIS C. LAWRENCE, Brooklyn, N. Y. Filed May 1, 1916. Serial No. 94,813. (Cl. 3—2.)



1. An artificial limb of the class described comprising sections pivotally joined together, each of said sections comprising a plurality of shaped plates adjustably secured to each other for lateral adjustment with respect to each other and a joint for said sections comprising a plurality of shaped plates adjustably secured to each other, said sections comprising said joint having longitudinal adjustment with the plates of the adjacent section.

2. An artificial limb of the class described comprising an adjustable joint section, said joint section being formed of a plurality of overlapping shaped plates, said plates being adjustably secured to each other for lateral adjustment, a pintle carried by one of said plates, having threaded engagement with another of said plates to draw said plates together, and a threaded stem carried by one of the plates engaging the opposite plate to separate said plates and enlarge the general dimensions of said joint section.

3. An artificial limb of the class described comprising a foot, an ankle section and a leg section, said foot section having its upper face recessed to receive fastening means carried by the ankle section, said ankle and leg sections comprising complemental sections having their edges overlapping, and fastening means carried by said sections to hold said sections in any desired relation.

4. An artificial limb of the class described comprising a foot, an ankle section and leg section, said foot having its upper face recessed to receive fastening means, an eye-bolt carried by said foot, said ankle section comprising four complemental sheet metal sections fitted to each other, side plates of said ankle section, bearings formed on the lower ends of said side plates, said leg section comprising four complemental sheet metal sections fitted to have their edges overlapping, said leg sections having their lower ends slotted to permit a vertical adjustment over said ankle sections, fastening means for the sections of said leg and ankle portions and said leg sections having transverse slots formed therein to receive fastening means carried by some of said sections for lateral adjustment of said plates comprising said leg section with respect to each other.

5. An artificial limb of the class described comprising a foot, an ankle section and a leg section, said foot having its upper face recessed to receive fastening means, an eye-bolt carried by said foot, said ankle section comprising four fitted sheet metal sections having their edges overlapping, the front plate of said ankle section having an inwardly directed lug from a lower edge thereof, a cushion between said lug and said foot, the back plate of said ankle section having a socket formed in the lower end thereof, a spring in said socket bearing on said foot, a tension cord connecting said back plate to said foot, side plates connecting said front and back plates being adjustably connected thereto, bearings formed on the lower ends of said side plates to rest in the recessed portions of said foot and fastening means carried by the several sections to adjustably secure them to each other.

[Claim 6 not printed in the Gazette.]

1,213,115. PLASTIC COMPOSITION AND PROCESS OF MAKING THE SAME. HUGO LIEBER, New York, N. Y. Filed Mar. 28, 1914. Serial No. 827,914. (Cl. 106—40.)

1. As a composition of matter, a solid material consisting essentially of peat having incorporated therewith and disseminated therethrough a binding agent including peat which has been subjected to the viscose process.

2. As a composition of matter, a solid material comprising fibrous peat and having incorporated therewith and disseminated therethrough a binding agent comprising peat fines treated by the viscose process.

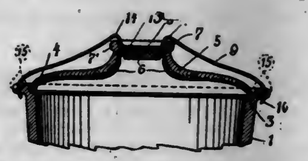
3. As a composition of matter, a solid material comprising peat and a binding agent including an adhesive material formed from peat distributed through the mass.

4. As a composition of matter, a solid material comprising peat and an adhesive material formed from peat distributed through the mass as a binding agent.

5. As a composition of matter, a solid material consisting essentially of peat of which a portion has been converted into viscoid cellulose and binds the unconverted portion together into a coherent mass.

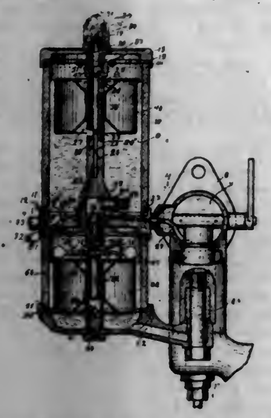
[Claims 6 to 21 not printed in the Gazette.]

1,213,116. RECEPTACLE. MATTHEW MICHAEL LOOBAM, New York, N. Y. Filed Oct. 27, 1914. Serial No. 868,864. (Cl. 131—30.)



A receptacle comprising in combination with a jar of non-porous material, a cover resting on the top of the jar, said cover consisting of porous material, the pores of which are closed on the outer surface, with the exception of a central portion on the cover on which the pores extend through the entire thickness of the material of the cover; an annular flange surrounding said central porous portion, a non-porous seal detachably placed on said central porous portion and surrounded by said annular flange, and a holding bail extending from the jar over said flange into engagement with the detachable seal for forcing the seal against the cover and for forcing the cover against the jar.

1,213,117. VACUUM FEED DEVICE. OSCAR L. LOUGHEAD, Racine, Wis. Filed Mar. 11, 1916. Serial No. 83,460. (Cl. 158—36.)



1. In a vacuum feed device, the combination of a reservoir comprising a base, a top, a casing interposed between said base and top, and means for detachably securing said base, top, and casing together, comprising a member detachably secured to the top and base, air and suction conduits in said member, valves in said air and suction conduits, float controlled means for operating said valves, a fuel supply conduit leading to the reservoir, a carbureter supply conduit leading from the reservoir, and a valve in said carbureter supply conduit for preventing backflow of the fuel into the reservoir.

2. In a vacuum feed device, the combination of a reservoir comprising a base, a top, a casing interposed between said base and top, and means for securing said base, top, and casing together comprising a member detachably secured to the top and base, alined air and suction conduits in said member, valves in said alined conduits, float controlled means for operating said valves, a fuel supply conduit leading to the reservoir, a carbureter supply conduit leading from the reservoir, and a valve in said carbureter supply conduit for preventing backflow of the fuel into the reservoir.

3. In a vacuum feed device, the combination of a reservoir, a fuel supply conduit leading thereto, alined air and suction conduits communicating with the reservoir and provided with valve seats, a valve sleeve member within said alined conduits, a valve stem adjustably mounted in said sleeve member and carrying valve heads for engagement with said valve seats, float controlled means for operating said valve stem, a carbureter supply conduit leading from the reservoir, and a suction operated valve in said carbureter supply conduit.

4. In a vacuum feed device, the combination, of a reservoir, a fuel supply conduit leading thereto, an air conduit leading thereto, an engine suction conduit leading therefrom, a valve in said air conduit, a valve in said suction conduit, a member operatively connected to said valves, a float within said reservoir, means for operating said member including lever arms engaging said member, guide rods for said float carried by said lever arms, resilient means connected to said lever arms for assisting the action of the float, stops on said rods for engaging said float, a carbureter supply conduit leading from the reservoir, and means for preventing back feed of the fuel in the carbureter-supply conduit to the reservoir.

5. In a vacuum fluid fuel feed device, the combination of a reservoir, a fuel supply conduit leading thereto, an upright member disposed within the reservoir and having a channel therein provided with an opening communicating with said reservoir, an air conduit and a suction conduit communicating with said channel, a valve in the air conduit, a valve in the suction conduit, float controlled means simultaneously operating both of said valves, a carbureter supply conduit leading from the reservoir, and a suction operated check valve in said carbureter supply conduit.

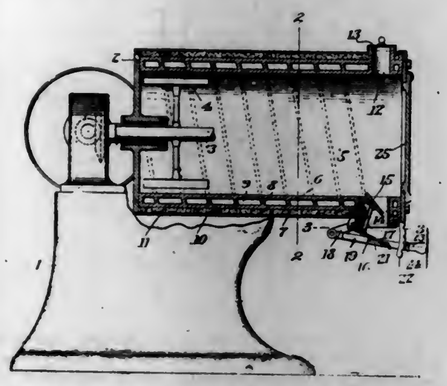
[Claims 6 to 9 not printed in the Gazette.]

1,213,118. PROTECTIVE AND NON-PENETRATIVE COVERING AND THE LIKE. GEORGE LYNCH, London, England. Filed May 13, 1916. Serial No. 97,419. (Cl. 89—36.)

1. As a new article of manufacture, a protective and bullet-impeding material for use in military operations comprising a sheet or quilt of wool or cotton wool in a normal loose or fluffy condition impregnated throughout its extent with dry powdered resin.

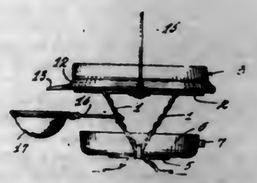
2. As a new article of manufacture, a protective and bullet-impeding covering for use in military operations comprising wool or cotton wool in normal loose or fluffy condition impregnated throughout its extent with dry powdered resin and inclosed by a water-proof or other fabric covering of any desired shape or pattern which does not impair the loose or fluffy character of the wool or cotton wool.

1,213,119. CONTAINER. LAWRENCE F. MCGRATH, New York, N. Y. Filed June 22, 1915. Serial No. 35,595. (Cl. 137—21.)



A container having an outlet opening, a valve pivoted in the outlet opening, a closure pivoted outside said outlet opening, a bar operatively connecting the closure with the valve and lying in said opening and a lever mounted upon the container and operatively connected with the closure.

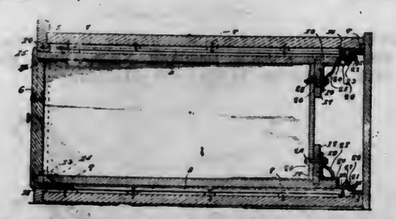
1,213,120. EGG-SEPARATOR. FLORA L. MARCILLE, Thorold, Ontario, Canada. Filed Apr. 12, 1915. Serial No. 20,831. (Cl. 65—12.)



1. In an egg separator, the combination with a frame, of a white container and a yolk container removably mounted thereon, a strainer having a wire bottom removably mounted on the said frame above the white container, the said strainer having a hole in the wall thereof and a spout extending outwardly beneath said hole above said yolk container.

2. In an egg separator, the combination with a frame, of a white container mounted thereon, a strainer having a wire bottom and removably mounted on said frame above the white container, said strainer having a side wall provided with a yolk passage therein, and a spout extending outwardly beneath the said passage.

1,213,121. DETACHABLE DRAWER. LEANDER M. MAYNE, Columbia, S. C. Filed Jan. 12, 1916. Serial No. 71,758. (Cl. 45—77.)



1. In combination, a casing, drawers therefor, and means slidably mounting the drawers within said casing, said means comprising tracks, a guide roller fixed at one end of the tracks, and a second roller swingingly mounted on the drawer for sliding movement on said tracks and means having connection with the drawer for preventing any accidental swinging movement of the second roller from said track.

2. In combination, a casing, drawers mounted therein and means for permitting of a slidable and detachable connection of the drawers with the casing, said means embodying a fixed and a movable plate, a guide roller mounted on said movable plate and means carried by the fixed plate and binding against the movable plate for preventing any inward swinging movement of said movable plate.

3. In combination, a casing, drawers therefor, tracks secured in said casing, a roller hingedly connected to the rear end of the drawer for movement on said tracks, and pivotally mounted means for locking the hinge against movement.

4. In combination, a casing, drawers therefor, tracks secured within said casing, a guide roller, a hinge for swingingly connecting the guide roller to the rear end of said drawer for movement on said tracks, a bolt passing through said hinge, and means pivotally mounted on said bolt for locking the roller against movement.

5. In combination, a casing, drawers therefor, tracks secured within said casing, a guide roller, a hinge for swingingly connecting the guide roller to the rear end of said drawer for movement on said tracks, a bolt passing through said hinge, and means pivotally mounted on said bolt for locking the hinge against inward horizontal swinging movement.

[Claim 6 not printed in the Gazette.]

1,213,122. METALLIC TIE. JOSEPH L. MILLER, Jersey Mills, Pa. Filed June 24, 1916. Serial No. 105,629. (Cl. 238—5.)



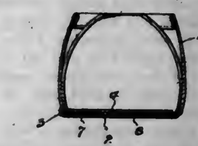
1. A tie for railway rails, comprising hollow end members, rods connecting said members, a cushion block providing a seat for the rail in each of said end members, closure plates for the end members, and means for securing the closure plates upon the end members and over the base flanges of the rails.

2. A tie for railroad rails, comprising hollow end members having open boxes, rods connecting the end members, a cushion block providing a seat for a rail in each of the end members, closure plates for the end members, longitudinally disposed elements in the ends contacting with the sides of the cushion blocks, and securing means associated with the said elements and engaging the closure plates for locking the closure plates upon the said ends and in engagement with the rails.

3. A tie for railroad rails having metal boxes forming the ends thereof, rod members at the lower portions of the boxes for connecting the same, a cushion block providing a seat for a rail in each of the boxes, a filler of preservative material between the cushion blocks and the ends of each of the boxes, cleats secured in the boxes and contacting with the sides of the blocks, closure plates for the boxes arranged to have their confronting edges overlying the base flanges of the rails when the rails are arranged upon the cushion blocks, and locking means removably connected with the cleats and passing through the closure plates for locking the said plates upon the said boxes.

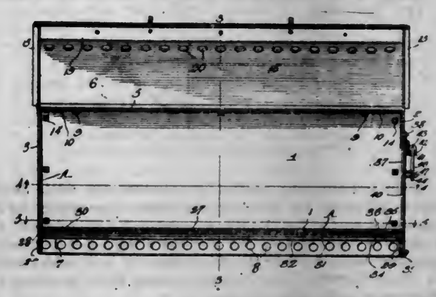
4. In a metallic tie for railway rails, hollow members having open tops providing the ends of the ties, ears at the lower corners of the ends, rod members passing through the ears, means for securing the rod members, a spacer element upon each of the rod members between the ends, a cushion block providing a rail seat in each of the ends, closure plates for the ends, elements secured to the bottom plates of the boxes and contacting with the sides of the cushion blocks, bolt members removably associated with said elements and having their threaded ends passing through openings in the closure plates, and nuts for the bolts.

1,213,123. SHOE. JOHN A. NORDLOH, Cincinnati, Ohio. Filed Feb. 25, 1916. Serial No. 80,439. (Cl. 36—68.)



A shoe comprising an upper, a sole united to the upper by a seam extending along the margin of the sole, an insole, and a member fitted within the heel portion of the said upper and constituting a means for stiffening the heel portion of the upper and having its lower marginal portion turned in to lie between the said sole and insole in position covering the said seam.

1,213,124. COOP. MORRIS NORRING, Rolfe, Iowa. Filed Aug. 29, 1916. Serial No. 117,502. (Cl. 119—19.)

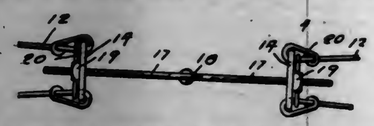


1. A brood coop constructed from a series of removably connected plates and having a gable roof, said roof to the opposite sides of the ridge thereof having openings, valve members connected with the ridge and disposed over the openings, means for adjusting the valves with relation to the said openings, a ceiling plate disposed below the roof and having its edges provided with openings, a bot-

tom plate having its edges provided with openings, a slidable valve for regulating these openings, and the coop, below the floor being provided with ventilating openings.

2. A brood coop constructed of a plurality of plates including a front and back and having their vertical edges flanged, side plates contacting with and secured to the flanges, cleats upon the sides, a floor plate comprising a flanged member which engages with the cleats, lugs upon the side plates, a ceiling plate resting upon the lugs, a pitch roof above and including the ceiling, interengaging flanges between the roof, front and back plates and the side plates, a door closing a door opening in the front plate, the front, back and side plates, below the floor plate being provided with openings, the floor plate having its edges provided with openings, a slidable plate providing a valve for these openings, a ceiling plate having its edges provided with openings, the top to the opposite sides of the ridge having a series of longitudinally disposed openings, and plates hingedly connected to the valve disposed to overlie the openings in the roof, and means for adjusting the said plates with relation to the said roof.

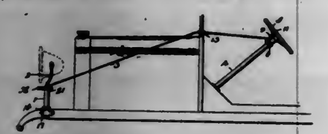
1,213,125. WIRE-FENCE TIGHTENER AND POST-ANCHOR. JOSEPH W. OLSON, Minnewaukan, N. D. Filed Nov. 8, 1915. Serial No. 60,360. (Cl. 85—36.5.)



1. A fence wire tightener and post anchor comprising a pair of wire loops, apertured plates carried by the loops, an oppositely threaded bar slidably engaged through the plates and provided with adjusting nuts, and an intermediate loop member carried by the bar for engagement of a tool to turn the bar, and means engaging with the said wire loops and with the said nuts to hold the nuts against rotation relatively to said plates.

2. A tightening device comprising a pair of wire loops, a pair of plates having apertures receiving said loops therethrough, and central openings, an oppositely threaded bar having its ends slidably engaged through the central apertures, nuts engaged on the said threaded ends outwardly of the plates, and wire members having their opposite ends coiled about the said loops and their central portions bent to partially embrace the said nuts to prevent movement of the latter relatively to the plates and the loops.

1,213,126. HEADLIGHT CONTROL. OSCAR O'NEAL, Fremont, Mich. Filed Feb. 7, 1916. Serial No. 76,686. (Cl. 240—61.)

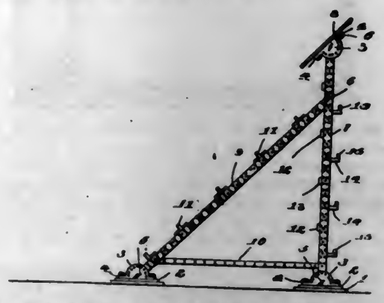


1. In a head-light control, in combination with headlights mounted for turning movement, operating cords connected to the headlights, a member for attachment to a steering post, guides for the operating cords pivotally mounted on said member, and springs to hold said guides in normal position, the operating cords being provided at their rear ends with buttons.

2. In a device of the class described, a pivotally mounted bracket having a radial arm, a spring to turn the bracket in one direction, an operating cord attached to the arm to turn the bracket in the reverse direction, a stop limiting the movement of said arm in one direction, a pivotally mounted stop to limit the movement of said arm in the reversed direction, a cushion acting against the pivotally mounted stop and a stop to limit the rebound of said pivotally mounted stop.

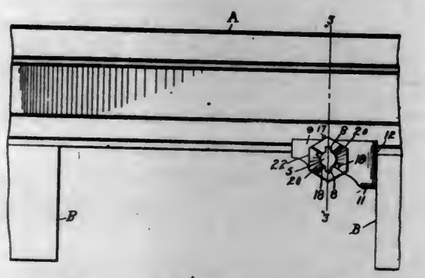
3. In a head-light control, in combination with headlights mounted for turning movement, operating cords attached to the headlights, a member for attachment to a steering post, tubular guides through which said cords extend, said guides having downwardly extending pivots mounted in bearing openings in said member, stops at the ends of the cord to engage the outer ends of said tubular guides and springs to hold said tubular guides in normal position.

1,213,127. DISPLAY-RACK. ROBERT E. OSBORNE and MERTON T. HORTON, Hamburg, N. Y. Filed Nov. 2, 1915. Serial No. 59,278. (Cl. 211—14.)



In a display rack, a pair of base members arranged in spaced relation and each having an angle piece in its upper side, a standard member having its lower end detachably and pivotally secured to the angle piece of one of the base members, an inclined bar having its upper portion detachably, pivotally and adjustably connected to the standard and its lower end detachably and pivotally secured to the angle piece of the other base member and a connecting bar detachably, pivotally and adjustably secured to the standard and to the inclined bar.

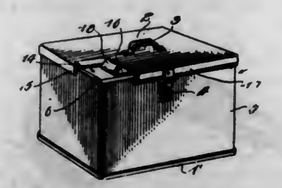
1,213,128. RAIL-ANCHOR. VENA A. MILLER, Bloomdale, Ohio. Filed June 23, 1916. Serial No. 105,421. (Cl. 238—4.)



1. A cam lock comprising the combination with a shank having laterally extending lugs at one end, of a collar centrally apertured to pass over said lugs and rotatably engage the shank, cams formed on the outer face of the collar to engage behind the lugs and pockets in said collar adapted to receive the lugs and prevent relative rotation of the shank and collar in either direction.

2. A rail anchor comprising a shank having a grooved head at one end adapted to engage the base of a rail, oppositely directed lugs formed on the other end of the shank, a member loose on the shank adapted to engage said rail base and an adjacent tie to prevent creeping of the rail thereon, a washer on the shank outwardly of said member, a collar on the shank, cams formed on the outer face of the collar to engage behind the lugs, and pockets in said collar adapted to receive the lugs and hold the shank and collar against relative rotation, said collar, washer and member being similarly apertured to pass over said lugs for engagement with or disengagement from the shank.

1,213,129. CHICKEN-RENOVATOR. ROBERT E. PACK, Sioux City, Iowa. Filed Oct. 26, 1916. Serial No. 127,866. (Cl. 119—160.)



1. A device of the class described comprising a sheet metal receptacle having outer imperforate walls, the upper edges of said walls being bent inwardly toward each other and at right angles to the main portions thereof, an inner wall spaced from the outer wall formed of plates of reticulated material, the plates adjacent the ends of the receptacle being extended into engagement with the side walls of the latter, the side edges of the other plates engaging the first mentioned plates, angle metal strips secured to the corners of said inner wall to hold said plates together, additional angle metal strips secured to the bottom edges of said plates and the bottom of said receptacle, the top edge of said plates being secured to the inwardly bent edges of the outer wall, a removable reticulated bottom spaced from the bottom of said receptacle, absorbent material between said inner and outer walls, a cover for the receptacle, said cover having an opening in one corner, and a slidable closure for said opening.

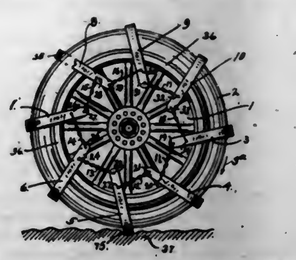
2. A device of the class described comprising a receptacle, absorbent material lining the inner walls of said receptacle, a cover hinged to said receptacle, the edges of said cover being bent downwardly around the sides of said receptacle to form flanges, said cover and its flanges being cut away at one corner to provide an opening, channel-shaped guides secured to the inner side of said cover, said guides being spaced apart a distance greater than the width of said opening, and a plate slidable in said guides to cover said opening, said plate being wider than said opening, one end of said plate being bent to form a finger piece, one end of the latter being cut away, the edge of said plate adjacent said cut away portion engaging one flange of the cover to limit its movement in one direction, movement in the other direction being limited by the engagement of said finger piece with one edge of said opening.

1,213,130. POISON-BOTTLE INDICATOR. RICHARD M. PAGE, Denver, Colo., assignor of seven-tenths to Charles I. Hays, Denver, Colo. Filed July 28, 1916. Serial No. 111,835. (Cl. 215—113.)



In combination with a bottle having a neck, a band around the neck and provided with V-shaped slits spaced from the sides thereof and forming correspondingly shaped prongs, said prongs being turned outwardly so that openings are formed in the band by said prongs and slits, the ends of the band being arranged in over-lapping relation and the prong near one end of the band being extended through the opening of the over-lapping end and bearing against the prong of said over-lapping end, the last named prongs being reversely bent and serving to secure the ends of the band together.

1,213,131. NON-SLIPPING TRACTION DEVICE FOR VEHICLE-WHEELS. WILLIAM H. PENSEYRES, Buffalo, N. Y. Filed Feb. 17, 1912. Serial No. 678,396. (Cl. 152—14.)



1. In a non-slipping traction device for vehicle wheels, the combination with a plurality of members positioned transverse to and in contact with the tire of said wheel, of chain connections journaled on inner portions of said members in continuous connection, each of said members having a curved portion in contact with said tire, and a bar or lever portion positioned between the tire of said wheel and the hub of the same, said chain connections being journaled to join a point near the inner end of said bar portion of one member with the bar portion of a neighboring member at a point away from the end of the same, and all neighboring members being similarly connected.

2. In a non-slipping traction device for vehicle wheels, the combination with a plurality of members positioned transverse to and in contact with the tire of said wheel, of chain connections journaled on the inner portions of said members in continuous connection, each of said members having a curved portion in contact with said tire, and a bar or lever portion positioned between the tire of said wheel and the hub of the same, said chain connections being journaled to join a point near the inner end of said bar portion of one member with the bar portion of a neighboring member at a point away from the end of the same, and all neighboring members being similarly connected, and a ring positioned near said tire concentric with the same and having pivoted thereto each of said members substantially as set forth.

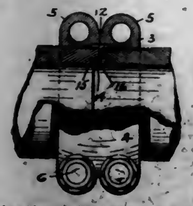
3. A device of the class described, comprising the combination of a plurality of like members, spaced circumferentially about the tire of a vehicle wheel and transverse to said tire and having each an inwardly positioned bar extension, chain-like connections continuously joining the said bar extensions and a ring positioned near said tire and having pivoted thereto each of the said members.

4. A non-slipping traction device, adapted to be mounted upon a vehicle wheel, comprising a plurality of similar members spaced circumferentially about the tire of said wheel and transverse to said tire, each of said members having an inwardly positioned bar extension, means connecting the inner ends of neighboring bar extensions, said means being journaled at two separate points upon each of said inner ends, and a ring positioned near said tire and having pivoted thereto each of said members, substantially as set forth.

5. A non-slipping traction device, adapted to be mounted upon the tire of a vehicle wheel, comprising a plurality of members spaced circumferentially upon and transverse to the tractive surface of said tire, each member having a lever portion extending toward the hub of said wheel, the normal longitudinal direction of said lever portion being inclined to a radius of said wheel passing through the central point of contact of the member, of which said lever portion is a part, and the said tire, said lever portions being linked together for their coaction in

manner to produce a gripping of said tractive surface by said device, when one of said lever portions is tilted by the retarding action of its member with the ground.

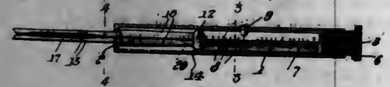
1,213,132. PIPE-COUPLING. GEORGE A. PETERSON, Oakland, Cal. Filed Mar. 11, 1912. Serial No. 682,890. (Cl. 137—28.)



1. In combination with pipes having abutting ends, a pipe coupling divided into two parts longitudinally with oppositely threaded sockets in its opposite ends and having an annular groove between said sockets, alined ears on each of said parts and screw-threaded means engaging said ears adapted to draw the parts together, said parts being rotatable to draw said pipe ends together.

2. A clamp coupling adapted to join and seal two abutting non-rotatable pipes having oppositely threaded ends, comprising a coupling divided into two parts longitudinally and having an annular recess between the ends, said parts having oppositely threaded sockets in the ends thereof adapted to turn upon said abutting pipe ends and draw them together when said coupling is in place, lugs on said parts and bolts extending through said lugs adapted to draw the parts together.

1,213,133. SAFETY-RAZOR-BLADE HOLDER. JAMES C. POISTER, Topeka, Kans. Filed Apr. 29, 1916. Serial No. 94,386. (Cl. 30—25.)



1. In a safety razor blade holder, a tubular handle having a closure at one end provided with a slot, in combination with a pair of blade gripping jaws extending through said slot, and having enlarged inner portions arranged in the tubular handle and provided with a tapered shoulder to bear against the inner side of said closure, a follower pin in the handle, having a pointed end engaging the inner ends of the jaws and a screw in the outer end of the handle to move said follower pin and cause the latter to spread the inner ends of the jaws and thereby cause the outer portions of the jaws to grip a blade between them.

2. In a safety razor blade holder, a tubular handle, a pair of blade gripping jaws, a follower pin to operate the jaws, said follower pin being polygonal in cross section, and fitted for longitudinal movement in the tubular handle, a screw to operate said pin, and a guide pin for the follower pin, said guide pin projecting into the bore of the handle and having a notch to engage one edge of the follower pin.

3. In a device of the class described a tubular handle having a closure at one end provided with crossed slots of unequal length and intersecting at the center, a pair of gripping jaws extending through one of said slots and having enlarged inner portions arranged in the handle and provided with a tapered shoulder to bear against the inner side of said closure, a follower pin mounted for longitudinal movement and having a pointed end engaged between the inner ends of the enlarged inner portions of the jaws, said pin being removable from the tubular handle to permit the jaws to be arranged in either of said slots, and means to operate said pin.

4. In a device of the class described, a handle having a portion provided with a slot, a pair of jaws extending through and arranged in the ends of the said slot, said jaws having a tapered shoulder on the inner side of said portion and being provided at their inner ends with camming grooves, a follower pin mounted for longitudinal movement and having a pointed end engaged in said camming grooves, and means to operate said pin.

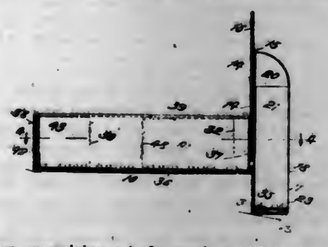
1,213,134. ADJUSTABLE GAGE. MEL FELLOWS, Chicago, Ill. Filed Feb. 17, 1915. Serial No. 8,793. (Cl. 33—143.)



1. A gage having a main frame, suitable insulating or other covering for the frame, two rotating turrets having a plurality of anvils of varying lengths, a hub for each turret provided with notches, means for engaging with the notches to automatically lock the turrets in exact operative position and means for disengaging the locking means to permit rotation of the turret, substantially as shown and described.

2. A gage having a main frame, suitable insulating or other covering for the frame, two rotating turrets having a plurality of anvils of varying lengths and means for locking and holding the anvils in exact operative position.

1,213,135. PAPER BOX. SAMUEL KISLOVITZ, New York, N. Y., assignor to Charles A. Blades, Arlington, N. J. Filed Mar. 18, 1916. Serial No. 85,000. (Cl. 229—16.)



1. A box comprising a body portion, and a cover therefor hinged to the rear end of said body portion, said cover being formed of transverse sections connected by a hinge-line, and the forward section being longer than the rear section and capable of being folded thereon and therewith turned into a substantially vertical position supporting the body of the box in an inclined display position, and the hinge connecting the said rear cover-section with the rear end of said body permitting said section to be turned upwardly to a vertical position and being adapted to arrest said section in such position.

2. A box comprising a body portion, and a cover therefor hinged at the rear end of said body portion, said cover being formed of transverse sections connected by an intercepted hinge-line, and the forward section being longer than the body of the rear section and capable of being folded thereon and therewith turned into a substantially vertical position supporting the body of the box in an inclined display position, the rear section of the cover between the sections of said intercepted hinge-line having a forwardly projecting portion cut from the forward section of the cover and affording a prominent advertising surface when the cover sections are in folded position supporting the body of the box.

3. A box comprising a body portion, and a cover therefor hinged to the rear end of said body portion, said cover being formed of transverse sections connected by a hinge-line, and the forward section being longer than the body of the rear section and capable of being folded thereon and therewith turned into a substantially vertical position supporting the body of the box in an inclined display position, and said cover being also formed with means for locking it when the box is to be given its display position, to the body portion of the box.

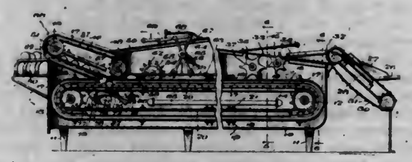
4. A box comprising a body portion, and a cover therefor hinged to the rear end of said body portion, said cover being formed of transverse unequal sections connected by a hinge-line, and the forward section being longer than the rear section and capable of being folded thereon and therewith turned into a substantially vertical position supporting the body of the box in an inclined display position, and said forward section of the cover having side and front end flanges to pass upon the adjacent portions of the body of the box, while the rear section of said cover has no edge flanges and thus is permitted, when the box is in display position, to present a plain surface in line with the rear end of the body of the box.

5. A box comprising a body portion, and a cover therefor hinged to the rear end of said body portion, said cover being formed of transverse unequal sections connected by a hinge-line, and the forward section being longer than the body of the rear section and capable of being folded thereon and therewith turned into a substantially vertical position supporting the body of the box in an inclined display position, and said forward section being formed integrally with a hinged lip adapted to engage said body portion and lock said cover thereto when said cover is in its folded prop-position.

[Claims 6 to 13 not printed in the Gazette.]

REISSUES.

14,248. AUTOMATIC COOKING MECHANISM. JOHN S. BAKER, Los Angeles, Cal., assignor to Baker-Shippee Manufacturing Co., Los Angeles, Cal., a Corporation of California. Filed Oct. 19, 1916. Serial No. 126,546. Original No. 1,181,057, dated Apr. 25, 1916, Serial No. 778,927, filed July 14, 1913. (Cl. 126—272.)



1. In a can cooking apparatus the combination of a substantially closed cooking chamber through which the cans are moved, means for moving a plurality of series of cans through said chamber, and means for independently varying the length of travel of the cans in the respective series in said chamber.

2. In apparatus for treating packaged goods, the combination of a cooking chamber, a plurality of package-ways therein, means for simultaneously moving the packages along the ways, and means for varying the length of travel of the packages in any package-way.

3. In apparatus for treating packaged goods, etc., the combination of a cooking chamber, means for simultaneously moving a plurality of series of cans through said chamber, and means for varying at will the length of travel of the cans in any series in said chamber.

4. In a can cooking apparatus the combination of a substantially closed cooking chamber, a plurality of can ways therein, means for simultaneously moving cans along the ways, and means for independently varying at will the length of travel of the cans in each way.

5. In apparatus for treating packaged goods, etc., the combination of a cooking chamber, means for moving a plurality of series of packages through said chamber, means for varying at will the length of travel of the packages in each series so that the packages in the several series may be caused to travel for the same or different distances in the chamber.

6. In can cooking the combination of a substantially closed cooking chamber, means for guiding and moving a plurality of parallel series of cans through said chamber, and adjustable means for independently delivering the cans in each series so that the cans in the several series may be caused to travel for the same or different distances in the chamber.

7. In an apparatus for treating packaged goods and the like, the combination of a cooking chamber, a plurality of ways in said chamber, means for moving packages along said ways, means for feeding packages to said ways, and independent means for discharging packages from each way, said discharge means being adjustable so as to vary the length of travel of the cans in said chamber.

8. In a can cooking apparatus the combination of a substantially closed cooking chamber, a plurality of parallel can ways in said chamber, means for moving cans along such ways, means for feeding cans to each pathway, and means for discharging cans from each pathway, said discharge means being adjustable so as to vary the length of travel of the cans in each way within the chamber, substantially as described.

9. In a can cooking apparatus the combination of a substantially closed cooking chamber, a plurality of parallel can ways in said chamber, means for simultaneously moving cans along such ways, means for feeding cans to each way, independent means for discharging cans from each way, said discharge means being independently adjustable so as to vary the length of travel of the cans in each way, substantially as described.

10. An automatic cooker, comprising a casing, a guide-way mounted therein, a propeller for moving canned goods along said guide-way, and means for automatically discharging the cooked goods therefrom at any one of a plurality of points in accordance with the time required for cooking the materials, with a plurality of means adjacent the discharge for conducting the cooked goods away from the cooker and devices for directing the cooked goods to the desired conducting means.

11. An automatic cooker for canned goods, comprising a casing having spirally arranged guiding and supporting tracks mounted therein, a conveyer having transverse slats extending across said guides and tracks for advancing the goods thereon, means for introducing goods upon said guide ways, and means for delivering the goods therefrom at any one of a plurality of points, with a plurality of means adjacent the discharge for conducting the cooked goods away from the cooker and devices for directing the cooked goods to the desired conducting means.

12. An automatic cooker for canned goods comprising a casing having a spiral guiding track therein, a conveyer made up of chains having cross connecting propeller slats, adapted to engage the canned goods upon said guiding track, means for delivering the canned goods therefrom at any one of a plurality of points, and means for heating the contents of the casing of the machine, with a plurality of means adjacent the discharge for conducting the cooked goods away from the cooker and devices for directing the cooked goods to the desired conducting means.

13. An automatic cooker, comprising a casing having an entrance opening at one end and a discharge opening at the other end, a can way therein, means for introducing canned goods to be cooked into the entrance opening, a conveyer mounted therein for forwarding the canned goods along said way, and adjustable means for discharging the goods at different points along the can way, whereby some goods may be allowed to remain in the cooker longer than other goods for accomplishing the cooking of the same to a proper degree, with a plurality of means exterior to the casing adjacent the discharge

for conducting the cans away from the cooker and devices for directing the cans to the desired conducting means.

14. In apparatus for treating packaged goods the combination of a cooking chamber, a package-way therein, means for moving packages along said way, and means for discharging packages from the way at different points to vary the length of travel of the packages in said chamber, with a plurality of means exterior to the chamber adjacent the discharge for conducting away the packages discharged from the chamber and devices for directing the packages to the desired conducting means.

15. In an apparatus for treating packaged goods and the like, the combination of a cooking chamber, a way in said chamber, means for moving packages along said way, means for feeding packages to said way, and means for discharging packages from said way, said discharge means being adjustable so as to vary the length of travel of the cans in said chamber, with a plurality of means exterior to the chamber adjacent the discharge for conducting away the packages discharged from the chamber and devices for directing the packages to the desired conducting means.

16. In an apparatus for treating packaged goods, the combination of a cooking chamber through which the packages are moved, a package carrier within the chamber, and means for varying at will the length of travel of the packages relative to the length of the carrier and within the chamber, for the purpose specified, with a plurality of means exterior to the chamber adjacent the discharge for conducting away the packages discharged from the chamber and devices for directing the packages to the desired conducting means.

17. An automatic cooker comprising a casing, a package-way therein, propelling means for moving the goods on the way, and means for switching packages at different points in the way so as to lengthen or shorten the time required for cooking the material contained in the packages, with a plurality of means exterior to the chamber adjacent the discharge for conducting away the packages discharged from the chamber and devices for directing the packages to the desired conducting means.

18. An automatic cooker comprising a casing adapted to hold a fluid cooking agent, an inclined guide way for directing canned goods into said casing, the casing having an opening in the top thereof for receiving the same, coöperating socketed feed wheels adapted to introduce the cans into the mechanism one at a time, transverse bars mounted in the said casing, spiral guiding bars formed of T irons mounted upon said transverse bars, and adapted to guide canned goods within the casing, the said angle bars in the lower part of the machine also operating as supporting bars, inner longitudinal bars carried by the said transverse bars and supporting the canned goods part of the way, the angle bars being interrupted for a portion of their length near the discharge end of the machine, upwardly inclined bars leading from said interrupted portions of the angle bars to the discharge end of the machine, a conveyer for carrying the canned goods up the same to a discharge opening in the end of the machine, pivoted levers mounted below said openings, means for raising the said levers for lifting the cans so that they may pass out of the spiral canways of the machine, and adjustable means for operating said lifting levers.

19. An automatic cooker, comprising a casing adapted to contain a fluid, a heating coil arranged within said casing for heating said water, spiral guiding and supporting rails surrounding said heating coil, a propeller also surrounding said heating coil and operating in conjunction with said guiding and supporting means for advancing canned goods to the machine, the said spiral guide rails having openings in their length near the discharge end of the machine, a transverse shaft mounted below the same, levers journaled thereon, some of said levers having lifting arms, spurs mounted adjacent to said levers and the said lifting arms, shafts carrying the same, operating handles outside the casing for turning said shafts, the spurs being set in different angular positions with respect to said shafts whereby some of the lifting levers may be raised while others are lowered, the raised levers being operable for directing the cooked materials out of the cooker, slides for closing the openings in said spiral guide rails where the canned goods are not being delivered, and levers for operating said slides.

20. In a cooker, the combination of a heating box having a can-inlet, a can track within the box in communicative relation with the can-inlet, said track having also a plurality of can-outlets to deliver the cans therethrough; and adjustable slides for separately controlling the outlets, each slide when projected to close an outlet directing the cans past such outlet.

21. In a cooker, the combination of a heating box having a can-inlet and discharge, a can-track within the box in communicative relation with the can-inlet and discharge, said track having a plurality of can-outlets, tto deliver the cans therefrom; and means for separately controlling said outlets, each means including a slide adapted when projected to close an outlet to direct the cans past such outlet.

22. In a cooker, the combination of a casing having a can-way therein, a can-inlet to the way, and a plurality of can-outlets from the way arranged at successively increasing distances from the inlet; means for advancing the cans in the way from the inlet to the plural outlets; means separately controlling said outlets for discharging the cans through any predetermined outlet; and separate means for conducting away the cans delivered from separate outlets.

23. In a cooker, the combination of a heating box having can-inlet and discharge openings; a can-track within the box in communicative relation with the can-inlet and having a plurality of can-outlets in communication with the discharge; means for advancing the cans upon the can-track from the inlet to the plurality of outlets; means separately controlling said outlets to effect the discharge of the cans from any predetermined outlet; and separate controllable means for conducting away the cans delivered from separate outlets.

24. In a cooker, the combination of a heating box having a can-inlet and discharge, and a can-way therein having a plurality of can-outlets arranged at successive points along the can-path; means for advancing the cans along the way; means for separately controlling the discharge of the cans from any predetermined outlet; a plurality of conducting means each in communicative relation with all the outlets; and means for directing the cans from any predetermined outlet into any of the conducting means.

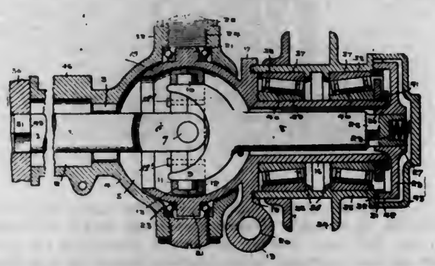
25. In a cooker, the combination of a heating box having a can-inlet and discharge, and a can-way therein having a plurality of can-outlets arranged at successive points along the way; means for advancing the cans along the way, means for separately controlling the discharge of the cans from any predetermined outlet; a plurality of receiving tracks each in communicative relation with all the outlets; and means associated with said tracks to direct the cans from any predetermined outlet into any of the tracks.

26. In a cooker, the combination of a heating box having a can-inlet and discharge, a can-way therein having a plurality of can-outlets arranged at successive points along the can-way; means for advancing the cans along the way; means for separately controlling the discharge of the cans from any predetermined outlet; a plurality of receiving tracks each in communicative relation with all the outlets; and means associated with said tracks to direct the cans from any predetermined outlet into any of the tracks.

27. An automatic cooker with spiral can ways for canned goods, comprising a can advancing conveyer, a casing carrying the same, said conveyer having driving shafts and transversely extending bars, means outside the casing for driving said conveyer, spiral guide tracks extending along the conveyer and arranged at an angle thereto so as to continually advance the goods from one side of the casing toward the other, said track having a plurality of outlets, means adjacent each outlet for directing the goods from the conveyer at any outlet, and guides for directing the goods from said outlet.

28. An automatic cooker, comprising a casing having an entrance opening at one end and a discharge opening at the other end, the said discharge opening extending the full width of the casing, means for introducing cans into the entrance opening, a conveyer mounted therein, a spiral can way for guiding the cans as they are propelled by said conveyer, said can way having a plurality of separate outlets; and means located at each outlet in the canway for directing the cans at will from the canway at such outlet.

14,249. STEERING MECHANISM. WILLIAM AUGUST BESSERDICH, Clintonville, Wis., assignor of one-half to Bernhard A. Mosling, Clintonville, Wis. Filed Jan. 12, 1916. Serial No. 71,695. Original No. 1,152,874, dated Sept. 7, 1915, Serial No. 702,225, filed June 7, 1912. Renewed Mar. 2, 1915, Serial No. 11,579. (Cl. 21—90.)



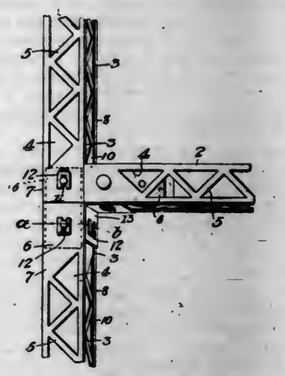
1. The combination with a universal joint having shafts, of a spherical housing therefor comprising an outer casing and an inner casing operatively positioned within the outer casing and having an intervening space therebetween, tubular extensions on said casings to receive said shafts, bosses upon said outer casing having internal threads formed therein, trunnions upon said inner casing disposed within said bosses, and adjusting screws mounted within the threaded portions of the bosses of said outer casing and having their inner ends operatively connected with the trunnions within said bosses, whereby to adjustably maintain the inner casing in spaced relation within the outer casing.

2. The combination with a universal joint having shafts, of a spherical housing therefor comprising an outer casing and an inner casing operatively positioned within the outer casing and having an intervening space therebetween, tubular extensions on said casings to receive said shafts, bosses upon said outer casing having internal threads formed therein, trunnions upon said inner casing disposed within said bosses, bearings within said bosses for said trunnions, and adjusting screws mounted within the threaded portions of the bosses of said outer casing and having their inner ends engaging the bearings within said bosses, whereby to adjustably maintain the inner casing in spaced relation within the outer casing.

3. The combination with a universal joint having shafts, of a spherical housing therefor comprising an outer casing and an inner casing operatively positioned within the outer casing and having an intervening space therebetween, tubular extensions on said casings to receive said shafts, bosses upon said outer casing having internal threads and annular recesses formed therein, trunnions upon said inner casing disposed within the recesses of said bosses, ball bearing rings seated in said recesses, ball bearing rings surrounding said trunnions, anti-friction balls interposed between said rings, and adjusting screws mounted within the threaded portions of the bosses of said outer casing and having their inner ends engaging the rings within the recesses of said bosses, whereby to adjustably maintain the inner casing in spaced relation within the outer casing.

4. The combination with a universal joint having shafts, of a spherical housing therefor, said housing comprising an outer casing and an inner casing operatively positioned within the outer casing and having an intervening space therebetween, tubular extensions on said casings to receive said shafts, oppositely disposed apertured bosses upon said outer casing having internally threaded portions and annular recesses formed therein at the inner ends of said threaded portions, oppositely disposed trunnions upon said inner casing disposed within the recesses of said bosses in spaced relation thereto, rings seated in said recesses and provided with raceways in their inner edges, rings surrounding said trunnions of less diameter than the rings in said recesses and provided with raceways in their outer edges, anti-friction balls interposed between said rings and operating within the respective raceways, adjusting screws mounted within the threaded portions of the bosses of said outer casing and having their inner ends engaging the rings within the recesses of said bosses whereby to adjustably maintain the inner casing in proper spaced relation within the outer casing, and lock nuts threaded upon the outer end portions of said adjusting screws for maintaining the same in their respective adjusted positions.

14,250. TOY CONSTRUCTION-BLOCKS. ALFRED C. GILBERT, New Haven, Conn., assignor to The A. C. Gilbert Company, New Haven, Conn., a Corporation of Connecticut. Filed Jan. 29, 1914. Serial No. 815,323. Original No. 1,066,809, dated July 8, 1913, Serial No. 743,073, filed Jan. 20, 1913. (Cl. 189—34.)



1. Toy construction blocks comprising strips each having inwardly turned flanges at the sides, said strips provided at opposite ends with perforations, combined with U-shaped coupling-pieces having perforations adapted to aline with the perforations in the strips, and bolts adapted to extend through the strips and coupling-pieces, whereby four strips may be connected with a coupling-piece.

2. In a separable toy box girder, the combination of four miniature structural elements of identical cross-section arranged in box-like form, each of said elements constituted by a sheet metal strip, the end portions of which are provided with perforations, each strip provided at the side edges with means to engage the side edges of adjacent strips located laterally thereof so as to present relative displacement, said strips being movable laterally into the assembled position, and laterally separable from each other, two of said strips set in between the other two to space them apart, means for preventing the collapse of the structure by inward movement of the inner spacing strips, and detachable fastening means for holding the strips in assembled position, passing through the perforations in the other strips at the respective ends of the box-like structure; substantially as described.

3. Toy construction blocks comprising strips of sheet metal formed with inwardly turned edges and provided

at opposite ends with perforations, U-shaped coupling-pieces around which four strips may be placed, means for interlocking said strips with the coupling-piece, and an angle iron adapted to connect two or more blocks.

4. In a toy construction block, the combination of a pair of sheet metal channeled strips arranged with their channeled faces opposing each other, a second pair of similar channeled strips having their channeled faces opposing each other, said second strips set in between said first strips at right angles thereto and spacing apart said first strips, the strips of said second pair being held against outward displacement by engagement with the flanges of the first strips, means for holding said second strips from displacement in an inward direction, and means for detachably securing all of said strips together in the relation specified to form a separable toy girder: substantially as described.

5. In a toy construction block, the combination of a plurality of strips, each having inwardly turned side flanges, two of said strips facing each other to form an outer pair, and two of said strips set in between the first strips at right angles thereto so as to space the same apart, means for spacing apart the inner strips and preventing their displacement in an inward direction relative to the block, and means for securing all of said strips detachably together to form a separable toy girder; substantially as described.

6. A structural element for building up toy box girders, columns and the like comprising a miniature structural member having an elongated body part of flexible sheet metal with opposed angularly disposed edge flanges, said body part having a plurality of cut-out sections forming transversely disposed truss parts, said cut-out portion terminating a considerable distance from the ends of the body part to form extended bearing portions, and said extended bearing portions having a substantially centrally disposed aperture for the reception of means for uniting the member to another member or members whereby different composite and angularly arranged structures can be readily formed.

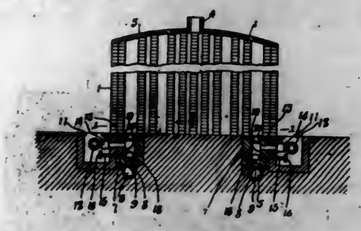
7. In a miniature toy form of box girder, the combination of a plurality of flexible structural elements of identical form in box like arrangement, each of said elements composed of a light flexible sheet metal strip having a plurality of openings formed therein throughout a considerable portion of its length to present transversely extending truss parts, like angularly disposed flanges at the edges of the strips for overlapping the body portions of the adjacent strips to hold the parts of the box like formation against relative displacement at the corners thereof and detachable fastening means for holding the respective strips separably together whereby a miniature girder can be readily formed.

8. In a toy girder construction, the combination of four like elongated flexible metal strips each strip having opposed inwardly extending side flanges and the said strips being arranged edge to edge to form a substantially rectangular girder with the flanges of one strip arranged to engage a side part of the adjacent strip and a single means at the end of the girder for securing all of the strips in their arranged positions.

9. In a toy girder construction, the combination of a section comprising four elongated yieldable sheet metal strips having cut-out parts intermediate the ends thereof to form transversely extending truss members, the said strips being arranged edge to edge to form a rectangular structure, and having side flanges each of which overlaps a part of the body portion of an adjacent strip, a second section of similar construction, the sections being arranged so that one constitutes a prolongation of the other, and common means for detachably securing the strips of one section in place and for securing the two sections together.

10. In a toy box girder, the combination of a girder section composed of four miniature structural elements each consisting of a sheet metal strip cut away throughout a considerable portion of its length so as to present integral transverse truss or connecting members, such strips arranged in box like form, flanges at the corners of the structure arranged to overlap the body portions of the respective adjacent strips to prevent relative displacement of the parts, a second box girder section similar to the first and having one end adjacent one end of the first section, and fastening means for holding the strips of each section in assembled position at the adjacent ends of the section and at the same time interconnecting the two sections, said fastening means being detachable for separating the sections from each other and simultaneously releasing the individual strips of at least one section from each other.

14,251. BRICK-KILN. JOHN T. UNDERWOOD, Dayton, Ohio, assignor to Underwood Engineering Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 3, 1916. Serial No. 88,748. Original No. 1,105,724, dated Aug. 4, 1914, Serial No. 808,059, filed Dec. 22, 1913. (Cl. 25—148.)



1. In a kiln having imperforate outer walls, the combination of a series of burner openings within the kiln at the floor level thereof, means for conducting air and gas to said openings under pressure where the gas may be burned, said kiln having means to permit the escape of the burnt gases, said exit means being so constricted as to maintain the pressure within the kiln in excess of that of the air on the exterior of the kiln.

2. In a kiln having imperforate outer walls, the combination of a gas conduit below the floor of the kiln, a series of burner chambers connecting to the conduit and having openings into the kiln, a valve in each chamber to control the flow of gas under pressure into the chamber, an air main, a pipe extending from said main into each burner chamber and adapted to discharge air underpressure into the chamber together with the gas, so that during the burning of the materials in the kiln, the pressure within the kiln shall be above that of the atmosphere.

3. The process of burning bricks which consists in arranging them in proper form in a kiln having imperforate outer walls, with air spaces so as to permit the passage of burnt gases between them, and with an outer coating to prevent the escape of the burnt gases except at proper flues, and then forcing air and gas into the bottom of the kiln under pressure where they may be burned, the pressure within the kiln being in excess of the air pressure on the exterior of the kiln and serving to prevent the entrance of atmospheric air through any openings in the outer coating.

4. In a kiln, means for introducing air and gas under pressure into the kiln and maintaining said air and gas, or a combination of them, under pressure in the kiln, in excess of that of the air on the exterior of the kiln, said kiln having means for permitting the escape of burnt gases.

5. The herein described process of treating ceramic material consisting in maintaining fuel in the interior of a kiln in an incandescent state under pressure in excess of that of the air on the exterior of the kiln.

6. The herein described process of treating ceramic material consisting in maintaining a fuel composed of air and gas in the interior of a kiln in an incandescent state under pressure in excess of that of the air on the exterior of the kiln.

7. The herein described process of treating ceramic material consisting in introducing air and gas under pressure into the interior of a kiln, and maintaining the resulting fuel in an incandescent state under pressure within the kiln in excess of that of the air on the exterior of the kiln.

8. The herein described process of treating ceramic material consisting of stacking such material within a kiln in a manner to leave suitable interstices for the entrance of heat; in introducing air and gas under pressure into such kiln; in maintaining the resulting fuel in an incandescent state under pressure within the kiln in excess of that of the air on the exterior of the kiln to cause the heat resulting from the combustion to treat the material with substantial uniformity throughout all parts of the kiln.

9. The herein described process of treating ceramic material consisting of stacking such material within a kiln in a manner to leave suitable interstices for the entrance of heat; in introducing air and gas under pressure into such kiln; in maintaining the resulting fuel in an incandescent state under pressure within the kiln in excess of that of the air on the exterior of the kiln in varying the proportions of the air and gas to vary the oxidation, and thereby control the resulting color of the material.

10. The herein described process of treating ceramic material consisting of stacking the material within a closed kiln in a manner to leave interstices for the entrance of heat; in introducing into such kiln air and gas under pressure; and in maintaining the resulting fuel in an incandescent state under pressure within the kiln in excess of that of the air on the exterior of the kiln.

DESIGNS.

50,154. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1916. Serial No. 129,234. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,155. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1916. Serial No. 129,235. Term of patent 7 years.



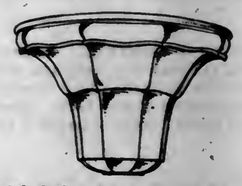
The ornamental design for a lighting fixture, as shown.

50,156. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1916. Serial No. 129,236. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,157. CANOPY FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1916. Serial No. 129,237. Term of patent 7 years.



The ornamental design for a canopy for lighting fixtures, as shown.

50,158. SOCKET-COVER FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1916. Serial No. 129,238. Term of patent 7 years.



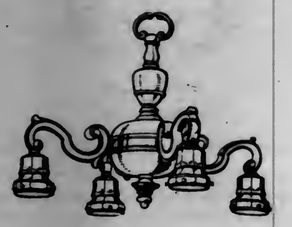
The ornamental design for a socket cover for lighting fixtures, as shown.

50,159. ARM FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1916. Serial No. 129,239. Term of patent 7 years.



The ornamental design for an arm for lighting fixtures, as shown.

50,160. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,582. Term of patent 7 years.



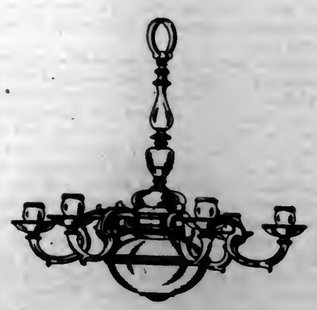
The ornamental design for a lighting fixture, as shown.

50,161. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,583. Term of patent 7 years.



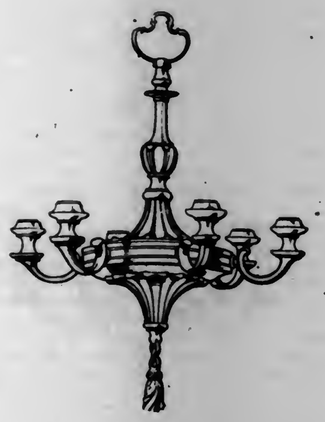
The ornamental design for a lighting fixture, as shown.

50,162. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,584. Term of patent 7 years.



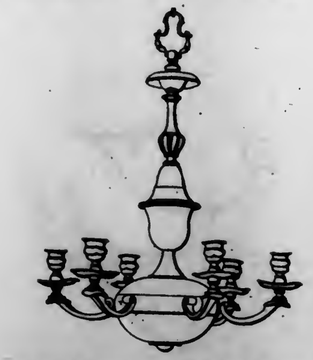
The ornamental design for a lighting fixture, as shown.

50,163. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,585. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,164. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,586. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,165. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,587. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,166. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,588. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,167. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,589. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,168. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,590. Term of patent 7 years.



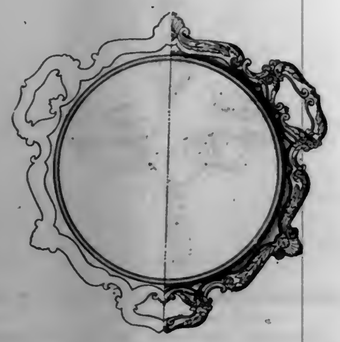
The ornamental design for a lighting fixture, as shown.

50,169. CENTER PLATE FOR A CHANDELIER-BODY. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Dec. 2, 1916. Serial No. 134,773. Term of patent 7 years.



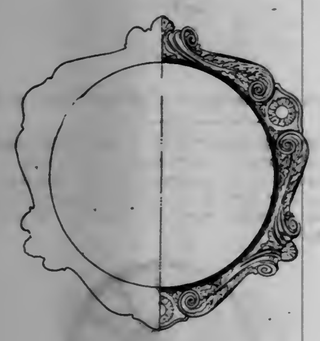
The ornamental design for a center plate for a chandelier body, as shown.

50,170. RIM FOR A CHANDELIER-BODY. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Dec. 2, 1916. Serial No. 134,774. Term of patent 7 years.



The ornamental design for a rim for a chandelier body, as shown.

50,171. RIM FOR A CHANDELIER-BODY. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Dec. 2, 1916. Serial No. 134,775. Term of patent 7 years.



The ornamental design for a rim for a chandelier body, as shown.

50,172. ARM FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 27, 1916. Serial No. 133,794. Term of patent 7 years.



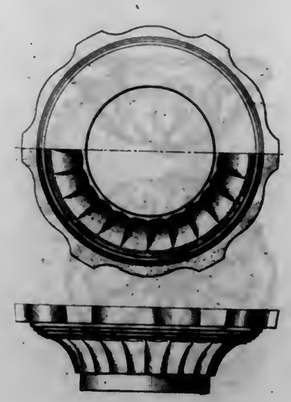
The ornamental design for an arm for lighting fixtures, as shown.

50,173. CANDLESTICK. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 27, 1916. Serial No. 133,796. Term of patent 7 years.



The ornamental design for a candlestick, as shown.

50,174. CHANDELIER CEILING-RING. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 27, 1916. Serial No. 133,797. Term of patent 7 years.



The ornamental design for a chandelier ceiling ring, as shown.

50,175. CANOPY FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Dec. 2, 1916. Serial No. 134,771. Term of patent 7 years.



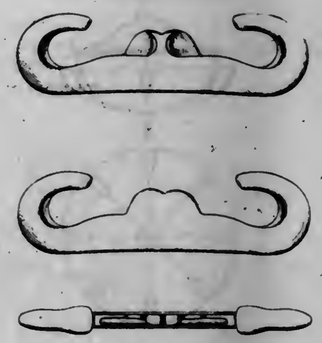
The ornamental design for a canopy for lighting fixtures, as shown.

50,176. SOCKET-COVER FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Dec. 2, 1916. Serial No. 134,772. Term of patent 7 years.



The ornamental design for a socket cover for lighting fixtures, as shown.

50,177. HOOK. JOHN B. BAXTER, Watervliet, N. Y., assignor to Covert Manufacturing Company, Watervliet, N. Y., a Corporation of New York. Filed Oct. 29, 1915. Serial No. 58,713. Term of patent 14 years.



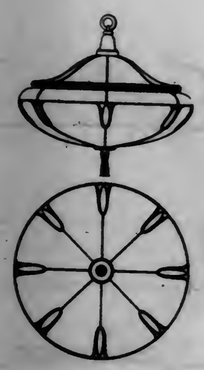
The ornamental design for a hook, as shown.

50,178. ELECTRIC-LIGHTING FIXTURE. ROBERT WINFIELD BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., Brooklyn, N. Y., a Corporation of New York. Filed Nov. 1, 1916. Serial No. 129,018. Term of patent 3½ years.



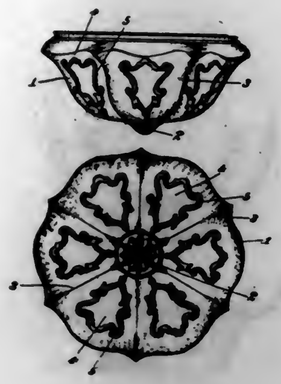
The ornamental design for an electric lighting fixture, as shown.

50,179. ELECTRIC-LIGHTING FIXTURE. ROBERT WINFIELD BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., Brooklyn, N. Y., a Corporation of New York. Filed Nov. 1, 1916. Serial No. 129,019. Term of patent 3½ years.



The ornamental design for an electric lighting fixture, as shown.

50,180. SHADE-BOWL. JOHN BEISWANGER, Steubenville, Ohio., assignor to Gill Brothers Company, Steubenville, Ohio, a Corporation of West Virginia. Filed Nov. 14, 1916. Serial No. 131,340. Term of patent 7 years.



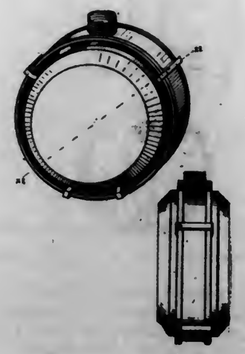
The ornamental design for a shade bowl substantially as shown and described.

50,181. RING OR SIMILAR ARTICLE. MARTIN L. BOWDEN and MARTIN L. BOWDEN, Jr., Brooklyn, N. Y. Filed Aug. 4, 1916. Serial No. 113,196. Term of patent 7 years.



The ornamental design for a ring or similar article, as shown and described.

50,182. CANTEEN. WILLIS J. BOYLE, Sr., Los Angeles, Cal. Filed July 15, 1916. Serial No. 109,577. Term of patent 14 years.



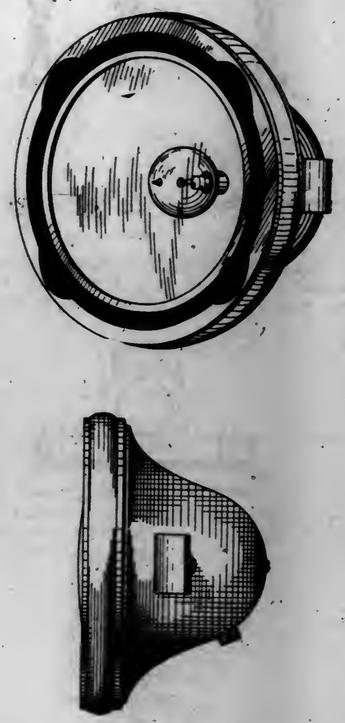
The ornamental design for a canteen, as shown.

50,183. LIGHT-SCREEN. FRANCIS M. BRINCKERHOFF, Englewood, N. J. Filed June 14, 1915. Serial No. 34,094. Term of patent 7 years.



The ornamental design for a light-screen, as shown.

50,184. AUTOMOBILE-LAMP. JOHN W. BROWN, Jr., Columbus, Ohio, and LESTER MCCULLOUGH, Chicago, Ill., assignors to The John W. Brown Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Nov. 13, 1916. Serial No. 131,155. Term of patent 7 years.



The ornamental design for an automobile lamp, as shown.

50,185. IMAGE OR DOLL. JAMES P. DUNNE, Chicago, Ill. Filed May 22, 1916. Serial No. 99,240. Term of patent 3½ years.



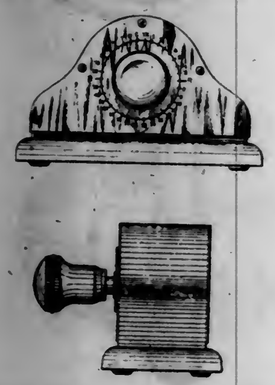
The ornamental design for an image or doll, as shown.

50,186. SHAMPOOING APPARATUS. WILLIAM FAERBER, Chicago, Ill. Filed Oct. 12, 1916. Serial No. 125,340. Term of patent 7 years.



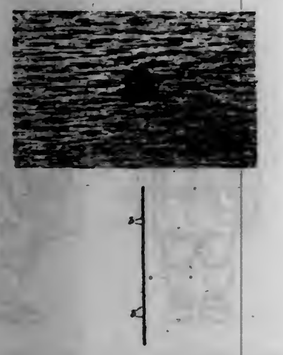
The ornamental design for a shampooing apparatus, as shown.

50,187. FRAME FOR CHECK-PROTECTING MACHINES. BENJAMIN O. FANSLOW, Rye, N. Y. Filed Sept. 13, 1916. Serial No. 119,982. Term of patent 14 years.



The ornamental design for a frame for check protecting machines, as shown.

50,188. WALL-PAPER. GUSTAVE M. FAUSER, New York, N. Y., assignor to The Hobbs Wall Paper Company, a Corporation of New Jersey. Filed July 27, 1916. Serial No. 111,724. Term of patent 3½ years.



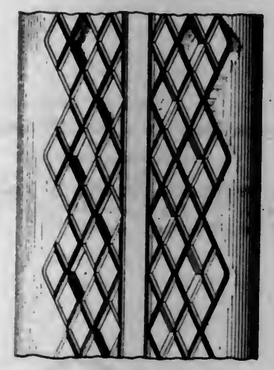
The ornamental design for wall paper as shown and described.

50,189. PORTABLE ELECTRIC LAMP. THOMAS D. FINIZIO, Kitchawan, N. Y. Filed Nov. 14, 1916. Serial No. 131,345. Term of patent 3½ years.



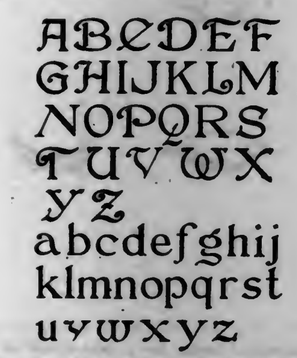
The ornamental design for a portable electric lamp, as shown.

50,190. TIRE-TREAD. ELUE O. FRITCH, Watertown, Mass., assignor to Hood Rubber Company, Watertown, Mass., a Corporation of Massachusetts. Filed Sept. 30, 1916. Serial No. 123,185. Term of patent 14 years.



The ornamental design for a tire tread as shown.

50,191. FONT OF PRINTING-TYPE. WILLIAM T. GEISSINGER, Pittsburgh, Pa. Filed Aug. 14, 1916. Serial No. 114,935. Term of patent 14 years.



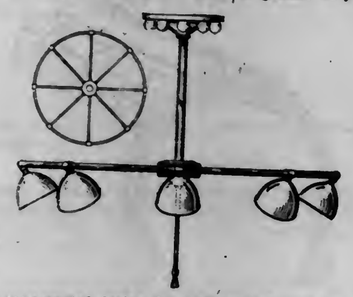
The design for a font of printing type as shown.

50,192. LAMP-GLOBE. JOSEPH W. GOSLING, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 4, 1916. Serial No. 129,620. Term of patent 14 years.



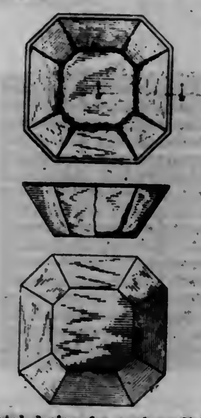
The ornamental design for a lamp globe as shown and described.

50,193. LIGHTING-FIXTURE. OSCAR D. GUTH, St. Louis, Mo., assignor to Luminous Unit Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 1, 1916. Serial No. 129,017. Term of patent 14 years.



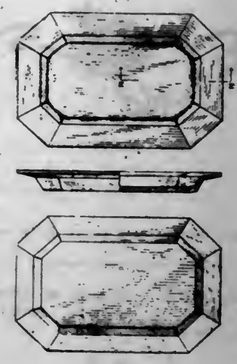
The ornamental design for a lighting fixture, as shown.

50,194. GLASS DISH OR SIMILAR ARTICLE. REUBEN HALEY, Beaver, Pa., assignor to United States Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 4, 1916. Serial No. 129,616. Term of patent 7 years.



The ornamental design for a glass dish or similar article, substantially as shown.

50,195. GLASS PLATE OR SIMILAR ARTICLE. REUBEN HALEY, Beaver, Pa., assignor to United States Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 4, 1916. Serial No. 129,617. Term of patent 7 years.



The ornamental design for a glass plate or similar article, substantially as shown.

50,196. PAPER DOILY. CHARLES W. HAMILTON, Milwaukee, Wis. Filed Mar. 13, 1916. Serial No. 83,981. Term of patent 14 years.



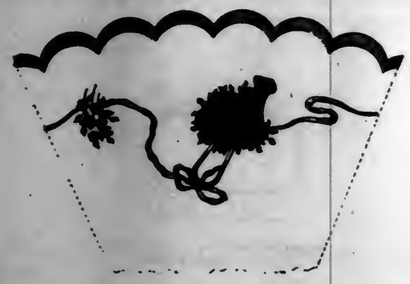
The ornamental design for a paper doily, as shown.

50,197. PAPER DOILY. CHARLES W. HAMILTON, Milwaukee, Wis. Filed Mar. 13, 1916. Serial No. 83,982. Term of patent 14 years.



The ornamental design for a paper doily, as shown.

50,198. PAPER DOILY. CHARLES W. HAMILTON, Milwaukee, Wis. Filed Mar. 13, 1916. Serial No. 83,984. Term of patent 14 years.



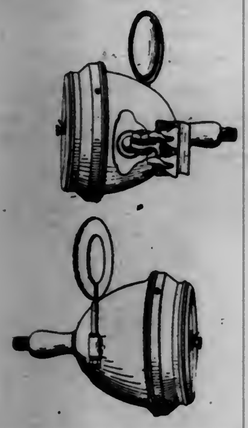
The ornamental design for a paper dolly, as shown.

50,199. PAPER DOILY. CHARLES W. HAMILTON, Milwaukee, Wis. Filed Mar. 13, 1916. Serial No. 83,985. Term of patent 14 years.



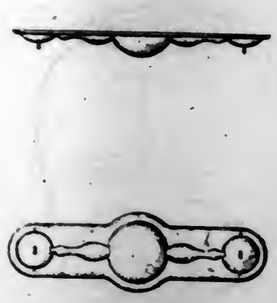
The ornamental design for a paper dolly, as shown.

50,200. VEHICLE-LAMP WITH MIRRORSCOPE. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed Sept. 27, 1916. Serial No. 122,572. Term of patent 14 years.



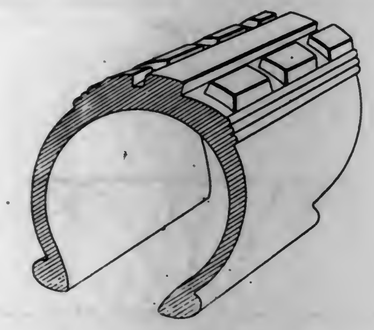
The ornamental design for a vehicle lamp, with mirrorscope as shown.

50,201. CEILING-PLATE. FRANK C. HOBBS, New York, N. Y., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Nov. 20, 1916. Serial No. 132,484. Term of patent 14 years.



The ornamental design for a ceiling plate as shown.

50,202. TIRE. ERNEST HOPKINSON, New York, N. Y. Filed Dec. 24, 1915. Serial No. 68,589. Term of patent 14 years.



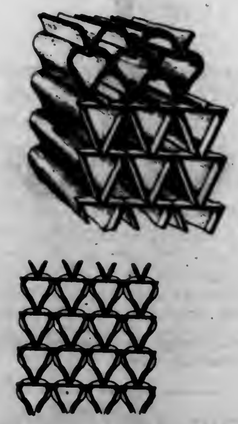
The ornamental design for a tire as shown.

50,203. PORCH-SHADE. AZEL C. HOUGH, Janesville, Wis. Filed Nov. 7, 1913. Serial No. 799,829. Term of patent 14 years.



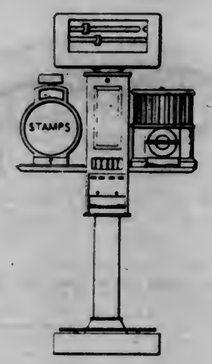
The ornamental design for a porch shade, as shown.

50,204. RADIATOR-CORE. JOSEPH A. KUBNZ, Toledo, Ohio. Filed Mar. 8, 1916. Serial No. 82,941. Term of patent 7 years.



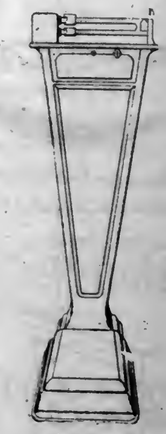
The ornamental design for a radiator core substantially as shown.

50,205. CASING FOR COMBINED VENDING AND WEIGHING MACHINES. CHARLES E. MCADOW, Jersey City, N. J. Filed Oct. 2, 1916. Serial No. 128,454. Term of patent 7 years.



The ornamental design for a casing for combined vending and weighing machines, as shown.

50,206. CASING FOR WEIGHING-SCALES. HERBERT S. MILLS, Oak Park, Ill. Filed Nov. 7, 1916. Serial No. 130,079. Term of patent 7 years.



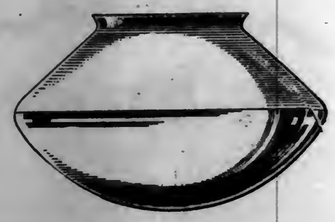
The ornamental design for a casing for weighing-scales, as shown.

50,207. BRACKET-BACK FOR LIGHTING-FIXTURES. PAUL MOHRMANN, Chicago, Ill., assignor to Friedley Voshardt Co., Chicago, Ill., a Corporation of Illinois. Filed Nov. 11, 1916. Serial No. 130,910. Term of patent 7 years.



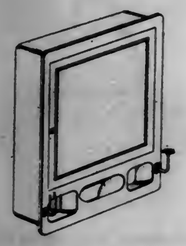
The ornamental design for a bracket back for lighting fixtures, as shown.

50,208. GLOBE. EUGENE H. PECK, New York, N. Y., assignor to The Phoenix Glass Company, a Corporation of West Virginia. Filed Nov. 1, 1916. Serial No. 129,026. Term of patent 7 years.



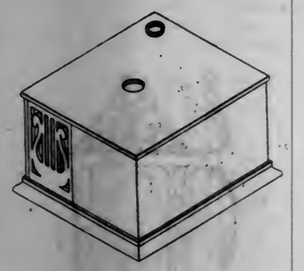
The ornamental design for a globe, as shown.

50,209. WALL-CABINET. WILLIAM L. PHELAN, New York, N. Y. Filed Nov. 21, 1916. Serial No. 132,704. Term of patent 14 years.



The ornamental design for a wall cabinet, as shown.

50,210. PHONOGRAPH-CABINET. HORACE SHEELE, Philadelphia, Pa., assignor to Domestic Talking Machine Corporation, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 1, 1916. Serial No. 88,399. Term of patent 7 years.



The ornamental design for a phonograph cabinet substantially as shown.

50,211. CANOPY, HANGER, AND PAN FOR A LIGHTING-FIXTURE. ROBERT G. WAGNER and ERNEST J. SCHWEITZER, Los Angeles, Cal. Filed Nov. 8, 1916. Serial No. 130,280. Term of patent 7 years.



The ornamental design for a canopy, hanger, and pan for a lighting fixture as shown.

50,212. INDICATING HAND OR POINTER. FRANK B. WOODMAN, Boston, Mass., assignor to American Steam Gauge & Valve Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed June 30, 1913. Serial No. 776,701. Term of patent 14 years.



The ornamenal design for an indicating hand or pointer as shown and described.

50,213. FRAME FOR HAND-BAGS. MARTIN ZINN, New York, N. Y. Filed Oct. 19, 1916. Serial No. 126,618. Term of patent 3½ years.



The ornamental design for a frame for hand bags, as shown.

TRADE-MARKS

PUBLISHED JANUARY 16, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 84,454. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GAS ENGINE EFFICIENCY COMPANY, St. Louis, Mo., assignor to Efficiency Oil Corporation, St. Louis, Mo., a Corporation of Delaware. Filed Feb. 11, 1915.



No claim being made to the words "25% More Mileage," nor the word "Gas," apart from the mark shown in the drawing.

Particular description of goods.—A Preparation for Improving Gasolene and other Hydrocarbon Fuels Used in Hydrocarbon-Motors.

Claims use since Sept. 1, 1914.

Ser. No. 93,992. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OTTO A. GLESSNER, Chicago, Ill. Filed Mar. 30, 1916.



Particular description of goods.—A Germicide for the Treatment of Diseases of the Mucous Membrane and Skin.

Claims use since Feb. 1, 1916.

Ser. No. 95,041. (CLASS 37. PAPER AND STATIONERY.) KEITH PAPER COMPANY, Turners Falls, Mass. Filed May 10, 1916.

CAMBRAI

Particular description of goods.—Writing and Printing Papers.

Claims use since on or about Jan. 1, 1900.

Ser. No. 95,288. (CLASS 37. PAPER AND STATIONERY.) AMERICAN PAPETERIE COMPANY, Albany, N. Y. Filed May 20, 1916.

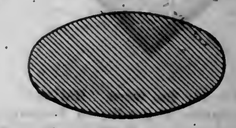


No claim being made to the word "Linen."

Particular description of goods.—Writing-Paper.

Claims use since the 10th day of March, 1915.

Ser. No. 95,627. (CLASS 39. CLOTHING.) LAMBERTVILLE RUBBER COMPANY, Lambertville, N. J. Filed June 5, 1916.



Said trade-mark consists of a green oval-shaped device.

Particular description of goods.—Rubber Boots and Rubber Shoes.

Claims use since May 27, 1916.

Ser. No. 97,433. (CLASS 39. CLOTHING.) EMANUEL J. LEVIN, New York, N. Y. Filed Aug. 18, 1916.



Particular description of goods.—Rompers or Play-Suits for Children, Made of Denims, Galateas, All Kinds of Cotton Goods, White Goods, Muslins, and Linens.

Claims use since May 1, 1916.

Ser. No. 97,613. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES SAMUEL BERRY, Little Rock, Ark. Filed Aug. 25, 1916.

BERRY'S
Minted Epsom Salts
PALATABLE AND COOLING
DISTRIBUTED BY
THE MINTED EPSOM SALTS CO.
LITTLE ROCK, ARK.

It is to be further understood that no claim is made to the reading-matter appearing on the drawing.
Particular description of goods.—Minted Epsom Salts.
Claims use since Aug. 10, 1915.

Ser. No. 97,653. (CLASS 38. PRINTS AND PUBLICATIONS.) CHARLES R. VAN NAME, New York, N. Y. Filed Aug. 26, 1916.

ROSSVAN THOROUGHBRED RATINGS
E P Co

No claim is made for the word "Ratings."
Particular description of goods.—A Periodical Devoted to Horse-Racing Information, Published Twice a Month.
Claims use for the words "Rossvan Thoroughbred Ratings" since Jan. 1, 1900, and the triangle with "E P Co" since Jan. 1, 1916.

Ser. No. 98,069. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) VIRGINIA BEVERAGE CORPORATION, Salem, Va. Filed Sept. 18, 1916.

Scupade

Particular description of goods.—A Beverage That is Carbonated and Sold as a Soft Drink, and Syrup for the Manufacture of the Same.
Claims use since Apr. 1, 1916.

Ser. No. 98,645. (CLASS 39. CLOTHING.) BROWNSTEIN-LOUIS COMPANY, Los Angeles, Cal. Filed Oct. 14, 1916.

Super-Six

Particular description of goods.—Dress, Negligée, Work, and Under Shirts.
Claims use since Mar. 1, 1916.

Ser. No. 98,762. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALLE-RHUME REMEDY CO., Rochester, N. Y. Filed Oct. 19, 1916.

AlleRhume

Particular description of goods.—An Internal Remedy for Rheumatism, Liver, Kidney, Stomach, and Bowel Complaints.
Claims use since about Sept. 1, 1916.

Ser. No. 98,847. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ST. LOUIS SOLUBLE TEA & COFFEE COMPANY, St. Louis, Mo. Filed Oct. 23, 1916.

TEA-KO-ALE

No claim is made for the word "Ale" apart from the mark shown.
Particular description of goods.—A Non-Alcoholic Beverage in the Nature of a Soft Drink.
Claims use since Sept. 1, 1916.

Ser. No. 98,906. (CLASS 48. MALT EXTRACTS AND LIQUORS.) MÜNCH BREWERY BOTTLING DEPT. INC., Brooklyn, N. Y. Filed Oct. 26, 1916.

GOLD MEDAL EXTRACT
MALT HOPS

No claim of exclusive right being made to the use of the words "Gold Medal Extract—a Compound of Malt and Hops" except as shown in the accompanying drawing. The background of the words "Malt and Hops" is a red ribbon.
Particular description of goods.—A Beverage Made from a Compound of Malt and Hops and Cereals.
Claims use since Mar. 1, 1916.

Ser. No. 99,023. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ISIDORE HOROVITZ, Savannah, Ga. Filed Nov. 1, 1916.

Phos-Fer-Tone

Particular description of goods.—A Tonic in Tablet Form.
Claims use since May 10, 1916.

Ser. No. 99,072. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VIROCULIN CO., Waterbury, Conn. Filed Nov. 3, 1916.

VIROCULIN

Particular description of goods.—Medicinal Preparation for Treatment of the Eyes.
Claims use since about August, 1914.

Ser. No. 99,079. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MADAM'S BUFORD & OWENS, Oklahoma, Okla. Filed Nov. 4, 1916.

B & O

Particular description of goods.—Hair-Oil.
Claims use since Aug. 1, 1915.

Ser. No. 99,148. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ESSEN REMEDY COMPANY, Newark, N. J. Filed Nov. 7, 1916.

STOM-JACK

Particular description of goods.—A Medicine for Indigestion.
Claims use since Jan. 1, 1914.

Ser. No. 99,236. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BOSTON ELECTRO CLEANER CO., Portland, Me., and Boston, Mass. Filed Nov. 11, 1916.

BECCO

Particular description of goods.—Silver-Polish.
Claims use since June 15, 1916.

Ser. No. 99,258. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE ROSENBERG-NEUGASS CO., INC., New York, N. Y. Filed Nov. 11, 1916.

RONECO

Particular description of goods.—Japanese Crapes and Chinese Silks in the Piece.
Claims use since Aug. 1, 1916.

Ser. No. 99,283. (CLASS 48. MALT EXTRACTS AND LIQUORS.) RUFF'S BREWING CO., Quincy, Ill. Filed Nov. 13, 1916.

TUYU

Particular description of goods.—A Malt Beverage.
Claims use since Aug. 10, 1916.

Ser. No. 99,285. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STAR ECZEMA CO., Corsicana, Tex. Filed Nov. 13, 1916.

BLUE STAR

The representation of the star is colored blue.
Particular description of goods.—Eczema Remedy.
Claims use since Oct. 31, 1916.

Ser. No. 99,296. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORM. MEISTER LUCIUS & BRÜNING, Höchst-on-the-Main, Germany. Filed Nov. 14, 1916.

KRYSOLGAN

Particular description of goods.—A Chemical Compound Used for the Treatment of Tuberculous Diseases.
Claims use since Sept. 25, 1916.

Ser. No. 99,325. (CLASS 39. CLOTHING.) W. T. GRANT COMPANY, New York, N. Y. Filed Nov. 16, 1916. Comprising the word "Wearite."

WEARITE

Particular description of goods.—Hosiery.
Claims use since June 1, 1913.

Ser. No. 99,366. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me. Filed Nov. 17, 1916.

HILENDALE

Particular description of goods.—Woolen Goods in the Piece.
Claims use since Sept. 28, 1916.

Ser. No. 99,505. (CLASS 39. CLOTHING.) KABO CORSET CO., Chicago, Ill. Filed Nov. 23, 1916.

KABO

Particular description of goods.—Brassières and Children's Underwaists.
Claims use since January, 1912.

Ser. No. 99,546. (CLASS 37. PAPER AND STATIONERY.) GALA TEA CO. INC., Brooklyn, N. Y. Filed Nov. 25, 1916.

GALA

Particular description of goods.—Writing-Paper.
Claims use since Nov. 1, 1916.

Ser. No. 99,611. (CLASS 37. PAPER AND STATIONERY.) EDWARD HUGETZ, New York, N. Y. Filed Nov. 28, 1916.

Victor U.S.F. P.Co.

Particular description of goods.—Fountain and Stylographic Pens.
Claims use since about May 1, 1916.

Ser. No. 99,628. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) H. R. MALLINSON & CO., New York, N. Y. Filed Nov. 29, 1916.

Shadow Lawn Green

No claim is made to the word "Green" apart from the mark shown in the drawing.
Particular description of goods.—Woven and Knitted Silk and Crape Piece Goods.
Claims use since Nov. 28, 1916.

Ser. No. 99,720. (CLASS 37. PAPER AND STATIONERY.) THOMS BROS. CO., Chicago, Ill. Filed Dec. 4, 1916.

ECONOMY WRAPPING ALWAYS SATISFACTORY STRENGTH

All the words appearing on the accompanying drawing, except "Economy," are disclaimed.
Particular description of goods.—Wrapping-Paper.
Claims use since Oct. 1, 1915.

Ser. No. 99,740. (CLASS 39. CLOTHING.) THE BEACON FALLS RUBBER SHOE COMPANY, Beacon Falls, Conn. Filed Dec. 6, 1916.

BEACON FALLS TOP NOTCH

The exclusive use of the words "Beacon Falls" apart from the mark shown in the drawing is disclaimed.
Particular description of goods.—Rubber Boots, Rubber Shoes, Rubber Overshoes, Rubber Sandals, Arctics, Insoles, Spats, and Overgaiters.
Claims use since Dec. 9, 1910.

Ser. No. 99,773. (CLASS 37. PAPER AND STATIONERY.) FREDERICK A. RIDLEY, New York, N. Y. Filed Dec. 7, 1916.

FOUNDATION BOND

No claim is made to the word "Bond" apart from the mark shown on the drawing.
Particular description of goods.—Bond and Writing Papers and Envelops.
Claims use since on or about Nov. 28, 1916.

Ser. No. 99,870. (CLASS 37. PAPER AND STATIONERY.) BEEKMAN PAPER AND CARD COMPANY, New York, N. Y. Filed Dec. 12, 1916.

PEACE

Particular description of goods.—Writing and Printing Papers.
Claims use since the 11th day of December, 1916.

Ser. No. 99,971. (CLASS 39. CLOTHING.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Dec. 15, 1916.



Particular description of goods.—Leather Shoes.
Claims use since Jan. 1, 1912.

Ser. No. 99,995. (CLASS 37. PAPER AND STATIONERY.) TAYLOR-LOGAN CO. PAPERMAKERS, Holyoke, Mass. Filed Dec. 16, 1916.

MARKETPLACE

Particular description of goods.—Ledger, Record, and Bond Paper, Envelops, Book and Cover Paper, Vellum, Text, Wall, and Coated Papers.
Claims use since July 31, 1916.

TRADE-MARK REGISTRATIONS GRANTED

JANUARY 16, 1917.

114,916. LADIES', MISSES', AND CHILDREN'S KNIT UNDERWEAR. ACHUFF KNITTING MILL, INC., Philadelphia, Pa.
Filed October 6, 1916. Serial No. 98,455. PUBLISHED NOVEMBER 14, 1916.

114,917. CERTAIN NAMED TOILET PREPARATIONS. JOSEPH C. ALLEN, Plainfield, N. J.
Filed April 10, 1916. Serial No. 94,270. PUBLISHED NOVEMBER 7, 1916.

114,918. ASPHALT PAINT. AMERICAN ASPHALT PAINT CO., New York, N. Y.
Filed July 20, 1916. Serial No. 96,683. PUBLISHED NOVEMBER 14, 1916.

114,919. OYSTER-DISPLAY CASES. AMERICAN CAN CO., New York, N. Y.
Filed August 25, 1915. Serial No. 88,797. PUBLISHED NOVEMBER 7, 1916.

114,920. OAKUM FOR PACKING AND CALKING. AMERICAN MANUFACTURING COMPANY, Boston, Mass., and Brooklyn, N. Y.
Filed June 13, 1916. Serial No. 95,840. PUBLISHED NOVEMBER 7, 1916.

114,921. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed October 5, 1916. Serial No. 98,426. PUBLISHED NOVEMBER 14, 1916.

114,922. AUTOMOBILE-GASOLENE-TANK FILLING AND MEASURING DEVICES. APEX ELECTRIC MANUFACTURING COMPANY, Chicago, Ill.
Filed November 26, 1915. Serial No. 90,918. PUBLISHED NOVEMBER 14, 1916.

114,923. CRAPES AND SILKS IN THE PIECE. SAMUEL J. ARONSOHN INC., Paterson, N. J., and New York, N. Y.
Filed July 12, 1916. Serial No. 96,512. PUBLISHED NOVEMBER 14, 1916.

114,924. MEDICINAL PREPARATION FOR TREATMENT OF THE KIDNEYS AND LIVER. FERMIN L. BACA, Bexar county, Tex.
Filed August 23, 1916. Serial No. 97,573. PUBLISHED NOVEMBER 14, 1916.

114,925. POWER-DRIVEN TRACTORS FOR FARM, INDUSTRIAL, AND COMMERCIAL USES. WILLIAM STIMSON BARNES, Chicago, Ill.
Filed August 20, 1915. Serial No. 88,705. PUBLISHED NOVEMBER 14, 1916.

114,926. POWER-DRIVEN TRACTORS FOR FARM, INDUSTRIAL, AND COMMERCIAL USES. WILLIAM STIMSON BARNES, Chicago, Ill.
Filed August 20, 1915. Serial No. 88,706. PUBLISHED NOVEMBER 14, 1916.

114,927. SKELETON DRAWINGS FOR USE AS AIDS OR HELPS IN CHILD INSTRUCTION. BARRINGTON GRAPHOPRINT COMPANY, INCORPORATED, New York, N. Y.
Filed September 8, 1916. Serial No. 97,852. PUBLISHED NOVEMBER 14, 1916.

114,928. SKELETON DRAWINGS FOR USE AS AIDS OR HELPS IN CHILD INSTRUCTION. BARRINGTON GRAPHOPRINT COMPANY INCORPORATED, New York, N. Y.
Filed September 8, 1916. Serial No. 97,853. PUBLISHED NOVEMBER 14, 1916.

114,929. LIQUID COURT-PLASTER. BAUER & BLACK, Chicago, Ill.
Filed October 13, 1916. Serial No. 98,620. PUBLISHED NOVEMBER 14, 1916.

114,930. GAMES. KATE A. BRADLEY, Atlantic City, N. J.
Filed October 12, 1916. Serial No. 98,585. PUBLISHED NOVEMBER 14, 1916.

114,931. FELT WASHERS. T. R. BRAWLEY, Brooklyn, N. Y.
Filed January 4, 1916. Serial No. 91,905. PUBLISHED NOVEMBER 14, 1916.

114,932. FERTILIZERS. THE BERG COMPANY, Philadelphia, Pa.
Filed August 18, 1916. Serial No. 97,431. PUBLISHED NOVEMBER 7, 1916.

114,933. POLISH FOR WOOD SURFACES. SCHUYLER C. BOROM, Minneapolis, Minn.
Filed August 26, 1916. Serial No. 97,634. PUBLISHED NOVEMBER 14, 1916.

114,934. MEDICINAL PREPARATION USED AS A TONIC AND NERVE-SEDATIVE. STEPHEN BRITTON, New York, N. Y.
Filed September 15, 1916. Serial No. 98,005. PUBLISHED NOVEMBER 7, 1916.

114,935. MONTHLY PERIODICALS. THE BRUCE PUBLISHING COMPANY, Milwaukee, Wis.
Filed February 6, 1915. Serial No. 84,333. PUBLISHED APRIL 25, 1916.

114,936. LEATHER, AND PARTICULARLY JAPANNED OR "PATENT" LEATHER. W. D. BYRON & SONS INC., Williamsport, Md.
Filed September 15, 1916. Serial No. 97,998. PUBLISHED NOVEMBER 14, 1916.

114,937. HAIR-TONIC. CRUSELLAS Y CA., Habana, Cuba.
Filed October 16, 1916. Serial No. 98,682. PUBLISHED NOVEMBER 14, 1916.

114,938. GASEOUS FUEL COMPOUND SUITABLE FOR CUTTING AND WELDING PURPOSES. CARBO HYDROGEN CO. OF AMERICA, Pittsburgh, Pa.
Filed November 27, 1915. Serial No. 90,969. PUBLISHED NOVEMBER 14, 1916.

114,939. PREPARATIONS FOR THE TREATMENT OF CONSTIPATION, RHEUMATISM, AND GALL-STONES AND OTHER CERTAIN NAMED DISEASES. CHARLES S. CARLISLE, Oklahoma, Okla.
Filed June 17, 1916. Serial No. 95,931. PUBLISHED NOVEMBER 14, 1916.

114,940. SHEETINGS, SHEETS, ANR PILLOW-CASES. CARLETON DRY GOODS CO., St. Louis, Mo.
Filed August 25, 1916. Serial No. 97,617. PUBLISHED NOVEMBER 14, 1916.

114,941. GOWNS, OUTER SUITS, WRAPS, AND GARMENTS MADE OF FUR. DAVID G. CARMICHAEL, New York, N. Y.
Filed August 31, 1916. Serial No. 97,727. PUBLISHED NOVEMBER 14, 1916.

114,942. WATERPROOF AUTOMOBILE AND CARRIAGE FABRICS. F. S. CARR COMPANY, Boston, Mass.
Filed April 10, 1915. Serial No. 85,838. PUBLISHED NOVEMBER 14, 1916.

114,943. HAIR-TONICS. H. A. CASSEBEER, New York, N. Y.
Filed October 14, 1916. Serial No. 98,649. PUBLISHED NOVEMBER 14, 1916.

114,944. BAGS. CHASE BAG CO., St. Louis, Mo.
Filed September 11, 1916. Serial No. 97,894. PUBLISHED NOVEMBER 7, 1916.

114,945. YARN. CITY MANUFACTURING CORPORATION, New Bedford, Mass.
Filed September 12, 1916. Serial No. 97,950. PUBLISHED NOVEMBER 14, 1916.

114,946. GOLF ACCESSORIES. J. P. COCHRANE, Edinburgh, Scotland.
Filed May 10, 1916. Serial No. 95,042½. PUBLISHED NOVEMBER 14, 1916.

114,947. CERTAIN NAMED CLOTHING. COHEN GOLDMAN & CO. INC., New York, N. Y.
Filed October 11, 1916. Serial No. 98,557. PUBLISHED NOVEMBER 14, 1916.

114,948. DENTAL POWDER FOR ASSISTING IN HOLDING DENTAL PLATES IN THE MOUTH. COREGA CHEMICAL COMPANY, Augusta, Me., and Cleveland, Ohio.
Filed August 25, 1914. Serial No. 80,781. PUBLISHED NOVEMBER 7, 1916.

114,949. OIL-CLOTH. THE COTT-A-LAP COMPANY, Somerville, N. J.
Filed May 4, 1916. Serial No. 94,892. PUBLISHED NOVEMBER 14, 1916.

114,950. BOTTLE-OPENERS. THE CROWN CORK AND SEAL CO., OF BALTIMORE CITY, Baltimore, Md.
Filed September 26, 1916. Serial No. 98,238. PUBLISHED NOVEMBER 14, 1916.

114,951. DISH-WASHING MACHINES. THE DIETZ MANUFACTURING COMPANY, Cincinnati, Ohio.
Filed October 27, 1916. Serial No. 98,182. PUBLISHED NOVEMBER 14, 1916.

114,952. RAZORS AND SHEARS. FRED DOLLE, Chicago, Ill.
Filed September 23, 1916. Serial No. 98,180. PUBLISHED NOVEMBER 14, 1916.

114,953. NEWSPAPER. EDWIN T. EARL, Los Angeles, Cal.
Filed August 28, 1916. Serial No. 97,660. PUBLISHED NOVEMBER 14, 1916.

114,954. WRITING-PAPER, PRINTING-PAPER, ENVELOPS, TABLETS, WRITING-CARDS, AND CARDBOARD. EATON, CRANE & PIKE COMPANY, Pittsfield, Mass.
Filed September 15, 1916. Serial No. 98,006. PUBLISHED NOVEMBER 7, 1916.

114,955. CIGARS. OTTO EISENLOHR & BROS. INCORPORATED, Philadelphia, Pa.
Filed September 11, 1916. Serial No. 97,964. PUBLISHED NOVEMBER 7, 1916.

114,956. BLOUSES, WAISTS, ROMPERS, AND PLAY-SUITS, AND DRESS, NEGLIGÉE, WORK, AND UNDER SHIRTS. ELDER MANUFACTURING COMPANY, St. Louis, Mo.
Filed August 25, 1916. Serial No. 97,620. PUBLISHED NOVEMBER 14, 1916.

114,957. ENAMEL-COATED NATURAL STONE. THE EUCLID STONE & BRICK CO., Cleveland, Ohio.
Filed September 29, 1916. Serial No. 98,322. PUBLISHED NOVEMBER 7, 1916.

114,958. ENGINE STOP MECHANISM. FALLS MOTORS CORPORATION, Sheboygan Falls, Wis.
Filed October 16, 1916. Serial No. 98,690. PUBLISHED NOVEMBER 14, 1916.

114,959. [WITHDRAWN.]

114,960. BUILDING-BOARDS MADE OF FIBER IMPREGNATED WITH A CHEMICAL SOLUTION, RENDERING THEM FIRE-RESISTING. FIREPROOF FIBRE BUILDING BOARDS LIMITED, Bloomsbury, London, England.
Filed September 19, 1916. Serial No. 98,084. PUBLISHED NOVEMBER 14, 1916.

114,961. TRUNKS. FREDERICK & NELSON, Seattle, Wash.
Filed September 26, 1916. Serial No. 98,241. PUBLISHED NOVEMBER 7, 1916.

114,962. HAIR-NETS. THEO. H. GARY CO., New York, N. Y.
Filed August 1, 1916. Serial No. 97,015. PUBLISHED NOVEMBER 14, 1916.

114,963. RUBBER TIRES OR TIRE-CASINGS OF RUBBER WITH SUITABLE STRENGTHENING MATERIAL AND INNER TUBES. THE GENERAL TIRE AND RUBBER COMPANY, Akron, Ohio.
Filed April 27, 1916. Serial No. 94,741. PUBLISHED NOVEMBER 7, 1916.

114,964. HAND-RAKES. ANNA K. GILSON, Quechee, Vt.
Filed October 16, 1916. Serial No. 98,692. PUBLISHED NOVEMBER 14, 1916.

114,965. REMEDY FOR INTESTINAL STASIS AND CONSTIPATION. FRANCIS H. GLAZEBROOK, Morristown, N. J.
Filed August 29, 1916. Serial No. 97,683. PUBLISHED NOVEMBER 7, 1916.

114,966. CERTAIN NAMED CHEMICALS AND PIGMENTS FOR GENERAL USE. CHARLES F. GLEDHILL, New York, N. Y.
Filed February 19, 1916. Serial No. 92,975. PUBLISHED NOVEMBER 7, 1916.

114,967. REMEDY FOR CERTAIN NAMED DISEASES AND AFFECTIONS. S. B. GOFF & SONS CO., Camden, N. J.
Filed August 12, 1916. Serial No. 97,302. PUBLISHED NOVEMBER 7, 1916.

114,968. MEN'S, WOMEN'S, AND CHILDREN'S OUTER GARMENTS. GOODALL WORSTED CO., Sanford, Me., and New York, N. Y.
Filed May 19, 1916. Serial No. 95,267. PUBLISHED NOVEMBER 14, 1916.

114,969. ORGANIC PHOSPHORUS COMPOUNDS. THE GRAIN CHEMICAL CO., INC., New York, N. Y.
Filed October 12, 1916. Serial No. 98,593. PUBLISHED NOVEMBER 14, 1916.

114,970. PREPARATION OR DRESSING FOR THE HUMAN HAIR. CLARISSA J. HALLER, New York, N. Y.
Filed April 25, 1916. Serial No. 94,706. PUBLISHED NOVEMBER 7, 1916.

114,971. GLOVES—VIZ., MEN'S WALKING-GLOVES, DRESS-GLOVES, STREET-GLOVES, DRIVING-GLOVES, AND AUTOMOBILE-GLOVES. O. C. HANSEN MFG. COMPANY, Milwaukee, Wis.
Filed October 16, 1914. Serial No. 81,940. PUBLISHED OCTOBER 31, 1916.

114,972. NURSING-BOTTLES. INFANTS SPECIALTY COMPANY INC., Buffalo, N. Y.
Filed September 11, 1916. Serial No. 97,907. PUBLISHED NOVEMBER 7, 1916.

114,973. ARTIFICIAL STONE WHICH POSSESSES THE PROPERTY OF ABSORBING SOUND. H. W. JOHNS-MANVILLE CO., New York, N. Y.
Filed August 29, 1916. Serial No. 97,686. PUBLISHED NOVEMBER 14, 1916.

114,974. COVERING MADE OF HAIR AND CANVAS AND PLACED OVER HOT-WATER BOILERS TO HOLD THE HEAT. H. W. JOHNS-MANVILLE CO., New York, N. Y.
Filed August 29, 1916. Serial No. 97,687. PUBLISHED NOVEMBER 14, 1916.

114,975. MEN'S TROUSERS AND BOYS' SUITS AND TROUSERS. KAPLAN BROS., New York, N. Y.
Filed September 22, 1916. Serial No. 98,167. PUBLISHED NOVEMBER 14, 1916.

114,976. GAS AND COMBINATION LIGHTING-FIXTURES AND PARTS FOR SUCH LIGHTING-FIXTURES. BENJAMIN F. KLEIN, Cleveland, Ohio.
Filed November 8, 1915. Serial No. 90,514. PUBLISHED NOVEMBER 7, 1916.

114,977. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,404. PUBLISHED NOVEMBER 14, 1916.

114,978. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,405. PUBLISHED NOVEMBER 14, 1916.

114,979. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,406. PUBLISHED NOVEMBER 14, 1916.

114,980. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,407. PUBLISHED NOVEMBER 14, 1916.

114,981. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,408. PUBLISHED NOVEMBER 14, 1916.

114,982. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,409. PUBLISHED NOVEMBER 14, 1916.

114,983. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,410. PUBLISHED NOVEMBER 14, 1916.

114,984. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,411. PUBLISHED NOVEMBER 14, 1916.

114,985. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,412. PUBLISHED NOVEMBER 14, 1916.

114,986. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,413. PUBLISHED NOVEMBER 14, 1916.

114,987. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed October 4, 1916. Serial No. 98,414. PUBLISHED NOVEMBER 14, 1916.

114,988. BITS. THE LEBANON MACHINE COMPANY, Lebanon, N. H.
Filed September 23, 1916. Serial No. 98,188. PUBLISHED NOVEMBER 14, 1916.

114,989. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed August 9, 1916. Serial No. 97,218. PUBLISHED NOVEMBER 7, 1916.

114,990. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed August 9, 1916. Serial No. 97,219. PUBLISHED NOVEMBER 7, 1916.

114,991. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed August 9, 1916. Serial No. 97,220. PUBLISHED NOVEMBER 7, 1916.

114,992. MEN'S DRESS AND NEGLIGÉE SHIRTS. CHARLES L. LEVI, Philadelphia, Pa.
Filed August 18, 1916. Serial No. 97,429. PUBLISHED NOVEMBER 14, 1916.

114,993. DANDRUFF REMEDY AND HAIR-RESTORER. SARAH LEVY, New York, N. Y.
Filed September 15, 1916. Serial No. 97,997. PUBLISHED NOVEMBER 7, 1916.

114,994. PICTURE-FRAME MOLDINGS, PICTURE-FRAMES, AND PARTS OF FRAMES. THE H. LIEBER COMPANY, Indianapolis, Ind.
Filed September 28, 1916. Serial No. 98,295. PUBLISHED NOVEMBER 14, 1916.

114,995. CORSETS. LILY OF FRANCE CORSET CO., New York, N. Y.
Filed October 9, 1916. Serial No. 98,521. PUBLISHED NOVEMBER 14, 1916.

114,996. BEDS, MATTRESSES, BED-SPRINGS. MORRIS LIPPS, New York, N. Y.
Filed September 30, 1915. Serial No. 89,548. PUBLISHED NOVEMBER 7, 1916.

114,997. PREPARATION TO BE APPLIED TO COAL TO RENDER THE COMBUSTION OF COAL MORE COMPLETE. LLOYDS OF AMERICA, Bradley Beach, N. J.
Filed September 12, 1916. Serial No. 97,953. PUBLISHED NOVEMBER 7, 1916.

114,998. SALVE FOR EXTERNAL TREATMENT OF CATARRH, SORE THROAT, TONSILLITIS, AND CROUP. JAMES S. MCCLANAHAN, Justin, Tex.
Filed April 18, 1916. Serial No. 94,504. PUBLISHED NOVEMBER 7, 1916.

114,999. SALVE FOR EXTERNAL USE. MACMILLAN CHEMICAL CO., Falls City, Nebr.
Filed September 7, 1916. Serial No. 97,842. PUBLISHED NOVEMBER 14, 1916.

115,000. HOSE MADE PARTLY OF RUBBER AND PARTLY OF COTTON. THE MANHATTAN RUBBER MFG. CO., New York, N. Y.
Filed July 25, 1916. Serial No. 96,832. PUBLISHED NOVEMBER 14, 1916.

115,001. PERFUMES AND TOILET WATERS. PARFUMERIE MARCEAU, INC., New York, N. Y.
Filed October 12, 1916. Serial No. 98,605. PUBLISHED NOVEMBER 14, 1916.

115,002. CERTAIN NAMED STEAM REGULATING DEVICES, PUMPS, ENGINES, AND THE LIKE. MASON REGULATOR COMPANY, Boston, Mass.
Filed July 25, 1916. Serial No. 96,820. PUBLISHED NOVEMBER 14, 1916.

115,003. MATERIALS FOR PRECIPITATING VALUABLE METALS FROM HYDROMETALLURGICAL SOLUTIONS CONTAINING THE SAME. MERRILL METALLURGICAL COMPANY, San Francisco, Cal.
Filed September 5, 1916. Serial No. 97,801. PUBLISHED NOVEMBER 14, 1916.

115,004. LAXATIVES. RUDOLPH MERTIN, Boston, Mass.
Filed September 12, 1916. Serial No. 97,956. PUBLISHED NOVEMBER 7, 1916.

115,005. SWORD-BLADES, MATCHETS, AND MATCHET-KNIVES. ROBT. MOLE & SONS, Birmingham, England.
Filed September 29, 1916. Serial No. 98,315. PUBLISHED NOVEMBER 14, 1916.

115,006. NERVE-TONIC. MUNYON'S HOMŒOPATHIC HOME REMEDY CO., Philadelphia, Pa.
Filed October 18, 1916. Serial No. 98,754. PUBLISHED NOVEMBER 14, 1916.

115,007. TEMPERATURE-GAGES. NATIONAL GAUGE & EQUIPMENT CO., La Crosse, Wis.
Filed June 26, 1916. Serial No. 96,156. PUBLISHED OCTOBER 3, 1916.

115,008. BOND AND LEDGER PAPER. NEENAH PAPER COMPANY, Neenah, Wis.
Filed September 11, 1916. Serial No. 97,924. PUBLISHED NOVEMBER 7, 1916.

115,009. RHEUMATISM AND NEURITIS MEDICINE. NEWBERRY-EDMONDSON CO., Grand Island, Nebr.
Filed October 10, 1916. Serial No. 98,542. PUBLISHED NOVEMBER 14, 1916.

115,010. NEWSPAPER-SECTION. NEWSPAPER FEATURE SERVICE, INC., New York, N. Y.
Filed July 26, 1916. Serial No. 96,877. PUBLISHED NOVEMBER 7, 1916.

115,011. WIRE. EUGENIO C. NOE & Co., Buenos Aires, Argentina.
Filed January 26, 1916. Serial No. 92,422. PUBLISHED NOVEMBER 14, 1916.

115,012. DANDRUFF-REMOVER. NUSBAUM & BRENNERMAN, Seattle, Wash.
Filed July 24, 1916. Serial No. 96,799. PUBLISHED NOVEMBER 14, 1916.

115,013. TWINES AND ROPES MADE FROM SHREDDED FIBERS OF PALMETTO OR PALM LEAVES. PALMETTO PRODUCTS COMPANY, INC., New York, N. Y., assignor to Palmetto Products Company, Inc., Jacksonville, Fla., a Corporation of Florida.
Filed June 7, 1916. Serial No. 95,683. PUBLISHED NOVEMBER 7, 1916.

115,014. TWINES AND ROPES MADE FORM SHREDDED PALMETTO OR PALM LEAVES. PALMETTO PRODUCTS COMPANY, INC., New York, N. Y., assignor to Palmetto Products Company, Inc., Jacksonville, Fla., a Corporation of Florida.
Filed June 7, 1916. Serial No. 95,684. PUBLISHED NOVEMBER 7, 1916.

115,015. HOT-WATER BOTTLES AND FOUNTAIN-SYRINGES. PENINSULAR CHEMICAL COMPANY, Detroit, Mich.
Filed September 13, 1916. Serial No. 97,978. PUBLISHED NOVEMBER 7, 1916.

115,016. STOMACH-TONIC. DELFO PERRUCCI, New York, N. Y.
Filed July 27, 1916. Serial No. 96,905. PUBLISHED NOVEMBER 7, 1916.

115,017. TOY CANNONS. PEG LOCK BLOCK COMPANY, INC., New York, N. Y.
Filed October 4, 1916. Serial No. 98,418. PUBLISHED NOVEMBER 14, 1916.

115,018. OLIVE-OIL EMULSION. THE POMPEIAN CO., Baltimore, Md.
Filed April 20, 1916. Serial No. 94,582. PUBLISHED NOVEMBER 7, 1916.

115,019. HAIR-TONIC, SHAMPOO PREPARATIONS, COLD-CREAM, LIQUID FACE-POWDER, AND LIP-ROUGE. ORVILLE L. PRATHER, Claremore, Okla.
Filed June 19, 1916. Serial No. 95,979. PUBLISHED NOVEMBER 7, 1916.

115,020. FABRIC ROLLS FOR LEATHER-PRESSING MACHINES. EMIL J. F. QUIRIN, Olean, N. Y.
Filed August 11, 1916. Serial No. 97,282. PUBLISHED NOVEMBER 14, 1916.

115,021. LUMINOUS MATERIALS CONTAINING RADIUM, FOR GENERAL USE. RADIUM LUMINOUS MATERIAL CORPORATION, New York, N. Y.
Filed September 19, 1916. Serial No. 98,096. PUBLISHED NOVEMBER 14, 1916.

115,022. ADHESIVE CEMENT. REGINA CEMENT COMPANY, Washington, D. C.
Filed September 26, 1916. Serial No. 98,247. PUBLISHED NOVEMBER 14, 1916.

115,023. WORK-SHIRTS. RELIANCE MANUFACTURING COMPANY, Chicago, Ill.
Filed October 9, 1916. Serial No. 98,526. PUBLISHED NOVEMBER 14, 1916.

115,024. PREPARATION FOR THE TREATMENT OF DROPSY. ROBERTS DROPSY CURE CO., St. Louis, Mo.
Filed October 31, 1914. Serial No. 82,307. PUBLISHED NOVEMBER 14, 1916.

115,025. MEDICINAL CHEMICAL FOR THE TREATMENT OF RHEUMATISM. RÖHM & HAAS, Philadelphia, Pa.
Filed May 25, 1916. Serial No. 95,426. PUBLISHED NOVEMBER 7, 1916.

115,026. COAL. ROMANN & BUSH PIG IRON & COKE CO., St. Louis, Mo.
Filed September 11, 1916. Serial No. 97,929. PUBLISHED NOVEMBER 7, 1916.

115,027. MEDICAL AND PHARMACEUTICAL PREPARATION FOR THE CURING OF CORNS. SAMUEL K. SALEEBY, Brooklyn, N. Y.
Filed October 3, 1916. Serial No. 98,393. PUBLISHED NOVEMBER 7, 1916.

115,028. TOILET-PAPER. SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y.
Filed June 10, 1916. Serial No. 95,804. PUBLISHED AUGUST 1, 1916.

115,029. CERTAIN NAMED CONSTRUCTION MATERIAL. SHRAUGER & JOHNSON, Atlantic, Iowa.
Filed July 7, 1916. Serial No. 96,416. PUBLISHED NOVEMBER 7, 1916.

115,030. COAL AND COKE. STONEGA COKE & COAL CO., Big Stone Gap and Wise and Lee counties, Va.
Filed July 27, 1916. Serial No. 96,909. PUBLISHED NOVEMBER 7, 1916.

115,031. MAGNETOS AND MAGNETO PARTS. SUMTER ELECTRICAL CO., Chicago, Ill.
Filed September 12, 1916. Serial No. 97,959. PUBLISHED NOVEMBER 14, 1916.

115,032. WATERPROOFED FABRIC. TATE ELECTROLYTIC WATERPROOFING COMPANY INCORPORATED, New York, N. Y.
Filed August 10, 1916. Serial No. 97,244. PUBLISHED NOVEMBER 7, 1916.

115,033. WATERPROOFED THREADS AND YARNS. TATE ELECTROLYTIC WATERPROOFING COMPANY INCORPORATED, New York, N. Y.
Filed August 10, 1916. Serial No. 97,245. PUBLISHED NOVEMBER 7, 1916.

115,034. PUNCHING-MACHINES AS OFFICE APPLIANCES FOR PERFORATING SHEETS. THE SAMUEL C. TATUM CO., Cincinnati, Ohio.
Filed September 26, 1916. Serial No. 98,251. PUBLISHED NOVEMBER 7, 1916.

115,035. SMOKING-TOBACCO. THE TEXAS TOBACCO CO., San Antonio, Tex.
Filed September 16, 1916. Serial No. 98,036. PUBLISHED NOVEMBER 7, 1916.

115,036. AUTOMOBILES. GEORGE L. THOMPSON, Brooklyn, N. Y.
Filed September 6, 1916. Serial No. 97,829. PUBLISHED NOVEMBER 14, 1916.

115,037. LIVER-TONIC. THE TRAVELER REMEDY CO., Hot Springs, Ark.
Filed September 27, 1915. Serial No. 89,497. PUBLISHED NOVEMBER 7, 1916.

115,038. MONTHLY MAGAZINE PUBLICATION. CLARENCE D. TUSKA, Hartford, Conn.
Filed September 5, 1916. Serial No. 97,812. PUBLISHED NOVEMBER 14, 1916.

115,039. CIGARS. UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y.
Filed August 21, 1916. Serial No. 97,484. PUBLISHED NOVEMBER 7, 1916.

115,040. CIGARS. UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y.
Filed August 21, 1916. Serial No. 97,488. PUBLISHED NOVEMBER 7, 1916.

115,041. CLOSURE-TOPS FOR BOTTLES, JARS, AND THE LIKE. UNITED STATES METAL CAP & SEAL COMPANY, New York, N. Y.
Filed September 30, 1915. Serial No. 89,556. PUBLISHED NOVEMBER 14, 1916.

115,042. FOOD-CONTAINERS. VACUUM CAN CO., Chicago, Ill.
Filed August 4, 1916. Serial No. 97,101. PUBLISHED NOVEMBER 7, 1916.

115,043. ILLUMINATING, HEATING, AND LUBRICATING OILS AND GREASES. VACUUM OIL COMPANY, Rochester, N. Y.
Filed March 24, 1916. Serial No. 93,861. PUBLISHED JUNE 6, 1916.

115,044. HOSIERY. WALLACH & MAYER, INC., New York, N. Y.
Filed October 5, 1916. Serial No. 98,453. PUBLISHED NOVEMBER 14, 1916.

115,045. RIBBONS. H. H. WEIL & SON, INC., Waverly and New York, N. Y.
Filed September 21, 1916. Serial No. 98,149. PUBLISHED NOVEMBER 14, 1916.

115,046. WOOLEN, COTTON, SILK, SATIN, VELVET, VELVETEEN, AND CORDUROY PIECE GOODS. WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo.
Filed September 6, 1916. Serial No. 97,830. PUBLISHED NOVEMBER 14, 1916.

115,047. EJECTORS AND AIR-PUMPS. C. H. WHEELER MANUFACTURING COMPANY, Philadelphia, Pa.
Filed October 11, 1916. Serial No. 98,583. PUBLISHED NOVEMBER 14, 1916.

TRADE-MARK REGISTRATIONS RENEWED.

14,011. WASHING POWDERS AND SOAPS. EPHRAIM STOCKTON WELLS, Jersey City, N. J.; Estate of E. S. Wells, owner.
Registered January 25, 1887. Renewed January 25, 1917.

TRADE-MARK REGISTRATIONS CANCELED.

113,580. HOSIERY. W. T. GRANT COMPANY, New York, N. Y.
Registered October 24, 1916. Canceled December 7, 1916.

LABELS

REGISTERED JANUARY 16, 1917.

19,830.—*Title:* "MULTIMOTOR CYLINDER OIL." (For Lubricating-Oil.) EARLE C. ANTHONY, INC., Los Angeles, Cal. Filed November 13, 1916.

19,831.—*Title:* "SUGAR DOODLE." (For Candy.) WILLIAM J. BADER, Philadelphia, Pa. Filed December 15, 1916.

19,832.—*Title:* "CASSON'S CREAM LINIMENT." (For Liniment.) WILMER CASSON, Salisbury, Md. Filed October 25, 1916.

19,833.—*Title:* "EDIBLE." (For Canned Corn.) R. G. CHARLES, Wye Mills, Md. Filed December 15, 1916.

19,834.—*Title:* "COMMERCIAL CLUB." (For Cigars.) THE COMMERCIAL CIGAR CO., Newark, Ohio. Filed September 25, 1916.

19,835.—*Title:* "FLUFFY RUFFLES STARCH." (For Laundry Starch.) INDEPENDENT STARCH COMPANY, INC., New York, N. Y. Filed December 16, 1916.

19,836.—*Title:* "KEIL'S DEEP WELL SPARKLING GINGER ALE." (For Ginger-Ale.) JULIUS M. KEIL, Western Springs, Ill. Filed November 17, 1916.

19,837.—*Title:* "CREAMETTES." (For Macaroni and other Paste Products.) MOTHER'S MACARONI COMPANY, Minneapolis, Minn. Filed July 10, 1916.

19,838.—*Title:* "HAMLET Y OFELIA." (For Cigars.) GUSTAVE A. MUELLER, Chicago, Ill. Filed October 18, 1916.

19,839.—*Title:* "PARODI." (For Cigars.) PARODI CIGAR COMPANY, INC., Jersey City, N. J. Filed November 3, 1916.

19,840.—*Title:* "SNO-KIST." (For Apples.) YAKIMA VALLEY FRUIT GROWERS' ASSOCIATION, North Yakima, Wash. Filed November 1, 1916.

19,841.—*Title:* "BLUE STRIPE." (For Apples.) YAKIMA VALLEY FRUIT GROWERS' ASSOCIATION, North Yakima, Wash. Filed November 1, 1916.

19,842.—*Title:* "RED STRIPE." (For Apples.) YAKIMA VALLEY FRUIT GROWERS' ASSOCIATION, North Yakima, Wash. Filed November 1, 1916.

19,843.—*Title:* "COLUMBIA MOTOR OIL." (For Lubricating-Oil.) EARLE C. ANTHONY, INC., Los Angeles, Cal. Filed November 13, 1916.

19,844.—*Title:* "LOCKTITE." (For Hair-Nets.) S. GLEMBY, INC., New York, N. Y. Filed November 27, 1916.

PRINTS

REGISTERED JANUARY 16, 1917.

4,599.—*Title:* "EVANGELINE TAMPICO SAUCE." (For Pepper Sauce.) EDMOND BULLIARD, St. Martinsville, La. Filed September 1, 1916.

4,600.—*Title:* "'JAZZ' RAG." (For Music-Rolls for Automatic Musical Instruments.) IMPERIAL PLAYER ROLL CO., Chicago, Ill. Filed November 8, 1916.

4,601.—*Title:* "CREAMETTES." (For Macaroni.) MOTHER'S MACARONI COMPANY, Minneapolis, Minn. Filed July 31, 1916.

4,602.—*Title:* "GUESTS ARE COMING." (For Biscuit.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed November 15, 1916.

4,603.—*Title:* "TWITCHELL PNEUMATIC TIRE PRESSURE GAUGE." (For Pneumatic-Tire Pressure-Gages.) A. SCHRADER'S SON, INCORPORATED, Brooklyn, N. Y., and Chicago, Ill. Filed December 13, 1916.

4,604.—*Title:* "NU-EAT-A NUT CEREAL." (For Breakfast Food.) A. RUSSELL HOWE, Buffalo, N. Y. Filed November 1, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the District of Columbia.

MERRILL *v.* EWING, COMMISSIONER OF PATENTS.

Decided November 15, 1916.

SUIT TO OBTAIN PATENT UNDER SECTION 4915, REVISED STATUTES—CLAIMS FOUND ALLOWABLE IN PART IN LIGHT OF EVIDENCE SUBMITTED.

Evidence considered and found to justify the allowance of claims 6, 7, and 8 and a claim substantially like these but omitting the clause relating to the cleaning out of the residue, and to support the rejection of claims 1 to 5.

Mr. Archibald Cox and *Mr. Wm. G. Henderson* for the plaintiff.

Mr. William R. Ballard for the defendant.

McCOY, *J.:*

The purpose of this suit is to obtain relief under section 4915 of the Revised Statutes, the plaintiff's application for a patent having been rejected by the Patent Office and the decision of the Commissioner of Patents having been affirmed by the Court of Appeals of the District of Columbia. The bill prays a judgment that the plaintiff is entitled to a patent for the invention which he claims and that the Commissioner of Patents be authorized and directed to grant him such patent. The bill also asks for certain amendments of plaintiff's specifications or of the claims, or both, before the grant of the patent asked for.

Plaintiff's invention is of a process for treating semisolid materials in the containers of filter-presses and removing the same therefrom. There are eight claims, which, as the court of appeals says, are sufficiently illustrated by two as follows:

1. The hereinbefore described method of treating in and removing solid or semi-solid material from the containers of pressure filters consisting in depositing a sufficient amount of said material in layers of suitable thickness upon the filter-cloths which form the closure of the containers, so that a space is left between the layers, then subjecting the layers to the pressure of a liquid, vapor or gas acting from behind the filter-cloths whereby the same are caused to fall to the bottom of the container and then forcing said material out of the container by the impingement of a stream of liquid, vapor or gas under pressure acting from below upwardly upon the contents of said containers.

6. The hereinbefore described method of treating in and removing solid or semi-solid material from the containers of pressure filters consisting of depositing the same in thin layers upon the filter cloths which form the closure of the filters so that a space is left between the layers, then subjecting the layers to any desired metallurgical treatment, subjecting the material during the deposition and treatment to continuous pressure upon the layers, and then opening the gates of the containers and finally, subjecting the layers to the pressure of liquid, vapor or gas acting from behind the filter cloths whereby the same are discharged from the pressure filter through said bottom outlet gates of the containers.

The court of appeals further states that plaintiff's process is for the purpose of extracting gold from ore-slimes by what is known as the cyanid process.

A filter-press of the kind in which the process claimed by the plaintiff is carried on is described as being a set of frames or containers shaped like a box without ends which are placed together so as to form sections of a long, hollow structure. Alternating with the containers and inserted between them are filter-plates, that is, plates holding apart two pieces of filter-cloth so that liquid passing through the filter-cloth may collect and pass out at the bottom of the plates. The containers and plates are pressed together so as to make tight joints between them, and the whole thus held together is called a filter-press.

Before the plaintiff invented the process here involved, the slimes were treated in the kind of filter-press described by admitting them into each container under pressure. The free-gold-bearing liquid would pass through the filter-cloths and be carried off through the passages in the bottom of the filter-plates, the slimes remaining in the containers with some of the gold-bearing solution held in them. To displace or remove this solution washing fluid was admitted into the filter-plate at one end of the container and put through the cake of slime displacing the gold-bearing solution held in the cake and forcing it out through the filter-plate at the other end of the container. The essential feature of the process now sought to be patented is the depositing of thin layers of slimes on the filter-cloths within the containers; holding these layers in that position by maintaining a continuous pressure against them and displacing the gold-bearing solution by forcing washing fluid through these layers from the center of the container, thereby forcing the solution into the filter-plates at the two ends of the container.

It is claimed by the plaintiff, although not so stated in his application, that in carrying on the process of extracting gold according to the earlier method, it was necessary to completely fill a container with a solid cake of the slimes because other-

wise it would be impossible to extract the gold-bearing solution held in the slimes after the free-gold-bearing solution had been filtered off, for the reason that in order to force washing fluid through a cake of slimes the cake must entirely fill the container. If this were not done the washing fluid would pass through the space not so filled, that being the line of least resistance. Again, if there were simply a layer of slimes on the filter-cloth the washing material coming in through the filter-plate would knock it down and not pass through it.

The plaintiff attempted to prove in the Patent Office that it was the invariable practice to fill containers of filter-presses completely with the slimes before his present invention, but he was not permitted to make use of certain affidavits offered for that purpose. Those affidavits having been rejected by the Patent Office were not considered by the court of appeals. The officials in the Office held that it was not the universal practice to completely fill containers as above stated. The Examiner said that—

the drawings of the present case and in a prior patent to the plaintiff were substantially identical;

that the process as claimed differs from that of the patent only in two particulars, one of which he said—

is a limitation which is only the natural and logical, and even the necessary and inevitable, operation of the process,

such limitation being the claim that the process of filtering is to be carried on only until the deposited layers of sediment are of a suitable thickness and so as to leave a space between the layers. The Examiner said further:

As to this it need only be said that anyone of ordinary intelligence in operating the filter to carry out the process would exercise sufficient judgment to clean out the containers when the layers of sediment were of "suitable thickness," (see lines 71–75, p. 1 of Thompson) and would not be such a blockhead as to attempt to continue the filtering operation until there was no space left between the layers, or until the machine would break down from excess pressure.

Certain affidavits are now before the court on a stipulation that they are to have the force and effect of testimony. The statements in those affidavits which are in no wise controverted by other evidence in this proceeding, establish conclusively that in carrying on the process of extracting gold in the containers of the kind described above it was the invariable practice prior to plaintiff's present invention to continue the operation until the container was completely filled and thereupon to force washing material through the slimes so filling the container for the purpose of washing out the gold remaining and in the manner already described herein. Such being the proof in this suit it is obvious that the statements of the Examiner above quoted proceeded upon a misconception of the state of the art, which misconception prevailed through all the proceedings in the Patent Office, and it must be held therefore that so far as concerns the use of filter-presses of the sort described above the plaintiff was the first to suggest the carrying on of the process of extracting gold by depositing slimes in thin layers on the filter-cloths inside the containers, treating them from the space within the containers while held under pressure by forcing through them a washing fluid for the purpose of forcing out the valuable metal content and it remains only to be determined whether the process involved invention and whether it was new.

The application was rejected in the Patent Office on two references: (1) Merrill (the plaintiff) 798,200, August 29, 1905; (2) Thompson 713,717, November 18, 1902. These references are relied upon by the defendant and he also relies on Merrill (the plaintiff) 842,484, January 29, 1907, which was not referred to during the proceedings in the Patent Office except by the plaintiff.

As above stated it was claimed in the Patent Office that the drawings of the plaintiff's application and of his prior Patent 798,200 were substantially identical and that the discontinuance of the operation of depositing slimes on the filter-cloths when a thin layer had been deposited was necessary and did not involve invention. The evidence now before the court, and it is that of metallurgical engineers who by study and practice are thoroughly familiar with the process involved in the plaintiff's application, prove that the step in the process of depositing thin layers on the filter-cloths was not only not the natural and necessary operation of the process, and that the practice was otherwise, but shows further that the plaintiff had long sought to overcome the difficulties which had seemed to be insuperable in the attempts to extract from low-grade ores of a clay nature the last particle of the precious metal and that the affiants had likewise encountered these obstacles and had been unable to overcome them until the invention which is the subject-matter of the plaintiff's application. Hanson, one of the witnesses, states in detail his unsuccessful efforts to overcome the difficulties and the plaintiff and Mackenzie testified to a contract entered into between a mining company and the plaintiff for the installation of filter-presses which would accomplish the desired result and the failure of the plaintiff to do so after many experiments, the outcome being that he was obliged to cancel the contract at a considerable loss. Mackenzie, Hanson, and Broadwater show conclusively that not until the plaintiff's present invention was it possible to overcome the difficulties referred to and that by reason of such invention they no longer exist. It is also satisfactorily shown that owing to the removal of these difficulties gold which was theretofore lost has since been saved in very large quantities, the plaintiff's invention being used in many large mines in this and other countries.

To uphold the plaintiff's claim to invention it is not necessary or even possible here to rely upon the fact that his process has come into general use supplanting other processes which accomplished the same result, for as already stated, until his invention the metal now saved was lost through inability to extract it, but had the plaintiff's process supplanted other processes that fact in a case of this kind would be strong evidence of invention. Filter-presses are not sold on bargain-counters and no

amount of advertising or puffing would induce the purchase of them. Mine operators look for results. If any proof of this were necessary the experience of the plaintiff with the mining company already referred to would be sufficient.

If the plaintiff is to be denied the right to a patent it must be because what he claims as his invention is not new. Was he anticipated by Thompson? The Thompson patent as described in the Letters issued to him relates to apparatus for use in filtering or separating liquids from solids and—

has for its object to make the action of such apparatus continuous and so as to require less manual work than is required with filters hitherto constructed.

He says:

Apparatus constructed in accordance with my invention is practicable for filtering purposes generally—such as for instance treating ore slimes or separating water from river silts, sewage, and other matters so as to discharge the solid matter as free of liquid as desired.

The specifications and drawings show that the Letters Patent include two inventions. There is first described a filter chamber or tank from the upper part of which filter-plates are suspended. The whole space within the chamber is filled with the mixture of liquid and solid matter to be filtered, which mixture necessarily entirely covers the filter-plates. Thompson says:

When sufficient solid matter has collected on the filter-cloths, it, or some of it, must be removed so that further solid matter may collect thereon, and this removal is done periodically so that the solid matter falls into the space below the plates a. The whole space within the chamber a is, of course, filled with a mixture of liquid and solid matter to be filtered, and when solid matter is detached from the filter-cloths it falls through the said mixture without any considerable part of it becoming suspended therein, and without materially interfering with the working of the filter, and thus the solid matter can be removed from the lower part of the chamber while filtering proceeds at the upper part of the same chamber. Various means may be employed for thus detaching solid matter from the filter-cloths provided the means be such that the solid matter falls and is not to any detrimental extent stirred into the mixture being filtered.

The second invention described in Thompson's Letters Patent does not involve the use of a tank or chamber but consists of what he calls filtering-compartments formed by grooved filter-plates arranged so that they form compartments in series or as a "zigzag" in consequence of openings in them giving communication between the compartments alternately. The mixture to be filtered enters the first compartment (evidently under pressure) and the solid matter issues from the last compartment, the liquid passing away through the filter-cloths and grooves in the plates. Arms carrying scrapers or brushes revolve in the compartments and scrape or brush off the cloths solid matter which deposits thereon during filtration, which solid matter is thus passed into suspension in the mixture and the cloths by the scraping process are kept comparatively clean for continuous filtration.

Thompson's second process bears no resemblance whatever to plaintiff's invention and it is obviously nothing but a continuous filtering process. It seems equally obvious that the process first described is also nothing but a continuous filtering operation. Notwithstanding that the solid or semisolid material in the course of filtration in the Thompson apparatus collects on the filter-cloths, and Thompson says that when sufficient material has so collected it must be removed so that other solid matter may collect, the deposit occurs from merely natural causes and is not deliberately made for the purpose of aiding in the carrying out of the process, but on the contrary, it appears that the deposited material is an obstacle. This is clearly true in regard to the second of the two inventions described in his patent and is equally true in regard to his invention first described.

As stated in Thompson's specification the whole space within the chamber is filled with a mixture of liquid and solid matter to be filtered, which necessarily then covers the filter-plates entirely. Consequently there is no time during the operation when the matter which has accumulated on the filter-plates is not saturated and just as in his second process when the accumulated matter is removed from the cloths in the manner described it must again pass into suspension in the mixture in the tank and cannot fail to become to some extent at least a part of the mixture being filtered. The first of Thompson's inventions therefore could not be used to accomplish the purpose of plaintiff's invention, for even if the matter forced from the filter-cloths could pass through the accumulated matter in the tank and pass to the bottom of the tank to be removed by a screw conveyer in the manner described by him there having been no entire displacement of the liquid content while it was on the filter-plates part of that content would go with the solid, which would be fatal in the cyanid process as Broadwater states in his affidavit. Broadwater further says in regard to the Thompson patent:

There is, of course, no suggestion of any displacing or washing in the Thompson patent or any provision for it and it is necessary to exercise the imagination to hit upon any conceivable way in which displacing or washing could be attempted with that apparatus. The only conceivable way would be to hold the cakes on the filter leaves by suction while the tank was emptied and again filled with washing fluid. Of course, if the attempt were made to wash without holding the cakes on by suction, the inevitable withdrawal of pressure from the cakes, involved in withdrawing the material from the tank and refilling it with washing fluid, would result in those cakes falling off the filter leaves so that the washing would be impossible. If the attempt should be made to wash by holding the cakes on the leaves by suction while withdrawing the material from the tank and filling it with washing fluid (all of which is not in any way suggested but contradicted by the patent), the result would inevitably be unsatisfactory, because when the contents of the tank were withdrawn from the leaves the air would get to the cakes, and, during the period necessary to empty and refill the tank, dry and crack the cakes, so that by the time the tank was filled with the washing fluid so as to reach these cakes, there would be cracks or equivalent inequalities through which the washing fluid would make its way instead of permeating the cakes to displace the gold-bearing solution held by them. In brief, the apparatus of the Thompson patent is necessarily simply a clarifying filter. It is not in any sense an apparatus designed or adaptable to the purpose of treating material as it is treated in the containers of the filter-press.

* * * * * * *

The treatment in a filter-press also permits the use of a predetermined charge, and thus the perfect recovery which is made practicable by avoiding the left-over material which is incident to the use of a return circuit, and in this way and others is far better than any vacuum process. The treatment of material in a filter-press is recognized as distinct from its treatment by vacuum filters. It is certainly widely different from anything suggested in the Thompson patent, for that shows only a clarifying filter and no possible means of treating material as it is treated in the filter-press to produce the essential complete recovery of the gold-bearing solution from the slimes.

It is satisfactorily established by the evidence and by a comparison of the filter-press used by the plain-

tiff with the Thompson filter, and by a comparison of the process as carried on in the former with the process as carried on in the latter, that Merrill's process cannot be operated in Thompson's filter, and this being so and the difference between the two apparatuses being so radical it cannot be held that because Thompson removes the solid matter so called from the filter-cloths in his apparatus before the space between the two sets of filter-plates is entirely filled by the matter so deposited (assuming that this were possible) a patent should be refused to the plaintiff for his invention. This conclusion is well within the principles laid down in *Loom Co.* v. *Higgins*, (105 U. S., 580, 591;) *Potts* v. *Creager*, (155 U. S., 597–606;) *Carnegie Steel Co.* v. *Cambria Iron Co.*, (185 U. S., 403.)

Merrill's Patent No. 842,484, which, as stated, was not referred to in the Patent Office as a ground for rejection of the application says in its specification among other things:

A further object is to permit of the independent introduction of cleansing, precipitating or other materials to the containers * * * the unfiterable contents of the containers are deposited upon the plates and may be then washed or treated while in place by forcing liquid or gas through it, which vapor or gas may be introduced either by means of the inlets *d* or *a*, the latter having slits *n* leading into alternate filter-plates and behind the filtering medium.

The inlets *d* open into the containers and for this reason and because the specification speaks of treating the contents of the containers "in place," which, as stated, are said to be deposited upon the plates, the defendant claims that this is a description of the process in the plaintiff's application, but the language does not necessarily indicate that the plaintiff was describing a process of treating from the inside of the container layers of material deposited on the filter-cloths and is consistent with the practice proved to have been universal before the plaintiff's application, namely, the filling of the container completely with solid matter. Moreover the evidence in the case, especially that of Broadwater, shows that he was familiar with Merrill 842,484, as well with the process carried on in the apparatus therein described, and he states that the practice was invariably to make a solid cake held by the walls of the container and to wash through it. This patent was granted in January, 1907. Mackenzie's evidence moreover shows that Merrill's failure to satisfy the mining company above mentioned was under a contract made in February, 1907, and he says that the process of Merrill's application would have solved the problem of that company. It is inconceivable that Merrill should have intended by his 1907 patent to describe a process which would have accomplished results sought for without using it.

Hanson says that from 1907 to 1910 he was endeavoring at a certain mine to solve the problem of extracting gold from low-grade ores and that he was thoroughly familiar with the known methods of treating ores in filter-presses. He details the several methods adopted to overcome the difficulties without success and states that it was not until the use of the plaintiff's process that the problem was solved. While he does not specifically refer to Merrill 842,484 it is reasonable to infer from his statement of his familiarity with known methods that he was aware of Merrill's patent. He asserts positively that the method of the plaintiff's application is new and that it has overcome difficulties theretofore considered insuperable by those familiar with the old filter-press process notwithstanding the most exhaustive efforts to remove them.

It must be held therefore that the process of the plaintiff's application was not described and that it was not intended to be described or claimed in Merrill 842,484.

In the defendant's brief it is stated:

It cannot be emphasized too strongly that neither the specification nor claims of plaintiff's application specifies the kind of metallurgical treatment, the character of the treating fluid nor the place of its introduction. The description and claims are in broad general terms and the patent if granted would prohibit the use of known filters in ways taught by the prior art.

If the latter statement be true then it should be possible to refer to the known filters and the ways in which they are used, but there is no proof of the statement before the court.

The bill asks for leave to amend the application and claims in such particulars as may be necessary and proper. In the plaintiff's brief only two amendments are suggested. It is claimed that the statement—

A^1 is a corresponding inlet for treating the precipitate in place with liquids, vapors, or gases and which is preferably placed at either or both upper corners of the container and in like manner forms a continuous opening or openings when the containers are placed together in the filter press—

is erroneous in that this inlet is not to be used for the purpose of treating the precipitate for the reason that it opens into the filter-plates and not into the container, and that the description of the process shows that the treating material is to be introduced into the container. The description of the process should control and the leave to amend should be granted accordingly.

The other amendment relates to Figures 2 and 4 of the drawings in which the apertures opening into the filter-plates marked a^1 and a^2 are shown in alternate filter-plates only. The description shows that these apertures are to be used for the purpose of admitting vapor, liquid or gas for the purpose of dislodging material deposited on the filter-cloths inside the container. Consequently, these inlets must open into every set of filter-plates; otherwise there can be no such dislodgment. Figs. 6 and 8 show the apertures in each set of filter-plates. There seems to be an obvious mistake in drawings 2 and 4 and they should be amended to correct it.

The bill states the process for which the plaintiff claims the right to a patent as follows:

6. Your orator's said invention, as set forth in said application, consists of the following steps:—
(*a*) Depositing layers of equal permeability and thin enough to be permeable on the filter cloths which form each side of the chamber, as distinguished from completely filling the chamber as in the old filter-press process.
(*b*) Holding these layers in that condition and position by avoiding the discontinuance of the pressure against them and maintaining continuous pressure.
(*c*) Displacing the metal-bearing liquid held in the layers after simple filtration by putting washing fluid through them from the open space left in the center of the container, as distinguished from the old method of forcing the washing fluid through the solid cake completely filling the chamber.
(*d*) Mechanically removing the barren layers by forcing them off the filter cloths, them sluicing out the material by a stream of water.

This process is sufficiently described in the application and is what the plaintiff claims in his sixth, seventh and eighth claims. Those claims should be allowed.

Section 4915 of the Revised Statutes provides in part that the court—

may adjudge that such applicant is entitled according to law to receive a patent for his invention as specified in his claim, or for any part thereof as the facts in the case may appear.

It was held in *Durham* v. *Seymour* (6 App. D. C., 78) that the plaintiff could not under this section have allowed to him claims not made in the Patent Office, but the section as seen from the part just quoted does permit the allowance of any part of the plaintiff's claim and in order that the plaintiff shall have the full benefit of his invention he may, if he so elects, be allowed a claim in substance as follows:

The hereinbefore described method of treating solid or semi-solid material in the containers of pressure-filters consisting in depositing the same under continuous pressure in thin layers upon the filter cloths which form the closure of the filters, so that a space is left between the layers, then subjecting the layers while under continuous pressure to any desired metallurgical treatment.

Claims 1 to 5, inclusive, should not be allowed. While it is held herein that it was the practice always to fill containers with solid material prior to plaintiff's invention and that the deposition in layers upon the filter-cloths inside the containers is new in the art, claims 1 to 4 do not describe any process, for the steps therein described would accomplish nothing if carried out; that is to say, the depositing of the material in layers upon the cloths, knocking it from the cloths and washing it out would be an idle ceremony without the intervening and essential step of treating the material so deposited for the purpose of extracting the metal. This step is stated in the application to be "an element in the process." The inference to be drawn from the statement by the plaintiff in his bill of the process which he claims seems to indicate that he has abandoned claims 1 to 4 and also claim 5, which does not describe the process as set forth in the bill.

Settle decree on notice.

ADJUDICATED PATENTS.

(U. S. D. C.) The Bergener patent, No. 962,114, for a tubular lantern, *Held* valid and infringed. *R. E. Dietz Co.* v. *Burr & Starkweather Co.*, 236 Fed. Rep., 763.

(U. S. D. C.) The Bergener patent, No. 1,072,688, for a tubular lantern, *Held* valid and infringed. *R. E. Dietz Co.* v. *Burr & Starkweather Co.*, 236 Fed. Rep., 763.

(U. S. D. C.) The Erb patent, No. 962,135, for a tubular lantern, *Held* valid and infringed. *R. E. Dietz Co.* v. *Burr & Starkweather Co.*, 236 Fed. Rep., 763.

(U. S. D. C.) The Dillon reissue patent, No. 13,352, for a vacuum-cleaner, *Held* valid and infringed. *United Electric Co.* v. *Creamery Package Mfg. Co.*, 236 Fed. Rep., 746.

(U. S. C. C. A.) The King patent, No. 914,426, for a metallic rod packing-ring, *Held* valid and infringed. *United States Metallic Packing Co.* v. *Hewitt Co.*, 236 Fed. Rep., 739.

(U. S. D. C.) The McArthur design patent, No. 42,488, for a design for a tubular lantern, *Held* void for lack of invention and not infringed. *R. E. Dietz Co.* v. *Burr & Starkweather Co.*, 236 Fed. Rep., 763.

(U. S. C. C. A.) The McClur patent, No. 814,067, for a silo, *Held* valid and infringed. *Farmers' Handy Wagon Co.* v. *Beaver Silo & Box Mfg. Co.*, 236 Fed. Rep., 731.

(U. S. D. C.) The Speer and Forster patent, No. 1,071,364, for an alloy of iron, *Held* void for lack of novelty and also not infringed. *Pittsburgh Iron & Steel Foundries Co.* v. *Seaman-Sleeth Co.*, 236 Fed. Rep., 756.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 8, 1917.

Albert T. Hoffman, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Cline, Crowell & McCorkle, 306 Main street, Newton, N. C., for registration of a trade-mark and trade-mark registered July 21, 1896, No. 28,649, to Albert T. Hoffman, Cleveland, Ohio, and a notice of such declaration sent by registered mail to said Hoffman at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Hoffman, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 2, 1917.

Mercantile Supply Company, its assigns or legal representatives, take noti e:

An interference having been declared by this Office between the application of Joseph Burnett Co., of 36 India street, Boston, Mass., for registration of a trade-mark and trade-mark registered December 18, 1906, No. 58,651, to Mercantile Supply Company, of Middletown, N. Y., and the Office having failed to secure proof of service upon the said Mercantile Supply Company, and no satisfactory evidence of successorship having been filed, notice is hereby given that unless said Mercantile Supply Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1916.

Edwin A. Madge, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Edwin A. Madge, 533 Woodward avenue, Detroit, Mich., and the application of Harry U. Strong, 914 Chestnut street, Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Edwin A. Madge at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Madge, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1916.

Frings & Zwietusch, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Columbia Brewing Co., 2120–2132 South C street, Tacoma, Wash., for registration of a trade-mark and trade-mark registered August 22, 1882, No. 9,619, to Frings & Zwietusch, Milwaukee, Wis., and a notice of such declaration sent by registered mail to said Frings & Zwietusch at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Frings & Zwietusch, their assigns or legal representatives, shall enter an appearance therein within thirty days of the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 23, 1916.

Earl J. Baker and Ernest C. Root take notice:

Letters suggesting claims for purposes of interference having been mailed to Ernest C. Root, Engineers Building, Cleveland, Ohio, (1365 Ontario street,) the attorney of record in an application filed by Earl J. Baker, and returned undelivered, and a telegram addressed to Earl J. Baker, 2077 East Seventy-seventh street, Cleveland, Ohio, not having been delivered, notice is hereby given that unless Ernest C. Root or Earl J. Baker shall furnish an address to which mail may be delivered to one or the other within thirty days from the first publication of this notice the interferences will be proceeded with as in case of default.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 27, 1916.

Mildred Lewless, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Eugene B. Walsh, 59 Howard avenue, Brooklyn, N. Y., and the patent to Mildred Lewless, 155 Harmon street, Brooklyn, N. Y., (Patent No. 1,102,934, issued July 7, 1914,) and a notice of such declaration sent by registered mail to said Mildred Lewless at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Lewless, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

F. W. H. CLAY, *Assistant Commissioner.*

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ISSUE OF JANUARY 23, 1917.

Patents	677	No. 1,213,136 to No. 1,213,812, inclusive.
Designs	9	No. 50,214 to No. 50,222, inclusive.
Trade-Marks	88	No. 115,048 to No. 115,135, inclusive.
Labels	1	No. 19,845.
Prints	1	No. 4,605.
Reissues	2	No. 14,252 to No. 14,253, inclusive.
Total	778	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	.....	North Carolina	5	1
Arizona	3	.....	North Dakota	2	.....
Arkansas	1	.....	Ohio	36	1
California	39	2	Oklahoma	2	1
Colorado	2	.....	Oregon	8	1
Connecticut	20	3	Pennsylvania	57	1
Delaware	.....	.....	Rhode Island	5	2
Florida	5	2	South Carolina	2	1
Georgia	7	1	South Dakota	5	1
Idaho	1	.....	Tennessee	4	.....
Illinois	72	12	Texas	8	1
Indiana	16	1	Utah	1	.....
Iowa	10	1	Vermont	.....	.....
Kansas	10	1	Virginia	10	.....
Kentucky	6	2	Washington	3	3
Louisiana	2	.....	West Virginia	2	.....
Maine	1	.....	Wisconsin	17	1
Maryland	5	4	Wyoming	1	.....
Massachusetts	31	7			
Michigan	16	6	Alaska, District of	.....	.....
Minnesota	16	2	Canal Zone	.....	.....
Mississippi	1	2	District of Columbia	2	.....
Missouri	26	3	Hawaii Territory	1	.....
Montana	2	.....	Philippine Islands	.....	.....
Nebraska	5	.....	Porto Rico	.....	.....
Nevada	2	.....	U. S. Army	.....	.....
New Hampshire	1	.....	U. S. Navy	1	.....
New Jersey	30	2			
New Mexico	1	.....	Total to residents of the United States	622	87
New York	113	22			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	.....	.....	Netherlands	.....	.....
Belgium	.....	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	2	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	13	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	1	.....	South Australia	.....	.....
England	20	2	Spain	1	.....
Finland	.....	.....	Sweden	3	.....
France	8	.....	Switzerland	4	.....
Germany	9	.....	Transvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	.....	.....
India	.....	.....	Western Australia	.....	.....
Ireland	.....	1			
Italy	1	.....	Total to residents of foreign countries	63	3
Luxemburg	.....	.....			
Mexico	.....	.....			

Disclaimer.

14,124, (Reissue.) *John Lundie*, New York, N. Y. TIE-PLATE. Patent dated May 2, 1916. Disclaimer filed January 15, 1917, by the patentee.

He therefore disclaims, as to said patent, reissue 14,124, all tie-plates included in the construction specified in claim 9, except tie plates in which "the greater thicknesses of said plate" mentioned are caused to be "at those portions of said projections which are nearest to said flange" by a rail-bearing surface inclined upwardly toward the rail-retaining flange, and in which the rail-bearing surface is also curved longitudinally of the rail flange so that the rail in its deflection will have a rolling bearing upon said surface.

Adverse Decisions in Interference.

PATENT No. 1,104,959.

On December 22, 1916, a decision was rendered that Frank Spencer Chapman was not the first inventor of the subject-matter covered by claims 8, 10, 13, and 14 of his Patent No. 1,104,959, subject, "Vacuum-lightning," and no appeal having been taken within the time allowed such decision has become final.

Renewal of Forfeited Cases.

A petition for the renewal of a forfeited application need not be signed by the inventor or assignee, but may be signed by the attorney.

A power of attorney in the original application authorizing an attorney to transact all business in the Patent Office in connection with the application construed to be of sufficient scope to include the signing of a petition for renewal and the subsequent prosecution of the application. (*Ex parte Agee*, 101 O. G., 1609.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 19, 1917.

Class No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences, Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 1	Nov. 20	334
119	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Aug. 1	Nov. 15	601
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Jan. 2	Dec. 27	120
253	4. Conveyors; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Nov. 11	Jan. 4	228
227	5. Bookbinding; Harvesters; Jewelry; Music	Sept. 15	Dec. 15	298
118	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Sept. 8	Dec. 8	267
117	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Aug. 28	Nov. 11	511
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	June 27	Oct. 5	1209
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	July 7	Dec. 16	540
235	10. Carriages and Wagons; Spring Devices	July 8	Dec. 20	817
184	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Nov. 22	Jan. 10	82
222	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Sept. 5	Jan. 10	498
229	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Sept. 22	Dec. 8	510
207	14 Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Aug. 21	Dec. 12	200
206	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 20	Jan. 3	199
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	July 3	Nov. 20	632
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Oct. 14	Dec. 26	161
267	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 16	Dec. 13	206
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Aug. 7	Sept. 19	441
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 18	Dec. 29	238
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 5	Dec. 4	285
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Aug. 16	Nov. 25	489
179	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	June 29	July 25	357
144	24. Apparel: Apparel Apparatus; Sewing-Machines	July 20	Nov. 21	392
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Nov. 1	Dec. 13	173
106	26. Electricity, Generation; Motive Power	Apr. 4	Nov. 17	672
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Dec. 8	Dec. 21	233
65	28. Internal-Combustion Engines	Aug. 9	Nov. 18	563
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	July 19	Nov. 20	379
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 2	Dec. 26	358
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Aug. 17	Nov. 16	288
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	July 1	Dec. 12	347
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Sept. 7	Dec. 8	350
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	June 7	Nov. 28	351
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	June 27	Dec. 26	714
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Sept. 8	Dec. 14	771
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	June 7	Nov. 24	823
278	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Dec. 22	Dec. 21	165
221	39. Water Distribution	July 28	Dec. 14	326
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Sept. 15	Jan. 5	526
126	41. Railway Draft Appliances; Resilient Tires and Wheels	Sept. 7	Dec. 5	492
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	July 1	Nov. 28	370
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Nov. 7	Nov. 21	114

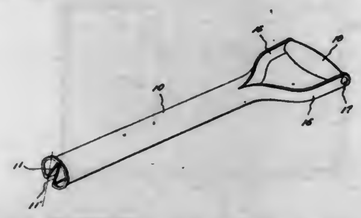
Oldest new case, Apr. 4; oldest amended, July 25.
Total number of applications awaiting action..... 18,348

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Nov. 29	Dec. 26	869
	Designs	Nov. 25	Dec. 19	366
	Labels and Prints	Dec. 28	Dec. 20	104

PATENTS

GRANTED JANUARY 23, 1917.

1,213,136. HANDLE. ALBERT L. ADAMS, Cedar Rapids, Iowa. Filed Apr. 3, 1916. Serial No. 88,615. (Cl. 55—116.)



1. A handle made from a single sheet of metal formed in a tube and having the edges thereof inturned and incased within the tube to form a longitudinal reinforcement.

2. A hollow handle, the two longitudinal edges of which are bent inwardly the full length of and housed by the body thereof.

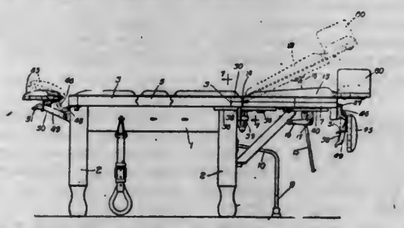
3. A hollow handle, the edges of which are bent inwardly and housed by the body thereof, such edges forming an open longitudinal channel the full length of the handle.

4. A tubular metal handle, the two long edges of which are bent inwardly and inclined to form an inverted V-shaped channel the length of one side of the handle.

5. A handle made from a single sheet of metal formed in a tube and having the edges thereof inturned and incased within the tube to form a longitudinal reinforcement, one end of the said handle being provided with two spaced terminals and a handle grip secured between said terminals.

[Claims 6 to 8 not printed in the Gazette.]

1,213,137. TREATING-TABLE. CHESTER WARE ALBRIGHT, Evanston, Ill., assignor to The C. W. Albright Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 1, 1913. Serial No. 745,552. (Cl. 128—16.)



1. A treating table having its top composed of a stationary portion and a leaf pivoted to swing about a vertical axis, and an auxiliary leaf mounted on said swinging leaf for movements about a horizontal axis intersecting the aforesaid axis.

2. A treating table having its top composed of a stationary leaf and a swinging leaf arranged in one end of the stationary leaf, and said stationary leaf having a removable central section arranged at the opposite end.

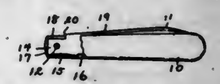
3. A treating table having its top composed of a stationary leaf and a swinging leaf arranged in one end of the stationary leaf, said stationary leaf having a removable central section arranged at the opposite end and a transverse removable section between its ends.

4. A treating table having its top composed of a stationary leaf and a swinging leaf arranged adjacent to the stationary leaf, said swinging leaf having a removable section in proximity to the stationary leaf.

5. A treating table having a stationary leaf and a leaf mounted to swing about a vertical axis, and a high-engaging hook movably mounted on the under side of the swinging leaf so as to be capable of occupying a position in which it is concealed under the swinging leaf and also in an operative position in which it projects beyond the swinging leaf.

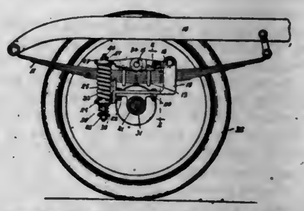
[Claim 6 not printed in the Gazette.]

1,213,138. POCKET-KNIFE. BENJAMIN ALLEN, New Britain, Conn. Filed Aug. 21, 1916. Serial No. 116,035. (Cl. 30—10.)



In combination in a pocket knife having a handle formed of a single piece of sheet material and a blade, the said blade being operatively connected to one end of the handle structure, and the said handle structure comprising a pair of handle sides opposed one to the other and separated by a blade receiving space, the said blade filling the said space at one end of the said handle sides, means for holding the other ends of the said handle sides in spaced relation comprising a bridge extending across the end portions of the said handle sides, and the said bridge serving as a spring member for resiliently holding the said blade in the position to which it is set relatively to the said handle.

1,213,139. SHOCK-ABSORBER. PER AUGUST ANDERSON, New York, N. Y. Filed Oct. 1, 1913. Serial No. 792,743. (Cl. 267—19.)



1. The combination of a vehicle leaf spring, an axle, and resilient shock absorbing means connecting said axle with the upper surface of said leaf spring extending across the opposite edges of said leaf spring whereby transverse rocking of the latter is arrested.

2. The combination of a vehicle leaf spring, an axle located approximately centrally beneath said leaf spring, a member connected with said leaf spring and having its ends located in planes at opposite sides of said axle, means for pivotally connecting one end of said member with said axle and resilient shock absorbing means for connecting the opposite end of said member with said axle, said re-

silient means extending across the opposite edges of said leaf spring whereby transverse rocking of the latter is arrested.

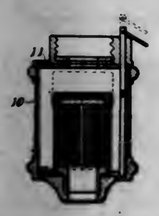
3. The combination of a vehicle leaf spring, an axle located approximately centrally beneath said leaf spring, a member connected with the upper surface of said leaf spring and located approximately midway between the ends thereof, a member carried by said axle and having its one end portion pivotally connected with one end of said first named member at a point above said leaf spring and shock absorbing springs located on opposite sides of said leaf spring and between the opposite ends of said two members.

4. The combination of a vehicle leaf spring, an axle, a device rigidly connected with the upper surface of said leaf spring, a member carried by said axle and having its one end portion pivotally connected with one end of said device and shock absorbing springs located between the opposite ends of said device and said member and extending across the opposite edges of said leaf spring whereby transverse rocking of the latter is arrested.

5. The combination of a vehicle leaf spring, an axle, resilient shock absorbing means connecting said axle with the upper surface of said leaf spring and extending across an edge of said leaf spring whereby a transverse rocking of the latter is arrested, and recoil absorbing means connected with said shock absorbing means whereby the rebound thereof is neutralized.

[Claims 6 to 8 not printed in the Gazette.]

1,213,140. FILTER. JOHN ANDREW, Concord, N. H. Filed Feb. 8, 1916. Serial No. 76,948. (Cl. 210—6.)

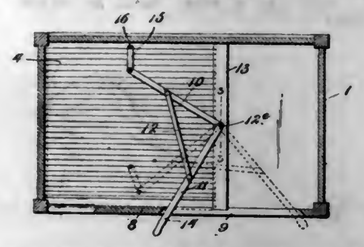


1. A filter, including a housing with an outlet through its bottom, an additional bottom member within said housing, having an opening coincident with said outlet and a recess in its upper surface, concentric with said opening, and a filtering chamber having a downward tubular extension received within the outlet of said housing, said filtering chamber being seated in the recess of said additional bottom member concentrically with said tubular extension and the point of reception of the latter within the outlet of said housing.

2. A filter, including a housing having an outlet through its bottom, an additional bottom member within said housing having an opening coincident with said outlet and a recess in its upper surface concentric with said opening and a filtering chamber having a downward tubular extension received within the outlet of said housing, said filtering chamber being seated in the recess of said additional bottom member concentrically with said tubular extension and the point of reception of the latter within the outlet of said housing, and means for lifting said additional bottom member, connected thereto and operable from a point exterior of said housing or filter.

3. A filter, including a housing having an outlet through its bottom, an additional bottom member within said housing having an opening coincident with said outlet and a recess in its upper surface concentric with said opening, a filtering chamber having a downward tubular extension received within the outlet of said housing, said filtering chamber being seated in the recess of said additional bottom member concentrically with said tubular extension and the point of reception of the latter within the outlet of said housing, means for lifting said additional bottom member, connected thereto and operable from a point exterior of the filter, said housing having an upper removable closure-section, and the latter having said lifting means extending therethrough and upon which, said closure section may be moved upwardly, when removing it from the body of the housing.

1,213,141. DOOR-OPERATING MECHANISM FOR KITCHEN-CABINETS. ERSEL CLOE ASH, Elwood, Ind., assignor to G. I. Sellers & Sons Company, Elwood, Ind., a Corporation of Indiana. Filed Feb. 7, 1916. Serial No. 76,516. (Cl. 45—16.)



1. A kitchen-cabinet having a compartment provided with opposite vertical ways the upper ends of which are horizontally disposed, and a flexible door mounted for movement in the ways and adapted to close the compartment, combined with a horizontally disposed bell-crank lever fulcrumed in the cabinet, above the horizontal ways, and terminating at one end in an operating handle extending through and beyond an opening in the wall of the cabinet, and a movable connection between the opposite inner end of said lever and the upper end of the flexible door, whereby the door is opened and closed by an operation of the lever.

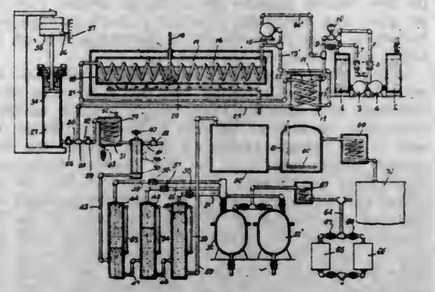
2. A kitchen-cabinet having a compartment provided with opposite parallel vertical ways the upper ends of which are horizontally disposed, and a flexible door mounted for movement in the ways and adapted to close the compartment, combined with a horizontally disposed bell-crank lever fulcrumed in the cabinet at one side of and above the flexible door and terminating at its outer end in an operating handle extending through and beyond an opening in the wall of the cabinet, and a link loosely connected at one end to the door and at the other end to the inner end of the lever.

3. A kitchen-cabinet having a compartment provided with opposite vertical ways, the upper ends of which are rearwardly disposed with an opening in its wall, and a flexible door mounted in the ways and adapted to close the compartment, and a bell-crank lever fulcrumed at its angle adjacent the door and loosely connected at its inner end to the same and at its outer end extending through the opening and terminating in a handle beyond the same, whereby the door is raised and lowered by a vibration of said lever.

1,213,142. PRODUCTION OF PHENOL AND OTHER SUBSTANCES. JONAS W. AYLSWORTH, East Orange, N. J.; Adelaide M. Aylsworth and The Savings Investment and Trust Company, of East Orange, executors of said Jonas W. Aylsworth, deceased. Filed Jan. 24, 1916. Serial No. 73,826. (Cl. 23—24.)

1. The process of producing phenol, comprising mixing chloro-benzene with caustic alkali solution, causing the mixture to travel through a path in which it is constantly subjected to a temperature in excess of 300° C., under pressure greater than the vapor tension of the reacting substances, at a rate such that each part of the mixture is subjected to the heating for a period of not more than one hour, then adding an acid to liberate phenol from the phenoxid formed, and drawing off the phenol from the solution, substantially as set forth.

2. The process of producing phenol, comprising mixing chloro-benzene with caustic alkali solution and heating the mixture at a temperature considerably above 300° C., under pressure greater than that due to the vapor tension of the reacting substances, to form alkaline phenoxid and chlorid, and liberating and drawing off phenol from the solution, substantially as set forth.



3. The process of producing phenol, comprising mixing chloro-benzene and sodium hydrate in the proportion of substantially one molecule of the former to between two and three molecules of the latter, in aqueous solution, heating the mixture at a temperature considerably above 300° C. under pressure greater than that due to the vapor tension of the reacting substances, to form sodium phenoxid and sodium chlorid, adding hydrochloric acid in suitable proportion to liberate phenol, and separating phenol from the solution, substantially as set forth.

4. The process of producing phenol, comprising mixing chloro-benzene and sodium hydrate in the proportion of one molecule of the former to from two and a quarter to three molecules of the latter, together with water in proportion of from fifteen to twenty-five molecules to one of the chloro-benzene, heating the mixture under pressure to a temperature substantially in excess of 300° C. to form sodium phenoxid and sodium chlorid with sodium hydrate in excess, adding an acid to react with the phenoxid to liberate phenol, and separating out the latter, substantially as set forth.

5. The process of producing phenol, comprising mixing chloro-benzene and alkali hydrate solution, causing the mixture to travel through a path in which it is continuously subjected to a temperature in excess of 300° C., under pressure greater than the vapor tension of the reacting substances, until a phenoxid has been formed, adding an acid to liberate phenol, and drawing off the phenol from the solution, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

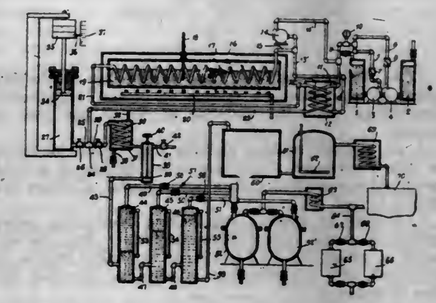
1,213,143. APPARATUS FOR ORGANIC CHEMICAL REACTIONS. JONAS W. AYLSWORTH, East Orange, N. J.; Adelaide M. Aylsworth and the Savings Investment and Trust Company, of East Orange, executors of said Jonas W. Aylsworth, deceased. Filed Jan. 24, 1916. Serial No. 73,827. (Cl. 23—24.)

1. In chemical reaction apparatus, the combination of a plurality of receptacles, a pump for withdrawing liquid from each receptacle, a mixing coil, a reaction coil, and connections between said pumps and said mixing coil, and between said mixing coil and said reaction coil, substantially as set forth.

2. In chemical reaction apparatus, the combination of a mixing coil, a reaction coil, means for heating the latter, a source of supply, a chamber surrounding said mixing coil, and connections for leading fluid material from said source, through said mixing coil and reaction coil, and thence into said chamber, to heat the material in said mixing coil, substantially as set forth.

3. In chemical reaction apparatus, the combination of a reaction coil, means for pumping liquid through the same, means for heating the same, a pipe leading from said coil, a hydraulic accumulator connected to said pipe, a receiver, a pipe connection leading to said receiver from said pipe, and a valve in said pipe connection, substantially as set forth.

4. In chemical reaction apparatus, the combination of a source of supply, a reaction chamber, a mixing coil, pipe connections joined to the ends of the mixing coil, to complete a circuit therewith, means for causing liquid to flow into and circulate through the mixing circuit, and a connection from one of said pipe connections to said reaction chamber, to permit liquid to flow to said chamber as liquid flows into said mixing circuit from said source, substantially as set forth.



5. In chemical reaction apparatus, the combination of a source of supply, a reaction coil, a connection between the same, a pipe leading from the exit end of said coil, having a valve therein, pipe connections joined to the ends of the said coil, to complete a circuit therewith, a valve in said pipe connections, and means for causing liquid to flow from said source through said reaction coil, and said pipe connections, repeatedly, when said first valve is closed and said second valve is open, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,213,144. ORGANIC INSULATING COMPOSITION. LEO H. BAEKELAND, Yonkers, N. Y., assignor to General Bakelite Company, New York, N. Y., a Corporation of New York. Original application filed Dec. 4, 1907, Serial No. 405,022. Divided and this application filed Dec. 31, 1914. Serial No. 879,946. (Cl. 106—22.)

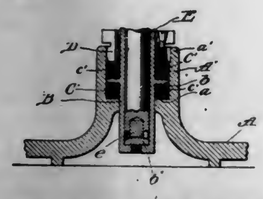
1. An organic insulating composition adapted for coil-impregnation, said composition containing a phenolic condensation product and being initially fluid and mobile, but transformable by heat without substantial change of volume into a homogeneous, impervious, and infusible solid of high insulating value.

2. An organic insulating composition adapted for coil-impregnation, said composition containing a phenolic condensation product and being initially fluid and mobile, but transformable by heat without substantial change of volume into a homogeneous, impervious, and infusible solid of high insulating value and substantially free from volatile constituents, sulfur, and acid-reacting substances.

3. An organic insulating composition adapted for coil-impregnation, said composition containing a phenolic condensation product and a material imparting flexibility to the final product, the composition being initially fluid and mobile but transformable by heat without substantial change of volume into a homogeneous, impervious, and infusible solid of high insulating value.

4. An organic insulating composition adapted for coil-impregnation, said composition containing a phenolic condensation product and a material imparting flexibility to the final product, the composition being initially fluid and mobile but transformable by heat without substantial change of volume into a homogeneous, impervious, and infusible solid of high insulating value and substantially free from volatile constituents, sulfur, and acid-reacting substances.

1,213,145. BEARING FOR VERTICAL SHAFTS. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Company, Ltd., a Corporation of New York. Filed July 3, 1913. Serial No. 777,296. (Cl. 64—48.)



1. A resilient packing ring comprising reinforcing coiled springs embedded therein of greater compressive resistibility than the material of which the ring is formed.

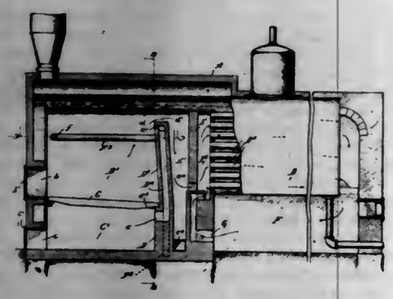
2. An annular resilient packing ring comprising therein axially arranged reinforcing coiled springs of greater compressive resistibility than the material of which the ring is formed.

3. A resilient packing ring having reinforcing coiled springs of greater compressive resistibility than the material of which the ring is formed extending therein in alinement with the direction of pressure to which the ring is subjected.

4. An annular packing ring for yieldingly resisting axial and radial compression formed of a resilient material having embedded therein coil springs of greater compressive resistibility than said material.

5. An annular packing ring formed of rubber having embedded therein coil springs to increase the resistance of the ring to axial and radial compressions.

1,213,146. FURNACE. DANIEL O. BERRY, Chicago, Ill. Filed Mar. 25, 1916. Serial No. 86,544. (Cl. 110—75.)

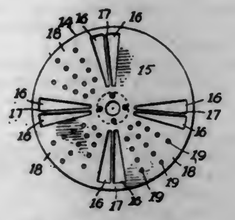


1. The combination with a furnace provided with a fire box and grate, of a bridge wall having a portion thereof extending nearly to the crown sheet of the furnace and inclined forward from the grate to the top thereof, said wall being provided with air inlet ducts, a transversely-extending wall between the first named wall and the furnace boiler, forming a compartment between said wall and the boiler and between said wall and the inclined wall, a pipe communicating with said air ducts and extending horizontally across the upper portion of the fire box toward the front wall thereof, said horizontal pipe having an elongated opening on one side inside of the fire box, substantially as described.

2. In a furnace provided with a fire box and grate, the combination of a bridge wall having a forwardly-inclined wall rising nearly to the crown sheet of the furnace, and a second wall rising to the crown sheet and having an opening through the same above the bridge wall, the forwardly-inclined wall being provided with air ducts extending nearly to the top of the fire chamber, an air pipe connecting therewith and extending into the fire chamber with a discharge opening near the front wall of the furnace, the forwardly-inclined wall being provided with an air induction passageway opening from the furnace ash pit and discharging superheated air into the fire chamber opposite the discharge opening from the air pipe, and means for creating a draft through said furnace to carry the products of combustion through the boiler, substantially as described.

3. In a furnace provided with an air chamber and grate, a bridge wall having two partition walls rising therefrom with openings therethrough, a boiler having a combustion chamber at the rear and bottom thereof, the wall of the furnace having air ducts through the sides thereof which open into the fire chamber discharging superheated air toward the rear thereof, one of the bridge wall partitions having air induction passages discharging superheated air toward the front of the fire chamber, means for creating a draft through said furnace to carry the products of combustion through the boiler to the rear combustion chamber, and means for reoxidizing the heavier gases after they leave the last combustion chamber, substantially as described.

1,213,147. SHUTTER FOR KINETOSCOPES. THOMAS H. BLAIR, Northboro, Mass. Filed Sept. 29, 1915. Serial No. 53,198. (Cl. 88—19.3.)



1. A revolving shutter for kinetoscopes, having a section adapted to completely intercept the light during movement of the film and having a plurality of perforated sections alternating with a plurality of light transmitting sections of less width than said perforated sections, each of said light transmitting sections consisting of a plurality of openings separated by narrow bars.

2. A revolving shutter for kinetoscopes, having a section adapted to completely intercept the light during movement of the film and having a plurality of perforated sections alternating with a plurality of light transmitting sections of less width than said perforated sections, each of said light transmitting sections consisting of a plurality of openings separated by narrow bars of less width than said openings.

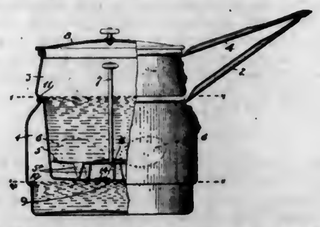
3. A revolving shutter for kinetoscopes, having a section adapted to completely intercept the light during movement of the film and having a plurality of light transmitting sections alternating with other sections of greater width than said light transmitting sections, one of said other sections being perforated.

4. A revolving shutter for kinetoscopes, having a section adapted to completely intercept the light during movement of the film and having a plurality of light transmitting sections alternating with other sections of greater width than said light transmitting sections, one of said other sections having a series of holes therethrough.

5. A revolving shutter for kinetoscopes, having a section adapted to completely intercept the light during movement of the film and having a plurality of light transmitting sections alternating with other sections of greater width than said light transmitting sections, some of said other sections having small holes therein.

[Claim 6 not printed in the Gazette.]

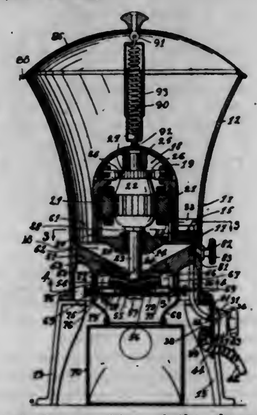
1,213,148. METHOD AND APPARATUS FOR COOKING EGGS. RALPH V. BLAKE, Yonkers, N. Y. Filed July 27, 1916. Serial No. 111,664. (Cl. 53—1.)



1. An egg cooking apparatus comprising an egg receiving vessel, a second vessel surrounding the lower part thereof and in which the former is mounted in a fixed position and spaced-apart from the bottom and side wall thereof, a small outlet passage from the former to the latter whereby hot water placed in the first vessel may pass slowly into cold water placed in the second vessel to cause the level of water in the second to rise up around the sides of the first to cool the latter, the capacity of the first vessel and its arrangement being such relatively to the space under and around the same that the water in the first vessel can not wholly escape therefrom but will be retained therein to partially or wholly cover any eggs contained therein after cooking has ceased.

2. The method of cooking an egg which comprises applying boiling water to an egg in a receptacle and applying to the outside of said receptacle a cooling medium for reducing by conduction the temperature of said water to below the boiling point at a predetermined speed to control the cooking of the egg.

1,213,149. GRINDING-MACHINE. EDWARD J. BODEY, Cincinnati, Ohio. Filed Nov. 29, 1915. Serial No. 64,012. (Cl. 83—18.)



1. In a grinding machine of the character described, the combination of horizontally disposed burs, a grinding shaft extending up and down and having operative connection with one of said burs, a feeding hopper, and an electric motor having operative connection with said grinding shaft, said electric motor received by said hopper.

2. In a grinding machine of the character described, the combination of an upright shaft, a feeding hopper comprising a hopper bottom, an electric motor located within said feeding hopper above said hopper bottom, said hopper bottom having a feed-opening through which said upright shaft extends, and a pair of horizontally disposed burs located below said feed-opening, one of said horizontally disposed burs having operative connection with said upright shaft for rotating the same.

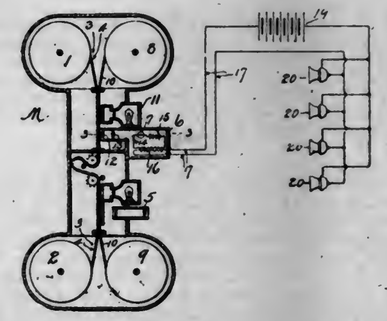
3. In a grinding machine of the character described the combination of a hopper comprising a hopper bottom, an electric motor received by said hopper above said hopper bottom, said electric motor comprising an armature-shaft, said hopper bottom having a feed-opening through which said shaft extends, horizontally disposed burs one of which has operative connection with said shaft for rotating the same, an annular wall having a braking surface about said armature-shaft, and centrifugally acting brake-shoes having operative connection with said shaft for being rotated thereby and movable substantially horizontally for coacting with said braking surface.

4. In a grinding machine of the character described, the combination of a frame, a hopper extending upwardly therefrom, a grinding-bur, a coacting grinding-bur, and an electric motor mounted in said hopper and having an armature-shaft extending through said first-named bur and operatively connected with said coacting bur, said first-named bur having a support, and said support and said frame having inclined slot and radially extending pin connections between them, whereby upon relative rotative movement between the walls of said slots and said radially extending pins said bur-support is adjusted lengthwise of said shaft.

5. In a grinding machine of the character described, the combination of a frame, a hopper extending upwardly therefrom, a pair of horizontally disposed grinding-burs, an electric motor thereabove comprising an armature-shaft to which one of said burs is secured, said electric motor received into said hopper from above, securing means between said electric motor and said hopper, said last-named bur and said armature-shaft having a connection therebetween releasable by a movement of said bur downwardly lengthwise of said shaft, and said electric motor movable lengthwise in the opposite direction out of said hopper.

[Claims 6 to 10 not printed in the Gazette.]

1,213,150. METHOD OF PRODUCING MAGNETIC SOUND-RECORDS FOR TALKING-MOTION-PICTURE FILMS. HENRY C. BULLIS, Redwood Falls, Minn. Filed Dec. 15, 1915. Serial No. 67,088. (Cl. 179—100.2.)



1. A method of photographing sound records on a sensitized record medium which consists in flashing thereon light beams, and causing said light beams at the source to be inversely varied in intensity by the sound waves to be recorded.

2. A method of photographing sound records on a sensitized record medium which consists in flashing light beams thereon in a series of transverse striations, and causing said light beams at the source to be inversely varied in intensity by the sound waves to be recorded.

3. A method of producing sound records which consists in photographically producing a positive negative master record of sound controlled light flashes which are inversely related to the sounds, then printing the said master negative on a sensitized surface containing finely divided metallic material in suspension, and subsequently

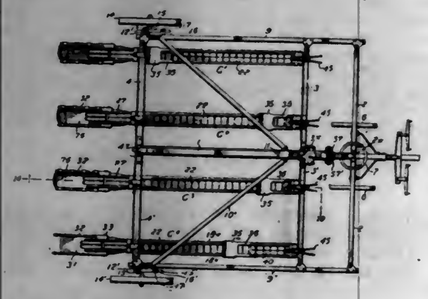
removing all of said sensitised coating not hardened by printing the master negative on said sensitized surface.

4. A method of producing sound records which consists in producing a photogram record of sound controlled light flashes which are inversely related to the sound waves, then printing said photogram record on the sensitized coating of a temporary film strip, then providing the printed sensitized surface with a permanent backing strip, and subsequently removing all of the sensitized coating not hardened in the printing step and also stripping the temporary film strip from the permanent backing.

5. A method of producing sound records which consists in producing a photogram record of sound controlled light flashes which are inversely related to the sound waves, then printing said photogram record directly on a sensitized metallic coating carried by a temporary film strip, then attaching a permanent backing strip to the hardened surface of the sensitized metallic coating, and subsequently removing all of the sensitized coating not hardened in the printing step, and also stripping the temporary film strip from the permanent backing.

[Claim 6 not printed in the Gazette.]

1,213,151. COTTON-HARVESTER. ERNEST PATRICK CAYO, Beeville, Tex. Filed Oct. 20, 1915. Serial No. 56,900. (Cl. 214—1.)



1. In a cotton harvesting device, a frame, a plurality of conveyers carried by said frame, said conveyers being adapted to enter between the rows of cotton plants, a movable seat carried by each conveyer, a receptacle at one end of the conveyer for receiving cotton, and means carried by the seat and adapted to engage a portion of the conveyer for operating the latter.

2. In a cotton harvesting device, a frame, a plurality of conveyers carried by said frame, said conveyers being adapted to enter between the rows of cotton plants, a track carried by each conveyer, a movable seat slidably supported on said track and arranged to move therealong, means carried by said seat and arranged to engage a portion of the conveyer for operating the latter, and a receptacle at the end of the conveyer for receiving cotton.

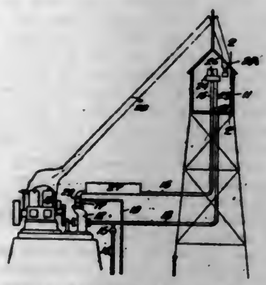
3. In a cotton harvesting device, a frame, a plurality of conveyers carried by said frame, said conveyers being adapted to enter between the rows of cotton plants, a track carried by each conveyer, a seat slidable along the track, and means carried by the seat and adapted to engage a portion of the conveyer for operating the latter when the seat is moving in one direction, the movement of the seat in the other direction being independent of the conveyer.

4. In a cotton harvesting device, a frame, a plurality of conveyers carried by said frame, each of said conveyers having an endless belt provided with cleats and said conveyers being adapted to enter between the rows of cotton plants, a movable seat carried by each conveyer, and a pawl pivotally connected to the seat and arranged to engage the cleats on said endless belt for moving the latter when the seat is moved in one direction, the movement of the seat in the other direction causing the pawl to ride idly over the seat.

5. In a cotton harvesting device, a frame, a plurality of conveyers suspended from said frame, said conveyers being adapted to enter between the rows of cotton plants, a track carried by each conveyer, a seat slidably disposed on said track and having an opening therein, an endless belt carried by each conveyer, cleats carried by said endless belt, and a pawl carried by said seat for engaging said cleats to move the endless belt when the seat is moved relatively to the frame.

[Claims 6 to 10 not printed in the Gazette.]

1,213,152. CONTROLLING MEANS FOR INTERNAL-COMBUSTION ENGINES. ALLISON R. CHAMBERS, New Glasgow, Nova Scotia, Canada. Filed Mar. 29, 1915. Serial No. 17,799. (Cl. 103—86.)



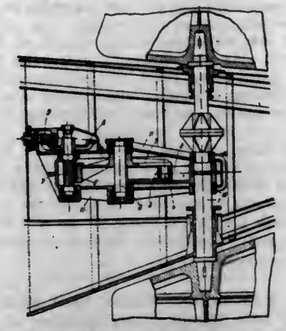
1. In a device of the character described, the combination with an elevated tank of an internal combustion motor, a pump connected thereto and arranged to force water into said tank, a pipe extending from the tank to the intake of the pump, a float controlled valve in the tank arranged to admit water from the tank to said pump when the water level reaches a predetermined point, whereby the pump will operate as a starting device for the motor, and means for closing said valve when the pump commences to function normally.

2. In a device of the character described, the combination with an elevated tank of an internal combustion motor, a pump connected thereto and arranged to force water into said tank, a pipe extending from the tank to the intake of the pump, a float controlled valve in the tank arranged to admit water from the tank to said pump when the water level reaches a predetermined point, whereby the pump will operate as a starting device for the motor, a low down tank in the discharge line of the pump arranged to receive the discharge of the pump functioning as a motor starter, and means for automatically draining the discharge line and low down tank between the periods of pump operation.

3. In a device of the character described, the combination with an elevated tank, of an internal combustion motor, a pump connected thereto, a discharge pipe from the pump extending nearly to the top of the tank, a pipe extending from the bottom of the tank to the intake of the pump, a float controlled valve in said latter pipe closable by flow of water through the discharge pipe, a low down tank in the discharge pipe for reception of water passed through the pump from said second pipe, means for draining the discharge pipe and low down tank during rest periods of the pump, and a float controlled device arranged to break the ignition circuit of the motor when water rises to a predetermined level in the overhead tank.

1,213,153. SUBMARINE STEERING APPARATUS. ANDRÉ CITROEN, Paris, France, assignor to Societe Anonyme Des Engrenages Citroen, Paris, France, a Corporation of France. Filed Dec. 19, 1913. Serial No. 807,761. (Cl. 114—16.)

1. In steering mechanism for ships and the like, the combination with a rudder shaft, of a frame mounted on the shaft, actuating mechanism for said shaft supported by the frame, and means to brace the frame and prevent the same from freely swinging about the axis of said shaft.



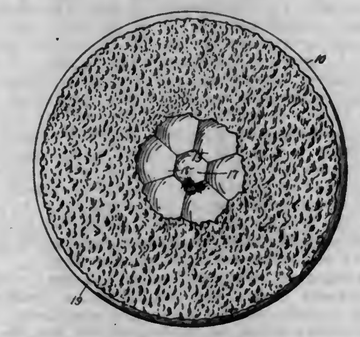
2. In steering mechanism for ships and the like, the combination with a rudder shaft, of a frame mounted on the shaft, actuating mechanism for said shaft supported by the frame, and means to yieldingly brace the frame and prevent the same from freely swinging about the axis of said shaft.

3. In combination with a submarine or the like, of a series of rudders for steering and submerging, and a motor for controlling each or all of said rudders separately or simultaneously.

4. In combination with a submarine or the like, of steering and submerging rudders, a motor for operating each or all of said rudders through their respective actuating means, said means comprising a main rudder shaft, means to impart relatively slow movements to the rudder shaft when the resistance offered thereby is relatively great and to impart faster movements to said rudder shaft when the resistance offered thereby is relatively small.

5. In combination with a submarine or the like, a series of steering and submerging rudders, a motor for operating each or all of said rudders through their respective actuating means, said means comprising a main rudder shaft, an auxiliary rudder shaft, means to impart a constant angular velocity to the auxiliary shaft, connections between the auxiliary shaft and the main rudder shaft to impart to the latter an inconstant angular velocity, the displacement being relatively slow when the rudder makes a relatively large angle with the axis of the ship and relatively fast when the rudder makes a relatively small angle with the axis of the ship, and means for locking said rudder in any desired position.

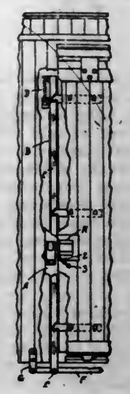
1,213,154. AUTOMOBILE-HEADLIGHT GLASS. HENRY D. COHEN, Newark, N. J. Filed July 27, 1916. Serial No. 111,546. (Cl. 240—48.4.)



1. A glazing for dimming headlights, comprising a relatively small central portion composed of a cluster of transparent plano-concave lenses and a surrounding annular translucent portion.

2. A glazing for dimming headlights comprising a relatively small central portion composed of a cluster of transparent plano-concave lenses arranged concentrically and constructed to form substantially a rosette, and a surrounding annular translucent portion.

1,213,155. FASTENER FOR CAR-DOORS. HARRY G. COLLIER, Muncie, Ind. Filed Oct. 28, 1916. Serial No. 128,159. (Cl. 70—102.)



1. A fastener for car doors comprising a vertical lock bar having the tooth and recess, means to sustain the lock bar yieldably at raised position, a latch lug carried by the door and that has a tooth and recess to engage the tooth and recess of the lock bar, and there being inclined meeting faces on the lock bar and latch lug so coöperatively adapted that when the lock bar is depressed the teeth and recesses are disengaged and the door is forced from the closed position.

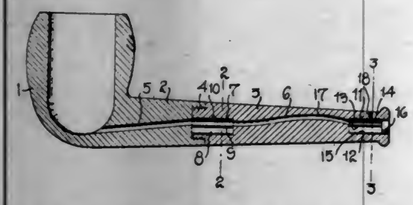
2. A fastener for car doors comprising a vertical lock bar having a tooth and recess, means to sustain the lock bar yieldably at raised position, a latch lug carried by the door and that has a tooth and recess to engage the tooth and recess of the lock bar and there being inclined meeting faces on the lock bar and latch lug so coöperatively adapted that when the lock bar is depressed the teeth and recesses are disengaged and the door is forced from the closed position, and means to check the lock bar against movement from the said engaged position.

3. A fastener for car doors comprising a vertical lock bar having the tooth and recess, a spring to sustain the lock bar at raised position, a latch lug carried by the door and that has a tooth and recess to engage the tooth and recess of the lock bar and there being inclined meeting faces on the lock bar and latch lug so coöperatively adapted that when the lock bar is depressed the teeth and recesses are disengaged and the door is forced from the closed position, and a spring actuated device to check the lock bar against movement and which is capable of being locked against release.

1,213,156. TOBACCO-PIPE. GEORGE W. CONLEY, Wheaton, Ill. Filed Mar. 27, 1916. Serial No. 87,035. (Cl. 131—12.)

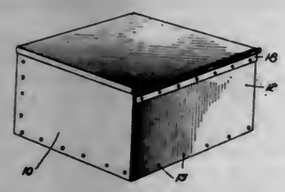
1. A tobacco pipe including a bowl and a stem, said stem being provided with a longitudinally extending passageway, said passageway being enlarged adjacent its ends, tubes arranged within said enlarged portions of the passageway, perforated partitions extending longitudinally of said tubes to provide passageways and receiving chambers, the openings of the perforate partition being each of a diameter less than the diameter of the passageway, said second named passageways being disposed in

communication with the first-mentioned passageway and said receiving chambers being located below said first-mentioned passageway.



2. A tobacco pipe including a bowl and stem, said stem being provided with a longitudinally extending passageway, said passageway being deflected upwardly intermediate its ends, one end of said stem being provided with an enlarged opening forming a continuation of the passageway, a tube arranged within said opening, a perforated partition arranged transversely of said tube to provide a passageway and a receiving chamber, the perforations of the partition being each of a diameter less than the diameter of the passageway, said passageway being arranged in communication with said first-mentioned passageway, said partition being terminated short of the outer end of the tube, a stopper arranged within said tube, said stem being provided with a transverse opening, said tube being provided with an opening to be alined with said transverse opening to provide an opening in one side of the stem for the passage therefrom of smoke passing through the passageways.

1,213,157. SHEET-METAL BOX. WILLIAM F. CONWAY, Chicago, Ill., assignor to Troy Laundry Machinery Company, Ltd., Chicago, Ill., a Corporation of New York. Filed May 29, 1914. Serial No. 841,691. (Cl. 220—11.)

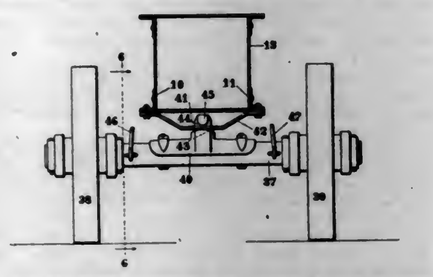


1. A dust and moisture proof sheet metal box comprising rigidly connected side and bottom walls, an outwardly and downwardly curved flange along the entire upper edge of one side wall, said flange lying wholly outside of the vertical plane of said side wall, a cover surrounding the upper edges of the side walls and having a downwardly and rearwardly curved flange along one entire edge thereof conforming to and surrounding said curved flange on said side wall, and a keeper strip secured along the entire length of the outside of said side wall curved outwardly and upwardly to extend around the curved flange on the cover to retain the same in engagement with the curved flange on the side wall and to serve as a stop to limit the opening movement of the cover.

2. A duct and moisture proof sheet metal box comprising rigidly connected side and bottom walls, an outwardly and downwardly curved flange along the entire upper edge of one side wall lying wholly outside of the vertical plane of said side wall, inwardly projecting flat flanges along the entire upper edges of the other side walls, and a cover surrounding the upper edges of the side walls and having a rearwardly and downwardly curved flange along one entire edge thereof conforming to and surrounding said curved flange on said side wall, whereby said cover when closed closely engages adjacent vertical and horizontal portions along the upper edges of all of the side walls.

3. A dust and moisture proof sheet metal box comprising rigidly connected side and bottom walls, an outwardly and downwardly curved flange along the entire upper edge of one side wall lying wholly outside of the vertical plane of said side wall, inwardly projecting flat flanges along the entire upper edges of the outer side walls, a cover surrounding the upper edges of the side walls and having a rearwardly and downwardly curved flange along one entire edge thereof conforming to and surrounding said curved flange on said side wall, and a keeper strip secured along the entire length of the outside of said side wall curved outwardly and upwardly to extend around the curved flange on the cover to retain the same in engagement with the curved flange on the side wall and to serve as a stop to limit the opening movement of the cover.

1,213,158. HAY-PRESS. JOSEPH DAIN, Moline, Ill., assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa, a Corporation of Iowa. Filed Mar. 21, 1914. Serial No. 826,265. (Cl. 100—19.)



1. A hay-press, comprising a frame having a compression chamber toward one end thereof, a compressing member movable into and out of said compression chamber, power-operated mechanism mounted on said frame toward the opposite end thereof, for operating said compressing member, and means supporting the compression chamber end of said frame so as to permit it to tilt laterally to maintain substantial alinement thereof with the end of the frame supporting the power-operated mechanism, for the purpose specified.

2. A hay-press, comprising a frame having a compression chamber toward one end thereof, a compressing member movable into and out of said compression chamber, power-operated mechanism mounted on said frame toward the opposite end thereof, for operating said compressing member, means supporting the power end of said frame and holding it against lateral tilting, and means supporting the compression chamber end of said frame so as to permit it to tilt laterally to maintain substantial alinement thereof with the end of the frame supporting the power-operated mechanism, for the purpose specified.

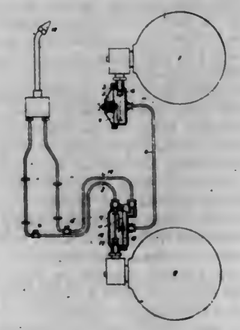
3. A hay-press, comprising a frame having a compression chamber toward one end thereof, a compressing member movable into and out of said compression chamber, a feeding device for feeding the hay into the compression chamber, power-operated mechanism mounted on said frame toward the end opposite the compression chamber end thereof, for operating said compressing member and said feeding device, and means supporting the compression chamber end of said frame so as to permit it to tilt laterally to maintain substantial alinement thereof with the end of the frame supporting the power-operated mechanism, for the purpose specified.

4. A hay-press, comprising a frame having a compression chamber toward one end thereof, a compressing member movable into and out of said compression chamber, a feeding device for feeding the hay into the compression chamber, power-operated mechanism mounted on said frame toward the end opposite the compression chamber end thereof for operating said compressing member and said feeding device, means supporting the power end of said frame and holding it against lateral tilting, and means supporting the compression chamber end of said frame so as to permit it to tilt laterally to maintain substantial alinement thereof with the power end of said frame, for the purpose specified.

5. A hay-press, comprising a frame having a compression chamber toward one end thereof, a compressing member movable into and out of said compression chamber, power-operated mechanism mounted on said frame toward the opposite end thereof, for operating said compressing member, means supporting the compression chamber end of said frame so as to permit it to tilt laterally to maintain substantial alinement thereof with the power end of the frame, for the purpose specified, and supporting means for the power end of said frame arranged to swing about a vertical axis and acting to prevent lateral tilting of the latter end of said frame.

[Claim 6 not printed in the Gazette.]

1,213,159. LIGHTING OR HEATING APPARATUS. GUSTAF DALÉN, Skärsätra, Lidingön, Stockholm, Sweden. Filed May 2, 1916. Serial No. 94,891. (Cl. 48,191.)



1. In apparatus for lighting or heating purposes a receiver for storing a gas under pressure, a gas pressure governor, connected with said gas receiver, a second gas pressure governor, a second receiver connected therewith for storing a gas under pressure, adapted to be mixed with the aforesaid gas, and means for making the pressure in said second governor dependent of the pressure in the first mentioned governor.

2. In apparatus for lighting or heating purposes a receiver for storing a gas under pressure, a gas pressure governor, connected with said receiver, a second gas pressure governor, a second receiver connected therewith for storing a gas under pressure, adapted to be mixed with the aforesaid gas, and a gas connection between said governors, adapted to make the pressure in said second governor dependent of the pressure in the first mentioned governor.

3. In apparatus for lighting or heating purposes, a receiver for storing a gas under pressure, a gas pressure governor, connected with said receiver, a second gas pressure governor, a second receiver connected therewith for storing a gas under pressure, adapted to be mixed with the aforesaid gas, the gas pressure in said second gas pressure governor being balanced by the pressure in the first mentioned governor only.

4. In apparatus for lighting or heating purposes, a receiver for storing a gas under pressure, a gas pressure governor, connected with said receiver, a second gas pressure governor, a second receiver connected therewith for storing a gas under pressure, the gas pressure in said second governor being balanced by the pressure in the first mentioned governor only, leading to a burner, and shutting off valves, inserted in said outlets at a place between the burner and the governors.

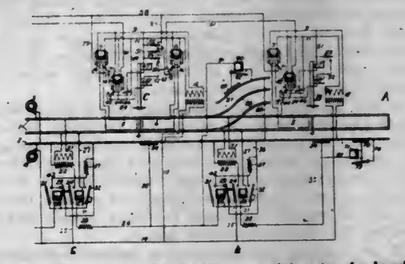
1,213,160. BREATHING-BAG. ROBERT HENRY DAVIS, London, England. Filed Jan. 13, 1915. Serial No. 2,045. (Cl. 128—13.)



1. A breathing bag composed of flexible material, and having a partition dividing the interior into two compartments in communication with one another at the lower part of the bag and a third flexible compartment adapted to contain a cooling agent, substantially as and for the purpose described.

2. A breathing bag composed of flexible material and having a partition dividing the interior into two compartments in communication with one another at the lower part of the bag and a third flexible compartment adapted to contain a cooling agent and located adjacent to one side of the breathing bag, substantially as described.

1,213,161. RAILWAY SIGNALING SYSTEM. ALBERT V. T. DAY, New Rochelle, N. Y., assignor, by mesne assignments, to Hall Switch & Signal Company, New York, N. Y., a Corporation of Maine. Filed Aug. 22, 1908. Serial No. 449,756. (Cl. 246—36.)



1. A traffic-controlling system comprising track circuits, means for energizing them, and means acting automatically to deënergize the track circuit in the portion of the line occupied by a train.

2. A traffic-controlling system comprising normally-deenergized track circuits, and means acting automatically to energize the track circuits successively ahead of a train moving through the line and to deënergize the track circuit at the point occupied by the train.

3. A traffic-controlling system divided into blocks, track circuits each occupying substantially the whole of a block, and means acting automatically to energize a block ahead of a train and to deënergize the block occupied by the train.

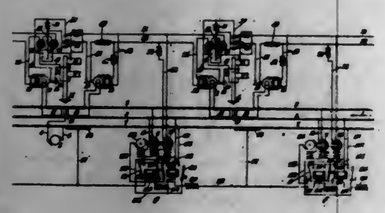
4. A traffic-controlling system comprising track circuits, and relays for controlling the track circuits each having two contact fingers responsive to currents of different characters, one contact finger controlling one track circuit and the other contact finger controlling an adjacent track circuit.

5. A traffic-controlling system comprising a track having continuously-conductive rails and cross-bonds consti-

uiting track circuits, traffic-controlling devices responsive to currents in the track circuits, and means, normally inactive, for energizing the track circuits, said means operating automatically, under control of a train to energize a track circuit in advance of the train without energizing the track circuit occupied by the train.

[Claim 6 not printed in the Gazette.]

1,213,162. TRAFFIC-CONTROLLING SYSTEM FOR RAILWAYS. ALBERT V. T. DAY, New Rochelle, N. Y., assignor to The Hall Switch and Signal Company, a Corporation of Maine. Filed Oct. 29, 1908. Serial No. 460,126. (Cl. 246—36.)



1. An electric traffic-controlling system for railways comprising a traffic-controlling device, electric means for controlling the traffic-controlling device comprising two relays of which one is responsive to alternating current only and the other to direct current only, a source of alternating current to energize one of said relays and a source of direct current for energizing the other relay, and a line circuit connecting the relays and said sources, the relays being in series in said circuit.

2. An electric traffic-controlling system for railways comprising a traffic-controlling device, electric controlling means therefor responsive to direct current, a source of such current, a line circuit connecting said means and said source, a relay controlling the line circuit and operatively responsive only to alternating current, and a source of alternating current connected with the line circuit, said relay being connected in the line circuit in series with the source of direct current so as to receive both direct current and alternating current while being operatively affected only by the latter.

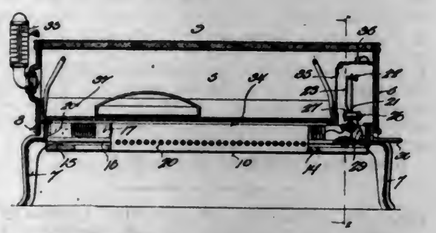
3. An electric traffic-controlling system comprising a track circuit, a source of current for energizing the track circuit, a line circuit, electric translating means responsive to current in the track circuit and operating intermittently to transmit a pulsating current through the line circuit, a traffic-controlling device, and electric translating means responsive to said pulsating current and controlling the traffic-controlling device.

4. An electric traffic-controlling system comprising a track circuit, a source of current for energizing the track circuit, a line circuit, a source of current for energizing the line circuit, a relay having two windings of which one is energized by the track circuit and the other by the line circuit, a circuit-breaker in the line circuit actuated by the relay, a traffic-controlling device, and electric translating means connected with the line circuit and controlling the traffic-controlling device, the relay, when both windings are energized, being operative to cause the circuit-breaker to interrupt the line circuit intermittently so as to cause an intermittent flow of current therein, and said electric translating means being operatively responsive only to such intermittent current.

5. An electric traffic-controlling system for railways comprising a track circuit, a traffic-controlling device, electric translating means controlling the traffic-controlling device and responsive to current in the track circuit, means for energizing the translating means through the track circuit, supplemental means for energizing the electric translating means, and electric controlling devices operating automatically to throw said supplemental energizing means into operation upon the approach of a vehicle toward a certain point in the railway and to throw said means out of operation after the vehicle passes said point.

[Claims 6 to 11 not printed in the Gazette.]

1,213,163. ELECTRIC STERILIZING-OVEN. NICHOLAS DEDRICK, Manitowoc, Wis., assignor to Carl H. Seeger, Manitowoc, Wis. Filed Feb. 5, 1916. Serial No. 76,275. (Cl. 219—35.)

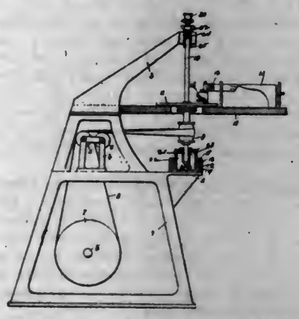


1. An electric sterilizing oven comprising a body formed of heat insulating material, a foraminous partition disposed horizontally in the body, and terminating at one end in an upstanding wall portion spaced from the adjacent end of the body to form a thermostat chamber, a heating member disposed below the partition and including a plurality of elements and thermostats in the chamber for controlling respective elements.

2. An electric sterilizing oven comprising a body including side and end walls, a cover and a bottom, an inwardly projecting horizontal flange at the lower portions of said side and end walls, a heating member resting against said flange and spaced from the bottom and from one end of the body, and the body being provided with openings between the heating member and bottom.

3. An electric sterilizing oven comprising a body portion including side and end walls and a cover, inwardly extending flanges carried by the lower portions of the walls, a pan shaped body member engaged in the bottom of the body to abut the flanges to form a closure for said bottom, a heating block carried by the bottom member and spaced from the bottom and sides thereof and engaging the flanges of the side walls and one end wall, and the sides and the adjacent end of the bottom pan member being provided with openings communicating with the heating block passages.

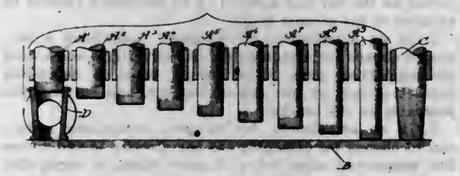
1,213,164. METHOD OF POLISHING DIAMONDS. GERRIT A. DE GRAAF, Bloomfield, N. J. Filed July 10, 1912. Serial No. 708,560. (Cl. 51—11.)



1. The process of polishing diamonds which consists in suitably coating the surface of a lapidary wheel adapted for polishing diamonds, speeding it past the stage of initial wobbling and then up to approximately 1900 revolutions per minute at which speed the wheel runs true and is capable of cutting diamonds in the ordinary manner, then increasing the speed until tremors are set up in the wheel so that diamonds can no longer be cut, then finally increasing the speed of the wheel to approximately 3000 revolutions per minute whereby the tremor is eliminated and the wheel will again cut diamonds and maintaining said high speed while bringing a diamond into contact with the surface of said wheel.

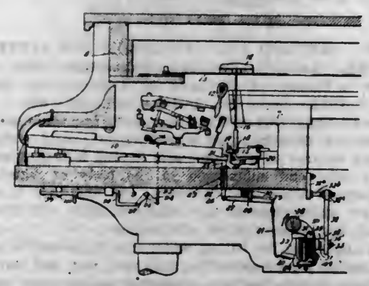
2. An improvement in the art of polishing diamonds which consists in preparing an abrasive surface of oil and diamond dust and moving the same at high velocity across the grain of a diamond to produce a facet thereon, said abrasive being moved at a velocity of not less than 7000 feet per minute.

1,213,165. METHOD OF TAPER-FINISHING METALLIC BODIES. WILLIAM W. DOOLITTLE, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 24, 1916. Serial No. 93,132. (Cl. 29—157.)



The herein described method of working the initial diametered taper cylindrical face of a cast body or the like to its finish taper diameter, which consists in subjecting the face to the progressive cutting action of a series of tools successively cutting into the stock at different depths in said face along lines diagonal to the planes of the initial and finish diameters, thereby leaving steps of uncut stock on said face, removing the body from one tool to another as a cut is taken, and dressing down the uncut stock on said face to the desired finish taper diameter.

1,213,166. ELECTRIC SELF-PLAYING GRAND PIANO. CHARLES W. DORRICOTT, Philadelphia, Pa., assignor to Electrelle Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 3, 1912. Serial No. 707,523. (Cl. 84—231.)



1. An electrically operated player for musical instruments comprising a plurality of levers, means for pivotally mounting the same upon the underside of the piano, striker rods connected with said levers and extending through the bottom of said piano into engagement with the key levers thereof, mechanisms for actuating said levers, and a flexible connection between each lever of the plurality of levers and an actuating mechanism.

2. An electrically operated player for musical instruments comprising striker rods for engaging the actuating elements of the instruments, a plurality of levers connected with said striker rods, a rail supporting said levers, actuating shoes, flexible connections between said levers and the actuating shoes, a power shaft for swinging said actuating shoes, and electrically operated means for forcing said actuating shoes into engagement with said power shaft.

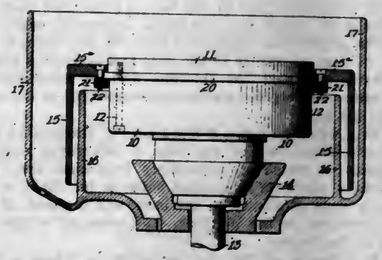
3. The combination with a piano casing, a hammer action mounted therein, and key levers for actuating said hammer action, of striker rods arranged to actuate said key levers, levers without the casing connected to said striker rods, actuating shoes, a flexible connection between each lever and an actuating shoe, a rotating shaft, and electromagnetic devices each supporting one of said shoes and adapted to move the same into engagement with said rotating shaft.

4. The combination with a piano casing, a hammer action mounted therein, and key levers for actuating said hammer action, of striker rods arranged to actuate said key levers, levers without the casing connected to said striker rods, actuating shoes, a flexible connection between each lever and an actuating shoe, a rotating shaft, electromagnetic devices including armatures upon which said shoes are pivotally mounted, and means for energizing said magnets to cause the engagement of the actuating shoes with the rotating shaft.

5. The combination with a piano casing, a hammer action mounted therein, and key levers for actuating said hammer action, of striker rods arranged to actuate said key levers and having a limited downward movement, levers connected to said striker rods, actuating shoes, a flexible suspending member between each lever and an actuating shoe to relieve said shoes of the weight of said key levers and associated parts, a rotating shaft, and electrically operated means for moving said actuating shoes into engagement with said shaft.

[Claims 6 to 11 not printed in the Gazette.]

1,213,167. MAGNETIC CHUCK AND CASING. ALDEN M. DRAKE, Worcester, Mass., assignor to Heald Machine Company, Worcester, Mass., a Corporation of Massachusetts. Filed Sept. 26, 1916. Serial No. 122,304. (Cl. 29—107.)



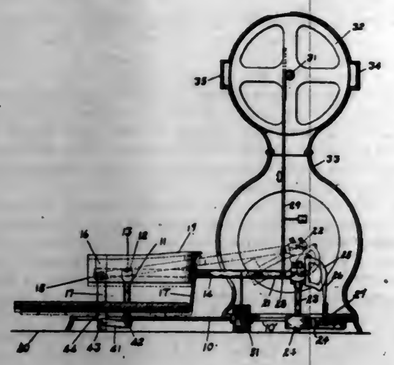
1. In combination, a magnetic chuck and a casing therefor, said chuck comprising a body member and a top plate suitably secured to each other, said top plate having a flange projecting outwardly therefrom at a point below the upper surface thereof, and said casing comprising a cover member encircling said top plate and engaging said flange and having a depending outer portion, and means to clamp said member firmly against said flange, whereby a tight joint is formed.

2. In combination, a magnetic chuck and a casing therefor, said chuck having a top plate with a flange below its upper surface, and said casing comprising a cover member having an inwardly projecting portion fitting the upper surface of said flange, a band engaging the lower surface of said flange, and means to draw said cover member and band firmly against the parallel faces of said flange, forming close contact therewith.

3. In combination, a circular magnetic chuck and a casing therefor, said chuck having a top plate with a flange projecting outwardly therefrom below its upper surface, and said casing comprising a cover member having an annular inwardly projecting portion engaging the upper and outer surfaces of said flange and having a

depending cylindrical outer portion spaced from said chuck, a band engaging the lower surface of said flange, and means to draw said annular portion and band firmly against said flange.

1,213,168. WEIGHING-SCALE. FRANK P. DUNN, Anderson, Ind., assignor, by mesne assignments, to Toledo Scale Company, Toledo, Ohio, a Corporation of New Jersey. Filed June 27, 1910. Serial No. 569,191. (Cl. 73—29.)



1. In a weighing scale, a low base 10, brackets 11, arising from either side of the base, a bifurcated beam 14 the limbs of which are separately fulcrumed upon said brackets, a platform suspended between the limbs of the beam in close proximity to the base and extending past the fulcrum, and an automatically adjustable counterpoise for the load connected to the beam and to the base.

2. In a weighing scale, a low base 10, brackets 11, arising from either side of the base, a bifurcated beam 14, the limbs of which are separately fulcrumed upon said brackets, a platform suspended between the limbs of the beam in close proximity to the base and extending beyond the latter and past the fulcrum, and an automatically adjustable counterpoise for the load connected to the beam and to the base.

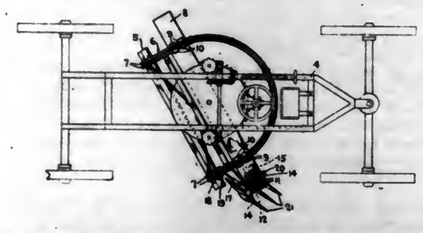
3. In a weighing scale, a low base 10, brackets 11 arising from either side of the base, a bifurcated beam 14 the limbs of which are separately fulcrumed upon said brackets, a platform suspended between the limbs of the beam in close proximity to the base, and a guard 19 rigidly connected to the platform and arranged within the limbs of the beam.

4. In a device of the class described, a frame, a scale beam, fulcra upon the frame upon which the scale beam is mounted, a goods receiving platform upon the beam at one side of the fulcra, a pendulum counterpoise wholly suspended from the beam at the other side of the fulcra, a segment secured to the counterpoise on the side thereof remote from the fulcrum for movement therewith, a strap passing over the curved edge of the segment and secured to the frame whereby movement of the beam causes the pendulum to swing in relation thereto and indicating mechanism and connections from the beam thereto, independent of the counterpoise.

5. In a device of the class described, a frame, beam supports mounted thereon, a beam upon the supports, a goods receiver upon the beam, one end of the beam being bifurcated, a pendulum mounted between the limbs of the bifurcation, a segment attached to the pendulum on the side thereof remote from the fulcrum for movement therewith to angularly adjustable relation thereto, a strap passing over the segment and connected to the frame and indicating mechanism and connections from the beam thereto, independent of the counterpoise.

[Claims 6 to 22 not printed in the Gazette.]

1,213,169. ATTACHMENT FOR ROAD-SCRAPERS. WILLIAM M. DYMOND, North Platte, Nebr. Filed Aug. 5, 1916. Serial No. 113,874. (Cl. 37—7.)



1. In an attachment for scrapers, comprising a bar, means for attaching the bar directly to and across the supporting arms of a scraper blade, and a cutter supported on the bar and adapted to be positioned thereby in advance of the scraper blade.

2. In an attachment for scrapers, comprising a bar, spaced clamps for attaching the bar directly to and across the supporting arms of a scraper blade, a depending bracket carried by one end of the bar, and cutter disks journaled on the bracket.

3. In an attachment for scrapers, comprising a bar, spaced clamps for attaching the bar directly to and across the supporting arms of a scraper blade, a depending bracket comprising spaced depending arms having shaft boxes and braces connected to the boxes, and a rotary cutting member mounted in the boxes.

4. In an attachment for scrapers, comprising a bar, spaced clamps for attaching the bar directly to and across the supporting arms of a scraper blade, a depending bracket comprising spaced depending arms having shaft boxes, a brace connecting one of the boxes to the bar, a brace connected to the other box and arranged to engage one of the scraper supporting arms, and rotary cutters mounted in the boxes.

5. The combination with a wheeled frame, of a scraper blade, spaced arms connected to the blade for supporting the same on the frame, a bar extending across the blade supporting arms, means for clamping the bar to the arms, and cutting means suspended from one end of the bar and disposed in advance of the forward end of the blade.

[Claim 6 not printed in the Gazette.]

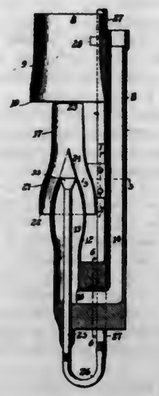
1,213,170. METHOD AND APPARATUS FOR LIFTING WATER. LEVI T. EDWARDS, Philadelphia, Pa., assignor to Edward A. Edwards, Bryn Mawr, Pa. Filed Apr. 1, 1915. Serial No. 18,444. (Cl. 103—84.)

1. In an apparatus for lifting water, the combination of a well, a delivery pipe extending into said well, a foot piece secured to said pipe and having a flaring unobstructed inlet end submerged in the body of water, a nozzle located below said foot-piece and arranged to discharge air under pressure into said foot piece and means to supply compressed air to said nozzle.

2. In apparatus for lifting water, the combination of a well, a delivery pipe extending into said well and having a foot piece terminating in a submerged unobstructed inlet, a nozzle located below said footpiece and arranged to discharge air under pressure into said delivery pipe and means to supply compressed air to said nozzle.

3. In apparatus for lifting water, the combination of a well, a delivery pipe extending into said well and having a foot piece terminating in a submerged unobstructed inlet, a nozzle located below said foot piece and arranged to discharge air under pressure into said delivery pipe and means exterior of said delivery pipe to supply compressed air to said nozzle.

4. In an apparatus for lifting water, the combination of a delivery pipe extending into a body of water, an inlet section secured to the lower end of said pipe having a flaring unobstructed inlet end, a nozzle provided with an outlet located below said inlet section and arranged to discharge air under pressure into said inlet section, and means to vary the size of said outlet, said means being operable above the level of the body of water.



5. In an apparatus for lifting water, the combination of a well, a delivery pipe extending into said well, an inlet section secured to the lower end of said pipe, a nozzle located below said inlet section and arranged to discharge air under pressure into said inlet section, and a mixing tube having a portion encircling said nozzle and having its discharge end located in alinement with said delivery pipe and in close proximity to the inlet of said inlet section.

[Claims 6 to 15 not printed in the Gazette.]

1,213,171. SCREW CONVEYER. OTTOMAR OSKAR ERFURTH, Teuchern, Germany. Filed Oct. 16, 1915. Serial No. 56,254. (Cl. 100—48.)

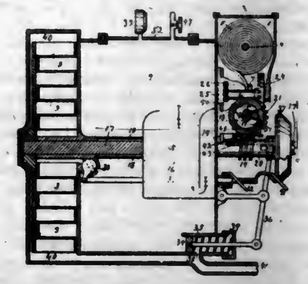


A screw conveyer comprising a shaft provided with a boss, the elements in the outer surface of which lie parallel to the axis of said shaft, said boss extending around and progressing along said shaft and increasing in radius from one end toward the other, and a helical band arranged on said boss.

1,213,172. INTERNAL-EXPLOSION ENGINE. WILLIAM ERWIN, Philadelphia, Pa. Filed Mar. 29, 1916. Serial No. 87,468. (Cl. 123—24.)

1. In an explosion engine or motor, a power generator, whose moving parts have a constant rotary motion, for containing and exploding an explosive solid, comprising the combination of a power generator chamber, a reel therein to support said explosive solid, rollers for feeding said explosive for explosion, a rotary divider for separating the individual charges for explosion and delivering them to the path of a sparking or exploding circuit, a sparking or exploding circuit which delivers its spark between two spark plugs, and a rotary circuit breaker operated by the generator shaft for timing the exploding spark.

2. In an explosion engine or motor, the combination of a power generator, whose moving parts have a constant rotary motion, for containing and exploding an explosive solid, with a pressure power chamber for storing the resulting gases, and for delivering them to the motor of the engine.



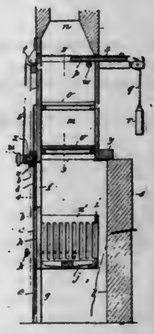
3. In an explosion engine or motor, the combination of a power generator, whose moving parts have a constant rotary motion, for containing and exploding an explosive solid, means for exploding said explosive solid in the generator, and a pressure power chamber for storing the resulting gases, and for delivering them to the motor of the engine.

4. In an explosion engine or motor, the combination of a rotary power generator for containing and exploding an explosive solid, means for exploding said explosive solid in the generator, a pressure power chamber for storing the resulting gases and delivering them to the motor of the engine, and generator operating gears automatically disconnected by excess pressure in said pressure chamber, said gears being adjustable to operate at various pressures.

5. In an explosion engine or motor, the combination of a rotary power generator for containing and exploding an explosive solid, means for exploding said explosive solid in the generator, a pressure power chamber for storing the resulting gases and delivering them to the motor of the engine, generator operating gears automatically disconnected by excess pressure in said pressure chamber, said gears being adjustable to operate at various pressures, and a fluid pressure turbine or rotary motor operated by the pressure in said pressure chamber.

[Claims 6 to 11 not printed in the Gazette.]

1,213,173. FIREPLACE. JAMES D. EVANS, Montgomery, Ala. Filed Apr. 17, 1916. Serial No. 91,619. (Cl. 126—120.)



1. In a heating appliance of the class set forth, a fireplace front wall, a grate behind the same, said wall having an opening above and also an opening below the grate, a heating drum or flue above the grate, a damper for this drum or flue, a pair of connected doors adapted to simultaneously close the openings in said front wall above the grate and below the same, and means connecting said door structure with the damper, whereby they may be simultaneously operated.

2. In a heating appliance of the class set forth, a fireplace front wall, a grate behind the same, said wall having an opening above and also an opening below the grate, a heating drum or flue above the grate, a damper for this drum or flue, a pair of connected doors adapted to simultaneously close the openings in said front wall above the grate and below the same, and means connecting said door structure with the damper whereby they may be simultaneously operated, said means embodying devices whereby the damper may be adjusted to closed or open position independently of the movement of the doors.

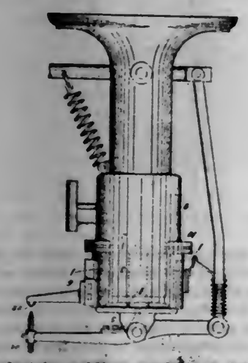
3. In a heating appliance of the class set forth, a front wall, a grate behind the same, an opening being provided in the front wall above the grate and another opening being provided in the front wall below the grate, a pair of connected doors adapted to simultaneously open or close said openings, the proportions of the parts being such that the upper opening may be entirely closed without entirely closing the lower or draft opening.

4. In a heating appliance of the class set forth, a front wall having a pair of separated draft openings, a grate supported behind the front wall at a point between said openings, guideways on the front face of said front wall, a door structure working up and down in said guideways and consisting of a pair of vertical side bars connected by two separated doors, one adapted to coöperate with the upper opening in the front wall and the other adapted to coöperate with the lower opening in the front wall, a heat flue structure above the door structure, a damper at the upper end of this heat flue structure adapted to normally open by gravitation, a chain connecting the damper to the upper end of the door structure whereby the damper structure tends to counterbalance the door structure and whereby also when the door structure is raised to open the draft openings the damper normally opens to a corresponding degree.

5. In a heating appliance of the class set forth, a front wall having a pair of separated draft openings, a door structure slidably mounted on this wall and embodying a pair of separated doors adapted to control said openings, a grate mounted behind the front wall in a position between said openings, a heat flue or drum above the door structure, a damper at the upper end of the heat flue normally tending to open, a chain connecting the damper to the upper end of the door structure, and means whereby the effective length of this chain may be shortened or lengthened to thereby permit the damper to be operated independently of the door structure and whereby also the damper tends to counterbalance the door structure and hold it in its adjusted position.

[Claims 6 and 7 not printed in the Gazette.]

1,213,174. ELECTRIC WELDING-MACHINE. PETER FÄSZLER, Berlin-Friedenau, Germany. Filed July 7, 1915. Serial No. 38,449. (Cl. 219—13.)



1. In an electric welding machine a transformer, the protecting case of said transformer consisting of parts of electrically non-active material, said parts forming the greater part of the transformer case, said case completed to a fully closed case by parts of the secondary coil of the transformer by these filling up the intervals between the said non-active parts.

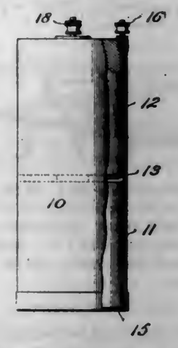
2. In an electric welding machine a transformer, the protecting case of said transformer consisting of jacket-forming parts of electrically non-active material, said parts forming the greater part of the transformer case, said case completed to a fully closed case by parts of the secondary coil of the transformer by these filling up the intervals between the said jacket-forming parts.

3. In an electric welding machine a transformer, the protecting case of said transformer consisting of jacket-forming parts of electrically non-active material extending upward from the base of the welding machine, said parts forming the greater part of the transformer case, said case completed to a fully closed case by parts of the secondary coil of the transformer by these filling up the intervals between the said jacket-forming parts.

4. In an electric welding machine a transformer, the protecting case of said transformer consisting of two jacket-forming parts of electrically non-active material, said parts forming the greater part of the transformer case and leaving two gaps, said two gaps filled up by the outer parts of the two-conductor secondary coil completing the said jacket-forming parts to a fully closed transformer jacket.

5. In an electric welding machine a transformer, the protecting case of said transformer consisting of one integral jacket-forming part of electrically non-active material extending through three quarters of the circumference, said part forming the greater part of the transformer case by leaving one gap, said gap filled up by the outer part of the single conductor secondary coil completing the said jacket-forming part to a fully closed transformer jacket.

1,213,175. PORTABLE ELECTRIC BATTERY. ISIDOR FEETMAN, New York, N. Y. Filed Dec. 16, 1915. Serial No. 67,278. (Cl. 204—53.)



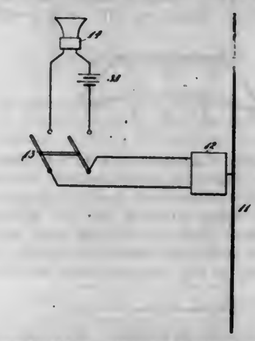
1. A portable battery comprising in combination a group of superposed cells the lowermost of which is bare while the others carry a suitable external insulation, a removable conducting plate having a binding post at one end and fitting closely against all of said cells, and an external insulating casing snugly fitting said cells and plate.

2. A portable battery comprising in combination a group of superposed cells the lowermost of which is bare while the others carry a suitable external insulation, a removable conducting plate curved to fit said cells and extending along the same, a slotted binding post fixed to one end of said plate and straddling the edge of the uppermost cell, and an external insulating casing snugly fitting said cells and plate.

3. A portable battery comprising in combination a group of superposed cells the lowermost of which is bare while the others carry a suitable external insulation, a removable conducting plate curved to fit said cells, extending along the same and having a retaining ledge extending under the edge of the lowermost cell, a binding post at the top of said plate adapted so to engage the edge of the top cell as to confine the cells between it and said ledge, and an external insulating casing snugly fitting said cells and plate.

4. As an article of manufacture a removable connecting element for batteries comprising a cylindrically curved plate having an internal ledge at one end and a binding post at the other end provided with a slot adapted to straddle the edge of a battery cell of the general type described.

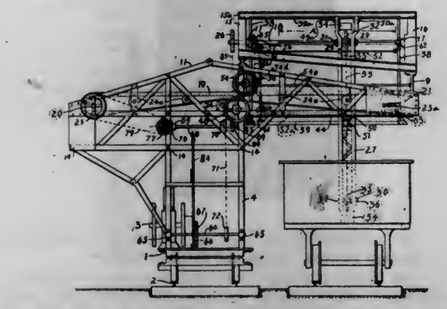
1,213,176. APPARATUS FOR PHONOGRAPH-KINETOSCOPES. REGINALD A. FESSENDEN, Brookline, Mass. Filed June 27, 1916. Serial No. 106,247. (Cl. 179—1.)



1. A loud-speaking telephone having its diaphragm arranged as a kinetoscopic screen.

2. Means for producing sound in an inclosure adapted to contain an audience, comprising a loud speaking telephone having a diaphragm of the same order or dimensions as the cross section of said inclosure.

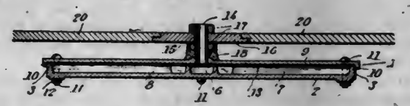
1,213,177. CAR-UNLOADER. ROBERT G. FLEMING, San Jose, Cal. Filed Dec. 2, 1915. Serial No. 64,707. (Cl. 193—3.)



1. In a car unloader, the combination with a support, an arm extending from said support, a conveyer operatively positioned in said arm, an elevator operatively attached to said arm and longitudinally adjustable with relation thereto and pivotally adjustable in a plane perpendicular to said arm, of means for effecting said longitudinal adjustment, said means comprising a pivotally mounted frame adapted to move with said elevator in the pivotal adjustment thereof, one or more cables attached to said elevator and operating over pulleys attached to one side of said frame and pulleys mounted on a shaft positioned near the opposite end of said frame, and means for manually operating said shaft.

2. In a car unloader, the combination of a support, an arm extending from said support, a conveyer operatively positioned in said arm, an elevator operatively attached to said arm and longitudinally adjustable with relation thereto and pivotally adjustable in a plane perpendicular to said arm, a pair of auxiliary arms positioned at right angles to said arm, a shaft operatively positioned in said auxiliary arms and having driving means connected thereto, a frame pivotally mounted on said shaft and adapted to move with said elevator in the pivotal adjustment thereof, means for pivotally adjusting said frame and said elevator, and means for longitudinally adjusting said elevator in said frame, said elevator being pivotally mounted on said shaft and being provided with a plurality of rollers adapted to engage the top of said frame and a plurality of rollers adapted to engage the bottom of said frame.

1,213,178. AIR-HEATER. WILLIAM D. FLEMING, East Downingtown, Pa. Filed July 21, 1914. Serial No. 852,237. (Cl. 126—15.)



1. In a preheater for range stoves, the combination with a removable lid for the stove, of a preheater consisting of separated top and bottom walls, side walls forming with the top and bottom walls an air chamber, means for dividing the chamber into substantially serpentine passages, and a central inlet tube bolted to the lid and connected to the top plate of the preheater, between the lid and upper oven wall, the central tube forming the support for the preheater and whereby the heat and flames may engage all sides, top and bottom of the preheater, and one of the side walls of said preheater being provided with outlet openings.

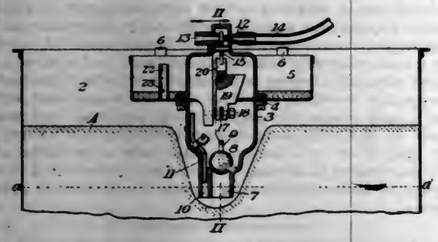
2. A preheater for stoves comprising a base including a plate having an edge wall rising vertically therefrom, a cover plate secured upon such wall, the space between the base plate and the cover plate being divided by a series of longitudinal and transverse partitions to form a central chamber and a tortuous passage on each side of the central chamber, said tortuous passage including channels extending adjacent to and co-extensive with the length of the sides of the edge wall, the tortuous passage on one side of the central chamber open to said central chamber and also to the other edge channel, the edge wall adjacent one of the channels being formed with horizontally arranged openings communicating with the said channel and the upper portion of the fire box of said stove, and a hollow connector extending from the cover and detachably secured to one of the lids of said stove and for spacing said cover plate from the undersurface of the top wall of the stove and constituting the support for the preheater, said connector communicating at one end with the atmosphere adjacent the top of the stove and at its remaining end with the central chamber.

1,213,179. WATER-AGITATOR FOR ICE-FREEZING APPARATUS. JAMES E. FLITCROFT, Pittsburgh, Pa., assignor to P. Wall Manufacturing Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 4, 1915. Serial No. 25,692. (Cl. 261—3.)

1. A water agitating device, comprising a receptacle having a water inlet and a water outlet, an air inlet and an air outlet in alinement with each other, means for continuously supplying air under pressure to said inlet, and means for intermittently opening and closing the air outlet for alternately creating suction and pressure within said receptacle, substantially as described.

2. A water agitating device, comprising a receptacle adapted for support on an ice freezing can and having a water inlet and outlet arranged to communicate with the interior of the can below the water level thereof, an air inlet and an air outlet in alinement with each other, means for continuously supplying air under pressure to said inlet, and means for intermittently opening and closing the air outlet for creating alternately suction

and pressure within said receptacle, substantially as described.



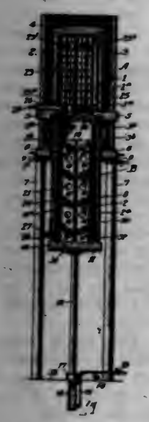
3. A water agitating device, comprising a closed chamber having a water inlet opening and a water outlet opening, means for creating alternately suction and pressure within said chamber, and a water receptacle having a connection with the interior of said chamber, substantially as described.

4. A water agitating device, comprising a closed chamber having a water inlet opening and a water outlet opening, means for creating alternately suction and pressure within said chamber, a water receptacle having a connection with the interior of said chamber, and also having an overflow outlet, substantially as described.

5. A water agitating device, comprising a closed chamber having a valved water inlet and a water outlet, an air pipe or tube extending within the outlet and upwardly within the chamber, and means for alternately creating a suction and pressure within said chamber, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

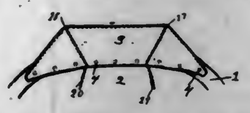
1,213,180. RECOVERY OF ZINC. CHARLES H. FULTON, Cleveland, Ohio, assignor to David B. Jones, Chicago, Ill. Filed July 17, 1916. Serial No. 109,724. (Cl. 204—64.)



1. The herein described method of recovering zinc, which consists in (1) mixing the ground and calcined ore with a reducing agent and a binder of such a character and in such proportions as will cause briquets formed from such mixture to maintain their form and volume during the process of distillation, (2) forming such ore mixture into compact briquets under pressure, (3) preheating such briquets to drive off the volatile contents of the binder and convert the latter into coke, (4) interposing said briquets as a continuous resistor between the electrodes of a closed electric furnace and passing a current of electricity through them to heat them to a distilling temperature, and (5) recovering the zinc from the zinc vapor evolved by the distillation of the briquets.

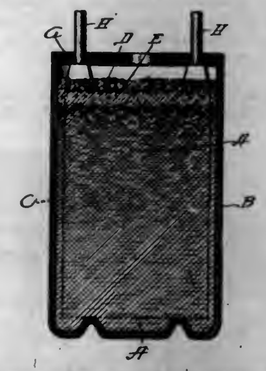
2. The herein described method of recovering zinc, which consists in (1) mixing the ground and calcined ore with pulverized coke and with a carbonaceous binder such as pitch in such proportions as will cause the briquets formed from such mixture to maintain their form and volume during the process of distillation, (2) forming such ore mixture into compact briquets under pressure, (3) preheating such briquets to drive off the volatile contents of the binder and convert the latter into coke, (4) interposing said briquets as a continuous resistor between the electrodes of a closed electric furnace and passing a current of electricity through them to heat them to a distilling temperature, and (5) recovering the zinc from the zinc vapor evolved by the distillation of the briquets.

1,213,181. GARMENT. NORMAN GROSS, Hartford, Conn. Filed Jan. 2, 1915. Serial No. 270. (Cl. 2—62.)



A sweater collar comprising an intermediate section and approximately triangular end sections, the side edges of the intermediate section converging inwardly and with the bottom edge being selvaged, the end sections being selvaged along their inner and bottom edges and the selvaged inner edges of the end sections being secured respectively by stitching to the selvaged sides of the intermediate section.

1,213,182. STORAGE BATTERY. WILLIAM GARDINER, Chicago, Ill. Filed May 22, 1915. Serial No. 29,896. (Cl. 204—29.)



1. The composition of matter consisting of sulfuric acid, sodium silicate, infusorial earth and water.

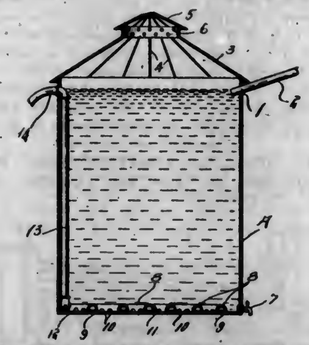
2. The herein described composition of matter consisting proportionately of a solution of sulfuric acid and water of about 1.300 specific gravity, and a solution of one-half pint of water, two ounces of sodium silicate and from four to eight ounces of infusorial earth.

3. A non-flowing electrolyte for storage batteries consisting of sulfuric acid, water, sodium silicate and infusorial earth in combination.

4. In a storage battery, a non-flowing electrolyte, comprising a congealed solution of sulfuric acid, sodium silicate, infusorial earth and water, a porous layer of material thereon superposed on and in intimate contact with said electrolyte, and a quantity of absorbent material on said porous layer.

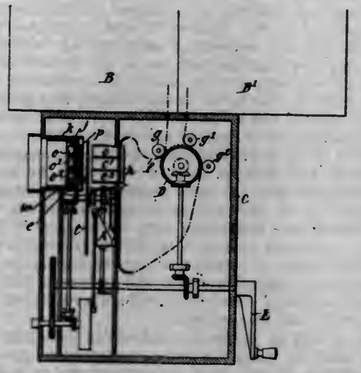
5. An electrolyte for storage batteries consisting of sulfuric acid and water of about 1.300 specific gravity, infusorial earth and sodium silicate all consolidated together in a congealed mass of the consistency of jelly.

1,213,183. TANK. CLIFFORD E. GARTRELL, Wadsworth, Tex. Filed July 31, 1913. Serial No. 782,268. (Cl. 210—3.)



In an apparatus of the class described, the combination with a tank having an inlet pipe adjacent the top thereof and a discharge valve at the bottom thereof; of a coil pipe D-shaped in cross section with the flat portion of the D resting upon the bottom of the tank, said pipe being provided with a series of perforations in the side walls at the junction of said side walls with the flat portion of the pipe, and a vertical discharge pipe extending upward from the D-shaped pipe and discharging at a point adjacent the top of the tank.

1,213,184. APPARATUS FOR TAKING CINEMATOGRAPHIC VIEWS IN COLORS. LÉON GAUMONT, Paris, France, assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed July 26, 1913. Serial No. 781,367. (Cl. 88—16.4.)



1. In an apparatus for taking cinematographic pictures upon a single film by the three-color process, the combination, of an inclosure for a sensitized film, an optical system comprising three objectives constituting a unit or whole mounted removably in the apparatus and adapted to furnish pictures equal in size on the film, guiding means for said unit adapted to hold said unit in such position that a plane passing through the optical axes of the three objectives shall be parallel to the plane in which the film is displaced at the film gate, means for simultaneously centering the three objectives with respect to the object, or portion of the object and the image which it is desired to photograph on the film, and means for simultaneously focusing the three objectives.

2. In an apparatus for taking cinematographic pictures upon a single film by the three color process, the combination, of an inclosure for a sensitized film, an optical system constituting a unit or whole adapted to furnish pictures equal in size upon the film and comprising three objectives, a common removable plate, on which said objectives are fixed, three screens respectively corresponding to said objectives and adapted to move therewith, a slideway adapted to hold said unit in such position that a plane passing through the optical axes of the three objectives shall be parallel to the plane in which the film is displaced at the film gate, means for simultaneously centering the three objectives with respect to the object, or portion of the object and the image which it is desired to photograph on the film, and means for simultaneously focusing the said three objectives.

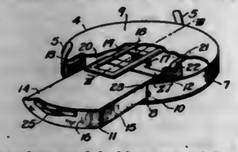
3. In an apparatus for taking cinematographic pictures upon a single film by the three-color process, the combination of an inclosure for a sensitized film, an optical system constituting a unit or whole adapted to furnish pictures equal in size upon the film and comprising three objectives, three corresponding screens in line with the objectives, a common plate upon which said objectives are fixed, said plate having one side face dressed parallel with the plane passing through the axes of the three objectives, a frame upon which the plate is detachably fixed by means of screws passing through horizontally ovalized holes in the said plate; vertical slideways adapted to receive the sides of the frame one of which slideways presents a portion against which the dressed face of the plate bears, this portion being dressed absolutely parallel with the plane in which the film is displaced at the film gate while the other slideway permits of a certain amount of play between itself and the said plate; means for vertically moving said frame in said slide-ways in order to simultaneously center the three objectives with respect to the object, or portion of the object and the image which it is desired to photograph on the film, and means for simultaneously focusing the three objectives.

4. In an apparatus for taking cinematographic pictures upon a single film by the three-color process, the combination of an inclosure for sensitized film, an optical system forming a unit or whole adapted to furnish pictures equal in size upon the film, and comprising three objectives, three corresponding screens in line with the objectives, a common plate upon which said objectives are fixed, said plate having one side dressed parallel with the plane which passes through the axes of the three objectives, a frame upon which the plate is detachably fixed by means of screws passing through horizontally ovalized holes in the said plate, vertical slideways adapted to receive the sides of the frame one of the sides of said slideways presenting a portion against which the dressed face of the plate bears, this portion being itself dressed perfectly parallel with the plane in which the film is displaced at the film gate, while the other slideway permits of a certain amount of play between itself and the said plate, a rack integral with one of the sides of the frame, a pinion meshing with this rack for sliding the frame in the slideway and simultaneously centering the three objectives on the film, a flexible shaft passing through the fitting carrying the objectives and the casing of the apparatus for operating the said pinion from the exterior by means of a knob, and means for simultaneously focussing the three objectives.

5. In an apparatus for taking cinematographic pictures upon a single film by the three color process, the combination of an inclosure for a sensitized film, an optical system comprising three objectives forming a removable unit or whole adapted to furnish pictures of equal size upon the film, a socket in which said unit is mounted, a sleeve fitting in which said socket is adapted to slide, guiding means for said unit adapted to hold said unit in such position that a plane passing through the optical axes of the three objectives shall be parallel with the plane in which the film is displaced at the film gate, means for simultaneously centering the three objectives, of a rack integral with the said socket which slides in said sleeve or fitting, and a pinion meshing with the said socket for causing the socket to slide in said sleeve or fitting and simultaneously focus the said three objectives.

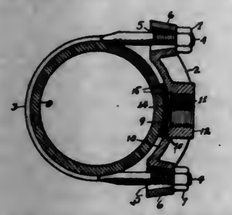
[Claims 6 to 8 not printed in the Gazette.]

1,213,185. MEMORANDUM-PAD HOLDER FOR DESK-TELEPHONES. JOHN S. GEE, Kansas City, Mo. Filed Oct. 22, 1915. Serial No. 57,269. (Cl. 211—7.)



A memorandum pad holder comprising a housing forming a side wall cut away to form an opening and having spacing lips at the edges of the opening turned into the chamber to provide guide and gripping members, and a tray slidable within the opening with its edges yieldingly gripped by said lips.

1,213,186. CLAMP AND GASKET. JOSEPH H. GLAUBER, deceased, Cleveland, Ohio, by The Citizens Savings and Trust Co., executor, Cleveland, Ohio. Filed Mar. 29, 1915. Serial No. 17,899. (Cl. 137—73.)



1. In a service connection, the combination of a clamping saddle having a curved seat and recesses at the sides thereof, with a gasket having lugs projected into said recesses to hold the gasket from displacement.

2. In a service-connection, a clamping saddle having a curved seat and open projections at the sides of said seat, in combination with a gasket having lugs projected at an angle to the seating plane of the gasket and adapted to extend into said open projections.

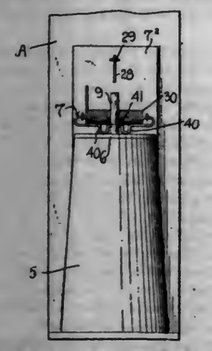
3. In a service-connection, a saddle and clamping means therefor, said saddle having open ears transversely thereof at its middle portion, in combination with a gasket having integral lugs projected in slidable engaging relations with said open ears.

4. In a service-connection, a saddle having a curved seat, in combination with a gasket riveted to said saddle opposite said seat.

5. In a service-connection, a saddle having a curved seat, in combination with a gasket permanently affixed to said saddle in movable engaging relations with said seat.

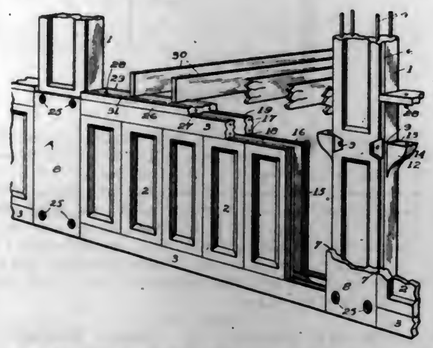
[Claims 6 to 15 not printed in the Gazette.]

1,213,187. CHURN. JAMES F. HADDAN, Doerun, Ga. Filed Apr. 1, 1916. Serial No. 88,383. (Cl. 217—81.)



A device of the character described comprising a body, a support positioned adjacent the body, a cover for the body, a plate engaged with the support and capable of vertical adjustment in a direction toward or from the body, a spring carried by the plate and including a loop portion provided with extensions adapted to engage with the cover to hold the cover in engagement with the body, a portion of the loop intermediate the extensions being disposed inwardly, and a hook member secured to the upper portion of the plate and adapted to engage the inwardly extended portion of the loop for holding the spring in an inoperative position relative to the cover.

1,213,188. BUILDING CONSTRUCTION. FRANK R. HAHN, Decatur, Ill. Filed Jan. 17, 1916. Serial No. 72,453. (Cl. 72—16.)



1. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, and assembling units having locking means adapted to engage the bolt, rod or bar in said sockets.

2. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, and assembling units in the form of elongated bars, their ends adapted to fit in the grooves in said supporting studs or standards and having locking means adapted to engage the bolt, rod or bar in said sockets, said assembling units being grooved and ribbed to interlock with said tiles or blocks.

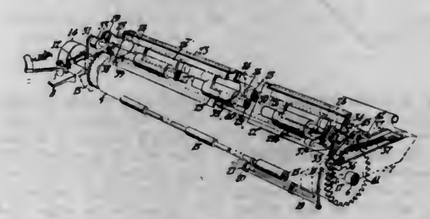
3. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, and assembling units having locking means adapted to engage the bolt, rod or bar in said sockets, said locking means being in the form of a pivoted hook.

4. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, and assembling units having locking means adapted to engage the bolt, rod or bar in said sockets, said supporting studs or standards having projecting brackets or supports, and stringer members supported thereon for supporting joists.

5. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, and assembling units having locking means adapted to engage the bolt, rod or bar in said sockets, said supporting studs or standards having projecting brackets or supports, and stringer members supported thereon for supporting joists, said stringer members being ribbed on one side and grooved on the other to interlock with said other parts.

[Claims 6 to 9 not printed in the Gazette.]

1,213,189. TYPE-WRITING MACHINE. FREDERICK A. HART, Newark, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Mar. 30, 1915. Serial No. 17,998. (Cl. 197—138.)



1. The combination with a rotary platen and means cooperating therewith to feed a work-sheet over the platen, of a work-sheet-feeding couple comprising feed rolls at the delivery side of the platen to engage the work-sheet at a point in advance of the printing line, a squaring gage located in advance of said couple and against which the leading edge of the work-sheet may be set to square the sheet with reference to the printing line on the platen, a paper-supporting and squaring table on which the forward end of the sheet is supported while being adjusted to said gage, means to separate said feed rolls to permit said adjustment of the work-sheet, and means to automatically withdraw the squaring gage from the path of the work-sheet when said rolls are brought into gripping engagement with the work-sheet.

2. The combination with a rotary platen and work-sheet-feeding means coöperating therewith to advance work-sheets over the platen past the printing line, the printing line being in advance of said feeding means, of a pair of feed rolls at the delivery side of the platen, means to separate said rolls to permit the adjustment of the work-sheets therebetween, a gage located beyond said rolls in position to be engaged by the leading edges of the work-sheets, and means to drive said rolls from the platen at the surface speed of the platen and thereby assist in advancing the work-sheets, said rolls operable to positively feed a work-sheet and maintain it in alinement on the platen when the bottom edge of the work-sheet has passed beyond the said first-mentioned feeding means, thereby enabling the printing to be continued and the alinement of the work-sheet on the platen maintained until the printing has reached the bottom of the work-sheet.

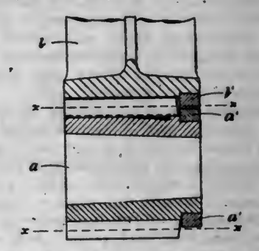
3. The combination with a rotary platen and work-sheet-feeding means coöperating therewith to advance work-sheets over the platen past the printing line, the printing line being in advance of said feeding means, of a pair of feed rolls at the delivery side of the platen, means to drive said rolls from the platen at the surface speed of the platen and thereby assist in advancing the work-sheets, said rolls operable to positively feed a work-sheet and maintain it in alinement on the platen when the bottom edge of the work-sheet has passed beyond the said first-mentioned feeding means, thereby enabling the printing to be conttinued and the alinement of the work-sheet on the platen maintained until the printing has reached the bottom of the work-sheet, and a paper-table extending between said feed rolls and the platen and on which the work-sheets are supported and guided.

4. The combination with a rotary platen and work-sheet-feeding means coöperating therewith to advance work-sheets over the platen past the printing line, the printing line being in advance of said feeding means, of a pair of feed rolls at the delivery side of the platen, means to drive said rolls from the platen at the surface speed of the platen and thereby assist in advancing the work-sheets, said rolls operable to positively feed a work-sheet and maintain it in alinement on the platen when the bottom edge of the work-sheet has passed beyond the said first-mentioned feeding means, thereby enabling the printing to be continued and the alinement of the work-sheet on the platen maintained until the printing has reached the bottom of the work-sheet, a paper-table extending between said feed rolls and the platen and on which the work-sheets are supported and guided, and a squaring gage for the leading edge of the work-sheet projecting past the surface of the table into the path of the sheet to enable the sheet to be squared with relation to the printing line while the sheet is supported on said table.

5. The combination with a rotary platen and work-sheet-feeding means coöperating therewith to advance work-sheets over the platen past the printing line, the printing line being in advance of said feeding means, of a pair of feed rolls at the delivery side of the platen, means to drive said rolls from the platen at the surface speed of the platen and thereby assist in advancing the work-sheets, said rolls operable to positively feed a work-sheet and maintain it in alinement on the platen when the bottom edge of the work-sheet has passed beyond the said first-mentioned feeding means, thereby enabling the printing to be continued and the alinement of the work-sheet on the platen maintained until the printing has reached the bottom of the work-sheet, a paper-table extending between said feed rolls and the platen and on which the work-sheets are supported and guided, a squaring gage for the leading edge of the work-sheet projecting past the surface of the table into the path of the sheet to enable the sheet to be squared with relation to the printing line while the sheet is supported on said table, said feed rolls being located between the squaring gage and the printing line on the platen, the line of contact between said rolls being substantially in the plane of the surface of said table, means for separating said rolls to permit adjustment of the sheet, and a connection between said last-named means and the gage for automatically throwing the gage out of the path of the work-sheet when the rolls are brought together to feed the work-sheet.

[Claims 6 to 28 not printed in the Gazette.]

1,213,190. TOOTHED GEARING. ERNEST HATTON, Killingworth, England. Filed July 12, 1915. Serial No. 39,471. (Cl. 74—41.)

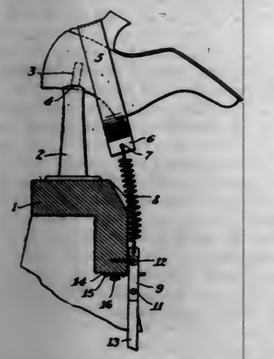


1. Toothed garing wherein the pinion and the wheel are respectively formed or provided with cylindrical contact

surfaces non-coincident with the pitch circle, substantially as and for the purpose set forth.

2. Toothed gearing wherein the pinion or the wheel is formed or provided with a radially extending collar, and the wheel or pinion with a surface on which the said collar rolls and slides, such contact surface being non-coincident with the pitch-circle, substantially as and for the purpose set forth.

1,213,191. METHOD OF ATTACHING WOODEN OR LOUIS HEELS. GROVER C. HAUSER and JOHN H. DOLAN, Rochester, N. Y. Filed Mar. 10, 1916. Serial No. 83,417. (Cl. 12—147.)



1. A method of attaching wooden or Louis heels to shoes comprising applying to the rear face of the heel a pressure which acts in a direction to force the heel simultaneously toward the toe and also toward the heel seat to produce substantially equal pressure of the heel on the heel seat throughout the entire area of the seat.

2. A method of attaching wooden or Louis heels to shoes comprising applying to the rear face of the heel a resilient pressure which acts in a direction to force the heel simultaneously toward the toe of the shoe and also toward the heel seat to produce substantially equal pressure on the heel seat throughout the entire area of the seat.

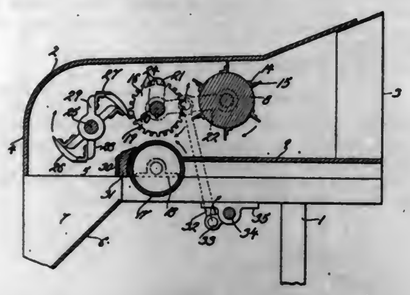
3. A method of attaching wooden or Louis heels to shoes comprising applying a resilient pressure to the rear face of the heel to force the heel simultaneously toward the toe of the shoe and with equal pressure against the heel seat throughout the entire area of the seat, while the heel is otherwise free to partake of movement under such pressure.

1,213,192. STRAW-CUTTING MACHINE. DANIEL G. HEBBNER, Lansdale, Pa. Filed Sept. 18, 1916. Serial No. 120,627. (Cl. 146—29.)

1. The combination in a straw cutting machine, of cutting means, a pair of feed rolls, one of said rolls having a plurality of ribs arranged in staggered formation and operative to engage and hold the straw during the cutting of the latter by said cutting means, and another roll having flexible strips designed to wipe and slightly compress the straw prior to the passing of the same between the feed rolls, substantially as described.

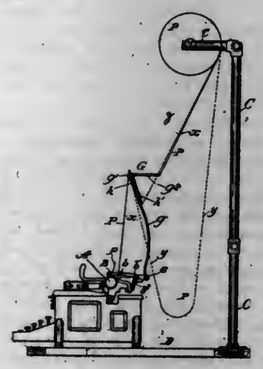
2. The combination in a straw cutting machine, of a casing, cutting means, a pair of feed rolls one mounted above the other, means for rotating said feed rolls, means forming movable bearings for said upper feed roll at opposite sides of the casing, a rocker shaft, another roll having flexible strips designed to wipe and slightly compress the straw prior to the passing of the same between the feed rolls, and links connecting said rocker shaft with the movable bearings, substantially as described.

3. The combination in a straw cutting machine, of a casing, a supporting structure therefor, cutting means within said casing, a pair of feed rolls positioned within said casing and one mounted above the other, the upper feed roll having journal portions extending through slots in opposite sides of the casing, a beating roll positioned within said casing and having journal portions extending through the sides thereof, arms pivotally mounted on said journal portions of the beating roll and forming bearings for said journal portions of the upper feed roll, a rocker shaft mounted on said supporting structure and extending across said casing, said rocker shaft having crank arms thereon, and links respectively connecting said first-mentioned arms and the crank arms of the rocker shaft, substantially as described.



4. A straw cutting machine including a casing, cutting means, two rolls one mounted above the other and operative to feed the straw to the cutting means, a wiping roll having end plates secured thereto and provided with trunnions, said trunnions forming journals for said roll and mounted in said casing, and flexible strips secured to the surface of said roller and operative to wipe and slightly compress the straw prior to the passing of the same to the feeding means, substantially as described.

1,213,193. PAPER-FEED DEVICE. EDWARD B. HESS, Brooklyn, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 24, 1916. Serial No. 116,605. (Cl. 197—133.)



1. A paper feed device for the platen of a typewriting machine comprising a source of supply for the paper web, and a swinging spring-actuated guide for the paper interposed between the platen and the source of supply for automatically producing a slack portion of the web between the source of supply and the platen while the paper is being fed.

2. A paper feed device for the platen of a typewriting machine comprising a source of supply for the paper web, a guide over which the paper passes, and a spring-actuated guide beneath which the paper passes interposed between the platen and source of supply for automatically producing a slack portion in the web between the source of supply and the platen.

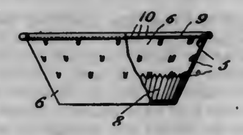
3. A paper feed device for the platen of a typewriting machine comprising a source of supply for the paper web, a fixed guide over which the web passes, and a swinging spring-actuated guide for the paper interposed between the platen and source of supply and located below the fixed guide for automatically producing a slack portion in the web between the source of supply and the platen.

4. A paper feed device for the platen of a typewriting machine comprising a stationary support for a roll of paper, a fixed guide, another guide interposed between the platen and the web support and adapted to swing in a vertical plane, and a spring for swinging said last-mentioned guide downward to produce a slack looped portion in the web between the roll and the platen when said guide is raised to a predetermined extent.

5. A paper feed device, comprising a support for the web, a fixed guide, another guide adapted to swing in a vertical plane and a spring for swinging said guide downward to produce a looped portion in the web when said guide is raised to a predetermined extent.

[Claim 6 not printed in the Gazette.]

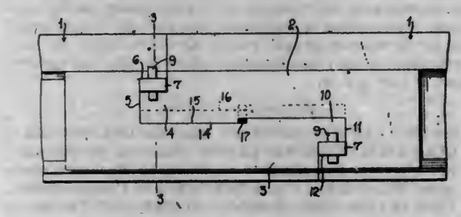
1,213,194. PAPER-LINED RECEPTACLE. HARRIET HILL, New York, N. Y. Filed Jan. 12, 1916. Serial No. 71,603. (Cl. 47—18.)



1. A liquid holding receptacle comprising a body open at its upper end, a paper lining conforming substantially to the shape of the receptacle and arranged therein, said receptacle having on its inner surface a series of depending projections engaging the upper edge of the lining and a second series of depending projections disposed at a different distance from the bottom of the receptacle from the first whereby to adapt the receptacle to secure therein linings of various sizes.

2. A liquid holding receptacle comprising a body open at its upper end, a paper lining conforming substantially to the shape of the receptacle and arranged therein, said receptacle having on its inner surface a plurality of spaced projections disposed below the said upper end, and engaging the upper edge of said lining and a perforated disk arranged on said projections.

1,213,195. JOINT FOR RAILS AND STRUCTURAL STEELWORK. GOTTLIEB H. HOELSCHER, Battle Creek, Iowa. Filed May 24, 1916. Serial No. 99,629. (Cl. 239—8.)



1. A rail joint comprising the meeting ends of rails provided with extensions adapted to be disposed in superposed relation, each of said extensions being provided with a forwardly directed tongue, the coacting meeting end of the rails being provided with a pocket to receive a tongue, each of said tongues being of a vertical dimension less than the corresponding dimension of the pocket whereby a transverse opening is afforded, and a wedge member insertible through each of said openings for maintaining the meeting ends of the rails in assembled relation.

2. A rail joint comprising the meeting ends of rails provided with extensions adapted to be disposed in superposed relation, each of said extensions being provided with a forwardly directed tongue, the coacting meeting end of the rails being provided with a pocket to receive a tongue, each of said tongues being of a vertical dimension less than the corresponding dimension of the pocket whereby a transverse opening is afforded, a wedge member insertible through each of said openings for maintaining the meeting ends of the rails in assembled relation, and means coacting with the wedge members for holding the same against displacement.

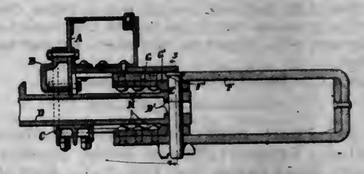
3. A rail joint comprising the meeting ends of rails provided with extensions adapted to be disposed in superposed relation, each of said extensions being provided with a forwardly directed tongue, the coacting meeting end of the rails being provided with a pocket to receive a tongue, each of said tongues being of a vertical dimension less than the corresponding dimension of the pocket whereby a transverse opening is afforded, and a wedge member insertible through each of said openings for maintaining the meeting ends of the rails in assembled relation, the opposed faces of the extensions being provided with a coacting rib and groove.

4. A rail joint comprising the meeting ends of rails provided with extensions adapted to be disposed in superposed relation, each of said extensions being provided with a forwardly directed tongue, the coacting meeting end of the rails being provided with a pocket to receive a tongue, each of said tongues being of a vertical dimension less than the corresponding dimension of the pocket whereby a transverse opening is afforded, and a wedge member insertible through each of said openings for maintaining the meeting ends of the rails in assembled relation, one of the opposed faces of the extensions being provided with a depression, the second opposing face being provided with a lug adapted to extend within said depressed portion.

5. A rail joint comprising the meeting ends of rails provided with extensions adapted to be disposed in superposed relation, each of said extensions being provided with a forwardly directed tongue, the coacting meeting end of the rails being provided with a pocket to receive a tongue, each of said tongues being of a vertical dimension less than the corresponding dimension of the pocket whereby a transverse opening is afforded, and a wedge member insertible through each of said openings for maintaining the meeting ends of the rails in assembled relation, one of the opposed faces of the extensions being provided with a depression, the second opposing face being provided with a lug adapted to extend within said depressed portion, said lug being of a length less than the length of the depression.

[Claims 6 and 7 not printed in the Gazette.]

1,213,196. RAILWAY DRAFT-RIGGING. HARRY A. HOKE, Altoona, Pa. Filed June 26, 1916. Serial No. 105,835. (Cl. 213—42.)

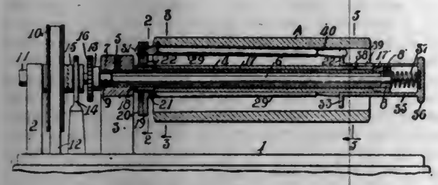


1. In a railway draft gear the combination with the drawbar of a draft yoke pivotally secured thereto and comprising a U-shaped yoke strap, a hollow member loosely surrounding the drawbar to which the ends of said yoke strap are secured, and a draft yoke pin which

passes through the ends of the draft yoke strap, through said member and through said drawbar, and thus pivotally connects said yoke and drawbar.

2. A railway draft yoke comprising a U-shaped yoke strap and a hollow member adapted to loosely surround the drawbar to which the yoke is connected and to which the ends of said strap are secured, said member being formed with tongues projecting along the inner sides of the legs of said yoke strap, and said yoke being formed with registering apertures extending through the legs of the yoke strap and through said tongues to receive a yoke pin for pivotally connecting said yoke to the drawbar with which it is to be used.

1,213,197. PHONOGRAPH. NEWMAN H. HOLLAND, West Orange N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Sept. 29, 1913. Serial No. 792,253. (Cl. 274—40.)



1. In a support for sound records, the combination of a rotatable member, a record engaging member, and a device resiliently connected to said rotatable member for rotary movement with respect thereto and coacting therewith when turned with respect thereto in either direction to positively change the position of said record engaging member with respect to the axis of the support, substantially as described.

2. In a support for sound records, the combination of a member adapted to engage the bore of a record, a device coacting with said member adjacent one end thereof and operable to positively move said member at such end either toward or away from the axis of the support, and means operable independently of said device and coacting with said member adjacent the other end thereof to change the inclination of said member with respect to the axis of the support, substantially as described.

3. In a support for sound records, the combination with a plurality of record engaging members, of means comprising a plurality of relatively rotatable members adapted by their relative rotation in either direction to positively change the relative position of said record engaging members, substantially as described.

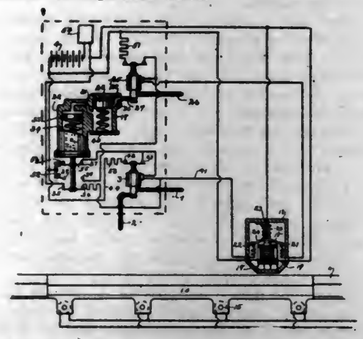
4. In a support for sound records, the combination with a plurality of record engaging members, of means comprising a pair of positively and resiliently connected relatively rotatable members adapted by their relative rotation in either direction to change the relative position of said record engaging members, substantially as described.

5. In a phonograph, the combination with a shaft, of a plurality of record engaging members extending longitudinally thereof, and supporting means for said members comprising a plurality of relatively rotatable members adapted by their relative rotation in either direction to positively change the inclination of said record engaging members with respect to said shaft, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,213,198. TRAIN SPEED-CONTROL AND STOPPING DEVICE. LAWRENCE WESLEY HORNE, Brooklyn, and WARREN NOBLE CRANE, New York, N. Y. Filed Mar. 4, 1914. Serial No. 822,301. (Cl. 246—58.)

1. A train stop comprising a magnetic track having non-magnetic sections, a magnetic circuit interrupting means retained by the track, a valve operated by the release of said retaining means and a piston operated by air passing through said valve and adapted to reëstablish the circuit through said valve.



2. A train speed controlling device, including magnetic rails and non-magnetic sections having controllable magnetic fields adjacent thereto, a circuit opening device maintained closed by said magnetic track and field, a magnetically operated and normally closed air valve opened by the interruption of said circuit maintaining device, and a duplex cylinder and plurality of pistons operable therein for reëstablishing the circuit through said air valve.

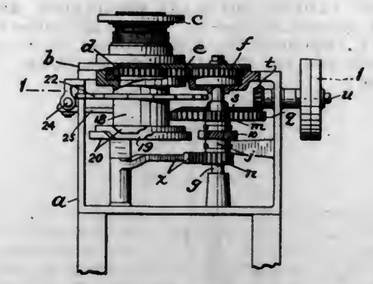
3. A device of the character described having a magnetically controlled circuit maintaining means and a magnetically operated air valve electrically connected therewith and operated thereby, a main cylinder and piston operable therein and adapted to reëstablish a circuit through said valve and an auxiliary cylinder and piston therein adapted to control the passage of air from said valve to said main piston.

4. A magnetically operated circuit maintaining means adapted to be operated by an interruption of a magnetic field an air valve operated by an operation of said maintaining means, a piston operated by the passage of air through said air valve and operating means for reëstablishing a circuit through said air valve by a depression of said piston and a second air valve operated by an interruption of said maintaining means during the movement of said piston.

5. A train speed controlling device which includes a magnetic rail having a plurality of non-magnetic sections each provided with an electromagnetic field and a magnetic circuit retaining means adapted to be passed over said magnetic rail and to be operated by the deënergizing of the electromagnetic fields adjacent to the non-magnetic sections, an electromagnetically operated air valve adapted to be opened by the operation of said maintaining means, a cylinder and piston operated therein and connected to said air valve and controlled thereby, means upon said piston for reëstablishing a circuit to close said air valve and a second air valve connected to a train line air pipe and means operable with said piston for maintaining said second air valve closed during an initial interruption through said maintaining means and means for operating said second air valve upon an interruption of said maintaining means during the movement of said piston.

1,213,199. CLUTCH-SHIFTING MECHANISM FOR CIRCULAR-KNITTING MACHINES. HARRY A. HOUSEMAN, Philadelphia, Pa., assignor to Standard Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 20, 1916. Serial No. 110,287. (Cl. 74—46.)

1. In a clutch shifting mechanism, the combination with a driven shaft, of a rotary member and an oscillatory member each provided with a recess, means to rotate the rotary member at a higher speed than the maximum speed of the oscillatory member, a clutch key turning with the shaft, means for moving the key out of engagement with the recess of one member and into engagement with the recess of the other member, said key having front and rear parallel walls adapted to fit within similar parallel walls in the oscillatory member, the lower portion of the front wall of the key being cut away to permit the key to enter the recess in the oscillatory pinion while still being driven by the rotary gear.



2. In clutch shifting mechanism, the combination with a driven shaft, of a rotary member and an oscillatory member each provided with a recess, means to rotate the rotary member at a higher speed than the maximum speed of the oscillatory member, a clutch key turning with the shaft, means for moving the key out of engagement with the recess of one member and into engagement with the recess of the other member, a cam and means to turn the same, a member adapted to be actuated by the cam, and connections between said member and the clutch key for shifting the key, said cam having an interrupted cam face adapted to determine the shift from rotation to oscillation, whereby the movement of the clutch key, when passing from the rotary member to the oscillatory member, will be temporarily arrested to allow the recess in the oscillatory pinion to move into a position directly opposite the clutch key to permit the shift of the key to be completed.

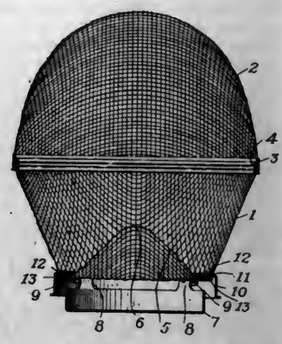
3. In a clutch shifting mechanism, the combination with a driven shaft, of a rotary member and an oscillatory member each provided with a recess, means to rotate the rotary member at a higher speed than the maximum speed of the oscillatory member; a clutch key turning with the shaft, means for moving the key out of engagement with the recess of one member and into engagement with the recess of the other member, said key having front and rear parallel walls adapted to fit within similar parallel walls in the oscillatory member, the lower portion of the front wall of the key being cut away to permit the key to enter the recess in the oscillatory pinion while still being driven by the rotary gear, a cam and means to turn the same, a member adapted to be actuated by the cam, and connections between said member and the clutch key for shifting the key, said cam having an interrupted cam face adapted to determine the shift from rotation to oscillation, whereby the movement of the clutch key, when passing from the rotary member to the oscillatory member, will be temporarily arrested, after the key has been disengaged from the rotary member and has partly entered the recess in the oscillatory pinion, to allow the last named recess to catch up to the key and permit the latter to complete its movement.

4. In a clutch shifting mechanism, the combination with a driven shaft, of a rotary member and an oscillatory member loose on the shaft, a clutch key turning with the shaft and adapted to slide along the shaft out of engagement with one member and into engagement with the other member, a non-rotary ring in which the said key is feathered to permit it to turn with the shaft, a device carrying the ring and adapted to move it along the shaft, a clutch shifting lever for moving said device, a cam, and a shoe on the lever adapted to be actuated by the cam.

5. In a clutch shifting mechanism, the combination with a driven shaft, of a rotary member and an oscillatory member loose on the shaft, a clutch between said members and movable into driving engagement with either, a device alongside the shaft movable in the direction thereof and connected with the clutch so as to shift the same, projections on said device, screws in said projections, a lever confined between said screws, a shoe on the lever, and a cam adapted to engage the shoe and thereby, through said lever and said device, shift the clutch.

[Claims 6 to 8 not printed in the Gazette.]

1,213,200. FLY-TRAP. FRANK D. HUNTOON, Worcester, Mass., assignor to National Manufacturing Company, Worcester, Mass., a Corporation of Massachusetts. Filed Mar. 31, 1916. Serial No. 88,103. (Cl. 43—22.)



1. In a fly trap, a rigid supporting member providing an inturned annular flange, and an inclosure having a wall of flexible material greater in diameter than said flange, and having a bead at its lower edge, whereby the contraction of said wall permits the springing of said bead over said flange, to hold the said parts in operative position.

2. In a fly trap, an inclosure having bottom and side walls made of foraminous material, and a rigid member providing an inturned annular flange for the support of said inclosure, said side walls of said inclosure being of greater diameter than said flange, and having above said bottom an annular recess, whereby the contraction of said walls permits the springing of said bottom within said flange, to retain the parts in operative position.

3. In a fly trap, a rigid supporting member providing an inturned annular flange, and an inclosure having a wall of screen material, whose diameter at the bottom is greater than the interior diameter of said flange, there being an annular recess formed in said wall above its lower edge, whereby, upon the contraction of said wall, said flange is received within said recess to hold the parts in operative position.

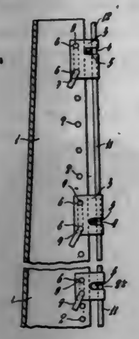
1,213,201. FASTENER FOR FENCING-WIRES. GEORGE HUTCHINSON, Masterton, New Zealand, assignor to Donald-Hutchinson Patents Limited, Masterton, New Zealand. Filed Dec. 20, 1913. Serial No. 807,970. (Cl. 256—48.)

1. A fastener for fence wires, comprising in combination with a fence post, a bracket having a wire receiving slot, means for securing the bracket to the post, and lugs projecting laterally from the slot both above and below the wire to form contact bases wider than the bracket.

2. A fastener for fence wires, comprising in combination with a fence post having an approximately vertical web, a bracket made of sheet metal folded over said web and having holes registering with holes in the web, the bracket having a portion adapted to receive a fence wire, and a staple having prongs projecting through the holes in the web and bracket, one of the prongs being offset at its projecting end.

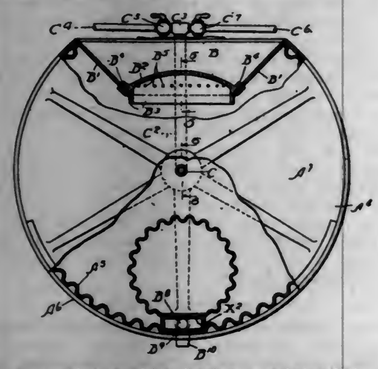
3. A fastener for fence wires, comprising in combination with a fence post having an approximately vertical

web, a bracket made of sheet metal folded over said web and having holes registering with holes in the web, the bracket having a portion adapted to receive a fence wire, a staple having prongs projecting through the holes in the web and bracket, one of the prongs being offset at its projecting end, and a key for holding the wire in the bracket.



4. A fastener for fence wires comprising in combination with a fence post a bracket having a horizontal slot so as to receive and support a fence wire, and means for attaching the bracket at two points to the post, said horizontal slot being located in such a position relatively to the points of attachment that, by reversing the bracket upon the post, the fence wire holding portion is raised or lowered a distance equal to one half the distance between said two points of attachment.

1,213,202. WASHING-MACHINE. FRANCIS T. JOHNSON, Chicago, Ill. Filed June 7, 1915. Serial No. 32,525. (Cl. 68—18.)

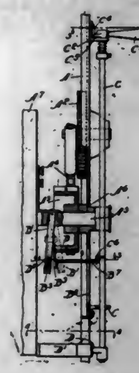


1. A washing machine having a substantially cylindrical tub, a cylindrical baffle member container therein, located between the center thereof and the periphery thereof, and means interposed between the wall of the tub and the baffle member, and located entirely beneath the baffle member and between it and the tub for preventing the passage of solid materials while permitting the passage of liquids through the aperture between the baffle member and the wall of the tub.

2. A cylindrical tub having a cylindrical baffle member therein parallel with its axis, a narrow box located between the baffle member and the wall of the tub and closing the space between them, said box being perforate, the width of the box being less than the diameter of the baffle member.

3. A washing machine having a cylindrical tub, a baffle member therein arranged so as to form two hopper shaped chambers within the tub on both sides of the baffle member, such hopper-shaped chamber terminating each at a point beneath the baffle member, means interposed at such termination for preventing the passage of solid materials through the space between the tub and the baffle member while permitting the passage of liquids.

1,213,203. CLUTCH AND BRAKE MECHANISM. FRANCIS T. JOHNSON, Chicago, Ill. Original application filed June 7, 1915, Serial No. 32,525. Divided and this application filed Feb. 21, 1916. Serial No. 79,534. (Cl. 74—46.)



1. A power transmission comprising a shaft, a clutch arm mounted for rotation in a plane containing the axis of the shaft, but held against rotation about the shaft, a drum and means for rotating it, and means for thrusting said arm in engagement with the drum to complete the driving connection, said means comprising a guide plate always in engagement with the lever independent of its position, and means for moving the plate to and from the drum.

2. A clutch comprising a slotted driving drum, a driven member and a clutch arm pivoted thereon and means for rotating said arm to shift it out of and thrust it into the slot in the drum, said means comprising a pair of curved fingers in slidable rotatable relation with the end of the clutch arm, said fingers being substantially concentric with the driving drum.

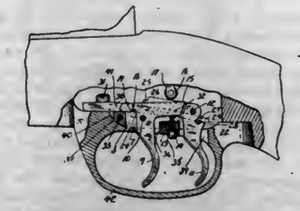
3. The combination with a rotary washing machine tub of a rotary driving member, a clutch arm carried thereby, and means for throwing it into and out of operative engagement with the rotary member, a brake member adapted to engage the tub, and means responsive to the clutch operating means for throwing the brake member into engagement with the tub when the clutch arm is out of engagement with the driving means.

4. The combination with a shaft mounted for oscillation of a clutch arm carried thereby held against rotation thereabout and free to swing in a radial plane with respect to the shaft, a driving segment and means for oscillating it, its periphery being at one point slotted to engage the arm, and means for swinging said arm into and out of engagement with said slot to connect and disconnect the driving and the driven part.

5. The combination with a shaft mounted for rotation of a clutch arm carried thereby held against rotation thereabout and free to swing in a radial plane with respect to the shaft, a driving segment and means for rotating it, its periphery being at one point slotted to engage the arm, and means for swinging said arm into and out of engagement with said slot to connect and disconnect the driving and the driven part, a driven member carried by the shaft, a brake adapted to be thrust against the driven member, and a connection between the brake and the clutch lever swinging mechanism to cause engagement of the brake when the lever is swung out of the operative position.

[Claims 6 and 7 not printed in the Gazette.]

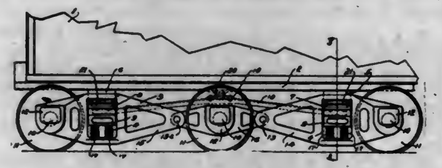
1,213,204. TRIGGER MECHANISM FOR SHOULDER-ARMS. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed June 28, 1916. Serial No. 106,335. (Cl. 42—69.)



1. In an independently organized set-trigger mechanism, the combination with a mounting-block formed with a slot extending throughout its length and having its side walls united by tie-lugs one of which extends below them, a trigger pivotally mounted in the forward end of the said slot, a set-trigger pivotally mounted in the rear end of the said slot, and an adjusting-screw mounted in the said depending tie-lug.

2. In a shoulder-arm, the combination with a guard provided with a slot, of an independently organized set-trigger mechanism comprising a mounting-block carrying a trigger and a set-trigger and adapted to be located in the said guard in position for the said triggers to extend downward through the said slot into the finger-portion of the guard, and springs applied to the guard for co-action with the said triggers.

1,213,205. RAILWAY CAR AND TRUCK CONSTRUCTION. BYERS W. KADEL, Roanoke county, Va. Filed May 17, 1916. Serial No. 98,037. (Cl. 105—244.)



1. In railway car and truck construction, a car body, a supporting truck under each end of the same, each truck being capable of swiveling under the car body and there being a plurality of seats on each truck at spaced intervals longitudinally of the body for receiving the load from the car body, with coöperatively formed and disposed load delivering seats on the body, each truck embodying means for equalizing the loads delivered thereto among all the wheels of that truck and for equalizing the reactions between all of the said load seats at that end of the car.

2. In railway car and truck construction, a car body, a supporting truck under each end of the same, each truck being capable of swiveling under the car body and there being a plurality of seats on each truck at spaced intervals longitudinally of the body for receiving the load from the car body, with coöperatively formed and disposed load delivering seats on the body having centrally disposed draft-sills, each truck embodying means for equalizing the loads delivered thereto among all the wheels of that truck and for equalizing the reactions between all of the said load seats at that end of the car, the truck at one end not being connected to the one at the other end except through the body and the said trucks being free to swivel independently of each other.

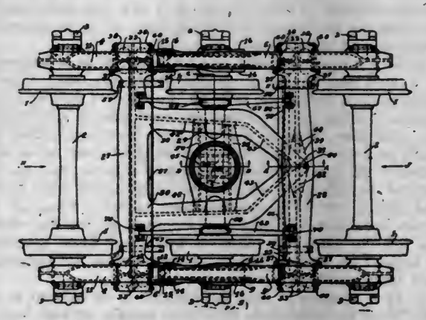
3. In railway car and truck construction, a car body, a swiveling supporting truck under each end of the same, each of said trucks embodying side frames, a plurality of cross bolsters extending transversely of the truck at spaced intervals and supported by the said side frames, each of the cross bolsters being provided with means thereon for receiving portions of the load directly from the car body, coöperatively formed and disposed load delivering means on the under face of the car body, and means in connection with said side frames for delivering the cross bolster loads to the truck wheels, for equalizing it therebetween, and for equalizing the reactions between the said load delivering means on an end of the car body.

4. In railway car and truck construction, a car body, a swiveling supporting truck under each end of the same, each of said trucks embodying the customary wheels and axles together with oil boxes therefor, a plurality of side members along each side of each truck, the same comprising end units and intermediate units, the oil boxes for the end axles being rigidly secured to and supporting the outer ends of the end units and the oil boxes for the intermediate axles being rigidly secured to and supporting the intermediate units, the inner ends of the end units resting upon and being supported by the intermediate units at spaced points longitudinally thereof, the intermediate units being rotatable with respect to the middle axle, cross bolsters extending transversely of the car from side members to side members, the ends of the same being supported upon the said end units thereof, and means on each of said cross bolsters for receiving a portion of the car body load, there being coöperatively formed means on the under face of the car body for delivering such loads directly thereto.

5. In railway car and truck construction, a car body, a supporting truck under each end of the same, each of said trucks embodying wheels, axles and oil boxes, the oil boxes being mounted upon the axles outside the lines of the wheels, side frame members supported upon the oil boxes and likewise disposed outside of the truck wheels, each of said side frames being composed of two end units and an intermediate unit, the end units carrying at their outer ends the oil boxes for one end of the outer axles, the intermediate unit carrying the oil box for the corresponding end of the middle axle, the oil boxes in each instance being secured to the respective one of the said frame units and the entire frame unit and oil box being rotatable about its respective axle, two cross bolsters extending transversely of the car at spaced intervals longitudinally of the same and along either side of the middle truck wheels, said cross bolsters being supported upon the end units of the said frames and the inner ends of said end units in turn upon the said intermediate unit, load-receiving means on each cross bolster and coöperatively formed and alined means on the car body for imparting portions of the car body load directly from the car body to the cross bolsters.

[Claims 6 to 12 not printed in the Gazette.]

1,213,206. CAR-TRUCK. BYERS W. KADEL, Roanoke county, Va. Filed May 26, 1916. Serial No. 99,994. (Cl. 105—244.)



1. In a car truck, a pair of over-reaching frame members disposed along one side of the truck and articulated

with respect to each other, one of said frame members being bifurcated at its inner end for a portion of its depth but not for its full depth and accommodating between the resulting portions the adjacent end of the other frame member.

2. A car truck having a pair of over-reaching frame members connected together and articulated with respect to each other, one of said frame members having side walls at its ends spaced apart at the top but connected at the bottom and the adjacent end of the other frame member being disposed between the said spaced side walls.

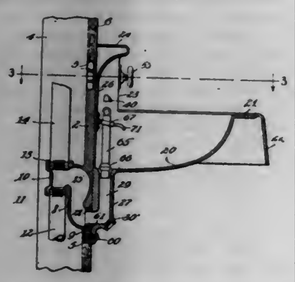
3. A car truck having a rigid side frame and an over-reaching articulated side frame connected thereto and supported thereby at one end, the rigid side frame being provided with spaced side walls and the over-reaching portion of the articulated side frame being disposed between said spaced side walls.

4. A car truck having articulated and over-reaching side frames, at least one of which has a top member of channel shape in cross section with the web turned horizontally and with normally depending flanges, the flanges of the channel being extended upward along either side of the frame and forming a way for the adjacent side frame.

5. A car truck having over-reaching side members, one of which is formed with the top member of channel shape in cross section, the web of the channel being disposed horizontally and being diverted from its normal path to provide a pocket for the adjacent over-reaching side member.

[Claims 6 to 45 not printed in the Gazette.]

1,213,207. LAVATORY. CHARLES C. KELLER, Cleveland, Ohio. Filed Feb. 28, 1914, Serial No. 821,633. Renewed Nov. 27, 1916. Serial No. 133,810. (Cl. 4—1.)



1. In a lavatory, a cast metal member adapted to be secured to a wall between adjacent studs, pipe connections rigid with said member, upon the rearward side thereof, there being a chamber in said member adapted to form part of a trap, a basin adapted to contact with and be secured to the face of said member, and having a hollow portion adapted to form another part of a trap and means for securing said basin to said member, so as to support the same and complete said trap.

2. In a lavatory, a rigid member adapted to be secured to a wall and having a chambered portion, said chambered portion having an inlet on the forward side of said member and an outlet at the rearward side of said member, said inlet being at a lower level than said outlet, a basin member having a rearward face adapted to be secured to the forward face of said first member, said basin member having a chambered portion provided with inlet and outlet, the outlet of the basin chamber being at a lower level than its inlet and arranged to register with the inlet of said first chamber when said basin member is secured to said wall member, and means for securing said basin member to said wall member.

3. In a lavatory, a member adapted to be secured to a wall with its front face near the surface of said wall, pipe connections rigid with said member and located rearwardly from its face, a basin member having a face complementary to that of said wall member and adapted to be secured thereto, said wall member and basin member being formed with trapped discharge passageways, one half of such trap being formed in each of said members, and means for securing said basin member to said wall member.

4. In a lavatory, a cast member adapted to be secured to a wall and having a substantially flat forward face adapted to lie substantially at the plane of the wall, said member being formed with a hollow chamber communicating at its lower portion with an aperture in said forward face and also having a discharge opening at its upper portion, a basin member having a rearward face complementary to the face of said wall member and adapted to be secured thereto, the basin having a downwardly extending discharge passageway which opens through the face of the basin member and is arranged to register with the first mentioned aperture of said chamber, means for securing said basin member to said wall member, and means for maintaining a tight joint between the walls of said openings.

5. In a wall lavatory a cast metal plate having a substantially flat elongated body portion and laterally extending arms at each end and parallel to the plane thereof, the arms at one end having ribs upon their rearward sides, and the arms at the other end having ribs upon their forward sides, said last named ribs terminating to the rear of the plane which defines the forward face of said body portion.

[Claims 6 and 7 not printed in the Gazette.]

1,213,208. KASSETTE. JOHN ROBERT KELLEY, Covington, Ky. Filed July 26, 1915. Serial No. 42,063. (Cl. 250—34.)



1. A plate holder comprising a face plate, a hollow metal frame formed by telescoping channel-shaped members one into the other encircling and carrying said face plate, and a back plate having metal hinge members to guide said back plate accurately into position relative to said frame and to prevent lateral movement of said back plate.

2. In a plate holder having a face plate and a detachable back plate, a polygonal sheet metal frame comprising channel shaped members telescoped one into another to form a hollow frame of substantially rectangular cross-section.

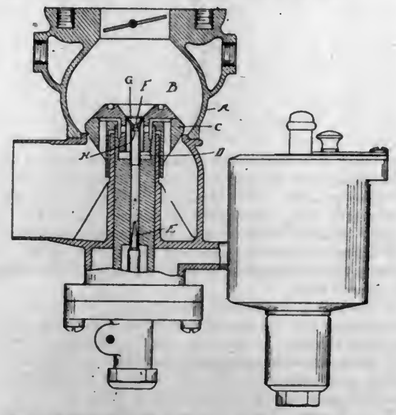
3. A plate holder comprising a face plate, a rigid sheet metal frame encircling and carrying said face plate and formed by telescoping channel-shaped members one into the other, and a metal back plate having metal hinge members to detachably connect said back plate to said frame and to guide said back plate into position relative to said frame.

4. A plate holder comprising a face plate, a rigid metal frame encircling said face plate, hinge sockets in one section of said frame having narrower channels leading therefrom at one side, a back plate having hinge members provided with heads to enter said sockets and necks to enter said lateral channels to detachably connect said back plate to said frame and to guide it to position therein.

5. A plate holder comprising a face plate, a rigid metal frame encircling and carrying the face plate, hinge sockets in one section of said frame having narrower lateral channels leading therefrom at one side, a back plate having metal hinge members provided with heads to enter and move to and from the bottom of said sockets and necks to enter and move between the walls of said lateral channels to detachably and adjustably connect said back plate to said frame.

[Claim 6 not printed in the Gazette.]

1,213,209. CARBURETER. CHARLES H. KIRBY, Detroit, Mich., assignor to Detroit Lubricator Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 28, 1915. Serial No. 52,284. (Cl. 261—48.)



1. In a carbureter, the combination with an automatic air valve, an aspirating tube carried thereby and a cooperating metering pin for variably restricting the discharge of liquid through said aspirating tube, of auxiliary non-adjustable means for restricting the flow of liquid proportioned to be relatively inoperaitve at low velocities of the air and increasingly operative at high velocities.

2. In a carbureter, the combination with an automatic air valve, an aspirating tube carried thereby and a cooperaitng metering pin for varying the area of inlet opening to said tube in different positions of adjustment of the valve, of a restriction in said aspirating tube proportioned to limit the maximum discharge of liquid and to be relatively inoperative at restricted positions of adjustment of said metering pin.

3. In a carbureter, the combination with an automatic air valve, an aspirating tube carried thereby and a cooperating metering pin for varying the inlet of the liquid fuel, of a restriction located at the discharge mouth of said aspirating tube proportioned to limit the maximum discharge of liquid.

4. In a carbureter, the combination with an automatic air valve, of an aspirating tube and coöperating metering pin one of which is controlled by said valve, said tube having a restriction at one point and being flared at each side of the restriction.

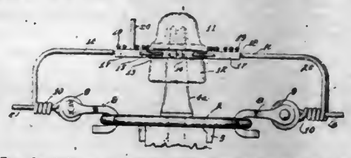
5. In a carbureter, the combination with an automatic air valve, of an aspirating tube and coöperating metering pin one of which is controlled by said valve, said tube having a restriction located at the discharge mouth thereof proportioned to limit the maximum discharge of liquid.

1,213,210. MINERAL WATER FOR USE IN THE MANUFACTURE OF LEAVENED BREAD. HENRY A. KOHMAN, Pittsburgh, Pa., CHARLES HOFFMAN, New York, N. Y., and TRUMAN M. GODFREY, Pittsburgh, Pa. Filed June 8, 1916. Serial No. 102,389. (Cl. 99—10.)

A mineral water for use as a yeast stimulant and dough ripener in the production of leavened bread, comprising water having in solution ammonium chlorid, calcium chlorid, and potassium bromate; substantially as described.

1,213,211. CURRENT-DISTRIBUTING APPARATUS. LAURENCE M. KLAUBER and RAY C. CAVELL, San Diego, Cal.; said Cavell assignor to San Diego Consolidated Gas and Electric Co., San Diego, Cal., a Corporation of California. Filed Mar. 10, 1916. Serial No. 83,246. (Cl. 173—28.)

1. In electric current distributing apparatus, the combination of a supporting member consisting of a plate constructed to resist mechanical strains, and having a plurality of separate attaching points disposed about an axis, an insulator pin above said plate, a service connection ring formed of sections metallically connected together for carrying current circumferentially around said pin, and having a plurality of separate attaching means, and a plurality of conductors connected insulatingly respectively to said attaching points, said plate operating to support the tensile strains in said conductors, said conductors having extensions connected to the separate attaching means of said ring.

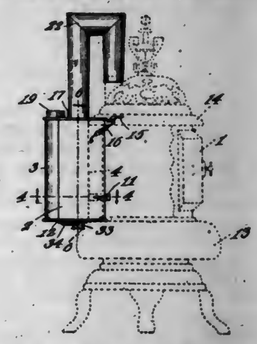


2. In electric current distributing apparatus, an anchor plate to be attached to a support and constructed to resist mechanical strains, means for insulatingly anchoring a plurality of service conductors on said plate, an insulator adjacent said plate, a split ring attached to said insulator and having a plurality of attaching means for connecting said ring to individual service conductors, and conductor extensions having individually disconnectible means for connecting the said conductors with said ring, said anchor plate operating to relieve said extensions of tensile strain.

3. In electric current distributing apparatus, a multiple service connection consisting of a split ring formed of metallically connected conducting sections for conducting current around a central axis, and having means for securing the same about an insulator, said ring having a plurality of separated attaching means for attaching individual service conductors to said connection, and movable members associated with said attaching means for removably connecting the service conductors thereto.

4. In electric current distributing apparatus, an anchor plate having means for engaging a support, said anchor plate having a plurality of anchor openings therein, clevises mounted in said openings and having insulating spools, service wires fastened around said insulating spools so as to impart the tensile strains in said wires to said anchor plate, an insulator mounted on said anchor plate, a service connection in the form of a ring secured to said insulator, having a plurality of attaching means for connecting said service conductors thereto, and removable fastening means for connecting said service wires with said service connection.

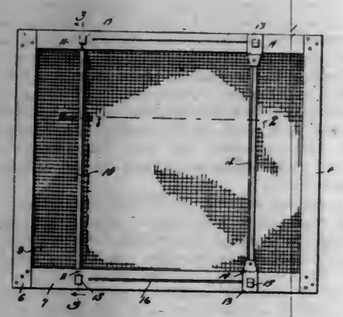
1,213,212. HEATING-DRUM. GUSTAV J. KNAACK and CHARLES J. MARQUARDT, Princeton, Wis. Filed Feb. 14, 1916. Serial No. 78,203. (Cl. 257—173.)



A heating drum, means for detachably and adjustably connecting the drum to a stove, said drum having a horizontal plate extended from its front to its rear wall and

spaced from the side walls of the drum and top of the drum, a deflecting plate extending from the front wall to the rear wall and having a part disposed transversely between the plate and top of the drum to provide independent flues, baffle plates depending from the side edges of the plate and having their lower edges spaced from the bottom of the drum, an intermediate baffle plate having its lower edge connected to the bottom of the drum and its upper edge disposed above the lower edges of the first named baffle plates, and a pipe leading from the stove to one of the flues for directing the products of combustion into the adjacent flue, whereby the products of combustion will pass around the baffle plates and to the remaining flue, as and for the purpose set forth.

1,213,213. WINDOW-SCREEN. GUSTAV J. KNAACK and CHARLES J. MARQUARDT, Princeton, Wis. Filed Mar. 28, 1916. Serial No. 87,297. (Cl. 156—38.)



1. A window screen comprising two similar frames composed of parallel overlapping side portions each connected at one end by an end member, screen fabric stretched across each of said frames, a strip connecting the free ends of each frame and the adjacent lateral end of said fabric, the said strip of each frame being bent inwardly throughout its length to engage the adjacent surface of the fabric of the opposite frame, and a connecting bar connecting said side members of each frame upon the opposite surface of the fabric of the opposite frame to force the said fabric into engagement with its corresponding strip, substantially as described.

2. A window screen comprising two similar frames composed of sliding parallel overlapping side sections each connected at one end by an end member, each side portion being provided with registering elongated slots, screen fabric connecting the ends of each frame and supporting the adjacent edge of the screen fabric, a bar connecting the ends of each of said frames and engaging the fabric of the adjacent frame, clips securing the ends of each bar to its respective frame and passing through the slot in the next adjacent frame side member, substantially as described.

3. A window screen comprising two similar frames composed of parallel overlapping side portions each connected at one end by an end member, the said side portions and end members being provided with grooves, wire fabric stretched across each frame and engaged at its edges in said grooves, a strip connecting the free ends of each frame, each strip comprising an elongated metallic member arranged at its ends in said grooves and bent longitudinally to provide clamping portions for the reception of the end of said screen fabric, the said strip extending laterally to engage with the fabric of the adjacent frame throughout the width of the latter, and a bar connecting the ends of each frame and engaged throughout its length upon the opposite side of the adjacent frame fabric and over said strip, substantially as described.

1,213,214. TATTING-SHUTTLE. OSCAR A. KRATZ, Hillsdale, Oreg. Filed Apr. 29, 1916. Serial No. 94,424. (Cl. 66—10.)

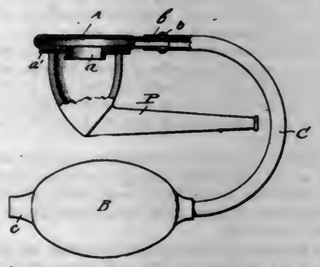


1. As a new article of manufacture, a tatting shuttle comprising two elongated plates substantially elliptical in form adapted to be arranged in superposed relation, said plates being provided with means to afford a mounting for a spool, each of said plates being provided at a side with an inwardly directed flange, the flange of one plate being arranged at a side opposite to the flange of the second plate.

2. As a new article of manufacture, a tatting shuttle comprising two elongated plates substantially elliptical in form adapted to be arranged in superposed relation, and inwardly disposed tongues carried by said plates to afford a mounting for a spool, each of said plates being provided at a side with a depending flange.

3. As a new article of manufacture, a tatting shuttle comprising two elongated plates substantially elliptical in form adapted to be arranged in superposed relation, and inwardly disposed tongues carried by said plates to afford a mounting for a spool, the adjacent end portions of the plates being provided with coacting sockets and heads for holding the plates against relative lateral movement.

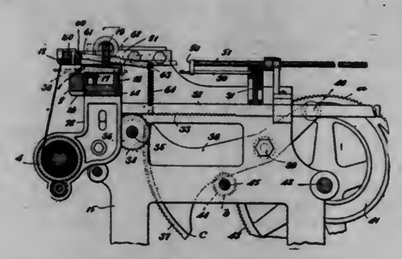
1,213,215. AUTOMATIC APPARATUS FOR CLEANING TOBACCO-SMOKING PIPES. STANISLAUS KUPREL, Bridgeport, Conn. Filed June 29, 1914. Serial No. 848,105. (Cl. 131—13.)



A pipe cleaner comprising a circular cell having flat parallel upper and lower walls, the upper wall having a smooth and unobstructed surface and the lower wall having a short outlet tube extending from the center of the lower side of the cell, said cell forming a chamber within which air is compressed, an inlet tube extending into the edge of the cell, and an elastic washer fitted on the outlet tube and covering the lower side of the cell to be seated on the upper edge of a pipe to prevent the escape of air, said inlet tube being arranged for connection to the outlet tube of a syringe bulb, the inlet tube being located entirely below the surface of the upper wall.

1,213,216. MACHINE FOR THREADING TUFT-YARNS. CHARLES LEA, Boston, Mass., assignor to American Warp Drawing Machine Company, a Corporation of Maine. Filed Jan. 31, 1914. Serial No. 815,824. (Cl. 139—94.)

1. In a machine for threading tuft yarns through the tubes of a tube frame in carpet manufacture, said tube frame having means for holding thereon a plurality of spools in serial arrangement, the combination with a machine frame having upright supports, a series or bank of needles having a path of movement between said upright supports, a tube frame support for holding successive portions of the tube frame between said upright supports and in operative relation to the needles, means to clamp and hold the section or portion of the tube frame which is placed in operative relation to the needles in alinement therewith, said tube frame support extending on either side of and beyond the upright frame supports of the machine and in non-interfering relation to said upright supports and the operating parts of the machine, whereby support is afforded for portions of the tube frame out of operative relation to the needles, means upon the machine for holding a spool with its yarns in operative relation to be seized by the needles, and means for causing relative movement between the needles on the one hand and the tubes and the yarns on the other to thread the yarns through the tubes, whereby successive sections of the tube frame may be threaded with the yarns from successive spools and the spools attached to the frame.



2. In a machine for threading tuft yarns through the tubes of a tube frame in carpet manufacture, said tube frame having means for holding thereon a plurality of spools in serial arrangement, the combination with a series or bank of needles, a tube frame support for holding successive portions of the tube frame in operative relation to the needles together with means for holding in alinement with the needles those portions of the tubes which are placed in operative relation thereto, said support extending on either side beyond the extent of said needle bank and in non-interfering relation to the operating parts of the machine, whereby support is afforded for portions of the tube frame out of operative relation to the needles, means for holding a spool in the machine with its yarns in position to be drawn through the tubes, means for causing relative movement between the needles and the tubes to simultaneously draw the yarns whereby the yarns from successive spools may be threaded through successive portions of the tube frame and the spool serially attached to the tube frame.

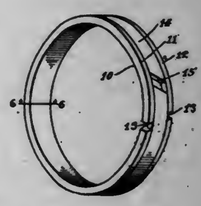
3. In a machine for threading tuft yarns through the tubes of a tube frame, in carpet manufacture, said tube frame having means for holding thereon a plurality of spools in serial arrangement, the combination with means for holding the yarns of a single spool, a series or bank of needles, means for simultaneously engaging the yarns by the needles, and a tube frame support of greater extent than the width of the bank of needles with means for holding alined those tubes of the tube frame which are placed in operative relation to the needles, said support being in non-interfering relation to the operating parts of the machine, whereby successive portions of the tube frame may be threaded with successive spools.

4. In a machine for threading tuft yarns through the tubes of a tube frame, the latter being adapted to hold serially a plurality of spools, the combination with means on the machine for holding the yarns of a single spool, a bank or series of needles, means for moving the same in relation to the yarns, and means for holding a tube frame in successive positions upon said machine with successive portions thereof in operative relation to the yarns and the needles the portions of said tube frame out of operative relation to the yarns and the needles being in non-interfering relation to the operative parts of the machine, whereby the yarns from a plurality of spools may be threaded in succession thereon.

5. In a machine for threading tuft yarns through the tubes of a tube frame in carpet manufacture, said tube frame having means for holding thereon a plurality of spools in serial arrangement, the combination with a series or bank of needles, with means for actuating the same, of a spool holder, devices to hold the ends of the yarns, a tube frame support, means overhanging the tube frame support for supporting said yarn holding devices, free lateral movement of the tube frame on said support being permitted without interference with said overhanging means, said tube frame support extending laterally beyond and on either side of said overhanging device and in non-interfering relation to the operating parts of the machine to support the portions of the tube frame out of operative relation to the needles.

[Claims 6 to 11 not printed in the Gazette.]

1,213,217. PACKING-RING. MELVIN MARION LLOYD, Des Moines, Iowa. Filed May 7, 1913. Serial No. 766,081. (Cl. 121—108.)



1. A packing ring comprising an expansible divided body portion having a groove in its outer surface and a split expansion ring slidably mounted in said grooves.

2. A packing ring having an open base ring, the ends of said base ring forming a diagonal slot, and an open filling ring adapted to slide on said base ring, the ends of said filling ring also forming a diagonal slot, said slots when the rings are assembled running in opposite directions so that a tight connection is assured at all times.

3. A packing ring having an open base ring, the ends of said base ring forming a diagonal slot, a groove in the outer periphery of said base ring, and an open filling ring adapted to slide in said groove, the ends of said filling ring also forming a diagonal slot, said slots when the rings are assembled running in opposite directions so that a tight connection is assured at all times.

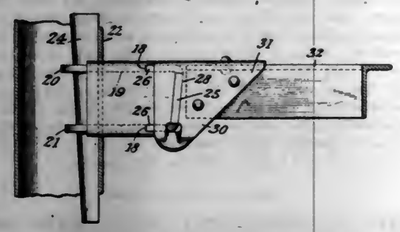
4. A packing ring having an open base ring, a groove in the outer periphery of said base ring, and an open filling ring slidably mounted in said groove so that the openings of the two rings can be positioned one hundred and eighty degrees apart thereby to equalize the pressure throughout the rings.

5. A packing ring comprising a one-piece expansible body portion, split at one point, said body portion being provided in its outer surface with a groove, a split expansion ring slidably mounted in said groove, all so constructed and arranged that it is impossible for said expansion ring to assume such a position with relation to said body portion that the joints between the ends of said parts aline.

1,213,218. BEDSTEAD CORNER-BRACKET. HECTOR V. LOUGH, North Plainfield, N. J. Filed Sept. 10, 1915. Serial No. 49,867. (Cl. 5—55.)

1. In a bedstead corner bracket, in combination, a hollow tubular member of sheet metal having its front end adapted to fit the bedpost, a connecting member of sheet metal fitted into the tubular member from the rear thereof, a member integral with and projecting from the said

connecting member adapted to engage the tubular member to determine the positions of the said members relative to each other, means for binding the two members firmly to the bedpost, edge portions on said connecting member spaced from and inclined downwardly and forwardly toward the rear thereof, and a side rail end member having inclined parts at its outer end, adapted to removably fit between the rear of the tubular member and the inclined edge portions of said connecting member.



2. In a bedstead corner bracket, in combination, a horizontal tubular member of sheet metal having its front end adapted to fit the bedpost and having recesses in its rear edges; a connecting member of sheet metal fitted into the rear of the tubular member, having lugs to enter the recesses in the rear edges of the tubular member and provided with means extending through the latter for connection to the bed post, and having lateral edge-portions inclined downwardly toward and spaced from the rear side-edges of the tubular member; and a siderail end-member having inclined portions adapted to fit removably between the inclined edge-portions of the connecting member and the rear side-edges of the tubular member.

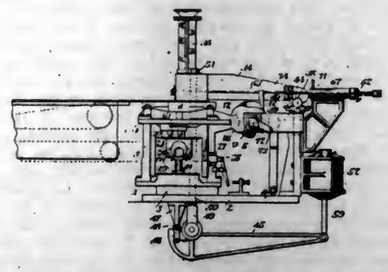
3. In a bedstead corner bracket, in combination, a horizontal tubular member having its upper and lower front edges shaped to fit against the bedpost; a connecting member having upper and lower arms extending forwardly from the rear of the tubular member through the same to enter slots in the bed post and formed with openings to receive a wedge-key inside the post, the connecting member having also means to limit its movement into the tubular member and provided with lateral edge-portions inclined downwardly toward and spaced from the rear side-edges of the tubular member; and a siderail end-member having inclined portions to fit removably between the rear side-edges of the tubular member and the inclined edge-portions of the connecting member.

4. In a bedstead corner bracket, in combination, a horizontal tubular member of sheet metal adapted to bear at its front end against the bedpost, a connecting member comprising a strip of sheet metal bent to form upper and lower arms connected at their rear ends by a downwardly and forwardly inclined portion having its side edges projecting laterally, the arms extending through the tubular member from the rear thereof for attachment to the bedpost and having means for holding the tubular member against the post; and a siderail end-member having side members provided with edges inclined in correspondence with the side edges of the connecting member and adapted to fit removably between said side edges and the rear side edges of the tubular member.

5. In a bedstead corner bracket, in combination, a horizontal tubular member of sheet metal adapted at its front end to bear against the bedpost; a connecting member of sheet metal having upper and lower arms extending through the tubular member from the rear thereof for attachment to the bedpost and having means to bear against the rear of the tubular member and hold the same against the bedpost, said arms being connected at their rear by a plate inclined downwardly toward and spaced from the rear side-edges of the tubular member; and a siderail end-member of sheet metal having side members provided with downwardly and forwardly inclined slots to receive the side-edges of the said inclined plate.

[Claims 6 and 7 not printed in the Gazette.]

1,213,219. BLOCK OR TILE PRESS. LOUIS N. MCCARTER, Norristown, Pa., assignor of one-half to Samuel C. Graham, Pittsburgh, Pa. Filed Apr. 24, 1915. Serial No. 23,608. (Cl. 25—84.)



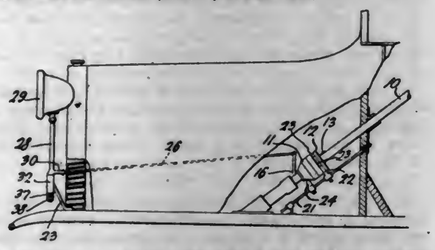
1. A molding press including a mold bearing carriage, a molding element mounted for movement in the carriage, an eccentric for operating said element, a box casing embodying an eccentric strap movable with the element and controlled by the eccentric and means to guide the box casing longitudinally and means coöperating with a fixed part of the press to guide the same transversely of the carriage.

2. A molding press including a mold bearing carriage, a molding element mounted for movement in the carriage, a box casing embodying an eccentric strap movable with the element, an eccentric operating said casing, a guide block held against other than movement transverse the carriage, and a stud depending from the casing and movably mounted in the guide block.

3. A molding press including a mold bearing carriage, a molding element mounted for movement in the carriage, a box casing embodying an eccentric strap movable with the element, means for operating the casing, rails mounted on the carriage, a guide block having sliding coöperation with the rails, and a guide stud depending from the casing and mounted for free movement in the guide block in a direction at right angles to the movement of the block in the rails.

4. A molding press including a mold bearing carriage, a molding element mounted for movement in the carriage, a box casing embodying an eccentric strap movable with the element, means for operating the casing, rails mounted on the carriage, a guide block having sliding coöperation with the rails, and a guide stud depending from the casing and mounted for free non-rotative movement in the guide block in a direction at right angles to the movement of the block in the rails.

1,213,220. DIRIGIBLE LIGHT FOR AUTOMOBILES. ELMER L. MCCASLIN, Salina, Kans., assignor of one-half to Fred C. Skinner, Webb, Canada. Filed Aug. 4. 1916. Serial No. 113,162. (Cl. 240—62.)



1. Means for operating dirigible head-lights, consisting of a rotary head operatively connected with said lights, a clutch member mounted upon a steering bar for engagement with said head, and a shifting rod for moving said clutch member and provided with means for effecting a locking engagement with the head.

2. In an apparatus for controlling dirigible headlights, the combination with a steering bar, of a head revolubly mounted thereon, a clutch member keyed upon the steering bar and adapted for engagement with said head, an arm actuated by the head and connected with the dirigible headlights, and a shifting rod for movement of the clutch member carrying a locking member for engagement with a recess in said head.

3. In an apparatus for operating dirigible lights, the combination with a steering bar, of a head revolubly mounted upon said bar, a clutch member keyed upon the steering bar, a bell crank lever having one of its arms connected with the said lights and its other arm in operative engagement with the head, a shifting rod having a yoke engaged with the clutch member for movement thereof into and out of engagement with the head, and a locking member carried by the shifting rod for engagement with a socket or recess in the head.

1,213,221. CLEAN-OUT FITTING. MARTIN MCGLONE, Des Moines, Iowa. Filed Mar. 7, 1916. Serial No. 82,633. (Cl. 137—76.)

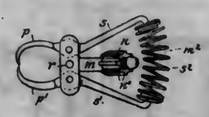


1. A cleanout fitting, comprising a stem adapted for mounting in an opening of pipe or trap, a peripheral flange on said stem, an annular gasket on said flange, a neck on the stem within the gasket, a cap on said gasket, and a screw-cap loosely overlying and inclosing the cap, neck and gasket and screwed on said flange.

2. A cleanout fitting, comprising a stem having a bore of uniform diameter throughout adapted for communication with an opening of trap or pipe, a peripheral flange on and projecting radially of said stem formed with a peripheral coarse screw, an annular gasket on said flange, a loose cap having a rim engaging on said gasket and a screw-cap screwed on said flange and adapted to press the loose cap to the gasket, said screw-cap inclosing the outer end of the stem, the loose cap and the gasket.

3. A cleanout fitting, comprising a stem having a bore of uniform diameter throughout adapted for communication with an opening of trap or pipe, a peripheral flange on and projecting radially of said stem formed with a peripheral coarse screw, a neck on said stem, a gasket on the flange surrounding said neck, a loose cap having a rim resting on said gasket and inclosing said neck, and a screw-cap loosely inclosing the neck, cap and gasket and screwed on said flange, said screw-cap being formed with a tapering peripheral flange.

1,213,222. ARTIFICIAL ARM AND THE FITTINGS THEREFOR. PETER MURRAY MCKAY, Rockville, Collingwood, New Zealand, assignor of one-half to Richard William Brickell, Mornington, New Zealand. Filed Aug. 21, 1916. Serial No. 116,027. (Cl. 3—12.)



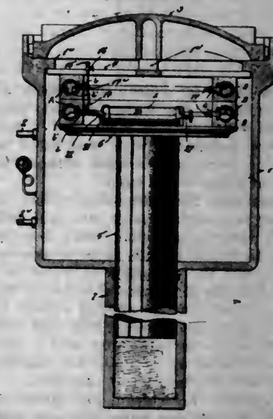
1. An artificial drum characterized by having its end formed with a metal block and provided with plug screwed into a threaded aperture therein, such plug being formed with a central bore extending through it having grooves formed longitudinally along its internal peripheral surface to receive correspondingly toothed stems of fittings for the arm, substantially as specified.

2. An artificial arm characterized by having its end formed with a metal block and provided with a plug screwed into a threaded aperture therein such plug being formed with a central bore extending through it having grooves formed longitudinally along its internal peripheral surface, a stop at the inner end of the bore and a spring catch situated on the inside of the block and normally overlying one side of the bore, in combination with a stem having a boss adapted to fit into the bore and formed with teeth fitting the grooves therein and an extension beyond the boss adapted to project through the bore and formed with a groove around it adapted to be engaged by the said spring catch, substantially as specified.

3. A fitting for an artificial arm of the class herein referred to consisting in a pair of curved jaws pivoted together and provided with handles extending beyond their pivot and with a spring situated between such handles and normally keeping the jaws closed, and a stem or shank adapted to be inserted and locked within the arm, extending at an angle to the plane of the jaws, substantially as specified.

4. A fitting for an artificial arm of the class herein referred to, consisting in a pair of curved jaws pivoted together and having a stem or shank adapted to be inserted into and locked within the arm extending beyond the pivot continuously with one of the jaws, a handle extending beyond the pivot from the other jaw and a spring situated between such stem or shank and handle, normally keeping the jaws closed, substantially as specified.

1,213,223. APPARATUS FOR FORMING AND VULCANIZING RUBBER ARTICLES. NELSON W. MCLEOD, St. Louis, Mo., assignor to American Motors Tire Company, Detroit, Mich., a Corporation of Michigan. Filed May 4, 1916. Serial No. 95,886. (Cl. 18—17.)



1. In an apparatus for vulcanizing rubber articles, a mold, means for introducing water into said mold, means for heating the water in said mold, and means associated with said mold permitting the expansion of the water in the mold without permitting generation of steam in the mold.

2. In an apparatus for vulcanizing rubber articles, a mold, means for introducing water into said mold, means for heating the water in said mold, and means aside from said mold into which the water heated therein may expand without permitting generation of steam in the mold.

3. In an apparatus for vulcanizing rubber articles, a mold, means for introducing water into said mold, means for heating the water in said mold and a closed expansion chamber having communication with the interior of said mold.

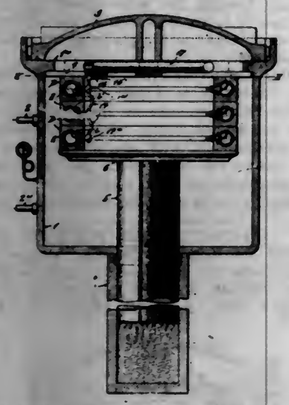
4. In an apparatus for vulcanizing rubber articles, a mold, means for introducing water into said mold, means for heating the water in said mold, and an expansion chamber below the plane of said mold having communication with the interior of the mold.

5. In an apparatus for vulcanizing rubber articles, a sectional mold having an abutment member situated between its shell sections, means for introducing water into

said mold through said abutment member, means for heating the water in said mold, and means having communication with the interior of said mold through said abutment member into which the water heated in said mold may expand without permitting the generation of steam in the mold.

[Claims 6 to 17 not printed in the Gazette.]

1,213,224. APPARATUS FOR FORMING AND VULCANIZING RUBBER ARTICLES. NELSON W. MCLEOD, St. Louis, Mo., assignor to American Motors Tire Company, Detroit, Mich., a Corporation of Michigan. Filed May 4, 1916. Serial No. 95,337. (Cl. 18—17.)



1. In an apparatus for vulcanizing rubber articles, a mold, means for introducing water into said mold, means for heating the water in said mold, and a non-yielding expansion device associated with said mold to permit the expansion of water in the mold without permitting the generation of steam in the mold.

2. In an apparatus for vulcanizing rubber articles, a mold, means for introducing water into said mold, means for heating the water in said mold, and a non-yielding expansion device including an air chamber associated with said mold to permit the expansion of water in the mold without permitting the generation of steam in the mold.

3. In an apparatus for vulcanizing rubber articles, a mold, means for introducing water into said mold, means for heating the water in said mold, and a non-yielding expansion device including a closed air chamber having communication with the interior of said mold.

4. In an apparatus for vulcanizing rubber articles, a mold, means for introducing water into said mold, means for heating the water in said mold, and an expansion chamber above the plane of said mold having communication with the interior of the mold.

5. In an apparatus for vulcanizing rubber articles, a mold, means for introducing water into said mold, means for heating the water in said mold, and an expansion device including an air chamber located above the plane of the water in the mold and having communication with the interior of the mold.

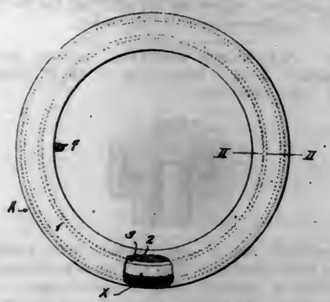
[Claims 6 and 7 not printed in the Gazette.]

1,213,225. MOLD FOR MAKING PNEUMATIC TIRES. NELSON W. MCLEOD, St. Louis, Mo., assignor to American Motors Tire Company, Detroit, Mich., a Corporation of Michigan. Filed May 4, 1916. Serial No. 95,338. (Cl. 18—42.)

1. In a mold for molding rubber articles having separable edges, a shell within which the object to be molded may be confined, an abutment device between which and said shell the separable edges of the object to be molded may be held, means for introducing fluid into the confined object, and a barrier within said object whereby the fluid introduced into said object is precluded from contact with the edge portions of the confined object.

2. In a mold for molding rubber articles having separable edges, a shell within which the object to be molded may be confined, an abutment device between which and said shell the separable edges of the object to be molded may be held, means for introducing fluid into the confined object, and a barrier independent of said annular device whereby the fluid introduced into said object is dammed from contact with the edge portions of the confined object.

3. In a mold for molding rubber articles having separable edges, a shell within which the object to be molded may be confined, an abutment device between which and said shell the separable edges of the object to be molded may be held, means for introducing fluid into the confined object, and a flexible barrier within said object whereby the fluid introduced into said object is restrained from contact with the edge portions of the confined object.

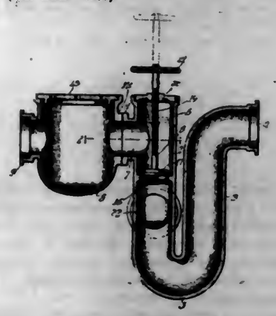


4. In a mold for molding rubber articles having separable edges, a shell within which the object to be molded may be confined, an abutment device between which and said shell the separable edges of the object to be molded may be held, means for introducing fluid into the confined object, and a barrier extending across the joint between said abutment device and the wall of said confined object whereby the fluid introduced into said object is restrained from contact with the edge portions of the confined object.

5. In a mold for molding rubber articles having separable edges, a shell within which the object to be molded may be confined, an abutment device between which and said shell the separable edges of the object to be molded may be held, means for introducing fluid into the confined object, and a flexible barrier extending across the joint between said abutment device and the wall of the confined object whereby the fluid introduced into said object is restrained from access to said joint.

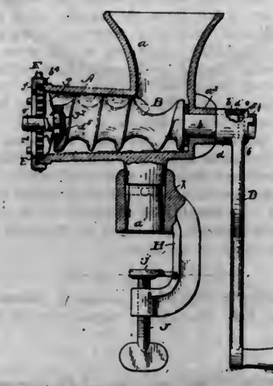
[Claims 6 and 7 not printed in the Gazette.]

1,213,226. PLUMBING STRUCTURE. CHARLES F. MADDEN, Green Bay, Wis. Filed Apr. 26, 1916. Serial No. 93,579. (Cl. 182—10.)



A plumbing fitting comprising a pipe returned upon itself to provide two parallel legs of a trap, one leg extending vertically and open at its upper end, a settling basin connected to the vertically extending leg below its upper end, an annular ledge formed on the inner wall of the vertically extending leg below its connection with the settling basin, a cap secured in the upper end of the said leg, a screw threaded rod taking through said cap, and a valve disk carried by the lower end of the rod for cooperation with the said annular ledge.

1,213,227. HANDLE. ALONZO MANHARD, Cleveland, Ohio, assignor to The Cleveland Electric and Machine Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 1, 1914. Serial No. 841,997. (Cl. 74—33.)



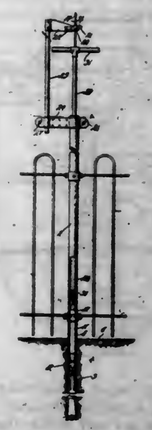
The combination of a bearing sleeve, a shaft which is rotatably mounted in said sleeve and projecting beyond the sleeve said shaft having near its outer end a portion which is reduced in size and which is of oval form in cross section and having at its extreme end a larger oval button shaped end, a crank handle having a sleeve with an opening which is cylindrical a part of the way through to fit upon the cylindrical shaft and which has an inwardly extending flange near its outer face, the inner periphery of which flange is oval and of such size as will permit the button shaped end of the shaft to pass through it but will not permit the oval shaped part of the shaft to turn completely around it.

1,213,228. COUPLING DEVICE FOR TUBULAR POLES. WILLIAM A. MATSINGER, Philadelphia, Pa. Filed May 18, 1916. Serial No. 98,469. (Cl. 189—23.)

1. A series of expansive members made in parts, and a knuckle-joint member having oppositely disposed wedge portions, and means for moving said first members toward each other to be engaged by the wedge portions of said knuckle-joint members and thereby expanded, substantially as described.

2. A series of expansive members made in parts, and a knuckle-joint member having oppositely disposed wedge portions, arranged at angles to each other, and means for moving said first members toward each other, said first members having openings in their parts which extend to the parting between said parts, said partings of each of said first members extending at an angle to each other, said wedge portions being designed to enter said openings when said sections are moved toward each other to effect the expansion of the parts of each of said members in directions at an angle to each other, substantially as described.

3. A series of expansive members made in parts, and a knuckle-joint member having oppositely disposed wedge portions arranged at angles to each other, and a tie bolt passing through all of said members and operative to move said first members toward each other, said first members having openings in their parts which extend to the parting between said parts, said partings of each of said first members extending at an angle to each other, said wedge portions being designed to enter said openings when said sections are moved toward each other to effect the expansion of the parts of each of said members in directions at an angle to each other, substantially as described.



4. A coupling device for tubes, comprising a series of members, adjustable means for securing the members together, certain of said members being made of a number of parts, said latter members having openings extending to their parting lines, the partings of certain of said members being at angles to the partings of other of said members, and knuckle-joint members having wedge portions movable within said openings by said adjustable means, certain of the wedge portions being disposed at angles to other of the wedge portions to move said parts in different directions into gripping engagement with the inner surface of the tube when said adjustable means is actuated to move all of said members together, substantially as described.

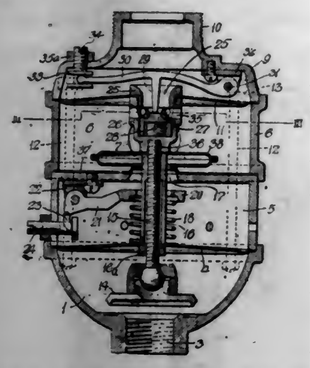
5. A coupling device for tubes, comprising a series of expansive members, each being made in parts and having recesses forming a passage, a tie-bolt extending through said passages in said members and having a head on one end and provided with a screw-thread at its other end, a nut fitting said screw-thread, said members having openings at their ends extending to their parting lines, knuckle-joint members positioned between adjacent end portions of said first members and each having oppositely disposed wedge portions designed to extend within said openings, one end member of said series having beveled surfaces for engagement with the head on said tie-bolt and being made in a number of parts, the nut on said tie-bolt being in engagement with the opposite end member of the series and when turned operates to move said wedge portions within said openings to expand said parts into gripping engagement with the inner surface of the tube, said head on the tie-bolt also aiding by engagement with said beveled surfaces to move the parts of its coöperative member into gripping engagement with the inner surface of the tube, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,213,229. AUTOMATIC WATER-HEATER VALVE. HENRY C. MAUL, Detroit, Mich., assignor to The Michigan Stove Company, Detroit, Mich., a Corporation of Michigan. Filed May 27, 1916. Serial No. 100,201. (Cl. 126—351.)

1. A water heater valve comprising a casing having a gas chamber, a water chamber, an atmospheric chamber between said gas and water chambers, a cap for said water chamber, a movable valve seat member establishing communication between said cap and said water chamber, a valve held normally seated against said valve seat mem-

ber, means in said cap operable from the outside thereof for adjusting said valve relative to said valve seat member, a gas valve in said valve chamber, and a connection between said gas valve and said valve seat member to cause movement thereof in synchronism.



2. A water heater valve comprising a casing having a gas chamber, a water chamber, an atmospheric chamber between said gas and water chambers, a cap for said water chamber, a movable valve seat member establishing communication between said cap and said water chamber, a valve held normally seated against said valve seat member, a gas valve in said gas chamber, a connection between said gas valve and said valve seat member to cause said valve and member to move in synchronism, a spring in said atmospheric chamber adapted for moving said gas valve, and means in said atmospheric chamber operable from the outside thereof adapted for regulating the expansive force of said spring.

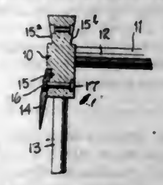
3. A water heater valve comprising a gas chamber, a water chamber, an atmospheric chamber between said gas and water chambers, a cap for said water chamber, a movable valve seat member establishing communication between said cap and said water chamber, diaphragms at the ends of said water chamber supporting said valve seat member, a valve held normally seated against said valve seat member, means in said cap adapted for adjusting said valve relative to said valve seat member, a gas valve in said gas chamber, a connection between said gas valve and said valve seat member to cause movement thereof in synchronism, means in said atmospheric chamber adapted for closing said gas valve, and means operable from outside of said atmospheric chamber for regulating the last mentioned means.

4. A valve comprising a casing having inlet and outlet connections, a flexible diaphragm between said connections, a valve carried by said diaphragm, means extending from one side of said diaphragm to the other to hold said valve open when said diaphragm is flexed from neutral position, and another diaphragm of less area than the first mentioned diaphragm and attached to the opposite side of said valve to move in synchronism therewith.

5. A valve comprising a casing having inlet and outlet connections, a flexible diaphragm between said connections, a diaphragm of less area than the first mentioned diaphragm, a valve housing between said diaphragms and carried thereby, a valve in said housing and means to hold said valve open when said diaphragms are flexed from neutral position and shift said valve housing.

1,213,230. CUTTING ATTACHMENT FOR RAKES. EDWARD F. MITTCOVSSE, Pittsburgh, Pa. Filed May 31, 1916. Serial No. 100,908. (Cl. 55—10.)

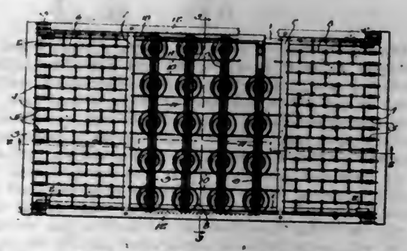
1. The combination with a rake having a cross bar and rake teeth, of a cutting blade detachably disposed upon the outer face of the cross bar and extending entirely along the length thereof and parallel to the teeth, said blade projecting over the bases of the teeth but lying in a plane spaced from the plane of the teeth.



2. A rake comprising a handle, a cross bar, teeth projecting from the cross bar, the cross bar being provided on its outer face away from the handle with upper and lower longitudinally extending recesses forming pockets, and a blade detachably connected to the cross bar and extending parallel to the teeth, said blade being adapted to be disposed in either one of said recesses, the cutting edge of the blade projecting beyond the cross bar.

3. A rake comprising a handle, a cross bar, teeth projecting from the cross bar, the cross bar being provided on its outer face with upper and lower longitudinally extending recesses and upon its rear face with a longitudinally extending recess, and a cutting blade detachably mounted upon the handle and adapted to be disposed in any one of said recesses, and when so disposed extending parallel to the teeth of the rake.

1,213,231. SPRING-BOTTOM. JACOB L. MOORE, Muncie, Ind. Filed Feb. 19, 1916. Serial No. 79,291. (Cl. 5—40.)

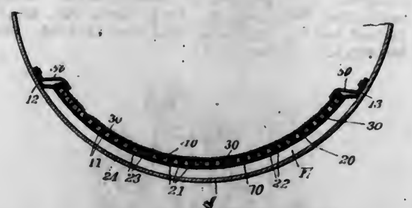


1. A spring bottom having a supporting frame and including end panels of fabric formed of flexibly connected links; a group of upright coiled springs arranged between the end panels; transversely arranged strips of resilient metal to which the inner transverse edges of the fabric panels are attached and with which the portion of the spring bottom formed of upright coiled springs is secured, these metal strips thus effecting the assembly between the end panels of the spring bottom and the intermediate portion of the spring bottom; and strips of resilient metal at the longitudinal edges of the spring bottom and attached at their ends to the end rails of the spring bottom frame, the aforesaid strips of metal being attached at their outer ends to the latter strips of metal.

2. A spring bottom having a supporting frame and including end panels of fabric formed of flexibly connected links; a group of upright coiled springs arranged between the end panels; and transversely arranged strips of resilient metal to which the inner transverse edges of the fabric panels are attached and with which the portion of the spring bottom formed of upright coiled springs is secured, these metal strips thus effecting the assembly between the end panels of the spring bottom and the intermediate portion of the spring bottom.

3. A spring bottom having a supporting frame and including end panels of fabric formed of flexibly connected links; a group of upright coiled springs arranged between the end panels; and transversely arranged pieces of resilient metal extending across the spring bottom from side to side and to which the inner transverse edges of the fabric panels are attached and with which the portion of the spring bottom formed of upright coiled springs is secured, these metal pieces thus effecting the assembly between the end panels of the spring bottom and the intermediate portion of the spring bottom.

1,213,232. SCREEN FOR PERCOLATORS. WILLIAM I. MORGAN, Seaford, N. Y. Filed Sept. 3, 1914. Serial No. 859,956. (Cl. 210—37.)

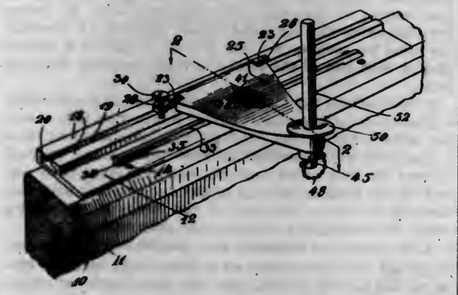


1. A screen for a percolator consisting of a perforated plate, a flexible grid formed of longitudinal bars spaced apart by a plurality of rows of spacing members, the bars and spacing members being tied together, a comparatively coarse fabric over the grid, and means for securing the fabric and grid to the plate.

2. A screen for a percolator consisting of a perforated plate, a flexible grid formed of longitudinal bars spaced apart by spacing members, the bars and spacing members being tied together, a comparatively coarse fabric over the grid, a wire netting over the fabric, and means for securing the netting, fabric and grid to the plate.

3. A screen for a percolator consisting of a perforated plate, a flexible grid formed of longitudinal bars spaced apart by spacing members, the bars and spacing members being tied together, a comparatively coarse fabric over the grid, a wire netting over the fabric, and clamps for securing the said elements together.

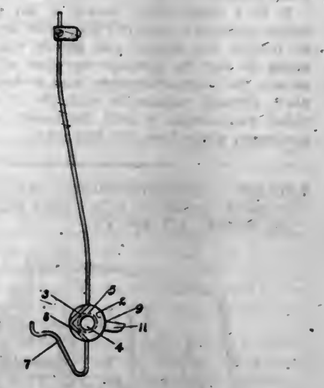
1,213,233. ADJUSTABLE OAR-LOCK. THOMAS S. MORTON, Tuxedo Park, N. Y. Filed Oct. 26, 1916. Serial No. 127,855. (Cl. 9—26.)



1. In a device of the class described, the combination with a bracket rigidly engaged with the rail of a boat, said bracket being grooved longitudinally, of slides movable in the mentioned groove, a plate pivotally engaged with said slides, a rail upon which said plate normally rests, means for slidably engaging said plate to said rail, and means combined with said plate for pivotally engaging with an oar.

2. In a device of the class described, the combination with a metallic bracket adapted to be secured to the rail of a boat, said bracket having an inverted T shaped slot extending its entire length, of a rail disposed parallel with said slot, a plate element slidable in said slot, means for engaging said plate element therein, means for engaging said plate with said rail or disengaging the same, means indicative of the position of the latter engaging means, and means for removably engaging a rowlock with said plate.

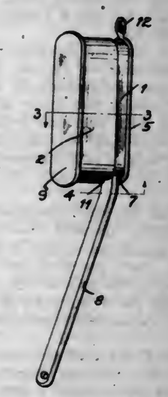
1,213,234. HAMMER-WIRE AND HUB THEREFOR FOR CLOCK-MOVEMENTS. EMIL MUCKLE, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed Aug. 30, 1916. Serial No. 117,645. (Cl. 58—1.)



1. The combination with a hammer-hub having a central opening for the reception of the stud upon which it oscillates and also having a locking-groove formed in one of its faces so as to clear the said opening, of a hammer-arm, hammer-tail and intermediate locking-bend made from one piece of wire, the said bend fitting into the said groove, and means for securing the bend of the wire in the groove of the hub.

2. The combination with a hammer-hub having a central opening for the reception of the stud upon which it oscillates and also having a locking-groove formed in one of its faces so as to clear the said central opening, and also formed with a staking-shoulder concentric with such opening, of a one piece hammer-wire comprising a hammer-arm, a hammer-tail and an intermediate locking-bend adapted in shape to fit into the said groove, and a washer applied to the grooved face of the hub over the said staking-shoulder by means of which it is secured in place.

1,213,235. COVER FOR TOOTH-BRUSHES. PAUL D. MEIERS, Granite City, Ill. Filed June 12, 1913. Serial No. 773,330. (Cl. 132—11.)

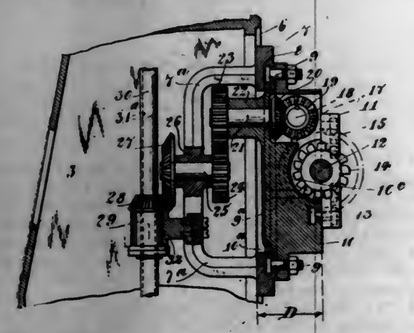


1. In an adjustable tooth brush holder, an elongated plate having an outwardly extending flange formed adja-

cent its edge, said flange having a slot formed therein extending from the edge thereof to the plane of the plate, and a second plate having an outwardly extending flange formed thereon, said last mentioned flange adapted to slidably engage with the first mentioned flange and having a depression in one edge thereof constructed and arranged to register with the aforementioned slot for receiving the handle of the brush, said flanges being adjustable to accommodate brushes with bristles of various length.

2. In a tooth brush holder, a flat elongated plate, a flange extending from the plate and provided with means to receive the handle and permit the back of a tooth brush to rest flat against the plate within the flange, a second flat elongated plate, and a flange on the second plate slidably engageable with the first flange and provided with means to hold the handle of the brush from movemeat away from the first plate.

1,213,236. GEAR-HOBBING MACHINE. WILLIAM NATISCH, Greatkills, N. Y. Filed May 22, 1916. Serial No. 99,048. (Cl. 90—4.)



1. In a machine of the kind described, a cutter slide, a cutter head rotatably mounted therein, a hob arbor attached to said cutter head, the axis of said hob arbor lying in the same plane with the axis of rotation of said cutter head and a driving spindle for said hob arbor, whose axis is located outside of the plane through the axes of cutter head and hob arbor.

2. In a machine of the kind described, a cutter slide, a cutter head rotatably mounted therein, said cutter slide being adapted to slide perpendicularly to the direction of the cutter head axis, a hob arbor and a spindle driving said arbor, carried by said cutter head, a shaft supplying power to said spindle and a bearing for said shaft attached to the cutter head.

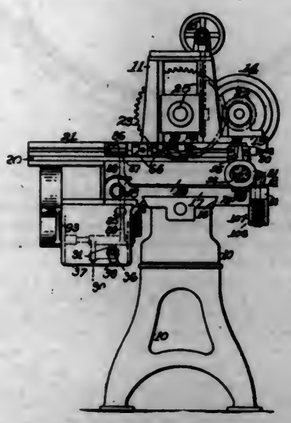
3. In a machine of the kind described, a cutter slide, a cutter head rotatably mounted therein, said cutter slide being adapted to slide perpendicularly to the direction of the cutter head axis, a hob arbor, a driving spindle in geared connection with said hob arbor and an intermediate shaft geared to said driving spindle carried by said cutter head the axis of said intermediate shaft being parallel, but eccentric to the axis of rotation of the cutter head.

4. In a machine of the kind described, a cutter slide, a cutter-head, rotatably mounted therein, a hob arbor, a driving spindle in geared connection with said hob arbor, and an intermediate shaft geared to said driving spindle in eccentric position to the axis of the cutter head, and a second intermediate shaft journaled in the cutter slide and a planetary gear connection between said intermediate shafts.

5. In a machine of the kind described, a supporting column, a power shaft attached thereto, a cutter slide movably supported on said column, a cutter head rotatably carried by said cutter slide, a horizontal shaft journaled in said cutter slide coaxially with the axis of rotation of said cutter head and geared to said power shaft and a pair of planetary gears within said column to transmit power from the horizontal shaft to the cutter head.

[Claims 6 to 10 not printed in the Gazette.]

1,213,237. DROP-TABLE MECHANISM FOR MILLING-MACHINES. ALBERT E. NEWTON and FRED K. HENDRICKSON, Worcester, Mass., assignors to Reed-Prentice Company, a Corporation of Massachusetts. Original application filed Dec. 29, 1914, Serial No. 878,270. Divided and this application filed Nov. 23, 1915. Serial No. 63,111. (Cl. 90—18.)



1. In a milling machine, the combination with a drop table and a movable work table thereon, of positive means for raising, comprising a lever, means carried by the work table for operating said lever, a cam member adapted to turn and arranged to support the drop table, and means operated by said lever for turning the cam into a position to drop or raise the drop table.

2. In a milling machine, the combination with a drop table and a sliding work table thereon, of a rotatable cam carried by the drop table and supporting it, means for supporting the cam, and means operated by the sliding table for turning the cam through a part of a revolution at each end of the stroke to raise and drop the drop table.

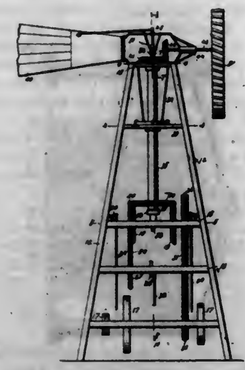
3. In a milling machine, the combination of a drop table, a carriage for supporting it having a raised surface, a sliding work table on the drop table, a cam provided with a plurality of projecting surfaces therearound adapted to rest on said raised surface, said cam supporting one end of the drop table, and means for rotating said cam through an arc at each end of the stroke of the sliding table, for raising and dropping the drop table.

4. In a milling machine, the combination with a carriage and a reciprocatory work table, said carriage having a supporting surface for the work table, of means whereby the work table is supported at one end from said surface in operative position during the operative stroke, and means whereby said last named means is moved to allow the table to drop from said supporting surface at the end of the working stroke.

5. In a milling machine, the combination of a drop table, a carriage for supporting it having a raised surface, a sliding work table on the drop table, a cam provided with a plurality of equally spaced projecting surfaces thereabout each adapted to rest in turn on said raised surfaces as the cam turns, said cam supporting one end of the drop table, and means for rotating said cam through an arc equal to one half the distance between two of said projections at each end of the stroke of the sliding table, for raising and dropping the drop table.

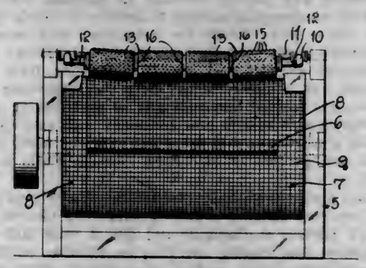
[Claims 6 to 8 not printed in the Gazette.]

1,213,238. GEARING. PHILIP H. NICKELS, Council Grove, Kans. Filed Jan. 30, 1912. Serial No. 674,340. (Cl. 74—7.)



In combination, a shaft, a gear on said shaft, a second shaft, a sleeve slidably mounted on the second shaft, a gear carried by said sleeve and adapted to mesh with the first mentioned gear when in one position and to be free from said first gear in a second position, a collar on said sleeve, a collar on the second shaft, a spring interposed between the collars and urging said sleeve into position to bring the second gear into mesh with the first gear, a bell crank lever fulcrumed adjacent said sleeve collar and having a downwardly extending arm bearing against said sleeve collar on the side opposite the spring, and a pull rod connected to the other arm of the lever.

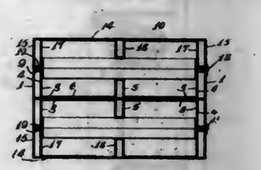
1,213,239. DEVICE FOR CLEANING SAND AND GRAVEL SCREENS. ROSE E. NOLL, Marietta, Ohio. Filed Aug. 23, 1916. Serial No. 116,527. (Cl. 83—56.)



1. The combination with a revolving sand and gravel screen having a flexible, reticulated wall, of a plurality of relatively rotatable rollers mounted above the screen for independent angular movement with respect to their rotative axes, each of said rollers having peripheral teeth for engagement through the interstices of the screen, whereby the rollers are positively rotated in the rotation of the screen.

2. The combination with a revolving sand and gravel screen having a flexible, reticulated wall, of a vertically swinging support mounted above the screen, and a plurality of rollers mounted in spaced relation in the support for independent rotation upon a common axis, said rollers resting upon the screen and having relative angular movement with respect to their rotative axes, the wall of the screen flexing under the weight of the rollers, each roller having peripheral teeth for engagement through the interstices in the screen, whereby the individual rollers are positively rotated.

1,213,240. SHEET-METAL FILING-BOX. ENOCH OHNSTRAND, Syracuse, N. Y., assignor to Oliver M. Edwards, Syracuse, N. Y. Filed July 29, 1911. Serial No. 641,355. (Cl. 220—5.)



1. A box comprising a substantially rectangular body having a bottom, and sides having the marginal edges thereof bent to form channels facing said bottom, and a sheet metal member having an integral centrally disposed lengthwisely extending corrugation, bottom portions on opposite sides of the corrugations extending in parallelism with the bottom of the body, and sides spaced apart from the sides of the body and having angular marginal portions engaging the walls of the channels formed by the marginal portions of the sides of the body, substantially as and for the purpose specified.

2. A box comprising a sheet metal body having a bottom and side flanges projecting from the bottom, and a sheet metal member including a bottom engaging the bottom of the body and flanges at its opposite sides opposed to the first-mentioned flanges, the flanges on one of said parts being formed with channels facing the bottom and the flanges in the other of said parts extending into said channels, substantially as and for the purpose specified.

3. A box comprising a sheet metal body having a bottom and side flanges projecting from the bottom, and a sheet metal member including a bottom engaging the bottom of the body and flanges at its opposite sides opposed to, and spaced apart from, the first-mentioned flanges and together therewith forming hollow walls, the flanges of one of said parts having their margins bent to form channels facing the bottom, and the flanges on the other of said parts having their margins bent to engage the bottoms of said channels, substantially as and for the purpose set forth.

4. A box comprising a sheet metal body having a bottom and side flanges projecting from the bottom, and a sheet metal member engaging the bottom and having flanges at its opposite sides opposed to, and spaced apart from, the first-mentioned flanges and together therewith forming hollow walls, the flanges on one of said parts having their margins bent to form channels facing the bottoms, and the flanges on the other of said parts having their margins bent to engage the bottoms of said channels, and said member being formed with a card guide consisting of a corrugation located between said flanges, substantially as and for the purpose described.

5. A box comprising a sheet metal body having a bottom and sides integral with the bottom, the sides having their margins bent to form internal channels facing the bottom, and a sheet metal member including a bottom engaging the bottom of the body and flanges at its opposite sides extending into such channels and snugly fitting the channels, substantially as and for the purpose specified.

[Claims 6 to 21 not printed in the Gazette.]

1,213,241. DEMOUNTABLE RIM FOR VEHICLE-WHEELS. NELS L. OLSON, Detroit, Mich. Filed May 1, 1916. Serial No. 94,550. (Cl. 21—69.)

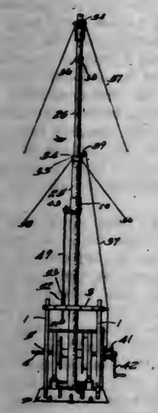
In a vehicle wheel, channel spokes having conical sockets at the outer end thereof of less depth than the width of said spokes, a demountable rim, inwardly projecting arms carried thereby, conical studs on said arms adapted to wedge in the conical sockets of said spokes by side

thrusts of said spokes, said arms having the outer faces thereof in a plane with the outer sides of said spokes, and



means extending through said spoke sockets, and said rim studs for holding said rim studs in said spoke sockets.

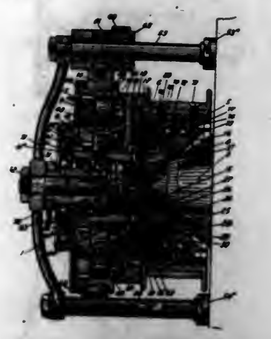
1,213,242. PORTABLE PULLING-MACHINE. CHARLES HERMAN OVERLY and OWEN ALONZO THOMPSON, Independence, Kans. Filed Jan. 3, 1916. Serial No. 69,853. (Cl. 189—16.)



1. The combination in a pulling machine comprising a base frame and mast, of a detachable two-wheel truck and its bolster, a cross beam on the base frame seated on the bolster as a fulcrum, a tongue on the bolster adapted to be coupled to the mast at one side of the bolster, the weight of the base frame being such as to overbalance the mast end of the frame when the tongue is uncoupled from the mast, and side bars pivoted to the bolster and detachably connected to a portion of the base frame at the opposite side of the bolster as described.

2. The combination with a two wheel truck and its bolster, of a mast and a base frame seated on the bolster as a fulcrum, a tongue detachably connecting the truck and mast, the weight of the base frame being such as to overbalance the mast end of the frame when the tongue is uncoupled from the mast, and a pair of side bars pivoted on a part of the truck and detachably connected to the base frame at the opposite side of the bolster.

1,213,243. DRIVING MECHANISM. VICTOR W. PAGE, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Feb. 14, 1913. Serial No. 748,285. (Cl. 74—34.)



1. In a device of the character indicated, a driving member, a traction member rotatively supported thereon and having a portion overhanging and spaced from said driving member and rigidly carrying an annular abutment upon said overhanging portion to provide a driving connection chamber, a driving connection for connecting said members and secured within said chamber, a rotatable carrier upon said driving member and spaced therealong from said abutment, and a second driving connection for connecting said members and located longitudinally of said driving member between said carrier and abutment with said carrier carrying a portion of said second named driving connection and said abutment carrying another portion of such driving connection; substantially as described.

2. In a device of the character indicated, a driving member, a traction member rotatably supported thereon and having a portion overhanging and spaced from said driving member and rigidly carrying an annular abutment upon said overhanging portion to provide a clutch chamber, a direct drive clutch for connecting said members and secured within said chamber, a rotatable carrier upon said driving member and spaced therealong from said abutment, and a speed change drive for connecting said members and located longitudinally of said driving member between said carrier and abutment with said carrier carrying a portion of said drive and said abutment carrying another portion of said drive; substantially as described.

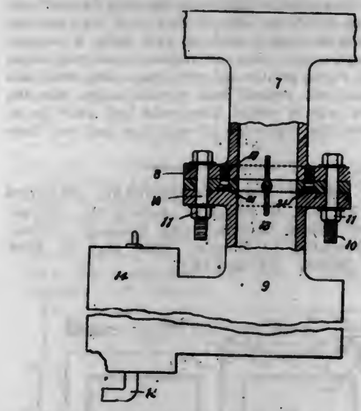
3. In a device of the character indicated, a driving member, a traction member rotatably supported thereon and having a portion overhanging and spaced from said driving member and rigidly carrying an annular abutment upon said overhanging portion to provide a clutch chamber, a controllable direct drive clutch for connecting said members and secured within said chamber; a rotatable carrier upon said driving member and spaced therealong from said abutment, a controllable speed change drive for connecting said members and located longitudinally of said driving member between said carrier and abutment with said carrier carrying a portion of said drive and said abutment carrying another part of said drive, and means for controlling said drives; substantially as described.

4. In a device of the character indicated, the combination with a driving element, an element to be driven thereby, and a plurality of controllable driving connections therebetween, said connections including members to be operated in succession to thereby render one connection inactive prior to rendering the other active, of means for controlling said connections and for moving said members in succession, such means comprising a two-armed lever carrying a contact element and having one arm operatively connected to one of said members and its other arm to an actuator, and an oscillative member operatively connected to the other member and carrying a contact element in the path of movement of said first element but spaced therefrom along said path when said lever is in initial position; substantially as described.

5. In a device of the character indicated, the combination with a driving element, an element to be driven thereby, and a plurality of controllable driving connections therebetween, said connections including members to be operated in succession to thereby render one connection inactive prior to rendering the other active, of means for controlling said connections and for moving said members in succession, such means comprising a bell crank carrying a contact element and having one arm operatively connected to one of said members and its other arm to an actuator, and an oscillative member operatively connected to the other member and carrying a contact element in the path of movement of said first element but spaced therefrom along said path when said bell crank is in initial position; substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,213,244. ANTITHEFT DEVICE FOR MOTOR-CARS. JOSEPH W. PARKIN, Philadelphia, Pa. Filed Dec. 8, 1915. Serial No. 65,662. (Cl. 137—69.)



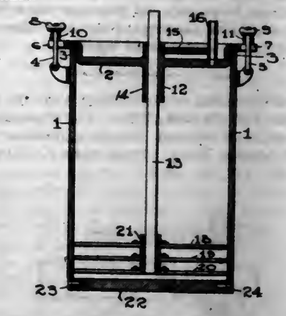
A safety lock of the character described comprising in combination a body portion adapted to be inserted in a joint in a line of fuel supply and having means for attachment to one part of the line, said attaching means adapted to be permanently secured against removal, the said body portion being provided with an opening to permit the passage of fuel therethrough, a valvular member adapted to control the flow of fuel, locking means for locking said valvular member in closed position, and means releasably holding said valvular member in open position.

1,213,245. CEREAL-MACHINE. DAVID C. PARKS, near Kimmswick, Mo. Filed June 25, 1915. Serial No. 36,351. (Cl. 99—2.)

1. A machine for reducing cereals to a meal like form, comprising a closed hollow cylindrical container, having a central bearing in its top, a shaft mounted in said bearing and adapted to reciprocate therein, a series of cutting knives carried at the lower end of said shaft, and means for admitting compressed air to the interior of said container.

2. A machine for reducing cereals to a meal like form, comprising a closed hollow cylindrical container, having a central bearing in its top, a shaft mounted in said bearing and adapted to reciprocate therein, a series of cutting knives carried at the lower end of said shaft, and a tube connected to a suitable source for supplying compressed air to the interior of said container.

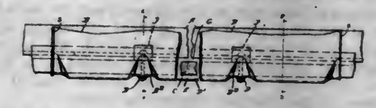
3. In a machine for reducing cereals to a meal like form, a hollow container having a cylindrical body and a top cover removably fastened upon said body, a long central sleeve in said cover forming a bearing, a shaft mounted in said bearing and adapted to reciprocate therein, and a series of cutting knives carried at the lower end of said shaft.



4. In a machine for reducing cereals to a meal like form, a hollow container having a cylindrical body and a top cover removably fastened upon said body, a long central sleeve in said cover forming a bearing, a shaft mounted in said bearing and adapted to reciprocate therein, a tubular support on the lower end of said shaft and a series of cutting knives radiating horizontally from said support.

5. In a machine for reducing cereals to a meal like form, a hollow container having a cylindrical body, a bottom pivotally mounted in said body and a removable top cover, means for locking the bottom in closed position, spring means for resiliently locking the top cover in place, a long central sleeve in the cover forming a bearing, a shaft mounted in said sleeve and adapted to reciprocate therein, said shaft extending within the container, a tubular support on the lower end of said shaft, a series of cutting knives radiating from said support and arranged in horizontal rows, said knives having their lower edges sharpened, and a tube arranged in the cover for admitting compressed air to the interior of the container.

1,213,246. CAR-ROOF. JOHN PEARSON, Chicago, Ill. Filed May 20, 1915. Serial No. 29,304. (Cl. 108—5.4.)



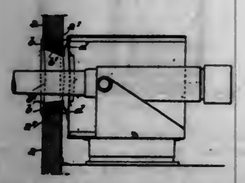
1. In a device of the class described, a car body having sides, metallic roof sheets having downturned skirts at their ends overlying the car side, the skirts and body of the sheets having depressions at their edges to bear upon the car sides to space their central portions from the car body and provide air passages below the sheets into the car, and means to secure the sheets to the car.

2. In a device of the class described, a car body having sides, metallic roof sheets having downturned skirts at their ends overlying the car side, the sheets having depressions at their edges extending across the width of the skirts and into the body of the sheets to space their central portions from the car body to provide air passages into the car below the sheets, and means to secure the sheets to the car.

3. In a device of the class described, a car body having sides, metallic roof sheets having downturned skirts at their ends overlying the car side, fasciæ intermediate the sides and skirts, means to space the fasciæ from the sides to provide air passages below the sheets into the car, bends in the sheets to space their skirts and bodies from the fasciæ to provide air passages below the sheets into the car, and means to secure the sheets and fasciæ to the car.

4. In a device of the class described, a car body having sides, metallic roof sheets having downturned skirts at their ends overlying the car side, fascia between the skirts and sides, the sheets being deformed or bent to space portions of their bodies and skirts from the fascia to provide air passages below the sheets into the car, washers between the car side and fascia to space the latter away from the car side to provide air passages below the sheets into the car, and bolts passing through the sides, washers, fascia and skirts to secure them together.

1,213,247. GUN-CARRIAGE SHIELD AND IN THE EMBRASURES OF CASEMATES. PIO PERRONE, Rome, Italy, assignor to Società Anonima Italiana Gio, Ansaldo & C., Genoa, Italy. Filed June 6, 1914. Serial No. 843,443. (Cl. 89—36.)



1. A gun casemate comprising a fixed armor having an embrasure, a gun carriage internally of the fixed armor, a shield partially closing and in spaced relation to the embrasure, a resilient connection between the gun carriage and the shield, the edges of the casemate and of the shield being formed to engage each other after a limited amount of backward movement of the shield.

2. A gun casemate comprising a fixed armor having an embrasure, a gun carriage internally of the embrasure, a shield partially closing the embrasure and spaced away therefrom so as to be capable of backward movement, resilient arms upon the gun carriage for supporting the shield and permitting of its backward movement under excessive pressure and means for limiting the extent of backward movement of the shield.

3. A gun casemate comprising a fixed armor having an arcuate portion with a rectangular embrasure, a gun carriage movable about an axis at the point from which the arc is struck, an arcuate armored shield partially closing the embrasure and also movable along said embrasure about said axis of the gun carriage in spaced relation to the fixed armor and resilient connecting means between the gun carriage and the shield, the edges of the fixed and movable armor being so shaped as to arrest inward movement of the movable armor against the resistance of the resilient connecting means.

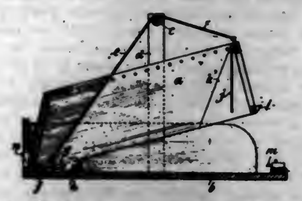
4. The combination with a gun carriage of an arcuate armored shield concentric with the axis of the carriage, resilient means for mounting the shield upon the carriage and a casement having an arcuate portion positioned relatively to the shield to permit backward movement thereof and to limit the extent of said movement.

5. A gun casemate comprising a fixed armor, an embrasure in the casemate of greater external than internal width, a gun carriage internally of the fixed armor, a shield having a greater external than internal width, resilient means connecting the gun carriage to the shield and supporting same in spaced relation to the casemate embrasure and to permit the shield to abut against said casemate embrasure under excessive external pressure.

[Claims 6 and 7 not printed in the Gazette.]

1,213,248. ANIMAL-TRAP. BERTRAM LEWIS PHILLIPS, Brockley, London, England. Filed Sept. 16, 1916. Serial No. 120,434. (Cl. 43—19.)

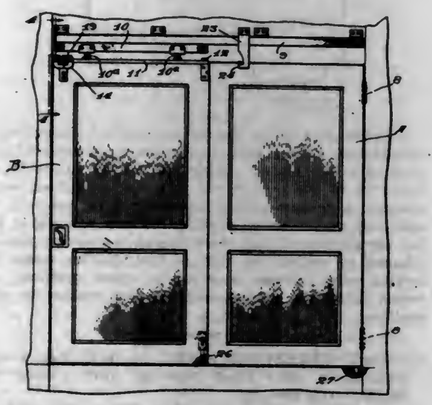
1. In an animal trap, an open bottomed but otherwise closed cage, a support above said cage, a bait plate and flexible connecting means between the front portion of said cage and said bait plate, led over said support and of such length that the front of said cage is raised when said bait plate is inserted beneath the rear edge of said cage.



2. In an animal trap, an open bottomed but otherwise closed cage, a base plate, upstanding side and rear walls and a front fillet on said base plate loosely inclosing said cage, a support above said cage, a bait plate and flexible connecting means between the front portion of said cage and said bait plate, led over said support and of such length that the front of said cage is raised when said bait plate is inserted between the rear edge of said cage and said base plate.

3. In an animal trap, an open bottomed but otherwise closed cage, a base plate, upstanding side and rear walls and a fillet on said base plate loosely inclosing said cage, a lug at the rear edge of said cage engaging in said rear wall, a lug at the front edge of said cage, an inwardly directed spring-protruded latch on said fillet, a support above said cage, a bait plate and flexible connecting means between the front portion of said cage and said bait plate, led over said support and of such length that the front of said cage is raised when said bait plate is inserted between the rear edge of said cage and said base plate.

1,213,249. MEANS FOR SUSPENDING SLIDING DOORS. ELLIS J. G. PHILLIPS, Aurora, Ill., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed May 22, 1916. Serial No. 99,063. (Cl. 20—16.)



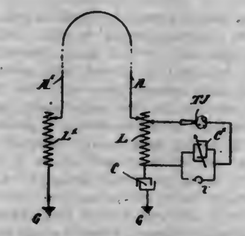
1. The combination with a sliding door suspended from an overhead track, the suspending means including a bar lying over and pivotally connected to the door near the forward edge thereof, of means for detachably connecting said bar to the door adjacent to the other edge thereof, an arm attached to a fixed support, and a device carried by said bar and adapted to have locking engagement with said arm when said door has been moved on its track to open position, said engagement of such device with the arm holding said bar against longitudinal movement when the door has been swung away from the doorway.

2. The combination with a sliding door suspended from an overhead track, the suspending means including a bar lying over and pivotally connected to the door near the forward edge thereof, of a pivot-bolt carried by the door and adapted to be projected into a floor-socket in vertical alinement with the pivotal connection of the door with said bar when the door has been moved on its track to open position, and means for maintaining the alinement of such pivots when the door is thereafter swung on its pivots away from the doorway.

3. The combination with a sliding door suspended from an overhead track, the suspending means including a bar lying over and pivotally connected to the door near the forward edge thereof, of interengaging means carried by the bar and the door for detachably connecting said bar and door together adjacent to the other edge of the door, a pivoted latch on the bar for locking said interengaging means together, and means adapted for engagement by the latch, after the door has been moved on its track to open position, for holding said bar against shifting longitudinally when the door is thereafter turned away from the doorway.

4. The combination with a sliding door suspended from an overhead track, the suspending means including a bar lying over and pivotally connected to the door near the forward edge thereof, of a bracket connected with the bar and having an opening in it, a projection on the door adapted to pass through said opening, a pivoted latch connected with the bar and adapted to engage the projection on the door to lock the bar to the door, and a stationary arm with which said latch is adapted to be engaged after the door has been moved on its track to open position, such engagement with the arm holding the said bar against longitudinal movement when the door is thereafter swung away from the doorway.

1,213,250. MEANS FOR RECEIVING INTELLIGENCE COMMUNICATED BY ELECTRIC WAVES. GREENLEAF WHITTIER PICKARD, Amesbury, Mass., assignor to Wireless Specialty Apparatus Company, New York, N. Y., a Corporation of New York. Original application filed Aug. 30, 1906, Serial No. 332,697. Divided and this application filed Nov. 8, 1906. Serial No. 342,465. (Cl. 250—20.)



1. Means for receiving intelligence communicated by electric waves, which comprises a circuit arranged to be supplied with oscillating current containing energy derived from said waves; a conducting solid connected in good contact in said circuit and constructed and arranged to function as a rectifier to convert said supplied oscillating current into direct currents; and a condenser and a parallel-connected telephone also connected in said circuit, substantially as and for the purpose described.

2. Means for receiving intelligence communicated by electric waves, which comprises an aerial wave-intercepting circuit containing an inductance coöperatively related to ground; a circuit receiving oscillating currents from said wave-intercepting circuit by way of said inductance; a conducting solid connected in good contact in the latter circuit at a point of relatively high potential and constructed and arranged to function as a rectifier to convert said supplied oscillating current into direct currents; and a condenser and a parallel-connected telephone connected in said circuit at a point of relatively lower potential, substantially as and for the purpose described.

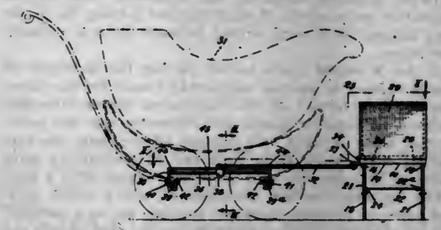
3. Means for receiving intelligence communicated by electric waves, which comprises an inductance coil constituting an element of a wave-intercepting oscillating-current circuit which is coöperatively related to the ground and arranged to be supplied with energy derived from such waves; in combination with a condenser connected in a circuit arranged to be supplied, by way of said inductance coil, with oscillating currents also containing energy derived from said electric waves; a device connected in series with said condenser and consisting of an electrically-conducting but highly-resistant non-metallic material possessing thermo-electromotive power, and thereby functioning as a rectifier of said supplied oscillating currents; and a device connected to receive and constructed to indicate the flow of direct currents which results, by the functioning of said rectifier and condenser, from said supplied oscillating currents, substantially as and for the purpose described.

4. Means for receiving intelligence communicated by electric waves, which comprises an inductance coil constituting an element of an oscillating current circuit which is arranged to be supplied with energy derived from such waves; in combination with a condenser connected in a circuit arranged to be supplied, by way of said inductance coil, with oscillating currents also containing energy derived from said electric waves; a device connected in series with said condenser and consisting of an electrically-conducting but highly-resistant non-metallic material possessing thermo-electromotive power, and thereby functioning as a rectifier of said supplied oscillating currents; and a device connected to receive and constructed to indicate the flow of direct currents which results, by the functioning of said rectifier and condenser, from said supplied oscillating currents, substantially as and for the purpose described.

5. Means for receiving intelligence communicated by electric waves, which comprises a condenser connected in a circuit which is arranged to be supplied with oscillating current containing energy derived from such waves; in combination with a high-resistance device connected in series with said condenser and constructed and arranged to function as a rectifier for said supplied oscillating current; and a device connected to receive and constructed to be operated by the flow of direct currents which results, by the functioning of said rectifier and condenser, from the supplied oscillating current, substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

1,213,251. ADJUSTABLE STOOL FOR BABY-CARRIAGES. LILLIAN M. PIERCE, New York, N. Y., assignor of one-half to George L. Pierce, New York, N. Y. Filed Jan. 29, 1916. Serial No. 75,054. (Cl. 21—12.)

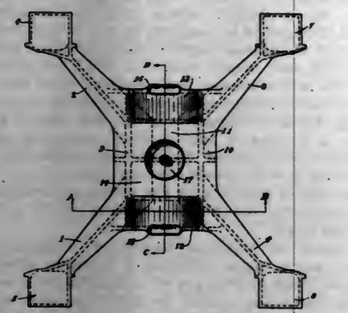


1. An adjustable stool for baby carriages, comprising a seat, two connected spaced bars adapted to be detachably fastened to the axles of a baby carriage under its body, an extensibly adjustable retaining element pivoted to the seat so that the seat may be swung on the element, and said element being pivoted to the bars for allowing the seat to be guided to and from under the body of the carriage so as to be disposed alongside the carriage for use as well as being carried on the bars when not in use, foldable legs for supporting the seat when in use, and a locking element for preventing the legs from accidental collapsing.

2. The combination with the baby carriage, of a foldable stool, and an extensibly adjustable retaining element pivoted to the stool, and fastened to the carriage for allowing the stool to be disposed under the body of the carriage when not in use and to be guided to a position alongside of the carriage for occupancy.

3. The combination with the body of a baby carriage, of a support removably fastened to the carriage above the axles, a foldable stool and an extensibly adjustable retaining element in the form of a lazy tong, the said element having one end pivoted to the support and having its other end pivoted to the stool for allowing the stool to be adjustably disposed under the body of the carriage on the support when not in use and to be guided to a position alongside of the carriage for occupancy.

1,213,252. CAR TRUCK-BOLSTER. JOHN A. PILCHER, Roanoke, Va. Filed Aug. 5, 1915. Serial No. 43,487. (Cl. 105—244.)



1. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams extending between adjacent terminals and connected near the intersection point of the X by a distinct joining beam, the said joining beam being made with two parallel spaced main portions spanning the said continuous beams with a relatively depressed portion therebetween, and a center-bearing plate on the said depressed portion, the said depressed portion extending also from one to the other of the said main parallel portions and being joined thereto.

2. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams extending between adjacent terminals and connected near the intersection point of the X by a distinct joining beam, the said joining beam being arched between the said continuous beams.

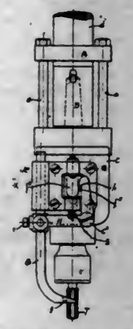
3. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams extending between adjacent terminals and connected near the intersection point of the X by a distinct joining beam, the said joining beam being made with two parallel-spaced main portions spanning the said continuous beams with a relatively depressed portion therebetween, and a center bearing plate on the said depressed portion, the said parallel-spaced portions being arched between the said continuous beams, and the said relatively-depressed portion extending directly across from one of said continuous beams to the other.

4. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams extending between adjacent terminals and connected near the intersection point of the X by a distinct joining beam, the said joining beam being made with two parallel-spaced main portions spanning the said continuous beam with a relatively-depressed portion therebetween, a center-bearing plate on the said depressed portion, and side bearings on the said main portion at each side of the said center-bearing plate, said depressed portion extending also from one to the other of the said main parallel portions and being joined thereto.

5. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams extending between adjacent terminals and connected near the intersection point of the X by a distinct joining beam, the said joining beam being made with two parallel-spaced main portions spanning the said continuous beams with a relatively-depressed portion therebetween, and a center bearing plate on the said depressed portion, the said parallel-spaced portions being arched between the said continuous beams and the said relatively-depressed portion extending directly across from one of said continuous beams to the other, the said continuous members being of I-shape in cross section and the said arched main portions of the joining beam being of box-shape in cross section.

[Claim 6 not printed in the Gazette.]

1,213,253. TAPPING OR THREAD-CUTTING DEVICE. ARTHUR C. PLETZ, Cincinnati, Ohio. Filed July 30, 1915. Serial No. 42,844. (Cl. 10—137.)



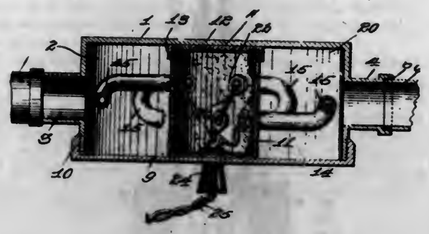
1. In a tapping attachment, the combination of means for attaching the tapping device to the sleeve of the drill-spindle, a shank and beveled gear attached thereto, for transmitting the rotation of the drill-spindle, an attachment spindle, and beveled gear attached thereto to transmit reverse motion to the attachment spindle, an idler gear meshing with both the aforesaid gears, a clutch splined to the attachment spindle, and adapted to engage either the first or second mentioned gears, a yoke lever for shifting said clutch, a spring adapted to normally hold said mechanism in reversing motion position, a lug on said yoke lever, a trip rod with a trip adapted to engage the material being tapped when the tap has entered the work a predetermined distance, a trip lever, one end of which is adapted to be fixed to the trip rod, and a hook on the trip lever adapted to engage the yoke lever so as to hold the device in position to insure forward rotation of the tap, until the hook is released from the lug by pressure of the trip on the material being tapped.

2. In a drilling and tapping machine, in combination with the suspended gear casing containing the reversing train of bevel gears, a drill spindle entering said casing from below loosely through the lower gear and into an axial bore or recess of the upper, and having an enlargement between the upper and lower gears spacing said gears apart.

3. In a drill press attachment of the character indicated in combination with the independent drill spindle, the oppositely rotating bevel gears and clutch mechanism for rotatively connecting the spindle with the gears alternately, a spring bearing mediately against the clutch to hold the engagement normally in reverse or withdrawal movement of the drill or tap; a movable locking catch holding the spring in compression; and a trip rod connected therewith and adapted to operate the release when the required depth of penetration is reached by the drill in the article worked.

4. In an attachment of the character described, the combination with the drill spindle and its rotative mechanism and shifting clutch, of an operating yoke, having a hand lever provided with a projection, a bell-crank lever pivoted at its angle having one end provided with a catch adapted to engage said projection, and a trip-rod adjustably connected to another arm of the bell-crank lever and adapted to release the engagement of the catch with said projection.

1,213,254. LIQUID-HEATER. FRED POOLE, Jewell, Kans. Filed Feb. 2, 1915. Serial No. 5,739. (Cl. 219—39.)



1. In a liquid heater the combination of a casing interposed in a water conduit or the like, a cylindrical supporting body centrally located in said casing, and a plurality of heating members having their inner extremities respectively in a plane diagonally to the longitudinal axis of the supporting body, the said inner extremities being alternately disposed in the wall of said supporting body, as and for the purpose set forth.

2. In combination, a casing interposed in a water conduit, a second casing concentrically arranged in said first casing and carrying a plurality of U-shaped angularly arranged radially extending heating members, whereby to aid circulation of liquid passing between said casings.

3. In a liquid heater the combination of a casing interposed in a water conduit or the like, a supporting casing carried therein, radially extending heating members associated with said inner casing having the inner extremities thereof alternately arranged in said casing, and means for securing said heating elements rigidly to the casing.

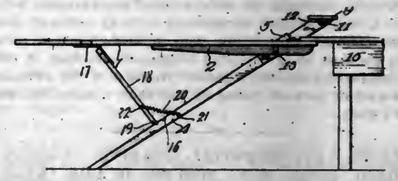
4. A liquid heater, including a casing interposed in a water conduit or the like, a supporting casing receivable within said first-mentioned casing, a plurality of heat radiating members carried by said inner casing and extending laterally in the water space between said inner and outer casings, inlet and outlet means for said first-mentioned casing, electric heating units carried in each of said heat radiating members, and means for detachably securing said heat radiating members in position.

5. In a liquid heater, the combination of an outer casing interposed in a water conduit or the like, an inner casing affording a supporting body, heat radiating members carried by said inner casing and extending laterally in the space between said casings, said heat radiating members being so disposed relative to each other as to cause the liquid to assume a substantially zigzag course from inlet to outlet.

[Claim 6 not printed in the Gazette.]

1,213,255. IRONING-BOARD. JAMES H. PRIMM, Chicago, Ill. Filed Aug. 21, 1916. Serial No. 115,984. (Cl. 68—10.)

In a device of the class described, a board and a supporting leg pivotally mounted in said board, said device being adapted to be attached to a table with the table edge clamped between the opposed ends of the board and leg, said leg being notched, a brace, one end of which is pivoted to said board and the other end of which seats in



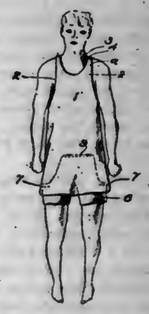
said notches, and a spring connecting said brace and said leg.

1,213,256. ANTISKIDDING DEVICE. TOM A. PYROS, Pittsburgh, Pa. Filed Mar. 29, 1916. Serial No. 87,452. (Cl. 152—14.)



An anti-skidding device comprising a plurality of anti-skidding members composed of narrow flat strips of closely woven fabric adapted to extend transversely in flat engagement with the tread portion of a tire, a pair of coupling elements for each of said members, each of said elements comprising a rectangular body-portion and parallel extensions contactingly inclosing one end portion of its associated anti-skidding member, the said extensions and body-portion being provided with serrated edges pressed into the said end portions whereby the latter is connected to the element, and annular retaining members seated in the said coupling elements.

1,213,257. BATHING-SUIT. LESTER RAUH, New York, N. Y. Filed June 3, 1915. Serial No. 31,915. (Cl. 2—145.)



1. A bathing suit comprising a shirt element and a trunk element, said trunk element having inverted U-shape upward extensions and U-shape recesses therebetween.

2. A bathing suit comprising a shirt element and a trunk element, said trunk element having portions of its upper part terminating in different horizontal planes to permit freedom of the swimmer's legs.

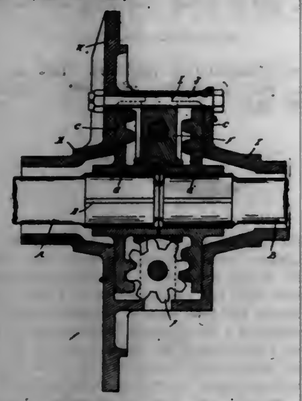
3. A bathing suit comprising a shirt element and a trunk element, said trunk element having inverted U-shape upward extensions and U-shape recesses therebetween, the top of said extensions and the bottom of said recesses being stitched to said skirt portion, said stitching being overlapped to prevent rising of the skirt around the swimmer's body.

4. A bathing suit comprising a shirt element and a trunk element, said trunk element being secured to said

body element by intermittent stitching in different horizontal planes to permit freedom of the swimmer's legs and to prevent rising of the skirt around the swimmer's body.

5. A bathing suit comprising a body element and a trunk element, said trunk element being secured to said body element by interrupted staggered stitching in different horizontal planes to permit freedom of the swimmer's legs and to prevent rising of the skirt around the swimmer's body.

1,213,258. DIFFERENTIAL GEARING. CHARLES E. REDDIO, Detroit, Mich. Filed Feb. 18, 1915. Serial No. 9,027. (Cl. 74—34.)



1. A differential gearing, comprising a pair of spaced axially alined spiral disk gears adapted for mounting on the respective axle sections, the threads of said gears being respectively right and left, intermediate gears mounted between said spiral gears adapted for engagement with said disk gears, and a mounting for said intermediate gears adapted for planetary movement about the axis of said disk gears.

2. A differential gearing, comprising a pair of spaced axially alined spiral disk gears having their threads respectively right and left and of the same pitch, intermediate gears mounted between said spiral gears engaging said disk gears, the pitch of the threads being such as to prevent the driving of either disk from the intermediate gear, a drive member revoluble about the axis of said disk gears, and a mounting for said intermediate gears upon said drive member.

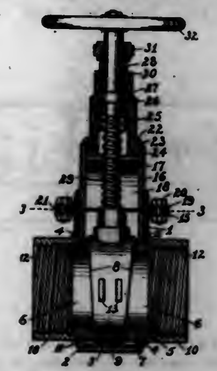
3. A differential gearing, comprising alined abutting axle sections, a pair of spiral disk gears mounted on the respective sections and spaced from each other, the threads of said gears being oppositely arranged and respectively right and left, a member arranged intermediate said gears and journaled for independent rotary movement thereon, and intermediate gears mounted on said member and engaging the opposite disk gears, said engagement permitting the rotation of said intermediate gears by either one of said disk gears and being irreversible.

4. A differential gearing, comprising a pair of axially alined spaced spiral disk gears having abutting hub portions, the threads of said gears being respectively right and left, a member journaled upon the hubs of said gears intermediate the disks, intermediate gears mounted on said member and engaging said disk gears so as to be revoluble by either of said disks the movement being irreversible, and a housing for said gearing connected to said intermediate member and forming a drive member therefor.

5. A differential gearing, comprising a pair of spaced axially alined spiral disk gears having their threads oppositely arranged and respectively right and left, a plurality of intermediate gears arranged in planes offset from the axis of said disk gears to bring the teeth of said intermediate gears more nearly in parallelism with the axes thereof, and a mount for said intermediate gears adapted for planetary movement about the axis of said disk gears.

[Claim 6 not printed in the Gazette.]

1,213,259. STEEL-PLATE GATE-VALVE. HARRY B. REDDING, Cleveland, Ohio, assignor, by direct and mesne assignments, of one-fourth to M. A. Fritts, one-half to D. A. Diemert, and one-fourth to The Cleveland Steel Valve Co., Cleveland, Ohio, a Corporation of Ohio. Filed May 7, 1915. Serial No. 26,463. (Cl. 137—5.)

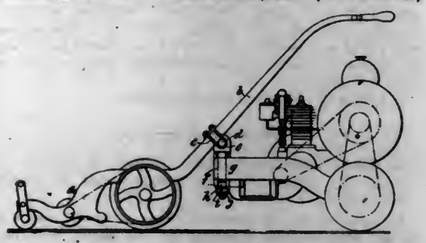


1. A valve body formed of side plates and a strip, the side plates being welded to the strip, the side plates having openings therethrough, and tubular members having their ends fitting against and being welded to said side plates in alinement with the openings, substantially as described.

2. A valve body formed of side plates and a strip, the side plates being welded to the strip, the side plates having openings therethrough, rings inserted in the openings of the side plates and having shoulders abutting the inner faces thereof, tubular members fitting over the outer ends of said rings and abutting the outer faces of the side plates, and said tubular members being welded to the rings and to the side plates, subetantially as described.

3. A valve body formed of side plates and a strip, the side plates being welded to the strip, the side plates having openings therethrough, rings inserted in the openings of the side plates and having shoulders abutting the inner faces thereof, tubular members fitting over the outer ends of said rings and abutting the outer faces of the side plates, said tubular members being welded to the rings and to the side plates, the rings having their inner faces inclined, and guide bars for the valve gate welded to said strip between said inclined faces of the rings, substantially as described.

1,213,260. MOTOR-PROPELLED VEHICLE. WILLIAM EDGCUMBE RENDLE, Westminster, London, England. Filed Aug. 9, 1915. Serial No. 44,633. (Cl. 21—114.)



1. The combination with a vehicle having handles for steering it, of a motor driven vehicle, a horizontal cross bar, clips which attach the cross bar to the handles, and a universal joint between said bar and the motor driven vehicle which permits the steered vehicle to be turned independently of the motor driven vehicle.

2. A vehicle connected to a motor driven machine by a bar fixed to the vehicle and free to turn in a bearing in a pin held in a socket larger at the bottom than at the top in the motor driven machine.

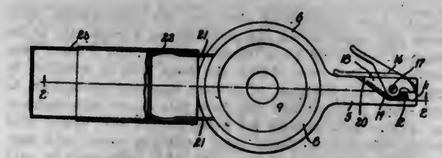
1,213,261. CHOLIC-ACID FORMALDEHYDE CONDENSATION PRODUCT. ERICH RIETZ, Elberfeld, Germany, assignor to Synthetic Patents Co. Inc., New York, N. Y., a Corporation of New York. Filed Dec. 29, 1914. Serial No. 879,516. (Cl. 23—24.)

1. The hereindescribed new and therapeutically valuable substances being chemically condensation products of cholic acid and an active methylene-containing substance, said substances being soluble in alcohol, substantially as described.

2. The herein described new and therapeutically valuable products being chemically compounds of cholic acid and formic aldehyde which are whitish powders soluble in alcohol and glacial acetic acid, substantially as described.

3. The herein described new and therapeutically valuable product being chemically a compound of cholic acid and formic aldehyde which is a whitish powder soluble in alkali, alcohol and glacial acetic acid, melting at about 140° C., substantially as described.

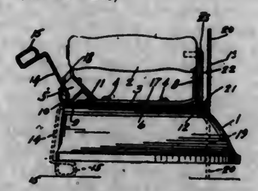
1,213,262. RECEPTACLE FOR CIGAR-ASHES. JOHN S. ROGINSKI, Boston, Mass. Filed Aug. 14, 1915. Serial No. 45,495. (Cl. 248—1.)



1. A device of the character described having, in combination, an arm with a slot therein extending inwardly from one edge of said arm, a pin adapted to be fastened to a suitable support and projecting through said slot, a head on said pin whereby said arm is prevented from moving downwardly on said pin and a latch pivoted on said arm and constructed and arranged to engage said pin, whereby said arm is pivotally and detachably connected to said pin.

2. A device of the character described having, in combination, an arm with a slot therein extending inwardly from one edge of said arm, a pin adapted to be fastened to a suitable support and projecting through said slot, a head on said pin whereby said arm is prevented from moving downwardly on said pin and a spring-actuated latch lever pivoted on said arm and provided with a recess in one edge thereof arranged to engage said pin whereby said arm is pivotally and detachably connected to said pin.

1,213,263. SAD-IRON SUPPORT. EVEN J. ROHNE, Minneapolis, Minn. Filed Mar. 27, 1916. Serial No. 86,875. (Cl. 68—27.)



1. A sad-iron support including a plurality of movable legs secured to a sad-iron, said legs having feet on which the sad-iron rests when the legs are lowered.

2. A sad-iron support including a plurality of movable legs secured to a sad-iron, yielding means tending to raise the legs, said legs having feet on which the sad-iron rests when the legs are lowered, the weight of the sad-iron on said feet holding the legs lowered against the tension of said yielding means.

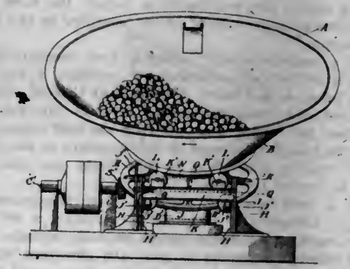
3. A sad-iron support including a plurality of movable legs secured to a sad-iron for swinging movement and limited endwise movement, said legs having feet on which the sad-iron rests when the legs are lowered.

4. A sad-iron support including a plurality of movable legs secured to a sad-iron, said legs having feet on which the sad-iron rests when the legs are lowered, and yielding means tending to raise the legs.

5. A sad-iron support including a plurality of movable legs secured to a sad-iron, said legs having feet on which the sad-iron rests when the legs are lowered, yielding means tending to raise the legs, and means for positively lowering one of said legs.

[Claims 6 to 12 not printed in the Gazette.]

1,213,264. MORTAR BALL-MILL. LEVERETT S. ROPES, Helena, Mont. Filed May 22, 1915, Serial No. 29,831. Renewed June 15, 1916. Serial No. 103,866. (Cl. 83—9.)



1. A mortar ball mill comprising a base having a concaved bearing recess, a semi-spherical bearing block mounted in said recess, a hopper, a block secured thereto and having a spindle journaled in a recess in said bearing block, the adjacent faces of said blocks having annular raceways and ball bearings therein, a gear wheel fixed to said hopper, and gear means for rotating said wheel.

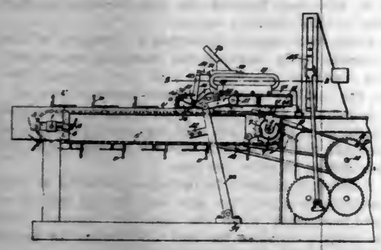
2. A mortar ball mill comprising a base having a concaved bearing recess, a semi-spherical bearing block mounted in said recess, a hopper and shell in which the same is mounted, said shell being provided with an annular track, a block projecting from said shell provided with a spindle journaled in a recess in said bearing block, a gear wheel integral with said shell, means for driving the wheel, a rack and means for raising and lowering the same and antifriction wheels carried by the rack and engaging said rack.

3. A mill comprising a rotary bowl-shaped receptacle having a substantially spherical inner bottom surface and straight flaring side walls constituting continuations of said bottom surface, means for supporting and rotating said receptacle with its axis inclined to the horizontal, and a multiplicity of tumbling crushers in said receptacle adapted to be given a whirling and tumbling movement in a circular path by the rotary movement of said receptacle.

1,213,265. FEED ATTACHMENT FOR AUTOMATIC BOOK-TRIMMING MACHINES. JAMES ROWE, Chicago, Ill. Filed May 22, 1915. Serial No. 29,932. (Cl. 164—48.)

1. In a book-trimming machine, feed mechanism including a reciprocable member, book-pad engaging means carried thereby, and means for throwing the same out of and into engaging relation to book pads during movement of said member in one direction, and maintaining said means in said relation during the entire movement of said

member in the opposite direction whereby the said engaging means are positioned to engage the book pads during the entire movement of the carriage in the opposite direction.



2. In a book-trimming machine, feed mechanism including a reciprocable carriage, a book-pad support between the limits of movement thereof, book pad engaging means on said carriage, and mechanism for raising and lowering the said means during the movement of said carriage in one direction for causing said means to pass freely over the book-pad to be moved thereby whereby the said engaging means are positioned to engage the book pads during the entire movement of the carriage in the opposite direction.

3. In a book-trimming machine, feed mechanism including a horizontally reciprocable carriage, a book-pad support between the limits of movement thereof, reciprocable book pads engaging means on said carriage, and mechanism for raising and lowering the said means during the backward movement of said carriage in one direction for causing said means to pass freely over the book-pad to be moved thereby.

4. In a book-trimming machine, feed mechanism including a horizontally reciprocable carriage, a book-pad support, book-pad engaging means on said carriage reciprocable relatively thereto to vary the elevation thereof, mechanism on said carriage for reciprocating said means as said carriage moves rearwardly, and devices on the frame of the machine adapted to be engaged by said mechanism to actuate the latter at predetermined intervals to cause said means to pass freely over and drop behind the book pad during the rearward movement of the carriage.

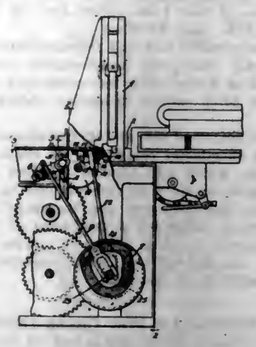
5. In a book-trimming machine, feed mechanism including a horizontally reciprocable carriage, a book-pad support, book-pad engaging means on said carriage reciprocable relatively thereto to vary the elevation thereof, mechanism on said carriage for reciprocating said means as said carriage moves rearwardly, and cams on the frame of the machine disposed in engaging relation to said mechanism to actuate the latter at predetermined intervals to cause said means to pass freely over and drop behind the book pad during the rearward movement of the carriage.

[Claims 6 to 14 not printed in the Gazette.]

1,213,266. BOOK-PAD ADJUSTER FOR AUTOMATIC BOOK-TRIMMING MACHINES. JAMES ROWE, Chicago, Ill. Filed May 22, 1915. Serial No. 29,933. (Cl. 164—48.)

1. In a book-trimming machine, the combination with gages for determining the position of a book-pile to be trimmed relatively to a trimming plane and a book supporting surface over which the book pile is adapted to slide into said position, of a pair of book-pile elevating devices having their surfaces normally flush with the book supporting surface and extending from a point forward of the book-engaging surfaces of the gages to a point rearwardly thereof; and mechanism for imparting a rocking movement of said devices through an arc sufficient to effect elevation thereof and a movement toward said gages to a position flush with the book-supporting surface upon completing said movement.

2. In a book-trimming machine, the combination with gages for determining the position of a book-pile to be trimmed relatively to a trimming plane and a book supporting surface over which the book pile is adapted to slide into said position, of devices disposed contiguous to said gages for elevating the book pile above said supporting surface and moving the same toward said gages, said devices adapted to lower said book-pile upon said supporting surface as they complete their movement in said direction, and mechanism for imparting alternately opposite movements to said devices at respectively different intervals.



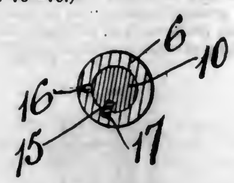
3. In a book-trimming machine, the combination with gages for determining the position of a book-pile to be trimmed relatively to a trimming plane and a book supporting surface over which the book pile is adapted to slide into said position, of devices disposed contiguous to said gages for elevating the book pile above said supporting surface and moving the same toward said gages, said devices adapted to lower said book-pile upon said supporting surface as they complete their movement in said direction, and mechanism for actuating said devices at intervals in respectively opposite directions and maintaining the same immovable for periods alternating with the intervals of movement thereof.

4. In a book-trimming machine, the combination with gages for determining the position of a book-pile to be trimmed relatively to a trimming plane, and a book supporting surface over which the book pile is adapted to slide into said position, of means movable in slots in the book pile supporting surface contiguous to said gages for elevating the book pile and moving the same toward said gages and depositing the same upon said supporting surface while said book pile abuts against said gages and while said devices continue their movement in said direction, and a cam actuated mechanism associated with said devices for imparting motion thereto in respectively opposite directions at predetermined intervals, and maintaining the same immovable for predetermined periods between the intervals of movement thereof.

5. In a book-trimming machine, the combination with gages for determining the position of a book pile, to be trimmed relatively to a trimming plane, and a book supporting surface over which the book pile is adapted to slide into said position, of a pair of shoes disposed contiguous to said gages and having their upper surfaces normally disposed at an elevation no higher than said book supporting surface, rocking means associated with said shoes for moving the same through a given arc intersected by the plane of the supporting surface whereby to elevate and move toward said gages a book-pile deposited upon said supporting surface in the path of said shoes and to redeposit said bookpile upon said surface as said shoes complete said movement through said arc, and mechanism for actuating said rocking means at predetermined intervals.

[Claims 6 to 8 not printed in the Gazette.]

1,213,267. SAW-SETTING APPARATUS. VERNON ROYLE, Paterson, N. J. Filed Sept. 25, 1914. Serial No. 863,494. (Cl. 76—70.)

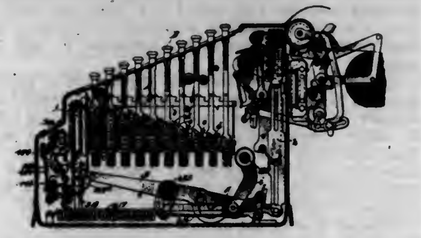


1. In saw setting apparatus, the combination with a saw setting tool, of an anvil provided with a concave face surrounded by a bearing surface on which the tooth to be set is intended to rest.

2. In saw setting apparatus, the combination with means for supporting the saw in position to be set, of a saw setting tool provided with a convex lower end and an anvil having a concave face, the concavity of the anvil face being greater than the convexity of the lower end of the setting tool.

3. In saw setting apparatus, an anvil, a saw setting tool, a saw centering device, a main supporting element and a bracket in which the saw centering device has a vertical adjustment, the said bracket having a support constructed to slide horizontally in the main supporting element.

1,213,268. ADDING AND LISTING MACHINE. GUSTAF RUNQUIST, Terre Haute, Ind., assignor to International Money Machine Company, Terre Haute, Ind. Filed Jan. 11, 1915. Serial No. 1,629. (Cl. 235—60.)



1. In a machine of the class described, an accumulator comprising transfer mechanism including a carrying member, and controlling means connected with said member comprising a control member, a spring attached thereto, an operating device for the spring to store up energy therein for actuating the control member, a main actuator coacting with said device to subject the carrying member to the action of the spring, and means on the operating device to preliminarily restrain the control member as the spring is energized and for subsequently releasing the control member.

2. In a machine of the class described, an accumulator comprising transfer mechanism including a carrying member, and controlling means for said member comprising springs, means to operate said springs to store up energy therein to act in opposite directions, a main actuator, and means intermediate the carrying member and said springs operable in opposite directions by the latter to control the action of the carrying member.

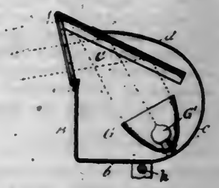
3. In a machine of the class described, a carrying member, a lever connected thereto, energy storing means connected with the lever to move the same in opposite directions, a main actuator, means for subjecting the lever to the action of the energy storing device at a predetermined time in the action of the main actuator, and means for restraining and releasing the lever incident to the action of said energy storing device thereon in either of opposite directions.

4. In a machine of the class described, the combination of a carrying member, a controlling lever therefor, a connection between said lever and the carrying member, an energy storing device connected with the lever, a main actuator, means operable by the main actuator for storing up energy in said energy storing device whereby to actuate the lever, and means intermediate the last mentioned means and the lever for direct operation of the same.

5. In a machine of the class described, a carrying member, a lever connected thereto, an energy storing device connected with the lever, a main actuator, means for subjecting the lever to the action of the energy storing device at a predetermined time in the action of the main actuator, an operating member connected with the energy storing device for storing up energy in the latter, and locking and releasing means for said lever carried by said operating member and controlling the time of movement of the same under the action of the energy storing device.

[Claims 6 to 36 not printed in the Gazette.]

1,213,269. HEADLIGHT FOR VEHICLES. FRANK H. RUTHERFORD, Chicago, Ill. Filed Dec. 4, 1914. Serial No. 875,416. (Cl. 240—41.)



1. A device of the class described comprising a casing, a lamp inclosed in said casing, an upper reflector located in the upper portion of the casing and arranged to project the light forward from the upper portion of the same, and a lower parabola reflector inclosed within said casing which concentrates and throws the rays of light upwardly and forwardly against said upper reflector.

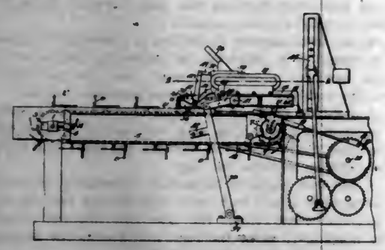
2. A device of the class described comprising a suitable casing, a lamp inclosed within said casing, an upper forwardly extending upwardly inclined reflector arranged to project the light forward from the upper part of said casing, and a lower parabola reflector within which said lamp is placed which is inclosed within the lower part of said casing and which throws the rays of light upwardly and forwardly against said upper reflector.

3. A device of the class described comprising a closed hollow casing having an upper opening in its front, an upper reflector extending rearwardly and downwardly through the top of said opening into said casing, a lower parabola reflector within the lower closed portion of said casing, and a lamp within said parabola reflector which latter reflects and concentrates the light upwardly and forwardly against said upper reflector.

4. A device of the class described comprising a hollow casing having an upper front opening for the passage of light rays, an upper reflector extending within the casing and rearwardly and downwardly from the top of said opening to near the rear of said casing, a lower parobola reflector within the lower portion of the casing and arranged to reflect light rays upwardly and forwardly upon the upper reflector, and a suitable lamp within and surrounded by the parabola reflector; said lamp and parabola reflector being concentric.

5. A device of the class described comprising a hollow casing having an upper front opening closed by a transparent window, and an opaque wall beneath said opening, an upper reflector extending within the casing and rearwardly and downwardly from the top of said opening, a lower parabola reflector located within the lower portion of the casing and concealed behind the opaque front

member in the opposite direction whereby the said engaging means are positioned to engage the book pads during the entire movement of the carriage in the opposite direction.



2. In a book-trimming machine, feed mechanism including a reciprocable carriage, a book-pad support between the limits of movement thereof, book pad engaging means on said carriage, and mechanism for raising and lowering the said means during the movement of said carriage in one direction for causing said means to pass freely over the book-pad to be moved thereby whereby the said engaging means are positioned to engage the book pads during the entire movement of the carriage in the opposite direction.

3. In a book-trimming machine, feed mechanism including a horizontally reciprocable carriage, a book-pad support between the limits of movement thereof, reciprocable book pads engaging means on said carriage, and mechanism for raising and lowering the said means during the backward movement of said carriage in one direction for causing said means to pass freely over the book-pad to be moved thereby.

4. In a book-trimming machine, feed mechanism including a horizontally reciprocable carriage, a book-pad support, book-pad engaging means on said carriage reciprocable relatively thereto to vary the elevation thereof, mechanism on said carriage for reciprocating said means as said carriage moves rearwardly, and devices on the frame of the machine adapted to be engaged by said mechanism to actuate the latter at predetermined intervals to cause said means to pass freely over and drop behind the book pad during the rearward movement of the carriage.

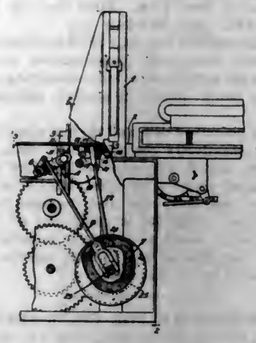
5. In a book-trimming machine, feed mechanism including a horizontally reciprocable carriage, a book-pad support, book-pad engaging means on said carriage reciprocable relatively thereto to vary the elevation thereof, mechanism on said carriage for reciprocating said means as said carriage moves rearwardly, and cams on the frame of the machine disposed in engaging relation to said mechanism to actuate the latter at predetermined intervals to cause said means to pass freely over and drop behind the book pad during the rearward movement of the carriage.

[Claims 6 to 14 not printed in the Gazette.]

1,213,266. BOOK-PAD ADJUSTER FOR AUTOMATIC BOOK-TRIMMING MACHINES. JAMES ROWE, Chicago, Ill. Filed May 22, 1915. Serial No. 29,933. (Cl. 164—48.)

1. In a book-trimming machine, the combination with gages for determining the position of a book-pile to be trimmed relatively to a trimming plane and a book supporting surface over which the book pile is adapted to slide into said position, of a pair of book-pile elevating devices having their surfaces normally flush with the book supporting surface and extending from a point forward of the book-engaging surfaces of the gages to a point rearwardly thereof; and mechanism for imparting a rocking movement of said devices through an arc sufficient to effect elevation thereof and a movement toward said gages to a position flush with the book-supporting surface upon completing said movement.

2. In a book-trimming machine, the combination with gages for determining the position of a book-pile to be trimmed relatively to a trimming plane and a book supporting surface over which the book pile is adapted to slide into said position, of devices disposed contiguous to said gages for elevating the book pile above said supporting surface and moving the same toward said gages, said devices adapted to lower said book-pile upon said supporting surface as they complete their movement in said direction, and mechanism for imparting alternately opposite movements to said devices at respectively different intervals.



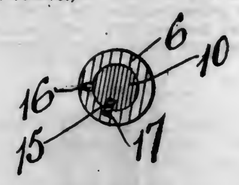
3. In a book-trimming machine, the combination with gages for determining the position of a book-pile to be trimmed relatively to a trimming plane and a book supporting surface over which the book pile is adapted to slide into said position, of devices disposed contiguous to said gages for elevating the book pile above said supporting surface and moving the same toward said gages, said devices adapted to lower said book-pile upon said supporting surface as they complete their movement in said direction, and mechanism for actuating said devices at intervals in respectively opposite directions and maintaining the same immovable for periods alternating with the intervals of movement thereof.

4. In a book-trimming machine, the combination with gages for determining the position of a book-pile to be trimmed relatively to a trimming plane, and a book supporting surface over which the book pile is adapted to slide into said position, of means movable in slots in the book pile supporting surface contiguous to said gages for elevating the book pile and moving the same toward said gages and depositing the same upon said supporting surface while said book pile abuts against said gages and while said devices continue their movement in said direction, and a cam actuated mechanism associated with said devices for imparting motion thereto in respectively opposite directions at predetermined intervals, and maintaining the same immovable for predetermined periods between the intervals of movement thereof.

5. In a book-trimming machine, the combination with gages for determining the position of a book pile, to be trimmed relatively to a trimming plane, and a book supporting surface over which the book pile is adapted to slide into said position, of a pair of shoes disposed contiguous to said gages and having their upper surfaces normally disposed at an elevation no higher than said book supporting surface, rocking means associated with said shoes for moving the same through a given arc intersected by the plane of the supporting surface whereby to elevate and move toward said gages a book-pile deposited upon said supporting surface in the path of said shoes and to redeposit said bookpile upon said surface as said shoes complete said movement through said arc, and mechanism for actuating said rocking means at predetermined intervals.

[Claims 6 to 8 not printed in the Gazette.]

1,213,267. SAW-SETTING APPARATUS. VERNON ROYLE, Paterson, N. J. Filed Sept. 25, 1914. Serial No. 863,494. (Cl. 76—70.)

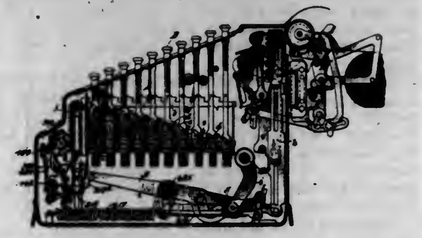


1. In saw setting apparatus, the combination with a saw setting tool, of an anvil provided with a concave face surrounded by a bearing surface on which the tooth to be set is intended to rest.

2. In saw setting apparatus, the combination with means for supporting the saw in position to be set, of a saw setting tool provided with a convex lower end and an anvil having a concave face, the concavity of the anvil face being greater than the convexity of the lower end of the setting tool.

3. In saw setting apparatus, an anvil, a saw setting tool, a saw centering device, a main supporting element and a bracket in which the saw centering device has a vertical adjustment, the said bracket having a support constructed to slide horizontally in the main supporting element.

1,213,268. ADDING AND LISTING MACHINE. GUSTAF RUNQUIST, Terre Haute, Ind., assignor to International Money Machine Company, Terre Haute, Ind. Filed Jan. 11, 1915. Serial No. 1,629. (Cl. 235—60.)



1. In a machine of the class described, an accumulator comprising transfer mechanism including a carrying member, and controlling means connected with said member comprising a control member, a spring attached thereto, an operating device for the spring to store up energy therein for actuating the control member, a main actuator coacting with said device to subject the carrying member to the action of the spring, and means on the operating device to preliminarily restrain the control member as the spring is energized and for subsequently releasing the control member.

2. In a machine of the class described, an accumulator comprising transfer mechanism including a carrying member, and controlling means for said member comprising springs, means to operate said springs to store up energy therein to act in opposite directions, a main actuator, and means intermediate the carrying member and said springs operable in opposite directions by the latter to control the action of the carrying member.

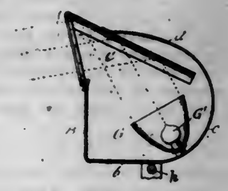
3. In a machine of the class described, a carrying member, a lever connected thereto, energy storing means connected with the lever to move the same in opposite directions, a main actuator, means for subjecting the lever to the action of the energy storing device at a predetermined time in the action of the main actuator, and means for restraining and releasing the lever incident to the action of said energy storing device thereon in either of opposite directions.

4. In a machine of the class described, the combination of a carrying member, a controlling lever therefor, a connection between said lever and the carrying member, an energy storing device connected with the lever, a main actuator, means operable by the main actuator for storing up energy in said energy storing device whereby to actuate the lever, and means intermediate the last mentioned means and the lever for direct operation of the same.

5. In a machine of the class described, a carrying member, a lever connected thereto, an energy storing device connected with the lever, a main actuator, means for subjecting the lever to the action of the energy storing device at a predetermined time in the action of the main actuator, an operating member connected with the energy storing device for storing up energy in the latter, and locking and releasing means for said lever carried by said operating member and controlling the time of movement of the same under the action of the energy storing device.

[Claims 6 to 36 not printed in the Gazette.]

1,213,269. HEADLIGHT FOR VEHICLES. FRANK H. RUTHERFORD, Chicago, Ill. Filed Dec. 4, 1914. Serial No. 875,416. (Cl. 240—41.)



1. A device of the class described comprising a casing, a lamp inclosed in said casing, an upper reflector located in the upper portion of the casing and arranged to project the light forward from the upper portion of the same, and a lower parabola reflector inclosed within said casing which concentrates and throws the rays of light upwardly and forwardly against said upper reflector.

2. A device of the class described comprising a suitable casing, a lamp inclosed within said casing, an upper forwardly extending upwardly inclined reflector arranged to project the light forward from the upper part of said casing, and a lower parabola reflector within which said lamp is placed which is inclosed within the lower part of said casing and which throws the rays of light upwardly and forwardly against said upper reflector.

3. A device of the class described comprising a closed hollow casing having an upper opening in its front, an upper reflector extending rearwardly and downwardly through the top of said opening into said casing, a lower parabola reflector within the lower closed portion of said casing, and a lamp within said parabola reflector which latter reflects and concentrates the light upwardly and forwardly against said upper reflector.

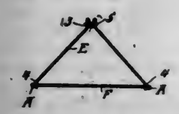
4. A device of the class described comprising a hollow casing having an upper front opening for the passage of light rays, an upper reflector extending within the casing and rearwardly and downwardly from the top of said opening to near the rear of said casing, a lower parobola reflector within the lower portion of the casing and arranged to reflect light rays upwardly and forwardly upon the upper reflector, and a suitable lamp within and surrounded by the parabola reflector; said lamp and parabola reflector being concentric.

5. A device of the class described comprising a hollow casing having an upper front opening closed by a transparent window, and an opaque wall beneath said opening, an upper reflector extending within the casing and rearwardly and downwardly from the top of said opening, a lower parabola reflector located within the lower portion of the casing and concealed behind the opaque front

wall thereof, and a suitable lamp within the parabola reflector, said lamp and parabola reflector being arranged to cast and reflect the light rays upwardly and forwardly upon the upper reflector.

[Claim 6 not printed in the Gazette.]

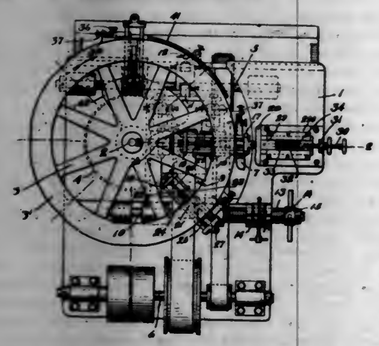
1,213,270. FOLDING PIPE-BENCH. FRITZ SABBOW, Lestershire, N. Y. Filed Feb. 8, 1915. Serial No. 6,955. (Cl. 81—41.)



1. In a folding pipe bench a supporting frame hinged to the bench; a foot board hinged to the lower part of said frame; a swing leg hinged to the opposite side of said supporting frame; a ball mounted in said support frame and having a recess formation in its outer side adapted to receive said swing leg; and lugs mounted on said swing leg to support said ball when the leg is resting within the recess in said ball.

2. In a pipe bench, a supporting frame hinged to the bench, a swinging leg secured to the bench opposite to the supporting frame, a ball having its ends pivotally mounted in said supporting frame and provided intermediate of its ends with a looped portion for receiving the swinging leg, and a lug mounted on said swinging leg to support said ball when said leg is within the looped portion of said ball.

1,213,271. WOOD-HEEL-GROOVING MACHINE. CLYDE R. SANDERS, Georgetown, Mass. Filed Apr. 11, 1914. Serial No. 831,308. (Cl. 144—154.)

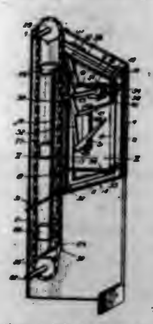


A machine of the character described, comprising a rotary carrier having a clamp thereon, a rotary cutter arranged to engage a blank held by said clamp, as the carrier carries the same thereover, an abutment arranged to engage the opposite side of the blank from that first engaged by the cutter, while held in the clamp, and means permitting adjustment of said abutment longitudinally of the path of the clamp to hold the blank in central radial relation with the axis of the carrier.

1,213,272. CARD-EXHIBITING DEVICE. RICHARD S. SARVER, Kansas City, Mo. Filed May 17, 1915. Serial No. 28,799. (Cl. 40—36.)

1. The combination with an elevator, of a primary supporting member adapted for actuation by a member on the elevator and secondary supports adapted for actuation by the primary member and for successive projection to supporting positions.

2. The combination with an elevator, of a primary supporting member adapted for actuation by a member on the elevator and secondary supports adapted for actuation by the primary member and for successive projection to supporting positions, and yielding means for automatically returning the parts to initial position.



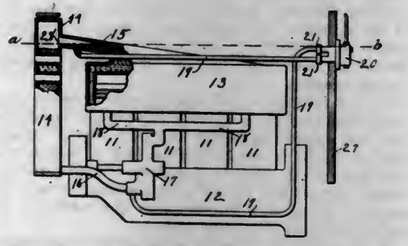
3. The combination with an elevator, of a primary supporting device adapted for actuation by a member on the elevator, secondary supporting arms, and links connecting the secondary arms with the primary arm and adapted for initially retaining said secondary arms at different angles relative to the primary arm and successively projecting the same to functional position upon actuation of the primary arm.

4. The combination with an elevator, of a pivotally mounted head having an arm adapted for actuation by a member on the elevator, supporting and stop arms on said head adapted for movement to functional position upon actuation of the head arm, a plurality of stepping arms pivotally mounted and having link connection with the head arm and adapted for movement to functional position at different stages of the movement of said head arm.

5. The combination with an elevator, of a pivotally mounted head, having an arm adapted for actuation by a member on the elevator, and having a supporting arm, a secondary supporting arm pivotally mounted and having link connection with the head arm, the secondary arm being normally retained out of functional position, but adapted for movement to functional position at a predetermined stage in the movement of the head arm.

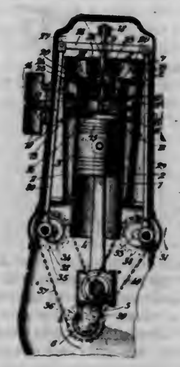
[Claims 6 to 14 not printed in the Gazette.]

1,213,273. TEMPERATURE-INDICATING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WALTER S. SAUNDERS, Westfield, N. J. Filed Aug. 12, 1914. Serial No. 856,339. (Cl. 123—170.)



In combination with a liquid cooling system for internal combustion engines including a cooling jacket, a radiator, two conduits whereby said jacket and radiator are placed in communication with one another, and a pump associated with one of said conduits for causing the liquid in the system to circulate; a shunt conduit through which a part of the cooling liquid may flow, one end of said conduit being connected with the cooling system at the inlet side of the pump, and the other end of said shunt conduit being connected to the system adjacent to and below the level of the liquid in the system, and a temperature indicating device for indicating the temperature of the liquid in said shunt conduit through which the liquid is caused by said pump to circulate from a higher to a lower level of said system.

1,213,274. VALVE-GEAR FOR PISTON-ENGINES. ERNST SCHMID, Oerlikon, Switzerland. Filed May 22, 1914. Serial No. 840,221. (Cl. 137—118.)



1. In a packing for valve rods of combustion engines, the combination with a valve rod projecting through the wall of the engine cylinder, of a chamber surrounding the valve rod and adapted to receive and permit an expansion of gas escaping from the engine cylinder around the valve rod, said rod having means for connecting periodically the chamber and cylinder, to permit the gas in the chamber to be sucked through the valve rod from said chamber into the cylinder.

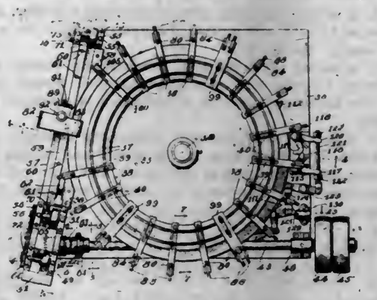
2. In a packing for valve rods of combustion engines, the combination with a valve rod projecting through the wall of the engine cylinder, of a chamber surrounding the valve rod and adapted to receive and permit an expansion of gas escaping from the engine cylinder around the valve rod, said valve rod having means for connecting periodically the chamber with the charge space of the cylinder to permit the gas in the chamber to be sucked through the valve rod from the chamber into the cylinder.

3. In a packing for valve rods of combustion engines, the combination with a valve rod projecting through the wall of the engine cylinder, of a plurality of annular expansion chambers surrounding the valve rod and adapted to receive and permit an expansion of gas escaping from the engine cylinder between the valve rod and the inner walls of the cylinder, said rod having means for connecting the chamber with the charge space of the cylinder during the suction period to permit the gas in the chamber to be sucked through the valve rod from the chamber into the cylinder.

4. In a packing for valve rods of a combustion engine, the combination with a valve rod projecting through the wall of the engine cylinder, of a plurality of annular expansion chambers arranged in tandem and surrounding the valve rod and adapted to receive and permit an expansion of gas escaping from the engine cylinder between the valve rod and the inner wall of the cylinder, said rod having means for connecting the chambers with the charge space of the cylinder during the suction period to permit the gas in the chamber to be sucked through the valve rod from the chamber into the cylinder.

5. In a packing for valve rods of a combustion engine, the combination with the engine cylinder, of a cylinder cover, a hollow sleeve arranged centrally in said cover, a tubular extension in said sleeve projecting into the hollow space of the latter, a nut screwed in the cover, an annular chamber provided between the sleeve and the nut, a valve rod passing through said tubular extension and nut and having a longitudinal hollow portion, ports leading from said hollow portion to the surface of the rod, channels in said tubular extension connecting the space for the charge of the engine cylinder with the hollow portion of the rod, and an annular recess in the valve rod for connecting the hollow sleeve space to the chamber provided between the sleeve and the nut.

1,213,275. PUNCHING-MACHINE. PAUL C. SCHROEDER, Chicago, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 12, 1915. Serial No. 13,845. (Cl. 164—15.)



1. A punching machine having, in combination, a rotary wheel, a series of punching devices mounted about the periphery of said wheel for adjustment both radially and circumferentially of the wheel, means for rectilinearly feeding a metal band tangentially to said wheel with the opposite faces of the band lying in planes parallel with the plane of the wheel, and means for operating the punching devices as they come into association with the band.

2. A punching machine having, in combination, a circular wheel rotatably mounted on a central axis, a plurality of punch supports mounted about the periphery of said wheel for adjustment both radially and circumferentially of the wheel, said supports projecting beyond the periphery of the wheel and having enlarged heads on their outer ends, a work-receiving slot in each head, a punch in each head operatively related to the slot, means for operating the punches, and means for feeding the material to be punched into the slots.

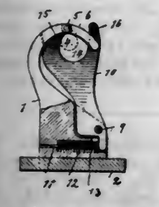
3. A punching machine having, in combination, a rotary wheel, a series of punch supports mounted about the periphery of said wheel, each support having a slot therein, a feed-table having one edge cut away to accommodate the punch supports in their travel, feed rollers for rectilinearly feeding a band along the table and through the slots in the punch supports, and stationary operating means located at about the point of tangency and arranged to successively operate the punching devices.

4. A punching machine having, in combination, a rotary wheel, a series of punching devices mounted about the periphery of said wheel and each independently adjustable both radially and circumferentially of the wheel, a feed-table at one edge of the wheel along which the band to be punched is fed, means including feed rollers at opposite ends of said table for feeding the band tangentially to the wheel, and stationary operating means located at about the point of tangency and arranged to successively operate the punching devices.

5. A punching machine having, in combination, a rotary support, a series of punching and severing devices mounted thereon, rollers for feeding a band into position to be acted on by said punching and severing devices, means for operating said punching and severing devices, means for stopping and starting the band-feeding rollers, and adjustable means mounted on said rotary support for actuating said stopping and starting means.

[Claims 6 to 25 not printed in the Gazette.]

1,213,276. SAFETY-CATCH FOR PINS. ARNOLD SCHROETTER, New York, N. Y. Filed Oct. 7, 1916. Serial No. 124,219. (Cl. 24—157.)



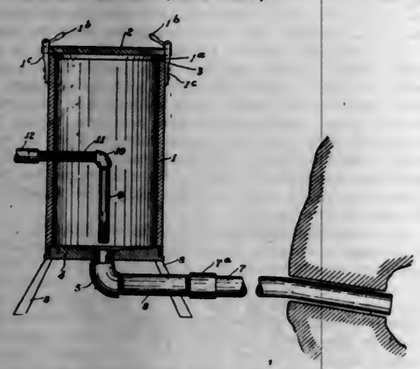
1. A safety catch for pins, comprising a keeper, a latch pivoted thereto, and a pivoted tongue having a toe adapted to engage the latch.

2. A safety catch for pins, comprising a keeper, a latch pivoted thereto, and a spring-controlled tongue pivoted to the keeper and having a toe which is eccentric to the latch.

3. A safety catch for pins comprising a keeper having a notch, a latch pivoted to the keeper and having a projection adapted to engage said notch, and a pivoted spring-controlled tongue having a toe adapted to engage the projection, said toe being eccentric to the latch.

4. A safety catch for pins, comprising a keeper having a notch, a notched latch pivoted to the keeper and having a projection adapted to engage the keeper-notch, a pivoted spring-controlled tongue having an eccentric toe adapted to engage the projection and a handle adapted to engage the latch-notch.

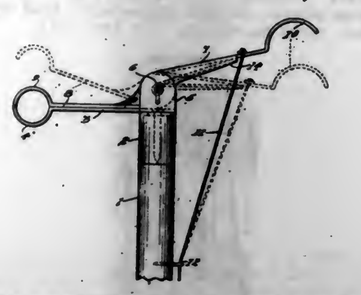
1,213,277. POWDER-LOADING DEVICE. WILLIAM T. SCOTT, San Diego county, Cal. Filed July 17, 1915. Serial No. 40,449. (Cl. 86—20.)



1. In a device for loading explosive powder the combination of a powder receptacle provided with an aperture therein, an air inlet pipe adapted to connect with a compressed air tank and extending inwardly through the wall of said receptacle, its extended end extending to near said aperture in said receptacle and adapted to be moved to different positions relatively to said aperture for adjustment for different sized grains of powder and means for conducting the powder from said aperture to the pocket in which it is to be deposited.

2. In a device for loading explosive powder the combination of a powder receptacle provided with a dish shaped bottom with an aperture centrally therein, an air inlet pipe adapted to connect with a compressed air tank and extending inwardly through the wall of said receptacle, another pipe pivotally mounted thereon with its lower end extending to near the bottom of said receptacle directly over said aperture and adapted to be moved upon its pivotal mounting for adjustment for different sized grains of powder, an elbow with one end in said aperture, a pipe secured in the other end of said elbow and a flexible tube connected to the extended end of said pipe adapted to fit loosely in a hole extending to the pocket in which the powder is to be deposited.

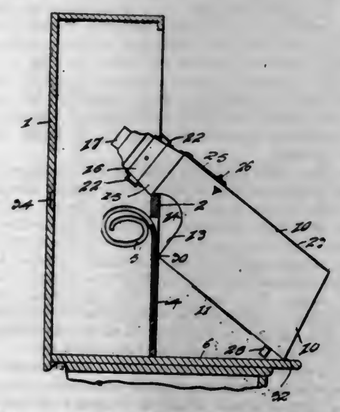
1,213,278. CURTAIN-POLE LIFTER. NELS SEASHORE, Minneapolis, Minn. Filed Apr. 20, 1916. Serial No. 92,333. (Cl. 57—110.)



1. In a curtain pole lifter, a pole, a head carried by said pole and formed with ears disposed above said pole, a stationary jaw formed integral with said head, a bolt connecting said ears, a shank pivotally arranged upon said bolt, a jaw formed integral with said shank and adapted for coöperation with the said stationary jaw, a spring wound upon said bolt and connecting said ears and said shank whereby said jaws may be yieldingly retained in closed relation and manually operable means connecting said shank for moving the same upon its pivot to open said jaws.

2. In a curtain pole lifter, a pole, a head carried by said pole and formed with ears disposed above said pole, a stationary jaw formed integral with said head, a bolt connecting said ears, a shank pivotally arranged upon said bolt, a jaw formed integral with said shank and adapted for coöperation with said stationary jaw, a spring wound upon said bolt and connecting said ears and shank whereby said jaws may be yieldingly retained in closed relation, a sleeve slidably arranged upon said pole and flexible connection between said shank and the said sleeve whereby the former member may be moved to open said jaws.

1,213,279. KITCHEN-CABINET. WILFRED SELLERS, Elwood, Ind. Filed Nov. 11, 1915. Serial No. 60,926. (Cl. 45—16.)



1. The combination with a kitchen-cabinet, including a compartment formed therein, of an intermediate transverse bar across the front of said compartment, a flour-bin in said compartment and having its front wall, between its ends, provided with a curved recess loosely receiving said bar, whereby said bin is supported and movably fulcrumed on the bar and capable of tilting outward at its upper end to assume an inverted position, and a rest for supporting said bin when so tilted and inverted.

2. The combination with a kitchen-cabinet, including a compartment formed therein, of an intermediate transverse bar across the front of said compartment, a flour-bin in said compartment and between its upper and lower ends having its front wall provided with a recess for loosely receiving said transverse bar, said recess having a front inclined portion and a rear curved portion, whereby said bin is adapted to rest upon and slide forwardly over said bar at the inclined portion of said recess and is movably fulcrumed upon said bar so as to swing over the same at the rear curved portion of the recess, so that the bin is capable of tilting outward and swinging downward at its upper end so as to assume an inverted position in front of said compartment, and a rest for supporting the said bin when so tilted and inverted.

3. The combination, with a kitchen-cabinet, including a compartment formed therein, of an intermediate transverse bar across the front of said compartment, a flour-bin in said compartment and having its front wall, between its ends, provided with a recess for said bar, said recess terminating in a rear engaging portion, whereby said bin is supported by the bar and is capable of sliding forwardly thereover so that the rear portion of the recess is brought into engagement with the bar and the bin may be swung upon the bar to an inverted position in front of the compartment, and means for supporting said bin when so inverted.

1,213,280. FIFTH-WHEEL FOR VEHICLES. WILLIAM OSCAR SHADBOLT, Brooklyn, N. Y. Filed Feb. 10, 1916. Serial No. 77,479. (Cl. 21—114.)

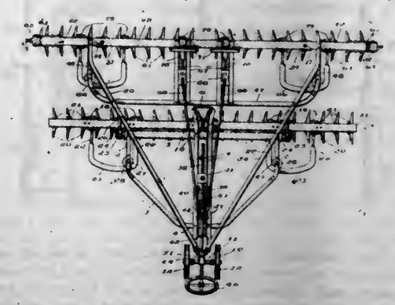
1. A fifth wheel comprising an upper member provided with lateral projections and journaled under the frame of a vehicle, a lower member secured to devices below the vehicle, means adapted to pivotally connect the said members together, and a spring acting between said first named member and the under side of said vehicle; said spring always remaining in a line parallel with the longitudinal axis of said vehicle.

2. A fifth wheel comprising an upper member provided with lateral projections and journaled under the frame of a vehicle, a lower member secured to devices below the vehicle, means adapted to pivotally connect the members together, bearing portions located on the under side of said vehicle, and a semi-elliptical spring having its central portion secured to said first named member, and having ends adapted to slide in said bearing portions.

3. A fifth wheel comprising an upper member provided with lateral projections and journaled under the frame of a vehicle, a lower member secured to devices below the vehicle, means adapted to pivotally connect the members together, a bearing portion located on the under side of said vehicle, and a spring having a portion secured to said first named member, and having a portion adapted to slide in said bearing portion.

4. A fifth wheel comprising an upper member provided with lateral projections and journaled under the frame of a vehicle, a lower member secured to devices below the vehicle, means adapted to pivotally connect the said members together, and a spring acting between said first named member and the under side of said vehicle; said fifth wheel and spring being adapted to slide longitudinally with relation to said vehicle.

1,213,281. DISK HARROW. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed June 10, 1912. Serial No. 702,645. (Cl. 55—83.)



1. In a tractor drawn tandem disk harrow, front and rear units flexibly connected, each unit having a plurality of pivoted gang members, and unitary means positioned to be reached from a tractor for angularly adjusting all of said gangs.

2. In a tractor drawn tandem disk harrow, front and rear frames concentrically pivoted, each frame carrying a plurality of angularly adjustable disk gangs, and means positioned to be reached from a tractor for controlling the adjustment of said gangs.

3. In a tandem disk harrow, flexibly associated front and rear frames laterally pivotally connected and each carrying a plurality of angularly adjustable disk gangs, and unitary means located on the forward end of the harrow for simultaneously adjusting the angular positions of said gangs.

4. In a tandem disk harrow, front and rear frames laterally pivotally connected and each carrying a plurality of pivoted gang members and unitary means for angularly adjusting all of said gangs.

5. In a tandem disk harrow, front and rear units comprising each a pair of pivoted gang members the rear unit being capable of a lateral movement relative to the front unit and the gang members being adapted to be placed in cruciform arrangement, and a single member for adjusting the angular positions of all of said gang members.

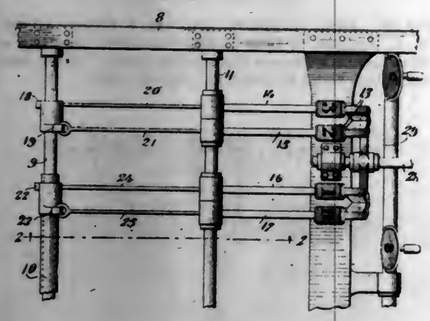
[Claims 6 to 36 not printed in the Gazette.]

1,213,282. VEHICLE SIGNAL APPARATUS. EDGAR S. SHAW, Minerva, Ohio. Filed May 20, 1916. Serial No. 98,828. (Cl. 177—311.)



In a device of the character described, the combination of a vehicle body, a bracket held in fixed position with reference to said body, said bracket provided with a cam-face, a signal arm pivotally mounted and carried by said bracket, a foot lever pivotally connected to the vehicle body below the signal arm, a rod connected to said foot lever and to the signal arm, a spring connected to the foot lever and signal arm and a light signal carried by said signal arm, a switch carried by the signal arm, the cam of the fixed bracket adapted to actuate the switch by the movements of the signal arm, and a flange carried by the signal arm adapted for contact with the actuating rod.

1,218,283. GEAR-SHIFTING MECHANISM. JOHN J. SIMS, Massey, Ontario, Canada. Filed May 22, 1916. Serial No. 99,228. (Cl. 74—81.)



1. The combination with a gear shaft, arms on said shaft, a pair of levers, connections between said levers and said arms and coöperating means on said levers for holding the latter yieldably engaged with each other, substantially as described.
scribed.

2. The combination with a gear shaft, arms on said shaft, a pair of levers, connection between said levers and said arms, and gripping fingers on each lever, the said fingers being adapted to yieldably engage with each other, substantially as described.

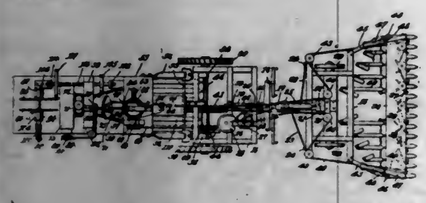
3. The combination with a gear shaft, arms on said shaft, pairs of levers, connections between said levers and said arms, one of said levers being adapted to move in a reverse direction upon forward movement of the other lever, and notched fingers carried by each lever and adapted to engage when said levers are at intermediate positions in their movement, substantially as described.

4. The combination with a gear shaft, arms projecting in opposite directions from said shaft, a pair of bell crank levers, links connecting said levers and said arms, gripping fingers projecting toward each other from said levers and adapted to yieldably engage when said levers are parallel, and means for limiting the downward movement of said levers, substantially as described.

5. The combination with gear shafts, arms on each of said shafts, a pair of levers for each of said shafts, connections between the levers of each pair and the arms of the corresponding shafts, a stud axle arranged between and adjacent the extremities of said levers, a rocker arm mounted on said axle beneath said levers, and gripping fingers on said levers adapted to engage with said rocker arm upon depression of the levers, substantially as described.

[Claim 6 not printed in the Gazette.]

1,218,284. METHOD OF AND APPARATUS FOR HARVESTING FODDER-CROPS. FRITZ SLATHAR, Bloom City, Wis. Filed Nov. 5, 1915. Serial No. 59,777. (Cl. 100—65.)



1. The method of preparing grass, preliminary to drying the same for use as fodder, consisting in twisting the freshly cut grass into a rope-like form, and then winding the rope of grass into separate coils to form bales.

2. The method of preparing grass, preliminary to drying the same for use as fodder, consisting in twisting the freshly cut grass into rope-like form, subjecting the rope of grass to sufficient pressure to crush the strands without squeezing out the sap, and then winding the rope of grass into separate coils to form bales.

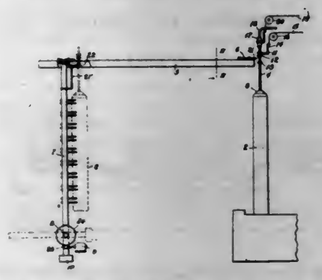
3. The method of preparing grass, preliminary to drying the same for use as fodder, consisting in twisting the grass into rope-like form after it is cut, and then winding the rope of grass into separate coils to form flat bales having a central ventilating space.

4. A baler for twisting material into a rope-like form and winding the rope into a coil, comprising a rotatable drum open at its ends, feed rollers mounted adjacent to the receiving end of the drum, twisting rollers mounted in the drum, said twisting rollers being rotatable about their own axes and revolving with the drum, and driving means for the drum, and the feed and twisting rollers.

5. A baler for twisting material into a rope-like form and winding the rope into a coil, comprising a rotatable drum open at its ends, twisting rollers mounted in the drum, said twisting rollers being rotatable about their own axes and revolving with the drum, and driving means for the drum and the twisting rollers.

[Claims 6 to 19 not printed in the Gazette.]

1,218,285. APPARATUS FOR HANDLING GLASS CYLINDERS. HARRY G. SLINGLUFF, Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 27, 1908. Serial No. 464,768. (Cl. 49—17.1.)

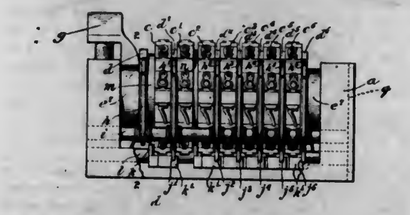


In apparatus for handling glass cylinders, a bait and drawing means upon which the bait is releasably supported, a track extending substantially horizontally to a point remote from the drawing means, a carrier mounted for movement along the track, means whereby the bait may be disengaged from the drawing means and supported on the carrier, a tilting takedown cradle at the end of the track, and means whereby the bait may be disengaged from the carrier and supported upon the cradle.

1,213,286. NUMBERING-HEAD. AMOS H. SMITH, New York, N. Y., assignor to American Bank Note Company, a Corporation of New York. Filed May 13, 1915. Serial No. 27,776. (Cl. 101—184.)

1. A numbering head embodying therein a shaft, a plurality of digit wheels rotatably mounted upon said shaft, a ratchet wheel rotatable with each of said digit wheels, a holding pawl coöperating with each of said ratchet wheels, a plurality of means normally operative to prevent movement of said pawls respectively, means movable with each digit wheel of lower denomination and operative upon said means acting upon the pawl of the ratchet wheel of the digit wheel of next higher denomination whereby said means is made inoperative during the transfer operation from said wheel of lower denomination to said wheel of higher denomination, and actuating means for said digit wheels.

2. A numbering head embodying therein a shaft, a plurality of digit wheels rotatably mounted upon said shaft, a ratchet wheel rotatable with each of said digit wheels, a holding pawl coöperating with each of said ratchet wheels, a plurality of means normally operative to prevent movement of said pawls respectively, means movable with each digit wheel of lower denomination and operative upon said means acting upon the pawl of the ratchet wheel of the digit wheel of next higher denomination whereby said means is made inoperative during the transfer operation from said wheel of lower denomination to said wheel of higher denomination, a transfer mechanism actuating directly upon the several digit wheels and a main actuating mechanism therefor.



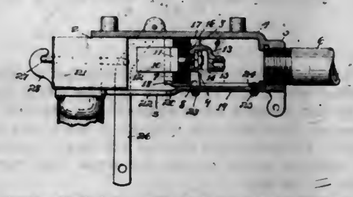
3. A numbering head embodying therein a shaft, a plurality of digit wheels rotatably mounted upon said shaft, a ratchet wheel rotatable with each of said digit wheels, a holding pawl coöperating with each of said ratchet wheels having an arm or heel thereon, means normally positioned in the path of the arm or heel upon each of said pawls whereby movement of said pawls respectively is prevented, means movable with each digit wheel of lower denomination and operative upon said means acting upon the pawl of the ratchet wheel of the digit wheel of next higher denomination whereby said means is made inoperative during the transfer operation from said wheel of lower denomination to said wheel of higher denomination, and actuating means for said digit wheels.

4. A numbering head embodying therein a shaft, a plurality of digit wheels rotatably mounted upon said shaft, a ratchet wheel rotatable with each of said digit wheels, a holding pawl coöperating with each of said ratchet wheels, each of said pawls having an arm or heel theeron, a plurality of levers mounted adjacent each ratchet wheel respectively and having a laterally extending abutment engaging the arm or heel of the pawl coöperating with the adjacent ratchet wheel whereby movement of said pawl is normally prevented, means movable with each digit wheel of lower denomination and operative upon said means acting upon the pawl of the ratchet wheel of the digit wheel of next higher denomination whereby said means is made inoperative during the transfer operation from said wheel of lower denomination to said wheel of higher denomination, and actuating means for said digit wheels.

5. A numbering head embodying therein a shaft, a plurality of digit wheels rotatably mounted upon said shaft, a ratchet wheel rotatable with each of said digit wheels, a holding pawl coöperating with each of said ratchet wheels, each of said pawls having an arm or heel thereon, a plurality of levers mounted adjacent each ratchet wheel respectively and having a laterally extending abutment engaging the arm or heel of the pawl coöperating with the adjacent ratchet wheel whereby movement of said pawl is normally prevented, each of said levers having a stepped or offset portion at one side of said abutment whereby clearance is afforded for the movement of the pawl operative upon the ratchet wheel adjacent said lever, means movable with each digit wheel of lower denomination and operative upon said means acting upon the pawl of the ratchet wheel of the digit wheel of next higher denomination whereby said means is made inoperative during the transfer operation from said wheel of lower denomination to said wheel of higher denomination, and actuating means for said digit wheels.

[Claims 6 to 14 not printed in the Gazette.]

1,213,287. TERMINAL BOX. ELDA G. SMITH, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 9, 1914. Serial No. 811,181. (Cl. 173—338.)



1. A terminal box rectangular in general outline and open at one end and at one side and being closed at its other end and other sides, and having a nipple for connection with an electric conduit at its closed end, a partition extending transversely of the interior of the box forming a chamber communicating with the nipple, terminals supported by the partition and having binding devices located in said chamber for connection with wires extending into said chamber from the electrical conduit connected to the nipple, said terminals also having contacts exposed on the opposite side of the partition, and a cover for the chamber, substantially as and for the purpose described.

2. A terminal box rectangular in general outline and open at one end and one side and closed at its other end and other sides, the box having a transverse partition having one edge exposed at said open side, a cover for the portion of the open side of the box between the partition and the closed end of the box, the cover overlapping the edge of the partition, and terminals supported by the partition and exposed on opposite sides thereof, substantially as and for the purpose set forth.

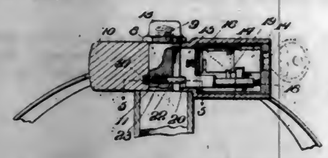
3. A terminal box open at one end and one side and closed at its other end and other sides, the box being provided with a transverse partition having an edge exposed at said open side, a cover for the portion of the open side of the box between the partition and the closed end of the box, and terminals supported by the partition and exposed on opposite sides thereof, substantially as and for the purpose set forth.

4. A terminal box rectangular in general outline and having a transverse partition of insulation between its ends and terminals carried by said partition and exposed on opposite sides thereof, a cover for the portion of the open side of the box between the partition and the closed end of the box, the cover overlapping the edge of the partition and extending in front of the partition toward the open end of the box to form a stop; in combination with a plug movable in and out of the box and into and out of engagement with the stop, substantially as and for the purpose specified.

5. A terminal box rectangular in general outline and open at its front end and at one side and being closed at its other end and the other sides and having a nipple for connection with an electric conduit at its closed end, a partition extending transversely of the interior of the box between its ends forming a chamber communicating with the nipple, terminals supported by the partition and having binding devices located in said chamber for connection with wires extending into said chamber from the electrical conduit connected to the nipple, said terminals also having contacts exposed on the opposite or front side of the partition, and a cover for the chamber, the cover extending in front of the partition; in combination with a plug movable into the box through the open side thereof against the front edge of the cover, substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,213,288. STEERING-WHEEL LOCK. JOHN F. G. SMITH, Washington, D. C. Filed Aug. 21, 1914, Serial No. 857,918. Renewed Dec. 9, 1916. Serial No. 136,093. (Cl. 70—90.)



1. In a steering wheel lock, in combination, a steering post formed with a slot therein, a steering wheel, means carried by said steering wheel adapted to be engaged with or disengaged from said slot whereby to place said parts in operative or inoperative relation and means controlled by said engaging means to hold the wheel from vertical movement on the post.

2. In a steering wheel lock, in combination, a steering post formed with a slot therein, a steering wheel, means carried by said steering wheel adapted to be engaged with or disengaged from said slot whereby to place said parts in operative or inoperative relation, and means carried by said post and controlled by said first mentioned means adapted to engage said wheel when the latter is in inoperative relation with the post to prevent the removal of the wheel from the post.

3. In a steering wheel lock, in combination, a steering post formed with a slot therein, a wheel mounted on said post, key-controlled means carried by said wheel adapted to engage with or disengage from said slot, means carried by said post adapted to engage said wheel when said key-controlled means is disengaged from said post, said wheel engaging means being actuated in the actuation of said key-controlled means, whereby to permit the removal of said wheel from the shaft.

4. In a steering wheel lock, in combination, a steering post having a vertically extending slot therein, a steering wheel adapted to be mounted over the slotted end of said post and provided adjacent the lower face of its hub portion with a circumferential recess, a spring-pressed member mounted adjacent the upper end of said post and having its outer end extending through the slotted portion thereof and into the circumferential recess of the wheel, a lock chamber extending from the hub portion of said wheel, a lock in said chamber provided with a bolt extending into the slot in the post and adapted to engage the spring-pressed member therein, whereby said bolt in its extended position is adapted to compress said spring-pressed member from out the circumferential recess in the wheel and to lock said wheel and post together, for the purpose set forth.

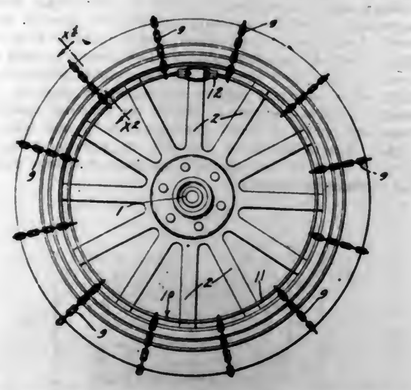
1,213,289. DENTAL-WASTE RECEIVER. SAMUEL SOLOFF, Brooklyn, N. Y. Filed Dec. 18, 1915. Serial No. 67,653. (Cl. 32—5.)



1. In a waste receiver of the class described, a diaphragm having a plurality of indications thereon, said individual indications being in spaced relation to the others and a reinforcing spider underlying said diaphragm.

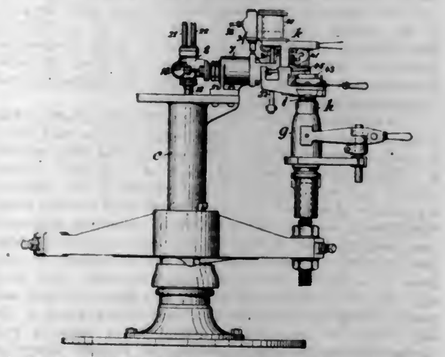
2. In a waste receiver of the class described, a receptacle, a retaining ring carried by said receptacle, said retaining ring being recessed, a diaphragm removably carried by said retaining ring in the recessed portion thereof, a spider carried by said receptacle underlying said diaphragm, and said diaphragm having indications thereon of individual areas of said diaphragm to be punctured by tweezers and wads of waste carried thereby.

1,213,290. NON-SKID TIRE-CHAIN. CLEO R. STANDLEY, Boone, Iowa. Filed Feb. 2, 1916. Serial No. 75,699. (Cl. 152—14.)



The combination with a wheel, of a multiplicity of circumferentially spaced chains extending transversely over the tire of the wheel, each chain having one of its ends positively anchored to the wheel, and a hoop loosely inserted through the other ends of the chains whereby the chains are free to move independently on the hoop and on the wheel in circumferential directions.

1,213,291. MACHINE FOR THE MANUFACTURE OF GLASS BOTTLES, JARS, AND THE LIKE. JAMES HENDERSON STEELE, Pendleton, England. Filed Mar. 29, 1916. Serial No. 87,477. (Cl. 49—13.)



1. In a machine of the type hereinbefore referred to for the manufacture of glass bottles, jars and the like, a pillar, an intermittently rotatable sleeve on the said pillar, a plurality of bearings on the upper end of the said sleeve, a turnover-bracket mounted in each of the said bearings, a parison mold, a neck mold and a parison mold operating piston on the fore end of each of the said brackets and a combined vacuum and compressed air inlet valve centrally located above the said pillar and sleeve, the said valve comprising a stationary plug connected with a vacuum and a compressed air source and a casing, intermittently rotatably mounted on the said plug and receiving externally the rear end of the pivots of the said turnover-brackets, longitudinal passages in each of the said pivots for separately conveying from the said plug, vacuum to the said neck mold and compressed air to both the said neck mold and the said parison mold operating piston, for the purpose hereinbefore specified.

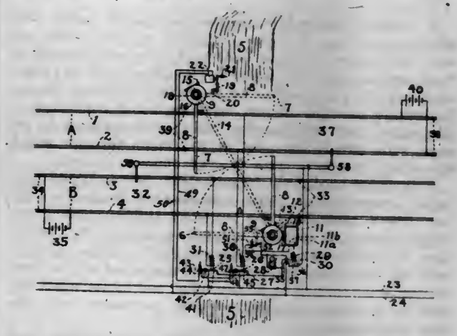
2. In a machine of the type hereinbefore referred to for the manufacture of glass bottles, jars and the like, a pillar, an intermittently rotatable sleeve on the said pillar, a plurality of bearings on the upper end of the said sleeve, a turnover-bracket mounted in each of the said bearings, a parison mold, a neck mold and a parison mold operating piston on the fore end of each of the said brackets and a combined vacuum and compressed air inlet valve centrally located above the said pillar and sleeve, a stationary valve plug centrally located above the said pillar, having a vacuum and a compressed air compartment, a valve casing intermittently rotatably mounted on the said plug and receiving externally the rear ends of the pivots of the said turnover-brackets, a vacuum and a compressed air passage formed longitudinally in each of the said pivots, the rear end of the said compressed air passage being in constant communication with the said vacuum compartment and the rear end of the said vacuum passage in intermittent communication with the said vacuum compartment and means connecting the fore end of the said vacuum passage with the nozzle of the said neck mold and the fore end of the said compressed air passage with the said nozzle and the parison mold operating piston, for the purpose hereinbefore specified.

3. In a machine of the type hereinbefore referred to for the manufacture of glass bottles, jars and the like, a pillar, an intermittently rotatable sleeve on the said pillar, a plurality of bearings carried by the upper end of the said sleeve, a turnover-bracket mounted in each of the said bearings, a parison mold, a neck mold and a parison mold operating piston on the fore end of each of the said brackets, a stationary valve plug centrally located above the said pillar, having a vacuum and a compressed air compartment and each thereof a port, a valve casing intermittently rotatably mounted on the said plug, receiving externally the rear ends of the pivots of the said turnover-brackets and having internally an annular vacuum and an annular compressed air recess in constant register with the said plug ports and a port leading from the said annular vacuum recess to the periphery of the rear end of the said pivot, a vacuum and a compressed air passage formed longitudinally in the said pivot, the rear end of the said compressed air passage being in constant register with the said compressed air recess and the rear end of the said vacuum passage communicating with a cross port in the said pivot, adapted to be intermittently brought into register with the port in the said casing, for the purpose hereinbefore specified.

4. In a machine of the type hereinbefore referred to for the manufacture of glass bottles, jars and the like, a pillar, an intermittently rotatable sleeve on the said pillar, a plurality of bearings on the upper end of the said sleeve, a turnover-bracket mounted in each of the said bearings, a parison mold, a neck mold and a parison mold operating piston on the fore end of each of the said brackets and a combined vacuum and compressed air inlet valve centrally located above the said pillar and sleeve, the said valve comprising a stationary plug having a vacuum and a compressed air compartment and a valve casing intermittently rotatably mounted on the said plug and receiving externally the rear ends of the pivots of the said turnover-brackets, a vacuum and a compressed air passage formed longitudinally in each of the said pivots, the rear end of the said compressed air passage being in constant communication with the said compressed air compartment and the rear end of the said vacuum passage in intermittent communication with the said vacuum compartment, a cross port in the said pivot at the fore end of each of the said passages, a pipe connecting one of the said cross ports with the nozzle of the said neck mold, a chamber in the head of the said turnover-bracket, a pipe connecting the other of the said cross ports with the said chamber and two pipes connected with the said chamber one of which has a hand controlled valve and leads to the said parison mold operating piston, for the purpose hereinbefore specified.

5. In a machine of the type hereinbefore referred to for the manufacture of glass bottles, jars and the like, a pillar, an intermittently rotatable sleeve on the said pillar, a plurality of turnover-bracket bearings on the upper end of and rotatable with the said sleeve, a combined vacuum and compressed air inlet valve located centrally above the said sleeve the casing of which has externally bosses which receive the rear ends of the turnover-bracket pivots and an air tight joint located between each rear end of the said pivots and the said bosses, the said joint comprising two necks formed around the said rear ends, two annular grooves in the said boss and a metal ring cast around each of the said necks through cross apertures in the said boss, for the purpose hereinbefore specified.

1,213,292. RAILWAY-GRADE-CROSSING PROTECTIVE DEVICE. GEORGE M. STOLL and VICTOR S. BEAM, Maplewood, N. J. Filed Sept. 15, 1913. Serial No. 789,807. (Cl. 269—3.)



1. A protective device for railway crossings, comprising a horizontally-movable gate normally positioned across the track, a train-controlled motor adapted to slowly move the gate to a position parallel with the track, train releasable means for holding the gate in the latter position and means for restoring said gate to its normal position.

2. A protective device for railway crossings, comprising a pair of horizontally-movable gates normally positioned across the track, a train-controlled motor adapted to slowly move the gates to a position parallel with the track, train releasable means for holding the gates in the latter position, and means for restoring said gates to their normal position.

3. A protective device for railway crossings, comprising a horizontally-movable gate normally positioned across the track, train controlled means adapted to slowly move the gate to a position parallel with the track, means for holding the gate in the latter position and means for restoring said gate to its normal position.

4. A protective device for railway crossings, comprising a horizontally-movable gate normally positioned across the track a train-controlled motor adapted to slowly move the gate to a position parallel with the track, a latch for said gate, a relay for releasing said latch, and means for restoring said gate to its normal position.

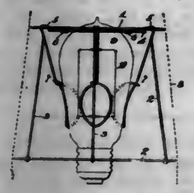
5. A horizontally-movable railway crossing gate, a train-controlled motor adapted to slowly swing the gate from a position across the track to a position parallel with the track, train releasable means for holding the gate in the latter position and means for restoring said gate to its normal position.

[Claim 6 not printed in the Gazette.]

1,213,293. SHADE-HOLDER. AARON P. STORRS, Owego, N. Y., assignor to Storrs Mica Company, Owego, N. Y., a Corporation of New York. Filed Feb. 1, 1915. Serial No. 5,447. (Cl. 240—111.)

1. A shade holder for incandescent electric lamps, said holder comprising a frame composed of filamentous annuli, braces connecting the annuli, a collar of insulating material having an opening adapted to engage with either that end of the lamp through which the wires enter, or

with the end opposite thereto and supported from arms carried by one annulus, and spring arms carried by the same annulus adapted to engage with the sides of the lamp.



2. A shade holder for incandescent electric lamps, said holder comprising a frame composed of filamentous annuli, filamentous members bent back from one annulus to form spring arms and adapted to engage with the sides of the lamp, and a collar of insulating material, the intermediate portions of the members being connected to the collar, said collar having an opening adapted to engage with either that end of the lamp through which the wires project, or with the end opposite thereto.

3. A shade holder for incandescent electric lamps, said holder comprising a frame composed of filamentous annuli, braces connecting the annuli, a disk of yielding material having an opening adapted to engage with either that end of the lamp through which the wires enter or with the end opposite thereto and supported at its outer edge on arms carried by one annulus, and spring arms carried by the same annulus adapted to engage with the sides of the lamp.

4. A shade holder for incandescent electric lamps, said holder comprising a frame composed of filamentous annuli, braces connecting the annuli, a collar of yielding insulating material having an opening adapted to engage with either that end of the lamp through which the wires enter or with the end opposite thereto and supported from arms carried by one annulus, and spring arms carried by the same annulus adapted to engage with the sides of the lamp.

5. A shade holder having a frame, a shield carried by the frame, said shield being adapted to engage a lamp bulb whether the latter is in an upright or in a pendant position, elastic means carried by the frame for holding the bulb in engagement with the shield, the parts being so proportioned and arranged that the source of light will assume a central location with the holder irrespective of the position of the holder relatively to the lamp.

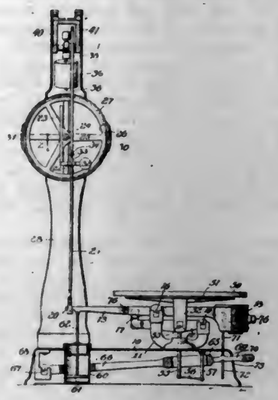
[Claims 6 to 8 not printed in the Gazette.]

1,213,294. PLATFORM COMPUTING-SCALE. CHARLES G. STRUBLER, Elkhart, Ind., assignor to Strubler Computing Scale Company, Elkhart, Ind., a Corporation of Indiana. Filed Feb. 14, 1912. Serial No. 677,574. (Cl. 73—104.)

1. In a computing scale, a load receiving platform, a pivoted scale beam supporting said platform, a draw bar connected to the scale beam, a rack bar connected to said draw bar, a rotatable weight and price chart, a pinion thereon meshing with said rack bar, and equalizing and load counterpoise pendulum means mounted above the axis of the chart and connected to the chart operating means by flexible bands which extend from points below said axis to said pendulum means.

2. In a computing scale, a load supporting structure, a rotatable weight and price chart, a supporting shaft therefor, a plurality of pendulum levers having knife edge pivots and having means of support above said chart, a draw bar and rack bar connecting said load supporting structure with said chart to operate the latter, and connections between said pendulums and chart and the load supporting structure, embracing an evener bar and flexible connections between the evener bar below the axis of said chart and pendulums.

3. In a computing scale, a load supporting structure, a rotatable weight and price chart, operative connections between the supporting structure and chart embracing a rack bar connected with said structure and a pinion on the chart meshing with the rack bar, compensating pendulum levers having means to support the same above the chart and operative connections between said rack bar and said pendulum levers, connected to the rack bar at a point below the axis of said chart.

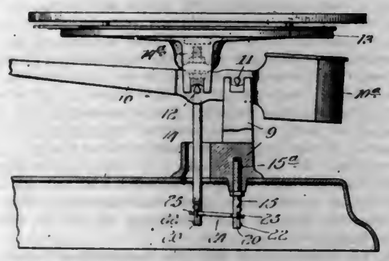


4. In a computing scale, a load supporting structure, a rotatable weight and price chart, operative connections between the supporting structure and chart, embracing a draw bar and rack connected with said structure and a pinion on the chart meshing with the rack, a plurality of compensating pendulum levers above said pinion provided with knife-edge pivots and eccentric segmental portions, tapes trained about and attached to said segmental portions, and an evener below said pinion to which the tapes are connected.

5. In a computing scale, a base, a rotatable weight and price chart, a load supporting structure, comprising a scale beam, with means to operatively connect it to said chart, load counterpoising and equalizing weights above the chart, with means to also operatively connect the same to said chart, a supplemental weight pivoted to the scale base and having means to normally sustain it free from the scale beam, and means whereby said weight may be supported on the scale beam to increase the capacity of the scale.

[Claims 6 to 24 not printed in the Gazette.]

1,213,295. SCALE-CHECK DEVICE. CHARLES G. STRUBLER, Elkhart, Ind., assignor to Strubler Computing Scale Company, Elkhart, Ind., a Corporation of Indiana. Filed Sept. 27, 1912. Serial No. 722,627. (Cl. 73—152.)



1. In a scale check device, a stem, a transverse knife-edged pivot integrally formed on said stem, an apertured plate with alined integral knife-edge pivots fastened to said stem, and a check plate having multiple alined bearings operatively connected with said stem and plate.

2. In combination, a scale check device consisting of a plurality of stems, each having an integral, laterally-directed, knife-edge pivot bearing near the end, plates fastened to said stems and having multiple alined knife-edge shelf and laterally directed pivot bearings, and a double ended check plate having internal and external flat alined bearings at each end to engage with said pivot bearings of the stems respectively.

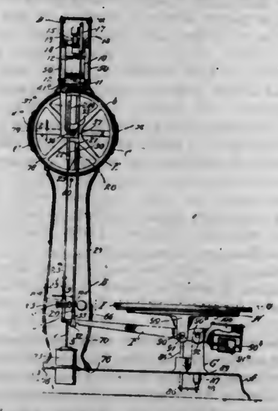
3. In a scale check device, a threaded stem having an integral side disposed knife-edge in alinement with the center of the stem, a removable plate fastened to said stem, said plate having multiple alined knife-edges, two of which aline with and face the knife-edge on said stem and point inward, the other two being shelf pivots and pointing upward, and a check plate having flat internal and external alined bearings adapted to work against the knife-edges of said removable plate and of said stem, with means to hold the check plate centrally of the shelf pivots.

4. In a scale check device, a stem provided with a knife-edge near one of its ends, a plate having an opening and vertically disposed supporting knife-edges in said opening, said plate also provided with longitudinally projecting knife-edges, a check plate having an extension on its end, a portion of which is recessed and adapted to pass through the opening in said plate, and resting on the supporting knife-edges of said plate, said check plate having flat contacting surfaces adapted to work against the knife-edges on said plate and stem, all substantially as shown and described.

5. In a scale check device, a stem having a knife-edge pivot swivelly mounted thereon, and a multiple knife-edge plate removably fastened to the swivel end of said stem, all substantially as shown and described.

[Claims 6 to 8 not printed in the Gazette.]

1,213,296. COMPUTING-SCALE. CHARLES G. STRUBLER, Elkhart, Ind., assignor to Strubler Computing Scale Company, Elkhart, Ind., a Corporation of Indiana. Filed Feb. 8, 1913. Serial No. 747,197. (Cl. 73—104.)



1. In a computing scale, a pivoted scale lever, a rotatable weight and price chart supported above and connected to said lever, a plurality of counterpoise pendulums pivotally supported above said chart, a draw bar pivotally connected to said scale lever, an evener pivotally connected to the upper end of the draw bar, links loosely connected at their lower ends to the ends of said evener and extending at their upper ends adjacent to the pendulums, and tapes connecting the upper ends of said links to said pendulums.

2. In a computing scale, a pivoted scale lever, a rotatable weight and price chart supported above and connected to said lever, a plurality of counterpoise pendulums pivotally supported above said chart, and provided with eccentric extensions, a draw bar pivotally connected to said scale lever, an evener bar pivotally connected to the upper end of the draw bar, links loosely connected at their lower ends to the ends of said evener, and tapes attached to said links adjacent to the pendulums and trained about the peripheries of and attached to said eccentric extensions.

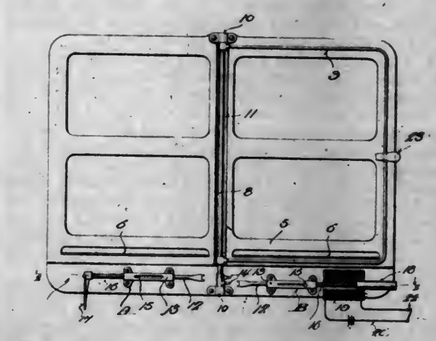
3. In a computing scale, a base, a hollow standard rising therefrom, a fixed casing surmounting the standard, a weight and price chart member mounted therein, a scale lever pivotally supported on the base, means to operatively connect said lever to said price chart member to actuate the same, counterpoise pendulums above said member, means to operatively connect said pendulums to said lever, knife edge bearings for said pendulums supported on a fixed or nonmovable part of said casing, and a removable cap member mounted on the fixed casing, and inclosing said pendulums.

4. In a computing scale, a base, a hollow standard rising therefrom, a casing surmounting the standard comprising end plates with a bridge bar extending between and connecting the same, a weight and price chart mounted therein, a scale lever operatively connected to said chart to actuate the same, counterpoise pendulums also operatively connected to said lever and therethrough to the chart and bearings for said pendulums carried by and supported on said bridge bar.

5. In a computing scale, a base, a hollow standard rising therefrom, a casing surmounting the standard comprising end plates with a bridge bar extending between and connecting same, a weight and price chart mounted therein, a scale lever operatively connected to said chart to actuate the same, counterpoise pendulums also connected to said lever and therethrough to the chart, bearings for said pendulums carried by and supported on said bridge bar and a cap member inclosing said pendulums and their bearings and removably fixed to said drum casing.

[Claims 6 to 16 not printed in the Gazette.]

1,213,297. LEAF-TURNING DEVICE. JOHN B. STURZL, Hiles, Wis. Filed Apr. 3, 1916. Serial No. 88,447. (Cl. 84—17.)

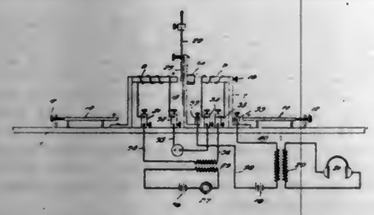


1. A leaf turning device comprising a body frame, a turning frame including a transversely journaled shaft on a body frame, a pair of pins projecting laterally from longitudinally spaced portions of the shaft, operating shafts movable transversely past the first shaft and engageable with the respective pins, and each pin being disposed on the shaft at an engle to its respective operating shaft when in operating position.

2. A leaf turning device comprising a body frame, a turning frame including a shaft journaled transversely thereon, a pin projecting laterally from said shaft, an operating shaft mounted for slidable movement trans-

versely of the first shaft to engage said pin, a solenoid coil surrounding said operating shaft, and a solenoid armature formed at the adjacent end of said operating shaft.

1,213,298. TELEPHONIC RELAY. FRANK E. SUMMERS, Memphis, Mo. Filed July 11, 1916. Serial No. 108,701. (Cl. 179—171.)



1. A relay, including a support, a diaphragm carried by the support, two electromagnets, the like poles of which are disposed upon opposite sides of the diaphragm and in attractive relation thereto, the windings of said coils being opposed, and two adjustable permanent magnets disposed upon the base and in coöperation with the respective electro-magnets, the poles thereof being disposed in a corresponding position to the respective electro-magnets.

2. A relay, including a support, a diaphragm carried by the support, two electro-magnets, the like poles of which are disposed upon opposite sides of the diaphragm and in attractive relation thereto, the windings of said coils being opposed, two adjustable permanent magnets disposed upon the base and in coöperation with the respective electro-magnets, the poles thereof being disposed in a corresponding position to the respective electro-magnets, and means for increasing the efficiency of the diaphragm operably connected thereto.

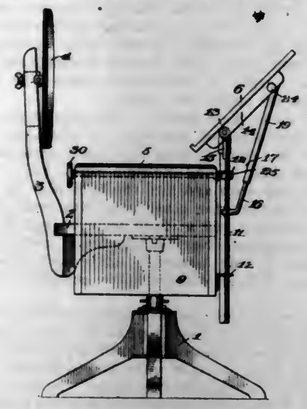
3. A relay, including a support, a diaphragm carried by the support, two electromagnets, the like poles of which are disposed upon opposite sides of the diaphragm and in attractive relation thereto, the windings of said coils being opposed, two adjustable permanent magnets disposed upon the base and in coöperative relation with the respective electro-magnets, the poles thereof being disposed in a corresponding position to the respective electro-magnets, and adjustable means for increasing the efficiency of the diaphragm operably connected thereto.

4. A relay, including a support, a diaphragm carried by the support, two electro-magnets, the like poles of which are disposed upon opposite sides of the diaphragm and in attractive relation thereto, the windings of said coils being opposed, two adjustable permanent magnets disposed upon the base and in coöperation with the respective electro-magnets, the poles thereof being disposed in a corresponding position to the respective electro-magnets, means for increasing the efficiency of the diaphragm operably connected thereto, said means including a vibrating rod connected centrally of the diaphragm, a weight adjustably mounted upon the free end thereof, and a resilient fulcrum point intermediate of the ends of the rod.

5. A relay, including a support, a diaphragm carried by the support, two electro-magnets, the like poles of which are disposed upon opposite sides of the diaphragm and in attractive relation thereto, the windings of said coils being opposed, two adjustable permanent magnets disposed upon the base and in coöperation with the respective electro-magnets, the poles thereof being disposed in a corresponding position to the respective electro-magnets, and means for increasing the efficiency of the diaphragm operably connected thereto, said means including a rod having an aperture centrally of the ends thereof, a pin carried by the diaphragm support and fitting in said opening, one end of the rod being connected centrally of the diaphragm, an adjustable spring mounted upon the pin and bearing against the rod, and an adjustable weight upon the free end of the rod.

[Claims 6 to 12 not printed in the Gazette.]

1,213,299. CHAIR. MARTIN THUM, Rochester, N. Y., assignor to Langslow Fowler Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 30, 1912. Serial No. 723,115. (Cl. 45—82.)



1. In combination with the seat portion of a chair, a receptacle supported thereon, a post slidable in guides at the front of the receptacle, a work table carried by said post, clamping means engaging said post and pressing it against its guides, a rod connected to said clamping means and extending through the receptacle to the rear thereof, and means at the rear of the receptacle for adjusting said rod and the clamping means with relation to the post.

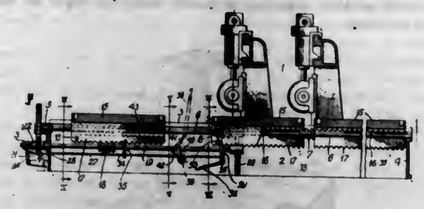
2. In combination with the seat portion of a chair, of a post associated therewith, a work table pivotally mounted on the post, a rod pivotally connected to the post intermediate its ends, a sleeve rotatably and pivotally connected with the work table in slidable engagement with said rod, coöperating projections on the rod and sleeve adapted to normally hold said members in locked engagement one with the other, an arm connected with the sleeve and a spring controlled member pivotally connected with said arm for effecting rotation of the sleeve to permit adjustment of the same upon said rod.

3. An adjustable chair comprising a seat, a support mounted thereon, a post slidable in guides upon the support, clamping means engaging the post arranged to press the same against its guides, a work table pivotally mounted on the post, a rod pivotally connected to the post intermediate its ends, a sleeve rotatably and pivotally attached to the work table having slidable engagement with said rod and adapted to be normally held in locked engagement therewith, an arm connected with the sleeve and a spring controlled member pivotally connected with said arm for effecting rotation of the sleeve to permit adjustment of the same upon the rod.

4. In combination with the seat portion of a chair, of a post associated therewith, a work table pivotally mounted on said post, a rod pivotally connected to the post intermediate its ends, a sleeve rotatably and pivotally arranged on the work table having slidable engagement with said rod and adapted to be held in locked relation therewith, an arm carried by the sleeve, a bracket on the work table, an actuating rod connected to said arm and movable within an opening in the bracket, and means for retaining the actuating rod in normal position whereby the sleeve is held in locking engagement with the first mentioned rod.

1,213,300. WORK-HOLDER FOR MILLING-MACHINES. SAMUEL J. TODD, Highland Park, Mich., assignor of one-half to Jonathan Palmer, Jr., Detroit, Mich. Filed Feb. 14, 1916. Serial No. 78,109. (Cl. 90—21.)

1. In a milling machine, work holders, a slow feed mechanism for said work holders, and a comparatively fast feed mechanism adapted to move one of said work holders into position to be placed in engagement with said slow feed mechanism while another work holder is being moved by said slow feed mechanism.



2. In a milling machine, work holders, slow feed mechanism for said work holders, a comparatively fast feed mechanism adapted to move said work holders into position to be placed in engagement with said slow feed mechanism, and means adapted to move said work holders from said fast feed mechanism to said slow feed mechanism.

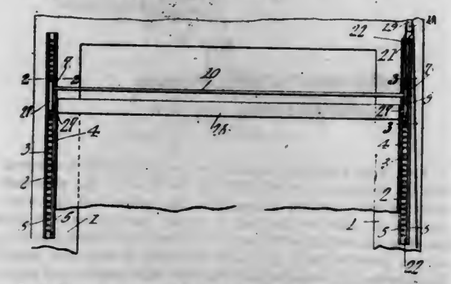
3. In a milling machine having work holders adapted to be repeatedly fed through said machine, an accelerator including an automatic means actuated in advance of a manually actuated means for moving said work holders predetermined distances prior to entering said machine.

4. In a milling machine having work holders adapted to be repeatedly fed through said machine, an accelerator comprising an automatic fast feed mechanism adapted to move said work holders toward said machine, and manually actuated means adapted to move said work holders from said fast feed mechanism to a point to be moved through the machine by the feed mechanism thereof.

5. In a milling machine having work holders and a main feed mechanism for moving said work holders, an auxiliary feed mechanism actuated by said main feed mechanism to move work holders faster than and at the same time as the work holders moved by said main feed mechanism, and means actuated by said work holders to control the operation of said auxiliary feed mechanism.

[Claims 6 and 7 not printed in the Gazette.]

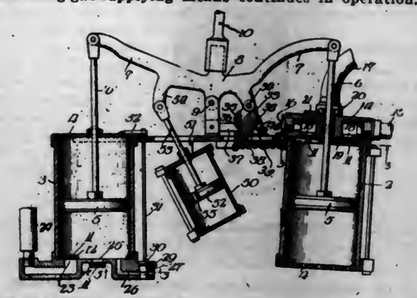
1,213,301. WINDOW-SHADE FIXTURE. JOHN K. TOMLINSON, Ronceverte, W. Va. Filed Oct. 20, 1915. Serial No. 56,937. (Cl. 156—27.)



In a device of the class described, a strip and means for securing the strip to a portal-frame, the strip being outwardly extended intermediate its longitudinal edges to define a rib having openings forming a rack, and to define a recess behind the rib; a shade-roller-receiving bracket interengaged with the strip for vertical sliding movement; a pinion carried by the bracket and meshing into the rack; a hanger inserted into the upper end of the recess behind the rib; and a flexible element trained across the hanger and secured to the bracket.

1,213,302. APPARATUS FOR PRODUCING ARTIFICIAL RESPIRATION. WILLIAM E. TULLAR, Chicago, Ill., assignor to The Respiratory Apparatus Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 5, 1916. Serial No. 113,352. (Cl. 128—13.)

1. In an apparatus of the character described, the combination of means for supplying oxygen-containing gas to and withdrawing waste and other products from the lungs of a patient, an outlet from and an inlet to each of said means, a disk of relatively light material loosely maintained in bodily movable relation to each of said outlets and inlets, and adapted to alternately close said outlets and inlets, the weight of said disks being such that they are readily operable by the lungs of the patient to permit spontaneous breathing through the apparatus, and means whereby said waste-product withdrawing means may be rendered inoperative while said oxygen-containing-gas-supplying means continues in operation.



2. In an apparatus of the character described, the combination of means for supplying oxygen-containing gas to and withdrawing waste and other products from the lungs of a patient, an outlet from and an inlet to each of said means, valves in said inlets and outlets, means whereby said waste-product-withdrawing means may be rendered inoperative while said oxygen-containing-gas-supplying means continues in operation, and means for preventing the operation of said first-mentioned means beyond a predetermined rate of speed.

3. In an apparatus of the character described, the combination of means for supplying oxygen-containing gas to and withdrawing waste and other products from the lungs of a patient, an outlet from and an inlet to each of said means, a disk of relatively light material loosely maintained in bodily movable relation to each of said inlets and outlets, and adapted to alternately close said inlets and outlets, the weight of said disks being such that they are readily operable by the lungs of the patient to permit spontaneous breathing through the apparatus, means whereby said waste-product-withdrawing means may be rendered inoperative while said oxygen-containing-gas-supplying means continues in operation, and means for varying the effective capacity of said first-mentioned means.

4. In an apparatus of the character described, the combination of means for supplying oxygen-containing gas to and withdrawing waste and other products from the lungs of a patient, an outlet from and an inlet to each of said means, a disk of relatively light material loosely maintained in bodily movable relation to each of said inlets and outlets, and adapted to alternately close said inlets and outlets, the weight of said disks being such that they are readily operable by the lungs of the patient to permit spontaneous breathing through the apparatus, means whereby said waste-product-withdrawing means may be rendered inoperative while said oxygen-containing-gas-supplying means continues in operation, and means for varying the proportion of oxygen in the oxygen-containing gas supplied.

5. In an apparatus of the character described, the combination of means for supplying oxygen-containing gas to and withdrawing waste and other products from the lungs of a patient, an outlet from and an inlet to each of said means, valves in said inlets and outlets, means whereby said waste-product-withdrawing means may be rendered inoperative while said oxygen-containing-gas-supplying means continues in operation, means for preventing the operation of said first-mentioned means beyond a predetermined rate of speed, and means for varying the effective capacity of said first-mentioned means.

[Claims 6 to 33 not printed in the Gazette.]

1,213,303. POWER-TRANSMISSION MECHANISM. JOHN VALENTINE, Chicago, Ill. Filed Dec. 20, 1913. Serial No. 808,030. (Cl. 74—7.)



1. A power transmission mechanism comprising in combination, rotary driving and driven members in axial alinement, one of said members having a friction rim and the other member having a cam hub arranged within said rim, friction shoes within said rim, and wedging rollers interposed between and in rolling contact with said hub and said shoes, substantially as described.

2. A power transmission mechanism comprising in combination, rotary driving and driven members in axial alinement, one of said members having a friction rim and the other member having a cam hub arranged within said rim, friction shoes within said rim, and wedging rollers interposed between said hub and said shoes, the periphery of said hub being recessed at intervals in its periphery to form enlarged cam seats, said rollers being in rolling contact with said seats, substantially as described.

3. A power transmission mechanism comprising in combination, rotary driving and driven members in axial alinement, one of said members having a friction rim and the other member having a cam hub within said rim, friction shoes within said rim, and wedging rollers interposed between said hub and said shoes, said shoes and said cam hub having curved, recessed, cam seats in their adjacent faces for said rollers, substantially as described.

4. A power transmission mechanism comprising in combination, driving and driven members in axial alinement, a friction disk on one of said members having a rim provided with an internal friction surface, the other member having a cam hub within said rim, friction shoes within said rim, and a plurality of wedging rollers interposed between each of said shoes and said hub, substantially as described.

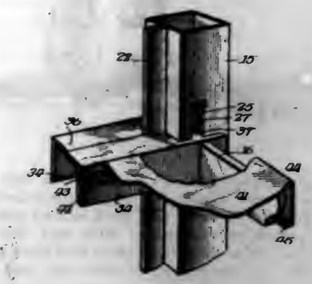
5. A power transmission mechanism comprising in combination, driving and driven members in axial alinement, a friction disk on one of said members having a rim provided with an internal friction surface, the other of said members having a cam hub within said rim, friction shoes within said rim, and a plurality of wedging rollers interposed between each of said shoes and said hub, said shoes and said hub having enlarged concave seats for said rollers, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,213,304. METAL SHELVING. WALTER N. VANCE, Chicago Heights, Ill., assignor to Durand Steel Locker Company, Chicago, Ill., a Corporation of Illinois. Filed June 12, 1915. Serial No. 33,675. (Cl. 211—27.)

1. A frame comprising uprights slotted to receive the ends of cross supports, and a cross support having an end engageable behind the slotted material of the uprights, said end being set off from the body of the cross support by a necked portion the side walls of which are inclined and wedgingly held in said slot.

2. A frame comprising uprights having perforations of tapering form, and a cross support having an end disposed through a perforation, said end being set off by a necked portion tapering mutually with the taper of said perforation.



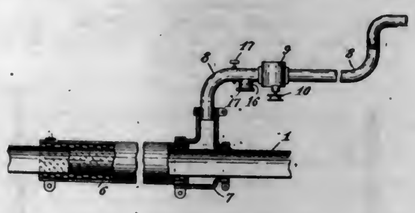
3. A frame comprising uprights and cross supports, said uprights and cross supports having tongue and slot connections, the portion of the cross support engaging the upright being narrower than said end and spaced inwardly an appreciable distance from said end and this portion and the part of the upright engaging therewith having mutually inclined engaging faces.

4. A frame comprising slotted uprights and a pair of cross supports engaged in a single slot one above the other.

5. A frame comprising slotted uprights, and a pair of cross supports engaged in a single slot one above the other and extending angularly with respect to each other.

[Claims 6 to 12 not printed in the Gazette.]

1,213,305. AUTOMOBILE HEATING AND COOLING APPARATUS. JOSEF VERDERBER, Cleveland, Ohio. Filed Mar. 20, 1916. Serial No. 85,229. (Cl. 237—21.)



1. A heat absorbing apparatus for automobiles comprising an elongated casing adapted to fit over the pipe conducting the exhaust gases from the engine of the automobile, a member having a spiral passageway formed therein contacting with said exhaust pipe, heat retaining means surrounding the said member having the spiral passageway, a chambered member with which the spiral passageway communicates and means for conducting heated air to suitable radiators.

2. A heat absorbing apparatus for automobiles, comprising an elongated casing adapted to fit upon the pipe conducting the exhaust gases from the engine of the automobile, a member having a plurality of unconnected spiral passageways formed therein contacting with the said exhaust pipe, heat retaining means surrounding the said member having spiral passageways, a chambered member with which the spiral passageways communicate, and means for conducting the heated air to suitable radiators.

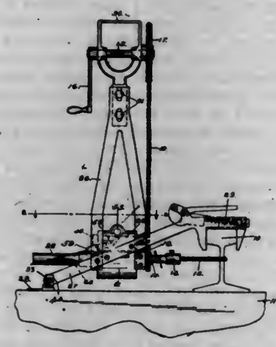
3. A heat absorbing apparatus for automobile heating purposes comprising an elongated casing adapted to fit upon the pipe conducting the exhaust gases from the engine of the automobile, a member having inwardly extending projections adapted to contact with said pipe said projections forming walls for spiral grooves in said member, means surrounding the said member having spiral passageways, a chambered member with which the spiral passageways communicate, and means for conducting the heated air to suitable radiators.

4. A heating apparatus for automobiles, comprising an elongated casing adapted to surround a portion of the pipe conducting exhaust gases from the engine, a sheet metal member having a plurality of raised spiral passageways formed therein and adapted to surround the said pipe for the exhaust gases, heat retaining material forming the outside cover for the said member having the spiral passages, a chambered member with which the spiral passages communicate, a pipe communicating with the chambered member for conducting the heated air, and a suction device for drawing air through the casing and chambered member.

5. A heating apparatus for use with an automobile, comprising an elongated casing adapted to encircle a portion of the pipe which conducts the gases from the engine, said casing comprising an inner member having spiral grooves formed therein, the bottom of the grooves contacting with the outer surface of the said pipe, a cylindrical member surrounding the said member having the spiral grooves formed therein, and a cover of heat retaining material surrounding the said cylindrical member, a chambered member covered with heat insulating material, which chambered member surrounds a portion of the pipe from the engine and likewise communicates with the spiral passageway before mentioned, a pipe communicating with the chambered member, and a suction device associated with said pipe to draw air through the spiral passageways and the said chambered member.

[Claim 6 not printed in the Gazette.]

1,213,306. TRACK-DRILL. EUGENE W. VOGEL, Oak Park, Ill., assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill., a Corporation of Illinois. Filed June 15, 1914. Serial No. 845,280. (Cl. 77—9.)



1. In a drill of the character described, the combination with a threaded drill spindle, of a direct driving connection for the same, a feed nut on the threaded end of said spindle, mechanism for driving the feed nut at a speed different from the speed of rotation of the spindle, and means comprising a foot operated member for putting the feed nut driving mechanism out of operation and a stop for holding the same against rotation with the spindle.

2. In a drill of the character described, the combination with a threaded drill spindle, of a direct driving connection for the same, a right threaded feed nut on the threaded end of the spindle, mechanism for driving the feed nut at a speed less than the speed of rotation of the spindle, and means comprising a foot operated member for putting the feed nut driving mechanism out of operation and for holding the feed nut from rotation with the spindle.

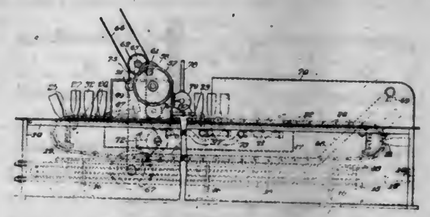
3. In a drill of the character described, the combination with a right threaded drill spindle, of a direct driving connection for the same, a feed nut on the threaded end of the spindle, mechanism for driving the feed nut at a speed different from the speed of rotation of the spindle comprising a clutch, means comprising a foot lever for operating said clutch so as to put said feed nut driving mechanism out of operation and a stop to hold said feed mechanism against rotation.

4. In a drill of the character described, the combination with a right threaded drill spindle, of a direct driving connection for the same, a feed nut on the threaded end of the spindle, mechanism for driving the feed nut at a speed less than the speed of rotation of the spindle, and means comprising a foot operated member for putting the feed nut driving mechanism out of operation and for holding the feed nut from rotation with the spindle.

5. In a drill of the character described, the combination with a drill spindle formed with a right thread, of a direct driving connection for the spindle, a feed nut on the threaded end of the spindle, mechanism for driving the feed nut in the same direction as the spindle but at a slower speed, and means for putting said feed nut driving mechanism out of operation.

[Claims 6 to 21 not printed in the Gazette.]

1,213,307. BOTTLE-WASHING MACHINE. WALTER WACHS and ROCKWELL L. GALLUP, Chicago, Ill. Filed Sept. 1, 1915. Serial No. 48,423. (Cl. 141—7.)



1. In a bottle washing machine, the combination of a tank adapted to contain a soaking solution, means disposed within the tank for heating the solution contained therein, a water receptacle mounted in the upper portion of said tank, an endless conveyer mounted to travel around said receptacle without entering the same, a series of bottle holders mounted on said conveyer, means for spraying the soaking solution from said tank over the bottles as they emerge from the tank, means for spraying water from said receptacle over the interiors and exteriors of said bottles when positioned over the receptacle so that the spraying water is caught in said receptacle, and means for subsequently spraying clean, fresh water over the interiors and exteriors of said bottles while still positioned over said receptacle.

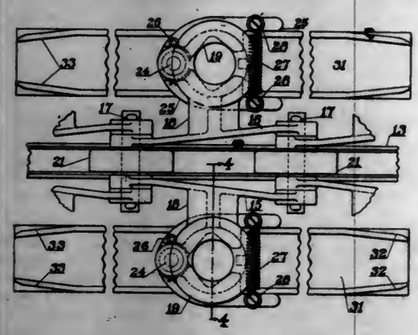
2. In a bottle washing machine, the combination of a soaking tank, a water receptacle mounted in the upper portion thereof, an endless carrier arranged to travel above and beneath said receptacle, bottle holders mounted on said carrier, a pump for spraying the soaking solution from said tank over the exteriors of the bottles as they emerge from the tank at one end thereof, the pump intake being located near the opposite end of the tank from the spray nozzle to thereby create a current of soaking solution in the tank in a direction opposite to the direction of movement of the bottles, a pump for spraying water from the receptacle over said bottles, a drive shaft and a drive chain arranged to drive both of said pumps from said shaft.

3. In a bottle washing machine, the combination of a soaking tank, a water receptacle mounted in the upper portion thereof, a bottle carrier arranged to travel around said receptacle and through the tank, a pump for delivering soaking solution from said tank to bottles on said carrier, a pump for delivering water from said receptacle to said bottles, a drive shaft, a driving chain connected with said shaft and with both of said pumps, a secondary shaft driven from said drive shaft, and means operated from said secondary shaft for intermittently advancing said bottle carrier.

4. In a bottle washing machine, the combination of a long, narrow soaking tank, means mounted near the top of the tank for collecting water delivered above said means, an endless conveyer arranged to travel around said means from end to end of said tank, individual bottle carriers mounted on said conveyer, means for withdrawing the soaking solution from one end of said tank and spraying the same over the bottles as they emerge on said carrier from the other end of the tank, and means for delivering different fluids to said bottles as they pass in succession over said collecting means.

5. In a bottle washing machine, the combination of a soaking tank, a water receptacle mounted in the upper portion thereof, a track above said receptacle, a track in said tank beneath the receptacle, an endless bottle conveyer adapted to travel on said tracks, means for delivering a soaking solution from the tank to the bottles at one end of the tank, and means for delivering different fluids successively to the bottles when over said receptacle.

1,213,308. BOTTLE-CONVEYER. WALTER WACHS and ROCKWELL L. GALLUP, Chicago, Ill. Original application filed Sept. 1, 1915, Serial No. 48,423. Divided and this application filed May 12, 1916. Serial No. 96,974. (Cl. 198—8.)



1. A bottle conveyer, comprising a bottle-holder consisting of a socket, a pair of clamping jaws mounted adjacent to said socket, a spring for normally closing said jaws about the neck of a bottle in position in said socket, means for opening said jaws against the force of said spring, and means for preventing a rapid closing movement of said jaws such as would injure a bottle in said socket.

2. A bottle conveyer, comprising a bottle-holder consisting of a socket, a pair of pivoted bottle-holding jaws mounted at one end of said socket, a spring for normally holding said jaws in closed position, means for opening said jaws against the action of said spring, and means for locking said jaws in open position.

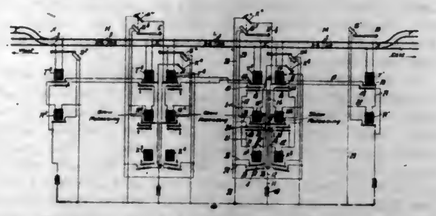
3. The combination of a conveyer comprising a series of pivotally connected links, each link being provided with bottle-receiving means, a bottle-holder mounted on each of said means, comprising a pair of pivoted jaws, means for advancing said conveyer, and means for opening said jaws, maintaining them in open position for a predetermined period and subsequently closing said jaws gradually so as to obviate injury to a bottle in said socket.

4. The combination of a conveyer provided with bottle-supporting elements, a pair of jaws pivoted on each of said elements, a spring for closing each pair of jaws to hold a bottle therein, stationary means for opening said jaws at a predetermined point in the travel of the conveyer and means for maintaining said jaws in open position during a predetermined travel of said conveyer.

5. The combination of a conveyer, bottle holders mounted thereon, each comprising a pair of pivotally mounted jaws, means for normally holding said jaws in closed position, mechanism for opening said jaws at a predetermined point in the travel of the conveyer, a latch for locking said jaws in open position, and means for automatically releasing said latch.

[Claims 6 to 10 not printed in the Gazette.]

1,213,309. RAILWAY SIGNALING. HERBERT A. WALLACE, New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Jan. 28, 1914. Serial No. 814,988. (Cl. 246—30.)



1. In combination, a stretch of railway track divided into a plurality of sections, a pair of opposing signals located substantially at each junction of adjacent sections for governing traffic in opposite directions, a signal relay for the control of each signal, track circuits for the sections, each including a track relay for controlling the signal relay for each signal governing traffic through the section; means for controlling each signal relay by the signal relay for the signal next in advance governing traffic in the same direction, an auxiliary relay for each signal relay adapted when energized to render the latter ineffective to control the signal relay for the signal next in the rear, a pick-up and a holding circuit for each auxiliary relay, each pick-up circuit including a back contact of a track relay for the section through which the corresponding signal governs traffic, and a front contact of the corresponding signal relay, and each holding circuit including a front contact of the auxiliary relay and the said back contact of the track relay and a source of current.

2. In combination, a stretch of railway track divided into a plurality of sections, a pair of opposing signals located substantially at each junction of adjacent sections for governing traffic in opposite directions, a signal relay for the control of each signal, two track relays for each section successively operated by the passage of a car or train through the section, means for energizing said track relays, each track relay controlling the signal relay for each signal governing traffic through the section; means for controlling each signal relay by the signal relay for the signal next in advance governing traffic in the same direction, an auxiliary relay for each signal relay adapted when energized to render the latter ineffective to control the signal relay for the signal next in the rear, a pick-up and a holding circuit for each auxiliary relay, each pick-up circuit including a back contact of a track relay for the section through which the corresponding signal governs traffic and a front contact of the corresponding signal relay, and each holding circuit including a front contact of the auxiliary relay and the said back contact of the track relay and a source of current, and a branch around the said track relay contact for the holding circuit of each auxiliary relay, said branch including a back contact of the signal relay for the corresponding signal.

3. In combination, a stretch of railway track, signals located at intervals through the stretch for governing traffic in one direction, and other signals located at intervals for governing traffic in the opposite direction, a signal relay for controlling each signal, track circuits for the stretch including track relays for controlling said signal relays, means for controlling the signal relay for each signal by the signal relay for the signal next in advance governing traffic in the same direction, an auxiliary relay for each signal relay for rendering the latter ineffective to control the signal relay for the signal next in the rear, a pick-up circuit for each auxiliary relay including a back contact

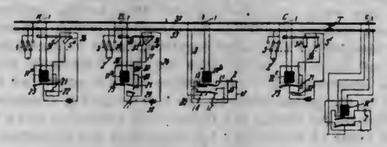
of a track relay for the portion of the stretch directly governed by the corresponding signal and a front contact of the signal relay for such signal, and a holding circuit for each auxiliary relay including the said track relay back contact and a front contact of the auxiliary relay.

4. In combination, a stretch of railway track divided into sections, two track relays for each section adapted to be operated successively by the passage of a vehicle through the section, means for energizing said track relays; two signals for each section, one corresponding to one track relay and adapted to govern traffic through the section in one direction, the other corresponding to the other track relay and adapted to govern traffic in the other direction; a signal relay for each signal and controlled by the track relays of the section through which the signal governs traffic; means for controlling the signal relay for each signal by the signal relay for the signal next in advance governing traffic in the same direction, an auxiliary relay for each signal relay for rendering the latter ineffective to control the signal relay for the signal next in the rear, a pick-up circuit for each auxiliary relay including a front contact of the corresponding signal relay and a back contact of the corresponding track relay, and a holding circuit for each auxiliary relay including the said track relay back contact and a front contact of the auxiliary relay, and a branch around the track relay contact in the holding circuit for each auxiliary relay, which branch includes a back contact of the signal relay for the corresponding signal.

5. In combination, two successive sections of a railway track, a signal located adjacent the entrance end of each section, a signal relay for each signal for the control thereof, a line circuit for each signal relay extending through the corresponding section, track circuits for the sections including track relays for controlling the line circuits of the signal relays, means for controlling the line circuit for the section in the rear by the line circuit for the section in advance; and an auxiliary relay for removing the line circuit for the section in the rear from the control of the line circuit for the section in advance, a pick-up circuit for said auxiliary relay including a back contact of a track relay for the section in advance and a front contact of the signal relay for the section in advance, and a holding circuit for said auxiliary relay including the said track relay back contact and a front contact of the auxiliary relay.

[Claims 6 and 7 not printed in the Gazette.]

1,213,310. RAILWAY SIGNALING. HERBERT A. WALLACE, New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed June 23, 1914. Serial No. 846,730. (Cl. 246—30.)



1. In combination, a plurality of successive block sections, a signal for each block section adapted to indicate danger, caution and clear, track circuits for the block sections each including a track relay, each track relay comprising a movable member capable of a middle position and movable in opposite directions therefrom in response to reversals of current in the relay, each relay comprising two independently movable sets of contacts one of which is closed when said member moves in one direction from its middle position and the other of which is closed when the member moves in the other direction from its middle position, a caution indication circuit for each signal controlled by one of said sets of contacts of the relay for the corresponding block section, and a clear indication circuit for each signal controlled by the other set of contacts of the relay for the corresponding block section, and a pole-changer operated by each signal for reversing the polarity of the track circuit in the rear.

2. In combination, a signal adapted to indicate danger, caution and clear, a relay for said signal and comprising a member having a middle position and capable of movements in opposite directions from said middle position, said relay also comprising two independently movable sets of contacts one or the other of which sets is closed according as said member moves in one direction or the other from its middle position, a caution indication circuit for said signal controlled by one of said sets of contacts, and a clear indication circuit for said signal controlled by the other of said sets of contacts.

3. In combination, two successive sections of a railway track, a track circuit for each section including a source of current and a relay, each relay being responsive to reversals of current, the relay for the forward section comprising two sets of contacts one or the other of which sets is closed according as the relay is energized in one direction or the other and both of which sets are opened whenever the relay is deënergized, said contacts operating to reversibly connect the rails of the rear section with the corresponding source of current according as the relay is energized in one direction or the other, means for reversing the polarity of the track circuit for the forward section, and a signal controlled by the relay for the rear section.

4. In combination, two successive sections of a railway track, a source of current and a relay for each section, each relay being responsive to reversals of current, the relay for the forward section comprising a member having a middle deënergized position and capable of movements in opposite directions therefrom according as the relay is energized in one direction or the other, said relay also comprising two independently movable sets of contacts one or the other of which is closed according as the said member moves in one direction or the other from its middle position, and both of which sets are opened when the member occupies the middle position, said contacts operating to reversibly connect the rails of the rear section with the source of current for that section according as one set or the other is closed, means for reversibly connecting the rails of the forward section with the source of current for that section, and a signal controlled by the relay for the rear section.

5. In combination, a signal adapted to indicate danger, caution and clear, a relay comprising two independently movable sets of contacts one or the other of which sets is closed according as the relay is energized in one direction or the other and both of which sets are open when the relay is deënergized, a caution indication circuit for said signal controlled by one of said sets of contacts, and a clear indication circuit for said signal controlled by the other set.

[Claim 6 not printed in the Gazette.]

1,213,311. GEARING. HENRY C. WALTER, Bridgeport, Conn., assignor to The Locomobile Company of America, New York, N. Y., a Corporation of West Virginia. Filed Apr. 19, 1915. Serial No. 22,231. (Cl. 74—41.)

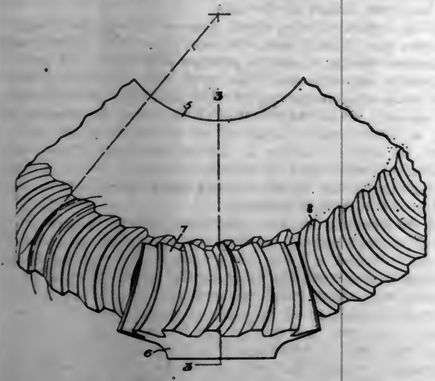
1. A pair of mating bevel gears whose teeth are each curved from end to end and formed on an arc of a circle whose point of tangency to a radial line drawn from the cone center is intermediate the ends of such tooth.

2. A pair of mating bevel gears whose teeth are each curved from end to end and formed on an arc of a circle whose point of tangency to a radial line drawn from the cone center is approximately midway between the ends of such tooth.

3. A pair of mating bevel gears whose teeth are of substantially uniform depth from end to end and are each curved from end to end and formed on an arc of a circle whose point of tangency to a radial line drawn from the cone center is intermediate the ends of such tooth.

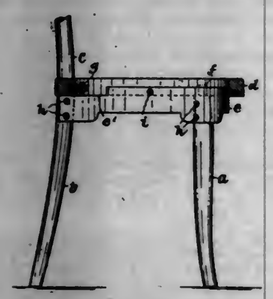
4. As a new article of manufacture, a bevel gear whose teeth are each curved from end to end and are formed on an arc of a circle whose point of tangency to a radial line

drawn from the cone center of the gear is intermediate the ends of such tooth.



5. A pair of mating bevel gears whose teeth are each curved from end to end and formed on an arc of a circle whose point of tangency to a radial line drawn from the cone center is intermediate the inner end and the middle of such tooth.

1,213,312. CHAIR. ALBERT WANNER, Jr., New York, N. Y. Filed Jan. 25, 1916. Serial No. 74,123. (Cl. 155—3.)



1. In a seating appliance, an open seat-supporting frame and an upright plate-like member secured against the inside face of and depending from the frame, in combination with legs secured to the frame and each having an inwardly facing surface thereof bearing against and secured to the outer face of said member.

2. In a seating appliance, an open seat-supporting frame and an upright plate-like member bent in plan and secured against the inside face of and depending from the frame, in combination with legs secured to the frame and each having an inwardly facing surface thereof bearing against and secured to the outer face of said member.

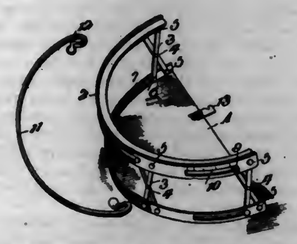
3. In a seating appliance, a substantially circular seat-supporting frame, an upright plate-like member curved in plan to the curvature of, and secured against the inside face of and depending from, the frame, in combination with legs secured to the frame and each having an inwardly facing surface thereof bearing against and secured to the outer face of said member.

4. In a seating appliance, an open seat supporting frame and a leg having an inwardly facing surface thereof outwardly offset with reference to the inside surface of said frame, in combination with an upright plate-like member secured at a point removed from the leg to the inside face of said frame and having its upper edge recessed adjacent the leg and its thus-recessed portion extending under the frame and secured to said surface of the leg.

5. In a seating appliance, an open seat-supporting frame, a pair of front legs depending therefrom, back-legs depending from the frame and having inwardly facing surfaces thereof outwardly offset with reference to the inside face of said frame, in combination with an upright plate-like member bent in plan and secured to the inside face of and depending from the frame and also secured to the inside faces of the front legs and having its upper edge at each end thereof recessed and the thus-recessed ends extending under the frame and secured to the back legs.

[Claims 6 to 8 not printed in the Gazette.]

1,213,313. SKIRT-GAGE. LOU V. WATKINS, Fort Worth, Tex. Filed June 2, 1915. Serial No. 31,722. (Cl. 33—9.)



1. A skirt-gage comprising a semi-circular base and two slotted rims, one of which is a part of the base, and the other adjustably connected thereto, members pivoted together in pairs, one end of which are pivoted respectively to the two rims, and the opposite ends slidable in the slots thereof, and means connected with two of said members for adjustably fastening them at some point in said slots to regulate the height of the adjustable rim.

2. A skirt-gage comprising a base and two slotted rims, one of which is a part of the base, and the other adjustably connected thereto, members pivoted together in pairs, one end of which are pivoted respectively to the two rims, and the opposite ends slidable in the slots thereof, means connected with two of said members for adjustably fastening them at some point in said slots to regulate the height of the adjustable rim, and a detachable clamp for clamping the skirt to one of the rims, and along the edge of which the skirt is marked to indicate its height from the floor.

3. A skirt-gage comprising a base, a slotted rim or flange connected with one edge thereof, a slotted gage-rim, a lazy-tongs connection between the two, a lazy-tongs comprising members in pairs pivoted together at their centers with one end of each pair pivotally connected with the two rims, and the opposite ends having pulleys or rollers slidably connected in the slots, means connecting one member of two pairs together, gages in proximity to two of the slots in the gage-rim, and adjustable thumb-nuts connected with one member of each outer bar adjacent to the gages, whereby the lazy-tongs are expanded or contracted by sliding the thumb-nuts toward or away from each other in their slots for regulating the adjustment or height of the gage-rim from the floor.

1,213,314. SPRING SUSPENSION FOR AUTOMOBILE-TRUCKS. EDWARD J. WELCH, Fitchburg, Mass. Filed Aug. 4, 1916. Serial No. 113,094. (Cl. 267—37.)



1. In a spring suspension for a vehicle body, the combination of a leaf spring, a pair of pins, one connected with each of two parallel leaves of the spring for supporting the vehicle frame therefrom, said parallel leaves being rigidly connected at their centers, and means whereby said pins are rigidly connected together, but are capable of turning on an axis located between them to accommodate the two leaves.

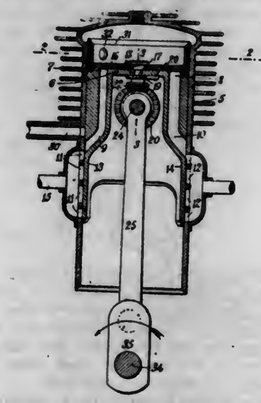
2. In a device of the character described, the combination of a semi-elliptical leaf spring, a vehicle body having a stationary hub thereon, a supporting member pivotally connected with said hub and adapted to swing freely with respect thereto, and two connection connected with the ends of separate leaves of said spring and fixed to the supporting member.

3. In a device of the character described, the combination with an automobile truck chassis having a hub provided with a cylindrical socket, of a pair of circular plates for supporting it located and adapted to turn together in said socket, a pair of pins having their ends supported by said plates and movable therewith, a spring connected to said chassis at one end and having at the other end two leaves adapted to have freedom of motion independently of each other, one connected to each of said pins.

4. In a device of the character described, the combination with an automobile truck chassis having a fixed hollow hub thereon, of a pair of circular plates located in said hub and adapted to turn on a central axis, a pair of pins having their ends supported by said plates and movable therewith, a semi-elliptical spring connected to said chassis at one end and having at the other end two leaves adapted to have freedom of motion independently of each other, one connected to each of said pins, said leaves being turned over at their ends around the respective pins, and a substantially flat leaf located between them and projecting beyond their ends.

5. In a spring suspension for a vehicle body, the combination of a leaf spring, a pair of pins, one connected with each of two leaves of the spring for supporting the vehicle frame therefrom, means whereby said pins are rigidly connected together, but are capable of turning on an axis located between them to accommodate the two leaves, said spring having a straight ended leaf between said two leaves.

1,213,315. INTERNAL-COMBUSTION ENGINE. HUGO C. WELL, New York, N. Y., assignor of one-half to Frederick A. B. Meinhardt, New York, N. Y. Filed July 9, 1913. Serial No. 778,075. (Cl. 123—47.)



1. In an internal combustion engine, a cylinder having a port, a piston for reciprocating in the cylinder, and having a port for communicating with the port of the cylinder, a valve mounted for rotating on the piston for commanding the second-mentioned port, a piston rod fulcrumed to the piston, and gearing connecting the piston rod with the valve for rotating the latter.

2. In an internal combustion engine, a cylinder having a port, a piston for reciprocating in the cylinder and having a port for communicating with the port in the cylinder, a valve mounted for rotating on the piston for commanding the second-mentioned port, a piston rod fulcrumed to the piston, a beveled gear secured for rotating with the valve, a second beveled gear meshing with the first beveled gear, and means by which the second beveled gear is operable by the piston rod.

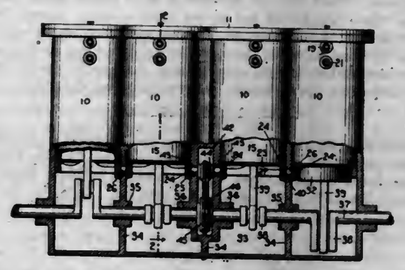
3. In an internal combustion engine, a cylinder having a port, a piston for reciprocating in the cylinder and having a port for communicating with the port in the cylinder, a valve for commanding the second mentioned port and mounted for rotating on the piston on an axis extending longitudinally of the cylinder, a beveled gear secured for rotating with the valve, a piston rod fulcrumed to the piston on an axis extending transversely of the cylinder, a beveled gear meshing with the first beveled gear, and means operable by the piston rod for actuating the second mentioned beveled gear.

4. In an internal combustion engine, a cylinder having a port, a piston for reciprocating in the cylinder, and having a port for communicating with the port of the cylinder, a valve mounted for rotating on the piston for commanding the second-mentioned port, a piston rod fulcrumed to the piston, gearing connecting the piston rod with the valve for rotating the latter, and a pawl and ratchet means to prevent the rotation of the valve in one direction.

5. In an internal combustion engine, a cylinder having a port, a piston for reciprocating in the cylinder and having a port for communicating with the port in the cylinder, a valve mounted for rotating on the piston for commanding the second-mentioned port, a piston rod fulcrumed to the piston, a beveled gear secured for rotating with the valve, a second beveled gear meshing with the first beveled gear, means by which the second beveled gear is operable by the piston rod, and means to prevent the rotation of the valve in one direction relatively to the piston.

[Claims 6 to 12 not printed in the Gazette.]

1,213,316. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. HUGO C. WELL, New York, N. Y., assignor of fifty one-hundredths to Frederick A. B. Meinhardt, New York, N. Y. Filed Aug. 24, 1915. Serial No. 47,070. (Cl. 123—59.)



1. In a valve mechanism for internal combustion engines, a cylinder having a port, a valve sleeve commanding the port, a gearing on the valve sleeve, a ring in the cylinder below the valve sleeve, there being a recess in the ring, a gear disposed in the recess and meshing with the gearing, and means to rotate the gear.

2. In a valve mechanism for internal combustion engines, a cylinder, a sleeve for rotating relatively to the cylinder and adapted to regulate the operation of the engine, gearing on the valve sleeve, a ring in the cylinder below the valve sleeve, there being a recess in the ring, a gear disposed in the recess and meshing with the gearing, and means to rotate the gear.

3. In a valve mechanism for internal combustion engines, a cylinder having a port, a valve sleeve commanding the port, gearing on the valve sleeve, a ring in the cylinder below the valve sleeve, there being a recess in the ring with a groove in the ring leading to the recess, a gear

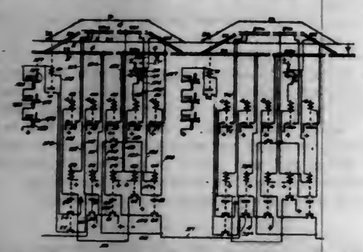
disposed in the recess and meshing with the gearing, and means to rotate the gear.

4. In a valve mechanism for internal combustion engines, a cylinder having a port, a valve sleeve in the cylinder commanding the port, gearing on the valve sleeve, a ring in the cylinder below the valve sleeve, there being a recess in the ring, a gear disposed in the recess, and meshing with the gearing, means to rotate the gear, and a piston for reciprocating in the valve sleeve from a position below the ring.

5. In a valve mechanism for internal combustion engines, a cylinder having a port, a valve sleeve in the cylinder commanding the port, gearing on the valve sleeve, a ring in the cylinder below the valve sleeve, there being a recess in the ring with the ring inclined in the direction of the recess, a gear disposed in the recess and meshing with the gearing, means to rotate the gear, and a piston for reciprocating in the valve sleeve from a position below the ring.

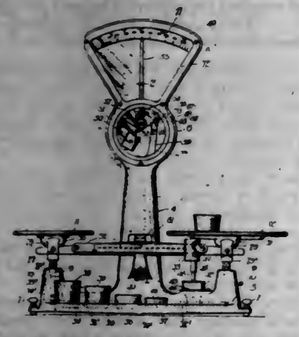
[Claims 6 to 11 not printed in the Gazette.]

1,213,317. TRUCKING SYSTEM. ROBERT CARLTON WELLER, Chicago, Ill., and PHILIP DANIEL NAUGLE and STANLEY TABER HYDE, Bremerton, Wash. Filed Nov. 4, 1912. Serial No. 729,189. (Cl. 246—36.)



In a transportation system, a main track and a plurality of sidings, a car and an electric motor for moving the same, said track and sidings being suitably electrically connected and divided into sections forming blocks, the electrical circuit for one section in each siding being normally open when the car is on said section, means for interrupting the supply of electric power to one section when said car occupies the next forward section, and manually controlled means for closing the power circuit in said normally open circuit, substantially as described.

1,213,318. SCALE. LEWIS CALVIN WETZEL, Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Toledo, Ohio, a Corporation of New Jersey. Filed Mar. 28, 1912. Serial No. 686,827. (Cl. 73—29.)



1. In a weighing scale, a beam, a commodity receptacle thereon, an indicating chart, a pendulum adapted to offset load on the scale pan to the capacity of the chart, an index hand carried by the pendulum and coöperating with the chart, an arm rigid with the beam and substantially perpendicular thereto, and an operative connection between the upper end of the arm and the pendulum.

2. In a weighing scale, a beam, a commodity receptacle thereon, an indicating chart, a pendulum suspended above the beam adapted to offset load on the scale pan to the capacity of the chart, an index hand carried by the pendulum and coöperating with the chart, an arm rigid with the beam and substantially perpendicular thereto, and an operative connection between the upper end of the arm and the pendulum.

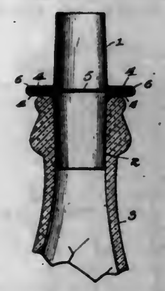
3. In a weighing scale, a base, a hollow column rising from the base, a frame constituting a beam or lever comprising longitudinal members extending on opposite sides of the column, a cross piece connecting the opposite members of the frame and extending through the column, an upright arm mounted on the cross piece, a pendulum suspended from the hollow column, and connections between the upper end of the arm and the pendulum.

4. In a weighing scale, a beam, a commodity receptacle thereon, an indicating chart, a pendulum hung above the beam adapted to offset load on the scale pan to the capacity of the chart, an index hand carried by the pendulum and coöperating with the chart, an arm rigid with the beam and substantially perpendicular thereto, and an adjustable operating connection between the upper end of the arm and the pendulum.

5. In a weighing scale, a beam, a commodity receptacle thereon, an indicating chart, a pendulum hung above the beam adapted to offset load on the scale pan to the capacity of the chart, an index hand carried by the pendulum and coöperating with the chart, an arm rigid with the beam and substantially perpendicular thereto, a member pivoted to the upper end of the beam and adjustable with relation thereto, a segment secured to the pendulum, and a tape connected to the segment and pivoted member at its opposite end.

[Claims 6 to 15 not printed in the Gazette.]

1,213,319. SANITARY DRINKING APPARATUS. SAMUEL T. WHITAKER, Columbus, Ga., assignor of one-half to Homer C. McCutchen, Columbus, Ga. Filed Sept. 15, 1916. Serial No. 120,260. (Cl. 65—13.)



1. In sanitary drinking apparatus, a tubular structure having a lateral projection intermediate its ends adapted to engage the upper edge of a bottle neck when the structure is introduced into the neck, the portions of the tube extending in opposite directions away from the projection being substantially duplicates of each other and each adapted to snugly fit within a bottle neck.

2. In sanitary drinking apparatus, a tubular structure having a lateral projection intermediate its ends adapted to engage the upper edge of a bottle neck when the structure is introduced into the neck, the portions of the tube extending in opposite directions away from the projection being substantially duplicates of each other and being tapered in directions away from the projection for enabling each to snugly fit within a bottle neck.

3. In sanitary drinking apparatus, tubular alined sections each a substantial duplicate of the other and each comprising a tapered body having a terminal flange, and means connecting the flange for producing a lateral projection in the length of the completed structure, each section being proportioned to fit within a bottle neck.

4. In sanitary drinking apparatus, a tubular structure having an annular shoulder adapted to rest on top of a bottle neck in position for having a portion of the tube extend into the bottle neck and a portion of the tube extend upwardly beyond the bottle neck, the formed portion being adapted to snugly fit within a bottle neck.

1,213,320. SANITARY DRINKING APPARATUS. SAMUEL T. WHITAKER, Columbus, Ga., assignor of one-half to Homer C. McCutchen, Columbus, Ga. Filed Sept. 30, 1916. Serial No. 123,077. (Cl. 65—13.)



1. In a sanitary drinking apparatus, the combination, of alined tubular sections, and a ridge outstanding therefrom, the said ridge and sections being constructed to be individually collapsed to a substantially flat condition.

2. In a sanitary drinking apparatus, the combination, of alined tubular sections, and a ridge outstanding therefrom, the said ridge being severed on lines dividing the ridge into segments for enabling the collapsing of the ridge and sections to a substantially flat condition.

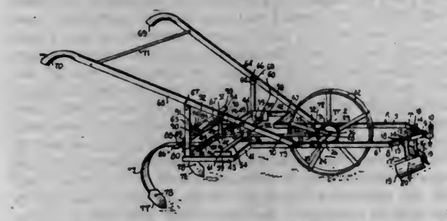
3. In a sanitary drinking apparatus, the combination, of alined tubular sections, and a ridge outstanding therefrom, the said ridge being severed on radial lines dividing the ridge into segments adapted for extending substantially lengthwise of the tubular sections.

4. In a sanitary drinking apparatus, the combination, of alined tubular sections, and a ridge outstanding therefrom the said ridge being severed on radial lines dividing the ridge into segments adapted for extending substantially lengthwise of the tubular sections, some of said segments being adapted to extend in one direction and others in the opposite direction along the tubular sections.

5. In a sanitary drinking apparatus, the combination, of alined tubular sections, a ridge outstanding therefrom, and a fabric extending across the opening of the tubular sections and embedded within the ridge, the said ridge being adapted to be collapsed on the sections when the sections are collapsed to a substantially flat condition.

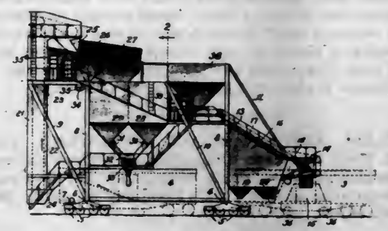
[Claims 6 and 7 not printed in the Gazette.]

1,213,321. COTTON-CHOPPER. JEFFERSON D. WHITE, Gore, Ga. Filed June 17, 1916. Serial No. 104,252. (Cl. 97—46.)



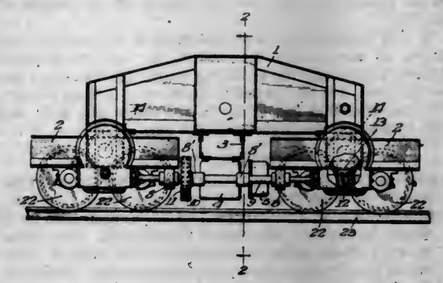
A cotton chopper comprising a wheel-supported frame, a driven shaft carried by the frame and provided with cutting means, resilient plow supporting arms secured to the frame and extending rearwardly thereof, a member connecting said arms, a regulating arm pivotally connected to the member, and an upstanding arm carried by the frame, said upstanding arm and pivoted arm being provided with coacting means whereby the resilient arms may be held at differing elevations.

1,213,322. PORTABLE COAL-SCREENING RIG. CHARLES S. WILLIAMSON, Chicago, Ill. Filed Nov. 3, 1911. Serial No. 658,301. (Cl. 83—56.)



In a portable screening plant, the combination with a receiving hopper, a screen for receiving coal from the said hopper, a spout leading from the lower end of said screen, a hopper for receiving coal which has passed through the screen, an endless conveyer for regulating the movement of the coal over the screen and the conveyer when passing over the lower end of the screen being supported above the same and spaced therefrom for the purpose specified.

1,213,323. CONVEYING APPARATUS. CHARLES S. WILLIAMSON, Chicago, Ill. Filed Dec. 1, 1915. Serial No. 64,591. (Cl. 105—223.)



1. In a traveling conveying apparatus a frame, a plurality of supporting and propelling wheels mounted in said frame, worm wheels, gearing including meshing gears upon the opposite side of said frame from said worm wheels and connecting the same with said propelling wheels, a worm shaft having worms thereon for driving said worm wheels, a motor suspended from said frame and arranged to drive said worm shaft from a central point between said worms.

2. In a traveling conveying apparatus a frame, having a plurality of supporting and propelling wheels mounted thereon, a plurality of worm wheels, a reduction gearing interposed between said worm wheels and said propelling wheels for driving said propelling wheels, a worm shaft below said worm wheels, a plurality of worms on said shaft, a motor attached to the frame for driving said worm shaft and arranged substantially centrally thereof.

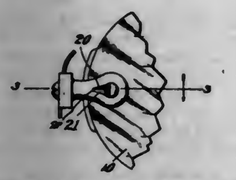
3. In a traveling conveying apparatus, a bridge having legs, a truck to support one of said legs and having a drive shaft thereon, a worm on either end of said shaft, a worm wheel engaged with each of said worms, a shaft on which each of said worm wheels is mounted, a pinion on each of said last mentioned shafts and propelling wheels, directly driven by said pinions

4. In a traveling conveying apparatus, a bridge having legs, a truck to support one of said legs and having a drive shaft thereon, a worm on either end of said shaft, a worm wheel engaged with each of said worms, said worms engaging said worm wheels from below, a shaft on which each of said worm wheels is mounted, a pinion on each of said last mentioned shafts and propelling wheels directly driven by said pinions.

5. In a traveling conveying apparatus, a bridge having legs, a truck to support one of said legs and having a drive shaft thereon, a worm on either side of said shaft, an independent motor applied to drive said drive shaft at a point between said worms, a worm wheel engaged with each of said worms, a shaft on which each of said worm wheels is mounted, a pinion on each of said last mentioned shafts and propelling wheels directly driven by said pinions.

[Claims 6 and 7 not printed in the Gazette.]

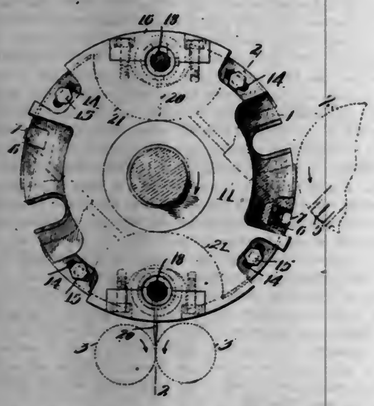
1,213,324. EYEGLASSES AND SPECTACLES. FRANK W. WOOD, New York, N. Y., assignor, by direct and mesne assignments, to Floating Wedge Lock Nut Co., Inc., a Corporation of New York. Filed May 28, 1915. Serial No. 30,875. (Cl. 88—42.)



1. The hereinbefore described method of forming lock-joints of micrometric dimensions, comprising the following steps: (1) forming a bar or rod that has the characteristics of a locking detent; (2) inserting that rod or bar in the recess of a nut; and (3) cutting off the surplus of the bar.

2. The hereinbefore described method of forming lock-joints of micrometric dimensions, for use in spectacle frames, comprising the following steps: (1) forming a bar or rod that has the characteristics of a locking detent; (2) inserting that rod or bar in the recess of a nut; and (3) cutting off the surplus of the bar.

1,213,325. FOLDING-BLADE-ADJUSTING MECHANISM. HENRY A. WISE WOOD, New York, and JOHN A. ISBELL, Middletown, N. Y., assignors, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed June 5, 1913, Serial No. 771,854. Renewed June 29, 1916. Serial No. 106,739. (Cl. 101—48.)



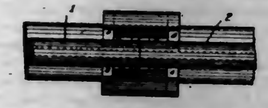
1. The combination with a folding cylinder having a cutting member thereon and provided with recesses therein, of bearing plates circumferentially adjustable in said recesses toward and from said cutting member, and a folding blade shaft supported by said bearing plates.

2. The combination with a folding cylinder having annular recesses in its ends opposite each other, circular bearing plates located in said recesses and adjustable therein circumferentially of the cylinder, bearings located in said plates, a shaft rotatable in said bearings, and a folding blade mounted on said shaft.

3. The combination with a folding cylinder having annular recesses in its ends, circular bearing plates located in said recesses and adjustable therein circumferentially of the cylinder, means for clamping said plates to the cylinder in their adjusted positions, ball bearings in said plates, a shaft rotatable in said bearings, and a folding blade mounted on said shaft.

4. A folding cylinder having in combination a cutting member mounted on said cylinder, a pair of cylinder ends each provided with an annular recess therein, circumferentially slotted plates mounted in said recesses, bolts in said slots for securing said plates in adjusted angular position, two sets of diametrically opposed bearings in said plates, a shaft rotatable in each set of bearings, and a folding blade on each shaft, angular adjustment of the plates being effective to vary the angular relation of the shafts and the cutting member.

1,213,326. COMBINED RAIL CHAIR, FASTENER, AND TIE. WILMER H. YEAKES, Pittsburgh, Pa. Filed Apr. 24, 1916. Serial No. 93,102. (Cl. 239—6.)



1. A combined rail chair, fastener and tie comprising a chair base plate supporting the base of a track rail, opposed walls projecting upwardly from the plate and having over-hanging hooks, fish plates arranged between said walls and adapted to be mounted upon the base of the track rails at opposite sides thereof, fastener elements mounted against said fish plates and having crescent-shape projections seated in said walls and further over-lapped by said hooks whereby the fish plates are maintained in position to hold down the rail, and said fish plates having means engaging the ends of said fastener elements to prevent longitudinal shifting thereof, lugs carried by the fish plates and over-hanging said fastener elements, and wedges interposed between said lugs and said fastener elements.

2. In combination a rail chair for supporting the base of a track rail, fish plates positioned within the chair and adapted to be mounted upon the base of the track rail, fastener elements positioned against the fish plates and extending into the sides of the chair, and means carried by the fish plates and engaging the ends of the fastener elements to prevent longitudinal movement of said elements, lugs carried by the fish plates and over-hanging said fastener elements, and wedges interposed between the lugs and fastener elements.

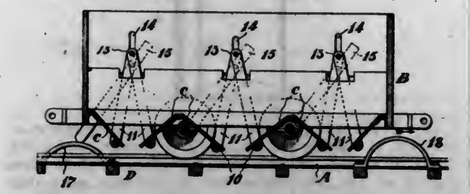
3. A combined rail chair and fastener comprising a chair plate for supporting the base of the track rails, vertically disposed opposed walls projecting upwardly from said plate and having their inner faces at their upper portions cut away to provide over-hanging hooks, angle shaped fish plates adapted to be mounted upon the base of the track rail at opposite sides thereof and having the bases thereof positioned against the plane portions of the inner faces of said walls, fastener elements mounted upon said fish plates and having crescent-shaped projections seated in said faces and over-lapped by said hooks whereby the fish plates are maintained in position to hold down the rail, and said fish plates having their bases provided with means near each end engaging the ends of said projections to prevent longitudinal shifting of the fastener elements.

4. A rail chair comprising a base plate connected with a tie, means mounted within the chair for fastening a track rail therein, a channel-shaped member depending from each end of said plate, and means mounted in said members for coupling said chair to a pair of opposed chairs and providing a support for the base of a track rail.

5. In combination a rail chair for supporting the base of a track rail, fish plates positioned within the chair and adapted to be mounted upon the base of the track rail, fastener elements positioned against the fish plates and extending in the sides of the chair, and means carried by the fish plates and engaging the ends of the fastener elements to prevent longitudinal movement of said elements, lugs carried by the fish plates and over-hanging said fastener elements, and wedges interposed between the lugs and fastener elements, and means engaging the top edge of said fastener elements to arrest vertical movement thereof.

[Claim 6 not printed in the Gazette.]

1,213,327. AUTOMATIC CAR-DUMPING APPLIANCE. JAMES H. BAKER, Fairfield, Ill. Filed Aug. 25, 1916. Serial No. 116,881. (Cl. 214—1.)

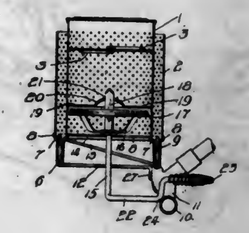


1. An automatic car dumping appliance comprising in combination with a car adapted to travel over a track and having hinged bottom sections and vertically disposed slots, of a pair of spaced parallel transverse bars, links connecting the opposite extremities of said bars, one of said bars supporting the free end of each bottom section, the other of said bars being movable in vertically disposed slots, means for supporting the last mentioned bar elevated to hold the bottom section normally closed, trip members at the opposite sides of the track for automatically releasing said means to permit said section to assume a discharge position, and an obstructing member disposed between the tracks for engagement with said section to automatically return the latter and its associated parts to normal position.

2. An automatic car dumping appliance comprising in combination with a car adapted to travel over tracks and having a hinged bottom section and vertically disposed slots, of a pair of spaced parallel transverse bars, links connecting said bars at the extremities thereof, one of said bars supporting the free end of each bottom section, the other of said bars being movable within vertically disposed slots in said car, arms pivoted upon the car and adapted to support the latter mentioned bar elevated to hold the bottom section normally closed, trip members at the opposite sides of the track in the path of movement of said arms to rock the latter from beneath the last mentioned bar to permit said bottom section to assume a discharge position, and an obstructing member arranged between the tracks for engagement with said section to return the latter and its associated parts to normal position.

3. An automatic car dumping appliance comprising in combination with a car adapted to travel over tracks and having a hinged bottom section and vertically disposed slots, of a pair of spaced parallel transverse bars, links connecting said bars at the extremities thereof, one of said bars supporting the free end of each bottom section, the other of said bars being movable within vertically disposed slots in said car, arms pivoted upon the car and adapted to support the latter mentioned bar elevated to hold the bottom section normally closed, trip members at the opposite sides of the track in the path of movement of said arms to rock the latter from beneath the last mentioned bar to permit said bottom section to assume a discharge position, an obstructing member arranged between the tracks for engagement with said section to return the latter and its associated parts to normal position, and said arms being pivoted above the center to gravitate to its normal position beneath the latter mentioned bar.

1,213,328. LIGHTING ARRANGEMENT FOR OIL-STOVES. HUBERT A. BARSCHOW, Kankakee, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Oct. 12, 1916. Serial No. 125,163. (Cl. 158—90.)



1. A burner for an oil stove having, in combination, concentric combustion tubes, the inner tube having near the lower end thereof a horizontally disposed plate with a central opening, a burner bowl, a spindle carried by said bowl and adapted for rotational and longitudinal movement, a member supported by and rigid with said spindle and adapted to support said tubes while being elevated or lowered, a projecting head rigidly secured to said spindle, said head extending loosely through and co-operating with said central opening for rotating said tubes, and a lug on said bowl structure and adapted to support said spindle when the latter and the tubes are in an elevated position.

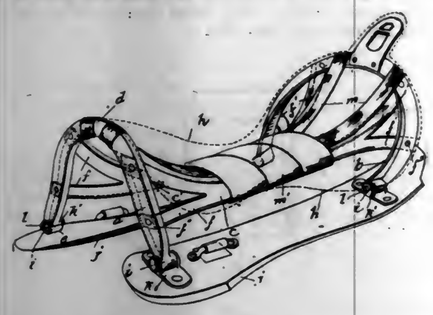
2. A burner for an oil stove having, in combination, combustion tubes, a burner bowl, a spindle carried by said bowl for elevating or lowering said tubes, said spindle having a portion thereon adapted to support the tubes while being elevated or lowered, and said spindle further having a head for rotating said tubes, means on one of said tubes coöperating with said supporting means and head, and a lug secured to said bowl structure and adapted to support said spindle when the latter and the tubes are in an elevated position.

3. A burner for an oil stove having, in combination, concentric combustion tubes, the inner tube having near the lower end thereof a horizontally-disposed plate with a central opening, a burner bowl, a spindle carried by said bowl and adapted for rotational and longitudinal movement, a member rigidly secured to said spindle and adapted to support said tubes while being elevated or lowered, and a projecting head rigidly secured to said spindle, said head extending through and coöperating with said central opening for rotating said tubes, whereby the tubes may be properly seated upon said burner bowl.

4. A burner for an oil stove having, in combination, concentric combustion tubes, the inner tube having near the lower end thereof a horizontally-disposed plate with a central opening, a burner bowl having outwardly-extending flanges with upwardly-projecting rims, and a spindle carried by said bowl and adapted for rotatable movement, said spindle having a head rigidly secured thereto, said head extending through and coöperating with said central opening whereby said tubes will be correctly seated upon said flanges and within said rims when rotated by and with said spindle.

5. A burner for an oil stove having, in combination, concentric combustion tubes, the inner tube having near the lower end thereof a horizontally-disposed plate with a central opening, a burner bowl, a spindle carried by said bowl and adapted for rotation, a member supported by said spindle and adapted to support said tubes while being rotated, and a projecting head rigidly secured to said spindle, said head extending through and coöperating with said central opening whereby said tubes and said supporting member may be rotated by and with said spindle.

1,213,329. SADDLE. FREDERICK C. BEAL, Toronto, Ontario, Canada. Filed May 25, 1916. Serial No. 99,851. (Cl. 54—44.)



1. In a saddle tree for a riding saddle, the combination of front and rear arches, a pair of spacing members at opposite sides of the saddle tree connected to the arches interjacent their crests and feet and of a contour corresponding to the saddle seat, and serving to hold the arches rigidly in their assembled relation, a pair of sideboards below the feet of the arches, and hinge members connecting the sideboards to the arches.

2. In a saddle tree for a riding saddle, the combination of tubular front and rear arches, a pair of tubular spacing members at opposite sides of the saddle tree connected to the arches interjacent their crests and feet and of a contour corresponding to the saddle seat, and serving to hold the arches rigidly in their assembled relation, a pair of sideboards below the feet of the arches, and hinge members connecting the sideboards to the arches.

3. In a saddle, the combination of a saddle tree comprising front and rear arches, a pair of spacing members at opposite sides of the saddle tree connected to the arches interjacent their crests and feet, and serving to hold the arches rigidly in their assembled relation, suspension webs connected to the front and rear arches, straining webs passing over the suspension webs and connected to the spacing members, and a saddle seat suspended from the front and rear arches above the suspension and straining webs and clear of contact with the spacing members.

4. In a saddle, the combination of a saddle tree comprising front and rear arches, a pair of spacing members at opposite sides of the saddle tree connected to the arches interjacent their crests and feet, and serving to hold the arches rigidly in their assembled relation, suspension webs connected to the front and rear arches, straining webs passing over the suspension webs and connected to the spacing members, a saddle seat suspended from the front and rear arches above the suspension and straining webs and clear of contact with the spacing members, and sideboards connected to the feet of the arches.

5. In a saddle, the combination of a saddle tree comprising front and rear arches, a pair of spacing members at opposite sides of the saddle tree connected to the arches interjacent their crests and feet, and serving to hold the arches rigidly in their assembled relation, suspension webs connected to the front and rear arches, straining webs passing over the suspension webs and connected to the spacing members, a saddle seat suspended from the front and rear arches above the suspension and straining webs and clear of contact with the spacing members, a pair of sideboards below the feet of the arches, and hinge members connecting the sideboards to the arches.

1,213,330. PAINT AND PROCESS OF MAKING SAME. ANSON G. BUTTS, Asheville, N. C. Filed Apr. 27, 1915. Serial No. 24,225. (Cl. 134—39.)

1. Paint containing dehydrated barium phosphate together with a vehicle.

2. Paint containing precipitated and dehydrated barium phosphate and a paint vehicle.

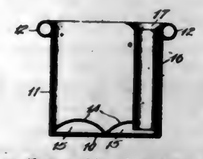
3. Paint containing drying oil and precipitated barium phosphate.

4. As a new product, a mixture containing barium phosphate and a paint oil.

5. As a new product, a mixture containing a drying oil and anhydrous precipitated barium phosphate.

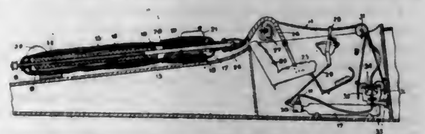
[Claims 6 to 8 not printed in the Gazette.]

1,213,331. FLOWER AND PLANT BOX. LEWIS E. BURLEIGH, Chicago, Ill. Filed Apr. 7, 1916. Serial No. 89,520. (Cl. 47—19.)



In a flower box, the combination with an impervious receptacle, of a perforated false bottom consisting of a plurality of arched sections having recesses at their edges resting on the true bottom and perforations near their highest portions, said recesses and perforations taken together being scattered over substantially the entire area of said bottom so that all the soil therein may be efficiently aerated and watered by capillary action simultaneously from below, and a water and air passage to the outside of the box extending downward through the false bottom and terminating at its lower end at a point above the real bottom, said receptacle having an aperture in the side thereof above the false bottom for draining off any excess of water that may be poured into the passage or deposited on the top of the soil.

1,213,332. PARACHUTE. EVERARD RICHARD CALTHROP, London, England. Filed Apr. 14, 1914. Serial No. 831,785. (Cl. 244—21.)

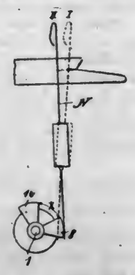


1. The combination with a parachute of a collapsible pneumatic framework, means for loosely attaching said framework to said parachute, a valve in the nose of said parachute, means for introducing a fluid under pressure from a reservoir carried by the air craft to said valve to expand said framework, and means for automatically severing the connections between the aircraft and the parachute.

2. The combination with a parachute and a nest box therefor, of a collapsible pneumatic framework loosely attached to said parachute, a reversible valve in the nose of said parachute, a compressed air reservoir, means for introducing air under pressure from said reservoir to said valve to inflate said framework and to expand the parachute, means for introducing air under pressure from said reservoir to said nest box to project the parachute therefrom, a shearing device for the pipe supplying air under pressure to said framework, and means for actuating said shearing device when the parachute reaches its limit of upward movement.

3. The combination with a parachute and a nest box therefor, of an elastic envelop mounted in said nest box to frictionally engage said parachute, means for introducing compressed air to the interior of the parachute and to the nest box, a valve in said nest box and means associated with the parachute for operating said valve to interrupt the supply of air to said nest box when the edge of the parachute is clear thereof.

1,213,333. APPARATUS FOR MAKING REINFORCED KNITTED GOODS. FRANZ CECKA, Chemnitz, Germany, assignor to the Firm of Schubert & Salzer Maschinenfabrik Aktiengesellschaft, Chemnitz, Germany. Filed July 22, 1914. Serial No. 852,416. (Cl. 66—28.)



1. In an apparatus for making reinforced knitted goods, the combination with the needles, and their operating mechanism, of means comprising coöperating cams mounted on the same shaft for setting the needles according to the desired knitting depth, gear wheels operatively connecting the cams for movement in opposite directions, and automatic means to set said cams in different positions.

2. In an apparatus for making reinforced knitted goods, the combination with the needles, and their operating mechanism, of means for setting the needles according to the desired knitting depth, said means comprising a rotary disk, a pair of cam disks mounted on said disk coaxially thereof, and gear wheels mounted on the disk and connecting the cams for operation in opposite directions, and automatic means to set said cams in different positions.

3. In an apparatus for making reinforced knitted goods, the combination with the needles, and their operating mechanism, of means for setting the needles according to the desired knitting depth, and means comprising a rotary disk, a pair of cam disks mounted on said disk coaxially thereof, gear wheels mounted on the disk and connecting the cams for operation in opposite directions, and pawl and ratchet mechanism mounted on said disk and adapted to operate the gear wheels for setting the cams in different positions, and automatic operating means for the pawl and ratchet mechanism.

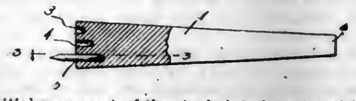
4. In an apparatus for making reinforced knitted goods, the combination with the needles, and their operating mechanism, of means for setting the needles according to the desired knitting depth, and means comprising a rotary disk, a pair of cam disks mounted on said disk coaxially thereof, gear wheels mounted on the disk and connecting the cams for operation in opposite directions, and duplicate pawl and ratchet mechanism mounted on said disk and adapted to operate the gear wheels for shifting the cams one away from and the other one toward each other, and automatic operating means for the pawls and ratchet mechanisms.

5. In an apparatus for making reinforced knitted goods, the combination with the needles, and their operating mechanism, of means for setting the needles according to the desired knitting depth, said means comprising a rotary disk, a pair of cam disks mounted on said disk coaxially thereof, gear wheels mounted on the disk and connecting the cams for operation in opposite directions, and duplicate pawl and ratchet mechanism mounted on said disk and adapted to operate the gear wheels for shifting the cams one away from and the other one toward each other, and automatic, selector controlled operating means for operating the pawl and ratchet mechanisms.

[Claims 6 to 8 not printed in the Gazette.]

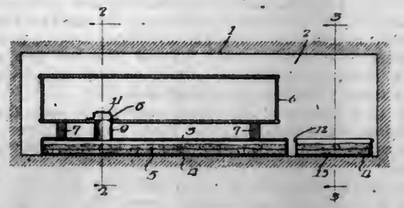
1,213,334. STAPLE-SET. EDWARD P. CHAPMAN, Findlay, Ill. Filed May 19, 1916. Serial No. 98,650. (Cl. 1—50.)

A staple set comprising a body portion having a series of independent staple receiving sockets in one end thereof, which sockets have contours similar to that of a wire staple and are of gradually decreasing depths whereby a staple may be engaged in the deepest of the sockets during



the initial movement of the staple into its set position and subsequently engaged in the remaining sockets, successively, in the order of their decrease in its further movement into its set position.

1,213,335. APPARATUS FOR PRESERVING BODIES. WILLIAM R. CLAYTON, Chicago, Ill. Filed June 12, 1916. Serial No. 103,189. (Cl. 99—5.)



1. In a desiccating apparatus, the combination of a sealed container, a casket therein, a closed receptacle within said container supporting a quantity of desiccating material, and a conduit connecting the interior of said casket and receptacle.

2. In a desiccating apparatus, the combination of a sealed container, a casket therein, a closed receptacle within said container supporting a quantity of desiccating material, a conduit connecting the interior of said casket and receptacle, and an open receptacle within said container supporting a quantity of desiccating material.

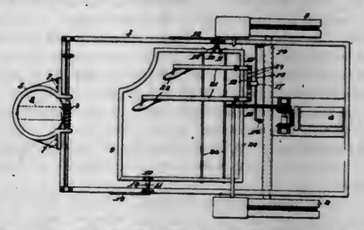
3. In a desiccating apparatus, the combination of a sealed container, a casket therein, and a quantity of calcium chlorid and calcined gypsum arranged within said container to attract and take up moisture from the atmosphere.

4. In a disiccating apparatus, the combination of a sealed container, a casket therein, a receptacle within said container, supporting a quantity of calcium chlorid and calcined gypsum, and communicating means between said receptacle and the interior of said casket.

5. In a desiccating apparatus, the combination of a sealed container, a casket therein, a closed receptacle within said container supporting a quantity of calcium chlorid and calcined gypsum, and a conduit connecting the interior of said casket and receptacle.

[Claims 6 to 8 not printed in the Gazette.]

1,213,336. MOTOR-PLOW. EDWARD W. COOK, Galion, Ohio. Original application filed Apr. 19, 1915, Serial No. 22,341. Divided and this application filed Sept. 2, 1915. Serial No. 48,600. (Cl. 97—36.)



1. In a device of the class described, a main frame mounted on wheels, a plow frame secured to said main frame for adjustment vertically thereof, a plurality of

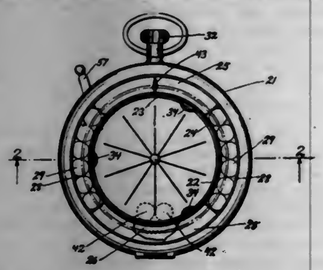
plow beams pivotally connected to said frame, a pair of struts extending crosswise of said plow frame beneath said beams for supporting the plows carried thereby when the frame is raised, a clevis on said main frame, and a link for connecting said plow frame and clevis, substantially as described.

2. In a device of the class described, a main frame mounted upon wheels, an auxiliary frame, a vertically adjustable connection between one end of said auxiliary frame and said main frame, means for further supporting said auxiliary frame secured to said main frame, means for raising and lowering said support, plow beams pivotally secured to said plow frame, struts extending crosswise of said auxiliary frame to support said plow beams when said auxiliary frame is raised, as and for the purpose set forth.

3. In a device of the class described, a main frame mounted on wheels, a plow frame, supporting means on said main frame for raising and lowering said plow frame, brackets secured to said main frame, a bar mounted transversely of said main frame and adjustably secured to said brackets, connecting means between said bar and said plow frame and means for adjustably securing plows to said frame, substantially as described.

4. In a device of the class described, a main frame mounted on wheels, a plow frame supported thereon, brackets secured to said main frame, a bar mounted transversely of said main frame and adjustably secured to said brackets, a second bar adjacent said first mentioned bar and provided with perforations, means slidably mounted upon said first mentioned bar for adjustably securing said second bar, plows mounted upon said plow frame and means for connecting said plows to said second bar, as and for the purpose set forth.

1,213,337. GAME APPARATUS. MAX CONDÉ, New York, N. Y., assignor to Hermann Korber, New York, N. Y. Filed Apr. 22, 1914. Serial No. 833,655. (Cl. 46—56.)



1. A game apparatus comprising a casing, a rotatable table within said casing, an indicating element adapted to be placed on said table, devices adapted to rotate said table and means located inside said casing adapted to retain said indicating element on said table when the table is rotated, said retaining means being provided with an inwardly projecting loop adapted to deflect said indicating element.

2. A game apparatus comprising a casing, a rotatable table therein, means adapted to rotate same, a receptacle adjacent the table, and an indicating element adapted to be located either in said receptacle or on said table.

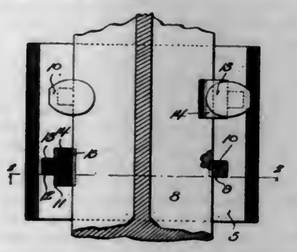
3. A game apparatus comprising a casing, a plurality of compartments within said casing, one of said compartments containing a rotatable table, and another of said compartments comprising a receptacle, an indicating element adapted to be located either in said receptacle or on said table, and an annular wall separating said compartments.

4. A game apparatus comprising a casing, a plurality of compartments within said casing, one of said compartments containing a rotatable table, and another of said compartments comprising a receptacle, an indicating element adapted to be located either in said receptacle or on said table, and an annular rotatable wall separating said compartments, said rotatable wall being provided with an opening adapted to place the said receptacle in communication with said rotatable table.

5. A game apparatus comprising a casing, a plurality of compartments within said casing, one of said compartments containing a rotatable table, and the other compartment comprising a receptacle, an indicating element adapted to be located either in said receptacle or on said table, a rotatable annular wall separating said compartments, said rotatable wall being provided with an opening adapted to place said receptacle in communication with said rotatable table, and means adapted to rotate said wall and thereby cause said opening to aline with said receptacle.

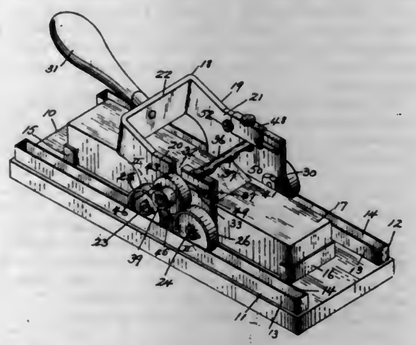
[Claims 6 to 12 not printed in the Gazette.]

1,213,338. RAIL-ANCHORING DEVICE. DENNIS E. CROWLEY, Milwaukee, Wis. Filed Apr. 15, 1916. Serial No. 91,297. (Cl. 238—2.)



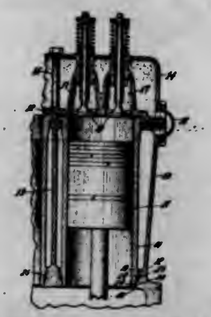
A rail anchoring device comprising the combination of a tie, a rail bed plate disposed thereon and a rail on the plate, said plate being provided with passages having their inner edge portions extending under the rail, grip blocks insertible in the passages, and having their upper ends extended inwardly to overlie the rail base flange and provided at their inner sides with recesses receiving the rail base flange, teeth formed on the inner faces of said recesses and headed wedge spikes extending through the passages into the tie and clampingly bearing against the blocks with the heads of said spikes engaging on said blocks to provide the securing means of the rail and bed plate to the tie.

1,213,339. HONING-MACHINE FOR SAFETY-RAZOR BLADES. RAPHAEL D'AMATO, Astoria, N. Y. Filed July 19, 1913. Serial No. 780,003. (Cl. 51—16.)



A honing machine for razor blades comprising a base plate, a sharpening medium mounted on said plate, a U-shaped frame adapted to straddle said sharpening medium, a pair of rollers mounted on each end of said frame, a handle on said frame for causing it to be reciprocated on the base plate, guide ways on said base plate for said rollers, and a blade holder rotatably mounted in said U-shaped frame and over said sharpening medium; said holder having each end thereof projecting beyond the U-shaped frame and having a roller fixedly secured thereto, each of said rollers being in frictional contact with a pair of frame rollers whereby when the carrier is reciprocated the holder will be oscillated to alternately bring and hold the opposed surfaces of the cutting edge of the blade into contact with the sharpening medium.

1,213,340. GAS-ENGINE. FRANK M. DAVIS, Milwaukee, Wis. Filed Nov. 1, 1915. Serial No. 58,994. (Cl. 123—173.)



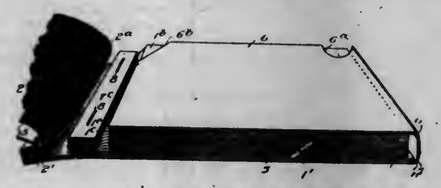
1. In a gas engine, a cylinder jacket, a cylinder wall slidably fitted therein with an annular space therebetween having an inclined wall, such annular space varying in sectional area with the expansion and contraction of the cylinder wall incident to the temperature variations thereof, and a resilient gasket fitting in the annular space and adapted to be crowded by the inclined wall of the annular space against the opposite wall thereof by the longitudinal movements of the cylinder wall.

2. In a gas engine, a cylinder jacket having a pair of concentric bearing surfaces of different diameters, a cylinder wall having corresponding concentric bearing surfaces slidably fitting against the bearing surfaces of the cylinder jacket, there being a tapering surface between one pair of bearing surfaces forming a wall of an annular space between the cylinder wall and the cylinder jacket and a resilient gasket contained in the annular space.

3. In a gas engine, a cylinder jacket, a cylinder wall within the cylinder jacket having a flange at one end thereof seated upon the cylinder jacket, a cylinder head seated upon the flange of the cylinder wall, clamping means connecting the cylinder head with the cylinder jacket to clamp the flange of the cylinder wall therebetween, there being concentric bearing surfaces of different diameters at the other end of the cylinder wall with a tapering cam surface therebetween and corresponding concentric bearing surfaces in the cylinder jacket within which the bearing surfaces of the cylinder wall slidably fit, said tapering cam surface of the cylinder wall forming one wall of an annular space between the bearing surfaces of the cylinder wall and the cylinder jacket, and a rubber gasket partially occupying the annular space and adapted to be compressed by the cam surface to more completely occupy the annular space by the longitudinal movement of the end of the cylinder wall incident to the expansion thereof.

4. In a gas engine, a cylinder jacket, a cylinder wall therein with an annular flange at one end seated on the end of the cylinder jacket with a space between the cylinder wall and the cylinder jacket to contain water, a hollow cylinder head fitting on the flange of the cylinder wall and containing valve pockets, the space within the cylinder head around the valve pockets being adapted to contain water, clamping means connecting the cylinder head with the cylinder jacket to clamp the flange of the cylinder wall therebetween, a by-pass connecting the water space of the cylinder jacket with the water space of the cylinder head, there being concentric bearing surfaces of different diameters at the other end of the cylinder wall with a tapering cam surface therebetween and corresponding concentric bearing surfaces in the cylinder jacket within which the bearing surfaces of the cylinder wall slidably fit, said tapering cam surface of the cylinder wall forming one wall of an annular space between the bearing surfaces of the cylinder wall and the cylinder jacket, and a rubber gasket partially occupying the annular space and adapted to be compressed by the cam surface to more completely occupy the annular space by the longitudinal movement of the end of the cylinder wall incident to the expansion thereof.

1,213,341. MANIFOLDING BOOK OR PAD. WILLIAM E. DUNNING, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Feb. 5, 1913, Serial No. 746,279. Renewed May 17, 1916. Serial No. 98,215. (Cl. 11—23.)



1. The combination of a main pad comprising a plurality of sets of original and copy-receiving slips, the original slip of each set being provided with a transfer medium on its lower face, an auxiliary set of slips each provided with a transfer medium on its lower face and arranged to be positioned between the slips of a set of slips of said main pad, and a stop card arranged to be positioned between the uppermost set of slips and the adjacent set of slips of the main pad, the said stop card being formed with cutaway portions in its upper and lower corners, to expose the original slip below it and permit the grasping thereof at either its upper or lower edge.

2. The combination of a main pad comprising a plurality of sets of original and copy-receiving slips, the original slip of each set being provided with a transfer medium on its lower face, an auxiliary set of slips each provided with a transfer medium on its lower face and arranged to be positioned between the slips of a set of slips of said main pad, and a stop card arranged to be positioned between the uppermost set of slips and the adjacent set of slips of the main pad, the said stop card being formed with a cutaway portion near or adjacent to its lower edge to expose the original slip below it, and one of the upper corners of the stop card being cutaway to expose the upper free end of the original slip below it.

3. The combination of a main pad comprising a plurality of sets of original and copy-receiving slips, means for transferring the record written on the original slip to the slip which may be positioned below it when the pad is in use, an auxiliary set of slips each provided with a transfer medium on its lower face and arranged to be positioned between the slips of a set of slips of said main pad, and a stop card arranged to be positioned between the uppermost set of slips and the adjacent set of slips of the main pad, the said stop card being formed with cutaway portions in its upper and lower corners to expose the original slip below it and permit the grasping thereof at either its upper and lower edge.

4. The combination of a main pad comprising a plurality of sets of original and copy-receiving slips, the original slip of each set being provided with a transfer medium on its lower face, an auxiliary set of slips each arranged to be positioned between the slips of a set of

slips of said main pad, means for transferring the record written on the original slip from said auxiliary slip to the slip below it when the auxiliary slip is positioned for use, and a stop card arranged to be positioned between the uppermost set of slips and the adjacent set of slips of the main pad, the said stop card being formed with cutaway portions in its upper and lower corners, to expose the original slip below it and permit the grasping thereof at either its upper or lower edge.

5. The combination of a main base having one end extended to form a stop card, a supplemental base fixed to said main base and folded on itself to form a lower member and an upper member adapted to swing thereon, a main pad comprising a plurality of sets of original and copy-receiving slips fixed at one end to the upper member of the supplemental base and adapted to swing therewith, the original slip to each set being provided with a transfer medium on its lower face, and an auxiliary set of slips secured at one end to said main base, each of said auxiliary slips being provided with a transfer medium on its lower face and arranged to be positioned between the slips of a set of slips of said main pad, and the stop card being arranged to be positioned between the uppermost set of slips and the adjacent set of slips of the main pad, the said stop card being formed with a cutaway portion near or adjacent to its lower edge to expose the original slip below it, and one of the upper corners of the stop member being cutaway to expose the upper free end of the original slip below it.

[Claims 6 to 9 not printed in the Gazette.]

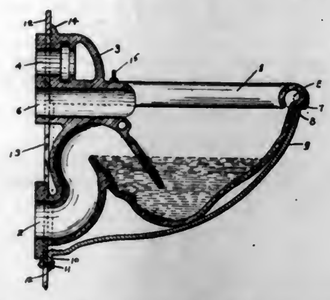
1,213,342. MILK-AERATOR. MICHAEL DUVALL, Marshfield, Wis. Filed July 24, 1916. Serial No. 110,976. (Cl. 31—90.)



An aerator-vessel comprising a pail having a perforated bottom provided with a centrally located port, a perforated valve of greater diameter than said port and having integral depending lugs with enlargements on their lower ends, said depending lugs being slidably mounted in apertures in the bottom of the pail and forming means for guiding and limiting the upward and downward movement of the perforated valve so that said valve will seat upon the interior surface of the bottom of said pail when the aerator-vessel is lifted from the body of the liquid and a handle member attached to the upper end of said pail so that the aerator-vessel may be plunged into the liquid.

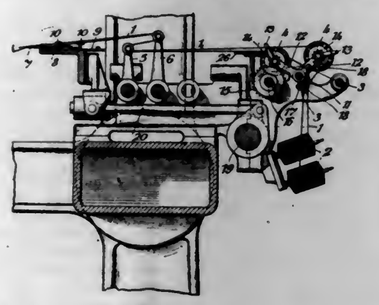
1,213,343. WATER-CLOSET STRUCTURE. DAVID A. EBINGER and DAVID H. EBINGER, Columbus, Ohio. Filed Jan. 10, 1914. Serial No. 811,290. (Cl. 4—18.)

A water closet structure comprising a bowl formed with a peripheral flush rim, a bracket formed independently of said bowl and arranged to be directly attached to the room wall above the floor level, said bracket being formed with a forwardly extending portion upon which the flush rim of said bowl is arranged to rest, and seat post bolts



extending vertically through said bowl and rigidly extending said bracket to securely hold said bowl in position.

1,213,344. EMBROIDERING-MACHINE. KARL EGGART and DANIEL FISCHER, Arbon, Switzerland, assignors to the Firm of Adolph Saurer, Arbon, Switzerland. Filed Oct. 2, 1915. Serial No. 53,673. (Cl. 112—7.)



1. In an embroidering machine, the combination of a tension shaft, a plurality of tension wheels, means independent of the tension shaft for supporting the tension wheels at a determinate distance from one another, means adapted to connect positively each tension wheel to the tension shaft and means adapted to displace separately each tension wheel to permit its engagement with and disengagement from the tension wheel.

2. In an embroidering machine, the combination of a tension shaft, having a gear-wheel fixed thereon, a tension wheel having a pinion adapted for engagement with said gear-wheel, and means to support the tension wheel movably to permit its pinion to be engaged with and disengaged from the gear-wheel of the tension shaft.

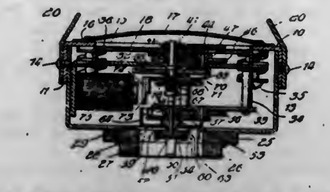
3. In an embroidering machine, the combination of a tension shaft, a plurality of gears fixed thereon, a plurality of tension wheels having each a pinion adapted for engagement with the corresponding gear-wheel, and means to support each tension wheel independently and movably to permit its pinion to be engaged with and disengaged from the corresponding gear-wheel of the tension shaft.

4. In an embroidering machine, the combination of a tension shaft having a gear fixed thereon, a tension wheel having a V-shaped groove and a pinion adapted for engagement with said gear-wheel, and means to support the tension wheel movably to permit its pinion to be engaged with and disengaged from the gear-wheel of the tension shaft.

5. In an embroidering machine, the combination of a tension shaft having a gear-wheel fixed thereon, a tension wheel having a pinion adapted for engagement with said gear-wheel, and a swinging lever carrying said tension wheel to permit its pinion to be engaged with and disengaged from the gear-wheel of the tension shaft.

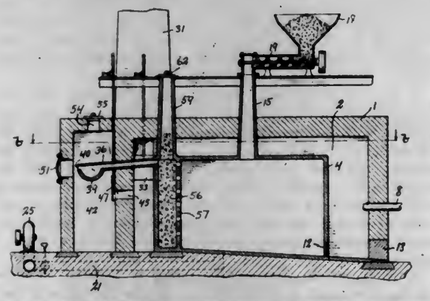
[Claims 6 to 8 not printed in the Gazette.]

1,213,345. ELECTRIC TIME-STAMP. CHARLES S. ELLIS, Chicago, Ill. Filed Mar. 10, 1911. Serial No. 613,617. (Cl. 234—53.5.)



A hand electric time stamp adapted to be actuated from a master clock, comprising a casing of less height than width and consisting of top and bottom detachably connected members with means for detachably connecting them, a hand piece attached to the top member, connected upper and lower pillar plates within the casing to constitute a unitary frame removably attached to and carried by the upper casing member, a yieldable dial stamping die carried by the bottom casing member and provided with a central opening, a clock dial carried by the upper pillar plate below the hand piece, an arbor rotatively mounted in and arranged concentrically of the removable frame, hour and minute hands traversing the clock dial and connected to and operated by said arbor, yieldable hour and mipute marking dies extending into the central opening of the stamp die with their lower faces in the plane of the lower face of said latter die and connected to and operated from the arbor, pawl and ratchet mechanism carried by said frame for giving intermittent rotation to said arbor, and a horizontally arranged electromagnet within the casing at one side of the arbor and mounted on the removable frame for actuating the pawl and ratchet mechanism.

1,213,346. RETORT APPARATUS. EDWARD FINK, Milwaukee, Wis., assignor of one-half to Halleck W. Seaman, Clinton, Iowa. Filed May 9, 1914. Serial No. 837,386. (Cl. 266—19.)



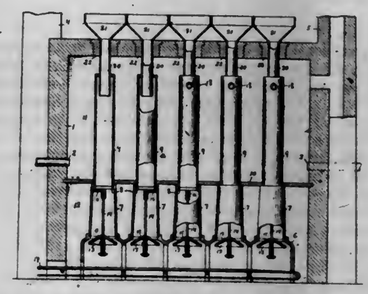
1. A long, high and narrow retort of substantially rectangular outlines, in combination with means for heating the same, a condenser in communication therewith, the retort being provided with an upright feed pipe for feeding material to the retort and condensing metallic vapor arising from the retort thereinto, and means in communication with the feed pipe adapted to hold material to seal the interior of the retort from the air.

2. The combination with a furnace provided with a combustion chamber, of a plurality of long, high and narrow retorts of substantially rectangular outlines located in said combustion chamber and spaced apart to form flues therebetween, each of said retorts being provided with an upright feed pipe for feeding material to a retort and condensing metallic vapor arising from a retort thereinto, material holding means in communication with the feed pipes to seal the interiors of the retorts from the air, and condensers in communication with the retorts.

3. The combination with a furnace provided with a combustion chamber, of a chamber adjacent thereto, a long, high and narrow retort in the combustion chamber, a condenser leading from said retort into the adjacent chamber and a flue for leading combustion products from the combustion chamber into the adjacent chamber for heating the condenser therein.

4. The combination with a combustion chamber of a long, high and narrow retort located therein and provided with a reduction chamber in communication therewith in the combustion chamber, a feed pipe for supplying material to the retort, a feed pipe for supplying material to the reduction chamber, and a condenser in communication with said retort through said reduction chamber.

1,213,347. RETORT APPARATUS. EDWARD FINK, Milwaukee, Wis., assignor of one-half to Halleck W. Seaman, Clinton, Iowa. Filed June 10, 1915. Serial No. 33,236. (Cl. 266—19.)



1. The combination with a retort and a condenser and an outlet leading from said retort to said condenser, of a preheating and feeding tube for supplying material to said retort so connected to the retort as to maintain a pocket free from material adjacent the outlet to the condenser when the retort has been filled with material through the preheating and feeding tube.

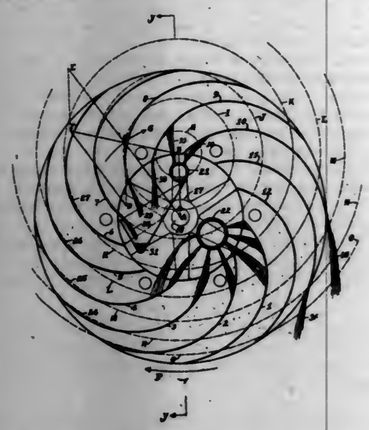
2. The combination with a base member, adapted to retain reduced materials therein and open at its top, of an open bottom retort supported on said base member and provided with a preheating feed pipe extending upward therefrom, and a condenser communicating with the interior of the retort through an outlet in the retort located in the retort above material in the retort when the retort is filled with material through the preheating feed pipe.

3. The combination with a retort open at the bottom and provided with a condenser and a preheating and feeding tube connected to the upper end of the retort, of a base member open at its bottom, for supporting the retort, and a shaft extending up into the base member and provided with an agitator for breaking up crusts or adhering material which may form beneath the reducing zone of the retort.

4. The combination with a furnace provided with a combustion chamber and a partition forming the bottom of the combustion chamber, of retorts open at their bottoms, located in the combustion chamber, base members for said retorts located below said partition, and means for producing a zone of high temperature within said combustion chamber adjacent the lower ends of said retorts.

5. The combination with a furnace provided with a combustion chamber, of retorts located in said combustion chamber and preheating and feeding tubes extending through the roof of said furnace and communicating with the interiors of said retorts, and means for regulating the heating of said preheating and feeding tubes.

1,213,348. CONCENTRATOR. ARTHUR O. GATES, La Fayette, Ind. Filed July 25, 1913. Serial No. 781,162. (Cl. 83—86.)



1. A concentrator of the character set forth having a plurality of separating surfaces arranged in the form of a hollow wheel and to revolve about a substantially horizontal axis, a spray pipe entering the hollow portion of the wheel for spraying the material to be separated onto the separating surfaces at the lower portion of their revolution, the said separating surfaces being curved so that the varying resultant force of gravity and the centrifugal force on the material causes a reciprocating flow of the said material across the separating surfaces during a revolution thereof whereby some of the material is discharged from the inner edges of the said surfaces at a certain part of the revolution and other portions of the material are retained on the said surfaces, a trough entering the hollow portion of the said wheel for catching the said discharged portions of the material and carrying same out of the wheel, and a second spray pipe entering the hollow portion of the wheel for spraying water onto the separating surfaces at the higher portion of their revolution to wash the said portions of the material which are retained on the separating surfaces, off of the outer edges thereof at a certain part of the revolution.

2. A concentrator of the character set forth having a plurality of separating surfaces arranged to revolve about a substantially horizontal axis, means for feeding material to be separated onto the said surfaces in their downwardly and outwardly sloping positions, the said surfaces being curved outwardly from the said axis and in the direction of rotation in a manner such that the varying resultant force of gravity and centrifugal force on the said material causes a reciprocating flow of the said material across the separating surfaces during a revolution thereof whereby some of the material is discharged from the said surfaces at a certain part of the revolution, other portions of the material being retained on the said surfaces, and means for causing a discharge of the latter said portions of the material from the separating surfaces at a certain part of the revolution.

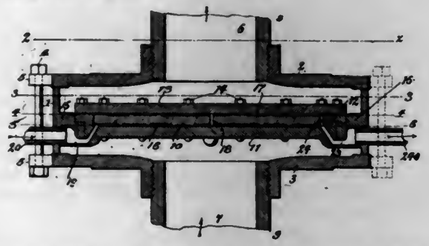
3. A concentrator having a plurality of separating surfaces arranged in the form of a wheel to revolve about a substantially horizontal axis, means for feeding the material to be separated onto the said surfaces in their downwardly and outwardly sloping positions, the said surfaces being curved outwardly fram the said axis and in the direction of rotation in a manner such that the varying resultant force of gravity and centrifugal force on the material causes a reciprocating flow of the material across the separating surfaces during a revolution thereof whereby certain portions of the material are separated from other portions thereof and discharged from the said separating surfaces at a certain part of the revolution, and means for washing off the remainder of the said material from the separating surfaces at a certain part of the revolution.

4. A concentrator having a plurality of separating surfaces arranged in the form of a wheel to revolve about a substantially horizontal axis, and means for feeding the material to be separated onto the said surfaces in their downwardly and outwardly sloping positions, the said surfaces being curved outwardly from the said axis and in the direction of rotation in a manner such that the varying resultant force of gravity and centrifugal force on the material causes a reciprocating flow of the material across the separating surfaces whereby certain portions of the material are separated from other portions thereof and discharged from the separating surfaces at a certain part of the revolution.

5. A concentrator having a plurality of revolving separating surfaces arranged in the form of a wheel and curved outwardly from the axis of rotation and in the direction of rotation in a manner such that the varying resultant force of gravity and centrifugal force causes a reciprocating movement of the material to be separated across the separating surfaces during a revolution thereof, and means for delivering material to the separating surfaces in their downwardly and outwardly sloping positions.

[Claims 6 to 13 not printed in the Gazette.]

1,213,349. VAPORIZER. LAWRENCE G. GEBHARD and JAMES M. ROWLEY, Buffalo, N. Y. Filed Feb. 5, 1914. Serial No. 816,828. (Cl. 257—245.)



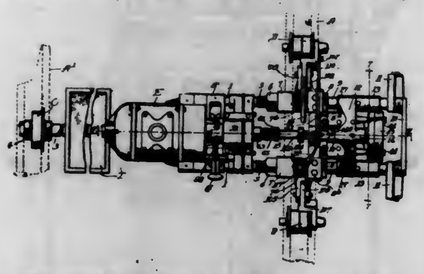
1. A liquid vaporizer comprising a heating chamber having a tubular body, heads engaging with opposite ends of said body and provided respectively with an inlet and an outlet for a heating agent, a core arranged within the heating chamber and provided with a conduit for the liquid to be vaporized, said core being of larger diameter than the bore of said inlet and outlet, and means independent of said body for clamping said heads against said body.

2. A liquid vaporizer comprising a heating chamber having a tubular body, heads engaging with opposite ends of said body and provided respectively with an inlet and an outlet for a heating agent, a core arranged within the heating chamber and provided with a conduit for the liquid to be vaporized, said core being of larger diameter than the bore of said inlet and outlet, and means independent of said body for clamping said heads against said body, comprising bolts connecting said heads outside of said body.

3. A liquid vaporizer comprising a heating chamber having a tubular body, heads engaging with opposite ends of said body and provided respectively with an inlet and an outlet for a heating agent, a core arranged within the heating chamber and mounted on said body and provided with a conduit for the liquid to be vaporized, said core being of larger diameter than the bore of said inlet and outlet, and means independent of said body for clamping said heads against said body.

4. A liquid vaporizer comprising a heating chamber having a tubular body and heads engaging opposite ends of said body and provided with inlet and outlet passages, respectively, for a heating agent, and a core arranged within the heating chamber and having a partition plate and wall plates arranged on opposite sides of said partition plate, said plates being constructed to form conduits for a hydrocarbon liquid to be vaporized, and one of said wall plates being formed integrally with said tubular body of the heating chamber while the other wall plate is separable therefrom.

1,213,350. TRACK-DRILLING MACHINE. CHARLES E. GIBBDING and JOHN ROWLAND BROWN, Mansfield, Ohio, assignors to The Ohio Brass Company, Mansfield, Ohio. Filed Feb. 20, 1914. Serial No. 819,876. (Cl. 77—8.)



1. The combination with a frame, of a drill frame movable thereon, a drill carried by the drill frame, means having a portion fixed in the first named frame and having driving means for the said drill and for bodily moving the said drill frame continuously to feed the drill.

2. The combination with a frame, of a drill frame movable thereon, a drill carried by said drill frame, a shaft for moving the drill frame to feed the drill, driving means comprising parts mounted on the first mentioned frame for rotating said shaft, and means for bodily moving the shaft and the drill frame to feed the drill.

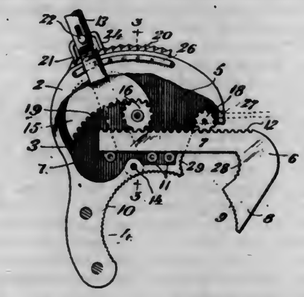
3. The combination with a frame, of a drill frame movable thereon, drilling means carried by said drill frame, and means having a portion mounted on the first named frame for driving said drilling means and for continuously shifting said drill frame, said means embodying a common connection for said drill frame and said drilling means between them and the said driving means.

4. The combination with a frame, of a drill frame movable thereon, drilling means having parts carried bodily by said frame, a common shaft for shifting the drill frame continuously and for driving the drill, and means on the first mentioned frame for actuating said shaft.

5. The combination with a frame, of a drill-carrying frame mounted thereon, drills rotatable in the drill frames, a shaft for shifting the drill frame, driving means on the first named frame for rotating the shaft, and means for automatically shifting said shaft to feed the drill frame and rotate the drills.

[Claims 6 to 25 not printed in the Gazette.]

1,213,351. PIPE-WRENCH. JESSE G. GILMORE, Pine Bluff, Ark. Filed Apr. 15, 1916. Serial No. 91,420. (Cl. 81—133.)



1. A wrench comprising a fixed jaw member having a casing formed as a part thereof, an adjustable jaw member having an extension bar mounted to be capable of movement into and extension from said case, a handle pivotally mounted on the fixed jaw member, means to be actuated upon swinging of the handle to move said movable jaw to its adjusted position, and means to hold the handle in a fixed relation to retain the setting of the movable jaw.

2. A wrench comprising a jaw member having a case formed as a part thereof, an adjustable jaw member having an extension rack bar formed as a part thereof, and received in said case to be capable of endwise movement, a toothed wheel mounted in the case with the teeth thereof in engagement with the teeth of the extension rack bar, means to turn said toothed wheel to cause movement of the adjustable jaw to the proper relation, and means carried by the means arranged to turn said toothed wheel and arranged to hold said means against displacement when the proper adjustment of the movable jaw has been attained.

3. A wrench comprising a jaw having a case formed as a part thereof, a movable jaw provided with an extension rack bar mounted in said case to be capable of endwise movement, a toothed wheel mounted in the case with the teeth thereof in engagement with the teeth of the extension rack bar, a handle pivotally mounted on the case, and an arcuated rack carried by said handle in engagement with the teeth of the wheel in such relation that as the handle is swung the wheel is turned to cause movement of the extension rack bar and in consequence adjustment of the adjustable jaw.

4. A wrench comprising a fixed jaw, an adjustable jaw having an extension rack bar formed as a part thereof, friction rolls with which said rack bar has engagement, toothed wheels mounted on the fixed jaw with the teeth thereof in engagement with the teeth of the rack bar, a handle pivotally mounted on said fixed jaw, an arcuated rack carried by said handle with the teeth thereof in engagement with the teeth of one of said wheels, said parts being so arranged that as the handle is swung the toothed wheel is turned to cause movement of the extension rack bar and consequently of the adjustable jaw, and means to hold the parts in the proper adjusted relation.

5. A wrench comprising a fixed jaw, an adjustable jaw having an extension rack bar formed as a part thereof, friction rolls with which said rack bar has engagement, toothed wheels mounted on the fixed jaw with the teeth thereof in engagement with the teeth of the rack bar, a handle pivotally mounted on said fixed jaw, an arcusted rack carried by said handle with the teeth thereof in engagement with the teeth of one of said wheels, said parts being so arranged that as the handle is swung the toothed wheel is turned to cause movement of the extension rack bar and consequently of the adjustable jaw, means to indicate by the relative positioning of the handle the width of extension of the jaws, and means to hold the handle in the adjusted relation to maintain the fixed adjustment of the jaw.

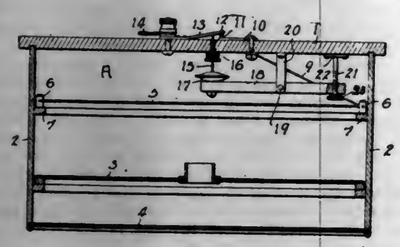
1,213,352. SHAVING KIT. FRANK W. GRADY, Taft, Cal. Filed May 25, 1915. Serial No. 30,357. (Cl. 132—11.)



A shaving brush including a hollow handle constituting a soap container, bristles extending from one end of the

handle, the other end of the handle being open, an extension detachably connected to the open end of the handle and constituting a combined mug and razor container, said extension constituting a closure for the open end of the handle, a closure for the extension, and a cap for housing the bristles, said cap engaging the closed end portion of the handle.

1,213,353. ELECTRICAL INCUBATOR. JOHN DAVID GRAVES, Colton, Cal. Filed June 30, 1916. Serial No. 106,952. (Cl. 219—19.)

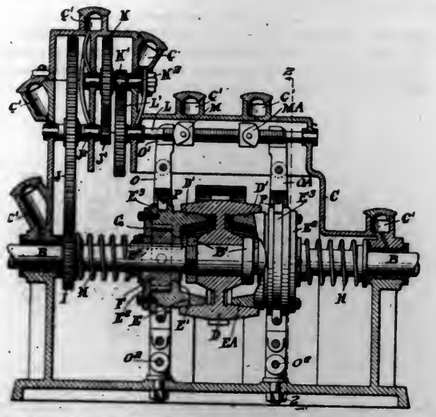


1. An electrically heated incubator, including a box, a resistance wire extending horizontally across the box above the eggs, feed wires connected to the resistance wire to complete the circuit and supply current thereto, a fixed metallic contact member and a swinging metallic contact member interposed in the circuit, said contact members being normally in engagement with each other, an adjusting lever mounted within the box, a thermostat carried by the adjusting lever, means for locking the adjusting lever in different positions with the thermostat at different elevations, and a plunger carried by the thermostat and engaging the swinging contact member to move the same and interrupt the circuit when the temperature within the incubator reaches a predetermined point.

2. An electrically heated incubator, including a box, a resistance wire extending horizontally across the box above the eggs, feed wires connected to the resistance wire to complete the circuit and supply current thereto, a fixed metallic contact member and a swinging metallic contact member mounted upon the top of the box and interposed in the circuit, the said contact members being normally in engagement with each other, a bracket pendent from the top of the box, an adjusting lever pivotally mounted upon the bracket, a thermostat carried by the adjusting lever, means for locking the adjusting lever in different positions with the thermostat at different elevations, and a plunger carried by the thermostat and passing loosely through the top of the box, said plunger engaging the swinging metallic contact member to move the same and interrupt the circuit when the temperature within the box reaches a predetermined point.

3. An electrically heated incubator, including a box, a resistance wire extending horizontally across the box above the same, feed wires connected to the resistance wire to complete the circuit and supply current thereto, a fixed metallic contact member and a swinging metallic contact member interposed in the circuit and mounted upon the top of the box, said contact members being normally in engagement with each other, a bracket pendent from the top of the box, an adjusting lever pivotally mounted upon the bracket at an intermediate point in its length, a thermostat carried by one end of the adjusting lever, an adjusting screw acting upon the opposite end of the adjusting lever to set the lever in different positions with the thermostat at different elevations, and a vertically disposed plunger carried by the thermostat and passing slidably through the top of the box, said plunger engaging the swinging contact member to move the same and interrupt the circuit when the temperature within the box reaches a predetermined point.

1,213,354. POWER TRANSMISSION. WILLIAM H. GRINDALL, Altoona, Pa. Filed Feb. 26, 1916. Serial No. 80,583. (Cl. 74—46.)



1. A power transmitting mechanism comprising in combination a driven shaft, a reversible driving member journaled on the driven shaft, a ratchet mechanism and a releasable clutch connecting said shaft and member and operating in the normal condition of said clutch to turn the shaft with said member on a rotation of the latter in one direction, and a second ratchet mechanism and releasable clutch connecting said shaft and member and operating in the normal condition of the last mentioned clutch to turn the shaft with said member on a direction of rotation of the latter opposite to the first mentioned direction of rotation.

2. A power transmitting mechanism comprising in combination a driven shaft, a reversible driving member journaled on the driven shaft, a ratchet mechanism and a releasable clutch connecting said shaft and member and operating in the normal condition of said clutch to turn the shaft with said member on a rotation of the latter in one direction, and a second ratchet mechanism and releasable clutch connecting said shaft and member and operating in the normal condition of the last mentioned clutch to turn the shaft with said member on a direction of rotation of the latter opposite to the first mentioned direction of rotation, and clutch releasing means responsive to the angular movement of said shaft for restricting the angular movement of said shaft in either direction.

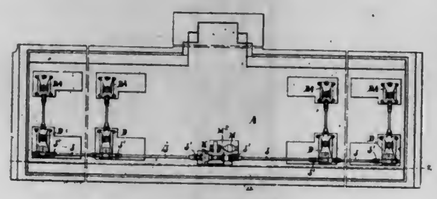
3. In a power transmitting mechanism the combination of a driven shaft, a member revolubly mounted thereon, a pair of friction clutch members mounted on said shaft and movable into and out of operative engagement with said member, and a ratchet connection between each of said clutch members and said driven shaft, one of said ratchet mechanisms preventing relative movement of the corresponding clutch member and shaft in one direction and the other ratchet mechanism preventing relative movement in the opposite direction between the second clutch member and the shaft.

4. In a power transmission the combination of a driven shaft and a driving member revolubly mounted thereon, collar members splined on the shaft at opposite sides of said driving member, a pair of friction clutch members, one mounted on each collar member and movable axially therewith to engage and disengage the driving member, and a ratchet connection between each collar member and the corresponding clutch member, said ratchet connections being oppositely directed so that one prevents relative rotation in one direction and the other relative rotation in the opposite direction between the corresponding collar and friction clutch members.

5. In a power transmission the combination with the driven shaft of a driving member revolubly mounted thereon, a pair of collar members splined on said shaft one on each side of said driving shaft, a pair of friction clutch members one mounted on one and the other mounted on the second of said collar members, resilient means normally holding said clutch members in engagement with said driving member, a ratchet connection between each clutch member and corresponding collar member, said ratchet connections being oppositely connected so that one prevents relative rotation in one direction and the other prevents relative rotation in the opposite direction between the collar and clutch members connected by it, and means responsive to the angular movement of the driven shaft and operating after a predetermined movement of the shaft in either direction to disengage the driving member and the clutch member by which the driven shaft is turned in the last mentioned direction.

[Claims 6 to 9 not printed in the Gazette.]

1,213,355. SCALE-RELIEVING GEAR. WILLIAM H. GRINDALL, Altoona, Pa. Filed Feb. 26, 1916. Serial No. 80,584. (Cl. 73—121.)



1. In a weighing scale the combination with the platform and the balancing mechanism therefor, of a relieving gear for the latter comprising a plurality of lifting jacks each having a movable actuating member, and being arranged in pairs beneath the scale platform at intervals along the length of the latter, the two jacks of each pair being located at opposite sides of the center line of the platform and comprising a common screw operating shaft having oppositely threaded portions in threaded engagement respectively, with the movable actuating members of the two jacks, and a shaft extending longitudinally of the platform and gear connected to one end of each of said screw operating shafts.

2. In a weighing scale the combination with the platform and the usual balancing mechanism therefor, of a relieving gear for the latter comprising a plurality of lifting jacks each having a movable actuating member, and being arranged in pairs beneath the scale platform at intervals along the length of the latter, the two jacks of each pair being located at opposite sides of the center line of the platform and comprising a common screw operating shaft having oppositely threaded portions in threaded engagement respectively, with the movable actuating members of the two jacks, a main shaft extending longitudinally of the platform and a gear connected to one end of each of said screw operating shafts, and a reversible motor geared to said main shaft.

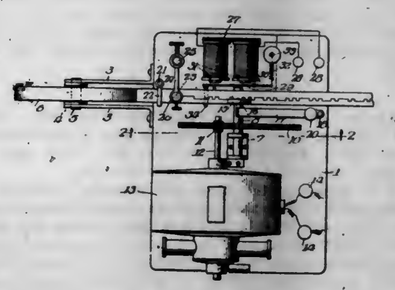
3. In a weighing scale the combination with the platform and the balancing mechanism therefor, of a relieving gear for the latter comprising a plurality of screw jacks arranged in pairs beneath the scale platform at intervals along the length of the latter, the two jacks of each pair being located at opposite sides of the center line of the platform and each comprising a vertically movable plunger, a horizontally movable part and a link connection between the plunger and sliding part, the two jacks of each pair being so arranged that the two plungers will be moved in one direction by the movement of the sliding parts toward one another and will be moved in the opposite direction on a movement of the sliding parts away from one another, a common operating shaft for each pair of jacks having oppositely threaded portions in threaded engagement with the horizontally movable parts of said jacks, and mechanism for simultaneously rotating the various operating shafts.

4. In a weighing scale the combination with the platform and the balancing mechanism therefor, of a relieving gear for the latter comprising a plurality of screw jacks arranged in pairs beneath the scale platform at intervals along the length of the latter, the two jacks of each pair being located at opposite sides of the center line of the platform and each comprising a vertically movable plunger, a horizontally movable part formed with trunnions, and a separable link connecting said trunnions to said plunger, the two jacks of each pair being so arranged that the two plungers will be moved in one direction by the movement of the sliding parts toward one another and will be moved in the opposite direction on a movement of the sliding parts away from one another, a common operating shaft for each pair of jacks having oppositely threaded portions in threaded engagement with the horizontally movable parts of said jacks, and mechanism for simultaneously rotating the various operating shafts.

5. In a weighing scale the combination with the platform and the balancing mechanism therefor, of a relieving gear for the latter including a plurality of lifting jacks and means for simultaneously adjusting said jacks into and out of operative engagement with said platform, said means comprising a main jack operating shaft, a reversible motor, gearing connecting said motor and shaft and normally operative to effect a rotation of the shaft in one direction or the other according to the direction of operation of the motor, and means responsive to the resultant angular movement of said shaft for rendering said gearing inoperative to give further movement in the same direction to said shaft after the resultant movement of the shaft in either direction from a neutral condition has reached a predetermined maximum.

[Claims 6 and 7 not printed in the Gazette.]

1,213,356. RECORDER. RAY E. HALL, Ann Arbor, Mich., assignor of one-half to Charles A. Robertson, Ann Arbor, Mich. Filed July 31, 1915. Serial No. 42,873. (Cl. 234—27.5.)



1. In a recorder, the combination of means for drawing a tape at a constant speed therethrough, a fixed member constantly engaging said tape and adapted to mark thereon, means for shifting the tape laterally to vary the character of the marking, and means for returning the tape to its normal position after each shifting operation.

2. In a recorder, the combination of means for drawing a tape at a constant speed therethrough, a fixed member constantly engaging said tape and adapted to mark thereon, electro-magnetic means for shifting the tape laterally to vary the character of the marking, and means for returning the tape to its normal position after each shifting operation.

3. In a recorder, the combination of means for drawing a tape at a constant speed therethrough, a fixed member

engaging said tape and adapted to mark thereon, an electro-magnet adapted to receive current impulses, an armature therefor, and means connected to said armature and embracing the tape, whereby the latter is moved laterally as each current impulse is received to vary the character of the marking.

4. In a recorder, the combination of means for drawing a tape at a constant speed therethrough, a pen having a constant ink supply fixedly mounted to engage and mark said tape, an electro-magnet adapted to receive current impulses, an armature therefor, and a yoke connected to said armature and embracing the tape, whereby the latter is moved laterally as each current impulse is received to vary the character of the marking.

5. In a recorder, the combination of a base, means thereon for supporting a roll of tape, a motor and means actuated thereby to draw the tape through the recorder at a constant speed, a pen having a constant ink supply fixedly mounted to engage and mark said tape, an electro-magnet adapted to receive current impulses, an armature therefor, and a yoke connected to said armature and embracing the tape, whereby the latter is moved laterally as each current impulse is received to vary the character of the marking.

[Claims 6 and 7 not printed in the Gazette.]

1,213,357. COMPOSITION FOR LEAVENING DOUGH. ABEL M. HAMBLET, Winchester, Mass. Filed Dec. 10, 1914. Serial No. 876,506. (Cl. 99—10.)

1. A liquid composition for use in leavening containing lactic acid and an anhydrid of lactic acid substantially equivalent in amount to not less than fifteen per cent. by weight of the lactic acid present.

2. A liquid composition for use in leavening containing lactic acid, an anhydrid of lactic acid, substantially equivalent in amount to not less than fifteen per cent. by weight of the lactic acid present and a solvent ingredient amounting to not less than twenty per cent. of the total volume of the composition.

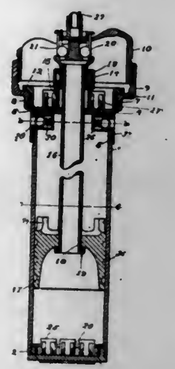
3. A liquid composition for use in leavening containing lactic acid, an anhydrid of lactic acid substantially equivalent in amount to not less than fifteen per cent. by weight of the lactic acid present and a solvent ingredient amounting to not less than twenty per cent. of the total volume of the composition the total acidity of such composition being greater than that of a normal acid solution.

1,213,358. DEEP-WELL PUMPING-CYLINDER. FRED J. HAMLIN, Kansas City, Mo., assignor of one-fourth to Marion L. Vining, Kansas City, Mo. Filed Apr. 24, 1915. Serial No. 23,742. (Cl. 103—71.)

1. In double acting deep well pumping cylinders the combination of a working barrel, an external thread around the upper end of said barrel, a head closing the upper end of said barrel, said head having an annular flange extending downward and provided with an internal thread fitting the external thread of said barrel, cages screw-threaded in and extending through said annular flange and said barrel, annular flanges on the outer ends of said cages, said annular flanges seating in counterbored seats in said head, and intake valves in said cages.

2. In double acting deep well pumping cylinders the combination of a vertically positioned working barrel, a head closing the upper end of said barrel, a plunger in said barrel, a plunger rod extending upward from said plunger and through said head, a stuffing box surrounding said rod, an annular flange extending upward from said head, a plurality of cages arranged around said stuffing box and within said annular flange and screw threaded into said head, a shoulder on each of said cages resting against the under side of said head and forming a joint, and a discharge valve in each of said cages.

3. In a double acting deep well pumping cylinder, a working barrel, an external thread on the outer side of said barrel, a cylinder head closing the upper end of said barrel, an annular flange extending downward from said cylinder head and provided with an internal thread fitting the external thread of said working barrel, an annular flange extending upward from said cylinder head the outside diameter of which is larger than the outside diameter of the annular flange extending downward, an external thread on said annular flange extending upward, a radial flange extending outwardly from said annular flange extending upward, a well pipe whose inside diameter is larger than said radial flange, a reducing sleeve with internal threads connecting said well pipe and said annular flange extending upwardly, and suitable intake and discharge valves serving the upper end of said working barrel.



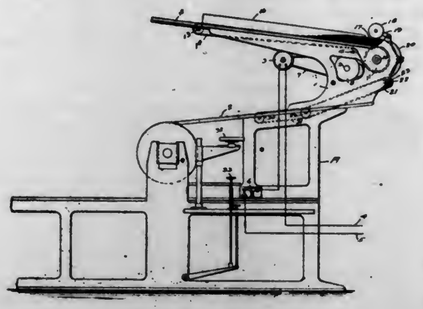
4. In a double acting deep well pumping cylinder, a working barrel, a head closing the upper end of said barrel, an annular flange extending downwardly from said head and connecting with said barrel, an annular flange extending upward from said head, suitable valves serving said working barrel, a plunger in said working barrel, a well pipe whose inside diameter is larger than said barrel and said head, and a sleeve connecting said head and said well pipe whereby said working barrel and said head and said plunger may simultaneously be drawn through said sleeve and said well pipe.

5. In deep well pumping cylinders the combination of a working barrel, a head closing the upper end of said barrel, an external thread on said head, a plunger in said barrel, cages extending into said barrel above said plunger, and lugs extending upward from said plunger and arranged to engage said cages for the purpose of turning said head with the plunger rod.

1,213,359. PAPER-LOADING MACHINE. JAMES G. HARDIN, Canton, N. Y. Filed Feb. 16, 1915. Serial No. 8,692. (Cl. 101—36.)

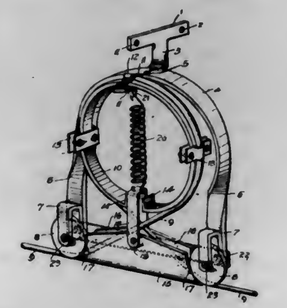
1. The combination in a loading machine of a frame mounted upon a printing press-table, a table mounted upon said frame, a power-driven main roll journaled in said frame, belts passing around said main roll and said table, power-rotated pulleys journaled in said press-table, belts passing around said pulleys above and below said press-table, a power-rotated shaft journaled in said frame, pulleys mounted upon said shaft, belts passing around said pulleys and around said pulleys in said press-table, a suitable member adapted to guide a sheet from the main roll to said belts.

2. The combination in a loading machine of a frame mounted upon a printing press-table, a table mounted upon said frame, a power-driven main roll journaled in said frame, belts passing around said main roll and said table, power-rotated pulleys journaled in said press-table, belts passing around said pulleys above and below said press-table, a table interposed between said main roll and said printing press-table, a power-rotated shaft journaled in



said frame, pulleys mounted upon said shaft, belts passing around said pulleys and around said interposed table.

1,213,360. SPRING TAKE-UP FOR TROLLEY-WIRES. DEMETRIUS H. HART, Birmingham, Ala. Filed June 1, 1916. Serial No. 101,202. (Cl. 191—44.)



1. In a device of the character described, a bracket, a spring attached to the bracket, and wire guides on the bracket to hold a loop of wire in position to encircle said spring, substantially as described.

2. In a device of the character described, a bracket, a curved band spring attached to the bracket, and wire guides on the bracket to hold a loop of wire in position to encircle said spring, substantially as described.

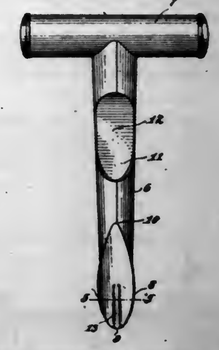
3. In a device of the character described, a bracket, a curved band spring attached to the bracket, wire guides on the bracket to hold a loop of wire in position to encircle said spring, and means to brace the guide bearing portions of the bracket together, substantially as described.

4. In a device of the character described, a bracket, a curved band spring attached to the bracket, wire guides on the bracket on each side of the spring to guide a loop of wire about said band, and a block to bridge the gap left at the neck of the loop, substantially as described.

5. In a slack take-up for trolley wire, a bracket having means for suspension above the trolley wire, spaced alining grooved guides on the bracket and disposed to engage the top edge of the trolley wire, a split spring ring connected overhead to the bracket and disposed to receive a loop formed in the trolley wire between said guides, means to bridge the gap left in the trolley wire at the neck of the loop, and means to brace together the guide ends of the bracket.

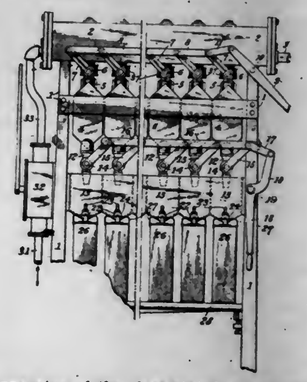
[Claims 6 to 12 not printed in the Gazette.]

1,213,361. APPLE-CORER. MELVILLE P. HAYWARD, Quincy, Mass. Filed Feb. 13, 1915. Serial No. 7,938. (Cl. 146—6.)



An apple corer comprising a cylindrical body terminating in a slanting cutting end having a cutting edge, and being provided with a reinforcing rib located at the extremity and forming a part of the cutting edge.

1,213,362. MULTIPLE FILLING APPARATUS. FREDERICK C. HELMUTH, Lynbrook, N. Y., assignor to Standard Oil Company, of New York, New York, N. Y., a Corporation of New York. Filed Nov. 12, 1915. Serial No. 61,019. (Cl. 226—17.)

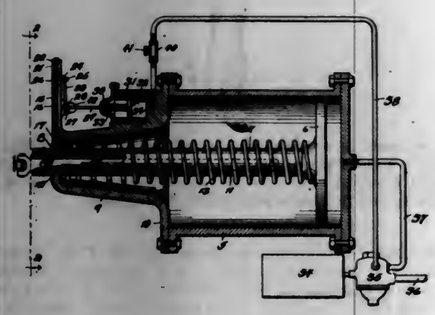


1. In apparatus of the class stated, a stationary reservoir, a series of stationary measures each connected directly with the reservoir, means outside each measure and outside the reservoir to simultaneously permit and prevent the flow of liquid from the reservoir to each measure, an air vent connected with but outside of each measure, a valve in each vent automatically closed by the rise of the liquid in the measure and automatically opened by its subsidence therefrom, a series of funnels below the measures, means to simultaneously permit and prevent the flow of liquid from the measures to the funnels, and separately operated means connected with each funnel and accessible from the exterior thereof to permit and prevent the flow of liquid from each funnel to the individual vessel with which it co-acts.

2. In apparatus of the class stated, a stationary reservoir, a series of stationary measures each connected directly with the reservoir, means outside each measure and outside the reservoir to simultaneously permit and prevent the flow of liquid from the reservoir to each measure, an air vent connected with but outside of each measure, a valve in each vent automatically closed by the rise of the

liquid in the measure and automatically opened by its subsidence therefrom, a double series of funnels below the measures, means to permit and prevent the flow of liquid from the measures to one or the other of the series of funnels and separately operated means connected with each funnel and accessible from the exterior thereof to permit and prevent the flow of liquid from each individual funnel to the individual vessel with which it co-acts.

1,213,363. AIR-BRAKE ATTACHMENT. MURRAY HENRY, Alexandria, La., assignor of one-half to Joseph Gebhardt, Alexandria, La. Filed May 25, 1916. Serial No. 99,843. (Cl. 188—1.)



1. In apparatus of the character described, the combination with a brake cylinder, of a brake piston mounted to move therein, a piston rod connected with the piston, a triple valve connected with the brake cylinder to control the passage of pressure therein and having an exhaust through which pressure passes from the brake cylinder, pressure operated means to engage the piston rod and lock the piston against movement, and means of communication between the exhaust of the triple valve and the pressure operated means so that the pressure operated means is set into action by the exhaust from the triple valve.

2. In apparatus of the character described, the combination with a brake cylinder, of a brake piston mounted to move therein, a piston rod secured to the piston, a triple valve to control the passage of pressure to the brake cylinder and having an exhaust through which pressure passes from the brake cylinder, an element to engage with the piston rod to lock it against movement, a lock-cylinder, a lock-piston mounted to move therein and having connection with the element to move it, and a conduit establishing communication between the exhaust of the triple valve and the lock-cylinder.

3. In apparatus of the character described, the combination with a brake cylinder, of a brake piston mounted to move therein, a piston rod secured to the brake piston, a triple valve to control the passage of pressure to the brake cylinder and having an exhaust through which pressure passes from the brake cylinder, an element to engage the piston rod to lock it against movement, a lock-cylinder, a lock-piston mounted to move therein and having connection with the element to move it, and a conduit connecting the lock-cylinder and exhaust of the triple valve and having a contracted port communicating with the atmosphere whereby the lock-piston will not be improperly operated by leakage from the triple valve.

4. In apparatus of the character described, the combination with a brake cylinder, of a brake piston mounted to move therein, a piston rod connected with the piston and provided with a longitudinal set of teeth, a movable pawl to engage and disengage the teeth, a lock-cylinder, a lock-piston mounted to move therein, operative connecting means between the lock-piston and pawl, and means to supply pressure to the lock-cylinder.

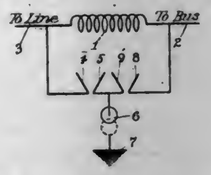
5. In apparatus of the character described, the combination with a brake cylinder, of a brake piston mounted to move therein, a tubular piston rod connected with the piston and provided with a longitudinal set of teeth, a rod having connection with the brake rigging and extending into the tubular piston, and an element to engage the teeth of the tubular rod to hold it against movement.

1,213,364. SOCKET FOR ELECTRIC LAMPS. WILLIAM HERSKOVITZ, Chicago, Ill. Filed Jan. 17, 1914. Serial No. 812,709. (Cl. 173—362.)



A socket for electric lamps having a hollow dome having through its crown an opening and a hanger comprising, as an integral structure, a hanger ring, a tubular shank integral therewith, the upper end of said shank opening into the hanger ring and its lower end opening into the dome, the lower portion of said shank being of two diameters resulting in an annular shoulder bearing upon the crown of the dome and below said shoulder a portion of reduced diameter which passes through the opening of the dome, and an annular reinforcing plate through which also said portion of reduced diameter passes, the lower end of the shank having tongues and the reinforcing plate having notches extending radially outward from the opening of the reinforcing plate, the lower end of the shank being expanded so that said tongues occupy said notches.

1,213,365. PROTECTING MEANS FOR ELECTRIC CIRCUITS. ALFRED HEAZ, Chicago, Ill., assignor to Delta-Star Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 2, 1915. Serial No. 53,667. (Cl. 175—30.)



1. In combination, a transmission line, a bus, surge retarding means between said line and said bus, an electrolytic arrester having a ground connection, separate spark gaps connecting said electrolytic arrester to each side of said surge retarding means and a charging resistance for charging said electrolytic arrester.

2. In a horn gap arrester, a horn formed of a curved channel of sheet metal, said channel being bent to present a spherical face at the point of discharge formation, and means fitting into the concave side of said channel for supporting said horn.

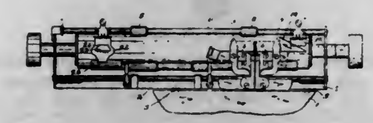
3. In combination a supporting bracket, an inductance coil, an insulator for suspending said coil below said bracket, a pair of insulators above said bracket, horn gap electrodes mounted on said insulators, connecting wires for joining said horn electrodes to the terminals of said coil, a third insulator mounted between said latter two insulators above said bracket, horn electrode means for forming a pair of gaps with said horn electrodes, transmission wires connected to said horn electrodes and a ground connection for said electrode means.

4. In a lightning arrester, a plurality of parallel resistance rods, metal clips joining the ends of said rods in series, said clips comprising each a casting having a pair of sockets, bolts for springing said sockets upon the ends of said rods, said clips having a body joining said sockets, said body having a flange projecting laterally toward adjacent clips for defining spark gaps.

5. In combination a transmission line to be protected, a plurality of inductance or retardation coils connected in series with the dynamic current flowing in said line to prevent the passage of surges and the like, said transmission line being thereby divided into sections for causing a tendency to localize or confine surges or the like disturbances arising in a given section to that particular section, means in shunt of each inductance or retardation coil for dissipating and by-passing said disturbances arising upon a section, whereby said disturbances may be discharged to ground or a part of the same discharged to an adjacent section of the line, said means comprising an electrode connected to one side of the inductance coil, an electrode connected to the other side of the inductance coil, electrode means between said electrodes and adapted to form independent spark gaps with said electrode, a ground connection for said electrode means and means for resisting or limiting the passage of dynamic current through said grounded connections.

[Claims 6 to 8 not printed in the Gazette.]

1,213,366. LINE-GAGE FOR TYPE-WRITING MACHINES. EDWARD B. HESS, Brooklyn, N. Y., assignor to Royal Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 29, 1915. Serial No. 24,674. (Cl. 197—187.)



1. In a typewriting machine the combination with the platen of a scale bar fixed relatively to the sidewise movement of the platen, a line gage of relatively short length located adjacent one end of the platen adjustable in a line parallel with the axis of the platen and movable bodily independently of the scale bar away from the platen about an axis below the top thereof.

2. Line gage devices for a typewriting machine, comprising a short fixed line gage located at the printing point, and a supplemental line gage located adjacent one end of the platen mounted to move sidewise with the platen and adjustable in its mounting toward and from the end of the platen relatively to the fixed gage.

3. Line gage devices for typewriting machines, comprising a short fixed line gage located at the printing point, and a supplemental line gage located adjacent one end of the platen and comprising a part mounted for adjustment toward and from the end of the platen, a part vertically adjustable relatively to the line of print and a third part movable transversely toward and from the platen.

4. In a typewriting machine the combination with the platen of a fixed scale bar, a short line gage located near one end of the platen, a frame comprising a horizontally arranged bar and rearwardly extending side arms pivoted in rear of the platen, a pivotal connection between said bar and said line gage, devices for moving the line gage lengthwise on said bar in a line parallel with the axis of the platen away from said side arms, and means for holding the line gage close to the platen.

5. In a typewriting machine, the combination with the platen of a swinging frame above the platen, a line gage of relatively short length located near one end of the platen and movable sidewise therewith, and a centrally arranged line gage fixed relatively to the sidewise movement of the platen.

[Claims 6 to 12 not printed in the Gazette.]

1,213,367. MANUFACTURE OF EXPLOSIVES. HAROLD HIBBERT, Pittsburgh, Pa. Filed Feb. 23, 1915. Serial No. 9,774. (Cl. 52—3.)

1. An explosive comprising a nitrated mixture of glycols substituted on adjacent carbon atoms, said explosive being a stable product of a relatively non-volatile nature and of low freezing point; substantially as described.

2. An explosive comprising a mixture of nitrated glycols substituted on adjacent carbon atoms with other explosive compounds, said explosive being a stable product of a relatively non-volatile nature and of low freezing point; substantially as described.

3. An explosive comprising a mixture of nitrated glycols substituted on adjacent carbon atoms and glycerin, said explosive being a stable product of a relatively non-volatile nature and of low freezing point; substantially as described.

4. An explosive comprising a nitrated mixture of ethylene, propylene and butylene glycols, said explosive being a stable product of a relatively non-volatile nature and of low freezing point; substantially as described.

5. An explosive comprising a nitrated mixture of ethylene, propylene and butylene glycols with other explosive compounds, said explosive being a stable product of a relatively non-volatile nature and of low freezing point; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,213,368. LIQUID COMPOSITION. HAROLD HIBBERT, Pittsburgh, Pa. Filed Jan. 10, 1916. Serial No. 71,215. (Cl. 252.)

1. A heating and refrigerating liquid composition comprising water and glycols of the 1.2 glycol type miscible therewith, said composition being relatively non-volatile and remaining liquid at low temperatures; substantially as described.

2. A heating and refrigerating liquid composition comprising water and a mixture of 1.2 glycols including ethylene, butylene and propylene glycols, said composition being relatively non-volatile and remaining liquid at low temperatures; substantially as described.

3. A heating and refrigerating liquid composition comprising about 60 to 65 parts of water and 35 to 40 parts of glycols of the 1.2-glycol type miscible therewith, said composition being relatively non-volatile and remaining liquid at low temperatures; substantially as described.

4. A heating and refrigerating liquid composition comprising about 60 to 65 parts of water and 35 to 40 parts of a mixture of 1.2-glycols including ethylene, propylene and butylene glycols, said composition being relatively non-volatile and remaining liquid at low temperature; substantially as described.

5. A heating and refrigerating liquid composition comprising water and a mixture of glycols and polyglycols, said composition being relatively non-volatile and remaining liquid at low temperatures; substantially as described.

[Claim 6 not printed in the Gazette.]

1,213,369. EXPLOSIVE AND METHOD OF PRODUCING SAME. HAROLD HIBBERT, Pittsburgh, Pa. Filed Jan. 10, 1916. Serial No. 71,217. (Cl. 52—3.)

1. An explosive comprising a nitrated polyglycol, said explosive being a stable product of a relatively non-volatile nature and of low freezing point; substantially as described.

2. An explosive comprising a mixture of nitrated polyglycols, said explosive being a stable product of a relatively non-volatile nature and of low freezing point; substantially as described.

3. An explosive comprising a mixture of nitrated polyglycols with nitrated glycols, said explosive being a stable product of a relatively non-volatile nature and of low freezing point; substantially as described.

4. An explosive comprising a nitrated mixture of ethylene, propylene and butylene glycols and nitrated polyglycols, said explosive being a stable product of a relatively non-volatile nature and of low freezing point; substantially as described.

5. An explosive comprising a solution of nitro-cellulose in a nitrated polyglycol, said explosive being a stable colloid of relatively non-volatile nature and of low freezing point; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

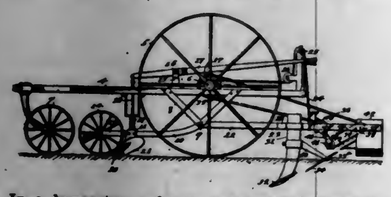
1,213,370. BAT. JOHN A. HILLERICH, Louisville, Ky., assignor to Hillerich & Bradsby Company, a Corporation of Kentucky. Filed Oct. 9, 1915. Serial No. 55,018. (Cl. 46—4.)



1. A handle for a base ball bat, tennis racket, hockey stick, and other sporting goods, for which this construction is suitable, covered with a sheet of cork under tension and secured in place by adhesion, and having an enlarging and cushioning foundation applied under the cork and firmly attached to the handle and to the inner side of the cork.

2. A handle for a base ball bat, tennis racket, hockey stick, and other sporting goods, for which this construction is suitable, covered with a sheet of cork under tension, and having an enlarging and cushioning foundation applied under the cork and firmly attached to the handle and to the inner side of the cork, the end portions of said cork extending beyond the said foundation and being applied and secured by adhesion directly to the handle.

1,213,371. BEET-HARVESTER. CLARENCE J. HOBSON and GEORGE PAGE WRIGHT, Orby, Cal. Filed May 27, 1915. Serial No. 30,865. (Cl. 55—9.)



1. In a harvester, a frame, a standard carried by said frame, beet digging blades at the lower end of said standard, one at each side thereof, and a beet gathering rake arranged at the rear of each of the said blades.

2. In a harvester, a frame, a standard at the longitudinal center of said frame, two rearwardly, outwardly and upwardly inclined beet digging blades carried by said standard, one at each side thereof, and a beet gathering rake arranged at the rear of each of the said blades.

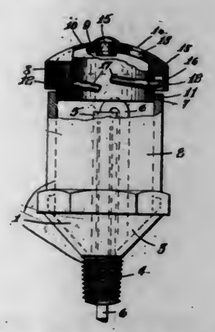
3. In a harvester, a frame, a standard carried by said frame, beet digging blades at the lower end of said standard, one at each side thereof, a cross bar vertically adjustable on said standard, and a set of forwardly and downwardly inclined rakes at each end of said cross bar and in rear of a digging blade.

4. In a harvester, a wheel supported frame, a supplemental frame carried by the wheel supported frame, a standard at the longitudinal center of the supplemental frame, digging blades at the lower end of the standard on opposite sides thereof, rakes carried by the standard, one in rear of each of the said blades, the teeth of the rakes inclining forwardly and downwardly, a forwardly and downwardly inclined table having its lower end adjacent the upper ends of the teeth of the rakes, endless belts above the table, one in rear of each rake, and means for operating the belts from the axle of the supporting wheels.

5. In a beet harvester, a wheel supported frame, a supplemental frame carried by the wheel supported frame, a standard carried by the supplemental frame, digging blades at the lower end of the standard, one at each side thereof and each adapted to dig the beets of a row, two rakes one in the rear of each blade, the teeth of the rakes inclining downwardly and forwardly, means in rear of the rakes for receiving the beets therefrom and conveying them away, and means for operating the conveying means from the axle of the supporting wheels.

[Claims 6 and 7 not printed in the Gazette.]

1,213,372. GREASE-CUP. ADOLPH WILLIAM HOLL, Cleveland, Ohio, assignor to George W. Bowen, Auburn, N. Y. Filed Apr. 29, 1915. Serial No. 24,676. (Cl. 184—92.)



1. A grease cup comprising a base, a cover including inner and outer cap members having perforations, the inner cap member being secured to the base, the outer cap member being rotatably mounted on the inner cap member and having its perforation arranged to be brought into and out of alinement with the perforation in the inner cap member during the rotation of said outer cap member, and the outer cap member and the base having opposing surfaces, and means interposed between the opposing surfaces of the outer cap member and the base and acting to retard turning of the outer cap member, substantially as and for the purpose specified.

2. A grease cup comprising a base having an annular wall, a cover for the base including inner and outer cap members, the inner cap member having an annular wall fitting into the upper end of the annular wall of the base, and the outer cap member being rotatably mounted on the inner cap member and having an annular wall lapping the outer face of the base, and friction means interposed between the annular walls of the cap members, and also between the upper edge of the base and the top of the outer cap member, said means acting as a brake on the outer cap member to prevent turning thereof, substantially as and for the purpose set forth.

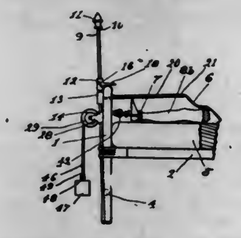
3. A grease cup comprising a base having a barrel portion, and a cover including inner and outer cap members having their tops engaging each other and their sides lapping respectively the inner and outer faces of the barrel portion of the base, the cap members being formed with perforations in their tops, and the outer cap member being rotatable relatively to the inner cap member and the base for bringing the perforation in its top into and out of registration with the perforation of the inner cap member, substantially as and for the purpose described.

4. A grease cup comprising a base having a barrel portion, a cover including inner and outer cap members having their tops engaging each other, and their sides lapping respectively the inner and outer faces of the barrel portion of the base, the cap members being formed with perforations in their tops, and the outer member being rotatable relatively to the inner cap member and the base for bringing the perforation in its top into and out of registration with the perforation of the inner cap member, and friction means interposed between the sides of the cap members and between the top of the outer cap member and the opposing surface of the barrel portion of the base, substantially as and for the purpose described.

5. A grease cup comprising a base, a cover including inner and outer cap members having perforations, the inner cap member being secured to the base, the outer cap member being rotatably mounted on the inner cap member and having its perforation arranged to be brought into and out of alinement with the perforation in the inner cap member, and the outer cap member and the base having opposing surfaces, and means interposed between the opposing surfaces of the outer cap member and the base and acting to retard turning of the outer member of the cover, said means including an annular compression spring, substantially as and for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,213,373. UNIVERSAL BUCK EXTENSION. EVERT HOLLOWELL, Kansas City, Kans. Filed Apr. 12, 1916. Serial No. 90,590. (Cl. 128—52.)



1. In a universal buck extension, a plurality of rods positioned in parallel relations, a hub on each of said rods and fitted to slide freely thereon, means to lock said hubs on said rods, an arm projecting from each of said hubs, a pin connecting said arms, a pulley journaled on said pin, a supporting means projecting from said rods, and means slidably mounted on said rods to bind said rods to a bed.

2. In a universal buck extension, a plurality of rods positioned in parallel relations, a hub on each of said rods, said hubs fitted to slide freely on said rods, said hubs connected by a parallel integral bar, means to lock said hubs on said rods, means to support said rods, and a rod projecting from each of said hubs approximately at a right angle to the first mentioned rods.

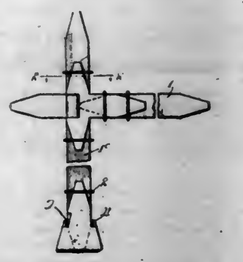
3. In a universal buck extension, a plurality of rods positioned in parallel relations, a hub on each of said rods, said hubs fitted to slide freely on said rods, means to lock said hubs on said rods, means to support said rods, a rod projecting from each of said hubs approximately at a right angle to the first mentioned rods, a hub on each of said last mentioned rods, and fitted to slide freely thereon, means to lock said last mentioned hubs on said last mentioned rods, a bar integral with said last mentioned hubs, arms projecting from said last mentioned bar, and a pulley journaled between said last mentioned arms.

4. In a universal buck extension, a plurality of rods positioned in parallel relation, means slidably mounted on said rods and arranged to rest upon the foot piece of a bed stead, a strap connecting to said rods through connections fitted to slide upon said rods, a pulley journaled to said rods through connection fitted to slide thereon, and a bed cover supporting rod connecting to said rods through connection fitted to slide freely on said rods.

5. In a universal buck extension, a plurality of rods positioned in parallel relation, a supporting rest slidably mounted on said rods, a connectible strap mounted on connections slidably mounted on said rods, a pulley journaled to connections slidably mounted on said rods, a plurality of bed cover supporting rods projecting from connections slidably mounted on said first mentioned rods, and a pulley journaled to connections slidably mounted on said bed cover supporting rods.

[Claims 6 and 7 not printed in the Gazette.]

1,213,374. STRUCTURAL TOY. ROBERT J. HOSKEN, Chicago, Ill. Filed June 24, 1914. Serial No. 847,168. (Cl. 189—36.)



1. In apparatus of the class described, a pair of blanks, one thereof having a tapered portion in combination with a wedging washer adapted to bind said tapered portion to another blank.

2. A structural toy comprising blanks having strip portions thereon, strips, said strip portions and strips being tapered at their ends, wedging washers whereby the tapered portion of one strip may be firmly clamped to the body portion of another strip without the use of wedges or the like.

3. A structural toy comprising blanks for connections, column bases, angles and the like and strips for beams, girders and the like, said blanks and strips having tapered portions and wedging means adapted to bind the tapered portion of one member to the body of another when said tapered portions overlap.

4. A structural toy adapted to be constructed out of sheet material comprising a plurality of blanks, having strip extensions thereon, for joints, column supports and the like, a plurality of strips for beams, girders and the like, and wedging washers whereby the end of a strip or strip extension may be rigidly clamped against the body of another strip or strip extension.

5. In a structural toy comprising blanks, strip extensions on said blanks, all said extensions being of the same width, in combination with wedging devices easily slidable along one of said strip extensions but adapted to bind two of said strip extensions together without the insertion of special wedging means.

[Claims 6 to 16 not printed in the Gazette.]

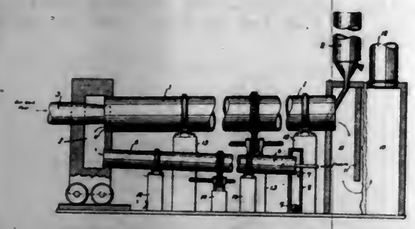
1,213,375. PROCESS OF PRODUCING ALKALINE-EARTH-METAL COMPOUNDS. FREDERICK W. HUBER and ROBERT W. POINDEXTER, Jr., Los Angeles, Cal. Filed July 6, 1914. Serial No. 849,314. (Cl. 23—13.)

1. A process of producing a sulfid of an alkaline earth metal, which comprises subjecting the sulfate of such a metal, free from admixture with solid fuel, to a reducing flame, at a temperature of about 1200 to 1300° C.

2. A process of producing strontium sulfid, which comprises, subjecting strontium sulfate, in a comminuted form to the action of a reducing flame, at a temperature of about 1200 to 1300° C.

3. A process of producing strontium-oxygen coinpounds, which comprises subjecting strontium sulfate to the action of a reducing flame, at a temperature of about 1200 to 1300° C., and thereafter subjecting the hot strontium sulfid, thereby produced, and while still in a highly heated condition, to the action of superheated steam.

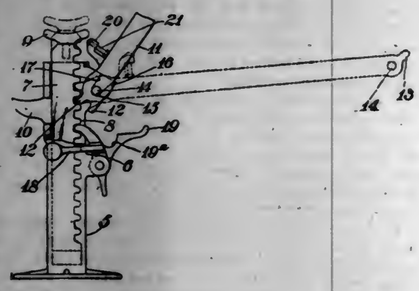
4. A process of producing alkaline earth metal compounds, which comprises subjecting comminuted alkaline earth metal sulfate, to the action of a reducing flame at a temperature materially above a red heat, thereafter subjecting the alkaline earth metal sulfid to the action of steam, at a high temperature, and bringing the gaseous product of said second reaction into contact with the material treated in said first step, to aid in maintaining a reducing atmosphere in said first step.



5. A continuous process of producing strontium-oxygen compounds, which comprises subjecting strontium sulfate, in the form of a moving agitated mass, to contact with a reducing flame, at a temperature of about 1200 to 1300° C., subjecting the hot strontium sulfid thereby produced to the action of steam, and passing the hydrogen sulfid produced in said second step, into contact with the materials treated in the first step, to aid in maintaining a reducing atmosphere in said first step.

[Claims 6 to 8 not printed in the Gazette.]

1,213,376. LIFTING-JACK. HENRY H. HUFFMAN, Columbus, Ohio. Filed Sept. 20, 1916. Serial No. 121,177. (Cl. 254—112.)

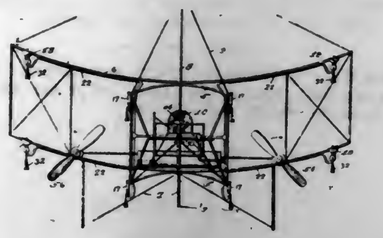


1. A lifting jack comprising, in combination, a base, a lifting bar having a toothed edge, a pawl and means for causing the same to be automatically engaged with said toothed edge, an operating bar constructed to engage said toothed edge to raise and lower the lifting bar and to directly actuate the pawl to remove the same from engagement with said lifting bar, and an automatically sliding device on the operating bar for engaging said pawl and holding the pawl disengaged from the lifting bar when the operating bar is moved to lower the lifting bar.

2. A lifting jack comprising, in combination, a base, a lifting bar having a toothed edge, a pawl and means for causing the same to be automatically engaged with said toothed edge, said pawl also having a finger with a depression therein, an operating bar constructed to engage said toothed edge to raise and lower the lifting bar and to directly actuate the pawl to remove the same from engagement with said lifting bar, and a sliding pin on the operating bar to drop into said depression to hold said pawl disengaged from the lifting bar when the operating bar is moved to lower the lifting bar.

3. A lifting jack comprising, in combination, a base, a lifting bar having a toothed edge, a pawl pivoted in the base to engage said toothed edge, means for causing the same to be automatically engaged therewith, and an operating bar having trunnions to fulcrum in the base above the fulcrum of the pawl and having at the same end a single rigid tooth to engage a tooth of the lifting bar, the other portion of said bar forming a handle and constructed to engage the pawl, when depressed, to release the same from engagement with the lifting bar, said tooth standing, when the bar is in operative position, at an upward inclination to the axis of the operating bar, whereby the said tooth may be disengaged from the lifting bar and the said handle subsequently depressed to contact with the pawl to release the same from the lifting bar thereby permitting the lifting bar to fall.

1,213,377. AEROPLANE. JAMES W. INGLETON, Astoria, Oreg. Filed Dec. 30, 1914. Serial No. 879,740. (Cl. 244—29.)



1. An air craft including transversely arranged planes, a balancing vane mounted in each end of the planes and movable therein to be automatically operated when said planes are tilted, an air cup carried by each side of each of the terminals of said planes having a partition therein to divide said cup into two parts, and an air supply pipe in communication with each of said parts of the cup, an air baffle movable in each of said parts and in connection with the vane, and a valve automatically operable by the tilting of the craft to open communication to either of said air supply pipes, whereby pressure is exerted upon either one of said baffles for re-adjusting the vane to insure stabilization of the craft.

2. An air craft including planes, a balancing vane movably mounted in each of said planes and automatically movable when the planes are tilted, air baffles associated with the opposite ends of each of said balancing vanes, cups housing said baffles, each of which is equipped with a partition to coact with said baffles, an air supply pipe communicating with said cup on the opposite sides of said partitions, and a valve for normally closing communication through said air pipes, and automatically permitting communication through either of the pipes of the cup when the craft is tilted.

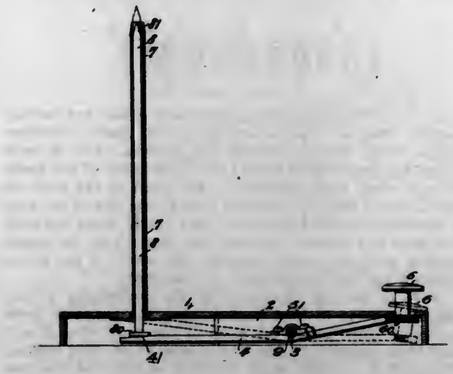
3. An air craft including lateral and longitudinal planes, balancing vanes associated with each of said planes and operable upon displacement of the craft, motors associated with the vanes, air supply pipes in connection with said motors to control the latter for holding the vanes in a predetermined position, and a valve member for closing communication through certain of the supply pipes to hold the vanes of said longitudinal planes in a fixed position when ascending or descending.

4. An air craft including planes, balancing vanes mounted in the opposite terminals of each plane, a pair of motors in connection with each vane to insure predetermined positioning of the latter, and means common to all of said motors to control movement of the latter.

5. An aeroplane including longitudinally and transversely extending planes, a balancing vane mounted in each terminal of each of said planes, motors in connection with said vanes and automatically movable under tilting movement of the planes, mechanism for transmitting motive energy to said motors for operating the latter and means common to said mechanism for rendering the motors of either the longitudinally or transversely extending planes inoperative.

[Claim 6 not printed in the Gazette.]

1,213,378. PAPER-FILE. NELS V. JENSEN, Portland, Oreg. Filed Mar. 29, 1916. Serial No. 87,464. (Cl. 129—21.)



1. A paper file comprising a base, a tubular spindle mounted thereon, a puncturing spindle normally incased within the said tubular spindle and finger operated means on the base for engaging and projecting the puncturing spindle above the tubular spindle, said puncturing needle having its end sharpened, said finger operated means having provision for normally lying retracted, whereby said sharpened end of said spindle will normally lie within the confines of said tubular spindle.

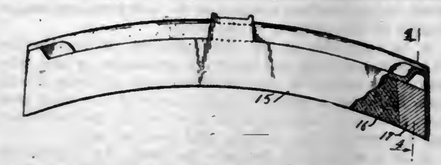
2. A paper file comprising a base, a tubular spindle mounted thereon, a puncturing spindle normally incased within the said tubular spindle and finger operated means on the base for engaging and projecting the puncturing spindle above the tubular spindle, said means comprising a lever rockably mounted on the underside of the base, one end of which acts as a support for the puncturing spindle and a pusher member on the other end of the lever that projects above the base.

3. As a new article, a paper file comprising a suitable base including pendent oppositely disposed side members, a cross bolt mounted on the said side members, a lever rockably mounted on the said bolt, a pusher member on the outer end of the lever that projects above the base, a tubular spindle removably connected to the base member and a puncturing spindle loosely held on the tubular spindle and projected below the base to rest on the inner end of the lever, the upper end of the puncturing spindle being normally held within the upper end of the tubular member and adapted to be moved up out of the said tubular member when the outer end of the lever is depressed.

1,213,379. COMPOSITION-FILLED BRAKE-SHOE. HARRY JONES and ROBERT C. AUGUR, Suffern, N. Y., assignors, by mesne assignments, to The American Brake Shoe & Foundry Company, Wilmington, Del., a Corporation of Delaware. Filed Jan. 2, 1914. Serial No. 809,821. (Cl. 188—27.)

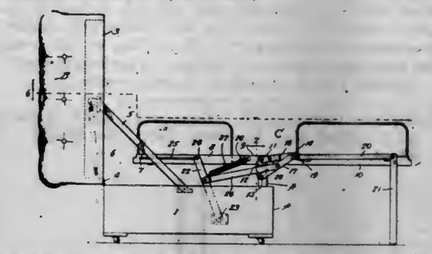
1. A brake shoe consisting of a shell or casing substantially trough-shape, metallic blocks positioned within said shell, conforming in shape to, and contacting throughout with, the end walls of said shell and supplementing the same, and a composition body portion contained within said shell and forming, in conjunction with said metallic blocks and casing, a wearing body.

2. A brake shoe consisting of a casing substantially trough-shape, including end walls, metallic blocks positioned within said casing, extending between the side walls



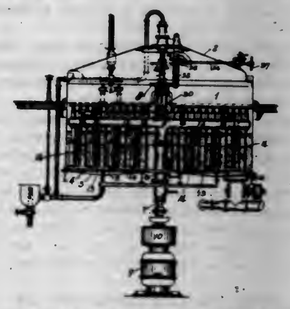
thereof, said metallic blocks approximating the shape of, and contacting throughout with, the said end walls of the casing, and a wearing body portion contained within the shell and extending between said metallic blocks.

1,213,380. COUCH OR SOFA. SOLOMON KARPEN, Chicago, Ill., assignor to S. Karpen & Bros., Chicago, Ill., a Corporation of West Virginia. Filed Aug. 9, 1915. Serial No. 44,600. (Cl. 5—51.)



In a structure of the character set forth, the combination of a main box frame provided at its front corners with fixedly secured standards, folding standards mounted thereon, an intermediate bed section mounted on said folding standards, front and rear bed sections pivotally connected with the intermediate bed section, a pair of links at each end of the bed structure connected with the pivots at the ends of the folding standards, a link connecting each of said pairs of links with the outer bed section, folding legs connected with the outer bed section, links joining said legs to said second named links, links connected with the end members of the box frame and serving to elevate the rear bed section, actuating links for said last named links, connected with said pairs of links, and springs connecting the intermediate bed section with and tending to elevate the links which support the rear bed section.

1,213,381. MASH AND STRAINER TANK MACHINE. ANDREAS R. KELLER, Chicago, Ill. Filed Mar. 15, 1916. Serial No. 84,346. (Cl. 195—30.)



1. In a machine of the class described, the combination of a tank, straining and agitating mechanism in said tank, means for adjusting said straining and agitating mechanism and controlling mechanism for said adjusting means.

2. In a machine of the class described, the combination of a tank, straining and agitating mechanism in said tank, means for adjusting said straining and agitating mechanism, and controlling mechanism for said adjusting means, located on the exterior of the tank.

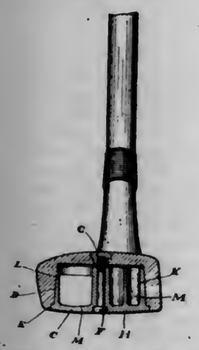
3. In a machine of the class described, the combination of a tank, straining and agitating mechanism in said tank, means for adjusting said straining and agitating mechanism including a shaft rotatably mounted in a fixed position, a movable shaft shiftable relatively to the fixed shaft, and a controller for shifting said movable shaft.

4. In a machine of the class described, the combination of a tank, straining and agitating mechanism in said tank, means for adjusting said straining and agitating mechanism including a shaft rotatably mounted in a fixed position, a longitudinally movable shaft shiftable relatively to the fixed shaft, and a controller for shifting said movable shaft.

5. In a machine of the class described, the combination of a tank, straining and agitating mechanism in said tank, means for adjusting said straining and agitating mechanism including a vertical shaft rotatably mounted in a fixed position, a longitudinally shiftable horizontal shaft, gears respectively mounted on said shafts, and adapted to be engaged or disengaged by the shifting of said horizontal shaft, and means for shifting said horizontal shaft.

[Claims 6 to 35 not printed in the Gazette.]

1,213,382. GOLF-CLUB. HORACE L. KENT, Brooklyn, N. Y. Filed May 10, 1916. Serial No. 96,526. (Cl. 46—4.)



1. A golf club having in the head thereof an angularly adjustable cup member containing ballast material, which material is eccentrically located relative to an axis about which said ballast member is angularly adjustable.

2. A golf club having in the head thereof an angularly adjustable ballast member, which ballast member is unsymmetrically weighted with respect to an axis relative to which said ballast member is angularly adjustable.

3. A golf club having in the head thereof a removable eccentrically-weighted ballast member which can be caused to assume any one of several angularly adjusted positions in the head whereby the effect of the eccentrically weighted ballast member can be regulated.

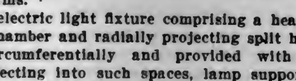
4. A golf club having in the head thereof an angularly adjustable ballast member detachably secured in the head, which ballast member is eccentrically weighted with respect to the axis about which it is angularly adjustable.

5. A golf club having in the head thereof an angularly adjustable ballast member secured in place as by a screw, said ballast member having more weight on one side of the axis of the screw than it has on the other side.

[Claims 6 to 19 not printed in the Gazette.]

1,213,383. FIREARM-CLEANING-ROD TIP. HARRY R. KIESSIG, Berkeley, Cal. Filed Mar. 27, 1916. Serial No. 86,892. (Cl. 42—91.)

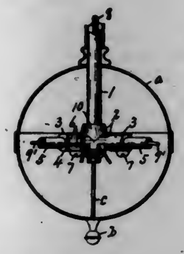
1. In a fire-arm cleaning rod tip, a round rod having sundry annular grooves, sundry annular ridges between the grooves, the sides of the ridges being the walls of the grooves, each of the ridges having spiral teeth, the teeth of each ridge having opposite pitch to that of the teeth of the adjacent ridge, a toothless head section at one end of the rod, a toothless shank section, the above named grooves and ridges alternating and being located between the head and shank sections, the head, the ridges, and the shank having approximately the same diameter, said diameter being larger than the diameter of the bottom of the grooves, the teeth of the ridges having an approximately V shaped profile, all substantially as set forth.



2. In a fire-arm cleaning rod tip, a round rod having sundry annular grooves near one end, sundry annular ridges being formed between the grooves, each of said ridges having teeth of helical pitch, the pitch of the teeth of each ridge being opposite to the pitch of the teeth of the adjacent ridge, a toothless head at one end of the rod, a toothless shank, the grooves and ridges being between the head and shank, the head, the ridges, and the shank having about the same diameter, the whole of the above forming the tip substantially as described.

3. In a fire-arm cleaning rod tip, comprising a rod, sundry annular toothed sections upon the rod, said teeth having a spiral pitch, the pitch of the teeth of each section being opposite to that of the teeth of the next section, the toothed sections being near one end of the rod and a shank section for the purpose specified.

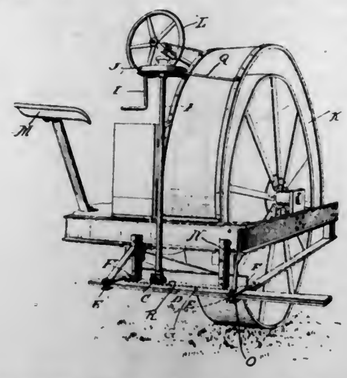
1,213,384. ELECTRIC-LIGHT FIXTURE. CYRIL W. KING, Oswego, N. Y. Filed Oct. 1, 1913. Serial No. 792,902. (Cl. 248—30.)



1. An electric light fixture comprising a head having a central chamber and radially projecting split hubs spaced apart circumferentially and provided with apertured ears projecting into such spaces, the upper ear being of greater cross sectional area than the lower ear and extending beneath the horizontal axis of the hub, lamp-supporting arms slidably engaged in said hubs, with the enlarged upper ear engaging the same entirely over its adjacent face and below the transverse axis of the arm, and bolts passed through the apertured ears for tightening the hubs on the arms.

2. An electric light fixture comprising a head having a central chamber and radially projecting split hubs spaced apart circumferentially and provided with apertured ears projecting into such spaces, lamp supporting arms slidably engaged in said hubs, one of said ears of each pair being formed to have the inner end thereof engage the arm throughout its length and past the transverse axis thereof, bolts passed through the apertured ears for tightening the hubs on the arms, the portions of the hub between the arms being extended and united at points above and below the plane of the hubs and provided with co-axial threaded sockets, a supporting pipe screwed in the upper socket, and a case-supporting rod secured in the lower socket.

1,213,885. SHIFTABLE TRACTOR DRAW-BAR. ARTHUR J. KNIERIEM, Scribner, and GEORGE H. HILBERS, Hooper, Nebr. Filed May 17, 1916. Serial No. 98,224. (Cl. 21—137.)



1. In a device of the character described, the combination of a casing secured to a tractor or the like, power transmitting means within said casing, a crank operating said power transmitting means, a shaft suspended from said casing and operatable by said power transmitting means, a gear carried by the lower end of said shaft, a rack in mesh with said gear, brackets supporting said rack, and rollers carried by said brackets in contact with the rear face of said rack.

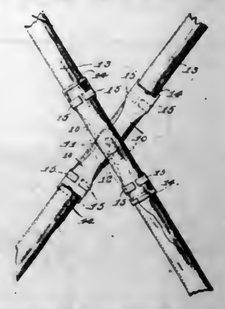
2. In a device of the character described, the combination with a tractor of a supporting frame including bifurcated arms, a draw-bar having rack teeth thereon movable in said arms, a shaft, a pinion carried by the shaft and meshing with the rack teeth of the draw-bar, a casing, brackets extending from the tractor and supporting the casing and means within the casing from which a crank extends to within the convenient reach of the operator for rotating the shaft and moving the draw-bar transversely of the tractor.

3. In a device of the character described the combination with a tractor, of a movable draw bar carried thereby, a casing, brackets secured to the tractor and supporting said casing, a shaft journaled at one end in a portion of the casing and extending therein, a pinion keyed to said shaft within the casing, a pinion keyed to the opposite end of the shaft and engaging teeth formed upon the draw-bar, a crank shaft journaled in the casing, and a worm keyed to the crank shaft and concealed within the casing and engaging the pinion therein.

4. In a device of the character described, the combination with a tractor of a shiftable draw-bar having rack teeth provided upon one edge and movably mounted upon the tractor, a vertical shaft, a pinion keyed to one end thereof and meshing with the teeth of said draw-bar, a casing supported by the tractor and forming a bearing for the upper end of said shaft, a pinion keyed to the shaft within said casing, a bracket carried by the shaft and extending beyond the edge of the pinion within the casing, a crank shaft journaled in said bracket and a worm on the crank shaft and disposed between the ends of the bracket and meshing with the pinion in said casing as and for the purposes set forth.

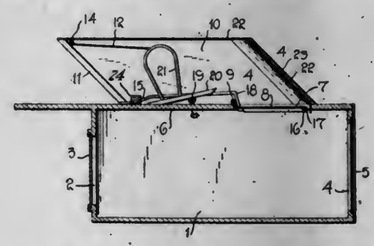
1,213,386. SUSPENDER CONNECTION. JEAN G. LAMOTHE, New York, N. Y. Filed Jan. 26, 1916. Serial No. 74,466. (Cl. 241—24.)

A support comprising plates having their central portions pivotally connected and having their end portions bent to extend in spaced relation, gripping tongues extending from the sides of the plates adjacent the ends thereof and bent back to extend transversely of the plates in overlapping relation to the outer faces thereof, the plates being provided with transversely extending slots between the gripping tongues and the ends of the plates, and straps extending longitudinally of the plates along



the outer faces thereof and passing beneath said gripping tongues and through said slots and extending from the plates out of engagement with each other.

1,213,387. TRAP. RALPH A. LEWIS, Grangeville, Idaho, assignor of one-third to William Strait and one-third to Wallace N. Scales, Grangeville, Idaho. Filed May 4, 1916. Serial No. 95,448. (Cl. 43—26.)



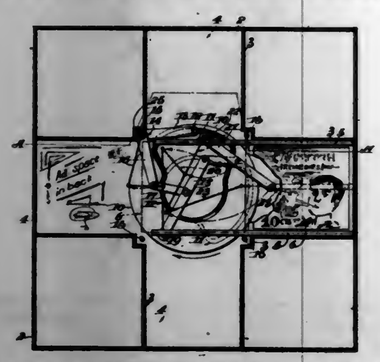
A trap including an inclosed housing having one end open and provided with an opening in its base, a vertically swinging door coacting with the open end of the housing, automatic means for maintaining the swinging door in an elevated position, a depressible platform normally closing the opening in the base, an elongated rod having one end portion underlying the platform, said platform having a marginal portion returned to afford a barrel to receive said end portion of the elongated member, a portion of the elongated member immediately adjacent the platform being offset upwardly, the outer end portion of the elongated member extending beneath the swinging door and serving to elevate the same upon depression of the platform.

1,213,388. ADVERTISING DEVICE. JOHN P. LOFTUS, Vancouver, British Columbia, Canada. Filed Feb. 18, 1914, Serial No. 819,469. Renewed June 10, 1916. Serial No. 103,020. (Cl. 40—65.)

1. An advertising device, comprising the combination with a suitable supporting frame having a central withdrawal space, adjacent and parallel slideways projecting horizontally and vertically outward from this space, advertising display cards endwise movable in the slideways, a cam rotatably mounted within the witddrawal space to rotate in a plane parallel to the slideways, and means for connecting each card to the eccentricity of the cam to project them successively from the withdrawal space and return them thereto at regular intervals.

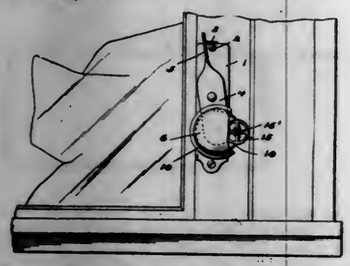
2. An advertising device, comprising the combination with a substantially square casing, having a right angled partition at each corner that will leave a cross shaped space across the middle of the casing, a slideway extending along each arm of the cross and into the central space

at the intersection, said slideways being in adjacent and parallel planes, an advertising card endwise movable in each slideway, a cam rotatably mounted in the intersection space to rotate in a plane parallel to the slideway



and a lever system multiplying the eccentricity of the cam to successively project each display card from the intersection space outward into the arms and to withdraw the same.

1,213,389. BURGLAR-ALARM. GEORGE F. LUMB, Harrisburg, Pa. Filed Aug. 16, 1916. Serial No. 115,321. (Cl. 116—44.)



A plate adapted to be secured to a window sash, having an upturned outwardly extending projection at one end thereof, a plate pivotally mounted on said first-mentioned plate intermediate of its ends, a spring arm on one end of said second-mentioned plate by which said plate may be shifted on its pivot and adapted to engage the upturned projection on the first-mentioned plate to hold same in adjusted positions, an alarm bell carried on the opposite end of said pivoted plate having a friction wheel projecting from the side thereof adapted to engage the side of a window frame when adjusted into operative position and held therein by the spring action of said arm, and ratchet means within said bell and in operative engagement with said friction wheel for actuating the striker mechanism of said bell, substantially as described.

1,213,390. SANITARY PUMP. ANDREW J. MCCALL, St. Louis, Mo. Filed May 28, 1913. Serial No. 770,581. (Cl. 261—42.)

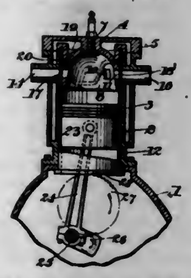
1. In a sanitary beer pump, the combination of a cylindrical vertical mounted water container, of an air tank located above the same; a pipe connection connecting both the tank and container, a valve located therein; a combination air and water supply pipe leading into the water container for supplying the water tank with water, the inner end of said pipe being perforated through which the water or air may be permitted to enter into said tank; and a pipe connection located on the top of the air tank by which the purified air is conveyed to the proper source of supply, substantially as specified.

2. A device of the class described, comprising a vertically mounted water compartment in combination with a vertically mounted air container; a pipe connection connecting both containers, a valve located therein for regulating the passage from one container to the other; a drain tap located at the bottom of the water container and normally closed by a cap; a combination water and air supply pipe leading into the water tank, a check valve



located in the pipe connection, the inner end of the pipe being perforated and through which the water or the air may be permitted to pass into the container; and a governor controlled pipe connection located on the top of the air container through which the air is directed to the proper source of supply, and an overflow cock located near the top of the water container for regulating the height of the water container, substantially as specified.

1,213,391. ENGINE-VALVE MECHANISM. HARRY F. MCCRAY and WINFORD W. GOODRICH, Reno, Nev. Filed May 15, 1916. Serial No. 97,535. (Cl. 123—80.)



1. In an engine, the combination with the cylinder containing the power chamber, of a rotary valve having ports adapted to communicate with said power chamber during the intake and exhaust strokes of the engine, and a narrow sinuous packing ring extending continuously above and below the path of the ports in the valve and across said path at intervals forming pockets to receive said ports during the compression and expansion strokes for sealing said ports from the power chamber during those periods.

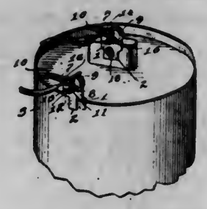
2. In an engine, the combination with the cylinder having intake and exhaust ports, of a cylinder head having an annular wall extending down into the cylinder provided with opening or openings communicating with said intake and exhaust ports of cylinder, a rotary valve sleeve interposed between said cylinder and annular wall of cylinder head, said rotary valve sleeve having ports adapted to register with said intake and exhaust ports of cylinder and communicating with said opening or openings in the annular wall of cylinder head during intake and exhaust strokes of the engine respectively, and a narrow sinuous packing ring interposed between the valve sleeve and the annular wall of the cylinder head and extending continuously above and below the path of the ports in the valve sleeve and across said path at intervals forming pockets to receive said ports, during the compression and expansion strokes of the engine for sealing said ports from the opening or openings in the annular wall of the cylinder head during those periods.

1,213,392. HAT-HOLDER. MATO FITZMAURICE MALONEY, Atlantic Beach, Fla. Filed July 17, 1916. Serial No. 109,746. (Cl. 24—250.)



A device of the class described comprising a short jaw and a long jaw having a pivoted connection with each other, and a spring coil coacting with the jaws to normally hold them open, a flat pad on the lower end of the long jaw, a recessed pad on the lower end of the short jaw, the long jaw having a locking lever pivoted thereto above the common pivot of the jaws, said short jaw having a transverse groove adjacent its upper end, and a free end of the locking lever adapted to engage the upper end of said short jaw and to be positioned in the transverse groove to positively lock the jaws in closed position.

1,213,393. CONNECTOR FOR ELECTRIC CONDUCTORS. HOSEA F. MAXIM, Norfolk, Va., assignor of one-half to Otto Wells, Norfolk, Va. Filed Feb. 10, 1912. Serial No. 676,782. (Cl. 173—259.)



1. In a connector for electric conductors, the combination with a flat body having an opening adapted to receive an electric conductor, of a coil spring positioned upon the body with its coil parallel to the body, one end of the said spring being extended in the form of an arm to co-act with a conductor and press it into engagement with the body, and a tongue formed on the body and adapted to receive the other end of the coil spring.

2. In a connector for electric conductors, the combination with a flat body having an opening adapted to receive an electric conductor, of a coil spring mounted upon the body with one end extended to form a finger piece adapted to co-act with the electric conductor, and a tongue formed outward from the plane of the body and positioned to receive the other end of the coil spring.

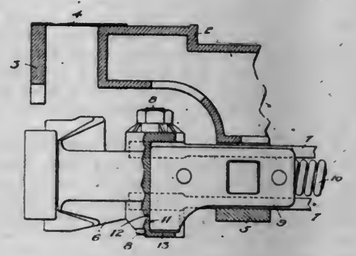
3. A connector for electric conductors comprising a flat body having an opening adapted to receive an electric conductor, a tongue pressed outward from the body, and a conductor-engaging spring comprising double coils positioned one upon each side of the body, one end of the spring extending outward from the coils in the form of a conductor-engaging arm, and the other end of the spring extending tangentially from the coils into engagement with the said tongue.

4. In a connector for electric conductors, the combination of a flat body having an opening adapted to receive an electric conductor, a spring mounted upon the body with one end extended to form a pressure arm adapted to contact with an electric conductor in the said opening, and a ledge projecting outward from the body and positioned to support the other end of the spring, the said ledge having a flange at the outer end to hold the said end of the spring in place.

5. In a connector for electric conductors, the combination of a flat body having an opening adapted to receive an electric conductor, a spring mounted upon the body with one end extended to form a pressure arm adapted to contact with an electric conductor in the said opening, a ledge projecting outward from the body and positioned to support the other end of the spring, a stop positioned on the body adjacent the said opening to limit the movement of the said pressure arm when no conductor is in the opening, and means for preventing endwise movement of the spring with respect to the body.

[Claims 6 to 14 not printed in the Gazette.]

1,213,394. CAR-COUPLING. ISAAC H. MILLIKEN, Aspinwall, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 11, 1916. Serial No. 71,526. (Cl. 213—42.)



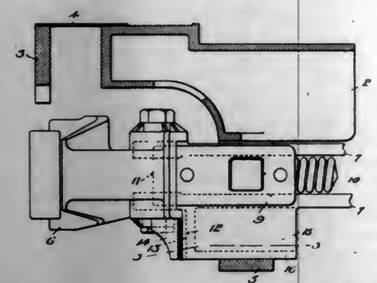
1. In a draft appliance for railway vehicles, the combination with a coupler stem, of a coupler head pivotally connected to said stem so as to swing on a vertical axis, and a yieldingly supported member slidably mounted on said stem and engaging said coupler head below said stem.

2. In a draft appliance for railway vehicles, the combination with a coupler stem, of a coupler head pivotally connected to said stem so as to swing on a vertical axis, and a yieldingly supported member slidably mounted on said stem and having portions which respectively engage said head at a greater vertical distance on one side of the longitudinal axis of the stem than on the other.

3. In a draft appliance for railway vehicles, the combination with a coupler stem, of a coupler head pivotally connected to said stem so as to swing on a vertical axis, and means carried by said stem for resisting drooping of said head with respect to said stem, said means involving a plurality of laterally spaced bearing faces which engage said head on opposite sides of the pivotal axis thereof and which extend to a greater vertical distance below the longitudinal axis of said stem than above the same.

4. A coupler head having alined openings adapted to receive a vertically extending pivot pin whereby it may be pivotally connected to a coupler stem, said head having a pocket adapted to receive said stem and being provided on its under surface with a recess adapted to receive the end of said pivot pin, said pocket being provided with a reëntrant lower wall which also forms a wall of said recess.

1,213,395. DRAFT APPLIANCE FOR RAILWAY-VEHICLES. ISAAC H. MILLIKEN, Aspinwall, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 11, 1916. Serial No. 71,527. (Cl. 213—42.)



1. In a draft appliance for railway vehicles, the combination of a coupler head, a coupler stem, means for pivotally connecting said head and stem so as to permit said head to swing laterally with respect to said stem, and means for supporting said stem from the railway vehicle, said stem being provided with a downwardly extending projection which engages said coupler head in advance of said stem supporting means and to the rear of the outer end of said stem, whereby drooping of the said head is minimized.

2. In a draft appliance for railway vehicles, the combination of a coupler head, a coupler stem, and means for pivotally connecting said head and stem so as to permit said head to swing laterally with respect to said stem, said head and said stem being respectively provided on their lower sides with projections which extend downwardly below the outer end of said stem and which are provided with vertically extending bearing faces that are adapted to engage each other to thereby minimize drooping of the coupler head.

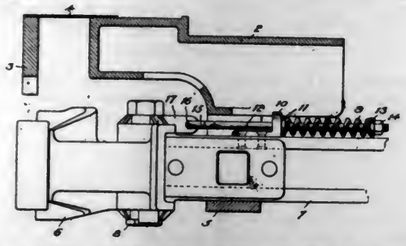
3. In a draft appliance for railway vehicles, the combination of a coupler head, a coupler stem, means for pivotally connecting said head and stem so as to permit said head to swing laterally with respect to said stem, and a yieldingly supported device slidably mounted on said stem and adapted to engage said head and to centralize the same with respect to said stem, said stem being provided with a vertically extending bearing face which engages said head to the rear of the forward end of said yieldingly supported device.

4. A coupler head having alined openings to receive a vertically extending pivot pin whereby it may be pivotally connected to a coupler stem, said head having a rearwardly open pocket adapted to receive said stem and having on its under side a projection extending downwardly below the lowermost of said pivot pin openings, said projection having a vertically extending bearing face adapted to engage said stem.

1,213,396. CAR-COUPLING. ISAAC H. MILLIKEN, Aspinwall, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 11, 1916. Serial No. 71,528. (Cl. 213—42.)

1. In a car coupler, the combination with a coupler head, of a coupler stem, means for pivotally connecting said head and stem so as to permit said head to swing laterally with respect to said stem, and spring mechanism extending in the direction of length of the coupler stem and engaging said head to the rear of its pivotal connection with said stem and constituting means for yieldingly resisting drooping of said head in the direction of its pivotal axs.

2. In a car coupler, the combination with a coupler head, of a coupler stem, means for pivotally connecting said head and stem so as to permit said head to swing laterally with respect to said stem, and yielding means engaging the upper portion of the coupler head at a point removed from its axis of pivotal connection with said stem and constituting means extending in the direction of length of said coupler stem for yieldingly resisting drooping of said head.

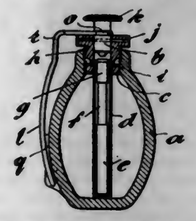


3. In a car coupler, the combination with a coupler head, of a coupler stem, means for pivotally connecting said head and stem so as to permit said head to swing laterally with respect to said stem, and a spring mounted on said stem and extending in the direction of length thereof, and operatively interposed between said spring and head and serving to yieldingly resist drooping of said head in the direction of its pivotal axis.

4. In a car coupler, the combination with a coupler head, of a coupler stem, means for pivotally connecting said head and stem so as to permit said head to swing laterally with respect to said stem, and means for yieldingly resisting drooping of said head in the direction of its pivotal axis, said means for resisting drooping of the head involving a spring mounted on the exterior of said stem and extending in the direction of length thereof, and a rigid member operatively interposed between said spring and said head.

5. In a car coupler, the combination with a coupler head, of a coupler stem, means for pivotally connecting said head and stem so as to permit said head to swing laterally with respect to said stem, and means for yieldingly resisting drooping of said head in the direction of its pivotal axis, said means for resisting drooping involvng a spring mounted upon the upper side of said stem, means for transmitting the resistance of said spring to said coupler head, and means for adjusting the operative length of said last-named means.

1,213,397. HAND-GRENADE, INCENDIARY AND OTHER BOMB, AND THE LIKE. WILLIAM MILLS, Birmingham, and WILLIAM MORGAN, Bristol, England. Filed May 8, 1916. Serial No. 96,138. (Cl. 102—29.)

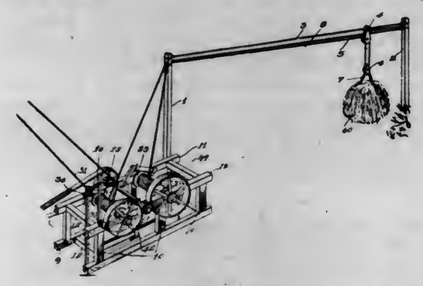


1. In a hand grenade, incendiary or other bomb, or the like, the combination with a hollow body of means whereby a charge in the said body may be fired, and means whereby said firing means may be controlled, said controlling means being adapted to be gripped or held by the hand grasping said body, and said controlling means being so arranged with relation to the said body that the action of grasping the said body by the hand is adapted to disengage the controlling means from the firing means.

2. In a hand grenade, incendiary or other bomb, or the like, the combination with a hollow body of means whereby a charge in the said body may be fired, and means whereby said firing means may be controlled, said controlling means being adapted to be gripped or held by the hand grasping said body, and said controlling means being so arranged with relation to the said body that the action of grasping the said body by the hand is adapted to disengage the controlling means from the firing means, said controlling means being separable from the grenade when desired.

3. A grenade, comprising in combination a hollow body, a firing member carried by said body mounted to move axially thereof, one extremity of said member being disposed externally of the body, and said extremity being adapted to be concussively operated inwardly, a resistance member normally retaining said striker in position, said resistance member being adapted to be overcome when the striker is concussively operated, and additional means for normally maintaining said striker in an inoperative condition comprising a safety member, said safety member being normally disposed in relief in relation to the body of the grenade whereby it may be automatically displaced by the action of the hand in grasping the latter.

1,213,398. FRICTIONAL GEARING. ALBERT MOEDE, Reedsville, Wis. Filed Apr. 28, 1916. Serial No. 94,148. (Cl. 74—26.)



1. The combination with a hoisting device of the class described, including a base frame, a pair of parallel shafts mounted on said frame transversely thereof, hoisting drums carried on said shafts, wheels carried by the free ends of said shafts, of a driving shaft, a friction wheel carried by said driving shaft, one end of said shaft carrying said friction wheel being shiftable for engagement with the other wheels, a lever for shifting said shaft, the said lever being pivotally connected to the base, pulley wheels, supporting arms for said pulley wheels mounted on the said frame and extending upwardly therefrom, and a pair of cables connected to said lever and trained over the pulleys on the opposite sides thereof for purposes specified.

2. The combination with a hoisting device of the class described, including a base frame, a pair of parallel shafts mounted on said frame transversely thereof, hoisting drums carried on said shafts, of a driving shaft, one end of which is laterally shiftable, friction means carried by each of said shafts, a lever for shifting said shaft pivotally connected to the base, a bracket member connected to the frame, a second lever pivotally mounted in said bracket, the end of said second lever being bifurcated to embrace the said shaft, a bar pivotally connecting the lower ends of said levers, a link mounted on the second mentioned lever adjacent the lower end thereof, a pair of springs connected to the said link and anchored to the frame and the first mentioned lever respectively on opposite sides of the link for a purpose specified.

1,213,399. DIRIGIBLE VEHICLE-HEADLIGHT. GEORGE W. MORSE, Park City, Utah. Filed Feb. 2, 1916. Serial No. 75,651. (Cl. 240—62.)

1. In combination with a steering device for a vehicle, a lamp, a gear wheel, a gear wheel on the steering device meshing with said gear wheel, a sprocket wheel, means to drive said sprocket wheel from the teeth on the first mentioned gear wheel, a chain trained around said sprocket wheel, and means operable by said chain to shift said lamp.



2. In combination with a lamp, a shaft, a casing in which the shaft is mounted, driving means for the shaft within the casing, means within the casing engaging the casing to prevent displacement of the shaft, brace means connected to the lamp and resting on the casing, and friction reducing means intermediate the brace means and the casing.

3. In combination with a lamp, a shaft therefor, a casing, means within the casing to turn said lamp, said shaft being provided with a bearing to engage the bottom of the casing, and means on the shaft interior of the casing to engage the top of the casing to prevent displacement of the shaft.

4. In combination with a lamp, a shaft therefor, a casing, said shaft extending through said casing and having a bearing engaging its bottom wall, means on said shaft interiorly of the casing to engage the top wall to prevent displacement of the shaft, driving means for the shaft within the casing, and a bearing rigidly connected to the shaft exteriorly of the casing extending outwardly and downwardly and resting on the casing.

5. In combination with a steering member of a vehicle, a gear wheel slidable thereon and turnable therewith, means to secure the gear wheel in an adjusted position, a second gear wheel, a casing, a shaft mounted in said casing, means to drive said shaft from the second mentioned gear wheel, a lamp, a supporting shaft therefor extending through the casing and having a bearing to engage its bottom wall, means to prevent vertical displacement of the last mentioned shaft, means to drive the last mentioned shaft from the first mentioned shaft, bearing means rigid with the supporting shaft and engaging the top of the casing.

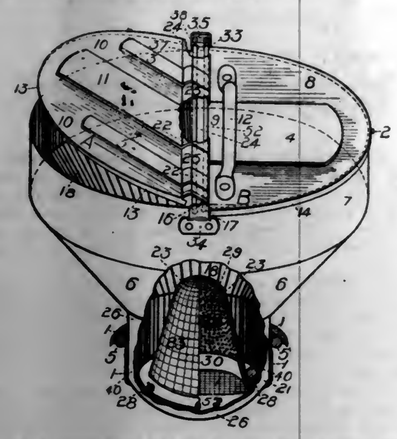
1,213,400. RECEPTACLE-COVER. JOHN F. MULLANEY, Colorado Springs, Colo. Filed Apr. 20, 1911. Serial No. 622,255. (Cl. 220—22.)

1. In a receptacle, the combination of a cover having a bearing having two oppositely projecting ends and a hinge lug secured to the edge of the receptacle and having its inner face flanges provided with a groove extending laterally from the rear to the front of the lug and terminating in a slight recess adapted to receive and hold one of the ends of said bearings of the removable cover, and a hinge lug secured to the opposite side of said receptacle and having a deep recess on its inner face adapted to receive and hold the opposite end of said bearing, substantially as set forth.

2. In a receptacle, the combination of a two-part cover, the top part having a bearing having two oppositely projecting ends, a hinge securing lug secured to the side of the receptacle and having a groove, extending laterally from rear to front on its inner or secured side and terminating in a slight recess adapted to receive and hold one end of the bearing of the said top part, a hinge lug secured to the opposite side of the receptacle and having a deep recess on the inner secured side thereof adapted to receive and hold the opposite end of the bearing of the said top part, substantially as set forth.

3. In a receptacle, a cover provided with a bearing having two oppositely projecting ends, a hinge lug, secured to the side of the receptacle near its open top and having a grooved way extending laterally from its rear

edge to near its front edge on its inner or secured side and terminating in an enlarged slight recess, adapted to receive and hold one end of the bearing of the cover, a hinge lug secured to the opposite side of said receptacle and having a deep recess on the inner or secured side thereof adapted to receive and hold the opposite end of said cover bearing, substantially as set forth.



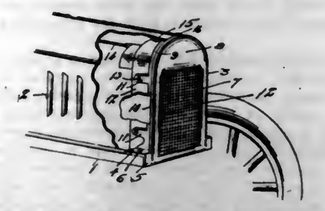
4. In a receptacle, having a removable hinged lid, a hinge lug secured to the outer side of the receptacle near its open top and having a grooved way, extending laterally from its rear top edge on its inner or secured side and terminating in a slight recess, adapted to receive and hold one of the cover bearing ends, a hinge lug secured to the opposite side of said receptacle at the same relative height as the former hinge lug and having a deep recess on the inner or secured side thereof near its front edge and opposite the slight recess adapted to receive and hold the opposite bearing end of said cover, said first-named lug being provided with a deep recess between the slight recess and the entrance to the said grooved way, a projecting pivotal bearing for said hinged lid one end of which is pivoted in said deep recess, a slight depression in said last named hinge lug and opposite the said last named deep recess adapted to receive and hold the opposite end of the pivotal bearing, substantially as set forth.

5. In combination with a receptacle, a removable cover therefor provided with a bearing having oppositely projecting ends, a hinge securing lug secured to the side of the receptacle near its top and having a slotted way, there being a deep groove extending from its rear edge to near its front edge and terminating in a slight depression or recess adapted to receive one end of the bearing of the said removable cover of the receptacle, a hinge securing lug secured to the opposite edge of the receptacle, from the first named hinge securing lug, and having a deep recess near its front edge and opposite the said slight recess in said first named hinge securing lug adapted to receive the opposite end of the bearing, a hinged cover having a bearing provided with two projecting bearings pivoted in said hinge securing lugs, a deep recess in the first named hinge lug at the entrance to said slotted way adapted to receive one end of the pivotal bearing of the said hinged cover, said last named hinge receiving lug having a crooked groove way terminating in a shallow recess adapted to receive and hold the opposite end of the pivotal bearing of the said hinged lid by the spring of the receptacle, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,213,401. RADIATOR-SUPPORTING FRAME. FRANK A. NEVEU, Dallas, Tex. Filed May 6, 1916. Serial No. 95,766. (Cl. 21—90.)

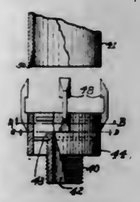
1. In an automobile construction, the combination with the radiator, of a hood having its forward edge extending beyond the rear face of the radiator, and a facing member mounted on the vehicle frame and placed in front of the front face of the radiator and supporting the radiator and forward end of the hood.



2. In an automobile construction, the combination with the radiator, of a hood having its forward edge extending substantially into the plane of the front face of the radiator, and a facing member placed in front of the radiator and the forward edge of the hood and supporting the forward end of the hood.

3. In an automobile construction, the combination with the radiator, of a hood having its forward edge extending beyond the rear face of the radiator, and a facing member mounted on the vehicle frame and placed in front of the front face of the radiator and having a rearwardly extending portion located between the hood and radiator and supporting the hood and radiator.

1,213,402. WHISTLE FOR CALLIOPES. JOSEPH E. ORI, Bloomfield, N. J. Original application filed Sept. 6, 1913, Serial No. 788,478. Divided and this application filed Dec. 26, 1914. Serial No. 879,193. (Cl. 116—59.)



1. A whistle for calliopes comprising a pair of spaced sections, brackets connecting said sections, a disk disposed in one of said sections, a supporting nipple carried by the disk, a second disk disposed above the first disk, one of said sections having a sharpened end and a disk adjustable within one of said sections.

2. In a whistle such as described, a pair of spaced sections, one of said sections having a beveled end, brackets connecting said sections, a disk carried by one of said sections, a nipple engaging said disk and supporting said sections, projections extending from one of said sections and a disk supported by the projections above the first-mentioned disk and in spaced relation to the inner walls of said section.

3. In a whistle such as described, a supporting plug, a nipple detachably connected with said supporting plug, a disk carried by the nipple, a whistle section engaging the disk whereby said section will be supported, projections extending from the whistle section, a disk carried by said projections and having its periphery spaced from the inner side of said section, brackets secured to said section, a second section carried by the brackets and held in spaced relation to the first section, said second section having a beveled lower end, and a disk adjustable in said second mentioned section.

4. A whistle for calliopes comprising a pair of spaced sections, brackets connecting said sections, a disk disposed in one of said sections, a supported nipple carried by the disk, a second disk disposed above the first disk, and means in one of said sections for varying the tone of the whistle.

5. A whistle for calliopes comprising a lower section, a supporting nipple carried thereby, a disk mounted above said supporting nipple, an upper section, brackets connecting said upper and lower sections, and means in the upper section for varying the tone of the whistle.

[Claim 6 not printed in the Gazette.]

1,213,403. PROCESS FOR SECRETING FUR AND HAIR. LOUIS FRANÇOIS PARIS, Paris, France. Filed Mar. 3, 1914, Serial No. 822,179. Renewed June 20, 1916. Serial No. 104,804. (Cl. 38—12.)

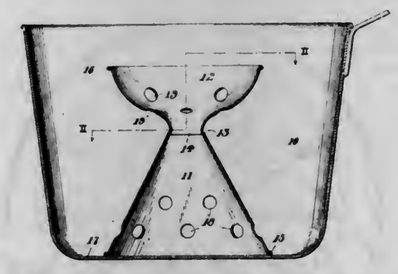
1. A process for secreting hair intended for the manufacture of felt, which consists in subjecting the hair to the action of the compounds that arise when nitric acid, hydrochloric acid, zinc chlorid, sodium nitrite and sodium hypochlorite are made to react in an aqueous solution.

2. A process for secreting hair intended for the manufacture of felt, which consists in subjecting the hair to the action of nitrous anhydrid, nitrosyl chlorid and a combination of the nitrosyl chlorid with a metallic chlorid.

3. A process for secreting hair intended for the manufacture of felt, which consists in subjecting the hair to the action of the compounds that arise when nitric acid, hydrochloric acid, zinc chlorid, sodium nitrite and sodium hypochlorite are made to react in an aqueous solution to which a neutral salt has been added, substantially as described and for the purpose set forth.

4. A process for secreting hair intended for the manufacture of felt, which consists in subjecting the hair to the action of the compounds that arise when nitric acid, hydrochloric acid, zinc chlorid, sodium nitrite and sodium hypochlorite are made to react in an aqueous solution, to which a salt of an alkaline earth has been added, substantially as described and for the purpose set forth.

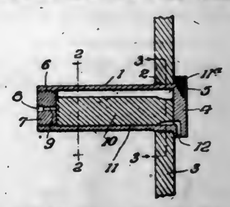
1,213,404. MILK-BOILER. JOHN PELUCHA, Newark, N. J. Filed Sept. 20, 1915. Serial No. 51,614. (Cl. 53—1.)



A milk boiler attachment comprising a hollow frusto-conical base open at both ends and provided with a plurality of perforations adjacent the enlarged end thereof, a bowl-shaped top member having a contracted bottom inseparably secured to the upper end of the said base and provided with a communicating passage between the said top and base, the said bowl-shaped top being provided with a plurality of perforations therethrough and having continuously curved sides.

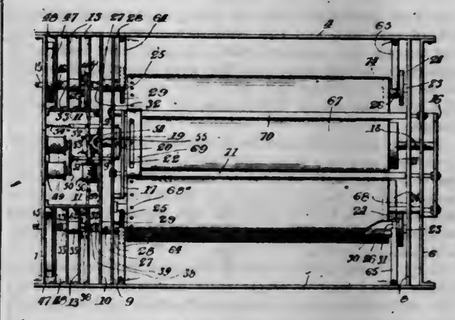
1,213,405. AIR-VALVE FOR RADIATORS. NICHOLAS U. PERIS, Lancaster, Pa. Filed Aug. 10, 1915. Serial No. 44,691. (Cl. 236—24.)

An air valve for radiators comprising a tubular body adapted to fit wholly within the radiator and having screw-threads at its outer end for attachment to the radiator, a head formed integrally with said tubular body at said threaded end and adapted to fit closely against the outer surface of the radiator, said head having an opening therethrough communicating with and angular to the tube chamber, an adjustable and removable apertured plug screw-threaded wholly within the inner end of the tubular body, and a composition member fitting loosely within the tube and expansible to close the aperture in said plug, and said composition member being reduced at the end adjacent the tube head forming an annular



clearance to provide a continuous passage from the aperture in the head through the aperture in the plug when the expansible member is contracted, substantially as set forth.

1,213,406. INDICATOR. HUBERT PETERS, Edmonton, Alberta, Canada, assignor of one-half to Frederick McDonald Bill, Edmonton, Alberta, Canada. Filed June 11, 1914. Serial No. 844,499. (Cl. 40—58.)



The combination with a street-car, of an indicator comprising a casing, a shaft rotatably mounted in said casing, a drum rigidly mounted on said shaft, a disk rigidly mounted on said shaft, pins mounted on the outer periphery of said disk and extending radially therefrom, rods slidably mounted in said casing, located on diametrically opposite sides of the said disk and designed to alternately engage with the said pins, a bracket mounted on the casing, a link pivotally connected at its ends to said rods, and pivotally connected intermediate of its length to said bracket, an armature mounted on one of said rods, solenoids designed to intermittently engage with said armature, a spring mounted on the other rod adapted to return the rods to a normal position, rollers rotatably mounted in said casing, a screen mounted on said rollers and having its ends attached thereto, and means for operating said rollers, as and for the purpose specified.

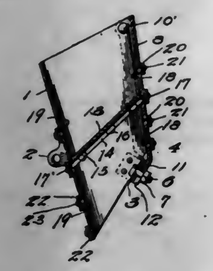
1,213,407. CONCRETE MIXER AND CONVEYER. SOAME E. PFAHLER, Hopewell, Va. Filed Mar. 20, 1916. Serial No. 85,323. (Cl. 83—73.)



The combination in a concrete mixing and conveying device with a revoluble drum having an inlet opening and an imperforate tapered extension having an axial outlet opening, said drum and extension each having a spirally

arranged imperforate flange on its inner wall of uniform width uniformly spaced to form a closed wall arranged within the conveyer from end to end thereof and having a free open central space, the conveying capacity of the drum being greater than the capacity of the extension.

1,213,408. CONVEYER-BUCKET. SOAME E. PFAHLER, Hopewell, Va. Filed Mar. 20, 1916. Serial No. 85,324. (Cl. 193—28.)



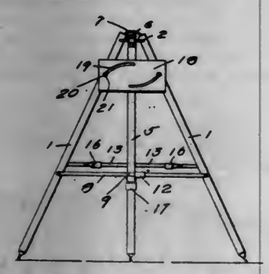
1. The combination with a conveyer bucket comprising a fixed rear wall and two sides formed with an open top and bottom and provided with a hinged front wall, of a removable bottom plate provided with retaining pins, and sockets in the front wall and fixed rear wall to receive said pins, and means for locking the hinged wall to the bucket.

2. The combination with a bucket comprising a rear fixed wall and two sides and having open ends and a removable front wall adapted to close the open front of the bucket and retaining devices in the bucket, of a removable adjustable bottom plate for the bucket having means co-acting with said devices for holding the bottom plate in adjusted position.

3. The combination with a conveyer bucket having a hinged front wall, a bridge plate and means for locking said wall to the plate, of an adjustable bottom formed with retaining pins, and a plurality of oppositely disposed sets of sockets in the bucket walls to receive said pins.

4. The combination in a conveyer bucket open at both ends and formed with tapered sides, of a front wall hinged to the bucket and converging toward its lower end, sockets in the front wall and in the opposite wall of the bucket, and a bottom plate for the bucket having retaining devices in said sockets.

1,213,409. FOLDING HOD-STAND. FREDERICK W. PFEIFER, St. Louis, Mo. Filed May 26, 1915. Serial No. 30,634. (Cl. 248—43.)



1. In a folding hod stand the combination with a plurality of uprights and a brace pivoted together at their upper ends; of a plate mounted on the said uprights adjacent their upper ends, and said plates being arranged to assume horizontal position when the lower ends of said uprights are spread and to assume vertical position when the lower ends of said uprights are moved together.

2. In an adjustable hod stand the combination with a pair of uprights pivoted together at their upper ends; of means for supporting the said uprights in a vertical plane and a plate mounted on the said uprights, and said plates being arranged to assume horizontal position when the lower ends of said uprights are spread and to assume vertical position when the lower ends of said uprights are moved together.

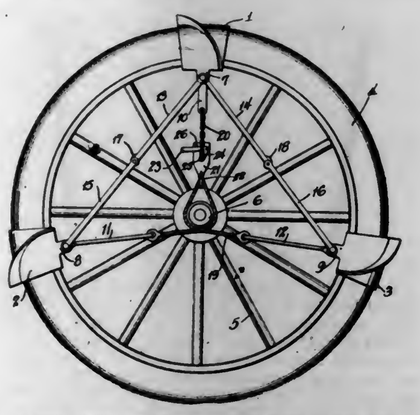
3. In a folding hod stand the combination with a pair of uprights pivoted together at their upper ends; of a plate pivotally and slidably mounted upon said uprights and means for supporting the said uprights, and said plates being arranged to assume horizontal position when the lower ends of said uprights are spread and to assume vertical position when the lower ends of said uprights are moved together.

4. In a folding hod stand the combination with a pair of uprights hinged together at their upper ends; of a brace hingedly associated with the upper ends of the uprights and formed in two sections hinged together, means for maintaining said sections in alinement and a plate mounted on the said uprights, and said plates being arranged to assume horizontal position when the lower ends of said uprights are spread and to assume vertical position when the lower ends of said uprights are moved together.

5. In a folding hod stand the combination with a pair of uprights and a brace hinged together at their upper ends; of means for supporting the said uprights and brace in predetermined positions and a plate mounted on the said uprights, and said plates being arranged to assume horizontal position when the lower ends of said uprights are spread and to assume vertical position when the lower ends of said uprights are moved together.

[Claim 6 not printed in the Gazette.]

1,213,410. TIRE-SHOE. AMBROSE E. POWELL, Caron, Saskatchewan, Canada. Filed July 11, 1916. Serial No. 108,744. (Cl. 152—14.)



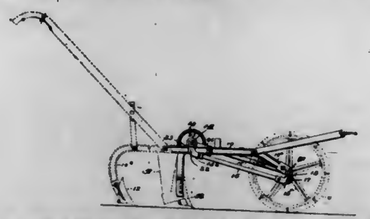
1. A mud shoe for wheels comprising a plurality of shoe members to be mounted over the tread at spaced apart points, means to be connected with the hub of the wheel and by which the shoes are secured in the proper mounting, means by which adjustment of the parts may be made to adapt the device for use upon wheels of various sizes, and braces connected with one of said shoes and extended to the remaining shoes to hold the several shoes against displacement from the operative mounting.

2. A mud shoe for wheels comprising a plurality of shoe members shaped to be received over a tire mounted on said wheels, cleats carried by said shoes, securing means extended from each of said shoes, clamping means by which the securing means can be drawn in to mount the shoes in the proper positions on and hold the same secured to the tire, and braces connected between said shoes to hold the same against displacement from their relative positioning and from the tire.

3. A mud shoe for wheels comprising a plurality of shoe members shaped to be received and fitted over a tire mounted on said wheel, a cable connected with certain of said shoes to be looped around the hub of the wheel, a securing clamp structure to be connected in said loop, and means by which the clamp structure is connected with another of said shoes in such relation that as the clamp structure is brought to the operative relation the several shoes will be drawn against the tire.

4. A mud shoe for wheels comprising a plurality of shoe members shaped to be received and fitted over a tire mounted on said wheel, a cable connected with certain of said shoes to be looped around the hub of the wheel, a securing clamp structure to be connected in said loop, means by which the clamp structure is connected with another of said shoes in such relation that as the clamp structure is brought to the operative relation the several shoes will be drawn against the tire, and folding brace members connected between said last named shoe and the remaining shoes to hold the several shoes against displacement.

1,213,411. PLANTER. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Filed Sept. 11, 1914. Serial No. 861,176. (Cl. 111—32.)



1. In combination, a frame having spaced longitudinal members, bracing and stiffening means arranged between said members and engaging the same, said bracing and stiffening means including a pair of blocks whose confronting surfaces are provided with flanges which extend toward each other and are arranged at the top and bottom of the blocks, a standard having a forwardly projecting portion arranged edgewise with its sides presented toward the inner side walls of the blocks, respectively, and its upper and lower edges adjacent to the flanges of the blocks, and a fastening means which extends through the frame members, blocks and standards and secures the parts together.

2. In combination, a frame having spaced longitudinal members, a standard having a forwardly projecting portion arranged between said members, and means for bracing the frame members and securing the standard rigidly against movement relatively to the frame, said means comprising members which are disposed on opposite sides of the standard and between the same and the frame members and have their inner, confronting, sides provided at the top and bottom thereof with flanges which respectively overlie and underlie the standard, and a plurality of spaced fastening elements which extend through the standard, bracing members and frame-members.

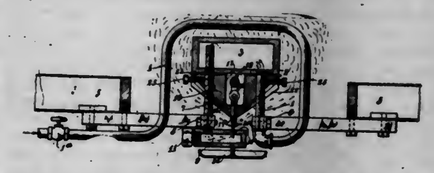
3. In combination, a frame having spaced longitudinal members, bracing and stiffening means, comprising a pair of complementary members arranged between the frame members and each having at each end a block which projects laterally in opposite directions from the intermediate part of the member, said blocks having their inner, confronting, surfaces provided at the top and bottom thereof with lateral flanges, a standard having a forwardly projecting portion arranged edgewise, with its sides presented toward the inner side walls of the blocks and its upper and lower edges respectively underlying and overlying the upper and lower flanges of the blocks, and fastening means for securing the frame members, blocks and standard together, said fastening means having elements which extend through the frame members, blocks and standard.

4. In combination, a frame having spaced longitudinal members, bracing and stiffening means, comprising a pair of complementary members arranged between the frame members and each comprising a plurality of blocks and a web intermediate the blocks, each block extending in opposite directions beyond the sides of the web, the inwardly projecting portions having flanges at the top and bottom thereof, the flanges of one block of each member extending throughout a portion only of the length of the block, a standard having a forwardly projecting portion arranged edgewise, with its sides presented toward the inner side walls of the blocks throughout the length of the latter and its upper and lower edges respectively underlying and overlying the upper and lower flanges of the blocks, and fastening means for securing the frame members, blocks and standard together, said fastening means being spaced along the standard and extending through the same.

5. In combination, longitudinal frame members having inwardly extending flanges, a standard having a portion arranged longitudinally between said frame members, bracing and stiffening members arranged on opposite sides of said portion of the standard and between the same and the longitudinal members, each bracing and stiffening member having its outer surface formed with spaced grooves or channels which receive the flanges of the longitudinal members and also having portions between said grooves or channels, the latter portions being received by the spaces between the flanges of the longitudinal members, and means for securing the longitudinal frame members, standard and bracing and stiffening members together.

[Claims 6 to 11 not printed in the Gazette.]

1,213,412. HYDROCARBON-BURNER. ENOCH RECTOR, New York, N. Y., assignor to Rector Engine Corporation, New York, N. Y., a Corporation of New York. Filed Feb. 26, 1912, Serial No. 679,864. Renewed June 15, 1916. Serial No. 103,865. (Cl. 158—54.)



1. In a hydrocarbon burner, the combination with a gas reservoir and an outlet pipe having an orifice provided therein, of a conical member arranged adjacent to the orifice, a valve carried by said member and adapted to close said outlet, and means secured to said member for spreading the gases escaping through said orifice.

2. In a hydrocarbon burner, the combination of a supply pipe and a gas reservoir adapted to be disposed in the flame from the burner, an outlet pipe from said reservoir, with the end thereof in the reservoir positioned above the end of the supply pipe in the reservoir whereby the gas is compelled to traverse the reservoir, said outlet pipe having an orifice below the reservoir, and a valve between the reservoir and the orifice, arranged in the path of the gases escaping from the orifice.

3. In a hydrocarbon burner, the combination of a supply pipe, a gas reservoir, an outlet pipe having an orifice below the reservoir, and valve supporting means secured adjacent to the bottom of the reservoir and having a recess provided therein and an axial bearing communicating with said recess, a valve in said bearing, and means in the recess for operating the valve.

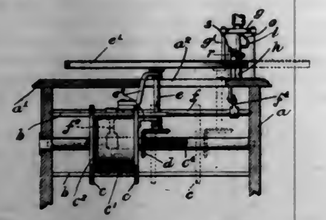
4. In a hydrocarbon burner, the combination of an outlet pipe provided with a tapered orifice forming a valve seat, a valve for incompletely closing said orifice, and a

support for said valve provided with a spreading means for causing the vapor to mix with the surrounding air.

5. In a hydrocarbon burner, the combination of an outlet pipe for the vapor provided with a tapered orifice forming a valve seat, a valve supported above said orifice in the path of the vapor escaping therefrom, and conical supporting means for said valve provided with longitudinal ribs and with a radial baffle plate.

[Claims 6 to 8 not printed in the Gazette.]

1,213,413. PHONOGRAPH. CLINTON B. REPP, New York, N. Y. Filed Jan. 19, 1912. Serial No. 672,067. (Cl. 274—12.)



1. A phonograph embodying therein a fixed amplifier, a transmitter arm, one end of which is adapted to carry a stylus point, means connecting the other end thereof with, and adapted to transmit vibrations from said arm to, said amplifier, a rigid supporting arm for said transmitter arm, one end of which is connected to said transmitter arm adjacent that end thereof adapted to carry the stylus point, means supporting the other end of said arm and holding it against lateral movement while permitting vertical movement, a record support, and means causing said record support to have lineal traverse relatively to a stylus carried by said arm, and to have simultaneous rotary movement.

2. A phonograph embodying therein a fixed amplifier, a transmitter arm, one end of which is adapted to carry a stylus point, means connecting the other end thereof with, and adapted to transmit vibrations from said arm to, said amplifier, a rigid supporting arm for said transmitter arm, one end of which is connected to said transmitter arm adjacent that end thereof adapted to carry the stylus point, means supporting the other end of said arm and holding it against lateral movement while permitting vertical movement, a record support, means causing said record support to have lineal traverse relatively to a stylus carried by said arm, and to have simultaneous rotary movement, and means adapted to place said amplifier under tension through the connecting means between said transmitter arm and said amplifier.

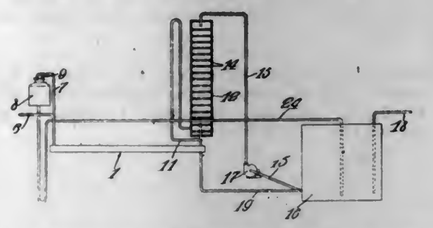
3. A phnograph, embodying therein a rotary record support, a fixed amplifier, a substantially stationary transmitter arm, carrying a stylus point and adapted to be connected with and transmit vibrations to, said amplifier, means for causing said record support to have lineal traverse relatively to said stylus and to have simultaneous rotary movement, means adapted to place said amplifier under tension through the connection between said transmitter arm and said amplifier, and means whereby the direction of this pressure may be varied to adapt the machine for use in connection with either graphophone or gramophone records.

4. A phonograph, embodying therein a rotary record support, a fixed amplifier, a rigid supporting arm mounted upon horizontal pivots below said amplifier, said arm having slight lateral play, means exerting a downward pressure upon said arm, a substantially stationary transmitter arm attached adjacent to one end thereof to said supporting arm and having the other end thereof connected with, and adapted to transmit vibrations to, said amplifier, said transmitter arm being adapted to carry a stylus point, and means for causing said record support to have lineal traverse relatively to said stylus and to have simultaneous rotary movement.

5. A phonograph, embodying therein a rotary record support, a fixed amplifier, a rigid supporting arm mounted upon horizontal pivots below said amplifier, said arm having slight lateral play, means exerting a downward pressure upon said arm, a substantially stationary transmitter arm attached adjacent to one end thereof to said supporting arm and having the other end thereof connected with, and adapted to transmit vibrations to, said amplifier, said transmitter arm being adapted to carry a stylus point, means for causing said record support to have lineal traverse relatively to said stylus and to have simultaneous rotary movement, and means adapted to place said amplifier under tension through the connection between said transmitter arm and said amplifier.

[Claims 6 to 12 not printed in the Gazette.]

1,213,414. SO_2 GAS AND LIQUID RECLAIMER. AUGUST F. RICHTER, Watertown, and THOMAS L. DUNBAR, Potsdam, N. Y. Filed July 11, 1914. Serial No. 850,434. (Cl. 23—13.)



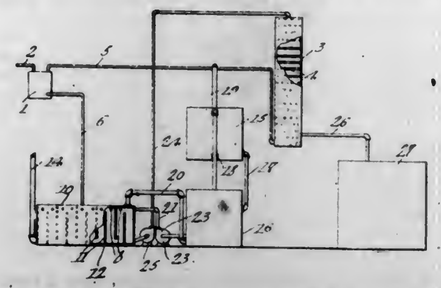
1. A salvaging step in a sulfite process, which consists in first cooling the combined liquid and gaseous products from a digester, then effecting a separation of the liquid and gaseous products from each other, subjecting the gas obtained by the separation to the action of a cooling medium the temperature of which differs from that of the atmosphere, mingling the liquid obtained by the separation with fresh liquor, and mingling the mixture of fresh liquor and liquid with the gas after the latter has been cooled.

2. A salvaging apparatus for use in a sulfite process and comprising a cooler for liquid and gaseous digester-products; a separator into which the cooler discharges; a liquor-storage; a second cooler for the gas from the separator; a connection between the separator and the second cooler; a liquid conduit leading from the separator to the liquor-storage; a sulfur-dioxid reclaiming-tower; a gas-conveying connection between the second cooler and the lower portion of the tower; a liquor-delivery conduit leading from the liquor-storage to the upper portion of the tower; means interposed in the last-specified conduit for enhancing the flow of liquor from the liquor-storage to the tower; and a return conduit leading from the lower portion of the tower to the liquor-storage.

3. A salvaging apparatus for use in a sulfite process and comprising a cooler; a separator into which the cooler discharges; a liquor-storage; a liquid conduit leading from the separator to the liquor-storage; a sulfur-dioxid reclaiming-tower; means for conveying gas from the separator to the bottom of the tower; a liquor-delivery conduit leading from the liquor-storage to the top of the tower; a return-conduit leading from the bottom of the tower to the liquor-storage; and means for producing a flow through a circuit comprising the liquor-storage, the delivery-conduit, the tower and the return-conduit.

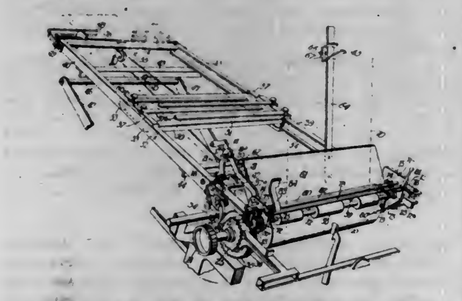
1,213,415. PROCESS OF MAKING SULFITE LIQUOR. AUGUST F. RICHTER and THOMAS L. DUNBAR, Watertown, N. Y. Filed Oct. 9, 1914. Serial No. 865,921. (Cl. 23—13.)

A process of making sulfite liquor, which consists in separating the products of a digester into sulfur dioxid and spent liquor; mingling sulfite liquor with the spent liquor; mingling the mixture of sulfite liquor and spent liquor with sulfur dioxid from a burner; mingling the excess sulfur dioxid from the burner with calcium bisulfite to



form the said sulfite liquor; and mingling the sulfur dioxid which is abstracted from the products of digester with the compound derived by mingling the spent liquor, the sulfite liquor and the sulfur dioxid from the burner.

1,213,416. TYPE-WRITING MACHINE. FRANK A. ROBINSON, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 6, 1915. Serial No. 43,908. (Cl. 197—126.)



1. In a typewriting machine, the combination with a rotary platen, of a pair of feed rolls between which a work-piece may be grasped to be thereby drawn over the platen, and means for effecting a positive drive of said rolls and the platen at the same peripheral speed to cause the same to act when in motion as the sole means for feeding the work-piece.

2. In a typewriting machine, the combination with a rotary platen, of a pair of feed rolls between which a work-piece may be grasped to be thereby drawn over the platen, intermeshing gears, one fast to each of said rolls, for effecting a positive drive of said rolls at the same peripheral speed to cause the same to act as the primary means for feeding the work-piece, and a gear fast to the platen and intermeshing with one of said roll gears for effecting a drive of the roll gears and the platen in unison, said rolls acting when in motion as the sole means for feeding the work-piece.

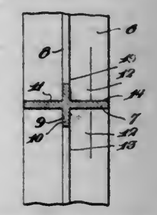
3. In a typewriting machine, the combination with a platen, of a pair of feed rolls between which a work-piece may be grasped after it leaves the printing line, to be thereby drawn over the platen, means for effecting a positive drive of said rolls and said platen at the same peripheral speed to cause the same to act when in motion as the sole means for feeding the work-piece, and means for holding the work-piece to the platen behind the printing line.

4. In a typewriting machine, the combination with a platen, of a pair of feed rolls between which a work-piece may be grasped to be thereby drawn over the platen, means for effecting a positive drive of said rolls and said platen at the same peripheral speed to cause the same to act when in motion as the sole means for feeding the work-piece, and means for exerting a draw on the work-piece behind the printing line to hold the same snugly against the platen.

5. In a typewriting machine, the combination with a platen, of a pair of feed rolls between which a work-piece may be grasped to be thereby drawn over the platen, means for effecting a positive drive of said rolls and said platen at the same peripheral speed to cause the same to act when in motion as the sole means for feeding the work-piece, and a bar over which the work-piece is turned behind the printing line to cause the work-piece to be held snugly to the platen as it approaches the printing line.

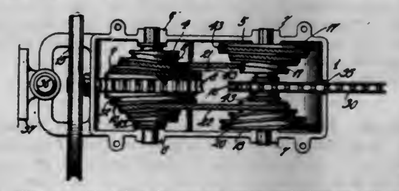
[Claims 6 to 42 not printed in the Gazette.]

1,213,417. METAL SASH-JOINT. WILLIAM ROPER, Philadelphia, Pa., assignor of one-half to Henry N. Renton, Philadelphia, Pa. Filed Mar. 14, 1916. Serial No. 84,098. (Cl. 189—36.)



A metal sash joint comprising two interlocking muntins cross shape in transverse section, each muntin having crossed flat webs, one of said muntins having a slot extending transversely from one edge part-way through one of its webs, said slot having an extension at an angle to the general direction thereof and cutting away a part of its other web, said first slotted web being slit to provide tongues laterally bendable to provide additional space intermediate said slot extension and said edge, the other of said muntins having crossed flat webs movable into said slot when the tongues are laterally bent, said latter muntin having a notch in one edge of one of its webs for interlocking with the edge portion of the first-mentioned web of the slotted muntin which is remote from the first-mentioned edge of the first muntin, the other web of the second muntin being movable into the slot in the second-mentioned web of the first-mentioned muntin, the other web of the second muntin filling the remaining portion of the slot when the tongues are again bent into their normal position, substantially as described.

1,213,418. POWER-TRANSMISSION MECHANISM. WILLIAM ROPER, Philadelphia, Pa. Filed July 27, 1916. Serial No. 111,571. (Cl. 74—21.)



1. The combination in power transmission mechanism, of two pulleys having grooves of gradually varying diameter, rotatable means having grooves therein, and flexible members having one of their ends secured to respective pulleys and their other ends connected to said means, said grooves being arranged to permit the alternate winding of the flexible members into and out of said grooves, and means for rotating said pulleys as a unit, and in opposite directions to rotate said means by the flexible members, substantially as described.

2. The combination in power transmission mechanism, of two pulleys having grooves of gradually varying diameter, rotatable means having grooves therein, and flexible members having one of their ends secured to respective pulleys and their other ends connected to said means, said grooves being arranged to permit the alternate winding of the flexible members into and out of said grooves, means for rotating said pulleys as a unit, and in opposite directions to rotate said means by the flexible members, and an actuating member operated by said means, substantially as described.

3. The combination in power transmission mechanism, of two pulleys having grooves of gradually varying diameter, rotatable means having grooves therein, and flexible members having one of their ends secured to respective pulleys and their other ends connected to said means, said grooves being arranged to permit the alternate winding of the flexible members into and out of said grooves, means for rotating said pulleys as a unit, and in opposite directions to rotate said means by the flexible members, a sprocket operated by said means, and an actuating chain on said sprocket, substantially as described.

4. The combination in power transmission mechanism, of two frusto-conical pulleys rotatable as a unit and having spirally arranged grooves therein of gradually varying diameter, rotatable means having grooves therein, a cable having one end secured to one of said frusto-conical pulleys within the largest diameter of its groove and the other end positioned within one of the grooves of said rotatable means, a second cable having one of its ends secured to the other of said frusto-conical pulleys within the smallest diameter of its groove, the other end of said latter cable being secured within the other groove of the rotatable means, means for rotating said pulleys in opposite directions to wind and unwind the cables in and from their grooves, a member secured to said rotatable means, and actuating means operated by said member, substantially as described.

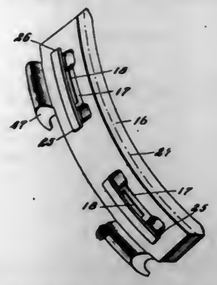
5. The combination in power transmission mechanism, of two frusto-conical pulleys rotatable as a unit and having spirally arranged grooves therein of gradually varying diameter, two other frusto-conical pulleys operative as a unit and having a common axis arranged substantially parallel with a common axis of the first two frusto-conical pulleys, each of said second mentioned pulleys being opposite one of the first mentioned pulleys and tapering in an opposite direction thereto, each of said second pulleys having a spirally arranged groove of varying diameter, a cable having one end secured to one of the first-mentioned pulleys within the smallest diameter of its groove and its other end secured to one of the second mentioned pulleys which is directly opposite, said end of the cable being secured within the groove of the latter mentioned pulley at its smallest diameter, a second cable having one of its ends secured to the other of said first-mentioned pulleys within its groove at the largest diameter thereof and its other end secured to the other of said second mentioned pulleys within its groove at the largest diameter thereof, said cables being of such length as to have portions alternately wound on opposite pulleys, means for rotating said first pulleys, and actuating means on said second pulleys, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,213,419. BRAKE-SHOE AND BRAKE-HEAD. CHARLES V. ROTE, Lancaster, Pa., assignor to C. V. Rote Brake Shoe Co., Lancaster, Pa., a Corporation of Delaware. Filed Mar. 16, 1915. Serial No. 14,724. (Cl. 188—28.)

1. In a brake mechanism, a supporting member, a brake shoe adapted to seat against the face of said supporting member, and locking means adapted to extend transversely through said supporting member and said shoe and adapted to move inwardly and downwardly therein.

2. In a brake mechanism, a supporting member, a brake shoe adapted to seat thereagainst, and locking means extending transversely into the supporting member and through said shoe to secure the latter to said supporting member, said locking means also extending obliquely downwardly and inwardly whereby to retain the locking means in place by gravity.



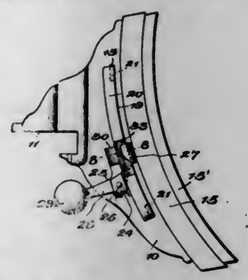
3. In a brake mechanism, a supporting member, a brake shoe adapted to seat against the front face of said supporting member, and a key having oblique blades adapted to be inserted downwardly and transversely into the supporting member and through said shoe to lock the latter to the supporting member.

4. In a brake mechanism, a supporting member, a brake shoe adapted to seat against the front face of said supporting member, and means for locking said shoe to said member comprising a handle having spaced-apart blades extending obliquely therefrom in parallelism with each other, said blades being adapted to extend downwardly and inwardly into said supporting member and through said shoe, whereby to retain the locking means in place by gravity.

5. In a brake mechanism, a supporting member having a key-way in the side thereof, a brake shoe adapted to seat against the front face of said supporting member and having a key-way adapted to register with the key-way of said supporting member, and means adapted to extend obliquely into said first key-way and through said second key-way to lock the shoe to the supporting member.

[Claims 6 to 20 not printed in the Gazette.]

1,213,420. INTERLOCKING MEANS FOR BRAKE-HEADS AND BRAKE-SHOES. CHARLES V. ROTE, Lancaster, Pa., assignor to C. V. Rote Brake Shoe Co., Lancaster, Pa., a Corporation of Delaware. Filed June 17, 1915. Serial No. 34,657. (Cl. 188—28.)



1. In a brake mechanism, a supporting member, a brake shoe adapted to seat against the face of said supporting member, locking means for securing the brake shoe to said supporting member, and a pivoted latch for retaining said locking means in locking position.

2. In a brake mechanism, a supporting member, a brake shoe adapted to seat against the face of said supporting member, locking means for securing the brake shoe to said supporting member, and means adapted to drop into the path of said locking means to prevent its accidental movement from locking position.

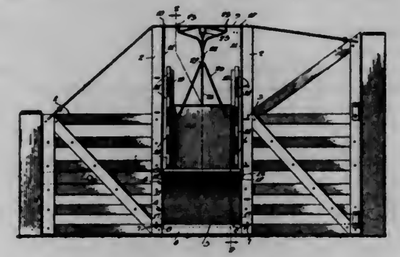
3. In a brake mechanism, a supporting member, a brake shoe adapted to seat against the face of said supporting member, locking means for securing the shoe to said supporting member, and retaining means comprising a pivoted lever having at one end means for engaging said locking means for preventing the accidental withdrawal of the same, and at the other end means for retaining said first end in engagement with said locking means.

4. In a brake mechanism, a supporting member, a brake shoe adapted to seat thereagainst, locking means to secure the shoe in place on said supporting member, and retaining means comprising a pivoted lever having at one end a yoke adapted to engage said locking means, and at the other end a ball-weight to maintain said yoke in engagement with said locking means.

5. In a brake mechanism, a supporting member, a brake shoe adapted to seat thereagainst, a key member having blades adapted to extend transversely through said supporting member and shoe to retain the same in assembled position, and means adapted to engage said key member to retain the same in locking position.

[Claims 6 to 15 not printed in the Gazette.]

1,213,421. HOG-CHUTE. HENRY C. RYBOLT, Kenney, Ill. Filed May 10, 1916. Serial No. 96,725. (Cl. 119—82.)



1. In a device of the class described, the combination of a main gate having a central passage therethrough, a closure for said passage, said closure being adapted to be demountably moved downwardly, means for supporting said closure in a lowered position, whereby the central passage through the main gate will be open so that the closure may constitute a tread portion for the chute whereby animals passing through the central opening may pass up the closure into a receiving vehicle.

2. In a device of the class described, the combination of a main gate having a central opening, vertical standards carried by said main gate in parallel relation adjacent the central opening, a vertical gate carried removably upon said standards for normally closing the space between said standards, said central swinging gate being adapted to be removably extended in a lowered position, means for holding said swinging gate in a tilted position so as to constitute a tread portion, whereby animals passing between said standards may pass up said tread portion into a receiving vehicle at the end thereof.

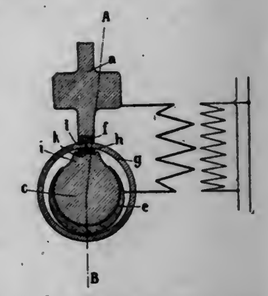
3. In a device of the class described, the combination of a main gate having central spaced standards, a brace strand connecting the upper ends of said standards, a swinging gate carried upon said standards for normally closing the space therebetween, said swinging gate being adapted to be removed from said standards and swung to a lower tilted position, staples carried by said swinging gate, supporting rods having L-shaped grips at their lower ends, said L-shaped grips being adapted to be positioned over said staples, hooks formed at the upper ends of said rods, said hooks being adapted to be positioned upon said strand, whereby said supporting rods will be carried so as to support one end of said swinging gate in an elevated position, whereby the swinging gate will constitute a tread portion so that animals passing between said standards will be directed upwardly over the tread portion or swinging gate into a receiving vehicle at the end thereof.

4. In a device of the class described, the combination of a pair of standards, a tie strand connecting the upper ends of said standards, hooks carried by said standards, a tread portion extending between said standards, offset outwardly extending fingers carried by said tread, said fingers removably carried by said hooks, whereby said tread will be held from moving rearwardly between said standards, means carried by said tread for constituting in combination therewith a chute, and means for supporting the outer end of said tread in an elevated position.

5. In a device of the class described, the combination of a pair of standards, a tie strand connecting the upper ends of said standards, hooks carried by said standards, a tread portion extending between said standards, offset outwardly extending fingers carried by said tread, said fingers removably carried by said hooks, whereby said tread will be held from moving rearwardly between said standards, means carried by said tread for constituting in combination therewith a chute, staples carried by said tread adjacent its outer end, supporting rods having L-shaped grips at their lower ends, said grips engaging said staples, whereby said grips will be held in engagement with said tread for holding said rods against accidental displacement, said rods having hooks at their upper ends, said hooks engaging said strand for holding the forward ends of said chute in an elevated position.

[Claims 6 to 8 not printed in the Gazette.]

1,213,422. PROCESS OF ELECTRICALLY WELDING TUBES. JOHANN SAĆEK, Charlottenburg, Germany, assignor to Carl Heinrich Fischer, Charlottenburg, near Berlin, Germany. Filed Dec. 13, 1916. Serial No. 136,786. (Cl. 219—6.)



1. A process of electrically welding tubes consisting in placing a plane strip of the same material as that of the tube along the welding seam on the outside of said tube, said strip overlapping the seam, and passing an electric current through said strip.

2. A process of electrically welding tubes consisting in placing a separate plane strip of the same material as that of the tube along the welding seam on the inside of said tube, said strip overlapping the seam, and passing an electric current through said strip.

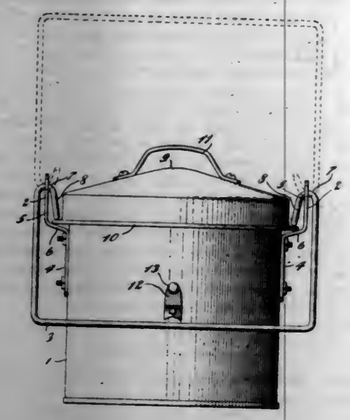
3. A process of electrically welding tubes consisting in placing strips of the same material as that of the tube along the welding seam inside and outside of said tube, said strip overlapping the seam, and passing an electric current through said strips.

1,213,423. GARBAGE-CAN. HENRY J. SCHAFFER, Brooklyn, N. Y. Filed Sept. 5, 1916. Serial No. 118,372. (Cl. 220—22.)

1. The combination with a can body having upwardly extending ears on opposite sides thereof, of a cover for said body, and a bail pivoted to said ears and having the opposite ends thereof bent to form cover-retaining arms, the said arms engaging said cover when the bail is in its lowermost position.

2. The combination with a can body having upwardly extending ears on opposite sides thereof, of a cover for said body, and a bail pivoted to said ears and having the

opposite ends thereof bent to form cover-retaining arms, the said arms extending at an angle to the plane of the bail and adapted to engage the upper surface of the cover, beyond the vertical plane of the pivots, when the bail is moved downwardly into contact with the side of said body.



3. The combination with a can body having upwardly and outwardly extending ears on opposite sides thereof, of a cover for said body having an outwardly extending flange fitting within the spaces between said body and said ears, and a bail pivoted to said ears and having the opposite ends thereof bent to form cover-retaining arms, the said arms engaging said flange when the bail is in its lowermost position.

4. The combination with a can body having upwardly and outwardly extending ears on opposite sides thereof, of a cover for said body having an outwardly extending flange fitting within the spaces between said body and said ears, and a bail pivoted to said ears and having the opposite ends thereof bent to form cover-retaining arms, the said arms extending at an angle to the plane of the bail and adapted to engage the upper surface of said flange, beyond the vertical plane of the pivots, when the bail is moved downwardly into contact with the side of the body.

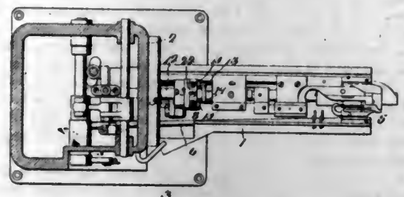
5. The combination with a can body having upwardly and outwardly extending ears on opposite sides thereof, of a cover for said body having an outwardly extending flange fitting within the spaces between said body and said ears, a bail pivoted to said ears and having the opposite ends thereof bent to form cover-retaining arms, the said arms engaging said flange when the bail is in its lowermost position and being raised away from said flange when the bail is lifted, and means for locking the bail in its lowermost position along the side of said body.

[Claim 6 not printed in the Gazette.]

1,213,424. LOOPER MECHANISM FOR SEWING-MACHINES. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 9, 1914. Serial No. 823,409. (Cl. 112—5.)

1. A sewing machine including in combination, a needle, a looper, means for vibrating the looper into and out of the needle loop, means for moving the looper laterally including a shaft, devices operated by the shaft, means for adjusting said devices, and means for holding said devices in adjusted position.

2. A sewing machine including in combination, a needle, a looper, means for vibrating the looper into and out of the needle loop, means for moving the looper laterally including a shaft, an eccentric, means for supporting said eccentric on said shaft, whereby the same may be adjusted transversely of the shaft for adjusting the lateral throw of the looper.



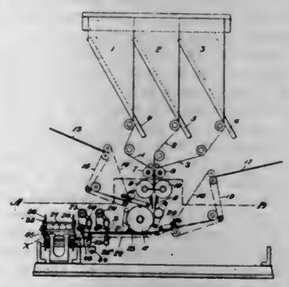
3. A sewing machine including in combination, a needle, a looper, means for vibrating the looper into and out of the needle loop, means for moving the looper laterally including a shaft, an eccentric carried by said shaft, means for adjusting said eccentric transversely of the shaft, and means for holding the eccentric in adjusted position.

4. A sewing machine including in combination, a needle, a looper, means for vibrating the looper into and out of the needle loop, means for moving the looper laterally including a shaft, a collar mounted on said shaft, an eccentric supported and actuated by said collar, and means for shifting said eccentric on said collar transversely of said shaft.

5. A sewing machine including in combination, a needle, a looper, means for vibrating the looper into and out of the needle loop, means for moving the looper laterally including a shaft, a collar mounted on said shaft, an eccentric supported and actuated by said collar, means for shifting said eccentric on said collar transversely of said shaft, and means for holding said eccentric in adjusted position.

[Claims 6 to 8 not printed in the Gazette.]

1,213,425. ASSOCIATING AND BINDING MACHINE. RALPH C. SEYMOUR, Larchmont, N. Y., assignor to Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Original application filed July 10, 1909, Serial No. 506,956. Divided and this application filed Dec. 8, 1911. Serial No. 664,556. (Cl. 101—120.)



1. The combination with web forwarding means, of devices for severing sheets from the webs, sheet forwarding means including timing devices located on one side of the web forwarding means, sheet forwarding means including timing devices located on the other side of said web forwarding means, means for assembling sheets from said sheet forwarding means with the web sheets and upon both sides of the web sheets, longitudinally arranged means for stitching the assembled sheets, and means for stopping the sheets while being stitched.

2. The combination with web forwarding means, of devices for severing sheets from the webs, sheet forwarding means including timing devices located on one side of the web forwarding means, sheet forwarding means including timing devices located on the other side of said web forwarding means, means for assembling sheets from said

sheet forwarding means with the web sheets and upon both sides of the web sheets and a plurality of stitching devices arranged longitudinally of the direction of travel of the sheets for stitching the assembled sheets.

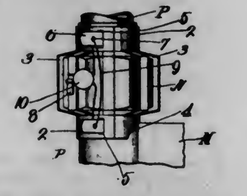
3. The combination with web forwarding means, of devices for severing sheets from the webs, sheet forwarding means including timing devices located on one side of the web forwarding means, sheet forwarding means including timing devices located on the other side of said web forwarding means, means for assembling sheets from said sheet forwarding means with the web sheets and upon both sides of the web sheets, a plurality of stitching devices arranged longitudinally of the direction of travel of the sheets for stitching the assembled sheets, means for stopping the sheets while being stitched and means for folding the stitched sheets.

4. The combination with web forwarding means, of devices for severing sheets from the webs, sheet forwarding means including timing devices located on one side of the web forwarding means, sheet forwarding means including timing devices located on the other side of said web forwarding means, means for assembling sheets from said sheet forwarding means with the web sheets and upon both sides of the web sheets, means for stitching the assembled sheets with a plurality of stitches arranged longitudinally of the direction of travel of the sheets, means for stopping the sheets while being stitched, means for conveying the stitched sheets to a folding mechanism, and a folding mechanism for folding the stitched sheets along said stitches.

5. The combination with web forwarding means, of devices for severing sheets from the webs, sheet forwarding means including timing devices located on one side of the web forwarding means, sheet forwarding means including timing devices located on the other side of said web forwarding means, means for collecting sheets cut from the web, means for assembling sheets from said sheet forwarding means with the web sheets, a tape pathway into which the collected sheets are progressed from said collecting means, and stitching means located along said tape pathway and adapted to make a plurality of stitches in the sheets longitudinally of their direction of travel.

[Claims 6 to 26 not printed in the Gazette.]

1,213,426. PIPE UNION OR COUPLING SEAL. MILES A. SHADLEY, Kansas City, Mo. Filed Feb. 27, 1915. Serial No. 11,083. (Cl. 137—28.)

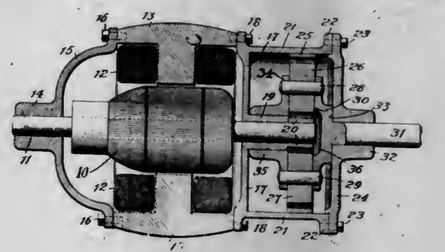


1. A seal for pipe unions or couplings comprising a transversely slotted channeled portion forming a cage and flanges projecting laterally from the free ends of the arms or sides of the channeled portion; the channeled portion being adapted to encircle the nut or enlargement of the union or coupling, and the flanges on the adjacent portions of the pipes connected by the union or coupling, a tongue projecting from one end of the channeled portion and adapted to be interlocked with the opposite end of the same when in operative position, means to connect the ends of the flanges, and means to seal the connected ends of the flanges.

2. A seal for pipe unions or couplings comprising a transversely slotted channeled portion forming a cage and flanges projecting laterally from the free ends of the arms or sides of the channeled portion; the channeled portion being adapted to encircle the nut or enlargement of the union or coupling, and the flanges the adjacent portions of the pipes connected by the union or coupling, a tongue projecting from one end of the channeled portion and adapted to be interlocked with the opposite end of the same when in operative position, a perforated tongue projecting from one end of each flange and adapted when the cage is in operative position to be fitted through the opposite end of the corresponding flange until the hole in the tongue is disposed outward of the flange, a flexible connection extending through said holes, and means for sealing the ends of the flexible connection together.

3. A seal for pipe unions or couplings comprising a transversely slotted channeled portion adapted to be bent around the central portion of a pipe union or coupling and provided at one end with an integrally formed tongue adapted to be passed through one of the slots and bent back against the opposite end of said channeled portion to secure the same as a cage around the said union or coupling; said channeled portion also having flanges at its side margins for encircling the pipes connected by the union or coupling, one of said flanges having a longitudinal recess and both of said flanges having slots at one end and perforated tongues at the opposite ends, the tongues being adapted to be fitted through the slots until the perforations of the tongues are disposed outwardly of said flanges, a flexible connection extending through the perforations of said tongues, and a seal uniting the ends of said flexible connection.

1,213,427. MOTOR AND GEARING THEREFOR. JAMES A. SHEPARD, Montour Falls, N. Y. Filed Feb. 7, 1914. Serial No. 817,343. (Cl. 74—34.)



1. The combination of a gear case having openings in opposite walls thereof, a driving shaft, a driven shaft axially in line with said driving shaft, said shafts extending into said gear case through said openings, a boss on one of said walls and surrounding one of said openings, said boss projecting into said gear case and having interior and exterior bearings thereon, one of said shafts being supported on said interior bearing, means for supporting the other shaft on said exterior bearing, and gearing in said gear case connecting the driving shaft and driven shaft.

2. The combination of a gear case having openings in opposite walls thereof, a driving shaft, a driven shaft axially in line with said driving shaft, said shafts extending into said gear case through said openings, a boss on the inside of one of said walls and surrounding one of said openings, said boss having an exterior bearing surface, means for supporting one of said shafts on said bearing surface, and gearing in said gear case connecting said driving shaft and driven shaft.

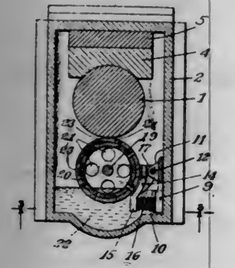
3. The combination of a gear case having openings in opposite walls thereof, a driving shaft, a driven shaft axially in line with said driving shaft, said shafts extending into said gear case through said openings, a boss on the inside of one of said walls and surrounding one of said openings, said boss having an exterior bearing surface, a planet gear carrier on one of said shafts having a hub portion supported on said exterior bearing, planet gears mounted on said carrier, a sun gear on the other shaft, and an orbit gear supported by the gear case, said sun gear and orbit gear meshing with the planet gears.

4. The combination with a motor, of a casing therefor, a gear case, said gear case and motor casing having a common partition wall provided with an opening extending therethrough, a boss surrounding said opening, said boss projecting into the gear case and being provided with interior and exterior bearing surfaces, a motor shaft extending through said opening into said gear case and supported on said interior bearing surface, a driven shaft coaxial with the motor shaft and terminating in said gear case, means for supporting the driven shaft on said exterior bearing surface, and speed-reducing gearing in said gear case for connecting the motor shaft and driven shaft.

5. The combination of a motor casing, a gear case secured to the motor casing, one end wall of said gear case constituting an end wall for the motor casing and having an opening therethrough, a boss surrounding the opening in said wall and projecting into the gear case, said boss having interior and exterior bearings thereon, a motor shaft extending through said opening into said gear case and supported on said interior bearing, a sun gear mounted on the inner end of said motor shaft, an orbit gear mounted in the gear case, a driven shaft coaxial with the motor shaft and terminating in said gear case, a planet gear carrier on said driven shaft having a hub portion supported on said exterior bearing, and planet gears mounted on said carrier and meshing with said sun gear and orbit gear.

[Claim 6 not printed in the Gazette.]

1,213,428. JOURNAL-LUBRICATOR. CHARLES A. SIMMONS, Albany, N. Y. Filed Mar. 26, 1914, Serial No. 827,262. Renewed June 15, 1916. Serial No. 103,868. (Cl. 64—34.)



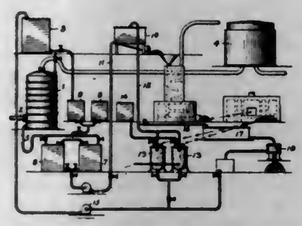
1. The combination with a car journal and a journal box, of a lubricating drum having an absorbent covering and engaging with the under-face of said journal, said drum being hollow and provided with end openings for the admission of oil, and a frame pivotally mounted for support by the side of the journal box and carrying said drum, said frame having downwardly extending arms, and helically coiled springs bearing horizontally against said arms to hold said drum yielding against its journal.

2. The combination with a car journal and a journal box, of a platform detachably supported by a side wall of said box, said platform serving as a support, a drum having an absorbent covering and bearing against the lower face of said journal, a frame supporting said drum and pivotally mounted on said platform, said frame having downwardly extending integral arms, and helically coiled springs arranged horizontally in engagement with said arms to control the pressure with which the drum bears against its journal.

3. The combination with a car journal and a journal box of a platform removably mounted against the side of said journal box to serve as a pivotal support, a frame pivoted to said support and having downwardly extending arms, coiled springs engaging said arms and bearing horizontally against the lower ends of said platform, a drum with an oil-absorbent face mounted to turn in said frame, said drum being hollow and having perforations through which oil may be thrown from the inside of the drum against the journal to be lubricated.

4. The combination with a car journal and a journal box of lugs on the side of the journal box forming a vertical guideway, a platform slidingly mounted in said guideway and having legs and ears, a pivot bar supported by said ears, a swinging frame mounted on said pivot bar and having downwardly extending arms, a spring between each of said arms and a leg of said platform, said frame being shaped to form a yoke, a rotating drum mounted in said yoke and provided with an absorbent covering held in yielding engagement with said journal by said springs, openings in the end of said drum and perforations through the cylinder face of said drum and its felt covering, whereby oil may be thrown by centrifugal action from the inside of the drum through said perforations against the journal to be lubricated.

1,213,429. RECOVERING CYANOGEN AND SULFUR COMPOUNDS FROM FLUIDS. FREDERICK W. SPEAR, Jr., Oakmont, Pa. Filed Oct. 30, 1915. Serial No. 58,880. (Cl. 23—13.)



1. The process of treating a fluid containing hydrocyanic acid and hydrogen sulfid, or soluble cyanids, and sulfids, which consists in subjecting the fluid to the action of a re-agent in solution, adapted to and in such proportions as to combine directly with all of the said substances, to form a soluble cyanid and an insoluble sulfid, segregating the insoluble compounds and extracting the cyanid compounds from the liquor.

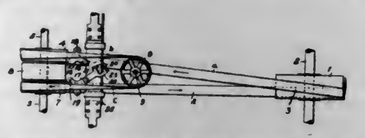
2. The process of treating fluids containing hydrocyanic acid and hydrogen sulfid, or soluble cyanids, and sulfids, which consists in treating the fluid with a zinc compound in solution adapted to combine directly with the contained substances to form a soluble cyanid and an insoluble sulfid, segregating the insoluble compounds and extracting cyanid compounds from the liquor.

3. The process of recovering hydrocyanic acid from fluids which consists in subjecting the fluid to the action of a zincate solution.

4. The process herein described which consists in subjecting gases containing hydrocyanic acid to the action of a zincate solution.

5. The process herein described which consists in subjecting a fluid containing hydrocyanic acid and hydrogen sulfid to the action of a zincate solution thereby forming an insoluble sulfid compound and segregating such compound.

1,213,430. BELT-GEARING. FRANCIS A. STIERHEIM, Pittsburgh, Pa. Filed Sept. 21, 1914. Serial No. 862,718. (Cl. 74—21.)



1. A power transmitting mechanism having in combination a driving pulley, a plurality of driven pulleys, an idler and a belt inclosing said pulleys and idler in independent loops, the driven pulleys having their faces at right angles to the portion of the belt operating to drive the respective pulley.

2. A power transmitting mechanism having in combination a driving pulley, a plurality of simultaneously driven pulleys, an idler intermediate said driven pulleys as regards belt movement, and a belt inclosing said pulleys and idler in independent loops, the driven pulleys having their faces at right angles to the portion of the belt operating to drive the respective pulley.

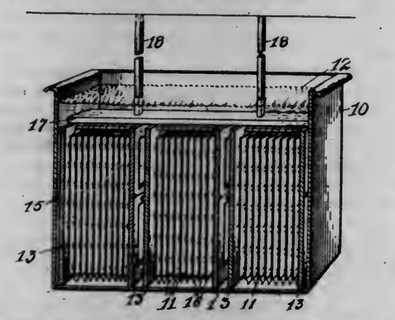
3. A power transmitting mechanism having in combination a driving pulley, a plurality of driven pulleys, an idler and a belt passing around the idler and so arranged on the driven pulleys as to rotate the latter in opposite directions respectively, the driven pulleys having their faces at right angles to the portion of the belt operating to drive the respective pulley.

4. A power transmitting mechanism having in combination a driving pulley, a plurality of driven pulleys, an idler and a belt passing around the idler and frictionally engaging said pulleys, said elements being so constructed that different rates of rotation are imparted to the respective driven pulleys, the driven pulleys having their faces at right angles to the portion of the belt operating to drive the respective pulley.

5. A power transmitting mechanism having in combination a driving pulley, a plurality of shafts, fast and loose pulleys carried by each of the said shafts, a belt driven by the driving pulley and having successive loops adapted to engage the fast and loose pulleys, each of said loops being movable from its fast to its loose pulley and vice versa, without any shifting of the other loops.

[Claim 6 not printed in the Gazette.]

1,213,431. MEANS FOR HOLDING SHEET-VENEER WHILE BLEACHING. BERDETTE E. STRONG and HARRY G. CLEMENGER, Jamestown, N. Y. Filed Dec. 24, 1914. Serial No. 878,947. (Cl. 8—2.)



1. Means for holding sheet veneer during bleaching comprising, two frame sides for holding the veneer in line, and removable means for connecting said frame sides near the outer edges to thereby hold the veneer in line between said frame sides.

2. Means for holding sheet veneer during bleaching, comprising, two frame sides for holding the veneer in line, pins removably and adjustably connecting said frame sides to hold the veneer therebetween and within said pins, and means for holding the veneer and frame sides in bundle form.

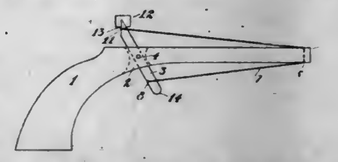
3. Means for holding sheet veneer during bleaching comprising, frame sides having holes therein near the outer edges, pins removably insertible in said holes to connect said frame sides and hold the veneer in line, and means for binding said frame sides on said pins to inclose the veneer in bundle form.

4. Means for holding sheet veneer during bleaching comprising, frame sides having holes therein around the outer edges, pins removably insertible in said holes to connect said frame sides and hold the veneer in line therebetween, means connectible to said pins for separating the sheets of veneer so that they will not touch one another, and means for binding said frame sides on said pins to inclose the veneer in bundle form.

5. Means for holding sheet veneer during bleaching comprising, frame sides having spaced holes therein around the outer edges, pins removably insertible in said holes to connect said frame sides and hold the veneer in line therebetween, sheets of netting engaging around said pins to separate the sheets of veneer so that they will not touch one another, and a cord for binding said frame sides and netting and veneer in bundle form for submerging in the bleaching solution.

[Claim 6 not printed in the Gazette.]

1,213,432. TOY PISTOL. HENRY C. STRUCHEN, St. Paul, Minn. Filed Apr. 15, 1916. Serial No. 91,439. (Cl. 124—2.)

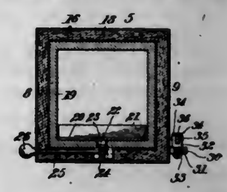


1. In a toy pistol the combination with a pistol handle and barrel of a pivoted lever passing through said barrel, one end of said lever serving as a trigger and the other end serving as a catch, a slot in said catch and parallel with the barrel of said pistol and adapted to receive a cardboard therein, and a flexible band attached to the end of said pistol barrel and the trigger end of said lever and adapted to be caught over the catch end for the purpose of snapping or shooting a cardboard therefrom.

2. In a toy piston the combination with a pistol barrel and body, of a pivoted lever extending through said barrel, the lower end forming a trigger and the upper end a catch, an endless flexible band, means at the front end of said pistol barrel for attaching said endless flexible band, leaving a loop above said barrel and a loop below said barrel, means on said trigger for attaching said lower loop thereto, a slot in said catch parallel to said barrel, and means for slipping the upper of said loops over said catch, whereby it may be normally restrained, but will be freed from said catch when said trigger is pulled backwardly.

3. In a toy pistol the combination with a barrel and body, of a pivoted lever extending through said barrel, a flexible connection between said barrel and said lever normally holding the lower end of said lever forwardly, and a flexible loop attached to said pistol barrel and adapted to be looped over the upper end of said lever, without disturbing the forward position of the lower end of said lever, a slot in the upper end of said lever adapted to receive a cardboard, the upper end of said lever being formed to release the flexible loop thereon when the lower end of said lever is pulled, thus snapping or shooting the cardboard placed in said slot.

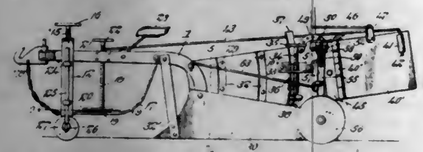
1,213,433. BUTTER CONTAINER AND CUTTER. GEORGE E. TERRY, San Francisco, Cal. Filed June 11, 1914. Serial No. 844,504. (Cl. 45—71.)



In a butter container of the class described, an elongated rectangular casing open at one end and comprising inner and outer spaced apart metallic members, the bottom of the inner member thereof having a depres-

sion in its center adjacent the open end, non-heat conducting material between said members to prevent the entrance of heat or cold to or from the interior of said casing, an inner sanitary casing of vitreous material closely fitting within the outer casing and being readily removable to permit the same to be cleaned, said inner casing being open at one end and having its bottom centrally longitudinally slotted from its rear wall to its open end, a movable sanitary readily cleanable carrying plate to receive the butter, closely fitting the inner casing and covering the slot in its bottom to prevent the entrance of butter, said plate being slidable on said slotted bottom, a longitudinally extending rack depending from the bottom of said plate centrally thereof and slidably disposed in said slot, a pinion in said depression meshing with said rack, and a shaft fixed to said pinion and extending transversely through and rotatably mounted in said outer casing with its outer end projecting therebeyond, said butter carrying plate being ejected by rotation of said pinion.

1,213,434. ROAD GRADING AND DITCHING PLOW. WILHELM TETZLOFF, New Richland, Minn. Filed May 25, 1916. Serial No. 99,831. (Cl. 97—12.)



1. A plow comprising a frame carried by the beam thereof, a supporting member extending beneath said beam, an arched frame mounted in said first named frame and connected to said supporting member, a segmental rack carried by said arched frame, operating means including a gear engaging said rack for actuating the same to turn said arched frame about its vertical axis, whereby to guide the plow, vertically arranged rods carried by said arched frame exteriorly of the sides thereof and having their lower ends extending below the lower end of said arched frame, and a ground engaging element supported by the lower ends of said rods.

2. A plow comprising a frame secured to the forward end of the beam thereof, bearings on said frame, a horizontally arranged adjusting member mounted in said bearings, a bracket arranged to slide on said frame and having operative connection with said adjusting member whereby the same may be adjusted, a scraper pivotally connected to the mold board of the plow, and a connection between the bracket and said scraper whereby to swing the latter about its pivots when the former is adjusted.

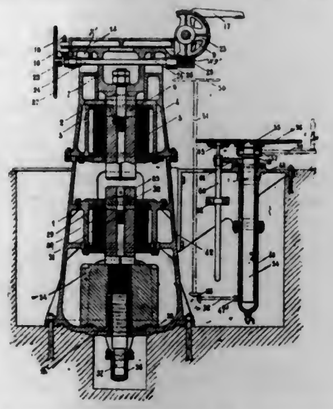
3. In a plow, the combination with the mold board and land side thereof, of an arched member connecting said parts, a laterally and downwardly extending beam pivoted to said mold board, a ground engaging disk carried by said beam, a bearing on said arched member, another bearing carried by said beam medially of its ends, and a screw shaft mounted in said bearings for vertically adjusting said beam.

1,213,435. STRAW-HAT FILLER. CHARLES S. THAYER, Middletown, N. Y. Filed Aug. 11, 1916. Serial No. 114,466. (Cl. 134—11.)

A filler for straw hats comprising one ounce banana oil, sixteen ounces white enamel paint, twenty-four ounces gasolene, five ounces sulfur, and eighteen ounces soapstone.

1,213,436. MOLDING-MACHINE. LÉON THOMAS, La Magdaleine, near Soissons, France, assignor to Societe Les Fils de A. Piat & Cie., Paris, France. Filed Aug. 4, 1914. Serial No. 855,060. (Cl. 22—33.)

1. In a mold jarring machine, the combination of a base, a table yieldingly supported on said base, a flask tilting table hinged to the first table and means for tilting the same, a stationary magnet coil having a movable core supported by the first-named table for lifting the same, a second stationary magnet coil having a movable core in line with the first core and adapted to act as an anvil for the first core, means for alternately energizing said coils to lift one core while the other is falling by gravity, a pump having a shock-absorbing piston operating counter to the anvil core, a receiving table associated with the tilting table, and a hydraulic lift for the receiving table and having operating connections with said pump, and means for controlling said connections.



2. In a mold jarring machine, the combination of a table, electromagnetic means for jarring the same, a receiving table provided with hydraulic lifting means, a pump having a plunger piston operated by said magnetic means, conduit connections between said pump and hydraulic means including a pressure accumulator, and valve means for controlling the fluid supply to said hydraulic means.

3. In a mold jarring machine, the combination of a base, a vibratory table yieldingly supported on said base, a solenoid having a core for intermittently lifting said table and a second solenoid arranged below the first having a core adapted to act as an anvil for the first core, and means for alternately energizing said solenoids to lift one core while the other is falling by gravity, said second core being provided with means for retarding its fall.

4. In a mold jarring machine, the combination of a base, a table yieldingly supported on said base, a stationary magnet coil having a movable core supported by said table for lifting the latter, a second stationary magnet coil having a movable core in line with the first core and adapted to act as an anvil for the first-named core, and means for alternately energizing said electromagnet to lift one core while the other is falling by gravity.

5. In a mold jarring machine, the combination of a table provided with electromagnetic means for jarring the same, a second table hinged to the first-named table for receiving a mold and provided with arms adapted to engage beneath the first-named table to hold the second table in horizontal position when in tilted position, yielding means for balancing the second table, means for tilting the table, and an electromagnetic vibrator for jarring the mold when the table is in position for withdrawal.

[Claims 6 and 7 not printed in the Gazette.]

1,213,437. CONCRETE PILING AND PILING ELEMENT. MAXWELL M. UPSON, Englewood, N. J., assignor to Raymond Concrete Pile Company, New York, N. Y., a Corporation of New Jersey. Filed July 23, 1909. Serial No. 509,111. (Cl. 72—76.5.)

1. A piling element consisting of a pile composed of concrete and having embedded in it metallic interlocks for the respective joint faces, said interlocks being separated by a concrete filled pile space in the direction of the piling, and such interlocks consisting of a vertically disposed

series of sections separated from each other by the pile concrete, and coöperative with adjacent piling elements.

2. A piling element comprising a pile composed of concrete and having embedded in it at each of two of its respective sides, separate metallic members, each constructed to interlock with adjacent piling elements.

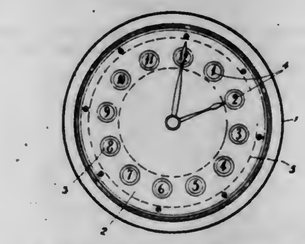


3. A piling element comprising a pile composed of concrete and having a vertical metallic interlock embedded in it in the plane of the piling but extending only partially through the pile in the direction of the piling.

4. A piling element consisting of a pre-molded pile composed essentially of concrete and having embedded in it a rolled steel member not affecting the integrity of the concrete structure, but extending outside the concrete and adapted to coöperate with a succeeding piling element to resist strains at right angles to the vertical length of the pile.

5. A piling element comprising a pile composed of concrete and having embedded in its side a separate metallic member in vertically disposed sections each constructed to interlock into an adjacent piling element.

1,213,438. WINDING-INDICATOR. EPHREM FÉLIX VALIQUET, Montreal, Quebec, Canada, assignor of one-fifth to Joseph Felix Desmarais, one-fifth to Omer Francois Lefebvre, and one-fifth to Joseph Charles Desmarais, Montreal, Canada. Filed Dec. 2, 1915. Serial No. 64,760. (Cl. 58—85.)



1. An indicator for watches comprising a main watch dial provided with a plurality of circumferential openings, a rotary dial provided with numerals which in its normal position will permit the said numerals to be visible through the openings provided in the main watch dial, means to rotate said dial and thereby cause the numerals to become invisible and means to rotate said rotary dial back to its normal position on winding the watch, substantially as described.

2. An indicator for watches comprising a main watch dial provided with a plurality of circumferential openings, a fixed plate provided with a circular groove adjacent to its edge, a circular dial provided with time indicating numerals sliding in said circular groove, said circular dial being spring-held in its normal position, means to release said dial and thereby cause the numerals to become invisible and manual means to rotate said circular dial back to its normal position, substantially as described.

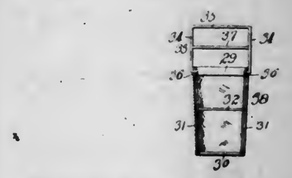
3. An indicator for watches comprising a fixed main watch dial provided with a plurality of openings adjacent to its circumference, a circular dial provided with a plurality of time indicating numerals, a fixed plate provided with a circular groove adjacent to its edge having a number of openings, said groove being adapted to receive the said circular dial, a gear mounted on said fixed plate, a pawl engaging said circular dial, means to rotate said gear, means to disengage said pawl from said dial and means to rotate said circular dial back into its normal position, substantially as described.

4. An indicator for watches, comprising a fixed main watch dial provided with a plurality of openings adjacent to its circumference, a circular dial provided with a plurality of time indicating numerals, a fixed plate provided with a circular groove adjacent to its edge, having a number of openings, said groove being adapted to receive the said circular dial, a gear mounted on said fixed plate, a pawl pivotally secured to said plate engaging a pin mounted on said circular dial passing through one of said openings in the groove of said fixed plate, means to rotate said gear, means to disengage said pawl from said pin, means to rotate said circular dial and means to rotate said circular dial back to its normal position, substantially as described.

5. An indicator for watches, comprising a fixed main watch dial provided with a plurality of openings adjacent to its circumference, a circular dial provided with a plurality of time indicating numerals, a fixed plate provided with a circular groove adjacent to its edge, having a number of openings, said groove being adapted to receive the said circular dial, a gear mounted on said fixed plate, a pawl pivotally secured to said plate engaging a pin mounted on said circular dial passing through one of said openings in the groove of said fixed plate, means to rotate said gear, a spring secured to said fixed plate at one end and at the other end secured to said pin and means to rotate said circular dial back to its normal position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,213,439. MAIL-BAG COLLECTING AND DELIVERING APPARATUS. ANTON JACK WALTER, Brooklyn, N. Y. Filed June 1, 1916. Serial No. 101,143. (Cl. 258—26.)



1. In a mail bag collecting and delivering apparatus, an open topped mail bag container comprising a skeleton frame and a cover therefor, means on said container extending upwardly from the open end for supporting the container in position for delivery, and other means for engaging the collecting apparatus.

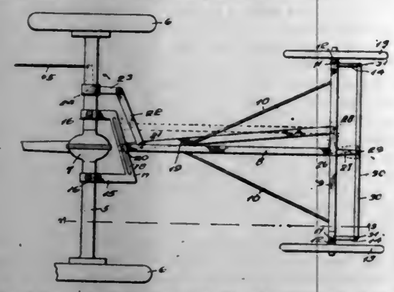
2. In a mail bag collecting and delivering apparatus, an open topped mail bag container comprising a skeleton frame and a cover therefor, a swinging bail extending upwardly from the mouth of said container having an upper and a lower transverse bar for respectively sustaining said container for delivery and for engaging the collecting apparatus.

3. In a mail bag collecting and delivering apparatus, an open topped mail bag container comprising a skeleton metal frame including a flat annular band at the top, and a cover of flexible material for said frame, and a bail pivoted to said band having two parallel horizontal bars forming a part thereof for engaging the collecting and delivering apparatus respectively.

1,213,440. TRAILER FOR VEHICLES. PETER J. WEPPLO, Franklin, Minn. Filed July 5, 1916. Serial No. 107,623. (Cl. 21—137.)

1. A trailer for a propelling vehicle, comprising a frame adapted for arrangement behind and connection with the vehicle and provided with a substantially relatively stationary guide element extending transversely thereof, wheels connected with the frame for supporting the same, means to operate the wheels for steering the frame, and a

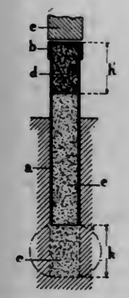
member connected with the means and carrying an element contacting with the transverse guide element to move longitudinally of the guide element.



2. A trailer for a propelling vehicle, comprising a frame adapted for arrangement behind and connection with the vehicle and provided with an angularly arranged transverse guide element having a longitudinal opening, wheels connected with the frame for supporting the same, means to operate the wheels for steering the frame, and a link connected with the means and carrying an element operating within the longitudinal opening of the inclined transverse guide element.

3. A trailer for a propelling vehicle, comprising a frame, wheels connected with the rear end of the frame, steering means for the wheels, an approximately U-shaped frame connected with the forward end of the first named frame and adapted for attachment to the propelling vehicle and having an inclined transverse slot, a link connected with the steering means, and a pin carried by the forward end of the link and operating in the slot.

1,213,441. METHOD OF MAKING CONCRETE OR REINFORCED-CONCRETE (FERROCONCRETE) PILES. OTTO WILHELMI, Lucerne, Switzerland, assignor to the Firm of Internationale Siegwartbalken-Gesellschaft, Lucerne, Switzerland. Filed Dec. 11, 1913. Serial No. 806,011. (Cl. 72—81.)



1. A process of manufacturing monolithic piles which consists in preparing a vertical opening in the ground lined by a sleeve, filling the sleeve with a fluid concrete, raising the sleeve, refilling the sleeve with fluid concrete, and then simultaneously forcing said concrete and sleeve into the ground, said sleeve being maintained open at its lower end during the remainder of the process after said raising of the sleeve.

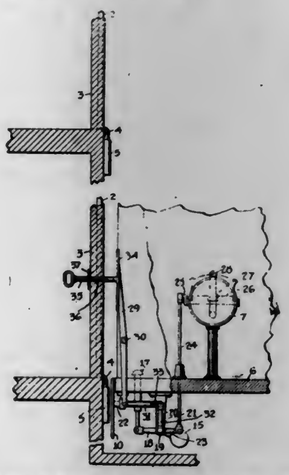
2. A process of manufacturing monolithic piles which consists in preparing a vertical opening in the ground lined by a sleeve, filling said sleeve with a liquid plastic, raising said sleeve a predetermined height, refilling said sleeve with a plastic, then simultaneously forcing said plastic and sleeve into the ground and repeating the operation until the pile formed is composed entirely of plastic material, said sleeve being maintained open at its lower end during the remainder of the process after said raising of the sleeve.

3. A process of manufacturing monolithic piles which consists in preparing a vertical opening in the ground lined by a sleeve, filling said sleeve with a liquid plastic mass, raising said sleeve a predetermined height, refilling said sleeve with a plastic mass and then simultaneously forcing said sleeve and mass into the ground, said liquid plastic mass adapted to expand laterally and provide a base section of enlarged cross-sectional area, the operation being repeated until the enlarged base area and column have been entirely filled with said plastic mass, said sleeve being maintained open at its lower end during the remainder of the process after said raising of the sleeve.

4. A process of manufacturing monolithic piles which consists in preparing a vertical opening in the ground lined by a sleeve, providing a liquid plastic mass, filling said sleeve with said mass, raising said sleeve a predetermined height, refilling said sleeve and simultaneously forcing said sleeve and mass into the ground the operation being repeated until the entire column is formed, some portion of the column formed of liquid plastic mass being of a greater cross-sectional area than the other portion of the column, said sleeve being maintained open at its lower end during the remainder of the process after said raising of the sleeve.

5. A process of manufacturing monolithic piles which consists in preparing a vertical opening in the ground lined by a sleeve, filling said sleeve with a plastic mass, raising said sleeve a predetermined height, refilling said sleeve with said plastic mass then simultaneously forcing said sleeve and mass into the ground to its original depth, then again raising said sleeve a predetermined height and refilling the same with said plastic mass and again forcing said sleeve and mass into the ground thereby laterally expanding the base of the pile to be formed to a predetermined width, substantially as described, said sleeve being maintained open at its lower end during the remainder of the process after said raising of the sleeve.

1,213,442. ELEVATOR SAFETY SYSTEM. GLENN S. WILLIAMSON, New York, N. Y. Filed Mar. 24, 1916. Serial No. 86,449. (Cl. 187—49.)



1. In a safety system for elevators having a shaft with a plurality of landings, the combination with a landing door, and a shaft lock for the same, of a car having a controller, mechanism on the car operable to open said lock and to render the controller inoperative, and means comprising an insertible and removable key for opening said lock from the outside of the landing door.

2. In a safety system for elevators having a shaft with a plurality of landings, the combination of a landing door, a mechanical lock therefor, a car having a controller and mechanism on the car for opening the lock and rendering the controller inoperative, a shaft wall portion adjacent said door provided with a key hole, a key insertible in said hole, and means whereby said key may be operated to open said lock in the presence of the car.

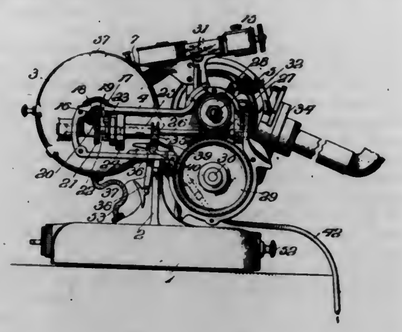
3. In a safety system for elevators having a shaft with a plurality of landings, the combination with a landing door, a shaft lock for said door, a car having a controller, a car shoe for opening said lock, and mechanism on the car operable to project said shoe and at the same time render the controller inoperative, a shaft wall portion adjacent said door provided with a key hole, and a key insertible in said hole to operate the mechanism on the car.

4. In a safety system for elevators having a shaft with a plurality of landings, the combination of a shaft lock for a landing door, a car having a controller, mechanism on the car operable to open said lock and at the same time to prevent starting of the car by locking the controller, and means requiring the presence of the car for opening said lock from the outside of the door.

5. In an elevator, the combination of a door at a landing, a mechanical lock for said door, a pedal and train of mechanism on the car for releasing said lock, and means whereby said lock releasing mechanism on the car may be actuated from the landing at the outer side of the door to release the lock.

[Claims 6 to 19 not printed in the Gazette.]

1,213,443. TALKING-MACHINE. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Sept. 25, 1913. Serial No. 791,821. (Cl. 274—17.)



1. The combination of a flat base, a relatively short column of small cross-sectional area projecting upward therefrom, and a talking machine comprising a record-mandrel, a sound-box carriage and a motor operatively connected with said mandrel and carriage, said talking machine being supported by said column with its parts compactly arranged in balanced relation with respect to said column.

2. The combination in a talking machine, of a flat base, a column of small cross-sectional area projecting upward from the base, and a mechanism supported on the column and comprising a record-mandrel, a sound-box carriage and a motor operatively connected with the mandrel and carriage, the center of gravity of the mechanism being at an elevation above the bottom of the base less than the maximum horizontal dimension of the base.

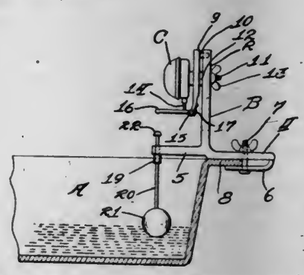
3. The combination in a talking machine, of a flat base, a column of small cross-sectional area projecting upward from the base, and a mechanism supported on the column and comprising a record-mandrel, a sound-box carriage and a motor operatively connected with the mandrel and carriage, the center of gravity of the mechanism lying approximately in the axis of the column and being at an elevation above the bottom of the base less than the maximum horizontal dimension of the base.

4. The combination in a talking machine, of a flat base, a relatively short column of small cross-sectional area projecting upward from the base, a record-mandrel and a sound-box carriage supported on the column at one side thereof, and a motor supported on the column at the other side thereof and operatively connected with the mandrel and carriage, the combined center of gravity of said mandrel, carriage and motor lying approximately in the axis of the column.

5. The combination in a talking machine, of a flat base, a column of small cross-sectional area projecting upward from the base, a record-mandrel and a sound-box carriage supported on the column at one side thereof, and a motor supported on the column at the other side thereof and operatively connected with the mandrel and carriage, the combined center of gravity of the mandrel, carriage and motor being at an elevation above the bottom of the base less than the maximum horizontal dimension of the base.

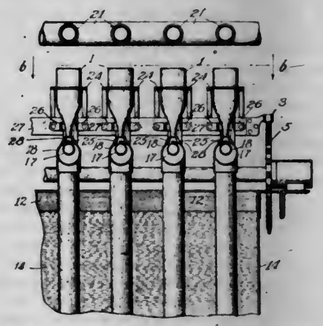
[Claims 6 to 32 not printed in the Gazette.]

1,213,444. OVERFLOW-SIGNAL. WILLIAM J. ABERLE, St. Paul, Minn. Filed July 21, 1915. Serial No. 41,091. (Cl. 116—15.)



An overflow alarm, comprising a support having means for fastening it to a receptacle, a stem carrying a float vertically reciprocable with respect to said support, an alarm carried by said support, and a trigger adapted to be thrown from inoperative position without to operative position within the path of travel of said stem and to be actuated thereby to sound said alarm.

1,213,445. BOTTLE-CLEANING DEVICE. FRANK C. ALTPETER, Chicago, Ill. Filed Oct. 10, 1914. Serial No. 866,022. (Cl. 141—7.)



1. In a bottle washing machine the combination of means for directing a jet of cleaning liquid against the outer portions of the bottle, of means for simultaneously directing a jet of liquid into the interior of said bottle, and means for collecting the used liquid from the interior of the bottle to the exclusion of the liquid used for the exterior of the bottle.

2. In a bottle washing machine the combination of means for directing a jet of cleaning liquid against the outer portions of the bottle, means for simultaneously directing a jet of liquid into the interior of said bottle, means for collecting the used liquid from the interior of the bottle to the exclusion of the liquid used for the exterior of the bottle, and means for forcing the collected liquid again through the means for directing liquid into the interior of said bottle.

3. In a bottle washing machine the combination of means for directing a jet of cleaning liquid against the outer portions of the bottle, means for collecting the used liquid from the exterior of said bottle, means for simultaneously directing a jet of liquid into the interior of said bottle, means for collecting the used liquid from the interior of the bottle to the exclusion of the liquid used for the exterior of the bottle, and means for forcing the collected liquid again through the means for directing liquid into the interior of said bottle.

4. In a bottle washing machine the combination of means for directing a jet of cleaning liquid against the outer portions of the bottle, means for collecting the used liquid from the exterior of said bottle, means for forcing the liquid collected through the means for directing the liquid against the outer portions of the bottle, means for simultaneously directing a jet of liquid into the interior of said bottle, means for collecting the used liquid from the interior of the bottle to the exclusion of the liquid used for the exterior of the bottle, and means for forcing the collected liquid again through the means for directing liquid into the interior of said bottle.

5. In a bottle washing machine the combination of means for directing cleaning liquid against the outer portions of the bottle, a plurality of nozzles and a pipe for directing liquid into the interior of said bottle, and a second pipe inclosing said first aforesaid pipe having openings adjacent to said nozzles for collecting the used liquid from the interior of the bottle to the exclusion of the liquid used for the exterior of the bottle.

[Claims 6 to 8 not printed in the Gazette.]

1,213,446. FORK. ELMER ANDERSON, Palmyra township Renville county, Minn. Filed Aug. 3, 1916. Serial No. 112,996. (Cl. 55—2.)

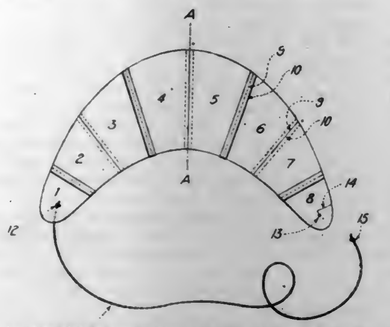


1. A device of the character described, comprising a handle having a shank provided with a longitudinal opening and a recess in communication with the longitudinal opening, an implement having a shank longitudinally adjustably mounted within the longitudinal opening and provided with an enlarged member for insertion within the recess to lock the implement shank against longitudinal movement with relation to the handle shank, and yielding means adapted to oppose the lateral movement of the implement shank with relation to the handle shank.

2. A device of the character described, comprising a handle having a shank provided with a longitudinal opening and a plurality of recesses leading into the longitudinal opening, an implement having a shank longitudinally adjustably mounted within the longitudinal opening and provided with a plurality of cams adapted for insertion within the recesses, and a laterally extending spring secured to the handle shank and adapted to contact with a selected cam.

3. A device of the character described, comprising a handle having a shank provided with a longitudinal opening and a plurality of recesses leading into the longitudinal opening, an implement having a shank longitudinally adjustably mounted within the longitudinal opening and having a longitudinal slot formed therein and a plurality of cams adapted for insertion within the recesses, a pin secured to the handle shank and passing through the slot of the implement shank, and a substantially U-shaped spring straddling the handle shank and secured thereto and adapted to contact with a selected cam.

1,213,447. EYE-SHADE. ROBERT H. BACON, Los Angeles, Cal. Filed July 17, 1916. Serial No. 109,768. (Cl. 2—149.)



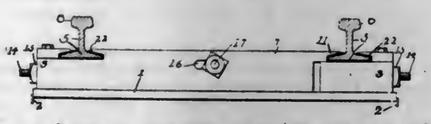
1. An eye-shade composed of a plurality of flat sections jointed together, alternate joints being foldable in one direction and the intermediate joints foldable in the opposite direction, whereby the shade may be folded into a compact pack, and means for holding the shade on the head of the wearer.

2. An eye-shade composed of a plurality of flat sections joined together by pliable hinge strips arranged alternately on opposite sides of the shade, and means for holding the shade on the head of the wearer.

3. An eye-shade composed of a plurality of flat sections jointed together, alternate joints being foldable in one direction and the intermediate joints foldable in the opposite direction, whereby the shade may be folded into a compact pack, the joints between said sections being formed of pliable hinge strips each of which is cemented to two adjacent sections, said hinge strips being arranged alternately on opposite sides of the shade, and means for holding the shade on the head of the wearer.

4. An eye-shade composed of a plurality of flat sections joined together by pliable hinge strips arranged alternately on opposite sides of the shade, alternate joints being foldable in one direction and the intermediate joints foldable in the opposite direction whereby, when the shade is folded up, the edges of the sections at alternate joints will fall into line thus forming a compact pack, the exterior outline of which is the same as that of the two largest sections.

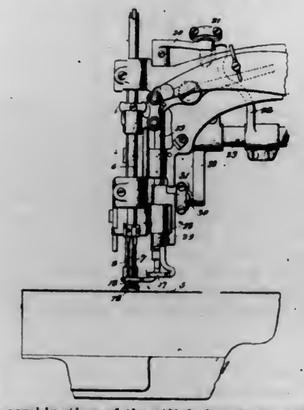
1,213,448. RAILROAD-TIE. HENRY J. BARNES, Youngstown, Ohio. Filed Oct. 16, 1916. Serial No. 125,883. (Cl. 238—5.)



1. A railroad tie, consisting of twin sections, each having a broad end rail supporting portion a narrow rib and a locking lug and recess, a longitudinal and a transverse binding means for securing the sections together, and a channeled plate receiving and supporting the base of said sections when assembled.

2. A railroad tie, consisting of twin sections, each having a broad end rail supporting portion formed with a seat for the base of the rails on its upper face and a recess on its under face and a narrow rib having teeth on its inner face and terminating in flanges on its upper face and a locking lug on its under face, a longitudinal bolt passing through said ribs of the sections for bringing their teeth into engagement and a transverse rod passing through said sections to bring them together and secure the locking lugs in the recesses of said sections.

1,213,449. SEWING-MACHINE. JOSEPH BERGER, Jr., Utica, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 8, 1913. Serial No. 740,894. (Cl. 112—7.)



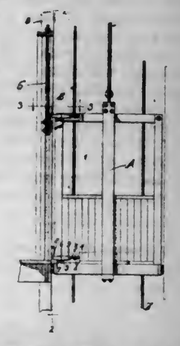
1. The combination of the stitch forming mechanism, including a plurality of needles set in oblique position with respect to the line of feed, and a looper for each needle, of thread laying mechanism for laying threads on the upper face of the fabric, comprising thread carrying fingers, a vertical shaft supporting one of said fingers, means for operating the shaft, said vertical shaft being disposed at one side the line of feed, whereby the thread carrying finger moves in an arc substantially equal distances from said needles, and means for supporting the other thread finger, whereby the same may be oscillated about the axis of said vertical shaft independently of said first named thread finger and in a direction opposed thereto, and means for oscillating said last named thread finger, the oscillating devices for the thread fingers being timed so that said thread fingers are moved simultaneously in opposite directions and are given one complete reciprocation for every two complete reciprocations of the needles.

2. The combination of the stitch forming mechanism, including a plurality of needles set in an oblique position with respect to the line of feed, of a thread laying mechanism for laying threads on the upper face of the fabric, comprising a plurality of thread carrying fingers, a vertical shaft for carrying one of said fingers, an oscillating support carrying the other finger, and mounted so as to oscillate about the axis of said shaft, an operating shaft, arms carried thereby and projecting in opposite directions therefrom, and links connecting said arms respectively with said vertical shaft and said oscillating support, whereby said thread carrying fingers are simultaneously moved in opposite directions.

3. The combination of the stitch forming mechanism, including a plurality of needles set in an oblique position with respect to the line of feed, of a thread laying mechanism for laying threads on the upper face of the fabric, comprising a plurality of thread carrying fingers, a vertical shaft for carrying one of said fingers, an oscillating support carrying the other finger, and mounted so as to oscillate about the axis of said shaft, an operating shaft, arms carried thereby and projecting in opposite directions therefrom, links connecting said arms respectively with said vertical shaft and said oscillating support, whereby said thread carrying fingers are simultaneously moved in opposite directions, and means for adjusting said links for varying the position of the thread fingers relative to the needles.

4. The combination of the stitch forming mechanism, including a plurality of needles set in an oblique position with respect to the line of feed, of a thread laying mechanism for laying threads on the upper face of the fabric, comprising a plurality of thread carrying fingers, a vertical shaft for carrying one of said fingers, an oscillating support carrying the other finger, and mounted so as to oscillate about the axis of said shaft, an operating shaft, arms carried thereby and projecting in opposite directions therefrom, and links connecting said arms respectively with said vertical shaft and said oscillating support, whereby said thread carrying fingers are simultaneously moved in opposite directions, said vertical shaft being disposed at one side the line of feed, whereby said thread carrying fingers are moved in arcs substantially equal distances from the needles.

1,213,450. SAFETY-LATCH FOR ELEVATOR-GATES. CHARLES L. BORST, Atchison, Kans. Filed Mar. 18, 1916. Serial No. 85,125. (Cl. 187—58.)



1. In combination with an elevator having an elevator gate vertically movable in the exit from said elevator, trip members carried by said gate at each side thereof, a latch rotatably mounted on each side of said elevator at its upper end, and a similar latch disposed at the bottom of said elevator at the exterior thereof, resilient means secured to said elevator and engaging each of said latches, each of said latches provided with means for altering the pressure exerted by said resilient means on said latches whereby a different pressure will be required to swing said latches on their pivots, said trip members adapted to engage the uppermost of said latches, and a slidably mounted trip member flexibly connected to said gate and adapted to engage the lowermost latch at the bottom of said elevator.

2. In combination with an elevator having an elevator gate vertically movable in the exit from said elevator, trip members carried by said gate, and means carried by said elevator and arranged for intermittent engagement with said trip members, including flat springs, said means including blocks having resilient engagement with said flat spring elements, said blocks being provided with pivot pins disposed at one side of the center line of the blocks whereby the pressure exerted by said resilient elements on said blocks may be altered for varying the pressure required to release said means for intermittent engagement with said trip members.

3. In combination with an elevator having an elevator gate vertically movable in the exit from said elevator, trip members carried by said gate at each side thereof, a plate mounted on each side of said elevator and provided with an outwardly extending flange at one end, each of said plates carrying a flat spring having its end secured to said flange, said springs extending longitudinally along the sides of said plates, means carried by each of said plates and adapted to intermittently engage said trip members, said means including blocks contacting with the ends of said flat springs, said blocks being provided

with pivot pins disposed at one side of the center line of the blocks whereby the pressure exerted by said flat springs on said blocks may be altered for varying the pressure required to release said means for intermittent engagement with said trip members.

4. In combination with an elevator having an elevator gate vertically movable in the exit from said elevator, of a latch pivotally mounted, a substantially rectangular plate secured to the side of the elevator and having a screw threaded aperture provided adjacent one of its ends, a pivot pin screw threadedly mounted in said aperture and extending outwardly from said plate for pivotally receiving said latch, a block integrally formed with said latch and interposed between said latch and said plate, a spring engaging said block, said spring having one of its ends fixed to said plate, a cleat secured to the framework of said exit, and a trigger member flexibly connected to said gate and slidably mounted for vertical movement on said cleat and extending into the path of movement of said latch.

5. In combination with an elevator having an elevator gate vertically movable in the exit from said elevator, a plate secured to the wall of said elevator, a latch pivotally mounted on said plate, a spring secured to one end of said plate, a block integrally formed with said latch and, a pivot pin extending through said latch and said block and having its ends secured to said plate, said pivot pin extending through said block in a line to one side of the center line of the block whereby one side of said block will project a greater distance from said pin than the opposite side of said block, and a trip finger mounted upon the elevator gate and in alinement with said latch.

[Claims 6 to 8 not printed in the Gazette.]

1,213,451. LOCK. WALTER EDWARD BOWL, Warborough, Wallingford, England. Filed Aug. 1, 1913. Serial No. 782,395. (Cl. 70—29.)



1. In a lock of the kind specified, the combination with the casing, bolt-bars, and slide, of a spring-catch pivoted directly to said slide, and having a tail and a projection on said tail, and of a pair of apertures in one of said bolt-bars coöperating with said projection of said tail, substantially as described.

2. In a lock having a casing, bolt-bars and slide as specified, in combination, a member slotted to correspond with the key-holes in said casing and shaped to permit the key turning completely within same, means for holding said member stationary, and a spring-catch pivoted to said slide and engaging and disengaging one of said bolt-bars, substantially as described.

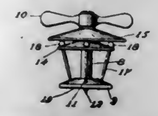
3. In a device of the character substantially as described, the combination with the casing, bolt bars, slide and spring catch, said spring catch pivoted to said slide and having a tail, and projection on said tail, a pair of apertures in one of said bolt bars coöperating with said projection, a member comprising an arched body, said body having slotted sides corresponding with the key holes in said casing, and means for holding said member stationary with said casing.

4. A device of the character substantially as described, comprising a casing, bolt bars slidably contained therein, a member comprising an arched body having its sides extended and bearing upon said casing, means for holding said member stationary comprising a groove in said body engaging one of said bolt bars and screws engaging said sides and said casing, and a spring catch pivoted to a slide and engaging and disengaging one of said bolt bars.

5. In a device of the character substantially as described, a casing, bolt bars within said casing, a slide, a stationary member forming a housing for a key, and a spring catch pivoted to said slide and coöperating with means on one of said bolt bars.

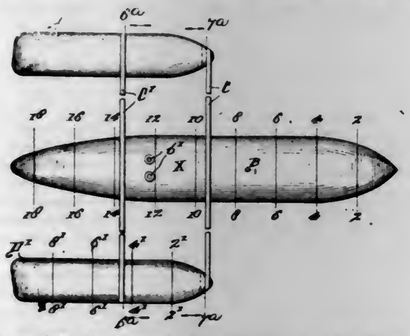
[Claims 6 to 12 not printed in the Gazette.]

1,213,452. STOPPER-EXTRACTOR. WILSON M. BRADY, Baltimore, Md. Filed Jan. 16, 1915. Serial No. 2,554. (Cl. 65—46.)



A bottle-stopper extractor having in combination, a stem provided at its lower end with a head having inclined passages 11, through the head; a sleeve 13, slidable on the stem and carrying a pin-holding plate 14, having radial slots 16; a pin-actuating plate 15, also carried by the sleeve and positioned above the said pin-holding plate; and pins having heads at their upper end and sharpened points at the other end,—said pins extending loosely through the radial slots in the pin-holding plate and having their heads interposed between said pin-plate and the actuating plate, and the pointed ends of the pins extending through said inclined passages in the lower head.

1,213,453. FLOAT FOR AEROPLANES. MARK LAMBERT BRISTOL and HOLDEN CHESTER RICHARDSON, U. S. Navy. Filed Feb. 21, 1916. Serial No. 79,095. (Cl. 244—2.)



1. A float attachment for aeroplanes, comprising a main central float mounted below the center of gravity of the aeroplane and provided with a substantially V-shaped bottom, and two smaller side floats secured abreast the rear portion of the main float, the three floats being mounted below and connected to the body of the aeroplane, and said side floats having their bottoms flared outward in reverse directions, substantially as described.

2. A float attachment for aeroplanes, comprising a main central float mounted below the center of gravity of the aeroplane, said float being of stream-line construction having its upper surface curved and tapering forward and aft, and its bottom substantially V-shaped in cross section, and two smaller side floats secured abreast the rear portion of the main float, the two side floats having their upper surface curved and tapering fore and aft and their bottoms flaring upward and outward in reverse directions, the three floats being also connected to the body of the aeroplane, substantially as described.

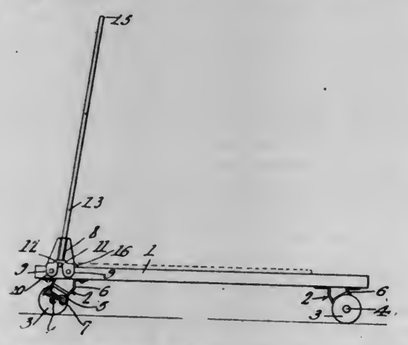
3. A float attachment for aeroplanes, comprising a main central float mounted below the center of gravity of the aeroplane, said float being of stream-line construction having its upper surface curved and tapering forward and aft, and its bottom substantially V-shaped in cross section, and provided with a step, and two smaller side floats secured abreast the rear portion of the main float, the two side floats having their upper surface curved and tapering fore and aft and their bottoms flaring upward and outward in reverse directions, the three floats being also connected to the body of the aeroplane, substantially as described.

4. A float attachment for aeroplanes, comprising a main central float mounted below the center of gravity of the aeroplane, said float being of stream-line construction having its upper surface curved and tapering forward and aft, and its bottom substantially V-shaped in cross section, and provided with a step, with means for ventilating said step, and two smaller side floats secured abreast the rear portion of the main float, the two side floats having their upper surface curved and tapering fore and aft and their bottoms flaring upward and outward in reverse directions, the three floats being also connected to the body of the aeroplane, substantially as described.

5. A float attachment for aeroplanes, comprising a main central float mounted below the center of gravity of the aeroplane, said float being of stream-line construction having its upper surface curved and tapering forward and aft, and its bottom substantially V-shaped in cross section, and two smaller side floats secured abreast the rear portion of the main float, the two side floats having their upper surface curved and tapering fore and aft and their bottoms of warped construction and flaring upward and outward in reverse directions, the three floats being also connected to the body of the aeroplane, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,213,454. TOY KICK-CAR. CARL E. BROWN, Columbus, Ohio. Filed Apr. 8, 1916. Serial No. 89,962. (Cl. 21—191.)

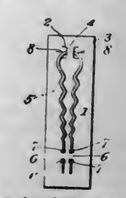


1. A device of the character described comprising a wheel mounted foot board, brackets carried thereby and having apertures, a doubled resilient handle having angular terminals projecting into said apertures, and means for preventing the complete withdrawal of said terminals from the apertures unless the handle is swung to a predetermined position.

2. A device of the character described comprising a wheel mounted foot board, a pair of upstanding brackets carried thereby having apertures, a doubled resilient handle having outturned terminals projecting through said apertures, and a piece carried by said foot board between the brackets and having an upwardly offset tongue to normally prevent the terminals from being moved completely out of said apertures.

3. A device of the character described comprising a wheel mounted foot board, a pair of upstanding brackets carried thereby and having apertures adjacent their lower ends, a doubled resilient handle having outturned terminals projecting through said apertures, the upper ends of said brackets having inwardly projecting lugs for receiving the limbs of said handle therebetween, and a piece carried by the foot board and having an upwardly offset forwardly projecting tongue above the axis of said terminals, said tongue being sufficiently wide to prevent said limbs from being moved together enough to completely withdraw said terminals from said apertures when the handle is in operative position or is swung against the board.

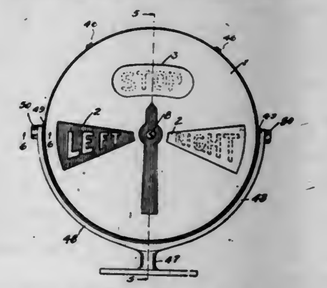
1,213,455. DISPLAY DEVICE. ALFRED BURKE, Flushing, N. Y. Filed July 6, 1914. Serial No. 849,188. (Cl. 211—34.)



1. A display device for hair pins comprising a blank provided with a pair of slits forming a holder between them for the head of a pin, slits extending laterally of said pair of slits and terminating at points located a greater distance apart than the maximum width of the pin, and holders for the legs of the pin, said lateral slits forming a divided opening through which the pin is passed into engagement with the holders in mounting it on the blank.

2. A display device for hair pins comprising a card provided at its upper portion with a pair of longitudinal slits having outturned ends and forming between them a vertical strip for engaging and holding the head of a hair pin, slits extending laterally of the longitudinal slits and forming a divided pin-receiving opening of greater length than the width of the pin whereby the pin may be mounted on the card by being passed from the rear through said opening, and pairs of transverse slits having outturned ends at the lower portion of the card and forming between them horizontal strips for engaging and holding the legs of the pin.

1,213,456. SIGNALING DEVICE FOR AUTOMOBILES. JAMES K. BURLEIGH and LAUREN V. WHITE, Kalamazoo, Mich., assignors, by direct and mesne assignments, to Arthur L. Zwister, Kalamazoo, Mich. Filed July 8, 1915. Serial No. 38,824. (Cl. 40—52.)



1. In a device of the class described, the combination of a face plate, provided with display openings therein, a plate disposed parallel to said face plate and connected thereto, said plate being provided with legends in line with said display openings, a pair of shutters pivoted and movable between the corresponding legends and certain of said display openings, guides secured to the front of said plate and disposed to limit the upward movement of said shutters, a third shutter vertically movable between said guides and provided with a rearwardly directed finger, said plate being provided with a slot through which said finger extends, said third shutter being movable between one of said display openings and the corresponding legend, electromagnets carried by the plate bearing said leg-

ends, an armature lever for each electromagnet pivotally mounted on said plate, fingers extending laterally from two of said armature levers, said plate being provided with slots through which said fingers extend beneath the lower edges of the corresponding shutters, a lever pivotally mounted on said plate, and having the end thereof engaging beneath the rearwardly directed finger of the third shutter, the third armature lever being disposed with the end thereof engaging beneath said lever to actuate the same, and a casing, all co-acting substantially as described, and for the purpose specified.

2. In a device of the class described, the combination of a face plate, provided with display openings therein, a plate disposed parallel to said face plate and connected thereto, said plate being provided with legends in line with said display openings, a pair of shutters pivoted and movable between the corresponding legends and certain of said display openings, guides secured to the front face of said plate and disposed to limit the upward movement of said shutters, a third shutter vertically movable between said guides and provided with a rearwardly directed finger, said plate being provided with a slot through which said finger extends, said third shutter being movable between one of said display openings and the corresponding legend, electromagnetic means for actuating said shutters and a casing, all co-acting substantially as described, and for the purpose specified.

3. In a device of the class described, the combination of a face plate provided with a pair of display openings, a plate provided with a pair of direction-indicating legends disposed in line with said display openings, a bolt connecting said face plate and said plate, a pair of shutters pivoted on said bolt, and movable between said legends and said display openings, said plate being provided with slots, electromagnets mounted on the rear of said plate, armature levers for each of said magnets pivoted on the rear of said plate, and provided with laterally directed fingers extending through said slots beneath the lower edges of said shutters, whereby said shutters will be lifted when said magnets are energized.

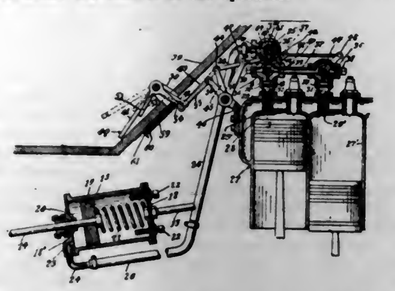
4. In a device of the class described, the combination of a face plate provided with a rearwardly directed peripheral flange, and provided with display openings, a plate carrying shutters movable behind said display openings, shutter actuating means carried by said plate, a spring metal bar disposed within said flange at the rear of said plate and extending around the periphery thereof, a casing provided with a forwardly directed peripheral flange fitting around the rearwardly directed flange of said face plate, fastening means passing through said flanges, and into said bar, a bracket provided with a pair of upwardly extending arms, and bolts passing through the ends of said arms and into said flanges and bar.

5. In a device of the class described, the combination of a face plate provided with a rearwardly directed peripheral flange, and provided with display openings, a plate and carrying shutters movable behind said display openings, shutter actuating means carried by said plate, a casing provided with a forwardly directed peripheral flange fitting around the rearwardly directed flange of said face plate, fastening means passing through said flanges, a bracket provided with a pair of upwardly extending arms, and bolts passing through the ends of said arms and into said flanges.

[Claims 6 and 7 not printed in the Gazette.]

1,213,457. PNEUMATIC BRAKE FOR AUTOMOBILES. CONWAY F. CANDLER, Orange, Cal. Filed Dec. 13, 1915. Serial No. 66,625. (Cl. 188—3.)

1. The combination of an automobile, an internal combustion engine, a footbrake comprising a pedal and a brake rod, said rod consisting of a front and a rear section, a pneumatic cylinder having its front head rigidly attached to said front section, a piston slidably mounted in said cylinder and operatively connected to said rear section, resilient means tending to move said piston into brake release position, adjustable piston stops limiting the movement of said piston, a pressure conduit leading from said cylinder to the combustion chamber of said engine, a throttle valve in said conduit, a control valve located in said conduit between said throttle valve and said cylinder, said control valve being provided with an exhaust port and a plurality of exhaust passages of successively increasing cross-sectional area, adapted to establish communication between said conduit and said exhaust port and valve operating means under the control of the operator.



2. The combination of an automobile, an internal combustion engine, a footbrake comprising a pedal and a brake rod, said rod consisting of a front and a rear section, a pneumatic cylinder having its front head rigidly attached to said front section, a piston slidably mounted in said cylinder and operatively connected to said rear section, resilient means tending to move said piston into brake release position, a support for said cylinder allowing longitudinal movement thereof, a pressure conduit leading from said cylinder to the combustion chamber of said engine, a throttle valve in said conduit, a control valve located in said conduit between said throttle valve and said cylinder, said control valve being provided with an exhaust port and a plurality of exhaust passages of successively increasing cross sectional area adapted to establish communication between said conduit and said exhaust port, valve operating means under the control of the operator and resilient means for moving said valves into brake inoperative position.

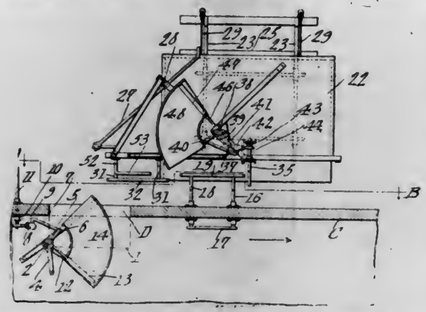
3. The combination of an automobile, an internal combustion engine, a footbrake comprising a pedal and a brake rod, said rod consisting of a front and a rear section, a pneumatic cylinder having its front head rigidly attached to said front section, a piston slidably mounted in said cylinder and operatively connected to said rear section, a pressure conduit leading from said cylinder to the combustion chamber of said engine, a control valve in said conduit, said control valve being provided with an exhaust port and an exhaust passage establishing communication between said conduit and said exhaust port when the brake is in release position, and valve operating means under the control of the operator for establishing communication between the combustion chamber of said engine and said pneumatic cylinder.

4. The combination of an automobile, an internal combustion engine, a brake, a brake rod, a pneumatic cylinder, a piston slidably mounted therein and operatively connected to said rod, resilient means tending to move said piston into brake release position, adjustable stops limiting the movement of said piston, a pressure conduit leading from said cylinder to the combustion chamber of said engine, a throttle valve in said conduit, a control valve between said throttle valve and said cylinder in said conduit, said control valve being provided with an exhaust port and a plurality of exhaust passages of successively increasing cross-sectional area adapted to establish communication between said conduit and said exhaust port, and valve operating means under the control of the operator.

5. The combination of an automobile, an internal combustion engine, a brake, a brake rod, a pneumatic cylinder, a piston slidably mounted therein and operatively connected to said rod, a pressure conduit leading directly from said cylinder to the combustion chamber of said engine, a throttle valve in said conduit normally closing communication between said cylinder and said conduit, a control valve between said throttle valve and said cylinder in said conduit, said control valve being provided with an exhaust port and an exhaust passage adapted to establish communication between said conduit and said exhaust port, and valve operating means under the control of the operator.

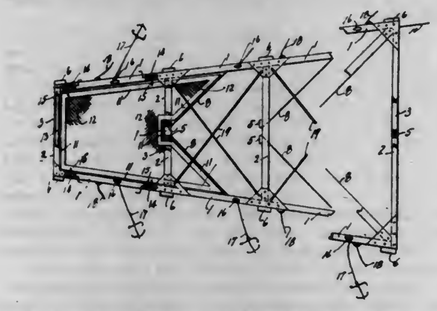
[Claim 6 not printed in the Gazette.]

1,213,458. APPARATUS FOR RECEIVING AND DELIVERING MAIL. JOHN A. CHAMBERS, Newburg, Mo. Filed July 19, 1915. Serial No. 40,764. (Cl. 258—7.)



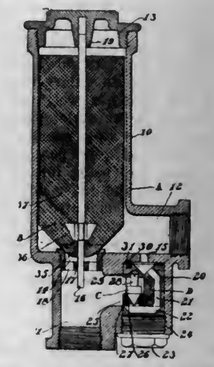
Apparatus for effecting the interchange of mail, including a stationary trough-like holder, a revoluble post outside of and adjacent the holder, said holder being concentric with the post, a member movable longitudinally within the holder, a connection between said member and the post, a spring connected to the post, a crank arm, cooperating means connecting the crank arm to the post for holding said post against rotation and with the spring under tension, and a tripping element for engagement by the crank arm to shift said connecting means out of their holding positions, thereby to successively release the spring and actuate the movable member within the holder.

1,213,459. PORTABLE FISH-TRAP. HANS CHRISTENSEN, Brownsville, Wash. Filed Apr. 14, 1915. Serial No. 21,217. (Cl. 43—20.)



In a portable fish trap which normally rests upon the bottom of the sea, the combination of a rigidly connected outer framework, webbing secured to the said framework and members dividing the trap into inner and outer compartments, the former being adapted to inclose fish and the latter to guide the fish into the inner compartment, a door separating the inner and outer compartments, a false bottom within the inner compartment and fitting the sides of said compartment closely, means for raising the said false bottom with respect to the rest of the trap, said means including windlasses on top of the trap framework and lines attached to the false bottom and adapted to be wound upon the windlasses, a door in the inner compartment near the top of the trap and communicating with the outside of the trap, whereby the captured fish may be more easily removed from the trap and whereby they may be released from the trap into the open sea, means for securing the trap to the bottom of the sea, said means including anchors secured to the top of the trap by lines and piles projecting a short distance below the bottom of the trap, and means for raising the entire trap, whereby it may be moved from place to place.

1,213,460. TEMPERATURE-BOOSTER FOR HOT-WATER HEATING SYSTEMS. WILBERT EDGAR CLARK, Toronto, Ontario, Canada. Filed Dec. 20, 1915. Serial No. 67,805. (Cl. 137—53.)



1. A temperature booster for hot water heating systems comprising a cylindrical portion having a bottom outlet neck and a side outlet neck, a main passageway between the outlet necks and a by-pass passageway between said outlet necks, a weighted valve controlling the main passageway, a removable cage member mounted in the by-pass passageway having a passageway therethrough, a cup shaped seat communicating with the bottom of the last mentioned passageway, said combined by-pass passageway forming one of L shape, a removable plug holding the seat and cage member in position, a valve mounted in the cage member and a removable seat for the valve, substantially as described.

2. A temperature booster of the character described comprising, in combination, a valve casing provided with an outlet passageway formed with a valve seat and a separate by-pass passageway for back flow, said by-pass passageway being formed with an enlargement opposite an opening formed in the casing, a weighted valve gravity seated on the valve seat in the outlet passageway, a cage member fitting to the enlargement in the by-pass passageway and being itself formed with two passageways, one of which has a tapered valve seat thereon, a tapered valve fitting the seat and reciprocably held in position thereon, a plug closing the opening in the casing, and a removable member co-acting therewith formed with a recess adapted to connect the two passageways in the cage member, as and for the purpose specified.

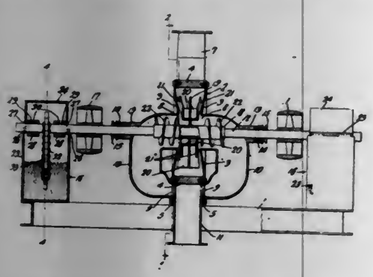
3. A temperature booster of the character described comprising, in combination, a valve casing provided with an outlet passageway formed with a valve seat and a separate by-pass passageway for back flow, said by-pass passageway being formed with an enlargement opposite an opening formed in the casing, a weighted valve gravity seated on the valve seat in the outlet passageway, a cage member formed with two passageways, a valve seat removably mounted in one passageway and having screw threaded engagement with the wall thereof, a valve adapted to fit the seat, a plug closing the opening in the casing, and a removable member coacting therewith formed with a recess which affords communication between the two passageways and the cage member.

4. A temperature booster of the character described comprising, in combination, a valve casing provided with an outlet passageway formed with a valve seat and a separate by-pass passageway for back flow, said by-pass passageway being formed with an enlargement opposite an opening formed in the casing, a weighted valve gravity seated on the valve seat in the outlet passageway, a cage member fitting to the enlargement and being formed with two passageways, one of which has a valve seat thereon and being also formed with a guide recess opposite the valve seat, a valve adapted to fit the valve seat and having a projection adapted to extend into the recess, a plug adapted to close the opening in the casing, and a removable member co-acting therewith having a recess which affords communication between the two passageways and the cage member.

5. A temperature booster of the character described comprising, in combination, a valve casing provided with an outlet passageway formed with a valve seat and a separate by-pass passageway for back flow, said by-pass passageway being formed with an enlargement opposite an opening formed in the casing, a weighted valve gravity seated on the valve seat in the outlet passageway, a substantially cylindrical shaped cage member fitting to the enlargement, being formed with one passageway extending end to end of the same, and being formed with another passageway extending from the under side and opening at one side, a valve removably mounted in said last mentioned passageway, a valve fitted to the seat, a plug member closing the opening in the casing, and a removable member co-acting therewith affording communication between the two passageways in the casing.

[Claim 6 not printed in the Gazette.]

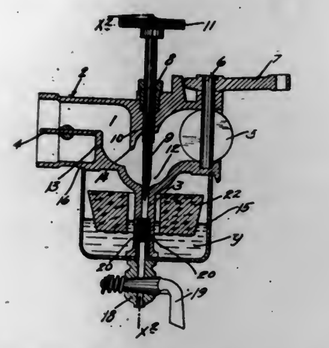
1,213,461. PUMP. ALBERT N. COOPER, Davis, Cal. Filed Dec. 6, 1915. Serial No. 65,320. (Cl. 253—191.)



1. A pump embodying a casing including an annular member and circular side plates attached thereto, said annular member having an outlet opening at one side, the side plates having downwardly projecting portions, the annular member having a lower inlet chamber between said extensions and a depending inlet member communicating with said chamber, said extensions having openings communicating with said chamber, the side plates having central openings, U-shaped conduits terminally attached to the side plates and their extensions to communicate with the openings thereof, a shaft extending through the openings of the side plates and the respective portions of the conduits, a rotor carried by the shaft within the casing, and worms carried by the shaft within the conduits.

2. A centrifugal pump, comprising a casing having dished sides having central inlets, said casing having an outlet in its periphery, and a rotor within the casing embodying a disk between the sides of the casing having a hub, said disk having alining pairs of outstanding blades at opposite sides, the blades extending along curved lines from said hub to the periphery of the disk and being curved away from the direction in which the rotor revolves, the free edges of said blades having angularly extending wings forming buckets, the outer ends of the buckets projecting beyond the periphery of said disk, said blades increasing in width from their inner to their outer ends, the wings increasing in width from their inner to their outer ends and having their inner ends terminating short of the inner ends of the blades.

1,213,462. CARBURETER. ALBERT J. CUMMING, Minneapolis, Minn., assignor of fifty-one one-hundredths to William G. Jordan, Minneapolis, Minn. Filed Oct. 18, 1915. Serial No. 56,443. (Cl. 261—58.)



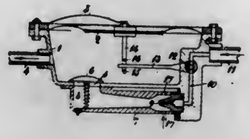
1. In a carbureter, a casing having an air passage in the form of a Venturi tube with a depressed bowl and fuel intake port opening into said bowl, said tube having its greatest contraction at one side of said bowl, and at a point between said fuel intake port and the air intake end of said tube, and the said tube at a point between said air intake and its point of greatest contraction, also having a permanently fixed baffle flange.

2. In a carbureter, a casing having an air passage in the form of a Venturi tube with a depressed bowl and a fuel intake port opening into said bowl, said tube having its greatest contraction at one side of said bowl and at a point between said fuel intake port and the air intake end of said tube, and the said tube, at a point between its air intake end and its point of greatest contraction having a permanently fixed baffle flange that rises above said bowl.

3. In a carbureter, a casing having a tube for the intake of air, a fluid fuel intake port opening into the bottom of the intermediate portion of said tube, fixed baffle flanges in said tube between the intake end thereof and the said fuel port, the said baffle flanges being arranged to afford a contraction in the said tube and to cause the air to take a zigzag downward course on its way past the said fuel port, a throttle valve in the delivery end of said tube, and a choke valve in the receiving end of said tube adapted to be set in a position at one side of the passage through said tube, the said baffles projecting, one upward and one downward, and arranged to afford a contraction of the said tube and to cause the air to take a zigzag downward course on its way past said fuel intake port.

4. In a carbureter, the combination with a casing having an air intake conduit and a depending tubular stem communicating with the intermediate portion of said air intake conduit, a needle valve working through the top of said casing and serving to open and close said tubular stem, said intake conduit having, on the receiving side of said needle valve, upwardly and downwardly extended baffle flanges, a choke valve in the receiving end of said air intake conduit working adjacent to the upwardly extended baffle flange, a throttle valve in the delivery end of said air conduit, and a cup having communication with the said tubular stem for the supply of the fluid fuel thereto, and means for automatically maintaining an approximately constant level of fluid fuel in said cup.

1,213,463. INCANDESCENT-LIGHTING PLANT. GUSTAF DALÉN, Stockholm, Sweden. Filed Apr. 9, 1912. Serial No. 689,475. (Cl. 67—87.)



1. In an incandescent lighting plant employing gas rich in carbon and comprising a plurality of incandescent lamps, a gas nozzle opening into a diverging air intake pipe and operating on the injector principle, a pressure receiver having a varying volume and communicating with said air intake pipe, and a feeding conduit for said lamps communicating with said pressure receiver and leading to the lamps.

2. In an incandescent lighting plant, a plurality of incandescent lamps employing gas rich in carbon, a gas nozzle opening into a diverging air intake pipe and operating on the injector principle, a pressure receiver communicating with said air intake pipe and closed by a movable member, a shutting off device located in the gas conduit, and means for actuating said device in the extreme positions of the movable member.

3. In an incandescent lighting plant, a plurality of incandescent lamps employing gas rich in carbon, a gas nozzle opening into a diverging air intake pipe and operating on the injector principle, a pressure receiver communicating with said air intake pipe and closed by a movable member, a shutting off device located in the gas conduit, and means connected with the movable member for actuating said device in the extreme positions of the movable member.

4. In an incandescent gas lighting plant, a pressure receiver closed by a loaded diaphragm and connected with the lighting pipe system, means for delivering gas and air into the receiver, a shutting off device inserted in the gas supply conduit, a lever extending from said device, a spring inserted between the diaphragh and said lever and a second spring tending to maintain the device in either of its extreme positions, the strength of said second spring being adjusted so that the first mentioned spring overcomes the latter in the extreme positions of the diaphragm.

1,213,464. COMPOUNDS OF CINCHONA ALKALOIDS AND 2-PHENYL-QUINOLIN-4-CARBOXYLIC ACID. ALEX B. DAVIS, Indianapolis, Ind., assignor to The Eli Lilly and Company, Indianapolis, Ind, a Corporation of Indiana. Filed June 7, 1916. Serial No. 102,310. (Cl. 23—24.)

1. A compound of a cinchona alkaloid and 2-phenyl-quinolin-4-carboxylic acid.

2. A compound of quinin and 2-phenyl-quinolin-4-carboxylic acid.

3. Quinin-di-2-phenyl-quinolin-4-carboxylate.

1,213,465. CRESOL CONDENSATION PRODUCT. ALEX B. DAVIS, Indianapolis, Ind., assignor to The Eli Lilly and Company, Indianapolis, Ind., a Corporation of Indiana. Filed June 7, 1916. Serial No. 102,311. (Cl. 23—24.)

1. The condensation products of methylated phenols with the higher alcohols.

2. The condensation products of the cresols with the higher alcohols.

3. The condensation products of ortho cresol and a higher alcohol.

4. The condensation products of cresol and a butyl alcohol.

1,213,466. PLUMBER'S FITTING. FREDERICK W. DELANOY and FRED NELSON DELANOY, Alameda, Cal. Filed Apr. 19, 1916. Serial No. 92,309. (Cl. 137—77.)



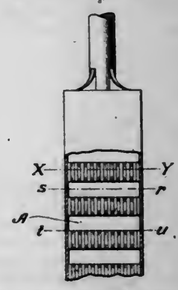
1. A fitting comprising a ring of soft metal, external threads formed on said ring and a plate extending across the face of said ring to form a detachable closure therefor.

2. A fitting comprising a ring of soft metal, external threads formed on said ring, a plate forming a closure for said ring, said plate being detachably secured to the face of said ring, and reinforced toward its center.

3. A fitting comprising a ring of soft metal, external threads formed on said ring and an integrally formed plate extending across one end of said ring to form a detachable closure therefor.

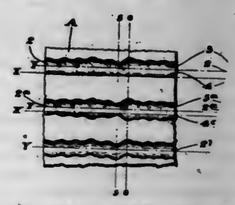
4. A fitting comprising a ring of soft metal, external threads formed on said ring, an integrally formed plate extending across one end of said ring to form a detachable closure therefor, and axially formed lugs extending from one end of said ring for screwing said fitting into position.

1,213,467. ELECTRIC ACCUMULATOR. CONSTANTIN DE SEDNEFF, Paris, France. Filed July 28, 1913. Serial No. 781,593. (Cl. 204—29.)



An electrode for accumulators comprising superimposed layers of webs extending from one side of the electrode to the other, adjacent webs having a cell therebetween, and the webs of adjacent layers being set at angles, the individual webs tapering from the center of the electrode outwardly whereby the current in the electrode is evenly distributed.

1,213,468. SOUND-RECORD. VICTOR H. EMERSON, New York, N. Y., assignor to Emerson Phonograph Company, Inc., a Corporation of New York. Filed Dec. 16, 1915. Serial No. 67,165. (Cl. 274—42.)



1. A sound record having a groove with a rounded bottom and undulations representative of sound vibrations in said bottom and one side thereof, the other side having

sound waves recorded thereon of relatively slight amplitude.

2. A sound record having a groove with a rounded bottom and undulations in said bottom and one side thereof, said undulations similarly disposed and representative of sound vibrations, the other side being relatively straight.

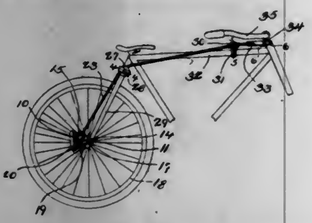
3. A sound record having a groove with one wall relatively straight; and an oblique wall inclined at approximately forty five degrees to the vertical plane thereof, said oblique wall having undulations representative of sound vibrations, the bottom thereof having sound undulations therein of appreciable width and corresponding to the vibrations of the oblique wall.

4. A sound record having a groove with a rounded bottom, one wall substantially vertical, and a wall obliquely inclined to said vertical wall said bottom and oblique wall having vibrations of equal frequency and said bottom having greater width than the amplitude of the vibrations recorded thereon.

5. A sound record having a groove of unequal depth and widening toward the top, said groove having one wall disposed approximately at forty-five degrees declivity relative to the vertical plane merging into a bottom of appreciable width and having in the side and bottom of said wall undulations of substantially equal frequency.

[Claims 6 and 7 not printed in the Gazette.]

1,213,469. BICYCLE-BELL. RAYMOND G. FESSLER, Mendota, Ill. Filed Mar. 22, 1916. Serial No. 86,027. (Cl. 116—56.)



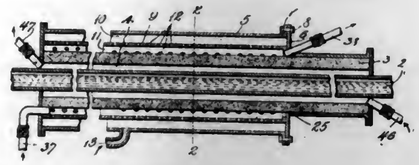
1. A bicycle including a frame, a driving wheel having an axle, and a steering post, a bracket connected with the axle of said driving wheel and including a movable arm, a signal connected with said arm and including actuating mechanism engaged by said driving wheel when the arm is moved to bring the signal to an operative position, a rigid lever arm extending from said steering post above the frame, and flexible means connecting said lever arm with the movable arm of said bracket for moving the signal into an operative position when the steering post is turned.

2. A vehicle including a frame, a driving wheel and a steering post, a movably mounted signal including actuating mechanism engaged by said driving wheel when the signal is moved to an operative position, a rigid lever arm extending from said steering post above the frame, and flexible means connecting said lever arm with the signal for moving the signal into an operative position when the steering post is turned.

1,213,470. PROCESS FOR SECURING HEAT ENERGY FROM COMBUSTIBLE SUBSTANCES. ROBERT GILMOUR FINLAY, Cleveland, Ohio. Filed Aug. 5, 1913. Serial No. 783,230. (Cl. 158—117.5.)

1. The process of securing heat energy from combustible fluid which comprises exposing a combustible fluid to ignition, progressively combusting the elemental constitutents at selective temperatures and at different isolated points, securing and blending the heat evolved and discharging the products of combustion.

2. The process of securing heat energy from combustible fluid which comprises exposing a combustible fluid containing hydrogen to ignition, progressively combusting the elemental constituents at selective temperatures and at different isolated points, securing and blending the heat evolved and discharging the products of combustion.



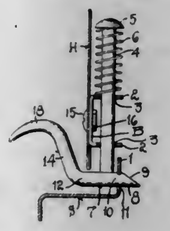
3. The process of securing heat energy from combustible fluid which comprises exposing a combustible fluid containing hydrogen and carbon to ignition, progressively combusting the elemental constituents at selective temperatures and at different isolated points, securing and blending the heat evolved and discharging the products of combustion.

4. The process of securing heat energy from combustible fluid which comprises exposing a combustible fluid containing a hydrocarbon to ignition, progressively combusting the elemental constituents at selective temperatures and at different isolated points, securing and blending the heat evolved and discharging the products of combustion.

5. The process of securing heat energy from combustible fluid which comprises exposing a combustible fluid containing hydrogen and carbon to the action of heat capable of liberating hydrogen progressively combusting the carbon and the hydrogen at selective temperatures and at different isolated points, securing and blending the heat evolved and discharging the products of combustion.

[Claims 6 to 56 not printed in the Gazette.]

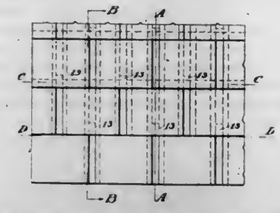
1,213,471. CATCH. KINGSTON FORBES, Flint, Mich. Filed July 3, 1916. Serial No. 107,395. (Cl. 70—82.)



1. The combination with a fixed part and a part movable relative thereto, said fixed part having an opening, a bracket secured to the inner face of the movable part, an endwise movable bolt disposed through the bracket, a cross head secured to the movable member, one arm of said cross head being adapted for insertion through the opening of the fixed part, the opposite arm of the cross head extending beyond the outer face of the movable part, and means for automatically imparting movement to the movable member in one direction.

2. The combination with a fixed part and a part movable relative thereto, said fixed part having an opening, a bracket secured to the inner face of the movable part, an endwise movable bolt disposed through the bracket, a cross head secured to the movable member, one arm of said cross head being adapted for insertion through the opening of the fixed part, the opposite arm of the cross head extending beyond the outer face of the movable part, the opposite end of the movable member being provided with a head, and an expansible member interposed between the bracket and the head for automatically imparting movement to the movable member in one direction.

1,213,472. SHINGLE. SILAS M. FORD, St. Paul, Minn. Filed Jan. 10, 1916. Serial No. 71,312. (Cl. 108—8.)



1. In a shingle strip the combination of shingle units formed from said strip, a gutter integral with said shingle units formed from said strip, said gutter running longitudinally with said shingle units thus formed, and a block positioned in said gutter intermediate of the ends of said gutter.

2. In a shingle strip the combination of a tongue formed by longitudinally shearing along two parallel adjacent lines in the upper portion of said strip, two extensions formed adjacent to said tongue, one on either side thereof by a shearing cut at right angles to said longitudinal shearing cuts, a gutter in the lower portion of said shingle strip formed by folding into a substantially tight box plait the lower portion of said shingle strip below said right angle shearing cuts, said extensions being lapped over the tongue in the upper portion of said shingle strip.

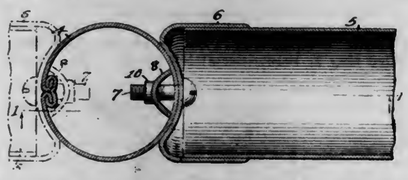
3. In a shingle strip the combination of a tongue formed by longitudinally shearing along two parallel adjacent lines in the upper portion of said strip, two extensions formed adjacent to said tongue, one on either side thereof by a shearing cut at right angles to said longitudinal shearing cuts, a gutter in the lower portion of said shingle strip formed by folding into a substantially tight box plait the lower portion of said shingle strip below said right angle shearing cuts, the extension being lapped over the tongue in the upper portion of said shingle strip, and a block positioned at the upper end of said gutter, extending transversely across the upper end of said gutter.

4. As an article of manufacture a shingle formed of fibrous water-proofed material having a fold running longitudinally thereof with the surfaces forming said fold incorporated together, and a transverse fold at the butt end thereof abutting said longitudinal fold.

5. As an article of manufacture a shingle formed of fibrous water-prooofed material having folds running longitudinally at either side of said shingle, and a transverse fold at the butt end thereof, said transverse fold abutting said folds at either side.

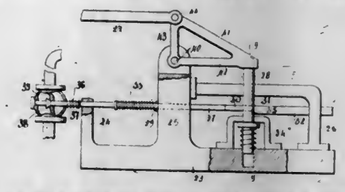
[Claims 6 to 11 not printed in the Gazette.]

1,213,473. BEDSTEAD CONSTRUCTION. PATRICK HENRY FRIEL, Kenosha, Wis. Filed Nov. 5, 1915. Serial No. 59,764. (Cl. 5—4.)



In a joint for connecting the end of one tube with the side of another tube, a ferrule on said first named tube having a closed end bearing on the side of said last named tube, a screw passed through said ferrule and into said last named tube having its head bearing against the inner surface of said closed end, and a nut for said screw within said last named tube consisting of a U-shaped strip of sheet metal having parallel edges bearing against the inner surface of said last named tube on opposite sides of said screw and having a threaded bore in the apex thereof for said screw, said bearing edges being adapted to separate by the tightening of said screw to bind the apex of said nut to said screw.

1,213,474. SAFETY-APPARATUS FOR INDICATING TO THE ENGINE-DRIVER WHETHER THE LINE IS FREE OR BLOCKED. HENRI FRIQUET, Havre, France. Filed Oct. 7, 1913. Serial No. 793,803. (Cl. 246—59.)



1. A signal apparatus comprising a pivotally supported triangular actuating member, means for maintaining one end of the actuating member normally depressed, a connecting rod having one end secured to the actuating member, a second pivotally supported triangular actuating member secured to the opposite end of the connecting rod, a resiliently supported rod disposed in the path of movement of the second actuating member and provided with a slot, a rod disposed through the slot and provided with a locking means coöperating with the wall of the slot when the resiliently supported rod is in raised position, means for actuating the rod longitudinally when unlocked by depression of the resiliently supported rod, and an audible alarm disposed in the path of movement of the rod disposed through the slot and arranged to be operated by movement in one direction of the last named rod.

2. A signal apparatus comprising a pivotally supported triangular actuating member, a rod having its lower end pivoted to the actuating member, a casing pivotally supported and arranged to receive the opposite end of the rod, a spring disposed in the casing and arranged to depress the rod, a connecting rod having one end secured to the actuating member, a second pivotally supported triangular actuating member secured to the opposite end of the connecting rod, a resiliently supported rod disposed in the path of movement of the second actuating member and provided with a slot, a rod disposed through the slot and provided with a locking means coöperating with the wall of the slot when the resiliently supported rod is in raised position, means for actuating the rod longitudinally when unlocked by depression of the resiliently supported rod, and an audible alarm disposed in the path of movement of the rod disposed through the slot and arranged to be operated by movement in one direction of the last named rod.

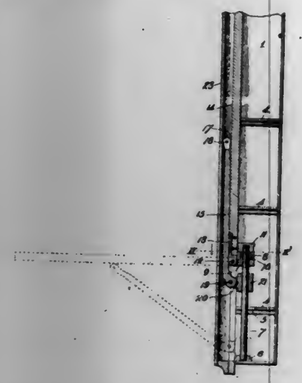
3. A signal apparatus comprising an actuating rod, a rockably supported actuated member connected to the rod, a movable rod disposed in the path of movement of the actuated member and normally retained in elevated position, an alarm actuating rod disposed through the movable rod and adapted to be locked against movement in one direction thereby until movement of the actuating member releases same, means for moving the actuating rod in one direction when released, and an audible alarm disposed in the path of movement of the actuating rod.

4. A signal apparatus comprising a normally elevated rod having an opening therethrough, means for depressing the rod at a predetermined point, an actuating rod disposed through the opening and provided with a locking shoulder operative when the first named rod is in elevated position, means for moving the actuating rod longitudinally when released, and an audible alarm disposed in the path of movement when the actuating rod is released.

5. A signal apparatus comprising an audible alarm controlled by a valve, a spring pressed stem connected to and extending from the valve, an actuating rod disposed

in alinement with the valve stem, means for locking the actuating rod against movement, means for unlocking the locking means and pivotally supported actuating means for actuating the unlocking means.

1,213,475. ADJUSTABLE AND FOLDABLE IRONING-BOARD STRUCTURE. DANA D. GARDNER, Kansas City, Mo. Filed Oct. 2, 1916. Serial No. 123,442. (Cl. 68—10.)



1. An ironing board structure, comprising a suitable support, a board connected for vertical and horizontal movements on said support, a brace hinged to the board to swing vertically therewith, and slidingly and rotatably connected to the support to respectively accommodate the vertical and horizontal movements of the board, and means to secure the board against accidental horizontal movement.

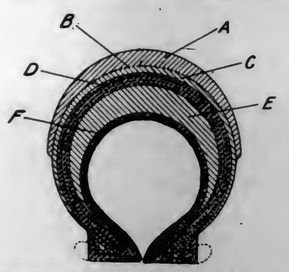
2. An ironing board structure, comprising a cabinet, a board supported for projecting out of said cabinet horizontally and for swinging toward either side and abutting the corresponding side wall of the cabinet and for folding upwardly within the latter, a brace supported to swing horizontally and hinged to the board to swing vertically and horizontally therewith, and means to prevent accidental reverse swinging movement of the board after the same has been swung to abutting relation with either side of the cabinet.

3. An ironing board structure, comprising a base, a cross bar above the base, a rod extending from the base through said cross bar, a collar slidable and rotatable on said rod and adapted to be limited in its downward movement by said base, a hinge member rotatable horizontally on said rod, means for fastening the hinge member to the cross bar to prevent accidental rotation of the former, a board hinged to the hinge member for movement in a vertical plane, and a brace pivoted at its opposite ends to the board and collar to constitute an inclined brace for the former when in operative position and to fold flatly against it when in folded or inoperative position.

4. An ironing board structure, comprising a cabinet, a support therein, a collar slidable vertically on the support, a board connected to the support for swinging in a vertical plane until wholly within or projecting ont of the cabinet, and a brace hinged to the board and collar and adapted to brace the board in a horizontal position when the collar is at the lower end of its movement on the said support and to lie flatly against the board when the latter is wholly within the cabinet.

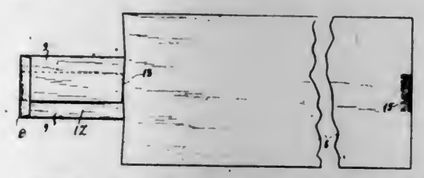
1,213,476. VEHICLE-TIRE. CLARENCE F. A. GRAY, Montreal, Quebec, Canada. Filed Nov. 24, 1913. Serial No. 802,802. (Cl. 152—10.)

The herein described pneumatic tire shoe comprising a tread, an outer cushion, a strong, tough external stress and wear-resisting carcass on which said cushion and tread are superimposed having its inner edge inclosing a pair of bead elements, an inner carcass of strong dense tough internal pressure-resisting nature within and spaced from the outer carcass, said inner carcass being similar in its construction to the construction of the outer carcass except for the bead elements and having its inner edges spaced from said inner edges of the outer carcass and bead elements, and a secondary cushion of solid



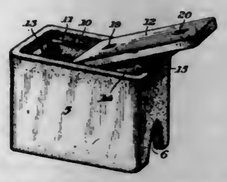
resilient material interposed between the two carcasses and filling the whole space between them, said cushion having its entire inner and outer surfaces secured firmly to the inner and outer carcasses respectively whereby to form therewith a single element, and at the same time being capable of removal with the inner carcass to permit of access to the inner surface of the outer carcass without impairing the integrity of the outer carcass, its cushion and tread.

1,213,477. WRAPPER. OTTO E. GROTH, Milwaukee, Wis. Filed Nov. 21, 1914. Serial No. 873,245. (Cl. 229—87.)



A wrapper constructed entirely from a single piece of material and comprising a pocket portion and a main body portion, the body portion being of greater length than the pocket, and said pocket portion located at one edge of the body portion, the inner end of said pocket being open to provide a mouth, and said body portion extending longitudinally directly from and in line with the pocket, and having integral wings projecting on each side beyond the side edges of the pocket and forming integral tucking in wings extending the entire length of the side edges of the main body portion.

1,213,478. METER-BOX. LEO G. HAASE, Pasadena, Cal. Filed May 1, 1916. Serial No. 94,815. (Cl. 72—9.)



1. The combination with a meter box, of a detached lid adapted to seat horizontally on the meter box having an inclined face on its under side sloping from its outer end and terminating adjacent its longitudinal center for canting the lid on sliding it from its seat whereby the lid will be directed to its seated position on an impulse being imparted thereto.

2. The combination with a meter box, of a lid adapted to seat horizontally on the meter box having means for canting the lid on sliding it from its seat whereby the lid will be directed to its seated position on an impulse being imparted thereto, and a weight on said lid for maintaining it in its canted position coöperating with the canting means in restoring the lid to its closed position.

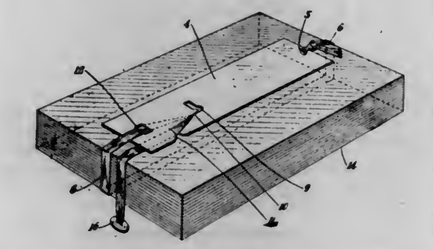
3. The combination with a meter box, of a lid adapted to seat thereon having an inclined lower face engageable with the end of the meter box on sliding the lid to dispose the latter in a canted position, and a weighted portion on the lid operating to maintain it in its canted position and coöperating with the inclined face to restore the lid to its closed position on an impulse being imparted thereto.

4. The combination with a meter box, of a lid adapted to seat thereon having a projection on its under side adjacent one end thereof forming a weight terminating in a transverse shoulder intermediate the ends of the lid, and an inclined face extending from said shoulder toward the unweighted end of the lid.

5. A rectangular meter box lid formed with an inclined face on its under side sloping from its outer end toward its center terminating in a downwardly projecting shoulder, and a weight carried by the lid between the shoulder and the end of the lid opposite the inclined face.

[Claims 6 to 10 not printed in the Gazette.]

1,213,479. BINDING DEVICE. FREDERICK C. HARRIMAN, Ardsley-on-Hudson, N. Y. Filed Nov. 19, 1915. Serial No. 62,281. (Cl. 24—130.)

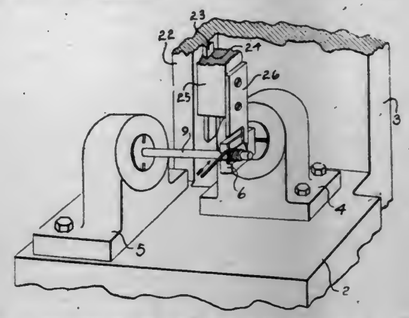


A binding device, consisting of an elongated flat strip, a tape secured to one end thereof, the other end of such strip being provided with a slot having a binding end extending at an angle to said slot, a lobe communicating with said binding end and also with an enlarged opening at the other end of said slot, the free end of said tape being freely movable in said slot at all portions thereof except said binding end, said strip being also provided with a slit in the edge thereof, adjacent to said slot, whereby the free end of said tape may be temporarily affixed to the bottom of said strip.

1,213,480. WIRE-COILING MACHINE. EDISON W. HART, Massillon, Ohio, assignor to The Reliance Manufacturing Company, Massillon, Ohio, a Corporation of Ohio. Filed June 28, 1916. Serial No. 106,385. (Cl. 153—65.)

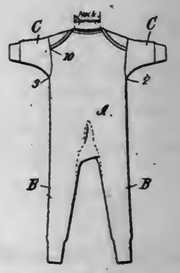
1. A machine of the class described comprising a head having a slot open at one end to produce a fork and a mandrel arranged in the slot of the head, coiling rollers supported by the head and disposed on opposite sides of a plane through the axis of the mandrel and parallel to the branches of the slotted head, the peripheries of the coiling rollers being in the path of the wire to be coiled and being disposed to coil the wire about the mandrel as the wire is advanced, and means for gaging the pitch of the structure to be coiled.

2. A machine of the class described comprising a head having a slot open at one end to produce a fork, a mandrel arranged in the slot of the fork, coiling rollers supported by the head and arranged on opposite sides of a plane passing through the axis of the mandrel, the peripheries of the rollers being adapted to be engaged by the wire as the wire is fed to thus coil the wire on the mandrel, and a spacing roller supported by the head and overlying an adjacent coiling roller.



3. A machine of the class described comprising a head having a slot open at one end to produce a fork and a mandrel arranged in the slot of the head, the head having means to coil the wire on the mandrel, a cutter adapted to operate against the mandrel to cut off a pre-determined portion of the coil structure, one of the branches of the forked head being adapted to receive the thrust of the mandrel during the cutting action of the cutter.

1,213,481. UNION-SUIT. NATHAN HATCH, Albany, N. Y. Filed Apr. 21, 1916. Serial No. 92,595. (Cl. 2—144.)

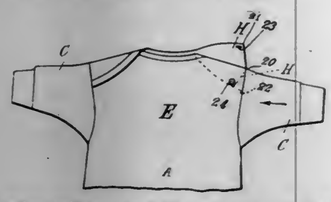


1. In a union suit, a trunk portion, chest and back flaps extending upwardly therefrom, the upper corners of each flap forming pairs of shoulder portions, one pair overlapping the other pair, the pair of shoulder portions formed from the chest flap extending rearwardly of the horizontal medial line of the shoulders and the pair of shoulder portions formed from the back flap extending forwardly of the horizontal medial line of the shoulders, each pair of shoulder portions being secured to the garment at their outer ends, the side edges of the chest and back flaps forming the armholes, the entire upper edges being free of each other from shoulder seam to shoulder seam to form the body opening when separated and the neck opening when closed.

2. In a union suit, a trunk portion, chest and back flaps extending upwardly therefrom, the upper corners of each flap forming pairs of shoulder portions, the rear pair overlapping the front pair, the pair of shoulder portions formed from the chest flap extending rearwardly of the horizontal medial line of the shoulders and the pair of shoulder portions formed from the back flap extending forwardly of the horizontal medial line of the shoulders, each pair of shoulder portions being secured to the gar-

ment throughout their side edges, the side edges of the chest and back flaps forming the armholes, the entire upper edges being free of each other from shoulder seam to shoulder seam to form the body opening when separated, and the neck opening when closed.

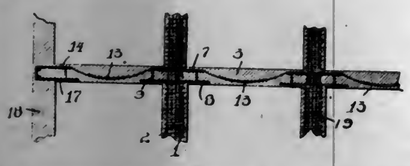
1,213,482. UNION-SUIT. NATHAN HATCH, Albany, N. Y. Continuation in part of application Serial No. 92,595, filed Apr. 21, 1916. This application filed May 17, 1916. Serial No. 98,010. (Cl. 2—144.)



1. A union suit provided with chest and back flaps, the upper corners of said flaps being formed into shoulder portions, the pair of shoulder portions formed from the chest flap extending rearwardly of the horizontal medial line of the shoulder, and the pair of shoulder portions formed from the back flap extending forwardly of said horizontal line of the shoulder, the upper edges of the chest and back flaps being free to form both the body and neck openings, one of the shoulder flaps being free.

2. A union suit provided with chest and back flaps extending from points substantially at the arm pits, the upper corners of said flaps being formed into shoulder portions, the pair of shoulder portions formed from the chest flap extending rearwardly of the horizontal medial line of the shoulder, and the pair of shoulder portions formed from the back flap extending forwardly of said horizontal line of the shoulder, the upper edges of the chest and back flaps being free to form both the body and neck openings, one of the shoulder flaps being free, and means for detachably securing its end to the body of the garment.

1,213,483. REINFORCED CONCRETE CONSTRUCTION. EYVIND LEE HEIDENREICH and WILLIAM ARTHUR COLLINGS, Kansas City, Mo.; said Heidenreich assignor to said Collings. Filed Jan. 2, 1915. Serial No. 43. (Cl. 72—15.)



1. A reinforced floor construction embracing longitudinally, transversely and diagonally arranged strips of wire mesh fabric extending from wall to wall of the building, to afford a continuous tension member for the entire area of the floor, a floor slab of concrete molded thereon and extending into the walls, a group of horizontally anchored rods bedded in the walls and extending around the building near the upper plane of the floor slab and another group of rods near the lower plane thereof respectively, said tension webs extending over the upper group of anchor rods and downwardly around the lower group of anchor rods and thence into the floor slab near the bottom thereof, and affording a continuous reinforcing compression member projecting from the wall into the floor slab.

2. A beamless or girderless floor slab of concrete or the like embracing in combination with the side walls and columns, horizontal anchoring rods in the side wall of wire mesh or netting running continuously lengthwise, crosswise and diagonally in all floor panels, and arranged in tension and invested with the continuous concrete floor slab, said wire mesh reinforcement being located near the top of the floor slab in each column head and at the walls and near the bottom of the floor slab intermediate the same, the ends of said reinforcing strips being carried around said anchor rods and downwardly and thence into the floor slab near the bottom thereof, crossed webs of metal fabric arranged in each column head below the first named strips of reinforcement and near the bottom of the floor slab, and means spacing said upper and lower reinforcing elements relatively to, and tying the same together, and affording means for supporting the same in the forms during pouring.

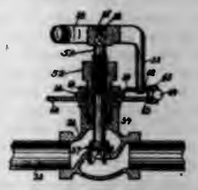
3. A reinforced concrete construction embracing the combination with a column and a floor slab of metal fabric webs carried through the column head near the top of the floor slab and extending outwardly therefrom, horizontally and thence downwardly to near the bottom of the slab, reinforcing compression members comprising crossed metallic webs of metal fabric strips arranged in the column head near the bottom of the floor slab and extending horizontally outwardly thereinto and around the column, metallic stirrups tying said reinforcing tension and compression means in unvarying relation and extending downwardly below the latter to afford a support for both in the bottom of the form.

4. A reinforced floor construction embracing the walls, horizontally anchored rods embedded therein, the floor slab of concrete or the like, and reinforcing tension members invested in said floor slab and extending therefrom into the wall and around said anchored members near the top of the floor slab and downwardly and outwardly into the floor slab near the bottom thereof, the protruding ends thereof affording reinforcing compression elements.

5. In a beamless and girderless floor slab of concrete, the combination with the concrete floor slab, the columns and walls, of a layer of wire mesh reinforcement embedded therein affording tension members above the columns and along the walls, and wire mesh folded downwardly to form another layer of reinforcement affording a compression member, the former near the top of the floor slab, the latter near the bottom thereof, stirrups affording spacing members between said tension and compression layer members, and each comprising a helically wound rod threaded through both said layer members and extending radially outward from the columns, and means connected with stirrups for supporting the reinforcement in the forms preparatory to pouring the concrete.

[Claims 6 to 8 not printed in the Gazette.]

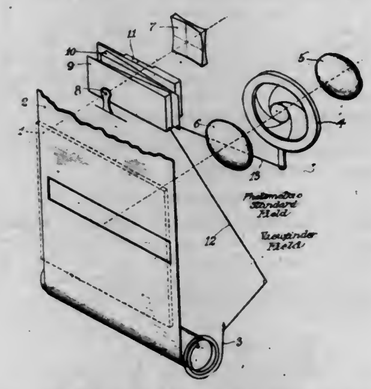
1,213,484. COCK. ADOLF HEIN, Berlin, Germany. Original application filed Apr. 11, 1912, Serial No. 690,211. Divided and this application filed May 12, 1913. Serial No. 767,229. (Cl. 137—4.)



1. An adjustable cock, comprising an indicator disk, a handle movable over said disk, thereby indicating the position of the valve of the cock, a second disk rotatable with respect to the first named disk and provided with a stop member arranged to move over the indicator disk and to be engaged by the handle, means for securing said second named disk in adjusted positions, and means for securing the disk and stop together.

2. An adjustable cock comprising a valve casing having an inlet and an outlet, a valve disposed therein, a handle secured to the valve stem and provided with a depending arm, an indicator disk carried by the valve casing and being provided with an opening to receive the valve stem, a second disk disposed above the indicator disk and being provided with a laterally extending stop member, said second disk being rotatable with respect to the indicator disk and being arranged to be engaged by the depending arm, and means comprising a lock nut for locking the stop member in its shifted position.

1,213,485. PHOTOGRAPHY. ALFRED HERZ, Chicago, Ill. Filed Aug. 27, 1915. Serial No. 47,612. (Cl. 95—53.)



1. In combination, a view-finder comprising image-defining mechanism, and a main camera comprising exposure-timing, illumination-controlling and image-forming mechanism, adjustable means for evaluating the photometric quality of the image of said view-finder, and means automatically operated by adjustment of said photometric means for adjusting the exposure-timing mechanism and the illumination-controlling mechanism.

2. In combination, a view-finder comprising image-forming or defining mechanism, a main camera comprising exposure-timing, illumination-controlling and image-forming mechanism, adjustable means for evaluating the photometric quality of the image of said view-finder, and means automatically operated by adjustment of said photometric means for adjusting the illumination-controlling mechanism.

3. In combination, a view-finder comprising image-forming or defining mechanism, a main camera comprising image-forming, illumination-controlling and exposure-timing mechanism, adjustable means for evaluating the photometric quality of the image of said view-finder, and means automatically operated by adjustment of said photometric means for adjusting the exposure-timing mechanism.

4. In combination, a lens, a stop mechanism therefor, a shutter mechanism therefor, a view-finder means for modifying the image of said finder in degree to correspond to the stop opening.

5. In combination, a lens, a stop mechanism therefor, a shutter mechanism, a view-finder, a standard of illumination, and means for modifying the image of said finder in degree to correspond to said stop opening.

[Claims 6 to 31 not printed in the Gazette.]

1,213,486. METHOD OF MAKING ACETALDEHYDE. HAROLD HIBBERT and HAROLD ARTHUR MORTON, Pittsburgh, Pa., assignors to Union Carbide Company, New York, N. Y., a Corporation of Virginia. Filed Nov. 5, 1915. Serial No. 59,836. (Cl. 23—24.)

1. The method of making acetaldehyde, which consists in introducing acetylene into a solution of sulfuric acid, said solution containing also a salt of mercury and a salt of a relatively weak acid, said salt being irreducible under the operating conditions.

2. The method of making acetaldehyde, which consists in introducing acetylene into a solution of sulfuric acid, said solution containing also a salt of mercury and a salt of a relatively weak acid, said salt being irreducible under the operating conditions, and simultaneously distilling acetaldehyde from the solution.

3. The method of making acetaldehyde, which consists in introducing acetylene into a solution of sulfuric acid, said solution containing also a salt of mercury and a borate.

4. The method of making acetaldehyde, which consists in introducing acetylene into a solution of sulfuric acid, said solution containing also a salt of mercury and a borate, and simultaneously distilling acetalhehyde from the solution.

1,213,487. METHOD OF MAKING ACETALDEHYDE. HAROLD HIBBERT and HAROLD ARTHUR MORTON, Pittsburgh, Pa., assignors to Union Carbide Company, New York, N. Y., a Corporation of Virginia. Filed Nov. 5, 1915. Serial No. 59,837. (Cl. 23—24.)

1. The method of making acetaldehyde which consists in introducing acetylene into a solution containing an acid salt of a strong acid, said solution substantially free from hydrogen ions, and containing also a salt of mercury.

2. The method of making acetaldehyde which consists in introducing acetylene into a solution containing an acid salt of a strong acid, said solution substantially free from hydrogen ions and containing also a salt of mercury, and simultaneously distilling acetaldehyde from the solution.

3. The method of making acetaldehyde, which consists in introducing acetylene into a solution containing the ion HSO_4^- but substantially free from hydrogen ions, said solution containing also a salt of mercury.

4. The method of making acetaldehyde, which consists in introducing acetylene into a solution containing the ion HSO_4^- but substantially free from hydrogen ions, said solution containing also a salt of mercury, and simultaneously distilling acetaldehyde from the solution.

5. The method of making acetaldehyde, which consists in introducing acetylene into a solution containing an acid salt of a strong acid, said solution substantially free from hydrogen ions, and containing also a salt of mercury and a salt of relatively weak acid.

[Claims 6 to 8 not printed in the Gazette.]

1,213,488. VALVE-SPRING RETAINER. WILLIAM B. HOBAN, Chicago, Ill. Filed Oct. 30, 1912. Serial No. 728,749. (Cl. 137—32.)



1. In a device of the class described, the combination of a valve stem having a longitudinally extending series of notches, a spring surrounding said stem, a follower mounted thereon below said spring, and engaging means mounted on said follower and adapted to engage the notches in said valve stem and hold the spring under tension.

2. In a device of the class described, the combination of a notched valve stem, a spring surrounding said stem,

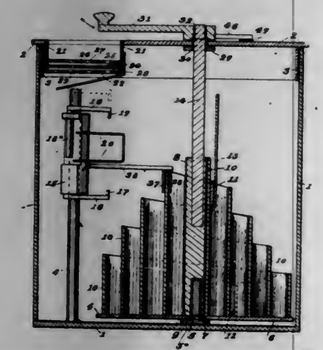
a follower mounted thereon below said spring, a pair of curved dogs mounted on the under side of said follower and adapted to be manually brought into engagement with the notches of said valve stem and to automatically drop out of engagement when said follower is raised.

3. In a device of the class described, the combination with a notched valve stem, a spring surrounding said stem, a follower mounted below said spring and provided with a circular boss adapted to fit within said spring and hold it in position, a pair of curved dogs mounted on the under side of said follower and adapted to be manually brought into engagement with the notches of said valve stem and to automatically drop out of engagement when said follower is raised.

4. In a device of the class described, the combination of a valve stem having a longitudinally extending series of means for engagement thereon, a spring surrounding said stem, a follower mounted thereon engaging said spring, and engaging means mounted on said follower for engaging said means for engagement on the stem to hold the spring under any desired degree of tension.

5. In a device of the class described, the combination of a valve stem having a longitudinally extending series of means for engagement thereon, a spring surrounding said stem, a follower mounted thereon engaging said spring, and engaging means mounted on said follower for engaging said means for engagement on the stem to hold the spring under tension, said engaging means being so mounted as to automatically drop ont of engagement with said means on the valve stem when the follower is raised.

1,213,489. PHOTOGRAPHIC DEVELOPING APPARATUS. FRANK A. BINDER, New York, N. Y. Filed Dec. 14, 1915. Serial No. 66,716. (Cl. 95—90.5.)



1. In an apparatus for developing photographic films, the combination of a suitable casing closed against the admission of actinic rays; an upright member fitted within said casing; a rigid film support attached to said upright member and spirally wound around the same; and means for actuating the said upright member from without the casing so as to rotate the said film support.

2. In an apparatus for developing photographic films, the combination of a suitable casing; a cover adapted to fit upon said casing; a stud axle attached to the bottom of said casing; an upright member pivotally fitted upon said stud axle; and a film support attached to said upright member and spirally wound around the same, the said support being formed of a continuous strip of metal and held in a fixed coil.

3. In an apparatus for developing photographic films, the combination with a suitable casing and a cover adapted to fit thereon, of a stud axle attached to the bottom of said casing; an upright member having a recess formed at one end, fitted upon said stud axle; a spirally wound rigid film support with vertical sides and attached to said upright member; and means for rotating the said film support from without the apparatus.

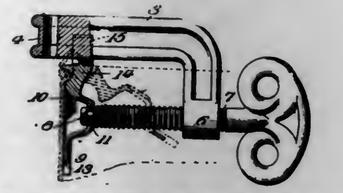
4. In an apparatus for developing photographic films, the combination of a suitable casing, a cover adapted to fit upon said casing; a stud attached to the bottom of said casing; an upright member having a recess formed at the lower end fitted upon said stud; a rigid spirally wound film support attached to said upright member; and means for removing the said film support from the casing.

5. In an apparatus for developing photographic films, the combination of a casing; a suitable cover adapted to fit upon said casing; a stud axle attached to the bottom of said casing; an upright member 8 having a recess formed at the lower end fitted upon said stud axle; a rod 14 attached at one end to said upright member and extending upward thereof through the top of said cover; and a rigid spirally wound film support having a downward sloping top edge attached to the said upright member.

[Claims 6 to 27 not printed in the Gazette.]

1,213,490. [WITHDRAWN.]

1,213,491. CLOTHES-WRINGER CLAMP. ALBERT E. HOLADAY, Naugatuck, Conn., assignor to The American Wringer Company, Woonsocket and Providence, R. I., a Corporation of Rhode Island. Filed Mar. 17, 1916. Serial No. 84,944. (Cl. 68—32.)



1. In a clothes wringer, a clamp pivotally mounted on the frame thereof comprising an angled frame, the angled portion of said frame being arranged in depending position, a clamping screw mounted in the end of the angled portion having a neck provided with a head, a button engaging member having an apertured boss from which extends a slot communicating with an aperture through which the head of the clamp is adapted to be forced for guiding the neck into position within the aperture of said boss, said button engaging member having a bifurcated head working on the horizontal portion of the frame.

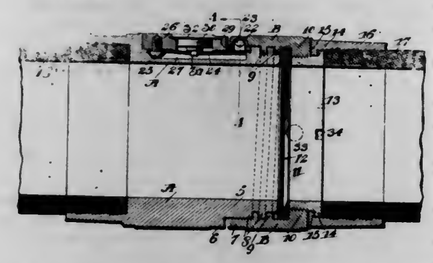
2. In a clothes wringer, a clamp pivotally mounted on the frame thereof comprising a frame having a clamping screw carried thereby and a button engaging member having a head embracing said frame, said button engaging member having a hollow boss provided with apertures communicating with one another by a slot for guiding and holding the button in position upon said head when arranged in vertical position.

3. In a clothes wringer, a clamp pivotally mounted on the frame thereof comprising a horizontally disposed frame having a depending portion provided with a threaded bore, a clamping screw mounted in said threaded bore provided with a neck having a head, a button engaging member having a boss provided with spaced openings connected by a slot adapted to receive the head of said screw when arranged at an angle of forty-five degrees, said button engaging member having a bifurcated head embracing the horizontal portion of said frame for guiding and preventing the button engaging member from rotating when the neck of said head is guided into the aperture of the boss of said button engaging member by the movement of said button engaging member into vertical position.

4. In a clothes wringer, the combination with the frame thereof, of a clamping frame pivotally mounted thereon having a clamping screw mounted therein provided with a neck having a head, a substantially horseshoe shaped engaging member detachably mounted upon the neck of said head, a neck extending from said engaging member having a bifurcated head embracing the frame of said clamp, said clamp having an apertured boss with a slot extending from said boss communicating with an opening through which the head of said clamping screw is adapted to be passed, and when said engaging member is arranged at an angle of forty-five degrees to enable the engaging member to be guided upon the neck of said head when moved into vertical position.

5. In a clothes wringer, the combination with a frame thereof, of a clamping screw carried thereby, of an engaging member having a bifurcated head traveling on the frame of said clamp, said engaging member having an enlargement provided with spaced openings of different diameters connected by a slot, the larger opening of said engaging member being adapted to receive said head when arranged at an angle, the aperture of said engaging member being adapted to receive the neck of said head when said engaging member is moved into vertical position.

1,213,492. HOSE-COUPLING. ALBERT GEORGE HUGHES, Douglas, Ariz. Filed Nov. 1, 1915. Serial No. 59,068. (Cl. 137—28.)

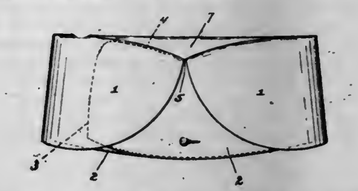


1. A coupler comprising a male member and a female member respectively externally and internally threaded whereby to be turned into engagement one with the other, a recess in one of the members, a plate having two openings therethrough arranged to cover the recess and having its outer surface flush with the outer surface of said member to preserve the contour of the latter, a spring arm arranged in the recess and secured at one end to the plate, a detent carried at the other end of the arm and extending through one of the openings in said plate at a point adjacent to and inwardly of the threaded portion of the male member, a series of depressions provided interiorly of the female member circumferentially thereof and outwardly of the threaded portion of the female member and adapted to coact with said detent in maintaining the members in coupled position, a button slidably arranged in the other opening in the plate above the spring arm and having a pin engaging said arm, and a flexible plate arranged in the opening above the button.

2. A coupler comprising a male member and a female member respectively externally and internally threaded whereby to be turned into engagement one with the other, a recess in one of the members, a plate having two openings therethrough arranged to cover the recess and having its outer surface flush with the outer surface of said member to preserve the contour of the latter, a spring arm arranged in the recess and secured at one end to the plate, a detent carried at the other end of the arm and extending through one of the openings provided in said plate, a series of depressions provided interiorly of the female member circumferentially thereof and gradually increasing in width to conform with the pitch of the threads, said depressions adapted to coact with said detent in maintaining the members in coupled position, a button slidably arranged in the other opening in the plate above the spring arm and connected with said spring arm, and a flexible plate arranged in the opening above the button.

3. A coupler comprising a male member and a female member respectively externally and internally threaded whereby to be turned into engagement one with the other, a recess in one of the members, a perforated plate arranged to cover the recess, a spring-actuated detent carried on the under side of the plate whereby to be housed in the recess, said detent having a portion extending outwardly through the opening in the plate, a series of depressions formed circumferentially of the other member and adapted to coact with the detent in maintaining the members in coupled position, and means carried by the plate for operating the detent manually whereby to disengage it from the depressions.

1,213,493. FOLD-COLLAR. HUBBARD F. HURD, Troy, N. Y., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y., a Corporation of New York. Filed July 25, 1914. Serial No. 853,147. (Cl. 2—69.)

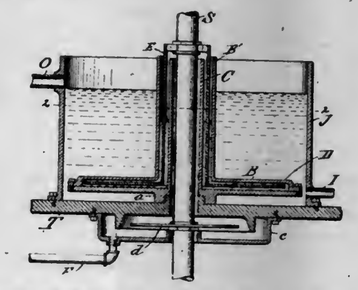


1. A fold-collar comprising a band and a folded-over top, said band having an upturned hook-end, the upper edge of which hook-end is convexly curved adjacent to the point of junction of said hook-end with the top, the other end of the collar having a corresponding interlocking part.

2. A fold-collar comprising a band and a folded-over top, said band having a hook-end and having its upper edge divergently convexly curved on opposite sides of and adjacent to the point of junction of said hook-end with the top, the other end of the collar having a corresponding interlocking part.

3. A fold-collar comprising a band, and a folded-over top attached to the body-portion of the band, the upper edge of the attached portion of the band being convexly curved adjacent to the points of junction of the ends of the top with the band, said band having a hook-end the upper edge of which is convexly curved and intersects said convexly curved edge on the neighboring attached portion of the band substantially at the point of junction of the neighboring end of the top with the band.

1,213,494. STUFFING-BOX. MARTIN HILL ITTNER, Jersey City, N. J. Filed May 6, 1914. Serial No. 836,623. (Cl. 137—115.)



1. In a stuffing box for a rotary shaft comprising a stationary sleeve surrounding the shaft and spaced therefrom, a second stationary sleeve surrounding the first sleeve, and spaced from said first sleeve throughout the length of the sleeves, said sleeves being joined at one end to form an annular chamber, and a third sleeve attached to said shaft beyond the open end of said chamber and

projecting into said chamber out of contact with both said sleeves, said chamber containing a sealing liquid whereby the length of column of sealing liquid is limited only by the length of said sleeves.

2. A stuffing box for a rotary vertical shaft comprising a stationary sleeve surrounding said shaft and spaced therefrom, a second stationary sleeve surrounding said first mentioned sleeve, said sleeves being connected together at the bottom to form an annular chamber open at the top, a third sleeve attached to said rotary shaft above the open end of said chamber and projecting into said chamber and out of contact with either of said sleeves, and a liquid seal in said chamber and extending upward on each side of the rotary sleeve to form a sealing column effectively equal to at least twice the depth of liquid in said chamber.

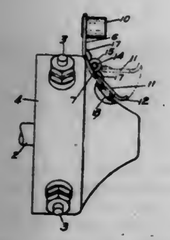
3. A stuffing box for a rotary vertical shaft comprising a stationary disk surrounding said shaft having at its center a stationary sleeve projecting upwardly around said shaft and out of contact therewith, a second stationary disk attached to the first mentioned disk at its periphery and spaced therefrom within the periphery to form a chamber, said second disk having a sleeve surrounding the sleeve of the first mentioned disk and forming a vertical continuation of the chamber between the disks, and a third disk working in the chamber formed by the two stationary disks and having an elongated hub attached to the shaft above the edges of the stationary disks, said chamber containing a sealing liquid extending up into the vertical portion of said chamber on either side of the hub of said rotary disk.

4. A stuffing box for a rotary vertical shaft comprising a stationary sleeve surrounding said shaft and spaced therefrom, a second stationary sleeve surrounding said first mentioned sleeve, said sleeves being connected together at the bottom to form an annular chamber open at the top, a third sleeve attached to said rotary shaft above the open end of said chamber and projecting into said chamber and out of contact with either of said sleeves, a liquid seal in said chamber and extending upward on each side of the rotary sleeve to form a sealing column effectively equal to at least twice the depth of liquid in said chamber, and means for cooling said stuffing box consisting of a water-jacket or container inclosing said outer disk.

5. A stuffing box for a rotatory shaft, comprising a container surrounding the shaft and separated therefrom by an intervening space, and containing a sealing liquid, a rotatory element mounted upon the shaft and having a frictional surface immersed in the sealing liquid, a drip-cup to intercept accidental overflow of the sealing liquid into the receptacle in which the shaft operates, and a disk mounted upon the shaft for throwing any such overflow into the drip-cup; substantially as described.

[Claim 6 not printed in the Gazette.]

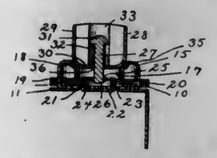
1,213,495. IGNITION-TIMER. EDWARD B. JACOBSON, Pittsfield, Mass., assignor to J and B Manufacturing Company, Pittsfield, Mass., a Corporation of Massachusetts. Filed Dec. 18, 1915. Serial No. 67,685. (Cl. 123—166.)



1. In an ignition timer, the combination with a rotary portion, of an adjustable housing for inclosing the rotary portion and having a transverse opening therethrough, an upright arm secured at its lower end to the exterior of the housing and having a free end for detachable connection with a control rod, a plate pivoted at its rear end to said arm and seated over said opening, and spring means for yieldingly opposing the upward displacement of the plate.

2. In an ignition timer, the combination with a rotary portion, of a housing for inclosing the rotary portion and having an transverse opening through its face, an annular seat provided on the housing around said opening and extending above the surface of the housing, an upright arm secured to the exterior of the housing adjacent said opening and having a free upper end for detachable connection with a control rod, a bar mounted on said arm at its lower end, a plate pivoted at its rear end on said bar and seated on said seat over said opening and having its forward end inclined away from the housing, and a spring carried on said bar and arranged to yieldingly oppose the upward displacement of the plate.

1,213,496. TURN-BUTTON. BERTHOLD JAHN, New Britain, Conn., assignor to The B. Jahn Manufacturing Company, New Britain, Conn., a Corporation. Filed Apr. 7, 1916. Serial No. 89,711. (Cl. 24—221.)



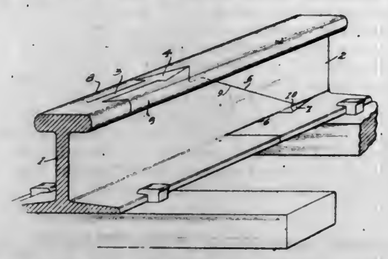
1. A turn-button comprising a supporting plate, a pin extending outwardly from the said supporting plate, and a head mounted on the said pin, the said head comprising a bottom having a hole that fits the said pin, a barrel extending outwardly from the said bottom, a head on the outer end of the said pin, positioned in the said barrel, and a spring mounted on the said pin and positioned between the said head and the said bottom, the said supporting plate having a hole that fits the said pin, and the said pin extending through the said hole in the supporting plate and having a riveted head on the end that serves as the means for holding the said head operatively mounted on the said supporting plate.

2. A turn-button comprising a supporting plate, a pin extending outwardly from the said supporting plate, and a head mounted on the said pin, the said head comprising a bottom having a hole that fits the said pin, a barrel extending outwardly from the said bottom, a head on the outer end of the said pin, positioned in the said barrel, a spring mounted on the said pin and positioned between the said head and the said bottom, and a pair of wings extending laterally from the said barrel and the lower, outer corners of the said wings being rounded suitably to serve as bearing surfaces in coöperation with the walls of an eye-piece.

3. A head for a turn-button, generally cup-shaped, formed of sheet-material comprising an endless side wall, the said side wall having opposed portions that are in spaced relation and of suitable shape to combine to form a barrel, and radial wings on each side of the said barrel formed of a double thickness of the said material, and a perforated bottom at one end of the said head.

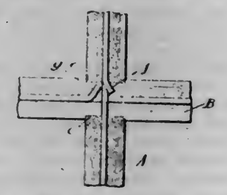
1,213,497. RAIL-JOINT. GOTTLIEB JANS, Walsh, Alberta, Canada. Filed Jan. 8, 1916. Serial No. 71,124. (Cl. 239—8.)

Rail joint means comprising rail ends, one rail end being provided in its tread portion with a tongue terminating in a head, the web of said rail end being projected beyond said head and beveled forwardly, and the flanges of said rail end being projected beyond said web portion and recessed to form feet; the second rail end being bifurcated in its tread portion for interlocking engagement with said tongue and head, the web of the second rail end being beveled rearwardly and adapted to rest upon the



first mentioned web, and the flanges of said second rail end being recessed to afford interlocking engagement with the flanges of the first mentioned rail end.

1,213,498. METAL SASH OR WINDOW. ALLAN W. JOHNSON, Chicago, and WILLIAM STUART TAIT, Lemont, Ill., assignors to American Steel Window Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 21, 1914. Serial No. 820,174. (Cl. 189—36.)



1. In a metal window sash, a pair of intersecting muntin webs having complementary cross notches, the notched edge of the web of one muntin having a longitudinal tongue extending across the notch and overlying an unsevered portion of the other muntin and such other muntin having a tongue abutting the end of said first-mentioned tongue.

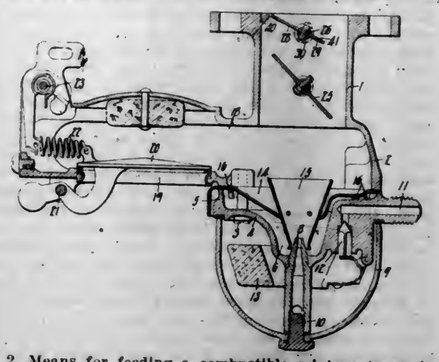
2. In a metal window sash, a pair of intersecting muntin webs having complementary cross notches, the notched edge of the web of one muntin having a longitudinal tongue crossing the top edge of its notch and overlying a portion of the web of the other muntin, and such other muntin having a longitudinal tongue cut in the same plane as said first-mentioned tongue and abutting the end portion of said first-mentioned tongue.

3. In a metal window sash, a pair of intersecting T-shaped muntins formed with complementary cross notches, the outer edge of the web of the lower muntin having a longitudinal tongue overlying an uncut portion of the web of the upper muntin, and such upper muntin having a longituidnal tongue cut in the same plane as said first-mentioned tongue and abutting the end portion of said first-mentioned tongue.

4. In a metal window sash, a pair of intersecting T-shaped mullions having their webs formed with complementary cross notches, the flange of the lower muntin being recessed and the flange of the upper muntin being cut away to make interlocking engagement in the recess of the lower muntin, the web of the lower muntin having a longitudinal tongue overlying an unsevered portion of the web of the upper muntin and the upper muntin having a locking tongue abutting against the end of said first-mentioned tongue.

1,213,499. CARBURETER. CHESTER F. JOHNSON, Detroit, Mich. Filed Sept. 20, 1915. Serial No. 51,601. (Cl. 123—108.)

1. Means for feeding a combustible mixture to an internal combustion engine comprising means for forming a mixture passage, means for supplying air to the mixture passage, means for supplying fuel to the mixture passage, a main throttle valve located in the mixture passage, and an auxiliary pivotally mounted non-balanced throttle valve also located in the mixture passage.



2. Means for feeding a combustible mixture to an internal combustion engine comprising means for forming a mixture passage, means for supplying air to the mixture passage, means for supplying fuel to the mixture passage, a main throttle valve located in the mixture passage, and an auxiliary non-balanced throttle valve located in the mixture passage at a point between the cylinder of the engine and the main throttle valve.

3. Means for feeding fuel to an internal combustion engine comprising means for forming a mixture passage, means for supplying air to the mixture passage, means for supplying fuel to the mixture passage, a main throttle valve located in the mixture passage, an automatic pivotally mounted throttle valve also located in the mixture passage, said automatic throttle valve being arranged to be moved in one direction by the in-rushing fuel mixture, and resilient means tending to resist the movement of said valve.

4. Means for feeding fuel to an internal combustion engine comprising means for forming a mixture passage, means for supplying air to the mixture passage, means for supplying fuel to the mixture passage, a main throttle valve located in the mixture passage, an auxiliary throttle shaft extending transversely across the mixture passage, an automatic throttle valve carried by the shaft, the portion of the last mentioned valve on one side of its shaft offering greater resistance to a current in the mixture than the portion on the other side of the shaft, and resilient means tending to hold the automatic throttle valve in such position as to partly close the mixture passage.

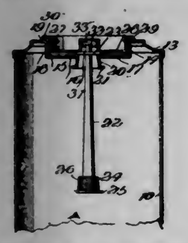
5. Means for feeding fuel to an internal combustion engine comprising means for forming a mixture passage, means for supplying air to the mixture passage, means for supplying fuel to the mixture passage, a main throttle valve located in the mixture passage, an auxiliary throttle shaft extending transversely across the mixture passage, an automatic throttle valve carried by the shaft, the portion of the last mentioned valve on one side of its shaft offering greater resistance to a current in the mixture than the portion on the other side of the shaft, resilient means tending to hold the automatic throttle valve in such position as to partly close the mixture passage, and means for varying the resistance which the resilient means offers to movement of the valve.

[Claims 6 to 15 not printed in the Gazette.]

1,213,500. SPOUT FOR RECEPTACLES. WILLIAM G. KENDALL, Newark, N. J. Filed July 13, 1915. Serial No. 39,692. (Cl. 221—23.)

1. The combination with a receptacle including a top having an opening surrounded by a downwardly extending and tapering annular flange terminating in an in-

wardly directed peripheral stop shoulder, of an inner closure including a body adapted to seat on the shoulder and an upwardly flared annular flange frictionally engaging the flange of the can top and terminating in an outwardly directed peripheral shoulder engaging the top of the can, said inner closure having a central opening surrounded by a downwardly extending and flaring annular flange terminating in a peripheral stop shoulder, a tubular spout movable through the opening of the inner closure, a stop disk secured to the spout adjacent one end and adapted in one position of the spout to seat upon the upper face of the closure, a frustoconical tubular thimble secured to the inner end of the spout and terminating at its lower end in an outwardly directed annular flange, said thimble being adapted to frictionally seat in the flared flange of the inner closure with the stop shoulder of the thimble engaging the stop shoulder of the flange, the outer face of the thimble being lightly scored, an outer closure including a body having a central recess adapted to surround the outer end of the spout when the latter is in retracted position and when seated upon the stop disk, an upwardly directed flared annular flange adapted to engage within the flange of the inner closure and terminating in an outwardly directed circumferential stop shoulder engaging the stop shoulder of the inner closure, a closed bonnet surrounding the recess in the outer closure and inclosing the outer end of the spout, and a packing in the bonnet engaging the spout.

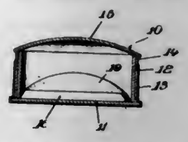


2. A combined closure and spout for receptacles including an inner closure having an upwardly directed flared peripheral flange adapted to frictionally engage in the neck of a receptacle and terminating in an annular stop shoulder adapted to engage the upper edge of the receptacle neck, said closure being formed centrally with an opening surrounded by a downwardly extending and flared flange terminating in an outwardly directed stop shoulder, an outer closure including a body adapted to seat in spaced relation to the body of the first closure and formed centrally with a recess in alinement with the opening of the inner closure and peripherally with an upwardly directed and outwardly flared annular flange to engage the flange of the inner closure and terminating in an outwardly directed circumferential stop shoulder to engage the stop shoulder of the inner closure, a bonnet open at its lower end and closed at its upper end secured to the outer face of the outer closure and surrounding the recess therein, a tubular spout provided adjacent its upper end with a stop disk adapted to be clamped between the inner and outer caps when the spout is in retracted position, and a thimble secured to the lower end of the spout and including a frusto-conical body portion adapted for frictional engagement in the downwardly directed flared flange of the inner closure and terminating in an annular stop shoulder engageable against the stop shoulder of said flange of the inner closure.

3. The combination with a receptacle having a neck adapted to receive a frictional closure cap, of an inner frictional closure cap engageable in the neck and formed centrally with a spout receiving opening surrounded by a downwardly directed spout engaging flange, a spout having means at its lower end for engagement in such flange when the spout is extended, means at its upper end to support the spout when retracted, and an outer frictional sealed closure engageable within the first closure and having a bonnet to receive the outer end of the spout.

4. The combination with a receptacle having a circular depressed portion formed with an opening surrounded by a depending flaring flange, a spout extending through the opening and formed at its inner end with a tapered thimble for engagement within the flange when the spout is projected and adjacent its outer end with an annular stop shoulder, a closure having an upstanding annular flange adapted to frictionally engage the peripheral wall of the depressed portion when the closure is applied and forced into engagement with the stop shoulder of the spout and having a recess for the end of the spout projecting beyond the stop shoulder, a bonnet formed on the closure to surround the extended end of the spout, and a packing in the bonnet to seal the spout.

1,213,501. ROUGE-PAD. WILLIAM G. KENDALL, Newark, N. J. Original application filed June 15, 1915, Serial No. 34,303. Divided and this application filed July 11, 1916. Serial No. 108,694. (Cl. 132—8.)



1. A rouge pad including a base having an upwardly and inwardly directed peripheral flange, and a plurality of ribs upstruck from the base.

2. A rouge pad including a base having an upwardly and inwardly directed peripheral flange, and a plurality of ribs upstruck from the base, the ribs being wider at their upper than at their lower edges.

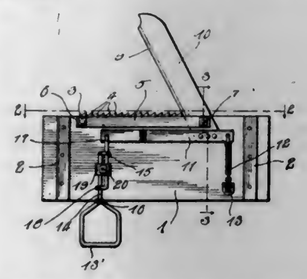
3. A rouge pad including a base having an upwardly and inwardly directed peripheral flange, and a plurality of spaced substantially parallel ribs upstruck from the base.

4. A rouge pad including a base having an upwardly and inwardly directed peripheral flange, and a plurality of spaced substantially parallel ribs upstruck from the base, the ribs being of hollow construction and opening through the bottom of the base.

5. A rouge pad including a base having an upwardly and inwardly directed peripheral flange, and a plurality of spaced substantially parallel ribs upstruck from the base, the ribs being wider at their upper than at their lower edges.

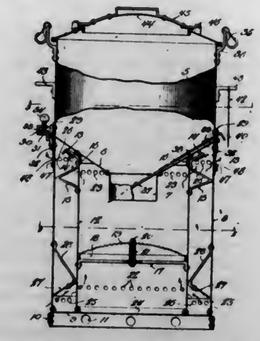
[Claim 6 not printed in the Gazette.]

1,213,502. CORN-HEADER. GEORGE W. KILDOW, Yates Center, Kans. Filed Apr. 22, 1915. Serial No. 23,269. (Cl. 146—23.)



A heading device comprising a bar with means at each end for spacing it from a suitable support, a lever having an off-set portion, a cutting blade rigidly attached at an angle to or near one end of said lever and pivoted on one of the spacing means of said bar, and operating means for said lever, said off-set portion of the lever being out of the plane of the said bar.

1,213,503. CAR-HEATER. CHARLES H. KREBS, Milwaukee, Wis., assignor to Everburn Heater Company, Milwaukee, Wis. Filed July 20, 1916. Serial No. 110,264. (Cl. 126—56.)



1. A car heater comprising a hopper, an outer casing depending from and detachably connected with the hopper and provided with vertically spaced series of openings, a bottom closure for the casing, and a burner drum depending from the hopper within the casing and spaced from the wall of said casing to form therewith an air heating chamber.

2. A car heater comprising a hopper, means for suspending the hopper, an outer casing depending from and detachably connected with the hopper and provided with vertically spaced series of openings, a bottom closure for the casing, and a burner drum depending from the hopper within the casing and spaced from the wall of said casing to form therewith an air heating chamber.

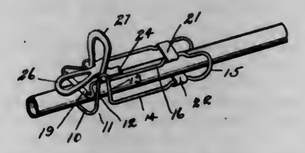
3. A car heater comprising a hopper, an outer casing depending from and detachably connected with said hopper, a bottom closure for the casing, an open bottom burner drum depending from the hopper within the casing and adapted to engage the bottom closure of the outer casing and a grate in the drum.

4. A car heater comprising a hopper, an outer casing depending from and detachably connected with the hopper, a bottom closure for said outer casing and a burner drum secured to and depending from the hopper and disposed within the outer casing and spaced therefrom to form therewith an air heating chamber.

5. A car heater comprising a hopper, an outer casing depending from and detachably connected with the hopper and provided with vertically spaced series of openings, a burner drum depending from the hopper within the outer casing and spaced therefrom and provided with vertically spaced series of openings disposed intermediately of the openings of the outer casing, a grate in the burner drum between its series of openings and an annular baffle plate surrounding the burner drum above its lower series of openings.

[Claims 6 to 11 not printed in the Gazette.]

1,213,504. TUBE-CLAMP. CHARLES P. KUEHNER, Providence, R. I. Filed Mar. 6, 1916. Serial No. 82,296. (Cl. 137—6.)



1. A tube clamp comprising a pair of normally spaced apart jaws formed of a length of spring wire bent to form a transverse lower jaw bar, the wire on both sides of the jaw being bent to form an upwardly extending cam supporting loop, then longitudinally the length of the jaw, then over and back substantially upon themselves forming a hinge portion then forwardly of said loops, then transversely forming the upper bighting jaw bar and a cam member pivotally mounted in said loops for operating said jaws.

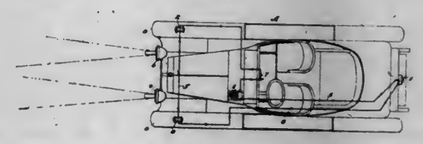
2. A tube clamp comprising a pair of normally spaced apart jaws formed of a length of spring wire, bent to form a transverse lower jaw bar, the parts of the wire on both sides of the jaw being bent to form an upwardly extending cam supporting loop then longitudinally the length of the jaw, then over and back substantially upon themselves forming a hinge portion then forwardly of said cam loops then transversely forming the upper bighting jaw bar, means for connecting the opposite wires together adjacent the hinge portion and a cam member pivotally mounted in said loops for operating said jaws.

3. A tube clamp comprising a pair of elongated jaws formed from a length of spring wire bent at its bight to form a lower transverse bighting bar, both parts of the wire then extending upward and back forming cam supporting loops then longitudinally forming the length of the jaws then upward over and back substantially upon themselves and forwardly between said cam loops and transversely in toward each other forming the upper bighting bar normally spaced apart from the lower bar and a cam member pivotally mounted in said loops for operating said jaw.

4. A tube clamp comprising a pair of elongated jaws formed from a length of spring wire bent at its bight to form a lower transverse bighting bar, both parts of the wire then extending upward and back forming cam supporting loops then longitudinally forming the length of the jaws upward over and back substantially upon themselves and forwardly between said cam loops and transversely toward each other forming the upper bighting bar normally spaced apart from the lower bar, a supporting sleeve connecting the ends of the wire, and a cam member pivotally mounted in said loops for operating said jaws, said cam having two operating handles.

5. A tube clamp comprising a pair of normally spaced apart jaws formed of a length of spring wire bent to form a transverse lower jaw bar, the wire on both sides of the jaw being bent to form an upwardly extending cam supporting loop, then longitudinally the length of the jaw, then over and back substantially upon themselves forming a hinge portion then forwardly of said loops, then transversely forming the upper bighting jaw bar, the side wires adjacent the hinge portion being twisted together forming a tie between them, and a cam member pivotally mounted in said loops for operating said jaws.

1,213,505. FENDER AND TAIL LIGHT SYSTEM. HARRY A. LACERDA, Schenectady, N. Y. Filed Aug. 11, 1916. Serial No. 114,376. (Cl. 240—7.)



1. An automobile including a tail light, front fender lights emitting forward and rearward rays, and a series circuit for all the lights, whereby the forward lights serve as indicators of the condition of the tail light.

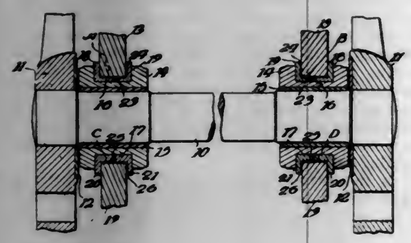
2. An automobile including a tail light, fender lights positioned in front of the driver's seat and emitting forward and rearward rays, and a series circuit in which all the lights are included, the forward rays being differently colored from the rearward rays of the fender lights.

3. A fender light comprising a body formed of a single piece and of cylindrical shape with open ends and formed with a central depending open boss interiorly threaded,

lenses in the open ends, and a plug screwed into the said boss and supporting a light-producing means, said plug being provided with a shoulder which coöperates with the bottom edge of the said boss to form the sole clamping means for securing the said body in place.

4. A fender light comprising a hollow body open at its ends and formed with a depending open boss, lenses in the open ends, a plug fitted on the said hollow boss and supporting a light-producing means, said lug being provided with a shoulder which coöperates with the bottom edge of the said boss to form means for securing the fender light in place.

1,213,506. LOCOMOTIVE-JOURNAL-BOX MOUNTING. GEORGE H. LANGTON, Portsmouth, Va., assignor of one-half to John W. Small, Portsmouth, Va. Filed Sept. 18, 1916. Serial No. 120,793. (Cl. 105—113.)



1. A journal box mounting including a shoe and wedge actively receiving the box with the said wedge and shoe each provided with side flanges of unequal thickness arranged for coöperation with a pedestal.

2. A journal box mounting including a shoe and wedge actively receiving the box and each provided with side flanges of unequal thickness, and liners arranged to bear between the thinner flanges of the shoe and wedge and a pedestal for the box received by the several shoe and wedge flanges.

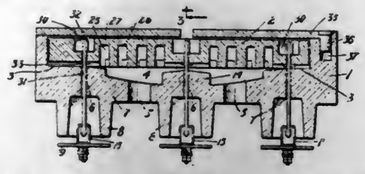
3. A journal box mounting including a wedge and shoe actively receiving the box and each provided with coacting flanges of unequal thickness arranged for coöperation with a pedestal with the thinner flanges of the wedge and shoe disposed inwardly, and liners arranged to bear between the said thinner flanges of the shoe and wedge and a pedestal for the box with the liner of the shoe reversible end for end with respect to the shoe to confront the thicker flange of the said shoe and the liner of the wedge interchangeable with an opposed wedge liner of like character to dispose the opposed wedge liner to confront the thicker flange of the wedge for spacing the box laterally.

4. A journal box mounting including a shoe and wedge actively receiving the box and each provided with coacting flanges of unequal thickness, and liners arranged to bear between the thinner flanges of the shoe and wedge and a pedestal for the box received by the several shoe and wedge flanges, the combined thickness of each of the thinner flanges of the shoe and wedge and the said liners respectively being substantially equal to the respective thickness of the thicker flanges of the shoe and wedge.

5. The combination with right and left pedestals actively receiving corresponding journal boxes, of right and left shoes and wedges receiving the boxes and each formed with coacting side flanges of unequal thickness engaging the said pedestals, and liners bearing between the thinner flanges of the shoes and wedges and the pedestals with the liners of the shoes reversible end for end with respect to the said shoes, and the right and left wedges interchangeable to dispose the liners to bear between the thicker flanges of the shoes and wedges and the pedestals for spacing the boxes laterally.

[Claims 6 to 10 not printed in the Gazette.]

1,213,507. ELECTRIC HEATER. JAMES LAWRENCE, New York, N. Y., assignor to Stanley G. Ranger, New York, N. Y. Filed May 29, 1916. Serial No. 100,493. (Cl. 219—37.)



1. In a device of the class described, a heating unit member comprising a plate of insulating material having air circulation openings therein and a heating element supported by said plate to heat air circulating through said openings, and a receiving member for supporting said unit and extending across said openings and directing and reflecting the heat generated by said element.

2. In a device of the class described, a heating unit member comprising a plate of insulating material having air circulation openings therein and a heating element supported by said plate to heat air circulating through said openings, a receiving member for supporting said unit and extending across said openings and directing and reflecting the heat generated by said element, said receiving member having air circulation openings.

3. In a device of the class described, a heating unit member comprising a plate of insulating material having air circulation openings therein and a heating element supported by said plate to heat air circulating through said openings, and a receiving member for supporting said unit and extending across said openings and directing and reflecting the heat generated by said element, said receiving member having air circulation openings, one of said members being formed to provide an air chamber between said receiving member and said unit.

4. In a device of the class described, a heating unit member having an electrode thereon, a receiving member for supporting said unit and having a passage therein for said electrode, one of said members being formed to provide a chamber between said elements, and means protecting said passage from material accumulating in said chamber.

5. In a device of the class described, a receiving member of heat resisting material having a depression in its upper face a heating unit in said depression, and a supporting and protecting plate supported by said member and extending over and out of contact with said unit.

[Claims 6 to 20 not printed in the Gazette.]

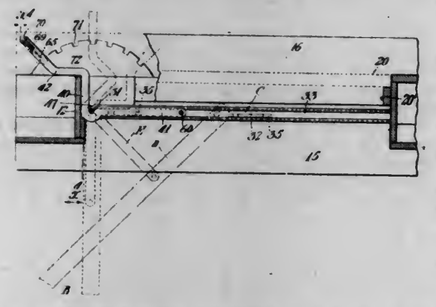
1,213,508. SASH-OPERATING DEVICE. WILLIAM C. LEA and JOSEPH C. GEORGE, Los Angeles, Cal. Filed Jan. 18, 1916. Serial No. 72,870. (Cl. 16—135.)

1. A window structure comprising a casement, a sash in said casement, a movable pivotal connection between said casement and said sash, a swinging arm pivotally mounted on said casement, means for pivotally connecting the outer end of said arm to the sash, said arm being adapted to engage and hold said movable pivotal connection stationary during the swinging movement of said arm to open the sash, and means for locking the inner end of said swinging arm.

2. A window structure comprising a casement, a sash in said casement, a movable pivotal connection between said sash and said casement, a swinging arm pivotally mounted in said casement and having its outer end pivotally connected to said sash, said arm having engaging means for holding said movable pivotal connection directly over the pivotal connection of the swinging arm and casement during the opening movement of the sash, and permitting lateral movement of said movable pivotal connection when the sash has reached its open position.

3. A window structure comprising a casement, a sash fitting inside said casement, guides secured inside said

casement at the top and bottom of the window opening, said guides having grooves cut therein, slides so shaped that they fit inside said grooves and slide freely therein, a slide pivot pin secured to each of said slides and projecting into the sash opening of said casement, sash pivot plates secured to the top and bottom of said sash and having an opening therein into which said slide pivot pin projects, detachable catch means for locking said bottom slide in one extreme position, casement pivot plates secured to said casement at the top and bottom of the sash opening, casement pivot pins secured to said casement pivot plates in such a position that they are on the same axis as the slide pivot pins when said bottom slide is locked in its extreme position, swinging arms pivoted on said casement pivot pins at the top and bottom of said sash, brace pivot plates secured to the top and bottom of said sash, and brace pivot pins each secured to the outer end of one of said swinging arms and engaging and turning in one of said brace pivot plates, said lower swinging arm having a locking slot formed therein, said locking slot being so located and shaped that said slide pivot pin is locked therein whenever the sash is partly or wholly closed.

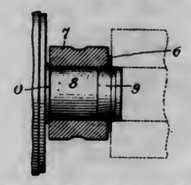


4. A window structure comprising a casement, a sash in said casement, pivotal means for said sash at the top and bottom thereof movably mounted in said casement, and a swinging arm pivotally mounted in said casement for swinging said sash, said arm having a locking slot adapted to engage the sash pivotal means at the bottom of the sash.

5. A window structure comprising a casement, a sash in said casement, pivot plates secured to said sash at the top and bottom thereof, guides secured to said casement at the top and bottom thereof, a slide in each guide, pins on said guides engaging the respective pivot plates, means on one of said slides for releasably engaging its respective guide, an arm pivotally mounted intermediate its length on said casement, and means for pivotally connecting the outer end of said arm to said sash, said arm having a locking slot therein adapted to receive the pin on one of said slides.

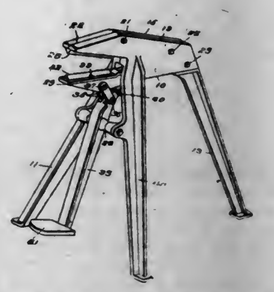
[Claims 6 and 7 not printed in the Gazette.]

1,213,509. FASTENING DEVICE. THOMAS L. LEE, Rochester, N. Y., assignor to North East Electric Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 10, 1916. Serial No. 90,203. (Cl. 74—8.)



The combination, with a recessed shaft and a member mounted thereon, of an integral annular fastening-device of malleable metal, comprising a sleeve normally of greater diameter than the shaft, and a flange normally curving outwardly from one end of the sleeve; the other end of the sleeve being compressed into the recess in said shaft, and the flange being upset against said member mounted on the shaft.

1,213,510. NUT-CRACKING MACHINE. FREDERICK LEU, Long Island City, N. Y., assignor to Maximilian Calm, Brooklyn, N. Y. Filed Nov. 12, 1915. Serial No. 61,136. (Cl. 146—3.)



1. In a device of the class described, a frame, legs formed on said frame presenting a tripod, a head carried by said legs, said head being formed of halves, each of said halves being recessed, shoulders formed by said recesses, an extension from one of said legs for attachment between said shoulders, a plurality of bolts for securing said halves and extension in fixed relation, a jaw formed by forward extensions of said halves, a cutter of triangular cross section detachably carried by said jaw, a swinging jaw pivotally mounted on one of said bolts, a cutter of triangular cross section detachably carried by said swinging jaw, and a lever pivoted between two of the legs of said frame for actuating said swinging jaw.

2. In a device of the class described, a relatively fixed jaw, lugs formed on said jaw, a screw detachably carried by said jaw, a cutter of triangular cross section detachably carried by said jaw between said lugs and said detachable screw, a swinging jaw, lugs formed on said swinging jaw, a screw detachably carried by said swinging jaw, a cutter of triangular cross section detachably carried by said swinging jaw between said legs and said detachable screw on said swinging jaw, and a lever for actuating said swinging jaw.

3. In a device of the class described, coacting jaws having relatively flat faces, spaced lugs formed on said faces, said lugs being undercut, a screw detachably carried by each of said jaw members, and an interchangeable cutter carried by each jaw member between said lugs and screw.

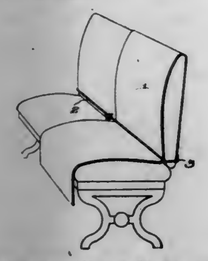
4. In a device of the class described, a frame comprising a head formed of halves, said halves coacting in forming a jaw, a leg extending from each half of said head, a supplemental leg carried by said head, a swinging jaw carried by said head, and fastening means for said halves, supplemental leg and jaw.

1,213,511. SEAT-COVER. HENRI COLVIN LINTHICUM, Durham, N. C. Filed Jan. 13, 1916. Serial No. 71,921. (Cl. 155—26.)

1. A seat cover comprising a flexible foldable sheet having a length to extend transversely across the seat and across the back thereof and hang down at the rear side of the back, that end of the cover which is to hang down at the back of the seat being folded upon itself, and ties or tapes extending in opposite directions from the cover and secured within the folded portion thereof.

2. A seat cover comprising a flexible foldable sheet having a length to extend transversely across the seat and across the back thereof and hang down at the rear side

of the back, that end of the cover which is to hang down at the back of the seat being folded upon itself, and a tape or the like having its intermediate portion inclosed within the folded part of the cover and secured therein and its end portions extending at opposite sides of the cover and of a length to be passed around the back of a seat and tied to hold the cover in place.

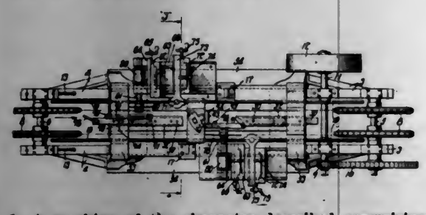


3. A seat cover comprising a flexible foldable sheet having a length to extend transversely across the seat and across the back thereof and hang down at the rear side of the back, that end of the cover which is to hang down at the back of the seat being folded upon itself, a tape or the like having its intermediate portion inclosed within the folded part of the cover and secured therein and its end portions extending at opposite sides of the cover and of a length to be passed around the back of a seat and tied to hold the cover in place, and reinforcements embracing the folded portion of the cover at the corners thereof.

4. A seat cover comprising a flexible foldable sheet having a length to extend transversely across the seat and across the back thereof and hang down at the rear side of the back, that end of the cover which is to hang down at the back of the seat being folded upon itself, a tape or the like having its intermediate portion inclosed within the folded part of the cover and secured therein and its end portions extending at opposite sides of the cover and of a length to be passed around the back of a seat and tied to hold the cover in place, the folds of the cover and the tape portion therein being glued or pasted together.

5. As a new article of manufacture, a seat cover comprising a sheet of flexible foldable material provided with securing tapes or ties at one end and projecting at opposite sides thereof and of a length to embrace the back of the seat and be tied together to hold the device in place, said sheet being folded transversely successively in the same direction, the opposite end portions of the sheet in its folded condition being folded inwardly in opposite direction, and the ties or tapes being wound around the folded sheet.

1,213,512. COMBINED SAW AND JOINTER. EDWARD J. LOBDELL, Onaway, Mich. Filed June 24, 1916. Serial No. 105,580. (Cl. 144—2.)



1. A machine of the character described comprising a pair of saws and a pair of jointers, a carrier for moving a wooden block in a general direction and successively presenting it to the saws and jointers, parallel tracks upon which the carrier travels, the saws and jointers being arranged in the order of saw, jointer, saw, jointer, along the line of forward movement of the carrier, and means for changing the position of the carrier angularly with respect to the line of movement thereof and about an axis at an angle to the plane of said parallel tracks whereby the saws and jointers are caused to form diverging surfaces on the block.

2. A machine of the character described comprising a pair of saws and a pair of jointers, a carrier for moving a wooden block in a general direction and successively presenting it to the saws and jointers, parallel tracks upon which the carrier travels, the saws and jointers being arranged in the order of saw, jointer, saw, jointer, along the line of forward movement of the carrier, and means for changing the position of the carrier angularly with respect to the line of movement thereof and about an axis at an angle to the plane of said parallel tracks between the time the block passes the first jointer and the time it passes the second saw whereby the saws and jointers are caused to form diverging surfaces on the block.

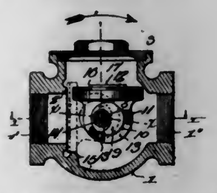
3. A machine of the character described comprising a carrier for moving a wooden block in a given general direction, parallel tracks upon which the carrier travels, a saw and a jointer on one side of the line of movement of the carrier, another saw and another jointer on the opposite side of said line of movement, the jointer being located forwardly of the saw in each instance, and means for changing the position of the carrier angularly with respect to the line of movement thereof and about an axis at an angle to the plane of said parallel tracks whereby the block is caused to engage with the saw and jointer on one side at an angle to the plane on which it engages the saw and jointer on the other side.

4. A machine of the character described comprising a carrier for moving a wooden block in a given general direction, parallel tracks upon which the carrier travels, a saw and a jointer on one side of the line of movement of the carrier, another saw and another jointer on the opposite side of said line of movement, the last mentioned saw and jointer being located forwardly of the first mentioned, the jointer being located forwardly of the saw in each instance, and means for changing the position of the carrier angularly with respect to the line of movement thereof and about an axis at an angle to the plane of said parallel tracks whereby the block is caused to engage with the saw and jointer on one side at an angle to the plane on which it engages the saw and jointer on the other side.

5. A machine of the character described comprising a carrier for moving a block in a given general direction, track means upon which the carrier is supported in a given plane, a pair of saws one on each side of said line of movement, the planes of the saws being parallel to each other, and means for causing the carrier to present the block to one of the saws to cut a desired surface thereon and for turning the block about an axis at right angles to the plane in which it is supported by the track means and presenting it to the other saw to cut another surface thereon the plane of which intersects the plane of the first mentioned surface at an acute angle.

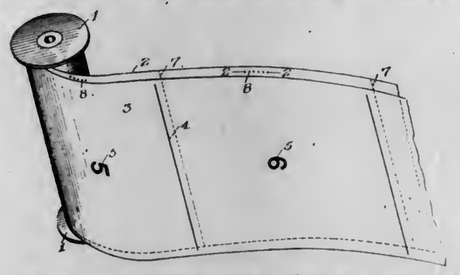
[Claims 6 to 16 not printed in the Gazette.]

1,213,513. BUTTERFLY-VALVE. WILHELM R. LOHSE, Milwaukee, Wis., assignor of one-third to Nicholas Koch, Milwaukee, Wis., and two-thirds to George H. Crowns, Port Washington, Wis. Filed May 3, 1916. Serial No. 95,026. (Cl. 137—4.)



A valve of the butterfly type comprising a housing having a port valve seat, a rotatable stem extending across the seat, a valve disk for the seat, an ear extending from the disk and provided with a circular aperture and a slot in connection with the aperture, an eccentric head fitted on the valve stem and rotatably seated in the circular aperture, a locking pin extending through the eccentric head and stem, and said pin including a portion projecting into the slot of the ear for limiting movement of the valve disk with relation to the stem eccentric.

1,213,514. PHOTOGRAPHIC FILM. FRANK W. LOVEJOY, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 27, 1913. Serial No. 797,374. (Cl. 95—9.)



A continuous strip of photographic film formed in a single integral piece and comprising a plurality of adjoining picture areas adapted to receive a series of successive exposures, one of the longitudinal edges of the film being provided with a plurality of distinguishing marks, one of which is opposite and individual to each picture area and arranged between said area and the margin of the strip, the marks being constituted by protuberances formed up from the material of the film and successive marks consisting of numerically successive groups of protuberances, all arranged in alinement and parallel with the longitudinal edge of the film.

1,213,515. PRESSURE INDICATOR AND VALVE. WILLIAM W. LOWER, Tyrone, Pa. Filed Sept. 27, 1916. Serial No. 122,357. (Cl. 152—12.)



1. In a pressure indicator and valve, the combination of a tubular stem, means for attaching the stem to an object, a valve seat in the lower end of said stem, a slidable indicator adapted to be projected from the stem, means for preventing the escape of air between the indicator and stem, a valve seat near the outer end of said indicator, a spring for retracting the indicator within the stem, a rod extending through the indicator stem and valve seats; a valve on said rod adapted to close the seat in the indicator, a second valve on such rod adapted to close the seat in the stem when the rod is forced inward; and a spring for normally projecting the rod to close the valve seat in the indicator.

2. An indicator valve for pneumatic tires and the like, comprising a tubular stem having a valve seat adjacent one end, a tubular indicator telescoping into the upper end of said stem and having a valve seat near its outer end, a contractile spring having one end connected with the stem and its other end connected with the inner end of the indicator, a valve rod extending through the stem and indicator, and valves on said rod respectively adapted to close the seat in the stem and the seat in the indicator, and a spring for normally holding said rod so as to close the seat in the indicator and leave the seat in the stem open.

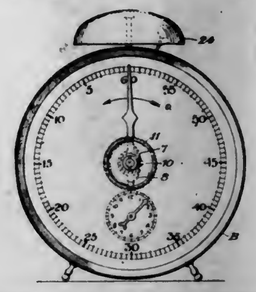
3. An indicator valve for the purpose specified, comprising a tubular stem having a valve seat adjacent its lower end, means for attaching the stem to an object, a tubular indicator telescoping the outer end of the stem and having a valve seat, means for preventing escape of air from the stem around the indicator, a helical spring having one end attached to the stem and the other to the indicator, a valve rod extending through the indicator and stem, valves on such rod respectively adapted to close the seat at the lower end of the stem and to close the seat in the indicator, a spring within the indicator normally causing said rod to seat the valve in the indicator, and a cap adapted to be screwed on the outer end of the stem over the indicator and valve rod, substantially as described.

4. An indicator valve for pneumatic tires and the like comprising a tubular stem, a tubular nipple connected with the lower end of said stem, a tubular indicator telescoping into the upper end of said stem, a valve seat in the stem, a valve seat in the indicator, a contractile helical spring having one end rigidly connected with the stem and its other end rigidly connected with the inner end of the indicator, a valve rod extending through the stem indicator and nipple, and valves on said rod respectively adapted to close the seat in the stem and the seat in the indicator, and a spring for normally holding said rod so as to close the seat in the indicator and leave the seat in the stem open.

5. An indicator valve for the purpose specified, comprising a tubular stem, means for attaching the stem to an object, a tubular member screwed into the lower end of said stem, a valve seat adjacent the tubular member at the lower end of the stem, a tubular indicator telescoping the outer end of the stem, a tubular member screwed into the inner end of the indicator, means for preventing escape of air from the stem around the lower end of the indicator, a helical spring having one end engaged with the tubular member attached to the stem and the other engaged with the tubular member attached to the indicator, a valve rod extending through the indicator tubular stem and tubular members, and valves on such rod respectively adapted to close the seat at the lower end of the tubular member and to close the seat in the indicator.

[Claim 6 not printed in the Gazette.]

1,213,516. TIMING DEVICE. PAUL S. LUTTRELL, Oakland, Cal., assignor to Reminder Clock Co., Oakland, Cal., a Corporation of California. Filed June 30, 1915. Serial No. 37,355. (Cl. 58—16.)



1. In a timing device, an alarm mechanism, a connected spring-actuated driving mechanism, an indicator

hand, a connected spring-actuated driving mechanism, a pair of winding shafts, one connected with the alarm driving mechanism and the other with the indicator driving mechanism, means for turning the alarm winding shaft, and means on the alarm winding shaft for turning the other winding shaft.

2. In a timing device, an alarm mechanism, a connected spring-actuated driving mechanism, an indicator hand, a connected spring-actuated driving mechanism, a pair of winding shafts one interior of the other, one connected with the alarm driving mechanism and the other with the indicator driving mechanism, and means for turning said shafts independently of each other and in unison with each other.

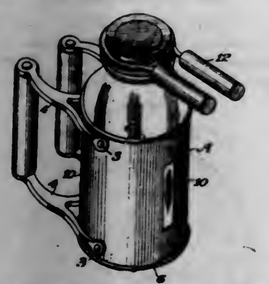
3. In a timing device, an alarm mechanism, a connected spring-actuated driving mechanism, an indicator hand, a connected spring-actuated driving mechanism, a pair of winding shafts, one connected with the alarm driving mechanism and the other with the indicator driving mechanism, a winding key loosely mounted on the alarm winding shaft, means for automatically locking the shaft to turn in unison with the key, and means for automatically coupling the indicator hand winding shaft to turn in unison with the alarm winding shaft and winding key.

4. In a timing device, an alarm mechanism, a connected spring-actuated driving mechanism, an indicator hand, a connected spring-actuated driving mechanism, a winding shaft connected with the alarm driving mechanism, a winding key loosely mounted on said shaft, a ratchet member secured on the shaft, a pin on the winding key engageable with said ratchet member to turn the ratchet and shaft, a tubular shaft exteriorly of the alarm winding shaft connected with the indicator hand driving mechanism, and means for automatically coupling said shaft to turn in unison with the winding key and alarm winding shaft.

5. In a timing device, an alarm mechanism, a connected spring-actuated driving mechanism, an indicator hand, a connected spring-actuated driving mechanism, a winding shaft connected with the alarm driving mechanism, a winding key loosely mounted on said shaft, a ratchet member secured on the shaft, a pin on the winding key engagable with said ratchet member to turn the ratchet and shaft, a tubular shaft exteriorly of the alarm winding shaft connected with the indicator hand driving mechanism, and a second ratchet member secured to the first named winding shaft engageable with a member on the tubular winding shaft to turn said shaft.

[Claims 6 to 14 not printed in the Gazette.]

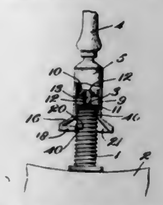
1,213,517. COMBINATION HOLDER AND GRIP. JAMES MCADAMS, Sausalito, Cal. Filed Aug. 11, 1915. Serial No. 44,912. (Cl. 65—26.)



1. In a jar holder, a split gripping member formed with slots, handles connected to the member to draw same about the jar, removable blocks for decreasing the interior diameter of the member disposed interiorly of the member, and a pair of locking elements movably connected to each block of a size to project through the slots, said elements being movable to engage the exterior face of the gripping member so as to lock the blocks thereto.

2. In a jar holder, a split gripping member formed with slots, handles connected to the member to draw same about the jar, removable blocks for decreasing the interior diameter of the member disposed interiorly of the member, and a pair of L-shaped locking lugs pivotally connected at one end to each block, said lugs when moved to have their free ends lie adjacent and in confronting relation being insertible in the slots and when moved to have their free ends point in the opposite directions being engaged with the exterior face of the member at points beyond the ends of the slot.

1,213,518. COUPLING FOR PNEUMATIC TIRES. NORMAN S. MCEWEN, Nashville, Tenn. Filed Sept. 18, 1916. Serial No. 120,832. (Cl. 137—28.)



1. In a coupling for inflating pneumatic tires the combination of means adapted to be connected to a supply of compressed air; a coupling member joined at one end to said means and having its other end flared to provide an inclined wall and an elongated opening, said opening terminating at one side flush with a portion of said inclined wall and having its opposite side screw threaded; and a piston provided with a passage therethrough movable in said coupling member, substantially as described.

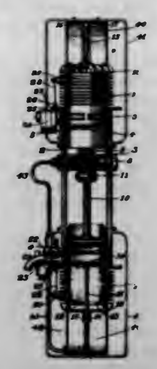
2. In a coupling for inflating tires the combination of a screw threaded nipple carried by the wheel rim; a coupling member having a flared interior chamber adapted to loosely fit said nipple and provided with an elongated opening having one end flush with the wall of said flared chamber and its other end screw threaded and adapted to engage the screw threads on said nipple; and a movable piston carried by said coupling member adapted to engage said nipple, substantially as described.

3. In a coupling of the class described, the combination of a screw threaded nipple provided with a valve stem; a coupling member provided with a flared bore adapted to loosely fit said nipple and with an elongated opening enlarged and flush with said bore at one end and having screw threads at its other end, said last named screw threads adapted to engage the screw threads on said nipple; and a piston having a passage adapted to receive said valve stem, located in said bore, substantially as described.

4. In a coupling of the class described, the combination of a screw threaded nipple provided with a valve stem; a coupling member provided with a flared bore adapted to loosely fit said nipple and with an elongated opening enlarged and flushed with said bore at one end and having screw threads at its other end, said last named screw threads adapted to engage the screw threads on said nipple; and a piston provided on one side with a cup shaped packing to form a tight joint, on its other side with disk like packing to engage the end of the nipple, and having a passage adapted to receive said valve stem, said piston movable up and down and located in said bore, substantially as described.

1,213,519. TWO-CYCLE ROTARY-CYLINDER INTERNAL-COMBUSTION ENGINE. CHESTER MCLAREN, Oakland, Cal. Filed June 26, 1915. Serial No. 36,511. (Cl. 123—44.)

1. In an engine, a ported cylinder, a piston operable therein, an inwardly extending seat formed in the head of the cylinder, a scavenging piston snugly fitting the cylinder and provided with a central enlargement adapted to engage with the seat, and means for operating the scavenging piston.



2. In an engine, spaced side plates, an interposed crank case rotatable therebetween, a plurality of cylinders on the crank case, a stationary crank pin extending eccentrically through the case and secured to the side plates, a piston in each cylinder, and a rod connecting each piston to the crank pin.

3. In an engine, spaced side plates having a circular ball race on its inner face, a crank case interposed between the side plates and provided with a cylindrical portion supported on the ball races of the plates, ball bearings in the races, the cylindrical portion of the case being formed with a peripheral series of openings, a cylinder arranged in each opening of the case and extending inwardly between the plates, a stationary crank pin connecting the plates and disposed eccentrically to the case, pistons in the cylinders, and piston rods connecting the pistons to the crank pin.

4. In an engine, spaced side plates, a rotary crank case disposed therebetween and provided with a circular flange overlying the periphery of one of the plates, a generator mounted on the specified plate and operably engaging the flange of the case, cylinders carried by the case, pistons in the cylinders, a crank pin carried by the plates, rods connecting the pistons to the pin, and sparking means for the cylinders operable from the generator.

5. In an engine, spaced side plates, a rotary crank case disposed therebetween and provided with a circular flange overlying the periphery of one of the plates, a generator mounted on the specified plate and operably engaging the flange of the case, cylinders carried by the case, pistons in the cylinders, a crank pin carried by the plates, rods connecting the pistons to the pin, a sparking element in each cylinder, and a contact for each sparking element connected thereto and arranged on the circular flange of the case, said contacts being adapted to make and break circuit with the generator.

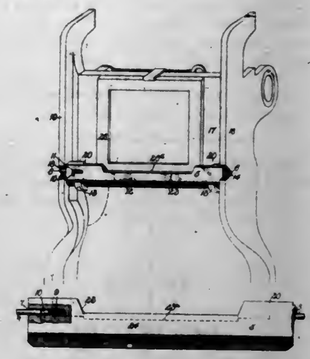
[Claims 6 and 7 not printed in the Gazette.]

1,213,520. JOB-PRESS STANDARDIZER. WILLIAM SENTURY MCMATH, El Paso, Tex. Filed Oct. 2, 1916. Serial No. 123,302. (Cl. 101—13.)

1. A job press standardizer having a lower edge for engagement by fingers on a press-bed, means for detachably securing the sides of the standardizer to the sides of the press-bed, the standardizer having a cutaway portion spaced from each side and extending from the front to the rear and through the top of the standardizer.

2. A job press standardizer having means by which it may be secured to a press bed, the standardizer from its top and from points spaced from its sides being cut away downwardly and rearwardly, there being an additional central cut-away portion in the standardizer which is spaced from the said points, the additional cut-away portion extending from the front to the rear and through the top of the standardizer.

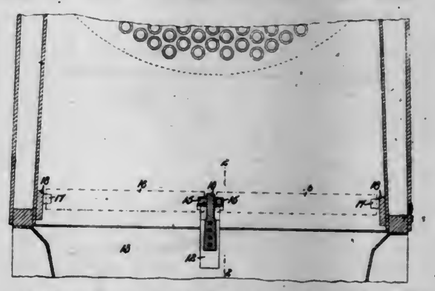
3. A job press standardizer having means by which it may be secured to a press-bed, the standardizer from its top and from points spaced from its sides being cut-away downwardly and rearwardly, there being an additional central cut-away portion in the standardizer which is spaced from the said points, and an additional cut-away portion extending from the front to the rear and through the top of the standardizer.



4. A job press standardizer having means by which it may be secured to a press-bed, the standardizer from its top and from points spaced from its sides being cut away downwardly and rearwardly, there being an additional central cut-away portion in the standardizer which is spaced from the said points, and an additional cut-away portion extending from the front to the rear and through the top of the standardizer, the standardizer being inclined downwardly at the rear of the said additional cut-away portion, the incline being at an angle to the incline of the first mentioned cut.

5. A job press standardizer having means by which it may be secured to a press bed, the standardizer from its top and from points spaced from its sides being cut away downwardly and rearwardly, there being an additional central cut-away portion in the standardizer which is spaced from the said points, the additional cut-away portion extending from the front to the rear and through the top of the standardizer, the standardizer being inclined downwardly at the rear of the said additional cut-away portion, the inclination being at an angle to the incline of the first mentioned cut.

1,213,521. REINFORCED CENTER FRAME FOR BOILER-GRATES. JAMES MAHON, Ravena, N. Y. Filed June 26, 1916. Serial No. 105,899. (Cl. 126—176.)

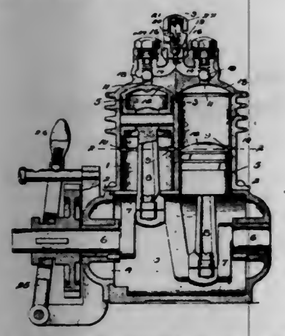


1. As an article of manufacture, a cast iron center frame for boiler grates, comprising a frame gradually increasing in thickness from a point intermediate of its width to its lower edge, and having a flat steel bar cast in said thickened portion and extending throughout the length of the frame.

2. As an article of manufacture, a cast iron center frame for boiler grates provided with an enlarged depending integral portion, and a reinforcing steel bar cast in the said depending portion and extending throughout the length of the center frame, the said reinforcing bar having transverse apertures filled with the metal of the depending portion.

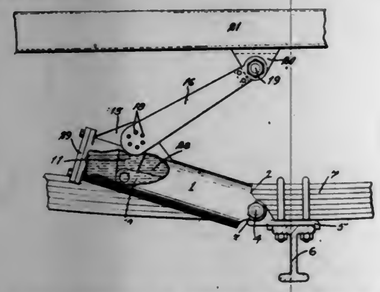
3. As an article of manufacture, a cast iron center frame for boiler plates provided with an enlarged depending integral portion, and at its ends with V-shaped heels, and a reinforcing steel bar cast in the said depending portion and extending throughout the length of the center frame, the ends of the reinforcing bars having downwardly and outwardly projecting V-shaped terminals conforming to the heels of the center frame.

1,213,522. AIR-PUMP. CHARLES W. MANZEL, Buffalo, N. Y., assignor to Manzel Brothers Company, Buffalo, N. Y., a Corporation of New York. Filed Aug. 29, 1912. Serial No. 717,659. (Cl. 230—27.)



In an air pump, the combination of a crank case, a crank-shaft journaled therein, a pair of integral pump-cylinders seated side by side on the crank case and removably secured thereto, said cylinders being closed at their upper ends by integral heads and their lower ends opening into the crank case, a piston in each cylinder connected with the crank shaft, each cylinder having in its head an outlet chamber containing a check-valve, said valves being located at the same ends of the cylinders, a discharge conduit connected with both of said outlet chambers, a valve chamber located between said outlet-chambers and communicating with both of the same, and a safety-valve located in said valve chamber.

1,213,523. SHOCK-ABSORBER. RICHARD MARTIN, Alameda, Cal. Filed Apr. 24, 1916. Serial No. 93,137. (Cl. 21—105.)



1. A shock-absorber for vehicles, comprising a fluid-containing cylinder adapted for connection with the vehicle axle; an arm having one end pivotally connected with said cylinder and the other end adapted for connection with the vehicle body; a ported piston within said cylinder; a connection between said piston and said arm; a valve associated with said piston for controlling the area of said port, and means for holding said valve off its seat.

2. A shock-absorber for vehicles, comprising a fluid-containing cylinder adapted for connection with the vehicle axle; an arm having one end pivotally connected with said cylinder and the other end adapted for connection with the vehicle body; a ported piston within said cylinder; a connection between said piston and said arm; a valve associated with said piston for partially closing said port during the travel of said piston in one direction only, and an adjustable stop for holding said valve off its seat.

3. A device for the described purpose, comprising a fluid-containing cylinder; a lineally movable ported piston within said cylinder; a movable exterior arm having a connection with said piston; a valve associated with said piston for partially closing the port therein; and means for holding said valve off its seat during the travel of said piston in one direction only.

4. A device for the described purpose, comprising a fluid-containing cylinder; a ported piston within said cylinder; a movable exterior arm having a connection with said piston; a valve associated with said piston for partially closing the port therein; an adjustable stop for holding said valve off its seat; and means for locking said adjustable stop in position.

5. A device for the described purpose, comprising a fluid-containing cylinder; a ported piston within said cylinder; a movable exterior arm having a connection with said piston; an automatic valve associated with said piston for partially closing the port therein during the travel of said piston in one direction only; an adjustable stop for holding said valve off its seat; and means for locking said adjustable stop in position.

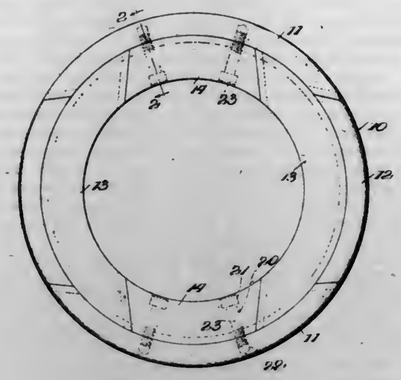
1,213,524. NECKTIE-HOLDER. EDWIN S. MATHESON, West Palm Beach, Fla. Filed Feb. 29, 1912. Serial No. 680,611. (Cl. 24—60.)



A device for holding a necktie from rising on the wearer, consisting of an approximately rectangular spring wire frame, one end portion of which is reëntrant and includes an inwardly broadening throat, one end of the wire of the frame terminating in an eye and the other end of the wire passing through the eye and extending thence longitudinally and centrally of the rectangle behind and in spaced relation thereto.

1,213,525. COLLAPSIBLE CORE. ROBERT M. MERRIMAN, Akron, Ohio. Filed July 19, 1916. Serial No. 110,103. (Cl. 18—45.)

1. A collapsible core including inner and outer sectional members, the abutting ends of the sections of each member being scarfed and said inner members, when assembled, forming inner and outer rings, one engaging within the other, and means for locking the rings thus formed against independent lateral movement, said means including shoulders formed longitudinally along the entire length of the inner faces of the sections making up the outer ring to provide an annular shoulder adapted to seat in an annular channel provided by forming channels longitudinally in the outer faces of the sections of the inner ring.



2. A collapsible core including inner and outer rings, one engaging closely within the other, each ring being formed of a plurality of sections the abutting ends of which are scarfed whereby their inclined end faces lie in non-parallel, non-radial planes so that when the core is assembled securing of a pair of opposed sections of the inner ring to certain of the sections of the outer ring will secure all of the sections against movement, and means for so securing such sections.

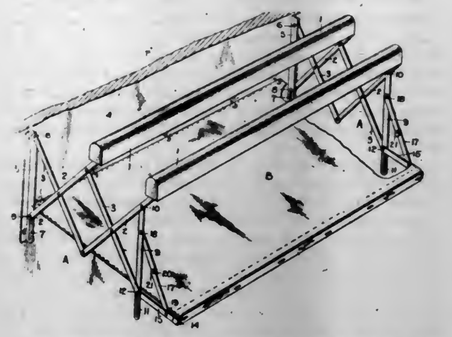
3. A collapsible core including inner and outer ring portions, each formed in a plurality of sections, certain sections of the outer ring being of greater length than the remaining sections of the outer ring and certain sections of the inner ring being of greater length than the remaining sections of the inner ring and the rings having the abutting ends of their sections scarfed and so assembled that the sections of one break joint with the sections of the other.

4. A collapsible core including inner and outer ring portions, each formed in a plurality of sections, certain sections of the outer ring being of greater length than the remaining sections of the outer ring and certain sections of the inner ring being of greater length than the remaining sections of the inner ring and the rings having the abutting ends of their sections scarfed and so assembled that the sections of one break joint with the sections of the other whereby securing of the shorter sections of the inner ring to the longer sections of the outer ring will secure all of the sections together.

5. A collapsible core including inner and outer ring portions, each formed in a plurality of sections, certain of the sections of the outer ring being of greater length than the remaining sections of the outer ring and certain of the sections of the inner ring being of greater length than the remaining sections of the inner ring and the rings having their sections so assembled that the sections of one break joint with the sections of the other, and means whereby securing of the shorter sections of the inner ring to the longer sections of the outer ring will secure all of the sections together, said means including the forming of the abutting ends of the sections with scarf joints so that the shorter sections of the outer ring are held against movement from each other by the longer sections when the longer sections of the outer ring are held against movement away from each other and in such a manner that the longer sections of the inner ring are held against movement toward each other as long as the shorter sections of the inner ring are held against movement toward each other.

[Claims 6 to 14 not printed in the Gazette.]

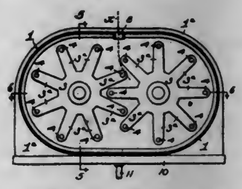
1,213,526. CHICKEN-ROOST. CONRAD MICHAUD. Wantagh, N. Y. Filed Mar. 20, 1915. Serial No. 15,749. (Cl. 119—22.)



1. In a chicken roost, the combination of a pair of lazy tongs, perch bars carried thereby, vertical bars connected with the lazy tongs, a stretching bar having arms slidably connected with the vertical bars, said arms and vertical bars having interlocking parts adapted to interlock when the lazy tongs are fully opened, and a flexible catching bottom connected with the stretching bar.

2. In a chicken roost, the combination of a pair of lazy tongs, perch bars carried thereby, vertical bars connected with the lazy tongs, a stretching bar having arms slidably connected with the vertical bars, said arms and vertical bars having interlocking parts adapted to interlock when the lazy tongs are fully opened, a flexible catching bottom connected with the stretching bar, and folding braces connected with the arms of the stretching bar and with the vertical bars to coöperate with the said interlocking parts to hold the said stretching bar in position to maintain the flexible bottom stretched.

1,213,527. MACHINE FOR TREATING KNITTED WEBS. JOSEPH D. MORLEY, New York, N. Y., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Apr. 15, 1916. Serial No. 91,330. (Cl. 26—8.)



1. The combination, in a machine for treating the end portions of knitted webs, of a beater structure, means for moving the same in the direction of the wales of the web, and means for directing a free end of the web into the path of said beater structure, whereby the latter can act to longitudinally stretch and laterally contract that portion of the web submitted to its action.

2. The combination, in a machine for treating the end portions of knitted webs, of a plurality of beaters disposed in a circular series, means for rotating said series of beaters, and means for feeding a free end of the knitted web thereto in such manner that the beaters of the series will act successively upon said web to longitudinally stretch and laterally contract that portion of the same submitted to their action.

3. The combination, in a machine for treating the end portions of knitted webs, of beaters disposed on opposite sides of the web, means for moving said beaters in the direction of the wales of the web, and means for feeding a free end of the knitted web between said beaters, where-

by the latter will act to longitudinally stretch and laterally contract that portion of the web submitted to their action.

4. The combination, in a machine for treating the end portions of knitted webs, of beaters disposed on opposite sides of the web, means for moving said beaters in the direction of the wales of the web so that their paths of travel intersect one another, and means for feeding a free end of the knitted web thereto in such manner that it will cross said paths of travel where they intersect and will thereby be stretched longitudinally and contracted laterally.

5. The combination, in a machine for treating the end portions of knitted webs, of a plurality of beaters disposed in two circular series, means for rotating said series of beaters, and means for feeding a free end of the knitted web thereto in such manner that the successive beaters of one series will act upon one side of the web and the successive beaters of the other series will act on the opposite side of the web in alternation with the beaters of the first series, and will longitudinally stretch and laterally contract that portion of the web submitted to their action.

[Claims 6 to 15 not printed in the Gazette.]

1,213,528. APPARATUS FOR DISPLAYING ADVERTISEMENTS, SIGNALING, AND THE LIKE. JAMES PRIESTNALL NAYLOR, Dulwich, London, England. Original application filed Aug. 2, 1911, Serial No. 642,030. Patent No. 1,191,023, dated July 11, 1916. Divided and this application filed Sept. 15, 1913. Serial No. 789,930. (Cl. 177—350.)



1. In an advertisement and signal display device, the combination of a plurality of similar monogrammic groups of elements, each element individually capable of operation to display and non-display position by energization of a plurality of electro-magnetic devices, three systems of contact keys, circuit connections between the keys and the monogrammic groups, one system of said keys being for selection of a monogrammic group, a second system including composing keys for selection of elements on the particular monogrammic group, and a third system for deletion of displayed elements by operating those elements only which have been displayed, and manipulative means for controlling the said three systems of keys.

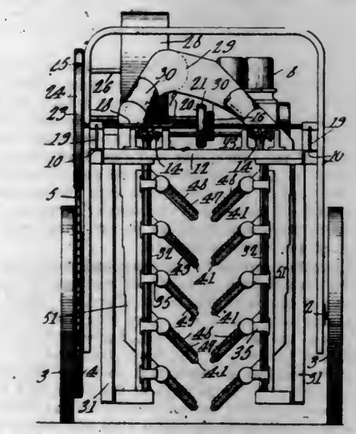
2. In an advertisement and signal display device, the combination of a plurality of similar monogrammic groups of elements, three systems of contact keys, circuit connections between the keys and the monogrammic groups, one system of said keys being for the selection of the monogrammic group, the second system formed of composing keys for selection of elements upon the particular monogrammic group, and a third system being for the deletion of displayed elements, and automatically operative means for controlling the said three systems of keys, said automatic means including a control strip having only as many contact devices as there are systems of keys.

3. In an advertisement and signal display device, the combination of a plurality of similar monogrammic groups of elements, three systems of contact keys, circuit connections between the keys and the monogrammic groups, one system of said keys being for the selection of the monogrammic group, another system comprising composing keys for selection of elements upon the particular monogrammic group, and the third system being for the deletion of displayed elements, manually operative means for controlling the said three systems of keys and automatically operative means for controlling the said three systems of keys, said automatic means being constructed and arranged for alternative manual operation.

4. In an advertisement and signal display device, the combination of a plurality of similar monogrammic groups of elements, three systems of contact keys, circuit connections between the keys and the monogrammic groups, one system of said keys being for the selection of the monogrammic group, another system including groups of keys for selection of elements upon the particular monogrammic group, and a third system being for the deletion of displayed elements, and automatically operative means for controlling the said three systems of keys, said automatic means including a control device having only as many contacts as there are systems of keys, the duration of the display of the selected elements being determinable by the distance between the contacts and the speed of the control device.

5. In an advertisement and signal display device, the combination of a plurality of similar monogrammic groups of elements, each element individually capable of operation to display and non-display position by the energization of a plurality of electro-magnetic devices, three systems of contact keys, circuit connections between the keys and the monogrammic groups, one system of said keys being for selection of a monogrammic group, a second system including composing keys for the selection of elements on the particular monogrammic group, and a third system for the deletion of displayed elements by operating those elements only which have been displayed, manipulative means for the said three systems of keys and automatically operative means for controlling the said three systems of keys, said automatic means including a control strip having contact devices corresponding in number to the systems of keys.

1,213,529. COTTON-PICKER. JOSEPH B. NEIL, Filbert, S. C., assignor to South Carolina Cotton Picker Company, Yorkville, S. C. Filed Jan. 9, 1913. Serial No. 741,058. (Cl. 56—6.)



1. A cotton picking machine having superposed housing arranged in opposed series, all of the housings of each series being parallel and the housings of the opposed series converging downwardly toward one end of the machine, the inner sides of the housings being open, suction flues communicating with the housings at the outer sides thereof, and cotton picking means along the open inner side of each housing and parallel therewith.

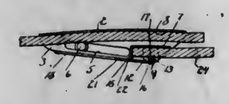
2. In a cotton picking machine, superposed inclined housings open along their inner sides, said inner sides converging downwardly toward one end of the machine, suction flues communicating with the housings at the outer sides thereof, and a pair of picking rolls parallel with and disposed close to the open inner side of each housing.

3. In a cotton picking machine, superposed inclined housings open along their inner sides, said inner sides converging downwardly toward one end of the machine, suction flues communicating with the housings at the outer sides thereof, a picking roll parallel with and disposed close to the open side of each housing, and means for removing material from the picking roll and directing it into the adjacent housing.

4. In a cotton picking machine, superposed inclined housings open along their inner sides, said inner sides converging downwardly toward one end of the machine, suction flues communicating with the housings at the outer sides thereof, a pair of picking rolls parallel with and disposed along the open inner side of each housing, and doffing means within each housing for removing material from one of the rolls, said roll constituting means for removing material from the other roll.

5. In a cotton picking machine, the combination with two opposed series of housings having their inner edges converging downwardly at one end of the machine, a picking roll parallel with and adjacent the open inner side of each housing, and means for removing material from the picking roll and directing it into the adjacent housing, said housings and picking means being inclined to conform to the natural position of the limbs of plants whereby the housings and picking devices may enter between and move freely among the limbs of the plant, and suctions flues communicating with the housings at the outer sides thereof.

1,213,530. BUCKLE. GEORGE R. NETTLETON, New Haven, Conn., assignor to The W. & E. T. Fitch Co., New Haven, Conn., a Corporation. Filed Apr. 10, 1916. Serial No. 90,246. (Cl. 24—74.)



1. A buckle comprising a frame having edge walls, an independently formed transverse division plate located between the inner faces of the said walls, a clamping lever mounted in the frame and co-acting with the inner face of the division plate as a means for fixing one end of the strap to the buckle, and means for clamping the free end of the strap in the frame.

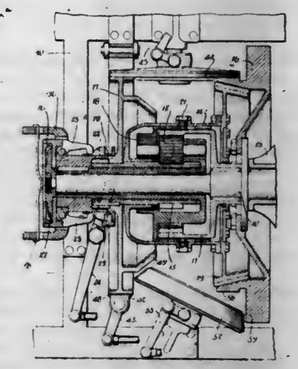
2. A buckle comprising a frame having inwardly extending edge walls, a division plate located between the walls forward of the rear end of the frame, said division plate formed with inwardly extending perforated ears, a lever mounted in the said perforations and having a gripping edge coacting with the inner face of said division plate, whereby the strap may be held between them, and means for adjustably connecting the free end of the strap with the buckle.

1,213,531. TRANSMISSION-GEARING. ALDEN E. OSBORN, New York, N. Y. Filed Nov. 16, 1912. Serial No. 731,770. (Cl. 74—34.)

1. In a transmission gearing the combination of a gear system, a movable mount having connection with an element thereof, means for restraining at will the motion of the mount and controllable means for positively driving the mount independently of the action of the gear system and at two or more different speeds.

2. In a transmission gearing the combination of a gear system, a movable mount having connection with an element thereof, means for restraining at will the motion of the mount, and controllable means mounted independently of the gearing for positively driving the mount at two or more different speeds.

3. In a transmission gearing the combination of a gear system, a movable mount having connection with an element thereof, means for restraining at will the motion of the mount, and controllable means mounted independently of the gearing for positively driving the mount similarly to the action of the gear and at both a higher and a lower speed.

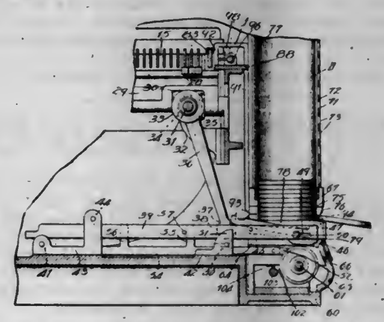


4. In a transmission gearing the combination of driving and driven elements, a movable mount, a gear system having one element thereof connected with the driving element, a second element thereof connected with the driven element and a third element thereof connected with the movable mount, means for restraining at will the motion of the mount, and means for positively driving the mount from the driving element separately from the action of the gear system at both a higher and a lower speed.

5. In a transmission gearing the combination of driving and driven elements, a movable mount, a gear system having one element thereof connected with the driving element, a second element thereof connected with the driven element and a third element thereof connected with the movable mount, means for restraining at will the motion of the mount, and means for positively driving the mount from the driving element separately from the action of the gear system and at the same speed as it is given by the action of the gear system or a speed either lower or higher than it is given by said gear system's action.

[Claims 6 to 37 not printed in the Gazette.]

1,213,532. PAYING-MACHINE. NELSON C. OVAITT and FREDRICK N. ROSENSTENGEL, Detroit, Mich., assignors to Payograph Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 17, 1914. Serial No. 872,624. (Cl. 133—4.)



1. In a machine of the class described; the combination of a holder for coins, an ejector bar and an ejector member mounted thereon, means for reciprocating said bar below

said holder and coins therein, slots in said bar and ejector member respectively, a pin passing through said slots, and front and rear abutments in the path of said pin as the bar is reciprocated, the slot in said ejector member being inclined and said pin when engaging with the front abutment coöperating with said slot to depress the ejector member below the lowermost coin in the holder and when engaging with the rear abutment coöperating with the slot to raise the ejector member into the plane of the lowermost coin.

2. In a machine of the class described, the combination of a holder for coins, an ejector bar and an ejector member mounted thereon, means for reciprocating said bar below said holder said bar and said member having slots, a pin passing through said slots and projecting beyond the sides of said bar, front and rear abutments for said pin and in the path of said bar, the slots in said bar being inclined and said pin when engaging with said front abutment coöperating with said bar slots to depress the ejector member below the plane of the lowermost coin in the holder and when engaging with the rear abutment coöperating with said bar slots to again raise the ejector member.

3. In a machine of the class described, the combination of a holder for coins, an ejector bar and an ejector member mounted thereon, means for reciprocating said bar below said holder and coins therein, said bar having a slot, a pin extending through said ejector member and said slot and projecting beyond the side of said bar, front and rear abutments for said pin, said slot being inclined and said pin when engaging with the front abutment coöperating with said slot to depress the ejector member below the plane of the lowermost coin and said pin when engaging with the rear abutment coöperating with said slot to restore the member to upper position.

4. In a machine of the class described, the combination of a holder for coins, an ejector bar and an ejector member mounted thereon, means for reciprocating said bar below said holder and coins therein, said ejector member having a slot, a pin extending through said slot and bar and projecting beyond the side of said bar, front and rear abutments for said pin, said slot being inclined and said pin when engaging with the front abutment coöperating with said slot to depress the ejector member below the plane of the lowermost coin and said pin when engaging with the rear abutment coöperating with said slot to restore the member to upper position.

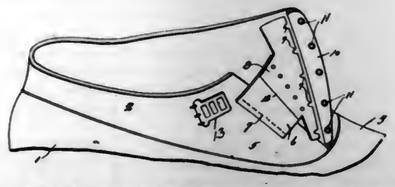
5. In a machine of the class described, the combination of a holder for coins, an ejector bar having a forked outer end, means for reciprocating said bar below the holder and coins therein, an ejector member within the fork of the bar pivoted at its inner end to the bar, a pin passing transversely through said bar and ejector member, front and rear abutments for said pin adjacent the path of said bar, said bar and member having cam surfaces adapted to coöperate with said pin to swing the member downwardly below the lowermost coin in the holder when said pin engages the front abutment and to coöperate with the pin to raise the member into the plane of the lowermost coin when the pin engages with the rear abutment.

[Claims 6 to 20 not printed in the Gazette.]

1,213,533. SHOE-CLOSURE. GUSTAV ADOLF PETERSEN, Viborg, S. D. Filed July 16, 1915. Serial No. 40,216. (Cl. 36—50.)

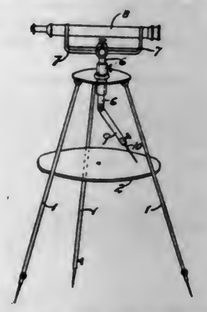
1. A shoe having one of its flies provided with a leather piece projected beyond the free edge of the fly and its opposite fly provided with a leather strip along its inner edge, buttons arranged on said strip and a plate carried by said leather piece and formed with notches along its free edge in alinement with the buttons of the said strip, said plate being adapted for insertion between said strip and the fly to which it is secured.

2. A shoe having one of its flies provided with a leather piece projected beyond the free edge of the fly and its opposite fly provided with a leather strip along its inner edge, buttons arranged on said strip and means carried by said leather piece for insertion between said strip and its fly for engagement with the said buttons whereby independent longitudinal movement of the flies is avoided.



3. A shoe having one of its flies provided with a leather piece projected beyond the free edge of the fly and adapted to be folded back upon itself and its opposite fly provided with a leather strip along its inner edge, buttons arranged on said strip, a plate secured to said leather piece and formed with notches along its free edge in alinement with the buttons of the said strip for engagement with said buttons when said plate is inserted between said strip and its fly, and a buckle carried by said flies.

1,213,534. DIRECTION-FINDER AND THE LIKE. FRANCIS WILLIAM PHILLIPS, Worksop, England. Filed Aug. 10, 1915. Serial No. 44,726. (Cl. 33—67.)

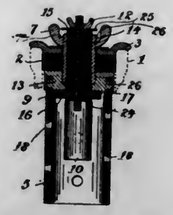


1. An instrument of the kind referred to, comprising in combination, a stand supported on legs; a cradle; means pivotally supporting said cradle on said stand, said cradle adapted to carry the device to be directed toward an object and adapted to perform swiveling movements in relation to said stand, a table carried between the legs of said stand and an extensible pointer pivotally connected with said means and adapted to register with points on said table substantially as and for the purpose set forth.

2. An instrument of the kind referred to, comprising in combination, a stand supported on legs, a spindle extending through said stand and rotatable therein, a cradle carried by said spindle and movable in a vertical plane in relation thereto, said cradle adapted to carry the device to be directed toward an object, a table carried between the legs of said stand and an extensible pointer pivoted to said spindle and adapted to register with points on said table.

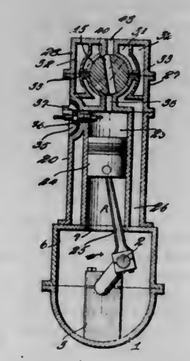
1,213,535. GALVANIC BATTERY. JOHN EDWARD PRESTON, London, England. Filed Aug. 31, 1914. Serial No. 859,402. (Cl. 204—34.)

1. A removable stopper unit for the containing vessel of a closed galvanic battery cell, including insulated positive and negative elements comprising one element of a clamp, a cover plate forming the complementary clamp element, an expanding elastic disk coming between said clamping elements for plugging tightly the containing vessel when the component clamping parts are drawn together to put clamping pressure upon the opposite faces of said disk, insulated conductors leading from the positive and negative elements to the exterior of the unit, one conductor being within the other, means for drawing the component clamping parts together, and fluid sealing means between said conductors, substantially as and for the purposes described.



2. A removable stopper unit for the containing vessel of a closed galvanic battery cell, including insulated positive and negative elements comprising one element of a clamp, a cover plate forming the complementary clamp element, an expanding elastic disk coming between said clamping elements for plugging tightly the containing vessel when the component clamping parts are drawn together to put clamping pressure upon the opposite faces of said disk, insulated conductors leading from the positive and negative elements to the exterior of the unit, one conductor being within the other, the outside conductor being formed as an exteriorly threaded tubulus, and the inside conductor being formed as a screwed stem, a nut screwed to the exteriorly threaded tubulus, a nut screwed to the said stem, and fluid sealing means between said conductors, substantially as and for the purposes described.

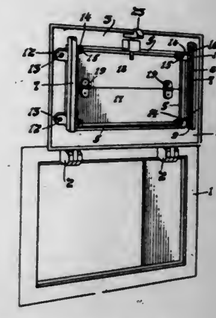
1,213,536. VALVE SYSTEM. RALPH J. QUELLE, Burlington, Iowa, assignor of one-half to James Moir, Burlington, Iowa. Filed Jan. 21, 1916. Serial No. 73,428. (Cl. 123—59.)



1. An engine of the class described comprising a plurality of explosive cylinders, a detachable valve casing supported thereby, a rotary valve positioned within said detachable valve casing, said valve provided with a plurality of ports formed therein, said valve casing provided with a plurality of ports communicating with said ports in said valve and also communicating with said explosive cylinders for controlling the passage of gases to and from said cylinder through said valve, said rotary valve provided with a projecting end shaft, bearings supporting said end shaft, means for supplying lubricant to the periphery of said rotary valve, a water jacket formed around said rotary valve within said valve casing, and an oil reservoir formed within said valve casing and positioned upon the outside of said water jacket for facilitating the cooling of the lubricant before being admitted to said rotary valve.

2. An engine of the class described comprising an explosive cylinder, a valve casing supported thereby, a rotary valve positioned within said valve casing, means for supplying lubricant to the periphery of said rotary valve, a water jacket formed around said rotary valve within said valve casing, an oil reservoir formed within said valve casing and positioned upon the outside of said water jacket for facilitating the cooling of the lubricant before being admitted to said rotary valve.

1,213,537. WINDOW-GUARD. JOHN E. RABER, Canton, Ohio. Filed Apr. 29, 1916. Serial No. 94,843. (Cl. 189—79.)



1. In a device of the character described, the combination with a hinged member adapted to swing in a vertical plane, of a guard member hingedly connected at its upper edge to said hinged member and a second guard member hingedly connected to the lower edge of said first named guard member, the lower edge of said second named guard member being slidably connected to said hinged member, said guard members adapted to fold against the hinged member when the latter is raised and to unfold therefrom when the latter is lowered.

2. The combination with a swinging closure member for an opening, said member having delicate parts, of a guard member hingedly connected to said closure member below said delicate parts when the closure member is in the closed position, and a second guard member hingedly connected to said first named guard member, the free edge of said second named guard member being slidably connected to said closure member, said guard members adapted to fold against the closure member when opened to protect its delicate parts, and to unfold therefrom in unobstructing position relative to the opening when the closure member is closed.

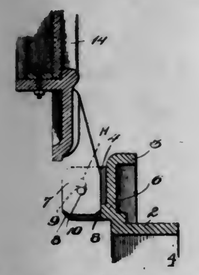
3. The combination with an opening and a closure member hinged at one side thereof for vertical swinging movement, of a protecting element comprising a plurality of hingedly connected members hinged to the inner side of the closure member the free edge of the lowermost member being slidably connected to the closure member, said hingedly connected members adapted to open against said closure member when the closure member is opened and to fold together through the opening when the closure member is closed.

4. In a device of the character described, a window casing, a vertically swinging sash frame hinged to said window casing, a glazed panel mounted within said sash frame, and a guard formed of sections hingedly connected together and hingedly connected to said sash frame, the edges of said guard being slidably connected to said sash frame, said guard arranged to open in front of said glazed panel when the sash is in the raised position and to fold together beneath said glazed panel when the sash is in the closed position, one of said sections provided with an off-set portion adapted to overlap the hinged joint of said sections when the guard is in the opened position.

5. In a device of the character described, a window casing, a sash frame hinged at one side thereof for vertical swinging movement, said sash frame being provided with vertically disposed grooves, a guard formed of sections hingedly connected together and hingedly connected to said sash frame adjacent the lower extremities of said grooves, and projections provided adjacent the free edge of said guard and slidably located within said grooves, said sections being arranged to automatically fold together beneath said glazed panel when the sash is in the closed position and to automatically open in front of said glazed panel when the sash is in the raised position.

[Claims 6 and 7 not printed in the Gazette.]

1,213,538. HINGE. JOHN E. RABER, Canton, Ohio. Original application filed Sept. 25, 1915, Serial No. 52,578. Divided and this application filed July 19, 1916. Serial No. 110,019. (Cl. 16—106.)



1. In a hinge of the character described, the combination of fixed and hinge members, the fixed member provided with ears having grooves in their inner faces, said grooves not extending entirely through said ears, and a pin located through the hinge member and extending into said grooves, one of said ears having an aperture communicating with the groove therein for inserting said pin.

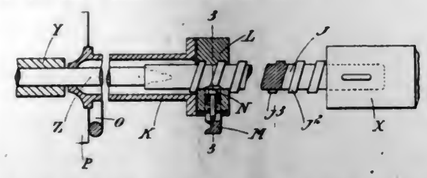
2. In a hinge of the character described, the combination of fixed and hinge members, the fixed member provided with ears having grooves in their inner faces, said grooves not extending entirely through said ears, a pin located through the hinge member and extending into said grooves, one of said ears having an aperture communicating with the groove therein for inserting said pin and a removable plug for closing the aperture in said ear after the pin is inserted.

3. In a hinge of the class described, the combination of fixed and hinge members, the fixed member provided with ears having vertical grooves in their inner faces, said grooves not extending entirely through said ears, a pin located through the hinge member and extending into said grooves, one of said ears having an aperture communicating with the groove therein for inserting said pin, and a stop block located below the pin and between the ears of the fixed hinge member.

4. In a hinge of the class described, the combination of fixed and hinge members, the fixed member provided with ears having grooves in their inner faces and an aperture located through the ears of the fixed hinge member, said apertures communicating with the grooves, the hinge member having located therethrough a pin, the extended portions of the pin seated in the groove, and means for closing the apertures in the ears of the fixed hinge member.

1,213,539. MANUFACTURE OF SEAMLESS TUBES. ROBERT REIMANN and ABSALOM PERCIVAL PARSELLE, Birmingham, England. Filed Apr. 13, 1914. Serial No. 831,376. (Cl. 80—14.)

1. In a machine for use with a pilger mill, the combination of a reciprocating feed bar, a ram for moving the feed bar, means for reciprocating said ram, a screw and nut connection between the feed bar and the ram, a shaft carried by the ram having a spiral thread, means for preventing the rotation of the shaft when moving in one direction, a gear wheel slidably mounted on the shaft and arranged to rotate therewith, a second gear meshing therewith and slidably mounted on the feed bar and arranged to rotate therewith, and means for restraining the gears from movement in a longitudinal direction with the feed bar and shaft, substantially as set forth.

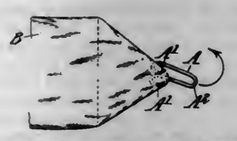


2. In a machine for use with a pilger mill, the combination of a reciprocating feed bar, a ram for moving the feed bar, means for reciprocating said ram, a screw and nut connection between the feed bar and the ram, a shaft connected to the ram and arranged to be reciprocated therewith, a spiral thread on said shaft, a pawl and ratchet connection between the ram and the shaft carried by the ram and arranged to retain the shaft from rotation when the ram is moved in one direction, a gear wheel on the shaft and adapted to rotate therewith, a second gear wheel on the feed bar and adapted to rotate therewith, and bearings for said gear wheels, said bearings being adapted to maintain the gear wheels from movement in a longitudinal direction with the shaft and the feed bar, substantially as set forth.

3. In a machine for use with a pilger mill, the combination of a reciprocating feed bar, a ram for moving the feed bar, means for reciprocating said ram, a screw and nut connection between the bar and the ram, supporting brackets mounted on the ram, a gear wheel mounted in said brackets surrounding the feed bar, a spline connection between the feed bar and said gear wheel, a shaft mounted on the ram and adapted to move therewith, a spiral spline on said shaft, a second gear wheel mounted on the shaft and the spiral spline seated between said brackets, and means for preventing the spiral shaft from rotating when the ram is moved in one direction, substantially as set forth.

4. In a machine for use with a pilger mill, the combination of a feed bar, a ram, means for reciprocating said ram, a screw and nut connection between said feed bar and said ram, a shaft geared with said feed bar, a spiral on said shaft, and a ratchet device carried by said ram, causing said shaft to rotate during reciprocation of said ram in one direction only, a screwed bar carried by said feed bar, a mandrel attached to said screwed bar, a guide for said mandrel, a nut carried by said guide, and engaging said screwed bar, and a stop device engaged by said nut causing it to disengage from said screwed bar substantially as set forth.

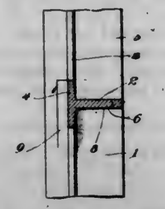
1,213,540. FASTENER OR HOOK AND THE LIKE. CHARLES EMMANUEL REINHARDT-RUTLAND, London, England. Filed July 28, 1915. Serial No. 42,304. (Cl. 24—150.)



A fabric fastening device formed of a single piece of wire bent upon itself into approximately U-shape to form two approximately parallel legs and a connecting member, the connecting member and legs lying within the plane passing through the legs, the greatest width of the fastening device being adjacent to the hooks, the arrangement being such that the fabric through which the

legs pass is not spread or stretched during its passage over the legs and the connecting member, but is contracted or plaited as it is drawn toward the center of the connecting member, each of said legs having a hook at its end; substantially as described.

1,213,541. METAL SASH-JOINT. HENRY N. RENTON, Philadelphia, Pa., assignor of one-half to William Roper, Philadelphia, Pa. Filed Dec. 15, 1915. Serial No. 66,984. (Cl. 189—36.)



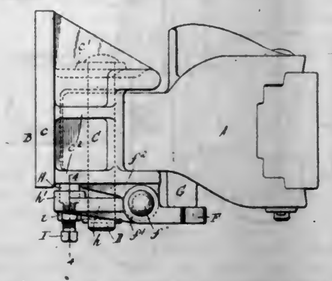
1. A sash joint comprising two munnions, one having a notch in one edge, the other having a slot therein, a tongue formed in said latter munnion, said tongue being produced by forming two slits lengthwise of said munnion and another slit connecting said first slits, one long edge surface of said tongue entirely forming one end of said slot, said tongue being laterally bendable to provide space additional to said slot to permit the insertion of said first munnion, said first munnion after its insertion being movable transversely to said second munnion to permit the portion forming said notch to straddle the portion of said second munnion adjacent the opposite end of said slot, said tongue being movable into its original position after the first munnion has been moved into said straddling position, substantially as described.

2. A sash joint comprising two munnions at angles to each other, one munnion being of general cross-shape section, the other munnion being of general T-shape transverse section, the cross shaped munnion having a T-shape opening therein into which the T-shape section fits, said cross-shape section being slit to provide a laterally bendable tongue directly adjacent the outer surface of the head portion of the T-shape munnion, the end surface of the web of the T-shape munnion having a recess into which a portion of the web of the cross-shape munnion extends to form a lock, said tongue when bent out laterally providing space in addition to said opening into which said T-shape munnion may be slid and afterward moved transversely to form said lock, said tongue when bent to its original position serving to abut said outer surface of the head of the T-shape munnion, substantially as described.

3. A sash joint comprising two munnions at angles to each other, one munnion being of general cross-shape section, the other munnion being of general T-shape transverse section, the cross shaped munnion having a T-shape opening therein into which the T-shape section fits, said cross-shape section being slit to provide two oppositely disposed laterally bendable tongues directly adjacent the outer surface of the head portion of the T-shape munnion, the end surface of the web of the T-shape munnion having a recess into which a portion of the web of the cross-shape munnion extends to form a lock, said tongues when bent out laterally providing space in addition to said opening into which said T-shape munnion may be slid and afterward moved transversely to form said lock, said tongues when bent to their original positions serving to abut said outer surface of the head of the T-shape munnion, substantially as described.

1,213,542. SUPPORTING DEVICE FOR COUPLINGS. WILLARD F. RICHARDS, Depew, N. Y., assignor to Gould Coupler Company, New York, N. Y. Filed Apr. 10, 1913. Serial No. 760,096. (Cl. 213—42.)

1. The combination with a car coupler, and a bracket to which said coupler is pivoted to swing laterally, of a shelf on which said coupler is adapted to rest in front of the coupler pivot, said shelf being pivoted to said bracket so as to be vertically adjustable, and means for holding said shelf at different elevations, substantially as set forth.



2. The combination with a car coupler, and a bracket to which said coupler is pivoted to swing laterally, of a shelf which is pivoted to said bracket so as to be vertically adjustable, said shelf having a portion extending forwardly from its pivot which partially supports the coupler, and a portion extending rearwardly from the shelf pivot adapted to bear upwardly against said bracket for holding the shelf in supporting position, substantially as set forth.

3. The combination with a car coupler, and a bracket to which said coupler is pivoted to swing laterally, of a vertically adjustable device for partially supporting said coupler, said device being pivoted to said bracket and having a shelf portion extending forwardly from the pivot of said device beneath a portion of the coupler, and an arm extending rearwardly from the pivot of said device, and means carried by said arm and adapted to bear against said bracket for holding said device in supporting position, substantially as set forth.

4. The combination with a car coupler, and a bracket to which said coupler is pivoted to swing laterally, of a vertically adjustable device for partially supporting said coupler, said device being pivoted to said bracket and having a shelf portion extending forwardly from the pivot of said device beneath a portion of the coupler, and a pocket in rear of the pivot of said device, and a block which is adapted to bear upwardly against said bracket and is vertically adjustable in said pocket, substantially as set forth.

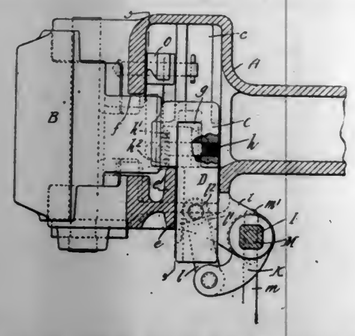
5. In a coupler pocket, a shelf adapted to engage and support a portion of a coupler head and having a pivotal connection with the pocket, and adjusting means for supporting the engaging portion of the shelf at varying heights.

[Claim 6 not printed in the Gazette.]

1,213,543. CAR-COUPLING. WILLARD F. RICHARDS, Depew, N. Y., assignor to Gould Coupler Company, New York, N. Y. Filed July 28, 1915. Serial No. 42,302. (Cl. 213—59.)

1. In a car coupler, the combination with a coupler head and a pivoted knuckle, of a knuckle locking block arranged to move vertically in a cavity in the coupler head, a guide stem rigid with said locking block which is detachably connected to and depends from said block through a guide hole in the bottom of the coupler head in which the stem is adapted to slide vertically for guiding the locking block in its vertical movements, said stem and guide hole being of less cross sectional area than said locking block, a rock shaft extending beneath the coupler head crosswise thereof, bearings at the bottom of said coupler head in which said rock shaft is journaled, an arm which extends lengthwise of the coupler from said rock shaft below the lower end of said guide stem, and a substantially upright link which is pivoted at its lower end to the free end of said rock arm and is pivoted at its upper end to said guide stem above the lower end thereof,

both said guide stem and said link being arranged to move through said guide hole in the operation of the lock.



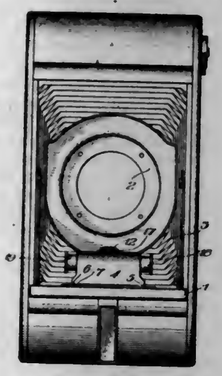
2. In a car coupler, the combination with a coupler head and a pivoted knuckle, of a knuckle-locking block arranged to move vertically in a cavity in the coupler head, a guide stem which is rigid with said locking block and depends therefrom through a guide hole in the bottom of the coupler head in which the stem is adapted to slide vertically for guiding the locking block in its vertical movements, said stem and guide hole being of less cross-sectional area than said locking block, and the lower portion of said guide stem being recessed for the reception of a link, a rock shaft extending beneath the coupler head crosswise thereof, bearings at the bottom of said coupler head in which the rock shaft is journaled, an arm which extends lengthwise of the coupler from said rock shaft below the lower end of said guide stem, and a substantially upright link which is pivoted to the free end of said arm and extends into the recess of said guide stem and is pivoted to said stem above the lower end thereof, both said guide stem and said link being arranged to move through said guide hole in the operation of the lock.

3. In a car coupler, the combination with a coupler head and a pivoted knuckle, of a knuckle locking block arranged to move vertically in a cavity in the coupler head, a guide stem rigid with said block which depends from the block through a guide hole in the bottom of the coupler head in which the stem is adapted to slide vertically for guiding the locking block in its vertical movements, said stem and guide hole being of less cross-sectional area than said locking block, a rock shaft journaled on the coupler head beneath the bottom thereof and extending crosswise of the coupler, an arm fixed to and extending from said rock shaft lengthwise of the coupler toward said guide stem, a link pivotally connected to said arm and to said guide stem whereby said locking block is moved positively both up and down by the rocking of said shaft, said rock shaft being weighted so that said arm tends to swing downwardly to lower and hold the locking block in locking position.

4. In a car coupler, the combination with the coupler head and a pivoted knuckle, of a knuckle locking block arranged to slide vertically in the coupler head, a guide stem which depends from said block through a hole in the bottom of the coupler in which the stem is adapted to slide vertically for guiding the locking block in its vertical movements, said stem and guide hole being of polygonal cross-section and of less cross-sectional area than said locking block, bearing lugs integral with said coupler head which project from the bottom thereof at opposite sides of said guide hole and are separated by a space which opens into and connects with said guide hole at the rear side thereof, a rock shaft journaled in said lugs and extending crosswise beneath the coupler head, a rock arm secured to said shaft and extending forwardly in the space between said bearing lugs with its front end adapted to swing in a substantially upright arc and to enter said guide hole in the upper position of said arm, and a substantially upright link which is pivoted to said rock arm and to said guide stem.

5. In a car coupler, the combination with the coupler head and a pivoted knuckle, of a vertically movable knuckle locking block provided with a reduced depending guide stem which depends through and is adapted to slide vertically in a guide hole in the bottom of the coupler head, a rock shaft extending crosswise beneath said coupler head and journaled thereon, a rock arm secured to said rock shaft and connected with said guide stem, said rock shaft being provided at one end with an eye, and an operating rod provided with a hook entering said eye for connecting said rod to said shaft for turning the latter, said eye being provided at opposite sides of said hook with side walls which extend beyond the cross piece of the eye and are adapted to engage the sides of the hook.

1,213,544. CAMERA-CARRIAGE. WILLIAM A. RIDDELL, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 20, 1915. Serial No. 56,949. (Cl. 95—46.)



1. In a camera, the combination with a track and a block movable thereon, of a track gripping member comprising a cross-head adapted to engage the track in opposition to the block and a stem connected to the cross-head and extending through the block, a rotary cam arranged to turn about the stem as a center and to act against the latter and against the block and a thrust member for actuating the cam.

2. In a camera, the combination with a track and a block movable thereon and provided with a circular cam track, of a track gripping member comprising a cross-head adapted to engage the track in opposition to the block and a stem connected to the cross-head and extending through the block centrally of the cam track, a rotary cam disk arranged to turn about the stem as a center and to act against the latter and against the cam track, said disk being provided with an offset finger and a thrust member arranged to reciprocate in the block and to coöperate with the said finger on the cam disk.

3. In a camera carriage, the combination with a track and a block slidable on top of the latter, of a cross-head engaging beneath the track, a stem on the cross-head extending through the block and having a headed portion and a rotary cam arranged to turn on the stem and to act against the headed portion thereof and against the block to raise the cross-head into gripping engagement with the track.

4. In a camera carriage, the combination with a track and a block movable thereon and provided with a vertical opening surrounded by a cam track and with a transverse recess, of a cross-head adapted to engage the track in opposition to the block, a stem on the cross-head extending through the vertical opening, a cam disk mounted to turn on the stem and to coöperate with the cam track to move the stem vertically and a thrust member arranged to reciprocate in the transverse opening and to coöperate with the cam disk to turn the latter.

5. In a camera carriage, the combination with a track and a carriage block movable thereon having a transverse recess therein, of a clamping member adapted to engage the track in opposition to the carriage block, a rotary device for said member, a tubular thrust member for actuating the rotary device arranged to reciprocate in the recess in the carriage block and a spring within the tubular thrust member for moving the latter in one direction.

1,213,545. METHOD OF EXTRACTING AND MODIFYING PROTEINS OR ALBUMINOUS MATTER. CHARLES C. RINGLER and JOHN BEERHALTER, Duluth, Minn., assignors of thirty-three and one-third one-hundredths to Fitger Brewing Company, Duluth, Minn., a Corporation of Minnesota. Filed Mar. 13, 1916. Serial No. 83,878. (Cl. 99—11.)

1. A method of extracting and modifying protein or albuminous matter from yeast, which consists in digesting the yeast with a solution of ammonia to dissolve the protein contained therein, removing the excess of ammonia by evaporation, and separating the solution from the sediment.

2. A method of extracting and modifying protein from yeast, which consists in digesting the yeast under pressure with a solution of ammonia to dissolve the protein contained in the yeast, then removing the excess of ammonia by evaporation, and separating the resulting solution from the sediment.

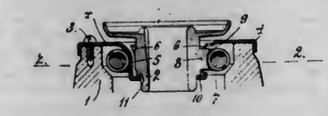
3. A method of extracting and modifying protein or albuminous matter from yeast, which consists in digesting the yeast, subjected to pressure and heat, with an ammonia solution to dissolve the protein contained in the yeast, removing the excess of ammonia, and separating the resulting solution from the sediment.

4. A method of extracting and modifying protein or albuminous matter from brewers' yeast, which consists in eliminating from the yeast the substances contaminating it, digesting the so treated yeast with an ammonia solution, while subjected to pressure and heat, to dissolve the protein contained in the yeast, removing the excess of ammonia, and separating the resulting solution from the sediment.

5. A method of extracting and modifying protein or albuminous matter from brewers' yeast, which consists in eliminating the hop resins from the yeast, digesting the so-treated yeast with an ammonia solution, while subjected to pressure and heat, to dissolve the protein contained in the yeast, and separating the resulting solution from the sediment.

[Claim 6 not printed in the Gazette.]

1,213,546. YIELDING NECK-BEARING. JOHANNES VALDEMAR MÅRTEN RISBERG and GUSTAF WILHELM JOHANSSON, Södertelje, Sweden, assignors to Aktiebolaget Baltic, Södertelje, Sweden, a Corporation of Sweden. Filed Dec. 29, 1915. Serial No. 69,220. (Cl. 64—48.)



1. In a yielding neck bearing, the combination of a plurality of fixed abutments arranged in a series around a point; a bearing sleeve placed within said series and provided with a series of projections disposed between the respective abutments; and an elastic means placed around said series and engaging said abutments and projections and bearing against the same with its inner surface.

2. In a yielding neck bearing, the combination of a plurality of fixed abutments arranged in a series around a point; a bearing sleeve placed within said series and provided with a series of projections disposed between the respective abutments; and an elastic ring placed around said series and engaging said abutments and projections and bearing against the same with its inner surface.

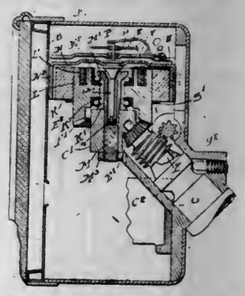
3. In a yielding neck bearing, the combination of the sleeve of the bearing, an elastic ring inclosing the same and tending to contract, stationary abutments against which the said ring bears at different points of its inner surface, projections being provided on the said sleeve located between the said abutments and acted upon by the ring, substantially as described and for the purpose set forth.

4. In a yielding neck bearing, the combination of a plurality of fixed abutments arranged in a series around a point and provided with grooved outer faces; a bearing sleeve placed within said series and provided with a series of projections disposed between the respective abutments and provided with grooved outer faces; and an elastic ring placed around said series and engaging said outer faces of the abutments and projections.

5. In a yielding neck bearing, the combination of a plurality of fixed abutments arranged in a series around a point and provided with convexed outer faces; a bearing sleeve placed within said series and provided with a series of projections disposed between the respective abutments and provided with convexed outer faces; and an elastic ring of spiral wire placed around said series and engaging said outer faces of the abutments and projections.

[Claim 6 not printed in the Gazette.]

1,213,547. MAGNETIC SPEEDOMETER. FRANK A. ROSS, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed June 30, 1916. Serial No. 106,776. (Cl. 264—4.)



1. In a magnetic speedometer, a ring magnet in combination with a mount for the same of non-magnetic metal occupying the central aperture of the magnet; a thermostatic device let into the mount at one side and secured thereto at one end; a temperature compensating shunt piece connected to the other end of the thermostatic device and lapping laterally upon one pole of the magnet, the magnet mount and said shunt piece having one a slot and the other a stud engaging the slot for guiding the shunt piece in the movement caused by the thermostatic device.

2. In a magnetic speedometer, a ring magnet in combination with a mount for the same of non-magnetic metal which occupies the central aperture of the magnet; a calibrating device consisting of a thin ring of magnetic material having a radially-extended wing or segment for lapping laterally more or less on the magnet poles, the magnet mount having at intervals in its circumference slightly projecting lugs spaced away from the plane of the proximate face of the magnet and said ring being normally sprung out of its plane and engaged between said lugs and the magnet face so as to elastically press the segment projection against the side of the magnet.

3. In a magnetic speedometer, a ring magnet in combination with a mount for the same of non-magnetic

metal occupying the central aperture of the ring, and projecting longitudinally therefrom at one side of the magnet; a calibrating shunt device consisting of a spring plate of magnetic material comprising a narrow ring portion and a relatively wide wing or segment projecting radially therefrom at a part of its circumference for lapping laterally on the magnet pole, said ring being mounted for rotation upon said projecting portion of the non-magnetic mount, said projection having at intervals in its circumference slight radially-projecting lugs spaced away from the proximate side of the magnet, and said ring portion of the shunt having in its inner circumference notches adapting it to pass over said lugs and be engaged behind them by rotation, and being normally sprung out of its plane at the points circumferentially removed from said notches so as to be flattened back into its plane when rotated into engagement behind the lugs, whereby it reacts to hold the wing pressed against the side of the magnet.

4. In a magnetic speedometer, a ring magnet in combination with a mount for the same of non-magnetic material occupying the central aperture of the ring; a temperature compensating shunt mounted upon said non-magnetic mount for movement substantially about the axis of the magnet and comprising a radially-projecting segmental portion lapping on one pole of the magnet, and a thermostatic device lodged in the mount and connected thereto and to said shunt piece for moving the latter about the magnet axis to cause its segmental projection to approach and depart from and to lap more or less on the other pole of the magnet.

1,213,548. COIN-OPERATED VENDING-MACHINE. CLEM J. SCHWIETERMAN, New York, N. Y., assignor to Surbrug Chocolate Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,073. (Cl. 194—2.)



1. In a device of the class described, the combination with a suitable casing, of an article chute, a movable trap or support in the article chute, a coin chute, a pivoted latch, a counter poise on one end of said latch, the other end of said latch being disposed in the path of a coin passing through the coin chute, said latch being engaged with the trap plate intermediate the ends of the latch for vibrating the trap plate.

2. In a device of the class described, the combination with a suitable casing, of an article chute, a movable trap or support pivotally mounted in the article chute, a pivoted latch with its pivot at right angles to the pivot of the trap plate, being pivotally engaged with the trap plate between the ends of said latch, one end of said latch adapted to be engaged by a coin passing through the coin chute and means on the other end of said latch for restoring it to its normal position with its coin-engaging end in the pathway of the coin chute.

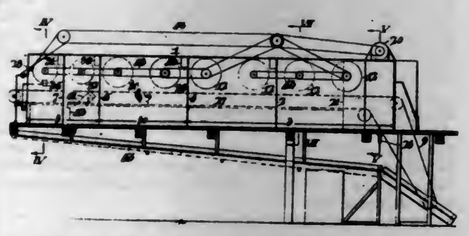
3. In a device of the class described, the combination with a suitable casing, a coin chute and an article chute, a plate separating said chutes, a trap plate movably mounted in the article chute, and having a projection extending through an opening in the plate, a pivoted latch mounted on the plate and having an opening intermediate its ends engaging the projection on the trap plate and for vibrating said plate.

4. In a device of the class described, the combination with a suitable casing, of an article chute and a coin chute disposed within said casing and separated by a plate, a trap plate having a surface configuration adapted to engage the article to be vended pivoted to the walls of the casing, a projection on said trap plate extending through an aperture in the plate separating the coin chute and article chute, a latch pivoted to said plate having a portion disposed in the path of the coin chute and adapted to be engaged by a coin passing through said chute, a counterpoise on the latch and an opening in said latch engaged by the projection on the trap plate.

5. In a device of the class described, the combination with a suitable casing, of an article chute and a coin chute disposed within said casing and separated by a plate, an annular trap plate pivoted to the side walls of the casing, a projection on the rear of said trap plate extending through an opening in the plate between the chutes, a latch pivoted to said plate having one of its ends disposed in the path of the coin chute and adapted to be engaged by a coin passing through said chute, a counter poise on the other end of said latch, an opening in said latch engaging the projection on the trap plate for vibrating said trap plate and a segmental groove formed in the rear wall of the casing opposite the trap plate.

[Claim 6 not printed in the Gazette.]

1,213,549. PROCESS AND APPARATUS FOR DRYING AND CONDITIONING MATERIALS. WALTER W. SIBSON and THOMAS ALLSOP, Philadelphia, Pa., assignors to The Philadelphia Drying Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 28, 1913. Serial No. 781,465. Renewed June 20, 1916. Serial No. 104,803. (Cl. 34—12.)



1. The process of drying and conditioning yarn, which consists in subjecting the yarn while loosely supported to a drying atmosphere and subsequently to a moist conditioning atmosphere without exposing the dried yarn to cooling air currents.

2. The process of drying and conditioning yarn, which consists in subjecting the yarn while loosely supported to heated air at a relatively high temperature, then subjecting the yarn to warm air at a relatively low temperature without exposing the dried yarn to cooling air currents, and then subjecting the yarn to a moist air for conditioning the same and also without exposing the yarn to cooling air currents.

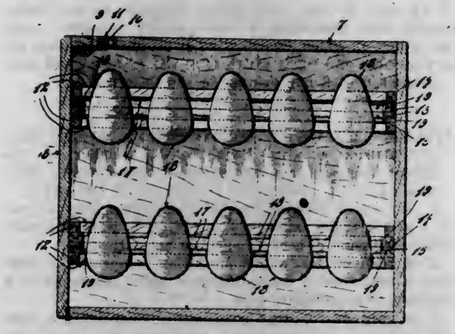
3. The process of drying and conditioning material, which consists in subjecting the material while loosely suspended to a drying atmosphere and subsequently to a moist conditioning atmosphere without exposing the dried material to cooling air currents.

4. The process of drying and conditioning material which consists in subjecting the material while loosely suspended to heated air at a relatively high temperature, then subjecting the material to warm air at a relatively low temperature without exposing the dried material to cooling air currents, and then subjecting the material to a moist air for conditioning the same and also without exposing the material to cooling air currents.

5. A drying and conditioning apparatus comprising an inclosure, means for loosely suspending the material and passing the same through said inclosure, partitions for separating said inclosure into a drying compartment and a conditioning compartment, whereby the material to be dried and conditioned may be passed directly from the drying compartment to the conditioning compartment and whereby said material is subjected to a drying and conditioning air while loosely suspended in said compartment.

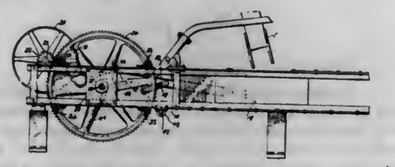
[Claims 6 to 20 not printed in the Gazette.]

1,213,550. EGG-CARRIER. HOWARD LEROY SMITH, St. Louis, Mo. Filed Jan. 31, 1914, Serial No. 815,656. Renewed Dec. 1, 1916. Serial No. 134,509. (Cl. 217—27.)



An improved egg carrier, composed of a suitable box, a lid hinged to said box, spaced-apart guide-strips on the internal walls of said box, a tray comprising two frames hinged together and having sheets of wire netting the edges of which are clamped between said frames and suitable clamping-strips, all held between said spaced guide-strips on the box; the said wire-netting having egg-receiving pockets; and suitable locking means for holding said lid closed.

1,213,551. BALING-PRESS. PLIN C. SOUTHWICK, Sandwich, Ill. Filed Mar. 13, 1916. Serial No. 83,848. (Cl. 100—7.)



1. In a baling press, in combination, a reciprocable plunger, a revoluble drive wheel having a slot extending outward with reference to its center, a pitman attached to the plunger and having a gudgeon entering and movable in the wheel slot, and means for guiding the gudgeon toward and away from the center of the wheel at different periods in the cycle of movement.

2. In a baling press, in combination, a reciprocable plunger, a revoluble drive wheel having a slot oblique to a radius intersected thereby, a pitman attached to the plunger and having a gudgeon entering and movable in the wheel slot, and means for guiding the gudgeon toward and away from the center of the wheel at different periods in the cycle of movement.

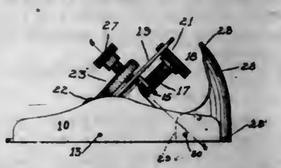
3. In a baling press, in combination, a reciprocable plunger, a drive wheel having a slot oblique to a radius intersected thereby, a pitman attached to the plunger and having a gudgeon entering and movable in the wheel slot, a flange extending outwardly on the side face of the wheel, and a gudgeon on the pitman intermediate of its ends engageable by the flange.

4. In a baling press, in combination, a reciprocable plunger, a drive wheel having an outwardly extending slot in its side face and an outwardly extending flange on such face, a pitman connected to the plunger and having a gudgeon engaging the slot and a gudgeon engageable by the flange.

5. In a baling press, in combination, a reciprocable plunger, a revoluble drive wheel, a pitman connected to the plunger and to the wheel, its connection to the wheel being slidable toward and away from the center thereof, and means for shifting such connection to the wheel at different parts in the cycle.

[Claims 6 to 13 not printed in the Gazette.]

1,213,552. PLANE. WILLIAM E. SPARKS, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed July 9, 1913. Serial No. 778,082. (Cl. 145—5.)

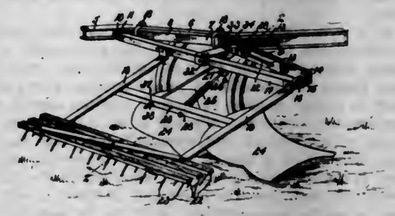


1. In a plane, the combination of a stock having side walls presenting a channeled cross-section, a member fitting within the stock and having side walls abutting the respective first-named walls, and means of connection between each side wall of said member and the adjacent side wall of the stock, said two means of connection being located out of line with each other; substantially as described.

2. In a plane, the combination of a stock having parallel side walls, a sheet metal member having bent-up extensions at the sides fitting within and against said side walls, and a rivet securing each of said extensions to the corresponding side wall of the stock, said rivets being out of line with each other; substantially as described.

3. In a plane, the combination of a stock having upright side walls, a palm rest composed of a plate resting at its lower edge on the bed of the stock and having forwardly directed extensions or lugs at the sides, and a rivet securing each extension or lug to the respective side walls of the stock, said rivets being out of line with each other; substantially as described.

1,213,553. HARROW ATTACHMENT FOR GANG-PLOWS. JOHN SWAINSON, Angusville, Manitoba, Canada. Filed June 21, 1916. Serial No. 104,966. (Cl. 97—44.)



1. In a harrow attachment for gang plows, a frame, a harrow member movably mounted on the frame, resilient means for moving the rear of the harrow member downwardly relatively to the frame, and means to limit the movement of the harrow member in the said direction.

2. In a harrow attachment for gang plows, a frame having two arms disposed at an angle to each other, an ex-

metal occupying the central aperture of the ring, and projecting longitudinally therefrom at one side of the magnet; a calibrating shunt device consisting of a spring plate of magnetic material comprising a narrow ring portion and a relatively wide wing or segment projecting radially therefrom at a part of its circumference for lapping laterally on the magnet pole, said ring being mounted for rotation upon said projecting portion of the non-magnetic mount, said projection having at intervals in its circumference slight radially-projecting lugs spaced away from the proximate side of the magnet, and said ring portion of the shunt having in its inner circumference notches adapting it to pass over said lugs and be engaged behind them by rotation, and being normally sprung out of its plane at the points circumferentially removed from said notches so as to be flattened back into its plane when rotated into engagement behind the lugs, whereby it reacts to hold the wing pressed against the side of the magnet.

4. In a magnetic speedometer, a ring magnet in combination with a mount for the same of non-magnetic material occupying the central aperture of the ring; a temperature compensating shunt mounted upon said non-magnetic mount for movement substantially about the axis of the magnet and comprising a radially-projecting segmental portion lapping on one pole of the magnet, and a thermostatic device lodged in the mount and connected thereto and to said shunt piece for moving the latter about the magnet axis to cause its segmental projection to approach and depart from and to lap more or less on the other pole of the magnet.

1,213,548. COIN-OPERATED VENDING-MACHINE. CLEM J. SCHWIETERMAN, New York, N. Y., assignor to Surbrug Chocolate Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,073. (Cl. 194—2.)



1. In a device of the class described, the combination with a suitable casing, of an article chute, a movable trap or support in the article chute, a coin chute, a pivoted latch, a counter poise on one end of said latch, the other end of said latch being disposed in the path of a coin passing through the coin chute, said latch being engaged with the trap plate intermediate the ends of the latch for vibrating the trap plate.

2. In a device of the class described, the combination with a suitable casing, of an article chute, a movable trap or support pivotally mounted in the article chute, a pivoted latch with its pivot at right angles to the pivot of the trap plate, being pivotally engaged with the trap plate between the ends of said latch, one end of said latch adapted to be engaged by a coin passing through the coin chute and means on the other end of said latch for restoring it to its normal position with its coin-engaging end in the pathway of the coin chute.

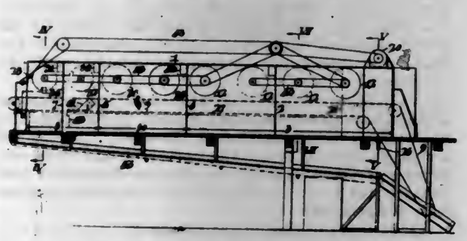
3. In a device of the class described, the combination with a suitable casing, a coin chute and an article chute, a plate separating said chutes, a trap plate movably mounted in the article chute, and having a projection extending through an opening in the plate, a pivoted latch mounted on the plate and having an opening intermediate its ends engaging the projection on the trap plate and for vibrating said plate.

4. In a device of the class described, the combination with a suitable casing, of an article chute and a coin chute disposed within said casing and separated by a plate, a trap plate having a surface configuration adapted to engage the article to be vended pivoted to the walls of the casing, a projection on said trap plate extending through an aperture in the plate separating the coin chute and article chute, a latch pivoted to said plate having a portion disposed in the path of the coin chute and adapted to be engaged by a coin passing through said chute, a counterpoise on the latch and an opening in said latch engaged by the projection on the trap plate.

5. In a device of the class described, the combination with a suitable casing, of an article chute and a coin chute disposed within said casing and separated by a plate, an annular trap plate pivoted to the side walls of the casing, a projection on the rear of said trap plate extending through an opening in the plate between the chutes, a latch pivoted to said plate having one of its ends disposed in the path of the coin chute and adapted to be engaged by a coin passing through said chute, a counter poise on the other end of said latch, an opening in said latch engaging the projection on the trap plate for vibrating said trap plate and a segmental groove formed in the rear wall of the casing opposite the trap plate.

[Claim 6 not printed in the Gazette.]

1,213,549. PROCESS AND APPARATUS FOR DRYING AND CONDITIONING MATERIALS. WALTER W. SIBSON and THOMAS ALLSOP, Philadelphia, Pa., assignors to The Philadelphia Drying Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 28, 1913, Serial No. 781,465. Renewed June 20, 1916. Serial No. 104,803. (Cl. 34—12.)



1. The process of drying and conditioning yarn, which consists in subjecting the yarn while loosely supported to a drying atmosphere and subsequently to a moist conditioning atmosphere without exposing the dried yarn to cooling air currents.

2. The process of drying and conditioning yarn, which consists in subjecting the yarn while loosely supported to heated air at a relatively high temperature, then subjecting the yarn to warm air at a relatively low temperature without exposing the dried yarn to cooling air currents, and then subjecting the yarn to a moist air for conditioning the same and also without exposing the yarn to cooling air currents.

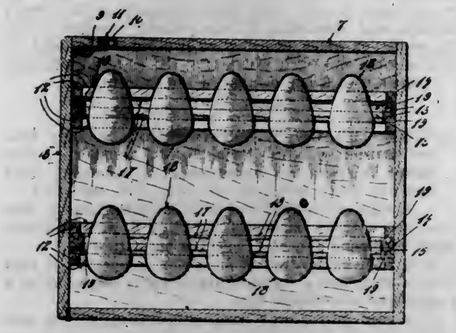
3. The process of drying and conditioning material, which consists in subjecting the material while loosely suspended to a drying atmosphere and subsequently to a moist conditioning atmosphere without exposing the dried material to cooling air currents.

4. The process of drying and conditioning material which consists in subjecting the material while loosely suspended to heated air at a relatively high temperature, then subjecting the material to warm air at a relatively low temperature without exposing the dried material to cooling air currents, and then subjecting the material to a moist air for conditioning the same and also without exposing the material to cooling air currents.

5. A drying and conditioning apparatus comprising an inclosure, means for loosely suspending the material and passing the same through said inclosure, partitions for separating said inclosure into a drying compartment and a conditioning compartment, whereby the material to be dried and conditioned may be passed directly from the drying compartment to the conditioning compartment and whereby said material is subjected to a drying and conditioning air while loosely suspended in said compartment.

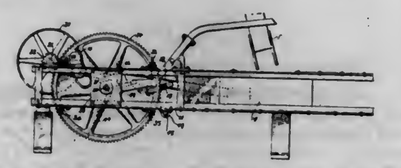
[Claims 6 to 20 not printed in the Gazette.]

1,213,550. EGG-CARRIER. HOWARD LEROY SMITH, St. Louis, Mo. Filed Jan. 31, 1914, Serial No. 815,656. Renewed Dec. 1, 1916. Serial No. 134,509. (Cl. 217—27.)



An improved egg carrier, composed of a suitable box, a lid hinged to said box, spaced-apart guide-strips on the internal walls of said box, a tray comprising two frames hinged together and having sheets of wire netting the edges of which are clamped between said frames and suitable clamping-strips, all held between said spaced guide-strips on the box; the said wire-netting having egg-receiving pockets; and suitable locking means for holding said lid closed.

1,213,551. BALING-PRESS. PLIN C. SOUTHWICK, Sandwich, Ill. Filed Mar. 13, 1916. Serial No. 83,848. (Cl. 100—7.)



1. In a baling press, in combination, a reciprocable plunger, a revoluble drive wheel having a slot extending outward with reference to its center, a pitman attached to the plunger and having a gudgeon entering and movable in the wheel slot, and means for guiding the gudgeon toward and away from the center of the wheel at different periods in the cycle of movement.

2. In a baling press, in combination, a reciprocable plunger, a revoluble drive wheel having a slot oblique to a radius intersected thereby, a pitman attached to the plunger and having a gudgeon entering and movable in the wheel slot, and means for guiding the gudgeon toward and away from the center of the wheel at different periods in the cycle of movement.

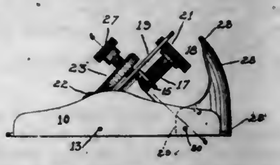
3. In a baling press, in combination, a reciprocable plunger, a drive wheel having a slot oblique to a radius intersected thereby, a pitman attached to the plunger and having a gudgeon entering and movable in the wheel slot, a flange extending outwardly on the side face of the wheel, and a gudgeon on the pitman intermediate of its ends engageable by the flange.

4. In a baling press, in combination, a reciprocable plunger, a drive wheel having an outwardly extending slot in its side face and an outwardly extending flange on such face, a pitman connected to the plunger and having a gudgeon engaging the slot and a gudgeon engageable by the flange.

5. In a baling press, in combination, a reciprocable plunger, a revoluble drive wheel, a pitman connected to the plunger and to the wheel, its connection to the wheel being slidable toward and away from the center thereof, and means for shifting such connection to the wheel at different parts in the cycle.

[Claims 6 to 13 not printed in the Gazette.]

1,213,552. PLANE. WILLIAM E. SPARKS, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed July 9, 1913. Serial No. 778,082. (Cl. 145—5.)

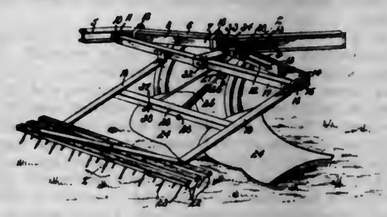


1. In a plane, the combination of a stock having side walls presenting a channeled cross-section, a member fitting within the stock and having side walls abutting the respective first-named walls, and means of connection between each side wall of said member and the adjacent side wall of the stock, said two means of connection being located out of line with each other; substantially as described.

2. In a plane, the combination of a stock having parallel side walls, a sheet metal member having bent-up extensions at the sides fitting within and against said side walls, and a rivet securing each of said extensions to the corresponding side wall of the stock, said rivets being out of line with each other; substantially as described.

3. In a plane, the combination of a stock having upright side walls, a palm rest composed of a plate resting at its lower edge on the bed of the stock and having forwardly directed extensions or lugs at the sides, and a rivet securing each extension or lug to the respective side walls of the stock, said rivets being out of line with each other; substantially as described.

1,213,553. HARROW ATTACHMENT FOR GANG-PLOWS. JOHN SWAINSON, Angusville, Manitoba, Canada. Filed June 21, 1916. Serial No. 104,966. (Cl. 97—44.)



1. In a harrow attachment for gang plows, a frame, a harrow member movably mounted on the frame, resilient means for moving the rear of the harrow member downwardly relatively to the frame, and means to limit the movement of the harrow member in the said direction.

2. In a harrow attachment for gang plows, a frame having two arms disposed at an angle to each other, an ex-

tension adjustable longitudinally of one arm, means to secure the extension in adjusted position to the said arm, the extension and the other arm being provided with bearings, a beam journaled in the bearings, and a harrow member extending from the beam.

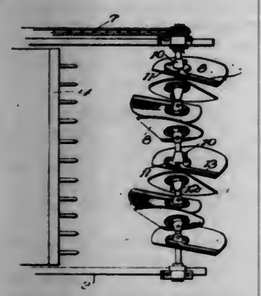
3. In a harrow attachment for gang plows, a frame, a harrow member pivoted to the frame, resilient means for moving the rear of the harrow member downwardly, and means to limit the said downward movement of the harrow member.

4. In a harrow attachment for gang plows, a frame, a horizontal member pivoted to the frame, a harrow member secured to the horizontal member and extending therefrom in one direction, an arm on the horizontal member extending in the opposite direction, and adjustable means on the frame for engaging the arm to limit the movement of the harrow member.

5. In a harrow attachment for gang plows, a frame, a horizontal member pivoted to the frame, a harrow member secured to the horizontal member and extending therefrom in one direction, an arm on the horizontal member extending therefrom in the opposite direction, a bracket with a threaded orifice on the frame, and a screw meshing with the threaded orifice and engaging the arm for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

1,213,554. SPREADER ATTACHMENT FOR FERTILIZER-DISTRIBUTERS. HENRY SYNCK, Coldwater, Ohio, assignor to New Idea Spreader Company, Coldwater, Ohio. Filed Sept. 10, 1914. Serial No. 861,022. (Cl. 111—40.)



1. In a broadcast spreader for fertilizer distributers, the combination with means for feeding material, of a spreader disposed in the path of the material from the feeding means and including a rotary member, and blades mounted on the rotary member at an oblique angle to the axis of rotation of said member, each blade having an edge formed on a line of gradually increasing radius toward its outer end and upon which the material will ride, said blades being movable against the line of feed of the material.

2. In a broadcast spreader for fertilizer distributers, the combination with means for feeding material, of a spreader disposed in the path of the material from the feeding means and including a rotary member, and blades secured to rotary member in stepped relation around the circumference thereof and disposed at an oblique angle to the axis of rotation of said member, each blade having an edge formed on a line of gradually increasing radius toward the outer end thereof and upon which the material will ride and from the outer end of which it will be thrown laterally by centrifugal force as the member rotates.

3. In a broadcast spreader for fertilizer distributers, the combination with means for feeding material, of a spreader disposed in the path of the material from the feeding means and including a rotary member, blades secured to the rotary member progressively around the circumference thereof and each having an edge arranged at substantially right angles thereto, and a side face disposed at an oblique angle to the axis of rotation of said member, each blade having a curved edge formed on a line of gradually increasing radius toward the outer end thereof and upon which the material will ride when the member is rotated.

4. A broadcast spreader for fertilizer distributers comprising a rotary member, and blades secured to the rotary member at an oblique angle to the axis of rotation thereof, each blade having an edge formed on a line of gradually increasing radius toward the outer end thereof and upon which the material will ride, the several blades being disposed progressively around the rotary member whereby a clear lateral passage for the material acted upon by the blades is provided at the side of each blade.

5. A broadcast spreader for fertilizer distributers comprising a rotary member, and a blade secured to said member at an oblique angle to the axis of rotation thereof, an edge of said blade being eccentric to the rotary member and describing a substantially involute curve, the radius of which increases as it recedes from said rotary member and upon which edge the material will ride.

[Claims 6 to 8 not printed in the Gazette.]

1,213,555. ROADWAY COMPOSITION. ROBERT FULTON TOMPKINS, New York, N. Y., assignor to The Binder Company, a Corporation of New Jersey. Filed Aug. 15, 1913. Serial No. 784,885. (Cl. 106—24.)

1. A road or roadway composition, comprising a road base and binding substance including a water-insoluble metal compound of a carbon-acid of aromatic type.

2. A road or roadway composition comprising a road base, a filler, and a water-insoluble metal compound of a carbon-acid of aromatic type.

3. A road or roadway composition comprising a road base, a filler, a dressing and a water-insoluble metal compound of a carbon-acid of aromatic type.

4. A road or roadway composition, comprising a road base and binding substance including a water-insoluble metal compound of tannic acid.

5. A road or roadway composition comprising a road base, a filler, and a water-insoluble metal compound of tannic acid.

[Claims 6 to 23 not printed in the Gazette.]

1,213,556. RAZOR-STROPPER. BERNHARD TROSKY, Brooklyn, N. Y. Filed Nov. 9, 1916. Serial No. 130,325. (Cl. 51—16.)



1. A stropper comprising a supporting structure composed of hingedly connected sections, stropping elements in the sections, a pair of clamping bars on the sections for clamping a blade, and movable blade-holding means associated with one of the bars for holding the blade in proper position.

2. A stropper comprising a structure composed of hingedly connected sections, stropping means in the said structure, blade-clamping bars on the two sections, and a pivoted stud-carrying plate associated with one of the bars to hold a blade in coöperative relation with the stropping means.

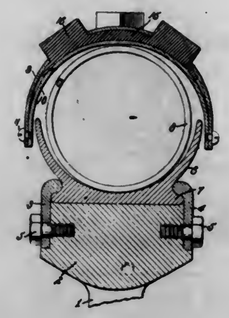
3. A stropper comprising a casing composed of hingedly connected sections, stropping means in the casing, a pair of meeting bars for clamping a blade, a plate movably mounted in coöperative relation with one of the bars and adjustable to hold different style blades.

4. A stropper comprising a casing composed of hingedly connected sections, stropping means in the casing, a pair of meeting bars for clamping a blade, a plate movably mounted in coöperative relation with one of the bars and adjustable to hold different style blades, studs projecting from one side of the plate, a clip on the opposite side of the plate, and a spring fastened to the plate and disposed under the clip for holding a blade engaged with the bar associated with the plate.

5. A stropper comprising a body composed of relatively movable sections, stropping means in the body, a pair of coacting bars for holding a blade, a plate pivoted adjacent one of the bars, recesses in the edge of such bar, and studs on the plate movable into and out of the recesses to hold a blade in coöperative relation with the stropping means.

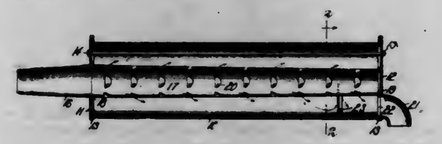
[Claim 6 not printed in the Gazette.]

1,213,557. TIRE. JOHN THOMAS TROTTER, New York, N. Y. Filed May 20, 1916. Serial No. 98,727. (Cl. 152—8.)



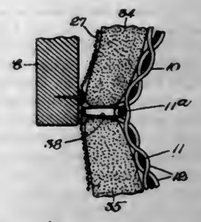
In a device of the character described, a covering member for a tire comprising an inner ring arc-shaped in cross section, an outer ring arc-shaped in cross section, said outer ring being arranged in contact with the inner ring at the edges and spaced from the inner ring along its peripheral line, means for rigidly securing said outer ring and said inner ring together, said rings being formed of metal, said outer ring having a plurality of apertures therein, and a cushioning member arranged between said rings, said cushioning member being formed with projections extending through said apertures.

1,213,558. EXHAUST-MUFFLER. GEORGE F. TURNER, Mahoningtown, Pa. Filed Feb. 18, 1916. Serial No. 79,039. (Cl. 121—116.)



An exhaust muffler including an elongated shell having a head at each end, the one head having an extension at the center forming an inlet adapted to connect with the exhaust of an engine and the other head having an outlet at one side of the center, a tube concentric with the shell and extending from one head to the other, said tube constituting an expansion chamber, one end of the shell communicating with the said inlet, and the opposite end being closed by the adjacent head, said tube having a multiplicity of outlet openings to the interior of the shell; together with a crescent-shaped plate to baffle the sounds, the plate being disposed in the shell transversely of the tube at the same side from which the outlet leads and positioned a short distance from the said outlet, there being a free space in the shell at the opposite side of the tube from the baffle and extending both in front and behind the said baffle.

1,213,559. UPHOLSTERED STRUCTURE AND FABRIC THEREFOR. CLARENCE A. VAN DERVEER, Wakefield, Mass., assignor to Heywood Brothers and Wakefield Company, Wakefield, Mass., a Corporation of New Jersey. Filed Dec. 28, 1915. Serial No. 69,007. (Cl. 155—43.)



1. A woven fabric consisting essentially of warp members of cane and filling members of cane but having one or more stronger members of less brittle material of substantially circular cross section woven therein between the cane members.

2. A woven fabric consisting essentially of warp members of cane and filling members of cane but having one or more stronger warp members of less brittle material of substantially circular cross section woven therein between the cane warp members.

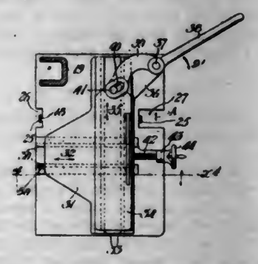
3. A woven fabric consisting essentially of warp members of cane and filling members of cane but having a cord woven therein between two cane members.

4. An upholstered structure comprising a fastener-receiver element, an external covering fabric of cane warp members, cane filling members, and a member less brittle than cane, said cane members and said less brittle member being interwoven with each other, said fabric having a crease, and said less brittle member being arranged to lie in said crease, two substantially contiguous sections of upholstering material between said fastener-receiving element and said external covering fabric, and a series of fasteners each anchored to said fastener-receiving element and embracing said less brittle member, said fasteners extending between said sections of upholstering material.

5. An upholstered structure comprising a fastener-receiving element, an external covering of woven cane fabric having an interwoven member less brittle than cane, two substantially contiguous sections of upholstering material between said fastener-receiving element and said external covering, and a series of fasteners each anchored to said fastener-receiving element and embracing said woven member, said fasteners extending between said sections of upholstering material.

[Claims 6 to 8 not printed in the Gazette.]

1,213,560. HEEL-CUTTER. JOSEPH VERTUNNI, Long Beach, Cal. Filed Feb. 28, 1916. Serial No. 81,047. (Cl. 143—25.)



1. A heel cutter comprising a table having saw open recesses indented at either side thereof, said recesses extending laterally of the saw blade out through the side edges of the table, a driving shaft journaled below said

table, a driving wheel mounted on said shaft outside its bearings, an idler shaft, means for supporting said shaft above said table, an idler wheel on said shaft, a band saw mounted on said driving and idler wheels and passing through said saw recesses in said table, a lower slide mounted in guides on said table in such a manner as to slide across said table in a direction parallel to the plane of the band wheels, screw means for adjusting the position of said lower slide, an upper slide mounted in guides on said lower slide in such a manner as to slide in said lower slide at right angles to the direction of motion of said lower slide, means by which an operator can cause said upper slide to move in said lower slide, and means for securing a shoe to said upper slide in such a position that said movement of said upper slide in said lower slide throws the heel of said shoe against said saw.

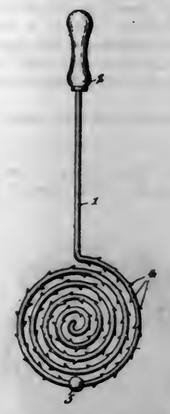
2. A heel cutter comprising a table having saw open recesses indented at either side thereof, said recesses extending laterally of the saw blade out through the side edges of the table, a driving shaft journaled below said table, a driving wheel mounted on said shaft outside its bearings, an idler shaft, means for supporting said shaft above said table, an idler wheel on said shaft, a band saw mounted on said driving and idler wheels and passing through said saw recesses in said table, a lower slide mounted in guides on said table in such a manner as to slide across said table in a direction parallel to the plane of the band wheels, screw means for adjusting the position of said lower slide, an upper slide mounted in guides on said lower slide in such a manner as to slide in said lower slide at right angles to the direction of motion of said lower slide, a pin projecting upwardly from the rear end of said upper slide, a hand lever pivoted on said lower slide, said hand lever having a slotted end engaging said pin for the purpose of moving said upper slide in said lower slide, and means for securing a shoe to said upper slide in such a position that said movement of said upper slide in said lower slide throws the heel of said shoe against said saw.

3. A heel cutter comprising a table having saw recesses at either side thereof, said recesses extending laterally of the saw blade out through the side edges of the table, a driving shaft journaled below said table, a driving wheel mounted on said shaft outside its bearings, an idler shaft, means for supporting said shaft above said table, an idler wheel on said shaft, a band saw mounted on said driving and idler wheels and passing through said saw recesses in said table, a lower slide mounted in guides on said table in such a manner as to slide across said table in a direction parallel to the plane of the band wheels, screw means for adjusting the position of said lower slide, an upper slide mounted in guides on said lower slide in such a manner as to slide in said lower slide at right angles to the direction of motion of said lower slide, a pin projecting upwardly from the rear end of said upper slide, a hand lever pivoted on said lower slide, said hand lever projecting from the right hand side of said table and moving in a plane parallel with said table, said hand lever having a slotted end engaging said pin for the purpose of moving said upper slide in said lower slide, and means for securing a shoe to said upper slide in such a position that said movement of said upper slide in said lower slide throws the heel of said shoe against said saw.

1,213,561. EGG-BEATER. LENA E. WALKER, Fayette, Iowa. Filed Jan. 29, 1915. Serial No. 5,097. (Cl. 259—144.)

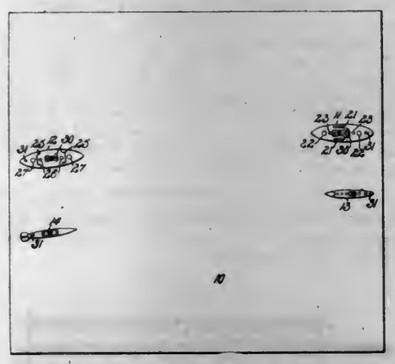
1. A beater of the character described comprising a rod having one end portion forming a handle extension and having the remaining portion coiled to provide a beating head extending upon opposite sides of the handle extension, that portion of the rod forming the beating head having side prongs and being provided intermediate its length with an enlargement forming a pivot point positioned beneath the handle when the beater is used in an upright position.

2. A beater of the character described comprising a rod having one end portion bent to provide a beating head having a handle extending therefrom, the bent



portion of the rod being provided intermediate its length with an enlargement forming a pivot point positioned beneath the handle when the beater is used in an upright position.

1,213,562. GAME APPARATUS. JOHN ABBET WALLS, Baltimore, Md. Filed July 13, 1916. Serial No. 109,052. (Cl. 46—59.)



1. In a game apparatus, a member representing a war vessel, and a wheel rotatably mounted on the member for engaging a supporting table, and having a distinguishing mark thereon to indicate the distance moved by the member.

2. In a game apparatus, a plurality of members in the shape of war vessels of different classes, each member having markings indicating vulnerable points, members representing projectiles which may be fired from one vessel at another vessel, and measuring means on one of the first mentioned members for indicating the distance which the last mentioned of the first mentioned members is moved.

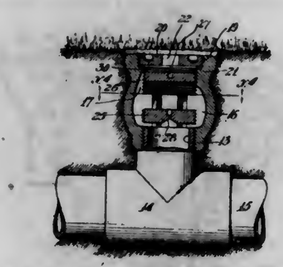
3. In a game apparatus, a member representing a war vessel and having markings thereon indicating vulnerable points, and a wheel rotatably mounted on the member for engaging a supporting table to indicate the distance moved by the member.

4. In a game apparatus, a member representing a war vessel with an opening through its bottom, and a wheel journaled in bearings in the member, with its periphery disposed at the bottom of the opening, the wheel having a mark thereon for the purpose specified.

5. In a game apparatus, a member representing a war vessel and having markings thereon indicating vulnerable points, there being an opening through the bottom of the member, and a wheel rotatably mounted on the member and with its periphery disposed at the bottom of the opening, the wheel having a mark thereon for the purpose specified.

[Claims 6 to 11 not printed in the Gazette.]

1,213,563. SPRAY-NOZZLE. ROY P. WILLIAMS, Santa Barbara, Cal., assignor to A. M. Drake, Pasadena, Cal. Filed Apr. 14, 1915. Serial No. 21,463. (Cl. 137—86.)



A spray nozzle comprising a body having a cylindrical threaded opening therethrough and spiral fluid channels formed in the body adjacent to said opening, a cap having a central hole therethrough, said cap being so shaped that it forms a tight closure with the top of said threaded opening, a primary plug threaded in said opening and adapted to be screwed up or down to regulate the flow of water to said channels, and a secondary plug threaded in said opening and adapted to be moved up or down to regulate the flow of fluid through said channels thereby regulating the fineness of the spray into which the fluid is divided.

1,213,564. METHOD OF MAKING CORRUGATED DISKS FOR WHEELS. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed June 12, 1915. Serial No. 33,698. (Cl. 113—116.)



1. The method of forming a disk with tapering corrugations from a sheet of metal, which consists in forming by dies a corrugation at each end of the sheet and then trimming the ends and then forming the balance of the corrugations.

2. The method of forming a sheet of metal into a disk by bringing it by dies to the desired form in which it has tapering corrugations and by forming the end corrugations before those on the body are formed.

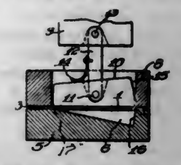
3. The method of forming a disk from a plane strip which consists in giving it tapering corrugations by applying die pressure to opposite faces of the strip from end to end of transverse lines beginning at one margin and extending nearly to the opposite margin, the lines of application swinging as the strip changes its form.

4. The method of forming a disk from a flat strip which consists in pressing into divergent planes spaced transverse tapering segments by pressure simultaneously applied over approximately the whole of each segment, whereby the parts between said segments integrally connect segments in the two planes.

5. The method of forming a disk from a plane metal strip which consists in pressing into two divergent planes, alternately, a series of spaced segments all tapering from the same margin of the strip, the forming pressure being simultaneously applied from end to end of each segment.

[Claims 6 to 13 not printed in the Gazette.]

1,213,565. TOOL FOR MAKING WHEEL-DISKS. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed June 12, 1915. Serial No. 33,699. (Cl. 113—49.)



1. In apparatus of the class described, the combination with a recessed die of a coacting die pivoted intermediate its ends to a power-actuated plunger, whereby it may rest throughout its length upon the material to be formed yet rocks to accommodate itself to unequal resistance on opposite sides of its pivot.

2. The combination with a die having an elongated recess of a depth gradually increasing with the distance from one end, of a coacting die having a salient face and pivoted between its ends to rock in the axial plane of said recess.

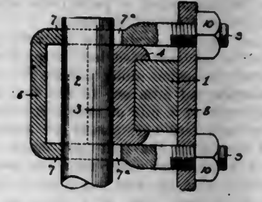
3. The combination with a die having an elongated recess of a depth gradually increasing in passing from one end, of a centrally pivoted die having a salient face for coacting with the recessed die, and means for applying forming power to the centrally pivoted die at the pivotal point.

4. The combination with a die having an elongated recess of a depth gradually increasing in passing from one end, of a coacting salient faced die, a power plunger, a link pivoted at one end to the plunger and at the other to the central portion of the second die, and a guide limiting the bodily swinging of the latter die as it is advanced by the plunger.

5. The combination with a die recessed to form in one side of a sheet metal strip transverse corrugations gradually decreasing in depth in passing toward the opposite side, of a centrally pivoted coacting die having corresponding salient portions and arranged for swinging bodily about one end while the pivotal point is advancing, and means for accurately guiding the salient die into the recess of the other die.

[Claims 6 to 9 not printed in the Gazette.]

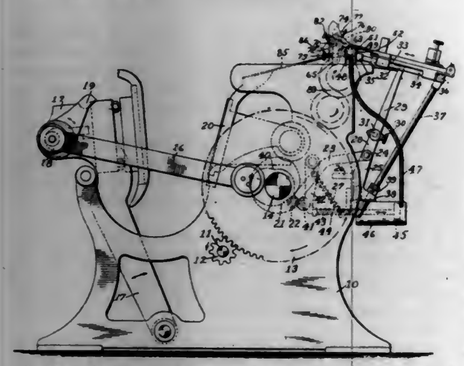
1,213,566. MOUNTING THE TEETH OR BLADES OF AGRICULTURAL IMPLEMENTS. LELAND WILLIS, Grenloch, N. J., assignor to Bateman Manufacturing Company, Grenloch, N. J., a Corporation of New Jersey. Filed July 25, 1916. Serial No. 111,147. (Cl. 55—94.)



In a device for clamping the shank of a tooth or blade of an agricultural implement to a frame bar thereof, the combination of said bar, the shank, a block interposed between said bar and shank, said block having one face for bearing against a side of the bar, an opposite face recessed to form a seat for the reception of one side of the shank, and flanges overlapping the top and bottom faces of the

frame bar, a clamp bar on the opposite side of the frame bar from the block, said bar having transverse openings therethrough above and below the frame bar, and a yoke comprising a vertical member and upper and lower horizontal members integral therewith, and having vertical openings therethrough and threaded ends projecting through the transverse openings in the clamp bar, and nuts engaging said threaded ends, the outer faces of the openings in the horizontal members of the yoke bearing against the outer face of the shank and serving to press the inner face of the same against its seat in the block.

1,213,567. AUTOMATIC FEEDING MECHANISM FOR BED-AND-PLATEN PRESSES. HENRY A. WISE WOOD, New York, N. Y., assignor to American High Speed Press Company, New York, N. Y., a Corporation of New York. Filed Jan. 10, 1911. Serial No. 601,807. (Cl. 101—41.)



1. In a bed and platen press, the combination of a feed table, longitudinal guides therefor, an oscillatable feed bar to which the forward end of the table is pivoted, means for adjusting the other end of the feed table transversely to the plane thereof, and means for reciprocating the feed table along the guides.

2. In a sheet feeding device for printing presses, the combination of a movable feed bar adapted to engage a sheet and move the same along during its own motion, a feed table supported adjacent to the feed bar in position to present one of a pile of sheets thereon to engage the surface of said feed bar, and means projecting from the feed bar toward the feed table for guiding the forward edge of a sheet on the surface of the bar, said guiding means also projecting beyond the feed bar to guide the sheet after it has advanced beyond the feed bar.

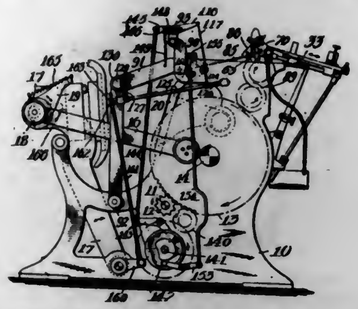
3. In a sheet feeding device the combination with a feed table, a feed bar located substantially at the end thereof, a stationary sheet separating means above the feed bar, and means for adjusting the feed table about the feed bar as a center to vary its angular relation to the bottom of the separator to permit the separation and feeding of sheets of different thickness.

4. In a sheet feeding device for printing presses, the combination of a movable feed bar adapted to engage a sheet and move the same along during its own motion, a feed table supported adjacent to the feed bar in position to present one of a pile of sheets thereon to engage the surface of said feed bar, means for moving the feed table toward and from the feed bar, means for moving the surface of the feed bar away from the feed table, and means projecting from the feed bar toward the feed table for guiding the forward edge of a sheet on the surface of the bar, said guiding means also projecting beyond the feed bar to guide the sheet after it has advanced beyond the feed bar.

5. In a sheet feeding device for printing presses, the combination of a feed bar adapted to engage a sheet and move the same along, a feed table, and a guiding means for the sheet comprising a member having a surface substantially in registration with the surface of the feed bar that receives the sheet and projecting therefrom on opposite sides, the projection on one side extending under the sheets on the feed table, and the projection on the other side supporting the forward edges of the sheets after they have advanced beyond the feed bar.

[Claims 6 to 20 not printed in the Gazette.]

1,213,568. AUTOMATIC TRIPPING MECHANISM FOR BED-AND-PLATEN PRESSES. HENRY A. WISE WOOD, New York, N. Y., assignor to American High Speed Press Company, New York, N. Y., a Corporation of New York. Original application filed Jan. 10, 1911, Serial No. 601,807. Divided and this application filed May 28, 1912. Serial No. 700,185. (Cl. 101—15.)



1. In a bed and platen printing press, the combination with the platen, a rocker arm, means for rocking the latter, and a bed carried by said rocker arm, of an eccentric on the rocker arm to control its contact with the platen, an oscillating operating means affixed on said eccentric, a movable element normally held out of the path of movement of said operating means, a mechanism actuated by sheets fed into the press, normally idle elements mounted adjacent said mechanism and connected to said movable element, and means to latch said normally idle elements with said sheet actuated mechanism to cause the actuation of said movable element into the path of said operating means upon the failure of a sheet to pass into the press.

2. In a bed and platen printing press, the combination with the platen, a rocker arm, means for rocking the rocker arm, and a bed mounted on the rocker arm, of means for controlling the contact of said bed with the platen, means for operating said controlling means, said operating means having a normally idle movement, a stop element for projection into the path of movement of said operating means, freely suspended elements for projecting said stop element, a sheet operated controlling mechanism, and a locking device carried by said sheet operated controlling mechanism thrown into inoperative position by the passage of sheets into the press, and engageable with said freely suspended elements on failure of a sheet to pass into the press.

3. In a bed and platen printing press, in combination with the platen, a rocker arm, and a bed mounted on the rocker arm, of an eccentric on the rocker arm for controlling the contact of the bed with the platen, normally idle means for swinging said eccentric on its axis, a sheet operated controlling mechanism, means for causing the operative actuation of said eccentric operating means, and a mechanism for locking said sheet operated controlling mechanism with said means for causing the operative actuation of the eccentric operating means on the failure of a sheet to pass into the press.

4. In a bed and platen printing press, the combination with the platen, rocker arm, and bed mounted on the rocker arm, of an eccentric on the rocker arm for adjusting the bed, an arm connected with the eccentric for operating it, a movable plunger for engaging the arm when the bed moves up toward the platen to swing the arm and eccentric on their axes, whereby the rocker arm will be moved back, an oscillatable shaft, an arm on said shaft for operating the plunger, a spring for turning the shaft in one direction, and a trip device controlled by the passage of a sheet through the press for preventing the spring from operating.

5. In a bed and platen printing press, the combination with the platen, rocker arm, and bed mounted on the rocker arm, of means on the rocker arm for adjusting it, an arm connected with said means for operating it, a movable plunger, a shaft having an arm thereon for moving the plunger into the path of said arm, means controlled by the passage of a sheet through the press for preventing said shaft from moving, and means connected with the rocker arm for restoring the plunger to inoperative position.

[Claims 6 to 18 not printed in the Gazette.]

1,213,569. SWIVEL-HOOK FOR COAT-HANGERS. GEORGE WORDINGHAM, Milwaukee, Wis. Filed Aug. 14, 1914. Serial No. 856,838. (Cl. 211—13.)

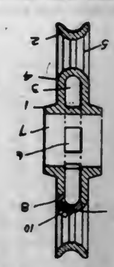


In a garment hanger, a flat sided relatively thin hanger body, and a suspension device therefor including a suspension hook, and a clip carried by the said hook, said clip having spaced depending sides arranged to confront each other and joined by a connecting portion overlying the upper edge of the hanger body with the sides of the clip confronting the sides of said body, the clip sides being relatively wide and having the free margins thereof bent to provide inwardly directed flanges extending longitudinally of the clip sides from end to end of the clip with the said flanges disposed at substantially right angles to the clip sides and formed at their inner edges with a plurality of teeth, the sides of the clip providing jaws movable toward each other to clamp the hanger body therebetween and shift the said flanges to pierce the said body by the teeth thereof with the sides of the clip seating flat against the sides of the hanger body and with the said flanges extending into the said body at substantially right angles to the side faces thereof and providing elongated supporting shoulders within the hanger body adapted to receive the weight of a load upon the clip exerted through said suspension hook with the hook attached to the connecting portion of the clip.

1,213,570. PULLEY. LEWIS E. YOUNIE, Portland, Oreg. Filed Jan. 21, 1915. Serial No. 3,480. (Cl. 64—26.)

1. In a pulley, the combination of a hub; and an oil chamber formed by walls of approximately uniform thickness extending from the hub, said walls having an insert of metal other than the body of the wall and of the same thickness as the wall with its inner and outer surfaces flush and in conformity with the surfaces of the wall, said insert having an opening therethrough.

2. In a pulley, the combination of a hub; and an oil chamber formed by walls of approximately uniform thickness extending from the hub, said walls having a curved portion and an insert in said curved portion of metal other than the body of the wall and of the same thick



ness as the wall with its inner and outer surfaces flush and in conformity with the surfaces of the wall, said insert having an opening therethrough.

1,213,571. COMBINED BATHING-CAP AND SUIT-BAG. JOSEPH ZUCKERMAN, New York, N. Y. Filed Aug. 12, 1916. Serial No. 114,610. (Cl. 2—106.)



1. A combined article of the character described, formed with a covering member substantially oval when inflated, ears projecting from the opposite sides of the covering member arranged to extend over the ears of a person when the covering member has been folded to produce a cap, and retaining and binding straps connected to said ears.

2. In a combined article of the character described, a substantially water-proof body approximately twice as long as it is wide, one half of the body being capable of collapsing to a position within the other half, part of said body being formed with extensions which produce depending pockets on opposite sides of the body, said pockets acting as ear covers when the device is in use as a cap.

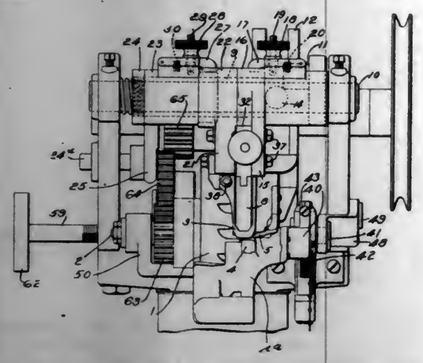
3. In a combination article of the character described, a body arranged to form a jacket for an inflatable bag when the device is used as a ball, a pair of projections formed integral with part of the body forming pockets and ear covers when the device is used as a cap, said jacket being open at one point, and means for holding said opening closed.

4. A combined article of the character described, comprising a body formed from a plurality of sections connected together, two of said sections arranged diametrically opposite being formed with extensions which, when the device is folded, will produce combined pockets and ear covers, and means connected with said pockets for holding the device in position on the head.

1,213,572. TRIMMING-MACHINE. ALEXANDER MCKLOP ALEXANDER, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 25, 1913. Serial No. 744,127. (Cl. 12—82.)

1. A trimming machine, having, in combination, a rotary trimming knife, a guide for determining the position

of the work with relation to the knife, a shaft on which the knife is mounted, a slide supporting the shaft and adjustable longitudinally of the shaft, and means for adjusting the slide to position the knife with relation to the guide.



2. A trimming machine, having, in combination, a rotary trimming knife, means for guiding the work with relation to the knife, a shaft on which the knife is mounted, supporting means for the shaft having provisions for adjustment to position the knife with relation to the work guiding means comprising an adjustable slide on which the shaft is journaled, and a second slide on which the first slide is mounted arranged for adjustment angularly with relation to the direction of adjustment of the first slide.

3. A trimming machine, having, in combination, a rotary trimming knife, means for guiding the work with relation to the knife as it is moved past the knife, a shaft on which the knife is mounted and provision for adjusting the knife with relation to the work guiding means comprising a slide on which the shaft is journaled arranged for forward and rearward adjustment, a second slide on which the first slide is mounted arranged for lateral adjustment, and means for adjusting the slides.

4. A trimming machine, having, in combination, a rotary trimming knife, means for positioning the work with relation to the knife normally located adjacent the acting edge of the knife so as to obstruct access thereto and mounted for movement away from the knife, and mechanism for locating the shoe positioning means in normal position after it has been moved away from the knife.

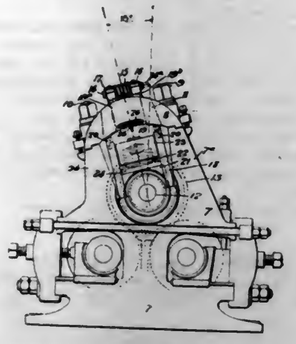
5. A trimming machine, having, in combination, a trimming knife, and work feeding means normally located adjacent the knife so as to obstruct access thereto and mounted for movement out of knife obstructing position.

[Claims 6 to 30 not printed in the Gazette.]

1,213,573. SUGAR-CANE MILL. JOHN JAMES ARMSTRONG, Honolulu, Hawaii. Filed Aug. 10, 1915. Serial No. 44,695. (Cl. 100—47.)

1. In a sugar-cane mill having three rollers in triangular arrangement, a housing, a top cap secured to said housing, said cap provided with a curved bottom and a vertical slot, the jaws of said housing tapered to provide an upper gap wider at its top than near its bottom, a frame within said gap, a top roller journal brass and a hydraulic jack operating within said frame, and means for swinging and for locking said frame in any angular position within the said gap, substantially as and for the purpose described.

2. In a sugar-cane mill, three rollers, a housing provided with an upper gap wider at its upper end than at its bottom, a top cap secured to said housing and provided with a slot through same and with a curved bottom, a frame in said gap containing a hydraulic jack and a top roller journal brass and provided at its upper end with a lug terminating in the segment of a worm-gear projecting through said slot in the top cap, a shaft provided with a worm and journaled above said cap, the said worm meshing with the said worm-gear segment, substantially as and for the purpose described.



3. In a sugar-cane mill, three rollers disposed in triangular relation, a housing provided with an upper gap, a frame movable in said gap in the plane of the housing, a hydraulic jack carried by said frame for imposing pressure on the top roller, and means to shift said frame in said gap comprising a worm associated with the housing, and a toothed member associated with said frame for cooperation with the worm.

4. In a sugar-cane mill, three rollers disposed in triangular relation, a housing provided with an upper gap, a frame movable in said gap in the plane of the housing, a hydraulic jack carried by said frame for imposing pressure on the top roller, and means to shift said frame in said gap comprising an actuating part associated with the housing, and an actuated part associated with the frame.

5. In a mill of the kind described, a housing having a gap with a semi-circular bottom and a wide top, and a cap provided with a vertical slot and a curved bottom, substantially as described.

[Claim 6 not printed in the Gazette.]

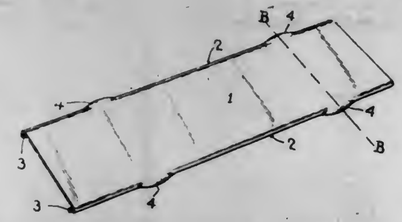
1,213,574. TWO-PRONG COMPOUND FISHING-TOOL. LAWRENCE F. BAASH, Fillmore, Cal., assignor of one-half to Tay-Pike Company, Los Angeles, Cal., a Corporation of California. Filed May 8, 1916. Serial No. 96,257. (Cl. 57—9.)



1. In a fishing tool, a pair of plates, means for securing said plates in spaced relation to each other, complementary slots formed through each of said plates, said slots converging toward each other at their lower ends, a pair of tongs, a single pivot for said tongs, said pivot being movable in relation to said plates, said tongs being formed with coacting grip jaws at their outer ends and with operating handles at their opposite ends, said handles being each provided with a pin slidably mounted in said slots, and means for bodily raising or lowering said plates, whereby on the raising of said plates, the gripping jaws are gravitationally moved toward each other to firmly hold the object engaged between them.

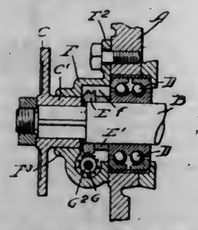
2. In a fishing tool, the combination of a support provided with a pair of inclined slots converging toward each other at their lower ends, a pair of tongs suspended from said support, said tongs comprising a pair of coacting grip jaws at their lower ends and with operating handles at their upper ends, a single pivot for said tongs movable in relation to said support, pins on said handles slidably mounted in said slots, and means for bodily raising or lowering said support whereby on the raising of said support, the gripping jaws are gravitationally moved toward each other to hold the object engaged by them.

1,213,575. BRICK-PALLET. ANSON J. BENTLEY, Niles, Ohio. Filed Jan. 3, 1916. Serial No. 69,869. (Cl. 34—17.)



In pallets of the kind described, means for retaining pairs of such pallets apart from each other consisting of rounded protuberances formed on parallel edges thereof, as and for the purpose set forth.

1,213,576. LATERAL GEAR-DRIVE FOR TRAVEL-INDICATORS. JOSEPH BERG, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed June 28, 1916. Serial No. 106,378. (Cl. 74—36.)



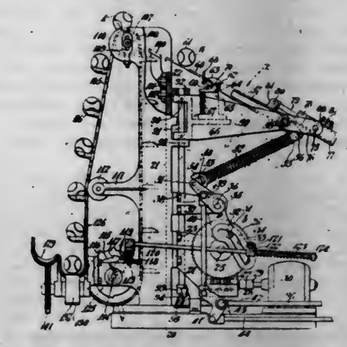
1. In combination with a power transmitting shaft, a gear housing in which it is journaled and from which it protrudes; a coupling member on the protruding end of said shaft; a gear fast on the protruding portion of said shaft back of the coupling; a supplemental housing member secured to the main gear housing and inclosing said gear, said supplemental housing having a lateral entrance to the cavity in which the gear is inclosed; a bearing sleeve intruded through said entrance and made fast therein; a shaft journaled in said sleeve bearing, and a gear on the inner end of said shaft meshing with the gear in the supplemental housing.

2. In combination with a power transmitting shaft, a gear housing in which it is journaled and from which it protrudes and a coupling fast on the protruding end of said shaft, a gear fast on the protruding portion of the shaft back of the coupling, a supplemental housing secured to the main gear housing and inclosing said gear, said supplemental housing having a lateral entrance leading into the housing cavity, a shaft journaled in said entrance, and a gear on the inner end of said shaft meshing with the gear in said supplemental housing.

3. In combination with a power transmitting shaft, a gear housing in which it is journaled, and from which it protrudes and a coupling fast on the protruding end of said shaft; a gear fast on the protruding portion of the shaft back of the coupling; a supplemental housing secured to the main gear housing and inclosing said gear, said housing having a lateral entrance leading into the housing cavity; a shaft journaled in said entrance, and a gear on the inner end of said shaft meshing with the gear in said supplemental housing, the coupling comprising a sleeve or hub portion which is longitudinally positioned by the gear in the supplemental housing, and said supplemental housing having a sleeve or hub extension which constitutes a journal bearing for the sleeve or hub of the coupling.

4. In combination with a power-transmitting shaft, a gear housing in which it is journaled, and from which it protrudes; a coupling fast on the protruding end of said shaft; a gear fast on the protruding portion of the shaft back of the coupling; a supplemental housing secured to the main gear housing and inclosing said gear, said housing having a lateral entrance leading into the housing cavity, a shaft journaled in said entrance, and a gear on the inner end of said shaft meshing with the gear in said supplemental housing, the coupling comprising a sleeve or hub portion which is longitudinally positioned by the gear in the supplemental housing, and said supplemental housing having a sleeve or hub extension which constitutes a journal bearing for the sleeve or hub of the coupling; the supplemental housing having a wick pocket opening into the housing cavity in the plane of the gear therein for holding a lubricating wick in contact with said gear in the housing.

1,213,577. POWER-DRIVEN BASE-BALL PITCHER. HARRY G. BOARDMAN, Chicago, Ill., assignor to Automatic Baseball Co. of Illinois, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1916. Serial No. 100,986. (Cl. 124—1.)



1. A pair of baseball pitchers, two lifting means each adapted to deliver balls to one of said pitchers, horizontal means for feeding balls to said lifting means, driving means for each lifting means, and means by which either or both of said driving means can drive said horizontal means, said horizontal means being driven twice as fast by both of said driving means as it is when driven by either alone.

2. In a baseball pitcher, a lifting means, a horizontal trough through which balls are delivered to said lifting means, and an overflow trough for receiving excess balls from near the center of said horizontal trough and delivering them to a point near the beginning of said horizontal trough.

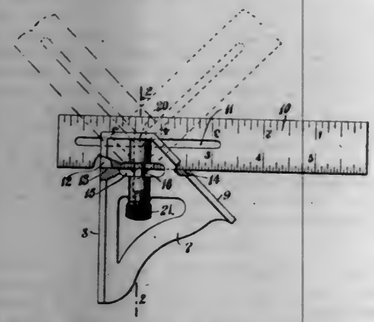
3. In a baseball pitcher, a lifting means, a horizontal trough through which balls are delivered to said lifting means, and a belt driven from said baseball pitcher for delivering balls to said trough.

4. In a baseball pitcher, a sloping floor, a horizontal trough located in the low portion of said floor, a second horizontal trough for said pitcher, two belts extending in either direction from said pitcher and each delivering balls to said second trough, and means by which both of said belts are driven by said pitcher.

5. In a baseball pitcher, a standard; a bracket attached to said standard; a throwing arm pivoted in said bracket; a tension spring attached at one end to one end of said throwing arm; a crank lever pivoted on said standard and having one end of said tension spring attached to one end thereof; and motor driven means for actuating the other end of said crank lever.

[Claims 6 to 16 not printed in the Gazette.]

1,213,578. MITER AND TRY-SQUARE. CHRISTIAN BODMER, New Britain, Conn., assignor to The Stanley Rule and Level Company, New Britain, Conn., a Corporation of Connecticut. Filed May 29, 1916. Serial No. 100,448. (Cl. 33—94.)



1. A combined miter and try square comprising a tool stock having convergently arranged mitering and squaring edges and a blade pivotally secured in the head of the tool stock between said edges and adapted to be swung from coöperating relation with one of said edges over to the opposite side of the head into coöperating relation with the other edge with a seat on each side of the pivotal mounting for said blade, said seats being positioned to simultaneously engage one side edge of said blade to definitely establish the angular position of said blade and stock.

2. In a tool of the character set forth, a tool stock having straight edges at opposite sides thereof and a slot extending therethrough from one straight edge to the other straight edge, a blade seated in said slot and formed itself with a longitudinal slot and a clamping bolt mounted in the tool stock and provided with a pivot pin working in the slot in the blade to thereby permit of the blade being swung on said pivot from coöperating relation with the straight edge on one side of the tool over into coöperating relation with the other straight edge on the opposite side of the tool with a seat on each side of the pivotal mounting for said blade, said seats being positioned to simultaneously engage one side edge of said blade to definitely establish the angular position of said blade and stock.

3. In a tool of the character set forth, a tool stock having straight edges at opposite sides thereof and a slot extending therethrough from one straight edge to the other straight edge, a blade seated in said slot and formed itself with a longitudinal slot, a clamping bolt mounted in the tool stock and provided with a pivot pin working in the slot in the blade to thereby permit of the blade being swung on said pivot from coöperating relation with the straight edge on one side of the tool over into coöperating relation with the other straight edge on the opposite side of the tool, said tool stock having an opening extending therethrough located between the straight edges to provide clearance for the end of the blade in swinging over from one side to the opposite side of the tool stock and provided with bearing seats for the blade at the opposite ends of said opening.

4. In a tool of the character set forth, a tool stock having straight edges at opposite sides thereof, an opening therethrough between said straight edges, bearing seats at the opposite ends of said opening and a slot extending through the tool stock from the straight edge at one side to the straight edge at the opposite side thereof, a blade seated in said slot and bearing on said seats at the respective straight edges and bridging the opening between said bearing seats said blade having a longitudinal slot therein, a slotted clamping post mounted in the tool stock and having side arms embracing the opposite faces of the blade and a pivot pin extending between the side arms and through the longitudinal slot in the blade to thereby hold the blade in lengthwise adjustable relation in the tool stock and permit of said blade being swung over from one side of the tool stock to the other side.

1,213,579. LOOKOUT-MAST FOR SHIPS. ALFRED BONOM, Paterson, N. J. Filed Apr. 28, 1916. Serial No. 94,283. (Cl. 114—91.)



1. A lookout mast comprising a supporting post, a ball and socket joint on said post, a shaft disposed transversely to the axis of the post and constrained to move with the ball, a dome revolubly mounted on the shaft and coaxial with the post, means normally connecting the dome to the shaft, a column carried by said dome, and weights carried by the dome to balance the column.

2. A lookout mast comprising a supporting post presenting a ball socket, a ball in said socket, a shaft transversely to the axis of the post and rigid with the ball, a dome coaxial with the post mounted to revolve on the shaft, means keying the dome to the shaft, a column surmounting said dome, and weights carried by the dome at a point below the socket in the post to overbalance the column on the dome, said dome having a longitudinal opening to clear the way for the post when the dome is revolved on the shaft.

3. A lookout mast comprising a supporting post presenting a ball socket, a ball in the socket, a shaft disposed transversely of the axis of the column and constrained to move with the ball, a dome housing said post and mounted to revolve on the shaft, said dome having a longitudinal opening to clear the way for the post when the dome is turned on the shaft, means for turning the dome, means for keying the dome to the shaft whereby the shaft is bound to participate in the movement of the dome, a column surmounting the dome, and weights secured to the dome below the socket in the post to overbalance the column.

4. A lookout mast comprising a supporting post presenting a ball socket, a ball in the socket, a shaft carried by the ball transversely of the post axis, said shaft being constrained to move with the ball, a dome housing the ball and post rotatably mounted on the shaft, said dome having a longitudinal opening to clear the way for the post when the dome is turned on the shaft, a detachable pinion and ratchet arrangement associated with the dome for turning the same, detachable means rigidly securing the shaft to the dome to normally prevent the turning of the dome on the shaft, a column surmounting the dome, and weights carried by the dome below the ball and socket to overbalance the column.

5. A lookout mast comprising a gravitationally operable column mounted on a ball and socket joint located in the longitudinal axis of the column whereby said mast is normally maintained in a substantially vertical position, an auxiliary bearing for said column on said ball and socket joint disposed transversely of the axis of the column, detachable means normally preventing the column from moving on the auxiliary bearing, and detachable means associated with the column for moving the same on the auxiliary bearing.

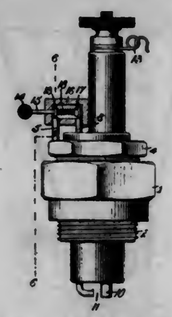
[Claims 6 and 7 not printed in the Gazette.]

1,213,580. RAILWAY-TRACK CONSTRUCTION. CHARLES M. BOWMAN, Lebanon, Pa. Filed Dec. 18, 1915. Serial No. 67,000. (Cl. 238—4.)



The combination with a railway tie or sleeper having pockets formed in its upper face immediately below the rails crossing the same, said pockets being slightly narrower than the tie and of a length to extend beyond the opposite edges of the flanges of the rails, of spikes having recesses formed in their opposite faces engaged in the tie within the confines of the pockets and spaced from the walls thereof, said recesses disposed entirely within said pockets, and a plastic mass capable of hardening filling the pockets and engaging in the recesses of and surrounding said spikes to prevent the spikes from becoming dislodged from their original intact position.

1,213,581. SPARK-PLUG. ERIC BRANDQUIST, Orange, N. J. Filed June 7, 1916. Serial No. 102,202. (Cl. 123—169.)

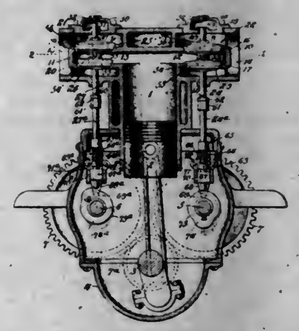


1. In a spark plug of the character described, an insulating member provided with a bar extending therethrough, the inner end of the bar acting as a contact, an auxiliary bar extending through said insulating member arranged so that the inner end will act as a contact spaced from the first mentioned contact, and a ground member extending to near the upper end of said auxiliary bar, said ground member being arc-shaped at its upper end, the arc being formed so as to cause the distance between the ground member and the auxiliary bar to continually remain the same regardless of the position of the auxiliary bar.

2. In a spark plug of the character described, an insulating member, a pair of bars extending therethrough, means for connecting one of said bars with the ground, said means comprising a switch formed by a reciprocating bar and a spring for holding said reciprocating bar in contact with one of the first mentioned bars, and a glass container surrounding said switch confining the spark produced when the switch is partially opened and the plug is in use.

3. In a spark plug of the character described, an insulating member provided with an enlargement on one side at the lower part, said enlargement extending through the casing of the plug, said enlargement forming a shoulder at the upper end spaced below the upper end of the insulating member, a bar extending through the insulating member and forming a contact at the lower end, an auxiliary bar extending through the enlargement and made of such a length that one end will project beyond said shoulder and the other end will project beyond the enlargement for forming a second contact whereby said auxiliary bar remains dead until the circuit is closed, and a ground member connected with said casing and formed with a member extending to a point adjacent the upper end of said auxiliary bar.

1,213,582. EXPLOSION-ENGINE VALVE. JAMES A. BROWN, Cedar Rapids, Iowa. Filed Mar. 21, 1914. Serial No. 826,289. (Cl. 123—86.)



1. An explosion engine provided with a pair of adjacent inlet ports and a pair of adjacent exhaust ports, a balanced valve structure for each pair of ports having yieldable marginal portions where engaging the ports, and adapted to yield in a direction perpendicular to the direction of movement of the valve structure, and means for positively opening and closing each balanced valve structure.

2. An explosion engine provided with a passage communicating with the explosion chamber and having a pair of associated alined ports leading therefrom, a balanced valve for the ports, and operating means for the valve for positively moving it in both directions and including elastic means for cushioning the closing movement of the valve, said valve being provided with marginal packing members yieldable in a direction perpendicular to the closing movement of the valve and coacting with the cushioning means to yieldably and accurately seat the valve.

3. An explosion engine provided with a conduit for gases communicating with the interior of the cylinder of the engine and including a pair of adjacent alined tapering ports each constituting a valve seat, and a valve structure comprising connected tapering valves each con-

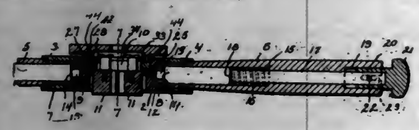
nected to a respective one of the valve seats with the faces toward the engine cylinder of substantially equal area, and the margins of the valves toward the seats being provided with floating seating edges movable in directions perpendicular to the closing movement of the valve atructure.

4. In an explosion engine, balanced valves movable to the open and closed positions and each provided with floating engaging margins for the ports controlled by the valves, said floating margins being movable with respect to the valves in directions substantially perpendicular to the opening and closing movements of said valves.

5. In an explosion engine, a balanced valve having a port engaging portion consisting of packing rings mounted for bodily movement in planes substantially perpendicular to the direction of movement of the valve in opening and closing.

[Claims 6 to 14 not printed in the Gazette.]

1,213,583. EXPANSION RATCHET-WRENCH. STEPHEN BROWN, Pawtucket, R. I. Filed Jan. 5, 1916. Serial No. 70,505. (Cl. 81—63.)



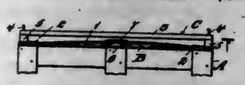
1. A ratchet wrench of the class described including a rotary head, jaws slidably mounted in and carried by the head, a rotary nut located within the casing and operatively connected with the jaws for moving the same toward and from each other, a bearing member secured within the casing and receiving and forming a bearing for the nut and retaining the latter in the rotary head, and an exterior operating plate extending through the bearing member and connected with the nut for operating the same.

2. A ratchet wrench of the class described including a stock having a casing, a rotary head mounted in the casing and provided with an oblong opening, jaws slidable in the opening toward and from each other, a rotary nut mounted in the casing and operatively connected with the jaws for moving the same toward and from each other, said nut consisting of a ring having an inner bearing, a guide disk fitting in the bearing of the nut and provided with an oblong slot, fastening means carried by the jaws and operable in the slot of the guide disk and means operable exteriorly of the casing for rotating the nut.

3. A wrench of the class described including a stock having a casing, a rotary head mounted in the casing and provided with an oblong opening, jaws slidable in the opening and provided at their inner ends with plates having thread sections, said head being also provided at its inner face with a recess receiving the said plates, a nut consisting of a ring fitting in the recess of the head and having facial threads engaging the thread sections of the said plates, said nut being provided with an annular groove, a bearing ring receiving the said nut and an exterior operating plate connected with the nut and fitting in the annular groove thereof and arranged in flush relation with the said nut.

4. A wrench of the class described including a stock having a casing, a rotary head mounted in the casing and provided with an oblong opening, jaws slidable in the opening and provided at their inner ends with plates having thread sections, said head being also provided at its inner face with a recess receiving the said plate, a nut consisting of a ring fitting in the recess of the head and having facial threads engaging the thread sections of the said plates, a guide disk arranged within the nut and provided with a slot, headed fastening devices extending through the slot and connected with the jaws, a fixed bearing ring secured within the casing and receiving the nut, and an exterior operating plate having a rib or flange fitting against the nut and secured to the same.

1,213,584. PROTECTIVE COVER FOR FRUIT-CRATES. SHERMAN P. BUNKER, Rockville Center, N. Y. Filed July 20, 1916. Serial No. 110,323. (Cl. 217—52.)



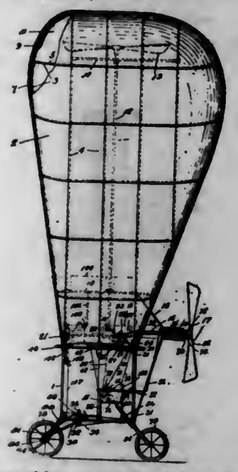
1. The combination of a crate body having end walls of such thickness that fasteners can be driven downwardly in the top edges thereof, and a top for the crate of such length as to extend from one end wall to the other and lie directly on the top edges thereof, with a protective device comprising cross pieces disposed on the upper surface of the crate top at the ends thereof, longitudinal strips disposed on top of the cross pieces, and fasteners passing through the strips and cross pieces and through the crate top and driven into the end walls of the crate body.

2. The combination of a crate body having end walls of such thickness that fasteners can be driven downwardly in the top edges thereof, and a top for the crate of such length as to extend from one end wall to the other and lie directly on the top edges thereof, with a protective device comprising cross pieces disposed on the upper surface of the crate top at the ends thereof, longitudinal strips disposed on top of the cross pieces and secured thereto, and fasteners securing the cross pieces to the crate top and to the end walls of the crate body and clamping the crate top between the cross pieces and said end walls.

3. A new article of manufacture comprising a crate top, cross-pieces fastened to the upper surface of the top and disposed along the end edges thereof, and longitudinal strips having their ends bearing on the top of the cross pieces and fastened thereto, the outer side edges of the said strips being disposed inwardly from the side edges of the said crate top.

4. A new article of manufacture comprising a crate top, and a protective device consisting of cross pieces fastened to the top surface of the crate top at the ends thereof, and longitudinal strips fastened to the top sides of the cross pieces and spaced by such cross pieces from the crate top, said longitudinal strips and crate top being of substantially the same length, whereby the cross pieces lie wholly between the crate top and strips.

1,213,585. FLYING-MACHINE. WILLIAM H. BUSH, Framingham, Mass. Filed May 12, 1916. Serial No. 97,190. (Cl. 244—7.)



1. A flying-machine comprising a body frame, gas bags extended above said frame in upwardly divergent relation, means arranged between the gas bags for elevating the machine and means arranged beyond the gas bags for propelling the machine.

2. A flying-machine comprising a body frame, gas bags having their maximum dimension vertically of the machine including a shell of fixed maximum contour rising above the body frame, means for elevating the machine, and means for propelling the machine, the gas bags extending forwardly and rearwardly of the body frame with the rearward extension of greater area to maintain longitudinal stability of the machine under the action of the driving means.

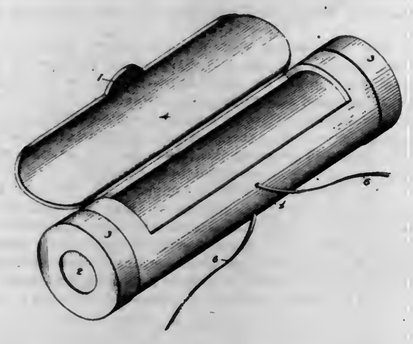
3. A flying-machine comprising a body frame, gas bags rising from the respective sides of the frame in upwardly divergent relation, each gas bag including a metallic sheathing of fixed contour, a series of independent gas envelops arranged in the sheathing and a frame supporting the sheathing and dividing the gas envelops, elevating means for the machine arranged between the gas bags and a propelling means for the machine arranged in rear of the gas bags.

4. A flying-machine comprising a body frame, gas bags rising therefrom in upwardly divergent relation, and elevating means for the machine arranged between the gas bags, and propelling means for the machine arranged in rear of the gas bags, and supporting planes secured to and projecting beyond the body frame.

5. A flying-machine comprising a body frame, gas bags rising therefrom in upwardly divergent relation, and elevating means for the machine arranged between the gas bags, and propelling means for the machine arranged in rear of the gas bags, and supporting planes secured to and projecting beyond the body frame, and means carried by the body frame for adjusting the supporting planes into a plurality of angularly related positions to permit said planes to be turned in approximate line of movement of the machine in elevating and in driving.

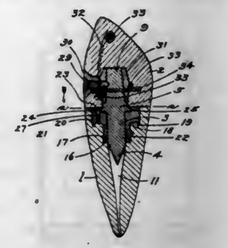
[Claims 6 to 23 not printed in the Gazette.]

1,213,586. SAMPLE-MAILING PACKAGE. JOHN L. CABELL, Savannah, Ga. Filed July 9, 1914. Serial No. 849,905. (Cl. 229—12.)



A mailing package consisting of a tube having an opening in one side of the same but preserving its tubular form for a considerable distance at each end, circular disks bearing against the ends of the tube, retainers for said disks consisting of bands, surrounding the ends of the tube and extending inwardly beyond said ends so as to overlap said disks, a closing flap hinged to the tube at one edge of the opening therein, and extending beyond the opposite edge of said opening and also beyond the ends of the same, and releasable fastening means for the free edge of said flap.

1,213,587. REMOVABLE ARTIFICIAL DENTAL CROWN. WILLIAM E. CHESTER, Norwood, Ohio. Filed May 3, 1916. Serial No. 95,258. (Cl. 32—30.)



1. In combination, a dental crown or cap, a tooth root, a fastening or coupling intervening said crown and root and comprising a vertical post having a body-portion adapted to removably-extend into the pulp-canal of the root, a doubly-shouldered head or flange on said body-portion adapted to removably seat in a shouldered recess made in the upper end of said pulp-canal, a vertical shank on said head adapted to engage a pit provided in the bottom of the crown, and means in the crown adapted to removably-fasten it to said shank in fiam, upright position on the top of the root.

2. In combination, a dental crown or cap, a tooth root, a fastening or coupling intervening said crown and root and comprising a vertical post having a pointed body-portion adapted to removably-engage the pulp-canal of the root, a doubly-shouldered head or flange on said body-portion adapted to partially and removably seat in a shouldered cavity made in the upper end of the pulp-canal, a vertical shank surrounding said head and adapted to engage a pit provided in the bottom of the crown, a bushing in the crown adapted to engage said shank, and a transverse screw inserted into the crown from its lingual side and adapted to engage the said shank for removably-fastening the crown in supported-position on the top or finished table of said root.

3. In combination, a dental crown or cap, a tooth root, a vertical doubly-shouldered post or pin adapted to removably-engage the pulp-canal in the tooth root, a doubly-shouldered and grooved seat in the upper end of said pulp-canal, a flanged metal box or bushing fitting within said doubly-shouldered and grooved seat and adapted to contain the shouldered-portion of the post, a lateral lug on said doubly-shouldered portion of the post adapted to engage a notch made in the countersunk upper portion of the box or bushing and to receive a vertical fastening-screw, an upright shank on the post, a vertical box or bushing in the crown to engage said shank and provided with a lateral threaded box or lining, and a countersunk screw in said lateral lining for removably-fastening or mounting the crown on the said shank and the root top.

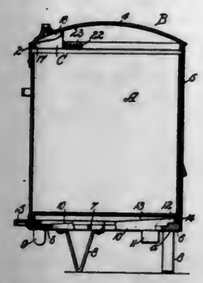
1,213,588. SANITARY GARBAGE-CAN. PHILIP COHEN, New York, N. Y. Filed Aug. 22, 1916. Serial No. 116,261. (Cl. 220—115.)

1. A device of the class described comprising a casing having an open front and a base formed with a tiltable portion, and an open top receptacle disposed in the casing and tiltable forwardly with the said tilting portion of the base, the receptacle when in closed position forming in appearance the front of the casing.

2. A device of the class described comprising a casing formed with an open front and having a tiltable base portion, and a receptacle removably resting on the said tiltable base portion to tilt therewith and formed with means engageable with the edges of the opening of the casing to form a seal.

3. A device of the class described comprising a casing having a lateral opening and provided with a fixed top, a

tilting element in the bottom of the casing, a receptacle supported on the said element and tiltable therewith, and means on the top actuated by the tilting of the receptacle to discharge disinfestant into the same.



4. In a device of the class described, the combination of a casing including a body open at its front, a top secured to the body, a base on which the body is mounted, said base having a front hinged section tiltable downwardly, and legs supporting the rear section of the base, with an open top receptacle movable into and out of the open side of the casing and having a removable interlocking engagement with the tilting portion of the said base.

5. In a device of the class described, the combination of a casing including a body open at its front, a top secured to the body, a base on which the body is mounted, said base having a front hinged section tiltable downwardly, and legs supporting the rear section of the base, with an open top receptacle movable into and out of the open side of the casing and having a removable interlocking engagement with the tilting portion of the said base, said receptacle having vertical flanges at opposite sides for engaging the body of the casing and also having an upstanding lip for engaging the top of the casing.

[Claims 6 and 7 not printed in the Gazette.]

1,213,589. CONNECTOR FOR REINFORCING-RODS. WILLIAM ARTHUR COLLINGS, Kansas City, Mo. Filed Dec. 27, 1915. Serial No. 68,809. (Cl. 72—114.)



1. An apertured cylindrical connector for reinforcement rods, and integral inwardly projected portions thereon adapted to engage the sides of the reinforcement rods to hold the connector in position for connecting said rods and to space said connector from said rods.

2. In a device of the class described, the combination with abutting reinforcement rods, of an apertured connector engaged on the abutting ends of said rods, and means integral with said connector adapted to hold the same positioned upon said rods and spaced therefrom to permit concrete to flow between said rods and said connector.

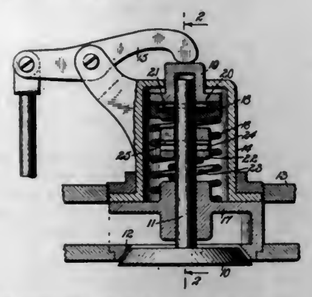
3. A connector of the class described, comprising a tube, and a plurality of means struck inwardly therefrom and projecting in opposite directions, said means acting to space said tube from the inclosed reinforcement members.

4. A connector of the class described, comprising a tube, and a plurality of tongues struck inwardly therefrom and projecting in opposite directions, said tongues acting to space said tube from the inclosed reinforcement members.

5. In a device of the class described, rods placed end to end, a tube therearound, and oppositely directed integral means arranged on said tube adapted to hold said rods in alinement for concreting and to space said tube from said rods.

[Claim 6 not printed in the Gazette.]

1,213,590. POPPET-VALVE. CLARENCE D. COMPTON, New York, N. Y. Filed Aug. 18, 1916. Serial No. 115,727. (Cl. 123—188.)



1. The combination with a spring-pressed poppet valve and its seat, of actuating means for the valve initially movable to free the valve from the pressure of the spring, the continued movement of said means serving to actuate the valve after being freed from the spring pressure.

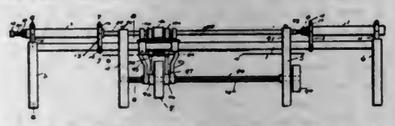
2. The combination with a poppet valve and its seat, of a spring closing the valve, an element movable relatively to the stem against which the spring abuts, a member on the stem to be engaged by said element, and actuating means movable to displace the said element and then engage the said member on the stem for actuating the valve.

3. The combination with a poppet valve, its seat and spring, of means to free the valve of the pressure of the spring and impart an opening movement to the valve after being freed from the spring pressure.

4. The combination with a poppet valve and its seat, of actuating means for the valve, a weight loose on the valve stem, and coacting means on the weight and stem to impart a turning movement to the weight.

5. The combination with a poppet valve, its seat and spring means acting on the valve stem and tending to close the valve, of actuating means movable to relieve the spring pressure on the stem in opening the valve, a spring-supported weight loose on the stem, and co-acting means on the stem and weight to impart a turning movement to the weight upon an opening movement of the stem.

1,213,591. POLISHING-MACHINE. RUDOLPH CONRADER, Erie, Pa. Filed Apr. 12, 1911. Serial No. 620,658. (Cl. 51—4.)



1. In a polishing machine, the combination of a lap made up of sections movable radially under the influence of centrifugal force; a spindle carrying the lap; means for rotating the spindle; and mechanism for automatically reciprocating the spindle, the speed throughout each reciprocating movement being uniform.

2. In a polishing machine, the combination of a plurality of spindles; means for rotating said spindles; and a common mechanism for axially and automatically reciprocating the spindles in unison, the speed throughout each reciprocating movement being uniform.

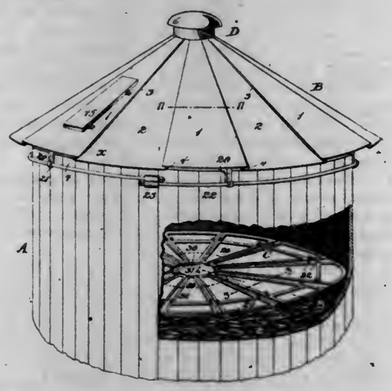
3. In a polishing machine, the combination of two spindles in alinement; an arbor between the spindles for driving them; and mechanism for axially reciprocating the arbor with the spindles.

4. In a polishing machine, the combination of two spindles in alinement; an arbor between the spindles for driving them; and mechanism for automatically reciprocating the spindles with the arbor in an axial direction.

5. In a polishing machine, the combination of two spindles arranged in alinement; laps arranged at the outer ends of said spindles, said laps being made up of sections movable radially under the influence of centrifugal force; an arbor arranged between the spindles for driving said spindles; and mechanism for reciprocating the spindles with the arbor in an axial direction.

[Claims 6 to 36 not printed in the Gazette.]

1,213,592. SILO ROOF AND SEAL. FINIS B. CRAWFORD, Atlanta, Mo. Filed Jan. 28, 1916. Serial No. 74,771. (Cl. 20—1.41.)



1. The combination of a silo body, a roof composed of sections hingedly mounted on the body, and a seal in the silo composed of sections detachably connected together and adapted to be applied to the sections of the roof to form a filling extension when the roof sections are in open position.

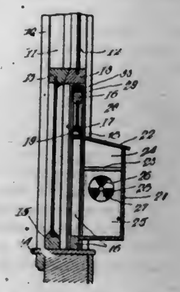
2. The combination of a silo body, brackets applied to the top edge of the body, seats formed in the top ends of the brackets, a ring engaging the seats of all the brackets, said ring being adjustable in diameter and bodily removable from the brackets while the latter remain in place, members having apertures for receiving the ring, whereby the ring forms a common pintle on which the members swing, I-beam-like members slidably connected with the first-mentioned members, roof sections fastened to the second-mentioned members, and fasteners for clamping the slidably connected members together.

3. A silo roof comprising a ring adjustable in diameter, members having openings through which the ring passes and having slots extending transversely to the ring, roof sections having I-beam-like members slidable in the slots of the first-mentioned members, and means for rigidly clamping the slidably connected members removably together, said means being located outwardly from the ring so as to be accessible outside the silo.

4. The combination of a silo body having a hoop extending around the same at the top, brackets straddling the top edge of the body and each having a member engaging under the hoop, and also each having spaced upstanding members to form a seat, a ring of substantially the same diameter as the body and resting in the seats of the brackets, fasteners securing the ring in the brackets, roof sections, a rail-like member extending longitudinally of and fastened to the under side of each section, hinge members having openings through which the ring extends and having slots in which the rails slidably engage, and set-screws clamping the members and rails together.

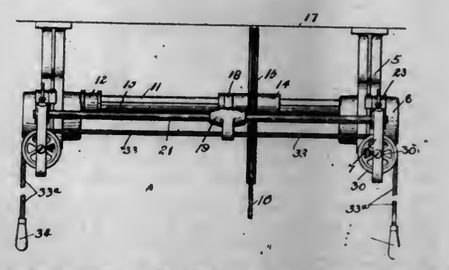
5. In a silo roof, the combination of a plurality of triangular sections mounted to overlap at their edges to form a conical shaped roof, the upper ends of the sections being turned up to form a neck, a ring engaging the neck internally and externally, a dome supported by and spaced above the ring to provide a ventilating opening, a clamping frame disposed within the roof and engaged therewith, and a fastener securing the ring and frame together.

1,213,593. WINDOW-BOX. CARL A. DAHLBERG, Chicago, Ill. Filed Jan. 29, 1916. Serial No. 74,970. (Cl. 45—104.)



In a window box, the combination with a rectangular frame, of a box secured thereto and extended therefrom, a channeled member adjustably mounted on and embracing each of the sides of said frame and the upper portion thereof, springs interposed between said members and said frame, and an angular and channeled corner piece adjustably mounted on the adjacent ends of said members at each upper corner of the frame.

1,213,594. GRINDER COUNTER-SHAFT. HUBERT DALTON, New York, N. Y. Filed Oct. 7, 1916. Serial No. 124,235. (Cl. 64—4.)



1. In a device of the kind described, the combination with the counter-shaft and counter-shaft hangers, of a pulley keyed on the counter-shaft and movable in the direction of the length of the counter-shaft, a pair of brackets each adapted to be mounted in either of two positions on the hangers, a shipper for the pulley, means attached to the shipper for actuating the shipper to move the pulley on the counter-shaft in one direction or the other, and guiding means for the shipper-actuating means carried by the brackets.

2. In a device of the kind described, the combination with the counter-shaft and counter-shaft hangers, of a

pulley keyed on the counter-shaft and movable lengthwise thereof, a pair of brackets each adapted to be mounted in either of two positions on the hangers, a shipper for the pulley, means attached to the shipper for actuating the shipper to move the pulley on the counter-shaft in one direction or the other, guiding means for the shipper actuating means carried by the brackets, and guiding means for the shipper carried by the brackets.

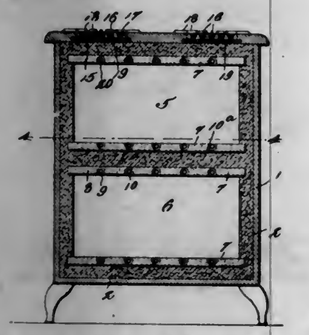
3. In a device of the kind described, the combination with the counter-shaft and counter-shaft hangers, of a pulley keyed on the counter-shaft and movable lengthwise thereof, a pair of brackets each adapted to be mounted in either of two positions on the hangers, a pulley journaled in each bracket, a shipper for the pulley on the counter-shaft, and operating means for the shipper including flexible cord lengths attached to the shipper and passing over the pulleys.

4. In a device of the kind described, the combination with the counter-shaft and counter-shaft hangers, of a pulley keyed on the counter-shaft and movable lengthwise thereof, a pair of brackets each adapted to be mounted in either of two positions on the hangers, a pulley journaled in each bracket, a shipper for the pulley on the counter-shaft, flexible cord lengths attached to the shipper and passing over the pulleys on the brackets, and a guide-rod for the shipper secured at its opposite ends to the brackets.

5. In a device of the kind described, in combination, a counter-shaft, a pulley keyed on the shaft but adapted for movement lengthwise thereof, reversible hangers for the shaft whereby the shaft may be suspended from a ceiling or mounted on a side wall, a pair of brackets one supported by each hanger, a rod fixed to and joining the brackets, means carried by the brackets and hangers for mounting the brackets on the hangers in position to hold the rod horizontally offset from the counter-shaft when the hangers are in either of their two positions, and a device carried by the rod and movable thereon to shift the pulley lengthwise of the shaft.

[Claims 6 to 12 not printed in the Gazette.]

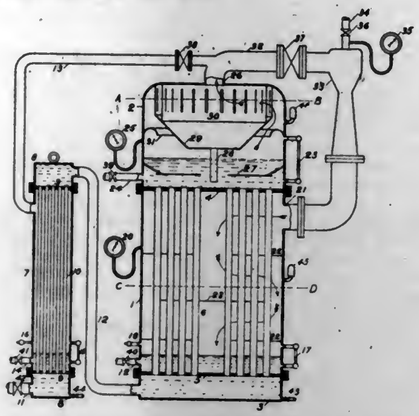
1,213,595. ELECTRIC STOVE. GEORGE DEAL, Omaha, Nebr. Filed Oct. 23, 1915. Serial No. 57,573. (Cl. 219—35.)



A stove of the class described including a casing provided in its top with an opening, a lining of non-heat conducting material arranged at the inner face of the casing and extending beneath the opening, an asbestos disk supported by the lining at the bottom of the opening, and an electric heater consisting of a disk or body arranged in the opening and provided in its upper face with grooves, and heating elements arranged in the grooves, and a support projecting over the plate or body.

1,213,596. EVAPORATOR. WILLIAM L. DE BAUFRE, Annapolis, Md. Filed Nov. 23, 1915. Serial No. 62,952. (Cl. 127—9.)

1. An evaporator consisting of, means of containing a solution, means of compressing the vapor from said solution consisting of a vapor actuated compressor, means of heating said solution by said compressed vapor and the exhaust from said compressor and means of drying said vapor before being compressed.



2. An evaporator consisting of, means of containing a solution, means of compressing the vapor from said solution, means of heating said solution by means of said compressed vapor, and means of condensing noncompressed vapor from said solution.

3. An evaporator consisting of, means of containing a solution, means of compressing the vapor from said solution consisting of a vapor operated compressor, and means of combining compressed vapor from said compressor and the operating vapor to heat the solution.

4. An evaporator consisting of, means of containing a solution, means of compressing the vapor from said solution consisting of a vapor actuated compressor, and means of heating said solution by means of said compressed vapor and the exhaust from said compressor.

5. An evaporator consisting of, means of containing a solution, means of compressing the vapor from said solution consisting of a vapor actuated compressor, means of heating said solution by means of said compressed vapor and the exhaust from said compressor, and means of condensing noncompressed vapor from said solution.

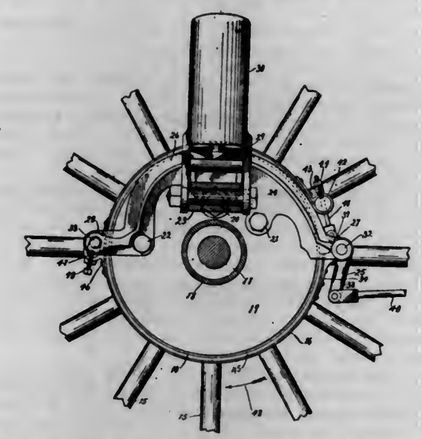
[Claims 6 to 11 not printed in the Gazette.]

1,213,597. VEHICLE-BRAKE. FREDERICK DENMAN, Seattle, Wash. Filed Sept. 11, 1915. Serial No. 50,249. (Cl. 21—8.)

1. In a vehicle brake, in combination, a drum turning with the vehicle wheel, a friction band extending about the drum, one end of the band being fixed, straining means connected with the other end of the band, and means having a cam engagement with the band intermediate its ends for moving the adjacent part of the band toward the drum when the band is tightened by the said straining means, and for moving the adjacent part of the band away from the drum when the straining means is released.

2. In a vehicle brake, in combination, a drum turning with the vehicle wheel, a pair of fixed studs extending transversely over the drum at diametrically opposite points, a friction band having one end attached to one of the studs to prevent movement of the said end of the band about the drum and the remainder of the band extending about the drum in the direction of its rotation during forward movement of the vehicle, an intermediate part of the band being provided with a cam slot which is inclined to the radius of the drum and slidingly receives the other stud, an operating lever having a fixed pivot and connection between the operaing lever and the other end of the friction band.

3. The combination with a vehicle having an axle, a wheel mounted upon the end of the axle and a tubular axle housing with a flanged end adjacent the wheel, of a drum located between the wheel and the flanged end of the axle housing, said drum being secured against the wheel to rotate therewith, a bracket secured against the flanged end of the axle housing and having an arm adapted to serve as a perch for connection with the vehicle spring, a pair of studs fixed in the bracket, one of said studs extending transversely in front of the drum and the other stud extending transversely in rear of the drum, a friction band having one end connected with one of the studs and extending therefrom about the drum in the direction of rotation of the drum during forward movement of the vehicle, an intermediate part of the band being provided with a cam slot which is inclined to the radius of the drum and slidingly receives the other stud, an operating lever pivotally mounted on the bracket and connection between the operating lever and the other end of the friction band.

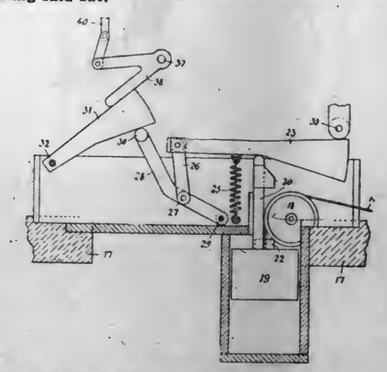


4. The combination with a vehicle having an axle, a wheel mounted upon the end of the axle and a tubular axle housing with a flanged end adjacent the wheel, of a drum located between the wheel and the flanged end of the axle housing, said drum being secured against the wheel to rotate therewith, a bracket secured against the flanged end of the axle housing and having an arm adapted to serve as a perch for connection with a vehicle spring, a stud fixed in the bracket and extending transversely in front of the drum, a friction band having one end connected with the said stud and extending therefrom about the drum in the direction of rotation of the drum during forward movement of the vehicle, an operating lever pivotally mounted on the bracket, and connection between the operating lever and the other end of the friction band.

5. In a vehicle brake, in combination, a drum turning with the vehicle wheel, a friction band extending about the drum, straining means operable upon the band to effect a relative movement of the two ends of the band at one side of the drum and a longitudinal shifting of an intermediate part of the band at the opposite side of the drum, and means having a cam engagement with the said intermediate part of the band for moving it toward and away from the drum when longitudinally shifted by the said straining means.

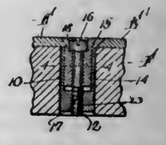
1,213,598. SIGNALING APPARATUS FOR THE PROTECTION OF STATIONS AND BLOCK-POSTS. NIELS VIGGO DIECHMANN, Esbjerg, Denmark. Filed Oct. 20, 1914. Serial No. 867,643. (Cl. 246—59.)

1. In a signaling device for railroad trains provided with a signal and a rigid projection; a signal-actuating member and a setting member therefor; a lever intermediary said members, one of the members permanently contacting therewith and the other member having journaled connection with said lever, manually operated means for adjusting said setting member in the path of said projection, whereby the setting member upon being struck by the projection, coöperates with said lever to set said actuating member in position to actuate the signal; said manually operated means comprising a weighted bar for shifting the setting member and a flexible connection for actuating said bar.



2. In a signaling device for railroad trains provided with a signal and a rigid projection; a signal-actuating member and a setting member therefor; a lever intermediary said members, one of the members permanently contacting therewith and the other member having journaled connection with said lever, manually operated means for adjusting said setting member in the path of said projection, whereby the setting member upon being struck by the projection, coöperates with said lever to set said actuating member in position to actuate the signal; said manually operated means comprising a weighted bar for shifting the setting member and a flexible connection for actuating said bar, and a winding drum and a flexible connection between the drum and said weighted arm.

1,213,599. FASTENER. CHARLES E. W. DOW, Dorchester, Mass. Filed Oct. 15, 1915. Serial No. 56,113. (Cl. 85—1.)

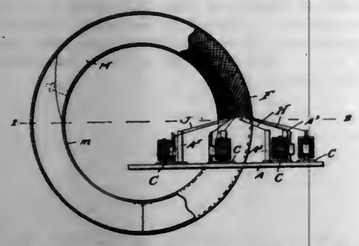


1. A fastener of the nature described comprising an exteriorly screw threaded socket member having a bore, a fastener having a shank slidable and rotatable in said bore, and a releasable means engaged with said socket member for securing said fastener member from sliding or rotating, said fastener member, its shank and the bore of said socket member being so related that said fastener member may rotate on an axis eccentric to its periphery.

2. A fastener of the nature described, comprising a socket member, a shank adapted to slide longitudinally into said socket member and having a polygonal engaging member, the axis of which is offset from the axis of said shank, and means to secure said shank to said socket member.

3. A fastener of the nature described, comprising an exteriorly screw threaded socket member having an end wall furnished with a screw threaded perforation, a shank rotatable and slidable in the bore of said socket and having an axial perforation and a polygonal engaging member offset laterally from its axis, and a screw extending through the perforation of said shank and engaged with the screw threaded perforation of said socket member.

1,213,600. TIRE AND METHOD OF MAKING THE SAME. WILLIAM H. DUNKERLEY, Paterson, N. J. Filed Apr. 8, 1916. Serial No. 89,766. (Cl. 154—14.)



1. The herein described method of forming a circumferentially divided annulus in one complete continuous operation, which consists in braiding a plurality of threads in a plurality of layers continuous of each other and maintining all of the threads under permanent uniform tension one upon the other and simultaneously forming selvages continuous of each other along the edges.

2. The herein described method of forming a circumferentially divided annulus in one complete continuous operation, which consists in braiding a plurality of threads in a plurality of layers continuous of each other one upon the other and simultaneously forming reinforced selvages continuous of each other throughout the various layers.

3. The herein described method of making a divided annulus in one complete continuous operation, which consists in braiding a plurality of threads continuous of each other and alternately forming layers of braided threads and rubber each continuous throughout the annulus and simultaneously embodying in each braided layer a reinforcement at its opposite edges continuous of each other and throughout the annulus and placing all of the threads permanently under uniform tension.

4. A tire or analogous annulus composed of layers of thread all continuous of each other, each layer braided continuously to form an annular fabric having an opening along its inner face, layers of rubber continuous of each other and alternating with the layers of thread and circumferentially extended cords incorporated in said fabric at the margins of said opening to form selvage edges therefor, said cords being continuous of each other and of each thread layer and all of the threads being permanently under uniform tension.

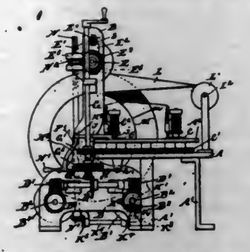
5. A tire or analogous annulus composed of layers of thread all continuous of each other, each layer braided continuously to form an annular fabric having an opening along its inner face, layers of rubber continuous of each other and alternating with the layers of thread and circumferentially extended cords incorporated in said fabric at the margins of said opening to form selvage edges therefor, said cords being continuous of each other and of each thread layer and all of the threads being permanently under uniform tension, and reinforcing strands incorporated with the thread layers and made continuous of each other and with the threads throughout the tire.

[Claims 6 to 9 not printed in the Gazette.]

1,213,601. BRAIDING-MACHINE. WILLIAM H. DUNKERLEY, Paterson, N. J. Filed Apr. 8, 1916. Serial No. 89,767. (Cl. 28—4.)

1. In a braiding machine, a table having a central opening and raceways encircling such opening, braiding-carriers in such raceways, means for moving said braiding-carriers, means for supporting an annular core passing through such central opening and arranged therein to receive a braided covering applied by said braiding-carriers, and means for applying a web of rubber, to such braided covering.

2. In a braiding machine, a table having a central opening and raceways encircling such opening, braiding-carriers in such raceways, means for moving said braiding-carriers, means for supporting an annular core passing through such central opening and arranged therein to receive a braided covering applied by said braiding-carriers, means for rotating such core, and means for applying a web of rubber, to such braided covering.



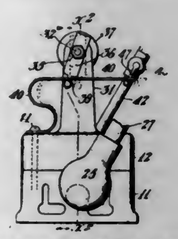
3. In a braiding machine, a table having a central opening encircled by raceways and having a channel from the exterior of said table to said central opening, means for supporting an annular core passing through such central opening and arranged therein to receive a braided covering applied by a series of braiding-carriers in said raceways, such channel adapted to allow the removal of such covered core, and means for applying a web of rubber, to such braided covering.

4. In a braiding machine, a table having a central opening and raceways encircling such opening, and having a channel from the exterior of said table to said central opening, braiding-carriers in such raceways, means for moving said braiding-carriers, an annular core passed through such central opening and arranged therein to receive a braided covering applied by said braiding-carriers, wheels supporting said core, means for revolving said wheels and rotating said core, and means for applying a web of rubber upon said covering.

5. In a braiding machine, a table having a central opening and raceways encircling such opening, braiding-carriers in such raceways, means for moving said braiding-carriers, an annular core passed through such central opening and arranged to receive a braided covering applied by said braiding-carriers, wheels supporting said core, means for revolving said wheels and rotating said core, a roller arranged to press said core yieldingly upon said wheels, and means for applying a web of rubber, to such braided covering.

[Claims 6 to 10 not printed in the Gazette.]

1,213,602. TAILOR'S IRON. ALEXANDER DURAND, Los Angeles, Cal. Filed May 23, 1916. Serial No. 99,456. (Cl. 68—26.)

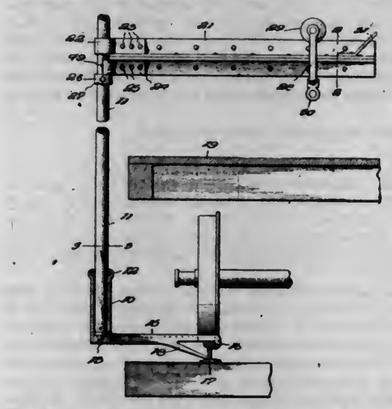


1. In a tailor's iron; a heating element; walls forming a steam generating chamber above said heating element; a water pipe connected into the top of said steam generating chamber; a valve in said water pipe, standards secured to the top of said iron; a handle rotatably mounted in said standards; a bracket lever rigidly secured to one end of said handle inside the rear standard, said bracket lever being bent over to project down outside said standard; spring means for holding said handle normally in the closed position; and means by which said bracket lever actuates said valve.

2. In a tailor's iron; a heating element; walls forming a steam generating chamber above said heating element; a water pipe connected into the top of said steam generating chamber; a valve in said water pipe, standards secured to the top of said iron; a handle rotatably mounted in said standards; a bracket lever rigidly secured to one end of said handle inside the rear standard, said bracket lever being bent over to project down outside said standard; and a flat leaf spring secured to the top of said steam chamber and so connected to said bracket lever and said valve as to hold them normally in the closed position.

3. In a tailor's iron; a heating element; walls forming a steam generating chamber above said heating element; a water pipe connected into the top of said steam generating chamber; a valve in said water pipe, standards secured to the top of said iron; a handle rotatably mounted in said standards; a bracket lever rigidly secured to said handle; spring means for holding said handle normally in the closed position; and means by which said bracket lever actuates said valve.

1,213,603. PORTABLE CRANE. JAMES DYKES, New Rockford, N. D. Filed June 13, 1916. Serial No. 103,470. (Cl. 212—56.)

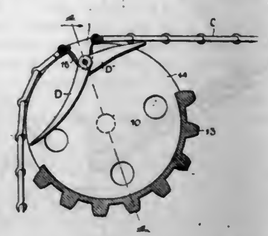


1. In a device of the class described, a supporting standard, a mast mounted for rotation in said standard, a boom device including vertically directed webs, a strap member connected to said boom device at its upper edge and encompassing said mast, stop members connected to said boom at its lower edge and bearing against said mast, and a stop collar adjustable upon said mast and engaging said boom.

2. In a device of the class described, a supporting standard, a mast supported by said standard, a boom formed of L-bars connected by their webs, a strap device connected to the upper webs of said boom and rotatively engaging said mast, brace members connected to the lower webs of said boom below said strap device and bearing against said mast, and a stop collar adjustable upon said mast and engaged by said braces.

1,213,604. SHEAF-HOIST. EDGAR EBERLY and WILLIAM G. FETROW, Mechanicsburg, Pa. Filed July 28, 1916. Serial No. 111,820. (Cl. 193—8.)

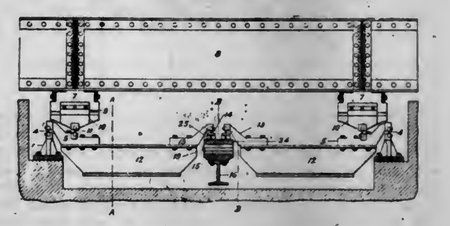
1. In an apparatus of the character described, the combination of a sprocket chain having carrier fingers, pulleys for the chain guiding the same in paths at angles to each other, so that one run of the chain forms a salient, and a pulley mounted at the salient in position to receive the chain with the fingers thereof disposed toward the pulley, said pulley having an interior space to accommodate a carrier finger and an opening leading from the periphery to said space, co-acting members on the pulley at the interior and on the said chain at the base of the finger to effect driving engagement between the pulley and chain, and sprocket teeth on the pulley for a portion only of the periphery thereof, the periphery at the said opening being untoothed.



2. The herein described sprocket pulley for use with a carrier chain having fingers, said pulley having an interior space to receive a carrier finger, an opening leading from the periphery to the space for the entrance and escape of the finger, means on the pulley at the interior adapted to effect driving engagement between the pulley and the chain at the base of a finger, and sprocket teeth on the pulley for a portion of the periphery thereof adapted to engage the chain links.

3. A sprocket pulley for drive chains having sprocket teeth for a portion of the periphery of the pulley adapted to engage chain links, said pulley having a space within the pulley to receive carrier members on the chain and having a peripheral opening leading to said space, said pulley at the interior thereof having means to engage the chain independently of the sprocket teeth.

1,213,605. RAILROAD-TRACK SCALE. ALBERT HAMILTON EMERY, Stamford, Conn. Filed Dec. 31, 1915. Serial No. 69,666. (Cl. 73—121.)



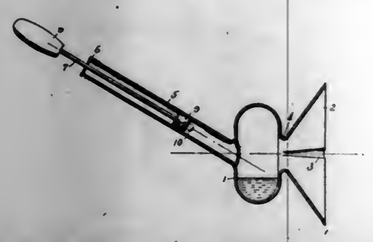
1. In a plate-fulcrum scale, a primary lever having a fixed plate-fulcrum, a secondary lever, a loading block therefor, a plate fulcrum securing said block to its lever, a plate fulcrum secured to the transmitting end of said primary lever and a roller bearing between said transmitting fulcrum and said loading block.

2. In a plate-fulcrum scale, a lever, a loading block and a plate-fulcrum therefor, a pair of similar levers transmitting loads to said loading block, transmitting plate-fulcrums secured to said similar levers, and rolling bearings between said loading block and said transmitting plate-fulcrums.

3. In a scale, a lever, a loading block therefor, a plate-fulcrum securing together said lever and loading block, a pair of primary levers, plate-fulcrums secured to said primary levers and rollers between the last named plate-fulcrums and said loading block.

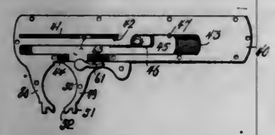
4. In a plate-fulcrum scale, two parallel pairs of first levers which receive their loads from the platform of the scale, two second levers placed at right angles to said first levers, a single third lever at right angles to said second levers, a loading block, a plate-fulcrum securely attached to said loading block and to said third lever, plate-fulcrums secured to the inner ends of said second levers, and rollers between said second lever fulcrums and said loading block.

1,213,606. BREAST-PUMP. JAMES TUCKERMAN EMOTT, Morristown, N. J., assignor to Puritan Chemical Company, a Corporation of Massachusetts. Filed Sept. 9, 1912. Serial No. 719,397. (Cl. 128—4.)



A breast pump comprising a receptacle of spheroidal shape, a funnel-shaped mouthpiece projecting outwardly from one side thereof, and an imperforate pump barrel extending from the opposite side thereof, the axes of said receptacle and mouthpiece being co-incident, and the pump barrel communicating with said receptacle at its center of curvature, all of said parts being formed integral from a single piece of glass, and the axis of the pump barrel being disposed at an angle to the axes of the mouthpiece and receptacle, whereby, when said receptacle is held substantially level, the pump barrel extends in such a direction that the pump may be conveniently manipulated.

1,213,607. RING AND FINGER GAGE. MONROE ENGELSMAN, New York, N. Y. Filed Apr. 3, 1912. Serial No. 688,244. (Cl. 33—178.)



1. In a gage of the character described the combination of a plate having a pair of scales formed thereon and a stationary jaw formed therewith, a movable jaw coacting with the stationary jaw, a pointer bar extending from the movable jaw, a pointer on said bar coacting with one of said scales, a rack formed with said bar, a pivot pivoted in said plate, a pinion fastened to said pivot and meshing with said rack, a gear on said pivot, a reciprocating pointer bar in the gage, a rack formed with the latter meshing with said gear and a pointer extending from the second bar for the other scale.

2. In a gage of the character described the combination of a plate having a pair of scales formed thereon and a stationary jaw formed therewith, the said stationary jaw having a finger gaging edge and a ring gaging edge, a movable jaw coacting with the stationary jaw and having a finger gaging edge and a ring gaging edge, a pointer bar extending from the movable jaw for one of said scales, a second pointer bar in the gage for the other scale, gearing interposed between the two pointer bars to move simultaneously with the movements of the movable jaw and means to lock the movable jaw in operative position.

3. In a gage of the character described the combination of a top plate with a pair of scales formed thereon, and a rear plate, a second and third plate, each with a slot, interposed between said top and rear plates, all of said plates registering with each other, a stationary jaw extending from one end of each of said plates, means to clamp said plates together, a pointer bar having a rack movably located in the slot formed in the second plate coacting with one of the scales on the top plate, a jaw extending from said bar, a pointer bar having a rack located in the slot in the third plate coacting with the second scale on the top plate, a pivot extending through the gage, a pinion and a gear fastened to said pivot, the pinion meshing with the rack of the pointer bar having the movable jaw and the gear meshing with the rack of the other pointer bar, a screw supported in the movable jaw, a handle on the screw located over the top plate and a washer interposed between said handle and the said top plate to lock the movable jaw in position.

4. In a gage of the character described the combination of a top plate with a pair of scales formed thereon and a stationary jaw formed therewith, the latter having a gaging edge, a movable jaw coacting with the stationary jaw and having a gaging edge, a pointer bar extending from the movable jaw for one of said scales, a second pointer bar in the gage for the other scale, gearing interposed between the two pointer bars to move them simultaneously with the movements of the movable jaw and means to lock the movable jaw in operative position.

5. In a gage of the character described the combination of a stationary jaw having a curved inner gaging edge and an outer gaging edge, a line perpendicular to the longitudinal axis of the gage tangent to the curved inner gaging edge being coincident with said outer gaging edge, the said gaging edges being correlative to each other, and a movable jaw coacting with the stationary jaw and having a curved inner gaging edge and an outer gaging edge, a line perpendicular to the longitudinal axis of the gage and tangent to the curved gaging edge of the movable jaw being coincident to the outer gaging edge of the movable jaw, the latter two gaging edges being correlative to each other.

[Claim 6 not printed in the Gazette.]

1,213,608. GREEN CHROMIUM COMPOUND AND A PROCESS OF MAKING SAME. GADIENT ENGI, ARMIN GROB, and FRITZ STRAUB, Basel, Switzerland, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Nov. 10, 1915. Serial No. 60,679. (Cl. 8—1.)

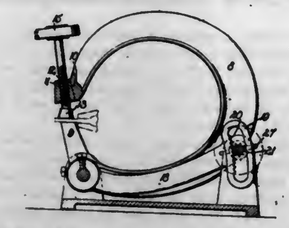
1. The described process for the preparation of a new chromium compound consisting in heating a mixture of aqueous solutions of a chromium salt and of the technical orthooxyazo dyestuff derived from 4:2:1-nitrodiazophenol and 1:8:3:6-aminonaphtholdisulfonic acid, separating the remaining inorganic residue by filtration, evaporating the filtered blue solution, separating from this latter by crystallization a red, difficultly soluble chromium compound, delivering the solution from this latter by filtration and isolating the new green chromium compound from its remaining blue-green solution.

2. The described process for the manufacture of a green chromium compound consisting in heating the mixture of aqueous solutions of a chrominum salt and of the pure orthooxyazo dyestuff derived from 4:2:1-nitrodiazophenol and 1:8:3:6-aminonaphtholdisulfonic acid, separating the remaining inorganic residue by filtration and isolating the new chromium compound from its thus obtained solution.

3. As a new article of manufacture the described green chromium compound of the orthooxyazo dyestuff derived from 4:2:1-nitrodiazophenol and 1:8:3:6-aminonaphtholdisulfonic acid, dissolving in concentrated sulfuric acid with a red-blue coloration and in alcohol with a blue-green coloration and dyeing from its green colored aqueous solution the animal fibers green tints of prominent fastness to light.

1,213,609. SKATE-HOLDER. JOSEPH HENRY FERODOWILL, St. Paul, Minn. Filed Oct. 6, 1916. Serial No. 124,051. (Cl. 51—7.)

1. In a skate holder, a bearing, a shaft journaled in the bearing, a grip secured to the shaft and having its terminals spaced apart, means on one of the grip terminals for pressing a skate runner against the other grip terminal, a bearing in the rear of the first bearing, an arm secured to the shaft and extending rearwardly, a rack on the arm, a stud journaled in the last mentioned bearing and having a gear at one side of the bearing meshing with the rack, and an operating wheel on the stud.

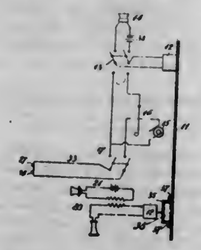


2. In a skate holder, a bearing, a shaft journaled in the bearing, a grip secured to the shaft and having its terminals spaced apart, means on one of the grip terminals for pressing a skate runner against the other grip terminal, a bearing in the rear of the first bearing, an arm secured to the shaft and extending rearwardly, a rack on the arm, a stud on the last mentioned bearing and having a gear at one side of the bearing meshing with the rack, an operating wheel on the stud beyond the rack, the stud having a threaded terminal extending at the other side of the last mentioned bearing, and a wing nut meshing with the threaded terminal for drawing the operating wheel inwardly to press the rack against the bearing for locking purposes.

3. In a skate holder, a plate having bearings, a shaft journaled in the bearings, two C-shaped grips spaced apart and secured adjacent their bottoms to the shaft, means on one side of the grip terminals for pressing a skate runner against the other grip terminals, an arm secured to the shaft and extending rearwardly, and means on the plate for securing the arm in adjusted position.

4. In a skate holder, a plate having bearings, a shaft journaled in the bearings, two C-shaped grips spaced apart and secured adjacent their bottoms to the shaft, means on one side of the grip terminals for pressing a skate runner against the other grip terminals, a bearing on the plate at the rear of the shaft, an arm secured to the shaft and extending rearwardly, a rack on the arm, a stud journaled in the last mentioned bearing and having a gear at one side of the bearing meshing with the rack, an operating wheel on the stud beyond the rack, the stud having a threaded terminal extending at the other side of the bearing, and a wing nut meshing with the threaded terminal for drawing the operating wheel inwardly to press the rack against the bearing for locking purposes.

1,213,610. DYNAMO-ELECTRIC MACHINERY. REGINALD A. FESSENDEN, Brookline, Mass., assignor to Submarine Signal Company, Portland, Me., a Corporation of Maine. Original application filed Jan. 29, 1913, Serial No. 744,793. Divided and this application filed Oct. 4, 1915. Serial No. 53,896. (Cl. 179—1.)



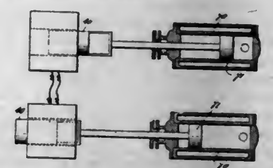
1. Apparatus for signaling by impulses comprising an oscillating dynamo, a source of electric power, a receiving apparatus, and means for energizing the magnete circuit of the dynamo to maintain a non-fluctuating flux therein both while sending and receiving signals.

2. Apparatus for signaling by periodic and speech-producing impulses comprising an oscillating dy. amo, a receiving apparatus, and means for maintaining a non-fluctuating magnetic flux in the magnetic circuit of said dynamo both while sending and while receiving signals, said means comprising a source of continuous current.

3. Apparatus for signaling by periodic and speech-producing impulses comprising an oscillating dynamo arranged so as to generate and be acted upon by compressional impulses of a liquid, and means for maintaining a non-fluctuating magnetic flux in the magnetic circuit during operation.

4. Apparatus for signaling by periodic and speech-producing impulses comprising an oscillating dynamo, a receiving apparatus, and means for maintaining the oscillating dynamo in a uniformly responsive condition for receptance during the act of transmission.

1,213,611. DYNAMO-ELECTRIC MACHINERY. REGINALD A. FESSENDEN, Brookline, Mass., assignor to Submarine Signal Company, Portland, Me., a Corporation of Maine. Original applications filed Jan. 29, 1913, Serial No. 744,793, and May 31, 1913, Serial No. 770,857. Divided and this application filed Oct. 4, 1915. Serial No. 53,895. (Cl. 172—237.)



1. Apparatus for generating electrical power, comprising a plurality of reciprocating engines and a plurality of reciprocating dynamos operatively connected to said heat engines, said reciprocating dynamos being electrically connected with each other and having substantially no self induction, being thereby maintained in synchronism.

2. Apparatus for generating alternating electrical power comprising a plurality of reciprocating engines and a plurality of reciprocating dynamos operatively connected to said engines, said reciprocating dynamos being electrically connected with each other and having substantially no self-induction, being thereby maintained in synchronism, and the frequency of the currents rendered independent of any natural period of the engine.

3. Apparatus for generating electrical power comprising a plurality of reciprocating engines and a plurality of reciprocating alternating dynamos operatively connected to said engines, said reciprocating dynamos being electrically connected with each other and having substantially no self-induction, being thereby maintained in synchronism, and the frequency of the currents generated rendered independent of any natural period of the engines.

4. Apparatus for generating electrical power comprising a plurality of engines and a plurality of reciprocating alternating dynamos operatively connected to said engines, said reciprocating dynamos being electrically connected with each other and having substantially no self-induction, being thereby maintained in synchronism.

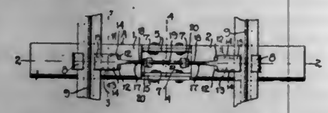
5. Apparatus for generating alternating electrical power comprising a plurality of engines and a plurality of reciprocating dynamos operatively connected to said engines, said reciprocating dynamos being electrically connected with each other and having substantially no self-induction, being thereby maintained in synchronism.

[Claims 6 to 8 not printed in the Gazette.]

1,213,612. METALLIC RAILWAY-TIE. FRANKLIN EDWIN FRENCH, Princeton, Ind., assignor of one-half to Oliver M. Case, Otwell, Ind. Filed Aug. 23, 1916. Serial No. 116,498. (Cl. 238—5.)

1. A railway tie of the character described, comprising complemental sections formed at their inner ends with

overlapping arms, means for adjustably connecting said arms at different extensions, for the purpose specified, the sections being formed with rail supporting surfaces and at the outer ends thereof with undercut shoulders extending transversely, rail engaging plates slidable upon and retained on said rail supporting surfaces and formed with lips for engagement with the inner base flanges or rails, and means for moving said lips toward and away from each other.



2. A metallic railway tie consisting of complemental hollow sections closed at their ends and formed intermediate of their ends with cross braces at their bottoms, the sections being further formed at their adjoining ends with overlapping side arms, each formed with a plurality of bolt holes, bolts adapted to extend through said holes whereby the sections may be held together in different adjustments lengthwise of the tie, the sections being formed with rail supporting surfaces, and means for holding the rails on said surfaces.

3. A tie of the character described comprising complemental sections each formed with a transversely extending undercut shoulder designed to engage the outer base flange of a track rail and with a rail supporting surface extending inwardly from said shoulder, the side edges of said rail supporting surfaces being provided with longitudinal recesses forming longitudinally extending flanges, rail engaging plates movable on said rail supporting surfaces and formed with downwardly and inwardly turned side flanges engaging the flanges of said surfaces, the said plates being formed at their inner ends with threaded stems and at their outer ends with beveled lips adapted to engage the inner base flange of the rails, and a turn buckle engaging the threaded stems, as and for the purpose set forth.

4. A tie of the character described, comprising complemental sections formed at one end with longitudinally extending side arms, said side arms being of a width less than the height of the sections, and the arms being arranged in overlapping relation to each other, means for holding said arms connected together, the sections being formed with rail supporting surfaces, rail engaging plates movable upon said surfaces and formed at their adjoining ends with longitudinally extending threaded stems extending over the space between and above said arms, and a turn buckle receivable in said space and engaging said stems, for the purpose specified.

1,213,613. RECORD OF LIGHT, SOUND, AND ANALOGOUS PHENOMENA AND PROCESS AND APPARATUS FOR PRODUCING THE SAME. CHARLES EDGAR FRITTS, deceased, Oneonta, N. Y., by Josephine H. Fritts, administratrix, Oneonta, N. Y., assignor, by mesne assignments, to John D. Myers, Philadelphia, Pa. Original application filed Oct. 22, 1880, Serial No. 19,313. Divided and this application filed June 22, 1912. Serial No. 705,346. (Cl. 274—46.)



1. The combination with a speaking diaphragm, of a movable photo-sensitive body, a source of light adapted to throw a beam on said body, and means operated by said diaphragm for controlling the lateral position of said beam on said body.

2. The method of making a sound record which consists in photographically tracing on a sensitive surface a sinuous line of uniform width in accordance with sound pulsations.

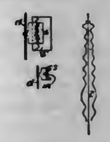
3. The method of making a sound record which consists in photographically tracing on a sensitive surface a sinuous line of uniform width in accordance with sound pulsations, and then producing by the use of said photographically produced record commercial sound records capable of reproducing the sound.

4. The method of making a sound record which consists in photographically tracing on a sensitive surface a sinuous line of uniform width in accordance with sound pulsations, so treating said record as to change the relative elevation of said line and the adjacent surface of the record.

5. The method of making a sound record which consists in photographically tracing on a sensitive surface a sinuous line of uniform width in accordance with sound pulsations, so treating said record as to change the relative elevation of said line and the adjacent surface of the record and making from said record commercial sound records capable of reproducing the sound.

[Claims 6 to 17 not printed in the Gazette.]

1,213,614. RECORD OF PULSATIONS OF SOUND AND ANALOGOUS PHENOMENA AND PROCESS AND APPARATUS FOR PRODUCING THE SAME. CHARLES EDGAR FRITTS, deceased, Oneonta, N. Y., by Josephine H. Fritts, administratrix, Oneonta, N. Y., assignor, by mesne assignments, to John D. Myers, Philadelphia, Pa. Original application filed Oct. 22, 1880, Serial No. 19,313. Divided and this application filed June 22, 1912. Serial No. 705,347. (Cl. 274—46.)



1. The combination with a source of light rays, of a photo-sensitive surface, means for moving said surface across said light rays, and means for controlling the intensity of said rays reaching said surface at different points longitudinally of the surface by and in accordance with sound waves whereby a record varying in density longitudinally will be produced.

2. A sound record varying in density longitudinally in accordance with sound waves.

3. A photographically produced sound record having a coating or surface varying in density longitudinally of the record in accordance with sound waves.

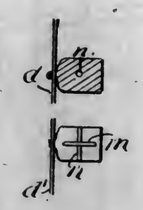
4. A photographically produced sound record having a coating or surface of substantially uniform width varying in light transmitting capacity at different points longitudinally of the record in accordance with sound waves.

5. A sound record consisting of a record blank having a record thereon of substantially uniform width varying in light transmitting capacity longitudinally of the record in accordance with sound pulsations and capable of reproducing the sound.

[Claims 6 to 15 not printed in the Gazette.]

1,213,615. APPARATUS FOR MAKING SOUND-RECORDS. CHARLES EDGAR FRITTS, deceased, Oneonta, N. Y., by Josephine H. Fritts, administratrix, Oneonta, N. Y., assignor, by mesne assignments, to John D. Myers, Philadelphia, Pa. Original application filed Oct. 22, 1880, Serial No. 19,313. Divided and this application filed June 22, 1912. Serial No. 705,349. (Cl. 274—5.)

1. In a device for producing sound records, the combination with a speaking diaphragm, of a photo-sensitive surface, means for moving said surface, means including a shutter for cutting off light from said surface except through a single light opening, and means operated by said diaphragm for vibrating said shutter and said light opening in accordance with sound waves.



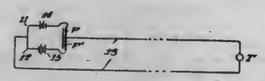
2. In a device for making sound records the combination with a photo-sensitive surface, of means for moving said surface, means including a movable shutter so constructed as to permit a single spot of light to reach said surface, and means for vibrating said shutter in accordance with sound pulsations whereby said spot will vibrate on said surface.

3. In a device for making sound records the combination with a photo-sensitive surface, of means for moving said surface, means including a movable shutter having a light opening therein for permitting a single spot of light to reach said surface, and means for vibrating said shutter and spot transversely of the line of motion of said surface by and in accordance with sound pulsations.

4. Means for recording sound waves comprising a movable sensitized surface, means for moving said surface, an inclosure therefor provided with an opening, a shutter provided with a light opening and located in front of the opening in said inclosure, a receiving diaphragm, and devices intermediate of said diaphragm and shutter whereby the latter is operated in accordance with the vibrations of the diaphragm.

5. Means for recording sound waves comprising a movable sensitized surface, means for moving said surface, an inclosure therefor provided with an elongated light opening for admitting light to said surface, a shutter extending across said opening and provided with an elongated light opening extending across said first-mentioned opening, and means for moving said shutter longitudinally of said first-mentioned opening in accordance with sound pulsations.

1,213,616. MEANS FOR PRODUCING, CONTROLLING, AND UTILIZING ELECTRIC CURRENTS. CHARLES EDGAR FRITTS, deceased, Oneonta, N. Y., by Josephine H. Fritts, administratrix, Oneonta, N. Y., assignor, by mesne assignments, to John D. Myers, Philadelphia, Pa. Original application filed Oct. 22, 1880, Serial No. 19,313. Divided and this application filed June 22, 1912. Serial No. 705,351. (Cl. 179—83.)



1. The combination with two sources of electricity and a circuit connected thereto, branch conductors in said circuit, each having one of said sources oppositely connected therein, and a conductor the resistance of which is affected by light included in each branch circuit.

2. The combination with two sources of electricity and a circuit connected thereto, branch conductors in said circuit, each having one of said sources oppositely connected therein, each branch conductor including a selenium cell.

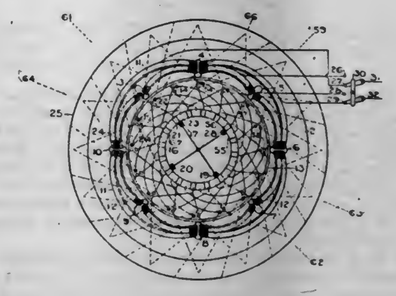
3. The combination with a source of electricity and a circuit connected thereto, two branch conductors in said circuit each including an oppositely connected section of said source of electricity and a conductor the resistance of which is affected by light, and a translating device affected by the relative currents flowing in said branch conductors.

4. The combination with a source of electricity and a circuit connected thereto, of branch conductors in said circuit each including an oppositely connected section of said source of electricity and a selenium section, said selenium sections being adjacently mounted, and means for supplying variable light to said selenium sections.

5. The combination with sources of electricity and a circuit associated therewith, of branch circuits connecting opposite poles of said sources of electricity to one terminal of said circuit, a selenium conductor in each branch circuit, and means for supplying varying light to said selenium conductors.

[Claims 6 to 10 not printed in the Gazette.]

1,213,617. ALTERNATING-CURRENT MOTOR. VALÈRE ALFRED FYNN, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 12, 1915. Serial No. 20,716. (Cl. 172—276.)



1. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a commuted winding, elements of a second rotor winding interconnected at one end, and means for interconnecting the other ends of said elements.

2. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a commuted winding, elements of a second rotor winding interconnected at one end, and automtic means for interconnecting the other ends of said elements when a speed has been attained approximating the synchronous speed for one of the available numbers of stator poles.

3. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a commuted winding, elements of a second rotor winding interconnected at one end, and means for interconnecting the other ends of said elements and short-circuiting the commuted winding at a plurality of points.

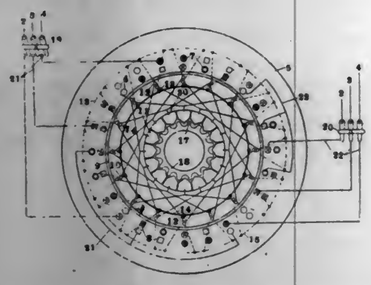
4. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a commuted winding, elements of a second rotor winding interconnected at one end, and single means for interconnecting the other ends of said elements and short-circuiting the commuted winding at a plurality of points.

5. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a commuted winding and brushes positioned to cause it to coöperate with a number of stator poles less than the largest number available, elements of a second winding on the rotor, and automatic means for interconnecting said elements to form a squirrel

cage winding when a speed has been attained approximating the synchronous speed for one of the available numbers of stator poles.

[Claims 6 to 13 not printed in the Gazette.]

1,213,618. ALTERNATING-CURRENT MOTOR. VALÈRE ALFRED FYNN, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 12, 1915. Serial No. 20,717. (Cl. 172—279.)



1. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a pole winding and a winding inductively responsive to any number of available stator poles, and means for rendering the rotor pole winding inductively responsive to any available number of stator poles when a speed has been attained approximating the synchronous speed for one of the available number of stator poles.

2. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a pole winding and a squirrel cage winding, and means for converting the rotor pole winding into a squirrel cage winding when a speed has been attained approximating the synchronous speed for the largest number of stator poles.

3. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a permanently short-circuited pole winding of low resistance and a squirrel cage winding of higher resistance, and means for converting the rotor pole winding into a squirrel cage winding when a speed has been attained approximating the synchronous speed for the largest number of stator poles.

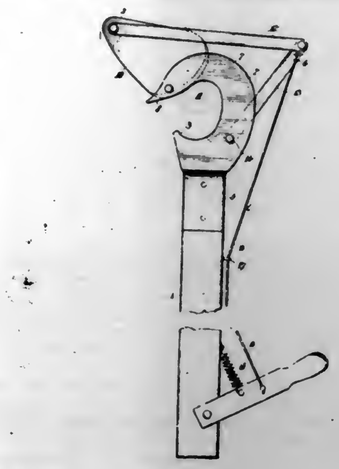
4. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a pole winding and with another winding, the elements of said pole winding consisting of permanently short-circuited coils all interconnected at one end and means for connecting the other ends of said coils after the motor has started.

5. In a dynamo electric machine, a rotor provided with a pole winding, the elements of which consist of permanently short-circuited coils all interconnected at one end, and means for interconnecting the other ends of said coils.

[Claims 6 to 10 not printed in the Gazette.]

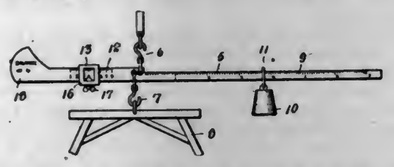
1,213,619. PRUNING IMPLEMENT. CRISTIE F. GALBREATH, Hartford, Mich. Filed Oct. 16, 1915. Serial No. 56.274. (Cl. 30—11.)

In a device of the class described, a shank having spaced parallel arms forming an elongated limb receiving loop having an entrance between its ends, said loop being disposed above the shank and in the same vertical plane to provide a limb support upon the end of the shank at the lower end of the loop, incline guide shoulders upon the free ends of the arms in advance of the entrance to the loop, a blade to be passed through said loop mounted to



turn above said shoulders, and means for turning said blade.

1,213,620. SCALE-BEAM. THOMAS WILLIAM GATTIS, Lohn, Tex., assignor of one-half to Samuel W. Hughes, Brady, Tex. Filed Sept. 17, 1912. Serial No. 720,835. (Cl. 73—30.)

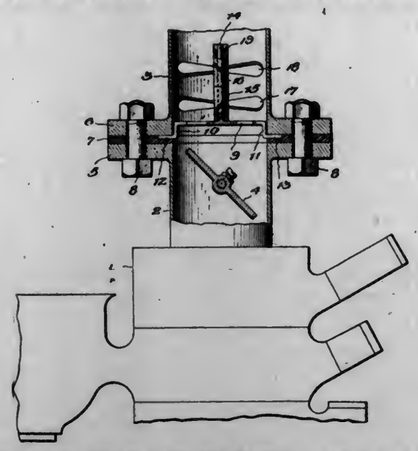


In a scale for weighing bales of cotton, a steelyard having a short arm graduated for a portion of its length and between its ends, a solid scale weight adjustable in the long arm of the steelyard, a counter-balance weight on the short arm of said yard having an indicating hand and movable over said graduations, an enlargement on the steelyard at one end of the short arm having indicia thereon indicating the graduation with which said hand must register to insure the balancing of the yard when the scale weight is at the meeting ends of the arms, and means on the counterbalance weight for locking the same against movement.

1,213,621. CARBURETER ATTACHMENT. LA ROUX B. GIDDENS, Tampa, Fla. Filed Aug. 16, 1915. Serial No. 45,783. (Cl. 48—180.)

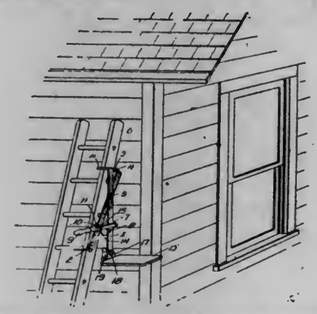
1. In a device of the character described, the combination with an intake pipe having flanged adjacent sections, of a single bar, integral flanges bent from said bar and fitting in one pipe section, integral lugs bent outwardly from said flanges and extending between the flanges of the pipe sections, and a rotary mixing device mounted on said bar, substantially as described.

2. In a device of the character described, the combination with an intake pipe having flanged adjacent sections, of a single straight bar fitted diametrically across one pipe section and having its ends bent to provide flanges frictionally gripping the interior walls of said section, the extremities of said bar beyond the flanges being turned outwardly to constitute lugs engaging between the flanges of the pipe sections, a spindle mounted on said bar, and a pair of fans journaled on said spindle,



and having reversely-disposed vanes for rotation in opposite direction under the influence of the incoming charge, substantially as described.

1,213,622. LADDER-BRACKET. CONRAD E. GIDLOF, Homestead, Fla. Filed Apr. 21, 1916. Serial No. 92,684. (Cl. 228—26.)

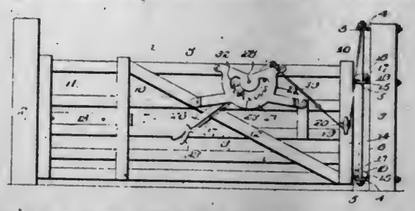


1. A shelf support comprising a clamp including shanks pivotally connected to each other adjacent their ends, jaws formed on each of the shanks adjacent their pivoted connection, a lever pivotally mounted on one of the shanks and having a cam engagement with the other shank to move the jaws to clamping position, means carried by the shanks for locking the jaws in clamping position, and a shelf carrying bracket adjustably mounted on one of the shanks.

2. A support comprising a clamp including shanks pivotally connected together, angularly disposed jaws formed on each of the shanks, a lever pivotally mounted upon one of the shanks and having its free end formed in a slot to receive the longitudinal edge of the other shank whereby upon movement of the lever the said shank will be moved into engagement with the remaining shank, means carried by one of the shanks and adjustably mounted in the remaining shank to lock the lever against movement in one direction, and a shelf supporting bracket carried by one of the shanks.

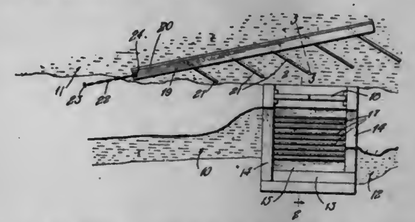
1,213,623. GATE. ROY GILES, Assumption, Ill. Filed Aug. 29, 1916. Serial No. 117,516. (Cl. 39—14.)

In combination, a gate post, a gate hingedly and slidably connected with said post, a rack frame connected with one side of the gate and having teeth thereon, a bracket connected with the other side of the gate and alining with said rack frame, a shaft mounted to turn in said bracket and rack frame, spaced levers mounted on said shaft, a yoke connecting said levers, a flexible connection between one of said levers, the gate, and said



post, a rock shaft carried by said levers, a dog on said rock shaft, a spring connected with said shaft and yoke and adapted to normally hold said dog in engagement with the teeth on the rack frame, and means for releasing said dog from engagement with said teeth connected with the rock shaft and said levers.

1,213,624. IRRIGATION-DITCH GUARD. CHAMBERS E. GLENN, Terra Alta, W. Va. Filed Mar. 1, 1916. Serial No. 81,504. (Cl. 61—5.)



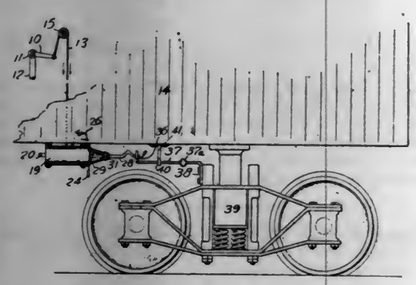
1. A fish guard comprising a substantially circular body having an upstanding wall and having an inlet and a spill-way outlet, the wall being provided with an opening intermediate the inlet and spillway outlet, baffle plates positioned in the wall openings and having their inner ends conforming to the contour of the wall, and a paddle wheel rotatably mounted in the circular body and having its paddles extending in operative relation to the inlet and outlet and openings in the upstanding wall.

2. A fish guard including a floating brush sweep comprising a carrying bar, a cable for loosely connecting one end of the bar with the bank of a stream when the bar is floating in the stream, and inclined fins extending from said bar and extending transversely thereof beyond one side of the bar and increasing in length toward the free end thereof, the fins being positioned between the bar and the bank of the stream.

1,213,625. AUTOMATIC TRUCK-CONTROLLED TRAIN-STOP. LELAND ELLSWORTH GLENN, Greensboro, N. C. Filed Apr. 28, 1916. Serial No. 94,179. (Cl. 188—2.)

1. In an automatic train stop of the character described, the combination with a conductor's emergency valve, of a flexible connection secured at one end thereto, a winding drum to which the other end of said connection is secured, a shaft upon which said drum is fast, a casing in which said shaft is journaled, a spring coiled about the shaft and secured at one end thereto and at its opposite end to the casing, said shaft having one end thereof extended beyond the casing and squared for the reception of a turning implement, a notched head secured to the opposite end of the shaft within the casing, a lever pivoted at one end to a part of the casing and having a dog rigid therewith and movable to engage the notched head, a spring normally acting upon the said lever to

force the same away from the notched head to released position, said lever having an extension provided with a concaved end, a controlling arm having its inner end rounded for engagement within the concaved end of the said extension to normally hold the lever in engagement with the notched head and against the tension of its spring, said controlling arm having an intermediate universally movable fulcrum in connection with the casing and having spaced angularly bent portions adjacent its outer end, a ring encircling the outer portion of the said controlling arm and disposed between the angular portions of the said arm, and a truck carried bracket supporting the said ring for the purpose described.



2. In an automatic train stop of the character described, a car carried actuating mechanism including the combination with a conductor's emergency valve, of a flexible connection secured at one end thereto, a winding drum to which the other end of said connection is secured, a shaft upon which said drum is fast, a casing in which said shaft is journaled, a spring coiled about the shaft and secured at one end thereto and at its opposite end to the casing, said shaft having one end thereof extended beyond the casing and squared for the reception of a turning implement, a notched head secured to the opposite end of the shaft within the casing, a lever pivoted at one end to a part of the casing and having a dog rigid therewith and movable to engage the notched head, a spring normally acting upon the said lever to force the same away from the notched head to released position, said lever having an extension provided with a concaved end, a controlling arm having its inner end rounded for engagement within the concaved end of the said extension to normally hold the lever in engagement with the notched head and against the tension of its spring, said controlling arm having an intermediate universally movable fulcrum in connection with the casing and also having angularly bent portions adjacent its outer end with a straight portion between the said angularly bent portions, a ring encircling the said straight portion between the angularly bent portions whereby movement of the ring in any direction will cause engagement of the same with the controlling arm, and a truck carried bracket supporting said ring for the purpose described.

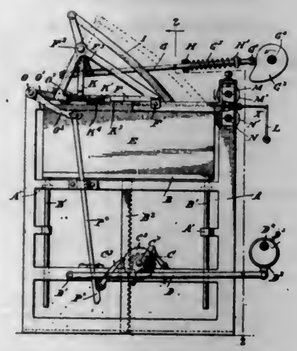
3. In an automatic train stop of the character described, the combination with a conductor's emergency valve, of a flexible connection attached to the same, a spring actuated winding drum to which the opposite end of said connection is secured, a lever normally controlling movement of the drum, a spring for releasing the lever from the drum, a controlling arm normally engaging the lever and having an intermediate universally movable fulcrum, and provided adjacent its outer end with spaced angularly bent portions, and a truck carried ring encircling the outer portion of the said controlling arm and disposed thereon between the angularly bent portions of the arm, for the purpose described.

4. In an automatic train stop of the character described, the combination with a conductor's emergency valve, of a flexible connection attached to the same, a spring actuated winding drum to which the opposite end of said connection is secured, a lever normally controlling movement of the drum, a spring for releasing the lever from the drum, a casing in connection with which said drum and its parts and said lever are mounted, a controlling arm having an intermediate ball and socket connection with a portion of the frame and having its inner end normally engaging the lever to hold the latter in connection with the winding drum, said controlling arm having spaced angularly bent portions adjacent its outer end, and a truck carried ring encircling the outer portion of the controlling arm between the angular portions thereof.

5. In an automatic train stop of the character described, emergency valve actuating means, means for holding the first named means normally inactive, including a spring actuated lever having a projection provided with a concaved end, and a controlling arm having a universally movable intermediate fulcrum and having a rounded inner end normally seated in the concaved end of the said projection, said arm being provided with spaced angularly bent portions adjacent its outer end, and a truck carried ring encircling the outer portion of the said controlling arm and disposed between the angularly bent portions thereof, all for the purpose described.

[Claim 6 not printed in the Gazette.]

1,213,626. PAPER-FEEDING MACHINE. ALVIN P. GREENE, Watertown, N. Y. Filed Feb. 23, 1916. Serial No. 79,987. (Cl. 101—36.)

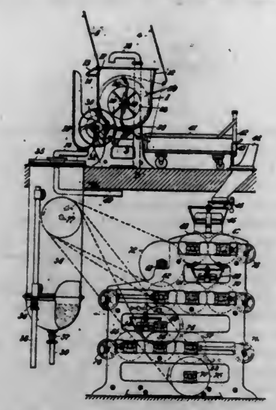


In a paper feeding machine, the combination with an elevator having a rack bar with a pinion meshing with the latter, a ratchet wheel for rotating the pinion, a pawl for imparting an intermittent movement to the ratchet wheel, a rock shaft with an arm projecting therefrom, a roller upon the latter and positioned in the path of the elevator, a longitudinally movable member, an arm fixed to the rock-shaft and to which one end of said member is pivoted, means for guiding the member, the latter having a widened portion near its free end, and an anti-friction wheel on the pawl against which said widened portion is adapted to contact as the elevator reaches its highest limit.

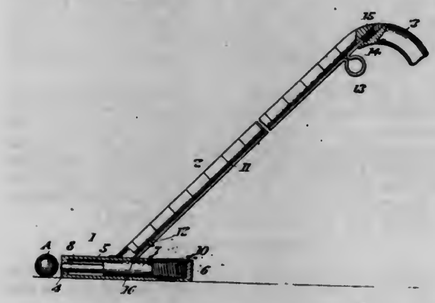
1,213,627. PROCESS FOR THE MANUFACTURE OF WHOLE-GRAIN BREAD. PAUL GROSS, Charlottenburg, Germany, assignor to Vollbrot Patent-Verwertungs-Gesellschaft, M. B. H., Berlin, Germany, a Firm. Filed Dec. 5, 1916. Serial No. 135,201. (Cl. 99—10.)

1. The process of making food products from grain in the presence of water at a temperature of about 60° centigrade to separate bran from the grain, disintegrating the docorticated grain, and working the product into dough for baking.

2. The process of making food products from grain consisting in heating the grain in the presence of water at a temperature of about 60° centigrade, removing the separated bran and suspended particles of starch by flotation from the decorticated grain kernels, disintegrating the latter in their moist condition, and working the product into dough for baking.



1,213,628. GAME DEVICE. GEORGE S. GUMAER, Coronado, Cal. Filed May 13, 1916. Serial No. 97,336. (Cl. 124—12.)



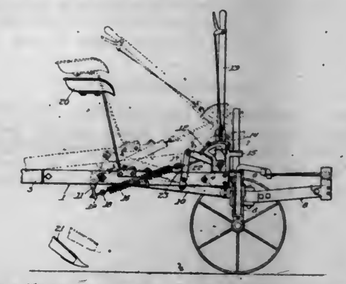
The herein described ground gun comprising a barrel, a spring actuated plunger in the barrel, having a tooth, a handle attached to the barrel and arranged at an angle thereto, a trigger wire mounted for longitudinal movement in guide devices on the handle and arranged to engage its outer end with the tooth of the plunger when the latter is retracted, and a spring to hold the trigger wire in engaged position.

1,213,629. CORN-HARVESTING MACHINE. CLINTON A. HAGADONE, Western Springs, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Oct. 9, 1913. Serial No. 794,237. (Cl. 21—204.)

1. In a harvesting machine, a draft member, a tongue truck slidably connected therewith, and means for raising the draft member relative to the truck, said means including a connecting link between the draft member and tongue truck, a control member, and a fulcruming link between said connecting link and control member.

2. In a harvesting machine, a draft member, a tongue truck, a connection between said truck and said draft member including a draft bar, a hand lever mounted upon said draft member, and a link connection between said hand lever and said draft bar acting as a fulcrum whereby said draft member may be raised or lowered relative to said truck.

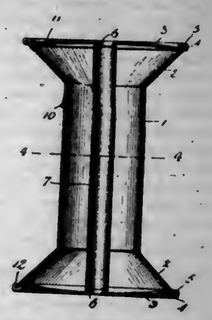
3. In a harvesting machine, a draft frame including forwardly extending members having a head secured to their front ends, a tongue truck including a vertically arranged standard, said head being slidably mounted upon said standard, a draft bar connecting said truck with said draft frame, a hand lever mounted upon said draft frame, and a link connection between said hand lever and said draft bar whereby said draft frame may be raised or lowered relative to said truck.



4. In a harvesting machine, a draft frame including forwardly extending members having a head secured to their front ends, a tongue truck including a vertically arranged standard, said standard being slidably mounted in said frame head, a draft bar pivotally connecting said truck and draft frame and disposed between the members of the latter, a lever mounted upon said draft frame, and a link connection between said lever and said draft bar whereby said draft frame may be raised or lowered relative to said truck.

5. In a harvesting machine, a draft frame including forwardly extending members having a head secured to their front ends, said head having forwardly projecting loop members spaced apart vertically and a toothed sector, a tongue truck including a vertically arranged standard slidably received by said loop members, a draft bar connecting said truck with said draft frame, a hand lever mounted upon said frame, a link connection between said hand lever and said draft bar whereby said draft frame may be raised or lowered relative to said truck, and a counterbalancing spring connecting said hand lever with said draft frame.

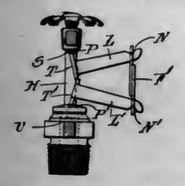
1,213,630. SPOOL. HARRY L. HALLIDAY, Elmira, N. Y. Filed July 1, 1916. Serial No. 107,096. (Cl. 242—123.)



1. A sheet metal spool comprising a tubular body with flared head flanges formed integrally therewith, said body and flanges being diametrically split into two sections the body forming parts of which are provided at their meeting edges with interlocking flanges, outwardly dished head plates having their outer margins bent around the edges of said head flanges and also punched inwardly to provide inwardly extending tubular bosses, and a central tubular head plate spreader fitting at its extremities around said bosses.

2. A sheet metal spool comprising a tubular body with flared head flanges formed integrally therewith, said body and flanges being diametrically split into two sections the body forming parts of which are provided at their meeting edges with interlocking flanges, outwardly dished head plates having their outer margins bent around the edges of said head flanges and also punched inwardly to provide inwardly extending tubular bosses, and a central tubular head plate spreader fitting at its extremities around said bosses, the body and head plates being formed with outwardly struck thread grips, and the bent margins of the head plates being cut away to form thread receiving notches.

1,213,631. AUTOMATIC SPRINKLER. WILBERFORCE BEECHER HAMMOND, Boston, Mass., assignor to Pierce-Hammond Automatic Sprinkler & Heating Company, New Bedford, Mass., a Corporation of Massachusetts. Filed Apr. 19, 1915. Serial No. 22,295. (Cl. 169—5.)



1. In an automatic sprinkler of the type indicated, a pair of valve engaging toggle-lever members, each comprising a toggle portion and a lever arm, the lever portion proceeding from one side of and extending at an acute angle to the toggle portion.

2. In an automatic sprinkler of the type indicated, a pair of valve engaging toggle-lever members, each comprising a toggle portion and a lever arm made of an integral piece of sheet metal, the lever portion bent from one side of and standing at an acute angle to the toggle portion.

3. In an automatic sprinkler of the type indicated, a pair of interchangeable valve engaging toggle-lever members, each comprising a toggle portion and a lever arm made of an integral piece of sheet metal, the lever portion bent from one side of and standing at an acute angle to the toggle portion.

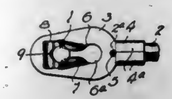
4. In an automatic sprinkler of the type indicated, a pair of valve engaging toggle-lever members, each comprising a toggle portion and a lever arm made of an integral piece of sheet metal, the lever portion standing at an acute angle to the toggle portion, the toggle portions of each toggle lever member having a groove cut in one end, to engage with an edge of a similar groove cut in the end of the toggle portion of the other member.

5. In an automatic sprinkler of the type indicated, a pair of interchangeable valve engaging toggle-lever members, each comprising a toggle portion and a lever arm made of an integral piece of sheet metal, the lever portion standing at an acute angle to the toggle portion, the toggle portion of each toggle lever member having a groove cut in one end, to engage with an edge of a similar groove cut in the end of the toggle portion of the other member.

[Claims 6 to 9 not printed in the Gazette.]

1,213,632. ELECTRICAL CONNECTOR. WILLIAM P. HAMMOND, Passaic, N. J. Filed Mar. 3, 1916. Serial No. 81,820. (Cl. 173—269.)

1. In combination with a threaded binding post, an electrical connector formed from a single plate and provided with a slot adapted to slidably receive the binding post, said plate being provided with integral resilient gripping portions at the edges of said slot for positively engaging the threads of said post with pressure to establish a good electrical connection and to prevent the plate from being removed from the post in the direction of its axis.



2. In combination with a threaded binding post, an electrical connector formed from a single plate and provided with a slot adapted to receive the binding post, one portion of said slot being of such a size as to slip freely thereover, while another portion of the slot is provided at its edges with integral resilient gripping portions adapted to positively engage the threads of the binding post to prevent the connector from being removed therefrom in the direction of its axis.

3. An electrical connector for threaded binding posts, including a single plate formed with a slot to receive the binding post and having a seat at one end thereof, the sides of the slot being formed with deflected integral resilient portions adapted to positively engage the threads of the binding post and coöperate with the before mentioned seat to lock the plate in position upon the binding post and prevent removal of the plate in the direction of the axis of the binding post.

4. An electrical connector for threaded binding posts, including a single plate formed with a slot having a seat at one end thereof, one portion of the slot being enlarged so as to slip freely upon the binding post, while the portion of the slot adjacent the seat is provided with deflected integral resilient gripping portions adapted to positively engage the threads of the binding post and coöperate with the before mentioned seat to lock the plate in position upon the binding post and prevent removal therefrom in the direction of the axis of the binding post.

5. An electrical connector for threaded binding posts, including a single plate formed with a slot to receive the binding post and having a seat at one end thereof, spaced resilient gripping portions being provided at the edges of the slot adjacent the seat for coöperation with each other and the seat to positively engage the threads of the binding post at three points in the periphery thereof.

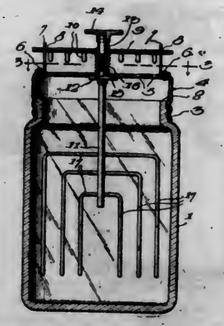
[Claims 6 to 8 not printed in the Gazette.]

1,213,633. WAGON END-GATE. JAMES G. HASTINGS, Ord, Nebr. Filed Mar. 16, 1916. Serial No. 84,648. (Cl. 21—21.)



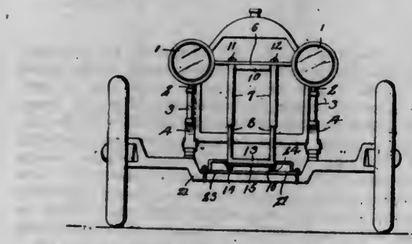
The combination with spaced side members provided with stops, of an end gate, a cleat secured to one of the side members in spaced relation to its stop, a plate secured to the cleat with its inner edge directed laterally into the space between the cleat and stop and then rebent and directed at an angle thereto to engage within a groove provided in the cleat, a plate secured to one end of the gate and having the free edge portion thereof curved outwardly from the plane of the gate and terminally rebent to provide a hook adapted to detachably embrace the rebent portion of the first named plate, and means for moving the gate transversely of the side members, to cause the rebent portion of the first named plate to ride upon the curved portion of the second named plate and force the adjacent gate end against the stop, the free edge portion of the second named plate being simultaneously moved to frictionally lock against the angular portion of the first named plate, said means additionally serving to clamp the other end of the gate against the related stop.

1,213,634. CONDIMENT-HOLDER. JOE HAVASSY, Miami, Ariz. Filed Jan. 17, 1916. Serial No. 72,574. (Cl. 65—57.)



A device of the class described comprising a perforated cap having a central aperture therein and adapted to be secured to the open end of a receptacle, a plate above said cap and adapted to move vertically toward and away from the same, said plate being provided with a central aperture alined with the aperture in said cap and with a plurality of spaced apertures, ears rising rigidly from the cap and received slidably in said spaced apertures, a rod extending through said alined apertures and revolubly mounted therein, a stop on said rod above said plate, an additional stop on said rod below the cap, an agitator carried by said rod and adapted to be disposed within said receptacle, punches depending from the lower face of said plate and adapted to be projected through the perforations in said cap when the plate is moved to its lowermost position, and a coil spring surrounding said rod between said plate and cap for normally retaining said plate in its uppermost position.

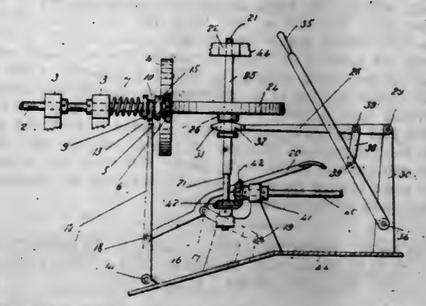
1,213,635. DIRIGIBLE HEAD-LAMP. JAMES M. HEADEN, Hamer, S. C. Filed Oct. 25, 1916. Serial No. 127,651. (Cl. 240—62.)



The combination with a pair of headlamps mounted to turn on substantially vertical axes, of arms extending rearwardly from said lamps, a coupling rod connecting said arms and serving to equalize the turning movement of the lamps, a lamp actuating member comprising a base, clamping means securing said base to the steering arm connected rod, substantially parallel bars extending from said base, a cross head at right angles to said bars and parallel to said base, a slotted guide fastened to the front axle and acting as guiding and supporting means for the lamp actuating member, a plurality of post sections extending upwardly from said cross head, and complemental post sections fixedly attached to said coupling rod and having tubular lower portions which slidingly receive the lower sections of said posts.

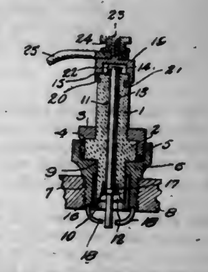
1,213,636. DRIVING MECHANISM. JACOB D. HECKARD, Astoria, Oreg. Filed July 12, 1916. Serial No. 108,922. (Cl. 74—26.)

1. In a driving mechanism, a revoluble driving shaft, a friction driving wheel mounted to revolve with and slide longitudinally on the driving shaft, a spring for moving the driving wheel longitudinally of the shaft in one direction, a pivoted lever for moving the said wheel in the reverse direction, toggle arms operatively connected with the said lever and provided with a foot lever or pedal, a countershaft mounted crosswise of the driving shaft, a friction driven wheel mounted to revolve with and slide longitudinally on the countershaft and to engage with the said driving wheel, and hand operated means for sliding the said driven wheel on the said countershaft.



2. In a driving mechanism, a revoluble driving shaft, a friction driving wheel mounted to revolve with and slide longitudinally on the driving shaft, a spring for moving the driving wheel longitudinally of the shaft in one direction, a pivoted lever for moving the said wheel in the reverse direction, toggle arms operatively connected with the said lever and provided with a foot lever or pedal, a vertical counter shaft arranged in front of the said driving shaft, a friction driven wheel mounted to revolve with and slide longitudinally on the countershaft and to engage with the said driving wheel upon opposite sides of its center, a pivoted lever for raising and lowering the driven wheel on the countershaft, a pivoted hand lever, and a link pivotally connecting the two last said levers.

1,213,637. JUMP-SPARK PLUG. FRANK H. HEGINBOTTOM, Saginaw, Mich., assignor to S. H. Heginbottom & Sons, Saginaw, Mich. Filed Apr. 8, 1916. Serial No. 89,933. (Cl. 123—169.)



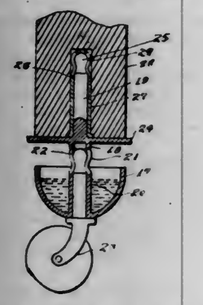
1. A spark plug of the class described, comprising a body having a bore extending therethrough, a reciprocally mounted core within said bore, a washer shrunk upon said core adjacent the ends thereof, said washers engaging the ends of said body, thereby holding said core against accidental displacement, and means carried by said body for forming a circuit in combination with said core.

2. A spark plug of the class described, comprising a body having a bore extending therethrough, said body having a pocket formed upon one end, said pocket communicating with one end of said bore, a core reciprocally mounted within said bore, washers fixed upon said core, one washer fitting upon the outer end of said body, the remaining washer fitting within said pocket, means carried by said body for forming a circuit in combination

with said core, and the washer within said pocket being adapted to receive gas pressure so as to move and in turn move said core and also be sucked outwardly with respect to said pocket for moving said core.

3. A spark plug of the class described, comprising a body having a bore extending therethrough, said body having a pocket formed in one end thereof communicating with said bore, said pocket being of a substantially inverted frusto-conical pocket, a core reciprocally mounted within said bore, washers fixedly mounted upon said core adjacent its ends, one of said washers movably fitting upon the end of said body, the remaining washer movably fitting within said pocket, means carried by said body for forming a circuit in combination with said core, said pocket being adapted to collect a quantity of gas so as to cause the gas to be compressed for moving the washer within said pocket, thereby moving said core in one direction, and said pocket being adapted to have the gas sucked therefrom, whereby the force exerted upon the washer carried within said pocket will cause the washer to move toward the outer end of said pocket for returning said core to its normal position.

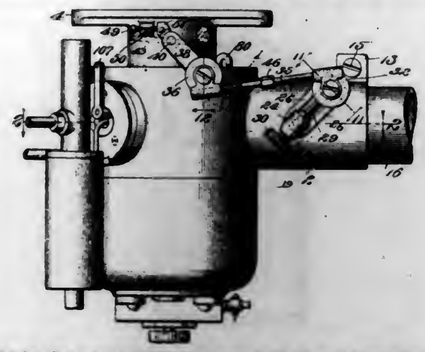
1,213,638. INSECT-GUARD. JAMES D. HENDERSON and CHARLES ZOLNINGER, Frederick, Okla. Filed June 22, 1915. Serial No. 35,684. (Cl. 45—15.)



An insect guard comprising a stem, said stem being provided with a solid cylindrical upper portion, and a yieldable hollow cylindrical lower portion, a disk on said stem, intermediate the solid and hollow cylindrical portions thereof, and a cup on and embracing the lower end of the hollow cylindrical portion and a support for the structure inserted within the latter mentioned hollow cylindrical portion.

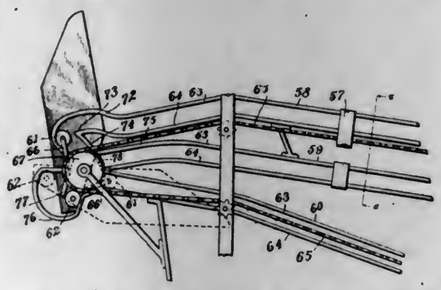
1,213,639. MECHANISM FOR SIMULTANEOUSLY OPERATING TWO ROCK-SHAFTS. JOSEPH V. HENLEY, St. Louis, Mo. Original application filed Nov. 28, 1913, Serial No. 803,479. Divided and this application filed Apr. 16, 1915. Serial No. 21,682. (Cl. 137—139.)

The combination with a rock shaft of a second rock shaft, a crank on said second rock shaft, a block revolubly connected with said crank and provided with a screw-threaded opening therethrough, an arm having a hub at one end keyed to the first rock shaft and terminating at its other end in a fork, the tines of which are separated at their outer ends, said arm having an interiorly screw-threaded opening therethrough extending in the direction of the forked end, a comparatively long adjusting screw mounted in the said opening and extending between, and in the direction of, the tines of the fork, a block having a circumferential groove adapted to receive the tines of the forked end, said block having an interiorly screw-threaded opening therethrough adapted to receive the outer end of the said adjusting screw, a stub journal extending from one side of said block, a member pivotally mounted on said journal and provided with an interiorly screw-threaded opening therethrough, a connecting rod each end of which is provided with exterior screw-threads, which screw-threaded ends are adjustably positioned, respectively, in the block on the crank of the outlet valve



and in the member which is journaled on the said slotted block, and an enlargement on the connecting rod whereby it may be readily revolved for the purposes of adjustment.

1,213,640. SHOVELING-MACHINE. FRANK M. HEWITT, Goldfield, Nev. Filed Jan. 4, 1915. Serial No. 511. (Cl. 37—24.)



1. In a machine of the type described, an excavator element including an endless traveling chain, scoops linked to said chain, a pair of rollers for each side of each scoop, and means coöperating with said rollers for dumping said scoops without causing the overturning thereof.

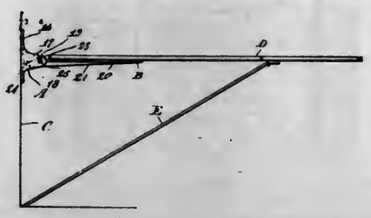
2. In a machine of the type described, an excavator element including an endless traveling chain, scoops linked to said chain, a pair of rollers carried by each side of each scoop, and guideways comprising oppositely disposed portions for coöperating with said rollers in dumping said scoops without causing the overturning thereof.

3. In a machine of the type described, an excavator element including an endless traveling chain, scoops linked to said chain, a pair of rollers carried by each side of each scoop, a pair of guideways, each independently coacting with one roller of a side between the loading and dumping points for said scoops, converging portions formed on said guideways adjacent said dumping point, arcuate and reversely arcuate portions connecting said guides to alter the path of said rollers and to dump each scoop, and a third guideway connected to one of the first said guideways at the dumping and loading points for returning said scoops to the latter point without causing their overturning.

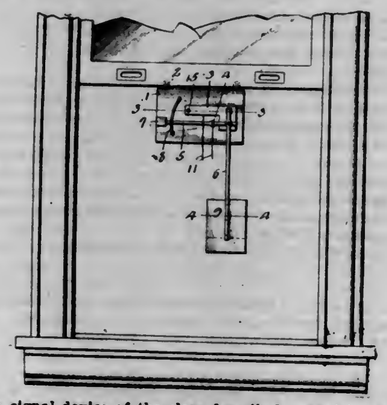
1,213,641. SUPPORTING DEVICE FOR IRONING-BOARDS, &c. SAMUEL L. HICKMAN, Springfield, Ohio, assignor of one-half to C. H. Stephan, Springfield, Ohio. Filed May 19, 1916. Serial No. 98,620. (Cl. 248—18.)

A supporting device for ironing boards, shelves and the like comprising a wall member and a shelf member, said

wall member consisting of a base having forwardly extending vertically disposed parallel brackets provided with vertical slots extending downwardly from the upper edges thereof, said base having also a lug extending between and connected with the brackets to the rearward of the slots; said shelf member consisting of an arm having a head provided with a projecting nose having a shoulder at the base thereof and with oppositely disposed laterally extending pintles, said pintles adapted to pivotally engage the slots in the brackets of the wall member and said nose adapted to engage beneath the lug connecting said brackets with the shoulder at the base of said nose engaging the end wall portion of said lug.



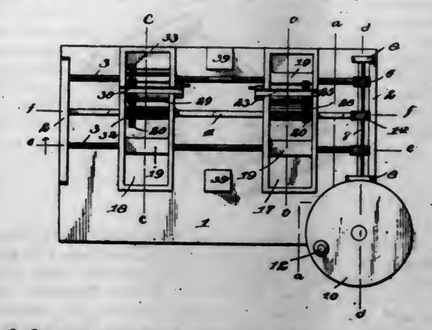
1,213,642. RAIN AND WIND SIGNAL. MARTIN GEO. HOEFT, Minonk, Ill. Filed Mar. 1, 1916. Serial No. 81,536. (Cl. 200—35.)



A signal device of the class described comprising a base board adapted to be supported in an open window or the like, a horizontal lever fulcrumed between its ends on said base board, a connecting rod loosely connected to one end of said lever and depending therefrom, and having the upper end projecting above said lever, means on the lower end of said rod adapted to receive rain, snow, etc., whereby the rod will be lowered and said lever swung about its peripheral connection with said base board, a contact plate on said base board, a pin carried by said plate and disposed in the path of movement of said lever, said pin and lever forming the terminals of the signal circuit, and means on the lower end of said rod adapted to receive wind pressure, whereby the rod will be swung about its loose connection with said lever to engage the upper end of said plate to close the signal circuit independently of said lever and pin.

1,213,643. WIRE-TWISTER. MARTIN GEO. HOEFT, Olpe, Kans. Filed Mar. 15, 1916. Serial No. 84,481. (Cl. 140—115.)

1. In a wire twister, two carriages, a wire engaging member on each of the carriages, means for moving the carriages longitudinally, means for permitting the movement of the carriages toward each other without actuating the wire engaging means, and means for revolving the wire engaging means in opposite directions only when the carriages are traveling away from each other.



2. In a wire twisting apparatus, two carriages, oppositely-threaded screw-shafts engaging nuts secured in the carriages, gears in the carriages, a wire-receiving barrel having teeth meshing with the gears in each of the carriages, a hook upon each of the barrels, means for operating the screw-shafts to move the carriages toward or away from each other, and means actuated by said operating means for revolving the gears when the carriages are moved away from each other.

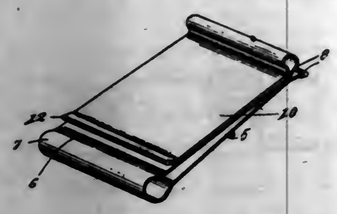
3. In an apparatus for twisting the ends of wires to connect the same, a base, screw shafts having oppositely pitched threads journaled in bearings on the base, two carriages each having two nut members engaging the threads of the screw shafts, gears journaled in bearings in each of the carriages, a slotted barrel having teeth meshing with the gears on each of the carriages, a wire receiving element upon each of the barrels, a hollow slotted shaft for each of the barrels, means for actuating the screw shafts to move the carriages toward or away from each other, means for limiting the movement of the carriages, and means actuated by the said operating means for revolving the gears to rotate the barrels in opposite directions when the carriages are moved away from each other only.

4. In an apparatus for twisting the ends of wires to connect the same, a base, flanges on the ends of the base, shafts having oppositely pitched teeth journaled in bearings in the flanges, two carriages upon the base, two nut members in each of the carriages engaging with the threads of the shafts, means for simultaneously rotating the shafts to move the carriages longitudinally of the base, means for limiting the movement of the carriages, gears journaled in bearings in the carriages, a wire-twisting element engaging with and operated by said gears, and means for rotating said gears to turn the wire-engaging elements in opposite directions when the carriages are moved away from each other.

5. In an apparatus for twisting the ends of wire to join the same, a base having its ends flanged, shafts journaled in bearings in the said flanges, certain of said shafts being threaded and the said threads being arranged at opposite pitches from their center, the remaining shaft being square in cross-section, said shafts passing through said carriages, nut members secured to the carriages or engaging with the threaded shafts, a toothed wheel having a square bore in each of the carriages and engaged by the square shaft, gears journaled in the carriages and meshing with said toothed wheel, wire-receiving members having hooked ends co-engaging with the gears, toothed wheels for the shafts, a toothed wheel upon the square shaft being loosely arranged thereon, a pawl carried by this toothed wheel, a ratchet wheel secured to the square shaft and engaged by the pawl, a shaft arranged transversely of the first-mentioned shafts, toothed wheels upon the said shaft meshing with the referred-to toothed wheels upon the first-mentioned shafts, and means for actuating the last-mentioned shaft.

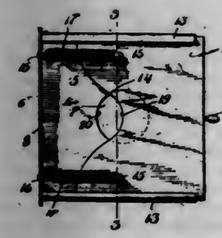
[Claim 6 not printed in the Gazette.]

1,213,644. PEN, PENCIL, STOGIE, AND CIGAR HOLDER. DELLO A. HOLCOMB, Youngstown, Ohio. Filed June 19, 1913. Serial No. 774,678. (Cl. 24—10.)



A device of the character set forth formed of a single strip of flat metal having its opposite ends looped to provide transversely arranged spring portions, said ends bent to lie back upon the body in opposite directions, one of said ends forming a clamping member, the opposite end forming an outer wall, the face of the body opposing the inner face of the outer wall provided with a plurality of longitudinally extending corrugations forming pockets and being provided with an outwardly inclined upper end to permit articles to be readily inserted in the pockets.

1,213,645. BROOM-HOLDER. ALBERT B. HOLDEN, Andover, S. D. Filed May 1, 1916. Serial No. 94,775. (Cl. 24—263.)

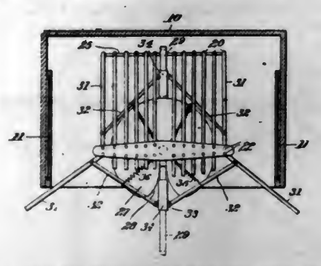


A support adapted for attachment to a fixed structure comprising a suspending plate of substantially rectangular form and provided with a centrally located opening, said plate being formed with inturned edges, providing the same with spaced parallel grooves, a gripping member slidably mounted upon the plate and within the groove thereof, and provided with a semi-cylindrical opening in the rear transverse edge thereof, a pair of coiled springs connected at one end with the gripping member and at their opposite end to the suspending plate for exerting an inward pull upon the gripping member and securing the article to be supported between the wall forming the centrally located opening of the suspending plate and the wall forming the semi-cylindrical opening of the gripping member.

1,213,646. DISPLAY-RACK. WILLIAM T. HORMES, Govans, Md., assignor to Solomon Himmel, Baltimore, Md. Filed Jan. 20, 1915. Serial No. 3,332. (Cl. 211—16.)

1. In a display rack of the character described, the combination with a case or cabinet, of a rotatable shaft mounted to reciprocate to and from a position within the case or cabinet, and a plurality of oppositely disposed sets of parallel panels supported by said shaft for pivotal movement independent of the rotation of said shaft, the combined length of the sets of panels being greater than the width of said case or cabinet.

2. In a display rack of the character described, the combination with a case or cabinet, of a rotatable shaft mounted to reciprocate to and from a position within the case or cabinet, a plurality of parallel panels arranged in oppositely disposed sets and pivotally supported by said shaft, and means independent of the case or cabinet for simultaneously preventing pivotal movement of all said panels.



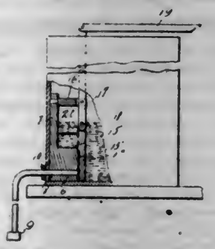
3. In a display rack of the character described, the combination with a case or cabinet, of a rotatable shaft mounted to reciprocate to and from a position within the case or cabinet, a plurality of parallel panels arranged in oppositely disposed sets and pivotally supported by said shaft, and means independent of the case or cabinet cooperating with the end panels for simultaneously preventing pivotal movement of all of said panels.

4. In a display rack of the character described, the combination with a case or cabinet, of a rotatable shaft mounted to reciprocate to and from a position within the case or cabinet, spaced apart cross heads secured to said shaft, and a plurality of parallel panels arranged in oppositely disposed sets and pivotally attached to opposite edges of said cross heads, the combined length of the sets of panels being greater than the width of said case or cabinet.

5. In a display rack of the character described, the combination with a case or cabinet, of a rotatable shaft mounted to reciprocate to and from a position within the case or cabinet, spaced apart cross heads secured to said shaft, a plurality of parallel panels arranged in oppositelly disposed sets and pivotally supported by said cross heads, and means independent of the case or cabinet coöperating with the end panels for simultaneously preventing pivotal movement of all of said panels.

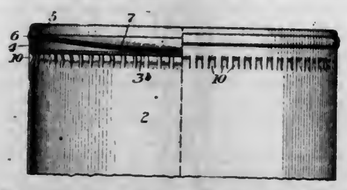
[Claims 6 to 33 not printed in the Gazette.]

1,213,647. LIQUID-FERTILIZER DISTRIBUTER. JAMES H. HUFFSTUTTER, Corning, Mo. Filed Mar. 28, 1916. Serial No. 87,299. (Cl. 137—63.)



In a liquid distributer, the combination with a tank, of a block secured to one wall of the tank adjacent the bottom thereof, a plate projecting upwardly from said block and lying flush with said tank wall, a post projecting upwardly from said plate, pipes extending through said block and communicating at one end with the forward face of the latter, a valve plate hingedly connected to said block and adapted to swing over the forward face of the latter, a spring for normally holding said valve plate in closed position, a lever pivoted intermediate its ends to said post, a connection between one end of said lever and said valve plate, and a link connected to the opposite end of said lever, substantially as described.

1,213,648. CLOSURE FOR PAPER RECEPTACLES. EDWIN F. HULBERT, South Norwalk, Conn., assignor to National Paper Can Company, Norwalk, Conn., a Corporation of Delaware. Filed Dec. 1, 1913. Serial No. 803,914. (Cl. 229—12.)



1. The combination with a paper can or receptacle, of an outwardly flanged cap or disk within the end portion thereof, the flange of said cap or disk being held between the body of the receptacle and a portion thereof which is turned inwardly within said flange, said parts having a locking groove formed therein and an auxiliary cap or disk seated within said groove and exerting an outward locking pressure thereon; substantially as described.

2. A paper can or receptacle having its end portion turned inwardly, a cap or disk having an outwardly turned flange held between the body of the receptacle and the inwardly turned portion thereof, said parts having a locking groove formed therein and a secondary cap or disk seated within the said inturned portion and exerting an outward locking pressure on the parts; substantially as described.

3. A paper can or receptacle having an inturned end portion, an inner cap or closure member having an outwardly turned flange fitted between said inwardly turned portion and the wall of the body of the receptacle, and said parts having a locking bead or groove formed therein to lock the parts together, together with an auxiliary cap or closure whose peripheral edge is engaged with said groove and arranged to hold said parts in locked position; substantially as described.

4. A paper can or receptacle having an inturned end portion, an inner cap or closure member having an outwardly turned flange fitted between said inwardly turned portion and the wall of the body of the receptacle, and said parts having a locking bead or groove formed therein, together with an auxiliary cap or closure whose peripheral edge is engaged with said groove, the inner cap or closure having a central opening, and the outer cap or closure having an inset portion fitting within and closing said opening; substantially as described.

5. A paper can or receptacle having an inturned portion, a cap or closure member having an outwardly turned flange fitted between said inturned portion and the wall of the body of the receptacle, said parts being beaded to lock them to each other and provided with an annular groove in the inturned end portion, and an auxiliary bowed cap or closure sprung into said groove and arranged to hold the parts in position, substantially as described.

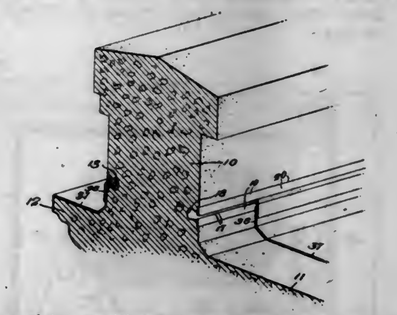
[Claims 6 to 9 not printed in the Gazette.]

1,213,649. METAL REGLET. ROWLAND C. HUNTER, Englewood, N. J. Filed Feb. 24, 1916. Serial No. 80,280. (Cl. 108—26.)

1. A reglet comprising a length of metal of channel formation, and shoulders formed in the throat of said channel structure, to receive a clamp for temporarily holding said channel structure in a form.

2. A reglet comprising a length of metal of channel formation, said channel comprising a web and side walls, said side walls tapering toward the open side of said channel, said sides being rolled to present inwardly directed shoulders, flanges formed of said side walls extending in opposite directions from said side walls, said flanges being resilient, and said shoulders being adapted to receive a clamp for detachably supporting said channel in a temporary structure.

3. A reglet comprising a length of metal of channel formation, said channel structure comprising a web and side walls, said side walls tapering toward the throat of said structure, said side walls being rolled to present inwardly directed shoulders and then oppositely extending flanges, said flanges being resilient, a resilient clip conforming to the exterior configuration of said channel structure carried by the meeting ends of said channel structures, prongs formed on said clip extending perpendicularly therefrom and said shoulders being adapted to receive a clamp for temporary attachment of said reglet to a form.

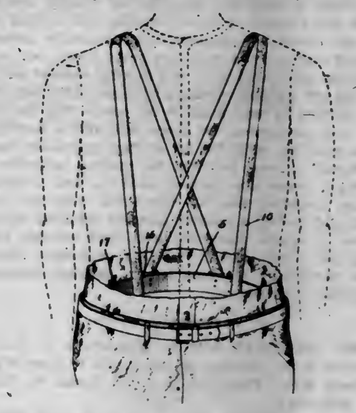


4. A reglet comprising a length of metal of channel formation, inwardly directed shoulders formed therein, flanges formed of said channel structure beyond said shoulders, said flanges being crimped and formed to normally spring in advance of said reglet.

5. A reglet comprising a channel structure, of a web and side walls, said side walls tapering toward the open side, resilient oppositely extending flanges formed of said side walls, said flanges having the edges thereof rolled, a clip engageable over the meeting ends of said channel structures and tongues formed of said clips to interlock in said rolled edges of said flanges.

[Claim 6 not printed in the Gazette.]

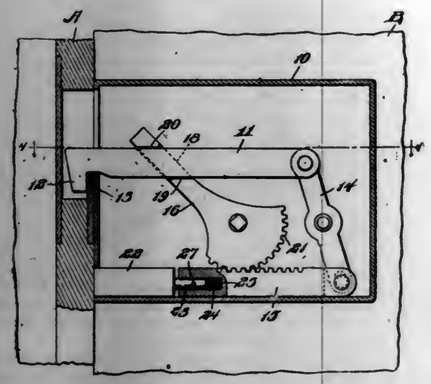
1,213,650. GARMENT-SUPPORTER. RALPH E. HUTCHINSON, Morton, Minn. Filed Feb. 7, 1916. Serial No. 76,737. (Cl. 241—12.)



1. A garment supporter comprising a belt adapted to be supported about the waist of the user inside the shirt, means for adjusting the free ends of the belt, and substantially U-shaped members secured to the belt at spaced intervals and adapted to receive and hold the shirt and waist band of the trousers associated therewith as the belt of the latter is drawn taut.

2. A garment supporter comprising a belt adapted to be arranged about the waist of the user, one end of said belt having a plurality of openings, a resilient locking element carried by the opposite end of the belt for interchangeable engagement with said openings, shoulder suspension means supporting said belt, and substantially U-shaped members secured to the belt at spaced intervals and adapted to receive and hold the shirt and waist band of the trousers associated therewith as the belt of the latter is drawn taut.

1,213,651. CAR-DOOR LOCK. ANTON A. JOHNS, Remer, Minn. Filed July 5, 1916. Serial No. 107,656. (Cl. 70—102.)



1. A lock mechanism for sliding doors including a locking element, a lever mounted for rocking movement and having one end pivotally associated with the adjacent end of said locking element, an actuating member associated with said element, a handle connected with said member for operating the latter, and a connection between the opposite end of said lever and said actuating member, including a yieldably supported abutment for the purpose described.

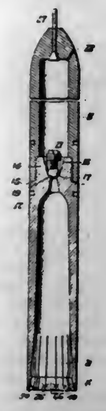
2. A lock mechanism for sliding doors including a locking element, a rack bar mounted for sliding movement beneath said element, a lever arranged for rocking movement and having its opposite ends pivotally connected with said element and rack bar respectively, an actuating member associated with said locking element and having a toothed segment meshing with said rack bar, and a handle carried by said member for controlling the latter.

3. A lock mechanism for doors including a locking element, a rack bar mounted for sliding movement beneath said element, a lever mounted for rocking movement and providing a connection between said bar and locking element, an actuating member associated with the locking element and having a toothed segment meshing with said rack bar a handle connected with said member for operating the latter, and a yieldably supported abutment member carried by the rack bar in advance thereof for the purpose described.

1,213,652. TUBULAR DRILL. CHRISTIAN A. JOHNSON, Laramie, Wyo., assignor of one-fourth to John Waidele, Laramie, Wyo. Filed Oct. 13, 1916. Serial No. 125,443. (Cl. 255—64.)

1. A tubular drill having a reduced externally threaded shank at its upper end, the bore of said shank being provided with a valve seat and with grooves forming air outlets, a ball valve engaging the seat, and a threaded cap forming a closure for the valve chamber.

2. A tubular drill having a reduced externally threaded shank, the bore of which constitutes a valve chamber, an upwardly opening valve in said chamber, a closure at the upper end of the valve chamber, said chamber having grooves that constitute air outlets unobstructed by the closure.

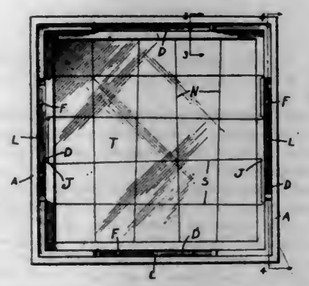


3. A tubular drill having a reduced externally threaded shank, the bore of which constitutes a valve chamber, an upwardly extending valve in said chamber, a closure at the upper end of the valve chamber, said chamber having grooves that constitute air outlets unobstructed by the closure, in combination with a coupling member of tubular form internally threaded at its lower end to engage the threaded shank and having an air outlet at its upper end.

4. A tubular drill having a bore provided at its lower end with grooves merging with the bore at their upper ends, the lower end of said drill having a circumferential series of approximately semi-circular recesses merging with the grooves, the ribs intermediate the grooves being beveled at their lower ends, producing cutting edges that are radially disposed with respect to the axis of the drill.

5. A tubular drill having a bore provided at its lower end with grooves merging with the bore at their upper ends, the lower end of said drill having a circumferential series of approximately semi-circular recesses merging with the grooves, the ribs intermediate the grooves being beveled at their lower ends, producing cutting edges that are radially disposed with respect to the axis of the drill, the lower edge portion of the drill being also beveled to form faces intermediate the beveled faces at the lower ends of the ribs and semi-circular recesses, forming a circumferential cutting edge.

1,213,653. COLOR-FRAME. WILLIAM E. JOLLY and CHARLES D. FORTIER, Rahway, N. J. Filed Sept. 19, 1916. Serial No. 121,060. (Cl. 240—3.)

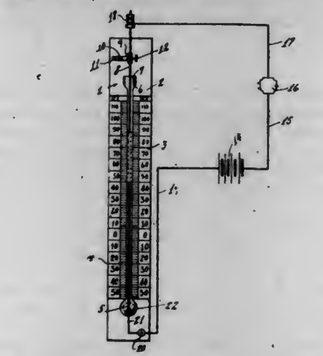


1. A color frame made up of two sections, one of which has a groove upon its inner face and upset portions with indentures therein, the other section having a marginal flange for engaging said groove, and lugs for engagement with said indentures, a colored gelatin sheet adapted to be held intermediate the frame sections by said interlocking lugs and indentures.

2. A color frame made up of two sections, one of which has a groove upon its inner face and upset portions with indentures therein, the other section having a marginal flange for engaging said groove, lugs for engagement with said indentures, a colored gelatin sheet adapted to be held intermediate the frame sections by said interlocking lugs and indentures, wires secured to the frame sections at right angles to each other and adapted to hold the sheet of gelatin in place.

3. A color frame made up of two sections, one of which has a groove upon its inner face and upset portions with indentures therein, the other section having a marginal flange for engaging said groove, lugs for engagement with said indentures, a colored gelatin sheet adapted to be held intermediate the frame sections by said interlocking lugs and indentures, said frame having lugs upset therefrom, and wires fastened to said upset lugs, the wires from one frame being positioned at right angles to those upon the other.

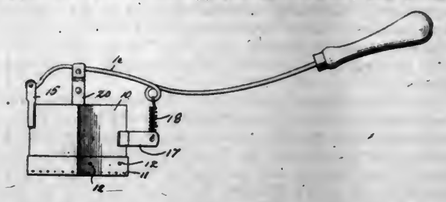
1,213,654. THERMOSTATIC FIRE-SIGNAL. ARCHIBALD B. JONES, San Francisco, Cal. Filed Mar. 30, 1914. Serial No. 828,375. (Cl. 200—32.)



A thermostatic signaling device including a graduated base plate provided at one end with a binding post, a mercury tube supported on the base plate and provided at its upper end with an integral cup, an electrode embedded in the mercury at one end of the tube and connected with the said binding post, a transversely disposed supporting arm located beyond the other end of the tube and secured at one end to the base plate and provided adjacent to such attached end with an outward bend and having its other end free and provided with a collar arranged in alinement with the said tube, a clamping screw carried by the collar, a contact rod passing through the collar and adjustably clamped by the said screw and extending through the cup into the said tube, said rod being provided at its outer end with a binding post, a sleeve fitted in and bearing against the bottom of the said cup and pierced by the said rod, and a plastic seal contained within the cup and supported by the said sleeve.

1,213,655. GREASER. JOHN M. KEIL, Boonton, N. J. Filed July 28, 1915. Serial No. 42,368. (Cl. 65—12.)

A griddle greaser including a casing, a large mesh wire screen removably carried by the lower end of the casing, absorbent material within the casing, a follower within the casing and on the absorbent material, an upwardly extending stem carried by the follower, a bracket carried by the upper end of the casing, a lever pivotally connected to the bracket and intermediate its ends to the stem, a second bracket carried by the casing below the upper end and on the opposite side thereof, and a coil spring connected at its ends to the lever outwardly of the pivot thereof and to the second bracket.



1,213,656. RUG. LUELLA STILWELL KINNARD, Chicago, Ill. Filed Mar. 23, 1915. Serial No. 16,414. (Cl. 66—4.)

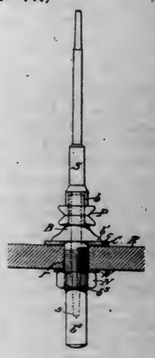


1. A rug or floor covering of the class described, comprising a body portion formed by a series of rows of knitted or crocheted chains, adjacent rows interlooping with one another and a pliable core located within and concealed by the loops of said chain whereby said rug will be flexible and will retain a flat position when in use.

2. A rug or floor covering of the class described, comprising a body portion formed by a series of rows of knitted or crocheted chains, adjacent rows interlooping with one another, and a pliable core located within and concealed by the loops of said chain whereby said rug will be flexible and will retain a flat position when in use, and both sides of said rug will be alike.

3. A rug or floor covering of the class described, comprising a body portion formed by a series of rows of knitted or crocheted chains, adjacent rows interlooping with one another, and a pliable core, formed of a suitable cord, located within and concealed by the loops of said chain whereby said rug will be flexible and will retain a flat position when in use.

1,213,657. SPINDLE-ADJUSTING DEVICE. RICHARD G. H. KNIGHT, Providence, and GEORGE R. QUIMBY, Central Falls, R. I. Filed May 2, 1916. Serial No. 94,889. (Cl. 64—77.)



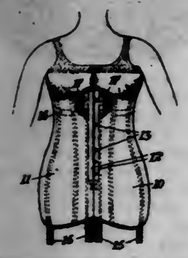
1. In an adjusting-device for spinning-, winding- or twisting spindles, the combination with the spindle-

bearing having a base adapted to set on the spindle-rail and a shank extending through said rail, of a washer surrounding the shank between the base of the bearing and the top of the rail, and a set-screw extending through the rim of the washer to adapt it to be set against the rail to adjust the position of the bearing in relation thereto.

2. In an adjusting-device for rotatable spindles, the combination with the spindle-bearing having a base adapted to set on the spindle-rail and a shank extending through the rail, of a relatively flat washer arranged between the base of the bearing and the top of the rail, and a plurality of set-screws arranged in spaced relation on one side of the washer and adapted to be screwed down against the top of the rail to adjust the position of the bearing in relation thereto.

3. As a new article of manufacture, an adjusting-device for the bolster-bearings of spinning-spindles consisting in an annular washer having a plurality of set-screws extending through its rim and arranged in spaced relation on one side of its diametrical center.

1,213,658. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Oct. 12, 1916. Serial No. 125,176. (Cl. 2—73.)



1. In an apparel corset and in each corset body half, an insert of yielding material extending from the upper edge of the corset adjacent the front steel to the approximated waist line, where the said insert is tapered across the approximated waist line to provide for a variable yielding movement increasing from the lower portion of the approximated waist line to the upper portion thereof.

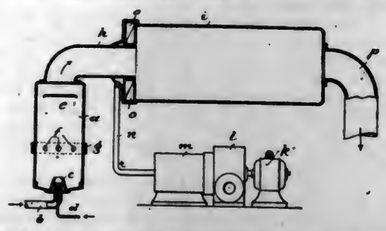
2. In an apparel corset and in each corset body half, an insert of yielding material extending from the upper edge of the corset body half adjacent the front steel to the approximated waist line where the said insert is cut at an angle, with one corner lying substantially at the lower portion of the approximated waist line adjacent the front steel and the other corner at the upper portion of the approximated waist line in order to effect a variable yielding movement between the lower and upper portions of the approximated waist line.

1,213,659. METHOD OF AND APPARATUS FOR VAPORIZING, CONCENTRATING, OR DRYING SOLUTIONS. GEORG A. KRAUSS, Munich, Germany. Filed Nov. 29, 1916. Serial No. 134,043. (Cl. 127—9.)

1. The herein described method of treating substances containing liquids, which consists in atomizing said substances in a chamber, conveying said substances in suspension to a second chamber, and drying the substances in said second chamber.

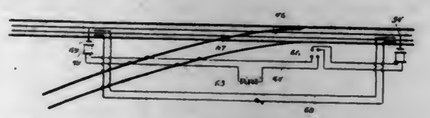
2. An apparatus of the character specified, comprising an atomizing chamber, means for spraying substances containing liquids into said chamber, a drying chamber, a conduit connecting said chambers and through which conduit the substances in suspension are adapted to be conveyed from the atomizing chamber to the drying chamber, and means for forcibly projecting said substances in suspension into the drying chamber.

3. An apparatus of the character specified, comprising an atomizing chamber, means for spraying substances containing liquids into said chamber, a drying chamber, a conduit connecting said chambers and through which conduit the substances in suspension are adapted to be conveyed from the atomizing chamber to the drying cham-



ber, means surrounding said conduit through which heated gaseous bodies may pass into said drying chamber, and means for forcibly projecting said substances in suspension into the drying chamber.

1,213,660. TRAIN-STOPPING SYSTEM. PRESTON KUHN, Hammond, Oreg. Filed Oct. 28, 1913. Serial No. 797,849. (Cl. 246—58.)



1. In a railway controlling system, a main line trackway, a switch controlling traffic from the main line trackway to the siding or branch line, conductors extending longitudinally of said main line trackway and spaced apart and composed of sections insulated one from another to divide the trackway into blocks, said conductors lying in a plane above the switch points and having the portions thereof disposed immediately above the switch points mounted for swinging movement, means for swinging such portions in the opening of the switch, sources of energy each having the poles thereof connected with the opposite sections of one of the blocks at one end of the latter, and car carried mechanism under the control of said conductors.

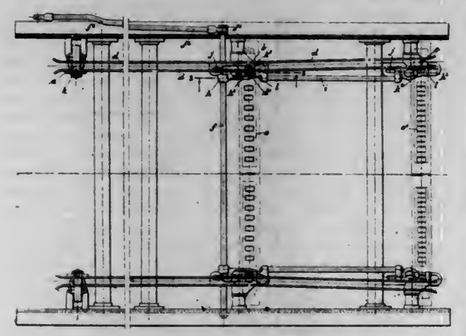
2. In a railway controlling system, a main line trackway, a switch controlling traffic from the main line trackway to the siding or branch line, conductors extending longitudinally of said main line trackway and spaced apart and composed of sections insulated one from another to divide the trackway into blocks, said conductors lying in a plane above the switch points and having the portions thereof disposed immediately above the switch points mounted for swinging movement, means for swinging such portions in the opening of the switch, sources of energy each having the poles thereof connected with the opposite sections of one of the blocks at one end of the latter, car carried mechanism under the control of said conductors, and means for shunting the current around said switch in the movement of the swinging portions of said conductors.

3. In a railway controlling system, a main line trackway, a switch controlling traffic from the main line trackway to the siding or branch line, conductors extending longitudinally of said main line trackway and spaced apart and composed of sections insulated one from another to divide the trackway into blocks, said conductors lying in a plane above the switch points and having the portions thereof disposed immediately above the switch points mounted for swinging movement, means for swinging such portions in the opening of the switch, sources of energy each having the poles thereof connected with the opposite sections of one of the blocks at one end of the latter, car carried mechanism under the control of said conductors, means for breaking the continuity of said conductors at opposite sides of the switch whereby the

portions of the conductors within the zone of the switch will be deënergized, and means for shunting the current around the deënergized portions of said conductors and said switch.

4. In a railway controlling system, intersecting lines of rails, a pair of conductors extending longitudinally of each line of rails and cut off at the point of intersection and having the confronting ends of such cut off portions spaced apart a distance approximately equal to the width of the intersecting lines of rails, means associated with each pair of conductors for deënergizing the portions of said conductors within the crossing zone, a by-pass around the crossing of said deënergized portions of the conductors whereby the portions of the conductors beyond the crossing zone will be electrically connected, and means for operating said first-named means to connect said by-pass in circuit with the respective portions of the conductors of one line of rails when a car is within the crossing zone of the other line of rails and actuate said first-named means of the conductors of the occupied line of rails to render said conductors electrically continuous, and means at the point of intersection of said conductors for electrically connecting the confronting ends of the conductors of the occupied line of rails and clearing the intersecting point of the flanges of the car wheels.

1,213,661. DRAFT-REGULATING DEVICE FOR CHAIN GRATES. ARMAND LEON FREDERIC LEFÈVRE, St.-Denis, France. Filed Nov. 5, 1915. Serial No. 59,803. (Cl. 110—40.)



1. A draft-regulating device for chain-grates, comprising slideways, each slideway being in two parts hinged together, dampers moving with the grate and controlled by said slide-ways, a roll fixed to the point of connection of the two parts of each slide-way, a cam having a slot receiving said roll, said cam-slot having a straight portion and an outwardly inclined portion, a roll fixed to the other extremity of one portion of the slide-way, a cam having a slot receiving the last-named roll, the last-named cam-slot having a straight portion, and an inwardly inclined portion and means for moving said cams to actuate the slide-ways.

2. A draft-regulating device for chain-grates comprising a slide-way on each side of the grate, each slide-way being in two parts hinged together, dampers moving with the grate and controlled by said slide-ways, a roll fixed to the point of connection of the two parts of each slideway, a cam having a slot receiving said roll, said slot having a straight portion and an outwardly inclined portion, a roll fixed to the other extremity of one slide-way portion, a cam having a slot receiving the last-named roll, the last-named slot having an inwardly inclined portion and a straight portion, the outwardly and inwardly inclined portions of said slots being adjacent to each other or between the straight portions, a guide for said cams, parallel to the longitudinal axis or median line of the grate, and means for moving said cams to actuate the slide-ways.

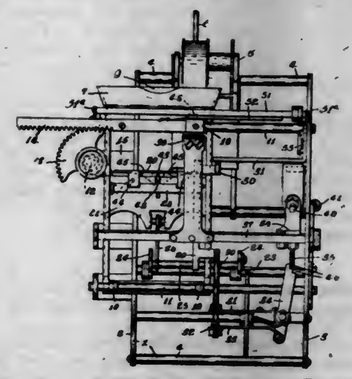
3. A draft-regulating device for chain-grates, comprising a slide-way on each side of the grate, each slide-way being in two parts hinged together, dampers moving with the grate and controlled by said slide-ways, a roll fixed to the point of connection of the two parts of each slideway, a cam having a slot receiving said roll, said slot having a straight portion and an outwardly inclined portion, a roll fixed to the other extremity of one slide-way portion, a cam having a slot receiving the last-named roll, the last-named slot having an inwardly inclined portion and a straight portion and an outwardly inclined portion, a guide for said cams, parallel to the longitudinal axis or median line of the grate, connecting means between said cams and means for actuating said connecting means.

4. A draft-regulating device for chain-grates, comprising a pair of slide-ways arranged at opposite sides of the grate, each slide-way composed of a pair of sections disposed end to end and having their confronting inner ends hinged together; dampers moving with the grate and controlled by said slide-ways; a pair of adjusting devices located at the points of connection of said slide-ways, and connected together for movement in unison; a second adjusting device located at the outer end of one section of each slide-way; a motion-transmitting connection between the two adjusting devices of each section; and means for operating the first-named adjusting devices, to shift said slide-ways relatively to the longitudinal axis or median line of the grate.

5. A draft-regulating device for chain-grates, comprising a pair of slide-ways arranged at opposite sides of the grate, each slide-way composed of a pair of sections disposed end to end and having their confronting inner ends hinged together; dampers moving with the grate and controlled by said slide-ways; a pair of rolls connected to the hinge-joints of said slide-ways; a pair of cams co-acting with said rolls, and connected together for movement in unison; a roll connected to the outer end of one section of each slide-way; a cam co-acting with each second-named roll and connected with the corresponding first-named cam to move in unison therewith; and means for operating said first-named cams, to shift said slide-ways relatively to the longitudinal axis or median line of the grate.

[Claims 6 and 7 not printed in the Gazette.]

1,213,662. TIME-RECORDER. WILLARD H. BUNDY, Syracuse, N. Y., assignor to W. H. Bundy Recording Company, Syracuse, N. Y., a Corporation of New York. Filed July 2, 1912. Serial No. 707,161. (Cl. 234—48.)



1. In a time recorder, impression making mechanism including a handle for operating said mechanism to make a record, a shiftable card receiver, a card stop for limiting the movement of the card into the receiver, a device for clamping the body of the card against a stationary part after the card engages said stop, and mechanism ac-

tuated by the handle for operating said device, substantially as and for the purpose set forth.

2. In a time recorder, a laterally shiftable card receiver, a card abutment, an abutment carriage movable periodically in the card receiver at an angle to the shifting movement thereof, the abutment being movable relatively to the carriage by the card when inserted in the receiver, printing mechanism including a movable platen, an operating lever for moving the platen, means for normally locking the operating lever from movement, and means for operating the locking means, the lock operating means being arranged to be operated by the card abutment in any position of the card receiver or the abutment, substantially as and for the purpose described.

3. In a time recorder, a frame for supporting type wheels, a platen, a lever for operating the platen, a lock for the lever, a laterally shiftable card receiver, a card abutment movable in the card receiver, an elongated rocking part movable as a unit with the abutment and being movable about its axis by the abutment when the abutment is engaged by the card, and a second elongated rocking part fixed from movement with the abutment and extending crosswise of the first-mentioned rocking part, and means operated by the second-mentioned rocking part for releasing the lock for said lever, substantially as and for the purpose specified.

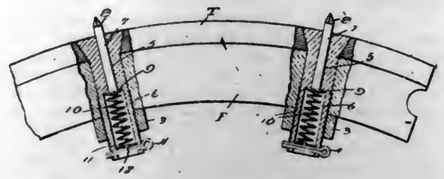
4. In a time recorder, a shiftable card receiver, a card abutment in the receiver, a carriage for the abutment movable in a direction at an angle to the shifting movement of the receiver, printing mechanism including a movable platen, means for actuating the platen, means for normally preventing the operation of the actuating means comprising an elongated rocking element carried by the abutment carriage and extending transversely of the card receiver, a second elongated rocking element fixed from movement with the carriage and extending at an angle to the first-mentioned rocking element in position to be engaged and actuated thereby in all positions of the card receiver and the movable abutment carriage, and a latch for locking the operating means, the latch being operated by the second-mentioned rocking element, substantially as and for the purpose set forth.

5. In a time recorder, a frame including side plates, one side plate having inwardly extending arms, a time stamp supported by the frame and carried between the side plates, a movable platen coacting with the time stamp, a card receiver arranged between the platen and the time stamp, and shiftable laterally into a plurality of positions, a movable card abutment in the receiver, a carriage for the abutment movable in a direction at a right angle to the shifting movement of the receiver, means for actuating the platen, means for preventing the operation of the actuating means comprising an elongated rocking element carried by the abutment carriage and extending transversely of the card receiver, a second elongated rocking element supported by the inwardly extending arms of the frame, and extending at an angle to the first-mentioned rocking element in position to be engaged and actuated thereby in all positions of the receiver and the movable abutment carriage, and a latch supported by the frame and coacting with the operating means, the latch being connected to the second-mentioned rocking element, substantially as and for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

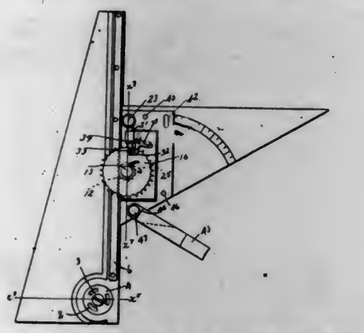
1,213,663. ANTISLIPPING TIRE. JOHN H. LYNN, Coplay, Pa. Filed May 4, 1916. Serial No. 95,415. (Cl. 21—212.)

1. An anti-slipping device for tires comprising a bolt having a bore which opens through its outer end and enlarged into a chamber which opens through its inner end, a spur slidably mounted in said bore and having a point projecting beyond the outer end of the bolt and a head at its inner end standing within said chamber, a pin across the inner end of the latter, a washer resting on the pin and having a hole in it, and an expansive coiled spring between said washer and bolt-head, for the purpose set forth.



2. The combination with a tire, and a tread overlying the same, these parts being pierced with registering apertures; of a bolt having a flaring head fitting the aperture of the tread and a body projecting through the tire and threaded for the reception of a nut, said bolt having a bore through its outer portion and an enlarged chamber through its inner portion communicating with the bore, a spur within the latter having a point projecting beyond the outer end of the bolt and a head standing within said chamber, a pin across the inner end of the chamber, and an expansive spring within such chamber between the pin and head, for the purposes set forth.

1,213,664. DRAFTSMAN'S APPLIANCE. ANTHONY W. MCCUAIG and TONY N. CHIDA, Los Angeles, Cal. Filed May 24, 1916. Serial No. 99,615. (Cl. 33—81.)



1. In combination with two members connected for relative movement, a spring drum on one of said members, means connecting said drum and the other member to cause relative movement between the members, escapement mechanism on one member and coöperating with the other member, and means for manually operating said escapement mechanism.

2. In combination with two members connected for relative movement, a spring drum on one of said members, means connecting said drum and the other member to cause relative movement between the members, escapement mechanism on one member and coöperating with the other member, and means for manually operating said escapement mechanism; the member with which said escapement mechanism coöperates being provided with a rack to that end.

3. In combination with two members connected for the relative movement, a spring drum on one of said members, means connecting said drum and the other member to cause relative movement between the members, escapement mechanism on one member and coöperating with the other member, and means for manually operating said escapement mechanism; the member with which said escapement mechanism coöperates being provided with a rack to that end; said escapement mechanism comprising an escapement wheel, and a pinion mounted to rotate with said escapement wheel and engaging with said rack; and said means for manually operating said escapement mechanism comprising spaced dogs adapted to be alternately applied to the teeth of said escapement wheel, and a member for reciprocating said dogs in a path substantially parallel with the axis of said escapement wheel.

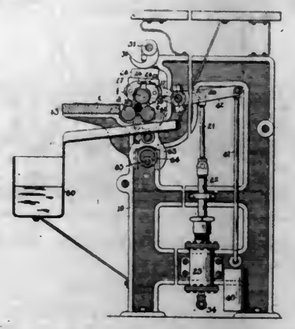
4. In combination with two members connected for relative movement, a spring drum on one of said members, means connecting said drum and the other member to cause relative movement between the members, escapement mechanism on one member and coöperating with the other member, and means for manually operating said escapement mechanism; the member with which said escapement mechanism coöperates being provided with a rack to that end; said escapement mechanism comprising an escapement wheel, and a pinion mounted to rotate with said escapement wheel and engaging with said rack; said means for manually operating said escapement mechanism comprising spaced dogs adapted to be alternately applied to the teeth of said escapement wheel, and a member for reciprocating said dogs in a path substantially parallel with the axis of said escapement wheel; said member for reciprocating said dogs comprising a depressible spring-resisted key, a dog-holder whereby the dogs are connected with the key, and means limiting the movement of the dog-holder and dogs and key and including an adjustable stop.

[Claims 6 to 8 not printed in the Gazette.]

1,213,665. APPARATUS FOR TREATING RUBBER ARTICLES. WILLIAM P. MCGEOUCH, Arlington, Mass., assignor to Boston Woven Hose & Rubber Co., Cambridge, Mass., a Corporation of Massachusetts. Filed Dec. 23, 1915. Serial No. 68,433. (Cl. 242—66.)

1. In an apparatus for winding a wrapper of flexible material upon an unvulcanized rubber sleeve, in combination, rollers to support the rubber sleeve, a pressure roller movable toward and from said supporting rollers and arranged to engage the rubber sleeve when the latter is bearing against said supporting rollers, a carrier for said pressure roller in which the latter has a fixed bearing while permitting said roller to revolve, mechanism for bodily moving said carrier, and means coöperating with said carrier for maintaining the pressure roller in fixed position with relation to said supporting rollers while a wrapper is being wound upon the rubber sleeve by said rollers.

2. In an apparatus for winding a wrapper of flexible material upon an unvulcanized rubber sleeve, in combination, rollers to support the rubber sleeve, a pressure roller movable toward and from said supporting rollers and arranged to engage the rubber sleeve when the latter is bearing against said supporting rollers, a movable carrier for said pressure roller, in which the latter has a fixed bearing while permitting the pressure roller to revolve, and means coöperating with said carrier for maintaining the pressure roller in fixed position with relation to said supporting rollers while a wrapper is being wound upon the rubber sleeve by said rollers, and means for positively rotating one of said rollers.



3. In an apparatus for winding a wrapper of flexible material upon an unvulcanized rubber sleeve, in combination, rollers to support the rubber sleeve, a pressure roller movable toward and from said supporting rollers and arranged to engage the rubber sleeve when the latter is bearing against said supporting rollers, a movable carrier for said pressure roller, in which the latter has a fixed bearing while permitting the said pressure roller to revolve, a rock-shaft, and a backing device for said pressure roller, comprising a member movable with said carrier and a member movable with said rock-shaft.

4. In an apparatus for winding a wrapper of flexible material upon an unvulcanized rubber sleeve, in combination, rollers to support the rubber sleeve, a pressure roller movable toward and from said supporting rollers and arranged to engage the rubber sleeve when the latter is bearing against said supporting rollers, a movable carrier for said pressure roller, in which the latter has a fixed bearing while permitting the pressure roller to revolve, and means coöperating with said carrier for maintaining the pressure roller in fixed position with relation to the supporting rollers while a wrapper is being wound upon the rubber sleeve by said rollers.

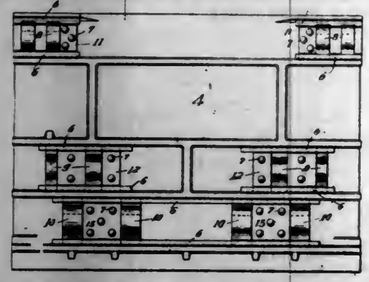
5. In an apparatus of the character described, in combination, a plurality of rollers to engage the article to be wrapped, one of said rollers being movable toward and from the other rollers, a carrier for said movable roller in which the latter has a fixed bearing while permitting it to revolve, means for effecting revolution of said rollers and the article to be wrapped, and means coöperating with said carrier for maintaining the said movable roller in fixed position with relation to the other rollers while a wrapper is being wound upon the said article to cause the latter to be compressed externally as the wrapper is wound upon it and to permit said movable roller to be bodily moved toward and from its coöperating rollers.

[Claims 6 and 7 not printed in the Gazette.]

1,213,666. BACK FOR EXCAVATING-DIPPERS. WALTER S. MCKEE, Chicago, and WESLEY G. NICHOLS, Chicago Heights, Ill., assignors to American Manganese Steel Company, Augusta, Me., a Corporation of Maine. Filed Nov. 17, 1916. Serial No. 131,820. (Cl. 37—16.)

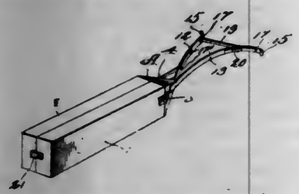
A back for dippers, comprising a cast metal plate with reinforcing ribs extending in a direction substantially parallel to the upper and lower edges of the dipper; the confronting cast ribs provided with undercut side edges; and lugs, each comprising a base plate having upper and lower beveled edges, and outstanding spaced apertured plates, the beveled edges of the base plates of the lugs

interlocking with the undercut sides of the ribs, and rivets extending through said base plates and through the



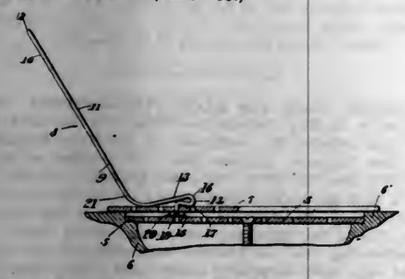
said cast dipper back plate, holding the lugs in position between said ribs.

1,213,667. TOOTH-CLEANING IMPLEMENT. CALEB W. MCKINNEY, Fresno, Cal. Filed Aug. 31, 1915. Serial No. 48,321. (Cl. 132—12.)



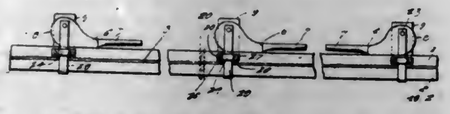
A tooth cleaning tape holder comprising a substantially rectangular casing formed of hinged sections, one of said sections carrying a pair of spaced bearings, a tape carrying reel journaled in said bearings, a finger carried by the other section adjacent one of said bearings and adapted to engage said reel to prevent the rotation thereof, a pyramidal shaped end piece carried by one end of said casing, a pair of oppositely bowed members secured to the slanting opposite faces of said end piece, the section carrying said bearings having an opening arranged therein adjacent one of said bearings and through which the tape passes, one of said bow members adjacent said opening having a plurality of openings through which the tape is threaded, the other of said bow members having an eyelet adjacent the free end thereof in alinement with the outermost opening in the other member, and a spring clasp carried by said member to engage the free end of the tape after it is threaded through the last named opening.

1,213,668. STRAINER ATTACHMENT. GEORGE WALTER MCKINSTRY, Southbridge, Mass. Filed May 10, 1916. Serial No. 96,653. (Cl. 4—35.)



As a new article of manufacture, a lifting device for strainers comprising a single strand of material so bent to provide a substantially U-shaped inclined handle, each of the limbs of the handle being bent in a lateral direction providing a foot, a curved connecting portion connecting the feet with said limbs and presenting a convexed contact point, the free terminal of each foot being bent below and upon the foot forming a toe having a downwardly inclined fixed contact point, shanks formed on the free terminals of the toes, and means for connecting the shanks to an apertured member and holding the first and last mentioned contact points in binding engagement with the top surface thereof and defining the handle in a substantially vertical inclined position, substantially as and for the purpose specified.

1,213,669. WIRE-CLAMP. TIMOTHY E. MADDEN, Eden Valley, Minn. Filed Sept. 26, 1916. Serial No. 122,219. (Cl. 254—83.)



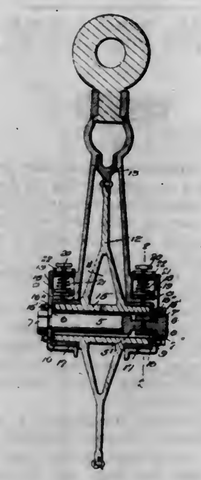
1. A device of the class described comprising an upper and lower clamping board, guides arranged on the opposite longitudinal side edges of the upper clamping board, slotted blocks carried by the outer face of the upper clamping board, cam levers journaled through the slots of said blocks, supporting bars journaled in the levers, the lower ends of said arms bent angularly and embracing the lower clamping board, whereupon by downward movement of the levers, the boards will be drawn into close proximity to one another.

2. A device of the class described comprising a pair of rectangular clamping boards, the opposing faces of said boards being serrated, a plurality of slotted blocks arranged on the outer face of one of said boards at spaced distances apart, guides arranged on the opposite longitudinal edges of one of said boards and in alinement with said blocks, pins arranged transversely through the slots of said blocks, levers journaled to the pins on opposite sides of the blocks, supporting bars having one of their ends secured to the opposite ends of the pins, their lower ends extending through the guides, the extreme lower ends of said bars being bent angularly in the direction of one another and embracing the cooperating clamping board, whereby upon movement of said levers, the boards will be drawn into close proximity to one another.

3. A device of the class described comprising an upper and lower clamping board, the opposing faces of said boards being serrated, a plurality of blocks arranged on the outer face of the upper board at spaced distances apart, said blocks provided with vertical slots, pins arranged transversely through the slots and extending beyond the opposite faces of the blocks, levers, said levers having cam-shaped heads, said heads arranged on opposite sides of the blocks and journaled to the ends of the pins, supporting bars, the upper ends of said supporting bars journaled to the opposite ends of the pins on the outer faces of the levers, the lower ends of said bars being bent angularly in the direction of one another and embracing the outer face of the lower board, guides, said guides arranged on the opposite longitudinal side edges of the upper board at spaced distances apart, said supporting bars extending through said guides, whereby upon downward movement of the levers, the boards will be drawn into close proximity to one another.

1,213,670. SHEAVE-BLOCK. DUFF GERARD MANORS, Tellico Plains, Tenn. Filed June 3, 1916. Serial No. 101,466. (Cl. 64—66.)

1. A sheave block comprising a central shaft made in sections adjustable relatively to each other, a sleeve member surrounding said shaft in spaced relation thereto, a sheave carried by said sleeve, a housing for inclosing said sheave comprising sections provided with oppositely disposed cup-shaped portions forming recesses into which project the ends of said sleeve member, bearing rings interposed between said ends and the inner faces of said recesses, other bearing members mounted in said cup-shaped portions and surrounding the ends of said sleeve member, said cup-shaped portions being provided with openings for receiving the reduced threaded ends of said shaft, the portions of said housing surrounding said openings engaging the shoulders of said shaft, and means mounted upon the ends of said shaft for retaining the sections of said housing in position.



2. A sheave block comprising a central shaft having reduced ends to provide shoulders, a sleeve member surrounding said shaft in spaced relation thereto, a sheave carried by said sleeve, a housing for inclosing said sheave comprising sections provided with oppositely disposed cup-shaped portions forming recesses into which project the ends of said sleeve member, bearing rings interposed between said ends and the inner faces of said recesses, bearing members mounted in said cup-shaped portions and surrounding the ends of said sleeve member and overlapping and engaging the periphery of said bearing rings, said cup-shaped portions being provided with openings for receiving the reduced threaded ends of said shaft, the portions of said housing surrounding said openings engaging the shoulders of said shaft, and means mounted upon the ends of said shaft for retaining the sections of said housing in position.

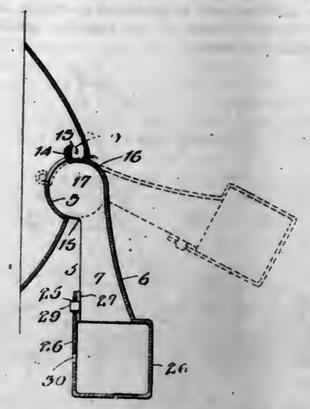
3. A sheave block comprising a sectional shaft having the sections thereof adjustable relatively to each other, a sleeve member surrounding said shaft, a sheave carried by said sleeve member, a housing for said sheave having recesses into which the ends of said sleeve member projects, and bearing members interposed between the ends of said sleeve member and the inner faces of said recesses.

4. A sheave block comprising a sectional shaft having the sections thereof adjustable relatively to each other, a sleeve member surrounding said shaft, a sheave carried by said sleeve member, a housing for said sheave having recesses into which the ends of said sleeve member project, bearing members interposed between the ends of said sleeve member and the inner faces of said recesses, and other bearing members surrounding the ends of said sleeve members and overlapping the first named bearing members.

5. A sheave block comprising a shaft, including relatively adjustable sections, a coupling for joining said sections, a sheave housing partially supported by said coupling, and a sheave carrying sleeve member in said housing and surrounding said shaft.

[Claim 6 not printed in the Gazette.]

1,213,671. HANDLE FOR CASKETS. ARTHUR J. MARSHALL, Cincinnati, Ohio. Filed Sept. 18, 1916. Serial No. 120,792. (Cl. 16—103.)



1. A handle comprising an ear having a rearwardly sunken semi-cylindrical socket, with a hole in the rear wall of such socket; and an arm interlocked with the ear and whose upper end has a rounded knuckle fitting rotatably in said socket with a radial stop on the knuckle rearwardly projecting through said hole for engagement with its upper and lower edges and moving therein as the arm is swung.

2. A handle comprising an ear having its face inwardly depressed into a socket forming substantially half of a cylinder whose axis is horizontal, with a hole in the rear wall of such socket; and an arm whose upper end has a rounded knuckle fitting rotatably in said socket with a radial stop on the rear side of the knuckle projecting through said hole and moving therein as the arm is swung vertically, and a transverse head carried by the stop and overhanging the socket wall, for the purpose set forth.

3. A handle comprising a sheet metal ear having rearwardly depressed into it an upright socket forming substantially half of a cylinder with a rectangular hole in the upper portion of its rear wall throughout substantially a quarter of said cylinder; and an arm having a round knuckle fitting rotatably in said socket with a stop projecting rearwardly through said hole to limit the rise of the arm to substantially a horizontal position, and means on the stop to prevent dislocation of the knuckle from the socket.

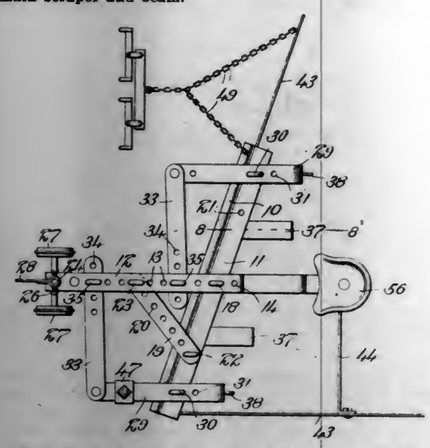
4. A handle comprising a sheet metal ear having depressed into it an upright socket forming substantially half of a cylinder with a rectangular hole in its rear wall throughout substantially a quarter of said cylinder; and an arm having a round knuckle fitting rotatably in said socket with a stop projecting through said hole to limit the rise of the arm to substantially a horizontal position, said stop being formed into an eye, and a pin secured transversely through the eye and of greater length than the width of said hole.

5. In a handle, the combination with an ear, and a hand grip; of a sheet metal arm substantially rectangular in cross section, a hinge connection between its upper end and said ear, its front leaf being continued downward into a tongue to inclose said grip and the tongue provided near its extremity with an eye, and its side leaves carrying lips projecting normally to the rear and having reduced tips, said lips adapted to be bent in behind the tongue and with their tips bent out through its eye, for the purpose set forth.

1,213,672. ROAD-GRADER. JOHN D. MARTIN, Owensboro, Ky. Filed June 23, 1916. Serial No. 105,420. (Cl. 37—7.)

1. In a road grader, the combination with a draft beam; of a scraper pivoted intermediate its ends to said

beam, means to hold the scraper in adjusted angular relation, a supplemental scraper blade having its forward end pivoted to one end of the main scraper, and means normally holding said supplemental scraper parallel to the beam independently of the angular relation of the main scraper and beam.



2. In a road grader, the combination with a draft beam; of a scraper pivoted intermediate its ends to said beam, means to hold the scraper in adjusted angular relation, a supplemental scraper blade having its forward end pivoted to one end of the main scraper, and means normally holding said supplemental scraper parallel to the beam independently of the angular relation of the main scraper and beam, said last means being adjustable to vary the angular relation between the supplemental scraper and the beam and including an element arranged to hold the means in adjusted position.

3. In a road grader, the combination with a draft beam; of a scraper pivoted intermediate its ends to said beam, means to hold the scraper in adjusted angular relation, a supplemental scraper blade having its forward end pivoted to one end of the main scraper, a rearward extension on the beam, a ground engaging disk wheel carried by said extension, and a brace connecting the extension with the supplemental scraper.

4. In a road grader, the combination with a draft beam; of a scraper pivoted intermediate its ends to said beam, means to hold the scraper in adjusted angular relation, a supplemental scraper blade having its forward end pivoted to one end of the main scraper, and means normally holding said supplemental scraper parallel to the beam independently of the angular relation of the main scraper and beam, said last means being adjustable to vary the angular relation between the supplemental scraper and the beam, said last means comprising an extension on the beam, and a brace connecting the extension with the supplemental scraper.

5. In a road grader, the combination with a draft beam; of a scraper pivoted intermediate its ends to said beam, means to hold the scraper in adjusted angular relation, a supplemental scraper blade having its forward end pivoted to one end of the main scraper, and a disk wheel carried in advance of the forward end of the main scraper and coöperating with the supplemental scraper.

[Claims 6 to 8 not printed in the Gazette.]

1,213,673. TOE-NAIL PROTECTOR. THEODORE L. MARVEL, Taunton, Mass. Filed Feb. 16, 1916. Serial No. 78,741. (Cl. 128—28.)

A device of the class described comprising a flat normally straight leaf spring member having a hook end for engaging one edge of a hand or toe nail, and an inverted substantially U-shaped double hook member adapted for engaging the other edge of said nail and loosely straddling the spring member when lying across the nail for



the bowing of said spring member to effect a pressure thereon for the straightening of the same.

1,213,674. SADDLE. GEORGE S. MASLEN, Philadelphia, Pa. Filed July 25, 1916. Serial No. 111,291. (Cl. 208—15.)



1. In a saddle structure, a rigid body provided with a marginal channel, a covering having its free edge portion extended into the channel and relatively rigid means within the channel co-acting with the walls thereof to hold said free edge portion of the covering in a confined condition against said body and serving to hold the intermediate portion of the covering in a stretched condition over the upper surface of said body.

2. A saddle structure comprising, a relatively rigid body, a flexible covering extending over the body and having a marginal portion extending under the body, and means separable from the body and co-acting therewith to hold said marginal portion of the covering in a secured condition against said body.

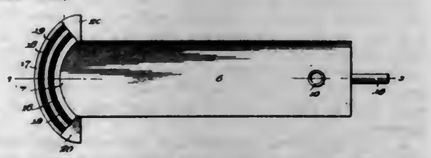
3. A saddle structure comprising, a body, having a channel, and a flexible covering extending over the body and against the wall of said channel, and a clamping device separable from the body and serving to hold the covering in confinement against the wall of said channel.

4. A saddle structure comprising, a body, having a channel on the under side thereof, a covering extending over the body and having a marginal portion extending over and against the wall of said channel and an expansible device carried by the body and serving to hold the marginal portion of the covering against the wall of the channel.

5. A saddle structure comprising, a body having a relatively rigid portion on its under side, a flexible covering extending over the body and terminating against said portion of the body, and a detachable device separable from the body and serving to hold the terminal of the covering in confinement against said portion of the body.

[Claims 6 to 13 not printed in the Gazette.]

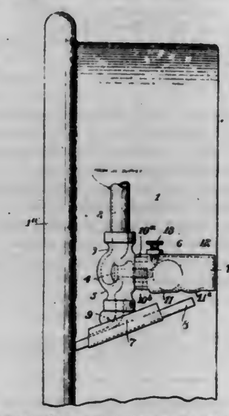
1,213,675. OIL-BURNER. MACY MAYNARD, Auburn, Wash. Filed June 10, 1916. Serial No. 102,931. (Cl. 158—75.)



1. An oil burner comprising a substantially rectangular body having a rounded head, a substantially rectangular oil conduit extending longitudinally of the body, a restricted steam conduit disposed below the oil conduit and having its side walls at a distance from its head flared outwardly to the sides of the body and terminating in a straight shoulder, and the head being formed with restricted apertures communicating with the steam conduit and said apertures radiating from the axis of the head.

2. An oil burner comprising a substantially rectangular body having a substantially rectangular oil conduit therein, an inlet pipe for the conduit, said body below the oil conduit having a restricted steam conduit, an inlet pipe for the steam conduit, the sides of the steam conduit adjacent to the outlet end of the burner being flared toward the sides of the said burner, said body having a plurality of radially disposed apertures communicating with the steam conduit, said body approximately in a line with the said apertures at the outlet end thereof being extended to provide a lip, said lip being formed with a plurality of rounded depressions, vertical extensions upon the sides of the lip, and the inner walls of the said extensions being beveled approximately in a line with the end apertures.

1,213,676. WHEEL-FLANGE LUBRICATOR. JAMES HENRY MINER, Lumberton, Miss. Filed Apr. 15, 1916. Serial No. 91,431. (Cl. 184—3.)

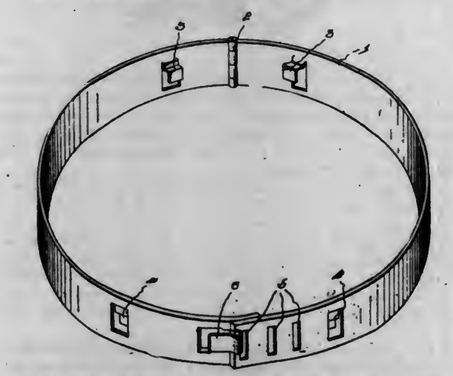


1. In a wheel flange lubricator a valve, a horizontal tube, a movable weight therein, one end of said tube having a depression in the bottom, inclined so as to cause said movable weight to exert a greater force against the valve while rounding a curve.

2. In a flange lubricator, a horizontal tube, a movable weight therein, said tube having a decline from the center each way toward the ends.

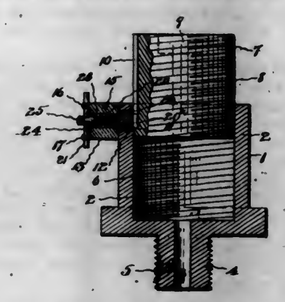
3. In a flange lubricator, a container, a movable weight therein, each end of said container being depressed and lower than the intermediate portion and forming a temporary resting place for said weight.

1,213,677. GARMENT-FASTENER. WILLIAM M. MORRIS and BENJAMIN MORRIS, Milford, Conn. Filed Jan. 2, 1915. Serial No. 259. (Cl. 241—8.)



A garment fastener comprising a pair of body sections, means for hinging the rear ends of the sections together, a downwardly depending hook struck up from each section and disposed upon each side of the hinging means and upon the inner faces thereof for engaging the rear tabs of a pair of suspenders, downwardly depending hooks struck up from the sections adjacent their free ends and disposed upon the inner faces thereof for engaging the front tabs of the suspenders, one of said sections having a plurality of elongated slots arranged in spaced relation and adjacent the free end thereof, and a hook struck up from the other section and disposed upon the outer face thereof to engage any one of the slots.

1,213,678. GREASE-CUP. WESLEY W. MORROW and CHARLES H. BURGETT, Prescott, Ariz. Filed July 1, 1916. Serial No. 107,131. (Cl. 184—48.)



1. In a grease cup, a grease receptacle, a plug secured in the wall of said grease receptacle and having a chamber or bore, a pawl mounted within said chamber having a rigid handle means on said plug for securing the handle in different radial positions and a grease ejecting plug adapted to be engaged by said pawl and held from rotary movement in one direction.

2. In a grease cup, a grease receptacle provided with a plug in its wall having a chamber or bore communicating with the interior of the grease receptacle, a pawl rotatably and slidably mounted in said chamber and provided with a handle and means on said plug for engaging the ends of said handle and retaining it in different positions.

3. In a grease cup, a grease receptacle provided with a hollow plug in its wall communicating with the interior of the grease receptacle, a rotatable and slidable spring pressed pawl mounted in said chamber having a handle with laterally projecting ends and means for retaining said handle in different radial positions on said plug.

4. In a grease cup, a grease receptacle having an opening in its wall, a plug secured in said opening provided with lugs and slots, a pawl having a handle, adapted to engage said lugs and slots a grease ejecting plug having a slot adapted to receive the end of the pawl by which said grease ejecting plug is held from rotary movement in one direction.

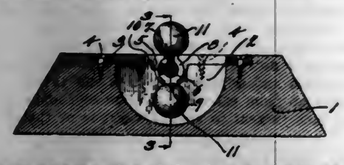
5. In a grease cup, a grease receptacle having an opening in its wall, a hollow plug secured in said opening having lugs and slots, a rotatable and slidable spring pressed pawl having a beveled end and mounted within said hollow plug and provided with a handle adapted to engage the said lugs and slots and a grease ejecting plug having a longitudinal slot with which the beveled end of the pawl is adapted to engage for the purpose of locking the grease ejecting plug.

[Claims 6 and 7 not printed in the Gazette.]

1,213,679. GAME APPARATUS. JAMES J. MURPHY, Maspeth, N. Y. Filed Apr. 5, 1916. Serial No. 89,204. (Cl. 46—4.)

1. In game practice apparatus of the class described, the combination of a base having a recess therein, a balanced revoluble member mounted in said recess including diametrically opposing ball members, either of said ball

members being subject to disposition with respect to the surface of the base to present a greater or less striking surface for a ball to represent corresponding conditions incident to the playing of golf.



2. In game apparatus of the class described, the combination of a base, a revoluble member journaled thereon and having threaded arms, and apertured balls adapted to be screwed on said arms for adjustment with respect to the surface of the base and to balance the revoluble member.

3. In game apparatus of the class described, the combination of a base, a supporting plate detachably connected thereto, a revoluble member, a support carried by said plate on which said revoluble member is loosely mounted, and a golf ball mounted on said revoluble member.

4. In game apparatus of the class described, the combination of a base, an annular supporting plate detachably connected thereto, a shaft fixed transversely of the plate, a revoluble member loosely mounted on said shaft intermediate the sides of the plate, and golf balls having threaded connection with the revoluble member for adjustment radially with respect to the axis of said member to produce a balanced member.

1,213,680. CIGARETTE-PAPER HOLDER FOR TOBACCO-RECEPTACLES. TURNER HUNT NANCE, Birmingham, Ala. Filed Sept. 23, 1915. Serial No. 52,223. (Cl. 206—41.)



1. A holder for a roll of paper, comprising a two-part casing divided lengthwise with the parts hinged together for permitting opening and closing of the casing, and said parts where meeting on the side of the casing opposite the hinge forming a longitudinally extended slot for the passage of paper from within the casing, and a plate hinged to one member of the casing to one side of the slot and extending over the slot into embracing relation to the other member of the casing, whereby on the movement of the plate out of embracing relation to the casing members the casing may be opened for the insertion of a roll of paper and when the casing is closed and the hinged plate is in embracing relation to the casing, said plate constitutes a severing plate for projected portions of the roll of paper beyond that edge of said plate remote from its hinge connection to the casing member.

2. A holder for a roll of paper comprising a two-part casing divided lengthwise with the parts hinged together and having a spring tending to hold the parts in engagement and said parts when in engagement forming a longitudinally extended slot for the passage of paper therethrough, and a plate hinged to one member of the casing in embracing relation to the other member of the casing, said plate having spring means tending to maintain it in engagement with the second-named part of the casing and the plate also being provided with a thumb hole through it and a tearing edge for the paper at the side of the plate remote from the hinge.

3. A holder for a roll of paper comprising a cylindrical casing consisting of two substantially semi-cylindrical members divided along a diameter of the casing, one of the members being hinged to the other member along one edge and having the other edge separated from the corresponding edge of the other member to form a longitudinal slot for the passage of the paper from the casing, and said second-named member having spring means tending to hold it in close relation to the first-named member, and a plate hinged to the first-named member adjacent to the slot and provided with spring means for normally holding it in engagement with the second named member, said plate having a thumb hole therethrough for moving the web of paper beneath the plate and the edge of the plate remote from the hinge serving as a tearing edge for the paper.

4. An attachment for a tobacco box provided with a terminal bead at one end, comprising a holder for a roll of cigarette paper, with the holder having means for the projection of the cigarette paper and for the severance of the projected portion from the remainder of the roll, and a plate conforming in shape and size to the bead end of the box to which the holder is secured, said plate having flanges of channel form elongated in the direction of the width of the box and adapted to embrace the terminal bead on opposite sides of the box to slide lengthwise onto and off from said beaded end of the box.

5. In combination with a tobacco box provided with a terminal bead at and around its closed end, a holder for a roll of cigarette paper having a width and length not to exceed the dimensions of the end of the tobacco box and provided with flanges at its base on opposite sides thereof and adapted to embrace the terminal bead of the tobacco box on opposite sides of said closed end so as to slide in the direction of the long dimension of said end of the box onto and off therefrom.

[Claims 6 and 7 not printed in the Gazette.]

1,213,681. VEGETABLE-SLICER. EDWARD P. NORTON, Cottonwood Falls, Kans. Filed June 9, 1916. Serial No. 102,731. (Cl. 146—7.)

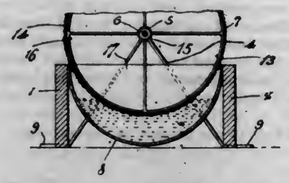


1. A vegetable slicer comprising blades having angularly disposed shank portions and cutting ends, blocks interposed between the shank portions of the blades and holding the same substantially in parallel relation, the cutting end portions of the blades being converged downwardly toward each other.

2. A vegetable slicer comprising a series of blades having shank ends and cutting ends which are disposed at angles with relation to each other, blocks interposed between the shank ends of the blades and holding the same substantially in parallel relation, the cutting ends of the blades being converged downwardly toward each other, the shanks of some of the blades being extended above the blocks and a handle mounted upon the extended portions of the said shanks.

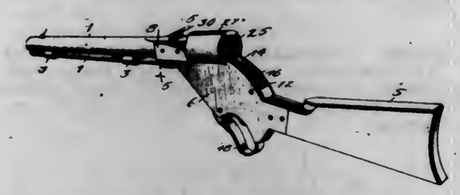
3. A vegetable slicer comprising a series of blades having angularly disposed shanks and cutting ends, blocks interposed between the shank ends of the blades and holding the same in substantially parallel relation, the cutting ends of the blades being converged downwardly toward each other, the shank portion of the intermediate blade being extended in an upward direction and a handle mounted upon the said shank portion and the shank portions of the terminal blades being extended above the upper ends of the blocks and connected with the said handle.

1,213,682. HOG-OILER. ROLLIANCE W. OLIVER, Eldorado, Ohio. Filed Dec. 4, 1915. Serial No. 65,041. (Cl. 119—157.)



A hog oiler of the class described including an oblong frame composed of vertical side and end walls, a trough secured at its upper edges within the frame, approximately inverted V-shaped bearing brackets secured to the frame at the inner faces of the ends thereof, between the same and the ends of the trough, and projecting above the trough and the frame and having terminal laterally extending attaching portions projecting beyond the frame, a shaft supported by the bearing brackets and a cylinder mounted for rotary movement on the shaft and extending into the trough.

1,213,683. TOY REPEATING GUN. CARL B. OSBORN, San Marcos, Tex. Filed May 6, 1916. Serial No. 95,803. (Cl. 124—13.)



1. In an action for toy guns, an operating member comprising a trigger, a striker and a spring the latter being tensioned by a pull upon the trigger in the act of firing the gun, and a catch for engaging the discharging member to hold the same in cocked position, the said member being movable longitudinally by means of the trigger and released from the catch after the said spring has been subjected to tension.

2. An action for toy guns comprising a trigger, a discharging member connected with the trigger and movable therewith, a spring for operating the said member and adapted to be placed under tension when pulling upon the trigger to fire the gun, and a catch for retaining the member in cocked position, such member being releasable from the catch by the action of the trigger after the said spring has been subjected to tension.

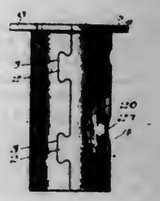
3. An action for toy guns comprising a trigger, a discharging member having pivotal connection with the trigger and adapted to be moved longitudinally thereby, an operating spring for the said member adapted to be tensioned when pulling upon the trigger in the act of discharging the gun, and a catch for retaining the said member in cocked position during the tensioning of the spring, such member being releasable from the catch by the action of the trigger when reaching the limit of its movement when tensioning the spring.

4. An action for toy guns comprising a trigger, a discharging member pivotally connected to the trigger a distance from the axis of the trigger, a main spring having engagement with the said member and trigger, coacting stops between the trigger and such member to cause both to move together in one direction, and a catch for engaging the member to hold the same in cocked position, the discharging member being releasable from the catch by the action of the trigger during its movement after tensioning the main spring.

5. An action for toy guns, the same comprising a pivotally mounted trigger, a discharging member pivoted to the trigger a distance from the axis of such trigger, cooperating stop means between the trigger and said member to cause both to move in unison in one direction, a spring engaging both the trigger and the member and adapted to be subjected to tension when the trigger is operated to discharge the gun, and a catch cooperating with the discharging member to hold the same in cocked position.

[Claims 6 to 12 not printed in the Gazette.]

1,213,684. METAL BUSHING AND METHOD OF FORMING SAME. WILLIAM C. OSTERHOLM, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed July 26, 1915. Serial No. 41,966. (Cl. 29—189.)



1. The method of forming bushings from prepared blanks of sheet metal having interlockable tongues and gaps upon their opposite edges, consisting in first pressing the blanks into semi-cylindrical form, assembling them in tubular form with their meeting edges interlocking, subjecting the assembled members to an external pressure, and passing a sizing and finishing drift through its bore.

2. The method of forming bushings from prepared blanks of sheet metal having interlockable tongues and gaps upon their opposite edges, consisting in first pressing the blanks into semi-cylindrical form, assembling them in tubular form with their meeting edges interlocking, subjecting the assembled members to external side and end pressure, and passing a sizing and finishing drift through its bore.

3. The method of forming bushings from prepared blanks of sheet metal having interlockable tongues and gaps upon their opposite edges, consisting in first pressing the blanks into semi-cylindrical form, assembling them in tubular form with their meeting edges interlocking, subjecting the assembled members to external pressure, inserting a shell of metal alloy within the tubular member, and passing a shell expanding and finishing drift through its bore.

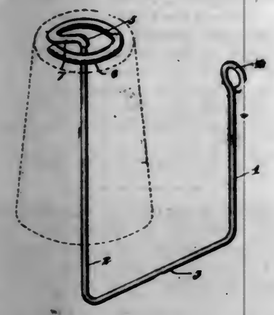
4. The method of forming bushings from prepared blanks of sheet metal having interlockable tongues and gaps upon their opposite edges, consisting in first pressing the blanks into semi-cylindrical form, assembling them in tubular form with their meeting edges interlocking, subjecting the assembled members to external pressure, passing a sizing and finishing drift through its bore, inserting a shell of metal alloy within the tubular member, and passing a shell expanding and finishing drift through its bore.

5. The method of forming bushings from prepared blanks of sheet metal having interlocking tongues and gaps upon their opposite edges, consisting in first pressing the blanks into semi-cylindrical form, assembling them in tubular form with their meeting edges interlocking, subjecting the assembled members to external pressure, passing a sizing and rifling drift through its bore, inserting

a shell of metal alloy within the rifled member, and passing an expanding and finishing drift through its bore.

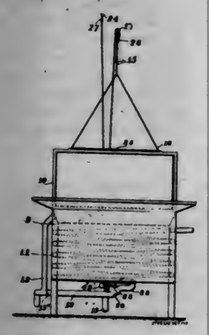
[Claims 6 to 9 not printed in the Gazette.]

1,213,685. TUMBLER-SUPPORT. MACY A. OWENS, Walnut Hill, Ill. Filed June 10, 1916. Serial No. 102,929. (Cl. 278—20.)



A tumbler support formed from a single piece of wire and comprising a vertical portion formed with an eye at its upper end, a horizontal portion, a second vertical portion parallel to and spaced from said first mentioned vertical portion by means of the horizontal portion and a coil formed upon said second vertical portion and at right angles thereto, said coil being on a plane above the eye of the first mentioned vertical portion and being adapted for contact with the inside bottom of the tumbler to support the said tumbler in an inverted position.

1,213,686. MEANS FOR PREVENTING FIRES IN TANKS, &c. WILLIAM DOUGLAS OWENS, New York, N. Y. Filed June 4, 1915. Serial No. 32,041. (Cl. 220—121.)



1. In fire prevention apparatus the combination with a tank having a discharge, of an injector nozzle in said discharge and directed to accelerate the outflow therethrough, a source of fluid pressure for said injector nozzle, and heat released means for admitting fluid pressure to said injector nozzle on the occurrence of a fire to accelerate the outflow from said tank.

2. In fire prevention apparatus the combination with a tank having a normally closed discharge of an injector nozzle in said discharge and directed to accelerate the outflow therethrough, a source of fluid pressure for said injector nozzle, and heat released means for opening said discharge and admitting fluid pressure to said injector nozzle on the occurrence of a fire to accelerate the outflow from said tank.

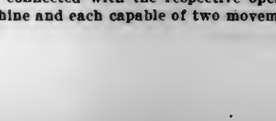
3. The combination with a tank having a normally open cover and normally closed discharge, of an injector in said discharge, a source of fluid pressure for said injector, and heat released means for closing said cover, opening said discharge and admitting fluid pressure to the injector to accelerate the outflow from said tank.

4. The combination with a tank having a discharge, of a tank cover normally held in open position, accelerating means for creating a partial vacuum in said discharge to accelerate the outflow therethrough, controlling means for said accelerating means, and heat released means for simultaneously closing said cover and rendering said accelerating means effective to create a partial vacuum in the discharge and draw out the contents of said tank.

5. The combination with a tank having a normally closed discharge, of an injector in said discharge, means for supplying fluid under pressure to heat said reservoir and connected to said injector, and heat released means for opening said discharge and admitting said fluid pressure to said injector to accelerate the discharge of said tank.

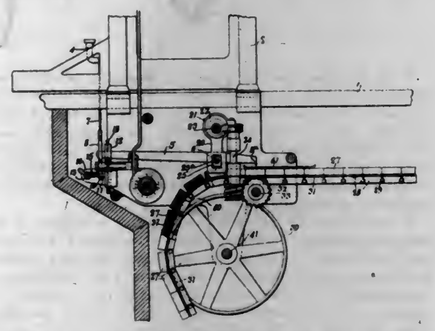
[Claims 6 to 11 not printed in the Gazette.]

1,213,687. STOP DEVICE FOR CAMERAS. GEORGE PELHAM, Lead, S. D. Filed Feb. 7, 1916. Serial No. 76,779. (Cl. 95—31.)



In combination a camera carrying a roll film provided with a series of openings, a casing secured to said camera, a pair of arms pivotally connected to said casing and having angularly bent extremities arranged to engage said openings, a plunger for giving arcuate movement to said levers, and a spring for opposing the movement of said plunger.

1,213,688. AUTOMATIC OPERATING DEVICE FOR TYPE-WRITERS. JOHN H. PILLINGS, Dayton, Ohio, assignor of one-half to Benjamin H. Noyes, Dayton, Ohio. Filed Oct. 13, 1913. Serial No. 794,775. (Cl. 197—19.)



1. The combination with a machine having a plurality of operable parts, of a series of actuating members operatively connected with the respective operable parts of said machine and each capable of two movements of different kinds, one an operative movement to cause the operation of the connected part of said machine and the other an inoperative movement, operating means acting on said actuating members and capable of imparting thereto movement of either kind, and a device to control the kind of movement imparted to each actuating member.

2. The combination with a machine having a plurality of operable parts, of a series of actuating members operatively connected with the respective operable parts of said machine and each capable of two movements of different kinds, one an operative movement to cause the operation of the connected part of said machine and the other an inoperative movement, operating means acting on said actuating members and capable of imparting thereto movement of either kind, of a controlling device to cause the operative movement of said actuating members in a predetermined sequence.

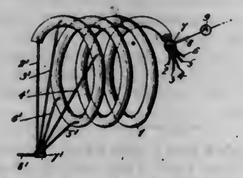
3. The combination with a machine having a plurality of parts, of a series of actuating members operatively connected with the respective operable parts of said machine and each capable of two movements of different kinds, one an operative movement to cause the operation of the connected part of said machine and the other an inoperative movement, means acting normally on said actuating member to impart inoperative movement thereto, and a controlling device acting automatically on said members to transform said inoperative movement into operative movement.

4. The combination, with a typewriter, of an actuating bar operatively connected near one end with an operable part of said typewriter, means for continuously imparting transverse reciprocatory movement to said bar and causing the same to fulcrum about that end which is connected with said typewriter, the other end of said bar being free to move in the line of said reciprocatory movement, and means to interrupt the movement of the last-mentioned end of said bar and cause said bar to fulcrum about said last-mentioned end and cause movement to be imparted to that end thereof which is connected with said typewriter.

5. The combination, with a typewriter, of an actuating lever, means pivotally connected with said lever between its ends to impart transverse movement thereto, one end of said lever being operatively connected with said typewriter and normally held against operative movement, the other end of said lever being normally free to move, and means to automatically interrupt the movement of the last-mentioned end of said lever and thereby cause operative movement to be imparted to the first-mentioned end thereof.

[Claims 6 to 27 not printed in the Gazette.]

1,213,689. INDUCTANCE-COIL. DAVID R. PRICE, Winthrop, Mass., assignor to George K. Woodworth, trustee, Brookline, Mass. Filed Apr. 24, 1914. Serial No. 834,095. (Cl. 171—242.)



1. The method of reducing to substantially a minimum the fluctuating current resistance of an inductance-coil wound with a stranded conductor and having a given inductance which consists in compensating for the effect of inequalities of the impedances of the several strands making up said conductor.

2. The method of reducing to substantially a minimum the fluctuating current resistance of an inductance coil wound with a stranded conductor and having a given inductance which consists in compensating for the effect of any inequalities of the impedances of the several strands making up said conductor which may be disproportionate to the respective cross-sectional areas thereof.

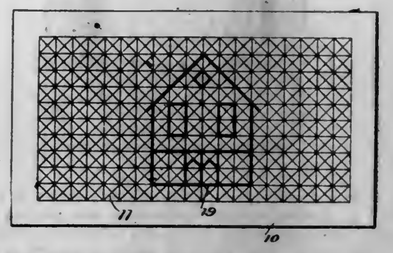
3. The method of giving a stranded-wire inductance-coil substantially minimum fluctuating current resistance for a given inductance which consists in rendering practically equal the impedances of the several strands making up the conductor employed for winding said coil and compensating for the effect of any inequalities of the impedances of said strands.

4. The method of giving a stranded-wire inductance coil substantially minimum fluctuating current resistance for a given inductance which consists in rendering the impedances of the several strands making up the conductor employed for winding said coil practically proportional to the respective cross-sectional areas thereof and compensating for the effect of any inequalities of the impedances of said strands which may be disproportionate to their respective cross-sectional areas.

5. An inductance-coil comprising in combination a main coil wound with a stranded-wire conductor and having a given inductance and means for reducing to substantially a minimum the fluctuating current resistance of said coil.

[Claims 6 to 18 not printed in the Gazette.]

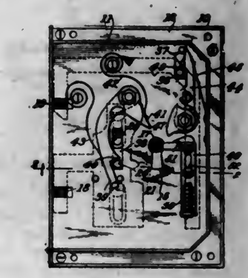
1,213,690. EDUCATIONAL BOARD. ALFREDO QUINONES, New Orleans, La. Filed Nov. 2, 1916. Serial No. 129,168. (Cl. 46—64.)



1. In a toy of the class described, the combination of a board having a plurality of intersecting angularly related grooves, a plurality of strips for insertion in certain of said grooves to produce various representations of objects, said strips having heads, the heads being of a color other than that of the face so as to render the design discernible.

2. In a device as specified, the combination of a board having a plurality of transverse and longitudinal relatively spaced grooves, said board also having a plurality of angularly related diagonally extending grooves, all of said grooves intersecting each other at common points, and a plurality of strips, said strips having colored head portions to exhibit a design when combined as placed in various of the grooves.

1,213,691. LOCK. PASQUALE RAINONE, New York, N. Y. Filed Aug. 10, 1916. Serial No. 114,099. (Cl. 70—14.)

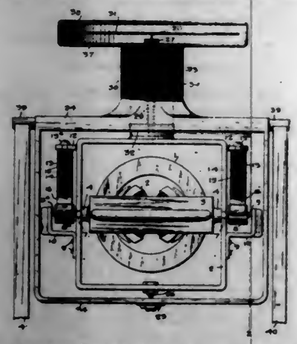


1. A primary lock having two bolts shiftable independently by the same key, in combination with a secondary lock having latches engaging the said bolts and releasable therefrom independently of each other by the same key.

2. A primary lock having a tumbler controlled bolt provided with means for coöperation with a key for advance and retraction thereby, a second bolt independent of the first, but capable of being advanced and retracted by the same key; in combination with a secondary lock having a latch engaging the first bolt to prevent retraction thereof, a second latch engaging the second bolt to prevent

retraction thereof, and means permitting release of the bolts and retraction thereof only by a plurality of manipulations of the key in a predetermined order.

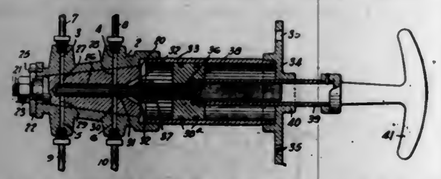
1,213,692. BEARING FOR GYROSCOPIC APPARATUS. GEORGE A. ROSSITER and EDWARD A. THORNE, Brooklyn, N. Y., assignors to Frank G. Carrie, New York, N. Y. Filed May 6, 1912. Serial No. 695,514. (Cl. 64—10.)



1. In a gyroscopic compass the combination of a bearing; a yielding member supporting said bearing; magnetic means adapted to lessen the weight of said bearing on its support; and automatic means associated with said yielding member adapted to control the action of said magnetic means, substantially as described.

2. In a gyroscopic compass the combination of a gyroscopic disk; a frame provided with armatures and bearings for supporting said disk; a second frame provided with yielding members on which said bearings are pivoted; magnets supported by said second frame adapted to attract said armatures and thereby reduce the friction of said bearings; resistances under the control of said yielding members; a circuit through said resistances and said magnets and means for supporting said second frame, substantially as described.

1,213,693. PRIMER FOR EXPLOSIVE-ENGINES. MARCUS B. SCHMELTZ, Pittsburgh, Pa. Filed May 13, 1916. Serial No. 97,256. (Cl. 103—75.)



1. A primer for explosive engines comprising a casing having an inlet and outlets, a rotatable plug in said casing having a longitudinal recess therein with transverse holes connected to said recess and arranged to register with the inlet and outlets in the casing, a cylinder on one end of the casing connected to the recess in said plug, a reciprocatory piston within the cylinder having a piston rod extending to the exterior of the cylinder, a handle on the one end of the piston rod, and means connecting the piston rod and plug and arranged to rotate the plug when the piston rod is turned axially and to reciprocate the piston without movement of said plug.

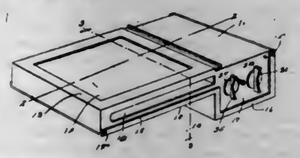
2. A primer for explosive engines comprising a casing having ports for connecting the casing with the engine cylinders and fuel tank, a rotatable plug in the casing having a longitudinal recess therein, said plug having transverse openings arranged to register with and connect said ports with the recess in said plug, a cylinder on one end of said casing into which said recess opens, a reciprocating piston in the cylinder, a piston rod on the piston having a handle on the exterior of the cylinder, and a sliding connection between the piston rod and plug whereby the piston is reciprocated without movement of the plug and whereby the plug is rotated when the piston rod is turned axially at all points in the reciprocatory movement of the piston.

3. A primer for explosive engines comprising a casing having ports for connecting the casing with the engine cylinders and fuel tank, a rotatable plug in the casing having a longitudinal recess therein, said plug having transverse openings arranged to register with and connect said ports with the recess in said plug, a cylinder on one end of said casing into which said recess opens, a reciprocating piston in said cylinder, a hollow piston rod on the piston having a handle extending to the exterior of the cylinder, and a stem fastened to said plug and projecting through the piston into the hollow piston rod, said piston and stem having contacting surfaces adapted to rotate the plug when the piston rod is turned axially and arranged to permit the piston being reciprocated without movement of the plug.

4. A primer for explosive engines comprising a casing having an inlet and outlets, a rotatable plug in said casing having a longitudinal recess therein with transverse holes connected to said recess and arranged to register with the inlet and outlets in the casing, a cylinder on one end of the casing connected to the recess in said plug, a reciprocatory piston within the cylinder having a piston rod extending to the exterior of the cylinder, a handle on the one end of the piston rod, means connecting the piston rod and plug and arranged to rotate the plug when the piston rod is turned axially and to reciprocate the piston without movement of said plug, and coacting means on said casing and plug whereby the extent of turning movement of the plug is limited.

5. A primer for explosive engines comprising a casing having ports for connecting the casing with the engine cylinders and fuel tank, a rotatable plug in the casing having a longitudinal recess therein, said plug having transverse openings arranged to register with and connect said ports with the recess in said plug, a cylinder on one end of said casing into which said recess opens, a reciprocating piston in said cylinder, a hollow piston rod on the piston having a handle extending to the exterior of the cylinder, a stem fastened to said plug and projecting through the piston into the hollow piston rod, said piston and stem having contacting surfaces adapted to rotate the plug when the piston rod is turned axially and arranged to permit the piston being reciprocated without movement of the plug, and coacting means on said casing and plug whereby the extent of turning movement of the plug is limited.

1,213,694. FILM-ROLL HOLDER. WILBUR I. SCHULTZ, Sr., Clay City, Ind. Filed June 5, 1915. Serial No. 32,416. (Cl. 95—34.)



A film roll holder including a casing comprising front and rear sections, said rear section having one end thereof bent downwardly, then forwardly and upwardly and provided with upturned flanges formed on its longitudinal edges, said front casing comprising a flat plate having side walls, a rear wall, and a front wall, said plate having an exposure opening formed therein, a partition secured to said front section, said partition having a downturned end, spool carrying studs secured to said side walls of said front casing positioned on each side of said downturned end of the partition, a guide roller secured adjacent the lower end of said front section, said rear section being hingedly connected to the rear wall of said front section and extending forwardly to the front part thereof and overlying said spool carrying studs, said flanges engaging the outer side of the side walls of the front section to form light tight joints, and a slide adapted to cover said exposure opening in the front section.

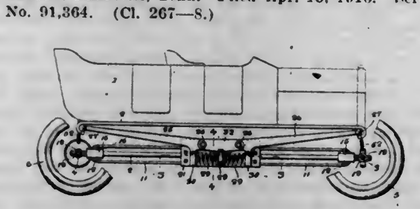
1,213,695. CLOTH-COVERED BUCKLE. JOSEPH B. SCUTTI, Brooklyn, N. Y. Filed Apr. 14, 1916. Serial No. 91,049. (Cl. 24—165.)



1. In a device of the class described, an outer annulus with separated edges and a cloth stretched over the same, a cross-bar and an inner annulus mounted in the first mentioned annulus and over said cross-bar.

2. In a device of the class described, an outer annulus with separated edges, a cloth stretched over the same, a cross-bar on the inner of said edges of the outer annulus, and a second annulus in the groove of the first mentioned annulus.

1,213,696. VEHICLE-BODY SUPPORT. BENJAMIN C. SEATON, Nashville, Tenn. Filed Apr. 15, 1916. Serial No. 91,364. (Cl. 267—8.)



1. The combination with the front and rear axles of a vehicle, and a vehicle body, of struts holding said axles at a fixed distance from each other, flexible elements extending between and connected with the front and rear axles, main body-supporting members supported by said flexible elements, body-supporting levers having a jointed connection with the vehicle body and the main body-supporting members, and cushioning means for said body supporting levers.

2. The combination with the front and rear axles of a vehicle, and a vehicle body, of struts holding said axles at a fixed distance from each other having a universal jointed connection with said axles, flexible elements extending between and connected with the front and rear axles, main body-supporting members supported by said flexible elements, body-supporting levers having a jointed connection with the vehicle body and the main body-supporting members, and cushioning means for said body supporting levers.

3. The combination with the front and rear axles of a vehicle, and a vehicle body, of struts holding said axles at a fixed distance from each other, flexible elements extending between and yieldingly connected with the front and rear axles, main body-supporting members supported by said flexible elements, body-supporting levers having a jointed connection with the vehicle body and the main body-supporting member, and cushioning means for said body-supporting levers.

4. The combination with the front and rear axles of a vehicle, and a vehicle body, of cables extending between said axles and supported thereby, and body supporting connections yieldingly supported by said cables.

5. The combination with the front and rear axles of a vehicle, and a vehicle body, of cables extending between said axles and supported thereby, and body supporting connections yieldingly supported by said cables including cushioning members.

[Claims 6 to 12 not printed in the Gazette.]

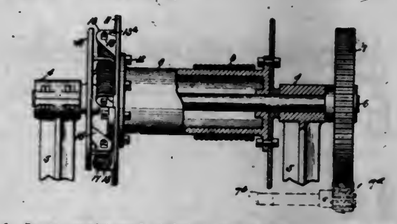
1,213,697. TIRE. BENJAMIN C. SEATON, Nashville, Tenn. Filed Apr. 15, 1916. Serial No. 91,367. (Cl. 152—13.)



1. An inner tube for pneumatic tires comprising a sheet-like member of resilient material having a central longitudinal outwardly bowed portion, and other inwardly bowed portions at opposite sides of said outwardly bowed portion, and a saddle adapted to encircle the tire carrying rim, said saddle being formed with annular seats for the marginal edges of said inner tube member.

2. An inner tube member for pneumatic tires comprising a sheet-like body of resilient material having a central longitudinal outwardly bowed portion, and other inwardly bowed portions at opposite sides of said outwardly bowed portion, and a saddle adapted to encircle the tire carrying rim, said saddle being formed with annular seats for the marginal edges of said inner tube member, the said inwardly bowed portions serving when the tube is in a fully expanded condition to press the marginal edges of the body of said tube member into airtight engagement with said annular seats.

1,213,698. SAFETY-DRIVE FOR DRILLING-MACHINE DRUMS. ABIA J. SHARP and JOHN O. FOSTER, Harrisonville, Mo. Filed Apr. 29, 1916. Serial No. 94,374. (Cl. 64—13.)



1. In a cushioned driving mechanism, a drive and a driven element, presenting opposed lateral faces formed with transverse recesses, springs interposed between said elements, and studs on the elements receiving the opposite ends of the springs, the said studs having lateral notches in which portions of each spring near the ends thereof are received, the extremities of each spring extending from the said notches into said recesses.

2. In a cushioned driving mechanism, a drive and a driven element, presenting opposite lateral faces formed with transverse recesses, springs interposed between said elements, studs having threaded shanks, the said elements having lugs through which the said shanks extend,

and nuts rigidly securing the studs to said lugs, the studs furthermore having lateral notches at the bases thereof in which portions of each spring, near the ends thereof, are received, the extremities of each spring extending from the said notches into said recesses.

1,213,699. SPLICE-BAR FOR RAILS AND THE LIKE. FREDERICK L. H. SIMS, Toronto, Ontario, Canada, assignor to The Diaphone Signal Company, Limited, Toronto, Ontario, Canada. Filed May 13, 1916. Serial No. 97,387. (Cl. 239—11.)



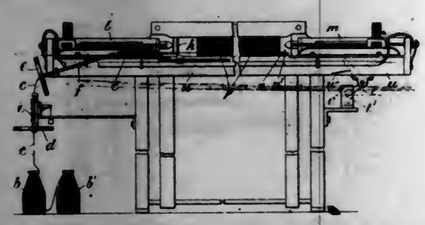
1. A splice bar for rails and the like provided with a bolt hole and having ribs on its outer side forming between them a groove of less width than the diameter of the hole and intersecting the same substantially diametrically, said ribs being tapered off at each end to the general level of the outer surface of the splice bar.

2. A splice bar for rails and the like provided with a bolt hole and having ribs on its outer side forming between them a groove of less width than the diameter of the hole and intersecting the same substantially diametrically, said ribs being tapered off at each end to the general level of the outer surface of the splice bar, in combination with a slotted bolt having its slotted end extending through the splice bar; and a key passing through the slot in the bolt and lying in said slot, the outer corner of the forward end of said key being beveled off.

3. A splice bar for rails and the like provided with a bolt hole and having a groove with parallel flat sides formed in its outer surface of less width than the diameter of the hole and intersecting the same substantially diametrically, in combination with a slotted bolt having its slotted end extending through the splice bar; and a wedge key passing through the slot in the bolt, the edges of the slot behind the rear end of the key being deformed to prevent the retraction of the key.

4. A splice bar for rails and the like provided with a bolt hole and having ribs on its outer side forming between them a groove of less width than the diameter of the hole and intersecting the same substantially diametrically, the said ribs extending around the hole substantially concentric therewith.

1,213,700. LOOM FOR WEAVING. ALBERT SMITH, Birmingham, England. Filed Oct. 27, 1915. Serial No. 58,190. (Cl. 139—18.)



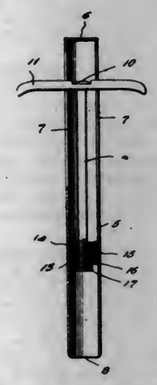
1. In a loom the combination of suitable shed-forming and picker mechanisms; means for supporting a supply of weft yarn at one side of the loom; a shuttle thrown by said picker mechanism and provided with rearwardly diverging longitudinal yarn guiding slot-like apertures in the face of said shuttle toward the fell of the woven cloth, through which apertures the weft yarn passes, whereby a looped double pick of yarn is laid in the shed at each throw of the shuttle forward or away from the weft yarn supply; and a catch located at that side of the loom remote from the weft yarn supply for coacting directly with the shuttle to catch the loop of said double pick while held open by the divergent yarn guiding apertures in the shuttle.

2. The combination of a loom including a suitable shed-forming mechanism, picker motion and slay; means for supporting a supply of weft yarn at one side of the loom; a shuttle thrown by said picker motion and provided with spaced apertures on the face toward the fell of the woven cloth, through which apertures the weft yarn passes, whereby a looped double pick of yarn is laid in the shed by each throw of the shuttle away from the weft supply; and a fixed catch located at that side of the loom remote from the yarn supply for coacting directly with the shuttle as the latter moves in the beating up motion of the slay to catch and retain the loop of said double weft.

3. The combination of a loom including a suitable shed forming mechanism, picker motion and slay; means for supporting a supply of weft yarn at one side of the loom; a shuttle thrown by said picker mechanism and provided with rearwardly diverging longitudinal yarn guiding slot-like apertures in the face of said shuttle toward the fell of the woven cloth, through which apertures the weft yarn passes, whereby a looped double pick of yarn is laid in the shed at each throw of the shuttle forward or away from the weft yarn supply; and a fixed catch located at that side of the loom remote from the weft yarn supply for coacting directly with the shuttle as the latter moves in the beating up motion of the slay to catch the loop of said double pick while held open by the divergent yarn guiding apertures in the shuttle.

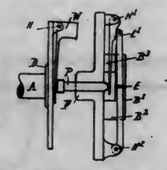
4. In a loom for weaving fabric, a shuttle to which weft from a bobbin, cone or the like outside the shuttle is supplied so that a double pick of weft is inserted in the open shed on the motion of the shuttle in one direction, the shuttle running freely on one of the picks of weft when performing its motion in the reverse direction, the shuttle being constructed so that the weft passes into and out of the shuttle through openings in the front face of the same, and means for giving to the shuttle its reciprocating motion working in combination with a weft retaining device at the side of the cloth opposite that at which the weft is first introduced into the open shed, the said weft retaining device comprising two parallel wires n, n^1, the wire n being hook shaped and the wire n^1 being flattened and situated within the hook of the wire n, the weft being engaged with the hook on the first beat up of the slay and being disengaged therefrom on the second beat up substantially as set forth and shown.

1,213,701. VACUUM MASSAGE DEVICE. ALVIN L. SMITH, Washington, D. C. Filed May 26, 1916. Serial No. 100,075. (Cl. 128—16.)



A vacuum massage device comprising a tubiform body of uniform cross sectional size throughout closed at one end and having diametrically opposite elongated slots extending from a slight distance spaced from the closed end to a point medially of said member, a piston rod interiorly of said tubiform member, a piston reciprocatingly slidable in the tubiform member and connected to one end of the piston rod, and a handle bar connected to the piston rod at its end opposite the piston and disposed transversely of the tubiform member through the slots therein for the protruding of the ends of the handle bar a considerable distance without said member at opposite sides thereof.

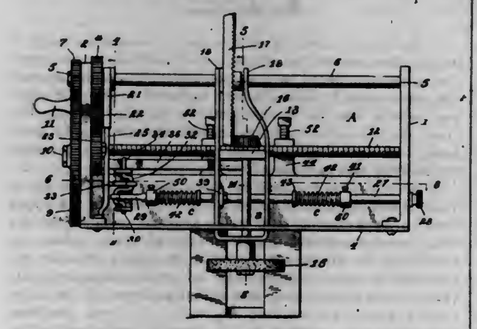
1,213,702. GOVERNOR FOR ELECTRIC-LIGHTING GENERATORS FOR MOTOR-CARS. HERBERT CHARLES HUMPHREY SMYTH, London, England. Filed Oct. 26, 1915. Serial No. 58,078. (Cl. 175—310.)



1. A centrifugal governer for electrical generators comprising a centrifugal lever rotating with the dynamo-shaft and separate contact-operating mechanism carried on an adjacent stationary supporting plate within the generator, said mechanism consisting of a sliding pin co-axial with the dynamo-shaft and movable in the stationary supporting plate, a radially disposed lever pivotally mounted on the latter and controlled at its free end by the said sliding pin, a contact lever pivoted diametrically opposite the radial lever and controlled thereby at its free end, a fulcrum-pin fast on the contact lever, an electric contact block seated on said fulcrum-pin, a pair of contact blocks fast on the stationary support within the path of the fulcrumed contact block, and means for keeping the contact-operating mechanism in constant coöperation with the said centrifugal lever, as described.

2. In a centrifugal governor for electrical generators which comprises a single weighted centrifugal lever carried by the dynamo-shaft and separate pin-operated multiplying lever mechanism on a stationary support for electrical contacts, the combination with said multiplying mechanism of a turnable adjusting spindle, an adjustable coil-spring retained on said spindle by one end and bringing the other end of said spring against the multiplying mechanism, means for turning said spindle, and means for retaining same in an adjusted position, as described.

1,213,703. SHARPENING-MACHINE FOR CUTTER-HEADS. WILLIAM A. SPEEGLE, Drexel, N. C., assignor of one-fourth to T. P. Brackman, one-eighth to Will Shuping, and one-eighth to W. L. Cannon, Drexel, N. C. Filed Aug. 9, 1916. Serial No. 114,041. (Cl. 51—7.)



1. In a device of the class described, the combination with a base, a main shaft and a threaded feed shaft journaled therein, a train of gears connecting said shafts, and reversing mechanism within said train; of a carriage including a frame, a gear splined on the main shaft within said frame, a tool shaft journaled in the carriage and driven by the splined gear, a rock lever for actuating said reversing mechanism, a double crank rod, connections between one of its cranks and said lever, a rod connected with the other crank, and stops on said rod engaged by the carriage att he extremes of its movements, for the purposes set forth.

2. In a device of the character described, the combination with a base, a main shaft and a threaded feed shaft journaled therein, means for rotating the main shaft, a train of gears connecting it with the feed shaft, and reversing mechanism within said train; of a carriage including a frame whose arms are slidably mounted on both shafts, a gear splined on the main shaft between said arms, a tool shaft journaled in the carriage and having a small gear meshing with the splined gear, a rock lever for actuating said reversing mechanism, a double crank rod, connections between one of its cranks and said lever, a rod slidably mounted in the base and connected with the other crank, and adjustable stops on said rod engaged by the carriage at the extremes of its movements, for the purpose set forth.

3. In a device of the character described, the combination with a base, a main shaft and a threaded feed shaft journaled therein, a train of gears connecting said shafts, and reversing mechanism within said train; of a carriage including arms, a gear splined on the main shaft between said arms, a tool shaft journaled in the carriage and driven by the splined gear, a rock lever for actuating said reversing mechanism, a double crank rod, connections between one of its cranks and said lever, a rod slidably mounted in the base and connected with the other crank, collars adjustable on said rod, springs thereon against the collars, washers against the inner ends of the springs, and a U-shaped lug on the carriage loosely embracing the rod between said washers, for the purpose set forth.

4. A device of the class described comprising a base, a grinding wheel carriage movably mounted thereon, a screw threaded shaft engaging said carriage, means for rotating said shaft, a shiftable gear interposed between said means and the screw threaded shaft for reversing the rotation of said shaft, a rod slidably mounted in the base, a crank connection between said rod and said gear, and means mounted upon said rod and engaged by said carriage for actuating said rod to shift the gear for reversing the direction and rotation of said shaft.

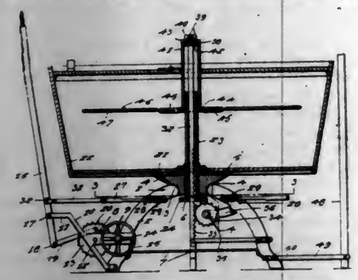
5. A device of the class described comprising a base, a carriage movably mounted thereon, a screw threaded shaft engaging said carriage, means for rotating said shaft, a shiftable gear interposed between said means and the screw threaded shaft for reversing the rotation of said shaft, a rod slidably mounted, a crank connection between said rod and said gear, and adjustable resilient means engaged by said carriage for actuating said rod to shift the gear for reversing the direction of rotation of said shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,213,704. WASHING-MACHINE. JOHN A. STENSRUD, Scotsguard, Saskatchewan, Canada, assignor of one-fourth to Oscar J. Bolstad, Scotsguard, Saskatchewan, Canada. Filed Oct. 20, 1916. Serial No. 126,706. (Cl. 68—24.)

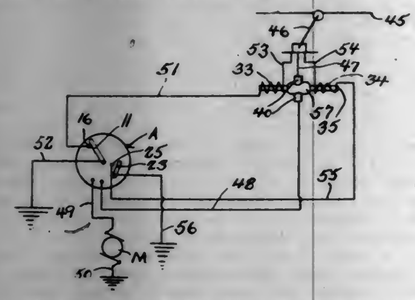
In a washing machine, a base, brackets supported on the base, a bar slidably mounted beside the base, extensions on the bar slidable in the brackets, springs surrounding the extensions for balancing the bar, means to reciprocate said bar, rack teeth on the inner and lower faces of the bar, a hollow shaft journaled in the base and extending upwardly therethrough, a tub rotatably supported on the base and attached to said shaft, a pinion on the lower end of the shaft meshing with the rack teeth on the inner face of the bar, a hollow sleeve slidable over the upper end of the hollow shaft, a rack bar slidable through the hollow shaft and connected to the sleeve, a corrugated rubber secured to the lower end of the sleeve

and means driven from the under face of the first mentioned rack bar to cause the second mentioned rack bar



to reciprocate simultaneously with the oscillation of the tub.

1,213,705. ELECTRIC CUT-OFF MECHANISM. MINOT M. STEVENS and THOMAS J. NEWCOME, Hastings, Pa. Filed Dec. 14, 1915. Serial No. 66,865. (Cl. 172—179.)



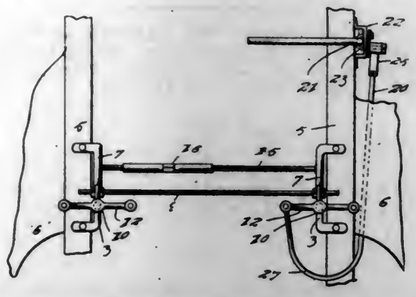
1. The combination with a source of power, of a main circuit connected therewith, a controlling device in said main circuit, a normally opened secondary circuit connected with the source of power, means operated by the off movement of the controller for closing said secondary circuit, means operated by current in the secondary circuit to break the main circuit, and means operated at the termination of the off movement of the controller to close the main circuit.

2. The combination with a source of power, of a main circuit connected therewith, a controlling device in said main circuit having an on and off movement, a secondary circuit connected with the source of power and including a normally open switch, means operated by the initial off movement of the controlling device to close said switch, and means operated by the closing of the secondary circuit to break the main circuit.

3. The combination with a source of power, of a main circuit connected therewith, a controlling device in said main circuit having an on and off movement, a pair of secondary circuits connected with the source of power, one of said secondary circuits including a movable part of the controlling device and said circuit being closed in the full off position of said movable part and open in all other positions of the part, means operated by the closing of said secondary circuit to close the main circuit, the other of said secondary circuits including a normally open switch, means operated by the initial off movement of a part of the controlling device to close said switch, and means operated by the closing of the last named secondary circuit to break the main circuit.

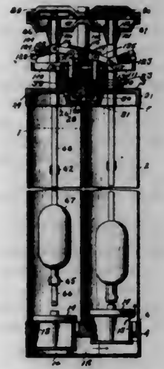
1,213,706. DIRIGIBLE HEADLIGHT. ARTHUR L. STEWARDSON and JOHN D. HARPER, Santa Anna, Tex. Filed Sept. 1, 1916. Serial No. 118,078. (Cl. 240—62.)

In combination, an automobile including a chassis and a steering arm, of a pair of lamp standards journaled to the chassis, headlights carried by said standards, means for connecting the standards together, a rod connected to one of the standards and having one end screw threaded, a substantially U-shaped member having the ends of its arm portion screw threaded and having the web portion thereof engaging the steering arm, a plate carried by the arm portions of said member and held in engagement with



the steering arm, one of said arm portions of said member being of shorter length than the other and having a nut threaded thereon for forcing one end of the plate in the direction of the steering arm, and an internally screw threaded sleeve threaded to the rod and journaled on the arm portion of said member which is of greater length than the other arm portion.

1,213,707. PNEUMATIC PUMP. JOHN M. SWANSTROM, Chicago, Ill. Filed Aug. 2, 1913, Serial No. 782,782. Renewed Sept. 21, 1916. Serial No. 121,510. (Cl. 103—8.)



1. In a device for raising water by compressed air, a water chamber having an air inlet opening in its upper end, a valve adapted to close the air inlet opening against the air supply pressure, means operated by the air pressure within the water chamber for causing the valve to close the air inlet opening against the air supply pressure, and means independent of the valve closing means for holding the valve in closed position.

2. In a device for raising water by compressed air, a water chamber having an air inlet opening in its upper end, an inwardly opening valve adapted to close the air inlet opening against the air supply pressure, means operated by the air pressure within the water chamber for causing the valve to close the air inlet opening against the air supply pressure, means independent of the valve closing means for holding the valve in closed position, and means also operated by air pressure for releasing the valve.

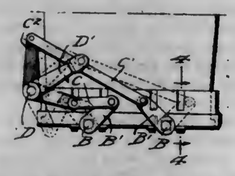
3. In a device for raising water by compressed air, two water chambers arranged side by side, each having an air inlet in its upper end, a valve for closing each air inlet opening against the air supply pressure, a lever pivoted between the air inlet openings, and means operated by the lever for causing the valve to close the air inlet openings against the air supply pressure alternately, means for swinging the lever past its dead center and resilient means arranged to swing the lever to position to cause it to effect the closing of a valve.

4. In a device for raising water by compressed air, water chambers arranged side by side, each having an air inlet opening in its upper end, valves adapted to close the air inlet openings against the air supply pressure, a lever pivoted between the air inlet openings and means operated by the lever for causing the valve to close the air inlets of the chambers against the air supply pressure alternately, means for swinging the lever past its dead center, and resilient means arranged to swing the lever to position to cause it to effect the closing of a valve, comprising a resilient device having one end in engagement with the lever and the other end in the plane of the pivot of the lever.

5. In a device for raising water by compressed air, two water chambers arranged side by side, each having an air inlet opening in its upper end, a valve for closing each air inlet opening against the air supply pressure, a lever pivoted between the air inlet openings and means operated by the lever for causing the valves to close the air inlets of the two water chambers against the air supply pressure alternately, means for swinging the lever, and a resilient device bearing at one end against the lever and having its other end arranged in line with the pivot of the lever.

[Claims 6 to 17 not printed in the Gazette.]

1,213,708. LOCOMOTIVE ASH-PAN. WILLIAM WHITE SYKES, Richmond, Va. Filed Jan. 10, 1916. Serial No. 71,242. (Cl. 110—168.)

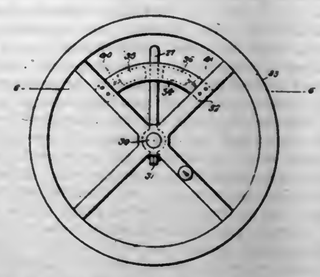


1. An ashpan having double rocking doors, the inner edges of which are adjacent to one another and the outer edges of which close upwardly against the lower edge of the ashpan at opposite sides thereof, an extension lip carried by the said inner edge of one of the doors to lap the adjacent edge of the other door in closed position, a rigid frame surrounding the said lower edge of the pan and having portions at opposite sides thereof depending below the said lower edge of the ashpan at opposite sides along and below the said outer edges of the doors, and having at its other sides cored out recesses and vertical apertures, rock shafts on which said doors are secured, bearings for said rock shafts, and securing members for attaching said bearings to the said frame, extending through the said vertical apertures thereof and extending into the said cored-out recesses.

2. An ash-pan having double ash-pan doors, rock shafts having stationary bearings and upon which said doors are secured, a crank arm rigid at one end with each shaft, a bell crank lever, links pivotally connecting the arms of said lever with the said crank arms of both shafts, and an operating shaft upon which said bell crank lever is secured, said operating shaft being mounted at one side of the ash-pan whereby it may with increased length be utilized to operate multiple ash-pans, substantially as described.

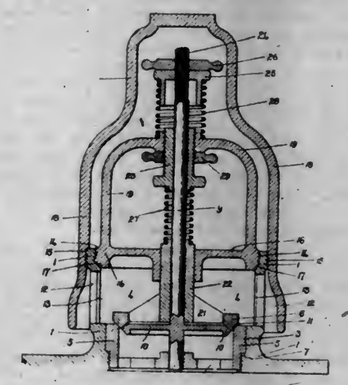
3. An ash-pan having double rocking doors, the outer edges of which close upwardly against the lower edge of the ash-pan, and a rigid frame surrounding and secured to the lower edge of the ash-pan and having extensions at opposite sides depending below the lower edges of the ash-pan along and below the said outer edges of the doors and having bearings supporting the doors for rocking movement.

1,213,709. SIGNAL FOR AUTOMOBILES. RALPH W. THIBODEAU, Quincy, Mass. Filed Dec. 8, 1915. Serial No. 65,789. (Cl. 200—27.)



A steering wheel controlled switch embodying a contact finger stationarily mounted upon the steering column, a panel plate secured to the underneath surface of the steering wheel, a pair of yieldable contacts housed within the panel plate and provided with protruding hooked extremities, said contact finger adapted to alternately engage with the hooked extremities of the yieldable contacts upon movement of the steering wheel in opposite directions.

1,213,710. COMBINED PRESSURE AND VACUUM RELIEF VALVE. FREDERICK MORTIMER TIMPSON, Ilford, and ALEXANDER OGILVIE ROBERTSON, London, England, assignors to The Tiros Valve Syndicate, London, England. Filed June 15, 1916. Serial No. 103,903. (Cl. 137—53.)



1. A combined pressure and vacuum relief valve appliance, consisting of a valve chamber having apertures in its wall, a valve seating fitted in said valve chamber, a grid carried by said seating and having a central hole, a plate secured to the top of the chamber and provided with a hole, a bridge carried by said plate, co-acting vacuum relief and pressure valves, a tubular stem on the pressure valve passing through the hole in said plate, a stem on the relief valve passing through the hole in said grid and through the tubular stem of the pressure valve, an adjustable screw stem engaging the bridge and through which the relief valve stem also passes, a nut threaded on the end of the relief-valve stem, springs between said nut and said bridge and between the adjustable screw stem and the stem on the pressure valve, and a cover attachable to the valve chamber so as to completely inclose

the springs, bridge, plate, and nut, and the apertures in said chamber wall.

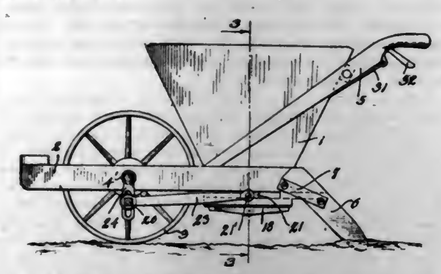
2. An appliance of the character specified, comprising, in combination, a valve chamber having its wall threaded internally; a valve seating fitted in said chamber; a centrally-apertured plate engaged with the thread on said chamber wall and provided with an elevated bridge having a central threaded opening alining with the aperture in said plate, a pressure valve arranged to fit against said seating and having an upstanding tubular stem extending through the plate aperture; an adjustable tubular stem engaged in the bridge aperture and located above the first-named tubular stem; a vacuum relief valve arranged to seat against the under face of the pressure valve and having a stem projecting upwardly through and beyond both tubular stems; a spring interposed between said tubular stems and exerting pressure downward upon the lower stem, so as to maintain the pressure valve normally closed, said spring having its pressure regulated by adjustment of the upper stem; a nut threaded on the projecting upper end of the relief valve stem; and a spring interposed between said bridge and said nut and exerting pressure upward against the latter, so as to maintain the relief valve normally closed, the last-named spring having its pressure regulated by adjustment of said nut.

3. An appliance of the character specified, comprising, in combination, a valve chamber having apertures in its side wall, and having said wall threaded both externally and internally above said apertures; a valve seating fitted in the base of said chamber; a centrally-apertured plate engaged with the internal thread on said chamber wall and provided with an elevated bridge having a central threaded opening alining with the aperture in said plate; a pressure valve arranged to fit against said seating and having an upstanding tubular stem extending through the plate aperture; an adjustable tubular stem engaged in the bridge aperture and located above the first-named tubular stem; a vacuum relief valve arranged to seat against the under face of the pressure valve and having a stem projecting upwardly through and beyond both tubular stems; a spring interposed between said tubular stems and exerting pressure downward upon the lower stem, so as to maintain the pressure valve normally closed, said spring having its pressure regulated by adjustment of the upper stem; a nut threaded on the projecting upper end of the relief valve stem; a spring interposed between said bridge and said nut and exerting pressure upward against the latter, so as to maintain the relief valve normally closed, the last-named spring having its pressure regulated by adjustment of said nut; and a cover removably engaged with the external thread on said chamber and extending below said thread, so as to completely inclose said springs, nut, bridge, plate, valves and valve stems, and the apertures in said chamber wall.

4. An appliance of the character specified, comprising, in combination, a valve chamber having apertures in its side wall, and having said wall threaded externally above said apertures; a valve seating fitted in the base of said chamber; co-acting pressure and vacuum relief valves arranged within said chamber and provided with controlling springs for normally holding them individually closed, one of said valves being arranged to fit against said seating, and the other valve being arranged to seat against the under face of the first-named valve; and a cover removably engaged with the external thread on said chamber and extending below said thread, so as to completely inclose said valves and their controlling springs, and the apertures in said chamber wall.

1,213,711. FERTILIZER-DISTRIBUTING APPARATUS. JAMES L. TOWNSEND, McDonalds, N. C. Filed May 22, 1916. Serial No. 99,141. (Cl. 111—34.)

1. In fertilizer distributing apparatus of the class described, the combination with a hopper having a discharge opening substantially equal to the area of the bottom of the hopper, of distributing plates entirely closing the discharge opening of said hopper, and agitating means operably connected to one of the plates for causing the fertilizer to sift from between the plates during movement of the apparatus.



2. In fertilizer distributing apparatus of the class described, the combination of a hopper having a discharge opening, a relatively stationary apertured plate attached to the hopper at said opening, and an agitating plate substantially closing the discharge opening, said plates having coöperating projections adapted to operate upon the material to pulverize and work the same from between the plates.

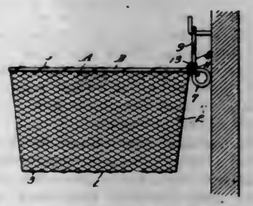
3. In fertilizer distributing apparatus of the class described, the combination of a hopper having a discharge opening, relatively stationary spaced plates each having their central portion cut away to form spaced projections and arranged at the discharge opening, a movable member disposed intermediate said spaced plates forming a closure for the plates and the discharge opening of the hopper, and means for agitating said movable member to work the material from between the plates and over their edges.

4. In fertilizer distributing apparatus of the class described, the combination of a hopper having a discharge opening, relatively stationary spaced plates each having their central portion cut away so as to leave spaced projections, the projections of one plate being arranged over the spaces between the projections of the other plate, and an intermediate movable plate for agitating the material to distribute the same from the hopper.

5. In fertilizer distributing apparatus of the class described, the combination of a hopper having a discharge opening, and relatively superposed plates each having their body cut out to form annular pulverizing blades, one of said plates constituting a substantial closure for the discharge opening of the hopper.

[Claims 6 to 10 not printed in the Gazette.]

1,213,712. POULTRY-NEST. CHRIST W. TRIPPENSEE, Jefferson City, Mo. Filed May 17, 1916. Serial No. 98,118. (Cl. 119—45.)

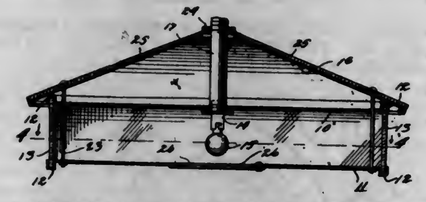


1. A poultry nest comprising a body having a flat side, a reinforcing member secured to the upper edge of the body and comprising a single piece of wire, the ends of which are bent to provide laterally extending loops at the flat side of the body, and then extending upwardly to provide upstanding eyes.

2. A poultry nest comprising a body of substantially semi-ovate formation and including a bottom member, a single piece of material secured to the edge of the bottom member and extending from the same to form the sides of the body, said material having the opposite ends overlapped and bent to form a flat side, and supporting eyes carried by the body.

3. A poultry nest comprising a body having a flat side, a reinforcing member secured to the upper edge of the body and comprising a single piece of wire, the ends of which are bent to provide laterally extending loops at the flat side of the body and then extending outwardly to provide upstanding eyes, and a rod connecting the ends of the wire and having its opposite ends bent to provide eyes, the last mentioned eyes engaging the terminals of the loops.

1,213,713. STREET-SIGN. ROBERT M. WALLACE, Santa Ana, Cal. Filed July 28, 1915. Serial No. 42,406. (Cl. 40—132.)



A street sign structure comprising in combination, upper and lower plates having opposing marginal grooves, translucent plates having their longitudinal edges inserted in said grooves, an inclined roof overlying the upper plate, bolts passed through said upper and lower plate and said roof for securing the latter in assembled position, illuminating devices suspended between said upper and lower plates, and means for suspending the structure.

1,213,714. ELECTRICALLY-INDICATING WEATHER-VANE. FRANK L. WASHBURNE, Westfield, N. J., and GEORGE E. KIMMERLÉ, Brooklyn, N. Y., assignors to E. G. Washburne & Company, New York, N. Y. Filed Mar. 13, 1915. Serial No. 14,285. (Cl. 177—351.)

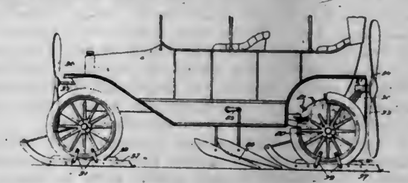


1. A weather vane comprising an upright support, an electric commutator intermediate the ends thereof, a wind vane including an open-ended tube rotatably mounted upon said upright support, a flange carried at the lower end of said tube, positioned adjacent the top of said electric commutator, an electric contact arm carried by said flange and coöperating with said electric commutator, and a bracket rigidly secured to said upright support with an inwardly extending claw at the upper extremity thereof, said inwardly extending claw projecting above said commutator and engaging the upper surface of said flange and holding the same against shifting.

2. A weather vane adapted to transmit signals as to its position, comprising an upright post, an electric commutator at the upper extremity thereof, a rod secured to and projecting above, said commutator, a wind vane provided with a supporting tube, said supporting tube fitting down over said rod, the lower extremity of said wind vane tube extending adjacent the top of said commutator and provided with a flange, a contact arm carried by said flange and engaging said commutator and a supporting bracket rigidly secured to said post, extending to the side of said commutator and contact arm, a claw at the upper extremity of said supporting bracket projecting above and engaging said flange.

3. A weather vane adapted to transmit signals as to its position, comprising an upright post, an electric commutator at the upper extremity thereof, a rod secured to, and projecting above, said commutator, a wind vane provided with a supporting tube, said supporting tube fitting down over said rod, the lower extremity of said wind vane tube extending adjacent the top of said commutator and provided with a flange, a contact arm carried by said flange and engaging said commutator and a supporting bracket rigidly secured to said post, extending to the side of said commutator and contact arm, a claw at the upper extremity of said supporting bracket projecting above and engaging said flange, and a sectional spherical-shaped casing housing the said commutator, contact arm, flange and supporting bracket therein, the upper section of said casing secured to a weather vane supporting tube and adjustable therealong.

1,213,715. SELF-PROPELLED SLEIGH. SAMUEL WEINBERG, Regan, N. D., assignor of one-half to Nathan Weinberg, Bowdon, N. D., and one-half to Morris Weinberg, Regan, N. D. Filed July 14, 1916. Serial No. 109,331. (Cl. 21—47.)



1. In a motor driven sleigh, the combination with a wheeled vehicle, of runners detachably connected to the wheels of said vehicle, spurred wheels rotatable about the rear axle of the vehicle and adapted to bite into the snow to propel the sleigh, and means for connecting said spurred wheels to the ring gear of the differential and disconnecting the driving wheels from such ring gear.

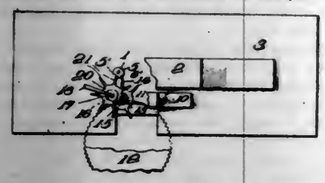
2. In a motor driven sleigh, the combination with a wheeled vehicle, of runners detachably connected to the wheels of said vehicle, spurred wheels rotatable about the rear axle of the vehicle and adapted to bite into the snow to propel the sleigh, means for connecting said spurred wheels to the ring gear of the differential and disconnecting the driving wheels from such ring gear, and aerial propellers connected to the engine and ring gear respectively for assisting said spurred wheels in driving the sleigh.

3. In a motor driven sleigh, the combination with a wheeled vehicle, of runners detachably connected to the wheels of said vehicle, spurred wheels rotatable about the rear axle of the vehicle and adapted to bite into the snow to propel the sleigh, means for connecting said spurred wheels to the ring gear of the differential and disconnecting the driving wheels from such ring gear, aerial propellers connected to the engine and ring gear respectively for assisting said spurred wheels in driving the sleigh, and steppers connected to the driving shaft of the sleigh to augment the action of said propellers and spurred wheels.

4. In a motor driven sleigh, the combination with a wheeled vehicle, of runners detachably connected to the wheels of said vehicle, spurred wheels rotatable about the rear axle of the vehicle and adapted to bite into the snow to propel the sleigh, and manually controlled

clutches for connecting said spurred wheels to the ring gear of the differential and disconnecting the drive wheels of the vehicle from such ring gear.

1,213,716. ESCAPEMENT FOR CHRONOMETERS. RICHMOND A. WENTWORTH, Hope, Me. Filed July 5, 1916. Serial No. 107,670. (Cl. 58—117.)



1. An escapement comprising a balance-wheel, a shaft, a plurality of actuated pallets on said shaft, and star-wheels engaging said pallets and moving in different directions for oscillating said balance wheel.

2. In an escapement, the combination with a balance wheel, of a shaft, grooved pallets on said shaft, star-wheels so located as to engage the grooves of said pallets, and geared together so as to turn in opposite directions, and thus to oscillate the balance-wheel.

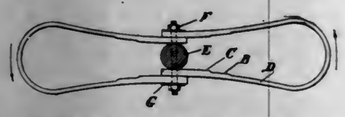
3. In an escapement, the combination with a balance-wheel and shaft, of notched pallets in superimposed relation on said shaft, escape-wheels geared so as to revolve in opposite directions and engage the notches in said pallets, said balance-wheel and pallets permitting intermittent movement of said escape-wheels.

4. An escapement comprising a shaft, a balance wheel thereon, pallets on said shaft having grooves therein, a power shaft and a driven shaft substantially parallel to said first mentioned shaft, star wheels on said power and said driven shafts, and means for actuating said last mentioned shafts, whereby the pallets will be alternately engaged by said star wheels, and the balance wheel will be oscillated in opposite directions alternately.

5. An escapement comprising a balance shaft carrying a balance wheel thereon, pallets having vertical grooves therein, the grooves in said pallets being in staggered relation to each other, actuating means in close proximity to said balance shaft comprising star wheels adapted to engage the grooves in said pallets alternately, said star wheels having arms in staggered relation with each other.

[Claims 6 to 8 not printed in the Gazette.]

1,213,717. HOG-BEATER BELT. STEPHEN WENZEL, Jersey City, N. J., assignor to New Jersey Car Spring & Rubber Co., Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 19, 1915. Serial No. 56,717. (Cl. 17—11.)



1. A hogbeater arm comprising a one piece strip of flexible material adapted for use in the form of a loop, said belt being thicker at the ends of the loop than in the middle whereby motion communicated to the thicker portion is internally resisted.

2. A hogbeater arm adapted for use in the form of a loop, said loop comprising a one piece strip of flexible belting, one material thereof being thicker at the ends of the loop and thinner in that portion of the belt intermediate to said ends, the material tapering gradually from the thicker to the thinner portions of the belt whereby motion communicated to the thicker portion is internally resisted.

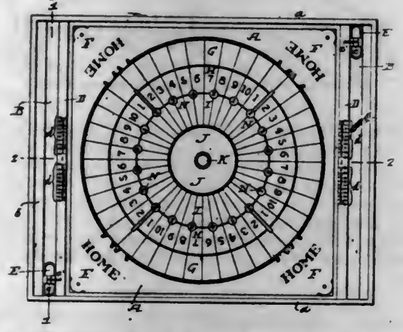
3. A hogbeater arm comprising a flexible loop made up of a plurality of layers of material, the ends of the loop having more layers than its middle portion, said layers being united to form an integral structure whereby motion communicated to the thicker portion is internally resisted.

4. A belt for hogbeater arms adapted for use in the form of a loop, said belt comprising a plurality of layers of canvas united by rubber or the like to form an integral structure, the ends of the loop being made thicker than its middle portion.

5. A belt for hogbeater arms comprising a plurality of layers of canvas, the number of layers being increasingly greater toward the ends of the belt, a canvas friction cover inclosing all of said layers, said layers and the cover being united by rubber or the like to form an integral structure.

[Claims 6 to 10 not printed in the Gazette.]

1,213,718. GAME. RICHARD W. WETHERILL, Philadelphia, Pa. Filed Nov. 7, 1914. Serial No. 870,741. (Cl. 46—63.)



1. The combination of a game board; a slide-way having a series of indicators thereon; and a slide arranged to travel in the slide-way and having a pointer which can be located opposite any one of the indicating marks.

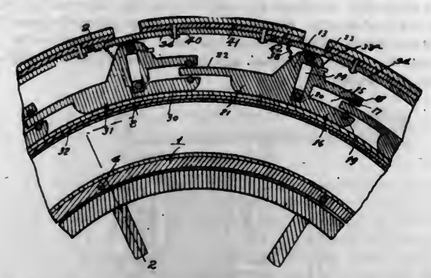
2. The combination in a game board, of a slide-way having a series of indicating pins projecting at one side thereof; and a slide-way having a flexible pointer of such length as to project into the space between the pins on one side of the slide-way so that, when a player moves the slide, the pointer will be flexed and will pass the pins except at the point where the slide stops.

3. The combination in a game board, of a series of circular ways, one within another; a central space with a small goal therein, the ways being divided into sections by radial lines extending from the goal circle to the outside circle; and a series of small circles located in the first radial lines between the two inner circular ways, said small circles forming a large circle.

4. The combination in a game board, of a series of circular ways, one within another; a central space with a smaller goal therein; the ways being divided into sections by radial lines; a series of circles located beyond the central circle and forming a direct passage-way into the inner central circle or goal; a slide-way at each side of the board, each having a series of indicating pins at one side thereof; and a slide mounted in each slide-way and having a flexible pointer arranged to extend between the pins.

1,213,719. CUSHION-TIRE FOR VEHICLES. JOHN F. WHITE, Pittsburgh, Pa. Filed Feb. 2, 1916. Serial No. 75,646. (Cl. 152—29.)

1. A tire for vehicles comprising an inner section having a protected element to constitute an air chamber, an intermediate section cushioned by said protected element and including radially shiftable interengaging pressure equalizing elements, and an outer section surrounding said elements and including bridge members each pivotally connected at one end with one of said elements and having its other end free of the pivot of an adjacent bridge member, a free end of one bridge member slidable in the pivoted end of an adjacent bridge member and on the pivot for said latter member.



2. A tire for vehicles comprising an inner section having a protected element to constitute an air chamber, an intermediate section cushioned by said protected element and including radially shiftable interengaging pressure equalizing elements, and an outer section surrounding said elements and including bridge members each pivotally connected at one end with one of said elements and having its other end free of the pivot of an adjacent bridge member, a free end of one bridge member slidable in the pivoted end of an adjacent bridge member and on the pivot for said latter member, and means for connecting the free ends of the bridge members to the pressure equalizing elements for maintaining each bridge member on that element upon which it slides.

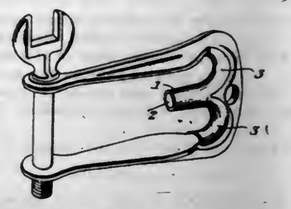
3. A tire for vehicles comprising an inner section including a cushioning element, an intermediate section cushioned by said element and having radially shiftable equalizing elements, each of said elements having a lateral pocket at one side and a laterally extending arm at the other side, the arm of one equalizing element extending to the pocket of an adjacent equalizing element, and an outer section surrounding said equalizing elements and including a series of bridge members each having one end pivotally connected with a pressure equalizing element and its other end free of the pivot of an adjacent bridge member, the free end of one member slidable in the pivoted end of an adjacent bridge member and on the pivot of said latter member.

4. A tire for vehicles comprising an inner section including a cushioning element, an intermediate section cushioned by said elements and having radially shiftable pressure equalizing elements, each of said elements having a pocket at one side and at its other side a laterally extending arm having a tongue, the tongue of one equalizing element extending in the pocket of an adjacent equalizing element, an outer section surrounding said equalizing element and including a series of bridge members each having one end pivotally connected with a pressure equalizing element and its other end free of the pivot of an adjacent bridge member, the free end of one bridge member slidable in the pivoted end of an adjacent brige member, rolls carried by the pivots of said bridge members and upon which slide the free ends of the bridge members, and an anti-friction means carried by each of said pressure equalizing elements within the pocket thereof for the tongue of an adjacent element.

5. A tire for vehicles comprising an inner section including a cushioning element, an intermediate section cushioned by said element and having radially shiftable pressure equalizing elements, each of said elements having a pocket and an arm, the arm of one equalizing element extending in the pocket of an adjacent equalizing element, and an outer section surrounding said equalizing elements and including a series of bridge members pivotally connected with said pressure equalizing elements, each of said bridge members sliding upon a pressure equalizing element adjacent to that element to which said bridge member is pivoted, anti-friction means carried by said pressure equalizing elements for said bridge members, and resilient means for connecting said bridge members with said pressure equalizing elements.

[Claims 6 to 8 not printed in the Gazette.]

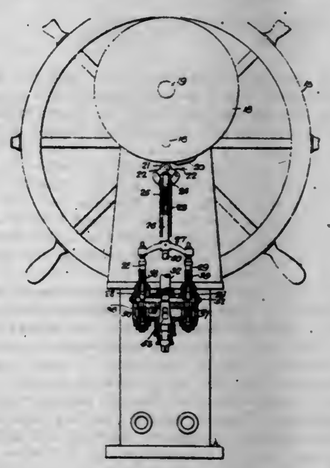
1,213,720. CLEVIS-PROTECTOR. SILAS W. WILLIAMS, Gordo, Ala. Filed Sept. 15, 1916. Serial No. 120,370. (Cl. 97—4.)



1. The combination with a clevis of a protector comprising a cylindrical body, a pair of oppositely located substantially semi-circular channel shaped members formed upon one end of said body.

2. The combination with a clevis, of a protector shaped to snugly fit the inner vertical portion of the front end of the clevis and means for removably securing the protector thereto.

1,213,721. EQUALIZING MECHANISM FOR TELEMOTOR SYSTEMS. JOHN D. WILLIAMSON, Jr., Philadelphia, Pa., assignor to American Engineering Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 10, 1915. Serial No. 13,476. (Cl. 138—2.)



1. A system including two sets of telemotors; pipes respectively connecting the telemotors of the two sets; a casing connected to both sides of the system; a storage tank connected to the casing; valves in said casing placed to respectively connect the sides of said system to said tank; a steering wheel; and means for causing said wheel to operate the valves under predetermined conditions.

2. A system including two sets of telemotors; pipes respectively connecting the telemotors of said sets; a casing connected to both sides of the system; valves in said casing placed to respectively permit communication between the sides of the system and said casing; a steering wheel; and means actuated when said wheel is operated to its mid position for opening said valves.

3. A telemotor system including a casing connected to both sides thereof; a storage tank also connected to said

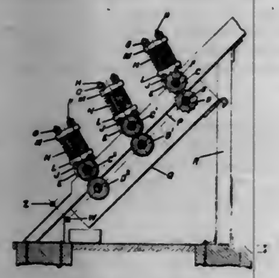
casing; two valves for controlling the flow of fluid between the casing and the telemotor system; a steering wheel; and means for simultaneously opening said valves when the steering wheel is moved to its mid position.

4. A telemotor system including a casing connected to both sides thereof; two normally closed valves controlling the flow of fluid between the two sides of the system and said casing; a steering member; and means for opening one at least of said valves when said member is moved to its mid position.

5. A telemotor system including a casing connected to both sides thereof; two normally closed valves controlling the flow of fluid between the two sides of the system and said casing; a steering member; means for opening one at least of said valves when said member is moved to its mid position; with hand operated means for actuating said valves.

[Claims 6 to 12 not printed in the Gazette.]

1,213,722. SUGAR-CANE MILL. JOHN WILSON, Glasgow, Scotland. Filed Oct. 1, 1915. Serial No. 53,570. (Cl. 100—47.)

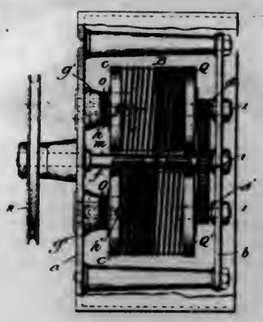


1. In a cane mill having the rollers mounted in pairs, the combination with a housing comprising two pairs of oppositely disposed channel beams, the flanges of each pair on each side of the mill being turned toward each other to form a hollow box girder, a plate connecting the bottoms of the two box girders on opposite sides of the mill, said plate being cut away to provide channels for the lower rollers and for the juice, bearings for each pair of rollers mounted on opposite sides of said hollow box girders, and tie bolts passing through the hollow portion of said box girders and tying said bearings together, substantially as described.

2. In a cane mill having the rollers mounted in pairs, the combination with a housing comprising two pairs of oppositely disposed channel beams, the flanges of each pair on each side of the mill being turned toward each other to form a hollow box girder, a plate connecting the bottoms of the two box girders on opposite sides of the mill, said plate being cut away to provide channels for the lower rollers and for the juice, bearings for each pair of rollers mounted on opposite sides of said hollow box girders, and tie bolts passing through the hollow portion of said box girders and tying said bearings together, with springs mounted on said tie bolts, and means for adjusting the compression on said springs, substantially as described.

1,213,723. INDICATOR SYSTEM. ADOLPH ZEISEL, Bel Air, Md. Filed July 1, 1913, Serial No. 776,825. Renewed June 24, 1916. Serial No. 105,708. (Cl. 177—351.)

1. In an indicator system, the combination of a source of direct current, a first and second conductor of equal lengths and electrical resistances connected in parallel to said source of direct current, an indicator, an electrical connection between one terminal of said indicator and the center of said first conductor, a sliding trolley wheel bearing on said second conductor normally at its center, an electrical connection between said trolley wheel and the other terminal of said indicator, a pair of non-combustible, non-absorbent, non-conductive drums upon which said second conductor is wound, a pulley, a shaft therefor, and gearing between said shaft and drums for communicating motions to said drums for unwinding said second conductor from one drum and winding it upon the other drum, and causing the said second conductor to pass in either direction and in contact with said sliding trolley wheel.



2. In an indicator system, the combination of a source of direct current, a first and second conductor of equal lengths and electrical resistances connected in parallel with said source of direct current, an indicator, an electrical connection between one terminal of said indicator and the center of said first conductor, a sliding trolley wheel bearing on said second conductor normally at its center, an electrical connection between said trolley wheel and the other terminal of said indicator, a pulley and means controlled by the rotation of said pulley in different directions, for feeding said second conductor back and forth along and in contact with said trolley wheel.

3. In an indicating system, the combination of an indicator, a pair of spaced cylindrical drums each having its peripheral surface provided with spaced annular ribs, a slidably mounted trolley wheel arranged in the space between said drums, a source of current to one terminal of said indicator, a second conductor connected to the remaining terminal of said source of current, said second conductor being coiled around both of the drums and lying between the ribs formed thereon, said trolley wheel being in electrical contact with that portion of the second conductor that bridges the distance between the drums, and a third conductor connecting the remaining terminal of the indicator with the trolley wheel.

4. In an indicator system, the combination of a source of direct current, a first and second conductor of equal length and electrical resistances connected in parallel with said source of direct current, an indicator, an electrical connection between one terminal of said indicator and the center of said first conductor, a movable contact bearing on said second conductor normally at its center, an electrical connection between said contact and the other terminal of said indicator, a pulley or lever, and means controlled by the rotation of said pulley in different directions for feeding said second conductor back and forth along and in engagement with said contact.

1,213,724. PROCESS OF PURIFYING CRUDE ACETATE OF LIME. OSCAR T. ZINKEISEN, New York, N. Y., assignor to Fore Chemical Works, Inc., New York, N. Y., a Corporation of Delaware. Filed Jan. 24, 1911. Serial No. 604,303. (Cl. 23—24.)

1. The process of purifying a solution of acetate of lime, which consists in precipitating the organic impurities from an alkaline solution of said acetate and in the presence of an alkaline bleaching agent.

2. The process of purifying a solution of acetate of lime, which consists in boiling the same with lime, a salt of iron and a bleaching agent.

1,213,725. FOUNTAIN-PEN. OSCAR B. ANDERSSON, Elizabeth, N. J., assignor to Eagle Pencil Company, New York, N. Y. Filed Oct. 18, 1916. Serial No. 126,438. (Cl. 120—46.)



1. In a self-filling fountain pen, the combination with a tubular handle, having a dished rear end, a nozzle, a collapsible ink bag and a presser bar interposed between the ink bag and handle, of an operating lever extending within and lengthwise of the handle, pivoted between its two ends in the rear portion of the handle, connected at its front end to the presser bar and at its rear end protruding through a cross-slot in the dished rear end of the pen handle to provide an operating handle for the self-filling movement, and a spring which presses the lever in a direction to lift its front arm which carries the presser bar away from the ink bag, substantially as and for the purposes hereinbefore set forth.

2. In a self-filling fountain pen, a presser movement, comprising a plug adapted to be detachably secured to the rear end of the pen barrel and formed with a dished rear end, a lever pivoted between its ends in a recess in the plug, a presser bar pivoted to the front end of said lever, the rear end of said lever protruding through a cross-slot in the dished rear end of the plug in position to serve as an operating handle, and a spring mounted and housed in the recess in the plug to press the lever in a direction to move its presser-bar-carrying end away from the ink bag, substantially as and for the purposes hereinbefore set forth.

1,213,726. IMPREGNATED COIL AND METHOD OF MAKING THE SAME. LEO H. BAEKELAND, Yonkers, N. Y., assignor to General Bakelite Company, New York, N. Y., a Corporation of New York. Filed Dec. 4, 1907. Serial No. 405,022. (Cl. 175—21.)

1. The method of making coils for electrical uses, which consists in forming a coil having its windings in spaced relation, filling the interstices between the windings with a fluid and mobile phenolic condensation product, and then transforming said product, *in situ*, into a solid, homogeneous, impervious, insoluble, and infusible body, serving both as a support and as an insulator for said windings.

2. The method of making coils for electrical uses, which consists in forming a coil having its windings in spaced relation, filling the interstices between the windings with a fluid and mobile phenolic condensation product combined with a substance capable of increasing the flexibility of the final product, and then transforming said product, *in situ*, into a solid, homogeneous, impervious insoluble, and infusible body, serving both as a support and as an insulator for said windings.

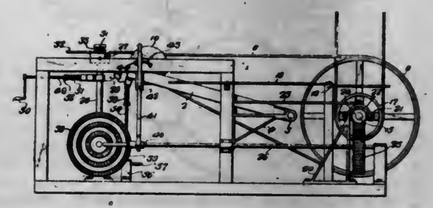
3. The method of making coils for electrical uses, which consists in forming a coil having its windings in spaced relation, said windings provided with a fibrous covering, filling the interstices between said windings and simultaneously impregnating said fibrous covering with a fluid and mobile phenolic condensation product, and then transforming said product, *in situ*, into a solid, homogeneous, impervious, insoluble, and infusible body, serving both as a support and as an insulator for said windings.

4. The method of making coils for electrical uses, which consists in forming a coil having its windings in spaced relation, said windings provided with a fibrous covering, filling the interstices between said windings and simultaneously impregnating said fibrous covering with a fluid and mobile phenolic condensation product combined with a substance capable of increasing the flexibility of the final product, and then transforming said product, *in situ*, into a solid, homogeneous, impervious, insoluble and infusible body, serving both as a support and as an insulator for said windings.

5. As a new article of manufacture, a coil for electrical uses whereof the windings are both separated and insulated by a solid, homogeneous, impervious, insoluble, and infusible phenolic condensation product, said condensation product serving both as a support and as an insulator for the coil windings.

[Claims 6 to 10 not printed in the Gazette.]

1,213,727. DISK-GRINDER. EDWARD BATTERMAN, Hobart, Ind. Filed Sept. 19, 1916. Serial No. 120,985. (Cl. 51—7.)



1. A disk grinding machine including a grinding shaft, a grinding wheel carried by the shaft, means for yieldingly supporting said shaft, a disk carrying shaft, means for yieldingly supporting said shaft with relation to the grinder shaft, and means for yieldingly supporting the disk upon the disk carrying shaft.

2. A grinder machine including a main frame, a vertically movable frame supported by the main frame, means for vertically adjusting and yieldingly supporting the vertically movable frame, a grinding shaft carried by the vertically movable frame, a grinding wheel mounted upon said shaft, a vertical disk supporting shaft, and means for yieldingly supporting said shaft for movement toward and from the grinding shaft.

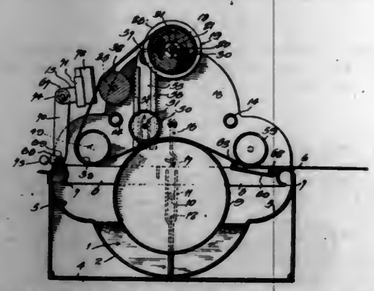
3. A disk grinder machine including a horizontal, vertically movable grinding shaft, means for adjustably and yieldably supporting said shaft, a grinding wheel carried by the shaft, a vertical shaft mounted for movement toward and from the grinding wheel, a disk carrying support upon said vertical shaft, and means for adjusting and yieldably supporting the vertical shaft.

4. A disk grinding machine including a horizontal vertically movable grinding shaft, means for adjustably and yieldably supporting said shaft, a grinding wheel upon the grinding shaft, a vertically disposed disk carrying shaft, means for supporting a disk thereon for peripheral contact with the grinding wheel, an adjusting device engaging said vertical shaft for adjusting the same toward and from the disk grinding shaft, and means associated with said adjusting shaft for yieldingly backing the vertical shaft.

1,213,728. WALL-PAPER PASTING AND TRIMMING MACHINE. WALTER J. BEACH, Minneapolis, Kans., assignor of one-half to James H. Glenn, Minneapolis, Kans. Filed July 3, 1916. Serial No. 107,398. (Cl. 91—14.)

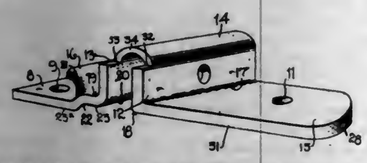
1. In a device of the class described, a paste container, a paste applying roll in said container, a frame disposed above said container, a paper carrier mounted in said frame, vertical channeled guides secured to each opposite end of said frame, a vertically movable slide disposed in each of said guides, and a pressure roll journaled in said slides and normally engaging said paste applying roll, each of said slides having a stop adapted to engage the top of said guides when the former are raised, whereby said pressure roll may be spaced from the paste applying roll.

2. In a device of the class described, a paste container, a floatable roll therein, vertical guides at the opposite ends of said paste container to receive said roll, a frame disposed above said paste container, a paper carrier mounted in said frame, a vertical channeled guide secured to each opposite end of said frame, a vertically movable slide disposed in each of said guides, a vertically elongated bearing carried by each slide, a pressure roll journaled in said elongated bearings and normally engaging said floatable roll, said floatable roll and pressure roll being movable vertically in their guides and bearings respectively by the buoyancy of said roll.



3. In a device of the class described, a paste container, a paste applying roll therein, a paper carrier, a guide roller, paper from the paper carrier being brought into contact with said paste applying roll and passed beneath said guide roller, and a paste distributer comprising a shaft pivotally mounted on the opposite ends of said paste container, an L-shaped plate fixed by its long arm to said shaft, its short arm being bent upon itself to form a contact member, a lever on one end of said shaft, and a rack, the teeth thereof being adapted to be engaged by said lever.

1,213,729. BRAKE-HANGER BRACKET. LEWIS N. BEAR, Greenville, Pa. Filed May. 29, 1916. Serial No. 100,688. (Cl. 188—70.)



1. As a new article of manufacture, a brake hanger bracket formed from a single sheet of metal bent to provide a channel therein to receive the hanger bar, one corner of the bracket plate being offset out of the plane of said plate for engagement with an offset portion on the truck frame bar.

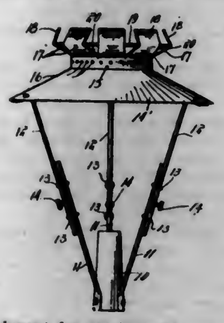
2. As an improved article of manufacture, a brake hanger bracket having a channel formed therein to receive the hanger bar and openings in the side walls of the channel for the hanger bar pivot, the intermediate portion of said channel at one end thereof, being cut away.

3. As an improved article of manufacture, a brake hanger bracket having a channel formed therein to receive the hanger bar, and openings in the side walls of the channel for the hanger bar pivot, the intermediate portion of said channel at one end thereof being cut away, one corner of the sheet metal plate being offset out of the plane of said plate for engagement with a correspondingly offset portion on the truck frame bar.

4. As an improved article of manufacture a brake hanger bracket formed from a single sheet of metal to provide a transverse channel therein having openings in its side walls to receive the pivot bolt of the hanger bracket, said side walls at one end of the channel being provided with a shoulder thereon.

5. As a new article of manufacture, a brake hanger bracket formed from a single sheet of metal to provide a transverse channel therein having openings in its side walls to receive the pivot bolt of the hanger bracket, said side walls at one end of the channel being each provided with a shoulder thereon, said plate having an offset portion disposed out of the plane of the body of the plate for engagement upon a similarly off-set portion on the truck frame bar, said plate upon opposite sides of the channel therein being also provided with openings to receive the attaching bolt.

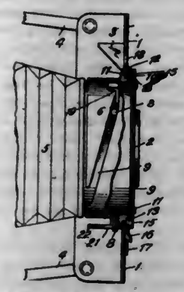
1,213,730. ATTACHMENT FOR GAS-BURNERS. PASQUALE JOHN BORACCI, Long Island City, N. Y. Filed June 13, 1916. Serial No. 103,493. (Cl. 126—252.)



1. An attachment for gas burners comprising a tubular member adapted to fit over the burner, legs extending outward and upward from the member, a frusto-conical hood secured to the upper ends of the legs, a flange extending upward from the top of the hood and provided with a series of openings spaced horizontally about the flange, outwardly and upwardly extending fingers radiating from the top of the flange and having upwardly extending extremities bent slightly inward, and a plate held on the fingers in the angles thereof.

2. An attachment for gas burners comprising a tubular member adapted to fit over the burner, legs extending outward and upward from the member, a frusto-conical hood secured to the upper ends of the legs, a flange extending upward from the top of the hood and provided with a series of openings spaced horizontally about the flange, the upper edge of the flange being split and bent to provide outwardly and upwardly extending fingers radiating from the top of the flange and having upwardly extending extremities bent slightly inward, and a plate held on the fingers in the angles thereof.

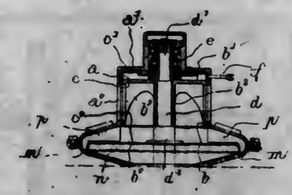
1,213,731. CAMERA. CARL BORNMANN Binghamton, N. Y., assignor to Ansco Company, Binghamton, N. Y., a Corporation of New York. Filed May 6, 1916. Serial No. 95,763. (Cl. 95—44.)



In a camera a focusing device comprising a movable front to which the bellows is attached, a diagonally slotted sleeve, a longitudinally movable lens casing located within

the slotted sleeve and provided with projecting parts adapted to work through the slots of the sleeve, both the sleeve and the lens casing being supported upon said movable front, means to prevent rotary and to compel axial movement by the lens casing, a shoulder on the sleeve adapted to engage with the rear of the movable front, a reduced forwardly projecting part of the sleeve adapted to pass through an opening in the movable front, a shoulder upon said reduced part projecting forwardly beyond the last named shoulder, a ring provided with knobs adapted to be seated upon said last named shoulder, a scale on the movable front, and a pointer upon said ring coöperating with said scale.

1,213,732. SIREN. PIERRE BOSSU, Paris, France, assignor to Societe Anonyme Des Etablissements L. Bleriot, Paris, France. Filed July 7, 1913. Serial No. 777,734. (Cl. 116—1.)



1. A siren, comprising a drum-shaped stator, a continuously rotating drum-shaped rotor, and a drum-shaped valve inserted between the rotor and the stator and adapted to intercept and release at will the active fluid in the said rotor and stator.

2. A siren comprising a stationary ported member, a continuously moving part, and a valve coöperative with the stationary ported member and adapted to intercept and to release at will the active fluid relatively to the stationary ported member, the valve being driven by said continuously moving part.

3. A siren, comprising a stator, a continuously rotating rotor, a valve inserted between the rotor and the stator and adapted to intercept and release at will the active fluid in the said rotor and stator, and a brake block carried by said valve adapted to engage the rotor and so drive the valve.

4. A siren, comprising a stator, a continuously rotating rotor, a valve inserted between the rotor and the stator and adapted to intercept and release at will the active fluid in the said rotor and stator, a brake-block carried by said valve adapted to engage the rotor and so drive the valve, a rod supporting said brake block, a magnet, an armature having a recess and adapted to be attracted by said magnet and to act on the rod when so attracted to cause said brake block to engage said rotor, means whereby when the valve has rotated to the required extent, the rod engages with said recess in the armature, and a spring adapted to return the valve to its closed position when the armature is not attracted.

5. In a siren, the combination of relatively revoluble members having ports therein, and a valve actuated by one of said members for controlling the ports of the members.

[Claim 6 not printed in the Gazette.]

1,213,733. ROTARY OPERATING MECHANISM. HERMAN W. BRAUNBECK, San Francisco, Cal. Filed Apr. 28, 1916. Serial No. 94,216. (Cl. 74—40.)

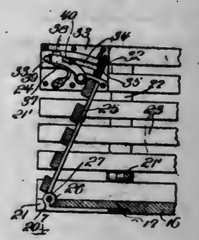
1. In a mechanical movement a shaft mounted for rotary motion, clutch members mounted on said shaft, sleeves slidably mounted upon the shaft and engageable with said clutch members, a lever arranged adjacent said shaft, and means operable from said lever and mounted upon said sleeves for rotating and moving said sleeves to alternately engage the clutch members whereby a continuous rotary motion will be imparted to the shaft.

2. In a mechanical movement a casing, a shaft mounted for rotary motion journaled in the casing, clutch members keyed to the shaft at the opposite extremities thereof, spirally flanged sleeves loosely mounted on the shaft, the flanges upon one sleeve extending in a direction opposite to the flanges upon the remaining sleeve, a spring mounted upon said shaft and interposed between said sleeves, said sleeves adapted to normally engage said clutch members under the action of said spring, collars mounted on each of said sleeves and having their inner faces formed with spirally arranged grooves, said grooves receiving said flanges, and a lever fulcrumed exteriorly of the casing and connected to said collars.



3. In a mechanical movement a casing, a shaft mounted for rotary motion journaled in the casing, toothed disks rigidly mounted upon the opposite ends of the shaft, spirally flanged sleeves loosely mounted upon the shaft, the flanges of one sleeve extending in a direction opposite to the flanges of the remaining sleeve, teeth formed on the outer ends of each of said sleeves and engageable with said disks, a spring mounted upon the shaft and interposed between the confronting ends of the sleeves, collars mounted upon each of said sleeves and having grooves formed therein adapted to receive said flanges, a rod connecting said collars, and a lever arranged exteriorly of the casing and projecting into the casing, said lever being pivotally connected to said rod.

1,213,734. CRATE. LESLIE C. BRITT, Chariton, Iowa. Filed Mar. 31, 1916. Serial No. 88,068. (Cl. 217—47.)



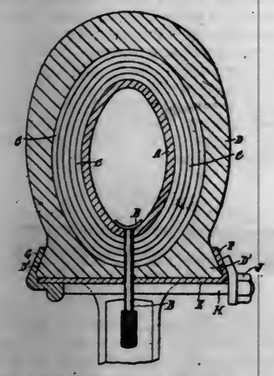
In a device for the purpose set forth, the combination with movable side and end members, of T-headed bolts upon the ends extending outwardly therefrom at the upper corners thereof, plates upon the sides at the upper corners thereof provided each with an arcuate slot having an enlarged portion at one of the ends thereof to permit of the entrance of the T-shaped head to the said slot when the ends are swung inwardly in a line with the enlarged end of the said slot, a spring pressed latch upon each of the plates and normally straddling the slot thereof and adapted to be contacted and pressed below the slot by the shank of the bolt when the end is swung to a vertical position and to engage with the said shank when the end is in such vertical position.

1,213,735. PNEUMATIC TIRE. HENRY BROWN, Putney Hill, London, England. Filed July 5, 1916. Serial No. 107,641. (Cl. 152—13.)

1. An air-tube for a pneumatic tire, said air-tube comprising a thick-walled soft india rubber tube and a plurality of layers of india rubber cord wound under tension around said tube.

2. An air-tube for a pneumatic tire, said air-tube comprising a thick-walled soft india rubber tube, a plurality

of layers of india rubber cord wound under tension around said tube, and an outer covering of india rubber secured to the outer surface of the wound cord.

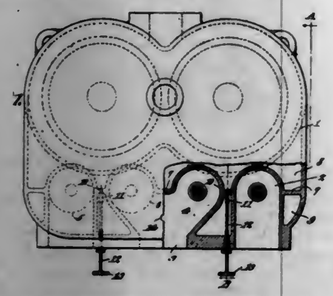


3. An air-tube for a pneumatic tire, said air-tube comprising a thick-walled soft india rubber tube, and a plurality of layers of india rubber cord wound in tension around the tube in opposite directions.

4. An air-tube for a pneumatic tire, said air-tube comprising a thick-walled soft india rubber tube, and a plurality of layers of india rubber cord wound in tension around the tube in opposite directions, such cord being secured at intervals.

5. An air-tube for a pneumatic tire, said air-tube comprising a thick-walled soft india rubber tube, a plurality of layers of india rubber cord wound in tension around the tube, and a thinner india rubber cord wound around the tube and tied so as to secure the india rubber cord forming the layers above mentioned.

1,213,736. EXPLOSIVE-ENGINE. LE ROY BROWN, Lansing, Mich. Filed Apr. 3, 1916. Serial No. 88,692. (Cl. 123—173.)



1. In an explosive engine, a cylinder casting having a water jacket and a steam chamber, valved means for controlling the admission of water to the steam chamber from the water jacket, and exhaust and fuel passages extending into the steam chamber.

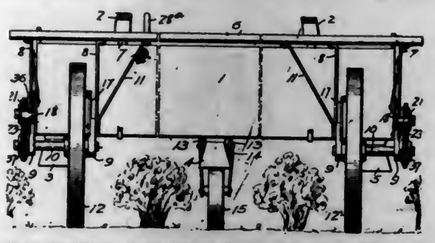
2. In an explosive engine, a cylinder casting having a water jacket and a steam chamber, valved means for controlling the admission of water from the water jacket into the steam chamber, and exhaust and fuel passages extending into the steam chamber, said steam chamber having a vent.

3. In an explosive engine, a cylinder casting having a water jacket, exhaust and fuel passages extending into the casting, a partition within the casting and providing a steam chamber extending between the passages, said partition having a port for maintaining communication between the water jacket and the steam chamber, and means for controlling the flow of water into the steam chamber from the jacket.

4. In an explosive engine, a cylinder casting having a steam chamber, means for admitting water in minute quantities to the steam chamber from the water jacket, and means for conducting gaseous fuel and exhaust gases through the steam chamber.

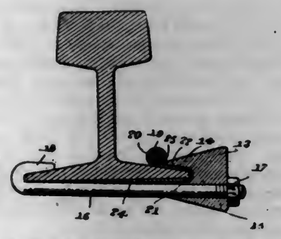
5. In an explosive engine, a cylinder casting having a jacket including a water chamber and a steam chamber, valved means for controlling the flow of water from the water chamber into the steam chamber, and means for conducting exhaust gases and gaseous fuel through the steam chamber.

1,213,737. FERTILIZER-DISTRIBUTER. LESTER A. BAUMLEY, Sanford, Fla. Filed Mar. 24, 1916. Serial No. 86,408. (Cl. 111—34.)



In a fertilizer distributer, the combination with a fertilizer container, of pedestals secured therewith in pairs near each end thereof, brackets extending between and connected to said pedestals and container, braces extending between and connected to said pedestals and brackets, a stub axle journaled in each of said pairs of pedestals, traction wheels keyed to but slidably mounted on said axles, said wheels being permanently within the vertical plane of the end walls of the container and means operated by the traction wheels for feeding material in the container.

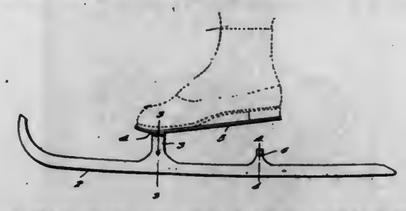
1,213,738. RAIL-BOND. GEORGE H. BURGE, Huntsville, Mo. Filed Sept. 23, 1914. Serial No. 863,181. (Cl. 173—277.)



In a device for the purpose set forth, the combination with clamps having spring jaws conforming to the cross sectional contour of the flanges of rails and having adjustable elements for forcing the same toward the longitudinal edges of the said flanges of the rails, of liners shaped to engage with the upper and lower edges of the flange of the rails and to be compressed by the clamps against said rails, each of said liners having their upper edges rolled to provide a housing, and a conductor wire within said housings, said clamp adapted to engage the housing to prevent the displacement of the wire.

1,213,739. SNOW-SKATE. JOHN E. BUORK, Charlottesville, Va. Filed Aug. 29, 1916. Serial No. 117,475. (Cl. 46—50.)

1. The combination in a skate of a runner comprising a ground engaging surface and upwardly bent sides joined together at their upper edges, the said sides being upwardly extended intermediate of the ends of the runner to form a support, the upper ends of the said extensions being outwardly turned to form supporting plates, a foot plate formed of resilient material secured to the said supporting plates at its front end, the sides of the said runner being upwardly extended to form a support beneath the rear end of the said foot plate.



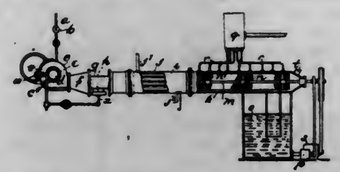
2. A skate runner comprising a ground engaging surface and upwardly bent sides joined together at their upper edges.

3. In a skate the combination with a runner having upwardly extending sides intermediate of its ends forming a support, the upper ends of the said extensions being outwardly turned to form supporting plates, of a foot plate secured to the said supporting plates and adapted to oscillate in a vertical plane.

4. In a skate the combination with a runner, of a support, a foot plate secured at its front end to the said support, and adapted to oscillate in a vertical plane, the sides of the said runner being upwardly extended to form a support beneath the rear end of the said foot plate.

5. The combination in a skate of a runner, a support, a foot plate formed of resilient material secured at its front end to the said support, and a second support upon the said runner beneath the rear end of the said foot plate.

1,213,740. MANUFACTURE OF FORMALDEHYDE. GEORGE CALVERT, London, England. Filed Dec. 24, 1915. Serial No. 68,597. (Cl. 23—24.)



1. The method of manufacturing formaldehyde which consists in heating a chamber, delivering air to said chamber, heating said air during its passage into said chamber, feeding methyl alcohol into said chamber, vaporizing said methyl alcohol and instantly expelling it at a high velocity from said chamber together with the heated air, passing the same through a reaction chamber over a suitable catalyzer to produce formaldehyde, passing the formaldehyde so produced through a cooling chamber and then passing the formaldehyde through an absorption chamber.

2. The method of manufacturing formaldehyde which consists in heating a chamber, delivering air to said chamber, heating said air, feeding methyl alcohol against a rotating fan in said chamber, passing the air and alcohol through a reaction chamber over a suitable catalyzer to produce formaldehye, heating the reaction chamber, passing the formaldehyde so produced through a cooling chamber and then passing the formaldehyde through an absorption chamber.

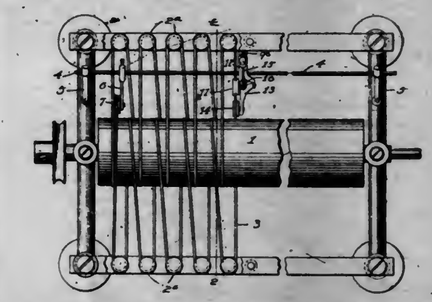
3. The method of manufacturing formaldehyde which consists in heating a chamber, delivering air to said chamber, heating said air, feeding methyl alcohol against a rotating fan in said chamber, passing the air and alcohol through a reaction chamber over a suitable catalyzer to produce formaldehyde, passing the formaldehyde so produced through a cooling chamber, passing circulating water through the cooling chamber out of contact with the mixture, and then passing the formaldehyde through an absorption chamber.

4. Apparatus for manufacturing formaldehyde comprising a rotary fan, a casing for said fan, means for heating the casing and the fan, means for supplying methyl alcohol to the fan, means for heating the air entering the fan casing, a reaction chamber adjacent to and adapted to receive air and alcohol from the delivery of the fan, an absorbing chamber communicating with the reaction chamber, rotary members in said absorption chamber adapted to agitate the mixture and means for circulating absorbing water through said absorbing chamber to dissolve the formaldehyde formed in the reaction chamber.

5. Apparatus for manufacturing formaldehyde, comprising a rotary fan, a casing for said fan, means for heating the casing and the fan, means for supplying methyl alcohol to the fan, means for heating the air entering the casing, a reaction chamber adjacent to and in communication with the delivery of the fan, a cooling chamber adjacent to and in communication with said reaction chamber, an absorbing chamber adjacent to and in communication with said cooling chamber, rotary members in said absorbtion chamber adapted to agitate the mixture of air and alcohol therein and means for circulating absorbing water through said absorbing chamber to dissolve the formaldehyde formed in the reaction chamber.

[Claims 6 to 12 not printed in the Gazette.]

1,213,741. SPINDLE-DRIVING MECHANISM. ROBERT GRANVILLE CARLE, Woonsocket, R. I. Filed Oct. 27, 1914. Serial No. 868,886. (Cl. 118—48.)



1. In combination with a driving drum and spindles, an endless band passing alternately and successively around said drum and said spindles, a stationary guide pulley having its axis substantially parallel to the axis of the drum and around which said band passes at the slack end of the drum, a pivotally supported arm carrying a pulley engaging the portion of the band between said drum and stationary guide pulley and swinging in a plane perpendicular to the axis of the drum and a spring exerting tension on said arm.

2. In combination with a driving drum and spindles, an endless band passing alternately around said drum and successively around said spindles, a bar arranged parallel with said drum, a vertically disposed rod carried by said bar, a stationary guide pulley carried by the lower part of said rod, around which said band passes, an arm pivotally supported from said upper portion of said vertical rod and carrying a pulley engaging the portion of the band between said drum and stationary guide pulley, and means exerting tension on said arm.

3. In combination with a driving drum and spindles, a stationary guide pulley in proximity to the drum at one end of the spindles, an endless driving band passing around said guide pulley and alternately around said drum and said spindles, a stationary guide pulley between the drum and spindles at the opposite end, and a tension pulley engaging the slack of the belt between said last named guide pulley and the drum.

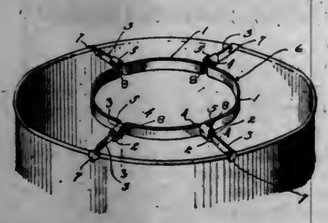
1,218,742. CURRYCOMB. WILLIAM H. CARLS, Yuma, Colo. Filed Sept. 11, 1916. Serial No. 119,538. (Cl. 119—91.)



1. A curry comb comprising a substantially V-shaped back, an elongated hand grasp secured to the back at the apex portion thereof, and currying elements supported by the opposite end portions of the back and mounted for rotation on axes disposed longitudinally of said portions.

2. A curry comb comprising a substantially V-shaped back, an elongated hand grasp secured to the apex portion of the back, a plate secured to the under face of each of the portions of the back at opposite sides of the hand grasp, said plates extending from the outer end portions of the back to points in close proximity to the apex portion thereof, the opposite ends of each of said plates being provided with angularly disposed ears, a shaft rotatably supported by said ears, and currying elements carried by said shaft.

1,213,743. STRAINER-HOLDER. ORANGE J. CARSON, Farmington, N. Mex. Filed July 10, 1916. Serial No. 108,379. (Cl. 248—30.)

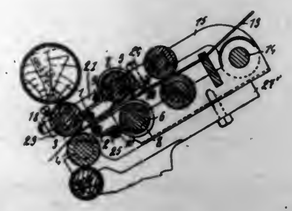


A holder of the class described comprising a plurality of curved sections, each section having flanges carried by its ends, clips engaged with the flanges, arms having hooks carried by their outer ends and having their inner ends engaged between said flanges and pivot pins passed through the clips, flanges, and inner ends of the arms, as and for the purpose set forth.

1,213,744. SPINNING-FRAME. FERNANDO CASABLANCAS, Sabadell, Spain. Filed Oct. 15, 1915. Serial No. 56,025. (Cl. 19—28.)

1. In a spinning frame, the combination of a pair of endless belts for conducting the roving to the drawing rollers, said belts being slack so as to take a certain convexity due to their own rigidness, a pair of driving rollers for said belts which force the belts against one another producing a strong pressure upon the roving carried by said belts, and means to guide the front curve or loop of said belts arranged so as not to exert a direct pressure upon the part of the belts which holds the roving, in order that the pressure of the belts upon the roving may be soft and resilient.

2. In a spinning frame, the combination of a pair of endless belts for conducting the fibers to the drawing rollers, said belts being slack so as to take the convexity resulting from their own rigidness, a pair of driving rollers that compress said belts and drive them, a pair of guiding rods arranged inside of the front curve or loop of said belts, these rods being sufficiently separated one from the other so as not to exert a pressure upon the parts of the belts which hold the roving.

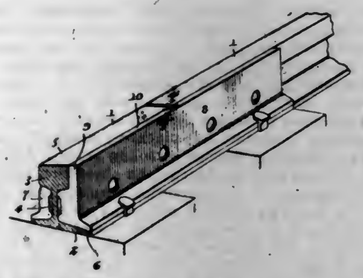


3. In a spinning frame, the combination of a pair of endless belts for conducting the roving to the drawing rollers, said belts being slack so as to take the convexity resulting from their own rigidness, a pair of driving rollers for said belts, a pair of guiding rods arranged inwardly of the front curve or loop of said belts, said rods being separated one from another so as not to exert any pressure upon the parts of the belts carrying the roving, and a pair of outer rods applied to the outward side of the belts in order to increase the resilient pressure exterted by said belts on the roving.

4. In a spinning frame, the combination of a pair of belts for conducting the roving to the drawing rollers, said belts being slack so as to take the convexity resulting from their own rigidness, a pair of driving rollers for said belts and a pair of outer rods applied to the outward sides of the belts in order to guide their front curves or loops and to increase the resiliency of said belts.

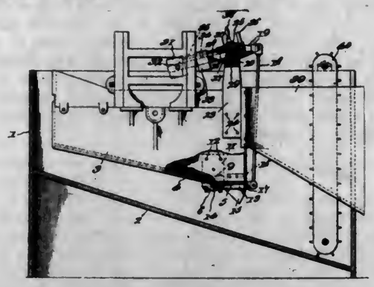
5. In a spinning frame, the combination of a pair of belts for conducting the roving to the drawing rollers, said belts being slack so as to take the convexity resulting from their own rigidness, an inward guiding rod for one of said belts, and an outer rod applied to the outward side of the other belt, said rods being arranged to guide the front curves or loops of the belts.

1,213,745. RAIL. ALBERT S. CASH and ROBERT H. BRISCOE, Elizabethtown, Ky. Filed Aug. 7, 1915. Serial No. 44,259. (Cl. 239—3.)



The combination of a pair of rails each having a tread inclined downward from the outside of the rail toward the inside thereof, fish plates for connecting the alining ends of said rails, one of said fish plates being confined between the lower edge of the tread and the upper edge of the base flange, the other fish plate having an extension, the upper edge of which is in the same plane throughout its length and laterally inclined in the same plane as the upper surface of the tread.

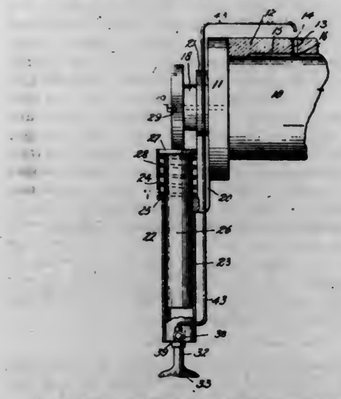
1,218,746. GRAVITY DISCHARGE-GATE FOR SEPARATING APPARATUS. CHARLES E. CHRIST, Tamaqua, Pa. Filed July 12, 1916. Serial No. 108,894. (Cl. 137—139.)



1. A counterbalance structure for jig gates comprising a rock shaft, connections between said gate and shaft, a head on said shaft, an arm having a divided spread end fitted in said hear, a counterbalance weight slidable on said arm, and a threaded rod journaled in said head and passing through said weight for adjusting the latter, substantially as described.

2. A counterbalance structure for jig gates comprising a rock shaft, connections between said gate and shaft, a head on said shaft, an arm connected to said head, a counterbalance weight slidable on said arm, and a threaded rod journaled in said head and passing through said weight for adjusting the latter, substantially as described.

1,213,747. LUBRICATING DEVICE. WILLIAM H. CLEHM, Glassboro, N. J. Filed Dec. 5, 1916. Serial No. 135,212. (Cl. 184—27.)



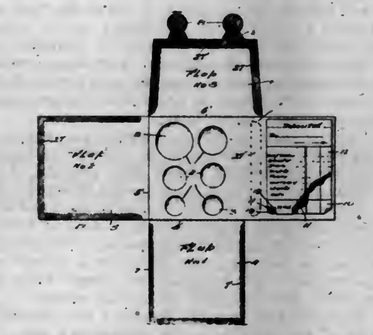
1. In a lubricating device, the combination of a pump, means adapted to be fixed upon the axle or shaft for reciprocating the plunger of the pump, inlet and outlet pipes at one end of said pump said outlet pipe leading to the bearing to be lubricated, and means for suspending said pump from the plunger reciprocating means.

2. In a lubricating device, the combination of a pump having a reciprocating plunger adapted to project at one end from the cylinder of the pump, means adapted to be attached to a rotatable axle or shaft for reciprocating said plunger, valve inlet and outlet pipes connected to the opposite end of the pump, and supporting means for the pump mounted upon the rotating plunger operating means.

3. In a lubricating device, the combination of a pump having a reciprocating plunger, means capable of attachment to the end of a rotatable shaft or axle for reciprocating said plunger, a delivery pipe leading from said pump to the bearing to be lubricated, and suspending means for the pump mounted on the plunger reciprocating means.

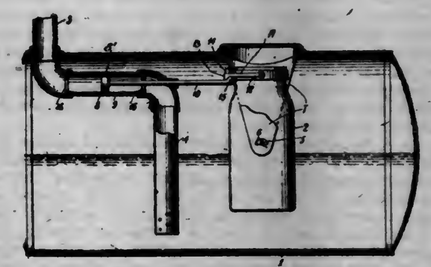
4. In a lubricating device, the combination of a pump, a plunger reciprocating therein, a cam adapted to be secured against the end of a journal or shaft for reciprocating said plunger, a valved inlet tube for the pump adapted to enter an oil receptacle, a valved outlet tube leading to the bearing to be lubricated, and a supporting plate rotatably mounted on the hub of said cam and fixed to said pump.

1,213,748. MAILING-CARD. GEORGE W. COBEL, Brookings, S. D. Filed Apr. 27, 1916. Serial No. 94,027. (Cl. 120—74.)



The herein described mailing card comprising a body of cardboard provided at its left end with a series of coin receptacles, a memorandum pad attached to the face of the card at its right end, a sheet attached to the back of the card and closing said receptacles at one side, and three flaps integral with the edges of the sheet and projecting beyond the edges of the card at its left end and beyond the left extremity of the card, all flaps being gummed around the three margins remote from the card and one flap being narrower transversely than the end flap is long so that when the former is folded over the coin receptacles and onto the card the latter may be folded across the first flap and gummed upon it and directly to the face of the card between said receptacles and pad.

1,213,749. FIRE-EXTINGUISHER SYSTEM. ROBERT L. COONEY, Atlanta, Ga. Filed Feb. 21, 1914. Serial No. 820,311. (Cl. 169—24.)



1. A fire extinguisher system comprising a tank, a distributing pipe leading therefrom, the distributing pipe and the tank both containing elastic fluid pressure of normally equal degree, fire extinguisher agent supply means including a movable controlling element arranged within the tank, a cylinder connected to the distributing pipe and in communication therewith, an operating element movable lengthwise of said cylinder, the operating element being movable in either direction from its normal position by the action of elastic fluid pressure against a

face thereof, accordingly as the pressure in the distributing pipe is increased or decreased relatively to the pressure in the tank, and connections between the operating element and the controlling element whereby a movement of the former in either direction produces an operative movement of the latter.

2. A fire extinguisher system comprising a tank, a distributing pipe leading therefrom, the distributing pipe and the tank both containing elastic fluid pressure of normally equal degree, an acid bottle normally supported in an upright position in the tank and invertible to discharge its contents into the tank, a cylinder connected to the distributing pipe and in communication therewith, an operating element movable lengthwise of said cylinder, the operating element being movable in either direction from its normal position by the action of the elastic fluid pressure against a face thereof, accordingly as the pressure in the distributing pipe is increased or decreased relatively to the pressure in the tank, and connections between the operating element and the acid bottle whereby a movement of the former in either direction produces an operative movement of the latter.

3. A fire extinguisher system comprising a tank, a distributing pipe leading therefrom, the distributing pipe and the tank both containing elastic fluid pressure of normally equal degree, an acid bottle having triangular trunnions, brackets supporting the acid bottle and upon which the trunnions engage to normally hold the acid bottle in an upright position, a cylinder connected to the distributing pipe and in communication therewith, a plunger movable lengthwise of said cylinder, the plunger being movable in either direction from its normal position by the action of elastic fluid pressure against a face thereof, accordingly as the pressure in the distributing pipe is increased or decreased relatively to the pressure in the tank, and connections between the plunger and the acid bottle whereby a movement of the former in either direction produces an operative movement of the latter.

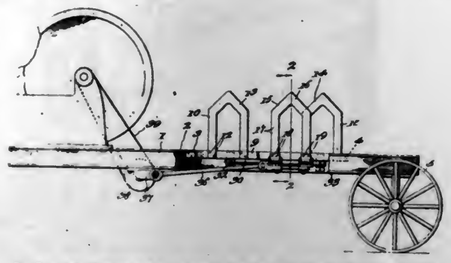
4. A fire extinguisher system comprising a tank, a distributing pipe leading therefrom, the distributing pipe and the tank both containing elastic fluid pressure of normally equal degree, an acid bottle having triangular trunnions, brackets supporting the acid bottle and upon which the trunnions engage to normally hold the acid bottle in an upright position, a cylinder connected to the distributing pipe and in communication therewith, a plunger movable lengthwise of said cylinder, the plunger being movable in either direction from its normal position by the action of elastic fluid pressure against a face thereof, accordingly as the pressure in the distributing pipe is increased or decreased relatively to the pressure in the tank, and connections between the plunger and the acid bottle whereby a movement of the former in either direction produces an operative movement of the latter, the connections comprising a rod which carries the plunger and which projects beyond the cylinder into the tank, a yoke pivotally mounted upon the upper end of the acid bottle, a lug upon which the yoke normally rests, and projections provided on the yoke and plunger respectively, the projection on the yoke normally engaging over the projection on the plunger.

5. A fire extinguisher system comprising a tank, a distributing pipe leading therefrom, fire extinguisher agent supply means including a movable controlling element mounted in equilibrium in the tank, a fluid pressure actuated operating means for said element operative relatively thereto and to which a suction or blowing fluid pressure impulse is transmitted from a source external to the tank by the distributing pipe, said operating means being operable by either of said suction or blowing pressure impulses as transmitted thereto by the distributing pipe.

[Claims 6 to 8 not printed in the Gazette.]

1,213,750. HEMP-BRAKE. JOHN WILLIAM CRAIN, Winchester, Ky. Filed Mar. 20, 1916. Serial No. 85,452. (Cl. 13—6.)

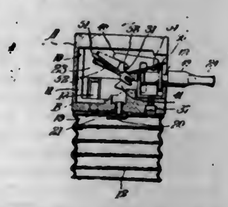
1. In an improved hemp brake, the combination of a framework, a double series of laterally spaced stationary knives formed each of a single strip of metal bent U-shape and inverted, the free ends of said strips being secured to said framework, the upper doubled portions of said knives being flattened and inclined, and a series of laterally spaced movable knives offset with respect to said stationary knives and adapted to be received therebetween, said movable knives also consisting each of a flat strip of metal bent U-shape and inverted and having inclined and flattened upper ends to coöperate with the inclined upper ends of the stationary knives to guide the hemp stalks down to the space between said knives, substantially as described.



2. In an improved hemp brake of the character described, the combination of a wheeled frame including longitudinal and transverse beams, stringers connected between said transverse beams, tracks supported from said longitudinal beams, a double series of inverted U-shaped knives having inclined portions secured to said longitudinal beams and stringers, a carriage mounted to reciprocate on said tracks between a double series of said stationary knives, inverted U-shaped movable knives mounted on said carriage and coöperating with said first-named knives and having inclined portions, and means for reciprocating said carriage, substantially as described.

3. In an improved hemp brake, the combination of a framework composed of longitudinal beams, transverse beams securing said longitudinal beams together, longitudinal stringers connected between said transverse beams, a double series of laterally spaced knives consisting of strips of metal bent U-shape and inverted, the free ends of said strips being secured to the longitudinal beams and stringers, said strips having inclined upper ends, hangers mounted on said longitudinal beams, bars supported from said hangers, a carriage including a pair of heads having eyes slidably received over said bars, rods connecting said heads, perforated ears on said heads, movable knives consisting of strips of metal bent U-shape and inverted and having their free ends secured to the perforated lugs on said heads, the upper ends of said knives being inclined to coöperate with the inclined upper ends of said stationary knives, and means for reciprocating said carriage, substantially as described.

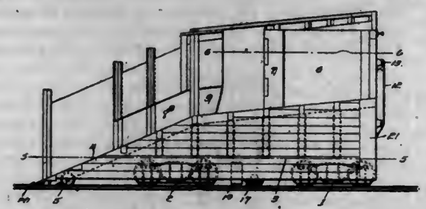
1,213,751. ELECTRIC SWITCH. JAMES S. CROSSLEY, Solvay, N. Y. Filed Oct. 29, 1914. Serial No. 869,285. (Cl. 173—346.)



1. In an electric switch, the combination of two insulating members secured together face to face and having registering cavities in their abutting faces to provide a switch chamber, switch mechanism in said chamber comprising a frame having sides, ends and a bottom, a fastening device engaging the bottom of said frame and the insulating member in which the frame is fitted to secure the frame in the cavity therein, a rotatable operating member mounted in the ends of said frame, a switch member, a pivoted switch actuating device operable by said rotatable member, and a pin upon which said device is pivoted, said pin being mounted in the sides of said frame with the opposite ends of said pin projecting beyond the sides of the frame, one of said insulating members having oppositely disposed similar recesses opening into the cavity therein and also opening into the face thereof which abuts against a face on the other insulating member, said similar recesses being adapted to receive the projecting ends of said pin and prevent the frame swiveling on said fastening device when said rotatable member is turned to operate the switch.

2. In an electric switch, the combination of two insulating members secured together face to face and having registering cavities in their abutting faces to provide a switch chamber, switch mechanism in said chamber comprising a frame fitted in the cavity in one of said members and having sides, ends and a bottom, a screw engaging the bottom of said frame and the insulating member in which the frame is fitted to secure the frame therein, a spindle mounted in the ends of said frame and rotating in either direction, a switch member, a pivoted switch actuating device operable by turning said spindle in either direction, and a pin upon which said device is pivoted, said pin being disposed at right angles to the spindle and mounted in the sides of said frame, the opposite ends of said pin projecting beyond the outer sides of said frame, the insulating member to which said frame is secured having oppositely disposed similar recesses opening into the cavity therein and also opening into the top face thereof and adapted to receive and closely fit around the projecting ends of said pin and prevent the frame swiveling on said screw when the spindle is turned in either direction to operate the switch.

1,213,752. SNOW-PLOW. ALBERT DAHLIN, Butte, Mont. Filed Oct. 27, 1916. Serial No. 128,091. (Cl. 104—51.)

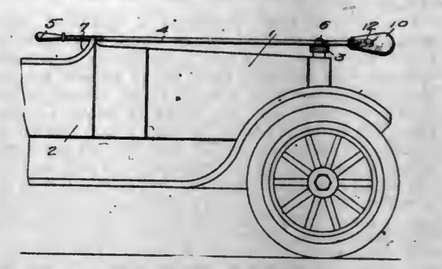


1. A snow plow comprising a wheel mounted frame having an upwardly and rearwardly inclined surface, side walls mounted at the lower forward portion of the inclined surface, a prow mounted at the upper rear portion of the inclined surface, hinge-panels forming the apex of the prow and partition walls normally housed within the sides of the prow and adapted to be projected beyond the prow toward the first mentioned side walls.

2. A snow plow comprising a wheel mounted frame having an upwardly and rearwardly inclined surface, side walls located at the lower forward portion of the said surface, a wedged shaped prow mounted at the upper rear portion of the platform, hinged panels forming the apex of the said prow, partitions normally housed between the side walls of the prow, wheels supporting the said partitions, and winding mechanisms for controlling the movement of the partitions, the said partitions adapted to be extended toward the first mentioned side walls.

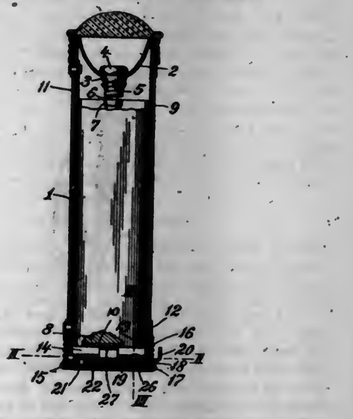
1,213,753. SIGNALING DEVICE FOR MOTOR-VEHICLES. MICHAEL J. DALTON, Chula Vista, Cal. Filed Dec. 15, 1915. Serial No. 66,933. (Cl. 116—31.)

In combination with a motor vehicle, of a signal for indicating the direction of turning, said signal comprising a lever having adjacent one end a vertical pivot connecting the lever to the filling cap of the radiator and carrying a signal at the said end and a grip at the other end,



said lever extending rearwardly of the dashboard, and the said board having notches for holding the lever in adjusted position.

1,213,754. FLASH-LIGHT LAMP. FRIEDRICH DAVID, Brooklyn, N. Y., assignor to Enterprise Electric Novelty Co., New York, N. Y., a Corporation. Filed Sept. 13, 1916. Serial No. 119,887. (Cl. 240—8.5.)



1. A portable lamp, comprising a cylindrical casing inclosing an electric battery; an electric lamp connected to the casing and to one pole of the battery; a rotatable removable cap having a screw thread adapted for electrical engagement with a screw thread formed on said cylindrical casing; said cap having an insulated contact adapted to be forced against the other pole of said battery by means of said screw threads when said cap is rotated, said cap having a manually operative lever pivoted thereto and in electric connection therewith and adapted to be thrown into or out of engagement with said contact, whereby said lamp may be alternately lighted or extinguished.

2. A portable lamp, comprising a cylindrical casing having an electric lamp mounted in one end thereof, one contact of the lamp being electrically connected to the casing; the other end of the casing being open; an electric battery adapted to be placed in said open end of the casing in such a manner that one pole of the battery can make contact with the other contact of said lamp; a rotatable removable cap having a screw thread adapted for electrical engagement with a screw thread formed on said open end of the cylindrical casing; said cap having an insulated contact provided with a spring extension adapted to be forced against the other pole of said battery by means of said screw threads when said cap is rotated, said spring thereby serving to hold the battery against said lamp; said cap having a manually operative lever pivoted

thereto and in electric connection therewith and adapted to be thrown into or out of engagement with said contact, whereby said lamp may be alternately lighted or extinguished.

3. A portable lamp, comprising a cylindrical casing inclosing an electrical battery; an electric lamp connected to the casing and to one pole of the battery; a rotatable removable cap having a screw thread adapted for electrical engagement with a screw thread formed on said cylindrical casing; said cap having an insulated contact adapted to be forced against the other pole of said battery by means of said screw threads when said cap is rotated; adjusting means for preventing rotating of said cap; said cap having a manually operative lever pivoted thereto and in electric connection therewith and adapted to be thrown into or out of engagement with said contact, whereby said lamp may be alternately lighted or extinguished.

1,213,755. BOX FOR CONTAINING BELTS OF CARTRIDGES FOR USE IN MACHINE-GUNS. WILLIAM IRELAND DAVIES, Bucknell, England. Filed Sept. 11, 1915. Serial No. 50,142. (Cl. 89—34.)



1. A cartridge box comprising four side walls a base and a top, one of said sides being hingedly secured, along its lower edge, to the base member, the hinged lid of said box being hingedly secured to the upper edge of one of the sides of the box, and being provided with means adapted to overlie the upper edge of the side of the box.

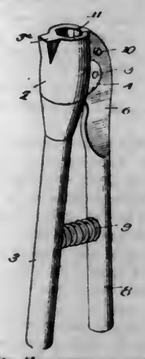
2. A cartridge box comprising four walls, a base and a lid, one of said walls being hingedly secured along its lower edge to the base, a lid being hingedly secured to one of the upper edges of another wall, and means secured to the lid and the side wall which is capable of being swung outwardly so that when the lid is lowered the said side wall is automatically swung into a closed position.

3. A cartridge box comprising four walls, a base and a lid, one of said walls being hingedly secured along its lower edge to the base, a lid being hingedly secured to the upper edge of another wall, and means comprising two wedge members adapted to coöperate with one another, one of said wedge members being secured to the lid, the other to the side wall so that when the lid is lowered the side wall automatically swings into a closed position.

4. A cartridge box comprising four walls, a base and a lid, one of said walls being hingedly secured along its lower edge to the base, said lid being hingedly secured to the upper edge of one of the sides, and means comprising a resilient pad secured to the inner face of the hinged side wall.

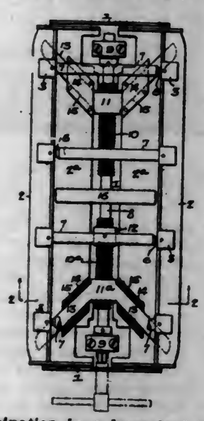
1,213,756. NUT OR BOLT HOLDING DEVICE. RAY DAVIS, Lehigh, Iowa. Filed June 6, 1916. Serial No. 102,054. (Cl. 81—13.)

1. In a device for the purpose set forth, a shank having one of its ends formed with a socket, said socket having one of its sides slotted and provided with ears to the opposite sides of the said slot, a gripping member including a head which is pivotally secured between the ears and which is adapted to have one of its ends enter the socket, spring means between the shank and said gripping member for forcing the said head to within the socket, and means for limiting the movement of the head in the direction of the socket.



2. In a device for the purpose set forth, a member including a straight shank having its end formed with an enlarged socket, said socket, at the mouth thereof having a laterally extending lug, said socket, opposite the lug having a longitudinal slot, ears upon the socket member to the opposite sides of the slot, a gripping member including a head and a handle, said head being pivoted between the ears, a laterally arranged stud upon the head to contact with the socket to limit the movement of the head through the slot of the socket, a spring exerting a pressure between the handle and the shank, and the engaging face of the head having a V-shaped depression.

1,213,757. LOOSE-LEAF BINDER. JOSEPH O. DECKERT, Philadelphia, Pa., assignor to William Mann Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 19, 1916. Serial No. 98,603. (Cl. 129—13.)

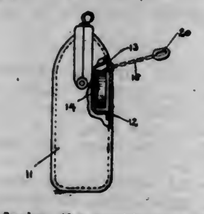


1. The combination in a loose leaf binder, of a back and adjustable side members; a rod having right and left hand screw threads thereon; two nuts, one on each threaded portion of the rod; diagonal arms carried by the nuts; boxes secured to the side members in which the diagonal arms are mounted and by which the back is rigidly held to the adjustable side members, the parts being so arranged that, on turning the rod, the side members will be moved toward or from each other.

2. The combination in a binder, of a back; two side members arranged to slide on the back; a longitudinal rod; bearings therefor carried by the back; a right and left hand screw thread on the rod; two nuts adapted to the two threads, said nuts having integral diagonal arms; boxes on the side members in which the arms are mounted and by which the back is rigidly held to the adjustable side members so that on turning the rod in one direction the nuts will be moved apart and the side members will be drawn together and when the nuts are moved in the opposite direction the side members will be forced apart.

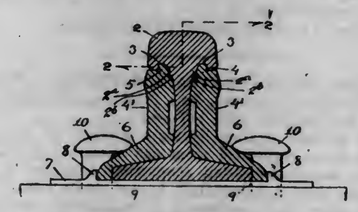
3. The combination in a binder, of a back; side sections having flat portions and having means for retaining the leaves to the binder; a longitudinal rod having two threaded sections; bearings for said rod secured to the back; a nut on each threaded section of the rod; diagonal arms projecting laterally from the nut; inclosed boxes on the flat portions of the side members of the binder having diagonal slots in which the arms are fitted; a centrally located guide plate secured to the back and extending on the inner side of the flat portions of the side members and having an opening for the passage of the rod; and a stop on the rod to limit the outward movement of the nuts and the side members.

1,213,758. SAFETY DEVICE. LAWRENCE R. DELANEY, Gage, Okla. Filed Dec. 19, 1911. Serial No. 666,835. (Cl. 150—47.)



In a safety device, the combination of a purse having an eyelet, a piece of fabric secured to the inner face of one of the sides of the purse at each of its marginal edges forming a completely closed pocket with which the eyelet communicates, a casing located within the pocket and having opposite walls and a peripheral opening, a central transverse pivot mounted within the casing, lugs located at one of the walls of the casing interiorly thereof, a reel mounted on the pivot and provided with a peripheral groove and having a shallow recess at one side into which the lugs project, a spring located within the reel and connected with the same and the pivot, gravity catches pivoted to the reel in the said shallow recess and arranged to engage the said lugs to hold the reel, and a flexible element wound around the reel in the peripheral groove thereof and extending through the said opening and the said eyelet and provided at its outer end with attaching means.

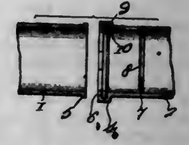
1,213,759. RAIL-JOINT. HARVEY E. DENGLER, Steelton, Pa. Filed June 8, 1916. Serial No. 102,539. (Cl. 239—9.)



1. In a rail joint, rails having approximated ends provided with recesses in the bottoms of the heads thereof, the inner walls of said recesses being spaced apart laterally from the rail web, the rail head having inner bottom portions projecting laterally from and forming enlargements of the web at the juncture of web and head, lateral fish plates having upwardly projecting ribs spaced apart laterally from the inner faces of said plates and fitting in said recesses, and upper horizontal shoulders against which bear the outer bottom portions of the rail heads, said fish plates having solid vertical portions located directly between and in vertical alinement with said shoulders and the tops of the base flanges of the rails, and outwardly projecting foot portions overlying the rail flanges and extending beyond the same, a base plate underlying the rail at both sides of the joint and provided with upwardly projecting lugs engaging the outer edges of said foot portions, said base plate and said foot portions having matched recesses forming spike holes located beyond the outer edges of the rail flanges.

2. In a rail joint, rails having approximated ends provided with recesses in the bottoms of the heads thereof, the inner walls of said recesses being spaced apart laterally from the rail web, the rail head having inner bottom portions projecting laterally from and forming enlargements of the web at the juncture of web and head, said enlargements having bottom shoulders, lateral fish plates having upwardly projecting ribs spaced apart laterally from the inner faces of said plates and fitting in said recesses, said plates having upper inner shoulders against which bear the bottom shoulders of said enlargements, and upper outer shoulders against which bear the outer bottom portions of the rail heads, said fish plates having solid vertical portions located directly between and in vertical alinement with said shoulders and the tops of the base flanges of the rails, and outwardly projecting foot portions overlying the rail flanges and extending beyond the same, a base plate underlying the rail at both sides of the joint and provided with upwardly projecting lugs engaging the outer edges of said foot portions, said base plate and said foot portions having matched recesses forming spike holes located beyond the outer edges of the rail flanges.

1,218,760. METHOD OF FORMING PIPE-JOINTS. DANIEL B. DIMICK, Birmingham, Ala., assignor to American Casting Company, Birmingham, Ala., a Corporation of Alabama. Filed Feb. 25, 1916. Serial No. 80,430. (Cl. 137—28.)



1. The method as described for forming a joint between pipe sections consisting in placing a gasket between said pipe sections having a projecting portion extending into the pipe passage, and pressing said projecting portion down to cover the joint, substantially as described.

2. The method as described for forming a joint between pipe sections, which consists in placing a plastic gasket between said pipe sections having a projecting portion extending into the pipe passage, and pressing said projecting portion down with the application of heat to cover the joint, substantially as described.

3. The method as herein described for forming a joint between pipe sections, which consists in casting a plastic gasket on one section with a portion extending into the pipe passage, bringing the pipe sections together on said plastic gasket, and smoothing down with the application of heat such extending portion of the gasket to bridge the interior walls of the section ends, substantially as described.

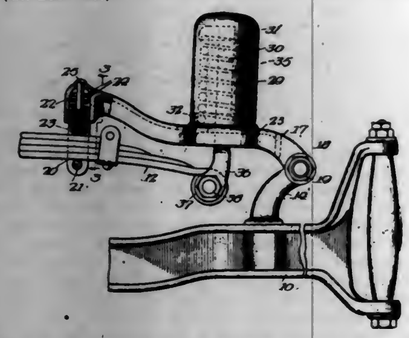
4. The method as herein described for forming a joint between pipe sections, which consists in casting on one pipe section a permanently-plastic gasket, with a portion extending into the pipe passage, bringing the pipe sections together forcibly on said gasket, and hot-ironing said extending gasket portion over the interior of the section

ends to provide a fluid-tight joint, substantially as described.

5. The herein described method of forming a fluid-tight joint between interlocking pipe sections, which consists in casting on one section a permanently-plastic gasket having a portion extending into the pipe passage, bringing said pipe sections forcibly together over said gasket by a rotating movement to interlock the same and compress the gasket therebetween, and subsequently ironing down with the application of heat such extending gasket portion to cover the interior of the joint, substantially as described.

[Claim 6 not printed in the Gazette.]

1,213,761. SPRING SUSPENSION. THOMAS I. DUFFY, Chicago, Ill. Filed Nov. 1, 1915. Serial No. 58,996. (Cl. 267—19.)



1. A spring suspension for vehicles comprising, in combination with the main spring and its support, of a lever pivoted to said support and movably engaging the main spring between the ends of the latter, and an auxiliary spring carried between the ends of the lever and connected to the end of the main spring.

2. A spring suspension for vehicles comprising, in combination with the main spring and its support, of a lever pivoted to said support and movably engaging the main spring between the ends of the latter, and an auxiliary spring carried between the ends of the lever and pivotally connected to the end of the main spring.

3. In a spring suspension for vehicles, a main spring, a lever pivoted at one end to a relatively fixed support, a clamping yoke at the other end of the lever movably engaging the spring inside its end, an auxiliary spring supported on the lever between the ends of the latter and a plunger connected to the auxiliary spring and pivoted to the end of the main spring.

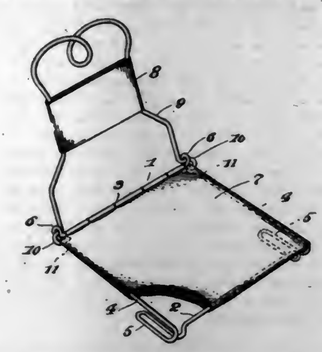
4. In a spring suspension for vehicles, a main spring provided at one end with an eye, a support for the spring, a lever pivoted at one end thereof to said support and movably engaging said spring a distance inside the end of the latter, an auxiliary spring supported on said lever at its pivot end and a plunger connected to said spring and pivoted to said eye of the main spring.

5. In a spring suspension for vehicles, a main spring, a lever pivoted at one end thereof to a relatively fixed support, a clamping yoke carried by the other end of the lever, the arms of which engage over the sides of said spring with a cross pin connecting the ends of said arms whereby the lever may be removably attached to the main spring, an auxiliary spring supported on the lever at its pivot end and a plunger connected to the auxiliary spring and pivoted to the end of the main spring.

[Claim 6 not printed in the Gazette.]

1,213,762. AUXILIARY SEAT. OLIN V. DUNN, Brookings, S. D. Filed Mar. 14, 1916. Serial No. 84,169. (Cl. 155—5.)

An auxiliary seat of the class described, comprising a seat frame formed of a single length of wire bent to provide front and rear end bars and side bars, the front end bar at its junction with the side bars being bent downwardly and rearwardly to form hooks, the rear bar at its junction with said side bars being bent to form



upwardly projecting axially alining eyes arranged at right angles to said rear bar, and a back rest formed of a single length of wire having the end portion thereof bent to provide pintles pivoted in the said eyes, respectively.

1,213,763. METHOD OF MANUFACTURING COKE FROM PITCH AND THE PRODUCT THEREOF. CLARENCE R. ECKERT, Chicago, Ill., assignor to The Barrett Company, New York, N. Y., a Corporation of West Virginia. Filed Sept. 10, 1915. Serial No. 49,901. (Cl. 44—1.)

1. The process of manufacturing coke from coal tar pitch or similar hydrocarbons, which consists in mixing therewith a sufficient amount only of solid carbonaceous material non-liquefiable by heat to practically prevent foaming of the hydrocarbon at critical heat and then subjecting the mixture to the coking operation.

2. In the manufacture of coke from pitch and similar hydrocarbons, the method, which consists in mixing with the hydrocarbon coke breeze in substantially the proportions of 90% of hydrocarbon and 10% of coke breeze, and afterward subjecting the mixture to a coking operation.

3. In the manufacture of coke pitch, the method, which consists in mixing with pitch, coke breeze in substantially the proportions of 90% of pitch to 10% of breeze.

4. In the manufacture of coke from pitch and similar hydrocarbons, the method which consists in mixing with the pitch solid carbonaceous material in substantially the proportions of 90% of pitch and 10% of the solid carbonaceous material, and afterward subjecting the mixture to a coking operation.

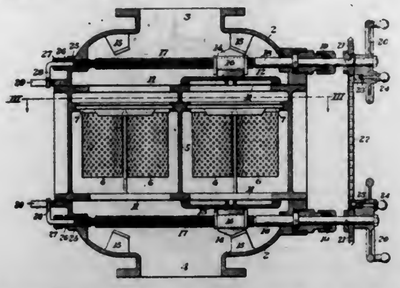
5. In the manufacture of coke from coal tar pitch and similar hydrocarbons, the method of adding to the pitch a sufficient amount of solid carbonaceous material non-liquefiable by heat to substantially prevent the foaming of the hydrocarbon.

[Claims 6 to 9 not printed in the Gazette.]

1,213,764. MULTIPLE-STRAINER SYSTEM. WILLIAM S. ELLIOTT, Pittsburgh, Pa. Filed June 20, 1914. Serial No. 846,333. (Cl. 137—5.)

1. A multiple strainer having a plurality of valves arranged to be translated from one operative position to another operative position, connections arranged to actuate said valves simultaneously from a single point of control to effect their movement of translation, and means whereby said valves may be operated independently after being translated to insure their proper independent seating action, substantially as described.

2. A multiple strainer having a plurality of bodily shiftable valves, and actuating devices connected to said valves whereby they may all be simultaneously shifted from a single point of control, said actuating devices having means whereby each valve after being shifted may be means whereby each valve after being shifted may be given an independent seating movement, substantially as described.



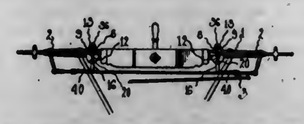
3. A multiple strainer having a plurality of bodily shiftable valves, means for insuring a close seating of said valves in each of their operative positions, and actuating connections for simultaneously shifting all of the valves from a single point of control, said actuating connections having means whereby each of the valves after being shifted may be given an independent seating movement in coöperation with the close seating insuring means, substantially as described.

4. A multiple strainer having a plurality of parallel strainer compartments, each of which is provided with separate inlet and outlet ports, valves for controlling said ports, each of said valves being bodily shiftable from the port of one compartment to the port of another compartment, and actuating devices connected to said valves to simultaneously shift them from a single point of control, said actuating connections having means whereby each valve after being shifted may be given an independent seating movement, substantially as described.

5. A multiple strainer having a plurality of parallel strainer compartments, each of which is provided with separate inlet and outlet ports, valves for controlling said ports, each of said valves being bodily shiftable from the port of one compartment to the port of another compartment, a screw shaft engaging each valve, and actuating connections for simultaneously operating the two screw shafts, said connections having means whereby each of said shafts may also be independently operated, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,213,765. DIRIGIBLE HEADLIGHT. JAMES MATHEW ERVIN, Onaway, Mich. Filed Oct. 8, 1915, Serial No. 54,713. Renewed June 17, 1916. Serial No. 104,237. (Cl. 240—62.)



1. The combination with a rotatable headlight, of a crank for moving said headlight, a lever adapted to move said crank, a spring adapted to move said lever in one direction, means for moving said lever in an opposite direction against the action of said spring whereby said spring restores said lever to normal position, and means engaging said lever to hold said lever, said crank and said headlights in normal position.

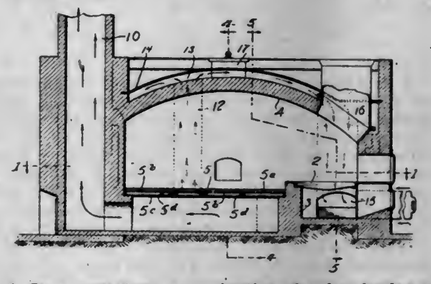
2. The combination with a rotatable headlight, of a crank for moving said headlight, a lever adapted to move said crank, a spring held under tension by said lever and adapted to move said lever in one direction, means connected to said lever holding said lever against the action of said spring and adapted to move said lever in an opposite direction to that of said spring and thereby place said spring under additional tension whereby said spring restores said lever to normal position and remains under sufficient tension to move said lever in an opposite direction to that of said means.

3. The combination with a rotatable headlight, of a crank for moving said headlight, a lever having a rolling action against said crank adapted to move said crank, a spring held under tension by said lever and adapted to move said lever in one direction, means for moving said lever in an opposite direction against the action of the spring whereby said spring restores said lever to normal position, means engaging said lever to hold said lever, said crank, said headlight in normal position, and means adapted for mounting against said crank whereby said crank can only be moved in one direction.

4. The combination with a headlight, of a casing, a socket member in said casing supporting said headlight, a crank in said casing for moving said socket member, a lever extending into said casing for moving said crank, and means adapted to be mounted in said casing to limit the movement of said crank in one direction.

5. The combination with a vehicle having headlight brackets, and a steering mechanism, of casings supported by said brackets, rotatable socket members having toothed portions in said casings, headlights supported by said members, cranks in said casings having segment racks engaging the toothed portions of said members for moving said members, operating levers extending into said casings and having a rolling action against said cranks for moving said cranks, connections between each lever and said steering mechanism adapted to move either lever to turn a headlight, and means associated with each operating lever to automatically move the lever not actuated by the steering mechanism to turn the headlight thereof in the same direction as the headlight actuated by the steering mechanism.

1,213,766. CREMATORY. AUGUSTUS C. FELTON, Jr., Macon, Ga. Filed July 3, 1916. Serial No. 107,299. (Cl. 110—12.)



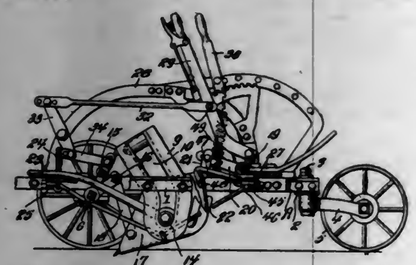
1. In a crematory, a combustion chamber having an arched roof, a grate disposed at one side of said combustion chamber, a night-soil pan disposed on the other side of said combustion chamber contiguous to said grate, a stack or chimney on that side of the furnace contiguous to said night soil pan, flues connecting said combustion chamber with said stack, said flues extending underneath said night-soil pan, said night-soil pan being made of metal plates spaced apart, the upper plates having a thin refractory covering, means for introducing air between said metal plates, and an outlet for the air from the space between the plates.

2. In a crematory, a furnace jacket, a combustion chamber having an arched roof spaced from said jacket, a grate disposed at one side of said combustion chamber, a night-soil pan disposed on the other side of said combustion chamber contiguous to said grate, a stack or chimney on that side of the furnace contiguous to said night soil pan, flues connecting said combustion chamber with said stack, said flues extending underneath said night-soil pan,

said night-soil pan being made of metal plates spaced apart, the upper plates having a thin refractory covering, means for introducing air between said metal plates, said last named means comprising an air inlet communicating with the space between the plates, a vertically disposed air conduit communicating at its lower end with the space between the plates and at its upper end with the space between the arched roof and furnace jacket, and an outlet for the air from the roof space.

3. In a crematory, a furnace jacket, a combustion chamber having an arched roof spaced from said jacket, a grate disposed at one side of said combustion chamber, a night-soil pan disposed on the other side of said combustion chamber contiguous to said grate, a stack or chimney on that side of the furnace contiguous to said night-soil pan, flues connecting said combustion chamber with said stack, said flues extending underneath said night-soil pan, said night-soil pan being made of metal plates spaced apart, the upper plates having a thin refractory covering, means for introducing air between said metal plates, said last named means comprising an air inlet communicating with the space between the plates, a vertically disposed air conduit communicating at its lower end with the space between the plates and at its upper end with the space between the arched roof and furnace jacket, and an air passage leading from the roof space to the space beneath the grate.

1,213,767. SCRAPER. THOMAS B. FERGUSON, Hanford, Cal. Filed Apr. 8, 1913. Serial No. 759,723. (Cl. 37—33.)

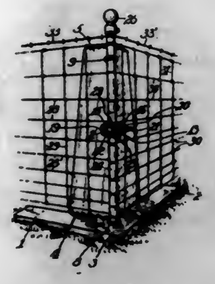


1. In a machine of the class described, a main frame, an axle supporting the forward portion of the frame, ground wheels on the axle, an arch on the axle intermediate the ground wheels, fixed arms secured on the axle intermediate the arch and the ground wheels, a trailer wheel supporting the rearward portion of the frame, a rock shaft mounted on the frame and having radial arms, a scoop, links connecting the forward and rearward portions of the scoop with the fixed arms extending from the axle and the rock shaft, respectively, means connected to the axle arch for rocking the axle, and means for rocking the rock shaft independently of the axle, also to effect adjustment of the scoop.

2. In a machine of the class described, a carrying frame, two shafts independently supported for rocking movement, one of said shafts constituting also an axle on which supporting wheels are mounted, fixed radial arms extending from the shafts, a scoop, links connecting the scoop with the radial arms, means for rocking the shafts to effect adjustment of the scoop, guiding means for the scoop, a third shaft supported for rocking movement and having scoop engaging hooks, a spring to withdraw the hooks from engagement with the scoop, and a treadle to actuate the rock shaft against the tension of the spring.

1,213,768. FENCE-TIGHTENING POST. NELSON F. HOWARD, Fairfield township, Tippecanoe county, Ind. Filed June 4, 1915. Serial No. 32,176. (Cl. 256—41.)

1. A fence post including a column, a winding-shaft rotatably supported uprightly adjacent to the column and having a spiral-tooth gear wheel fixedly secured to the middle portion thereof, and a worm rotatably supported by the column between the column and the gear wheel in engagement with the wheel and affording lateral support to the middle portion of the winding-shaft, the worm being adapted for turning and also for holding the gear wheel.



2. A fence post including a base, a column fixed on the base, a journal bearing supported by the upper portion of the column, a winding-shaft extending rotatably through the journal bearing and rotatably supported upon the base, a spiral-tooth gear wheel fixedly secured to the winding-shaft, and a worm rotatably supported by the column between the column and the gear wheel in driving engagement with the wheel, the worm affording lateral support to the winding shaft.

3. A fence post including a base, a column fixed upon the base, a stub-shaft having a shank that is fixedly secured in the upper portion of the base, the shaft projecting upward beyond the top of the base, a collar supported upon the top of the base and extending about the stub-shaft, a hollow upright winding-shaft having its lower end extending rotatably about the stub-shaft and supported upon the top of the collar, and a journal bearing secured to the upper portion of the column and supporting the upper portion of the winding-shaft.

4. A fence post including a base, a column fixed on the base and having two arm-supporting members fixedly secured therein, the members converging from the exterior inwardly each to the other and being connected together within the column, the members having each an arm thereon that projects beyond the column, one of the arms having a circular journal bearing therein, the other having a slot in its end to constitute a journal bearing, a worm horizontally arranged between the arms and having two journals rotatably supported in the journal bearings, a winding-shaft rotatably supported upon the base, and a spiral-tooth gear wheel fixedly secured to the winding-shaft in engagement with the worm.

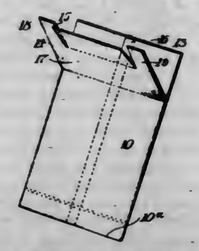
1,213,769. METHOD OF MAKING ENVELOPS AND THE LIKE. WILLIAM H. JACOBS, Washington, Conn., assignor, by mesne assignments, to The Lock-Tite Envelope Corporation, New York, N. Y., a Corporation of New York. Original application filed June 12, 1914, Serial No. 844,619. Divided and this application filed Mar. 30, 1915. Serial No. 18,192. (Cl. 93—35.)

1. The method of making envelops or the like of the kind described which consists in forming a tubular body said body being of greater length than the envelop to be formed, and cutting and folding portions of said tubular body to form a pocket and co-acting tongue.

2. The method of making envelops or the like of the kind described which consists in first forming a tubular body of greater length than the envelop, then cutting said body at one end to provide a foldable portion and folding said foldable portion and securing it to said body.

3. The method of making envelops or the like of the kind described which consists in first forming a tubular body, cutting said body to provide a foldable portion, and folding said foldable portion and securing it at its ends to said body to form a pocket.

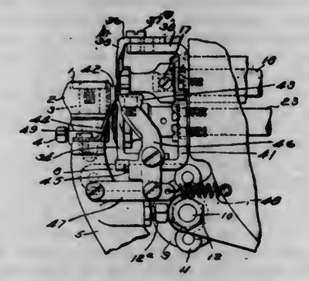
4. The method of making envelops or the like of the kind described which consists in first forming a tubular body of greater length than the envelop, then cutting said body at one end to provide a foldable portion, then folding said portion to form two folds, and securing said folded portion to said body to provide a pocket.



5. The method of making envelops or the like of the kind described consisting in cutting a tubular bag body to provide a foldable portion, folding said portion and securing it to provide a pocket, and forming a tongue adapted to fit into said pocket.

[Claims 6 to 14 not printed in the Gazette.]

1,213,770. MACHINE FOR OPERATING ON SOLES. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 3, 1913. Serial No. 751,895. (Cl. 12—30.)



1. A machine for operating upon a sole blank having a marginal flap or rib, having, in combination, means for supporting and feeding the blank, and means for stretching the fibers of the material in the flap or rib at the upper marginal portion thereof to produce a length at this portion of the flap or rib greater than the length at its base to permanently set it, substantially as described.

2. A machine for operating upon a sole blank having a marginal abutment, having, in combination, means for supporting and feeding the blank, and means for providing the marginal abutment with a series of transverse crimps or corrugations to set it in upturned position, substantially as described.

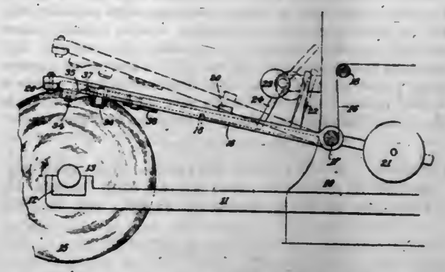
3. A machine for operating upon an insole blank having a flap and a parallel lip on one face, having, in combination, means for supporting and feeding the blank, and means for molding the flap and lip against each other into a configuration providing mutual support one for the other, substantially as described.

4. A machine for operating upon an insole blank having a flap and a parallel lip on one face, having, in combination, means for turning up the flap and lip, and means for providing the flap and lip with a series of transverse crimps or corrugations, substantially as described.

5. A machine for operating upon a sole blank having a flap on one face, having, in combination, means for turning up the flap, and means for compressing the up-turned flap in the direction of its height to consolidate the fibers of the flap at its base, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

1,213,771. PAPER-CONTROLLING DEVICE. DAVID M. LEEN and ADAM BOOMERSHINE, Dayton, Ohio, assignors to Mercantile Corporation, Dayton, Ohio, a Corporation of New York. Filed Dec. 21, 1915. Serial No. 67,968. (Cl. 242—76.)



1. In a paper controlling device, in combination, a support for a roll of paper, a relatively fixed but manually adjustable guide block contacting with the side of the roll adjacent its periphery at the point where the web leaves the same, and a resiliently pressed guiding member contacting with the periphery of the roll at the side opposite from the aforesaid guide block.

2. In a paper controlling device, in combination, a relatively fixed guide contacting with the side of the roll of paper adjacent its periphery, a shifting guide contacting with the opposite side of the roll and means for maintaining the last mentioned guide in contact with the side of the roll at its periphery.

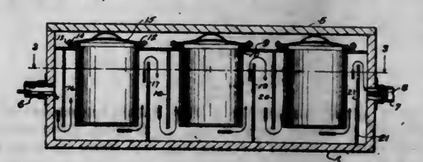
3. In a paper controlling device, in combination, a support for the roll of paper, an adjustable but relatively fixed guide block adjacent the periphery of the roll at the point where the web leaves the roll, a second shifting guide block adapted to contact with the edge of the roll at a point adjacent the periphery and opposite the first mentioned block.

4. In a paper controlling device, in combination, a support for a roll of paper, a guide block adjacent the periphery of the roll at the point where the web leaves the roll, a second guide block adapted to contact with the edge of the roll at a point adjacent the periphery and opposite the first mentioned block, and means for resiliently maintaining the said last mentioned guide block in contact with the paper roll, the said first mentioned guide block being relatively fixed with respect to the second mentioned block as the paper is withdrawn from the roll.

5. In a device of the class described, means for controlling and tensioning a web of paper comprising, in combination a supporting frame, a relatively fixed but adjustable guide and a shifting guide, both of said guides contacting with the edge of the roll of paper adjacent the periphery thereof and adjacent the point where the web leaves the roll, and a tension bar attached to said frame and adapted to rest upon and tension the paper.

[Claims 6 to 12 not printed in the Gazette.]

1,213,772. COOKER. CHARLES F. MCCOWN, Long Beach, Cal., assignor of one-half to John S. Steely, Los Angeles, Cal. Filed Feb. 29, 1916. Serial No. 81,152. (Cl. 126—33.)

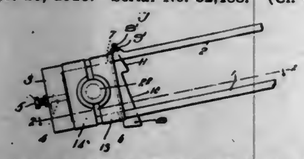


1. In combination with the exhaust pipe of an engine, a cooker comprising a casing provided with an inlet connected to said pipe and an outlet, a wall in said casing having openings, cooking receptacles disposed in said

openings, and extending into the path of the exhaust gases, baffle plates disposed in said casing transverse to the path of travel of exhaust gas therethrough and disposed between said receptacles.

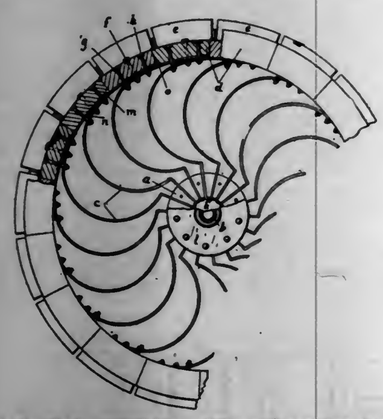
2. In combination with the exhaust pipe of an engine, a cooker comprising a casing provided with an inlet connected to said pipe and an outlet, a wall in said casing having openings, cooking receptacles disposed in said openings and extending into the path of the exhaust gases, baffle plates of relatively high heat retentivity disposed in said casing transverse to the path of travel of exhaust gases therethrough and disposed between said receptacles.

1,213,773. ADJUSTABLE BEARING FOR MOWING-MACHINE PITMEN. OTTO MILLER, Crab Orchard, Ill. Filed Apr. 20, 1916. Serial No. 92,488. (Cl. 64—55.)



In an adjustable bearing, supporting arms which are parallel to each other, bearing blocks recessed upon their opposite edges to receive said supporting members and serving to guide the blocks as they are adjusted, one of said blocks having slots therein and the other block provided with integral projections movable within said slots and provided with a transverse slot in its outer edge, the adjacent edge of each block having a bearing surface extending its entire width, the two supporting arms having oppositely disposed slots, a key having a straight edge movable within a slot in one of said blocks and its opposite edge provided with parallel inclined portions adapted to have wedging action against the edges of said slots in the arms, one end of the key being circumferentially threaded, a set screw mounted in a cross-piece connecting said arm and movable against the adjacent edge of the slotted block, and a nut mounted thereon.

1,213,774. ELASTIC VEHICLE-WHEEL. JOHN OBERMEIER, Portland, Oreg. Filed Aug. 30, 1916. Serial No. 117,783. (Cl. 152—30.)



1. A wheel comprising a hub, spring-spokes having a straight inner-end portion and a circular curve beyond such portion, means for securing said inner ends of the spokes to the hub, a section-rim, interlocking means on the abutting ends of said rim sections, adapted to permit the rim sections relative, independent, radial and longitudinal movement, the outer ends of said spokes being made to bear on the inner face of one rim-section and having a projecting tongue overlapping the inner face of the adjacent rim-section, the tongue of one spoke underlying the outer end of the adjacent spoke, bolts connecting the overlying outer-ends of the spokes to the rim, including adjustment bolts, adapted for drawing a greater or lesser portion of said outer ends to the rim, whereby the tension of the spokes may be adjusted and the hub centered.

2. A wheel comprising a hub, spring-spokes having a straight inner-end portion and a circular curve beyond such portion, means for securing said inner ends of the spokes to the hub, a section-rim, interlocking means on the abutting ends of said rim sections, adapted to permit the rim sections relative, independent, radial and longitudinal movement, the outer ends of said spokes being made to bear on the inner face of one rim-section and having a projecting tongue overlapping the inner face of the adjacent rim-section, the rim sections being made with longitudinal grooves for said tongues of the spokes, the tongue of one spoke underlying the outer end of the adjacent spoke, bolts connecting the overlying outer-ends of the spokes to the rim, including adjustment bolts, adapted for drawing a greater or lesser portion of said outer ends to the rim, whereby the tension of the spokes may be adjusted and the hub centered.

3. A wheel comprising a hub, spring-spokes having a straight inner-end portion and a circular curve beyond such portion, means for securing said inner ends of the spokes to the hub, a section-rim, tongue and groove elements on the abutting ends of said rim-sections, adapted to permit the rim sections relative, independent, radial and longitudinal movement, the outer ends of said spokes being made to bear on the inner face of one rim-section and having a projecting tongue overlapping the inner face of the adjacent rim-section, the rim sections being made with longitudinal grooves for said tongues of the spokes, the tongue of one spoke underlying the outer end of the adjacent spoke, bolts connecting the overlying outer-ends of the spokes to the rim, including adjustment bolts, adapted for drawing a greater or lesser portion of said outer-ends to the rim, whereby the tension of the spokes may be adjusted and the hub centered.

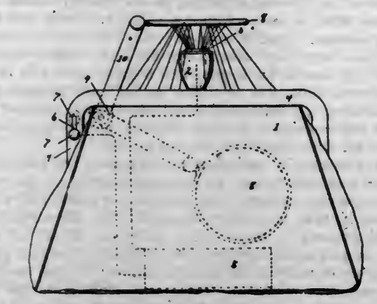
4. A wheel comprising a hub, spring-spokes having a straight inner-end portion and a circular curve beyond such portion, means for securing said inner ends of the spokes to the hub, a rim, the outer ends of said spokes being made to bear on the inner face of the rim and having a projecting tongue, the tongue of one spoke underlying the outer end of the adjacent spoke, bolts connecting the overlying outer-ends of the spokes to the rim, including adjustment bolts, adapted for drawing a greater or lesser portion of said outer ends to the rim, whereby the tension of the spokes may be adjusted and the hub centered.

5. A wheel comprising a hub, spring-spokes having a straight inner-end portion and a circular curve beyond such portion, means for securing said inner ends of the spokes to the hub, a rim, the outer ends of said spokes being made to bear on the inner face of the rim and having a projecting tongue, the tongue of one spoke underlying the outer end of the adjacent spoke, bolts connecting the overlying outer-ends of the spokes to the rim, including adjustment bolts, adapted for drawing a greater or lesser portion of said outer-ends to the rim, whereby the tension of the spokes may be adjusted and the hub centered, the underlying spoke ends being provided with a longitudinal slot through which said adjustment bolts extend, whereby said underlying spoke ends are permitted longitudinal movement under the overlying spoke members.

[Claim 6 not printed in the Gazette.]

1,213,775. NOVELTY. JAMES DAVID RAUDEBAUGH, San Diego, Cal. Filed Dec. 1, 1915. Serial No. 64,485. (Cl. 150—34.)

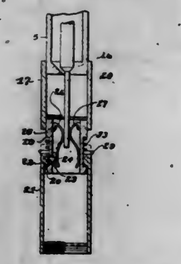
1. A novelty, comprising a purse or hand bag, an electric light mounted in the catch knob of said purse or hand bag, an arm pivotally mounted on the frame of said purse or hand bag, and a mirror mounted on said arm by a universal joint.



2. A novelty, comprising a purse or hand bag, and a mirror adjustably mounted on the frame of said purse or hand bag, by a universal joint, for universal adjustment.

3. A novelty, comprising a purse or hand bag, an electric lamp mounted in the catch knob of said purse or hand bag, and a mirror adjustably mounted on the frame of said purse or hand bag, by a friction controlled, universal joint.

1,213,776. DRAIN DEVICE FOR WELL-PUMP TUBING. HOMER G. RISDEN and FRANK SEPPI, Orcutt, Cal. Filed Dec. 6, 1915. Serial No. 65,404. (Cl. 103—60.)



1. A pump drain device, comprising the combination with a pump tubing, of a slidable member mounted thereon, a section of tubing having a check valve disposed in the wall thereof to release fluid therefrom, a collar disposed to be engaged by said sliding member, a rod secured to said collar extending longitudinally of said tubing for engagement with said valve, a detent and catch mechanism interposed between said tubing and said slidable member to lock said slidable member to said tubing, said mechanism normally in locked position, and means to lock said mechanism.

2. A pump drain device, comprising the combination with a pump tubing, of a slidable member mounted thereon, a section of tubing having a check valve disposed in the wall thereof to release fluid therefrom, a collar disposed to be engaged by said sliding member, a rod secured to said collar extending longitudinally of said tubing for engagement with said valve, said sliding member formed with a catch shoulder, a detent for engaging said shoulder, a spring on which said detent is mounted and normally holding the latter out of engagement with said shoulder, and means for moving said detent into engagement with said shoulder.

3. A pump drain device, comprising the combination with a pump tubing, of a slidable member mounted thereon, a section of tubing having a check valve disposed in the wall thereof to release fluid therefrom, a collar disposed to be engaged by said sliding member, a rod secured to said collar extending longitudinally of said tubing for engagement with said valve, said sliding member formed with a catch shoulder, a detent for engaging said shoulder, a spring secured to the inner wall of said tubing and extending toward the center thereof, said detent mounted on said spring, the latter tending to hold said detent out of engagement with said shoulder, means for interposition between said spring and the inner wall of said tubing to move said detent into engagement with said catch.

4. A pump drain device, comprising the combination with a pump tubing, of a slidable member mounted thereon having a catch shoulder on its inner wall, a section of tubing having a check valve disposed in the wall thereof to release fluid therefrom, said tubing provided with an aperture adjacent said shoulder, a detent disposed in said aperture, a spring on which said detent is mounted, said spring secured to said tubing and bowed toward the center thereof, a second spring registering with said first spring, a gas anchor disposed to be moved between said springs to lock said detent with said catch shoulder, a collar mounted on said tubing and disposed to be engaged by said sliding member, and a rod secured to said collar extending longitudinally of said tubing for engagement with said valve.

1,213,777. INCLOSED-FUSE ELEMENT. EDWARD E. ROBERTS, Hartford, Conn., assignor to The Johns-Pratt Company, Hartford, Conn., a Corporation of Connecticut. Filed May 8, 1916. Serial No. 96,026. (Cl. 175—273.)



1. A fuse element comprising conducting terminals, a non-conducting supporting rod extending from one terminal to the other, cushioning means between one end of the rod and one terminal, and metallic ribbons connecting said terminals.

2. A fuse element comprising metallic terminals, a glass supporting rod extending from one terminal to the other, cushioning means interposed between said rod and one terminal, and metallic ribbons connecting the terminals.

3. A fuse element comprising metallic terminals, a glass supporting rod with its ends extending into sockets in said terminals, a spring arranged in the socket of one terminal and thrusting against the end of said rod, and metallic ribbons connecting said terminals.

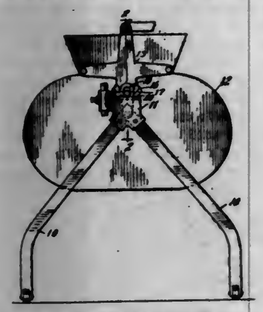
4. A fuse element comprising metallic terminals, a glass rod with its ends extending into sockets in said terminals, a spring arranged in the socket of one terminal and thrusting against one end of said rod, washers on said rod and closing the socket in the terminal containing said spring, and metallic ribbons connecting said terminals.

5. A fuse element comprising conducting terminals, a non-conducting supporting rod extending from one terminal to the other, and yieldingly connected therewith, and fusible conductors joining said terminals.

1,213,778. WASHING-MACHINE. OWEN W. ROBERTS, Chicago, Ill. Filed Apr. 10, 1914. Serial No. 830,872. (Cl. 68—21.)

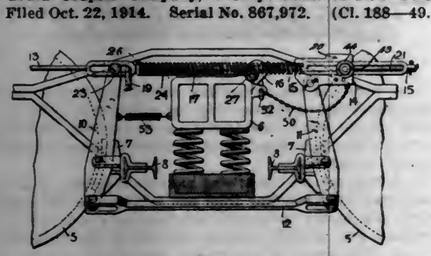
1. In a washing machine, a supporting frame having brackets at each end of the tub, a tub located between said brackets and having a bracket secured thereto on each end, each bracket on the frame having a horizontal ledge and each bracket on the tub having an outwardly extending pivot and a rib centered with respect thereto so that as the tub is rocked from side to side, the points of support are transferred from said pivots to the ribs, said pivots serving to prevent slipping of the tub in either direction while supported on said ribs, substantially as specified.

2. In a washing machine, a supporting frame having brackets at each end of the tub, a tub located between said brackets and having a bracket secured thereto on each end, each bracket on the frame having a horizontal ledge and each bracket on the tub having an outwardly ex-



tending pivot and a rib centered with respect thereto so that as the tub is rocked from side to side, the points of support are transferred from said pivots to said ribs, said ribs being so constructed that the rocking movement of the tub imparts to said pivots a right line vertical movement, substantially as specified.

1,213,779. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, New York, N. Y., assignor, by mesne assignments, to Gould Coupler Company, a Corporation of New York. Filed Oct. 22, 1914. Serial No. 867,972. (Cl. 188—49.)



1. In a device of the character described, in combination, live and dead levers, an actuating member connected with one of said levers, a holding device connected with the other, a take-up member connected directly with the actuating member adapted to be operated on excess travel of the live lever, and friction means yieldable in both directions positioned between the holding device and said take-up member for directly moving the holding device to take up the excess amount of slack caused by excess travel.

2. In a device of the character described, in combination, live and dead levers, an actuating member connected with one of said levers, a holding device directly connected with the other, a take-up member connected with the actuating member and adapted to be operated on excess travel of the live lever, and friction means yieldable in both directions between the holding device and the take-up member for moving the holding device to take up the slack due to excess travel, said take-up member being flexibly supported entirely from the rigid part of the truck.

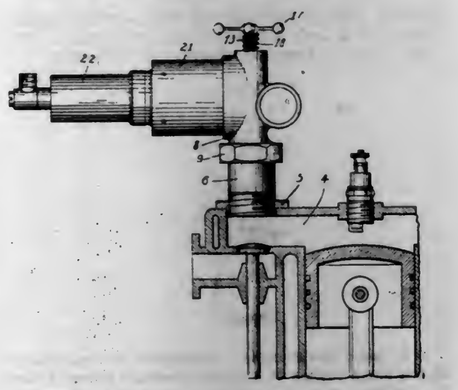
3. In a device of the character described, in combination, live and dead levers, an actuating member having a connection with one of said levers, a holding device directly connected with the other, a take up member having a lost motion connection with the actuating member adapted to be operated on excess travel of the live lever and means between the holding device and take up member for moving the holding device to take up the exact slack due to excess travel, said means comprising a yielding friction clutch device adapted to permit relative movement under abnormal conditions.

4. In a device of the character described, in combination, live and dead levers, an actuating member connected with one of said levers, a holding device directly connected with the other, a take up device connected with the actuating member adapted to be operated on excess travel of the live lever, and means between the holding device and take up device for moving the holding device to take up the exact slack due to excess travel, said holding device including a holding rod, a positive clutch adapted to operate thereon and a yielding friction clutch connection between the dead lever and take up device.

5. In a device of the character described, in combination, live and dead levers, an actuating member connected with one of said levers, a holding device connected with the other, a take up device connected with the actuating member adapted to be operated on excess travel of the live lever, and means between the holding device and take up device for moving the holding device to take up the exact slack due to excess travel, said holding device including a holding rod mounted on the truck and an intervening yielding friction clutch between the take up device and dead lever permitting normal movement in one direction only.

[Claims 6 to 22 not printed in the Gazette.]

1,213,780. APPARATUS FOR COMPRESSING AIR. STEPHEN G. SKINNER, Wilmette, Ill. Filed Oct. 15, 1914. Serial No. 866,740. (Cl. 230—27.)



1. In combination with one cylinder of a multiple cylinder internal combustion engine an auxiliary chamber disposed adjacent said engine cylinder, a passage adapted to afford communication between the engine cylinder and said auxiliary chamber, a valve for said passage arranged when seated to lie substantially flush with the inner wall of said engine cylinder, a manually operated controlling rod for said valve, means for locking said valve in either open or closed position as required, an opening in the wall of said auxiliary chamber, and a fluid pressure operated pump fitted in said opening, said pump having differential power and compression cylinders and pistons in said power and compression cylinders substantially as and for the purpose set forth.

2. In combination with one cylinder of a multiple cylinder internal combustion engine an auxiliary chamber disposed above said engine cylinder, a passage adapted to afford communication between said cylinder and said auxiliary chamber, a valve for said passage arranged when seated to lie substantially flush with the inner wall of said engine cylinder, a manually operated controlling rod for said valve, means for locking said valve in either open or closed position as required, an opening in one of the walls of said auxiliary chamber, and a fluid pressure operated pump fitted in said opening and projecting laterally and horizontally from said auxiliary chamber, said pump having differential power and compression cylinders and pistons in said cylinders substantially as and for the purpose set forth.

3. In combination with one cylinder of a multiple cylinder internal combustion engine, an auxiliary chamber disposed adjacent and above said engine cylinder, a passage adapted to afford communication between the engine cylinder and said auxiliary chamber, a valve for said passage arranged when seated to lie substantially flush with the inner wall of said engine cylinder, a manually operated controlling rod for said valve supported by said auxiliary chamber, means coöperating with said rod to lock said valve in either its open or closed position as required, an opening in the wall of said auxiliary chamber, a fluid pressure operated pump removably fitted in said opening and projecting laterally and horizontally from said auxiliary chamber, said pump having differential power and compression cylinders and pistons in said power and compression cylinders substantially as and for the purpose set forth.

1,213,781. GUARD FOR DRAFTSMEN'S SCALES. JOHN GORDON SPARKES, Birmingham, Ala., assignor to Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Feb. 21, 1916. Serial No. 79,653. (Cl. 33—107.)



1. A guard for polygonal scales having a rounded edge adapted to project beyond all but one of the flat faces of a scale and forming a continuous rolling support for the latter in all but one position, and means to mount the guard on a scale.

2. A guard for polygonal scales formed by a circular plate having a segment removed therefrom, and means at the center of the plate for attaching it to the end of a scale.

3. A guard for polygonal scales formed by a circular plate having a segment removed therefrom, and means at the center of the plate for attaching it to the end of a scale, said guard having a radius not less than the distance from the center to the corner edges of the scale on which it is adapted to be mounted.

4. A scale guard formed by a flat rounded plate having a segmental portion cut therefrom, and a center pivot pin adapted for attaching it to the end of a scale.

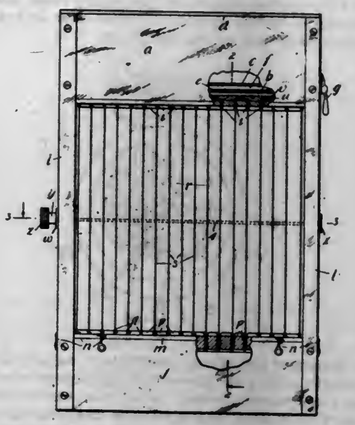
5. A scale guard formed by a plate having portions adapted to project substantially beyond all but one of the index bearing sides of a polygonal scale to which it is adapted to be attached, and means to mount said plate on the scale in a plane at right angles to the long axis of the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,213,782. AIR-COOLING DEVICE. WILLIS H. THOMAS, Portland, Oreg., assignor of one-half to Einar W. Lobse, Portland, Oreg. Filed Feb. 14, 1916. Serial No. 78,319. (Cl. 261—103.)

1. In combination with an electric fan, a device of the character described comprising an upper tank and a lower tank rigidly spaced apart, the bottom of said upper tank being made with a longitudinal recess, a plurality of vertical wicks extending between the recess of the upper tank and the top of the lower tank, an auxiliary wick in the recess overlying the upper ends of the vertical wicks, a reservoir located in the upper tank, and a valved connection for permitting liquid to flow from the reservoir onto the auxiliary wick.

2. In combination with an electric fan, a device of the character described comprising an upper tank and a lower tank rigidly spaced apart, the bottom of said upper tank being made with a longitudinal recess, a plurality of vertical wicks extending between the recess of the upper tank and the top of the lower tank, a screen element in the recess of the upper tank overlying the upper ends of the wicks, an auxiliary wick overlying the screen element, a reservoir located in the upper tank, and a valved connection for permitting liquid to flow from the reservoir onto the auxiliary wick.



3. In combination with an electric fan, a device of the character described comprising an upper tank and a lower tank rigidly spaced apart, the bottom of said upper tank being made with a longitudinal recess, a plurality of vertical wicks extending between the recess of the upper tank and the top of the lower tank, an auxiliary wick in the recess overlying the upper ends of the vertical wicks, a reservoir located in the upper tank, a valved connection for permitting liquid to flow from the reservoir onto the auxiliary wick, and means for varying the planes of the vertical wicks.

4. In combination with an electric fan, a device of the character described comprising an upper tank and a lower tank rigidly spaced apart, the bottom of said upper tank being made with a longitudinal recess, a plurality of vertical wicks extending between the recess of the upper tank and the top of the lower tank, a screen element in the recess of the upper tank overlying the upper ends of the wicks, an auxiliary wick overlying the screen element, a reservoir located in the upper tank, a valved connection for permitting liquid to flow from the reservoir onto the auxiliary wick, and means for varying the planes of the vertical wicks.

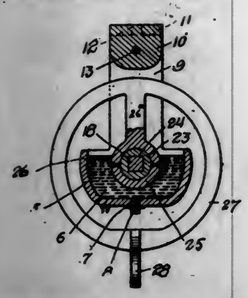
5. In combination with an electric fan, a device of the character described comprising an upper tank and a lower tank rigidly spaced apart, the bottom of said upper tank being made with a longitudinal recess, a plurality of vertical wicks extending between the recess of the upper tank and the top of the lower tank, an auxiliary wick in the recess overlying the upper ends of the vertical wicks, a reservoir located in the upper tank, a valved connection for permitting liquid to flow from the reservoir onto the auxiliary wick, a rod connecting the wicks, and means for moving said rod longitudinally.

[Claims 6 to 12 not printed in the Gazette.]

1,213,783. HANGER FOR SWINGS. HARRY J. VOLKWEIN, Pittsburgh, Pa. Filed Mar. 24, 1914, Serial No. 826,906. Renewed Mar. 29, 1916. Serial No. 87,661. (Cl. 155—35.)

1. A hanger for swings comprising a receptacle adapted to contain a body of lubricant, means for suspending said receptacle from a support, a squared element extending across said receptacle and connected thereto, a bearing surrounding and having a squared opening in which is seated said element, an oscillatory bearing sleeve inclosing said bearing, a crank arm projecting from the bearing sleeve, and a hanger member integral with said arm and arranged exteriorly of said receptacle.

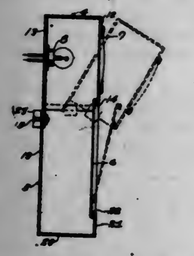
2. A hanger for swings comprising a receptacle adapted to contain a body of lubricant, a cylindrical bearing fixed within said receptacle and spaced from the bottom of the latter, a cylindrical bearing sleeve inclosing said bearing and capable of oscillating thereon, a crank arm integral with said bearing sleeve and projecting from said receptacle, and a hanger member integral with said arm and arranged exteriorly of the receptacle.



3. A hanger for swings comprising a receptacle adapted to contain a body of lubricant, a cylindrical bearing fixed within said receptacle and spaced from the bottom of the latter, a cylindrical bearing sleeve inclosing said bearing and capable of oscillating thereon, a crank arm integral with said bearing sleeve and projecting from said receptacle, a hanger member integral with said arm and arranged exteriorly of the receptacle, said sleeve provided with ports for the passage of lubricants to said bearing.

4. A hanger for swings comprising a receptacle open at its top, a pair of hanger arms integral with said receptacle and capable of being fixedly secured to a support, a cylindrical bearing arranged within and fixedly secured with said receptacle, an oscillatory bearing sleeve inclosing said bearing, a crank arm integral with said bearing sleeve and projecting from said receptacle, and a hanger member integral with said arm and arranged exteriorly of said receptacle.

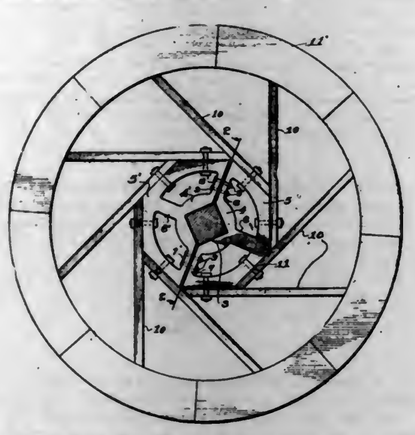
1,213,784. ILLUMINATED NUMBER-PLATE. HARRY WALKER, Anaheim, Cal. Filed Dec. 14, 1915. Serial No. 66,686. (Cl. 40—132.)



1. An automobile number plate device, comprising a housing open at its lower side, the front wall of said housing having an inturned lip at its lower edge, the rear wall thereof provided with means for detachably securing a number plate support, a number plate support detachably secured to the rear wall of said housing and including rear, front, side and bottom walls, a section of the front wall having an inturned lip forming a channel and translucent number plates formed with lips arranged to be engaged with the lips on said housing and support.

2. An automobile number plate device, comprising a housing open at its lower side, the front wall of said housing having an inturned lip at its lower edge, the rear wall thereof provided with means for detachably securing a number plate support, a number plate support detachably secured to the rear wall of said housing and including rear, front, side and bottom walls, a section of the front wall having an inturned lip forming a channel and translucent number plates formed with lips arranged to be engaged with the lips on said housing and support, said housing provided with a tail light bull's eye and a light disposed within said housing.

1,213,785. BAND-WHEEL CONSTRUCTION. WILSON B. WIGLE, Fullerton, Cal. Filed Aug. 17, 1916. Serial No. 115,456. (Cl. 64—17.)



1. In a band wheel for a square shaft, a divided collar having a rim and a hub spaced therefrom and secured thereto by spokes forming openings therebetween, said rim being arranged to receive tangential arms and having apertures communicating with said openings for bolting the arms to said rim, and means for securing the sections of said collar together and clamping the same to said shaft.

2. In a band wheel for square shafts, a divided collar comprised of sections, each section having a hub portion arranged to seat upon said shaft and a rim spaced from said hub portion and secured thereto by spokes, thereby forming openings between said hub and said rim, each section having a spoke arranged to abut the spoke on an adjacent section when assembled, means on said last mentioned spokes for securing together said sections and clamping them upon said shaft, said rim being arranged for mounting arms tangentially thereon, and having apertures communicating with said openings for receiving bolts to clamp the arms thereto.

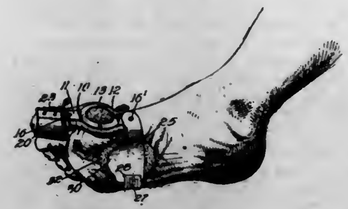
3. A band wheel for a square shaft, comprising a divided collar having a rim and a hub spaced therefrom and secured thereto by spokes forming openings therebetween, said rim being of polygonal shape and having apertures communicating with said openings, arms mounted on said rim tangential thereto, bolts in said apertures securing said arms to said rim, and a wheel rim mounted upon said arms.

4. A band wheel for square shafts, comprising a divided collar formed of sections, each section having a hub portion arranged to seat upon said shaft and a rim spaced from said hub portion and secured thereto by spokes, thereby forming openings between said hub and said rim, the sections forming a polygonal prism to bolt arms on when assembling, means on said last mentioned spokes for securing together said sections and clamping them upon said shaft, said rim having apertures communicating with said openings, arms mounted on said rim tangential thereto, bolts in said apertures for securing said arms to said rim, and a wheel rim mounted upon said arms for a drive belt.

5. In a band wheel construction, a square shaft, a divided collar having a hub to conform with the square

shaft and an octagonal rim spaced therefrom and secured thereto by spokes forming openings for bolting tangential arms to said rim, and means for clamping the two collar parts on said shaft.

1,213,786. FOOT-TREATMENT APPARATUS. LEE W. WILMS, Chicago, Ill., assignor to The Scholl Manufacturing Company, Chicago, Ill., a Corporation of New York. Filed July 30, 1915. Serial No. 42,714. (Cl. 128—28.)



1. In a device of the character described, the combination of a toe splint connectible to a toe, an under-foot spring, connected to the rear end of the splint, and an adjustable band for encircling the foot guided by said under-foot spring.

2. In a device of the character described, the combination of a toe splint, means for connecting the anterior end thereof to a toe, an underfoot plate pivotally connected with the posterior portion of the splint and extending laterally to pass crosswise of the foot adjacent the ball of the foot, and adjustable band-means engaging the plate to complete a circle around the foot.

3. In a device of the character described, the combination of a splint, means for attaching the front end of said splint to a toe, a transversely bent plate member pivoted to the rear end of said splint and arranged to extend down alongside of and under the foot adjacent the heads of the metatarsal bones, and a band for securing said plate to the foot.

4. In a device of the character described, the combination of a toe-splint, means for attaching the front end thereof to the great toe that the splint may extend alongside of the toe past the metatarso-phalangeal joint, a transversely-bent plate-member connected to the splint to lie in rear of the joint and pass down under and cross the foot adjacent the heads of the metatarsal bones, means supplementing the normal curvatures of said plate to exert a restorative upward pressure under the metatarsal bones, and means for securing said plate to the foot.

5. In a device of the character described, the combination of a splint, means for attaching the front end of said splint to a toe, a transversely bent plate member pivoted to the rear end of said splint and arranged to extend down alongside of and under the foot adjacent the heads of the metatarsal bones, means supplementing the normal curvatures of said plate to exert a restorative upward pressure under the metatarsal bones, and a band for securing said plate to the foot.

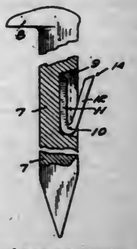
[Claims 6 to 10 not printed in the Gazette.]

1,213,787. SPIKE AND OTHER FASTENER. CARL L. WOODSBURY, Los Angeles, Cal. Filed Jan. 4, 1915. Serial No. 547. (Cl. 85—23.)

1. A device of the class described comprising a shank having a longitudinally formed groove on one of its faces, the sides and ends of said groove being provided with taper to give good draw and a fastener of spring metal provided with biting edges adapted to fit in said groove.

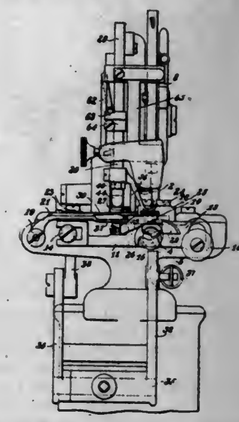
2. A spike formed of a rectangular cross section and having a rectangularly formed groove in one of its faces, providing end outwardly tapered walls, side walls, and a back wall, and a V-shaped spring provided with outwardly extending arms of equal length, so that the same may be forced into said groove, and one of said arms be projected from said groove when the spike is forced to its seat.

3. A device of the class described comprising a shank having a groove provided with tapered sides and ends, and formed parallel with the direction of movement of said shank when being driven, and a spring acting fastener adapted to be seated in said groove with its locking arms trailing with the movement.



4. A spike formed of symmetrical cross section and having a groove formed from the outer surface inward and providing outwardly inclined end walls, side walls and a back wall and an acutely bent spring provided with outwardly extending arms the ends of said arms formed with inwardly inclined surfaces, so that said spring may be forced into said groove, the sharpened end of one arm engaging the adjacent end wall and the other of said arms be projected from said groove and engage the material into which said spike may be driven.

1,213,788. SEWING-MACHINE. JOHN V. ALLEN, South Weymouth, and EDWARD E. ORR, Weymouth, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 14, 1914. Serial No. 872,119. (Cl. 112—8.)



1. A sewing machine, having, in combination, a presser foot bar, a presser foot on said bar, stitch forming mechanism, feeding means, means to actuate the feeding means, a stop mounted on the presser foot bar to control the movement of the presser foot, and a thrust absorbing member between the feeding means and stop arranged to absorb the thrust of the feeding means on the presser foot bar in the direction of feed.

2. A sewing machine, having, in combination, a four-motion feed device, a presser foot bar, a presser foot mounted on the presser foot bar to co-act with the feeding device, and movable means mounted on the machine frame and actuated by the feeding device independently of the work to directly transmit the vertical motion only of the feeding device to the presser foot.

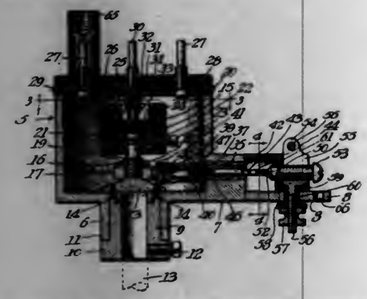
3. A sewing machine having, in combination, work feeding means, mechanism to actuate the feeding means, a presser foot bar mounted to reciprocate in a direction normal to the line of feed of the work, connections between the presser foot bar and the feeding means for lifting the presser foot bar during the advancing movement of the work, and a thrust absorbing member included in said connections mounted independently of the presser foot bar which is constrained to move only in a direction to reciprocate the presser foot bar.

4. A sewing machine, having, in combination, a four-motion feeding means, means for operating the feeding means, a presser foot coöperating with the feeding means to clamp the work and movable in a direction substantially normal to the direction of feed, a stop mounted on the presser foot bar and a lever pivoted to the machine frame with a free end interposed between the presser foot stop and feeding means whereby the feeding means acts through said lever fo actuate the presser foot.

5. A sewing machine, having, in combination, a four-motion feeding means, means for operating the feeding means, a presser foot coöperating with the feeding means to clamp the work and movable in a direction substantially normal to the direction of feed, a stop mounted on the presser foot bar, a lever pivoted to the machine frame with a free end interposed between the presser foot stop and feeding means whereby the feeding means acts through said lever to actuate the presser foot, and means for adjusting said lever to vary its distance from the stop.

[Claims 6 and 7 not printed in the Gazette.]

1,213,789. IGNITION APPARATUS. ELLIS D. ALLENSWORTH, Waukegan, Ill. Filed Aug. 30, 1915. Serial No. 48,105. (Cl. 123—168.)



1. A device of the character described comprising a casing having a laterally projecting part provided with a radial bore; a hollow shaft axially movable within said bore; a roller carried by the inner end of said shaft; a timer-cam rotatable on an axis at substantial right angles to said hollow shaft and in a horizontal plane with said roller; a spring to yieldingly hold said roller in contact with said cam; a contact pin, within the hollow shaft, having a contact-bearing end projecting from the end thereof; a spring within the hollow shaft to yieldingly hold the contact pin in its extended position; a stop for said contact pin and a relatively stationary contact for coöperation with the said movable contact.

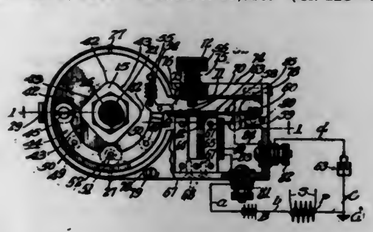
2. A device of the character described comprising a casing, having a laterally projecting part provided with a radial bore and a plate extension; a hollow shaft, axially movable within said bore; a removable roller carried in a slot provided in the inner end of said shaft; a timer-cam rotatable on an axis at substantial right angles to said hollow shaft, in a horizontal plane with said roller; a spring surrounding said hollow shaft, to yieldingly hold said roller in contact with said cam; an axially movable contact pin, within the hollow shaft, having a contact-bearing end projecting from the end of said hollow shaft; a spring within the hollow shaft to yieldingly hold the contact pin in its extended position; a stop for said contact pin; a relatively stationary, adjustable contact for coöperation with the movable contact, insulatedly supported on said plate extension and a cover for the spark-gap space between said contacts.

3. A device of the character described comprising a casing having a laterally projecting part provided with a radial bore; an axially movable contact member within said bore; a relatively stationary, adjustable contact member without the bore; a rotatable part on which the casing and both contacts are rotatably supported; a distributer cam carried by a part rotatable independently of said casing, and a commutator member for the high potential circuit carried by said rotatable support.

4. In an ignition timer the combination with a cam reciprocated member having an opening therein, of a contact member extending within the opening, a spring to resiliently hold the contact member in its extended position, a stop to limit the outward movement of the contact member, and a relatively stationary coöperating contact member.

5. A device of the character described comprising a casing having a laterally projecting part provided with a radial bore; a hollow shaft axially movable within said bore; a timer cam; a spring to yieldingly hold the inner end of said shaft in contact with said cam; a contact pin, within the hollow shaft having a contact bearing end projecting from the end thereof; a spring within the hollow shaft to yieldingly hold the contact pin in its extended position; a stop for said contact pin; and a relatively stationary contact for coöperation with the said movable contact.

1,213,790. IGNITING AND SPARK-DISTRIBUTING DEVICE. ELLIS D. ALLENSWORTH, Waukegan, Ill. Filed Jan. 3, 1916. Serial No. 69,785. (Cl. 123—168.)



1. An ignition timer and spark distributer comprising an electromagnet; a yielding armature adapted to normally close circuit through said electromagnet; means including a rotary cam to restrain the armature and hold it in open circuit position and a spring opposing said means for releasing said armature to permit the electromagnet to vibrate the armature.

2. An ignition timer and spark distributer comprising an electromagnet; a stationary contact; a yielding armature; a contact controlled by said armature normally connected to the stationary contact; means, including a rotary cam for disconnecting said contact and a spring opposing said means to separate it from said armature and permitting the electromagnet to vibrate the armature when the cam is moved.

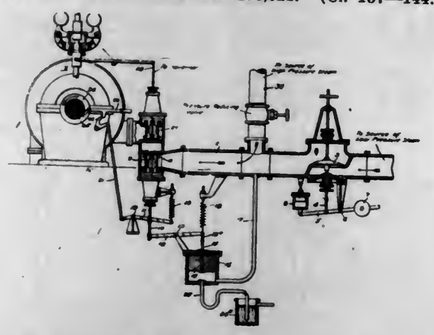
3. An ignition timer and spark distributer comprising an electromagnet; a stationary contact; a yielding armature responsive to said magnet when unrestrained; a contact carried by the armature coöperating with the stationary contact to close the circuit through said electromagnet; means, including a cam to restrain the armature and a spring opposing said means to release the armature and permit the electro-magnet to vibrate the armature when the cam is moved.

4. An ignition timer and spark distributer comprising an electromagnet; a stationary contact; a yielding armature responsive to said magnet when unrestrained; a contact carried by the armature coöperating with the stationary contact to close the circuit through said electromagnet; a spring arranged to permit the armature to close said contact and means including a rotary cam operable against the influence of said spring to restrain said armature and stop the electromagnet from vibrating the armature.

5. An ignition timer and spark distributer comprising an electromagnet; an armature therefor adapted to normally close circuit through said electromagnet; means, including a rotary cam for positively holding the armature in open circuit position and a spring for releasing the armature when the cam is moved thereby permitting the electromagnet to vibrate the armature.

[Claims 6 and 7 not printed in the Gazette.]

1,213,791. FLUID-PRESSURE ENGINE. JAMES NICOLSON BAILEY, Stretford, England, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 17, 1909. Serial No. 496,621. (Cl. 137—144.)



1. In combination with a turbine, a supply main, a valve for delivering motive fluid to the turbine, a governor for controlling the operation of the valve, a second valve between the main and the first mentioned valve, and means responsive to fluid pressure within the supply main for controlling the operation of the second valve.

2. In combination with a turbine, a supply valve for delivering motive fluid to the turbine, a governor for controlling the operation of said valve, and a pressure responsive valve for controlling the delivery of motive fluid to said first mentioned valve.

3. In a low pressure turbine two independently actuated valves and their casings, the casing of one being in communication with the other, means for actuating one of the valves in response to the speed of the turbine, and means for causing the other valve to cut off the supply of fluid to the turbine when the pressure falls below a determined value.

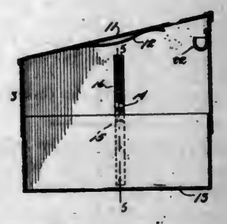
4. In combination with a low pressure turbine, two independently actuated valves, the casings of which communicate with each other, means for actuating one of the valves in response to variations in the speed of the turbine, and means for causing the other valve to cut off the supply of fluid to the speed responsive valve when the pressure falls below a determined pressure.

5. In a fluid pressure turbine, a supply main, a valve, a speed responsive device for controlling said valve to determine the amount of steam admitted to said turbine, another valve normally unseated, and means for seating said last named valve when the pressure in the main falls below a determined value.

[Claims 6 to 11 not printed in the Gazette.]

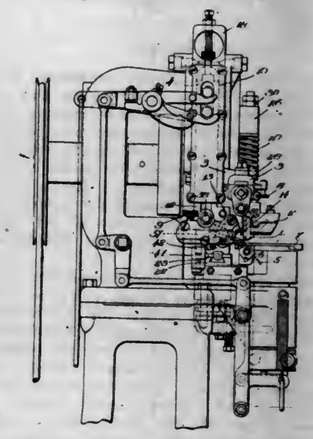
1,213,792. MAIL-BOX. WILLIAM T. BENNER, Catasauqua, Pa. Filed Mar. 22, 1916. Serial No. 85,905. (Cl. 232—17.)

A mail box comprising a casing having open upper and lower ends, a vertically movable receptacle disposed within the casing and adapted to be moved therewithin and through the open lower end thereof, a vertical ratchet-toothed bar secured to the inner face of each of the end walls of the casing, and manually operated vertical leaf springs secured to the ends of the receptacle adjacent



the toothed bars and formed with struck-up lugs interchangeably engaging with the teeth of the bar to support the receptacle at different heights within the casing and through the open lower end thereof, thereby increasing the capacity of the receptacle.

1,213,793. CHANNELING-MACHINE. FREDERIC E. BERTRAND, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 23, 1914. Serial No. 873,538. (Cl. 12—27.)



1. A channeling machine, having, in combination, an edge knife adapted to be set to make square or beveled feather cuts, an edge gage movable to control the width of the feather cut, and connections between the edge knife and edge gage operating to change the angle of the edge knife to cut a beveled feather edge only when the edge gage is set for a wide feather.

2. A channeling machine, having, in combination, a support for an insole, an edge knife for cutting the feather at different angles, an adjustable edge gage to control the width of the edge cut, and connected means to set the edge knife for a thin feather edge cut simultaneously with the adjustment of the edge gage for a wide feather.

3. A channeling machine, having, in combination, an edge knife angularly adjustable to cut at different angles, an adjustable edge gage to control the width of edge cut, and means controlled by an adjustment of the edge gage to produce a wide feather to set the edge knife for a thin feather edge.

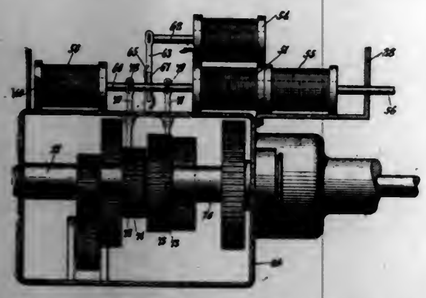
4. A channeling machine, having, in combination, an edge knife mounted to swing about its cutting end as a center to produce a beveled feather, an adjustable edge gage, and mechanism adjustable during the operation of

the machine to swing the edge knife when adjusting the edge gage.

5. A channeling machine, having, in combination, a knife block, a knife mounted for rotation in said block about its cutting end as the center, an edge gage, means for adjusting the edge gage to control the width of feather cuts during the operation of the machine, and mechanism connecting the edge gage adjusting means with the knife block to rotate the knife only when the edge gage is set in a certain predetermined position.

[Claims 6 to 11 not printed in the Gazette.]

1,213,794. AUTOMATIC GEAR-SHIFT FOR AUTOMOBILES. ARTHUR N. CHENOWETH, Waterbury, Conn. Filed Dec. 8, 1914. Serial No. 876,040. (Cl. 74—97.)



1. Automatic speed gear change mechanism for automobiles, comprising suitable change gears, and shifters therefor; electro-magnetic means for positioning the shifters to effect a particular engagement, and electro-magnetic means for positioning the shifters in neutral position; circuits to said electro-magnetic means and including a source of current; automatic means to govern the actuation of said electro-magnetic means; and a switch device to initiate the action of the automatic means to render possible the automatic shifting of said change gears.

2. Automatic speed gear change mechanism for automobiles, comprising suitable change gears, and shifters therefor; electro-magnetic means for positioning the shifters to effect a particular engagement, and electro-magnetic means for positioning the shifters in neutral position; circuits to said electro-magnetic means and including a source of current; automatic means to govern the actuation of said electro-magnetic means; and a switch device to initiate the action of the automatic means to render possible the automatic shifting of said change gears, and comprising a lock and key and an electric circuit adapted to be closed by turning said key.

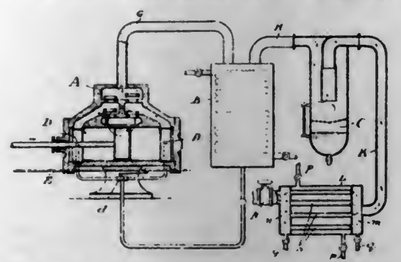
3. Automatic speed gear change mechanism for automobiles, comprising suitable change gears, and shifters therefor; electro-magnetic means for positioning the shifters to effect a particular engagement, and electro-magnetic means for positioning the shifters in neutral position; circuits to said electro-magnetic means and including a source of current; automatic means to govern the actuation of said electro-magnetic means; and a switch device to initiate and render possible the automatic shifting of said change gears, and comprising a lock and key and an electric circuit adapted to be closed when the key is turned in one direction, and an electric circuit adapted to be closed when the key is turned in the reverse direction.

4. Automatic speed gear change mechanism for automobiles, comprising suitable change gears, and shifters therefor; electro-magnetic means for positioning the shifters to effect a particular engagement, and electro-magnetic means for positioning the shifters in neutral position; circuits to said electro-magnetic means and including a source of current; automatic means to govern the actuation of said electro-magnetic means; a switch device to initiate the action of the automatic means to render possible the automatic shifting of said change gears; and manually operated means to select the change gears for a desired speed.

5. Automatic speed gear change mechanism for automobiles, comprising suitable change gears, and shifters therefor; electro-magnetic means for positioning the shifters to effect a particular engagement, and electro-magnetic means for positioning the shifters in neutral position; circuits to said electro-magnetic means and including a source of current; automatic means to govern the actuation of said electro-magnetic means; a switch device to initiate the action of the automatic means to render possible the automatic shifting of said change gears; and manually operated means to select the change gears for a desired speed, said manually operated means being interlocked with said switch device, whereby the former is not operative independently of the latter.

[Claims 6 to 25 not printed in the Gazette.]

1,213,795. PROCESS OF SEPARATING HYDROCARBONS FROM NATURAL OR OTHER GAS. WILLARD OLIVER FELT, Bradford, Pa., assignor to Petroleum Products Company, a Corporation of New Jersey. Filed Oct. 3, 1908. Serial No. 456,069. (Cl. 196—25.)



1. In the art of separating condensable hydrocarbons from gases containing them, the process which consists in compressing the gas in the presence of a heat-absorbing agent.

2. The process of separating condensable hydrocarbons from gases containing them, which consists in compressing the gas in the presence of a heat-absorbing agent, and then cooling the compressed gas, whereby the condensable hydrocarbons are liquefied.

3. The process of separating condensable hydrocarbons from gases containing them, which consists in compressing the gas in the presence of a heat-absorbing agent, cooling the compressed gas, whereby the condensable hydrocarbons are liquefied, and then separating the condensed hydrocarbons from the gas.

4. In the art of separating condensable hydrocarbons from gases containing them, the process which consists in compressing the gas in the presence of glycerin.

5. The process of separating condensable hydrocarbons from gases containing them, which consists in compressing the gas in the presence of glycerin, and then cooling the compressed gas, whereby the condensable hydrocarbons are liquefied.

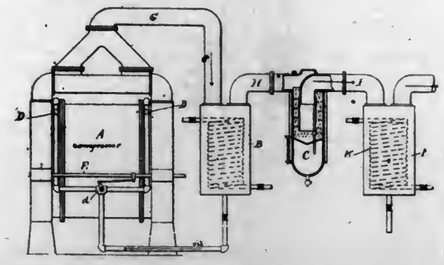
[Claims 6 to 13 not printed in the Gazette.]

1,213,796. PROCESS OF COMPRESSING, PURIFYING, DRYING, AND COOLING GASES. WILLARD OLIVER FELT, Bradford, Pa., assignor to Petroleum Products Company, a Corporation of New Jersey. Filed Sept. 26, 1908, Serial No. 454,925. Renewed May 5, 1916. Serial No. 95,673. (Cl. 183—117.)

1. The process of purifying gases which consists in compressing them in the presence of Turkey-red oil.

2. The process of purifying gases which consists in compressing them in the presence of Turkey-red oil in the form of a mist or fine spray.

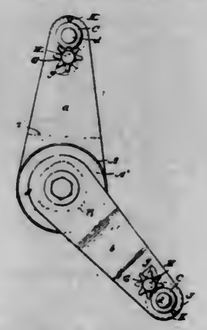
3. The process of purifying gases which consists in compressing them in the presence of Turkey-red oil which has been reduced in temperature considerably below that of the gas to be treated.



4. The process of purifying gases which consists in compressing them in the presence of Turkey-red oil in the form of a mist or fine spray, and subsequently recovering the Turkey-red oil for reuse.

5. The process of purifying gases which consists in refrigerating Turkey-red oil to a temperature below that of the gas to be treated, commingling the said oil and gas and then compressing the mixture.

1,213,797. MEANS FOR CONNECTING RETARDING DEVICES. PHELPS M. FREER, Detroit, Mich. Filed Feb. 9, 1911. Serial No. 607,491. (Cl. 21—105.)



1. In a friction device having two rotatable members pivotally connected on a common axis and provided with frictional means adapted to retard their relative rotation and having lever arms connected to and extending radially from the respective members, the combination of spherical sockets formed in the free ends of the arms and apertured through their sides, with stud bolts having spherical heads adapted to lie in the sockets and reduced shanks which extend out through said apertures with sufficient play in the aperture of one of said arms to permit free angular movement of its stud shank therein, while the aperture of the other arm snugly fits upon its stud shank to prevent any but rotary movement on its axis, thereby maintaining the frictional device in its proper plane transverse to said axis.

2. In a friction device having two rotatable members pivotally connected on a common axis and provided with frictional means adapted to retard their relative rotation and having lever arms connected to and extending radially from the respective members, the combination of spherical sockets formed in the free ends of the arms and apertured through their sides, with stud bolts having spherical heads adapted to lie in the sockets and reduced shanks which extend out through said apertures, with sufficient play in the aperture of one of said arms to permit free angular movement of its stud shank therein, while the aperture of the other arm is provided with a sleeve extension which snugly fits upon its stud shank to prevent any but rotary movement on its axis thereby maintaining the friction device in its proper plane transverse to said axis.

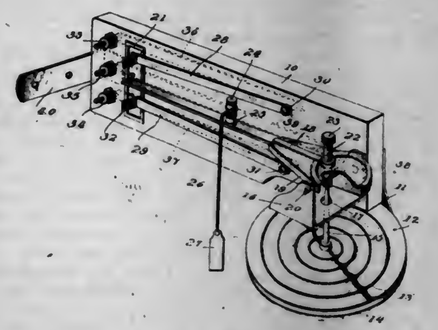
3. In a friction device having two rotatable members pivotally connected on a common axis and provided with frictional means adapted to retard their relative rotation and having lever arms connected to and extending radially from the respective members, the combination of the arms having their ends made in two parts with hemispherical sockets in each part, an oil receptacle formed in the top of one half-socket and an aperture through the wall of the other half-socket, with means for holding the two parts together, a stud bolt having a spherical head adapted to lie in the closed socket with its reduced shank projecting out through said aperture.

4. In a friction device having two rotatable members pivotally connected on a common axis and provided with frictional means adapted to retard their relative rotation and having lever arms connected to and extending radially from the respective members, the combination of the arms having their ends made in two parts with hemispherical sockets in each part and apertures through the side walls thereof, stud bolts having spherical heads adapted to lie in the closed sockets with their reduced shanks projecting out through said apertures, means for holding the two socketed parts of the arms slightly apart when the heads are fitted in the closed sockets, with annular gaskets of suitable soft material to exclude dust from and pass oil into the sockets, lying in the space between the two said parts.

5. In a friction device having two rotatable members pivotally connected on a common axis and provided with frictional means adapted to retard their relative rotation and having lever arms connected to and extending radially from the respective members, the combination of the arms having their ends made in two parts with hemispherical sockets in each part and apertures through the side walls thereof, stud bolts having spherical heads adapted to lie in the closed sockets with their reduced shanks projecting out through said apertures, means for holding the two socketed parts of the arms slightly apart when the heads are fitted in the closed sockets, and springs tending to force the said two parts into closer relation and thereby compensate for wear in the ball-and-socket joints.

[Claims 6 to 9 not printed in the Gazette.]

1,213,798. INCUBATOR-ALARM. PERRY S. MARTIN, Broadway, Va. Filed Feb. 25, 1913. Serial No. 750,690. (Cl. 200—81.)

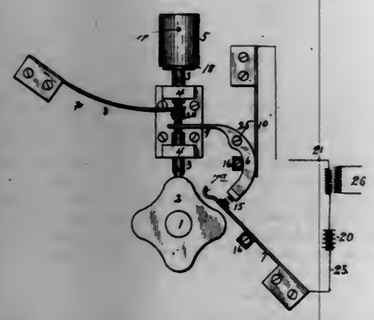


1. In incubator alarms, a circuit closer including a base, spaced brackets carried by the base, a thermostat carried by one of the brackets, a needle carried by said thermostat and extending through the other bracket, an indicator arm pivoted in said latter bracket, a counter-weight carried by the arm and normally holding the same in engagement with the needle, and contact arms adjustable toward and away from the indicator arm.

2. In incubator alarms, a circuit closer including a base, brackets carried by the base, a thermostat carried by one of the brackets, a needle carried by the thermostat and extending through the other bracket, an indicator arm pivoted in said latter bracket, an adjusting screw threaded through said arm and in alinement with the needle, a counterweight carried by the arm and normally holding the same with its set screw in engagement with the needle, and contacts adapted to be engaged by the arm upon swinging movement thereof.

3. In incubator alarms, a circuit closure including a base, spaced brackets carried by the base and arranged one above the other, a thermostat carried by the lower bracket, a needle carried by the thermostat and extending through an opening in the upper bracket, an indicator arm pivotally supported by the upper bracket, an adjusting screw threaded through said arm and in alinement with the needle, a counter-weight carried by the arm and normally holding the same with its set screw in engagement with the needle and contacts adapted to be engaged by the arm on swinging movement thereof.

1,213,799. ELECTRIC-CIRCUIT-BREAKING DEVICE. FREDERIC S. PERRIN, Brooklyn, N. Y., assignor to Splitdorf Electrical Co., Newark, N. J., a Corporation of New Jersey. Filed Apr. 18, 1916. Serial No. 91,861. (Cl. 200—27.)



1. The combination of an electric circuit having a pair of coöperative contacts, with a movable member adapted to make and break said circuit, and means controlled by said member to positively break said circuit at said contacts in any position of rest of said member.

2. The combination of an electric circuit having a pair of coöperative contacts, a movable element carrying one of said contacts, a movable member coöperating with said movable element to make and break said circuit at said contacts, and means adapted to be actuated by said member to control one of said contact members to cause it to break the circuit when said movable member is at rest in certain positions.

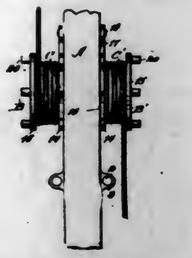
3. The combination of an electric circuit having a pair of coöperative contacts, with a movable element carrying one of said contacts, a movable member coöperating with said movable element to make and break said circuit at said contacts, and a controller for said element adapted to actuate the latter to break the circuit when said member is at rest in certain positions.

4. An electric circuit having two contact points, means to move one of said contact points to make and break the circuit, and means to move the other contact point to retain the circuit broken when not in use.

5. An electric circuit having two contact points, means to move one of said contact points in one direction to successively make the circuit, and means to move the other contact point in an opposite direction to break the circuit when not in use.

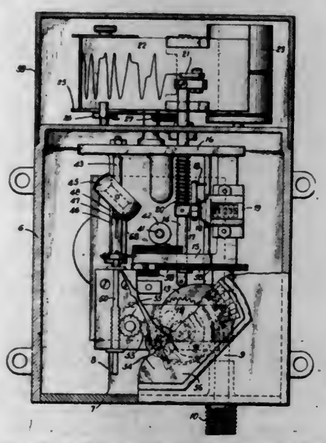
[Claims 6 to 16 not printed in the Gazette.]

1,213,800. LIFTING-JACK AND PULLING DEVICE. GEORGE A. PIPER, Omaha, Nebr. Filed June 28, 1916. Serial No. 106,343. (Cl. 254—184.)



A device of the class described comprising a body, winding drums rotatably mounted thereon at opposite sides, teeth on the outer faces of the drums for engagement with an operating lever, means for turning the drums, and cables connected with the drums and serving to support the body when one cable is fastened to an anchor and the other cable is fastened to the object to be pulled.

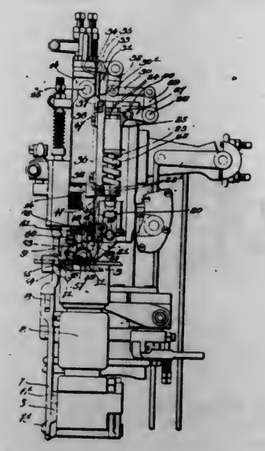
1,213,801. DISTANCE AND SPEED INDICATOR AND RECORDER. THOMAS J. BARRETT, Irvington, N. J., assignor, by mesne assignments, to Autographic Recorder Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 12, 1915. Serial No. 20,679. (Cl. 234—5.)



1. The combination of a casing, a rotary shaft entering the casing and adapted to be driven from an external source, a cam mounted within the casing and driven by the shaft, a rod reciprocated by the cam and having one end extending through a wall of the casing, a counter within the casing actuated by said rod, a centrifugal speed-indicator within the casing driven by said shaft, an index actuated by the indicator, a clock mechanism within the casing, a tape-feeding device exterior to the casing actuated by the clock mechanism, a marker mounted on the end of said rod extending through the wall of the casing and arranged to mark the tape fed by said device, a cover mounted on the casing in position to inclose said marker and the tape-feeding device and a regulating device for the clock mechanism operable from outside the casing; substantially as described.

2. The combination of a casing, a shaft entering the same and adapted to be driven from an external source, a transverse shaft within the casing, worm gearing connecting said shafts, a cam on the transverse shaft, a spring actuated rod reciprocated axially by the cam and its spring, a marker carried by the rod, means for supporting and feeding a tape in coöperative relation to the marker, a counter within the casing actuated by the rod, a third shaft mounted for rotation within the casing, spur gearing connecting the third shaft to the first shaft whereby the third shaft is driven by the first one at higher speed than the first one, a centrifugal member driven by the third shaft, and an index actuated by the centrifugal member; substantially as described.

1,213,802. CHANNELING-MACHINE. FREDERIC E. BERTRAND, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 27, 1914. Serial No. 874,230. (Cl. 12—27.)



1. A channeling machine, having, in combination, a sole support, a sole cutting knife adapted to produce a sole cut extending parallel to the face of the sole held on the support, means to relatively move the support and knife to set the knife in a position to cut obliquely to the face of the sole for starting the cut, and means to automatically change the knife from an oblique cutting position to a parallel cutting position.

2. A channeling machine, having, in combination, a sole cutting knife, a table for supporting the sole during the cutting operation, means to relatively move the table and knife to set the knife in a position to cut obliquely to the plane of the face of the sole for starting the cut, and means to automatically change the knife from an oblique cutting position to a parallel cutting position.

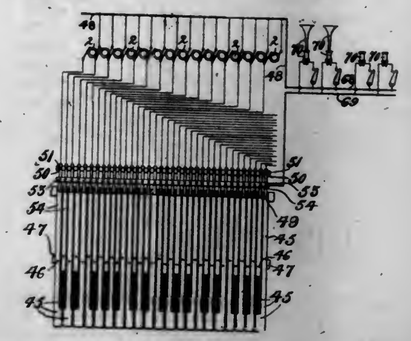
3. A channeling machine, having, in combination, a sole support, a sole cutting knife adapted to produce a sole cut extending parallel to the face of the sole held upon the support, means to feed the sole during the cutting operation, means to relatively move the support and knife about an axis normal to the line of cut to position the knife to cut obliquely to the face of the sole to start the cut, and means to automatically change the knife from an oblique cutting position to a parallel cutting position.

4. A channeling machine, having, in combination, a sole support, means to feed the sole, a sole cutting drag knife rotatable about an axis transverse to the line of feed, and means controlled by the operation of the machine upon a sole for automatically rotating the knife.

5. A channeling machine, having, in combination, a sole support, a rotatable sole cutting drag knife, and means controlled by the operation of the machine upon a sole for automatically rotating the knife.

[Claims 6 to 33 not printed in the Gazette.]

1,213,803. ART OF AND APPARATUS FOR GENERATING AND DISTRIBUTING MUSIC ELECTRICALLY. THADDEUS CAHILL, Holyoke, Mass., assignor, by mesne assignments, to Ellis Spear, E. Hilton Jackson, George F. Cahill, Arthur T. Cahill, and Thaddeus Cahill, trustees. Continuation of application Serial No. 43,944, filed Jan. 19, 1901. Divided and application filed Feb. 26, 1903, Serial No. 145,797. Renewed Nov. 6, 1913, Serial No. 799,625. This application filed Feb. 17, 1904, Serial No. 194,111. Renewed Dec. 14, 1916. Serial No. 137,069. (Cl. 84—81.)



1. In combination, a plurality of shafts, and means incapable of slip connecting said shafts together so that they rotate with angular velocities having the same numerical ratios as the vibration-frequencies of consecutive notes of the chromatic scale.

2. In combination, a plurality of shafts and toothed gearing connecting said shafts so that they rotate without slip with angular velocities having the same numerical ratios as the vibration-frequencies of consecutive notes of the chromatic scale.

3. In combination, twelve shafts, and gearing incapable of slip connecting said shafts so that they rotate with angular velocities having the same numerical ratios as the vibration-frequencies of the twelve notes of the chromatic scale.

4. In combination, in a music-generating system, (*a*) rotary vibration-generating devices for producing respectively vibrations corresponding to consecutive notes of a musical scale, (*b*) a plurality of shafts, each carrying the rotary members of one or more of the vibration-generating devices aforesaid; and (*c*) gearing incapable of slip connecting said shafts together so that they rotate with different angular velocities.

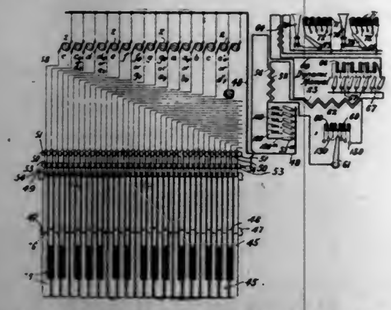
5. In combination, in a music-generating system, (*a*) rotary vibration-generating devices, having vibration-frequencies corresponding to the notes of a musical scale through one or more octaves, (*b*) a plurality of shafts, each carrying the rotary members of one or more of the vibration-generating devices aforesaid; and (*c*) gearing incapable of slip connecting said shafts together so that they rotate with different angular velocities.

[Claims 6 to 119 not printed in the Gazette.]

1,213,804. ART OF AND APPARATUS FOR GENERATING AND DISTRIBUTING MUSIC ELECTRICALLY. THADDEUS CAHILL, New York, N. Y., assignor, by mesne assignments, to Ellis Spear, E. Hilton Jackson, George F. Cahill, Arthur T. Cahill, and Thaddeus Cahill, trustees. Continuation of applications Serial No. 43,944, filed Jan. 19, 1901; Serial No. 145,197, filed Feb. 26, 1903, and Serial Nos. 194,112 and 194,113, filed Feb. 17, 1904. This application filed Apr. 27, 1915. Serial No. 24,190. (Cl. 84—81.)

1. An electrical music-generating apparatus, including, in combination, (*a*) electrical vibration-generating devices, for producing electrical vibrations corresponding to the

notes of a musical scale; (b) a line or mains, in which electrical vibrations are produced by the devices aforesaid; (c) telephonic receivers, fed with electrical vibrations from the line or mains aforesaid; (d) note-controlling devices, whereby the several vibration-generating devices aforesaid are caused to act, each as required, on the line or mains aforesaid, to produce the requisite electrical vibrations therein; and (e) an electrical-swell device, whereby the loudness of a note can be increased or decreased gradually, as required.



2. In combination, in an electrical music-generating system, (a) rotary vibration-generating devices, for producing the electrical vibrations required; (b) shafts on which the rotary members of said vibration-generating devices are mounted; (c) toothed gearing, connecting said shafts, so that they rotate with the relative angular velocities required; (d) suitable vibration-translating apparatus, whereby electrical vibrations are translated into audible vibrations; (e) note-controlling devices whereby the vibration-generating devices aforesaid are caused to act upon the vibration-translating apparatus aforesaid; each vibration-generating device as required; and (f) an expression device, serving in common for a plurality of the vibration-generating devices aforesaid, and whereby the loudness of the sounds produced by the vibration translating apparatus aforesaid, as a result of the action of the said vibration-generating devices thereon, may be controlled.

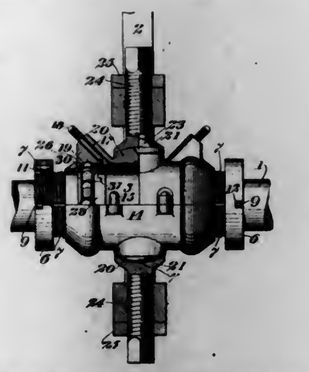
3. In combination, in an electrical music-generating system, (a) alternators, having vibration-frequencies corresponding to the notes of a musical scale through one or more octaves; (b) suitable vibration-translating apparatus, whereby electrical vibrations are translated into audible vibrations; (c) means, whereby the alternators aforesaid are made to act upon the vibration-translating apparatus aforesaid, each alternator as required; and (d) an expression device serving in common for a plurality of the alternators aforesaid, whose vibration-frequencies correspond to consecutive notes of a musical scale, to govern the loudness of the sounds produced by said alternators, in the vibration-translating apparatus aforesaid.

4. In combination, in an electrical music-generating system, (a) alternators having vibration-frequencies corresponding to the notes of a musical scale through one or more octaves; (b) suitable vibration-translating apparatus, whereby electrical vibrations are translated into audible vibrations; (c) keys, at a keyboard and means controlled by them whereby the alternators aforesaid are made to act upon the vibration-translating apparatus aforesaid, each alternator as required; and (d) an expression device, serving in common for a plurality of the alternators aforesaid, whose vibration-frequencies correspond to consecutive notes of a musical scale, to govern the loudness of the souds produced by said alternators, in the vibration-translating apparatus aforesaid.

5. In combination, in an electrical music-generating system, (a) alternators, for producing electrical vibrations corresponding to the notes of a musical scale; (b) shafts, on which the rotary members of said alternators are mounted; (c) toothed gearing, connecting said shafts, so that they rotate without slip with the relative angular velocities required; (d) suitable vibration-translating apparatus, whereby electrical vibrations are translated into audible vibrations; (e) means, whereby the alternators aforesaid are caused to act upon the vibration-translating apparatus aforesaid, each alternator as required; and (f) an expression device serving in common for a plurality of the alternators aforesaid, and acting to govern the loudness of the sounds produced by said alternators in the vibration-translating apparatus; the alternators controlled by the expression device aforesaid, having frequencies corresponding to notes of different pitches.

[Claims 6 to 237 not printed in the Gazette.]

1,213,805. BALL-BEARING. CHARLES H. CHAPMAN, Winchester, Mass.; Frank F. B. Chapman administrator of said Charles H. Chapman, deceased. Filed Jan. 23, 1914. Serial No. 813,971. (Cl. 64—57.)



1. In a ball bearing for shafting, a divided sleeve provided with slotted and tapered screwthreaded ends adapted to be fitted to the shaft and having circumferential chilled ball-races formed thereon, and divided and hinged locking rings having tapered screwthreaded portions to engage the threaded tapered ends of the sleeve and adapted to hold the parts of the sleeve together and fixedly lock the sleeve to the shaft, said locking rings adapted to be operated and removed from the sleeve to permit the removal of the sleeve and its ball-races from the shaft.

2. In a ball bearing for shafting, a divided sleeve having tapered ends of less interior diameter than the remainder of the interior of the sleeve and circumferential chilled ball-races formed thereon and adapted to be fitted to the shaft, means to removably bind said sleeve at its ends to the shaft, a divided housing having interior chilled ball-races formed therein in alinement with the ball-races of the sleeve and applied to said sleeve, and bearing balls arranged in the alined ball races of the sleeve and housing.

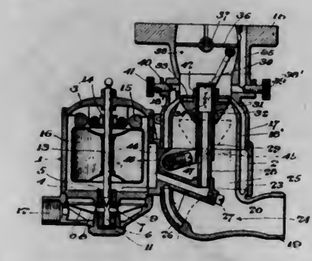
1,213,806. PROCESS OF MAKING STEEL AND IRON. SHERWOOD S. KNIGHT, Berkeley, Cal. Filed Feb. 18, 1914. Serial No. 819,499. (Cl. 75—27.)

1. The improvement in process of manufacturing iron or steel in a basic, open-hearth furnace, consisting, first, in charging directly onto the bottom a layer of ferrous material low in carbon to the extent of approximately 10% to 20% by weight of the entire charge, completely covering the bottom of the furnace; second, heating this ferrous material sufficiently to cause it to become a pasty mass; third, charging non-ferrous material containing free carbon, and subsequently charging a fluxing material and ferrous material; and fourth, finishing and drawing off the product.

2. The improved process for the manufacture of iron or steel consisting in—first: charging directly on the bottom of the furnace a complete layer, say 10% to 20% of the entire charge by weight,—of ferrous material comparatively low in carbon; second: charging directly upon said ferrous layer, when softened or pasty from heat, burned lime or limestone, about 5% to 20% of the entire charge; third: charging upon the limestone layer additional charges of ferrous material and carbonizing material of a non-ferrous nature composed largely of free carbon until the entire charge is completed; fourth: driving the furnace at a sufficiently high temperature to rapidly liquefy the ferrous material until the bath runs from .50% to .00% carbon (with or without addition of highly carbonized ferrous material as may be necessary to this end); fifth: after the ferrous material of the charge is liquefied, reducing the elements other than iron, and sixth, finishing and drawing off the product.

3. The improvement in the process of manufacturing refined iron or steel in a basic lined furnace, consisting first in charging directly onto the bottom of the furnace a layer of ferrous material such as steel or wrought iron scrap or material of a similar nature, in an amount sufficient to cover the bottom of the furnace, and heating said layer to reduce it to a pasty mass and thus forming a shield and protection to the basic material of the bottom against the basic material subsequently charged; then charging the furnace with basic material and ferrous material, and then rapidly reducing the comparative quantity of the materials other than iron and finishing and drawing off the product.

1,213,807. CARBURETER. HARRY A. MILLER, Los Angeles, and CLARENCE J. CADWELL, Santa Barbara, Cal., assignors, by mesne assignments, to Master Carburetor Corporation, Detroit, Mich., a Corporation of Delaware. Filed May 4, 1914. Serial No. 836,150. (Cl. 261—41.)



1. In a carbureter, a mixing chamber, an auxiliary air valve for controlling admission of air to said chamber, a distributer slidable within the air valve and having a series of perforations which are adapted to be opened or shut by the air valve according to the relative positions of the air valve and distributer and a throttle valve positioned above the mixing chamber and operatively connected to the air valve.

2. In a carbureter, a mixing chamber, an auxiliary air valve for controlling admission of air to said chamber, a distributer slidable within the air valve and having a series of perforations which are adapted to be opened or shut by the air valve according to the relative positions of the air valve and distributer, a throttle valve above the mixing chamber, an operating member pivoted to the throttle and air valve.

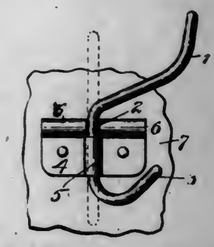
3. In a carbureter, a mixing chamber, an auxiliary air valve for controlling admission of air to said chamber, a distributer slidable within the air valve and having a series of perforations which are adapted to be opened or shut by the air valve according to the relative positions of the air valve and distributer, and means for sliding the air valve along the distributer.

4. In a carbureter, a mixing chamber, an auxiliary air valve for controlling admission of air to said chamber, a distributer slidable within the air valve and having a series of perforations which are adapted to be opened or shut by the air valve according to the relative positions of the air valve and distributer, means for sliding the air valve along the distributer, and means for sliding the distributer independently of the air valve.

5. In a carbureter, a mixing chamber, an auxiliary air valve for controlling admission of air to said chamber, a distributer slidable within the air valve and having a series of perforations which are adapted to be opened or shut by the air valve according to the relative positions of the air valve and distributer, a throttle valve above the mixing chamber, a connection between the throttle valve and air valve to produce coöperative connection of the throttle valve and air valve, and means for sliding the distributer independently of the air valve.

[Claims 6 to 15 not printed in the Gazette.]

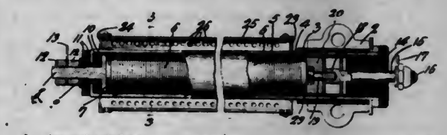
1,213,808. FOLDING HOOK. LOGAN E. PAGE, New Britain, Conn., assignor to The Hart & Hutchinson Company, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 24, 1914. Serial No. 820,545. (Cl. 248—24.)



1. In a folding hook, a hook member having a straight shank portion, a bracket including a back plate having an upright corrugation forming a channel to receive the shank portion, said corrugation being of less length than the length of said shank, and terminating below the upper edge of said plate, the upper edge of said plate at each side of said corrugation being bent outwardly to form horizontal spacer abutments at each side of and above said upright corrugation and in a plane to engage the opposite sides of the hook member above the shank portion.

2. In a folding hook, a hook member having a straight shank portion, a bracket including a back plate having an upright corrugation forming a channel to receive the shank portion, said corrugation being of less length than the length of said shank, and terminating below the upper edge of said plate, the upper edge of said plate at each side of said corrugation being bent outwardly to form horizontal spacer abutments at each side of and above said upright corrugation and in a plane to engage the opposite sides of the hook member above the shank portion, said spacer abutments being corrugated horizontally.

1,213,809. ELECTRICAL COMPRESSION RESISTANCE UNIT. PAUL J. RAY, Lakewood, Ohio. Filed Jan. 10, 1914. Serial No. 811,433. (Cl. 219—51.)



1. An electrical compression resistance unit having a plurality of conductor members whose surfaces are coated with carborundum mixed with an adhesive compound.

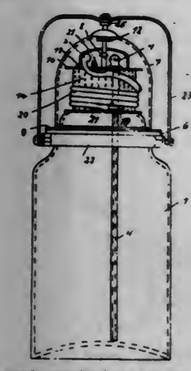
2. An electrical compression resistance unit having a plurality of conductor disks whose surfaces are coated with carborundum mixed with silicate of soda.

3. An electrical compression resistance unit having a plurality of conductor members whose surfaces are coated with amorphous carborundum mixed with an adhesive compound.

4. An electrical compression resistance unit having a plurality of conductor disks whose surfaces are coated with amorphous carborundum mixed with silicate of soda.

5. An electrical compression resistance unit having a plurality of conductor members whose surfaces are coated with conductive material having abrasive properties, mixed with an adhesive compound.

1,213,810. STERILIZING APPARATUS. CARL ALBERT SCHAERER, Pankow, Berlin, Germany. Filed Aug. 18, 1915. Serial No. 46,166. (Cl. 167—3.)



1. An improved sterilizing apparatus comprising, in combination, a receptacle for receiving the liquid substance to be sterilized, a stopper for tightly closing the mouth of said receptacle, a discharge pipe leading through said stopper from the receptacle and an air feeding pipe leading into said receptacle through the said stopper, a flexible discharge pipe connected to the said discharge pipe leading from the receptacle, means connected to said flexible discharge pipe for applying the sterilized liquid to the sick body, a perforated drum placed at top of said receptacle and serving to guide the flexible discharge pipe, a bell covering the top of said receptacle together with the stoppering means, pipes and drum connected thereto, and means for tightening said bell against its support, substantially as and for the purpose set forth.

2. In an improved sterilizing apparatus, the combination, with a receptacle for receiving the liquid substance to be sterilized, of a stoppering device, means for tightening and releasing said stoppering device, a discharge pipe leading from the receptacle through said stoppering device, an air feeding pipe leading into said receptacle through said stoppering device, means connected to said discharge pipe for leading the sterilized liquid out of the apparatus, a perforated drum surrounding the stoppering device and parts carried by the same, a bell surrounding said drum and superposed to the said receptacle, means for supporting said bell, a swivel carried by said supporting means for holding the said bell in position, and means for tightening and releasing said bell as required, substantially as and for the purpose set forth.

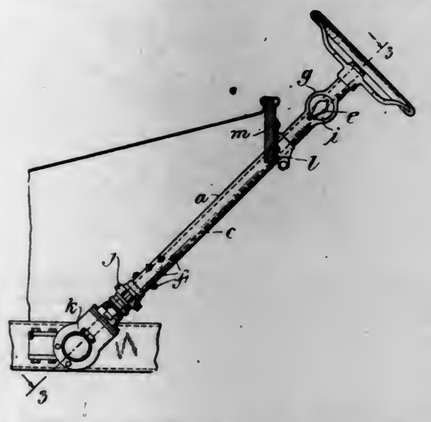
3. A sterilizing apparatus comprising a receptacle for receiving fluid substances to be sterilized, a closure for the receptacle, instrumentalities for facilitating the discharge of the fluid from the receptacle, and a removable sealing bell secured to the receptacle to inclose the fluid discharging instrumentalities, said receptacle with the receiving bell secured thereto being capable of being heated as an entirety to sterilize the fluid within the receptacle to cause the vapors from the heated fluid to pass into the sealing bell through the fluid discharging instrumentalities to sterilize the instrumentalities contained within the sealing bell.

4. A sterilizing apparatus comprising a receptacle for receiving fluid substances to be sterilized, a collar secured to the receptacle, a closure for the receptacle having means to discharge fluid from the receptacle and provided also with a vent, a sealing bell for inclosing the fluid discharging means and the vent, and means carried by the collar to clamp the bell into engagement with collar supporting means to hermetically seal the instrumentalities within the bell including the fluid discharging means and the vent, whereby the entire apparatus may be heated sufficiently to sterilize the fluid within the receptacle and permit the vapors from the fluid to escape through the fluid discharging means for sterilizing the instrumentalities contained within the sealing bell.

5. A sterilizing apparatus comprising a receptacle for receiving fluid substances to be sterilized, a hoop secured to the receptacle near the mouth thereof and provided with a swivel, means to maintain the swivel in a predetermined position, locking pins carried by the swivel, a closure for the receptacle having fluid discharging instrumentalities, a drum adapted to be positioned around the fluid discharging instrumentalities, said drum being provided with a flange having notches to permit of the passage therethrough of the swivel locking pins whereby the drum may be moved to a predetermined position on the receptacle and retained in such position, a part of the fluid discharging instrumentalities being coiled around the drum, a sealing bell to close the fluid discharge instrumentalities and a drum, and means to hermetically seal the bell to the receptacle.

[Claim 6 not printed in the Gazette.]

1,213,811. STEERING-WHEEL POST. GRANT E. SMITH, Poughkeepsie, N. Y., assignor to Pouvailsmith Corporation, Poughkeepsie, N. Y., a Corporation of New York. Filed Aug. 25, 1916. Serial No. 116,761. (Cl. 21—90.)



1. A steering wheel post for motor vehicles, comprising a hollow core adapted to contain the steering wheel shaft, and a covering of molded plastic material around the core and adapted to maintain the post in rigid alinement.

2. A steering wheel post for motor vehicles, comprising a hollow wooden core adapted to contain the steering wheel shaft, and a covering of condensite molded onto the core and adapted to maintain the post in rigid alinement.

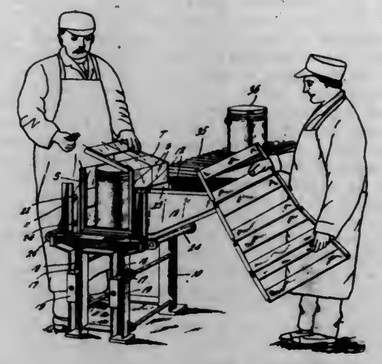
3. A steering wheel post for motor vehicles, comprising a hollow core adapted to contain the steering wheel shaft, and a covering of molded plastic material around the core and extending inwardly to form a bearing for said shaft.

4. A steering wheel post for motor vehicles, comprising a hollow core adapted to contain the steering wheel shaft, and a covering of molded plastic material around the core, said plastic material extending beyond the core and inwardly at one end to form a bearing for said shaft.

5. A steering wheel post for motor vehicles, comprising a hollow core adapted to contain the steering wheel shaft, a covering of molded plastic material secured to the core, and a connecting wire for controlling any electrically operated part, inclosed between said core and plastic material.

[Claims 6 to 14 not printed in the Gazette.]

1,213,812. BOX-BLANK-FOLDING TABLE. JAMES K. STEWART, St. Louis, Mo., assignor to Pioneer Box Company, Crawfordsville, Ind., a Corporation of Indiana. Filed Apr. 14, 1916. Serial No. 91,004. (Cl. 144—288.)



1. Means for folding a foldable package blank, comprising a table for the reception of one section of a package blank, means for engaging adjacent sections of the blank and holding the same substantially in the flat with that section supported by the table, and means for producing a relative motion between the table and section-engaging means for folding said sections into position substantially at right angles to the table and section supported thereby.

2. An apparatus for folding package blanks, comprising a main frame, a vertically-movable table supported thereby and arranged to receive an intermediate portion of a foldable package blank, swinging arms arranged adjacent said table and in position to engage other portions of the package blank when in an extended condition, and means controlled by the movement of the table for swinging said swinging arms into blank folding position.

3. An apparatus for folding package blanks, comprising a main frame, a vertically-movable table supported therein by means yielding to a preponderant weight, swinging arms pivotally supported upon said table at each side thereof and adapted to engage portions of the blank and holding the same substantially in the flat with that section supported by the table, and means for engaging said arms to cause the same to swing toward each other as the table descends.

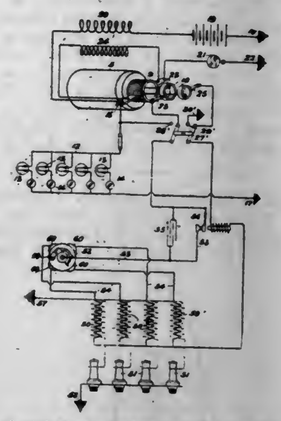
4. An apparatus for folding package blanks comprising a main frame, a downwardly movable table adapted to receive an intermediate section of the package blank, arms pivoted at opposite sides of the table and adapted to engage sections of the blank flanking that supported by the table, means controlled by the downward movement of the table for swinging said arms to cause folding of said flanking blank sections, and means for yieldingly supporting the table in its upper position.

5. An apparatus for folding package blanks comprising a main frame, a downwardly movable table adapted to receive an intermediate section of the package blank, arms pivoted at opposite sides of the table and adapted to engage sections of the blank flanking that supported by the table, and means controlled by the downward movement of the table for swinging said arms to cause folding of said flanking blank sections.

[Claims 6 and 7 not printed in the Gazette.]

REISSUES.

14,252. ELECTRICAL SYSTEM FOR AUTOVEHICLES. RICHARD VARLEY, Englewood, N. J., assignor to Varley Duplex Magnet Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 8, 1916. Serial No. 130,296. Original No. 1,185,151, dated May 30, 1916, Serial No. 704,259, filed June 17, 1912. (Cl. 123—149.)



1. In electrical equipment of the character described the combination with an internal combustion engine of an electric generator driven thereby in a non-variable phase relationship thereto and adapted to deliver continuous and alternating current, a work circuit in continuous current association therewith, ignition apparatus having an energizing circuit in alternating current association therewith, and make and break mechanism for controlling said alternating current circuit, said make and break mechanism having its operative periods substantially coincidently related to the generator and engine phases, whereby the ignition apparatus shall be energized at determined periods of generation of the alternating current and in cyclic synchronism with the engine.

2. In electrical equipment of the character described, the combination with an internal combustion engine, of an electric generator having a revoluble armature driven thereby in a non-variable phase relationship thereto, a commutator, a work circuit in continuous current association with said commutator, slip rings, ignition apparatus having an energizing circuit in alternating current association with said slip rings, and controlling means for said alternating current circuit, said controlling means having its operative periods substantially coincidently related to the generator and engine phases, whereby the ignition apparatus shall be energized at determined periods of generation of the alternating current and in cyclic synchronism with the engine.

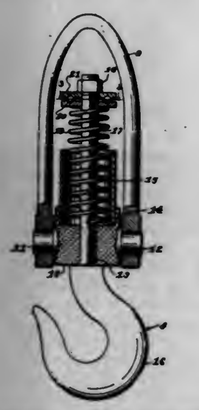
3. In electrical equipment of the character described, the combination with an internal combustion engine, of an electric generator driven thereby in a non-variable phase relationship thereto and adapted to deliver continuous and alternating current, a work circuit in continuous current association therewith, ignition apparatus having a circuit, and controlling means for bringing said circuit into and out of alternating current association with the generator at periods of time substantially coincidental with the maximum periods of flow of the alternating current wave and in synchronism with the engine cycles.

4. In electrical equipment of the character described, the combination with an internal combustion engine, of an electric generator driven thereby in a non-variable phase relationship thereto and adapted to deliver continuous and alternating current, a work circuit in continuous current association therewith, ignition apparatus having an

energizing circuit in alternating current association therewith, and an interrupter driven in synchronism with the engine and adapted to interrupt the alternating current circuit at periods of time substantially coincident with the maximum periods of flow of the alternating current.

5. In electrical equipment of the character described, the combination with an internal combustion engine, of an electric generator driven thereby in a non-variable phase relationship thereto and adapted to deliver continuous and alternating current, a work circuit in continuous current association therewith, ignition apparatus having a primary energizing circuit in alternating current association, therewith, and an interrupter connected in said primary circuit and positively driven by the engine in synchronism with the engine and in such phase relationship to the generator as to interrupt the primary circuit at periods of time substantially coincident with the maximum periods of flow of the alternating current.

14,253. BALL-BEARING SPRING CASING-HOOK. WILSON B. WIGLE, Fullerton, Cal. Filed Aug. 1, 1916. Serial No. 112,572. Original No. 1,177,559, dated Mar. 28, 1916, Serial No. 29,222, filed May 19, 1915. (Cl. 57—127.)



1. In a hook construction, the combination of a yoke, a hook rotatably mounted on said yoke and movable in a vertical direction, anti-friction bearing means interposed between said hook and said yoke to take the thrust of said hook when a load is placed thereon and permit free rotation of the same, resilient means to carry the load attached to said hook and to return said hook to its normal position after a vertical movement thereof, and means to limit the downward movement of said hook and to relieve the load on said resilient means when the latter has contracted a predetermined amount.

2. In a hook construction, the combination of a yoke, resilient means mounted on said yoke, anti-friction bearing means mounted upon said resilient means, a hook secured to said anti-friction bearing means to permti free rotation of said hook in any position, and means interposed between said yoke and said anti-friction means to relieve the load on said resilient means when the latter has contracted a predetermined distance.

3. In a hook construction, the combination of a yoke, resilient means mounted upon said yoke, anti-friction bearing means mounted upon said resilient means, a hook secured to said antifriction bearing means to permit free rotation of the hook in any position, a fixed support for said anti-friction bearing means located to be engaged thereby when said resilient means has contracted a predetermined distance.

4. In a hook construction, the combination of a yoke including a cross bar having an aperture, a hook provided with a shank, a raceway disk secured thereon, said shank extending through the aperture in said cross bar, a raceway disk rotatably mounted on said shank below said first mentioned disk, rollers disposed between said disks thereby permitting free rotation of the hook in any position, a spring means disposed between said last mentioned raceway disk and cross bar, and a support for said raceway disk spaced therefrom when said spring is expanded.

5. In a hook construction, the combination of a yoke including a cross bar having an aperture, a hook provided with a shank extending through said aperture, anti-friction bearing means secured to the upper end of said shank, a compression spring encompassing said shank and disposed between said cross bar and anti-friction bearing, thereby permitting free rotation of the hook in any position, and a tubular member mounted on said yoke and normally spaced from said anti-friction bearing means.

6. In a hook construction, the combination of a yoke provided with a cross bar having an aperture, a tubular member secured to said cross bar and disposed concentric with said aperture, a hook provided with a shank extending through said aperture, a raceway disk secured to said shank, a raceway disk rotatably mounted on said shank below said first mentioned raceway disk, bearing balls mounted between said raceway disks, thereby permitting free rotation of the hook in any position, and a compression spring disposed about said shank within said tubular member and between said cross bar and raceway disks.

7. In a hook construction, the combination of a yoke, a cross bar having an aperture pivotally mounted in said yoke, a hook provided with a shank extending through said aperture, anti-friction bearing means secured to the upper end of said shank, resilient means mounted upon said cross bar and engaging said anti-friction bearing means thereby permitting free rotation of the hook in any position, and a fixed support for said anti-friction bearing means located to be engaged thereby when said resilient means has contracted a predetermined distance.

8. In a hook construction, the combination of a yoke, a cross bar having an aperture pivotally mounted upon said yoke, a hook provided with a shank, a raceway disk secured thereon, said shank extending through the aperture in said cross bar, a race-way disk rotatably mounted on said shank below said first mentioned disk, rollers disposed between said disks thereby permitting free rotation of the hook in any position, a spring means disposed between said last mentioned raceway disk and cross bar, and a support for said raceway disk spaced therefrom when said spring is expanded.

9. In a hook construction, the combination of a yoke, a cross bar having an aperture pivotally mounted upon said yoke, a tubular member secured to said cross bar and disposed concentric of said aperture, a hook provided with a shank extending through said aperture, a raceway disk secured to said shank, a raceway disk rotatably mounted on said shank below said first mentioned raceway disk, bearing balls mounted between said race-way disks, thereby permitting free rotation of the hook in any position, and a compression spring disposed about said shank within said tubular member and between said cross bar and raceway disks.

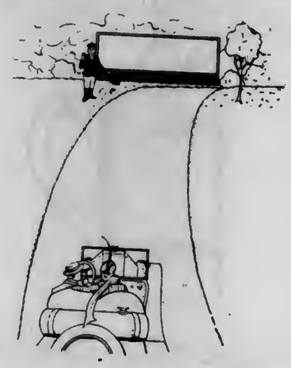
DESIGNS.

50,214. SEAMSTRESS SEWING-CABINET. HENRY BECKER, New York, N. Y. Filed Oct. 24, 1916. Serial No. 127,506. Term of patent 7 years.



The ornamental design for a seamstress sewing cabinet as shown.

50,215. SIGN. IRVING BROMILEY, Cranston, R. I., assignor to Old Colony Advertising Company, a Corporation of Rhode Island. Filed Oct. 9, 1916. Serial No. 124,741. Term of patent 7 years.



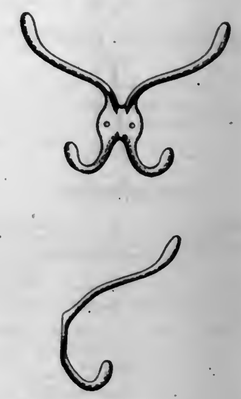
The ornamental design for n sign as shown.

50,216. BORDER FOR WALL-PAPER. GUSTAVE M. FAUSER, New York, N. Y., assignor to Hobbs Wall Paper Company, a Corporation of New Jersey. Filed Nov. 3, 1916. Serial No. 129,401. Term of patent 3½ years.



The ornamental design for a border for wall paper as shown and described.

50,217. COMBINED HAT AND CLOTHES HOOK. WILLIS G. FAWCETT, Salem, Ohio. Filed Sept. 12, 1914. Serial No. 861,474. Term of patent 3½ years.



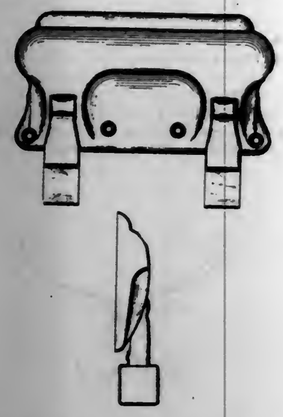
The ornamental design for a combined hat and clothes hook, substantially as shown.

50,218. AUTOMOBILE-BODY. FRANK L. MACKEMER, Peoria, and ELI M. MACKEMER, Galesburg, Ill. Filed June 17, 1916. Serial No. 104,284. Term of patent 3½ years.



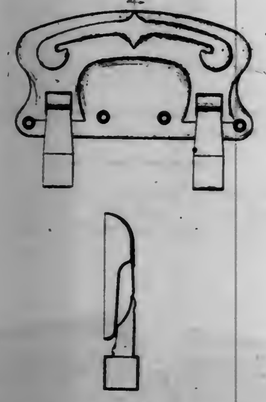
The ornamental design for an automobile body, as shown.

50,219. ESCUTCHEON. JOSEPH A. RAYMOND, Chicago, Ill. Filed Nov. 6, 1916. Serial No. 129,899. Term of patent 3½ years.



The ornamental design for an escutcheon, as shown.

50,220. ESCUTCHEON. JOSEPH A. RAYMOND, Chicago, Ill. Filed Nov. 6, 1916. Serial No. 129,900. Term of patent 3½ years.



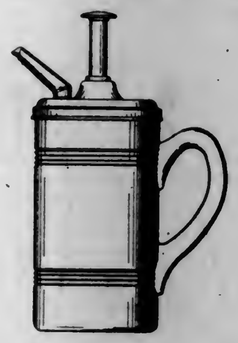
The ornamental design for an escutcheon as shown.

50,221. GLASS ARTICLE. MAURICE A. SMITH, Jeannette, Pa., assignor to McKee Glass Company, Jeannette, Pa., a Corporation of Pennsylvania. Filed May 27, 1916. Serial No. 100,430. Term of patent 7 years.



The ornamental design for a glass article of manufacture, as shown.

50,222. SYRUP-DISPENSING APPARATUS. JOHN M. TRAVIS, St. Louis, Mo. Filed Feb. 28, 1916. Serial No. 81,071. Term of patent 7 years.



The ornamental design for a syrup dispensing apparatus, as shown.

TRADE-MARKS

PUBLISHED JANUARY 23, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 76,156. (CLASS 37. PAPER AND STATIONERY.) WEST VIRGINIA PULP & PAPER COMPANY, New York, N. Y. Filed Feb. 25, 1914.

Velvet Enamel

No claim is made to the word "Enamel" apart from the mark shown in the drawing.

Particular description of goods.—Book-Papers.

Claims use since Jan. 15, 1912.

Ser. No. 80,871. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAM ANTHONY, Johnstown, Pa. Filed Aug. 29, 1914.



The portrait shown being fanciful.

Particular description of goods.—A Remedy for Rheumatism.

Claims use since Aug. 1, 1912.

Ser. No. 81,982. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE GRAPHITE LUBRICATING COMPANY, Boundbrook, N. J. Filed Oct. 19, 1914.



No claim is made to the representation of the bearing except as associated with the words "Bound Brook."

Particular description of goods.—Self-Lubricating Trolley-Wheel Bushings and Metal and Graphite Bearings and Bushings.

Claims use since Sept. 18, 1914.

Ser. No. 84,427. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) J. & C. FISCHER, New York, N. Y. Filed Feb. 10, 1915.

MELOTHEME

Particular description of goods.—Regulating Devices for Player-Pianos and Piano-Players.

Claims use since Feb. 3, 1915.

Ser. No. 88,339. (CLASS 15. OILS AND GREASES.) THE PHOENIX OIL COMPANY, Cleveland, Ohio. Filed July 31, 1915.

SOLVOLINE

Particular description of goods.—Soluble Lubricating and Soluble Cutting Oils.

Claims use since about March of 1912.

Ser. No. 89,766. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES HARRY MCCORMICK, Comstock, Mich. Filed Oct. 9, 1915.

Drugcraft

Particular description of goods.—Headache, Neuralgia, and Rheumatism Tablets, Cathartic Compound Tablets, Toilet Lotions, Nerve and Blood Pills, Cough-Wafers, and Corn-Plasters.

Claims use since 1908.

Ser. No. 89,924. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAAS-SANDERSON CO., Evansville, Ind. Filed Oct. 18, 1915.



The drawing is not lined for color, but to indicate shading.

Particular description of goods.—Coffee in Packages.

Claims use since the 5th day of September, 1915.

Ser. No. 90,071. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN W. BRABANT, La Crosse, Wis. Filed Oct. 25, 1915.



No claim being made to the words "Concrete Mixer" apart from the marks shown in the drawing.

Particular description of goods.—Concrete-Mixing Machines.

Claims use since the 5th day of August, 1915.

Ser. No. 90,701. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALEXANDER HORLICK, Milwaukee, Wis. Filed Nov. 17, 1915. Under ten-year proviso.

HORLICK'S

Particular description of goods.—Bread, Biscuits, Crackers, Wafers, Cookies, Candies, Cocoa, and Chocolate.

Claims use since in 1844.

Ser. No. 91,040. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE C. D. PRUDEN COMPANY, Baltimore, Md. Filed Nov. 30, 1915.

QUIXET

Particular description of goods.—Steel Portable Buildings.

Claims use since Aug. 1, 1915.

Ser. No. 91,177. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, East Pittsburgh, Pa. Filed Dec. 4, 1915.



No claim being made to the words "Westinghouse Electric."

Particular description of goods.—Electrostatic Voltmeters, Electrostatic Ground-Detectors; Electrometers, Electroscopes; Portable and Switchboard Graphic Ammeters, Voltmeters, Wattmeters, Power-Factor Meters, and Frequency-Meters; Switchboard Graphic Totalizing Wattmeters, Kilo-Volt-Ampere Meters, and Totalizing Kilo-Volt-Ampere Meters; Portable and Switchboard Indicating Ammeters, Voltmeters, Wattmeters, Frequency-Meters, Power-Factor Meters, and Reactive-Factor Meters; Shunts for Direct-Current Meters; Fault-Localizers, Iron-Loss Voltmeters, Printometers for Maximum-Demand Meters; Maximum-Demand Meters, Kelvin Balances, Potentiometers, Capacitance and Power-Factor Measuring Bridges; Synchronizers and Synchroscopes, Integrating Watt-Hour Meters, Indicating Voltmeter-Compensators, Indicating Automobile-Ammeters, Indicating Automobile-Voltmeters; Ampere-Hour Meters, Portable Precision Voltmeters, Ammeters, Wattmeters, and Watt-Hour Meters; Portable Lamp-Testing Meters; Electrical Testing Outfits and Volt-Ammeters; Instrument-Transformers, Prepayment Watt-Hour Meters; Wheatstone Bridges, Watt-Hour-Demand Meters, Spring-Testing Instruments, Average-Value Voltmeters; Discharge-Gaps for Voltage-Measuring, Mean-Square-Value Ammeters, Steam-Flow Meters, Harmonic Analyzers, Oscillographs, Ohmmeters, Polarity-Indicators, Temperature-Indicating Instruments, Apparent-Power Wattmeters, Maximum-Voltage Meters, Polyphase Power-Factor Meters, Differential Galvanometers; Galvanometers, Dynamometers, Thermo-Couple Potentiometers, Cycle-Recorders, Speed-Counters, Speedometers, Cyclometers, Tachometers, Precision Condensers and Resistors, Thermo-Couples, Permeometers, Thermostats, Hardness-Testing Machines, Viscosimeters, Tape-Testing Machines, Mica-Gaging Machines, Pyrometers, Fluid-Flow Indicators, Multipliers for Potentiometers; Conductivity-Bridges and Vacuum-Gages.

Claims use since July 24, 1914.

Ser. No. 91,608. (CLASS 12. CONSTRUCTION MATERIALS.) THE GENERAL FIREPROOFING CO., Youngstown, Ohio. Filed Dec. 20, 1915.

SAFETILATH

Particular description of goods.—Composition Sheets for Fireproofing in Structural Work.

Claims use since Dec. 1, 1915.

Ser. No. 91,896. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) TEMPERANCE BEVERAGE COMPANY, Chicago, Ill. Filed Jan. 3, 1916.



Particular description of goods.—A Carbonated Non-Alcoholic Soft Drink.

Claims use since about Oct. 15, 1915.

Ser. No. 92,473. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KEEN, ROBINSON & COMPANY LIMITED, London, England. Filed Jan. 28, 1916. Under ten-year proviso.



No claim is made to the representation of the British coat-of-arms apart from the mark shown in the drawing.

Particular description of goods.—Prepared Barley.

Claims use since the year 1862.

Ser. No. 92,650. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SALUX DRUG COMPANY, St. Louis, Mo. Filed Feb. 4, 1916.

Lady Marian

Particular description of goods.—Perfumes, Cold-Cream, Massage-Cream, Toilet Water, and Face-Powder.

Claims use since the 10th day of March, 1915.

Ser. No. 93,245. (CLASS 28. JEWELRY AND PRECIOU-METAL WARE.) CHARLES H. SHERMAN, North Attleboro, Mass. Filed Mar. 2, 1916. Under ten-year proviso.

MERIT
MERIT

Particular description of goods.—Chains, Bracelets, Fobs, Lockets, Seals, Pendants, Combs, Scarf-Pins, Tie-Clasps, Brooches, Studs, Cuff-Links, Cuff-Buttons, Key-Rings, Jump-Rings, Swivels, Snaps, Made in Part of or Plated with Precious Metal.

Claims use since 1893.

Ser. No. 93,813. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE PAYSON MANUFACTURING COMPANY OF CHICAGO, Chicago, Ill. Filed Mar. 4, 1916.

SIMPLEX

The trade-mark consists of the word "Simplex."

Particular description of goods.—Transom-Lifters.

Claims use since June, 1908.

Ser. No. 93,872. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HEMRICH BROS. BREWING CO., Seattle, Wash. Filed Mar. 25, 1916.

Lifestaff

Particular description of goods.—A Non-Alcoholic Beverage Made from Selected Grains and Sold as a Soft Drink.

Claims use since Jan. 1, 1916.

Ser. No. 94,389. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) O-MI SPECIALTY COMPANY, Chicago, Ill. Filed Apr. 13, 1916.



Particular description of goods.—A Polish for the Finger-Nails.

Claims use since Sept. 15, 1912.

Ser. No. 94,725. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MARVEL MFG. CO., New Haven, Conn. Filed Apr. 26, 1916.



The trade-mark consists of the word "X-Ray" associated with the representation of an optical toy having a portion intermediate its ends colored dark, no claim being made to the representation of the toy or to the word "Curio" apart from that shown in the accompanying drawing.

Particular description of goods.—An Optical Toy.

Claims use since Mar. 25, 1914.

Ser. No. 94,881. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THORNTON & CHESTER MILLING CO., Buffalo, N. Y. Filed May 3, 1916. Under ten-year proviso.



No claim, so far as the present application is concerned, being made to any of the matter appearing in the drawing except the words "Royal Gift." The lining shown in the drawing is intended to indicate shading and not color.

Particular description of goods.—Wheat-Flour.

Claims use since March, 1880.

Ser. No. 95,178. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PARKVILLE MILLING COMPANY, Parkville, Mo. Filed May 16, 1916.



Particular description of goods.—Wheat-Flour.

Claims use since Apr. 1, 1916.

Ser. No. 95,422. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) C. KENYON COMPANY, Brooklyn, N. Y. Filed May 25, 1916.

Silvareign

Comprising the word "Silvareign."

Particular description of goods.—Waterproof Fabrics Used in the Manufacture of Waterproof Garments.

Claims use since May 22, 1916.

Ser. No. 95,520. (CLASS 12. CONSTRUCTION MATERIALS.) FLINTKOTE MANUFACTURING COMPANY, Boston, Mass. Filed May 29, 1916.



The picture of a boy being fanciful and the legend "Look for the Boy" being disclaimed.

Particular description of goods.—Prepared Roofing, Shingles, Strip-Shingles, Valley and Ridge Strips, Prepared Floorings, and Insulating-Paper.

Claims use since on or about Dec. 28, 1915.

Ser. No. 95,710. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LANGE CANNING CO., Eau Claire, Wis. Filed June 8, 1916.



No claim being made to the exclusive use of word "Brand."

Particular description of goods.—Canned Fruits and Vegetables.

Claims use since July 14, 1910.

Ser. No. 95,787. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MARVEL ACCESSORIES MANUFACTURING COMPANY, Cleveland, Ohio. Filed June 10, 1916.



Particular description of goods.—Tire-Vulcanizers and Tire-Vulcanizing Patches.

Claims use since about Apr. 24, 1916.

Ser. No. 96,140. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. L. DAUNHEIM & CO., New York, N. Y. Filed June 26, 1916.



Particular description of goods.—Wheat-Flour.

Claims use since the 27th day of May, 1916.

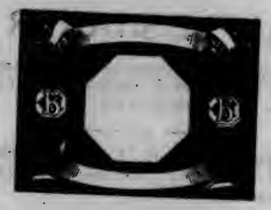
Ser. No. 96,345. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CURTICE BROTHERS CO., Rochester, N. Y. Filed July 6, 1916. Under ten-year proviso.

BLUE LABEL

Particular description of goods.—Canned Fruits, Vegetables, Canned and Potted Meats, Combinations of Vegetables in Cans and Jars, Combinations of Meats with Vegetables or Fruits in Cans and Jars, Canned Soups, Canned Puddings, Pickled Fruits, Preserves, Catsup, and Condiments.

Claims use since June, 1887.

Ser. No. 96,347. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CURTICE BROTHERS CO., Rochester, N. Y. Filed July 6, 1916. Under ten-year proviso.



Particular description of goods.—Canned Vegetables and Fruits, Canned and Potted Meats, Combinations of Vegetables in Cans and Jars, Combinations of Meats with Vegetables or Fruits in Cans and Jars, Canned Soups, Canned Puddings, and Pickled Fruits.

Claims use since about the year 1870.

Ser. No. 96,353. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) DURHAM MANUFACTURING COMPANY, Muncie, Ind. Filed July 6, 1916.

DUPLEX

Particular description of goods.—Fireless Stoves.

Claims use since January, 1909.

Ser. No. 96,469. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MOTHER'S MACARONI COMPANY, Minneapolis, Minn. Filed July 10, 1916.



Particular description of goods.—Macaroni.

Claims use since about Jan. 1, 1913.

Ser. No. 96,721. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MICRO PISTON RING CO., INC., New York, N. Y. Filed July 21, 1916.



No claim is made to the representation of the piston-rings apart from the mark shown in the drawing.

Particular description of goods.—Piston-Rings.

Claims use since October, 1914.

Ser. No. 96,955. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE HILL-SMITH METAL GOODS CO., Boston, Mass. Filed July 29, 1916.

H-S

Particular description of goods.—Repair Parts for Automobiles Connected with the Ignition Systems.

Claims use since about Jan. 1, 1915.

Ser. No. 97,057. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ALBERT N. EATON, Omaha, Nebr. Filed Aug. 3, 1916.

CIZ

Particular description of goods.—Metal Culvert Pipes or Tubes.

Claims use since Feb. 11, 1916.

Ser. No. 97,069. (CLASS 39. CLOTHING.) THEXTON & WRIGHT, LD., Westminster, England. Filed Aug. 3, 1916.

"Bonavestis"

Particular description of goods.—Men's Overcoats.
Claims use since Jan. 29, 1916.

Ser. No. 97,102. (CLASS 12. CONSTRUCTION MATERIALS.) E. VAN NOORDEN & Co., Boston, Mass. Filed Aug. 4, 1916.

ANCHOR BAR

Particular description of goods.—Skylights.
Claims use since July 1, 1909.

Ser. No. 97,146. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PHILO HAY SPECIALTIES Co., Newark, N. J. Filed Aug. 7, 1916.

PANDORA

FOUNTAIN OF YOUTH

Particular description of goods.—Talc, Nail-Polishes, Deodorizer, Eau de Quinin, Shampoo Preparations, Brilliantine, Almond and Honey Cream, Sachets, Cold-Cream, Depilatory-Powder, Cuticle-Remover, Massage-Cream, Eyebrow-Crayon, Nail-White, Nail-Gloss and Rouges.
Claims use since May 1, 1916.

Ser. No. 97,150. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SCHUSTER COMPANY, Cleveland, Ohio. Filed Aug. 7, 1916.

FLAVORITE

Particular description of goods.—Flavoring Extracts for Foods, (Except for Cake-Icings;) Cocoa; Preserved Fruits; Nut, Caramel, Maple, Butter-Scotch, and Fruit Sundaes; Bouillon-Cubes; Beef-Tea Extract; Canned Clam Bouillon; Chicken Bouillon; Tomato Bouillon; Nuts; Marshmallow-Topping; Cream-Aid; Coffee; Coffee Extracts, and Chocolate.
Claims use since Feb. 8, 1915.

Ser. No. 97,402. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. H. GEORGE & COMPANY, Fort Wayne, Ind. Filed Aug. 17, 1916.



Particular description of goods.—Butter.
Claims use since May 5, 1916.

Ser. No. 97,405. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LAUTZ BROS. & Co., Buffalo, N. Y. Filed Aug. 17, 1916.

SNOW MAID

Particular description of goods.—Soap.
Claims use since May 5, 1915.

Ser. No. 97,420. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ATLANTA REFINING & MANUFACTURING COMPANY, Atlanta, Ga. Filed Aug. 18, 1916.

IMPERIAL



Particular description of goods.—An Oleaginous Compound for Use as a Pastry-Shortening.
Claims use since May 1, 1916.

Ser. No. 97,532. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) APPLETON COMPANY, Lowell, Mass. Filed Aug. 22, 1916.

APPLEALERT

The trade-mark comprising the word "Applealert."
Particular description of goods.—Cotton Piece Goods.
Claims use since June 28, 1916.

Ser. No. 97,534. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) APPLETON COMPANY, Lowell, Mass. Filed Aug. 22, 1916.

APPLESHAKER

The trade-mark comprising the word "Appleshaker."
Particular description of goods.—Cotton Piece Goods.
Claims use since June 28, 1916.

Ser. No. 97,535. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) APPLETON COMPANY, Lowell, Mass. Filed Aug. 22, 1916.

APPLEWEB

The trade-mark comprising the word "Appleweb."
Particular description of goods.—Cotton Piece Goods.
Claims use since June 28, 1916.

Ser. No. 97,537. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) APPLETON COMPANY, Lowell, Mass. Filed Aug. 22, 1916.

APPLEFLUFF

The trade-mark comprising the word "Applefluff."
Particular description of goods.—Cotton Piece Goods.
Claims use since June 28, 1916.

Ser. No. 97,538. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) APPLETON COMPANY, Lowell, Mass. Filed Aug. 22, 1916.

APPLEDOZY

The trade-mark comprising the word "Appledozy."
Particular description of goods.—Cotton Piece Goods.
Claims use since June 28, 1916.

Ser. No. 97,541. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) APPLETON COMPANY, Lowell, Mass. Filed Aug. 22, 1916.

APPLETYROL

The trade-mark comprising the word "Appletyrol."
Particular description of goods.—Cotton Piece Goods.
Claims use since June 28, 1916.

Ser. No. 97,542. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) APPLETON COMPANY, Lowell, Mass. Filed Aug. 22, 1916.

APPLESLUMBER

The trade-mark comprising the word "Appleslumber."
Particular description of goods.—Cotton Piece Goods.
Claims use since June 28, 1916.

Ser. No. 97,543. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) APPLETON COMPANY, Lowell, Mass. Filed Aug. 22, 1916.

APPLEBYELOW

The trade-mark comprising the word "Applebyelow."
Particular description of goods.—Cotton Piece Goods.
Claims use since June 28, 1916.

Ser. No. 97,641. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE HAPPY FARMER TRACTOR CO., Minneapolis, Minn. Filed Aug. 26, 1916.



Particular description of goods.—Tractors.
Claims use since Oct. 1, 1915.

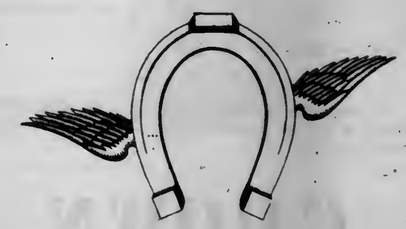
Ser. No. 98,102. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEGUIN MILLING & POWER CO., Seguin, Tex. Filed Sept. 19, 1916.



WHITE HOUSE

Particular description of goods.—Wheat-Flour.
Claims use since 1902.

Ser. No. 98,122. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) RACINE AUTO TIRE COMPANY, Racine, Wis. Filed Sept. 20, 1916.



Particular description of goods.—Inner Tubes for Tires and for Non-Metallic Tires and Tire-Casings Composed in Whole or in Part of Rubber or Its Equivalent or of Rubber or Its Equivalent and Fabric.
Claims use since about the first part of the year 1910.

Ser. No. 98,156. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE BORGFELDT & Co., New York, N. Y. Filed Sept. 22, 1916.

POLLYANNA

Particular description of goods.—Face-Powder, Toilet Powder, Tooth-Powder, Tooth-Pastes, Smelling-Salts, Talcum Powder, Sachets, Bath-Salts, Perfumes, Nail-Enamels and Nail-Polishes, Eyebrow-Pencils, Rouges, (Liquid, Powder, and Compact,) and Toilet Creams.
Claims use since Sept. 20, 1916.

Ser. No. 98,220. (CLASS 12. CONSTRUCTION MATERIALS.) PACIFIC CREOSOTING CO., Seattle, Wash. Filed Sept. 25, 1916.



No claim being made to the words "Wood Blocks" and the representation of a wooden block apart from the mark shown in the drawing.

Particular description of goods.—Wood-Block Paving.

Claims use since Sept. 1, 1916.

Ser. No. 98,246. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) PRATT & LAMBERT, INCORPORATED, Buffalo, N. Y. Filed Sept. 26, 1916.

Tonetic

Particular description of goods.—Wood-Stains, Wood-Fillers, Varnishes, Enamels, and Dry and Ready-Mixed Paints.

Claims use since Aug. 24, 1916.

Ser. No. 98,249. (CLASS 15. OILS AND GREASES.) SWAN & FINCH COMPANY, New York, N. Y. Filed Sept. 26, 1916.

CROWN

Particular description of goods.—Lubricating-Oils.

Claims use since Jan. 1, 1890.

Ser. No. 98,373. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RIO GRANDE VALLEY CREAMERY COMPANY, El Paso, Tex. Filed Oct. 2, 1916.



No claim being made to the exclusive use of the words "Rio Grande Valley Butter" nor to the words "One Pound Net Weight" except in connection with the other features of the mark.

Particular description of goods.—Butter.

Claims use since the 15th day of January, 1916.

Ser. No. 98,428. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) GEORGE BORGFELDT & CO., New York, N. Y. Filed Oct. 5, 1916.



Particular description of goods.—Statuettes and Ornamental Heads and Figures Adapted to be Applied to Any Article of Manufacture.

Claims use since Oct. 4, 1916.

Ser. No. 98,543. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) A/S. NORSKE MINERALKILDER, Larvik, Norway. Filed Oct. 10, 1916.



No claim being made to the words "Naturlig Mineralvand, Fra 'Kong Haakons' Radioaktiv-Alkaliske Mineralkilde A/S Norske Mineralkilder Bad Larvik Norge, Farris," apart from the mark shown on the drawing.

Particular description of goods.—Mineral Waters.

Claims use since April, 1915.

Ser. No. 98,555. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BALSTONE, COOKE & CO. LD., Manchester, England. Filed Oct. 11, 1916. Under ten-year proviso.

SANSPAREIL

Particular description of goods.—Velvets, Velvettas, Velveteens, Corduroys, Moleskins, Beaverteens, and other Fustian Cloths.

Claims use since prior to July, 1884.

Ser. No. 98,721. (CLASS 17. TOBACCO PRODUCTS.) THEOBALD AND OPPENHEIMER COMPANY, Philadelphia, Pa., and New York, N. Y. Filed Oct. 17, 1916.

MERI-TOSA



The trade-mark consists of the word "Meri-Tosa" and a fanciful picture of a young lady, the picture being in an elliptical frame.

Particular description of goods.—Cigars.

Claims use since September, 1915. Said corporation used in its business from 1904 until September, 1915, a trade-mark exactly the same except that the name was spelled "La Meritosa" instead of "Meri-Tosa."

Ser. No. 98,742. (CLASS 12. CONSTRUCTION MATERIALS.) ACME BRICK COMPANY, Cayuga, Ind. Filed Oct. 18, 1916.

PERSIANTEX

Particular description of goods.—Bricks Made of Clay and Equivalent Material.

Claims use since about Sept. 1, 1916.

Ser. No. 98,761. (CLASS 12. CONSTRUCTION MATERIALS.) ACME BRICK COMPANY, Cayuga, Ind. Filed Oct. 19, 1916.

VINE-WOVE

Particular description of goods.—Bricks Made of Clay and Equivalent Material.

Claims use since about May 15, 1916.

Ser. No. 98,769. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MILLER RUBBER COMPANY, Akron, Ohio. Filed Oct. 19, 1916.

AD-ON-A-TREAD

Particular description of goods.—Double-Tread-Tire-Repair Patches, Repair-Boots.

Claims use since Aug. 1, 1916.

Ser. No. 98,770. (CLASS 15. OILS AND GREASES.) MUTUAL OIL COMPANY, Kansas City, Mo. Filed Oct. 19, 1916.

Mutual

Particular description of goods.—Automobile-Lubricating Oil, Cylinder-Grease, Cylinder-Oils, Dynamo-Oils, Engine-Oils, Transmission-Grease, Cup-Grease, Axle-Grease, Locomotive Rod-Grease, Gear Compound, Ice-Machine Oil, Motor-Cycle Oil, Separator-Oil, and Tractor-Oil.

Claims use since 1910.

Ser. No. 98,786. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) HUBBARD PORTABLE OVEN CO., Chicago, Ill. Filed Oct. 20, 1916.



Particular description of goods.—Portable and other Ovens.

Claims use since June 21, 1912.

Ser. No. 98,815. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SHERWIN-WILLIAMS CO., Cleveland, Ohio. Filed Oct. 21, 1916.



Particular description of goods.—Medicinal Linseed-Oil for Human and Animal Use, and Paranitranilin.

Claims use since December, 1910, on medicinal linseed-oil for human and animal use, and March, 1916, on paranitranilin.

Ser. No. 98,829. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CAPA DRUG COMPANY, Washington, D. C. Filed Oct. 23, 1916.

CAPA

Particular description of goods.—Ointments and Salves Used for Wounds, Ulcers, Bruises; Capsules or Tablets Used for La Grippe, Sore Throat, Menses, Influenza, Jaundice, Sluggish Liver, Headaches, Stomach Disorders, and Biliousness; Hepatics Used in Kidney and Liver Troubles; Collyriums; Gargles and Lotions Used in Treatment of Tonsilitis and Sore Throat; Biological Products, as Antitoxins; Cosmetics Such as Facial Powders and Creams, Sedative, Pharmaceutical Preparations Used for Treatment of Stomach Pains, Colds, Fevers, Diseases of Females, Catarrh and Neuralgic Treatments, Hair or Scalp Tonics or Hair-Growers; Inunctions Used in the Treatment of Gonorrhea; Liniments Used in the Treatment of Croup, Neuralgia, Headaches, Painful Joints, Rheumatism, La Grippe, Colds, and Incipient Pleurisy; Oleates; Medicinal Plasters, Suppositories, and Pills Used in the Treatment of La Grippe, Menses, and Colds.

Claims use since Oct. 18, 1916.

Ser. No. 98,834. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GULFPORT GROCERY CO., Gulfport, Miss. Filed Oct. 23, 1916.

GYPSY QUEEN

SELF RISING FLOUR

The exclusive right to the words "Self Rising Flour" being disclaimed except as associated with the other features of the mark.

Particular description of goods.—Wheat-Flour.

Claims use since the 1st day of December, 1914.

Ser. No. 98,902. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, New York, N. Y., and Kansas City, Mo. Filed Oct. 26, 1916.



Particular description of goods.—Cakes.

Claims use since about May 3, 1916.

Ser. No. 98,916. (CLASS 31. FILTERS AND REFRIGERATORS.) AUTO VACUUM FREEZER COMPANY, INC., New York, N. Y. Filed Oct. 27, 1916.

Auto Vacuum

No claim being made to the word "Vacuum" apart from the mark shown in the drawing.

Particular description of goods.—Liquid-Freezers.

Claims use since Jan. 1, 1912.

Ser. No. 98,938. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BUNTE BROTHERS, Chicago, Ill. Filed Oct. 28, 1916.

Mi-Choice

Particular description of goods.—Candy.

Claims use since the month of August, 1916.

Ser. No. 98,955. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ROBERT REINER IMPORTING CO., Weehawken Heights, N. J. Filed Oct. 28, 1916.

RRIC

Particular description of goods.—Embroidering-Machines, Jacquards, Punching-Machines and Parts Thereof, and Embroidering-Machine Needles, Borers, Stüpfels, Shuttles, and Take-Ups.

Claims use since Oct. 15, 1916.

Ser. No. 98,978. (CLASS 48. MALT EXTRACTS AND LIQUORS.) GIPPS BREWING CO., Peoria, Ill. Filed Oct. 30, 1916.

AMBERLIN

Particular description of goods.—Beer.

Claims use since June 5, 1888.

Ser. No. 98,980. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) EDWARD E. JOHNSON, St. Paul, Minn. Filed Oct. 30, 1916.

DEMON

Particular description of goods.—Pump-Rod Couplings.

Claims use since about Oct. 19, 1916.

Ser. No. 99,014. (CLASS 17. TOBACCO PRODUCTS.) MARTINEZ HAVANA CO., New York, N. Y. Filed Oct. 31, 1916.

BALBOA

Particular description of goods.—Cigars.

Claims use since 1906.

Ser. No. 99,056. (CLASS 39. CLOTHING.) BOYD-WELSH SHOE COMPANY, St. Louis, Mo. Filed Nov. 3, 1916.

Quality

No claim being made to the word "Quality" apart from the mark shown in the drawing.

Particular description of goods.—Leather and Cloth Shoes.

Claims use since Oct. 21, 1916.

Ser. No. 99,081. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BURTON & DAVIS CO., New York, N. Y. Filed Nov. 4, 1916.

SUPREME

Particular description of goods.—Coffee, Tea, Catsup, Yellow Cornmeal, White Cornmeal, Farina, Tapioca, Barley, Raisins, Spices, Prepared Mustard, Peanut-Butter, Pickles, Jellies, Olives, and Flavoring Extracts for Foods.

Claims use since 1890.

Ser. No. 99,096. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) SON BROTHERS & CO., San Francisco, Cal. Filed Nov. 4, 1916.

CORN-HUSK

Particular description of goods.—Cigarette-Papers.

Claims use since May 1, 1901.

Ser. No. 99,199. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) PEERLESS RUBBER MANUFACTURING COMPANY, New York, N. Y. Filed Nov. 9, 1916.

SIN PAR

Particular description of goods.—Rubber and Rubber-Lined-Fabric Hose.

Claims use since July 21, 1916.

Ser. No. 99,229. (CLASS 15. OILS AND GREASES.) TIDE WATER OIL CO., New York, N. Y. Filed Nov. 10, 1916.

SNOW FLAKE

Particular description of goods.—Illuminating-Oil.

Claims use since Jan. 1, 1880.

Ser. No. 99,241. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE ELRAY CO., Chattanooga, Tenn. Filed Nov. 11, 1916.

ELRAY

Particular description of goods.—Electric Flash-Lights and Dry Batteries.

Claims use for electric flash-lights since Oct. 26, 1916, and as applied to dry batteries since Nov. 4, 1916.

Ser. No. 99,243. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEO. C. V. FESLER, St. Louis, Mo. Filed Nov. 11, 1916.

COLDINE

Particular description of goods.—A Remedy for Coughs, Colds, and La Grippe.

Claims use since July 15, 1916.

Ser. No. 99,257. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EMIL REINBOLD, Chicago, Ill. Filed Nov. 11, 1916.

MOTOY

Particular description of goods.—Motion-Picture Films.

Claims use since Sept. 1, 1916.

Ser. No. 99,306. (CLASS 10. FERTILIZERS.) THE WUICHET FERTILIZER COMPANY, Dayton, Ohio. Filed Nov. 14, 1916.

RED CORNER

The trade-mark being a representation of a triangle colored red and the words "Red Corner."

Particular description of goods.—Fertilizers.

Claims use since about thirty years last past.

Ser. No. 99,314. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NOVO MANUFACTURING CO., INC., New York, N. Y. Filed Nov. 15, 1916.



No claim being made to the representation of the battery apart from the mark shown in the drawing.

Particular description of goods.—Electric-Flash-Light Batteries and Casings Therefor.

Claims use since about Oct. 25, 1916.

Ser. No. 99,327. (CLASS 43. THREAD AND YARN.) JAMES LEES AND SONS COMPANY, Bridgeport, Pa. Filed Nov. 16, 1916.



The lining on the drawing is intended merely to show contrast and not to indicate color.

Particular description of goods.—Worsted and Woolen Yarn.

Claims use since Aug. 12, 1916.

Ser. No. 99,367. (CLASS 12. CONSTRUCTION MATERIALS.) AMERICAN TAR PRODUCTS COMPANY, Dover, Del., and Chicago, Ill. Filed Nov. 18, 1916.

Tarmac

Particular description of goods.—A Bituminous Tar Binder for Roads.

Claims use since Jan. 15, 1916.

Ser. No. 99,418. CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SYMS, EAGLE & CO., Chicago, Ill. Filed Nov. 20, 1916.

SUBMARINE

Particular description of goods.—Canned Sardines.

Claims use since Nov. 1, 1916.

Ser. No. 99,430. (CLASS 33. GLASSWARE.) DAVIS CARPENTER & CO., INC., New York, N. Y. Filed Nov. 21, 1916.

RAY-PLACEABLE

Particular description of goods.—Lenses for Vault-Light Construction.

Claims use since on or about the 1st day of March, 1916.

Ser. No. 99,448. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. D. MANOR & CO., Newmarket, Va. Filed Nov. 21, 1916.

Manorhouse

Particular description of goods.—Wheat-Flour.

Claims use since 1913.

Ser. No. 99,450. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) RICE & WALLENSTEIN, New York, N. Y. Filed Nov. 21, 1916.

PROTECTO

Particular description of goods.—Protective Handles for Hand-Bags and other Transportable Articles.

Claims use since July 25, 1916.

Ser. No. 99,462. (CLASS 39. CLOTHING.) CHARMAX CRAVAT CO., New York, N. Y. Filed Nov. 22, 1916.

Ten Fold

Comprising the words "Ten Fold."

Particular description of goods.—Men's Neckwear—Namely, Cravats, Necktles, and Scarfs.

Claims use since Oct. 15, 1916.

Ser. No. 99,465. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) M. K. GOETZ BREWING CO., St. Joseph, Mo. Filed Nov. 22, 1916.

Tempura

Particular description of goods.—A Cereal Food Beverage Sold as a Soft Drink.

Claims use since July 20, 1916.

Ser. No. 99,523. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY LEWEY, New York, N. Y. Filed Nov. 24, 1916.

OM  EL

Particular description of goods.—Freckles, Blackheads, and Similar Diseases of the Skin.

Claims use since Oct. 28, 1916.

Ser. No. 99,540. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY GLADYS FARLEY, North Bergen, N. J. Filed Nov. 25, 1916.

Exbeard

Particular description of goods.—A Depilatory.

Claims use since April, 1916.

Ser. No. 99,563. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOGERT & GREENBANK, New York, N. Y. Filed Nov. 27, 1916.

MAINSTAY

Particular description of goods.—Wheat-Flour.

Claims use since May 11, 1916.

Ser. No. 99,573. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLLAND FOOD CORPORATION, New York, N. Y. Filed Nov. 27, 1916.



No claim being made to the words "Brand, Sweetened Condensed Milk, Trademark, from Holland."

Particular description of goods.—Condensed Milk.

Claims use since May 1, 1916.

Ser. No. 99,586. (CLASS 39. CLOTHING.) RELIANCE MANUFACTURING COMPANY, Chicago, Ill. Filed Nov. 27, 1916.



No claim is made to the word "Special" apart from the mark shown in the drawing.

Particular description of goods.—Overalls.

Claims use since Nov. 22, 1916.

Ser. No. 99,593. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHANE BROS. & WILSON COMPANY, Philadelphia, Pa. Filed Nov. 27, 1916.

CERBERUS

Particular description of goods.—Wheat-Flour.

Claims use since about Apr. 1, 1916.

Ser. No. 99,608. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) U. J. ULERY Co., New York, N. Y. Filed Nov. 28, 1916.



Particular description of goods.—Scissors, Razors, Pocket-Knives, and Steel Table-Cutlery.

Claims use since Aug. 7, 1912.

Ser. No. 99,617. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE BEAVER COMPANY, Buffalo and Beaver Falls, N. Y.; Roanoke Rapids, N. C.; Thorold and Ottawa, Ontario, Canada, and London, England. Filed Nov. 29, 1916.



BEAVERBILT

Particular description of goods.—Window-Backgrounds, Office-Partitions, Folding Screens, Sewing-Screens, Decoration-Screens, Folding Tables, and Shirt-Waist Boxes.

Claims use since Oct. 1, 1916.

Ser. No. 99,629. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW ORLEANS COFFEE CO. LTD., New Orleans, La. Filed Nov. 29, 1916.

BELLE ROSE

Particular description of goods.—Rice.

Claims use since Nov. 23, 1916.

Ser. No. 99,630. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW ORLEANS COFFEE CO. LTD., New Orleans, La. Filed Nov. 29, 1916.

RAVEN

Particular description of goods.—Rice.

Claims use since Nov. 23, 1916.

Ser. No. 99,679. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) HUGH THOMPSON BROOM CORN COMPANY, Kansas City, Mo. Filed Dec. 2, 1916.

HO-M-AID

Particular description of goods.—Brooms.
Claims use since Nov. 15, 1916.

Ser. No. 99,703. (CLASS 39. CLOTHING.) ELDER MANUFACTURING CO., St. Louis, Mo. Filed Dec. 4, 1916.

JACK FROST

Particular description of goods.—Men's and Boys' Knit and Cut Underwear.
Claims use since June 1, 1916.

Ser. No. 99,713. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LESHER, WHITMAN & CO. INC., New York, N. Y. Filed Dec. 4, 1916.

SILVER BLOOM

Particular description of goods.—Piece Goods of Cotton Warp with Worsted or Mohair or Alpaca Filling or Combinations Thereof and Dress Fabrics of Cotton, Silk, Linen, Cotton-Warp Worsted, Mohair, and Alpaca.
Claims use since Aug. 10, 1915.

Ser. No. 99,741. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BELL, CONRAD & COMPANY, Chicago, Ill. Filed Dec. 6, 1916.

OLD ELM

Particular description of goods.—Coffee.
Claims use since the month of January, 1916.

Ser. No. 99,742. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BELL, CONRAD & COMPANY, Chicago, Ill. Filed Dec. 6, 1916.

FOOL PROOF

Particular description of goods.—Coffee.
Claims use since the month of August, 1915.

Ser. No. 99,771. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES ROY PINKHAM, Los Angeles, Cal. Filed Dec. 7, 1916.

EL FESTINO

Particular description of goods.—Grapes.
Claims use since September, 1916.

Ser. No. 99,783. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WIESE PACKING CO., Seattle, Wash. Filed Dec. 7, 1916.

HOBBY

Particular description of goods.—Canned Salmon.
Claims use since the 29th day of August, 1916.

Ser. No. 99,784. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WIESE PACKING CO., Seattle, Wash. Filed Dec. 7, 1916.

"Sambo"

Particular description of goods.—Canned Salmon.
Claims use since Oct. 21, 1916.

Ser. No. 99,828. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WALLACE & CO., Brooklyn, N. Y. Filed Dec. 9, 1916.

MALLO PONIES

Particular description of goods.—Chocolates and Candies.
Claims use since the 20th day of November, 1916.

Ser. No. 99,910. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FILOMENA AMERISE, Hazleton, Pa. Filed Dec. 14, 1916.

LEONORE

Particular description of goods.—Macaroni.
Claims use since April, 1915.

Ser. No. 99,938. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) JESSE FRENCH AND SONS PIANO COMPANY, New Castle, Ind. Filed Dec. 14, 1916.

Particular description of goods.—Pianos.
Claims use since March, 1912.

Ser. No. 99,934. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) JESSE FRENCH AND SONS PIANO COMPANY, New Castle, Ind. Filed Dec. 14, 1916.

Particular description of goods.—Pianos.
Claims use since March, 1912.

Ser. No. 99,945. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) REEVES, PARVIN & CO., Philadelphia, Pa. Filed Dec. 14, 1916.

THE PARTRIDGE

Particular description of goods.—Canned Fruits and Vegetables.
Claims use since 1887.

Ser. No. 99,963. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEE COUNTY PACKING COMPANY, Fort Myers, Fla. Filed Dec. 15, 1916.

NATIONAL

Particular description of goods.—Citrus Fruits.
Claims use since Oct. 26, 1916.

Ser. No. 99,965. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALVIN J. NYE, Orlando, Fla. Filed Dec. 15, 1916.

V

Particular description of goods.—Citrus Fruits.
Claims use since October, 1914.

Ser. No. 99,991. (CLASS 39. CLOTHING.) JOSEPH S. OPPENHEIMER, New York, N. Y. Filed Dec. 16, 1916.

Amo

Particular description of goods.—Corsets.
Claims use since May 1, 1915.

Ser. No. 100,009. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HELMET COMPANY, Cincinnati, Ohio. Filed Dec. 18, 1916.

HELMET

Particular description of goods.—Chewing-Gum.
Claims use since September, 1908.

Ser. No. 100,075. (CLASS 39. CLOTHING.) M. UPLAND & CO., New York, N. Y. Filed Dec. 20, 1916.

TUSTYL

Particular description of goods.—Ladies' Hats.
Claims use since Nov. 20, 1916.

Ser. No. 100,186. CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SUNSET SOAP DYE COMPANY, New Rochelle, N. Y. Filed Dec. 26, 1916.

SUNSET

The trade-mark consists of the word "Sunset."
Particular description of goods.—Dyes.
Claims use since the latter part of April, 1915.

Ser. No. 100,187. (CLASS 6. CHEMICALS, MEDICINES. AND PHARMACEUTICAL PREPARATIONS.) SUNSET SOAP DYE COMPANY, New Rochelle, N. Y. Filed Dec. 26. 1916.

SUNSET SOAP DYES

No claim is made to the words "Soap Dyes" apart from the mark shown in the drawing.
Particular description of goods.—Dyes.
Claims use since the latter part of April, 1915.

Ser. No. 99,679. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) HUGH THOMPSON BROOM CORN COMPANY, Kansas City, Mo. Filed Dec. 2, 1916.

HO-M-AID

Particular description of goods.—Brooms.
Claims use since Nov. 15, 1916.

Ser. No. 99,703. (CLASS 39. CLOTHING.) ELDER MANUFACTURING Co., St. Louis, Mo. Filed Dec. 4, 1916.

JACK FROST

Particular description of goods.—Men's and Boys' Knit and Cut Underwear.
Claims use since June 1, 1916.

Ser. No. 99,713. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LESHER, WHITMAN & Co. INC., New York, N. Y. Filed Dec. 4, 1916.

SILVER BLOOM



Particular description of goods.—Piece Goods of Cotton Warp with Worsted or Mohair or Alpaca Filling or Combinations Thereof and Dress Fabrics of Cotton, Silk, Linen, Cotton-Warp Worsted, Mohair, and Alpaca.
Claims use since Aug. 10, 1915.

Ser. No. 99,741. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BELL, CONRAD & COMPANY, Chicago, Ill. Filed Dec. 6, 1916.

OLD ELM

Particular description of goods.—Coffee.
Claims use since the month of January, 1916.

Ser. No. 99,742. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BELL, CONRAD & COMPANY, Chicago, Ill. Filed Dec. 6, 1916.

FOOL PROOF

Particular description of goods.—Coffee.
Claims use since the month of August, 1915.

Ser. No. 99,771. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES ROY PINKHAM, Los Angeles, Cal. Filed Dec. 7, 1916.

EL FESTINO

Particular description of goods.—Grapes.
Claims use since September, 1916.

Ser. No. 99,783. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WIESE PACKING Co., Seattle, Wash. Filed Dec. 7, 1916.

HOBBY

Particular description of goods.—Canned Salmon.
Claims use since the 29th day of August, 1916.

Ser. No. 99,784. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WIESE PACKING Co., Seattle, Wash. Filed Dec. 7, 1916.

"Sambo"

Particular description of goods.—Canned Salmon.
Claims use since Oct. 21, 1916.

Ser. No. 99,828. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WALLACE & Co., Brooklyn, N. Y. Filed Dec. 9, 1916.

MALLO PONIES

Particular description of goods.—Chocolates and Candies.
Claims use since the 20th day of November, 1916.

Ser. No. 99,910. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FILOMENA AMERISE, Hazleton, Pa. Filed Dec. 14, 1916.

LEONORE

Particular description of goods.—Macaroni.
Claims use since April, 1915.

Ser. No. 99,933. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) JESSE FRENCH AND SONS PIANO COMPANY, New Castle, Ind. Filed Dec. 14, 1916.



Particular description of goods.—Pianos.
Claims use since March, 1912.

Ser. No. 99,934. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) JESSE FRENCH AND SONS PIANO COMPANY, New Castle, Ind. Filed Dec. 14, 1916.



Particular description of goods.—Pianos.
Claims use since March, 1912.

Ser. No. 99,945. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) REEVES, PARVIN & Co., Philadelphia, Pa. Filed Dec. 14, 1916.



Particular description of goods.—Canned Fruits and Vegetables.
Claims use since 1887.

Ser. No. 99,963. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEE COUNTY PACKING COMPANY, Fort Myers, Fla. Filed Dec. 15, 1916.



Particular description of goods.—Citrus Fruits.
Claims use since Oct. 26, 1916.

Ser. No. 99,965. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALVIN J. NYE, Orlando, Fla. Filed Dec. 15, 1916.



Particular description of goods.—Citrus Fruits.
Claims use since October, 1914.

Ser. No. 99,991. (CLASS 39. CLOTHING.) JOSEPH S. OPPENHEIMER, New York, N. Y. Filed Dec. 16, 1916.

Amo

Particular description of goods.—Corsets.
Claims use since May 1, 1915.

Ser. No. 100,009. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HELMET COMPANY, Cincinnati, Ohio. Filed Dec. 18, 1916.

HELMET



Particular description of goods.—Chewing-Gum.
Claims use since September, 1908.

Ser. No. 100,075. (CLASS 39. CLOTHING.) M. UPLAND & Co., New York, N. Y. Filed Dec. 20, 1916.

TUSTYL

Particular description of goods.—Ladies' Hats.
Claims use since Nov. 20, 1916.

Ser. No. 100,186. CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SUNSET SOAP DYE COMPANY, New Rochelle, N. Y. Filed Dec. 26, 1916.

SUNSET

The trade-mark consists of the word "Sunset."
Particular description of goods.—Dyes.
Claims use since the latter part of April, 1915.

Ser. No. 100,187. (CLASS 6. CHEMICALS, MEDICINES. AND PHARMACEUTICAL PREPARATIONS.) SUNSET SOAP DYE COMPANY, New Rochelle, N. Y. Filed Dec. 26. 1916.



No claim is made to the words "Soap Dyes" apart from the mark shown in the drawing.
Particular description of goods.—Dyes.
Claims use since the latter part of April, 1915.

TRADE-MARK REGISTRATIONS GRANTED

JANUARY 23, 1917.

115,048. CERTAIN NAMED FOOD PRODUCTS. AIR UTILITIES COMPANY, INC., New York, N. Y.
Filed March 4, 1916. Serial No. 93,290. PUBLISHED NOVEMBER 7, 1916.

115,049. SOUPS, AND MORE PARTICULARLY FOR SOUPS IN DRY AND CONCENTRATED FORM. AMERICAN HEALTH SOUP CO., St. Louis, Mo.
Filed October 9, 1916. Serial No. 98,507. PUBLISHED NOVEMBER 14, 1916.

115,050. COLORS FOR RUBBER, LEATHER, SOAP, BORATE OF MANGANESE, AND SICCATIVE. AMERICAN HEYL CO., INC., New York, N. Y.
Filed April 22, 1914. Serial No. 77,642. PUBLISHED OCTOBER 26, 1915.

115,051. PIANOS. AMERICAN PIANO COMPANY, New York, N. Y.
Filed August 3, 1916. Serial No. 97,042. PUBLISHED NOVEMBER 21, 1916.

115,052. WRITING AND PRINTING PAPER KNOWN AS EXTRA-SUPERFINE AND COLORED FLATS. AMERICAN WRITING PAPER CO., Holyoke, Mass.
Filed February 1, 1915. Serial No. 84,233. PUBLISHED JUNE 1, 1915.

115,053. FACE-POWDER, COLD-CREAM, HAIR-WASH, TOOTH-PASTE, ROUGE, SHAMPOO PREPARATIONS, PERFUME. THE ARMAND COMPANY, Des Moines, Iowa.
Filed August 23, 1916. Serial No. 97,570. PUBLISHED NOVEMBER 7, 1916.

115,054. BACON AND HAMS. ARMOUR AND COMPANY, Chicago, Ill.
Filed July 29, 1916. Serial No. 96,944. PUBLISHED NOVEMBER 7, 1916.

115,055. WHEAT-FLOUR. W. M. ATKINSON, Minneapolis, Minn.
Filed September 5, 1916. Serial No. 97,778. PUBLISHED NOVEMBER 7, 1916.

115,056. TALKING-MACHINES. THE AUSTIN COMPANY, Providence, R. I.
Filed December 16, 1915. Serial No. 91,509. PUBLISHED FEBRUARY 29, 1916.

115,057. AUTOMOBILE-TRAILERS. AUTO-KAMP EQUIPMENT CO., INC., Saginaw, Mich.
Filed September 22, 1916. Serial No. 98,152. PUBLISHED NOVEMBER 7, 1916.

115,058. VELVETS, VELVETEENS, SATEENS, CORDS, MOLESKINS, AND FUSTIAN CLOTH. BALSTONE COOKE & CO. LD., Manchester, England.
Filed August 5, 1916. Serial No. 97,108. PUBLISHED NOVEMBER 14, 1916.

115,059. TALKING-MACHINES. CHARLIE J. BOUSFIELD, Bay City, Mich.
Filed August 14, 1916. Serial No. 97,326. PUBLISHED NOVEMBER 14, 1916.

115,060. PALLIATIVE FOR CANCER, ECZEMA, GANGRENE OR BLOOD-POISON, SORE EYES, CUTS, AND SPRAINS. DAVID W. BOYER, Cairo, Ill.
Filed October 17, 1916. Serial No. 98,727. PUBLISHED NOVEMBER 21, 1916.

115,061. CERTAIN NAMED CANNED FOODS. BRODSKY PALMAN GELBER CO., Chicago, Ill.
Filed August 21, 1916. Serial No. 97,492. PUBLISHED NOVEMBER 7, 1916.

115,062. CITRUS FRUIT. BROOKSVILLE CITRUS GROWERS ASSN., Brooksville, Fla.
Filed October 12, 1916. Serial No. 98,586. PUBLISHED NOVEMBER 14, 1916.

115,063. BILLIARD-CLOTH. THE BRUNSWICK-BALKE-COLLENDER CO., Chicago, Ill.
Filed November 2, 1914. Serial No. 82,330. PUBLISHED NOVEMBER 21, 1916.

115,064. CERTAIN NAMED CLOTHING. THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y.
Filed April 5, 1915. Serial No. 85,688. PUBLISHED NOVEMBER 21, 1916.

115,065. WATERPROOFED COATS FOR MEN, WATERPROOFED COATS FOR WOMEN. THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y.
Filed April 5, 1915. Serial No. 85,689. PUBLISHED NOVEMBER 21, 1916.

115,066. WHISKY. CAHN, BELT & COMPANY, Baltimore, Md.
Filed September 8, 1916. Serial No. 97,857. PUBLISHED NOVEMBER 21, 1916.

115,067. POULTRY FEED. CANADIAN MILL & ELEVATOR CO., El Reno, Okla.
Filed August 9, 1916. Serial No. 97,207. PUBLISHED NOVEMBER 7, 1916.

115,068. GINGER-ALE. CANTRELL & COCHRANE LTD., Dublin and Belfast, Ireland.
Filed October 10, 1916. Serial No. 98,537. PUBLISHED NOVEMBER 21, 1916.

115,069. CANNED SALMON. COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg.
Filed September 16, 1916. Serial No. 98,023. PUBLISHED NOVEMBER 7, 1916.

115,070. CLEANER FOR SILKS, LACES, FURS, KID GLOVES, LEATHERS, FEATHERS, AND FELT. THE CUMMER PRODUCTS CO., Cleveland, Ohio.
Filed September 29, 1916. Serial No. 98,312. PUBLISHED NOVEMBER 21, 1916.

115,071. TURN-TABLES FOR TALKING-MACHINES. JOHN A. DAVIS, Boston, Mass.
Filed August 17, 1916. Serial No. 97,394. PUBLISHED NOVEMBER 14, 1916.

115,072. CERTAIN NAMED CLOTHING. DELSON KNITTING MILLS, Chicago, Ill.
Filed November 26, 1915. Serial No. 90,929. PUBLISHED NOVEMBER 21, 1916.

115,073. [WITHDRAWN.]

115,074. WHEAT-FLOUR. B. A. ECKHART MILLING CO., Chicago, Ill.
Filed September 11, 1916. Serial No. 97,900. PUBLISHED NOVEMBER 7, 1916.

115,075. COMPOUNDS FOR PURIFYING PRODUCTS OF COMBUSTION ISSUING FROM HEATERS, STOVES, RADIATORS, AND LIKE APPARATUS. FAGEOL & TATE, Oakland, Cal.
Filed September 21, 1916. Serial No. 98,137. PUBLISHED NOVEMBER 21, 1916.

115,076. CLEANER FOR ENAMEL SURFACES. JOHN FALLON, New York, N. Y.
Filed June 10, 1916. Serial No. 95,782. PUBLISHED NOVEMBER 14, 1916.

115,077. COFFEE. FOLEY BROS. & QUINLAN, INCORPORATED, St. Paul, Minn.
Filed June 19, 1916. Serial No. 95,964. PUBLISHED NOVEMBER 7, 1916.

115,078. RAZOR-STROPS. LEON A. FLINKER, Detroit, Mich.
Filed July 29, 1916. Serial No. 96,954. PUBLISHED NOVEMBER 7, 1916.

115,079. CERTAIN NAMED CLOTHING. JOHN GATELY Co., Chicago, Ill.
Filed September 21, 1916. Serial No. 98,139. PUBLISHED NOVEMBER 21, 1916.

115,080. BEER. M. K. GOETZ BREWING CO., St. Joseph, Mo.
Filed October 7, 1916. Serial No. 98,494. PUBLISHED NOVEMBER 21, 1916.

115,081. BEER. M. K. GOETZ BREWING CO., St. Joseph, Mo.
Filed October 7, 1916. Serial No. 98,495. PUBLISHED NOVEMBER 21, 1916.

115,082. RUBBER BOOTS AND SHOES. GOODYEAR RUBBER COMPANY, Middletown, Conn.
Filed October 16, 1916. Serial No. 98,693. PUBLISHED NOVEMBER 21, 1916.

115,083. FRESH BOXED APPLES. GROWERS SERVICE COMPANY, North Yakima, Wash.
Filed October 14, 1916. Serial No. 98,658. PUBLISHED NOVEMBER 14, 1916.

115,084. PREPARATION FOR THE TREATMENT OF HEADACHES, FEVER, NEURALGIA, SCIATICA, NERVOUSNESS, AND INSOMNIA. HED-TONE COMPANY, Waco, Tex.
Filed August 28, 1916. Serial No. 97,666. PUBLISHED NOVEMBER 21, 1916.

115,085. TOILET-PAPER, PAPER TOWELING, AND PAPER NAPKINS. THE JOHN HOBERG CO., Green Bay, Wis.
Filed June 2, 1916. Serial No. 95,596. PUBLISHED NOVEMBER 14, 1916.

115,086. FLOOR-COVERINGS MADE FROM FELT SATURATED WITH ASPHALTUM AND COATED ON BOTH SURFACES. JUDSON & AIRD, New York, N. Y.
Filed December 6, 1915. Serial No. 91,223. PUBLISHED NOVEMBER 21, 1916.

115,087. LINING-PAPER FOR BUILDING PURPOSES AND IN PACKING-CASES. H. H. HOPKINS COMPANY, Chicago, Ill.
Filed August 24, 1916. Serial No. 97,602. PUBLISHED NOVEMBER 14, 1916.

115,088. FLAVORING EXTRACTS FOR FOODS. THE HUDSON MFG. CO. INCORPORATED, Chicago, Ill.
Filed September 15, 1916. Serial No. 98,009. PUBLISHED NOVEMBER 14, 1916.

115,089. HOUSE ORGAN ISSUED MONTHLY. JOHN F. JELKE COMPANY, Chicago, Ill.
Filed August 23, 1916. Serial No. 97,577. PUBLISHED OCTOBER 31, 1916.

115,090. WATERPROOF GARMENTS—NAMELY, SLICKERS, OIL-CLOTH COATS, AND HATS. GEORGE A. JOHNSON, Jr., Seattle, Wash.
Filed March 8, 1916. Serial No. 93,388. PUBLISHED NOVEMBER 14, 1916.

115,091. WHEAT-FLOUR. THE KIRKLAND DISTRIBUTING COMPANY, Columbia, S. C.
Filed August 23, 1916. Serial No. 97,578. PUBLISHED NOVEMBER 7, 1916.

115,092. APPAREL-CORSETS. KOPS BROS., New York, N. Y.
Filed August 26, 1916. Serial No. 97,646. PUBLISHED NOVEMBER 21, 1916.

115,093. KNITTED AND TEXTILE UNDERWEAR AND SWEATERS. KUTTNER & SIEGEL, INC., Pleasantville, N. Y.
Filed June 9, 1916. Serial No. 95,751. PUBLISHED NOVEMBER 21, 1916.

115,094. GASOLENE-IMPROVERS OR PREPARATIONS FOR AUGMENTING THE ENERGY OF MOTOR-FUELS. JEROME R. LANDAUER, Chicago, Ill.
Filed April 21, 1915. Serial No. 86,087. PUBLISHED NOVEMBER 7, 1916.

115,095. BELT-DRESSING. WILLIAM M. LAWYER, Syracuse, N. Y.
Filed August 21, 1916. Serial No. 97,515. PUBLISHED NOVEMBER 14, 1916.

115,096. HATS. LEYSER, GREEN CO., Brooklyn, N. Y.
Filed March 22, 1916. Serial No. 93,766. PUBLISHED NOVEMBER 21, 1916.

115,097. MEDICINE FOR CERTAIN NAMED DISEASES. EDWIN J. LIPSCOMB, Duncan, Miss., and Memphis, Tenn.
Filed July 28, 1916. Serial No. 96,922. PUBLISHED NOVEMBER 21, 1916.

115,098. MEDICINE FOR CERTAIN NAMED DISEASES. EDWIN J. LIPSCOMB, Duncan, Miss., and Memphis, Tenn.
Filed July 28, 1916. Serial No. 96,923. PUBLISHED NOVEMBER 21, 1916.

115,099. CARBONATED SOFT DRINK. THE MADISON BOTTLING WORKS, Madison, N. C.
Filed October 6, 1916. Serial No. 98,474. PUBLISHED NOVEMBER 21, 1916.

115,100. SWEET APPLE CIDER SOLD AS A SOFT DRINK. L. F. MIKESELL, Traverse City, Mich.
Filed October 6, 1916. Serial No. 98,477. PUBLISHED NOVEMBER 21, 1916.

115,101. FLUID PREPARATION FOR CLEANING ARTICLES MADE OF WHITE LEATHER OR WHITE FABRICS. ISRAEL MILLER, New York, N. Y.
Filed August 7, 1916. Serial No. 97,141. PUBLISHED NOVEMBER 14, 1916.

115,102. BOND-PAPER AND WAXING-PAPER. MUNISING PAPER COMPANY, Munising, Mich.
Filed June 8, 1916. Serial No. 95,714. PUBLISHED NOVEMBER 14, 1916.

115,103. HAIR-TONICS. AUGUSTA NELSON, Seattle, Wash.
Filed June 19, 1916. Serial No. 95,989. PUBLISHED NOVEMBER 14, 1916.

115,104. FINGER-RINGS AND CERTAIN NAMED CARD JEWELRY. OSTBY AND BARTON COMPANY, Providence, R. I.
Filed September 28, 1916. Serial No. 98,290. PUBLISHED NOVEMBER 14, 1916.

115,105. WATER-CRAPE PAPER, TISSUE-CRAPE PAPER, PAPER FLOWER-POT COVERS. PAPYRUS ARTIFICIAL PAPER MANUFACTURING CO., Kenilworth borough, N. J.
Filed February 7, 1916. Serial No. 92,695. PUBLISHED NOVEMBER 14, 1916.

115,106. CERTAIN NAMED CANNED FRUIT. PRATT-LOW PRESERVING CO., Santa Clara, Cal.
Filed October 9, 1916. Serial No. 98,523. PUBLISHED NOVEMBER 14, 1916.

115,107. CHEWING-GUM OR CANDIED CHEWING-GUM. RUECKHEIM BROS. & ECKSTEIN, Chicago, Ill.
Filed September 29, 1916. Serial No. 98,316. PUBLISHED NOVEMBER 14, 1916.

115,108. CERTAIN NAMED BRUSHES. RENNOUS, KLEINLE & COMPANY OF BALTIMORE CITY, Baltimore, Md.
Filed September 18, 1916. Serial No. 98,061. PUBLISHED NOVEMBER 7, 1916.

115,109. CERTAIN NAMED BRUSHES. RENNOUS, KLEINLE & COMPANY OF BALTIMORE CITY, Baltimore, Md.
Filed September 18, 1916. Serial No. 98,063. PUBLISHED NOVEMBER 7, 1916.

115,110. FRUIT SYRUPS FOR CERTAIN NAMED PURPOSES. RICHARDSON CORPORATION, Rochester, N. Y.
Filed July 24, 1916. Serial No. 96,801. PUBLISHED NOVEMBER 14, 1916.

115,111. CHEWING-GUM. JOHN B. ROBBINS, Malden, Mass.
Filed August 4, 1916. Serial No. 97,096. PUBLISHED NOVEMBER 7, 1916.

115,112. SOAP. ROYAL PALM SOAP CO. INC., Tampa, Fla.
Filed August 1, 1916. Serial No. 97,023. PUBLISHED NOVEMBER 21, 1916.

115,113. ANTISEPTIC COMPOUND. ST. CLAIRE RANSFORD-GAY, New York, N. Y.
Filed May 4, 1916. Serial No. 94,905. PUBLISHED NOVEMBER 21, 1916.

115,114. COFFEE. SCHNULL & Co., Indianapolis, Ind.
Filed December 8, 1915. Serial No. 91,333. PUBLISHED NOVEMBER 7, 1916.

115,115. FLAVORING EXTRACTS FOR FOODS, AND SPICES. D. & L. SLADE CO., Boston, Mass.
Filed August 11, 1916. Serial No. 97,284. PUBLISHED NOVEMBER 7, 1916.

115,116. GRINDING-WHEELS. STAR CORUNDUM WHEEL Co., Detroit, Mich.
Filed October 7, 1916. Serial No. 98,503. PUBLISHED NOVEMBER 7, 1916.

115,117. CERTAIN NAMED PAPER AND STATIONERY. STENOGRAPHY & REPORTING COMPANY, LTD., Trenton, N. J.
Filed August 21, 1916. Serial No. 97,467. PUBLISHED NOVEMBER 14, 1916.

115,118. PRUNES. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed September 23, 1916. Serial No. 98,197. PUBLISHED NOVEMBER 14, 1916.

115,119. DAIRY FEED. TIOGA MILL & ELEVATOR CO., Waverly, N. Y.
Filed September 19, 1916. Serial No. 98,106. PUBLISHED NOVEMBER 7, 1916.

115,120. OILED CLOTHING. A. J. TOWER COMPANY, Boston, Mass.
Filed October 18, 1916. Serial No. 98,758. PUBLISHED NOVEMBER 21, 1916.

115,121. COMBUSTION-ENGINES, LOCOMOTIVES, AND MOTORS AND THEIR PARTS. UNITED COMBUSTION COMPANY, New York, N. Y., assignor to Locomotive Pulverized Fuel Company, New York, N. Y., a Corporation of Delaware.
Filed July 21, 1915. Serial No. 88,093. PUBLISHED OCTOBER 3, 1916.

115,122. CANDY. UNITED DRUG COMPANY, Boston, Mass.
Filed September 23, 1916. Serial No. 98,199. PUBLISHED NOVEMBER 7, 1916.

115,123. CERTAIN NAMED HAIR-TONIC. SAVANNAH BEMBY WALLACE, Augusta, Ga.
Filed August 24, 1916. Serial No. 97,608. PUBLISHED NOVEMBER 21, 1916.

115,124. CERTAIN NAMED CLOTHING. FRANKLIN-SIMON & Co. INC., New York, N. Y.
Filed October 5, 1916. Serial No. 98,446. PUBLISHED NOVEMBER 21, 1916.

115,125. MOTORS AND DRIVES FOR TALKING-MACHINES. VICTOR ELECTRICAL EQUIPMENT CO., Boston, Mass.
Filed August 17, 1916. Serial No. 97,415. PUBLISHED NOVEMBER 14, 1916.

115,126. SAFETY-PINS. WALDES & COMPANY, New York, N. Y.
Filed March 23, 1915. Serial No. 85,354. PUBLISHED NOVEMBER 14, 1916.

115,127. BRASSIÈRES. THE WARNER BROTHERS COMPANY, Bridgeport, Conn.
Filed October 6, 1916. Serial No. 98,485. PUBLISHED NOVEMBER 21, 1916.

115,128. NATURAL LAXATIVE MEDICINAL WATER. WATERTOWN CARBONATING CO., Watertown, S. D.
Filed September 9, 1916. Serial No. 97,886. PUBLISHED NOVEMBER 21, 1916.

115,129. MIDDY-BLOUSES. WILLIAM C. WEILLER, Baltimore, Md.
Filed May 27, 1916. Serial No. 95,498. PUBLISHED NOVEMBER 21, 1916.

115,130. DISINFECTANTS AND INSECTICIDES. WEST DISINFECTING COMPANY, New York, N. Y.
Filed October 21, 1916. Serial No. 98,819. PUBLISHED NOVEMBER 21, 1916.

115,131. SHAVING AND TOILET SOAPS. THE J. B. WILLIAMS COMPANY, Glastonbury, Conn.
Filed January 14, 1916. Serial No. 92,145. PUBLISHED NOVEMBER 21, 1916.

115,132. LINIMENT FOR CERTAIN NAMED PURPOSES. DAVID WRÓBLEWSKI, New York, N. Y.
Filed July 20, 1916. Serial No. 96,705. PUBLISHED NOVEMBER 21, 1916.

115,133. CERTAIN NAMED TOILET ARTICLES. ZAUDER BROS. INC., New York, N. Y.
Filed July 15, 1916. Serial No. 96,610. PUBLISHED NOVEMBER 21, 1916.

115,134. PREPARATION FOR THE TREATMENT OF WHOOPING-COUGH AND LIKE AILMENTS. ZOL, LIMITED, London and Kensington, England.
Filed December 11, 1915. Serial No. 91,409. PUBLISHED NOVEMBER 21, 1916.

115,135. CERTAIN NAMED CANNED FOODS. THE H. D. LEE MERCANTILE CO., Salina, Kans., and Kansas City, Mo.
Filed October 6, 1916. Serial No. 98,472. PUBLISHED NOVEMBER 14, 1916.

TRADE-MARK REGISTRATIONS RENEWED.

13,976. COPPER INGOTS. LEWISOHN BROTHERS, New York, N. Y.; United Metals Selling Company, New York, N. Y., a Corporation of Delaware, assignee.
Registered January 11, 1887. Renewed January 11, 1917.

14,526. MEDICINES FOR PULMONARY AND THROAT DISEASES. J. C. AYER COMPANY, Lowell, Mass.
Registered June 21, 1887. Renewed June 21, 1917.

14,527. PROPRIETARY MEDICINES CONTAINING SARSAPARILLA. J. C. AYER COMPANY, Lowell, Mass.
Registered June 21, 1887. Renewed June 21, 1917.

14,566. A PREPARATION FOR THE HAIR. J. C. AYER COMPANY, Lowell, Mass.
Registered July 5, 1887. Renewed July 5, 1917.

TRADE-MARK REGISTRATIONS CANCELED.

16,313. SOAPS AND DETERGENTS. LEVER BROS., Warrington, county of Lancaster, England.
Registered February 26, 1889. Canceled December 18, 1916.

16,315. FANCY SOAPS AND TOILET PERFUMERY. LEVER BROS., Warrington, county of Lancaster, England.
Registered February 26, 1889. Canceled December 18, 1916.

100,116. COFFEE. J. B. GREENHUT CO., FORMERLY GREENHUT-SIEGEL COOPER CO., INC., New York, N. Y.
Registered October 6, 1914. Canceled December 18, 1916.

LABELS

REGISTERED JANUARY 23, 1917.

19,845.—*Title:* "PILCHER'S 'GUARANTEED' BACHELOR BUTTONS." (For Buttons.) J. V. PILCHER MANUFACTURING COMPANY, INCORPORATED, Louisville, Ky. Filed November 16, 1916.

PRINTS

REGISTERED JANUARY 23, 1917.

4,605.—*Title:* "PILCHER'S AUTOMATIC BACHELOR-BUTTON." (For Buttons.) J. V. PILCHER MANUFACTURING COMPANY, INCORPORATED, Louisville, Ky. Filed November 16, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the United States.

MINERALS SEPARATION, LIMITED, AND MINERALS SEPARATION AMERICAN SYNDICATE, LIMITED, *v.* HYDE.

Decided December 11, 1916.

1. PATENTABILITY—"AGITATION FROTH PROCESS" OF ORE CONCENTRATION.
Patent No. 835,120, for a process of concentration of ores, compared with the prior art and *Held* valid and infringed as to claims 1, 2, 3, 5, 6, 7, and 12 and invalid as to claims 9, 10, and 11.

2. SAME—SAME—COMMERCIAL SUCCESS.
Where it appeared that without puffing or business exploitation the patented process promptly came into extensive use throughout the world and largely replaced all earlier processes, *Held* that the fact is persuasive of the presence of invention.

3. SAME — SAME — ORIGINALITY — EMPLOYER AND EMPLOYEE.
Where the patentees planned and directed the investigations from day to day, conducted them in large part themselves, and interpreted the results, *Held* that the resulting invention is theirs and not that of an employee who happened to make the analyses and observations which resulted immediately in the discovery.

4. SAME—SAME—SUFFICIENCY OF DISCLOSURE.
The invention being applicable to ores of an infinite variety of compositions, *Held* that the disclosure of the patent, which states the limits within which variations in the process need be made to operate on any of the ores, is sufficient, although preliminary tests may be necessary on a given ore in order to treat it most advantageously under the patented process.

Mr. Henry D. Williams, Mr. William H. Kenyon, Mr. Lindley M. Garrison, Mr. Frederick D. McKenny, Mr. John H. Miller, and *Mr. Odell W. McConnell* for the petitioners and complainants.

Mr. Walter A. Scott, Mr. Thomas F. Sheridan, Mr. Geo. L. Wilkinson, Mr. K. R. Babbitt, and *Mr. J. Bruce Kremer* for the respondent and defendant.

Mr. Justice CLARKE delivered the opinion of the Court.

In this suit the complainants, the first named as the owner and the other as general licensee, claim an infringement of United States Letters Patent No. 835,120, issued on the 6th day of November, 1906, to Henry Livingstone Sulman, Hugh Fitzalis Kirkpatrick-Picard, and John Ballot. The usual injunction, accounting and damages are prayed for. The district court sustained the patent as to claims numbered 1, 2, 3, 5, 6, 7, 9, 10, 11, and 12; found that the defendant had infringed each of these claims, and granted the prayer of the petition. The Circuit Court of Appeals for the Ninth Circuit reversed the decree of the district court and remanded the case with instructions to dismiss the bill. The case is here on writ of certiorari to review that decision.

As stated in the specification, the claimed discovery of the patent in the suit relates—

to improvements in the process for the concentration of ores, the object being to separate metalliferous matter from gangue by means of oils, fatty acids, or other substances which have a preferential affinity for such metalliferous matter over gangue.

The answer denies all of the allegations of the bill and avers that in twenty-five designated United States and five British patents the process described in suit was "fully and clearly described and claimed," and it also avers that the claimed discovery was invented, known and used by many persons long prior to the time when the application was made for the patent in suit. Notwithstanding this elaboration of denial counsel for the defendant in the summarized conclusion to their brief rely upon only five of the many patents referred to as showing that the patent in suit was anticipated and is therefore invalid for want of novelty and invention, viz: Everson (1886), Froment (Italy, 1902; Great Britain, 1903), Glagner (1903), Schwartz (applied for April 19, 1905, issued December 19, 1905), and Kirby (applied for October 17, 1903, issued December 18, 1906). And the defendant, a man obviously experienced in the subject, says that, in his opinion, the whole basis of flotation concentration was disclosed in the Everson United States Patent No. 348,157 and in the Froment British patent.

It is clear that in the prior art, as it is developed in this record, it was well known that oil and oily substances had a selective affinity or attraction for, and would unite mechanically with, the minute particles of metal and metallic compounds found in crushed or powdered ores, but would not so unite with the quartz, or rocky non-metallic material, called "gangue." (Haynes British patent, 1860, and United States patents, Everson, 1885; Robson, 1897, and Elmore, 1901.) It was also well known that this selective property of oils and oily substances was increased when applied to some ores by the addition of a small amount of acid to the ore and water used in process of concentration. (United States patents, Everson, 1885; Elmore, 1901, and Cattermole, 1904.)

Prior to the date of the patent in suit a number of patents had been granted in this and other countries for processes aiming to make practical use of this property of oil and of oil mixed with acid in the

treatment of ores, all of which, speaking broadly, consisted in mixing finely crushed or powdered ore with water and oil, sometimes with acid added, and then in variously treating the mass—"the pulp"—thus formed so as to separate the oil, when it became impregnated or loaded with the metal and metal-bearing particles, from the valueless gangue. From the resulting concentrate the metals were recovered in various ways.

The processes, of this general character, described in the prior patents may be roughly divided into two classes. The process in the patents of the first class is called in the record the "surface-flotation process" and it depends for its usefulness on the oil used being sufficient to collect and hold in mechanical suspension the small particles of metal and metalliferous compounds and by its buoyancy to carry them to the surface of the mixture of ore, water and oil, thus making it possible, by methods familiar to persons skilled in the art, to float off the concentrate thus obtained into any desired receptacle. The waste material, or gangue, not being affected by the oil and being heavier than water sinks to the bottom of the containing vessel and may be disposed of as desired.

The process of the other class, called in the record the "metal-sinking process," reverses the action of the surface-flotation process and is illustrated by the Cattermole U. S. patent, No. 777,273, in which oil is used to the extent of four per cent. to six per cent. to ten per cent. of the weight of the metalliferous mineral matter, depending on the character of the ore, for the purpose of agglomerating the oil-coated concentrate into granules heavier than water, so that they will sink to the bottom of the containing vessel, permitting the gangue to be carried away by an upward-flowing stream of water.

The process of the patent in suit, as described and practised, consists in the use of an amount of oil which is "critical," and minute as compared with the amount used in prior processes "amounting to a fraction of one per cent. on the ore," and in so impregnating with air the mass of ore and water used, by agitation—"by beating the air into the mass"—as to cause to rise to the surface of the mass, or pulp, a froth, peculiarly coherent and persistent in character, which is composed of air-bubbles with only a trace of oil in them, which carry in mechanical suspension a very high percentage of the metal and metalliferous particles of ore which were contained in the mass of crushed ore subjected to treatment. This froth can be removed and the metal recovered by processes with which the patent is not concerned.

It is obvious that the process of the patent in suit, as we have described it, is not of the metal-sinking class, and while it may, in terms, be described as a surface-flotation process, yet it differs so essentially from all prior processes in its character, in its simplicity of operation and in the resulting concentrate, that we are persuaded that it constitutes a new and patentable discovery.

The prior processes which we have described required the use of so much oil that they were too expensive to be used on lean ores, to which they were intended to have their chief application, and the efforts of investigators for several years prior to the discovery of the process in suit had been directed to the search for a means or method of reducing the amount of oil used, and it is clear from the record that approach was being made, slowly, but more and more nearly to the result which was reached by the patentees of the process in suit in March, 1905. The Froment Great Britain patent (1903) and the Kirby United States patent (applied for in 1903 and granted in 1906) are especially suggestive of the advance which was being made toward the desired result, but the Froment process was little more than a laboratory experiment and has never proved of value in practice, and the Kirby process, though approaching in some respects more nearly to the end attained by the process of the patent in suit, found its preferred application in the use of an amount of oil solution equal to one-fourth to three-fourths in weight of the ore treated, which was prohibitive in cost.

Into this field of investigation at this stage of its development came the patentees of the patent in suit. They were experienced metallurgists of London, of inventive genius and with financial resources, and they entered upon an investigation of the processes of oil concentration of ores which was continued through several years, and consisted of a very extended series of experiments in which the quantities of oil, of water and of acid used and the extent and character of the agitation of the mass under treatment resorted to, were varied to an almost unparalleled extent as to each factor and the results were carefully tabulated and interpreted. It was while pursuing a comprehensive investigation of this character, having, as the evidence shows, the special purpose in mind at the time to trace the effect on the results of the process of a reduction to the vanishing-point of the quantity of oil used, that the discovery embodied in the patent in suit was made. The experimenters were working on the Cattermole "metal-sinking process" as a basis when it was discovered that the granulation on which the process depended practically ceased when the oleic acid (oil) was reduced to about five per cent. "on the ore." It was observed, however, that, as the amount of oleic acid was further reduced and the granulation diminished, there was an increase in the amount of "float-froth," which collected on the surface of the mass and that the production of this froth reached its maximum when about one per cent. or slightly less "on the ore" of oleic acid was used. This froth, on collection, was found to consist of air-bubbles modified by the presence of the minute amount of oil used and holding in mechanical suspension between seventy per cent. and eighty per cent. of the total mineral content of the mass treated. It was promptly recognized by the patentees that this froth was not due to the liberation of gas in the mass treated by the action of the dilute acid used, and its formation was at once attributed in large part to the presence of the air introduced into the mixture by the agitation which has been resorted to to mix the oil with the particles of crushed ore, which air, in bubbles, attached itself to the mineral particles, slightly coated as they were with what was necessarily an infinitesimal amount of oil, and floated them to the surface. The extent of the agitation of the mass had been increased as the experiments proceeded until the—

series of Gabbett mixers, fitted with the usual baffles, were speeded at from 1,000 to 1,100 revolutions per minute.

A careful consideration of the record in this case convinces us that the facts with respect to the process of the patent in suit are not overstated by the plaintiff's witness, Adolph Liebmann, an expert of learning and experience, when he says in substance:

The present invention differs essentially from all previous results. It is true that oil is one of the substances used but it is used in quantities much smaller than was ever heard of, and it produces a result never obtained, before. The minerals are obtained in a froth of a peculiar character, consisting of air bubbles which in their covering film have the minerals embedded in such manner that they form a complete surface all over the bubbles. A remarkable fact with regard to this froth is that, although the very light and easily destructible air bubbles are covered with a heavy mineral, yet the froth is stable and utterly different from any froth known before, being so permanent in character that I have personally seen it stand for twenty-four hours without any change having taken place. The simplicity of the operation, as compared with the prior attempts, is startling. All that has to be done is to add a minute quantity of oil to the pulp to which acid may or may not be added, agitate for from two and one-half to ten minutes and then after a few seconds collect from the surface the froth which will contain a large percentage of the minerals present in the ore.

It is not necessary for us to go into a detailed examination of the process in suit to distinguish it from the processes of the patents relied on as anticipations, convinced as we are that the small amount of oil used makes it clear that the lifting force which separates the metallic particles of the pulp from the other substances of it is not to be found principally in the buoyancy of the oil used, as was the case in prior processes, but that this force is to be found, chiefly, in the buoyancy of the air-bubbles introduced into the mixture by an agitation greater than and different from that which had been resorted to before and that this advance on the prior art and the resulting froth concentrate so different from the product of other processes make of it a patentable discovery as new and original as it has proved useful and economical. It results without more discussion, that we fully agree with the decision of the House of Lords, arrived at upon a different record and with different witnesses, but when dealing with the equivalent of the patent in suit, in *Minerals Separations, Limited*, v. *British Air Concentration Syndicate, Limited*, (27 R. P. C., 33.) In this decision Lord Shaw, speaking for the court and distinguishing the process there in suit especially from the Elmore oil-flotation process which had gone before but which was typical of the then prior art said:

They (the patentees of the agitation froth process of the patent in suit) are not promoting a method of separation which had before been described, but they are engaged upon a new method of separation. Instead of relying upon the lesser specific gravity of oil in bulk they rely upon the production of a froth by means of an agitation which not only assists the process of the minute quantities of oil reaching the minute particles of metal, but forms a multitude of air cells, the buoyancy of which air cells, forming around single particles of the metal, floats them to the surface of the liquid.

And Lord Atkinson said:

In their process this mysterious affinity of oil for the metallic particles of the ore is availed of, yet the oil is used in such relatively infinitesimal quantities, that the metallic particles are only coated with a thin film of it, and the lifting force is found not in the natural buoyancy of the mass of added oil, but in the buoyancy of air bubbles, which, introduced into the mixture by the more or less violent agitation of it, envelop or become attached to, the thinly oiled metallic particles, and raise them to the surface, where they are maintained by what is styled the surface tension of the water.

The record shows not only that the process in suit was promptly considered by the patentees as an original and important discovery, but that it was immediately generally accepted as so great an advance over any process known before that, without puffing or other business exploitation, it promptly came into extensive use for the concentration of ores in most, if not all, of the principal mining countries of the world, notably in the United States, Australia, Sweden, Chile and Cuba, and that, because of its economy and simplicity, it has largely replaced all earlier processes. This, of itself, is persuasive evidence of that invention which it is the purpose of the patent laws to reward and protect. (*Diamond Rubber Co.* v. *Consolidated Tire Co.*, 220 U. S., 428; *Carnegie Steel Co.* v. *Cambria Iron Co.*, 185 U. S., 403, 429, 430; *The Barbed Wire Patent*, 143 U. S., 275; *Smith* v. *Goodyear Dental Vulcanite Co.*, 93 U. S., 486.)

The claim that the patentees of the patent in suit are not the original discoverers of the process patented because an employee of theirs happened to make the analyses and observations which resulted immediately in the discovery, cannot be allowed. The record shows very clearly that the patentees planned the experiments in progress when the discovery was made; that they directed the investigations day by day, conducting them in larger part personally and that they interpreted the results. *Agawam Company* v. *Jordan* (7 Wall., 583–603) rules this claim against the defendant.

Equally untenable is the claim that the patent is invalid for the reason that the evidence shows that when different ores are treated preliminary tests must be made to determine the amount of oil and the extent of agitation necessary in order to obtain the best results. Such variation of treatment must be within the scope of the claims, and the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter. The composition of ores varies infinitely, each one presenting its special problem, and it is obviously impossible to specify in a patent the precise treatment which would be most successful and economical in each case. The process is one for dealing with a large class of substances and the range of treatment within the terms of the claims, while leaving something to the skill of persons applying the invention, is clearly sufficiently definite to guide those skilled in the art to its successful application, as the evidence abundantly shows. This satisfies the law. (*Mowry* v. *Whitney*, 14 Wall., 620; *Ives* v. *Hamilton*, 92 U. S., 426, and *Carnegie Steel Co.* v. *Cambria Iron Co.*, 185 U. S., 403, 436, 437.)

The evidence of infringement is clear.

While we thus find in favor of the validity of the patent, we cannot agree with the district court in

regarding it valid as to all of the claims in suit. As we have pointed out in this opinion there were many investigators at work in this field to which the process in suit relates when the patentees came into it, and it was while engaged in study of prior kindred processes that their discovery was made. While the evidence in the case makes it clear that they discovered the final step which converted experiment into solution, "turned failure into success," (*The Barbed Wire Patent*, 143 U. S., 275,) yet the investigations preceding were so informing that this final step was not a long one and the patent must be confined to the results obtained by the use of oil within the proportions often described in the testimony and in the claims of the patent as "critical proportions," "amounting to a fraction of one per cent. on the ore," and therefore the decree of this Court will be that the patent is valid as to claims Nos. 1, 2, 3, 5, 6, 7 and 12, and that the defendant infringed these claims, but that it is invalid as to claims 9, 10 and 11. Claims Nos. 4, 8 and 13 were not considered in the decrees of the two lower courts and are not in issue in this proceeding.

The decision of the circuit court of appeals will be reversed, and the decision of the district court, modified to conform to the conclusions expressed in this opinion, will be affirmed.

ADJUDICATED PATENTS.

(U. S. D. C.) The De Forest patents, Nos. 879,275, 967,876, 967,877, 967,878, 824,637, 836,070, and 841,386, all relating to detectors for use in the radio art, construed and *Held* not infringed. *Marconi Wireless Telegraph Co. of America* v. *De Forest Radio Telephone & Telegraph Co.*, 236 Fed. Rep., 942.

(U. S. C. C. A.) The Ferguson patent, No. 1,089,405, for a concrete dock, *Held* valid and infringed. *Detroit Iron & Steel Co.* v. *Carey*, 236 Fed. Rep., 924.

(U. S. D. C.) The Fleming patent, No. 803,684, claims 1 and 37, for an incandescent-lamp detector for radio-stations, *Held* valid and infringed. *Marconi Wireless Telegraph Co. of America* v. *De Forest Radio Telephone & Telegraph Co.*, 236 Fed. Rep., 942.

(U. S. C. C. A.) The Frey patent, No. 1,001,132, for an apparatus for compressing air, *Held* valid and infringed. *Frey* v. *Marvel Auto Supply Co.*, 236 Fed. Rep., 916.

(U. S. D. C.) The Gould patent, No. 1,021,363, for a gas-igniter, *Held* void for lack of invention in view of the prior art. *Safety Gas Lighter Co.* v. *Fischer Bros. & Corwin*, 236 Fed. Rep., 955.

(U. S. C. C. A.) The Hopkins patent, No. 1,039,130, for an adding and writing machine, construed and *Held* not infringed. *Moon-Hopkins Billing Mach. Co.* v. *Dalton Adding Mach. Co.*, 236 Fed. Rep., 936.

(U. S. D. C.) The Pomeroy patent, No. 1,011,643, for a gas-igniter, *Held* not infringed. *Safety Gas Lighter Co.* v. *Fischer Bros. & Corwin*, 236 Fed. Rep., 955.

(U. S. D. C.) The Slater patent, No. 893,105, for an envelop-machine, *Held* valid and infringed on motion for preliminary injunction. *Outlook Envelope Co.* v. *Whiting-Patterson Co.*, 236 Fed. Rep., 940.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 8, 1917.

Albert T. Hoffman, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Cline, Crowell & McCorkle, 306 Main street, Newton, N. C., for registration of a trade-mark and trade-mark registered July 21, 1896, No. 28,649, to Albert T. Hoffman, Cleveland, Ohio, and a notice of such declaration sent by registered mail to said Hoffman at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Hoffman, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 2, 1917.

Mercantile Supply Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Joseph Burnett Co., of 36 India street, Boston, Mass., for registration of a trade-mark and trade-mark registered December 18, 1906, No. 58,651, to Mercantile Supply Company, of Middletown, N. Y., and the Office having failed to secure proof of service upon the said Mercantile Supply Company, and no satisfactory evidence of successorship having been filed, notice is hereby given that unless said Mercantile Supply Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1916.

Edwin A. Madge, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Edwin A. Madge, 533 Woodward avenue, Detroit, Mich., and the application of Harry U. Strong, 914 Chestnut street, Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Edwin A. Madge at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Madge, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1916.

Frings & Zwietusch, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Columbia Brewing Co., 2120–2132 South C street, Tacoma, Wash., for registration of a trade-mark and trade-mark registered August 22, 1882, No. 9,619, to Frings & Zwietusch, Milwaukee, Wis., and a notice of such declaration sent by registered mail to said Frings & Zwietusch at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Frings & Zwietusch, their assigns or legal representatives, shall enter an appearance therein within thirty days of the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

THE OFFICIAL GAZETTE OF THE United States Patent Office.

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Trade-Marks	131	No. 115,136 to No. 115,266, inclusive.
Labels	20	No. 19,846 to No. 19,865, inclusive.
Prints	10	No. 4,606 to No. 4,615, inclusive.
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Arizona	3	.....	North Dakota	2	.....
Arkansas	5	.....	Ohio	48	3
California	40	6	Oklahoma	5	1
Colorado	4	.....	Oregon	6	1
Connecticut	15	.....	Pennsylvania	65	25
Delaware	.....	2	Rhode Island	7	.....
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Georgia	3	1	South Dakota	2	.....
Idaho	3	.....	Tennessee	2	2
Illinois	75	15	Texas	16	1
Indiana	16	2	Utah	4	.....
Iowa	11	1	Vermont	1	.....
Kansas	7	.....	Virginia	9	2
Kentucky	2	.....	Washington	11	1
Louisiana	1	1	West Virginia	6	4
Maine	2	2	Wisconsin	17	1
Maryland	5	2	Wyoming	1	.....
Massachusetts	34	12			
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Minnesota	17	4	Canal Zone	.....	.....
Mississippi	2	.....	District of Columbia	4	1
Missouri	23	12	Hawaii Territory	.....	.....
Montana	2	1	Philippine Islands	.....	.....
Nebraska	4	.....	Porto Rico	.....	.....
Nevada	1	1	U. S. Army	.....	.....
New Hampshire	1	.....	U. S. Navy	.....	.....
New Jersey	29	8			
New Mexico	.....	.....	Total to residents of the United States	661	158
New York	113	44			

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Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	1	.....	Netherlands	3	.....
Belgium	1	.....	New South Wales	1	.....
British India	.....	.....	New Zealand	2	.....
British West Indies	.....	.....	Norway	1	.....
Canada	10	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	.....	.....
Denmark	2	.....	South Australia	.....	.....
England	11	2	Spain	.....	.....
Finland	.....	.....	Sweden	1	.....
France	4	.....	Switzerland	.....	.....
Germany	14	.....	Turkey	1	.....
Guatemala	.....	.....	Victoria	.....	.....
India	.....	.....	Western Australia	.....	.....
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APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 26, 1917.

Class No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences, Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 20	Nov. 20	321
126	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Aug. 7	Nov. 22	508
176	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Jan. 3	Jan. 9	124
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Nov. 14	Jan. 4	238
167	5. Bookbinding; Harvesters; Jewelry; Music	Oct. 3	Dec. 15	202
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Sept. 20	Dec. 26	265
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Sept. 6	Nov. 28	499
131	8. Beds: Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	July 12	Oct. 14	1214
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	July 10	Jan. 2	541
285	10. Carriages and Wagons; Spring Devices	July 25	Jan. 2	847
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 15	Jan. 16	82
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Oct. 2	Jan. 13	571
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Sept. 22	Dec. 28	524
307	14 Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Sept. 30	Dec 14	290
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 28	Jan. 6	211
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	July 29	Dec. 4	629
308	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Oct. 14	Dec. 26	181
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Dec. 4	Dec. 21	206
236	19. Dampers, Automatic; Furnaces; Heating Systems: Stoves and Furnaces: Domestic Cooking Vessels	Aug. 7	Oct. 2	445
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking	Dec. 26	Jan. 6	208
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152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 4	Jan. 4	353
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils: Oils, Fats, and Glue; Sugar and Salt.	Aug. 17	Nov. 17	285
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	July 1	Jan. 2	866
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Sept. 8	Dec. 21	341
104	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	July 10	Nov. 23	332
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	July 27	Dec. 30	720
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Sept. 20	Dec. 28	734
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	June 12	Dec. 4	831
278	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Jan. 2	Jan. 6	146
221	39. Water Distribution	Aug. 12	Dec. 14	341
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Oct. 16	Jan. 8	530
105	41. Railway Draft Appliances; Resilient Tires and Wheels	Sept. 21	Dec. 15	478
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	July 14	Dec. 1	376
182	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 6	Nov. 21	120

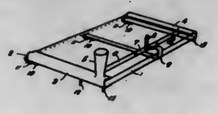
Oldest new case, Apr. 12; oldest amended, July 25.
Total number of applications awaiting action..... 18,274

101	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Dec. 11	Jan. 5	533
	Designs	Nov. 27	Dec. 29	345
	Labels and Prints	Dec. 22	Dec. 20	145

PATENTS

GRANTED JANUARY 30, 1917.

1,213,813. ELEVATED DRAFTING-RULE. ANDREW E. ANDERSON, Brownsville, Tex. Filed Mar. 10, 1916. Serial No. 83,282. (Cl. 33—107.)



1. A rule consisting of an oblong body having a straight edge, supporting legs depending therefrom which, when resting upon a plane surface, hold said straight edge above the said surface, one of said legs being movable lengthwise relative to the rule.

2. A rule consisting of an oblong body having a straight edge, supporting legs depending therefrom, which, when resting upon a plane surface, hold said straight edge spaced above the surface, spacers depending from the rule underneath said straight edge, and an upstanding knob carried by the rule.

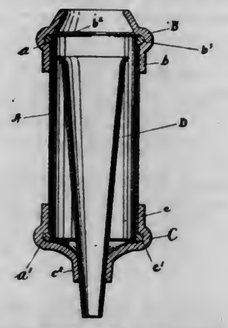
3. A rule consisting of an oblong body having a straight edge, supporting legs depending therefrom, which, when resting upon a plane surface, hold said straight edge spaced above the surface, and spacers depending from the rule underneath said straight edge, one of said spacers being movable.

4. A rule consisting of an oblong member having a straight edge, supporting legs depending therefrom and spaced apart, and also spaced from said straight edge and a spaced depending from the rule underneath the straight edge.

5. A rule consisting of an oblong member having a straight edge, supporting legs depending therefrom and spaced apart, and also spaced from said straight edge and a plurality of spacers depending from the rule underneath said straight edge, one of which is movable.

[Claim 6 not printed in the Gazette.]

1,213,814. TEAT-CUP FOR MILKING-MACHINES. CARL OSCAR ANDERSON, Lancaster, Pa. Filed Feb. 5, 1916. Serial No. 76,405. (Cl. 31—102.)



1. A teat cup comprising an outer casing open at both ends and having a mouth-piece at one end and a flexible closure at the other end thereof; said closure having a pendant tubular portion, and a tapered tubular member having its lower end inserted through the tubular pendant portion of said closure and supported thereby within said casing so as to adapt it to be given a reciprocatory movement by intermittent or pulsating suction.

2. A teat cup comprising a cylindrical member open at both ends having a detachable mouth-piece on one end and a detachable flexible closure at the other end thereof; said closure having a cylindrical portion fitting over the end of said cylindrical member and a reduced tubular extension depending therefrom, and a funnel-like member within said cylindrical member having its lower and smaller end protruding through the tubular extension of said closure and adjustably supported thereby within said cylindrical member.

3. A teat cup comprising an inflexible tubular member having at each end an annular rib or bead, a flexible mouth-piece having a cylindrical portion fitting over one end of said member, and a flexible cap or closure having a cylindrical portion fitting over the other end thereof; said cylindrical portions of said mouth-piece and closure each having an annular recess therein in which is seated one of the annular ribs on said flexible member for retaining it thereon, and a tapered tubular member adjustably supported by said flexible closure within said inflexible member so as to adapt it to be given a receprocatory movement by pulsating suction.

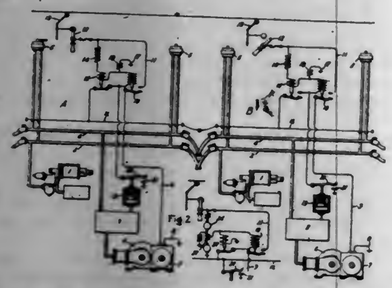
4. A teat cup comprising an outer member of tubular form, an inner member of funnel-like form adjustably supported in said outer member, the support therefor comprising a flexible closure on the lower end of said tubular member having a pendant tubular portion through which said inner member protrudes, whereby the latter is adapted to be given a reciprocatory movement by intermittent or pulsating suction.

5. A teat cup comprising an outer cylindrical member of approximately uniform diameter from end to end having a flexible mouth-piece at one end and a flexible closure at the other end thereof; said closure having a pendant tubular portion, an inner member of funnel like form protruding through the pendant tubular portion of said closure and supported thereby within said outer member so as to adapt it to be given a reciprocatory movement by intermittent or pulsating suction, and means for securing said mouth-piece and closure to said cylindrical member so as to permit the same to be readily removed when desired for cleaning or for taking the device apart.

1,213,815. CONTROL SYSTEM FOR RAILWAY AIR-COMPRESSORS. CLINTON J. AXTELL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 4, 1916. Serial No. 76,134. (Cl. 172—288.)

1. In combination, a source of supply one side of which is grounded, a plurality of electric motors, electromagnetic switches having one side of their actuating windings connected to the ungrounded side of said source, and arranged to connect each of such motors to the source of supply, independent switches associated with each motor connected to the other side of said actuating windings for controlling the energization of the corresponding electromagnetic switches, a low potential ground connection connected to the first mentioned side of each of said actuating windings, a synchronizing wire connected to the other side of each of said actuating windings, and means responsive to the voltage supplied to said electromagnetic switches controlling the connection of the actuating windings thereof to said synchronizing wire.

2. In combination, a source of supply one side of which is grounded, a plurality of electric motors, electromagnetic switches having one side of their actuating windings connected to the ungrounded side of said source, and arranged to connect each of such motors to the source of supply, independent switches associated with each motor connected to the other side of said actuating windings for controlling the energization of the corresponding electromagnetic switches, a low potential ground connection connected to the first mentioned side of each of said actuating windings, a synchronizing wire connected to the other side of each of said actuating windings, and protective relays responsive to the voltage supplied to said electromagnetic switches having their actuating windings connected in series with the windings of said switches, and having their contacts controlling the connection of the windings of said electromagnetic switches to said synchronizing wire.

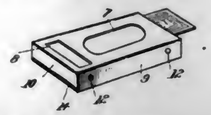


3. In combination, a compressed air system, a plurality of motor-driven air compressors supplying compressed air thereto, a source of electric current one side of which is grounded, electromagnetic switches having one side of their actuating windings connected to the ungrounded side of said source and arranged to connect each motor to said source, pressure actuated switches associated with each compressor and connected to the other side of said actuating windings for controlling the energization of the corresponding electromagnetic switches, a low potential ground connection connected to the first mentioned side of each of said actuating windings, a synchronizing wire connected to the other side of each of said actuating windings, and means responsive to the voltage supplied to said electromagnetic switches controlling the connection of the windings thereof to said synchronizing wire.

4. In combination, a plurality of cars, a compressed air system thereon supplied by motor driven compressors on two or more of said cars, a trolley wire, electromagnetic contactors arranged to connect each of said motors to the trolley wire, pressure actuated switches associated with each compressor arranged on a decrease of pressure in said system to complete an energizing circuit for the corresponding contactor, a train wire interconnecting the circuits of said contactors at points intermediate the actuating windings thereof and said pressure actuated switches, the other terminals of said windings being connected to the trolley wire through a resistance and the coil of a protective relay, the contacts of said protective relay controlling the connection of the windings of said contactors to said train wire, and resistance connections to ground intermediate the coils of said contactors and said relays.

1,213,816. TICKET-HOLDER. JOHN R. BALLENTINE, Toledo, Ohio. Filed Jan. 21, 1915. Serial No. 3,467. (Cl. 206—39.)

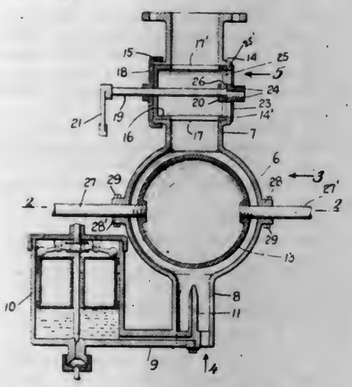
1. A ticket holder comprising a casing formed of two similar parts secured together, each part having side flanges which are lapped when the parts are assembled, and an end flange of slightly less width than the thickness of the casing, forming a slot at the end of the casing, each part also having an opening to permit finger pressure on a ticket in the casing, and a spring within the casing, adapted to hold such ticket against the wall of the casing and in line with the slot.



2. A double ticket holder comprising a casing made of two similar parts, each part having a thumb opening and also having two side flanges and one end flange, the side flanges of the two parts being fastened together, and the end flange being of slightly less width than the thickness of the casing, whereby a slot is formed at each end of the casing, and a spring within the casing adapted to hold two packs of tickets against said parts, with a ticket of each pack in line with one of the slots.

3. A ticket holder comprising a box formed of two similar parts, each part having a finger opening and also having two side flanges 9 and an end flange 10, said side flanges being lapped and fastened together, and each end flange being of less width than the thickness of the box, whereby a slot is formed in each end of the box, and a spring within the box adapted to hold a pack of tickets against each of said parts, with the outer ticket in line with one of the slots.

1,213,817. CARBURETER. JOSEPH S. BARUCH, New York, N. Y. Filed Oct. 29, 1913. Serial No. 797,983. (Cl. 257—241.)



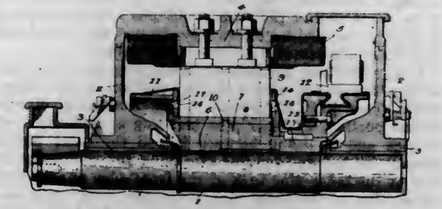
1. In a carbureter, the combination with two concentric hollow spheres separated by a narrow space, of means for heating the inner sphere, means for delivering air and fuel radially against one side of the inner sphere, and means for discharging the heated and mixed material from the opposite side of the outer sphere; whereby all the entering material is spread in a uniform thin layer over the hot inner sphere and after heating and mixing is collected and delivered as hot carbureted air of homogeneous character.

2. In a carbureter, the combination with an internally spherical hollow casing having on one side a relatively small radially disposed charge inlet passage and on the opposite side a corresponding outlet passage, of a concentric hollow sphere slightly smaller than, and fixed within, the casing, and means for heating the interior of said sphere.

3. In a carbureter, the combination with a casing provided with a spherical chamber having on one side an air inlet passage and on the opposite side a charge outlet passage, of a slightly smaller hollow sphere within said chamber, hot-fluid pipes passing into said chamber, communicating with the interior of said sphere and holding the latter concentric with the chamber, means within said

inlet passage for delivering fuel radially against the sphere, and means for admitting a variable amount of auxiliary air to said outlet passage.

1,213,818. COMPOSITE ARMATURE-SLEEVE. WALTER J. BAUROTH, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Aug. 31, 1911, Serial No. 646,995. Renewed June 3, 1916. Serial No. 101,646. (Cl. 171—206.)



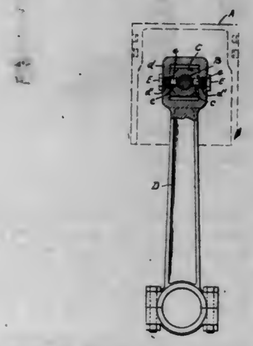
1. In an armature of the class described, the combination of a core, a support for said core, and a non-magnetic metallic shield cast integral upon the support and interposed between it and the core.

2. In an electro-magnetic machine, a magnetic core, a support for the core, and a non-magnetic metallic shield cast integral on said support and interposed between it and the core.

3. In an armature of the class described, the combination of a core, a support made of magnetic metal for said core, and a non-magnetic metallic shield cast integral upon the support and interposed between it and the core.

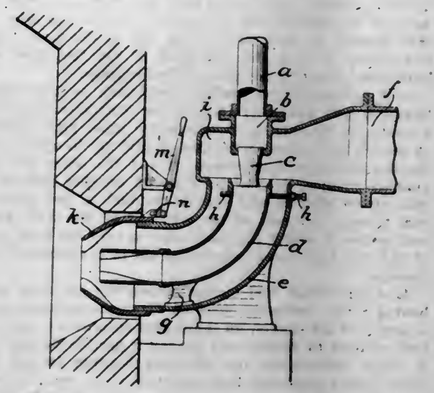
4. In an armature of the class described, the combination of a core, a support for said core, said support provided with recesses at its outer extremities, and a non-magnetic metallic shield cast integral upon the support extending into said recesses and interposed between the support and the core.

1,213,819. UNIVERSAL JOINT FOR CONNECTING-RODS. ELI A. BEARUP, Flint, Mich. Filed Mar. 6, 1916. Serial No. 82,312. (Cl. 74—17.)



In motion converting means, the combination of a piston having alined transverse passage-ways through its walls, a block provided with a passage-way therethrough adapted to register with the passage-ways through the piston walls and provided with bearing apertures in its sides, a wrist pin adapted to be driven through the passage-ways in the piston walls and through the passage-way in the said block, a connecting rod provided with an inner end having a transverse opening somewhat larger than the outside dimensions of the said block, the said inner end of the connecting rod with the said block being adjusted in its proper position with respect to the piston before the wrist pin is driven through the piston walls and the passage-way of the block, and threaded trunnions screwed into threaded apertures in the sides of the inner end of the connecting rod and having bearing portions engaging in the bearing apertures in the sides of the block, substantially as described.

1,213,820. PULVERIZED-FUEL BURNER. LARS H. BERGMAN, Philadelphia, Pa. Filed July 16, 1915. Serial No. 40,172. (Cl. 110—104.)

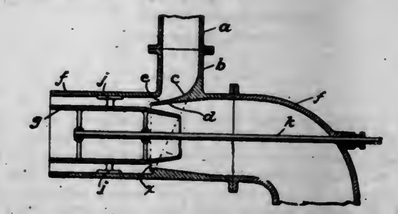


1. A pulverized fuel burner comprising an outer pipe and an inner pipe whose discharge ends extend horizontally, an inlet for air under pressure common to both pipes and communicating therewith at their rear ends, a downwardly extending fuel supply chamber provided with an outlet arranged to receive the coal by gravity, said fuel outlet communicating directly with one of said pipes and opening forwardly thereinto in the direction of the flow of air therethrough, whereby the propulsion and combustion of the fuel is effected with the use of but one source of air supply.

2. A pulverized fuel burner comprising an outer air pipe and an inner air and fuel pipe, said pipes being curved to provide horizontally extending discharge ends and vertically extending admission ends, a chamber for air under pressure common to both pipes arranged above the admission ends of the pipes, and a fuel inlet extending downwardly into the admission end of the inner pipe.

3. A pulverized fuel burner comprising an inner fuel carrying pipe, an outer combustion air pipe, a fuel inlet to the inner pipe, and means to supply air to both pipes, the inner pipe having longitudinal corrugations to insure a more intimate mixture of the combustion air with the fuel.

1,213,821. PULVERIZED-FUEL BURNER. LARS H. BERGMAN, Philadelphia, Pa. Filed July 16, 1915. Serial No. 40,173. (Cl. 110—104.)



1. A pulverized fuel burner comprising an outer pipe having a rear extension adapted for communication with a source of air supply, an inner pipe open at its rear end toward the forward portion of said rear extension of the outer pipe and adapted to receive and convey a portion of

said air to effect combustion and affording between it and the outer pipe an annular passage, open at its rear, for another portion of said air to atomize and convey the fuel, and a fuel inlet to said passage in front of the rear end of the inner pipe.

2. A pulverized fuel burner comprising an outer pipe having a rear extension adapted for communication with a source of air supply, an open-ended inner pipe adapted to receive and convey a portion of said air to effect combustion and affording between it and the outer pipe an annular passage, open at its rear, for another portion of said air to atomize and convey the fuel, a fuel inlet to said passage in front of the rear end of the inner pipe, and means to vary the area back of the fuel inlet for admission of air to the annular fuel passage.

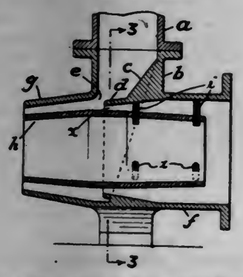
3. A pulverized fuel burner comprising an outer pipe having a rear extension adapted for communication with a source of air supply, an open-ended inner pipe adapted to receive and convey a portion of said air to effect combustion and affording between it and the outer pipe an annular passage, open at its rear, for another portion of said air to atomize and convey the fuel, a fuel inlet to said passage in front of the rear end of the inner pipe, and means to adjust the inner pipe to vary the area back of the fuel inlet for admission of air to the annular fuel passage.

4. A pulverized fuel burner comprising an outer pipe having a rear extension adapted for communication with a source of air supply, an inner pipe open at its rear end and adapted to receive and convey a portion of said air to effect combustion and affording between it and the other pipe an annular passage, open at its rear, for another portion of said air to atomize and convey the fuel, said inner pipe being tapered inwardly toward its rear, and a fuel inlet to said passage.

5. A pulverized fuel burner comprising an outer pipe having a rear extension adapted for communication with a source of air supply, an open-ended inner pipe adapted to receive and convey a portion of said air to effect combustion and affording between it and the outer pipe an annular passage, open at its rear, for another portion of said air to atomize and convey the fuel, said inner pipe being tapered toward its rear, a fuel inlet to said passage, and means to slide the inner pipe longitudinally and thereby vary the area back of the fuel inlet for admission of air to the annular fuel passage.

[Claims 6 to 11 not printed in the Gazette.]

1,218,822. PULVERIZED-FUEL BURNER. LARS H. BERGMAN, Philadelphia, Pa. Filed July 16, 1915. Serial No. 40,174. (Cl. 110—104.)



1. A pulverized fuel burner comprising an outer pipe, an inner pipe inclosing a combustion air passage and affording between it and the outer pipe a passage for fuel and for fuel atomizing and conveying air, an inlet for air common to both pipes, a fuel hopper communicating with the space between said pipes, said pipes being arranged to form a forwardly contracting annular passage, back of said fuel inlet, whose mouth is located to the rear of the front wall of the hopper.

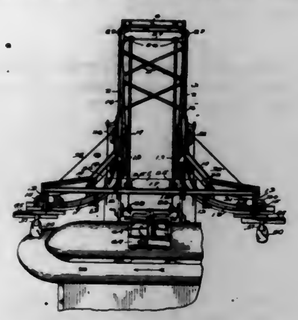
2. A pulverized fuel burner comprising an outer pipe, a fuel hopper, an inner pipe inclosing a combustion air passage and affording between it and the outer pipe a passage for fuel and for fuel atomizing and conveying air, and an inlet for air common to both pipes, the outer pipe having a conical portion whose front edge terminates back of the front wall of the hopper.

3. A pulverized fuel burner comprising an outer pipe, a fuel hopper, an inner pipe inclosing a combustion air passage and affording between it and the outer pipe a passage for fuel and for fuel atomizing and conveying air, and an inlet for air common to both pipes, the outer pipe having a conical portion whose front edge terminates back of the front wall of the hopper and also a conical portion in front of the fuel hopper to give the fuel and air leaving the burner a contracted or converging shape.

4. A pulverized fuel burner comprising an outer pipe having between its ends a conical portion, a fuel hopper whose front wall is forward of the front edge of said conical portion, an inner pipe inclosing a combustion air passage and affording between it and the outer pipe a passage for fuel and for fuel atomizing and conveying air, part of the inner pipe back of the front edge of said conical portion of the outer pipe converging rearwardly and affording a forwardly contracting passage for the passage of air toward the fuel inlet, and an inlet for air common to both pipes.

5. A pulverized fuel burner comprising an outer pipe, a fuel hopper, an inner pipe inclosing a combustion air passage and affording between it and the outer pipe a passage for fuel and for fuel atomizing and conveying air, and an inlet for air common to both pipes, the outer pipe having a conical portion whose front edge terminates back of the front wall of the hopper, the opposite front end portions of both pipes converging toward the common axis of said pipes.

1,213,823. MAIL-BAG DELIVERING AND RECEIVING APPARATUS. J HENRY BICKHARD, Toledo, Ohio. Filed Nov. 3, 1916. Serial No. 129,315. (Cl. 258—10.)

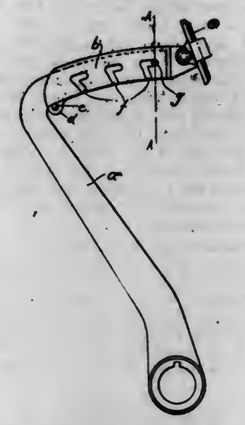


1. In a mail bag delivering and receiving apparatus, the combination of a telescoping frame having two pairs of fingers, a second frame having attached thereto the mail bag to be delivered or received, a pair of conveyers and tracks over which the conveyers move, the conveyers having fingers for receiving or delivering the second named frame.

2. In a mail bag delivering and receiving apparatus, the combination of a telescoping frame having two pairs of fingers, a second frame having attached thereto the mail bag to be delivered or received, a pair of conveyers and tracks over which the conveyers move, the conveyers having fingers for receiving or delivering the second named frame, and means for hoisting the tracks over which the conveyer moves away from the track over which the train moves.

3. In a mail bag receiving apparatus, the combination of a frame having fingers, a frame to which the mail bag is secured supported on the fingers of the first named frame, a second set of fingers, a pair of vertically disposed and pivotally supported plates located below the second set of fingers, springs for yieldingly holding the free ends of the plates in proximity to each other, the said plates being so positioned relative to the fingers as to engage the bag when the fingers engage the second named frame.

1,213,824. EXTENSION FOR PEDALS. EDGAR J. BLOOM, Tiffin, Ohio. Filed May 29, 1916. Serial No. 100,549. (Cl. 74—81.)



1. The combination of a pedal lever provided with a projecting portion on its side, and an extension adapted to fit the pedal lever and provided with bayonet slots adapted to selectively engage the projection on the side of the pedal lever.

2. The combination of a pedal lever provided with a cross pin having projecting ends, and an extension in the form of a bar of U cross section provided in its sides with bayonet slots which can be selected to be brought into engagement with the ends of the cross pin to vary the projection of the extension on the pedal lever.

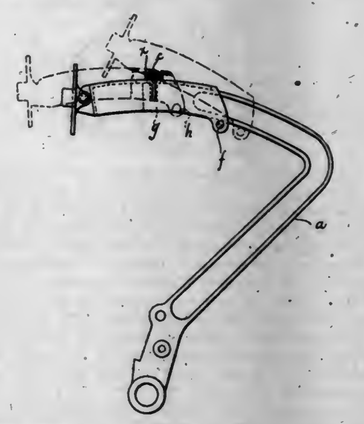
3. The combination of a pedal lever provided with a projection in its side, and a bayonet-slotted extension of U cross section straddling the top of the pedal lever and provided at its forward end with a pin adapted to engage under the pedal lever and at its rear end with the pedal, the said extension being adjustable upon the pedal lever by drawing the same rearwardly, swinging the same out of the bayonet slot and sliding the same along the pedal lever to bring the desired bayonet slot over the cross pin again.

4. The combination of a pedal lever provided with a projecting portion on its side, and an extension of U-shape cross section adapted to interlock with the pedal lever at selected positions, the said extensions having one or more lugs cut out of the metal in its top for the purpose of taking up looseness when desired.

5. The combination with a foot lever provided with a part of a locking device, of an extension having both a sliding and a pivotal connection with the foot lever and provided with a plurality of locking device parts, the said extension being arranged to pivot on the pedal lever to cause one of its locking device parts to be disengaged from the pedal lever locking part and the said extension then being capable of being longitudinally slid along the pedal lever part to bring another locking part into engagement with the pedal lever locking part when the said extension is swung back to its initial angular position.

1,213,825. EXTENSIBLE PEDAL. EDGAR J. BLOOM, Tiffin, Ohio. Filed June 23, 1916. Serial No. 105,364. (Cl. 74—81.)

1. The combination of a pedal lever terminal, an extension adapted to slidingly engage the pedal lever terminal and provided with two or more slots, each slot provided with two portions of different width and connected by a reduced passage-way, and a locking member which can be adjusted toward or away from the pedal lever terminal and which has three diameters, a diameter which can pass through the reduced passage-way of the slot, a head portion which can only pass through the large portion of the slot, and an intermediate locking shoulder portion which is adapted to fit into the offset or smaller portion of the slot.



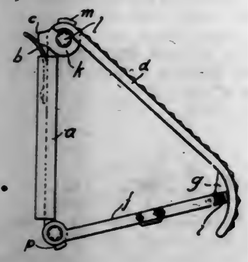
2. The combination of a pedal lever terminal, an extension slidingly fitting over the same and having a plurality of slots, each slot having two portions of different widths connected by a reduced passage-way, and a locking bolt and nut adapted to screw into the pedal lever terminal and having three diameters, one to pass through the reduced portion, a second to fit into the smaller portion of the slot, and a third to pass through only the large portion of the slot.

3. The combination of a pedal lever terminal, an extension slidingly engaging thereon and provided with a plurality of slots, each slot comprising two portions of different widths connected by a reduced passage-way, and a locking member screwing toward or away from the pedal lever terminal and comprising three diameters, one arranged to pass through the reduced passage-way, a second portion of larger diameter and toward the outside of the locking bolt arranged to fit into the smaller portion of the slot, the said portions of two diameters being connected by a tapered portion so as to cause the extension to so arrange itself as to bring the smaller portion of the slot into registry with the locking member, and a portion or head having a diameter larger than the two portions previously mentioned and which will pass through only the large portion of the slot.

4. The combination of a pedal lever terminal having a recess on its under side, an extension of inverted U shape cross section and having at its inner end a pin, the said extension adapted to straddle the pedal lever extension and the said pin adapted to fit on the under side of the pedal lever terminal, a locking member adjustable into or away from the pedal lever terminal, the said extension being provided with a plurality of slots in its top which coöperate with the locking bolt and which in certain positions may be lifted over the locking member head, the said pin upon which the extension swings being arranged to drop into the recess in the bottom of the pedal lever terminal to allow the walls of a slot to clear the head of the locking member.

5. The combination of a pedal lever terminal, an extension arranged to slide along the pedal lever terminal and provided with a plurality of slots, and locking means having a screw adjustment with respect to the pedal lever terminal and adapted to pass through the said slots and to positively as well as frictionally lock the extension at selected points along the pedal lever terminal.

1,213,826. EXTENSIBLE PEDAL. EDGAR J. BLOOM, Tiffin, Ohio. Filed Nov. 1, 1916. Serial No. 129,005. (Cl. 74—81.)



1. An extension for pedals, having in combination, a base plate adapted to be supported upon the pedal lever, and a foot rest secured thereto and adapted to be swung out and secured in such swung out position for the purpose of lengthening the pedal, substantially as described.

2. A pedal lever extension, having in combination with a pedal lever, a base plate supported thereupon, and a foot rest which folds out and is securable in such folded out position to extend the pedal, substantially as described.

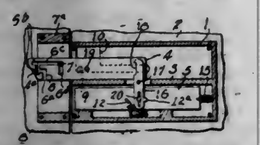
3. A pedal lever extension, having in combination, a base plate adapted to be supported by the pedal lever, a foot rest pivoted to one end of the base plate, and a brace pivoted to the other end, the foot rest folding out to lengthen the pedal lever and the brace folding out to hold the foot rest spaced from the base plate.

4. A pedal lever extension, having in combination, a base plate supported by the pedal lever, a foot rest pivoted to one end of the base plate, a spring thrusting against the foot rest tending to force it toward the base plate, and a brace secured to the base plate and adapted to fold out to hold the foot rest in a folded out position against the stress of the spring.

5. A foot lever extension, having in combination, a base plate adapted to be supported by the foot lever, a spring secured thereto, a foot rest pivoted to the upper end of the base plate and provided with projecting lugs adapted to engage the free end of the spring, the under side of the foot rest being provided with a lug, and a brace pivoted to the lower end of the base plate and whose free end is adapted to engage the lug.

[Claim 6 not printed in the Gazette.]

1,213,827. DOUBLE-BOLT LOCK. GEORGE BLUME, Siberia, Ind. Filed June 1, 1916. Serial No. 101,059. (Cl. 70—74.)

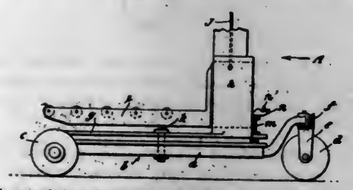


1. A lock including a casing, a locking bar slidable within the casing and having the lower corner of the nose thereof beveled, a tortuous slot being provided in the end of the locking bar and the slot being provided with angular corners having notches in communication therewith, means for manipulating the locking bar, and a pin for engagement with the tortuous slot in the end of the bar, the mouth of the slot opening through the lower edge of the bar just to the rear of the beveled nose thereof.

2. A lock including a casing, upper and lower locking bars slidably mounted within the casing, manual means for manipulating one of the locking bars, a transverse lever pivotally mounted at an intermediate point in its length, one end of the lever being loosely connected to the other locking bar, while the opposite end of the lever is provided with a notched seat, a pin upon the first mentioned locking bar for engagement with the notched seat of the lever upon an initial backward movement of the locking bar to swing the lever and project the second locking bar into operative position, and key controlled means for retaining the second locking bar in operative position.

3. A lock including a casing, upper and lower locking bars slidably mounted within the casing, one of the bars having a tortuous slot in the end thereof, means for manipulating the said locking bar, a pin for engagement with the said tortuous slot, a transverse lever pivotally mounted at an intermediate point in its length, one end of the lever being loosely connected to the other locking bar, while the opposite end of the lever is provided with a notched seat, means upon the first locking bar for engaging the notched seat of the lever to swing the lever and project the second locking bar into operative position when the first bar is given an initial backward movement, and key controlled means for retaining the second locking bar in operative position.

1,213,828. REVOLVING PORTABLE ELEVATOR-LOCK. WILLIAM EDWARD BOEHCK, Jersey City, and HENRY SHELDEN GERMOND, Jr., Bayonne, N. J., assignors to New York Revolving Portable Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 10, 1916. Serial No. 114,177. (Cl. 187—9.)



1. A revolving portable elevator including a truck; an elevator-base pivotally mounted thereon; a load-carrying platform carried by said elevator-base; and a locking screw mounted in said elevator-base and arranged to bear frictionally against said truck and thereby to lock the same and said elevator-base together.

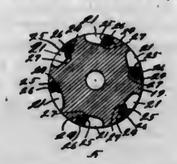
2. A revolving portable elevator including a truck; an elevator-base pivotally mounted thereon; a load-carrying platform carried by said elevator-base; and a locking screw mounted in said elevator-base and arranged to bear frictionally against said truck and thereby to lock the same and said elevator-base together; said locking screw being formed with a head shaped to receive the foot of the workman for turning said screw.

1,213,829. APPARATUS FOR FACILITATING THE BURNING OF STUMPS. RALPH BOEHNE, Doniphan township, Hall county, Nebr. Filed Oct. 9, 1916. Serial No. 124,655. (Cl. 98—3.)



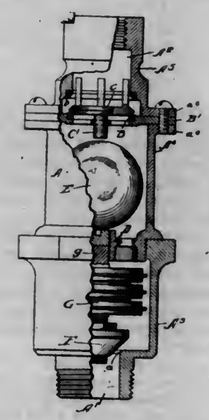
Apparatus for facilitating the burning of stumps comprising a base plate having a tubular flanged central portion, said plate being adapted to rest on the ground to cover a recess therein adjacent to the stump, a stand pipe mounted in said tubular flanged central portion, and a funnel revolubly mounted in said stand pipe, and provided with a wind vane attached to the rear thereof whereby the mouth of said funnel is automatically turned in the direction from which the wind is coming, substantially as described.

1,213,830. PLANTER. WALTER H. BOON, Carbon, Tex. Filed Aug. 31, 1916. Serial No. 117,904. (Cl. 111—9.)



In a peanut planter, the combination of a seed receptacle having a restricted throat in its bottom and a drop feed wheel having pockets in its periphery, of means for rotating the feed wheel, whereby the pockets will move past and adjacent said throat, each pocket at one end having a cavity, a cushion adhesively secured in said cavity, said pockets having projections adjacent the cavity to additionally secure the cushion in place, and over which projections said cushion engages.

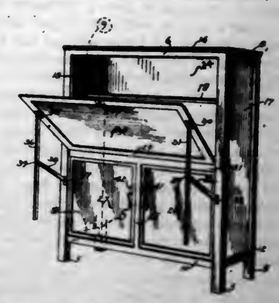
1,213,831. COMBINED VALVE DEVICE FOR HOT-WATER HEATING SYSTEMS. GEORGE L. BOTTUM, Chicago, Ill. Filed Mar. 4, 1916. Serial No. 82,034. (Cl. 137—122.)



1. The combination in a single unitary fitting comprising a valve casing or body having a sole inlet at the lower part and an outlet at the upper part and a continuous passage from the inlet to the outlet, of a valve at the upper part seating upwardly for preventing liquid outflow; an apertured diaphragm or spider below said valve and a float retained by said spider below the valve in position for uplifting the valve to its seat upon rise of liquid in the passage to a pre-determined height; a valve suspended from the spider and a seat for said valve at the inlet, the suspending means being heat-responsive or thermostatic member adapted to expand for lowering the valve to its seat upon rise of temperature to a given degree above the normal, and to contract for lifting the the valve from its seat upon fall of temperature from that point.

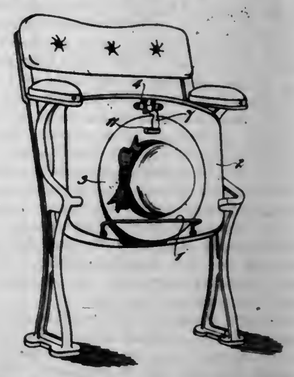
2. The combination in a single unitary fitting comprising a valve casing or body having an inlet at the lower part and an air outlet at the upper part and a continuous passage from the inlet to the outlet, of a check valve located toward the outlet end seating downward for preventing back-flow of air through said outlet; a valve constituting the sole control of the inlet port and seating outwardly thereat; an apertured diaphragm or spider intermediate the two valves, said inlet valve being suspended from said spider, the suspending means consisting of a heat-responsive or thermostatic member adapted to expand for lowering the valve to its seat upon a pre-determined rise of temperature above the normal.

1,213,832. STAINING AND FINISHING CABINET. JOHN ARTHUR BRANDT, St. Louis, Mo. Filed May 1, 1915. Serial No. 25,276. (Cl. 45—51.)



In a device of the character described, in combination with horizontal and vertical elements, a combined door and staining plate, said vertical elements secured to said horizontal elements to form compartments substantially adjacent each other, said door and staining plate hingedly secured to one of said horizontal elements, supports pivotally secured to said door and staining plate, arms pivotally secured to certain of said vertical elements, said arms pivotally secured to said supports, said arms and supports being positioned laterally adjacent each other so that said supports form pedestals for said door and staining plate when said door and staining plate is in an open position and so that said arms form braces for said supports, when said door and staining plate is in an open position, in such a manner that said door and staining plate will lie in a horizontal plane when open, and so that said arms and said supports will be held firmly adjacent certain of said vertical elements when said door and plate is in a closed position.

1,213,833. MEANS FOR HOLDING HATS. EDMUND BREWSTER, Daisyville, England. Filed Oct. 31, 1916. Serial No. 128,722. (Cl. 155—33.)



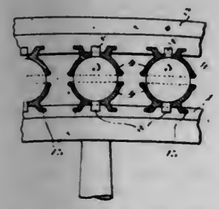
1. A device for holding a hat comprising in combination a foundation, a light bar provided with means of attachment to the said foundation and having a portion held at some distance therefrom, and a clip member attached to the said foundation, coming opposite the said bar and comprising an arm pivoted so as to swing over in a plane perpendicular to the foundation surface, a part of said arm adapted to come into contact with and hold the brim of the hat, and spring means for keeping the said arm normally pressed toward the foundation, substantially as described.

2. In a tip-up chair, the combination with the lower surface of the seat-portion thereof of a device for holding hats comprising a light bar provided with means of at-

tachment to the said surface and having a portion held at some distance therefrom, and a clip member attached the said surface, coming opposite the bar and comprising an arm pivoted so as to swing over in a plane perpendicular to the surface, a part of the said arm being adapted to come into contact with and hold the brim of the hat, and spring means for keeping the said arm normally pressed toward the surface, substantially as described.

3. In a tip-up chair, the combination with the lower surface of the seat-portion thereof of a device for holding hats comprising a light bar provided with means of attachment to the said surface and having a portion held at some distance therefrom, and a clip member attached to the said surface and coming opposite the bar, such clip member comprising a plate attached to the surface and provided with upstanding lugs, another plate constituting an arm and furnished with pivots pivoted to the lugs on the first mentioned plate, in such a way that the plate constituting the arm can swing in a plane perpendicular to the surface, a roll for pressing on the brim of a hat at the free end of the said arm, and spring means adapted to keep the said roll pressed toward the surface when the clip is released, substantially as described.

1,213,834. ELASTIC WHEEL-TIRE. ROBERT BUNZLAU and CARL LUDWIG STOLL, Vienna, Austria-Hungary, assignors to the Firm "Sembusto" Elastische Radbereifungen Gesellschaft M. B. H., Vienna, Austria-Hungary. Filed June 8, 1916. Serial No. 102,585. (Cl. 152—36.)



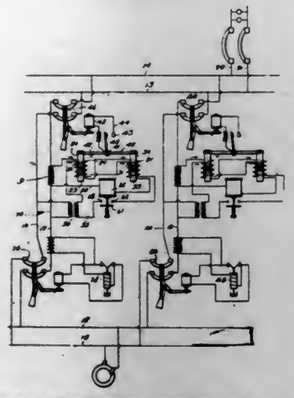
1. In an elastic wheel tire the combination of an inner rim, an outer rim and resilient elements interposed therebetween, each of said elements being composed of a pair of cup shaped members and of an elastic body seated in the pair of cup shaped members so as to act as a cushioning and at the same time as a transmitting mens, the base portion of the cup shaped members being provided with flanges engaging grooves in the respective rim.

2. In an elastic wheel tire the combination of an inner rim, an outer rim and resilient elements interposed therebetween, each of said elements being composed of a pair of cup shaped members and of an elastic body seated in the pair of cup shaped members so as to act as a cushioning and at the same time as a transmitting means, the base portion of the cup shaped members being provided with flanges engaging grooves in the respective rim and with lateral lugs engaging the rim.

3. In an elastic wheel tire the combination of an inner rim, an outer rim and resilient elements interposed therebetween, each of said elements being composed of a pair of cup shaped members and of an elastic body seated in the pair of cup shaped members so as to act as a cushioning and at the same time as a transmitting means, the base portion of the cup shaped members being provided with flanges engaging grooves in the respective rim and with a pair of lateral lugs at each side, said lugs engaging recesses in the rim.

4. In an elastic wheel tire the combination of an inner rim, an outer rim and resilient elements interposed therebetween, each of said elements being composed of a pair of cup shaped members and of an elastic body seated in the pair of cup shaped members so as to act as a cushioning and at the same time as a transmitting means, the base portion of the cup shaped members being provided with flanges engaging grooves in the respective rim and with lateral lugs engaging the rim, said lugs being composed of metal strips capable of being bent over so as to engage the rim.

1,213,835. REVERSE-CURRENT RELAY. GEORGE A. BURNHAM, Saugus, Mass., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Jan. 24, 1913. Serial No. 743,915. (Cl. 175—294.)



1. A reverse current relay comprising a pair of differential coils, a switch controlled by said coils, normally biased to the open position and movable to the closed position upon reversal of current, said coils having two windings, one of which is normally inactive and means controlled by the current through the second winding for rendering said first winding active.

2. A reverse current relay having windings arranged in differential relation, a rock-switch governed by said windings normally biased by the relay current to open position and adapted to be moved to closed position upon reversal of the current, one of the windings being included in an open circuit, and means to close said circuit, substantially as described.

3. A reverse current relay having windings arranged in differential relation, a rock-switch governed by said windings normally biased by the current coils of the relay to one position and adapted to be moved to another position upon reversal of the current, one of the windings being normally inactive, and means operated upon an abnormal condition of the circuit to render said winding active, substantially as described.

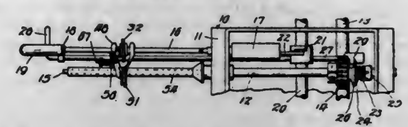
4. A reverse current relay comprising a pair of differential-coils, a rock-switch controlled by the coils normally biased to one position and adapted to be moved to another position upon reversal of the current, one winding of each of said coils being normally inactive, and means controlled by an abnormal condition of the circuit to render said windings active, substantially as described.

5. A reverse-current relay comprising a pair of differential-coils, a rock-switch upon the arms of which the coils act, normally biased to open position and adapted to be moved to closed position upon reversal of the current, one winding of each of said coils being included in an open circuit, and means to close said circuit, substantially as described.

[Claims 6 to 31 not printed in the Gazette.]

1,213,836. TRAVERSE MECHANISM FOR YARN-WINDING MACHINES. LEON J. CAMPBELL, Chicago, Ill., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 4, 1916, Serial No. 82,031. Renewed Nov. 27, 1916. Serial No. 133,756. (Cl. 242—27.)

1. A traverse mechanism, comprising a traverse bar, a bearing member mounted on said traverse bar and having screw-threaded connection therewith, a traverse wheel adjustably mounted on said bearing member and adapted to turn therewith, and means for adjusting said traverse wheel laterally on said bearing member and holding said traverse wheel in its position of adjustment.



2. A traverse mechanism, comprising a traverse bar, a traverse wheel adjustably mounted on said traverse bar and having screw-threaded connection therewith, and means for adjusting and holding said traverse wheel in a position at an inclination to said traverse bar.

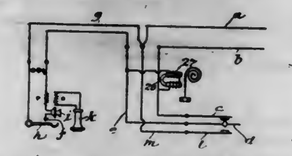
3. A traverse mechanism, comprising a traverse bar, a traverse wheel adjustably mounted on said traverse bar and having screw-threaded connection therewith, and means for adjustably and yieldably holding said traverse wheel in a position at an inclination to said traverse bar.

4. A traverse mechanism, comprising a traverse bar, a bearing member mounted on said traverse bar and having screw-threaded connection therewith, a traverse wheel adjustably mounted on said bearing member, means holding said traverse wheel from rotation about said bearing member, and means for adjusting said traverse wheel laterally on said bearing member and yieldably holding said traverse wheel in its position of adjustment.

5. A traverse mechanism, comprising a traverse bar, a bearing member mounted on said traverse bar and having screw-threaded connection therewith, a traverse wheel adjustably mounted on said bearing member, means holding said traverse wheel from rotation about said bearing member, and means for adjusting and yieldably holding said traverse wheel in a position at an inclination to said traverse bar.

[Claims 6 to 22 not printed in the Gazette.]

1,213,837. SIGNAL DEVICE FOR TELEPHONE SYSTEMS. ARTHUR E. CASE, Chicago, Ill. Filed Jan. 10, 1913. Serial No. 741,197. (Cl. 179—7.)



1. The combination with a telephone line, of a substation, including a transmitter, a mechanical vibratory singaling device sustained independently of the transmitter, means for electro-magnetically transmitting the signal over the line, means for operating said device and means controlled by said operating means for shunting the telephone set from the line during the operation of said device by the operating means and for a predetermined period thereafter.

2. The combination with a telephone-line, of a sub-station including a transmitter, a resilient vibratory signaling device mounted independently of the transmitter, means for electro-magnetically transmitting a signal over the line, means for operating said device, and means controlled by said operating means for shunting the telephone set from the line when said device is operated by said operating means and during the residual vibration of the device.

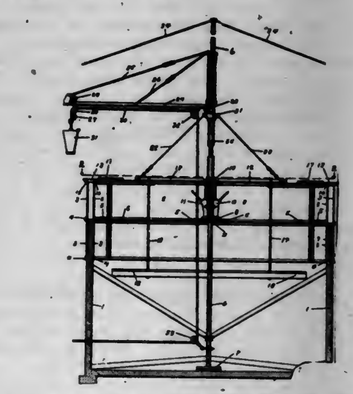
3. The combination with a telephone-line, of a sub-station, including a transmitter, a mechanical vibratory signaling device mounted independently of the transmitter, means for electro-magnetically transmitting the signal over the line, means for operating said device, and means controlled by said operating means for shunting the telephone set from the line during the transmission of a signal.

4. The combination with a telephone line, of a substation including a telephone set, a mechanical signaling device, an electro-magnet connected to the line, an armature for the magnet operated mechanically by said device, and operated mechanically by said device to vary the magnetic flux and the flow of potential over the line responsively to the mechanical vibrations of said device, and means for shunting the telephone set from the line during the transmission of a signal.

5. The combination with a telephone line, of a substation, a mechanical signaling device, electro-magnetic means connected to the line operated mechanically by said device for varying the magnetic flux and the flow of potential over the line according to the mechanical vibrations of said device, and means for conjointly causing the operation of said device and shunting the telephone set from the line during the transmission of a signal.

[Claims 6 to 11 not printed in the Gazette.]

1,213,838. APPARATUS FOR ERECTING CONCRETE SILOS AND SIMILAR STRUCTURES. ELON K. CONKLIN, Hartford, Mich. Filed Jan. 22, 1915. Serial No. 3,688. (Cl. 25—124.)



1. In a structure of the class described, the combination of a mast, a hub slidable on said mast, means for elevating said hub, a plurality of radiating arms carried by said hub, spacer bars pivoted to the ends of said arm and each provided with a pair of notches to receive the upper edges of outer and inner mold members, and means for securing said spacer bars to one of the mold members with which they engage, all coacting substantially as described and for the purpose specified.

2. In a structure of the class described, the combination of a mast, a hub slidable on said mast, means for elevating said hub, a plurality of radiating arms carried by said hub, spacer bars pivoted to the ends of said arm and each provided with a pair of notches to receive the upper edges of outer and inner mold members, all coacting substantially as described and for the purpose specified.

3. In a structure of the class described, the combination of a door form comprising a pair of vertically extending angle bars, a second pair of vertically extending angle bars, vertical plates secured to said angle bars, horizontal plates provided with strengthening ribs extending between said vertical plates and secured thereto, a keeper socket provided with a boss having a threaded socket therein, secured to the outer face of said plate by means of a screw extending through said plate and threaded in said socket whereby said keeper socket may be disconnected from said door form, all coacting substantially as described and for the purpose specified.

4. In a structure of the class described, the combination of a door form comprising a pair of vertically extending angle bars, a second pair of vertically extending angle

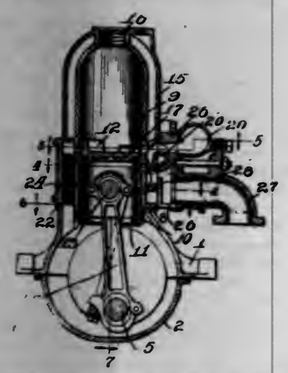
bars, vertical plates secured to said angle bars, a keeper socket provided with a boss having a threaded socket therein, secured to the outer face of said plate by means of a screw extending through said plate and threaded in said socket whereby said keeper socket may be disconnected from said door form, all coacting substantially as described and for the purpose specified.

1,213,839. EDUCATIONAL APPLIANCE. JOSHUA C. CONROD, Cement, Okla. Filed Feb. 18, 1913. Serial No. 749,103. (Cl. 46—25.)



A card game apparatus comprising a pack of substantially ninety-four cards divided into twenty-one different groups, nineteen of which consisting of four cards to each group, the twentieth group consisting of six cards, and the twenty-first group twelve cards, whereby the pack of cards may be divided into two decks of equal number of cards each, each group being distinguished by historical periods, each card of each group being distinguished by a world famous person, the cards of the whole pack being numbered chronologically, each group being further distinguished numerically, the group consisting of twelve cards being distinguished as special cards, indicative of points to be added or points to be forwarded or subtracted in counting the game, a single card associated with and completing the twelve cards to the special group and having means whereby it is distinguished individually from the cards of the special group and individually distinguished from the cards of the other groups, and indicative of amusement and merriment to the game.

1,213,840. CONVERTIBLE INTERNAL-COMBUSTION ENGINE. ALBERT E. COOK, Odebolt, Iowa, and THOMAS VAN TUYL, Kankakee, Ill.; said Van Tuyl assignor to said Cook. Filed Aug. 31, 1912. Serial No. 718,029. (Cl. 123—21.)



1. A 2-stroke cycle engine embracing a cylinder, a crank case attached thereto, an exhaust valve and ignition means timed or 2-stroke operation of said engine, means simultaneously adjusting the timing of said valve and said ignition means to cause 4-stroke cycle operation of said engine, and means associated with said crank case for introducing a double fuel charge under compression into said cylinder when operating as a 4-stroke engine.

2. A 2-stroke cycle engine embracing a cylinder, a piston, a crank case, a by-pass connecting said crank case with said cylinder, vaporizing and mixing mechanism for a fuel charge within said by-pass, igniting means, an exhaust controlling valve, lever actuated means simultaneously adjusting said exhaust controlling valve, and the timing of said ignition means for 4-stroke cycle operation, and mechanism permitting inlet of two fuel charges prior to ignition for each 4-stroke cycle power stroke.

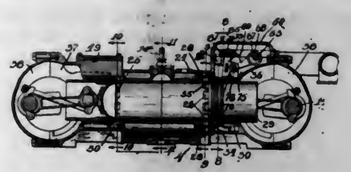
3. A 2-stroke cycle engine embracing a cylinder, a crank case, a valve controlling the outlet from the cylinder, timed ignition means, means compressing the charge prior to inlet to the cylinder, manually operated means for varying the timing of said ignition means to convert the engine from a 2-stroke to a 4-stroke motor, and vice versa, without stopping the motor, and mechanism for adjusting said valve and ignition means to permit a second fuel charge inlet prior to ignition when operating as a 4-stroke cycle engine.

4. An internal combustion two stroke cycle engine comprising a cylinder, a piston, means changing the cycle of said engine without stopping from two stroke to four stroke cycle and vice versa, and mechanism permitting an additional fuel mixture to pass into said cylinder for one cycle when operating as a four stroke cycle engine.

5. In a convertible 2-stroke or 4-stroke cycle internal combustion engine of the 2-stroke type, a cylinder, a crank case attached thereto having a by-pass communicating with said cylinder, plates in said by-pass for vaporizing and mixing a fuel charge, a valve mechanically operated to retain a first fuel charge in the cylinder while a second fuel charge flows thereinto, means compressing the second fuel charge in said crank case prior to inlet to the cylinder, and preliminary to final compression, ignition means, and manually operated mechanism for timing the same according to the operation of said valve.

[Claims 6 to 12 not printed in the Gazette.]

1,213,841. OPPOSED CONVERTIBLE INTERNAL-COMBUSTION ENGINE. ALBERT E. COOK, Odebolt, Iowa, and THOMAS VAN TUYL, Kankakee, Ill.; said Van Tuyl assignor to said Cook. Filed Sept. 3, 1912. Serial No. 718,180. (Cl. 123—21.)



1. An engine of the class described embracing a plurality of cylinders open at each end; crank cases connecting like ends of said cylinders, a crank shaft journaled in the crank cases at each end of each cylinder, oppositely movable coacting pistons in each cylinder and connected respectively with said crank shafts, centrally disposed ignition means connected in said cylinders, means admitting an explosive charge to the crank cases for primary compression, ports at one end of each cylinder for admitting the charge between the pistons at the end of a power stroke, exhaust ports at the other end of each piston for exhausting the products of combustion at the end of the power stroke, an exhaust valve, mechanism holding the same normally inert for two cycle operation and mechanism actuating the same for closing the exhaust ports at alternate outward strokes of the piston to hold a previously compressed charge while delivering an additional charge of mixture into the cylinders, and means shifting the timing means for four stroke operation.

2. An engine of the class described embracing parallel open ended cylinders, a crank case at each end thereof, crank shafts therein, oppositely reciprocating pistons in said cylinders connected to drive said crank shafts, inlet and exhaust ports, an igniting mechanism adjustable to two stroke and four stroke operation, mechanically actuated valves acting to close the exhaust ports at alternate outward movements of the pistons, and means to adjust the valves to prevent exhaust of the fuel charge from said cylinders preliminary to the admission of an additional charge into said cylinders.

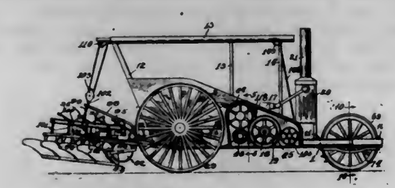
3. In a device of the class described a central firing internal combustion engine, normally of the two stroke type, pistons therein, an exhaust sleeve valve inert at two stroke operation, and shifting and timing mechanism adapted to afford ignition at alternate compression strokes of the piston and adapted to actuate said valve to close the exhaust ports at all outward movements of the pistons except at the end of the power stroke.

4. In an engine of the class described a cylinder open at each end, a pair of pistons movable therein, inlet ports at one end of said cylinder controlled by movement of one of said pistons to permit intake of fuel therethrough, crank cases mounted on each end of said cylinder and communicating with one another adapted to receive the fuel passing inwardly through said inlet ports, inlet ports at the other end of said cylinder adapted to permit a flow of fuel from said crank cases into said cylinder between said pistons for firing, exhaust ports in said cylinder controlled by movement of one of said pistons to permit eduction of the products of combustion, and a sleeve valve operated synchronously with said pistons to open and close said exhaust ports independently of the piston controlling the same.

5. In a device of the class described a plurality of cylinders, pistons movable therein, a pair of crank shafts journaled at opposite ends of said cylinders and each connected to certain of the pistons therein, ignition means in said cylinders, inlet ports in said cylinders at only one end thereof, exhaust valves controlling the flow from said cylinders at one end thereof, mechanism for changing the timing of the ignition and said exhaust valves whereby said engine may be operated either on a two stroke cycle or a four stroke cycle, mechanism for connecting said crank shafts for synchronous movement thereof, and power take off means on each end of each of said crank shafts whereby the power of said engine may be taken from any one of said means independently of or simultaneously with the others.

[Claims 6 to 8 not printed in the Gazette.]

1,213,842. PLOWING-TRACTOR. ALBERT E. COOK and THOMAS VAN TUYL, Kankakee, Ill.; said Van Tuyl assignor to said Cook. Filed Apr. 13, 1914. Serial No. 831,625. (Cl. 21—114.)



1. In a tractor of the class described, a frame, a bearing sleeve mounted thereon, arms journaled on said sleeve, an axle supported at the ends of said arms, tractor wheels journaled on the ends of said axle, an internal annular gear on each of said tractor wheels, shafts journaled within said sleeve, and a pinion connected to each of said shafts adapted to mesh with said internal annular gears to drive the tractor wheels.

2. In a tractor of the class described, a frame, a sleeve mounted thereon, arms journaled thereon, an axle mounted in said arms, internally geared tractor wheels journaled on the ends of said axle, driving means within said sleeve, and pinions forming a part thereof meshing with said internally geared tractor wheels to drive the tractor.

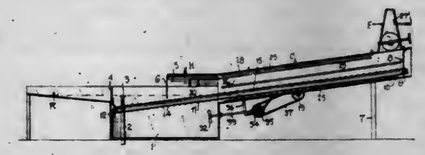
3. In a tractor of the class described, a frame, means pivotally connected therewith, an axle mounted in said means, internally geared tractor wheels journaled on the ends of said axle, and mechanisms associated with said means adapted to mesh with said internally geared tractor wheels to drive the same.

4. In a device of the class described, a frame, a sleeve mounted thereon, friction driven means mounted within said sleeve, pinions secured thereon, arms journaled on said sleeve co-axial with said means, an axle mounted in the ends of said arms, resilient means connected on said arms to support said frame thereon, and annular internally geared tractor wheels on the ends of said axle meshing with said pinions to receive a drive from said friction driven means.

5. In a device of the class described, a frame, friction driven driving means connected therewith, arms having one end of each thereof pivoted co-axial with said means, springs connected between said frame and arms to support the frame on said arms, an axle mounted in the ends of said arms, pinions connected to said driving means, tractor wheels journaled on the ends of said axle, and an annular gear within each of said wheels in mesh with said pinions to receive a drive from said driving means.

[Claims 6 to 10 not printed in the Gazette.]

1,213,843. SCALDING APPARATUS. JACOB N. COULBOURN, Federalsburg, Md. Filed May 20, 1916. Serial No. 98,918. (Cl. 146—14.)



1. A scalding apparatus comprising a tank, an inclosed chamber in communication with the tank, a conveyer passing through the tank and the chamber, steam pipes leading from a suitable source of supply disposing longitudinally of the chamber and provided with inwardly directed openings, and a pipe leading from a source of water supply and disposed longitudinally through the chamber and extending above the tank and discharging therein.

2. A scalding apparatus comprising a tank, an inclosed chamber in communication with the tank, a conveyer passing through the tank and chamber, steam pipes leading from a suitable source of supply disposed longitudinally of the chamber and provided with inwardly directed openings, and a pipe leading from a source of water supply and disposed longitudinally through the chamber and terminating above the tank and discharging therein, the portion of the last named pipe within the chamber being returned.

3. A scalding apparatus comprising a tank, an inclosed chamber in communication with the tank, a conveyer passing through the tank and chamber, steam pipes leading from a suitable source of supply disposed longitudinally of the chamber and provided with inwardly directed openings, a pipe leading from a source of water supply and disposed longitudinally through the chamber and terminating above the tank and discharging therein, the portion of the last named pipe within the chamber being returned, said pipe being also in communication with the tank adjacent the bottom thereof, and a valve for controlling the flow through said last named pipe.

4. A scalding apparatus comprising a tank, an inclosed chamber in communication with the tank, a conveyer passing through the tank and the chamber, steam pipes leading from a suitable source of supply and disposed longitudinally of the chamber and provided with inwardly directed openings, a pipe leading from a source of water supply and disposed longitudinally through the chamber and terminating above the tank, the portion of the last named pipe above the tank being provided with depending branches having their lower ends closed and their side walls provided with perforations.

1,213,844. PROTECTIVE DEVICE. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 2, 1912. Serial No. 694,776. (Cl. 175—30.)



1. In a protective device, a discharge path comprising a plurality of conducting members normally held in position by pressure on the end members and free to separate when relieved of said pressure, and a heat responsive support normally in contact with said end members to exert an endwise pressure thereon and hold all said members in normal relation and broken by abnormally high heat in said discharge path.

2. In a protective device, a dischage path comprising a plurality of conducting members and an insulating spacer placed end to end to form a column with two of said members separated by said spacer to form a spark gap, and a support for engaging the end members of said column and normally exerting an endwise pressure thereon to hold said members in position, said support being in thermal relation to said discharge path to relieve the endwise pressure on said conducting members and thereby leave said members free to separate.

3. A protective device comprising an insulating tube frangible by local heating, a discharge path in said tube comprising a resistance rod and electrodes spaced apart to form a spark gap and means in engagement with said tube for exerting a pressure on the end of said rod to hold it in contact with one of said electrodes and produce a stress which tends to elongate said tube whereby abnormal heating of said resistance rod produces fracture of said tube and leaves said resistance rod free to separate from said electrode.

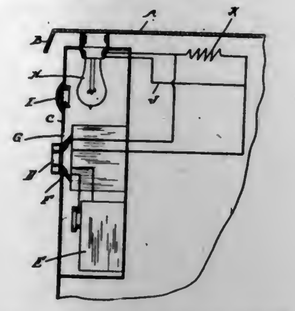
4. A protective device comprising a plurality of spark gap units each comprising a closed chamber containing an insulating fluid and electrodes spaced apart in said chamber to form a spark gap in which the dielectric is put under pressure by a discharge through said gap, and a closed container inclosing said spark gap units with slight clearance to assist in extinguishing the arcs in said gaps.

5. A protective device comprising a plurality of spark gap units mounted one on top of the other, each unit comprising insulating walls and metal ends in engagement with said walls to form a pressure retaining chamber, said metal ends forming the electrodes of a spark gap in said chamber, a sealed porcelain tube encircling said units with slight clearance, a resistance rod in said tube with one end in engagement with said series of units, and resilient means for engaging the other end of said resistance rod to hold said rod and said units firmly in place.

[Claims 6 to 14 not printed in the Gazette.]

1,213,845. ILLUMINATED SWITCH AND INDICATOR. RANSOM W. DAVENPORT, Detroit, Mich., assignor to Detroit Stove Works, Detroit, Mich., a Corporation of Michigan. Filed Sept. 23, 1915. Serial No. 52,301. (Cl. 240—2.)

1. In an electric cooking range, the combination with an electric circuit of an electric switch for controlling said circuit, including a heating unit, a casing for inclosing said switch, an indicating dial associated with the switch within the casing, the casing being apertured to permit reading of said dial, and a lamp within said casing and controlled by said switch for illuminating said dial upon the closing of said circuit.



2. The combination with an electric cooking range, of a controlling switch therefor, an indicator on said switch having an inclined face, a housing in which said switch is placed apertured for the observation of said indicator, a lamp within said housing for illuminating said indicator when the circuit is closed, and a bull's-eye also illuminated by said lamp and observable from all directions.

3. In an electric cooking range, the combination with an electric circuit, including a heating unit, of a controlling switch therefor, an indicator on said switch having an inclined face, a casing for inclosing said switch, apertured to permit reading of the indications, and a lamp within said casing and controlled by said switch for illuminating said indicator upon the closing of the circuit.

4. The combination with an electric circuit, of an indicating switch for controlling the same, a casing for inclosing said switch apertured to permit the reading of the indications, a bull's-eye in the casing, and a lamp within the casing for independently illuminating said bull's-eye and the indicating switch.

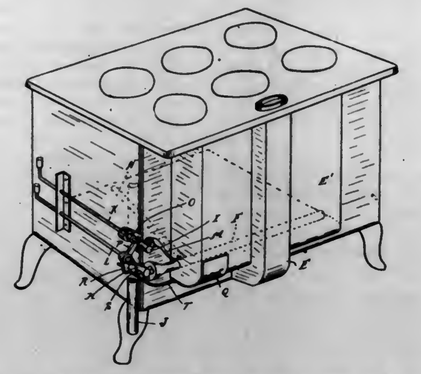
5. The combination with an electric circuit, of a controlling switch therefor, an indicator on said switch, a casing for inclosing said switch having an aperture opposite said indicator and having a second aperture, and a lamp within the casing positioned to throw light directly through said second aperture and indirectly through the aperture adjacent the indicator by reflection from the indicating surface.

1,213,846. COMBINED COAL AND GAS RANGE. RANSOM W. DAVENPORT, Detroit, Mich., assignor to Detroit Stove Works, Detroit, Mich., a Corporation of Michigan. Filed Jan. 24, 1916. Serial No. 74,003. (Cl. 126—36.)

1. In a stove, an oven, a gas burner extending longitudinally of said oven at the rear thereof and adjacent to the bottom, said burner having forwardly-directed jet openings, a partition or false bottom engageable with said oven above said burner forming a limited space between the same and the oven bottom, and a lighter tube for said burner mounted on said partition and removable therewith.

2. In a stove, the combination with an oven having a swell or projection in the rear wall thereof, of a gas burner extending longitudinally in said swell and adjacent to the oven bottom, said burner having forwardly-directed jet openings, a partition or false bottom for the oven engageable therewith above said gas burner, and a lighter tube connected with said false bottom and removable therewith.

3. In a stove, the combination with an oven of a burner at the rear of said oven and adjacent to the bottom thereof, a removable partition or false bottom engageable with the oven above said burner, a lighter tube mounted on said partition and removable therewith, and a gas supply tube for said lighter registrable and engageable therewith upon the insertion of said partition.

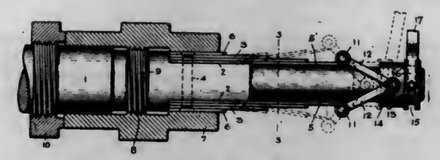


4. In a stove, the combination with an oven, of a gas burner arranged at the rear theerof and adjacent to the bottom, a false bottom engageable with said oven above said burner, a lighter tube mounted on said false bottom, a gas supply tube registrable and engageable with said lighter tube upon the insertion of said false bottom, and independent valves for controlling the gas supply to said lighter tube and burner.

5. In a stove, the combination with an oven, of a burner arranged adjacent to the bottom and at the rear thereof, a false bottom engageable with the oven above said burner tube, a lighter tube mounted on said false bottom, a gas supply tube registrable and engageable with said lighter tube upon the insertion of said false bottom, independent valves controlling the gas from said lighter tube and burner, and an interlock between said valves for compelling the opening of the lighter valve in advance of the burner valve.

[Claim 6 not printed in the Gazette.]

1,213,847. SPEED-GOVERNOR. WILLIAM F. DAWSON, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 3, 1914. Serial No. 860,011. (Cl. 264—18.)



1. A centrifugal speed governor comprising a spindle, springs secured at one end to opposite sides of said spindle and extending parallel to it, a controlling device, and means connecting it to the free ends of the springs, said springs and the connecting means acting as the weights for the governor.

2. A centrifugal speed governor comprising a spindle, springs secured at one end to opposite sides of said spindle and extending parallel to it, a controlling device, means connecting it to the free ends of the springs, said springs and the connecting means acting as the weights for the governor, and means on the spindle for adjusting the effective length of the springs.

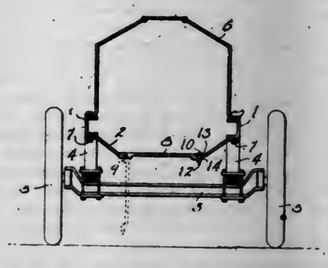
3. A centrifugal speed governor comprising a spindle having flattened sides, laminated springs having their bases secured to said sides and their free ends lying parallel to and extending along the spindle, the laminations being graduated in length with the longest ones lying next the spindle, links pivoted to the free ends of said longest laminations, a controlling device, and means connecting the links to it, said springs and the links acting as the weights for the governor.

4. A centrifugal speed governor comprising a spindle having flattened sides, laminated springs having their bases secured to said sides and their free ends lying parallel to and extending along the spindle, the laminations being graduated in length with the longest ones lying next the spindle, links pivoted to the free ends of said longest laminations, a controlling device, means connecting the link to it, and means on the spindle for adjusting the effective length of the springs.

5. A centrifugal speed governor comprising a cylindrical spindle flattened on opposite sides, laminated springs secured to said sides and having their edges concentric with said spindle, and a cylindrical sleeve sliding longitudinally on said spindle and springs.

[Claim 6 not printed in the Gazette.]

1,213,848. UNDERPAN CONSTRUCTION FOR AUTOMOBILES. JAMES M. EDGINGTON and ARTHUR C. EDGINGTON, Chillicothe, Ohio. Filed Mar. 31, 1915. Serial No. 18,393. (Cl. 74—56.)

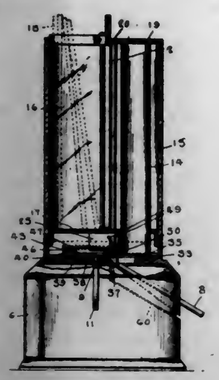


1. An under pan construction for automobiles, including a pan extending under the engine and having the edges thereof permanently secured to the chassis, said pan being provided at a point under the engine with a large opening, a downwardly swinging trap door normally closing the opening and hinged at one of its edges to one side of the opening, and fastening members adjustably mounted upon the pan at the opposite side of the opening for detachably engaging the swinging edge of the trap door to lock the trap door in a closed position, said fastening members being movable into an inoperative position when it is desired to open the trap door.

2. An under pan construction for automobiles, including a pan extending under the engine and permanently secured to the chassis, said pan being provided at a point under the engine with a large opening, a downwardly swinging trap door normally closing the opening and hinged at one edge thereof to one side of the opening, slots being provided in the path at the opposite side of the opening, wings projecting from the swinging edge of the trap door and provided with notches, and clamping bolts slidable within the slots of the pan and adapted to be moved into and out of engagement with the notched wings at the swinging edge of the trap door so that the trap door can be locked in a closed position and quickly released.

3. An under pan construction for automobiles, including a pan extending under the engine and having the edges thereof permanently secured to the chassis, said pan being provided at a point under the engine with a large opening, and the sides of the pan sloping downwardly toward the said opening, a downwardly swinging trap door normally closing the opening and hinged at one of its edges to one side of the opening, and fastening means for locking the trap door in a closed position.

1,213,849. SLOT-MACHINE. JAMES H. EGAN, Ocean City, N. J. Filed July 18, 1916. Serial No. 109,940. (Cl. 194—80.)

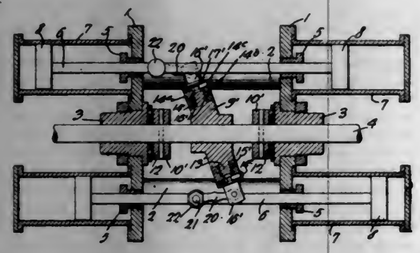


1. The combination of a magazine for articles, a sliding delivery plate thereunder having an opening for the bottom article, and a coin slot, a coin chute, a frame at the lower end of the coin chute having a narrow part adapted to engage and stop a coin with its edge in said slot and a wider part adapted to release said coin, a pusher plate slidable upon the delivery plate and having a short chute section projecting into said frame and adapted to engage a coin stopped therein and shift the same to the wider part of the frame.

2. The combination with a sliding delivery plate, of an operating coin mechanism associated therewith, an exposure chute leading from said mechanism, having an opening through which a coin may be seen, and an arm carried by said plate and projecting across said chute in position to stop a coin opposite said opening at each operation of the plate.

3. The combination of a coin chute having a frame at the lower end thereof provided with an opening having a narrow end adapted to stop a coin, and a wide end adapted to release the same, a sliding article delivery plate having a slot into which the edge of a coin projects when it is so stopped, and a sliding pusher plate having a short chute section located between said chute and slot and projecting into said frame and adapted to engage a coin therein and shift the same to the wide end thereof to release the same, said coin acting to slide the delivery plate when so shifted, and means to restore the plates to original position.

1,213,850. MECHANICAL MOVEMENT. JAMES EDWARD EMLEY, Middleport, Ohio. Filed Feb. 5, 1916. Serial No. 76,420. (Cl. 74—14.)



1. A mechanical movement embodying a rotary shaft, a reciprocatory rod, a member mounted upon said shaft having an oblique flange, a U-shaped ring straddling said flange, and a connection between said rod and ring.

2. A mechanical movement embodying a rotary shaft, a reciprocatory rod parallel therewith, a member upon said shaft having an oblique portion, a ring engaging said oblique portion, a pivoted member carried by the periphery of the ring to swing about an axis extending from said shaft, and a link pivotally connected with said pivoted member and rod.

1,213,851. METHOD OF AND APPARATUS FOR MAKING TERNE PLATES. THOMAS M. EVANS, Granite City, Ill. Filed July 8, 1916. Serial No. 108,226. (Cl. 91—59.1.)

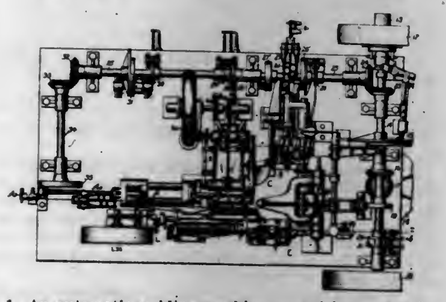


1. The herein described method of making a terneplate, consisting in passing a metallic sheet through a suitable flux into terne, then passing the sheet between two pairs of rotating rollers into another body of terne, having a different temperature than that of the first named terne and then finally passing the sheet between a third pair of rotating rollers which are peripherally coated with a resinous substance.

2. The herein described method of making a terneplate, consisting in passing a metallic sheet through a suitable flux into terne of a predetermined temperature, then passing the sheet between two pairs of rotating rollers into another body of terne having a lower temperature than that of the first named terne, and then finally passing the sheet between a third pair of rotating rollers which are peripherally coated with a resinous substance.

3. In apparatus of the character described, the combination of a pot adapted to contain terne, a pair of rollers mounted side by side within the said pot, guides for directing material to be coated from the outside of the said pot, through the terne therein, to the said rollers, a second pot adapted to contain the terne, a second pair of rollers mounted side by side within the second pot, guides for directing the said material from the first to the second pair of rollers, a third pair of rollers mounted side by side within the second pot, guides for directing the said material from the second pair of rollers through the terne within the second pot to the third pair of rollers, a non-combustible packing, a receptacle for a resinous substance adapted to hold the said packing against the periphery of each of the last named rollers, and means for rotating the said rollers, substantially as described.

1,213,852. WELDING-MACHINE. JOHN T. FAGAN and CLEVELAND H. QUACKENBUSH, Cleveland, Ohio, assignors to General Electric Company, a Corporation of New York. Filed July 27, 1914. Serial No. 853,335. (Cl. 219—4.)



1. An automatic welding machine comprising means for accurately spacing ends of two wires facing each other, means for placing a third wire in contact with said ends, and means for fusing each of the said ends so as to unite thereto the said third wire.

2. An automatic welding machine comprising means for supporting two wires in substantially horizontal position and for accurately spacing their ends facing each other, means for placing a third wire upon said ends, and means for fusing each of the said ends so as to unite thereto the said third wire.

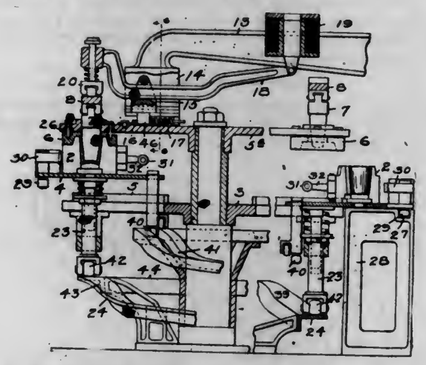
3. An automatic welding machine comprising means for shaping ends of two wires so as to receive a third wire, means for accurately spacing said ends relatively to each other, means for placing the third wire in contact with said ends, and means for fusing said ends to unite thereto the said third wire.

4. An automatic welding machine comprising means for shaping ends of two wires so as to receive a third wire, means for supporting the said two wires in substantially horizontal position and for accurately spacing their said ends relatively to each other, means for placing the third wire in contact with said ends, and means for fusing said ends to unite thereto the said third wire.

5. An automatic welding machine comprising means for forming a groove at an end of each of two wires, means for accurately spacing said ends relatively to each other, means for inserting the ends of a third wire in said grooves, and means for fusing the first mentioned ends so as to unite thereto the ends of the said third wire.

[Claims 6 to 38 not printed in the Gazette.]

1,213,853. MACHINE FOR PRESSING GLASSWARE. ENOCH FERNGREN, Kansas City, Mo. Filed Jan. 8, 1913. Serial No. 740,754. (Cl. 49—37.)



1. In apparatus for making articles of glassware, a plurality of press molds having varying formative characteristics, a plurality of stationary mold rings, coacting plunger mechanism, means for successively elevating said molds to said mold rings, and means for successively imparting predetermined different substantially limited pressing movements to said plunger mechanism responsive to the respective shaping requirements of the press molds.

2. In apparatus for making articles of glassware, a plurality of press molds having varying formative characteristics, a plurality of ring molds, plunger mechanism, means for successively presenting said press molds to the ring molds and to said plunger mechanism, and automatically re-adjusting means for successively imparting positive predetermined and differently limited pressing movements to said plunger mechanism responsive to the respective shaping requirements of the molds.

3. In apparatus for making articles of glassware, a plurality of press molds having varying formative characteristics, a pressing plunger associated with each mold and automatically pre-adjusting and differentiating means for successively modifying and varying the plunger stroke and the pressure acting upon the plungers for imparting to each plunger a predetermined pressing movement responsive to the different formative requirements of its respective mold.

4. In apparatus for making articles of glassware, a plurality of press molds having varying formative characteristics, a pressing plunger for each mold, means for successively presenting the molds to the plungers, and automatically mechanically re-adjusting means for acting upon the plungers for imparting to each plunger a specific pre-limited distance movement into the mold, and a different predetermined pressing movement specifically responsive to the formative requirements of its respective mold, and the period of coöperative pressing engagement therewith.

5. In apparatus for making articles of glassware, a plurality of press molds having varying formative characteristics, a pressing plunger associated with each mold, means for successively acting upon the plungers for imparting to each plunger a specific and predetermined pressing stroke and a pre-arranged distance movement into the mold, and means for successively effecting a predetermined different and specifically responsive formative dwell between each plunger and its respective mold.

[Claims 6 to 19 not printed in the Gazette.]

1,213,854. METHOD OF MAKING FOOD COMPOSITIONS. JOHN C. FLEMING, Boston, Mass. Filed Nov. 14, 1916. Serial No. 131,272. (Cl. 99—11.)

1. A method of producing a food compound comprising subjecting shelled peanuts while in a closed receptacle to the action of steam under pressure until disintegrated into an emulsion-like mass, and then mixing the same with a cereal.

2. A method of producing a food compound comprising subjecting shelled peanuts to the action of steam under pressure until disintegrated, removing the oil, and then mixing with a cereal.

3. A method of producing a food compound comprising subjecting shelled peanuts to the action of steam under pressure until disintegrated, mixing the same with a cereal, and finally drying.

4. A method of producing a food compound comprising removing the outer shells from peanuts, subjecting the shelled peanuts to the action of a cold borax solution to remove the inner shells, then subjecting them to the action of steam under pressure until disintegrated, and finally mixing with a cereal.

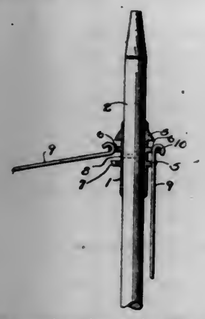
5. A method of producing a food compound comprising removing the outer shells from peanuts, subjecting the shelled peanuts to the action of a cold borax solution to remove the inner shells, then subjecting them to the action of steam under pressure until disintegrated, mixing the disintegrated mass with a cereal, and finally drying.

1,213,855. UMBRELLA. GEORGE FLYNN, National Soldiers Home, Tenn., assignor of one-half to Adam Broyles, National Soldiers Home, Tenn. Filed Apr. 27, 1916. Serial No. 93,945. (Cl. 135—28.)

1. An umbrella construction embracing a head portion having a flange formed therearound and provided with a plurality of spaced apart openings, a plurality of ribs bent at their ends to form hooks to be received through the openings of said flange and to be freely inserted through or removed from the openings when the ribs are brought to extend substantially parallel with the stick of the umbrella and from the outer end thereof, and a second flange formed adjacent the first mentioned flange and spaced above the same to have the ribs abutted thereagainst at their hooked ends when the umbrella is brought to the folded relation and to thus hold the ribs against punching through the cover.

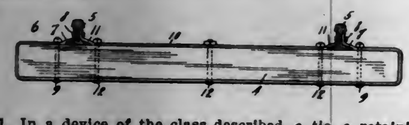
2. An umbrella construction embracing a head portion having a flange formed therearound and provided with a plurality of spaced apart openings, a plurality of ribs bent at their ends to form hooks to be received through the openings of said flange and to be freely inserted through or removed from the openings when the ribs are brought to extend substantially parallel with the stick

of the umbrella and from the outer end thereof, a second flange formed adjacent the first mentioned flange and spaced above the same to have the ribs abutted thereagainst at their hooked ends when the umbrella is brought to the folded relation and to thus hold the ribs against punching through the cover, and a third flange formed around the head on the opposite side of said first mentioned flange provided with notches formed substantially in line with the openings of said flange to receive the ribs when the same are brought adjacent to the stick in the folding of the umbrella.



3. An umbrella construction embracing a head portion adapted to be fitted on a stick at the outer end thereof and provided with three peripherally disposed outstanding flanges arranged in spaced relation, the central flange being provided with a plurality of openings, and a plurality of ribs bent at their ends to provide hooks to be received through the openings of the central flange and to be freely inserted through or removed from said openings when the ribs are brought to extend substantially parallel with the stick of the umbrella and from the outer end thereof, the inner flange being provided with notches formed in alinement with the openings of the central flange so located that the ribs will fit therein and be held against lateral twisting when brought to a position adjacent to the stick upon closing of the umbrella, and the outer flange made of sufficient width to overhang the openings of the central flange to hold the ribs against sliding movement through the openings of the central flange and punching through the cover of the umbrella when the ribs are brought to the folded relation.

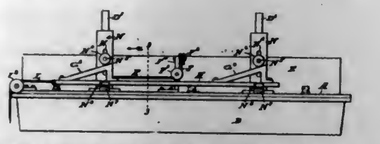
1,213,856. RAIL-FASTENER. JOHN P. FOLEY, Columbus, Kans. Filed Aug. 31, 1916. Serial No. 117,938. (Cl. 238—4.)



1. In a device of the class described, a tie, a retaining member comprising a relatively narrow metallic strap secured to the under face of the tie and extending at its extremities inwardly from the ends of the tie and upon the upper face thereof, the extremities of said strap being of greater width than the body portion of the same and being adapted to engage and snugly fit the web of a rail, a rail clamp comprising a strip of metal secured to the upper face of the tie and between the extremities of said retaining member, the ends of said clamp being widened and adapted to snugly engage the webs of the opposing rails, and the said widened portions of said clamp and retaining member being provided with alined openings, substantially as described.

2. In a device of the class described, a tie, a rail retaining member comprising a metallic strap extending longitudinally of the tie upon the under face thereof and projecting inwardly from the opposite ends of said tie upon the upper face of the same, the extremities of said member being widened and bent to form fish plate portions, a rail clamp secured to the upper face of said tie, the ends of said clamp being bent upwardly and angularly to provide fish plate portions for engagement with the inner faces of railroad rails, and bolts adapted to extend through the fish plate portions of said retaining member and said clamp and through rails held thereby, substantially as described.

1,213,857. ADHESIVE-SPREADER. HARRY GRANT FRANCIS, Rushville, Ind. Filed Mar. 29, 1915. Serial No. 17,725. (Cl. 91—56.)

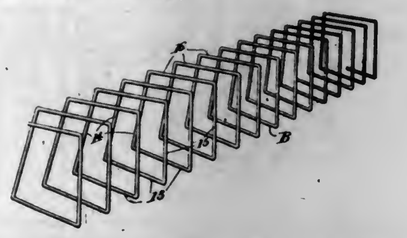


1. The combination in an adhesive spreader, of a tank, a perforated plate within the tank, vertical bars actuated by inclines for raising the plate, a tank cover operated by the bar that carries the inclines for operating the vertical bars.

2. The combination in an adhesive spreader of a tank, a perforated plate within the tank, vertical bars actuated by inclines for raising the plate, a tank cover operated by the bar that carries the inclines, the horizontal travel of the horizontal bar being greater than the vertical travel of the vertical bars.

3. The combination in an adhesive spreader of a tank, a plate within the tank, vertical bars actuated by inclines for raising the plate carried by a horizontal bar, a foot lever for operating the horizontal bar.

1,213,858. MATTRESS OR THE LIKE. GUSTAV A. FRANZ, Jackson, Mich. Filed Nov. 26, 1915. Serial No. 63,574. (Cl. 5—13.)



1. As a new article of manufacture, a coiled rectangular shaped spring whose top and bottom portions are arranged normally in parallel planes inclined in opposite directions across the longitudinal axis of the spring and whose side portions are inclined slightly from the vertical, all in the same direction, the parts on one side being inclined to a greater extent than the similar parts on the other side, thereby providing a series of square loops formed of one continuous piece of wire, drawn out along the axis of the loops to form a tubular structure of square cross section.

2. As a new article of manufacture, a coiled rectangular shaped spring whose bottom portions are arranged normally in parallel planes and whose side portions are inclined in the same direction from the vertical, the inclined parts on one side being inclined to a greater extent than the similar parts on the other side and the top parts all being parallel to each other and helically inclined to the axis of the spring, and a band spring connected to the aforesaid spring and connected at its ends to the ends of the aforesaid spring.

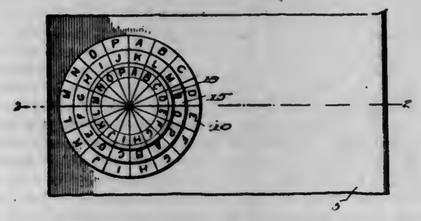
3. A mattress comprising a ticking provided with a central recess, a plurality of rectangular shaped spiral springs disposed lengthwise in said recess, longitudinally of the mattress, said springs composed of inclined loops adapted to yield laterally when subjected to pressure.

4. A mattress comprising a ticking provided with a central recess, a sack disposed in said recess, a plurality of rectangular shaped spiral springs disposed lengthwise in the sack, longitudinally of the mattress, said springs composed of inclined loops adapted to yield laterally when subjected to pressure.

5. A mattress comprising a ticking provided with a central recess, a sack disposed in said recess and having a plurality of longitudinally disposed alining pockets, and rectangular shaped spiral springs disposed lengthwise in said pockets, longitudinally of the mattress, said springs composed of inclined loops adapted to yield laterally when subjected to pressure.

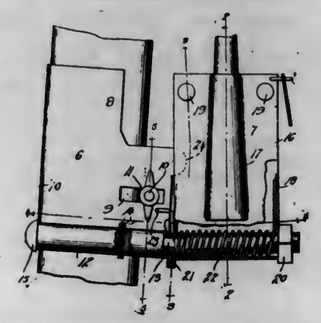
[Claim 6 not printed in the Gazette.]

1,213,859. FUEL CUT-OFF FOR MOTOR-VEHICLES. WILLIAM J. FREW, Chicago, Ill. Filed Nov. 14, 1916. Serial No. 131,262. (Cl. 137—27.)



The combination with a liquid container having an outlet; of a tube in the container and provided with a side port, and a plurality of tubes rotatably mounted in the first-mentioned tube and projecting from the container, said rotatable tubes having side ports in the plane of the first-mentioned port, and the innermost tube being in communication with the container outlet, the inner ends of the rotatable tubes being flared for preventing withdrawal of the said tubes from the first-mentioned tube, said first-mentioned tube being fixed in the container.

1,213,860. WHIP-HOLDER. SAMUEL A. GARBER, Fortuna, N. D. Filed Aug. 16, 1916. Serial No. 115,289. (Cl. 54—1.)

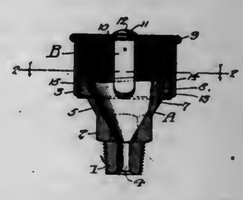


1. In a device of the class described, a base, a barrel on said base, a whip holder, a bolt extending through said barrel and rotatively supporting said whip holder, a stop on said base, a spring inclosed by said whip holder for normally forcing the latter against the said stop, and a cord attached to said holder, substantially as described.

2. In a device of the class described, a base, said base comprising a metallic plate bent upon itself to provide a pair of spaced parallel leaves, the said leaves being provided with registering slots, a barrel on one of said leaves and a shaft in said barrel, a holder on said shaft, means for forcing said holder in one direction, a stop on one of said leaves for limiting the movement of said holder, and a bolt extending through said registering slots for securing said base to a support, substantially as described.

3. In a device of the class described, a base, a shaft extending from said base, a holder comprising a sheet of metal bent upon itself to provide a pair of resilient jaws mounted to rotate upon said shaft, a spring arranged upon said shaft normally forcing the said holder in one direction, a stop on said base for limiting the movement of said holder, the said holder being provided with alined pressed portions, the said leaves having registered openings, bolts detachably secured in said openings, and a cord attached to said holder substantially as described.

1,213,861. GREASE-CUP. HENRY GIBBS, Chicago, Ill., assignor to W. D. Allen Manufacturing Company, Chicago, Ill., a Corporation. Filed May 14, 1915. Serial No. 28,114. (Cl. 184—48.)



1. A grease cup, comprising a base having a threaded upper portion, a cap threaded to engage the upper portion of said cup, a U-shaped spring having its outer end embedded in the upper portion of said base at one side thereof and having arms projecting laterally across the upper portion of said base and an angular pin fixed to and depending from said cap and extending between the members of said U-shaped spring.

2. A grease cup, comprising a base having a threaded upper end, and a pocket formed in said upper end, a threaded cap engaging the upper end of said base and having a depending angular pin therein and a spring extending laterally across the upper portion of said base and engaging said pin, said spring having its outer end rigidly secured within the pocket in the upper part of said base.

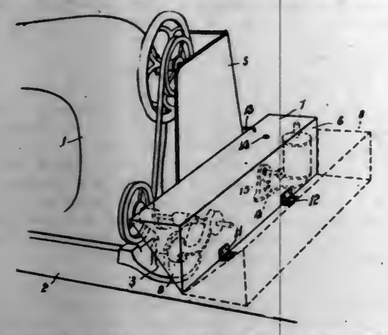
3. A grease cup comprising a base having a threaded flange at its upper end provided with a vertical slot at one side, a cap threaded on said flange and having a depending rectangular pin therein, and a U-shaped spring having arms extending laterally across the upper portion of said base on opposite sides of said pin, said U-shaped spring having a downturned bent end portion extending within said slot, and the wall of said slot being upset between the arms of said spring to secure the bent end portion thereof to said base, substantially as described.

4. A grease cup comprising a base having a threaded flange at its upper end provided with a vertical pocket open at its upper end, a cap threaded on said flange and having a depending angular pin therein, a spring extending laterally across the upper portion of said base and engaging said pin, said spring having a downturned outer end rigidly secured within said pocket, substantially as described.

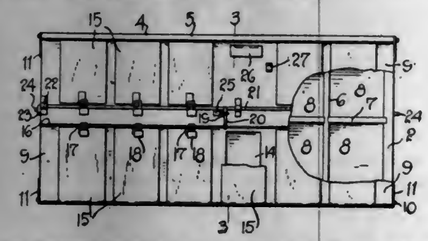
1,213,862. BOBBIN-WINDER GUARD. SOL GOGEL, Toronto, Ontario, Canada. Filed Oct. 4, 1915. Serial No. 54,096. (Cl. 74—56.)

In combination with a hinged sewing machine belt guard, a supplementary guard for other mechanisms, said supplementary guard being hingedly positioned at an edge

approximately at right angles to the hinged edge of said belt guard, and means for normally locking said supplementary guard to said belt guard whereby both guards are held against disturbance.



1,213,863. LOCKING DEVICE FOR MAIL-BOXES. WILLIAM PRESTON GOINS, Walcott, Ark. Filed Feb. 27, 1915. Serial No. 11,010. (Cl. 16—61.)



In a device of the character described, a box open at one side, closure members for the box hinged to the box for swinging movement in a vertical plane and opening in opposite directions, the free longitudinal marginal portions of the closure members overlapping when the members are closed, a rock shaft carried by the outer of said closure members having its outer ends extended beyond the box, then angularly bent rearward, and then at an obtuse angle whereby to form hook-shaped members on the ends of the rock shaft, an operating arm mounted upon the shaft, studs mounted upon the ends of the box and with which the hook-shaped members are adapted to engage, the obtusely angled extremities of the rod when shifted into engagement with the studs drawing the rock shaft rearward, a hasp mounted upon the box and thereby supported independently of the closure members and having its outer end extending through the overlapping portions of the closure members when the latter are in closed position, and means for locking the operating arm on the shaft to said hasp when the hook-shaped ends of the shaft are in full engagement with the studs.

1,213,864. RAIL-JOINT. EMANUAL A. GUILL, Conran, Mo. Filed June 10, 1916. Serial No. 102,988. (Cl. 239—8.)



1. In a rail joint, the combination of the meeting ends of two rails, each of the rail ends being provided with transverse diagonally extending cut ends through the head, web and flange, each of said rails being further provided with a tongue integrally formed with the web and projecting beyond the said transverse cut end and adapted to co-act with the web of each adjacent rail for preventing longitudinal displacement of the rail ends, and retaining means carried by each of the rails for providing a space into which each of said tongues are projected.

2. In a rail joint, the combination of the meeting ends of two rails each provided with a transverse diagonally extending cut end for providing coöperating contacting surfaces, the contacting surface of one rail being provided with a depression, and the opposite surface having a depending locking lug adapted to be received in said recess, a tongue carried by each of said rail ends, each of said rails being provided with a space for permitting the tongues to interlock with each rail end.

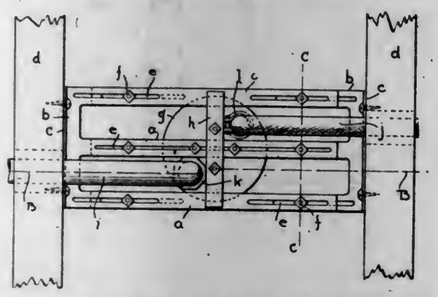
3. In a rail joint, the combination of the meeting ends of two rails, the head of one rail being provided with a depression, the adjacent rail end having a tongue adapted to fit within the said recess when the rail ends are in interlocked engagement, means comprising a locking lug carried by one of the rail ends for locking the ends of the rails in close proximity to each other, a stay bar carried by each of the rail ends and disposed for providing a space between each of said bars and the web of each rail, and a tongue formed on each of the rail ends and adapted to enter into said spaces; each of said rail ends also being cut at an angle to present contacting surfaces adapted to coöperate when the rail ends are joined together.

4. In a rail joint, the combination of the meeting ends of two rails, each rail having an extension formed on its end to provide a tongue, each extension being tapered toward its free end, a stay bar formed integrally with the head and flange of each rail and disposed in spaced relation to the web of the rail, each of said spaces being restricted for permitting an entrance of the ends of said tongues when the same are extended in the space between the webs and the said bars, each of the rail ends being provided with locking means coöperating to lock the rail ends in engagement after the tongues are inserted in position.

5. In a rail joint, the combination of the meeting ends of two rails each having diagonally cut ends for providing angularly extending surfaces adapted to contact with each other, a tongue integrally formed with and projecting from each surface and adapted to lie in contact with the corresponding web of the adjacent rail, each tongue having one edge cut away to permit assembling of the said rail ends.

[Claim 6 not printed in the Gazette.]

1,213,865. BRIDGE FOR SUPPORTING ELECTRIC FIXTURES. JOHN R. GUNN, Detroit, Mich. Filed June 7, 1915. Serial No. 32,566. (Cl. 247—5.)



1. A bridge and outlet box of the class described, having in combination, a pair of bridge portions each having at each end an angle metal cross-bar and each provided with a plurality of slotted straps integrally connected together by the angle metal cross-bar, the said straps of the two bridge portions adapted to be overlapped and secured in selectable positions of overlap, and an outlet box provided with extensions supported on the outside straps in selectable positions.

2. A bridge and ceiling box of the class described, having in combination, a pair of bridge portions provided at their outside ends with cross bars which may be secured to the joists and having a plurality of slotted straps, the said straps of the two bridge portions being adapted to coincide, bolts and nuts for securing the bridge portions in various positions of adjustment by passing through the said slots, a ceiling box, bolts and nuts for securing the ceiling box at varying positions along the center pair of coinciding straps and passing through the slots in the same, and a cross strip secured to the top of the ceiling box and resting at each end on the outside pairs of straps.

1,213,866. PAPER-PULP APPARATUS. WILLIAM H. HARDING, Jr., New York, N. Y. Filed Mar. 4, 1915. Serial No. 12,047. (Cl. 92—29.)



1. In paper pulp apparatus, the combination of a rotary screen adapted to have its lower portion dipping into a body of paper pulp, means for confining paper pulp in quantities of a thickness exceeding the maximum thickness of felt-elevated sheets of pulp, and mechanically directing the same toward and against the screen, and retaining it in engagement with the screen while such pulp is in substantially a vertical position.

2. In paper pulp apparatus, the combination of a rotary screen, a vat in which said screen rotates, means for maintaining a difference in pressure between the exterior and interior surfaces of the screen for causing paper pulp to collect in the form of a coating on the screen while in the vat in quantities exceeding in thickness the maximum thickness of felt-elevated sheets of pulp, and means for confining the coating of pulp against dislodgment from the screen during ascent from the body of pulp in the vat.

3. In paper pulp apparatus, the combination of a rotary screen, a vat for containing paper pulp into which the screen extends, means for maintaining a difference in pressure at the respective faces of the screen for building and retaining a coating of pulp on the exposed face of the screen, means directing paper pulp in the vat toward the exposed face of the screen, and additional means moving in the direction of travel of the screen for retaining the coating of pulp on the screen while substantially vertical.

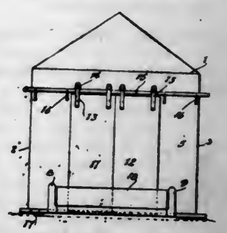
4. In paper pulp apparatus, the combination, with a container for paper pulp, of a rotary screen extending into the container and adapted to be partly submerged in pulp, and traveling shields spaced apart and extending about exposed portions of the screen at the respective opposing ascending and descending parts of the screen.

5. In paper pulp apparatus, the combination of a rotary screen, means for maintaining a difference in pressure at the respective sides of the screen for building and retaining a coating of paper pulp on the screen, additional means for retaining the coating of pulp on the screen, and means for washing the pulp while so retained.

[Claims 6 to 18 not printed in the Gazette.]

1,213,867. DOOR OPENING AND CLOSING DEVICE. FREDERICK WILLIAM HARRIS, Tate, Saskatchewan, Canada. Filed Apr. 10, 1916. Serial No. 90,145. (Cl. 268—8.)

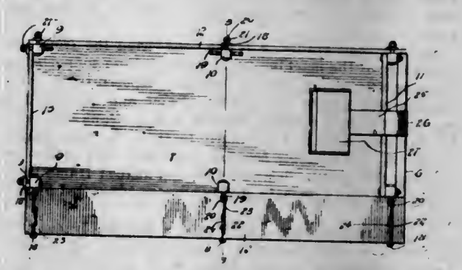
1. The combination with a building provided with a doorway opening and normally shut sliding doors closing the opening, of a depressible approach located in advance of the doors, depressible runways within the building to the rear of the doors, a rack extending downwardly from each runway, a connection between the racks and the approach, spring means normally retaining the approach and runways in their elevated positions, a rotatably mounted cross shaft disposed adjacent the racks, pinions fixed to the shaft and meshing with the racks and winding cables attached to the shaft and to the doors and arranged to effect the opening of the doors in the depression of the approach or runways.



2. The combination with a building provided with a doorway opening and normally shut sliding doors closing the opening, of a depressible approach located in advance of the doors, depressible runways within the building to the rear of the doors, a rack extending downwardly from each runway, a link connecting the lower end of each rack pivotally with the underside of the approach, suitably mounted springs engaging with the lower ends of the racks and normally retaining the runways and approach in their elevated positions, a suitably mounted cross shaft located adjacent the racks, pinions secured to the cross shaft and meshing with the racks, winding drums on the shaft and suitably guided winding cables connecting the drums with the doors and designed in the winding of the cables to open the doors.

3. The combination with a building provided with a doorway opening and normally shut sliding doors closing the opening, of an approach located in advance of the doors and having the forward end thereof pivotally mounted, runways located within the building and to the rear of the doors and having their rearmost ends pivotally mounted, a downwardly extending rack secured to each of the runways, links pivotally connecting the racks with the approach, spring means normally engaging with the racks and effecting the retaining of the free ends of the approach and runways normally in an elevated position, a suitably mounted cross shaft adjacent the racks, a pinion secured to the cross shaft and meshing with the racks, winding drums on the cross shaft and suitably guided cables connecting the drums with the doors and arranged in the depression of the approach or runways to open the doors.

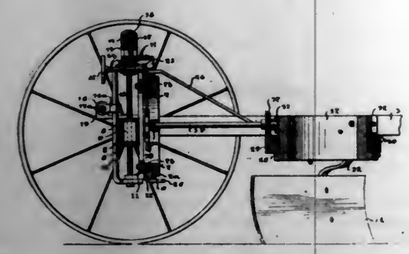
1,213,868. WAGON-BOX. HENRY S. HARRIS, Cardwell, Mont. Filed Jan. 9, 1914. Serial No. 811,216. (Cl. 21—7.)



A wagon box including a bottom, vertical stakes mounted adjacent the sides of the bottom, side members hinged to the bottom, a metallic plate secured to the outer face of each of the side members and opposite each of the stakes, an eye bolt disposed through the upper end of each of the stakes, the outer end of each of the plates extending beyond the outer edge of the side and provided with

an eye for the reception of the eye bolt when the side is in vertical position, and for the reception of one end of a flexible connection at times, said flexible element being carried by the eye bolt and including a turn buckle arranged to lengthen or shorten said element whereby to alter the position of the respective side member.

1,213,869. ROAD-GRADER. ROYAL A. HAWLEY, Graham, Tex., assignor of one-third to J. Driver and one-third to John Rubenkoenig, Graham, Tex. Filed Apr. 19, 1915. Serial No. 22,332. (Cl. 37—49.)



1. In a road grader, a frame connecting the front and rear axles of the machine, an annular bearing supported by the rear axle, a ring shaped vertically disposed frame forming the rear end of the machine frame and supported to turn on the said annular bearing, and a means supported by the rear axle and arranged to turn the ring shaped frame on said annular bearing.

2. In a road grader, a frame connecting the front and rear axles of the machine, an annular bearing supported by the rear axle, a ring shaped vertically disposed frame forming the rear end of the machine frame and supported to turn on the said annular bearing, and a means supported by the rear axle and arranged to turn the ring shaped frame on said annular bearing, combined with a scraper blade supported by the machine frame and arranged to revolve therein, a shaft traversing the annular bearing and arranged to turn the scraper blade and a manual means for turning said shaft, said manual means arranged within the annular bearing.

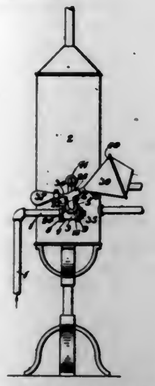
3. In a road grader, a frame connecting the front and rear axles of the machine, an annular bearing supported by the rear axle, a ring shaped vertically disposed frame forming the rear end of the machine frame and supported to turn on the said annular bearing, and a means supported by the rear axle and arranged to turn the ring shaped frame on said annular bearing, combined with means for raising and lowering said annular bearing, the ring shaped frame and the means for turning said ring shaped frame, said raising and lowering means supported by the rear axle.

4. In a road grader, a frame connecting the front and rear axles of the machine, an annular bearing supported by the rear axle, a ring shaped vertically disposed frame forming the rear end of the machine frame and supported to turn on the said annular bearing, and a means supported by the rear axle and arranged to turn the ring shaped frame on said annular bearing, combined with means for shifting the annular bearing and ring shaped frame laterally of the rear axle, said shifting means supported by said axle.

5. In a road grader, a rear axle, a box like frame work arranged to shift laterally along the axle, an annular bearing supported by said frame work, a frame having a ring shaped rear end supported to turn on the annular bearing, and a scraper carried by said frame, combined with means traversing the box like frame work and supported therein, said means arranged to turn said ring shaped rear end of said scraper-frame on said annular bearing.

[Claim 6 not printed in the Gazette.]

1,213,870. AUTOMATIC VALVE. WILLIAM JAMES HAYNES, St. Louis, Mo. Filed Oct. 27, 1916. Serial No. 128,007. (Cl. 137—68.)



1. A valve, comprising a valve casing, an influent port to said valve casing and an effluent opening from said valve casing, a valve body controlling said influent port, a hollow rocker arm having one end thereof extending horizontally and in communication with the interior of the valve casing, a container attached to and communicating with the other end of said rocker arm, an arm on said horizontal portion of said rocker arm adapted to contact with the valve body, an extension from said rocker arm, and an adjustable weight mounted on said extension, substantially as specified.

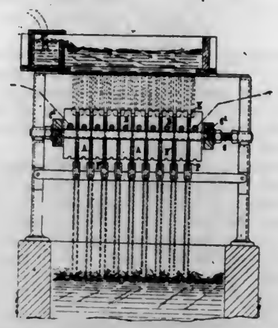
2. The combination with a liquid supply pipe, of a valve casing attached to said supply pipe, a discharge pipe leading from said valve casing and in communication with a tank, a valve controlling the inlet from said supply pipe to said valve casing, a counterbalanced arm having a hollow horizontal portion extending into said valve casing and in communication therewith through an opening in the wall thereof, a weight on one end of said counterbalanced arm, and a container on the opposite end of said counterbalanced arm adapted to swing said arm and thereby close said inlet between the supply pipe and the valve casing when a predetermined level of water has been attained in the tank, and to discharge the contents of said container through the valve casing when the level of the water in the tank falls below the predetermined level.

3. The combination with a tank, of a valve casing in communication therewith, a supply passage entering said valve casing, a valve body in said valve casing adapted to control the flow of liquid from said supply passage to said valve casing, a hollow rocker arm having a container on one end thereof and having a branch thereof extending into and in communication with the interior of the valve casing, an adjustable weight on the other end of said rocker arm, connections between said rocker arm and said valve body, whereby the valve body will be moved to close the inlet passage when a predetermined quantity of liquid enters said container from the valve casing, and to automatically release said valve body from the intake opening when the level of the water in the tank drops below a predetermined height, substantially as specified.

1,213,871. BIPOLAR-ELECTRODE ELECTROLYZER. GEORGE GRANT HEPBURN, Chorlton-cum-Hardy, Manchester, England. Filed Aug. 26, 1916. Serial No. 117,043. (Cl. 204—5.)

1. In bi-polar electrode electrolyzers, in combination, a plurality of electrodes spaced at the requisite distance apart, the intervening spaces being open at top and bottom, means between the electrodes forming side walls of the cells, means maintaining a flow of electrolyte through the cells, and overflow means preventing flooding of the cells, as set forth.

2. In bi-polar electrode electrolyzers, in combination, a plurality of electrodes spaced at the requisite distance apart, means between the electrodes forming side walls of the cells, means forming a movable bottom for each cell, means maintaining a flow of electrolyte through the cells, and overflow means preventing flooding of the cells, as set forth.



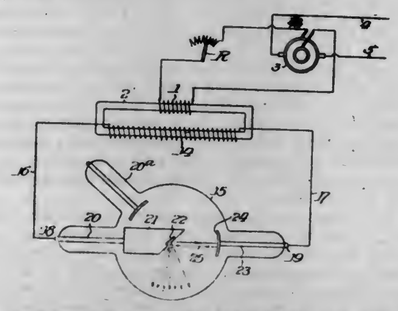
3. In bi-polar electrode electrolyzers, in combination, a plurality of electrodes spaced at adjustable distances apart, means supporting the electrodes and clamping them together, means between the electrodes forming side walls of the cells, means maintaining a flow of electrolyte through the cells, and overflow means preventing flooding of the cells, as set forth.

4. In bi-polar electrode electrolyzers, in combination, a plurality of electrodes spaced at adjustable distances apart, means supporting the electrodes and clamping them together, means between the electrodes forming side walls of the cells, means maintaining a flow of electrolyte through the cells, overflow means preventing flooding of the cells, and means preventing electrolyte from one cell uniting with that from an adjacent cell, as set forth.

5. In bi-polar electrode electrolyzers, in combination, a plurality of electrodes, means supporting the electrodes and clamping them together, means between the electrodes forming side walls of the cells, troughs delivering electrolyte to the cells, and overflow means preventing flooding of the cells, as set forth.

[Claims 6 to 18 not printed in the Gazette.]

1,213,872. SYSTEM OF X-RAY-TUBE OPERATION. GEORGE R. HOGAN and HECTOR P. MACLAGAN, Chicago, Ill. Filed Apr. 13, 1914. Serial No. 831,372. (Cl. 250—34.)



1. A system for operating X-ray tubes, comprising the combination of a transformer having primary and secondary windings, an X-ray tube having its terminals connected directly with the terminals of the secondary winding of said transformer, and means for controlling the operation of the transformer to produce an electromotive force in the secondary winding thereof of symmetrical wave form greater than that required to cause current to flow from the anode to the cathode of said tube, and less than that required to cause current to flow from the cathode to the anode of said tube.

2. In a system for operating X-ray tubes, the combination of a transformer having primary and secondary windings, a source of alternating current connected with the primary winding, an X-ray tube directly connected with the secondary winding, and means for producing in said secondary winding a potential of symmetrical wave form sufficient only to cause a uni-directional current flow through said tube.

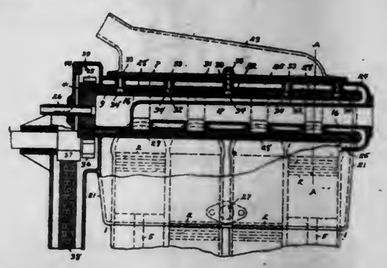
3. In a system for operating X-ray tubes, the combination of an X-ray tube, a closed high tension circuit directly connected with the terminals of said tube, and means for producing in said circuit an alternating electromotive force of symmetrical wave form sufficient only in amount to produce a uni-directional current flow through said tube.

4. In a system for operating X-ray tubes, the combination of a high tension X-ray tube having no valve, a closed circuit directly connected with the terminals of said tube, and means for producing an alternating electromotive force of symmetrical wave form in said circuit, intermediate in value between the critical break-down values for the gap between the electrodes of said tube.

5. In a system for operating X-ray tubes, the combination of a transformer having a closed magnetic circuit provided with primary and secondary windings, an X-ray tube having its terminals connected directly with the terminals of said secondary winding, and means for controlling the operation of said transformer to produce an alternating electromotive force of symmetrical wave form in said secondary winding sufficient only to produce current flow in said tube from the anode to the cathode of said tube.

[Claims 6 to 14 not printed in the Gazette.]

1,213,873. ROTARY-VALVE HYDROCARBON-ENGINE. GEORGE E. HOLLMANN, Flint, Mich. Filed May 12, 1915. Serial No. 27,526. (Cl. 123—59.)



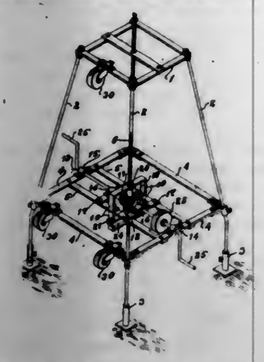
1. In apparatus of the class described a rotary sleeve valve having internal and external bearing surfaces and ports for the passage of gas, and having in its external face circumferential recesses made therein at points coincident with the ports respectively.

2. In a hydro-carbon engine having a series of cylinders, two cylindrical valve casings having ports communicating respectively with the combustion chambers of the cylinders; a rotary sleeve valve in each of the casings having ports adapted to register respectively with the ports in the casing as the valve is rotated, the valve having circumferential recesses at points coincidental with each of its ports; a cylindrical core having concentric chambers, the innermost of which is adapted to have communication with the respective combustion chambers of the cylinders through the ports in the valve and casing periodically as the valve is rotated, the outermost chamber being adapted for the passage therethrough of a cooling liquid; and a mechanism for actuating the valves.

1,213,874. POST-HOLE DIGGER. LEE N. HOLSOMBACK, Dallas, Tex. Filed Nov. 15, 1915. Serial No. 61,501. (Cl. 255—22.)

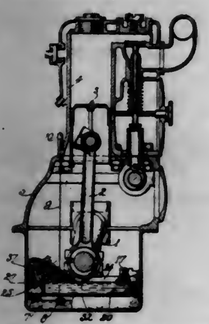
In a machine of the character described, a screw-threaded standard, a miter gear normally idle on said standard,

a means for locking said gear to said standard, a second miter gear arranged on said standard below said first gear, a threaded sleeve wherein said standard is adapted to be



advanced, means for normally locking said sleeve against rotation, said locking means being releasable, said second gear normally idle on said standard and a means for releasably locking said second gear to said sleeve.

1,213,875. OILING SYSTEM FOR INTERNAL-COMBUSTION MOTORS. HARRY L. HORNING, Waukesha, Wis., assignor to Waukesha Motor Co., Waukesha, Wis., a Corporation of Wisconsin. Filed Apr. 7, 1916. Serial No. 89,548. (Cl. 184—13.)



1. In combination, a crank case, a crank shaft mounted in said case, an oil pocket below the crank of said shaft, an oil reservoir, a pump operating at a speed proportional to the speed of the crank shaft for pumping oil from said reservoir to said pocket, a return passage leading to said reservoir, and a scoop on said crank for dipping into said pocket as the crank shaft rotates to throw oil out of said pocket into said return passage, said scoop being of such throwing capacity as to maintain the level of oil in said pocket below the overflow point.

2. In combination, a motor crank case, a crankshaft mounted in said case, said crankcase having an oil reservoir and a plurality of individual pockets, each pocket being individual to the corresponding crank pin upon said crankshaft, said pockets having a transverse wall spaced from the side wall of said crankcase to form a common passageway, said crankcase having a storage reservoir for receiving the oil discharged from the pockets, a pump geared to said crankshaft for discharging oil from said reservoir to each individual pocket, and scoops upon the connecting rod of each crankpin for splashing the oil from the individual pocket over said longitudinal wall into the common passageway, said scoop members being of such throwing capacity as to maintain the level of oil in said pockets below the overflow point.

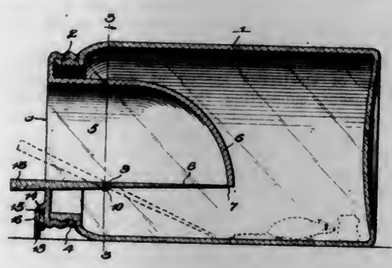
3. In combination, a crank case, a crank shaft mounted in said case, said shaft having a plurality of cranks, an oil pocket below each crank, an oil reservoir, a pump operating at a speed proportional to the speed of the crank shaft for pumping oil from said reservoir individually to said pockets, a common return passage leading to said reservoir, and a scoop on each of said cranks for dipping into the respective oil pocket as the crank shaft rotates to throw oil out of said pocket into said common return passage, said scoops being of such throwing capacity as to maintain the level of oil in said pocket below the overflow point.

4. In combination, a case, a crankshaft mounted in said case, said case having pans or pockets individual to the crankpins of said shaft, a passage between the side of said crankcase and said pans for carrying off the excess oil which is splashed out of the pans and a deflector upon the edge of said pan.

5. In combination a crankcase, a crank mounted in said case, said case having a broad flat bottom and having individual pockets arranged therein for the individual crankpins, said pans having a common longitudinal wall spaced from the side wall of said case to form an overflow channel, deflectors for said pans, said deflectors being adapted to deflect the splash to adjacent pans.

[Claims 6 and 7 not printed in the Gazette.]

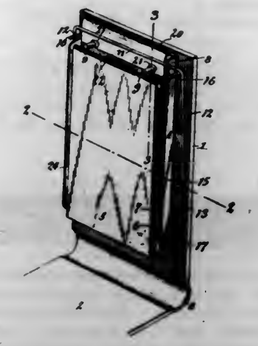
1,213,876. ANIMAL-TRAP. CHRISTOPHER C. HOVIS, San Luis Obispo, Cal. Filed July 25, 1916. Serial No. 111,227. (Cl. 43—24.)



1. The herein described sanitary trap having a body of transparent glass formed at one end with an opening, a cap member removably arranged on said open end and formed of transparent glass, said member having integrally formed with it an entrance portion which projects into the body and is closed at its top, sides and inner end, but provided with an open bottom, a trap door formed of a flat rectangular shaped piece of transparent glass of a size to cover the open bottom of said entrance portion and to project beyond the outer face of said cap member, said trap door having its outer end thick and being tapered from said end to its inner end to render said outer end heavier, said trap door being formed with a transversely extending pivot opening arranged at a point intermediate its ends and the side walls of said entrance portion of the cap member being formed with apertured pivot openings to aline with the opening in the trap door, and a pivot pin passed through said alined openings to pivotally mount the trap door.

2. In a trap, the combination of a transparent cylindrical jar having a threaded neck, a one-piece glass cap to screw on said neck and having a trap-door controlled entrance member, said cap being formed on its outer face near its bottom with an integral lug projecting outwardly from said face and of substantially rectangular shape, said lug having upright end walls, a longitudinal curved bottom and a transverse opening intersecting said end walls, and a wire passed through said opening in the lug and having its central portion positioned in said opening, the projecting end of the wire being bent downwardly at right angles into engagement with the flat end walls of the lug and then bent in opposite directions around the curved bottom of said lug to provide oppositely projecting supporting feet to prevent the jar from rolling.

1,213,877. MANIFOLD-BOOK OR SALES-SLIP HOLDER. JOHN F. HUBER, Buffalo, N. Y., assignor to George W. Pound, Buffalo, N. Y. Filed July 8, 1914. Serial No. 849,727. (Cl. 129—5.)



1. A manifold book comprising a backing having a binding pin, adapted to receive a plurality of record sheets each of which has a perforated tab at one end which receives said pin, and a clamping device for holding said sheets in place comprising a cross bar engaging with the front side of the pile of tabs adjacent to the outer side of said pin, two longitudinal spring arms each having one of its ends connected with one end of the cross bar, and a sliding connection between the other end of each arm and the backing.

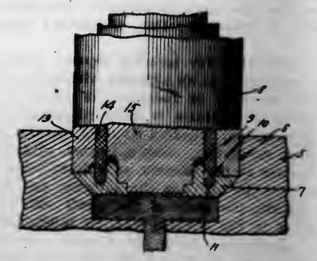
2. A manifold book comprising a backing having a plurality of binding pins, adapted to receive a plurality of record sheets each of which has a perforated tab at one end which receives said pins, and a clamping device for holding said sheets in place comprising a cross bar engaging with the front side of the pile of tabs adjacent to the outer sides of said pins, two longitudinal spring arms each having one of its ends connected with one end of the cross bar and provided at its opposite end with a longitudinal guide loop, and guide pins arranged on said backing and having heads, each guide loop embracing one of said pins between the head of the latter and said backing.

3. A manifold book comprising a backing having a plurality of binding pins, adapted to receive a plurality of record sheets each of which has a perforated tab at one end which receives said pins, and a clamping device for holding said sheets in place comprising a cross bar engaging with the front side of the pile of tabs adjacent to the outer sides of said pins, two longitudinal spring arms each having one of its ends connected with one end of the cross bar and provided at its opposite end with a longitudinal guide loop, guide pins arranged on said backing and having heads, each guide loop embracing one of said pins between the head of the latter and said backing, and means for retaining said cross bar and arms against lateral displacement relatively to the backing.

4. A manifold book comprising a backing having a plurality of binding pins, adapted to receive a plurality of record sheets each of which has a perforated tab at one end which receives said pins, and a clamping device for holding said sheets in place comprising a cross bar engaging with the front side of the pile of tabs adjacent to the outer sides of said pins, two longitudinal spring arms each having one of its ends connected with one end of the cross bar and provided at its opposite end with a longitudinal guide loop, guide pins arranged on said backing and having heads, each guide loop embracing one of said pins between the head of the latter and said backing, and retaining pins arranged on the backing and engaging with the inner sides of said arms adjacent to the cross bar.

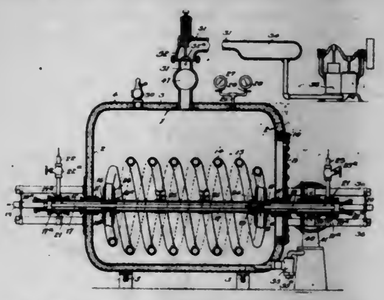
5. A manifold book comprising a backing having a binding device adapted to engage with one edge of a pile of record sheets, and a clamping device for holding said sheets in place having one part engaging said sheets adjacent to said binding device and another part slidably connected with said backing.

1,213,878. FORGING-DIE. GEORGE T. JACOCKS, Pottstown, Pa. Filed May 11, 1916. Serial No. 96,793. (Cl. 78—60.)



The herein described forging die, including a female die having a forging receiving cavity, and a male die fitting snugly in the cavity to prevent flashing from the circumferential edge of the male die, said male die having a groove, or grooves, formed upon the forging engaging face thereof for receiving the surplus metal of the forging that is to be removed to form a finished forging, and a movable forging engaging member carried by the male die and forming a part thereof, said movable forging engaging member acting to spread the metal in the cavity and cause the surplus to enter the groove or grooves.

1,213,879. LIQUID-TREATING APPARATUS. AAGE JENSEN, San Francisco, Cal. Filed Aug. 16, 1915. Serial No. 45,803. (Cl. 127—18.)



1. In an apparatus for treating liquids, the combination with a container, of an agitator embodying a plurality of independent ducts extending through the same, shaft connections at opposite ends of the agitator journaled in the container walls, independent ducts in each shaft connection communicating respectively with the independent ducts in the agitator, independent treating fluid supply means communicating with said ducts respectively, whereby treating fluids may be circulated through the independent ducts in the agitator independently in either direction, and means for rotating the agitator.

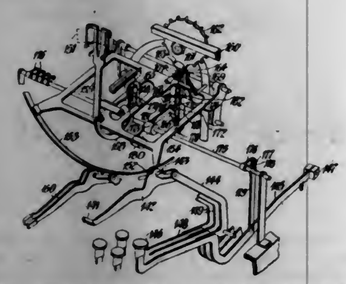
2. In an apparatus for treating liquids, the combinatino with a container, of an agitator embodying a plurality of independent spiral ducts, shaft connections at opposite ends of the agitator journaled in the container walls, independent ducts in each shaft connection communicating respectively with the spiral ducts of the agitator, independent treating fluid supply means communicating with said ducts respectively, whereby treating fluids may be circulated through the coils independently in either direction, and means for rotating the agitator.

3. In an apparatus for treating liquids, the combination with a container, of an agitator embodying a shaft journaled in the container walls and having a plurality of independent ducts in each end thereof, a plurality of coils forming an agitator having their ends connected with the shaft and communicating respectively with the ducts in opposite ends of the shaft, a plurality of independent treating fluid supply means communicating with the ducts respectively in the opposite end of the agitator shaft, whereby treating fluid may be circulated through the coils independently in either direction, and means for rotating the agitator.

4. In an apparatus for treating liquids, the combination with a container, of an agitator within the container embodying a plurality of independent ducts, a tubular shaft on which the agitator is mounted journaled in the walls of the container, headers mounted within the shaft and having ducts therein, communicating with the shaft on opposite sides of the headers, said ducts being in communication with the ducts in the agitator, and independent ducts within the ends of the shaft communicating with the ducts in the headers whereby independent communicating circulating ducts are formed extending out at the ends of the shaft and through the independent ducts of the agitator, and independent fluid treating supply means communicating respectively with the ducts in the ends of the shaft.

5. In an apparatus for treating liquids, the combination with a closed container, of a tubular shaft journaled in the walls of the container and having ducts in its opposite ends exterior of the container, independent tubular coils mounted on the shaft within the container and communicating respectively with the ducts in the respective ends of the shaft, means for exhausting air from the container, means for rotating the shaft, independent treating liquid supply means communicating with the ducts in the shaft ends, and means for admitting and discharging liquid to be treated, substantially as described.

1,213,880. TYPE-WRITING MACHINE. VASSAF KADRY, Constantinople, Turkey, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 15, 1914. Serial No. 812,244. (Cl. 101—174.)



1. The combination with typewriter types adapted to form both "te" medial and "te" initial, of typewriter types adapted to form the remainder of the letters of the Arabic alphabet.

2. The combination with typewriter types adapted to form both "the" medial and "the" initial, of typewriter types adapted to form the remainder of the letters of the Arabic alphabet.

3. The combination with typewriter types adapted to form both "sod" medial and "sod" initial, of typewriter types adapted to form the remainder of the letters of the Arabic alphabet.

4. The combination with typewriter types adapted to form the letter "noon" by a letter-feeding and a silent type, of typewriter types adapted to form the letter "sod" by combining with said letter-feeding type, another typewriter type adapted to form the remainder of the letters of the Arabic alphabet.

5. The combination with typewriter types adapted to form the letter "noon" by a letter-feeding and a silent type, of typewriter types adapted to form the letter "sin" by combining with said letter-feeding type, and other typewriter types adapted to form the remainder of the letters of the Arabic alphabet.

[Claims 6 to 23 not printed in the Gazette.]

1,213,881. SHEATHED WIRE AND TERMINAL THEREFOR. WILLIAM K. KEARSLEY, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed May 23, 1916. Serial No. 99,306. (Cl. 219—63.)



1. The method of making a resistance element for electric heaters and the like, which consists in providing enlarged sections at the ends of a core wire, surrounding the core with a metal sheath, filling the space between the core and the sheath with powdered insulating material, and reducing the whole in cross section.

2. The method of making a resistance element for electric heaters and the like, which consists in surrounding a core wire provided with enlarged sections at the ends with a metal sheath, filling the space between the core and the sheath with powdered insulating material, reducing the whole in cross section, and stripping the sheath and the insulation at the ends to expose the terminals.

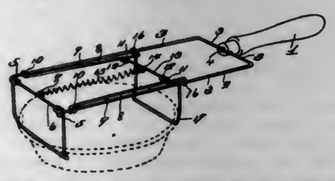
3. The method of making a resistance element for electric heaters and the like, which consists in applying tubes to the ends of a core wire, surrounding the core with a metal sheath, filling the space between the core and the sheath with powdered insulating material, and reducing the whole in cross section.

4. The method of making a resistance element for electric heaters and the like, which consists in applying tubes to the ends of a core wire, surrounding the core with a metal sheath, filling the space between the core and the sheath with powdered insulating material, reducing the whole in cross section, and stripping the sheath and the insulation at the ends to expose the terminals.

5. The method of making a plurality of resistance elements for electric heaters and the like, which consists in providing the core wire with enlarged sections, surrounding the core with a metal sheath, filling the space between the two with powdered insulating material, reducing the whole in cross section, and cutting the compound wire thus formed through the various enlarged sections.

[Claims 6 and 7 not printed in the Gazette.]

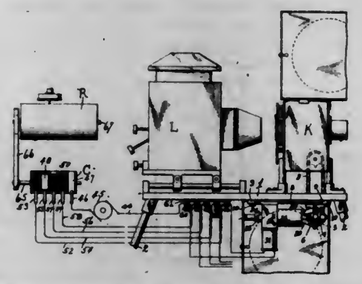
1,213,882. PLATE AND PAN LIFTER. SENECA KETTELL, North Scituate, R. I. Filed May 17, 1916. Serial No. 98,077. (Cl. 65—32.)



1. A pie pan or plate lifter comprising a frame having parallel wire sides and terminating in a forwardly positioned depending loop to engage one side of the pie-plate, a handle for the main frame, eyes formed at the point where the loop depends, a strengthening piece connected between these eyes and provided at its center for connection with a spring, a supplemental frame similar to the main frame but omitting the handle, eyes in the supplemental frame at the extreme end of the horizontal member and at the junction of the horizontal and depending member, said eyes being adapted to slide over the parallel members of the main frame, other eyes formed near the junction of the horizontal and depending member of the supplemental frame, a strengthening piece connecting the last named eyes and adapted to receive a spring at its center and a spring tensioning means for drawing the depending loops toward each other.

2. A pie-pan or plate-lifter comprising a frame having parallel wire sides and terminating in a forwardly positioned depending loop to engage one side of the pie plate, a handle for the main frame, eyes at the point where the loop depends, said eyes being so formed that the natural strain on the loop will tend to close them, a strengthening piece connected between these eyes and provided at its center for connection with a spring, a supplemental frame similar to the main frame but omitting the handle, eyes in the supplemental frame at the extreme end of its horizontal members, eyes at the junction of the horizontal and depending members of said supplemental frame so formed that the horizontal members hook around the depending legs of the loop and pass below the horizontal members of the main frame in forming them thus enabling the depending loop of which they are a part to better withstand the strain of its work all of these said eyes being adapted to slide over the parallel members of the main frame, other eyes formed near the junction of the horizontal and depending members of the supplemental frame, a strengthening piece connecting the last-named eyes and adapted to receive a spring at its center, and a spring tensioning means for drawing the depending loops toward each other.

1,213,883. SYNCHRONOUS PHONOGRAPH AND KINETOGRAPH. ISIDOR KITSEE, Philadelphia, Pa., assignor to The Cort-Kitsee Co., a Corporation of New York. Filed July 1, 1912. Serial No. 706,887. (Cl. 88—16.2.)



1. The combination of a sound machine, a pneumatic engine and a picture machine adapted to be driven by said engine of electro-magnetic valve mechanism controlling said engine, said mechanism controlled by said sound machine.

2. The combination with a kinetograph and a sound producing machine, of pneumatic means driving said kinetograph, electro-magnetic valve mechanism controlling said pneumatic means, said valve mechanism controlled by said sound producing machine.

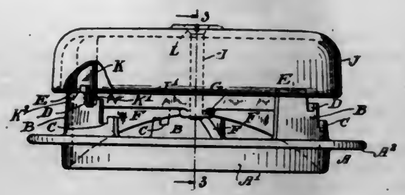
3. The combination with a kinetograph and a sound record, of pneumatic means driving one of them, valve mechanism controlling said pneumatic means, electro-magnetic means controlling said valve mechanism, and switching mechanism controlled by the other of them controlling said electro-magnetic means.

4. The combination with a kinetograph and sound record, of a plurality of pneumatic engines controlling the movement of one of them, valve mechanism controlling said engines, electro-magnetic means controlling said valve mechanism, and switching mechanism controlled by the other of them controlling said electro-magnetic means.

5. The combination with a kinetograph and sound record, of reciprocating pneumatic engines controlling the movement of one of them, valve mechanism controlling said engines, electro-magnetic means controlling said valve mechanism, and switching mechanism controlled by the other of them controlling said electro-magnetic means.

[Claims 6 to 11 not printed in the Gazette.]

1,213,884. VENTILATING DEVICE. GEORGE E. KNOWLES, New York, N. Y.; Hattie A. Knowles executrix of said George E. Knowles, deceased. Filed Oct. 21, 1913. Serial No. 796,384. (Cl. 98—27.)



1. A ventilating device for buildings or the like comprising a ring portion adapted to serve as a base and provided with brackets integral with said ring and extending laterally from positions adjacent the periphery thereof, each bracket being provided with a plurality of steps located at different distances from said ring member, a hood portion provided with ribs for engaging the steps of said brackets, said hood portion being movable into different positions in order to cause each of said ribs to be shifted from one step to another, and a clamping member connected with said ring member and with said hood portion for holding the same together.

2. A ventilating device for buildings comprising a base member having a laterally extending flange and a plurality of upwardly extending brackets, each bracket being provided with a plurality of steps arranged at different levels from said laterally extending flange, a hood portion provided with members to rest upon said steps for the purpose of controlling the height of the hood relative to the base and thus adjusting the space therebetween for purposes of ventilation, and a fastening member connected with the proximate center of said base and with the proximate center of said hood for clamping said hood upon said base.

3. A ventilating device for buildings or the like comprising a base portion provided with an opening and with a spider bridged across said opening for permitting ventilation therethrough, said base portion being provided with a plurality of brackets integral with it, each bracket having a plurality of steps extending to different distances from said base portion, said brackets being spaced apart, a hood portion provided with a plurality of surfaces disposed adjacent its periphery for engaging some of said steps in order to support said hood at points disposed adjacent the periphery thereof, so as to allow ventilation between said hood and said base portion, and said hood being adjustable bodily in relation to said base by shifting said hood so as to bring its supporting surfaces out of engagement with one group of steps and into engagement with another group of steps, and means for locking said hood and said base portion when said hood is thus adjusted relatively to said base portion.

4. A ventilating device for buildings or the like comprising a hood provided with a plurality of supporting surfaces disposed near its periphery and spaced apart, a base member having a general annular form and provided near its periphery with a plurality of supporting surfaces disposed at different distances from the general plane of the base and adapted to be engaged by said supporting surfaces of the hood in order to support said hood upon said base at a distance from the centers of said hood and said base, the supporting surfaces of said base being spaced apart in order to permit the passage of a ventilating fluid between said base and said hood, and means for locking said hood and said base together.

1,213,885. GAS-BURNER. CHARLES L. KOONTZ, South Bend, Ind., assignor of one-half to Augustus O. Koontz, South Bend, Ind. Filed Apr. 27, 1916. Serial No. 93,940. (Cl. 158—116.)



1. A burner comprising a base formed with a recess, a top extending laterally of the base, and a cup underlying the top having a projection adapted to seat in the recess of the base to support the cup in burner forming relation with the top.

2. A burner comprising a base, an upper burner section extending laterally of the base, and a lower burner section underlying the upper section, said base and lower section being formed with interengaging parts adapted to support the lower section in burner forming relation with the upper section.

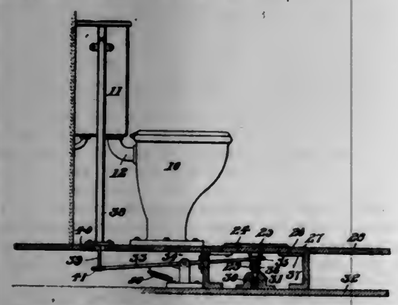
3. A burner including a base formed with a recess, a top removably secured to the base and projecting beyond the same, and a cup coöperating with the top to complete the burner, and formed with a projection to seat in the recess in the base, and coöperating means carried by the top and cup to secure these parts together beyond the base.

4. A burner including a base formed with a recess, a top removably secured to the base and projecting beyond the same, a cup underlying the top and having a projection to enter the recess in the base, lips carried by the top and cup, and means for securing the lips together.

5. A burner including a base formed with a recess, a top removably secured to the base, and projecting laterally beyond the same, a cup arranged beneath the projecting portion of the top, and having a lug to enter the recess in the base, said top and cup being provided at points remote from the lug and recess connection with lips, and a bolt uniting the lips.

[Claims 6 and 7 not printed in the Gazette.]

1,213,886. AUTOMATIC FLUSHING DEVICE. FRANK J. KOZIK, Easthampton, Mass. Filed Nov. 20, 1916. Serial No. 132,407. (Cl. 4—5.)

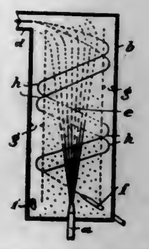


1. A device of the class described comprising in combination with a water closet having a tank provided with a flusher pipe supplied with a ball valve, an arm pivoted in the said tank, loose link connections between the said arm and valve, a trip bar carried by the said tank, a resiliently mounted floor plate, an operating lever attached at one end to said plate, a rod connecting one end of the lever to one end of the bar, a hook pivoted to the said arm, a spring for maintaining the upper free end of the hook within the path of travel of the said bar whereby the bar in its upward movement is brought into tripping engagement with the said hook.

2. A device of the class described comprising in combination with a flush tank having a gravity seating flush valve, an arm pivoted within the said tank, link connections between the said arm and valve, a limiting guide for the said arm, an upwardly-extending hook pivoted to the said arm, resilient connections between the said hook and the adjacent side of the tank whereby the free end of the hook is normally arranged spaced from the said tank side, a trip bar for the said arm pivoted to the tank and having a lower beveled face adapted for frictional moving engagement with the said hook during the downward movement thereof, and elevating means for the said bar adapted for upwardly moving the said arm upon an upward movement of the bar in the valve unseating operation.

3. A device of the class described comprising in combination with a flush tank having a gravity seating flush valve, an arm pivoted within the said tank, link connections between the said arm and valve, a limiting guide for the said arm, an upwardly-extending hook pivoted to the said arm, resilient connections between the said hook and the adjacent side of the tank whereby the free end of the hook is normally arranged spaced from the said tank side, a trip bar for the said arm pivoted to the tank and having a lower beveled face adapted for frictional moving engagement with the said hook during the downward movement thereof, elevating means for the said bar adapted for upwardly moving the said arm upon an upward movement of the bar in the valve unseating operation, the said means comprising a normally resiliently elevated foot plate, a lever having one end operatively connected to the said plate, and a connecting rod between the opposite end of the said lever and the adjacent end of the said bar.

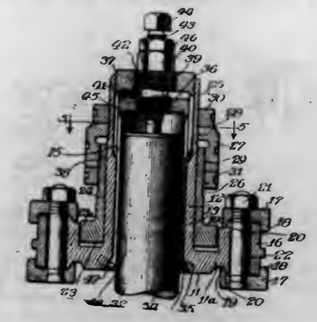
1,213,887. METHOD OF VAPORIZING OR CONCENTRATING LIQUIDS, SOLUTIONS, EMULSIONS, SUSPENSIONS, AND LIKE SUBSTANCES. GEORG A. KRAUSE, Munich, Germany. Filed Nov. 29, 1916. Serial No. 134,042. (Cl. 99—5.)



The herein described method of desiccating substances containing liquids, which consists in injecting said substances in a finely divided state into a desiccating chamber lengthwise thereof, and forcing an envelop of a heated gaseous drying medium in a sinuous path about said substance, the diameter of said envelop being maintained substantially uniform from one end of said desiccating chamber to the other.

1,213,888. MATCHER-HEAD. FRANKLIN L. LANE, Beloit, Wis., assignor to P. B. Yates Machine Company, Beloit, Wis., a Corporation of Wisconsin. Filed Sept. 27, 1915. Serial No. 52,818. (Cl. 144—218.)

1. The combination with a tool head having an axial bore with a beveled approach at one end, and a shaft, of means for mounting the head on the shaft comprising a sleeve enlarged at one end with a beveled exterior face for coöperation with the beveled approach of the bore, an abutment for the head at the opposite end of the bore, said abutment enveloping the closed end of the sleeve, a screw passing through the closed end of the abutment and sleeve and engaging the same with right and left hand threads respectively and bearing inwardly on the shaft end, whereby the turning of the screw will shift the abutment and sleeve simultaneously in opposite directions and cause the sleeve to be contracted on the shaft by the beveled coacting surfaces.



2. The combination with a tool head having an axial bore with beveled approaches at both ends, and a shaft, of means for mounting the head on the shaft comprising a sleeve enlarged at its one end with beveled exterior face for coöperation with the beveled approach at one end of the bore, a sleeve abutment for the head at the opposite end of the bore, said abutment having a beveled face for coöperation with the beveled approach at that end of the bore and enveloping the first sleeve, and means to effect relative axial movement of the two sleeves, said means including an element bearing on the shaft end to determine the position of the head relative to the shaft.

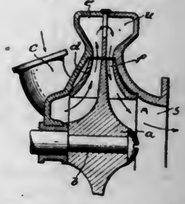
3. The combination with a tool head having an axial bore with beveled approaches at both ends, and a shaft, of means for mounting the head on the shaft comprising a cup-shaped sleeve enlarged at its one end with beveled exterior face for coöperation with the beveled approach at one end of the bore, a cup-shaped sleeve abutment for the head at the opposite end of the bore, said abutment having a beveled face for coöperation with the beveled approach at that end of the bore and enveloping the first sleeve, a right and left hand screw engaging the two sleeves and including an element bearing inwardly on the shaft end, whereby the turning of the screw will shift the two sleeves simultaneously in opposite directions and cause the inner sleeve to be contracted on the shaft by the beveled co-acting surfaces.

4. The combination with a tool head having an axial bore with beveled approaches at both ends, and a shaft, of means for mounting the head on the shaft comprising a cup-shaped sleeve enlarged at its one end with beveled exterior face for coöperation with the beveled approach at one end of the bore, a cup-shaped sleeve abutment for the head at the opposite end of the bore, said abutment having a beveled face for coöperation with the beveled approach at that end of the bore and enveloping the closed end of the first sleeve, a screw passing through the closed end of the two cup-shaped sleeves and engaging the same with right and left hand threads respectively and bearing inwardly on the shaft end, whereby the turning of the screw will shift the two sleeves simultaneously in opposite directions and cause the inner sleeve to be contracted on the shaft by the beveled coacting surfaces.

5. The combination with a tool head having an axial bore with beveled approaches at both ends, and a shaft, of means for mounting the head on the shaft comprising a cup-shaped sleeve enlarged at its one end with beveled exterior face for coöperation with the beveled approach at one end of the bore, a cup-shaped sleeve abutment for the head at the opposite end of the bore, said abutment having a beveled face for coöperation with the beveled approach at that end of the bore and enveloping the closed end of the first sleeve, means to lock the two sleeves against relative rotation while permitting of axial displacement, a screw passing through the closed end of the two cup-shaped sleeves and engaging the same with right and left hand threads respectively and bearing inwardly on the shaft end, whereby the turning of the screw will shift the two sleeves simultaneously in opposite directions and cause the inner sleeve to be contracted on the shaft by the beveled co-acting surfaces.

[Claims 6 to 8 not printed in the Gazette.]

1,213,889. TURBINE PUMP OR COMPRESSOR. FRANZ LAWACZECK, Halle-on-the-Saale, Germany. Filed Mar. 28, 1913. Serial No. 757,314. (Cl. 103—43.)



1. A turbine pump or compressor having a rotor with one set of impeller blades associated in the usual manner with a central inlet and peripheral outlet, another set of impeller blades arranged between a peripheral inlet and central outlet and adapted to increase the energy of the centripetally impelled fluid and a diffuser adapted to receive the discharge from the first set of blades, transform kinetic energy thereof into pressure, and subsequently invert the fluid for passage into the inlet of the second set of blades.

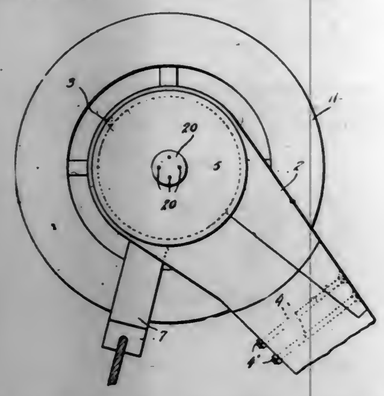
2. A turbine pump or compressor having a rotor with one set of impeller blades associated in the usual manner with a central inlet and peripheral outlet, another set of impeller blades arranged between a peripheral inlet and central outlet and adapted to increase the energy of the centripetally impelled fluid and a diffuser adapted to receive the discharge from the first set of blades, transform kinetic energy thereof into pressure, subsequently invert the fluid and then increase the velocity and reduce the pressure of the fluid as it passes into the inlet of the second set of blades.

3. A turbine pump or compressor having a rotor with one set of impeller blades associated in the usual manner with a central inlet and peripheral outlet, another set of impeller blades arranged between a peripheral inlet and central outlet and adapted to increase the energy of the centripetally impelled fluid and a diffuser adapted to receive the discharge from the first set of blades, transform kinetic energy thereof into pressure, subsequently invert the fluid, and then increase the velocity and reduce the pressure of the fluid as it passes into the inlet of the second set of blades, and directing vanes in the diffuser adapted to direct the entering water in the manner described.

4. A turbine pump or compressor having a rotor with one set of impeller blades associated in the usual manner with a central inlet and a peripheral outlet, another set of impeller blades arranged between a peripheral inlet and central outlet and adapted to increase the energy of the centripetally impelled fluid, and a diffuser adapted to receive the discharge from the first set of blades, transform kinetic energy thereof into pressure, subsequently invert the fluid in the same plane, and then increase the velocity and reduce the pressure of the fluid as it passes into the inlet of the second set of blades, and directing vanes in the diffuser adapted to direct the entering water in the manner described.

5. A turbine pump or compressor having a rotor with one set of impeller blades associated in the usual manner with a central inlet and peripheral outlet, another set of impeller blades arranged between a peripheral inlet and central outlet and adapted to increase the energy of the centripetally impelled fluid, a stationary chamber arranged to receive the discharge from the first set of blades and invert it for passage into the inlet of the second set of blades, and vanes in said chamber adapted to direct the fluid as it passes into the said inlet.

1,213,890. TROLLEY-HARP. ETHAN A. LEONARD, Aurora, Ill. Filed June 1, 1916. Serial No. 101,130. (Cl. 64—66.)



1. A trolley harp, including a supporting member, circular bearing plates removably carried by said supporting member having concaved pockets arranged therein, supporting elements movably received by said concaved bearing elements, and a trolley wheel arranged upon said supporting elements.

2. A trolley harp, including a supporting member, bearings carried by said supporting member having concaved pockets arranged therein, supporting elements movably arranged in said pockets, immovable stub-axles arranged upon the supporting elements, and a trolley wheel carried by said stub-axles.

3. A trolley harp, including a supporting member, bearings carried by said supporting member having concaved pockets arranged therein, convex supporting elements removably received by said pockets, stub-axles having squared extensions engaged with said supporting elements, and a trolley wheel carried by the stub-axles.

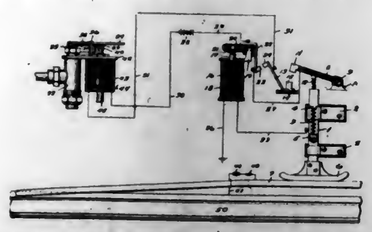
4. A trolley harp, including a supporting member, bearings carried by said supporting member having concaved pockets and inclined recesses adjacent the pockets formed therein, convex supporting elements movably received by said pockets, and a trolley wheel arranged upon the supporting elements.

5. A trolley harp, including a supporting member, circular bearing plates carried by said supporting member having concaved pockets arranged therein, supporting elements loosely received by said bearing pockets, stub-axles engaged with the supporting elements, a hollow axle arranged upon said stub-axles having a plurality of lubricant dispensing ways therein, and a trolley wheel carried by the axle.

[Claims 6 to 8 not printed in the Gazette.]

1,213,891. ELECTRICALLY-OPERATED AND MECHANICALLY-CONTROLLED TRAIN-STOPPING DEVICE. WILLIAM B. MURRAY, Washington, D. C., assignor to The Miller Train Control Corporation, Staunton, Va., a Corporation of Virginia. Filed July 27, 1912. Serial No. 711,794. (Cl. 246—58.)

1. In apparatus of the character described, train stopping means, means to automatically operate the train stopping means when released, means normally preventing the operation of the train stopping means and adapted to automatically move upon being released so that said train stopping means may operate, an electrical device to normally hold the last named means against such automatic movement, a normally closed circuit including a source of current connected with the electrical device, a switch connected in the closed circuit, a mechanically operated structure to actuate the switch, a stationary ramp to move the mechanically operated structure, a source of current having electrical connection with the stationary ramp, and means including an electrical device having electrical connection with the movable structure and adapted when energized to close the circuit upon the opening of the switch.



2. In automatic train stopping apparatus of the character described, automatically operated train stopping means, an electrically operated device adapted when energized to prevent operative movement of the automatically operated train stopping means, a normally closed circuit including a source of current connected with said electrically operated device, mechanically operated means to open the closed circuit, and electrically operated means to close the circuit.

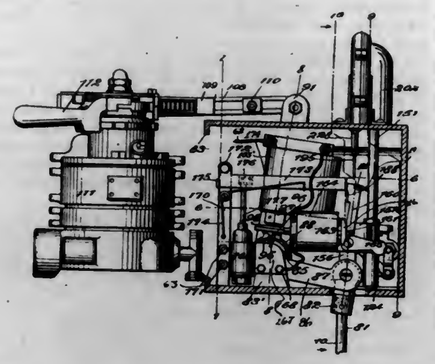
3. In automatic train stopping apparatus of the character described, automatically operated train stopping means, electrically operated means adapted when energized to prevent the operation of the automatically operated train stopping means, a normally closed circuit including a source of current connected with the electrically operated means, mechanically operated means to open the circuit, an electrically operated device to close the circuit at another point and in a shunt around the point where the circuit is opened by the mechanically operated means, and a stationary ramp serving the double function of moving the mechanically operated means and supplying current to the electrically operated device.

4. In apparatus of the character described, train stopping means, means controlling the operation of the same including a circuit, a ramp, a source of current, means for connecting and disconnecting the ramp with and from the source of current, a reciprocatory structure to travel into engagement with the ramp and be moved thereby, switch means operated by the reciprocatory structure upon the engagement of the same with the ramp to open the circuit at one point, and electrically operated switch means to close the circuit at another point upon the engagement of the reciprocatory structure with the ramp when the latter is connected with the source of current.

5. The combination with the track rail, of a ramp rail; a vehicle having a controlling device and a magnet for controlling said device; a current supply on the vehicle; a circuit on the vehicle which normally includes the said electro-magnet; a contact on the vehicle to engage the ramp rail and thereby effect a break in the normal vehicle circuit through the electro-magnet; a branch in said normal vehicle circuit between the vehicle current supply and electro-magnet and means for closing a connection from the vehicle current supply through said branch while the vehicle contact is in engagement with a ramp rail.

1,213,892. TRAIN-CONTROL SYSTEM. WILLIAM B. MURRAY, Washington, D. C., assignor to The Miller Train Control Corporation, Staunton, Va., a Corporation of Virginia. Filed Feb. 10, 1913. Serial No. 747,498. (Cl. 246—58.)

1. In a train stopping system of the character described, a plurality of substantially horizontally arranged pivoted sleeves one of which extends into the other, said sleeves being provided with lateral openings; a movable bolt adapted to enter the latter openings to lock the sleeves for rotation together in one direction; electrically operated means to move the bolt for unlocking the sleeves; mechanically operated means to turn one sleeve; a valve for actuating train control means; and connecting means between the valve and one sleeve.



2. In a train control system of the character described, a pivoted sleeve having a lateral opening; a second pivoted sleeve arranged upon the first named sleeve and having a lateral opening adapted to register with the first named lateral opening; an upstanding crank connected with the second named pivoted sleeve; an electro-magnet carried by the upstanding crank; a gravity operated bolt adapted to move downwardly into the lateral openings to lock the sleeves for movement together in one direction and to move upwardly when the magnet is energized; train control means; connecting means between the upstanding crank and the train control means; mechanically operated means to turn the first named sleeve; and means to energize the magnet under certain track conditions.

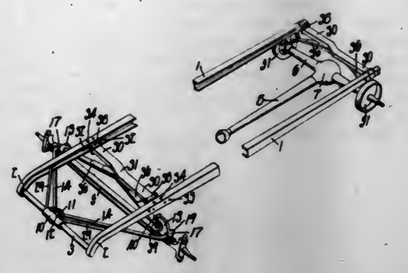
3. In a train control system of the character described, a pair of substantially horizontal sleeves one of which extends into the other; electrically operated means carried by one sleeve to be bodily moved thereby and adapted when deënergized to lock the sleeves for movement together in one direction and when energized to unlock the sleeves; train control means actuated by the turning movement of one sleeve; and mechanically operated means to move the other sleeve.

4. In a train control system of the character described, a supporting structure, a crank carrying a laterally extending sleeve at one end thereof, a swinging support including a sleeve surrounding the first named sleeve, an electro-magnet carried by the swinging support, a latch adapted to lock and unlock the sleeves, an armature connected with the latch and disposed adjacent the electro-magnet, train stopping means connected with the swinging support to be operated thereby, mechanically operated means to move the crank, and electrical means to close a circuit including the electro-magnet.

5. In a train control system of the character described, a supporting structure, a pivoted crank mounted thereon and provided near one end with a lateral extension, a swinging support including a sleeve surrounding the lateral extension and provided with an opening adapted for registration with an opening in the lateral extension, an electro-magnet mounted upon the swinging support, an armature lever pivotally connected near one end with the swinging support and disposed below and adjacent the electro-magnet, a bolt carried by said armature lever to operate within the openings formed through the sleeve and lateral extension, mechanically operated means to move the crank, electrical means to close a circuit including the electro-magnet, and train stopping means operated by and upon the movement of the swinging support.

[Claims 6 to 23 not printed in the Gazette.]

1,213,893. VEHICLE. CHARLES L. NEDOMA, Detroit, Mich. Filed July 13, 1916. Serial No. 108,979. (Cl. 21—182.)



1. A motor vehicle comprising a frame, a front axle, said frame extending forwardly past the front axle, resilient means extending longitudinally of the axle for supporting the frame on the axle, tension means connecting the frame and axle, said tension means being capable of angular movement in respect to the frame, whereby stress on the frame, tending to drive it forwardly, is caused to pull the axle.

2. A motor vehicle comprising a frame, a front axle, said frame extending forwardly past the front axle, resilient means extending longitudinally of the axle for supporting the frame on the axle, tension means connecting the frame and axle, said tension means being capable of universal angular movement in respect to the frame, whereby stress on the frame, tending to drive it forwardly, is caused to pull the axle.

3. A motor vehicle comprising a pair of side bars, a front cross bar joining the side bars, a front axle positioned to the rear of the cross bar, means extending longitudinally of the axle for resiliently supporting the side bars on the axle, and tension means for joining the outer portions of the axle to the cross bar, said tension means being capable of angular movement with respect to the cross bar.

4. A motor vehicle comprising a pair of side bars, a front cross bar joining the side bars, a front axle positioned to the rear of the cross bar, means extending longitudinally of the axle for resiliently supporting the side bars on the axle, and tension means attached to the cross bar near the center thereof, said tension means also being attached to the axle near its outer ends and being capable of angular movement with respect to the cross bar, whereby stress on the side bars, tending to drive them forwardly, is caused to pull the axle.

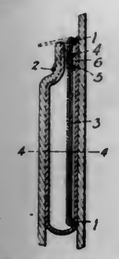
5. A motor vehicle comprising a pair of side bars, a front cross bar joining the side bars, a front axle positioned to the rear of the cross bar, means extending longitudinally of the axle for resiliently supporting the side bars on the axle, a second cross bar joining the side bars at a point substantially over the front axle, and tension means attached to the front cross bar and to the outer ends of the front axle whereby stress on the side bars, tending to drive them forwardly, is caused to pull the axle.

[Claims 6 to 9 not printed in the Gazette.]

1,213,894. SAFETY POCKET DEVICE. FRED S. NELSON, Medicine Bow, Wyo. Filed May 5, 1916. Serial No. 95,566. (Cl. 2—151.)

1. A safety pocket attachment, including a rectangular frame member adapted to be inserted within the pocket, an intermediate cross bar extending across the frame member, fastening means carried by the intermediate cross bar for engaging the pocket to hold the frame member in position therein, and a spring actuated clamping jaw pivotally mounted upon the upper cross bar of the frame member and bearing yieldably against the exterior of the pocket.

2. A safety pocket attachment, including a rectangular frame member adapted to be inserted within the pocket, an intermediate cross bar extending across the frame member, a transverse clamping bar having returned ends which are pivotally connected to the upper cross bar of the frame member, and coil springs surrounding the upper cross bar of the frame member, one end of each of the coil springs being extended into engagement with the intermediate cross bar, while the other end thereof is extended into engagement with the clamping bar, said springs acting upon the clamping bar to hold the same yieldably in operative position.



3. A safety pocket attachment, including a rectangular frame member adapted to be inserted within the pocket, a thickness of flexible material stretched upon the frame member, an intermediate cross bar extending across the frame member at the rear of the flexible material, fastening means carried by the said intermediate cross bar for engaging the pocket to secure the frame member in position therein, and a spring actuated clamping jaw pivotally mounted upon the upper cross bar of the frame member and bearing yieldably against the exterior of the pocket.

1,213,895. HEAD-MOTION FOR NAILING-MACHINES. ELMER C. NORTHRUP, San Francisco, Cal., assignor, by mesne assignments, to Savings Union Bank and Trust Company, San Francisco, Cal., a Corporation of California. Filed May 28, 1915. Serial No. 30,985. (Cl. 1—10.)



1. The combination of a frame, inclined guides near the top of said frames, a slidable head on said guides, arms carried by said slidable head and adjustable transversely thereof, a plurality of nail chucks and nail drivers carried by said arms, and links carried by the slidable head and pivoted thereto in front of the guides on which it is slidable.

2. The combination of a frame having inclined guides at the upper end thereof, a head slidable on said guides, arms supported by said slidable head and adjustable transversely thereof, links pivoted to said slidable head in a plane in front of the guides on which it is movable, nail chucks and nail drivers carried by said arms, and a crank shaft to which said links are connected and which delivers the thrusts to the slidable head in a plane approximately parallel to the line of motion of said head.

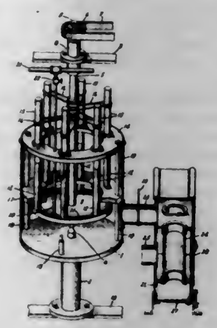
3. A nailing machine comprising the combination with a frame having inclined guides in its upper end, of a slidable head thereon mounted so that it may rock in a plane parallel to the guides, links connected to said slidable head, springs to deliver the thrust of said links to the slidable head whereby one side may move more than the other side, and adjustable arms carried by the slidable head for the support of nail chucks and nail drivers.

4. A nail machine comprising a frame having inclined guides at the upper portion thereof, a slidable head carried by said guides and mounted so that it may rock in a plane parallel to the guides, resilient links connected with said slidable head for raising and lowering it, transversely movable arms carried by the slidable head, bolts for fixing two of said arms in a given adjustment with respect to said slidable head, and nail chucks and nail drivers carried by the arms.

5. A nailing machine comprising a frame, inclined guides at the upper end thereof, a slidable head carried by the guides and mounted so that it may move more at one end than the other in a plane parallel to the guides, laterally movable arms carried by the slidable head, means to adjust said arms, means to secure them in a given adjustment with respect to said slidable head, a second pair of arms supported by the first arms and movable with respect thereto, nail chucks carried by the second arms, and nail drivers carried by the first set of transversely adjustable arms.

[Claims 6 and 7 not printed in the Gazette.]

1,213,896. METHOD AND APPARATUS FOR COMMINUTING METAL. ROBERT PALMER and NATHAN H. ADAMS, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Mar. 16, 1916. Serial No. 84,728. (Cl. 29—4.5.)



1. The method of comminuting metal which consists in producing relative motion between a body of said metal and a plurality of cutting teeth, acting upon the turnings of metal produced thereby with a current of fluid to remove the same from the cutting teeth, carrying away the turnings of metal by said fluid current and collecting the metal particles.

2. The method of comminuting magnesium which consists in turning off small chips from a body of magnesium with a tool having cutting teeth, shifting the relation of the magnesium body and said tool to cause the engagement of said teeth with the metal on lines intersecting prior lines of engagement, removing the turnings of metal by a current of fluid from the cutting teeth and collecting said turnings.

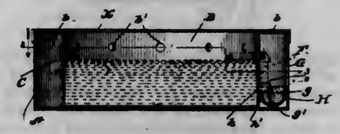
3. An apparatus for preparing comminuted metal which comprises a machining tool having a plurality of teeth, means for holding a body of magnesium in contact with said teeth, and means for producing relative motion between said tool and said magnesium body while continuously shifting the cutting travel of said teeth on said body to produce successive engagement of said teeth on intersecting lines.

4. An apparatus for sub-dividing magnesium which comprises a tool having a plurality of rows of cutting teeth, means for holding a body of magnesium in contact with said teeth, and means for producing relative motion between said tool and said magnesium in the general direction of said rows of teeth to turn off shavings of magnesium, and means for rotating said body of magnesium on its axis to change the surface subjected to the machining action.

5. An apparatus for sub-dividing magnesium which comprises a movably mounted tool having a serrated surface, means for rotating said tool, means for mounting one or more bodies of magnesium to bear against said serrated surface, means for rotating said bodies on their own axes, and means for collecting the particles of magnesium produced by the cutting action of said surface.

[Claims 6 to 9 not printed in the Gazette.]

1,213,897. STOCK-WATERER. PETER PAULSEN, Ute, Iowa. Filed June 30, 1916. Serial No. 106,788. (Cl. 119—73.)



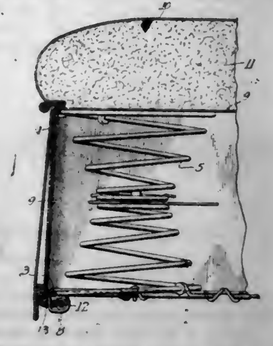
1. A stock waterer, comprising a water tank, a casing surrounding it and having an air chamber interposed between the casing and the tank which communicates with the interior of the tank above the water level therein through a plurality of openings located at different points in the water tank, a cover having a drinking opening resting on the tank and casing, a drinking trough located wholly within said air chamber, a valved pipe leading from the water tank to the trough, a vertical partition in the trough in front of said valve for protecting it, and a screen extending from said partition to the side of the tank above the valve for shielding the latter.

2. A stock waterer, comprising a water tank formed with a horizontally projecting annular flange, a casing surrounding the water chamber and provided with an air chamber below said annular flange, a heater in said chamber, means for conveying heated air from the chamber to the interior of the tank above the water level therein, and a cover for the tank which overlaps said annular flange but which is provided with an opening for access to the interior of the tank.

1,213,898. WIRE-SEAT STRUCTURE. JOSEF PETRZILKA, Racine, Wis., assignor, by mesne assignments, to The Nash Motors Company, Kenosha, Wis., a Corporation of Maryland. Filed July 19, 1915. Serial No. 40,631. (Cl. 155—25.)

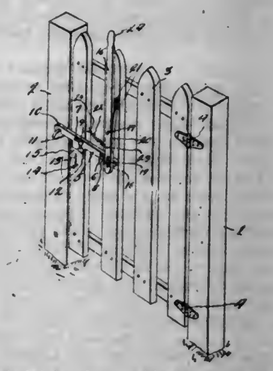
1. A wire seat structure comprising upper and lower wire marginal frames, a plurality of springs interposed between said frames, a covering for the seat structure extending downwardly between the upper and lower frames, wires extending between the sides of the lower frame and secured thereto by being coiled therearound, eyelets at the lower end of said covering in alinement with said wires, the ends of said wires being normally straight to be received in said eyelets and then bent inwardly and upwardly to draw the lower edge of the covering inwardly and toward the bottom of said seat structure.

2. A wire seat structure comprising upper and lower marginal wire frames, a plurality of springs interposed between said frames, a covering for the seat structure extending downwardly between said upper and lower frames, a reinforcing wire secured in the lower end of said covering, wires extending between the sides of the lower frame and being secured thereto by being coiled therearound, eyelets in said covering above its reinforcing wire and in line with said wires, the free ends of said wires being originally straight to receive the eyelets and



being then bent inwardly and upwardly to loop around the reinforcing wire of the covering and to draw it up against the base of the seat structure.

1,213,899. GATE-LATCH. FRANCIES M. PETTY, Maud, Okla., assignor of one-half to J. E. Simpson, Maud, Okla. Filed June 30, 1916. Serial No. 106,838. (Cl. 70—28.)

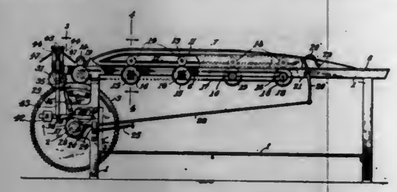


In a gate-latch, the combination of a keeper and a latch-bar adapted to be carried by a swinging closure and designed to engage said keeper, of means for reciprocating the latch-bar out of engagement with the said keeper, said latch-bar having an elongated slot at one end, a headed pin carried by the closure and extending through said elongated slot, said latch-bar having an elongated L-shaped slot near its other end, a headed pin carried by the closure end, extending through said L-shaped slot, whereby as the latch-bar cams over the keeper thereby tilting the latch-bar, the vertical portion of the L-shaped slot receives said last mentioned pin, and spring tensioning means for the latch-bar, said means comprising a spring tensioning manually actuated lever pivoted upon the closure and having its lower end provided with a slot and pin connection with said latch-bar.

1,213,900. FOLDING-MACHINE. EMANUEL PIONONE, New York, N. Y. Filed June 8, 1916. Serial No. 102,414. (Cl. 101—44.)

1. In a folding machine, a horizontal support for the material, a straight guide plate projecting vertically at one side of the support, a deflector gradually narrowing in the direction of feed of the material overhanging the support and located opposite the guide plate, a horizontally disposed guide plate between the support and the

deflector but separated from both, a guide to determine the feed of the material to the machine, feeding devices located in the same plane as the support adjacent to the vertical guide plate, rolling devices beyond the feeding devices adapted to engage the material and coil it and squeezing devices adapted to flatten and compress the coiled material.



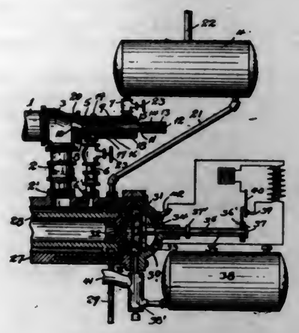
2. In a folding machine, a horizontal support for the material, a straight guide plate projecting vertically at one side of the support, a deflector gradually narrowing in the direction of feed of the material overhanging the support and located opposite the guide plate, a horizontally disposed guide plate supported from the vertical guide plate and located between the support and the deflector but separated from both, a guide to determine the feed of the material to the machine, feeding devices located adjacent to the vertical guide plate only and arranged in pairs, the meeting surfaces of which are in the same plane as the support, rolling devices beyond the feeding devices adapted to engage the material and coil it, and squeezing devices superimposed above the coiling devices adapted to grip the coiled material and flatten and compress it.

3. In a folding machine, a horizontal support for the material, a straight guide plate projecting vertically at one side of the support, a deflector gradually narrowing in the direction of feed of the material overhanging the support and located opposite the guide plate, a horizontally disposed guide plate supported from the vertical guide plate and located between the support and the deflector, but separated from both, a guide to determine the feed of the material to the machine, feeding devices located adjacent to the vertical guide plate only and arranged in pairs, the meeting surfaces of which are in the same plane as the support, rolling devices beyond the feeding devices adapted to engage the material and coil it, squeezing devices superimposed above the rolling devices adapted to grip the coiled material and flatten and compress it, a hopper to receive the flattened and compressed material, and squeezing rollers in the bottom of the hopper.

4. In a folding machine, a horizontal support for the material, a straight guide plate projecting vertically at one side of the support, a deflector gradually narrowing in the direction of feed of the material overhanging the support and located opposite the guide plate, a horizontally disposed guide plate between the support and the deflector but separated from both, feeding devices located adjacent to the vertical guide plate only and in the same plane as the support, endwise movable rolling devices beyond the feeding devices adapted to engage the material and coil it, and squeezing devices adapted to grip the coiled material and hold it during the withdrawal of the rolling devices and to flatten and compress the coiled material.

1,213,901. ASPIRATOR. ELBERT BALL PORTER, Penn Yan, N. Y. Filed July 27, 1915. Serial No. 42,121. (Cl. 60—30.)

1. The combination of a delivery conduit and an aspirator mounted thereon, said aspirator having means movably mounted therein for putting the aspirator into and out of communication with the conduit, means for connecting the aspirator with a source of fluid to enable said first-named means to be actuated by the fluid to put the aspirator into communication with the conduit, a source of vaporizable liquid connected to the aspirator, and a movable member in the aspirator operable by said fluid to act upon the liquid and facilitate the passage of the latter through the aspirator.



2. An aspirator comprising a discharge tube inside of the same and a chamber surrounding the tube and communicating therewith, means for supplying fluid to the chamber, a piston surrounding the tube, and means for putting the piston into communication with a source of pressure fluid to cause the fluid to be impelled quickly therethrough and out of the aspirator.

3. An aspirator having a valve and a seat therefor, said seat having one or more apertures leading to the rear face of said valve, and means communicating with said apertures for supplying fluid under pressure to the aspirator, said fluid acting through said apertures to move said valve away from its seat.

4. An aspirator comprising a valve, means providing a seat for said valve, said means having apertures therethrough, means for conducting gases under pressure to said apertures to open the valve, a piston behind the valve to be also operated by the pressure of the gases, means for supplying water to the opposite face of said piston, and means for conducting said water to the space between the valve and the valve seat when the valve is opened, to cause the same to be vaporized by the said gases.

5. An aspirator comprising a discharge tube extending longitudinally therethrough, a valve at one end of said tube and having a stem projecting from the opposite end to the outside of the aspirator, means for supplying liquid to said tube, and means for supplying fluid to the aspirator and actuating said valve, to permit the liquid to pass the valve.

1,213,902. CARBON-STEEL CAR-WHEEL. WINFIELD S. POTTER, New York, N. Y., assignor of one-half to Louis M. Slack, New York, N. Y. Original application filed Dec. 16, 1911, Serial No. 666,237. Divided and this application filed Feb. 20, 1912. Serial No. 678,850. (Cl. 105—150.)

1. A carbon-steel car wheel having a dense tread portion, devoid of irregularities of composition occurring during freezing and cooling of the original ingot casting from which the wheel blank was produced, said tread portion being unstretched or unelongated radially while being wrought, free from laminations, and having its structure, due to the mechanical forming, changed to a fine grain; substantially as described.

2. A carbon steel wrought car wheel having a dense, fine-grained tread portion free from lamination and tempered; substantially as described.

3. A carbon steel wrought car wheel having a dense, fine-grained tread portion free from lamination and of a graduated hardness and temper varying from a machinable state in the hub portion to a harder state in the tread portion; substantially as described.

1,213,903. HAT-PIN. ELIZABETH D. POWELL, Titusville, Fla. Filed Apr. 1, 1916. Serial No. 88,222. (Cl. 24—155.)

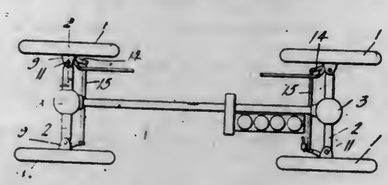


1. A hat pin comprising a sleeve provided with a handle, a rod slidably disposed in said sleeve, a sectional shank connected to said rod and normally disposed within said sleeve, a sectional point formed integral with said sectional shank and disposed beyond said sleeve and means connecting said sectional members for yieldingly forcing them apart.

2. A hat pin comprising a sleeve provided with a handle, a rod slidably disposed in said sleeve, a sectional element comprising a shank and point pivotally connected to said rod and adapted for partial telescoping engagement with said sleeve and means disposed between the sections of said element for yieldingly forcing them apart.

3. A hat pin comprising a sleeve provided with a handle, a rod slidably disposed in said sleeve and formed with a head, a sectional element comprising a grooved shank and point pivotally connected to said rod and adapted for partial telescoping engagement with said sleeve whereby said sections are normally retained in closed relation, and a spring disposed in the grooved portions of said sectional element for yieldingly forcing them apart.

1,213,904. AUTOMOBILE RUNNING-GEAR. CHARLES DE WITT RADLIFF, Benchland, Mont. Filed July 14, 1916. Serial No. 109,336. (Cl. 21—90.)



A mechanism of the character described embodying an axle housing, a shaft rotatable therein and terminating adjacent the end thereof, a steering knuckle having a tubular spindle, an annular groove at the basal end of said spindle, and offset ears overlapping and pivotally connected with the end of said housing, a wheel having a hub rotatable upon the spindle, a stub shaft rotatable within the spindle and having a disk at its outer end overlapping the outer side of the hub, a ring working in said groove and resting against the inner side of the hub, means securing said disk and ring together and extending through the hub, the adjacent ends of said shafts having interengageable portions to provide a universal joint.

1,213,905. PROCESS OF VULCANIZING PLASTICS. CHESTER J. RANDALL, Naugatuck, Conn., assignor to Boston Rubber Shoe Company, a Corporation of Massachusetts. Filed May 13, 1915. Serial No. 27,749. (Cl. 18—53.)

1. The process of vulcanizing rubber or similar material which comprises, partially vulcanizing the rubber under a pressure sufficient to prevent blowing of the rubber, cooling the rubber while maintaining it at a pressure sufficient to prevent blowing of the rubber, and completing the vulcanization under steam at a pressure less than that during partial vulcanization.

2. The process of vulcanizing rubber or similar material which comprises, partially vulcanizing the rubber in contact with a fluid vulcanizing medium under a pressure sufficient to prevent blowing, cooling the rubber under fluid pressure sufficient to prevent blowing of the rubber, and completing the vulcanization under steam at a pressure less than that during partial vulcanization.

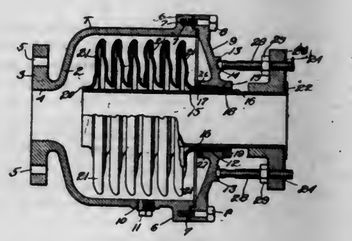
3. The process of vulcanizing rubber or similar material which comprises, partially vulcanizing the rubber under heated air at a pressure sufficient to prevent blowing, subjecting the rubber to cool air at a pressure to prevent blowing of the rubber, and completing vulcanization under pressure less than that during partial vulcanization.

4. The process of vulcanizing rubber or similar material which comprises, partially vulcanizing the rubber under heated air at a pressure sufficient to prevent blowing, subjecting the rubber to cool air at a pressure to prevent blowing of the rubber, and completing vulcanization under steam at a vulcanizing temperature.

5. The process of treating vulcanizable rubber stock consisting of partially curing the stock in contact with air at a vulcanizing temperature and pressure, cooling the partially vulcanized stock under sufficient pressure to prevent blowing of the stock while cooling, and completing the cure of the stock in contact with wet steam at a vulcanizing temperature and pressure.

[Claims 6 and 7 not printed in the Gazette.]

1,213,906. EXPANSION-JOINT. FREDERICK RAY, Short Hills, N. J. Filed Nov. 4, 1914. Serial No. 870,217. (Cl. 137—34.)



1. An expansion joint, compensating for lengthwise expansion of pipe lines comprising an expansion member consisting of annuluses of elastic metal alternately, integrally and homogeneously joined together to form a continuous joint, the construction being such that the maximum movement of the expansion member shall not exceed the elastic movement of its parts.

2. An expansion joint compensating for lengthwise expansion of pipe lines comprising an expansion member consisting of annuluses of elastic metal alternately, integrally and homogeneously joined at their inner and outer peripheries to form a continuous joint, pipe connections at each end, and stops to prevent the expansion of the expansion member beyond the limit of the elastic metal.

3. An expansion joint comprising an expansion member consisting of annuluses of elastic metal, integral joints connecting the annuluses at their inner and outer peripheries, said joints having the same elastic character as the annuluses, and pipe connections at each end, the construction being such that maximum movement of the expansion member does not exceed the elastic movement of its parts.

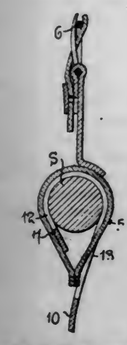
4. An expansion joint comprising an expansion member consisting of a plurality of nested corrugated disks, said disks being alternately welded together at their inner and outer peripheries, so as to form junctions homogeneous with respect to the physical properties of the adjacent metal, a casing inclosing said expansion member, and a pipe connection to said expansion member extending outside of said casing.

5. An expansion joint comprising a metallic expansion member consisting of a plurality of corrugated disks, said disks being alternately welded together at their inner and outer peripheries so as to form junctions homogeneous with respect to the physical properties of the adjacent metal, a casing inclosing said member, connecting means

united to said expansion member extending outside of said casing and a non-steam-tight joint between said casing and connecting means.

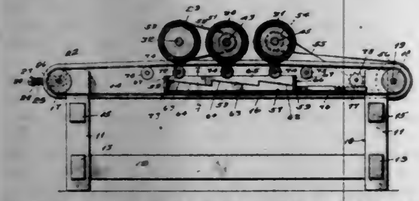
[Claims 6 to 18 not printed in the Gazette.]

1,213,907. TUG CONNECTION FOR HARNESS. CHARLES W. REINHART, Forest Lake, Minn. Filed Oct. 7, 1916. Serial No. 124,384. (Cl. 54—50.)



The combination with a shaft tug and belly-band, of a connection between the same consisting of a single leather strap, having an elongated elliptical shaped end portion provided with an opening therein, said end portion of the strap being adapted to be bent upon itself and the tug loop disposed through said opening, said strap at the edge of the opening being permanently secured to the tug loop and the spaced portions of the strap projecting laterally in opposite directions from the edges of the tug loop for bearing engagement upon the shaft, and means for detachably connecting the other end of the strap to one end of the belly-band.

1,213,908. LEATHER-BRUSHING MACHINE. CARLETON RUHE, Olean, N. Y. Filed July 8, 1915. Serial No. 38,836. (Cl. 149—15.)



1. In a machine of the character described, a supporting structure, a flexible traveling support connected therewith, a plurality of rotatable brushes arranged near and above the traveling support, a corresponding number of pressure elements arranged beneath the traveling support in substantial vertical alinement with the brushes, and means to simultaneously move the pressure elements toward and away from the brushes, substantially as described.

2. In a machine of the character described, a supporting structure, a flexible support connected therewith, a plurality of rotatable brushes arranged near and above the flexible support, a corresponding number of pressure elements arranged beneath the support in substantial vertical alinement with the brushes, and means to substantially simultaneously raise and lower the pressure elements with relation to the brushes.

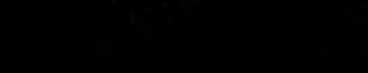
3. In a machine of the character described, a supporting structure, an endless conveyer connected therewith, a plurality of rotatable brushes arranged near and above the upper portion of the endless conveyer, a corresponding number of pressure rolls arranged beneath the upper portion of the endless conveyer in approximately vertical alinement with the brushes, and common means to raise and lower the pressure rolls with relation to the brushes.

4. In a machine of the character described, a supporting structure, an endless conveyer connected therewith, a plurality of rotatable brushes connected with the supporting structure and arranged near and above the endless conveyer, a movable frame arranged beneath the upper portion of the endless conveyer, a plurality of pressure rolls carried by the frame and disposed in approximately vertical alinement with the brushes beneath the upper portion of the endless conveyer, and means to raise and lower the frame.

5. In a machine of the character described, a supporting structure, an endless conveyer connected therewith, a vertically movable frame carried by the supporting structure beneath the upper portion of the endless conveyer and having inclined faces, a plurality of pressure rolls carried by the vertically movable frame and engaging the lower side of the upper portion of the endless conveyer, a substantially horizontally movable frame arranged beneath the vertically movable frame and having inclined faces to coöperate with the first named inclined faces, means to move the horizontally movable frame in one direction, and brush means arranged near and above the endless conveyer.

[Claims 6 to 8 not printed in the Gazette.]

1,213,909. AEROPLANE-WING. ADOLF FRANK RUSS, Pittsburgh, Pa. Filed Mar. 31, 1916. Serial No. 88,126. (Cl. 244—12.)



1. An aeroplane wing comprising an arched frame having marginal stays and intermediate cross-braces, an upper membrane secured to and held in fixed position upon the upper side of said frame, and a flexible lower membrane secured to the marginal stays of said frame and unsupported by the other frame members.

2. An aeroplane wing of triangular shape comprising an arched frame having marginal stays at the three edges of the wing and intermediate cross-braces, an upper membrane secured to and held in fixed position upon the upper side of said frame, and a flexible lower membrane stretched tautly between and secured to the marginal stays of said frame and unsupported by the other frame members, said membranes being separated a substantial space at the inner wing edge and gradually tapering to meeting lines at the front and rear wing edges.

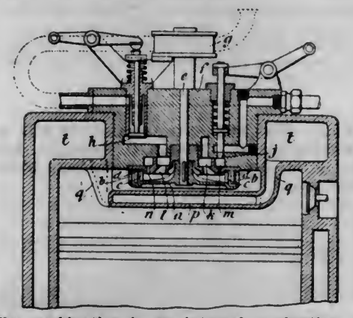
1,213,910. DOWN-SPOUT. LEON SAFFIAN, Philadelphia, Pa. Filed Sept. 16, 1916. Serial No. 120,519. (Cl. 210—4.)



1. A down-spout comprising an upper section, a lower section having a shoulder and a bell mouth above it, and a skeleton section secured at its upper end to the upper section and having arms extending down past the bell mouth and shoulder of the lower section and secured within the body of the latter; combined with a sleeve slidably mounted on the upper and skeleton sections with its lower end adapted to enter said bell mouth when the sleeve is depressed, the body of the latter having a vent opening, a nozzle surrounding the same, a spider within the lower section below its shoulder, and a strainer removably mounted on said spider.

2. A down-spout comprising an upper section, a lower section having a shoulder and a bell mouth above it, and a skeleton section secured at its upper end to the upper section and having arms extending down past the bell mouth and shoulder of the lower section and secured within the body of the latter; combined with a sleeve slidably mounted on the upper and skeleton sections with its lower end adapted to enter said bell mouth and rest on the shoulder when the sleeve is depressed, the body of the latter having a vent opening, and a strainer within the lower section below its shoulder.

1,213,911. INTERNAL-COMBUSTION ENGINE. ALBERT SCHMID, Ste. Adresse, France. Filed Dec. 19, 1914. Serial No. 878,147. (Cl. 123—33.)



1. The combination in an internal combustion engine of means for introducing fuel into the cylinder, a rotary device positioned within the engine cylinder so as to receive said fuel and provided with alternate moving and stationary blades or fingers for mechanically breaking up or pulverizing and intimately mixing the same with air, and means for rotating said rotary device.

2. The combination in an internal combustion engine of means for introducing fuel into the cylinder, a rotary device positioned within the engine cylinder so as to receive said fuel and provided with alternate moving and stationary blades or fingers for mechanically breaking up or pulverizing the fuel and intimately mixing the same with air, and means outside of said engine cylinder for rotating said rotary device.

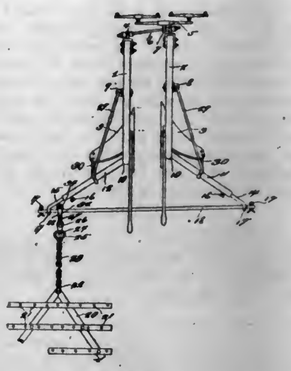
3. The combination in an internal combustion engine of means for introducing liquid fuel into the cylinder, a rotary device positioned within the engine cylinder so as to receive said liquid fuel and provided with alternate moving and stationary blades or fingers for mechanically breaking up or pulverizing the liquid fuel and intimately mixing the same with air, and means outside of said engine cylinder and operatively connected with said rotary device for driving the same.

4. The combination in an internal combustion engine of means for introducing liquid fuel into the cylinder, a rotary device positioned within the engine cylinder so as to receive said liquid fuel and provided with alternate moving and stationary blades or fingers for mechanically breaking up or pulverizing the liquid fuel and intimately mixing the same with air, and means outside of said engine cylinder and axially alined with said rotary device for operating the same.

5. The combination in an internal combustion engine of means for introducing liquid fuel into the cylinder, a rotary device positioned within the engine cylinder so as to receive said liquid fuel and provided with alternate moving and stationary blades or fingers for mechanically breaking up or pulverizing the liquid fuel and intimately mixing the same with air, means for rotating said rotary device, and a water cooled shield within the engine cylinder for protecting said rotary device.

[Claim 6 not printed in the Gazette.]

1,213,912. SHIFTING HARROW ATTACHMENT FOR DOUBLE PLOWS. JASPER RAY SERGEANT, Fort Morgan, Colo. Filed June 8, 1916. Serial No. 102,508. (Cl. 97—44.)



1. In a device as set forth, the combination of a pair of plows, the beams of which are arranged in parallelism and means connecting the forward ends of the beams, whereby the plows may shift automatically one in advance of the other, with a pair of diverging bars, one carried by the rear extremity of each beam, means connecting the rear ends of the bars, and a harrow having slidable connection with the last named means, whereby the harrow may be shifted to one side or the other.

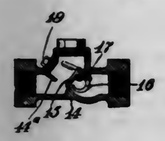
2. In a device as set forth, the combination of a pair of plows, the beams of which are disposed in parallelism with each other and a rod loosely connecting the forward ends of the beams, with a pair of diverging bars, one being carried by the rear extremity of each beam, a connection between the rear extremities of said bars, said connection consisting of a transverse rod, and a harrow having means provided with a slidable connection with said rod, whereby the harrow may shift to one side or the other.

3. In a device as set forth, the combination of a pair of plows, the beams of which are arranged in parallelism and a rod loosely connecting the forward ends of the beams, whereby the plows may shift automatically one in advance of the other, with a pair of diverging bars, one being carried by the rear extremity of each beam, the rear portion of each bar being hollow, extensions telescopically mounted in said hollow portions, means for holding said extensions adjustably in said hollow portions, a rod connecting the rear extremities of said extensions loosely, a harrow having a connection slidable on the rod, whereby the harrow may shift to one side or the other, as the beams are shifted.

1,213,913. WATER-CLOSET-FLUSHING TANK. FRANK E. SHAW, Columbus, Ohio, assignor of one-half to Cecil H. Kern, Columbus, Ohio. Filed Feb. 1, 1915. Serial No. 5,402. (Cl. 4—5.)

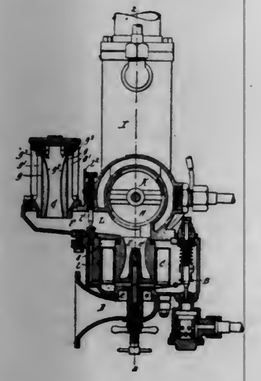
1. In a water closet flushing tank having a siphon discharge, the combination of a water supply pipe having a tank filling branch, a valve therein and means whereby the valve may be opened and closed with the difference in the level of the water in the tank, said first named supply pipe also having a branch containing a jetting outlet opening into the siphon, a valve for controlling the jet-

ting outlet operable at will to open the same, said last named valve being maintained in open position by the flow of water through the jetting outlet until the tank filling supply branch is opened, substantially as described.



2. In combination with a flushing tank, a siphon and a jetting device for the siphon, a water supply means having two outlets, one for the jetting device and one for charging the tank, a separate valve for controlling each of said outlets, the valve for the outlet of the jetting device being operable at will, the valve for said jetting device being automatically maintained in open position by the flow of jetting water until the tank charging outlet is opened, and means operated by a lowering of the level of the water in the tank for opening the tank charging outlet upon the discharge of the tank.

1,213,914. CARBURETER. CHARLES L. SHEPPY, Buffalo, N. Y., assignor to The Pierce-Arrow Motor Car Company, Buffalo, N. Y. Filed Aug. 6, 1912. Serial No. 713,677. (Cl. 261—41.)

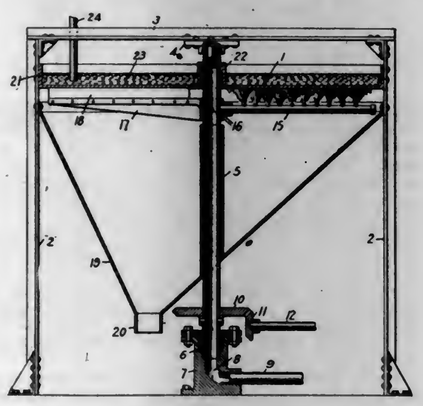


1. In a carbureter, the combination of a liquid fuel chamber, means for maintaining a substantially constant fuel level therein, a main fuel supply nozzle arranged in a main air supply passage and connected with said fuel chamber, a plurality of auxiliary air admission valves which are opened in succession by the suction of the engine with which the carbureter is connected, a supplemental fuel supply nozzle arranged in the path of the air admitted by said auxiliary air valves, said supplemental fuel nozzle being connected at its inlet end only with said fuel chamber and adapted to discharge fuel only, the discharge end of said supplemental fuel nozzle being at a higher elevation than that of the main fuel supply nozzle and constantly open, and a throttle valve located between both of said fuel nozzles and the discharge passage of the carbureter for controlling the mixture from both of said fuel supply nozzles.

2. In a carbureter, the combination of a liquid fuel chamber, means for maintaining a substantially constant fuel level therein, main and auxiliary air supply passages, a fuel nozzle arranged in the main air supply passage and connected with said fuel chamber, a plurality of valves which control the admission of air to said auxiliary air passage and are opened in succession by the suction of the engine with which the carbureter is connected, a supplemental fuel supply nozzle connected at its inlet end only with said fuel chamber and adapted to discharge fuel only, the discharge end of said supplemental fuel nozzle being located in said auxiliary air passage and at a higher elevation than the discharge end of the main fuel supply nozzle and constantly open, adjustable means for regulating the maximum discharge of said supplemental fuel nozzle, and a throttle valve located between both of said fuel nozzles and the discharge passage of the carbureter for controlling the mixture from both of said fuel supply nozzles.

3. In a carbureter, the combination of a liquid fuel chamber, means for maintaining a substantially constant fuel level therein, a fuel supply nozzle arranged in a main air supply passage and connected with said fuel chamber, a plurality of auxiliary air admission valves consisting of independently movable spring strips of different tensions which are opened in succession by the suction of the engine with which the carbureter is connected, a supplemental fuel supply nozzle arranged in the path of the air admitted by said auxiliary air valves, said supplemental fuel nozzle being connected at its inlet end only with said fuel chamber and adapted to discharge fuel only, the discharge end of said supplemental fuel nozzle being at a higher elevation than that of the main fuel supply nozzle and constantly open, and a throttle valve located between both of said fuel supply nozzles and the discharge passage of the carbureter for controlling the mixture from both of said fuel supply nozzles.

1,213,915. PROCESS AND APPARATUS FOR MAKING CARBON-BLACK. WALTER O. SNELLING, Pittsburgh, Pa. Filed Oct. 14, 1915. Serial No. 55,754. (Cl. 134—60.)



1. Apparatus for making carbon black comprising means for projecting a carbonaceous flame upon a carbon-collecting surface, and means for maintaining the said surface at a temperature slightly above 100 degrees centigrade.

2. Apparatus for making carbon black comprising means for projecting a carbonaceous flame upon a carbon-collecting surface, and means for maintaining the said surface at a temperature above 100 degrees centigrade but below the temperature of the flame.

3. Apparatus for making carbon black comprising means for projecting a carbonaceous flame upon a carbon-collecting member, and means for applying a cooling fluid to the said member, the said member being sufficiently thick to maintain a substantial difference between the temperatures of its carbon-collecting and fluid-engaging surfaces.

4. Apparatus for making carbon black comprising means for projecting a carbonaceous flame upon a horizontal carbon-collecting plate having upturned edges forming a receptacle for containing a cooling fluid, the said plate being sufficiently thick to maintain a substantial difference between the temperatures of its carbon-collecting and fluid-engaging surfaces.

5. The process of making amorphous soots that comprises projecting a luminous flame upon a surface maintained at a temperature slightly above 100 degrees centigrade.

[Claims 6 to 12 not printed in the Gazette.]

1,213,916. CONCRETE ROAD-CULVERT. FREDERICK H. SOUDER, Lansdale, Pa., assignor of one-fourth to Artemas A. Souder and one-fourth to Wilson C. Stauffer, Lansdale, Pa. Filed Sept. 12, 1916. Serial No. 119,632. (Cl. 72—52.)



1. The combination in a culvert, of end sections forming walls and having holes extending therethrough, pipes extending between said walls and having flanges fitting within the holes in said walls, grooves intersecting said holes and adjacent said flanges, and filling material fitting within said grooves and acting to abut said flanges, said filling material forming an interlock to retain said pipes within the walls, substantially as described.

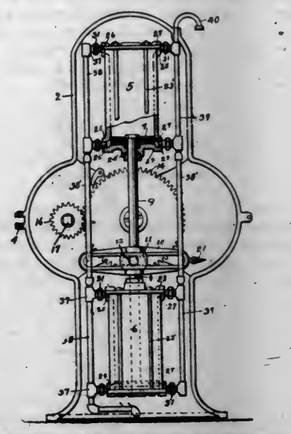
2. The combination in a culvert, of end sections forming walls and having holes extending therethrough, pipes extending between said walls and having flanges fitting within the holes in said walls, grooves intersecting said holes and adjacent said flanges, and filling material fitting within said grooves and acting to abut said flanges, said filling material forming an interlock to retain said pipes within the walls, said walls having a passageway therein which leads to the grooves and whereby the filling material may be inserted, substantially as described.

3. The combination in a culvert, of end sections forming walls and having holes extending therethrough, pipes extending between said walls and having flanges fitting within the holes in said walls, grooves intersecting said holes and adjacent said flanges, and filling material fitting within said grooves and acting to abut said flanges, said filling material forming an interlock to retain said pipes within the walls, said walls having reinforcements embedded therein, substantially as described.

4. The combination in a culvert, of end sections forming walls and having holes extending therethrough, pipes extending between said walls and having flanges fitting within the holes in said walls, annular grooves intersecting said holes and adjacent said flanges, and filling material fitting within said grooves and acting to abut said flanges, said filling material forming an interlock to retain said pipes within the walls, said walls having reinforcements embedded therein, and freely removable coupling sections having internal recesses into which the intermediate flanged ends of the pipe extend, said recesses providing shoulders for abutment with said latter flanges of the pipes, substantially as described.

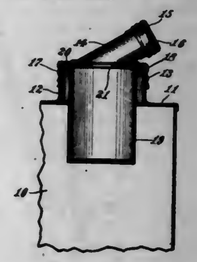
1,213,917. DOUBLE-ACTING PUMP. AUGUST STEINHAUER and THOMAS D. VAN ETTEN, Sidney, Ohio. Filed Feb. 12, 1915. Serial No. 7,680. (Cl. 103—78.)

A casing made in separable sections having enlarged ends and a reduced middle portion, in combination with a pair of pump cylinders mounted in opposed relation within said casing, and pistons within said cylinders having



crank operating connections located and mounted within and upon said reduced middle portion of the casing.

1,213,918. MEASURING DEVICE FOR CONTAINERS. EDWARD STERNS, St. Louis, Mo., assignor, by mesne assignments, to Efficiency Oil Corporation, St. Louis, Mo., a Corporation of Delaware. Filed May 6, 1915. Serial No. 26,406. (Cl. 221—23.)



1. A container having an outlet, a measuring cup normally positioned in said container for removal through said outlet, and a closure for the outlet adapted to retain the cup in place, said closure having a pouring spout.

2. A container having an outlet, a measuring cup normally positioned in said container and having its open end toward the outlet, and a closure for said outlet adapted to retain the cup in place and having a spout constructed and arranged to open into said cup.

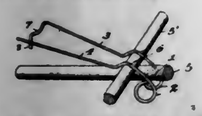
3. A container having an outlet, a measuring cup adapted to be positioned in said outlet, and a closure adapted to retain said cup in position and form a tight joint between the container, cup and closure, said closure having a spout arranged to open into said cup.

4. A container having an outlet, a closure having a pouring spout, and a measuring cup between said closure and said outlet and adapted to form a sealing member.

1,213,919. SPRING-METAL CLIP FOR UNITING AND SUPPORTING CONCRETE-REINFORCEMENTS. ARTHUR H. SYMONS, Chicago, Ill., assignor to Symons Clamp Co., Chicago, Ill., a Corporation of Missouri. Filed July 13, 1915. Serial No. 39,578. (Cl. 72—122.)

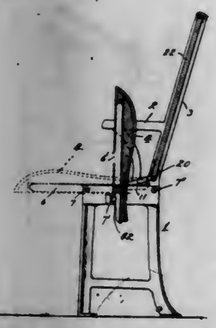
1. A spring wire clip for yieldably binding together and positioning crossed concrete reinforcing rods or bars, comprising a link-like structure bowed between its ends, one

end of the link being provided with integral loop-like lateral projections, the other end of the link being openable and the parts thereof adapted to interlock with each other and be resiliently held in interlocked relation, one of the link ends having a transversely disposed hook portion engaged by the other link end, the intermedaite part of said link being bowed and provided with hump-like curves, substantially as described.



2. In a spring wire clip for yieldably binding together and positioning crossed concrete reinforcing rods or bars, comprising a suitable length of wire bent at approximately mid-length to form the clip and including a transverse saddle-like portion at one end of said clip on which is adapted to rest the lower reinforcing bar, a pair of rigid coils formed from the continuation of said transverse saddle-like portion for spacing the lower bar from its support, two approximately parallel arms extending upwardly from and being a continuation of said coils, said arms being of sufficient distance apart to admit said lower reinforcing bar, an upstanding hump-like curve being formed in each arm adjacent to said coils, said upstanding hump-like curves being adapted to partially embrace the upper bar, and means for positioning said ends including a transversely bent portion on the end of one of said arms for engaging the lower side of said lower bar.

1,213,920. THEATER-CHAIR. ANTON SZYMKOWIAK, San Francisco, Cal. Filed Jan. 12, 1915. Serial No. 1,799. (Cl. 155—13.)



1. A chair of the character described comprising side frames, a back having its upper edge pivotally mounted in said side frames, a seat, trackways carried by said seat, rollers carried by said side frames on which said trackways may move, arms pivotally attached at one end to the lower edge of said back, cam members pivotally mounted in said arms adjacent their other ends, extensions on said cam members attached to said seat, and spring means mounted in said arms which tend to rotate said seat about the pivot of said cam members, and hold it in its forward position on said trackway.

2. A chair of the character described comprising side frames, a back having its upper edge pivotally mounted in said side frames, a seat, trackways carried by said seat, rollers carried by said side frames on which said trackway may move, brackets attached to the lower corners of said back, arms pivotally mounted at one end in said brackets, cam shaped members pivotally mounted in said arms intermediate their ends, extensions from said cam members attached to said seats, springs mounted in said arms between said cam members and the pivoted ends, cam surfaces formed in said brackets eccentric with the pivoted point of said arms, bearing plates on one end of said springs adapted to rest on said cam surfaces, and rollers on the other ends of said springs adapted to bear against the said cam shaped members whereby said seat tends to raise and to move to its forward position.

1,213,921. STABLE HYDROGEN PEROXID AND METHOD OF MAKING THE SAME. OTTO LIEBKNECHT and ALOIS SCHAIDHAUF, Frankfort-on-the-Main, Germany, assignors to Roessler and Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed May 1, 1913. Serial No. 764,931. (Cl. 23—10.)

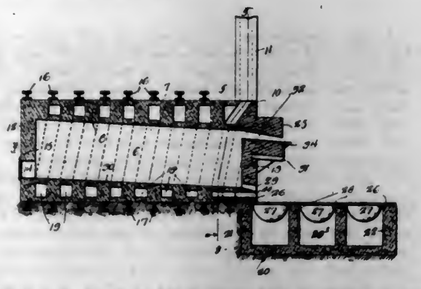
1. The method of rendering a solution, containing substances carrying oxygen in available form, stable which consists in adding an insoluble tin compound to the solution.

2. The method of rendering a hydrogen peroxid solution stable, which consists in adding an insoluble tin compound to said solution.

3. A solution containing a substance carrying oxygen in available form and an insoluble tin compound.

4. A hydrogen peroxid solution, containing an insoluble tin compound.

1,213,922. ZINC-FURNACE. GEORGE LONDRESS and LEYLAND ROGERS, Clarksburg, W. Va. Filed June 27, 1914, Serial No. 847,735. Renewed Mar. 4, 1916. Serial No. 82,268. (Cl. 263—41.)



1. A zinc dross furnace comprising a series of fire boxes, a dross compartment and a spiral flue surrounding said dross compartment and communicating with and connecting each of said fire boxes.

2. In a zinc dross furnace, a series of fire boxes, a dross compartment having upper and lower discharge passages extending through end wall thereof and a spiral flue surrounding said dross compartment.

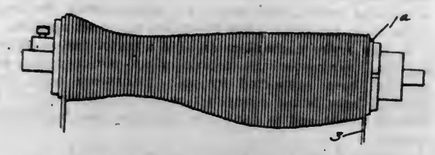
3. A zinc dross furnace comprising a series of fire boxes, a dross compartment having upper and lower discharge passages extending through one end thereof, a stack for said furnace and a spiral flue surrounding said dross compartment and communicating with the fire boxes and stack.

4. In a zinc dross furnace such as described, a dross compartment, a plurality of fire boxes located below said compartment, a stack extending from said furnace, and a spiral flue surrounding the dross compartment and communicating with said stack.

5. In a zinc dross furnace, a dross compartment, a plurality of fire boxes located beneath said compartment, a spiral flue surrounding said compartment and in communication with the fire boxes, a stack extending from the furnace and communicating with said flue, a spelter box at one end of the furnace, the bottom of said dross compartment being disposed on a slant sloping toward the spelter box, a plurality of removable kettles located in the spelter box, one wall of the furnace having an opening sloping from the lower wall of the dross compartment into the spelter box, and a second opening sloping downwardly from the upper wall of said dross compartment to the spelter box.

[Claims 6 and 7 not printed in the Gazette.]

1,213,923. ARTIFICIAL LEG. LEOPOLD M. LUX, Minneapolis, Minn. Filed Sept. 24, 1915. Serial No. 52,464. (Cl. 3—2.)

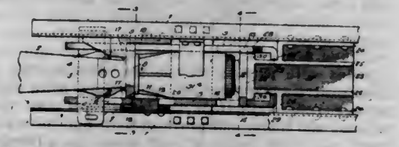


1. As a new article of manufacture, a vegetable fiber artificial limb having a seamless tubular form of varying cross section and with the particles thereof variously displaced in the varying cross sections thereof.

2. The process of making an artificial limb from a seamless vegetable fiber tube which consists in placing the fiber tube around a form having a varying cross section, and in reducing the said tube to the shape of said form, by external compression.

3. The process of making an artificial limb from a seamless vegetable fiber tube which consists, first in soaking the original tube in water to soften the same, second, in placing the said softened tube around a form having a varying cross section, and third, in reducing the said tube to the shape of the said form, by external compression.

1,213,924. DRAFT-RIGGING. STUART G. MCALISTER, Washington, D. C., assignor to The T. H. Symington Company, Rochester, N. Y., a Corporation of Maine. Filed Mar. 20, 1916. Serial No. 85,871. (Cl. 213—42.)



1. In a draft rigging, the combination with the draft sills, of a coupler, a cushioning mechanism therefor, means extending rearwardly of the coupler and adapted to operatively connect the same to the said cushioning mechanism, and stationary means connected to the said sills and adapted to coöperate with the coupler connecting means to limit the forward movement of the same, the said connecting means being capable of a lateral movement to permit the removal thereof independently of the said limiting means.

2. In a draft rigging, the combination with the draft sills, of cushioning mechanism, a stationary stop member connected to the said sills, a coupler, means for operatively connecting the said coupler and cushioning mechanism, the said stop being arranged rearwardly of the cushioning mechanism and being provided with lateral projections adapted to coöperate with the coupler connecting means to limit the forward movement of the same.

3. In a draft rigging, the combination with the draft sills, of a coupler, cushioning mechanism therefor, said cushioning mechanism including a follower adapted to engage the coupler, means extending rearwardly of the coupler and adapted to operatively connect the same to the cushioning mechanism, and means rigidly connected to the sills, in rear of the said follower, said means being adapted to coöperate with the coupler connecting means to limit the forward movement of the coupler.

4. In a draft rigging, the combination with the draft sills, of a coupler, a cushioning mechanism in rear of the said coupler, a stationary stop member adapted to form a forwardly facing abutment for the said cushioning mechanism, means operatively connecting said coupler and cushioning mechanism, said means being located at the vertical sides of the said cushioning mechanism, and said stop member and means on said stop adapted to prevent forward movement of said coupler beyond a predetermined amount.

5. In a draft rigging, the combination with spaced draft sills, of a stop rigidly connected thereto, and bridging the space therebetween, a coupler, a cushioning mechanism, horizontally arranged means extending rearwardly of the coupler and adapted to connect the coupler and cushioning means, the said stop extending rearwardly of the cushioning mechanism and being provided with laterally extending means adapted to engage the coupler connecting means to limit the forward movement thereof.

[Claims 6 to 12 not printed in the Gazette.]

1,213,925. PHOTOGRAPHIC PAPER. ALFRED C. MCCLOSKEY, Philadelphia, Pa., assignor to Process Paper Manufacturing Company, a Corporation of Delaware. Filed Aug. 12, 1915. Serial No. 45,226. (Cl. 95—8.)



1. Photographic paper for producing prints having dark images on light grounds from tracings and the like, provided upon the face with a light sensitive coating containing ferric salts and provided upon the back with a coating containing ferrous salts and removable by the clearing solution, whereby the paper after printing can be immersed in or wet on both sides with the appropriate solutions tending to stain it and will, when finished, present a clean back free from discolorations or stains.

2. Photographic paper for producing prints having dark images on light grounds from tracings and the like, provided upon each face with a coating of which the coating on the face contains ferric salts and of which the coating on the back has been primarily exposed to reduce ferric salts to ferrous salts, whereby the coating on the back comes off in the clearing solution to provide a clean stainless back.

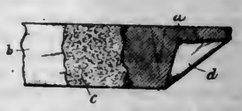
3. Photographic paper for producing prints from tracings and the like provided on its back with a coating which does not produce images and which is removable by the clearing solution, substantially as described.

4. Photographic paper for producing prints having dark images on light grounds from tracings and the like, provided upon one face with a light sensitive coating and upon the other face with a non-printing protective coating having the same behavior in respect to the finishing solutions as have the portions of the light sensitive coating after they have been exposed in printing, substantially as described.

5. Photographic paper having on the back thereof a non-printing coating impermeable to stains from the finishing solutions and removable by the clearing solution.

[Claims 6 to 9 not printed in the Gazette.]

1,213,926. FACING MATERIAL FOR CORK OR OTHER DISKS FOR BOTTLE-CAPS. CHARLES E. MCMANUS, New York, N. Y. Filed May 9, 1916. Serial No. 96,304. (Cl. 154—45.5.)



1. A facing material for cork or other disks for bottle caps consisting of metal foil provided with a reinforcement or backing of fibrous material having one surface

thereof gummed and the other surface firmly bonded to said metal foil by a stratum of a binding medium.

2. A facing material for cork or other disks for bottle caps consisting of metal foil having a paper reinforcement or backing, one surface of said paper being gummed and the other surface thereof being firmly bonded to said metal foil by a stratum of a binding medium.

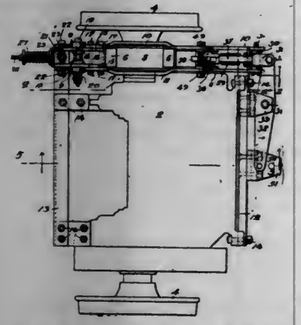
3. A facing material for cork or other disks for bottle caps consisting of metal foil having a paper reinforcement or backing, one surface of said paper being gummed and the other surface thereof being firmly bonded to said metal foil by a stratum of a binding medium, said paper reinforcement or backing being relatively thicker than said metal foil.

4. A facing material for cork or other disks for bottle caps consisting of metal foil provided with a reinforcement or backing of fibrous material having one surface gummed and the other surface firmly bonded to said metal foil by a stratum of a substantially non-absorbent, gas-impervious binding medium having relatively less flexibility than said metal foil or its backing.

5. A facing material for cork or other disks for bottle caps consisting of tin foil having a paper reinforcement or backing, one surface of said paper being gummed and the other surface thereof being firmly bonded to said tin foil by a stratum of substantially non-absorbent gas impervious binding medium having relatively less flexibility than said tin foil or said paper, said paper being relatively thicker than said tin foil.

[Claim 6 not printed in the Gazette.]

1,213,927. BRAKE FOR CARS. JOHN S. MCWHIRTER, New York, N. Y., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 29, 1915. Serial No. 69,141. (Cl. 188—34.)



1. In a brake, a motor casing, an axle on which the motor casing is sleeved, a drum on the axle and fixed thereto, and braking mechanism supported from the motor casing and applied to the drum.

2. In a brake mechanism, an axle, a drum fixed thereon, a motor-casing sleeved to said axle, parallel bars adjacent to one end of said motor-casing and above said axle, means for supporting said parallel bars from said motor-casing, brake shoes adapted to engage said drum, and mechanism for supporting said brake shoes from said parallel bars.

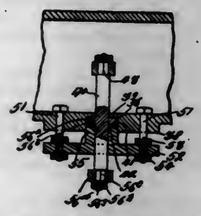
3. In a brake mechanism, an axle, a drum mounted thereon, a motor-casing sleeved on said axle, parallel bars at one end of said motor-casing and above said axle, means for supporting said bars from said motor-casing, brake shoes and means for suspending the same from said parallel bars, and mechanism for causing said brake shoes to simultaneously engage said drum at opposite points when the brake is applied, and to disengage said drum when the brake is released.

4. In a brake mechanism, an axle, a drum fixed thereon, parallel bars above said axle and adjacent to said drum, means for supporting said bars from said axle, brake shoes adjacent to said drum, brake shoe holders holding said brake shoes, hangers supporting one of said holders and levers supporting the other of said holders, a live lever and a link connecting the same with the said first mentioned levers, and means for withdrawing the brake shoes from the drum after the brake has been applied.

5. In a brake mechanism, an axle, a motor casing sleeved thereon, transverse bars secured to said motor-casing, and parallel bars supported by said transverse bars, said parallel bars being connected to one transverse bar by pivotal means and to the other transverse bar by resilient means.

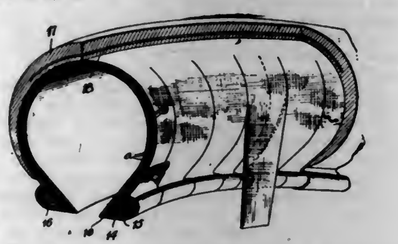
[Claims 6 and 7 not printed in the Gazette.]

1,213,928. STUFFING OR PACKING BEARING-BOX. PETER J. MAGUIRE, Hutchinson, Kans. Filed Apr. 19, 1916. Serial No. 92,217. (Cl. 64—10.)



A stuffing bearing box for a rock shaft, comprising in combination with a wall having an opening and a counter recess adjoining said opening, a shaft mounted in said opening, a plate having a central opening and provided with a boss adjoining its opening, and mounted upon said shaft, whereby the boss may fit said counter recess, said counter recess having a shoulder, a collar integral to the shaft and fitting between the shoulder and said boss and provided with packing on one face and packing on the cylindrical circumference of said collar, bolts extending through said wall from its inner face and threaded through said plate, and provided with nuts to engage the inner and outer faces of said plate for adjusting the plate.

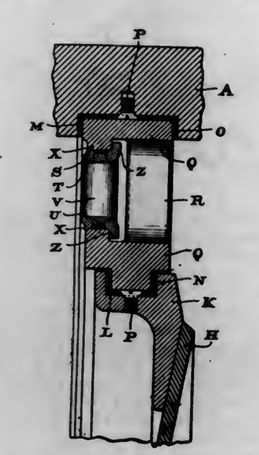
1,213,929. FABRIC TIRE. ROBERT M. MERRIMAN, Akron, Ohio. Filed July 19, 1916. Serial No. 110,104. (Cl. 152—13.)



1. In a tire construction, a plurality of plies of substantially uniformly woven fabric cut with the weave and having their longitudinal edges serrated to provide spaced tongues, the plies being superimposed one upon the other, tread and side wall portions superimposed upon the outer fabric ply, and a breaker strip embedded in the tread and side portions and projecting at its edges into the side walls of the tire below the inner lines of the serrations of the fabric plies.

2. A tire construction embodying a plurality of superimposed plies of fabric, each ply being cemented to all adjacent plies and all being embedded in the body of the tire and each ply of fabric being of substantially uniform weave with certain of its threads extending circumferentially of the tire and the other threads transversely thereof, the side edges of each ply of fabric being notched to provide tongues, the edges of which abut against each other when the ply is shaped to the tire, the tongues of each ply breaking joint with the abutting edges of those of an adjacent ply.

1,213,930. TURBINE-NOZZLE. JOHN F. METTEN, Philadelphia, Pa., assignor to The William Cramp & Sons Ship & Engine Building Company, a Corporation of Pennsylvania. Filed July 3, 1914. Serial No. 848,731. (Cl. 253—78.)



1. In a turbine, the combination with a casing, of a diaphragm, a separate nozzle carrying element engaging the casing and the diaphragm to lock the latter, and a separate nozzle structure mounted in said nozzle carrying element.

2. In a turbine, the combination with a casing, of a diaphragm, a separate nozzle carrying element slidably engaging the casing and the diaphragm to lock the latter, and a separate nozzle structure mounted in said nozzle carrying element.

3. In a turbine, the combination with a casing, of a diaphragm, a divided nozzle carrying ring slidably mounted between the casing and the diaphragm, and a segmental nozzle structure mounted in said ring.

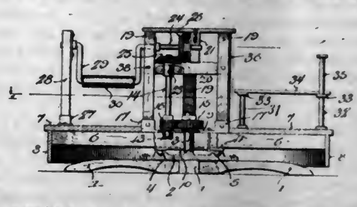
4. In a turbine, the combination with a casing, of a diaphragm, a nozzle carrying ring slidably interlocking with both the casing and the diaphragm whereby the nozzle ring holds the diaphragm against displacement, and a nozzle structure comprising concentric rings and radial blades carried by said ring.

5. In a turbine, the combination with a casing around its inner surface, of a diaphragm, a segmental nozzle carrying ring formed to slidably interlock with the diaphragm and the grooved casing to hold the diaphragm in position and be slidably removable independently of the diaphragm, and a segmental nozzle structure mounted in said ring.

[Claims 6 to 29 not printed in the Gazette.]

1,213,931. PORTABLE CAROUSEL. IGNATZ MILONCZYK, Milwaukee, Wis. Filed Dec. 1, 1915. Serial No. 64,408. (Cl. 46—27.)

In a carousel the combination of a base having a bearing plate and an upright pivot shaft extending therefrom, a platform including a series of radially disposed beams, a top plate at the center of the platform apertured to form a bearing for the pivot plate, a bottom plate at the center of the platform apertured to form a second bearing for the pivot shaft, means for securing said plates together and to the beams socket members formed integrally at outer portions of the top plate, uprights secured in said



socket members and a drive mechanism carried by said uprights in gear mesh with the pivot shaft.

1,213,932. OUTSOLE AND WELT STITCHING MACHINE AND GUARD THEREFOR. GEORGE ELI MONGEAU, Lowell, Mass. Filed Feb. 13, 1915, Serial No. 8,077. Renewed Dec. 20, 1916. Serial No. 138,129. (Cl. 112—20.)



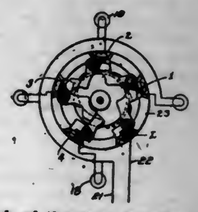
1. In a shoe-sewing machine in combination, a work-supporting table having a needle-slot and a recess in its front work-engaging face, and a guard extending below said table, said guard having its upper edge portion received in said recess.

2. In a shoe-sewing machine in combination, a work-supporting table having a needle-slot and having a recess between said slot and the work-receiving end of said table, and a guard extending below said table, said guard having its upper edge portion received in said recess.

3. In a shoe-sewing machine in combination, a work-supporting table having a needle-slot and a guard extending below said table and having its upper outer surface continuous with the front surface of said table.

4. In a shoe-sewing machine in combination, a work-supporting table and a guard having an incline to extend over the work-receiving end of said table; said guard and table having continuous front surfaces.

1,213,933. ELECTRIC SWITCH. HARRY J. MORBY, Syracuse, N. Y., assignor to Pass & Seymour, Inc., Solvay, N. Y., a Corporation of New York. Filed Mar. 28, 1912. Serial No. 686,806. (Cl. 175—287.)



1. In a switch of the class described, the combination with a block of insulating material, of a series of separate circuit terminals secured thereto, means for interconnecting the terminals including an element carried by each of the terminals, and means for successively tripping said

interconnecting elements to successively connect the terminals with one another.

2. In an electric switch the combination of a series of terminals, a plurality of switch elements mounted in the same plane, each of said terminals having one switch element pivoted thereon and the successive switch elements being adapted to slide in edge engagement, a cam for actuating said elements, and rotatable means for operating the cam.

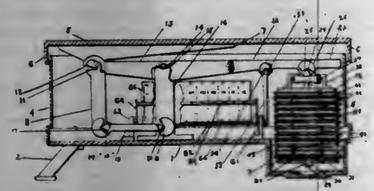
3. In an electric switch, the combination of a plurality of terminals, pivoted switch elements electrically connected to said terminals and adapted to contact with one another, springs tending to move said elements into contact with one another, a cam adapted to normally hold said elements apart but adapted when operated to release said elements to permit said springs to move them into contact with each other, and means for operating said cam.

4. In an electric switch, the combination of two circuit terminals, a switch member pivoted on each of said terminals and rotating means for operating said switch members to open and close the circuit between said terminals, said switch members being adapted to engage and slide in contact with one another when actuated by said operating means.

5. In a switch of the class described, the combination with an insulating block, of a terminal thereon adapted to be connected to an electric main, a series of other terminals electrically independent and adapted to be connected to separate translating devices, means for successively connecting said other terminals to the main terminal comprising pivoted connecting members adapted to bridge the space between and electrically connect consecutive terminals, and means for actuating said connecting members.

[Claims 6 to 21 not printed in the Gazette.]

1,213,934. SCALE. HUBERT A. MYERS, Toledo, Ohio, assignor, by direct and mesne assignments, to Toledo Scale Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 20, 1913. Serial No. 743,121. (Cl. 73—102.)



1. A weighing device embodying an automatic step by step counterpoise comprising counterweights, pick up means for the counterweights and adjusting means for varying the pick up distance between the counterweights.

2. A weighing device embodying a main lever, a load bearing for said lever, a counter weight bearing for said lever, a fulcrum in line with said bearings, a series of successively acting counterweights for the lever, pick up means for the counterweights, and adjusting means for varying the pick up distance between the counterweights.

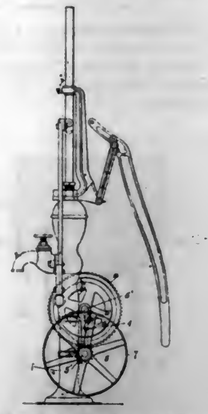
3. A weighing device embodying a universally suspended counterpoise pick up member, concentric counterpoise means to be picked up by said member, and universal joint supporting means for the counterpoise means.

4. A weighing device embodying a pick up member, counterweights, and universal joint sustaining means for said counter weights, said counterweights surrounding the member and disposed to be picked up by said member.

5. A weighing device movable in operation to have counterpoise action and embodying a plurality of dash pots disposed for successive action, said dash pots having restricted discharge openings therefrom.

[Claims 6 to 17 not printed in the Gazette.]

1,213,935. POWER ATTACHMENT FOR PUMPS. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, Ashland, Ohio, a Copartnership consisting of Francis E. Myers and Philip A. Myers. Filed Nov. 24, 1915. Serial No. 63,175. (Cl. 103—62.)



1. The combination, with a pump stand provided with fixed lugs projecting outwardly on opposite sides thereof, of a power attachment provided with arms embracing said stand and having portions hooked over said lugs.

2. The combination, with a pump stand provided with fixed lugs projecting outwardly on opposite sides thereof, of a power attachment provided with arms embracing said stand and having portions hooked over said lugs, and means for clamping the parts together.

3. In a power attachment, a body portion provided with bearings, a pair of slotted arms arranged to embrace a pump stand and be attached thereto, a hook portion, and a set screw for making the engagement rigid.

4. The combination, with a pump stand provided with oppositely projecting lugs, of a power attachment provided with slotted arms embracing the stand with the slots engaging the lugs, whereby the attachment is supported from the stand and movement back and forth is prevented.

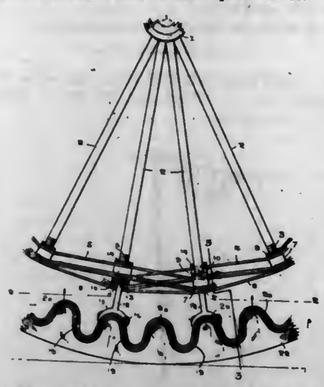
5. The combination, with a pump stand provided with fixed lugs projecting outwardly therefrom, of a power attachment provided with a slotted member engaging certain of the lugs, a pair of hooked arms embracing said stand and hooked over other of said lugs and clamping means.

[Claims 6 to 10 not printed in the Gazette.]

1,213,936. RESILIENT WHEEL. BRODIE S. NELLANS, Elbing, Kans. Filed Dec. 11, 1915. Serial No. 66,303. (Cl. 152—28.)

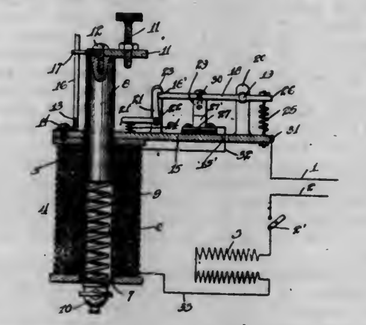
1. A resilient wheel, comprising a hub, spokes carried by said hub and having their ends in alternate staggered relation to provide spoke series, spring members secured to the spokes of each series, a spring felly for said wheel, means connecting the springs of the spoke series to said spring felly, and a zigzag reinforcing band secured consecutively to the ends of the alternating spokes for maintaining the spoke series and their spring members in lateral spaced relation.

2. A resilient wheel, comprising a hub having spokes provided with screw threaded ends disposed in alternate staggered relation to each other to provide spoke series, a plurality of superposed spring bands secured upon the threaded ends of each of the spoke series and lying in spaced parallelism to each other, an angular reinforcing band having angular sectors secured to the extremities of said spokes for connecting the alternate spokes of one series to the alternate spokes of the other series for maintaining said spokes and said spring bands in operative position, a felly for said wheel consisting of a plurality of superposed convolute spring members provided with a resilient tread member, and bolts for connecting said felly to the respective spring bands of said spoke series.



3. A resilient wheel, comprising a hub having spokes provided with screw threaded ends disposed in alternate staggered relation to each other to provide spoke series, a plurality of superposed spring bands secured upon the threaded ends of each of the spoke series and lying in spaced parallelism to each other, an angular reinforcing band having angular sectors secured to the extremities of said spokes for connecting the alternate spokes of one series to the alternate spokes of the other series for maintaining said spokes and said spring bands in operative position, a felly for said wheel consisting of a plurality of superposed convolute spring members provided with a resilient tread member, and bolts connecting each alternate convolute of said spring felly to the respective spring bands of said spoke series at a point midway between the ends of the spokes of said series.

1,213,937. ELECTRIC-CIRCUIT BREAKER. STEFFEN F. NIELSSEN, Houston, Tex. Filed July 7, 1914. Serial No. 849,473. (Cl. 175—270.)

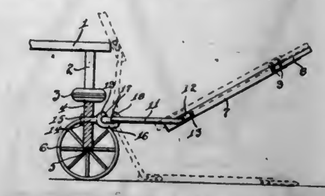


1. A circuit breaker, including, in combination, a solenoid having a movable core, said core being snugly arranged within the solenoid to provide a pneumatic air cushioning chamber, means for controlling the air pressure therein, a slotted guide, a lateral extension carried by the free end of said core having means for engagement with a circuit opening device, and an arm extending from said core for engagement with said slotted guide to prevent rotation of the core when in use.

2. A circuit breaker, including, in combination, a solenoid having a movable core, said core being snugly arranged within the solenoid to provide a pneumatic cushioning chamber, a slotted guide, a lateral extension carried by the free end of said core carrying adjustable means for engagement with a circuit closing device, and an arm extending from said core for engagement with said slotted guide to prevent rotation of the core when in use.

3. A circuit breaker, including, in combination, a solenoid having a movable core, said core being snugly received within the solenoid to provide a pneumatic air cushioning chamber, a valve for controlling the air pressure therein, a slotted guide, a lateral extension carried by the free end of said core carrying an adjustable screw threaded shank for engagement with a circuit opening device, and an arm extending from said core for engagement with said slotted guide to prevent rotation of the core when in use.

1,213,938. DETACHABLE HANDLE FOR TRUCKS. JAMES NORTON, Reeds Ferry, N. H. Filed Oct. 22, 1915. Serial No. 57,322. (Cl. 21—65.)



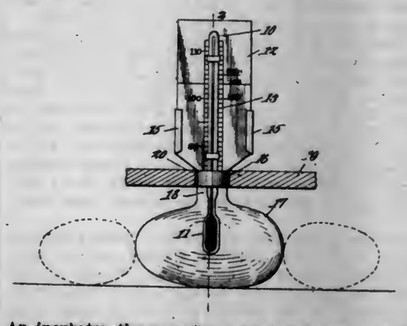
1. In combination with the axle bolster of a truck, open loop securing elements anchored on the bolster, and a handle removably associated with the securing elements.

2. The combination with the axle bolster of a truck, of securing elements associated therewith, open loops formed integrally with the outer ends of the securing elements, a handle including a body, and a connecting element, said connecting element being removably associated with said open loops.

3. The combination with the axle bolster of a truck, securing elements associated therewith, open loops on the outer end of the securing elements, the outer ends of the loops constituting hooks, the inner ends of the loops constituting guards for the hooks, and a handle including a body and a connecting element for removable association with the loops.

4. The combination with the axle bolster of a truck, securing elements associated therewith, each including an engaging shank and an open loop, the outer end of each loop adjacent the slit constituting a guard for the hook, a handle including a body, and a triangular loop extending at an angle therefrom and removably associated with the loops and being adapted for vertical swinging movement to allow the body to lie flat on the ground when not in use.

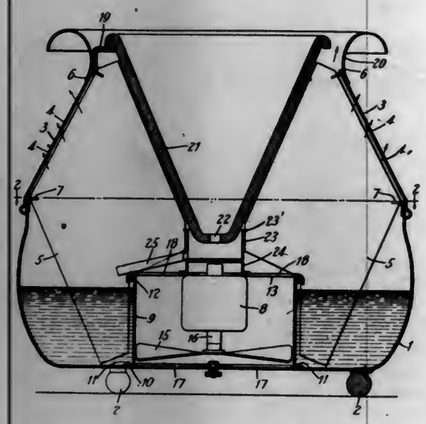
1,213,939. THERMOMETER. ADAM OSTHEIMER, Cleveland, Ohio. Filed Dec. 29, 1915. Serial No. 69,161. (Cl. 73—52.)



An incubator thermometer comprising a mercury tube and its bulb, a graduated plate carrying the tube, a holder for the plate having marginal bends forming channels in which the plate slidably seats, a ring on the end of the

holder, and an egg-contacting inclosure housing the bulb, and having a neck on which the ring is mounted, the bulbed end of the tube passing through the neck.

1,213,940. HUMIDIFIER. LEE H. PARKER, Brookline, and EDWARD K. STANDISH, Stoughton, Mass., assignors, by mesne assignments, to Spray Engineering Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 13, 1915. Serial No. 50,324. (Cl. 47—19.)



1. A humidifier comprising a bowl like receptacle adapted to stand and to contain water, means substantially centrally positioned in said receptacle for circulating air currents through the receptacle, and a series of spaced, radially positioned sheets arranged about said circulating means and adapted to be partially immersed in the water of said receptacle.

2. A humidifier comprising a bowl-like receptacle adapted to stand and to contain water, means substantially centrally positioned in said receptacle for circulating air currents therethrough, and a series of spaced, radially positioned, absorptive sheets arranged in an annular series with respect to said circulating means and adapted to be partially immersed in the water of said receptacle.

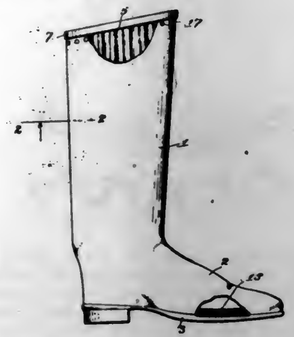
3. A humidifier comprising a bowl-like receptacle adapted to stand and to contain water, said receptacle being open at the top for filling and having openings in the lateral wall for the discharge of moistened air, means substantially centrally positioned in the receptacle for circulating air currents therethrough, and a series of spaced, absorptive sheets arranged about said circulating means and adapted to be partially immersed in said receptacle.

4. A combined humidifier and flower or plant receptacle consisting of an outer bowl-like member and an inner plant receptacle suspended therein from the wall of said bowl-like member, whereby the plant or flowers are in close proximity to the lateral walls of the said outer bowl-like member, said plant receptacle having an opening for introducing water therethrough into the humidifier, whereby the humidifier may receive its water supply through said plant receptacle, and absorptive means within said bowl-like member and arranged about said plant receptacle.

5. A combined humidifier and flower or plant receptacle consisting of an outer bowl-like member and an inner plant receptacle suspended therein from the wall of said bowl-like member, whereby the plant or flowers are in close proximity to the lateral walls of the said outer bowl-like member, means for humidifying air including absorptive material between said receptacle and said bowl-like member, and means including an air circulating device and openings in the lateral wall of said bowl-like member for forcing the discharged or humidified air into immediate proximity to the supported plant or flowers in said suspended receptacle.

[Claims 6 to 10 not printed in the Gazette.]

1,213,941. VENTILATING DEVICE. CHARLES A. PATRICK, Hazel Dell, Ill. Filed Apr. 25, 1914. Serial No. 834,511. (Cl. 36—3.)



1. A ventilating garment comprising an outer layer, an inner layer, an independent continuous strip mounted between said layers and forming a cellular air space between said outer layer and strip and between said strip and inner layer, said outer layer being provided with air passages adjacent to one extremity thereof and the interposed strip being stopped short of the opposite extremity of the outer layer and the adjacent extremity of the inner layer to permit circulation of air from the space between the outer and interposed layers to the space between the interposed and the inner layers, and means arranged to close over the air passages of the outer layer to stop circulation of air therethrough.

2. A ventilating garment comprising an impervious outer covering having air passages formed therethrough adjacent its upper extremity, a pervious inner covering, and an impervious continuous member located between the outer and inner coverings and providing a cellular air space between said outer covering and the continuous member and between said member and the pervious inner covering, said continuous member being made somewhat shorter than said covering members and being stopped short of the lower ends thereof, all of said parts being so arranged that air may be taken in through the air passages of the outer covering at atmospheric temperature and may circulate downwardly through the outer series of cells and flow around the lower end of the impervious interposed member and then upwardly through the inner course of cells and escape through the pervious inner covering.

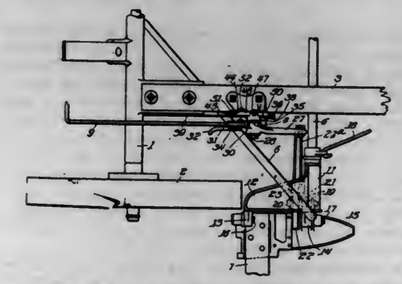
3. A ventilating garment comprising an outer impervious covering, an inner pervious covering, and an impervious corrugated strip mounted between said covering portions to provide cellular air spaces between said interposed strip and the outer covering and between the inner covering and the strip, said corrugated strip being stopped short of one end of said covering portions to establish communication from the outer cells to the inner cells and the outer covering being provided with openings therethrough at the opposite extremity of the garment from that in which communication is permitted from the outer to the inner cells.

4. A ventilating garment comprising an outer impervious covering, an inner pervious covering, an impervious corrugated strip mounted between said covering portions to provide cellular air spaces between said interposed strip and the outer covering and between the inner covering and the strip, said corrugated strip being stopped short of one end of said portions to establish communication from the outer cells to the inner cells and the outer covering being provided with openings therethrough at the opposite extremity of the garment from that in which communication is permitted from the outer to the inner cells, and means to regulate the supply of air through the openings of the outer covering and to permit said openings to be closed.

5. A ventilating garment comprising a plurality of layers of material arranged together to form outer and inner courses of cells, said garment being provided with passages adjacent to the opposite extremities thereof through which atmospheric air is permitted to flow into the outer course of cells adjacent to one extremity of the garment and to pass to the inner course of cells adjacent to the opposite extremity to thus have circulation to affect the temperature within the garment, and means arranged to close over the passages leading to the atmosphere and to thus close the same to the circulation of air.

[Claim 6 not printed in the Gazette.]

1,213,942. MOWING-MACHINE. CHARLES PEARSON, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed June 14, 1913. Serial No. 773,629. (Cl. 56—74.)



1. In a mowing machine, a frame, a finger bar flexibly connected therewith, a lifting lever pivotally mounted upon said frame and operatively connected with said finger bar in a manner to raise or lower it, a spring-pressed detent slidable upon said lever, a sector secured to said frame and having a notch therein adapted to receive said detent, a notch masking member pivotally mounted upon said sector eccentric to the axis of said lifting lever and having a limited swinging movement toward or from said notch, said detent engaging with said masking member in a manner to swing it forward to a notch masking position when said lever is moved in a direction to lower said finger bar.

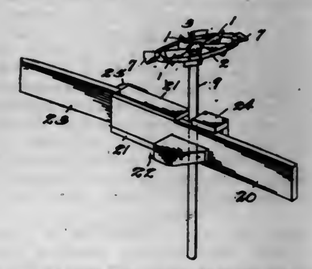
2. In a mowing machine, a machine frame, a rising and falling coupling frame carried thereon, a finger bar pivotally connected to said coupling frame, a lifting lever pivoted on said machine frame, operative connections between said lever and said coupling frame and finger bar [illegible] upon movement of said lever to vary the position [illegible] said coupling frame and bar in a predetermined sequence, and a coupling frame supporting hook carried on said lever and movable on a radius therewith.

3. In a mowing machine, a machine frame, a rising and falling coupling frame carried thereon, a finger bar pivotally connected to said coupling frame, a lifting lever pivoted on said machine frame, operative connections between said lever and said coupling frame and finger bar operable upon movement of said lever to vary the position of said coupling frame and bar in a predetermined sequence, a coupling frame supporting hook pivoted on said lever and movable on a radius therewith, and means movable with said lever for moving said hook about its pivot.

4. In a mowing machine, a machine frame, a coupling frame pivoted thereon, a finger bar pivoted on said coupling frame, a lifting lever pivoted on said machine frame, operative connections between said lever and said finger bar and coupling frame operable to vary the elevation of each of said last mentioned elements in a predetermined sequence, a coupling frame supporting member pivoted on said lifting lever at one side of the pivot thereof, and means engageable with said supporting member upon movement of said lever for moving the supporting member about its pivot on said lever.

5. In a mowing machine, a machine frame, a coupling frame pivoted thereon, a finger bar pivoted on said coupling frame, a lifting lever carried on said machine frame, operative connections between said lever and said coupling frame and finger bar operable to vary the elevation of each of said last mentioned elements in a predetermined sequence, a coupling frame supporting hook pivoted to said lifting lever and means movable with said lever and engageable with said hook after a predetermined movement of said lever in either direction for moving said hook to and from its supporting position.

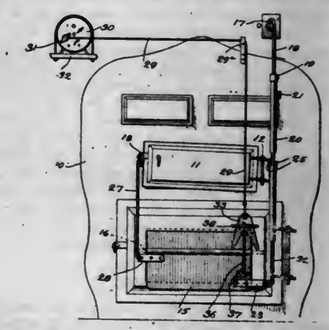
1,213,943. TOY HELICOPTER. JOSEPH W. PECINOVSKY, Webb City, Mo. Filed Mar. 18, 1916. Serial No. 85,176. (Cl. 244—2.)



1. The combination in a toy apparatus of a helicopter propeller having a shaft with a pair of strips each having a hand-grasp and each strip formed with a pair of flanges adapted to guide the other strip.

2. The combination in a toy apparatus of a helicopter propeller and its shaft with a pair of strips each having a hand grasp and each strip having upper and lower overhanging flanges adapted to guide the other strip, and said flanges located at the remote ends of the strips.

1,213,944. FURNACE DRAFT-REGULATOR. FORREST M. POWELL, Chicago, Ill., assignor of one-fourth to John P. Crangle and one-fourth to Emil Davis, Chicago, Ill. Filed Mar. 9, 1916. Serial No. 83,012. (Cl. 236—7.)



1. The combination with a furnace having a coal door and a draft door and equipped with automatic draft-regulating means, of mechanism arranged to automatically open said draft door, means extending directly between the two doors and arranged to close the coal door when the draft door is opened, and means independent of the last mentioned means and of said mechanism and operable by the opening movement of said draft door to pro-

vide an independent operating connection between the draft door and said automatic regulating means.

2. The combination with a furnace having a coal door and a draft door and equipped with automatic draft-regulating means, of a flexible element connected at one end to said draft door for opening the latter, mechanism arranged to wind up said flexible element, independent means extending directly between said two doors and operable by opening movement of the draft door for closing the coal door, means for breaking the connection between the said flexible element and the draft door, and independent means extending directly between said automatic draft-regulating means and said draft door and operable by opening movement of the latter to provide an operating connection for automatically controlling the draft door in the daytime.

3. The combination with a furnace having automatic draft-regulating means mounted at the upper portion thereof and including a pivoted lever, the furnace also having a draft door in its lower portion, of a connection between said draft door and said lever comprising a tube connected at its upper end to said lever and depending therefrom and having opposite cut-away portions, a rod connected at its lower end to said draft door and extending upwardly into said tube to slide in the latter, said rod being provided at its upper end with a pair of opposed spring dogs arranged to engage in said cut-away portions of the sleeve, and mechanism arranged to automatically open the draft door, the opening movement of said door acting to raise said rod in its sleeve and cause the locking dogs to engage the cut-away portions, thereby providing an operating connection between the automatic regulating means and the draft door for operation in the daytime.

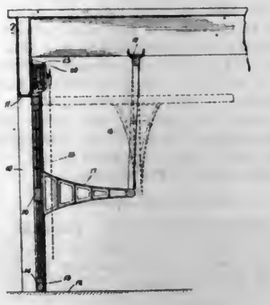
4. The combination with a furnace having a draft device and equipped with automatic regulating means including a pivoted lever, of means for automatically opening said draft device, a sleeve connected at its upper end with and depending from said lever and having opposed cut-away portions, a rod connected at its lower end to said draft device and passing upwardly into said sleeve and being slidable in the latter, a pair of spring dogs carried by the upper end of said rod and having out-turned ends arranged to engage in said cut-away portions of the sleeve, and a pair of spring-mounted releasing devices carried by the sleeve and arranged to be pressed inwardly to engage and release said spring dogs from the cut-away portions of the sleeve.

5. The combination with a furnace having a draft door in its lower portion and equipped with automatic draft-regulating means which includes a lever pivoted on the upper portion of the furnace, a rod connected at its upper end and depending from one end of said lever, a stop shoulder on said rod, a sleeve receiving in its upper end the lower end of said rod, said sleeve being arranged to abut against said stop shoulder, a set screw for rigidly securing said sleeve to the rod, a second rod connected at its lower end to said draft door and passing upwardly slidably into the lower end of said sleeve, of a pair of spring-locking dogs carried by the upper end of said second rod and arranged to engage parts on said sleeve to lock the latter to said second rod, and means for automatically opening said draft door, whereby the second rod will be slid upwardly in the sleeve and will carry the locking device into operative position.

[Claims 6 to 24 not printed in the Gazette.]

1,213,945. TURNOVER DOOR. ARTHUR T. PRESCOTT, East Orange, N. J., assignor to George H. Frothingham Company, New York, N. Y., a Corporation of New York. Filed Jan. 29, 1916. Serial No. 74,968. (Cl. 20—16.)

1. In combination with a door opening having vertical guideways, a door having guide means near its lower end coöperating with the guideways, suspended links spaced materially from the plane of the door opening and spaced apart to permit the door to swing between them, and a pair of brackets affixed to the door near its edges at an intermediate point in its length and extending laterally a substantial distance from the inner surface of the door to connect pivotally with the suspended links whereby a force exerted upon the door in the plane thereof and near the guide means causes it to move rotatatively from a vertical to a substantially horizontal plane.



2. In combination with a door opening having vertical guideways, a door having guide means near its lower end coöperating with the guideways, suspended links spaced materially from the plane of the door opening and spaced apart to permit the door to swing between them, a pair of brackets affixed to the door near its edges at an intermediate point in its length and extending laterally a substantial distance from the inner surface of the door to connect pivotally with the suspended links, and a hoisting mechanism acting upon the door near the guide means whereby a force exerted upon the door in the plane thereof and near the guide means causes it to move rotatively from a vertical to a substantially horizontal plane.

3. In combination with a door opening having vertical guideways, a door having guide means near its lower end coöperating with the guideways, suspended links spaced materially from the plane of the door opening and spaced apart to permit the door to swing between them, a pair of brackets affixed to the door near its edges at an intermediate point in its length and extending laterally to connect pivotally with the suspended links, said brackets being spaced from the top of the door a distance substantially equal to their length whereby a force exerted upon the door in the plane thereof and near the guide means causes it to move rotatively from a vertical to a substantially horizontal plane.

4. In combination with a door opening, a door adapted to occupy a substantially vertical position when closed, guideways for the door opening adapted to hold the lower end of the door to a vertical movement, brackets extending laterally a substantial distance from the inner surface of the door from intermediate points in the length of the door, and links spaced materially from the inner surface of the door, suspended from above and pivotally connected to the brackets, the points of connection between the links and the brackets constituting a comparatively fixed axis about which the door moves rotatively from the vertical to a substantially horizontal plane.

1,213,946. RAILWAY. HERBERT PRITCHARD, Downingtown, Pa. Filed June 4, 1914. Serial No. 842,813. (Cl. 239—8.)

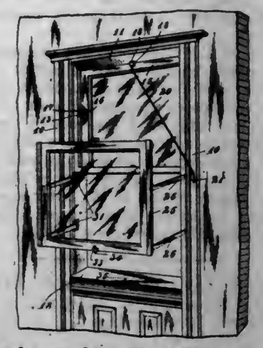
1. The combination with a pair of rails in complementary relation, each having its end region recessed transversely one-half its thickness for twice the length of the distance between the centers of adjoining ties, and having its web thickened, throughout its recessed portion and beyond each end thereof, by a reinforcing member on the outer side of said rail between the rail head and base flange, in unitary relation therewith, including an extension beyond the head of the rail at the end thereof, arranged to fit between the head and base flange of the other rail; each of said rails having a series of seven bolt holes extending transversely through its web and reinforcing member, each elongated in the direction of the rail length; each rail having a spike notch in its flange adjacent its reinforcing member at the end of the latter, and two pairs of spike notches in said flange in such spaced relation that each pair registers with a tie; of a series of seven bolts having unthreaded portions fitting through the holes in said complementary rails, of such shape that they cannot be turned therein; said bolts having heads all bearing upon the reinforcing member of one of said rails, and having screw threaded ends projecting through the reinforcing member of the other of said rails; the end bolts of said series being longer than the other bolts; nuts on all of said bolts clamping said rails together; a tie under said rails at the middle of said joint; two ties adjoining said middle tie under said rails in such spaced relation that the ends of the respective rails terminate at the middle of said ties, though the extensions of the reinforcing members extend beyond the same; other ties beneath said rails, in spaced relation with said adjoining ties; and a single rail on said ties, parallel with said complementary rails, and forming therewith a railway track.



2. The combination with a pair of rails in complementary relation, each having its end region recessed transversely, one-half of its thickness, and having its web thickened, throughout its recessed portion and beyond each end thereof, by a reinforcing member on the outer side of the rail between the rail head and base flange, in unitary relation therewith, including an extension beyond the head of the rail at the end thereof, arranged to fit, as a wedge, and bear upon both the head and base flange of the other rail; each of said rails having a series of bolt holes extending transversely through its web and reinforcing member, each elongated in the direction of the rail length; each rail having a spike notch in its flange adjacent its reinforcing member at the end of the latter, and two pairs of spike notches in said flange in such spaced relation that each pair registers with a tie; of a series of bolts having unthreaded portions fitting through the holes in said complementary rails, of such shape that they cannot be turned therein; said bolts having heads all bearing upon the reinforcing member of one of said rails, and having screw threaded ends projecting through the reinforcing member of the other of said rails; the end bolts of said series being longer than the other bolts; nuts on all of said bolts clamping said rails together; a tie under said rails at the middle of said joint; two ties adjoining said middle tie under said rails in such spaced relation that the ends of the respective rails terminate at the middle of said ties, though the extensions of the reinforcing members extend beyond the same.

1,213,947. WINDOW. HENRY F. PRUSSNER, PHILIP NASH, and JOSEPH MANGER, Brooklyn, N. Y. Filed Feb. 4, 1916. Serial No. 76,078. (Cl. 20—53.)

In a window, the combination with the frame thereof and a pair of sashes operable therein, of pairs of bars pivotally attached to each side of the lower sash, the lower pair of bars being secured to the sash at its lower end and to the window frame at a height from the sill equivalent to their length, the upper pair of bars being attached to the center of the sash at one end and to the window frame at their other end, at a height above the first pair of bars, by a distance equivalent to their length, so that the said sash may either rest upon the sill or



swing out and upward to rest parallel against the entire surface of the upper sash.

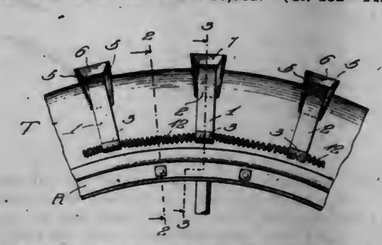
1,213,948. SHOE-HORN. CHARLES R. REDHEFFER, Philadelphia, Pa. Filed July 8, 1916. Serial No. 108,086. (Cl. 132—30.)



1. As a new article of manufacture, a shoe horn consisting of two parts hinged together transversely of the longitudinal axis of the shoe horn, each part having a guiding surface forming in alined position a continuation of the surface of the other part and means to limit the opening movement of said parts, whereby a substantially continuous guiding surface for a heel is formed by the combined parts.

2. As a new article of manufacture, a shoe horn consisting of two parts hinged together transversely of the longitudinal axis of the shoe horn, each part having a guiding surface forming in alined position a continuation of the surface of the other part, catch means to latch the parts in folded position and means to limit the opening movement of said parts whereby a substantially continuous guiding surface for a heel is formed by the combined parts.

1,213,949. ANTISKIDDING GRIP-TREAD FOR VEHICLE-WHEELS. CONRAD REGER, Danville, Pa. Filed Mar. 30, 1916. Serial No. 87,762. (Cl. 152—14.)

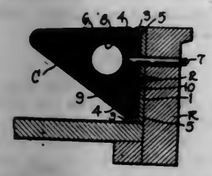


1. A device of the class described comprising a longitudinally curved channeled plate adapted to fit snugly transversely around the tread of a tire, a clamping member disposed in the channel of said plate midway of the ends of the latter and having an anti-slipping element thereon, a U-shaped member having its intermediate por-

tion disposed in the channel of said plate and its central portion clamped between the central portion of the latter and said clamping member, and means for securing the said clamping member, said U-shaped member, and said plate together.

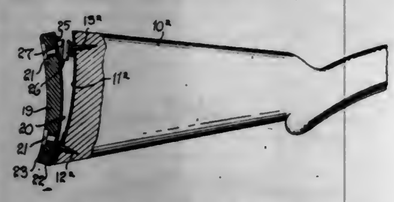
2. A device of the class described comprising a longitudinally curved channeled plate adapted to fit snugly transversely around the tread of a tire, a short arcuate clamping plate disposed longitudinally in the channel of said curved plate midway of the ends of the latter, and having an anti-slipping element thereon, a U-shaped member having its intermediate portion disposed in the channel of said curved plate, and its central portion clamped between the central portion of the latter and said clamping plate, and means for securing said clamping plate, said member, and said curved plate together.

1,213,950. CUSHION FOR BILLIARD-TABLES. ELIJAH RINGSMITH, Morenci, Ariz. Filed Dec. 27, 1915. Serial No. 68,880. (Cl. 46—11.)



In combination with the rail of a billiard table, a strip secured to the inner face thereof and disposed longitudinally therealong, the longitudinal margins of the strip being provided with laterally and inwardly disposed flanges, a cushion having its upper and lower faces adjacent its rear wall provided with longitudinally disposed grooves forming outstanding beads immediately adjacent to the grooves, said grooves and beads affording an interlocking engagement with the flanges of the strip, said cushion being provided with a longitudinally directed air chamber positioned in advance of the grooves whereby the portion of the cushion intermediate the grooves is substantially solid, the rear wall of the cushion being provided with a longitudinally disposed slit in communication with the air chamber, said slit being disposed on an incline with its outer end terminating below the air chamber, an inner tube insertible within the air chamber through the slit, and a valve in communication with said tube.

1,213,951. RECOIL-PAD FOR GUN-BUTTS. ELIJAH RINGSMITH, Morenci, Ariz. Filed June 19, 1916. Serial No. 104,456. (Cl. 42—74.)



1. The combination with a gun-butt having headed screws, of a recoil pad and a coil spring, the coil gradually diminishing in diameter, the small end of the coil being engaged by a corresponding headed screw and the large end of the coil being engaged with the recoil pad, said recoil pad having an opening through which the screw may be removed.

2. The combination with a gun-butt, of headed screws extending therefrom and having their heads slightly spaced from the face of the gun-butt, resilient members engaged by the heads of the screws and projecting beyond said heads, and a recoil pad operatively engaged by the resilient members and supported in spaced relation to the heads of the screws.

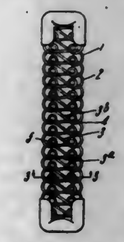
3. The combination with a gun-butt, of headed screws extending therefrom and having their heads slightly spaced from the face of the gun-butt, resilient members engaged by the headed screws and projecting beyond the heads thereon, and a detachable recoil pad operatively engaged by said resilient members, said pad being provided with openings alining with the screws whereby the screws may be removed from engagement with the gun-butt.

4. The combination with a gun-butt, of headed screws extending therefrom, a recoil pad, a spring engaged with one of said screws and detachably engaged with the recoil pad, and a hinge member engaged with the other end of the recoil pad and pivotally but detachably engaged with the other screw.

5. The combination with a gun-butt, of headed screws extending therefrom, a recoil pad, a spring engaged with one of said screws and detachably engaged with the recoil pad, and a resilient hinge member engaged with the other end of the recoil pad and detachably engaged with the other screw.

[Claims 6 and 7 not printed in the Gazette.]

1,213,952. GARMENT-STAY. WILLIAM J. ROCHE, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed June 22, 1914. Serial No. 846,589. (Cl. 2—76.)



1. A garment stay, comprising wire bent back and forth to form a series of eyes or loops along the edges of the stay and connecting crossings, the crossing portions being bent to form another series of smaller closed eyes or loops lying in the plane of the stay and between the edges thereof.

2. A garment stay, comprising wire bent back and forth to form a series of open eyes or loops along both edges of the stay and intermediate connecting portions or crossings, successive eyes or loops overlapping each other slightly, the crossing portions of the wire being bent to form another series of smaller closed eyes or loops lying in the plane of the stay and between the edges thereof.

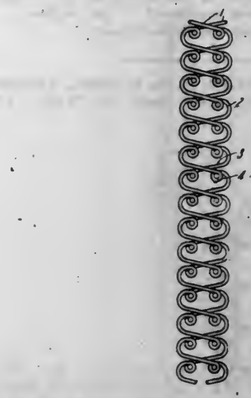
3. A garment stay, comprising wire bent back and forth to form a series of eyes or loops and connecting crossings, said eyes or loops lying along the edges of the stay, the wire being also bent to form another series of complete coils lying along the middle portion of the stay and in the plane thereof.

4. A garment stay comprising wire bent back and forth to form a series of open eyes or loops along both edges of the stay and connecting crossing portions, each crossing portion being bent intermediate the edges of the stay to form a smaller closed eye or loop, the closed eyes or loops in alternate crossings lying on opposite sides of the middle line of the stay and in the plane thereof.

5. A garment stay, comprising wire bent to form two series of open loops or eyes lying along the edges of the stay and a series of transverse crossing portions, the crossing portions being bent to form two parallel series of closed loops or eyes lying between the edges of the stay and in the plane thereof.

[Claim 6 not printed in the Gazette.]

1,213,953. GARMENT-STAY. WILLIAM J. ROCHE, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed July 21, 1914. Serial No. 852,254. (Cl. 2—76.)



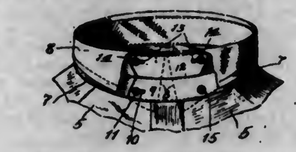
1. A garment stay, comprising a plurality of wires, each of which is bent back and forth from edge to edge of the stay to form a series of edge loops and transversely extending crossing portions, the wires being also bent to form a series of closed loops lying on each side of the middle line of the stay.

2. A garment stay, comprising a plurality of wires, each of which is bent back and forth from edge to edge of the stay to form a series of edge loops and transversely extending crossing portions, the wires being also bent to form pairs of oppositely disposed closed loops lying on each side of the middle line of the stay.

3. A garment stay, comprising a plurality of wires, each of which is bent back and forth from edge to edge of the stay to form a series of edge loops and transversely extending crossing portions, the wires being also bent to form two longitudinally extending rows of closed loops lying on each side of the middle line of the stay, alternate loops in each row forming parts of different wires.

4. A garment stay, comprising a plurality of wires bent back and forth across the stay to form a series of edge loops and crossing portions, the wires being also bent intermediate the edges of the stay to form a row of closed loops or eyes, alternate loops or eyes of which are at different wires.

1,213,954. CONVERTIBLE COLLAR. WILLIAM B. RONEY, Omaha, Nebr., assignor to M. E. Smith and Company, Omaha, Nebr., a Corporation of Nebraska. Filed June 5, 1916. Serial No. 101,680. (Cl. 2—41.)

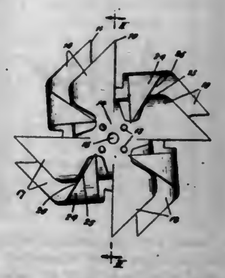


1. A convertible collar for garments having a tab to extend across the space between the adjacent ends of the collar, the collar comprising an inner portion and an outer portion adapted to fold down about said inner portion and in front of said tab, and a tab secured to the other tab and adapted to stand up to hold the collar in "military" position, or to fold down in front of the first tab to allow the collar to assume a "negligée" position, and suitable securing means for the second tab.

2. A soft folded collar having an inner portion and an outer portion, a tab connected to one end of the inner portion, a tab foldably connected to the upper edge of the first tab so as to be foldable downwardly into position in front of the first tab, and means for detachably securing the opposite ends of the second tab.

3. A shirt having a soft collar permanently attached thereto and having a tab secured adjacent to one end of the collar and adapted to overlap the opposed end, a tab secured to the first mentioned tab and arranged to stand up to hold the collar in "military" position or to fold down alongside the first tab to allow the collar to occupy a "negligée" position, a button and button-hole for securing the first tab to the opposed portion of the shirt, the second tab having two button-holes at horizontally opposite ends, two buttons secured to the underside of the collar and adapted to enter said two button-holes and hold the second tab in upstanding position, and a fourth button arranged to receive one of the button-holes on the second tab when the latter is folded down, the other button-hole on said second tab being arranged to receive the first mentioned button.

1,213,955. ROTARY FAN. ADOLPH F. ROTH, New York, N. Y. Filed Oct. 14, 1915. Serial No. 55,832. (Cl. 170—165.)



1. A rotary fan of the character described, comprising a hub portion, and a plurality of pairs of superposed blades extending radially from the hub portion and the free ends of the blades of each pair being angular in shape as well as being correspondingly bent toward the hub portion upon one of the corresponding faces of one of the blades of each pair to provide an air-suction space between the blades of each pair.

2. A rotary fan of the character described, comprising a hub portion, and a plurality of pairs of superposed blades extending radially from the hub portion, and the free ends of the blades of each pair being angular in shape as well as being correspondingly bent toward the hub portion upon one of the corresponding faces of one of the blades of each pair so that parts of each pair of the bent ends are in lapping arrangement while the other parts of each pair of the bent ends are spaced apart to provide an air-suction space between the blades of each pair.

3. A rotary fan of the character described, comprising a hub portion, a plurality of pairs of superposed substantially equilateral triangular blades extending radially from the hub portion, and a plurality of approximately cone-shaped air-suction members one provided on the free ends of each pair of the blades by curling one of the corresponding corners of the blades each pair toward the hub portion upon one of the corresponding faces of one of the blades of its respective pair.

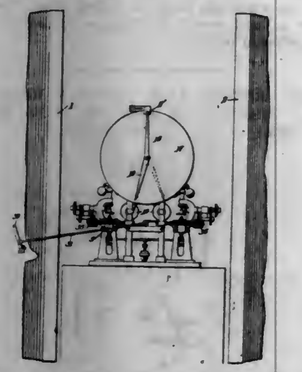
4. A rotary fan of the character described, comprising a hub portion, a plurality of pairs of superposed blades extending radially from the hub portion, and a plurality of pairs of approximately cone-shaped air-suction members one pair on each pair of the blades, and all of the air-suction members being disposed upon one of the corresponding spaces of one of the blades of each pair as well as being disposed circumferentially with relation to the hub portion.

5. A rotary fan of the character described, comprising a hub portion, and two series of pairs of superposed blades

extending radially from the hub portion, the free ends of each pair of one series of the blades being correspondingly bent toward the hub portion upon one of the corresponding faces of one of the blades of each pair of this series and the free ends of each pair of the second series of the blades being also correspondingly bent toward the hub portion upon one of the corresponding faces of one of the blades of each pair of said second series so as to be disposed in opposite directions to the bent ends of the pairs of blades of the first series, for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

1,213,956. SAFETY MINE-HOIST. GEORGE F. ROYER, Wilkes-Barre, Pa. Filed Nov. 10, 1915. Serial No. 60,731. (Cl. 74—46.)



1. In a mine hoist, the combination with suitable winding drums, cables, and two cages connected with the cables so that they travel simultaneously in opposite directions, of an indicating mechanism including a dial and two hands or pointers adapted to alternately coöperate with a single indication on the dial as the cages, respectively, reach a predetermined elevation, and means adapted to automatically check rotation of the drums on completion of a sufficient number of revolutions to wind a predetermined length of cable thereon.

2. In a mine hoist, the combination with two winding drums arranged to rotate simultaneously, and means adapted to automatically check rotation of the drums on completion of a predetermined number of revolutions thereof, of an indicating mechanism comprising a dial and two hands or pointers connected respectively with said drums whereby they will move relative to the dial in unison with rotation of the drums.

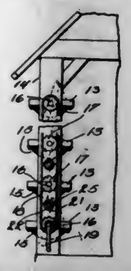
3. In a mine hoist, the combination with a pair of "fast" and "loose" winding drums arranged to rotate simultaneously, and means adapted to automatically check rotation of the drums on completion of a predetermined number of revolutions thereof, of an indicating mechanism comprising a dial and two hands or pointers connected respectively with said drums whereby they will move relative to the dial in unison with rotation of the drums, the relative positions of the hands being varied as the "loose" drum is adjusted to vary the operative length of the cable thereon, for the purpose described.

4. In a mine hoist, the combination with a winding drum, and means adapted to automatically check rotation of the drum on completion of a predetermined number of revolutions thereof, of an indicating mechanism comprising a dial, a pointer connected with the drum and movable over the dial in unison with rotation of the drum, and means coöperating with the pointer for indicating the direction of the next succeeding movement of the drum at the termination of a movement thereof in one direction.

5. In a mine hoist, the combination with two simultaneously acting winding drums, and means adapted to automatically check rotation of the drums on completion of a predetermined number of revolutions thereof, of means including a pointer, movable by the drums, and a dial for indicating a predetermined limit of proper movement of the drums, and supplemental means arranged to coöperate with the pointer to indicate the direction of the next succeeding movement of the drums at the termination of the predetermined movement of the drums.

[Claims 6 to 18 not printed in the Gazette.]

1,213,957. DRYING-HOUSE. ROSS B. RYDER, Altamont, S. D. Filed Jan. 29, 1916. Serial No. 75,121. (Cl. 34—19.)



1. A drying device comprising a structure having walls including end beams, boards positioned between said end beams, pivot pins for said boards, the pivot pins at one end extending through the end beams, perforated receptacles carried by said boards, means for rotating one of said pivot pins to adjust the angle of the board carried thereby, means for transmitting rotary movement of said pivot pins to the remaining pivot pins whereby said boards will be simultaneously adjusted, and means for releasably holding said boards in an adjusted position.

2. A drying device of the character described comprising a structure having a wall provided with end beams, boards positioned between said end beams and pivotally connected therewith, the boards being positioned for overlapping relation when in one position, perforated receptacles carried by said boards, means for moving said boards to an adjusted position, and means for releasably holding said boards in an adjusted position.

3. A drying device of the character described comprising a structure having a wall including end beams, boards pivotally mounted between said end beams, perforated receptacles carried by said boards, means for moving said boards to an adjusted position, and means for releasably holding the boards in an adjusted position.

4. A drying device of the character described comprising a structure including a wall provided with end beams, boards pivotally mounted between said end beams, perforated receptacles carried by said boards, and means for adjusting the angle of said boards.

5. A drying device comprising a structure having a side wall provided with end beams, boards pivotally mounted between said end beams, clutch pins rotatably mounted in one of said beams and provided with heads at their inner ends for engaging said boards, means for yieldably holding the heads of said pins in engagement with said boards, means for releasably holding said pins in a set position, and means for adjusting the angle of said boards.

[Claim 6 not printed in the Gazette.]

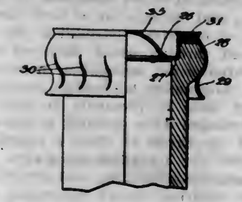
1,213,958. PUMP CONNECTION OR THE LIKE. MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, and HENRY P. KRAFT, Ridgewood, N. J. Filed June 16, 1911. Serial No. 633,598. (Cl. 137—28.)

1. A coupling of the character described having a plurality of passageways greater than two, one having a nipple adapted to lead to the interior of a gage, and having means for connection with a tire valve, and said nipple being of substantially the same diameter as said tire valve, and being screw-threaded interiorly and exteriorly.

2. A coupling of the character described having a plurality of passageways greater than two, one having an enlarged flange provided with a screw-thread on its exterior, and a relatively small nipple surrounded by said flange and adapted to contact with the packing of a gage, said nipple being screw-threaded to receive a pump coupling.



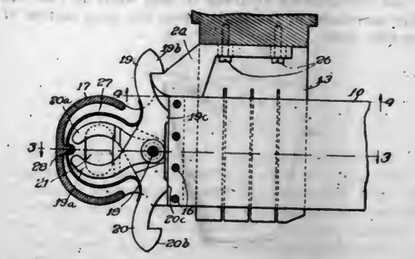
1,213,959. SANITARY BOTTLE-CAP. AARON SEGALL, New York, N. Y. Filed Aug. 5, 1911. Serial No. 642,499. (Cl. 215—82.)



A sanitary cap of non-absorbent, resilient material, adapted for use upon milk bottles, and comprising a horizontal annular disk, as wide as the top of a milk bottle and adapted to extend to the outer line of the top of the bottle to be capped and to the inner line of said top, a downwardly extending wall in the form of a circular flange projecting vertically downward from the interior line of the horizontal disk portion and conforming in outline to the circular interior of the bottle neck to which it is to be applied, and a closing wall extending entirely across the space within said downwardly extending wall, closing said space and aiding in holding said downwardly extending wall in position, with an angle not greater than a right angle at the corner where the lower line of the downwardly extending wall joins the closing wall, some portion of said closing wall being raised between the lines of the downwardly extending wall, from the corner aforesaid, thus constituting a spring holding device, all arranged and combined substantially as set forth, whereby the cap may be sprung upon the bottle top and held thereon by its own resilience.

1,213,960. LOCKING-SWITCH. EDSON O. SESSIONS, Chicago, Ill. Filed June 14, 1915. Serial No. 33,926. (Cl. 175—282.)

1. In a switching mechanism, the combination of a pivoted switch blade having two operative positions, two contact jaws, one for engagement with said blade in each operative position, a catch associated with each jaw, a casing carried by the end of said blade, two latches pivotally mounted in said casing, one for engagement with each catch, each latch having an operating member rigidly associated therewith, and a helical spring secured at its ends to said operating members for holding said latches in position to engage said catches.



2. An electric switch comprising a pair of posts, a switch blade pivotally connected to one of the posts, a catch lug adjacent the other post, switch jaws adjacent said catch lug, a bracket secured to the blade, and a hook pivotally connected to the bracket, said bracket being at such distance from the pivot of the blade as to cause the hook to co-act with the catch lug when the blade is closed, said bracket having an eye to be engaged by an operating implement, and the hook having an ear overlapping said eye.

3. An electric switch comprising a pair of posts, a switch blade pivotally connected to one of the posts, a catch lug adjacent the other post, switch jaws adjacent said catch lug, a bracket secured to the blade, and a hook pivotally connected to the bracket, said bracket being at such distance from the pivot of the blade as to cause the hook to co-act with the catch lug when the blade is closed, said bracket having an opening for receiving an operating implement, and the hook having an ear overlapping said opening, and a spring tending to hold said hook in its engaging position and said ear in its overlapping position.

4. An electric switch comprising a pair of posts, a switch blade pivotally connected to one of the posts, a catch lug adjacent the other post, switch jaws adjacent said catch lug, a bracket secured to the blade, and a hook pivotally connected to the bracket, said bracket being at such distance from the pivot of the blade as to cause the hook to co-act with the catch lug when the blade is closed, said bracket comprising a casing for containing said hook and provided with openings through its opposite walls for receiving an operating implement, and said hook having an ear located between said walls and overlapping said openings.

5. An electric switch comprising a pair of posts, a switch blade pivotally connected to one of the posts, a catch lug adjacent the other post, switch jaws adjacent said catch lug, a bracket secured to the blade, and a hook pivotally connected to the bracket, said bracket being at such distance from the pivot of the blade as to cause the hook to co-act with the catch lug when the blade is closed, said bracket having an opening for receiving an operating implement, and said hook having an ear overlapping said opening, and devices for mounting said catch lug so that it may be moved longitudinally of said blade to different operative positions.

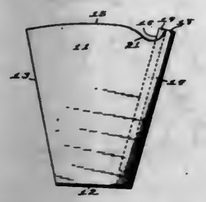
[Claims 6 to 11 not printed in the Gazette.]

1,213,961. DRINKING-CUP. FRANK P. SHEPARD, Oklahoma, Okla. Filed Oct. 7, 1912. Serial No. 724,332. (Cl. 65—58.)

1. A collapsible drinking cup having a collapsible suction tube permanently attached thereto and associated with the walls thereof so as to be automatically opened and closed as the drinking cup is opened and closed.

2. A collapsible drinking cup including walls arranged to have a relative movement, and a collapsible suction tube associated with and permanently attached to said walls so as to be collapsed and opened up by the movements thereof.

3. A collapsible drinking cup including walls arranged to have a relative movement, and a suction tube associated with and permanently attached to said walls so that the relative movement of the walls alters the cross section of the suction tube.

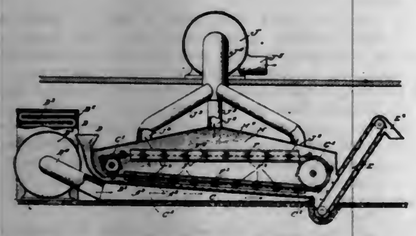


4. A collapsible drinking cup including relatively movable walls joining each other on a folding line, and a collapsible suction tube extending along the folding line of the walls and permanently connected to the walls so as to be collapsed and opened up by the relative movement thereof.

5. A collapsible drinking cup including relatively movable walls joining each other on a folding line, and a collapsible suction tube of polygonal cross section extending along the folding line and permanently connected with the said walls so as to be collapsed and opened up by the relative movements thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,213,962. DRYING APPARATUS. EARNEST E. SILER, Chicago, Ill., assignor, by direct and mesne assignments, to The Universal Drying Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 15, 1915. Serial No. 8,136. (Cl. 34—43.)



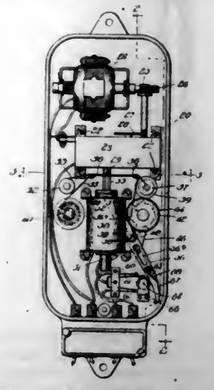
1. The combination of means forming a supporting surface for the material to be treated, and having a plurality of indirect air passages through which air is emitted to dry the material, and rotary agitators operating to tumble the material about to subject all of its particles to the action of the air.

2. The combination of means forming a supporting surface for the material to be treated, and having a plurality of indirect air passages through which air is emitted to dry the material, rotary agitators operating to tumble the material about to subject all of its particles to the action of the air, and means for carrying off the moisture laden air.

3. A bed of the class described comprising a plurality of superposed members forming a support for the material to be treated, the lower of said members having a plurality of perforations, and the upper of said members having a plurality of openings communicating with said perforations but offset with respect thereto.

4. The combination of a drying bed comprising a flat supporting member having a plurality of air passages and low guards disposed over said passages and forming mouths for said passages disposed at an angle to the plane of said plate and facing all in the same direction, and means for moving the material along the bed in the direction in which said mouths face.

1,213,963. RECORDER FOR SYSTEMS OF ELECTRICAL DISTRIBUTION. HAROLD S. SINES, Chicago, Ill., assignor to Mineralac Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 31, 1915. Serial No. 69,598. (Cl. 234—1.5.)



1. In a system of electrical distribution the combination with a circuit through which electrical energy is supplied, together with means controlled by the energy traversing said circuit, operating both when the electrical energy supply to said circuit is cut off and when the energy supply is reëstablished, to record cessations in the supply of electrical energy and the duration of such cessations.

2. In a system of electrical distribution, the combination with a circuit through which electrical energy is supplied, of a chronometer mechanism, printing hands operated by said chronometer mechanism, mechanism for carrying a record sheet in proximity to said printing hands, a platen arranged when operated to move the record sheet toward the hands to effect a record, electromagnetic mechanism for actuating the platen, a circuit for said electro-magnetic mechanism, and switching means controlled by the electrical energy traversing said first mentioned circuit arranged to cause the operation of the electro-magnetic mechanism each time the supply of electrical energy to said first mentioned circuit ceases and when the supply of electrical energy to said circut is reestablished.

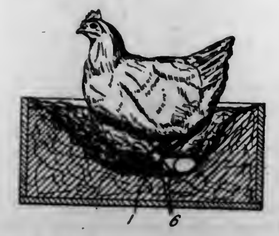
3. In a system of electrical distribution the combination with a circuit through which electrical energy is supplied, a chronometer mechanism, printing hands operated by the chronometer mechanism, mechanism for carrying a record sheet in proximity to said printing hands, a platen arranged when operated to move the record sheet toward the hands to effect a record, electro-magnetic mechanism for actuating the platen, switching mechanism controlling the operation of said electro-magnetic mechanism, and means controlled by the energy traversing the circuit aforesaid, arranged and adapted to cause the operation of the switching mechanism and thus the operation of the electro-magnetic mechanism and platen each time the supply of electrical energy to said circuit ceases and also each time the supply of electrical energy to said circuit is reëstablished.

4. In a system of the class described, the combination with a circuit through which electrical energy is supplied, a time-keeping mechanism and means controlled by the current traversing said circuit coöperating with the time-keeping mechanism to make a record of the times when the energy supply to said circuit is cut off and reëstablished, whereby the duration of the "outage" intervals may be ascertained.

5. In a system of electrical distribution, a circuit through which electrical energy is supplied, a time-keeping mechanism, printing hands operated thereby, means for carrying a record sheet in proximity to said printing hands, and mechanism controlled by the energy traversing said circuit arranged to cause a record of the position of the printing hands to be impressed upon the record sheet when the normal energy supply to said circuit is cut off and reëstablished, whereby the duration of the "outage" intervals may be ascertained.

[Claim 6 not printed in the Gazette.]

1,213,964. ANTISET FOR HENS. ALFRED B. SMITH, Topeka, Kans. Filed June 26, 1916. Serial No. 106,041. (Cl. 119—97.)



An anti-set for hens embodying a sleeve applicable to the leg of a hen, and a set of radial spurs attached to the sleeve adjacent to each end thereof, the free ends of the spurs of each set being curved away from the spurs of the opposite set.

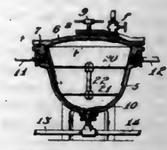
1,213,965. CUSHION-INSOLE. LOUIS SPIRLIN, New York, N. Y. Filed Oct. 20, 1915. Serial No. 56,909. (Cl. 36—71.)



In a cushion insole for footwear, a flexible bottom layer of a shape conforming to the shape of the inner surface of the sole of the footwear, a flexible top layer on the bottom layer having an uninterrupted upper surface and formed with a substantially semi-elliptic projection overhanging the shank part of the bottom layer, and parts of both of the layers being connected together but having free outer edges, thereby providing an open pocket between the shank parts thereof, and a rubber pad secured in the pocket and disposed under the overhanging projection of the top layer, the said pad being formed with a top surface inclined downwardly toward the central parts of the layers, and the edge of the pad under the overhanging projection of the top layer being beveled inwardly toward the lower layer, said pad being adapted to have its underhanging portion bend upwardly to follow the contour of the interior of the shoe adjacent the inner side of the wearer's arch, substantially as set forth and for the purpose specified.

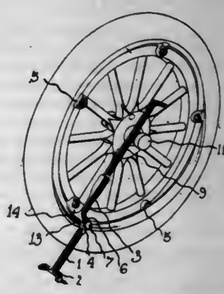
1,213,966. ART OF CLEANSING WOOL. GRAY STAUNTON, Muskegon, Mich. Filed Apr. 20, 1912, Serial No. 692,141. Renewed June 15, 1916. Serial No. 103,867. (Cl. 8—12.)

1. A process of cleansing wool which comprises confining the wool in a receptacle in such a manner that it shall be stationary during all subsequent steps, successively passing a cleansing fluid through said receptacle and the wool stationarily maintained therein from the bottom of said receptacle to the top thereof until said wool is cleansed, and thereafter successively passing through said receptacle and wool, still maintained stationary therein, a washing fluid from the bottom of said receptacle to the top thereof.



2. A process of cleansing wool which consists in confining the wool in a receptacle in such a manner that it shall remain stationary through all subsequent steps, successively passing a cleansing fluid through said receptacle and contained wool from the bottom of the receptacle to the top thereof until the wool is cleansed, thereafter successively passing through said receptacle and wool, still maintained stationary therein, a washing fluid from the bottom to the top of said receptacle, and thereafter passing through said receptacle and the wool therein contained, still maintained stationary therein, a drying medium.

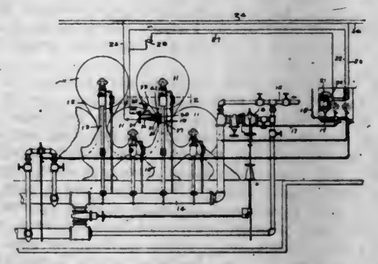
1,213,967. TIRE-TOOL. MILTON H. STEWART, Detroit, Mich. Filed Jan. 19, 1916. Serial No. 72,877. (Cl. 157—6.)



1. A tool for removing and re-setting tires comprising a standard and an off-set arm, and upwardly directed hooks carried by the tool, one of said hooks being positioned at the juncture of the standard and arm and each hook at an opposite side of the arm.

2. A tool for removing and resetting tires, comprising a standard and an off-set arm carried thereby, and rim engaging hooks positioned at the opposite sides of said arm, one of said hooks having an enlarged inclined end and a depending projection.

1,213,968. ELECTRICAL CONTROL FOR PAPER-MAKING MACHINES. COLE STICKLE, Indianapolis, Ind. Filed Nov. 8, 1915. Serial No. 60,424. (Cl. 34—48.)



1. The combination of cylinders for drying a sheet of paper or the like, means for heating said cylinders, electrical means for regulating said heating means, and means controlled by the tension of a sheet of paper or the like

as it passes over said cylinders for operating said electrical heat regulating means.

2. The combination with cylinders for drying a sheet of paper or the like, means for heating said cylinders, and a valve for controlling the heat of said cylinders, of means moved by the sheet of paper or the like passing over said cylinders according to its condition of moisture and dryness, an electric switch operated by said means, an electric circuit opened and closed by said switch, and electrical means controlled by said circuit for causing the regulation of the heat controlling valve.

3. The combination with cylinders for drying a sheet of paper or the like, means for heating said cylinders, and a valve for controlling the heat of said cylinders, of a main frame for supporting said cylinders, a frame mounted on said main frame near one of said cylinders so as to rock and having a roller on it extending transversely of the machine so as to bear against the sheet of paper or the like, and arranged so that said sheet as it tightens from dryness will rock said frame in one direction and when it slacks from moisture will permit the frame to rock in the opposite direction, a contact arm secured to said main frame, an adjustable contact on said arm, a contact arm secured to said rocking frame, a contact in said movable arm adapted to be moved against and away from the other contact as the rocking frame is moved in one direction or the other, an electric circuit opened and closed by said switch, and electrical means controlled by said circuit for causing the regulation of the heat controlling valve.

4. The combination with cylinders for drying a sheet of paper or the like, means for heating said cylinders, and a valve for controlling the heat of said cylinders, of a main frame for supporting said cylinders, a frame mounted on said main frame near one of said cylinders so as to rock and having a roller on it extending transversely of the machine so as to bear against the sheet of paper or the like, and arranged so that said sheet as it tightens from dryness will rock said frame in one direction and when it slacks from moisture will permit the frame to rock in the opposite direction, a contact arm secured to said main frame, an adjustable contact on said arm, a contact arm secured to said rocking frame, a contact in said movable arm adapted to be moved against and away from the other contact as the rocking frame is moved in one direction or the other, means for limiting the movement of said movable arm, an electric circuit opened and closed by said switch, and electrical means controlled by said circuit for causing the regulation of the heat controlling valve.

5. The combination with cylinders for drying a sheet of paper or the like, of means for heating said cylinders, a valve for controlling the heat of said cylinders, electrically operated means for regulating said valve, an electrical circuit for energizing said electrical means, a switch for opening and closing said circuit, and means controlled by the tension of the sheet of paper or the like as it passes over said cylinders for operating said switch.

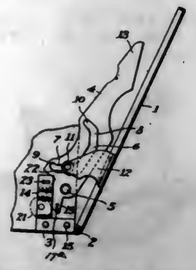
[Claims 6 to 8 not printed in the Gazette.]

1,213,969. BRACE AND LOCKING MEANS FOR HINGED OR SWINGING PARTS. CHARLES E. STURGIS, Rochester, N. Y. Filed May 6, 1916. Serial No. 95,911. (Cl. 217—60.)

1. In combination with a hinged part and a part to which the first named part is hinged, a brace pivoted to one of said parts at a point removed from the hinge and having a way thereon, and a pintle on the other part operating in said way, the way having a portion in which the pintle may work without any movement of the brace.

2. In combination with a hinged part and a part to which the first named part is hinged, a brace pivoted to one of said parts at a point removed from the hinge, and having a way thereon and a pintle on the other part operating in said way, the way having a portion in which the pintle may work without any movement of the brace, and a friction producing device acting on said brace to hold the latter against movement while the pintle is moving in said portion of the way.

3. In combination with a hinged part and a part to which the first named part is hinged, a brace pivoted to one of said parts at a point removed from the hinge and having a way thereon with a laterally-turned portion near the pivot, and a pintle on the other part operating in said way and moving in the laterally-turned portion without any movement of the brace.

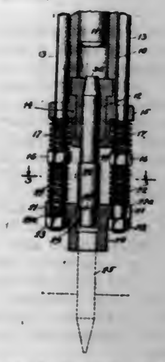


4. In combination with a hinged part and a part to which it is hinged, a brace pivoted to one of said parts at a point removed from the hinge and having a way thereon, a pintle on the other part operating in said way, and a detent for engaging said brace at its pivoted end when the brace is in bracing position.

5. In combination with a hinged part and a part to which it is hinged, a brace pivoted to one of said parts at a point removed from the hinge and having a way thereon, a pintle on the other part operating in said way, and a detent for engaging said brace at its pivoted end when the brace is in folded position, said detent also engaging said brace at its pivoted end when the latter is in bracing position.

[Claims 6 to 14 not printed in the Gazette.]

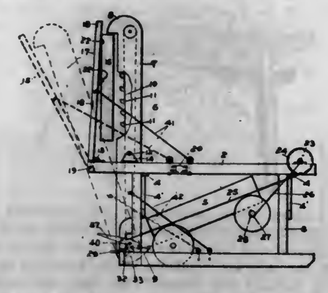
1,213,970. SPIKE-HOLDER FOR HAMMER-DRILLS. THOMAS E. STURTEVANT, Dover, N. J., assignor to McKiernan-Terry Drill Company, Dover, N. J., a Corporation of New Jersey. Filed Sept. 1, 1915. Serial No. 48,375. (Cl. 1—1.)



1. A spike driver attachment for a hammer drill having side rods and a socket comprising a driving spud having a shank adapted to enter the socket of the hammer drill, a spike-holding socket mounted to slide on the driving spud and on the side rods of the hammer drill, and springs on the side rods for pressing the socket outwardly.

2. The combination with a hammer drill having a socket and side rods with outwardly projecting extensions, of a spike driver attachment comprising a driving spud having a shank adapted to extend into the socket of the hammer drill, a spike holding socket associated with the driving spud and mounted to slide on the spud and on the side rod extensions, enlargements on the extensions for holding the spike holding socket in place, and springs surrounding the side rod extensions and pressing the spike socket against said enlargements.

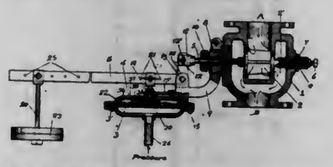
1,213,971. APPARATUS FOR TRANSFERRING GRAIN. CHARLES H. SWARNER, Wayne, Nebr. Filed Aug. 6, 1915. Serial No. 43,976. (Cl. 193—3.)



1. Apparatus of the specified class, comprising a frame adapted to contain a grain wagon, duplicate spaced pairs of bearings mounted on the top of the frame, a reversible elevator leg having a pair of alined pivotal and supporting arms extending horizontally from the opposite sides of the leg and journaled in the pairs of bearings alternatively, a conveyer shaft extending through the leg and projecting from its opposite sides, a driven shaft journaled in the frame, and means for connecting the driven shaft coaxially with either end of the conveyer shaft.

2. Apparatus of the specified class, comprising a supporting frame, duplicate spaced pairs of alternative bearings on the frame, a reversible and pivoted elevator leg having a pair of alined pivotal arms extending from the opposite sides of the leg and journaled in said pairs of bearings alternatively, a conveyer shaft extending through the leg and projecting from its opposite sides, a driven shaft journaled in the frame, and means for connecting one end of the driven shaft alternatively with the opposite ends of the conveyer shaft in mutual alinement therewith when the pivotal arms are journaled in either of said pairs of bearings.

1,213,972. FLUID-PRESSURE REGULATOR. ROBERT DANIEL TACKABERRY, Lewiston, Me. Filed Apr. 11, 1914. Serial No. 831,312. (Cl. 50—27.)



1. In a fluid pressure regulator, in combination, a valve body, a valve therein, a diaphragm case, a diaphragm therein, a hanger connecting said diaphragm case and valve body and permitting angular adjustment of said body relative to said case, a valve stem, operative connection between said diaphragm and stem, and means including a sliding joint between said diaphragm case and hanger for permitting adjustment of said case relative to said valve effective to vary the lift of said diaphragm.

2. In a fluid pressure regulator, in combination, a valve body, a valve therein, a diaphragm case, a diaphragm therein, a hanger connecting said case and body and permitting angular adjustment of said body relative to said diaphragm, said hanger having a sliding connection with said case permitting adjustment of said case relative to the valve, and a valve stem, a weighted lever fulcrumed on said hanger and connected with said stem, and a rocking connection between said diaphragm and lever for transmitting the effective motions of said diaphragm to said lever said rocking connection having selective engagement with the lever whereby the diaphragm may be adjusted along the lever to vary its effective lift.

3. In a fluid pressure regulator, in combination a reducing valve, a diaphragm operatively connected therewith and disposed to control the effective constant position of said valve, and a flexible protector for said diaphragm comprising a plurality of series of members overlying said diaphragm, each member of one series loosely connected with the adjacent member of an adjacent series.

4. In a fluid pressure regulator, in combination a reducing valve, a valve stem, a lever connected with said stem, a diaphragm, an anchoring member mounted on said diaphragm, a connection between said member and said lever, and a flexible protector for said diaphragm comprising a plurality of series of members having a loose connection with said anchoring member and one series loosely connected with an adjacent series.

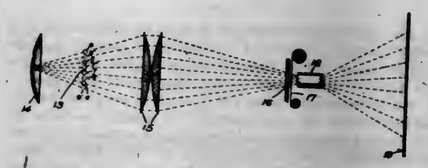
5. In a fluid pressure regulator in combination, a reducing valve, a valve stem, a lever connected with said stem, a diaphragm, an anchoring member mounted on said diaphragm, a connection between said member and said lever, and a flexible protector for said diaphragm comprising a plurality of series of radially disposed protector plates having loose connection with said anchoring member and one series detachably connected with an adjacent series.

[Claims 6 to 27 not printed in the Gazette.]

1,213,973. ALLOY ROLL-STEEL. FRANK D. TAGGART, Wyomissing, Pa. Filed Oct. 31, 1916. Serial No. 128,696. (Cl. 75—1.)

The improved alloy roll-steel described, composed mainly of iron, with percentages of carbon between 1.25 and 2.50, of chromium between 1.50 and 3.00, and of vanadium approximately .25; the minor elements present not exceeding one per cent.

1,213,974. PROJECTION APPARATUS. JOHN B. TAYLOR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 28, 1915. Serial No. 35,768. (Cl. 240—41.)



1. The combination in projection apparatus of an incandescent lamp having a coiled filament made up of a plurality of parallel sections all in the same plane and spaced from each other a distance approximately equal to the diameter of the coils and a spherical reflector having its center of curvature in the same plane as the lamp filament and adjacent one of the sections of the filament whereby images of the filament sections will be reflected in such a way as to occupy and fill the spaces between the filament sections.

2. The combination in projection apparatus of an incandescent lamp having a filament made up of a plurality of parallel sections all in the same plane, the area in that plane between adjacent sections being substantially equal to the effective light emitting area of a single section in a direction normal to the plane of the filament, and a spherical reflector having its center of curvature in the same plane as the lamp filament and adjacent one of the sections of the filament whereby images of the filament sections will be reflected in such a way that they will occupy and fill the spaces between the filament sections.

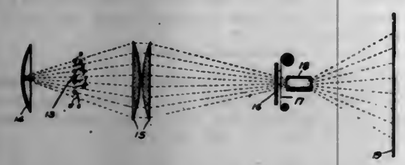
3. The combination in projection apparatus of an incandescent lamp comprising a bulb having a filling of inert gas, a coiled tungsten filament therein made up of a plurality of parallel sections all in the same plane, the area in that plane between adjacent sections being substantially equal to the effective light emitting area of a single section in a direction normal to the plane of the filament and a spherical reflector having its center of curvature in the same plane as the lamp filament whereby images of the filament sections will be reflected to and fill the spaces between the filament sections.

4. The combination in projection apparatus of an incandescent lamp for having a coiled filament made up of a plurality of parallel sections all in the same plane and spaced from each other a distance approximately equal to the diameter of the coils, and a reflector so related thereto that images of the filament sections are reflected in such a way as to fill the spaces between the filament sections.

5. The combination in projection apparatus of an incandescent lamp having a filament made up of a plurality of parallel sections all in the same plane, the area in that plane between adjacent sections being substantially equal to the effective light emitting area of a single section in a direction normal to the plane of the filament and a reflector so related thereto that images of the filament sections are reflected in such a way as to fill the spaces between the filament sections.

[Claims 6 and 7 not printed in the Gazette.]

1,213,975. PROJECTION APPARATUS. JOHN B. TAYLOR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed June 23, 1915, Serial No. 35,768. Divided and this application filed Feb. 17, 1916. Serial No. 79,001. (Cl. 176—16.)



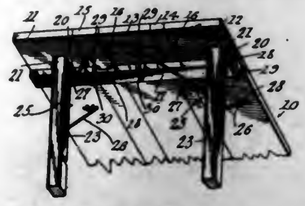
1. An incandescent lamp for projection purposes having a coiled filament made up of a plurality of parallel sections all in the same plane and spaced from each other a distance approximately equal to the diameter of the coils.

2. An incandescent lamp for projection purposes having a filament made up of a plurality of parallel sections all in the same plane, the area in that plane between adjacent sections being substantially equal to the effective light emitting area of a single section in a direction normal to the plane of the filament.

3. An incandescent lamp for projection purposes comprising a bulb having a filling of inert gas, a tungsten filament therein made up of a plurality of parallel sections all in the same plane, the area in that plane between adjacent sections being substantially equal to the effective light emitting area of a single section in a direction normal to the plane of the filament.

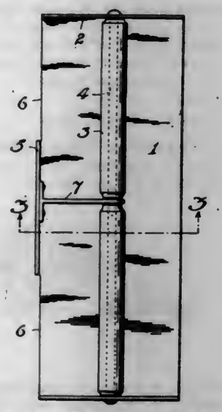
1,213,976. FOLDING TABLE. OSCAR S. TENLEY, Dunbar, Wis. Filed Jan. 26, 1916. Serial No. 74,358. (Cl. 45—116.)

1. A folding table, including a top composed of a plurality of hingedly connected leaves, two braces, one pivotally connected to the under side of each outer leaf, one being pivoted nearer the outer edge than the other and both being mounted for movement parallel to and at right angles to its carrying leaf and for passage beneath the other brace carrying leaf when the top is extended, means for holding the braces extended, two pairs of legs hingedly connected, one pair to each outer leaf, one leg of each pair being within the pivotal point of its brace and all legs nearer the respective ends of the outer leaves than the braces, whereby the braces when extended limit the folding movement of the legs but permit the folding of the legs upon and parallel to the longitudinal edges of the carrying leaves when the top is folded, and means for locking the legs extended.



2. A folding table, including a top composed of five leaves hingedly connected together, whereby when folded the middle leaf and one of the outer leaves will be parallel and form the exterior members, while the other outer leaf will be in parallel but incased, the other leaves being in parallel to each other and forming outer members at the opposite sides of the table to the middle and outer leaves, two braces, one pivotally connected to each outer leaf for movement in parallel and at right angles thereto, each of said braces being sufficiently long to extend beneath both outer leaves when the top is extended, and four legs, two legs being hingedly connected to each outer leaf beyond the braces, whereby the braces can be collapsed and extended when the legs are extended, but are prevented from extension when the legs are folded upon the carrying leaves.

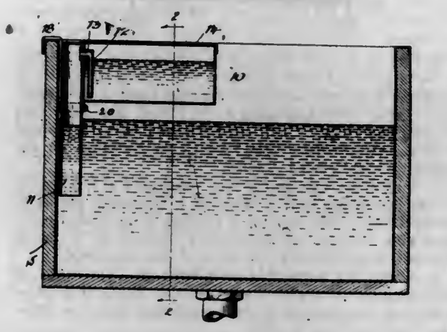
1,213,977. WALL-PAPER PROTECTOR. WILLIAM S. THOMPSON, Sinking Spring, Pa. Filed June 13, 1916. Serial No. 103,381. (Cl. 91—65.)



1. A device of the character described, comprising a flat plate of metal, rectangular in outline and having its smaller ends bent up at right angles to the base, a rod mounted longitudinally of the plate and between the upset ends; an upset guard portion on one of the longitudinal edges of the plate and formed integrally therewith, whereby open spaces are formed between the ends of said guard and the up-set ends of the plate; a brace attached to said guard and to the said rod, and handle members on said rod, separated from each other by the end of said brace.

2. In a device of the character described, a flat metal plate of rectangular outline having its shorter ends upset at right angles to the base; an upset guard portion on one of its longitudinal edges midway of its length, a handle mounted between the up-set ends and a brace engaging the guard portion at one of its ends and having its opposite end in engagement with said handle.

1,213,978. DISINFECTING DEVICE FOR FLUSH-TANKS. CHARLES W. THORNTON, Chicago, Ill., assignor, by mesne assignments, of one-half to Standardized Products Company, a Corporation of Illinois, and one-fourth to Ernest C. Ladd and one-fourth to Hubert Howard, Chicago, Ill. Filed Nov. 26, 1915. Serial No. 63,375. (Cl. 4—30.)



1. A device to dispense small dosages of a solution into a body of liquid, comprising a receptacle for the solution which is open to the atmosphere, a pipe leading downwardly therefrom and extending above the level of the solution in the receptacle and a dispensing tube within said receptacle, said tube extending upwardly from a point near the bottom of the receptacle and discharging at its upper end into the upper end of said pipe and made of a diameter considerably smaller than that of the pipe.

2. A device to dispense small dosages of a solution into a body of liquid, comprising a receptacle for the solution which is open to the atmosphere, a pipe leading downwardly therefrom and extending above the level of the solution in the receptacle and a dispensing tube within said receptacle, said tube extending upwardly from a point near the bottom of the receptacle and discharging at its upper end into the upper end of said pipe and made of a diameter considerably smaller than that of the pipe, a supporting bracket for said device and means whereby the pipe may be vertically adjusted relatively to said bracket.

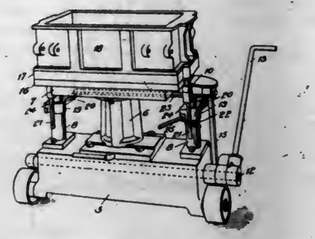
3. The combination with a tank to contain a body of liquid and a receptacle to contain a solution and open to atmospheric pressure, of a pipe communicating with the top of said receptacle and adapted to dip into said body of liquid, and a dispensing tube of considerably smaller diameter than the pipe within the receptacle, said tube extending upwardly from a point near the bottom of the receptacle and discharging at its upper end into the upper end of the pipe.

1,213,979. SAND-MOLDING APPARATUS. HENRY TECHERNING, Freeport, Ill. Filed Aug. 23, 1916. Serial No. 116,426. (Cl. 22—50.)

1. In apparatus of the class described, the combination of a pattern plate, a stripper plate primarily superposed thereon, and a flask primarily resting upon the stripper plate, of means for raising and lowering the stripper plate, and means for independently supporting the flask when it has been raised with the stripper plate.

2. The combination with a sand jarring table, of a pattern plate resting thereon, a stripping plate normally superposed upon the pattern plate, a flask normally resting upon the stripping plate, means for raising the stripping plate and the flask together, and automatic means for preventing the descent of the flask when the stripping plate is again lowered.

3. In apparatus of the class described, the combination with a suitable table, of a pattern plate resting thereon, a stripper plate normally resting upon the pattern plate and itself supporting a flask, means for lifting the opposite ends of the stripper plate equally and returning it to initial position, means for automatically holding the flask against descending with the stripper plate, and devices for at will throwing the last named means out of action.

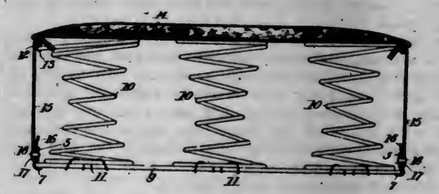


4. The combination with a sand jarring device and a stripper plate normally supported thereby, of cranks adapted to lift equally the ends of the stripper plate, respectively, means for actuating the cranks together, transmitting the motion of the cranks to raise the stripper plate, longitudinally movable vertical rods for supporting a flask in raised position, blocks movable into and out of the paths of the lower ends of said rods, respectively, springs urging the blocks into said paths, and manual means for moving the blocks out of said paths.

5. The combination with sand jarring apparatus, of a pattern plate supported thereby, a stripper plate and superposed flask normally supported upon the pattern plate, manually operable connecting cranks, means whereby the cranks when properly actuated lift equally opposite ends of the stripper plate and flask, vertically movable flask supporting rods, and spring actuated devices arranged to pass automatically, under the rods as soon as the latter are raised to a predetermined height, to support the flask independently of the stripper plate.

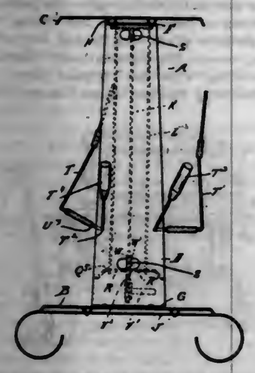
[Claim 6 not printed in the Gazette.]

1,213,980. SPRING STRUCTURE. JOHN G. VENN, Jackson, Mich., assignor to Jackson Cushion Spring Company, Jackson, Mich. Filed Dec. 8, 1915. Serial No. 65,809. (Cl. 155—25.)



A spring structure comprising a base frame composed of a strip of material including an upstanding flange provided with relatively small, spaced apertures, springs mounted on the frame, an upholstered covering including a seat portion and a skirt, the skirt having its lower edge folded inwardly and seamed adjacent the lower edges of the skirt and its folded portion, and separate headed fastenings passed through the folded portion of the skirt immediately above the seam and inwardly through said apertures and upset against the inner face of the upstanding flange of the base strip, the inner faces of the heads of the fastenings binding the skirt against the upstanding flange of the base strip.

1,213,981. TOASTER. FREDERICK A. VOLLBRECHT, Detroit, Mich., assignor to Industrial Electric Mfg. Company, Detroit, Mich., a Corporation of Michigan. Filed June 19, 1916. Serial No. 104,886. (Cl. 219—19.)



1. The combination with a frame having end up-rights, of an electrical resistance unit having angle shaped members at its upper and lower ends, and securing lugs extending inwardly from said up-rights and engaging said angle shaped members.

2. The combination with a frame having spaced walls, of a flat electrical resistance unit positioned between said walls and provided with a transverse flange, and means for holding said unit in fixed relation to said frame comprising lugs struck inwardly from said spaced walls and extending adjacent the transverse flange and into locking engagement with edge portions of the resistance unit.

3. The combination with a frame having end up-rights, of an electrical resistance unit having reversely positioned angle bars at its upper and lower ends, and means for holding said unit in fixed position in said frame comprising lugs extending inwardly from the up-rights and engaging the vertical flanges of said angle bars and positioned adjacent the horizontal flanges thereof.

4. The combination with a frame having end up-rights, of an electrical resistance unit comprising a pair of flat insulator members, a resistance wire wound on the outside of said insulator members, reinforcement members positioned inside of the insulator members, a pair of angle bars having depending vertical flanges secured upon opposite sides of said insulator member, and lugs extending inwardly from the end uprights and clamped against said vertical flanges, just beneath the horizontal flanges of the angle bars.

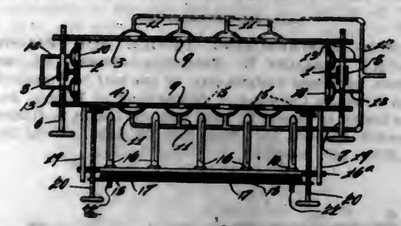
5. The combination with a frame having spaced walls, of a combined electrical resistance unit and grid member comprising a wound electrical resistance unit having at its upper and lower ends reversely positioned pairs of angle bars, secured thereto, grid bars extending through the other flanges of said angle bars, and means engaging said angle bars for holding said resistance and grid unit in position in said frame.

[Claim 6 not printed in the Gazette.]

1,213,982. APPARATUS FOR TREATING BUILDING AND ROAD MATERIAL. GEORG M. VON HASSEL, New York, N. Y. Filed Oct. 12, 1912. Serial No. 725,544. (Cl. 25—157.)

1. A mold consisting of a plurality of movable walls, provided with openings, movable coring devices detachably secured to said mold, means to move said coring devices through said openings and into said mold, a frame adapted for attachment to said mold after said coring devices have been removed, and burners carried by said frame adapted to pass through the openings in the walls of said mold.

2. A mold for clay or the like, consisting of a plurality of walls provided with a plurality of openings, means to introduce heat into said mold through some of said openings, and coring devices adapted to be forced into said mold through the other of said openings.



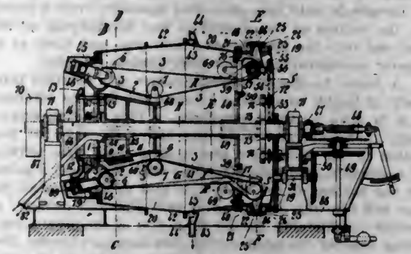
3. A mold for clay or the like, consisting of a plurality of walls provided with a plurality of openings, means to introduce heat into said mold through some of said openings, coring devices adapted to be forced into said mold through the other of said openings, and burners adapted to be forced into said mold through the openings for the passage of said coring devices.

4. A mold for clay or the like, consisting of a plurality of walls provided with a plurality of openings, means to introduce heat into said mold through some of said openings, and rotatable coring devices adapted to be forced into said mold through the other of said openings.

5. A molding apparatus, consisting of a plurality of walls adapted to retain clay or the like, means to produce pockets in the material in said mold, and means to introduce heat into said pockets.

[Claims 6 to 9 not printed in the Gazette.]

1,213,983. CENTRIFUGAL DRIER. KARL WÄRD and ALBERT WÄRD, Stockholm, Sweden. Filed Apr. 30, 1914. Serial No. 835,392. (Cl. 233—7.)



1. In a centrifugal drier, the combination with a rotary member, of a conveyer for the material to be dried carried by the said rotary member and mounted for independent movement in a direction substantially longitudinal with respect to the axis of the latter, the conveyer being disposed so that its innermost surfaces increase in inclination with respect to the perpendicular to the line of centrifugal force from one effective end of the conveyer to the other.

2. In a centrifugal drier, the combination with a rotary member, of a conveyer for the material to be dried carried by the said rotary member and mounted for independent movement in a direction substantially longitudinal with respect to the axis of the latter, the conveyer being disposed so that its innermost surfaces increase in inclination with respect to the perpendicular to the line of centrifugal force from one effective end of the conveyer to the other, means for supplying material to be dried to that end of the conveyer having the least inclination, and means for separately collecting the solid and liquid products as they are cast off from the conveyer.

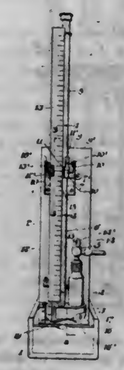
3. In a centrifugal drier, the combination with a rotary member, of a conveyer for the material to be dried carried by the said rotary member and consisting of an endless belt mounted for independent movement in a direction substantially longitudinal with respect to the axis of the said member, the said belt being disposed so that its innermost surfaces increase in lateral inclination with respect to the perpendicular to the line of centrifugal force from one effective end of the conveyer to the other.

4. In a centrifugal drier, the combination with a rotary member, of a conveyer for the material to be dried carried by the said rotary member and mounted for independent movement in a direction substantially longitudinal with respect to the axis of the latter, the conveyer being disposed so that its innermost surfaces increase in inclination with respect to the perpendicular to the line of centrifugal force from one effective end of the conveyer to the other, and means by which the angle of inclination of the conveyer may be adjusted.

5. In a centrifugal drier, the combination with a rotary member, of a conveyer for the material to be dried carried by the said rotary member and consisting of an endless belt mounted for independent movement in a direction substantially longitudinal with respect to the axis of the said member, the innermost stretch of the belt being maintained offset so that its flexion point is situated nearer to the axis of the rotary member than the effective ends of the conveyer, the belt being disposed so that that portion of its innermost stretch situated in advance of the flexion point has a definite lateral inclination with respect to the perpendicular to the line of centrifugal force, the other portion of the inner belt stretch being disposed so that its innermost surfaces increase in inclination with respect to the perpendicular to the line of centrifugal force from the flexion point to the opposite end of the conveyer.

[Claims 6 to 16 not printed in the Gazette.]

1,213,984. SPHYGMOMANOMETER. CARL R. WASER, Philadelphia, Pa., assignor to Precision Thermometer & Instrument Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 27, 1915. Serial No. 42,123. (Cl. 73—44.)



1. In an instrument of the character described, a plurality of tube sections, hinged devices with which said sections are respectively connected, and means for moving one of said tube sections relatively to the device with which it is connected so as to maintain a tight joint between said tube sections.

2. In an instrument of the character described, a plurality of tube sections, hinged clips connecting said sections, a spring for pressing one of the alined sections longitudinally toward the other, and means for holding the other of said sections against the action of said spring.

3. In an instrument of the character described, liquid supply means and a tube section connected in communicating relation, a supporting device to which said means and section are connected in movable relation, a second tube section hinged relative to said section first named, and means comprising a spring acting against said means and section first named for maintaining a tight joint between said sections.

4. In an instrument of the character described, liquid supply means and a tube section connected therewith, a supporting device to which said means and section are connected in movable relation, means comprising a second tube section hinged relatively to said supporting device so as to be movable into alinement with said section first named and exert pressure against the same, and resilient means for supporting said supply means and tube section first named.

5. In an instrument of the character described, supporting means comprising a clip, a longitudinally movable tube section guided by said clip, a second tube section, and means comprising a spring for maintaining a tight joint between said sections.

[Claims 6 and 7 not printed in the Gazette.]

1,213,985. GARMENT-STAY. JAMES M. WELSH, deceased, Meadville, Pa., by MARY ETTA K. WELSH, administratrix, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed July 14, 1914. Serial No. 850,974. (Cl. 2—76.)



1. A garment stay, comprising a flat strip folded at intervals upon itself in zigzag form back and forth from edge to edge of the stay, each fold overlying its preceding fold on the same side of the stay.

2. A garment stay, comprising a flat strip folded at intervals upon itself in zigzag form back and forth across the stay and on the same side thereof, with the folded portions forming substantially straight edges of the stay.

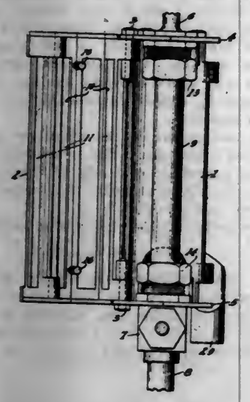
3. A garment stay, comprising a flat strip folded at intervals in zigzag form upon lines diagonal to the length of the strip, to form a succession of overlapping plies extending from edge to edge of the stay, each ply overlapping the preceding ply on the same side of the stay.

4. A garment stay, comprising a flat strip folded at intervals upon itself in zigzag form on lines diagonal to the length of the strip, with the folded portions forming the edges of the stay and slightly overlapping each other longitudinally thereof.

1,213,986. MEANS FOR PROTECTING WATER-GAGE TUBES OF STEAM-BOILERS. WALTER GUSTAV WEBECK, Chicago, Ill. Filed Dec. 8, 1915. Serial No. 65,719. (Cl. 73—54.)

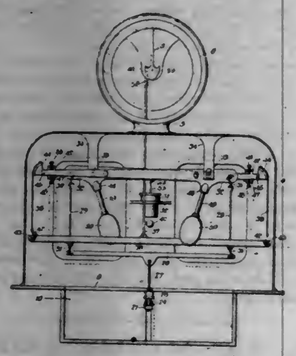
1. The combination with oppositely disposed and interchangeable nipples or valves, of end plates, gage nuts adjustably carried by said nipples or valves, a gage glass connecting said gage nuts and movable with relation thereto, the movement of said gage glass being limited by contact with one or the other of said nipples or valves, an elastic packing encircling said gage glass within said gage nuts and having a positive bearing upon said gage glass as said gage nuts are adjusted, a sectional member comprising stationary and movable elements connecting said end plates, means connecting the sections of said sectional member for releasably retaining them in closed relation, an exhaust port for one of said sections and stop bolts carried by the other section for engagement

with said gage nuts whereby displacement of the same is prevented.



2. The combination with oppositely disposed nipples, of end plates, gage nuts adjustably carried by said nipples, a gage glass connecting said gage nuts, a sectional member comprising stationary and movable elements connecting said end plates, means connecting the sections of said sectional member for releasably retaining them in closed relation, an exhaust port for one of said sections and stop bolts carried by the other section for engagement with the said gage nuts whereby displacement of the same is obviated.

1,213,987. WEIGHING-SCALE. LEWIS CALVIN WETZEL, Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Newark, N. J., a Corporation of New Jersey. Filed Mar. 31, 1913. Serial No. 757,995. (Cl. 73—29.)



1. In a weighing scale and in combination with the load receiver and weight indicator thereof, weight offsetting means, consisting of a pair of levers arranged side by side, a pair of pendulums each connected to its respective lever, an equalizer bar connected at its ends to the levers respectively and intermediately to the load receiver, and an equalizer bar connected at its ends to the levers respectively and intermediately to the indicator.

2. In a weighing scale and in combination with the load receiver and weight indicator thereof, weight offsetting means consisting of a pair of levers, a pair of pendulums each rigidly connected to its respective lever, an equalizer bar supported at its ends by the levers respectively and intermediately connected to the load receiver, and connections from the levers respectively to the weight indicator.

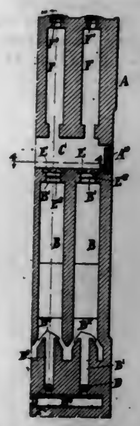
3. In a weighing scale and in combination with the load receiver and weight indicator thereof, weight offsetting means consisting of a pair of levers, a pair of pendulums each rigidly connected to its respective lever, an equalizer bar supported at its ends by the levers respectively and intermediately connected to the load receiver, and an equalizer bar connected at its ends to the levers respectively and intermediately to the indicator.

4. In a weighing scale and in combination with the load receiver and weight indicator thereof, weight offsetting means consisting of a pair of levers of the first order, a pair of pendulums each connected to its respective lever, an equalizer bar, means connecting said bar at its ends with the respective levers, a load receiver connected to the equalizer bar intermediate its ends, and an equalizer bar supported by the levers at its ends and intermediately connected to the indicator.

5. In a weighing scale and in combination with the load receiver and weight indicator thereof, weight offsetting means consisting of a pair of levers, a pair of pendulums each connected to its respective lever, an equalizer bar connected intermediate its ends to the load receiver, a pair of segments pivoted on the respective levers and adjustable about their pivots, a pair of ribbons connected to and bearing upon the respective segments, and an equalizer bar connected to the levers and indicator.

[Claims 6 to 10 not printed in the Gazette.]

1,213,988. COKE-OVEN. LOUIS WILPUTTE, New Rochelle, N. Y. Filed June 19, 1916. Serial No. 104,377. (Cl. 202—9.)



1. A coke oven structure formed with vertical heating flues and a horizontal passage to which the upper ends of said flues open, and in combination therewith members in hinged relation with said structure to swing into and out of a normal position in which they restrict communication between said flues and said passage.

2. A coke oven structure formed with vertical heating flues and a horizontal passage to which the upper ends of said flues open and with a recessed seat at the upper end of each flue, and in combination therewith flue restricting devices in hinged engagement with said structure and adapted to swing into and out of a normal position in which they are received in the corresponding seats.

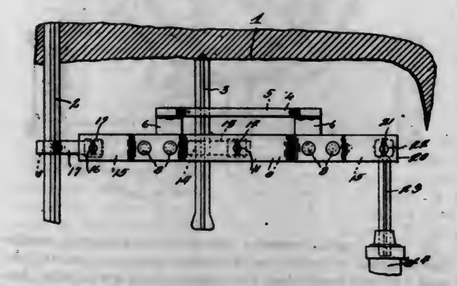
3. A coke oven structure formed with vertical heating flues and a horizontal passage to which the upper ends of said flues open, and in combination therewith a pair of members hinge-connected to said structure adjacent the upper end of each flue and adapted to be swung into and out of position in which they meet edge to edge and project across said flue.

4. A coke oven structure formed with vertical heating flues and a horizontal passage to which the upper ends of said flues open, and in combination therewith a pair of members hinge-connected to said structure adjacent the upper end of each flue and adapted to be swung into and out of position in which they meet edge to edge and project across said flue, each member being formed with a notch in its edge which registers with a corresponding notch in the other when the members extend across the flue to form a part connecting the flue to said passage.

5. A coke oven structure formed with vertical heating flues and a horizontal passage to which the upper ends of said flues open and being also formed with notches or recesses in said passage adjacent the upper ends of said flue, and in combination therewith flow restricting devices formed with pintle portions journaled in said notches to swing into and out of the position in which they extend across the corresponding flues.

[Claim 6 not printed in the Gazette.]

1,213,989. DRILL-EXTRACTOR. WILLIAM W. WILSON, Wonder, Nev. Filed Aug. 31, 1916. Serial No. 117,896. (Cl. 255—36.)



1. In a mine drill extractor, the combination of a support and an extractor body, of a chuck block mounted on the support whereby it will chuck or bind thereon, and on which the drill body is fulcrumed substantially midway the ends of the body, a chuck block pivoted at one end of the drill body and having an opening to receive the mine drill, whereby the second chuck block will intermittently chuck or bind on the drill, and means for imparting rapid successive hammer blows to the opposite ends of the extractor body, whereby the drill may be extracted, said extractor body having an offset plate provided with an elongated slot, the width of which is substantially the width of the support, and through which slot the support extends to guide and reinforce the extractor body.

2. In a mine drill extractor, the combination of a support and an extractor body, of a chuck block mounted on the support whereby it will chuck or bind thereon, and on which the drill body is fulcrumed substantially midway the ends of the body, a chuck block pivoted at one end of the drill body and having an opening to receive the mine drill, whereby the second chuck block will intermittently chuck or bind on the drill, and means for imparting rapid successive hammer blows to the opposite ends of the extractor body, whereby the drill may be extracted, said extractor body comprising a pair of opposing elongated strips, an elongated plate having an elongated slot of a width substantially equally the width of the support transversely and receiving the support, thereby guiding and reinforcing the extractor body, said slotted plate having L-shaped portions at its opposite ends secured between and spacing said strips.

1,213,990. MULTIPLE-DISK RECORD FOR PHONOGRAPHS. NEIL B. WOLCOTT, Washington, D. C. Filed Jan. 31, 1916. Serial No. 75,359. (Cl. 274—1.)

1. A composite disk record for phonographs, comprising a plurality of disk units having sound records on each, said units being secured together and adapted to be collectively placed upon a revolving phonograph table and successively rendered on a sound reproducer.



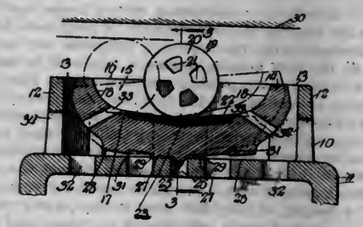
2. A composite disk record for phonographs, comprising a plurality of disk units each of which has a sound record thereon comprising a part of a continuous record of which all of the units comprise the whole, said units being arranged in sequent order and secured together to be collectively placed upon a revolving phonograph table and successively rendered on a sound reproducer.

3. A composite disk for phonographs, comprising a plurality of disk units each of which has a sound record thereon, means for securing the same together in composite form, and means by which the uppermost unit may be successively removed.

4. A composite disk record for phonographs, comprising a plurality of disk units each of which has a portion of a continuous sound record thereon, said units being arranged in sequent order and glued together on their outer edges, an unsecured tab on the outer edge of each by which each may be grasped to be successively removed from the assembled group.

5. A composite disk record for phonographs, comprising a plurality of disk units each of which has a portion of a continuous record thereon, a container having peripheral openings for holding said units in compressed relation whereby they may be sealed together on their outer edges.

1,213,991. ANTIFRICTION-BEARING. EDWIN S. WOODS, Chicago, Ill.; Albert G. Welch, executor of said Edwin S. Woods, deceased, assignor to Albert G. Welch, trustee. Filed Apr. 12, 1913. Serial No. 760,632. (Cl. 64—64.)



1. An antifriction bearing comprising a rocker having a top bearing surface, a support for said rocker and an antifriction element carried by said rocker having a peripheral rolling bearing on said top bearing surface, said rocker having upwardly turned ends which limit the movement of said antifriction element, said upturned ends having ventilation apertures, which open into said bearing surfaces and extend through said rocker.

2. An antifriction bearing comprising a rocker having oppositely inclined top bearing surfaces, intersecting in a transverse median line of the rocker, a support for said rocker, and an antifriction element having rolling bearing on said oppositely inclined top bearing surfaces of said rocker, said bearing surfaces terminating at their outer ends in upwardly curved turned stop surfaces, adapted to be engaged by and to stop said antifriction element when at either limit of movement on said bearing surface.

3. An antifriction bearing comprising a rocker provided with a flat bearing surface at its middle and with oppositely inclined bearing surfaces, which terminate at their outer ends in upwardly turned stop surfaces, a support for said rocker, and an antifriction element having peripheral bearing on said bearing surfaces carried by said

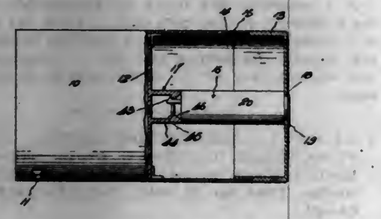
rocker and adapted to engage with and be arrested by said upwardly turned stop surfaces at either limit of its travel on said bearing surfaces.

4. An antifriction bearing comprising a rocker provided with a flat bearing surface on its bottom at the middle, and with inclined bearing surfaces at either end of said first named bearing surface, said rocker being provided on its top surface with oppositely inclined bearing surfaces parallel to the inclined bearing surfaces on the bottom thereof, said oppositely inclined top bearing surfaces being curved upwardly at their outer ends, a support for said rocker, and an antifriction element carried on the top of said rocker.

5. An antifriction bearing comprising a rocker having oppositely inclined bottom bearing surfaces, and an intermediate horizontal bearing surface, said rocker having on its top oppositely inclined bearing surfaces which curve upwardly at their outer ends, said surfaces intersecting in a transverse median line of the said intermediate bottom bearing surface, an antifriction element adapted for a rolling movement on said top bearing surfaces, and a support for said bottom bearing surfaces of said rocker.

[Claims 6 to 13 not printed in the Gazette.]

1,213,992. LOCK. FENTON WRIGHT, Kansas City, Mo. Original application filed Nov. 27, 1915, Serial No. 63,777. Divided and this application filed Feb. 25, 1916. Serial No. 80,415. (Cl. 70—14.)



1. In a lock, the combination with a keeper having an inwardly directed locking shoulder, a plug lock housing in alinement with the keeper, a rotatable key operated plug in the lock housing having a cam slot in one end, and a locking lever pivoted intermediate its length and engaging at one end in the cam slot and formed at its other end with a hook to engage the locking shoulder.

2. A plug lock including a lock casing, a fixed plug in the casing formed with a slot, a lever pivoted intermediate its length in the slot and extending beyond the casing and being formed with a hooked terminal for engagement with a keeper, a rotatable plug in the casing adapted when rotated to cause swinging of the lever, and means normally locking the rotatable plug to the fixed plug and releasable by application of a key to the rotatable plug to permit turning of such plug.

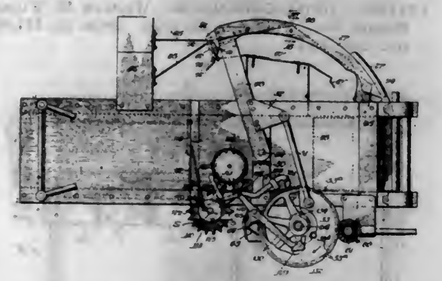
3. A lock including a casing, a fixed plug mounted in the casing, a rotatable plug mounted in the casing and abutting one end of the fixed plug, the abutting ends of the plugs being formed with alined sockets, spring pressed drivers normally seating partially in the sockets of one plug and partially in the sockets of the other, pins seating in the sockets of the rotatable plug and movable when engaged by the wards of a key to force the drivers out of the sockets of the rotatable plug, whereby the latter may be turned, the rotatable plug being formed with a cam slot and the fixed plug with a longitudinal slot, and a locking lever pivoted in the longitudinal slot of the fixed plug and seating in one end of the cam slot of the rotatable plug, whereby turning of the rotatable plug will swing the lever, the free end of the lever extending beyond the casing and terminating in a hook.

4. In a lock, a casing, a lever swingingly mounted in the casing and provided with a hooked terminal projecting beyond one end of the casing, a rotatable plug mounted in the casing and formed with a cam slot seating in the opposite end of the lever, and key controlled means for normally holding the plug against turning movement and for turning the plug to swing the lever upon application of the key.

5. A lock including a casing, a fixed plug in the casing, a rotatable plug in the casing abutting the fixed plug, key releasable means normally locking the plugs together, a swingingly mounted lever in the casing having a hooked locking terminal, and connection between the rotatable plug and lever whereby turning of the rotatable plug will swing the lever.

[Claims 6 and 7 not printed in the Gazette.]

1,213,993. BALING-PRESS. WILLIAM ZACHOW, Racine, Wis., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed Feb. 1, 1915. Serial No. 5,399. (Cl. 100—20.)



1. In a baling press, a transversely swinging needle-bar adapted to carry an extensible wire, mechanism carried by said needle-bar for holding said wire under tension, means for actuating said bar to carry said wire through said press to contact with a bale being formed, means for propelling said bale so that said wire will become encircled thereabout, and means for tying the meeting portions of said wire when the formation of said bale has been completed.

2. In a baling press, a transversely swinging needle-bar adapted to carry an extensible wire, mechanism carried by said needle-bar for holding said wire under tension, means for actuating said bar to carry said wire through said press to contact with a bale being formed, means for propelling said bale so that said wire will become encircled thereabout, means for tying the meeting portions of said wire when the formation of said bale has been completed, and means for cutting said wire and holding the end thereof so that said wire will be in position to be actuated by a succeeding bale under process of formation.

3. In a baling press, the combination of a driving shaft, a cam mounted thereon, a knife-controlling shaft communicating with said cam, a hook-controlling shaft communicating with said cam, a wire catching hook on said shaft, and means for driving said driving shaft to operate said cam and actuate said knife and hook controlling shafts.

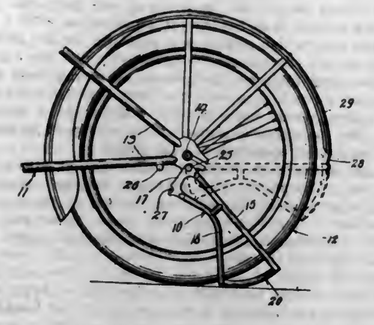
4. In a baling press, the combination of a driving shaft, a cam mounted thereon, a knife-controlling shaft communicating with said cam, wire cutting knives supported on said shaft, and means for driving said driving shaft whereby said knife-controlling shaft will be actuated to carry said knives in reverse directions in relation to a wire to be cut.

5. In a baling press, the combination of a driving shaft, a cam-shaft communicating with said drive shaft, a cam mounted on said cam-shaft, a knife-controlling shaft communicating with and actuated by said cam to operate a wire-cutting knife supported on said shaft, a hook-controlling rod communicating with said cam, a wire-hooking rod connected to said shaft, a twister-controlling shaft adjacent said mechanisms and communicating with said cam-shaft, a wire twister mounted on said twister shaft,

and means for rotating said drive shaft to drive said cam-shaft and cause said cam to actuate said knife, hook and twister controlling shafts.

[Claims 6 to 28 not printed in the Gazette.]

1,213,994. MOTOR-CYCLE STAND. ADOLPH ANDERSON, Chicago, Ill., assignor to Aurora Automatic Machinery Company, Chicago, Ill., a Corporation of Delaware. Filed Jan. 27, 1916. Serial No. 74,523. (Cl. 208—75.)



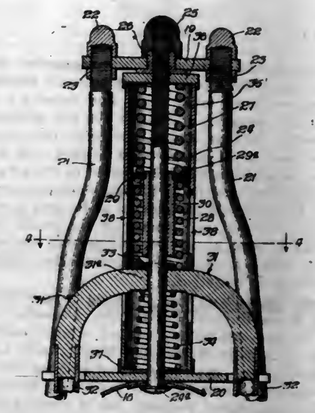
1. A supporting stand for vehicles, comprising connected together side frame members, each frame member consisting of longitudinal members spaced apart at their ends and joined together intermediate their ends by a transverse brace member, an end plate joining the inner ends of said longitudinal members and adapted to have pivotal connection with the vehicle frame, and a curvilinear track member connecting the outer ends of said longitudinal members, and arranged in eccentric relation to the point of pivotal connection of the stand and vehicle frame.

2. A supporting stand, comprising connected together side frame members adapted to be pivotally mounted on a vehicle frame, each consisting of longitudinal members spaced apart at their ends, a curvilinear track member connecting the outer ends of said longitudinal members and disposed in eccentric relation to the point of pivotal connection of the stand and vehicle frame, and a transverse member connecting the inner ends of said longitudinal members and adapted to engage the vehicle frame to retain said stand in supporting position.

3. A supporting stand for vehicles, comprising connected together side frame members, each comprising longitudinally extending members spaced apart at their ends and joined together at their central portions by a short transverse brace member, an end plate connecting the inner ends of said longitudinal members and adapted to have pivotal connection with the vehicle frame, a curvilinear track member connecting the outer ends of said longitudinal members and arranged in eccentric relation to the pivotal point of the stand and adapted to roll in contact with the ground to elevate the vehicle, and a stop member on said vehicle frame adapted to engage said end plate to retain said stand in supporting position.

4. A supporting stand for vehicles, comprising side frame members, each embracing longitudinally extending tubular members, one of said tubular members being straight, the other being substantially curvilinear and having its ends spaced from the ends of said straight tubular member, a short bracing member connecting the central portions of said tubular members, a transverse bar connecting the outer ends of said straight longitudinal members, an end plate connecting the inner ends of said longitudinal members and adapted to be pivotally connected to the vehicle frame, a curvilinear track member extending between the outer ends of said tubular members and arranged in eccentric relation to the pivotal point of the stand and adapted to roll in contact with the ground to elevate the vehicle, and coacting stop members on the vehicle frame and said end plate adapted to retain said stand in supporting position with said straight tubular members substantially vertical.

1,213,995. SPRING-FORK FOR MOTOR-CYCLES. ADOLPH ANDERSON, Chicago, Ill., assignor to Aurora Automatic Machinery Company, Chicago, Ill., a Corporation of Delaware. Filed Mar. 29, 1916. Serial No. 87,384. (Cl. 208—97.)



1. In a vehicle frame, the combination of a fork member, a wheel connected to the lower end of said fork member, shock absorbing means operatively connected to said wheel and embracing a plurality of springs varying in tension and arranged to absorb the shocks delivered in one direction, and means for limiting the action of one of said springs.

2. In a vehicle frame, the combination of a fork member, a wheel movably connected to said fork member, yieldable shock absorbing means connected to the axle of said wheel and embracing a plurality of springs arranged to oppose the bodily movement of said wheel in one direction, said springs varying in tension, and means for limiting the action of the lighter of said springs.

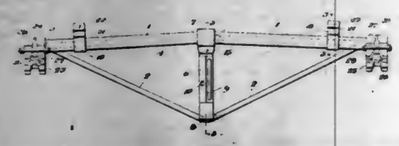
3. In a vehicle frame, the combination of a fork member, a wheel rockingly connected to said fork member, a plurality of springs mounted on said frame and acting to oppose the bodily movement of said wheel in one direction, one of said springs being relatively light and acting to absorb the correspondingly light shocks delivered to said wheel, and means acting to limit the action of said lighter spring and to transfer to said heavier spring the shocks exceeding the capacity of said lighter spring.

4. In a vehicle frame, the combination of a fork member, a wheel rockingly connected to said fork member, relatively light and heavy springs mounted on said frame and coöperating to oppose the bodily movement of said wheel in one direction, means connecting the lighter spring to the axle of said wheel, and non-yieldable means connected with said heavier spring and acting to replace said lighter spring and to transfer the movements of said wheel exceeding the capacity of said lighter spring, to said heavier spring.

5. In a vehicle frame, the combination of a fork member, a wheel connected to said fork member and movable bodily with respect thereto, relatively light and heavy springs mounted on said frame and acting to oppose the bodily movement of said wheel in one direction, a compression member connecting said wheel and the lighter spring, and means connected with said heavier spring and adapted to engage said compression member, to permit the said heavier spring to oppose the movements of said wheel exceeding the capacity of said lighter spring.

[Claims 6 to 16 not printed in the Gazette.]

1,213,996. BRAKE-BEAM. EUGENE M. APPLEBAUGH and GEORGE M. KELLER, Danville, Pa., assignors to Pennsylvania Brake Beam Company, Danville, Pa., a Corporation of Pennsylvania. Filed Apr. 28, 1916. Serial No. 94,099. (Cl. 188—22.)



1. A brake beam, comprising a compression member having its intermediate portion bent laterally forming the tension member of the brake beam, and forming a slot in the compression member, a strut at one end engaging the tension member, and at its other reduced end projecting through the slot of the compression member, and a clamp around the compression member secured to the strut.

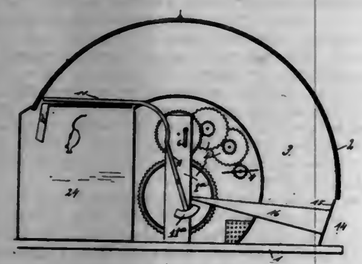
2. A brake beam comprising a flanged compression member having the intermediate portion of its web bent laterally forming the tension member of the brake beam, a strut having a head at one end projecting through the compression member, and a strap around the compression member secured to the strut.

3. A brake beam comprising a flanged compression member having a longitudinal slot therein, a tension member integral with the compression member, a strut constructed at one end to engage the tension member and having a head at its other end, said head fitting between the flanges of the compression member and projecting through the slot in the compression member, and a strap positioned around the compression member having its intermediate portion bearing against the said head, and its ends engaging the said head and secured to the strut.

4. A brake beam comprising a slotted compression member, a tension member integral with the compression member, a strut spacing the members apart and having a head thereon projecting through the slot of the compression member, and auxiliary hangers secured around the compression member and having enlargements thereon projecting through the slot of the compression member.

5. A brake beam having a longitudinal slot in its compression member, a strut having a head thereon bearing against the compression member and projecting through the slot therein, a strap clamped around the compression member and secured at its ends to the strut, auxiliary hangers clamped around the compression member and enlargements on the intermediate portions of the hangers projecting through the slot in the compression member.

1,213,997. ANIMAL-TRAP. MIGUEL DE MARIA ARRIOJA, New York, N. Y. Filed Jan. 15, 1916. Serial No. 72,192. (Cl. 43—24.)



1. An animal trap having the combination with a motor, and a receptacle, of a platform for the animal, means to set said motor in operation actuated by said platform upon the animal reaching thereto, means to maintain said motor in operation for an interval, and means to elevate said platform toward said tank from a lower position to a position above said tank and to return it to initial position by the operation of said motor.

2. An animal trap having the combination with a motor, and a receptacle, of a platform for the animal, a casing surrounding said platform, means to set said motor in operation upon the animal reaching said platform, said casing having an opening for the animal to reach said platform, means to move said platform in a motion of translation toward said tank from a lower position to a position above said tank and to return it to initial position by the operation of said motor, and means to close said opening during the operation of said platform.

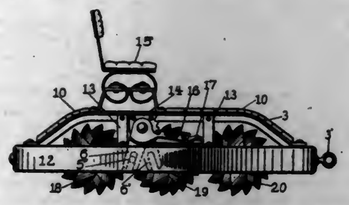
3. An animal trap having the combination with a motor, and destruction means, of a platform for the animal, means to set said motor in operation upon the animal reaching said platform, and means to elevate said platform and move it in a motion of translation toward said destruction means from a lower position to a position above the destruction means and to return it to initial position by the operation of said motor.

4. An animal trap having the combination with a motor, and a receptacle, of a platform for the animal, a casing surrounding said platform having an opening for the animal to reach said platform, means to set said motor in operation actuated by said platform upon the animal reaching thereto, a door carried by said means for setting the motor in operation, means to move said platform toward said tank and to return it to initial position by the operation of said motor, and said means for setting the motor in operation causing said door to close at the commencement of operation of said platform and to open at the termination of operation of the platform.

5. An animal trap having the combination with a motor, and a receptacle, of a platform for the animal, a casing surrounding said platform having an opening for the animal to reach said platform, means to set said motor in operation actuated by said platform upon the animal reaching thereto, a door for said opening, means to move said platform toward said tank and to return it to initial position by the operation of said motor, and said means for setting the motor in operation causing said door to close at the commencement of operation of said platform and to open at the termination of operation of the platform.

[Claim 6 not printed in the Gazette.]

1,213,998. HARROW. JOSEF ANDERS BACKLUND, Brooklyn, N. Y. Filed Oct. 4, 1916. Serial No. 123,733. (Cl. 55—11.)



1. A harrow comprising a frame, a plurality of shafts bearing earth engaging blades mounted in bearings slidably supported within said frame, and means for adjusting the bearings on either side of said frame in opposite directions and retaining said bearings in different positions in relation to the frame while maintaining said shafts parallel in all positions.

2. A harrow comprising a frame, a plurality of rotor shafts fitted in bearings which are secured to oppositely situated strips slidably supported in said frame, and a lever for shifting said strips linearly in opposite directions and locking them in any attained position.

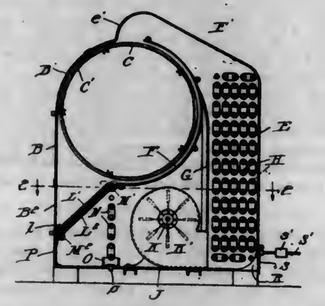
3. A harrow comprising a frame having a pair of opposite sides interiorly channeled, a strip lying in each channel, and a plurality of facing and correspondent bearings pivotally secured to said strips to permit the strips to slide in their respective channels, said strips being retained in the channels by rotor shafts inserted in said bearings, and a lever attached to one strip whereby both strips may be slid into and retained in any position in the channels, substantially as described.

4. A harrow comprising an interiorly channeled frame, a pair of slidable strips located in opposite channels, corresponding swivel bearings on the inner exposed surfaces of said strips, and a plurality of rotor shafts extending from the bearings in one strip into the corresponding bearings on the other strip the movement of one strip causing a compensating movement of the other in the opposite direction.

5. A harrow comprising an interiorly channeled frame having strips provided with bearings in opposite channels, and shafts provided with earth engaging blades connecting the bearings on one of said strips with the bearings on the other strip, a pin on one of said strips and a notched plate secured to said frame, and an adjusting lever pivoted on said toothed plate with releasable means for engaging teeth in said plate, said adjusting lever having a downwardly extending fork straddling aforesaid pin on said strip, providing means for reciprocating and securing said strip in position, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,213,999. DRYING APPARATUS. FRITZ BALZER, Chicago, Ill., assignor to Troy Laundry Machinery Company, Ltd., a Corporation of New York. Filed Apr. 27, 1914. Serial No. 834,795. (Cl. 34—5.)



1. In a drying tumbler, the combination with a casing, of a rotary foraminous cylinder in the casing, a heating chamber, a blower for circulating air through the heating chamber and cylinder, and removable means for eliminating the lint from the air after it passes through the cylinder and before it enters the blower.

2. In a drying tumbler, the combination with a casing, of a rotary foraminous cylinder in said casing, heating coils, a blower for circulating air around the heating coils and through the cylinder, a screen through which the air passes before being drawn through the blower, and means for permitting access to said screen to clean the same.

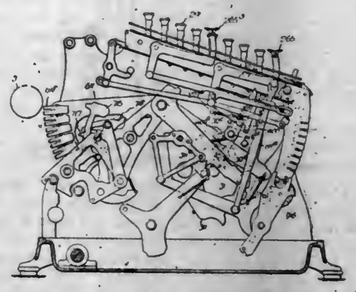
3. In a drying tumbler, the combination with a casing, of a rotary foraminous cylinder in said casing, heating coils, a blower for circulating air around the heating coils and through the cylinder, a removable screen located adjacent one wall of the casing through which the air passes before being drawn through the blower, and a door in said wall of the casing through which said screen may be withdrawn to remove the lint therefrom.

4. In a drying tumbler, the combination with a casing, of a rotary foraminous cylinder located within the upper portion of said casing, a heating chamber in the back portion of said casing and terminating in its upper end adjacent the top of said cylinder, a blower adjacent the bottom of said casing discharging into said heating chamber, a screen adjacent the front of the casing and intermediate of the cylinder and the intake of the blower, and a door in the front wall of said casing through which said screen is removable.

5. In a drying tumbler, the combination with a casing, of a rotary foraminous cylinder in the casing, a heating chamber, a blower for circulating air through the heating chamber and the cylinder, and means for eliminating the moisture from the air passing from the cylinder before it passes to the blower.

[Claims 6 to 14 not printed in the Gazette.]

1,214,000. ADDING AND LISTING MACHINE. EDWARD R. BARRETT, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 6, 1913. Serial No. 740,442. (Cl. 235—58.)



1. In a machine of the character described, the combination with manipulative amount-determining devices, a prime mover, and type carriers adapted normally to partake of one-step movement for setting up ciphers; of settable means for detaining said type carriers out of cipher-setting position, means for effecting successive release of the type carriers by the amount-determining devices; and means for interrupting at will the successive release of said type carriers.

2. In a machine of the character described, the combination with manipulative amount-determining devices, a prime mover, and type carriers adapted normally to partake of one-step movement for setting up ciphers; of pawls collectively settable to detain said type carriers; latches to hold the pawls set, said latches individually displaceable by the amount-determining devices; couplers between the latches; and manipulative coupler-displacing means.

3. In a machine of the character described, the combination with manipulative amount-determining devices, a prime mover, and type carriers adapted normally to partake of one-step movement for setting up ciphers; of normally retracted pawls for detaining said type-carriers; manipulative means for moving said pawls to engaging position; latches to hold said pawls in such position, said latches individually displaceable by the amount-determining devices; couplers between the latches; and manipulative coupler-displacing means.

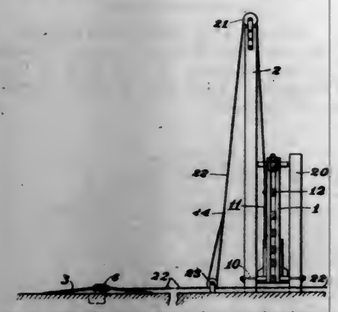
4. In a machine of the character described, the combination with manipulative amount-determining devices, a prime mover, and type carriers adapted normally to partake of one-step movement for setting up ciphers; of normally retracted pawls for detaining said type-carriers; manipulative means for moving said pawls to engaging position; latches normally retracted by said means and adapted upon operation thereof to engage said pawls, said latches individually displaceable by the amount-determining devices; couplers between the latches; and manipulative coupler-displacing means.

5. In a machine of the character described, the combination with manipulative amount-determining devices, a prime mover, and type carriers adapted normally to partake of one-step movement for setting up ciphers; of pawls collectively settable to detain said type carriers; latches to hold the pawls set, said latches individually

displaceable by the amount-determining devices; couplers movably mounted upon the latches and operatively connecting them; and manipulative coupler-displacing means.

[Claims 6 to 24 not printed in the Gazette.]

1,214,001. AUTOMATIC GATE-OPERATING MECHANISM. JOHN P. BEIL, King county, Wash. Filed Sept. 4, 1915. Serial No. 49,050. (Cl. 39—43.)



1. An automatic gate operating mechanism comprising two planks placed at one side of the roadway end to end, a single lever fixedly pivoted at one end upon a horizontal pivot, said lever extending transversely of the length of said planks beneath and supporting the meeting ends thereof between its ends, a bell-crank lever having one end beneath the swinging end of the first-named lever, and means actuatively connecting the other end of the bell-crank lever with the gate.

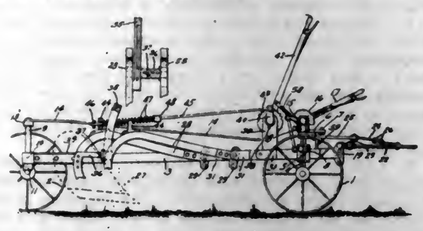
2. An automatic gate-operating mechanism comprising two planks placed at one side of the roadway end to end, a single lever pivoted by one end upon a horizontal pivot, and extending transversely of the length of said planks beneath and supporting the meeting ends thereof between its ends, a spring acting normally to raise said lever, and means actuatively connecting the swinging end of said lever with the gate.

3. An automatic gate opening mechanism, comprising two planks placed at one side of the roadway end to end, a single lever fixedly pivoted by one end upon a horizontal pivot and extending transversely of the length of said planks beneath the meeting ends thereof, a block resting upon said lever between its ends, and supporting the meeting ends of said planks, and means actuatively connecting the swinging end of said lever with the gate.

4. An automatic gate opening mechanism, comprising two planks placed at one side of the roadway end to end, said planks being provided with complemental semi-circular recesses at their meeting ends, a lever pivoted by one end, and extending transversely of the length of said planks beneath the meeting ends thereof, a block resting upon said lever between its ends, and supporting the meeting ends of said planks, a bolt secured in the upper edge of said block and fitting in said semi-circular recesses and means actuatively connecting the swinging ends of said lever with the gate.

1,214,002. GANG-PLOW. JOHN A. BERGREN, Lake Park, Minn., assignor of one-twentieth to August Holmgren, three-twentieths to John H. Moan, three-twentieths to Charles H. Kelson, one-twentieth to Carl T. Strand, and two-twentieths to Alfred F. Youngberg, Lake Park, Minn. Filed June 28, 1915. Serial No. 36,697. (Cl. 97—67.)

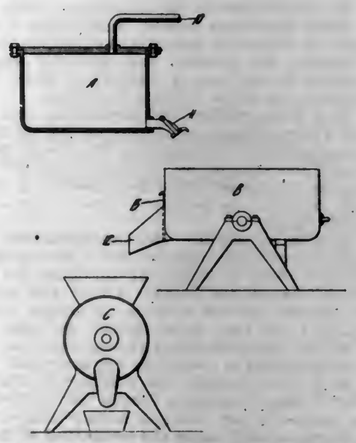
1. In a gang plow, the combination with a plow frame, of a plurality of plows having beams pivotally attached to said frame, guide segments secured to the rear portions of the beams of certain of said plows and extending approximately on the arc of a curve having its center at the pivotal connection between said beam and frame, and horizontal guide arms on certain of the plow beams engaging coöperating guide segments and working vertically therein, thereby holding said plows definitely spaced but free for independent vertical movements.



2. In a gang plow, the combination with a plow frame, of a plurality of plows having beams pivotally attached to said frame, guide segments secured to the rear portions of the beams of certain of said plows and extending approximately on the arc of a curve having its center at the pivotal connection between said beam and frame, and horizontal guide arms on certain of the plow beams engaging coöperating guide segments and working vertically therein, thereby holding said plows definitely spaced but free for independent vertical movements, the rear portions of said plow beams being downwardly curved, and the said guide segments being above and at the rear of the inner edge of the curved rear portion of said plow beam.

3. In a gang plow, the combination with a plow frame, of a plurality of plows having beams pivotally attached to said frame, guide segments secured to the rear portions of the beams of certain of said plows and extending approximately on the arc of a curve having its center at the pivotal connection between said beam and frame, and horizontal guide arms on certain of the plow beams engaging coöperating guide segments and working vertically therein, thereby holding said plows definitely spaced but free for independent vertical movements, the said horizontal guide arms being horizontally adjustable transversely of the plow beams, to vary the spacing between the plows.

1,214,003. PROCESS OF EXTRACTING POTASSIUM FROM MINERALS. HENRY BLUMENBERG, Los Angeles, Cal., assignor to Elliott B. Mapel, trustee, New York, N. Y. Filed Apr. 3, 1916. Serial No. 88,644. (Cl. 23—22.)



1. A process of converting a refractory potassium containing mineral to render the potassium amenable to the treatment with acids, comprising mixing equal parts of powdered sodium nitrate and powdered orthoclase, subjecting the mixture to a temperature of 1200 to 1500 degrees F. in a closed chamber until the liberation of nitric oxids ceases, drawing the fused mass from the closed chamber, cooling and grinding the same and treating the ground material with sulfuric acid, drawing off the solution from the insoluble mass and separating the potassium sulfate from the other sulfates by crystallization.

2. A process of extracting potassium from potassium containing minerals, comprising mixing equal parts of powdered sodium nitrate and powdered feldspar, subjecting the mixture to a temperature of 1200 to 1500 degrees F. in a closed chamber until the liberation of nitric oxids ceases, cooling and grinding the fused mass and treating the ground material with a mineral acid.

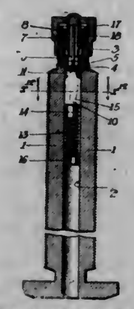
3. In a process of extracting potassium from potassium containing minerals comprising mixing equal parts of a nitrate of an alkali metal or alkaline earth metal and powdered feldspar, heating the mixture in a closed chamber until the liberation of nitric oxids ceases, cooling and grinding the fused mass and subjecting the ground material to the action of a mineral acid, separating the liquid from the insoluble parts and separating the potassium salt from the other salts by crystallization.

4. A process of extracting potassium from potassium containing minerals, comprising mixing a powdered nitrate of an alkali metal or alkaline earth metal and powdered feldspar, subjecting the mixture to a temperature sufficient to drive off the nitric oxids and to fuse the mass in a closed chamber, cooling and grinding the fused mass, treating the ground material with sulfuric acid, separating the liquid from the insoluble parts and separating the potassium salt from the other salts by crystallization.

5. A process of rendering potassium in a refractory potassium containing mineral available as a commercial fertilizer, comprising mixing equal parts of a powdered nitrate of an alkali metal or an alkaline earth metal and powdered feldspar, heating the mixture in a closed chamber until the liberation of nitric oxids ceases, cooling and grinding the fused mass and treating the same with a mineral acid.

[Claims 6 to 9 not printed in the Gazette.]

1,214,004. TIRE-VALVE. JUNIUS A. BOWDEN, Los Angeles, Cal., assignor to A. Schrader's Son, Incorporated, New York, N. Y., a Corporation of New York. Filed Feb. 19, 1913. Serial No. 749,548. (Cl. 152—12.)



1. In a tire valve, a valve body, a valve seat in said body, said body having an air passage of uniform cross-section leading to the seat, a valve plunger slidable in said air passage toward and from said seat, a spring seat slidably secured by frictional contact in the uniform part of said air passage, and a spring between said seat and plunger.

2. In a tire valve, a valve body with an air passage having an enlarged outer bore, thereby forming an annular shoulder, a seat of yielding material resting against said shoulder, a seat retainer comprising a sleeve removably secured in the outer end of the valve body, and a seat of harder material than said yielding seat between the yielding seat and sleeve, and a valve plunger in the air passage movable against said yielding seat, said valve plunger having a pin at one end, said pin extending to the outer end of said valve body, and means below said pin adapted to guide said plunger.

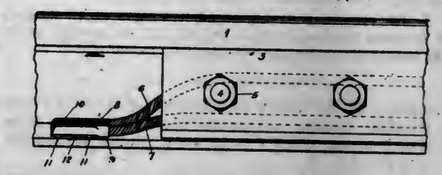
3. In a tire valve, a valve body with an air passage having an enlarged outer bore thereby forming a shoulder, a perforated seat of yielding material resting against said shoulder, a sleeve removably secured in the enlarged bore, a washer between the sleeve and yielding seat, and a valve plunger in the air passage movable against the inner face of the yielding seat, said plunger below said seat having guiding means slidably fitting the wall of the air passage, and a pin secured to said plunger, said pin extending to the outer end of said valve body.

4. In a tire valve, a valve body with an air passage and having an enlarged outer bore with a shoulder, a rubber seat on said shoulder, a seat composed of hard yielding material on the rubber seat, a sleeve screwed in the enlarged portion holding said material and rubber seats in position, a valve plunger in the air passage movable against the rubber seat, and means having a sliding fit with the wall of the air passage for guiding said plunger below said shoulder.

5. In a tire valve, a valve body with an air passage and having an enlarged outer bore with a shoulder, a rubber seat bearing against said shoulder, a sleeve screwed in the enlarged portion and retaining the seat, a valve plunger in the air passage, said valve plunger having a cupped end forming a thin edge adapted to seat against the rubber seat, said plunger having guide portions below said seat with a sliding fit in the air passage, a spring bearing against one end of the valve plunger to move it toward the rubber seat, and means in the valve body supporting the inner end of the spring.

[Claims 6 to 15 not printed in the Gazette.]

1,214,005. METHOD OF BONDING RAILS AND LIKE CONDUCTORS. JOHN R. BROWN, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed May 11, 1916. Serial No. 96,871. (Cl. 173—278.)



1. The method of electrically connecting or bonding the adjacent ends of rails held by splice plates which consists in passing two or more rail bonds around the adjacent ends of the rails to be bonded and between the rails and the splice plates, and welding the ends of the bonds together and simultaneously to the rails.

2. The method of bonding the adjacent ends of rails held by splice plates consisting in passing one or more rail bonds having elongated terminals between the already installed rails and splice plates and welding the terminals to the rail by adding molten metal forming an integral union with the bond terminal and rail.

3. The method of bonding the adjacent ends of rails held by splice plates consisting in threading around the joint and between the rails and splice plates, two or more rail bonds provided with terminals which will pass between the rails and splice plates without removing same, bringing the terminals adjacent to each other and building up the space there-between by means of molten metal integrally united to the terminals and to the rail forming thereby a bonded joint.

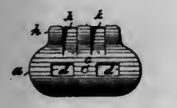
4. An electrical connection consisting of a rail, a plurality of bonds provided with terminals, faces on the terminals, one face on each terminal resting next the rail

surface, one face on each terminal facing each other and metal integrally united to the rail between the terminals and to the face on each terminal facing each other.

5. An electrical connection consisting of a rail, a plurality of bonds each provided with terminals, the terminals at each end placed next the rail and spaced apart and metal united integrally with the terminals and the rail.

[Claims 6 to 9 not printed in the Gazette.]

1,214,006. TICKET-HOLDER FOR CAR-CURTAINS. RUDOLPH L. BROWN, Chicago, Ill., assignor to The National Lock Washer Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 26, 1912. Serial No. 673,531. (Cl. 40—11.)



An integral ticket holder adapted for use with a car curtain having a rod therein, said holder having a portion at one end thereof curved to conform to the rod and provided in said portion with an opening whereby it may be secured to the rod, and a reversely-curved portion at the other end of said holder adapted, in conjunction with the curtain, to form a pocket to hold a ticket.

1,214,007. PROCESS OF DYEING VEGETABLE FIBERS. GEORGE D. BURTON, Boston, Mass. Filed Apr. 22, 1914. Serial No. 833,611. (Cl. 8—5.)

1. The process of dyeing degummed fibers which consists in treating the same with a solution of the natural coloring substance originally contained in the fiber, and a mordant.

2. The process of dyeing degummed fibers which consists in treating the same with a solution of the natural coloring substance originally contained in the fiber, and a mordant, and then with a color-setting agent.

3. The process of dyeing degummed fibers which consists in treating the same with a solution of the natural coloring substance originally contained in the fiber.

1,214,008. TREATMENT OF NATURAL CALCIUM PHOSPHATE. EDGARD CISELET and CAMILLE DEGUIDE, Brussels, Belgium. Filed Feb. 19, 1914. Serial No. 819,774. (Cl. 71—7.)

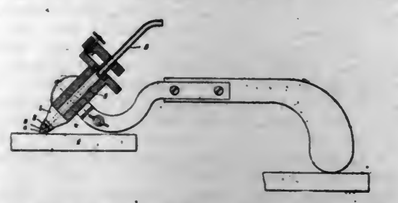
1. In a process for the preparation of assimilable phosphates, dissolving natural phosphate in melted calcium chlorid and eliminating the calcium chlorid by washing.

2. In a process for the preparation of assimilable phosphates, mixing natural phosphate with a concentrated solution of calcium chlorid, drying the mixture thus obtained, melting said mixture by the action of heat, submitting the mass to washing with water, collecting the phosphate and recovering the calcium chlorid carried away by the water.

3. In a process for the preparation of assimilable phosphates, crushing natural phosphate, mixing said phosphate with a concentrated solution of calcium chlorid, drying the mixture, heating said mixture to about 1000° C. cooling the mass thus obtained, crushing said mass, washing the same with water, collecting and drying the phosphate, and recovering the calcium chlorid carried away by the water.

4. In a process for the preparation of assimilable phosphates, crushing natural phosphate, mixing about 100 parts by weight of said phosphate with about 50 parts by weight of calcium chlorid in solution, the coefficient of concentration of which is 50%, heating said mixture to about 1000° C. in a furnace, cooling, crushing and washing with water the mass thus obtained, collecting and drying the phosphate, and recovering the calcium chlorid carried away by the water.

1,214,009. ART OF POLISHING DIAMONDS. CLYDE J. COLEMAN, New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc., a Corporation of New York. Filed July 20, 1912. Serial No. 710,623. (Cl. 51—11.)



1. The combination of a rotary polishing lap, means for holding a diamond in engagement with the lap to polish the diamond, said means comprising a dop and an adhesive body for adhesively attaching the diamond to the dop, and means for abstracting heat from the adhesive, whereby the adhesive will rigidly hold the diamond during the polishing thereof.

2. The combination of a rotary polishing lap, means for holding a diamond in engagement with the lap to polish the diamond, said means comprising a dop and an adhesive body for adhesively attaching the diamond to the dop, and means for locally applying a cooling gas to the adhesive to abstract heat from the adhesive whereby the adhesive will rigidly hold the diamond during the polishing thereof.

3. Means for holding a diamond during abrasive treatment thereof comprising a diamond, a holder therefor, a body of adhesive material interposed between the holder and the diamond and adhesively attaching the diamond to the holder, and a fluid-conveying duct having an opening adjacent to the adhesive body for circulating a cooling fluid during abrasive treatment of the diamond.

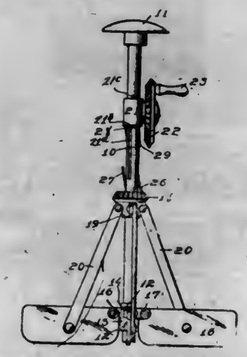
4. Means for holding a diamond during abrasive treatment thereof comprising a dop having a head and a tubular stem, a body of adhesive material adhesively attaching the diamond to the dop head, the dop head having a passage communicating with the interior of the tubular dop stem and terminating adjacent to the body of adhesive material, and a fluid-conveying duct connected to the tubular dop stem, such duct, tubular dop stem and passage constituting means for conveying a cooling fluid to abstract heat developed during abrasive treatment of the diamond.

5. Means for holding a diamond during abrasive treatment thereof comprising a dop having a tapered head and a tubular stem, the tip of the dop head being provided with a cup having a serrated edge and the dop head having therein a plurality of passages communicating with the interior of the tubular dop stem and terminating at the outside of the tapered dop head, an annular deflector surrounding the dop head at the ends of the passages and having an annular opening adjacent to the serrated edge of the cup of the dop head, and a fluid-conveying duct connected to the tubular dop stem, such duct, tubular dop stem, passages and deflector constituting means for conveying a cooling fluid to a diamond and to an adhesive body by means of which the diamond is attached to the cupped tip of the dop head.

1,214,010. COMBINED EGG-BEATER AND POTATO-MASHER. MAY CONNER, Garden Grove, Iowa. Filed Oct. 30, 1916. Serial No. 128,459. (Cl. 259—135.)

1. In a device of the class described, an upright member, a plurality of stirrer blades pivotally and rotatably mounted thereon, a gearing device rotatably and slidably mounted on said upright, links pivoted to said gearing device and to the respective stirrer blades, a sleeve slidably but non-rotatably mounted on said upright, and a gear rotatably mounted on said sleeve and adapted to mesh with said first gearing device.

2. In a device of the class described, an upright member, a plurality of blades pivotally and rotatably mounted on said upright, a gearing device slidably mounted on said upright, links pivoted to said gearing device and to the respective blades, adjustable means for holding said gearing device against sliding upwardly on the upright when the gearing device is in its lowermost position, adjustable means for holding the gearing device against sliding downwardly when said gearing device is in the higher position on the upright, a sleeve on said upright, and a gearing mounted on said sleeve adapted to coact with said first gearing device, for imparting rotation around the upright to said blades.



3. In a device of the class described, an upright member, a plurality of blades pivotally and rotatably mounted on said upright, a gearing device slidably mounted on said upright, links pivoted to said gearing device and to the respective blades, adjustable means for holding said gearing device against sliding upwardly on the upright when the gearing device is in its lowermost position, adjustable means for holding the gearing device against sliding downwardly when said gearing device is in the higher position on the upright, a sleeve on said upright, a gearing mounted on said sleeve adapted to coact with said first gearing device, for imparting rotation around the upright to said blades, said sleeve being slidably but non-rotatably mounted, and adjustable means for holding said sleeve against upward movement when in one position of its sliding movement on the upright, and for holding said sleeve against downward movement when in another position on the upright.

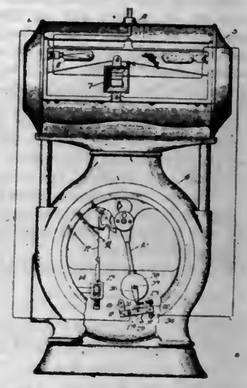
1,214,011. SCALE. SAMUEL G. CRANE, Toledo, Ohio, assignor to Toledo Scale Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 24, 1913. Serial No. 808,566. (Cl. 200—35.)

1. In an automatic weighing and indicating scale having an electric circuit, means for controlling the circuit from a movable element of the scale comprising a switch having a movable contact and means upon a movable member of the scale adapted to move said contact without touching the same.

2. In an automatic weighing and indicating scale having an electric circuit, means for controlling said circuit comprising a switch having a movable contact, magnetic means carried by a movable element of the scale and adapted to affect the movable contact to control its position relative to the stationary contact.

3. In an automatic weighing and indicating scale having an electric circuit, a switch for controlling said circuit comprising a movable contact formed of magnetic material and a magnet secured to a movable part of the scale and adapted to control the position of the movable contact of the switch.

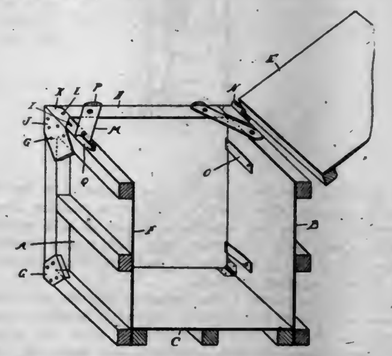
4. In an automatic weighing and indicating scale having an electric circuit, a switch for controlling said circuit comprising a stationary contact and a movable contact, a spring tending to maintain the circuit closed at the switch and a magnet mounted upon a movable part of the scale and normally maintaining the movable contact away from the stationary contact.



5. In a pendulum scale having an electric circuit, a switch having a stationary contact and a movable contact of magnetic material, means tending to maintain the contacts together and a magnet mounted upon the pendulum and maintaining the movable contact away from the stationary contact when the pendulum is in its lower position.

[Claim 6 not printed in the Gazette.]

1,214,012. COLLAPSIBLE BOX. HERBERT H. CUMMER, Cadillac, Mich. Filed Nov. 22, 1915. Serial No. 62,739. (Cl. 217—46.)



1. In a shipping box, a section comprising a wooden frame having mitered side rails with registering saw-kerfs transversely of the ends thereof, a metallic strip extending through said registering kerfs and bent over one side of said rails to form a corner reinforcement, and a metal facing plate upon the opposite sides of said rails closing the space within said frame.

2. In a collapsible shipping box, side and end sections, pivotal links connecting said sections to form diagonal corner braces and adapted to permit the folding of the ends between and into parallelism with the sides, and a bottom section hinged to one of said sides extending between and abutting against said sides and ends and foldable into parallelism with the sides.

3. In a collapsible shipping box, side and end sections, pivotal links connecting said sections, forming diagonal corner braces and permitting of the folding of the ends between and into parallelism with said sides, and a bottom section hinged to one of said sides extending between

and abutting against the sides and ends, and supported by said diagonal corner braces, being foldable into parallelism with the sides.

4. In a collapsible shipping box, side and end sections, pivotal links connecting said sections and forming diagonal corner braces at the bottom and top thereof, a bottom section hinged to one of said sides, extending between and abutting against said sides and ends and supported by the bottom diagonal corner braces, and a top hinged to a side fitting over said top diagonal braces and guided thereby.

5. In a collapsible shipping box, side and end sections, pivotal links connecting said sections, forming diagonal corner braces at the bottom and top thereof and permitting the folding of the ends between and into parallelism with said sides, a bottom section fitting between the sides and ends and supported on said bottom corner braces, a top section, and lugs projecting from said corner braces forming guide stops for said top.

[Claims 6 to 10 not printed in the Gazette.]

1,214,013. DIRECTORY. WILLIAM C. CUTLER, Los Angeles, Cal. Filed Dec. 16, 1915. Serial No. 67,166. (Cl. 40—78.)



1. A series of cards, a dial, means operative by the dial to move any one of the cards to a selective position, means operating to move the selected card out of said selective position away from the other cards, and means operative independently of the first named and last named means to lock the dial against rotation.

2. A series of cards, a dial, means operated by the dial to move any one of the cards to a selective position, lamps, means operating to move the selected card out of said selective position to view position away from the other cards, and means operated by the last mentioned means to effect energization of the lamps when said selected card is in said view position.

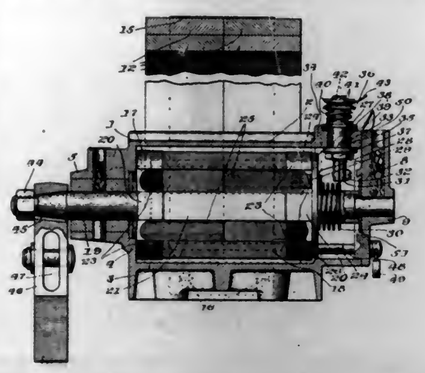
3. A series of cards, a dial, a platform, means operative by rotation of the dial to move any one of the cards to selective position, and means operative by movement of the platform to move the selected card out of selective position to view position and to lock the dial against rotation.

4. A series of cards, a dial, a platform, means operative by rotation of the dial to move any one of the cards to selective position, lamps, and means operative by movement of the platform to move the selected card out of selective position to view position and to simultaneously energize said lamps.

5. A series of cards, a dial, an oscillating plate, means operative by turning of the oscillatory plate to adjust any one of the cards to selective position, a button on the dial, means operative by the person using the device to store up power to move the selected card from selective position to view position, means to retract said card-moving means, means to hold the card-moving means against operation, means operative by movement of the button to release said holding means, means to hold said button in the releasing position, means operative by the power storing means to hold the dial against movement, and means operated by retractive movement of the card-moving means to release the button-holding means.

[Claims 6 to 12 not printed in the Gazette.]

1,214,014. MAGNETO. ROBERT C. DANLY, Chicago, Ill. Filed Apr. 3, 1914. Serial No. 829,235. (Cl. 171—209.)



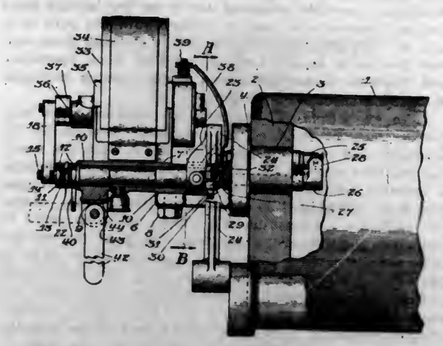
1. A magneto including, in combination, a casing having top and bottom and one end wall comprising a one-piece structure, a second separable end wall, an armature journaled in said end wall, laterally extending vertically disposed ribs at opposite ends of said case, said ribs having swaging elements at their opposite ends, pole pieces disposed upon opposite sides of the axis of said armature, said pole pieces being cast as one piece with said case in a manner to form the side walls thereof and provided with longitudinally disposed interlocking elements along their opposite edges engaging with the top and bottom walls of said case in a manner to rigidly secure said pole pieces in operative relation without other securing means, a field magnet having its pole received between said ribs and engaging with the outside faces of said pole pieces and having said swaging elements closed against the sides of said magnet in a manner to secure it in close contact with said pole pieces.

2. A magneto including, in combination, a case, an oscillatory armature journaled in said case, an insulated binding post carried by said case, a coiled resilient current conductor having its opposite end rigidly connected with said post and armature, respectively, and stop members carried by said armature and adapted to engage with said binding post in a manner to limit an oscillating movement of said armature in opposite directions.

3. In a magneto, a case, an oscillating armature journaled in said case, and including a laminated core piece, rivets securing the laminations in operative relation and extending beyond said core, a binding post carried by said case, said rivets contacting with said post in a manner to limit a rotative movement of said armature.

1,214,015. MAGNETO. ROBERT C. DANLY, Chicago, Ill. Filed June 28, 1915. Serial No. 36,683. (Cl. 123—149.)

1. A magneto including, in combination, a rotor, an arm on said rotor, a rock shaft journaled parallel and in the same vertical plane with said rotor, an arm on one end of said rock shaft, a link connection between said arms, an arm upon the opposite end of said rock-shaft and means engaging with said third arm for actuating said rock shaft intermittently in one direction from a moving part of an engine, and spring means operable to return said shaft to its initial position.



2. A magneto including, in combination, a frame, a rotor journaled in said frame, an arm on said rotor, a supporting base having said frame secured thereto, a rock shaft journaled in said base parallel with and in the same vertical plane with said rotor, an arm on said rock shaft, a link connection between said arms, an arm upon the opposite end of said rock-shaft and means engaging with said third arm intermittently for actuating said rock shaft in one direction from a moving part of an engine, and spring means operable to return said shaft to its initial position.

3. A magneto including, in combination, a frame, a rotor journaled in said frame, an arm on said rotor, a separable supporting base, means for securing said frame to said base, a rock shaft journaled in said base, an arm on said rock shaft, a link connection between said arms, means for actuating said rock shaft in one direction from a moving part of an engine, and spring means operable to return said shaft to its initial position.

4. A magneto including, in combination, a frame, a rotor journaled in said frame, an arm on said rotor, a separable supporting base, means for securing said frame to said base, a rock shaft journaled in said base, oppositely disposed arms upon one end of said rock shaft, a tripping arm upon the opposite end of said shaft, oppositely disposed fixed arms carried by said base, tension springs connecting said fixed arms with the arms upon said shaft, a link connection between the arm on said rotor and one of the arms on said rock shaft, and means operable from a moving part of an engine and adapted to engage intermittently with said tripping arm.

5. An ignition mechanism for internal combustion engines including, in combination, an igniter block, fixed and movable electrodes carried by said block, a bracket member supported by said block, a rock shaft journaled in said bracket, a trip arm on said rock shaft, an arm on said movable electrode adapted to engage with said trip arm, a spring tending to hold said arms in engagement, a magneto carried by said bracket, said magneto including an oscillatory rotor, and motion transmitting means connecting said rotor with said rock shaft.

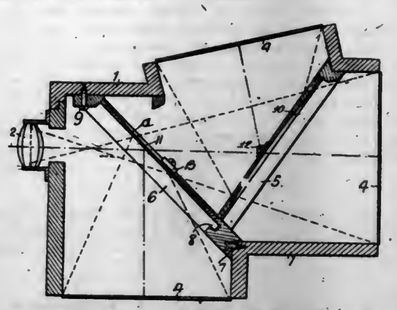
[Claims 6 and 7 not printed in the Gazette.]

1,214,016. PHOTOGRAPHIC CAMERA. ALFRED DAWSON, Greenhithe, England. Filed Feb. 21, 1913. Serial No. 749,877. (Cl. 95—2.)

1. In a multiplate photographic camera, a combined light-transmitting and reflecting element having a toric-figured surface to equalize the transmitted and the reflected image.

2. In a multiplate photographic camera, a plurality of combined light-transmitting and reflecting elements each having a toric-figured surface to equalize the transmitted and the reflected image.

3. In a multiplate photographic camera, a lens, a plurality of sensitized surface supports, a plurality of transparent reflectors each adapted to receive an image from said lens and to project said image upon the sensitized surface carried by the support opposite said reflector, and means for adjusting each of said supports about a substantially central axis.

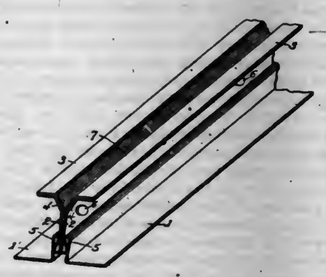


4. In a multiplate photographic camera, a lens, a plurality of sensitized surface supports, a plurality of transparent reflectors each adapted to receive an image from said lens and to project said image upon its corresponding sensitized surface support, and means for adjusting each of said supports about a substantially central axis, each of said reflectors having a surface distorted to compensate for refraction.

5. In a multiplate photographic camera, a lens, and a combined light-transmitting and reflecting element, said element having a substantially plane surface presented toward the lens and a curved surface remote from the lens.

[Claims 6 to 10 not printed in the Gazette.]

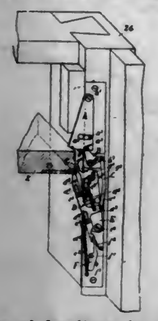
1,214,017. STRUCTURAL-MEMBER. EDGAR K. DAY, Wheeling, W. Va., assignor to Wheeling Corrugating Company, Wheeling, W. Va., a Corporation of West Virginia. Filed Oct. 27, 1915. Serial No. 58,144. (Cl. 189—34.)



1. A structural member composed of sheet-metal consisting of a base, a horizontal head, and a substantially vertical web, said web being composed of two thicknesses of metal each of which is flexed and reflexed upon itself to form a longitudinal fold, said two thicknesses being secured together at points intermediate said fold and said head and forming a yieldable joint adjacent to the folds for yieldingly gripping nails driven between said two thicknesses.

2. A structural member composed of sheet-metal and consisting of a head, a base, and a web connecting said head and said base, said web being composed of two attached members disposed back to back, each web being flexed and reflexed upon itself to form a longitudinal plait intermediate its head and base portions, said plaits being disposed in abutting relation to the outer faces of said members for reinforcing the latter, said members being in engagement adjacent to said plait and forming a joint in which the points of nails driven between said members are yieldingly gripped.

1,214,018. LATCH MECHANISM FOR COLLAPSIBLE SHELVES AND DOORS. CAMILLE DE VLEESCHOUWER and JOHANNES TACOMA, Amsterdam, Netherlands. Filed July 23, 1914. Serial No. 852,628. (Cl. 70—49.)



1. In an article of furniture, in combination, a supporting member mounted for movement between its inoperative and operative positions, and a latch for securing the supporting member in operative position comprising a locking pawl adapted to engage a part of the supporting member after initial movement of the same past its operative position to a certain extent, means for limiting the movement of the supporting member in this direction normally to the extent mentioned, means for rendering the said limiting means inoperative upon return of the supporting member to operative position, and means adapted to be actuated by the said member after movement of the same for a second time and to a greater extent in the same direction past operative position and upon return movement thereof for moving the locking pawl into inoperative position clear of the said member as the latter moves past the pawl toward its inoperative position.

2. In an article of furniture, in combination, a supporting member mounted for movement between its inoperative and operative positions, and a latch for securing the said member in its operative position comprising a movable locking pawl, a sliding piece mounted upon the pawl for limited movement relative thereto, means for yieldingly maintaining the sliding piece normally in operative position projecting from the pawl for contact with the supporting member, the said member when in operative position in engagement with the pawl being adapted to bear against the sliding piece to maintain the same in retracted position, a movable limiting member adapted to normally project into the path of the supporting member at a position more remote from the inoperative position of the supporting member than its operative position, means for transmitting motion from the sliding piece of the pawl to the said limiting member to render the latter inoperative upon movement of the said piece into retracted position, and a movable releasing device for the locking pawl disposed normally so that it projects into the path of a part of the supporting member but is shielded from contact therewith by the limiting member when operative.

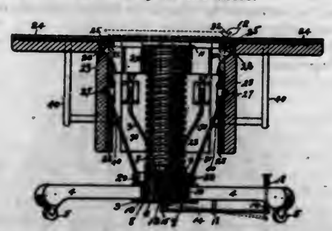
3. In an article of furniture, in combination, a supporting member mounted for movement between its inoperative and operative positions, a latch for securing the said member in its operative position comprising a movable locking pawl, a sliding piece mounted upon the pawl for limited movement relative thereto, means for yieldably maintaining the sliding piece normally in operative position projecting from the pawl for contact with the supporting member, the said member when in operative position in engagement with the pawl being adapted to bear against the sliding piece to maintain the same in retracted position, a movable limiting member adapted normally to project into the path of the supporting member at a position more remote from the inoperative position of the supporting member than its operative position, means for transmitting motion from the sliding piece of the pawl to the said limiting member to render the latter inoperative upon movement of the said piece into retracted position, a movable releasing device for the locking pawl disposed normally so that it projects into the path of a part of the supporting member but is shielded from contact therewith by the limiting member when operative, and means for locking the sliding piece on the locking pawl automatically in retracted position when moved into the same while the pawl is in operative position, the last-named locking means being adapted to become released from operative engagement with the sliding piece upon movement of the pawl into inoperative position.

4. In an article of furniture, in combination, a supporting member mounted for movement between its inoperative and operative positions, and a latch for securing the said member in its operative position comprising a movable locking pawl, a sliding piece mounted upon the pawl for limited movement relative thereto, means for yieldably maintaining the sliding piece normally in operative position projecting from the pawl for contact with the supporting member, the said member when in operative position in engagement with the pawl being adapted to bear against the sliding piece to maintain the same in retracted position, a movable limiting member adapted normally to project into the path of the supporting member at a position more remote from the inoperative position of the supporting member than its operative position, means for transmitting motion from the sliding piece of the pawl to the said limiting member to render the latter inoperative upon movement of the said piece into retracted position, a movable releasing device for the locking pawl disposed normally so that it projects into the path of a part of the supporting member but is shielded from contact therewith by the limiting member when operative, and a second pawl adapted to engage the sliding piece on the first named pawl automatically upon movement of the said piece into retracted position while the first pawl is in operative position, the said piece being adapted to be moved out of engagement with the second pawl to be released upon movement of the first pawl into inoperative position.

1,214,019. CONVERTIBLE TABLE. AUGUSTE JOSEPH DOSTEAT, Winnipeg, Manitoba, Canada, assignor of one-half to Joseph Pierre Tremblay, Winnipeg, Manitoba, Canada. Filed May 3, 1916. Serial No. 95,186. (Cl. 155—6.)

1. A table having a leg, a plurality of chairs radially disposed around the leg, means connecting the chairs and leg, and operative to position the chairs to form the top of the table.

2. A table having a leg, a plurality of outwardly facing chairs disposed about the leg, means connecting the chairs and leg, and operative to elevate the chairs and position them to form the top of the table.



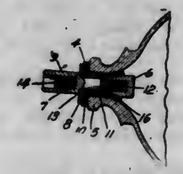
3. A table having a leg, a plurality of outwardly facing chairs radially disposed around the leg, and means operative to elevate and simultaneously rotate the chairs to position the backs thereof to form the table top.

4. A table having a leg, a plurality of outwardly facing chairs radially disposed around the leg, means movably mounted on the leg and pivotally connected to the chairs to elevate the same, and means to simultaneously rotate the chairs to cause the backs thereof to assume a position constituting them a part of the table top.

5. A table having an exteriorly screw-threaded leg, a member mounted on the leg and interiorly screw-threaded for engagement with the threads thereon and having wings, a plurality of outwardly facing radially disposed chairs pivotally connected to the said wings, a member rotatively mounted on the leg adjacent the bottom thereof, and radius rods pivotally connecting the chairs and rotatively mounted member.

[Claims 6 and 7 not printed in the Gazette.]

1,214,020. MEANS FOR SECURING FLOATS TO THEIR MOUNTING-RODS. CHARLES E. DOUGLAS, Cincinnati, Ohio, assignor to The John Douglas Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 30, 1915. Serial No. 64,275. (Cl. 137—104.)

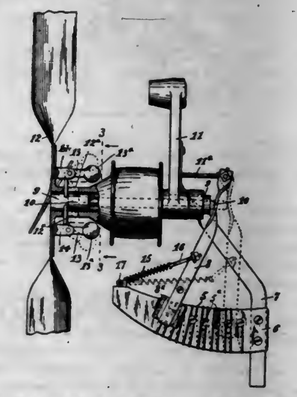


1. In a means for securing a vitreous or ceramic float having a necked opening to a valve actuating rod, the combination of a yielding collar located within the opening of the neck and having an annular flange adapted to engage the end of the neck, an expansion device located at the inner end of the collar, and means secured to the valve rod, engaging the annular flange, passing through the collar, and operatively connected with the device, whereby the device may be caused to expand the collar within the float and press the flange against the end of the float.

2. In combination in a means for securing a vitreous or ceramic float having a necked opening to a valve actuating rod, a yielding collar located within the opening of the neck and having an annular flange engaging the exterior of the neck, an expansion nut located at the inner end of the collar, a washer located at the outer end of the collar and in engagement with the flange, and a headed bolt connected with the valve rod, passing through the collar and into the nut with the head of the bolt engaging the washer, whereby the nut will be caused to expand the collar and the washer to compress the flange to secure the float in position.

3. A means for securing a vitreous or ceramic float having a necked opening to a valve actuating rod, comprising a yielding collar located within the opening to the neck and having a flange engaging the end of the neck, an internally threaded expansion nut located at the inner end of the collar and having a conical surface adapted to engage and enter the collar, a washer located at the outer end of the collar and in engagement with the flange, and a headed screw threaded bolt connected with the valve rod, passing through the collar and into a nut, with the head of the bolt engaging the washer, whereby the nut will be drawn into the collar to expand it when the bolt is rotated, said collar having a coefficient of friction with relation to the material of the float, less than the force exerted by the screw threads, whereby the collar will rotate with relation to the float when the screw threads have brought the expansion nut into proper position with relation to the collar to hermetically seal the float.

1,214,021. LIGHT OR VOLTAGE REGULATOR. DWIGHT A. EAKEN, Lodi, Ohio. Filed Dec. 13, 1915. Serial No. 66,570. (Cl. 171—229.)



1. In a voltage regulator for automobiles, the combination with a rotary shaft, a bracket support for said shaft, and governor mechanism carried by said shaft; of an insulating element mounted on said bracket support and carrying a variable resistance, and a contact element operated by said governor mechanism and adapted to traverse said resistance in accordance with the speed of said shaft.

2. In a voltage regulator for automobiles, an electric circuit including a plurality of lamps and a magneto, a resistance coil in said circuit, a rotary shaft provided with governor mechanism and a fan adapted to cool said resistance coil, and a support for said shaft provided with a spring resisted variable contact element on said support and actuated by said governor mechanism and traversing said resistance coil in accordance with the speed of rotation of said shaft.

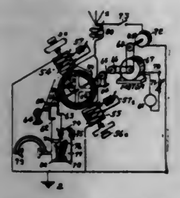
3. In a voltage regulator for automobiles, the combination with an electric circuit including a plurality of lamps and a magneto, and a graduated resistance coil having a series of contact elements; of a fan and fan shaft provided with governor mechanism said fan being in front of said resistance coil to cool the latter, a governor actuated plunger in said fan shaft, and a spring resisted variable contact lever in coöperative relation to said plunger and said contact elements of said resistance coil.

4. In a voltage regulator for automobiles, the combination with an electric circuit including a plurality of lamps and a magneto, and a bracket carrying a graduated resistance coil having a series of contact elements; of a rotary shaft provided with governor mechanism, a bracket support carrying said rotary shaft and first mentioned bracket, a governor actuated plunger in said shaft, and a spring resisted lever contact element operated by said plunger in variable contact with said contact elements of said resistance coil in accordance with the speed of rotation of said shaft.

5. In a light or voltage regulator for automobiles, the combination with a magneto and a pair of lamps arranged in parallel circuit therewith, and a resistance coil provided with a series of contact elements; of a rotary shaft provided with governor mechanism and a fan in front of said resistance coil, a governor actuated plunger in said shaft, and a spring resisted variable contact element in coöperative relation to said plunger and contact elements of said resistance coil.

[Claims 6 to 9 not printed in the Gazette.]

1,214,022. APPARATUS FOR WIRELESS TELEGRAPHY AND THE LIKE. PHILIP E. EDELMAN, Minneapolis, Minn. Filed Aug. 19, 1912. Serial No. 715,850. (Cl. 250—10.)



1. In a wireless system, a transmitter, a receiver cooperating therewith, said receiver comprising a tuner adapted to be continuously rotated, and a wave detector associated with said tuner and adapted to be included in a plurality of circuits, whereby energy radiated by said transmitter may be selected and translated by said receiver while energies arising from undesired sources may be dissipated in said circuits.

2. In a wireless system, suitable receiving inductances and means including a rotatable inductive member for selecting desired impulses therefrom.

3. In a wireless system, a rotating inductance and a plurality of circuits in relation therewith, said circuits including means for selecting desired energies therefrom and for dissipating other energies.

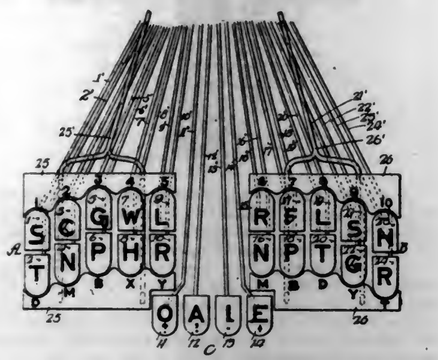
4. In a wireless system, a transmitter comprising a wave generator consisting of a plurality of electrodes in close proximity to each other and having a relative motion in the presence of a cooling insulator, means for varying the audible frequency of said generator, means associated with said generator whereby energy may be radiated, in different and distinguishable wavelengths, to represent signal elements, a receiver comprising a wave detector, tuning means associated with said detector to select and supply it with energy from said transmitter, means associated therewith to cause said received energy to indicate said transmitted signal elements, means associated with said receiver to guard said detector from and dissipate other energies reaching said receiver in other greater and lesser wavelengths, and auxiliary means to short circuit said receiver at suitable times when necessary to by-pass energies arising from strong atmospheric disturbances in the vicinity of said receiver without preventing the reception of said transmitted energy.

5. In a wireless system; a transmitter comprising means for radiating energy and means to modify the wavelength and audible frequency thereof; a receiver having means to select and render intelligible energy received from said transmitter, said means comprising a continuously rotatable tuning member.

[Claims 6 to 25 not printed in the Gazette.]

1,214,023. KEYBOARD FOR WRITING-MACHINES. ALEAH B. EDWARDS, Chicago, Ill., assignor to Shortwriter Company, Wilmington, Del., a Corporation of Delaware. Filed Feb. 5, 1916. Serial No. 76,362. (Cl. 197—100.)

1. A keyboard for writing machines comprising two rows of primary keys and a pair of elongated rigidly connected shift keys, one of said shift keys being disposed on each side of said rows of primary keys and so arranged with respect to said primary keys that a contiguous shift key may be actuated by the same finger that actuates any individual primary key.



2. A keyboard for writing machines comprising two groups of keys, each consisting of two rows of primary keys and a pair of elongated shift keys, one of said shift keys being disposed on each side of said rows of primary keys and so arranged with respect to said primary keys that a contiguous shift key may be actuated by the same finger that actuates any individual primary key.

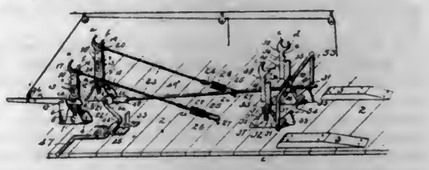
3. A keyboard for writing machines comprising two groups of keys, each consisting of two rows of primary keys and a pair of elongated rigidly connected shift keys, one of said shift keys being disposed on each side of said rows of primary keys and so arranged with respect to said primary keys that a contiguous shift key may be actuated by the same finger that actuates any individual primary key.

4. A keyboard for writing machines comprising a plurality of keys divided into groups, the keys of one of said groups bearing monograms and alphabetic letters representing the consonants S, T, C—K, N, G—J, P, W, H, L and R.

5. A keyboard for writing machines comprising a plurality of keys divided into groups, the keys of one of said groups bearing monograms and alphabetic letters representing the consonants R, N, F—V, P, L, T, S, G—K, H—N and R.

[Claims 6 to 8 not printed in the Gazette.]

1,214,024. AUTOMATIC AUTOMOBILE-JACK. WALTER P. EVANS, Des Moines, Iowa, assignor, by direct and mesne assignments, of one-fourth to Wenzelmann Mfg. Co., Galesburg, Ill., a Corporation of Illinois, and one-fourth to E. C. Bomar and one-fourth to Rees Davies, Clay Center, Kans. Filed Dec. 4, 1915. Serial No. 65,076. (Cl. 254—89.)



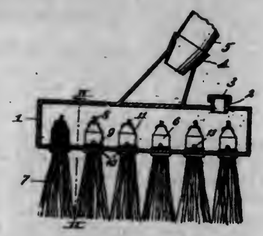
1. In a device of the nature described, a plurality of normally inclined independent jacks arranged in front and rear pairs, each of said jacks adapted to engage the outer end portion of an automobile axle, a crank operable by the automobile in its advancing movement, and means operated by said crank whereby one pair of said legs is caused to swing forwardly.

2. In a device of the nature described, a plurality of independently movable coöperating fulcrumed jacks arranged in front and rear pairs, a crank-arm adapted for actuation by an approaching vehicle, a rod connected with said crank-arm, means for sustaining a pair of said jacks in an inclined position and for swinging them forwardly, and means for adjustably connecting said rod and the last recited element.

3. In a device of the character described, a plurality of independent movable fulcrumed jacks arranged in front and rear pairs, a crank-arm adapted for actuation by an approaching vehicle, a rod connected with said crank-arm, a clip slidably mounted on said rod, means for locking it in selective positions thereon, and jack-raising means connected with said clip.

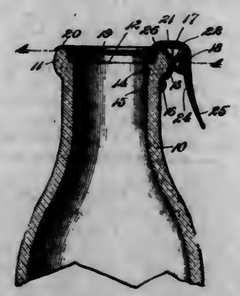
4. In a device of the nature described, a plurality of independent brackets arranged in quadrangular form, normally inclined jacks fulcrumed one in each bracket and movable independently of each other, and means for locking one of said jacks in vertical position, said jacks adapted to co-act in elevating and sustaining a vehicle.

1,214,025. CLEANSER. ELMER E. GRAFFTEY, Kansas City, Mo. Filed Mar. 10, 1916. Serial No. 83,419. (Cl. 15—51.)



In a device of the character described, in combination, a tubular member adapted to receive a tuft of bristles or fibers and provided with a conical terminal to abut the inner end of said tuft, said tubular member having a shoulder at its opposite end surmounted by screw threads, ports in said tubular member, means for securing the tuft in said tubular member, and a brush head into which the tubular member is adapted to be screwed.

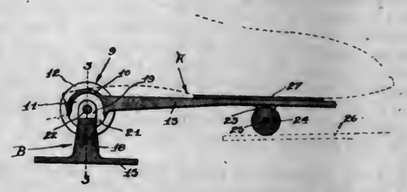
1,214,026. BOTTLE-CLOSURE. FREDERICK HACHMANN, St. Louis, Mo., assignor of one-half to Fred C. Schoenthaler, St. Louis, Mo. Filed Apr. 10, 1915. Serial No. 20,529. (Cl. 215—34.)



1. A bottle closure comprising a support consisting of a pair of spaced jaws adapted to seat downwardly over and embrace and yieldingly clamp the edge of a bottle neck for removably holding the closure on the bottle, one of said jaws having a laterally projecting part extending circumferentially of and partially around the bottle neck, said support having radially projecting lugs struck directly from the body of said support within the surface plane thereof and forming pintles, and a cap constructed and arranged to seat directly upon and to be self centering on the mouth of said bottle and having a downwardly directed handle provided with integral inwardly directed ears formed for engagement with said pintles to pivotally sustain said cap on said support.

2. A bottle closure comprising a support consisting of a pair of spaced jaws adapted to seat downwardly over and embrace and yieldingly clamp the edge of a bottle neck having an inner circumferential shoulder, said jaws being constructed and arranged for removably holding the support on the bottle and the inner jaw being adapted to project downward into the neck and having a shoulder formed to fit and seat securely on said circumferential shoulder, the outer jaw being provided with a laterally projecting part extending circumferentially of and partially around the bottle neck, said support having radially projecting lugs struck directly from the body of said support within the surface plane thereof and forming pintles, and a cap constructed and arranged to seat directly upon and to be self centering on the mouth of said bottle and having a downwardly directed handle provided with integral inwardly directed ears formed for engagement with said pintles to pivotally sustain said cap on said support.

1,214,027. PEDAL ATTACHMENT FOR ACCELERATING-LEVERS. LESLIE S. HACKNEY, St. Paul, Minn. Filed May 22, 1916. Serial No. 99,043. (Cl. 74—81.)



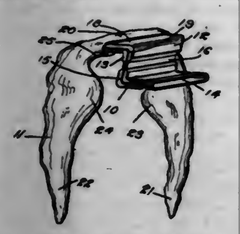
1. In a device of the class described, the combination with a foot lever, of a pedal comprising a cylindrical foot rest having keepers at its ends and designed to receive the shank of a shoe and an oscillatory sole-piece integral with said foot rest, a standard upon which said foot rest is axially pivoted and a roller mounted beneath said sole-piece adapted to rest freely in contact with said foot lever.

2. In a device of the class described, the combination with a foot lever, of a standard, a pedal comprising a foot rest designed to receive the shank of a shoe, and an oscillatory sole-piece integral with said foot rest, a pivot securing said foot rest upon said standard, said foot rest being designed so that the pressure thereon is transmitted radially to the pivot in said standard and a roller beneath the sole piece arranged to rest freely in contact with the lever and transmit motion from said pedal to said lever.

3. In a device of the class described, the combination with a foot lever, of a standard, a pedal comprising a hollow cylindrical foot rest having a portion of its annular wall cut away to receive the end of said standard, a pivot passing through said standard and axially arranged within said foot rest, and a sole-piece integral with said foot rest adapted to co-act with said foot lever.

4. In a device of the class described, the combination with a foot lever, of a standard having laterally extended arms turned upward at their ends, a pedal comprising a hollow cylindrical body having ends enlarged to form keepers at the extremities thereof, said body being cut away to receive the arms, the upturned ends thereof fitting snugly within said ends of said body, a pivot mounted in said ends and passing through said arms, said pivot being axially arranged with respect to the cylindrical body, a sole-piece integral with the body and a roller on said sole-piece arranged in rolling contact with said foot lever.

1,214,028. TOY MUSTACHE. FRANK H. HAINERT, Jr., Minneapolis, Minn. Filed Oct. 5, 1915. Serial No. 54,120. (Cl. 46—40.)



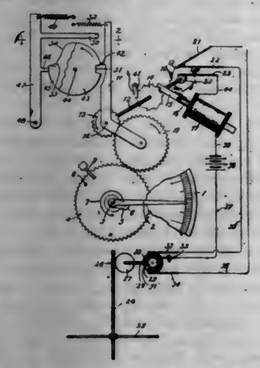
1. A toy comprising a hollow member adapted to be held in the mouth and having an upwardly offset portion positioned so as to lie close to the upper lip, and an inflatable sack of air-tight material removably secured to said member so that the same may be inflated and deflated.

2. A toy comprising a hollow member adapted to be held in the mouth and having an upwardly offset portion, an inflatable sack of air-tight material removably secured to said member so that the same may be inflated and deflated, and a whistle in the offset portion of said member to be sounded when the sack is inflated and deflated.

3. A toy comprising a relatively flat tubular member having two oppositely-extended parallel stems and a transverse portion connecting the same so that when one of the stems is placed in the mouth the other stem will extend outwardly from the upper lip below the nose of the user, and an inflatable sack of air-tight material secured adjacent its center to said extended portion and of such shape that when deflated the sack will have the appearance of a drooping mustache and when inflated will have the appearance of an upstanding mustache, in each case being held properly positioned upon the upper lip of the user.

4. A toy comprising a hollow Z-shaped member adapted to be held in the mouth by one of the bars of said Z, and an inflatable sack of air-tight material removably secured to the other bar of said Z so that the same may be inflated and deflated, said central bar of the Z being adapted to lie flat against the upper lip.

1,214,029. MAXIMUM-DEMAND INDICATING INSTRUMENT. CHESTER I. HALL, Chicago, Ill., assignor to Chicago Electric Meter Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 27, 1913. Serial No. 797,422. (Cl. 171—34.)



1. In a maximum indicating mechanism, the combination of an electricity meter, a maximum demand indicating device, a gear train for advancing said device, electromagnetic mechanism for actuating said gear train, circuit connections extending from said electromagnetic mechanism to said meter, and mechanism for controlling the gear train comprising a first lever for moving a gear of said train from operative position, a spring tending to move said lever to a position in which said gear is out of operative position, a cam engaging said lever to determine the operation of said spring, a second lever for moving said first lever against the action of said spring to bring the gear controlled by said first lever again into operative relation, a second spring stronger than said first spring for thus moving said second lever, a second cam for determining the operation of said second lever, and time-controlled mechanism for operating said cams.

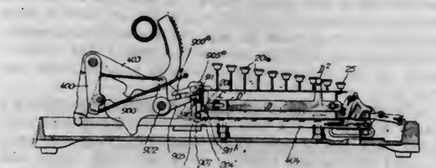
2. In a mechanism for indicating the maximum consumption of electricity, the combination of a meter, a maximum indicating device, a gear train for operating said device, connections extending from the meter for operating the gear train proportionally to the operation of the meter, and mechanism for controlling the gear train comprising a first lever for moving a gear of said train from operative position, a spring tending to move said lever such that said gear assumes an inoperative position, a cam engaging said lever to determine the operation of said spring, a second lever for moving said first lever against the action of said spring to bring the gear controlled by said first lever again into operative relation, a second spring stronger than said first spring for thus moving said second lever, a second cam for determining the operation of said second lever, and time-controlled mechanism for operating said cams.

3. In a mechanism for indicating the maximum consumption of electricity during one of recurring time intervals, the combination of a maximum indicating device, a gear train for operating said device, and mechanism for interrupting said gear train comprising a first lever for moving a gear of said train from operative position, a spring tending to move said lever such that said gears will assume an inoperative position, a cam engaging said lever to determine the operation of said spring, a second lever for moving said first lever against the action of said spring to bring the gear controlled by said first lever again into operative relation, a second spring stronger than said first spring for thus moving said second lever, a second cam for determining the operation of said second lever, and time-controlled mechanism for operating said cams.

4. In a mechanism for indicating the maximum consumption of electricity, the combination of a meter, a maximum indicating device, a gear train for operating said device, connections extending from the meter for operating the gear train proportionally to the operation of the meter, and mechanism for controlling the gear train comprising a first lever for moving a gear of said train from operative position, a spring tending to move said lever such that said gear is moved to an inoperative position, a cam engaging said lever to determine the operation of said spring, a second lever for moving said first lever against the action of said spring to bring the gear controlled by said first lever again into operative relation, a second spring stronger that said first spring for thus moving said second lever, a second cam for determining the operation of said second lever, and time-controlled mechanism for operating said cams, said first-named cam having a sustaining surface for positively maintaining the gear train in operative condition when said interrupting mechanism is not operative.

5. In a mechanism for indicating the maximum consumption of electricity during one of recurring time intervals, the combination of a maximum indicating device, a gear train for operating said device, and mechanism for controlling said gear train comprising a first lever for moving a gear of said train from operative position, a spring tending to move said lever such that said gear will move to an inoperative position, a cam engaging said lever to determine the operation of said spring, a second lever for moving said first lever against the action of said spring to bring the gear controlled by said first lever again into operative relation, a second spring stronger than said first spring for thus moving said second lever, a second cam for determining the operation of said second lever, and time-controlled mechanism for operating said cams, said first-named cam having a sustaining surface for positively maintaining the gear train in operative condition when said interrupting mechanism is not operative.

1,214,030. ADDING-MACHINE. HENRY M. HARRISON, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed June 25, 1914. Serial No. 847,223. (Cl. 235—26.)



1. The combination of depressible spring-sustained keys; detent-means for detaining them singly when depressed, with provisions for releasing one key by depression of another; and locking means normally withdrawn through engagement with said detent means and adapted upon depression of a key to lock out other keys, with provisions for disabling said locking means at will whereby to permit release of one key by depression of another.

2. The combination of depressible spring-sustained keys; spring-actuated detent-means for detaining them singly when depressed, with provisions for releasing one key by depression of another; and spring-actuated locking means normally withdrawn through engagement with said detent means and adapted upon depression of a key to lock out other keys, with provisions for disabling said locking means at will whereby to permit release of one key by depression of another.

3. The combination of depressible spring-sustained keys having detent and lock projections; a spring-actuated shutter adapted to be displaced and to engage over the detent projections; an inferiorly spring-actuated shutter to engage under the lock projections but normally restrained by the first-mentioned shutter; and manipulating means for permanently restraining the lock-shutter.

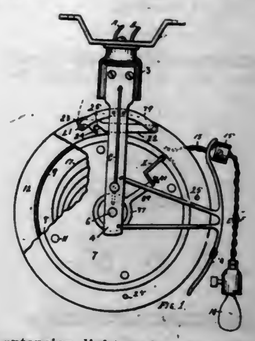
4. The combination of depressible spring-sustained keys having detent and lock projections; a spring-actuated shutter adapted to be displaced and to engage over the detent projections; an inferiorly spring-actuated shutter to engage under the lock projections but normally restrained by the first-mentioned shutter; and a manipulative slide for permanently restraining the lock-shutter.

5. The combination of depressible spring-sustained keys having detent and lock projections; a spring actuated shutter adapted to be displaced and to engage over the detent projections; an inferiorly spring-actuated shutter to engage under the lock projections but normally restrained by the first-mentioned shutter; a slide adapted to engage and permanently restrain said lock-shutter; and a manipulative slide for shifting the first-mentioned slide.

[Claim 6 not printed in the Gazette.]

1,214,031. REEL. ADAM HEIM, Liberty, Ind. Filed Apr. 11, 1916. Serial No. 90,481. (Cl. 248—10.)

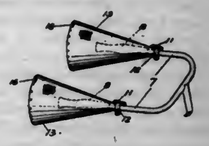
1. An extension light reel comprising a yoke swiveled at a fixed point, a gravity latch pivotally secured thereto and formed with an inclined open slot, a drum journaled in the yoke and provided with a stop, a spring for turning the drum with the stop into detachable engagement with the slot in the latch, wires wound on the drum by the action of the spring and provided with a lamp, said wires with the lamp being in circuit with the source of an electric current and provided with swiveled terminals concentric with the yoke and with the drum, a guide secured to the yoke and arranged to direct the wires toward the drum, and a stop adjustably secured on the wires and movable thereby into contact with the guide for regulating as desired the length of the pendant portion of the wires with the lamp.



2. An extension light reel comprising a yoke swiveled at a fixed point to turn in a horizontal plane, a hollow drum journaled in the yoke to turn in a vertical plane, a coiled spring located within the drum and arranged to turn it in one direction, a lamp, electric wires communicating with a source of current and provided with swiveled terminals concentric with the yoke and also with the drum, said wires being wound around the drum and terminating in circuit with the lamp, a resilient guide for the wires secured on the yoke and extended in front of the drum, a stop adjustably secured on the wires adapted to contact therewith for limiting the length of the portion of said wires to be wound on the drum, a stop carried by the drum and a gravity latch pivotally secured to the yoke for automatically engaging therewith for discontinuing the rotation of the drum under the exertion of the spring.

3. An extension light reel having in combination, a yoke adapted to be secured at a fixed point, a gravity latch pivotally secured thereto and formed with an inclined open slot, a drum journaled in the yoke and provided with a stop, a spring arranged to turn the drum with the stop into detachable engagement with the slot in the latch, wires provided with a lamp and wound on the drum by its action under the exertion of the spring, said wires with the lamp being in circuit with an electric current and provided with frictional terminals concentric with the axis of the drum, a guide secured at a fixed point in relation to the drum and arranged to properly direct the wires toward the drum during the winding thereof, and a stop adjustably secured on the wires and movable thereby into contact with the guide for regulating as desired the length of the pendent portion of the wires with the lamp.

1,214,032. MOTOR-HANDLE SHIELD. URBAN F. HEINECK, Portland, Oreg. Filed May 29, 1916. Serial No. 100,591. (Cl. 208—150.)

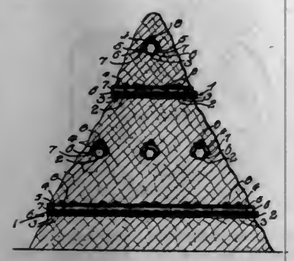


1. A device of the character described, comprising a circular spring 9 having means to secure it in circular position or rolled up, a supporting bar 10 rigidly secured at one end to the spring, a conical shaped covering having its larger end secured upon the spring 9 and being longitudinally secured on the bar 10, substantially as described.

2. A device of the character described, comprising a circular spring 9 having means to secure it in circular position or rolled up, a supporting bar 10 rigidly secured at one end to the spring and provided with an eye in its opposite end, a conical shaped covering having its larger

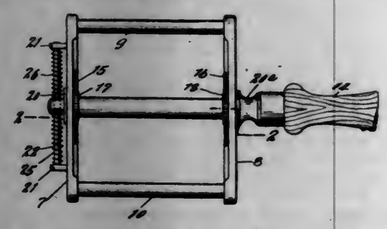
and secured upon the spring 9 and being longitudinally secured upon the bar 10, means to secure the ends of the bar 10 and covering upon a bar extending through the covering, substantially as described.

1,214,033. VENTILATING-PIPE. ANTON HERCER, Springvalley, Ill. Filed Apr. 6, 1916. Serial No. 89,481. (Cl. 98—26.)



A ventilating pipe having perforations extending throughout its circumference, and an arched hood extending longitudinally along one side of the pipe in spaced concentric relation thereto, the edges of said hood being bent inwardly and formed with longitudinally spaced notches for permitting free circulation of air, said edges being secured in contact with the pipe between said notches.

1,214,034. STROPPING-MACHINE. FREDERICK H. HOFFMANN, Jersey City, N. J. Filed Mar. 13, 1913. Serial No. 753,904. (Cl. 51—16.)



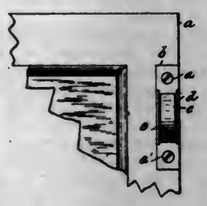
1. A stropping machine for razor blades comprising a frame formed with a pair of oppositely positioned elongated slots, a blade carrier movably mounted within said slots, a rack formed integral with each end of said frame and adjacent to each of said slots, a pair of pinions mounted on said blade carrier in mesh with said racks, means for reciprocating said blade carrier, whereby said racks and said pinions will coöperate to impart a rocking motion to said blade carrier, a rod mounted exteriorly of said frame and means freely movable thereon and adapted to alternately engage and coöperate with said reciprocating means to facilitate the movement of said blade carrier in the stropping operation.

2. A stropping machine for razor blades, comprising a frame formed with a pair of oppositely positioned elongated slots, a blade carrier movably mounted within said slots, a rack formed integral with said frame adjacent to each of said slots, a pinion rigidly mounted on said blade carrier in proximity to each end thereof each pinion being in mesh with its contiguous rack, and means in engagement with said blade carrier for reciprocating the same within said slots, whereby said racks and said pinions will serve to rock the same; and a pair of spiral springs mounted exteriorly of said frame and adapted to alternately engage with one end of said blade carrier, said springs being adapted to assist the movement of said blade carrier within said slots.

3. A stropping machine for razor blades, comprising a frame formed with a pair of oppositely positioned elongated slots, a blade carrier movably mounted within said slots, a rack formed integral with said frame adjacent to each of said slots, pinions mounted on said blade carrier and in mesh with each of said racks, a rod positioned transversely of said frame and a pair of spiral springs loosely mounted on said rod and adapted to contact with a portion of said blade carrier to normally maintain said blade carrier in the blade inserting position, and means for reciprocating said blade carrier to oscillate the same, the oppositely disposed spiral springs being alternately compressed upon the reciprocation of said blade carrying member, the inactive spring being out of contact with said blade carrier when its opposite is compressed, whereby the expansion of the compressed spring will serve to assist in the reciprocatory movement of said blade carrier.

4. A stropping machine for razor blades, comprising a frame formed with a pair of oppositely positioned elongated slots, one of said frame members having oppositely disposed ears formed thereon, a rod positioned within said ears, a blade carrier movably mounted within said slots, a rack formed integral with said frame adjacent to each of said slots, pinions rigidly mounted on said blade carrier and in mesh with each of said racks, and a pair of spiral springs mounted on said rod and in engagement with said ears and a portion of said blade carrier, and means for reciprocating said blade carrier, whereby said springs will be alternately compressed, the expansion of the compressed spring serving to return the blade carrier to its normal blade inserting position.

1,214,035. WINDOW-FIXTURE. DANIEL HOYT, East Orange, N. J., assignor of one-half to The National Lock Washer Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 21, 1912. Serial No. 716,141. (Cl. 16—19.)

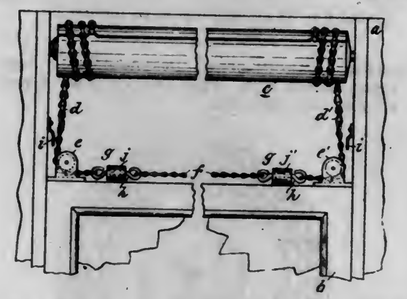


1. A series of devices adapted to be secured to the extreme side edges of a sash and to operate within the sash guideways, each device consisting of a case, a movable member pivoted within said case, said movable member having a convex face adapted to be in constant slidable bearing with the inside sash stop to hold the sash bodily against the outside sash stops at all times, a spring within the case to force the convex face of the movable member against the inside sash stop, said movable member being so formed that it cannot at any time lock the sash.

2. A device of the character described, adapted to be secured to the extreme side edges of a sash and to operate within the sash guideways, said device comprising a case, a movable member pivoted within the case and near the top thereof, a spring to force the movable member outward from the case, a shoulder on the movable member designed to contact the upper wall of the case to limit the outward movement of the movable member, said movable member having a convex face adapted to slidably bear on one wall of the guideway at all times to force the sash against the opposite wall, the convex face of the movable member receding from the bearing point to the case both above and below the bearing point, preventing the movable member from locking the sash at any point, said movable member sliding on the window frame tending to retard the downward movement of the sash.

3. A device of the character described, adapted to be secured to the extreme side edges of a sash and to operate within the sash guideways, said device comprising a case, a movable member pivoted within the case and having a convex bearing surface and limited in outward movement from the case, means on the face of said pivoted member to prevent it from locking the sash at any point whatever, said pivoted member adapted to be in constant slidable contact with the window frame and a spring to force the pivoted member against the frame.

1,214,036. SASH-BALANCE. DANIEL HOYT, East Orange, N. J., assignor of one-half to The National Lock Washer Company, Newark, N. J., a Corporation of New Jersey. Filed Oct. 7, 1912. Serial No. 724,270. (Cl. 16—148.)



1. In a device of the character described, the combination with a window frame, a spring roller mounted in said frame, a sash movable in the window frame, continuous connecting means between the spring roller and the sash, said connecting means extending across the top of the sash for actuation of said sash, said continuous connecting means being provided with means whereby the sash is prevented from falling upon breakage of the connecting means.

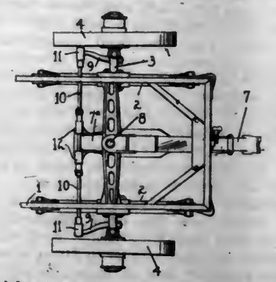
2. In a device of the character described, the combination with a window frame, a sash adapted to move therein and having a pulley secured to each upper corner thereof, a spring roller mounted in the window frame, a continuous chain extending from one end of the roller around the pulleys on the sash and to the opposite end of the roller and stops secured to the chain between the pulleys and of such dimension that they cannot pass the pulleys, whereby the sash is prevented from falling upon breakage of the chain.

3. The combination of a window frame, a sash adapted to move therein and having a pulley secured to each upper corner thereof, a sash balance spring roller suspended on pintles near the top of the frame constantly tending to raise the sash, a connecting means secured to each end of the roller passing down through the pulleys, the ends of said connecting means attached to a coupling, the arrangement being such that the connecting means may be readily attached to or detached from the coupling and the tension retained on the spring roller, whereby the sash may be removed without removing the balance roller.

1,214,037. TRAILER-TRUCK. WARREN R. HUDSON, Troy, Ohio, assignor to The Troy Wagon Works Company, Troy, Ohio, a Corporation of Ohio. Filed Nov. 1, 1915. Serial No. 59,128. (Cl. 21—139.)

1. In a vehicle of the character described, a main frame, an axle located below said frame, carrying wheels swivelly connected with said axle, springs for supporting said frame from said axle and wheels, a draft bar pivotally connected with said frame, and steering connections from said draft bar to said wheels, said steering connections having ball and socket joints.

2. In a vehicle of the character described, a main frame, an axle and carrying wheels, springs for supporting said frame from said axle and wheels, a draft bar pivotally connected to said frame, steering rods connecting the inner end of said draft bar with said wheels, said connections consisting of ball and socket joints.



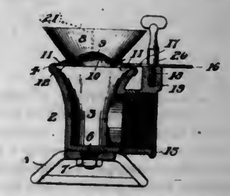
3. In a vehicle of the character described, a main frame, an axle and carrying wheels, springs for supporting said frame from said axle and wheels, a draft bar pivotally connected to said frame, an arm extending from each of said wheels, and a rod connecting each of said arms with the inner end of said draft bar, the connections between each of said rods with said bar and arm consisting of a ball and socket joint.

4. In a vehicle of the character described, a main frame, an axle and carrying wheels, springs for supporting said frame from said axle and wheels, a draft bar pivotally connected with said frame, arms extending from each of said wheels, steering rods, socket members on the respective ends of each of said rods, balls on said arms and draft bar extending into said socket members, and means for adjusting said socket members.

5. In a vehicle of the character described, a main frame, an axle located below said frame, carrying wheels swivelly connected with said axle, springs for supporting said frame from said axle and wheels, a draft bar pivotally connected with said frame having a rearwardly extending portion, and steering rods connecting the rear end of said draft bar with said wheels, said connection comprising ball and socket joints.

[Claim 6 not printed in the Gazette.]

1,214,038. LAWN-SPRINKLER. JOHN D. HUMPHREY, Norfolk, Conn. Filed Nov. 6, 1916. Serial No. 129,717. (Cl. 137—57.)



1. A sprinkler comprising a head and a spreader rising from the head, the head having a series of perforations to direct streams of water against the spreader, and a plate movable to cover one or more of the perforations and provided with laterally extending wings to engage the spreader when the valve member closes said perforations.

2. A sprinkler comprising a head and an approximately frusto-conical spreader rising from the head, the head having a series of perforations arranged in annular order around the base of the spreader to direct streams of liquid against said spreader, and a plate movable across approximately half the perforations, said plate having laterally disposed wings to fit against the spreader when the plate is in perforation-closing relation.

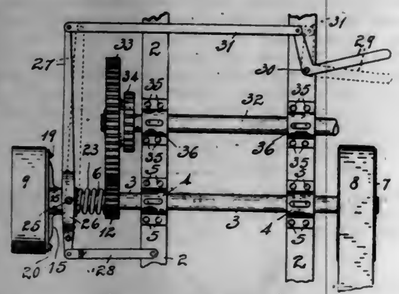
3. A sprinkler comprising a head and an approximately frusto-conical spreader rising from the head, the head having a series of perforations arranged in annular order around the base of the spreader to direct streams of liquid against said spreader, and a plate movable across approximately half the perforations, said plate having laterally

disposed wings to fit against the spreader when the plate is in perforation-closing relation, said plate also having a depending flange practically coextensive therewith.

4. A sprinkler comprising a head, and a frusto-conical spreader rising from the head substantially centrally thereof, the head having a series of perforations disposed approximately in annular order to direct streams of liquid against the spreader, and an approximately semi-annular plate movable to cover a number of said perforations and terminating in laterally disposed wings which engage the spreader when the plate is in perforation-closing relation, said plate also having a depending flange to fit against the head when said plate is in said relation.

5. A sprinkler comprising a head, and a frusto-conical spreader rising from the head substantially centrally thereof, the head having a series of perforations disposed approximately in annular order to direct streams of liquid against the spreader, and an approximately semi-annular plate movable to cover a number of said perforations and terminating in laterally disposed wings which engage the spreader when the plate is in perforation closing relation, said plate also having a depending flange to fit against the head when said plate is in said relation, said head having an interiorly threaded boss and the plate having a rearward longitudinally slotted extension, and a screw tapped into said boss extending through said slot and engaging said extension to hold the plate in a desired position.

1,214,039. MEANS FOR OPERATING DRIVEN MECHANISMS. ROBERT T. JENNEY, Monticello, Iowa. Original application filed Dec. 7, 1914, Serial No. 875,860. Divided and this application filed Apr. 5, 1915. Serial No. 19,386. (Cl. 74—7.)



1. In means of the character described, a shaft having a shoulder and a reduced end portion, a pinion having an elongated sleeve, mounted on said reduced portion and the pinion lying against said shoulder, a friction-clutch head splined to said sleeve, friction shoes carried by said head, a friction-clutch member adapted for engagement by said shoes, and means for holding said shoes normally in engagement with said friction-clutch member.

2. In means of the character described, a shaft having a shoulder and a reduced end portion, a pinion having an elongated sleeve, mounted on said reduced portion and the pinion lying against said shoulder, a friction-clutch head splined to said sleeve, friction-shoes carried by said head, a friction-clutch member adapted for engagement by said shoes, and a spring interposed between said pinion and head, for holding said shoes normally in engagement with said friction-clutch member.

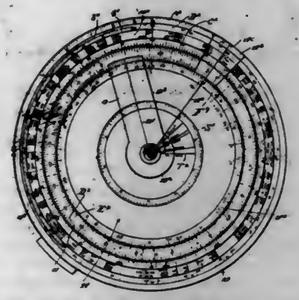
3. In means of the character described, a drive shaft, a pinion having an elongated sleeve, mounted and held from longitudinal movement thereon, a friction-clutch head splined to said sleeve, friction-shoes carried by said head, a friction-clutch member adapted for engagement by said shoes, and means for holding said shoes normally in engagement with said friction-clutch member.

4. In means of the character described, a drive-shaft, a pinion having an elongated sleeve, mounted and held from longitudinal movement thereon, a friction-clutch member slidably mounted on said sleeve, friction-shoes carried by said member, a friction-clutch member adapted for engagement by said shoes, means for holding said shoes normally in engagement with said friction-clutch member, and means for moving the first recited clutch-member and thereby disengaging said shoes from said head.

5. In means of the character described, a drive-shaft, a pinion having an elongated sleeve, mounted and held from longitudinal movement thereon, a friction-clutch head splined to said sleeve, friction-shoes carried by said head, a friction-clutch member adapted for engagement by said shoes, means for holding said shoes in engagement with said friction-clutch member, and means for adjusting said shoes on said head and relatively to said friction-clutch member.

[Claims 6 to 18 not printed in the Gazette.]

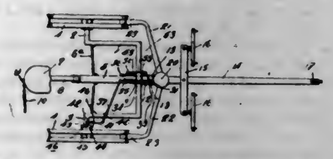
1,214,040. CALCULATING INSTRUMENT. JOHN T. JONES, Clifton, N. Y. Filed Dec. 17, 1914. Serial No. 877,703. (Cl. 235—84.)



1. The combination with a base having scales marked on the obverse face thereof, of a circular slide rotatable over the obverse face of the base and having scales marked on the top side thereof said slide being of less diameter than the base, and an arm fixed to the pivot of the slide and movable over the reverse face of the base, said arm extending beyond the peripheral edge of the base whereby same may be engaged at its free end to effect rotation of the slide relation to the base.

2. The combination with a base having scales on the obverse face thereof, of a circular slide rotatable over the obverse face of the base and having scales marked on the top face thereof, said slide being of less diameter than the base, a transparent circular cursor rotatable over the top face of the slide and of less diameter than the latter, a radial tongue on said cursor, a second transparent cursor movable over the top face of the first cursor, and an arm fixed to the pivot of the slide and movable over the reverse face of the base, said arm extending beyond the peripheral edge of the base whereby same may be engaged at its free end to effect rotation of the slide relative to the base.

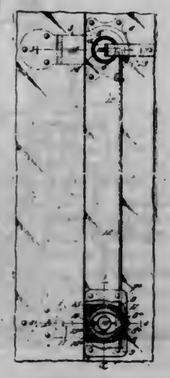
1,214,041. CONVERTIBLE AGRICULTURAL IMPLEMENT. MARSHAL E. JONES, Sparta, Ill. Filed July 30, 1913. Serial No. 782,148. (Cl. 111—6.)



1. In a convertible agricultural implement, a U-shaped axle, a tongue associated with the axle, and clamping means adjustably associated with the tongue and to the axle for removably holding the axle either vertically or horizontally in relation to the ground for facilitating the adjustment of various implements.

2. In a convertible agricultural implement frame, a U-shaped axle, supporting wheels operatively mounted thereon, a tongue associated with the axle, an auxiliary tongue detachably associated with the tongue and axle, clamping means for detachably holding both of the tongues to the frame when the frame is in a vertical position, and for holding the auxiliary tongue to the frame when the frame is in a horizontal position.

1,214,042. TRUNK-LOCKING MECHANISM. GUSTAV H. JUERGENS, St. Louis, Mo., assignor to P. C. Murphy Trunk Company, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 3, 1916. Serial No. 69,973. (Cl. 70—115.)



1. A trunk provided with a locking means, comprising a plurality of locks or fastening devices, one of which is key-controlled and the other being provided with spring actuated jaws, and means whereby the act of unlocking the key-controlled lock automatically effects the opening of said jaws so as to release the lock of which said jaws form a part.

2. A trunk provided with a plurality of locks or fastening devices arranged at different points on the trunk, one of said locks being key-controlled and the other lock having a spring-actuated retaining device, and a spring-actuated cam that operates automatically to positively move said retaining device into an inoperative position when the key-controlled lock is rendered inoperative by manipulating the key in same.

3. A trunk provided with a plurality of locks or fastening devices arranged at different points on the trunk, one of said locks being controlled by a key, and a releasing mechanism for the other lock comprising a rock shaft that operates automatically whenever the key-controlled lock is rendered inoperative by manipulating the key in same.

4. A trunk provided with a plurality of locks or fastening devices arranged at different points on the trunk, each of said locks comprising a movable member on one part of the trunk that coöperates with a holding element on the other part of the trunk, and a releasing mechanism combined with said locks and comprising a spring-actuated, rockable device that causes the holding element of one lock to be rendered inoperative automatically when the movable member of the other lock is released.

5. A trunk provided with a plurality of locks or fastening devices arranged at different points on the trunk, each of said locks comprising a movable member on one part of the trunk and a coöperating element on the other part of the trunk, a rockable device provided with means for effecting the release of the movable member of one lock and for shifting the movable member of the other lock into an inoperative position when said last mentioned movable member is released, and a spring for actuating said rockable device.

[Claims 6 to 16 not printed in the Gazette.]

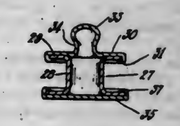
1,214,043. METAL JOINT. FRANK KUSTERLER, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Dec. 1, 1913, Serial No. 803,911. Renewed July 27, 1916. Serial No. 111,751. (Cl. 5—4.)



1. The combination of a hollow post member having an aperture in its side, a mold cup formed of resilient sheet metal having its rim in contact with the inner wall of the post and surrounding said aperture whereby the bowl of the cup forms a hollow cavity communicating by said aperture with the outside of the post, said cup having a flange-like rim around the bowl loosely fitting within said post and having at its sides remote from the aperture a pair of integral resilient sheet metal arms extending substantially from the rear edges of the flange, rearwardly converging toward each other out of contact with the inner sides of the post and with their rear ends resiliently engaging the inner wall of the posts remote from and opposite the aperture whereby the rim of the cup is pressed tightly into engagement with the inner wall of the post around said aperture, and a filling cast within the cavity of said cup.

2. The combination of a hollow post having an aperture in its side, a mold-cup within said post fitting over said aperture and provided with a pair of resilient integral reversely-extending convergent arms interposed between the back of the cup and the opposed inner wall of the post resiliently holding said mold-cup in position, and a filling cast in the cavity through the aperture in said post.

1,214,044. SEPARABLE LINK-BUTTON. IRVING R. LEDERER, Providence, R. I. Filed Aug. 16, 1916. Serial No. 115,293. (Cl. 24—102.)

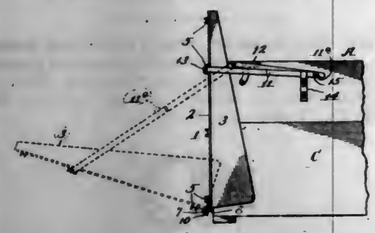


A separable link button member comprising a hollow post with an annular recess at one end concentric with the opening in the post, a split annular member loose in said recess and normally of less interior diameter than said opening, a head engaged over one end of the post and having an opening coaxial with the opening in the post and engaging said annular member to hold it in place, the opening in said head being of less diameter than said recess and of less diameter than the external diameter of the said annular member in the contracted form of the latter, and a cap on the other end of the post.

1,214,045. CONVERTIBLE END-GATE FOR WAGONS. ALVAN W. LIGHTBURN, Liberty, Mo. Filed Feb. 3, 1916. Serial No. 76,039. (Cl. 21—21.)

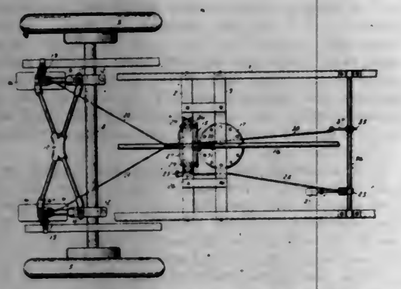
1. An end-gate for wagons comprising a back member having spaced series of bolt-receiving openings, a pair of side members each having an inturned flange seating on the back member, and securing bolts passed through each flange and selectively engaged in the openings of the back member.

2. An end-gate for wagons, comprising a back member, and a pair of side members each of which is adjustably secured thereto whereby the same may be moved toward



or away from each other so as to engage the inner and outer faces respectively of the sides of the wagon as desired.

1,214,046. VEHICLE-BRAKE. ISAAC E. MCCRACKEN, Pittsburgh, Pa. Filed June 28, 1915. Serial No. 36,805. (Cl. 21—8.)



1. A vehicle brake, comprising a brake shoe, a pivoted frame supporting said shoe behind the pivots of said frame, and power driven friction mechanism for swinging said frame to press the shoe against the roadway.

2. A vehicle brake, comprising a brake shoe, a supporting frame for said shoe pivotally connected to the axle and depending behind the same, and power driven friction mechanism for swinging said frame to press the shoe against the roadway.

3. A vehicle brake, comprising a frame pivotally connected to the axle, a brake shoe carried by said frame, a winding device, a flexible operating member connecting said device and frame, and means for rotating said winding device.

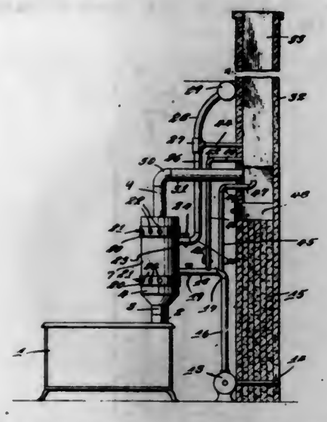
4. A vehicle brake, comprising a frame pivotally connected to the vehicle, a brake shoe carried by said frame, a rotatable winding device, a flexible operating member connecting said device and frame, and power operated mechanism for rotating said winding device.

5. A vehicle brake, comprising a frame pivotally connected to the rear axle, a brake shoe supported by said frame, yielding means for holding said frame with the brake shoe out of contact with the roadway, and power operated friction mechanism for swinging said frame to press the brake shoe against the roadway.

[Claims 6 to 8 not printed in the Gazette.]

1,214,047. MEANS FOR SAVING HEAT. DAVID R. MCGINNIS, Fresno, Cal. Filed Jan. 17, 1916. Serial No. 72,556. (Cl. 257—166.)

1. In a device of the class described, the combination of a hollow heating drum, a lower smoke drum positioned upon said heating drum, an inverted cone carried by said lower smoke drum, whereby smoke passing through said lower smoke drum may be deflected from the central portions of said lower smoke drum, an upper smoke drum positioned upon said heating drum, pipes extending into said smoke drums and through said heating drum, whereby the smoke deflected by said cone will pass into said pipes and then upwardly into the remaining smoke drum, said heating drum being provided with a plurality of openings adjacent its upper and lower ends, rotatable collars positioned upon said heating drum and being provided with a plurality of openings, the openings of said collars being adapted to register with the openings in said heating drum, whereby the heat within said heating drum may be dispensed, said collars being adapted to be moved so as to move said openings out of registry, whereby the heat within said heating drum will be prevented from escaping through said openings.

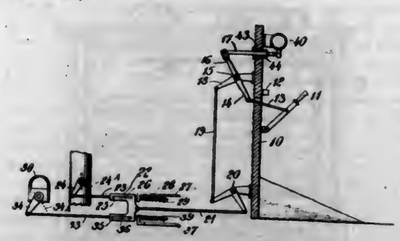


2. In a device of the class described, the combination of a casing, said casing being adapted to be positioned within a chimney so as to conform in shape to the inner shape of the chimney, said casing comprising an outer shell and an inner shell, a top and bottom connecting said outer and inner shells, the upper and lower ends of said inner shell being open so as to permit the passage of smoke therethrough, a pair of vertical partitions formed within said casing so as to span the distance between said shells, a substantially U-shaped horizontal partition extending approximately one-half way around the inner shell, whereby said partitions will divide said casing internally into air passages, whereby as the casing is heated the air may pass beneath said horizontal partition and then upwardly upon one side of the vertical partitions, over the free ends of said vertical partitions and downwardly upon the opposite side of the casing so as to be dispensed in a heated condition.

3. In a device of the class described, the combination of a heating drum, means for supporting said drum, means for conducting smoke through said drum and at the same time radiate heat into said drum, means for injecting air into said drum, said drum having side openings formed therein, and a movable collar carried upon said drum, said collar being adapted to be moved for opening or closing said openings, thereby regulating the passage of air from said drum.

4. In a device of the class described, the combination of a heating drum, means for supporting said drum, means for conducting smoke through said drum and at the same time radiate heat into said drum, means for injecting air into said drum, said drum having side openings formed therein, and a movable collar carried upon said drum, said collar having openings formed therein, said collar being adapted to be moved so as to cause the openings in said collar to register with or move out of registry with the openings in said drum, whereby the openings in said drum may be opened or closed for regulating the passage of air from said drum.

1,214,048. MECHANICAL INTERLOCK FOR ENGINE SELF-STARTERS. ALDEN L. MCMURTRY, Sound Beach, Conn. Filed Sept. 28, 1912. Serial No. 722,847. (Cl. 123—179.)



1. In combination with an internal combustion engine and a self starter therefor, a control lever, a throttle for the engine and a mechanical connection between said lever and the throttle whereby the throttle may be adjusted by the starting movement of the control lever of the starting device.

2. In combination with an internal combustion engine and a self starter therefor, a control lever, a plunger mechanically connected with said lever and a switch adapted to be adjusted by the movement of the plunger in response to the control lever of the starting device.

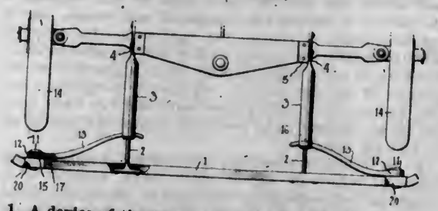
3. In combination with an internal combustion engine and a self starter therefor, a control lever, a switch, a switch lever, and a plunger mechanically connected with the control lever and arranged to be moved thereby in opposite directions and an engaging device on said plunger for moving the switch lever in opposite directions.

4. In combination with an internal combustion engine and a self starter therefor, a control lever, a switch, a switch lever capable of manual actuation and means actuated by the movement of the control lever in opposite directions for moving the switch lever in opposite directions without interfering with subsequent manual actuation of the switch lever.

5. In combination with an internal combustion engine and a self starter therefor, a control lever, a switch having a "battery" position, an "off" position, and a "magneto" position, a switch lever and means actuated by a movement of the switch lever in a direction to set the self starter in action to move the switch into its "battery" position, and by a movement of the control lever in an opposite direction to move the switch into its "magneto" position.

[Claims 6 to 16 not printed in the Gazette.]

1,214,049. AUTOMOBILE GUARD AND FENDER. EUGENE MARINKA, Detroit, Mich. Filed Oct. 21, 1916. Serial No. 126,836. (Cl. 105—130.)



1. A device of the type described comprising a yieldable bumper bar, spring actuated wheel guards carried by said bumper bar and adapted to be held in inactive positions, and released by an initial movement of said bumper bar to assume active positions in front of the wheels of a vehicle, and means carried by said bumper bar for engagement with said wheel guards to lock said guards in active positions.

2. A device of the type described comprising cylinders adapted for attachment to a vehicle, reciprocable plungers extending into said cylinders, a bumper bar connecting said plungers, spring actuated wheel guards carried by said bumper bar and adapted to be held in horizontal inactive positions by the ends of said cylinders and released by an initial movement of said bumper bar to assume vertical active positions in front of the wheels of a vehicle, and means carried by said bumper bar for engagement with said wheel guards to lock said guards in active positions.

3. The combination with vehicle wheels, of spring actuated guards in front of said vehicle wheels, means yieldably supporting said wheel guards and adapted for holding said guards in an inactive position and capable of releasing said guards to assume active positions, and means carried by said yieldable means adapted for locking said guards in active position.

4. A device of the type described comprising cylinders adapted for attachment to a vehicle, plungers extending into said cylinders, means in said cylinders adapted for cushioning an inward movement of said plungers, means in said cylinders adapted to permit of an initial movement of said plungers independent of said cushioning means, a bumper bar carried by said plungers, wheel guards pivotally held by said bumper bar and adapted to have the ends thereof held at said cylinders to maintain said guards in inactive positions, and means at the pivoted ends of said guards adapted to swing said guards to vertical active positions when released by an initial movement of said plungers.

1,214,050. TONE-PURIFIER FOR TALKING-MACHINES. CHARLES P. MARSHALL, Watertown, N. Y. Filed Apr. 24, 1916. Serial No. 93,038. (Cl. 174—27.)



1. The combination of the reproducer of a talking machine, having a diaphragm and a vibration-bar, and a damping device comprising a forked elastic part having its legs slotted to receive spaced portions of the said bar.

2. The combination of a talking machine having a vibration-bar and a reproducing diaphragm, and a tone modifier comprising a forked elastic part, the legs of the said part having zigzag slots to receive and to interlock with the said bar.

3. The combination with a talking machine having a sound reproducing mechanism including a vibration-bar and a diaphragm actuated by said bar, of a forked damping device adjustably mounted upon the vibration-bar, the legs of said device spread apart for damping spaced portions of the said bar, and having zigzag slots to receive and interlock with the said bar.

4. A tone purifier for talking machines, comprising a non-conductor of sounds mounted upon the vibration-bar which vibrates the diaphragm, the said non-conductor of sounds being bifurcated and its legs having slots to receive and grasp spaced portions of said bar.

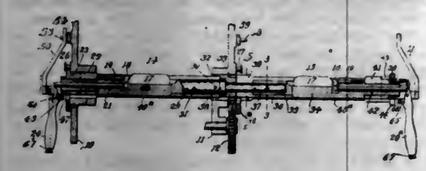
5. A tone purifier for talking machines, comprising a non-conductor of sounds mounted upon the vibration bar which vibrates the diaphragm, the said non-conductor of sounds being bifurcated and its legs having slots to receive spaced portions of said bar, and a weight carried by said non-conductor of sounds for steadying the same.

[Claims 6 to 10 not printed in the Gazette.]

1,214,051. COMPOSITION CARRIER OR HOLDER. HOWARD F. MARSTON, Dayton, Ohio, assignor to Mercantile Corporation, Dayton, Ohio, a Corporation of New York. Filed Jan. 19, 1916. Serial No. 72,918. (Cl. 101—126.)

1. In a device of the class described, in combination, a plurality of composition carriers, said carriers being movable in the direction of their axes, means for securing composition to each of said carriers, and means for retain-

ing said carriers in either of two axial positions whereby when in one position one carrier is in position for printing and the second carrier is in an accessible position for changing type and whereby when in the other position the first carrier is accessible for changing type and the second mentioned carrier is in position for printing.



2. In a printing machine, in combination, a plurality of composition carriers axially alined one with the other and movable in the direction of their common axis, means for securing composition to the said carriers, and means for retaining said carriers in either of two axial positions, said carriers when in one position placing one carrier in printing position and the other in an accessible position for changing composition and when in the other position placing the last mentioned carrier in printing position and the first mentioned carrier in accessible position for changing composition.

3. In a printing machine, in combination, a composition carrying mandrel adapted to be shifted laterally in the plane of a printing machine, means for independently rotating a plurality of means for securing independent pieces of composition to said carrier, said means being independent of each other, means for retaining said mandrel in either of two positions whereby one or the other of the sets of composition is brought into printing position and whereby the other set of composition is brought to an accessible position for replacement or cleaning.

4. In a printing machine, in combination, a composition carrying mandrel adapted to be shifted laterally in the frame of a printing machine, said mandrel having two axially alined portions independently rotatable with respect to each other, and means for shifting said mandrel to engage and disengage one portion with a driving means and to disengage and engage the other portion with the driving means.

5. In a printing machine, in combination, a composition carrying mandrel adapted to be shifted laterally in the frame of a printing machine, said mandrel having two axially alined portions independently rotatable with respect to each other, means associated with each of the aforesaid portions of the mandrel for securing composition thereto, and means for shifting said mandrel to engage and disengage one portion with a driving means and to concurrently disengage and engage the other portion with the driving means.

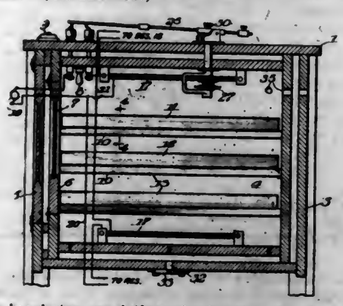
[Claims 6 to 22 not printed in the Gazette.]

1,214,052. BUCKLE. JOSEPH H. MAUZY, Broadway, Va. Filed Aug. 31, 1914. Serial No. 859,510. (Cl. 24—178.)



In combination, a buckle having spaced side bars, bent upward between their ends, an end bar connecting the upwardly bent ends, a cross bar slidably mounted on the side bars and movable toward the end bar, a strap having one end passed about and secured to the slidable cross bar and the other end passing between the slidable cross bar and the first-mentioned cross bar whereby when force is applied to the strap which will tend to move the ends apart the slidable cross bar will bind the ends of the strap between itself and the first-mentioned cross bar, and means at the other end of the buckle to engage a strap.

1,214,053. INCUBATOR. BAYARD W. MENDENHALL, Salt Lake City, Utah. Filed Oct. 21, 1914. Serial No. 867,813. (Cl. 119—37.)



1. An incubator consisting of a heating chamber, a plurality of removable egg or chick trays, adapted to be closely packed respectively with eggs or chicks, and adapted to be subject to the thermal influence of said chamber, means within said chamber for supporting said trays one above the other, electric means for supplying heat only at the top wall and bottom wall of said chamber, each of said means being substantially a continuous unit around the vertical center line of said chamber and located between said center line and the outer walls of said chamber, a thermostat to control the heating of said means, and switching mechanism to control the relative heating effect of said two means.

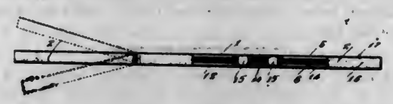
2. An incubator consisting of a heating chamber, a plurality of removable egg or chick trays, adapted to be closely packed respectively with eggs or chicks, and adapted to be subject to the thermal influence of said chamber, means within said chamber for supporting said trays one above the other, electric means for supplying heat only at the top wall and bottom wall of said chamber, each of said means being substantially a continuous unit around the vertical center line of said chamber and located between said center line and the outer walls of said chamber, a thermostat to control the heating of said means, and switching mechanism to control the relative heating effect of said two means, the bottom wall of said chamber having a plurality of small holes through which a plurality of fine streams of air may pass for circulatory purposes.

3. An incubator consisting of a heating chamber, a plurality of removable egg or chick trays, adapted to be closely packed respectively with eggs or chicks, and adapted to be subject to the thermal influence of said chamber, means within said chamber for supporting said trays one above the other, electric means for supplying heat only at the top wall and bottom wall of said chamber, each of said means being substantially a continuous unit around the vertical center line of said chamber and located between said center line and the outer walls of said chamber, a thermostat to control the heating of said means, and switching mechanism to control the relative heating effect of said two means, the bottom wall of said chamber having a plurality of small holes through which a plurality of fine streams of air may pass for circulatory purposes, a second wall outside of said bottom wall, said two walls forming an air chamber, and means to control the flow of air to said air chamber.

4. An incubator consisting of a heating chamber, a plurality of removable egg or chick trays, adapted to be closely packed respectively with eggs or chicks, and adapted to be subject to the thermal influence of said chamber, means within said chamber for supporting said trays one above the other, electric means for supplying heat at the top wall and bottom wall of said chamber, each of said means being substantially a continuous unit around the vertical center line of said chamber and located between said center line and the outer walls of said chamber, a thermostat to control the heating of said means, and switching mechanism to control the relative heating effect of said two means, the bottom wall of said chamber having a plurality of small holes through which a plurality of fine streams of air may pass for circulatory purposes.

5. An incubator consisting of a heating chamber, a plurality of removable egg or chick trays, adapted to be closely packed respectively with eggs or chicks, and adapted to be subject to the thermal influence of said chamber, means within said chamber for supporting said trays one above the other, electric means for supplying heat at the top wall and bottom wall of said chamber, each of said means being substantially a continuous unit around the vertical center line of said chamber and located between said center line and the outer walls of said chamber, a thermostat to control the heating of said means, switching mechanism to control the relative heating effect of said two means, the bottom wall of said chamber having a plurality of small holes through which a plurality of fine streams of air may pass for circulatory purposes, a second wall outside of said bottom wall, said two walls forming an air chamber, and means to control the flow of air to said air chamber.

1,214,054. TABLE-MAT. ELBERT V. MENDENHALL, Los Angeles, Cal. Filed Dec. 23, 1913. Serial No. 808,391. (Cl. 65—53.)

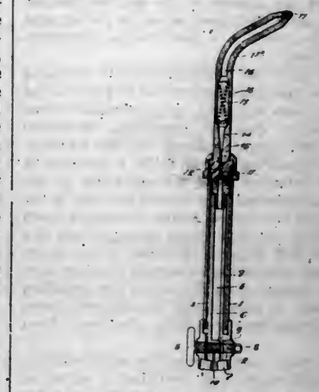


In combination, central and wing members each formed of upper and lower sheets, a hinge-strip extending between said central and wing members, hinge-flaps secured to the central and wing members, one hinge-flap extending on top of the wing member near the hinged edge thereof and extending in a loop down between the hinge-strip and wing member and extending over the hinge-strip and over adjacent portions of the central member, said hinge-flap being fastened to the top faces of the central and wing members and to the top face of the hinge-strip, the other hinge-flap extending beneath the wing member and beneath the hinge-strip and extending in a loop between the hinge-strip, and central member and extending underneath the central member, and said other hinge-flap being fastened to the bottom faces of the central and wing members and to the bottom face of the hinge-strip, and a continuous water-proof sheet covering the central and wing members and extending in a loop down within the loop of one of said hinge-flaps, said water-proof sheet extending beyond the inner adjacent edges of the central and wing members so as to overlap the adjacent edge portion of other similarly constructed central and wing mat members and the overlapping flap being cut to enable it to be folded flat when the mat is extended and to enable said flap to lie flat on said other similarly constructed mat members.

1,214,055. WELDING AND SOLDERING TORCH. ADOLF MESSER, Frankfort-on-the-Main, Germany. Filed June 29, 1911. Serial No. 636,113. (Cl. 158—27.4.)

1. In a welding and soldering burner, an elongated nozzle embodying a tip portion formed from a single piece of metal of high thermal conductivity and provided with a central passage, one portion of said passage being enlarged to form a mixing chamber, an interrupting element extending the length of the chamber removably mounted therein, and positioning means for engaging the free ends of said element.

2. In a welding and soldering burner, a nozzle embodying an elongated tip portion formed from a single piece of metal of high thermal conductivity, said nozzle having a mixing chamber at one end thereof, a yieldable interrupting element removably mounted therein and extending substantially the length of the chamber, engaging stops formed on the inner wall of said tip portions and arranged to engage the ends of said interrupting element for maintaining the same in operative position within said chamber.

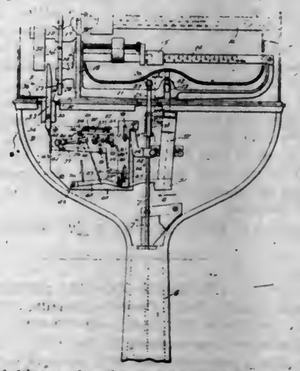


3. A welding and soldering burner embodying a nozzle having an elongated tip portion formed from a single piece of metal of great thermal conductivity, the wall of said tip portion being substantially thin in cross section, a mixing chamber in proximity to one end of said nozzle and a mixing device removably positioned within said chamber.

4. A welding and soldering burner embodying a nozzle having an elongated one-piece tip portion in the form of a pipe and containing a mixing chamber, the wall of said nozzle being substantially thin in cross section and made of copper, and a mixing device positioned in said mixing chamber.

5. A welding and soldering burner embodying a nozzle having an elongated one-piece tip portion and containing a mixing chamber, the wall of said nozzle being substantially thin in cross section and made of a metal of high thermal conductivity and a yieldable mixing device removably positioned in said mixing chamber.

1,214,056. WEIGHING-SCALE. BERTIE E. MILLS, Chicago, Ill., assignor to Mills Novelty Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1915. Serial No. 43,206. (Cl. 194—47.)



1. In a weighing-scale, the combination with weighing mechanism, of means movable into and out of position for preventing the scale from weighing, coin-controlled means operating automatically, upon the engagement therewith of a coin under its own weight, inserted into the machine, to cause said first-named means to be in a position in which they do not interfere with the operation of the scale mechanism, catch mechanism for holding said first-

named means in said last referred to position, and means, controlled by the movement of said weighing mechanism to normal position upon the removal of the weight from the scale, for actuating said catch mechanism to permit said first-named means to return to a position for preventing the scale from weighing.

2. In a weighing-scale, the combination with weighing mechanism, of means movable into and out of position for preventing the scale from weighing, coin-controlled means operating automatically, upon the engagement therewith of a coin under its own weight, inserted into the machine, to cause said first-named means to be in a position in which they do not interfere with the operation of the scale mechanism and automatically release the coin in the said movement of said last-named means, releasable catch mechanism for holding said first-named means in said last referred to position, and means, controlled by the movement of said weighing mechanism to normal position upon the removal of the weight from the scale, for actuating said catch mechanism to permit said first-named means to return to a position for preventing the scale from weighing.

3. In a weighing-scale, the combination with weighing mechanism of the beam-type and involving a balancing beam, of means movable into and out of position for preventing the scale from weighing, means operating to hold said first-named means normally in a position in which they will not interfere with the balancing of the scale when no weight is applied thereto, and coin-controlled means operating automatically, upon the engagement therewith of a coin under its own weight, inserted into the machine, to cause said first-named means to be in a position in which they do not interfere with the operation of the scale mechanism when a weight is on the scale.

4. In a weighing-scale, the combination with weighing mechanism, of means movable into and out of position for preventing the scale from weighing, means tending to move said first-named means to a position in which the scale is prevented from weighing, means controlled by said weighing mechanism and operating, when the latter is in normal position, to hold said first-named means in a position in which they will not interfere with the operation of said weighing mechanism, and coin-controlled means operating, when actuated, to prevent said first-named means from interfering with the operation of the weighing mechanism in the movement of the latter out of normal position.

5. In a weighing-scale, the combination with weighing mechanism, of means movable into and out of position for preventing the scale from weighing, means tending to move said first-named means to a position in which the scale is prevented from weighing, means controlled by said weighing mechanism and operating, when the latter is in normal position, to hold said first-named means in a position in which they will not interfere with the operation of said weighing mechanism, and coin-controlled means operating automatically upon the engagement therewith of a coin under its own weight, inserted into the machine, to cause said first-named means to be out of a position in which they interfere with the operation of the weighing mechanism in the movement of the latter out of normal position.

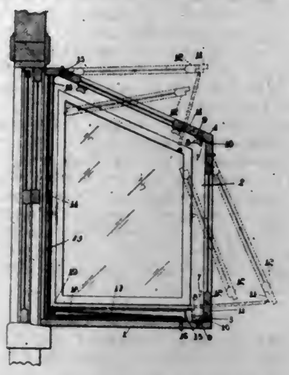
[Claims 6 to 22 not printed in the Gazette.]

1,214,057. WINDOW-CONSERVATORY. HENRY J. MOORE, Niagara Falls, Ontario, Canada. Filed Mar. 11, 1914. Serial No. 823,942. (Cl. 47—41.)

1. A window conservatory of box like form adapted to inclose plants and provided with an open tray adapted to contain water and supported on the bottom of the conservatory; a horizontal heating coil located in said tray; and a plant rack above the tray.

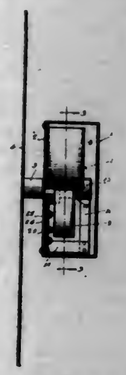
2. A window conservatory of box like form adapted to inclose plants and provided with an open tray adapted to contain water and supported slightly above the bottom of the conservatory; a horizontal heating coil located in said tray; and a plant rack above the tray.

3. A window conservatory of box like form adapted to inclose plants and provided with an open tray adapted to contain water and supported on the bottom of the con-



servatory; a horizontal heating coil located in said tray; a drainage spout leading from said tray; and a plant rack above the tray.

1,214,058. VEHICLE DIRECTION-INDICATOR. WARREN B. MOULTON and EDWIN W. MOULTON, Riverside, Cal. Filed Jan. 11, 1916. Serial No. 71,398. (Cl. 177—337.)

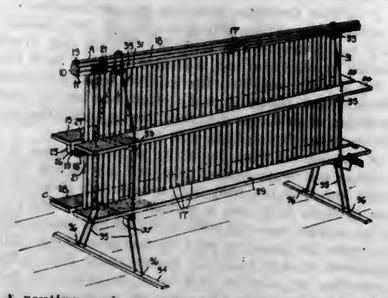


1. A vehicle direction indicator comprising a casing, a shaft journaled in said casing and extending out therefrom, an indicating member secured to and extending at right-angles from the shaft upon the outer end thereof, electromagnets mounted within the casing above and on opposite sides of the shaft, an armature fixed to said shaft, an electrical circuit for said magnets, a spring arm mounted within said casing, and a spring-engaging member carried by the shaft and having a flat face engaging said spring arm to hold the shaft against negative rotation.

2. A vehicle direction indicator comprising a casing, a shaft journaled in and extending out from the casing, an indicating member fixed to the shaft and extending at right-angles thereto, electromagnets mounted within the casing above and on opposite sides of the shaft, said magnets being of arcuate formation and spaced from one another at their upper ends, an arm, secured to and extending at right-angles from the shaft, an arcuate armature connected to the lower end of the arm and adapted to be attracted by either magnet, said magnets having their opposed faces on their lower ends recessed to receive the arm, an electric circuit for said magnets, means to energize the magnets independently a leaf spring rigidly

connected with the casing, and a spring engaging member carried by the shaft and having a flat face for engagement with the leaf spring.

1,214,059. ROUTING-RACK. FINIS A. MURRAY, Seymour, Mo. Filed Apr. 15, 1916. Serial No. 91,394. (Cl. 211—36.)



1. A routing rack comprising a top bar, a shelf, and a plurality of spaced flexible elements extending between the bar and shelf, the shelf holding the elements under tension.

2. A routing rack comprising a top bar, a plurality of spaced flexible elements depending from the top bar, a shelf through which said elements pass, and means for yieldingly holding the elements under tension.

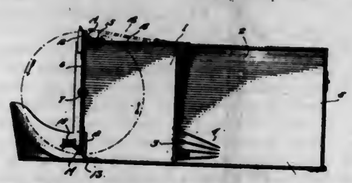
3. A rack of the character described including a supporting bar, a plurality of flexible bands attached to the bar and extending therefrom, means for yieldingly tensioning the bands, and a shelf through which said bands pass, the shelf extending on each side of the bands.

4. A rack of the character described including an upper supporting bar, a plurality of flexible bands attached to the upper bar and depending therefrom, a shelf consisting of two sections, the sections being disposed on each side of the flexible bands, and means for yieldably tensioning the bands, said means being disposed below said shelf.

5. A rack of the character described including an upper supporting bar, a plurality of flexible bands attached to the upper bar and depending therefrom and disposed in spaced relation to each other, a plurality of shelves disposed in vertical spaced relation and through which said bands loosely pass, and means for yieldably tensioning the bands.

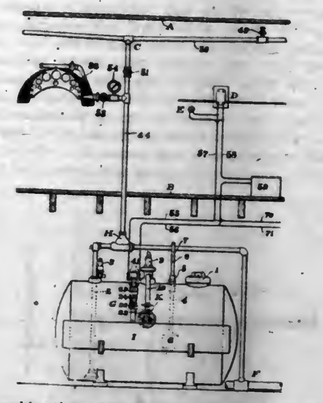
[Claims 6 to 11 not printed in the Gazette.]

1,214,060. MOUSE-TRAP. GEORGE MUTZ, Pittsburgh, Pa. Filed Oct. 4, 1916. Serial No. 123,760. (Cl. 43—24.)



A mouse trap comprising a casing, a door normally closing one end of the casing, a shaft journaled in the walls of the casing and to which the center of the door is secured, spring actuated means for revolving the door, oppositely disposed latches carried by the opposite ends of the door, a stop carried by the floor of the casing and arranged in the path of travel of the latches, bait boxes pivoted to opposite sides of the door, means connecting the latches and the bait boxes, whereby upon pressure being applied to the latter the latches will be sprung, said casing having a hinged door in the top thereof lying in the path of the edge of the revolving door and arranged to lift as the revolving door revolves and drop back therebehind to prevent backward rotation of said revolving door.

1,214,061. FLUID-DISTRIBUTING APPARATUS. CHARLES H. MEIGS, Philadelphia, Pa., assignor to National Fire Extinguisher Company, a Corporation of Delaware. Filed July 24, 1914. Serial No. 852,796. (Cl. 169—25.)



1. The combination with fluid distributing means, of a source of fluid supply normally in operative relation with said distributing means, a second source of fluid supply, smaller than the first, normally out of operative relation with said distributing means, and means for placing said second source in operative relation with said distributing means and disconnecting said normally operative source from said distributing means.

2. The combination with fluid distributing means, of a source of fluid supply normally in operative relation with said distributing means, a second source of fluid supply, smaller than the first, of a different character normally out of operative relation with said distributing means, and means for placing said second source in operative relation wtih said distributing means and disconnecting said normally operative source from said distributing means.

3. The combination with fluid distributing means, of a source of fluid supply normally in operative relation with said distributing means, a second source of fluid supply, smaller than the first, normally out of operative relation with said distributing means controlled by conditions at a desired location, and means for placing said second source in operative relation with said distributing means and disconnecting said normally operative source from said distributing means.

4. The combination with fluid distributing means, of a source of fluid supply normally in operative relation with said distributing means, a second source of fluid supply, smaller than the first, of a different character normally out of operative relation with said distributing means controlled by conditions at a desired location, and means for placing said second source in operative relation with said distributing means and disconnecting said normally operative source from said distributing means.

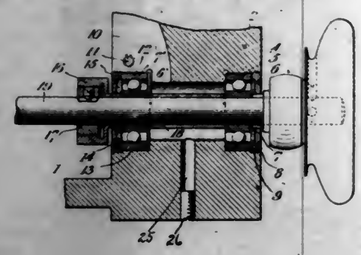
5. The combination with fluid distributing means, of a source of fluid supply normally in operative relation with said distributing means, a second source of fluid supply, smaller than the first, normally out of operative relation with said distributing means, and heat controlled means for placing said second source in operative relation with said distributing means and disconnecting said normally operative source from said distributing means.

[Claims 6 to 14 not printed in the Gazette.]

1,214,062. SHAFT-BEARING. FRANCIS S. NORTH, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 26, 1911. Serial No. 667,649. (Cl. 64—36.)

1. The combination of a supporting frame having an opening therethrough, said opening being enlarged at each end thereof to form a seating recess for a ball retainer, a

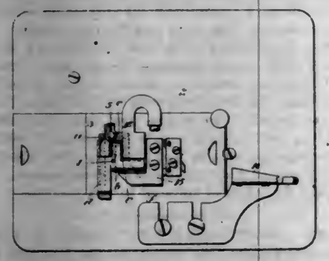
ball retainer in each recess, each of said ball retainers comprising inner and outer rings and balls between the rings, a main shaft extending through the inner rings, a collar fixed to the shaft and engaging the inner ring of one of said ball retainers, a sleeve on the shaft between the inner rings of the ball retainers, a second collar secured to the shaft, a threaded nut engaging said collar and bearing against the inner ring of the ball retainer for clamping said ring against said sleeve and said sleeve against the inner ring of the first named ball retainer, whereby said inner rings of the ball retainers are secured to the shaft, said supporting frame having a slot extending into the enlarged recess at the end of the opening adjacent said threaded nut, and means for drawing the walls of said slot together to clamp the outer ring of the ball



retainer in adjusted positions.

2. The combination of a supporting frame having an opening therethrough, said opening being enlarged at each end thereof to form a seating recess for a ball retainer, a ball retainer in each recess, each of said ball retainers comprising inner and outer rings and balls between the rings, a main shaft extending through the inner rings, a collar fixed to the shaft and engaging the inner ring of one of said ball retainers, a sleeve on the shaft between the inner rings of the ball retainers, a second collar secured to the shaft, a threaded nut engaging said collar and bearing against the inner ring of the ball retainer for clamping said ring against said sleeve and said sleeve against the inner ring of the first named ball retainer, whereby said inner rings of the ball retainers are secured to the shaft, said supporting frame having a slot extending into the enlarged recess at the end of the opening adjacent said threaded nut, means for drawing the walls of said slot together to clamp the outer ring of the ball retainer in adjusted positions, and screw washers for closing the outer ends of the enlarged recesses at each end of said opening.

1,214,063. FEEDING MECHANISM FOR SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 15, 1911. Serial No. 614,730. (Cl. 112—8.)



1. A feeding mechanism for sewing machines including a feed rocker, a bed plate to which the feed rocker is pivoted, a feed bar pivoted to the upper end of said feed rocker, means engaging the feed bar at the forward end thereof for raising and lowering the same, a feed dog pivotally supported on said feed bar, whereby said feed dog may be shifted from a position inclined to its path of travel to a position parallel thereto, and means for shifting the position of said feed dog, said means including a treadle, and connections between the treadle and the feed dog capable of operation without stopping the movements of the feed bar for shifting said dog.

2. A sewing machine including in combination a feed bar, means for reciprocating said feed bar, means for raising and lowering the feed bar, a feed dog pivotally supported by said feed bar, a slotted member fixed to said feed dog, a lever movable with said feed bar, means carried by the lever for engaging said slotted member for shifting the position of said feed dog, and means under the control of the operator for shifting said lever.

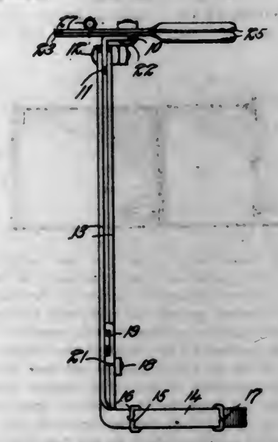
3. A sewing machine including in combination a feed bar, means for reciprocating said feed bar, means for raising and lowering the feed bar, a feed dog pivotally supported by said feed bar, a slotted member fixed to said feed dog, a lever movable with said feed bar, means carried by the lever for engaging said slotted member for shifting the position of said feed dog, means under the control of the operator for shifting said lever, a spring for moving said lever in one direction, and an adjustable stop for limiting the movement of the lever.

4. A feeding mechanism for sewing machines including in combination a feed rocker, a feed bar pivoted to said feed rocker, an eccentric for raising and lowering said feed bar, a feed dog pivoted to said feed bar, a lever pivotally supported by said feed bar, means for connecting said lever to said feed dog whereby a shifting of the lever will swing the feed dog, a spring for moving the lever in one direction, an adjustable stop for limiting the movement of the lever, a second lever pivoted on the bed plate of the machine, and having a link connection with the first named lever, said second named lever being under the control of the operator whereby said feed dog may be shifted without stopping the feeding mechanism.

5. A feeding mechanism for sewing machines including a pivoted feed dog, a spring for normally holding it with its upper or feeding surface inclined downwardly from front to rear, and means under the control of the operator for shifting it so that its upper or feeding surface may be level, said means being capable of operation without stopping the action of the machine.

[Claims 6 to 13 not printed in the Gazette.]

1,214,064. BAG-HOLDER. OSCAR E. PETERSON, Brunswick, Nebr. Filed June 1, 1916. Serial No. 101,075. (Cl. 83—26.)



A bag holder including an angle bracket having a vertical and a horizontal leg, bag carrying arms pivoted to the vertical leg, and gripping arms pivoted to the horizontal leg.

1,214,065. INDIA-RUBBER PAD FOR THE SOLES AND HEELS OF BOOTS AND SHOES. WALTER WILLIAM PHILLIPS, London, England. Filed Oct. 16, 1915. Serial No. 56,240. (Cl. 36—35.)



1. For a boot the combination of a rubber pad having therein a number of nail holes each extending from the tread surface of the pad and provided at its outer end with a relatively thin collar of rubber and nails each having a head comprising a collar portion to bear against the inner end wall of the hole and a central stem of less area extending from the outer side of the nail collar so constructed and arranged that the nail can be hammered into its final position without the aid of a separate punch.

2. For a boot, the combination of a rubber pad having therein a number of cylindrical nail holes each extending from the tread surface of the pad to within a short distance of the back surface thereof and provided at its outer end with a relatively thin collar of rubber, and nails each having a head comprising a circular collar portion of a size substantially equal in area to that of the inner end wall of the hole against which it is to bear and a central stem of less area extending from the outer side of said nail collar so constructed and arranged that the nail can be hammered into its final position without the aid of a separate punch.

1,214,066. ROOF-CROWN FOR OPEN-HEARTH FURNACES. THEODORE POULL, Birmingham, Ala. Filed July 18, 1916. Serial No. 109,965. (Cl. 263—46.)

1. In an open hearth furnace, a roof crown formed of arched rows of crown blocks resting at their ends on skew backs, rabbets in the blocks forming arched chases between rows thereof, and floating steel reinforcing bars resting loosely in the rabbets and bearing free or fixed connection thereto on the skew backs.

2. In an open hearth furnace, a metallic frame, an arched roof crown, skew backs disposed along the sides of the furnace with their tops standing flush with a portion of the frame work and left exposed to form a support for reinforcing bars, said skew backs being adapted to support the roof crown, and metallic reinforcing bars the ends of which rest loosely on the skew backs, and said part of the metallic frame and the arched body portions of which contact with and support the arched roof crown, substantially as described.

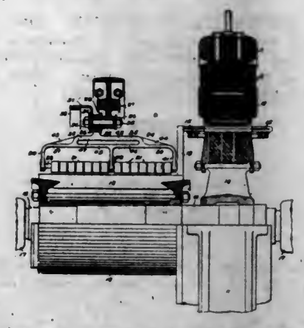
3. In an open hearth furnace, a metallic frame, an arched roof crown, skew backs disposed along the sides of the furnace with their tops standing flush with a portion of the frame work and left exposed to form a support for reinforcing bars, said skew backs being adapted to support the roof crown, metallic reinforcing bars the ends of which rest loosely on the skew backs, and said part of the metallic frame and the arched body portions of which contact with and support the arched roof crown, and means to directly support the skew backs by means of the metallic frame.

4. An open hearth roof crown formed of arched rows of crown blocks resting at their ends on skew backs, the crown blocks being vertically elongated to bring their upper ends above the skew backs, rabbets in said upper ends of the crown blocks, and steel bars working loosely in the rabbets and bearing at their ends on the upper ends of the skew backs free of fixed connection thereto.

5. In an open hearth furnace, a metallic frame work comprising horizontal longitudinal angle irons, a roof crown formed of rabbeted crown blocks, and arched steel bars extending through the rabbets and resting free of fixed connection on said angle irons to form floating supports for the roof crown that are free to follow its expansion and contraction.

[Claims 6 to 9 not printed in the Gazette.]

1,214,067. DYNAMO-ELECTRIC MACHINE. WILLIAM H. POWELL, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Feb. 27, 1915. Serial No. 11,405. (Cl. 200—24.)



1. A brush-rod support of electrically conductive material and comprising a body portion, and rod-supporting projections therefrom, said body portion comprising spaced portions forming parallel paths in circuit with said rod-supporting projections.

2. A brush-rod support of electrically conductive material and comprising a body portion, and rod-supporting projections therefrom, said body portion comprising spaced portions electrically connected together at one end and electrically connected to said rod-supporting projections.

3. A brush-rod support of electrically conductive material and comprising a body portion, and rod-supporting projections therefrom greater in number than two, said body portion comprising spaced portions electrically connected together at one end, and the other end of each of said spaced portions being electrically connected to an intermediate one and an end one of said rod-supporting projections.

4. A brush-rod support of electrically conductive material and comprising a body portion, and spaced rod-supporting projections greater in number than two from said body portion, said body portion forming a plurality of separate paths between a terminal portion of said support and said spaced rod-supporting projections.

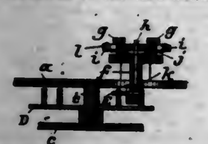
5. A brush-rod support of electrically conductive material and comprising a body portion, a terminal extension therefrom, and a plurality of spaced rod-supporting projections from said body portion extending in a direction opposite to said terminal extension, said body portion forming two spaced paths between said terminal extension and said rod-supporting projections.

[Claims 6 to 13 not printed in the Gazette.]

1,214,068. CLOCKWORK-ESCAPEMENT FOR MECHANICAL TIME-FUSES. HUGO PRAHL, Dusseldorf, Germany. Filed Jan. 21, 1915. Serial No. 3,583. (Cl. 102—36.)

1. In a clock work escapement for mechanical time fuses the combination of a balance having a hollow shaft

and a torsional balance control spring arranged in said shaft, the axis of rotation of said balance being coincident with the axis of rotation of the fuse when fired.



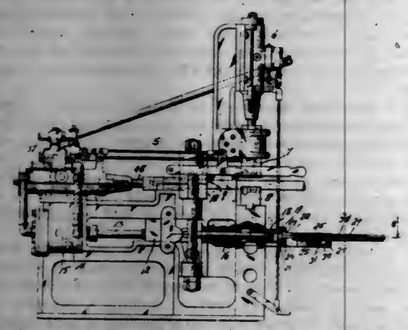
2. In a clock work escapement for mechanical time fuses the combination of a balance, a hollow shaft upon which said balance is mounted, a balance control spring arranged in said shaft, the axis of rotation of said balance being coincident with the axis of rotation of the fuse when fired, a screw for regulating the torsion of said balance control spring and a second spring for excluding the play of the screw.

1,214,069. MECHANICAL TIME-FUSE. HUGO PRAHL, Dusseldorf, Germany, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed Feb. 6, 1915. Serial No. 6,624. (Cl. 102—36.)



In a mechanical time fuse having clockwork mechanism, a driving spring for said mechanism comprising spaced apart oppositely wound convolutions arranged conaxially with respect to each other and to the axis of rotation of the projectile.

1,214,070. APPARATUS FOR FORMING LUGS UPON A DRILL-STEEL. THEODORE H. PROSKE, Denver, Colo. Filed Nov. 26, 1915. Serial No. 63,392. (Cl. 76—5.)



1. In combination with the frame of an apparatus, a shaft extending through said frame and a recess formed in the latter, a bearing sleeve inserted in said recess and surrounding the shaft, a tappet secured on the end of the shaft and projecting beyond the periphery of the latter into an enlarged portion of said sleeve, a pin located within the sleeve and having a portion offset and tapered, a cap secured upon one end of the sleeve and having a perforation therethrough, through which the tapered extremity of the pin projects, the head of the pin abutting against the inner surface of said cap, a member secured to the frame and located forward of the cap, said member being recessed, a U-shaped locking device located in said recess, the latter also adapted to receive a drill steel, which will lie between the legs of said locking device, a pin inserted through an opening in the side of said member and projecting into the recess of the latter, said pin having a cam upon its inner extremity adapted to engage one of the legs of the U-shaped locking device, a lever secured upon its outer extremity and means for forcing the shaft outwardly to project the first-named pin into the passage within the drill steel.

2. A device of the class described, comprising a bracket suitably mounted and provided with a recess, a U-shaped locking device located in said recess, the latter also adapted to receive a tool which will lie between the legs of said locking device, a pin inserted through an opening in the side of the bracket and projecting into the recess therein, said pin having a cam upon its inner extremity adapted to engage one of the legs of the U-shaped locking device, and a lever secured upon its outer extremity for manipulating purposes.

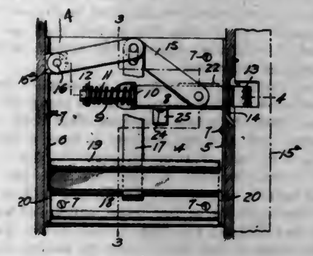
3. A device of the class described, comprising a bracket suitably mounted and provided with a recess, a U-shaped locking device located in said recess, the latter also adapted to receive a tool which will lie between the legs of said locking device, a pin inserted through an opening in the side of the bracket and projecting into the recess therein, said pin having a cam upon its inner extremity adapted to engage one of the legs of the U-shaped locking device, a lever secured upon its outer extremity for manipulating purposes, and means mounted adjacent one extremity of said tool and reciprocable to act thereon.

4. A device of the class described, comprising a shaft reciprocably mounted in a suitable framework and extending through a recess in the latter, a bearing sleeve located in said recess and surrounding the shaft, a pin carried by said bearing sleeve and projecting beyond one end of the latter, a bracket mounted adjacent this end of the sleeve and provided with a recess, means located in said recess for securing a drill steel in place, and means mounted upon one extremity of the shaft for engaging the pin and forcing it into the passage in the drill steel when the said shaft is actuated in one direction and for engaging the sleeve and withdrawing the pin from the passage within the drill steel when the shaft is actuated in the reverse direction.

5. In combination with the framework of an apparatus, a shaft extending through said frame and a recess formed in the latter, a bearing sleeve inserted in said recess and surrounding the shaft, a tappet secured upon the end of the shaft and projecting into an enlarged portion of said sleeve, a pin located within the sleeve and having a portion offset and tapered, a cap secured upon one end of the sleeve and having a perforation therethrough through which the tapered extremity of the pin projects, the head of the pin abutting against the inner surface of said cap, a bracket secured to the frame and located forward of the cap, said bracket being recessed, a locking device located in said recess for securing a drill steel in place, and means for forcing the shaft outwardly to project the pin into the passage within the drill steel for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,214,071. LATCH. PETER A. RASMUS, Paxton, Ill. Filed May 18, 1916. Serial No. 98,312. (Cl. 70—42.)



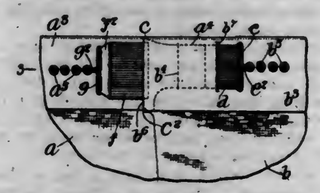
In a door lock in combination, a hollow door having spaced front and rear walls, said rear wall being slotted, a plate adapted to be contained between said walls, a slidable bolt carried by said plate, a toggle-link secured at one end to said plate and at its other end to said bolt, a U-shaped operating lever the extremities of which extend through said slots, and means connecting said lever and said toggle-links.

1,214,072. FOUNTAIN DRAWING-PEN. TEUNIS JOHANNES MARINUS REYNDERS, Rotterdam, Netherlands. Filed Dec. 5, 1916. Serial No. 135,191. (Cl. 120—43.)



A pen comprising a casing forming a reservoir, one end of said casing being reduced in diameter, an internally threaded sleeve revolubly mounted in the end of the casing which is of full diameter, a rod within said casing having one of its ends threaded and adapted to engage said internally threaded sleeve, a yoke at the other end of said rod, pen points carried by said yoke and adapted to project through the reduced end of the casing, and means between said pen points for slowly feeding ink thereto from said casing.

1,214,073. GARMENT. MORRIS REINER, Brooklyn, N. Y. Filed Mar. 3, 1916. Serial No. 81,777. (Cl. 2—143.)

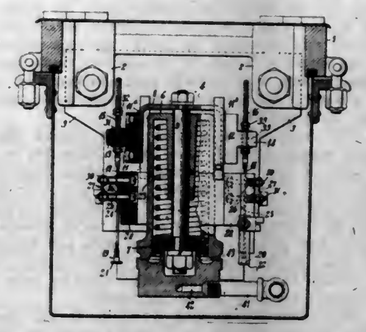


1. A pair of trousers having a waistband portion open at the opposite sides, the back part of the waistband portion being provided adjacent to the opening with vertical slots and the front part being provided with extensions adapted to be passed through said slots, said front and back parts of the waistband portion being provided with linings having eyes, and said extensions and that part of the back portion of the waistband inwardly of said extensions being provided with elastic straps having hook members adapted to engage said eyes.

2. A pair of trousers having a waistband portion open at the opposite sides, the front and back parts of the waistband portion of the trousers being provided with extensions, elastic members connected with said extensions, one of said extensions at each side of the trousers being adapted to pass through the waistband portion thereof, and said extensions being adjustably and detachably connected with said waistband portions.

1,214,074. TIME-LIMIT RELAY-SWITCH. CLARENCE RENSHAW, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed Nov. 29, 1911, Serial No. 662,181. Divided and this application filed Mar. 7, 1913. Serial No. 752,613. (Cl. 175—308.)

1. In a switching device, the combination with a movable member, and a stationary member, of an arm secured to said movable member, a rod slidably mounted on said arm and having a plurality of adjustable stops adapted to engage said arm, a contact member secured to said stationary member, a portion of said rod being flattened and biased to electrical engagement with said contact member, and a stationary member adapted to electrically engage the bottom of said rod.



2. In a switching device, the combination with a movable arm and a stationary contact member, of a rod disposed in the direction of movement of said member, a plurality of stops secured to said rod and adapted to engage said arm, a flat conducting member secured to said rod, means for biasing said conducting member to continued electrical engagement with said contact member, and a stationary contact member that is adapted to engage the bottom of said rod for predetermined positions thereof.

3. In a switching device, the combination with power-operated means, a U-shaped supporting member associated therewith, insulating blocks secured to the respective arms of said member and having openings therein, a plurality of conducting rods severally projecting loosely through said openings and adapted to be raised by said blocks and having flat, slotted intermediate portions, and a plurality of stationary contact members rigidly secured to said power-operated means, of laterally extending members associated with said contact members and projecting through the slots in said rods, and resilient means surrounding said projecting members for maintaining good electrical engagement between said contact members and the flat portions of said rods.

4. In a switching device, the combination with relatively movable main contact members adapted for abutting engagement, a slotted member of conducting material associated with the movable contact member and means for actuating said movable contact member, of an auxiliary stationary contact member adapted to engage said slotted member, a laterally extending member projecting through the slot in said rod, and resilient means associated with said laterally extending member for maintaining a good electrical engagement between said rod and said auxiliary stationary contact member.

5. In a switching device, the combination with a movable supporting member having an opening therein, a conducting rod loosely projecting through said opening, adjustable means associated with said rod on the opposite sides of said supporting member and adapted to be engaged thereby for actuating said rod, and a movable contact member associated with one end of said rod, said rod being provided with a slotted portion having a flat working surface, of a stationary contact member adapted to cooperatively engage said flat surface, a stud projecting through the slotted portion, and a coil spring surrounding the outer end of the stud and acting upon the slotted portion to maintain the flat working surface in good electrical engagement with said stationary contact member when said movable contact member and associated rod are actuated.

1,214,075. VIOLIN. JOHN HENRY RICE, Dallas, Tex. Filed Apr. 8, 1916. Serial No. 89,949. (Cl. 84—44.)

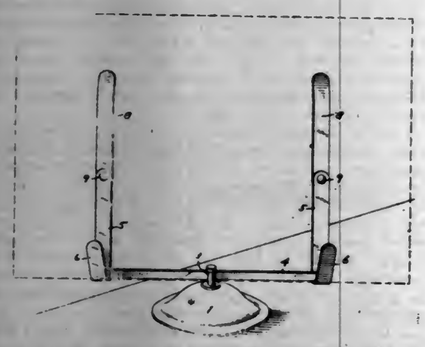


1. The combination with a violin having the usual strings outside thereof, of a bridge upon the inside of the belly of the violin, strings extending longitudinally of the body and engaging the bridge and corresponding in size and length to certain of the outside strings, and means for placing said inside strings under tension whereby they will vibrate in sympathy with and produce the same tones as the corresponding outside strings.

2. The combination with a violin having the usual strings outside thereof, of a bridge upon the inside of the belly of the violin, strings extending longitudinally of the body and engaging the bridge and corresponding in size and length to certain of the outside strings, and means for placing said inside strings under tension whereby they will vibrate in sympathy with and produce the same tones as the corresponding outside strings, said inside strings and their bridge coöperating to form a truss to reinforce the belly of the instrument.

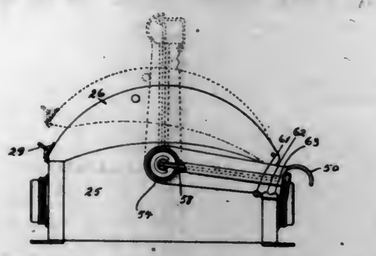
3. The combination with a violin having the usual strings outside thereof, of a bridge upon the inside of the belly of the violin, strings extending longitudinally of the body and engaging the bridge and corresponding in size and length to certain of the outside strings, and means for placing said inside strings under tension whereby they will vibrate in sympathy with and produce the same tones as the corresponding outside strings, said inside strings and their bridge coöperating to form a truss to reinforce the belly of the instrument, the distance between the bridges of the outside strings being the same as the distance between one end of the inside strings and the bridge engaged by said inside strings.

1,214,076. DEVICE FOR HOLDING NEWSPAPERS, MAGAZINES, &c., IN POSITION. LOUIS W. RICE, New York, N. Y. Filed Feb. 8, 1915. Serial No. 6,768. (Cl. 45—57.)



A folding table rest for newspapers and the like, comprising a base adapted to rest on the table and provided with a short post, a cross-piece carried by the post close to the base, supporting arms pivotally secured at their lower ends to the back of the cross piece at the outer ends of the latter with their lower extremities fashioned into hooks and extending around in front of the cross-bar, and extension pieces pivotally connected at one end of each with the upper ends of said arms and their opposite ends being free, whereby the extension pieces may be disposed vertically or turned either inward or outward, the arms and extension pieces being adapted to fold alongside the cross-piece, the arms then extending inward from their supporting pivots toward the post, and the extension pieces extending outward from the inner ends of the arms, the arms and extensions inclining rearward from the cross-piece.

1,214,077. ELECTRIC SWITCH. JOSEPH SACHS, Hartford, Conn. Filed Nov. 12, 1914. Serial No. 871,641. (Cl. 175—282.)



1. An electric switch comprising a box, a switching element in said box, movable between circuit closing and circuit opening positions, an actuator for said switching element, and means for at will connecting the switching element and the actuator and for disconnecting the same and while said actuator is in operative relation, the actuator having positions corresponding with those of the switching element and being positioned to prevent access to the interior of the box when in one of its said positions.

2. An electric switch comprising a box, a switching element in said box, movable between circuit closing and circuit opening positions, the box having a cover by opening which access to the interior thereof may be had, an actuator for the switching element movable to positions corresponding with those of the switching element, and means for at will connecting or disconnecting the actuator and the switching element to permit their movement together or the actuator independently of the switching element, the actuator when in one of its positions preventing the cover being opened.

3. The combination of a box having a cover, a switching element in the box, an actuator for the switching element, and means carried by the actuator for connecting said switching element to or disconnecting it from said actuator while said actuator is in assembled or operative relation with the box, said actuator when in one of its positions preventing opening of the cover.

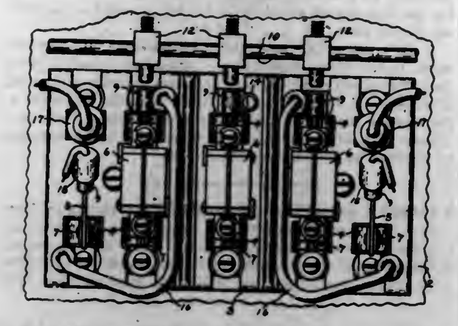
4. An electric switch comprising a box, a plurality of switching elements in the box, an actuator for the switching elements, movable independently of the box, and means for connecting one or more of said switching elements with said actuator or disconnecting one or more of them therefrom, said actuator being adapted when one or more of said switching elements are connected therewith to move the same between circuit opening to circuit closing positions and being adapted when said switching element or elements connected therewith are in circuit closing positions, to prevent access to the interior of the box.

5. An electric switch comprising a box, a switching element in the box movable between circuit closing and circuit opening positions, an actuator for said switching element having positions corresponding with those of the switching element, means carried by the actuator and accessible exteriorly of the box for at will connecting and disconnecting the actuator and the switching element and while the actuator is in operative relation, the actuator when in one of its positions preventing access to the interior of the box.

[Claims 6 to 42 not printed in the Gazette.]

1,214,078. METER-TESTING APPLIANCE. JOSEPH SACHS, Hartford, Conn. Filed May 1, 1915. Serial No. 25,157. (Cl. 175—183.)

1. A meter-testing appliance comprising a plurality of pairs of contacts, and their coöperating connectors, one of which constitutes a load-controlling switching element, at least one contact of each pair having means electrically connected therewith for the connection thereto of testing means to thus adapt the appliance for meter-testing.



2. A pair of contacts and a load-controlling switching connector coöperative therewith to open and close connections therebetween, one of the contacts having means electrically connected therewith for the connection thereto of testing means.

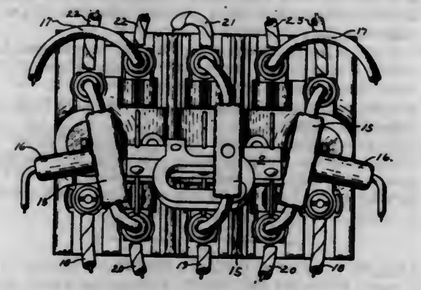
3. A pair of contacts and a connector coöperative therewith to open and close connection therebetween, one of the contacts having means electrically connected therewith for the connection thereto of testing means, and the connector also having means for the connection therewith of testing means when in either its open or closed position.

4. A pair of contacts and a connector coöperative with the contacts to open and close connection therebetween, one of the contacts having means electrically connected therewith for the connection thereto of testing means and the connector having means for the connection therewith of the same testing means.

5. A meter-testing appliance comprising a pair of contacts and a connector coöperative with the contacts to open and close connection therebetween, said contacts being each provided with wire connecting means and one of the wire connecting means having means in electrical connection therewith for the connection thereto of testing means, said appliance being provided with means to permit it to serve for load switching or meter-testing.

[Claims 6 to 27 not printed in the Gazette.]

1,214,079. CONVERTIBLE CUT-OUT SWITCH. JOSEPH SACHS, Hartford, Conn. Filed May 5, 1915. Serial No. 26,022. (Cl. 175—183.)



1. A load-controlling switching element and its complemental contacts, one of them constituting a load connectible contact and the other a meter coil connectible contact, the switching element when in the open position electrically freeing the meter coil connectible contact, and a circuit-controlling element connectible on the service side, said second element and the load side connectible contact of the switching element having means whereby current may be by-passed between the two elements.

2. A load-controlling switching element and its complemental contacts, one of them constituting a load connectible contact and the other a meter coil connectible contact, the latter being adapted for connection with one terminal of a meter coil, the switch element when in the open position freeing the meter coil connectible contact, a service side circuit-controlling connectible element having means also connectible to the other terminal of said meter coil, and means associated with said switching element and said service side connectible element for by-passing across from the switching element to the service element whereby said switching element may be opened without interrupting current flow between said elements.

3. A service side connected circuit controlling element, a load side connected load-controlling switching element both of said elements having means connectible to the terminals of a meter coil, and said switching element being adapted to electrically free the so connectible means associated therewith, and means associated with the service side connected element and the load end of the switching element for by-passing across from one to the other of said elements to thereby permit the opening of the switching element without interrupting the current flow from the service to the load side.

4. A switching element and its complemental contacts, one of them constituting a load connectible contact and the other a meter coil connectible contact, the switching element constituting a load-controlling element and when in the open position electrically freeing the meter coil connectible contact, and a circuit-controlling element connectible on the service side, said second element and the load side connectible contact of the switching element having means whereby current may be by-passed between the two elements, said second element having a fuse.

5. A cut out element connectible to the service side and a switching element connectible to the load side of a meter coil, said cut out element at its meter connectible end and said switching element at its load connectible end being provided with means whereby current may be by-passed between the two elements and around the meter coil and switch break when the switching element is open.

[Claims 6 to 21 not printed in the Gazette.]

1,214,080. STIFFENING MEMBER FOR CAR SIDES. RALPH V. SAGE, Columbus, Ohio. Filed May 1, 1914. Serial No. 835,594. (Cl. 105—183.)



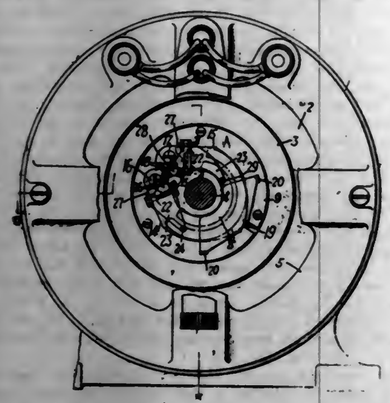
1. A stiffener for a car wall, comprising a tapered trough-shaped member provided with outwardly extending free edges, and a thickened integral apex portion.

2. A stiffener for car walls, comprising a tapered trough-shaped member provided with an integrally thickened apex portion.

3. A stiffener for car walls, comprising a trough-shaped member having its greatest height intermediate of its ends and gradually-decreasing therefrom, said trough-shaped member being provided with outwardly extending flanges, and a thickened integral apex portion.

4. A stiffener for a car wall, comprising a trough-shaped member gradually-decreasing in height from an intermediate part toward its ends, said trough-shaped member being provided with a thickened integral apex portion, and a flange extending entirely around its edges.

1,214,081. CENTRIFUGAL SWITCH. HAROLD M. SCHEIBE, Cambridge, Mass., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 19, 1913. Serial No. 807,661. (Cl. 175—310.)



1. The combination with a stationary contact member, and a rotatably and pivotally mounted contact member, of means for causing successive radial and axial movements of said rotatable contact member.

2. The combination with a stationary contact member, and a coacting rotatably and pivotally mounted contact member, of means for causing separate radial and axial movements of said movable contact member at a predetermined speed.

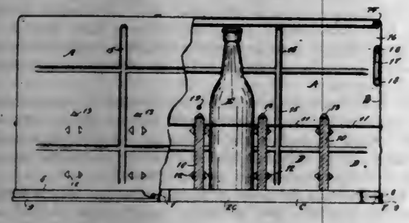
3. The combination with a stationary contact member, of a rotatably and pivotally mounted contact member coacting therewith, and means for actuating said movable contact member in a path that comprises substantially a right angle.

4. The combination with a rotatable member, and a weighted member connected thereto and having a radial movement, of a stationary contact member, a pivotally mounted contact member carried by said weighted member, and means for causing an axial movement of said pivotally mounted contact member.

5. The combination with a rotatable base member having a projecting portion, and a member pivotally mounted on said base member, of a contact member pivotally mounted on said second member and having an arm for engaging said projecting portion at a predetermined speed, and a stationary contact member for engagement by the movable contact member.

[Claims 6 to 10 not printed in the Gazette.]

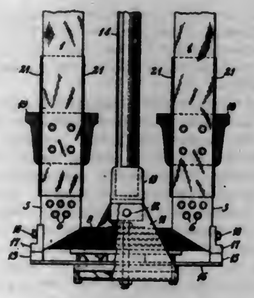
1,214,082. SHIPPING-CASE. LOUIS SCHOTT, Cincinnati, Ohio, assignor to The Cincinnati Galvanizing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 5, 1915. Serial No. 6,350. (Cl. 217—19.)



1. In a shipping case adapted to be evenly packed and stacked with similar cases which are all of the same dimensions, the combination of a wooden bottom, sheet metal sides, nails whereby these latter are connected to the edges of the bottom and a locking flange for the heads of the nails obtained by bending metal at the lower edge of the sides up and turning it over against the heads of the nails to prevent them from becoming loose and forming an obstruction which would interfere with close packing of the boxes.

2. In a shipping case the combination of a bottom, sheet metal sides, transversely extending wooden partitions for subdividing the case and ears extending from the inner side of the sheet metal sides opposite the ends of the wooden partitions and engaging the ends of these partitions to hold them in place, these ears being obtained by bending up metal from these sides.

1,214,083. OIL-CIRCUIT BREAKER. HJALMAR RUDMAN SCHULTZ, Trafford Park, Manchester, England, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 20, 1912. Serial No. 685,062. (Cl. 175—282.)



1. A terminal member for circuit interrupters comprising a plurality of side-by-side groups of superposed conductors having air ducts therebetween, a cradle for each of the said groups and a supporting member, said cradles being pivotally mounted on the supporting member.

2. A terminal member for circuit interrupters comprising a plurality of side-by-side groups of superposed conductors, a holder for each of the said groups and a supporting member, said holders being independently pivoted on the said supporting member.

3. A terminal member for circuit interrupters comprising a plurality of side-by-side groups of superposed conductors having air ducts therebetween, a holder for each of the said side-by-side groups and a supporting member, said holders being pivotally mounted on the said supporting member.

4. A terminal member for circuit interrupters comprising a plurality of side-by-side groups of conductors, a supporting member and holders for each of the said groups, said holders being pivotally connected to the said supporting members.

5. A terminal member for circuit interrupters and similar devices comprising a plurality of side-by-side groups of superposed conductors, a pivotally mounted support for each of said groups of conductors, and a member to which the said supports are pivoted.

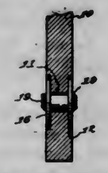
1,214,084. LADY'S UNDERGARMENT. ERNST T. SEIFERT, Richmond Hill, N. Y., assignor to Julius Kayser & Co., New York, N. Y., a Corporation of New York. Filed Mar. 16, 1916. Serial No. 84,501. (Cl. 2—41.)

A garment of the class stated adapted to dual uses, having a single, continuous draw string movably engaged with both the front and back of the neck opening and which alone passing over the shoulders constitutes the shoulder straps, the entire length of the draw string being of equal bulk and freely movable throughout relative to the garment, whereby the latter is comfortably adapted



without removal of the draw string from the garment to both day and evening wear.

1,214,085. SHOE-SOLE-STAMPING APPARATUS. JULIUS F. G. SELL, Jerseyville, Ill. Filed Aug. 13, 1914. Serial No. 856,671. (Cl. 101—83.)



1. A device as described including a pattern and means on said pattern for simultaneously numbering a pair of soles of shoes.

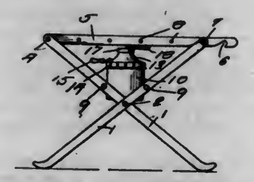
2. A device as described including a pattern, and a detachable means on said pattern for simultaneously numbering a pair of soles.

3. A numbering device for shoe soles including a pattern, and a pair of disks positioned one on each face of the pattern and having numerals on the faces thereof.

4. A numbering device for shoe soles including a pattern, a numbering element carried by said pattern comprising a primary and an auxiliary member, said primary member including a disk having a sleeve extending therefrom, said auxiliary member including a disk having a shank extending therefrom, said shank threaded in said sleeve whereby the two members are retained on said pattern and numerals on the outer faces of said disks.

5. A numbering device for shoe soles comprising a pattern used in rounding said soles, said pattern having an opening therethrough, a disk positioned on each face of said pattern and having means passing through said opening for retaining them thereon and numerals formed on said disks.

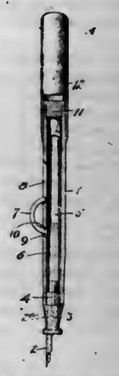
1,214,086. STOVE. EMMERSON N. SHAW, San Francisco, Cal., assignor of forty-five one-hundredths to Hamilton S. Wallace, San Francisco, Cal. Filed Feb. 19, 1916. Serial No. 79,377. (Cl. 126—43.)



1. In a portable and collapsible stove the combination with a pair of end pieces including legs permanently pivoted together, and a top pivoted to one leg of each end piece, of rods extending between the end pieces and a plurality of burners removably mounted on the rods.

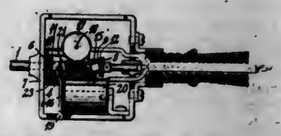
2. In a portable stove the combination with a pair of end pieces including permanently pivoted legs, the pivot of the legs being a rod which extends between the end pieces, of a top pivoted to one leg of each end piece, a rod extending between the other legs of the end pieces with which rod the top is detachably engaged, rods extending between the corresponding legs of the end pieces above and out of vertical alinement with the pivot rod of the legs, and burners supported by the pivot rod and maintained in place by the last mentioned rods.

1,214,087. SELF-FILLING FOUNTAIN-PEN. MORRIS SHEMIN, Bayonne, N. J., assignor to Joseph L. Valentine, Jersey City, N. J. Filed Sept. 20, 1916. Serial No. 121,101. (Cl. 120—46.)



In a fountain pen of the self filling variety, a barrel having a longitudinal slot in one side wall and intermediate the length thereof, a removable pen carrying plug at one end of said barrel said plug having an ink duct therethrough, a collapsible sack carried by said plug, the interior of said sack being in communication with said duct, a yielding bar within said barrel along side of said sack and underneath said slot, an operating member comprising a curved lever pivoted at one of its ends in said slot, said lever curving outwardly from said barrel when said lever is in its inoperative position, the curved portion of said lever intermediate its ends being arranged to pass through said slot and engage and depress said plate for the purpose of collapsing said sack by swinging said lever on its pivot, and means for detachably holding said lever in its inoperative position.

1,214,088. SPEED-COUNTER. CHARLES E. SKINNER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 14, 1912. Serial No. 703,639. (Cl. 235—104.)



1. A speed counter comprising a rotatable member, an indicator, a clock-governed electromagnetic means for operatively connecting the indicator to the rotatable member at the beginning of a predetermined time interval and a second clock-governed electromagnetic means for disconnecting the rotatable member at the end of such time interval.

2. A speed counter comprising a rotatable spindle, an adjustable sleeve supported thereon, an indicator opera-

tively connected to the sleeve, a clock-governed electromagnetic means for so adjusting the sleeve as to operatively connect it to the spindle at the beginning of a predetermined time interval and a second clock-governed electromagnetic means for disconnecting the sleeve from the spindle at the end of the predetermined time interval.

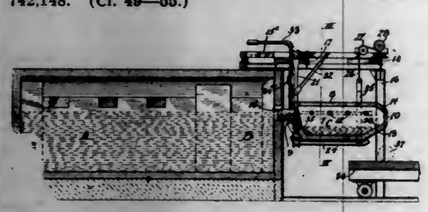
3. A speed counter comprising a rotatable spindle, an indicator, a clutch for operatively connecting the indicator to the spindle and disconnecting the same therefrom, a pair of electromagnets for actuating the clutch, and a time-governed controller for selectively and successively energizing the electromagnets.

4. A speed counter comprising a rotatable spindle, an indicator, a clutch for operatively connecting the indicator to the spindle and disconnecting the same therefrom, a pair of electro-responsive means for actuating the clutch, and a controller for governing one of the electro-responsive means to start the indicator at the beginning of a predetermined time interval and for governing the other electro-responsive means to stop the indicator at the end of such interval.

5. A speed counter comprising a rotatable spindle, an indicator, a clutch for operatively connecting the indicator to the spindle and disconnecting it therefrom, two electro-responsive means for selectively actuating the clutch, a clock mechanism, a controller for governing the electro-responsive means, and means dependent upon the clock mechanism for actuating the controller at the beginning and at the end of a predetermined time interval.

[Claims 6 to 9 not printed in the Gazette.]

1,214,089. GLASS-CASTING APPARATUS. HARRY G. SLINGLUFF, Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 15, 1913. Serial No. 742,148. (Cl. 49—55.)

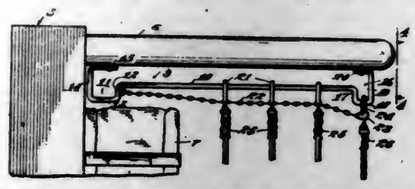


1. In combination in a glass pouring apparatus, a supply tank containing molten glass, and a tilting tank adjacent thereto into which the glass from the supply tank is continuously supplied in a relatively small stream at the rear end and from the front end of which the glass discharges when the tank is tilted, said tilting tank being mounted on fixed pivots at the rear end thereof which receives the glass so that when the front end is lowered such rear end is not materially changed in vertical position.

2. In combination in a glass pouring apparatus, a supply tank containing molten glass and provided with a laterally projecting discharge spout, a closed tilting tank provided at the front end with a discharge orifice and at the rear end with an opening through which the said spout projects, and means for heating the glass in the tilting tank, the said tilting tank having its pivotal support at the rear end thereof and so positioned that such rear end is not materially changed in vertical position by the lowering of the front end of the tank.

3. In combination in glass pouring apparatus, a supply tank containing a relatively large supply of molten glass, a tilting tank in position to receive the glass discharged from the supply tank and means whereby the tilting tank may be tilted to discharge a quantity of glass, the wall of the tilting tank upon which the stream of glass from the supply tank falls being inclined both when the tank is in tilted or pouring position and when it is in normal or untilted position, and being located in both positions so as to receive a flow of glass.

1,214,090. BEDCLOTHES-SUPPORT FOR FOLDING BEDS. THOMAS SPAULDING, Los Angeles, Cal. Filed Oct. 18, 1915. Serial No. 56,644. (Cl. 5—18.)



1. A bed clothes supporting device for folding beds, a plurality of supporting rods carried at one end of the bed frame, shoulders formed at each end of said supporting rods, a plurality of clothes engaging members slidably mounted on said supporting rods, a flexible connection between said slidable clothes engaging members, and means at the outer ends of said flexible connections engageable with said shoulders to retain the bed clothing engaging members either in close or spaced relation to each other.

2. A bed clothes supporting device for vertically swung folding beds comprising a plurality of supporting rods, a series of rings slidably mounted in each of said rods, a flexible connection between the rings on each of the rods, a series of bed clothes engaging clamps on said connections, a locking bar slidably mounted on the supporting rods and connected to the outer end of said flexible connections, and means on said supporting rods for retaining the locking bar in position at either end of the supporting rods.

3. A bed clothes supporting device for vertically swung folding beds comprising a plurality of supporting rods carried by the bed frame, U-shaped hook members formed at each end of each supporting rod, a series of bed clothes clamps slidably mounted on said supporting rods, a locking bar, loops on said locking bar slidable on the supporting rods adapted to be engaged by the U-shaped end portions of the supporting rods, and a flexible connection extending between the clothes clamping members on each of the supporting rods connecting at their outer ends with the locking bar and connecting at their inner ends with the supporting rods.

4. In a bed clothes supporting device for folding beds, a support member carried by the bed, a series of bed clothes engaging members slidably mounted on said support member, flexible connections between said bed clothes engaging members and hook means formed in each end of said support member adapted to hold the bed clothes engaging members in spaced relation to each other.

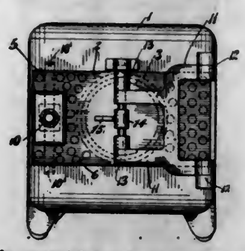
5. In a bed clothes supporting device, a supporting rod having spaced dependent hook portions and flexibly connected clothes supporting members slidable on said rod and adapted to be engaged collectively by one of the hook portions and to be spaced on the rod and held in spaced relation by the other hook portion.

[Claim 6 not printed in the Gazette.]

1,214,091. BURGLAR-PROOF SAFE. THOMAS S. SPIVEY, Cincinnati, Ohio, assignor to The American Banker's Safety Company, Wilmington, Del., a Corporation of Delaware. Filed Feb. 25, 1913. Serial No. 750,650. (Cl. 109—1.)

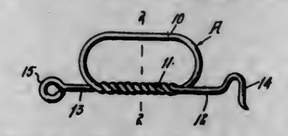
1. The combination of a hollow safe-body having a circular man-hole in its fore-wall, a circular closing-door for the said man-hole and extending outwardly beyond the face of said fore-wall, and opposite lateral-extensions on the said outwardly-extending part of the circular door adapted to laterally-overlap the said man-hole adjacent the point of co-action of the circular door and its circular man-hole.

2. A burglar-proof safe comprising a hollow body-portion having a circular man-hole, a circular closing-door for the man-hole, oppositely-disposed lateral-extensions on the outer face of said circular door each having an expanding-chamber beneath it and overlapping said man-hole, horizontal vent outlets or passages provided in the said lateral-extensions and leading from said expanding-chambers to their outer faces, fragile or easily dislodged plugs inserted in said vent outlets or passages and adapted to receive and offset the high pressure of an explosive when fired within said lateral-extensions.



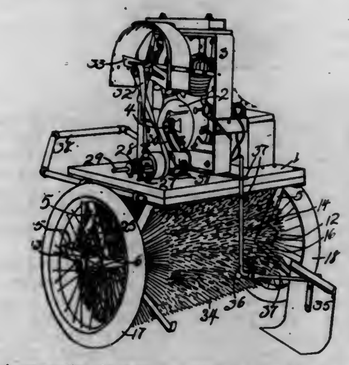
3. A safe comprising a body-portion having a suitable man-hole, a door adapted to properly engage said man-hole and having oppositely-disposed lateral-extensions; and horizontal vent outlets or passages provided in said oppositely-disposed lateral-extensions and expanding outwardly from the inner face of said extensions to the outer face thereof and forming a ready escape for any explosive fired beneath the said lateral-extensions.

1,214,092. HOOK. JAMES C. STEVENS, Apple River, Ill., assignor to Nannette L. Stevens, Apple River, Ill. Filed June 18, 1916. Serial No. 103,459. (Cl. 70—83.)



A hook formed from a single length of metal bent intermediately of its ends to produce a loop constituting a hand hold, the terminal portion of the length of metal being twisted upon themselves within the limits of the loop and then extended beyond respective ends of the loop, a hook formed on the outer end of one terminal portion, and a loop formed on the outer end of the other terminal portion.

1,214,093. CONCRETE-CLEANER. ROBERT C. STUBBS, Dallas, Tex. Filed Aug. 28, 1916. Serial No. 117,144. (Cl. 15—17.)



1. A concrete cleaner comprising a deck, a high speed motor mounted on said deck, bearing frames attached to said deck, a revoluble cleaner journaled in said frames, gearing operatively connecting said cleaner and said motor, a swinging frame pivotally connected to said bearing frame, supporting wheels journaled on said swinging frame and operating independently of said motor and revoluble cleaner, and means for adjusting said revoluble cleaner relative to said swinging frame.

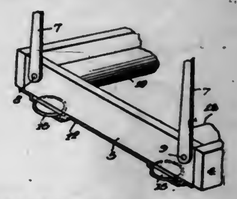
2. A concrete cleaner comprising a deck, a high speed motor mounted on said deck, bearing frames attached to said deck, a revoluble cleaner journaled in said frames, gearing operatively connecting said cleaner and said motor, a wheeled support for one end of said deck, a swinging frame pivotally connected to said bearing frames, supporting wheels journaled on said swinging frame and operating independently of said motor and revoluble cleaner, and means for adjusting said revoluble cleaner relative to said swinging frame.

3. A concrete cleaner comprising a vertically adjustable deck, bearing frames attached to said deck, a revoluble cleaner journaled in said bearing frames, a high speed motor mounted on said deck and operatively connected with said cleaner, a wheeled support for one end of said deck, a swinging frame pivotally connected to said bearing frames at one end and adjustably connected to said wheeled support and supporting wheels journaled on said swinging frame, said motor and cleaner operating independently of said supporting wheels.

4. A concrete cleaner comprising a deck, a wheel support for one end of said deck, a swinging frame operatively connected to the other end of said deck, means for adjusting said swinging frame relative to said wheel support, supporting wheels journaled on said swinging frame, a revoluble cleaner journaled on said deck, a high speed motor mounted on said deck for driving said cleaner independently of said supporting wheels.

5. A concrete cleaner comprising a deck, a wheeled support for one end of said deck, bearing frames attached to said deck, a revoluble cleaner journaled in bearings supported by the bearing frames, a swinging frame operatively connected to said bearing frames and adjustably connected to said wheeled support, supporting wheels journaled on said swinging frame, means mounted on said deck for driving said drum and means for adjusting said swinging frame relative to said wheeled support.

1,214,094. SHINGLE-CAR. LEWIS H. THOMPSON, California, Mo. Filed Sept. 12, 1914. Serial No. 861,416. (Cl. 20—86.)

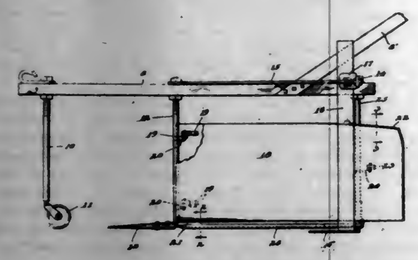


In a shingle car structure, a rectangular frame composed of end and side strips, shafts rotatably carried by the end strips of said frame, rollers mounted upon said shafts and extending from the inner surface of one of the end strips of the frame to the inner surface of the other end of the frame, said rollers extending below the lower edges of said side and end strips, a metallic strap secured to the under surface of one of said end strips and having saddles formed therein, vertical pins carried by said saddles, disks rotatably carried by said pins, said disks having their peripheries sharpened for engagement with the edge of a roof sheathing strip to prevent downwardly sliding movement of said frame, said saddles forming guards and supports for said vertical pins.

1,214,095. CULTIVATOR. MICHAEL TOMASKO, La Fayette, and CHARLES M. GARSNER, Monticello, Ind. Filed Sept. 25, 1915. Serial No. 52,674. (Cl. 97—10.)

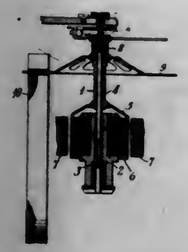
1. A cultivator comprising a draft beam; a threaded vertical rod depending from said draft beam; a cultivator

blade on the lower end of said rod; vertical pins at the rear side of said rod; spreader blades provided at their inner forward sides with perforated brackets fitting over said pins; a rod depending from the rear end of said draft beam; a vertical pin supported by said rod; perforated bars pivotally connected with the rear inner sides of said spreader blades and detachably engaging said pin; and a brace connecting the lower ends of said rods, substantially as described.



2. A cultivator comprising a draft beam; a threaded vertical rod depending from said draft beam; a cultivator blade on the lower end of said rod; vertical pins at the rear side of said rod; spreader blades provided at their inner forward sides with perforated brackets fitting over said pins; a rod depending from the rear end of said draft beam; a vertical pin supported by said rod; perforated bars pivotally connected with the rear inner sides of said spreader blades and detachably engaging said pin; a brace connecting the lower ends of said rods; a cross bar at the rear end of said draft beam; divergent braces connecting the outer ends of said bar with said first mentioned rod; hangers laterally adjustable on said cross bar; and cultivator blades on said hangers, substantially as described.

1,214,096. MOVABLE ELEMENT FOR ELECTRICAL MEASURING INSTRUMENTS. SAMUEL TROOD, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 7, 1913. Serial No. 746,774. (Cl. 171—34.)

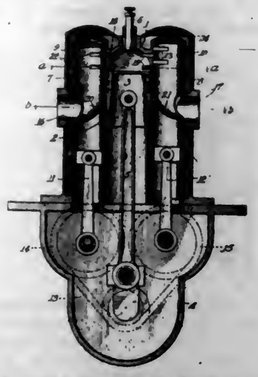


1. A movable member for electrical measuring instruments comprising a single shaft, a sleeve removably mounted thereon, an armature mounted upon the sleeve, a hub adjustably mounted upon the sleeve and a damping disk carried by the hub.

2. A movable member for electrical measuring instruments comprising a single shaft, a sleeve removably mounted thereon, an armature mounted upon the sleeve, a hub removably mounted upon the sleeve and a damping disk carried by the hub.

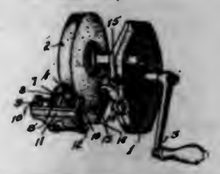
3. A movable member for electrical measuring instruments comprising a shaft, a sleeve mounted thereon, an armature mounted upon the sleeve, a hub adjustably mounted upon the sleeve, and a damping disk carried by the hub.

1,214,097. INTERNAL-COMBUSTION ENGINE. HARRY S. VROOMAN, Chicago, Ill. Filed Feb. 2, 1914. Serial No. 815,996. (Cl. 123—86.)



An internal combustion engine having a cylinder forming a combustion chamber, two valve cylinders associated with said engine cylinder and running longitudinally thereof, a hollow valve closed at the top and bottom slidable in each of said valve cylinders, said engine cylinder having a plurality of ports adapted for association with each valve, one set of ports being exhaust ports, and the other set being inlet ports, corresponding ports being substantially in the same plane transversely to said cylinder, and said ports being located close to the head end of said cylinder, each of said valves having a plurality of ports to coöperate with the corresponding engine cylinder ports, and intake and exhaust tubes for said engine, said valves having openings in their sides to communicate respectively with said intake and exhaust tubes, the said openings and said valves being of such size so that they are in constant communication with said intake and exhaust tubes, said engine cylinder having a substantially spherical end wall through which said engine cylinder ports extend.

1,214,098. GRINDING-MACHINE. MICHAEL WAGNER, Pittsburgh, Pa., assignor, by mesne assignments, to Newman Brothers, Incorporated, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 26, 1912. Serial No. 686,413. (Cl. 125—6.)

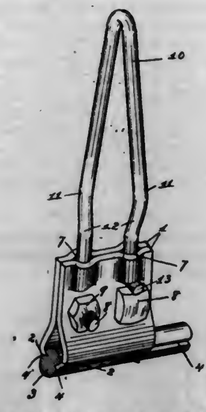


1. In combination in a facing device for grinding wheels, a support pivoted for movement toward and from the grinding wheel, yielding means tending to move the support away from the grinding wheel, a transverse guide on the support, a block provided with a facing means mounted on the guide for lateral movement, and positive means for adjusting the support toward the grinding wheel against the resistance of the yielding means.

2. In combination in a facing device for grinding wheels, a pivoted support, yielding means tending to move the support away from the grinding wheel, guide means on the support, a block provided with a facing means mounted on the guide for lateral movement and adjusting means whereby the said support can be moved toward the grinding wheel.

3. In combination in a facing device for grinding wheels, a bracket, a support pivoted to the bracket, a spring interposed between the bracket and the support to hold the support away from the grinding wheel, a guide on the support, a block adapted to slide laterally on the guide, a facing means carried by the block and means for moving the support against the action of the spring toward the grinding wheel.

1,214,099. TROLLEY-EAR. EDWIN WALDRON, Schenectady, N. Y. Filed Nov. 6, 1915. Serial No. 60,115. (Cl. 191—43.)

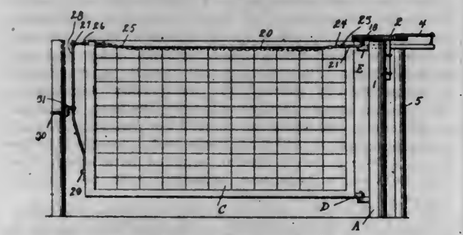


1. A wire-hanger having a wire-clamp provided with a pair of transverse openings, and a clamp-suspending loop with oppositely offset ends extending in opposite directions through the respective transverse openings in the clamp.

2. A wire-hanger comprising a pair of like interchangeable clamp-plates detachably secured together, having wire-engaging jaws and provided with transverse openings, and a clamp-suspending loop having offset ends extending in opposite directions, each through one of said transverse openings.

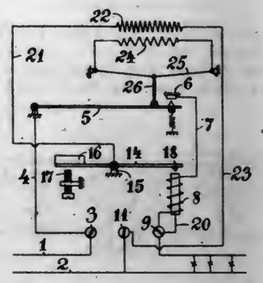
3. A wire-hanger comprising a pair of like interchangeable clamp-plates provided with bolt-holes, and with hook-holes each located above a bolt-hole, and with complementary grooves in their inner sides forming openings between the plates leading from their upper edge to the respective hook-holes; bolt-connections between said clamp-plates extending through the respective bolt-holes; and a clamp-suspending loop having its branches extending down through the respective groove-formed openings between the plates and its ends offset to form hooks, each engaging one of said hook-holes.

1,214,100. GATE. LEONARD WELKER, New Holstein, Wis. Filed Feb. 8, 1915. Serial No. 6,792. (Cl. 39—33.)



The combination with a hinge post and a latching post, of a gate hinged on said hinge post, a gear rotatable on the top of the hinge post, a pinion rotatable on the hinge axis of the gate and meshing with the gear, a latch mechanism for the gate, a keeper on the latching post engaged by said latch mechanism, a pair of levers rigidly secured to said pinion and projecting forwardly on the opposite sides of the gate in spaced relation thereto, flexible connections between said levers and latching mechanism, a lever extending rearwardly from said gear, and distant means on opposite sides of the gate for actuating said lever to rotate said gear, and pinion, whereby one of said pairs of levers first withdraws the latching mechanism and the other subsequently bears against the gate to open it.

1,214,101. HOT-WIRE ALTERNATING-CURRENT LIMITER. PEDER WESSEL, Ljan, near Christiania, Norway. Filed Mar. 24, 1915. Serial No. 16,719. (Cl. 175—268.)



1. In a hot wire alternating current limiter the combination with a main current electromagnetic relay, a transformer shunted on the main current cut in by the said relay on the current limit for which the apparatus is adjusted being reached, the secondary of said transformer supplying current to a hot wire which upon being heated effects an interruption of the main current as well as of the current to the primary of said transformer, thus causing a periodical interruption of the current until the consumption has again been brought down below the said limit.

2. In a hot wire alternating current limiter the combination with a main current electromagnetic relay, a transformer shunted on the main current cut in by the said relay on the current limit for which the apparatus is adjusted being reached, a hot wire connected to the secondary of said transformer, a lever provided with a main contact, means for interrupting said contact on the hot-wire being expanded, with the object of causing a periodical interruption of the current until the consumption has again been brought down below the said limit.

3. In a hot wire alternating current limiter the combination with a main current electromagnetic relay, a transformer shunted on the main current cut in by the said relay on the current limit for which the apparatus is adjusted being reached, a hot wire connected to the secondary of said transformer, a lever provided with a main contact located below said hot wire, means connecting said hot wire with said lever keeping the lever in position and maintaining the contact, and means to move said lever to interrupt the contact on the hot-wire being expanded with the object of causing a periodical interruption of the current until the consumption has again been brought down below the said limit.

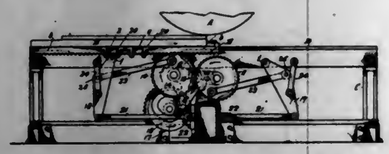
4. In a hot wire alternating current limiter, a transformer shunted on the main current, means for cutting in the primary of said transformer on the current limit for which the apparatus is adjusted being reached, a hot wire connected to the secondary of said transformer, and means for effecting an interruption of the main current, when the hot wire is expanded.

5. In a hot wire alternating current limiter, the combination with a main current electromagnetic relay, a transformer shunted on the main current cut in by the said relay on the current limit for which the apparatus is adjusted being reached, a hot wire connected to the secondary of the said transformer, a lever provided with a main contact and an auxiliary contact for the main current, means actuated by the hot wire for keeping said

lever in position and maintaining said main and auxiliary contact, means for moving the lever on the hot wire being expanded thereby first interrupting the main contact and then the auxiliary contact, a circuit comprising a resistance, shunted to the main current relay and means for closing said shunted circuit between the interruption of said main and auxiliary contacts and for interrupting it again between the reëstablishment of said contacts in order to reduce the current passing through the main current relay on the main circuit being reopened so as to equalize the lessened resistance of the lamps when their filaments are cooled.

[Claims 6 to 8 not printed in the Gazette.[

1,214,102. BED-MOTION FOR PRINTING-MACHINES. BRUCE C. WHITE, New York, N. Y., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Aug. 6, 1915. Serial No. 43,903. (Cl. 74—98.)



1. The combination with a reciprocating bed and means for driving it during the intermediate portion of its movement in either direction, of rocking levers acting to retard, stop, reverse, and accelerate the bed at the ends of its movement, means for rocking said levers, and link supports for said levers, said link supports being arranged to raise and lower the levers during the rocking movement to engage and release the bed and to secure the movement of the bed engaging part of the levers in substantially a straight line parallel with the bed movement, except at the beginning and end of their bed engaging movement.

2. The combination with a reciprocating bed and means for driving it during the intermediate portion of its movement in either direction, of rocking levers acting to retard, stop, reverse and accelerate the bed at the ends of its movement, crank mechanism for rocking said levers, and link supports for said levers, said link supports being arranged to raise and lower the levers during the rocking movement to engage and release the bed and to secure the movement of the bed engaging part of the levers in substantially a straight line parallel with the bed movement, except at the beginning and end of their bed engaging movement.

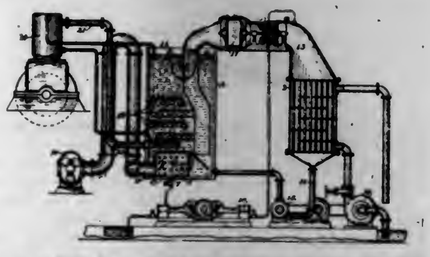
3. The combination with a reciprocating bed, of rocking levers acting to retard, stop, reverse, and accelerate the bed at the ends of its movement, cranks and connections for rocking said levers, bed driving gears for moving the bed in opposite directions, means for engaging and releasing the bed with and from said gears alternately, and link supports for said levers, said link supports being arranged to raise and lower the levers during the rocking movement to engage and release the bed and to secure the movement of the bed engaging part of the levers in substantially a straight line parallel with the bed movement, except at the beginning and end of their bed engaging movement.

4. The combination with a reciprocating bed, of rocking levers acting to retard, stop, reverse, and accelerate the bed at the ends of its movement, cranks and connections for rocking said levers, bed driving gears for moving the bed in opposite directions, a single rack on the bed, a rocking frame carrying said gears, means for rocking said frame to move said gears alternately into and out of mesh with the rack, said racks and gears having gaps extending across a part of their width and arranged on opposite sides of the rack and gears, whereby the gears may be brought into meshing position without engagement of the rack and gear teeth until the ends of the gaps are reached in the movement of the bed, and link supports for said levers arranged to raise and lower the levers during the rocking movement to engage and release the bed and to secure the movement of the bed engaging part of the levers in substantially a straight line parallel with the bed movement, except at the beginning and end of their bed engaging movement.

5. The combination with a reciprocating bed and means for driving it during the intermediate portion of its movement in either direction, of rocking levers acting to retard, stop, reverse, and accelerate the bed at the ends of its movement, said levers having fulcra movable transversely to the bed, means for rocking said levers, and a swinging connection between the levers and the frame arranged to secure the raising and lowering of the levers on their movable fulcra during the rocking movement to engage and release the bed and to secure the movement of the bed engaging part of the levers in substantially a straight line parallel with the bed movement, except at the beginning and end of their bed engaging movement.

[Claims 6 to 17 not printed in the Gazette.]

1,214,103. POWER-GENERATING APPARATUS. FRED L. WILLIAMS, San Francisco, Cal. Filed June 21, 1916. Serial No. 104,906. (Cl. 60—4.)



1. A power generating apparatus comprising an open-ended boiler adapted to contain water, means for passing a heating medium through said boiler and out the open end thereof for heating said water, a steam-operated, power-generating unit, a condenser connected with the exhaust side of the unit, and a pipe connected with the inlet side of the unit, said pipe having its opposite end submerged in the water contained in the boiler.

2. A power generating apparatus comprising an open-ended boiler adapted to contain water, means for forcing hot gases directly through the body of water contained in the boiler, a steam-operated, power generating unit, a condenser connected with the exhaust side of the unit, and a pipe connected with the inlet side of the unit, said pipe having its opposite end submerged in the water contained in the boiler.

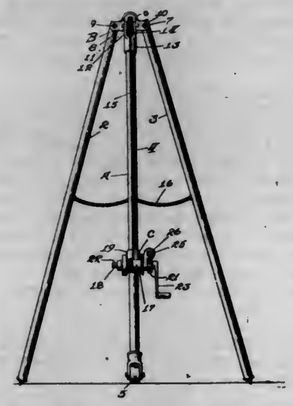
3. A power generating apparatus comprising a water-containing, open-ended boiler, a combustion chamber in the boiler surrounded by the water, said combustion chamber having a plurality of openings formed therein for the escape of the products of combustion and said openings being arranged to permit the liberated products to escape directly through the water body contained in the boiler, a burner in the combustion chamber, means for continuously supplying the combustion chamber with air under pressure, a bell having one end submerged in the boiler water, a steam turbine supplied with steam from said bell, and a condenser connected with the exhaust side of the turbine.

4. A power generating apparatus comprising a water-containing, open-ended boiler, a combustion chamber in the boiler surrounded by the water, said combustion chamber having a plurality of openings formed therein for the escape of the products of combustion and said openings being arranged to permit the liberated products to escape directly through the water body contained in the boiler, a burner in the combustion chamber, means for continuously supplying the combustion chamber with air under pressure, a bell having one end submerged in the boiler water, a steam turbine supplied with steam from said bell, a condenser connected with the exhaust side of the turbine, a dynamo connected with the turbine, and a housing inclosing the dynamo and turbine, said housing also serving the purpose of a steam delivery pipe between the bell and the turbine.

5. A power generating apparatus comprising a water-containing, open-ended boiler, a combustion chamber in the boiler surrounded by the water, said combustion chamber having a plurality of openings formed therein for the escape of the products of combustion and said openings being arranged to permit the liberated products to escape directly through the water body contained in the boiler, a burner in the combustion chamber, means for continuously supplying the combustion chamber with air under pressure, a bell having one end submerged in the boiler water, a steam turbine supplied with steam from said bell, a condenser connected with the exhaust side of the turbine, a dynamo connected with the turbine, a housing inclosing the dynamo and turbine, said housing also serving the purpose of a steam delivery pipe between the bell and the turbine, means for creating a circulation of water between the bell and the boiler water, and means for returning condensed water from the condenser to the boiler.

[Claim 6 not printed in the Gazette.]

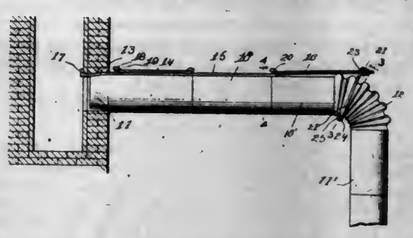
1,214,104. PORTABLE HOIST. ERNEST C. WINGIRE, Minneapolis, Minn., assignor of one-half to Peter J. N. Miller, Miller, S. D. Filed June 21, 1915. Serial No. 35,447. (Cl. 254—145.)



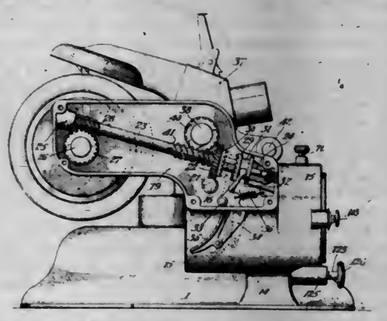
The combination with a portable hoist having three posts provided with means for limiting their movement away from one another at the bottom, of a fixture comprising a yoke having two pairs of outstanding flanges between each pair of which the upper end of each of two of said posts is pivotally secured spaced from the other of said posts, each flange of a pair being alined with the corresponding flange of the other pair, a pintle spanning said yoke, a sheave carried by said pintle, a coupling carried upon the upper end of the third post and having a pair of bifurcations journaled on said pintle to each side of said sheave, and lifting mechanism supported by said post.

1,214,105. STOVEPIPE-HOLDER. LEONARD P. WIRTZ, Pilger, Saskatchewan, Canada. Filed Dec. 3, 1912. Serial No. 734,767. (Cl. 126—318.)

In a stove pipe holder, the combination with a chimney having a lateral flue opening, a pipe projecting into said opening, a transversely corrugated elbow carried on the end of said pipe and extending downward therefrom, a ring having an eye above said elbow and secured around the elbow in the bottom of one of the corrugations, a series of detachably connected links of different lengths, a hook formed on the innermost link for engagement with the inner wall of the flue, the outermost link being threaded and being adapted to pass through the eye of said ring, and a nut on the extremity of the outermost link bearing against said eye.



1,214,106. TALKING-MACHINE. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Jan. 24, 1914. Serial No. 814,174. (Cl. 274—17.)



1. In a talking machine, the combination of a hollow base, a motor and motor shaft therein, a sound-record mandrel shaft and a driven shaft supported by said base in parallel relation, worm-gear connections between said mandrel and driven shafts for driving the mandrel shaft from the driven shaft, and worm gear connections between said motor shaft and driven shaft.

2. In a talking machine, the combination of a hollow base, a motor and vertical motor shaft therein, a sound-record mandrel shaft, a sound box feed-screw and a driven shaft all supported by said base parallel to each other, worm-gear connections between said driven shaft and said mandrel shaft and feed-screw, and worm gear connections between said motor shaft and driven shaft.

3. In a talking machine, the combination of a hollow base, a motor within said base, a vertical motor shaft having a worm on its upwardly projecting end, a bearing or support for said worm, a driven shaft having a worm-gear engaging said worm opposite said support, a sound-record mandrel shaft, and worm-gear connections between said driven shaft and mandrel shaft.

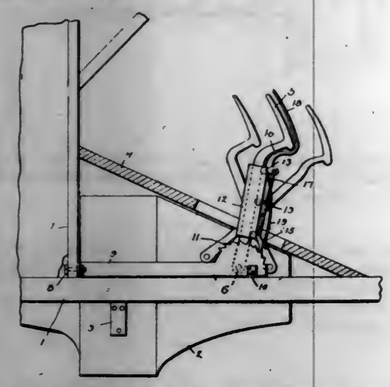
4. In a talking machine, the combination of a sound-record mandrel shaft and a sound-box carriage, with a hollow base having a post extending upwardly therein, a hollow motor shaft having bearing on the upper end and the sides of said post, a motor for driving said shaft, and driving connections between said motor shaft, the mandrel shaft and the sound-box carriage.

5. In a talking machine, the combination of a hollow base and two oppositely disposed abutments supported by said base, a motor in said base, a speed governor supported on one of said abutments and operatively connected to said motor, a sound-box carriage [illegible] the mo-

tor, a correction device supported on the other abutment, and operating connections between said carriage and correction device.

[Claims 6 to 20 not printed in the Gazette.]

1,214,107. FOOT-LEVER CONTROLLING DEVICE. HARRY YARNALL, Roosevelt, Wash. Filed Oct. 11, 1916. Serial No. 125,090. (Cl. 74—81.)



1. A controlling device of the kind described to be used in combination with a spring pressed lever comprising a rack adapted to be connected to a suitable support, a plate to be secured to the lever, a pawl pivoted to the plate to engage the teeth of the rack, a bell crank lever pivoted to the plate, and means connecting the bell crank lever and the pawl for removing the pawl from engagement with the rack to allow the lever to return to its normal position when the bell-crank lever is depressed.

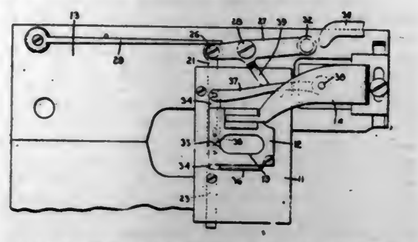
2. The combination with a spring pressed lever of a rigidly mounted rack arranged adjacent to the lever, a supporting plate clamped to the lever, a pawl pivotally mounted on the supporting plate means on the plate for holding the pawl in engagement with the teeth of the rack, a bell crank lever pivoted to the supporting plate, and means connecting the bell crank lever and the pawl whereby when the bell crank lever is depressed the pawl will be raised and consequently permit of the return of the spring pressed lever to its normal position.

3. The combination with a spring pressed foot lever, of a rigidly mounted rack arranged adjacent the side of the lever, a supporting plate removably connected to the lever, a pawl pivotally connected to the supporting plate and arranged to engage the teeth of the rack, a leaf spring rigidly connected to the supporting plate and bearing against the pawl for holding the pawl in engagement with the teeth of the rack, a substantial bell crank foot lever pivoted to the plate and arranged to one side of the foot pedal, and a connecting rod pivotally connected to the pawl and to the bell crank foot lever whereby when the bell crank foot lever is depressed the pawl will be raised from engagement with the teeth of the rack and permit of the return of the foot pedal to its normal position.

1,214,108. BUTTONHOLE-SEWING MACHINE. FRANK ZALESKI, Somerville, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed July 6, 1915. Serial No. 38,185. (Cl. 112—33.)

1. In a buttonhole sewing machine, the combination with upper and under thread mechanism, of work-clamping means comprising two clamping members between which the work is held continuously clamped during a predetermined stitching operation, means carried by one of said members for cutting the upper thread, and means carried by the other of said members for clamping the severed end of the upper thread.

2. In a buttonhole sewing machine, the combination with upper and under thread mechanism, of work-clamping means comprising two clamping members between which the work is clamped, means carried by one of said members for cutting both the upper and the under thread, and means carried by the other of said members for clamping the severed end of the upper thread.



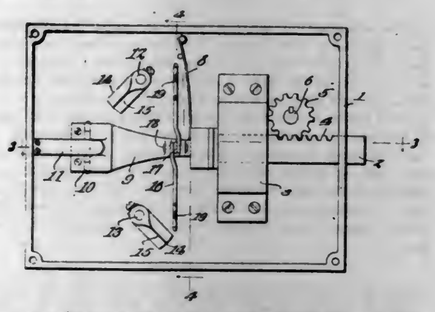
3. In a buttonhole sewing machine, the combination with upper and under thread mechanism, of work-clamping means comprising an upper and an under clamping member between which the work is held continuously clamped while a plurality of stitches are being formed, means carried by the under clamping member for cutting the upper thread, and means carried by the upper member for clamping the upper thread.

4. In a buttonhole sewing machine, the combination with upper and under thread mechanism, of work-clamping means comprising an upper and an under clamping member between which the work is clamped, means carried by the under clamping member for cutting both the upper and the under thread, and means carried by the upper member for clamping the severed end of the upper thread.

5. In a buttonhole sewing machine, the combination with a stitch frame having upper and under thread mechanism, of a clamp frame, said frames being movable relative to each other, a work clamp carried by the clamp frame and presenting two clamping members, a thread-cutting device carried by one clamping member, an upper thread clamping device carried by the other clamping member, and means actuated by the relative movement of said frames to operate said cutting and clamping devices to cut the upper thread and clamp the severed end thereof at the end of a stitching operation.

[Claims 6 to 9 not printed in the Gazette.]

1,214,109. PERMUTATION-LOCK. CLARENCE M. ADAMS, Rossville, Ga. Filed Aug. 4, 1916. Serial No. 113,176. (Cl. 70—18.)



1. In a permutation lock, a locking member, a movably mounted detent for holding it, a plurality of individually operable members, movable means carried by the detent and coöperable with said operable members, said operable members being arranged, when moved to a predetermined position, to conjointly move said means so that it carries the detent to releasing position.

2. In a permutation lock, a locking member, a movable detent for holding it, a rocker carried by the detent, and a plurality of individually operable means coöperable with said rocker and arranged, when moved to a predetermined position, to move said rocker for carrying the detent with it to releasing position.

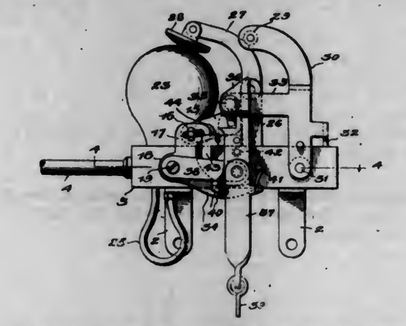
3. In a permutation lock, a locking member, a movable detent for holding it, a rocker pivoted to the detent between its ends, and independently operable means cooperable with the arms of the rocker and arranged, when moved to a predetermined position, to move the rocker for carrying the detent with it to releasing position.

4. In a permutation lock, a locking member, a movable detent for holding it, a rocker pivoted between its ends to the detent, and a pair of tumbler members coöperable with the arms of the rocker and arranged, when moved to a predetermined position, to move said rocker for carrying the detent with it to releasing position.

5. In a permutation lock, a locking member, a movable detent for holding it, a rocker pivoted to the detent having projections, and a plurality of individually operable cams arranged, when moved to simultaneously engage said projections, to move said rocker for carrying the detent with it to releasing position.

[Claims 6 and 7 not printed in the Gazette.]

1,214,110. MUSIC-LEAF TURNER. JOHN B. ALBERT, Danbury, Conn. Filed Apr. 21, 1916. Serial No. 92,718. (Cl. 84—17.)



1. In a leaf turner, a support, a swingingly mounted hollow leaf carrier, a self-expansible collapsible body communicatively connected with the carrier for creating a vacuum therein whereby a leaf will adhere to the carrier, and means operable in one continuous direction for effecting both a collapsing and releasing of the body.

2. In a leaf turner, a support, a swingingly mounted hollow leaf carrier, a self-expansible collapsible body communicatively connected with the carrier, a carrier-swinging means, means for collapsing and releasing the body for creating a vacuum in the carrier whereby a leaf will adhere to the latter, and a common actuator for the last two means initially free from the collapsible body.

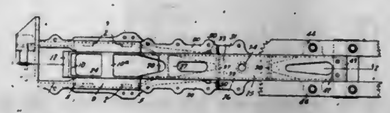
3. In a leaf turner, a support, a swingingly mounted hollow leaf carrier, a self-expansible collapsible body communicatively connected with the carrier, means for compressing the body, means for swinging the carrier, an actuator for the last two means releasably engaging the body-compressing means, and means movable relative to the actuator for releasing the body-compressing means from the actuator for creating a vacuum in the carrier whereby a leaf will adhere to the latter.

4. In a leaf turner, a casing, a leaf carrier swingingly mounted thereon, a collapsible bulb, means of communication between the bulb and carrier whereby on collapsing and releasing pressure from the bulb a vacuum will be created in the carrier for causing a leaf to adhere to the latter, means for collapsing the bulb, and means automatically rendering the bulb-collapsing means inoperative prior to movement of the carrier.

5. In a leaf turner, a casing, a leaf carrier swingingly mounted thereon, a collapsible bulb normally expanded, means of communication between the bulb and carrier whereby on collapsing and releasing pressure from the bulb a vacuum will be created in the carrier for causing a leaf to adhere to the latter, and means for successively compressing and releasing the bulb and swinging the carrier.

[Claims 6 to 18 not printed in the Gazette.]

1,214,111. DRAFT-GEAR CARRIER. JOHN ALLISON, Dravosburg, Pa., assignor to Pittsburgh Steel Foundry Company, Glassport, Pa., a Corporation of Pennsylvania. Filed Apr. 13, 1915. Serial No. 21,049. (Cl. 213—42.)



1. A draft gear carrier, comprising side members spaced to receive the draft gear therebetween, and a rearward extension integral with said side members and extending over and beyond the body bolster, the rear end of said extension being in substantially the same horizontal plane as the body bolster, and a laterally extending member connected to said extension and arranged to transmit the upward thrust of the carrier to the center sills of the car.

2. A draft gear carrier, comprising integral side members spaced to receive the draft gear therebetween, said side members being provided with integral inwardly extending horizontal flanges lying immediately adjacent the top edges of the follower plates and forming the upper guide for said follower plates and serving as a housing inclosing and protecting the same.

3. A draft gear carrier, comprising integral side members spaced to receive the draft gear therebetween, said side members being provided with inwardly extending horizontal flanges forming a top guide for the follower plates, in combination with removable horizontal bars forming the lower guide for said follower plates.

4. A draft gear carrier, comprising integrally connected side members spaced to receive the draft gear therebetween, longitudinally extending bars directly supporting the draft gear, and integral depending bracket members on the lower portions of said side members having openings for receiving said longitudinal gear supporting bars.

5. A draft gear carrier, comprising integrally connected side members spaced to receive the draft gear therebetween and provided in the horizontal axial plane of the draft gear with openings to receive transversely extending spring carrying devices.

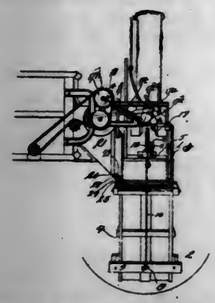
[Claims 6 to 12 not printed in the Gazette.]

1,214,112. HINGED GEAR-TRIP FOR AUTOMATIC COTTON-PRESSES. ELLSWORTH R. ALSEY, Paragould, Ark. Filed Feb. 9, 1916. Serial No. 77,175. (Cl. 100—25.)

1. In a multiple box cotton press, the combination of a frame, a tamper mounted therein, of a starting and stopping trip lever for the feeding means of the press, a device carried by the tamper to coöperate with the trip lever to trip the same, said trip device comprising an angular member comprising a vertical arm and a horizontal arm extending at right angles to each other, the horizontal arm being secured to the tamper, said vertical arm having a hinged section adapted to be thrown down on its hinged connection to avoid contacting with the trip lever when the tamper reaches its uppermost position, while changing the press boxes, said hinged section having an upper cam end, and spring means to hold the hinged section vertically.

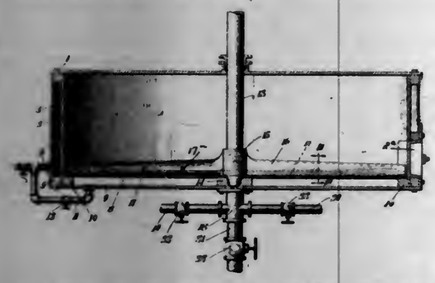
2. In a hinged gear trip for automatic cotton presses, the combination of a frame and a tamper mounted therein,

of a starting and stopping trip lever for the feeding means of the press, a device carried by the tamper and having an arm, an extension hinged to said arm, a spring for holding the extension alined with said arm so that the upper



end of the extension may trip the trip lever, said spring also constituting means to hold the extension swung downwardly, whereby the extension avoids coöperating with said lever, when changing the press boxes.

1,214,113. TANK FOR TREATING GARBAGE. JAMES A. ANDERSON, Barren Island, N. Y. Filed Mar. 8, 1916. Serial No. 82,807. (Cl. 87—13.)



1. A tank for the treatment of garbage comprising a tank, a stirrer shaft mounted therein, stirrer blades connected thereto, screen pipes carried by said shaft and extending outwardly along and back of the stirrer blades, means for supplying fluid to said screen pipes, and means permitting the contents of the tank to flow out through said screen pipes.

2. A tank for treating garbage comprising a tank, a stirrer shaft mounted therein, said shaft being hollow at its lower end, a stirrer blade connected to said shaft at the lower end thereof, a hollow screen pipe connected to the interior of said shaft and extending along and back of said stirrer blade, and means connected to the lower end of the shaft for supplying fluid to said screen pipe, and means permitting the contents of the tank to flow out through said pipe.

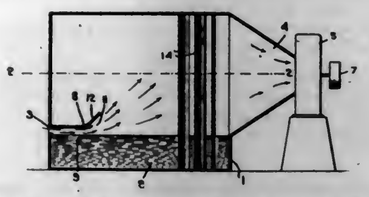
3. A tank for treating garbage comprising a tank, a stirrer shaft mounted therein, said shaft being hollow at its lower end, a stirrer blade connected to said shaft at the lower end thereof, a screen connected to the interior of the said shaft and extending along and back of said stirrer blade, means connected to the lower end of the shaft for supplying fluid to said screen, and means for permitting the liquid contents of the tank to flow out through said screen and through the bottom of the tank.

4. A tank for the treatment of garbage comprising a tank, a vertically arranged stirrer shaft therein, said shaft being hollow at its lower end, a pair of stirrer blades connected to said shaft at its lower end, a pair of hollow screens connected to and in communication with the interior of said shaft and extending outwardly at the back of the stirrer blades whereby they are protected by said blades, means connected to the lower end of said shaft for supplying steam and solvent to the screens, and means for permitting the liquid contents of the tank to be discharged through the screens and the hollow shaft.

5. A tank for treating garbage comprising a tank, a stirrer shaft mounted therein, a stirrer blade connected to said shaft, a detachable hollow screen pipe extending along the stirrer blade, means for supplying fluid to the tank through said screen pipe, and means for permitting the contents of the tank to flow out through said pipe.

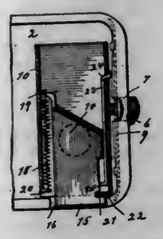
[Claims 6 to 8 not printed in the Gazette.]

1,214,114. APPARATUS FOR CONDITIONING AIR OR OTHER GAS. BERNARD R. ANDREWS, Newton, Mass. Filed Aug. 2, 1915. Serial No. 43,066. (Cl. 261—119.)



In a device of the class described, the combination with a casing containing water, of means forming with the top surface of the water an air passage which presents a narrow throat having a diverging discharge end, and means to cause a current of air to pass through said passage whereby the difference in the static pressure of the air at the constricted portion of said passage and at the diverging end thereof causes a conditioning spray to be developed from the water beneath the constricted portion of the passage, which conditioning spray is delivered to the air current.

1,214,115. MATCH-CASE. JOHN H. ASTRUCK, New York, N. Y. Filed Apr. 17, 1916. Serial No. 91,541. (Cl. 206—35.)

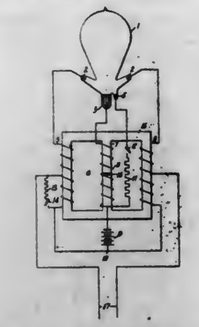


1. A match case provided with a cover having a slotted rim, a blade slidable within the cover and adapted to be projected outward through said slotted rim, a spring engaging the blade, means for locking the blade to the cover, and means for opening the cover and simultaneously unlocking the blade.

2. A match case provided with a cover, a blade slidable and laterally displaceable within the cover, a spring engaging the blade, means for locking the blade to the cover, a catch for opening the cover and simultaneously unlocking the blade, and a finger piece on the blade arranged at an angle to said catch.

3. A match case provided with a spring-hinged cover and a housing within the cover, one of said parts being apertured, a slidable and tiltable blade within the housing, a spring engaging the blade and adapted to throw the same outward, means for locking the blade to the housing, a catch on the cover that is adapted to engage the body of the match case, and an arm on the housing that is operable by the catch and engages the blade, said arm being adapted to unlock the blade from the housing.

1,214,116. RECTIFIER SYSTEM. ALFRED L. ATHERTON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 1, 1915. Serial No. 18,508. (Cl. 175—363.)



1. The combination with a vapor rectifier, of supply and load circuits therefor, a transformer connected in said supply circuit, a maintaining coil connected in said load circuit and mounted in inductive relation to the core of said supply transformer, and means for controlling the working flux of said transformer so that it may be rendered effective or ineffective in inducing a starting E. M. F. in said maintaining coil.

2. The combination with a vapor rectifier provided with main electrodes and a starting anode adjacent the main cathode, of suitable supply and load circuits connected to said main electrodes, a maintaining reactance device in said load circuit, and means for inducing an E. M. F. in said reactance device tending to establish a starting arc between said starting anode and the main cathode.

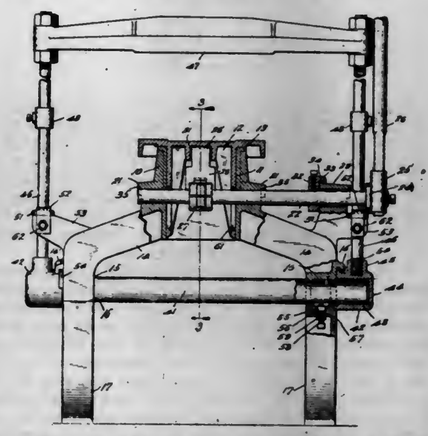
3. The combination with a vapor rectifier provided with main electrodes and a starting anode, of a transformer, connections from the terminals of the secondary winding of said transformer to the main anodes of said rectifier, a connection from the cathode of said rectifier to substantially the midpoint of said secondary winding, a winding inserted in said last named connection and mounted on an auxiliary core portion of said transformer free from alternating flux, means for altering the magnetic conditions in said transformer whereby an alternating E. M. F. will be induced in said auxiliary winding, and connections for applying said E. M. F. to said starting anode.

4. The combination with a rectifier provided with main electrodes and a starting anode, of a transformer provided with split primary and secondary windings, connections from the outer terminals of said secondary winding to the main anodes of said rectifier, a connection from the cathode of said rectifier to substantially the midpoint of said secondary winding, an auxiliary core member on said transformer symmetrically disposed with respect to said half windings whereby it receives no magnetic flux prior to starting said rectifier, a maintaining winding in inductive relation to said auxiliary core member and inserted in said last named connection, means for altering the distribution of magnetic flux in said transformer whereby a variable flux is interlinked with said maintaining winding for the generation of an E. M. F. therein, and connections whereby said E. M. F. may be impressed between the main cathode and said starting anode.

5. The combination with a rectifier provided with main electrodes and a starting anode, of a transformer provided with split primary and secondary windings, connections from the outer terminals of said secondary winding to the main anodes of said rectifier, a connection from the cathode of said rectifier to substantially the mid point of said secondary winding, an auxiliary core member on said transformer symmetrically disposed with respect to said half windings whereby it receives no magnetic flux prior to starting said rectifier, a maintaining winding in inductive relation to said auxiliary core member and inserted in said last named connection, an auxiliary load, means for supplying said load from a portion only of the turns of said transformer, whereby the normal distribution of flux therein is altered and a variable flux caused to interlink with said auxiliary winding with the generation of an E. M. F. therein, and connections whereby said E. M. F. may be impressed between the main cathode and said starting anode.

[Claims 6 to 8 not printed in the Gazette.]

1,214,117. MOLDING-MACHINE. WILLIAM I. BALLENTINE, Indianapolis, Ind., assignor to The B. & B. Mfg. Co., Indianapolis, Ind., a Corporation of Indiana. Filed May 8, 1916. Serial No. 96,097. (Cl. 22—44.)



1. A molding machine comprising a main body having a vertical stem-receiving passage, a flask-carrying table provided with a hollow stem mounted in said passage, a rock shaft journaled in said main body within and across said passage, a lever mounted within said passage upon said shaft, and a link arranged within said hollow stem and connecting the lever and flask-carrying table.

2. A molding machine comprising a main body having a vertical stem-receiving passage, a flask-carrying table provided with a hollow stem mounted in said passage, a rock shaft journaled in the main body within and across said passage, and connections protected by said hollow stem, between the shaft and flask-carrying table.

3. In a molding machine, the combination with the main body thereof, of a cylindrical projection carried thereby, a fitting having a pocket sleeved over said projection and journaled thereon, said fitting having a segmental circumferential flange at its inner end, an overhanging segmental protecting lip carried by said main body and projecting over said segmental flange and holding the same axially in place, an arm carried by said fitting, and a cross head carried by said arm.

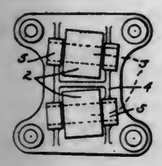
4. A molding machine comprising a main body having a vertical stem-receiving passage, a flask-carrying table having a hollow stem mounted in said passage, a shaft journaled in the main body across said passage, means carried by the shaft within said stem for reciprocating the flask-table by oscillation of the shaft, an additional bearing for said shaft, a collar carried by the shaft adjacent the inner end of said bearing, said collar carrying a segmental lip overhanging the adjacent end of said bearing.

5. A molding machine, comprising a main body having a vertical stem-receiving passage, a flask-carrying table provided with a hollow stem which is mounted in said passage and vertically slidable therein, a rock shaft journaled in said main body below said table, an arm mounted upon said shaft, and a link pivoted to said shaft and pro-

jecting upward into said hollow stem for lifting the table upon the turning of said shaft, said link and said table being connected only as the table rests on the link end.

[Claim 6 not printed in the Gazette.]

1,214,118. SIDE BEARING. FRANKLIN L. BARBER and EDWIN W. WEBB, Chicago, Ill., assignors to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 22, 1915. Serial No. 57,250. (Cl. 64—64.)



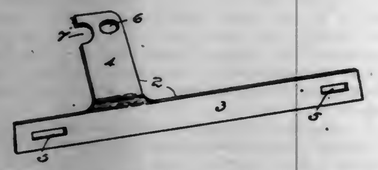
1. In a bearing, the combination with a base member having laterally spaced lugs with axially alined seats, of an axle mounted in said seats, and a roller journaled on the axle, one of said seats having a lug surface for limiting the endwise movement of the axle in one direction, the other of said seats having a longitudinally extended clearance groove and the adjacent end of said axle having a reduced portion onto which the seat, overlying the outer end portion of said groove, is swaged.

2. In a bearing, the combination with a base member having laterally spaced lugs with axially alined axle seats, the said axle seats having circumferentially spaced longitudinally extended clearance grooves, of an axle fitting said grooved seats with a driving fit and having at its ends reduced portions, and a roller journaled on the axle, one of said seats having a lug surface engaging the reduced portion of the adjacent end of the axle for holding the axle against rotation and endwise movement in one direction, the seat at the other end of the axle, overlying the outer end of one of said grooves, being swaged inward onto the underlying reduced portion of the axle.

3. In a bearing, the combination with a cast base having laterally spaced lugs with axially alined axle seats, the said axle seats having circumferentially extended clearance grooves, of an axle fitting the said grooved seats with a driving-fit, and a roller journaled on said axle.

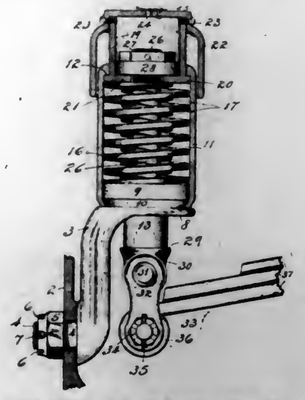
4. In a bearing, the combination with a cast base having laterally spaced lugs with axially alined axle seats, the said axle seats having circumferentially spaced longitudinally extended clearance grooves, of an axle fitting the said grooved seats with a driving fit, and a roller journaled on said axle, the said axle having beveled end portions and the said seats having lug surfaces engaging the said beveled end surfaces and holding the said axle both against rotation and endwise displacement.

1,214,119. NUMBER-PLATE BRACKET FOR AUTOMOBILES. GEORGE G. BAYNE, Quincy, Ill., assignor to Safety Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed July 6, 1915. Serial No. 38,298. (Cl. 40—125.)



A number-plate bracket formed from a sheet of metal and comprising an elongated bar having intermediate its ends a supporting projection, said projection turned at a right angle to the face and from the edge of the bar and having near its terminal a perforation and a recess, the latter cut in one of its lateral edges.

1,214,120. SHOCK AND REBOUND ABSORBER. GEORGE G. BAYNE, Quincy, Ill. Filed Mar. 20, 1916. Serial No. 85,399. (Cl. 267—19.)



1. In a device of the character described, a base, a casing secured thereto, its upper end provided with an abutment, a bearing-sleeve reciprocable in said casing and having a flange normally resting on said base, a compression-sleeve reciprocable in said casing and having a flange normally contacting said abutment, means for operating said sleeves, and a spring compressible by said sleeves.

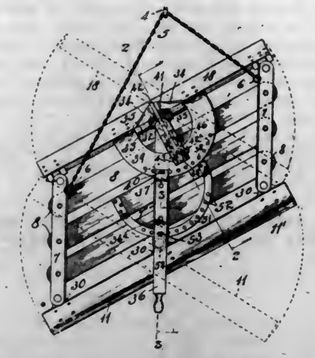
2. In a device of the character described, a base, a casing secured thereto, its upper end provided with an abutment, a bearing-sleeve reciprocable in said casing and having a flange normally resting on said base, a compression-sleeve reciprocable in said casing and having a head normally contacting said abutment, an absorber-spring compressible by said sleeves, a vehicle-spring, and means operable by the vehicle-spring for operating said sleeves.

3. In a device of the nature described, a base, a casing secured thereto, its upper end provided with an abutment, a bearing-sleeve reciprocable in said casing and having a flange normally resting on said base, a compression-sleeve reciprocable in said casing and having a flange normally contacting said abutment, an absorber-spring interposed between said sleeves, vehicle-spring-actuated means for operating the compression-sleeve to cause it to compress said spring, and vehicle-spring-actuated means for operating the bearing-sleeve to cause it to compress said absorber-spring.

4. In a device of the character described, a base, a casing secured thereto, its upper end provided with an abutment, a bearing-sleeve reciprocable in said casing and having a flange normally resting on said base, a compression-sleeve reciprocable in said casing and having a head normally contacting said abutment, an absorber-spring compressible by said sleeves, a staff penetrating both of said sleeves and movable therethrough, and a vehicle spring connected with said staff, the reciprocating movements of said staff and means associated therewith adapted to operate said sleeves whereby to compress said absorber spring.

1,214,121. ROAD-DRAG. GEORGE G. BAYNE, Quincy, and FRED A. RUNKLE, Macomb, Ill. Filed Apr. 29, 1916. Serial No. 94,394. (Cl. 37—5.)

1. In a drag, a front plane, a rock-shaft on which it is mounted, a sector connected with the rock-shaft, a drag-frame pivotally connected at its front end to said plane, means for rocking said plane on said shaft, a plane at the rear end of the frame, a lever for swinging said frame in a horizontal arc relatively to the front plane, and means associated with said sector and lever for locking said frame from swinging.



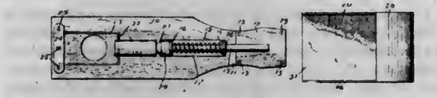
2. In a drag, a front plane, a rock-shaft on which it is mounted, a sector connected with the rock-shaft, a drag-frame pivotally connected at its front end to said plane, means for rocking said plane on said shaft, a plane at the rear end of the frame, a sector fixed on the frame, eccentric to the one recited, a lever adapted to swing the frame and rear plane in a horizontal arc, and plural means whereby said lever may be locked in engagement with both sectors.

3. In a drag, a knuckle, a rocker-casting pivoted thereto to rock in a vertical arc, a plane fixed to said casting, a drag frame pivotally connected to said knuckle to swing in a horizontal plane, means for rocking said casting, means for locking it in set position, means for swinging the frame in the arc recited, means for locking it in set position, and a plane arranged at the rear part of the frame.

4. In a drag, a knuckle, a rocker-casting pivoted thereto to rock in a vertical arc, a plane fixed to said casting, a drag frame pivotally connected to said knuckle to swing in a horizontal plane, a link one end of which is attached to said casting, a lever for moving said link forward or back, means for locking the lever in set position, means for swinging the frame in the arc recited, means for locking it in set position, and a plane arranged at the rear part of the machine.

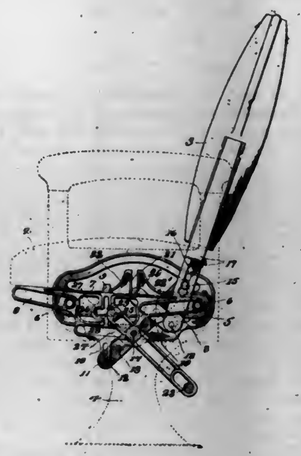
5. In a drag, a front plane, a rock-shaft on which it is mounted, a sector connected with the rock-shaft, a drag-frame pivotally connected at its front end to said plane, a link for rocking said plane on said shaft, a lever for imparting reciprocating movements to said link, a plane at the rear end of the frame, a lever for swinging said frame in a horizontal arc relatively to the front plane, and means associated with said sector and the last recited lever for locking said frame from swinging.

1,214,122. TOY. JOSEPH A. BEAMISDERFER, Jonestown, Pa. Filed Mar. 31, 1916. Serial No. 88,112. (Cl. 124—12.)



A toy including a gun comprising a base, a bearing bracket carried by said base, a plunger slidably carried by said bearing bracket and having a handle provided with an annular groove adjacent its forward end, a spring engaging said plunger to yieldably hold said plunger in a normal position, and a resilient U-shaped trigger having its bridge extending beneath said plunger and fitting in the groove of the handle of the plunger to releasably hold the plunger in the set position and having its arms extending inwardly upon opposite sides of the plunger and connected with the base.

1,214,123. CAR-SEAT. FREDERICK BENNETT, Ravenswood, N. Y., assignor to Walker and Bennett Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Aug. 31, 1912, Serial No. 718,055. Renewed July 20, 1916. Serial No. 110,412. (Cl. 155—2.)

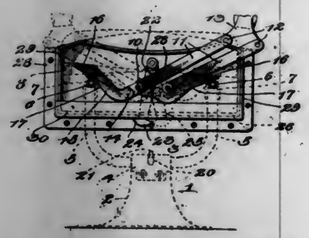


1. A car-seat, having in combination fixed end-plates provided with upwardly-extending, slotted arms; tie-rods connecting said plates together; seat-rockers mounted on the tie-rods, and provided with depending slotted extensions; a back provided with depending slotted arms; pivoted two-arm levers having their lower arms pivoted in slotted extensions of the seat-rockers and their upper arms loosely-connected to the slotted arms of the back, and links fulcrumed on the said two arm levers, said links having one end connected to the back-arms and the other end connected to the slotted arms of the end-plates, whereby the shifting of the back will shift the seat-rockers.

2. A car-seat, having in combination fixed end-plates provided with upwardly-extending, slotted arms; seat-rockers having oppositely-inclined slots, and provided with depending slotted extensions; tie-rods passing through the inclined slots of the seat-rockers and connecting the tie-plates together; a back provided with depending, slotted arms; a shaft having its ends fixed in the end-plates; a two-armed lever pivoted on said shaft at each end thereof, one arm of each lever being pivoted in each slotted-arm of the back and the other arm of each lever pivoted in each slotted extension of the seat-rockers, and links fulcrumed on the two-arm levers, each link having one arm connected to the back-arms and the other end connected to the slotted arms of the end-plates.

3. A car-seat, having in combination fixed end-plates provided with upwardly-extending slotted arms; seat-rockers having oppositely-inclined slots; tie-rods passing through said slots and connecting the end-plates together; a back provided with depending arms; a shaft having its ends fixed in the end-plates; two-arm levers pivoted on said shaft, one arm of each lever being connected to a back-arm and the other arm of each lever connected to a depending arm of the seat-rockers; and links fulcrumed on the two-arm levers.

1,214,124. CAR-SEAT. FREDERICK BENNETT, Ravenswood, N. Y., assignor to Walker & Bennett Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Sept. 30, 1913, Serial No. 792,606. Renewed July 8, 1916. Serial No. 108,245. (Cl. 155—2.)



1. In a car seat, in combination, a pedestal having a lower part adapted for attachment to the floor and an upper hinged portion connected with the seat, a suitable support for the wall end of the seat, locking means carried by the seat and adapted to engage the wall bracket, a shiftable seat back and means carried by the seat and actuated by the movement of the seat back in shifting, to lock the seat to the bracket in each extreme position of the seat back.

2. A car-seat, having in combination a pedestal consisting of upper and lower members, the upper member being hinged to the lower member and connected with the seat, so as to permit the seat to be swung upon the pedestal; a wall-bracket adjacent to the wall of the car; a headed latch carried by the seat and adapted to pass through a slot in the flange of the wall end-plate and engage said flange at either side of the slot to lock the seat in either extreme position, and means for actuating the latch to unlock the seat, so as to permit it being swung upon the pedestal.

3. In a car seat, in combination, a pedestal having a portion adapted for attachment to the floor, and an upper hinged portion connected with the seat, suitably connected end-plates, links pivoted between the end-plates, a seat-back pivoted to the links, a wall bracket having a flange with an aperture therethrough and a seat for supporting one of the end-plates, a pivoted latch carried by one end plate and having a head extending through the aperture in the flange of the bracket, said links being adapted, in the shifting movement of the back, to engage the latch to cause it to lock the seat to the bracket in each extreme position of the back, and to release the latch when at an intermediate point of its shifting movement, so that the seat may be swung out of the bracket.

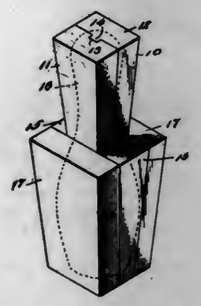
1,214,125. LEAD-LINE CONTROLLER. ERICK BERGMAN, Wayside, Miss. Filed June 26, 1916. Serial No. 105,969. (Cl. 43—9.)



1. In a seining apparatus, a pole or standard adapted to be held in an upright position on the bottom of a stream, lake or the like, a broad supporting base on the lower end of said pole, a horizontally pivoted pulley adjacent the lower end of said pole for directing a lead line, guards in front of said pulley to protect the net from entanglement therewith, two vertically pivoted pulleys on said base each having a horizontal flange on its upper face, said flanges being close together to maintain the lead line between the pulleys, and means for raising and lowering the pole.

2. In a seining apparatus, a pole or standard adapted to be held in upright position on the bottom of a stream, lake or the like, a broad flat base on the lower end of said pole, a vertical plate attached to said pole and said base, a horizontally pivoted pulley mounted on said plate, guards in front of and above said pulley to prevent entanglement of a seine net with the pulley, two pulleys vertically pivoted on said base each having a horizontal flange on its upper face, said flanges being close together to maintain the lead line between the pulleys, bearings above said latter pulleys having forwardly projecting spreading ends to form an entrance for the lead line to the pulleys, a raising line attached to the bottom of the pole, a lowering line attached to the top of the pole, and a plurality of guy lines fastened on said pole.

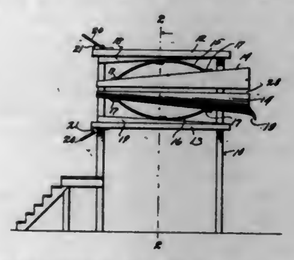
1,214,126. BOWLING-PIN. OSCAR J. BOLDT, Appleton, Wis. Filed Apr. 19, 1916. Serial No. 92,153. (Cl. 46—66.)



1. A built-up ten pin comprising a core element tapered toward its lower end and slabs secured thereabout at its lower part to form the body of the pin, the upper part of the core being of a size to form the neck of the pin.

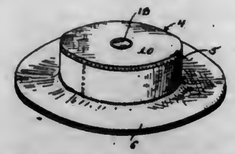
2. A built-up pin comprising a polygonal core tapered toward its lower end, and comparatively thick slabs secured to the sides thereof at the lower part having the grain substantially parallel to their outer sides.

1,214,127. MAIL-BAG CATCHING AND DELIVERING DEVICE. MARTIN L. BOWEN, New Eagle, Pa. Filed Oct. 30, 1916. Serial No. 128,560. (Cl. 258—11.)



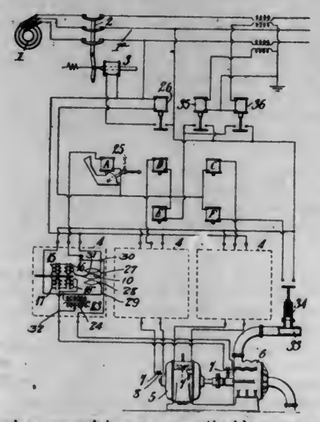
A mail bag catching and delivering device consisting of a suitable elevated structure, a longitudinally extending and horizontally split tapering chute, resilient elements supporting the chute on the structure whereby the sections of the chute will move yieldably toward and away from each other, said chute being arranged for the reception of a bag from a passing train, a bag guiding means carried by one of the sections of the chute, and inclined and spring pressed arms carried by the structure for supporting a bag to be taken up by the train, said bag support being arranged to deliver the bag to the train after the train carried bag has been received in the chute.

1,214,128. HAT-COVERING. WILLIAM P. BROOKS, Weleetka, Okla. Filed July 9, 1915. Serial No. 38,993. (Cl. 2—108.)



A hat covering comprising a crown engaging portion and a brim engaging portion, the crown portion of the covering having a disk of stiffened material carried thereby, whereby the covering will be held in the hat crown by the frictional engagement between the edge of the disk and inner surface of the hat crown, said disk causing the crown of the cover to lie flat on the hat crown when the cover is placed on the outside of the hat.

1,214,129. ELECTRICAL PROTECTIVE DEVICE. HAROLD W. BROWN, Ithaca, N. Y., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 7, 1914. Serial No. 810,798. (Cl. 175—294.)



1. A relay comprising a magnetizable core member, a two part main winding therefor, a plurality of auxiliary windings thereon, an armature, a resistor and a resistance thermometer, said main winding constituting two arms of a Wheatstone bridge, the resistor a third, the resistance thermometer a fourth, the auxiliary windings being so connected between points of normally equal potential that, if the resistance of the resistance thermometer changes, the armature will be actuated.

2. A relay comprising a magnetizable core member having a two-part main winding and a plurality of auxiliary windings thereon, two resistors and an armature, said resistors and the main winding constituting the arms of a Wheatstone bridge, the said auxiliary windings being connected to points of equal potential on the bridge.

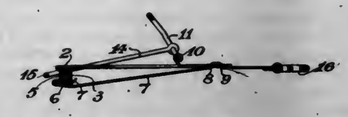
3. A temperature-responsive relay comprising a motor having coöperating main and auxiliary windings, and two resistors, the main winding of the motor and the two resistors constituting the arms of a Wheatstone bridge, the auxiliary winding being connected to points of equal potential thereon.

4. A relay comprising a magnetizable core member having a main and auxiliary winding thereon, a rotatable armature, a contact-making device actuated by the armature and two resistors, the said main winding and the two resistors being so connected as to constitute the four arms of a Wheatstone bridge, the auxiliary winding being so connected to the bridge that current only traverses the same under predetermined conditions to thereby actuate the armature.

5. The combination with an electro-responsive device having main and auxiliary windings, a rotatable armature and a contact-making device operatively connected to the armature, of two resistors, and a source of alternating current, the main winding and the two resistors constituting the arms of a Wheatstone bridge and the auxiliary windings being so connected to the bridge as to receive current only when the resistance of one of the resistors changes.

[Claims 6 to 10 not printed in the Gazette.]

1,214,130. HOSE-CLASP. CARL H. BURKHARDT, San Francisco, Cal. Filed Mar. 13, 1916. Serial No. 83,797. (Cl. 24—246.)

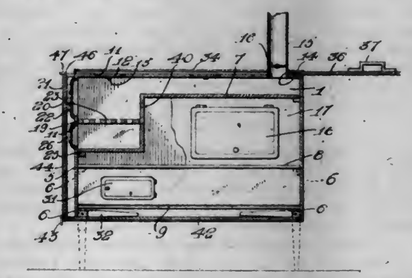


1. A garment supporter including a plate slotted at one end and doubled upon itself at its other end and then extended at right angles to the plate body and terminating in an outwardly extending slotted part disposed parallel to the plate body, a fabric member extending through the first named slot at one end and having its other end engaged with the opposite side faces of said outwardly extending part of the plate and passed rearwardly through the slot of said part of the plate, a flexible bar engaged with the doubled end of the plate and with the end of said fabric member, which engages with the outwardly extending part of the plate, clamping means coöperating with the bar, and supporting means secured to the first named end of the fabric member.

2. In a garment supporter, a member having a channel extending transversely thereof and facing outwardly, a relatively thick flexible bar fitted in said channel and impinged at its top and bottom against the top and bottom respectively of the channel and having a side facing outwardly so as to engage the garment, and clamping means coöperating with said outwardly facing side of the block to clamp the garment against said side of the block.

3. In a garment supporter, a body having a channel at one end, a fabric lining connected at one end to the body and having its other end extending in the channel, a resilient bar engaged in the channel and seating on said last named end of the lining, and clamping means coöperating with the bar.

1,214,131. PORTABLE STOVE. FLORENCE CANTERBURY, Canterbury, W. Va. Filed Apr. 8, 1916. Serial No. 89,936. (Cl. 126—1.)



1. A portable stove including a body, slideways on the edges of the body and protective slides removably engaged in the slideways to cover the top, bottom, front and one side of the body.

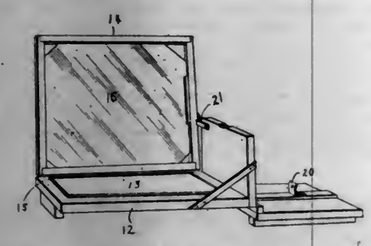
2. A portable stove including a body, slideways formed on the edges of the body, protective slides removably engaged in the slideways to cover the top, bottom, front and one side of the body, and supporting legs movably connected to the bottom and removably supported by the bottom protector slide when not in use.

3. A portable stove including a rectangular body embodying a fire box, a draft flue communicating with the box, an ash pit beneath the box, a cooking oven adjacent the fire box and ash pit, a steam oven beneath the cooking oven, legs for removably supporting the body, slideways formed on the edges of the body and protective slides removably engaged in the slideways to cover the front, top, one side and the bottom of the body, the bottom slide serving to support legs when not in use.

4. A portable stove including a rectangular body comprising a top, side and rear walls, a fire box formed in the body, a draft flue in the body communicating with the box, an ash pit in the body beneath the box, a cooking stove in the body adjacent the fire box and ash pit, a steaming oven beneath the cooking oven, doors for the ovens, ash pit and fire box, a plurality of lids associated with the top of the body, supporting legs associated with the bottom of the body, slideways formed on the edges of the body, and a plurality of slides removably engaged in the slideways to cover the front, top, bottom and one of the sides of the body for protecting the lids and doors and for removably supporting the legs.

5. A portable stove including a rectangular body embodying a fire box, a draft flue communicating with the box, an ash pit beneath the box, a cooking oven adjacent the fire box and ash pit, a steaming oven beneath the cooking oven and doors for the ovens, ash pit and fire box, supporting legs with the body, slideways formed on the edges of the body, a plurality of protectors removably engaged in the slideways to cover the top, front, bottom and one side of the body, and means for guiding the sliding movement of the protectors on the body.

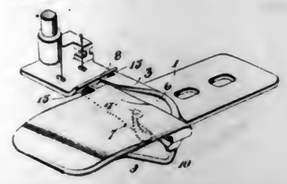
1,214,132. COPY-HOLDER. CHARLES H. CARLETON, San Francisco, Cal., assignor of one-half to Rene Whalte, San Francisco, Cal. Filed July 31, 1916. Serial No. 112,340. (Cl. 88—24.)



The combination with a base board, of a focusing frame hingedly mounted thereon for movement in the vertical plane of exposure, a clear glass exposure frame hingedly mounted upon the focusing frame for swinging movement transversely thereof, and means for securing said parts in their normal relative positions.

1,214,133. FOLDING AND GUIDING ATTACHMENT FOR SEWING-MACHINES. JOHN E. CHALMAN, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 9, 1912. Serial No. 676,536. (Cl. 112—10.)

1. A folding guide for sewing machines comprising a supporting base, a fabric support projecting laterally from said base and terminating in a guiding recess, whereby the edge of the fabric is folded back upon itself, said folding guide having a recess extending above and below the end of said first named recess for guiding a tape, said recesses merging into each other at the delivery end of the folder, whereby the tape is folded around the edge of the folded back fabric.

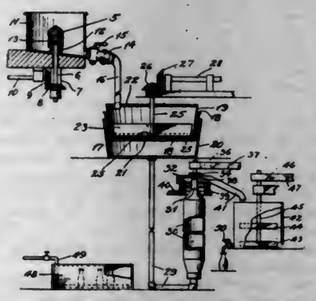


2. A folding guide for sewing machines comprising a supporting base, a fabric support projecting laterally from said base and terminating in a guiding recess, whereby the edge of the fabric is folded back upon itself, said folding guide having a recess extending above and below the end of said first named recess for guiding a tape, said recesses merging into each other at the delivery end of the folder, whereby the tape is folded around the edge of the folded back fabric, said recess for the tape having means for folding the edges of the tape as it passes through the folder.

3. A folding guide for sewing machines comprising a supporting base, a vertical wall rising therefrom and having a laterally projecting lip, a fabric support carried by said base and extending laterally therefrom and beneath said lip, said fabric support being spaced from said lip and vertical wall, and from said supporting base at its inner side, whereby a fabric resting on said support may be folded back underneath itself, said supporting base and fabric support having a guiding recess formed therethrough extending above and below the edge of the folded fabric, whereby a tape may be folded around the edge of the fabric.

4. The combination of a sewing machine having spaced needles of a folding guide comprising a supporting base, a fabric support projecting laterally from said base and terminating in a guiding recess whereby the edge of the fabric is folded back upon itself, said folding guide having a recess extending above and below the end of said first named recess for guiding a tape, said recesses merging into each other at the delivery end of the folding guide whereby the tape is folded around the edge of the folded back fabric, said folding guide being so disposed relative to said spaced needles that one of said needles passes through the folded fabric adjacent the fold therein while the other needle passes through the fabric adjacent the free edge of the fold and through the edges of said tape.

1,214,134. PROCESS OF PREPARING AND PRESERVING FRUIT-JUICES. HARRY F. CHENEY, Los Angeles, Cal. Filed July 7, 1915. Serial No. 38,414. (Cl. 99—11.)



1. The process of preserving fruit juices comprising the extracting of a greater portion of the fruit pulp from the expressed juice and collecting the juice in closed apparatus whereby oxidation is largely prevented, and mixing the juice with a preservative, and then subjecting the product to a sufficient degree of heat to substantially sterilize the same.

2. The process of preserving fruit juices comprising the expressing of the juice and pulp of the fruit and collecting it in closed apparatus for substantially preventing oxidation and subjecting the said products to the action of an inclosed filtering means for removing a large portion of the pulp, then mixing the clarified juice with a preserving material and subjecting the resultant juice to a sterilizing temperature.

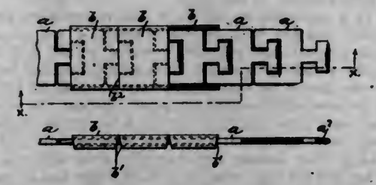
3. The process of preserving fruit juices comprising the expressing of the juice and pulp of the fruit and passing the same through a filtering medium to remove the bulk of the pulp, and then through a clarifying device for removing an additional quantity of pulp, next sweetening and flavoring the juice and bottling the same and then sterilizing the bottled juice by subjecting it to a sufficiently high degree of heat to destroy the bacteria in the juice.

4. The preserving of citrus fruit juices consisting of the process of reaming out the contents of the fruit from the skins thereof, passing the same through a filterer capable of removing and coloring the bulk of the pulp from the juice, then passing the juice through a centrifugal clarifier for removing all of the pulp except a small quantity for flavoring and coloring purposes, then mixing sugar with the juice and subjecting the juice to repeated temperatures of approximately 155 degrees Fahrenheit, whereby bacteria and spores present in the juice will be destroyed.

5. The continual process of preserving citrus fruit juice comprising the rapid passing of the juice and pulp successively through a filterer and a clarifier and then mixing with a preservative, after which the juice is raised to a temperature of approximately 155 degrees Fahrenheit for substantially sterilizing the same.

[Claims 6 to 10 not printed in the Gazette.]

1,214,135. CHAIN. EDWARD FOSTER CLARK, North Attleboro, Mass., assignor to W. G. Clark & Company, North Attleboro, Mass. Filed Dec. 20, 1915. Serial No. 67,749. (Cl. 59—80.)



1. A chain composed of a series of separable interlocking links in combination with a series of tubular shells slidably inclosing said links, said shells having their ends adjacent to the openings therein, so formed as to give flexibility to said chain and means for retaining the whole chain together as a unit, substantially as set forth.

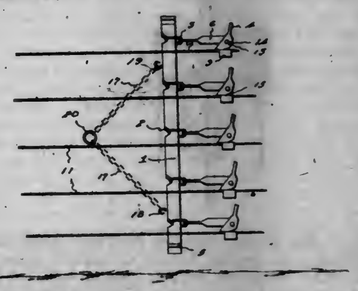
2. A chain adapted to be used for bracelets, belts and the like, limited in flexibility to a single plane and composed of interlocking units or links; a series of tubular shells inclosing said links, the ends of said shells adjacent to the openings therein being so formed as to permit flexure of the chain as a whole in a single plane; the longitudinal ends of said links being so shaped as to give freedom of movement between the extremities of said links and the inclosing shells and thus permitting flexure of the chain in a single plane, said shells and links being retained as a unit by means of a pin or pins passing through one or more of said shells and the inclosed links, substantially as set forth.

3. A chain composed of a series of interlocking units adapted to be stamped ready for assembling from flat stock by a single operation of said suitable dies; a series of tubular shells inclosing said links, the ends of said shells adjacent to the openings therein being adapted to permit flexure of the chain in a single plane, said shells and links being retained as a unit by means of one or more pins passing through one or more of said shells and the inclosed links, substantially as set forth.

4. A device of the character described, comprising a plurality of chain units, hingedly connected together, a plurality of sleeve units, inclosing respectively each of said chain units, adjacent portions of said sleeve units adapted to remain in contact during movement of the units with respect to each other, and to cover the hinge connection between the chain units.

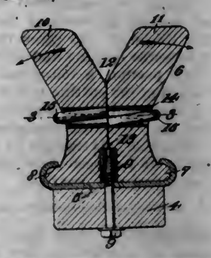
5. A device of the character described, comprising a plurality of chain units hingedly connected together, a plurality of sleeve units inclosing respectively each of said chain units, adjacent portions of said sleeve units provided with interlocking engagement and adapted to remain in closed relation during the movement of the units, and to cover the hinge connection between the chain units.

1,214,136. WIRE-STRETCHER. JOSEPH G. CLARK, Bullard, Tex. Filed May 21, 1915. Serial No. 29,592. (Cl. 254—83.)



A wire clamp comprising a bar, an eye at one end of said bar, a connecting link secured in said eye, a short laterally extending arm secured at one end to the free end of the bar and arranged at right angles thereto, the end of said shorter arm being inclined downwardly and then bent upwardly forming a wire receiving jaw, the bottom of said wall of said jaw inclined or angularly disposed and arranged at an acute angle to the outer side of the jaw adapted to cause the wire to become wedged between it and the said outer wall of the jaw, a cam lever pivotally secured to the shorter arm, said lever adapted to wedge the wire into the groove of the jaw.

1,214,137. RESILIENT TIRE. LEONARD E. CLAWSON, San Francisco, Cal. Filed May 8, 1916. Serial No. 96,085. (Cl. 152—1.)



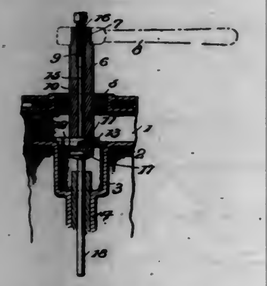
1. A tire for wheels comprising two elastic circular members abutting in the plane of the wheel, and transverse elastic lacing cords connecting said members together, and having an elastic action in unison with that of the tire member.

2. A tire for wheels including a pair of elastic members abutting in the plane of the wheel and having transverse perforations, and an elastic lacing cord through the perforations, having elastic movements in unison with those of the tire.

3. A resilient tire for wheels including two circular elastic members abutting in a central plane of the wheel, having transverse perforations concentric with the circumference, and an elastic cord laced through the perforations, said lacing expanding and contracting coincidently with the compressions and expansions of the tire member.

4. A tire for wheels including circular elastic tread members perforated transversely, and an elastic cord laced through said perforations and expanding and contracting in unison with the compressions and expansions of the tread members.

1,214,138. VALVE-GRINDING TOOL. THOMAS O. CRITZ, Richmond, Va. Filed July 8, 1914. Serial No. 849,774. (Cl. 90—12.5.)



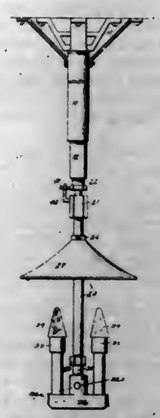
1. A tool of the character described, comprising a cylindrical body portion having an angular upper reduced end and a transverse angular opening adjacent its lower end, a cutting tool adjustable in said opening and extending beyond the sides of the body portion, a screw extending downwardly through the body portion from its upper end and adapted to lock the facing tool in its adjusted position, and a reduced elongated rod carried by the lower end of the body portion.

2. A tool of the character described comprising a body portion, means for rotating the same, an elongated bearing rod carried by the lower end of the body portion, a cutting tool transversely adjustable through the tool, and means extending through the upper end of the body portion for locking the cutting tool in its adjusted position, whereby the tool can be adjusted to its proper position after the tool is inserted in the cylinder.

3. A tool of the character described, comprising a cylindrical body portion having an angular upper end and a transverse angular opening adjacent its lower end, said body portion having a longitudinal opening extending from its upper end and intersecting the transverse opening and having its upper end screw-threaded, a cutting tool in said transverse opening and extending beyond the sides of the body portion, a rod within the longitudinal opening and engaging the cutting tool, a screw within the threaded end of the longitudinal opening and engaging the rod and forcing the same into engagement with the cutting tool, an elongated rod carried by the lower end of the body portion, and a removable sleeve on said rod, substantially as shown and described.

1,214,139. GENERATOR. JOEL BENJ. DALBEY, Nevada, Iowa, assignor of one-half to Jay A. King, Nevada, Iowa. Filed Nov. 11, 1915. Serial No. 60,962. (Cl. 67—49.)

1. In a device of the class described, a support, a generator tube mounted for screw-threaded rotation with relation thereto, said tube having a restricted discharge passage at its end farthest away from said support, a rod mounted on said support, a cleaner needle on the end of said rod adjacent to said discharge passage, non-heat conducting material surrounding said rod, said parts being so arranged that the rotation of said tube with relation to said support causes said cleaner needle to enter said discharge passage.



2. In a generator, a tube having a restricted discharge opening, a rod mounted in said tube, said tube and rod being mounted for screw-threaded adjustment with relation to each other, and partially received within said tube, non-heat conducting material mounted on said rod within said tube, means for surrounding said material for holding it in position and in shape adapted to permit the passage of fuel, and a cleaner needle on said rod.

3. In a generator tube, a support, a tube mounted for rotation with relation thereto, a rod mounted in said support, and partially received within said tube, non-heat conducting material mounted on said rod within said tube, means for surrounding said material for holding it in position and in shape adapted to permit the passage of fuel, said non-heat conducting material and the material enveloping it being so arranged as to rotate with the tube and with relation to the rod.

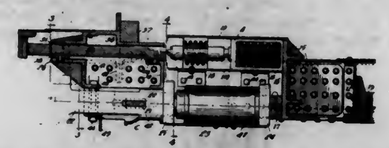
4. In a generator, a support, a tube mounted for screw-threaded rotation with relation thereto, a rod mounted in said support, and partially received within said tube, non-heat absorbing material mounted on said rod within said tube, means for surrounding said material for holding it in position and in shape adapted to permit the passage of fuel, said generator tube having a restricted discharge passage, enveloping material being arranged to hold the rod away from contact with the tube when said rod and tube are rotated with relation to each other, and a cleaner needle mounted in said rod and adapted to enter said passage when the rod and tube are rotated with relation to each other.

5. In a device of the class described, a support, provided with a passage extending through it, a rod having one end received in said passage and secured to said support, a sleeve having one end mounted for rotation in said passage between the ends thereof, packing around said sleeve, means for retaining said packing for making a tight joint around said sleeve, a generator tube communicating with said sleeve designed to rotate therewith and to receive said rod, and non-heat conducting material on said rod within said sleeve.

1,214,140. CAR-UNDERFRAME. CHARLES E. DATH, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 14, 1916. Serial No. 91,241. (Cl. 213—39.)

1. In car construction, the combination with buffer mechanism and a draft rigging, of a platform end casting having means for supporting the stems of the buffer mechanism and an integral front stop shoulder for the draft rigging.

2. In car construction, the combination with longitudinal sills, and a platform end casting, of buffer mechanism, and a draft gear, the latter being located beneath the buffer mechanism and the gear and buffer mechanism being removable from below.



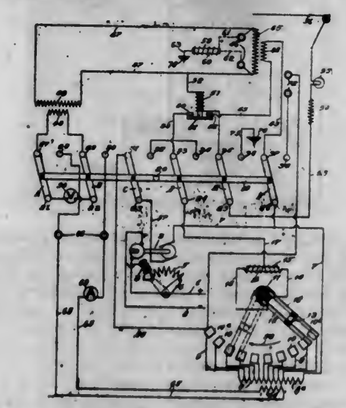
3. In passenger car construction, the combination with spaced, longitudinal sills, a rear stop casting extending between and secured to said sills and a front stop casting, of a buffer mechanism and a draft gear located between said sills and also between said castings.

4. In passenger car construction, the combination with longitudinal draft sills, a rear stop casting extending between and secured to said sills, and a front stop casting, the latter having a horizontal shoulder acting as a front stop for a draft gear and provided also with passage ways in which move the stems of a buffer mechanism, of a buffer mechanism and a draft gear located between said sills and also between said castings.

5. A casting for passenger car platforms having passage ways therethrough for the main and side stems of a buffer mechanism, said casting being provided with a horizontal, transversely extending front shoulder for a draft gear.

[Claims 6 to 10 not printed in the Gazette.]

1,214,141. TESTING APPARATUS. ADOLPH H. DAUS, Chicago, Ill. Filed Aug. 6, 1915. Serial No. 43,991. (Cl. 175—183.)



1. In an apparatus for testing the insulation between a conductor and a metal member adjacent thereto, a source of current having one terminal thereof grounded, a ground connection for said metal member, a source of alternating current, a step-up transformer having its secondary terminals connected respectively to said conductor and said member, a source of alternating current connected to the primary of the transformer, and a circuit-controller interposed between the said member and the other terminal of said source of current and controlling the supply of alternating current to the said primary.

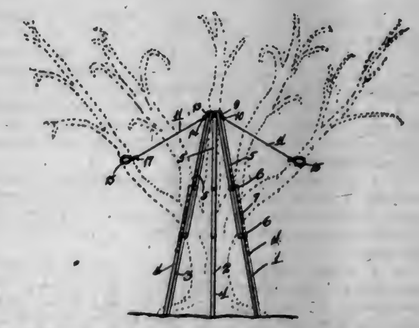
2. In an apparatus for testing the insulation of a conductor on a motor used on a trolley circuit having a ground return, a step-up transformer having its secondary terminals respectively connected to said conductor and to a ferrous part of the motor, a source of alternating current connected to the primary terminals of the transformer; a normally open circuit-closer in circuit with the primary of said transformer; and means controlled by a grounding of the said ferrous part of the motor for actuating said circuit-closer.

3. In an apparatus for use with a source of alternating current in testing grounded-circuit motors, a step-up transformer, rupturable connection between the primary of said transformer and the source of current, means actuated by a grounding of the secondary transformer circuit for controlling said connections, and visual means for indicating the closing of the said connections by the said grounding.

4. In an apparatus for use with a source of alternating current in testing grounded-circuit motors, a step-up transformer, rupturable connections between the primary of said transformer and the source of current, means actuated by a grounding of the secondary transformer circuit for controlling said connections, and means for simultaneously controlling the connections of the primary and secondary of the transformer to the source of current and the said means respectively.

5. In a testing apparatus for use with a pair of alternating current supply wires, a multi-sectioned transformer winding permanently connected at one end to one of said wires, an interruptible connection between the other wire and the other end of said winding, a commutating switch affording an adjustable connection to the respective sections of said winding, a step-up transformer having its primary in shunt with the part of said winding between said commutating switch and the first named end of the winding, a pair of sockets connected to the secondary of the step-up transformer, a second pair of sockets normally having only one thereof connected to one of said wires: and switching means for transferring the connection to the second wire from one end of the winding to the commutating switch, and for simultaneously therewith transferring the connection of the other wire from the primary of the step-up transformer to the other of said second pair of sockets.

1,214,142. FRUIT-TREE PROP. CHARLES S. DINGWALL, Medford, Oreg. Filed Aug. 11, 1916. Serial No. 114,450. (Cl. 47—31.)



1. A tree prop comprising a plurality of supporting standards, a plurality of hooks connected to certain of the said standards at their upper ends, means carried by the end of one of the retaining standards for coöperation with the said hooks whereby the ends of the standards may be held together, fastening elements for each of said hooks, and eye loops associated with the fastening means.

2. A tree prop comprising a plurality of supporting standards, means carried by the end of each standard and mutually coöperating for retaining the ends of the standards in close relation, the said means including nuts in engagement with the standards, eye loops integrally formed with the nuts, and retaining means secured to the said eye loops.

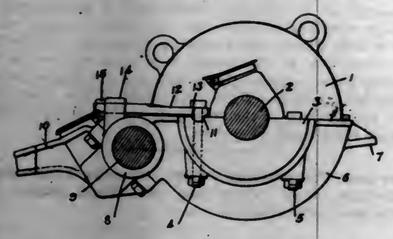
3. A tree prop comprising a plurality of supporting standards, an eye bolt carried by the upper end of one of

the standards, hooks carried by the upper end of each of the other standards, the said hooks and the said eye bolt coöperating to hold the ends of the standards together, and retaining means secured to the upper ends of the standards.

4. A tree prop comprising a plurality of supporting standards, an eye bolt carried by the upper end of one of the standards, hooks carried by the upper end of each of the other standards, the said hooks and the said eye bolt coöperating to hold the ends of the standards together, nuts mounted on each of the said hooks and said eye bolt for fastening the same to the said standards, each of said nuts carrying an integrally formed eye loop, and retaining means secured to the said eye loops.

5. A tree prop comprising a plurality of supporting standards, an eye bolt carried by the upper end of one of the standards, means carried by the other standards and engageable with the said eye bolt for mutual coöperation whereby the said standards may be held together, eye loops associated with the said eye bolt and said means, one of the said eye loops being mounted upon each standard, and retaining means secured to the said eye loops.

1,214,143. DYNAMO-ELECTRIC MACHINE. GEORGE M. EATON, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 6, 1915. Serial No. 38,150. (Cl. 105—241.)



1. A dynamo-electric machine comprising a bearing housing having a semicircular seat, a frame adapted to receive said housing, and means extending diametrically from the top of said housing for transmitting lateral strains from the said frame to the said housing.

2. A dynamo-electric machine comprising a bearing housing, a frame adapted to receive said housing, and a tying member extending diametrically from said housing and attached to the said frame.

3. A dynamo-electric machine comprising a bearing housing, a frame adapted to receive said housing, and a tying member connecting the said frame and housing and provided with a projection received in a seat in the said housing.

4. A dynamo-electric machine comprising a bearing housing, a frame adapted to receive said housing, bolts connecting the said housing to the said frame, and a tying member secured to the said housing by means of one of the said bolts and also attached to the said frame.

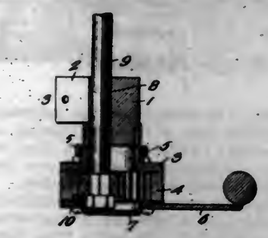
5. A dynamo-electric machine comprising a bearing housing, a frame adapted to receive said housing and having an axle bearing and a lug adjacent to the said bearing, a tying member extending through an opening in the said lug and provided with a projection received in a seat in the said housing, and means for securing the said tying member in the said position.

[Claim 6 not printed in the Gazette.]

1,214,144. STEERING DEVICE FOR AUTOMOBILES. WILLIAM BIRDLE ELAM, Armour, S. D., assignor of one-half to J. B. Boot, Armour, S. D. Filed May 1, 1916. Serial No. 94,717. (Cl. 74—79.)

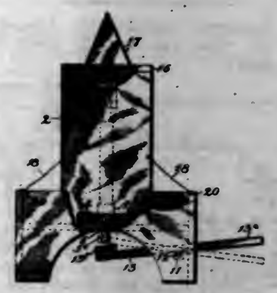
1. In a steering device for automobiles, the combination with a bearing member, of a plate rotatably mounted thereon, an internal toothed gear carried by the plate, a steering rod extending through the bearing member and into the gear, a pinion on the steering rod meshing with the gear and a steering arm rigidly connected to the gear.

2. In a steering device for automobiles, the combination with a bearing member, of a plate rotatably mounted



thereon, an internal toothed gear mounted on said plate, a dust cap covering the gear, a steering arm mounted on the dust cap, bolts securing the plate, the gear, the dust cap and the steering arm rigidly together, a steering rod extending through the bearing member and a pinion on the end of said rod meshing with the teeth of said internal gear.

1,214,145. POULTRY-FEEDER. FREDERICK EUKER, North Branch, N. Y. Filed Nov. 18, 1916. Serial No. 132,036. (Cl. 119—55.)



1. In a device of the character described, a feed receptacle having delivery outlets for the feed; a bottom movable relatively to said outlets for working the feed out through the same, said bottom being movable by gravity to the downward position; and means for moving said bottom upwardly from the outside of the receptacle.

2. In a device of the character described, a feed receptacle provided with outlets for the escape of feed therefrom; a hollow feeding device located within said receptacle; and means for alternately moving the walls of said feeding device in opposite directions therein.

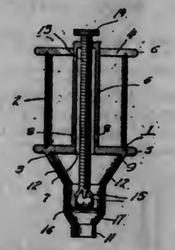
3. In a device of the character described, a feed receptacle provided with outlets for the escape of feed therefrom; a hollow feeding device located within said receptacle; and means for alternately moving the walls of said feeding device toward and from said outlets.

4. In a device of the character described, a feed receptacle provided with outlets for the escape of feed therefrom; a hollow feeding device located within said receptacle, and having its walls movable by gravity and by the weight of the feed in the receptacle, in a direction away from said openings; and means for moving the walls of said feeding device toward said openings.

5. In a device of the character described, a feed receptacle provided with delivery openings; a normally collapsed feeding device located within said receptacle; and means for utilizing the weight of the fowls feeding at the receptacle to expand said feeding device.

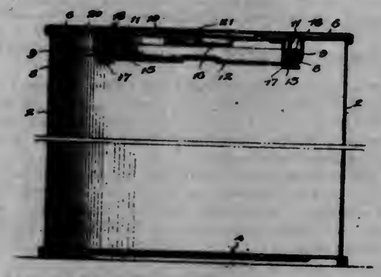
[Claims 6 to 12 not printed in the Gazette.]

1,214,146. LUBRICATING-CUP. LEIGH H. FISCHER, McCordsville, Ind., assignor of one-half to Solomon B. Prater, McCordsville, Ind. Filed Jan. 22, 1916. Serial No. 73,694. (Cl. 184—69.)



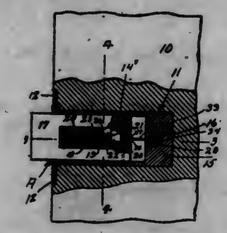
A lubricator comprising a receptacle, a valve mounted in said receptacle to normally close communication therethrough, when the receptacle is in an upright position, said valve being unseated to permit the contents of the receptacle to be dispensed when said receptacle is turned from an upright position, a screw-threaded rod adjustably mounted in said receptacle and having the lower terminals thereof bifurcated to embrace said valve for limiting the movement of the latter, and a housing for said rod extending through the receptacle.

1,214,147. CAN AND JAR CLOSURE. EDWARD FISHER, Newport, R. I. Filed Mar. 10, 1916. Serial No. 83,217. (Cl. 220—79.)



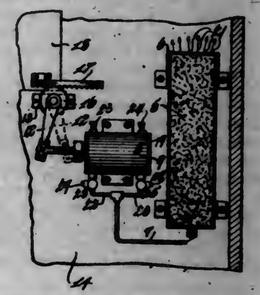
A can or other receptacle having a top provided with a vertical annular flange having an inwardly curved portion terminating in an upturned edge, of a cover having a vertical flange provided with an outwardly curved portion terminating in an upturned edge, said parts engaging and fitting the curved portion, upturned edge and vertical portion of the top, and a sealing cord in the groove formed by the interengaging portions of the top and cover.

1,214,148. DOOR-LATCH. SAMUEL H. FORD, Flat Rock, Ill. Filed June 3, 1915. Serial No. 31,954. (Cl. 70—42.)



A door latch comprising a casing, a normally projected latch bolt mounted in the casing, a knob arbor slidably mounted in the casing and having a longitudinal slot therein, a pin mounted in the arbor and extending through the slot, a link provided with a longitudinal slot through which the pin extends, said latch bolt being provided with a recess in its inner end, and a pin mounted in the latch bolt and extending across said recess and through the slot in said link.

1,214,149. FUMIGATING DEVICE. DANIEL FRAAD, Brooklyn, N. Y. Filed Aug. 11, 1916. Serial No. 114,311. (Cl. 167—3.)

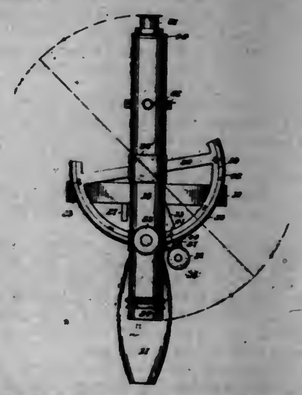


1. In combination with a discharging receptacle for disinfecting material, a pump supplying air to said receptacle, a valve arranged within and controlling the outlet from said pump, a spring bearing on said valve, means for adjusting the pressure of said spring, a movable part and means arranged to be operated by the movement of said part and to actuate said pump for the purpose set forth.

2. An elongated cylindrical disinfectant receptacle provided with numerous perforations at one end, a pump and tubular connecting means for forcing air into the other end of said receptacle, means for regulating the pressure under which the air passes from said pump through said tube.

3. In combination with a toothed gear carried by a door, a gear-wheel engaging the same, an arm carried by this wheel, a pump actuated by this arm and means for spraying disinfectant operated thereby.

1,214,150. AEROTRANSIT. ARTHUR C. FREEMAN, Jr., Norfolk, Va. Filed June 23, 1916. Serial No. 105,449. (Cl. 33—69.)



1. An aerotransit comprising a normally-level hand compass and a telescope revolubly mounted on the periphery of the said compass.

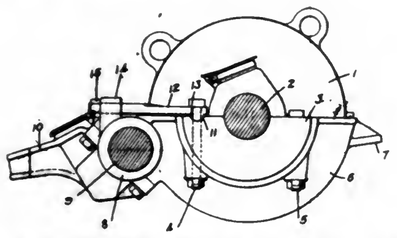
2. An aerotransit comprising a compass, a centrally depending handle carried by the said compass, and a vertically operably positionable telescope revolubly mounted adjacent the periphery of the said compass.

the standards, hooks carried by the upper end of each of the other standards, the said hooks and the said eye bolt coöperating to hold the ends of the standards together, and retaining means secured to the upper ends of the standards.

4. A tree prop comprising a plurality of supporting standards, an eye bolt carried by the upper end of one of the standards, hooks carried by the upper end of each of the other standards, the said hooks and the said eye bolt coöperating to hold the ends of the standards together, nuts mounted on each of the said hooks and said eye bolt for fastening the same to the said standards, each of said nuts carrying an integrally formed eye loop, and retaining means secured to the said eye loops.

5. A tree prop comprising a plurality of supporting standards, an eye bolt carried by the upper end of one of the standards, means carried by the other standards and engageable with the said eye bolt for mutual coöperation whereby the said standards may be held together, eye loops associated with the said eye bolt and said means, one of the said eye loops being mounted upon each standard, and retaining means secured to the said eye loops.

1,214,143. DYNAMO-ELECTRIC MACHINE. GEORGE M. EATON, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 6, 1915. Serial No. 38,150. (Cl. 105—241.)



1. A dynamo-electric machine comprising a bearing housing having a semicircular seat, a frame adapted to receive said housing, and means extending diametrically from the top of said housing for transmitting lateral strains from the said frame to the said housing.

2. A dynamo-electric machine comprising a bearing housing, a frame adapted to receive said housing, and a tying member extending diametrically from said housing and attached to the said frame.

3. A dynamo-electric machine comprising a bearing housing, a frame adapted to receive said housing, and a tying member connecting the said frame and housing and provided with a projection received in a seat in the said housing.

4. A dynamo-electric machine comprising a bearing housing, a frame adapted to receive said housing, bolts connecting the said housing to the said frame, and a tying member secured to the said housing by means of one of the said bolts and also attached to the said frame.

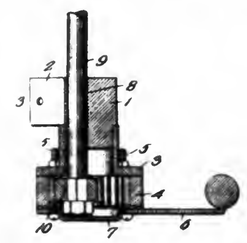
5. A dynamo-electric machine comprising a bearing housing, a frame adapted to receive said housing and having an axle bearing and a lug adjacent to the said bearing, a tying member extending through an opening in the said lug and provided with a projection received in a seat in the said housing, and means for securing the said tying member in the said position.

[Claim 6 not printed in the Gazette.]

1,214,144. STEERING DEVICE FOR AUTOMOBILES. WILLIAM BIRDLE ELAM, Armour, S. D., assignor of one-half to J. E. Boot, Armour, S. D. Filed May 1, 1916. Serial No. 94,717. (Cl. 74—79.)

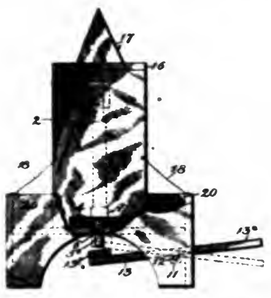
1. In a steering device for automobiles, the combination with a bearing member, of a plate rotatably mounted thereon, an internal toothed gear carried by the plate, a steering rod extending through the bearing member and into the gear, a pinion on the steering rod meshing with the gear and a steering arm rigidly connected to the gear.

2. In a steering device for automobiles, the combination with a bearing member, of a plate rotatably mounted



thereon, an internal toothed gear mounted on said plate, a dust cap covering the gear, a steering arm mounted on the dust cap, bolts securing the plate, the gear, the dust cap and the steering arm rigidly together, a steering rod extending through the bearing member and a pinion on the end of said rod meshing with the teeth of said internal gear.

1,214,145. POULTRY-FEEDER. FREDERICK EUKER, North Branch, N. Y. Filed Nov. 18, 1916. Serial No. 132,036. (Cl. 119—55.)



1. In a device of the character described, a feed receptacle having delivery outlets for the feed; a bottom movable relatively to said outlets for working the feed out through the same, said bottom being movable by gravity to the downward position; and means for moving said bottom upwardly from the outside of the receptacle.

2. In a device of the character described, a feed receptacle provided with outlets for the escape of feed therefrom; a hollow feeding device located within said receptacle; and means for alternately moving the walls of said feeding device in opposite directions therein.

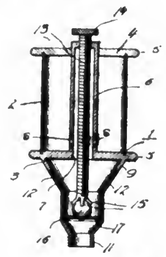
3. In a device of the character described, a feed receptacle provided with outlets for the escape of feed therefrom; a hollow feeding device located within said receptacle; and means for alternately moving the walls of said feeding device toward and from said outlets.

4. In a device of the character described, a feed receptacle provided with outlets for the escape of feed therefrom; a hollow feeding device located within said receptacle, and having its walls movable by gravity and by the weight of the feed in the receptacle, in a direction away from said openings; and means for moving the walls of said feeding device toward said openings.

5. In a device of the character described, a feed receptacle provided with delivery openings; a normally collapsed feeding device located within said receptacle; and means for utilizing the weight of the fowls feeding at the receptacle to expand said feeding device.

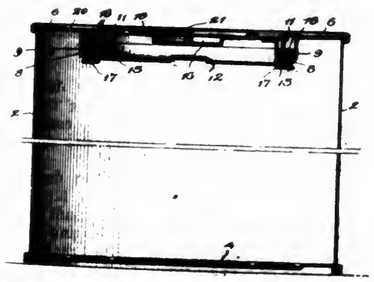
[Claims 6 to 12 not printed in the Gazette.]

1,214,146. LUBRICATING-CUP. LEIGH H. FISCHER, of Cordsville, Ind., assignor of one-half to Solomon B. Prater, McCordsville, Ind. Filed Jan. 22, 1916. Serial No. 73,694. (Cl. 184—69.)



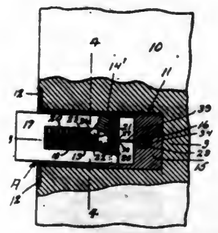
A lubricator comprising a receptacle, a valve mounted in said receptacle to normally close communication therethrough, when the receptacle is in an upright position, said valve being unseated to permit the contents of the receptacle to be dispensed when said receptacle is turned from an upright position, a screw-threaded rod adjustably mounted in said receptacle and having the lower terminals thereof bifurcated to embrace said valve for limiting the movement of the latter, and a housing for said rod extending through the receptacle.

1,214,147. CAN AND JAR CLOSURE. EDWARD FISHER, Newport, R. I. Filed Mar. 10, 1916. Serial No. 83,217. (Cl. 220—79.)



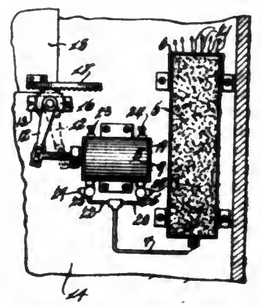
A can or other receptacle having a top provided with a vertical annular flange having an inwardly curved portion terminating in an upturned edge, of a cover having a vertical flange provided with an outwardly curved portion terminating in an upturned edge, said parts engaging and fitting the curved portion, upturned edge and vertical portion of the top, and a sealing cord in the groove formed by the interengaging portions of the top and cover.

1,214,148. DOOR-LATCH. SAMUEL H. FORD, Flat Rock, Ill. Filed June 3, 1915. Serial No. 31,954. (Cl. 70—42.)



A door latch comprising a casing, a normally projected latch bolt mounted in the casing, a knob arbor slidably mounted in the casing and having a longitudinal slot therein, a pin mounted in the arbor and extending through the slot, a link provided with a longitudinal slot through which the pin extends, said latch bolt being provided with a recess in its inner end, and a pin mounted in the latch bolt and extending across said recess and through the slot in said link.

1,214,149. FUMIGATING DEVICE. DANIEL FRAAD, Brooklyn, N. Y. Filed Aug. 11, 1916. Serial No. 114,311. (Cl. 167—3.)

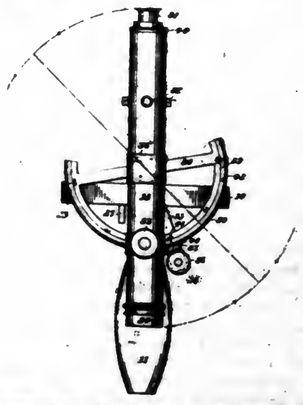


1. In combination with a discharging receptacle for disinfecting material, a pump supplying air to said receptacle, a valve arranged within and controlling the outlet from said pump, a spring bearing on said valve, means for adjusting the pressure of said spring, a movable part and means arranged to be operated by the movement of said part and to actuate said pump for the purpose set forth.

2. An elongated cylindrical disinfectant receptacle provided with numerous perforations at one end, a pump and tubular connecting means for forcing air into the other end of said receptacle, means for regulating the pressure under which the air passes from said pump through said tube.

3. In combination with a toothed gear carried by a door, a gear-wheel engaging the same, an arm carried by this wheel, a pump actuated by this arm and means for spraying disinfectant operated thereby.

1,214,150. AEROTRANSIT. ARTHUR C. FREEMAN, Jr., Norfolk, Va. Filed June 23, 1916. Serial No. 105,449. (Cl. 33—69.)



1. An aerotransit comprising a normally-level hand compass and a telescope revolubly mounted on the periphery of the said compass.

2. An aerotransit comprising a compass, a centrally depending handle carried by the said compass, and a vertically operably positionable telescope revolubly mounted adjacent the periphery of the said compass.

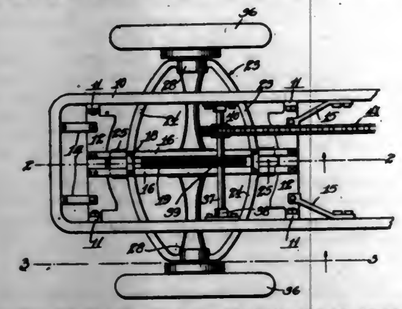
3. An aerotransit comprising a campass, a centrally depending handle carried by the said compass, an operably vertically positionable telescope revolubly mounted adjacent the periphery of the said compass, a spirit level upon the said compass adjacent the said telescope, and a counterweight beneath the said compass at the opposite edge thereof from the said level.

4. An instrument for measuring vertical angles and horizontal directions comprising a hand compass having a lockable needle, a telescope revolubly positioned adjacent the periphery of said compass, an inclination designating scale carried by the said compass with the said telescope arranged at the zero indication upon the said scale when the telescope is in its vertical position with the compass positioned horizontally.

5. An instrument for measuring vertical angles and horizontal directions comprising a hand compass having a lockable needle, a telescope revolubly positioned adjacent the periphery of said compass, an inclination scale carried by the said compass with the said telescope arranged at the zero indication upon the said scale when the telescope is in its vertical position with the compass positioned horizontally, a spirit level upon the said compass adjacent the said telescope, and a setting vernier for the said scale shiftable with the said telescope.

[Claims 6 to 13 not printed in the Gazette.]

1,214,151. AXLE-MOUNTING FOR MOTOR-VEHICLES. GEORGE GEER and WESLEY GEER, Vinton county, Ohio. Filed Apr. 13, 1915. Serial No. 21,105. (Cl. 21—90.)



1. In an axle mounting for vehicles, means dependent from the chassis of a vehicle for supporting said mounting, slidable means sustained by said depending means to permit horizontal rotation of said mounting with respect to said chassis, and means carried by said sliding means permitting vertical oscillation of said mounting with respect to first said means.

2. In an axle mounting for vehicles, means including guide plates dependent from the chassis of a vehicle for supporting said mounting, shoes carried by said mounting for sliding contact with said guide plates to permit horizontal rotation of the mounting independent of said means, and means sustained by said shoes to permit vertical oscillation of said mounting independent of said chassis.

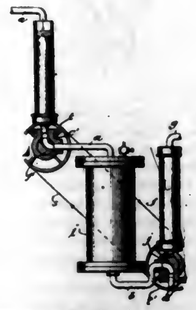
3. A divided-axle mounting for vehicles including a chassis, differential drive gearing, the primary gear of which is maintained in alinement with said chassis, an axle frame having a horizontal and a vertical independency of movement about the central perpendicular axis with respect to said chassis, and a divided axle mounted in said frame to be driven by said gear.

4. In a divided-axle mounting for vehicles, a chassis, differential drive gearing, the primary gear of which is maintained in alinement with said chassis, an axle frame, a divided axle carried by said frame and driven by said gear, and means affording said axle a horizontal and a vertical independency of movement about central axes with respect to said gear.

5. A divided-axle mounting for vehicles including a chassis, a differential drive gearing, the primary gear of which is maintained in alinement with said chassis, an axle frame, a divided axle supported in said frame and driven by said gear, and separate means affording a common vertical and horizontal independency of movement of said frame and axle about a central point with respect to said chassis.

[Claims 6 to 22 not printed in the Gazette.]

1,214,152. METHOD AND APPARATUS FOR CLEANSING FILTER MEDIUMS. ALBERT LEGRAND GENTER, Salt Lake City, Utah. Filed Nov. 5, 1915. Serial No. 59,882. (Cl. 210—18.)



1. The process substantially as herein described, of cleansing a filter medium and facilitating the filtering function thereof, said process consisting, essentially, in alternately directing in substantially rapid succession the filter current against one side of said medium and a cleansing current against the opposite side of said medium.

2. The process substantially as herein described, of cleansing a filter medium and facilitating the filtering function thereof, said process consisting, essentially, in imparting a positive movement to opposite sides of the filtering medium alternately.

3. The process substantially as herein described, of cleansing a filter medium having flexible filtering sides and facilitating the filtering function of said sides, said process, consisting, essentially, in imparting a positive rhythmical movement to the liquid by alternate pressures on opposite sides of said medium.

4. The process substantially as herein described, of cleansing a filter medium having filtering sides and facilitating the filtering function of said sides, said process consisting, essentially, in imparting a series of intermittent filtering pulsations against the outer surface of said sides and alternating therewith an opposed series of intermittent back pressure pulsations against the interior surfaces of said sides.

5. The process substantially as herein described, of cleansing a filter medium and facilitating the filtering function thereof, said process consisting, essentially, in giving alternate impulses to the filtering medium in one direction and utilizing the back pressure of filtrate obtained from a previous filtering period for giving alternate impulses to the filtering medium in the opposite direction.

[Claims 6 to 8 not printed in the Gazette.]

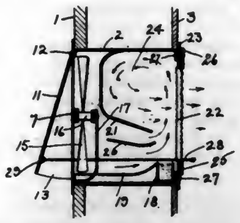
1,214,153. CIGAR-HOLDER. WILLIAM D. GIBSON, Seattle, Wash. Filed Nov. 29, 1915. Serial No. 64,182. (Cl. 131—10.)



In a cigar-holder of the class described, the combination with a body portion which is provided with a passageway

extending lengthwise therethrough, and one end portion of which is formed to adapted it to receive an end portion of a cigar, while its other end portion is formed to adapt it to serve as a mouth-piece, of a plug adapted to be inserted within said passageway at the mouth-piece end of said body portion, said plug having a different form of cross-section from the shape of the cross-section of said passageway and having a head whose inner side is curved; and a shaft having one of its ends fastened to the inner end of said plug and having its other end provided with a barbed point.

1,214,154. VENTILATOR AND AIR-PURIFYING APPARATUS. FRANK A. GUSTAVSON, Seekonk, Mass. Filed Jan. 29, 1912. Serial No. 674,080. (Cl. 98—47.)



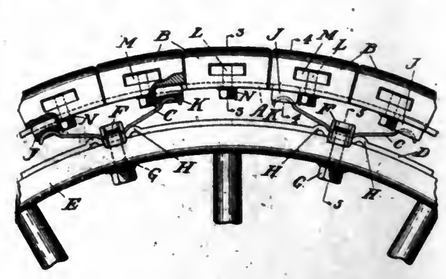
1. An air purifier and ventilating apparatus comprising a flue casing provided with a mixing chamber, a reservoir for liquid germicide located in said casing below said mixing chamber, means for directing the incoming air over said reservoir, a frame removably secured to the outlet end of said casing, a filter cloth carried by said frame and closing the outlet of said casing, said filter cloth forming a permeable wall for said mixing chamber, and positioned to permit the incoming air to move along the inner surface thereof as well as through the same.

2. An air purifier and ventilating apparatus comprising a flue casing provided with a mixing chamber, a reservoir for liquid germicide located in said casing below said mixing chamber, means for directing the incoming air over said reservoir, said means including a partition wall within said casing forming one wall of said mixing chamber, a frame removably secured to the outlet end of said casing, and a filter cloth carried by said frame and closing the outlet of said casing, said filter cloth also forming a permeable wall for said mixing chamber, and positioned to permit the incoming air to move along the inner surface thereof as well as through the same.

3. An air purifier and ventilating apparatus comprising a flue casing provided with a mixing chamber, a reservoir for liquid germicide located in said casing, below said mixing chamber, means for directing the incoming air over said reservoir, said means including a depending partition wall within said casing provided with an angularly disposed deflector and forming side and bottom walls of said mixing chamber, a frame removably secured to the outlet end of said casing, a filter cloth carried by said frame and closing the outlet of said casing, said filter cloth also forming one side wall of a mixing chamber, and positioned to permit the incoming air to move along the inner surface thereof as well as through the same.

1,214,155. TIRE. CHARLES WALTER GUTTZEIT, New York, N. Y. Filed Oct. 4, 1912. Serial No. 723,841. (Cl. 152—8.)

1. In a wheel, a tire comprising a continuous flexible metal rim, a plurality of blocks on said rim constituting a segmental tread, said blocks arranged in pairs and having an additional block between adjacent pairs, a felly, springs between said felly and said rim secured to one of said members at its middle, bearing blocks between the ends of said spring and the other member, an inward projection on the flexible metal rim under each block, said bearing blocks of each spring being located on opposite sides of the said inward projections under each block in each pair.



2. In a wheel, a tire comprising a continuous flexible metal rim, tread blocks on said rim, means for securing said blocks which means include projections on the inner side of the rim, a felly, bearing blocks arranged between the felly and the rim and adapted to engage circumferentially the opposite sides of a plurality of said securing means on the inside of said rim, a plurality of springs of flat stock each having one of its ends engaging the bearing block and means for securing the middle of each spring against circumferential movement on the felly.

3. In a wheel, a tire comprising a continuous flexible metal rim, blocks on said rim constituting a segmental tread, an attaching plate associated with each of said blocks, bolts passing through the rim and respectively engaging said attaching plates, washer plates for each of said bolts, a lateral extension on said washer plate to lock the same against rotation to form an abutment, a felly, bearing blocks between the felly and the rim so arranged whereby said blocks bear against the extension of said washer plate, and springs engaging at their free ends the bearing blocks.

4. In an automobile tire, a flexible continuous rim, a suitably yielding segmental tread, flat springs positioned circumferentially within said rim and supporting it about a felly, bearing blocks between the springs and rim and holding the rim against circumferential movement, flanges on the bearing blocks engaging the edges of the rim, and a recess in the blocks to engage the ends of the springs to form a seat for the latter and prevent sidewise movement of the bearing blocks.

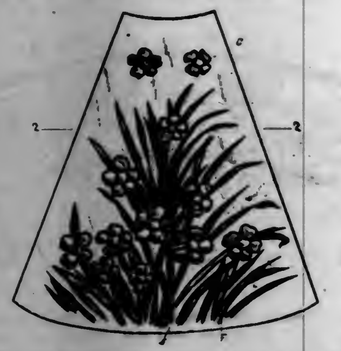
5. In an automobile tire, a rigid felly, a flexible rim surrounding said felly of a size affording a space between it and the felly to permit radial relative movement, detachable blocks secured at intervals to the said flexible rim to constitute the tread and prevent engagement of the rim with the ground, a plurality of springs between the rim and the felly, a clamp to secure each at its middle against circumferential movement with relation to the felly, bearing blocks engaging the outer end of each spring, lateral flanges on said bearing blocks whereby said bearing blocks are prevented from lateral displacement with relation to the rim, and flanges on the bearing blocks to engage the spring ends laterally, whereby the bearing blocks and coöperating parts afford the sole means for preventing lateral displacement of the rim with respect to the felly.

[Claims 6 and 7 not printed in the Gazette.]

1,214,156. ORNAMENTAL LAMP-SHADE. ARTHUR J. HALL, Hartford, Conn. Filed Dec. 7, 1916. Serial No. 135,581. (Cl. 240—109.)

1. The combination in an ornamental lamp shade comprising an opaque body part with open work in floral or other designs with beveled walls flared to the outer surface, a fabric or like material covering the outer surface of said body part, with corresponding designs painted on the said fabric arranged to register with the designs in the body part, a chiffon or like material covering the said painted fabric the combination providing the means

whereby the colors in the painted designs are changeable at different angles when illuminated.



2. The combination in an ornamental lamp shade comprising a body part with open work in artistic designs, outlines of the designs perforating the interior of the body part flared to form a full connecting design on the outer surface of the body part, the outer surface of the said body part covered with fabric, designs painted on the said fabric arranged to register with the like designs in the body part, the said painted fabric covered with chiffon or like material whereby the edges of the painted designs are shaded whereby the colors in the said painted designs change to the eye at different angles.

1,214,157. LIQUID DRESSING FOR LEATHER. HENRY ALFRED HAMEISTER, Elkhart Lake, Wis. Filed June 28, 1916. Serial No. 106,455. (Cl. 134—8.)

A liquid dressing for leather comprising one pound of rosin, one pint of linseed oil, and three ounces of pitch.

1,214,158. CONTAINER. AUGIE L. HANSEN, Evanston, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 17, 1915. Serial No. 67,342. (Cl. 220—13.)



1. In a container of the class described, the combination with a container body of cylindric shape having a laterally extended opening in its cylindrical wall, and a band extending more than 180 degrees around said wall and slidable therein to serve as a closure for said opening, said band being of spring material to permit separation of its ends to facilitate its application to the body and to thereafter hold itself thereon by its clamping engagement therewith.

2. In a container of the class described, the combination with a container body of cylindric shape having a laterally extended opening in its cylindrical wall, a band extending more than 180 degrees around said wall and slidable thereon to serve as a closure for said opening, said band being of spring material to permit separation of its ends to facilitate its application to the body and to thereafter hold itself thereon by its clamping engagement therewith, and means for locking said band against removal from the container body after it has been applied thereto.

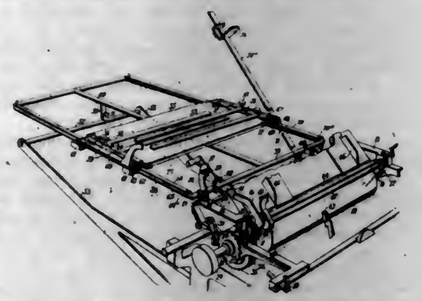
3. A container of the class described, comprising a body having a vertical cylindrical section provided with an opening, a band of spring material partly encircling said cylindrical section and slidable thereon to act as a closure for said opening, a plate engaging against the inside of said cylindrical section and secured to said band and serving to lock said band against removal from said body.

4. A container of the class described comprising a body having a cylindrical section provided with an opening, a band of spring material partly surrounding and fitting against the outside of said cylindrical section and slidable thereon to act as an outer closure for said opening, a plate engaging the inner side of said cylindrical section and secured to said band to move with said band to act as an inner closure for said opening.

5. A container of the class described comprising a body having a cylindrical section provided with a laterally extended opening, a band of spring material partly encircling and fitting the outer side of said cylindrical section and slidable thereon to act as a closure for said opening, a plate engaging against the inner face of said cylindrical section and secured at its inner end to said band adjacent one end thereof, the outer end of said plate and the adjacent end of said band forming a clamp for receiving the edge at the opposite end of said opening to yieldingly lock the band in closed position.

[Claims 6 to 11 not printed in the Gazette.]

1,214,159. TYPE-WRITING MACHINE. WILLIAM F. HELMOND, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 20, 1915. Serial No. 51,520. (Cl. 197—126.)



1. In a typewriting machine, a platen, a carriage for holding transfer material between the plies of a work-piece during line-space feed of the transfer material and work-piece, and for shifting the transfer material at intervals backward along the work-piece, a rail for guiding and partly supporting the carriage, grooved guide rolls on the carriage rotatable about vertical axes and embracing opposite sides of said rail to hold the carriage against lateral play on the rail, and a companion supporting rail for said carriage, the latter being provided with a grooved guide roll device to engage said companion rail on one side only.

2. In a typewriting machine, a platen, a carriage for holding transfer material between the plies of a work-piece during line-space feed of the transfer material and work-piece, and for shifting the transfer material at intervals backward along the work-piece, a rail for guiding the carriage, guards on the carriage coöperating with opposite sides of said rail to hold the carriage against lateral play on the rail, a second rail coöperating with the first rail to guide the carriage, and guards on the carriage coöperating with the second rail, said last-named guards arranged to hold the carriage against up and down movement at the second rail and allowing such lateral movement of the carriage on the second rail as may be due to irregularities or distortion in the first rail, whereby binding of the carriage between the two rails is prevented.

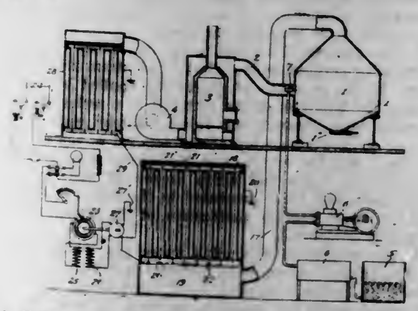
3. In a typewriting machine, a platen, a carriage for holding transfer material between the plies of a work-piece during line-space feed of the transfer material and work-piece, and for shifting the transfer material at intervals backward along the work-piece, a rail for guiding the carriage, guards on the carriage coöperating with opposite sides of said rail to hold the carriage against lateral play on the rail, a second rail coöperating with the first rail to guide the carriage, guards on the carriage coöperating with the second rail, said last-named guards allowing such lateral movement of the carriage on the second rail as may be due to irregularities or distortion in the first rail, whereby binding of the carriage between the two rails is prevented, and offsets arranged to prevent said lateral guards from moving up and down at either rail whereby the carriage is prevented from jumping the rails.

4. In a typewriting machine, a platen, a carriage for holding transfer material between the plies of a work-piece during line-space feed of the transfer material and work-piece, and for shifting the transfer material at intervals backward along the work-piece, two rails for guiding the carriage, rollers on the carriage, two on each side of one of said rails, with the rail closely held therebetween and holding the rollers against up and down movement relatively to the rail, and two rollers on one side of the other of said rails, and a guard on the carriage between which and said last two rollers the second rail is held; said second rail operative to hold the rollers thereon against up and down movement, space being provided for such lateral play of the carriage on said second rail as may be due to irregularities and distortion in said first rail.

5. In a typewriting machine, a platen, a carriage for holding transfer material between the plies of a work-piece during line-space feed of the transfer material and work-piece, and for shifting the transfer material at intervals backward along the work-piece, two rails for guiding the carriage, rollers on the carriage, one on each side of one of said rails, with the rail closely held therebetween and holding the rollers against up and down movement relatively to the rail, and one roller on one side of the other of said rails, and a guard on the carriage between which and said last roller the second rail is held; said second rail operative to hold the roller thereon against up and down movement, space being provided for such lateral play of the carriage on said second rail as may be due to irregularities and distortion in said first rail.

[Claims 6 to 18 not printed in the Gazette.]

1,214,160. MALTOSE AND PROCESS OF MAKING THE SAME. FRED J. HEMIG, Chicago, Ill., assignor to Crown Maltose Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 12, 1915. Serial No. 7,871. (Cl. 127—10.)



1. Maltose in the form of a finely-divided powder the individual particles of which are of generally spheroidal curvature.

2. Maltose in the form of a non-hygroscopic, finely-divided powder, the individual particles of which are of generally spheroidal curvature.

3. A finely divided powder the ultimate particles of which are of generally spheroidal form and consists of

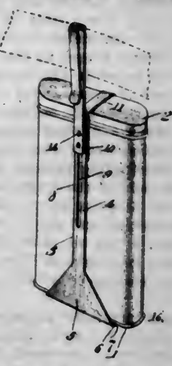
upward of 90 per cent. reducing sugars calculated as maltose.

4. A finely divided, whitish, non-hygroscopic powder the individual particles of which are of generally spheroidal curvature and consists essentially of uncaramelized malt sugar.

5. The herein described process which consists in subjecting starch in solution to the action of diastatic enzyms to produce a substantially pure maltose solution, spraying the resultant solution in a finely divided form into a desiccating atmosphere, whereby instantly removing the water to form solid spheroidal particles, and collecting such particles.

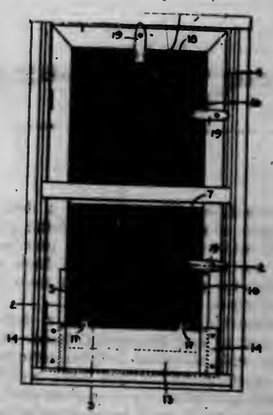
[Claims 6 to 8 not printed in the Gazette.]

1,214,161. TOBACCO-CAN HOLDER. PAUL R. HETTINGER and CARL P. PRINCE, Albany, N. Y. Filed Jan. 18, 1916. Serial No. 72,819. (Cl. 224—5.)



In a holder for the purpose set forth, a slotted strap having its end widened and formed with a tongue providing a channel between the tongue and the said widened end of the strap, a right angular spring clamp upon one of the sides of the strap, of a spring clip upon the other side of the strap, adjustable securing members for the clamp and clip and passing through the slot of the strap, as and for the purpose set forth.

1,214,162. WINDOW-SCREEN. CHARLES W. HINCHCLIFFE, Lawrence, Mass. Filed Dec. 1, 1915. Serial No. 64,538. (Cl. 156—14.)



1. A window screen adapted to be positioned in a window frame and having a main frame, a netting supported thereby, an auxiliary frame secured to the main frame and clamping the perimeter of the netting therebetween, a

strip secured to the window frame, hinges pivotally to secure the screen to the strip, and a slide positioned adjacent the lower portion of the screen and movable to permit the manipulation of shutters and to permit the opening and closing of the screen without interference with shutter fasteners.

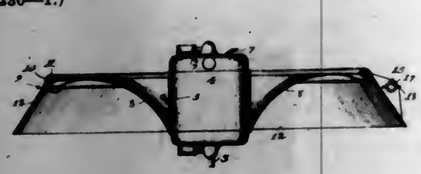
2. A window screen having a main frame, a netting supported thereby, an auxiliary frame secured to the main frame and clamping the netting therebetween, an angle strip, hinges secured to the screen and to the strip, means for detachably securing said strip to one of the opposed faces of a window frame whereby said strip and screen may be installed as a self-contained structure and after installation the screen may be opened and closed by pivoting on said hinges.

3. A window screen pivotally mounted in a window sash and having a frame, a netting supported thereby, a transverse frame member above the lower ends of the main frame, said netting terminating thereat, a slide vertically movable on the lower ends of the frame normally to form a closure conforming to the window frame sill and movable to afford access to the screen exterior, and means on the slide to retain the same in normal position upon the movement of screen about its pivot.

4. A window screen pivotally mounted in a window sash and having a frame, a netting supported thereby, a transverse frame member above the lower ends of the frame, said netting terminating thereat, a slide vertically movable on the lower ends of the frame normally to form a closure for the space between the netting terminus and the lower ends of the frame, and movable to afford access to the screen exterior, a lap on said slide normally engaging said transverse member and thereby supported in normal position upon movement of the screen about its pivot.

5. A window screen pivotally mounted in a window sash and having a frame, a netting supported thereby, a transverse frame member above the lower ends of the frame, said netting terminating thereat, a metallic slide vertically movable on the lower ends of the frame normally to form a closure for the space between the netting terminus and the lower ends of the frame and movable to afford access to the screen exterior, an integral lap on said slide normally engaging said transverse member and thereby supported in normal position upon movement of the screen about its pivot and integral tabs on said slide whereby it may be manipulated.

1,214,163. ELECTRIC FAN. WILLIAM C. HOOD, Chicago, Ill. Filed Oct. 8, 1914. Serial No. 865,615. (Cl. 230—1.)



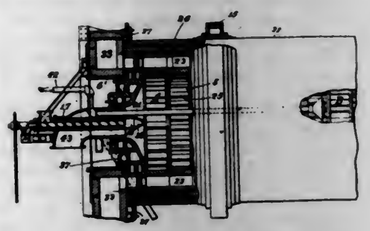
1. The combination with a fan, of a deflector plate positioned in rear of said fan, said deflector plate having a substantially wide marginal portion terminating in a rounded bead portion and an inclined band secured to said bead portion for governing the area controlled by the deflected air currents.

2. The combination with a fan, of a deflector plate positioned in rear of said fan, said deflector plate having a substantially wide marginal portion terminating in a rounded bead portion, an inclined band secured to said bead portion for governing the area controlled by the deflected air currents, said band being detachable from the bead portion.

3. In an electric fan and in combination, a deflector plate having a truncated conical portion with the side of the cone concave, a rim and an intermidiate portion of substantial extent merging into the concave cone and the rim, a motor having its major portion located at the rear side of the plate in the chamber formed by the conical portion and a fan located coaxial of the plate in advance of the front side thereof.

4. In an electric fan and in combination, a deflector plate having a truncated conical central portion with an opening through the end of said truncated portion substantially co-extensive in area with said end and a deflecting portion of material extent at the base of the cone, a motor having a casing, said motor having its major portion located in the chamber formed at the rear of the plate by the conical portion thereof and an end of its casing exposed through said opening in the plate and substantially closing the same, and a fan arranged coaxial of the plate in advance of said exposed end of the motor casing.

1,214,164. PROCESS OF TREATING MATERIALS. JOHN W. HORNSBY, Summit, N. J., assignor to General Reduction Gas and By-Products Company, a Corporation of Delaware. Filed July 15, 1910, Serial No. 572,134. Renewed June 24, 1916. Serial No. 105,722. (Cl. 48—202.)



1. The process of continuously making water gas which consists in introducing carbonaceous material and steam into a closed vessel in the presence of a source of heat out of contact with the material maintaining the particles of the material in a series of falling showers down through the vessel whereby the steam as it passes through the vessel is brought into repeated and shifting contact with the particles of the material.

2. The process of making water gas continuously, which consists in feeding carbonaceous material into a closed vessel in the presence of a source of heat out of contact with the material, introducing steam into the vessel, and maintaining the particles of the material in a condition of separation and subdivision by repeatedly lifting and showering the particles down through the vessel thereby presenting all surfaces of the material again and again to the action of the heat and the steam.

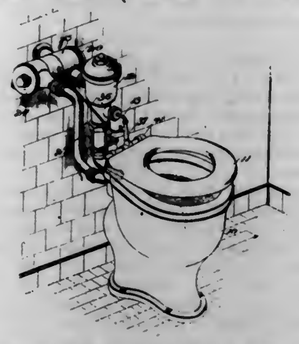
3. The process of making water gas, which consists in introducing carbonaceous material and steam into a closed vessel in the presence of externally applied heat, maintaining the particles of the material in a series of falling showers down through the vessel whereby each particle has all of its surfaces repeatedly exposed to the action of the heat and the steam, and the seared surfaces of the particles are again and again broken off and fresh surfaces again and again presented to the action of the heat and the steam whereby gasification of the material is substantially completed.

4. The process of producing water gas, which consists in introducing carbonaceous material continuously into an externally heated revolving vessel, introducing steam into the vessel while the vessel is revolved to cause the material to be picked up and showered down in the interior of the vessel to maintain the material in a finely divided and comminuted condition, thus exposing the separated particles of the material to the action of the steam and heat, the shock of the falling particles being adapted to disrupt their seared surfaces and present fresh surfaces to the action of the heat and steam with each revolution of the vessel.

5. The process of producing water gas which consists in introducing carbonaceous material continuously into an externally heated vessel, passing steam through falling veils of the material and again and again subjecting the surfaces of the material in a separated and unsupported condition to the action of the heat and the steam whereby the material is substantially gasified.

[Claims 6 and 7 not printed in the Gazette.]

1,214,165. TOILET ATTACHMENT. ALVAH JEWEL HOWD, Nampa, Idaho, assignor of fifty-one one-hundredths to Edward H. Dewey, Nampa, Idaho. Filed Dec. 12, 1916. Serial No. 136,514. (Cl. 4—21.)



1. In combination with a toilet having a flush pipe, a member mounted in said pipe adapted to be actuated by the flushing water, a motor adapted to store energy on actuation of said member, and a fan adapted to be driven by said motor on subsequent use of the toilet.

2. In combination with a toilet having a flush pipe, and a normally raised seat, a member adapted to be actuated by the flushing water as the seat is raised, a motor for storing energy on actuation of said member, and an exhaust fan adapted to be driven by said motor when said seat is subsequently depressed.

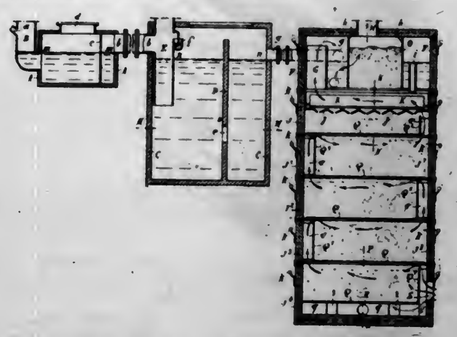
3. In combination with a toilet having a flush pipe, and a normally raised seat, a water wheel adapted to be rotated by the flushing water, a fan, shafts therefor, a clutch between the shafts about which the water wheel and fan turn, and a spring motor adapted to be tensioned by the flushing water and adapted to drive the fan when the seat is depressed.

4. In combination with a toilet having a flush pipe, and a normally raised seat, a water wheel adapted to be rotated by the flushing water, a fan, shafts therefor, a clutch between the shafts about which the water wheel and fan turn, a spring motor adapted to be tensioned by the flushing water and adapted to drive the fan when the seat is depressed, and means adapted to stop said exhaust fan as said seat returns to normal position.

5. In combination with a toilet having a flush pipe, and a normally raised seat, an exhaust fan, a shaft about which said fan is adapted to turn, a water wheel adapted to be rotated by the flushing water, a shaft upon which said water wheel is mounted, a clutch between the shafts, a spring motor on one of said shafts adapted to be actuated by the turning of the water wheel, a pawl and ratchet mechanism on the same shaft adapted to be released as the seat is depressed to start said fan and to prevent rotation of the shaft upon which said fan is mounted when said seat returns to normal position.

1,214,166. PURIFICATION OF LIQUID AND SOLID MATERIALS. ELIE JULES MARCEL JANVIER, Paris, France. Filed Jan. 29, 1913. Serial No. 744,813. (Cl. 210—18.)

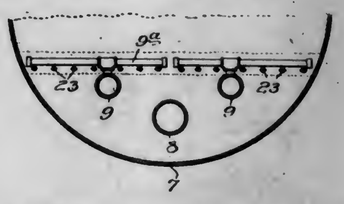
1. A sewage disposal apparatus comprising a stack of receptacles, said receptacles being separate and adapted to fit one on top of another, said receptacles having a grate, a relatively thick layer of filtering material in said grate, said grate having a perforated bottom and a perforated upright portion spaced from one end of the receptacles adapted to permit air to horizontally penetrate the mass of the material in said receptacle for facilitating the oxidation of the sewage.



2. A sewage disposel apparatus comprising a stack of receptacles adapted to contain filtering material, one of said receptacles having a vertical screen therein adapted to prevent passage of solid insoluble matter, and the other receptacles having grates supporting a relatively thick layer of filtering material, said grates having a perforated bottom and a perforated upright portion spaced from one end of the receptacles, the space between the end of the receptacle and upright portion of the grate being adapted to permit air to horizontally penetrate the mass of the material in the receptacle for facilitating the oxidation of the sewage.

3. A sewage disposal apparatus comprising a stack of receptacles, one of said receptacles having two vertical perforated walls therein and a charge of filtering material between said vertical perforated walls, liquid entering the receptacle being adapted to flow through the filtering material between said perforated plates, and other receptacles having grates supporting a relatively thick layer of filtering material, said grates having a perforated bottom and a perforated upright portion spaced from one end of the receptacles, the space between the end of the receptacle and upright portion of the grate being adapted to permit air to horizontally penetrate the mass of the material in the receptacle for facilitating the oxidation of the sewage.

1,214,167. PRESSURE-FILTER. WILLIAM M. JEWELL, Chicago, Ill., assignor to Jewell Engineering Company, Chicago, Ill., a Corporation of Illinois. Filed June 15, 1914. Serial No. 845,192. (Cl. 210—8.)



In a filter, the combination of a casing containing a filter-bed formed of gravel with superposed relatively fine filtering material, and a pipe embedded in said gravel and having downwardly extending strainer-heads located in the gravel of said bed, with downwardly and laterally extending openings, whereby water forced into said strainer-heads for washing the filter-bed, discharges therefrom downwardly and into the gravel, in jets, said pipe being closed to the interior of said casing excepting through said strainer-heads.

strip secured to the window frame, hinges pivotally to secure the screen to the strip, and a slide positioned adjacent the lower portion of the screen and movable to permit the manipulation of shutters and to permit the opening and closing of the screen without interference with shutter fasteners.

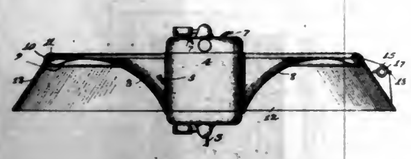
2. A window screen having a main frame, a netting supported thereby, an auxiliary frame secured to the main frame and clamping the netting therebetween, an angle strip, hinges secured to the screen and to the strip, means for detachably securing said strip to one of the opposed faces of a window frame whereby said strip and screen may be installed as a self-contained structure and after installation the screen may be opened and closed by pivoting on said hinges.

3. A window screen pivotally mounted in a window sash and having a frame, a netting supported thereby, a transverse frame member above the lower ends of the main frame, said netting terminating thereat, a slide vertically movable on the lower ends of the frame normally to form a closure conforming to the window frame sill and movable to afford access to the screen exterior, and means on the slide to retain the same in normal position upon the movement of screen about its pivot.

4. A window screen pivotally mounted in a window sash and having a frame, a netting supported thereby, a transverse frame member above the lower ends of the frame, said netting terminating thereat, a slide vertically movable on the lower ends of the frame normally to form a closure for the space between the netting terminus and the lower ends of the frame, and movable to afford access to the screen exterior, a lap on said slide normally engaging said transverse member and thereby supported in normal position upon movement of the screen about its pivot.

5. A window screen pivotally mounted in a window sash and having a frame, a netting supported thereby, a transverse frame member above the lower ends of the frame, said netting terminating thereat, a metallic slide vertically movable on the lower ends of the frame normally to form a closure for the space between the netting terminus and the lower ends of the frame and movable to afford access to the screen exterior, an integral lap on said slide normally engaging said transverse member and thereby supported in normal position upon movement of the screen about its pivot and integral tabs on said slide whereby it may be manipulated.

1,214,163. ELECTRIC FAN. WILLIAM C. HOOD, Chicago, Ill. Filed Oct. 8, 1914. Serial No. 865,615. (Cl. 230—1.)



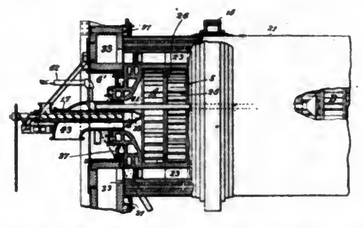
1. The combination with a fan, of a deflector plate positioned in rear of said fan, said deflector plate having a substantially wide marginal portion terminating in a rounded bead portion and an inclined band secured to said bead portion for governing the area controlled by the deflected air currents.

2. The combination with a fan, of a deflector plate positioned in rear of said fan, said deflector plate having a substantially wide marginal portion terminating in a rounded bead portion, an inclined band secured to said bead portion for governing the area controlled by the deflected air currents, said band being detachable from the bead portion.

3. In an electric fan and in combination, a deflector plate having a truncated conical portion with the side of the cone concave, a rim and an intermidiate portion of substantial extent merging into the concave cone and the rim, a motor having its major portion located at the rear side of the plate in the chamber formed by the conical portion and a fan located coaxial of the plate in advance of the front side thereof.

4. In an electric fan and in combination, a deflector plate having a truncated conical central portion with an opening through the end of said truncated portion substantially co-extensive in area with said end and a deflecting portion of material extent at the base of the cone, a motor having a casing, said motor having its major portion located in the chamber formed at the rear of the plate by the conical portion thereof and an end of its casing exposed through said opening in the plate and substantially closing the same, and a fan arranged coaxial of the plate in advance of said exposed end of the motor casing.

1,214,164. PROCESS OF TREATING MATERIALS. JOHN W. HORNSBY, Summit, N. J., assignor to General Reduction Gas and By-Products Company, a Corporation of Delaware. Filed July 15, 1910, Serial No. 572,134. Renewed June 24, 1916. Serial No. 105,722. (Cl. 48—202.)



1. The process of continuously making water gas which consists in introducing carbonaceous material and steam into a closed vessel in the presence of a source of heat out of contact with the material maintaining the particles of the material in a series of falling showers down through the vessel whereby the steam as it passes through the vessel is brought into repeated and shifting contact with the particles of the material.

2. The process of making water gas continuously, which consists in feeding carbonaceous material into a closed vessel in the presence of a source of heat out of contact with the material, introducing steam into the vessel, and maintaining the particles of the material in a condition of separation and subdivision by repeatedly lifting and showering the particles down through the vessel thereby presenting all surfaces of the material again and again to the action of the heat and the steam.

3. The process of making water gas, which consists in introducing carbonaceous material and steam into a closed vessel in the presence of externally applied heat, maintaining the particles of the material in a series of falling showers down through the vessel whereby each particle has all of its surfaces repeatedly exposed to the action of the heat and the steam, and the seared surfaces of the particles are again and again broken off and fresh surfaces again and again presented to the action of the heat and the steam whereby gasification of the material is substantially completed.

4. The process of producing water gas, which consists in introducing carbonaceous material continuously into an externally heated revolving vessel, introducing steam into the vessel while the vessel is revolved to cause the material to be picked up and showered down in the interior of the vessel to maintain the material in a finely divided and comminuted condition, thus exposing the separated particles of the material to the action of the steam and heat, the shock of the falling particles being adapted to disrupt their seared surfaces and present fresh surfaces to the action of the heat and steam with each revolution of the vessel.

5. The process of producing water gas which consists in introducing carbonaceous material continuously into an externally heated vessel, passing steam through falling veils of the material and again and again subjecting the surfaces of the material in a separated and unsupported condition to the action of the heat and the steam whereby the material is substantially gasified.

[Claims 6 and 7 not printed in the Gazette.]

1,214,165. TOILET ATTACHMENT. ALVAH JEWEL HOWD, Nampa, Idaho, assignor of fifty-one one-hundredths to Edward H. Dewey, Nampa, Idaho. Filed Dec. 12, 1916. Serial No. 136,514. (Cl. 4—21.)



1. In combination with a toilet having a flush pipe, a member mounted in said pipe adapted to be actuated by the flushing water, a motor adapted to store energy on actuation of said member, and a fan adapted to be driven by said motor on subsequent use of the toilet.

2. In combination with a toilet having a flush pipe, and a normally raised seat, a member adapted to be actuated by the flushing water as the seat is raised, a motor for storing energy on actuation of said member, and an exhaust fan adapted to be driven by said motor when said seat is subsequently depressed.

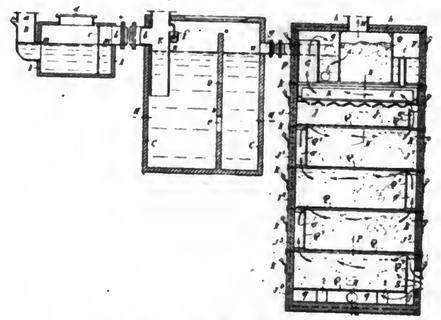
3. In combination with a toilet having a flush pipe, and a normally raised seat, a water wheel adapted to be rotated by the flushing water, a fan, shafts therefor, a clutch between the shafts about which the water wheel and fan turn, and a spring motor adapted to be tensioned by the flushing water and adapted to drive the fan when the seat is depressed.

4. In combination with a toilet having a flush pipe, and a normally raised seat, a water wheel adapted to be rotated by the flushing water, a fan, shafts therefor, a clutch between the shafts about which the water wheel and fan turn, a spring motor adapted to be tensioned by the flushing water and adapted to drive the fan when the seat is depressed, and means adapted to stop said exhaust fan as said seat returns to normal position.

5. In combination with a toilet having a flush pipe, and a normally raised seat, an exhaust fan, a shaft about which said fan is adapted to turn, a water wheel adapted to be rotated by the flushing water, a shaft upon which said water wheel is mounted, a clutch between the shafts, a spring motor on one of said shafts adapted to be actuated by the turning of the water wheel, a pawl and ratchet mechanism on the same shaft adapted to be released as the seat is depressed to start said fan and to prevent rotation of the shaft upon which said fan is mounted when said seat returns to normal position.

1,214,166. PURIFICATION OF LIQUID AND SOLID MATERIALS. ELIE JULES MARCEL JANVIER, Paris, France. Filed Jan. 29, 1913. Serial No. 744,813. (Cl. 210—18.)

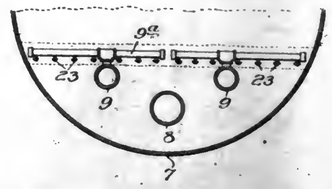
1. A sewage disposal apparatus comprising a stack of receptacles, said receptacles being separate and adapted to fit one on top of another, said receptacles having a grate, a relatively thick layer of filtering material in said grate, said grate having a perforated bottom and a perforated upright portion spaced from one end of the receptacles adapted to permit air to horizontally penetrate the mass of the material in said receptacle for facilitating the oxidation of the sewage.



2. A sewage disposal apparatus comprising a stack of receptacles adapted to contain filtering material, one of said receptacles having a vertical screen therein adapted to prevent passage of solid insoluble matter, and the other receptacles having grates supporting a relatively thick layer of filtering material, said grates having a perforated bottom and a perforated upright portion spaced from one end of the receptacles, the space between the end of the receptacle and upright portion of the grate being adapted to permit air to horizontally penetrate the mass of the material in the receptacle for facilitating the oxidation of the sewage.

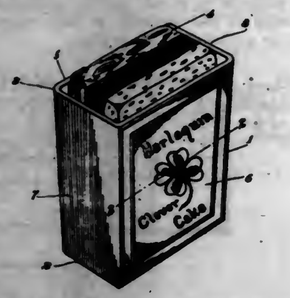
3. A sewage disposal apparatus comprising a stack of receptacles, one of said receptacles having two vertical perforated walls therein and a charge of filtering material between said vertical perforated walls, liquid entering the receptacle being adapted to flow through the filtering material between said perforated plates, and other receptacles having grates supporting a relatively thick layer of filtering material, said grates having a perforated bottom and a perforated upright portion spaced from one end of the receptacles, the space between the end of the receptacle and upright portion of the grate being adapted to permit air to horizontally penetrate the mass of the material in the receptacle for facilitating the oxidation of the sewage.

1,214,167. PRESSURE-FILTER. WILLIAM M. JEWELL, Chicago, Ill., assignor to Jewell Engineering Company, Chicago, Ill., a Corporation of Illinois. Filed June 15, 1914. Serial No. 845,192. (Cl. 210—8.)



In a filter, the combination of a casing containing a filter-bed formed of gravel with superposed relatively fine filtering material, and a pipe embedded in said gravel and having downwardly extending strainer-heads located in the gravel of said bed, with downwardly and laterally extending openings, whereby water forced into said strainer-heads for washing the filter-bed, discharges therefrom downwardly and into the gravel, in jets, said pipe being closed to the interior of said casing excepting through said strainer-heads.

1,214,168. EDIBLE CONTAINER. LEONARD VERNON JOHNSON and OTIS HARPER BENSON, St. Michaels, Md. Filed Oct. 14, 1916. Serial No. 125,530. (Cl. 99—11.)



1. An edible container for ice cream of pressed cake and of rectangular form to receive and fit the commercial single order rectangular ice cream block.

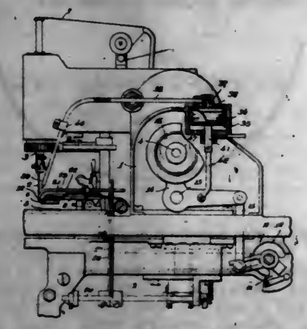
2. In combination, a commercial single order rectangular ice cream block and an edible container for the same of molded and baked cake, the container being of substantially rectangular cross section to fit the block and slightly tapered as to its vertical section.

1,214,169. TYPE-WRITER ATTACHMENT. DAVID A. E. JOHNSTON, Helena, Ark. Filed Jan. 23, 1913. Serial No. 743,773. (Cl. 197—133.)



An attachment for typewriters, comprising a cylinder; means depending from said cylinder and formed to engage and clamp a paper table; said cylinder having a longitudinal slot near its lower side through which a web of paper may pass; a shaft supported in said cylinder, said shaft having a longitudinal slot to receive and hold the end of said web, and disks to confine the roll of paper in proper position; and a paper cutter carried by, but separated from, the upper side of the cylinder.

1,214,170. SEWING-MACHINE. JOHN KIEWICZ, Boston, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed July 14, 1915. Serial No. 40,333. (Cl. 112—33.)



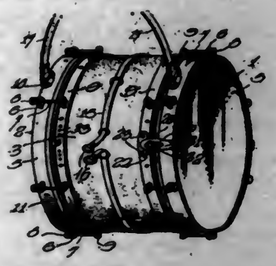
1. In a sewing machine, the combination with stitch-forming mechanism, of work-clamping means, means to cause a relative movement between the stitch-forming mechanism and working-clamping means, of means to hold the end of the thread while the initial stitches are being formed and then to cut said end, and pneumatic means actuated by the means for giving such relative movement between the work-clamping means and stitch-forming mechanism to remove said severed end.

2. In a sewing machine, the combination with stitch-forming mechanism, of work-clamping means, means to cause a relative movement between the stitch-forming mechanism and work-clamping means, means to hold the end of a thread while the initial stitches are being formed and then to cut said thread, a bellows device, a pipe leading therefrom into position to deliver an air blast onto the thread-holding and cutting means, and operating means for said bellows actuated by the means for giving the relative movement between the work-clamping means and stitch-forming mechanism.

3. In a sewing machine, the combination with a frame having a chamber therein, of stitch-forming mechanism, means to hold the end of the thread while the initial stitches are being formed and then to cut said end, a bellows located in said chamber, a pipe leading from the bellows into position to deliver an air blast against said thread-holding and cutting means, and means to actuate the bellows.

4. In a sewing machine, the combination with stitch-forming mechanism, of work-clamping means, means including an oscillating lever to cause a relative movement between said stitch-forming mechanism and work-clamping means, a bellows device connected to and operated by said lever, and a pipe communicating with said bellows and leading into a position to deliver air blasts against said thread-holding and cutting means.

1,214,171. COLLAPSIBLE DRUM. AM DEE KING, New Albany, Ind. Filed Feb. 14, 1916. Serial No. 78,202. (Cl. 84—10.)



1. In a device of the class described, a pair of drum heads, a collapsible body of flexible material therebetween, and ribs connecting said drum heads to space the same apart, said ribs being disposed within said flexible body.

2. In a device of the class described, a pair of drum heads, a collapsible body of flexible material therebetween, and foldable ribs connecting said drum heads to permit the drum heads to be moved toward each other.

3. In a device of the class described, a pair of drum heads, a plurality of two-part ribs pivoted together intermediate their ends and to said drum heads, said ribs being foldable inwardly to permit the two drum heads to come together, and a collapsible body of flexible material between said heads.

4. In a device of the class described, a pair of drum heads, a collapsible body therebetween, and a flexible band surrounding the intermediate portions of said body to collapse said body when tightened.

5. In a device of the class described, a pair of drum heads, foldable ribs connecting said heads, a collapsible body of flexible material between said heads and surrounding said ribs, and a flexible band around said ribs, said band causing said ribs and body to fold when tightened to collapse the drum.

[Claims 6 to 14 not printed in the Gazette.]

1,214,172. DEVICE FOR USE IN CROCHETING AND OTHER WORK. FRANK E. KINNEY, Jericho, Vt. Filed Apr. 15, 1916. Serial No. 91,824. (Cl. 66—17.)



1. A device of the class described including a base, standards on said base, lateral friction bends in said standards adapted to bear against the ends of a spool, terminals on the standards disposed toward each other and adapted to be entered in the bore of the spool, a hand-band engaging with said base and adapted to receive the hand of the user, and a finger bar slidably connected at its rear end with the said base for forward and backward bodily movement thereon, and having a finger ring at the front thereof, said base having a longitudinally disposed guide member on which the finger bar has its sliding movement.

2. A device of the class described including a spool support, means to hold the said support on the hand, a forwardly extending resilient finger bar connected with said base and provided with a finger-engaging member at the front end, said finger bar having means to guide the thread.

3. A device of the class described, including a spool support, means to hold the said support on the hand at the back thereof, and a resilient finger bar slidably connected with the said support and extending forwardly therefrom, the said finger bar having means for engagement of the forward end thereof by a finger of the user and having means to guide the thread.

4. A device of the class described including a base having bends alternating in forward and rearward directions, spool supporting means on said base, the said base presenting a member between the bends thereof raised above the ends of the base, means to hold the base to the hand of the user, and a finger bar slidably connected at its rear end with said raised member, said finger bar having means at the front end thereof for engagement by a finger of the user and having a thread guide.

5. A device of the class described including a base, means to hold said base to the hand of the user, standards rising from said base and provided with means at their upper ends to hold a spool, a clamp bar swingingly connected with one standard and formed with corrugations at the other end adapted to engage the adjacent standard, and a finger bar connected with the said base and extending forwardly therefrom, said finger bar having means at its front end to receive a finger of the user and having thread-guiding means.

[Claim 6 not printed in the Gazette.]

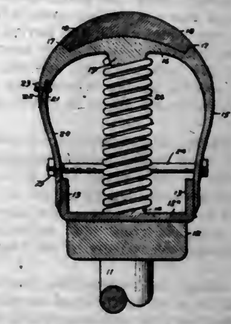
1,214,178. PROCESS OF WORKING ENAMELED LEATHER AND THE LIKE WITH SKIVING OR SPLITTING MACHINES. HERMANN KLAEGER, Cannstatt-Stuttgart, Germany, assignor to Fortuna-Werke, Spezialmaschinenfabrik, Gesellschaft Mit Beschränkter Haftung, Cannstatt-Stuttgart, Germany, a Corporation of Germany. Filed May 12, 1914. Serial No. 837,997. (Cl. 69—21.)

An improved method of skiving or splitting enameled leather or the like, which consists in subjecting enameled leather to a forward feeding pressure simultaneously on its enameled surafce and on its inner surface for feeding it under restraint to a skiving or splitting knife, and providing on the enameled surface while so pressed during its cutting or skiving, an interposed fine layer of a



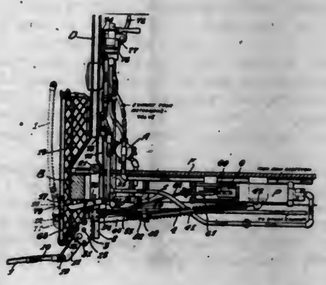
lubricating fluid, whereby the sticking of the enameled surface of the leather is prevented, and the feeding of the material to be worked is not impeded.

1,214,174. RESILIENT TIRE. LOUIS H. KLOCKSIEM, Paton, Iowa. Filed Aug. 16, 1915. Serial No. 45,827. (Cl. 152—8.)



In a device of the class described, the combination of an outwardly opening channel-shaped rim, with a tire comprising a resilient annular side portion, and an annular tread portion, a removable annular resilient side member having one edge overlapping the edge of said tread portion, and detachably secured thereto, said side portion and said side member having parts slidably mounted on the flanges of said channel-shaped rim, bolts extended through the side portion and the side member, for holding them against spreading movement and adapted to limit their inward movement on said rim, resilient springs interposed between said tread portion and said rim, and means for preventing said tire from creeping on said rim.

1,214,175. CAR-FENDER. EMIL M. KNOTHE, Seattle, Wash., assignor to Emeline Knothe, Seattle, Wash. Filed Nov. 15, 1916. Serial No. 131,356. (Cl. 105—250.)



1. In a car fender, in combination, a fender apron having carrying arms rigid therewith and extending up-

wardly and rearwardly from its rear edge, pivot supports for said arms distant from the rear edge of the fender apron, and a guard frame extending upward from adjacent the rear edge of the fender apron and having slots for the reception of the fender-carrying arms when the fender apron is raised.

2. In a car fender, in combination, a fender apron having carrying arms rigid therewith and extending upwardly and rearwardly from its rear edge, pivot supports for said arms distant from the rear edge of the fender apron, and a guard frame extending upward from adjacent the rear edge of the fender apron and having slots for the reception of the fender-carrying arms when the fender apron is raised, the guard frame and the fender apron having openings which register with each other and with the car coupler when the fender apron is in raised position.

3. In a car fender, in combination, a fender apron having carrying arms rigid therewith and extending upwardly and rearwardly from its rear edge, pivot supports for said arms distant from the rear edge of the fender apron, and a guard frame extending upward from adjacent the rear edge of the fender apron and having slots for the reception of the fender-carrying arms when the fender apron is raised, the carrying arms and the members to which they are pivoted having interlocking members engageable to hold the fender apron in either raised or lowered position.

4. In a car fender, in combination, fender suspension members located back of the bumper member of the car frame and pivoted by their upper ends above the bumper to swing parallel with the length of the car, fender carrying arms fixed to the rear edge of the apron frame and having pivotal supports from said suspension members located upwardly and rearwardly of the rear edge of the fender frame.

5. In a car fender, in combination, fender suspension members located back of the bumper member of the car frame and pivoted by their upper ends above the bumper to swing parallel with the length of the car, a block carried by the lower end of each of said suspension members and vertically adjustable thereon, and a fender apron having carrying arms pivoted upon said blocks at points upwardly and rearwardly of the rear edge of the fender apron.

[Claims 6 to 21 not printed in the Gazette.]

1,214,176. CATTLE-ALINING DEVICE. ALFRED W. KNUTSON, Galesburg, Ill., assignor to Rowe Manufacturing Co., Galesburg, Ill., a Corporation of Illinois. Filed July 11, 1916. Serial No. 108,559. (Cl. 119—149.)



1. In a device of the nature described, a support, a stanchion-adjusting arm connected therewith to rock longitudinally with reference thereto, and a stanchion connected with said arm.

2. In a device of the nature described, a support, a stanchion-adjusting arm flexibly connected therewith to rock longitudinally with reference thereto, and a stanchion connected with said arm.

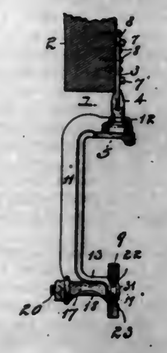
3. In a device of the nature described, a support, a stanchion-adjusting arm rockingly connected therewith, and a stanchion having swivel connection with said arm.

4. In a device of the nature described, a support, a stanchion-adjusting arm connected therewith to rock in the longitudinal axis thereof, and a stanchion connected with said arm.

5. In a device of the nature described, a support, a rocking, stanchion-adjusting arm pivotally connected therewith, and a stanchion connected with said arm.

[Claims 6 to 19 not printed in the Gazette.]

1,214,177. TRACK-HANGER. ALFRED W. KNUTSON, Galesburg, Ill., assignor to Rowe Manufacturing Co., Galesburg, Ill., a Corporation of Illinois. Filed July 18, 1916. Serial No. 109,901. (Cl. 104—181.)



1. The combination with a building-framework member, of a suspended track comprising a sustaining element having a button-like head, said sustaining element secured rigidly to said framework member, a track-supporting element having a slot adapted to be engaged with said head after the first recited element has been fixed in position, and a track supported by said track-supporting element.

2. The combination with a building framework member, of a suspended track comprising a sustaining element having a button-like head, said sustaining element secured rigidly to said framework member, a track-supporting element having a slot adapted to be engaged with or disconnected from said head after the first recited element has been fixed in position, and a track supported by said supporting element.

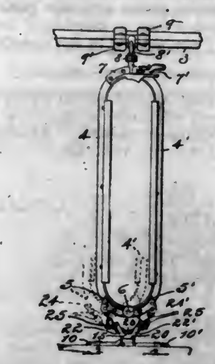
3. In a track-hanger, a sustaining-element provided with lugs, a strap provided with apertures adapted to be engaged by said lugs after the sustaining element has been fixed in operative position, a track-supporting element engaged with said sustaining element, and a track supported by said supporting element.

4. In a track-hanger, a yoke having at its upper end a slot and a recess communicating with the slot, a beam-plate having a shank and a head, the former adapted to move in said recess and the latter to be passed through said slot, whereby to engage said head with the upper end of said yoke, and a track supported by the yoke.

5. In a track-hanger, a track having circular apertures in its web, a track-supporting element provided with an eye and with a boss through which the eye extends, said boss seated in one of said apertures, a bolt non-rotatably seated in said eye and passing also through one of said apertures, and a nut engaging said bolt and thereby securing said track to said supporting element.

[Claims 6 to 23 not printed in the Gazette.]

1,214,178. CATTLE-ALINING DEVICE. ALFRED W. KNUTSON, Galesburg, Ill., assignor to Rowe Manufacturing Co., Galesburg, Ill., a Corporation of Illinois. Filed July 18, 1916. Serial No. 109,902. (Cl. 119—149.)



1. In a device of the nature described, a yoke having opposed, spaced eyes, a chain passing through said eyes, whereby to connect it with a stanchion.

2. In a device of the nature described, a swiveled yoke having spaced eyes, a chain passing through said eyes whereby to connect it with a stanchion, and stanchion-adjusting means for supporting the yoke.

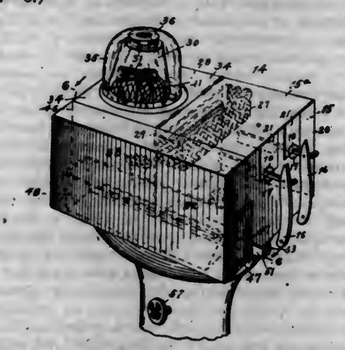
3. In a device of the nature described, a swiveled yoke, a stanchion, and a chain passed loosely through eyes in the yoke, its ends connected with the stanchion.

4. In a device of the nature described, a stanchion, a swiveled yoke, a chain passing loosely through it, the ends of the chain connected to the respective sides of the stanchion, and a pair of links adapted to support the yoke in different positions.

5. The combination with a stall-curb and a stanchion-supporting rail, of a stanchion supported from said rail, a pair of links securable to said curb and adapted to be placed in different divergent positions thereon, a yoke connected with said links and having spaced eyes, and a chain passed through said eyes, its ends secured to the respective sides of the stanchion.

[Claims 6 to 14 not printed in the Gazette.]

1,214,179. STERILIZER. JACOB A. KOLS, Cleveland, Ohio. Filed Aug. 8, 1916. Serial No. 113,711. (Cl. 167—3.)



1. A sterilizer comprising a casing having a spray head in the lower part thereof, and a dome at the top of the casing, provided with a spring cushion on its under side, adapted to press against a cup or the like within the casing, to hold the same in position.

2. A sterilizer comprising a casing having a spray head therein, and an inverted cup shaped holder in the casing over the spray head, adapted to hold articles above the same.

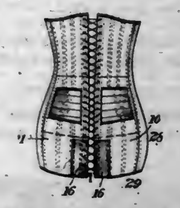
3. The combination with a sterilizer casing having a recess in one wall thereof, of a sectional holder adapted to grip the shank of a tool, and removably fitting in said recess.

4. The combination with a sterilizer casing having a recess in one wall thereof, of a tool holder comprising a removable section adapted to grip and hold a tool in the casing, the section being slidable into and out of the recess.

5. The combination of a sterilizer casing having a removable cover, and a recess in one wall of said casing, said recess opening on the side toward the cover, and a tool-holder slidable into and out of said recess, when the cover is opened.

[Claims 6 and 7 not printed in the Gazette.]

1,214,180. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Oct. 12, 1916. Serial No. 125,177. (Cl. 2—73.)



1. In an apparel corset and in each corset body half, a strap connected to one end adjacent the waist line of the garment, bridging an open space therein, and extending approximately from the hip section to the rear edge of the garment, and means for adjusting the said strap to position for use.

2. In an apparel corset and in each corset body half, a back relief strap secured at one end adjacent the waist line, bridging an open space in the body of the garment, and extending approximately from the hip section to the rear lacing edge of the garment, and means at the opposite end of the said strap for coacting with the rear lacing edge of the garment to adjust and secure the strap in position for use.

3. In an apparel corset and in each corset body half, a back relief strap comprising a plurality of tapes secured at corresponding ends to the body of the garment at approximately the hip section, bridging over an open space in the body of the garment, and extending rearwardly to substantially the rear lacing edge, and an eyelet strip secured to the opposite ends of the said tapes and adapted to coact with the rear lacing edge of the garment for adjusting the relief strap to position for use.

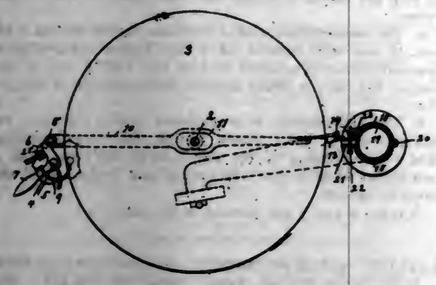
1,214,181. BRAKE FOR PHONOGRAPHS. FREDERICK KRAFT, Highwood Park, N. J. Filed Aug. 16, 1916. Serial No. 115,125. (Cl. 74—46.)

1. A phonograph comprising a turn table, a brake, a tone arm, a tripper mounted on the tone arm and adapted to be normally in operative engagement therewith, and brake controlling means adapted to arrest the tripper and simultaneously break its operative engagement with the tone arm.

2. A phonograph comprising a turn table, a brake, a tone arm, a split collar mounted on the tone arm and adapted to be taken along thereby through frictional contact, and a spreader operatively connected to the brake, said spreader being adapted to arrest the collar, and to simultaneously break its frictional engagement with the tone arm.

3. A phonograph comprising a turn table, a brake, a tone arm, a tripper fitted upon the tone arm, and means operable by the brake for loosening said tripper to permit an independent movement of the tone arm.

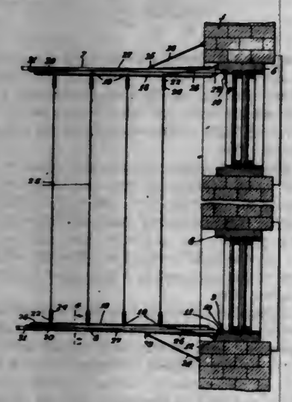
4. A phonograph comprising a turn table, a brake, a tone arm, a tripping member movably mounted thereon, and means operable by the brake for simultaneously loosening and arresting the tripping member.



5. A phonograph comprising a turn table, a brake, a brake setting rod, a tone arm, a split collar movable on the tone arm, and a head carried by the brake setting rod and adapted to simultaneously spread and arrest the collar.

[Claims 6 and 7 not printed in the Gazette.]

1,214,182. CLOTHES-DRIER. JOSEPH KRAMER, New York, N. Y. Filed July 13, 1915. Serial No. 39,534. (Cl. 68—34.)



1. In a device of the kind described, a pair of elongated supporting members, a fastening plate detachably carried by and removable with each of said supporting members, and clothes line supporting means slidable along each supporting member.

2. In a device of the kind described, a pair of elongated supporting members, a fastening plate pivotally and detachably carried by and removable with each of said supporting members, and clothes line supporting means slidable along each supporting member.

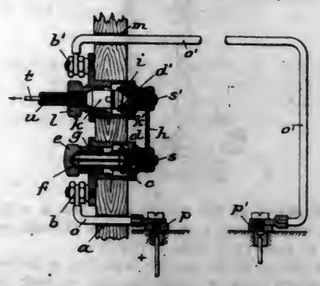
3. In a device of the kind described, a pair of elongated supporting members, a fastening plate pivotally and detachably carried by and removable with each of said supporting members, and clothes line supporting means slidable along each supporting member, said last named means being connected together.

4. In a device of the kind described, a plurality of elongated supporting members, a fastening plate pivotally and detachably carried by and removable with each of said supporting members, suspension means for the other end of each supporting member, a plurality of clothes line supporting means slidable along the elongated supporting members, and means for connecting together and for causing sliding movement of the clothes line supporting means on each elongated member.

5. In a device of the kind described, an elongated supporting member, a slide rod connected thereto in parallel, a plurality of hook members slidable on said slide rod, each of said hook members being provided with a bent portion for detachably engaging a sheave and with another portion for engaging a rope or chain.

[Claims 6 and 7 not printed in the Gazette.]

1,214,183. ELECTRICAL CONNECTING DEVICE. FRANZ KRATZ, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed Apr. 30, 1914. Serial No. 835,346. (Cl. 173—338.)



1. The combination with a conducting member, of an electrical connecting device therefor comprising a conducting socket terminal provided with a binding post, a conducting abutment terminal having its contacting surface located within the socket terminal and having a binding post extending outside thereof, and a plug engageable with the socket terminal, said plug maintaining one terminal of the conducting member in electrical connection with the socket member and forcing the other terminal of the conducting member into engagement with the contact surface of the abutment member.

2. The combination with a conducting member, of an electrical connecting device therefor comprising a conducting socket terminal provided with a binding post, a conducting abutment terminal having its contacting surface located within the socket terminal and having a binding post extending outside thereof, a conducting plug engageable with the socket terminal, said plug completing electrical connection between the socket terminal and one terminal of the conducting member, and forcing the other terminal of the conducting member into engagement with the contact surface of the abutment member.

3. The combination with a conducting member having end terminals, of an electrical connecting device therefor comprising a conducting socket terminal, a conducting abutment terminal insulated from the socket terminal and having its contact surface located within the socket terminal and connected therethrough to a binding post, and a plug holding the conducting member in place in the socket terminal and maintaining the end terminals of the conducting member in electrical connection with the socket member and the abutment member respectively.

4. The combination with a conducting member having end terminals, of an electrical connecting device therefor comprising a conducting socket terminal, a conducting abutment terminal insulated from the socket terminal and having its contact surface located within the socket terminal, and a conducting plug engageable with the socket terminal, said plug holding the conducting member in place between it and the contact surface of the abutment terminal and maintaining said end terminals in electrical connection with the socket member and the abutment member respectively.

5. The combination with a conducting member having end terminals, of an electrical connecting device therefor comprising a conducting socket terminal provided with a binding post, a conducting abutment terminal having its contact surface located within the socket terminal and having a binding post extending outside thereof, and a conducting plug engaging the socket terminal, said plug holding the conducting member in place between it and the contact surface of the abutment terminal and maintaining end terminals of the conducting member in electrical connection with the socket terminal and the abutment terminal respectively.

1,214,184. PIVOTED BRIDGE-SPRING FOR EYEGLASSES. FRANK J. KREMENTZ, Newark, N. J., assignor to Frank Krementz Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 15, 1916. Serial No. 91,287. (Cl. 88—44.)



1. The folding Oxford eyeglasses comprising lens frames having nose guards mounted thereon, a handle having a spring catch device and mounted on said lens frames to releasably hold them in folded position, a pivoted bridge connecting said lens frames and comprising a precious metal bridge spring, a spring pivot connection detachably secured at each end of said bridge spring and comprising a pivot casing to have spring pivotal connection with the coöperating lens frame, a spring holder connected to said pivot casing and provided with a close fitting spring socket to accommodate the end of said bridge spring and provided with a slot on the inner side of said holder adjacent the lens frame, a reduced width securing lug on said bridge spring to be accommodated by said slot, a coöperating holding lug on said holder and a holding screw connecting said lugs to hold the end of said bridge spring in operative engagement with said pivotal connection, said holding means acting as a stop to limit the inward movement of the ends of said bridge spring toward said lens frames.

2. The folding eyeglasses comprising lens frames having nose guards mounted thereon, a pivoted bridge connecting said lens frames and comprising a precious metal bridge spring, a spring pivot connection detachably secured at each end of said bridge spring and comprising a spring holder provided wtih a close fitting spring socket to accommodate the end of said bridge spring and provided with a slot on the inner side of said holder adjacent the lens frame, a reduced width securing lug on said bridge spring to be accommodated by said slot, a coöperating holding lug on said holder and a holding screw connecting said lugs to hold the end of said bridge spring in operative engagement with said pivotal connection, said holding means acting as a stop to limit the inward movement of the ends of said bridge spring toward said lens frames.

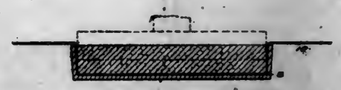
3. The folding eyeglasses comprising lens frames having nose guards mounted thereon, a pivoted bridge connecting said lens frames and comprising a bridge spring, a spring pivot connection detachably secured at each end of said bridge spring and comprising a spring holder provided with a close fitting spring socket to accommodate the end of said bridge spring and provided with a slot on the inner side of said holder adjacent the lens frame, and holding means comprising a reduced width securing member on said bridge spring to be accommodated by said slot, said holding means acting as a stop to limit the inward movement of the ends of said bridge spring toward said lens frames.

4. The pivoted bridge adapted to connect the lens frames of a folding Oxford or generally similar eyeglass and comprising a precious metal bridge spring, a spring pivot connection detachably secured at each end of said bridge spring and comprising a pivot casing to have spring pivotal connection with the coöperating lens frame, a spring holder connected to said pivot casing and provided with a close fitting spring socket to accommodate the end of said bridge spring and provided with a slot on the inner side of said holder adjacent the lens frame, a reduced width securing lug on said bridge spring to be accommodated by said slot, a coöperating holding lug on said holder and a holding screw connecting said lugs to hold the end of said bridge spring in operative engagement with said pivotal connection, said holding means being adapted to act as a stop to limit the inward movement of the ends of said bridge spring toward the lens frames.

5. The pivoted bridge adapted to connect the lens frames of a folding Oxford or generally similar eyeglass and comprising a precious metal bridge spring, a spring pivot connection detachably secured at each end of said bridge spring and comprising a spring holder provided with a close fitting spring socket to accommodate the end of said bridge spring and provided with a slot on the inner side of said holder adjacent the lens frame, a reduced width securing lug on said bridge spring to be accommodated by said slot, a coöperating holding lug on said holder and a holding screw connecting said lugs to hold the end of said bridge spring in operative engagement with said pivotal connection.

[Claim 6 not printed in the Gazette.]

1,214,185. KIESELGUHR FILLER AND METHOD OF PREPARING. ARTHUR H. KRIEGER, Los Angeles, Cal., assignor to Kieselguhr Co. of America, Los Angeles, Cal. Filed May 13, 1915, Serial No. 27,836. Renewed Aug. 11, 1916. Serial No. 114,470. (Cl. 154—28.)



1. A process for making heat-insulating fillers in the shape of slabs or blocks, which consists in compressing kieselguhr into a predetermined form to a point that if the kieselguhr is subjected to vibration it will not compact any further and applying thereto an envelop to hold the kieselguhr in said predetermined form.

2. A process for making heat-insulating fillers in the form of slabs or blocks, which consists in compressing kieselguhr alone into predetermined forms to a point that if the kieselguhr is subjected to vibration it will not compact any further and then applying thereto an envelop of pliable nature to hold the kieselguhr in said predetermined forms.

3. A process for making heat-insulating slabs or blocks, which consists in placing a pliable, fibrous sheet in a mold, compressing kieselguhr within the mold on the sheet to a point that if the kieselguhr is subjected to vibration it will not compact any further, folding the ends of the sheet over the compressed kieselguhr so that the extremities of the sheet will overlap, and then compressing the ends of the sheet covering the compressed kieselguhr to bind the extremities, whereby the compressed kieselguhr is enveloped by the flexible sheet.

4. As an article of manufacture, a heat-insulating filler consisting of compressed kieselguhr and an envelop of pliable material which is firmly pressed about the kieselguhr.

5. As an article of manufacture, a heat-insulating filler in the shape of a slab consisting of compressed kieselguhr and an envelop of pliable, fibrous material firmly compressed about the kieselguhr.

[Claims 6 and 7 not printed in the Gazette.]

1,214,186. SOLDERING-IRON. ROBERT KUHN, Detroit, Mich. Filed Sept. 4, 1915. Serial No. 48,968. (Cl. 219—26.)

1. The combination with a cylindrical heating unit and terminals extending from one end thereof, of a casing for said unit formed of continuous tubing having a cylindrical portion for receiving said unit and a reduced shank portion for receiving the terminals and for connection with the handle.

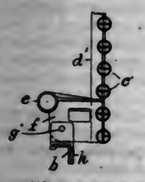
2. The combination with a cylindrical heating unit and terminals extending from one end thereof, of a casing for said unit comprising continuous tubing having a cylindrical portion and a reduced portion partly cut away, a threaded segment upon said unit engaging said cut-away portion, and an internally threaded ring surrounding said reduced portion and engaging said threaded segment.



3. The combination with a cylindrical heating unit and terminals projecting from one end thereof, of a casing for said unit comprising tubing having a cylindrical portion, a reduced portion partly cut-away with a shoulder therebetween against which one end of said unit is adapted to bear, a threaded segment on said unit for engaging said cut-away portion, and an internally threaded ring surrounding said reduced portion, engaging said segment and clamping said unit against said shoulder.

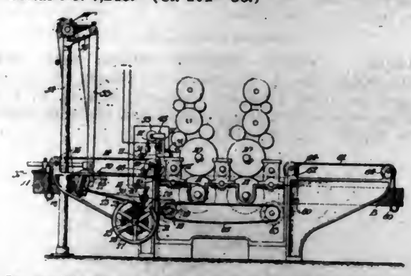
4. In an electrically heated instrument, the combination with a cylindrical heating unit having terminals extending from one end thereof, of a casing for said unit formed of tubing having a cylindrical portion for receiving the unit, a reduced shank portion for receiving the terminals and an intermediate portion partially cut away and forming a shoulder between the same and said cylindrical portion, a threaded segment on said heating unit engaging said cut-away portion, and an internally threaded ring surrounding said intermediate portion and engaging said threaded segment.

1,214,187. HINGED SPRING-WIRE MATTRESS. DAVID KUPERMAN, New York, N. Y. Filed Oct. 19, 1915. Serial No. 56,678. (Cl. 5—9.)



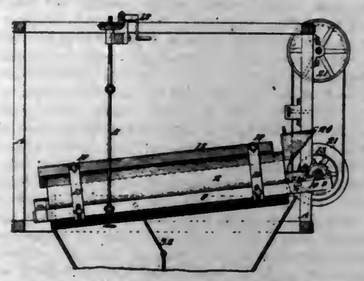
The combination, with a spring wire-mattress having corner brackets connected by side-bars, and each bracket being formed with a socket for the side-bar and a flat flange transverse thereto and projected at one side of the socket and the flange having a bolt-hole in its lower corner at one side of the socket, of bearings pivoted to the bolt-holes in said flanges and having each a foot-piece adapted to detachably engage the tie-bar of the bedstead, and the outer edge of the flange being adapted to rest upon the foot-piece and maintain the mattress in a vertical position when the mattress is tipped upwardly, as and for the purpose set forth.

1,214,188. SHEET FEEDING AND STACKING MECHANISM. SAMUEL M. LANGSTON, Wenonah, N. J., assignor to Samuel M. Langston Company, Camden, N. J., a Corporation of New Jersey. Filed Feb. 10, 1915. Serial No. 7,243. (Cl. 101—86.)



In combination, a stack support, a ratchet wheel, connections between said ratchet wheel and said support for raising the latter upon the rotation of said ratchet wheel in one direction, oscillating means for feeding sheets from said stack, a pivoted arm, a pawl carried by said arm and adapted to engage with said ratchet wheel, a link connected to said arm, means operating in conjunction with said oscillating feeding means to oscillate said link and pawl, means for varying the range of movement of said link and pawl in respect to the range of movement of said feeding means, an electromagnet carried by said arm adjacent to said pawl and adapted when energized to hold said pawl out of engagement with said ratchet wheel, and means controlled by the elevation of the top of the stack for controlling the circuit of said electromagnet.

1,214,189. SEPARATOR. ANTON LAUMEISTER, San Francisco, Cal. Filed Mar. 2, 1916. Serial No. 81,636. (Cl. 130—18.)

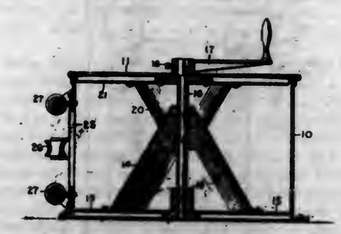


The combination with a main supporting frame, of a pair of parallelly disposed rollers journaled in the frame, driving means for each roller, a deflector plate centrally mounted between and above the rollers for vertical adjustment to obtain a variance in the separation of the material, and an adjustable partition member pivotally mounted below the rollers for adjustment to accommodate for adjustment of the deflector.

1,214,190. REEL. HORACE JOHN LEACH, Mount Carmel, Ill. Filed July 1, 1916. Serial No. 107,000. (Cl. 242—97.)

1. A reel for paying out and taking up a duplex drop wire, comprising a casing, and a hollow sectional drum mounted to turn in the said casing and formed of a conical main section and an inverted conical top section having its apex end fitting onto the apex end of the main section.

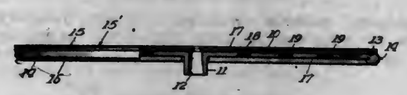
2. A reel for paying out and taking up a duplex wire, comprising a cylindrical casing, a removable cover and provided at the side with an opening for the passage of the wire, a conical main drum section mounted to turn in the casing and provided at its apex with a spindle extending through the said cover, and an inverted conical drum section held centrally on the spindle and engaging with its apex end the apex end of the said main drum section.



3. A reel for paying out and taking up a duplex drop wire, comprising a casing provided at the side with an outlet opening for the wire, pairs of guide rollers journaled on the casing adjacent the sides and ends of the said outlet opening, and a sectional drum mounted to turn in the said casing and formed of a conical main section and an inverted conical top section having its apex end fitting onto the apex end of the main section.

4. A reel for paying out and taking up a duplex wire, comprising a cylindrical casing having a removable cover and provided at the side with an opening for the passage of the wire, a conical main drum section mounted to turn in the casing and provided at its apex with a spindle extending through the said cover, and an inverted conical drum section held centrally on the spindle and engaging with its apex end the apex end of the said main drum section, the said drum sections being provided with annular flanges.

1,214,191. PHONOGRAPH TURN-TABLE. JOHN P. LEACH, Chicago, Ill. Filed Sept. 20, 1916. Serial No. 121,100. (Cl. 274—39.)



1. A turn-table for talking machines comprising the combination with a metallic plate, of a pair of thin wooden disks mounted on its upper and lower surfaces and in intimate contact therewith.

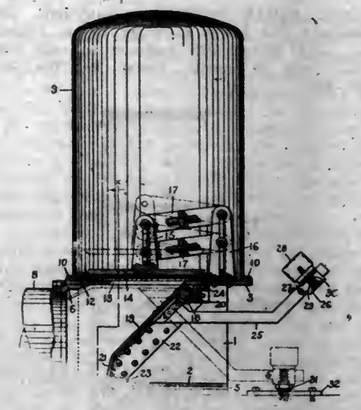
2. A turn-table for talking machines comprising the combination with a metallic disk having a plurality of openings therein of a pair of thin wooden disks mounted on the upper and lower surfaces thereof, and a wooden connector filling said openings and joining the wooden disks.

3. A turn-table for talking machines comprising the combination with a metallic disk having a plurality of openings therein of a pair of thin wooden disks mounted on the upper and lower surfaces thereof, and a composition of comminuted wood with a binder filling said openings and joining the wooden disks.

4. A turn-table for talking machines comprising the combination with a relatively thick metallic disk having a plurality of openings therein of a pair of relatively thin fibrous disks mounted on the upper and lower surfaces thereof, and a composition of fibrous particles and a binder filling said openings and joining the fibrous disks.

1,214,192. HYDRAULIC RAM. JOHN E. LESTER, Tacoma, Wash. Filed Sept. 13, 1915. Serial No. 50,486. (Cl. 103—29.)

1. In a hydraulic ram, a supply pipe, a casing connected therewith and having a direct horizontal passage alined with the supply pipe, a waste-valve pivotally mounted in the casing and swingable from an open position substantially parallel with the horizontal passage to a closed position extending angularly across said passage, a delivery-valve controlling a lateral outlet from the horizontal passage adjacent to that edge of the waste-valve which is farthest from the supply pipe, and means connected with the waste-valve and tending to swing the same toward the open position thereof.



2. In a hydraulic ram, a waste-valve pivoted on a horizontal axis and swingable from a horizontal open position to an inclined closed position, a counterweight connected with the valve and tending to swing the same toward the horizontal open position, the valve at the closed position intercepting angularly a horizontal passage, and a part integral with the swinging edge of the valve and projecting partially into said passage when the valve is open, whereby a current through the passage will tend to close the valve.

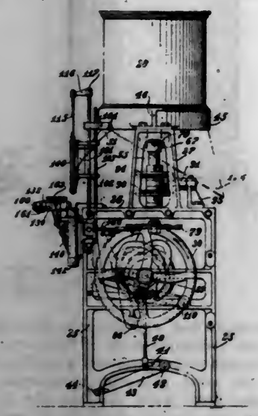
3. In a hydraulic ram, a casing, a supply pipe connected therewith, a waste-valve pivotally mounted in the casing and adapted to close an outlet therefrom, a counterweight connected with the valve and tending to swing the same from the closed position toward the supply pipe to an open position, a lip on the valve adapted to extend partially in front of the supply pipe opening when the valve is in open position, and means for adjusting the open position of the valve to vary the extent to which said lip may intercept the flow of water from the supply pipe.

4. In a hydraulic ram, a valve-casing having a horizontal substantially unobstructed passage through the same, a supply pipe connected with the casing at one end of the horizontal passage, the casing having a valved delivery-passage opening laterally from the horizontal passage, a waste-valve pivotally mounted on an axis extending near the edge of the delivery-passage remote from the supply pipe, means normally holding said valve in an open position substantially parallel with the horizontal passage, a lip on the valve adapted for engagement by a water-current flowing through the horizontal passage to swing the valve from the open position to a position intercepting the passage, and abutments on the casing for stopping the valve at a closed position adapted to deflect the water-current from the supply pipe toward the delivery passage.

5. In a hydraulic ram, a valve casing having a horizontal substantially unobstructed passage through the same and a valved delivery-passage opening from the upper side of the horizontal passage, a supply pipe connected with the casing at one end of the horibontal passage, a waste-valve pivoted on a transverse horizontal axis near the edge of the delivery-passage remote from the supply pipe, said valve being swingable about said axis from an inclined closed position at which it intercepts the horizontal passage to a horizontal open position adjoining the delivery-passage, a counterweight connected with the valve and adapted to move the same from closed to open position, the valve having an angular lip-

portion projecting near the end of the supply pipe when the valve is in open position, and a variable stop for adjusting the open position of the valve to increase and decrease the extent to which the lip projects into the path of a water-current from the supply pipe.

1,214,193. CIGAR-BUNCHING MACHINE. BERNARD LIBERMAN and JAMES C. WOBENSMITH, Philadelphia, Pa.; said Wobensmith assignor to said Liberman. Filed June 19, 1912. Serial No. 704,578. (Cl. 131—42.)



1. In a cigar bunching machine the combination of a hopper having its base portion provided with an annular channel of greater diameter than that of the hopper and a rotating measuring element having its periphery housed within the said channel.

2. A hopper provided in its bottom with a discharge opening and also a region of small apertures, in combination with a measuring element having pockets adapted to register one after the other with the discharge opening.

3. A hopper provided in its bottom with a discharge opening and also a region of small apertures and means for adjusting the size of said apertures, in combination with a measuring element having pockets adapted to register one after the other with the discharge opening.

4. A hopper, having a discharge opening, a measuring element rotating in the hopper, provided with pockets adapted to register successively, with the discharge and an agitator provided with horizontally extending arms having inclined under surfaces adapted to pass over the pockets.

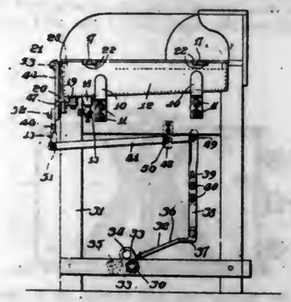
5. A hopper, having a discharge opening, a measuring element rotating in the hopper provided with pockets adapted to register, successively, with the discharge and an agitator provided with horizontally extending arms having inclined under surfaces adapted to pass over the pockets and close thereto.

[Claims 6 to 21 not printed in the Gazette.]

1,214,194. CIGAR-WRAPPER MOISTENER AND CONTAINER. BERNARD LIBERMAN, Philadelphia, Pa. Filed June 6, 1914. Serial No. 843,325. (Cl. 131—48.)

1. A humidor for a cigar maker's table comprising a cast-metal receptacle and a pressed metal lid movably connected therewith having its marginal extensions in a horizontal plane when the lid is brought to rest on the top of the receptacle and the intermediate body of the lid depressed below the level of the surrounding margin and lying in a plane inclined to the plane of said margin.

2. A humidor for a cigar maker's table comprising a receptacle having its bottom inclined to the horizontal, a drain cock at the lower portion of said inclined bottom and a perforated platen having supporting legs resting on the inclined bottom so proportioned as to maintain the platen horizontal.



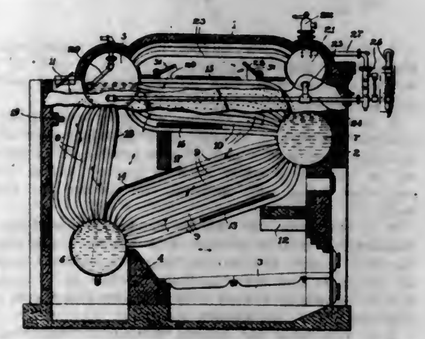
3. A humidor for a cigar maker's table comprising a cast-metal receptacle and a lid movably connected thereto, a lid actuating mechanism and a locking device for engaging said actuating mechanism to lock the lid in either the open or closed position.

4. A humidor for a cigar maker's table comprising a receptacle, a lid movably connected therewith provided on one side with hinge elements, inclining from the hinged side downwardly into the box when in the closed position, and provided on the other three sides with upwardly and then horizontally extending flanges, said upwardly extending flanges adapted to fit within the receptacle and the horizontally extending flanges adapted to fit over the edge of the receptacle.

5. A humidor comprising a receptacle, a lid movably connected therewith having upwardly extending flanges, metal pieces secured to the lid within the flanges and flush with the top portion thereof and a lever supporting pin connected with one of said metal pieces.

[Claims 6 to 18 not printed in the Gazette.]

1,214,195. BOILER. WILLIAM J. LINTON, Jersey City, N. J. Filed Oct. 19, 1912. Serial No. 726,619. (Cl. 122—476.)



1. A water-tube boiler comprising in addition to the usual drums and connecting water-tubes forming a closed water-circulating system, a steam-dome which is located partly below and partly above the normal level of the water in the water-circulating system, steam-superheating tubes which connect the steam-dome with the water-circulating system above the normal level of the water therein, and a water-pipe which connects the steam-dome somewhat above its lower side with the water-circulating system below the normal level of the water and outside the path of the steam therein.

2. A water-tube boiler comprising, in addition to the usual rear steam-disengaging and mud-drums, a front water-drum and connecting water-tubes, forming a closed water-circulating system, a steam-dome which is located in the front of the boiler casing with its lower side slightly below the normal level of the water in the boiler and is connected with the steam-disengaging drum above the water level of the boiler by steam-superheating tubes, and a water-pipe which connects the said steam-dome at a point between its lower side and the normal water level of the boiler with the lower side of one of the said rear drums.

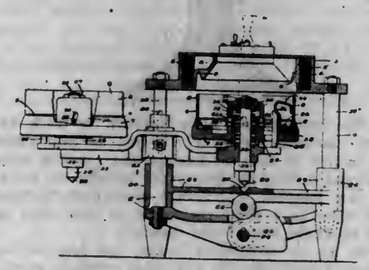
3. A water-tube boiler comprising, in addition to the usual drums and connecting water-tubes forming a closed water-circulating system, an additional drum which is located in the boiler casing partly below and partly above the normal level of the water in the water-circulating system, steam-superheating tubes which connect said additional drum with the water-circulating system above the normal level of the water therein, a water-pipe which connects said additional drum with the rear part of the water-circulating system outside the path of the steam therein, means for employing the hot gases which pass through the boiler to heat said additional drum and its connecting steam-superheating tubes, means for maintaining a supply of water in said additional drum, and means for protecting the steam-superheating tube connections from injury by the heat when the boiler is first started.

4. A water-tube boiler comprising, in addition to the usual drums and connecting water-tubes forming a closed water-circulating system, a drum which is located partly below and partly above the normal level of the water in the boiler and is connected with the boiler above the water level by steam-superheating tubes and below the water level solely by a connection therewith at a point outside the path of the steam therein.

5. A water-tube boiler comprising, in addition to the usual rear steam-disengaging and mud drums, front water-drum, and connecting water-tubes, forming a closed water-circulating system, a drum which is located in the front of the boiler casing with its lower side slightly below the normal level of the water in the boiler and is connected above the water level of the boiler with the rear steam-disengaging drum by steam-superheating tubes and below the water level of the boiler solely by a water connection with the lower side of one of the said rear drums.

[Claims 6 to 9 not printed in the Gazette.]

1,214,196. COLLAR MOLDING AND FINISHING MACHINE. THOMAS W. LLEWELLYN and JAMES J. DOYLE, Syracuse, N. Y., assignors, by mesne assignments, to National Chemical Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 31, 1914. Serial No. 828,637. (Cl. 68—9.)



1. In a collar molding machine, the combination of a head having a socket, a ring for receiving the collar, the ring being movable toward and from the head for interfitting the ring with the collar thereon and the socket to mold the collar, a carriage for the ring including a cylindrical bearing, the ring having a hub journaled on and slidable axially on the bearing, a spring arranged within the bearing and having one end engaged with the carriage, said spring permitting the ring to yield relatively to the carriage when in interfitting relation with the head, means for moving the carriage and for turning the ring relatively to the head during the yielding of the spring, and a thrust bearing interposed between the hub of the ring and the other end of the spring, substantially as and for the purpose described.

2. In a collar molding machine, the combination of a head having a socket and a ring for receiving the collar, the ring being movable toward and from the head for interfitting the ring with the collar thereon and the socket to mold the collar, a carriage for the ring including a bearing, the ring having a hub journaled on and slidable axially on the bearing, a spring interposed between the carriage and the ring for permitting the ring to yield relatively to the carriage when in interfitting relation with the head, the hub being formed with a cam slot and the bearing being formed with a pin working in the slot, substantially as and for the purpose set forth.

3. In a collar molding machine, the combination of a head having a socket, a ring for receiving the collar, the ring being movable toward and from the head for interfitting the ring with the collar thereon and the socket to mold the collar, a carriage for the ring including a bearing, the ring having a hub supported by and slidable axially of the bearing, a spindle extending axially through the bearing and the hub and having spaced apart shoulders engaging a lower face of the carriage and an upper face of the hub, a spring interposed between the carriage and the hub for permitting the ring to yield relatively to the carriage when in interfitting relation with the head, and means for moving the carriage and for turning the ring relatively to the head during the yielding of the spring, substantially as and for the purpose specified.

4. In a collar molding machine, the combination of a head having a socket, a ring for receiving the collar, the ring being movable toward and from the head for interfitting the ring with the collar thereon and the socket to mold the collar, a carriage for the ring including a bearing, the ring having a hub supported by and slidable axially of the bearing, a spindle extending axially through the bearing and the hub and having spaced apart shoulders engaging a lower face of the carriage and an upper face of the hub, the lower end of the spindle being tapered, a spring interposed between the carriage and the hub for permitting the ring to yield relatively to the carriage when in interfitting relation with the head, and a reciprocating carriage having a tapered socket for coacting with the tapered lower end of the spindle, substantially as and for the purpose set forth.

5. In a collar molding machine, the combination of a head having a socket, a ring for receiving the collar, the ring being movable toward and from the head for interfitting the ring with the collar thereon and the socket to mold the collar, a carriage for the ring including a bearing, the ring having a hub journaled on and slidable axially on the bearing, a spindle extending axially through the bearing and the hub and having spaced apart shoulders engaging a lower face of the carriage and an upper face of the hub, a spring encircling the spindle and having its lower end bearing against an upper face of the carriage, a thrust bearing between the upper end of the spring and the hub, and means for moving the carriage, substantially as and for the purpose described.

[Claims 6 to 22 not printed in the Gazette.]

1,214,197. DENTAL PLIERS. JAMES BELLINGER MCALLISTER, St. Johnsville, N. Y. Original application filed Sept. 20, 1915, Serial No. 51,570. Divided and this application filed June 3, 1916. Serial No. 101,467. (Cl. 32—10.)

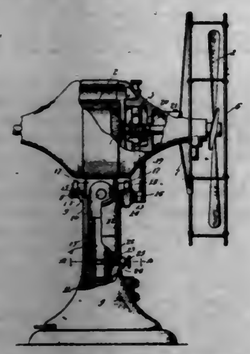
In dental pliers of the character described, a pair of handles merging into body portions which in turn merge into jaws, means for pivotally connecting said body portions together, each of said body portions being provided with a serrated or roughened section, a threaded

member extending from said serrated or roughened section, and a thumb member mounted on said threaded



member for gripping the end portions of a ligature, said jaws being adapted to carry said ligature.

1,214,198. ELECTRIC FAN. WILLARD M. MCEWEN, Chicago, Ill., assignor of one-third to Gustaf Olson, Chicago, Ill., and one-third to Louis Greenberg, Kokomo, Ind. Filed May 19, 1915. Serial No. 29,129. (Cl. 230—1.)



1. The combination of a support, a member journaled on said support so as to be normally free to rotate thereon at all times, motor-driven mechanism tiltably mounted on said member, and coacting means on said motor-driven mechanism and member adapted to tilt said motor-driven mechanism in a plane transverse to the pivotal connection of said motor-driven mechanism and member, whereby gyratory forces are set up so as to cause the oscillation of said member and motor-driven mechanism relative to said support.

2. The combination of a support, a member journaled on said support so as to be normally free to rotate thereon at all times, motor-driven mechanism tiltably mounted on said member, coacting means on said motor-driven mechanism and member adapted to tilt said motor-driven mechanism in a plane transverse to the pivotal connection of said motor-driven mechanism and member, whereby gyratory forces are set up so as to cause the oscillation of said member and motor-driven mechanism relative to said support, and means for controlling the angularity of the oscillation of said member on said support.

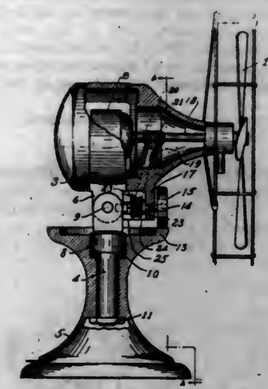
3. The combination of a support, a pair of members journaled on said support both normally free to rotate at all times relative to said support and to each other, motor-driven mechanism tiltably mounted on one of said members, driving mechanism connected to cause a relative rotation of said members, and coacting means on said motor-driven mechanism and the other said member adapted to tilt said motor-driven mechanism in a plane transverse to the pivotal connection of said motor-driven mechanism and member, whereby gyratory forces are set up so as to cause the oscillation of said one member and motor-driven mechanism relative to said support.

4. The combination of a support, a pair of members journaled on said support both normally free to rotate at all times relative to said support and to each other, motor-driven mechanism tiltably mounted on one of said members, driving mechanism connected to cause a relative rotation of said members, coacting means on said motor-driven mechanism and the other said member adapted to tilt said motor-driven mechanism in a plane transverse to the pivotal connection of said motor-driven mechanism and member, whereby gyratory forces are set up so as to cause the oscillation of said one member and motor-driven mechanism relative to said support, and means for controlling the angularity of the oscillation of said one member with respect to said support.

5. The combination of a support, a pair of members journaled on said support so as to be capable of rotating relatively to each other, motor driven mechanism tiltably mounted on one of said members, driving mechanism connected to cause a relative rotation of said members, coacting means on said motor driven mechanism and on the other said member adapted to tilt said motor driven mechanism in the plane of the axis of rotation of said members and thereby cause the oscillation of said one member relative to said support, a shoulder on one of said members, and means on said support adapted to engage said shoulder for controlling the oscillation of said one member.

[Claims 6 to 23 not printed in the Gazette.]

1,214,199. AIR-CIRCULATING DEVICE. WILLARD M. MCEWEN, Chicago, Ill. Filed Oct. 27, 1915. Serial No. 58,198. (Cl. 230—1.)



1. The combination of a support, a track thereon, blower mechanism tiltably mounted on said support, a cam carried by said mechanism and coacting with said track, and driving mechanism for causing the rotation of said cam whereby said blower mechanism is simultaneously tilted in a plane transverse to said track and rotated about the axis of said member.

2. In an air circulating device, the combination of a support, a track thereon, a member rotatably mounted on said support, blower mechanism tiltably mounted on said member, a cam carried by said blower mechanism and engaging said track, driving mechanism connecting said cam with said blower mechanism so as to cause the rotation of said cam whereby said blower mechanism is tilted in a plane transverse to said track, and anti-friction means acting between said cam and track whereby the gyratory forces set up by the tilting of said blower mechanism are free to cause said blower mechanism to oscillate in a plane transverse to the tilting thereof.

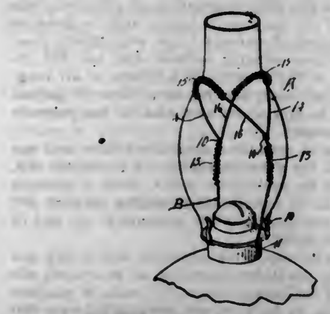
8. In an air circulating device, the combination of a support, a horizontally disposed annular track integrally formed thereon, a member rotatably mounted on said support, blower mechanism tiltably mounted on said member, a cam carried by said blower mechanism and engaging said track, and driving mechanism connecting said cam with said blower mechanism so as to cause the rotation of said cam whereby said blower mechanism is simultaneously tilted in a plane transverse to said track and rotated about the axis of said member.

4. In an air circulating device, the combination of a support, a track formed thereon, a member rotatably mounted on said support, blower mechanism tiltably mounted on said member, a roller mounted to travel on said track, an eccentric carried by said roller, and driving mechanism connecting said eccentric with said blower mechanism.

5. In an air circulating device, the combination of a support, a track formed thereon, a member rotatably mounted on said support, blower mechanism tiltably mounted on said member, an eccentric cam carried by said blower mechanism, a ring embracing said cam and engaging said track, anti-friction means interposed between said ring and cam, and driving mechanism connecting said cam with said blower mechanism.

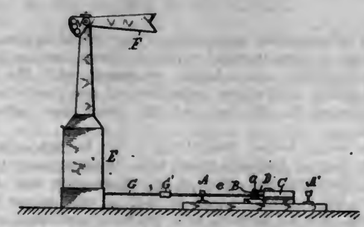
[Claims 6 and 7 not printed in the Gazette.]

1,214,200. LAMP-CHIMNEY ATTACHMENT. BENJAMIN F. MCFRANKLIN, Diamond, Ohio. Filed Nov. 22, 1915. Serial No. 62,821. (Cl. 240—97.)



As an article of manufacture, a lamp chimney holder formed of two lengths of wire each having its intermediate portion formed into a plurality of helix turns, divergent straight portions extending from the opposite ends of the helical portion, a series of helix turns formed at one end of one of the straight portions, a hook formed at the outer end of the second series of turns, and an eye formed on the outer end of the other straight portion, one of the divergent portions of each of the wires being slidably disposed through the eye of the other wires.

1,214,201. SAFETY BOMB-SIGNAL FOR TRAINS. WILLIAM MCMANE, Summit, N. J. Filed Mar. 21, 1916. Serial No. 85,549. (Cl. 246—16.)



1. In a railway safety appliance, the combination, with an exploding-rail supported parallel with the track-rails, of a bomb-carrier adapted to move a bomb to and from the surface of the exploding-rail, and a wheel separate from the track-wheels supported yieldingly upon the train to run over the exploding-rail and explode a bomb thereon.

2. In a railway safety appliance, the combination, with an exploding-rail supported parallel with the track-rails, of a bomb-carrier adapted to move a bomb to and from the surface of the exploding-rail, a wheel separate from the track-wheels supported yieldingly upon the train to run over the exploding-rail, and means operated by a train in times of danger for moving the bomb-carrier over the exploding-rail.

3. In a railway safety appliance, the combination, with a system of block-signals indicating danger on track-sections, of an exploding-rail intermediate to the track-rails, a bomb-carrier adapted to move a bomb to and from the surface of the exploding-rail, a wheel-frame carried by the train and supporting a wheel separate from the track-wheels for exploding a bomb upon the exploding-rail, and means for moving the bomb-carrier in unison with the danger-signal.

4. In a railway safety appliance, the combination, with an exploding-rail sustained intermediate to the track-rails, of a bomb-carrying slide movable transverse to the exploding-rail, a wheel separate from the track-wheels supported yieldingly upon the train to press upon the exploding-rail, and such exploding-rail being sloped downwardly at its ends to receive the yielding wheel.

5. In a railway safety appliance, the combination, with the track-rails, of an exploding rail intermediate to the track-rails and set above the level of the same, a bomb-carrier movable to and from the surface of the exploding rail and a wheel carried by the train and held normally above the level of the track-rails to clear the surface of all track-rails, but supported yieldingly to engage the surface of the exploding rail to operate upon the bomb.

[Claims 6 to 10 not printed in the Gazette.]

1,214,202. GLASS. GEORGE A. MACBETH, Pittsburgh, Pa.; George D. Macbeth, executor of said George A. Macbeth, deceased, assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 12, 1915. Serial No. 20,643. (Cl. 106—36.1.)

1. A glass formed by fusing together a mixture containing approximately the following proportions; 1500 parts of foundation batch capable of making substantially clear glass, 124 parts of aluminum oxid, 135 parts of fluorspar and 150 parts of sodium silico fluorid.

2. A glass formed by fusing together a mixture containing approximately the following proportions; 1500 parts of foundation batch capable of making substantially clear glass, 124 parts of aluminum oxid, 135 parts of a fluorid containing about 50% by weight of fluorin, and 150 of sodium silico fluorid.

3. A glass formed by fusing together a mixture comprising 1500 parts of a foundation batch capable of making substantially clear glass, 80 to 160 parts of aluminum oxid, 100 to 170 parts of a fluorid containing about 50% by weight of fluorin, and 100 to 200 parts of sodium silico fluorid.

4. A glass formed by fusing together a mixture comprising 1500 parts of a foundation batch capable of making substantially clear glass, 80 to 160 parts of aluminum oxid, 100 to 170 parts of a fluorid containing about 50% by weight of fluorin, and 100 to 200 parts of a second fluorid.

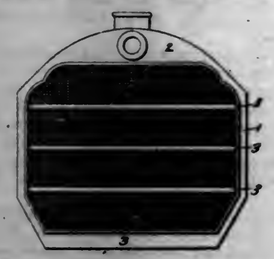
5. A glass formed by fusing together a mixture comprising 1500 parts of a foundation batch capable of making substantially clear glass and including zinc oxid, 80 to 160 parts of aluminum oxid, 100 to 170 parts of a fluorid containing about 50% by weight of fluorin, and 100 to 200 parts of sodium silico fluorid.

[Claims 6 to 8 not printed in the Gazette.]

1,214,203. RADIATOR UNIT. UMBERTO MAGNI, Los Angeles, Cal. Filed Aug. 23, 1915. Serial No. 46,902. (Cl. 257—130.)

1. In a radiator, a honey-comb structure comprising a plurality of units arranged side by side in an upright position, plaits formed on the opposite walls of each unit,

the plaits on one wall extending across and abutting the opposite wall, the walls between adjacent plaits being corrugated or beaded to form spacers to separate the units, the plaits having blind passages that taper from the center toward the ends and terminate short of the opposite end edges of the unit, the opposite edges of the units having offsets to produce upright water passages.



2. In a radiator, a honey-comb structure comprising a plurality of units arranged side by side in an upright position, plaits formed on the opposite walls of each unit, the plaits on one wall extending across and abutting the opposite wall, the walls between adjacent plaits being corrugated or beaded to form spacers to separate the units, the plaits having blind passages that taper from the center toward the ends and terminate short of the opposite end edges of the unit, the corrugations or beads tapering in width from the center to their ends and with the said ends terminating short of the opposite end edges of the unit, the opposite edges of the units having offsets to produce upright water passages.

3. In a radiator construction, a radiator unit comprising two side walls, each side wall having plaits that extend across and abut the opposite side wall, the plaits on the opposite side walls being alternately disposed, the walls between adjacent plaits being corrugated to form spacer beads for separating adjacent units, said plaits tapering in width from their center toward their ends, said spacer beads tapering in width from their center toward their ends, and having their ends terminating in a line with the ends of the blind passages in the plaits, the opposite ends of said units having offsets to produce the vertical fluid passages between them for the purposes specified.

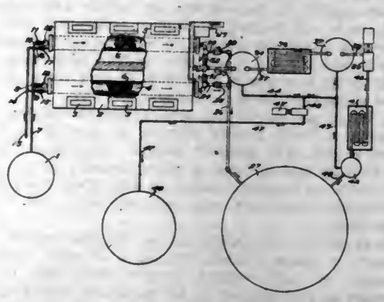
4. In a radiator, the combination with a receiving and a dispensing chamber; of a radiating body comprising a honeycomb structure embodying a plurality of units arranged side by side in an upright position, plaits formed on the opposite walls of the unit, the plaits on one wall extending across and abutting the opposite wall, the walls between adjacent plaits being corrugated or beaded to form spacers to separate the units, the plaits having blind passages that taper from the center toward the ends and terminate short of the edges of the unit, the outer edges of said units having offsets to produce upright water passages.

5. In a radiator, a honey-comb structure comprising a plurality of units arranged side by side in an upright position, plaits formed on the opposite walls of the units, the plaits on one wall extending across and abutting the opposite wall, the walls between adjacent plaits being corrugated or beaded to form spacers, the outer edges of the plaits of one wall fitting the corrugations in the opposite wall, said units having offsets for spacing the units to form the water passages.

[Claim 6 not printed in the Gazette.]

1,214,204. PROCESS FOR THE PRODUCTION OF AROMATIC BODIES AND GAS FROM PETROLEUM-OILS. FREDERICK WILLIAM MANN and MARVIN LEE CHAPPELL, Berkeley, Cal., assignors to Standard Oil Company, Richmond, Cal., a Corporation of California. Filed Feb. 3, 1916. Serial No. 75,918. (Cl. 196—26.)

1. The process of producing aromatic bodies and gas which consists in the dehydrogenation of petroleum oils containing oils of the carbocyclic series, under a pressure below atmospheric, at temperatures ranging between 600 and 750 degrees centigrade, in the presence of air and of a contact substance.



2. The process of producing aromatic bodies and gas which consists in the dehydrogenation of petroleum oils containing oils of the carbocyclic series, under a pressure below atmospheric, at temperatures ranging between 600 and 750 degrees centigrade, in the presence of a volume of air ranging from 500 to 800 cubic feet for each 15 or 20 gallons of oil subjected to treatment, and also in the presence of a contact substance.

3. The process of producing aromatic bodies and gas which consists in the dehydrogenation of petroleum oils containing oils of the carbocyclic series, under a pressure of from 1 to 4 inches of mercury below atmospheric pressure, at temperatures ranging between 600 and 750 degrees centigrade, in the presence of a volume of air ranging from 500 to 800 cubic feet for each 15 or 20 gallons of oil subjected to treatment, and also in the presence of a contact substance.

4. The process of producing aromatic bodies and gas which consists in the dehydrogenation of petroleum oils, containing oils of the carbocyclic series, under a pressure below atmospheric, at temperatures ranging between 600 and 750 degrees centigrade, in the presence of air and of the lower oxid of nickel.

5. The process of producing aromatic bodies and gas which consists in the dehydrogenation of petroleum oils containing oils of the carbocyclic series, under a pressure below atmospheric, at temperatures ranging between 600 and 750 degrees centigrade, in the presence of a volume of air ranging from 500 to 800 cubic feet for each 15 or 20 gallons of oil subjected to treatment, and also in the presence of the lower oxid of nickel.

[Claims 6 and 7 not printed in the Gazette.]

1,214,205. COLLAR-HOLDER. JOSEPH A. MARINER, St. Louis, Mo. Filed July 28, 1916. Serial No. 111,774. (Cl. 24—81.)



1. A collar holder comprising a curved bar having each end bent to form integral resilient clasps opening in opposite directions and adapted to engage with the flaps of the collar, said clasps being formed and positioned to be concealed by the bar and the collar flaps when in service.

2. A collar holder comprising a bar having each end bent to form a resilient clasp, said clasps opening in opposite directions and adapted to engage with one of the flaps of the collar, one part of each of said clasps being provided with an opening into which the material of the collar is adapted to be forced by a flat piece of the other part of the clasp, said flat piece being of greater width than said opening.

3. A collar holder comprising a bar formed of a strip of metal having a return bend at each end, spring loops formed in said bends, the ends of said bends extending in opposite directions and each forming with the body of the bend a resilient clasp adapted to engage with the flaps of the collar.

1,214,206. PROCESS OF GENERATING HYDROCYANIC-ACID GAS. CORNELIUS J. MARVIN, Los Angeles, Cal., assignor to The Braun Corporation, Los Angeles, Cal., a Corporation of California. Filed Feb. 13, 1915. Serial No. 7,975. (Cl. 23—1.)

1. The process of generating hydrocyanic acid gas which consists in bringing together a hot dilute acid and a cyanid solution.

2. The process of generating hydrocyanic acid gas which consists in bringing together hot dilute sulfuric acid and a cyanid solution.

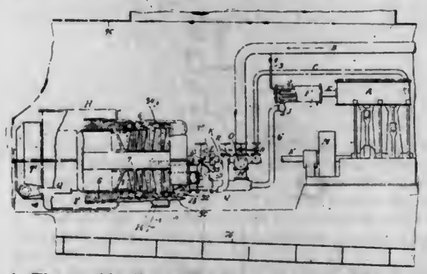
3. The process of generating hydrocyanic acid gas, which consists in bringing together hot dilute sulfuric acid, formed by mixing sulfuric acid and water in approximately equal parts and a solution of cyanid consisting of one part cyanid and two parts water.

4. The process of generating hydrocyanic acid gas which consists in bringing together water and concentrated sulfuric acid, whereby a dilute acid is formed and heat is generated which warms the dilute acid and adding a solution of cyanid to the dilute acid while the latter still retains the heat of dilution.

5. The process of generating charges of hydrocyanic acid gas which consists in placing an amount of hot dilute sulfuric acid in a vessel and successively adding thereto predetermined charges of cyanid solution, each charge being small as compared with said amount of acid.

[Claims 6 and 7 not printed in the Gazette.]

1,214,207. STEAM PROPULSION APPARATUS. JOHN F. METTEN, Philadelphia, Pa., assignor to The William Cramp & Sons Ship & Engine Building Company, a Corporation of Pennsylvania. Filed June 18, 1912. Serial No. 704,376. (Cl. 121—58.)



1. The combination with a reciprocating engine, of a turbine, said turbine and engine being connected in driving relation to the same shaft, said turbine having full power stages and auxiliary stages, means for supplying steam to said engine, and means for passing steam from the exhaust of said engine to the turbine and admitting it to either the full power or auxiliary stages.

2. The combination with a reciprocating engine, of a turbine, said turbine and engine being connected in driving relation to the same shaft, said turbine having full power stages and auxiliary stages, means for supplying steam to said engine, and means, comprising a reheater, for passing steam from the exhaust of said engine to the turbine and admitting it to either the full power or auxiliary stages.

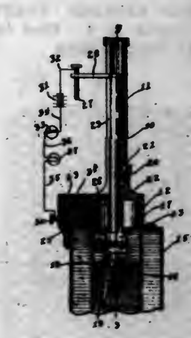
3. The combination with a reciprocating engine, of a turbine, said engine and turbine being connected in driving relation to the same shaft, said turbine having full power stages and auxiliary stages, means for supplying steam to said engine, and means for passing steam from the exhaust of said engine to the turbine and admitting it simultaneously to both the full power and auxiliary stages.

4. The combination with a reciprocating engine, of a turbine, said turbine and engine being connected in driving relation to the same shaft, said turbine having full power stages and auxiliary stages, means for supplying steam to said engine, and means, comprising a reheater, for passing steam from the exhaust of said engine to the turbine and admitting it simultaneously to both the full power and auxiliary stages.

5. The combination with a reciprocating engine, of a turbine, said engine and turbine being connected in driving relation to the same shaft, said turbine having full power stages and auxiliary stages, means for supplying steam to said engine, and means for passing steam from the exhaust of said engine to the turbine and admitting it to either or simultaneously to both the full power and auxiliary stages.

[Claims 6 to 13 not printed in the Gazette.]

1,214,208. SIGNAL FOR MOVING-PICTURE REELS. HARRY LOUIS MILLER, Pittsburgh, Pa. Filed June 25, 1915. Serial No. 36,385. (Cl. 200—35.)



1. A device of the character described comprising a tubular housing having an attaching base and provided with a longitudinally extending slot, a stem slidably mounted in said housing, a harp connected with the lower end of said stem, rollers carried by said harp, an insulating block connected with said housing, a contact point embedded in said block, said block being provided with a passageway for communication with said point, a stationary contact pin embedded in said block and contacting with said contact point, an arm extending from said stem through the slot in said housing, and a contact pin carried by said arm and passing through the passageway of said block to contact with said contact point.

2. A device of the character described comprising a housing provided with a longitudinally extending slot, a stem slidably mounted in said housing, a roller connected with the lower end of said stem, a contact point insulated from said housing, a stationary contact pin engaging said contact point, an arm extending from said stem through the slot in said housing, and a contact pin carried by said arm to engage said contact point.

1,214,209. OIL-CLOTH-VENDING APPARATUS. ROBERT W. MILLER, Woodlawn, Pa. Filed Oct. 23, 1915. Serial No. 57,568. (Cl. 83—135.)

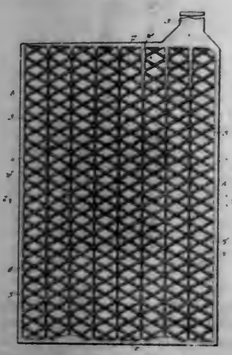
In an oil cloth vending apparatus, the combination of a frame, a stock reel and a receiving and measuring reel rotatably mounted thereon, a cutting board secured to the frame between said reels, a clamp borne by the receiving reel for engaging oil cloth, a measuring tape and take-up device therefor secured to said frame adjacent to one end of the receiving reel, said tape extending over the cutting board and having its outer end secured to said receiving reel at a point in line with said clamp, a hold-down bar pivoted at one side of and adapted to hold the

cloth firmly against said cutting board, means secured to the other end of said bar for clamping it against said cut-



ting board and upon a sheet of oil cloth to hold it firmly upon said board, and a cutter slidably mounted upon said bar.

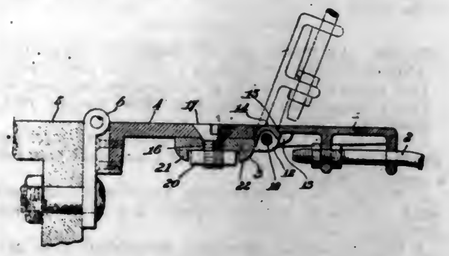
1,214,210. STORAGE-BATTERY PLATE. HOWARD STANLEY MILLS, Astoria, N. Y. Filed June 18, 1912. Serial No. 704,371. (Cl. 204—29.)



A grid for battery plates having substantially uniform thickness throughout comprising a rectangular frame, longitudinal bars extending from end to end of said frame parallel with the longer sides thereof, said bars being flush with the opposite faces of said frame, a terminal lug for said grid adjacent the ends of certain of said longitudinal bars, said ends being thickened to provide increased electrical conductivity, and parallel cross-bars extending between adjacent longitudinal bars on each side of said grid, said cross-bars being flush with the surfaces of said longitudinal bars, the bars on opposite sides extending in different diagonal directions and the bars on opposite sides being spaced apart, whereby receptacles for active material are provided which extend continuously from end to end of said grid between said longitudinal bars, said diagonal bars serving as retaining means for said active material.

1,214,211. THREAD-BOARD FOR SPINNING, TWISTING, AND THE LIKE MACHINES. ALBERT H. MORTON, Lowell, Mass. Filed June 11, 1914. Serial No. 844,455. (Cl. 118—12.)

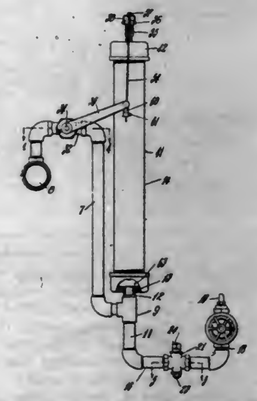
1. A spinning frame having, in combination, a roller beam, a doffing rail pivotally mounted on the roller beam, and capable of being turned backward into inoperative position thereon beyond its center of gravity, a thread board support secured to the doffing rail, and a thread board pivotally mounted on the thread board support, said parts having coöperating parts preventing the turning of the thread board to a position beyond that from which it will return by gravity to its operative position, when the doffing rail is in lowered, that is operative, position, substantially as described.



2. A spinning frame having, in combination, a thread board, a thread board support on which the thread board is pivoted, a pintle forming a pivot connecting the thread board and thread board support, said thread board support being provided with a pintle cover and the thread board having a portion adapted to engage the pintle cover when the thread board is turned upward to prevent the thread board from being lifted to a position such that it will fall over backward, substantially as described.

3. A spinning frame having, in combination, a roller beam, a doffing rail pivotally mounted on the roller beam, and a thread board pivotally supported upon the doffing rail, said rail and thread board having provision for preventing the thread board from being turned upon its pivot far enough to carry its center of gravity beyond the axis of the pivot when the rail is in lowefed, that is, operative position, substantially as described.

1,214,212. SANITARY-DRINKING-FOUNTAIN-SUPPLY SYSTEM. ALBERT S. NEWTON, Providence, R. I. Filed June 21, 1916. Serial No. 104,885. (Cl. 137—68.)



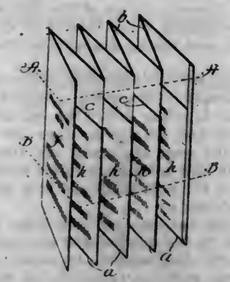
1. In a pressure regulator, the combination of a tank, a conduit connected with the tank and leading to a point of discharge, a supply pipe projecting from the conduit, a rotary valve in said supply pipe, an arm on the valve, a float in the tank, a flexible member connecting the float and arm, means on the flexible member for adjusting the arm relatively to said flexible member, a detachable head to said tank having an inwardly-extended tubular projection, and leak-preventing means carried by the float and coöperable with the inner end of said projection.

2. In a pressure regulator, the combination of a tank, a conduit connected to the tank and leading to a point of discharge, a supply pipe connected to the conduit, a valve in the supply pipe, a float in the tank operatively connected with the valve to equalize the pressure of water at the point of discharge, a depending tubular projection within the tank, means on the float coöperable with said projection to guide the float, and leak-preventing means carried by said float and coöperable with said projection.

3. In a pressure regulator, the combination of a vertical tank provided with an opening in its top, a tubular downwardly directed projection in the top of the tank surrounding the opening, a float in the tank, a conical projection upon the top of the float adapted to enter the opening, a packing disk on the float at the base of the conical projection adapted to engage the end of the tubular projection when the float is in its uppermost position, a pulley on the tank adjacent the opening, a conduit leading from the lower end of the tank to a point of discharge, a supply pipe branching from the conduit, a valve in the supply pipe, an arm on the valve, and a flexible member extending from the conical projection to the arm and engaging the pulley.

4. In a pressure regulator, a tank, a conduit connected therewith, a supply pipe connected with said conduit, a float in the tank, a valve in the supply pipe, an arm connected with said valve, a flexible connection between said float and arm whereby the force of the flow through the supply pipe is automatically controlled by said float, and coöperating means on said float and tank within the latter for guiding the float and preventing the leakage through the top of the tank.

1,214,213. DOCUMENT-FILE. GEORGE C. PARSONS, Cicero, Ill. Filed June 28, 1913. Serial No. 776,226. (Cl. 129—15.)



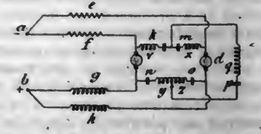
1. A document file composed of a single sheet of strong flexible material folded once lengthwise along a line some distance from the center line yet far from the edge and several times transversely in Z-folds to form a plurality of deep parallel pockets capable of expansion while still remaining substantially parallel, as and for the purpose described.

2. A document file composed of a single sheet of strong flexible material folded once lengthwise along a line some distance from the center line yet far from the edge and several times transversely in Z-folds to form a plurality of deep parallel pockets capable of expansion while still remaining substantially parallel, the horizontal fold being at one side of the longitudinal center line, as and for the purpose described.

3. A document file composed of a single sheet of strong flexible material folded once lengthwise along a line some distance from the center line yet far from the edge and several times transversely in Z-folds to form a plurality of deep parallel pockets capable of expansion while still remaining substantially parallel, and having the ends thereof secured as shown, as and for the purpose described.

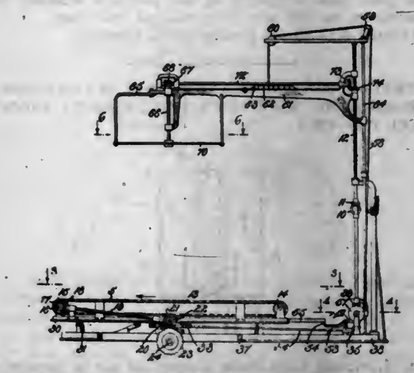
1,214,214. GENERATOR OF HIGH-FREQUENCY CURRENTS. PEDER OLUF PEDERSEN and VALDEMAR POULSEN, Frederiksberg, Denmark, assignors to Federal Telegraph Company, a Corporation of California. Filed Jan. 6, 1913. Serial No. 740,542. (Cl. 250—36.)

In a system for generating high frequency currents, the combination of a feeding circuit, a plurality of generators connected in parallel in said circuit, a circuit of oscillation in which said generators are also connected in parallel, a plurality of condensers at least one in each branch



of the divided portion of the said oscillation circuit and a plurality of self-induction coils, at least one in each branch of the divided portion of the oscillation circuit, the branches being inductively related to each other.

1,214,215. GRAIN-SHOCKER. OLE B. PETERSON, Jackson, Minn. Filed June 28, 1916. Serial No. 106,320 (Cl. 56—121.)



1. In a grain shocking device of the character described, the combination with a harvesting machine, of a frame connected to said machine, a rotatable member for receiving bundles from said machine, means for connecting the bundle ejecting mechanism of the harvesting machine with said member so that the two mechanisms will move together, means for holding the bundles in an upright position, an endless belt on said rotatable member for causing the ejection of the shock after the same has been formed, and means for operating said belt upon each revolution of said rotatable member.

2. In a grain shocking device of the character described, an endless belt, a rotatable platform carrying said belt, means for intermittently rotating said platform, and means for moving said belt at predetermined intervals so as to discharge bundles deposited thereon.

3. In a grain shocking device of the character described, the combination with a harvester, of a traveling belt for receiving bundles from said harvester, means for holding the bundles upright on said belt, a rotatable platform carrying said belt, means operated by said harvester for intermittently rotating said platform whereby the bundles discharged from the harvester on to the belt will be moved to one side until the platform has made a complete revolution, and means for moving said belt upon each complete rotation of said platform so as to discharge the bundles positioned thereon, said means causing the platform to operate at a speed equal to the speed of advance of the harvesting machine whereby said bundles will be maintained in an upright position.

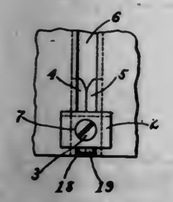
4. In a grain shocking machine of the character described, a belt for receiving bundles one at a time, rotatable means for holding said bundles in an upright position, a rotatable platform carrying said belt, means operated by the same power shaft for rotating the means for holding the bundles upright and also said platform in order that the bundles placed on the belt may be moved out of the way of the incoming or new bundles, means for mov-

ing said belt including a gear wheel, and means for rotating said gear wheel, said means including a traction wheel and a driving gear, said driving gear and the first mentioned gear meshing when said rotatable platform has been turned to a predetermined position.

5. In a grain shocking device of the character described, a frame adapted to be connected to a harvesting machine, a rotatable platform arranged on said frame, a traction wheel arranged at one side of said frame, a traveling belt arranged on said rotatable platform, a worm and gear drive for rotating said platform, a bundle or shock holder arranged above the platform for holding the bundles in an upright position as they are gathered on said belt, a worm and gear drive for rotating said bundle or shock holder, a rotatable shaft geared to both of said worms for operating the same simultaneously whereby the shock holder and the platform will rotate at the same speed and to the same extent, means for connecting said shaft to said harvester so as to receive power therefrom intermittently, and means for connecting said traction wheel with said belt upon each revolution of said platform whereby the bundles on the belt will be discharged therefrom.

[Claims 6 to 10 not printed in the Gazette.]

1,214,216. PRINTING-PLATE CLAMP. WILLIS PIPPERT, Rumford, Me. Filed July 5, 1916. Serial No. 107,513. (Cl. 101—169.)



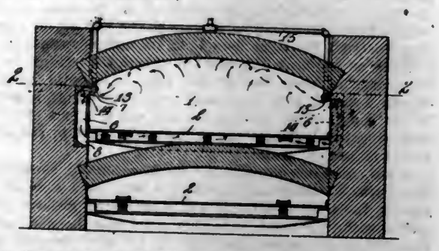
1. A printing plate clamp adapted for use in connection with a bed having a slot therein, including in combination a clamp dog, a pair of right and left duplicate coacting complementary base pieces, means for locking the base pieces to said clamp dog, both of said base pieces having faces for engaging the opposite sides of said bed slot respectively and both having threaded portions for engaging the clamp screw and both adapted to be entered singly into said slot through its mouth, and means on said base pieces for preventing the clamp dog from turning.

2. A printing plate clamp adapted for use in connection with a bed having a slot therein, including in combination a clamp dog, a pair of right and left duplicate coacting complementary base pieces, means for locking the base pieces to said clamp dog, both of said base pieces having faces for engaging the opposite sides of said bed slot respectively and both having threaded portions for engaging the clamp screw and both adapted to be entered singly into said slot through its mouth, and clamp dog stops on said base pieces respectively.

3. A printing plate clamp adapted for use in connection with a bed having a slot therein, including in combination a clamp dog, a pair of independent coacting complementary base pieces, a clamp screw for engagement with said base pieces and said clamp dog, both of said base pieces having faces for engaging the opposite sides of the bed slot respectively and both having threaded portions for engaging the clamp screw and both adapted to be entered singly into said slot through its mouth, and clamp dog stops on said base pieces respectively.

4. A printing plate clamp adapted for use in connection with a bed having a slot with undercut side faces, including in combination a clamp dog, a pair of independent coacting complementary base pieces, a clamp screw for engagement with said base pieces and said clamp dog, both of said base pieces having faces for engaging the opposite undercut faces of the bed slot respectively and both having means for engaging the clamp locking means and both adapted to be dropped one at a time into said slot through its mouth and slid endwise into coacting relation with each other and with the undercut faces of the slot, and clamp dog stops on said base pieces respectively.

1,214,217. ANNEALING-LEER. JOSEPH PLANTE, Verdun, Quebec, Canada. Filed May 15, 1913. Serial No. 767,862. (Cl. 49—47.)



1. In an annealing leer, an annealing oven constituting a space for the reception of articles, a heating device therefor, and an injecting device having its intake and discharge openings in communication respectively with the upper and lower portions of the oven space for the purpose set forth.

2. In an annealing leer, an annealing oven, a heating device therefor, and an injecting device having its intake and discharge openings in communication respectively with the upper and lower portions of the said oven, such injecting device comprising a box located in the wall of the annealing oven, and having a nozzle therein, for the purpose set forth.

3. In an annealing leer, an annealing oven constituting a space for the reception of articles, a pan within the oven space and an injecting device having one end in communication with and adapted to draw air from the upper portion of the oven space and the other end in communication with and adapted to inject such air into the lower portion of the oven space and at a point below the level of the said pan.

4. In an annealing leer, an annealing oven, a pan, an injector box located in the furnace wall and communicating at the top with and adapted to receive air from the top of the oven and communicating at the bottom with and adapted to return the air to the oven at the bottom, a nozzle within and having its inlet near the top of such box; and a pipe leading from a suitable source of fluid supply and communicating with such inlet.

5. In an annealing leer, an annealing oven constituting a space for the reception of articles, a heating device therefor, a movable pan within the oven, an elongated box in the wall of the oven, extending from a point adjacent the roof of the oven to a point below said pan and having an intake opening at the upper end and a discharge opening at the lower end, a boss upon the interior of the top of the box and having an angular passage therethrough one end of which opens into the box, a nozzle within the box and leading from the end of the passage opening into the box and a fluid conveying pipe leading to the other end of the passage.

1,214,218. FOOD AND PROCESS OF PREPARING THE SAME. MICHAEL QUINANE, Hoboken, N. J. Filed Apr. 14, 1916. Serial No. 91,079. (Cl. 99—11.)

1. The herein described food product comprising a plurality of constituents including, first, a farinaceous vegetable thoroughly cooked until dry; second, a coarse vegetable material constituting a filler and conveyer; third, a quantity of calcium phosphate, and finally, high grade olive oil as a preservative, the solution and oil being thoroughly impregnated throughout every particle of the two first mentioned components.

2. The herein described food product comprising the mixture of a vegetable rich in food properties; secondly, wheat bran as a filler and conveyer; thirdly, a solution including small proportions of calcium compound and saccharine matter, and, finally, an oleaginous preservative consisting of pure olive oil to the amount of 7% of the entire product, the same being thoroughly impregnated throughout the other ingredients.

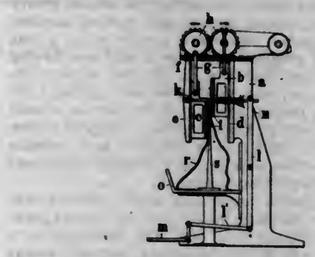
3. The herein described process of preparing foods, the same comprising the following steps: first, the separate thorough cooking of several independent components, one of which is rich in food value while the other consists largely of bulky material as a conveyer; secondly, the assemblage of these two main components after being cooked and thoroughly mixing the same; and, finally, introducing a fluid into the mixture as a hot spray during the mixing operation, whereby the fluid is thoroughly impregnated throughout every particle of the heavier material.

4. The herein described method of preparing a food, the same comprising the thorough cooking until substantially dry, of rice and wheat bran, then the mixing of these two commodities in a suitable container, then spraying into the container in the form of vapor, a fluid comprising water, saccharine matter and calcium phosphate, and finally introducing into the container a preservative oil for thorough impregnation along with the other components.

5. The herein described process of preparing a food, the same comprising the mixing together of certain heavy bulky food components; second, thoroughly mixing the same; third, introducing into the mixture, while in motion, a spray of solution of calcium compound and saccharine matter and also the spray from a highly heated preservative oil.

[Claim 6 not printed in the Gazette.]

1,214,219. CRIPPLING-MACHINE. CARL RAUSCH, Leipzig, Germany. Filed Aug. 20, 1913. Serial No. 785,661. (Cl. 149—20.)



1. A crippling machine comprising parallel and substantially upright plates adapted to be moved with the same speed and in opposite directions along a substantially vertical line, for rolling and crippling the hide, and means for supporting the hide during the crippling thereof between the said crippling plates and in a folded condition, each fold being in contact with one of said plates, during the crippling of the hide.

2. A crippling machine comprising parallel and substantially upright plates adapted to be moved in opposite directions along a substantially vertical line, for rolling and crippling the hide, means for supporting the hide during the crippling, and a tongue projecting between the plates and adapted to separate the parts of the hide not between the said plates, during the crippling of the hide.

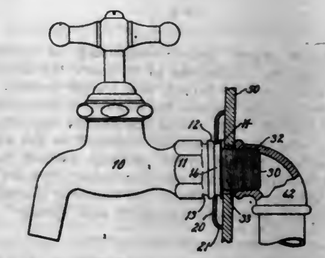
3. A crippling machine comprising substantially upright plates, means for moving said plates with the same speed in opposite directions for rolling and crippling the hide, a rod on each side of said plates and means to increase the distance of said plates the one from the other for a short time after an even number of strokes of said plates, whereby said hide is automatically fed between said plates.

4. A crippling machine, comprising parallel and substantially upright plates, means for moving said plates with the same speed in opposite directions for rolling and crippling the hide, means for supporting said hides during the crippling, and means to enable one of said plates to be adjusted perpendicular to its direction of movement.

5. A crippling machine, comprising parallel and substantially upright plates, means for moving said plates with the same speed in opposite directions for rolling and crippling the hide, means for supporting said hide during the crippling, and means for periodically moving one of said plates perpendicular to its direction of movement, whereby the said hide is automatically fed between said plates.

[Claims 6 to 9 not printed in the Gazette.]

1,214,220. FAUCET ATTACHMENT. JOSEPH REGAR, Cleveland, Ohio, assignor to The Regar Brass Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 6, 1915. Serial No. 65,188. (Cl. 137—127.)



1. In a device of the character described, the combination of a faucet shank having an external annular shoulder formed thereon a short distance in front of its rear end, said shank being internally threaded from the rear end, and an escutcheon plate loosely surrounding the shank at the rear of the shoulder and adapted to bear against said shoulder.

2. In a faucet attachment, the combination of a faucet shank having an annular shoulder, and an escutcheon plate loosely surrounding the shank at the rear of the shoulder and extending at its outer edge rearwardly behind the plane of the rear end of the shank, and the shank being internally threaded from the rear end.

3. In a faucet attachment, the combination of a one piece faucet shank having an annular shoulder, and an escutcheon plate loosely surrounding the shank at the rear of the shoulder, the material of the shank being flanged outwardly at the rear of the escutcheon.

4. In a faucet attachment, the combination of a shank having a rigid annular shoulder, an escutcheon plate loosely surrounding the shank at the rear of the shoulder, the shank being flanged outwardly at the rear of the escutcheon and the escutcheon extending at its outer edge rearwardly behind the plane of the rear end of the shank, the flange being adapted to abut a lavatory back and thereby prevent distortion of the escutcheon.

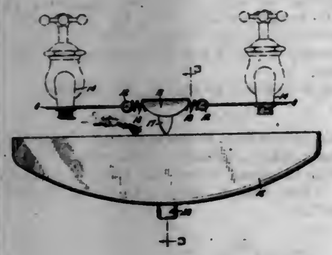
5. The combination of a faucet having an annular rib formed on its shank and an annular seat at the rear of such rib, an internal thread extending forwardly from the rear end of the shank, and a collar loosely occupying such seat and adapted to bear against said rib, the extreme rear end of the shank being flanged outwardly at the rear of the collar to retain it loosely in place, and the outer edge of the collar extending rearwardly behind the rear end of the shank.

[Claims 6 to 8 not printed in the Gazette.]

1,214,221. FAUCET WATER-MIXER. ANDREW ROSENTHAL, New York, N. Y. Filed May 4, 1916. Serial No. 95,486. (Cl. 137—4.)

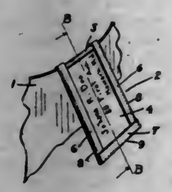
1. A faucet water mixer comprising an elongated trough having end extensions to lie below the faucets of

the usual water supply fixture, said trough having a central delivery opening; and means for removably attaching the trough in service, said means embodying an extension spring, and clip plates pivotally attached to the ends of said spring and having ovoid openings formed therein, the contrasted ends of said openings being extended away from said spring.



2. A faucet water mixer comprising an elongated trough having end extensions to lie below the faucets of the usual water supply fixture, said trough having a central delivery opening; means for removably attaching the trough in service, said means embodying an extension spring, and clip plates pivotally attached to the ends of said spring and having ovoid openings formed therein, the contracted ends of said openings being extended away from said spring; and a hanger permanently mounted on said trough for removably engaging said spring.

1,214,222. IDENTIFICATION DEVICE. MARIE F. RYERSON, Montclair, N. J. Filed Aug. 31, 1915. Serial No. 48,171. (Cl. 40—17.)

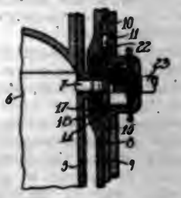


1. An identification card holder comprising a piece of textile material having opposite side edges turned in and sewed adjacent the creases forming folds projecting inwardly from the lines of sewing and adapted to receive beneath themselves the edges of a card, and a marginal portion of one end of the piece of textile material turned inward over and onto the ends of said side folds and sewed down, whereby the ends of said side folds are held from yielding outwardly away from the body portion.

2. An identification card holder comprising a piece of textile material having opposite side edges turned in and sewed adjacent the creases forming folds projecting inwardly from the lines of sewing and adapted to receive beneath themselves the edges of a card, and a marginal portion of one end of the piece of textile material turned inward over the ends of said side folds and sewed adjacent the crease forming a fold projecting inwardly from the line of sewing and also adapted to receive beneath itself the edge of a card.

3. An identification card holder comprising a piece of textile material having opposite side edges turned in and sewed adjacent the creases forming folds projecting inwardly from the lines of sewing and adapted to receive beneath themselves the edges of a card, and a marginal portion of one end of both the body portion and side folds bent backwardly behind the body portion, whereby the ends of the side folds are prevented from yielding outwardly away from the body portion at said backward bend.

1,214,223. VALVE MECHANISM. HERBERT S. SALISBURY, Waltham, Mass. Filed Apr. 24, 1916. Serial No. 93,085. (Cl. 123—188.)



1. A valve mechanism comprising a slide valve, a seat for said slide valve provided with a port, said seat having a groove therein surrounding said port, a packing member arranged in said groove in yielding contact with said slide valve, and resilient means interposed between said packing member at the bottom of said groove adapted to yieldingly retain said packing member in contact with said slide valve, said resilient means being adapted to substantially fill the space between said packing member and the bottom of said groove to prevent leakage around said packing member.

2. A valve mechanism comprising a slide valve, a seat for said slide valve, provided with a port, said seat having a groove surrounding said port, a metallic packing member arranged in said groove, and a resilient packing substance interposed between said metallic packing member and the bottom of said groove adapted to prevent leakage around said packing member.

3. A valve mechanism comprising a slide valve, a seat for said slide valve provided with a port, said seat having a groove surrounding said port, a packing member arranged in said groove, said packing member having a recess extending substantially entirely around the outer botttom corner thereof, and a resilient packing substance arranged within said recess and the bottom of said groove adapted to prevent leakage around said packing member.

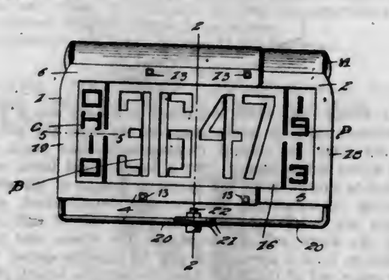
4. A valve mechanism comprising a slide valve, a seat for said slide valve provided with a port, said seat having a groove surrounding said port, a packing member arranged in said groove, said packing member having a recess in the portion thereof adjacent to the bottom of said groove, and a resilient packing substance arranged within said recess and in said groove between said packing member and the bottom of said groove adapted to prevent leakage around said packing member.

5. A valve mechanism comprising a slide valve, a seat for said slide valve provided with a port, an endless packing member surrounding said port and arranged in a groove formed in one of the contacting surfaces, means for yieldingly retaining said endless packing member in contact with the surface opposite thereto, and a resilient packing substance interposed between said packing member and the bottom of the groove containing the same adapted to prevent leakage around said packing member.

1,214,224. LICENSE-LAMP. HENRY H. SCHIEB, Akron, Ohio. Filed Jan. 5, 1916. Serial No. 70,493. (Cl. 40—132.)

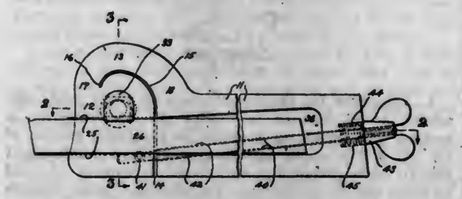
1. A license lamp for motor vehicles comprising an extensible housing including two telescoping sections, tubular members formed upon the upper ends of said members, one of said members provided at its upper and lower forward edges with a tongue receiving bore and opposed channels, tongues formed upon the other of said members for adjustable insertion into said tongue receiving bores, said last named member having channels formed in its upper and lower edges, and a license plate carrying frame mounted within said channels.

2. A license lamp for motor vehicles, comprising an extensible housing consisting of telescoping sections, tubular members formed upon the upper portions of said sections, one of said members being provided at its upper and lower forward edges with tongue receiving bores and with opposed facial channels, the other of said sections being provided with facial channels in its upper and lower sides, tongues formed upon said last named sections for slidable seating within said tongue receiving bores, means for holding said sections in adjusted position, a license plate carrying frame for insertion in said facial channels, and illuminating means mounted within said tubular members.



3. A license lamp for motor vehicles comprising an extensible housing consisting of two rectangular telescoping sections, tubular members formed upon the upper portions of said sections, one of said sections being provided with tongue receiving bores in its upper and lower sides, the other of said sections being provided with tongues formed upon the terminal ends of its upper and lower side rails, said tongues being provided for sliding insertion into said tongue receiving bores, means for holding said tongues in adjusted positions within said bores, said sections being provided with facial channels in their inner sides, a rectangular frame inserted in said channels, a frame carried by said last named frame and being provided with grooves for receiving a license plate and a translucent plate, an illuminating means mounted within said tubular members forwardly of said translucent plate.

1,214,225. TOOL-HOLDER. MELKER WILLARD SCHILLBERG, New York, N. Y. Filed Mar. 27, 1916. Serial No. 87,046. (Cl. 29—96.)



1. A tool holder comprising a shank, a tool carrying head separated therefrom by a gap ending with an approximately involute curve terminating forward in the upper part of said head, and means for securing the tool substantially central in the latter within said curve.

2. A tool holder comprising a shank portion, a tool carrying head, means for securing the tool approximately in the center of the latter, and a gradually increasing connecting member intermediate the head and shank portion leaving a gap therebetween of substantially involute curvature terminating outwardly forward past said center.

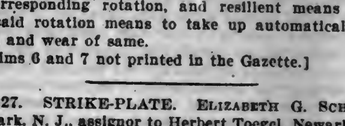
3. A tool holder comprising a shank, a tapering gooseneck extending forwardly, a tool carrying head divided from said shank by a narrow gap following the curvature of said gooseneck, and means for securing the tool to the central portion of said head within said curvature.

4. A tool holder comprising a shank, an upwardly and outwardly extending yieldable member joined at one end to said shank, a tool carrying head formed integral with the other end of said member, said head consisting of a part forced adjacent to the underside of the member and to the end of the shank so as to leave a narrow gap therebetween following the inner contours of the last named elements.

5. A tool-holder comprising a shank, a tool carrying head separated therefrom by a dividing gap, a connecting member between said shank and said head, and means for drawing the latter against its inherent resilience or elasticity to close said gap.

[Claims 6 to 10 not printed in the Gazette.]

1,214,226. PANORAMIC TILTING DEVICE. EBERHARD SCHNEIDER, New York, N. Y. Filed Aug. 23, 1916. Serial No. 116,537. (Cl. 248—47.)



1. A panoramic tilting device, comprising a frame, a supporting platform mounted therein, a base for said frame and platform, means to rotate said frame relatively to said base, means to rotate said platform relatively to said frame, and a rotatable shaft common to said two rotation means to engage one or the other thereof and adapted to effect the corresponding rotation.

2. A panoramic tilting device, comprising a frame, a supporting platform mounted therein, a base for said frame and platform, means to rotate said frame relatively to said base about a vertical axis, means to rotate said platform relatively to said frame about a horizontal axis, and a rotatable shaft common to said two rotation means and adapted to engage one or the other thereof to effect the corresponding rotation.

3. A panoramic tilting device, comprising a frame, a supporting platform and a horizontal shaft rotatably mounted in said frame and upon which said platform is secured, a vertically disposed segmental gear with worm teeth and movable with said shaft, a base for said frame and a horizontal worm wheel attached thereto, a horizontal actuating shaft and means to rotate same, two worms independently mounted on said actuating shaft and adapted to engage respectively the said segmental gear and the said worm wheel, and means to effect engagement between said actuating shaft and either one of the said worms.

4. A panoramic tilting device, comprising a frame, a supporting platform and a horizontal shaft rotatably mounted in said frame and upon which said platform is secured, a vertically disposed segmental gear with worm teeth and movable with said shaft, a base for said frame and a horizontal worm wheel attached thereto, a horizontal actuating shaft slidably mounted in said frame, two worms independently mounted on said actuating shaft and adapted to engage respectively the said segmental gear and the said worm wheel, means to rotate said actuating shaft, and key pins oppositely disposed on said actuating shaft designed to engage corresponding slots on the respective worms as the shaft is moved in one direction or the other.

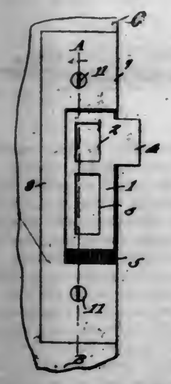
5. A panoramic tilting device, comprising a frame, a supporting platform mounted therein, a base for said frame and platform, means to rotate said frame relatively to said base, means to rotate said platform relatively to said frame, actuating means common to said rotation means to engage one or the other thereof to effect the corresponding rotation, and resilient means acting upon said rotation means to take up automatically lost motion and wear of same.

[Claims 6 and 7 not printed in the Gazette.]

1,214,227. STRIKE-PLATE. ELIZABETH G. SCHWENK, Newark, N. J., assignor to Herbert Toegel, Newark, N. J. Filed July 15, 1915. Serial No. 40,047. (Cl. 70—15.)

1. A strike-plate for door locks comprising an inner main keeper-section and an outer holding plate, the said

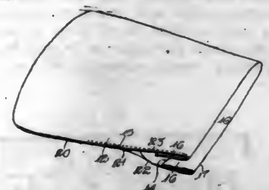
main keeper-section being provided with spaced angular openings for reception of the latch and bolt of a lock, and a tongue extending laterally from one of the marginal edges, opposite one of said openings, said tongue serving as a finger-piece for adjustment of said main keeper-section, said keeper-section being slidably fitted both longitudinally and laterally within the mortise of a door jamb and having a rear smooth surface to prevent marring of the wood, and the said holding plate being adapted to be snugly fitted within said mortise, retaining serrations upon said main keeper-section, and retaining serrations upon the said holding plate, the said serrations being located between and upon the immediate contact surfaces of the said keeper-section and the said holding plate.



2. A strike-plate for door locks comprising an inner main keeper-section formed with enlarged screw-receiving openings, the said main keeper-section being provided with spaced angular openings for reception of the latch and bolt of a lock, and a tongue extending laterally from one of the marginal edges, opposite one of said openings, said tongue serving as a finger-piece for adjustment of said main keeper-section, said keeper-section being slidably fitted both longitudinally and laterally within the mortise of a door jamb, and having a rear smooth surface to prevent marring of the wood, and an outer holding plate adapted to be snugly fitted within said mortise, the said holding plate being formed with screw-receiving openings, retaining screws in said last-mentioned openings, said screws extending into and through the enlarged openings in the said main keeper plate and screwed into the door-jamb, retaining serrations upon the said main keeper-section and retaining serrations upon the said holding plate, the said serrations being located between and upon the immediate contacting surfaces of the said keeper-section and the said holding plate.

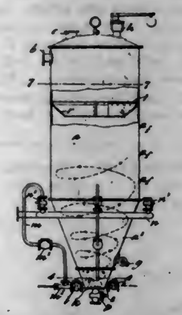
3. A strike plate including a main plate having a bolt receiving opening, a laterally extending tongue serving as a finger-piece for adjustment of said plate, and serrated end portions, each of said serrated end portions containing a relatively large fastener receiving opening and having a rear smooth surface to prevent marring of the wood when inserted in the mortise of a door jamb, a holding plate having its end portions serrated for engaging the serrations on the end portions of the main plate, there being relatively small fastener receiving openings within the serrated end portions of the holding plate, the middle portion of the holding plate being cut away to expose the bolt receiving opening in the main plate, and fastening means fitting snugly within the openings in the holding plate and extending through the end openings in the main plate, to hold the serrations upon the two plates in engagement with each other, said main plate being adjustable laterally relative to the holding plate when the serrations are disengaged and longitudinally of the holding plate when the pressure of the holding plate upon the main plate is reduced.

1,214,228. GARMENT-SLEEVE. JOHN B. SCOLPONETI, Boston, Mass. Filed June 23, 1915. Serial No. 35,775. (Cl. 2—94.)



A vented coat sleeve composed of a body and a lining of substantially the same length as the body and stitched to the outer end thereof to form a finished sleeve end, the sleeve being formed with a longitudinal inner seam, which is shorter than the operative length of the sleeve, leaving disconnected vent-forming longitudinal edges which are finished between the outer end of said seam and the outer end of the sleeve, the sleeve end being folded to form a neck which may be variably spaced from the outer end of the inner seam to vary the length of the sleeve and of the vent, one of said vent-forming edges being folded under said end.

1,214,229. APPARATUS FOR CARBONATING LEAD OXID. FREDERICK HERBERT SHARPE, Liverpool, England. Original application filed July 12, 1915, Serial No. 39,448. Divided and this application filed May 31, 1916. Serial No. 100,991. (Cl. 134—75.)



1. Apparatus for the manufacture of white lead, comprising a vat adapted to receive the substances to be treated, and means for inducing in the lower portion of the vat a flow of an agitating agent in a substantially helical course upwardly to prevent settlement of solid material and cause thorough and efficient contact between the substances under treatment.

2. Apparatus for the manufacture of white lead, comprising a vat to receive the substances to be treated, the vat having an inverted substantially conical side wall, and a jet for introducing an agitating fluid in a direction approximately tangential to the conical side wall of the vat, said conical wall and the jet coöperating to induce a helical flow of the agitating fluid.

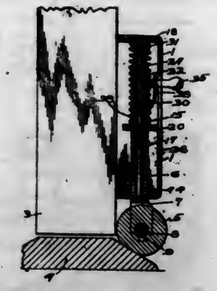
3. Apparatus for the manufacture of white lead, comprising a vat having a substantially conical side and adapted to contain the substances to be treated, and a plurality of jets all having a pitch in the same direction for introducing an agitating gas in directions approximately tangential to the conical side of the vat and to coact with the side of the vat to induce a helical flow of the substances under treatment.

4. Apparatus for the manufacture of white lead, comprising a vat adapted to receive the substances to be treated, the lower portion of the vat being of inverted conical shape, and means for introducing an agitating gas into the lower portion of the vat in a direction substantially tangential to that portion of the vat which is of inverted conical shape, said conical portion of the vat and the means for introducing the agitating gas coöperating to induce a helical flow of the agitating gas and the substances under treatment.

5. The combination with apparatus for the manufacture of white lead, embodying a plurality of jets through which an agitating agent is delivered into a vat, of removable connecting pipes connecting the separate jets to the main gas supply so that each jet and its connections can be cleaned without stopping the others.

[Claims 6 and 7 not printed in the Gazette.]

1,214,230. DOOR-CHECK. WALTER SHEPPARD, Toledo, Ohio. Filed Feb. 16, 1916. Serial No. 78,606. (Cl. 16—84.)



1. In a door check, the combination of a rubber roller, an axle, means for securing the axle to prevent rotation thereof, a yieldable rubber roller having an opening smaller than the axle and forced over the axle to frictionally engage therewith, means for securing the roller and the axle to the door and means for yieldingly pressing the roller against the floor.

2. In a door check, the combination of a pair of plates, guiding members located intermediate the plates, springs located on the guiding members, a third plate movable along the guide members and moved by the springs, a rod secured to one of the first-named plates, a sleeve, a roller connected to the sleeve, a second sleeve movable on the first-named sleeve, and springs surrounding the first-named sleeve, a casing, a nut threaded on one end of the first-named sleeve for locking the said parts in the casing.

3. In a door check, the combination of an axle, a roller located on the axle and formed of rubber and with an opening smaller than the axle, means for securing the axle from rotation, and means for yieldingly connecting the roller and axle to the door.

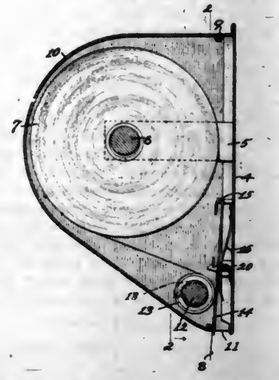
4. In a door check, the combination of a roller, a sleeve connected to the roller, a pin for guiding the sleeve, and secured to the door, a latch engaging member movable relative to the sleeve and a compression spring for yieldingly pressing the latch engaging member toward the floor and located intermediate the end of the sleeve and the latch engaging member, and springs for yieldingly pressing the sleeve downward toward the floor, the latch engaging member adapted to be engaged when the roller rides near to the top of the sill of the door.

5. In a door check, the combination of a floor engaging member, a latch engaging member located on the floor engaging member and movable along the floor engaging member, a compression spring for yieldingly pressing the latch engaging member toward the floor and located intermediate the floor engaging member and the latch engaging member, and a spring for pressing the floor engaging member toward the floor.

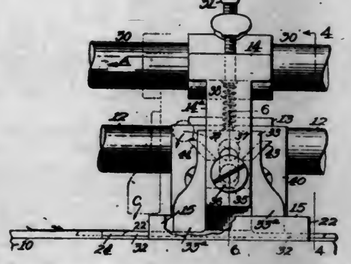
[Claims 6 and 7 not printed in the Gazette.]

1,214,231. TOILET-PAPER HOLDER. JOHN T. SHERIDAN, Bowling Green, Mo. Filed Aug. 5, 1916. Serial No. 113,257. (Cl. 211—29.)

A toilet paper holder, comprising a back plate, arms thereon, a shaft in detachable engagement with said arms and adapted to receive a roll of paper, a shield hinged to said back plate and slotted at its lower end, a friction roll carried by said shield adjacent said slot, external means for rotating said friction roll, a transverse rod carried by said back plate, a bearing plate hooked at its upper end for detachable connection with said rod, and a spring for holding said bearing plate toward said roll to act as a brake on the withdrawal of said paper.



1,214,232. SHEET-REGISTER. GILBERT J. SINNOTT, Brooklyn, N. Y., assignor to American High Speed Press Company, New York, N. Y., a Corporation of New York. Filed Mar. 4, 1916. Serial No. 82,227. (Cl. 101—37.)



1. In a sheet register, in combination, upper and lower sheet-engaging elements, means to move said elements simultaneously transversely of the sheet, and means to raise the upper element as it moves from normal position in either direction, said element being permitted to engage the lower element or the sheet overlying the same before the beginning of the return movement of said elements to normal position.

2. A sheet register having, in combination, a fixed member, a movable member, means for moving said latter member transversely of the sheet, said movable member having upper and lower sheet-engaging elements mounted thereon and means being provided for raising said upper element as it is moved in either direction from normal position, said means releasing said element to engage the sheet before the return movement of said element begins.

3. A sheet register having, in combination, a fixed member, a base adjustably secured to said fixed member and forming a side gage for the sheet, a movable member, means for moving said latter member transversely of the sheet, upper and lower sheet engaging elements mounted on said movable member, and means for raising the upper element as it is moved in either direction from normal position, said element being released to engage the sheet before the return movement of said element begins, where-

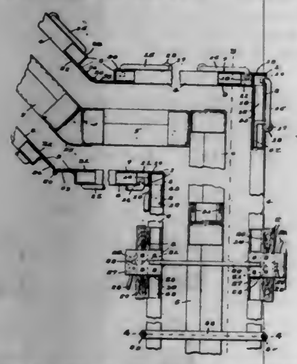
by the sheet may be registered against either edge of the adjustable base.

4. A sheet register having, in combination, a double-edged gage, a movable sheet-engaging element normally positioned centrally of said gage, means for moving said element relatively to said gage and transversely of the sheet, and means to raise said element as it is moved from normal position in either direction, said element being released to engage the sheet as it approaches its outer limit of travel and remaining in engaging position during its return movement to normal position.

5. A sheet register having, in combination, a fixed member, a double-edged gage, means to adjust said gage relatively to said member in either direction, a movable member, a sheet-engaging element mounted on said movable member, means to reciprocate said member and element, and means coöperating with said element effective to hold said element out of engagement with the sheet as it moves from normal position in either direction, and to permit said element to engage said sheet upon its return movement toward normal position from either direction.

[Claims 6 to 8 not printed in the Gazette.]

1,214,233. COLLAPSIBLE FORM FOR CONCRETE WALLS. PATRICK D. SKAHEN, Syracuse, N. Y. Filed May 18, 1914. Serial No. 839,363. (Cl. 25—131.)



1. A collapsible form for concrete walls comprising an outside angle iron, inside sheet metal pieces, one of said pieces having a flange lapping one of the flanges of the outside angle iron and secured thereto, a flange offset from the flange of the angle iron and opposed thereto to form a channel, and an intermediate web forming the bottom of said channel, and the other inside piece being opposed to the other flange of the angle iron to form a second channel and being secured to said intermediate web portion and side pieces extending into the channels, substantially as and for the purpose described.

2. A collapsible form for concrete walls comprising corner posts and side pieces, the posts including members formed with channels for receiving the ends of the pieces constituting the sides of the form, said members being hinged together, substantially as and for the purpose specified.

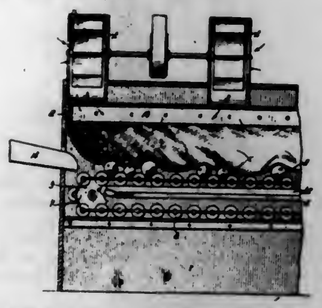
3. A collapsible form for concrete walls comprising an upright post having a vertical channel, side sections having their ends extending into the channel, and locking means for connecting the post and the side sections, the locking means being located on the outside of the post and the side sections, substantially as and for the purpose set forth.

4. A collapsible form for concrete walls comprising upright posts formed with channels and sheet metal side wall sections each having its longitudinal margin bent at an angle to the body thereof forming a channel iron, each section having extensions at its ends which telescope into the ends of the body of the section, the extensions being designed to extend into the channels of the posts so that the outer faces of the sections and the posts are flush, substantially as and for the purpose set forth.

5. A collapsible form for concrete walls comprising upright posts formed with channels and sheet metal side wall sections having their longitudinal margins bent at an angle to the body thereof forming a channel, each section having extensions at its ends which telescope into the ends of the body of the section, the extensions being designed to extend into the channels of the posts so that the outer faces of the sections and the posts are flush, and each section being formed with an external rabbeted channel along one longitudinal edge thereof and a flange at the other longitudinal edge thereof for entering the rabbeted channel of the contiguous section, substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,214,234. FRUIT-DRIER. LEE BRONSON SKINNER, Dunedin, Fla., assignor to L. B. Skinner Manufacturing Co., Dunedin, Fla. Filed Apr. 12, 1916. Serial No. 90,616. (Cl. 34—12.)



1. In a fruit drying machine, in combination, a conveyer for the fruit, means for subjecting the fruit to the drying action of air, and a porous diaphragm interposed between the air inlet and the fruit.

2. In a fruit drying machine, in combination, a conveyer for the fruit, means for subjecting the fruit to the drying action of air, a porous diaphragm interposed between the air inlet and the fruit, the said diaphragm kept in contact with the fruit by the pressure of the air above the diaphragm, and means for imparting a lateral movement to the diaphragm.

3. In a fruit drying machine, in combination, a conveyer for the fruit, means for subjecting the fruit to the drying action of air, a porous diaphragm interposed between the air inlet and the fruit, the said diaphragm kept in contact with the fruit by the pressure of air above the diaphragm, and means for imparting to the fruit a lateral rolling action alternately in opposite directions.

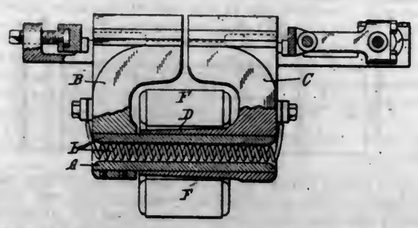
4. In a fruit drying machine, in combination, a conveyer for the fruit, means for subjecting the fruit to the drying action of air, and means acting on the upper run of the conveyer to alternately raise and lower the opposite sides of the conveyer.

5. In a fruit drying machine, in combination, a conveyer for the fruit, means for subjecting the fruit to the drying action of air, and means for imparting to the fruit lateral rolling movements alternately in opposite directions.

[Claims 6 to 12 not printed in the Gazette.]

1,214,235. TRANSFORMER-SECONDARY. HERBERT L. SMITH, Westerly, R. I. Filed May 24, 1916. Serial No. 99,317. (Cl. 219—13.)

1. In an electric welding transformer, a two-part secondary the members of which comprise respectively a cylinder and a sleeve therefor capable of rectilinear guided movement one upon the other, said members having arms or extensions carrying respectively the work terminals of the machine which require to be moved one with respect to the other in the electric welding operation.



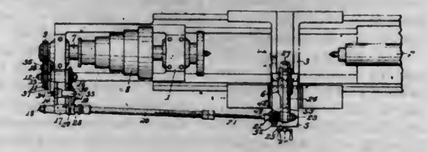
2. In an electric welding transformer, a two-part secondary the members of which consist respectively of a cylinder and a sleeve fitted thereon, one of said members being capable of rectilinear guided movement upon the other and said members carrying respectively arms upon which the workholders of the machine are mounted.

3. An electric welding transformer having a secondary comprising a hollow cylinder one end of which is provided with an extension carrying a workholder while the other end carries a sleeve fitted and guided on it and provided with an extension for the other workholder.

4. An electric welding transformer having a secondary comprising a hollow cylindrical bar within the field of the iron core of the transformer and having an arm secured to one end thereof, a sleeve fitted and guided on said cylinder and having an arm carrying the opposite terminal and a bond connected to said arms and passing through the hollow bar.

5. In a transformer secondary for electric welding machines, a cylindrical bar carrying one work terminal and a sleeve fitted and guided rectilinearly on said bar within the field of the core of the transformer and carrying the other work terminal.

1,214,236. RELIEVING ATTACHMENT FOR LATHES. OTTO W. STEINDORFF, Wheeling, W. Va. Filed Dec. 1, 1915. Serial No. 64,405. (Cl. 82—19.)



1. A relieving attachment for lathes including a driver, an oscillatory cam connected to and driven by the driver, means to selectively adjust the cam relative to the driver and fixedly secure same in its adjusted position, and a tool holder operatively related to the cam and being intermittently advanced and retracted thereby.

2. A relieving attachment for lathes including a driver, an oscillatory cam directly coupled to the driver, means for selectively adjusting the cam relative to the driver and fixedly secure the same in its adjusted position, and a tool holder operatively related to the cam for being intermittently advanced and retracted thereby.

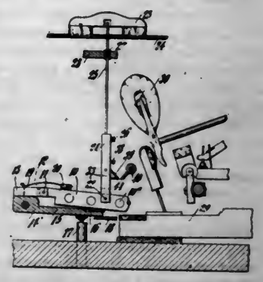
3. A relieving attachment for lathes including a cam mounted for limited oscillatory movement, a tool holder comprising a pivoted lever resting directly on the cam, and means for selectively and fixedly adjusting the relative position of the cam to the lever.

4. In mechanism of the character described, the combination with a compound slide, of a tool head adjustable thereon, a tool-holder pivoted on said head, an oscillatory cam mounted on said head and disposed in operative relation to said tool-holder whereby the latter is raised and lowered with the oscillations of the cam, an oscillatory shaft connected to said cam, a rotatable master cam, means interposed between said master cam and said shaft whereby the rotary movement of the former is converted into oscillatory movement of the latter, and a manually operable micrometer adjustment for the oscillatory cam controlling the extent of movement of the tool-holder.

5. In a mechanism of the character described, the combination with the head stock and pivoted tool holder of a lathe, of a rotatable master cam, means operable by the cam for oscillating the pivoted tool holder, a gear connected with the master cam, a second gear with the head stock, a sweep-arm pivoted between its ends, an idler gear adjustable on one end of the sweep-arm for connecting the first two gears, and means whereby the arm may be swung to move the idler into and out of mesh with one of the first two gears.

[Claims 6 to 17 not printed in the Gazette.]

1,214,237. SOSTENUTO DEVICE FOR PIANOS. THEODORE E. STEINWAY, New York, N. Y. Filed June 10, 1916. Serial No. 102,831. (Cl. 84—70.)



1. In a damper action for pianos, a damper lever, a damper and a damper lifter provided with a recess, a tappet pivoted within said recess and provided with a projecting portion, a spring within said recess operative to project said portion, and a sostenuto rail adapted to be moved under said projecting portion for holding the damper in raised position when it has been raised by the key.

2. In a damper action for pianos, a damper lever, a damper and a damper lifter provided with a recess, a tappet pivoted within said recess and provided with a projecting portion, a spring within said recess operative to project said portion, means for adjusting the degree of projection of the projecting portion, and a sostenuto rail adapted to be moved under said projecting portion to sustain the damper in raised position when it has been raised by the key.

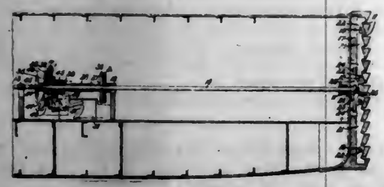
3. In a damper action for pianos, a damper lever, a damper, and a damper lifter provided with a recess in one side, a tappet pivoted within said recess and provided with a projecting portion and with a bore below its pivot point, a compression spring disposed in said bore and bearing against the rear wall of said recess, means above said pivot point for regulating the degree of projection of said projecting portion, and a sostenuto rail adapted to be moved under said projecting portion to sustain the damper in raised position when it has been raised by the key.

4. In a damper action for pianos, a plurality of damper levers, a plurality of dampers and a plurality of damper lifters having pivoted tappets provided with projecting portions, means for regulating the degrees of projection of said projecting portions to establish alinement thereof, and a sostenuto rail adapted to be moved under said projecting portions to sustain the dampers in raised position when they have been raised by the key.

5. In a damper action for pianos, a damper lever, a damper and a damper lifting and holding means disposed between said lever and said damper and comprising a lifter, a pivoted tappet carried by said lifter and provided with a projecting portion, adjustable means for regulat-

ing the position of said pivoted projecting tappet, and a spring for holding said projecting portion in normal position.

1,214,238. NET-CUTTING AND SIGNAL ATTACHMENT FOR SUBMARINES. GOTTHART TAUBERT, Pittsfield, Mass. Filed June 23, 1916. Serial No. 105,344. (Cl. 114—221.)



1. In a device of the character set forth, the combination with a stationary notched bar and a reciprocating cutter coöperating therewith, of driving means for the cutter including a slip connection permitting the stoppage of the cutter, signal means set into operation by the stoppage of the cutter, and means to positively connect the driving for increased power and greater speed.

2. In a net cutting attachment for submarines, the combination of cutting devices, means to operate the said cutting devices normally at low speed through a slip connection, and means to positively make high power and higher speed connection between the driving means and the cutter after the stoppage of the cutting devices takes place.

3. In a net cutting device for submarines, the combination of a cutting device, means to drive the same normally at low speed and permit the stoppage thereof by an obstruction, signal means set into operation by the stoppage of the cutting devices, and means to make positive connection subsequently between the driving devices and the cutting devices.

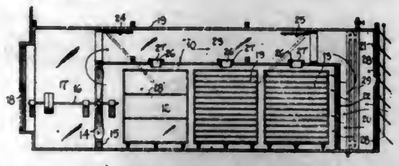
4. In a net cutting device for submarines, the combination of a main shaft, power means for driving the same, slip connections between the power means and the shaft serving to drive the shaft normally without obstruction, cutter devices connected to the shaft and serving to stop the rotation of the shaft when an obstruction is encountered, and other connecting means between the power devices and the shaft for operating the cutting devices powerfully and at high speed.

5. In a net cutting device for submarines, the combination of a rotary member, cutting devices connected to the rotary member, power means, slip connections between the power means and the rotary member serving to drive the cutting devices normally without obstruction but permitting the stoppage of the rotary member and cutting devices automatically when an obstruction is reached, and means set into operation automatically by the stoppage of the rotary member as aforesaid for giving a signal automatically and increasing the speed of the driving connections.

[Claims 6 to 10 not printed in the Gazette.]

1,214,239. DRYING-MACHINE FOR ALIMENTARY PASTES. AUGUST TEGOLI, Santa Rosa, Cal., assignor to Tegoli Drying Apparatus Manufacturing Company, Ltd., a Corporation of California. Filed May 24, 1916. Serial No. 99,619. (Cl. 34—19.)

1. A drying apparatus including a drying chamber open at opposite ends, a circulating chamber at each end of the drying chamber, an air passage connecting the circulating chamber and having a plurality of openings leading into the drying chamber, means at one end of the drying chamber for moving air therethrough, means for admitting fresh air to the circulating chamber located at the opposite end of the drying chamber from said air moving means, means for controlling the passage of air through any one of said openings from the air passage into the drying chamber, and means for preventing the inlet of air into either or both ends of the air passage from either circulating chamber.



2. A drying apparatus including a drying chamber open at opposite ends, a circulating chamber at each end of the drying chamber, an air passage connecting the circulating chamber, means for causing air to flow through the chamber in one direction, means for closing one or both ends of the air passage to prevent the passage of air therethrough, means for permitting air from the air passage to enter the drying chamber directly at a plurality of points, and means for mixing fresh air with the air already used prior to the entrance of this air into the drying chamber.

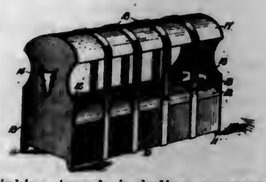
3. A drying apparatus comprising a drying chamber open at opposite ends and having charging doors and side walls, circulating chambers, one at each end of the drying chamber, a suction fan at one end of the drying chamber discharging into the adjacent circulating chamber, a passage connecting the circulating chamber, a louver at the end of the drying chamber opposite the fan, and a louver in the wall of the adjacent circulating chamber, and means for permitting or preventing the passage of air along said air passage.

4. A drying apparatus including a drying chamber open at opposite ends, air circulating chambers at opposite ends of the drying chamber, one of said circulating chambers being provided with a controllable outlet, means drawing air through the drying chamber and discharging it into the last-named circulating chamber, controllable means for admitting fresh air into the opposite circulating chamber, a louver admitting air from said last named circulating chamber into the end of the drying chamber opposite the air drying means, an air passage connecting the circulating chamber, and a door in said passage, in one position permitting the circulation of air therethrough and in the other position preventing said circulation.

5. A drying apparatus including a drying chamber open at opposite ends, circulating chambers disposed one at each end of the drying chambers, a suction fan at one end of the drying chamber and discharging into the circulating chamber at the other end of the drying chamber, the other circulating chamber having means for admitting fresh air thereto, a louver in the adjacent end of the drying chamber, an air passage connecting the circulating chambers and extending over the top of the drying chamber, controllable doors at opposite ends of the air passage, said air passage having openings extending into the drying chamber and disposed at spaced intervals, and means for controlling the passage of air downward through said openings.

[Claims 6 and 7 not printed in the Gazette.]

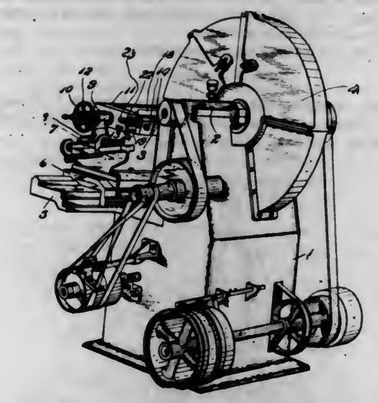
1,214,240. DRINKING-TROUGH FOR CHICKENS. ROLAND G. TODD, Clearfield, Pa. Filed Nov. 7, 1916. Serial No. 129,963. (Cl. 119—61.)



1. A drinking trough including a reservoir, inwardly disposed members at the sides of the reservoir overhanging the latter and presenting an opening affording access to the reservoir, one end of the said trough having an opening adjacent to the top of the reservoir, the said opening terminating inward from the sides of the reservoir, the ends of the reservoir and the inwardly disposed members on the reservoir serving to retain a quantity of water in the reservoir to the level of the said end opening when the trough is laid on its side; together with a roof supported above the said reservoir.

2. A drinking trough including a reservoir having inwardly disposed members at the sides thereof to overhang the reservoir and spaced to form an opening therebetween affording access to the reservoir, end members rising above the said reservoir, one of said end members having an opening adjacent to the top of the reservoir, a roof supported on said end members and overhanging the said inwardly disposed members of the reservoir, and vertical guard members extending at both sides of the trough from the reservoir to the roof.

1,214,241. UNIVERSAL KNIFE-HOLDING BAR. VICTOR M. TUTHILL, Grand Rapids, Mich. Filed Mar. 21, 1916. Serial No. 85,600. (Cl. 51—7.)



1. In a device of the character described, a bar provided with a plurality of slots on one side extending lengthwise of the bar, a rod secured to and positioned lengthwise of the same side of the bar, clamping members having one end provided with a curved recess to receive the rod, and with the opposite end turned inwardly toward the bar, cap screws passing through the clamping members and into the bar, and a removable backing strip seated in one of the slots in said bar, substantially as described.

2. In a device of the character described, a bar provided with a plurality of slots on one side extending lengthwise of the bar, a rod secured to said side of the bar adjacent a corner thereof, and a distance from the slots, clamping members at one end bearing against the rod and at the other end turned inwardly toward the bar, means to draw said clamping members toward the bar, and a backing member removably seated in a slot under the clamping members.

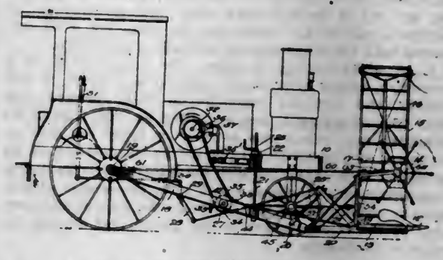
3. In a device of the character described, a bar provided with a plurality of slots in one side and extending lengthwise of the bar, clamping devices secured to said side of the bar, means to draw the clamping devices toward the bar and against a knife between the bar and clamping devices and a backing member removably seated in a slot against which the knife is adapted to seat, substantially as described.

4. In combination, a bar formed with a plurality of longitudinal slots in one side, clamping devices mounted on said side and having a pivotal mount at one end, means to draw said means against a knife positioned between the bar and said means, and a backing member removably seated in a slot against which the knife seats, substantially as described.

5. In combination, a bar, clamping means located at one side of the bar, means to clamp said means against a knife interposed between the bar and clamping means, and adjustable backing means against which the rear edge of the knife is adapted to seat to locate the edges of the knife in parallelism with the sides of the bar, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,214,242. HARVESTING-MACHINE. JOHN M. VEATCH, Palco, Kans. Filed June 13, 1916. Serial No. 103,458. (Cl. 56—100.)



1. In a harvesting machine, the combination of a tractor, a header attachment including a platform and platform supporting means, a frame including side members pivoted at their rear ends to said tractor, and pivotally connected at their forward ends with said platform supporting means, vertically adjustable elements carried by said tractor and engaging said side members intermediate their ends for raising and lowering the same to raise or lower said header attachment, upwardly and rearwardly extending arms carried by said platform supporting means, spring connections between said arms and the side members of said frame, and means carried by the tractor and having a pivotal connection with said side members and secured to said arms for adjusting the same to raise and lower the said header attachment including the cutter bar thereof.

2. In a harvesting machine, the combination of a tractor, a header attachment, platform supporting members for the header attachment, a frame having side members pivoted to said tractor and pivotally connected with said supporting members for supporting the latter and said header attachment, vertically adjustable elements carried by said tractor and engaging said frame for raising and lowering said supporting members and the header attachment, arms extending from said platform supporting members, resilient means connecting said arms and said side members of the frame and normally tending to raise the forward ends of the supporting members and the header attachment, and means having a connection with said frame and secured to said arms for adjusting the latter against the tension of said resilient means to lower the forward portion of said supporting members and the header attachment including the cutter bar thereof.

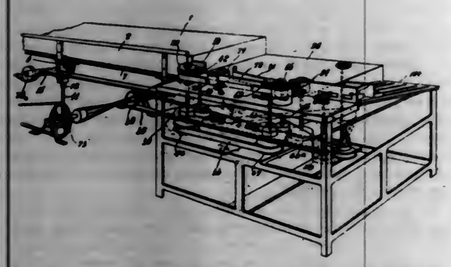
3. In a harvesting machine, the combination of a tractor, a header attachment including a platform, an elevator, a conveyer associated with each, a cutter bar mounted above said platform, and a reel also associated with said platform, the header attachment also including rearwardly extending platform supporting members, members pivotally connected to said tractor and pivotally connected at their forward ends with the platform supporting members for supporting said header attachment, the said pivoted members being adjustable to raise and lower the header attachment, means for raising and lowering the header attachment independently of the movement of the said pivoted members, a U-shaped frame extending laterally from one of said pivoted members, a train of gears mounted in said frame, shafts having their rear ends supported in said frame and connected to said gears

for operating the conveyers and cutter bar, a main driving shaft journaled in said pivoted members and operated by the motive power of said tractor for driving said shafts, and another shaft connected to one of the axles of the tractor and to the reel for rotating the latter.

4. In a harvesting machine, the combination of a tractor, a header attachment, side beams pivoted to said tractor, platform supporting means secured to said header attachment, and pivoted to said side beams, means for adjusting said side beams to actuate said platform supporting means to raise or lower said header attachment, and means for raising and lowering the platform supporting means and the header attachment independent of the movement of said side beams, the said means including bell-crank levers pivoted on the side beams, rods connecting one end of the bell-crank levers with members of the platform supporting means, and an operating lever connected with the other ends of said bell crank levers.

5. In a harvesting machine, the combination of a tractor, a header attachment, side beams pivoted to said tractor, and pivotally connected at their forward ends with said attachment, means carried by said tractor for adjusting said side beams to raise or lower the said attachment, bell-crank levers pivoted on the side beams, an operating lever connected with the bell-crank levers, means connecting the bell-crank levers with the header attachment to independently adjust the latter, and means operated by the motive power of the tractor, for driving the parts of the header.

1,214,243. MAIL-MARKING MACHINE. HENRY WALKER, Wellington, New Zealand. Filed Jan. 7, 1915. Serial No. 1,031. (Cl. 101—82.)



1. In a mail marking machine, a mail-marking table, roller type marking mechanism at one end of said table on the right hand side of the letter path, a belt pulley at the other end of said table, a second belt pulley adjoining said roller type marking mechanism, a feed belt on said first and second belt pulleys, a tension roller for said belt midway the said first and second belt pulleys, a spring adjustable guide plate at an acute angle with said feed belt, a separator roller opposite said first belt pulley, a separator roller opposite said second belt pulley, and means for driving said belt pulleys and roller marking mechanism substantially as described.

2. In a mail marking machine, a mail marking table, roller type marking mechanism at one end of said table on the right hand side of the letter path, a belt pulley at the other end of said table, a second belt pulley adjoining said roller type marking mechanism, a feed belt on said first and second belt pulleys, a tension roller for said belt midway the said first and second belt pulleys, a feed roller opposite to said tension roller, a spring adjustable guide plate at an acute angle with said first belt pulley, and means for driving said belt pulleys and roller type marking mechanism substantially as described.

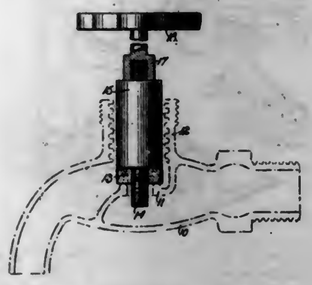
3. In a mail marking machine, a mail marking table, roller type marking mechanism at one end of said table on the right hand side of the letter path, a belt pulley at the other end of said table, a second belt pulley adjoining said roller type marking mechanism, a feed belt on said first and second belt pulleys, a tension roller for said feed belt midway the said first and second belt pulleys, a feed roller opposite to said tension roller, and means for driving said belt pulleys and roller type marking mechanism substantially as described.

4. In a mail marking machine, a mail marking table, a roller type marking mechanism at one end of said table on the right hand side of the letter path, a belt pulley at the other end of said table, a second belt pulley adjoining said roller type marking mechanism, a feed belt on said first and second belt pulleys, a tension roller for said feed belt midway the said first and second belt pulleys, a feed roller opposite to said tension roller, a spring adjustable guide plate at an acute angle with said feed belt, and means for driving said belt pulleys and roller type marking mechanism substantially as described.

5. In a mail marking machine, a mail marking table, roller type marking mechanism at one end of said table on the right hand side of the letter path, a belt pulley at the other end of said table, a second belt pulley adjoining said roller type marking mechanism, a feed belt on said first and second belt pulleys, a tension roller for said belt midway the said first and second belt pulleys, a feed roller opposite to said tension roller, a spring adjustable guide plate at an acute angle with said feed belt, a separator roller opposite said first belt pulleys, and means for driving said belt pulleys and roller type marking mechanism substantially as described.

[Claim 6 not printed in the Gazette.]

1,214,244. VALVE-SEAT GRINDER. ANDREW C. WALTZ, Port Arthur, Ontario, Canada. Filed July 19, 1916. Serial No. 110,055. (Cl. 51—12.)

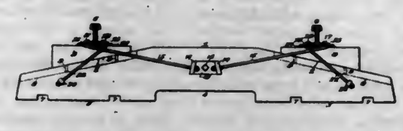


1. The herein described valve seat grinder comprising a round body of abrasive material, a centering device projecting downwardly from the center of the lower end thereof, a screw threaded projection at the upper end thereof, a turning device removably connected to the threaded end aforesaid, and a reinforcing cap for the body between the turning device and the abrasive material, said cap embracing the entire upper end of the abrasive body.

2. In a valve seat grinder, the combination of a cylindrical body of abrasive material, a center rod threaded from one end to the other and projecting axially through said body and projecting therefrom at the upper and the lower ends, a metal reinforcing jacket protecting the abrasive body around its curved surface, a reinforcing cap threaded upon the upper end of the center rod and embracing the end of the abrasive body and including also a flange projecting between the jacket and the upper end of the body, and a turning device connected to one threaded end of the rod.

1,214,245. RAILROAD-TIE. RUFUS WAPLES, Wayne, Pa. Filed Apr. 20, 1916. Serial No. 92,467. (Cl. 238—3.)

1. The combination in a tie adapted to be firmly embedded in the roadbed, of rails located above the tie; bearing blocks between the tie and the rails; means for holding the blocks to the rails; a centrally located anchor secured to the tie; and adjustable tension members extending from the anchor to the rails.



2. The combination of a tie having beveled ends and an anchor; a wedge mounted on each beveled surface of the tie; adjustable tension members extending from the anchor to the rails; and means for retaining the wedges in position.

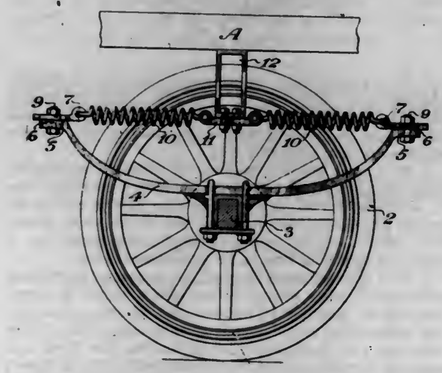
3. The combination of a tie having beveled ends; a wedge mounted on each beveled surface of the tie; a centrally located anchor on the tie; adjustable tension members extending from the anchor to the rails; and rail plates secured to each wedge and having flanges extending at each side of the base flange of the rail.

4. The combination of a tie having an inclined surface at each end; a wooden wedge mounted on each inclined surface; a flanged rail plate secured to the upper surface of each wedge so as to receive the base flange of the rails; a central anchor secured to the tie; tension members extending from the anchor to the outer flange of each rail; and holding down rods secured to the tie and engaging the inner flanges of the rails.

5. The combination of a tie having an inclined bearing surface at each end; a bearing block mounted on each inclined surface and arranged to support the rails; a tongue and groove connection between the block and the tie; and means for holding the rails onto the blocks.

[Claims 6 to 13 not printed in the Gazette]

1,214,246. VEHICLE-SPRING. JAMES F. WELCH, Cotati, Cal. Filed Mar. 27, 1916. Serial No. 86,916. (Cl. 267—43.)



1. In a vehicle spring, a rigid bracket member adapted to be centrally secured to the vehicle axle, a pair of coil-springs having their outer ends secured to the bracket ends, a centrally disposed plate connecting the inner ends of the springs, and means for securing the vehicle body to said plate.

2. In a vehicle spring, a bow-shaped rigid bracket member adapted to be centrally secured to the vehicle axle, an adjustable eye-plate secured one on each bracket end, a pair of coil-springs having their outer ends secured one to each eye-plate, a centrally disposed plate connecting the inner ends of the springs, and means for securing the vehicle body to said plate.

3. In a vehicle spring, a bracket member adapted to be centrally secured to the vehicle axle, an extension on each end of the bracket having a serrated surface, a slotted eye-plate on each bracket end extension having a serrated surface adapted to interlock with serrated bracket end extensions, means for securing the serrated members against lateral and endwise movement, a pair of coil-springs having their outer ends secured one to each eye-plate, a centrally disposed plate connecting the inner ends of the springs, and means for securing the vehicle body to said plate.

4. In a vehicle spring, a bow-shaped rigid bracket, means for securing said bracket to the vehicle axle in an upwardly bowed position, a pair of coiled springs having their outer ends secured to the bracket ends, and means for securing the inner ends of said springs to the vehicle body.

5. In a vehicle spring, a bow-shaped rigid bracket, means for securing said bracket to the vehicle axle in an upwardly bowed position, a pair of coiled springs having their outer ends secured to the bracket ends, a plate connecting the inner ends of said springs, a bracket depending from the vehicle frame, and means for securing said depending bracket to said plate.

[Claims 6 to 12 not printed in the Gazette.]

1,214,247. WINDOW-CLEANING DEVICE. FRED A. WESCOTT, Corning, N. Y., assignor to The Wescott Banker Signal Co. Inc. Filed Mar. 9, 1916. Serial No. 83,116. (Cl. 15—59.)



1. A window cleaning device comprising a sheet metal holder having jaw members forming a sponge receiving channel, the outer edges of said jaw members being closer together than the bases thereof so as to hold said sponge in place in said channel, a bar fitting in said channel and inclosed in the space between the bottom thereof and the top edges of said jaw members, said bar carrying prongs adapted to engage in a sponge and secure the same in said channel, and means for connecting a handle to the under side of said holder.

2. A window cleaning device comprising a holder for carrying a strip of rubber and sponge at opposite longitudinal edges thereof, said holder being made of a single sheet of metal having one longitudinal edge thereof provided with an outwardly facing groove to receive one edge of said strip of rubber, the portion intermediate the ends of said sheet of metal being twice doubled on itself to form the spaced sides of a channel to receive said sponge, a portion of said sheet of metal beyond said channel being bent beneath said channel and terminating adjacent said groove, whereby the part of the holder between said sponge channel and rubber groove is of a double thickness of metal.

3. A window cleaning device comprising a holder for carrying a strip of rubber and a sponge at longitudinal edges thereof, said holder being made of a single sheet of metal having one longitudinal edge thereof provided with a groove to receive one edge of said strip of rubber, the portion intermediate the ends of said sheet of metal being twice doubled on itself to form the spaced sides or jaws of a channel to receive a part of said sponge, the upper or free ends of said sides or jaws being closer together than the bases thereof so as to securely hold the sponge, a portion of said sheet of metal being bent beneath said channel against the under side thereof and terminating adjacent the rubber receiving groove, whereby the part of the holder between the sponge channel and the rubber groove is of a double thickness of metal to stiffen the holder.

1,214,248. TOP PLATE FOR SCREW-JACKS. SELTON M. WETZEL, Port Orchard, Wash. Filed Aug. 1, 1916. Serial No. 112,557. (Cl. 254—100.)

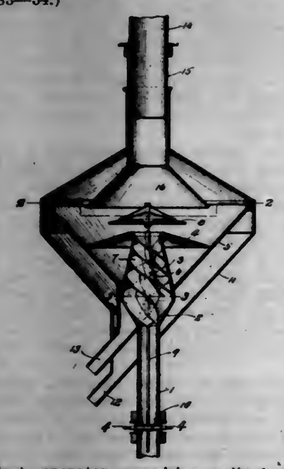


1. The combination with the top plate of a jack, said plate having a recess therein with a communicating opening, a head movable for positioning either within the recess or across the same, said head having a shank portion extending through the opening in the recess, and a stop on said shank to limit the movement of the head.

2. The combination with the top plate of a jack, said plate having a pair of intersecting recesses at different depths therein with an opening through the plate at the intersection of the recesses, a head movable for positioning in either recess, said head being of a corresponding height to the deepest recess, a shank portion on the head extending through the opening, and a stop on said shank to limit the movement of the head.

3. The combination with the top plate of a jack, said plate having a plurality of crossed recesses of different depths in its upper surface, vertical openings through the plate at the junction of said recesses; of bolts rotatably and slidably mounted through said openings, knife edge cross heads on said bolts adapted for disposition within either of the recesses for positioning above or below the surface of the plate, and locking nuts on the lower ends of said bolts to secure the same against vertical movement when the heads are positioned in the recesses.

1,214,249. DUST-SEPARATOR. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 3, 1916. Serial No. 75,967. (Cl. 183—54.)



1. A dust separator comprising walls forming an expansion chamber, an inlet pipe leading into the lower portion of said chamber, the inner end of said inlet pipe being provided with an enlarged portion and a contracted discharge, means in said enlarged portion for imparting a whirling motion to the dust laden air, a downwardly inclined wall spaced apart from the outer edge of said flange, and an adjustable cap piece or spreader plate mounted above the inner end of the inlet pipe for forcing the dust laden air downwardly and outwardly.

2. A dust separator comprising walls forming a casing, an inlet pipe leading into the lower end of said casing, means located within said inlet pipe for giving to the dust laden air a whirling motion, a conical wall 5 spaced apart from the walls forming said casing, a discharge spout leading from the apex of said conical wall, and an outwardly extending flange on the inner end of the inlet pipe whose outer edge extends nearly to said conical wall.

3. A dust separator comprising walls constituting an expansion chamber, the bottom walls of which chamber are conical so as to convey material into a down-spout, a down-spout leading from said conical walls, a conical wall located within the chamber and whose upper edge is spaced from the walls of said chamber, said last named conical wall also leading into a down-spout, a down-spout leading from said last mentioned conical wall, an inlet pipe leading into the expansion chamber and whose upper end terminates above said conical wall, means arranged in said inlet pipe for imparting whirling motion to the dust laden air, a flange on the upper end of said inlet pipe extending outwardly merely to said last mentioned conical wall, and a discharge pipe leading from the upper end of the expansion chamber.

1,214,250. PHOTOGRAPHIC SHUTTER. ANDREW WOLLENSAK, Rochester, N. Y., assignor to Wollensak Optical Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 9, 1916. Serial No. 83,180. (Cl. 95—63.)



1. In a photographic shutter, an exposure mechanism comprising a plurality of pivotally mounted shutter blades, a retaining ring for said blades, and an actuating ring having projections thereon mounted to turn on the periphery of said retaining ring.

2. In a photographic shutter, an exposure mechanism comprising a plurality of pivoted blades, a retaining ring for said blades, and an actuating ring having pintles extending therefrom and engaging the blades, said pintles also bearing on the periphery of the retaining ring to guide the actuating ring in its rotary movement.

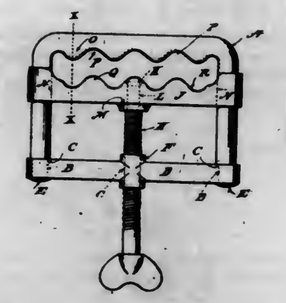
3. In a photographic shutter, an exposure mechanism comprising a plate having hollow bosses struck up therefrom, blades mounted to turn on said bosses, a retaining ring coöperating with the ends of said bosses, and a blade actuating ring having pintles extending therefrom and engaging the blades, said pintles bearing on the periphery of the retaining ring and guiding the actuating ring in its rotary movement.

4. In combination in a photographic shutter having a master member and an actuating lever therefor, a projection on the actuating lever engaging the master member at a point removed from the end thereof and traveling on the actuating movement of the actuating lever toward said end of the master lever to slip off the latter in order to free the same, one of said elements being laterally yieldable to permit the projection on the actuating lever to pass the master lever on the return movement.

5. In an automatic photographic shutter, the combination with a master member, of an actuating member therefor and two detents, one for bulb exposure, one for time exposure and both controlled by the actuating member, the detents being mounted on different turning axes, and a single spring acting on both detents to move them to detaining positions.

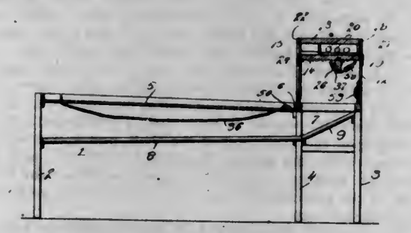
[Claims 6 to 24 not printed in the Gazette.]

1,214,251. TWITCH. EMIL WURMNEST, Morton, Ill. Filed July 13, 1915. Serial No. 39,671. (Cl. 119—96.)



A twitch comprising a U-shaped member having substantially parallel extensions and a primary jaw member connecting said extensions, a cross bar to which said parallel extensions are secured, a screw having a threaded engagement with said cross bar, and a secondary jaw member having a swiveled engagement with said screw and a slidable engagement with said parallel extensions, said primary and secondary jaws being substantially parallel to each other and having on their adjacent faces complementary rounded projections and depressions, the surface of each end of said secondary jaw adjacent said extensions terminating substantially at the crest of a rounded projection and being coved adjacent each of said extensions to conform with the contour of said extensions, whereby in the parallel movement of said jaws any object engaged between said jaws will not be pinched between said secondary jaw and said parallel extensions.

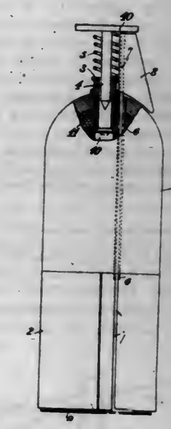
1,214,252. GAME APPARATUS. YUKINORI YAMAMOTO, St. Louis, Mo. Filed Sept. 7, 1916. Serial No. 118,815. (Cl. 46—61.)



1. In a game apparatus a table having an opening therein, an open-bottomed box-like structure mounted upon said table over said opening, said box like structure comprising end walls and front and rear walls, said front wall having an opening therein, a shelf between the end walls and above the opening in the front wall, a partition dividing said shelf, forming drawer openings, drawers within said openings and means for gaining access to the drawers through said rear wall, a plurality of hinged contact members depending within the opening within the front wall, a plurality of characters on the front face of the front wall arranged above the contact members, one for each contact member, a rocking bar hinged to the bottom of said shelf, a plurality of spring catches carried by said bar, one for each contact member, said resilient catches comprising a fixed portion and a movable portion pivotally connected together, said movable portion presenting an inclined face in the arc of the circle described by the free ends of said contact members when said contact members are swung inwardly and upwardly under the impact of a ball or the like whereby the ends of said contact members ride over said inclined face and are locked and means for simultaneously releasing said contact members.

2. In a game apparatus the combination of a table, a box like structure supported at one end of said table, said box like structure having a front wall with an opening formed therein, a plurality of contact members hingedly mounted at their upper ends within said openings and normally maintained by force of gravity in a depending position, the free ends of said contact members being adapted to swing upwardly in the arc of a circle when struck by a ball or the like, a rocking bar within said structure, resilient catches mounted on said rocking bar in the path of the free ends of said contact members, said catches being adapted to permit passage of the free ends of said contact members therenbove and to automatically lock said contact members in such elevated position and means adjacent the front end of said table for actuating said rocking bar to release said contact members.

1,214,253. SAFETY DEVICE FOR SHELLS. NIELS WALTERSEN AASEN, Copenhagen, Denmark. Filed Nov. 18, 1915. Serial No. 62,161. (Cl. 102—29.)

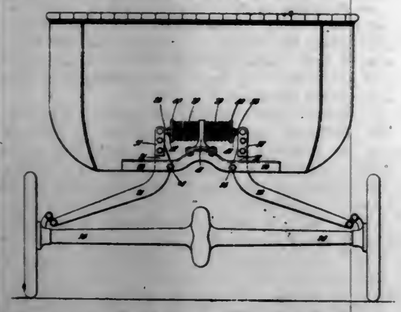


1. In a shell, a firing pin at the front part thereof, a plate attached to said firing pin, a safety pin having a projection at the front of said shell and adjacent the said plate, a safety piece loosely carried upon said safety pin and intermediate said plate and the front of the shell, and means for automatically retracting said safety pin when the said shell is propelled.

2. In a shell, a firing pin at the front part thereof, a plate attached to said firing pin, a safety pin having a projection at the front of said shell and adjacent the said plate, a safety piece loosely carried upon said safety pin and intermediate said plate and the front of the shell, said safety piece having an oblique edge adjacent said shell, and means for automatically retracting said safety pin when the said shell is propelled.

3. In a shell, a firing pin at the front part thereof, a plate on said firing pin, a movable safety piece intermediate the said plate and the front of said shell and preventing the forcing in of said firing pin, and means for automatically releasing said safety piece after the shell has been propelled, said means being operated by a pressure caused by the movement of said shell.

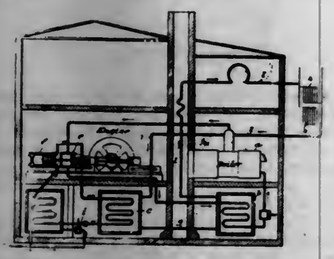
1,214,254. SPRINGING OF VEHICLES. ARTHUR JOHN ADAMS, Heywood, near Westbury, England. Filed Apr. 5, 1916. Serial No. 89,055. (Cl. 267—8.)



1. Improved means for springing a vehicle frame on an axle, comprising levers pivoted to said frame and to said axle, coiled springs adapted to bear against shorter arms of said levers, relatively longer arms of said levers being pivoted to links, said links being the usual shackles of the laminated springs which are replaced, and said coiled springs being placed horizontally above said frame and transversely of the vehicle.

2. Improved means for springing a vehicle frame on an axle, comprising levers pivoted to said frame and to said axle, coiled springs adapted to bear against shorter arms of said levers, relatively longer arms of said levers being pivoted to links, said links being the usual shackles of the laminated springs which are replaced, and said coiled springs being placed horizontally above said frame and transversely of the vehicle, a bracket secured to said frame and against which said springs bear, screw-threaded eye-bolts connected with said levers, and tension-controlling nuts on said screw-threaded eye-bolts, the longer arms of said levers being indirectly connected with the axle casing in respect of the rear axle and indirectly connected with the axle itself in respect of the front axle, substantially as set forth.

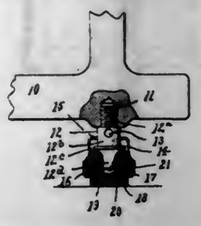
1,214,255. HEATING PLANT UTILIZING THE WASTE HEAT OF REFRIGERATING-MACHINES OF THE COMPRESSION OR ABSORPTION TYPE. EDMUND ALTENKIRCH and BERNHARD TENCKHOFF, Berlin, Germany. Filed Jan. 6, 1912. Serial No. 670,181. (Cl. 237—13.)



1. A plant for heating purposes, comprising a heat engine, a refrigerating machine driven thereby, condensers for said heat engine and said refrigerating machine, and means for placing the condensers of said heat engine and of said refrigerating machine in thermal connection with the region to be heated, said condensers being maintained above the temperature of the region to be heated, said condensers being thermally connected with each other.

2. A plant for heating purposes, comprising a heat engine having a condenser, a refrigerating machine, driven by said heat engine and having a condenser, a heat conveying medium, means for placing said medium in thermal connection with the condenser of said heat engine and the condenser of said refrigerating machine, to be heated by both, said condensers being maintained above the temperature of the region to be heated, said condensers being thermally connected with each other, means for transporting said medium to the region to be heated, and means for returning the cooled medium to the said condenser of the heat engine and the condenser of the refrigerating machine, there to be reheated.

1,214,256. SOUND AND SHOCK ABSORBING FOOT. NILS H. ANDERSON, Middletown, Conn., assignor of one-half to William A. Lorenz, Hartford, Conn. Filed June 10, 1914. Serial No. 844,225. (Cl. 155—33.)



1. A sound eliminating and shock absorbing support for a writing machine, consisting of a rubber cushion, an attachment stud with its lower end resting upon said cushion and its upper end adapted to be secured to the machine to be supported, a shell surrounding said cushion and loosely connected with said stud, and a cap secured to said shell and holding the rubber cushion therein.

2. A sound eliminating and shock absorbing support for a writing machine consisting of a cushioning pad, an attachment stud with one end resting upon said pad and the other end adapted to be secured to the machine to be supported, a shell surrounding said pad and loosely connected with said stud, and a cap secured to said shell and holding the pad therein, said cap having an opening in its lower end through which the lower end of the pad projects.

3. A sound eliminating and shock absorbing support for a writing machine, consisting of a rubber cushion, having a pocket in its upper face, an attachment stud with its lower end loosely fitting the pocket in the cushion, and its upper end adapted to be secured to the machine to be supported, a shell surrounding said cushion and loosely fitted upon the supporting stud, and a cap secured to the shell and holding the rubber cushion therein.

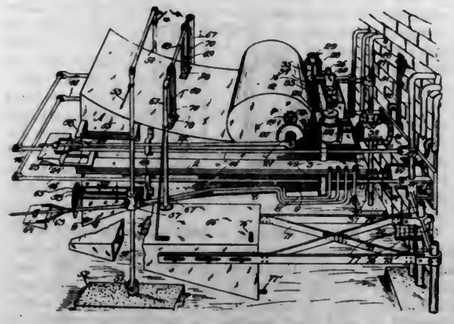
4. A sound eliminating and shock absorbing support for a writing machine consisting of an attachment stud having a threaded upper end and a tapered lower end, a shell movably secured to said stud, a perforated cap secured upon the lower end of the shell, and a cushion pad fitting within and held in the shell by said cap, said pad having a tapering recess in its upper end fitting the lower end of the attachment stud, and its lower end projecting through said cap.

5. A sound eliminating and shock absorbing support for a writing machine consisting of an attachment stud, having a threaded upper end, a reduced lower end, and an annular flange intermediate the ends, a shell loosely fitted upon said stud above the flange, a perforated cap secured upon the lower end of the shell, and a cushion pad held within the shell by said cap, and having its upper end supporting the stud, and its lower end projecting through the cap.

1,214,257. WAVE-FORCE-UTILIZING DEVICE. EMMER B. ARNOLD, Los Angeles, Cal. Filed Apr. 11, 1912. Serial No. 690,193. (Cl. 253—8.)

1. A device for utilizing the force of waves, comprising an inclosure having a water cushioning chamber, and a plurality of outlets beyond said chamber.

2. A device for utilizing the force of waves, comprising an inclosure having a water cushioning chamber, a valve in said chamber, and means to hold said valve closed in low tides.



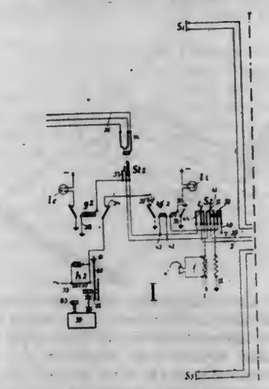
3. A device for utilizing the force of waves, comprising an inclosure, and means to hold said inclosure at a determined level.

4. A device for utilizing the force of waves, comprising an inclosure, and automatic means for holding said inclosure at a determined level.

5. A device for utilizing the force of waves, comprising an inclosure and floats to hold said inclosure at a determined level.

[Claims 6 to 15 not printed in the Gazette.]

1,214,258. TELEPHONE SYSTEM FOR TOLL TRAFFIC. CAROLUS ROBERT HENDRIK ARNTZENIUS, The Hague, Netherlands. Filed Sept. 19, 1913. Serial No. 790,674. (Cl. 179—50.)



1. In a telephone system for handling toll traffic in one direction; a plurality of stations and exchanges; means for connecting a calling station and a toll exchange; and means whereby the operator at said toll exchange can connect the toll line directly with an idle order wire between a distant toll exchange and a switching operator of a local exchange associated with said distant toll exchange.

2. In a telephone system for handling toll traffic in one direction; a plurality of stations and exchanges; means for connecting a calling station and a toll exchange; a switching key at said toll exchange; a relay at a distant toll exchange; means whereby said switching key operates said relay; a distant local exchange; an order wire between said local exchange and the distant toll exchange; and means whereby said relay connects the operator at the calling toll exchange to said order wire and thus to the switching operator of said distant local or called exchange.

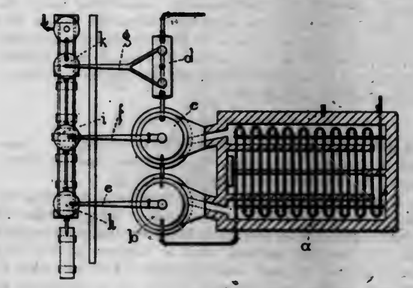
3. In a telephone system for handling toll traffic in one direction; a plurality of stations and exchanges; means for connecting a calling station and a toll exchange; a switching key at said toll exchange; a relay at a distant toll exchange; a distant local exchange; an order wire between said local exchange and the distant toll exchange; a buzzer at the distant toll exchange and means whereby the switching key operates the relay to connect the buzzer across the toll operator's toll lines when said order wire is engaged.

4. In a telephone system for handling toll traffic in one direction; a plurality of stations and exchanges; means for connecting a calling station and a toll exchange; a switching key at said toll exchange; a relay at a distant toll exchange; means whereby said key operates said relay; a second switching relay and a battery at the distant toll exchange; means whereby the first relay operated from the calling toll exchange completes a circuit from the battery through said second relay to earth; a distant local exchange, an order wire between said local exchange and the distant toll exchange; a plurality of corresponding order wire keys, one for each operator at the distant toll exchange; means whereby any one of said order wire keys, when engaging the order wire in question, completes a circuit from said battery to earth, means whereby said second switching relay on the completing of its circuit connects the calling toll operator directly to the order wire and thence to the distant local exchange should a circuit fram said battery to earth not be closed through one of said order wire keys; a buzzer circuit at the distant toll exchange and means whereby said buzzer circuit is connected across the calling toll operator's lines should the circuit from said battery to earth be closed through one of said order wire keys.

5. In a telephone system for handling toll traffic in one direction; a plurality of stations and exchanges; means for connecting a calling station through a local exchange to a toll exchange; means whereby the operator at said toll exchange can connect a toll line directly to an idle order wire at a distant toll exchange and thence to the switching operator of the called local exchange and means whereby a buzzer circuit warns any operator at the distant toll exchange who attempts to engage the order wire already engaged by the calling toll exchange.

[Claims 6 to 9 not printed in the Gazette.]

1,214,259. CONTINUOUS DISTILLATION OF TAR. JOHANN ARTMANN, Essen-on-the-Ruhr, Germany. Filed Oct. 14, 1909. Serial No. 522,540. (Cl. 196—25.)



1. A method of continuously distilling tar, which consists in preliminarily heating the tar above the distillation temperature of the medium weight and naphthalene oils without permitting their distillation, then continuously distilling off said medium weight and naphthalene oils, continuously conducting away the residue of said tar from said region of distillation, then continuously distilling off the heavy oils in said residue, and continuously conducting away from the region of said second distillation the second residue of said tar remaining after said

second distillation, and continuously removing from said second residue the heavier volatile constituents thereof, and continuously conducting away the pitch thus remaining, the said heat thus preliminarily imparted to the tar before the distillation thereof being sufficient to enable the said continuous distillation, substantially as described.

2. A method of continuously distilling tar, which consists in preliminarily heating the tar to 250° C., then continuously distilling off from said tar the medium weight and naphthalene oils contained therein, continuously conducting away the residue of said tar from said region of distillation, then continuously distilling off the heavy oils in said residue, and continuously conducting away from the region of said second distillation the second residue of said tar remaining after said second distillation, and continuously removing from said second residue the heavier volatile constituents thereof, and continuously conducting away the pitch thus remaining, said tar being heated only before the distillation of the said medium and naphthalene oils, the said heat preliminarily imparted to the tar being sufficient to enable the said continuous distillation, substantially as described.

3. A method of continuously distilling tar, which consists in first dehydrating the tar, preliminarily heating the tar above the distillation temperature of the medium weight and naphthalene oils without permitting the distillation thereof, then continuously distilling off said medium weight and naphthalene oils, continuously conducting away the residue of said tar from said region of distillation, then continuously distilling off the heavy oils in said residue, and continuously conducting away from the region of said second distillation the second residue of said tar remaining after said second distillation, and continuously removing from said second residue the heavier volatile constituents thereof, and continuously conducting away the pitch thus remaining, the said heat imparted to the said tar before the commencement of the first distillation, plus the heat imparted to the residues thereof in said regions of distillation being sufficient for all the distillations thereof, substantially as described.

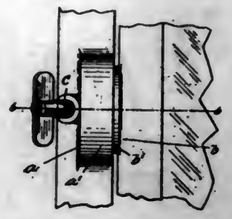
4. A method of continuously distilling tar, which consists in first dehydrating the tar, preliminarily heating the tar to 250° C., then continuously distilling off the medium weight and naphthalene oils without permitting the distillation thereof, continuously conducting away the residue of said tar from said region of distillation, then continuously distilling off the heavy oils in said residue, and continuously conducting away from the region of said second distillation the second residue of said tar remaining after said second distillation, and continuously removing from said second residue the heavier volatile constituents thereof, and continuously conducting away the pitch thus remaining, the said heat imparted to the said tar before the commencement of the first distillation, plus the heat imparted to the residue thereof in said regions of distillation being sufficient for all the distillations thereof, substantially as described.

1,214,260. LOCK-JOINT FOR WIND-SHIELDS. SAMUEL R. BAILEY, Amesbury, Mass. Filed Apr. 11, 1916. Serial No. 90,466. (Cl. 21—148.)

1. A joint comprising a bearing-member, a trunnion exteriorly journaled therein, said trunnion being tubular at one end to provide an interiorly disposed clamping surface within its bearing surface, and a locking device held against rotation by said bearing-member and arranged to be forced against said clamping face, in a direction to press said trunnion laterally in its bearing.

2. A joint comprising a bearing-member, a trunnion exteriorly journaled therein, said trunnion being tubular at one end to provide an interiorly disposed clamping surface within its bearing surface, and a clamping screw threaded in said bearing-member and arranged to cause frictional engagement between its end and said clamping face and to press the trunnion laterally in its bearing.

3. A joint comprising a bearing member, a trunnion journaled therein having an internal face disposed concentrically with its bearing face, and a screw threaded in said bearing member transversely of the axis of the trunnion, and in position to be frictionally engaged with said internal face.

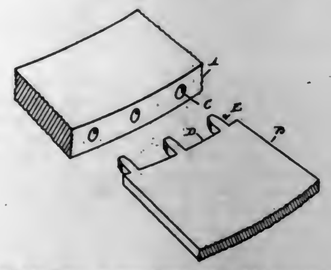


4. A lock joint comprising a fixed and a movable member, a trunnion on said movable member journaled in said fixed member and having a tubular end portion constructed to provide a circular face on its inner periphery concentric with the axis thereof, and a locking screw threaded in said fixed member in position to extend obliquely to said axis into said tubular end-portion, to engage said face.

5. A lock joint comprising a fixed and a movable member, said fixed member having a bearing cup therein, a trunnion on said movable member having a tubular end-portion extending into, and mounted for rotation in said cup, and a locking screw mounted in said fixed member and extending obliquely through the bottom of said cup in position to engage the inner periphery of the tubular end-portion of the trunnion.

[Claims 6 to 10 not printed in the Gazette.]

1,214,261. FURNITURE-JOINT. GUSTAV C. BALBACH, Detroit, Mich., assignor to Murphy Chair Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 17, 1914. Serial No. 825,388. (Cl. 20—92.)

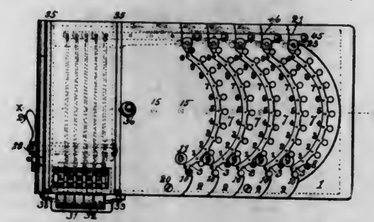


A furniture joint, comprising two transversely-extending members of unequal thickness, and a series of tenons of substantially square cross-section projecting from one end of the thinner member, and having the full thickness of said member, an edge of the other member being formed with a series of round bores registering with said tenons to receive the same.

1,214,262. COMPUTING DEVICE. CAESAR R. BANNIHR, New York, N. Y. Filed Sept. 12, 1914. Serial No. 861,401. (Cl. 235—80.)

1. An adding machine comprising a base with a series of dial disks and separator plates thereon, recesses for the dial disks in said separator plates, a center shaft in said recesses, a segmental margin at one side of the separator plates having index figures thereon to correspond with figures on the dial disks, dial disks having figures on their surface near the edge and knob projections corresponding with the figures at the edge, and an annular slotted projection on one side with the slots corresponding to the figures and knobs on said dial disk, and on the other side pins for a given number of slots in the annular

projection, the separator plates having recesses on both sides with a center shaft acting as a pivot for the dial disks on each side, the centers and recesses being in offset relation to each other on opposite sides of the separator plates, the dial disks to turn on said shaft in said recesses on one side of a separator plate to act on the annular slotted projection by means of the pins at the conjunction of the annular recesses, a lever pivotally arranged on each separator plate adjacent the periphery of the dial disks having a roll at one end engaging with the knob projection on the dial disks, and a pitman on the other engaging with a ratchet operatively connected with a figure type wheel to indicate the sum added at each operation, the separator plates having a stop at each end of the segmental margin, and the knobs on the dial disks being exposed between the stops, an aperture in the separator plates to show the totals all as herein shown and described.



2. In a computing or counting device the combination with a base of a series of figure dial disks, and corresponding separator plates arranged between, a dial disk with an annular slotted projection, pins on the opposite side of said disks, the annular slotted projection extending into a recess on one side of a separator plate and the pins standing above the dial disk and reaching into a recess on the reverse side of the separator plate, and the means for operating the dial disks all as herein shown and described.

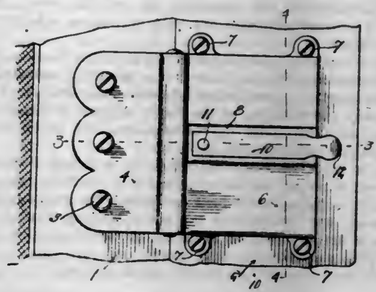
3. In a computing or counting machine the combination of a series of figure dial disks provided with a central bearing hole and an annular slotted projection on one side, and pins on the other, and corresponding separator plates arranged to support the dial disks, each separator plate provided with a recess on each side in an offset relation to each other, one recess for the dial disks to fit in provided with an annular recess for the annular slotted projection and a pivot central with the recess on which the dial disks may turn, and on the other side an annular recess wherein the pins on a dial disk may travel to engage with the annular slotted projection on another dial disk at the conjunction of the annular recesses, all as herein shown and described.

4. In a computing device in combination a base, a series of separate plates thereon, dial disks having finger projections on the periphery, said disks supported between the plates, a lever pivoted on each plate adjacent the periphery of the dial disks having a roll at one end engaging between the projections on the dial disks, a spring acting on the lever to position the dial disks by means of the roll between the projections, a series of numeral wheels and a pitman connected to the other end of each lever and operatively connected with each numeral wheel as herein shown and described.

5. An adding or computing device provided with figure dial disks or wheels in relation to each other that one may move another at required intervals, said dial disks provided with an annular projection having a diameter sufficient to encompass the centers of two dial disks located on opposite sides of a separator plate, said separator plate and dial disks being arranged in offset relation to each other that the pins on one side of a disk may engage with the slots in the annular projection on another disk at the conjunction of the circles of the pins and the annular projection, the pins being set at a radius of a circle of a required diameter encompassing the center shafts in the separator plates on which the dial disks turn, the slots in the annular projection being so located that a pin on a dial disk may engage with one side of a slot in the annular slotted projection and pass through the slot freely on the opposite side in turning about the centers in the separator plate, all as herein shown and described.

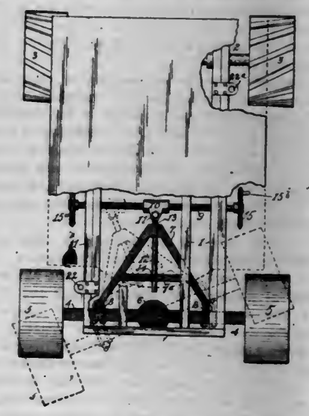
[Claim 6 not printed in the Gazette.]

1,214,263. DOOR-HINGE. DALE L. BARBER, Harlan, Iowa. Filed Sept. 7, 1916. Serial No. 118,904. (Cl. 16—106.)



In a hinge, the combination with a hinge plate, of a second hinge plate associated therewith, a housing into which said second plate snugly fits, said housing having a hollow rib and said second hinge plate having a similar rib slidable in the first mentioned rib, a spring secured to the outer face of the rib on the housing and having a catch extending through an opening in said rib and normally extending into a recess in the rib on the second mentioned hinge plate.

1,214,264. STEERING-GEAR FOR REVOLVING STEAM-SHOVELS. HARRY J. BARNHART, Marion, Ohio, assignor to The Osgood Company, Marion, Ohio. Filed Sept. 4, 1915. Serial No. 49,007. (Cl. 21—114.)



1. In a device of the described character, a truck, a platform mounted to turn either forwardly or backwardly on the truck, a steering axle for the truck, a steering gear mounted on the truck for the control of the axle, an engine on the platform, said gear and said engine being relatively positioned for operable connection in either of said positions of the platform, and detachable means for connecting said engine and said gear in either of said positions, combined with means for locking said platform to said truck in either of said positions.

2. In a device of the described character, a truck, a horizontally revoluble body on the truck, a steering axle for the truck, a shaft journaled across the truck and projecting beyond the sides of the body, steering connections between the shaft and the axle, an engine on the body, detachable means for operatively connecting said engine with a projecting end of said shaft, and means for locking the body against turning while said engine is thus connected.

3. A truck, a platform horizontally revoluble upon the truck, means for locking the platform against such rotation, steering wheels for the truck, and means supported by the platform for operating the steering wheels when the truck and platform are held stationary relatively to each other.

4. A truck, a revolving platform mounted thereon, a pivoted steering axle for the truck, a shaft journaled on the truck frame, a connection between the shaft and axle whereby the rotation of the shaft controls the axle, combined with manually operated means and engine driven means for rotating said shaft.

5. A truck, a revolving platform mounted thereon, a pivoted steering axle for the truck, a shaft journaled on the truck frame, a connection between the shaft and axle whereby the rotation of the shaft controls the steering axle, a driving gear at each end of the shaft and means for actuating either of said gears.

[Claims 6 to 11 not printed in the Gazette.]

1,214,265. DETECTOR FOR WIRELESS SYSTEMS. MILTON BEREL and LOUIS FUNKE, New York, N. Y. Filed Mar. 11, 1916. Serial No. 83,528. (Cl. 250—31.)



1. A detector comprising a container, an active crystal, a conductor contacting therewith, means for hermetically sealing the crystal and conductor in the container, and terminals at the outside of the container for connection with a wireless circuit.

2. A wireless detector comprising a chambered container, an active crystal in the chamber, a conductor bearing on the crystal and disposed in the chamber, separate masses of metallic material in which the crystal and conductor are respectively anchored, and a composition for hermetically sealing the conductor and crystal, said composition being neutral in cooling and solidifying, whereby the nature of the contact between the conductor and mineral is unaffected.

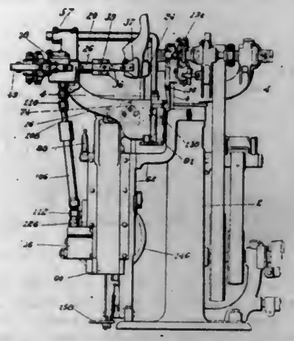
3. A wireless detector comprising a chambered container, an active crystal in the chamber, a conductor bearing on the crystal and disposed in the chamber, separate masses of metallic material in which the crystal and conductor are respectively anchored, a composition for hermetically sealing the conductor and crystal, said composition being neutral in cooling and solidifying, whereby the nature of the contact between the conductor and crystal is unaffected, a housing for the said container, and cushion material surrounding the container and holding the same separated from the walls of the casing.

4. A wireless detector comprising a casing hermetically sealed, binding posts on the casing, a container disposed in the casing, cushion material surrounding the container and separating the same from the walls of the casing, terminals on the container and connected with the respective binding posts, and detector means hermetically sealed in the container.

5. A detector comprising a hermetically sealed casing, binding posts having portions extending through the walls of the casing, moisture-tight joints at the points where the binding posts extend through the casing, a container disposed within the casing, terminals on the container connected with the respective binding posts, a crystal electrically connected with one of the terminals, a conductor electrically connected with the other terminal and bearing on the crystal, and a material covering the crystal and conductor, whereby the contact between the two is maintained permanent.

[Claim 6 not printed in the Gazette.]

1,214,266. MACHINE FOR USE IN FINISHING SHOES. FRANK W. BLANCHARD, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 28, 1914. Serial No. 821,660. (Cl. 12—87.)



1. In a heel trimming machine, the combination with a heel trimming cutter and a slidably mounted rand crease guide therefor, of a work support, mechanism for relatively moving said support and cutter to present the heel of a shoe mounted in said support to the action of said cutter to cause the heel to be trimmed, and mechanism arranged to operate in time relation to said relative movement of the support and the cutter for relatively moving said guide and shoe preparatory to the trimming operation to cause said guide to be positioned automatically in the rand crease of the shoe notwithstanding variations in the height of the heels of the shoes being trimmed.

2. In a heel trimming machine, the combination with a heel trimming cutter and a rand crease guide therefor confined against movement transverse to the axis of the cutter, of a work support, mechanism for relatively moving said support and cutter to present the heel of a shoe mounted in said support to the action of said cutter to cause the heel to be trimmed, and mechanism arranged for operation during said relative movement of the support and the cutter for relatively moving said guide and shoe in a direction substantially parallel to the axis of said cutter to cause said guide to be positioned in the rand crease of the shoe preparatory to the trimming operation.

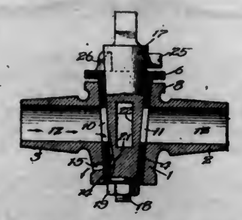
3. In a heel trimming machine, the combination with a heel trimming cutter and a rand crease guide therefor, of a work support, mechanism for relatively moving said support and cutter to cause the cutter to trim the heel of a shoe mounted in said support, and mechanism controlled by the work support for moving said guide relatively to the shoe to cause it to be positioned in the rand crease of the shoe preparatory to the trimming operation.

4. In a heel trimming machine, the combination with a rotary cutter, a shaft supporting said cutter, stationary bearings in which said shaft is mounted, and a rand crease guide for said cutter, of a work support, mechanism for moving said support to present the heel of a shoe mounted therein to said cutter for the trimming operation, and controlling mechanism for said rand crease guide arranged to be operated by said movement of the work support to cause the guide to enter the rand crease of a shoe before the trimming operation is begun.

5. In a heel trimming machine, the combination with a heel trimming cutter and a shoe support, of power operated mechanism for relatively moving said support and cutter to cause the heel to be presented to said cutter and to be trimmed by said cutter, and controlling means for enabling the workman to interrupt the engagement of the heel and cutter at any stage of the trimming operation.

[Claims 6 to 28 not printed in the Gazette.]

1,214,267. VALVE. MANDEL BLOCK, Chicago, Ill. Filed May 17, 1916. Serial No. 98,070. (Cl. 137—7.)



1. In combination, a valve casing having a main passage extending through it for the passage of fluid, and having a chamber extending transversely to said passage, and having a drain port communicating with said chamber and non-communicating with said main passage, a sleeve fitting into the chamber in the casing and provided with a drain port, the drain port in the sleeve registering with the drain port in the casing when the sleeve occupies one position, and being out of register when the parts are assembled with the sleeve rotated to another position, the sleeve having main ports in line with the main passage in the casing, and a valve rotatably fitting into said sleeve and having a passage through it which may be brought into or out of register with the main ports of the sleeve by rotating the valve, said valve having a drain passage adapted, when the valve is in closed position, to conduct the fluid to the drain port in the sleeve from one of the main ports of the sleeve.

2. In a water service valve, a casing having a main passage extending through it and having a chamber extending transversely to the main passage and having a drain port in the side out of communication with the main passage, a sleeve fitting into the chamber in the casing, and having a drain port in the side registering with the drain port in the casing, when the sleeve is in one position, said drain ports being out of register when the sleeve is assembled in a different position 180 degrees from the first, the sleeve having main ports in the side, registering with the main passage in the valve casing for each of the two settings of the sleeve, and a valve fitting into the sleeve and having a main passage adapted to be brought into and out of register with the main ports of the sleeve by rotating the valve 90 degrees, the valve having a drain passage in the side for conducting the water from one of the main passages in the sleeve to the drain passage in the casing, when the valve is in closed position.

3. In a water service valve, a casing having a main passage extending through it and having a chamber extending transversely to the main passage and having a drain port in the side communicating with the chamber and non-communicating with the main passage, a sleeve seating in said chamber and having main ports registering with the main passage in the casing, the sleeve having a drain port in the side in register with the drain port of the casing when the sleeve is set in one position and out of register when the sleeve is set in a different position, a valve seating in said sleeve and having a main passage extending through it coming into and out of register with the main port in the sleeve when the valve is rotated, the valve having a drain passage in the side for conducting the water from one of the main ports in the sleeve to the drain port in the sleeve when the valve is closed, said sleeve being open at the bottom, and fastening means at the bottom of the valve engaging the bottom of the sleeve, the major dimension of the fastening means being less than the diameter of the sleeve, whereby the sleeve and the valve may be simultaneously lifted out of the casing without disassembling them.

4. In a water service valve, a casing having a main passage extending through it and having a chamber extending transversely to the main passage and having a drain port in the side communicating with the chamber and non-communicating with the main passage, a taper sleeve seating in said chamber and having main ports registering with the main passage in the casing, the sleeve having a drain port in the side in register with the drain port of the casing when the sleeve is set in one position, and out of register when the sleeve is reversed to a position 180 degrees from the first, a taper valve seating in said sleeve and having a main passage extending through it coming into and out of register with the main port in the sleeve when the valve is rotated, the valve having a drain passage in the side for conducting the water from one of the main ports in the sleeve to the drain port in the sleeve when the valve is closed, said chamber and said sleeve both being open at the bottom, and a fastening device for holding the valve seated, said fastening device having an external diameter less than the internal diameter of the chamber, whereby the sleeve and the valve may be lifted out without being taken apart.

1,214,268. AIR-BAG FOR MENDING PNEUMATIC TIRES. JOHN W. BLODGETT, Chicago, Ill. Filed Dec. 18, 1913. Serial No. 807,419. (Cl. 18—45.)



1. An air bag for inflation in auto tires during certain repairing operations, comprising in combination a central rigid member, means at each end thereof for securing an elastic rubber sack thereto, an elastic rubber sack having its ends permanently secured to said means by air tight joints, a valve associated with one end thereof through which compressed air may be supplied to said sack, a fabric tube surrounding said rubber sack, and capable of expanding with the inflation of the rubber sack, and means independent of the sack-securing means for securing the fabric tube at its ends to the outside of the rubber sack independently of the connections of the latter to the central member so that the fabric tube may be removed and replaced without releasing the air-tight joints.

2. An air bag for the purpose described, comprising in combination a central rigid member, an elastic rubber air tight sack having its ends permanently secured to said member, a valve associated with one end thereof through which compressed air may be supplied to said sack, and a seamless strong elastic fabric casing surrounding said rubber sack and removably secured thereto at its ends independently of the means securing the sack to the central member, whereby said rubber sack and seamless tube are capable of expanding upon inflation of the former to accommodate the device to different sized tires and permitting the removal and replacement of the casing without affecting the air tightness of the sack.

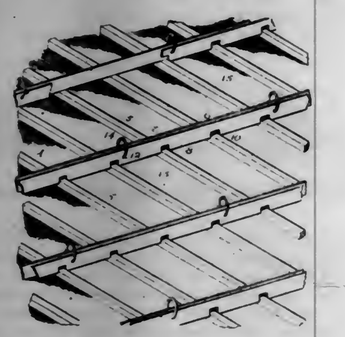
3. An air bag for the purpose described, comprising in combination an air tight elastic rubber sack, a valve associated with the sack for supplying air thereto for inflation, a central rigid member located within said sack, preventing its longitudinal expansion, and a strong elastic knit fabric casing surrounding the outer surface of said rubber sack and detachably fastened thereto at

both ends of said rubber sack, so that it can be removed without destroying the air tightness of the sack.

4. In an air bag for mending pneumatic tires, the combination with an inelastic central member, of a highly elastic air-tight tube surrounding the same and secured to the ends thereof, a strong knitted fabric tube of relatively limited elasticity having drawstrings in the ends by which it is removably secured around the air-tight tube to prevent its possible rupture by over-inflation, and a valve for inflating the air-tight tube.

5. In an air bag for mending pneumatic tubes, the combination with a central inelastic member having two outwardly facing shoulders and threaded extensions projecting centrally outward from said shoulders, one of said extensions having a passage therethrough and associated with an air valve, of clamping nuts threaded on said extensions, a tubular integral highly-elastic air-tight rubber sack having its ends clamped directly between said shoulders and nuts, a tubular casing made of strong elastic fabric surrounding the rubber sack to prevent the possible rupture thereof by over-inflation, and means for removably securing the ends of the casing to the ends of the sack so that the casing can be removed and replaced without affecting the air-tightness of the sack.

1,214,269. ATTACHMENT FOR DRY ORE-SEPARATORS. WILLIAM W. BONSON, Dubuque, Iowa. Filed May 5, 1911, Serial No. 625,344. Renewed July 8, 1916. Serial No. 108,246. (Cl. 83—54.)



1. In a dry ore separator, a divided table having a receiving side and a delivery side, a mesh upon the table, ore riffles on the mesh, adjustable gangue deflectors set upon the ore riffles at an angle thereto on the receiving side of the table, and means for adjusting the gangue deflectors relative to the mesh on the table.

2. In a dry ore separator, a table, a mesh on the table, ore riffles set on the mesh, gangue deflectors set on the ore riffles and each consisting of a bar secured upon the ore riffles and a plate, said plate provided with recesses in one edge, and means for adjusting said plate relative to the surface of the table.

3. In a dry ore separator, a table, ore riffles upon the table, gangue deflectors each formed of a bar and a plate set parallel to each other upon the ore riffles, and said plate provided with recesses in which the ore riffles engage, and means including a clasp engaging the bar, and plate for adjusting the gangue deflectors with the ore riffles in said recesses.

4. In a dry ore separator, a table, a mesh upon the table, ore riffles on the mesh set a short distance apart and providing runways between the riffles, gangue deflectors provided with recesses therein and set upon the ore riffles and across said runways and adapted to be engaged by the ore riffles in said recesses, and means engaging the gangue deflectors for adjusting said deflectors relative to the surface of the table to control the travel of the mass in the runways.

1,214,270. BINDER. HERBERT STANLEY BRENAN, St. John, New Brunswick, Canada. Filed Jan. 26, 1916. Serial No. 74,313. (Cl. 129—19.)



1. In a binder for sheet music, a pair of backs connected with a flexible member, a plurality of stubs connected to said flexible member, each of said stubs comprising a pair of upstanding sides, a pair of flaps pivotally arranged at the upper end of said sides, and a removable clamping member for connecting a sheet to each of said flaps.

2. In a binder for sheet music, a back including a flexible member, a plurality of stubs connected with said flexible member, each of said stubs comprising a pair of upstanding sides, a pair of flaps hinged to the upper edge of said sides, one of said flaps having a slot extending from near one end to near the opposite end, said slots being adapted to permit a sheet of music to be forced therethrough, and means for clamping said sheet of music to the opposite flap.

3. A binder for sheet music comprising a back formed with a flexible section, a plurality of stubs arranged on said flexible section, each of said stubs comprising a pair of upstanding members and flaps hinged to the upper edge of said upstanding members, one of said flaps having a slot therein extending from near one end to near the opposite end so that one of the leaves of a double sheet of music may be passed therethrough, means for clamping one of said leaves to the opposite flap, and means for clamping a separate sheet to the flap having the slot.

4. A binder for sheet music comprising a back formed with a flexible section, a plurality of stubs, means engaging the stubs and said flexible section for connecting the stubs flexibly with the flexible section, each of said stubs comprising a pair of upstanding walls and a pair of flaps hinged to said upstanding walls, one of said flaps having an aperture extending from near one end to near the opposite end.

5. A binder for sheet music, comprising a back having a flexible section, a plurality of stubs connected with said flexible section, each of said stubs being formed with a pair of flaps flexibly mounted in position, one of said flaps having a slot extending from near one end to near the opposite end, each of said flaps being formed with cut-out portions, and clamping means arranged in said cut-out portions for clamping sheet music to said flaps.

[Claim 6 not printed in the Gazette.]

1,214,271. PROCESS OF PLATING. LUCIAN W. BUGBEE, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Dec. 4, 1916. Serial No. 134,870. (Cl. 204—11.)

1. The process of plating aluminum, consisting in submerging the aluminum article in a plating bath and simultaneously subjecting the article to a plating action and to an abrasive blast, substantially as described.

2. The process of electro-plating, consisting in submerging the article to be plated in a plating bath, coupling the article with a source of electrical energy and directing an abrasive spray through the bath onto the article during the plating action.

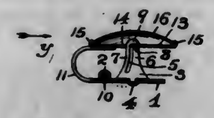
3. The process of plating an article, consisting in subjecting the article to a plating action and directing an abrasive spray against the article during a portion at least of the plating.

4. The process of plating an article, consisting in submerging the article in a plating bath, subjecting the article to a plating action, abrading the article during the early stages of the plating action, and stopping the abrasion before the plating action is completed.

5. The process of plating an article, consisting in subjecting the article to a plating action, and variably abrading the article, the initial rate of abrasion being greater than and the final rate of abrasion being considerably less than the rate of plating, substantially as and for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

1,214,272. BUTTON OR CLASP. FRANK P. BURNETT and VANDERHOFF M. VAN BRUNT, Newark, N. J., assignors of one-third to Charles J. Degavre, Newark, N. J. Filed Mar. 17, 1915. Serial No. 14,934. (Cl. 24—102.)



1. As a new article of manufacture a device of the character specified comprising a pair of pivotally connected members adapted to be separated in a hinge-like manner, a post connected with one of said main members, said post being formed with an angularly shaped slot so as to provide the post with a bifurcated end-portion, one of the members of said bifurcated end-portion providing a seat, and a retaining catch connected with the other member of said bifurcated portion, and a retaining means connected with the other member adapted to be brought into separable retaining engagement with the seat and catch of the bifurcated portion of said post.

2. As a new article of manufacture a device of the character specified comprising a pair of pivotally connected main members adapted to be separated in a hinge-like manner, a post connected with one of said main members, said post being formed with an angularly shaped slot so as to provide the post with a bifurcated end-portion, one of the members of said bifurcated end-portion providing a seat, and a retaining catch connected with the other member of said bifurcated portion, and the other main member being provided with a slot for arranging said member over the bifurcated end-portion of said post and bringing said member into separable retaining engagement with the seat and catch of the bifurcated portion of said post.

3. As a new article of manufacture a device of the character specified comprising a back-plate, a yoke-like element connected with said back-plate in a hinge-like manner, a face-plate connected with said yoke-like element, a post connected with said back-plate, said post being formed with an angularly shaped slot so as to provide the post with a bifurcated end-portion, one of the members of said bifurcated end-portion providing a seat, and a retaining catch connected with the other member of said bifurcated portion, and the said face-plate being provided with a slot for arranging said face-plate over the bifurcated end-portion of said post and for bringing said face-plate into separable retaining engagement with the seat and catch of the bifurcated portion of said post.

1,214,273. TIRE-PROTECTOR. JULIUS R. CABANNE, Seattle, Wash. Filed Apr. 17, 1916. Serial No. 91,811. (Cl. 152—16.)

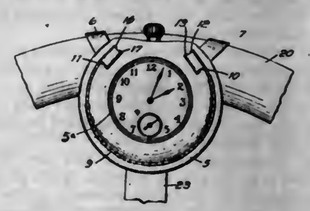
1. A tire protector of the class described, which embodies a plurality of saddles adapted each to be seated in a crosswise position on the tread portion of a pneumatic tire and each having an integral fin, all of which fins have a plurality of correspondingly disposed holes extending therethrough; a plurality of chains disposed parallel with each other each to extend through correspondingly disposed ones of said holes in the fins of all of said saddles, said saddles being equi-distantly spaced from each other, a plurality of helices of wire, each helix of which is disposed to surround and inclose each chain between each of adjacent ones of said saddles; whereby the saddles are held in equi-distantly spaced position, and connecting means for the ends of the chains.



2. A tire protector including a plurality of equi-distantly spaced saddles curved coincident to the curvature of the tire, linked elements extending between and through the saddles, and wire coils surrounding the linked elements with the ends thereof in engagement with the saddles.

3. A tire protector including a plurality of equi-distantly spaced saddles, linked elements extending between and through the saddles, and wire coils surrounding the linked elements with the ends thereof in engagement with the saddles.

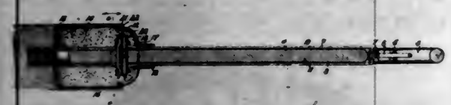
1,214,274. WATCH-HOLDER. WENDELL B. CAMPBELL, Cincinnati, Ohio, assignor to The Perkins-Campbell Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 17, 1916. Serial No. 72,417. (Cl. 224—4.)



1. A watch holder comprising a back of substantially flat fibrous material, a front of molded fibrous material having a shape adapted to form a watch receiving recess between it and the back when the back and front are sewed together, stitching securing the back and front along substantially their entire perimeters with sufficient space between the ends of the stitching to permit a watch to be inserted in the space between the back and front, and straps engaging the rim and a spoke of the steering wheel to secure the holder in position, certain of said straps being attached to the front beyond the ends of the stitching and extending through the back, whereby the opening left between the ends of the stitching will be substantially closed when the straps are secured to the wheel.

2. A watch holder comprising a back of fibrous material, a front of the same material, said back and front being secured together along substantially their entire perimeters, sufficient space being left to permit a watch to be inserted between them with its stem projecting beyond the unsecured portions of the edges, a strap secured to the back and adapted to embrace a spoke of a steering wheel, and straps engaging the front and back at the unsecured portions of the edges and adjacent to the projecting stem of a watch located between the front and back, adapted to draw the unsecured portions of the edges together to substantially close the watch-receiving opening and to embrace the rim of the steering wheel on each side of the embraced spoke, with sufficient space left at the unstrapped unsecured portions of the edges to permit of the projection therethrough of the stem of a watch located in the holder.

1,214,275. ILLUMINATING DEVICE FOR LIFE-LINES. JOSEPH C. CRICOLA, Brooklyn, N. Y., assignor of one-half to Henry M. Taylor, Mount Sinai, N. Y. Filed June 21, 1916. Serial No. 104,986. (Cl. 102—34.)



1. In an illuminating device for life lines, the combination with a projectile, of a casing arranged at the rear of the projectile and conforming to the shape of the projectile so as to produce an extension thereof, a rod extending through said casing and into the projectile, said rod being secured to the projectile, an inflammable matter arranged in said casing, a pair of sliding rods arranged on the opposite sides of said first mentioned rod, means operated by said rods when moved in one direction for causing the inflammable matter to be ignited, a safety device acting on the last mentioned rods for preventing said last mentioned rods from operating the means for igniting the inflammable matter, and means connected with said sliding rods for causing the life line to jerk the sliding rods a predetermined distance when the projectile has been discharged before the life line engages said first mentioned rod.

2. In an illuminating device for life lines, a rod, a casing connected with said rod and adapted to contain an inflammable matter, a fragile container arranged in said casing and adapted to contain a chemical which when mixed with said matter will produce a flame, a pair of sliding rods connected with said fragile container, and means for connecting said rods with a life line whereby when the life line pulls the rods will be moved longitudinally and said fragile container broken.

3. In an illuminating device for life lines, a container adapted to receive combustible matter, a rod for receiving the life line, a sliding member adapted to be moved by the life line before the same engages said rod, and means set in motion by said sliding member for causing an ignition of said combustible matter.

4. In an illuminating device for life lines, the combination with a projectile, of a casing conforming to the shape and size of the projectile arranged at the rear of the projectile, said casing containing an inflammable substance, a rod connected to the projectile for receiving the life line, means arranged in the casing for igniting said substance, and a sliding member adapted to be moved by the life line before the same engages said rod, said igniting means being operated by said sliding member.

5. In an illuminating device for life lines, a rod adapted to be connected with a projectile and a life line, said rod having a pair of grooves therein, a rod arranged in each of said grooves, a casing surrounding part of said first mentioned rod, said casing containing an inflammable matter, a fragile container connected with said first mentioned rod and arranged so as to contact with said inflammable matter, said container inclosing a chemical which when mixed with said inflammable matter will produce a flame, said rods and said grooves having loops at one end, said loops surrounding said container, whereby when said rods are moved longitudinally in said grooves said container will be broken, and means for connecting said rods with said life line so that when the projectile is projected through the air the resistance of the life line will be against said means in order that said rods will be moved longitudinally.

1,214,276. SNAP-CATCH. JOSEPH CHAROT, North Attleboro, Mass., assignor to Geo. L. Paine Company, North Attleboro, Mass., a Corporation of Rhode Island. Filed Aug. 10, 1916. Serial No. 114,282. (Cl. 24—239.)

1. In a catch, a housing of approximately rectangular cross-section having its back plate extended at an incline and contracted, a hook member slidable within the housing and having the extreme free edge of its hook engageable with the extreme free edge of the extension, said hook member being cut-away to form a resilient arm and a finger at right angles to the arm, the housing having a side notch to receive the finger, a pin-like projection on the rear inner end of the member, a coil spring receiving said projection, means in the housing to engage the rear end of the spring, and a stop in the housing arranged within the cut-away part of said member.



2. In a catch, a housing of approximately rectangular cross-section having its back plate extended at an incline and contracted, a hook member slidable within the housing, means to tension the hook member, the extreme free end of the hook being engageable with the extreme free end of the housing extension, a depressible arm on the member located entirely within the housing, said housing having a side notch and a finger on the arm extending through the notch.

3. In a catch, a housing having a side opening, a slidable hook member in the housing having a longitudinal arm which extends adjacent the side of the housing having said opening, a spring to effect automatic sliding of said member to open position, and means on the free end of the arm extending through said side opening to hold the member locked against the action of the spring.

4. In a catch, a housing, formed with a side notch and with a relatively small back opening, a slidable hook member in the housing, an abutment in the housing, a spring for tensioning the member insertible through said opening and engageable with the rear end of the member and with said abutment, a supplemental back plate for the housing extending over said back opening to hold the spring in place, and means on the hook member engageable in the notch to hold the hook member in locked position.

5. In a catch, a housing, a slidable catch in the housing, said housing having a side notch, a depressible arm located entirely within the housing, and extending along a side of the member and having a finger movable into and out of the notch, and a spring for tensioning the member engaged with the rear end thereof.

[Claim 6 not printed in the Gazette.]

1,214,277. APPARATUS FOR VULCANIZING TIRE-SHOES. HENRY Z. COBB, Winchester, Mass., assignor to United States Rubber Company, New Brunswick, N. J., a Corporation of New Jersey. Filed Mar. 6, 1915. Serial No. 12,645. (Cl. 18—45.)



1. Vulcanizing apparatus comprising means adapted to inclose a tire shoe and confine pressure therein, and a vessel forming a portable unit and adapted to provide a source of fluid pressure, such vessel being adapted to be contained within the walls of the shoe and having means whereby the fluid pressure confined within it may be liberated within the shoe.

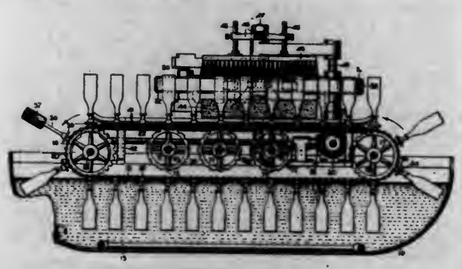
2. The combination with vulcanizing means adapted to inclose a tire shoe and confine pressure therein, of a vessel adapted to provide a source of fluid pressure, such vessel being of such size and shape as to be contained within the walls of the shoe, and having means whereby the fluid pressure confined within it may be liberated within the shoe during the vulcanizing operation.

3. The combination with vulcanizing means adapted to inclose a tire shoe and confine pressure therein, of a vessel adapted to provide a source of fluid pressure, such vessel being of such size and shape as to be contained within the walls of the shoe, and having thermostatic means adapted to open and liberate the confined pressure within the shoe upon the heating thereof in the course of the vulcanizing operation.

4. The combination with a vulcanizing mold adapted to inclose a tire shoe and confine pressure therein, of a vessel adapted to provide a source of fluid pressure, such vessel being of such size and shape as to be contained within the walls of the shoe, and having thermostatic means adapted to open and liberate the confined pressure upon the heating of the mold in the course of the vulcanizing operation.

5. The combination with vulcanizing means adapted to inclose a tire shoe and confine pressure therein, of a vessel adapted to provide a source of fluid pressure for use in vulcanizing a tire shoe, such vessel shaped and adapted to be contained within the walls of the shoe, and having thermosatic means adapted to open and liberate the confined pressure within the shoe upon the heating thereof in the course of the vulcanizing operation.

1,214,278. BOTTLE-WASHING MACHINE. IRA COLE, Delphos, Ohio, assignor to The Rapid Bottle Washer Co., Delphos, Ohio. Filed Dec. 22, 1915. Serial No. 68,197. (Cl. 141—7.)



1. In a bottle washing machine, the combination of an endless sprocket chain, means including front and rear sprocket wheels for supporting and driving said chain in a certain direction in a vertical plane, a series of individual bottle holding brushes having hollow stems carried by equally spaced links of said chain and extending outwardly therefrom in said plane, a solution tank beneath the wheels and chain, the bottles carried by said brushes being plunged downwardly under the front wheel into the solution in the tank and carried thence beneath the solution past the rear wheel, and means for brushing and spraying all parts of the bottles after they are carried out by the solution toward the front wheel, said spraying means including a sprocket wheel, certain of whose teeth are hollow and register with said hollow stems.

2. In a bottle washing machine, the combination of an endless flexible member, front and rear wheels for supporting and driving said member in horizontal runs in a vertical plane, a series of individual bottle holding brushes having hollow stems connected to and carried by said member in said plane, means for soaking the bottles carried by said brushes during their movement along one run between the front and rear wheels, and means for brushing and spraying the bottles while they are moving along the other run between the rear and the front wheels, said spraying means including a jet wheel having radial spraying nozzles acting through said member and registering at the periphery of the wheel directly with said hollow stems.

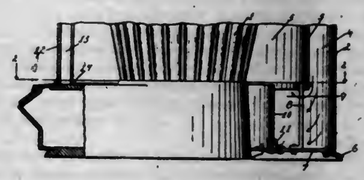
3. In a bottle washing machine, the combination of an endless flexible member, front and rear wheels supporting and driving said member in horizontal runs in a vertical plane, a series of equally spaced individual bottle holding brushes having hollow stems secured to said flexible member and extending outwardly therefrom in said plane, means for soaking the bottles carried by said brushes while they move with said member along one of the runs between the front and rear wheels, and means for scrubbing and spraying all portions of the bottles as they are carried along the other run from the rear to the front wheel, said spraying means including a jet wheel having radially arranged nozzles acting through said flexible member and registering with said hollow stems in succession as they pass thereover.

4. The combination with a sprocket chain, individual bottle holding brushes having hollow stems secured thereto at equally spaced intervals, and means for operating said chain and brushes, of a jet wheel, certain of whose teeth consist of radially disposed nozzles acting through said chain and registering with the hollow stems in succession as the chain passes thereover.

5. The combination with an endless sprocket chain, a series of equally spaced individual bottle holding brushes having hollow stems secured to and carried by said chain, and means to operate the chain, of spraying means including an idler sprocket wheel having radially disposed nozzles registering with said hollow stems in succession as the chain is moved thereover.

[Claims 6 to 14 not printed in the Gazette.]

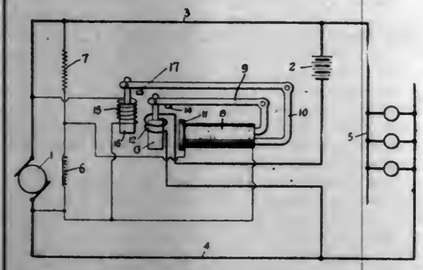
1,214,279. FURNACE. CHARLES E. COUGILL, Kalamazoo, Mich., assignor of one-half to Roscoe M. Tabor, Kalamazoo, Mich. Filed Sept. 18, 1915. Serial No. 51,321. (Cl. 126—99.)



1. In a furnace, the combination with the furnace body, of inner and outer casings spaced to provide a cold air chamber between, the inner casing being spaced from the furnace body to provide a hot air chamber between, the bottom of the inner casing being supported in an elevated position to provide for the passage of air from the cold air chamber to the hot air chamber, a bottom ring for the outer casing, bars connecting the outer casing ring to the furnace body, supporting arms for said inner casing mounted on said bars, and a baffle member mounted on said bars in the said air passage space below said inner casing and in a spaced relation to both the inner casing and furnace body and with its lower edge in a slightly elevated position and its upper edge projecting slightly above the lower edge of said inner casing, and constituting a shield for said air passage space below the inner casing.

2. In a furnace, the combination with the furnace body, of inner and outer casings spaced to provide a cold air chamber between, the inner casing being spaced from the furnace body to provide a hot air chamber the bottom of the inner casing being supported in an elevated position to provide for the passage of air from the cold air chamber to the hot air chamber, and a baffle member disposed in said air passage space below said inner casing and in a spaced relation to both the inner casing and furnace body and with its lower edge in a slightly elevated position and its upper edge projecting slightly above the lower edge of said inner casing, and constituting a shield for said air passage space below the inner casing.

1,214,280. ELECTRICAL SYSTEM OF DISTRIBUTION. GORHAM CROSBY, Brooklyn, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed June 26, 1914. Serial No. 847,408. (Cl. 171—313.)



1. In an electrical system of distribution, the combination of a generator driven at variable speed, a storage battery connected to be charged thereby, a carbon pile for regulating the voltage of the generator, two members acting on the same end of the pile mechanically independent of one another, an electromagnet controlling the action of one member responsive to voltage changes of the battery and generator, and an electromagnet serially connected between the generator and battery for controlling the action of the other member to regulate the battery charging current.

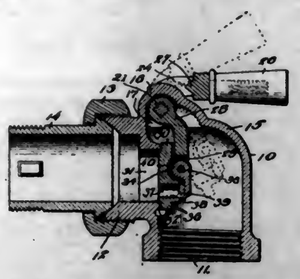
2. In an electrical system of distribution, the combination of a generator driven at variable speed, a storage battery connected to be charged thereby, a carbon pile for regulating the voltage of the generator, connected in shunt relation with field windings of the generator, a resistance in series with said field windings and pile, two levers acting on the same end of said pile mechanically independent of one another, a solenoid for controlling the lever responsive to voltage changes across the generator and battery and a solenoid serially connected between the generator and battery controlling the other lever, the actuation of either lever by its solenoid tending to compress the pile.

3. In an electrical system of distribution, the combination of a generator driven at variable speed, a storage battery connected to be charged thereby, a carbon pile for regulating the voltage of the generator, two members acting on the same end of the pile mechanically independent of one another, an electromagnet controlling the action of one member responsive to voltage changes of the battery and generator, and an electromagnet controlling the action of the other member responsive to changes in the battery charging current, the voltage controlled electromagnet having no effect on the pile until the battery has become substantially charged.

4. An electrical system of distribution, having in combination, a generator, a storage battery connected to be charged thereby, a compressible variable resistance operatively connected in the field circuit to regulate the voltage of the generator, two levers acting on the same end of said compressible variable resistance, mechanically independently of one another, a current coil connected between the generator and battery for regulating the action of one lever, and a coil responsive to voltage changes for regulating the action of the other lever.

5. In an electrical system of distribution, the combination of a generator driven at variable speed, a storage battery connected to be charged thereby, a carbon pile for regulating the voltage of the generator, two members acting on the same end of the pile independent of one another, electroresponsive means for controlling one member responsive to battery current changes during the charging of the battery, so as to limit the charging current and electroresponsive means for controlling the other member responsive to voltage changes, said last mentioned electroresponsive means having no effect on the pile until the battery has become substantially charged, when the generator voltage is controlled purely by voltage changes of the system.

1,214,281. RADIATOR-VALVE. EDWARD L. DAVIS, Schenectady, N. Y. Filed June 5, 1915. Serial No. 32,359. (Cl. 137—4.)



1. A valve for steam systems comprising, a casing having a steam inlet and a steam outlet port, a valve movable in the casing for and constructed to seat over the outlet port in the direction of steam flow, means to operate the valve, means to hold the valve in various graduated positions, a duct through the valve, and a second valve movable in the casing, and constructed to seat over said duct in the direction of steam flow yieldable to pressure opposite the direction of steam flow.

2. A valve of the class described, comprising a casing having an inlet and an outlet port, a manually operated yoke, an arbor or shaft connected to the yoke and extending within the said casing, an arm connected to the said arbor or shaft within the casing, a clapper valve pivotally connected to the said arm for engagement over the said outlet port, a duct in the said clapper for establishing communication between a radiator and source of steam supply when said clapper is either partially or entirely closed, a gravity seated flap valve normally engaged over the end of the said duct, yieldable to the outflowing water of condensation, and means to hold the clapper in adjusted positions whereby selection may be made by an operator of a series of graduations of port orifice of the said valve for regulating the quantity of steam to and modulating the heat in the said radiator.

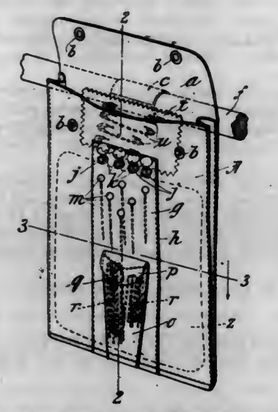
3. A valve of the class described, comprising a casing having an inlet and an outlet, a valve port eccentric with said outlet coincident with its lower part and forming a valve seat, a lever handle, an arbor connected with the handle and extending within the said casing, a clapper connected to the said arbor operable to engage with said valve seat port for graduating the quantity of steam admitted to said radiator, effecting heat modulation thereby, said clapper having a passage therethrough, and pressure operated means for establishing communication between the outlet of the said radiator and the source of supply through the said passage when the valve is either partially or entirely closed, whereby the water of condensation is permitted to continually drain away, and the entrance of steam in an opposite direction prevented when the valve is normally closed to the same.

4. A valve of the class described, comprising a casing having an inlet, an outlet port formed therein having a valve seat presented inward, an arbor revolubly mounted in the casing above the seat, an arm fixed thereon, a clapper on the arm disposed to engage said seat, the clapper having a duct therethrough, a flap valve to close said duct pivoted at the back of the clapper and movable therewith, disposed to engage over said duct by action of gravity, and means to rotate the arbor at will for the purposes indicated.

5. In a valve of the class described, a casing, an arbor revolubly engaged through one side of the casing, a seat on the casing around the arbor, and presented outwardly, said arbor having a corresponding portion snugly fitted to the seat, a bifurcated yoke having its arms on opposite sides of the casing, one arm secured to the arbor, a screw stud engaged in the opposite arm and having a conically pointed end set in the side of the casing for the purpose described and means to operate the yoke.

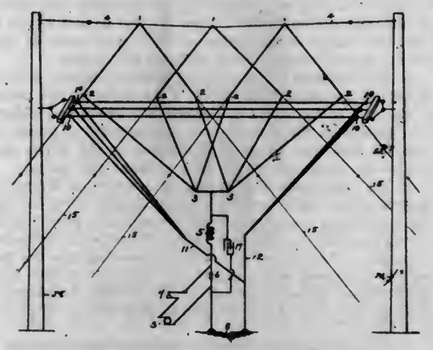
[Claims 6 and 7 not printed in the Gazette.]

1,214,282. EQUIPMENT DEVICE. NELLIE S. DAY, Springfield, Mass. Filed Sept. 4, 1915. Serial No. 49,059. (Cl. 150—28.)



An equipment device of the character described consisting of a pouch, the rear wall of which has an upper end extension flap to overlap the front wall and form a closure for the mouth of the pouch, the front wall of the pouch having externally a supplemental wall of flexible material which is marginally stitched to such pouch wall, and cushioning padding inclosed within the stitch-united walls, said supplemental wall having eyeleted perforations therethrough near its upper end, said supplemental cushion inclosing wall having a flap closed pocket at the lower portion thereof, the pouch also having at its rear side a flap closed pocket, and said pouch being provided with attachable flexible members to form a loop for the suspension of the device from the robe rail in an automobile tonneau.

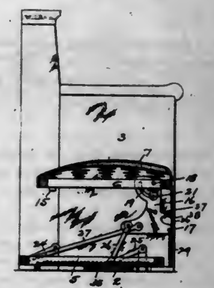
1,214,283. WIRELESS TELEGRAPHY. LEE DE FOREST, Palo Alto, Cal., assignor to Federal Telegraph Company, a Corporation of California. Filed Sept. 24, 1912. Serial No. 722,050. (Cl. 250—33.)



1. In a transmission system for wireless communication, an elevated fan-shaped main antenna, a conductor connecting said antenna to earth, an inductance and a source of electrical oscillations in said conductor, a supplementary horizontal antenna arranged within and insulated from said main antenna and a conductor connecting said supplementary antenna to earth.

2. In a transmission system for wireless communication, an elevated fan-shaped main antenna, a conductor connecting said antenna to earth, an inductance and a source of electrical oscillations in series in said conductor, a capacity in shunt on said inductance and source of oscillations, a supplementary horizontal antenna arranged within and insulated from said main antenna and a conductor connecting said supplementary antenna directly to earth.

1,214,284. FOLDING BED. JOSIAH A. DEWEY, San Francisco, Cal., assignor to Dewey Davenport Company, San Francisco, Cal., a Corporation of California. Filed Jan. 25, 1915. Serial No. 4,189. (Cl. 5—51.)



1. In furniture of the class described, a stationary structure, two superposed bed frames arranged on said structure, a plate pivoted to said structure, the upper bed frame being pivotally supported on said plate and being capable of limited turning movement with respect thereto, links pivoted to said structure, the lower frame being carried by said links, and links connecting said plate with the lower bed frame arranged to cause the lower bed frame to move upwardly and forwardly as the plate is moved about its pivot.

2. In furniture of the class described, a stationary structure, two superposed bed frames arranged on said structure, a plate pivoted to said structure, on which the upper bed frame is pivotally supported, links pivoted to said structure, the lower frame being supported on said links, means for limiting the amount of rotation of said upper frame with respect to said plate, and links connecting said plate with the lower bed frame arranged to raise the lower frame as the plate is rotated.

3. In furniture of the class described, a stationary structure, two superposed bed frames arranged on said structure, vertically disposed plates pivoted to said structure at opposite ends, the upper bed frame being pivoted to said plates adjacent its forward side, means for limiting the amount of rotation of said upper bed frame with relation to said plates, parallel links pivoted at each end of said stationary structure and adapted to support the lower frame and a plurality of links connecting each plate with the corresponding end of the lower bed frame.

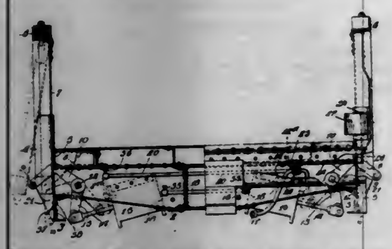
4. In furniture of the class described, a stationary structure, a lower bed frame arranged in said structure, parallel links upon which said bed frame is mounted, plates pivoted to opposite sides of said structure, a pair of crossed links connecting said plates with the corresponding sides of said frame, an upper bed frame pivoted to said plates, and means for limiting the movement of said upper frame with relation to said plates and causing the upper frame and plates to move about the pivots upon which the plates are supported.

5. In furniture of the class described, a stationary structure, parallel links pivoted directly to said structure at each end, a lower bed frame supported on said links, an upper bed frame in superposed relation therewith, plates pivotally mounted on opposite sides of said

structure, links connecting said plates with said lower bed frame, the upper bed frame being pivoted to said plates, and means for limiting the movement of said upper bed frame with relation to said plates.

[Claims 6 to 8 not printed in the Gazette.]

1,214,285. DOOR LOCKING AND RELEASING MECHANISM. GEORGE BINET DOREY, Montreal, Quebec, Canada, assignor to Rodger Ballast Car Company, Chicago, Ill., a Corporation of Maine. Filed Dec. 4, 1915. Serial No. 65,148. (Cl. 105—15.)



1. In a car, a floor, a side door, a locking shaft for locking the door in closed position and a hood beneath which such shaft is adapted to move when the door is released.

2. In a car, a floor, a side door, a hood, a locking shaft which is at times uncovered by the hood and adapted to lock the door in closed position, such shaft being adapted to move to a position beneath the hood when the door is released.

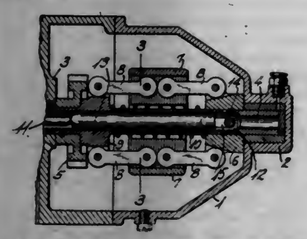
3. In a car, a floor, a side door and means for locking the door in closed position including an operating shaft beneath the floor, an arm extending outwardly through the car side and a locking shaft carried by the outer end of said arm.

4. In a car, the underframe including a side sill, stakes secured to the underframe, a door supported between the stakes, a floor upon the underframe and spaced from the sides thereof, a side floor portion inclined downwardly toward and secured to the side sill and having its lower edge projecting outwardly from the side sill and a shaft for locking the side door in closed position and adapted to assume a position beneath the projecting edge of the side floor margin when the door is released.

5. In a car, the underframe including a side sill, stakes secured to the underframe, a door supported between the stakes, a floor upon the underframe and spaced from the sides thereof, a side floor portion inclined downwardly toward and secured to the side sill and operating means beneath the inclined side floor portion for locking the door in closed position.

[Claims 6 to 29 not printed in the Gazette.]

1,214,286. REGULATING DEVICE. THEODORE DOUGLAS, Scarboro, N. Y. Filed Apr. 12, 1916. Serial No. 90,651. (Cl. 264—4.)



1. A regulating device comprising a speed-responsive element, an element to be actuated thereby, a member mounted in operative relation to said element to be actuated and adapted to be engaged by the speed-responsive element under certain conditions, and means for frictionally engaging said member to oppose the motion thereof.

2. A regulating device comprising a speed-responsive element, an element to be actuated thereby, and a buffer member to control the actuation of said last-named element by the speed-responsive element, whereby fluctuations in the action of said speed-responsive element may be suppressed, the buffer member being disconnected from one of said elements.

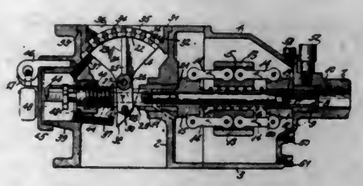
3. A governor having a speed-responsive element, a member to transmit motion therefrom, and means for carrying said member, said means having sufficient frictional engagement with the member, and the member having sufficient inertia to prevent derangement of the function of the governor.

4. A regulating device comprising a speed-responsive element, an element to be actuated thereby, and a member having considerable mass movably mounted between said elements, to transmit motion from one element to the other.

5. A regulating device comprising a speed-responsive element, an element to be actuated thereby, and a member having considerable mass movably mounted in operative relation to said element to be actuated, and adapted to be engaged by the speed-responsive element under certain conditions.

[Claims 6 to 8 not printed in the Gazette.]

1,214,287. GOVERNOR. THEODORE DOUGLAS, Scarboro, N. Y. Filed Apr. 12, 1916. Serial No. 90,653. (Cl. 264—3.)



1. The combination of a valve, a governor for the valve comprising a speed-responsive element, an element to be actuated thereby connected to the valve, a member to transmit motion from the speed-responsive element to the valve, means for carrying said member, said means having sufficient frictional engagement with the member and the member sufficient mass to prevent derangement of the function of the governor, a casing, means at one end of the casing to enable the governor to be driven from a source of power, means at the opposite end of the casing to adjust the element actuated by the governor, and means at said opposite end and flanking the last-named means to limit the range of movement of the valve, both of said means being accessible from without the casing.

2. The combination of a casing, a valve therein, a pivot on which the valve is mounted, a governor in the casing at one side of the valve to actuate the same, and adjustable devices on the opposite side of the valve flanking the pivot to limit the range of movement of the valve, said devices all being accessible from without the casing.

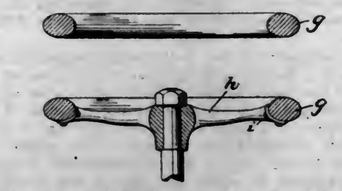
3. The combination of a casing comprising a section having a bore therethrough, a valve in said bore, the casing comprising a second section containing a governor, an element carried by the first section to actuate the valve, a member in the second section and extending into the first section to engage said element and transmit motion from the governor thereto, and means for driving the governor through the end of the second section remote from the first section.

4. In combination a casing, a valve mounted therein, a governor in the casing operatively related to the valve, said casing having means at one end provided with a bore to give entrance to a driving element for the governor, and a plurality of adjusting means for the valve at the opposite end of the casing, and accessible from without the casing.

5. The combination of a casing, a valve mounted therein, a governor in the casing operatively related to the valve, and means accessible from without the casing to adjust both ends of the range of movement of the valve.

[Claims 6 to 11 not printed in the Gazette.]

1,214,288. STEERING-WHEEL RIM. OLIVER W. EASTBURN, Jr., Kennett Square, Pa. Filed Mar. 3, 1916. Serial No. 81,978. (Cl. 154—43.)



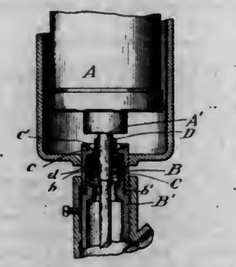
1. A steering wheel rim comprising a multitude of adhesively united layers of paper extending substantially circumferentially of the rim, each layer extending throughout its width concentric with the axis of the rim, the layers nearer the outer and inner wall of the rim being narrower than the intermediate layers.

2. A steering wheel rim comprising a continuous sheet of paper wound spirally around the axis of the rim, forming a multitude of superimposed layers, said layers being maintained in the undisturbed concentric relation in which they are wound but cut away along the corners to form a ring substantially oval in cross-section.

3. A steering wheel rim comprising a continuous sheet of paper wound spirally about the axis of the rim to form a multitude of superimposed layers, the width of successive layers gradually increasing from the inner and outer walls of the rim toward its circumferential axis and adjacent layers being adhesively united.

4. A steering wheel rim comprising a continuous sheet of vulcanized fiber paper wound spirally about the axis of the rim to form a multitude of superimposed layers, adjacent layers being adhesively united and the widths of successive layers gradually increasing from the inner and outer walls of the rim toward the circumferential axis thereof.

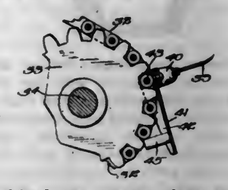
1,214,289. BEARING. FRANCIS G. EPPLEY, Chicago, Ill., assignor to Albaugh-Dover Co., Chicago, Ill., a Corporation of Illinois. Original application filed Apr. 10, 1909, Serial No. 489,028. Divided and this application filed June 18, 1913. Serial No. 774,279. (Cl. 64—48.)



1. A bearing comprising a casing having an inwardly extending circumferential flange near the top thereof, a neck bearing extending through the opening surrounded by said flange, an outwardly extending flange surrounding said neck bearing and adapted to abut against the under side of the first named flange, the meeting faces of said flanges presenting concavo-convex surfaces to each other, said surfaces having unequal radii of curvature, and a spring exerting a pressure against the neck bearing flange, substantially as described.

2. In a bearing, the combination of a cylindrical casing, having an annular flange inside thereof, said flange having an uneven radial curvature upon the under face thereof, a neck bearing in said casing provided within a helical groove upon the inside thereof and with openings through the walls of said bearing, a flange surrounding said neck bearing, the meeting faces of the aforesaid flanges having unequal radii of curvature, and a spring seated within said casing and bearing against the neck bearing, substantially as described.

1,214,290. SHEAF-LOADER. HARRY P. FISHER, Chicago, Ill. Filed May 1, 1916. Serial No. 94,607. (Cl. 214—2.)



1. In a sheaf loader, a conveyer chute, a pair of chains traveling along said chute, cross bars extending from one chain to the other, projections upon said cross bars for engaging the sheaves, and arms pivotally attached to said chains and having said cross bars attached to them, said arms overlying and resting upon the chains for a considerable distance behind the forward pivoted end of said arms whereby said arms and teeth are free to swing forward or overthrow at the end of the chute.

2. In a sheaf loader, a conveyer chute, a pair of chains traveling along said chute, cross bars extending from one chain to the other, projections upon said cross bars for engaging the sheaves, and arms pivotally attached at their forward ends to said chains, and extending rearward along said chains for a considerable distance to obtain a firm bearing, said arms having side wings for engaging the sides of the chain to prevent lateral displacement.

3. In a sheaf loader, a conveyer chute, a pair of link belts traveling along said chute, arms resting upon said link belts and having side wings, certain of the pivot pins of the link belt being extended to pivotally engage the wings of said arms, cross bars extending from one link belt to the other and fastened at each end to one of said arms, and conveyer teeth projecting upward from said bars.

4. In a sheaf loader, a conveyer chute, a pair of link belts traveling along said chute, sprockets at the upper and lower ends of said belts, arms pivotally attached at their forward ends to said belts, cross bars fastened to said arms, conveyer teeth projecting from said bars, and posts projecting from said arms for engaging the teeth of the sprockets at the lower end of said belts.

5. In a sheaf loader, a conveyer chute having a stationary section consisting of a stationary frame and a floor laid thereon; and a foot section comprising a floor pivoted to the lower end of the floor of the stationary section, and supporting means pivoted to the lower end of the stationary frame, the floor of the foot section being slidable upon said supporting means to thereby permit freedom of movement of the foot section and at the same time obtain a tight joint between the floors of the two sections.

[Claim 6 not printed in the Gazette.]

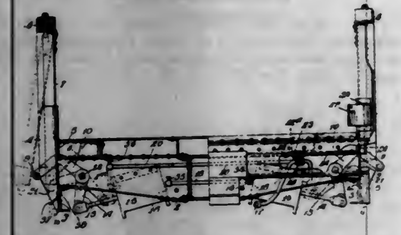
1,214,291. VEHICLE-TIRE. FRANK FITZHARRIS, Texarkana, Tex., assignor of one-half to Edward John Nixon, Texarkana, Tex. Filed Mar. 7, 1916. Serial No. 82,592. (Cl. 152—8.)

1. A vehicle tire comprising a casing and a structure disposed within the casing to hold the same distended, said structure comprising three spring rings arranged concentrically within the casing and spaced apart one from another, a pliable binding extending around the inner and

structure, links connecting said plates with said lower bed frame, the upper bed frame being pivoted to said plates, and means for limiting the movement of said upper bed frame with relation to said plates.

[Claims 6 to 8 not printed in the Gazette.]

1,214,285. DOOR LOCKING AND RELEASING MECHANISM. GEORGE BINET DORBY, Montreal, Quebec, Canada, assignor to Rodger Ballast Car Company, Chicago, Ill., a Corporation of Maine. Filed Dec. 4, 1915. Serial No. 65,148. (Cl. 105—15.)



1. In a car, a floor, a side door, a locking shaft for locking the door in closed position and a hood beneath which such shaft is adapted to move when the door is released.

2. In a car, a floor, a side door, a hood, a locking shaft which is at times uncovered by the hood and adapted to lock the door in closed position, such shaft being adapted to move to a position beneath the hood when the door is released.

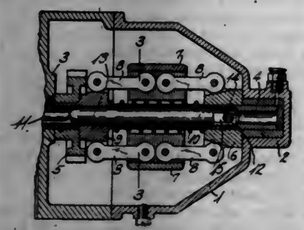
3. In a car, a floor, a side door and means for locking the door in closed position including an operating shaft beneath the floor, an arm extending outwardly through the car side and a locking shaft carried by the outer end of said arm.

4. In a car, the underframe including a side sill, stakes secured to the underframe, a door supported between the stakes, a floor upon the underframe and spaced from the sides thereof, a side floor portion inclined downwardly toward and secured to the side sill and having its lower edge projecting outwardly from the side sill and a shaft for locking the side door in closed position and adapted to assume a position beneath the projecting edge of the side floor margin when the door is released.

5. In a car, the underframe including a side sill, stakes secured to the underframe, a door supported between the stakes, a floor upon the underframe and spaced from the sides thereof, a side floor portion inclined downwardly toward and secured to the side sill and operating means beneath the inclined side floor portion for locking the door in closed position.

[Claims 6 to 29 not printed in the Gazette.]

1,214,286. REGULATING DEVICE. THEODORE DOUGLAS, Scarboro, N. Y. Filed Apr. 12, 1916. Serial No. 90,651. (Cl. 264—4.)



1. A regulating device comprising a speed-responsive element, an element to be actuated thereby, a member mounted in operative relation to said element to be actuated and adapted to be engaged by the speed-responsive element under certain conditions, and means for frictionally engaging said member to oppose the motion thereof.

2. A regulating device comprising a speed-responsive element, an element to be actuated thereby, and a buffer member to control the actuation of said last-named element by the speed-responsive element, whereby fluctuations in the action of said speed-responsive element may be suppressed, the buffer member being disconnected from one of said elements.

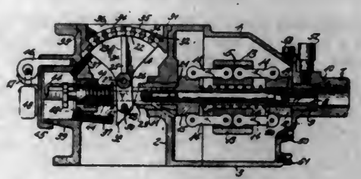
3. A governor having a speed-responsive element, a member to transmit motion therefrom, and means for carrying said member, said means having sufficient frictional engagement with the member, and the member having sufficient inertia to prevent derangement of the function of the governor.

4. A regulating device comprising a speed-responsive element, an element to be actuated thereby, and a member having considerable mass movably mounted between said elements, to transmit motion from one element to the other.

5. A regulating device comprising a speed-responsive element, an element to be actuated thereby, and a member having considerable mass movably mounted in operative relation to said element to be actuated, and adapted to be engaged by the speed-responsive element under certain conditions.

[Claims 6 to 8 not printed in the Gazette.]

1,214,287. GOVERNOR. THEODORE DOUGLAS, Scarboro, N. Y. Filed Apr. 12, 1916. Serial No. 90,653. (Cl. 264—3.)



1. The combination of a valve, a governor for the valve comprising a speed-responsive element, an element to be actuated thereby connected to the valve, a member to transmit motion from the speed-responsive element to the valve, means for carrying said member, said means having sufficient frictional engagement with the member and the member sufficient mass to prevent derangement of the function of the governor, a casing, means at one end of the casing to enable the governor to be driven from a source of power, means at the opposite end of the casing to adjust the element actuated by the governor, and means at said opposite end and flanking the last-named means to limit the range of movement of the valve, both of said means being accessible from without the casing.

2. The combination of a casing, a valve therein, a pivot on which the valve is mounted, a governor in the casing at one side of the valve to actuate the same, and adjustable devices on the opposite side of the valve flanking the pivot to limit the range of movement of the valve, said devices all being accessible from without the casing.

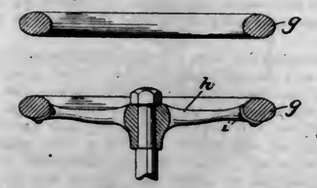
3. The combination of a casing comprising a section having a bore therethrough, a valve in said bore, the casing comprising a second section containing a governor, an element carried by the first section to actuate the valve, a member in the second section and extending into the first section to engage said element and transmit motion from the governor thereto, and means for driving the governor through the end of the second section remote from the first section.

4. In combination a casing, a valve mounted therein, a governor in the casing operatively related to the valve, said casing having means at one end provided with a bore to give entrance to a driving element for the governor, and a plurality of adjusting means for the valve at the opposite end of the casing, and accessible from without the casing.

5. The combination of a casing, a valve mounted therein, a governor in the casing operatively related to the valve, and means accessible from without the casing to adjust both ends of the range of movement of the valve.

[Claims 6 to 11 not printed in the Gazette.]

1,214,288. STEERING-WHEEL RIM. OLIVER W. EASTBURN, Jr., Kennett Square, Pa. Filed Mar. 3, 1916. Serial No. 81,978. (Cl. 154—43.)



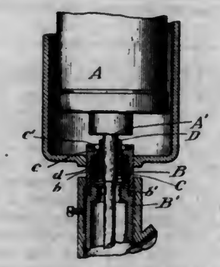
1. A steering wheel rim comprising a multitude of adhesively united layers of paper extending substantially circumferentially of the rim, each layer extending throughout its width concentric with the axis of the rim, the layers nearer the outer and inner wall of the rim being narrower than the intermediate layers.

2. A steering wheel rim comprising a continuous sheet of paper wound spirally around the axis of the rim, forming a multitude of superimposed layers, said layers being maintained in the undisturbed concentric relation in which they are wound but cut away along the corners to form a ring substantially oval in cross-section.

3. A steering wheel rim comprising a continuous sheet of paper wound spirally about the axis of the rim to form a multitude of superimposed layers, the width of successive layers gradually increasing from the inner and outer walls of the rim toward its circumferential axis and adjacent layers being adhesively united.

4. A steering wheel rim comprising a continuous sheet of vulcanized fiber paper wound spirally about the axis of the rim to form a multitude of superimposed layers, adjacent layers being adhesively united and the widths of successive layers gradually increasing from the inner and outer walls of the rim toward the circumferential axis thereof.

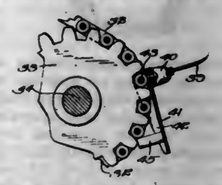
1,214,289. BEARING. FRANCIS G. EPPLEY, Chicago, Ill., assignor to Albaugh-Dover Co., Chicago, Ill., a Corporation of Illinois. Original application filed Apr. 10, 1909, Serial No. 489,028. Divided and this application filed June 18, 1913. Serial No. 774,279. (Cl. 64—48.)



1. A bearing comprising a casing having an inwardly extending circumferential flange near the top thereof, a neck bearing extending through the opening surrounded by said flange, an outwardly extending flange surrounding said neck bearing and adapted to abut against the under side of the first named flange, the meeting faces of said flanges presenting concavo-convex surfaces to each other, said surfaces having unequal radii of curvature, and a spring exerting a pressure against the neck bearing flange, substantially as described.

2. In a bearing, the combination of a cylindrical casing, having an annular flange inside thereof, said flange having an uneven radial curvature upon the under face thereof, a neck bearing in said casing provided within a helical groove upon the inside thereof and with openings through the walls of said bearing, a flange surrounding said neck bearing, the meeting faces of the aforesaid flanges having unequal radii of curvature, and a spring seated within said casing and bearing against the neck bearing, substantially as described.

1,214,290. SHEAF-LOADER. HARRY P. FISHER, Chicago, Ill. Filed May 1, 1916. Serial No. 94,607. (Cl. 214—2.)



1. In a sheaf loader, a conveyer chute, a pair of chains traveling along said chute, cross bars extending from one chain to the other, projections upon said cross bars for engaging the sheaves, and arms pivotally attached to said chains and having said cross bars attached to them, said arms overlying and resting upon the chains for a considerable distance behind the forward pivoted end of said arms whereby said arms and teeth are free to swing forward or overthrow at the end of the chute.

2. In a sheaf loader, a conveyer chute, a pair of chains traveling along said chute, cross bars extending from one chain to the other, projections upon said cross bars for engaging the sheaves, and arms pivotally attached at their forward ends to said chains, and extending rearward along said chains for a considerable distance to obtain a firm bearing, said arms having side wings for engaging the sides of the chain to prevent lateral displacement.

3. In a sheaf loader, a conveyer chute, a pair of link belts traveling along said chute, arms resting upon said link belts and having side wings, certain of the pivot pins of the link belt being extended to pivotally engage the wings of said arms, cross bars extending from one link belt to the other and fastened at each end to one of said arms, and conveyer teeth projecting upward from said bars.

4. In a sheaf loader, a conveyer chute, a pair of link belts traveling along said chute, sprockets at the upper and lower ends of said belts, arms pivotally attached at their forward ends to said belts, cross bars fastened to said arms, conveyer teeth projecting from said bars, and posts projecting from said arms for engaging the teeth of the sprockets at the lower end of said belts.

5. In a sheaf loader, a conveyer chute having a stationary section consisting of a stationary frame and a floor laid thereon; and a foot section comprising a floor pivoted to the lower end of the floor of the stationary section, and supporting means pivoted to the lower end of the stationary frame, the floor of the foot section being slidable upon said supporting means to thereby permit freedom of movement of the foot section and at the same time obtain a tight joint between the floors of the two sections.

[Claim 6 not printed in the Gazette.]

1,214,291. VEHICLE-TIRE. FRANK FITZHARRIS, Texarkana, Tex., assignor of one-half to Edward John Nixon, Texarkana, Tex. Filed Mar. 7, 1916. Serial No. 82,592. (Cl. 152—8.)

1. A vehicle tire comprising a casing and a structure disposed within the casing to hold the same distended, said structure comprising three spring rings arranged concentrically within the casing and spaced apart one from another, a pliable binding extending around the inner and

intermediate rings to normally hold the same in concentric relation and permit of local deformation of the intermediate ring under shocks, and a pliable non-elastic binding extending around the bound inner and intermediate rings and the outer ring for holding the latter normally in concentric relation with the intermediate ring and permitting of local deformation of the outer ring under shocks.

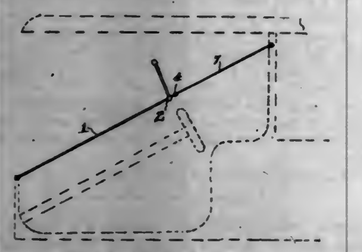


2. A vehicle tire comprising a casing and a structure disposed within the casing to hold the same distended, said structure comprising three spring rings arranged concentrically within the casing and spaced apart one from another, a pliable binding extending around the inner and intermediate rings to normally hold the same in concentric relation and permit of local deformation of the intermediate ring under shocks, and a pliable non-elastic binding extending around the bound inner and intermediate rings and the outer ring for holding the latter normally in concentric relation with the intermediate ring and permitting of local deformation of the outer ring under shocks, the intermediate ring being wider than the other rings.

3. A tire comprising a shoe, three spaced concentrically arranged rings disposed concentrically to and within the shoe, two of the rings lying at the inner and tread portions of the shoe respectively and the third ring lying between the others and normally separated therefrom by free open spaces, pliable inelastic means for binding the inner and intermediate rings together, and pliable inelastic means for binding the outer ring to the bound inner rings, said intermediate ring acting supplementary to the outer ring for receiving impacts too great to be sustained wholly by the outer ring.

4. A filler for a tire shoe, comprising three concentrically arranged spring rings in spaced relation, a binding extending transversely around the inner and intermediate rings to maintain the same in concentric relation, a binding extending around the outermost ring and the bound intermediate and inner rings for maintaining the outer ring in concentric relation with the intermediate ring, and a cushion disposed between the last-mentioned binding and the outer surface of the outer ring.

1,214,292. DUST, WIND, AND STORM SHIELD FOR VEHICLES. JAMES J. FITZPATRICK, New York, N. Y. Filed May 23, 1916. Serial No. 99,315. (Cl. 21—81.)



1. In combination with a flexible apron suspended in the forepart of a vehicle to protect the driver, a shield formed of the upper portion of such apron and comprising means for holding the upper portion of such apron extended, such means consisting of a transverse pocket in said apron and a frame carrying said shield the lower member of which revolves in said pocket, and adapted to be turned in a plane transversely to such apron and means for retaining such shield in different angular positions with reference to such apron.

2. In combination with a flexible apron suspended in the forepart of a vehicle to protect the driver, a shield consisting of the upper portion of such apron, pockets at the sides and top edge of such upper portion, a transverse pocket in such apron at the lower edge of such upper portion, a tube within such transverse pocket provided with means for suspending such apron extending rearwardly of such upper portion, rods within such tube and the side and top pockets, means for securely joining the ends of such rods and means for adjustably connecting the tube and inclosed rod adapted to hold the shield in different positions.

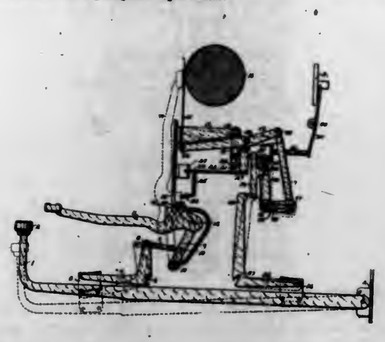
3. In combination with a flexible apron suspended in the forepart of a vehicle to protect the driver, a shield consisting of the upper portion of such apron, eyes in such upper portion, pockets at the sides and top edge of such upper portion, a transverse pocket in such apron at the lower edge of such upper portion, a tube within such transverse pocket, means having rearwardly projecting portions adapted to secure the tube in the pocket and adapted to receive the suspending devices, a rod within said tube provided with a sleeve or sleeves extending over the end or ends of the tube and provided with perforations registering with screw threaded perforations in the tube, a set screw passing through the perforations in the sleeve or sleeves and adapted to engage the screw threaded perforations in the tube and retain the rod in different relative positions with regard to the tube, and rods within the side and top pockets and means for securely joining the ends of the rods.

4. In a combination with a flexible apron suspended in the forepart of a vehicle to protect the driver, of a shield consisting of the upper portion of the apron, a frame adapted to hold such upper portion in an extended position and means adapted to permit the turning of said frame on its lower member, a tube inclosing said lower member, a fastening device consisting of a sleeve on such lower member provided with an enlarged inner portion adapted to receive and turn on the end of said tube and provided with perforations registering with screw threaded perforations in said tube and a set screw adapted to pass through the perforations in the sleeve and engage the screw threaded perforations.

5. In a combination with a flexible apron suspended in the forepart of a vehicle to protect the driver of a shield consisting of the upper portion of the apron, a transverse pocket in the apron at the lower edge of the upper portion thereof, pockets at the sides and top of the upper portion thereof, and rods within the side and top pockets, a tube within the transverse pocket secured against turning and a rod within the tube securely connected with the rods in the side and top pockets and provided with means adapted to connect the tube and inclosed rod to prevent the turning of the rod.

1,214,293. FRONT-STRIKE TYPE-WRITING MACHINE. WILLIAM R. FOX, Grand Rapids, Mich. Filed Dec. 29, 1913. Serial No. 809,165. (Cl. 197—22.)

1. In a key action for typewriting machines, the combination of a key lever, a rock lever, a loop secured to said key lever and having an upwardly curved top, the rear end of said rock lever being disposed within said loop in engagement with the top thereof, a universal bar adapted to be acted upon by the rock lever, connections therefrom to the ribbon oscillating mechanism, a shiftable type bar segment, a type bar with a trip contact in close proximity to the pivot thereof, a slot in the rear end of said type bar, a type bar actuating lever pivoted in said type bar segment and having a pin on its upper end engaging in said slot, a second rock lever, a second loop on said key lever, said loop having an upwardly curved top, the forward end of said rock lever being disposed within said loop in engagement with the top thereof, a coupling between the upper end of said rock lever and said type bar actuating lever, a universal escapement bar disposed to be acted upon by the said trip contact of the type bar when it is near the printing position, a parallel movement support for said universal bar on the said type bar segment, a push pin carried thereby, an escapement mechanism, and a sliding trip pin for the escapement mechanism carried on the frame and having a broad head to insure contact of the push pin therewith at all positions of the type bar segment, all coacting substantially as described for the purpose specified.



2. In the key action of a typewriting machine, the combination of a key lever, a rock lever operatively connected therewith, a universal bar to be acted upon by said rock lever, connections therefrom to the ribbon oscillating mechanism, a shiftable type bar segment, a type bar having a trip contact in close proximity to the pivot thereof, a second rock lever operatively connected with said key lever, a slot in the rear end of said type bar, a type bar actuating lever fulcrumed in said type bar segment, and connected with the upper end of said rock lever, a universal escapement bar disposed to be acted upon by said trip contact on the type bar when it is near the printing position, a parallel movement support for said universal bar on the said type bar segment, a push pin carried thereby, an escapement mechanism and a sliding trip pin for the escapement mechanism carried on the frame and having a broad head to insure contact of the push pin therewith at all positions of the type bar segment, all coacting substantially as described for the purpose specified.

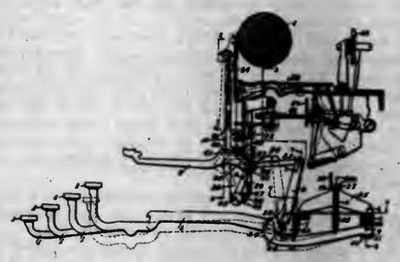
3. In a typewriting machine, the combination of a key lever, a rock lever, a loop carried by said key lever, the top of said loop being upwardly curved to afford a variable leverage, the rear end of said rock lever being disposed within said loop in engagement with the top thereof, a universal bar to be actuated by said rock lever, connections therefrom to the ribbon oscillating mechanism, a shiftable type bar segment, a type bar with a trip contact in proximity to the pivot thereof, a universal escapement bar carried by said segment disposed to be acted upon by said shoulder contact on the type bar when it is near the printing point, escapement operating means actuated by said universal bar, a loop on said key lever, the top of said loop being upwardly curved to afford a variable leverage, a rock lever having its forward end disposed in said loop, and means connecting said rock lever with the type bar for operating the same, all coacting substantially as described for the purpose specified.

4. In a typewriting machine, the combination of a key lever, a rock lever, a universal bar to be operated by said rock lever, means connecting said rock lever to said key lever, connections from said universal bar to the ribbon oscillating mechanism, a shiftable type bar segment, a type bar with a trip contact in proximity to the pivot thereof, a second rock lever, means connecting said rock lever with the key lever, means operatively connecting said rock lever with the type bar, a universal escapement bar carried by said segment and disposed to be acted upon by said contact on the type bar when it is near the printing position, an escapement mechanism, and operating means therefor actuated by said universal bar, all coacting substantially as described for the purpose specified.

5. In a typewriting machine, the combination of a key lever, a shiftable type bar segment, a type bar with a trip contact in close proximity to the pivot thereof, a slot in the rear end of said type bar, a type bar actuating lever pivoted in said segment and having a pin on its upper end engaging in said slot, a rock lever, a loop on said key lever, said loop having an upwardly curved top, the forward end of said rock lever being disposed within said loop in engagement with the top thereof, a coupling between the upper end of said rock lever and said type bar actuating lever, a universal escapement bar disposed to be acted upon by the said trip contact of the type bar when it is near the printing position, a parallel movement support for said universal bar on the said type bar segment, a push pin carried thereby, an escapement mechanism, and a sliding trip pin for the escapement mechanism carried on the frame and having a broad head to insure contact of the push pin therewith at all positions of the type bar segment, all coacting substantially as described for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

1,214,294. TYPE-WRITING MACHINE. WILLIAM R. FOX, Grand Rapids, Mich. Filed Dec. 22, 1914. Serial No. 878,547. (Cl. 197—22.)



1. In a typewriting machine, the combination of a casting secured to the base of the machine and provided with a rear bar having a plurality of slots formed therein; a finger lever fulcrum wire carried by said rear bar; a plurality of finger levers disposed in said slots, said finger levers having fulcrum notches formed in the rear ends thereof in which said fulcrum wire is disposed; a plate disposed on the bottom of said rear bar and closing the slots therein; bolts extending through said plate and through said rear bar; nuts provided on the upper ends of said bolts; said casting having a front bar provided with a plurality of slots formed therein; a rock lever fulcrum wire carried by said front bar; a plurality of rock levers disposed in the slots of said front bar, said rock levers having fulcrum slots formed therein in which said fulcrum wire is disposed, said rock levers being connected to said finger levers in front of the rock lever fulcrum; a pair of yokes supported by the front and rear bars of said casting; a slotted comb carried by said yoke and extending parallel to said front and rear bars and midway between the same, said slotted comb being provided with an upturned rear edge; a plurality of springs connected each at its lower end to one of said finger levers; a screw threaded into the upper end of each of said springs; the heads of said screws being disposed in the slots of said comb and supported by the edges thereof; all coacting substantially as described and for the purpose specified.

2. In a typewriting machine, the combination of a casting secured to the base of the machine and provided with a rear bar having a plurality of slots formed therein: a finger lever fulcrum wire carried by said rear bar; a plu-

rality of finger levers disposed in said slots, said finger levers having fulcrum notches formed in the rear ends thereof in which said fulcrum wire is disposed; a plate disposed on the bottom of said rear bar and closing the slots therein; bolts extending through said plate and through said rear bar; nuts provided on the upper ends of said bolts; said casting having a front bar provided with a plurality of slots formed therein; a rock lever fulcrum wire carried by said front bar; a plurality of rock levers disposed in the slots of said front bar, said rock levers having fulcrum slots formed therein in which said fulcrum wire is disposed, said rock levers being connected to said finger levers in front of the rock lever fulcrum; a slotted comb extending parallel to said front and rear bars and midway between the same, said slotted comb being provided with an upturned rear edge; a plurality of springs connected each at its lower end to one of said finger levers; a screw threaded into the upper end of each of said springs; the heads of said screws being disposed in the slots of said comb and supported by the edges thereof; all coacting substantially as described and for the purpose specified.

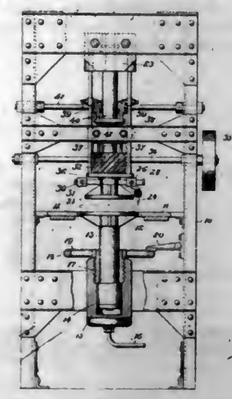
3. In a typewriting machine, the combination of a casting secured to the base of the machine and provided with a rear bar having a plurality of slots formed therein; a finger lever fulcrum wire carried by said rear bar; a plurality of finger levers disposed in said slots, said finger levers having fulcrum notches formed in the rear ends thereof in which said fulcrum wire is disposed; a plate disposed on the bottom of said rear bar and closing the slots therein; bolts extending through said plate and through said rear bar; nuts provided on the upper ends of said bolts; said casting having a front bar provided with a plurality of slots formed therein; a rock lever fulcrum wire carried by said front bar; a plurality of rock levers disposed in the slots of said front bar, said rock levers having fulcrum slots formed therein in which said fulcrum wire is disposed, said rock levers being connected to said finger levers in front of the rock lever fulcrum; all coacting substantially as described and for the purpose specified.

4. In a typewriting machine, the combination of a base; a casting secured thereto and having rear and front bars; a fulcrum wire carried by said rear bar; a finger lever having a fulcrum notch at its rear end in which said fulcrum wire is disposed; a rock lever fulcrum wire carried by said front bar; a rock lever provided with a fulcrum slot in which said rock lever fulcrum wire is disposed, said rock lever being connected to said finger lever; a comb supported by said casting above said bars; a spring detachably supported by said comb and secured at its lower end to said finger lever; a type bar segment; a type bar fulcrum wire carried thereby; a type bar provided with a fulcrum slot in which said fulcrum wire is disposed, said type bar being removably fulcrumed on said fulcrum wire; a cam lever fulcrum wire carried by said segment; a cam lever removably fulcrumed on said fulcrum wire and operatively connected to said type bar; and operative connections between said rock lever and said cam lever, each type bar action comprising a type bar, cam lever, rock lever, finger lever and finger lever spring and connections being independently removable from the machine; all coacting substantially as described and for the purpose specified.

5. In a typewriting machine, the combination of a supporting bar provided with a plurality of slots; a fulcrum wire extending longitudinally of said bar through the slotted portion thereof; a plurality of finger levers provided with fulcrum notches at the rear ends thereof in which said fulcrum wire is disposed; springs engaging said finger levers and holding said notches in engagement with said wire; a plate disposed on the bottom of said bar and closing the slots therein; bolts extending through said plate and said bar; and nuts threaded on the ends of said bolts whereby said plate can be lowered sufficiently to permit the removal of any one of said finger levers; all coacting substantially as described and for the purpose specified.

[Claims 6 to 30 not printed in the Gazette.]

1,214,295. METHOD AND APPARATUS FOR PRODUCING RUBBER MOLDING-BLANKS. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Sept. 8, 1914. Serial No. 860,645. (Cl. 164—71.)



1. The method of making rubber molding-blanks containing a definite volume of material which consists in compressing to a predetermined reduced thickness a slab of rubber having in its natural form a greater thickness, and so holding it while a knife is caused to move in a circumscribing path defining the desired outline of the blank in order to cut said blank out of the slab, and then releasing the pressure and allowing the blank to assume its natural form.

2. In a machine for cutting rubber molding-blanks containing a predetermined volume of material, the combination of means for compressing a slab of the material, an adjustable stop for limiting the compression to a definite thickness, a knife mounted in operative relation to the slab-compressing means, and means for moving said knife in a definite circumscribing path to cut out a blank of the desired outline.

3. In a machine for cutting rubber blanks, the combination of a fixed upper abutment for the blank, a vertically-movable lower abutment or platen, means for elevating and depressing said lower abutment, an adjustable stop for limiting the upward movement of said platen, and a revolving knife-holder.

4. In a machine for cutting rubber blanks, the combination of a vertically-movable plunger having a platen at its upper end and a piston at its lower end mounted in a cylinder, a stop-nut for said piston surrounding the plunger and screwing in the upper end of said cylinder, a hand-wheel for said nut, an upper blank abutment, and a revolving knife-holder.

5. In a machine for cutting rubber blanks, the combination of upper and lower abutments for the blank of which the lower one is vertically movable, a knife-holder mounted to revolve about the upper abutment, a rotary support for said knife-holder attached to a gear having a vertically-elongated face, a stationarily-mounted mating gear, and a vertically-movable thrust-member for raising and lowering the first-said gear and the knife-holder.

[Claim 6 not printed in the Gazette.]

1,214,296. INSTRUMENT FOR DRAFTING PATTERNS FOR GARMENTS. JOSEPHINE S. GORTON, Chicago, Ill. Filed Mar. 31, 1916. Serial No. 87,999. (Cl. 33—11.)

1. A device for the purpose described consisting of a flat instrument provided longitudinally with a straight edge, merging into a convexly curved edge extending across the end of the instrument, and intersecting an opposing concave curved edge, which said curved edges are adapted for drafting the line for both an arm scye and neck curve.



2. A device for the purpose described consisting of a flat instrument provided longitudinally with a straight edge merging into a convexly curved end of constantly decreasing radius, said curve intersecting a concave curved edge.

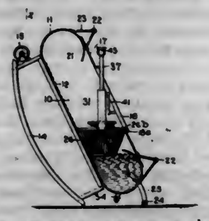
3. A device for the purpose described consisting of a flat instrument provided with a straight edge, merging into a convexly curved edge extending across the end of the instrument, and adapted for drafting both an arm scye and neck curve, and with an elongated slot extending lengthwise of and for a portion of its length parallel with the straight edge, adapted for locating the points for and drafting two back lines of a sleeve.

4. A device for the purpose described consisting of a flat instrument provided with a straight edge merging into a convexly curved edge extending across the end of the instrument, and with an elongated concave curved edge approximately parallel with the straight edge adapted for drafting both the dart and shoulder curves of a garment.

5. A device for the purpose described, consisting of a flat instrument provided with a straight edge terminating in a curved edge, extending across the adjacent end of the instrument, merging into a convexly curved edge terminating in an outwardly curved edge generally extending at an oblique angle to the straight edge and connected by a sharp curve, with an elongated curved edge extending on a line approximately parallel with the straight edge.

[Claims 6 and 7 not printed in the Gazette.]

1,214,297. RINSING AND DRAINING DEVICE FOR CLOTHES. ROBERT GOSMAN, Amagansett, N. Y. Filed Mar. 13, 1915, Serial No. 14,069. Renewed Feb. 24, 1916. Serial No. 80,306. (Cl. 68—21.)



1. The herein described rinsing and draining device for clothes comprising, in combination, a tapered receptacle having an open mesh bottom, a rigid bail secured to the upper rim of the receptacle and extending thence upwardly, a plunger comprising a shank slidable along the bail, a disk secured to the lower end of the plunger and a conical coil spring secured to the lower surface of the disk and extending downwardly therefrom, the taper of the spring being reverse to that of the receptacle, and means carried by the bail for controlling the movements of the plunger shank.

2. The herein described rinsing and draining device for clothes comprising a receptacle having an upwardly directed flare and so constructed as to permit the water to pass freely into and out of the same, a bail secured permanently to the upper rim of the receptacle, and means coöperating with the bail to act upon the clothes in the receptacle to agitate and compress the same, said last mentioned means including a conical coil spring substantially filling and closing the upper end of the receptacle.

3. The herein described rinsing and draining device for clothes comprising a receptacle of upwardly flaring form and constructed to allow the water to enter and leave the same freely, one portion of the receptacle body being flat, and means permanently connected to the receptacle and serving to agitate and compress the clothes therein, said last mentioned means including a coil spring, the outermost turn of the coil being of a size to just fit within the top of the receptacle and having a straight portion along said flat portion of the receptacle, substantially as set forth.

4. The herein described rinsing and draining device for clothes comprising a receptacle tapered downwardly and having a reticulated bottom, a bail for manipulating it, and a combined agitator and compressor coöperating with the bail and acting downwardly upon the top of the clothes within the receptacle.

1,214,298. REINFORCED-CONCRETE RAILROAD-TIE. LOUIS GREEN, London, England. Filed June 12, 1913. Serial No. 773,178. (Cl. 238—3.)



1. A railroad tie, comprising a reinforced concrete sleeper, a strip of metal bent to form a resilient seating for a rail and having opposite supporting legs splayed transversely of the rail for said seating, said legs being partly embedded in said sleeper, and non-extensible members between and directly connected to said legs for preventing said legs from spreading relatively to one another.

2. A railroad tie, comprising a reinforced concrete sleeper, a strip of metal bent to form a resilient chair seating for a flanged rail and two supporting legs splayed transversely of the rail for said chair, said legs being partly embedded in said sleeper, and non-extensible members between and directly connected to said legs for preventing said legs from spreading relatively to one another.

3. A railroad tie, comprising a reinforced concrete sleeper, a strip of metal bent to form a resilient seating for a rail and two supporting legs splayed transversely of the rail for said seating, said legs being partly embedded in said sleeper and prevented from spreading relatively to one another by members forming part of the longitudinal ties of the reinforcement of said sleeper, said members being between and directly connected to said legs.

4. A railroad tie, comprising a concrete sleeper reinforced by upper and lower longitudinal members and by terminal transverse members connecting together said upper longitudinal members with said lower longitudinal members and by intermediate transverse members connecting together said upper and lower longitudinal members respectively, a strip of metal bent to form a resilient seating for a rail and having two opposite supporting legs splayed transversely of the rail for said seating, said legs being partly embedded in said sleeper and said intermediate transverse members being between and directly

connected to said legs to prevent said legs from spreading relatively to one another.

5. A railroad tie, comprising a concrete cross-sleeper reinforced by an upper and lower system of longitudinal and transverse members, said upper system being located above the neutral zone and consisting of two end portions, each arranged symmetrically with respect to the center of the corresponding rail and comprising terminal closed hoops and intermediate connecting longitudinal ties and of a central portion consisting of longitudinal ties connecting the adjacent transverse portions of the two adjacent terminal closed hoops of the said two end portions, said lower system consisting of two end portions, each arranged symmetrically with respect to the center of the corresponding rail and comprising a central closed hoop located below said neutral zone, longitudinal ties connecting the transverse portions of said central hoop with the outer transverse portions of said terminal hoops in said upper system and diagonal ties connected with the transverse portions of said central hoop and extending upwardly beyond said neutral zone, forming together with said longitudinal ties in the lower system a series of trusses on each side of a rail and of a central portion consisting of longitudinal ties connecting the adjacent transverse portions of the two said central hoops and rail supports, each having portions embedded in said sleeper at the apices of the corresponding series of said trusses, whereby the thrusts of said supports are distributed.

[Claims 6 to 9 not printed in the Gazette.]

1,214,299. MANUFACTURING COLLOIDS. WILLIAM M. GROSVENOR, Ridgewood, N. J., and LOUIS A. BENCHER, Newtonville, Mass. Filed Oct. 7, 1913, Serial No. 793,807. Renewed June 30, 1915. Serial No. 37,369. (Cl. 252.)

1. The new form of substantially dry colloid in which the diffuse submicroscopic structure of the colloid when wet is preserved to the extent that the colloid is capable of rapid hydration and dehydration.

2. The new form of substantially dry colloid in which the diffuse submicroscopic structure of the colloid when wet is sufficiently preserved in the substantially dry colloid so that the substantially dry colloid is capable of rapid hydration and dehydration and of rapidly adsorbing dyes.

3. The process of preparing diffuse colloids which consists in superhydration of the colloid followed by graduated dehydration of the colloid, the gradations of the second stage being so slight that the initial extension of the colloid mass is so far as possible preserved.

4. The process of treating colloids for preparation of specific hydrated products therefrom, which consists in superhydrating the colloid and then causing dehydration gradually to avoid condensation of the colloid residue.

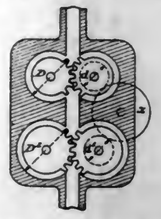
5. The process of treating colloids for preparation of specific hydrated products therefrom, which consists in superhydrating the colloid and then causing dehydration in gradual stages by automatically changing the drying power of the dehydration agent.

[Claims 6 and 7 not printed in the Gazette.]

1,214,300. SYSTEM OF MULTIPLE PUMPS. PHILIPPE JULES GROUVELLE, EMILE HENRI ARQUEMBOURG, and LEON JEAN JORET, Paris, France. Filed Nov. 18, 1910. Serial No. 593,040½. (Cl. 103—44.)

1. The improvement in multiple rotary pumps of the class indicated, comprising a casing having a central passage, a series of pairs of circular rotary members journaled oppositely to each other and on opposite sides of said passage into which they project, all being in the same plane, the members of each pair working in peripheral contact, and a motor which is geared with both pairs, the two members adjacent to the delivery side of the pump operating to produce an outflow less than that of the pump on the suction side, as described.

2. In a multiple rotary pump of the class described, the combination with a casing having a central passage, of two series of pairs of circular rotary members working in peripheral contact and arranged in the same plane with their peripheries projecting into the passage from opposite sides, the members nearest the outflow end of said passage being of lesser diameter than the members of the other pair, and a motor geared with both pairs and rotating them at same speed, as described.



3. A multiple pump of the rotary type indicated, comprising a casing or covering having a central passage, pairs of circular rotary members arranged in said casing, each pair constituting a unit-pump and the members of each pair arranged rotatably opposite each other on opposite sides of said passage and projecting into the latter so that their peripheries work in contact, and means for giving the unit-pumps different peripheral speeds so that the discharge of one is higher than that of the pump it feeds, as described.

4. A multiple rotary pump of the class described, comprising a casing having a central passage, a series of pairs of circular rotary members, each pair constituting a pump unit, the members of each pair rotating oppositely to each other, being arranged on opposite sides of said passage into which they project and working in peripheral contact, all being in the same plane, a motor geared with the pairs of rotary members, and means for giving to the various pump units constituted by said series of rotary members different outflows such that the outflow of each pump unit be greater than that of the pump unit which it feeds according to the losses of the latter.

5. A multiple rotary pump of the class described, comprising a casing having a central passage, a series of pairs of circular rotary members, each pair constituting a pump unit, the members of each pair rotating oppositely to each other, being arranged on opposite sides of said passage into which they project and working in peripheral contact, all being in the same plane, the rotary members constituting two successive pump units having different diameters such that the outflow of each pump unit be greater than that of the pump unit which it feeds according to the losses of the latter, and a motor geared with the pairs of rotary members.

[Claim 6 not printed in the Gazette.]

1,214,301. SHUTTER FOR MOTION-PICTURE-PROJECTING APPARATUS HAVING INTERLOCKING PARTS AND MEANS FOR MAINTAINING THE PARTS IN ASSEMBLED RELATION AND FOR MOUNTING THE SHUTTER ON A PROJECTING APPARATUS. FRANK C. HAMILTON, New York, N. Y., assignor to Eureka Projector Device Co. Inc., New York, N. Y., a Corporation of New York. Filed Sept. 30, 1915. Serial No. 53,235. (Cl. 88—19.3.)

1. In a built-up rotatable shutter having a plurality of assembled and projecting vanes, a hub portion, and an auxiliary hub portion adapted to be adjustably fixed within the first mentioned hub portion, said auxiliary hub portion including a sleeve, said sleeve carrying a spirally adjustable nut on one end, and an adjustable collar fixable adjacent its other end.

2. In a built-up rotatable shutter having a plurality of assembled and projecting vanes, a hub portion, and an auxiliary hub portion adapted to be adjustably fixed within the first mentioned hub portion, said auxiliary hub portion including a sleeve, said sleeve carrying a spirally adjustable nut on one end and an adjustable collar fixable adjacent its other end, and a spring interposed between said shutter and the collar.



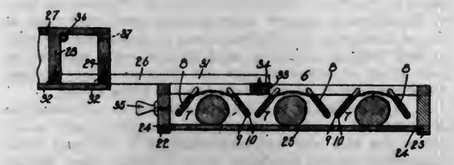
3. In a built-up rotatable shutter having a plurality of assembled and projecting vanes, a hub portion, and an auxiliary hub portion adapted to be adjustably fixed within the first mentioned hub portion, said auxiliary hub portion including a sleeve, said sleeve carryng a sprally adjustable nut on one end, and an adjustable collar fixable adjacent its other end, and a leaf-spring carried by the shutter and straddling said sleeve.

4. In a built-up rotatable shutter having a plurality of assembled and projecting vanes, a hub portion, and an auxiliary hub portion adapted to be adjustably fixed within the first mentioned hub portion, said auxiliary hub portion including a sleeve, and carrying means for clamping the first mentioned hub portion on said sleeve and for clamping said sleeve on the shutter shaft, said means including a resilient tongue extending from and longitudinally of the sleeve.

5. In a built-up rotatable shutter, a body portion provided with a seat, a vane having a shank portion adapted to fit said seat and having also a light-diffusing portion, said light-diffusing portion being thinner than the shank and the junction between the shank and the light-diffusing portion being defined by a shoulder on each side of the vane and a shield on each side of the body portion having a flange engaging over the said shoulder.

[Claim 6 not printed in the Gazette.]

1,214,302. DEVICE FOR PROOFING DOUGH. MALCOLM A. HAMILTON, Waltham, Mass. Filed Feb. 23, 1916. Serial No. 79,909. (Cl. 107—7.)



1. A device of the class described having, in combination, a casing, an invertible frame slidably arranged in said casing, a U-shaped receptacle arranged in said frame, said receptacle being constructed of cloth adapted to hold dough, and a peel detachably secured to said frame above said U-shaped receptacle adapted to catch the dough as it drops from said U-shaped receptacle when said frame is inverted.

2. A device of the class described having in combination, a frame, a plurality of U-shaped receptacles constructed of sheet material each adapted to hold dough, said receptacles being disposed in substantially parallel relation in said frame, the upper edges of said U-shaped receptacles being movable toward each other to wrap said sheet material about the dough contained therein, and means adapted to connect like edges of said U-shaped receptacles together, whereby a simultaneous movement thereof will result.

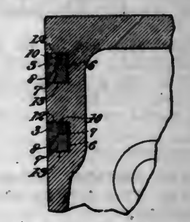
3. A device of the class described having, in combination, an invertible frame, a pair of parallel members mounted in said frame and movable toward and away from each other, a piece of sheet material suspended at opposite edges thereof from said members respectively and constituting a dough receptacle, and means constructed and arranged to catch said dough when said frame is inverted.

4. A device of the class described having, in combination, a frame, a plurality of pairs of parallel members mounted upon said frame, the members constituting each pair being movable toward and away from each other, a piece of sheet material suspended at opposite edges from the parallel members of each pair and constituting a dough receptacle, and means for simultaneously moving the parallel members of each pair toward each other to wrap said material about the dough contained therein.

5. In a device of the class described a frame, a pair of parallel rods each having offset ends pivotally mounted in said frame, and a piece of cloth attached along opposite edges thereof to said rods respectively, said cloth constituting a dough receptacle, said rods being movable toward each other to wrap said cloth about the dough contained therein.

[Claim 6 not printed in the Gazette.]

1,214,303. PISTON-RING. JOHN CHARLES HENDERSON, San Francisco, Cal. Filed Oct. 17, 1914. Serial No. 867,109. (Cl. 121—108.)



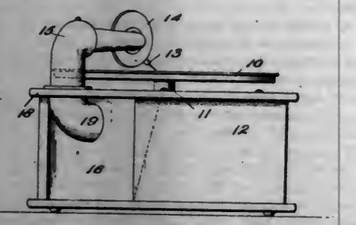
1. A piston ring comprising inner and outer split spring rings having a tendency to expand outwardly, a flange on one edge of said inner ring forming an abutment for the outer ring, an exterior cone-like surface on said inner ring extending from the flange to the opposite edge of the ring, and an interior cone-like surface on the outer ring extending the entire width thereof and contacting with the corresponding cone-like surface on the inner ring, and adapted to slide laterally thereon.

2. A piston ring comprising inner and outer split rings having a spring-like tendency to expand outwardly, a flange on said inner ring forming an abutment for the outer ring, an exterior cone-like surface on the inner ring, and an interior cone-like surface on the outer ring, said outer ring being of less width than the inner ring and terminating even with one edge thereof, the construction being such that said cone-like surfaces constitute the entire bearing surface between said rings so that the outer ring is free to slide laterally on the inner ring.

3. A piston ring comprising inner and outer split rings having a spring like tendency to expand outwardly, a flange on the inner ring, an exterior cone like surface on the inner ring, and an interior cone like surface on the outer ring, said outer ring being of less width than the inner ring and terminating even with one edge thereof, the construction being such that said cone like surfaces constitute the entire bearing surface between said rings so that the outer ring is free to slide laterally on the inner ring, and the area of said outer ring contacting with the cylinder wall being less than the area of the conical bearing surfaces.

4. A split ring comprising inner and outer split spring rings having a tendency to expand outwardly, a flange on one edge of one ring forming an abutment for the other ring, a cone-like surface on the flanged ring extending from said flange to the opposite edge of said ring, and a cone-like surface on the other ring extending the entire width thereof and contacting with the corresponding cone-like surface on the flanged ring, and adapted to slide laterally thereon.

1,214,304. TALKING-MACHINE. HARRY W. HESS, New York, N. Y. Filed Aug. 7, 1914. Serial No. 855,654. (Cl. 274—2.)

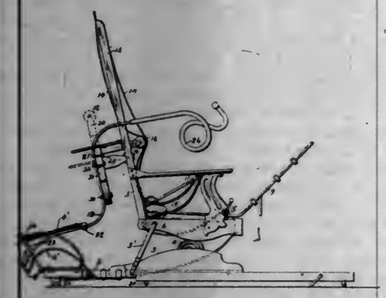


1. In a talking machine, a box for accommodating the usual motor and having a resonant wall so placed as to afford no material obstruction to lateral transmission of sound, and a tone arm carried by said box and so placed as to project sound waves against the outer surface of said wall, substantially as described.

2. In a talking machine, a box for the motor having a resonant wall placed across a recess at one corner thereof, and a tone arm extending downward through the projecting top of said box, so as to project sound waves against the outside of said resonant wall, substantially as described.

3. In a talking machine, a box for the motor having a resonant wall placed across a recess at one corner thereof in an inclined position, and a tone arm projecting downward through the projecting top of the box and having its lower extremity turned toward said wall, substantially as described.

1,214,305. MASSAGE DEVICE. HALBERT L. HOARD, Fort Atkinson, Wis. Filed July 29, 1914. Serial No. 855,788. (Cl. 128—16.)

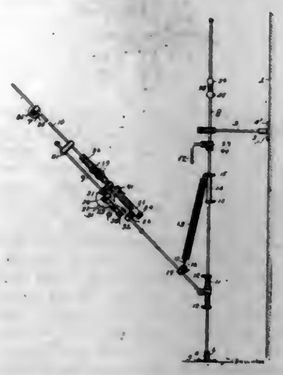


The combination of a seat, a platform, means for connecting said seat to said platform in a substantially rigid position, a flexible fabric connected with the back of said seat, a roller carrier, a roller rotatably mounted on said carrier and bearing on said flexible back, and means for manually transmitting motion to the carrier;—said carrier being adapted to follow the back and simultaneously move the roller over the surface thereof.

1,214,306. MASSAGE DEVICE. HALBERT L. HOARD, Fort Atkinson, Wis. Filed Feb. 27, 1915. Serial No. 10,491. (Cl. 128—16.)

1. In a device of the described class, the combination of a standard, means for connecting said standard with the wall of a building, a roller supporting frame, means for pivotally connecting one end of said frame to said standard, one or more massage rollers revolubly connected to said frame, and means for manually moving the free end of said frame alternately upwardly and downwardly whereby said massage roller or rollers are caused to traverse the body of the operator alternately in opposite directions.

2. In a device of the described class, the combination of a vertical standard, a roller supporting frame, means for pivotally connecting one end of said frame to said standard, means for adjustably supporting said frame at different elevations from said standard, one or more massage rollers revolubly connected to said frame, and means for manually moving the free end of said frame upwardly and downwardly whereby said massage roller or rollers are caused to traverse the body of the operator.



3. In a device of the described class, the combination of a vertical standard, means for connecting said standard to the floor and wall of a building, a roller supporting frame, means for pivotally connecting one end of said frame to said standard, a plurality of rollers revolubly connected to said frame, and means for manually moving the free end of said frame alternately upwardly and downwardly whereby said massage rollers are caused to traverse the body of the operator in opposite directions.

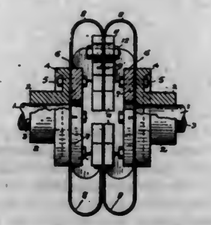
4. In a device of the described class, the combination of a vertical standard adapted to be supported from the wall of a building, a roller supporting frame, means for pivotally connecting one end of said frame to said standard, one or more massage rollers revolubly connected to said frame, and means for manually moving the free end of said frame upwardly and downwardly whereby said massage roller or rollers are caused to traverse the body of the operator, one or more springs, each connected at one of their ends to said frame and at their opposite ends to said vertical standard, said springs being adapted by their recoil to coöperate with the operator in moving said roller supporting frame as the same is being raised.

5. In a device of the described class, the combination of a vertical standard, means for connecting said standard to the floor and wall of a building, a two part roller supporting frame, the parts of said frame being adjustably connected together, means for pivotally connecting one end of said frame to said standard, means for adjustably supporting said frame at different elevations from said standard, a plurality of massage rollers revolubly connected with said frame, one or more springs respectively connected at one of their ends to said frame and at their opposite ends to said vertical standard, and a plurality of handles connected with said frame in convenient position to be grasped by the hands of the operator.

[Claim 6 not printed in the Gazette.]

1,214,307. FLEXIBLE COUPLING. WILLIAM B. HOSFORD, Mishawaka, Ind., assignor to Dodge Manufacturing Company, Mishawaka, Ind., a Corporation of Indiana. Filed Sept. 11, 1916. Serial No. 119,513. (Cl. 64—13.)

1. In flexible couplings, a series of elastic members, terminal connectors to adjacent shaft ends, and means for securing the elastic members between such connectors independently of each other by clamping their ends to the connectors and providing coöperating abutting means adapted to engage the ends of the elastic members and prevent their twisting.



2. A flexible coupling comprising separate terminal members for each shaft end, radially placed elastic connectors adapted to reach across the space between such members, and means for securing the connectors to said members by clamping them while their ends engage abutments on said members whereby the shafts will transmit rotative effort across the connectors when in or out of alinement with each other.

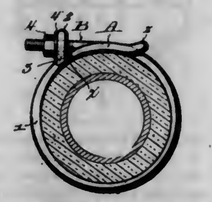
3. In flexible couplings, shafts, terminal members secured thereon to rotate therewith, a series of independently supported connectors having elastic portions attached to the terminal members with the elastic portion nearer the axis of rotation than their points of attachment to the terminal members, said terminal members cooperating with the ends of the connectors for holding them against displacement.

4. In flexible couplings, shaft end fastenings provided with recesses, separate elastic connectors having a recurving portion and projections formed at the tips thereof said projections adapted to enter the recesses, and means for supporting the connectors adjacent such projections.

5. In flexible couplings, standard flange coupling parts adapted to be directly connected to each other when a rigid coupling is desired, flexible connectors placed therebetween, clamping members adapted to hold the connectors to the parts when a flexible coupling is required, the ends of the connectors and the coupling parts having cooperating means adapted to prevent the connectors being displaced.

[Claims 6 and 7 not printed in the Gazette.]

1,214,308. COUPLING MEMBER. CLEMENT W. INGLIS, CHARLES W. INGLIS, and BRUCE K. INGLIS, Milwaukee, Wis. Filed Apr. 21, 1916. Serial No. 92,584. (Cl. 137—28.)



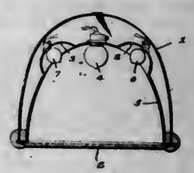
1. A hose coupling comprising a wire hoop having overlapped terminals, one of which is in the form of a looped tongue adapted to straddle the other terminal, the extreme end of the tongue being provided with an offset bow through which the other terminal of the hoop projects, and means engaging said terminal and the tongue bow for contracting the hoop.

2. A hose coupling comprising a wire hoop having overlapped terminals, one of which is in the form of a looped tongue adapted to straddle the other terminal, the extreme end of the tongue being provided with an offset bow through which the other terminal of the hoop projects, the last mentioned terminal being provided with threads, and a nut engageable with the threads adapted to exert pressure upon the bow, whereby upon a draw of the nut in one direction the body of the hoop and its extended tongue portion will be contracted.

3. A hose coupling comprising a wire hoop having a terminal loop at one of its ends, the other end being formed with a straight section which is fitted between the loop stretches, an upstanding bow forming part of the tongue through which the straight section of the hoop extends, and a nut in threaded engagement with the aforesaid end adapted to impinge against the bow.

4. A hose coupling comprising a wire hoop including sections having adjacent ends bent to form interlocking eye portions, the other end of one section being bent to form a terminal loop adapted to straddle the other end of the other section, the extreme end of said loop being provided with an offset bow through which the last said other end projects, and means engaging said other end and the bow for contracting the hoop.

1,214,309. HEADLIGHT. EDWARD L. JILLSON and WILLARD R. JILLSON, Jr., Syracuse, N. Y., assignors to Royal C. Colman, New York, N. Y. Filed July 26, 1913. Serial No. 781,361. (Cl. 240—7.)



1. The combination of a head light having a main reflector, the reflector having a facet above the focal axis of the reflector, and arranged with its focal axis at an angle to the focal axis of the reflector and hence constituting an additional reflector, a main lamp arranged in the focal axis of the main reflector and a supplemental lamp arranged in the focal axis of the facet, and means for controlling the lighting of the lamps, substantially as and for the purpose set forth.

2. The combination of a head light having a reflector formed with facets on opposite sides of the focal axis of the reflector and arranged with their focal axes at an angle to the focal axis of the reflector, a main lamp arranged in the focal axis of the reflector and supplemental lamps arranged in the focal axes of the facets, and means for controlling the lighting of the lamps, substantially as and for the purpose described.

3. The combination of a head light having a main reflector provided with facets on opposite sides of and above the focal axis of the reflector, each facet being arranged with its focal axis at an angle to the focal axis of main reflector and thereby constituting an additional reflector, a main lamp arranged in the focal axis of the main reflector, and supplemental lamps arranged in the focal axes of said facets, and means for controlling the lighting of the lamps, substantially as and for the purpose specified.

4. The combination with the steering means of a motor vehicle; of a head light having a main reflector provided with additional reflectors on opposite sides of the focal axis of the main reflector, the additional reflector being arranged with their focal axes at an angle to the focal axis of the main reflector in order to direct the light to the right and left respectively, electric lamps in the focal axes of the reflectors respectively, and an electric lighting circuit having a switch therein including two members, one being carried by a movable part of the steering means and the other being fixed and provided with three contact surfaces, one leg of the circuit being connected to one of the members of the switch and the other leg being divided into three branches in which the lamps are connected, the branches being connected respectively to said contact surfaces, substantially as and for the purpose described.

5. The combination of a head light having a main reflector, the reflector having a facet above the local axis of the reflector, a main lamp arranged in the focal axis of

the main reflector and a supplemental lamp arranged in the focal axis of the facet, and means for controlling the lighting of the lamps.

[Claims 6 to 10 not printed in the Gazette.]

1,214,310. FOUNTAIN-PEN. STORMONT JOSSELYN, Atlantic, Mass., assignor of one-half to S. Chilton Crocker, Boston, Mass. Filed Sept. 18, 1916. Serial No. 120,607. (Cl. 120—46.)

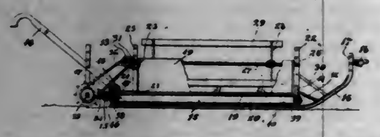


1. In a combination with the barrel of a fountain pen having a collapsible sack therein, a presser-plate arranged to engage said sack, a lever pivotally mounted in said barrel and arranged to engage said plate to collapse the sack when swung from its normal position, and a nut threaded on the end of said lever and arranged to be screwed into locking engagement with the end of the barrel, to lock the lever in inoperative position.

2. In combination with a fountain pen barrel having a longitudinal slot extending continuously from an intermediate point in its side wall into the end wall thereof, a lever pivotally mounted in said slot and having one arm thereof provided with an offset portion, arranged to extend into the slotted portion of said end wall, and a threaded extension, projecting beyond said end wall of the barrel, a nut threaded on said extension and adapted to be screwed against said end wall, to lock said lever in inoperative position, and a collapsible sack in the barrel having a presser-plate arranged to be engaged by the opposite arm of said lever.

3. In combination with a fountain-pen barrel having a slot in its wall extending longitudinally thereof from its closed end, a lever pivotally connected to the barrel to swing in said slot, and, in the normal position thereof, to lie with its outer surface flush with the surface of the barrel, one arm of said lever having a threaded end-portion extending beyond the end of the barrel in central alinement therewith, when the lever is in said normal position, a nut threaded on said end-portion, adapted to be clamped against the end of the barrel, to lock said lever in said position, and constructed to provide a continuous surface with the adjacent portion of the barrel, and a collapsible sack in the barrel having a presser-plate arranged to be engaged by the opposite arm of the lever.

1,214,311. POTATO-BUG DESTROYER. ALBERT JULIEN, Copas, Minn. Filed Oct. 7, 1916. Serial No. 124,356. (Cl. 43—1.)



In a potato bug destroyer, a flat base member adapted to slide over the ground and having upturned side flanges, front and rear rollers journaled in said side flanges, an endless apron guided over the rollers, forwardly diverging reel carrying shafts supported above the apron, a pressure roller contacting with that portion of the apron which passes over the rearward guide roller, a rotary brush engaging the rearward portion of the apron for cleaning the same, intermeshing gears on the rearward guide roller and on the pressure roller, intermeshing gears on the rearward guide roller and on the rotary brush, a rotary ground engaging member, and means for transmitting motion from the latter to the rotary brush and to the reel carrying shafts.

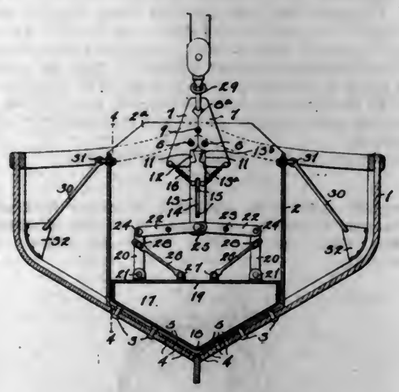
1,214,312. BUTTON-FASTENER. FRED A. KAEDING, Kramer, N. D. Filed Sept. 4, 1915. Serial No. 49,072. (Cl. 24—162.)



1. A device of the class described comprising a body provided with a button and having guiding flanges thereon, a resilient plate slidably mounted between the flanges and the body, a U-shaped pin pivotally connected to and normally lying along the outside edges of the body in substantially the same plane, eyes formed on opposite sides of the body in substantially the same plane as the said body to receive the points of the pin and a catch carried by the plate for retaining the pins within the eyes.

2. A device of the class described comprising a body provided with a button and having guiding flanges thereon, a resilient plate slidably mounted upon the flanges and the body, a U-shaped pin pivotally connected to and normally lying along the outside edges of the body in substantially the same plane, eyes formed on opposite sides of the body in substantially the same plane with the said body to receive the points of the pin and a hook shaped catch carried by the plate and overlapping the end of the body when in engagement therewith.

1,214,313. LIFE-BOAT HOOK. VICTOR REGINALD KALBFLEISCH, Sault Ste. Marie, Mich., assignor of one-third to Maitland Gilbert Griffis, Sault Ste. Marie, Mich. Filed Oct. 10, 1914, Serial No. 866,065. Renewed Aug. 22, 1916. Serial No. 116,390. (Cl. 9—23.)



1. A device of the character described including a hoisting hook, a boat, hoisting hook engaging means mounted upon the boat, locking means for holding the hoisting hook engaging means in operative position, and means for automatically and temporarily moving the hoisting hook engaging means into inoperative position when the boat is launched, the said hoisting hook engaging means automatically returning to operative position after a period of time.

2. A device of the character described including a hoisting hook, a boat, hoisting hook engaging means upon the boat, locking means for holding the hoisting hook engaging means in operative position, and means actuated by engagement of the boat with the water when the boat is launched for automatically and temporarily moving the hoisting hook engaging means into inoperative position when the boat is launched, the said hoisting hook engaging means automatically returning to operative position after a period of time.

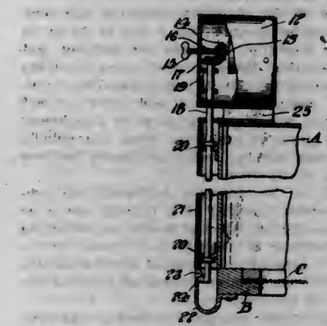
3. A device of the character described including a hoisting hook, a boat, hoisting hook engaging means upon the boat, a float, means for mounting the float upon the boat so that it will be engaged by the water and temporarily moved thereby when the boat is launched, afterward returning to its normal position, and an operative connection between the float and the hoisting hook engaging means for releasing the hoisting hook when the boat is launched and the float temporarily moved, the return of the float to its normal position moving the hoisting hook engaging means into operative position.

4. A device of the character described including a hoisting hook, a boat, hoisting hook engaging means upon the boat and comprising a pair of correspondingly formed pivotally mounted complemental sections, each of the complemental sections being correspondingly notched so as to form a recess between them, a latch bar adapted to be forced into said recess to normally hold the complemental sections in engagement with the hoisting hook, a float, means for mounting the float upon the boat so that it will engage the water and be moved thereby when the boat is launched, and an operative connection between the float and latch bar so that the hoisting hook will be released from the hoisting hook engaging means when the boat is launched.

5. A device of the character described including a hoisting hook, a boat, hoisting hook engaging means upon the boat and comprising a pair of correspondingly formed pivotally mounted complemental sections adapted to normally engage the hoisting hook, each of said sections being correspondingly notched to provide a recess between them, a latch bar adapted to be forced into said recess to normally hold the hoisting hook engaging means in operative position, a spring connected to each complemental section of the hook engaging means and normally tending to draw the said sections into inoperative position, a float, means for mounting the float upon the boat so that it will engage the water and be moved thereby when the boat is launched, and an operative connection between the latch bar and the float so that the latch bar will be withdrawn from the recess and the hoisting hook released from the hoisting hook engaging means when the boat is launched.

[Claims 6 to 8 not printed in the Gazette.]

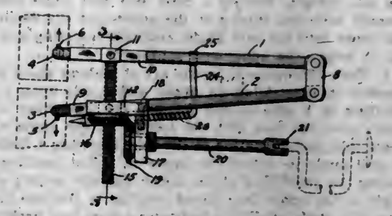
1,214,314. ANIMAL-FEEDER. HARUMICHI KAMADA and TOHORU ISHIZUKA, Sacramento, Cal. Filed May 16, 1916. Serial No. 97,965. (Cl. 119—56.)



1. A feeder comprising a container, a door hinged thereto, a keeper on said door, a rotatable shaft having a segment for locking engagement with the keeper and supported by the container, means for actuating the shaft, chutes located interiorly of the container and opening through the ends thereof and gates on the door for normally closing the ends of the chutes.

2. A feeder comprising a container, a door hinged thereto, a keeper on said door, a shaft journaled upon the container and having a segment for locking engagement with the keeper, means for actuating the shaft, chutes located interiorly of the container and opening through the ends thereof, gates on the door for normally closing the ends of the chutes, and a housing containing the shaft and supported by the container.

1,214,315. EXPANDING-TOOL FOR WHEEL-RIMS. HENRY KAPLAN, San Francisco, Cal., assignor to Long Manufacturing Company, San Francisco, Cal., a Corporation of California. Filed Mar. 9, 1915, Serial No. 13,261. Renewed May 17, 1916. Serial No. 98,210. (Cl. 157—1.)

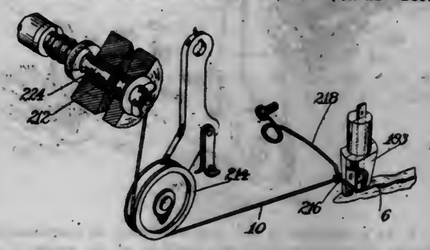


1. An expanding tool for wheel rims comprising a pair of arms pivoted together, a screw pivotally connected with one of said arms and extending through a nut bearing on a block pivotally connected with the other arm, and a sliding bar for opening a lock on the wheel rim and supported by one of said arms.

2. An expanding tool for wheel rims comprising a pair of arms pivoted together, a screw pivoted to one of said arms and extending through a bevel gear nut bearing on a block pivoted to the other arm, a second bevel gear in mesh with the first bevel gear, and manual means for rotating said gears and expanding or contracting the tool.

3. An expanding tool for wheel rims comprising a pair of arms pivoted together, a screw pivotally connected with one of said arms, a nut through which said screw extends, a pivoted block on the other arm against which said nut bears, and a rod supported adjacent one of said arms and having a clamp to engage one of the arms on one end thereof and having the other end shaped for disengaging the lock on a wheel rim.

1,214,316. PROCESS OF MAKING SHOES. WILLIAM J. KELLY, Reading, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 6, 1915. Serial No. 19,490. (Cl. 12—145.)



1. That improvement in the art of making shoes which consists in assembling upon a last an upper and a sole, effecting a step-by-step lasting operation by successively engaging said upper by a lasting tool, over the upper engaging surface of which a cord is laid, and forcing said upper into lasted position upon said sole, at the same time forcing said cord into upper securing position, and then inserting a fastening to secure said cord and said upper in the position to which they have been brought during said stretching operation.

2. That improvement in the art of making shoes which consists in assembling upon a last an upper and a sole, effecting a step-by-step lasting operation by successively

engaging said upper by means of a lasting tool, over the upper engaging end of which a cord is laid, and stretching said upper over the last into lasted position upon said sole, whereby said cord is brought into upper securing position simultaneously with the upper stretching operation, and then permanently securing said upper in lasted position by a staple inserted through said upper into said sole in position to hold said cord.

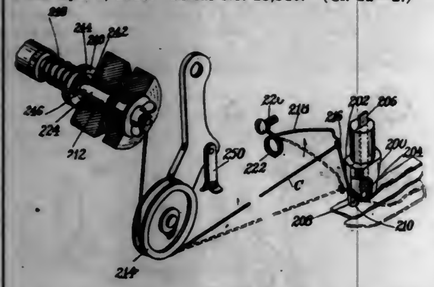
3. That improvement in the art of making shoes which consists in assembling upon a last an upper and a sole, wiping the upper down the side of the last, and forcing the angle of the upper into the angle between the last and the sole margin, forcing a cord into said angle simultaneously with the wiping of the upper and the forcing of the upper into the said angle, and then inserting a fastening to secure the upper and said cord.

4. That improvement in the art of making shoes which consists in assembling an upper and a sole upon a last, effecting in a step-by-step manner the stretching of the upper over the last and the forcing of the angle of the upper into lasted relation to the sole, inserting a fastening in said angle to secure the upper in lasted position, and during the stretching of the upper and the forcing of the angle of the upper into lasted relation to the sole forcing into said angle auxiliary fastening means into position to cooperate with said first-mentioned fastening means.

5. That improvement in the art of making shoes which consists in assembling an upper and a sole upon a last, turning out the margin of the upper, engaging said upper by means of a lasting tool, wiping it down the side of the last and forcing the angle of the upper into the angle between the last and the sole margin, and leading a cord across the end of said lasting tool before said wiping and stretching operations in such relation to said tool that said cord is forced into said angle simultaneously with the wiping of the upper and the forcing of the angle of the upper into the angle between the last and the sole margin, then securing the upper in lasted position by fastening means inserted in said angle in position to secure said cord in said angle.

[Claims 6 and 7 not printed in the Gazette.]

1,214,317. LASTING-MACHINE. WILLIAM J. KELLY, Reading, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 1, 1915. Serial No. 18,540. (Cl. 12—2.)



1. In a machine of the class described, in combination, means for forcing successive portions of the angle of an upper into lasted relation to a sole, means for inserting fastenings in the angle of the upper to secure the upper in lasted position, and means for guiding auxiliary upper fastening means into position to be secured in said angle by said fastenings.

2. In a machine of the class described, in combination, means for forcing successive portions of an upper into lasted relation to a sole, means for forcing a cord into upper securing position, and means for inserting upper securing fastenings in such relation to the cord as to prevent the heads of the fastenings from pulling through the upper, said means including a tool over the upper engaging end of which the cord is laid.

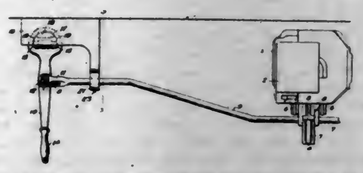
3. In a machine of the class described, a lasting tool, and a work support relatively movable to effect an upper stretching and wiping operation to force the angle of the upper into lasted position, means for inserting fastenings in the angle of the upper to secure the upper in lasted position, and means for guiding auxiliary fastening means into upper securing position in said angle.

4. In a machine of the class described, the combination with a lasting tool and a work-support, normally in separated relation, and means for effecting a relative movement of approach of said tool and said support to cause said tool to effect a lasting operation, of means for guiding a continuous upper fastening means through said tool into upper fastening position, and a take-up operating upon said fastening means during the relative movements of said tool and said work support.

5. In a machine of the class described, a lasting tool and a work support relatively movable to effect a lasting operation, and means for guiding a fastening into position to secure the upper in lasted condition constructed and arranged to guide auxiliary fastening means into position to be secured by said first-mentioned fastening means.

[Claims 6 to 16 not printed in the Gazette.]

1,214,318. COUPLING-CENTERING MECHANISM. WILLIAM KELSO, Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 17, 1916. Serial No. 115,470. (Cl. 213—59.)



1. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally, said means involving a fulcrum member, and a lever having a plurality of fulcrum points either of which is adapted to coöperate with said fulcrum member, the fulcrum member being interposed between the fulcrum points of the lever.

2. In mechanism of the character indicated, the combination with a coupler mounted on a car so as to be capable of moving laterally, of means for shifting said coupler laterally in either direction, said means involving a lever having an operating handle and a plurality of fulcrum points, and means connecting said lever to said coupler, said fulcrum points and the point of attachment of said connecting means to said lever being triangularly disposed, the fulcrum member being interposed between the fulcrum points of the lever.

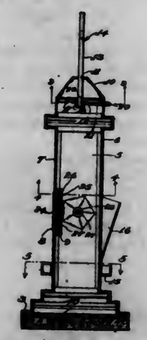
3. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for unlocking said coupler and shifting it laterally, said means involving a lever which is adapted to be rotated about three distinct axes, and a fulcrum member interposed between two of the axial points of the lever.

4. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally, said means involving a fulcrum member affording a plurality of fulcra for an operating lever, and an operating lever adapted to fulcrum upon either of said fulcra, said operating lever having an opening, and said fulcrum member having a projection extending into said opening.

5. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, said coupler involving a knuckle and a lock therefor, of means for moving said lock to unlocked position and for shifting said coupler laterally, said means involving a fulcrum member, a lever coöperating with said fulcrum member, and means operatively connecting said lever and coupler and adapted to actuate said coupler lock, said lever being rotatable in one direction to induce an unlocking movement of said lock, and being rotatable in another direction to effect a lateral shifting of said coupler, said shifting being effected independently of an unlocking movement of said lever.

[Claims 6 to 10 not printed in the Gazette.]

1,214,319. MONUMENT. WALTER J. KENNEDY and GEORGE YELLE, Indian Orchard, Mass. Filed Oct. 2, 1915. Serial No. 53,806. (Cl. 40—68.)



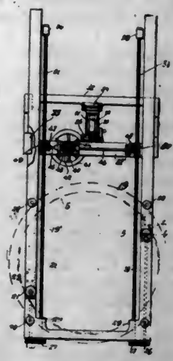
1. A monument comprising a base formed with a plurality of strips of metal secured at their edges by angle bars, a hollow shaft extending upwardly from the base consisting of sheets of metal secured at their edges by angle bars, the front wall of the hollow shaft provided with a transparent window, a transversely extending shaft rotatable immediately in the rear of the window, slidable hubs on said rotary shaft, adjustable arms on the hubs, and bars adjustably connected at the ends of the arms and adapted to be adjustable with relation to each other to fit cards of different sizes and a cap at the upper end of the shaft.

2. A monument comprising a base, a hollow shaft extending upwardly from the base, the front wall of said shaft being provided with a transparent window, a transversely extending shaft rotatable immediately in the rear of the window, slidable hubs on said rotary shaft, adjustable arms on the hubs and bars connected at the ends of the arms and adapted to be adjusted with relation to each other to fit cards of varying sizes.

1,214,320. STONE-TOOL. CHARLES KILBURN, Cincinnati, Ohio. Filed Jan. 13, 1913. Serial No. 741,623. (Cl. 125—6.)

1. A device of the character described comprising a standard open at the center thereof, a carriage open at the center thereof, adapted to be adjusted perpendicularly on said standard, a circular gear rack forming part of said carriage and open at the center whereby a column to be surfaced may be passed through the entire device, and means on said carriage for supporting a hammer tool, means on the carriage for adjusting the hammer whereby the tool is operated around the surface of the column inserted through the device.

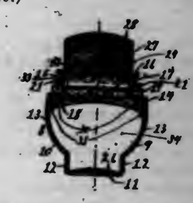
2. In a stone surfacing machine, the combination with a standard; of a carriage comprising bearings allowing for its movement in a plane parallel with the length of said standard and a circular gear rack open at the center thereof after being properly mounted on said standard, a rotating carrier open at the center after being mounted on said carriage, and being provided with pinion gears for coöperation with the said circular gear rack of said carriage, a tool beam bracket slidable along the entire length of said rotating carrier, a swivel beam holder on said tool beam bracket being adapted to swing in a plane transverse the length of said rotatable carrier and a tool beam slidable in said swivel beam holder in the line of its own length.



3. A device of the character described comprising a standard, a truck, a carriage adapted to be adjusted perpendicularly on said standard, said carriage comprising a circular gear rack mounted on slidable bearings, said slidable bearings adapted to engage the standard, a rotating carrier, pinion gears on said rotating carrier adapted to mesh with said circular gear rack, rollers on said rotating carrier adapted to engage the circular gear rack, a tool beam bracket slidably mounted on said rotatable carrier, a horizontal tool beam rotatably mounted in said bracket and means for rotating said rotating carrier on said circular gear rack.

4. In a stone surfacing machine the combination with a standard, of a carriage, means for adjusting said carriage in a line parallel to the length of said standard, a carrier rotatable in a plane parallel to the length of said standard, independent means for rotating said carrier on said carriage, a tool beam bracket adjustable longitudinally on said carrier, independent means for accomplishing said adjustment, a tool beam holder pivotally mounted on said tool beam bracket and adapted to swing in a plane transverse of the length of said carrier, a tool beam slidable in the line of its own length in said tool beam holder, means for holding said tool beam holder rigid against rotation in said tool beam bracket and means for slidably operating said tool beam in said tool beam holder.

1,214,321. PNEUMATIC TIRE. WILLARD E. KING, Topeka, Kans. Filed Feb. 25, 1915. Serial No. 10,573. (Cl. 152—10.)



1. In pneumatic tires, the combination of rigid base and side walls, a flexible tread member, said parts forming an annular air chamber, bridge bolts spanning said side walls and the tread member being formed with transverse openings for the accommodation of said bridge bolts, said openings being larger in cross section than the bridge bolts to permit radial and longitudinal action of each portion of the tread; said side walls and tread member being formed with co-acting shoulders to limit the out-

ward radial movement of the tread member; and said tread member being also formed with soft rubber annular inwardly extending flanges bearing against the respective side walls and with a transversely flexible element between the soft rubber flanges and the tread portion which permits the inward radial action of the tread under stress of the load and against the air pressure within the tire, without dislodging the soft rubber flanges from their seats.

2. In pneumatic tires, the combination of a rigid base and side walls, said side walls being formed with inwardly facing annular shoulders, and a flexible tread member fitted between the side walls and spaced apart from the base and formed with transversely flexible laterally extending annular shoulders bearing against the respective side wall shoulders and formed also with soft rubber annular inwardly extending flanges along the edges of the respective tread-member shoulders and bearing against the respective side walls; said tire base, side walls, and tread member forming an annular air chamber, and said soft rubber flanges forming under air pressure within said chamber an air tight seal between the tread member and the side walls and forming elastic and flexible connections between the side walls and the respective shoulder portions of the tread member.

3. In pneumatic tires, the combination of a steel channel forming the base and side walls of a pneumatic tire, said side walls being formed with inwardly facing annular shoulders opposite each other along their periphery, bridge bolts spanning said side walls, and a flexible tread member formed with transversely flexible laterally extending outwardly facing shoulder portions bearing against the respective side wall shoulders, said steel channel and said tread member forming an annular air chamber, and said tread shoulders being formed with soft rubber fillets bearing against the respectively adjacent side walls, the transverse flexing of the tread shoulders permitting inward radial movement of the tread without dislodging said fillets, and said fillets forming an air tight elastic and flexible connection between the side walls and the tread shoulders.

4. The combination of a steel channel forming the base and side walls of a pneumatic tire, said side walls being formed with inwardly facing annular shoulders, and a flexible tread member formed with transversely flexible laterally extending outwardly facing annular shoulder portions bearing against the respective side wall shoulders, said steel channel and said tread member forming an annular air chamber, and said tread shoulders being also formed with inwardly extending annular soft rubber fillets bearing against the respectively adjacent side walls, the transverse flexing of the tread shoulders permitting inward radial movement of the tread portion and said fillets forming air tight and elastic and flexible connections between the tread shoulders and the respective side walls.

5. The combination of a steel channel forming the base and side walls of a pneumatic tire, a flexible tread member, said channel and tread member forming an annular air chamber, means for limiting the radially outward action of the tread member, soft rubber annular fillets bearing against the respective side walls, and an annular transversely flexible element connecting the tread with the respective fillets inside limiting means, the flexing of said flexible element permitting inward radial movement of the tread and said fillets forming air tight elastic and flexible annular connections between said flexible element and the respective side walls.

[Claim 6 not printed in the Gazette.]

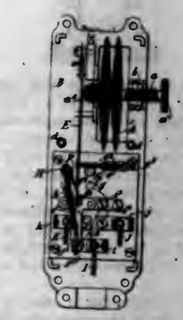
1,214,322. ENGINE ATTACHMENT. THOMAS LOUIS KIRBY, Hartsville, Tenn. Filed Aug. 17, 1915. Serial No. 45,938. (Cl. 137—5.)

A valve of the character specified, adapted to be arranged between the carbureter, and the engine to which the carbureter is connected, and comprising a casing having means for engaging the manifold, said casing having a transverse opening near the end remote from the manifold engaging means, a slide valve movable through the slot transversely of the passage of the casing, a spring in connection with the valve for normally holding the valve in register with the passage through the casing, manually controlled means for moving the slide valve in the opposite direction, and a cap covering the outer end of the



casing and having an opening provided with a covering of perforate material, said casing being internally enlarged beyond the slide valve, and a coil spring between the valve and the cap for holding the valve to its seat, said casing having a lateral arm provided with an opening for guiding the valve.

1,214,323. CONTROLLER FOR HEATING SYSTEMS. FREDERICK T. KITCHEN, West New Brighton, N. Y., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Oct. 3, 1913. Serial No. 793,167. (Cl. 200—32.)



1. An automatic switch comprising a pivoted switch member, a terminal, means for interposing a frictional resistance to the initial movement of said switch member, a spring operatively connected to said switch member at one side of its pivot and to a fixed part of the device on the other side of said pivot, elastic thermostatic actuating means for said switch member comprising an expansible vessel having volatile fluid therein and affected by the temperature of the surrounding atmosphere, said vessel adapted to be restrained in its movement by said initial resistance whereby upon the completion of said initial movement, said switch member is moved by said actuating means with a sudden movement to its opposite position.

2. An automatic switch comprising a pivoted switch member, a pair of contacts, means for interposing a frictional resistance to the initial movement of said switch member, a spring operatively connected to said switch member at one side of its pivot and to a fixed part of the device on the other side of said pivot, elastic thermostatic actuating means for said switch member comprising an expansible vessel having volatile fluid therein and affected by the temperature of the surrounding atmosphere, said vessel adapted to be placed under compression in its movement by said initial resistance, a connection between said actuating means and said switch member comprising a bar spring mounted in operative relation to said actuating means whereby upon the completion of said initial movement, said switch member is moved by said actuating means with a sudden movement to the other contact.

3. An automatic switch comprising a pivoted switch member, a thermostatic actuating device for said switch member comprising an expansible vessel having a volatile fluid therein and affected by the temperature of the surrounding atmosphere, an operating bar for said switch member movably mounted adjacent said actuating device, and spring means for holding said bar and vessel in operative relation, a connection between said bar and said switch member adapted to amplify the movement of said bar, and a spring operatively connected to said switch member at one side of its pivot and to a fixed part at the other side of the pivot.

4. An automatic switch comprising a pivoted switch member, a pair of terminals, a thermostatic actuating device for said switch member comprising an expansible vessel having a volatile fluid therein and affected by the temperature of the surrounding atmosphere, an operating bar for said switch member movably mounted adjacent said actuating device, and spring means for holding said bar and vessel in operative relation, a connection between said bar and said switch member adapted to amplify the movement of said bar, a spring operatively connected to said switch member at one side of its pivot and to a fixed part at the other side of the pivot, and said switch member having frictional engagement with said terminals whereby a frictional resistance to the initial movement of said switch member exists.

5. An automatic controlling device for a switch comprising a movable operating bar, a pivoted spring switch member operatively connected to said bar, a terminal for said switch member, said switch member having sliding contact with said terminal and being adapted to bear with spring pressure thereon, whereby a frictional resistance to the initial movement of said switch member out of contact with said terminal is produced, an elastic thermostatic motor for moving said bar in one direction, and a spring for holding said bar in operating relation to said motor and moving it in the other direction, said motor and said spring each adapted to store up power when moving said switch member in its said initial movement under their respective powers.

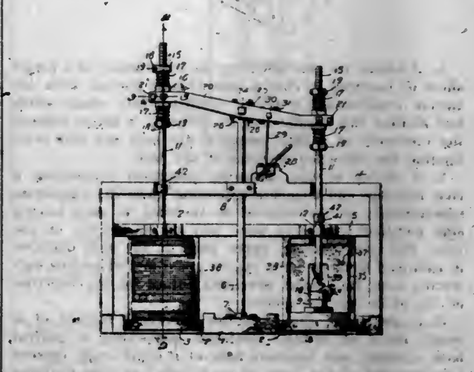
[Claims 6 to 11 not printed in the Gazette.]

1,214,324. NON-REFILLABLE BOTTLE. HENRY KRAUT, Summit, N. J. Filed Aug. 1, 1916. Serial No. 112,568. (Cl. 215—62.)



A bottle, a cylindrical cage in the neck of the bottle and provided in the base with an opening and provided with openings in the upper end, said cage also having a semi-annular opening in one side, and a hollow cylindrical valve in and of less diameter than the cage, closed at its lower end and opened at its upper end, said valve being provided with radially arranged guide spurs which bear against the wall of the bore of the neck, the valve being further provided at its upper end with a semi-annular flange the diameter of which is equal to that of the cage and the ends of which are slidably arranged on the sides of the side opening in the cage, said valve being removed from the cage through the semi-annular side opening of the latter when the cage is removed from the bottle's neck.

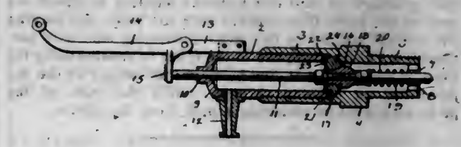
1,214,325. ADJUSTABLE CUSHIONING MEANS FOR LEVER-ACTUATED MECHANISM. RUDOLPH R. KUSS, Boise, Idaho. Filed June 7, 1916. Serial No. 102,303. (Cl. 74—5.)



1. In combination with a reciprocating stem and the means for reciprocating the same, of a sleeve threaded onto the stem and having means for clamping the sleeve on the stem, the sleeve having stops at its ends, a bushing slidable on the sleeve between the stops, and springs at the ends of the bushing and between the same and the stops.

2. In combination with a reciprocating stem and the means for reciprocating the same, of a yielding connection between the stem and the said means and comprising a sleeve adjustable on the stem and having means for securing the same in adjusted position, said sleeve having at each end a stop and a bushing between the stops, and a spring between each end of the bushing and the adjacent stop.

1,214,326. GAGE-COCK. VICTOR A. LANG, North Fort Worth, Tex. Filed Apr. 1, 1916. Serial No. 88,294. (Cl. 137—138.)



A gage cock comprising a sectional casing, a reversible valve seat held between the sections of said casing, a valve rod extending through one of the sections of said casing and having its inner end screw-threaded, a shoulder formed on said rod adjacent the screw-threaded end and having a beveled face, a valve head having a central screw-threaded bore having each end flared and beveled to engage the beveled face of the shoulder when threaded to the valve stem, said valve head having valve seat engaging faces, a perforated wall closing one end of one of the casings, a valve rod slidable in said wall and having one end threaded into the valve head, a shoulder formed on the last mentioned valve rod and having a beveled face to coöperate with the beveled face of the central bore of the valve head, a spring engaging the wall and the last mentioned shoulder to seat the valve head against the valve seat, and means for operating the first mentioned valve rod.

1,214,327. TOOTHPICK-HOLDER. JOSEPH G. LANNOYE, Detroit, Mich. Filed Mar. 10, 1916. Serial No. 83,211. (Cl. 206—28.)



1. A holder for toothpicks or the like formed of a single sheet of material having a central base portion with upturned longitudinal edges of comparatively small width and similar end members of an inverted V shape extending upwardly at a right angle to the said end and overlapping the upturned portions of the base.

2. A device of the character described comprising a base member, end members extending upwardly therefrom substantially of the form of an inverted V, each having side portions extending part way of the length of the base, the two adjacent upper ends of the side portions of each end member being spaced apart and extending outwardly from each other providing guides for the insertion of the picks into the holder.

3. A device of the character described formed of a single sheet of suitable material comprising a central base member, end members bent at a right angle thereto substantially of the form of an inverted V, side portions on said end members extending over the base less than half the length thereof providing openings between the side portions on opposite ends, the side portions being spaced at the top to allow removal of the picks from the device.

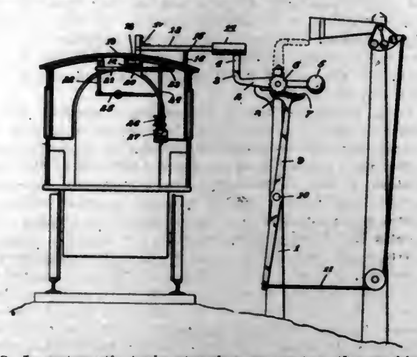
4. A device of the character described comprising a base or support for the picks, end members extending upwardly therefrom at each end substantially of the form of an inverted V, side portions on each end piece, the side members on one piece extending toward the other side portions on the other piece, and being spaced therefrom exposing the central portion of the picks, the side portions at the top being formed to provide an opening at each end to allow removal of the picks therefrom, and a guide piece on each side portion extending outwardly therefrom substantially as described.

5. A device of the character described formed of sheet metal comprising a base or supporting member for the picks having longitudinal upturned side flanges, integral end portions substantially of the form of an inverted V, side members on said end portions adapted to shield the ends of the picks from contact with the hand, and leaving the central portion of the picks uncovered, said side portions lying at an angle one to the other in substantially the form of an inverted V, and being out of contact at the top providing an opening through which the ends of the picks may pass in removing a pick from the device.

1,214,328. AUTOMATIC TRAIN-STOPPING APPARATUS. FREDERICK E. LAPIERRE, Cardiff, Alberta, Canada. Filed Apr. 25, 1916. Serial No. 93,564. (Cl. 246—59.)

1. In train stopping apparatus, the combination with a controlling element of the motor car, of a vertical shaft, an arm pivoted to said shaft adjacent to the upper end thereof, a strip disposed in proximity to said arm and formed with a notch adapted to receive the arm to hold the same in normal position, means for lifting said arm out of said notch, means for rotating said shaft when said arm is moved out of the notch, and connections between said shaft and the controlling element of the motor car whereby said element may be actuated in the rotation of said shaft.

2. In automatic train stopping apparatus, the combination with a controlling element of the motor car, of a vertical shaft capable of rotation, connections between said shaft and the controlling element of the motor car whereby said element may be actuated in the rotation of said shaft, an arm pivoted to said shaft and disposed at right angles thereto, means holding said arm in normal position, means for moving said arm out of normal position, and means for rotating said shaft upon the movement of said arm out of normal position.



3. In automatic train stopping apparatus, the combination with a controlling element of the motor car, of a vertical shaft capable of rotation, connections between said shaft and the controlling element of the motor car whereby said element may be actuated in the rotation of said shaft, an arm pivoted to said shaft and disposed at right angles thereto, means holding said arm in normal position, means for moving said arm out of normal position, an arm secured to said shaft and projecting outwardly therefrom at right angles thereto, and a spring connected to said last arm and adapted to swing the latter to rotate said shaft when the first-mentioned arm is moved out of normal position.

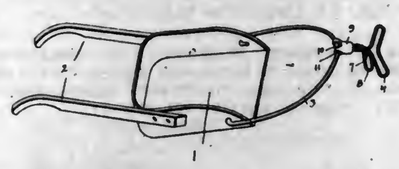
1,214,329. NON-REFILLABLE BOTTLE. SIMON LAZARUS, Louisville, Ky. Filed Sept. 27, 1915. Serial No. 52,768. (Cl. 215—69.)



The combination with a bottle having a reduced neck, of a thimble seated in said neck whose lower end is contracted, forming a seat, a valve shaped to seat within the contracted end of said thimble, a rod screwed into said valve and upstanding therefrom, an open disk threaded upon the free end of said rod and holding the valve centered relative to the seat, a rod threaded into and depending from said seat and a cross arm carried by the lower end of said last mentioned rod.

1,214,330. CLEVIS FOR ROAD-SCRAPERS. SHUFFORD C. LEDBETTER, Edneyville, N. C. Filed May 2, 1916. Serial No. 94,906. (Cl. 97—27.)

A clevis of the class described comprising a bar of material bent to form a V-shaped slot, the ends of said bar being intertwisted, a stem formed by the intertwisted portion, a bent back extension on one of the intertwisted members, an eye formed at the end of the bent back extension and a link supported in the eye and having its longitudinal axis arranged in alinement with the crotch of the V-shaped frame.



1,214,331. HÆMOCYTOMETER. MAX LEVY, Philadelphia, Pa. Filed Sept. 30, 1916. Serial No. 123,200. (Cl. 88—40.)



1. A hæmocytometer having its counting chamber positioned below the face of the slide, for use with a cover-plate that is supported by the slide to bridge the counting chamber.

2. A hæmocytometer comprising a glass slide having a counting chamber positioned below the plane of the face of the slide, recesses in the slide located alongside of the counting chamber and a cover-plate adapted to rest upon the face of the slide to bridge the counting chamber and the recesses.

3. A hæmocytometer comprising a slide in which is formed a transverse recess, a scale-slip cemented in the recess and maintained so that the face of the scale-slip will be below the plane of the face of the slide and a cover plate which is supported by direct engagement with the face of the slide to provide above the scale-slip a counting chamber.

4. A hæmocytometer comprising a slide in which is formed a recess, a scale-slip of less thickness than the depth of the recess which is cemented to the slide and maintained so that the face of the scale-slip will be below the plane of the face of the slide and a cover which is supported by direct engagement with the face of the slide beyond the recess to provide above the scale-slip a counting chamber.

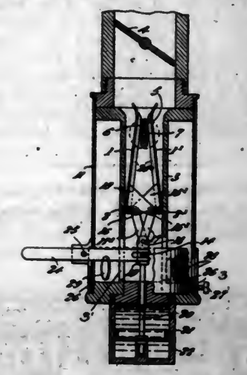
5. A hæmocytometer comprising a slide in which is formed a transverse recess and a scale-slip receiving recess, a scale-slip cemented in the scale-slip receiving recess so that the face of the scale-slip will be maintained below the plane of the face of the slide, for use with a cover-plate that is supported by the face of the slide to bridge the scale-slip and the grooves adjacent to the sides of the scale-slip.

[Claims 6 and 7 not printed in the Gazette.]

1,214,332. CARBURETER. WILLIAM GODSON LITTLE, Shoreham, England. Filed Aug. 21, 1916. Serial No. 116,155. (Cl. 261—53.)

1. A carbureter comprising a casing, a petrol nozzle within the casing, hinged flaps arranged at opposite sides of the petrol nozzle, a dash pot situated below said casing and co-axial therewith, and a pair of links connected to the respective flaps and to the movable member of the dash pot whereby the flaps in their movements toward or from one another operate said movable member.

2. A carbureter comprising a casing, a petrol jet within the casing, hinged flaps within the casing, flanged edges to the said flaps, adapted normally to abut against the said petrol jet, a dash-pot situated below the said casing, links connecting the movable member of the said dash-pot with the said flaps, an adjustable spring connected with the said movable member, a lever connected with the said movable member and adapted when pressed to hold the said flaps against the said petrol jet and means for varying the air admission to the said casing.

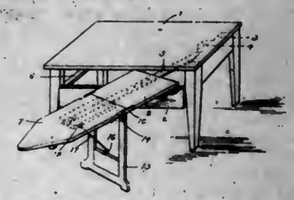


1,214,333. STONE-SETTING. FRANK P. LITTLEJOHN, Fresno, Cal. Filed Apr. 27, 1915, Serial No. 24,370. Renewed Dec. 23, 1916. Serial No. 138,618. (Cl. 63—26.)



In combination with an article, a stone on one face thereof and a setting applied against the other face of the article, presenting an annular portion with prongs projecting through the article to engage the stone, the opening in the annular portion permitting the article about the stone to protrude, said annular portion forming a seat for the stone and the portion of article surrounding it at the setting.

1,214,334. IRONING-BOARD. ALICE GERTRUDE LONGSTREET, Duluth, Minn. Filed Sept. 28, 1916. Serial No. 122,606. (Cl. 65—10.)



1. The combination with a table, of a horizontally pivotally suspended supporting arm beneath the top of the table and capable of being swung outwardly from thereunder, an ironing board composed of two parts, one foldable upon the other and slidably carried by the support-

ing arm and a straight supporting leg foldably attached to and designed to normally extend vertically from directly adjacent the line of folding of the board.

2. The combination with a suitable support having a covering member, of a horizontally pivotally suspended supporting arm beneath the covering member and capable of being swung outwardly from thereunder and an ironing board composed of two parts, one foldable upon the other, the latter being slidably carried by the supporting arm and carrying a straight supporting leg foldably attached thereto.

1,214,335. HAT STRETCHER AND STEAMER. HARRY P. LYNCH and WILLIAM MECK, Wilkes-Barre, Pa. Filed Sept. 11, 1916. Serial No. 119,569. (Cl. 223—33.)



1. In a hat stretcher, the combination with upper and lower members for embracing the hat brim, the lower member having an opening for the hat crown and the upper member having guide slots crossing at its center; of shafts mounted in bearings on said upper member and crossing each other over its center, the ends of each being oppositely threaded from its center outward, nuts mounted on such threaded ends of certain shafts and cylindrical on their exterior, elements loosely embracing the cylindrical nuts, means for tightening them thereon at will, stretching blocks beneath the upper member, and supports connecting the blocks with said elements.

2. In a hat stretcher, the combination with an annular base, a member overlying the same and having crossed slots, and bearings on the member in line with said slots; of shafts journaled in said bearings and crossing and out of engagement with each other above the center of said member, each shaft being oppositely threaded from its center outward and having a handle at one extremity, a nut mounted on each end of its respective shaft and cylindrical on its exterior and having a head on its inner end, a split sleeve engaging said cylindrical exterior, means for manually clamping the sleeve in such engagement to prevent the rotation of the nut, a stretching block below said member, and a support connecting the sleeve and block and passing through one of said slots.

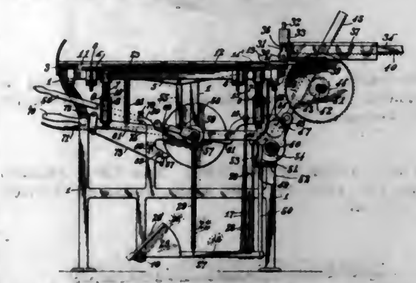
3. In a hat stretcher, the combination with an annular base, a member overlying the same and having crossed slots, and bearings on the member in line with said slots; of shafts journaled in said bearings and crossing and out of engagement with each other above the center of said member, each shaft being oppositely threaded from its center outward and having a handle at one extremity, a nut mounted on each end of its respective shaft and cylindrical on its exterior, a split sleeve loosely engaging such exterior, a set screw for clamping it thereon to prevent rotation of the nut, a hook whose shank depends from the sleeve through one of said slots, and a stretching block supported by the bill of the hook.

4. In a hat stretcher, the combination of a base, a member overlying the same and having slots crossing at its center and graduations alongside each slot, elements movable on the member along its graduations, supports depending from the elements through the slots, stretching blocks carried by the supports, and means for moving the elements outward or inward in pairs or singly at will.

5. In a hat stretcher, the combination of a base, a member overlying the same and having slots crossing at its center and graduations alongside each slot, elements movable on the member along its graduations, supports depending from the elements through the slots, stretching blocks carried by the supports, shafts journaled in said member and each having its ends oppositely threaded, nuts engaging the threads thereof, and means for connecting a respective nut with its corresponding element at will.

[Claims 6 to 9 not printed in the Gazette.]

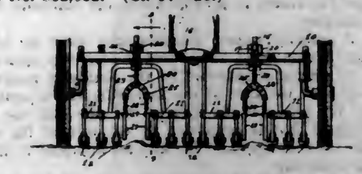
1,214,336. TOBACCO STEMMING AND BOOKING MACHINE. JOHN T. MCCLOSKEY, Dayton, Ohio. Filed Mar. 27, 1915, Serial No. 17,437. Renewed Oct. 27, 1916. Serial No. 128,118. (Cl. 131—57.)



1. In a machine of the type specified, in combination, a table upon which leaves of tobacco are stemmed and booked, a reciprocable cutter movable across said table in stemming said leaves, means for actuating said cutter, clamping fingers adapted to initially engage said leaves preparatory to being spread in a stemming and booking position, means for actuating said clamping fingers to their holding positions, and means actuated by the cutter actuating means for releasing said fingers from their holding positions, substantially as described.

2. In a machine of the type specified, in combination, a table upon which tobacco leaves are stemmed and booked, a reciprocating cutter movable across said table, clamping members for initially holding said leaves in position to be spread upon said table, booking clamps for engaging said leaves when spread upon the table, means for actuating said cutter including a rack, a main drive shaft, oscillating gears interposed between the rack and said drive shaft, and means for releasing the initial holding clamps at the conclusion of each stemming operation, substantially as described.

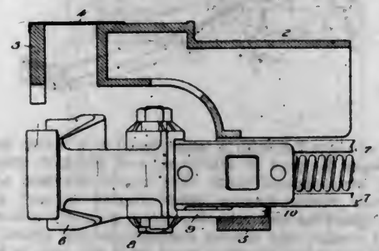
1,214,337. CULTIVATOR ATTACHMENT. DANIEL A. MCCONNELL, Malcom, Iowa. Filed Sept. 16, 1914. Serial No. 862,052. (Cl. 97—13.)



An attachment for cultivators including a fulcrum block having an opening therethrough and having its lower end bifurcated to straddle one of the frame members of a cultivator, a lever extending through the opening, a set screw passing through the block into the opening to lock the lever in adjusted position, a hook carried by the lever to form yoke attaching means, and a weight slidably mounted on the lever and provided with means whereby it may be held in adjusted position on said lever.

1,214,338. CAR-COUPLING. WILLIAM MCCONWAY, Jr., Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 8, 1915. Serial No. 65,670. (Cl. 213—42.)

1. In a draft appliance for railway vehicles, the combination with a coupler stem which is adapted to be mounted upon the body of a railway vehicle, of a coupler head, and means for pivotally connecting said head and stem so as to permit said head to swing laterally in a horizontal plane with respect to said stem, said head being provided with a rigidly attached member which extends to the rear of the pivotal axis of said head and which is adapted to be interposed between said coupler stem and a stationary part of said vehicle and to engage a stationary part of said vehicle.



2. In a draft appliance for railway vehicles, the combination with a coupler stem which is adapted to be movably mounted on the body of a railway vehicle, of a coupler head, and means for connecting said head and stem so as to permit said head to turn on a vehicle axis, said head being provided with a rearwardly extending member which is movable therewith and which overlaps said stem and is adapted to have sliding engagement with a stationary part of said vehicle.

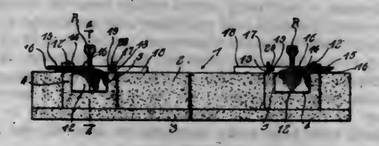
3. In a draft appliance for railway vehicles, the combination with a coupler stem which is adapted to be movably mounted on the body of a railway vehicle, of a coupler head, a vertically extending pivot pin connecting said head and stem, and a carry iron extending under and supporting said coupler stem, said coupler head being provided with a rearwardly extending member having overlapping engagement with said carry iron.

4. In a draft appliance for railway vehicles, the combination with a coupler stem, of a coupler head, means for movably connecting said head and stem, and a carry iron supporting said stem, said coupler head being provided with a rearwardly extending member which is interposed between and engages said stem and carry iron.

5. In a draft appliance for railway vehicles, the combination with a coupler stem, of a coupler head, means for movably connecting said head and stem, and means for minimizing drooping of said head with respect to said stem, said means for minimizing drooping extending rearwardly from said head and engaging said stem and being pressed downwardly by the weight of said stem.

[Claim 6 not printed in the Gazette.]

1,214,339. RAILROAD-TIE. JAMES MCCOURT, Albany, Oreg. Filed June 29, 1916. Serial No. 106,672. (Cl. 238—3.)

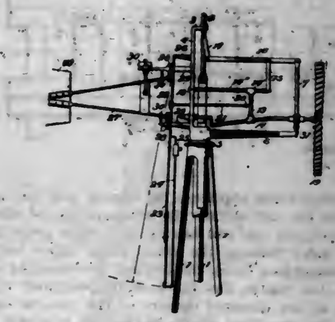


1. A railroad tie comprising a plastic body, upper and lower longitudinal bars embedded within said body and being integrally connected at their adjacent ends, upright stems secured to the upper longitudinal bar near the ends thereof and projecting above the top of said body, and rail fastening devices mounted on the upper ends of said stems.

2. A railroad tie comprising a plastic body having transverse channels in its top near the ends thereof, wooden blocks disposed within said channels, sheets of compressed paper surrounding said blocks, plates resting upon the upper sides of the latter and having flanges extending downwardly from the ends thereof into abutting engagement with the sides of said body, and rail fastening devices mounted on opposite sides of said channels.

3. A railroad tie comprising a plastic body, upright stems projecting above the top of said body and anchored therein, eyes formed on the upper ends of the inner stems, bars extending through said eyes and having wedge-shaped slots therein, wedge-shaped keys disposed in said slots, and rail fastening devices mounted on the upper end of the outer tems.

1,214,340. WINDMILL. BENJAMIN J. MACEWEN, Canutillo, Tex. Filed Nov. 15, 1915. Serial No. 61,673. (Cl. 170—75.)



1. In a wind mill, the combination of a pitman, a wind wheel, means connecting the wind wheel and the pitman for varying the stroke of the latter, a regulator vane and a steering device operable in different planes, and adapted to be locked in contact with each other for rendering said means inoperative.

2. In a windmill, the combination of a pitman, a wind wheel, means connecting the pitman and the wind wheel for automatically varying the stroke of the pitman, a steering device and means engageable with the steering device operative upon throwing the latter in inactive position for rendering said first mentioned means inoperative.

3. In a windmill, the combination of a pitman, a wind wheel, means connecting the pitman and the wind wheel for varying the stroke of the pitman, a regulator vane cooperating with said means, and a rudder having a support adapted to be moved into contact with said vane for rendering said means inoperative.

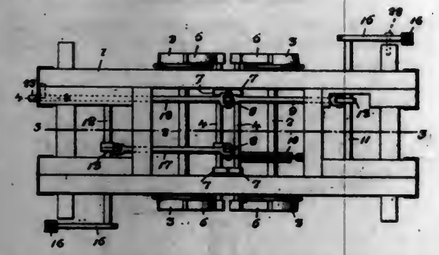
4. In a windmill, the combination of a pitman, a wind wheel, means connecting the pitman and the wind wheel for varying the stroke of the pitman, a regulator vane cooperating with said means, a steering device adapted to be moved into contact with said vane for rendering said means inoperative, and independent means carried by said regulator vane for simultaneously regulating the length of the stroke of the pitman and the speed of the wind wheel.

5. In a wind mill, the combination of a pitman, a wind wheel, means connecting the wind wheel and the pitman for varying the stroke of the latter, a vertically disposed regulator vane, and a horizontally arranged steering device having a support adapted to be moved into contact with said vane for rendering said means inoperative.

1,214,341. SAFETY MINE-CAR BRAKE. ISAAC A. MACHAMER, Wiconisco, Pa., assignor of one-half to Andrew Budd, Allen Budd, and Richard Budd, Williamstown, Pa. Filed Aug. 8, 1916. Serial No. 113,791. (Cl. 188—24.)

1. In a safety brake appliance for mining cars, the combination with a car, of brake members for the wheels of the car, operating shafts for said brake members, intermeshing elements for the shafts, spring means for the

shafts for normally retaining the braking means out of wheel-engaging position, levers, means comprising mechanism between the levers and shafts for operating the shafts when the levers are actuated, a longitudinally extending rod for one of the shafts, an extension for the rod projecting outwardly of the car, means for normally sustaining the extension in alinement with the rod, means for permitting the extension being arranged angularly of the rod and retained in such position, and said extension providing a buffer member, whereby when contacted, to move the rod longitudinally and actuate the shaft to apply the brake means.

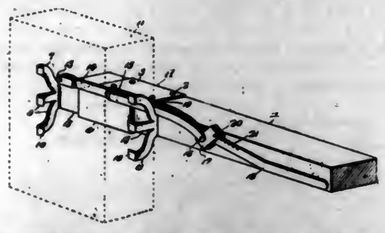


2. In a safety brake appliance for mining cars, the combination with the car, of laterally arranged spaced shafts journaled upon the car and having their ends projecting beyond the sides thereof, the wheel brake shoes having the rounded engaging faces, the toothed intermeshing segments upon the shafts, the short shafts journaled adjacent to two of the diagonal corners of the car, the operating levers for the short shafts having the inwardly extending pedals thereon, the rod connection between the short shafts and the first mentioned shafts, and the spring means for holding the shafts in one position to normally retain the brake shoes out of contact with the wheels of the car.

3. In a safety brake appliance for mining cars, the combination with the car, of two spaced shafts arranged transversely in journals upon the car, a brake shoe having a curved engaging face upon the ends of each of the shafts and disposed over the car wheels, intermeshing toothed segments on the shafts, lugs extending from the shafts, short shafts journaled in bearings adjacent to two of the diagonally opposite corners of the car and extending beyond the sides of the car, lugs upon the short shafts, rod members secured to the lugs of the short shafts and to the lugs of the first mentioned shafts, a lever having an offset end connected to the outer end of each of the short shafts and projecting beyond the end of the car, an offset member providing a pedal upon each of the levers, a buffer rod connected with the lug of one of the main shafts and having its free end extending beyond the end of the car, and spring means coöperating with one of the main shafts for normally holding the same in one position to retain the brake shoes out of engagement with the periphery of the wheels.

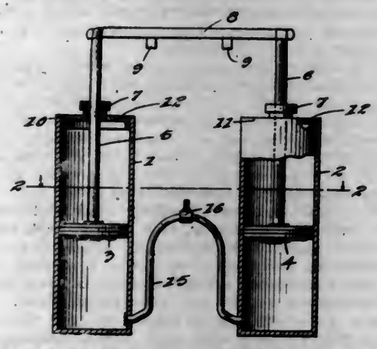
4. In a safety brake appliance for mining cars, the combination with a car, of arched brake shoes for the wheels of the car, shafts for the shoes, rod members connected with the shafts, diagonally disposed brake levers for the rods to actuate the same and rotate the shafts, intermeshing segments for the shafts, spring means for normally retaining the shafts in one position to sustain the brake shoes out of contact with the car wheels, a buffer rod extending longitudinally of the car and connected with one of the shafts, said buffer rod having its outer end bifurcated and the inner wall of the bifurcation provided with a depression, a rod extension including a tongue received in the bifurcation and the said extension projecting beyond the end of the car, said tongue having its inner end provided with a lug adapted to be received in the depression and having its side provided with an elongated opening, and a spring within the slot and exerting a tension between one of the walls thereof and the pivot to normally force the lug to within the depression.

1,214,342. BRAKE-SHOE CLAMP. LESTER M. MACOMB, Payette, Idaho. Filed Feb. 16, 1916. Serial No. 78,740. (Cl. 21—82.)



The combination with a brake beam, of a clamp holding keeper fastened to said beam and provided with a tongue slot, opposed brake shoe clamps provided with oppositely facing tongues which overlap in said slot, clamp-tightening and releasing levers pivotally attached to said clamps, and ratchet elements on said levers for holding the latter relatively fixed when the shoe is held between the clamps.

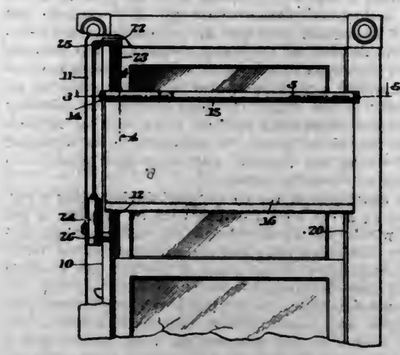
1,214,343. SHOCK-ABSORBER. JOHN W. MATTHEWS, Macon, Mo. Filed Dec. 9, 1914. Serial No. 876,319. (Cl. 267—50.)



A vehicle shock absorber including a pair of vertical cylinders designed to be located in advance and rear of the axle of a vehicle and to be rigidly secured to the same, said cylinders being provided with integral heads at their lower ends and having removable heads at their upper ends provided with ports, pistons located within the cylinders, piston rods connected with the pistons and extending through the upper heads, a horizontal bar connecting the upper terminals of the piston rods to cause the same to move in unison, said bar having spaced lugs formed on its under side to provide means for attaching it to a vehicle body, a vertically substantially inverted U-shaped pipe located between said cylinders and connected at its terminals with the said cylinders at the lower ends of the same for equalizing the pressure in the cylinders below the pistons, and permitting an uninterrupted passage of the same from one cylinder to the other, and a valve at the top of the pipe for supplying fluid pressure to the cylinders, said pipe being arranged to straddle the axle supporting the valve above the same.

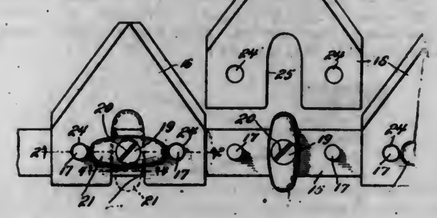
1,214,344. SHADE. WILLIAM J. MAYO, Charlottesville, Va. Filed Dec. 29, 1914. Serial No. 879,548. (Cl. 156—27.)

In a device of the kind described, in combination, a window casing, a vertical rod secured to one side of the window casing, a shade roller-carrying horizontal frame projecting beyond the opposite sides of said window casing, a supplementary frame attached to the back of the first named frame, pintles arranged at the diagonally-opposite corners of said supplementary frame and projecting outwardly at right angles therefrom, rollers journaled upon said pintles between which rollers said rod extends so that said rollers may engage said vertical rod and permit



said frame to move vertically of said casing, a weighted cable secured to said first named frame at the point where it carries said supplementary frame, a vertical guide at the side of said casing opposite said rollers and a clip carried by said first named frame and engaging said vertical guide.

1,214,345. CUTTING APPARATUS. BENJAMIN MELBY, Ashby, Minn. Filed Feb. 16, 1915. Serial No. 8,663. (Cl. 56—44.)



A sickle bar having upstanding lugs, a headed screw engaging the sickle bar midway between said lugs, and a turn button fitted on the screw, said turn button having the two ends of its bottom face slanted transversely in opposite directions to produce a double cam, in combination with a cutting member having apertures to engage the upstanding lugs and a notch extending forwardly from the rear edge thereof to engage the bolt member, the double cam face of the turn button being adapted to engage the top face of the cutting member adjacent to opposite sides of the notch, and the turn button being adjustable by the screw to produce the proper pressure upon the face of the cutting member.

1,214,346. MANUFACTURE OF AN ARTIFICIAL MANURE OR FERTILIZER. ANTON MESSERSCHMITT, Stolberg, Germany. Filed Oct. 25, 1916. Serial No. 127,686. (Cl. 71—7.)

1. A process of manufacturing a complex manure which comprises calcining or smelting potassium-containing minerals mixed phosphates and basic substances and treating the calcined material while in the heated condition with a nitrogen oxid-containing substance to effect a combination of nitrogen with said calcined material.

2. A process of manufacturing a complex manure which comprises treating with a nitrogen oxid-containing substance in the presence of hydrogen oxid, a product obtainable by calcining natural potassium-containing minerals mixed with phosphates asd a basic substance until decomposition occurs.

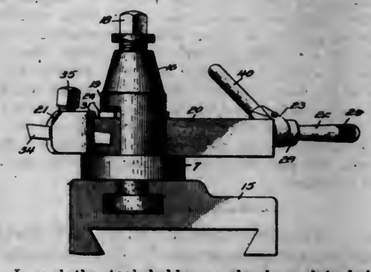
3. A process of manufacturing a complex manure which comprises treating with a nitrogen oxid-containing substance in the presence of hydrogen oxid, a silicate combination containing potassium and phosphorus in available form.

4. A process of manufacturing a complex manure which comprises treating with a concentrated solution of a nitrate, a silicate combination containing potassium and phosphorus in available form.

5. A process of manufacturing a complex manure which comprises treating a product obtainable by pyrogenically decomposing a mixture of potassium-containing minerals, phosphates and a basic substance, with a hot concentrated solution of calcium nitrate.

[Claims 6 and 7 not printed in the Gazette.]

1,214,347. LATHE TOOL-HOLDER. RUDOLPH MILECZ, Hoboken, N. J. Filed Aug. 8, 1916. Serial No. 113,793. (Cl. 29—99.)



1. In a lathe tool holder, a shank, a detachable tool carrying head, a primary assembling member extending longitudinally of the shank and detachably connected with the head, said member having means coöperating with the head to limit longitudinal movement thereof with respect to the shank, and secondary means for tightening the primary assembling member to preclude lengthwise movement thereof.

2. In a lathe tool holder, a shank, a detachable tool carrying head, a primary assembling member extending longitudinally of the shank and in threaded engagement with the head, said assembling member having a shoulder coöperating with the head to limit longitudinal movement thereof with respect to the shank, and secondary means for tightly engaging the primary assembling member to preclude lengthwise movement thereof.

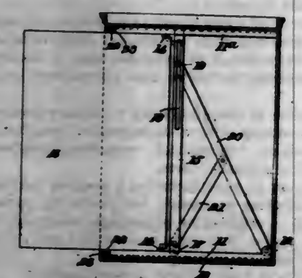
3. In a lathe tool holder, a shank, a detachable tool carrying head, a primary assembling member extending longitudinally through the shank and in threaded engagement with the head, said assembling member having a shoulder coöperating with the head to limit longitudinal movement thereof with respect to the shank, and secondary means engaging the shoulder to forcibly move the primary assembling member lengthwise of the shank, thereby tightly seating the head upon the shank.

4. A lathe tool holder comprising a shank and a tool carrying head having obliquely disposed meeting faces, each on a single plane with respect to the axis of the shank, said faces being capable of limited vertical and lateral sliding movement with respect to each other, and an assembling member extending through the shank and in threaded engagement with the heaod for securing the same on the shank.

5. A lathe tool holder comprising a shank and a detachable tool carrying head, said shank and head having obliquely disposed meeting faces, and stops to limit lateral and vertical movement of the head with respect to the shank, and an assembling member extending lengthwise of the shank in threaded engagement with the head.

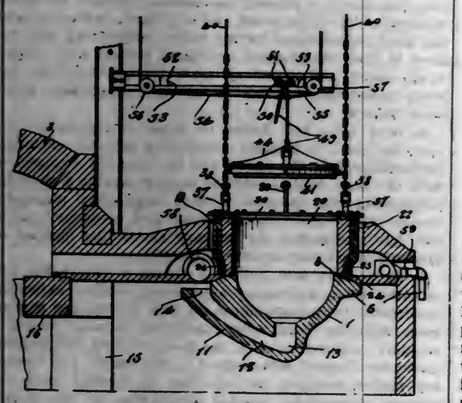
[Claims 6 to 11 not printed in the Gazette.]

1,214,348. DISPLAY-RACK. ANDREW E. MILLER, Baltimore, Md., assignor to Solomon Himmel, Baltimore, Md. Filed Sept. 21, 1911. Serial No. 650,608. (Cl. 211—16.)



The combination with a case having end and rear walls and an open front, said case having a guide at one end and a second guide at the open front, a door for closing the open front of the case, means attached to the door and spaced from the ends thereof to engage said guides, the contiguous ends of the guides being connected by a curved portion to cause said guide-engaging means to travel in a curved pathway as it passes from one guide to the other, and means pivotally supporting the rear end of the door, said door supporting means engaging the end guide to the rear of the door and positioned to project the rear end of the door forwardly beyond the curved guide-connecting portion into the angle formed by the end wall and front of the case, when the door is in closed position.

1,214,349. WINDOW-GLASS-BLOWING APPARATUS. TONY A. MILLER, Morgantown, W. Va. Filed Jan. 22, 1916. Serial No. 73,680. (Cl. 49—56.)



1. An apparatus of the class described including a glass furnace provided with a kiln having an arched top wall, said top wall being provided with an opening and a pot secured within the kiln below the said opening and extending into the glass and having a submerged inlet, said pot being provided at opposite sides with notches, wedges engaging the notches and the opposite walls of the kiln and an extension section movable through the said opening and adapted to form a continuation of the pot.

2. An apparatus of the class described including a furnace having a top wall provided with an opening, a pot located within the furnace below the said opening and having a submerged inlet and an extension section forming a continuation of the walls of the pot and movable upwardly and downwardly therefrom, said extension section consisting of a body portion of refractory material and an outer metallic water jacket, said water jacket being provided with an inwardly curved lower portion forming a support for the body portion of the extension section.

3. An apparatus of the class described including a furnace having a top wall provided with an opening, a pot located within the furnace below the said opening, and having a submerged inlet and an extension section forming a continuation of the walls of the pot and movable upwardly and downwardly therefrom, said extension section comprising a body portion of refractory material, an outer water jacket fitting the body portion and provided with a lower supporting portion, a top wall or member carrying the water jacket, a removable cover arranged upon the said top member, and supporting beams also connected with the top member.

4. An apparatus of the class described including a furnace having a top wall provided with an opening, a pot located within the furnace below the said opening, and having a submerged inlet and an extension section forming a continuation of the walls of the pot and movable upwardly and downwardly therefrom, and a cover for the extension section, comprising a refractory body portion, upper and lower metallic peripheral members adjustably connected and engaging the body portion and a substantially conical metallic top section secured to the upper member.

5. An apparatus of the class described including a glass furnace having a kiln provided with burner apertures and having opposite skimming and setting holes, a pot arranged within the furnace and having a submerged inlet located in the transverse plane of the said holes, burners mounted in the said apertures and an extension section coöperating with the walls of the pot and movable to and from the same.

1,214,350. COUPLING-CENTERING MECHANISM. ISAAC H. MILLIKEN, Aspinwall, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 17, 1916. Serial No. 115,383. (Cl. 213—59.)



1. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally in either direction, said means involving a fulcrum member on the car and a lever device having at one side of the longitudinal axis of the car a plurality of operating members to either of which power may be applied to effect a lateral shifting of the coupler, the fulcrum point of said lever device being movable into and out of engagement with said fulcrum member and said operating members permitting power to be applied on either side of the fulcrum point of the lever device, thereby permitting the direction of lateral shifting of the coupler to be selectively controlled.

2. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally in either direction, said means involving a plurality of levers at one side of the longitudinal axis of the car, and means for operatively connecting said levers to the car coupler, each of said levers being rotatable about a plurality of axes.

3. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally in either direction, said means involving a plurality of movably connected levers, and means operatively connecting one of said levers to the car coupler, said levers being adapted to be operatively coupled together so that one may actuate the other, the free ends of said levers when in coupled relation being on opposite sides of the means for connecting one of said levers to the car coupler, and said levers being supported upon the car through said connecting means.

4. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting the coupler laterally in either direction, said means involving a plurality of levers at one side of the longitudinal axis of the car, means for operatively connecting said levers to the coupler, and a member mounted on the car and forming a fulcrum for said levers, one of said levers being adapted to be engaged with and disengaged from said fulcrum member and to be actuated by the other lever.

5. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of a locking device for maintaining the parts of the coupler in coupled relation, means extending toward the side of the car and operatively connected to said locking device and adapted to actuate said locking device and to shift said coupler laterally, said means being operatively connected at its outer end with a lever device comprising a plurality of operating members to either of which power may be applied to effect a lateral shifting of the coupler, said operating members permitting power to be applied on either side of the fulcrum point of the lever device.

[Claims 6 to 12 not printed in the Gazette.]

1,214,351. COUPLING-CENTERING MECHANISM. ISAAC H. MILLIKEN, Aspinwall, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 17, 1916. Serial No. 115,384. (Cl. 213—59.)



1. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally, said means involving a lever, and means operatively connecting said lever to said coupler, the body portions of said lever on opposite sides of the point of attachment of the lever to the means for operatively connecting said lever with the coupler being respectively adapted to fulcrum on independent fulcrum points.

2. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally, said means involving a fulcrum, a lever, and means operatively connecting said lever to the coupler, said lever being rotatable in the same direction to shift said coupler laterally in either direction.

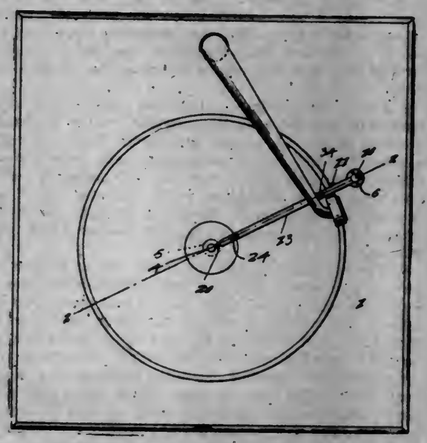
3. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally, said means involving a lever, means operatively connecting said lever to the coupler, and a fulcrum member affording a plurality of fulcra for said lever, said fulcra being arranged in a plurality of series.

4. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally in either direction, said means involving a lever, and means affording a plurality of vertically spaced fulcra adapted to be engaged by said lever.

5. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally in either direction, said means involving a fulcrum member, a lever, and means operatively connecting said lever and coupler, said lever being rotatable in opposite directions and adapted to engage said fulcrum member by rotation in either direction.

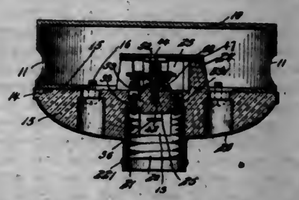
[Claims 6 to 9 not printed in the Gazette.]

1,214,352. REPEATER ATTACHMENT FOR PHONOGRAPHS. GEORGE L. MINNS, Cleveland, Ohio. Filed Aug. 19, 1916. Serial No. 115,896. (Cl. 274—15.)



The combination with a phonograph including a turn table, a central post in the turn table, a tone arm, a record on the turn table and a sound box on the tone arm, of a horizontally disposed traveler bar positioned beneath the tone arm, a sleeve fitted over the central post of the turn table and being provided with external screw threads, means adjustably supporting the outer end of the traveler bar and a toothed bolt at the inner end of the traveler bar for engagement with the sleeve so that when the sleeve rotates and the bolt is in contact therewith the traveler bar will be raised, a spring for raising said bolt into engagement with the sleeve, a latch for holding said bolt out of engagement with the sleeve, said latch being mounted at the inner end of the traveler bar and a push button at the opposite end of the traveler bar to pull the bolt back when the tone arm is in starting position.

1,214,353. CONDUIT-BOX RECEPTACLE. HARRY J. MORBY, Syracuse, N. Y. Filed Sept. 17, 1913. Serial No. 790,287. (Cl. 173—354.)



1. In a receptacle of the class described, the combination of an insulating base having a cavity approximately at the center of one face thereof, lamp contacts in said cavity, switch mechanism located on the opposite face of the base from the lamp contacts, and means for operating the switch mechanism, the said base having a pas-

ageway extending from face to face of the base through which said operating means passes.

2. In an electric appliance, the combination of an insulating base, circuit terminals approximately at the center of one side of said base, switch mechanism on the opposite side of said base, and means for operating said switch mechanism, said base having a guideway to receive and guide said operating means from one side of the base to the opposite side thereof.

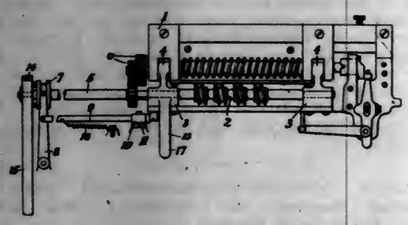
3. In a receptacle of the class described, the combination of an insulating base having a cavity and a switch chamber located on opposite sides thereof, lamp contacts secured in the cavity and comprising a shell which has a portion projecting outside the cavity, switch mechanism in said switch chamber, a cap for the outer side of said base having a flange surrounding the projecting portion of said lamp contact shell, and operating means for said switch mechanism extending from the switch chamber through said base and cap to the outer side of the receptacle.

4. In an electric pull switch, the combination of an insulating base of vitreous material, switch mechanism mounted on one side of said base, and a flexible operating member for said switch mechanism, said base having a guideway for said flexible member, said guideway leading from said switch mechanism to the opposite side of said base and having a glazed surface to diminish the friction between said base and the flexible member which slides thereon.

5. The combination with an outlet box or similar support, of a receptacle having a base comprising a cover for the box, a cavity in the outer face of said base, lamp contacts in said cavity, switch mechanism on the inner face of said base and extending into the outlet box, and a pull chain or cord for operating the switch mechanism, said base having an opening extending therethrough remote from said cavity and through which said pull chain passes, whereby said operating chain or cord is disposed so as not to engage the lamp fitted in said cavity.

[Claims 6 to 17 not printed in the Gazette.]

1,214,354. DISTRIBUTING MECHANISM OF TYPOGRAPHICAL COMPOSING-MACHINES. CARL MUEHLBESN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Mar. 27, 1916. Serial No. 86,915. (Cl. 199—33.)



1. In a typographical composing machine, the combination with a distributer rail, four distributer screws adapted to propel matrices along the said rail, and driving means adapted to rotate the said screws, of means whereby one only of the said screws can be moved out of its operative position, and means adapted to disconnect the driving means and screws when the said screw is so moved.

2. In a typographical composing machine, the combination with a distributer rail, four distributer screws adapted to propel matrices along the said rail, and driving means adapted to rotate the said screws, of means whereby one only of the said screws can be moved out of and into its operative position, and means adapted to disconnect and connect the driving means and screws when the said screw is moved respectively out of and into the said position.

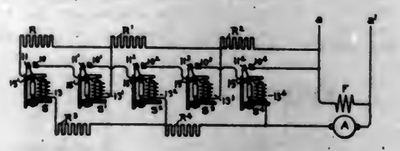
3. In a typographical composing machine, the combination with a distributer rail, four distributer screws adapted to propel matrices along the said rail, and driving means adapted to rotate the said screws, of a pivot for the bearings of one of the said screws, the said bearings, and means adapted to disconnect and connect the driving means and screws when those bearings are rocked about the pivot to move the respective screw out of and into its operative position respectively.

4. In a typographical composing machine, the combination with a distributer rail, four distributer screws adapted to propel matrices along the said rail, and driving means adapted to rotate the said screws, of a clutch adapted to establish and disestablish driving connection between said driving means and screws, a pivot for the bearings of one of the said screws, the said bearings, and means adapted to open and close the clutch when those bearings are rocked about the pivot to move the respective screw out of and into its operative position respectively.

5. In a typographical composing machine, the combination with a distributer rail, four distributer screws adapted to propel matrices along the said rail, and driving means adapted to rotate the said screws, of a clutch adapted to establish and disestablish driving connection between said driving means and screws, a pivot for the bearings of one of the said screws, the said bearings, and a spring constantly tending to open the clutch and adapted to be released when the said bearings are rocked about the pivot to move the respective screw out of its operative position.

[Claims 6 and 7 not printed in the Gazette.]

1,214,355. MOTOR-CONTROL SYSTEM. EDWIN J. MURPHY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 9, 1911. Serial No. 626,065. (Cl. 172—288.)



1. The combination with an electric motor, of a resistance in the circuit thereof, a plurality of electromagnetic switches each comprising an actuating winding and a switch member actuated thereby for successively cutting out sections of resistance, and connections whereby the closing of each switch to cut out a section of resistance simultaneously energizes a succeeding magnet winding and deënergizes a preceding magnet winding.

2. The combination with an electric motor, of a resistance in the circuit thereof, a plurality of electro-magnetic switches each having a winding in series with the motor and a switch member arranged to be closed by said winding to cut out a section of resistance, and connections whereby each switch member in closing to cut out a section of resistance simultaneously energizes a succeeding magnet winding and deënergizes a preceding magnet winding.

3. The combination with an electric motor, of a resistance in the circuit thereof, a plurality of electromagnetic switches each comprising a single actuating winding and a single switch member actuated thereby for successively cutting out sections of resistance, and connections whereby the closing of each switch to cut out a section of resistance simultaneously energizes a succeeding magnet winding and deënergizes a preceding magnet winding.

4. The combination with an electric motor of a resistance in the circuit thereof and a plurality of electromagnetic switches for cutting said resistance out of circuit each comprising a switch member arranged to be held open when the current in the magnet winding thereof is relatively high and closed when the current falls to a predetermined value, and connections whereby each switch member in closing to cut out a section of resistance simultaneously energizes a succeeding winding and deënergizes a preceding winding.

5. The combination with an electric motor, of a plurality of resistance sections in the circuit thereof divided into groups, a plurality of electromagnetic switches each comprising an actuating winding and a switch member actuated thereby for successively cutting sections of resistance out of the alternate groups, and connections whereby each switch member in closing to cut out a section of resistance simultaneously energizes a succeeding magnet winding and deënergizes a preceding magnet winding.

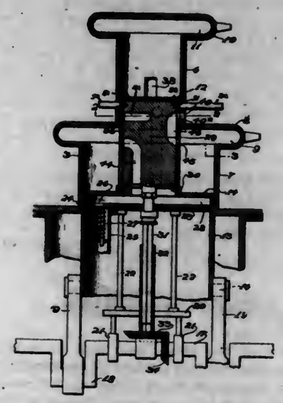
[Claims 6 to 24 not printed in the Gazette.]

1,214,356. FLOWER-POT. CHRISTIAN NATVIG, Ivanhoe, Minn. Filed Apr. 11, 1916. Serial No. 90,402. (Cl. 47—19.)



A receptacle of the class described comprising spaced outer and inner integral walls, supporting webs intermediate said walls, the inner of said walls at the base having feed apertures to permit passage of moisture to the contents of the receptacle, the material about the mouth of the receptacle being depressed to form a channel and having an opening in said channel communicating with the space between the walls, and closure means for said opening.

1,214,357. INTERNAL-COMBUSTION ENGINE. IRA G. NICKS, Norfolk, Va. Filed Jan. 22, 1916. Serial No. 73,675. (Cl. 123—47.)



1. In an internal combustion engine, a cylinder, a piston reciprocably mounted in said cylinder, a valve rotatably mounted in said piston, a crank shaft, connections between said piston and said crank shaft, driving connections between said valve and said crank shaft and relatively stationary supporting means for said driving connections.

2. In an internal combustion engine, a cylinder having a reduced end, a double piston including relatively large and small portions reciprocably mounted in said cylinder, a valve rotatably mounted in said piston, a crank shaft, extensible driving connections between said valve and said crank shaft and relatively stationary supporting means for said driving connections.

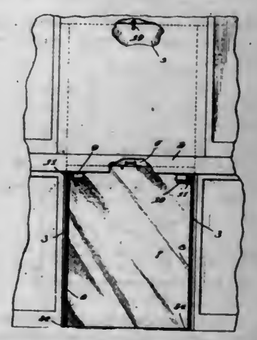
3. In an internal combustion engine, a cylinder having a reduced end and explosion chambers, a hollow double piston reciprocably mounted in said cylinder, a crank shaft, connections between the relatively large end of said piston and said crank shaft, a plate snugly fitted within the relatively large end of said piston providing a compression chamber, and a rotary valve mounted in said piston for connecting said explosion chambers with said compression chamber.

4. In an internal combustion engine, a cylinder having a reduced end, a double piston reciprocably mounted in said cylinder, a plate snugly fitted within the relatively large end of said piston, a valve rotatably mounted in the relatively small end of said piston, a crank shaft, driving connections between the relatively large end of said piston and said crank shaft, and driving connections between said crank shaft and said rotatable valve extending through said plate.

5. In an internal combustion engine, a cylinder, a piston reciprocally mounted in said cylinder, said cylinder having apertures therein, oil pipes communicating with said apertures, said piston having apertures adapted to be moved into registration with the apertures in said cylinder, and a valve rotatably mounted in said piston having a circumferential oil receiving groove registering with the apertures in said piston.

[Claims 6 to 9 not printed in the Gazette.]

1,214,358. BANK-ROBBER TRAP. ELBERT E. NUNN, Malvern, Ark. Filed May 27, 1916. Serial No. 100,262. (Cl. 268—2.)



1. In apparatus of the class described, the combination with one wall of a structure formed with a doorway and with a compartment above the doorway, of a door frame in said doorway having the head piece formed with an elongated slot establishing communication between the doorway and said compartment, a door mounted in said compartment and capable of vertical movement through said slot across said doorway, an electric motor mounted upon said head piece and connected to said door for lowering the latter, an electric motor mounted upon said head piece and connected to said door for opening the latter, a screen on the inner surface of said door capable of conducting an electric current, a source of energy for said screen, and means controlled by said door in the downward movement thereof to connect said screen to said source of energy upon the door reaching the limit of its downward movement.

2. In apparatus of the class described, the combination with one wall of a structure formed with a doorway, of a door capable of vertical movement across said doorway, an electric motor connected to said door for lowering the latter, an electric motor connected to said door for raising the latter, a screen on the inner surface of said door capable of conducting an electric current, a source of en-

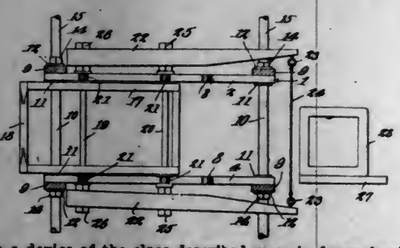
ergy for said screen, and means controlled by said door in the downward movement thereof to connect said screen to said source of energy upon the door reaching the limit of its downward movement.

1,214,359. HOSE AND GARMENT SUPPORTER. DORA H. PAGE, Parowan, Utah. Filed July 17, 1915. Serial No. 40,472. (Cl. 241—4.)



A garment supporter comprising a pair of circular shoulder straps, hip straps depending from the lowermost point of said shoulder straps, said hip straps having elastics at their lower ends provided with hose attaching devices, front and rear cross bars connecting the shoulder straps, loops secured to the lower central portion of said shoulder straps adjacent said hip straps, integral front and rear V-straps slidably connected to said loops, and garment attaching means carried by said V-straps at the central portion thereof.

1,214,360. CUTTING-MACHINE. JAMES PARK, Hopkins, Minn. Filed Nov. 27, 1915. Serial No. 63,870. (Cl. 25—105.)

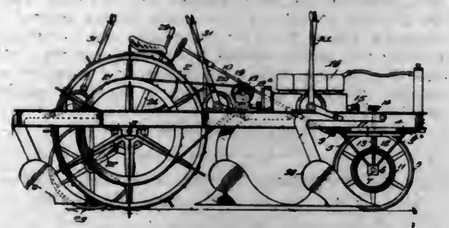


In a device of the class described, a main frame having a guide which is laterally deflected intermediate its ends; a carriage mounted to reciprocate on the main frame and embodying a secondary frame and rods mounted therein, the rods extending entirely across the secondary frame, the ends of the rods being mounted to slide in the guide; arms located exteriorly of the main frame and fulcrumed intermediate their ends on one rod, the arms projecting at their forward ends beyond the main frame; a cutter connecting the forward ends of the arms; and means on the other rod for engaging the rear ends of the arms to tilt the same on the first specified rod, thereby to effect the tightening of the cutter.

1,214,361. MOTOR. JOSEPH NICHOLAS PARKER, Bedford, Va. Filed Sept. 27, 1912. Serial No. 722,600. (Cl. 21—114.)

1. In a motor of the character described, a frame, a pivoted steering wheel, means for turning the wheel at right angles to the frame in either direction, and means controlled by the turning of the said wheel for driving the same while at right angles to the frame.

2. In a motor of the character described, a frame, a motor on the frame, a pivoted steering wheel, means for turning the wheel at right angles to the frame in either direction, and gearing between the motor and wheel when at right angles to the frame, said gearing being out of mesh when the steering wheel is in normal position.



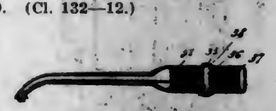
3. In a motor of the character described, a frame, a motor having a gear on its shaft, a pivoted steering wheel, a gear on the axle of the wheel, means for turning the wheel at right angles to the frame, and a swinging shaft having gears thereon to mesh with the gear of the motor shaft and the gear of the axle of the steering wheel when the said wheel is at right angles to the frame.

4. In a motor of the character described, a frame, a motor having a worm on its shaft, a frame mounted to turn on the main frame, a steering wheel mounted in the said frame, a gear wheel on the axle of the steering wheel, means for turning the frame to bring the steering wheel at right angles to the frame, a bearing secured to the turning frame and having a V-shaped slot therein, and a shaft mounted to swing in one of the bearings of the axle of the steering wheel and working in the slot of said bearing, said shaft being provided with two pinions, said pinions meshing with the worm of the motor shaft and the gear wheel of the axle of the steering wheel when the said steering wheel is at right angles to the frame.

5. In a motor of the character described, a frame, a motor having a worm on its shaft, a frame mounted to turn on the main frame and having a rack on one face, a steering wheel mounted on the said frame, a bevel gear wheel on the axle of the steering wheel, a pinion meshing with the rack, an operating rod operating the pinion, a bearing secured to the turning frame and having a V-shaped slot therein, and a shaft mounted to swing in one of the bearings of the axle of the steering wheel and working in the slot of said bearing, said shaft being provided with pinions adapted to mesh with the worm of the motor shaft and the bevel gear wheel of the axle of the steering wheel, when said steering wheel is turned at right angles to the frame.

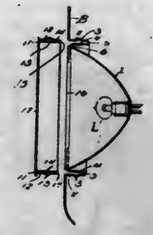
[Claims 6 to 8 not printed in the Gazette.]

1,214,362. DENTAL-FLOSS HOLDER. ARTHUR L. PASCHALL, San Simon, Ariz. Filed Aug. 26, 1913, Serial No. 786,753. Renewed Nov. 15, 1916. Serial No. 131,570. (Cl. 132—12.)



In a device of the class described, in combination a hollow shank, divergent arms formed integrally upon said shank, one of said arms being formed hollow so as to communicate with said hollow shank, thread guides carried by said arms at their outer ends, said shank being provided with spaced semicircular plates forming one-half of a housing, a semicircular housing section hingedly connected to said plates, a catch adapted to secure the said sections of the housing together, said first-named housing section being formed with off set projections forming pintle bearings, a spool having integral oppositely extending pintles arranged to seat in said bearings and to snap out of the same to remove the spool, the other housing section being formed with offsets adapted to overlie and reinforce said first named offsets.

1,214,363. LAMP-BOX. ARNOLD G. PETERS, Minneapolis, Minn. Filed Feb. 29, 1916. Serial No. 81,172. (Cl. 240—7.)



1. A lamp box whose rear portion comprises a projector, a surrounding channel, and a shoulder between them, all formed as an integral part of a sheet metal vehicle body; and whose front portion includes a glass whose edge rests on said shoulder, and a frame removably fitting said channel and holding the glass in place against the shoulder and across said projector.

2. In a lamp box, the combination with a cupped body, and a glass-holding frame; of fastening means between said elements comprising a female member on one of them consisting of a channel opening axially and having one wall smooth and the other irregular, and a male member on the other element shaped for removable insertion into said female member and having an irregularity adapted to engage that of such female member for holding the members engaged.

3. A sheet metal lamp box comprising a cupped body and around its mouth a channel composed of an inner wall united to the body by a shoulder and an outer wall united at its rear edge to said inner wall and with its front edge projecting beyond said shoulder, one of the walls having a groove facing toward the other; combined with a glass resting against the shoulder, and a frame surrounding the glass and removably engaging said channel, the frame being composed of a resilient metal strip bent into U-shape cross section and of a size to fit said channel closely, one wall thereof having a rib adapted to enter said groove, and a beading secured across the front edge of the inner wall of the frame.

4. A lamp box comprising a cupped body whose mouth is surrounded by an axially open channel and a shoulder inside the same, a glass closing said mouth and resting against the shoulder, and a frame removably engaging said channel and overlying the edge of said glass and bearing it against said shoulder.

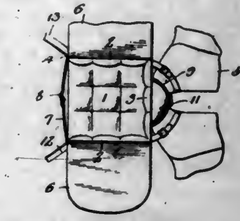
5. A lamp box comprising a cupped body whose mouth is surrounded by an axially open channel and a shoulder inside the same, a glass closing said mouth and resting against the shoulder, and a frame removably engaging said channel and having a beading across its front edge overlying and closing the mouth of the channel and bearing the glass against said shoulder.

[Claims 6 to 14 not printed in the Gazette.]

1,214,364. CHILD'S SADDLE. NELL PETERSON, Whitewater, Colo. Filed Nov. 7, 1916. Serial No. 130,011. (Cl. 54—46.)

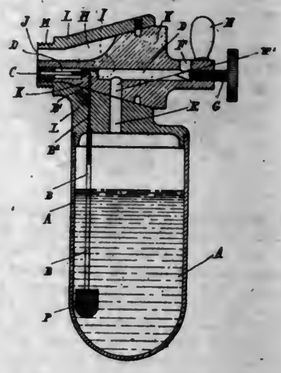
1. In combination, a child's saddle comprising a saddle tree adapted to rest upon the back of the animal in advance of a main saddle, means adapted to secure a child in position upon said child's saddle, means upon the child's saddle adapted to engage the main saddle for holding the child's saddle from forward displacement, and means upon the child's saddle adapted to engage the neck of the animal for holding the child's saddle against rearward displacement.

2. In combination, a child's saddle comprising a seat portion, a tree having depending flaps to which said seat portion is attached, and side and back pieces surrounding the corresponding portions of the seat and extending upwardly therefrom, means adapted to secure a child in said saddle, means upon the back piece of the child's saddle adapted to engage the cantle of a main saddle to hold said child's saddle from forward displacement, and means con-



nected with the flaps of the tree and adapted to encircle the neck of the animal for holding the child's saddle against rearward displacement.

1,214,365. APPARATUS FOR ENABLING INTERNAL-COMBUSTION ENGINES TO BE READILY STARTED. JOHN WILLIAM PHILLIPS, Hendon, England. Filed May 25, 1915. Serial No. 30,394. Renewed Dec. 23, 1916. Serial No. 138,619. (Cl. 123—180.)



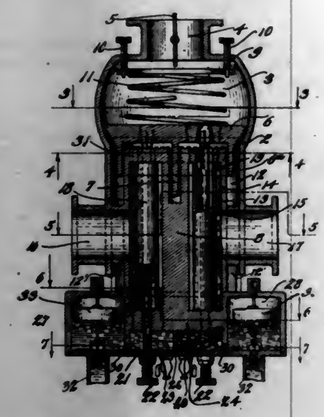
The improved construction of apparatus for enabling internal combustion engines to be readily started, consisting of a block or carrier having a nozzle by which it can be attached to the induction pipe, a petrol reservoir or container attached to said carrier, a pipe or passageway leading from near the bottom of the petrol reservoir to the nozzle end of the carrier, an air passage leading from the nozzle end of the carrier and surrounding a portion of the petrol pipe and having branches leading to the petrol reservoir and the atmosphere, a valve controlling the branch to the atmosphere and an auxiliary air passage between the atmosphere and the nozzle, the whole being constructed and arranged so that the petrol reservoir can be opened to or cut off from the induction pipe, and when required air only can be admitted into the induction pipe through the apparatus.

1,214,366. CARBURETER. CHARLES IRVING PLACE, Sharon, Conn. Filed Mar. 22, 1916. Serial No. 85,883. (Cl. 261—12.)

1. In a carbureter, a casing provided with a mixing chamber and formed with concentrically disposed outer and inner air and heating chambers respectively, fuel supply means passing through the heating chamber and communicating with the mixing chamber, and a main valve operating in the mixing chamber so as to control the admission of air from the air chamber to the mixing chamber and connected with the fuel supply means to

control the passage of fuel therefrom to the mixing chamber.

2. In a carbureter, a casing provided with a mixing chamber and formed with concentrically disposed outer and inner air and heating chambers respectively, fuel supply means passing through the heating chamber and communicating with the mixing chamber, and a main valve operating in the mixing chamber so as to control the admission of air from the air chamber to the mixing chamber and connected with the fuel supply means to control the passage of fuel therefrom to the mixing chamber, the fuel supply means comprising tubes connected with said valve and operable thereby to control the supply of the fuel to the mixing chamber.



3. In a carbureter, a casing provided with a mixing chamber and formed with concentrically disposed outer and inner air and heating chambers respectively, fuel supply means passing through the heating chamber and communicating with the mixing chamber, a main valve operating in the mixing chamber so as to control the admission of air from the air chamber to the mixing chamber and connected with the fuel supply means to control the passage of fuel therefrom to the mixing chamber, the fuel supply means comprising tubes connected with said valve and operable thereby to control the supply of the fuel to the mixing chamber, and means to supply a heating medium to the said heating chamber and passing through the air chamber.

4. In a carbureter, a casing provided with a mixing chamber and divided into inner and outer heating and air chambers respectively, the latter having an air supply opening and being separated from the heating chamber by a partition, means for supplying a heating medium to the heating chamber whereby to heat said partition and thereby heat the air passing through the air chamber, a valve controlling the admission of air to the mixing chamber from the air chamber, and fuel supply means controlled by said valve and adapted to be heated by said heating chamber.

5. In a carbureter, a casing provided with a mixing chamber and divided into inner and outer heating and air chambers respectively, the latter having an air supply opening and being separated from the heating chamber by a partition, means for supplying a heating medium to the heating chamber whereby to heat said partition and thereby heat the air passing through the air chamber, a valve controlling the admission of air to the mixing chamber from the air chamber, fuel supply tubes connected with said valve and passing through the heating chamber, and other valve means coacting with said tubes and the action of which in coöperation with the tubes is governed by the movement of the first mentioned valve.

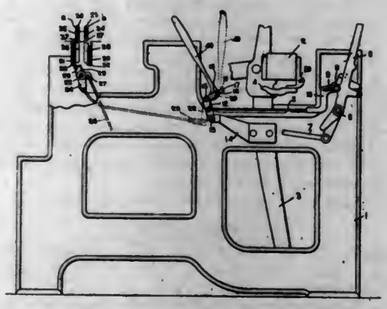
[Claims 6 to 17 not printed in the Gazette.]

1,214,367. CLOTHES-PIN HOLDER. JOHN S. REESMAN, Highland Park, Ill. Filed Nov. 28, 1914, Serial No. 874,478. Renewed Nov. 25, 1916. Serial No. 133,493. (Cl. 68—11.)



The combination with a bag having a substantially square opening at the upper edge thereof, of a hanger constructed from a strand of wire looped above said opening to provide two horizontally extending sides contacting for a portion of their lengths at opposite ends of the loop with one of said sides connected with the top of the bag, the other of said sides being bent between the contacting portions to provide a downwardly extending U-shaped frame secured to the sides and bottom of the opening, said contacting portions being bent between their ends to provide upwardly extending hooks with the hook portions on the straight side of the loop bearing against the inner faces of the hook portions on the bent sides of the loop throughout their length, to prevent the sagging of the sides of the loop under the weight of articles placed within the bag.

1,214,368. WARP STOP MECHANISM FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Nov. 6, 1914. Serial No. 870,683. (Cl. 139—92.)



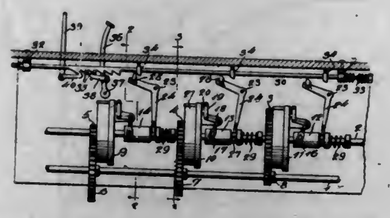
1. A warp stop mechanism for looms having a lay provided with a bunter, comprising two series of detectors in which each detector is supported upon a warp thread, a feeler and means for actuating the same to coöperate with both series of detectors whereby said feeler is adapted to be arrested by a detector of either series when released by failure of its supporting thread, a rocking governor connected to said feeler and having an indicating handle located on the outside of the loom frame and movable into different positions when the feeler is arrested by members of different series of detectors, a movable carrier, a dog pivotally mounted thereon having means engaging said governor and adapted normally to be oscillated by

said governor out of the path of the bunter on the lay but to be positioned by said governor in the path of the bunter when the feeler is arrested by a released detector and means connected to said carrier and operable by the movement of said carrier to effect the stoppage of the loom when the dog upon said carrier is engaged by said bunter.

2. In a loom comprising a shipper, a knockoff lever therefor, a swinging carrier and a link connecting said lever and said carrier, a dog pivoted upon said carrier, a lay, a bunter thereon adapted at times to coöperate with the dog to move said carrier and thereby to actuate the knockoff lever and release the shipper, a series of detectors maintained inoperative by intact warp threads, a vibrating feeler to engage and be arrested by a released detector, a rocking governor operatively connected in sliding engagement with said dog and provided with an indicating handle and connections between the said feeler and governor to rock and position the latter according to the position of the feeler, the governor normally moving the dog out of the bunter path and positioning the dog in said path when the feeler is arrested.

3. In a loom, a lay having a bunter, a shipper, releasing means for the shipper including a dog to coöperate with the bunter, a rocking governor mounted independently of the dog and having an indicating handle, a slot and pin connection between the governor and the dog, two series of detectors suspended from the warp threads, a normally vibrating feeler adapted to be arrested by a released detector and means intermediate the feeler and governor normally to rock the latter and move the dog out of the bunter path except when the feeler is arrested by engagement with a detector, the connection between the dog and governor permitting relative movement of the dog when engaged by the bunter whereby the indicating handle is positioned differently when the feeler is arrested by a member of one series than when arrested by a member of the other series.

1,214,369. VARIABLE-SPEED GEARING. RICHARD B. RICE, Rochester, N. Y. Filed Jan. 20, 1916. Serial No. 73,224. (Cl. 74—59.)



1. Power transmission means, including parallel driving and driven shafts, gears of varying size fixedly mounted on one of the shafts, corresponding gears loosely mounted on the other shafts and in mesh with the fixedly mounted gears, clutch means for connecting said loosely mounted gears with their respective shaft, bell crank levers engaged with said clutch means for operating the same, a slidable rod having a series of lugs thereon adapted to engage the bell crank levers to selectively connect the clutch means with the loosely mounted gears, and means engaged with the slidable rod for facilitating the manipulation thereof.

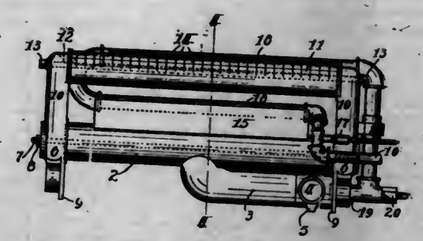
2. Power transmission means, including parallel driving and driven shafts, gears of varying size fixedly mounted on one of the shafts, corresponding gears loosely mounted upon the other shaft and in mesh with the fixedly mounted gears, drums carried by said loosely mounted gears, flexible clutch members arranged about said drums and connected with said other shaft, bell crank levers engaged with the clutch members for tightening the same upon said drums, a sliding rod having a series of lugs thereon adapted to engage the bell crank levers to connect the clutch members with the drums of the loosely mounted gears, and pawl and ratchet mechanism for operating said sliding rod.

3. Power transmission means, including driving and driven shafts, gears of varying size fixedly mounted on one of the shafts, corresponding gears loosely mounted upon the other shaft and in mesh with the fixedly mounted gears, clutches connected with said other shaft and engageable with the loosely mounted gears, a plurality of bell crank levers engageable with said clutches, a slidable rod carrying a plurality of spaced apart lugs adapted for engagement with the bell crank levers to move the same for operating said clutches, and means engageable with said slidable rod for operating the same.

4. The combination of parallel driving and driven shafts, of gears of varying size fixedly mounted on one of the shafts, corresponding gears loosely mounted on the other shaft each in mesh with a fixed gear, clutch members carried by and connected to said other shaft, means for normally maintaining said clutches in inoperative position, means engageable with the clutch members for moving the same into operative positions, a slidable rod, a plurality of lugs adjustably mounted upon said rod and adapted for engagement with said clutch moving means for actuating the same, and means engageable with the slidable rod for operating the same.

5. The combination of parallel driving and driven shafts, of gears of varying size fast on one of the shafts, corresponding gears loosely mounted on the other shaft, each in mesh with a fixed gear, drums carried by said loosely mounted gears, flexible clutch members disposed about said drums, slidable means arranged upon and connected to said other shaft and connected to the flexible clutch members, means engaged with said slidable means for moving the same into operative position and tightening the flexible clutches about the drums, means for normally maintaining the slidable means in inoperative position, a slidable rod, a plurality of spaced apart lugs adjustably mounted on said slidable rod adapted to engage said means for operating the slidable means whereby to independently connect the clutch members to their respective drums, and means engageable with the slidable rod for operating the same.

1,214,370. HYDROCARBON-GENERATOR. HUGO H. RIEGEL and DAVID F. HORNING, St. Paul, Minn., assignors to The Super Gas Producer Sales Co., a Corporation of South Dakota. Filed Apr. 8, 1916. Serial No. 89,948. (Cl. 158—71.)



1. A burner of the class described comprising a horizontally disposed gas supply tube, conduits extending upwardly and radially from the ends of said supply tube, burner tubes connecting the upper ends of said conduits, and a fuel supply tube passing between the burner tubes and discharging into the gas supply tube.

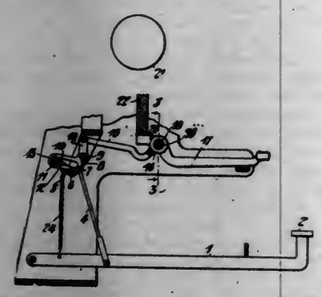
2. A burner of the class described comprising a horizontally disposed gas supply tube, a pair of horizontally disposed burner tubes rotatably mounted above said supply tube and communicating therewith, and a fuel supply tube passing between said burner tubes and thence into position for discharging into said gas supply tube.

3. A burner of the class described comprising a horizontally disposed gas supply tube, a pair of horizontally disposed burner tubes rotatably mounted above said sup-

ply tube and communicating therewith, a generator pan supported by said gas supply tube, and a fuel supply tube passing between said burner tubes and thence over said pan and into position for discharging into said gas supply tube.

4. A burner of the class described comprising a gas supply tube and a gas inlet portion, said gas inlet portion being formed with lateral air inlet openings, a pair of burner tubes rotatably mounted above and communicating with said gas supply tube, and a fuel supply tube passing between said burner tubes and into position for discharging into the inlet portion of said gas supply tube.

1,214,371. TYPE-WRITING MACHINE. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 18, 1914. Serial No. 872,682. (Cl. 197—30.)



1. In a typewriting machine, the combination with a key lever and a swinging type-bar, of a toggle comprising a pivotally-mounted driving arm and a link connecting said driving arm to the type-bar, and connecting means between said driving arm and said key lever for actuating the toggle during the printing stroke; said toggle being constructed and arranged to be straightened during the printing stroke and thereby bring the hub or body of said type-bar gradually to a position of rest before its type-carrying end reaches the printing point, while permitting said end to spring forward to the printing point, the toggle, when straightened, being transverse to the line joining the type-bar pivot and the point of connection of the toggle with the type-bar, whereby the toggle positively resists further rotation of the type-bar on its pivot.

2. In a typewriting machine, the combination with a key lever and a type-bar, of a toggle comprising a bell-crank driving lever and a link connecting one arm of said driving lever to the type-bar, and connecting means between the other arm of the driving lever and the key lever comprising a link and lever for actuating the toggle during the printing stroke; said toggle being constructed and arranged to be straightened during the printing stroke and thereby bring the hub or body of said type-bar gradually to a position of rest before its type-carrying end reaches the printing point, while permitting said end to spring forward to the printing point.

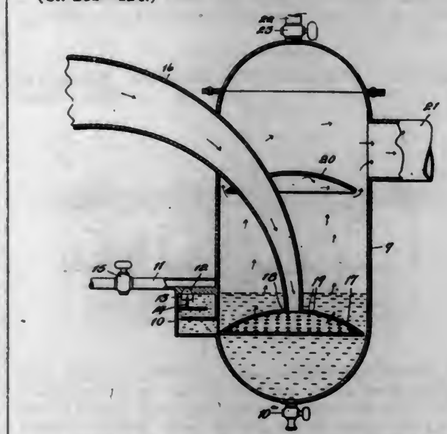
3. In a typewriting machine, the combination with a key lever and a type-bar, of a toggle comprising a bell-crank driving lever having one arm extending upwardly and a horizontal link connecting said arm to the type-bar, and connecting means between the other arm of the driving lever and the key lever for actuating the toggle during the printing stroke; said toggle being constructed and arranged to be straightened during the printing stroke; and thereby bring the hub or body of said type-bar gradually to a position of rest before its type-carrying end reaches the printing point while permitting said end to spring forward to the printing point, the toggle, when straightened, being transverse to the line joining the type-bar pivot and the point of connection of the toggle with the type-bar, whereby the toggle positively resists further rotation of the type-bar on its pivot.

4. In a typewriting machine, the combination with a key lever and a type-bar, of a toggle comprising a pivotally-mounted driving arm and a link connecting said driving arm to the type-bar, a lever operatively connected to said driving arm, and a connection between the last-named lever and the key lever for actuating the former and the toggle during the printing stroke; said toggle being constructed and arranged to be straightened during the printing stroke and thereby bring the hub or body of said type-bar gradually to a position of rest before its type-carrying end reaches the printing point, while permitting said end to spring forward to the printing point.

5. In a typewriting machine, the combination with a key lever and a type-bar, of a toggle comprising a bell crank driving lever and a link connecting one arm of said driving lever to the type-bar, a lever operatively connected to the other arm of the driving lever, and a connection between the last-named lever and the key lever for actuating the former and the toggle during the printing stroke; said toggle being constructed and arranged to be straightened during the printing stroke and thereby bring the hub or body of said type-bar gradually to a position of rest before its type-carrying end reaches the printing point, while permitting said end to spring forward to the printing point.

[Claims 6 to 19 not printed in the Gazette.]

1,214,372. APPARATUS FOR SUPPLYING WATER-VAPOR TO THE CYLINDERS OF AN INTERNAL-COMBUSTION ENGINE. FLOYD T. ROMBERGER, Elizabethville, Pa. Filed June 6, 1916. Serial No. 101,968. (Cl. 261—124.)



1. Apparatus of the character described; comprising a receptacle to hold water; means to feed water into the receptacle and to maintain a desired water level therein; an air inlet conduit leading into the receptacle and having its discharge end disposed below the water level thereof for a substantial distance; a deflector plate arranged within the receptacle and spaced a substantial distance below the water level thereof and having a main centrally arranged opening to receive air from the air inlet conduit and discharge the same beneath the deflector plate which is provided outwardly of the centrally arranged openings with apertures for the passage of the air as it ascends through the water whereby the air is sprayed through the water; and a gas take off conduit connected with the receptacle above the water level.

2. Apparatus of the character described; comprising a receptacle to hold water; automatic means to feed water into the receptacle and maintaining the water level substantially constant; an air inlet conduit leading into the receptacle and having its discharge end exposed below the water level thereof for a substantial distance; a deflector plate arranged within the receptacle at a substantial distance beneath the water level thereof and spherically curved and having its concave side arranged lowermost, the deflector plate having a centrally arranged opening to receive the air from the air supply conduit so that the air is conducted beneath the deflector plate for contact with the concave side thereof, the deflector plate being provided outwardly of the centrally arranged opening with apertures for spraying the ascending air through the water; a second deflector plate disposed within the receptacle above the water level thereof; and a gas take off pipe connected with the receptacle above its water level.

1,214,373. TYPE OR MATRIX. JOSEPH LEE ROUSSEAU, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Apr. 6, 1915. Serial No. 19,430. (Cl. 199—12.)



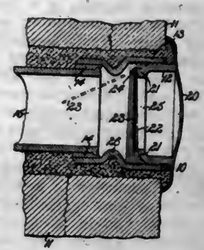
1. A type or matrix of rectangular elongated form containing a formative character in one of its vertical edges and provided at its upper end with a distributing combination and on its opposite edges with projecting ears to adapt it for circulation in a typographical machine, the said type or matrix having solid or rigid side and edge walls and formed with a channel or cavity located between and inclosed by said walls; whereby the matrix is materially lightened without weakening it, without destroying its general form or contour, and without removing the support from its edge wall containing the formative character.

2. A type or matrix of rectangular elongated form containing a formative character in one of its vertical edges and provided at its upper end with a distributing combination and on its opposite edges with projecting ears to adapt it for circulation in a typographical machine, the said type or matrix having solid or rigid side and edge walls and formed with two longitudinal channels or cavities located between and inclosed by said walls and extending from its top and bottom, respectively, and separated by an intermediate partition which is located in the rear of the formative character; whereby the matrix is materially lightened without weakening it, without destroying its general form or contour, and without removing the support from its edge wall containing the formative character.

3. A type or matrix adapted for circulation in a typographical machine and formed at its upper end with a channel or cavity located between and inclosed by its side walls, one of said walls being reduced at its upper end by said channel, and the other formed with a longitudinal cut or notch opening into the channel, the said cavity and notch thus serving conjointly to provide a separating notch adapted to coöperate with the stop rail of a distributer box used in said typographical machine, substantially as shown and described.

4. A type or matrix A adapted for circulation in a typographical machine and formed with a channel or cavity located between and inclosed by its side and edge walls and opening at its bottom, the said type or matrix being formed in its bottom with a cut or notch extending transversely through said side walls, the said cavity and notch thus serving conjointly to provide a distributing notch adapted to coöperate with a font-selecting bridge used in said machine, substantially as shown and described.

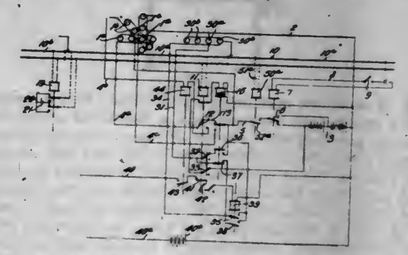
1,214,374. COMBINED FRESH-AIR PLATE AND SEWER-GAS CHECK. FRANCIS N. ROWAN, New York, N. Y., assignor to William J. Flynn, New York, N. Y. Filed July 15, 1916. Serial No. 109,491. (Cl. 4—21.)



1. In a fresh air inlet pipe, a perforate head having a neck connected with the entrance end of the fresh air inlet pipe and having its inner end contracted and provided with an opening, the wall of which is tapered to provide a valve seat inclined downwardly and outwardly, a valve pivoted to said neck and normally suspended in a substantially vertical position whereby the same is spaced from said valve seat to permit fresh air to enter said inlet pipe, said valve being adapted to swing into further open position on a suction action within said pipe and to swing outwardly against said seat to close said opening on pressure being exerted against the back of said valve.

2. In a fresh air inlet pipe, a perforate head having a neck connected with the entrance end of the fresh air inlet pipe and having its inner end contracted and provided with an opening, the wall of which is tapered to provide a valve seat inclined downwardly and outwardly, a valve pivoted to said neck and normally suspended in a substantially vertical position whereby the same is spaced from said valve seat to permit fresh air to enter said inlet pipe, said valve being adapted to swing into further open position on a suction action within said pipes and to swing outwardly against said seat to close said opening on pressure being exerted against the back of said valve, and a ferrule connected with the inlet pipe and into which said neck is threaded, said ferrule having an annular inwardly extending bend, the inner diameter of which is substantially the same as the opening in said neck and said inlet pipe.

1,214,375. SIGNALING SYSTEM. ALEXANDER H. RUDD, Media, Pa., assignor to The Position-Light Signal Company, a Corporation of Maine. Filed May 26, 1916. Serial No. 100,143. (Cl. 246—30.)



1. In a light signal, the combination with lighting circuits and lamps contained therein, of an armature controlling one of such circuits, a second armature controlling the first named circuit and also another of such circuits, and a common control for the two armatures, the last named armature having a greater time interval than the first-named armature.

2. In a light signal, the combination with a plurality of proceed lighting circuits, of a stop lighting circuit, an armature controlling the proceed circuits, a second armature controlling the proceed circuits and the stop circuit,

and a common control for the two armatures, the last named armature having a greater time interval than the first named armature.

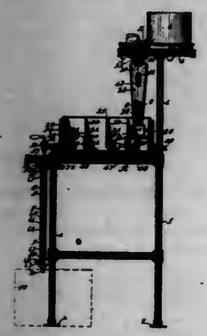
3. In a light signal, the combination with lighting circuits, and lamps contained therein, of a track relay, an armature actuated thereby and controlling one of said circuits, a second relay whose circuit is controlled by the first relay, and an armature actuated by the second relay, controlling the first named circuit and also another of such circuits, the last named armature having a greater time interval than the first named armature.

4. In a light signal, the combination with a plurality of proceed circuits, of a stop lighting circuit, a track relay, means for determining current flow through the said relay and the character of such flow, a polarized armature actuated by the said relay and controlling according to the polarity of the current therein the proceed circuits, a neutral armature actuated by the said relay, a second relay whose circuit includes the neutral armature of the first relay, and an armature actuated by the second relay for completing the proceed circuits, or the stop circuit, the movements of the last named armature having a greater time interval than that of the polarized armature.

5. In a signaling system, the combination with an upper element, of a lower element, proceed and stop signal circuits for the upper element, a signal circuit for the lower element, a track relay and a relay controlled thereby for controlling the signaling circuits of the upper element, the last named relay having an armature which when such relay is deënergized, opens the proceed and closes the stop circuits, and manual interconnected means for opening the circuit of the last named relay and the signal circuit of the lower element.

[Claims 6 to 12 not printed in the Gazette.]

1,214,376. COMBINED PASTEURIZING, HOLDING, AND COOLING MEANS. HENRY M. RUDD, Los Angeles, Cal. Filed Dec. 11, 1915. Serial No. 67,288. (Cl. 99—2.)



1. A combined pasteurizing and cooling device comprising a liquid receiving receptacle, a removable pasteurizing element provided with a series of communicating compartments, means for distributing the liquid over the pasteurizing element, liquid retention means for holding the liquid and subjecting the same to prolonged auxiliary heating, and tubular cooling means for effecting the rapid cooling of the liquid, the said elements being combined for effecting the treatment of the liquid in a single and continuous operation.

2. A combined pasteurizing and cooling device comprising means for holding the supply of liquid to be treated, primary tubular heating and liquid distributing means for heating the liquid during its passage thereover, intermediate liquid holding means for receiving and holding the liquid in a heated state for a given period of time, tubular cooling means, and distributing means for spreading the liquid over said cooling means, as set forth.

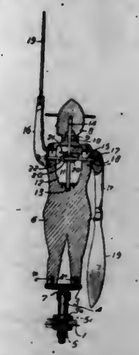
3. A combined pasteurizing and cooling device comprising tubular means for spreading and distributing the liquid to be treated and for heating the same during the distribution thereof, means for retaining the liquid in its heated state under agitation for a predetermined period of time, and tubular means for redistributing the liquid and cooling the same, in a single continuous operation.

4. A combined pasteurizing, liquid holding and cooling device including a primary heating coil for receiving and distributing the flow of liquid, a removable receptacle for receiving the liquid from said coil, heating means for said receptacle, a cold water coil for cooling the liquid discharged from said receptacle, and means for spreading and evenly distributing the liquid over said heating and cooling coils.

5. A combined pasteurizing and cooling device including a circulating hot water heating coil and liquid distributing means therefor, removable liquid holding means for receiving and holding the liquid from the heating coil, hot water heating means for said liquid holding element, a cold water coil for cooling said liquid, and means for spreading and distributing said liquid over said cooling coil.

[Claims 6 to 11 not printed in the Gazette.]

1,214,377. MECHANICAL TOY. JASPER JEROME SABIN, Coupeville, Wash. Filed May 13, 1916. Serial No. 97,315. (Cl. 46—40.)



1. A mechanical toy of the character specified, comprising the representation of a figure having a chamber in the upper portion thereof, a head mounted to rotate on the figure on a vertical axis, a shaft journaled transversely of the representation near the top thereof and extending across the chamber, arms secured to the ends of the shaft and extending in opposite directions, each having the representation of a blade or sword in the hand thereof, and the said blades having their planes perpendicular to each other to constrain the shaft to rotate when the wind impinges against the blades, a pedestal upon which the figure is mounted to rotate on a vertical axis, and a connection between the head and the shaft for constraining the head to turn toward each arm as it moves downward, said connection comprising a shaft journaled in the upper part of the figure and rigid with the head and having a loop intermediate its ends through which the first-named shaft extends, said last-named shaft having a cross head above the first-named shaft and the first-named shaft having radial pins for alternately engaging the ends of the cross head.

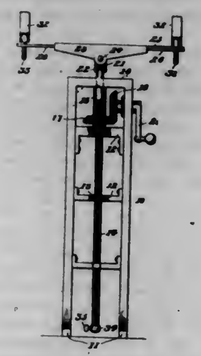
2. A mechanical toy of the character specified, comprising the representation of a figure having a chamber in the upper portion thereof, a head mounted to rotate on the figure on a vertical axis, a shaft journaled transversely of the representation near the top thereof and extending across the chamber, arms secured to the ends of the shaft and extending in opposite directions, each having the representation of a blade or sword in the hand thereof, and the said blades having their planes perpendicular to each other to constrain the shaft to rotate when the wind impinges against the blades, a pedestal upon which the figure is mounted to rotate on a vertical axis, and a connection between the head and the shaft for constraining the head to turn toward each arm as it moves downward.

3. A mechanical toy of the character specified, comprising the representation of a figure having a chamber in the upper portion thereof, a head mounted to rotate on the figure on a vertical axis, a shaft journaled transversely of the representation near the top thereof and extending across the chamber, arms secured to the ends of the shaft and extending in opposite directions, each having the representation of a blade or sword in the hand thereof, and the said blades having their planes perpendicular to each other to constrain the shaft to rotate when the wind impinges against the blades, and a connection between the head and the shaft for constraining the head to turn toward each arm as it moves downward.

4. A mechanical toy of the character specified, comprising the representation of a figure having a chamber in the upper portion thereof, a head mounted to rotate on the figure on a vertical axis, a shaft journaled transversely of the representation near the top thereof and extending across the chamber, arms secured to the ends of the shaft and extending in opposite directions and having means for constraining the shaft to rotate when the arms are engaged by air currents, and a connection between the head and the shaft for constraining the head to turn from side to side as the shaft rotates.

5. A mechanical toy of the character specified, comprising the representation of a figure consisting of a body, arms rigidly connected and mounted to rotate with respect to the body on an axis transverse to the body, said arms extending in opposite directions, a head rotatably connected with the body to rotate on a vertical axis, and a connection between the head and the arms to constrain the head to turn from side to side as the arms rotate.

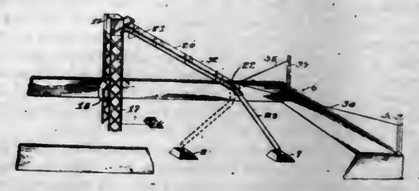
1,214,378. ELEVATING-JACK. ANDREW SADLOCK, Hopwood, Pa. Filed Sept. 30, 1916. Serial No. 123,001. (Cl. 254—100.)



1. A jack comprising a standard, an operating shaft carried by the said standard, a block swiveled in the upper free end of the said shaft, a platform pivotally mounted upon the said block having inturned sides adjacent the top thereof, a main slide mounted upon the top of the said platform having side flanges arranged beneath the said sides and having an underneath recess, an auxiliary slide positioned upon the top of the said platform slidably arranged within the said recess, and an adjustment retaining means for the said slides.

2. A jack comprising a standard, an operating shaft carried by the said standard, a block swiveled in the upper free end of the said shaft, a platform pivotally mounted upon the said block having inturned sides adjacent the top thereof, a main slide mounted upon the top of the said platform having side flanges arranged beneath the said sides and having an underneath recess, an auxiliary slide positioned upon the top of the said platform slidably arranged within the said recess, an adjustment retaining means for the said slides, and U-shaped work receivers provided with threaded shanks adjustably arranged through the opposite free ends of the said slides.

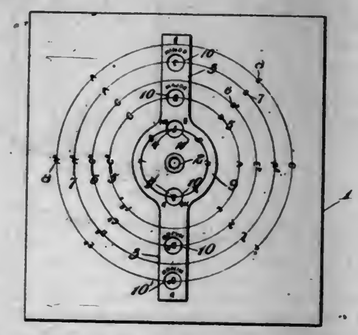
1,214,379. FLEXIBLE PIPE CONNECTION. WALTER J. SAUNDERS, Los Angeles, Cal. Filed June 19, 1916. Serial No. 104,437. (Cl. 193—41.)



1. A flexible connection for conduits, comprising a series of conduits arranged with the end of one nesting within the adjacent end of another so as to permit relative angular movement, thereby forming joints, means flexibly securing adjacent conduits to each other, supporting links secured to said conduits, said links provided with openings, a tie cable disposed in said openings, a supporting line, hangers mounted on said supporting line and supporting said tie cable.

2. A flexible connection for conduits, comprising a series of thimbles arranged with an end of one nesting within the adjacent end of another so as to permit relative angular movement, pins pivotally connecting the adjacent thimbles to each other, supporting links secured to said conduits, said links provided with eyes, a tie cable disposed in said eyes, a supporting line, hangers mounted on said supporting line and supporting said tie cable.

1,214,380. MUSICAL CHART. CHARLES L. SCHUTZE, Hannibal, Mo. Filed June 6, 1916. Serial No. 101,998. (Cl. 84—86.)



1. A musical chart comprising a sheet having key notes inscribed thereon and arranged in concentrically disposed circles indicative, respectively, of the major keys in sharps, the major keys in flats, the relative minor keys in sharps and the relative minor keys in flats, and a finder strip pivoted between its ends at the center of said symbols and having the end portions thereof formed with openings corresponding with the series of notes respectively.

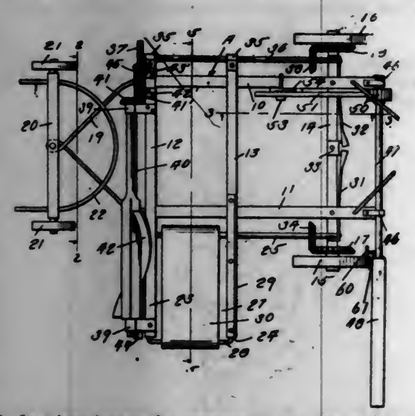
2. A musical chart comprising a sheet having inscribed thereon a circular series of numerals indicating the number of sharps or flats in each key and arranged in concentric relation to the center of the sheet, key notes arranged in concentrically disposed circles about the first mentioned series, the key notes of each series being in radial alinement with the numerals in the first mentioned series, and a finder strip pivoted between its ends at the

center of the first mentioned series and having the end portions thereof formed with openings, the openings in one end portion of the strip registering with certain of the respective series and the openings in the other end portion of the strip registering with certain of the other series.

3. A musical chart comprising a sheet having inscribed thereon a circular series of numerals indicating the number of sharps or flats in each key and arranged in concentric relation to the center of the sheet, key notes arranged in concentrically disposed circles about the first mentioned series, and a finder strip pivoted between its ends at the center of the first mentioned series and having the end portions thereof formed with openings, the openings in one end portion of the strip registering with certain of the respective series and the openings in the other end portion of the strip registering with the remaining series.

4. A musical chart comprising a sheet having inscribed thereon a circular series of numerals, key notes arranged in concentrically disposed circles about the numerals, the key notes in the respective circles being in radial alinement with the numerals, a finder strip pivoted between its ends at the center of said numerals and having the end portions thereof formed with a longitudinally extending series of openings, the series on one end being arranged to expose the major and relative minor keys in flats and the corresponding number of flats while the openings upon the opposite end are adapted to expose the key notes in sharps and the corresponding number of sharps, and indicia inscribed upon the finder strip adjacent each of said openings for indicating the information disclosed in the openings.

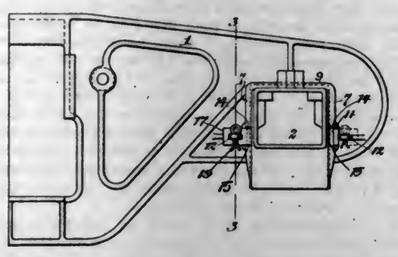
1,214,381. BEET-TOPPER. JOHN M. SHERRA, America, Ala. Filed Oct. 25, 1915. Serial No. 57,798. (Cl. 55—107.)



1. In a beet topper the combination of a wheeled frame, a shaft rotatably mounted on the frame, traction operated means for rotating said shaft, a guide on said frame, a knife having one end slidable in said guide, a gear fixed on the shaft and having the other end of the knife secured thereto eccentrically, a second shaft rotatably mounted on the frame parallel to the direction of movement of the knife and directly above the latter, a gear fixed on the second shaft meshing with the gear on the first shaft, and a spiral rib on the second shaft for engaging the severed tops and moving said tops rearwardly of the frame.

2. In a beet topper, the combination of a wheeled frame, means for cutting the tops and delivering same laterally of the frame, a rake rotatably mounted on the frame and positioned to gather the tops delivered laterally, a toothed wheel fixed on the rake, a pawl pivoted on the frame for coöperation with the wheel, and a lever on the frame having a stud slidable in a slot in the pawl.

1,214,382. SIDE FRAME FOR CAR-TRUCKS. CLIFTON W. SHERMAN, Buffalo, N. Y. Filed July 18, 1914. Serial No. 850,635. (Cl. 105—243.)



1. The combination of a truck side frame having a downwardly opening guide and a recess in a vertical wall of said guideway forming an upwardly facing shoulder, a journal box arranged in said guide way and adapted to be inserted vertically into said guide way and removed vertically therefrom and provided with forwardly and rearwardly facing shoulders engaging with said frame and also provided with a downwardly facing shoulder, and a horizontal key arranged in said recess and between said frame and journal box and engaging its underside with said upwardly facing shoulder and its upperside with said downwardly facing shoulder and movable horizontally and transversely into and out of its operative position relatively to said frame and box.

2. The combination of a truck side frame provided with a downwardly opening guide, a recess in a wall of said guide and a lug adjacent to said recess, a journal box arranged in said guide and provided with a downwardly facing shoulder above said recess, and a key having a body arranged in said recess and engaging said shoulder and having a laterally projecting lip arranged adjacent to said lug, and a pin arranged in said lug and engaging the outer side of said lip.

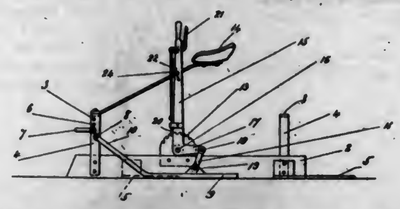
3. The combination of a truck side frame provided with a downwardly opening guide, a recess in a wall of said guide and a lug adjacent to said recess, a journal box arranged in said guide and provided with a downwardly facing shoulder above said recess, and a key having a body arranged in said recess and engaging said shoulder and having a laterally projecting lip provided with an opening which receives said lug, and a pin arranged in said lug and engaging with the outer side of said lip.

4. The combination of a truck side frame having a downwardly opening guide the walls of which are vertical, transverse recesses in the opposing parts of said walls, and lugs on the front side of said frame adjacent to the front ends of said recesses, a journal box arranged in said guide and provided with vertical ribs engaging with the front and rear sides of said frame and having downwardly facing shoulders, keys having transverse bodies arranged in said recesses and engaging said shoulders and having lips projecting in opposite directions lengthwise of the frame adjacent to said lugs, and pins arranged in said lugs and engaging with the front side of said lips.

1,214,383. WEED-CUTTER. CARL G. SIGURD, San Jose, Cal. Filed Feb. 29, 1916. Serial No. 81,160. (Cl. 55—60.)

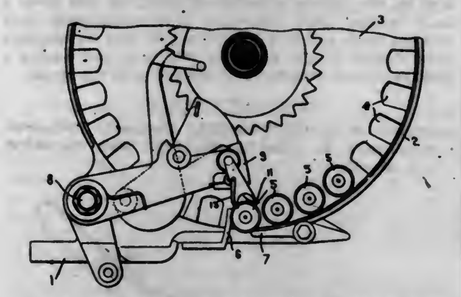
In a weed cutter, front and rear frames each comprising a raised cross bar and depending vertical arms at its ends and middle part, three main ground runners secured to the said arms, front and rear weed-cutting knives secured to the said ground runners and arranged above the level of their bottom surfaces, the front knives being secured to the side runners and projecting inwardly toward the center runner, and the rear knives being secured to all three runners and projecting outwardly, two adjustable auxiliary ground runners pivoted to the arms of the front

frame and arranged to the rear of the front knives and in advance of the rear knives, and means for raising and



lowering each adjustable runner independently of the other.

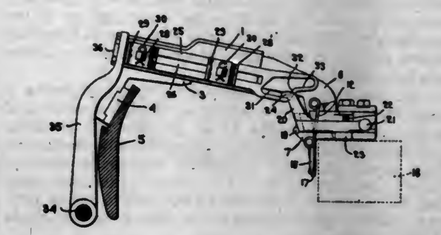
1,214,384. TRANSFERRER FOR AUTOMATIC FILLING-REPLENISHING LOOMS. ISAAC SNOW, Lawrence, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed July 3, 1916. Serial No. 107,220. (Cl. 139—85.)



1. In a loom provided with automatic filling replenishing mechanism, a hopper containing a supply of fresh filling carriers, a transferrer movable on the call for filling replenishment to transfer a filling carrier from the hopper into the shuttle, the said transferrer comprising a head operating at the butt of the filling carrier, an arm extending laterally from said head and recessed at its end to engage the tip of the filling carrier, a rock shaft journaled in said head and extending in general parallelism with said arm, a finger projecting from said shaft adjacent the end of the arm, a tail piece projecting from said shaft and extending beneath the head, and means acting normally to rock the shaft and maintain the tail piece out of engagement with the head and the finger away from the recess, whereby as the transfer movement takes place the said shaft is rocked by the butt of the filling carrier engaging the tail piece to cause the finger to engage the tip and lock it within said recess, and whereby upon initiation of the reverse movement of the transferrer the filling carrier is automatically released.

2. In a loom provided with automatic filling replenishing mechanism, a hopper containing a supply of fresh filling carriers, a transferrer movable on the call for filling replenishment to transfer a filling carrier from the hopper into the shuttle, the said transferrer comprising a head operating at the butt of the filling carrier, an arm extending laterally from said head and recessed at its end to engage the tip of the filling carrier, a rock shaft journaled in said head and extending in general parallelism with said arm, a finger projecting from said shaft adjacent the end of the arm, a tail piece projecting from said shaft and extending beneath the head, and a helical spring on said shaft connected at one end thereto and at the other end to said head and acting normally to rock the shaft and maintain the tail piece out of engagement with the head and the finger away from the recess, whereby as the transfer movement takes place the said shaft is rocked by the butt of the filling carrier engaging the tail piece to cause the finger to engage the tip and lock it within said recess, and whereby upon initiation of the reverse movement of the transferrer the filling carrier is automatically released.

1,214,385. THREAD-CUTTING TEMPLE. EDWARD S. STIMPSON, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Jan. 5, 1916. Serial No. 70,331. (Cl. 139—36.)



1. An automatic weft replenishing loom comprising a temple thread cutter actuated by or through the movement of the lay, a latch normally in engagement with the cutter to maintain it out of actuating position, a latch controller mounted to move by gravity into position to allow the latch to hold the cutter out of actuating position, means controlled by or through the loom changing mechanism to move the latch controller in the opposite direction to release the latch and place the cutter in actuating position, and means for frictionally retarding the gravity movement of the latch controller whereby the latch controller is gradually returned to normal position by the shock and jar of the loom operation to permit the cutter to remain in actuating position until after a plurality of successive cutting operations have taken place.

2. An automatic weft replenishing loom comprising a temple thread cutter actuated by or through the movement of the lay, a latch normally in engagement with the cutter to maintain it out of actuating position, a latch controller mounted to move by gravity into position to allow the latch to hold the cutter out of actuating position, means controlled by or through the loom changing mechanism to move the latch controller in the opposite direction to release the latch and place the cutter in actuating position, and adjustable means for frictionally retarding the gravity movement of the latch controller whereby the latch controller is gradually returned to normal position by the shock and jar of the loom operation to permit the cutter to remain in actuating position until after a plurality of successive cutting operations have taken place.

3. An automatic weft replenishing loom comprising a temple stand, a temple slidably mounted in the stand, a temple thread cutter carried by the temple and actuated by or through the movement of the lay, a latch movably mounted on the temple and normally in engagement with the cutter to maintain it out of actuating position, a latch controller mounted to slide rearwardly and downwardly on the temple stand under the influence of gravity into a position to allow the latch to hold the cutter out of actuating position, means controlled by or through the loom changing mechanism to move the latch controller in the opposite direction to release the latch and place the cutter in operating position, means engaging the latch controller frictionally with the temple stand to retard the gravity movement of the latch controller whereby the latch controller is gradually returned to normal position by the shock and jar of the loom operation to permit the cutter to remain in actuating position until after a plurality of successive cutting operations have taken place.

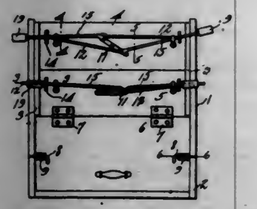
4. An automatic weft replenishing loom comprising a temple stand, a temple slidably mounted in the stand, a temple thread cutter carried by the temple and actuated by or through the movement of the lay, a latch movably mounted on the temple and normally in engagement with

the cutter to maintain it out of actuating position, a latch controller mounted to slide rearwardly and downwardly on the temples and under the influence of gravity into a position to allow the latch to hold the cutter out of actuating position, means controlled by or through the loom changing mechanism to move the latch controller in the opposite direction to release the latch and place the cutter in operating position, resilient means secured to the temple stand and pressing the latch controller into frictional engagement therewith to retard the gravity movement of the latch controller, whereby the latch controller is gradually returned to normal position by the shock and jar of the loom operation to permit the cutter to remain in actuating position until after a plurality of successive cutting operations have taken place.

5. An automatic weft replenishing loom comprising a temple thread cutter actuated by or through movement of the lay, means controlled by or through the changing mechanism of the loom to place the cutter in actuating position, means including a movable frictionally retarded element, controlled by the jar and shock of the loom operation, to throw the cutter out of and lock it out of actuating position after a plurality of successive operations have taken place.

[Claims 6 and 7 not printed in the Gazette.]

1,214,386. END-GATE FOR WAGONS. CHRIS A. STROBACK, Jr., Austin, Minn. Filed Mar. 28, 1916. Serial No. 87,319. (Cl. 21—21.)

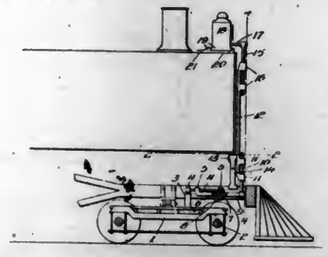


1. In combination with a vehicle body having sockets formed in its sides, an end gate consisting of a plurality of sections, levers pivotally connected to certain of the sections, rods having their inner ends pivotally connected to the ends of the lever and having their outer ends slidably engaged in the sockets, links having their inner ends pivotally connected to the outer ends of the lever, angle clips adjustably connected to the outer ends of the links, one of the flanges of the clips being provided with openings adapted to be engaged by the outer ends of the rods, when projected through the sockets.

2. In combination with a vehicle body having upper and lower sockets formed in its sides, an end gate, spring actuated bolts carried by the gate for detachably engaging the lower sockets, levers pivotally connected to the gate, rods having their inner ends pivotally connected to the ends of the lever and slidably engaged in the upper sockets, links having their ends pivotally connected to the outer ends of the lever and having clips adjustably connected to their outer ends, said clips having openings formed therein, the parts of the clips bearing said openings being adapted to clampingly engage the outer surfaces of the wagon sides for engagement with the outer ends of the rods when projected through the respective sockets.

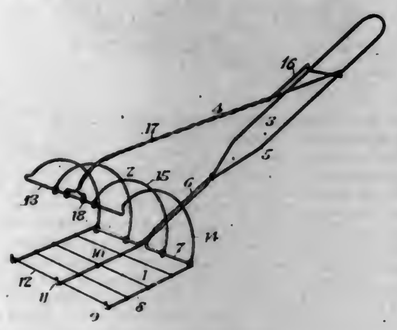
1,214,387. AUTOMATIC LOCOMOTIVE HEAD-LAMP. JACOB BOWMAN TABLER, Star Tannery, Va. Filed May 16, 1916. Serial No. 97,888. (Cl. 240—62.)

1. The combination with the body of a locomotive, and a truck pivotally mounted thereunder and supporting the same, of a headlamp arranged to turn on a vertical axis, and lamp turning means actuated by said truck and comprising a horizontally disposed transmission lever actuated by the truck, and a lamp turning lever connecting said transmission lever with the lamp, said lamp turning lever embodying slidable members at both ends thereof, one of which is connected to the lamp turning lever and the other to the lamp.



2. The combination with the body of a locomotive, and a truck pivotally mounted thereunder and supporting the same, of a headlamp arranged to turn on a vertical axis, and lamp turning means actuated by said truck and comprising a horizontally disposed transmission lever actuated by the truck, a plurality of guides on said lever, a lamp turning lever connecting said transmission lever with the lamp, and an actuating rod for said transmission lever slidable in the guides of said lever and having a positive pivoted connection at one end with the truck.

1,214,388. KITCHEN UTENSIL. JOSEPH F. THOMPSON, Brooklyn, N. Y. Filed May 24, 1915. Serial No. 30,126. (Cl. 65—52.)

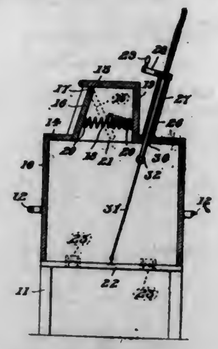


A utensil comprising a handle, a frame carried thereby, a curved top member hingedly connected with that edge of the frame which is nearest the handle and a brace member pivotally connected with the top member at a point in the line of curvature thereof, and at the extreme free edge thereof and slidably engaging the handle, that end portion of the brace member which is connected with the top member being curved to substantially conform with the curvature of the free edge portion of the top member.

1,214,389. GARBAGE-RECEPTACLE. STEPHEN TOTH, Furnace Run, Pa. Filed July 21, 1916. Serial No. 110,445. (Cl. 220—115.)

1. A garbage receptacle comprising a casing having bottom members hinged to the opposite sides thereof arranged horizontally when in their normal closed position, supporting legs for the casing having offset portions adapted for the accommodation of the said doors when in their open substantially vertical position, and releasable closure maintaining means for the said door.

2. A garbage receptacle comprising a casing having bottom members hinged to the opposite sides thereof arranged horizontally when in their normal closed position, supporting legs for the casing having off-set portions adapted for the accommodation of the said doors when in their open substantially vertical position, a tube obliquely positioned upon the said casing, a screw freely extending through the said tube projecting inwardly of the casing, flexible connections between the inner end of the screw and the said doors, and an adjusting nut upon the said screw revolubly positioned upon the upper free end of the tube.



3. A garbage receptacle comprising a casing, a hopper upon the said casing having a forwardly arranged door opening, a swinging closure door provided for the said opening hinged adjacent the top of the hopper, closing springs for the said door tensioned between the latter and the opposite rear wall of the hopper, bottom outlet doors upon the said casing, and adjustable supporting means for the said doors arranged obliquely rearwardly of the said hopper.

4. A garbage receptacle comprising a casing, a receiving hopper upon the top of the said casing, an automatically closed entrance door for the said hopper, contents supporting bottom doors hinged to the said casing, resilient binding members upon the adjacent edges of the said bottom doors in seating contact with each other when the said bottom doors are in their normal horizontal closed positions, and adjusting means for the said bottom doors operable rearwardly of and in a plane above the said hopper.

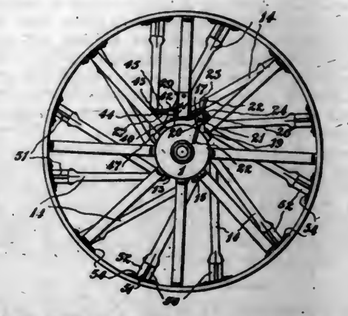
1,214,390. SPARKING PLUG. THOMAS B. TOWLE, Dayton, Ohio. Filed June 22, 1916. Serial No. 105,118. (Cl. 123—169.)



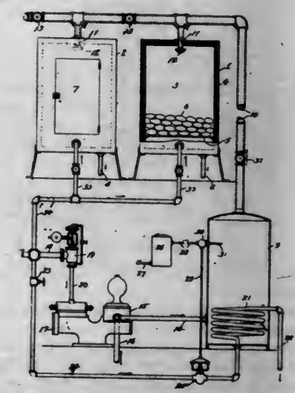
The combination with a sparking plug for gasolene engines, of a heat-accumulating cap constructed of a woven wire mesh which is secured to the end of said sparking plug below and in close proximity to the sparking points and entirely inclosing said sparking points and by means of which a high temperature is maintained at a point adjacent to the sparking points, substantially as and for the purposes specified.

1,214,391. TRACTION-WHEEL. HERMAN TREDUP, Sebewaing, Mich. Filed Oct. 3, 1916. Serial No. 123,546. (Cl. 21—209.)

In combination with a wheel, a sleeve mounted for oscillating movement on the wheel and having a segment gear, a pinion engaging said segment gear and having a shaft mounted in a bearing on the hub, tractor elements pivotally connected to the collar and adapted to be projected and withdrawn by the movements of the collar, means to enable said pinion to be manually turned, a dog pivotally mounted on one of the wheel spokes and arranged to engage the pinion, and means to lock the dog in engaged or disengaged position.



1,214,392. ART OF COOKING. CHARLES B. TRESCOTT, Chicago, Ill., assignor to Morris & Company, Chicago, Ill., a Corporation of Maine. Filed June 22, 1916. Serial No. 105,316. (Cl. 99—11.)



1. In the art of low-temperature cooking, the process of subjecting the material to be cooked in a cooker-chamber to the influence of water-saturated hot air at atmospheric pressure in said chamber and at a cooking temperature below the boiling point of water, and continuously supplying from an extraneous source throughout the cooking operation such air-saturating water.

2. In the art of low-temperature cooking, the process of spraying into a cooker, in which the cooking is carried on, hot water of a temperature below 212° F. and thereby saturating with water the atmosphere in the cooker and heating said atmosphere to the cooking temperature, and maintaining a continuous supply of the atmosphere saturating and heating sprayed hot-water, throughout the cooking operation.

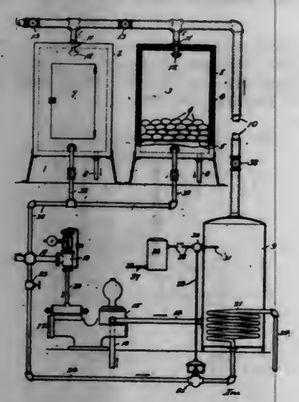
3. In the art of low-temperature cooking, the process of spraying into a cooker, in which the cooking is carried on, hot water of a temperature below 212° F. and thereby saturating with water the atmosphere in the cooker and heating said atmosphere to the cooking temperature, maintaining a continuous supply of the atmosphere saturating and heating sprayed hot water throughout the cooking operation, and withdrawing the surplus hot water from the cooker throughout said operation.

4. In the art of low-temperature cooking, the process of forcing water under pressure through a water-supply

holder and heating it, in its passage therethrough, to a temperature predetermined for cooking, but below the boiling-point of water and continuously directing the heated water and spraying it into a cooker in which the cooking is carried on, thereby saturating with water the atmosphere in the cooker and heating said atmosphere to the predetermined cooking temperature.

5. In the art of low-temperature cooking, the process of forcing water under pressure through a water-supply holder and heating it, in its passage therethrough, to a temperature predetermined for cooking but below the boiling-point of water, continuously directing the heated water and spraying it into a cooker in which the cooking is carried on, thereby saturating with water the atmosphere in the cooker and heating said atmosphere to the predetermined-cooking temperature, and automatically controlling the heating of the water coursing through said holder to maintain the predetermined temperature thereof.

1,214,393. LOW-TEMPERATURE COOKING APPARATUS. CHARLES B. TRESCOTT, Chicago, Ill., assignor to Morris & Company, Chicago, Ill., a Corporation of Maine. Filed June 22, 1916. Serial No. 105,317. (Cl. 99—2.)



1. A low-temperature cooking appartaus, comprising a cooker, means for introducing continuously, during the cooking operation employing hot air in the cooking-chamber, water in a finely divided condition to saturate therewith the air in said chamber, and means for regulating the supply of said water into said chamber to maintain therein during said operation a predetermined temperature for the cooking below the boiling-point of water.

2. A low temperature cooking apparatus, comprising a cooker, a water-showering pipe leading into the cooker-chamber, a water-heater discharging to said pipe, means for forcing water into and through said heater into the cooker-chamber by way of said pipe continuously during the cooking operation, and means for heating the water in said heater.

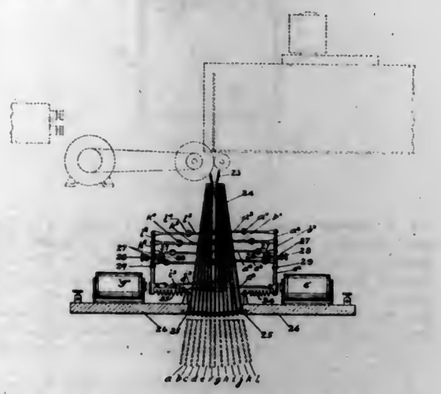
3. A low temperature cooking apparatus, comprising a cooker, a water-showering pipe leading into the cooker-chamber, a water-tank discharging through said pipe into said chamber, means for forcing water into and through said tank into the cooker-chamber by way of said pipe, means for heating the water in passing through said tank, and a thermostat-device connected with the tank and controlling the supply of heating medium for the water.

4. A low temperature cooking apparatus, comprising a cooker, a water-showering pipe leading into the cooker-chamber, a water-tank discharging through said pipe into said chamber, a water-forcing pump discharging into said tank to force water therethrough into the cooker-chamber by way of said pipe, a heater in said tank, a valved steam-pipe discharging into the heater for heating the water in passing through said tank, and a thermostat in said tank connected with the steam-pipe valve to control the passage of steam therethrough.

5. A low temperature cooking apparatus, comprising a cooker, a water-showering pipe leading into the cooker-chamber, a water-heater discharging to said pipe, means for forcing water into and through said heater into the cooker-chamber by way of said pipe continuously during the cooking operation, means for heating the water in said heater, and a valved steam-supply pipe leading into the cooker-chamber.

[Claim 6 not printed in the Gazette.]

1,214,394. CARD-ASSORTING MACHINE. ARTHUR S. TREW, Portland, Oreg. Filed Apr. 20, 1912. Serial No. 692,146. (Cl. 214—1.)



1. In a machine of the character described, a card container adapted to hold a series of cards in edge-wise position and having an open side, a magnetically operated ejector mounted to be reciprocated vertically in said container for ejecting the cards therefrom one by one.

2. In a machine of the character described, a card container adapted to hold a series of cards in edge-wise position and having an open side, a magnetically operated ejector mounted to be reciprocated vertically in said container for ejecting the cards therefrom one by one, and means for manually controlling said magnetically operated ejector at will.

3. A card ejecting unit for distributing machines comprising a container for the cards to be distributed, and means for ejecting the individual cards from the container comprising a card engaging element, and a magnetic actuator for said element mounted on the card container.

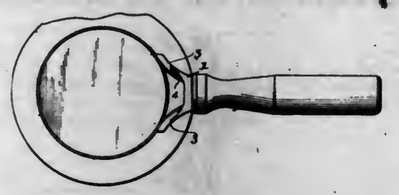
4. A card ejecting unit for distributing machines comprising a container for the cards to be distributed, and means for ejecting the individual cards in a downward direction from the container comprising a card engaging element, and a magnetic actuator for said element mounted upon the top of the card container.

5. A card ejecting unit for distributing machines comprising a container for the cards to be distributed, and means for ejecting the individual cards from the container comprising a card engaging element, an armature associated with said element pivotally mounted on the container, and a magnet also mounted on the container in position to operate the armature.

[Claims 6 to 9 not printed in the Gazette.]

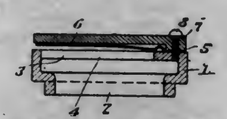
1,214,395. JAR OPENER AND HOLDER. GEORGE E. VALENTINE, Port Carbon, Pa. Filed Apr. 17, 1915. Serial No. 22,114. (Cl. 65—26.)

A device of the class described comprising a head having a central aperture and diverged arms carried thereby, the inner faces of which are curved into the aperture, a flexible band having its terminals passing through the aperture, a hollow handle rotatable against said head, a bolt in said handle connected at one end to the ends of



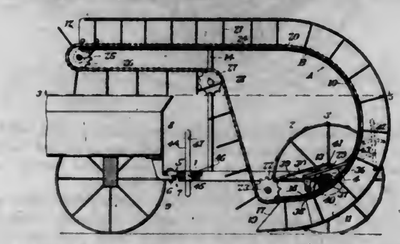
the band and provided at the other end with a threaded portion received in a threaded opening in the handle, said handle being rotatable on the bolt and about the head to force the head toward or away from the end of the loop.

1,214,396. PLATE-VALVE. CHARLES WAINWRIGHT, Erie, Pa. Filed July 30, 1915. Serial No. 42,851. (Cl. 103—66.)



A valve comprising a body having an admission port and a plurality of exhaust ports, tongues mounted upon the body and adapted to close over the exhaust ports, said tongues being provided in the vicinity of their points of attachment with the body with laterally disposed kinks.

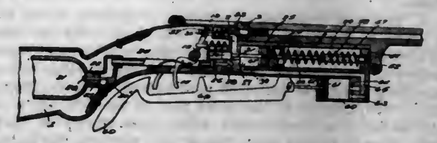
1,214,397. SNOW SHOVEL AND LOADER. EDGAR C. WEANER, Toledo, Ohio, assignor of one-half to Charles D. Leach, Toledo, Ohio. Filed Aug. 31, 1915. Serial No. 48,266. (Cl. 37—25.)



A snow shovel and loader, embodying in combination, a wheeled trailer truck, a snow scoop carried by said truck, loading means embodying a conveyer which takes the snow from the scoop and discharges the same at a point in advance of the trailer truck, said conveyer comprising a chute having its receiving and discharging ends facing in the same direction and embodying a semicircular rear portion closed in on all four sides and also having a horizontally extended discharge portion forming a continuation of said semicircular portion, an endless chain of snow propelling blades, the outer free edges of which sweep in close proximity to the outer wall of said semicircular portion of the chute, and means actuated by a truck wheel for driving said chain of propelling blades.

1,214,398. AIR-GUN. HERMAN L. WELCH, Los Angeles, Cal. Filed Apr. 12, 1916. Serial No. 90,741. (Cl. 124—8.)

1. In a gun, the combination with a discharge chamber normally closed to the barrel, means for filling it with a charge of pre-compressed fluid, and devices for permitting the escape of the charge into the barrel when the gun is fired; of auxiliary means for increasing the pressure of such charge within said chamber.



2. In a gun, the combination with a discharge chamber normally closed to the barrel, means for filling it with a firing charge of compressed fluid, and manually controlled means for increasing the pressure of such charge within the chamber; of devices for permitting the escape of the increased pressure-charge into the barrel in firing the gun.

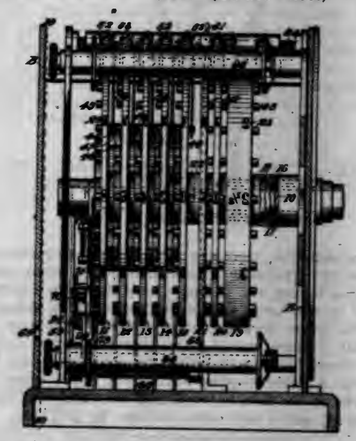
3. In a pneumatic gun, the combination with a discharge chamber normally closed to the barrel, a source of fluid under high pressure, a valve for admitting a charge from such source to said chamber, and manually controlled auxiliary means for increasing the pressure of such charge within the chamber; of devices for permitting the escape of the increased pressure-charge into the barrel in firing the gun.

4. In a pneumatic gun, the combination with a discharge chamber, a source of fluid under pressure, means for admitting a charge from the source to the chamber, and the firing devices for permitting the escape of said charge; of two auxiliary mechanisms for applying pressure to said charge, automatic means for actuating one of them, and manual means for actuating the other.

5. In a pneumatic gun, the combination with a discharge chamber, a source of fluid under pressure, means for admitting a charge from the source to the chamber, and the firing devices for permitting the escape of said charge; of two independent auxiliary mechanisms for applying pressure to said charge, automatic means for actuating one of them whenever the gun is fired, a manual adjustment for this mechanism, and manual means for actuating the other mechanism at will.

[Claims 6 to 24 not printed in the Gazette.]

1,214,399. NUMERATING AND RECORDING MACHINE. HARVEY P. WELLMAN, Oakland, Cal. Filed Nov. 7, 1914. Serial No. 870,791. (Cl. 235—139.)



1. In a can recording mechanism, a series of count wheels denominationally arranged in train, said count wheels having each a single projection on one side and a plurality of projections on the other side to the number of a multiple of ten, and a series of adjustable two-part carrying wheels coöperating with the count wheels, one

part of said carrying wheel being engaged by the single projection, and the other part by a plurality of projections.

2. In a can recording mechanism, a carrying wheel for a counting mechanism made in two parts with the line of division between the two parts lying in a plane at right angles to the axis of the wheel, said parts being correspondingly notched and each part adjustable circumferentially with respect to the other part to vary the pitch of the notches, in combination with count wheels on each side thereof having pins fitting said notches, the parts of said carrying wheels being engaged respectively by the pins on the count wheels lying adjacent to said parts.

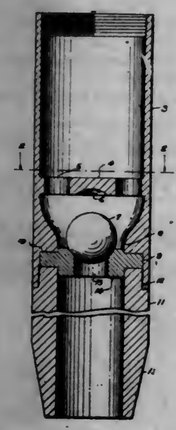
3. In a can recording mechanism, the combination with a bank of count wheels having carrying pins, and adjustable two-part carrying wheels having adjustable notches engageable with the pins, the parts of said carrying wheels being engageable with pins of different count wheels.

4. In a can recording mechanism, a carrying wheel for a counting mechanism made in two parts with a line of division between the two parts lying in a plane at right angles to the axis of the wheel, said parts being notched and each part adjustable with respect to the other to vary the pitch of the notches, in combination with count wheels and pins fitting said notches, said pins being individually engageable with the adjacent part only of the carrying wheel.

5. In a recording mechanism in combination, a bank of count wheels having carrying pins, and carrying wheels formed of two symmetrical adjustable parts having notches engageable with said pins, each of said parts being engaged by the pins of different count wheels.

[Claims 6 to 11 not printed in the Gazette.]

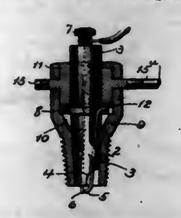
1,214,400. PUMP-VALVE. WILSON B. WIGLE, Fullerton, Cal. Filed Mar. 15, 1916. Serial No. 84,321. (Cl. 103—66.)



The combination including a tubular casing provided with threaded terminals for attachment to a pump barrel and suction tubing, and having a bore flaring to a reduced diameter at the lower end, a perforate bridge extending across the larger diameter of said flaring bore and provided with a valve rest, a valve seat detachably secured to said barrel below said bridge forming with said bore and bridge a valve housing having the entire cross sectional area of the bore between said seat and said bridge unobstructed, and a ball valve mounted on said seat.

1,214,401. SPARK-PLUG. ELIJAH J. WILLIS, Morehead City, N. C., assignor of one-third to Charles S. Wallace, Morehead City, N. C. Filed June 17, 1916. Serial No. 104,219. (Cl. 123—169.)

A spark plug structure, comprising a plug casing having slots in its wall, each slot open at one end and having a cam portion, the upper walls of the slots being roughened, a removable firing pin passing through the casing and carrying sparking terminals, a locking sleeve for the firing pin located in said casing, said sleeve having



arms to pass through the slots in the casing, one of said arms projecting farther beyond the casing than the other and having a roughened upper face, said arms constituting finger pieces to facilitate manipulation of said locking sleeve.

1,214,402. ORNAMENTAL ARTICLE. HENRIETTA MEADE WOOTTON, Boston, Mass. Original application filed Mar. 20, 1914, Serial No. 826,106. Divided and this application filed Feb. 10, 1915. Serial No. 7,449. (Cl. 41—21.)



1. In an ornamental article the combination of a background; a butterfly consisting of a base, an artificial body and natural wings mounted on said base; and means to hold the background and butterfly in position.

2. In an ornamental article the combination with a background, a transparent cover and a composite winged creature consisting of a flat artificial body and natural wings secured together, means for holding said composite winged creature on said background beneath said transparent cover.

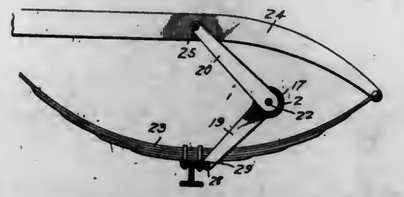
3. In an ornamental article the combination with a background, a transparent cover and a composite winged creature consisting of an artificial body and natural wings secured together, means for holding said composite winged creature on said background beneath said transparent cover.

4. In an ornamental article, a composite winged creature consisting of an artificial body and natural wings so secured together as to simulate the natural creature.

5. In an ornamental article the combination of a background, a composite winged creature consisting of a base, an artificial body and natural wings mounted on said base, and means to hold the background and composite winged creature in position.

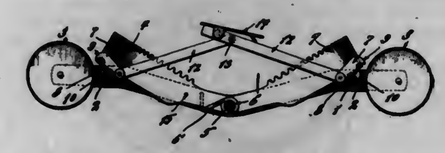
1,214,403. REBOUND-SNUBBER. HARRY E. WRIGHT, Spokane, Wash. Filed June 7, 1916. Serial No. 102,363. (Cl. 21—105.)

1. In a device of the kind described a casing comprising a pair of flanged annular members and an intermediate annular member therebetween, the inner peripheral face of said intermediate member extending beyond the inner face of the flanged members to form a shoulder, removable side plates and disks seated within said flanged annular members and bearing against said shoulder, a brake member within said casing readily rotatable in a clockwise direction, means for retarding the rotation of said brake member in an anticlockwise direction, lever arms formed on said disks adapted to be connected to the chassis and lever arms on said flanged annular members adapted to be connected to the springs of a vehicle.



2. In a shock absorber a casing comprising a pair of flanged annular members and an intermediate annular member, a pair of side plates and disks nested within said flanged member, a substantially rectangular brake member inclosed within said casing, the four corners of said brake member having extensions adapted to frictionally engage the inner periphery of said intermediate annular member, levers secured to said disk adapted to be connected to the chassis and a lever formed on said flanged annular member adapted to be connected to the spring of a vehicle, means permitting clockwise movement of said brake member in said casing when said levers approach each other, said means retarding the anticlockwise movement of said brake member when said levers are moved in an opposite direction.

1,214,404. ANIMAL-TRAP. ALBERT M. AHERN, St. Louis, Mo. Filed July 10, 1916. Serial No. 108,333. (Cl. 43—23.)



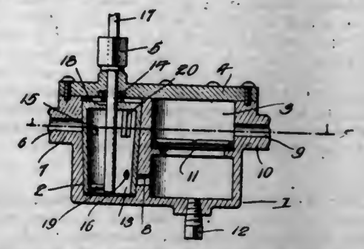
1. An animal trap comprising a pair of gripping jaws, jaw retaining devices for holding the trap in its open condition, and a depressible tripping device comprising a toggle pivoted to said jaw retaining devices.

2. An animal trap comprising a pair of pivotally connected gripping jaws, a pair of pivotally supported jaw retaining members associated with said jaws to hold the latter in their open positions, and a depressible tripping device comprising a toggle the ends of which are pivoted to the pivotally supported jaw retaining members, said toggle being operable to release said jaw retaining members from said jaws.

3. An animal trap comprising a frame, a pair of gripping jaws pivoted to said frame, jaw restraining members pivoted to said frame at points to which said jaws are spread when the trap is opened, and a toggle connecting said jaw engaging members, said toggle being movable upwardly to interlock said restraining members with said jaws and downwardly to separate said parts.

1,214,405. FUEL VALVE AND STRAINER. CHRISTIAN C. ANDERSEN, Davenport, Iowa. Filed July 20, 1916. Serial No. 110,359. (Cl. 137—7.)

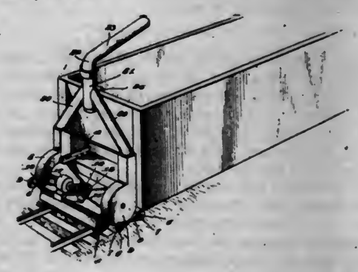
1. A device of the class described comprising a one-piece casing having therein a pair of horizontally spaced chambers closed at their upper ends by a removable cover, one of said chambers being tapered for the reception of a valve plug, an inlet into the upper end of this chamber, an outlet from the lower end thereof into the other chamber, an outlet from the upper end of said last named chamber, a horizontal strainer between the outlet of this chamber and that of the tapered chamber, a valve plug rotatably mounted in the last named chamber and having port means for registration with the inlet and outlet thereof, to permit the passage of liquid through the device, and means for turning said plug.



2. A device of the class described comprising a one-piece casing having therein a pair of horizontally spaced chambers closed at their upper ends by a removable cover, one of said chambers being tapered for the reception of a valve plug, an inlet into the upper end of this chamber, an outlet from the lower end thereof into the other chamber, an outlet from the upper end of said last named chamber, a horizontal strainer between the outlet of this chamber and that of the tapered chamber, a valve plug rotatably mounted in the last named chamber and having a pair of ports for registration with the inlet and outlet thereof to permit the passage of liquid through the device, an internal stop at the upper end of the plug, an operating stem passing slidably through the aforesaid cover and through the upper end of the plug into the interior of the latter, and a finger extending laterally from the lower end of said stem, said finger being adapted to be brought into contact with the stop when the stem is raised to permit rotation of said stem to set the plug.

3. A device of the class described comprising a valve casing having an inlet and an outlet, a hollow valve plug mounted rotatably in said casing and having port means for establishing communication between said inlet and outlet, an internal stop in one end of said plug, an operating stem sliding through the casing and through this end of the plug into the interior of the latter, and a laterally projecting finger on the inner end of said stem, said finger being adapted to be brought into contact with the stop when the operating stem is pulled outwardly, whereby rotation of said stem will set the valve.

1,214,406. SAND-MACHINE. WALTER D. ASHMON, Salem, Oreg. Filed Nov. 7, 1916. Serial No. 130,100. (Cl. 104—36.)

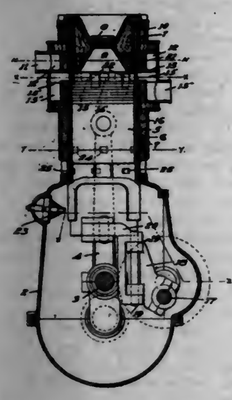


1. In a track cleaning machine, a casing open in the under side, a pair of revoluble brushes mounted under the front and rear sides of the casing and for operation on

and between the track rails, fan casings on the sides of the first named casing and each having an intake leading therefrom, a revoluble fan in each fan casing, a discharge pipe leading from each fan casing, a union to which the said discharge pipes are connected, and means to operate the brushes and the fans, the said brushes being arranged for rotation in reverse directions and so that their opposing sides move upwardly.

2. In a track cleaning machine, a casing open in the under side, a pair of revoluble brushes mounted under the front and rear sides of the casing and for operation on and between the track rails, fan casings on the sides of the first named casing and each having an intake leading therefrom, a revoluble fan in each fan casing, a discharge pipe leading from each fan casing, a union to which the said discharge pipes are connected, and means to operate the brushes and the fans, the said brushes being arranged for rotation in reverse directions and so that their opposing sides move upwardly, and a delivery pipe pivotally mounted on and leading from the union.

1,214,407. GAS-ENGINE. EMILE AZE, Minneapolis, Minn., assignor of one-fourth to Samuel Swanson and one-fourth to Albert T. Larsen, Minneapolis, Minn. Filed Dec. 23, 1913. Serial No. 808,317. (Cl. 123—124.)



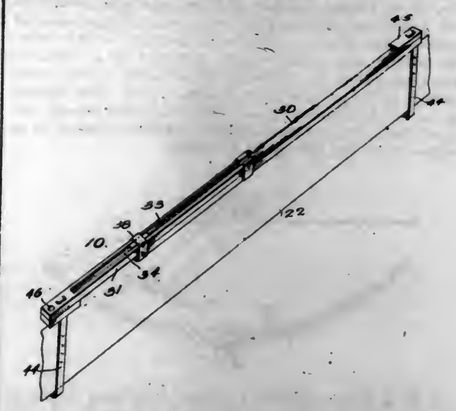
A gas engine comprising a cylinder having intake and exhaust ports alternately arranged and communicating respectively with intake and exhaust passages, a piston for said cylinder, a sleeve interposed between said piston and the walls of said cylinder and having a plurality of ports and arranged to move diagonally with respect to said inlet and exhaust ports and alternately establish communication between said inlet passage and said cylinder and said cylinder and exhaust passage, said sleeve having air intake ports communicating with an auxiliary air supply for thinning the mixture.

1,214,408. PHOTOGRAPHIC-FILM SUPPORT. CHARLES F. BARR and WILLIAM R. MILLER, Winchester, Va. Filed July 16, 1915. Serial No. 40,219. (Cl. 95—100.)

1. An extensible film support comprising a pair of buoyant bars, means connecting the bars for automatically extending the support, and members carried by the bars for supporting a film between them.

2. An extensible film support comprising a pair of overlapping buoyant bars co-acting with each other and each provided with a guiding member for the other bar, means connecting two ends of the bars for automatically extending the bars, and means carried by the other ends of the bars for supporting a film.

3. An extensible film support comprising a pair of bars with overlapping ends, means connecting said ends for automatically extending the bars, and a post carried by each of the other ends of the bars with attaching means for supporting a film between the posts.

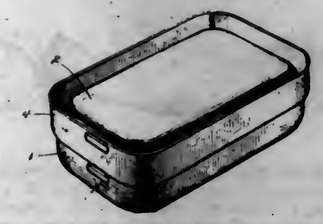


4. An extensible film support comprising a pair of bars with overlapping ends and each end having a fixed guide band encircling the other end, one of said bars having a longitudinal slot therein and a spring located in said slot having its ends attached to the ends of the bars for automatically extending the bars, and means on the bars for supporting a film.

5. An extensible film support comprising an intermediate bar and an end bar and means connecting said bars for automatically extending them, a third bar, and means on the intermediate bar co-acting with the third bar for holding said bar in adjusted position.

[Claim 6 not printed in the Gazette.]

1,214,409. COOKING VESSEL. DELPHA E. BARTH and SAMUEL F. COLLINS, Telluride, Colo. Filed Sept. 8, 1915. Serial No. 49,578. (Cl. 53—6.)

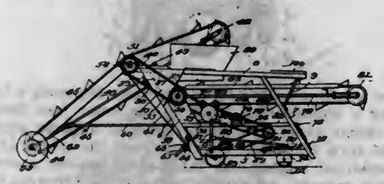


A self-basting roasting pan comprising a bottom portion having upwardly extending side and end walls and a cover for the bottom portion comprising a top wall and downwardly projecting side and end walls, said downwardly projecting side and end walls having the lower edges thereof projecting outwardly and then extended upwardly to form vertical flanges of a height greater than the height of the top wall of the cover, said flanges coöperating with the top of the cover and the side and end walls of the cover to form a receptacle adapted to contain a quantity of water, the outwardly extending lower edge portions of the side and end walls of said cover being curved in cross section to form grooves to receive the upper edges of the side and end walls of the bottom of the pan to form a fluid tight joint between the cover and the bottom.

1,214,410. DITCH AND SEWER DIGGER. CLARENCE BAUER, Zanesville, Ohio. Filed Sept. 16, 1914. Serial No. 862,006. (Cl. 37—24.)

1. In an excavating machine, a main framework, said framework comprising front and rear forwardly inclined

and upwardly converging corner posts, lower side bars connecting front and rear corner posts, upper side bars connecting the front and rear corner posts, an elevator mechanism disposed between the upper side bars, a conveyer mechanism disposed longitudinally of the framework, a cross bar carried by the rear corner posts and partially supporting said conveyer mechanism, supporting arms carried by the top side bars and supporting the elevator mechanism, an adjusting mechanism for the elevator mechanism, and means on the framework for supporting the adjusting mechanism.



2. A device of the class described comprising a main frame, a pivot rod journaled thereon, spaced sleeves secured transversely on said rod, spaced parallel bars slidably positioned in said sleeves, braces connecting said bars near their opposite ends, a shaft journaled transversely of said bars at one end thereof, sprocket wheels carried by said shaft, a drum rotatably positioned transversely of the bars at their opposite ends, endless chains carried by said sprocket wheels and drum, elevator buckets connecting the chains, a driving shaft supported by the frame, a drum secured on said shaft, sprocket wheels on said drum, said endless chains meshing with said sprocket wheels, means for driving said drum, means for shifting said rods longitudinally of the sleeves at will, and means for oscillating said rods with the pivot rod as a center.

3. A digging machine including a main frame, a pivot rod journaled thereon, spaced sleeves secured transversely on the rod, an elevator including a frame having side bars slidably extending through the sleeves, an adjusting frame carried on the main frame, eyes pivotally mounted on the adjusting frame, through which eyes the side bars of the elevator frame slidably extend, means for adjusting the elevator frame longitudinally, and means for actuating the adjusting frame.

4. In an excavating machine, an elevator including an endless carrier, a hollow shaft driven from the carrier, cutting disks mounted on the hollow shaft, stub shafts arranged in the hollow shaft, disks carried by the stub shafts, and means for adjusting the stub shafts relatively to the hollow shaft.

5. In an excavating machine of the class described, an elevator, said elevator including endless chains, a hollow shaft, sprocket wheels on said hollow shaft, said sprocket wheels meshing with said chains, disks carried by said hollow shaft, stub shafts adapted to be disposed in the opposite ends of said hollow shaft, disks carried by said stub shafts and adjustable connecting means between said stub shafts and hollow shafts for varying the distance between the disks.

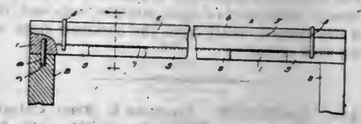
[Claim 6 not printed in the Gazette.]

1,214,411. BLACKBOARD-ERASER. WILLIAM E. BAYLESS and FRANK B. BAYLESS, Muncie, Ind. Filed Apr. 28, 1915. Serial No. 24,550. (Cl. 15—65.)



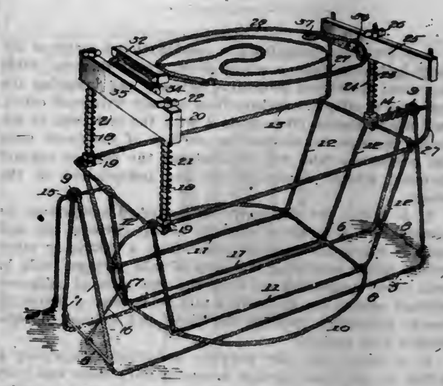
An eraser body comprising a strip of erasing material folded upon itself and having its side portions stitched together at a point spaced from the ends thereof, said ends being folded within the loop thus formed, and a filler inserted between the ends of the loop portion of the strip.

1,214,412. POULTRY-ROOST. SILAS J. BEAGLE, Walton, N. Y. Filed Oct. 13, 1915. Serial No. 55,688. (Cl. 119—25.)



A poultry roost of the character described comprising an intermediate section having trapping grooves therein, cleats carried by the intermediate section and having their upper sides disposed above the lower wall of the grooves, side sections associated with the intermediate section and resting on the upper sides of the cleats and covering the grooves for the major portion of the width of the grooves.

1,214,413. CHURN. PERCY BARKSDALE BELL, Biloxi, Miss. Filed Aug. 12, 1915. Serial No. 45,133. (Cl. 248—58.)



A churn comprising a supporting frame, a receptacle carrier rotatably mounted in said frame, vertically arranged rods extending upwardly, from said carrier at each end thereof, transversely disposed and vertically adjustable bars mounted on said rods, tightening means carried by said rods for supporting said bars in position a plate secured to one of said transversely disposed bars and having lateral end extensions, a pivot rod supported in said extensions and extending longitudinally of the bar, a receptacle retaining device including an element arranged in parallel relation to said transversely disposed bar and pivoted to said pivot rod, a spring coiled about said pivot rod and having one extremity engaging said pivoted element and the other extremity engaging said plate for exerting an upward pressure upon the same to raise said retaining device to inoperative position, and a lock carried by the other transversely disposed and adjustable bar for releasably maintaining the retaining device in locking position.

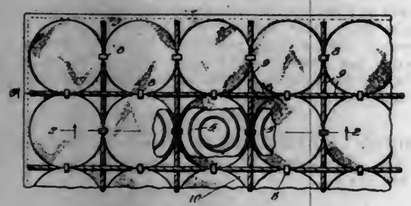
1,214,414. CONDENSATION PRODUCT FROM PHENOLS AND FORMALDEHYDE. LUDWIG BEREND, Amöneburg-on-the-Rhine, Germany. Filed Mar. 19, 1914. Serial No. 825,849. (Cl. 106—22.)

1. A process for producing artificial soluble and fusible resins from phenols and formaldehyde consisting in con-

densing a crude cresol containing m-cresol with a formaldehyde body in about such a quantity as the quantity of m-cresol contained in said mixture will call for, expelling the unused cresol from the obtained resin and recovering said cresol.

2. A process for producing artificial soluble and fusible resins from phenols and formaldehyde consisting in condensing a mixture of p-cresol and m-cresol with a formaldehyde body in about such a quantity as the quantity of m-cresol contained in said mixture will call for, expelling the unused cresol from the obtained resin and recovering said cresol.

1,214,415. MATTRESS. CHARLES E. BERO, Chicago, Ill. Filed Apr. 26, 1915. Serial No. 23,811. (Cl. 5—13.)



1. A mattress comprising in combination a series of upright helical springs, a woven fabric cover therefor, folds depressed therefrom projecting between and isolating the end coils of adjacent springs from contact with each other, and means spaced from contact with the end coils of adjacent springs, connecting the surface of the cover with the projecting fold, and maintaining the springs against material lateral movement the one independent of the other.

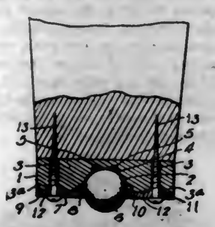
2. A device for the purposes described comprising in combination a series of upright helical springs, the end coils of which are adjacent each other, a ticking or other woven fabric overlying the ends of said springs, folds in said cover projecting between the end coils of adjacent springs, means for distending said folds, and a fastening means projecting through the cover and around the distended fold therein.

3. A device for the purpose described comprising a series of convolute springs arranged with their end coils adjacent each other, a textile fabric covering therefor provided with folds projecting between the end coils of said springs, a rope for distending said folds and a fastening means for securing the ropes to the fold and preventing a lateral movement of the springs, the one independently of the other.

4. A device for the purposes described comprising in combination a series of convolute springs arranged with their end coils adjacent each other, a cover extending over the outer ends of said springs provided with folds projecting between the adjacent end coils thereof, fibrous ropes distending said folds, extending from one edge of the cover to the other, and clips projecting through the surface of the cover and securing the ropes against movement independently of the movement of the springs.

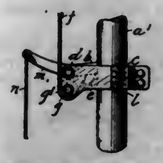
5. A device for the purpose described comprising in combination a series of upright hour glass springs arranged with the end coils of the springs adjacent each other, a fabric extending across and covering the ends of said springs, folds therein projecting between the adjacent end coils of said springs, fibrous ropes crossing each other and extending from edge to edge of said cover, and passing through and distending the projected folds thereof, clip plates passing through the cover and clenched against the surface of the distended folds spaced from contact with the springs and maintaining the springs from a lateral movement independently of each other.

1,214,416. FURNITURE-CASTER. DAVID O. BIDDLE, Bakers Summit, Pa. Filed May 24, 1916. Serial No. 99,634. (Cl. 16—151.)



The herein described furniture caster including a block having a semispherical recess in the lower face thereof, an annular raceway being provided at a point slightly spaced from the top of the recess, and the mouth of the semispherical recess being rabbeted to provide a second annular raceway, an annular series of anti-friction balls arranged within each of the annular raceways, a supporting ball fitted loosely within the recess and engaging the anti-friction balls, a retaining plate applied to the lower face of the block and holding the supporting ball in position, said retaining plate also providing the lower wall of the second annular raceway to hold the anti-friction balls in position therein, the retaining plate and block being formed with corresponding openings and the lower ends of the openings in the block being flared while the openings in the plate are surrounded by positioning bosses which engage the flared mouths of the openings in the block, and fastening members extending through said corresponding openings for holding the retaining plate in proper position upon the block and securing the block to an article of furniture.

1,214,417. GRIPPING DEVICE FOR USE IN RAISING AND LOWERING PIPES AND THE LIKE. THOMAS GIFFORD JAMIESON BISHOP, Bundy Station, Wanganella, New South Wales, Australia. Filed Nov. 10, 1915. Serial No. 60,764. (Cl. 57—9.)

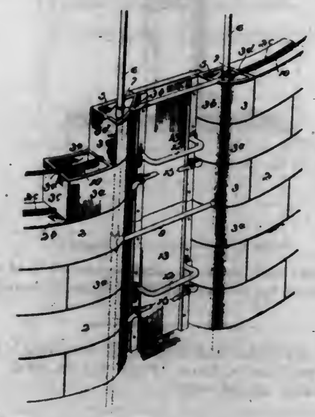


1. In a device for raising and lowering pipes, a frame, a hinged side on the frame, a jaw fixedly secured in one end of said frame, a jaw pivotally mounted in the opposite end of said frame, a lug on the underside of said pivotally mounted jaw, a rope connected to said lug, and a pulley mounted in said frame beneath the pivotally mounted jaw.

2. In a device for raising and lowering pipes, a frame, a hinged side on the frame, a jaw fixedly secured in one end of said frame, a jaw pivotally mounted in the opposite end of said frame, a lug on the underside of said pivotally mounted jaw, a lever on said pivotally mounted jaw, a flexible member depending from the outer end of said lever, a rope connected to said lug, and a pulley mounted in said frame beneath the pivotally mounted jaw.

1,214,418. SILO. JAMES D. BOBBITT, Madisonville, Ky. Filed Mar. 27, 1915. Serial No. 17,439. (Cl. 72—6.)

1. A silo having a vertical door opening and comprising door posts for said opening each composed of superimposed hollow tile blocks and intervening joints between said blocks and a vertical monolithic column filling the blocks, metal uprights in said columns and extending approximately throughout the lengths of said posts and each composed of sections having screw threaded ends and screw threaded couplings uniting said sections, and rigid cross bars traversing said opening and forming parts of a ladder and having screw threaded ends by which said ends are secured to said couplings, certain of said blocks being notched for the passage of said rods into the door posts and to remove the rods from said joints, said rods and the load carried thereby being directly sustained by said uprights through the medium of said couplings, substantially as described.



2. A silo having a vertical door opening, and comprising horizontal superimposed courses of blocks, the end blocks of the courses being hollow and forming vertical door posts provided with a concrete filling, metal uprights extending throughout the lengths of said posts and composed of screw threaded pipe sections of uniform length and threaded T couplings uniting said sections, the couplings of one upright being arranged opposite the couplings of the other upright, the blocks containing said couplings having notches in their horizontal edges alined with the horizontal branches of said couplings, and rigid ladder-rung-forming cross bars traversing said opening and extending through said notches and having threaded ends screwed into said horizontal branches of the couplings, whereby the load carried by said cross bars is directly sustained by said couplings and the uprights, substantially as described.

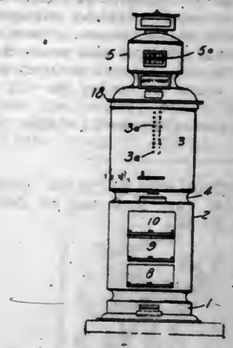
1,214,419. LOCKING MECHANISM. RICHARD C. BRADLEY, Shreveport, La., assignor of one-fourth to Lee Kinnebrew and one-fourth to J. Maley Eastham, Shreveport, La., and one-fourth to C. Frank Ireland, Houston, Tex. Original application filed Jan. 19, 1914, Serial No. 813,036. Divided and this application filed Oct. 20, 1915, Serial No. 56,957. Renewed Oct. 12, 1916. Serial No. 125,344. (Cl. 70—46.)

1. In a locking device, a lock casing having a key opening adapted to receive any of a plurality of keys, and means carried within the lock casing for rendering any key inoperative at will.

2. In a locking device, a lock casing, a movable member disposed within the casing and arranged to be engaged by any one of a plurality of keys, and means within the casing and corresponding to each individual key for rendering said key inoperative.

3. In a lock casing, a rotatable member provided with a slot arranged to receive any of a plurality of keys, and means carried by the casing for preventing the rotation of said rotatable member by any particular key.

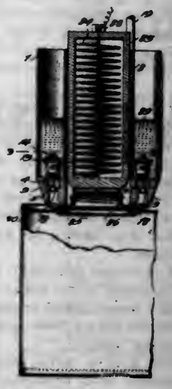
4. In a lock casing, a rotatable cylinder provided with a slot arranged to receive any one of a plurality of keys, and means carried by the casing and adapted to be adjusted manually to prevent the rotation of the cylinder by any predetermined key.



5. In a locking device, a lock casing, a cylinder rotatable within said casing and provided with a slot adapted to receive any of a number of keys, and a plurality of movable members corresponding to the individual keys and adapted to be moved manually to render any key inoperative.

[Claims 6 to 12 not printed in the Gazette.]

1,214,420. SOLDERING DEVICE. RICHARD C. BRADLEY, Houston, Tex., assignor of two-thirds to C. Frank Ireland, Houston, Tex. Filed Apr. 18, 1916. Serial No. 91,937. (Cl. 113—67.)

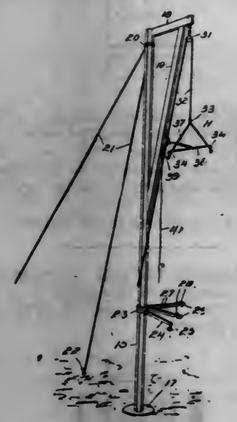


1. The herein described soldering device comprising an inner casing, an outer casing, a bottom common to the two casings, the space between the inner and outer casings constituting a reservoir for solder, said bottom being provided with a plurality of openings, a valve for each opening, a common means for supporting the valves, means for moving said common means to cause the movement of the valves simultaneously, means for keeping the solder in a molten condition, said last named means comprising a cylinder capable of radiating heat, said cylinder being arranged to enter the inner casing, and means carried at the end of the cylinder for engaging and holding a portion of the work to be soldered.

2. A device for soldering can tops comprising an inner cylindrical casing, an outer cylindrical casing, a common bottom supporting the two casings, said bottom being provided with a series of recesses, a cylinder arranged to close the upper part of each of said recesses, a common means for supporting the said cylinders, said means comprising a ring disposed in the space between the inner and outer cylindrical casings, and means for moving the ring to cause the movement of all of said cylinders.

3. A device for soldering can tops comprising an inner cylindrical casing, an outer cylindrical casing, a common bottom supporting the two casings, said bottom being provided with a series of recesses, a cylinder arranged to close the upper part of each of said recesses, a common means for supporting the said cylinders, said means comprising a ring disposed in the space between the inner and outer cylindrical casings, means for moving the ring to cause the movement of all of said cylinders, said soldering device being rotatable around the closure whereby the solder is spread.

1,214,421. COTTON-BAG EMPTIER. ODIS ARNOLD BROWN, Santa Anna, Tex. Filed Aug. 10, 1915. Serial No. 44,787. (Cl. 57—9.)



1. In a device of the class described, a hoisting frame of triangular form having a loop at its apex, and eyes at the lower corners thereof, a hoisting element connected with the loop, and hooks supported by the eyes, the base member of said triangular frame being provided with a hook member bent rearwardly therefrom and comprising spaced side members, and a stripping lever pivotally connected with the hook and having an arm operating between the side members.

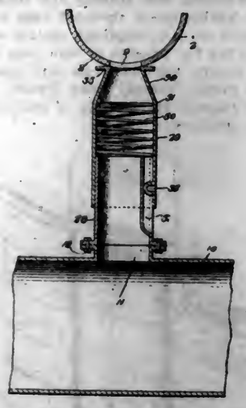
2. In a device of the class described, a hoisting frame of triangular form provided at its lower corners with bag attaching means, said frame being provided intermediate the lower corners thereof with a hook member and a pivotally supported stripping lever.

3. The combination with a cotton bag having a strap near the mouth thereof, of a triangular hoisting frame and hoisting means for elevating said frame, the latter being provided at the lower corners thereof with means to support the lower corners of the bag, and intermediate said corners with a hook for engagement with the strap, and means for stripping said strap from the hook.

1,214,422. GRATE. SIDNEY E. BROWN and HARRY C. KAIN, Marshall, Tex., assignors of one-third to Alois P. Prendergast, Marshall, Tex. Filed July 28, 1916. Serial No. 111,809. (Cl. 110—74.)

1. In a grate, grate bars having channels therein provided with inlet openings, a manifold arranged below said openings and having extensions registering therewith, sleeves mounted for vertical movement on said extensions, mouths on said sleeves, and springs within said sleeves for holding said mouths in contact with the grate bars adjacent the inlet openings therein.

2. In a grate, grate bars having channels therein provided with inlet openings, a manifold arranged below said openings and having extensions registering therewith, sleeves mounted for vertical movement on said extensions and having restricted ends forming mouths, springs arranged within said sleeves and contacting with said extensions for holding said mouths in contact with the grate



bars adjacent said openings, and means on said sleeves and extensions for holding the same against turning movement.

1,214,423. REVERSIBLE RATCHET-WRENCH. JOSEPH H. CASPER, Greeley, Kans. Filed May 19, 1915. Serial No. 29,121. (Cl. 81—60.)



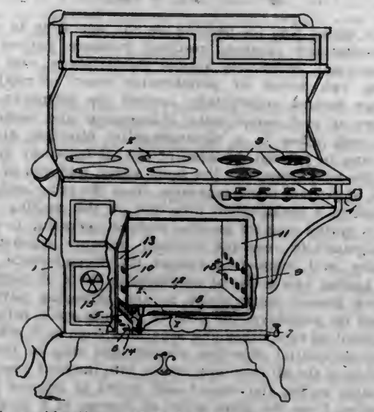
1. A ratchet wrench comprising a body, a handle on the body, a ratchet wheel rotatably mounted in the body, a pawl extending longitudinally through and slidably mounted in the handle and engaging the ratchet wheel, an operating stem slidably mounted in said handle, and means to lock said stem against rotation, said pawl being slidably connected to said stem, whereby said pawl can move independently of said stem when engaged by said ratchet teeth on said ratchet wheel.

2. A ratchet wrench comprising a body, a handle on the body, a ratchet wheel rotatably mounted in the body, a pawl extending longitudinally through and slidably mounted in the handle and engaging the ratchet teeth on the ratchet wheel, an operating stem slidably mounted in said handle, means to lock said stem against rotation, said pawl being slidably connected to said stem, whereby said pawl can move independently of said stem when engaged by the teeth on said ratchet wheel, and spring means normally holding said pawl in engagement with said ratchet wheel and said stem in locked position.

3. A ratchet wrench comprising a body, a shank on the body, said shank being provided with a longitudinal bore, the body having a circular chamber formed therein and extending transversely thereof, said chamber communicating with the bore, a handle threaded on the shank, an operating stem slidable through the handle, a knob at the outer end of the stem on the exterior of the handle, a lug on the knob, the stem being formed with a pair of diametrically opposite recesses for the reception of the lug, a pawl extending through the bore in the stem and into the chamber and slidably mounted therein, a cam face on the inner end of the pawl, a ratchet wheel rotatably mounted within the chamber coöperating with the pawl, an ear formed on the outer end of the pawl, said ear having a slot extending therethrough, said operating stem having its inner end bifurcated to receive said ear, a pin extending through the arm of the bifurcated portion of

the stem and through said slot in the ear, whereby said pawl is slidably connected to said stem, and a spring normally holding said pawl in engagement with the ratchet wheel and the pin on said stem in engagement with the recesses in said handle.

1,214,424. COMBINATION COOKING-STOVE. EGBERT H. CASTLE, Quincy, Ill. Filed Sept. 11, 1916. Serial No. 119,516. (Cl. 126—36.)

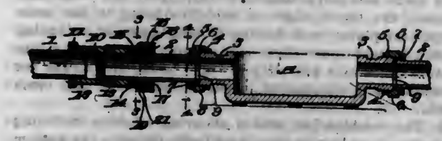


1. A combination coal and gas cooking stove, comprising a body, a fire-box and an oven in said body; said fire-box and oven being separated by an intervening space in communication with the interior of the oven, a chamber arranged below and in communication with said intervening space, a gas burner in said chamber, and longitudinal-conduits spaced apart on the underside of the bottom plate of the oven and formed in part by said plate and communicating at their inner ends with said chamber and having upstanding portions at their outer ends formed in part by the adjacent oven plate and communicating through apertures in said plate with the portion of the oven remote from the burner chamber.

2. In a cooking stove, a body, an oven therein, a burner chamber arranged below the oven at one end thereof, a burner in said chamber, and longitudinal conduits spaced apart on the underside of the bottom plate of the oven and formed in part by said plate and communicating at their inner ends with the burner chamber and having upstanding portions at their outer ends formed in part by the adjacent oven plate and communicating through apertures in said plate with the portion of the oven remote from the burner chamber.

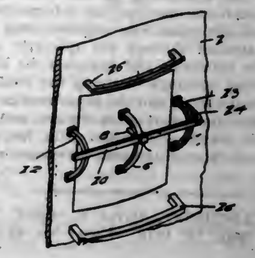
3. In a cooking stove, a body, an oven therein, a burner chamber arranged below the oven at one end thereof, a burner in said chamber, and longitudinal conduits spaced apart on the underside of the bottom plate of the oven and formed in part by said plate and communicating at their inner ends with the burner chamber and at their outer ends with the interior of the oven.

1,214,425. PIPE-COUPLING. DAVID L. CASTON, Commerce, Ga. Filed Nov. 6, 1914. Serial No. 870,558. (Cl. 137—28.)



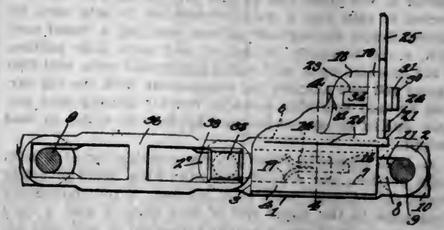
In a meter coupling, a meter box having a threaded spud, a pipe section, an internally threaded sleeve secured thereto, a flanged union member threaded into the sleeve having a connecting nut loosely mounted thereon and arranged to engage the flange and thread onto the spud, said spud and union member arranged to butt joint, a compressible washer between the ends of the spud and union member, and a packing carried by the sleeve and surrounding the union member.

1,214,426. SILO. FRANK CLINTON, Milan, Ind. Filed Apr. 3, 1914. Serial No. 829,297. (Cl. 20—1.4.)



In combination, a silo having a vertically elongated opening therein, a U-shaped member secured above said opening, an inwardly opening closure for said opening, a closing and locking lever, means pivotally securing said lever in spaced parallel relation to said closure, said lever having an angular end adapted, when said closure is moved inwardly and crosswise of said opening to be moved to vertical position to engage the angular end with the web portion of the U-shaped member to support said closure, and a pair of cleats arranged on opposite sides of said opening having convex outer surfaces adapted to be engaged by the extremities of the closing and locking lever to secure said closure in closed position.

1,214,427. CHAIN. MICHAEL COKUS, Frackville, Pa. Filed Aug. 8, 1916. Serial No. 113,801. (Cl. 193—8.)



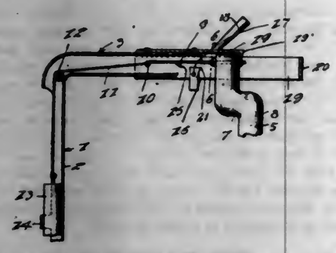
1. In a device of the class described, a link; side members applied to opposite faces of the link, the side members having transverse openings, and being provided in their inner faces with coöperating grooves defining a longitudinal opening, one side member being provided with an aperture, and the other side member being equipped with an arm extended through the aperture; a tapered, split key extended through the arm and coacting with the side member which is provided with the aperture; a scraper disposed transversely of the side members; a fastening device including a head engaging the scraper, and a shank passing through the scraper and entering the longitudinal opening; and a tapered split key mounted in the transverse openings and engaging the shank of the fastening device.

2. In a device of the class described, a link; side members applied to opposed faces of the link, the side members having transverse openings, and being provided in their inner faces with coöperating grooves defining a longitudinal opening, one side member being provided with an aperture, and the other side member being equipped with an

arm extended through the aperture; a clamping means on the arm and coacting with that side member which is provided with the aperture; a scraper disposed transversely of the side members; a fastening device including a head engaging the scraper, and a shank passing through the scraper and entering the longitudinal openings; and a securing element mounted in the transverse openings and engaging the shank of the fastening device.

3. In a device of the class described, a link; side members applied to opposite faces of the link, the side members including abutments and platforms outstanding from the abutments, the abutments having studs, and being provided with transverse openings, one side member having an aperture, and the other side member being equipped with an arm extended through the aperture; a scraper supported on the platforms and engaging the abutments, the scraper having openings receiving the studs; means coöperating with the studs and the abutments in retaining the scraper; a key inserted through the arm and engaging the side member which is provided with the aperture; and a key inserted through the transverse openings in the abutments.

1,214,428. STANCHION. DAVID G. CONN, Roseburg, Oreg. Filed Mar. 14, 1916. Serial No. 84,079. (Cl. 119—149.)



1. In a stanchion structure, the combination of a main body portion, one side of said stanchion being pivotally connected to said main body portion, a rod detachably connected to the upper end of said pivoted side, a cord connected to said rod, a weight connected to said cord for automatically moving said pivoted side into a closed position, a rod rotatably carried by said main body portion, a lug mounted upon said rod, a lug formed upon said first named rod and adapted for engagement with the lug carried by said rotatably mounted rod for holding said pivoted side in an opened position against the action of said weight.

2. In a stanchion structure, the combination of a main body portion, one side of said stanchion being pivotally connected to said main body portion, a rod detachably connected to the upper end of said pivoted side, a cord connected to said rod, a weight connected to said cord for automatically moving said pivoted side into a closed position, a rod rotatably carried by said main body portion, a lug mounted upon said rod, a lug formed upon said first named rod and adapted for engagement with the lug carried by said rotatably mounted rod for holding said pivoted side in an opened position against the action of said weight, said rotatably mounted rod having its outer end weighted whereby when said pivoted side is moved outwardly, said lug carried by said rotatable rod will be automatically swung out of an engaging position with respect to the lug carried by said first named rod for permitting said weight to automatically swing said pivoted side into a closed position.

1,214,429. PACKING-RING. EUGENE F. COOK, St. Louis, Mo., assignor to Harward M'f'g Company, St. Louis, Mo., a Corporation of Illinois. Filed May 10, 1915. Serial No. 26,963. (Cl. 121—108.)

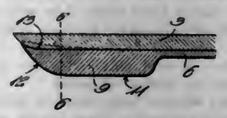
1. A spring ring for packing pistons, operating to exert a substantially constant resilient pressure against the cylinder wall completely around its circumference, said ring having a series of peripherally short oil-retaining pockets formed superficially and extending around its periphery, said pockets being independent and separated from each other in a circumferential direction around said ring to prevent draining of the oil from any pocket into the next.



2. A spring ring for packing pistons, operating to exert a substantially constant resilient pressure against the cylinder wall completely around its periphery, said ring having two series of peripherally short oil-retaining grooves formed superficially around its periphery, the grooves of each series being independent and separated from each other in a circumferential direction around said ring to prevent draining of the oil from any groove into the next groove of the same series, and one of said series of grooves being separated from the other series of grooves in a longitudinal direction on the packing ring.

3. A spring ring for packing pistons, operating to exert a substantially constant resilient pressure against the cylinder wall completely around its circumference, said ring having two series of peripherally short oil-retaining grooves formed superficially in and extending partially around its periphery, the grooves of each series being independent of each other and separated from each other in a circumferential direction around said ring to prevent draining of the oil from any groove into the next groove of the same series, and one of said series of grooves being separated from the other series of grooves in a longitudinal direction on the packing ring, the said grooves of said series being arranged in a staggered relation with respect to each other.

1,214,430. ATTACHMENT FOR SHEARING-MACHINES. RUSSELL D. COOK, Salt Lake City, Utah. Filed June 29, 1916. Serial No. 106,679. (Cl. 30—1.)



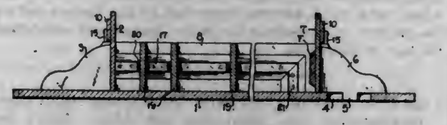
1. An article of the class described consisting of an attachment for shearing machines, said attachment being slightly concavo-convex and comprising an attaching plate, a fin formed on each end edge thereof and projecting beyond the front edge, and a plurality of relatively shorter fins formed integrally with and projecting forwardly from the front edge of said plate, all of said fins depending from the under side of said plate and having flat bottoms disposed in the same horizontal plane, each of said fins also having a longitudinally extending groove in its upper edge, said grooves being adapted to receive the bottom edges of a plurality of comb teeth of a shearing machine, said attachment being adapted to be disposed with its convex side toward the stationary cutter of the shearing machine.

2. The combination with a shearing machine including a stationary cutter having comb teeth thereon, the bottom edges of said teeth being thin; of an attachment therefor comprising an attaching plate, a fin formed on each end edge thereof, and a plurality of shorter fins formed on said plate and projecting forwardly from the front edge thereof, the upper edges of said fins being in the same horizontal plane, each having a longitudinally extending groove in said upper edge, said grooves receiving the thin bottom edges of a plurality of comb teeth, and means for clamping said attachment in engagement with said comb teeth.

3. The combination with a shearing machine including a stationary cutter having comb-teeth thereon, the bottom edges of said teeth being thin, and a pair of clamping screws for holding the parts of said machine together, of an attachment therefor, said attachment being slightly concavo-convex and comprising an attaching plate having coöperating attaching means to be engaged by said clamping screws, a fin formed on each end edge thereof, and a plurality of relatively shorter fins formed integrally with and projecting forwardly from the front edge of said plate, all of said fins depending from the underside of said plate and having flat bottoms disposed in the same horizontal plane, each of said fins also having a longitudinally extending groove in its upper edge to receive the thin bottom edges of a plurality of said comb-teeth, said attachment being disposed with its convex side toward said stationary cutter, whereby when said clamping screws are engaged with said coöperating attaching means and tightened, the fins will be clamped in engagement with said comb.

4. The combination with a shearing machine including a stationary cutter having comb teeth thereon, and a pair of clamping screws for holding the parts of said machine together; of an attachment therefor, said attachment being slightly concavo-convex and comprising an attaching plate having coöperating attaching means to be engaged by said clamping screws, a fin formed on each end edge thereof, and a plurality of relatively shorter fins formed integrally with and projecting forwardly from the front edge of said plate, all of said fins depending from the under side of said plate and having flat bottoms disposed in the same horizontal plane, the upper edges of said fins engaging the bottom edges of a number of said comb teeth, said attachment being disposed with the convex side toward said stationary cutter, whereby when said clamping screws are engaged with said coöperating attaching means and tightened, the attachment will be clamped in engagement with said comb.

1,214,431. MOLD. SAMUEL I. COTHERN, Herrick, Ill. Filed Apr. 24, 1916. Serial No. 93,276. (Cl. 25—121.)



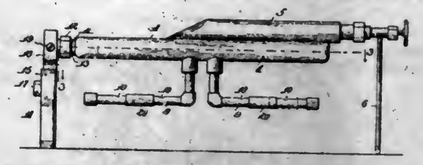
1. A mold comprising an elongated pallet, upstanding end plates carried by the pallet, one of said end plates being movable relative to the other, side plates adapted to coact with the pallet and the end plates, removable cores carried by the opposed faces of the side plates, said cores having their opposed ends spaced to afford receiving grooves, partition plates insertible within said grooves, and cores carried by said partition plates.

2. A mold comprising an elongated pallet, upstanding end plates carried by the pallet, one of said end plates being movable relative to the other, side plates adapted to coact with the pallet and the end plates, removable cores carried by the opposed faces of the side plates, said cores having their opposed ends spaced to afford receiving grooves, partition plates insertible within said grooves, cores carried by said partition plates, said cores being spaced to afford receiving grooves, and dividing plates adapted to be disposed longitudinally of the pallet, the ends of said dividing plates being insertible within the receiving grooves afforded by the cores of the partition plates.

1,214,432. OIL-BURNER. EDWARD CRAIG, Albion, Ill. Filed Mar. 13, 1916. Serial No. 83,861. (Cl. 158—63.)

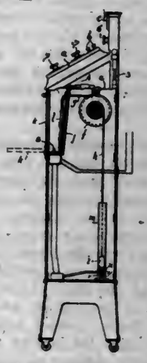
1. An oil burner, comprising a casing made in a single casting having two generating chambers in communication with each other and lying in the same horizontal plane, and an intake chamber located above one of the generating chambers and in communication therewith, burner tubes connected to the generating chambers, means for supplying fuel to the intake chamber and forming a support for an end of the casing, and a stand for supporting the other end of the casing.

2. An oil burner, comprising a casing having an intake and generating chambers in communication with each other, said casing being provided with a nipple at one end thereof for cleaning the generating chambers, a cap connected to the nipple for normally closing the same, and a stand connected to the said cap for supporting the casing.



3. The combination with an oil burner having an intake and generating chambers in communication with each other, a nipple on one end of the burner, and a cap for closing the nipple, of a stand consisting of a body having legs and a bifurcated stem, said body being provided with an opening in which the stem is received, means for adjustably connecting the stem and body together, said bifurcated end of the stem being adapted to receive the cap therein, and means for connecting the cap and stem together.

1,214,433. CABINET FOR ELECTRICAL APPLIANCES. ERNEST M. CRANE and CHAUNCEY R. PELTON, Detroit, Mich. Filed Mar. 27, 1916. Serial No. 86,884. (Cl. 175—298.)



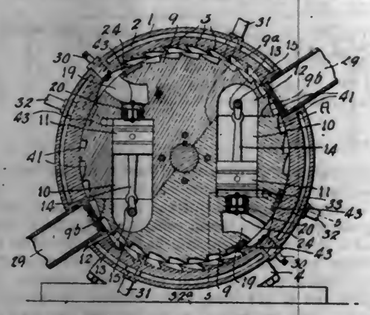
1. A cabinet having a plurality of electrically operated instruments withdrawable from said cabinet and withdrawable into said cabinet, means for automatically withdrawing said instruments into the cabinet when the use of the same is discontinued, and means for automatically switching on the current when said instruments are withdrawn from the cabinet and for cutting off the current when said instruments are drawn into the cabinet.

2. The combination of a cabinet provided with a top which serves as a switch board and includes a plurality of switches for electric circuits, a compartment located in the front of the cabinet below said switch board, a door for giving access to said compartment, and a plurality of electrically operated instruments supported on flexible cords automatically maintained in position in said compartment but which may be withdrawn from the compartment for use.

1,214,434. ROTARY MOTOR. FRANK J. CROMP, FRANK J. PEEBLES, and HERBERT S. PEEBLES, Central Lake, Mich. Filed June 3, 1916. Serial No. 101,541. (Cl. 123—9.)

1. A rotary explosion engine, including an outer shell provided upon the interior thereof with buckets, a rotor mounted within the outer shell and provided with an ex-

plosion chamber which opens through the periphery thereof in coöperative relation to the buckets, a pump upon the rotor for supplying fresh charges to the explosion chamber, a shaft extending through the rotor at one side thereof and having an operative connection with the pump, an annular gear at one end of the outer shell, a pinion applied to the shaft and meshing with the gear to drive the pump as the rotor turns, and ignition means.



2. A rotary explosion engine, including an outer shell provided upon the interior thereof with buckets, a rotor mounted within the outer shell and provided with an explosion chamber opening through the periphery thereof and arranged in coöperative relation to the buckets, said rotor being provided with a bore forming a pump cylinder and also with a passage leading from the pump cylinder to the explosion chamber, a spring seated check valve arranged in said passage and opening toward the explosion chamber, a piston mounted within the cylinder, means actuated by the rotation of the rotor for operating the piston, means for alternately supplying charges of fresh air and an explosive mixture to the cylinder, and ignition means for exploding the explosive charges in the explosion chamber.

3. A rotary explosion engine, including an outer shell provided upon the interior thereof with buckets, a rotor mounted within the outer shell and formed with an explosion chamber opening through the periphery thereof in coöperative relation to the buckets, said rotor being provided with a bore forming a pump cylinder and also with a passage leading from the pump cylinder to the explosion chamber, a piston mounted within the cylinder, a shaft extending through the rotor at one side thereof and operatively connected to the piston, an annular gear at one end of the outer shell, a pinion applied to the shaft and meshing with the gear for driving the piston, means for alternately supplying charges of fresh air and of an explosive mixture to the cylinder, a spring seated check valve arranged in the passage between the cylinder and explosion chamber and opening toward the latter, and ignition means for exploding the charges in the explosion chambers.

4. A rotary explosion engine, including an outer shell provided upon the interior thereof with buckets, a rotor mounted within the outer shell and formed in complemental halves, each half being formed with a cylinder bore opening through a meeting face thereof, and being also provided with an explosion chamber located opposite the inner end of the cylinder bore and opening through the periphery of the rotor in coöperative relation to the buckets of the shell, passages being provided which communicate between the cylinders and the explosion chambers, spring seated check valves mounted in the said passages and opening toward the explosion chambers, pistons mounted within the cylinders, means actuated by the rotor for operating the pistons, means for supplying explosive charges to the cylinders, and ignition means for exploding the charges in the explosion chambers.

5. A rotary explosion engine including an outer shell provided on the interior thereof with an annular row of buckets and also with a peripherally extending mixture groove, a mixture feed pipe leading to the groove, a rotor mounted within the outer shell and formed with an explosion chamber opening through the periphery thereof in coöperative relation to the buckets, said rotor being provided with a bore forming a pump cylinder which communicates with the explosion chamber and also with a feed passage leading from the pump cylinder and opening through the periphery of the rotor in position to be brought into communication with the mixture groove as the rotor revolves, a check valve between the pump cylinder and explosion chamber, a piston mounted within the pump cylinder, means actuated by the rotor for reciprocating the piston, and ignition means for exploding the charges in the explosion chamber.

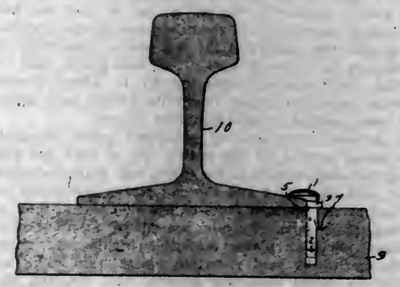
[Claims 6 to 10 not printed in the Gazette.]

1,214,435. MUD OR ICE TREAD FOR AUTOMOBILE-WHEELS. JOHN GREER CROUCH, Evansville, Ind. Filed May 12, 1916. Serial No. 97,031. (Cl. 152—14.)



A mud and ice tread for automobile wheels, comprising frames composed of attachable and detachable sections of angular cross sectional shape provided with webs at intervals thereof and at their abutting ends, said frames being adapted for disposition on opposite sides of the wheel, and tread devices connected to the frames within the pockets intermediate the webs thereof and straddling the tire of the wheel.

1,214,436. RAILWAY-SPIKE. ALEXANDER D. CURRY, Hawkinsville, Ga. Filed Nov. 29, 1915. Serial No. 64,078. (Cl. 238—4.)

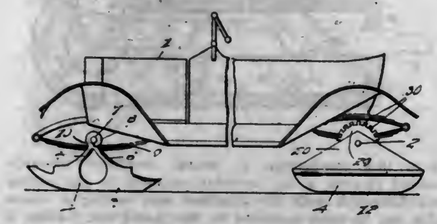


1. A railway spike consisting of a head, a shank formed integral with said head, a shoulder formed upon said shank beneath said head, a dovetailed groove formed transversely in the front face of said shank adjacent said shoulder, and a dovetailed rail chair removably mounted in said groove.

2. A railway spike consisting of a head, a shank formed integral with said head, a plurality of oppositely disposed projections formed upon said shank, a shoulder formed upon said shank adjacent said head, a dovetailed groove formed transversely in the front face of said shank immediately below said shoulder, and a rail chair removably mounted within said groove.

3. The combination with a railway spike consisting of a head, a shank formed integral with the said head, a shoulder formed on the said shank, the upper surface of the said shoulder being slanted downwardly to provide a water shed, said spike being provided with a dovetailed groove, a dove tailed rail chair slidably mounted in the said groove to retain the edge of the flange of a rail between the said head and chair in rigid position.

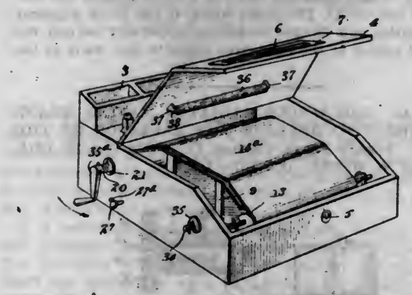
1,214,437. RUNNER ATTACHMENT FOR MOTOR-VEHICLES. GIUSEPPE D'AGOSTINO, Utica, N. Y. Filed Mar. 31, 1916. Serial No. 88,040. (Cl. 21—47.)



1. A runner attachment for motor vehicles including a pair of spaced runners, a guide structure positioned between said runners, a caterpillar tread for travel about said guide structure and comprising a plurality of cylindrical spurs, links connecting said spurs and holding them against rotation, a toothed wheel positioned outwardly of said tread, the teeth of said toothed wheel adapted to engage said cylindrical spurs for propelling said tread, and means for rotating said toothed wheel.

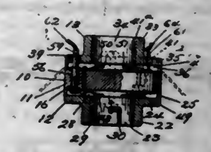
2. The combination with a motor vehicle including a driving axle, of a runner attachment for said vehicle including a pair of spaced runners, a guiding block secured to one of said runners and extending across the space between the runners, a caterpillar tread mounted for travel about said blocks and comprising a plurality of cylindrical spurs, and links connecting said cylindrical spurs, an upstanding bracket secured to the upper edges of said runners, a pair of stub shafts rotatably supported by said brackets, toothed wheels mounted upon said stub shafts and operatively engaging the cylindrical spurs of said caterpillar tread for operating the tread upon rotation of the toothed wheels, a toothed wheel mounted upon said drive axle and meshing with said first named toothed wheels for rotating the toothed wheels and operating the caterpillar tread upon rotation of the drive axle.

1,214,438. HOTEL DESK-REGISTER. GEORGES LEON JULES DELAFORGE, Coronado, Cal. Filed Oct. 6, 1915. Serial No. 54,469. (Cl. 11—22.)



In a desk register of the class described, a web operating roller having a shaft mounted in bearings which permit the removal of said shaft therefrom, an operating shaft arranged in line with said roller shaft and mounted for rotation and also for longitudinal movement, said operating shaft and said roller shaft having means at their opposing ends to enable them to be coupled and uncoupled, and means to actuate the operating shaft, a ratchet wheel on said operating shaft, a spring pressed pawl to engage said ratchet wheel, means to release said pawl from said ratchet wheel, an unwinding roller, a stub shaft geared to said unwinding roller, and means to engage and rotate either the winding roller or the stub shaft at will and both in the same direction, to enable the winding roller and unwinding roller to be turned either forwardly or rearwardly as may be desired in manipulating the web which connects said rollers.

1,214,439. SOCKET FOR ELECTRIC LAMPS. LAUBENS P. DIXON, New York, N. Y. Filed Jan. 6, 1914. Serial No. 810,603. (Cl. 173—337.)



1. In a socket for electric lamps, the combination with a central disk of two alined lamp socket sleeves removably secured to opposite sides of said disk, said sleeves each having a metallic lining for contact with the end of an electric lamp, flanges extending outwardly from the opposed ends of said sleeves with turned peripheral edges resting on the central disk for providing chambers between the flanges and the central disk, with means for securing the sleeves to the central disk, two electrical contacts secured on each side of the central disk within said chambers, each of said chambers having an opening therein for retaining the end of a metallic sleeve, said central disk having openings therethrough and metal sleeves disposed through said openings and through the openings of the contacts, the flange of one of the socket sleeves having three openings to admit plugs for insertion in the said sleeves of the central disk and the contacts, substantially as described, and for the purpose specified.

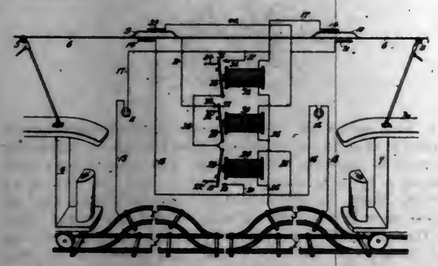
2. A double ended lamp socket comprising a central disk, cup shaped lamp receivers attached to the faces of said disk, electrical contacts mounted on each face of said disk and adapted to contact with a lamp when in place within said receivers, a metallic sleeve passing through said disk and connecting any two contacts on opposite faces of said disk, and a separate sleeve for each of the remaining contacts, said sleeves being adapted to receive either the positive or the negative plugs of an electric circuit, whereby either or both of the lamps may be lighted as desired.

3. A lamp socket comprising a central disk, lamp receivers attached to each face of said disk, two electric contacts mounted on each face of said disk and adapted to make a contact with a lamp when secured within said receivers, a metallic sleeve connecting any two contacts on opposite sides of said disk, and separate sleeves connected to each of the two remaining contacts, said sleeves being adapted to receive the positive and negative plugs of an electric circuit, whereby either or both of the lamps may be lighted as desired.

1,214,440. ELECTRIC-TROLLEY-RAILWAY SIGNAL SYSTEM. BENJAMIN M. DOWNS, Buffalo, and WALTER S. COOK, Lackawanna, N. Y. Filed Nov. 17, 1915. Serial No. 61,917. (Cl. 246—36.)

1. An electric trolley railway signal system comprising an electric signaling device having one terminal connected with the railway track upon which the car runs, a closing contact connected with the other terminal of said signal device and arranged adjacent to one part of the trolley wire so as to be electrically connected therewith by the trolley of the car as the latter passes the respective part of the track and trolley wire, a closing electro-magnet having an armature and a coil one end of which is connected with said track while the other end is connected with that side of said signal device with which said closing contact is connected, a retaining switch having contacts which are adapted to be engaged by the forward

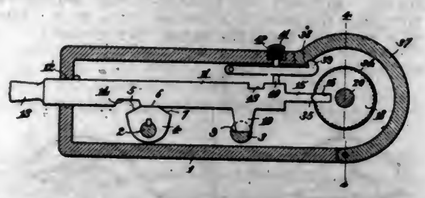
movement of said armature when attracted by energizing said coil and one of which is connected with said trolley wire while the other is connected with said signal device and coil on the same side as said closing contact, an opening contact arranged adjacent to another part of said trolley wire and adapted to be electrically connected therewith by the passage of said trolley, an opening electromagnet having an armature and a coil one end of which is connected with said opening contact and the other being connected with said railway track, and a restoring switch which is arranged in the circuit of said retaining switch and the contacts of which are adapted to be separated by the forward movement of the restoring armature under the attraction of the restoring coil when the latter is energized.



2. An electric trolley railway signal system comprising a track having different sections over which cars are adapted to run in opposite directions, respectively, a trolley wire having sections which are engaged respectively by the trolley of said cars running in opposite directions, two pairs of trolley contacts arranged at opposite ends of a railway block and each pair comprising a closing contact which is adapted to be electrically connected with one section of the trolley wire by the trolley as a car moves in one direction on one track section and an opening contact which is adapted to be electrically connected with the other section of the trolley wire by the trolley as the car moves in the opposite direction on another track section, two closing electro-magnets each having an armature and a coil, one end of both coils being connected with said track and the other end of one coil being connected with the closing contact at one end of the railway block while the other end of the other coil is connected with the closing contact at the opposite end of the railway block, two electric signal lamps arranged at opposite ends of said railway block and each connected on one of its sides with the track while its opposite side is connected with the closing contact at the opposite end of said block and also connected with the corresponding end of the coil of the companion closing electro-magnet, two retaining switches each having two contacts one of which is connected with the trolley wire and the other with that side of one of the signal lamps and the companion closing coil with which one of the closing contacts is connected and the contacts of each retaining switch adapted to be engaged by the forward movement of the armature of one of said closing coils when the latter becomes energized, an opening electro-magnet having an armature and a coil one end of which is connected with said track while the other end thereof is connected with both of said opening contacts at opposite ends of said block, and a restoring switch which is arranged in the circuit of both of said retaining switches and the contacts of which are adapted to be separated by the forward movement of the restoring armature under the attraction of the restoring coil when the latter is energized.

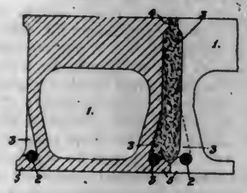
1,214,441. PERMUTATION-LOCK. FREDERICK C. ECKELMAN, New York, N. Y. Filed Mar. 7, 1916. Serial No. 82,775. (Cl. 70—53.)

1. A lock comprising a casing, a closure hinged thereto, a latch pivoted in the casing and engageable with the closure to hold the same in a closed position, tumblers movably mounted in the casing, a bar movably mounted in the casing for coöperation with the tumblers, and having a recess, and a pin movably mounted in the casing and engaging the latch and the bar and movable into the recess when the bar is moved into the tumblers to move the latch to release the closure.



2. A lock comprising a casing, tumblers movably mounted therein, a bar movably mounted in the casing for coöperation with the tumblers and having a recess and a lug turnably mounted in the casing and having a plurality of flat edges each of which is engageable with the bar, the said recess in the bar adapted to receive a portion of the lug during the turning movement thereof.

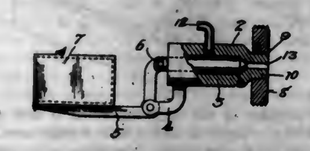
1,214,442. CONSTRUCTION OF FLOORS AND THE LIKE. FREDERICK WILLIAM EDLIN, Liverpool, England. Filed Jan. 20, 1916. Serial No. 73,252. (Cl. 72—66.)



1. A building block provided on each opposite side face with an intermediate cavity forming at the ends two flanges provided with openings in alinement with said cavity, whereby tie rods passed through the openings support the blocks and grouting when placed in the cavity anchors the tie rod and block together.

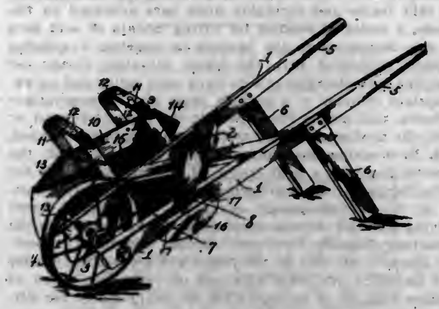
2. A building block provided on each opposite side face and above the bottom with an intermediate cavity forming at the ends two flanges provided with openings, the bottoms of said openings being in alinement with the bottom of the cavity, the lower edges of the block adjacent the cavities and flanges projecting outwardly beyond the vertical planes of the respective opposite side walls of the block.

1,214,443. HOT-WATER RADIATOR HAVING MEANS THEREIN TO RELEASE THE RADIATOR OF THE AIR. JOSEPH ELGER, Chicago, Ill. Filed Dec. 15, 1915. Serial No. 67,034. (Cl. 137—122.)



An air vent valve for radiators adapted to be inserted into a radiator unit through one of the screw threaded standard upper joint openings of the unit, and screw threaded means coöperating with the opening and the valve to maintain the valve in operative position in the radiator.

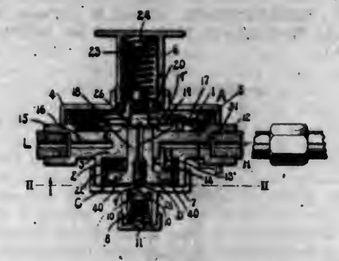
1,214,444. MEANS FOR CATCHING INSECTS. ALLEN F. ETHERIDGE, Evergreen, Ala. Filed Aug. 10, 1916. Serial No. 114,231. (Cl. 43—1.)



1. In a device of the character described, the combination with a wheeled frame, of arches secured to one side thereof and projecting laterally from said frame, a receptacle secured to the outer arms of said arches, a receptacle disposed between said first-mentioned receptacle and the wheeled frame, said receptacles being spaced apart, and plant engaging means projecting from the opposing sides of the respective receptacles.

2. A device for catching insects, comprising a barrow, arches secured to one side only of said barrow, and projecting laterally therefrom, said arches each comprising two members adjustably connected together, a receptacle secured to the outer end portions of said adjustable arches, another receptacle secured to the side of the barrow and spaced from the receptacle carried by the arches, curved arms secured to the inner sides of said receptacles, one of said curved arms being in advance of the other, and means for counterbalancing said receptacles.

1,214,445. REDUCING-VALVE. ARTHUR J. FAUSEK and IRWING F. FAUSEK, St. Louis, Mo. Filed Dec. 2, 1914. Serial No. 875,088. (Cl. 50—4.)



1. A valve comprising a casing having inlet and discharge passageways, and a valve device for controlling communication between said passageways, said valve device including a valve seat member and a closure member movable to present different portions thereof to the same face of said valve seat member.

2. A reducing valve comprising a casing having inlet and discharge passageways, and an automatic valve device including a closure member different portions of which are adapted to open and close communication between said passageways, said closure member being adjustable to different positions wherein only one of said portions is positioned to serve as a closure.

3. A valve comprising a casing having inlet and discharge passageways, and a valve device for closing communication between said passageways, said valve device including a valve seat member and a closure member having a series of closures each of which is adapted to contact in common with the same face of said valve seat member.

4. A reducing valve comprising a casing having an inlet passageway and a discharge passageway, and an automatic valve device for opening and closing communication between said passageways, said valve device including a ported abutment member and a closure member, different portions of which are adapted to contact with said ported abutment member to close communication between said passageways, said closure member being adjustable to different positions wherein only one of said portions is adapted to serve as a closure.

5. A reducing valve comprising a casing having inlet and discharge passageways, a diaphragm secured to said casing, a closure member having a plurality of closure elements each of which is adapted to close communication between said passageways, said closure member being adjustable to substitute one of said closure elements for another, and means for securing said closure member to said diaphragm so as to maintain any one of said closure elements in its operative position.

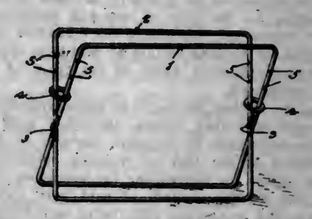
[Claims 6 to 9 not printed in the Gazette.]

1,214,446. FLY-SWATTER. CLARENCE L. FERGUSON, Georgetown, Mass., assignor of one-half to William P. R. Estes, Jr., Haverhill, Mass. Filed July 8, 1916. Serial No. 108,195. (Cl. 43—1.)



A fly swatter comprising a body, a handle on the body, a resilient loop at the free end of the handle, an extensible handle consisting of a pair of relatively slidable tubes one fitted within the other, the loop being adapted to fit in the smaller tube, a stop plug having a central opening therein at the outer end of the smaller tube, said opening being adapted to receive the handle of the swatter, a plug fitted within the inner end of the smaller tube, a plug in the handle end of the larger tube and a flexible member connecting the last named plug to limit the outward movement of the first mentioned tube with the second tube.

1,214,447. BROOM-BRIDLE. CHARLES A. FOSDICK, Keota, Iowa. Filed Oct. 25, 1916. Serial No. 127,653. (Cl. 15—23.)

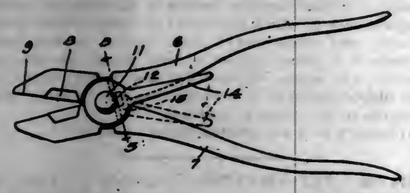


A broom bridle consisting of a pair of intersecting rectangular shaped relatively movable clamping frames, cer-

tain adjacent sides of the frames having pivotal connection with each other, and means adjustably associated with the clamping frames for holding the frames in different clamping positions.

1,214,448. PLIERS. WILLIAM FRANCIS, Seattle, Wash. Filed Aug. 22, 1916. Serial No. 116,563. (Cl. 81—45.)

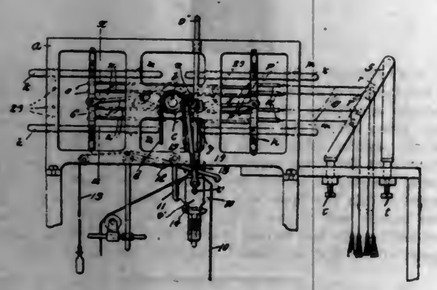
1. The combination with a pair of pliers having a pivot, of a cam on said pliers and a lever arm on said pivot, said lever arm having an inclined surface opposed to and engageable with said cam.



2. A device of the class described comprising two plier elements secured together by a pivot, of an inclined cam on one of said plier elements, and a lever arm mounted on said pivot and disposed to extend lengthwise thereof, said lever arm having an inclined surface adapted to be moved into engagement with said cam to cause frictional engagement between the two halves of said pliers.

3. The combination with a pair of pliers having a pivot, of a cam on one side of said pliers adjacent said pivot, a lever arm mounted on said pivot and having an inclined surface adapted to be moved into engagement with said cam to cause frictional engagement within the pivotal bearing of said pliers, said lever extending lengthwise of the handle elements of said pliers, and a downturned end on said lever arm adapted to project between the handles of said pliers.

1,214,449. JACQUARD MECHANISM FOR LOOMS. LEOPOLD FUCHS, Roslyn Heights, N. Y. Filed Nov. 7, 1914. Serial No. 870,879. (Cl. 139—16.)



1. Weaving mechanism for fancy or plain weaving comprising harness operating means including griff bars adapted to be connected to jacquard harness or heddle frames according to the type of weaving operation desired, pattern means for controlling the operation of said bars, and means for holding certain of said bars operative or inoperative according to which of the types of weaving is being performed.

2. Weaving mechanism for fancy or plain weaving comprising harness operating means including griff bars adapted to be connected to jacquard harness or heddle frames according to the type of weaving operation desired, pattern means for controlling the operation of said bars, means for holding certain of said bars operative or inoperative, and means for adjustably supporting the pattern means for actuating the griff bars according to which of the types of weaving is being performed.

3. In weaving mechanism of the class described, the combination with a griff frame, of driving mechanism for actuating said frame, harness operating means controlled by said frame and including hook bars arranged on the frame, a series of needles for lifting certain of said bars to give movement to the harness in weaving, a cylinder support connected with the frame actuating means for carrying interchangeably a pattern card series and an appropriate cylinder or a pattern chain and an appropriate cylinder, and means for adjusting the support toward or from the needles according to the type of cylinder utilized.

4. In weaving mechanism of the class described, the combination with a griff frame, of driving mechanism for actuating said frame, pattern controlling cylinders adapted to be interchangeably connected to the griff frame driving means for coöperation with card or chain needle actuating elements, a support therefor, a harness supporting means controlled by the frame and respective cylinder and including griff bars arranged on the frame, a set of needles adapted to be controlled by the cylinders for lifting certain of said bars to give movement to the harness, means for adjusting the cylinder support for raising or lowering the cylinder carried thereby for enabling cooperation of the latter with certain of the needles only, and means on which certain of the griff bars are adapted to be mounted to render the same inoperative with respect to certain of the needles.

5. In weaving mechanism of the class described, the combination with a griff frame, of driving mechanism for actuating said frame, a cylinder connected to the griff frame driving means, a support therefor, harness operating means controlled by the frame and cylinder and comprising griff bars arranged on the frame, a set of needles controlled by the cylinder for lifting certain of said bars to give movement to the harness in pattern or plain weaving, means intermediate the cylinder and needles for controlling actuation of predetermined needles according to the weave aforesaid desired, means for adjusting the cylinder support for enabling coöperation of the cylinder with said needles, a main frame carrying the griff frame, and rack members on said main frame on which certain of said griff bars are disposed when not in operation.

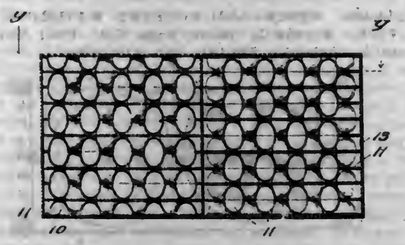
[Claims 6 to 17 not printed in the Gazette.]

1,214,450. FRUIT-PICKER. PERRY D. GIFFORD, Windfall, Ind. Filed Feb. 11, 1916. Serial No. 77,780. (Cl. 56—99.)



A fruit picker comprising a cylindrical collar, a pair of oppositely disposed barrels formed on said collar and extending parallel therewith, a hollow handle secured within the collar, a substantially rectangular frame having its ends diverging inwardly and downwardly into the barrels, a serrated plate secured to the frame, teeth formed on the plate, a cutting blade slidably secured to the frame, a substantially U-shaped member secured to the blade, and an operating rod slidable in the handle and connected to said member for sliding said blade over the plate to sever the stems of fruit.

1,214,451. PACKING DEVICE. EDWIN R. GILL, Yonkers, N. Y., assignor to Seamless Products Corporation, a Corporation of New York. Filed Jan. 13, 1913. Serial No. 741,816. (Cl. 217—27.)



1. In a packing crate for eggs, fruit and like articles, a tier of superimposed holding units each consisting of a pair of approximately square sheets of like size, the sheets of a unit being superimposed and having complementary half cells to form entire cells, each for holding an article singly, the cells in each unit being placed uniform distances apart, alternate units having different numbers of cells, the half cells of adjacent sheets of alternating units being in staggered relation to and in contact with the opposing sheets to support one unit from the one next below and to hold the opposing sheets of alternate units against lateral movement, the margins of the sheets of the unit having the larger number of cells being narrow and the margins of the sheets of the unit having the smaller number of cells being wide, the outer marginal cells of the unit having the smaller number of cells lying inside the outer marginal cells of the next following unit having a larger number of cells.

2. In a packing crate for eggs, fruit and like articles, a tier of superimposed holding units each consisting of a pair of superimposed sheets, the sheets of the units being alike in size and each sheet having a plurality of dome-shaped cells, the openings of the cells of the pair of sheets of a unit being in register with each other to form containers for containing the articles singly, alternate units having different numbers of registering cells, the margins of the sheets of a unit having the larger number of registering cells being narrow and the margins of the sheets of a unit having the smaller number of registering half cells being wide, the cells in one unit extending into the spaces between the cells of the next following unit and engaging the said cells and corresponding sheets.

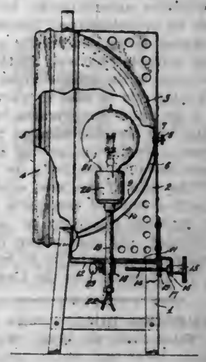
3. In a packing crate for eggs, fruit and like articles, an external boxing and a tier of superimposed holding units in the said boxing, each consisting of a pair of sheets, the sheets of all the units being alike in size and fitting into the boxing, each sheet having a plurality of dome-shaped cells, the openings of the cells of the sheets of a unit being in register with each other to form containers for containing the articles singly, each container being ovoidal in shape and elongated in a vertical direction, alternate units having different numbers of cells, the cells in one unit extending in the spaces between cells of the next following unit and engaging the said cells and the corresponding sheet, and cushioning sheets, one on top and the other on the bottom of the tier of holding units, the top cushioning sheet abutting against the under side of the top of the boxing and the bottom cushioning sheet resting on the bottom of the boxing, the said cushioning sheets having dome-shaped cells extending in the spaces of the adjacent cells of the bottom and top units and in contact with said cells and the corresponding sheets.

4. In a packing crate for eggs, fruit and like articles, an external boxing and a tier of superimposed holding units in the said boxing, each consisting of a pair of sheets, the sheets of all the units being alike in size and fitting into the boxing, each sheet having a plurality of dome-shaped cells, the openings of the cells of the sheets of a unit being in register with each other to form containers for containing the articles singly, each container being ovoidal in shape and elongated in a vertical direction, alternate units having different numbers of cells, the margins of the sheets of the units having the smaller number of cells being wider than the margins of the sheets having the larger number of cells, the cells in one unit extending in the spaces between cells of the next following unit and engaging said cells and the corresponding sheet, and cushioning sheets, one on top and the other on the bottom of the tier of holding units, the top cushioning sheet abutting against the under side of the top of the boxing, and the bottom cushioning sheet resting on the bottom of the boxing, the said cushioning sheets having dome-shaped half cells extending in the spaces of the adjacent cells of the bottom and top units and in contact with said cells and the corresponding sheets.

5. In a packing crate for eggs, fruits and like articles, two superimposed units, each unit being formed of two approximately square sheets provided with complementary half cells, the half cells being uniformly spaced apart and the sides of the half cells of two adjacent sheets of the two sheets being externally in contact with each other, and the apexes of the cells being in contact with the opposed faces of the said sheets, one unit having a larger number of cells than the other unit, the openings of the cells of the sheets of a unit being in register with each other to form containers for containing the articles singly, each container being ovoidal in shape, the elongation being in a vertical direction.

[Claims 6 to 12 not printed in the Gazette.]

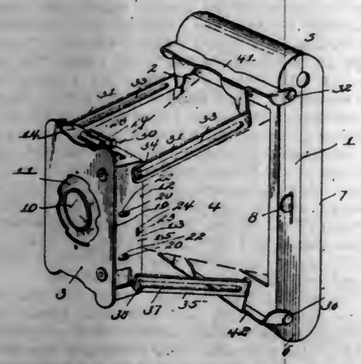
1,214,452. LAMP. GEORGE W. GILLETTE, Cleveland, Ohio. Filed May 27, 1915. Serial No. 30,747. (Cl. 240—44.)



1. In a lamp, a stationary frame, a reflector rigidly mounted thereon, horizontal guide-ways on said frame below said reflector and parallel with its axis, a slide movable in said guide-ways, slide adjusting means, and a lamp supporting tube adjustable vertically in said slide and extending through a slot in the lower portion of said reflector.

2. In a lamp, a stationary frame, a reflector rigidly mounted thereon and having a longitudinal bottom slot, a casing inclosing and protecting the rear portion of the reflector, said casing having a longitudinal slot in its bottom, guide-ways extending longitudinally of said casing slot outside of said casing and attached thereto, a slide movable in said guide-way, means outside of said casing for adjusting said slide, and a lamp holding tube extending through said slide and said slots from the outside of said casing to the inside of said reflector and adjustable in said slide, and means on the outside of said casing for holding said tube in adjusted position.

1,214,453. LENS-FOCUSING DEVICE. JOSEPH GODDARD and WILLIAM S. HUTCHINGS, Rochester, N. Y., assignors to Seneca Camera Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 8, 1916. Serial No. 77,051. (Cl. 95—45.)



1. A lens focusing device comprising a lens carrying member, a supporting member, an adjusting member movable relatively to said supporting and lens carrying members for shifting the latter to focus the lens, and means for normally retaining said adjusting member in a predetermined focusing position.

2. A lens focusing device comprising a support, a relatively movable lens carrying member, a lens focusing member movable relatively to said support and lens carrying member, and means for normally retaining the lens focusing member in predetermined focusing position.

3. A lens focusing device comprising a support, a relatively movable lens carrying member, a lens focusing member movable relatively to said lens carrying member, and a catch operative automatically to retain the lens focusing member in predetermined focusing position.

4. A lens focusing device comprising a support, a lens carrying member movable relatively to the support in the direction of the axis of the lens, and an adjusting member reciprocable relatively to said support and lens carrying member in a direction transversely to the axis of the lens to adjust the lens carrying member to focus the lens.

5. A lens focusing device comprising a support, a lens carrying member movable relatively to said support in the direction of the axis of the lens, said member having an operating portion exposed exteriorly of said support, and a member movable relatively to said support and lens carrying member and controlling the movement of the lens carrying member relatively to said support.

[Claims 6 to 22 not printed in the Gazette.]

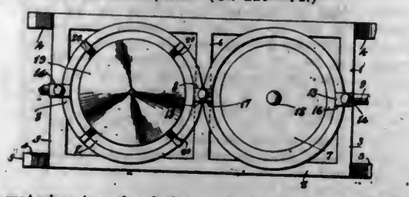
1,214,454. TUMBLING DOLL. JOHN GOWDEY, Philadelphia, Pa. Filed June 13, 1916. Serial No. 103,465. (Cl. 46—40.)



1. A tumbling figure-doll of the type indicated having a tubular body formed of two separate tubular sections of like diameter, with internal band or fastening portion, and threads passing through the upper section and looped around the lower section, thus securing the meeting edges of the sections in close contact, as described.

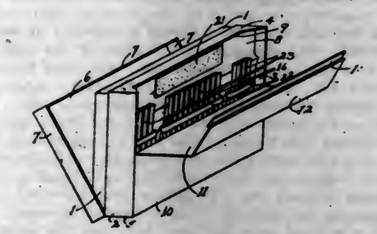
2. A tumbling figure doll comprising a body made of tubular sections of like diameter with an internal band covering the meeting edges of said sections, and means for securing sections and band together, as described.

1,214,455. STOCK AND POULTRY WATERING DEVICE. EUGENE L. GRANT, Napa, Cal. Filed May 19, 1914. Serial No. 839,494. (Cl. 119—74.)



A watering trough of the class described comprising a frame having spaced integral side and end bars, a central transverse bar formed integrally with the side bars and defining a plurality of squared pan receiving openings, the ends of said side bars being bent downwardly and outwardly forming supporting legs, a plurality of pans positioned in said pan receiving openings, said pans provided with an annular laterally extending peripheral flange, portions of said flanges resting upon the upper side of said side and end bars and transverse bar, a plurality of fastening plates arranged upon portions of said pan flanges and the upper side of the end bars and transverse bar and means extending through said plates and bars to hold the pans against movement with relation to the frame in any direction.

1,214,456. UNITARY CIGARETTE AND MATCH BOX. GEORGE FREDERIC HALL, Providence, R. I. Filed Feb. 3, 1910. Serial No. 541,893. (Cl. 206—48.)



1. In a unitary cigarette and match box the combination of inclosing walls a partition dividing the inclosed space into two separate compartments a hinged and flanged cover for one compartment a hinged flexible flap for the other compartment the cover and flap adapted to close toward each other and when in their fully closed position the edge of the flexible flap extending between a flange of the cover and an inclosing wall of the box and such contact assisting the cover and flap to retain such closed relation.

2. In a unitary cigarette and match box adapted for pocket use the combination of a cigarette compartment and a match compartment; integrally formed partitions extending crosswise of the match compartment and adapted to stiffen the walls of said compartment and with said walls forming pockets for the retention of matches, a ridge along a wall of said compartment, an elastic match-holding device and the whole assembled and adapted to hold a plurality of detached matches within said pockets crosswise of and in contact with said ridge intermediate the ends of said matches in position for endwise withdrawal.

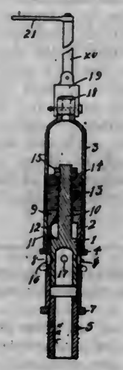
3. In a unitary cigarette and match box adapted for pocket use the combination of a cigarette compartment and a match compartment and a metallic lining for the match compartment having back, front and end walls and a bottom a plurality of dividing partitions extending crosswise between the back and front walls and forming pockets a plurality of clips formed on the back wall and projecting inwardly above said pockets and adapted to removably secure an elastic match holding means, an elastic match holding means, a ridge formed along the back wall above said clips, all of said walls, bottom, partitions, clips and ridge integrally formed of a metal blank machined bent shaped and adapted to receive and removably hold a layer of detached matches crosswise of said ridge with their ends extended for endwise withdrawal.

4. In a unitary cigarette and match box adapted for pocket use the combination of a cigarette compartment and a match compartment separated by a dividing wall, a metallic insert in said match compartment having a back portion parallel to said wall with a plurality of integrally formed partitions at right angles to said back portion a plurality of clips on said back portion projecting inwardly above said partitions and adapted to secure an elastic match holding means, an elastic match holding means, a ridge along said back portion, all of said insert integrally formed of a metallic blank machined bent shaped and adapted to receive and removably hold a layer of detached matches between said partitions crosswise of and in contact with said ridge in position for endwise withdrawal.

5. In a unitary cigarette and match box adapted for pocket use the combination of a compartment adapted to hold cigarettes and a compartment adapted to hold matches, a dividing wall between the compartments, an abrasive scratch adapted for the frictional ignition of matches, a match holding means, said scratch and means mounted in the match compartment and an attached envelop adapted to be sealed and to surround and inclose said scratch, means and matches to seal them off from the rest of the contents of the box.

[Claims 6 to 10 not printed in the Gazette.]

1,214,457. AUTOMATIC ADJUSTABLE FEEDER-VALVE. RAYMOND E. HARD, Fort Worth, Tex., assignor of one-half to E. H. Phillips, Fort Worth, Tex. Filed July 15, 1916. Serial No. 109,561. (Cl. 137—26.)



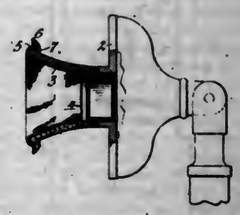
An intake valve comprising a nipple to be tapped into a manifold pipe or other receiver, a valve inclosing member adjustably mounted on said nipple and having receiving ports in the side thereof, a valve movable longitudinally in said member and provided with ports and an annular exterior groove adapted to register with the ports of said member and having surfaces on each side of its own ports and said groove adapted to close the ports of said member, said valve having a stem projecting through the end of said member, a spiral spring on said stem, and means for varying the tension of said spring, and said nipple serving to limit the travel of said valve.

1,214,458. SADDLETREE. JAMES M. HAYS, Jefferson City, Mo. Filed Sept. 22, 1916. Serial No. 121,577. (Cl. 54—44.)



A saddletree comprising a vertically perforated front arch provided with a vertical transverse groove, a horn located on the front arch, having a body formed with a forwardly extending perforated arm seated on the front arch, and a perforated leg piece occupying the vertical transverse groove of the front arch, horizontal pins extending through the front arch and through the perforated leg piece, a perforated strap piece within the front arch, and vertical rivets extending through the perforated arm, through the perforated front arch and through the perforated strap piece.

1,214,459. PROTECTOR FOR TELEPHONE-MOUTHPIECES. MARY GRIFFIN HEBERLY, Springville, N. Y. Filed Apr. 20, 1916. Serial No. 92,360. (Cl. 179—184.)



1. A protector for mouthpieces comprising a tubular body, a diaphragm arranged transversely at the rear end of the body, and a reversed attaching rim arranged on the outer side of said body and consisting of an inner annular flange which projects rearwardly from the front edge of the body and is of rearwardly tapering form and an outer annular flange which projects forwardly from the rear edge of said inner flange and is of rearwardly tapering form.

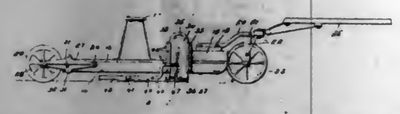
2. A protector for mouthpieces comprising a tubular body, a diaphragm arranged transversely at the rear end of the body, and a reversed attaching rim arranged on the outer side of said body and consisting of an inner annular flange which projects rearwardly from the front edge of the body and is of rearwardly tapering form and an outer annular flange which projects forwardly from the rear edge of said inner flange and is of rearwardly tapering form and has its front edge of larger diameter than that of the front edge of said body.

3. A protector for mouthpieces comprising a body, and a resilient attaching rim arranged around said body and having an inner flange which projects rearwardly from the body and is reduced and an outer flange which projects forwardly from said inner flange and is enlarged forwardly.

4. A protector for mouthpieces comprising a body, and a resilient attaching rim arranged around said body and

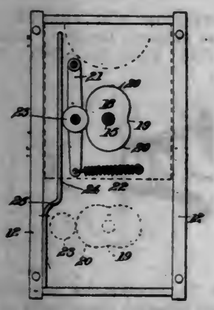
having an inner flange which projects rearwardly from the body and is reduced and an outer flange which projects forwardly from said inner flange and is enlarged forwardly, the rear side of the meeting parts of said inner and outer flanges being constructed to form a forwardly tapering surface for engaging the front edge of a mouthpiece and cause the rim to be sprung outwardly and the inner side of said inner flange to grip the periphery of the mouthpiece in rear of its front end.

1,214,460. CORN-CUTTER, &c. WILLIAM B. HICKEY, Sapulpa, Okla. Filed Sept. 4, 1915. Serial No. 48,988. (Cl. 56—103.)



In a machine of the class described, a wheeled frame, flanged guide plates secured on the outer faces thereof, slides guided therein and having vertically disposed webs, obliquely disposed cutters secured on the slides, aprons supported on the cutters and having upturned side edges forming outer and inner flanges, and bars secured on the inner flanges and having upturned front ends with forwardly extending arms, said arms having offsets forming hooks that engage the webs of the slides.

1,214,461. DISPLAY-RACK. SOLOMON HIMMEL, Baltimore, Md. Filed Mar. 7, 1913. Serial No. 752,675. (Cl. 211—16.)



1. In a display device, the combination with a case, of a rotatable rack mounted to reciprocate toward and from the back of the case, and means for cushioning contact of the rack with the case, should rearward movement be imparted when the rack has been rotated from a predetermined position.

2. In a display device, the combination with a case, of a rotatable rack mounted to reciprocate toward and from the back of the case, and a buffer having a resilient portion for cushioning contact of the rack with the case, should rearward movement be imparted when the rack has been rotated from a predetermined position.

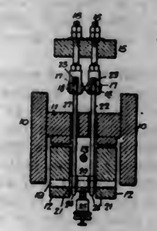
3. In a display device, the combination with a case, of a rotatable rack mounted to reciprocate toward and from the back of the case, and an abutment guide member attached to the case and provided with means for cushioning contact of the rack with the case, should rearward movement be imparted when the rack has been rotated from a predetermined position.

4. An improvement in display racks comprising a reciprocable carriage, a rotatable shaft supported thereby, a display rack supported by said shaft, means coöperating with said shaft for automatically causing said display rack to assume a predetermined position, and means for cushioning contact of the rack with the case, should rearward movement be imparted when said rack has been rotated from its predetermined position.

5. The combination with a case or compartment, of a rotatable rack movable to and from a position within said case or compartment, an abutment guide member adjacent the path of reciprocation of said rack, a disk attached to and rotatable with the rack in the same plane as said abutment guide, the width of said disk being less than the length thereof, and means interposed between said abutment guide and said disk and coöperating with the edge of said disk to maintain the major axis of said disk normally parallel with the said abutment guide and to increase the effective length of said disk when partially rotated in forward position, said abutment guide member having an abutment positioned to intercept said interposed means when said disk has been rotated in its forward position.

[Claims 6 to 12 not printed in the Gazette.]

1,214,462. LEATHER-GLAZING MACHINE. WILLIAM HOFMANN and CHARLES CHRISTY, Camden, N. J., assignors to Keystone Leather Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 7, 1916. Serial No. 82,705. (Cl. 149—18.)



1. The combination in a leather glazing machine, of a spring plank; links hung from said plank; an abutment; a rocker member, and means for operating the same; a transverse shaft carried by the rocker member; a bearing mounted on said shaft; and links having their lower ends attached to the bearing so as to prevent the bearing from turning independently of the links, said shaft being free to turn in the bearing.

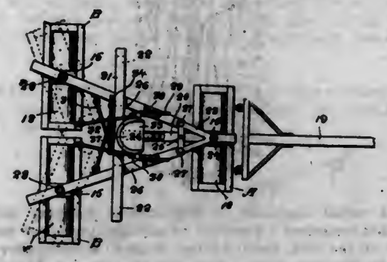
2. The combination in a leather glazing machine, of a spring plank; adjustable bolts carried by said plank and having rollers at their lower ends; two links, each of said links having a hook at each end, the upper hooks resting on the rollers of said bolts; an abutment; a rocker member, and means for operating the same; a transverse shaft carried by said rocker member; a bearing mounted on the shaft and having flattened reduced portions at each end, the lower hooks of said links engaging the flattened portions of the bearing so that said bearing will not turn in the links, but will allow the shaft to turn freely in the bearing.

1,214,463. LAND-ROLLER. SYLVESTER C. HOLTZ, Shelby, Ohio. Filed Aug. 22, 1916. Serial No. 116,393. (Cl. 55—47.)

1. In a machine of the class described, a front roller carrying frame, pivotally supported adjusting bars, means whereby said bars are connected with the front frame, rear roller carrying frames pivotally connected with the adjusting bars, and means for adjusting the rear roller carrying frames about their respective pivots.

2. In a machine of the class described, a front roller carrying frame, a reach pivotally connected therewith, triangular brackets supported adjacent to the top and bottom faces of the reach and connected therewith, adjusting bars pivoted between the triangular brackets at the rearward corners thereof, and rear roller carrying frames pivotally connected with the adjusting bars.

3. In a machine of the class described, a front roller carrying frame, a reach pivotally connected therewith, triangular brackets supported adjacent to the top and bottom faces of the reach and connected therewith, adjusting bars pivoted between the triangular brackets at the rearward corners thereof, and rear roller carrying frames pivotally connected with the adjusting bars; in combination with lever standards on the adjusting bars, hand levers fulcrumed on the said standards, and links connecting the hand levers with the rear roller carrying frames.



4. In a machine of the class described, a front roller carrying frame, a reach pivotally connected therewith, triangular frames adjacent to the top and bottom faces of the reach and connected therewith, a cross bar at the rearward end of the reach, said cross bar having horizontal slots adjacent to the ends thereof, adjusting bars pivoted between the triangular frames at the rearward corners thereof and guided through the slots in the cross bar, rear roller carrying frames connected pivotally with the adjusting bars, and means for swinging the roller carrying frames about the pivots and for securing them in adjusted position.

5. In a machine of the class described, a front roller carrying frame, pivotally supported adjusting bars, means whereby said bars are connected with the front frame, rear roller carrying frames pivotally connected with the adjusting bars, means for adjusting the rear roller carrying frames about their respective pivots, and means for locking the adjusting bars in adjusted position.

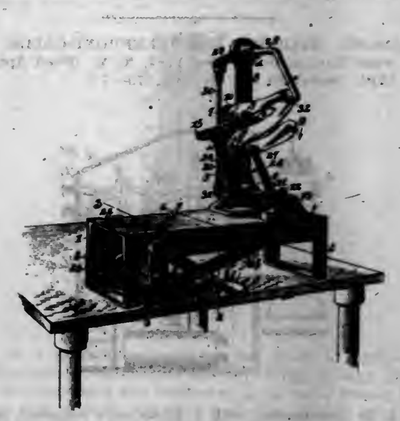
[Claim 6 not printed in the Gazette.]

1,214,464. BOX. HUBERT EDWIN HOOD, Buffalo, N. Y., assignor, by mesne assignments, to The F. F. Dalley Corporations, Limited, Hamilton, Ontario, Canada, a Corporation of Canada. Filed Feb. 8, 1915. Serial No. 6,753. (Cl. 220—6.)



A box comprising a body having a flange provided with an outwardly projecting annular bead or shoulder, a cover having a flange fitting over the flange of the body and provided on its outer side with a bracket having a web projecting laterally from the lower edge of the cover flange, an upright wall projecting upwardly from the outer edge of said web and along the outer side of said cover flange, a slot in said web and a stop lip projecting inwardly from the upper edge of said wall toward the cover flange, and a lever pivoted on said wall and having an inner arm arranged between the wall and cover flange and adapted to swing upwardly into engagement with said stop lip or downwardly through said slot and against one end of the latter and also against said body shoulder and an outer arm arranged outside of said wall and adapted to be manipulated.

1,214,465. MACHINE AND PROCESS FOR PULLING CANDY. JOHN M. HOWARTH, Wausau, Wis. Filed Dec. 16, 1915, Serial No. 67,224. Renewed Sept. 22, 1916. Serial No. 121,692. (Cl. 107—30.)



1. In a candy pulling machine; an oscillating arm having pins on opposite sides of its axis of motion, bell-cranks located on axes above and below that of the oscillating arm, pins carried by the bell-cranks and being adapted to move in opposite directions across the paths of movement of the oscillating arm pins, and means for moving the bell-cranks and oscillating arm simultaneously, all combined substantially as described.

2. In a candy pulling machine; an oscillating arm having pins on opposite sides of its axis of motion and parallel therewith, bell-cranks located above and below the oscillating arm and movable on axes parallel with that of the said arm, pins carried by the bell-cranks and being adapted to move across the paths of movement of the oscillating pins in opposite directions all of said pins being parallel and adapted to receive the candy, and means for moving the bell-cranks and oscillating arm simultaneously, all combined substantially as described.

3. In a candy pulling machine; an oscillating arm capable of performing a part of a revolution about its axis, the arm having pins at opposite sides of the axis, bell-cranks having pins projected into the plane of the arm carried pins and adapted to move into and out of the paths of movement of the said pins in opposite directions, said bell-cranks being movable on parallel axes above and below that of the oscillating arm, means for revolving the oscillating arm and means for simultaneously moving the bell-cranks, all combined substantially as described.

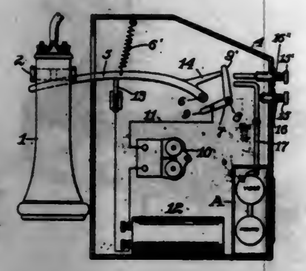
4. In a candy pulling machine; an oscillating arm having pins on opposite sides and movable in a semi-circular path about the central axis of motion, vibrating bell-cranks movable in semi-circular paths in opposite directions on axes above and below the central oscillating arm each bell-crank having a pin adapted to bisect the path of movemeint of its co-acting oscillating pin twice in one vibration, and means for vibrating the bell-cranks and revolving the arm simultaneously, all combined substantially as described.

5. In a candy pulling machine; an oscillating arm having forwardly extending pins on opposite sides of its axis of motion, a pinion secured to the back of the arm, a gear segment meshing with the pinion, bell-cranks revoluble on axes parallel to and above and below the axes of the oscillating arm, one arm of each bell-crank extending toward the said arm, pins on the ends of the bell-crank arms adapted to co-act with the pins on the oscillating arm said bell-crank pins bisecting the path of movement of the oscillating pins twice in one vibration, connections between the other arms of the bell-cranks, means for

moving the bell-cranks in opposite directions and means for rotating the oscillating arm simultaneously, all combined substantially as described.

[Claims 8 to 14 not printed in the Gazette.]

1,214,466. REGISTER FOR TELEPHONE-CALLS. EDWARD TAYLOR HULL, New York, N. Y. Filed Apr. 12, 1916. Serial No. 90,731. (Cl. 179—7.)



1. In combination with a subscriber's telephone set, a signal, a call counter, means by which said signal is given upon hanging up the receiver, and means for stopping said signal and for thereby operating the counter, substantially as described.

2. In combination with a subscriber's telephone set, a signal, a call counter, means by which said signal is given upon hanging up the receiver after the call has been effected, means for stopping the call and by the same act operating the counter, and means for stopping the signal without operating the counter, substantially as described.

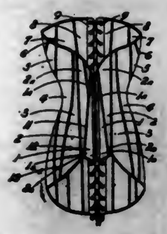
3. In combination with a subscriber's telephone set, a signal, a member operated to one position by the act of hanging up the receiver, said member assuming another position when the receiver is removed, electric circuit connections which include the signal for operating it, said circuit connections having contacts to open and close the circuit at two different points, said contacts being controlled by the movement of the member, closing one when the receiver is removed and closing the other when the receiver is hung up and manually operated means for breaking the circuit at one of the contacts and a counter or register operated by the same manual operation which breaks the signal circuit, substantially as described.

4. In combination with a subscriber's telephone set, a signal, a member moved to one position by the receiver hook when the receiver is hung thereon and assuming another position when the receiver is removed from its hook, a local electric circuit connection independent of the telephone circuit having contacts to open and close the local circuit at two different points, said contacts being controlled by the movement of the member, closing one when the receiver is removed and closing the other when the receiver is hung up to thereby operate the signal and manually operating means for breaking the circuit at the contact first mentioned, and a counter or register operated by the same manual operation which breaks the signal circuit, substantially as described.

5. In combination with a subscriber's telephone set, a signal, a member moved to one position by the receiver hook when the receiver is hung thereon and assuming another position when the receiver is removed from its hook, a local electric circuit connection independent of the telephone circuit having contacts to open and close the local circuit at two different points, said contacts being controlled by the movement of the member, closing one when the receiver is removed and closing the other when the receiver is hung up to thereby operate the signal and manually operating means for breaking the circuit at the contact first mentioned, and a counter or register operated by the same manual operation which breaks the signal circuit, and manually operated means for breaking said circuit at said first mentioned contact without operating the counter, substantially as described.

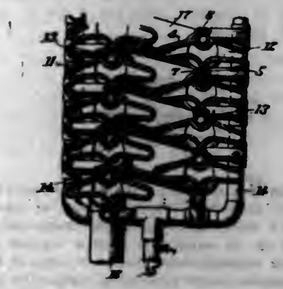
[Claim 6 not printed in the Gazette.]

1,214,467. CORSET. ELIZABETH FERGUSON HUME, Dunedin, New Zealand. Filed Aug. 12, 1913. Serial No. 784,418. (Cl. 2—73.)



A corset composed of two similar members each of which comprises a plurality of sections, the upper extremity of the first front section of each member above the waist line thereof being narrower than the lower extremity of the same section and the second section having an upper wide extremity and a lower narrower extremity, and so on alternately throughout the whole series of sections toward the back of the member except the last section at the back which has both the upper and lower extremities thereof of the same width, the upper portion of the last section at the back having its body vertically straight from the waist line upwardly and angularly disposed relatively to the upper part thereof from the waist line downwardly, the sections increasing in length from the front to the rear section, the joints between the first and second sections being at an angle and straight between the second and third sections, and so on alternately throughout the series of sections, whereby the fullness of the corset above the waist line relatively to a vertical plane coincident with the back above the waist line is directed to the front and the fullness of the corset below the waist line relatively to the same plane is directed toward the rear of the corset when the latter is applied to the body of the wearer.

1,214,468. WATER-HEATER. SAMUEL J. HURWITZ, Youngstown, Ohio. Filed Mar. 2, 1916. Serial No. 81,747. (Cl. 122—250.)

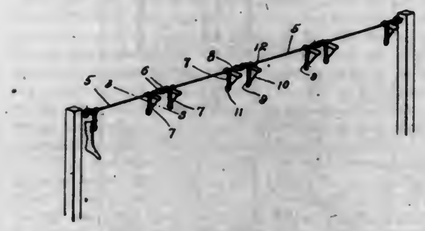


1. In a water heater, a water carrying pipe elongated in cross section and having the upper surface formed with a longitudinally extending groove and the lower surface formed with a longitudinally extending rib, and a heating pipe disposed in the groove and having the upper portion thereof formed with a longitudinal groove to receive the rib on an adjacent upper water carrying pipe.

2. In a water heater, a water carrying pipe elongated in cross section and having the upper surface formed with a longitudinally extending groove and the lower surface formed with a longitudinally extending rib, a heating pipe disposed in the groove and having the upper portion thereof formed with a longitudinal groove to receive the rib of an adjacent upper water carrying pipe, and burner tips on said heating pipe at each side of said rib and diverging outwardly from the tips on the other side whereby the flame will be directed against the bottom of the next uppermost water carrying pipe so that the heat from said flame may envelop said water carrying pipe.

3. In a water heater, a water carrying pipe and a fuel carrying heating pipe parallel with said water carrying pipe and extending throughout the length thereof, said water carrying pipe and fuel carrying pipe having the adjacent portions thereof formed to interfit each other.

1,214,469. CLOTHES-LINE. LUTHER C. IRVIN, Warwick, W. Va. Filed July 10, 1916. Serial No. 108,415. (Cl. 68—3.)



A clothes line of the character described comprising a plurality of links, each made from a single length of relatively stiff wire, eye terminals formed at the ends of the link, with the eyes of adjacent links loosely connected to each other, loops bent from each link, and swinging fasteners carried by the loops and having angularly disposed yokes engaged with the link and frictionally held in closed or open position.

1,214,470. TERMINAL CLIP FOR ELECTRIC CONDUCTORS. BENJAMIN A. JEFFERY, Detroit, Mich. Filed Feb. 3, 1912. Serial No. 675,284. (Cl. 173—269.)



1. A terminal clip for electric conductors comprising a ferrule and a clip portion in substantially parallel planes, connected by a tongue bent over one end of the ferrule portion, said clip portion and tongue being of sheet metal, said clip portion being provided with a longitudinal slot leading approximately to the tongue to provide arms, said slot having an enlarged seat portion and a relatively narrow entering portion leading thereto from the end of the clip, the material at the base of said arms being yieldable to permit a conductor larger than said narrow entering portions to pass therethrough to and from said seat portion.

2. A terminal clip for electric conductors comprising a ferrule formed of sheet metal bent to form a cylindrical body having abutting longitudinal edges, the forward end of said body having an integral tongue extending diametrically thereacross, said tongue terminating in an integral clip bent at an angle thereto, said tongue and clip being also of sheet metal, said clip being provided with a longitudinal slot leading approximately to the tongue to provide arms, said slot having an enlarged seat portion and a relatively narrow entering portion leading thereto from the end of the clip, the material at the base of said arms being yieldable to permit a conductor larger than said narrow entering portion, to pass therethrough to and from said seat portion.

1,214,471. SPARK-PLUG. JOSEPH ARTHUR JEFFERY and BENJAMIN ALFRED JEFFERY, Newark, N. J. Filed Sept. 23, 1908, Serial No. 454,401. Renewed July 10, 1916. Serial No. 108,451. (Cl. 123—169.)



1. In a spark plug, an insulating block, a conductor carried thereby, an electric terminal carried by said block and in circuit with said conductor, a gap being formed between said terminal and said conductor, and an arc-preventing resistance material in said gap to prevent passage of any currents but those of high potential.

2. In a spark plug, an insulating block, a conductor carried thereby and forming part of the circuit through said plug, a gap being formed in said circuit, and a solid body of arc-preventing high resistance material in said gap to prevent the passage of any currents but those of high potential.

3. In a spark plug, an insulating block, a conductor carried thereby and forming part of the circuit through said plug, a gap being formed in said circuit, and a solid body of carborundum in said gap to prevent the passage of any currents but those of high potential.

4. In a spark plug, an insulating block, a conductor carried thereby and forming part of the circuit through said plug, a gap being formed in said circuit, a solid body of arc-preventing high resistance material in said gap to prevent the passage of any currents but those of high potential, and means for preventing lateral displacement of said high resistance body.

5. In a spark plug, an insulating block, a conductor carried thereby, a binding post resting directly on the end of said block and separated from the end of said conductor by a space, means in said space for interposing a uniform resistance in the circuit to said conductor, and an independent cap for securing said binding post to one end of said block.

[Claims 6 to 22 not printed in the Gazette.]

1,214,472. METHOD OF MANUFACTURING SPARK-PLUGS. JOSEPH A. JEFFERY and BENJAMIN A. JEFFERY, Detroit, Mich. Filed Feb. 27, 1912, Serial No. 680,265. Renewed July 19, 1915. Serial No. 40,809. (Cl. 18—47.5.)



1. The method of manufacturing spark plugs comprising forcing a conductor wire longitudinally into an insulating block of ceramic material while the latter is in a plastic condition, and until the forward end of the wire approaches the farther extremity of the blank, whereby

said forward end will be embedded within said extremity, firing the blank with the wire therein, and finally removing the porcelain of the said extremity to expose the forward end of said wire.

2. The method of manufacturing spark plugs comprising forcing a conductor wire longitudinally into an insulating block of ceramic material while the latter is in a plastic condition, and until the forward end of the wire approaches the farther extremity of the blank, whereby said forward end will be embedded within said extremity, firing the blank with the wire therein, and finally grinding said extremity to expose the forward end of the wire flush with the end surface of the porcelain body.

1,214,473. ADJUSTABLE WRENCH. JOHN HENRY JENNER, Leavenworth, Ind. Filed May 22, 1916. Serial No. 99,169. (Cl. 81—89.)



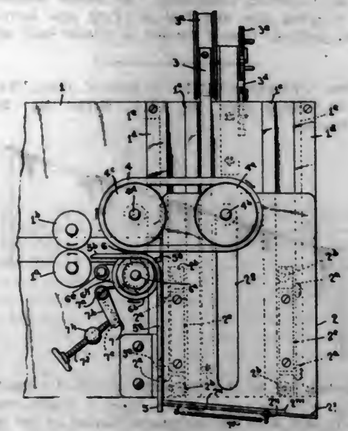
1. A wrench of the class described comprising a movable jaw member having ratchet teeth on its shank, a stationary jaw member having a guide to receive the shank, a lever pivoted to the stationary jaw member, a pawl carried by said lever for engagement with said ratchet teeth, means for forcing said pawl into normal engagement with said ratchet teeth, and a pivoted dog for cooperation with said pawl to move the latter out of engagement with the teeth when said lever is moved in one direction.

2. A wrench of the class described comprising a movable jaw member having ratchet teeth on its shank, a stationary jaw member having a guide to receive the shank, a lever pivoted to the stationary jaw member, a pawl carried by said lever for engagement with said ratchet teeth, a pair of springs engaging said pawl, and a dog, said dog forcing said pawl out of engagement with said teeth when the lever is moved in one direction.

3. A wrench of the class described comprising a movable jaw member having ratchet teeth on its shank, a stationary jaw member having a guide to receive the shank, a lever pivoted to the stationary jaw member, a pawl carried by said lever for engagement with said ratchet teeth, a pair of springs engaging said pawl, and a dog pivoted intermediate its ends and having a cam face on one end engaging a seat in said pawl, the dog forcing said pawl out of engagement with the teeth when the lever is operated in one direction.

4. A wrench of the class described comprising a movable jaw member having ratchet teeth on its shank, a stationary jaw member having a guide to receive the shank, a bell crank lever pivoted at one end to the stationary jaw member, a pawl pivoted to the lever for engagement with said ratchet teeth and having a seat therein, a spring on said stationary jaw member for engagement with said pawl for holding the same normally in engagement with said teeth, an additional spring for forcing said lever outwardly, and a dog pivoted intermediate its ends and having a cam face on one end for engagement with said seat, said dog forcing said pawl out of engagement with the teeth when the lever is actuated in one direction, said dog and the first mentioned spring being inactive when the lever is moved in the other direction.

1,214,474. FEEDING AND SEPARATING DEVICE FOR MAIL-MARKING MACHINES. WILLIAM D. JONES, Brooklyn, N. Y., assignor to Universal Stamping Machine Co., New York, N. Y., a Corporation of New Jersey. Filed Sept. 25, 1914, Serial No. 863,455. Renewed June 28, 1916. Serial No. 106,518. (Cl. 101—39.)



1. In a feeding device of the character specified, the combination with a movable vertically disposed feed roller, a carrier adapted to support the matter to be separated movable to and from said roller, means for moving said carrier toward said roller with uniform pressure, and means mounted on the carrier for causing the matter thereon to be presented to the feed belt with substantial uniformity.

2. In a feeding device of the character specified, the combination of a sliding carrier upon which the matter to be fed is stacked edgewise, a feed belt arranged to operate transversely of the carrier, means on the carrier for holding the mail matter thereon between said means and the belt and means for moving the carrier so as to present the said matter toward and against the belt with substantially uniform pressure.

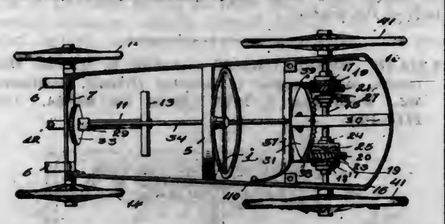
3. The combination with a movable carrier adapted to bodily support the mail matter to be separated, a transversely disposed feed belt for removing the articles separately from the carrier, means for moving the carrier toward the belt and causing it to present the mail matter against the belt with substantially uniform pressure, a separating roller beside the carrier and adjacent the belt adapted to prevent the passage of more than one article at a time from the carrier, and means for rotating said separating roller slowly reversely to the belt.

4. The combination with forwarding means, a guide for directing the articles to the forwarding means, the inner end of said guide adjacent the forwarding device being curved in the direction of discharge of the articles, means for moving articles lengthwise of said guide toward the forwarding devices, and means whereby the articles are caused to move transversely of the guide and follow up the curved part thereof as they approach the forwarding means.

5. The combination of a carrier, means for discharging articles from the carrier, means for moving the carrier toward said discharging means to bring the articles successively thereto, and means on the carrier whereby the final packages are caused to move in the direction of discharge as they approach the discharging means, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,214,475. HAND-PROPELLED VEHICLE. OTTO KARCHER, Canton, Ohio. Filed Nov. 27, 1916. Serial No. 133,545. (Cl. 208—38.)



1. In a hand propelled vehicle, an axle, a longitudinally disposed shaft rotatable in two directions, a driving gear fixed to said shaft, two gears loosely mounted upon said axle and engaging said driving gear so as to be driven thereby simultaneously in reverse directions, clutch members fixed on said axle adjacent to said driven gears, clutch members carried by said driven gears and engaging said first named clutch members and arranged to rotate the latter in the same direction, thereby continuously rotating the axle in one direction and a rotatable hand wheel connected to said longitudinally disposed shaft and arranged to rotate said shaft in either direction.

2. In a hand propelled vehicle, an axle, a longitudinally disposed shaft rotatable in two directions, a driving gear fixed to said shaft, two oppositely disposed spiral gears loosely mounted upon said axle and engaging said driving gear so as to be driven thereby simultaneously in reverse directions, clutch members fixed on said axle adjacent said driven gears, clutch members carried by said driven gears and engaging said first named clutch members and arranged to rotate the latter in the same direction thereby continuously rotating the axle in one direction and a rotatable hand wheel connected to said longitudinally disposed shaft and arranged to rotate said shaft in either direction.

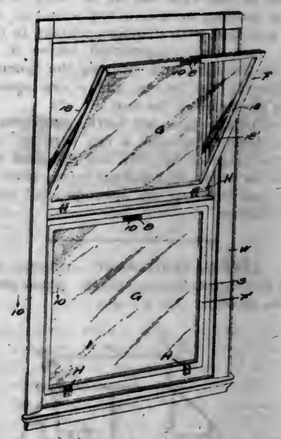
3. In a hand propelled vehicle, an axle, a longitudinally disposed shaft rotatable in both directions, a driving gear fixed to said shaft at a point below the center of said axle, two oppositely disposed spiral gears loosely mounted upon said axle and engaging said driving gear so as to be driven thereby simultaneously in reverse directions, clutch members fixed on said axle adjacent said driven gears, clutch members carried by said driven gears and engaging said first named clutch members and arranged to rotate the latter in the same direction thereby continuously rotating the axle in one direction and a rotatable hand wheel connected to said longitudinally disposed shaft and arranged to rotate said shaft in either direction.

4. In a hand propelled vehicle, an axle, a longitudinally disposed shaft rotatable in two directions, a driving gear fixed to said shaft at a point below the center of said axle, two oppositely disposed spiral gears loosely and slidably mounted upon said axle and engaging said driving gear so as to be driven thereby simultaneously in reverse directions, clutch members fixed on said axle adjacent said driven gears, clutch members carried by said driven gears and arranged to engage said first named clutch members to rotate the latter in the same direction, thereby continuously rotating the axle in one direction, springs arranged to normally hold said driven gears in engagement with their respective clutch members, said driving gear by virtue of its location with reference to the axle alternately holding each driven gear out of engagement with the adjacent clutch member while the other driven gear is held in engagement with its adjacent clutch member and a hand hold connected to said longitudinally disposed shaft and arranged to rotate said shaft in either direction.

5. In a hand propelled vehicle, an axle, a longitudinally disposed shaft rotatable in both directions, a driving gear fixed to said shaft at a point below the center of said axle, two oppositely disposed spiral gears loosely mounted upon said axle and engaging said driving gear so as to be driven thereby simultaneously in reverse directions, clutch members fixed on said axle adjacent said driven gears, clutch members carried by said driven gears and arranged to engage said first named clutch members to rotate the latter in the same direction thereby continuously rotating the axle in one direction, a pinion fixed upon said longitudinally disposed shaft, a second pinion meshing with said first named pinion, a shaft upon which said second named pinion is fixed and a hand wheel fixed upon said last named shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,214,476. WINDOW-SASH FASTENER. WILLIAM CLIFFORD LYNHAM, Richmond, Va., assignor of one-eighth to Martin Luther Anderson, Richmond, Va. Filed Feb. 21, 1916. Serial No. 79,727. (Cl. 16—119.)



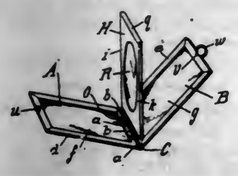
1. A combined fastener for a structure comprising one element slidably mounted within a casing and a second element hingedly mounted within the first, said fastener consisting of a bolt normally housed within the first element, the casing having a socket with which the tip of the bolt alines when this element is closed, a second bolt in the swinging element adapted to aline with the first when this element is closed, a weak spring normally retracting the first bolt, a stronger spring normally projecting the second bolt and adapted when both elements are closed to lock the second to the first and to project the first bolt and lock the first element to the casing, and manually operable means for retracting the second bolt.

2. In a window, the combination with a casing having sockets in its side rails, a sash also having sockets in its side rails, a housing in each sash socket, a bolt therein whose tip is adapted to engage the socket in the casing, and a relatively weak spring bearing it normally out of such engagement and into the housing of a frame movably mounted within the sash, and mechanism for locking this frame in adjusted position, said mechanism including a latch adapted to aline with said bolt when the parts are closed, and a latch-projecting spring relatively stronger than the one mentioned.

1,214,477. PHOTOGRAPH-CASE. GEORGE E. MCCORMACK, Providence, R. I., assignor to Ballou Manufacturing Company, a Corporation of Massachusetts. Filed July 24, 1916. Serial No. 110,833. (Cl. 40—102.)

1. A case of the type set forth, comprising a pair of hinged lids forming a case, a box provided with an open end secured to the hinge of the lids and provided with display openings in its walls, transparent leaves slidably mounted in the box and covering the openings, and means closing the open end of the box for binding the leaves.

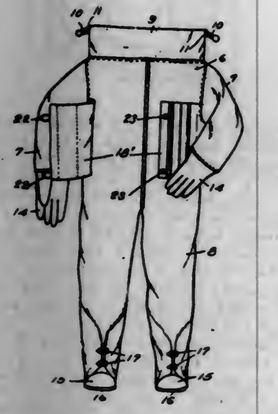
2. A case of the type set forth, comprising a pair of hinged lids forming a case, a box secured to the hinge of the lids provided with display openings, a binding member detachably fitted in and having means for closing the end of the box, and transparent leaves attached to the binding member covering the openings.



3. A case of the type set forth, comprising a pair of hinged lids forming a case, a box attached to the hinge of the lid provided with display openings in its sides and having an open end, transparent leaves in the box in contact with the sides and covering the openings, binding strips embracing the leaves, and a cap upon the strips closing the open end of the box.

4. A case of the type set forth, comprising a pair of hinged lids forming a case, a box with an open end secured to the hinge of the lids and provided with display openings in its walls, transparent leaves slidably mounted in the box and covering the openings, and binding strips uniting the leaves.

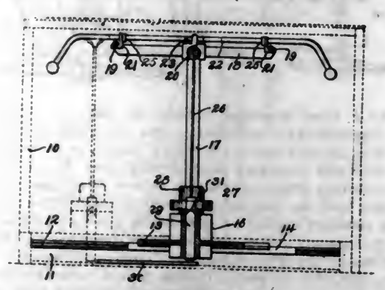
1,214,478. LIFE-SAVING SUIT. GUSTAF W. MAGNUS and JAY O'BANION, Seattle, Wash. Filed Mar. 18, 1916. Serial No. 85,005. (Cl. 9—20.)



1. A garment of the class described, comprising a waterproof body portion, shoes formed integral therewith, a buoyant belt secured thereto, gloves of flexible material, a hood, a neck-piece of flexible material, a draw-string in said neck-piece, and clasps for said draw-string, said clasps having spring-pressed cams that normally permit movement of said draw-string in one direction, and prevent movement of said draw-string in an opposite direction.

2. A garment of the class described, comprising a waterproof body portion of heavy material having a large open top end to provide easy access thereinto, shoes formed integral with said body portion, a hood of light flexible material, gloves of light flexible material, a neck-piece of light flexible material, a draw-string in said neck-piece, clasps for holding said draw-string against a force tending to open said neck-piece, said clasps being adapted to yield to force tending to close said neck-piece, and a belt secured to said garment and having air compartments provided therein, said belt being adapted to fasten around the large upper portion of said garment to confine said large upper portion snugly about the body of the wearer.

1,214,479. DISPLAY-RACK. ANDREW E. MILLER, Baltimore, Md., assignor to Solomon Himmel, Baltimore, Md. Filed Jan. 3, 1916. Serial No. 69,854. (Cl. 211—16.)



1. An improvement in display racks comprising a case, a rotatable rack mounted to reciprocate back and forth within said case, a stationary abutment, a locking member carried by the rack and coöperating with said abutment to prevent accidental rearward movement of the rack, and manually controlled means adapted to operate independently of the rotative movement of the rack for moving said locking member.

2. An improvement in display racks comprising a case, a rotatable rack mounted to reciprocate back and forth within said case, a stationary abutment, a handle carried by the rock and by means of which said rack may be reciprocated, and means connected with said handle and cooperating with said abutment to prevent rearward movement of the rack when the same is in its forward position, said means being adapted to operate independently of the rotative movement of the rack.

3. An improvement in display racks comprising a case, a rotatable rack mounted to reciprocate back and forth within said case, a stationary abutment, a locking member carried by the rack and coöperating with said abutment to prevent accidental rearward movement of the rack, and means adapted to operate independently of the reciprocable movement of the rack for moving said locking member.

4. An improvement in display racks comprising a case, a rotatable rack mounted to reciprocate within said case, a crank shaft supported by said rack, and a locking member adapted to operate independently of the rotative movement of the rack to prevent reciprocation of said rack, said locking member being operatively connected with said crank shaft.

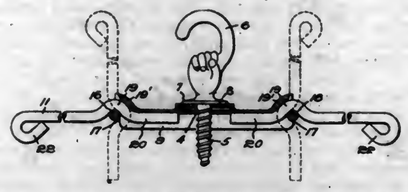
5. An improvement in display racks comprising a case, a rotatable rack mounted to reciprocate within said case, a crank shaft attached to said rack and provided with depending handle-ends, and a locking member adapted to operate independently of the rotative movement of the rack to prevent reciprocation of said rack, said locking member being operatively connected with said crank shaft.

[Claims 6 to 17 not printed in the Gazette.]

1,214,480. CANOPY. TOWNSEND PALMER, Middletown, Conn., assignor to The I. E. Palmer Company, Middletown, Conn., a Corporation of Connecticut. Filed Nov. 3, 1915. Serial No. 59,491. (Cl. 135—9.)

1. A canopy frame having a central or body member, a supporting ring and a series of rods pivotally mounted upon said ring between their ends, each of said rods having an inner end extending a substantial distance inward beyond the pivotal point thereof and adapted to bear against the under side of said central or body member.

2. A canopy frame having a central or body member, a supporting ring carried thereby and a series of rods pivotally mounted upon said ring between their ends, each of said rods having an inner end extending a substantial distance radially inward beyond the pivotal point thereof, and having a bearing relation with respect to said member.

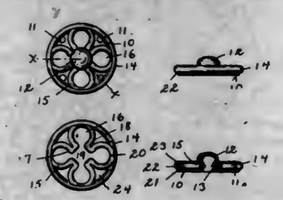


3. A canopy frame having a central or body member provided with a series of substantially radial channels, a ring encircling said central or body member, and a series of rods corresponding in number to said channels and pivotally mounted upon said ring, the inner ends of said rods being received in said channels when the rods are radially extended.

4. A canopy frame having a central or body member having a series of substantially radial channels provided with housings at their outer ends, a corresponding series of rods pivotally mounted at the outer ends of said housings, and a surrounding ring to support said rods in said housings at said point, the inner ends of said rods being received in said channels when the rods are radially extended.

5. Means for supporting a canopy consisting of a canopy frame adapted to be positioned at the top of a canopy and having a central or body member 1 provided with radial channels 2, and a marginal ring 16, a series of rods pivotally mounted between their ends upon said ring and having inner ends 20 extending radially inward beyond the pivotal point of said rods and adapted to enter said channels 2.

1,214,481. PROCESS OF MAKING SNAP-FASTENERS. GEORGE E. PRENTICE, New Britain, Conn. Filed Oct. 29, 1915. Serial No. 58,572. (Cl. 79—3.)

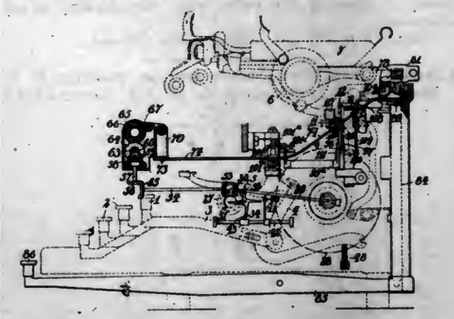


1. The process of forming a socket member for a snap fastener having a central ball receiving opening comprising providing a blank of appreciably greater thickness than the finished socket member and having a central opening and a plurality of radial passage ways extending outwardly from the said opening, and compressing the said blank to the desired thickness for the said finished socket member.

2. The process of forming a socket member comprising providing a blank having a central hole, a plurality of lateral holes, and connecting passages interconnecting the said lateral holes and central hole, and compressing the said blank appreciably so as to harden the material and provide a rounded contour for the border walls of the said holes.

3. The process of forming a socket member for a snap fastener suitable for coöperating with a ball member having a ball supported from a base by a reduced neck comprising punching from sheet metal a blank in the form of an endless structure of substantially uniform cross-section at all parts of the contour, the material of the said blank being of wavy form and extending by a plurality of bends back and forth between the outer side and the central portion, the portions at the middle being separated by an open space that is slightly large for a fit for the said reduced neck, the said material having thickness in excess of that of the finished socket member, and compressing the said blank to the desired thickness and thereby simultaneously closing inwardly the edges of the said portions at the middle so as to appreciably reduce the dimensions of the said open space for receiving the ball member and reduced neck.

1,214,482. COMBINED TYPE-WRITING AND COMPUTING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed June 30, 1911. Serial No. 636,201. (Cl. 235—59.)



1. The combination with a letter-feeding carriage, and two primary elements having relative step-by-step movements concomitantly with the movements of said carriage, one of said primary elements being a master wheel or member, and the other of said primary elements comprising a set of computing wheels or members individually actuable by said master wheel, of means for automatically effecting relative positioning or shifting of said primary elements to engage the master wheel with the live computing wheel in advance of the corresponding feed movements of said carriage, to prolong the interval during which the master-wheel is engaged to the live computing wheel.

2. The combination of a carriage and escapement mechanism therefor, two primary elements having relative step-by-step movements concomitantly with the movements of said carriage, one of said primary elements being a master wheel, and the other of said primary elements comprising a set of computing wheels individually actuable by said master wheel, and means controlled by said escapement mechanism for effecting relative positioning of said primary elements to prolong the interval during which the master wheel is engaged to the live computing wheel.

3. The combination with a letter-feeding carriage, and two primary elements having relative step-by-step movements concomitantly with the movements of said carriage, one of said primary elements being a master-wheel, and the other of said primary elements comprising a set of computing wheels or members individually actuable by said master wheel, of means for automatically effecting a relative shift or positioning of said primary elements to engage the master wheel with the live computing wheel during the feeding movement of the typewriter carriage.

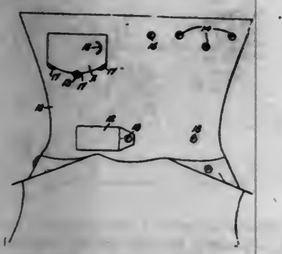
4. The combination of a carriage, an escapement or feeding mechanism therefor, including an escapement wheel or rack, two primary elements having relative step-by-step movements concomitantly with the movements of said carriage, one of said primary elements being a master wheel, and the other of said primary elements comprising a set of computing wheels individually rotatable by said master wheel, a pallet engaging said escapement

wheel, a connection from said pallet to one of said primary elements, and a spring to effect a limited shift or positioning of the same with relation to the other of said primary elements when said pallet escapes from a tooth of said escapement wheel.

5. The combination of a carriage, an escapement or feeding mechanism therefor, including an escapement wheel, two primary elements having relative step-by-step movements concomitantly with the movements of said carriage, one of said primary elements being a master wheel, and the other of said primary elements comprising a set of computing wheels individually rotatable by said master wheel, a pallet engaging said escapement wheel, a connection from said pallet to one of said primary elements, and a spring to effect a limited shift or positioning of the same with relation to the other of said primary elements when said pallet escapes from a tooth of said escapement wheel; means provided for automatically silencing the pallet when the machine is not computing.

[Claims 6 to 101 not printed in the Gazette.]

1,214,483. GARMENT. LOUIS STRAUSS, Brooklyn, N. Y. Filed May 27, 1916. Serial No. 100,176. (Cl. 2—118.)



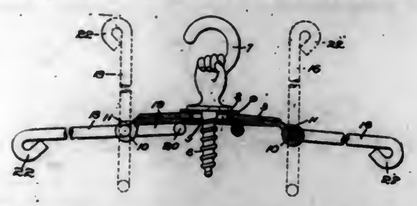
1. A garment having a cape collar, the length of said collar approximating the height of the head of the wearer; means mounted on said collar for temporarily connecting the juxtaposed edges thereof in service; and means for temporarily connecting the juxtaposed edges of sections of said collar when lifted to envelop the head of the wearer, said means comprising a tab having a buttonhole at the free end thereof, said tab being secured to said collar at the under side thereof when worn as a cape, said tab being adapted for extension across the juxtaposed edge sections of oppositely disposed collar sections to form in conjunction therewith a hood-like covering, and a button secured to the opposite section of said collar for engaging in service the buttonhole in said tab.

2. A garment having a cape collar, the length of said collar approximating the height of the head of the wearer; means mounted on said collar for temporarily connecting the juxtaposed edges thereof in service; and means for temporarily connecting the juxtaposed edges of sections of said collar when lifted to envelop the head of the wearer, said means comprising a flap having a series of buttonholes at the free end thereof, said flap being secured to said collar at the under side thereof when worn as a cape, said flap being adapted for extension across the juxtaposed edge sections of oppositely-disposed collar sections for forming in conjunction therewith a hood-like covering, and a series of buttons secured to the opposite section of said collar for engaging in service the series of buttonholes in said flap.

1,214,484. CANOPY. EMORY O. WHITCOMB, Middletown, Conn., assignor to The I. E. Palmer Company, Middletown, Conn., a Corporation of Connecticut. Filed Nov. 3, 1915. Serial No. 59,480. (Cl. 135—9.)

1. A canopy frame having a central body member and a series of rods having laterally bent portions pivotally supported upon said member, said rods having their inner ends extending inwardly beyond their bent portions and constituting stops adapted to co-act with said central body member.

2. A canopy frame having a central body member provided with a series of eyes extending transversely of said member, and a corresponding series of rods pivotally supported in said eyes, said rods having their inner ends extending inwardly beyond said eyes and constituting stops adapted to co-act with said central body member.

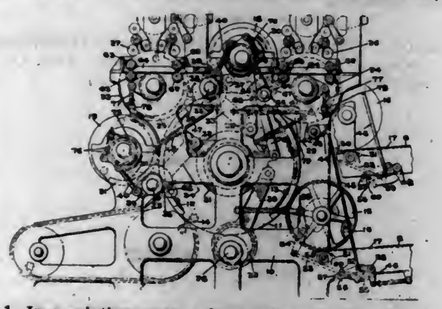


3. A canopy frame having a central body member provided with spaced eyes and a series of rods having laterally bent portions pivotally supported in said eyes, said rods having their inner ends extending inwardly beyond said eyes and constituting stops adapted to co-act with said central body member.

4. A canopy frame having a central body member provided with spaced eyes and a series of rods having laterally bent portions pivotally supported in said eyes and laterally bent stop portions 20 adapted to engage said central body member between said eyes and the central part of said body.

5. A canopy frame having a central body member 1 provided with eyes 10, 11 and a series of rods having laterally bent portions 18 pivoted within said eyes, each of said rods having their inner terminal portion 20 constituting a stop and adapted to engage the member 1.

1,214,485. PRINTING-PRESS. JOSEPH WHITE, Beechwood Heights, N. J., assignor to Hall Printing Press Company, Dunellen, N. J., a Corporation of New Jersey. Filed May 5, 1913. Serial No. 765,413. (Cl. 101—89.)



1. In a printing press, a form cylinder, a transfer cylinder, and an impression cylinder, said form cylinder being provided with inking rollers arranged to be moved into and out of contact with said form cylinder, and said transfer cylinder being arranged to be moved into and out of printing relation with said impression and form cylinders, means to move said transfer cylinder, said cylinder and said means being so constructed and arranged that said transfer cylinder is moved into printing relation only after the transfer surface has passed the impression point between said transfer cylinder and said impression cylinder, and before the transfer surface reaches the impression point between said transfer cylinder and said form cylinder, and automatic means to move said rollers into position to ink the form before the form reaches the impression point between said form and transfer cylinders.

2. In a printing press, a form cylinder, a transfer cylinder, and an impression cylinder, said form cylinder being provided with inking rollers arranged to be moved into and out of contact with said form cylinder, and said transfer cylinder being arranged to be moved into and out of print-

ing relation with said impression and form cylinders, means to move said transfer cylinder, said cylinder and said means being so constructed and arranged that said transfer cylinder is moved into printing relation only after the transfer surface has passed the impression point between said transfer cylinder and said impression cylinder, and before the transfer surface reaches the impression point between said transfer cylinder and said form cylinder, and automatic means connected to said cylinder moving means, to move said rollers into position to ink the form before the form reaches the impression point between said form and transfer cylinders.

3. In a printing press, the combination of a plurality of printing couples, each comprising a form and a transfer cylinder, an impression cylinder having an impression surface arranged to coöperate with each of said transfer cylinders in succession on each rotation of said impression cylinder, said transfer cylinders being arranged to be moved into and out of printing relation with said impression and form cylinders, and means to move said transfer cylinders, said cylinders and said means being constructed and arranged so that each of said transfer cylinders is moved only after the transfer surface on said transfer cylinder has passed the impression point between said transfer cylinder and said impression cylinder and before the transfer surface reaches the line passing through the centers of said transfer cylinder and said form cylinder with which it coöperates.

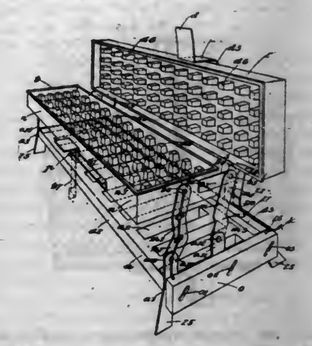
4. In a printing press, the combination of a plurality of printing couples, each comprising a form and a transfer cylinder, and each of said form cylinders being provided with inking rollers, an impression cylinder having an impression surface arranged to coöperate with each of said transfer cylinders in succession, said transfer cylinders being arranged to be moved into and out of printing relation with said impression and form cylinders, and means to move said transfer cylinders, said cylinders and said means being constructed and arranged so that each transfer cylinder is moved into printing relation only after the transfer surface on said transfer cylinder has passed the impression point between said transfer cylinder and said impression cylinder, and before the transfer surface reaches the impression point between said transfer cylinder and said form cylinder, and automatic means connected to said cylinder moving means, to move said rollers into position to ink the form of that form cylinder with which said set coöperates before the form reaches the impression point of said form cylinder.

5. In a printing press, the combination of a plurality of printing couples, each comprising a form and a transfer cylinder, and each of said form cylinders being provided with inking rollers, an impression cylinder having an impression surface arranged to coöperate with each of said transfer cylinders in succession, said transfer cylinders being arranged to be moved into and out of printing relation with said impression and form cylinders, and means to move said transfer cylinders, said cylinders and said means being constructed and arranged so that each transfer cylinder is moved into printing relation only after the transfer surface on said transfer cylinder has passed the impression point between said transfer cylinder and said impression cylinder, and before the transfer surface reaches the impression point between said transfer cylinder and that form cylinder with which it cooperates, and automatic means to move each set of said inking rollers into position to ink the form of that form cylinder with which said set coöperates, before the form reaches the impression point of said form cylinder, and to move each said set out of operative position before the form arrives at the inking point of said rollers.

[Claims 6 to 32 not printed in the Gazette.]

1,214,486. ELECTRIC COOKING APPARATUS. WILLIAM D. WRIGHT, San Diego, Cal. Filed Feb. 5, 1916. Serial No. 76,266. (Cl. 219—19.)

1. In a device of the kind described, a grill member mounted at each end on a support, a horizontal support parallel to said grill member mounted at each end of one of said supports, a plurality of swinging arms each mounted at one end on extended portions of said first named supports, a waffle member pivotally mounted on the other ends of said swinging arms, a plurality of hinges each mounted at one end on said horizontal support, another waffle member mounted on the other ends of said hinges, electric heating elements mounted in said grill member and each of said waffle members, and electric conducting wires connected to each of said heating elements and an electric current supply.



2. In combination with an electric grill member, a plurality of swinging arms each pivotally mounted at one end on supports attached to said grill member, another electrically heated member revolubly mounted on the other ends of said swinging arms, said arms being adapted to form a support for said revolving member and hold the cooking surface thereof in its reversed position at a certain distance from the cooking surface of said grill member, and electric means for heating said grill member and said revoluble member, electrically connected to an electric supply circuit.

3. In a device of the kind described, a pair of support members, a grill member mounted at each end on one of said support members, and provided with a plurality of longitudinal parallel portions and a plurality of parallel cross-pieces forming an integral part of said longitudinal parallel portions, each of said longitudinal portions and cross pieces provided in its lower surface with a longitudinal groove, an electric heating element mounted in each of said grooves and electrically connected to one another and to an electric current supply source, a plurality of swinging arms each revolubly mounted at one end on said supports, another member provided with a waffle-baking surface revolubly mounted on the ends of said swinging arms, an electric heating element mounted in said last named member, said member being adapted to be placed in its inverted position directly above and adjacent to said grill member, or to be swung to one side of said grill member.

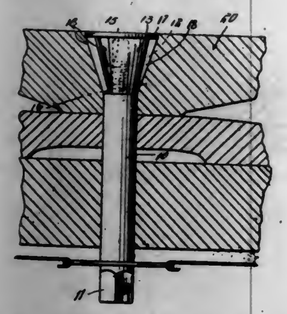
4. In a device of the kind described, the combination of two electrically heated members each provided with an aluminum waffle baking surface, swinging arm members upon which one of said electrically heated members is revolubly mounted, and a support upon which the other electrically heated member is hinged, whereby said electrically heated members are adapted to be moved on said swinging arms and said hinges into a position where the waffle baking surfaces may be placed together so that the edges of said baking surfaces will rest firmly against each other.

5. A folding electric cooking apparatus comprising two support members, a grill member firmly mounted at each end on one of said support members, a plurality of swinging arms having one end of each arm pivotally mounted on said support members, a horizontal support member mounted at its ends on said first mentioned support members, another cooking member revolubly mounted on the other ends of said swinging arms, and a third cooking member mounted on a plurality of hinges each attached

at its one end to the wall of said member and at its other end to said horizontal support member, all of said cooking members being adapted to be superposed one above the other in a compact form.

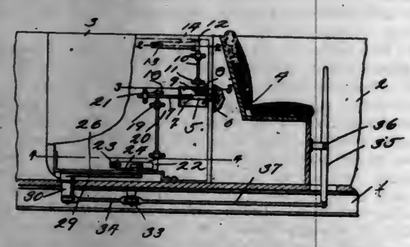
[Claims 6 to 9 not printed in the Gazette.]

1,214,487. KING-BOLT FOR WAGONS. HIRAM B. BAXTER, Plainville, Kans. Filed June 2, 1916. Serial No. 101,405. (Cl. 21—32.)



A king bolt for wagons comprising a body having one end squared, a head screwed on the other end of said body, said head being substantially conical in shape, a circumscribing flange on the major end of the head, and a plurality of longitudinal ribs formed on the head.

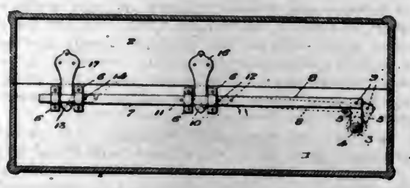
1,214,488. AUTOMOBILE-DOOR OPENER. GEORGE A. BOSLER, Chicago, Ill. Filed Apr. 27, 1916. Serial No. 94,008. (Cl. 268—5.)



1. In an automobile, the combination with the door thereof, of a locking bolt therefor, a pin extending outwardly from the bolt, a rod rotatably mounted on the door and having a slotted portion engaging the pin, the rod having also a crank portion on its upper end, a push plate pivotally mounted adjacent the upper edge of the door and having a cam portion on the free end thereof arranged to engage the crank portion on the rod, and resilient means for normally moving the push plate away from the crank portion of the rod.

2. In an automobile, the combination with the door thereof, of a bolt for locking the same, said bolt having a rod extending outwardly therefrom on which rod a pin is mounted, a rod rotatably mounted on the door and having a slotted crank portion engaging the pin and having also a crank portion on its lower end, a push plate pivotally mounted on the door and having a cam thereon arranged to engage the crank portion on the lower end of the rod, a plate extending beneath the push plate and having a slot therein, a lever mounted on the frame of the machine and having a roller extending into the slot in the last mentioned plate, means for moving the push plate to a position above the slot and means for operating the lever to move the roller within the slot in such manner that it will contact with the push plate and actuate the same to cause the rotation of the last mentioned rod.

1,214,489. TRUNK-FASTENER. JOHN W. ESPENLAUB, Evansville, Ind., assignor of two-thirds to Charles H. Espenlaub and Henry R. Hoge. Filed Feb. 24, 1916. Serial No. 80,156. (Cl. 70—116.)

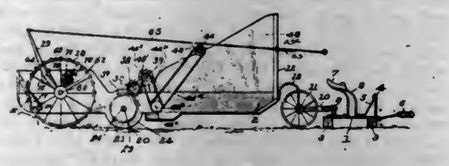


1. In a trunk fastener, the combination with a fastener member having a locking face, of a locking head movable crosswise over the face of the fastening member adapted to engage or release said fastener member which is provided with two recesses or cutout portions in its face, one of which is of a size adapting the fastener for free passage crosswise therethrough and the other being adapted to prevent passage of the fastener and to insure engagement of the fastener and locking head.

2. In a trunk fastener, the combination with a fastener member provided with an outstanding locking lug on its face and adapted to be carried by one part of a trunk, of a locking member adapted to be carried by another part of the trunk, said locking member having a recessed or cut-away portion in its face adapted to permit free passage of the fastener member therethrough crosswise thereof and provided with an inclined wall adapted to engage the fastener member to facilitate its passage through the recess aforesaid, said locking member when in another position, being adapted to engage the lug on the fastener member.

3. In a trunk fastener, the combination with a fastener member having on its face an outstanding locking lug provided with a locking shoulder and with an inclined shoulder, of a locking member adapted to be shifted in a general crosswise relationship to the fastener member to lock or release the latter, said locking member having a recess in its face adapted to permit free passage of the fastener member therethrough crosswise thereof and provided with a shoulder adapted to engage the inclined shoulder on the fastener member for the purpose of exerting a drawing action on the fastener member if the latter is not in proper position for locking, said locking member being adapted to engage the locking shoulder on the fastener member.

1,214,490. COTTON-HARVESTER. JAMES FORD, Christoval, Tex. Filed Dec. 22, 1914. Serial No. 878,587. (Cl. 56—6.)



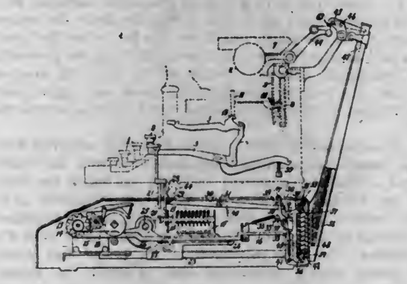
1. In a cotton harvester, a supporting frame, a pair of alining relatively spaced axles rotatably carried by said frame, a wooden core connected to and positioned between the spaced ends of said axles, a plurality of annuli mounted upon said roller in spaced relation with respect to each other, teeth formed upon the sides of said annuli and projecting at an incline laterally therefrom for engaging the cotton and picking it from bolls.

2. In a cotton harvester, a supporting frame, a pair of alining relatively spaced axles rotatably carried by said frame, a wooden core connected to and positioned between the spaced ends of said axles, a plurality of annuli mounted upon said roller in spaced relation with respect to each other, teeth formed upon the sides of said annuli and projecting at an incline laterally therefrom for engaging the cotton and picking it from bolls, said annuli bearing upon the ground and rotated through the traction of said frame.

3. In a cotton harvester, a supporting frame, a pair of alining relatively spaced axles rotatably carried by said frame, a wooden core connected to and positioned between the spaced ends of said axles for rotation with the axles, a plurality of annuli mounted upon said core in spaced relation with respect to each other, teeth formed upon the sides of said annuli and projecting at an incline laterally therefrom for engaging cotton and picking it from bolls, said annuli bearing upon the ground and rotated by the traction of the frame, a brush rotatably mounted above said annuli, a gear carried by one of said axles, a gear operatively connected to said brush and meshing with said axle carried gear for rotating said brush by the rotation of the axles, said axles being rotated by the rotation of said wooden core during the rotation of said annuli, a cleaning roller mounted forwardly of and upwardly from said brush for cleaning the cotton therefrom, an inclined platform positioned for receiving the cotton from said cleaning roller, a conveyer for receiving the cotton from said platform, means for rotating said cleaning roller, and means for operating said conveyer.

4. In a cotton harvester, a supporting frame, a pair of alining spaced axles rotatably carried by said frame, a wooden core connected to and positioned between the spaced ends of said axles for rotation with the axles, a plurality of annuli mounted upon said roller in spaced relation with respect to each other, teeth formed upon the sides of said annuli and projecting at an incline laterally therefrom for engaging the cotton and picking it from bolls, said annuli bearing upon the ground and rotated by the traction of said frame, a brush rotatably mounted above said annuli, a gear carried by one of said axles, a gear operatively connected to said brush and meshing with said axle carried gear for rotating said brush by the rotation of said axles, said axles being rotated by said wooden core during the rotation of said annuli, a cleaning roller mounted forwardly of and upwardly from said brush for cleaning cotton therefrom, an inclined platform positioned for receiving the cotton from said cleaning roller, a conveyer for receiving the cotton from said platform, means for rotating said cleaning roller, means for operating said conveyer, and a drag structure detachably connected to the forward end of said frame for crushing the bolls preparatory to the extraction of cotton therefrom by said annulus carried teeth.

1,214,491. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 17, 1912. Serial No. 678,299. (Cl. 235—60.)



1. The combination with a typewriting mechanism having a carriage, of computing mechanism having a series of dial wheels and a bar operating each dial wheel, means individual to each bar and normally out of contact therewith for moving it away from its fellows, and carriage controlled means for bringing said individual means separately into engagement with the associated key-controlled bars.

2. The combination with a typewriting mechanism having a carriage, of computing mechanism having a series of dial wheels and a bar operating each dial wheel, means individual to each bar and normally out of contact therewith for moving it away from its fellows, carriage controlled means for bringing said individual means separately into engagement with the associated bars, and mechanism universal to all of said individual means for actuating said individual means to manipulate said key-controlled bars.

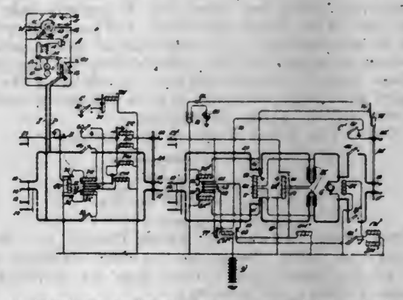
3. The combination with a typewriting mechanism having a carriage, of computing mechanism having a series of dial wheels and a bar operating each dial wheel, means individual to each bar and normally out of contact therewith for moving it away from its fellows, carriage controlled means for bringing said individual means separately into engagement with the associated bars, mechanism universal to all of said individual means for actuating said individual means to actuate said bars, said typewriting mechanism having numeral keys, and connections between said numeral keys and said universal mechanism enabling said keys to actuate said universal mechanism to actuate said bars.

4. The combination with a typewriting mechanism including a carriage and numeral keys, of a computing mechanism including a series of dial wheels and bars for operating the dial wheels, said bars shiftable by said keys, means carried by said carriage for determining the individual operation of said bars, transposition linkages between said bars and said means, said transposition linkages being normally disconnected from said bars, and interponent mechanism between said transposition linkages and said bars, for completing the connection between said means and said bars.

5. The combination with a typewriting mechanism including a carriage and numeral keys, of computing mechanism including a series of dial wheels and bars for operating said dial wheels, carriage controlled means for selecting the individual bars to be operated, linkages extending between said means and said bars, said linkages being normally disconnected from said bars, interponent mechanism individual to each of said bars and each of said linkages for effecting a completion of the connection between said means and said bars, and numeral key actuated means for operating said interponent mechanism.

[Claims 6 to 61 not printed in the Gazette.]

1,214,492. TELEPHONE SYSTEM. ALFRED H. DYSON, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Apr. 6, 1906. Serial No. 310,307. (Cl. 179—18.)



1. A telephone exchange system comprising telephone lines extending from substations to a central station, link-circuits at the latter station for uniting said lines, repeating coils included in said link-circuits for inductively uniting parts thereof, switching mechanism controlled from a calling station for connecting calling and called lines to opposite ends respectively of one of said link-

circuits for conversational purposes, disconnecting means independent of said repeating coil under the subsequent control of each of the connected parties for destroying the established connection and restoring all parts to normal, a central source of current and means controlled by the response of the called subscriber for bridging said source across the calling line and placing said disconnecting means in operative relation with said calling line.

2. A telephone exchange system comprising telephone lines extending from substations to a central station, link-circuits at the latter station for uniting said lines, repeating coils included in said link-circuits for inductively uniting parts thereof, switching mechanism controlled from a calling station for connecting calling and called lines to opposite ends respectively of one of said link-circuits for conversational purposes, means for destroying the established connection and restoring all parts to normal comprising a differential electromagnet having its windings normally balanced, and means at each connected substation for destroying said balance to cause the restoration of the parts to normal.

3. A telephone exchange system comprising telephone lines extending from substations to a central station, link-circuits at the latter station for uniting said lines, repeating coils included in said link-circuits for inductively uniting parts thereof, switching mechanism controlled from a calling station for connecting calling and called lines to opposite ends respectively of one of said link-circuits for conversational purposes, a central source of current, means for destroying the established connection and restoring all parts to normal, comprising a differential electromagnet having its windings included between the opposite poles of said source of current and the included link-circuit strands respectively, and means at each substation for varying the normal current flow in one of said windings to cause the restoration of the parts to normal.

4. A telephone exchange system comprising telephone lines extending from substations to a central station, normally electrically-discontinuous link-circuits at the latter station for uniting said lines, repeating coils included in said link-circuits for inductively uniting parts thereof, switching mechanism controlled from a calling station for connecting calling and called lines to opposite ends respectively of one of said link-circuits, a central source of current and means independent of said repeating coil under the control of the called party for bridging said source across the calling line and rendering the included link-circuit continuous thus completing the talking circuit between the two substations.

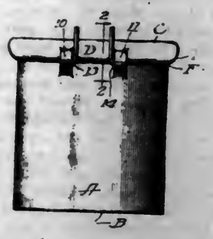
5. A telephone exchange system comprising telephone lines extending from substations to a central station, normally electrically-discontinuous link-circuits at the latter station for uniting said lines, repeating coils included in said link-circuits for inductively uniting parts thereof, switching mechanism controlled from a calling station for connecting calling and called lines to opposite ends respectively of one of said link-circuits, and means independent of said repeating coil, comprising an electro-magnet included in circuit with the called station, for supplying talking current to the calling line and rendering the included link-circuit continuous so as to complete a talking circuit between the two substations.

[Claims 6 to 34 not printed in the Gazette.]

REISSUES.

14,254. JAR. RICHARD P. WHITE, Chicago, Ill. Filed Aug. 14, 1916. Serial No. 114,919. Original No. 1,191,634, dated July 18, 1916, Serial No. 70,764, filed Jan. 7, 1916. (Cl. 215—99.)

1. A jar, including a shell having a bottom and an open top, an integrally-formed bead along the upper edge of said shell, pairs of bail-ears depending from said bead, said bail-ears being formed integrally with said bead and said shell, and extending longitudinally of said shell, the outer marginal edges of said ears being tangent to the outermost surface of said bead, there being bail-openings through said ears, the marginal edges of said openings being tangent to said shell, and bails pivoted to said ears in said openings.



2. A jar, including a shell having a bottom and an open top, an integrally-formed marginal bead along the upper edge of said shell, there being formed a sharp corner along the lower surface of said bead at its junction with said shell, pairs of bail-ears depending from said bead, said bail-ears being formed integral with said shell, and extending longitudinally of said shell, the outer margins of said ears being tangent to the outermost surface of said bead, there being bail-openings through said ears, the marginal edges of said openings being adjacent to said corners and tangent to said shell and to the lower surface of said bead, arcuate bails, the lower ends of said bails being pivoted in said openings and partly embracing said bead, whereby said bails are in righted position, the same will be reinforced by said beads and when swung down the free end of said bail will be maintained away from said shell.

3. In combination with a jar of frangible material, having a laterally projecting marginal bead integral therewith and two pairs of symmetrically disposed, spaced-apart, integral bail ears, projecting laterally from the jar within the plan area of the bead, said ears having transversely extending openings to receive the ends of carrying bails, there being one pair of ears on each side of a diametric plane, each pair to accommodate an attachable carrying bail and a bail for engagement with each pair of ears.

4. In combination with a jar of frangible material, an annular bead projecting outwardly from the mouth thereof and integral therewith, a bail ear integral with the jar and pierced transversely by a bail receiving opening, said ear projecting outwardly from the wall of the jar beneath the bead and lying entirely within the plan area of said bead.

5. In cobination with a jar of frangible material having an annular bead projecting outwardly from the mouth thereof, a bail ear projecting from the jar below the bead, and a bail having its lower end secured to the ear pivotally on a horizontal axis at a point within the plan area of the bead, the bail intermediate its lower and upper ends being curved outwardly and upwardly to extend above the bead.

6. In combination with a jar of frangible material having an annular bead projecting outwardly from the mouth thereof, a bail ear projecting from the jar below the bead, said ear having a transverse perforation therein positioned within the plan area of the bead, and a U-shaped bail having its lower ends turned for engagement with the perforation, the bail intermediate its lower and upper ends being curved outwardly and upwardly to extend above the bead, the curved portion conforming to the curvature of the bead for engagement therewith.

DESIGNS.

50,223. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed July 28, 1915. Serial No. 42,419. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown and described.

50,224. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed July 28, 1915. Serial No. 42,420. Term of patent 7 years.



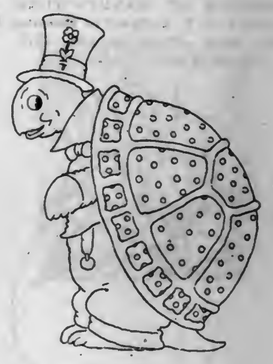
The ornamental design for an article of manufacture, as shown and described.

50,225. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed July 28, 1915. Serial No. 42,421. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown and described.

50,226. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed July 28, 1915. Serial No. 42,422. Term of patent 7 years.



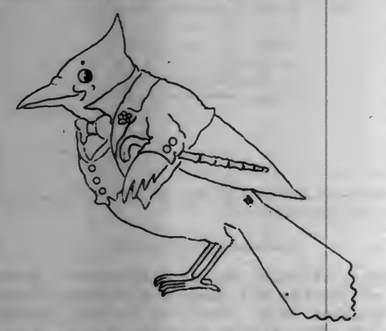
The ornamental design for an article of manufacture, as shown and described.

50,227. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed July 28, 1915. Serial No. 42,423. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown and described.

50,228. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed July 28, 1915. Serial No. 42,424. Term of patent 7 years.



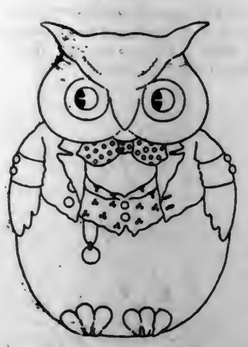
The ornamental design for an article of manufacture, as shown and described.

50,229. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed July 28, 1915. Serial No. 42,425. Term of patent 7 years.



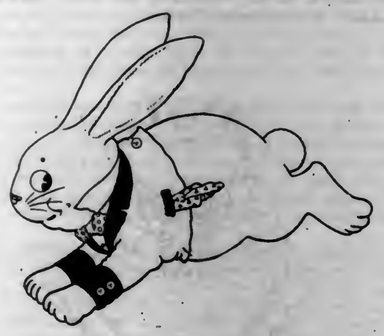
The ornamental design for an article of manufacture, as shown and described.

50,230. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed July 28, 1915. Serial No. 42,426. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown and described.

50,231. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed May 6, 1916. Serial No. 95,971. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown and described.

50,232. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed May 6, 1916. Serial No. 95,972. Term of patent 3½ years.



The ornamental design for an article of manufacture, as shown and described.

50,233. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed May 6, 1916. Serial No. 95,973. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown and described.

50,234. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed May 6, 1916. Serial No. 95,974. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown and described.

50,235. GAME-BOARD OR SIMILAR ARTICLE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed May 6, 1916. Serial No. 95,975. Term of patent 3½ years.



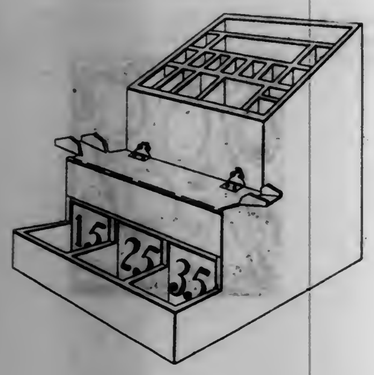
The ornamental design for a game board or similar article, as shown and described.

50,236. ARTICLE OF MANUFACTURE. HARRISON CADY, Brooklyn, N. Y., assignor to Thornton W. Burgess, Springfield, Mass. Filed Dec. 19, 1914. Serial No. 878,201. Term of patent 7 years.



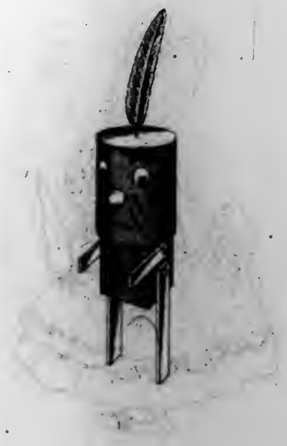
The ornamental design for an article of manufacture, as shown and described.

50,237. BARBER'S CABINET. BENEDETTO CHIANCO, Clairton borough, Pa. Filed July 11, 1916. Serial No. 108,754. Term of patent 3½ years.



The ornamental design for a barber's cabinet, as shown.

50,238. TOY. PAUL MORALES DAVIS, Brooklyn, N. Y. Filed Nov. 18, 1916. Serial No. 132,228. Term of patent 3½ years.



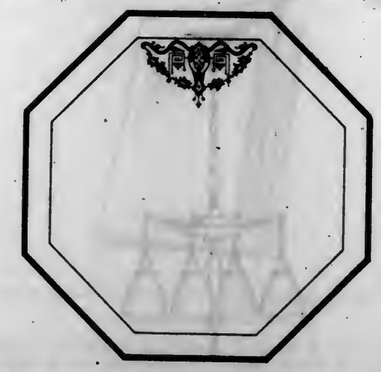
The ornamental design for a toy, as shown.

50,239. LAMP-CASING. JOHN L. DAWES, Pittsburgh, Pa. Filed Nov. 17, 1916. Serial No. 131,966. Term of patent 7 years.



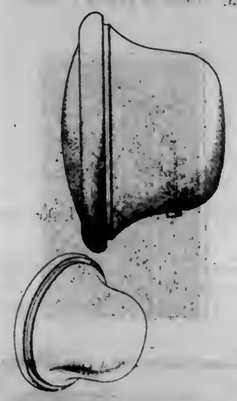
The ornamental design for a lamp casing, as shown.

50,240. PLATE OR SIMILAR ARTICLE. WALTER DE VILLE, East Liverpool, Ohio, assignor to The Palm Brothers Company, New York, N. Y. Filed Nov. 7, 1916. Serial No. 130,073. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

50,241. LAMP. DAVID HENRY ELKINS, Amesbury, Mass., assignor to Gray & Davis Inc., Cambridge, Mass. Filed Oct. 18, 1915. Serial No. 56,617. Term of patent 7 years.



The ornamental design for a lamp, as shown.

50,242. LAMP. DAVID HENRY ELKINS, Amesbury, Mass., assignor to Gray & Davis Inc., Cambridge, Mass. Filed Oct. 18, 1915. Serial No. 56,618. Term of patent 7 years.



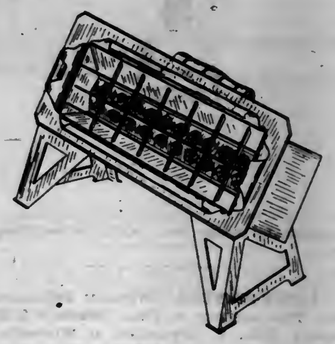
The ornamental design for a lamp, as shown.

50,243. BORDER FOR WALL-PAPER. EMILE ERICSON, Pelham, and ROOZE WEISS, Brooklyn, N. Y., assignors to Hobbs Wall Paper Company, a Corporation of New Jersey. Filed Nov. 13, 1916. Serial No. 131,150. Term of patent 3½ years.



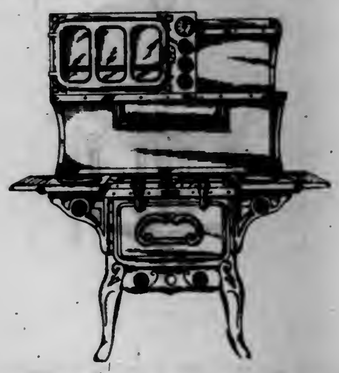
The ornamental design for a border for wall paper as shown and described.

50,244. ELECTRIC HEATER. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 9, 1915. Serial No. 49,841. Term of patent 14 years.



The ornamental design for an electric heater, substantially as shown.

50,245. STOVE. LUTHER D. SMITH, Toledo, Ohio, assignor to The Standard Electric Stove Company, Toledo, Ohio, a Corporation of Ohio. Filed Oct. 23, 1916. Serial No. 127,279. Term of patent 14 years.



The ornamental design for a stove, substantially as shown.

50,246. CASING FOR WEIGHING-SCALES. HERBERT S. MILLS, Oak Park, Ill. Filed Nov. 7, 1916. Serial No. 130,078. Term of patent 14 years.



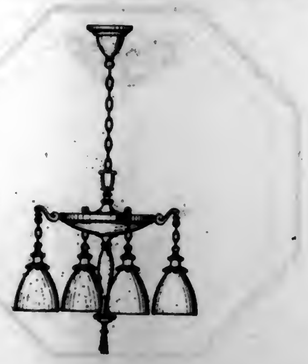
The ornamental design for a casing for weighing scales, as shown.

50,247. LIGHT-FIXTURE. WILLIAM POLACHECK, Milwaukee, Wis., assignor to Chas. Polacheck & Bro. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 26, 1916. Serial No. 127,956. Term of patent 3½ years.



The ornamental design for a light fixture, as shown.

50,248. LIGHT-FIXTURE. WILLIAM POLACHECK, Milwaukee, Wis., assignor to Chas. Polacheck & Bro. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 26, 1916. Serial No. 127,957. Term of patent 3½ years.



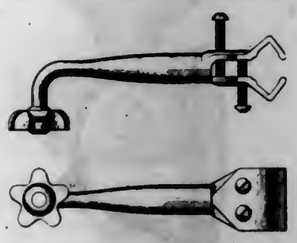
The ornamental design for a light fixture, as shown.

50,249. RUG. ROBERT F. RIDDELL, Manhasset, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed Nov. 18, 1916. Serial No. 132,225. Term of patent 7 years.



The ornamental design for a rug, substantially as shown.

50,250. MIRROR-BRACKET ARM. MEYER S. ROSEN, New York, N. Y., assignor to Emil Grossman M'f'g Co. Inc., Brooklyn, N. Y., a Corporation of New York. Filed Oct. 21, 1916. Serial No. 127,027. Term of patent 14 years.



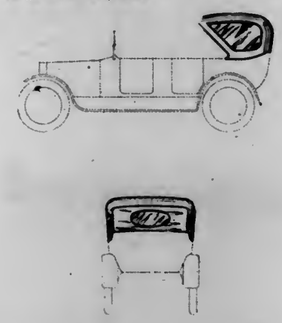
The ornamental design for a mirror bracket arm, as shown.

50,251. NOTE-BOOK. ARTHUR D. SHERMAN, Albany, N. Y. Filed June 12, 1916. Serial No. 103,332. Term of patent 3½ years.



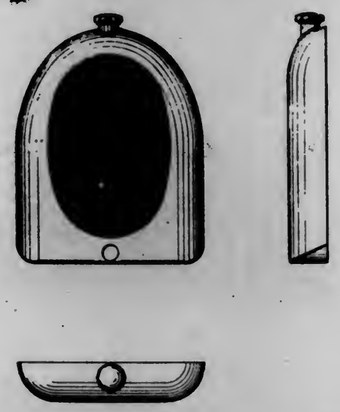
The ornamental design for a note book, as shown.

50,252. AUTOMOBILE-TOP. CONOVER T. SILVER, New York, N. Y. Filed Oct. 28, 1916. Serial No. 128,330. Term of patent 14 years.



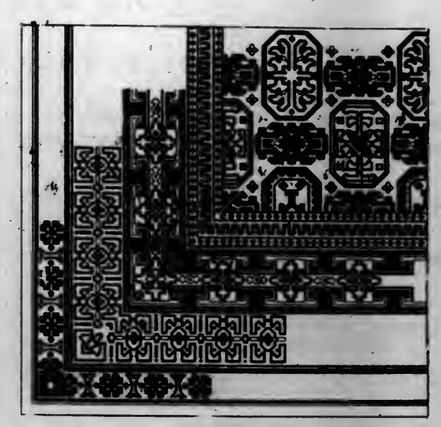
The ornamental design for an automobile top, as shown.

50,253. AUTOMOBILE-RADIATOR. CONOVER T. SILVER, New York, N. Y. Filed Oct. 28, 1916. Serial No. 128,331. Term of patent 14 years.



The ornamental design for an automobile radiator, as shown.

50,254. RUG. MARTHA H. SOLMS, Philadelphia, Pa., assignor to The Congoleum Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 24, 1916. Serial No. 133,264. Term of patent 7 years.



The ornamental design for a rug, substantially as shown.

50,255. SILK CLOTH. FRANÇOIS EUGENE FÉRIER, Lyon, France. Filed Dec. 20, 1915. Serial No. 67,925. Term of patent 3½ years.



The ornamental design for silk cloth, as shown in the drawing.

TRADE-MARKS

PUBLISHED JANUARY 30, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 72,379. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ENOCH MORGAN'S SONS COMPANY, New York, N. Y. Filed Aug. 16, 1913.

Spotless Town

Particular description of goods.—Detergent Preparation for Cleaning, Scouring, or Polishing.
Claims use since 1901.

Ser. No. 72,380. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ENOCH MORGAN'S SONS COMPANY, New York, N. Y. Filed Aug. 16, 1913.



No claim to the exclusive use of the words "Cleanser" or "Cleans & Scours" being made.
Particular description of goods.—A Detergent Preparation for Cleaning, Scouring, or Polishing.
Claims use since 1901.

Ser. No. 78,388. (CLASS 39. CLOTHING.) FREDERICK S. KAUDER, Brooklyn, N. Y. Filed May 19, 1914.



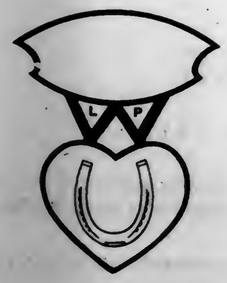
The picture shown on the drawing being fanciful, no claim being made to the exclusive right to the use of the word "Shoes" apart from the mark shown in the drawing.
Particular description of goods.—The Following Products—Namely, Leather and Cloth Boots and Shoes for Children.
Claims use since about Apr. 1, 1914.

Ser. No. 81,589. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN CANDY COMPANY, Milwaukee, Wis. Filed Oct. 1, 1914. Under ten-year proviso.

SENEGAMBIAN KIDS

Particular description of goods.—Candy.
Claims use since 1894.

Ser. No. 82,222. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS P. WICKLAND, Genoa, Ohio. Filed Oct. 27, 1914.



Particular description of goods.—Hair-Tonic.
Claims use since Sept. 1, 1914.

Ser. No. 83,427. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WEST DISINFECTING COMPANY, New York, N. Y. Filed Dec. 19, 1914.

COROLEUM

"Coroleum."
Particular description of goods.—Animal Dips and Disinfectants.
Claims use since the 16th day of December, 1914.

Ser. No. 83,865. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLYDE C. WHITELEY, Wichita, Kans. Filed Jan. 14, 1915.

LAY-MORE

Particular description of goods.—Live Poultry, Particularly a Strain of Rhode Island Reds.
Claims use since the early part of February, 1913.

Ser. No. 83,936. (CLASS 39. CLOTHING.) VICTOR MONTWID & SON, Milwaukee, Wis. Filed Jan. 18, 1915.

The Victor

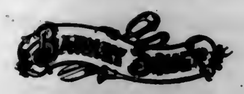
Particular description of goods.—Knitted Sweater-Coats, Knitted Sweater-Vests, Knitted Cardigan Jackets, Knitted Coats, Knitted Caps, Knitted Children's Outer Suits, and Workmen's Shirts, Overalls, and Pants.
Claims use in connection with knitted sweater-coats, knitted sweater-vests, knitted cardigan jackets, knitted coats, workmen's shirts, overalls, and pants since September, 1896, and in connection with knitted caps and children's outer suits since January, 1910.

Ser. No. 87,028. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) OREGON FRUIT JUICE COMPANY, Salem, Oreg. Filed June 1, 1915.

PHEASANT BRAND

No claim being made to the exclusive use of the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—Fruit-Juices—Namely, Loganberry-Juice.
Claims use since May 18, 1915.

Ser. No. 87,444. (CLASS 32. FURNITURE AND UPHOLSTERY.) BARNEY SCHER, New York, N. Y. Filed June 19, 1915.



No claim being made to the name "Barney Scher" apart from the mark shown in the drawing.
Particular description of goods.—Kitchen and Parlor Chairs, Bedsteads, Rockers, Buffets, Dining-Room and Parlor Tables, Mirrors, and Desks.
Claims use since Jan. 1, 1915.

Ser. No. 90,082. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GREENHUT COMPANY, INC., New York, N. Y. Filed Oct. 25, 1915.

SHADOW LAWN

Particular description of goods.—Coffee.
Claims use since October, 1912.

Ser. No. 90,491. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAY TYNION, New York, N. Y. Filed Nov. 6, 1915.



May Tynion Brand

The portrait shown being that of myself, no claim being made to the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—A Preparation for the Treatment of Lumbago, Rheumatism, and Swollen Joints.
Claims use since Jan. 8, 1914.

Ser. No. 90,539. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES GUSTAVE DUBEL, New Orleans, La. Filed Nov. 9, 1915.



Particular description of goods.—Coffee and Chicory.
Claims use since about August, 1909.

Ser. No. 91,278. (CLASS 31. FILTERS AND REFRIGERATORS.) THE BALDWIN REFRIGERATOR CO., Burlington, Vt. Filed Dec. 7, 1915.

No claim is herein made to the words "The Vermonter" when used apart from the other features of the mark herein disclosed.
Particular description of goods.—Refrigerators.
Claims use since Nov. 1, 1915.

Ser. No. 91,312. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) KOHLER CO., Kohler, Wis. Filed Dec. 8, 1915.

BRETTON

Particular description of goods.—Lavatories.
Claims use since the year 1909.

Ser. No. 91,508. (CLASS 5. ADHESIVES.) THE CUSHMAN & DENISON MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 15, 1915.

"MYSTICK"

Particular description of goods.—Mucilage.
Claims use since Sept. 1, 1915.

Ser. No. 91,611. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) OTTO HEINEMAN, New York, N. Y. Filed Dec. 20, 1915.



Applicant claims the words "The Motor of Quality" only in connection with the other features of the mark shown.
Particular description of goods.—Motors for Talking-Machines, Phonographs, Graphophones, and other Similar Musical Instruments.
Claims use since September, 1915.

Ser. No. 92,489. (CLASS 10. FERTILIZERS.) AMERICAN CYANAMID COMPANY, New York, N. Y. Filed Jan. 29, 1916.



Applicant hereby disclaims the phrases "The Perfect Ammoniate" and "Atmospheric Nitrogen" and the word "Cyanamid" apart from the mark shown in the drawing.
Particular description of goods.—A Chemical Compound for Agricultural Purposes.
Claims use since Oct. 1, 1915.

Ser. No. 94,047. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE SUPER GAS PRODUCER SALES COMPANY, St. Paul, Minn. Filed Apr. 1, 1916.

Super

Particular description of goods.—Gas-Producers.
Claims use since Mar. 10, 1916.

Ser. No. 94,557. (CLASS 38. PRINTS AND PUBLICATIONS.) THE THRESHERMEN'S REVIEW COMPANY, St. Joseph, Mich. Filed Apr. 19, 1916.

POWER FARMING

Particular description of goods.—A Farm-Paper Issued Monthly.
Claims use since Jan. 1, 1916.

Ser. No. 95,072. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVIS & GECK, INC., Brooklyn, N. Y. Filed May 11, 1916.

KALMERID

Particular description of goods.—Germicides, Medicated Lubricating-Jelly, Medicinal Preparations for External Use in Stopping Flow of Blood in Surgical Operations.
Claims use since June 12, 1914.

Ser. No. 95,144. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GRUNDY & MARTEN, San Francisco, Cal. Filed May 15, 1916.



Particular description of goods.—Decorative Design-Forms of Felt or Fabric for Applique Work.
Claims use since May 2, 1916.

Ser. No. 95,284. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE WALLACE & SMITH COMPANY, Laporte, Ind. Filed May 19, 1916.

MOTOR WEAVE

Particular description of goods.—Carriage-Robes.
Claims use since May 12, 1916.

Ser. No. 95,410. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANTONIO CENTANNI, Chicago, Ill. Filed May 24, 1916.

CENTOIL

Particular description of goods.—A Liniment for the Relief of Rheumatism, Asthma, Neuralgia, Colds, Sprains, Lumbago, Sore Throat, Erysipelas, Eczema, Headache, Earache, Toothache, Insect-Bites, and Pains in the Feet Caused by Bunions.
Claims use since May 1, 1913.

Ser. No. 95,731. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. JAMES DRUMMOND SCHOFIELD, Dallas, Tex. Filed June 8, 1916.

TWENTIETH CENTURY

Particular description of goods.—Cotton and Corn Planters.
Claims use since on or about the 14th day of September, 1899.

Ser. No. 96,077. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BROMO REMEDY CO., Chicago, Ill. Filed June 23, 1916.

BROCASCO

Particular description of goods.—Rheumatic Remedies.
Claims use since Dec. 1, 1914.

Ser. No. 96,097. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ISADOR A. WALLINS, Decatur, Ill. Filed June 23, 1916.



No claim being made to the use of the words "Holsum Eggs" apart from the mark shown in the drawing.
Particular description of goods.—Eggs.
Claims use since May 15, 1916.

Ser. No. 96,370. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) EDWIN B. STIMPSON COMPANY, Brooklyn, N. Y. Filed July 6, 1916.



No claim being made to the words "Edwin B. Stimpson Co., Brand," nor the representation of the goods upon which the mark is used, except in the connection shown.
Particular description of goods.—Gromets, Metal Washers, Rivets, Nails, Tacks, and Escutcheon-Pins.
Claims use since Nov. 4, 1915.

Ser. No. 96,433. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MONTGOMERY BROTHERS INC., Philadelphia, Pa. Filed July 8, 1916.

EVERITE

Particular description of goods.—Water and Steam Hose—Namely, Cotton Rubber-Lined Hose and Linen Hose—Molded Rubber Bumpers for Vehicles, Molded Rubber Valves and Valve-Stems for Water; Cotton and Rubber Packing, Including Superheat Sheet-Packing and Red Sheet-Packing, Asbestos Brakelining, Rubber and Fabric Belting, Canvas Belting, Cotton Belting, and Leather Belting; Piston-Packing—Namely, Flax Packing, Diagonal Packing Formed of Rubber and Fabric, and White-Tucks Packing.
Claims use since Apr. 12, 1916.

Ser. No. 96,579. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DIAMOND POWER SPECIALTY COMPANY, Detroit, Mich. Filed July 15, 1916.



Particular description of goods.—Appliances for Cleaning Boilers.
Claims use since January, 1903.

Ser. No. 96,580. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DIAMOND POWER SPECIALTY COMPANY, Detroit, Mich. Filed July 15, 1916.



Particular description of goods.—Appliances for Cleaning Boilers.
Claims use since January, 1903.

Ser. No. 97,215. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HEZEL MILLING COMPANY, East St. Louis, Ill. Filed Aug. 9, 1916.

JUPITER

Particular description of goods.—Wheat-Flour.
Claims use since October, 1892.

Ser. No. 97,311. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) PHILIP REINHERZ, New York, N. Y. Filed Aug. 12, 1916.



No claim being made to the representation of the phonograph appearing on the drawing.
Particular description of goods.—Phonographs and Talking-Machines and Records for Use Therewith.
Claims use since July 1, 1916.

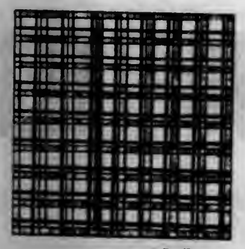
Ser. No. 97,470. (CLASS 17. TOBACCO PRODUCTS.) THEOBALD AND OPPENHEIMER COMPANY, Philadelphia, Pa., and New York, N. Y. Filed Aug. 21, 1916.

Artensa



The portrait shown in the drawing being that of Artensa J. Williams.
Particular description of goods.—Cigars.
Claims use since the year 1901.

Ser. No. 97,569. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ARMAND COMPANY, Des Moines, Iowa. Filed Aug. 23, 1916.



Consisting of squares of pink and white arranged horizontally and vertically, with a faint blue horizontal and vertical line crossing the whole between the pink squares, the colors and arrangement thereof substantially as described and shown on the accompanying drawing being claimed as features of the mark.

Particular description of goods.—Face-Powder, Cold-Cream, Hair-Wash, Tooth-Paste, Rouge, Shampoo Preparations.

Claims use since May 29, 1916, on face-powder; since July 27, 1916, on the other items enumerated above.

Ser. No. 97,588. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. V. PETERSON CO., Oakland, Cal. Filed Aug. 23, 1916.



No claim is made by it to the words "Original, Swedish Style, Health Food, Products, Registered, Brand, Manufactured By, Oakland, California, Knackebrod, Peterson's, A. V. Peterson Co." apart from the mark shown in the drawing.

Particular description of goods.—Crackers.

Claims use since May 1, 1916.

Ser. No. 97,604. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE STANDARD TIRE AND RUBBER MANUFACTURING COMPANY, Cleveland, Ohio. Filed Aug. 24, 1916.

Velvetread

Particular description of goods.—Rubber and Fabric Casings or Shoes for Pneumatic Tires.

Claims use since June 23, 1916.

Ser. No. 97,618. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES B. DRAKE, Yonkers, N. Y. Filed Aug. 25, 1916.



No claim is made to the words "Public Service Brand" and "Purity and Satisfaction Guaranteed" except in connection with the other features of the mark.

Particular description of goods.—Marmalades.

Claims use since July 1, 1916.

Ser. No. 97,841. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARION STOCK REMEDY COMPANY, Ocala, Fla. Filed Sept. 7, 1916.

The Gypsys'

Particular description of goods.—A Blood-Modifying Preparation.

Claims use since June 1, 1916.

Ser. No. 97,996. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) YOUNG & GRIFFIN COFFEE CO. INC., New York, N. Y. Filed Sept. 14, 1916.



No claim is made to the word "Brand" apart from the mark shown in the drawing.

Particular description of goods.—Coffee.

Claims use since Sept. 10, 1908.

Ser. No. 98,050. (CLASS 39. CLOTHING.) KLING BROS. & CO., Chicago, Ill. Filed Sept. 18, 1916.



No claim being made for the star shown in said mark except in connection with the other features thereof.

Particular description of goods.—Men's Coats and Trousers.

Claims use since Sept. 1, 1916.

Ser. No. 98,094. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL LICORICE CO., Brooklyn, N. Y. Filed Sept. 19, 1916. Under ten-year proviso.

PURITY

Comprising the word "Purity."

Particular description of goods.—Confectionery—viz., Manufactured Licorice.

Claims use since July 1, 1886.

Ser. No. 98,107. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) WARREN WEBSTER & COMPANY, Camden, N. J. Filed Sept. 19, 1916.

PRES-CO

Particular description of goods.—Steam-Heating Apparatus in Which There is Provided a Differential in Pressure Between the Boiler-Pressure and the Pressure of the Heating System by Automatic Devices in the Steam-Supply Pipe Whereby Supply of Steam to the Heating System from the Boiler is Prevented Until a Predetermined Initial Boiler-Pressure is Reached, and also Automatic Pressure Controlling and Reducing Valve Devices for Use in Steam-Heating Apparatus of the Preceding Nature.

Claims use since Aug. 23, 1916.

Ser. No. 98,172. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE UNITED ALKALI COMPANY LIMITED, Liverpool, England. Filed Sept. 22, 1916.



BULL BRAND

The word "Brand" being disclaimed. The trade-mark consists of a device of a bull and the words "Bull Brand."

Particular description of goods.—Caustic Soda; Caustic Potash, Manganate of Soda, Chlorate of Potash, and Bleaching-Powder.

Claims use since about August, 1885.

Ser. No. 98,309. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOWLES BROS. Co., Los Angeles, Cal. Filed Sept. 29, 1916. Under ten-year proviso.

CREAM PUFF

Particular description of goods.—Self-Rising Wheat-Flour.

Claims use since August, 1891.

Ser. No. 98,372. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) PACIFIC PLATINUM WORKS, Los Angeles, Cal. Filed Oct. 2, 1916.



Particular description of goods.—Resistant Chemical Ware for Laboratory Use, as Follows: Crucibles and Covers, Dishes of Various Forms, Triangles for Holding Crucibles and Dishes, Electrodes Used in Chemical Analysis, Tips and Sleeves for Tweezers and Tongs, Filter-Cones, Spatulas, Deflagration-Spoons, Combustion-Boats, Incineration-Pans, Blowpipe-Tips, Stirring-Rods, Parting Apparatus, Retorts, and Acid-Stills:

Claims use since July 1, 1916.

Ser. No. 98,377. (CLASS 38. PRINTS AND PUBLICATIONS.) TRIANGLE MUSIC PUB. CO., New York, N. Y. Filed Oct. 2, 1916.



Particular description of goods.—Sheet-Music.

Claims use since Jan. 1, 1916.

Ser. No. 98,390. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE NEW YORK SHIELD COMPANY, New York, N. Y. Filed Oct. 3, 1916.

Impréia

Particular description of goods.—Perfumery, Toilet Waters, Face-Powders, and Pastes.

Claims use since June 30, 1916.

Ser. No. 98,460. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) GEO. BORGFELDT & Co., New York, N. Y. Filed Oct. 6, 1916.

KEWPIE

Particular description of goods.—Ornamental Figures to be Put on the Top of Radiators of Automobiles, Newel-Posts of Stairways, and on Various other Articles or Structures to Which This Decorative Figure Would be Appropriate.
Claims use since Sept. 27, 1916.

Ser. No. 98,470. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FRANK A. LE COUNT, Springfield, Mass. Filed Oct. 6, 1916.



Particular description of goods.—Polishing-Cloth for Gold and Silver.
Claims use since Sept. 15, 1916.

Ser. No. 98,482. (CLASS 17. TOBACCO PRODUCTS.) RAUCH CIGAR COMPANY, INC., Indianapolis, Ind. Filed Oct. 6, 1916.

LINCOLN HIGHWAY

Particular description of goods.—Cigars, Cigarettes, and Smoking-Tobacco.
Claims use since Nov. 1, 1913.

Ser. No. 98,529. (CLASS 39. CLOTHING.) SCHUYLKILL SILK MILLS, Reading, Pa. Filed Oct. 9, 1916.

Vanity Fair

Particular description of goods.—Gloves, Silk Coats, and Underwear Consisting of Vests, Bloomers, Knickerbockers, Drawers, Union-Suits, Combinations, Chemise, Envelop-Chemise, Corset-Covers, Nightgowns, Bathing-Suits, Pajamas, Made of Knitted or Textile Material, for Adults and Babies.
Claims use since Oct. 5, 1916.

Ser. No. 98,530. (CLASS 39. CLOTHING.) SCHUYLKILL SILK MILLS, Reading, Pa. Filed Oct. 9, 1916.

Sunnisilk

Particular description of goods.—Gloves, Silk Coats, and Underwear Consisting of Vests, Bloomers, Knickerbockers, Drawers, Union-Suits, Combinations, Chemise, Envelop-Chemise, Corset-Covers, Nightgowns, Bathing-Suits, Pajamas, Made of Knitted or Textile Material, for Adults and Babies.
Claims use since Oct. 5, 1916.

Ser. No. 98,584. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) A. C. A. COMPANY, Binghamton, N. Y. Filed Oct. 12, 1916.

A·C·A CLOTH

No claim being made to the word "Cloth."
Particular description of goods.—Cloths Scientifically Prepared to Clean and Polish Metals, Woods, and Leathers.
Claims use since Sept. 15, 1915.

Ser. No. 98,660. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE J. H. CENTER CO., INC., Newburgh, N. Y. Filed Oct. 14, 1916.



Applicant disclaims exclusive right to the use of the word "Screens" apart from the mark shown in the drawing.
Particular description of goods.—Stereopticon and Moving-Picture Screens.
Claims use since January, 1908.

Ser. No. 98,665. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) NOBSCOT MOUNTAIN SPRING CO., Boston, Mass. Filed Oct. 14, 1916.

NOBSCOT

The word "Nobscot."
Particular description of goods.—Still Water, Sparkling or Carbonated Water, Ginger-Ale, and Tonics and Soft Drinks of All Kinds in Which Water is a Basis.
Claims use since Jan. 1, 1892.

Ser. No. 98,670. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE RIKE-KUMLER COMPANY, Dayton, Ohio. Filed Oct. 14, 1916.

Reve D'Amour

Particular description of goods.—Toilet Water, Talcum Powder, Face-Cream, and Perfume.
Claims use since about the 1st day of May, 1916.

Ser. No. 98,687. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DURKEE-ATWOOD CO., Minneapolis, Minn. Filed Oct. 16, 1916.

RieNie

Particular description of goods.—Rust and Scale Remover, Carbon-Remover, Prussian Blue, Lining-Top Dye, Silver-Plating Radiator Compound, an Oil-Meal Preparation for Stopping Radiator-Leaks; Winter Fluid, a Calcium Chlorid Non-Freezing Compound for Radiators, and Brazing Compound.
Claims use since the 11th day of December, 1911.

Ser. No. 98,697. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MYLE MAYKER COMPANY, Chicago, Ill. Filed Oct. 16, 1916.

MyleMayker

Particular description of goods.—Devices for Regulating the Supply of Air to Carbureters of Automobile-Engines.
Claims use since Sept. 1, 1916.

Ser. No. 98,715. (CLASS 12. CONSTRUCTION MATERIALS.) THE BLOUNT LUMBER CO., Lacona, N. Y. Filed Oct. 16, 1916.

BLCO

Particular description of goods.—Composition Roofing.
Claims use since the 10th day of August, 1916.

Ser. No. 98,855. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) AJAX RUBBER COMPANY, INC., Millbrook, N. Y. Filed Oct. 24, 1916.

MALTESE CROSS

Particular description of goods.—Automobile and Bicycle Tires of Rubber and Fabric.
Claims use since September, 1916.

Ser. No. 98,894. (CLASS 15. OILS AND GREASES.) APEX MANUFACTURING CO., Providence, R. I. Filed Oct. 26, 1916.

EZO

The trade-mark is printed in black.
Particular description of goods.—Lubricants.
Claims use since Oct. 1, 1916.

Ser. No. 98,901. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, New York, N. Y., and Kansas City, Mo. Filed Oct. 26, 1916.

Buena

Particular description of goods.—Cakes.
Claims use since about May 3, 1916.

Ser. No. 99,016. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PILDORAS NACIONALES CORPORATION, New York, N. Y., and Los Angeles, Cal. Filed Oct. 31, 1916.



Applicant makes no claim to the words "Pildoras Nacionales" apart from the mark shown in the drawing.
Particular description of goods.—Antimalarial Pills.
Claims use since Sept. 25, 1916.

Ser. No. 99,055. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed Nov. 3, 1916.

SAFEGUARD

Particular description of goods.—Clothes-Wringers and Parts Thereof.
Claims use since Oct. 3, 1916.

Ser. No. 99,149. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN H. HALLORAN, New York, N. Y. Filed Nov. 7, 1916. Under ten-year proviso.

Halloran's

The trade-mark as shown in the said drawing represents an enlarged facsimile of my surname, in the possessive case, in my own handwriting as contained and usually written by me in my signature and autograph.
Particular description of goods.—Pastry, Cakes, Confections, Ices, and Ice-Cream.
Claims use since Apr. 1, 1893.

Ser. No. 99,156. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILTON MANUFACTURING COMPANY INC., New York. N. Y. Filed Nov. 7, 1916.

PANAMARVEL

The trade-mark comprising the word "Panamarvel."
Particular description of goods.—Cotton Piece Goods.
Claims use since June 17, 1916.

Ser. No. 99,175. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) PATTON PAINT COMPANY, Milwaukee, Wis. Filed Nov. 8, 1916.

SNOLITE

Particular description of goods.—Ready-Mixed White Liquid Paints and Enamels.
Claims use since the 28th day of October, 1916.

Ser. No. 99,178. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FOREST TURNER, Kings Mountain, N. C. Filed Nov. 8, 1916.



Particular description of goods.—Soap.
Claims use since the 1st day of November, 1916.

Ser. No. 99,217. (CLASS 39. CLOTHING.) THE THISTLE HAT CO., New York, N. Y. Filed Nov. 10, 1916.

THE THISTLE HAT

No claim being made to the word "Hat" apart from the mark shown in the drawing.
Particular description of goods.—Hats.
Claims use since Feb. 1, 1916.

Ser. No. 99,250. (CLASS 37. PAPER AND STATIONERY.) KENTUCKY CORRUGATED PAPER COMPANY, Louisville, Ky. Filed Nov. 11, 1916.

IMPERVO

Particular description of goods.—Corrugated-Paper Table-Mats.
Claims use since July 1, 1916.

Ser. No. 99,259. (CLASS 39. CLOTHING.) RICH-STIX DRY GOODS COMPANY, St. Louis, Mo. Filed Nov. 11, 1916.

Mary Meuton

The trade-mark is a fanciful name written in the handwriting of Harold F. Murphy, of St. Louis, Mo.
Particular description of goods.—Middy-Blouses and Children's Dresses.
Claims use since Oct. 15, 1915.

Ser. No. 99,272. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GULFPORT GROCERY COMPANY, Gulfport, Miss. Filed Nov. 13, 1916.

GOLD CUP

Particular description of goods.—Wheat-Flour.
Claims use since the 18th day of September, 1916.

Ser. No. 99,278. (CLASS 6. CHEMICALS, MEDICINES AND PHARMACEUTICAL PREPARATIONS.) W. B. MCVICKER COMPANY, New York, N. Y. Filed Nov. 13, 1916.

RELAXO

Particular description of goods.—Pipe-Cleaning Substance.
Claims use since Sept. 1, 1916.

Ser. No. 99,326. (CLASS 39. CLOTHING.) GASTON G. JACOBS, Brooklyn, N. Y. Filed Nov. 16, 1916.

Young America

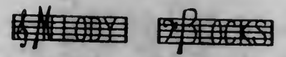
Particular description of goods.—Boys' Jackets.
Claims use since Oct. 1, 1916.

Ser. No. 99,335. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) THE BREECH-LOADER PIPE CO. INC., New York. N. Y. Filed Nov. 17, 1916.

Breech Loader

Particular description of goods.—Smoking-Pipes.
Claims use since Dec. 28, 1915.

Ser. No. 99,355. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE MUSICAL BLUE BOOK CORPORATION, New York. N. Y. Filed Nov. 17, 1916.



No claim being made to the word "Blocks" apart from the mark shown in the drawing.
Particular description of goods.—Blocks for Use in Teaching Music.
Claims use since about May, 1916.

Ser. No. 99,368. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN FEED MILLING CO., Asheville, N. C. Filed Nov. 18, 1916.



Particular description of goods.—Stock Feed.
Claims use since October, 1914.

Ser. No. 99,383. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PRATT-LOW PRESERVING COMPANY, Santa Clara, Cal. Filed Nov. 18, 1916.

SILVER LETTER

Particular description of goods.—Canned Fruits and Vegetables, Including Apricots, Pears, Peaches, Cherries, Plums, Blackberries, Grapes, Tomatoes, and Asparagus.
Claims use since Oct. 28, 1916.

Ser. No. 99,426. (CLASS 38. PRINTS AND PUBLICATIONS.) HOLLAND S. REAVIS, Houston, Tex. Filed Nov. 20, 1916.

THE OIL JOURNAL

The lining on the drawing is used merely for the purpose of showing a contrast and not to indicate color.
Particular description of goods.—Periodicals Published Monthly.
Claims use since the 31st day of October, 1916.

Ser. No. 99,429. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE BRITISH FILM STOCK COMPANY LIMITED, London, England. Filed Nov. 21, 1916.

BRIFCO

Particular description of goods.—Motion-Picture Films.
Claims use since June 11, 1914.

Ser. No. 99,470. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) OAKLEY VARNISH CO., Los Angeles, Cal. Filed Nov. 22, 1916.

Maarite

Particular description of goods.—Ready-Mixed Paints.
Claims use since July 1, 1916.

Ser. No. 99,477. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ISAIAH C. SCUDDER, New York, N. Y. Filed Nov. 22, 1916.

I. C. S.
SOLUTION

The trade-mark comprising the letters and word "I. C. S. Solution," no claim being made to the exclusive use of the word "Solution" apart from the mark as shown in the drawing.
Particular description of goods.—Electrolyte.
Claims use since Mar. 25, 1915.

Ser. No. 99,484. (CLASS 38. PRINTS AND PUBLICATIONS.) WILLETT & GRAY, New York, N. Y. Filed Nov. 22, 1916.

DAILY SUGAR TRADE JOURNAL

Particular description of goods.—Daily Sugar-Paper.
Claims use since Sept. 28, 1894.

Ser. No. 99,485. (CLASS 38. PRINTS AND PUBLICATIONS.) WILLETT & GRAY, New York, N. Y. Filed Nov. 22, 1916.

WEEKLY STATISTICAL SUGAR TRADE JOURNAL

Particular description of goods.—Weekly Sugar-Paper.
Claims use since July 9, 1891.

Ser. No. 99,503. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) HAWK FILM COMPANY, New York, N. Y. Filed Nov. 23, 1916.

HAWK

Particular description of goods.—Motion-Picture Films.
Claims use since Nov. 10, 1916.

Ser. No. 99,515. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CHAMBERLAIN COMPANY, Pittsburgh, Pa. Filed Nov. 24, 1916.

DESOLVO

Particular description of goods.—A Chemical Compound for Cleaning and Thawing Pipes and for Removing Rust and Stain.
Claims use since Apr. 1, 1909.

Ser. No. 99,522. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) L. A. HOWARD COMPANY, Minneapolis, Minn. Filed Nov. 24, 1916.



Which is a portrait of L. A. Howard, deceased.
Particular description of goods.—Preparations for the Treatment of Rheumatism, Catarrh, Goiter, and Piles, Carbolic Salve, Alterative Syrup, Cancer-Plaster, and Cholagogue.
Claims use since Oct. 23, 1916.

Ser. No. 99,529. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE ADVANCE FOUNDRY CO., Dayton, Ohio. Filed Nov. 25, 1916.

STRENES

Particular description of goods.—Iron Castings.
Claims use since Feb. 15, 1916.

Ser. No. 99,534. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALEXANDRE BÉRUBÉ, Berlin, N. H. Filed Nov. 25, 1916.

Use TRADE MARK DR. A. BÉRUBÉ

No claim being made to the words "Trade Mark" and "Dr. A. Bérubé" illustrated in the drawings.
Particular description of goods.—Tooth Powder and Cream.
Claims use for tooth-powder since Mar. 14, 1914, and for tooth-cream since Dec. 27, 1915.

Ser. No. 99,600. (CLASS 12. CONSTRUCTION MATERIALS.) WILLIAM J. GRAVERT, INC., Long Island City, N. Y. Filed Nov. 28, 1916.

VOLCANO

Particular description of goods.—Cement to be Used as a Bond for Fire-Brick Structures.
Claims use since Oct. 1, 1916.

Ser. No. 99,625. (CLASS 38. PRINTS AND PUBLICATIONS.) INTERNATIONAL NEWS SERVICE, New York, N. Y. Filed Nov. 29, 1916.

DAILY SPORT BUDGET

The lining appearing in the drawing being used merely for the purpose of shading, not denoting color.
Particular description of goods.—A Newspaper-Section.
Claims use since Apr. 14, 1915.

Ser. No. 99,639. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) C. CONRADTY, Nuremberg, Germany. Filed Nov. 29, 1916.

Argos-Pjo

The trade-mark consists of the word "Argos-Pjo."
Particular description of goods.—Electric-Light Carbons.
Claims use since May, 1915.

Ser. No. 99,651. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH C. DEVLIN, Lynn, Mass. Filed Dec. 1, 1916.

DEVORIS

Particular description of goods.—Tooth Powder and Paste.
Claims use since Nov. 9, 1916.

Ser. No. 99,656. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) A. HILLBORN KNIGHT, Philadelphia, Pa. Filed Dec. 1, 1916.

MOHAWK WATER PAINT

No claim being made for the words "Water Paint" apart from the other features of the mark.
Particular description of goods.—Water-Paint.
Claims use since about May 21, 1916.

Ser. No. 99,657. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MARTIN MANUFACTURING COMPANY, Newton, Mass. Filed Dec. 1, 1916.

Newtowne

Particular description of goods.—Lace and Drapery Curtains.
Claims use since about Nov. 1, 1915.

Ser. No. 99,676. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE E. L. PATCH CO., Boston, Mass. Filed Dec. 2, 1916.

CARBOKILL

The word "Carbokill."
Particular description of goods.—A Preparation for Eliminating Carbon in Gas-Engine Cylinders.
Claims use since Aug. 1, 1916.

Ser. No. 99,687. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PARKE DAVIS & CO., Detroit, Mich. Filed Dec. 2, 1916.

CURDALAC

Particular description of goods.—Peptic Coagulant.
Claims use since Oct. 1, 1916.

Ser. No. 99,699. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK WILLIAM CLEMENTS, Rochester, N. Y. Filed Dec. 4, 1916.



Particular description of goods.—A Medicinal Tonic, Blood and Tissue Builder.
Claims use since on or about the 15th day of July, 1914.

Ser. No. 99,727. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HEROLIN MEDICINE COMPANY, Atlanta, Ga. Filed Dec. 5, 1916.



Particular description of goods.—Hair-Dressing.
Claims use since Oct. 1, 1915.

Ser. No. 99,734. (CLASS 12. CONSTRUCTION MATERIALS.) REFRACTORY MATERIALS COMPANY, New York, N. Y. Filed Dec. 5, 1916.



The representation of the trowel is usually of a blue color, with the word "Brand" thereon in white, no claim being made to the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—High-Temperature Fire-Brick Cement, Non-Conducting Boiler-Covering and Stove-Lining.
Claims use since Nov. 15, 1916.

Ser. No. 99,739. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE ACIERAL COMPANY OF AMERICA, New York, N. Y. Filed Dec. 6, 1916.



The words "Trade Mark" being disclaimed except when used in connection with the remainder of the mark shown in the drawing. The lining on the drawing is for shading only, color forming no material part of the mark.
Particular description of goods.—Metal or Aluminum Compounds in the Form of Ingots, Castings, Rods, Plates, &c.
Claims use since June 7, 1916.

Ser. No. 99,747. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) F. A. HARDY & COMPANY, Chicago, Ill. Filed Dec. 6, 1916.

LENSOMETER

"Lensometer."
Particular description of goods.—Lens-Testing Instruments.
Claims use since Oct. 31, 1916.

Ser. No. 99,765. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL HARVESTER COMPANY OF NEW JERSEY, Chicago, Ill. Filed Dec. 7, 1916.

NEW SOUTHERN

Particular description of goods.—Cultivators and Parts Thereof.
Claims use since July, 1916.

Ser. No. 99,776. (CLASS 12. CONSTRUCTION MATERIALS.) SUMTER BRICK WORKS, Sumter, S. C. Filed Dec. 7, 1916.

DIXIE

Particular description of goods.—Building-Brick.
Claims use since Nov. 1, 1911.

Ser. No. 99,785. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BALTIMORE BARGAIN HOUSE, Baltimore, Md. Filed Dec. 8, 1916.



Particular description of goods.—Cambrics, Nainsooks, and Muslins in the Piece.
Claims use since 1913.

Ser. No. 99,793. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) KELLER MECHANICAL ENGRAVING COMPANY, Brooklyn, N. Y. Filed Dec. 8, 1916.

KME

Particular description of goods.—Steel and Brass Dies.
Claims use since about Aug. 1, 1915.

Ser. No. 99,798. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNITED STATES MOTION PICTURE CORPORATION, Wilkes-Barre, Pa. Filed Dec. 8, 1916.



No claim being made for the word "Comedy" appearing with the trade-mark.
Particular description of goods.—Motion-Picture Films.
Claims use since Oct. 2, 1916.

Ser. No. 99,800. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE WARREN LABORATORIES CO., Marietta, Ohio. Filed Dec. 8, 1916.



The exclusive use to the word "Oil" is hereby disclaimed.
Particular description of goods.—Liniment for Treatment of Rheumatism, Sciatica, Lumbago, Neuralgia, Swellings, Bruises, and Sprains.
Claims use since about Mar. 1, 1916.

Ser. No. 99,843. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS L. EVANS, Houston, Tex. Filed Dec. 11, 1916.



Particular description of goods.—Baking-Powders.
Claims use since Nov. 25, 1916.

Ser. No. 99,868. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BURCH AND COLLINS, Washington, D. C. Filed Dec. 12, 1916.

BC

Particular description of goods.—A Liquid Preparation for Removing Dirt and Grease, Which Is Also a Polish.
Claims use since Sept. 1, 1916.

Ser. No. 99,872. (CLASS 39. CLOTHING.) PHILIP A. LUCKETT, Salisbury, Md. Filed Dec. 12, 1916.

MY PAL

Particular description of goods.—Union-Suits, Undershirts, Drawers, and Pajamas Made of Textile Material.
Claims use since September, 1915.

Ser. No. 99,889. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FAXON & GALLAGHER DRUG CO., Kansas City, Mo. Filed Dec. 13, 1916.

DREAM KISS

Particular description of goods.—Perfumes, Toilet Waters, Face-Creams, Face-Powders, and Talcum Powders.
Claims use since December, 1911.

Ser. No. 99,893. (CLASS 39. CLOTHING.) GEO. E. KEITH COMPANY, Brockton, Mass. Filed Dec. 13, 1916.

Walk-Over

Particular description of goods.—Rubber Heels.
Claims use since on or about Jan. 1, 1909.

Ser. No. 99,904. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TINAS COMPANY, Detroit, Mich. Filed Dec. 13, 1916.

Ti-na-s

Particular description of goods.—A Remedy for Dandruff, Eczema, and Falling Hair.
Claims use since Dec. 11, 1916.

Ser. No. 99,907. (CLASS 39. CLOTHING.) THE WARNER BROTHERS COMPANY, Bridgeport, Conn. Filed Dec. 13, 1916.

Vanity

Particular description of goods.—Corsets.
Claims use since Dec. 6, 1916.

Ser. No. 99,926. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DYE PRODUCTS COMPANY OF THE UNITED STATES, Philadelphia, Pa. Filed Dec. 14, 1916.

DYO

Particular description of goods.—Dyes.
Claims use since Oct. 12, 1916.

Ser. No. 99,936. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FAIRCHILD BROS. & FOSTER, New York, N. Y. Filed Dec. 14, 1916.

Carminzym

Particular description of goods.—A Pharmaceutical Preparation in the Form of Powder and Tablets for the Relief of Indigestion.
Claims use since Aug. 1, 1916.

Ser. No. 99,943. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) OTIS ELEVATOR COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 14, 1916.

MICRO-DRIVE

Particular description of goods.—Elevators.
Claims use since Dec. 11, 1916.

Ser. No. 99,979. (CLASS 39. CLOTHING.) THE B. K. MFG. CO., Michigan City, Ind. Filed Dec. 16, 1916.

ALAROND

Particular description of goods.—Ladies' and Misses' Dresses, Bungalow-Aprons, Middy-Blouses, and Wash-Skirts.
Claims use since Sept. 1, 1916.

Ser. No. 99,982. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HUDSON W. HAKES, Millbury, Mass. Filed Dec. 16, 1916.

O K

Particular description of goods.—Self-Threading Shuttles for Looms.
Claims use since June, 1915.

Ser. No. 99,987. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN L. MCKENNA, New York, N. Y. Filed Dec. 16, 1916.

"KENNALITE"

Comprising the word "Kennalite."
Particular description of goods.—An Antiseptic Powder for the Treatment of Exudations of the Skin.
Claims use since Dec. 11, 1916.

Ser. No. 99,988. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN L. MCKENNA, New York, N. Y. Filed Dec. 16, 1916.

CAPILLOGEN

Comprising the word "Capillogen."
Particular description of goods.—A Treatment for the Hair and Scalp and for Eczema.
Claims use for about four years.

Ser. No. 99,993. (CLASS 39. CLOTHING.) SUEDETEX GLOVE COMPANY, INC., New York, N. Y. Filed Dec. 16, 1916.

SUEDETEX

Particular description of goods.—Gloves.
Claims use since June 15, 1916.

Ser. No. 99,998. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. D. BLAISDELL, Minneapolis, Minn. Filed Dec. 18, 1916.



Consisting of my portrait and a facsimile of my signature.
Particular description of goods.—Pile-Ointment.
Claims use since Jan. 1, 1916.

Ser. No. 100,079. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ROBERT HIKISH, Tuckahoe, N. Y. Filed Dec. 21, 1916.

QUADRUPLEX
FOUR I ONE
N

Particular description of goods.—Attachments for Internal-Combustion Engines—to wit, Auxiliary Air-Admission Devices, Fire-Extinguishing Devices, Priming Devices, and Cylinder Steaming Devices.
Claims use since Dec. 1, 1916.

Ser. No. 100,082. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE PHONOHARP COMPANY, Boston, Mass. Filed Dec. 21, 1916.

MARXOPHONE

Particular description of goods.—Zithers.
Claims use since on or about Apr. 1, 1915.

Ser. No. 100,138. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ARTHUR A. FRIESTEDT, Chicago, Ill. Filed Dec. 23, 1916.

HYDRONIZER

Consisting of the word "Hydronizer."
Particular description of goods.—Apparatus for Supplying Moisture to the Cylinders of Gas-Engines.
Claims use since Dec. 7, 1916.

Ser. No. 100,180. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) R. & H. MANUFACTURING CORPORATION, Detroit, Mich. Filed Dec. 26, 1916.

XL-ALL

Particular description of goods.—Razor Honers and Stroppers.
Claims use since March, 1916.

Ser. No. 100,208. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE REPUBLIC METALWARE CO., Buffalo, N. Y. Filed Dec. 27, 1916.

SAVORY

Particular description of goods.—Corers, Egg-Beaters, Cleavers, Graters, Sieves, (Flour,) Bread-Mixers, Table and Kitchen Knives, (of Base Metal,) Parers, Lemon-Squeezers, Scoops, All of Metal.
Claims use since about Jan. 7, 1899.

TRADE-MARK REGISTRATIONS GRANTED

JANUARY 30, 1917.

115,136. MOVING-PICTURE FILMS. ACORN MOVIE CARTOON COMPANY, Wilmington, Del.
Filed July 3, 1916. Serial No. 96,286. PUBLISHED NOVEMBER 21, 1916.

115,137. COTTON-SEED OIL FOR USE IN THE MANUFACTURE OF PRINTING-INKS. THE AMERICAN COTTON OIL COMPANY, Guttenberg, N. J., and New York, N. Y.
Filed May 10, 1916. Serial No. 95,019. PUBLISHED NOVEMBER 28, 1916.

115,138. SPELTER OR ZINC. ANACONDA COPPER MINING COMPANY, Anaconda and Butte, Mont., and New York, N. Y.
Filed April 10, 1916. Serial No. 94,273. PUBLISHED NOVEMBER 21, 1916.

115,139. CERTAIN NAMED POULTRY APPLIANCES. O. B. ANDREWS' COMPANY, Chattanooga, Tenn.
Filed July 14, 1916. Serial No. 96,554. PUBLISHED NOVEMBER 21, 1916.

115,140. [WITHDRAWN.]

115,141. MIXTURE OF CLIPPED WHITE OATS AND BARLEY. ARMOUR GRAIN COMPANY, Jersey City, N. J., and Chicago, Ill.
Filed August 14, 1916. Serial No. 97,317. PUBLISHED NOVEMBER 14, 1916.

115,142. MAGAZINE OR JOURNAL ISSUED MONTHLY. ART METAL CONSTRUCTION CO., INC., Jamestown, N. Y.
Filed September 27, 1916. Serial No. 98,252. PUBLISHED NOVEMBER 28, 1916.

115,143. CERTAIN NAMED PACKING. ASSOCIATED MANUFACTURERS COMPANY OF NEW YORK, New York, N. Y.
Filed May 17, 1916. Serial No. 95,193. PUBLISHED NOVEMBER 21, 1916.

115,144. BOTH POSITIVE AND NEGATIVE CINEOGRAPH AND MOVING-PICTURE FILMS. BALBOA AMUSEMENT PRODUCING COMPANY, Long Beach, Cal.
Filed August 3, 1916. Serial No. 97,043. PUBLISHED NOVEMBER 21, 1916.

115,145. SKELETON DRAWINGS FOR USE AS AIDS OR HELPS IN CHILD INSTRUCTION. BARRINGTON GRAPHOPRINT COMPANY, INCORPORATED, New York, N. Y.
Filed September 8, 1916. Serial No. 97,851. PUBLISHED NOVEMBER 28, 1916.

115,146. CORN-STARCH. BAUER AND BAUER, Bridgeport, Pa.
Filed September 30, 1916. Serial No. 98,328. PUBLISHED NOVEMBER 21, 1916.

115,147. CORN-STARCH. BAUER AND BAUER, Bridgeport, Pa.
Filed September 30, 1916. Serial No. 98,324. PUBLISHED NOVEMBER 21, 1916.

115,148. CORN-STARCH. BAUER AND BAUER, Bridgeport, Pa.
Filed September 30, 1916. Serial No. 98,325. PUBLISHED NOVEMBER 21, 1916.

115,149. HORSE AND MULE FEED. BEST-CLYMER MANUFACTURING COMPANY, St. Louis, Mo.
Filed October 13, 1916. Serial No. 98,621. PUBLISHED NOVEMBER 21, 1916.

115,150. DAIRY FEED. BEST-CLYMER MANUFACTURING COMPANY, St. Louis, Mo.
Filed October 13, 1916. Serial No. 98,622. PUBLISHED NOVEMBER 21, 1916.

115,151. DAIRY FEED. BEST-CLYMER MANUFACTURING COMPANY, St. Louis, Mo.
Filed October 13, 1916. Serial No. 98,623. PUBLISHED NOVEMBER 21, 1916.

115,152. FATTENING FEED FOR STOCK. BEST-CLYMER MANUFACTURING COMPANY, St. Louis, Mo.
Filed October 13, 1916. Serial No. 98,624. PUBLISHED NOVEMBER 21, 1916.

115,153. BUTTER, EGGS, AND CHEESE. BEYER BROS. COMMISSION CO., New York, N. Y.
Filed October 6, 1916. Serial No. 98,457. PUBLISHED NOVEMBER 21, 1916.

115,154. NIGHT-LIGHTS, CANDLES, AND TAPERS. GEORGE BORGFELDT & CO., New York, N. Y.
Filed September 21, 1916, Serial No. 98,131. PUBLISHED NOVEMBER 28, 1916.

115,155. PEANUT-OIL. BOSMAN & LOHMAN CO., Norfolk, Va.
Filed September 22, 1916. Serial No. 98,157. PUBLISHED NOVEMBER 21, 1916.

115,156. PANCAKE-FLOUR. BOWLES BROS. CO., Los Angeles, Cal.
Filed September 29, 1916. Serial No. 98,308. PUBLISHED NOVEMBER 21, 1916.

115,157. LUBRICANTS CONSISTING OF OILS AND GREASES. AUGUSTUS CRANE BUZBY, Philadelphia, Pa.
Filed October 25, 1916. Serial No. 98,871. PUBLISHED NOVEMBER 28, 1916.

115,158. CIGARS AND SMOKING-TOBACCO. A. GONZALEZ CAMERO, New York, N. Y.
Filed September 20, 1916. Serial No. 98,128. PUBLISHED NOVEMBER 28, 1916.

115,159. MEDICATED TONIC NERVE FOOD. CASEIN, LIMITED, Battersea, London, England.
Filed September 16, 1916. Serial No. 98,025. PUBLISHED NOVEMBER 28, 1916.

115,160. SPARK-PLUGS AND SPARK-PLUG PORCELAINS. CHAMPION IGNITION CO., Flint, Mich.
Filed October 16, 1916. Serial No. 98,683. PUBLISHED NOVEMBER 28, 1916.

115,161. CANNED SALMON. CHINOOK PACKING COMPANY, Chinook, Wash.
Filed April 21, 1916. Serial No. 94,605. PUBLISHED SEPTEMBER 19, 1916.

115,162. MEDICINAL PREPARATION USED IN THE TREATMENT OF CERTAIN NAMED DISEASES. THE COLUMBUS PHARMACAL COMPANY, Columbus, Ohio.
Filed July 19, 1916. Serial No. 96,663. PUBLISHED NOVEMBER 28, 1916.

115,163. ELECTRIC-LIGHTING FIXTURES. DAVID CROWNFIELD, Boston, Mass.
Filed September 20, 1916. Serial No. 98,112. PUBLISHED NOVEMBER 21, 1916.

115,164. HAIR-TONIC. DR. A. C. DANIELS, INC., Boston, Mass.
Filed July 31, 1916. Serial No. 96,986. PUBLISHED NOVEMBER 28, 1916.

115,165. HAMS. JACOB E. DECKER & SONS, Mason City, Iowa
Filed June 12, 1916. Serial No. 95,814. PUBLISHED NOVEMBER 21, 1916.

115,166. ACCORDIONS. YERMOLY DEMIANENKO, New York, N. Y.
Filed October 5, 1916. Serial No. 98,431. PUBLISHED NOVEMBER 28, 1916.

115,167. CERTAIN NAMED CANNING MACHINERY AND THE LIKE. THE F. G. DICKERSON CO., Portland, Me., and Chicago, Ill.
Filed May 20, 1916. Serial No. 95,296. PUBLISHED NOVEMBER 28, 1916.

115,168. POLISH FOR AUTOMOBILES, CARRIAGES, AND FURNITURE. DURST & CHARTZ FURNITURE CO., Carson City, Nev.
Filed October 2, 1916. Serial No. 98,353. PUBLISHED NOVEMBER 21, 1916.

115,169. NEWSPAPER. EDWIN T. EARL, Los Angeles, Cal.
Filed August 28, 1916. Serial No. 97,661. PUBLISHED NOVEMBER 28, 1916.

115,170. LADIES', MISSES', AND CHILDREN'S SUITS CONSISTING OF SKIRTS AND JACKETS, COATS, WAISTS, DRESSES, AND SKIRTS. JOSEPH ECKSTEIN, New York, N. Y.
Filed October 21, 1916. Serial No. 98,903. PUBLISHED NOVEMBER 28, 1916.

115,171. SOUND-RECORDS AND SOUND-RECORD BLANKS. THOMAS A. EDISON, INCORPORATED, West Orange, N. J.
Filed August 21, 1916. Serial No. 97,464. PUBLISHED NOVEMBER 28, 1916.

115,172. COFFEE AND TEA. J. S. ELLIOTT COFFEE CO., Newville, Pa.
Filed October 13, 1916. Serial No. 98,628. PUBLISHED NOVEMBER 21, 1916.

115,173. CHILDREN'S DRESSES. ELITE GARMENT COMPANY OF SYRACUSE, N. Y., INC., Syracuse, N. Y.
Filed August 21, 1916. Serial No. 97,507. PUBLISHED NOVEMBER 28, 1916.

115,174. CERTAIN NAMED AGRICULTURAL IMPLEMENTS, ENGINES, PUMPS, &c. EMERSON-BRANTINGHAM COMPANY, Rockford, Ill.
Filed September 18, 1916. Serial No. 98,045. PUBLISHED NOVEMBER 21, 1916.

115,175. SHOE-POLISH. ANDREW C. ERICKSON, Los Angeles, Cal.
Filed June 7, 1916. Serial No. 95,670. PUBLISHED NOVEMBER 28, 1916.

115,176. SELF-RISING WHEAT-FLOUR. EVANSVILLE MILL & ELEVATOR CO., INC., Evansville, Ind.
Filed October 6, 1916. Serial No. 98,463. PUBLISHED NOVEMBER 21, 1916.

115,177. DAILY NEWSPAPER. EVENING HERALD PUBLISHING COMPANY, Los Angeles, Cal.
Filed May 17, 1916. Serial No. 95,201. PUBLISHED JULY 25, 1916.

115,178. BOOKS CONTAINING DEPOSIT-SLIPS TO BE ISSUED TO MEMBERS OF A SAVINGS-CLUB. EXCHANGE TRUST COMPANY, Boston, Mass.
Filed September 21, 1916. Serial No. 98,135. PUBLISHED NOVEMBER 28, 1916.

115,179. CHEMICAL PREPARATION TO PROTECT POTATO VINES AND TUBERS. W. R. GRACE & CO., New York, N. Y.
Filed August 22, 1916. Serial No. 97,553. PUBLISHED NOVEMBER 28, 1916.

115,180. METAL-PICKLING COMPOUNDS AND INGREDIENTS THEREOF. THE GRASSELLI CHEMICAL COMPANY, Cleveland, Ohio.
Filed April 10, 1916. Serial No. 94,284. PUBLISHED NOVEMBER 28, 1916.

115,181. CHEMICAL COMPOUND USED AS A GASOLENE-INTENSIFIER AND CARBON-PREVENTIVE. CHARLES HAHN, Ithaca, N. Y.
Filed October 10, 1916. Serial No. 98,539. PUBLISHED NOVEMBER 28, 1916.

115,182. MEN'S AND BOYS' OUTER SUITS, COATS, OVERCOATS, AND TROUSERS. ISAAC HAMBURGER & SONS, Baltimore, Md.
Filed August 21, 1915. Serial No. 88,739. PUBLISHED NOVEMBER 28, 1916.

115,183. NON-ALCOHOLIC CEREAL BEVERAGE PUT UP IN BOTTLES AND IN KEGS. THEO. HAMM BREWING COMPANY, St. Paul, Minn.
Filed October 14, 1916. Serial No. 98,676. PUBLISHED NOVEMBER 28, 1916.

115,184. WATCH-GLASSES. HAMMEL, RIGLANDER & Co., New York, N. Y.
Filed September 21, 1916. Serial No. 98,141. PUBLISHED NOVEMBER 21, 1916.

115,185. TURPENTINE AND TURPENTINE SUBSTITUTE. CHR. A. HANSEN, New York, N. Y.
Filed October 16, 1916. Serial No. 98,717. PUBLISHED NOVEMBER 21, 1916.

115,186. CARPETS AND RUGS. HARDWICK & MAGEE Co., Philadelphia, Pa.
Filed October 31, 1916. Serial No. 99,008. PUBLISHED NOVEMBER 28, 1916.

115,187. CANNED SARDINES. ERNEST L. HEBBNER, New York, N. Y.
Filed October 6, 1916. Serial No. 98,467. PUBLISHED NOVEMBER 21, 1916.

115,188. METALLIC DIPPERS FOR SKIMMING MILK CONTAINED IN MILK-BOTTLES. DAVID E. HUBBELL, Elgin, Ill.
Filed January 22, 1916. Serial No. 92,339. PUBLISHED NOVEMBER 28, 1916.

115,189. COTTON PIECE GOODS. HUNTER MFG. & COM. CO., New York, N. Y.
Filed October 24, 1916. Serial No. 98,860. PUBLISHED NOVEMBER 28, 1916.

115,190. OLEOMARGARIN. JOHN F. JELKE COMPANY, Chicago, Ill.
Filed October 9, 1916. Serial No. 98,519. PUBLISHED NOVEMBER 21, 1916.

115,191. SANITARY PUMPS, CONVEYERS, BUTTER-CUTTERS, CAN-WASHERS, AND CHURNS. JENSEN CREAMERY MACHINERY COMPANY, New York, N. Y.
Filed October 17, 1916. Serial No. 98,732. PUBLISHED NOVEMBER 21, 1916.

115,192. WINE. FRED KALINA, Pittsburgh, Pa.
Filed October 14, 1916. Serial No. 98,661. PUBLISHED NOVEMBER 28, 1916.

115,193. COTTON-SEED MEAL. JOHN P. KEETON, Atlanta, Ga.
Filed October 12, 1916. Serial No. 98,595. PUBLISHED NOVEMBER 21, 1916.

115,194. CORSETS. MME. P. KLEIN, New York, N. Y.
Filed March 2, 1916. Serial No. 93,234. PUBLISHED JULY 18, 1916.

115,195. FRESH, SMOKED, AND SALTED MEATS AND LARD. GERHARD LANG, Buffalo, N. Y.
Filed May 24, 1915. Serial No. 86,860. PUBLISHED NOVEMBER 14, 1916.

115,196. ELECTRIC RELAYS, MAGNETS, SWITCHES, MOTORS, TRANSFORMERS, CONTROLLERS, AND REGULATORS. DAVID C. LARSON, New York, N. Y.
Filed September 6, 1916. Serial No. 97,821. PUBLISHED NOVEMBER 21, 1916.

115,197. ANTHRACITE COAL. LEHIGH & WILKES BARRE COAL CO., Wilkes-Barre, Pa.
Filed January 14, 1916. Serial No. 92,125. PUBLISHED NOVEMBER 21, 1916.

115,198. MACHINE PARTS—VIZ., COUPLINGS AND NUTS. THE LESLIE COMPANY, Lyndhurst, N. J.
Filed October 6, 1916. Serial No. 98,471. PUBLISHED NOVEMBER 21, 1916.

115,199. CAKES. LOOSE WILES BISCUIT COMPANY, Kansas City, Mo.
Filed October 9, 1916. Serial No. 98,520. PUBLISHED NOVEMBER 21, 1916.

115,200. TEA AND COFFEE. J. M. MCCRACKEN CO., Boston, Mass.
Filed October 17, 1916. Serial No. 98,737. PUBLISHED NOVEMBER 21, 1916.

115,201. DRIED VEGETABLES. H. J. MCGRATH CO., Baltimore, Md.
Filed September 22, 1916. Serial No. 98,169. PUBLISHED NOVEMBER 21, 1916.

115,202. HOMEOPATHIC PREPARATIONS FOR THE TREATMENT OF COLDS, GRIPPE, FEVER, AND SORE THROAT. EDWARD F. MCKAY, Oklahoma, Okla.
Filed September 5, 1916. Serial No. 97,804. PUBLISHED NOVEMBER 28, 1916.

115,203. ELECTRIC METERS, REGISTERS, CALCULATORS, AND THERMOSTATS. MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J., and New York, N. Y.
Filed October 5, 1916. Serial No. 98,438. PUBLISHED NOVEMBER 21, 1916.

115,204. BUTTER. MARTIN-KLEPPER CO., INC., Decatur, Ind.
Filed October 6, 1916. Serial No. 98,475. PUBLISHED NOVEMBER 21, 1916.

115,205. WASHABLE LEATHER. LOUIS MEYERS & SON, New York, N. Y.
Filed August 30, 1916. Serial No. 97,712. PUBLISHED NOVEMBER 21, 1916.

115,206. BROAD SILK IN THE PIECE. JULIUS A. MIGEL, New York, N. Y.
Filed October 27, 1916. Serial No. 98,928. PUBLISHED NOVEMBER 28, 1916.

115,207. CERTAIN NAMED BOTTLE WASHING, RINSING, AND CAPPING MACHINES AND ALLIED MACHINERY. MODERN MACHINERY CO., Wilmington, Del.
Filed May 31, 1916. Serial No. 95,557. PUBLISHED NOVEMBER 28, 1916.

115,208. SPARK-PLUGS. A. R. MOSLER & CO., New York, N. Y.
Filed October 9, 1913. Serial No. 73,293. PUBLISHED JULY 25, 1916.

115,209. WHEAT BREAKFAST FOODS. MOTHER'S MACARONI COMPANY, Minneapolis, Minn.
Filed September 29, 1916. Serial No. 98,314. PUBLISHED NOVEMBER 21, 1916.

115,210. ELECTRICAL CONDUCTORS OR CABLES. MOTOR PARTS COMPANY, Philadelphia, Pa.
Filed October 7, 1916. Serial No. 98,500. PUBLISHED NOVEMBER 28, 1916.

115,211. MONTHLY PUBLICATION. THE MOTOR PRINT COMPANY, New York, N. Y.
Filed October 12, 1916. Serial No. 98,601. PUBLISHED NOVEMBER 28, 1916.

115,212. MOTION-PICTURE-PROJECTING APPARATUS AND PARTS THEREOF. GEORGE W. NEWGASS, New York, N. Y.
Filed September 11, 1916. Serial No. 97,918. PUBLISHED NOVEMBER 21, 1916.

115,213. RICE. NEW ORLEANS COFFEE CO. LTD., New Orleans, La.
Filed October 17, 1916. Serial No. 98,738. PUBLISHED NOVEMBER 21, 1916.

115,214. WHEAT-FLOUR. NEW PRAGUE FLOURING MILL COMPANY, New Prague, Minn.
Filed September 23, 1916. Serial No. 98,192. PUBLISHED NOVEMBER 21, 1916.

115,215. MEN'S AND YOUTHS' LEATHER BOOTS AND SHOES. NOYES-NORMAN SHOE CO., St. Joseph, Mo.
Filed August 3, 1916. Serial No. 97,056. PUBLISHED NOVEMBER 21, 1916.

115,216. ELECTRIC LAMPS. JAMES O'CONNOR, New York, N. Y.
Filed October 23, 1916. Serial No. 98,842. PUBLISHED NOVEMBER 28, 1916.

115,217. ANTISEPTIC PREPARATION FOR DISEASES OF THE SKIN. JOHN H. O'GRADY, Chicago, Ill.
Filed October 4, 1915. Serial No. 89,639. PUBLISHED NOVEMBER 28, 1916.

115,218. PASTE AND READY-MIXED PAINTS. PARKER PRESERVATIVE PRODUCTS CO., Brooklyn, N. Y.
Filed April 21, 1916. Serial No. 94,627. PUBLISHED NOVEMBER 21, 1916.

115,219. WHEAT-FLOUR. PARIS MILLING COMPANY, Paris, Tex.
Filed October 6, 1916. Serial No. 98,479. PUBLISHED NOVEMBER 21, 1916.

115,220. SUPPOSITORIES FOR THE RELIEF OF HEMORRHOIDS. THE E. L. PATCH CO., Boston, Mass.
Filed October 14, 1916. Serial No. 98,668. PUBLISHED NOVEMBER 28, 1916.

115,221. SMOKING AND CHEWING TOBACCO. CHRISTIAN PEPER TOBACCO CO., St. Louis, Mo.
Filed June 8, 1916. Serial No. 95,717. PUBLISHED NOVEMBER 21, 1916.

115,222. COFFEE. S. S. PIERCE CO., Boston, Mass.
Filed September 28, 1915. Serial No. 89,523. PUBLISHED NOVEMBER 21, 1916.

115,223. WHEAT-FLOUR. PRANGE MILLING CO., New Douglas, Ill.
Filed October 6, 1916. Serial No. 98,480. PUBLISHED NOVEMBER 21, 1916.

115,224. ORNAMENTAL HEADS ADAPTED TO BE APPLIED TO ANY ARTICLE OF MANUFACTURE. E. & G. QUACKENBUSH, New York, N. Y.
Filed January 19, 1916. Serial No. 92,252. PUBLISHED NOVEMBER 28, 1916.

115,225. INNER TUBES FOR TIRES, AND NON-METALLIC TIRES AND TIRE-CASINGS COMPOSED OF RUBBER OR RUBBER AND FABRIC. RACINE AUTO TIRE COMPANY, Racine, Wis.
Filed March 31, 1915. Serial No. 85,589. PUBLISHED NOVEMBER 21, 1916.

115,226. PREPARATION FOR CLEANING HATS, SHOES, AND CLOTHING. IRVING W. RICE & CO., New York, N. Y.
Filed September 28, 1916. Serial No. 98,300. PUBLISHED NOVEMBER 28, 1916.

115,227. MICA POWDER. RICHMOND MICA COMPANY, INC., Richmond, Va.
Filed August 29, 1916. Serial No. 97,691. PUBLISHED NOVEMBER 21, 1916.

115,228. SHOE-DRESSING FOR WHITE SHOES. SACKS & CLYMAN, Philadelphia, Pa.
Filed September 21, 1916. Serial No. 98,145. PUBLISHED NOVEMBER 28, 1916.

115,229. HAIR-NETS. SAMSTAG & HILDER BROS., New York, N. Y.
Filed October 23, 1916. Serial No. 98,850. PUBLISHED NOVEMBER 28, 1916.

115,230. LEATHER BELTING. CHAS. A. SCHIEREN COMPANY, New York, N. Y.
Filed September 21, 1916. Serial No. 98,146. PUBLISHED NOVEMBER 28, 1916.

115,231. PRINTED BOOKS AND MUSICAL WORKS. THE ARTHUR P. SCHMIDT CO., Boston, Mass.
Filed July 11, 1916. Serial No. 96,510. PUBLISHED NOVEMBER 21, 1916.

115,232. FOOT-SOAP. SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill.
Filed August 19, 1916. Serial No. 97,462. PUBLISHED NOVEMBER 28, 1916.

115,233. CIGARS, CHEROOTS, AND LITTLE CIGARS. E. M. SCHWARZ & CO., New York, N. Y.
Filed August 3, 1916. Serial No. 97,065. PUBLISHED NOVEMBER 28, 1916.

115,234. ELECTRIC WARMING-PADS, VULCANIZERS, TOASTERS, AND FLAT-IRONS. SCIENTIFIC PRODUCTS CO., New Cumberland, W. Va., and Steubenville, Ohio.
Filed September 21, 1916. Serial No. 98,144. PUBLISHED NOVEMBER 21, 1916.

115,235. CANNED AMERICAN SARDINES. SEACOAST CANNING CO., Eastport, Me.
Filed June 11, 1915. Serial No. 87,261. PUBLISHED NOVEMBER 21, 1916.

115,236. MONTHLY MAGAZINES. SEA POWER PUBLISHING COMPANY, INCORPORATED, Washington, D. C.
Filed June 6, 1916. Serial No. 95,652. PUBLISHED NOVEMBER 28, 1916.

115,237. CANNED FRUITS AND VEGETABLES. JOHN SEXTON & COMPANY, Chicago, Ill.
Filed October 4, 1916. Serial No. 98,419. PUBLISHED NOVEMBER 21, 1916.

115,238. CERTAIN NAMED CLOTHING. SHAPIRO BROTHERS, New York, N. Y.
Filed December 19, 1914. Serial No. 83,420. PUBLISHED APRIL 11, 1916.

115,239. MIDDY-BLOUSES AND MIDDY-BLOUSE DRESSES FOR CHILDREN, MISSES, AND LADIES. SHAPIRO BROTHERS, New York, N. Y.
Filed August 31, 1916. Serial No. 97,738. PUBLISHED NOVEMBER 28, 1916.

115,240. WEEKLY PUBLICATION. FREDERICK WILLIAM SHEPPERD, New York, N. Y.
Filed July 25, 1916. Serial No. 96,849. PUBLISHED NOVEMBER 21, 1916.

115,241. METALS AND METAL ALLOYS, PARTICULARLY KNOWN TO THE TRADE AS SILVEL METAL. SILVEL METAL MANUFACTURING COMPANY, INC., New York, N. Y.
Filed July 27, 1916. Serial No. 96,[illegible] PUBLISHED NOVEMBER 21, 1916.

115,242. CAKES. HARRY W. SLOAT, Chicago, Ill.
Filed October 9, 1916. Serial No. 98,531. PUBLISHED NOVEMBER 21, 1916.

115,243. CERTAIN NAMED TOILET PREPARATIONS. LUTELLUS SMITH, Chicago, Ill.
Filed March 9, 1916. Serial No. 93,416. PUBLISHED NOVEMBER 28, 1916.

115,244. PERFORATED MUSIC SHEETS OR ROLLS. STANDARD MUSIC ROLL CO., Orange, N. J.
Filed April 5, 1916. Serial No. 94,178. PUBLISHED JUNE 6, 1916.

115,245. VARNISHES, JAPANS, DRIERS, STAINS, ENAMELS, PAINTS, AND VARNISH-REMOVERS. STANDARD VARNISH WORKS, New York, N. Y.
Filed October 4, 1916. Serial No. 98,421. PUBLISHED NOVEMBER 21, 1916.

115,246. FRUIT-TREES. STARK BRO'S NURSERIES AND ORCHARDS CO., Louisiana, Mo.
Filed September 30, 1916. Serial No. 98,345. PUBLISHED NOVEMBER 21, 1916.

115,247. SELF-RISING WHEAT-FLOUR. STEELEVILLE MILLING COMPANY, Steeleville, Ill.
Filed October 13, 1916. Serial No. 98,638. PUBLISHED NOVEMBER 21, 1916.

115,248. PUBLICATION ISSUED QUARTERLY. BRAD STEPHENS & CO., Boston, Mass.
Filed October 14, 1916. Serial No. 98,671. PUBLISHED NOVEMBER 28, 1916.

115,249. SPARK-PLUGS. STEWART-WARNER SPEEDOMETER CORPORATION, Chicago, Ill.
Filed October 2, 1916. Serial No. 98,376. PUBLISHED NOVEMBER 28, 1916.

115,250. MOTION-PICTURE FILMS OF ANIMATED CARTOONS ISSUED SERIALLY. PAUL H. TERRY, New York, N. Y.
Filed April 4, 1916. Serial No. 94,154. PUBLISHED NOVEMBER 21, 1916.

115,251. CIGARS. THEOBALD AND OPPENHEIMER COMPANY, Philadelphia, Pa., and New York, N. Y.
Filed October 11, 1916. Serial No. 98,575. PUBLISHED NOVEMBER 21, 1916.

115,252. SUBSTANCE USED AS FOOD FOR CALVES. JOSEPH THORLEY, LIMITED, London, England.
Filed September 29, 1916. Serial No. 98,318. PUBLISHED NOVEMBER 21, 1916.

115,253. DRIERS. TOUSEY VARNISH COMPANY, Chicago, Ill.
Filed April 20, 1916. Serial No. 94,589. PUBLISHED NOVEMBER 21, 1916.

115,254. CIGARS. UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y.
Filed August 21, 1916. Serial No. 97,477. PUBLISHED NOVEMBER 21, 1916.

115,255. CIGARS. UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y.
Filed October 11, 1916. Serial No. 98,579. PUBLISHED NOVEMBER 21, 1916.

115,256. LINIMENTS USED IN THE TREATMENT OF CERTAIN NAMED DISEASES AS A REMEDY FOR AILMENTS. VALLEY CHEMICAL CO., Elkins, W. Va.
Filed October 5, 1916. Serial No. 98,451. PUBLISHED NOVEMBER 28, 1916.

115,257. CLEANING AND POLISHING COMPOUND FOR FURNITURE AND THE LIKE. THE VAPORINE CO., Chicago, Ill.
Filed July 15, 1916. Serial No. 96,609. PUBLISHED NOVEMBER 21, 1916.

115,258. MOTORS AND DRIVES FOR TALKING-MACHINES. VICTOR ELECTRICAL EQUIPMENT CO., Boston, Mass.
Filed August 17, 1916. Serial No. 97,416. PUBLISHED NOVEMBER 28, 1916.

115,259. CERTAIN NAMED CLOTHING. JOHN WANAMAKER, PHILADELPHIA, Philadelphia, Pa.
Filed October 20, 1916. Serial No. 98,793. PUBLISHED NOVEMBER 28, 1916.

115,260. ILLUMINATING-OILS AND LUBRICATING OILS AND GREASES. WARREN OIL COMPANY, Warren, Pa.
Filed July 29, 1916. Serial No. 96,973. PUBLISHED NOVEMBER 21, 1916.

115,261. ILLUMINATING AND LUBRICATING OILS AND GREASES. WARREN OIL COMPANY, Warren, Pa.
Filed April 17, 1916. Serial No. 94,493. PUBLISHED NOVEMBER 21, 1916.

115,262. CIGARS. WELCHER BROTHERS, New York, N. Y., and Chicago, Ill.
Filed October 7, 1916. Serial No. 98,506. PUBLISHED NOVEMBER 28, 1916.

115,263. CERTAIN NAMED TOOLS. THE WILLIAMS HARDWARE CO., Clarksburg, W. Va.
Filed September 20, 1916. Serial No. 98,126. PUBLISHED NOVEMBER 21, 1916.

115,264. ELECTRIC SEARCH-LIGHTS. WILLIAMS M'F'G. CO., Santa Ana, Cal.
Filed October 10, 1916. Serial No. 98,547. PUBLISHED NOVEMBER 28, 1916.

115,265. RHEOSTATS. WIRT COMPANY, Philadelphia, Pa.
Filed July 23, 1915. Serial No. 88,151. PUBLISHED NOVEMBER 21, 1916.

115,266. FRENCH-IVORY AND CELLULOID COMBS AND FANS. YALE NOVELTY COMPANY, Leominster, Mass.
Filed June 21, 1916. Serial No. 96,041. PUBLISHED NOVEMBER 28, 1916.

TRADE-MARK REGISTRATIONS RENEWED.

14,002. PORCELAIN, CHINA, GLASS, AND ANALOGOUS WARES. HAMILTON & CO., New York, N. Y.
Registered January 25, 1887. Renewed January 25, 1917.

14,003. PORCELAIN, CHINA, GLASS, AND ANALOGOUS WARES. HAMILTON & CO., New York, N. Y.
Registered January 25, 1887. Renewed January 25, 1917.

TRADE-MARK REGISTRATIONS CANCELED.

44,340. LUBRICATING OILS AND GREASES. THE HUGHES ANTI-FRICTION COMPANY, Boston, Mass.
Registered March 21, 1905. Canceled January 12, 1917.

LABELS

REGISTERED JANUARY 30, 1917.

19,846.—*Title:* "LUNCHEON." (For Canned Salmon.) ALASKA-PACIFIC FISHERIES, Portland, Oreg. Filed December 26, 1916.

19,847.—*Title:* "BRADLEY'S CORN REMOVER." (For the Treatment of Corns.) BRADLEY MANUFACTURING Co. INC., Bluefield, W. Va. Filed January 8, 1917.

19,848.—*Title:* "JERSEY CREAM." (For Wheat-Flour.) DAHNKE WALKER MFG. Co., Union City, Tenn. Filed December 8, 1916.

19,849.—*Title:* "SECURITY." (For Matches.) THE LOUIS HILFER COMPANY, Chicago, Ill. Filed December 29, 1916.

19,850.—*Title:* "MAN-A-CEA." (For a Natural Mineral Water.) MANACEA WATER COMPANY, New York, N. Y. Filed January 2, 1917.

19,851.—*Title:* "MENNEN'S SHAVING CREAM." (For Mennen's Shaving-Cream.) G. MENNEN CHEMICAL Co., Newark, N. J. Filed January 6, 1917.

19,852.—*Title:* "MENNEN'S TAR SHAMPOOING CREAM." (For Mennen's Tar Shampooing-Cream.) G. MENNEN CHEMICAL Co., Newark, N. J. Filed January 6, 1917.

19,853.—*Title:* "CAFÉ SPUMANTE." (For Coffee.) NICOLA CAPPIELLO, Dunmore, Cal. Filed November 18, 1915.

19,854.—*Title:* "RUBINO VINO PURO DA PASTO." (For Wine.) G. E. PAGANI IMPORTING Co. INC., New York, N. Y. Filed December 28, 1916.

19,855.—*Title:* "PERSON'S PENNSYLVANIA PURE RYE WHISKEY." (For Whisky.) C. PERSON'S SONS, Buffalo, N. Y. Filed January 8, 1917.

19,856.—*Title:* "S. S. WHITE TOOTH PASTE." (For Tooth-Paste.) S. S. WHITE DENTAL MFG. Co., Philadelphia, Pa. Filed January 2, 1917.

19,857.—*Title:* "ZINC CEMENT." (For S. S. White Oxyphosphate-Zinc Cement.) THE S. S. WHITE DENTAL MFG. Co., Philadelphia, Pa. Filed January 2, 1917.

19,858.—*Title:* "S. S. WHITE TOOTH BRUSH." (For a Tooth-Brush.) THE S. S. WHITE DENTAL MFG. Co., Philadelphia, Pa. Filed January 2, 1917.

19,859.—*Title:* "S. S. WHITE MOUTH WASH." (For a Mouth-Wash.) THE S. S. WHITE DENTAL MFG. Co., Philadelphia, Pa. Filed January 2, 1917.

19,860.—*Title:* "ZINC CEMENT." (For S. S. White Oxyphosphate Zinc.) THE S. S. WHITE DENTAL MFG. Co., Philadelphia, Pa. Filed January 2, 1917.

19,861.—*Title:* "ZINC CEMENT." (For S. S. White Oxyphosphate-Zinc Cement.) THE S. S. WHITE DENTAL MFG. Co., Philadelphia, Pa. Filed January 2, 1917.

19,862.—*Title:* "S. S. WHITE TOOTH POWDER." (For Tooth-Powder.) THE S. S. WHITE DENTAL MFG. Co., Philadelphia, Pa. Filed January 2, 1917.

19,863.—*Title:* "S. S. WHITE MOUTH WASH." (For a Mouth-Wash.) S. S. WHITE DENTAL MFG. Co., Philadelphia, Pa. Filed January 2, 1917.

19,864.—*Title:* "S. S. WHITE TOOTH POWDER." (For Tooth-Powder.) S. S. WHITE DENTAL MFG. Co., Philadelphia, Pa. Filed January 2, 1917.

19,865.—*Title:* "OPEN CYLINDER PUMP." (For Electric Deep-Well Pumps.) THE VAILE-KIMES COMPANY, Dayton, Ohio. Filed January 8, 1917.

PRINTS

REGISTERED JANUARY 30, 1917.

4,606.—*Title:* "FINANCIALLY EMBARRASSED." (For Wheat Breakfast Food.) CREAM OF WHEAT Co., Minneapolis, Minn. Filed December 26, 1916.

4,607.—*Title:* "THEY'RE STARTING RIGHT." (For De Laval Cream-Separators.) THE DE LAVAL SEPARATOR COMPANY, New York, N. Y. Filed January 6, 1917.

4,608.—Title: "NESNAH." (For Nesnah.) CHR. HANSEN'S LAB. INC., Little Falls, N. Y. Filed December 29, 1916.

4,609.—*Title:* "LISTERINE—THE SAFE ANTISEPTIC." (For Listerine.) LAMBERT PHARMACAL Co., St. Louis, Mo. Filed December 29, 1916.

4,610.—*Title:* "LISTERINE—THE SAFE ANTISEPTIC PREVENTS INFECTION AND IS A BENEFICIAL, REFRESHING LOTION AFTER SHAVING." (For Listerine.) LAMBERT PHARMACAL Co., St. Louis, Mo. Filed December 29, 1916.

4,611.—*Title:* "LISTERINE—THE SAFE ANTISEPTIC." (For Listerine.) LAMBERT PHARMACAL Co., St. Louis, Mo. Filed December 29, 1916.

4,612.—*Title:* "A SAFE ANTISEPTIC FOR GENERAL FAMILY USE." (For Listerine.) LAMBERT PHARMACAL Co., St. Louis, Mo. Filed December 29, 1916.

4,613.—*Title:* "DRINK MOXIE." (For Moxie.) THE MOXIE Co., Boston, Mass. Filed January 6, 1917.

4,614.—*Title:* "HEALTH FIRST." (For Postum Cereal.) POSTUM CEREAL COMPANY, Battle Creek, Mich. Filed December 26, 1916.

4,615.—*Title:* "CUTICURA SOAP AND OINTMENT." (For Cuticura Soap and Ointment.) POTTER DRUG & CHEMICAL CORP., Boston, Mass. Filed January 6, 1917.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE HUDSON.

Decided September 16, 1916.

1 FORFEITURE OF APPLICATION—PAYMENT OF FEES DELAYED BY SUNDAYS AND HOLIDAYS.

A fee reaching the Office one day after the expiration of the six months by reason of a Sunday and a holiday falling together at the end of the period *Held* insufficient to save the case from forfeiture.

2. SAME—FACILITIES PROVIDED FOR THE FILING OF DELAYED ACTIONS.

The facilities provided by the Office for the filing of actions reviewed and *Held* to be a full performance of the duty of the Office for the convenience of applicants.

ON PETITION.

STRING-FASTENER FOR SECURING PARCELS.

Mr. William Wallace White for the applicant.

EWING, *Commissioner:*

This is a petition that the Commissioner exercise his supervisory authority and direct the acceptance and application of the final fee as paid.

It has always been the rule in the Patent Office that the final fee must be paid within six months from the date of allowance, and if for any reason it cannot be paid upon the last day then it must be paid upon an earlier date.

In order to accommodate applicants and their attorneys, a messenger is sent from this Office to the city post-office, who at the hour when this Office closes any working day seals a bag in which is deposited all mail received prior to that hour. This mail is delivered the next business day, but is counted as received on the day when the bag is sealed.

After this Office is closed for business a box is kept open at the main door under the charge of the watchman of the building until twelve o'clock midnight, wherein any papers may be deposited and into which special-delivery letters are placed when delivered. This box is sealed at midnight of each working day and is open on every holiday, excepting Sundays, until midnight, and all papers deposited therein are stamped as received upon the date of their deposit. Sunday is treated as *dies non*, and no papers are treated as received on a Sunday.

The foregoing practice has been in operation for two years. It is believed to be a full performance of the duty of the Office for the convenience of applicants.

The fee in this application presumably reached the Washington post-office on Sunday, September 3d. September 4th is a holiday in this District, as in the State where the attorney for the applicant resides. The fee was not delivered at this Office until one day after the six months had expired.

Under these circumstances it is not apparent that the applicant has been deprived of any right by the Office.

The showing under the act of August 17, 1916, is defective. The record does not show, nor does the petition state, who the foreign agent was, nor in what country he was located, and there are other obvious defects.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Second Circuit.

FRED GRETSCH MANUFACTURING COMPANY *v.* SCHOENING AND MALONE, AS COLLECTOR, ETC.

TRADE-MARKS—REGISTRATION FILED WITH THE TREASURY—IMPORTATION OF GENUINE ARTICLE BY OTHERS.

Where S., being the exclusive agent in this country for a foreign manufacturer of violin-strings, sold under the trade-mark "Eternelle," registered that mark in this country as his own trade-mark for the domestic trade, with the consent of the manufacturer abroad, and filed the registration in the Treasury Department, in accordance with section 27 of the act of 1905, *Held* that he could not thereby prevent the entry at the custom-house of genuine "Eternelle" strings bought from the manufacturer abroad by a third party.

Mr. Isaac B. Owens the complainant appellee.

Messrs. Kenyon & Kenyon for Schoening.

Mr. H. Snowden Marshall for Malone.

Before COXE, WARD, and ROGERS, Circuit Judges.

WARD, *Cir. J.:*

This is an appeal from an order of Judge Hough granting a preliminary injunction requiring the defendant Schoening to withdraw his notice of ownership of the trade-mark "Eternelle" filed with the Department of the Treasury under section 27 of the

act of February 20, 1905, so far as it applies to violin-strings manufactured under that name by C. A. Mueller in Germany, and enjoining the defendant Malone, collector of the port of New York, from longer detaining the violin-strings manufactured by Mueller under the name "Eternelle," consigned to the complainant, and requiring him to deliver the same to the complainant.

It appears that for many years past C. A. Mueller, of Unterwiesenthal, Saxony, Germany, has manufactured and sold violin-strings identified by the trade-mark "Eternelle." Defendant Schoening manufactures no strings but has the exclusive agency for the sale of Mueller's strings in the United States and on or about July 14, 1908, with Mueller's approval, registered the word "Eternelle" as a trade-mark belonging to him in the United States Patent Office, which registration he filed with the Department of the Treasury.

July 7, 1915, the complainant purchased a package of Mueller's genuine "Eternelle" violin-strings in Germany, which are the strings consigned to him now in the possession of the defendant Malone and which he as collector of the port refuses to permit to be entered.

It is said that there is no proof that the strings in question were made by Mueller but under all the circumstances of the case we think it is sufficiently established.

Section 27 of the act of 1905 is as follows:

That no article of imported merchandise which shall copy or simulate the name of any domestic manufacture, or manufacturer or trader, or of any manufacturer or trader located in any foreign country which, by treaty, convention, or law affords similar privileges to citizens of the United States, or which shall copy or simulate a trade-mark registered in accordance with the provisions of this act, or shall bear a name or mark calculated to induce the public to believe that the article is manufactured in the United States, or that it is manufactured in any foreign country or locality other than the country or locality in which it is in fact manufactured, shall be admitted to entry at any custom-house of the United States; and, in order to aid the officers of the customs in enforcing this prohibition, any domestic manufacturer or trader, and any foreign manufacturer or trader, who is entitled under the provision of a treaty, convention, declaration, or agreement between the United States and any foreign country to the advantages afforded by law to citizens of the United States in respect to trade-marks and commercial names, may require his name and residence, and the name of the locality in which his goods are manufactured, and a copy of the certificate of registration of his trade-mark, issued in accordance with the provisions of this act, to be recorded in books which shall be kept for this purpose in the Department of the Treasury, under such regulations as the Secretary of the Treasury shall prescribe, and may furnish to the department facsimiles of his name, the name of the locality in which his goods are manufactured, or of his registered trade-mark; and thereupon the Secretary of the Treasury shall cause one or more copies of the same to be transmitted to each collector or other proper officer of customs.

Before the passage of this act it was the law of this circuit that it was not an infringement of a trade-mark to sell the genuine goods identified by the mark so marked. Exactly that thing was held by Judge Wallace in *Apollinaris Co.* v. *Shearer*, (27 Fed. Rep., 18.) The company had the sole agency for the sale of Saxlehemer's Hunyadi Janos water in the United States and registered the name as a trade-mark in the Patent Office. Shearer, the defendant, bought the genuine water in Europe, imported it to the United States and sold it under that name. This was held not to be an infringement of the company's rights. So, in *Russia Cement Co.* v. *Frauenhar*, (133 Fed. Rep., 518,) the defendant bought the complainant's glue in barrels and then bottled it with a label describing it as the complainant's glue bottled by the defendant. This was held to be fair competition. The *rationale* of both decisions is that the defendant in each case was selling the genuine article identified by the trade-mark and the public was not misled, but was getting exactly what it paid for. These decisions, however, were made before the act in question was passed. Assuming that Congress could protect the owner of a registered trade-mark against the importation by third parties of the genuine article under that trade-mark, has it done so? We think not. The act prohibits the entry of imported merchandise which shall "copy or similate" a trade-mark registered under it. The obvious purpose is to protect the public and to prevent any one from importing goods identified by their registered trade-mark which are not genuine. In this case, however, the imported goods were the genuine article identified by the trade-mark. We assume that Schoening has a valid trade-mark, even if he does not manufacture the strings, (*Menendez* v. *Holt*, 128 U. S., 514,) applying to the whole of the United States, and still are of opinion that it is not infringed by one who buys in Germany the genuine article identified by the trade-mark, imports it into the United States and sells it so marked here.

The decree is affirmed.

Disclaimer.

1,142,696.—*William Graf* and *Charles F. Nickel*, Baltimore, Md. MACHINE FOR MAKING CONCRETE BLOCKS. Patent dated June 8, 1915. Disclaimer filed January 22, 1917, by the patentees.

Enter this disclaimer—

"To that part of the claims in said specification which is in the following words, to wit:

"3. An apparatus of the nature described comprising a mold, cores in said mold vertically movable therein, means for locking said cores in raised position, a plunger for compressing the material in said mold, and means operated by said plunger for releasing said locking means when the plunger is lowered.

"6. An apparatus of the nature described comprising a mold, tapered cores laterally movable into and out of said mold and vertically movable therein, a lining plate surrounding said cores and vertically movable therewith, means for inserting and withdrawing said tapered cores laterally through said lining plate, and means for raising and lowering said cores and lining plate in said mold.

"7. An apparatus of the nature described comprising a mold, tapered cores laterally movable into and out of said mold and vertically movable therein, said mold having a rear wall provided with openings for said cores permitting vertical movement thereof, a lining plate slidably mounted on said rear wall and provided with openings corresponding in size with the size of the cores, means for inserting and withdrawing said tapered cores laterally through said lining plate, and means for raising and lowering said cores and lining plate in said mold.

"9. An apparatus of the nature described comprising a mold, cores laterally movable into and out of said mold and vertically movable therein, means carried by said mold for moving said cores laterally into and out of said mold comprising a laterally slidable bracket support, a vertically slidable plate carried thereby for supporting said cores, and means carried by said bracket support for raising and lowering said cores and said slidable plate.

"10. An apparatus of the nature described comprising a mold, cores laterally movable into and out of said mold and vertically movable therein, means carried by said mold for moving said cores laterally into and out of said mold comprising a laterally slidable supporting member provided with a vertical supporting plate, a vertically movable plate slidable on said supporting plate and carrying said cores, means carried by said supporting member for raising and lowering said cores and sliding plate, said mold having a rear wall provided with openings for said cores permitting vertical movement thereof, and a lining plate slidably mounted on said rear wall and provided with openings corresponding in size with the size of the cores."

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 25, 1917.

Albert Manley Stockwell, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Burnham-Munger-Root Dry Goods Co., of Eighth and Broadway, Kansas City, Mo., and the application of The Greenwald & Reich Co., of 1321 West Sixth street, Cleveland, Ohio, for registration of a trade-mark and trade-mark registered June 26, 1894, No. 24,913, to Albert Manley Stockwell, of Leominster, Mass., and a notice of such declaration sent by registered mail to said Albert Manley Stockwell at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Albert Manley Stockwell, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 25, 1917.

M. Ballin & Sons, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Bittner, Hunsicker & Co., of 23–25 North Seventh street, Allentown, Pa., for registration of a trade-mark and trade-mark registered May 31, 1898, No. 31,608, to M. Ballin & Sons, of 102 Franklin street, New York, N. Y., and a notice of such declaration sent by registered mail to said M. Ballin & Sons at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said M. Ballin & Sons, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 25, 1917.

Joseph P. R. James, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Standard Oil Company, of Richmond, Cal., for registration of a trade-mark and trade-mark registered December 5, 1899, No. 33,861, to Joseph P. R. James, of Clinton, Iowa, and a notice of such declaration sent by registered mail to said Joseph P. R. James at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph P. R. James, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

F. W. H. CLAY, *Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 8, 1917.

Albert T. Hoffman, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Cline, Crowell & McCorkle, 306 Main street, Newton, N. C., for registration of a trade-mark and trade-mark registered July 21, 1896, No. 28,649, to Albert T. Hoffman, Cleveland, Ohio, and a notice of such declaration sent by registered mail to said Hoffman at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Hoffman, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

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JANUARY, 1917.

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DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

JANUARY, 1917.

[Decisions of the Supreme Court of the District of Columbia are indicated by the letter [a], of the United States Circuit Court of Appeals by the letter [c], and of the Supreme Court of the United States by two stars (**).]

ABANDONMENT OF APPLICATIONS.

BY WINNING PARTY WITHOUT MAKING INVENTION PUBLIC—JUDGMENT NOT A BAR.

Where the winning party in an interference without making the invention public permits his application to become abandoned, so that the public gets no benefit of it, he fails to complete the inventive act, and the judgment in the interference is not a bar to the grant of a patent for the invention to a losing party whose application has not become abandoned.

[Jolliffe *v.* Waldo *v.* Vermeer and Schorik, 671.

AGENT.

See Registration of Trade-Marks.

ANTICIPATION.

See Particular Patents, 1.

BAR TO PATENT.

See Abandonment of Applications.

PRIOR KNOWLEDGE.

Prior knowledge, to invalidate a patent, must be prior knowledge of the actual thing—a physical embodiment of the invention—and must be public, (citing cases.)

[Jolliffe *v.* Waldo *v.* Vermeer and Schorik, 671.

CLAIMS.

See Designs; Particular Patents, 3; Suits Under Section 4915, Revised Statutes.

COMMERCIAL SUCCESS.

INVENTION.

Where it appeared that without puffing or business exploitation the patented process promptly came into extensive use throughout the world and largely replaced all earlier processes, *Held* that the fact is persuasive of the presence of invention.

[**Minerals Separation, Limited, and Minerals Separation American Syndicate, Limited, *v.* Hyde, 1311.

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See Office Facilities for Filing Delayed Actions.

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See Particular Patents, 2.

APPLICABLE TO GROUP OF ARTICLES—WHEN ONE PATENT MAY COVER ALL.

Where a design is produced which is applicable to a group of articles, such as dishes, and the showing thereof as applied to one makes clear its mode and effect when applied to the others without further explanation, *Held* that the applicant may be permitted to cast his specification, claim, and drawing so as to cover the group.

[*Ex parte* Andrews, 373.

DISCLOSURE OF INVENTION.

See Abandonment of Applications; Invention, 2.

DRAWINGS.

See Designs.

EMPLOYER AND EMPLOYEE.

PATENTABILITY—ORIGINALITY.

Where the patentees planned and directed the investigations from day to day, conducted them in large part themselves, and interpreted the results, *Held* that the resulting invention is theirs and not that of an employee who happened to make the analyses and observations which resulted immediately in the discovery.

[**Minerals Separation, Limited, and Minerals Separation American Syndicate, Limited, *v.* Hyde, 1311.

EVIDENCE.

See Suits Under Section 4915, Revised Statutes.

FINAL FEES.

See Forfeiture of Applications.

FORFEITURE OF APPLICATIONS

PAYMENT OF FEES DELAYED BY SUNDAYS AND HOLIDAYS.

A fee reaching the Office one day after the expiration of the six months by reason of a Sunday and a holiday falling together at the end of the period *Held* insufficient to save the case from forfeiture.

[*Ex parte* Hudson 1583.

GOODS OF FOREIGN MANUFACTURE.

See Registration of Trade-Marks.

INFRINGEMENT.

See Particular Patents, 3.

INTERFERENCE.

See Abandonment of Applications; Bar to Patent.

INVENTION.

See Abandonment of Applications; Commercial Success; Employer and Employee; Particular Patents.

1. WHAT CONSTITUTES.
There is no invention in selecting and assembling the most desirable parts of different mechanisms in the same art where each operates in the same way in the new device as it did in the old and effects the same results.
[[4] Elite Mfg. Co. *v.* Ashland Mfg. Co., 374.

2. SUFFICIENCY OF DISCLOSURE.
The invention being applicable to ores of an infinite variety of compositions, *Held* that the disclosure of the patent, which states the limits within which variations in the process need be made to operate on any of the ores, is sufficient, although preliminary tests may be necessary on a given ore in order to treat it most advantageously under the patented process.
[[2a] Minerals Separation, Limited, and Minerals Separation American Syndicate, Limited, *v.* Hyde, 1311.

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OFFICE FACILITIES FOR FILING DELAYED ACTIONS.

FACILITIES PROVIDED FOR THE FILING OF DELAYED ACTIONS.
The facilities provided by the Office for the filing of actions reviewed and *Held* to be a full performance of the duty of the Office for the convenience of applicants. [*Ex parte* Hudson, 1583.

ORIGINALITY.

See Employer and Employee; Particular Patents, 2.

PARTICULAR PATENTS.

1. BURKHOLDER—No. 1,004,741—LIFT-JACK FOR AUTOMOBILES—VALIDITY—ANTICIPATION.
The Burkholder patent, No. 1,004,741, for a lift-jack for automobiles, *Held* invalid for lack of invention and anticipation.
[[3] Elite Mfg. Co. *v.* Ashland Mfg. Co., 374.

2. SAME—DESIGN NO. 44,837—LIFTING-JACK STANDARD—PATENTABILITY—LACK OF INVENTION.
The Burkholder design patent, No. 44,837, for a design for a lifting-jack standard, *Held* invalid for want of invention, showing neither beauty, originality, nor creative design. [[4] Id.

3. SULMAN *et al.*—No. 835,120—"AGITATION FROTH PROCESS" OF ORE CONCENTRATION—PATENTABILITY.
Patent No. 835,120, for a process of concentration of ores, compared with the prior art and *Held* valid and infringed as to claims 1, 2, 3, 5, 6, 7, and 12 and invalid as to claims 9, 10, and 11.
[[2a] Minerals Separation, Limited, and Minerals Separation American Syndicate, Limited, *v.* Hyde, 1311.

PRIOR KNOWLEDGE.

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REGISTRATION OF TRADE-MARKS.

REGISTRATION FILED WITH THE TREASURY—IMPORTATION OF GENUINE ARTICLE BY OTHERS.
Where S., being the exclusive agent in this country for a foreign manufacturer of violin-strings, sold under the trade-mark "Eternelle," registered that mark in this country as his own trade-mark for the domestic trade, with the consent of the manufacturer abroad, and filed the registration in the Treasury Department, in accordance with section 27 of the act of 1905, *Held* that he could not thereby prevent the entry at the custom-house of genuine "Eternelle" strings bought from the manufacturer abroad by a third party.
[[4] Fred Gretsch Manufacturing Company *v.* Schoening and Malone, as Collector, etc., 1583.

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[[1a] Merrill *v.* Ewing, Commissioner of Patents, 1045.

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See Invention, 2.

VALID PATENTS.

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VOID PATENTS.

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Library

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF JANUARY, 1917.

[Abbreviations: "Gaz."—Official Gazette.]

A. Schrader's Son. (See Bowden, Junius A., assignor.)
A. C. Gilbert Company, The. (See Gilbert, Alfred C., assignor.) (Reissue.)
A. J. Kirstin Company. (See Kirstin, Alfred J., assignor.)
A. M. Collins Manufacturing Company. (See Gilbee, Manuel A. T., assignor.)
Aasen, Niels W., Copenhagen, Denmark. Safety device for shells. No. 1,214,253; Jan. 30; v. 234; p. 1467.
Abbott, Leonard G., Boston, Mass. Bottle-stopper. No. 1,212,871; Jan. 16; v. 234; p. 927.
Abbott, Robert J., Washington, D. C. Rack for cooking utensils. No. 1,211,269; Jan. 2; v. 234; p. 309.
Abels, Herman F. (See Lathrop and Abels.)
Aberle, William J., St. Paul, Minn. Overflow-signal. No. 1,213,444; Jan. 23; v. 234; p. 1161.
Abigt, William, and E. B. Leonard, Evansville, Ind. Combination coal and gas range. No. 1,212,484; Jan. 16; v. 234; p. 774.
Abrahams, Edward S., Indianapolis, Ind. Illuminator for speedometers and gages. No. 1,212,306; Jan. 16; v. 234; p. 730.
Acheson, William, Superior, Nebr. Concrete-mixing machine. No. 1,211,270; Jan. 2; v. 234; p. 309.
Acker, Edward L. (See Glasow and Acker.)
Acker, Julius J. (See Bundy, Cyrus L., assignor.)
Acme Automatic Street Indicating Company, The. (See Small, Thomas W., assignor.)
Actien Gesellschaft für Anilin Fabrikation. (See Clausius, Schöner, and Siebert, assignors.)
Adams, Albert L., Cedar Rapids, Iowa. Handle. No. 1,213,136; Jan. 23; v. 234; p. 1058.
Adams, Arthur J., Heywood, near Westbury, England. Springing of vehicles. No. 1,214,254; Jan. 30; v. 234; p. 1468.
Adams-Bagnall Electric Company, The. (See Mould, Edmund F., assignor.)
Adams, Clarence M., Rossville, Ga. Permutation-lock. No. 1,214,109; Jan. 30; v. 234; p. 1418.
Adams, Edward A. (See Adams, John A., assignor.)
Adams, Frank H., Cleveland, Ohio. Automatic brake mechanism for phonographs. No. 1,212,872; Jan. 16; v. 234; p. 928.
Adams, George C., San Francisco, Cal. Cremation-furnace. No. 1,212,807; Jan. 16; v. 234; p. 730.
Adams, Harry A., Boston, Mass., assignor to J. F. Ryan, Bellows Falls, Vt. Strip-serving device. No. 1,212,873; Jan. 16; v. 234; p. 928.
Adams, John A., Toronto, Ontario, assignor to E. A. Adams, Montreal, Canada. Cushioned heel-pad for boots and shoes. No. 1,211,806; Jan. 9; v. 234; p. 524.
Adams, Joseph W., and R. L. Carrick, Lexington, Ky. Root-cutter. No. 1,211,655; Jan. 9; v. 234; p. 471.
Adams, Nathan H. (See Palmer and Adams.)
Addleman, Frank P., Austin, Colo. Beet lifting and digging device. No. 1,211,030; Jan. 2; v. 234; p. 226.
Adjustable Artificial Limb Company, The. (See Eisen, William M., assignor.)
Adsit, Frank, Chicago, Ill. Mechanical rectifier. No. 1,212,874; Jan. 16; v. 234; p. 929.
Advance Machine Co. (See Antoine and Black, assignors.)
Afanador, Angel, Lincoln, Nebr. Steering device. No. 1,213,067; Jan. 16; v. 234; p. 992.
Aghan, William H., Burke's Flat, Victoria, Australia. Separating precious metals from their ores. No. 1,210,880; Jan. 2; v. 234; p. 172.
Ahern, Albert M., St. Louis, Mo. Animal-trap. No. 1,214,404; Jan. 30; v. 234; p. 1521.
Ahlander, Ernest H., assignor to Thomas Wrigley Company, Chicago, Ill. Clamp and hanger. No. 1,211,997; Jan. 9; v. 234; p. 593.
Ahlers, Joseph A. (See Beckner and Ahlers.)
Aldenland, Harry, Toledo, Ohio. Combined hood and scarf. No. 1,211,807; Jan. 9; v. 234; p. 524.
Aiken, James R. (See Taylor, Alfred G., assignor.)
Aitken, William, assignor to The Relay Automatic Telephone Company, Limited, London, England. Manual and semi-automatic telephone system. No. 1,210,889; Jan. 2; v. 234; p. 3.
Akin, Allison, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone system and apparatus. No. 1,211,031; Jan. 2; v. 234; p. 227.
Aktiebolaget Baltic. (See Risberg and Johansson, assignors.)
Aktiebolaget Mjolkningsmaskin Omega. (See Lindström, Knut I., assignor.)
Aktiebolaget Svenska Luftventiler. (See Hilding, Ernst A., assignor.)
Aktiengesellschaft Brown, Boveri & Cie. (See Jonas, Julius, assignor.)
Albaugh-Dover Co. (See Burtt, Frank, assignor.)
Albaugh-Dover Co. (See Eppley, Francis G., assignor.)
Albert and J. M. Anderson Manufacturing Company. (See Andersen, Johan M., assignor.)
Albert, John B., Danbury, Conn. Music-leaf turner. No. 1,214,110; Jan. 30; v. 234; p. 1419.
Albert, Walter P., Chicago, Ill., assignor, by mesne assignments, to J. R. Garfield, trustee, Cleveland, Ohio. Telephone-exchange system. No. 1,212,728; Jan. 16; v. 234; p. 880.
Albertson, Clarence E., Minneapolis, Minn. Ladder-bracket. No. 1,211,906; Jan. 9; v. 234; p. 561.
Albright, Chester W., Evanston, assignor to The C. W. Albright Company, Chicago, Ill. Treating-table. No. 1,213,137; Jan. 23; v. 234; p. 1058.
Alden, Charles A., Steelton, Pa. Machine-tool. No. 1,211,381; Jan. 9; v. 234; p. 379.
Alexander, Alexander M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Trimming-machine. No. 1,213,572; Jan. 23; v. 234; p. 1206.
Alexander, Andrew, New York, N. Y. Expansion shell-reamer and arbor therefor. No. 1,210,391; Jan. 2; v. 234; p. 3.
Alexander, William H., *et al.* (See McIntosh, John C., assignor.)
Allan, Edward T., Cincinnati, Ohio, assignor to Union Special Machine Company, Chicago, Ill. Feeding mechanism for sewing-machines. No. 1,211,808; Jan. 9; v. 234; p. 525.
Allbright Mill Company, The. (See Kohlhepp, John W., assignor.)
Allen, Benjamin, New Britain, Conn. Pocket-knife. No. 1,213,138; Jan. 23; v. 234; p. 1058.
Allen-Chapman Company. (See Morse, Frederick H., assignor.)
Allen, Charles H., Attleboro, Mass. Fastening device. No. 1,212,308; Jan. 16; v. 234; p. 731.
Allen, Godfrey E., and J. H. Whiff, Swalwell, Alberta, Canada. Shocking-machine. No. 1,211,809; Jan. 9; v. 234; p. 525.
Allen, John V., South Weymouth, and E. E. Orr, Weymouth, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. No. 1,213,788; Jan. 23; v. 234; p. 1277.
Allen S. Davison Company. (See Davison, George S., assignor.)
Allen, Thomas S., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Dynamo-electric machine. No. 1,210,750; Jan. 2; v. 234; p. 128.
Allendorf, Peter G., Westwood, Mass. Motor-vehicle. No. 1,211,907; Jan. 9; v. 234; p. 561.
Allensworth, Ellis D., Waukegan, Ill. Ignition apparatus. No. 1,213,789; Jan. 23; v. 234; p. 1278.
Allensworth, Ellis D., Waukegan, Ill. Igniting and spark-distributing device. No. 1,213,790; Jan. 23; v. 234; p. 1278.
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Allis-Chalmers Manufacturing Company. (See Newhouse, Ray C., assignor.)
Allis-Chalmers Manufacturing Company. (See Powell, William H., assignor.)
Allis-Chalmers Manufacturing Company. (See Steen, Halfdan A., assignor.)
Allison, John, Dravosburg, assignor to Pittsburgh Steel Foundry Company, Glassport, Pa. Draft-gear carrier. No. 1,214,111; Jan. 30; v. 234; p. 1419.
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Almida, Steven A. (See Ensign and Almida.)
Alpenfels, Julius H., Denver, Colo. Decanting apparatus. No. 1,210,392; Jan. 2; v. 234; p. 4.

[redacted]sey, [redacted] R., Paragould, Ark. Hinged gear-trip for automatic cotton-presses. No. 1,214,112; Jan. 30; v. 234; p. 1419.
[redacted]asser, Joseph, Chicago, Ill. Damper. No. 1,210,390; Jan. 2 [redacted]
Altemus, [redacted] R., Philadelphia, Pa. Winding-head apparatus. No. 1,212,600; Jan. 16; v. 234; p. 833.
Altenkirch, Edmund, and B. Tenckhoff, Berlin, Germany. Heating plant utilizing the waste heat of refrigerating-machines of the compression or absorption type. No. 1,214,255; Jan. 30; v. 234; p. 1468.
Altman, Roy. (See Howard and Altman.)
Altpeter, Frank C., Chicago, Ill. Bottle-cleaning device. No. 1,213,445; Jan. 23; v. 234; p. 1161.
Altpeter, Oscar, Milwaukee, Wis. Plastic composition. No. 1,211,382; Jan. 9; v. 234; p. 379.
Alukonis, James, Nashua, N. H. Bicycle-bell ringer. No. 1,213,058; Jan. 16; v. 234; p. 992.
American Automatic Press Company. (See Leov, George C., assignor.)
American Bank Note Company. (See Smith, Amos H., assignor.)
American Banker's Safety Company, The. (See Spivey, Thomas S., assignor.)
American Box and Crate Company. (See Boardman, Thomas V., assignor.)
American Brake Company, The. (See Schwentler, Francis E., assignor.)
American Brake-Shoe & Foundry Company, The. (See Armbrust, Charles W., assignor.)
American Brake Shoe & Foundry Company, The. (See Jones and Augur, assignors.)
American Can Company. (See Fleischer, Paul W., assignor.)
American Casting Company. (See Dimick, Daniel B., assignor.)
American Coin Register Company. (See Voglesong, Clyde C., assignor.)
American Dan Stopper Company. (See Nordstrom, Elof, assignor.)
American Drafting Furniture Co. (See Forbes, Leighton H., assignor.)
American Encaustic Tiling Co. (See Stanberry, George A., assignor.)
American Engineering Company. (See Williamson, John D., Jr., assignor.)
American Graphophone Company. (See Archer, Harry W., assignor.)
American Graphophone Company. (See Woods, Clinton E., assignor.)
American Hardware Corporation, The. (See Hurd, Norman B., assignor.)
American Hardware Corporation, The. (See Johnson, Charles E., assignor.)
American High Speed Press Company. (See Sinnott, Gilbert J., assignor.)
American High Speed Press Company. (See Wood, Henry A. W., assignor.)
American Laundry Machinery Company, The. (See Andrée, William E., assignor.)
American Laundry Machinery Company. (See Binder, Gottlob, assignor.)
American Laundry Machinery Co., The. (See Kane and Couch, assignors.)
American Manganese Steel Company. (See McKee and Nichols, assignors.)
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American Mechanical Improvement Company. (See Slate, Thomas B., assignor.)
American Motors Tire Company. (See McLeod, Nelson W., assignor.)
American Optical Company. (See Bugbee, Lucien W., assignor.)
American Rolling Mill Company, The. (See Freeze, Johnathan R., assignor.)
American Steam Conveyor Corporation. (See Griffin, Lorne A., assignor.)
American Steel Foundries. (See Floyd, George G., assignor.)
American Steel Foundries. (See Lamont, John A., assignor.)
American Steel Window Company. (See Johnson and Talt, assignors.)
American Stove Company. (See Child, Guy B., assignor.)
American Stove Company. (See Possons, Minard A., assignor.)
American Telephone and Telegraph Company. (See Bascom, Henry M., assignor.)
American Train Control Company, The. (See Scott, Thomas W., assignor.)
American Warp Drawing Machine Company. (See Lea, Charles, assignor.)
American Well Works, The. (See Chapman, Matthew T., assignor.)
American Wringer Company, The. (See Holaday, Albert E., assignor.)
Amerman, John E., Brooklyn, N. Y. Drip-pan signal. No. 1,211,271; Jan. 2; v. 234; p. 309.
Ames, Arthur N., assignor, by mesne assignments, to Commercial Machine Company, Franklin, N. H. Yarn-changing mechanism for knitting-machines. No. 1,210,881; Jan. 2; v. 234; p. 173.
Amiss, James T., Baton Rouge, La. Type-writer ribbon. No. 1,212,166; Jan. 16; v. 234; p. 677.
Amman, Albert F., Naponee, Nebr. Hay-stacker. No. 1,210,393; Jan. 2; v. 234; p. 4.
Anderberg, Anders, Malmö, Sweden. Locomotive-boiler and the like. No. 1,212,435; Jan. 16; v. 234; p. 774.
Anders, Hanns R., Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y. Finishing animal filaments, fibers, or threads. No. 1,210,394; Jan. 2; v. 234; p. 4.
Andersen, Charles M., Denver, Colo., assignor to Auto Power Generator and Appliance Company. Transmission apparatus. No. 1,211,033; Jan. 2; v. 234; p. 227.
Andersen, Christian C., Davenport, Iowa. Fuel valve and strainer. No. 1,214,405; Jan. 30; v. 234; p. 1521.
Andersen, Johan M., assignor to Albert and J. M. Anderson Manufacturing Company, Boston, Mass. Circuit-controller. No. 1,210,581; Jan. 2; v. 234; p. 70.
Anderson, Adolph, assignor to Aurora Automatic Machinery Company, Chicago, Ill. Motor-cycle stand. No. 1,213,994; Jan. 30; v. 234; p. 1379.
Anderson, Adolph, assignor to Aurora Automatic Machinery Company, Chicago, Ill. Spring-fork for motor-cycles. No. 1,213,995; Jan. 30; v. 234; p. 1379.
Anderson, Anders J., assignor of one-half to C. Borup, Colville, Wash. Internal-combustion engine. No. 1,212,875; Jan. 16; v. 234; p. 929.
Anderson, Andrew E., Brownsville, Tex. Elevated drafting-rule. No. 1,213,818; Jan. 30; v. 234; p. 1317.
Anderson, Andrew N., Larson, N. D. Mower attachment. No. 1,212,167; Jan. 16; v. 234; p. 677.
Anderson, Axel, Stave Falls, British Columbia, Canada. Crate. No. 1,211,656; Jan. 9; v. 234; p. 471.
Anderson-Barngrover Mfg. Co. (See Thompson, Albert R., assignor.)
Anderson, Carl O., Lancaster, Pa. Teat-cup for milking-machines. No. 1,213,814; Jan. 30; v. 234; p. 1317.
Anderson, Edward L., Attleboro, Mass. Snap-fastening. No. 1,211,810; Jan. 9; v. 234; p. 526.
Anderson, Elmer, Palmyra township, Renville county, Minn. Fork. No. 1,213,446; Jan. 23; v. 234; p. 1162.
Anderson, Enoch J., Worcester, Mass. Clamp. No. 1,212,123; Jan. 9; v. 234; p. 633.
Anderson, James A., Barren Island, N. Y. Tank for treating garbage. No. 1,214,113; Jan. 30; v. 234; p. 1420.
Anderson, Martin L. (See Lynham, William C., assignor.)
Anderson, Nils H., Middletown, assignor of one-half to W. A. Lorenz, Hartford, Conn. Sound and shock absorbing foot. No. 1,214,256; Jan. 30; v. 234; p. 1468.
Anderson, Per A., New York, N. Y. Shock-absorber. No. 1,213,139; Jan. 23; v. 234; p. 1053.
Anderson, William, Harrisburg, Pa. Shock-absorber for vehicles. No. 1,211,272; Jan. 2; v. 234; p. 309.
Anderson, William B., assignor to Haggard and Marcusson Company, Chicago, Ill. Spring bed-bottom. No. 1,211,522; Jan. 9; v. 234; p. 425.
Anderson, William T., Atlantic, Iowa. Siphon. No. 1,211,523; Jan. 9; v. 234; p. 426.
Andersson, Oscar B., Elizabeth, N. J., assignor to Eagle Pencil Company, New York, N. Y. Fountain-pen. No. 1,213,725; Jan. 23; v. 234; p. 1257.
Anderwert, Eugen, H. Fritzsche, and H. Schobel, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Substantive orthooxyazo dyestuffs and making same. No. 1,210,751; Jan. 2; v. 234; p. 128.
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Andrée, William E., Chicago, Ill., assignor to The American Laundry Machinery Company, Cincinnati, Ohio. Garment-press. No. 1,211,034; Jan. 2; v. 234; p. 228.
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Andrew, John, Concord, N. H. Filter. No. 1,213,140; Jan. 23; v. 234; p. 1054.
Andrews, Bernard R., Newton, Mass. Apparatus for conditioning air or other gas. No. 1,214,114; Jan. 30; v. 234; p. 1420.
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Anker-Holth, Severin C., Port Huron, Mich. Cream-separator. No. 1,212,168; Jan. 16; v. 234; p. 677.
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Anthes, Charlie W., Amherst, Nebr. Washing-machine. No. 1,210,395; Jan. 2; v. 234; p. 5.
Anthony, David S., Sioux City, Iowa. Horseshoe. No. 1,212,601; Jan. 16; v. 234; p. 833.
Anthony, Jesse E. S., Los Angeles, Cal. Auto broom-rack. No. 1,211,998; Jan. 9; v. 234; p. 593.
Antoine, Alfred D., and F. Black, assignors to Advance Machine Co., Chicago, Ill. Check-controlled machine. No. 1,210,882; Jan. 2; v. 234; p. 173.
Applebaugh, Eugene M., and G. M. Keller, assignors to Pennsylvania Brake Beam Company, Danville, Pa. Brake-beam. No. 1,213,996; Jan. 30; v. 234; p. 1380.
Appleton Electric Company. (See Ryden, Axel, assignor.)
Archer, Charles L., Minneapolis, Minn. Pneumatic cord tire. No. 1,211,035; Jan. 2; v. 234; p. 228.
Archer, Harry W., assignor to American Graphophone Company, Bridgeport, Conn. Means for securing a sound-box to the tone-arm of talking-machines. No. 1,212,309; Jan. 16; v. 234; p. 731.
Ard, Charles E., Birmingham, Ala. Clipper. No. 1,211,273; Jan. 2; v. 234; p. 310.
Arey, Fred C., Oak Park, assignor to Northwestern Expanded Metal Company, Chicago, Ill. Machine for slitting sheet-metal strips. No. 1,211,362; Jan. 2; v. 234; p. 336.

Arey, Samuel E., and J. J. Hern, Fellows, Cal. Elevator. No. 1,211,999; Jan. 9; v. 234; p. 593.
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Armbrust, Charles W., Chicago, Ill., assignor, by mesne assignments, to The American Brake-Shoe & Foundry Company, Wilmington, Del. Brake-shoe. No. 1,210,582; Jan. 2; v. 234; p. 71.
Armitage, Joseph B., assignor to Narragansett Machine Company, Pawtucket, R. I. Automatic indicator for lockers. No. 1,212,876; Jan. 16; v. 234; p. 930.
Armstrong, James R., assignor to Equitable Meter Company, Pittsburgh, Pa. Gas-meter. No. 1,212,729; Jan. 16; v. 234; p. 881.
Armstrong, John A., Gilnockie, Westcombe Park, England. Blade-wheel mechanism. No. 1,211,524; Jan. 9; v. 234; p. 426.
Armstrong, John J., Honolulu, Hawaii. Sugar-cane mill. No. 1,213,573; Jan. 23; v. 234; p. 1206.
Armstrong, William H., Plainfield, assignor to Ingersoll-Rand Company, Jersey City, N. J. Rivet-set retainer. No. 1,211,036; Jan. 2; v. 234; p. 229.
Arnold, Emmer B., Los Angeles, Cal. Wave-force-utilizing device. No. 1,214,257; Jan. 30; v. 234; p. 1468.
Arntzenius, Carolus R. H., The Hague, Netherlands. Telephone system for toll traffic. No. 1,214,258; Jan. 30; v. 234; p. 1469.
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Asbestos Protected Metal Company. (See Caffrey, James H., assignor.)
Ash, Ersel C., assignor to G. I. Sellers & Sons Company, Elwood, Ind. Door-operating mechanism for kitchen-cabinets. No. 1,213,141; Jan. 23; v. 234; p. 1054.
Ashcroft Manufacturing Company, The. (See Blanchard, Crocker, and Keefer, assignors.)
Ashmon, Walter D., Salem, Oreg. Sand-machine. No. 1,214,406; Jan. 30; v. 234; p. 1521.
Aspinwall, Ernest E., Pawtucket, R. I. Machine for glazing and finishing yarns, threads, and twines. No. 1,212,877; Jan. 16; v. 234; p. 930.
Astrom, Carl P., East Orange, N. J., assignor to M. H. Treadwell Company. Dust-guard. No. 1,211,037; Jan. 2; v. 234; p. 229.
Astruck, John H., New York, N. Y. Match-case. No. 1,214,115; Jan. 30; v. 234; p. 1420.
Atherton, Alfred L., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Rectifier system. No. 1,214,116; Jan. 30; v. 234; p. 1421.
Atteberry, Alvin R., Springfield, Ill. Downdraft-furnace. No. 1,211,657; Jan. 9; v. 234; p. 472.
Augenbraun, Peter F., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Closure for gasolene or other liquid tanks. No. 1,212,878; Jan. 16; v. 234; p. 930.
Augur, Robert C. (See Jones and Augur.)
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Auld, John, and J. Graham, Glasgow, Scotland. Reducing-valve. No. 1,212,879; Jan. 16; v. 234; p. 930.
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Austin, Herbert A., Boston, Mass., assignor to Everlastik, Inc. Pasteboard dispensing-package for elastic. No. 1,210,883; Jan. 2; v. 234; p. 174.
Austin, John T., assignor to Austin Organ Company, Hartford, Conn. Tracker mechanism. No. 1,212,165; Jan. 9; v. 234; p. 649.
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Auto Power Generator and Appliance Company. (See Andersen, Charles M., assignor.)
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Avery, Clayton L., Tecumseh, Mich. Oiler for crank-pins. No. 1,212,602; Jan. 16; v. 234; p. 834.
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Avrin, Abraham, Montreal, Quebec, Canada. Recording system and apparatus. No. 1,210,752; Jan. 2; v. 234; p. 128.
Axtell, Clinton J., Schenectady, N. Y., assignor to General Electric Company. Control system for railway air-compressors. No. 1,213,815; Jan. 30; v. 234; p. 1317.
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Aycock, William E., Moultrie, Ga. Penciling-guide. No. 1,211,038; Jan. 2; v. 234; p. 229.
Ayers, Augustine R., assignor to W. P. Murphy, Chicago, Ill. Device for checking the tendency of train-pipes to shift longitudinally. No. 1,211,039; Jan. 2; v. 234; p. 229.
Aylsworth, Adelaide M., *et al.*, executors. (See Aylsworth, Jonas W.)
Aylsworth, Jonas W., deceased, East Orange, N. J.; A. M. Aylsworth and The Savings Investment and Trust Company of East Orange, executors. Production of phenol and other substances. No. 1,213,142; Jan. 23; v. 234; p. 1054.
Aylsworth, Jonas W., deceased, East Orange, N. J.; A. M. Aylsworth and The Savings Investment and Trust Company of East Orange, executors. Apparatus for organic chemical reactions. No. 1,213,143; Jan. 23; v. 234; p. 1055.
Ayres, Ernest R., Hutchinson, assignor of one-half to M. R. Benson, Harper, Kans. String-holding means for pianos and the like. No. 1,211,658; Jan. 9; v. 234; p. 472.
Aze, Emile, assignor of one-fourth to S. Swanson and one-fourth to A. T. Larsen, Minneapolis, Minn. Gas-engine. No. 1,214,407; Jan. 30; v. 234; p. 1522.
B. Jahn Manufacturing Company, The. (See Jahn, Berthold, assignor.)
B. & B. Mfg. Co., The. (See Ballentine, William I., assignor.)
B. F. Avery & Sons. (See Ray, Charles T., assignor.)
B. F. Goodrich Company, The. (See Gammeter, John R., assignor.)
Baash, Lawrence F., Fillmore, assignor of one-half to Tay-Pike Company, Los Angeles, Cal. Two-prong compound fishing-tool. No. 1,213,574; Jan. 23; v. 234; p. 1206.
Bachmann, Paul L., Oak Park, Ill., assignor of one-fifth to H. C. Schaefer, Appleton, Mo. Dish-holder. No. 1,213,059; Jan. 16; v. 234; p. 992.
Backlund, Josef A., Brooklyn, N. Y. Harrow. No. 1,213,998; Jan. 30; v. 234; p. 1380.
Backo, Petar, Farrell, Pa. Rail-joint. No. 1,210,396; Jan. 2; v. 234; p. 5.
Bacon, Robert H., Los Angeles, Cal. Eye-shade. No. 1,213,447; Jan. 23; v. 234; p. 1162.
Badgley, Hugh B., *et al.* (See Landreth, Harry, assignor.)
Badische Anilin & Soda Fabrik. (See Bosch, Carl, assignor.)
Badische Anilin & Soda Fabrik. (See Bosch, Mittasch, and Beck, assignors.)
Backeland, Leo H., Yonkers, assignor to General Bakelite Company, New York, N. Y. Organic insulating composition. No. 1,213,144; Jan. 23; v. 234; p. 1055.
Backeland, Leo H., Yonkers, assignor to General Bakelite Company, New York, N. Y. Impregnated coil and making the same. No. 1,213,726; Jan. 23; v. 234; p. 1257.
Bailey, James G., Delavan, Ill. Roller. No. 1,211,811; Jan. 9; v. 234; p. 526.
Bailey, James N., Stretford, assignor to The British Westinghouse Electric and Manufacturing Company, Limited, London, England. Turbine-control mechanism. No. 1,212,311; Jan. 16; v. 234; p. 732.
Bailey, James N., Stretford, England, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Fluid-pressure engine. No. 1,213,791; Jan. 23; v. 234; p. 1279.
Bailey, Samuel R., Amesbury, Mass. Lock-joint for windshields. No. 1,214,260; Jan. 30; v. 234; p. 1470.
Bair, Joseph H., assignor to Speed Adding Machine Company, Philadelphia, Pa. Adding-machine. No. 1,210,753; Jan. 2; v. 234; p. 129.
Baird, Archie M., and H. D. Palmer; said Baird assignor to Baird Pneumatic Tool Company, Topeka, Kans. Valve. No. 1,211,040; Jan. 2; v. 234; p. 230.
Baird-North Co. (See Stone, Clarence N., assignor.)
Baird Pneumatic Tool Company. (See Baird and Palmer, assignors.)
Baker, Charles H. (See Baker, Wilmer J., assignor.)
Baker, Howard H., Buffalo, N. Y. Fuse. No. 1,212,603; Jan. 16; v. 234; p. 834.
Baker, James H., Fairfield, Ill. Automatic car-dumping appliance. No. 1,213,327; Jan. 23; v. 234; p. 1121.
Baker, John S., assignor to Baker-Shippee Manufacturing Co., Los Angeles, Cal. Automatic cooking mechanism. (Reissue.) No. 14,248; Jan. 16; v. 234; p. 1019.
Baker-Shippee Manufacturing Co. (See Baker, John S., assignor.) (Reissue.)
Baker, Wilmer J., Wakefield, Mass., assignor of one-half to C. H. Baker, Plattsburg, N. Y. Boiler-tube plug. No. 1,213,060; Jan. 16; v. 234; p. 992.
Balbach, Gustav C., assignor to Murphy Chair Company, Detroit, Mich. Furniture-joint. No. 1,214,261; Jan. 30; v. 234; p. 1470.
Baldwin, Alonzo D., Latham, Kans. Sickle-bar for mowing-machines. No. 1,212,880; Jan. 16; v. 234; p. 931.
Baldwin, Charles H., and A. R. Shute, Port Jefferson Station, N. Y. Collapsible bed-spring. No. 1,211,041; Jan. 2; v. 234; p. 230.
Baldwin, John F., Jr., East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Phantom-circuit loading. No. 1,210,884; Jan. 2; v. 234; p. 174.
Baldwin, Luther C., assignor to U. S. Bobbin & Shuttle Company, Providence, R. I. Shuttle. No. 1,212,881; Jan. 16; v. 234; p. 931.

Baldwin, Thomas W., Crayford, assignor to British-American Tobacco Company Limited, Westminster, England. Apparatus for applying tips to cigarettes. No. 1,213,061; Jan. 16; v. 234; p. 993.
Ball and Roller Bearing Company, The. (See Helm, Lewis R., assignor.)
Ball, Frank, Chicago, Ill. Wall structure. No. 1,211,525; Jan. 9; v. 234; p. 426.
Ball, Ruthven H. (See Walker, William J., assignor.)
Ballentine, John R., Toledo, Ohio. Ticket-holder. No. 1,213,816; Jan. 30; v. 234; p. 1318.
Ballentine, William I., assignor to The B. & B. Mfg. Co., Indianapolis, Ind. Molding-machine. No. 1,214,417; Jan. 30; v. 234; p. 1421.
Ballou Manufacturing Company. (See McCormack, George E., assignor.)
Balogh, Gergely, Detroit, Mich. Life-saving suit. No. 1,211,042; Jan. 2; v. 234; p. 230.
Baltimore Tube Company. (See Brinkman, Louis H., assignor.)
Balzer, Fritz, Chicago, Ill., assignor to Troy Laundry Machinery Company, Ltd. Drying apparatus. No. 1,213,999; Jan. 30; v. 234; p. 1381.
Bang, Herman H., Joice, Iowa. Cuspidor. No. 1,210,897; Jan. 2; v. 234; p. 5.
Bangerter, Friedrich, New York, N. Y. Clock. No. 1,211,383; Jan. 9; v. 234; p. 379.
Banks, Reeve H., Pittsburgh, Pa. Surgical bandage and fastener therefor. No. 1,212,731; Jan. 16; v. 234; p. 882.
Bannihr, Caesar R., New York, N. Y. Computing device. No. 1,214,262; Jan. 30; v. 234; p. 1470.
Banta, John F., Goshen, Ind. Bed-frame corner construction. No. 1,211,908; Jan. 9; v. 234; p. 562.
Bar-Lock Typewriter Company Limited, The. (See Etheridge, Herbert, assignor.)
Barber-Colman Company. (See Colman, Howard D., assignor.)
Barber, Dale L., Harlan, Iowa. Door-hinge. No. 1,214,263; Jan. 30; v. 234; p. 1471.
Barber, Franklin L., and E. W. Webb., assignors to Standard Car Truck Company, Chicago, Ill. Side bearing. No. 1,212,436; Jan. 16; v. 234; p. 775.
Barber, Franklin L., and E. W. Webb, assignors to Standard Car Truck Company, Chicago, Ill. Side bearing. No. 1,214,118; Jan. 30; v. 234; p. 1422.
Barber, Howard M., Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y. Printing-plate-shaving machine. No. 1,212,730; Jan. 16; v. 234; p. 881.
Barbier, Alexandre, Lyon, France. Loom. No. 1,212,312; Jan. 16; v. 234; p. 732.
Barger, Henry W., Toledo, Ill. Combination power and steering knuckle. No. 1,212,882; Jan. 16; v. 234; p. 931.
Barker, Fredrick W., Coopers Plains, N. Y. Receptacle-cover and fastener therefor. No. 1,211,384; Jan. 9; v. 234; p. 379.
Barnes, Charles E., Hancock, N. Y. Oscillating bob-knee. No. 1,212,883; Jan. 16; v. 234; p. 931.
Barnes, Henry J., Youngstown, Ohio. Railway-tie. No. 1,213,448; Jan. 23; v. 234; p. 1162.
Barnes, Lew A., Chicago, Ill. Apparatus for building concrete structures. No. 1,211,812; Jan. 9; v. 234; p. 526.
Barnhart, Harry J., assignor to The Osgood Company, Marion, Ohio. Steering-gear for revolving steam-shovels. No. 1,214,264; Jan. 30; v. 234; p. 1471.
Barnwell, John S., Chattanooga, Tenn. Cuspidor. No. 1,212,000; Jan. 9; v. 234; p. 594.
Baron, Auguste B., and C. M. A. Guinard, Paris, France. Automatic apparatus for aerial photography. No. 1,212,884; Jan. 16; v. 234; p. 932.
Barr, Charles F., and W. R. Miller, Winchester, Va. Photographic-film support. No. 1,214,408; Jan. 30; v. 234; p. 1522.
Barrell, William L., Lawrence, Mass. Shuttle-threading mechanism. No. 1,210,584; Jan. 2; v. 234; p. 71.
Barrett Company, The. (See Eckert, Clarence R., assignor.)
Barrett, Edward R., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,214,000; Jan. 30; v. 234; p. 1381.
Barrett Manufacturing Company. (See Harshberger, Norman P., assignor.)
Barrett, Thomas J., Irvington, assignor, by mesne assignments, to Autographic Recorder Company, Newark, N. J. Distance and speed indicator and recorder. No. 1,213,901; Jan. 23; v. 234; p. 1282.
Barry, Thomas F., assignor to Rubber & Celluloid Harness Trimming Co., Newark, N. J. Brush. No. 1,212,313; Jan. 16; v. 234; p. 732.
Barry-Wehmiller Machinery Company. (See Dawson, Joseph W., assignor.)
Barschow, Hubert A., Kankakee, assignor to Sears, Roebuck and Company, Chicago, Ill. Lighting arrangement for oil-stoves. No. 1,213,828; Jan. 23; v. 234; p. 1121.
Bartels, Amandus, Harburg-on-the-Elbe, Germany. Manufacture of horny substances from casein. No. 1,211,526; Jan. 9; v. 234; p. 427.
Barth, Delpha E., and S. F. Collins, Telluride, Colo. Cooking vessel. No. 1,214,400; Jan. 30; v. 234; p. 1522.
Bartholomew, William, Chicago, Ill., assignor to Troy Laundry Machinery Company, Ltd. Bearing for vertical shafts. No. 1,213,145; Jan. 23; v. 234; p. 1056.
Bartholomew, William, and C. M. Leary, assignors to Troy Laundry Machinery Company, Ltd., Chicago, Ill. Starch-table. No. 1,211,885; Jan. 9; v. 234; p. 380.
Bartlett, Charles A., Cape Breton, Nova Scotia, Canada. Oil-can. No. 1,211,043; Jan. 2; v. 234; p. 230.
Baruch, Joseph S., New York, N. Y. Carbureter. No. 1,213,817; Jan. 30; v. 234; p. 1318.
Baruch, Morris J. (See Baruch, Lindner, and Goldsmith.)
Baruch, Samuel, Brooklyn, M. J. Baruch, New York, T. Lindner, Brooklyn, and S. Goldsmith, New York, N. Y. Beating-machine for furs. No. 1,211,659; Jan. 9; v. 234; p. 472.
Bascom, Henry M., Brooklyn, N. Y., assignor to American Telephone and Telegraph Company. Signaling system. No. 1,211,044; Jan. 2; v. 234; p. 231.
Bascom, Henry M., Brooklyn, N. Y., assignor to American Telephone and Telegraph Company. Party-line signaling system. No. 1,211,274; Jan. 2; v. 234; p. 310.
Bastian Brothers Company. (See Guillet, George L., assignor.)
Batchelder, Frank R., Worcester, Mass. Woven carrier. No. 1,211,275; Jan. 2; v. 234; p. 310.
Batchelder, Frank R., Worcester, Mass. Woven carrier. No. 1,211,276; Jan. 2; v. 234; p. 311.
Batcholts, Clinton, assignor to Specialty Insulation Manufacturing Company, Hoosick Falls, N. Y. Steering-wheel. No. 1,212,169; Jan. 16; v. 234; p. 678.
Bateman Manufacturing Company. (See Willis, Leland, assignor.)
Bates, Adelmer M., assignor to Bates Valve Bag Company, Chicago, Ill. Wire-tie-forming machine. No. 1,212,437; Jan. 16; v. 234; p. 775.
Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Making shoes. No. 1,212,170; Jan. 16; v. 234; p. 678.
Bates, Jesse S., assignor to Multipost Company, Rochester, N. Y. Stamp-affixer cabinet. No. 1,212,314; Jan. 16; v. 234; p. 733.
Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)
Battaglia, Salvatore, Chicago, Ill. Chair. No. 1,211,909; Jan. 9; v. 234; p. 562.
Batterman, Edward, Hobart, Ind. Disk-grinder. No. 1,213,727; Jan. 23; v. 234; p. 1257.
Battiani, Stefano, New York, N. Y. Coffee-percolator. No. 1,211,910; Jan. 9; v. 234; p. 562.
Batting, Harold L., and H. H. Gross, Jr., Chicago, Ill. Light-projector. No. 1,211,047; Jan. 2; v. 234; p. 281.
Baty, Noah O., Springfield, Mo. Bridge signal apparatus. No. 1,213,062; Jan. 16; v. 234; p. 993.
Bauder, Arthur R., North Haven, Conn. Method of and means for determining and indicating the depth of water. No. 1,212,438; Jan. 16; v. 234; p. 775.
Bauer & Black. (See Schulz, Otto C., assignor.)
Bauer, Clarence, Zanesville, Ohio. Ditch and sewer digger. No. 1,214,410; Jan. 30; v. 234; p. 1522.
Bauman, Leo S. (See Schwartzman, Abraham, assignor.)
Baumgardner, C. M. (See Hannah, Cyril R., assignor.)
Bauroth, Walter J., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Composite armature-sleeve. No. 1,213,818; Jan. 30; v. 234; p. 1319.
Baush Machine Tool Company. (See Calkins, Charles H., assignor.)
Baxter, Harry T., Nauvoo, Ill. Tooth-brush. No. 1,212,001; Jan. 9; v. 234; p. 594.
Baxter, Hiram B., Plainville, Kans. King-bolt for wagons. No. 1,214,487; Jan. 30; v. 234; p. 1548.
Bayer, William F., Buffalo, N. Y. Automatic tracking device for music-sheets. No. 1,211,048; Jan. 2; v. 234; p. 231.
Bayles, Lewis C., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Fluid-operated percussive tool. No. 1,211,049; Jan. 2; v. 234; p. 232.
Bayless, Frank B. (See Bayless, William E. and F. B.)
Bayless, William E. and F. B., Muncie, Ind. Blackboard-eraser. No. 1,214,411; Jan. 30; v. 234; p. 1523.
Bayne, George G., Quincy, Ill. Shock and rebound absorber. No. 1,214,120; Jan. 30; v. 234; p. 1422.
Bayne, George G., Quincy, Ill., assignor to Safety Manufacturing Company, Kansas City, Mo. Number-plate bracket for automobiles. No. 1,214,119; Jan. 30; v. 234; p. 1422.
Bayne, George G., Quincy, and F. A. Runkle, Macomb, Ill. Road-drag. No. 1,214,121; Jan. 30; v. 234; p. 1422.
Beach, Clarence E., Binghamton, N. Y., assignor, by mesne assignments, to The Gamewell Fire Alarm Telegraph Company. Successive non-interference signal-box. No. 1,210,398; Jan. 2; v. 234; p. 6.
Beach, George W. (See Von Culin, Clayton, assignor.)
Beach, Remus A. (See Mohr and Beach.)
Beach, Walter J., assignor of one-half to J. H. Glenn, Minneapolis, Kans. Wall-paper pasting and trimming machine. No. 1,213,728; Jan. 23; v. 234; p. 1257.
Beagle, Silas J., Walton, N. Y. Poultry-roost. No. 1,214,412; Jan. 30; v. 234; p. 1523.
Beal, Frederick C., Toronto, Ontario, Canada. Saddle. No. 1,213,329; Jan. 23; v. 234; p. 1122.
Beall, Albert E., assignor to Vertical Drainage Company, Clinton, Iowa. Drainage-tile. No. 1,210,885; Jan. 2; v. 234; p. 174.
Beam, Victor S. (See Stoll and Beam.)
Beamisderfer, Joseph A., Jonestown, Pa. Toy. No. 1,214,122; Jan. 30; v. 234; p. 1423.

Bean, Burton R., New Haven, Conn. Valve-grinding tool. No. 1,212,002; Jan. 9; v. 234; p. 594.
Bean, Charles L., San Jose, Cal. Valve-assembly remover. No. 1,212,003; Jan. 9; v. 234; p. 595.
Bean, Lewis R., Columbus, Ohio. Combined washer and boiler. No. 1,211,813; Jan. 9; v. 234; p. 527.
Bear, Lewis N., Greenville, Pa. Brake-hanger bracket. No. 1,213,729; Jan. 23; v. 234; p. 1258.
Bearce, Wilson R., and R. J. Jones, Sawtelle, Cal., assignor of one-third to F. Hammond, Casey, Ill. Cap-opening tool. No. 1,210,599; Jan. 2; v. 234; p. 6.
Beardsley, Frank W., Brooklyn, assignor to Seaboard Specialty Corporation, New York, N. Y. Dish-cleansing apparatus. No. 1,212,171; Jan. 16; v. 234; p. 671.
Bearup, Eli A., Flint, Mich. Universal joint for connecting-rods. No. 1,213,819; Jan. 30; v. 234; p. 1319.
Beatrice Steel Tank Manufacturing Company. (See Dresp, John P., assignor.)
Beatty, William M., Beaver Falls, Pa. Motor-vehicle. No. 1,210,754; Jan. 2; v. 234; p. 129.
Beauregard, Albert F., West De Pere, Wis. Gate. No. 1,212,439; Jan. 16; v. 234; p. 776.
Beck, Charles W., Rockville Center, N. Y., assignor, by mesne assignments, to The Beck-Frost Corporation, Detroit, Mich. Carbureter. No. 1,211,386; Jan. 9; v. 234; p. 380.
Beck, Charles W., Rockville Center, N. Y., assignor, by mesne assignments, to Beck-Frost Corporation, Detroit, Mich. Device for connecting air-hose to pneumatic-tire valves. No. 1,211,387; Jan. 9; v. 234; p. 381.
Beck, Christoph. (See Bosch, Mittasch, and Beck.)
Beck-Frost Corporation, The. (See Beck, Charles W., assignor.)
Becker, Edmund H., Washington, D. C., assignor to Kinetic Electric Company, Norfolk, Va. Protected electrode and making the same. No. 1,211,388; Jan. 9; v. 234; p. 381.
Becker, Reinhold S., assignor to Eastman Kodak Company, Rochester, N. Y. Marking photographic paper. No. 1,210,400; Jan. 2; v. 234; p. 7.
Becker, Rudolph, Roselle Park, N. J., assignor to The Singer Manufacturing Company. Lubricating device. No. 1,212,440; Jan. 16; v. 234; p. 776.
Beckmann, Erich, Hanover, Germany. Apparatus for transmitting movements or positions of indexes by means of multiphase-wound bodies. No. 1,211,050; Jan. 2; v. 234; p. 232.
Beckner, Henry C., and J. A. Ahlers, Cincinnati, Ohio. Metal bridging device. No. 1,212,172; Jan. 16; v. 234; p. 679.
Bedard, Ludger J., Minneapolis, Minn. Shoemaker's tool. No. 1,212,173; Jan. 16; v. 234; p. 679.
Beebe, Caldwell C., Racine, Wis. Artificial tooth. No. 1,212,885; Jan. 16; v. 234; p. 932.
Beecher, Louis A. (See Grosvenor and Beecher.)
Beerhalter, John. (See Ringler and Beerhalter.)
Beetem, Frank G., Philadelphia, Pa. Housing for ball or roller bearings. No. 1,211,814; Jan. 9; v. 234; p. 527.
Behl, Arthur F., Milwaukee, Wis. Fluid-fuel water-heater. No. 1,210,585; Jan. 2; v. 234; p. 72.
Behrendt, Barnim L., Brooklyn, N. Y. Envelop letter-sheet. No. 1,211,660; Jan. 9; v. 234; p. 473.
Bell, John P., King county, Wash. Automatic gate-operating mechanism. No. 1,214,001; Jan. 30; v. 234; p. 1382.
Beiswanger, John, assignor to Gill Brothers Company, Steubenville, Ohio. Reinforced-glass article of manufacture. No. 1,212,174; Jan. 16; v. 234; p. 680.
Beler, Adolf, Pittsburgh, Pa. Fluid-heater. No. 1,212,732; Jan. 16; v. 234; p. 882.
Bell, Harvey W., Pittsburgh, Pa. Boiler. No. 1,210,586; Jan. 2; v. 234; p. 72.
Bell, John H., East Orange, N. J., assignor to Western Electric Company, New York, N. Y. Telegraph system. No. 1,212,733; Jan. 16; v. 234; p. 882.
Bell, Percy B., Biloxi, Miss. Churn. No. 1,214,413; Jan. 30; v. 234; p. 1523.
Beller, Bernard A., Bueyeros, N. Mex. Wire-stretcher. No. 1,210,755; Jan. 2; v. 234; p. 130.
Bendix, Vincent, Chicago, Ill. Engine-starter. No. 1,212,175; Jan. 16; v. 234; p. 680.
Benjamin, Bert R., Oak Park, Ill., assignor to International Harvester Company of New Jersey. Twine tension device for harvesters, shockers, and the like. No. 1,211,815; Jan. 9; v. 234; p. 527.
Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)
Benjamin Electric Manufacturing Company. (See Cottrell, William, assignor.)
Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Safety device for presses. No. 1,212,176; Jan. 16; v. 234; p. 680.
Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Gas-engine governor. No. 1,212,177; Jan. 16; v. 234; p. 681.
Benner, William T., Catasauqua, Pa. Mail-box. No. 1,213,792; Jan. 23; v. 234; p. 1279.
Bennett, Barent M., Jordan, N. Y. Track-scraper for street-railways. No. 1,210,886; Jan. 2; v. 234; p. 175.
Bennett, Ebenezer. (See Parsons and Bennett.)
Bennett, Erastus S. (See Bennett, Robert B., assignor.)
Bennett, Frederick, Ravenswood, assignor to Walker and Bennett Manufacturing Company, New York, N. Y. Car-seat. No. 1,214,123; Jan. 30; v. 234; p. 1423.
Bennett, Frederick, Ravenswood, assignor to Walker & Bennett Manufacturing Company, New York, N. Y. Car-seat. No. 1,214,124; Jan. 30; v. 234; p. 1424.
Bennett, George W., Chicago, Ill. Medicament vaporizer and burner. No. 1,211,389; Jan. 9; v. 234; p. 381.
Bennett, Robert B., assignor to E. S. Bennett, New York, N. Y. Screw-pump. No. 1,211,390; Jan. 9; v. 234; p. 382.
Bennett, Stephen S., Highland Park, Mich. Differential mechanism. No. 1,211,661; Jan. 9; v. 234; p. 473.
Benson, Charles A., Chicago, Ill. Portable square. No. 1,213,063; Jan. 16; v. 234; p. 994.
Benson, Ellen, Chicago, Ill. Culinary device. No. 1,211,051; Jan. 2; v. 234; p. 233.
Benson, Elmer A., Peru, Ill. Metal shoe-sole. No. 1,210,587; Jan. 2; v. 234; p. 73.
Benson, Martin R. (See Ayres, Ernest R., assignor.)
Benson, Otis H. (See Johnson and Benson.)
Benson, Robert S., West Paris, Me. Test-plug. No. 1,212,886; Jan. 16; v. 234; p. 932.
Bentley, Anson J., Niles, Ohio. Brick-pallet. No. 1,213,575; Jan. 23; v. 234; p. 1207.
Berel, Milton, and L. Funke, New York, N. Y. Detector for wireless systems. No. 1,214,265; Jan. 30; v. 234; p. 1472.
Berend, Ludwig, Amöneburg-on-the-Rhine, Germany. Condensation product from phenols and formaldehyde. No. 1,214,414; Jan. 30; v. 234; p. 1523.
Berg, Henning J., Troy, N. Y. Tub-drainer. No. 1,212,004; Jan. 9; v. 234; p. 595.
Berg, Joseph, assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Lateral gear-drive for travel-indicators. No. 1,213,576; Jan. 23; v. 234; p. 1207.
Bergen, Abram S., Huntington, N. Y. Carbureter. No. 1,212,887; Jan. 16; v. 234; p. 933.
Berger, Joseph, Jr., Utica, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 1,213,449; Jan. 23; v. 234; p. 1163.
Bergman, Erick, Wayside, Miss. Lead-line controller. No. 1,214,125; Jan. 30; v. 234; p. 1424.
Bergman, Lars H., Philadelphia, Pa. Pulverized-fuel burner. No. 1,213,820; Jan. 30; v. 234; p. 1319.
Bergman, Lars H., Philadelphia, Pa. Pulverized-fuel burner. No. 1,213,821; Jan. 30; v. 234; p. 1319.
Bergman, Lars H., Philadelphia, Pa. Pulverized-fuel burner. No. 1,213,822; Jan. 30; v. 234; p. 1320.
Bergren, John A., assignor of one-twentieth to A. Holmgren, three-twentieths to J. H. Moan, three-twentieths to C. H. Kelson, one-twentieth to C. T. Strand, and two-twentieths to A. F. Youngberg, Lake Park, Minn. Gang-plow. No. 1,214,002; Jan. 30; v. 234; p. 1382.
Bergstrom, Edwin N., East Lynn, Mass. Spring-roll for leather-working machines. No. 1,210,401; Jan. 2; v. 234; p. 7.
Bernard, Philip, Sioux City, Iowa. Rain-water filter. No. 1,211,052; Jan. 2; v. 234; p. 233.
Bernard, Philip, Sioux City, Iowa. Window. No. 1,211,053; Jan. 2; v. 234; p. 234.
Bernard, Philip, Sioux City, Iowa. Chicken-waterer. No. 1,211,054; Jan. 2; v. 234; p. 234.
Berndt, John R., Moline, Ill. Furniture attachment. No. 1,211,527; Jan. 9; v. 234; p. 427.
Bernstein, Henry A., New York, N. Y. Arch and ankle support. No. 1,211,055; Jan. 2; v. 234; p. 235.
Bero, Charles E., Chicago, Ill. Mattress. No. 1,214,415; Jan. 30; v. 234; p. 1524.
Berold, Frederick H., Jr., Cincinnati, Ohio. Paper-bag machine. No. 1,212,178; Jan. 16; v. 234; p. 681.
Berry, Charles S., assignor of one-third to L. T. Slayden and one-third to J. S. Graham, Tuckerman, Ark. Mentholated or minted cathartic salts. No. 1,212,888; Jan. 16; v. 234; p. 933.
Berry, Clarence T. (See Palmer and Berry.)
Berry, Daniel O., Chicago, Ill. Furnace. No. 1,213,146; Jan. 23; v. 234; p. 1050.
Berry, James M., Detroit, Mich. Rim. No. 1,211,056; Jan. 2; v. 234; p. 235.
Bertrand, Frederic E., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Channeling-machine. No. 1,213,793; Jan. 23; v. 234; p. 1279.
Bertrand, Frederic E., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Channeling-machine. No. 1,213,802; Jan. 23; v. 234; p. 1283.
Berzon, Louis, Mount Vernon, N. Y. Scale. No. 1,211,057; Jan. 2; v. 234; p. 235.
Beskin, Samuel, Norfolk, Va. Coin-controlled mechanism for vending-machines. No. 1,211,528; Jan. 9; v. 234; p. 427.
Besserdich, William A., assignor of one-half to B. A. Mosling, Clintonville, Wis. Steering mechanism. (Reissue.) No. 14,249; Jan. 16; v. 234; p. 1021.
Best, Robert A., Grand Rapids, Mich. Tire-rim tool. No. 1,211,663; Jan. 9; v. 234; p. 474.
Best, Robert A., assignor of one-half to G. M. Fish, Grand Rapids, Mich. Tire-rim tool. No. 1,211,662; Jan. 9; v. 234; p. 473.
Best, William M., and W. P. Cunningham, Morris, Okla. Pumping-jack. No. 1,211,529; Jan. 9; v. 234; p. 428.
Best, William N., assignor to M. W. Dresser, Brooklyn, N. Y. Steam-generator. No. 1,212,889; Jan. 16; v. 234; p. 933.
Bettini, Gianni, Paris, France, assignor to Bettini Syndicate, Limited, London, England. Moving-picture apparatus. No. 1,210,887; Jan. 2; v. 234; p. 175.

Bettini Syndicate. (See Bettini, Gianni, assignor.)
Betts, Anson G., Asheville, N. C. Paint and making same. No. 1,213,330; Jan. 23; v. 234; p. 1122.
Betts, Major H., Bloomfield, N. J. Cigarette-box. No. 1,210,888; Jan. 2; v. 234; p. 175.
Bibb, George F. (See Carter and Bibb.)
Biberfeld, Arthur, assignor, by mesne assignments, to Heinrich Wollhelm and Ossenbach, Industriegesellschaft m. b. H., Berlin, Germany. Facing for walls and ceilings. No. 1,212,005; Jan. 9; v. 234; p. 595.
Bickhard, J Henry, Toledo, Ohio. Mail-bag delivering and receiving apparatus. No. 1,213,823; Jan. 30; v. 234; p. 1320.
Biddle, David O., Bakers Summit, Pa. Furniture-caster. No. 1,214,416; Jan. 30; v. 234; p. 1524.
Bidwell, Irwin F., H. M. Flavel, E. E. Henry, and L. C. McLeod, Astoria, Oreg. Coin-handling device. No. 1,211,530; Jan. 9; v. 234; p. 428.
Bigelow, Ernest A. (See Cock, Gerald A., assignor.)
Bijur, Joseph, assignor to The Safety Car Heating and Lighting Co., New York, N. Y. Regulating apparatus. No. 1,210,889; Jan. 2; v. 234; p. 176.
Bill, Frederick M. (See Peters, Hubert, assignor.)
Billings, Frank, Cleveland, Ohio. Conveyer. No. 1,212,890; Jan. 16; v. 234; p. 934.
Billings, Frederick I., and F. C. Schofield, Baltimore, Md. Tobacco-leaf-stripping machine. No. 1,212,441; Jan. 16; v. 234; p. 776.
Binder Company, The. (See Tompkins, Robert F., assignor.)
Binder, Frank A., New York, N. Y. Photographic developing apparatus. No. 1,213,489; Jan. 23; v. 234; p. 1176.
Binder, Gottlob, Rochester, N. Y., assignor to American Laundry Machinery Company, Cincinnati, Ohio. Ironing-machine. No. 1,210,402; Jan. 2; v. 234; p. 7.
Bird Machine Company. (See Clarke, Ralph S., assignor.)
Birky, Chris, Beemer, Nebr. Folding washstand. No. 1,212,006; Jan. 9; v. 234; p. 595.
Bischoff, Paul, St. Gallen, Switzerland. Machine for winding strips of fabrics. No. 1,211,058; Jan. 2; v. 234; p. 235.
Bisher, William B., Taylor, Nebr. Doubletree-support. No. 1,210,890; Jan. 2; v. 234; p. 176.
Bishop, Arthur W., St. Louis, Mo. Making cleaning compounds. No. 1,212,442; Jan. 16; v. 234; p. 777.
Bishop, James T. (See Vales and Bishop.)
Bishop, Thomas G. J., Bundy Station, Wangnanella, New South Wales, Australia. Gripping device for use in raising and lowering pipes and the like. No. 1,214,417; Jan. 30; v. 234; p. 1524.
Bjerre, Swan P., Chicago, Ill. Life-belt. No. 1,212,315; Jan. 16; v. 234; p. 733.
Bjorling, Ellis E., Salt Lake City, Utah. Camera-shutter-operating device. No. 1,211,664; Jan. 9; v. 234; p. 474.
Bjornstad, Alfred W., U. S. Army. Map. No. 1,213,064; Jan. 16; v. 234; p. 994.
Black, Ashley V., assignor to Grain Products Company, St. Louis, Mo. Food product. No. 1,210,589; Jan. 2; v. 234; p. 73.
Black, Floyd. (See Antoine and Black.)
Blackburn, Guy W., Elgin, Ill. Speedometer. No. 1,213,065; Jan. 16; v. 234; p. 994.
Blackley, Bryce E., Providence, R. I. Vehicle-spring. No. 1,211,816; Jan. 9; v. 234; p. 528.
Blacklock Milling Company. (See Blacklock, Thomas G., assignor.)
Blacklock, Thomas G., Brooklyn, N. Y., assignor to Blacklock Milling Company, Incorporated. Baker's mixture. No. 1,210,588; Jan. 2; v. 234; p. 73.
Blackwelder, Charlie A., Gunter, Tex. Nut-lock. No. 1,211,391; Jan. 9; v. 234; p. 382.
Blades, Charles A. (See Kislovitz, Samuel, assignor.)
Blaine, John A., Norfolk, Va. Toilet article. No. 1,212,443; Jan. 16; v. 234; p. 777.
Blair, Thomas H., Northboro, Mass. Shutter for kinetoscopes. No. 1,213,147; Jan. 23; v. 234; p. 1056.
Blake, George W., Wyandotte, Mich. Can-filling machine. No. 1,210,403; Jan. 2; v. 234; p. 8.
Blake, Ralph V., Yonkers, N. Y. Method and apparatus for cooking eggs. No. 1,213,148; Jan. 23; v. 234; p. 1057.
Blanchard, Frank W., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in finishing shoes. No. 1,214,266; Jan. 30; v. 234; p. 1472.
Blanchard, Frederick C., E. B. Crocker, Bridgeport, and P. S. Keefer, Milford, assignors to The Ashcroft Manufacturing Company, Bridgeport, Conn. Pressure-reducing valve. No. 1,210,891; Jan. 2; v. 234; p. 176.
Blandford, Sydney D., St. John's, Newfoundland. Tobacco-pipe. No. 1,210,404; Jan. 2; v. 234; p. 8.
Blank, Julius A., Fremont, Wis. Fence attachment. No. 1,211,059; Jan. 2; v. 234; p. 236.
Blaw Steel Construction Company. (See Loxterman, Howard B., assignor.)
Bliven, Frank S., Baltimore, Md. Weather-shield for motor-cars. No. 1,212,891; Jan. 16; v. 234; p. 934.
Block, Benjamin B., Los Angeles, Cal. Atomizing water-supply means for internal-combustion engines. No. 1,211,665; Jan. 9; v. 234; p. 474.
Block, Mandel, Chicago, Ill. Valve. No. 1,214,267; Jan. 30; v. 234; p. 1473.
Blodgett, John W., Chicago, Ill. Air-bag for mending pneumatic tires. No. 1,214,268; Jan. 30; v. 234; p. 1473.
Blomstrom, Carl H., Detroit, Mich. Driving mechanism for motor-vehicles. No. 1,211,531; Jan. 9; v. 234; p. 429.
Blood, Burr B., assignor to C. MacHarg, Chicago, Ill. Phonograph-needle cutter. No. 1,211,532; Jan. 9; v. 234; p. 430.
Bloom, Arvid T., assignor to Morgan Construction Company, Worcester, Mass. Apparatus for cooling metal rods. No. 1,211,277; Jan. 2; v. 234; p. 311.
Bloom, Edgar J., Tiffin, Ohio. Extension for pedals. No. 1,213,824; Jan. 30; v. 234; p. 1321.
Bloom, Edgar J., Tiffin, Ohio. Extensible pedal. No. 1,213,825; Jan. 30; v. 234; p. 1321.
Bloom, Edgar J., Tiffin, Ohio. Extensible pedal. No. 1,213,826; Jan. 30; v. 234; p. 1322.
Bloom, Edward, Paterson, N. J. Control device for warping-machines. No. 1,212,604; Jan. 16; v. 234; p. 834.
Bloomfield, Benjamin K., assignor of one-half to G. P. Callan, Brady, Tex. Combined desk and seat. No. 1,212,734; Jan. 16; v. 234; p. 883.
Blum, Eugene, and G. Müller, New York, N. Y. Coin-controlled cabinet. No. 1,211,060; Jan. 2; v. 234; p. 236.
Blum, Joseph O., Madison, Wis. Sack-spreader and gage. No. 1,211,278; Jan. 2; v. 234; p. 311.
Blume, George, Siberia, Ind. Double-bolt lock. No. 1,213,827; Jan. 30; v. 234; p. 1322.
Blumenberg, Henry, Los Angeles, Cal., assignor to E. B. Mapel, trustee, New York, N. Y. Extracting potassium from minerals. No. 1,214,003; Jan. 30; v. 234; p. 1382.
Blumenthal, Ferdinand, Cologne-Braunsfeld, Germany. Water-softening. No. 1,212,007; Jan. 9; v. 234; p. 595.
Blundell, David W., J. H. Mills, East Molesey, and A. T. Maguire, London, assignors to British Diatoric Manufacturing Company Limited, East Molesey, England. Artificial Tooth. No. 1,211,817; Jan. 9; v. 234; p. 528.
Boardman, Harry G., assignor to Automatic Baseball Co. of Illinois, Chicago, Ill. Power-driven base-ball pitcher. No. 1,213,577; Jan. 23; v. 234; p. 1207.
Boardman, Robert O., Grand Rapids, Mich., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,212,444; Jan. 16; v. 234; p. 777.
Boardman, Thomas V., Birmingham, Ala., assignor to American Box and Crate Company, Knoxville, Tenn. Delivery crate or case. No. 1,210,405; Jan. 2; v. 234; p. 8.
Bobbitt, James D., Madisonville, Ky. Silo. No. 1,214,418; Jan. 30; v. 234; p. 1524.
Boberg, Charles E., Fort Worth, Tex. Direction-indicator. No. 1,212,316; Jan. 16; v. 234; p. 733.
Bobo, Walter T., assignor to The Easy Truss Company, Battle Creek, Mich. Truss-pad. No. 1,211,666; Jan. 9; v. 234; p. 474.
Bock, Herman, Red Wing, Minn. Bill-fold and card-case. No. 1,211,533; Jan. 9; v. 234; p. 430.
Bock, Hermann, Buchatz, Oberschlesien, Germany. Pipe-packing holder. No. 1,211,061; Jan. 2; v. 234; p. 237.
Bodey, Edward J., Cincinnati, Ohio. Grinding-machine. No. 1,213,149; Jan. 23; v. 234; p. 1057.
Bodine, Frank, Richwood, Minn. Road-scraper. No. 1,212,008; Jan. 9; v. 234; p. 596.
Bodmer, Christian, assignor to The Stanley Rule and Level Company, New Britain, Conn. Miter and try-square. No. 1,213,578; Jan. 23; v. 234; p. 1208.
Bodmer, Christian, and A. W. Ritter, assignors to The Stanley Rule and Level Company, New Britain, Conn. Spirit-level. No. 1,212,735; Jan. 16; v. 234; p. 883.
Boeck, John, Boise, Idaho. Turning and stopping signal for automobiles. No. 1,211,279; Jan. 2; v. 234; p. 312.
Boehck, William E., Jersey City, and H. S. Germond, Jr., Bayonne, assignors to New York Revolving Portable Elevator Company, Jersey City, N. J. Revolving portable elevator-lock. No. 1,213,828; Jan. 30; v. 234; p. 1322.
Boehm, Joseph C., Chicago, Ill. Concrete-form fastener. No. 1,212,317; Jan. 16; v. 234; p. 734.
Boehne, Ralph, Doniphan township, Hall county, Nebr. Apparatus for facilitating the burning of stumps. No. 1,213,329; Jan. 30; v. 234; p. 1322.
Bohleber, William. (See Bundy, Cyrus L., assignor.)
Boldt, Oscar J., Appleton, Wis. Bowling-pin. No. 1,214,126; Jan. 30; v. 234; p. 1424.
Boleratz, Norine, Detroit, Mich. Coffee-pot. No. 1,210,590; Jan. 2; v. 234; p. 73.
Bolger, Robert S., Richmond Hill, assignor of one-half to G. F. Whistler, New York, N. Y. Paper barrel. No. 1,210,406; Jan. 2; v. 234; p. 9.
Bolstad, Oscar J. (See Stensrud, John A., assignor.)
Bolton, Lewis H., Slippery Rock, Pa. Stop. No. 1,211,392; Jan. 2; v. 234; p. 382.
Bomar, E. C., *et al.* (See Evans, Walter P., assignor.)
Bonner, William T., San Francisco, Cal. Metal-bed fastening. No. 1,212,736; Jan. 16; v. 234; p. 883.
Bonom, Alfred, Paterson, N. J. Lookout-mast for ships. No. 1,213,579; Jan. 23; v. 234; p. 1208.
Bonson, William W., Dubuque, Iowa. Attachment for dry-ore separators. No. 1,214,269; Jan. 30; v. 234; p. 1474.
Boomer, George A., assignor to The Plume & Atwood Manufacturing Company, Waterbury, Conn. Fixture-loop. No. 1,212,318; Jan. 16; v. 234; p. 734.
Boomershine, Adam. (See Lenn and Boomershine.)
Boon, Walter H., Carbon, Tex. Planter. No. 1,213,830; Jan. 30; v. 234; p. 1323.

Boot, J. E. (See Elam, William B., assignor.)
Bopp, Clinton L., Waterloo, Iowa. Wireless automatic railway registering system. No. 1,213,066; Jan. 16; v. 234; p. 994.
Boracci, Pasquale J., Long Island City, N. Y. Attachment for gas-burners. No. 1,213,730; Jan. 23; v. 234; p. 1258.
Borcherdt, Walter O., Austinville, Va., assignor to The New Jersey Zinc Company, New York, N. Y. Revolving screen and screening. No. 1,212,179; Jan. 16; v. 234; p. 681.
Borchmann, Clara, New York, N. Y. Cover for receptacles. No. 1,210,892; Jan. 2; v. 234; p. 177.
Borland, Deloss, and H. L. Fox, Charleston, Miss. Attachment for motor-vehicles. No. 1,212,009; Jan. 9; v. 234; p. 596.
Bornmann, Carl, assignor to Ansco Company, Binghamton, N. Y. Camera. No. 1,213,067; Jan. 16; v. 234; p. 995.
Bornmann, Carl, assignor to Ansco Company, Binghamton, N. Y. Camera. No. 1,213,731; Jan. 23; v. 234; p. 1258.
Borres, Frank J., Pittsburgh, Pa. Snow-remover. No. 1,211,280; Jan. 2; v. 234; p. 312.
Borst, Charles L., Atchison, Kans. Safety-latch for elevator-gates. No. 1,213,450; Jan. 23; v. 234; p. 1163.
Borup, Christian. (See Anderson, Anders J., assignor.)
Bosch, Carl, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Manufacture of carbonic-acid compounds of ammonia. No. 1,211,393; Jan. 9; v. 234; p. 382.
Bosch, Carl, A. Mittasch, and C. Beck, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Catalyzer. No. 1,211,394; Jan. 9; v. 234; p. 382.
Bosch Magneto Company. (See Naul, James M., assignor.)
Bosch Magneto Company. (See Schwarzmann and Wild, assignors.)
Bosch, Firm of Robert. (See Kratz, Franz, assignor.)
Bosler, George A., Chicago, Ill. Automobile-door opener. No. 1,214,488; Jan. 30; v. 234; p. 1548.
Bossu, Pierre, assignor to Societe Anonyme Des Etablissements L. Bleriot, Paris, France. Siren. No. 1,213,732; Jan. 23; v. 234; p. 1259.
Bostock, Henry D., Jacksonville, Fla. Egg-preserving compound. No. 1,212,445; Jan. 16; v. 234; p. 778.
Boston Rubber Shoe Company. (See Randall, Chester J., assignor.)
Boston Woven Hose & Rubber Co. (See McGeouch, William P., assignor.)
Bottum, George L., Chicago, Ill. Combined valve device for hot-water heating systems. No. 1,213,831; Jan. 30; v. 234; p. 1323.
Boucher, Otis L., Snyder, Okla. Body-armor. No. 1,210,407; Jan. 2; v. 234; p. 9.
Boularan, *dit* Deval, Abel, Paris, France. Movable plate applicable to the manufacture of positive cinematograph-films and obtaining the same. No. 1,212,446; Jan. 16; v. 234; p. 778.
Bourek, Thomas J., Helena, Mont. Tea-canister. No. 1,212,892; Jan. 16; v. 234; p. 934.
Boving, Paul C., Philadelphia, Pa. Composition for tile. No. 1,210,756; Jan. 2; v. 234; p. 130.
Bowden, Junius A., Los Angeles, Cal., assignor to A. Schrader's Son, Incorporated, New York, N. Y. Tire-valve. No. 1,214,004; Jan. 30; v. 234; p. 1383.
Bowen, George W. (See Holl, Adolph W., assignor.)
Bowen, George W. (See Zerk, Oscar, assignor.)
Bowen, James R., Ottawa, Ontario, Canada. Device for rifle and machine-gun instruction. No. 1,212,737; Jan. 16; v. 234; p. 884.
Bowen, Martin L., New Eagle, Pa. Mail-bag catching and delivering device. No. 1,214,127; Jan. 30; v. 234; p. 1424.
Bowers, Benjamin S., Laprairie, Minn. Electric switch. No. 1,211,281; Jan. 2; v. 234; p. 312.
Bowl, Walter E., Warborough, Wallingford, England. Lock. No. 1,213,451; Jan. 23; v. 234; p. 1164.
Bowman, Carrie O., Mesilla Park, N. Mex. Kitchen-spoon. No. 1,211,062; Jan. 2; v. 234; p. 237.
Bowman, Charles M., Lebanon, Pa. Railway-track construction. No. 1,213,580; Jan. 23; v. 234; p. 1209.
Box, Walter, Georgetown, Tex. Internal-combustion engine. No. 1,213,068; Jan. 16; v. 234; p. 995.
Boy, Hugh L., Speers Ferry, Va. Railway-tie. No. 1,211,063; Jan. 2; v. 234; p. 237.
Boyce, Millard W., Kearney, N. J. Locking device for automobiles. No. 1,211,064; Jan. 2; v. 234; p. 237.
Boyd, Arthur, West Hartlepool, England. Propelling mechanism for vehicles. No. 1,211,911; Jan. 9; v. 234; p. 563.
Boyd, Ura M., Dallas, Tex. Telephone signal device. No. 1,211,534; Jan. 9; v. 234; p. 430.
Boyd, William, and A. L. and J. J. Delapp, Okmulgee, Okla. Header-barge. No. 1,212,893; Jan. 16; v. 234; p. 935.
Brackman, T. P., *et al.* (See Speegle, William A., assignor.)
Braden, Albert R., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Electric heating apparatus. No. 1,210,591; Jan. 2; v. 234; p. 73.
Bradley, Charles S., New York, N. Y. Producer-gas-engine system. No. 1,212,894; Jan. 16; v. 234; p. 935.
Bradley, Franklin F., assignor to Bradley & Vrooman Company, Chicago, Ill. Oven. No. 1,211,535; Jan. 9; v. 234; p. 431.
Bradley, James T. (See Hardwick and Bradley.)
Bradley, Richard C., assignor of one-fourth to L. Kinnebrew, one-fourth to J. M. Eastham, Shreveport, La., and one-fourth to C. F. Ireland, Houston, Tex. Locking mechanism. No. 1,214,410; Jan. 30; v. 234; p. 1525.
Bradley, Richard C., assignor of two-thirds to C. F. Ireland, Houston, Tex. Soldering device. No. 1,214,420; Jan. 30; v. 234; p. 1525.
Bradley & Vrooman Company. (See Bradley, Franklin F., assignor.)
Bradley, William J., Troy, assignor to The Rail Joint Company, New York, N. Y. Roll construction for rolling-mills. No. 1,211,818; Jan. 9; v. 234; p. 528.
Brady, Frederick, Middletown, Del. Drawer-rack. No. 1,211,065; Jan. 2; v. 234; p. 237.
Brady, Philip, New York, N. Y. Spring-wheel. No. 1,212,180; Jan. 16; v. 234; p. 682.
Brady, Wilson M., Baltimore, Md. Stopper-extractor. No. 1,213,452; Jan. 23; v. 234; p. 1164.
Bragdon, Joseph H., New York, N. Y. Speed-controller for graphophones. No. 1,211,066; Jan. 2; v. 234; p. 238.
Brahman, Herbert G., Reading, Mich. Chicken-perch. No. 1,210,592; Jan. 2; v. 234; p. 74.
Brainard, Sidney W., Cleveland, Ohio, assignor to J. M. Duncan, Philadelphia, Pa. Valve mechanism. No. 1,210,757; Jan. 2; v. 234; p. 130.
Braly, Norman B., Butte, Mont. Canvas-hose coupling. No. 1,211,067; Jan. 2; v. 234; p. 238.
Brambach Piano Company. (See Brambach, Stephen, assignor.)
Brambach, Stephen, assignor to Brambach Piano Company, New York, N. Y. Upright piano. No. 1,210,593; Jan. 2; v. 234; p. 74.
Brand, Adolph L., Seattle, Wash. Nut-lock. No. 1,210,758; Jan. 2; v. 234; p. 131.
Brand, George P., *et al.* (See Lundberg, Endfred, assignor.)
Brand, Herman H. (See Cary and Brand.)
Brandquist, Eric. (See Wallace, Archibald H., assignor.)
Brandquist, Eric, Orange, N. J. Spark-plug. No. 1,213,581; Jan. 23; v. 234; p. 1209.
Brandt, John A., St. Louis, Mo. Staining and finishing cabinet. No. 1,213,832; Jan. 30; v. 234; p. 1323.
Brandwood, Edward. (See Brandwood, John, T., and E.)
Brandwood, John, T., and E., Bury, England. Perforated beam for dyeing and like apparatus. No. 1,211,068; Jan. 2; v. 234; p. 239.
Brandwood, Thomas. (See Brandwood, John, T., and E.)
Braun Corporation, The. (See Marvin, Cornelius J., assignor.)
Braunbeck, Herman W., San Francisco, Cal. Rotary operating mechanism. No. 1,212,733; Jan. 23; v. 234; p. 1259.
Braunstein, Aron, Brownsville, Tex. Antiseptic shaving outfit. No. 1,211,282; Jan. 2; v. 234; p. 313.
Breddin, Johannes P., Cologne, Germany. Apparatus for purifying sewage-water. No. 1,210,759; Jan. 2; v. 234; p. 131.
Brell, Julius J., New York, N. Y. Button feeding and attaching device. No. 1,212,181; Jan. 16; v. 234; p. 682.
Brenan, Herbert S., St. John, New Brunswick, Canada. Binder. No. 1,214,270; Jan. 30; v. 234; p. 1474.
Brenner, Carl, *et al.* (See Clark, Stuart J., assignor.)
Brent, John J., Alton, Kans. Automobile-heater. No. 1,213,069; Jan. 16; v. 234; p. 996.
Brenton, James, assignor to Northern Brass Manufacturing Company, Waukegan, Ill. Quick-opening faucet. No. 1,210,893; Jan. 2; v. 234; p. 177.
Brethour, William, Wyoming township, Kent county, Mich. Sawhorse. No. 1,211,069; Jan. 2; v. 234; p. 239.
Bretsnyder, William, Chicago, Ill. Safety device for power-presses. No. 1,212,319; Jan. 16; v. 234; p. 734.
Brewster, Edmund, Daisyville, England. Means for holding hats. No. 1,213,833; Jan. 30; v. 234; p. 1323.
Brickell, Richard W. (See McKay, Peter M., assignor.)
Brier, Paine, Denver, Colo. Heating system for automobiles. No. 1,211,667; Jan. 9; v. 234; p. 475.
Brightman, Harrison M., Columbus, Ohio. Feeding mechanism for nut-making machines. No. 1,212,605; Jan. 16; v. 234; p. 835.
Brightman, Harrison M., Columbus, Ohio. Nut-castellating machine. No. 1,212,606; Jan. 16; v. 234; p. 835.
Brinkman, Louis H., Glen Ridge, N. J., assignor, by mesne assignments, to Baltimore Tube Company, Incorporated. Tube-bending machine. No. 1,210,894; Jan. 2; v. 234; p. 178.
Brinkman, Louis H., Glen Ridge, N. J., assignor, by mesne assignments, to Baltimore Tube Company, Incorporated. Apparatus for and method of corrugating metal tubes. No. 1,210,895; Jan. 2; v. 234; p. 178.
Briscoe, Robert H. (See Cash and Briscoe.)
Bristol Company, The. (See Bristol, William H., assignor.) (Reissue.)
Bristol, Mark L., and H. C. Richardson, U. S. Navy. Float for aeroplanes. No. 1,213,453; Jan. 23; v. 234; p. 1164.
Bristol, William H., assignor to The Bristol Company, Waterbury, Conn. Thermo-electric couple. (Reissue.) No. 14,248; Jan. 9; v. 234; p. 649.
British-American Tobacco Company Limited. (See Baldwin, Thomas W., assignor.)

British Diatoric Manufacturing Company Limited. (See Blundell, Mills, and Maguire, assignors.)
British Westinghouse Electric and Manufacturing Company, The. (See Bailey, James N., assignor.)
Britt, Leslie C., Charlton, Iowa. Crate. No. 1,213,734; Jan. 23; v. 234; p. 1259.
Brock, Richard E., Canton, Ohio. Tube-reducing mill. No. 1,211,070; Jan. 2; v. 234; p. 239.
Brockhausen, Henry F. W., St. Louis, Mo. Garbage reduction and transportation system. No. 1,210,408; Jan. 2; v. 234; p. 10.
Bromley, Henry C. (See Jones, Clarence H., assignor.)
Bronn, Jegor I., Rombach, Lorraine, assignor of one-half to Rombacher Hüttenwerke, Rombach, Germany. Treatment of coke-oven gases. No. 1,211,395; Jan. 9; v. 234; p. 383.
Brooke, Thomas P., Chicago, Ill. Motor. No. 1,210,409; Jan. 2; v. 234; p. 10.
Brooks, Agustus F., Bedford, assignor to F. Davenport, Cincinnati, Ohio. Machine for use in the manufacture of paper boxes. No. 1,212,182; Jan. 16; v. 234; p. 683.
Brooks, Julius E., East Haven, assignor to Sargent & Company, New Haven, Conn. Casket-handle. No. 1,211,668; Jan. 9; v. 234; p. 475.
Brooks, Robert J., and F. E. Martin, Malvern, Ark. Armor for automobile-tires. No. 1,210,594; Jan. 2; v. 234; p. 74.
Brooks, Sidney R., Salamanca, N. Y. Burglar-alarm. No. 1,211,669; Jan. 9; v. 234; p. 476.
Brooks, William P., Weleetka, Okla. Hat-covering. No. 1,214,128; Jan. 30; v. 234; p. 1425.
Brorby, Jacob I., Shenandoah, Iowa. Flushing-cart. No. 1,211,396; Jan. 9; v. 234; p. 383.
Brown, Arthur L., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Liquid coating compositions. No. 1,212,738; Jan. 16; v. 234; p. 884.
Brown, Carl E., Columbus, Ohio. Toy kick-car. No. 1,213,454; Jan. 23; v. 234; p. 1165.
Brown, David, Eldorado, Ill. Railway-crossing. No. 1,213,070; Jan. 16; v. 234; p. 996.
Brown, George H., Wilkinsburg, Pa. Ash-retaining cigarette and the like. No. 1,211,071; Jan. 2; v. 234; p. 240.
Brown, George L., Plant City, Fla. Tooth-brush. No. 1,212,010; Jan. 9; v. 234; p. 596.
Brown, Glenn C., Nashville, Tenn. Power-transmission device. No. 1,212,896; Jan. 16; v. 234; p. 936.
Brown, Harlow R., Yonkers, assignor to Philip Strobel & Sons, Inc., New York, N. Y. Convertible table. No. 1,212,897; Jan. 16; v. 234; p. 936.
Brown, Harold W., Ithaca, N. Y., assignor to Westinghouse Electric and Manufacturing Company. Electrical protective device. No. 1,214,129; Jan. 30; v. 234; p. 1425.
Brown, Henry, Putney Hill, London, England. Pneumatic tire. No. 1,213,735; Jan. 23; v. 234; p. 1259.
Brown, Henry J., New York, N. Y. Cut-out film blanket-strip for autograph-cameras. No. 1,212,447; Jan. 16; v. 234; p. 778.
Brown, Horace P., Oakland, assignor to Pacific Burt Co., Emeryville, Cal. Manifolding order-blank. No. 1,211,819; Jan. 9; v. 234; p. 529.
Brown, James A., Cedar Rapids, Iowa. Explosion-engine valve. No. 1,213,582; Jan. 23; v. 234; p. 1209.
Brown, Jimmy, Jr., Blossburg, Ala. Sign-holder. No. 1,212,898; Jan. 16; v. 234; p. 937.
Brown, John R. (See Gierding and Brown.)
Brown, John R., assignor to The Ohio Brass Company, Mansfield, Ohio. Bonding rails and like conductors. No. 1,214,005; Jan. 30; v. 234; p. 1388.
Brown, Joseph P., Frederick, Okla. Cotton-picker. No. 1,212,899; Jan. 16; v. 234; p. 937.
Brown, Le Roy, Lansing, Mich. Explosive-engine. No. 1,213,735; Jan. 23; v. 234; p. 1260.
Brown, Obediah H., Ariel, Pa. Tire-guard. No. 1,212,448; Jan. 16; v. 234; p. 779.
Brown, Odis A., Santa Anna, Tex. Cotton-bag emptier. No. 1,214,421; Jan. 30; v. 234; p. 1526.
Brown, Rudolph L., Chicago, Ill., assignor to The National Lock Washer Company, Newark, N. J. Ticket-holder for car-curtains. No. 1,214,006; Jan. 30; v. 234; p. 1384.
Brown, Sidney E., and H. C. Kain, assignors of one-third to A. P. Prendergast, Marshall, Tex. Grate. No. 1,214,422; Jan. 30; v. 234; p. 1526.
Brown, Stanley, Garden City, N. Y. Finder for cameras. No. 1,210,806; Jan. 2; v. 234; p. 178.
Brown, Stephen, Pawtucket, R. I. Expansion ratchet-wrench. No. 1,213,583; Jan. 23; v. 234; p. 1210.
Brown, Thomas E., New York, N. Y. Bascule-bridge. No. 1,210,410; Jan. 2; v. 234; p. 10.
Brown, William H., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y. Calculating-machine. No. 1,212,320; Jan. 16; v. 234; p. 735.
Browne, Arthur B., Denver, Colo. Gas-engine. No. 1,210,897; Jan. 2; v. 234; p. 179.
Brownell, George L., Worcester, Mass. Twisting-machine. No. 1,211,670; Jan. 9; v. 234; p. 476.
Broyles, Adam. (See Flynn, George, assignor.)
Brubaker, William C., Chicago, Ill. Bolt. No. 1,210,595; Jan. 2; v. 234; p. 74.
Bruder, Joseph A., Philadelphia, Pa. Waterproof basket. No. 1,211,671; Jan. 9; v. 234; p. 476.
Brugmann, Walter, Davenport, Iowa. Canvas platform for binders. No. 1,212,011; Jan. 9; v. 234; p. 596.
Brumbaugh, Martin P., Juniata, Pa. Street sweeping and cleaning implement. No. 1,212,183; Jan. 16; v. 234; p. 683.
Brumley, Lester A., Sanford, Fla. Fertilizer-distributer. No. 1,213,737; Jan. 23; v. 234; p. 1260.
Brunner, Harold E., and L. S. Cope, Philadelphia, Pa., assignors to The Hess-Bright Manufacturing Company. Reducing-mill. No. 1,211,397; Jan. 9; v. 234; p. 383.
Brush, Alanson P., Flint, Mich. Engine-starting and current-generating apparatus. No. 1,211,072; Jan. 2; v. 234; p. 240.
Bryhan, Elmer C., Lancaster, Wis. Leveling-base for cream-separators. No. 1,210,411; Jan. 2; v. 234; p. 11.
Buchholtz, Carl A., Hoboken, N. J. Fire-lighter and heater. No. 1,211,536; Jan. 9; v. 234; p. 431.
Buchholz, Albert, Milwaukee, Wis. Garbage-can cover. No. 1,212,321; Jan. 16; p. 234; p. 735.
Buckingham, Fremont H., assignor to The Standard Computing Scale Company, Detroit, Mich. Dash-pot. No. 1,212,322; Jan. 16; v. 234; p. 736.
Buckner, William A., Fresno, Cal. Lock-nut. No. 1,213,071; Jan. 16; v. 234; p. 906.
Bucks, Harry, Somerville, Mass. Alarm attachment for drip-pans. No. 1,212,124; Jan. 9; v. 234; p. 634.
Budd, Allen, *et al.* (See Machamer, Isaac A., assignor.)
Budd, Andrew, *et al.* (See Machamer, Isaac A., assignor.)
Budd, Richard, *et al.* (See Machamer, Isaac A., assignor.)
Budlong, Standish S., Rockford, Ill. Excavating-machine. No. 1,210,412; Jan. 2; v. 234; p. 11.
Bugbee, Lucian W., assignor to American Optical Company, Southbridge, Mass. Retinoscope. No. 1,211,073; Jan. 2; v. 234; p. 240.
Bugbee, Lucian W., assignor to American Optical Company, Southbridge, Mass. Process of plating. No. 1,214,271; Jan. 30; v. 234; p. 1474.
Bühler, Gebrüder. (See Roth, Ernst, assignor.)
Bulgakow, Nicolai, Yurief, Jurjew, Russia. Automatic locking device for firearms. No. 1,212,012; Jan. 9; v. 234; p. 597.
Bulkley, Emery L., Painted Post, N. Y., assignor to Ingersoll-Rand Company, Jersey City, N. J. Regulator for fluid-compressors. No. 1,211,074; Jan. 2; v. 234; p. 240.
Bullis, Henry C., Redwood Falls, Minn. Producing magnetic sound-records for talking-motion-picture films. No. 1,213,150; Jan. 23; v. 234; p. 1057.
Bundy, Cyrus L., East Orange, N. J., and J. J. Acker, Horton, Kans. Friction draft-rigging. No. 1,210,413; Jan. 2; v. 234; p. 11.
Bundy, Cyrus L., East Orange, N. J., assignor of one-half to W. Bohleber, New York, N. Y. Spark-plug. No. 1,212,449; Jan. 16; v. 234; p. 779.
Bundy, Willard H., assignor to W. H. Bundy Recording Company, Syracuse, N. Y. Time-recorder. No. 1,213,662; Jan. 23; v. 234; p. 1235.
Bunker, Sherman P., Rockville Center, N. Y. Protective cover for fruit-crates. No. 1,213,584; Jan. 23; v. 234; p. 1210.
Bunnell, Morton G., assignor to The Coming Manufacturing Company, Chicago, Ill. Exhaust-whistle. No. 1,210,898; Jan. 2; v. 234; p. 179.
Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Ventilator apparatus. No. 1,212,450; Jan. 16; v. 234; p. 779.
Bunting Iron Works *et al.* (See Hall, James T., assignor.)
Bunzlau, Robert, and C. L. Stoll, assignors to "Sembusto" Elastische Radbereifungen Gesellschaft m. b. H., Vienna, Austria-Hungary. Elastic wheel-tire. No. 1,213,884; Jan. 30; v. 234; p. 1324.
Buork, John E., Charlottesville, Va. Snow-skate. No. 1,213,739; Jan. 23; v. 234; p. 1260.
Burbank, Louis S., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Tension-measuring device. No. 1,211,820; Jan. 9; v. 234; p. 529.
Burch, George B., Ballagh, Nebr. Spring-wheel. No. 1,212,607; Jan. 16; v. 234; p. 836.
Burchell-Johnston Corporation, The. (See Edwards, Bruce V., assignor.)
Burchill, Richard D., Tampa, Fla. Motor-sleigh. No. 1,210,899; Jan. 2; v. 234; p. 180.
Burgard, Charles H., Leavenworth, Kans. Conveyer and mixer. No. 1,211,398; Jan. 9; v. 234; p. 384.
Burge, George H., Huntsville, Mo. Rail-bond. No. 1,213,738; Jan. 23; v. 234; p. 1260.
Burgess, Charles F., Madison, Wis., assignor to C. F. Burgess Laboratories. Battery. No. 1,211,363; Jan. 2; v. 234; p. 336.
Burgett, Charles H. (See Morrow and Burgett.)
Burglar Proof Lock and Hardware Corporation. (See Segal, Samuel, assignor.)
Burke, Alfred, Flushing, N. Y. Display device. No. 1,213,455; Jan. 23; v. 234; p. 1165.
Burke, Mike T., Kalispell, assignor of one-half to M. Gorham, Butte, Mont. Fuel-mixer for explosive-engines. No. 1,212,013; Jan. 9; v. 234; p. 597.
Burkhardt, Carl H., San Francisco, Cal. Hose-clasp. No. 1,214,130; Jan. 30; v. 234; p. 1425.
Burkhardt, Frank J., assignor to The Automatic Nut Cracker Company, Cincinnati, Ohio. Nut-cracking device. No. 1,210,414; Jan. 2; v. 234; p. 12.

Burleigh, James K., and L. V. White, assignors to A. L. Zwisler, Kalamazoo, Mich. Signaling device for automobiles. No. 1,213,456; Jan. 23; v. 234; p. 1165.
Burleigh, Lewis E., Chicago, Ill. Flower and plant box. No. 1,213,331; Jan. 23; v. 234; p. 1122.
Burlingham, Lucious D., Hubbard, Ohio. Swing. No. 1,212,739; Jan. 16; v. 234; p. 884.
Burnett, Frank P., and V. M. Van Brunt, assignors of one-third to C. J. Degavre, Newark, N. J. Button or clasp. No. 1,214,272; Jan. 30; v. 234; p. 1475.
Burnham, George A., Saugus, Mass., assignor, by mesne assignments, to General Electric Company. Reverse-current relay. No. 1,213,835; Jan. 30; v. 234; p. 1324.
Burns, Mary A., Williamstown, N. Y. Woman's hat-banding. No. 1,211,075; Jan. 2; v. 234; p. 241.
Burns, William A., Drummondhill, Scotland. Sighting apparatus. No. 1,211,399; Jan. 9; v. 234; p. 384.
Burns, William A., Drummondhill, Scotland, assignor to Vickers Limited, London, England. Sighting apparatus. No. 1,211,400; Jan. 9; v. 234; p. 384.
Burns, William A., Drummondhill, Scotland, assignor to Vickers Limited, London, England. Sighting apparatus. No. 1,211,401; Jan. 9; v. 234; p. 385.
Burritt, William H., St. Louis, Mo. Vehicle-wheel. No. 1,211,076; Jan. 2; v. 234; p. 241.
Burroughs Adding Machine Company. (See Barrett, Edward R., assignor.)
Burroughs Adding Machine Company. (See Harrison, Henry M., assignor.)
Burrowes, Edward T., Portland, Me. Holding means for roller-screens. No. 1,211,402; Jan. 9; v. 234; p. 385.
Burrowes, Edward T., Portland, Me. Collapsible window-screen. No. 1,211,403; Jan. 9; v. 234; p. 385.
Burstyn, Walther, Berlin, Germany. Switch for heavy alternating currents. No. 1,212,125; Jan. 9; v. 234; p. 634.
Burt, William E., Burlington, Vt., assignor to The Leader Evaporator Company. Float-valve. No. 1,210,596; Jan. 2; v. 234; p. 75.
Burton, Elisha L., assignor of one-half to R. C. Burton, Thealka, Ky. Drill-bit. No. 1,211,537; Jan. 9; v. 234; p. 432.
Burton, George D., Boston, Mass. Dyeing vegetable fibers. No. 1,214,007; Jan. 30; v. 234; p. 1384.
Burton, Herbert, New York, N. Y. Support for engines. No. 1,211,077; Jan. 2; v. 234; p. 241.
Burton, Roscoe C. (See Burton, Elisha L., assignor.)
Burtt, Frank, Kalamazoo, Mich., assignor to Albaugh-Dover Co., Chicago, Ill. Driving or transmission gearing. No. 1,211,538; Jan. 9; v. 234; p. 432.
Bush, Charles A., assignor to Oshkosh Manufacturing Company, Oshkosh, Wis. Mixing-machine. No. 1,211,539; Jan. 9; v. 234; p. 433.
Bush, William H., Framingham, Mass. Flying-machine. No. 1,213,585; Jan. 23; v. 234; p. 1210.
Busick, William A., Belleville, Ill. Stove and range. No. 1,211,404; Jan. 9; v. 234; p. 386.
Butler, Henry G., Wellington, Kans. Machine for preparing a burning ballast-pile for covering. No. 1,212,323; Jan. 16; v. 234; p. 736.
Butler, Thomas F., Lorain, Ohio. Trap. No. 1,211,283; Jan. 2; v. 234; p. 313.
Butler, Willard M. (See Thie and Butler.)
Butler, Wilson W., *et al.* (See Gingras, Joseph N., assignor.)
Butts, Edward P., Springfield, Mass. Process and apparatus for drying. No. 1,212,014; Jan. 9; v. 234; p. 597.
Buttweiler, John R., Freeport, Minn. Steering device. No. 1,212,451; Jan. 16; v. 234; p. 780.
Byron, George, and C. Skipwith, Williams, Ariz. Railway-car step. No. 1,211,078; Jan. 2; v. 234; p. 242.
Byron Jackson Iron Works. (See Keating, John B., assignor.)
C. Ingber & Sons. (See Ingber, Nathaniel, assignor.)
C. A. Londellius & Sons Co. (See Londellius, Christian A., Jr., assignor.)
C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)
C. F. Burgess Laboratories. (See Burgess, Charles F., assignor.)
C. J. White Manufacturing Company, The. (See White, Charles J., assignor.)
C. V. Rote Brake Shoe Co. (See Rote, Charles V., assignor.)
C. W. Albright Company, The. (See Albright, Chester W., assignor.)
Cabanne, Julius R., Seattle, Wash. Tire-protector. No. 1,214,273; Jan. 30; v. 234; p. 1475.
Cabell, John L., Savannah, Ga. Sample mailing-package. No. 1,213,586; Jan. 23; v. 234; p. 1211.
Cadillac Motor Car Company. (See Parker, Clark W., assignor.)
Cadwell, Clarence J. (See Miller and Cadwell.)
Cael, Joseph D. (See Kimmey and Cael.)
Caffrey, James H., assignor to Asbestos Protected Metal Company, Beaver Falls, Pa. Apparatus for forming protected metal sheets. No. 1,212,324; Jan. 16; v. 234; p. 736.
Cahill, Arthur T., *et al.*, trustees. (See Cahill, Thaddeus, assignor.)
Cahill, George F., *et al.*, trustees. (See Cahill, Thaddeus, assignor.)
Cahill, Thaddeus, Holyoke, Mass., assignor, by mesne assignments, to E. Spear, E. H. Jackson, G. F., A. T., and T. Cahill, trustees. Art of and apparatus for generating and distributing music electrically. No. 1,213,803; Jan. 23; v. 234; p. 1283.
Cahill, Thaddeus, New York, N. Y., assignor, by mesne assignments, to E. Spear, E. H. Jackson, G. F., A. T., and T. Cahill, trustees. Art of and apparatus for generating and distributing music electrically. No. 1,213,804; Jan. 23; v. 234; p. 1283.
Cain, Raymond W. (See Mefferd, Earl, assignor.)
Cain, William B., Chicago, Ill. Loose-leaf-binder device. No. 1,211,672; Jan. 9; v. 234; p. 477.
Caldwell, Smith C., Roberts, Mont. Concrete culvert or bridge. No. 1,212,452; Jan. 16; v. 234; p. 780.
California Pipe Line Machine Co. (See Mahoney and Norris, assignors.)
Calkins, Charles H., Ludlow, Mass., assignor to Baush Machine Tool Company. Driving mechanism for motor-vehicles. No. 1,211,673; Jan. 9; v. 234; p. 477.
Calkins, Charles H., Ludlow, Mass., assignor to Baush Machine Tool Company. Composite gear. No. 1,212,608; Jan. 16; v. 234; p. 836.
Callaghan, Peter P., Lincoln, Cal. Chair. No. 1,212,453; Jan. 16; v. 234; p. 780.
Callahan, Thomas J., Dayton, Ohio. Duo-glazed sash. No. 1,211,079; Jan. 2; v. 234; p. 242.
Callan, George P. (See Bloomfield, Benjamin K., assignor.)
Calin, Maxmillan. (See Leu, Frederick, assignor.)
Calthrop, Everard R., London, England. Parachute. No. 1,213,332; Jan. 23; v. 234; p. 1122.
Calvert, George, London, England. Manufacture of formaldehyde. No. 1,213,740; Jan. 23; v. 234; p. 1261.
Calvin, Harvey D. and W. M., Colusa, Cal. Automobile-lock. No. 1,211,674; Jan. 9; v. 234; p. 477.
Calvin, William M. (See Calvin, Harvey D. and W. M.)
Cameron, Angus, Detroit, Mich. Bowling-pin-setting mechanism. No. 1,211,405; Jan. 9; v. 234; p. 386.
Cameron, John. (See Darrow, James B., assignor.)
Campbell, Colin, Rutherford, N. J. Steam-boiler. No. 1,211,912; Jan. 9; v. 234; p. 563.
Campbell, Colin, Yonkers, N. Y. Tire-armor. No. 1,213,072; Jan. 16; v. 234; p. 907.
Campbell, David W., assignor of one-half to J. A. Snoddy, Brownwood, Tex. Car-door fastener. No. 1,211,284; Jan. 2; v. 234; p. 313.
Campbell, Harry E., New York, N. Y. Metal window frame and sash. No. 1,211,913; Jan. 9; v. 234; p. 563.
Campbell, Harry E., New York, N. Y. Metal window frame and sash. No. 1,211,914; Jan. 9; v. 234; p. 564.
Campbell, Harry E., New York, N. Y. Metal window frame and sash. No. 1,211,915; Jan. 9; v. 234; p. 564.
Campbell, John K., Los Angeles, Cal. Folding-table cabinet. No. 1,210,415; Jan. 2; v. 234; p. 12.
Campbell, Leon J., Chicago, Ill., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass. Traverse mechanism for yarn-winding machines. No. 1,213,836; Jan. 30; v. 234; p. 1324.
Campbell, Oliver S. (See Edwards, Bruce V., assignor.)
Campbell, Sterling H., assignor to Railway Devices Company, St. Louis, Mo. Angle-cock holder. No. 1,212,184; Jan. 16; v. 234; p. 683.
Campbell, Wendell B., assignor to The Perkins-Campbell Company, Cincinnati, Ohio. Watch-holder. No. 1,214,274; Jan. 30; v. 234; p. 1475.
Campbell, Winfield M., Kansas City, Mo. Cooling and treating bread. No. 1,212,900; Jan. 16; v. 234; p. 937.
Canadian Knitting Company. (See Laroche, Olivier, assignor.)
Candler, Conway F., Orange, Cal. Pneumatic brake for automobiles. No. 1,213,457; Jan. 23; v. 234; p. 1166.
Canfield, Jesse C., Elkins, W. Va. Self-tightening bolt and nut. No. 1,212,126; Jan. 9; v. 234; p. 634.
Cannon, George B., Jr., Brooklyn, and F. W. Howard, New York, N. Y. Making umbrella-frames. No. 1,210,900; Jan. 2; v. 234; p. 180.
Cannon, W. L., *et al.* (See Speegle, William A., assignor.)
Canterbury, Florence, Canterbury, W. Va. Portable stove. No. 1,214,131; Jan. 30; v. 234; p. 1425.
Canton, Georges H. M., P. G. Unné, and E. J. J. Salmson, Billancourt, France. Lubricating system. No. 1,211,406; Jan. 9; v. 234; p. 387.
Cantrell, Edwin B. (See Miller and Cantrell.)
Cap-Hold. (See Clark, Charles, assignor.)
Capian, August, Denver, Colo. Multiple-picture-displaying device. No. 1,211,540; Jan. 9; v. 234; p. 433.
Carle, Robert G., Woonsocket, R. I. Pulley. No. 1,211,541; Jan. 9; v. 234; p. 433.
Carle, Robert G., Woonsocket, R. I. Spindle-driving mechanism. No. 1,213,741; Jan. 23; v. 234; p. 1261.
Carleton, Charles H., assignor of one-half to R. Whaite, San Francisco, Cal. Copy-holder. No. 1,214,132; Jan. 30; v. 234; p. 1426.
Carle, William H., Yuma, Colo. Currycomb. No. 1,213,742; Jan. 23; v. 234; p. 1262.
Carlson, Amanda W., Brooklyn, N. Y. Foldable wardrobe. No. 1,211,407; Jan. 9; v. 234; p. 387.
Carlson, Carl A., and H. E. Hill, assignors to Morris & Company, Chicago, Ill. Machine for interlacing curled hair. No. 1,211,821; Jan. 9; v. 234; p. 529.
Carnegie, Alfred Q. (See Parsons, Carnegie, and Cook.)

Carney, Thomas M., Kansas City, Mo. Shelf. No. 1,211,286; Jan. 2; v. 234; p. 314.
Carolin, Edward M. D., Leeds, England. Ventilated boot or shoe. No. 1,211,542; Jan. 9; v. 234; p. 434.
Carpenter, Howard H., Altadena, Cal. Refrigerating apparatus. No. 1,212,127; Jan. 9; v. 234; p. 635.
Carr, Minus, Maud, Miss. Switch. No. 1,213,073; Jan. 16; v. 234; p. 997.
Carraway, Charlie M., Shongaloo, La. Plow attachment. No. 1,210,901; Jan. 2; v. 234; p. 180.
Carrick, Robert L. (See Adams and Carrick.)
Carrie, Frank G. (See Rossiter and Thorne, assignors.)
Carson, Orange J., Farmington, N. Mex. Strainer-holder. No. 1,213,743; Jan. 23; v. 234; p. 1262.
Carter, Charles D., New York, and G. F. Bibb, Troy, N. Y., assignors to The Floyd-Wells Company, Royersford, Pa. Oven for coal and gas stoves. No. 1,211,916; Jan. 9; v. 234; p. 564.
Carter, George E., Apex, N. C. Door-check. No. 1,211,374; Jan. 2; v. 234; p. 340.
Carter, J. W. *et al.* (See Ross, Albert, assignor.)
Carter, Russell S., Hewlett, N. Y., assignor to Ingersoll-Rand Company, Jersey City, N. J. Drill-bit and sectional rod therefor. No. 1,211,080; Jan. 2; v. 234; p. 242.
Cary Manufacturing Co. (See Cary and Brand, assignors.)
Cary, Spencer C., and H. H. Brand, assignors to Cary Manufacturing Co., Brooklyn, N. Y. Machine for producing corrugated fasteners. No. 1,210,416; Jan. 2; v. 234; p. 13.
Cary, Spencer C., and H. H. Brand, assignors to Cary Manufacturing Co., Brooklyn, N. Y. Making saw-tooth fasteners. No. 1,210,417; Jan. 2; v. 234; p. 13.
Casablancas, Fernando, Sabadell, Spain. Spinning-frame. No. 1,213,744; Jan. 23; v. 234; p. 1262.
Case, Arthur E., Chicago, Ill. Signal device for telephone systems. No. 1,213,837; Jan. 30; v. 234; p. 1325.
Case, Francis M., assignor to J. C. Hub, Cleveland, Ohio. Apparatus for forming tab-stock. No. 1,211,081; Jan. 2; v. 234; p. 242.
Case, Francis M., assignor to J. C. Hub, Cleveland, Ohio. Apparatus for making tab-cards. No. 1,211,082; Jan. 2; v. 234; p. 243.
Case, Oliver M. (See French, Franklin E., assignor.)
Case, William L. (See Flatter and Case.)
Casey-Hedges Co., The. (See Stimmel, Frederick C., assignor.)
Cash, Albert S., and R. H. Briscoe, Elizabethtown, Ky. Rail. No. 1,213,745; Jan. 23; v. 234; p. 1262.
Cashman, Denis F., Dayton, Ohio. Control for aerial vehicles. No. 1,210,418; Jan. 2; v. 234; p. 14.
Casper, Joseph H., Greeley, Kans. Reversible ratchet-wrench. No. 1,214,423; Jan. 30; v. 234; p. 1526.
Cassman, John F., Logansport, Ind. Fence-gate. No. 1,212,015; Jan. 9; v. 234; p. 598.
Castle, Egbert H., Quincy, Ill. Combination cooking-stove. No. 1,214,424; Jan. 30; v. 234; p. 1527.
Caston, David L., Commerce, Ga. Pipe-coupling. No. 1,214,425; Jan. 30; v. 234; p. 1527.
Cater, Theodore T., Columbus, Kans. Dental-vulcanizer attachment. No. 1,212,016; Jan. 9; v. 234; p. 598.
Cathcart, William F., Chicago, Ill. Hydrocarbon generator and burner. No. 1,210,597; Jan. 2; v. 234; p. 75.
Cavell, Ray C. (See Klauber and Cavell.)
Caven, Alva H., Youngwood, Pa. Electric signal system. No. 1,211,083; Jan. 2; v. 234; p. 243.
Cayo, Ernest P., Beeville, Tex. Cotton-harvester. No. 1,213,151; Jan. 23; v. 234; p. 1058.
Cecka, Franz, assignor to Schubert & Salzer Maschinenfabrik Aktiengesellschaft, Chemnitz, Germany. Apparatus for making reinforced knitted goods. No. 1,213,333; Jan. 23; v. 234; p. 1123.
Cederstrom, Emil B., Detroit, Mich., assignor to Morgan & Wright. Manipulating and handling rolls of fabric. No. 1,210,902; Jan. 2; v. 234; p. 181.
Central Railway Signal Company. (See Dutcher, Frank, assignor.)
Centrifugal Machinery Company. (See Weeks, McCollom, and Haskell, assignors.)
Cericola, Joseph C., Brooklyn, assignor of one-half to H. M. Taylor, Mount Sinai, N. Y. Illuminating device for life-lines. No. 1,214,275; Jan. 30; v. 234; p. 1476.
Cerney, James, Jefferson Barracks, Mo. Rest for toilet-seats. No. 1,210,419; Jan. 2; v. 234; p. 14.
Cessna, John, Locust Grove, Ohio. Anchor for wire-stretchers. No. 1,211,084; Jan. 2; v. 234; p. 243.
Chabot, Joseph, assignor to Geo. L. Paine Company, North Attleboro, Mass. Snap-catch. No. 1,214,276; Jan. 30; v. 234; p. 1476.
Chadwick, George B., Portsmouth, N. H. Reamer having detachable blades. No. 1,210,903; Jan. 2; v. 234; p. 181.
Chadwick, George B., Portsmouth, N. H. Adjustable reamer. No. 1,210,904; Jan. 2; v. 234; p. 181.
Chadwick, John B., and P. Hollingshead, Runcorn, assignors to The Salt Union, Limited, Liverpool, England. Working gas-producers of the Mond type. No. 1,210,598; Jan. 2; v. 234; p. 75.
Chadwick, Lee S., East Cleveland, assignor to The Cleveland Foundry Company, Cleveland, Ohio. Stove. No. 1,212,901; Jan. 16; v. 234; p. 938.
Chadwick, Lee S., East Cleveland, assignor to The Cleveland Foundry Company, Cleveland, Ohio. Lifting device for combustion-tubes. No. 1,212,902; Jan. 16; v. 234; p. 938.
Chalman, John E., assignor to Union Special Machine Company, Chicago, Ill. Folding and guiding attachment for sewing-machines. No. 1,214,133; Jan. 30; v. 234; p. 1426.
Chamberlin, Clarence P., and C. T. Fezzey, Detroit, Mich.; said Chamberlin assignor to said Fezzey. Double-compartment package for mailing purposes. No. 1,212,128; Jan. 9; v. 234; p. 635.
Chambers, Allison R., New Glasgow, Nova Scotia, Canada. Controlling means for internal-combustion engines. No. 1,213,152; Jan. 23; v. 234; p. 1058.
Chambers, John A., Newburg, Mo. Apparatus for receiving and delivering mail. No. 1,213,458; Jan. 23; v. 234; p. 1167.
Chandler, Charles D. (See Roland and Chandler.)
Chandler, Nathaniel M., Woodland, Cal. Siphon. No. 1,211,085; Jan. 2; v. 234; p. 244.
Chantler, James D., Freeport, N. Y. Planter. (Reissue.) No. 14,238; Jan. 2; v. 234; p. 342.
Chapin, Levi J., Luverne, assignor of one-half to W. E. McDonald, Algona, Iowa. Excavator. No. 1,210,760; Jan. 2; v. 234; p. 131.
Chapman, Charles H., deceased, Winchester, Mass.; F. F. B. Chapman, administrator. Ball-bearing. No. 1,213,805; Jan. 23; v. 234; p. 1284.
Chapman, Edward P., Findlay, Ill. Staple-set. No. 1,213,334; Jan. 23; v. 234; p. 1123.
Chapman, Frank F. B., administrator. (See Chapman, Charles H.)
Chapman, Matthew T., assignor to The American Well Works, Aurora, Ill. Pumping apparatus. No. 1,211,408; Jan. 9; v. 234; p. 387.
Chappell, Marvin L. (See Mann and Chappell.)
Charles H. Scammell Company. (See Scammell, Charles H., assignor.)
Charles Taylor Sons Company, The. (See Taylor and Runyan, assignors.)
Chatfield, Franklin, Minneapolis, Minn., assignor to Rose Patch and Label Company, Grand Rapids, Mich. Machine for feeding and cutting labels. No. 1,210,761; Jan. 2; v. 234; p. 132.
Chatfield, Franklin, Minneapolis, Minn., assignor to Rose Patch and Label Company, Grand Rapids, Mich. Label-feeding machine. No. 1,211,543; Jan. 9; v. 234; p. 434.
Chatfield, Franklin, assignor to Northwestern Knitting Company, Minneapolis, Minn. Lady's undergarment. No. 1,211,917; Jan. 9; v. 234; p. 565.
Chauncey, Leon L. (See Eggleston and Chauncey.)
Chemische Fabrik Griesheim-Elektron. (See Specketer and Hofmann, assignors.)
Cheney, Charles C., Boston, Mass. Stud for shoe-tongues. No. 1,211,544; Jan. 9; v. 234; p. 434.
Cheney, Harry F., Los Angeles, Cal. Preparing and preserving fruit-juices. No. 1,214,134; Jan. 30; v. 234; p. 1426.
Chenoweth, Arthur N., Waterbury, Conn. Automatic gear-shift for automobiles. No. 1,213,794; Jan. 23; v. 234; p. 1280.
Chernyshoff, Alexander, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Lightning-arrester. No. 1,211,822; Jan. 9; v. 234; p. 530.
Chernyshoff, Alexander, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Lightning-arrester. No. 1,212,129; Jan. 9; v. 234; p. 636.
Cherry, Peterson H., Los Angeles, Cal. Toy. No. 1,212,903; Jan. 16; v. 234; p. 939.
Chester, William E., Norwood, Ohio. Removable artificial dental crown. No. 1,213,587; Jan. 23; v. 234; p. 1241.
Chesterton, Cyril A., Somerset, Manitoba, Canada. Envelop. No. 1,212,904; Jan. 16; v. 234; p. 939.
Chetwynd, Godfrey J. B., West Riding, England. Manufacture of steel. No. 1,211,545; Jan. 9; v. 234; p. 435.
Chicago Electric Meter Company. (See Hall, Chester I., assignor.)
Chicago Railway Signal and Supply Company. (See Vogel, Eugene W., assignor.)
Chicago Title & Trust Co., trustee. (See Hansen, Augie L., assignor.)
Childa, Tony N. (See McCuaig and Childa.)
Child, Guy B., Chicago, Ill., assignor to American Stove Company, St. Louis, Mo. Cooking-oven. No. 1,211,086; Jan. 2; v. 234; p. 244.
Chipman, Louis N. (See Elliott, Henry B., assignor.)
Chittenden, William R., Chicago, Ill. Mechanical movement. No. 1,211,409; Jan. 9; v. 234; p. 388.
Chmelar, Joseph M., Roy, Mont. Wire-gate-holding device. No. 1,212,905; Jan. 16; v. 234; p. 939.
Christ, Charles E., Tamaqua, Pa. Gravity discharge-gate for separating apparatus. No. 1,213,746; Jan. 23; v. 234; p. 1263.
Christensen, Hans, Brownsville, Wash. Portable fish-trap. No. 1,213,459; Jan. 23; v. 234; p. 1167.
Christensen, Niels A., Milwaukee, Wis. Controlling-valve for self-starters. No. 1,211,410; Jan. 9; v. 234; p. 388.
Christian, Horace B. (See Cornish, Harry S., assignor.)
Christy, Charles. (See Hofmann and Christy.)
Chryst, William A. (See Kettering and Chryst.)
Church, Melvin B., Grand Rapids, Mich. Automobile for collecting and distributing. No. 1,210,762; Jan. 2; v. 234; p. 132.
Cincinnati Galvanizing Company, The. (See Fluharty, Allan M., assignor.)
Cincinnati Galvanizing Company, The. (See Schott, Louis, assignor.)

Ciselet, Edgard, and C. Deguide, Brussels, Belgium. Treatment of natural calcium phosphate. No. 1,214,008; Jan. 30; v. 234; p. 1384.
Citizens Savings and Trust Co., The, executor. (See Glauber, Joseph H.)
Citroen, André, assignor to Societe Anonyme Des Engrenages Citroen, Paris, France. Submarine steering apparatus. No. 1,213,153; Jan. 23; v. 234; p. 1058.
Clark, Charles, assignor to Cap-Hold, Incorporated, New York, N. Y. Cap-retainer for deformable tubes, &c. No. 1,210,599; Jan. 2; v. 234; p. 76.
Clark, Charles, assignor to Cap-Hold, Incorporated, New York, N. Y. Cap-retainer for deformable tubes. No. 1,210,600; Jan. 2; v. 234; p. 76.
Clark, David A., Baltimore, Md. Metal-rolling machine. No. 1,212,325; Jan. 16; v. 234; p. 737.
Clark, Edward F., assignor to W. G. Clark & Company, North Attleboro, Mass. Chain. No. 1,214,135; Jan. 30; v. 234; p. 1427.
Clark, Erving D., Syracuse, N. Y. Means for converting kerosene-oil into explosive gas for internal-combustion engines. No. 1,211,087; Jan. 2; v. 234; p. 244.
Clark, Frederick S. (See Dye and Clark.)
Clark, George C., Mishawaka, Ind. Molding apparatus. No. 1,210,420; Jan. 2; v. 234; p. 14.
Clark, George C., Mishawaka, Ind. Molding apparatus. No. 1,210,421; Jan. 2; v. 234; p. 15.
Clark, James M., assignor of one-fifth to D. Guerry, Macon, Ga. Electric railway. No. 1,211,088; Jan. 2; v. 234; p. 245.
Clark, James V., Davis, W. Va. Mine-car. No. 1,211,089; Jan. 2; v. 234; p. 245.
Clark, Joel B., Bancroft, Iowa. Trench-filling machine. No. 1,212,906; Jan. 16; v. 234; p. 940.
Clark, Joseph G., Bullard, Tex. Wire-stretcher. No. 1,214,136; Jan. 30; v. 234; p. 1427.
Clark, Morton, Seattle, Wash. Poultry drinking-fountain. No. 1,210,601; Jan. 2; v. 234; p. 76.
Clark, Norris E., Plainville, Conn. Metal corner-bead. No. 1,212,740; Jan. 16; v. 234; p. 884.
Clark, Rufus B., Liberty Center, Ind. Door for silos. No. 1,211,287; Jan. 2; v. 234; p. 314.
Clark, Seth W., Findlay, Ohio. Sand-valve for deep-well pumps. No. 1,212,454; Jan. 16; v. 234; p. 780.
Clark, Stuart J., assignor of one-eighth to O. A. Wineman, one-eighth to H. Harris, one-eighth to C. Brenner, one-eighth to C. E. Ogg, one-eighth to D. T. Queen, and one-eighth to L. J. Foster, Auburn, Ill. Armored vehicle. No. 1,213,074; Jan. 16; v. 234; p. 997.
Clark, Wilbert E., Toronto, Ontario, Canada. Temperature-booster for hot-water heating systems. No. 1,213,460; Jan. 23; v. 234; p. 1167.
Clarke, Ralph S., East Walpole, Mass., assignor to Bird Machine Company. Pulp-screen. No. 1,210,905; Jan. 2; v. 234; p. 182.
Clarke, Ralph S., East Walpole, Mass., assignor to Bird Machine Company. Pulp-screen. No. 1,210,906; Jan. 2; v. 234; p. 182.
Clarke, Ralph S., East Walpole, Mass., assignor to Bird Machine Company. Save-all. No. 1,210,907; Jan. 2; v. 234; p. 182.
Claude, Georges, assignor to Societe L'Air Liquide, (Societe Anonyme Pour L'Etude Et L'Exploitation Des Procedes Georges Claude,) Paris, France. Separation of the constituents of gaseous mixtures. No. 1,212,455; Jan. 16; v. 234; p. 781.
Claude, Georges, assignor to Societe L'Air Liquide (Societe Anonyme Pour L'Etude Et L'Exploitation Des Procedes Georges Claude), Paris, France. Purification of gases. No. 1,212,456; Jan. 16; v. 234; p. 781.
Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,210,602; Jan. 2; v. 234; p. 76.
Clausen, Henry P., Mount Vernon, assignor to Western Electric Company, Incorporated, New York, N. Y. Calling device. No. 1,210,603; Jan. 2; v. 234; p. 77.
Clausius, Albert, Dessau in Anhalt, B. Schöner, Barackenlager Rothemark, near Wittenberg, and O. Siebert, Dessau in Anhalt, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Disazo dyes. No. 1,213,075; Jan. 16; v. 234; p. 998.
Claussen, Edward E., and J. C. Hammer, Hartford, Conn. Floor or ceiling plate. No. 1,212,609; Jan. 16; v. 234; p. 836.
Clavel, René, Basel, Switzerland. Sizing paper. No. 1,211,288; Jan. 2; v. 234; p. 314.
Clawson, Leonard E., San Francisco, Cal. Resilient tire. No. 1,214,137; Jan. 30; v. 234; p. 1427.
Claxton, William R., Bartow, Fla. Legging. No. 1,211,411; Jan. 9; v. 234; p. 389.
Clayton, Alfred P., Brooklyn, assignor to N. Y. Sanitary Food Corp., New York, N. Y. Sandwich-machine. No. 1,211,375; Jan. 2; v. 234; p. 340.
Clayton, William R., Chicago, Ill. Apparatus for preserving bodies. No. 1,213,335; Jan. 23; v. 234; p. 1123.
Clehm, William H., Glassboro, N. J. Lubricating device. No. 1,213,747; Jan. 23; v. 234; p. 1263.
Clemenger, Harry G. (See Strong and Clemenger.)
Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to J. R. Garfield, trustee, Cleveland, Ohio. Telephone-exchange system. No. 1,210,604; Jan. 2; v. 234; p. 77.
Clemetson, Adolph, and H. G. Holloway, Howard, S. D. Stock-releasing device. No. 1,212,017; Jan. 9; v. 234; p. 598.
Cleveland Electric and Machine Manufacturing Company, The. (See Manhard, Alonzo, assignor.)
Cleveland Foundry Company, The. (See Chadwick, Lee S., assignor.)
Cleveland Galvanizing Works, The. (See Edeburn, Alfred N., assignor.)
Cleveland, Novie P. (See Graves, Fredrick P., assignor.)
Cleveland Steel Valve Co., The, *et al.* (See Redding, Harry B., assignor.)
Clevenger, Galen H., Palo Alto, Cal. Flotation process of concentrating. No. 1,212,130; Jan. 9; v. 234; p. 636.
Clinton Cam Company. (See King and Whitlock, assignors.)
Clinton, Frank, Milan, Ind. Silo. No. 1,214,426; Jan. 30; v. 234; p. 1527.
Clippinger, Levi, Llano, Tex. Coop-support. No. 1,211,546; Jan. 9; v. 234; p. 435.
Clough, Alfred N. (See Clough and Spring.)
Clough, Charles W. and A. N., and W. O. Spring, Los Angeles, Cal. Combination folding cot and table. No. 1,210,605; Jan. 2; v. 234; p. 78.
Cloyd, James H. S., Tilden, Nebr. Combined staging-clamp and shingle-bracket. No. 1,210,763; Jan. 2; v. 234; p. 132.
Cluett, Peabody & Co. (See Hurd, Hubbard F., assignor.)
Clymer, William R., Cleveland, Ohio, assignor to National Carbon Company. Battery-lamp. No. 1,212,907; Jan. 16; v. 234; p. 940.
Coate, Albert P., Middletown, Ohio. Means for grinding and polishing rolling-mill rolls. No. 1,212,131; Jan. 9; v. 234; p. 636.
Coates, Frederick, Rochester, N. Y. Labeling, filling, and stoppering machine. No. 1,211,289; Jan. 2; v. 234; p. 314.
Coats, Howard L., Hammond, N. Y. Gate. No. 1,211,090; Jan. 2; v. 234; p. 245.
Cobb, Edith B., Cleveland, Ohio. Ash-tray. No. 1,212,185; Jan. 16; v. 234; p. 684.
Cobb, Henry Z., Winchester, Mass., assignor to United States Rubber Company, New Brunswick, N. J. Manufacture of tire-shoes. No. 1,211,918; Jan. 9; v. 234; p. 565.
Cobb, Henry Z., Winchester, Mass., assignor to United States Rubber Company, New Brunswick, N. J. Apparatus for vulcanizing tire-shoes. No. 1,214,277; Jan. 30; v. 234; p. 1476.
Cobb, Hurley M. (See Lemp and Cobb.)
Cobel, George W., Brookings, S. D. Mailing-card. No. 1,213,748; Jan. 23; v. 234; p. 1263.
Cochran, Fred J., Mount Vernon, Ill. Ball-bearing axle. No. 1,210,422; Jan. 2; v. 234; p. 15.
Cochrane, Wilbur A. (See Schneider, William G., assignor.)
Cock, Gerald A., London, England, assignor to E. A. Bigelow and E. A. Bigelow, Jr., New York, N. Y. Detonator. No. 1,211,919; Jan. 9; v. 234; p. 565.
Codd, William C., Baltimore, Md. Grate-bar for marine and stationary boilers. No. 1,212,018; Jan. 9; v. 234; p. 599.
Coe, Elmer R., Wilkinsburg, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-signal. No. 1,211,675; Jan. 9; v. 234; p. 478.
Coe, Herbert M., assignor of one-half to G. W. Dobson, San Jose, Cal. Sleeping-balcony. No. 1,212,019; Jan. 9; v. 234; p. 599.
Cohen, Henry D., Newark, N. J. Automobile-headlight glass. No. 1,213,154; Jan. 23; v. 234; p. 1059.
Cohen, Philip, New York, N. Y. Sanitary garbage-can. No. 1,213,588; Jan. 23; v. 234; p. 1211.
Colt-Kitsee Co., The. (See Kitsee, Isidor, assignor.)
Cokus, Michael, Frackville, Pa. Chain. No. 1,214,427; Jan. 30; v. 234; p. 1527.
Cole, Frederick W., Newton Highlands, assignor to Gamewell Fire Alarm Telegraph Co., Newton Upper Falls, Mass. Binding-post. No. 1,210,764; Jan. 2; v. 234; p. 133.
Cole, Frederick W., Newton Highlands, assignor to Gamewell Fire Alarm Telegraph Company, New York, N. Y. Signal-box. No. 1,210,765; Jan. 2; v. 234; p. 133.
Cole, Henry J., Gainesville, Tex. Sand-mill toy. No. 1,213,076; Jan. 16; v. 234; p. 998.
Cole, Ira, assignor to The Rapid Bottle Washer Co., Delphos, Ohio. Bottle-washing machine. No. 1,214,278; Jan. 30; v. 234; p. 1477.
Coleman, Clyde J., New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc. Polishing diamonds. No. 1,214,009; Jan. 30; v. 234; p. 1384.
Coleman, John P., Edgewood borough, Pa., assignor, by mesne assignments, to The Position-Light Signal Company. Signal. No. 1,211,676; Jan. 9; v. 234; p. 478.
Collet, Albert, assignor to Société Maurice et Pierre Collet et Cie., Paris, France. Machine for grooving and boring railway-ties. No. 1,210,908; Jan. 2; v. 234; p. 183.
Collier, Harry G., Muncie, Ind. Fastener for car-doors. No. 1,213,155; Jan. 23; v. 234; p. 1059.
Collier, John F., South Aberdeen, Wash. Loading apparatus. No. 1,213,077; Jan. 16; v. 234; p. 999.
Collier, John J., Irwin, Pa. Mine-shaft gate. No. 1,211,412; Jan. 9; v. 234; p. 389.

Collings, William A. (See Heidenreich and Collings.)
Collings, William A., Kansas City, Mo. Connector for reinforcing-rods. No. 1,213,589; Jan. 23; v. 234; p. 1212.
Collins, Frank W., Cortland, N. Y. Vehicle-robe. No. 1,211,290; Jan. 2; v. 234; p. 315.
Collins, John P. (See Henschen, William H., assignor.)
Collins, Samuel F. (See Barth and Collins.)
Collinson, John W., Greenwood, assignor to A. J. Lloyd Company, Boston, Mass. Instrument for testing lenses. No. 1,210,606; Jan. 2; v. 234; p. 78.
Colman, Howard D., assignor, by mesne assignments, to Barber-Colman Company, Rockford, Ill. Machine for preparing warps for weaving. No. 1,211,677; Jan. 9; v. 234; p. 478.
Colman, Royal C. (See Jillson, Edward L. and W. R., Jr., assignors.)
Colonial Trust Company, The, trustee. (See Bailey, James N., assignor.)
Colton, Edward A., Galesburg, Ill. Trolley-pole-controlling device. No. 1,212,326; Jan. 16; v. 234; p. 737.
Colton, Richard V. (See Kotter, Colton, and Schwerin.)
Combination Machine Company. (See Peterson, Jonathan, assignor.)
Comeau, Augustine F., assignor of one-half to J. Gaudet, Portland, Me. Window-screen and similar device. No. 1,211,920; Jan. 9; v. 234; p. 566.
Coming Manufacturing Company, The. (See Bunnell, Morton G., assignor.)
Commercial Machine Company. (See Ames, Arthur N., assignor.)
Compton, Clarence D., New York, N. Y. Poppet-valve. No. 1,213,590; Jan. 23; v. 234; p. 1212.
Compton, Glenn A., Minneapolis, Minn. Collapsible arch-form. No. 1,211,291; Jan. 2; v. 234; p. 315.
Compton, Paul, St. Louis, Mo. Advertising device. No. 1,212,741; Jan. 16; v. 234; p. 885.
Computing Scale Company, The. (See Hopkinson and Maltby, assignors.)
Condé, Max, assignor to H. Korber, New York, N. Y. Game apparatus. No. 1,213,337; Jan. 23; v. 234; p. 1124.
Cone, Lee E. H., assignor to The Dow Chemical Company, Midland, Mich. Making indoxyl and derivatives. No. 1,211,413; Jan. 9; v. 234; p. 389.
Conklin, Elon K., Hartford, Mich. Apparatus for erecting concrete silos and similar structures. No. 1,213,838; Jan. 30; v. 234; p. 1325.
Conley, George W., Wheaton, Ill. Tobacco-pipe. No. 1,213,156; Jan. 23; v. 234; p. 1059.
Conn, Charles G. (See Foster, Eugene L., assignor.)
Conn, David G., Roseburg, Oreg. Stanchion. No. 1,214,428; Jan. 30; v. 234; p. 1528.
Connelly, James E., Fort Wayne, Ind. Loom filler-carrier. No. 1,211,678; Jan. 9; v. 234; p. 479.
Conner, May, Garden Grove, Iowa. Combined egg-beater and potato-masher. No. 1,214,010; Jan. 30; v. 234; p. 1384.
Conner, William, Philadelphia, Pa. Hat. No. 1,212,132; Jan. 9; v. 234; p. 630.
Connor, Herschel M., San Francisco, Cal., assignor to Standard Light Company, Savannah, Ga. Vapor-burner. No. 1,210,423; Jan. 2; v. 234; p. 15.
Conrader, Rudolph, Erie, Pa. Polishing-machine. No. 1,213,591; Jan. 23; v. 234; p. 1212.
Conrod, Joshua C., Cement, Okla. Educational appliance. No. 1,213,839; Jan. 30; v. 234; p. 1326.
Constantinesco, Gogu, assignor of one-half to W. Haddon, London, England. Hydraulic power transmission. No. 1,211,679; Jan. 9; v. 234; p. 479.
Constantinesco, Gogu, assignor of one-half to W. Haddon, London, England. Hydraulic transmission. No. 1,211,680; Jan. 9; v. 234; p. 479.
Contant, Isaac, Jr., Lodi, N. J. Attachment for pens. No. 1,212,020; Jan. 9; v. 234; p. 599.
Conway, Daniel P. (See Dowling, Francis J., assignor.)
Conway, William F., assignor to Troy Laundry Machinery Company, Ltd., Chicago, Ill. Sheet-metal box. No. 1,213,157; Jan. 23; v. 234; p. 1060.
Cook, Albert E., Odebolt, Iowa, and T. Van Tuyl, Kankakee, Ill.; said Van Tuyl assignor to said Cook. Convertible internal-combustion engine. No. 1,213,840; Jan. 30; v. 234; p. 1326.
Cook, Albert E., Odebolt, Iowa, and T. Van Tuyl, Kankakee, Ill.; said Van Tuyl assignor to said Cook. Opposed convertible internal-combustion engine. No. 1,213,841; Jan. 30; v. 234; p. 1326.
Cook, Albert E., and T. Van Tuyl, Kankakee, Ill.; said Van Tuyl assignor to said Cook. Plowing-tractor. No. 1,213,842; Jan. 30; v. 234; p. 1327.
Cook, Blake C., and E. J. Kelly, Youngstown, Ohio. Safety draw-bar adjuster. No. 1,211,921; Jan. 9; v. 234; p. 566.
Cook, Edward W., Galion, Ohio. Motor-plow. No. 1,213,336; Jan. 23; v. 234; p. 1123.
Cook, Eugene F., assignor to Harward M'f'g Company, St. Louis, Mo. Packing-ring. No. 1,214,429; Jan. 30; v. 234; p. 1528.
Cook, Russell D., Salt Lake City, Utah. Attachment for shearing-machines. No. 1,214,430; Jan. 30; v. 234; p. 1528.
Cook, Stanley S. (See Parsons, Carnegie, and Cook.)
Cook, Stanley S. (See Parsons and Cook.)
Cook, Ulysses G., Casey, Ill. Collar and necktie retainer. No. 1,211,547; Jan. 9; v. 234; p. 435.
Cook, Walter S. (See Downs and Cook.)
Cooley, Jerome E., Manhattan, Kans., assignor to Automatic Electric Company, Chicago, Ill. Automatic telephone system. No. 1,212,908; Jan. 16; v. 234; p. 940.
Coolidge, William D., Schenectady, N. Y., assignor to General Electric Company. Cathode-ray device. No. 1,211,091; Jan. 2; v. 234; p. 245.
Coolidge, William D., Schenectady, N. Y., assignor to General Electric Company. X-ray tube. No. 1,211,092; Jan. 2; v. 234; p. 246.
Coolidge, William D., Schenectady, N. Y., assignor to General Electric Company. Electron-discharge apparatus and operating the same. No. 1,211,376; Jan. 2; v. 234; p. 340.
Cooney, Robert L., Atlanta, Ga. Stationary fire-extinguisher system. No. 1,213,078; Jan. 16; v. 234; p. 999.
Cooney, Robert L., Atlanta, Ga. Fire-extinguisher system. No. 1,213,749; Jan. 23; v. 234; p. 1263.
Cooper, Albert N., Davis, Cal. Pump. No. 1,213,461; Jan. 23; v. 234; p. 1168.
Cooper, Charles L., Moran, Kans. Vulcanizer. No. 1,212,742; Jan. 16; v. 234; p. 885.
Cooper Hewitt Electric Co. (See Thomas, Percy H., assignor.)
Cooper, James W., Mayesville, S. C. Fruit and potato gatherer. No. 1,212,909; Jan. 16; v. 234; p. 941.
Cooper, Joseph. (See Frank and Cooper.)
Cooper, Nathan, Brooklyn, N. Y. Steam-boiler or fluid-heater. No. 1,210,766; Jan. 2; v. 234; p. 133.
Cope, Lorenzo S. (See Brunner and Cope.)
Copersito, Anthony F., Brooklyn, N. Y. Fireproof casing for moving-picture films. No. 1,210,909; Jan. 2; v. 234; p. 183.
Corey, Robert B., Edgewood Park, Pa. Cementing or case-hardening material. No. 1,211,093; Jan. 2; v. 234; p. 246.
Cornelius, Leroy D. (See Knowles and Cornelius.)
Cornett, James M., Kewanee, Ill. Hog-sty. No. 1,212,910; Jan. 16; v. 234; p. 941.
Cornish, Harry S., New York, N. Y., assignor of one-third to H. B. Christian, Richmond, Va. Liquid-dispensing apparatus. No. 1,212,186; Jan. 16; v. 234; p. 684.
Corrall, Herbert, Helensburgh, Scotland, assignor to The Singer Manufacturing Company. Power-transmission device. No. 1,211,292; Jan. 2; v. 234; p. 315.
Corrall, Herbert, Helensburgh, Scotland, assignor to The Singer Manufacturing Company. Power-transmitter. No. 1,211,293; Jan. 2; v. 234; p. 316.
Cory, Fred P., assignor to The McClure Company, Saginaw, Mich. Spline-dowel for silo-staves. No. 1,212,327; Jan. 16; v. 234; p. 738.
Costabile, Lucy. (See Kaplan, Arthur, assignor.)
Coté, Arthur, Lyon, France. Buckle. No. 1,212,828; Jan. 16; v. 234; p. 738.
Cothern, Samuel I., Herrick, Ill. Mold. No. 1,214,431; Jan. 30; v. 234; p. 1529.
Cottrell, William, assignor to Benjamin Electric Manufacturing Company Chicago, Ill. Safety device for presses. No. 1,212,187; Jan. 16; v. 234; p. 685.
Couch, Forrest J. (See Kane and Couch.)
Cougill, Charles E., assignor of one-half to R. M. Tabor, Kalamazoo, Mich. Furnace. No. 1,214,279; Jan. 30; v. 234; p. 1477.
Coulbourn, Jacob N., Federalsburg, Md. Scalding apparatus. No. 1,213,843; Jan. 30; v. 234; p. 1327.
Couper, Richard H., Newark, N. J. Paint-box and support. No. 1,212,188; Jan. 16; v. 234; p. 685.
Courts, Benjamin D., assignor, by mesne assignments, to The Washtik Company, Toledo, Ohio. Sanitary mattress. No. 1,211,548; Jan. 9; v. 234; p. 436.
Cowell, John W., Chicago, Ill. Screw-holding device. No. 1,212,743; Jan. 16; v. 234; p. 885.
Cox, Charles F., Bridgeton, N. J. Gathering glass. No. 1,212,189; Jan. 16; v. 234; p. 686.
Craft, Edward B., Hackensack, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone desk seat. No. 1,210,424; Jan. 2; v. 234; p. 16.
Craig, Edward, Albion, Ill. Oil-burner. No. 1,214,432; Jan. 30; v. 234; p. 1529.
Craig, Edward, St. Joseph, Mich., assignor, by mesne assignments, to Wirebounds Patents Company, Chicago, Ill. Stapling-machine. No. 1,211,823; Jan. 9; v. 234; p. 530.
Crain, John W., Winchester, Ky. Hemp-brake. No. 1,213,750; Jan. 23; v. 234; p. 1264.
Craine, William, Brookfield, N. Y. Silo. No. 1,212,911; Jan. 16; v. 234; p. 941.
Cramer, George A., Garrett, Ind. Foot-rest. No. 1,211,824; Jan. 9; v. 234; p. 531.
Crampton, Archie H., Chicago, Ill. Latch. No. 1,211,549; Jan. 9; v. 234; p. 436.
Crandall Engineering Company. (See Crandall, James L., assignor.)
Crandall, James L., Malden, assignor to Crandall Engineering Company, East Boston, Mass. Railway dry-dock. No. 1,210,425; Jan. 2; v. 234; p. 17.
Crane Company. (See Doolittle, William W., assignor.)
Crane, Ernest M., and C. R. Pelton, Detroit, Mich. Cabinet for electrical appliances. No. 1,214,433; Jan. 30; v. 234; p. 1529.

Crane Manufacturing Company. (See Perkins, Charles H., assignor.)
Crane, Samuel G., Toledo, Ohio, assignor to Toledo Scale Company, Jersey City, N. J. Scale. No. 1,214,011; Jan. 30; v. 234; p. 1385.
Crane, Warren N. (See Horne and Crane.)
Crangle, John P., *et al.* (See Powell, Forrest M., assignor.)
Cranska Thread Company. (See Hayes, Charles E., assignor.)
Craven, James F., Pittsburgh, Pa. Spike. No. 1,210,426; Jan. 2; v. 234; p. 17.
Crawford, Finis B., Atlanta, Mo. Silo roof and seal. No. 1,213,592; Jan. 23; v. 234; p. 1213.
Crawford, Frank, Sr., assignor to The Crawford Manufacturing Company, New Brunswick, N. J. Stop-motion for knitting-machines. No. 1,212,912; Jan. 16; v. 234; p. 941.
Crawford, James O., Waco, Tex. Shade and drapery fixture. No. 1,211,094; Jan. 2; v. 234; p. 246.
Crawford Manufacturing Company, The. (See Crawford, Frank, Sr., assignor.)
Creamery Package Manufacturing Company, The. (See Valerius, Theodore L., assignor.)
Creighton, Elmer E. F., Schenectady, N. Y., assignor to General Electric Company. Protective device. No. 1,213,844; Jan. 30; v. 234; p. 1328.
Cress, Guy G., Benedict, Kans. Concrete-tile form. No. 1,212,021; Jan. 9; v. 234; p. 600.
Crews, Thomas B., Jr., assignor to Vulcan Valve Company, St. Louis, Mo. Valve. No. 1,210,427; Jan. 2; v. 234; p. 17.
Crisler, Horace, assignor of one-half to J. W. Sutherlin, Doyleville, Ark. Cuspidor. No. 1,210,428; Jan. 2; v. 234; p. 18.
Critz, Thomas O., Richmond, Va. Valve-grinding tool. No. 1,214,138; Jan. 30; v. 234; p. 1428.
Crocker, Ernest B. (See Blanchard, Crocker, and Keefer.)
Crocker, S. Chilton. (See Josselyn, Stormont, assignor.)
Crocker, Seth S., Wollaston, Mass. Fountain-pen. No. 1,212,744; Jan. 16; v. 234; p. 886.
Crockett, Samuel C., Bozeman, Mont., assignor to F. Leathers, Howard, Pa. Air-intake. No. 1,212,745; Jan. 16; v. 234; p. 886.
Croman, James E., Portland, Oreg., assignor to Tree Faller & Cutter Company. Tree-felling device. No. 1,211,414; Jan. 9; v. 234; p. 390.
Cromp, Frank J., and F. J. and H. S. Peebles, Central Lake, Mich. Rotary motor. No. 1,214,434; Jan. 30; v. 234; p. 1529.
Crosby, Gorham, Brooklyn, N. Y., assignor to Gould Coupler Company. Electrical system of distribution. No. 1,214,280; Jan. 30; v. 234; p. 1478.
Cross, George C., Cleveland, Ohio. Driven-well point and strainer. No. 1,211,415; Jan. 9; v. 234; p. 390.
Crossley, James S., Solvay, N. Y. Electric switch. No. 1,213,751; Jan. 23; v. 234; p. 1264.
Croston, George, Hoquiam, Wash. Photoprinting-machine. No. 1,212,022; Jan. 9; v. 234; p. 600.
Crouch, John G., Evansville, Ind. Mud or ice tread for automobile-wheels. No. 1,214,435; Jan. 30; v. 234; p. 1530.
Crouse-Hinds Company. (See Mantel, Florian J., assignor.)
Crouse-Hinds Company. (See Smith, Elda G., assignor.)
Crowley, Dennis E., Milwaukee, Wis. Rail-anchoring device. No. 1,213,838; Jan. 23; v. 234; p. 1124.
Crown Maltose Company. (See Hemig, Fred J., assignor.)
Crowns, George H., *et al.* (See Lohse, Wilhelm R., assignor.)
Cruikshank, Ernest W., Baltimore, Md. Auto-mat holder. No. 1,213,079; Jan. 16; v. 234; p. 999.
Cuff, Thomas, Govan, Saskatchewan, Canada. Locking device for the steering-gears of automobiles. No. 1,211,550; Jan. 9; v. 234; p. 436.
Culp, Arthur J., assignor of one-fourth to J. W. Stanfield, Clanton, Ala. Engine. No. 1,211,095; Jan. 2; v. 234; p. 247.
Cummer, Herbert H., Cadillac, Mich. Collapsible box. No. 1,214,012; Jan. 30; v. 234; p. 1385.
Cumming, Albert J., assignor of fifty-one one-hundredths to W. G. Jordan, Minneapolis, Minn. Carbureter. No. 1,213,462; Jan. 23; v. 234; p. 1168.
Cunha, Frank J., Hayward, Cal. Sanitary device for toilet-seats. No. 1,210,767; Jan. 2; v. 234; p. 134.
Cunningham, Edward E., and H. L. Wilson, St. Albans, W. Va. Automatic automobile-jack. No. 1,212,329; Jan. 16; v. 234; p. 738.
Cunningham, Wintford P. (See Best and Cunningham.)
Curl, William B., Louisville, Ky., assignor of one-half to A. T. Shrader, New Albany, Ind. Combined tractor and trailer. No. 1,211,825; Jan. 9; v. 234; p. 531.
Curley, Patrick, Goshen, N. Y. Hopple. No. 1,212,023; Jan. 9; v. 234; p. 600.
Currie, Duncan G., Manistique, Mich. Baggage-tag holder. No. 1,211,681; Jan. 9; v. 234; p. 479.
Curry, Alexander D., Hawkinsville, Ga. Railway-spike. No. 1,214,436; Jan. 30; v. 234; p. 1530.
Curry, William, Port Morien, Nova Scotia, Canada. Label-holder for railway-cars. No. 1,212,913; Jan. 16; v. 234; p. 942.
Curtis, Alexander R., Minneapolis, Minn. Automobile trailer-truck and hitch for same. No. 1,213,080; Jan. 16; v. 234; p. 1000.
Curtis, Charles G., New York, N. Y. Steam-turbine. No. 1,211,682; Jan. 9; v. 234; p. 480.
Curtis, George L., assignor of one-fourth to M. Wheelihan and one-fourth to J. H. McLean, Nevada City, Cal. Fruit-picker. No. 1,210,768; Jan. 2; v. 234; p. 134.
Curtis, James C., Cisco, Cal. Rocker attachment. No. 1,210,429; Jan. 2; v. 234; p. 18.
Curtis, John D., assignor to Richardson Manufacturing Company, Worcester, Mass. Conveyer for a sand-spreader. No. 1,211,294; Jan. 2; v. 234; p. 316.
Curtis, Myron S., assignor to Potter & Johnston Machine Company, Pawtucket, R. I. Metal-working machine. No. 1,211,551; Jan. 9; v. 234; p. 437.
Cutler-Hammer Mfg. Co., The. (See Klein, Charles J., assignor.)
Cutler, William C., Los Angeles, Cal. Directory. No. 1,214,013; Jan. 30; v. 234; p. 1386.
Cygon, Leon, Meadville, Miss. Vehicle-wheel. No. 1,211,096; Jan. 2; v. 234; p. 247.
Czeskleba, Victor. (See Pillsbury, Albert H., assignor.)
D. M. Sechler Implement & Carriage Co. (See Englund, Ernst E., assignor.)
D. M. Sechler Implement & Carriage Co. (See Garst, Stephen H., assignor.)
D. & W. Fuse Company. (See Pragst, George G., assignor.)
D'Agostino, Giuseppe, Utica, N. Y. Runner attachment for motor-vehicles. No. 1,214,437; Jan. 30; v. 234; p. 1531.
D'Amato, Raphael, Astoria, N. Y. Honing-machine for safety-razor blades. No. 1,213,339; Jan. 23; v. 234; p. 1124.
D'Entremont, Abraham J., West Pubnico, Nova Scotia, Canada. Propeller. No. 1,210,611; Jan. 2; v. 234; p. 80.
D'Oller, Henry, Jr., East Cleveland, Ohio. Shade attachment. No. 1,210,613; Jan. 2; v. 234; p. 81.
Daggett, William F., Chicago, Ill. Loose pulley. No. 1,210,607; Jan. 2; v. 234; p. 78.
Dahlberg, Carl A., Chicago, Ill. Window-box. No. 1,213,593; Jan. 23; v. 234; p. 1213.
Dahlgren, Charles J., East Orange, N. J. Garment hanger and stretcher. No. 1,212,024; Jan. 9; v. 234; p. 600.
Dahlin, Albert, Butte, Mont. Snow-plow. No. 1,213,752; Jan. 23; v. 234; p. 1265.
Dahn, Willard E., Harlem, Mont. Stone-rake. No. 1,211,552; Jan. 9; v. 234; p. 437.
Dain, Joseph, assignor, by mesne assignments, to Deere & Company, Moline, Ill. Cutting apparatus for harvesters. No. 1,210,910; Jan. 2; v. 234; p. 184.
Dain, Joseph, Moline, Ill., assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa. Hay-press. No. 1,213,158; Jan. 23; v. 234; p. 1060.
Dain Manufacturing Company of Iowa. (See Dain, Joseph, assignor.)
Dake, Charles W., assignor to Pyle-National Electric Headlight Company, Chicago, Ill. Electrode. No. 1,212,610; Jan. 16; v. 234; p. 886.
Dalager, Sophus A., Glenwood, Minn. Friction-drive automobile attachment. No. 1,211,416; Jan. 9; v. 234; p. 390.
Dalbey, Joel B., assignor of one-half to J. A. King, Nevada, Iowa. Generator. No. 1,214,139; Jan. 30; v. 234; p. 1428.
Dalén, Gustaf, Lidingön, Stockholm, Sweden. Apparatus for automatically exchanging incandescent bodies. No. 1,210,769; Jan. 2; v. 234; p. 134.
Dalén, Gustaf, Skärsätra, Lidingön, Stockholm, Sweden. Lighting or heating apparatus. No. 1,213,159; Jan. 23; v. 234; p. 1061.
Dalén, Gustaf, Stockholm, Sweden. Incandescent-lighting plant. No. 1,213,463; Jan. 23; v. 234; p. 1169.
Dalton, Hubert, New York, N. Y. Grinder counter-shaft. No. 1,213,594; Jan. 23; v. 234; p. 1213.
Dalton, Michael J., Chula Vista, Cal. Signaling device for motor-vehicles. No. 1,213,753; Jan. 23; v. 234; p. 1265.
Daly, James A., Detroit, Mich. Milling attachment. No. 1,212,330; Jan. 16; v. 234; p. 738.
Damascus Brake Beam Co., The. (See Schroeder, Frederick J., assignor.)
Dan, Edgar W., Platteville, Wis. Chicken-feeder. No. 1,211,097; Jan. 2; v. 234; p. 247.
Daniels, Fred C. T., Natick, Mass. Iron alloy. No. 1,211,826; Jan. 9; v. 234; p. 531.
Daniels, James W., Texico, N. Mex. Adjustable automobile-seat. No. 1,211,295; Jan. 2; v. 234; p. 316.
Daniels, Thomas M., Latrobe, Pa. Rail-joint. No. 1,210,430; Jan. 2; v. 234; p. 18.
Danly, Robert C., Chicago, Ill. Magneto. No. 1,214,014; Jan. 30; v. 234; p. 1386.
Danly, Robert C., Chicago, Ill. Magneto. No. 1,214,015; Jan. 30; v. 234; p. 1386.
Dannenfelser, Frederick M., Muskegon, Mich. Demonstrating apparatus. No. 1,210,008; Jan. 2; v. 234; p. 79.
Darling, Harry R., assignor to Eastman Kodak Company, Rochester, N. Y. Folding camera. No. 1,211,083; Jan. 9; v. 234; p. 480.
Darling, Mark S., Conrad, Mont. Explosion-engine. No. 1,212,914; Jan. 16; v. 234; p. 942.
Darrin, Mary S., Brooklyn, N. Y. Dish and kettle scraper. No. 1,211,098; Jan. 2; v. 234; p. 248.

Darrow, Burgess, assignor to The Goodyear Tire and Rubber Company, Akron, Ohio. Mechanical expansion-mold. No. 1,212,457; Jan. 16; v. 234; p. 782.
Darrow, James B., assignor of one-half to J. Cameron, Hinckley, N. Y. Automatic train-controller. No. 1,211,099; Jan. 2; v. 234; p. 248.
Darrow, Marius S., *et al.* (See Forrest, Charles N., assignor.)
Bath, Charles E., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Car-underframe. No. 1,214,140; Jan. 30; v. 234; p. 1428.
Daughtry, William R., Birmingham, Ala. Ice-shaving device. No. 1,212,915; Jan. 16; v. 234; p. 943.
Daum, Albert F., Pittsburgh, Pa. Cartridge-fuse. (Reissue.) No. 14,239; Jan. 2; v. 234; p. 343.
Daus, Adolph H., Chicago, Ill. Testing apparatus. No. 1,214,141; Jan. 30; v. 234; p. 1429.
Davenport, Frederick. (See Brooks, Augustus F., assignor.)
Davenport, Ransom W., assignor to Detroit Stove Works, Detroit, Mich. Cook-stove. No. 1,212,458; Jan. 16; v. 234; p. 782.
Davenport, Ransom W., assignor to Detroit Stove Works, Detroit, Mich. Illuminated switch and indicator. No. 1,213,845; Jan. 30; v. 234; p. 1328.
Davenport, Ransom W., assignor to Detroit Stove Works, Detroit, Mich. Combined coal and gas range. No. 1,213,846; Jan. 30; v. 234; p. 1328.
David, Friedrich, Brooklyn, assignor to Enterprise Electric Novelty Co., New York, N. Y. Flash-light lamp. No. 1,213,754; Jan. 23; v. 234; p. 1265.
Davies, Rees, *et al.* (See Evans, Walter P., assignor.)
Davies, William I., Bucknell, England. Box for containing belts of cartridges for use in machine-guns. No. 1,213,755; Jan. 23; v. 234; p. 1266.
Davis, Alex B., assignor to The Eli Lilly and Company, Indianapolis, Ind. Compound of cinchona alkaloids and 2-phenyl-quinolin-4-carboxylic acid. No. 1,213,464; Jan. 23; v. 234; p. 1169.
Davis, Alex B., assignor to The Eli Lilly and Company, Indianapolis, Ind. Cresol condensation product. No. 1,213,465; Jan. 23; v. 234; p. 1169.
Davis, Alva G., Three Springs, Ky. Corn-cutter. No. 1,211,100; Jan. 2; v. 234; p. 248.
Davis, Anthony E. (See Geiger and Davis.)
Davis, Arthur C., Cristobal, Canal Zone. Rivet-set holder for riveting-hammers. No. 1,211,417; Jan. 9; v. 234; p. 391.
Davis, Charles W., Edgeworth, Pa. Wattmeter. No. 1,210,609; Jan. 2; v. 234; p. 79.
Davis, David C., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Lightning-arrester. No. 1,212,746; Jan. 16; v. 234; p. 886.
Davis, Edward E., Milwaukee, Wis. Combined package-protector and strap-holder. No. 1,212,190; Jan. 16; v. 234; p. 686.
Davis, Edward L., Schenectady, N. Y. Steam-heating apparatus. No. 1,212,611; Jan. 16; v. 234; p. 837.
Davis, Edward L., Schenectady, N. Y. Radiator-valve. No. 1,214,281; Jan. 30; v. 234; p. 1478.
Davis, Emil, *et al.* (See Powell, Forrest M., assignor.)
Davis, Frank B., Erie, Pa. Dust-catcher. No. 1,211,101; Jan. 2; v. 234; p. 248.
Davis, Frank M., Milwaukee, Wis. Gas-engine. No. 1,213,340; Jan. 23; v. 234; p. 1125.
Davis, George A., Muncie, Ind. Connecting device. No. 1,211,296; Jan. 2; v. 234; p. 317.
Davis, George E., Vista, Cal. Writing-tablet. No. 1,211,297; Jan. 2; v. 234; p. 317.
Davis, Harrison H., The Plains, Ohio. Safety-spout for powder-kegs. No. 1,212,025; Jan. 9; v. 234; p. 601.
Davis, Jacob. (See Magidson, Frank, assignor.)
Davis, Orin C., Manistee, Mich. Door-latch. No. 1,210,911; Jan. 2; v. 234; p. 184.
Davis, Ray, Lehigh, Iowa. Nut or bolt holding device. No. 1,213,756; Jan. 23; v. 234; p. 1266.
Davis, Robert H., London, England. Breathing-bag. No. 1,213,160; Jan. 23; v. 234; p. 1061.
Davis, Robert W., Jr., Aspinwall, Pa. Electric heating unit and manufacturing the same. No. 1,211,102; Jan. 2; v. 234; p. 249.
Davis, Thomas A. (See Johns, Avy V., assignor.)
Davison, George S., assignor to Allen S. Davison Company, Pittsburgh, Pa. Furnace-lining. No. 1,210,431; Jan. 2; v. 234; p. 19.
Dawe, Harry E., Perth Amboy, N. J. Washboard-support. No. 1,211,298; Jan. 2; v. 234; p. 317.
Dawley, James C. (See Ziehler and Dawley.)
Dawson, Alfred, Greenhithe, England. Photographic camera. No. 1,214,016; Jan. 30; v. 234; p. 1387.
Dawson, Arthur T., Westminster, London, and J. Horne, Barrow-in-Furness, assignors to Vickers Limited, Westminster, England. Control system for gun-mountings and other mechanism. No. 1,211,418; Jan. 9; v. 234; p. 391.
Dawson, Joseph W., assignor to Barry-Wehmiller Machinery Company, St. Louis, Mo. Bottle-washing machine. No. 1,212,459; Jan. 16; v. 234; p. 783.
Dawson, Joseph W., assignor to Barry-Wehmiller Machinery Company, St. Louis, Mo. Bottle-washing apparatus. No. 1,212,747; Jan. 16; v. 234; p. 887.
Dawson, William F., Lynn, Mass., assignor to General Electric Company. Speed-governor. No. 1,213,847; Jan. 30; v. 234; p. 1329.
Day, Albert V. T., New Rochelle, assignor, by mesne assignments, to The Hall Switch & Signal Company, New York, N. Y. Railway signaling system. No. 1,213,161; Jan. 23; v. 234; p. 1061.
Day, Albert V. T., New Rochelle, N. Y., assignor to The Hall Switch and Signal Company. Traffic-controlling system for railways. No. 1,213,162; Jan. 23; v. 234; p. 1062.
Day, Edgar K., assignor to Wheeling Corrugating Company, Wheeling, W. Va. Structural member. No. 1,214,017; Jan. 30; v. 234; p. 1387.
Day, James C., Montpelier, Ohio. Headlight. No. 1,212,748; Jan. 16; v. 234; p. 887.
Day, Nellie S., Springfield, Mass. Equipment device. No. 1,214,282; Jan. 30; v. 234; p. 1479.
Dayton Engineering Laboratories Co., The. (See Kettering and Chryst, assignors.)
Dayton Manufacturing Company, The. (See Kirby, John, Jr., assignor.)
Daze, Mayer, New York, N. Y. Spring bed-bottom. No. 1,211,922; Jan. 9; v. 234; p. 566.
De Baufre, William L., Annapolis, Md. Evaporator. No. 1,213,596; Jan. 23; v. 234; p. 1214.
De Bra, Harvey R., Cameron, Mo. Gear-shifting apparatus. No. 1,212,026; Jan. 9; v. 234; p. 601.
De Camp, Charles E., *et al.* (See De Camp, James W., assignor.)
De Camp, James W., assignor of one-fourth to C. E. De Camp, Blackwell, Okla., and one-fourth to J. P. Miller, McAllen, Tex. Glass casket. No. 1,211,084; Jan. 9; v. 234; p. 480.
De Cesare, Matteo, Passaic, N. J. Vending-machine. No. 1,211,685; Jan. 9; v. 234; p. 481.
De Does, Peter J., assignor to The Toledo Parlor Furniture Company, Toledo, Ohio. Sofa-bed. No. 1,210,432; Jan. 2; v. 234; p. 19.
De Forest, Lee, Palo Alto, Cal., assignor to Federal Telegraph Company. Wireless telegraphy. No. 1,214,283; Jan. 30; v. 234; p. 1479.
De Forest, Louis S., New Haven, Conn. Hitching device. No. 1,210,433; Jan. 2; v. 234; p. 19.
De Graaf, Gerrit A., Bloomfield, N. J. Polishing diamonds. No. 1,213,164; Jan. 23; v. 234; p. 1062.
De Laval Separator Company, The. (See Leitch, Meredith, assignor.)
De Lony, Knud, Bridgeport, assignor to J. Schlott, Greens Farms, Conn. Increasing the efficiency of internal-combustion motors. No. 1,212,917; Jan. 16; v. 234; p. 943.
De Reamer, William J. (See Pruyn and De Reamer.)
De Witt, Frank A. (See Kissinger, Clarence L., assignor.)
Deal, George, Omaha, Nebr. Electric stove. No. 1,213,595; Jan. 23; v. 234; p. 1214.
Dean, Charles V., Grand Rapids, Mich. Tilting headlight. No. 1,212,191; Jan. 16; v. 234; p. 686.
Debbeler, John G., and F. J. Kirsch, Covington, Ky. Grease-cup. No. 1,211,419; Jan. 9; v. 234; p. 391.
Decarie Incinerator Company. (See Stacy, Elmer N., assignor.)
Deckert, Joseph O., assignor to William Mann Company, Philadelphia, Pa. Loose-leaf binder. No. 1,213,757; Jan. 23; v. 234; p. 1266.
Dedrick, Nicholas, assignor to C. H. Seeger, Manitowoc, Wis. Electric sterilizing-oven. No. 1,213,163; Jan. 23; v. 234; p. 1062.
Deere & Company. (See Dain, Joseph, assignor.)
Degavre, Charles J. (See Burnett and Van Brunt, assignors.)
Deguide, Camille. (See Ciselet and Deguide.)
Dehn, Martin, Buffalo, N. Y. Picture-hook. No. 1,210,610; Jan. 2; v. 234; p. 80.
Deister, Emil, assignor to Deister Machine Company, Fort Wayne, Ind. Concentrating-table. No. 1,211,364; Jan. 2; v. 234; p. 336.
Deister Machine Company. (See Deister, Emil, assignor.)
Del Fungo Giera, Philip L. E., and G. Miller, New York, N. Y. Mine anchor and controller. No. 1,212,048; Jan. 9; v. 234; p. 608.
Delaforge, Georges L. J., Coronado, Cal. Hotel desk-register. No. 1,214,438; Jan. 30; v. 234; p. 1531.
Delaney, Lawrence R., Gage, Okla. Safety device. No. 1,213,758; Jan. 23; v. 234; p. 1267.
Delanoy, Fred N. (See Delanoy, Frederick W. and F. N.)
Delanoy, Frederick W. and F. N., Alameda, Cal. Plumber's fitting. No. 1,213,466; Jan. 23; v. 234; p. 1169.
Delapp, Abraham L. (See Boyd and Delapp.)
Delapp, Jesse J. (See Boyd and Delapp.)
Delehanty, William F., Boston, Mass. Leaf-spring. No. 1,212,916; Jan. 16; v. 234; p. 943.
Delta-Star Electric Company. (See Herz, Alfred, assignor.)
Deming, Herbert V., Cumberland, Md. Shock-absorber. No. 1,212,133; Jan. 9; v. 234; p. 637.
Dengler, Harvey E., Steelton, Pa. Rail-joint. No. 1,213,759; Jan. 23; v. 234; p. 1267.
Denivelle, Paul E., New York, N. Y. Manufacture of artificial-stone structures. No. 1,212,331; Jan. 16; v. 234; p. 738.
Denman, Frederick, Seattle, Wash. Vehicle-brake. No. 1,213,597; Jan. 23; v. 234; p. 1214.
Denman, Walter R., assignor to Miller Rubber Co., Akron, Ohio. Building cord tire-casings. No. 1,210,434; Jan. 2; v. 234; p. 20.

Denman, Walter R., assignor to The Miller Rubber Company, Akron, Ohio. Tire-winding machine, (pneumatic control.) No. 1,211,827; Jan. 9; v. 234; p. 532.
Dennis, Louis M., Ithaca, N. Y. Method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid and of converting the sulfonic acid into a salt. No. 1,211,923; Jan. 9; v. 234; p. 507.
Dennis, Louis M., Ithaca, N. Y. Separating benzene sulfonic acid from sulfuric acid and converting the benzene sulfonic acid into a salt. No. 1,212,612; Jan. 16; v. 234; p. 837.
Denver Rock Drill Manufacturing Company, The. (See Oldham, Edward L., assignor.)
Denver Rock Drill Manufacturing Company, The. (See Smith, William A., assignor.)
Depollier, Charles L., Brooklyn, N. Y. Pocket-knife. No. 1,210,770; Jan. 2; v. 234; p. 134.
Depollier, Charles L., Brooklyn, N. Y. Watchcase. No. 1,210,771; Jan. 2; v. 234; p. 135.
Dervoz, Meho, Chicago, Ill. Nut-lock. No. 1,211,553; Jan. 9; v. 234; p. 437.
Desmarais, Joseph C., *et al.* (See Valiquet, Ephrem F., assignor.)
Desmarais, Joseph F., *et al.* (See Valiquet, Ephrem F., assignor.)
Detroit Lubricator Company. (See Kirby, Charles H., assignor.)
Detroit Stove Works. (See Davenport, Ransom W., assignor.)
Deutsch, Alexander, Girard, Ohio. Syringe or atomizer. No. 1,210,772; Jan. 2; v. 234; p. 135.
Devinez, Joseph, Lowell, Mass. Headlight for automobiles. No. 1,212,460; Jan. 16; v. 234; p. 783.
Devlin, Joseph L., Denver, Colo. Game-board and game. No. 1,211,103; Jan. 2; v. 234; p. 249.
Dewey Davenport Company. (See Dewey, Josiah A., assignor.)
Dewey, Edward H. (See Howd, Alvah J., assignor.)
Dewey, Josiah A., assignor to Dewey Davenport Company, San Francisco, Cal. Folding bed. No. 1,214,284; Jan. 30; v. 234; p. 1479.
Diaphone Signal Company. (See Sims, Frederick L. H., assignor.)
Dick, Maurice S. (See Witte, Adolf P., assignor.)
Dickey, Adam, Boston, and R. A. Hope, Quincy, Mass. Fixture for sliding curtains. No. 1,210,435; Jan. 2; v. 234; p. 20.
Didrichsen, Sigvart, Skölen, near Christiania, Norway. Duplex steam-pump. No. 1,211,686; Jan. 9; v. 234; p. 481.
Diechmann, Niels V., Esbjerg, Denmark. Signaling apparatus for the protection of stations and block-posts. No. 1,213,598; Jan. 23; v. 234; p. 1215.
Diefenderfer, Alfred J., Bronxville, assignor to Hayes Diefenderfer Co., Inc., New York, N. Y. Wind-shield support. No. 1,211,420; Jan. 9; v. 234; p. 392.
Diemert, D. A., *et al.* (See Redding, Harry B., assignor.)
Dieter, William, assignor to E. W. Bliss Company, Brooklyn, N. Y. Reducing-valve for automobile torpedoes. No. 1,211,104; Jan. 2; v. 234; p. 249.
Diffendall, Walter H., Hagerstown, Md. Stay-bolt-heading attachment for pneumatic hammers. No. 1,211,554; Jan. 9; v. 234; p. 438.
Dillon, Guy, assignor to F. H. Hirschman, Indianapolis, Ind. Mattress-tufting machine. No. 1,211,924; Jan. 9; v. 234; p. 567.
Dimick, Daniel B., assignor to American Casting Company, Birmingham, Ala. Forming pipe-joints. No. 1,213,760; Jan. 23; v. 234; p. 1267.
Dingwall, Charles S., Medford, Oreg. Fruit-tree prop. No. 1,214,142; Jan. 30; v. 234; p. 1429.
Dixon, Amos F., Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selecting mechanism and system. No. 1,210,912; Jan. 2; v. 234; p. 184.
Dixon, Charles F. (See Pigott, Reginald J. S., assignor.)
Dixon, Laurens P., New York, N. Y. Socket for electric lamps. No. 1,214,439; Jan. 30; v. 234; p. 1531.
Dobbel Auto Safety Lock Company. (See Dobbel, Frederick W., assignor.)
Dobbel, Frederick W., assignor to Dobbel Auto Safety Lock Company, Sonoma, Cal. Safety-lock for vehicles. No. 1,211,925; Jan. 9; v. 234; p. 568.
Dobbins, George. (See Dobbins, Jessie M. and G.)
Dobbins, George, assignor of one-fourth to J. B. Freeman, Stockton, Cal. Nut-lock. No. 1,212,918; Jan. 16; v. 234; p. 944.
Dobbins, Jessie M. and G., Stockton, Cal. Box-car. No. 1,213,081; Jan. 16; v. 234; p. 1000.
Dobson, George W. (See Coe, Herbert M., assignor.)
Dobson, James, assignor to Henry Pooley and Son, Limited, Birmingham, England. Weighing apparatus. No. 1,212,027; Jan. 9; v. 234; p. 602.
Dobson, John B., Atlanta, Ga., assignor to Warren Webster & Company. Steam-heating system. No. 1,212,749; Jan. 16; v. 234; p. 887.
Dobson, John E., New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Drawing-press. No. 1,212,192; Jan. 16; v. 234; p. 687.
Dodd, Albert J., Denver, Colo. Banana-rack. No. 1,211,926; Jan. 9; v. 234; p. 568.
Dodds, Rowan T. F., Decatur, Ill. Packer. No. 1,211,105; Jan. 2; v. 234; p. 250.
Dodge Brothers. (See Dodge, John F. and H. E., assignors.)
Dodge, Horace E. (See Dodge, John F. and H. E.)
Dodge, John F., Detroit, and H. E. Dodge, Grosse Pointe, assignors to Dodge Brothers, Detroit, Mich. Means for supporting and adjusting rotary devices. No. 1,212,461; Jan. 16; v. 234; p. 783.
Dodge Manufacturing Company. (See Hosford, William B., assignor.)
Doeg, Issachar W., Exeter, N. H. Oil-guard for shaft-bearings. No. 1,211,106; Jan. 2; v. 234; p. 250.
Doerinckel, Fritz, Essen-on-the-Ruhr, Germany. Furnace. No. 1,213,082; Jan. 16; v. 234; p. 1000.
Doering, Charles, Jr., Chicago, Ill. Liquid-dispensing apparatus. No. 1,210,612; Jan. 2; v. 234; p. 80.
Doerwald, William R., Brooklyn, N. Y. Toy bank. No. 1,211,299; Jan. 2; v. 234; p. 317.
Doherty, Henry L., New York, N. Y. Apparatus for removing suspended matter from gaseous fluids. No. 1,212,193; Jan. 16; v. 234; p. 687.
Dohmen, Arthur, Cologne, Germany. Apparatus for the electrolytic decomposition of water. No. 1,211,687; Jan. 9; v. 234; p. 482.
Dolan, John H. (See Hauser and Dolan.)
Donald-Hutchinson Patents Limited. (See Hutchinson, George, assignor.)
Donaldson, Margaret, assignor to Premier Manufacturing Company, Winchester, Ky. Underwaist. No. 1,210,773; Jan. 2; v. 234; p. 135.
Donnelly, Edward F., assignor to Donnelly Manufacturing Company, Malden, Mass. Safety device to prevent the collapsing of hot-water boilers. No. 1,212,148; Jan. 9; v. 234; p. 642.
Donnelly Manufacturing Company. (See Donnelly, Edward F., assignor.)
Donnelly, William T., Brooklyn, N. Y. Traction-gear. No. 1,212,462; Jan. 16; v. 234; p. 784.
Donner, Percy E. (See Snyder, Jacob R., assignor.)
Dooley, James P., assignor to Wright Wire Company, Worcester, Mass. Continuous-wire-drawing machinery. No. 1,212,919; Jan. 16; v. 234; p. 944.
Doolittle, William E., New Britain, Conn. Safety watch-guard. No. 1,212,920; Jan. 16; v. 234; p. 944.
Doolittle, William W., assignor to Crane Company, Chicago, Ill. Taper-finishing metallic bodies. No. 1,213,165; Jan. 23; v. 234; p. 1063.
Doran, Albert P., Chicago, Ill. Oil-burner. No. 1,212,613; Jan. 16; v. 234; p. 837.
Doran, George F., Omaha, Nebr. Curing meats. No. 1,212,614; Jan. 16; v. 234; p. 838.
Doran, Justin R., Beaver, Iowa. Armor for soldiers. No. 1,212,463; Jan. 16; v. 234; p. 784.
Dore, Frank M., Helena, Mont. Innersole-leveling knife. No. 1,211,555; Jan. 9; v. 234; p. 438.
Dore, Frank M., Helena, Mont. Sandpaper-cutter for breasting-wheels. No. 1,211,556; Jan. 9; v. 234; p. 438.
Dore, Frank M., Helena, Mont. Roller-skate. No. 1,211,557; Jan. 9; v. 234; p. 439.
Dorer, Emma K., New York, N. Y. Educational game. No. 1,210,614; Jan. 2; v. 234; p. 81.
Dorey, George B. (See Hopkins, Frank H., assignor.)
Dorey, George B., Montreal, Quebec, Canada, assignor to Rodger Ballast Car Company, Chicago, Ill. Door locking and releasing mechanism. No. 1,214,285; Jan. 30; v. 234; p. 1480.
Dorl, Walter P., Detroit, Mich. Vehicle-top. No. 1,211,107; Jan. 2; v. 234; p. 251.
Dornin, George A., Baltimore, Md. Ingot-mold. No. 1,210,774; Jan. 2; v. 234; p. 136.
Dorr, John V., Denver, Colo. Apparatus for thickening and agitating pulp. No. 1,211,828; Jan. 9; v. 234; p. 532.
Dorricott, Charles W., assignor to Electrelle Company, Philadelphia, Pa. Electric self-playing grand piano. No. 1,213,166; Jan. 23; v. 234; p. 1063.
Dostert, Auguste J., assignor of one-half to J. P. Tremblay, Winnipeg, Manitoba, Canada. Convertible table. No. 1,214,019; Jan. 30; v. 234; p. 1388.
Double, Edward, Los Angeles, Cal. Oil-tight swivel. No. 1,210,615; Jan. 2; v. 234; p. 82.
Dougherty, Glenn. (See Metcalf, Henry D., assignor.)
Dougherty, John M., and H. C. Tabler, St. Louis, Mo. Relief-valve. No. 1,210,913; Jan. 2; v. 234; p. 185.
Dougherty, John M., and H. C. Tabler, St. Louis, Mo. Automobile-lock. No. 1,210,914; Jan. 2; v. 234; p. 185.
Douglas, Charles E., assignor to The John Douglas Company, Cincinnati, Ohio. Means for securing floats to their mounting-rods. No. 1,214,020; Jan. 30; v. 234; p. 1389.
Douglas, Theodore, Scarboro, N. Y. Regulating device. No. 1,214,286; Jan. 30; v. 234; p. 1480.
Douglas, Theodore, Scarboro, N. Y. Governor. No. 1,214,287; Jan. 30; v. 234; p. 1480.
Douglas, William H., Belleville, N. J., assignor to Healy & Co., New York, N. Y. Auxiliary seat for automobiles. No. 1,211,108; Jan. 2; v. 234; p. 251.
Dow, Charles E. W., Dorchester, Mass. Fastener. No. 1,213,599; Jan. 23; v. 234; p. 1215.
Dow Chemical Company, The. (See Cone, Lee E. H., assignor.)
Dowling, Francis J., assignor of one-half to D. P. Conway, New York, N. Y. Swinging sanitary window-cupboard. No. 1,212,028; Jan. 9; v. 234; p. 602.

Downs, Benjamin M., Buffalo, and W. S. Cook, Lackawanna, N. Y. Electric-trolley-railway signal system. No. 1,214,440; Jan. 30; v. 234; p. 1531.

Doyle, James J. (See Llewellyn and Doyle.)

Doyle, James S. (See Hedley and Doyle.)

Drake, A. M. (See Williams, Roy P., assignor.)

Drake, Alden M., assignor to Heald Machine Company, Worcester, Mass. Magnetic chuck and casing. No. 1,213,167; Jan. 23; v. 234; p. 1063.

Drake, Harry M., Denver, Colo. Garment-stretcher. No. 1,210,915; Jan. 2; v. 234; p. 186.

Draper Corporation. (See Burbank, Louis S., assignor.)

Draper Corporation. (See Hawkins and Stickney, assignors.)

Draper Corporation. (See Jamieson, Robert, assignor.)

Draper Corporation. (See Leonard, Harry A., assignor.)

Draper Corporation. (See Owen, Herbert W., assignor.)

Draper Corporation. (See Rhoades, Alonzo E., assignor.)

Draper Corporation. (See Snow, Isaac, assignor.)

Draper Corporation. (See Stimpson, Edward S., assignor.)

Draper, John M., Manchester, England. Apparatus for separating substances of different specific gravities, such as fine coal or ores and the like. No. 1,210,916; Jan. 2; v. 234; p. 186.

Draver, Emil R., Richmond, Ind. Combined tire carrier and cover. No. 1,211,377; Jan. 2; v. 234; p. 341.

Dresp, John P., assignor to Beatrice Steel Tank Manufacturing Company, Beatrice, Nebr. Metallic corner-shield. No. 1,211,109; Jan. 2; v. 234; p. 251.

Dressel, Herman. (See Robbins and Dressel.)

Dresser, Marcia W. (See Best, William N., assignor.)

Driver, J., *et al.* (See Hawley, Royal A., assignor.)

Drobac, Jovan, Lackawanna, N. Y. Railway-rail. No. 1,211,300; Jan. 2; v. 234; p. 317.

Drouet, E. Charles. (See Storck, Frederick W., assignor.)

Drummond, Josiah D., Hungerford, Tex. Planter attachment. No. 1,211,558; Jan. 9; v. 234; p. 439.

Duckham, Arthur M., Ashstead, England. Discharging vertical retorts. No. 1,211,301; Jan. 2; v. 234; p. 318.

Duffy, Thomas I., Chicago, Ill. Shock-absorber. No. 1,213,083; Jan. 16; v. 234; p. 1000.

Duffy, Thomas I., Chicago, Ill. Spring suspension. No. 1,213,761; Jan. 23; v. 234; p. 1268.

Dugan, Wm. M., *et al.* (See Rose, Albert, assignor.)

Duguid, Archer F., Montreal, Quebec, Canada. Plumb-bob. No. 1,212,194; Jan. 16; v. 234; p. 687.

Dun Lany, William P., assignor to Sears, Roebuck and Company, Chicago, Ill. Stylus for talking-machines. No. 1,211,559; Jan. 9; v. 234; p. 439.

Dunbar, Francis W., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, Telephone system. No. 1,211,688; Jan. 9; v. 234; p. 482.

Dunbar, Francis W., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, Telephone-exchange system. No. 1,211,689; Jan. 9; v. 234; p. 482.

Dunbar, Thomas L. (See Richter and Dunbar.)

Duncan, John M. (See Brainard, Sidney W., assignor.)

Duncan, Raymond, New York, N. Y. Stop mechanism for talking-machines. No. 1,211,110; Jan. 2; v. 234; p. 251.

Dunham, Bert G., Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Machine-switching telephone-exchange system. No. 1,210,616; Jan. 2; v. 234; p. 82.

Dunham, Bert G., Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Relay. No. 1,210,617; Jan. 2; v. 234; p. 83.

Dunkerley, William H., Paterson, N. J. Tire and making the same. No. 1,213,600; Jan. 23; v. 234; p. 1216.

Dunkerley, William H., Paterson, N. J. Braiding-machine. No. 1,213,601; Jan. 23; v. 234; p. 1216.

Dunn, Edward L., assignor, by mesne assignments, to Standard Plunger Elevator Company, Worcester, Mass. Elevator safety controlling mechanism. No. 1,212,195; Jan. 16; v. 234; p. 688.

Dunn, Frank P., Anderson, Ind., assignor, by mesne assignments, to Toledo Scale Company, Toledo, Ohio. Weighing-scale. No. 1,213,168; Jan. 23; v. 234; p. 1064.

Dunn, Michael A., Poughkeepsie, N. Y. Cleaner for tumblers for metal castings, buttons, and other articles. No. 1,211,111; Jan. 2; v. 234; p. 252.

Dunn, Olin Y., Brookings, S. D. Auxiliary seat. No. 1,213,762; Jan. 23; v. 234; p. 1268.

Dunner, Julius, Brooklyn, assignor of one-half to S. M. Jacoby, New York, N. Y. Automatic presser-foot for sewing-machines. No. 1,211,112; Jan. 2; v. 234; p. 252.

Dunning, William E., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Manifolding book or pad. No. 1,213,341; Jan. 23; v. 234; p. 1125.

Duplex Lighting System, The. (See White, Ernest C., assignor.)

Duquesne Sales Company. (See Mearkle, Louis K., assignor.)

Duquesnoy, Louis, Hiawatha, Utah. Valve-grinding mechanism. No. 1,212,030; Jan. 9; v. 234; p. 603.

Durand, Alexander, Los Angeles, Cal. Tailor's iron. No. 1,213,602; Jan. 23; v. 234; p. 1216.

Durand Steel Locker Company. (See Vance, Walter N., assignor.)

Durieux, Joseph, Mount Vernon, Ohio. Means for excluding stones in glass-drawing. No. 1,212,031; Jan. 9; v. 234; p. 603.

Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Fiber-case railway-torpedo. No. 1,211,113; Jan. 2; v. 234; p. 253.

Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Fiber-case railway-torpedo. No. 1,211,114; Jan. 2; v. 234; p. 253.

Dutert, René G. A., Paris, France. Automatic focusing device for copying or enlarging cameras and the like. No. 1,211,302; Jan. 2; v. 234; p. 318.

Duvall, James, Camas, Wash. Bag-counting means. No. 1,210,618; Jan. 2; v. 234; p. 83.

Duvall, Michael, Marshfield, Wis. Milk-aerator. No. 1,213,842; Jan. 23; v. 234; p. 1126.

Dvoracek, James, Jr., Maynard, Ohio. Spike. No. 1,212,029; Jan. 9; v. 234; p. 603.

Dybile, Julius A., Joliet, Ill. Cleaning-door for hot-blast stoves. No. 1,210,436; Jan. 2; v. 234; p. 20.

Dyckman, Henry R., *et al.* (See Landreth, Harry, assignor.)

Dyckman, Otto J., *et al.* (See Landreth, Harry, assignor.)

Dyckman, Walter G., *et al.* (See Landreth, Harry, assignor.)

Dye, James T., and F. S. Clark, New York, N. Y. Automobile-signal. No. 1,211,115; Jan. 2; v. 234; p. 253.

Dye Products Company of the United States. (See Kitsee, Isidor, assignor.)

Dykes, James, New Rockford, N. D. Portable crane. No. 1,213,603; Jan. 23; v. 234; p. 1217.

Dymond, William M., North Platte, Nebr. Attachment for road-scrapers. No. 1,213,169; Jan. 23; v. 234; p. 1064.

Dyson, Alfred H., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Calling device. No. 1,210,917; Jan. 2; v. 234; p. 187.

Dyson, Alfred H., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, Telephone system. No. 1,214,492; Jan. 30; v. 234; p. 1549.

E. C. Tecktonius Manufacturing Company. (See Tecktonius, Emil C., assignor.)

E. G. Washburne & Company. (See Washburne and Kimmerlé, assignors.)

E. W. Bliss Company. (See Dieter, William, assignor.)

E. W. Bliss Company. (See Dobson, John E., assignor.)

E. W. Bliss Company. (See Klocke, William, assignor.)

Eades, Anna, Alturas, Cal. Suitcase. No. 1,211,829; Jan. 9; v. 234; p. 532.

Eagle Pencil Company. (See Andersson, Oscar B., assignor.)

Eaken, Dwight A., Lodi, Ohio. Light or voltage regulator. No. 1,214,021; Jan. 30; v. 234; p. 1389.

Eakin, Marshall M. (See Gunter and Eakin.)

Earl, George G., New Orleans, La. Automatic controlling or regulating apparatus. No. 1,211,830; Jan. 9; v. 234; p. 533.

Earl, George G., and A. B. Wood, New Orleans, La. Fluid-metering system. No. 1,212,149; Jan. 9; v. 234; p. 643.

Earl, George G., and A. B. Wood, New Orleans, La. Fluid-metering system. No. 1,212,150; Jan. 9; v. 234; p. 643.

Earp-Thomas, George H., Glen Ridge, assignor of one-half to H. K. Hannah, Montclair, N. J. Fertilizer composition and making same. No. 1,212,196; Jan. 16; v. 234; p. 688.

Eastburn, Oliver W., Jr., Kennett Square, Pa. Steering-wheel rim. No. 1,214,288; Jan. 30; v. 234; p. 1481.

Eastham, J. Maley, *et al.* (See Bradley, Richard C., assignor.)

Eastman Kodak Company. (See Becker, Reinhold S., assignor.)

Eastman Kodak Company. (See Darling, Harry R., assignor.)

Eastman Kodak Company. (See Gaumont, Léon, assignor.)

Eastman Kodak Company. (See Lovejoy, Frank W., assignor.)

Eastman Kodak Company. (See Riddell, William A., assignor.)

Easy Truss Company, The. (See Bobo, Walter T., assignor.)

Eaton, George M., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, Dynamo-electric machine. No. 1,214,143; Jan. 30; v. 234; p. 1430.

Eberly, Edgar, and W. G. Fetrow, Mechanicsburg, Pa. Sheaf-hoist. No. 1,213,604; Jan. 23; v. 234; p. 1217.

Ebinger, David A. and D. H., Columbus, Ohio. Water-closet structure. No. 1,213,343; Jan. 23; v. 234; p. 1126.

Ebinger, David H. (See Ebinger, David A. and D. H.)

Eckel, Guy E., Rushville, N. Y. Bicycle attachment. No. 1,211,303; Jan. 2; v. 234; p. 318.

Eckelman, Fredrick C., New York, N. Y. Permutation-lock. No. 1,214,441; Jan. 30; v. 234; p. 1532.

Eckert, Clarence R., Chicago, Ill., assignor to The Barrett Company, New York, N. Y. Manufacturing coke from pitch and the product thereof. No. 1,213,763; Jan. 23; v. 234; p. 1268.

Eckert, George W., Butler, Ky. Adjustable screen. No. 1,211,560; Jan. 9; v. 234; p. 439.

Eckman, Peter, Greeley, Colo. Sickle-blade holder. No. 1,212,615; Jan. 16; v. 234; p. 838.

Eddy, Kenneth L., Chicago, Ill., assignor, by mesne assignments, to Automatic Utilities Co. Card for loose-leaf devices. No. 1,210,437; Jan. 2; v. 234; p. 21.

Eddy, Kenneth L., Chicago, Ill., assignor, by mesne assignments, to Automatic Utilities Co. Loose-leaf device. No. 1,211,690; Jan. 9; v. 234; p. 483.

Edeburn, Alfred N., assignor to The Cleveland Galvanizing Works, Cleveland, Ohio. Chain-link. No. 1,211,421; Jan. 9; v. 234; p. 392.

Edelbertz, Bernard. (See Kondratieff, Dmitrie S., assignor.)

Edelman, Philip E., Minneapolis, Minn. Apparatus for wireless telegraphy and the like. No. 1,214,022; Jan. 30; v. 234; p. 1390.

Edgington, Arthur C. (See Edgington, James M. and A. C.)

Edgington, James M. and A. C., Chillicothe, Ohio. Under-pan construction for automobiles. No. 1,213,848; Jan. 30; v. 234; p. 1829.

Edlin, Frederick W., Liverpool, England. Construction of floors and the like. No. 1,214,442; Jan. 30; v. 234; p. 1532.

Edmonds, Samuel O., New York, N. Y., assignor to Hendrick Manufacturing Company, Carbondale, Pa. Screen. No. 1,212,151; Jan. 9; v. 234; p. 644.

Edsall, William H., Wallingford, Conn., assignor to H. L. Judd Company, New York, N. Y. Curtain-rod and bracket. No. 1,210,619; Jan. 2; v. 234; p. 84.

Edwards, Alrah B., Chicago, Ill., assignor to Shortwriter Company, Wilmington, Del. Keyboard for writing-machines. No. 1,214,023; Jan. 30; v. 234; p. 1390.

Edwards, Artist A., New Wilson, Okla. Chicken-brooder. No. 1,210,438; Jan. 2; v. 234; p. 21.

Edwards, Bruce V., Newark, N. J., assignor, by mesne assignments, to The Burchell-Johnston Corporation, Thermostatic apparatus. No. 1,211,116; Jan. 2; v. 234; p. 254.

Edwards, Bruce V., Newark, N. J., assignor, by mesne assignments, to The Burchell-Johnston Corporation, Thermostatic apparatus. No. 1,211,117; Jan. 2; v. 234; p. 254.

Edwards, Bruce V., Newark, N. J., assignor to O. S. Campbell, New York, N. Y. Oyster-shucking machine. No. 1,212,464; Jan. 16; v. 234; p. 785.

Edwards, Edward A. (See Edwards, Levi T., assignor.)

Edwards, Henry E., Jackson, Mich. Vehicle-top. No. 1,210,439; Jan. 2; v. 234; p. 21.

Edwards, Isaac L., Aurora, Ill. Rail-stay. No. 1,211,561; Jan. 9; v. 234; p. 440.

Edwards, Levi T., Philadelphia, assignor to E. A. Edwards, Bryn Mawr, Pa. Method and apparatus for lifting water. No. 1,213,170; Jan. 23; v. 234; p. 1064.

Edwards Mfg. Company, The. (See Wells, John T., assignor.)

Edwards, Oliver M. (See Ohnstrand, Enoch, assignor.)

Edwards, Van Every, Decatur, assignor of one-half to O. B. Wheeland, Riverton, Ill. Rotary steam-engine. No. 1,211,831; Jan. 9; v. 234; p. 533.

Edwards, William C., Jr., Kansas City, Mo. Metal structural member and building construction. No. 1,211,562; Jan. 9; v. 234; p. 440.

Efficiency Oil Corporation. (See Sterns, Edward, assignor.)

Egan, James H., Ocean City, N. J. Slot-machine. No. 1,213,849; Jan. 30; v. 234; p. 1330.

Eggart, Karl, assignor to Firm of A. Saurer, Arbon, Switzerland. Gearing. No. 1,210,775; Jan. 2; v. 234; p. 136.

Eggart, Karl, assignor to Firm of A. Saurer, Arbon, Switzerland. Jacquard embroidery-machine. No. 1,210,776; Jan. 2; v. 234; p. 136.

Eggart, Karl, and D. Fischer, assignors to Firm of A. Saurer, Arbon, Switzerland. Embroidering-machine. No. 1,213,344; Jan. 23; v. 234; p. 1126.

Eggleston, Walter E., and L. L. Chauncey, Binghamton, N. Y. Fireproof film-rewinder. No. 1,212,750; Jan. 16; v. 234; p. 888.

Eichelberger, William. (See Light and Eichelberger.)

Eigelberner, Harry B., Oak Park, Ill. Renovating butter. No. 1,210,918; Jan. 2; v. 234; p. 187.

Einfeldt, Ernest E., assignor to French & Hecht, Davenport, Iowa. Wheel. No. 1,211,422; Jan. 9; v. 234; p. 393.

Eisen, William M., assignor, by mesne assignments, to The Adjustable Artificial Limb Company, Inc., New York, N. Y. Artificial limb. No. 1,211,423; Jan. 9; v. 234; p. 393.

Eisendrath, Samson D., Chicago, Ill. Device for eliminating odors from gases, fumes, &c. No. 1,211,691; Jan. 9; v. 234; p. 483.

Ekstromer, Edward, Vancouver, British Columbia, Canada. Necktie. No. 1,211,118; Jan. 2; v. 234; p. 254.

Elam, William B., assignor of one-half to J. E. Boot, Armour, S. D. Steering device for automobiles. No. 1,214,144; Jan. 30; v. 234; p. 1430.

Elder, Edward H., Chicopee, Mass. Gun-barrel-riding machine. No. 1,211,119; Jan. 2; v. 234; p. 254.

Electrelle Company. (See Dorricott, Charles W., assignor.)

Electric Controller and Manufacturing Company, The. (See Hall, Jay H., assignor.)

Electric Railway Improvement Company, The. (See Herrick, Albert B., assignor.)

Electrical Engineers Equipment Company. (See Getts, Frank E., assignor.)

Electro-Fume Company, The. (See Slater and West, assignors.)

Elger, Joseph, Chicago, Ill. Hot-water radiator having means therein to release the radiator of the air. No. 1,214,443; Jan. 30; v. 234; p. 1532.

Eli Lilly and Company, The. (See Davis, Alex B., assignor.)

Eliason, Carl R., Wetaskiwin, Alberta, Canada. Rotary engine. No. 1,211,563; Jan. 9; v. 234; p. 441.

Elliott, Henry B., assignor of one-half to L. N. Chipman, Cincinnati, Ohio. Automatic controlling means for window-sashes. No. 1,213,084; Jan. 16; v. 234; p. 1001.

Elliott, Sterling, Newton, Mass. Addressing-machine. No. 1,210,440; Jan. 2; v. 234; p. 22.

Elliott, Sterling, Newton, Mass. Apparatus for moistening stencil-blanks. No. 1,210,441; Jan. 2; v. 234; p. 22.

Elliott, Sterling, Newton, Mass. Gluing-machine for stencil-frames. No. 1,210,442; Jan. 2; v. 234; p. 22.

Elliott, Sterling, Newton, Mass. Feeding mechanism for stencil-blanks. No. 1,210,443; Jan. 2; v. 234; p. 23.

Elliott, Virginia M., Chicago, Ill. Kimono. No. 1,211,832; Jan. 9; v. 234; p. 534.

Elliott, William S., Pittsburgh, Pa. Multiple-strainer system. No. 1,213,764; Jan. 23; v. 234; p. 1268.

Ellis, Charles S., Chicago, Ill. Electric time-stamp. No. 1,213,345; Jan. 23; v. 234; p. 1127.

Ellmann, Ernest E., St. Louis, Mo. Nut-lock. No. 1,210,919; Jan. 2; v. 234; p. 188.

Elmer, William, Buffalo, N. Y. Automatic injector control for locomotives. No. 1,212,197; Jan. 16; v. 234; p. 688.

Elmore, Charles B., Hartford, Conn., assignor to J. M. Sherwood Manufacturing Company, New York, N. Y. Dish-mop. No. 1,212,032; Jan. 9; v. 234; p. 603.

Emerson-Brantingham Company. (See Waterman, Lewis E., assignor.)

Emerson Phonograph Company. (See Emerson, Victor H., assignor.)

Emerson, Victor H., New York, N. Y., assignor to Emerson Phonograph Company, Inc. Sound-record. No. 1,213,468; Jan. 23; v. 234; p. 1169.

Emery, Albert H., Stamford, Conn. Railway-track scale. No. 1,213,605; Jan. 23; v. 234; p. 1217.

Emley, James E., Middleport, Ohio. Mechanical movement. No. 1,213,850; Jan. 30; v. 234; p. 1330.

Emmenegger, Peter, Guyaux, Pa. Making glass reflectors. No. 1,211,120; Jan. 2; v. 234; p. 255.

Emott, James T., Morristown, N. J., assignor to Puritan Chemical Company. Breast-pump. No. 1,213,606; Jan. 23; v. 234; p. 1218.

Endebrock, Carl H., and W. H. Mahlow, Trenton, N. J.; said Mahlow assignor to said Endebrock. Packing-ring. No. 1,211,692; Jan. 9; v. 234; p. 484.

Engelsman, Monroe, New York, N. Y. Ring and finger gage. No. 1,213,607; Jan. 23; v. 234; p. 1218.

Engi, Gadient, A. Grob, and F. Straub, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Green chromium compound and making same. No. 1,213,608; Jan. 23; v. 234; p. 1218.

Englund, Ernst E., assignor to D. M. Sechler Implement & Carriage Co., Moline, Ill. Corn-planter. No. 1,211,365; Jan. 2; v. 234; p. 837.

Ensign, Otis F., and A. J. Thuneman, Defiance, Ohio. Automatic locking device. No. 1,212,033; Jan. 9; v. 234; p. 604.

Ensign, William T., and S. A. Almida, Chicago, Ill. Toy. No. 1,212,832; Jan. 16; v. 234; p. 739.

Enterprise Electric Novelty Co. (See David, Friedrich, assignor.)

Entwisle, Edward F., Duquesne, Pa., assignor to Henry R. Worthington. Centrifugal pump. No. 1,210,777; Jan. 2; v. 234; p. 137.

Epple, Carl H., Oakland, and G. A. White, Red Bluff, Cal. Flange and rail lubricator. No. 1,211,424; Jan. 9; v. 234; p. 393.

Eppley, Francis G., assignor to Albaugh-Dover Co., Chicago, Ill. Bearing. No. 1,214,289; Jan. 30; v. 234; p. 1481.

Equitable Meter Company. (See Armstrong, James R., assignor.)

Erfurth, Ottomar O., Teuchern, Germany. Screw conveyer. No. 1,213,171; Jan. 23; v. 234; p. 1065.

Ermold, Mark A., Haddon Heights, N. J. Playing-cards. No. 1,212,198; Jan. 16; v. 234; p. 689.

Ertner, August C., Vancouver, British Columbia, Canada. Type-writer copy-holder. No. 1,211,833; Jan. 9; v. 234; p. 534.

Ervin, James M., Onaway, Mich. Dirigible headlight. No. 1,213,765; Jan. 23; v. 234; p. 1269.

Erwin, William, Philadelphia, Pa. Internal-explosion engine. No. 1,213,172; Jan. 23; v. 234; p. 1065.

Espenlaub, Charles H., *et al.* (See Espenlaub, John W., assignor.)

Espenlaub, John W., Evansville, Ind., assignor of two-thirds to C. H. Espenlaub and H. R. Hoge. Trunk-fastener. No. 1,214,489; Jan. 30; v. 234; p. 1548.

Estes, William P. R., Jr. (See Ferguson, Clarence L., assignor.)

Esty Sprinkler Company. (See Esty, William, assignor.)

Esty, William, assignor to Esty Sprinkler Company, Laconia, N. H. Automatic stationary fire-extinguisher. No. 1,211,834; Jan. 9; v. 234; p. 534.

Etheridge, Allen F., Evergreen, Ala. Means for catching insects. No. 1,214,444; Jan. 30; v. 234; p. 1533.

Atheridge, Herbert, London, assignor to The Bar-Lock Typewriter Company Limited, London, England. Type-bar action. No. 1,212,921; Jan. 16; v. 234; p. 945.
Aubanks, Joseph A., Greenfield, Ohio. Pencil-holder. No. 1,212,034; Jan. 9; v. 234; p. 604.
Auker, Frederick, North Branch, N. Y. Poultry-feeder. No. 1,214,145; Jan. 30; v. 234; p. 1430.
Aureka Projector Device Co. (See Hamilton, Frank C., assignor.)
Austis, Frederic A., Milton, Mass. Removing sulfur dioxid from metallurgical smoke and similar gases. No. 1,212,199; Jan. 16; v. 234; p. 689.
Austis, Frederick A., Milton, Mass. Sintering apparatus. No. 1,212,333; Jan. 16; v. 234; p. 739.
Austis, Frederic A., Milton, Mass. Treatment of nickel ores. No. 1,212,334; Jan. 16; v. 234; p. 739.
Avans, Arthur F., trustee. (See Wilkinson, John F., assignor.)
Avans, Charles D., Kings Mountain, Ky. Combination-table. No. 1,213,085; Jan. 16; v. 234; p. 1001.
Avans, Charles F. (See McCarter, Charles, assignor.)
Avans, David H., Milbank, S. D. Joint-chair. No. 1,212,035; Jan. 9; v. 234; p. 604.
Avans, James D., Montgomery, Ala. Fireplace. No. 1,213,173; Jan. 23; v. 234; p. 1065.
Avans, Thomas M., Granite City, Ill. Method of and apparatus for making terne plates. No. 1,213,851; Jan. 30; v. 234; p. 1330.
Avans, Walter P., Des Moines, Iowa, assignor of one-fourth to Wenzelmann Mfg. Co., Galesburg, Ill., one-fourth to E. C. Bomar, and one-fourth to R. Davies, Clay Center, Kans. Automatic automobile-jack. No. 1,214,024; Jan. 30; v. 234; p. 1390.
Averburn Heater Company. (See Krebs, Charles H., assignor.)
Averett, Daniel S., Jordan, N. Y. Power-jack for automobiles. No. 1,212,200; Jan. 16; Gaz. vol. 234; p. 689.
Averett, Edward, Pittsburgh, Pa. Railway cross-tie. No. 1,212,922; Jan. 16; v. 234; p. 945.
Averett, Francis D., Saranac Lake, N. Y. Transmission-dynamometer. No. 1,212,751; Jan. 16; v. 234; p. 888.
Averett, Henry L., Philadelphia, Pa. Flash-lamp. No. 1,211,121; Jan. 2; v. 234; p. 255.
Averlastik, Inc. (See Austin, Herbert A., assignor.)
Aversbed, Sydney, Chiswick, London, England. Testing of insulation. No. 1,212,467; Jan. 16; v. 234; p. 785.
Axtrand, Alfred, Aberdeen, Wash. Torpedo. No. 1,212,468; Jan. 16; v. 234; p. 786.
Ayer, Philipp, Halberstadt, assignor to R. Koepp & Co., Oestrich-on-the-Rhine, Germany. Production of antimonates. No. 1,211,564; Jan. 9; v. 234; p. 441.
B. E. Myers and Brother. (See Myers, Philip A., assignor.)
B. F. Dailey Corporations, The. (See Hood, Hubert E., assignor.)
B. L. Schmidt Company. (See Novick, Abraham, assignor.)
Babrique Internationale d'Appareils à Magneto S. A. (F. I. A. M.) *et al.* (See Geisslinger, Johann, assignor.)
Babnir Bearing Company, The. (See Fox, Rudolph H., assignor.)
Bagan, Henry. (See Lamb and Fagan.)
Bagan, John T., and C. H. Quackenbush, Cleveland, Ohio, assignors to General Electric Company. Exhausting-machine. No. 1,210,620; Jan. 2; v. 234; p. 84.
Bagan, John T., and C. H. Quackenbush, Cleveland, Ohio, assignors to General Electric Company. Welding-machine. No. 1,213,852; Jan. 30; v. 234; p. 1330.
Bageol, Rollie B., Oakland, Cal. Vehicle. No. 1,212,616; Jan. 16; v. 234; p. 838.
Bairbanks, Morse & Co. (See Hobart, Franklin G., assignor.)
Ballek, Nathan, Denver, Colo. Brake system. No. 1,210,444; Jan. 2; v. 234; p. 23.
Ballwell, Oscar M. (See Roquemore and Fallwell.)
Bangman, Andrew A., Bancroft, Iowa. Hame and tug connection. No. 1,211,122; Jan. 2; v. 234; p. 255.
Barr, Robert E., Minneapolis, Minn. Local-anesthesia machine. No. 1,211,304; Jan. 2; v. 234; p. 319.
Barrar, Charles F., Howell, Mich. Mail-box. No. 1,211,425; Jan. 9; v. 234; p. 394.
Barrington, Richard J. A., New York, N. Y. Cocktail-mixer. No. 1,211,426; Jan. 9; v. 234; p. 394.
Bäszler, Peter, Berlin-Friedenau, Germany. Electric welding-machine. No. 1,213,174; Jan. 23; v. 234; p. 1066.
Baucher, Andrew J., Wichita, Kans. Pumping mechanism for vacuum-cleaners. No. 1,212,923; Jan. 16; v. 234; p. 945.
Baugno, Anthony, Lexington, Mass. Necktie-holder. No. 1,213,086; Jan. 16; v. 234; p. 1001.
Baultless Rubber Company, The. (See Miller, Thomas W., assignor.)
Bausek, Arthur J. and I. F., St. Louis, Mo. Reducing-valve. No. 1,214,445; Jan. 30; v. 234; p. 1533.
Bausek, Irving F. (See Fausek, Arthur J. and I. F.)
Baust, Henry W., Grants Pass, Oreg. Concentrating-table. No. 1,210,778; Jan. 2; v. 234; p. 137.
Bay, Alpheus, Louisville, Ky. Apparatus for operating upon composite substances. No. 1,210,779; Jan. 2; v. 234; p. 137.
Bay, Alpheus, Louisville, Ky. Apparatus for operating upon composite substances. No. 1,210,780; Jan. 2; v. 234; p. 138.
Bay, Alpheus, Louisville, Ky. Apparatus for operating upon composite substances. No. 1,210,781; Jan. 2; v. 234; p. 138.
Bay, Alpheus, Louisville, Ky. Producing butter. No. 1,210,782; Jan. 2; v. 234; p. 139.
Bay, Alpheus, Louisville, Ky. Apparatus for operating upon composite substances. No. 1,210,783; Jan. 2; v. 234; p. 139.
Bear, Thomas G., Bayview, Ala. Mining-machine cable-connector. No. 1,210,445; Jan. 2; v. 234; p. 24.
Bedeler, John H., New York, N. Y. Evaporating apparatus. No. 1,212,469; Jan. 16; v. 234; p. 786.
Bederal Telegraph Company. (See De Forest, Lee, assignor.)
Bederal Telegraph Company. (See Pedersen and Poulsen, assignors.)
Befell, Henry H., and J. F. Ohmer, assignors to Ohmer Fare Register Company, Dayton, Ohio. Coin counting and registering device. No. 1,210,622; Jan. 2; v. 234; p. 85.
Behrenkamp, John E., and L. A. Smallfield, Kansas City, Mo.; said Smallfield assignor to said Behrenkamp. Garbage-receptacle. No. 1,211,305; Jan. 2; v. 234; p. 319.
Beinberg, Arthur, New York, N. Y. Tooth-brush holder and sterilizer. No. 1,212,335; Jan. 16; v. 234; p. 740.
Bekete, Stephen I., assignor to Hudson Motor Car Company, Detroit, Mich. Engine-valve. No. 1,210,621; Jan. 2; v. 234; p. 84.
Beller, Willy, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Ammunition-chest. No. 1,212,201; Jan. 16; v. 234; p. 690.
Bellman, Edward J., Milwaukee, Wis. Swinging-sash hanger. No. 1,212,336; Jan. 16; v. 234; p. 740.
Bellows, Mel, Chicago, Ill. Adjustable gage. No. 1,213,134; Jan. 16; v. 234; p. 1018.
Belsenthal, Gabriel, *et al.* (See Spiegel, Alexander S., assignor.)
Belsenthal & Sons, G. (See Scully, Walter P., assignor.)
Belt, Willard O., Bradford, Pa., assignor to Petroleum Products Company. Separating hydrocarbons from natural or other gas. No. 1,213,795; Jan. 23; v. 234; p. 1280.
Belt, Willard O., Bradford, Pa., assignor to Petroleum Products Company. Compressing, purifying, drying, and cooling gases. No. 1,213,796; Jan. 23; v. 234; p. 1280.
Belton, Augustus C., Jr., Macon, Ga. Crematory. No. 1,213,766; Jan. 23; v. 234; p. 1269.
Benjamin, Clarence L., Georgetown, assignor of one-half to W. P. R. Estes, Jr., Haverhill, Mass. Fly-swatter. No. 1,214,446; Jan. 30; v. 234; p. 1533.
Benjamin, Harold R. and I. G., Newburgh, N. Y. Tire-patch. No. 1,211,427; Jan. 9; v. 234; p. 394.
Benjamin, Ivin G. (See Benjamin, Harold R. and I. G.)
Benjamin, Thomas B., Hanford, Cal. Scraper. No. 1,213,767; Jan. 23; v. 234; p. 1270.
Benngren, Enoch, Kansas City, Mo. Machine for pressing glassware. No. 1,213,853; Jan. 30; v. 234; p. 1331.
Berodowill, Joseph H., St. Paul, Minn. Skate-holder. No. 1,213,609; Jan. 23; v. 234; p. 1218.
Berris, John A., Chicago, Ill. Water-heater. No. 1,211,927; Jan. 9; v. 234; p. 568.
Berris, Walter. (See Magie and Ferris.)
Bertman, Isidor, New York, N. Y. Portable electric battery. No. 1,213,175; Jan. 23; v. 234; p. 1066.
Beser, John C., Brooklyn, N. Y. Tooth-brush. No. 1,210,623; Jan. 2; v. 234; p. 86.
Bessenden, Reginald A., Brookline, Mass. Apparatus for phonograph-kinetoscopes. No. 1,213,176; Jan. 23; v. 234; p. 1067.
Bessenden, Reginald A., Brookline, Mass., assignor to Submarine Signal Company, Portland, Me. Submarine, subterranean, and aerial telephony. No. 1,212,202; Jan. 16; v. 234; p. 690.
Bessenden, Reginald A., Brookline, Mass., assignor to Submarine Signal Company, Portland, Me. Dynamo-electric machinery. No. 1,213,610; Jan. 23; v. 234; p. 1219.
Bessenden, Reginald A., Brookline, Mass., assignor to Submarine Signal Company, Portland, Me. Dynamo-electric machinery. No. 1,213,611; Jan. 23; v. 234; p. 1219.
Bessler, Raymond G., Mendota, Ill. Bicycle-bell. No. 1,213,469; Jan. 23; v. 234; p. 1170.
Betrow, William G. (See Eberly and Betrow.)
Bezzey, Chester T. (See Chamberlin and Bezzey.)
Bido, Edwin G., Berar, India. Saddle mechanism for cycles. No. 1,211,693; Jan. 9; v. 234; p. 484.
Biebig, John P., Candor, N. Y. Floating fly or bait. No. 1,212,752; Jan. 16; v. 234; p. 889.
Bike, James H., Autaugaville, Ala. Boll-weevil and square collector. No. 1,213,087; Jan. 16; v. 234; p. 1002.
Bilson, Samuel L., Kansas City, Mo. Spring-tire. No. 1,212,036; Jan. 9; v. 234; p. 605.
Bink, Edward, Milwaukee, Wis., assignor of one-half to H. W. Seaman, Clinton, Iowa. Retort apparatus. No. 1,213,346; Jan. 23; v. 234; p. 1127.
Bink, Edward, Milwaukee, Wis., assignor of one-half to H. W. Seaman, Clinton, Iowa. Retort apparatus. No. 1,213,347; Jan. 23; v. 234; p. 1127.
Binkelstein, Harry L. (See Finkelstein, Morris, S. H., H. L., and N.)
Binkelstein, Morris, S. H., H. L., and N., Greenville, Miss. Thread-coating composition. No. 1,210,446; Jan. 2; v. 234; p. 24.

Finkelstein, Nathan. (See Finkelstein, Morris, S. H., H. L., and N.)
Finkelstein, Samuel H. (See Finkelstein, Morris, S. H., H. L., and N.)
Finlay, Robert G., Cleveland, Ohio. Securing heat energy from combustible substances. No. 1,213,470; Jan. 23; v. 234; p. 1170.
Finn, Jay, Elmo, Kans. Tractor for plows, &c. No. 1,211,565; Jan. 9; v. 234; p. 441.
Firebaugh, Elba C., Kouts, Ind. Bacon-slicer. No. 1,212,924; Jan. 16; v. 234; p. 946.
Firestone Tire & Rubber Company, The. (See Stevens, William C., assignor.)
Fischer, Carl H. (See Sacek, Johann, assignor.)
Fischer, Daniel. (See Eggart and Fischer.)
Fischer, Leigh H., assignor of one-half to S. B. Prater, McCordsville, Ind. Lubricating-cup. No. 1,214,146; Jan. 30; v. 234; p. 1431.
Fischrupp, George, Chicago, Ill. Leg-rest for chairs. No. 1,211,428; Jan. 9; v. 234; p. 394.
Fish, George M. (See Best, Robert A., assignor.)
Fishel, Theodore H., New Rochelle, N. Y. Jewelry. No. 1,210,624; Jan. 2; v. 234; p. 86.
Fisher, Alva J., assignor to Hurley Machine Company, Chicago, Ill. Agitator or dolly for washing-machines. No. 1,211,123; Jan. 2; v. 234; p. 255.
Fisher, Arthur R., New York, N. Y. Colon-irrigator. No. 1,211,928; Jan. 9; v. 234; p. 569.
Fisher, Donald J., *et al.* (See Wise, Joseph C., assignor.)
Fisher, Edward, Newport, R. I. Can and jar closure. No. 1,214,147; Jan. 30; v. 234; p. 1431.
Fisher, Edward C., Burr Oak, Kans. Tool-holder. No. 1,213,088; Jan. 16; v. 234; p. 1002.
Fisher, Fred J., Detroit, Mich. Concealed hinge. No. 1,211,366; Jan. 2; v. 234; p. 337.
Fisher, Harry P., Chicago, Ill. Sheaf-loader. No. 1,214,290; Jan. 30; v. 234; p. 1481.
Fisher, Ira S., Moline, Mo. Metallic rail-tie. No. 1,212,037; Jan. 9; v. 234; p. 605.
Fisher, Sidney, West Dandy, N. Y. Window-screen. No. 1,212,753; Jan. 16; v. 234; p. 889.
Fitger Brewing Company. (See Ringler and Beerhalter, assignors.)
Fitts, James L., Merchantville, N. J., assignor to Warren Webster & Company. Steam-heating apparatus. No. 1,210,784; Jan. 2; v. 234; p. 140.
Fitzgerald, John M., assignor to H. S. Hawley, deceased, Chicago, Ill.; The Merchant's Loan and Trust Company, executor. Rectifier. No. 1,211,694; Jan. 9; v. 234; p. 484.
Fitzharris, Frank, assignor of one-half to E. J. Nixon, Texarkana, Tex. Vehicle-tire. No. 1,214,291; Jan. 30; v. 234; p. 1481.
Fitzpatrick, James J., New York, N. Y. Dust, wind, and storm shield for vehicles. No. 1,214,292; Jan. 30; v. 234; p. 1482.
Flammang, John, assignor to Inland Machine Works, St. Louis, Mo. Manufacturing piston-rings. No. 1,212,337; Jan. 16; v. 234; p. 740.
Flannery, Joseph M., assignor to Standard Chemical Company, Pittsburgh, Pa. High-speed steel. No. 1,210,625; Jan. 2; v. 234; p. 86.
Flannery, Joseph M., assignor to Standard Chemical Company, Pittsburgh, Pa. High-speed steel. No. 1,210,626; Jan. 2; v. 234; p. 86.
Flannery, Joseph M., assignor to Standard Chemical Company, Pittsburgh, Pa. High-speed steel. No. 1,210,627; Jan. 2; v. 234; p. 86.
Flatter, Carl, and W. L. Case, assignors of one-ninth to C. H. Stephenson, Alton Park, Tenn. Self-oiling ball-bearing trolley-wheel. No. 1,212,338; Jan. 16; v. 234; p. 741.
Flavel, Harry M. (See Bidwell, Flavel, Henry, and McLeod.)
Flaxman, Americ E., Pittenweem, Scotland. Handle or gripping-surface. No. 1,212,038; Jan. 9; v. 234; p. 605.
Fleckner, Walter O., Cloverdale, Cal. Air-proof composition. No. 1,212,925; Jan. 16; v. 234; p. 946.
Fleich, Oscar, Brooklyn, N. Y. Adjustable revolving-carrier support. No. 1,212,926; Jan. 16; v. 234; p. 946.
Fleischer, Paul W., West Hoboken, N. J., assignor to American Can Company, New York, N. Y. Can-feeding mechanism. No. 1,212,754; Jan. 16; v. 234; p. 889.
Fleming, John C., Boston, Mass. Food product. No. 1,211,124; Jan. 2; v. 234; p. 256.
Fleming, John C., Boston, Mass. Making food compositions. No. 1,213,854; Jan. 30; v. 234; p. 1331.
Fleming, Robert G., San Jose, Cal. Car-unloader. No. 1,213,177; Jan. 23; v. 234; p. 1067.
Fleming, William D., East Downingtown, Pa. Air-heater. No. 1,213,178; Jan. 23; v. 234; p. 1067.
Fletcher, Douglas P., Cicero, Ill. Spring-board. No. 1,210,920; Jan. 2; v. 234; p. 188.
Fletcher, Elizabeth I., Norwich, Conn. Rolling-pin. No. 1,212,039; Jan. 9; v. 234; p. 605.
Fletcher, Elizabeth I., Norwich, Conn. Dough-board. No. 1,212,040; Jan. 9; v. 234; p. 606.
Flexible Steel Lacing Company. (See Purple, George E., assignor.)
Flick, William S., assignor of one-half to G. A. Lambert, Anderson, Ind. Gate-opening device. No. 1,210,447; Jan. 2; v. 234; p. 24.
Flitcroft, James E., assignor to P. Wall Manufacturing Supply Company, Pittsburgh, Pa. Water-agitator for ice-freezing apparatus. No. 1,213,179; Jan. 23; v. 234; p. 1067.
Floating Wedge Lock Nut Co. (See Wood, Frank W., assignor.)
Flood, Thomas A., Salt Lake City, Utah. Vaccinating device. No. 1,212,927; Jan. 16; v. 234; p. 947.
Flowers, Walter A., Riverside, Tenn. Tie-loading machine. No. 1,212,617; Jan. 16; v. 234; p. 839.
Floyd, George G., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Draft-arm. No. 1,210,448; Jan. 2; v. 234; p. 24.
Floyd-Wells Company, The. (See Carter and Bibb, assignors.)
Fluharty, Allan M., Indianapolis, Ind., assignor to The Cincinnati Galvanizing Company, Cincinnati, Ohio. Bread-toaster. No. 1,212,340; Jan. 16; v. 234; p. 741.
Flurscheim, Bernhard J., New York, N. Y. Manufacturing diphenylamin. No. 1,212,928; Jan. 16; v. 234; p. 947.
Flynn, Edward J., Jr., Woodlawn, Pa. Apparatus for treating steel ingots. No. 1,212,470; Jan. 16; v. 234; p. 786.
Flynn, George, assignor of one-half to A. Broyles, National Soldiers Home, Tenn. Umbrella. No. 1,213,855; Jan. 30; v. 234; p. 1331.
Flynn, William J. (See Rowan, Francis N., assignor.)
Focardi, Pier-Luigi, Brooklyn, N. Y., assignor to Garwood Company, Garwood, N. J. Ball-bearing. No. 1,210,921; Jan. 2; v. 234; p. 188.
Foley, John P., Columbus, Kans. Rail-fastener. No. 1,213,856; Jan. 30; v. 234; p. 1332.
Folsom, Arthur E., assignor to W. M. Whitney, Winchendon, Mass. Wood-planing machine. No. 1,212,618; Jan. 16; v. 234; p. 839.
Fonda, Gorton R., Schenectady, N. Y., assignor to General Electric Company. Apparatus and process for concentrating argon. No. 1,211,125; Jan. 2; v. 234; p. 256.
Fondiller, William, assignor to Western Electric Company, New York, N. Y. Loading-coil. No. 1,210,628; Jan. 2; v. 234; p. 87.
Fondiller, William, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Manufacturing inductance-coils. No. 1,212,755; Jan. 16; v. 234; p. 890.
Fonos, Peter J., New Richmond, Wis. Rail-joint. No. 1,210,785; Jan. 2; v. 234; p. 141.
Foord, Charles L., Dallas, Tex. Awning. No. 1,212,619; Jan. 16; v. 234; p. 839.
Foote, George H., Jr. (See Gardner, Coe S., assignor.)
Foote, Hiram W., Los Angeles, Cal. Automobile-steering-gear lock. No. 1,211,835; Jan. 9; v. 234; p. 535.
Forbes, Kingston, Flint, Mich. Catch. No. 1,213,471; Jan. 23; v. 234; p. 1170.
Forbes, Leighton H., assignor to American Drafting Furniture Co., Rochester, N. Y. Drawer-support. No. 1,212,471; Jan. 16; v. 234; p. 787.
Ford, Bruce, Philadelphia, Pa. Secondary or storage battery. No. 1,210,786; Jan. 2; v. 234; p. 141.
Ford, Bruce, Philadelphia, Pa. Secondary or storage battery. No. 1,210,787; Jan. 2; v. 234; p. 141.
Ford, Edward L., Youngstown, Ohio. Puddling-furnace. No. 1,212,929; Jan. 16; v. 234; p. 947.
Ford, James, Christoval, Tex. Cotton-harvester. No. 1,214,490; Jan. 30; v. 234; p. 1548.
Ford, Ralph L., Chicago, Ill., assignor to International Harvester Corporation. Fertilizer attachment for seed-planters. No. 1,211,836; Jan. 9; v. 234; p. 535.
Ford, Samuel H., Flat Rock, Ill. Door-latch. No. 1,214,148; Jan. 30; v. 234; p. 1431.
Ford, Silas M., St. Paul, Minn. Shingle. No. 1,213,472; Jan. 23; v. 234; p. 1171.
Fore Chemical Works. (See Zinkeisen, Oscar T., assignor.)
Forrest, Alfred, Sr., *et al.* (See Forrest, Eugene, assignor.)
Forrest, Carl, *et al.* (See Forrest, Eugene, assignor.)
Forrest, Charles N., Rahway, assignor of one-fourth to R. L. Fowler, one-fourth to M. S. Darrow, Perth Amboy, and one-fourth to E. B. Rosevear, Boonton, N. J. Manufacture of flexible bituminous roofing and waterproofing materials. No. 1,211,837; Jan. 9; v. 234; p. 536.
Forrest, Eugene, assignor of two-eighths to T. Forrest, one-eighth to C. Forrest, and one-eighth to A. Forrest, Sr., Brimley, Mich. Motor-sleigh. No. 1,210,922; Jan. 2; v. 234; p. 188.
Forrest, Trefley, *et al.* (See Forrest, Eugene, assignor.)
Forster, John W. L., *et al.* (See McCollum, James H. K., assignor.)
Forsythe, Albert H., Joplin, Mo. Internal-combustion engine. No. 1,212,041; Jan. 9; v. 234; p. 606.
Forsyth, Holmes. (See Younger and Schoenky, assignors.)
Fortier, Charles D. (See Jolly and Fortier.)
Fortier, Charles L., assignor to Johnson Service Company, Milwaukee, Wis. Automatic control device. No. 1,212,042; Jan. 9; v. 234; p. 606.
Fortin, Benjamin P., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,212,756; Jan. 16; v. 234; p. 890.
Fortney, Harvey B., Hartman, Colo. Grain or hay grinder. No. 1,211,566; Jan. 9; v. 234; p. 441.
Fortuna-Werke, Spezialmaschinenfabrik, Gesellschaft Mit Beschränkter Haftung. (See Klaeger, Hermann, assignor.)

Fosdick, Charles A., Keota, Iowa. Broom-bridle. No. 1,214,447; Jan. 30; v. 234; p. 1533.
Fosdick, Frank C., Chicago, Ill. Water-softening apparatus for locomotives. No. 1,212,339; Jan. 16; v. 234; p. 741.
Foster and Company, Charles B. (See Higinbotham, Arthur O., assignor.)
Foster, Eugene L., assignor to C. G. Conn, Elkhart, Ind. Calibrating and justifying parts of wind musical instruments. No. 1,210,629; Jan. 2; v. 234; p. 87.
Foster, John O. (See Sharp and Foster.)
Foster, L. J., *et al.* (See Clark, Stuart J., assignor.)
Foster, R. Jay, assignor to Jersey Cereal Food Company, Cereal, Pa. Cereal food. No. 1,211,126; Jan. 2; v. 234; p. 256.
Fountain, Arthur, Pawhuska, Okla. Railway-tie. No. 1,212,930; Jan. 16; v. 234; p. 947.
Fowle, Charles L., Dowagiac, Mich. Grain-drill. No. 1,211,929; Jan. 9; v. 234; p. 569.
Fowler, Christopher L., Clifton Station, Va. Envelop. No. 1,210,449; Jan. 2; v. 234; p. 25.
Fowler, Frank T. (See Talbot, William W., assignor.)
Fowler, James, Granite City, Ill. Automatic sheet-metal tank. No. 1,212,341; Jan. 16; v. 234; p. 742.
Fowler, Paul L., Ogden, Utah. Jar-holder and top-remover. No. 1,211,695; Jan. 9; v. 234; p. 484.
Fowler, Robert L., *et al.* (See Forrest, Charles N., assignor.)
Fox, George B., Norwich, Conn. Shoe. No. 1,211,127; Jan. 2; v. 234; p. 256.
Fox, Harlin L. (See Borland and Fox.)
Fox, Rudolph H., assignor to The Fafnir Bearing Company, New Britain, Conn. Ball-bearing. No. 1,213,089; Jan. 16; v. 234; p. 1002.
Fox, Rudolph H., assignor to The Fafnir Bearing Company, New Britain, Conn. Ball-bearing. No. 1,213,090; Jan. 16; v. 234; p. 1003.
Fox, William A., Greeley, Kans. Egg-tester. No. 1,210,788; Jan. 2; v. 234; p. 141.
Fox, William R., Grand Rapids, Mich. Attachment for multiple drills. No. 1,210,450; Jan. 2; v. 234; p. 25.
Fox, William R., Grand Rapids, Mich. Drill. No. 1,212,472; Jan. 16; v. 234; p. 787.
Fox, William R., Grand Rapids, Mich. Front-strike typewriting machine. No. 1,214,293; Jan. 30; v. 234; p. 1482.
Fox, William R., Grand Rapids, Mich. Type-writing machine. No. 1,214,294; Jan. 30; v. 234; p. 1483.
Fraad, Daniel, Brooklyn, N. Y. Fumigating device. No. 1,214,149; Jan. 30; v. 234; p. 1431.
France, Jason G., Syracuse, N. Y. Wall-fastener. No. 1,210,451; Jan. 2; v. 234; p. 25.
Francis, Harry G., Rushville, Ind. Adhesive-spreader. No. 1,213,857; Jan. 30; v. 234; p. 1332.
Francis, William, Seattle, Wash. Pliers. No. 1,214,448; Jan. 30; v. 234; p. 1534.
Francis, William H., Washington, D. C. Galley-lock. No. 1,210,923; Jan. 2; v. 234; p. 189.
Frank Krementz Company. (See Krementz, Frank J., assignor.)
Frank, Louis, Brooklyn, and J. Cooper, New York, assignors to Greenpoint Metallic Bed Company, Brooklyn, N. Y. Metallic bedstead. No. 1,210,924; Jan. 2; v. 234; p. 189.
Frank, William, St. Louis, Mo. Machine for treating cinematograph-films. No. 1,211,429; Jan. 9; v. 234; p. 395.
Frankel Connector Company. (See Frankel, Harry, assignor.)
Frankel, Harry, assignor to Frankel Connector Company, Inc., New York, N. Y. Electrical connector. No. 1,211,128; Jan. 2; v. 234; p. 257.
Frankfurt, Ernest, Omaha, Nebr. Collapsible poultry-crate. No. 1,210,452; Jan. 2; v. 234; p. 25.
Franklin, Hubert F. (See Weiss and Franklin.)
Franklin, William H., Red Lodge, Mont. Power washing-machine. No. 1,211,129; Jan. 2; v. 234; p. 257.
Frankman, Olof, Marieberg, Sweden. Machine for cutting off the tops of beets and the like. No. 1,212,931; Jan. 16; v. 234; p. 948.
Franz, Gustav A., Jackson, Mich. Mattress or the like. No. 1,213,858; Jan. 30; v. 234; p. 1332.
Frasch, Hans A., New York, N. Y. Method of and apparatus for distilling hydrocarbons. No. 1,212,620; Jan. 16; v. 234; p. 840.
Frateschi, Joseph, Ogdensburg, N. Y. Gun-carriage. No. 1,211,130; Jan. 2; v. 234; p. 257.
Frederick, Isaac M., Perkasie, Pa. Toy swing. No. 1,211,930; Jan. 9; v. 234; p. 570.
Frederick Osann Company. (See Plumley, Raymond L., assignor.)
Frederick, William A., assignor to Twin-Rim Company, Boston, Mass. Steering-aid attachment for motor-vehicles. No. 1,212,160; Jan. 9; v. 234; p. 647.
Frederickson, C. J., *et al.* (See Lange, John, Jr., assignor.)
Freedman, Louis A., New York, N. Y. Removable seat for automobiles. No. 1,210,789; Jan. 2; v. 234; p. 142.
Freeman, Arthur C., Jr., Norfolk, Va. Aerotransit. No. 1,214,150; Jan. 30; v. 234; p. 1431.
Freeman, J. B. (See Dobbins, George, assignor.)
Freeman, Richard J., assignor of one-half to A. May, Jr., Yoakum, Tex. Door operating and locking means. No. 1,212,043; Jan. 9; v. 234; p. 607.
Freer, Phelps M., Detroit, Mich. Means for connecting retarding devices. No. 1,213,797; Jan. 23; v. 234; p. 1281.
Freese, Claude H., Los Angeles, Cal. Deodorizing device. No. 1,211,306; Jan. 2; v. 234; p. 319.
Freese, Herman W., assignor, by mesne assignments, to C. A. Waldron, trustee, Chicago, Ill. Hydraulic jack. No. 1,212,757; Jan. 16; v. 234; p. 891.
Freese, Johnathan R., Middletown, Ohio, assignor to The American Rolling Mill Company, Newark, N. J. Metallic crate. No. 1,212,758; Jan. 16; v. 234; p. 891.
French, Edward H., Smethport, Pa. Centrifugal separator. No. 1,212,473; Jan. 16; v. 234; p. 787.
French, Franklin E., Princeton, assignor of one-half to O. M. Case, Otwell, Ind. Metallic railway-tie. No. 1,213,612; Jan. 23; v. 234; p. 1219.
French & Hecht. (See Einfeldt, Ernest E., assignor.)
French, James C., Kenosha, Wis., assignor to F. C. Austin, Chicago, Ill. Trenching-machine. No. 1,210,453; Jan. 2; v. 234; p. 26.
French, James C., Kenosha, Wis., assignor to F. C. Austin, Chicago, Ill. Tunneling-machine. No. 1,210,925; Jan. 2; v. 234; p. 189.
Frew, William J., Chicago, Ill. Fuel cut-off for motor-vehicles. No. 1,213,859; Jan. 30; v. 234; p. 1333.
Frick & Lindsay Company. (See Moore, Martin L., assignor.)
Frick, William H., and A. J. Martin, Philadelphia, Pa. Starting-crank for engines. No. 1,211,307; Jan. 2; v. 234; p. 320.
Fridlund, Lewis, Willmar, Minn. Supplemental stove-top. No. 1,211,567; Jan. 9; v. 234; p. 441.
Fried. Krupp Aktiengesellschaft. (See Feller, Willy, assignor.)
Friel, Patrick H., Kenosha, Wis. Bedstead construction. No. 1,213,473; Jan. 23; v. 234; p. 1171.
Friquet, Henri, Havre, France. Safety apparatus for indicating to the engine-driver whether the line is free or blocked. No. 1,213,474; Jan. 23; v. 234; p. 1171.
Fritts, Charles E., deceased; J. H. Fritts, administratrix, Oneonta, N. Y., assignor, by mesne assignments, to J. D. Myers, Philadelphia, Pa. Record of light, sound, and analogous phenomena and process and apparatus for producing the same. No. 1,213,613; Jan. 23; v. 234; p. 1220.
Fritts, Charles E., deceased; J. H. Fritts, administratrix, Oneonta, N. Y., assignor, by mesne assignments, to J. D. Myers, Philadelphia, Pa. Record of pulsations of sound and analogous phenomena and process and apparatus for producing the same. No. 1,213,614; Jan. 23; v. 234; p. 1220.
Fritts, Charles E., deceased; J. H. Fritts, administratrix, Oneonta, N. Y., assignor, by mesne assignments, to J. D. Myers, Philadelphia, Pa. Apparatus for making sound-records. No. 1,213,615; Jan. 23; v. 234; p. 1220.
Fritts, Charles E., deceased; J. H. Fritts, administratrix, Oneonta, N. Y., assignor, by mesne assignments, to J. D. Myers, Philadelphia, Pa. Means for producing, controlling, and utilizing electric currents. No. 1,213,616; Jan. 23; v. 234; p. 1221.
Fritts, Josephine H., administratrix. (See Fritts, Charles E.)
Fritts, M. A., *et al.* (See Redding, Harry B., assignor.)
Fritzsche, Herman. (See Anderwert, Fritzsche, and Schobel.)
Frost, Philip B., Sheffield, and F. Rings, Liverpool, England. Composite beam. No. 1,212,759; Jan. 16; v. 234; p. 892.
Fry, Albert, Evans, Colo. Road-drag. No. 1,212,134; Jan. 9; v. 234; p. 637.
Fuchs, Leopold, Roslyn Heights, N. Y. Jacquard mechanism for looms. No. 1,214,449; Jan. 30; v. 234; p. 1534.
Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Bag-fastener. No. 1,211,931; Jan. 9; v. 234; p. 570.
Fuller, William J. H., Toronto, Ontario, Canada. Gas-lamp. No. 1,212,621; Jan. 16; v. 234; p. 840.
Fulton, Charles H., Cleveland, Ohio, assignor to D. B. Jones, Chicago, Ill. Recovery of zinc. No. 1,213,180; Jan. 23; v. 234; p. 1068.
Funke, Louis. (See Berel and Funke.)
Funsten, David, Washington, D. C. Cinder-guard. (Reissue.) No. 14,240; Jan. 2; v. 234; p. 343.
Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,212,203; Jan. 16; v. 234; p. 690.
Furneaux, George A., Dufur, Oreg. Aeroplane. No. 1,211,131; Jan. 2; v. 234; p. 257.
Fynn, Valère A., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Alternating-current motor. No. 1,213,617; Jan. 23; v. 234; p. 1221.
Fynn, Valère A., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Alternating-current motor. No. 1,213,618; Jan. 23; v. 234; p. 1222.
G. I. Sellers & Sons Company. (See Ash, Ersel C., assignor.)
Gable, Benjamin F., assignor of one-half to J. M. Lettich, San Francisco, Cal. Discharge-nozzle and controlling means therefor. No. 1,210,630; Jan. 2; v. 234; p. 87.
Gaddis, Walter E., Clinton, Ill. Hay rake and baler. No. 1,212,044; Jan. 9; v. 234; p. 607.

Gagne, Arthur J., Minneapolis, Minn., assignor to G. Gagne, Portland, Oreg. Leather-cutting machine. No. 1,210,454; Jan. 2; v. 234; p. 27.
Gagne, Gussa. (See Gagne, Arthur J., assignor.)
Gahan, Harry, Victoria, British Columbia, Canada. Water-supply system for explosive-engines. No. 1,210,631; Jan. 2; v. 234; p. 88.
Gallor, Chester F., Baltimore, Md. Rail-joint. No. 1,212,204; Jan. 16; v. 234; p. 691.
Gainer, Henry A. (See McLaughlin and Gainer.)
Galbraith, David G., Mineral Wells, Tex., assignor to A. Meriwether, Tulsa, Okla., D. G. Galbraith, E. A. Galbraith, and M. E. Galbraith, Mineral Wells, Tex. Roller-bearing. No. 1,210,632; Jan. 2; v. 234; p. 88.
Galbraith, Esther A., *et al.* (See Galbraith, David G., assignor.)
Galbraith, Mary E., *et al.* (See Galbraith, David G., assignor.)
Galbreath, Cristie F., Hartford, Mich. Pruning implement. No. 1,213,619; Jan. 23; v. 234; p. 1222.
Gale, Francis G., Waterville, Quebec, Canada. Mattress-frame. No. 1,210,633; Jan. 2; v. 234; p. 88.
Gale, Henry P., Oneida, N. Y. Shaft-hanger. No. 1,212,474; Jan. 16; v. 234; p. 787.
Gallet, Henrietta, *et al.* (See Gallet, Maurice, assignor.)
Gallet, Maurice, assignor of one-fourth to A. Salzman, one-fourth to F. Salzman, and one-fourth to H. Gallet, Chicago, Ill. Glove-cleaning machine. No. 1,210,634; Jan. 2; v. 234; p. 89.
Galloway, Daniel B., Corydon, Ky. Flue connection. No. 1,211,132; Jan. 2; v. 234; p. 258.
Gallup, Delbert L., Colegrove, Pa. Door-operator. No. 1,211,308; Jan. 2; v. 234; p. 320.
Gallup, Rockwell L. (See Wachs and Gallup.)
Gamewell Fire Alarm Telegraph Company, The. (See Beach, Clarence E., assignor.)
Gamewell Fire Alarm Telegraph Co. (See Cole, Frederick W., assignor.)
Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Manufacture of rubber tubing. No. 1,210,455; Jan. 2; v. 234; p. 27.
Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Press for horizontal vulcanizers. No. 1,210,926; Jan. 2; v. 234; p. 190.
Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Method and apparatus for producing rubber molding-blanks. No. 1,214,295; Jan. 30; v. 234; p. 1484.
Gann, David B. (See Watrous, Edward L., assignor.)
Gannaway, Alonzo M., McCoy, Ky. Combined extensible and foldable table. No. 1,210,635; Jan. 2; v. 234; p. 89.
Ganz, Phillip, Des Moines, Iowa. Ship-cleaning device. No. 1,213,091; Jan. 16; v. 234; p. 1004.
Garber, Samuel A., Fortuna, N. D. Whip-holder. No. 1,213,860; Jan. 30; v. 234; p. 1333.
Gardiner, William, Chicago, Ill. Storage battery. No. 1,213,182; Jan. 23; v. 234; p. 1068.
Gardner, Coe S., De Land, Fla., assignor of one-half to G. H. Foote, Jr. Air-pump attachment. No. 1,212,760; Jan. 16; v. 234; p. 892.
Gardner, Dana D., Kansas City, Mo. Adjustable and foldable ironing-board structure. No. 1,213,475; Jan. 23; v. 234; p. 1172.
Garfield, James R., trustee. (See Albert, Walter P., assignor.)
Garfield, James R., trustee. (See Clement, Edward E., assignor.)
Garford Manufacturing Company, The. (See Manson, Ray H., assignor.)
Gargano, Charles, assignor to F. Gargano, Elizabeth, N. J. Safety-envelop. No. 1,211,367; Jan. 2; v. 234; p. 337.
Gargano, Fred. (See Gargano, Charles, assignor.)
Garlock, William H., and W. J. Stubbe, Seattle, Wash. Bread-slicer. No. 1,212,045; Jan. 9; v. 234; p. 608.
Garrett, Robert E., Nashville, Tenn. Scale. No. 1,211,568; Jan. 9; v. 234; p. 442.
Garrivier, Adolphe, Toulouse, France. Monolithic concrete block adapted to snugly fit the rails. No. 1,212,040; Jan. 9; v. 234; p. 608.
Garst, Stephen H., Moline, Ill. Fertilizer-distributer. No. 1,210,636; Jan. 2; v. 234; p. 90.
Garst, Stephen H., assignor to D. M. Sechler Implement & Carriage Co., Moline, Ill. Marker for corn-planters. No. 1,211,368; Jan. 2; v. 234; p. 338.
Gartrell, Clifford F., Wadsworth, Tex. Tank. No. 1,213,183; Jan. 23; v. 234; p. 1069.
Garvey, Edward, Farmington, Minn. Liquid-measuring apparatus. No. 1,211,430; Jan. 9; v. 234; p. 395.
Garvey, Henry A., assignor to Packard Motor Car Company, Detroit, Mich. Gear-cutting machine. No. 1,210,456; Jan. 2; v. 234; p. 27.
Garwood Company. (See Focardi, Pier-Luigi, assignor.)
Gassner, Charles M. (See Tomasko and Gassner.)
Gatchell, George S. (See Molyneux and Gatchell.)
Gates, Albert J., assignor to Hanna Engineering Works, Chicago, Ill. Lubricator. No. 1,211,431; Jan. 9; v. 234; p. 395.
Gates, Arthur O., La Fayette, Ind. Concentrator. No. 1,213,348; Jan. 23; v. 234; p. 1128.
Gates, Philetus W., assignor to Hanna Engineering Works, Chicago, Ill. Lubricator. No. 1,211,432; Jan. 9; v. 234; p. 396.
Gattis, Thomas W., Lohn, assignor of one-half to S. W. Hughes, Brady, Tex. Scale-beam. No. 1,213,620; Jan. 23; v. 234; p. 1222.
Gaudet, Joseph. (See Comeau, Augustine F., assignor.)
Gaulden, William T. (See Harrington, Bryant P., assignor.)
Gault, Mary V. (See Siegmann, William G. F., assignor.)
Gaumont, Léon, Paris, France, assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y. Apparatus for taking cinematographic views in colors. No. 1,213,184; Jan. 23; v. 234; p. 1069.
Gebhard, Lawrence G., and J. M. Rowley, Buffalo, N. Y. Vaporizer. No. 1,213,349; Jan. 23; v. 234; p. 1128.
Gebhardt, Bernard F., Freeport, N. Y. Rotary internal-combustion engine. No. 1,213,092; Jan. 16; v. 234; p. 1004.
Gebhardt, Joseph. (See Henry, Murray, assignor.)
Gee, John S., Kansas City, Mo. Memorandum-pad holder for desk-telephones. No. 1,213,185; Jan. 23; v. 234; p. 1070.
Geer, George and W., Vinton county, Ohio. Axle-mounting for motor-vehicles. No. 1,214,151; Jan. 30; v. 234; p. 1432.
Geer, Harry R., Johnstown, Pa. Cutting-tool. No. 1,210,457; Jan. 2, v. 234; p. 27.
Geer, Seth H., Milwaukee, Wis. Decorated metal ornament and making same. No. 1,210,637; Jan. 2; v. 234; p. 90.
Geer, Wesley. (See Geer, George and W.)
Gegenheimer, John F., Jeannette, Pa. Apparatus for making hollow glass articles. No. 1,212,135; Jan. 9; v. 234; p. 638.
Geiger, Albert W., Bridgeport, Conn. Elastic strip. No. 1,211,696; Jan. 9; v. 234; p. 485.
Geiger, Frederick J., and A. E. Davis, Philadelphia, Pa. Means for use in making concrete sky-vault or floor lights. No. 1,211,133; Jan. 2; v. 234; p. 258.
Geisslinger, Johann, Geneva, assignor of one-half to Fabrique Internationale d'Appréils à Magneto S. A. (F. I. A. M.,) Geneva-Acacias, Switzerland, and one-half to Marburg Brothers, New York, N. Y. Dynamo-electric machine. No. 1,210,638; Jan. 2; v. 234; p. 90.
Geisslinger, Johann, Geneva, Switzerland, assignor of one-half to Fabrique Internationale d'Apparells à Magneto S. A. (F. I. A. M.,) Geneva-Acacias, Switzerland, and one-half to Marburg Brothers, New York, N. Y. Dynamo-electric machine. No. 1,210,639; Jan. 2; v. 234; p. 91.
Gendron, Joseph A., Nashua, N. H. Shuttle-motion for looms. No. 1,211,569; Jan. 9; v. 234; p. 442.
General Briquetting Company. (See Vogel, Felix A., assignor.)
General Bakelite Company. (See Baekeland, Leo H., assignor.)
General Carbonic Co. (See Levy, Fortunato, assignor.)
General Electric Company. (See Axtell, Clinton J., assignor.)
General Electric Company. (See Burnham, George A., assignor.)
General Electric Company. (See Coolidge, William D., assignor.)
General Electric Company. (See Creighton, Elmer E. F., assignor.)
General Electric Company. (See Dawson, William F., assignor.)
General Electric Company. (See Fagan and Quackenbush, assignors.)
General Electric Company. (See Fonda, Gorton R., assignor.)
General Electric Company. (See Kearsley, William K., assignor.)
General Electric Company. (See Lasche, Oskar, assignor.)
General Electric Company. (See Lemp and Stock, assignors.)
General Electric Company. (See March, Fred C., assignor.)
General Electric Company. (See Murphy, Edwin J., assignor.)
General Electric Company. (See Palmer and Adams, assignors.)
General Electric Company. (See Pen Dell, Charles W., assignor.)
General Electric Company. (See Taylor, John B., assignor.)
General Fireproofing Company, The. (See White, Herbert E., assignor.)
General Reduction Gas and By-Products Company. (See Hornsey, John W., assignor.)
General Research Laboratories. (See Knox, William J., assignor.)
General Vehicle Company. (See Lloyd, Robert M., assignor.)
Genter, Albert L., Salt Lake City, Utah. Method and apparatus for cleansing filter mediums. No. 1,214,152; Jan. 30; v. 234; p. 1432.
Genter, Albert L., assignor to Kelly Filter Press Company, Salt Lake City, Utah. Filtering apparatus. No. 1,212,932; Jan. 16; v. 234; p. 948.
Genter, Albert L., assignor to Kelly Filter Press Company, Salt Lake City, Utah. Filtering apparatus. No. 1,212,933; Jan. 16; v. 234; p. 949.
Gentzler, Louis D. (See Hazen and Gentzler.)
Geo. L. Paine Company. (See Chabot, Joseph, assignor.)

George, Ely D., San Francisco, Cal. Sound-transmitting system for moving pictures. No. 1,212,342; Jan. 16; v. 234; p. 742.
George, Gabriel L. (See George, James C. and G. L.)
George H. Frothingham Company. (See Prescott, Arthur T., assignor.)
George H. Scherff & Company. (See Scherff, George H., assignor.)
George, James C. and G. L., Bristol, Va. Mold-jacket. No. 1,211,570; Jan. 9; v. 234; p. 442.
George, Joseph C. (See Lea and George.)
Gerl-Holmen, Niels, Frederiksberg, near Copenhagen, assignor to Kløver-Byggryn-Fabrikken Danmark, Ltd., Copenhagen, Denmark. Flaking friable groats. No. 1,212,205; Jan. 16; v. 234; p. 691.
Gerlach, George W., Cumberland, Iowa. Safety block-signal. No. 1,211,697; Jan. 9; v. 234; p. 485.
Germain, Leon C., Conway, Mass. Pocket license-carrier. No. 1,210,927; Jan. 2; v. 234; p. 190.
Germond, Henry S., Jr. (See Boehck and Germond.)
Gernaert, Jules, Brussels, Belgium. Manufacture of a paper. No. 1,210,790; Jan. 2; v. 234; p. 142.
Gesellschaft für drahtlose Telegraphie m. b. H. (See Rukop and Schloemilch, assignors.)
Gettle, Thomas S. (See Silvius, Ellis T., assignor.)
Getts, Frank E., assignor to Electrical Engineers Equipment Company, Chicago, Ill. Switch. No. 1,212,161; Jan. 9; v. 234; p. 647.
Gibbons, Richard J., Fort Rosecrans, Cal. Writing-bed for desks. No. 1,211,433; Jan. 9; v. 234; p. 396.
Gibbs, Henry, assignor to W. D. Allen Manufacturing Company, Chicago, Ill. Grease-cup. No. 1,213,861; Jan. 30; v. 234; p. 1333.
Gibson, John C. (See Long, John R., assignor.)
Gibson, Stephen A., Hereford, Ariz. Fastening device for stirrup-leathers of saddles. No. 1,212,047; Jan. 9; v. 234; p. 608.
Gibson, William D., Seattle, Wash. Cigar-holder. No. 1,214,153; Jan. 30; v. 234; p. 1432.
Giddens, La Roux B., Tampa, Fla. Carbureter attachment. No. 1,213,621; Jan. 23; v. 234; p. 1222.
Gidlof, Conrad E., Homestead, Fla. Ladder-bracket. No. 1,213,622; Jan. 23; v. 234; p. 1223.
Gierding, Charles E., assignor to The Ohio Brass Company, Mansfield, Ohio. Power-transmission mechanism. No. 1,210,458; Jan. 2; v. 234; p. 28.
Gierding, Charles E., assignor to The Ohio Brass Company, Mansfield, Ohio. Trolley-retriever. No. 1,212,343; Jan. 16; v. 234; p. 742.
Gierding, Charles E., and J. R. Brown, assignors to The Ohio Brass Company, Mansfield, Ohio. Track-drilling machine. No. 1,213,350; Jan. 23; v. 234; p. 1129.
Giffin, Isaac N., Winterhaven, Fla. Vise. No. 1,212,136; Jan. 9; v. 234; p. 638.
Gifford, Perry D., Windfall, Ind. Fruit-picker. No. 1,214,450; Jan. 30; v. 234; p. 1534.
Gilbert, Alfred C., assignor to The A. C. Gilbert Company, New Haven, Conn. Toy construction-blocks. (Reissue.) No. 14,250; Jan. 16; v. 234; p. 1021.
Gilberthorpe Buckle Limited. (See Gilberthorpe, George L., assignor.)
Gilberthorpe, George L., Chatswood, near Sydney, assignor to Gilberthorpe Buckle Limited, Sydney, New South Wales, Australia. Buckle. No. 1,212,622; Jan. 16; v. 234; p. 841.
Gilchrest, Elon B. (See Toothaker, Fred L., assignor.)
Gile, Glenn E., Franklinville, N. Y. Safety for firearms. No. 1,210,459; Jan. 2; v. 234; p. 28.
Giles, Roy, Assumption, Ill. Gate. No. 1,213,623; Jan. 23; v. 234; p. 1223.
Gill, B. Aurelius. (See Smith, John H., assignor.)
Gill Brothers Company. (See Beiswanger, John, assignor.)
Gill, Edwin R., Yonkers, N. Y., assignor to Seamless Products Corporation. Packing device. No. 1,214,451; Jan. 30; v. 234; p. 1535.
Gill, William, Boston, Mass. Rat-trap. No. 1,211,134; Jan. 2; v. 234; p. 258.
Gillbee, Manuel A. T., assignor to A. M. Collins Manufacturing Company, Philadelphia, Pa. Ornamenting coated paper. No. 1,212,934; Jan. 16; v. 234; p. 949.
Gille, Edward C., Stampede, N. D. Agricultural implement. No. 1,211,135; Jan. 2; v. 234; p. 259.
Gillette, George W., Cleveland, Ohio. Lamp. No. 1,214,452; Jan. 30; v. 234; p. 1535.
Gillies, Robert A., Burnaby, British Columbia, Canada. Pivot-hinge for window-sashes. No. 1,212,475; Jan. 16; v. 234; p. 788.
Gilman, Albert E. (See Gilman, John H. and A. E.)
Gilman, John H. and A. E., assignors to King & Hamilton Company, Ottawa, Ill. Screen. No. 1,212,344; Jan. 16; v. 234; p. 743.
Gilmore, Jesse G., Pine Bluff, Ark. Pipe-wrench. No. 1,213,351; Jan. 23; v. 234; p. 1129.
Gilson, Claude U., Wellesley, Mass. Signature-marking means for paper-folding machines. No. 1,212,623; Jan. 16; v. 234; p. 841.
Gilstrap, Grover C., Claflin, Kans. Weather-strip. No. 1,212,206; Jan. 16; v. 234; p. 691.
Gindele, Harrison, Cincinnati, Ohio. Photographic-film cartridge. No. 1,212,137; Jan. 9; v. 234; p. 638.
Gingras, Joseph N., Thetford Mines, Quebec, assignor of one-half to W. W. Butler, Montreal, one-sixth to L. T. Pacaud, Thetford Mines, and one-sixth to W. J. Lynch, Quebec, Canada. Grain-door. No. 1,211,309; Jan. 2; v. 234; p. 320.
Givens, Sam G, Paducah, Ky., and H. Lewis, New Liberty, Ill. Stovepipe damper and cleaner. No. 1,211,136; Jan. 2; v. 234; p. 259.
Gladwell, G. S. (See Rudd, James F., assignor.)
Glasow, Albert O., and E. L. Acker, San Pedro, Cal. Combined tooth-paste squeezer and brush-holder. No. 1,212,138; Jan. 9; v. 234; p. 639.
Glass Founders Corporation. (See Roosevelt, André, assignor.)
Glauber, Joseph H., deceased; The Citizens Savings and Trust Co., executor, Cleveland, Ohio. Clamp and gasket. No. 1,213,186; Jan. 23; v. 234; p. 1070.
Gledhill, Edward C., Gallon, Ohio. Car-unloading apparatus. No. 1,212,624; Jan. 16; v. 234; p. 842.
Gleiche, Carl, assignor to Stock Motorpflug Gesellschaft Mit Beschränkter-Haftung, Berlin, Germany. Gear for adjusting the elevation of the frames of motor-plows. No. 1,210,791; Jan. 2; v. 234; p. 142.
Glendinning, Robert, *et al.* (See Spiegel, Alexander S., assignor.)
Glenn, Chambers E., Terra Alta, W. Va. Irrigation-ditch guard. No. 1,213,624; Jan. 23; v. 234; p. 1223.
Glenn, James H. (See Beach, Walter J., assignor.)
Glenn, Leland E., Greensboro, N. C. Automatic truck-controlled train-stop. No. 1,213,625; Jan. 23; v. 234; p. 1223.
Glenn, Luther A., *et al.* (See Webb, James L., assignor.)
Glenn, Thomas F., Ardmore, Pa. Artificial tooth. No. 1,210,460; Jan. 2; v. 234; p. 28.
Glenn, Thomas F., Ardmore, Pa. Artificial tooth. No. 1,212,935; Jan. 16; v. 234; p. 949.
Glenshaw Glass Company. (See Meyer and Lepper, assignors.)
Glick, Edward G., Cleveland, Ohio. Power-transmitting device. No. 1,210,461; Jan. 2; v. 234; p. 28.
Goddard, Joseph, and W. S. Hutchings, assignors to Seneca Camera Manufacturing Company, Rochester, N. Y. Lens-focusing device. No. 1,214,453; Jan. 30; v. 234; p. 1536.
Godfrey, Truman M. (See Kohman, Hoffman, and Godfrey.)
Goellner, Joseph J., assignor to Landis Machine Company, St. Louis, Mo. Presser control for sewing-machines. No. 1,212,761; Jan. 16; v. 234; p. 892.
Gogel, Sol, Toronto, Ontario, Canada. Bobbin-winder guard. No. 1,213,862; Jan. 30; v. 234; p. 1333.
Goins, William P., Walcott, Ark. Locking device for mail-boxes. No. 1,213,863; Jan. 30; v. 234; p. 1334.
Gold Car Heating & Lighting Company. (See Gold, Edward E., assignor.)
Gold Car Heating & Lighting Company. (See Kitchen, Frederick T., assignor.)
Gold Car Heating & Lighting Company. (See Klotz, Charles H., assignor.)
Gold, Edward E., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Car-heating system. No. 1,213,093; Jan. 16; v. 234; p. 1004.
Gold, Edward E., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Hose-coupling. No. 1,213,094; Jan. 16; v. 234; p. 1005.
Goldberger, Henry and M., Chicago, Ill. Surfacing device for tracing-cloth. No. 1,211,932; Jan. 9; v. 234; p. 571.
Goldberger, Morris. (See Goldberger, Henry and M.)
Goldenberg, Jacques C., and A. I. Keller, Brooklyn, N. Y., assignors to Individual Sanitary Shaving Cup Co. Individual shaving-cup. No. 1,212,936; Jan. 16; v. 234; p. 950.
Golding, John F., Washington, D. C. Utilization of scrap metal in the manufacture of washers. No. 1,210,928; Jan. 2; v. 234; p. 190.
Goldmerstein, Leon, New York, N. Y. Brake-lock for automobiles. No. 1,210,640; Jan. 2; v. 234; p. 91.
Goldsmith, Samuel. (See Baruch, Lindner, and Goldsmith.)
Goldsmith, William H., Jr., Biddeford, Me., assignor to Saco-Lowell Shops, Boston, Mass. Thread-guiding mechanism. No. 1,210,641; Jan. 2; v. 234; p. 92.
Good, Allen H., Spring City, Pa. Feed-hopper. No. 1,212,937; Jan. 16; v. 234; p. 950.
Good, David D., Landis township, Cumberland county, N. J. Automatic train-stopping device. No. 1,211,838; Jan. 9; v. 234; p. 536.
Good, Francis R., Philadelphia, Pa., assignor of one-half to J. E. Vollmer, Long Beach, Cal. Ruling-pen. No. 1,213,095; Jan. 16; v. 234; p. 1005.
Gooderham, George H., *et al.* (See McCollum, James H. K., assignor.)
Goodrich, George E., St. Louis, Mo. Cleaner for automobile wind-shields. No. 1,211,698; Jan. 9; v. 234; p. 485.
Goodrich, Walter E., Campello, Mass. Tire-tool. No. 1,211,571; Jan. 9; v. 234; p. 443.
Goodrich, Winford W. (See McCray and Goodrich.)
Goodridge, Victor C., Chicago, Ill. Dynamo. No. 1,212,476; Jan. 16; v. 234; p. 788.
Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,211,434; Jan. 9; v. 234; p. 396.

Goodspeed, Leland F., assignor to Milwaukee Locomotive Manufacturing Company, Milwaukee, Wis. Gearing for locomotives. No. 1,212,625; Jan. 16; v. 234; p. 842.
Goodspeed, Leland F., assignor to Milwaukee Locomotive Manufacturing Company, Milwaukee, Wis. Gearing for locomotives. No. 1,212,626; Jan. 16; v. 234; p. 843.
Goodwin, William B., Columbus, Ohio. Transmission mechanism for motor-vehicles. No. 1,212,627; Jan. 16; v. 234; p. 843.
Goodyear, Ernest F., Dudley, England. Wheel for automobiles and the like. No. 1,211,572; Jan. 9; v. 234; p. 443.
Goodyear Tire and Rubber Company, The. (See Darrow, Burgess, assignor.)
Goodyear's Metallic Rubber Shoe Company, The. (See Ritter, Herman W., assignor.)
Gorham, Marguerite. (See Burke, Mike T., assignor.)
Gorhan, Adolf, Liesing, near Vienna, Austria-Hungary. Purifying acetic acid. No. 1,210,792; Jan. 2; v. 234; p. 143.
Gorton, Josephine S., Chicago, Ill. Instrument for drafting patterns for garments. No. 1,214,296; Jan. 30; v. 234; p. 1484.
Gosman, Robert, Amagansett, N. Y. Rinsing and draining device for clothes. No. 1,214,297; Jan. 30; v. 234; p. 1485.
Goss Printing Press Company, The. (See Goss, Samuel G., assignor.)
Goss Printing Press Company. (See Seymour, Ralph C., assignor.)
Goss, Samuel G., Glencoe, assignor to The Goss Printing Press Company, Chicago, Ill. Stereotype-plate-finishing machine. No. 1,212,049; Jan. 9; v. 234; p. 609.
Gosselin, Henry G. (See Olson and Gosselin.)
Gould Coupler Company. (See Crosby, Gorham, assignor.)
Gould Coupler Company. (See Richards, Willard F., assignor.)
Gould Coupler Company. (See Sauvage, William H., assignor.)
Gow, Alexander M., Duluth, Minn. Door for side-dump cars. No. 1,210,462; Jan. 2; v. 234; p. 29.
Gowdey, John, Philadelphia, Pa. Tumbling doll. No. 1,214,454; Jan. 30; v. 234; p. 1536.
Gowliand, Henry O., Montreal, Quebec, Canada. Smoothing-head for manufacturing eyeglass-lenses. No. 1,212,628; Jan. 16; v. 234; p. 844.
Grace, Henry S., San Francisco, Cal. Car-fender. No. 1,212,762; Jan. 16; v. 234; p. 892.
Grady, Frank W., Taft, Cal. Shaving kit. No. 1,213,352; Jan. 23; v. 234; p. 1129.
Grafftey, Elmer E., Kansas City, Mo. Cleanser. No. 1,214,025; Jan. 30; v. 234; p. 1391.
Graham, Edward A., Brockley, London, England. Telephone system. No. 1,211,435; Jan. 9; v. 234; p. 397.
Graham, John. (See Auld and Graham.)
Graham, J. S., *et al.* (See Berry, Charles S., assignor.)
Graham, Samuel C. (See McCarter, Louis N., assignor.)
Grain Products Company. (See Black, Ashley V., assignor.)
Grant, Alexander D., San Jose, Cal. Sanitary toilet-bowl. No. 1,211,137; Jan. 2; v. 234; p. 259.
Grant, Eugene L., Napa, Cal. Stock and poultry watering device. No. 1,214,455; Jan. 30; v. 234; p. 1536.
Granville, Bernard, New York, N. Y. Pneumatic tire. No. 1,213,096; Jan. 16; v. 234; p. 1005.
Granz, Josef, assignor to Vogtländische Maschinen-Fabrik, Plauen, Germany. Embroidering-machine. No. 1,211,933; Jan. 9; v. 234; p. 571.
Gravell, James H., Philadelphia, Pa. Preparing metal for painting. No. 1,211,138; Jan. 2; v. 234; p. 259.
Graves, Churchill G., Roanoke, assignor to The Seward Trunk and Bag Company, Petersburg, Va. Wardrobe-trunk. No. 1,212,139; Jan. 9; v. 234; p. 639.
Graves, Fredrick P., assignor of forty-five one-hundredths to N. P. Cleveland, Bicknell, Ind. Nut-lock. No. 1,213,097; Jan. 16; v. 234; p. 1006.
Graves, John D., Colton, Cal. Electrical incubator. No. 1,213,353; Jan. 23; v. 234; p. 1130.
Gray, Clarence F. A., Montreal, Quebec, Canada. Vehicle-tire. No. 1,213,476; Jan. 23; v. 234; p. 1172.
Gray Electric Company. (See Tiffany, George S., assignor.)
Grebziszewki, Bronislaus, *et al.* (See Pludowski, Alexander, assignor.)
Green, Armin H., Los Angeles, Cal. Camp-stove. No. 1,212,162; Jan. 9; v. 234; p. 648.
Green Engineering Company. (See Strong, Arthur P., assignor.)
Green, Louis, London, England. Reinforced-concrete railway-tie. No. 1,214,298; Jan. 30; v. 234; p. 1485.
Green, Lynford O., Capay, Cal. Music-leaf turner. No. 1,212,050; Jan. 9; v. 234; p. 609.
Greenawalt, John E., Denver, Colo. Charge-car. No. 1,212,629; Jan. 16; v. 234; p. 844.
Greenberg, Louis, *et al.* (See McEwen, Willard M., assignor.)
Greene, Alvin P., Watertown, N. Y. Paper-feeding machine. No. 1,213,626; Jan. 23; v. 234; p. 1224.
Greene, Edgeworth, Montclair, N. J. Bottle. No. 1,211,934; Jan. 9; v. 234; p. 571.
Greenlaw, Rupert H., Lawrence, Mass. Telephone-recorder. No. 1,210,463; Jan. 2; v. 234; p. 29.
Greenpoint Metallic Bed Company. (See Frank and Cooper, assignors.)
Greensburg Swing Company. (See McKnight, Charles J., assignor.)
Gregory, Charles E., New Rochelle, N. Y., assignor to Standard Pail & Package Co., Inc. Process and machine for making containers. No. 1,210,464; Jan. 2; v. 234; p. 30.
Gregory, Frank J., New York, N. Y. Device for locating concealed conductors. No. 1,212,763; Jan. 16; v. 234; p. 893.
Greuter, Charles R., Saugus, Mass., assignor, by mesne assignments, to John T. Pratt, New York, N. Y. Guide-ring for elastic-fluid engines. No. 1,212,764; Jan. 16; v. 234; p. 893.
Griel, Howard B. and P. E. Shee, assignors to No-Touch Straw Holder Co., Lancaster, Pa. Straw-dispensing device. No. 1,211,139; Jan. 2; v. 234; p. 260.
Griffeth, Francis E., Athens, Ga. Harness attachment. No. 1,212,765; Jan. 16; v. 234; p. 893.
Griffin, Henry W., New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,211,140; Jan. 2; v. 234; p. 260.
Griffin, Henry W., New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,211,141; Jan. 2; v. 234; p. 261.
Griffin, Henry W., New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,211,142; Jan. 2; v. 234; p. 261.
Griffin, John B., assignor to Landers, Frary & Clark, New Britain, Conn. Percolator-pump. (Reissue.) No. 14,244; Jan. 9; v. 234; p. 650.
Griffin, Lorne A., Elkhart, Ind., assignor to American Steam Conveyor Corporation, Chicago, Ill. Ash tank and settler. No. 1,211,310; Jan. 2; v. 234; p. 321.
Griffis, Maitland G. (See Kaibfleisch, Victor R., assignor.)
Griffith, Richard, assignor to The Miller Rubber Company, Akron, Ohio. Tire-stitching machine. No. 1,212,207; Jan. 16; v. 234; p. 691.
Grigg, David H., Cloverdale, British Columbia, Canada. Spring-wheel. No. 1,212,208; Jan. 16; v. 234; p. 692.
Grindall, William H., Altoona, Pa. Power transmission. No. 1,213,354; Jan. 23; v. 234; p. 1130.
Grindall, William H., Altoona, Pa. Scale-relieving gear. No. 1,213,355; Jan. 23; v. 234; p. 1131.
Grindle, John L. (See Kelsay, Le Roy W., assignor.)
Grinnell Washing Machine Company. (See Lewis, George W., assignor.)
Griswold, Edgar J., New York, N. Y. Phonograph. No. 1,211,573; Jan. 9; v. 234; p. 443.
Griswold, John L., Dodge Center, Minn. Pig-guard. No. 1,211,830; Jan. 9; v. 234; p. 536.
Grob, Armin. (See Engl, Grob, and Straub.)
Groebli, Joseph A., New York, N. Y. Fabric shifting and tensioning mechanism for embroidering-machines. No. 1,210,793; Jan. 2; v. 234; p. 143.
Grohn, Henry P. (See Kenney and Grohn.)
Groshans, John H., Baltimore, Md. Means for heating cylinders of explosive-engines. No. 1,211,935; Jan. 9; v. 234; p. 572.
Gross, Howard H., Jr. (See Batting and Gross.)
Gross, Norman, Hartford, Conn. Garment. No. 1,213,181; Jan. 23; v. 234; p. 1068.
Gross, Paul, Charlottenburg, assignor to Vollbrot Patent-Verwertungs-Gesellschaft, m. b. H., Berlin, Germany. Manufacture of whole-grain bread. No. 1,213,627; Jan. 23; v. 234; p. 1224.
Grosvenor, William M., Ridgewood, N. J., and L. A. Beecher, Newtonville, Mass. Manufacturing colloids. No. 1,214,299; Jan. 30; v. 234; p. 1486.
Grotenhuis, William J., Chicago, Ill. Bed-frame corner-block. No. 1,213,098; Jan. 16; v. 234; p. 1006.
Groth, Otto E., Milwaukee, Wis. Wrapper. No. 1,213,477; Jan. 23; v. 234; p. 1172.
Grothey, Ivan W., Boston, Mass., assignor to Scott & Williams, Inc., Camden, N. J. Stop-motion device. No. 1,211,143; Jan. 2; v. 234; p. 262.
Grouvelle, Philippe J., E. H. Arquembourg, and L. J. Joret, Paris, France. System of multiple pumps. No. 1,214,300; Jan. 30; v. 234; p. 1486.
Grover, Alva J., Council Bluffs, Iowa. Washing-machine. No. 1,211,436; Jan. 9; v. 234; p. 397.
Gruben, Edward J., Royston, Tex. Planter. No. 1,212,477; Jan. 16; v. 234; p. 788.
Gruber, Archibald B., San Bernardino, Cal. Door-latch. No. 1,211,437; Jan. 9; v. 234; p. 398.
Gruber, Morris M., and P. Lauter, New York, N. Y. Water-massage vibrator. No. 1,210,929; Jan. 2; v. 234; p. 190.
Grubman, Leo, Brooklyn, assignor of one-half to J. Stein, New York, N. Y. Copying device. No. 1,212,938; Jan. 16; v. 234; p. 950.
Grupp, Otto. (See Stephany and Grupp.)
Gruver, Joseph H., assignor to The Simplex Protective Stopper Co., Baltimore, Md. Machine for applying bottle-stoppers. No. 1,212,209; Jan. 16; v. 234; p. 692.
Gubelman, Frederick J., Englewood, N. J. Anticurling device for paper sheets. No. 1,210,465; Jan. 2; v. 234; p. 30.
Guerry, Du Pont. (See Clark, James M., assignor)
Guill, Emanual A., Conran, Mo. Rail-joint. No. 1,213,864; Jan. 30; v. 234; p. 1334.
Guillet, George L., assignor to Bastian Brothers Company, Rochester, N. Y. Fastening device. No. 1,212,630; Jan. 16; v. 234; p. 844.
Guinard, Charles M. A. (See Baron and Guinard.)

Guinzburg, Victor, assignor to I. B. Kleinert Rubber Company, New York, N. Y. Nursing-vest. No. 1,211,699; Jan. 9; v. 234; p. 486.

Gulbrandsen, Sverre, Woodbury, assignor to Welsbach Light Company, Gloucester City, N. J. Incandescent mantle. (Reissue.) No. 14,241; Jan. 2; v. 234; p. 344.

Gulbrandsen, Sverre, Woodbury, assignor to Welsbach Light Company, Gloucester City, N. J. Limp incandescent mantle. (Reissue.) No. 14,242; Jan. 2; v. 234; p. 344.

Gumaer, George S., Coronado, Cal. Bread-toaster. No. 1,212,051; Jan. 9; v. 234; p. 610.

Gumaer, George S., Coronado, Cal. Game device. No. 1,213,628; Jan. 23; v. 234; p. 1225.

Gunn, Daniel G., Walnut Springs, Tex. Cushion-tire. No. 1,211,144; Jan. 2; v. 234; p. 262.

Gunn, John R., Detroit, Mich. Bridge for supporting electric fixtures. No. 1,213,865; Jan. 30; v. 234; p. 1334.

Gunter, Robert, and M. M. Eakin, assignors to G. T. C. Paget and W. E. Slaughter, London, England. Explosive projectile. No. 1,211,936; Jan. 9; v. 234; p. 573.

Gustavson, Frank A., Seekonk, Mass. Ventilator and air-purifying apparatus. No. 1,214,154; Jan. 30; v. 234; p. 1433.

Gutman, Benjamin. (See Gutman, Louis and B.)

Gutman, Louis and B., New York, N. Y. Petticoat. No. 1,210,466; Jan. 2; v. 234; p. 30.

Gutmann, Ludwig, St. Louis, Mo. Pulley. No. 1,211,937; Jan. 9; v. 234; p. 573.

Gutmann, Ludwig, St. Louis, Mo. Pulley covering or facing. No. 1,211,938; Jan. 9; v. 234; p. 573.

Guttzeit, Charles W., New York, N. Y. Tire. No. 1,214,155; Jan. 30; v. 234; p. 1433.

H. B. Dodge & Company. (See Smith, Ezra B., assignor.)

H. G. Trout Company. (See Walker, Albert S., assignor.)

H. H. Franklin Manufacturing Company. (See Brown, William H., assignor.)

H. L. Judd Company. (See Edsall, William H., assignor.)

H. & N. Carbureter Company. (See Hawxhurst and Nicolai, assignors.)

Haase, Leo G., Pasadena, Cal. Meter-box. No. 1,213,478; Jan. 23; v. 234; p. 1172.

Hachmann, Frederick, assignor of one-half to F. C. Schoenthaler, St. Louis, Mo. Bottle-closure. No. 1,214,026; Jan. 30; v. 234; p. 1391.

Hackney, Leslie S., St. Paul, Minn. Pedal attachment for accelerating-levers. No. 1,214,027; Jan. 30; v. 234; p. 1391.

Haddan, James F., Doerun, Ga. Churn. No. 1,213,187; Jan. 23; v. 234; p. 1070.

Haddon, Walter. (See Constantinesco, Gogu, assignor.)

Hadfield, Frederick, Millville, and W. Kuhlthau, Blackstone, Mass., assignors to Woonsocket Rubber Company. Rolling-machine. No. 1,210,930; Jan. 2; v. 234; p.191.

Hagadone, Clinton A., Western Springs, Ill., assignor to International Harvester Company of New Jersey. Corn-harvesting machine. No. 1,213,629; Jan. 23; v. 234; p. 1225.

Hagelstein, Christian H. T., assignor to The Reece Button Hole Machine Company, Boston, Mass. Buttonhole-location marker. No. 1,211,438; Jan. 9; v. 234; p. 398.

Haggard and Marcusson Company. (See Anderson, William B., assignor.)

Hahn, Frank R., Decatur, Ill. Building construction. No. 1,213,188; Jan. 23; v. 234; p. 1070.

Hailwood, Ernest A., Churwell, near Leeds, England. Safety-lamp. No. 1,212,631; Jan. 16; v. 234; p. 844.

Hainert, Frank H., Jr., Minneapolis, Minn. Toy mustache. No. 1,214,028; Jan. 30; v. 234; p. 1392.

Hains, Edson, Bedford, Ohio. Beehive. No. 1,211,145; Jan. 2; v. 234; p. 263.

Halbert, Everette M., Battle Creek, Mich. Transmission-gear for automobiles. No. 1,212,210; Jan. 16; v. 234; p. 693.

Hale and Kilburn Company. (See Marsh, Richard B., assignor.)

Hale, Frank A., Chicago, Ill. Memorandum-calendar. No. 1,211,574; Jan. 9; v. 234; p. 444.

Haley, Michael, assignor of one-half to C. S. Spaulding, Newburyport, Mass. Combination-lock. No. 1,212,767; Jan. 16; v. 234; p. 893.

Halfaker, John S. (See Painter and Halfaker.)

Halgren, John P., Kansas City, Mo. Adjustable concrete-form. No. 1,212,211; Jan. 16; v. 234; p. 693.

Hall, Abram R., Greeley, Colo. Oiler for die-stocks. No. 1,210,931; Jan. 2; v. 234; p. 191.

Hall, Arthur J., Hartford, Conn. Ornamental lamp-shade. No. 1,214,156; Jan. 30; v. 234; p. 1433.

Hall, Caseius G., assignor to E. A. Titsworth, Adams Center, N. Y. Marlinespike. No. 1,212,345; Jan. 16; v. 234; p. 743.

Hall, Chester L., assignor to Chicago Electric Meter Company, Chicago, Ill. Maximum-demand-indicating instrument. No. 1,214,029; Jan. 30; v. 234; p. 1392.

Hall, Elbert J., Berkeley, Cal. Variable-speed gearing. No. 1,212,346; Jan. 16; v. 234; p. 743.

Hall, Elbert J., West Berkeley, Cal. Carbureter. No. 1,212,478; Jan. 16; v. 234; p. 788.

Hall, F. D. (See Oldham, Herschel, assignor.)

Hall, George F., Providence, R. I. Unitary cigarette and match box. No. 1,214,456; Jan. 30; v. 234; p. 1536.

Hall, Harry, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Detachable covering for exposed edges. No. 1,211,439; Jan. 9; v. 234; p. 398.

Hall, James T., assignor of one-third to Bunting Iron Works and one-third to G. T. Mountford, Coalinga, Cal. Safety appliance for elevators. No. 1,212,347; Jan. 16; v. 234; p. 744.

Hall, Jay H., assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Electric switch. No. 1,211,440; Jan. 9; v. 234; p. 399.

Hall Printing Press Company. (See White, Joseph, assignor.)

Hall, Ray E., assignor of one-half to C. A. Robertson, Ann Arbor, Mich. Recorder. No. 1,213,356; Jan. 23; v. 234; p. 1131.

Hall, Samuel N., Memphis, Tenn. Hydraulic bed. No. 1,212,479; Jan. 16; v. 234; p. 789.

Hall, Samuel N., Memphis, Tenn. Bit-brace. No. 1,212,481; Jan. 16; v. 234; p. 790.

Hall, Samuel N., Memphis, Tenn., and C. M. Petersen, Washington, D. C., assignors to said Samuel N. Hall. Bitbrace. No. 1,212,480; Jan. 16; v. 234; p. 789.

Hall Switch & Signal Company, The. (See Day, Albert V. T., assignor.)

Hall-Thompson Company, The. (See Thompson, Henry C., assignor.)

Halliday, Harry L., Elmira, N. Y. Spool. No. 1,213,630; Jan. 23; v. 234; p. 1225.

Halliday, Marion B., Wallkill, N. Y. Suspended clothes-drier. No. 1,210,932; Jan. 2; v. 234; p. 191.

Hallock, Daniel Y., York, Pa. Bob-sled. No. 1,212,212; Jan. 16; v. 234; p. 693.

Halterbeck, John, assignor to G. Piel, New York, N. Y. Abrading-machine. No. 1,212,213; Jan. 16; v. 234; p. 694.

Halterbeck, John, assignor to G. Piel, New York, N. Y. Abrading-machine. No. 1,212,214; Jan. 16; v. 234; p. 694.

Ham, Joseph A., Apalachicola, Fla. Turpentine-scraper. No. 1,211,441; Jan. 9; v. 234; p. 399.

Hamblet, Abel M., Winchester, Mass. Composition for leavening dough. No. 1,213,357; Jan. 23; v. 234; p. 1132.

Hameister, Henry A., Elkhart Lake, Wis. Liquid dressing for leather. No. 1,214,157; Jan. 30; v. 234; p. 1434.

Hamilton, Frank C., assignor to Eureka Projector Device Co., Inc., New York, N. Y. Shutter for motion-picture-projecting apparatus having interlocking parts and means for maintaining the parts in assembled relation and for mounting the shutter on a projecting apparatus. No. 1,214,301; Jan. 30; v. 234; p. 1486.

Hamilton, Malcolm A., Waltham, Mass. Device for proofing dough. No. 1,214,302; Jan. 30; v. 234; p. 1487.

Hamlin, Fred J., assignor of one-fourth to M. L. Vining, Kansas City, Mo. Deep-well pumping-cylinder. No. 1,213,358; Jan. 23; v. 234; p. 1132.

Hamm, Bertram C., Boston, Mass. Tread for resilient tires. No. 1,210,933; Jan. 2; v. 234; p. 191.

Hammer, Joseph C. (See Claussen and Hammer.)

Hammerschmidt, Adolph T., *et al.* (See Landreth, Harry, assignor.)

Hammond, Francesco. (See Bearce and Jones, assignors.)

Hammond, Theodore A. and W. P., Passaic, N. J. Combined switch and lock device. No. 1,212,632; Jan. 16; v. 234; p. 845.

Hammond, Wilberforce B., Boston, assignor to Pierce-Hammond Automatic Sprinkler & Heating Company, New Bedford, Mass. Automatic sprinkler. No. 1,213,631; Jan. 23; v. 234; p. 1226.

Hammond, William P. (See Hammond, Theodore A. and W. P.)

Hammond, William P. (See Hebig, Henry C., assignor.)

Hammond, William P., Passaic, N. J. Electrical connector. No. 1,213,632; Jan. 23; v. 234; p. 1226.

Hampton, Roxanna A., New York, N. Y. Lady's powder-puff. No. 1,211,575; Jan. 9; v. 234; p. 444.

Handley, George F., Glendale, L. I., assignor to Royal Typewriter Company, Inc., New York, N. Y. Carriage-feed mechanism. No. 1,212,930; Jan. 16; v. 234; p. 950.

Hann, Walter, Hasbrouck Heights, N. J. Furnace-draft operator. No. 1,210,794; Jan. 2; v. 234; p. 143.

Hanna Engineering Works. (See Gates, Albert J., assignor.)

Hanna Engineering Works. (See Gates, Philetus W., assignor.)

Hanna, George W., Vale, Oreg. Portable dam. No. 1,212,633; Jan. 16; v. 234; p. 845.

Hannah, Charles L. (See Peirce and Hannah.)

Hannah, Cyril R., assignor of one-half to C. M. Baumgardner, Anaheim, Cal. Adjustable taper bit. No. 1,212,348; Jan. 16; v. 234; p. 744.

Hannah, Henry K. (See Earp-Thomas, George H., assignor.)

Hansen, Augie L., Evanston, Ill., assignor to Chicago Title & Trust Co., trustee. Massage device. No. 1,211,576; Jan. 9; v. 234; p. 444.

Hansen, Augie L., Evanston, assignor to Justrite Manufacturing Company, Chicago, Ill. Container. No. 1,214,158; Jan. 30; v. 234; p. 1434.

Hanson, Bengt M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Metal-working machine. No. 1,211,840; Jan. 9; v. 234; p. 537.

Hanson, Hans G., Gettysburg, S. D. Harrow. No. 1,210,795; Jan. 2; v. 234; p. 143.

Hanson, Sigvort, Racine, Wis. Dispensing-machine. No. 1,211,577; Jan. 9; v. 234; p. 445.

Hansson, Soren, New Glasgow, Nova Scotia, Canada. Car-truck. No. 1,211,146; Jan. 2; v. 234; p. 263.

Hanusch, Max, Marienbad, Austria-Hungary. Device for giving out coins. No. 1,212,052; Jan. 9; v. 234; p. 610.

Hard, Raymond E., assignor of one-half to E. H. Phillips, Fort Worth, Tex. Automatic adjustable feeder-valve. No. 1,214,457; Jan. 30; v. 234; p. 1537.

Harden, Daniel H., Banks, Ala. Back-band. No. 1,210,796; Jan. 2; v. 234; p. 144.

Hardesty, George E., Folsom, N. Mex. Farm-gate. No. 1,210,797; Jan. 2; v. 234; p. 144.

Hardie, James G., Canton, N. Y. Paper-loading machine. No. 1,213,359; Jan. 23; v. 234; p. 1132.

Hardin, Frank H., White Plains, N. Y. Spring suspension system for railway-trucks. No. 1,211,939; Jan. 9; v. 234; p. 573.

Harding, William H., Jr., New York, N. Y. Paper-pulp apparatus. No. 1,213,866; Jan. 30; v. 234; p. 1335.

Hardwick, William A., and J. T. Bradley, Memphis, Tenn. Water-gage glass. No. 1,210,467; Jan. 2; v. 234; p. 31.

Hardy, Lawrence P., South Bend, Ind. Coupon-strip holder. No. 1,212,349; Jan. 16; v. 234; p. 744.

Harkness, William E., Marion, Ohio. Coin-assorter. No. 1,212,215; Jan. 16; v. 234; p. 694.

Harley-Davidson Motor Co. (See Harley, William S., assignor.)

Harley, William S., assignor to Harley-Davidson Motor Co., Milwaukee, Wis. Side car for motor-cycles. No. 1,212,350; Jan. 16; v. 234; p. 745.

Harlow, John B., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selective signaling system. No. 1,210,642; Jan. 2; v. 234; p. 92.

Harlow, William S., Swampscott, Mass. Plugging-in switch. No. 1,211,940; Jan. 9; v. 234; p. 574.

Harmer, Samuel B., near Xenia, Ohio. Milking-machine. No. 1,210,468; Jan. 2; v. 234; p. 31.

Harp, Edward M., Dublin, Ga. Canning apparatus. No. 1,212,216; Jan. 16; v. 234; p. 695.

Harper, John D. (See Stewardson and Harper.)

Harrigan, Patrick J., Harrisburg, Ill. Boltless tie. No. 1,212,217; Jan. 16; v. 234; p. 695.

Harriman, Frederick C., Ardsley-on-Hudson, N. Y. Binding device. No. 1,213,479; Jan. 23; v. 234; p. 1173.

Harriman, George V., New York, N. Y. Transmission-gearing. No. 1,210,798; Jan. 2; v. 234; p. 144.

Harrington, Bryant P., Morven, assignor of one-half to W. T. Gaulden, Quitman, Ga. Cold-tire setter. No. 1,213,099; Jan. 16; v. 234; p. 1007.

Harrington, Samuel A., Richmond, Va. Type-writer. No. 1,211,147; Jan. 2; v. 234; p. 263.

Harris, Frederick W., Tate, Saskatchewan, Canada. Door opening and closing device. No. 1,213,867; Jan. 30; v. 234; p. 1335.

Harris, Henry, *et al.* (See Clark, Stuart J., assignor.)

Harris, Henry S., Cardwell, Mont. Wagon-box. No. 1,213,868; Jan. 30; v. 234; p. 1335.

Harrison, Henry A., Sykestown, N. D. Railway-crossing signal. No. 1,211,841; Jan. 9; v. 234; p. 537.

Harrison, Henry M., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,214,030; Jan. 30; v. 234; p. 1393.

Harrison, Herbert C., Lockport, N. Y. Apparatus for making radiator-strips. No. 1,212,482; Jan. 16; v. 234; p. 790.

Harrison, Jesse E., Madison, S. D. Traction-wheel. No. 1,211,578; Jan. 9; v. 234; p. 445.

Harrison, Laurence. (See Hough and Harrison.)

Harry, Erastus H. (See Walker and Harry.)

Harshberger, Norman P., Chicago, Ill., assignor to Barrett Manufacturing Company, New York, N. Y. Device for facilitating shingle-laying. No. 1,210,469; Jan. 2; v. 234; p. 31.

Hart, Demetrius H., Birmingham, Ala. Spring take-up for trolley-wires. No. 1,213,360; Jan. 23; v. 234; p. 1133.

Hart, Edison W., assignor to The Reliance Manufacturing Company, Massillon, Ohio. Wire-coiling machine. No. 1,213,480; Jan. 23; v. 234; p. 1173.

Hart, Francis, Rockaway, Oreg. Cement-brick machine. No. 1,211,842; Jan. 9; v. 234; p. 537.

Hart, Frederick A., Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and adding machine. No. 1,211,148; Jan. 2; v. 234; p. 264.

Hart, Frederick A., Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Type-writing machine. No. 1,212,940; Jan. 16; v. 234; p. 951.

Hart, Frederick A., Jersey City, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Computing-machine. No. 1,212,895; Jan. 16; v. 234; p. 935.

Hart, Frederick A., Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,213,100; Jan. 16; v. 234; p. 1007.

Hart, Frederick A., Newark, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Type-writing machine. No. 1,213,189; Jan. 23; v. 234; p. 1071.

Hart, Frederick A., Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,214,491; Jan. 30; v. 234; p. 1549.

Hart, Henry A., New York, N. Y. Figure toy. No. 1,212,941; Jan. 16; v. 234; p. 951.

Hart, Henry A., New York, N. Y. Target toy. No. 1,212,942; Jan. 16; v. 234; p. 952.

Hart, Henry A., New York, N. Y. Disappearing and recurring revolving target toy. No. 1,212,943; Jan. 16; v. 234; p. 952.

Hart, Henry A., Flushing, N. Y., assignor to The Strobel & Wilken Company, Cincinnati, Ohio. Toy figure. No. 1,212,218; Jan. 16; v. 234; p. 695.

Hart & Hutchinson Company, The. (See Page, Logan E., assignor.)

Hartberg, Henry, Watervliet, Mich. Currycomb. No. 1,211,811; Jan. 2; v. 234; p. 321.

Hartmann & Braun A.-G. (See Seidler, Max, assignor.)

Hartmann, Charles A., Washington, D. C. Gas-burning stove. No. 1,212,944; Jan. 16; v. 234; p. 952.

Hartrampf, William F., Forest Grove, Oreg. Seed cleaner and separator. No. 1,213,101; Jan. 16; v. 234; p. 1008.

Harward M'f'g Company. (See Cook, Eugene F., assignor.)

Haskell, Charles O. (See Weeks, McCollom, and Haskell.)

Haslam, Thomas P., assignor to The Kansas State Agricultural College, Manhattan, Kans. Vacuum serum-extractor. No. 1,212,945; Jan. 16; v. 234; p. 953.

Hassler, Robert H., Indianapolis, Ind. Easy-riding vehicle. No. 1,211,843; Jan. 9; v. 234; p. 538.

Hastings, James G., Ord, Nebr. Wagon end-gate. No. 1,213,633; Jan. 23; v. 234; p. 1226.

Hatch, Edwin G., Hoboken, N. J. Insulator-clamp. No. 1,210,470; Jan. 2; v. 234; p. 32.

Hatch, Nathan, Albany, N. Y. Union-suit. No. 1,213,481; Jan. 23; v. 234; p. 1173.

Hatch, Nathan, Albany, N. Y. Union-suit. No. 1,213,482; Jan. 23; v. 234; p. 1174.

Hathaway, Charles F., New York, assignor to Angular Drill and Machine Corporation, Rochester, N. Y. Square-hole drill. No. 1,212,634; Jan. 16; v. 234; p. 845.

Hatheway, Woodson, Jr., Stanberry, Mo. Grass-seed harvester. No. 1,212,053; Jan. 9; v. 234; p. 610.

Hatton, Ernest, Killingworth, England. Toothed gearing. No. 1,213,190; Jan. 23; v. 234; p. 1071.

Hauser, Grover C., and J. H. Dolan, Rochester, N. Y. Attaching wooden or Louis heels. No. 1,213,191; Jan. 23; v. 234; p. 1072.

Havassy, Joe, Miami, Ariz. Condiment-holder. No. 1,213,634; Jan. 23; v. 234; p. 1227.

Hawkins, Edward J., Solvay, N. Y. Music-leaf turner. No. 1,211,579; Jan. 9; v. 234; p. 445.

Hawkins, Harry F., and M. L. Stickney, Manchester, N. H., assignors, by mesne assignments, to Draper Corporation, Hopedale, Mass. Spinning-machine. No. 1,211,442; Jan. 9; v. 234; p. 399.

Hawley, Henry S. (See Fitzgerald, John M., assignor.)

Hawley, Royal A., assignor of one-third to J. Driver and one-third to J. Rubenkoenig, Graham, Tex. Road-grader. No. 1,213,869; Jan. 30; v. 234; p. 1336.

Hawxhurst, John J., Jr., Brooklyn, and E. F. Nicolai, Port Washington, assignors to H. & N. Carbureter Company, New York, N. Y. Carbureter. No. 1,210,799; Jan. 2; v. 234; p. 144.

Hayes, Albert, Salt Lake City, Utah, assignor to Moving Advertisement Company. Picture-holder. No. 1,210,934; Jan. 2; v. 234; p. 192.

Hayes, Charles E., assignor to Cranska Thread Company, Worcester, Mass. Bobbin-winding machine. No. 1,210,643; Jan. 2; v. 234; p. 93.

Hayes Diefenderfer Co. (See Diefenderfer, Alfred J., assignor.)

Haynes, William J., St. Louis, Mo. Automatic valve. No. 1,213,870; Jan. 30; v. 234; p. 1336.

Hays, Charles I. (See Page, Richard M., assignor.)

Hays, James M., Jefferson City, Mo. Saddletree. No. 1,214,458; Jan. 30; v. 234; p. 1537.

Hayward, Melville P., Quincy, Mass. Apple-corer. No. 1,213,361; Jan. 23; v. 234; p. 1133.

Hazen, James A., and L. D. Gentzler, Holyoke, Colo. Collapsible crate. No. 1,210,800; Jan. 2; v. 234; p. 145.

Headen, James M., Hamer, S. C. Dirigible head-lamp. No. 1,213,635; Jan. 23; v. 234; p. 1227.

Heald, Antoinette D. A. (See Heald, Joseph C., assignor.)

Heald, Joseph C., assignor to A. D. A. Heald, Newfield, Me. Crate. No. 1,211,700; Jan. 9; v. 234; p. 486.

Heald Machine Company. (See Drake, Alden M., assignor.)

Healy & Co. (See Douglas, William H., assignor.)

Heaney, David, Troy, Pa. Weighing device for forks or shovels. No. 1,210,644; Jan. 2; v. 234; p. 93.

Heany, John A., assignor to Patents Experiment Corporation, New York, N. Y. Electric insulation. No. 1,211,443; Jan. 9; v. 234; p. 400.

Heaslet, James G., Detroit, Mich., assignor to The Studebaker Corporation. Rear-axle and transmission construction. No. 1,212,635; Jan. 16; v. 234; p. 846.

Heasley, Joseph E., Butler, Pa. Combination clothes-line and clothes-pin construction. No. 1,211,312; Jan. 2; v. 234; p. 321.

Heberly, Mary G., Springville, N. Y. Protector for telephone-mouthpieces. No. 1,214,459; Jan. 30; v. 234; p. 1537.

Hebert, Frank P., assignor of one-half to G. J. Henry, San Francisco, Cal. Curing olives and product thereof. No. 1,211,844; Jan. 9; v. 234; p. 538.

Hebig, Henry C., New York, N. Y., assignor to W. P. Hammond, Passaic, N. J. Shock-absorber for vehicles. No. 1,210,645; Jan. 2; v. 234; p. 93.

Heckard, Jacob D., Astoria, Oreg. Driving mechanism. No. 1,213,636; Jan. 23; v. 234; p. 1227.

Hedin, Josef E. (See Waite and Hedin.)

Hedley, Frank, Yonkers, and J. S. Doyle, Mount Vernon, N. Y. Safety life-guard attachment for cars. No. 1,210,935; Jan. 2; v. 234; p. 192.

Heebner, Daniel G., Lansdale, Pa. Straw-cutting machine. No. 1,213,192; Jan. 23; v. 234; p. 1072.

Heenan & Froude. (See Walker, George H., assignor.)

Heflin, William D., Sardis, Miss. Planter. No. 1,212,946; Jan. 16; v. 234; p. 953.

Heginbottom, Frank H., assignor to S. H. Heginbottom & Sons, Saginaw, Mich. Jump-spark plug. No. 1,213,637; Jan. 23; v. 234; p. 1227.

Hehle, Boniface, Kansas City, Mo. Stop-register. No. 1,211,580; Jan. 9; v. 234; p. 446.

Heidenreich, Eyvind L., and W. A. Collings, Kansas City, Mo.; said Heidenreich assignor to said Collings. Reinforced concrete construction. No. 1,213,483; Jan. 23; v. 234; p. 1174.

Heidgerken, Herman J., Phillipsburg, Mont. Water-heater. No. 1,212,636; Jan. 16; v. 234; p. 846.

Heim, Adam, Liberty, Ind. Reel. No. 1,214,031; Jan. 30; v. 234; p. 1393.

Heim, Lewis R., assignor to The Ball and Roller Bearing Company, Danbury, Conn. Feeding device for roll-grinding machines. No. 1,210,936; Jan. 2; v. 234; p. 193.

Heim, Lewis R., assignor to The Ball and Roller Bearing Company, Danbury, Conn. Roll-grinding machine. No. 1,210,937; Jan. 2; v. 234; p. 193.

Hein, Adolf, Berlin, Germany. Cock. No. 1,213,484; Jan. 23; v. 234; p. 1174.

Heineck, Urban F., Portland, Oreg. Motor-handle shield. No. 1,214,032; Jan. 30; v. 234; p. 1393.

Heller, Emil A., New York, N. Y. Combustion-accelerator. No. 1,211,149; Jan. 2; v. 234; p. 264.

Heller, Ernest B., assignor, by mesne assignments, to The Vacuum Churn Corporation, New York, N. Y. Vacuum-churn. No. 1,212,483; Jan. 16; v. 234; p. 791.

Helmond, William F., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,214,159; Jan. 30; v. 234; p. 1434.

Helmuth, Frederick C., Lynbrook, assignor to Standard Oil Company of New York, New York, N. Y. Multiple filling apparatus. No. 1,213,362; Jan. 23; v. 234; p. 1133.

Hemenway, John F., New York, N. Y. Clothes-wringer. No. 1,211,701; Jan. 9; v. 234; p. 486.

Hemenway, John F., New York, N. Y. Pressure-roll release for clothes-wringers. No. 1,211,702; Jan. 9; v. 234; p. 487.

Hemig, Fred J., assignor to Crown Maltose Company, Chicago, Ill. Maltose and making the same. No. 1,214,160; Jan. 30; v. 234; p. 1435.

Henderson, James D., and C. Zolninger, Frederick, Okla. Insect-guard. No. 1,213,038; Jan. 23; v. 234; p. 1228.

Henderson, James W. (See Wristen and Henderson.)

Henderson, John C., San Francisco, Cal. Piston-ring. No. 1,214,303; Jan. 30; v. 234; p. 1487.

Hendrick Manufacturing Company. (See Edmonds, Samuel O., assignor.)

Hendrickson, Fred K. (See Newton and Hendrickson.)

Henley, Joseph V., St. Louis, Mo. Mechanism for simultaneously operating two rock-shafts. No. 1,213,639; Jan. 23; v. 234; p. 1228.

Hennessy, Hilary J., St. Paul, Minn. Ratchet winding mechanism. No. 1,212,152; Jan. 9; v. 234; p. 644.

Hennig, Adolph C. J., Seattle, Wash. Pipe-coupling. No. 1,211,941; Jan. 9; v. 234; p. 574.

Hennig, Albert, Hamburg, Germany. Double-acting two-stroke-cycle internal-combustion engine. No. 1,210,801; Jan. 2; v. 234; p. 145.

Henoch, Milton J., Sioux City, Iowa. Adding device. No. 1,211,581; Jan. 9; v. 234; p. 446.

Henry Disston & Sons. (See Smith, William, assignor.)

Henry, Eugene E. (See Bidwell, Flavel, Henry, and McLeod.)

Henry, George J. (See Hebert, Frank P., assignor.)

Henry, Murray, assignor of one-half to J. Gebhardt, Alexandria, La. Air-brake attachment. No. 1,213,363; Jan. 23; v. 234; p. 1134.

Henry, Nelson B., assignor to The Murray Company, Dallas, Tex. Gin. No. 1,210,646; Jan. 2; v. 234; p. 94.

Henry, Nelson B., assignor to The Murray Company, Dallas, Tex. Tramper for cotton-presses. No. 1,212,637; Jan. 16; v. 234; p. 847.

Henry Pooley and Son. (See Dobson, James, assignor.)

Henry R. Worthington, Inc. (See Entwisle, Edward F., assignor.)

Henschen, William H., Indianapolis, Ind., assignor of one-half to J. P. Collins, Chicago, Ill. Metallic spring-tire. No. 1,210,647; Jan. 2; v. 234; p. 94.

Hensen, Hans P., Tecumseh, Mich. Scraper. No. 1,212,351; Jan. 16; v. 234; p. 745.

Hepburn, George G., Chorlton-cum-Hardy, Manchester, England. Bipolar-electrode electrolizer. No. 1,213,871; Jan. 30; v. 234; p. 1336.

Hepsley, Ellis E., Everett, Wash. Electric window-fan. No. 1,211,150; Jan. 2; v. 234; p. 265.

Hercer, Anton, Springvalley, Ill. Ventilating-pipe. No. 1,214,033; Jan. 30; v. 234; p. 1394.

Herfurth, Alfred. (See Rona and Herfurth.)

Herington, George B., Alhambra, Cal. Ticket-counter. No. 1,210,802; Jan. 2; v. 234; p. 146.

Hermann Aukam & Co. (See Leathem, James, assignor.)

Hern, Jay J. (See Arey and Hern.)

Herr, Frederick, New York, N. Y. Hat-press. No. 1,212,054; Jan. 9; v. 234; p. 611.

Herr, Homer A., Philadelphia, Pa. Separating liquids from solids. No. 1,212,638; Jan. 16; v. 234; p. 847.

Herrick, Albert B., New York, N. Y., assignor to The Electric Railway Improvement Company, Cleveland, Ohio. Method of and electrode for welding bonds to rails. No. 1,211,313; Jan. 2; v. 234; p. 321.

Herrick, James A., New Rochelle, N. Y. Gas-producer. No. 1,210,471; Jan. 2; v. 234; p. 32.

Hersey, Arthur J., assignor of one-fourth to R. F. McDougall, Duluth, and one-fourth to C. M. Kemp, St. Paul, Minn. Horseshoe-calk. No. 1,210,648; Jan. 2; v. 234; p. 94.

Herskovitz, William, Chicago, Ill. Socket for electric lamps. No. 1,213,364; Jan. 23; v. 234; p. 1134.

Herz, Alfred, Chicago, Ill. Photography. No. 1,213,485; Jan. 23; v. 234; p. 1175.

Herz, Alfred, assignor to Delta-Star Electric Company, Chicago, Ill. Protecting means for electric circuits. No. 1,213,365; Jan. 23; v. 234; p. 1134.

Herzka, Emile, Arecibo, Porto Rico. Manufacturing fertilizer out of Steffens waste water, &c. No. 1,212,484; Jan. 16; v. 234; p. 791.

Hescheles, Isidore M., New York, N. Y. Metal corner for boxes. No. 1,212,219; Jan. 16; v. 234; p. 696.

Hess-Bright Manufacturing Company, The. (See Brunner and Cope, assignors.)

Hess, Edward B., Brooklyn, assignor to Royal Typewriter Company, Inc., New York, N. Y. Carriage-shift stop for type-writing machines. No. 1,211,444; Jan. 9; v. 234; p. 400.

Hess, Edward B., Brooklyn, assignor to Royal Typewriter Company, New York, N. Y. Line-gage for type-writing machines. No. 1,213,366; Jan. 23; v. 234; p. 1135.

Hess, Edward B., Brooklyn, assignor to Royal Typewriter Company, Inc., New York, N. Y. Paper-feed device. No. 1,213,193; Jan. 23; v. 234; p. 1072.

Hess, Edward B., and L. C. Myers, Brooklyn, assignors to Royal Typewriter Company, Inc., New York, N. Y. Type-writing machine. No. 1,212,947; Jan. 16; v. 234; p. 953.

Hess, Harry W., New York, N. Y. Talking-machine. No. 1,214,304; Jan. 30; v. 234; p. 1488.

Hess, Wendell, Jr., assignor to W. & L. E. Gurley, Troy, N. Y. Recorder. No. 1,211,703; Jan. 9; v. 234; p. 487.

Hesse, Albert R., Kelso, Minn. Parcel-post mail-box. No. 1,212,948; Jan. 16; v. 234; p. 954.

Hesse, Otto H., assignor to The Wm. G. Hesse & Son Mfg. Co., Incorporated, Leavenworth, Kans. Trailer running-gear and towing connection. No. 1,212,949; Jan. 16; v. 234; p. 954.

Hester, William A., Evansville, Ind. Pocket for overalls. No. 1,212,639; Jan. 16; v. 234; p. 848.

Hettinger, Paul R., and C. P. Prince, Albany, N. Y. Tobacco-can holder. No. 1,214,161; Jan. 30; v. 234; p. 1435.

Heuser, Friedrich W., Gross-Lichterfelde, near Berlin, Germany. Process and apparatus for making brazed joints. (Reissue.) No. 14,245; Jan. 9; v. 234; p. 650.

Hewitt, Frank M., Goldfield, Nev. Shoveling-machine. No. 1,213,640; Jan. 23; v. 234; p. 1228.

Hewitt, Richard B., Birmingham, Mich. Differential driving-gear. No. 1,211,151; Jan. 2; v. 234; p. 265.

Hewitt, Sarah D., Buffalo, N. Y. Vulcanizing apparatus for rubber hose. No. 1,210,938; Jan. 2; v. 234; p. 193.

Heylman, Edward M., assignor to Oliver Chilled Plow Works, South Bend, Ind. Cultivator. No. 1,212,950; Jan. 16; v. 234; p. 955.

Heywood Brothers and Wakefield Company. (See O'Hearn, George E., assignor.)

Heywood Brothers and Wakefield Company. (See Van Derveer, Clarence A., assignor.)

Hibbert, Harold, Pittsburgh, Pa. Manufacture of explosives. No. 1,213,367; Jan. 23; v. 234; p. 1135.

Hibbert, Harold, Pittsburgh, Pa. Liquid composition. No. 1,213,368; Jan. 23; v. 234; p. 1135.

Hibbert, Harold, Pittsburgh, Pa. Explosive and producing same. No. 1,213,369; Jan. 23; v. 234; p. 1135.

Hibbert, Harold, and H. A. Morton, Pittsburgh, Pa., assignors to Union Carbide Company, New York, N. Y. Making acetaldehyde. No. 1,213,486; Jan. 23; v. 234; p. 1175.

Hibbert, Harold, and H. A. Morton, Pittsburgh, Pa., assignors to Union Carbide Company, New York, N. Y. Making acetaldehyde. No. 1,213,487; Jan. 23; v. 234; p. 1175.

Hickerson, Sterling P., Fullerton, Nebr. Collapsible chicken-coop. No. 1,211,152; Jan. 2; v. 234; p. 265.

Hickey, William B., Sapulpa, Okla. Corn-cutter, &c. No. 1,214,460; Jan. 30; v. 234; p. 1538.

Hickman, Patrick H., assignor of one-half to T. A. Hickman, Irvington, N. J. Interchangeable last. No. 1,212,768; Jan. 16; v. 234; p. 894.

Hickman, Samuel L., assignor of one-half to C. H. Stephan, Springfield, Ohio. Supporting device for ironing-boards, &c. No. 1,213,641; Jan. 23; v. 234; p. 1228.

Hickman, Thomas A. (See Hickman, Patrick H., assignor.)

Hicks, Ulysses S., Hilts, Cal. Vegetable-slicer. No. 1,212,055; Jan. 9; v. 234; p. 611.

Higgins, Eric B., Wallasey, England. Conversion of unsaturated into saturated compounds. No. 1,211,704; Jan. 9; v. 234; p. 488.

Hight & Co., W. T. (See Hight, William T., assignor.)

Hight, William T., assignor to W. T. Hight & Co., Boston, Mass. Sliding-shoe for furniture. No. 1,212,220; Jan. 16; v. 234; p. 696.

Higinbotham, Arthur O., assignor to C. B. Foster and Company, Worcester, Mass. Relief-valve for compressor systems. No. 1,212,951; Jan. 16; v. 234; p. 955.

Hilbers, George H. (See Knieriem and Hilbers.)

Hilding, Ernst A., assignor to Aktiebolaget Svenska Luftventiler, Lidköping, Sweden. Air-valve for pneumatic tires. No. 1,212,640; Jan. 16; v. 234; p. 848.

Hilding, Ernst A., assignor to Aktiebolaget Svenska Luftventiler, Lidköping, Sweden. Air-valve for pneumatic tires. No. 1,212,641; Jan. 16; v. 234; p. 848.

Hilgers, Martin, Tazewell county, Ill. Respirating device. No. 1,210,939; Jan. 2; v. 234; p. 194.

Hill, Austin G., Chelsea, Mass. Toggle for use in stretching leather. No. 1,212,485; Jan. 16; v. 234; p. 791.

Hill, Charles F., Janesville, Wis. Bookbinding device. No. 1,212,352; Jan. 16; v. 234; p. 745.

Hill, Elijah E., New Albany, Miss. Closet-tank ball-cock. No. 1,212,056; Jan. 9; v. 234; p. 612.

Hill, George S., Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J. Stopping mechanism. No. 1,212,486; Jan. 16; v. 234; p. 791.

Hill, Harriet, New York, N. Y. Paper-lined receptacle. No. 1,213,194; Jan. 23; v. 234; p. 1073.

Hill, Herbert E. (See Carlson and Hill.)

Hill, Howard H., Upper Montclair, N. J. Detachable handle. No. 1,212,057; Jan. 9; v. 234; p. 612.

Hill, Joseph A., Sheffield, England. Furnace-grate for locomotive and like boilers and other purposes. No. 1,212,058; Jan. 9; v. 234; p. 612.

Hill, Julia, Valley Junction, Iowa. Receptacle. No. 1,213,102; Jan. 16; v. 234; p. 1008.

Hill, Thomas E., and J. J. Millett, Louisville, Ky. Means for lubricating and cleaning railway-tracks, &c. No. 1,211,845; Jan. 9; v. 234; p. 538.

Hillerich & Bradsby Company. (See Hillerich, John A., assignor.)

Hillerich, John A., Louisville, Ky., assignor to Hillerich & Bradsby Company. Bat. No. 1,213,370; Jan. 23; v. 234; p. 1136.

Hills, Sidney C., assignor to The Turner & Seymour Manufacturing Co., Torrington, Conn. Curtain-rod. No. 1,210,472; Jan. 2; v. 234; p. 32.

Hills, Sidney C., assignor to The Turner & Seymour Manufacturing Co., Torrington, Conn. Curtain-fixture. No. 1,210,473; Jan. 2; v. 234; p. 32.

Himmel, Solomon. (See Hormes, William T., assignor.)

Himmel, Solomon. (See Miller, Andrew E., assignor.)

Himmel, Solomon, Baltimore, Md. Display-rack. No. 1,214,461; Jan. 30; v. 234; p. 1538.

Hinchcliffe, Charles W., Lawrence, Mass. Window-screen. No. 1,214,162; Jan. 30; v. 234; p. 1435.

Hirschman, Frank H. (See Dillon, Guy, assignor.)

Hoard, Halbert L., Fort Atkinson, Wis. Massage device. No. 1,214,305; Jan. 30; v. 234; p. 1488.

Hoard, Halbert L., Fort Atkinson, Wis. Massage device. No. 1,214,306; Jan. 30; v. 234; p. 1488.

Hoare, John E., Toronto, Ontario, Canada. Player-piano. No. 1,210,474; Jan. 2; v. 234; p. 33.

Hoban, William B., Chicago, Ill. Valve-spring retainer. No. 1,213,488; Jan. 23; v. 234; p. 1175.

Hobart, Franklin G., Beloit, Wis., assignor to Fairbanks, Morse & Co., Chicago, Ill. Piston-pin-locking mechanism. No. 1,211,582; Jan. 9; v. 234; p. 446.

Hobgood, Lewis G., Columbia, S. C. Supplementary seat for motor-cycles. No. 1,212,221; Jan. 16; v. 234; p. 696.

Hobson, Clarence J., and G. P. Wright, Orby, Cal. Beet-harvester. No. 1,213,371; Jan. 23; v. 234; p. 1136.

Hochstadter, Martin, Berlin, Germany. Electrical conductor. No. 1,211,153; Jan. 2; v. 234; p. 266.

Hodgdon, George H., New York, N. Y. Decarbonizing attachment for internal-combustion motors. No. 1,211,705; Jan. 9; v. 234; p. 488.

Hodgman, Harry H., Nasonville, R. I. Shuttle-check. No. 1,212,952; Jan. 16; v. 234; p. 955.

Hodgson, John, Cleveland, Ohio, assignor of one-half to Tierney & Hodgson, New York, N. Y. Cap-spinning and cap-twisting machine. No. 1,212,222; Jan. 16; v. 234; p. 697.

Hoefleur, Arthur V., Chicago, Ill. Gravity-conveyer. No. 1,211,154; Jan. 2; v. 234; p. 266.

Hoeft, Martin G., Minonk, Ill. Rain and wind signal. No. 1,213,642; Jan. 23; v. 234; p. 1229.

Hoeft, Martin G., Olpe, Kans. Wire-twister. No. 1,213,643; Jan. 23; v. 234; p. 1229.

Hoelscher, Gottlieb H., Battle Creek, Iowa. Joint for rails and structural steelwork. No. 1,213,195; Jan. 23; v. 234; p. 1073.

Hoerbelt, Bernard W., Buffalo, N. Y. Blanket for offset-printing presses and making the same. No. 1,211,706; Jan. 9; v. 234; p. 488.

Hoff, John A., Cincinnati, Ohio. Testing device. No. 1,211,942; Jan. 9; v. 234; p. 574.

Hofferberth, William M., Redwood, N. Y. Gearing. No. 1,212,353; Jan. 16; v. 234; p. 746.

Hoffman, Charles. (See Kohmann, Hoffman, and Godfrey.)

Hoffman, George D., Pasadena, Cal., assignor to Hoffman Specialty Company, Chicago, Ill. Automatic air-valve for steam-radiators. No. 1,211,314; Jan. 2; v. 234; p. 322.

Hoffman, Harry F., Allentown, Pa. Dirigible headlight. No. 1,212,769; Jan. 16; v. 234; p. 894.

Hoffman, Harry F., Allentown, Pa. Dirigible headlight. No. 1,212,642; Jan. 16; v. 234; p. 849.

Hoffman Specialty Company. (See Hoffman, George D., assignor.)

Hoffmann, Frederick H., Jersey City, N. J. Stropping-machine. No. 1,214,034; Jan. 30; v. 234; p. 1394.

Hoffmann, Michael, South Bethlehem, Pa. Apiary. No. 1,212,223; Jan. 16; v. 234; p. 697.

Hofheimer, Maurice, Baltimore, Md., assignor, by mesne assignments, to Autosales Gum and Chocolate Company, New York, N. Y. Coin-detecting device for vending-machines. No. 1,212,959; Jan. 16; v. 234; p. 956.

Hofman, Louis A., St. Louis, Mo. Composition for making wall-plaster and plaster building-blocks. No. 1,211,445; Jan. 9; v. 234; p. 401.

Hofmann, Wilhelm. (See Specketer and Hofmann.)

Hofmann, William, and C Christy, Camden, N. J., assignors to Keystone Leather Company, Philadelphia, Pa. Leather-glazing machine. No. 1,214,462; Jan. 30; v. 234; p. 1538.

Hogan, George R., and H. P. MacLagan, Chicago, Ill. System of X-ray-tube operation. No. 1,213,872; Jan. 30; v. 234; p. 1337.

Hoge, Henry R., *et al.* (See Espeniaub, John W., assignor.)

Hoke, Harry A., Altoona, Pa. Railway draft-rigging. No. 1,213,196; Jan. 23; v. 234; p. 1073.

Holaday, Albert E., Naugatuck, Conn., assignor to The American Wringer Company, Woonsocket and Providence, R. I. Clothes-wringer clamp. No. 1,213,491; Jan. 23; v. 234; p. 1176.

Holbrook, Robert A., Chicago Heights, Ill. Shortening and leavening preparation. No. 1,210,940; Jan. 2; v. 234; p. 194.

Holcomb, Dello A., Youngstown, Ohio. Pen, pencil, stogie, and cigar holder. No. 1,213,644; Jan. 23; v. 234; p. 1230.

Holden, Albert B., Andover, S. D. Broom-holder. No. 1,213,645; Jan. 23; v. 234; p. 1230.

Holden, Floyd E. (See Marx and Holden.)

Holder, Allen G., Jr., Lucedale, Miss. Aeroplane. No. 1,212,954; Jan. 16; v. 234; p. 956.

Holder, Henry A., Lynn, assignor to Holder-Perkins Company, Woburn, Mass. Pneumatic bed for hide and leather working machines. No. 1,211,846; Jan. 9; v. 234; p. 539.

Holder-Perkins Company. (See Holder, Henry A., assignor.)

Holl, Adolph W., Cleveland, Ohio, assignor to G. W. Bowen, Auburn, N. Y. Grease-cup. No. 1,213,372; Jan. 23; v. 234; p. 1136.

Holland, Arthur S., Homer, N. Y. Mobile poultry and animal cage. No. 1,212,771; Jan. 16; v. 234; p. 895.

Holland Furnace Company. (See Landwehr, August H., assignor.)

Holland, Newman H., assignor to New Jersey Patent Company, West Orange, N. J. Phonograph. No. 1,213,197; Jan. 23; v. 234; p. 1074.

Holley, Clarence M., and C. C. Jennings, assignors to Utility Compressor Company, Detroit, Mich. Mechanical movement. No. 1,210,649; Jan. 2; v. 234; p. 95.

Hollingshead, Peter. (See Chadwick and Hollingshead.)

Hollmann, George E., Flint, Mich. Rotary-valve hydrocarbon-engine. No. 1,213,873; Jan. 30; v. 234; p. 1337.

Holloway, Harry G. (See Clemetson and Holloway.)

Hollowell, Evert, Kansas City, Kans. Universal buck extension. No. 1,213,373; Jan. 23; v. 234; p. 1137.

Holmberg, Axel F., San Francisco, Cal. Instrument-board for automobiles. No. 1,211,707; Jan. 9; v. 234; p. 488.

Holmgren, August, *et al.* (See Bergren, John A., assignor.)

Holsomback, Lee N., Dallas, Tex. Post-hole digger. No. 1,213,874; Jan. 30; v. 234; p. 1337.

Holt, William F., Redlands, Cal. Transportation system. No. 1,212,487; Jan. 16; v. 234; p. 792.

Holtz, Sylvester C., Shelby, Ohio. Land-roller. No. 1,214,463; Jan. 30; v. 234; p. 1538.

Homeler, Charles H., St. Paul, Minn. Gas-saving device. No. 1,211,583; Jan. 9; v. 234; p. 447.

Honea, Edward C., Alexandria, La. Flange-turner. No. 1,211,155; Jan. 2; v. 234; p. 266.

Hood, Frank M. (See Wallace, David T., assignor.)

Hood, Hubert E., Buffalo, N. Y., assignor, by mesne assignments, to The F. F. Dalley Corporations, Limited, Hamilton, Ontario, Canada. Box. No. 1,214,464; Jan. 30; v. 234; p. 1539.

Hood, William C., Chicago, Ill. Electric fan. No. 1,214,163; Jan. 30; v. 234; p. 1436.

Hoxey, George F., Sechelt, British Columbia, Canada. Collapsible megaphone. No. 1,211,584; Jan. 9; v. 234; p. 447.

Hooper, James P., Baltimore, Md. Gun-sling. No. 1,210,475; Jan. 2; v. 234; p. 33.

Hooper, Louis M., Rutherford, N. J., assignor to The J. L. Mott Iron Works. Handle mechanism for faucets. No. 1,211,585; Jan. 9; v. 234; p. 447.

Hoover, Benjamin, assignor of one-half to S. B. Rieg, Meridian, Miss. Safety appliance for railway-cars. No. 1,210,803; Jan. 2; v. 234; p. 146.

Hoover, Thomas A., Fresno, Cal. Automobile-bumper. No. 1,212,059; Jan. 9; v. 234; p. 612.

Hope, Robert A. (See Dickey and Hope.)

Hopewell, Charles F., Newton, Mass. Fabric coating, drying, and solvent-recovery apparatus. No. 1,212,643; Jan. 16; v. 234; p. 849.

Hopkins, Frank H., Brooklyn, N. Y. Shoe-fastening. No. 1,211,315; Jan. 2; v. 234; p. 323.

Hopkins, Frank H., Westmount, and G. B. Dorey, Montreal, Quebec, Canada. Vehicle-spring. No. 1,210,941; Jan. 2; v. 234; p. 194.

Hopkins, John A., Jr., Burns, Kans. Automatic fire alarm and extinguisher. No. 1,212,060; Jan. 9; v. 234; p. 613.

Hopkinson, Joseph, and C. H. Maltby, assignors to The Computing Scale Company, Dayton, Ohio. Meat-slicing machine. No. 1,210,476; Jan. 2; v. 234; p. 33.

Horinko, Leonard. (See Weber and Horinko.)

Horman, Herman, Arnold Mills, R. I. Plowing-machine. No. 1,212,772; Jan. 16; v. 234; p. 895.

Hormes, William T., Govans, assignor to S. Himmel, Baltimore, Md. Display-rack. No. 1,213,646; Jan. 23; v. 234; p. 1230.

Horn, William W., Chicago, Ill. Builder's scaffolding. No. 1,211,446; Jan. 9; v. 234; p. 461.

Horne, James. (See Dawson and Horne.)

Horne, Lawrence W., and W. N. Crane, New York, N. Y. Electrically-operated speed-controlling device for trains. No. 1,212,224; Jan. 16; v. 234; p. 698.

Horne, Lawrence W., Brooklyn, and W. N. Crane, New York, N. Y. Train speed-control and stopping device. No. 1,213,198; Jan. 23; v. 234; p. 1074.

Horning, David F. (See Riegel and Horning.)

Horning, Harry L., assignor to Waukesha Motor Co., Waukesha, Wis. Oiling system for internal-combustion motors. No. 1,213,875; Jan. 30; v. 234; p. 1338.

Hornsey, John W., Summit, N. J., assignor to General Reduction Gas and By-Products Company. Treating materials. No. 1,214,164; Jan. 30; v. 234; p. 1436.

Hornyak, John. (See Kelly and Hornyak.)

Horton, Merton T. (See Osborne and Horton.)

Hosford, William B., assignor to Dodge Manufacturing Company, Mishawaka, Ind. Flexible coupling. No. 1,214,307; Jan. 30; v. 234; p. 1488.

Hosken, Robert J., Chicago, Ill. Structural toy. No. 1,213,374; Jan. 23; v. 234; p. 1137.

Hosking, Joseph E., Butte, Mont. Candle-extinguisher. No. 1,211,156; Jan. 2; v. 234; p. 266.

Hough, Edwin R., and L. Harrison, London, England. Electric-light fitting or bracket. No. 1,211,847; Jan. 9; v. 234; p. 539.

Houseman, Harry A., assignor to Standard Machine Company, Philadelphia, Pa. Clutch-shifting mechanism for circular-knitting machines. No. 1,213,199; Jan. 23; v. 234; p. 1074.

House, Leon J., Point Marion, Pa. Lantern-lens. No. 1,211,447; Jan. 9; v. 234; p. 401.

Hover, Albert H., assignor to E. Olson, Chicago, Ill. Shade-fixture. No. 1,212,354; Jan. 16; v. 234; p. 746.

Hovis, Christopher C., San Luis Obispo, Cal. Animal-trap. No. 1,213,876; Jan. 30; v. 234; p. 1238.

Howard, Charles H., Saugus, assignor of one-half to P. T. Jackson, Jr., Cambridge, Mass. Paper-reinforcing machine. No. 1,211,848; Jan. 9; v. 234; p. 539.

Howard, Charles H., Saugus, assignor of one-half to P. T. Jackson, Jr., Cambridge, Mass. Paper-reinforcing machine. No. 1,211,849; Jan. 9; v. 234; p. 540.

Howard, Charles H., Saugus, assignor of one-half to P. T. Jackson, Jr., Cambridge, Mass. Paper-reinforcing machine. No. 1,211,850; Jan. 9; v. 234; p. 540.

Howard, Charles H., Saugus, assignor of one-half to P. T. Jackson, Jr., Cambridge, Mass. Paper-reinforcing machine. No. 1,211,851; Jan. 9; v. 234; p. 541.

Howard, Charles H., Saugus, assignor of one-half to P. T. Jackson, Jr., Cambridge, Mass. Paper-reinforcing machine. No. 1,211,852; Jan. 9; v. 234; p. 541.

Howard, Earl G., and R. Altman, Rush, Colo. Bean and pea harvester. No. 1,212,061; Jan. 9; v. 234; p. 613.

Howard, Frank W. (See Cannon and Howard.)

Howard, Hubert, *et al.* (See Thornton, Charles W., assignor.)

Howard, Nelson F., Fairfield township, Tippecanoe county, Ind. Fence-tightening post. No. 1,213,768; Jan. 23; v. 234; p. 1270.

Howarth, John M., Wausau, Wis. Machine and process for pulling candy. No. 1,214,465; Jan. 30; v. 234; p. 1539.

Howd, Alvah J., assignor of fifty-one one-hundredths to E. H. Dewey, Nampa, Idaho. Toilet attachment. No. 1,214,165; Jan. 30; v. 234; p. 1437.

Howland, Paul W., Houghton, Wash. Exposure-identifying device for cameras. No. 1,210,804; Jan. 2; v. 234; p. 146.

Hoyt, Albert M. (See Matson and Hoyt.)

Hoyt, Daniel, East Orange, assignor of one-half to The National Lock Washer Company, Newark, N. J. Window-fixture. No. 1,214,035; Jan. 30; v. 234; p. 1394.

Hoyt, Daniel, East Orange, assignor of one-half to The National Lock Washer Company, Newark, N. J. Sash-balance. No. 1,214,036; Jan. 30; v. 234; p. 1395.

Hub, J. C. (See Case, Francis M., assignor.)

Hubbard & Co. (See Peirce, Charles L., Jr., assignor.)

Hubbs, Henry E. (See Malone and Hubbs.)

Hubbs, Willis G., Walnut Ridge, Ark. Time and burglar alarm. No. 1,211,448; Jan. 9; v. 234; p. 401.

Huber, Frederick W., and R. W. Poindexter, Jr., Los Angeles, Cal. Producing alkaline-earth-metal compounds. No. 1,213,375; Jan. 23; v. 234; p. 1137.

Huber, John F., assignor to G. W. Pound, Buffalo, N. Y. Manifold-book or sales-slip holder. No. 1,213,877; Jan. 30; v. 234; p. 1339.

Huckel, John F., Kansas City, Mo. Vending-truck. No. 1,210,805; Jan. 2; v. 234; p. 147.

Hudson, John L., Belleville, N. J. Golf-club. No. 1,211,708; Jan. 9; v. 234; p. 488.

Hudson Motor Car Company. (See Fekete, Stephen I., assignor.)

Hudson, Peter L., Effingham, Ill. Weather-stop. No. 1,213,103; Jan. 16; v. 234; p. 1008.

Hudson, Warren R., assignor to The Troy Wagon Works Company, Troy, Ohio. Trailer-truck. No. 1,214,037; Jan. 30; v. 234; p. 1395.

Huffman, Dewey, Grano, N. D. Motor-sleigh. No. 1,210,477; Jan. 2; v. 234; p. 34.

Huffman, Henry H., Columbus, Ohio. Lifting-jack. No. 1,213,376; Jan. 23; v. 234; p. 1138.

Huffstutter, James H., Corning, Mo. Liquid-fertilizer distributer. No. 1,213,647; Jan. 23; v. 234; p. 1230.

Huggins, Gurry E., Montclair, N. J. Bag. No. 1,211,853; Jan. 9; v. 234; p. 542.

Hughes, Albert G., Douglas, Ariz. Hose-coupling. No. 1,213,492; Jan. 23; v. 234; p. 1177.

Hughes, Howard H., Madrid, Iowa. Intake and exhaust valve for gas-engines. No. 1,212,488; Jan. 16; v. 234; p. 792.

Hughes, Robert, Mount Vernon, N. Y. Spark-plug. No. 1,211,157; Jan. 2; v. 234; p. 207.

Hughes, Samuel W. (See Gattis, Thomas W., assignor.)

Hulbert, Edwin F., South Norwalk, assignor to National Paper Can Company, Norwalk, Conn. Closure for paper receptacles. No. 1,213,648; Jan. 23; v. 234; p. 1231.

Hulden, Alexander S., Great Falls, Mont. Wave-motor. No. 1,213,104; Jan. 16; v. 234; p. 1009.

Hull, Edward T., New York, N. Y. Register for telephone-calls. No. 1,214,466; Jan. 30; v. 234; p. 1540.

Hume, Elizabeth F., Dunedin, New Zealand. Corset. No. 1,214,467; Jan. 30; v. 234; p. 1540.

Humphrey, John D., Norfolk, Conn. Lawn-sprinkler. No. 1,214,038; Jan. 30; v. 234; p. 1395.

Humphrey, William, New York, N. Y. Dry-pipe valve and signal. No. 1,211,709; Jan. 9; v. 234; p. 489.

Hunt, Bertram, Glasgow, Scotland. Production of cuprous oxid electrolytically. No. 1,212,062; Jan. 9; v. 234; p. 613.

Hunt, Finis F. (See Wagner, Mathias, assignor.)

Hunt, John F., Malden, Mass. Disinfecting apparatus. No. 1,210,650; Jan. 2; v. 234; p. 85.

Hunt, Stephen A., Cave Spring, Ga. Fly-trap. No. 1,212,225; Jan. 16; v. 234; p. 698.

Hunter, E. C., *et al.* (See Webb, James L., assignor.)

Hunter, G. O., *et al.* (See Webb, James L., assignor.)

Hunter, James R., Asheville, N. C. Wrench. No. 1,212,063; Jan. 9; v. 234; p. 614.

Hunter, Matthew A., Troy, N. Y. Electrical resistance material. No. 1,211,943; Jan. 9; v. 234; p. 575.

Hunter, Maude. (See McCuin, William H., assignor.)

Hunter, Rowland C., Englewood, N. J. Metal regret. No. 1,213,649; Jan. 23; v. 234; p. 1231.

Huntoon, Charles F., Chicago, Ill. Truck-bolster. No. 1,210,478; Jan. 2; v. 234; p. 34.

Huntoon, Frank D., assignor to National Manufacturing Company, Worcester, Mass. Fly-trap. No. 1,213,200; Jan. 23; v. 234; p. 1075.

Hurd, Hubbard F., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y. Fold-collar. No. 1,213,493; Jan. 23; v. 234; p. 1177.

Hurd, Norman B., assignor to The American Hardware Corporation, New Britain, Conn. Panic-bolt dog. No. 1,213,105; Jan. 16; v. 234; p. 1009.

Hurley Machine Company. (See Fisher, Alva J., assignor.)

Hurwitz, Samuel J., Youngstown, Ohio. Water-heater. No. 1,214,468; Jan. 30; v. 234; p. 1540.

Hussar, Ernest A., New York, N. Y. Forming plates for artificial teeth. No. 1,211,944; Jan. 9; v. 234; p. 575.

Hutches, Benjamin F., Jr., Allendale, N. J. Calculating-machine. No. 1,212,226; Jan. 16; v. 234; p. 698.

Hutchings, William S. (See Goddard and Hutchings.)

Hutchinson, George W., assignor to Donald-Hutchinson Patents Limited, Masterton, New Zealand. Fastener for fencing-wires. No. 1,213,201; Jan. 23; v. 234; p. 1075.

Hutchinson, Ralph E., Morton, Minn. Garment-supporter. No. 1,213,650; Jan. 23; v. 234; p. 1231.

Hyde, Stanley T. (See Weller, Naugle, and Hyde.)

Hyer, Horace H., Hertel, Wis. Combination-tool. No. 1,212,064; Jan. 9; v. 234; p. 614.

Hyslup, Levin J., Keller, Va. Ballot-box. No. 1,211,854; Jan. 9; v. 234; p. 542.

I. B. Kleinert Rubber Company. (See Guinzburg, Victor, assignor.)

I. E. Palmer Company, The. (See Palmer, Townsend, assignor.)

I. E. Palmer Company, The. (See Whitcomb, Emory O., assignor.)

Iconochrome Company of America. (See John, Robert, assignor.)

Ide, Harry L., assignor of one-half to R. W. Ide, Springfield, Ill. Photographic camera. No. 1,212,355; Jan. 16; v. 234; p. 746.

Ide, Roy W. (See Ide, Harry L., assignor.)

Independence Coffee and Spice Company, The. (See Savageau, Frederick L., assignor.)

Individual Sanitary Shaving Cup Co. (See Goldenberg and Keller, assignors.)

Industrial Electric Mfg. Company. (See Vollbrecht, Frederick A., assignor.)

Ingber, Nathaniel, assignor to C. Ingber & Sons, New York, N. Y. Office-coat. No. 1,211,449; Jan. 9; v. 234; p. 402.

Ingersoll-Rand Company. (See Armstrong, William H., assignor.)

Ingersoll-Rand Company. (See Bayles, Lewis C., assignor.)

Ingersoll-Rand Company. (See Bulkley, Emery L., assignor.)

Ingersoll-Rand Company. (See Carter, Russell S., assignor.)

Ingersoll-Rand Company. (See Peck, Cald H., assignor.)

Ingles, Edwin F. (See Von Boden and Ingles.)

Ingleton, James W., Astoria, Oreg. Aeroplane. No. 1,213,377; Jan. 23; v. 234; p. 1138.

Inglis, Bruce K. (See Inglis, Clement W., C. W., and B. K.)

Inglis, Charles W. (See Inglis, Clement W., C. W., and B. K.)

Inglis, Clement W., C. W., and B. K., Milwaukee, Wis. Coupling member. No. 1,214,308; Jan. 30; v. 234; p. 1489.

Ingram, Walter M., Hollis Center, Me. Taper attachment for sawmill-carriages. No. 1,211,855; Jan. 9; v. 234; p. 542.

Ingram, William S., Raleigh, N. C. Safety air-brake valve. No. 1,212,955; Jan. 16; v. 234; p. 956.

Inland Machine Works. (See Flammang, John, assignor.)

Inman, William A., Hartford City, Ind. Cattle-guard. No. 1,210,806; Jan. 2; v. 234; p. 147.

International Harvester Company of New Jersey. (See Benjamin, Bert R., assignor.)

International Harvester Company of New Jersey. (See Hagadone, Clinton A., assignor.)

International Harvester Company of New Jersey. (See McIntire, Richard E., assignor.)

International Harvester Company of New Jersey. (See Osterholm, William C., assignor.)

International Harvester Company of New Jersey. (See Pearson, Charles, assignor.)

International Harvester Company of New Jersey. (See Rockwell, Horace L., assignor.)

International Harvester Company of New Jersey. (See Sharp, Charles S., assignor.)

International Harvester Company of New Jersey. (See Sturrock, John, assignor.)

International Harvester Corporation. (See Ford, Ralph L., assignor.)

International Harvester Corporation. (See Robinson, Charles W., assignor.)

International Money Machine Company. (See Runquist, Gustaf, assignor.)

International Siegwartbalken-Gesellschaft. (See Wilhelmi, Otto, assignor.)

Ireland, C. Frank, *et al.* (See Bradley, Richard C., assignor.)

Irvin, Luther C., Warwick, W. Va. Clothes-line. No. 1,214,469; Jan. 30; v. 234; p. 1541.

Irwin, Asa O., Fort Mills, Philippine Islands. Paper-fastener. No. 1,211,158; Jan. 2; v. 234; p. 267.

Irwin, Asa O., Fort Mills, Philippine Islands. Ball and roller bearing for journal-boxes. No. 1,212,065; Jan. 9; v. 234; p. 614.

Irwin, Theodore J., Fresno, Cal. Musical instruction. No. 1,212,356; Jan. 16; v. 234; p. 747.

Isbell, John A. (See Wood and Isbell.)

Ishizuka, Tohoru. (See Kamada and Ishizuka.)

Ittner, Charles E., and C. A. Smith, Baltimore, Md. Valve-operating mechanism. No. 1,211,159; Jan. 2; v. 234; p. 267.

Ittner, Martin H., Jersey City, N. J. Stuffing-box. No. 1,213,494; Jan. 23; v. 234; p. 1177.

Ives, James F., Newbern, N. C. Lock. No. 1,210,807; Jan. 2; v. 234; p. 148.

J. Gordon Knight Electric Company. (See Knight, Julian G., assignor.)

J and B Manufacturing Company. (See Jacobson, Edward B., assignor.)

J. E. Mergott Company, The. (See Fuller, Franz A., assignor.)

J. G. Brill Company, The. (See McWhirter, John S., assignor.)

J. I. Case Threshing Machine Company. (See Welty, Albert B., assignor.)

J. I. Case Threshing Machine Company. (See Zachow William, assignor.)

J. L. Mott Iron Works, The. (See Hooper, Louis M., assignor.)

J. M. Sherwood Manufacturing Corporation. (See Elmore, Charles B., assignor.)

Jackson Cushion Spring Company. (See Venn, John G., assignor.)

Jackson, E. Hilton, *et al.*, trustees. (See Cahill, Thaddeus, assignor.)

Jackson, Forest, Yetter, Iowa. Toothpick-holder. No. 1,212,357; Jan. 16; v. 234; p. 747.

Jackson, Patrick T., Jr. (See Howard, Charles H., assignor.)

Jackson, Thaddeus A., Brooklyn, N. Y. Can-surface presser and evener. No. 1,212,480; Jan. 16; v. 234; p. 792.

Jacobs, William H., Washington, Conn., assignor, by mesne assignments, to Lock-Tite Envelope Corporation, New York, N. Y. Making envelops and the like. No. 1,213,769; Jan. 23; v. 234; p. 1270.

Jacobson, Edward B., assignor to J and B Manufacturing Company, Pittsfield, Mass. Ignition-timer. No. 1,213,495; Jan. 23; v. 234; p. 1178.

Jacoby, Sellmar N. (See Dunner, Julius, assignor.)

Jacocks, George T., Pottstown, Pa. Forging-die. No. 1,213,878; Jan. 30; v. 234; p. 1339.

Jaeger, Christian, assignor to Plastic Art Novelty and Specialty Co., New York, N. Y. Imitation food or other article and making the same. No. 1,212,066; Jan. 9; v. 234; p. 614.

Jagerspacher, Carl, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Orange to red dyestuffs able to be chromated and making same. No. 1,210,808; Jan. 2; v. 234; p. 148.

Jahl, Anton, Linz, Germany. Making pure, highly-concentrated hydrogen peroxid from the peroxid of an alkaline earth. No. 1,210,651; Jan. 2; v. 234; p. 96.

Jahn, Berthold, assignor to The B. Jahn Manufacturing Company, New Britain, Conn. Turn-button. No. 1,213,496; Jan. 23; v. 234; p. 1178.

Jakob, Hans, Ebenhausen, assignor to Selwig & Lange, Brunswick, Germany. Washing device for guncotton and similar products. No. 1,211,450; Jan. 9; v. 234; p. 402.

Jakway, William H., Syracuse, N. Y. Vacuum cleaning apparatus. (Reissue.) No. 14,246; Jan. 9; v. 234; p. 650.

James, John, assignor to The James Manufacturing Company, Fort Atkinson, Wis. Stanchion. No. 1,211,586; Jan. 9; v. 234; p. 448.

James L. Morrison Machine Co. (See Ramsey, Clifford H., assignor.)

James Manufacturing Company, The. (See James, John, assignor.)

Jamieson, Robert, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me. Thread tension for loom-shuttles. No. 1,212,358; Jan. 16; v. 234; p. 747.

Janes, Bert S. (See Luce and Janes.)

Jans, Gottlieb, Walsh, Alberta, Canada. Rail-joint. No. 1,213,497; Jan. 23; v. 234; p. 1178.

Jantzen, Niels, Tacoma, Wash. Boat's rudder. No. 1,211,316; Jan. 2; v. 234; p. 323.

Janvier, Elie J. M., Paris, France. Purification of liquid and solid materials. No. 1,214,166; Jan. 30; v. 234; p. 1437.

Jarl, Emil. (See Robinson, D. Russell, assignor.)

Jeavons, William R., Cleveland, Ohio. Cooking device. No. 1,210,479; Jan. 2; v. 234; p. 35.

Jeavons, William R., and A. R. Whittaker, Cleveland, Ohio. Oven-door support. No. 1,210,480; Jan. 2; v. 234; p. 35.

Jeavons, William R., and A. R. Whittaker, Cleveland, Ohio. Assembling-machine. No. 1,212,227; Jan. 16; v. 234; p. 699.

Jeffery, Benjamin A. (See Jeffery, Joseph A. and B. A.)

Jeffery, Benjamin A., Detroit, Mich. Terminal clip for electric conductors. No. 1,214,470; Jan. 30; v. 234; p. 1541.

Jeffery, Joseph A. and B. A., Newark, N. J. Spark-plug. No. 1,214,471; Jan. 30; v. 234; p. 1541.

Jeffery, Joseph A. and B. A., Detroit, Mich. Manufacturing spark-plugs. No. 1,214,472; Jan. 30; v. 234; p. 1541.

Jeffrey Manufacturing Company, The. (See Bauroth, Walter J., assignor.)

Jeffrey Manufacturing Company, The. (See Waxbom, Carl J. E., assignor.)

Jenner, John H., Leavenworth, Ind. Adjustable wrench. No. 1,214,475; Jan. 30; v. 234; p. 1542.

Jenney, Robert T., Monticello, Iowa. Means for operating driven mechanisms. No. 1,214,039; Jan. 30; v. 234; p. 1396.

Jennings, Charles C. (See Holley and Jennings.)

Jennings, Chester S., assignor to The Lamson Company, Boston, Mass. Monitor system for carrier-despatch apparatus. No. 1,210,481; Jan. 2; v. 234; p. 36.

Jennings, Chester S., assignor to The Lamson Company, Boston, Mass. Monitor system for carrier-despatch apparatus. No. 1,210,482; Jan. 2; v. 234; p. 36.

Jennings, John E., Brooklyn, N. Y. Latticed pole. No. 1,211,160; Jan. 2; v. 234; p. 268.
Jennings, John F., Smithfield, Ill. Emergency-stop for automobiles. No. 1,211,710; Jan. 9; v. 234; p. 489.
Jensen, Aage, San Francisco, Cal. Liquid-treating apparatus. No. 1,213,879; Jan. 30; v. 234; p. 1339.
Jensen, Nels V., Portland, Oreg. Paper-file. No. 1,213,378; Jan. 23; v. 234; p. 1139.
Jersey Cereal Food Company. (See Foster, R. Jay, assignor.)
Jewell Engineering Company. (See Jewell, William M., assignor.)
Jewell, William M., assignor to Jewell Engineering Company, Chicago, Ill. Pressure-filter. No. 1,214,167; Jan. 30; v. 234; p. 1437.
Jewett, Francis H. (See Pilling and Jewett.)
Jikihara, Toshihei, assignor of one-half to N. Ando, Upland, Cal. Wind-power. No. 1,211,161; Jan. 2; v. 234; p. 268.
Jillson, Edward L. and W. R., Jr., Syracuse, assignors to R. C. Colman, New York, N. Y. Headlight. No. 1,214,309; Jan. 30; v. 234; p. 1489.
Jillson, Willard R., Jr. (See Jillson, Edward L. and W. R., Jr.)
Johansen, Johannes C., London, England. Massage apparatus. No. 1,210,809; Jan. 2; v. 234; p. 148.
Johansson, Gustaf W. (See Risberg and Johansson.)
John Church Company, The. (See Leisch, Joseph, assignor.)
John Douglas Company, The. (See Douglas, Charles E., assignor.)
John, Robert, New York, N. Y., assignor, by mesne assignments, to Iconochrome Company of America, Inc. Dark-room lantern. No. 1,212,228; Jan. 16; v. 234; p. 699.
Johns, Anton A., Remer, Minn. Car-door lock. No. 1,213,651; Jan. 23; v. 234; p. 1232.
Johns, Avy V., Forsyth, Mont., assignor of one-half to T. A. Davis, Findlay, Ill. Mechanism for raising and lowering lanterns. No. 1,211,856; Jan. 9; v. 234; p. 543.
Johns-Pratt Company, The. (See Roberts, Edward E., assignor.)
Johnson, Albert E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Insole-blank and preparing it. No. 1,212,490; Jan. 16; v. 234; p. 793.
Johnson, Albert E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating on soles. No. 1,213,770; Jan. 23; v. 234; p. 1271.
Johnson, Albert S., San Diego, Cal. Shock-absorber. No. 1,210,483; Jan. 2; v. 234; p. 37.
Johnson, Allan W., Chicago, and W. S. Tait, Lemont, assignors to American Steel Window Company, Chicago, Ill. Metal sash or window. No. 1,213,498; Jan. 23; v. 234; p. 1179.
Johnson, Andrew, Cripple Creek, Colo. Rail bond or tie. No. 1,211,162; Jan. 2; v. 234; p. 269.
Johnson, Charles E., Denver, Colo. Automatically-operating carbureter. No. 1,212,491; Jan. 16; v. 234; p. 793.
Johnson, Charles E., assignor to The American Hardware Corporation, New Britain, Conn. Lock. No. 1,210,810; Jan. 2; v. 234; p. 146.
Johnson, Chester F., Detroit, Mich. Carbureter. No. 1,213,499; Jan. 23; v. 234; p. 1179.
Johnson, Christian A., assignor of one-fourth to J. Waldele, Laramie, Wyo. Tubular drill. No. 1,213,652; Jan. 23; v. 234; p. 1232.
Johnson, Clause E. (See Jones, Rowe, and Johnson.)
Johnson, Francis T., Chicago, Ill. Washing-machine. No. 1,213,202; Jan. 23; v. 234; p. 1076.
Johnson, Francis T., Chicago, Ill. Clutch and brake mechanism. No. 1,213,203; Jan. 23; v. 234; p. 1076.
Johnson, Henry A., Kansas City, Mo. Paper box. No. 1,211,857; Jan. 9; v. 234; p. 543.
Johnson, James A., Norfolk, Va. Bottle-washing machine. No. 1,210,484; Jan. 2; v. 234; p. 37.
Johnson, J. B. (See Wildey, Arthur T., assignor.)
Johnson, Joseph G., Enstis, Fla. Seed-gatherer. No. 1,212,644; Jan. 16; v. 234; p. 850.
Johnson, Leonard V., and O. H. Benson, St. Michaels, Md. Edible container. No. 1,214,168; Jan. 30; v. 234; p. 1438.
Johnson, Lewis H., Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,210,652; Jan. 2; v. 234; p. 96.
Johnson, Lewis H., Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,210,653; Jan. 2; v. 234; p. 96.
Johnson, Lewis H., Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,212,492; Jan. 16; v. 234; p. 794.
Johnson, Lewis H., Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,212,493; Jan. 16; v. 234; p. 794.
Johnson, Lewis H., Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,212,494; Jan. 16; v. 234; p. 795.
Johnson, Lewis H., Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,212,495; Jan. 16; v. 234; p. 795.
Johnson, Ole S., St. Paul, Minn. Domestic water-heater. No. 1,211,858; Jan. 9; v. 234; p. 543.
Johnson Service Company. (See Fortier, Charles L., assignor.)
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Firearm. No. 1,212,773; Jan. 16; v. 234; p. 895.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Trigger mechanism for shoulder-arms. No. 1,213,204; Jan. 23; v. 234; p. 1077.
Johnson, Victor S., assignor to The Mantle Lamp Company of America, Chicago, Ill. Lamp. No. 1,211,163; Jan. 2; v. 234; p. 269.
Johnson, W. P. (See Newton, George W., assignor.)
Johnston, David A. E., Helena, Ark. Type-writer attachment. No. 1,214,169; Jan. 30; v. 234; p. 1438.
Johnstone, Robert A., Ness City, Kans. Razor-blade holder. No. 1,212,956; Jan. 16; v. 234; p. 957.
Jolliffe, John W. (See Lupton and Jolliffe.)
Jolly, William E., and C. D. Fortier, Rahway, N. J. Color-frame. No. 1,213,053; Jan. 23; v. 234; p. 1232.
Jonas, Julius, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland. Magnetically-controlled mercury-vapor apparatus and the like. No. 1,212,774; Jan. 16; v. 234; p. 896.
Jones, Anthony L., Columbia, S. C. Planter. No. 1,212,067; Jan. 9; v. 234; p. 614.
Jones, Archibald B., San Francisco, Cal. Thermostatic fire-signal. No. 1,213,654; Jan. 23; v. 234; p. 1233.
Jones, Clarence H., assignor of one-half to H. C. Bromley, Seattle, Wash. Casing for piles. No. 1,211,164; Jan. 2; v. 233; p. 269.
Jones, David B. (See Fulton, Charles H., assignor.)
Jones, Ernest B., West Canaan, N. H. Mortising-jig. No. 1,210,942; Jan. 2; v. 234; p. 195.
Jones, Harry, and R. C. Augur, Suffern, N. Y., assignors, by mesne assignments, to The American Brake Shoe & Foundry Company, Wilmington, Del. Composition-filled brake-shoe. No. 1,213,379; Jan. 23; v. 234; p. 1139.
Jones, John A., C. O. Rowe, and C. E. Johnson, Palestine, Tex. Sanitary cigarette-paper receptacle. No. 1,212,068; Jan. 9; v. 234; p. 615.
Jones, John T., Clifton, N. Y. Calculating instrument. No. 1,214,040; Jan. 30; v. 234; p. 1396.
Jones, Marshal E., Sparta, Ill. Convertible agricultural implement. No. 1,214,041; Jan. 30; v. 234; p. 1396.
Jones, Rees J. (See Bearce and Jones.)
Jones, William, New York, N. Y. Apparatus for the production of oxygen and hydrogen gases. No. 1,212,229; Jan. 16; v. 234; p. 700.
Jones, William D., Brooklyn, assignor to Universal Stamping Machine Co., New York, N. Y. Feeding and separating device for mail-marking machines. No. 1,214,474; Jan. 30; v. 234; p. 1542.
Jones, William H., Nelson, Cal. Harrow-evener. No. 1,212,957; Jan. 16; v. 234; p. 957.
Jonish, Florian, Wavy Creek, Saskatchewan, Canada. Sleigh-runner. No. 1,212,496; Jan. 16; v. 234; p. 796.
Jordan, James W., Williamsburg, Ky. Bechive. No. 1,211,587; Jan. 9; v. 234; p. 448.
Jordan, William G. (See Cumming, Albert J., assignor.)
Joret, Léon J. (See Grouvelle, Arquembourg, and Joret.)
Jorgenson, Chris M., Seattle, Wash. Anticreeping device for rails. No. 1,210,943; Jan. 2; v. 234; p. 195.
Josephson, Edgar, assignor to Pantasote Leather Company, Passaic, N. J. Treating celluloid. No. 1,211,588; Jan. 9; v. 234; p. 448.
Josselyn, Stormont, Atlantic, assignor of one-half to S. C. Crocker, Boston, Mass. Fountain-pen. No. 1,214,310; Jan. 30; v. 234; p. 1490.
Joyner, Miles D., Savannah, Ga. Adjustable gib for crossheads. No. 1,212,140; Jan. 9; v. 234; p. 640.
Juergens, Gustav H., assignor to P. C. Murphy Trunk Company, St. Louis, Mo. Trunk-locking mechanism. No. 1,214,042; Jan. 30; v. 234; p. 1397.
Julien, Albert, Copas, Minn. Potato-bug destroyer. No. 1,214,311; Jan. 30; v. 234; p. 1490.
Junius Kayser & Co. (See Seifert, Ernst T., assignor.)
Jungst, Homer V., and H. G. Kennedy, assignors to The Kennedy Wagon Company, Seattle, Wash. Door-fastener. No. 1,211,711; Jan. 9; v. 234; p. 489.
Justrite Manufacturing Company. (See Hansen, Augie L., assignor.)
K. Kaufmann & Co. (See Kaufmann, Ary, assignor.)
K. P. Manufacturing Company, The. (See Knauss, Edward, assignor.)
K. W. Ignition Company, The. (See Williams, Joseph A., assignor.)
Kadel, Byers W., Roanoke county, Va. Railway car and truck construction. No. 1,213,205; Jan. 23; v. 234; p. 1077.
Kadel, Byers W., Roanoke county, Va. Car-truck. No. 1,213,206; Jan. 23; v. 234; p. 1072.
Kadry, Vassaf, Constantinople, Turkey, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,213,880; Jan. 30; v. 234; p. 1340.
Kaech, Ben, Brooklyn, Wis. Mail-bag-delivery apparatus. No. 1,213,106; Jan. 16; v. 234; p. 1009.
Kaeding, Fred A., Kramer, N. D. Button-fastener. No. 1,214,312; Jan. 30; v. 234; p. 1490.

Kain, Harry C. (See Brown and Kain.)
Kaiser, Jacob W., East Cleveland, Ohio. Dispensing-receptacle. No. 1,211,945; Jan. 9; v. 234; p. 575.
Kaiser, John F., Bartlesville, Okla. Sign. No. 1,212,069; Jan. 9; v. 234; p. 615.
Kalbfleisch, Victor R., assignor of one-third to M. G. Griffis, Sault Ste. Marie, Mich. Life-boat hook. No. 1,214,313; Jan. 30; v. 234; p. 1490.
Kallberg, Oscar, Patterson, Cal. Garment-supporter. No. 1,211,589; Jan. 9; v. 234; p. 448.
Kallnbach Automatic Fire Alarm Company, The. (See Kallnbach, Carl A., assignor.)
Kallnbach, Carl A., Detroit, Mich., assignor to The Kallnbach Automatic Fire Alarm Company, Cleveland, Ohio. Alarm system. No. 1,212,958; Jan. 16; v. 234; p. 958.
Kálmán, Alexander, New York, N. Y. Matrix for linotype-machines. No. 1,211,946; Jan. 9; v. 234; p. 576.
Kaltenbach, Jacob, Wilkes-Barre, Pa. Direction-indicator for vehicles. No. 1,212,070; Jan. 9; v. 234; p. 615.
Kamada, Harumichi, and T. Ishizuka, Sacramento, Cal. Animal-feeder. No. 1,214,314; Jan. 30; v. 234; p. 1491.
Kaminetsky, Morris A., Passaic, N. J. Smoke-bell support. No. 1,211,317; Jan. 2; v. 234; p. 323.
Kane, Arthur L., and J. J. O'Neil, Newport, R. I. Toothbrush holder. No. 1,212,645; Jan. 16; v. 234; p. 850.
Kane, John, and F. J. Couch, Monroe, N. Y., assignors to American Laundry Machinery Co., Cincinnati, Ohio. Ironing-machine. No. 1,210,485; Jan. 2; v. 234; p. 38.
Kansas State Agricultural College, The. (See Haslam, Thomas P., assignor.)
Kantor, Jacob, Port Elizabeth, Cape Colony, South Africa. Piano wrest-plank. No. 1,212,775; Jan. 16; v. 234; p. 896.
Kaplan, Arthur, assignor to L. Costabile, Brooklyn, N. Y. Man's shirt-waist. No. 1,210,486; Jan. 2; v. 234; p. 38.
Kaplan, Henry, assignor to Long Manufacturing Company, San Francisco, Cal. Expanding-tool for wheel-rims. No. 1,214,315; Jan. 30; v. 234; p. 1491.
Kaplan, Morris, New York, N. Y. Eyeglasses. No. 1,212,776; Jan. 16; v. 234; p. 896.
Karcher, Otto, Canton, Ohio. Hand-propelled vehicle. No. 1,214,475; Jan. 30; v. 234; p. 1543.
Karpen, Solomon, assignor to S. Karpen & Bros., Chicago, Ill. Couch or sofa. No. 1,213,380; Jan. 23; v. 234; p. 1139.
Karsten, William F. C., Milwaukee, Wis. Rail-joint. No. 1,212,777; Jan. 16; v. 234; p. 896.
Katz, Sidney H., and F. K. Ovitz, Pittsburgh, Pa. Manufacture of formates. No. 1,212,359; Jan. 16; v. 234; p. 747.
Kaufmann, Ary, Newark, N. J., assignor to K. Kaufmann & Co. Pressed-out, raised, or embossed corner-piece for bags. No. 1,211,165; Jan. 2; v. 234; p. 270.
Kaul, Walter H., Humble, Tex. Oil-thief. No. 1,210,487; Jan. 2; v. 234; p. 38.
Kearsley, William K., Newark, N. J., assignor to General Electric Company. Sheathed wire and terminal therefor. No. 1,213,881; Jan. 30; v. 234; p. 1340.
Keating, John B., Oakland, assignor to Byron Jackson Iron Works, West Berkeley, Cal. Liquid-sealing box. No. 1,211,166; Jan. 2; v. 234; p. 270.
Keefe, James E., Chicago, Ill. Dentifrice. No. 1,211,712; Jan. 9; v. 234; p. 489.
Keefer, Philip S. (See Blanchard, Crocker, and Keefer.)
Keeler Automatic Headgate Company. (See Keeler, Karl F., assignor.)
Keeler, John C., Cottonwood, Cal. Scaffold. No. 1,211,318; Jan. 2; v. 234; p. 324.
Keeler, Karl F., assignor to Keeler Automatic Headgate Company, Provo, Utah. Automatic head-gate. No. 1,210,944; Jan. 2; v. 234; p. 196.
Keetle, John H., Ashland, Nebr. Road-grading machine. No. 1,211,167; Jan. 2; v. 234; p. 271.
Keil, Henry F., New York, assignor to Library Bureau, Ilion, N. Y. Drawer-pull. No. 1,210,945; Jan. 2; v. 234; p. 196.
Keil, John M., Boonton, N. J. Greaser. No. 1,213,655; Jan. 23; v. 234; p. 1233.
Keith, Frederick R., Randolph, Mass. Insole. No. 1,211,168; Jan. 2; v. 234; p. 271.
Keith, George, assignor of one-half to J. Keith, London, England. Gas-burner. No. 1,210,654; Jan. 2; v. 234; p. 97.
Keith, James. (See Keith, George, assignor.)
Kelzur, Marcus L., Baker, Oreg. Vehicle-fender. No. 1,212,497; Jan. 16; v. 234; p. 796.
Keller, Abraham I. (See Goldenberg and Keller.)
Keller, Andreas R., Chicago, Ill. Mash and strainer tank machine. No. 1,213,381; Jan. 23; v. 234; p. 1139.
Keller, Charles C., Cleveland, Ohio. Lavatory. No. 1,213,207; Jan. 23; v. 234; p. 1078.
Keller, George M. (See Applebaugh and Keller.)
Keller, Louis A. (See Phillips and Keller.)
Kelley, John R., Covington, Ky. Kassette. No. 1,213,208; Jan. 23; v. 234; p. 1078.
Kellogg Switchboard & Supply Company. (See Dunbar, Francis W., assignor.)
Kellogg Switchboard & Supply Company. (See Dyson, Alfred H., assignor.)
Kells, Charles E., New Orleans, La. Rotary compressor. No. 1,211,169; Jan. 2; v. 234; p. 271.
Kelly, Andrew W., and J. Hornyak, Philadelphia, Pa. Slide-rule. No. 1,210,488; Jan. 2; v. 234; p. 39.
Kelly, Emmett J. (See Cook and Kelly.)
Kelly Filter Press Company. (See Genter, Albert L., assignor.)
Kelly, William J., Reading, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Making shoes. No. 1,214,316; Jan. 30; v. 234; p. 1491.
Kelly, William J., Reading, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,214,317; Jan. 30; v. 234; p. 1492.
Kelsay, Le Roy W., assignor of one-half to J. L. Grindle, New York, N. Y. Device for developing roll-films. No. 1,212,498; Jan. 16; v. 234; p. 796.
Kelso, William, assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling-centering mechanism. No. 1,214,318; Jan. 30; v. 234; p. 1492.
Kelson, Charles H., *et al.* (See Bergren, John A., assignor.)
Kemon, Frank P., Atlantic City, N. J. Form for concrete construction. No. 1,212,499; Jan. 16; v. 234; p. 797.
Kemp, Clarence M., *et al.* (See Hersey, Arthur J., assignor.)
Kendall, William G., Newark, N. J. Spout for receptacles. No. 1,213,500; Jan. 23; v. 234; p. 1179.
Kendall, William G., Newark, N. J. Rouge-pad. No. 1,213,501; Jan. 23; v. 234; p. 1180.
Kennedy, Arthur M., Philadelphia, Pa. Fender for motor-vehicles. No. 1,212,071; Jan. 9; v. 234; p. 616.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,212,500; Jan. 16; v. 234; p. 797.
Kennedy, George D., Sonora, Cal. Combination pliers and wire-splicer. No. 1,212,501; Jan. 16; v. 234; p. 798.
Kennedy, Harry G. (See Jungst and Kennedy.)
Kennedy, James J., Brooklyn, N. Y. Toy. No. 1,211,590; Jan. 9; v. 234; p. 449.
Kennedy, John T., Soldier City, Kans. Nut-lock. No. 1,212,361; Jan. 16; v. 234; p. 748.
Kennedy, Louis S., Sandy Ridge, Pa. Arch for locomotive-boiler furnaces. No. 1,213,107; Jan. 16; v. 234; p. 1010.
Kennedy, Rayburn F., College Corner, Ohio. Tallying device. No. 1,211,170; Jan. 2; v. 234; p. 272.
Kennedy Wagon Company, The. (See Jungst and Kennedy, assignors.)
Kennedy, Walter J., and G. Yelle, Indian Orchard, Mass. Monument. No. 1,214,319; Jan. 30; v. 234; p. 1493.
Kenney, William J., Wilmette, assignor to Under-Feed Stoker Company of America, Chicago, Ill. Underfeed stoker. No. 1,211,592; Jan. 9; v. 234; p. 450.
Kenney, William J., Wilmette, and H. P. Grohn, assignors to Underfeed Stoker Company of America, Chicago, Ill. Automatic stoking apparatus. No. 1,211,591; Jan. 9; v. 234; p. 449.
Kenstowicz, Waclaw, Chicago, Ill. Rotary brush. No. 1,212,360; Jan. 16; v. 234; p. 748.
Kent, Burton M., Sayre, Pa., assignor of one-half to E. M. Ragan, Binghamton, N. Y. Locking device. No. 1,211,451; Jan. 9; v. 234; p. 402.
Kent, Horace L., Brooklyn, N. Y. Golf-club. No. 1,213,382; Jan. 23; v. 234; p. 1140.
Keppel, Jesse E., assignor to Vulcan Valve Company, St. Louis, Mo. Valve. No. 1,212,362; Jan. 16; v. 234; p. 748.
Kern, Cecil H. (See Shaw, Frank E., assignor.)
Kern, Conrad, Zurich, Switzerland. Dressing-hammer. No. 1,212,502; Jan. 16; v. 234; p. 798.
Kern, Edward N., Portsmouth, Ohio. Liquid-fuel-dispensing apparatus. No. 1,210,811; Jan. 2; v. 234; p. 149.
Kern, Edward N., Portsmouth, Ohio. Liquid-fuel-dispensing apparatus. No. 1,210,812; Jan. 2; v. 234; p. 149.
Kershner, Francis E., Henry, W. Va. Spoon-holder. No. 1,211,171; Jan. 2; v. 234; p. 272.
Kersteter, Charles W., Milwaukee, Wis. Alarm for wet-pipe automatic fire-extinguishing systems. No. 1,211,452; Jan. 9; v. 234; p. 402.
Ketcham, Louis B., Binghamton, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Needle-guard for sewing-machines. No. 1,212,778; Jan. 16; v. 234; p. 897.
Ketchum, Frank B., *et al.* (See Wise, Joseph C., assignor.)
Kettel, Charles, assignor of one-fourth to J. A. Skillman, St. Louis, Mo. Hot-water boiler. No. 1,211,172; Jan. 2; v. 234; p. 272.
Kettell, Seneca, North Scituate, R. I. Plate and pan lifter. No. 1,213,882; Jan. 30; v. 234; p. 1340.
Kettering, Charles F., and W. A. Chryst, Dayton, Ohio, assignors to The Dayton Engineering Laboratories Co. System of selective electrical distribution. No. 1,211,878; Jan. 2; v. 234; p. 341.
Keuffel & Esser Company. (See Sparkes, John G., assignor.)
Keyes, Eugene L., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Device for bending the tacks of lasted shoes. No. 1,210,655; Jan. 2; v. 234; p. 97.
Keynton, Howard, West Hoboken, N. J. Valve for radiators or the like. No. 1,213,108; Jan. 16; v. 234; p. 1010.
Keystone Leather Company. (See Hofmann and Christy, assignors.)
Kiefer, Karl, Cincinnati, Ohio. Filtering apparatus. No. 1,211,947; Jan. 9; v. 234; p. 576.
Kiel Manufacturing Company. (See Kiel, Peter P., assignor.)

Kiel, Peter P., assignor to Kiel Manufacturing Company, Albert Lea, Minn. Wringer-bracket. No. 1,211,593; Jan. 9; v. 234; p. 450.

Kieselguhr Company of America. (See Krieger, Arthur H., assignor.)

Kiessig, Harry R., Berkeley, Cal. Firearm-cleaning-rod tip. No. 1,213,383; Jan. 23; v. 234; p. 1140.

Kiewicz, John, assignor to The Reece Button Hole Machine Company, Boston, Mass. Sewing-machine. No. 1,214,170; Jan. 30; v. 234; p. 1438.

Kihlgren, Theodor, assignor, by mesne assignments, to National Equipment Company, Springfield, Mass. Stringing device for making confections. No. 1,210,946; Jan. 2; v. 234; p. 196.

Kilburn, Charles, Cincinnati, Ohio. Stone-tool. No. 1,214,320; Jan. 30; v. 234; p. 1493.

Kilby, Herbert N., Cleveland, Ohio. Filter. No. 1,211,859; Jan. 9; v. 234; p. 544.

Kildow, George W., Yates Center, Kans. Corn-header. No. 1,212,502; Jan. 23; v. 234; p. 1180.

Killian, Laurence J., Boston, Mass. Automobile signaling device. No. 1,212,863; Jan. 16; v. 234; p. 748.

Kilroy, Thomas, Bayonne, N. J. Apparatus for concentrating sulfuric acid. No. 1,211,594; Jan. 9; v. 234; p. 450.

Kilstrom, Axel, Providence, R. I. Shoe-buckle. No. 1,213,109; Jan. 16; v. 234; p. 1011.

Kimber, Walter E., Harlsden, London, England. Hammer rock-drill. No. 1,212,141; Jan. 9; v. 234; p. 640.

Kimmerlé, George E. (See Washburne and Kimmerlé.)

Kimmey, Alfred, Brooklyn, and J. D. Cael, Elmhurst, N. Y. Spigot-valve. No. 1,211,595; Jan. 9; v. 234; p. 451.

Kindt, Arthur H., Myerstown, Pa. Planter. No. 1,211,596; Jan. 9; v. 234; p. 451.

Kinetic Electric Company. (See Becker, Edmund H., assignor.)

King, Am Dee, New Albany, Ind. Collapsible drum. No. 1,214,171; Jan. 30; v. 234; p. 1438.

King, Cyril W., Oswego, N. Y. Electric-light fixture. No. 1,213,384; Jan. 23; v. 234; p. 1140.

King & Hamilton Company. (See Gilman, John H. and A. E., assignors.)

King, Henry C., Washington, Kans. Supporting device for automobiles. No. 1,212,646; Jan. 16; v. 234; p. 850.

King, Jay A. (See Dalbey, Joel B., assignor.)

King, Joseph. (See King, Solomon and J.)

King, Otto S., New York, N. Y. Safety-fuse coupling for gas-tank valves. No. 1,211,173; Jan. 2; v. 234; p. 273.

King, Solomon and J., Tazewell county, Ill. Valve structure for steam-engines. No. 1,212,959; Jan. 16; v. 234; p. 958.

King, Willard E., Topeka, Kans. Pneumatic tire. No. 1,214,321; Jan. 30; v. 234; p. 1493.

King, William F., Clinton, and J. S. Whitlock, Laurens, assignors of three-fourths to Clinton Cam Company, Clinton, S. C. Bobbin-stand for loom-magazines. No. 1,210,489; Jan. 2; v. 234; p. 39.

Kingsbury, Jacob S., assignor to Kingsbury-Leahy Company, Albany, N. Y. Traction device for vehicle-wheels. No. 1,211,453; Jan. 9; v. 234; p. 493.

Kingsbury-Leahy Company. (See Kingsbury, Jacob S., assignor.)

Kinnard, Luella S., Chicago, Ill. Rug. No. 1,213,656; Jan. 23; v. 234; p. 1233.

Kinnear Manufacturing Company, The. (See Rosenberg, Ralph H., assignor.)

Kinnebrew, Lee, *et al.* (See Bradley, Richard C., assignor.)

Kinney, Frank E., Jericho, Vt. Device for use in crocheting and other work. No. 1,214,172; Jan. 30; v. 234; p. 1439.

Kinosian, Harry J., Worcester, Mass. Attachment for planers. No. 1,211,174; Jan. 2; v. 234; p. 273.

Kinsley, William S. (See Palmer and Kinsley.)

Kintner, Samuel M., Pittsburgh, Pa. Apparatus for coding and decoding. No. 1,210,656; Jan. 2; v. 234; p. 97.

Kins, Emil B., Oak Park, and E. C. Wescott, Sacramento, assignors to Pacific Gas and Electric Company, San Francisco, Cal. Revivifying and utilizing spent oxid. No. 1,211,713; Jan. 9; v. 234; p. 490.

Kinzel, Edward, Albany, N. Y. Implement. No. 1,211,175; Jan. 2; v. 234; p. 273.

Kipniss, Abraham, and M. P. Neumann, New York, N. Y. Machine for making bobbins for electric batteries. No. 1,211,176; Jan. 2; v. 234; p. 274.

Kirbach, Robert, and V. Uber, Linden, N. J. Carbureter. No. 1,211,714; Jan. 9; v. 234; p. 490.

Kirby, Charles H., assignor to Detroit Lubricator Company, Detroit, Mich. Carbureter. No. 1,213,209; Jan. 23; v. 234; p. 1079.

Kirby, John, Pittsburgh, Pa. Welding a protective covering of copper to an iron or steel body. No. 1,211,715; Jan. 9; v. 234; p. 490.

Kirby, John, Jr., assignor to The Dayton Manufacturing Company, Dayton, Ohio. Antirattling device. No. 1,211,860; Jan. 9; v. 234; p. 544.

Kirby, Thomas L., Hartsville, Tenn. Engine attachment. No. 1,214,322; Jan. 30; v. 234; p. 1494.

Kirsch, Charles W., assignor to Kirsch Manufacturing Co., Sturgis, Mich. Curtain-rod. No. 1,210,947; Jan. 2; v. 234; p. 197.

Kirsch, Frank J. (See Debbeler and Kirsch.)

Kirsch Manufacturing Co. (See Kirsch, Charles W., assignor.)

Kirstin, Alfred J., assignor to A. J. Kirstin Company, Escanaba, Mich. Slack-take-up mechanism. No. 1,210,657; Jan. 2; v. 234; p. 98.

Kislovitz, Samuel, New York, N. Y., assignor to C. A. Blades, Arlington, N. J. Paper box. No. 1,213,135; Jan. 16; v. 234; p. 1018.

Kissinger, Clarence L., assignor of one-half to F. A. De Witt, Pierson, Iowa. Clevis. No. 1,210,814; Jan. 2; v. 234; p. 150.

Kitchen, Frederick T., West New Brighton, assignor to Gold Car Heating & Lighting Company, New York, N. Y. Controller for heating systems. No. 1,214,323; Jan. 30; v. 234; p. 1494.

Kitchen, John F., assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,212,960; Jan. 16; v. 234; p. 958.

Kitchen, John F., assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,212,961; Jan. 16; v. 234; p. 959.

Kitsee, Isidor, assignor to Dye Products Company of the United States, Philadelphia, Pa. Purifying logwood dyes. No. 1,210,948; Jan. 2; v. 234; p. 197.

Kitsee, Isidor, Philadelphia, Pa., assignor to The Coit-Kitsee Co. Synchronous phonograph and kinetograph. No. 1,213,883; Jan. 30; v. 234; p. 1341.

Kittle, John A., St. Louis, Mo. Automobile-stabilizer. No. 1,210,490; Jan. 2; v. 234; p. 39.

Klaeger, Hermann, assignor to Fortuna-Werke, Spezialmaschinenfabrik, Gesellschaft Mit Beschränkter Haftung, Cannstatt-Stuttgart, Germany. Working enameled leather and the like with skiving or splitting machines. No. 1,214,173; Jan. 30; v. 234; p. 1439.

Klahn, Emil, Hoboken, N. J. Ball-bearing roller. No. 1,212,503; Jan. 16; v. 234; p. 798.

Klask, Hermann, Batesburg, S. C. Lock. No. 1,211,177; Jan. 2; v. 234; p. 274.

Klauber, Laurence M., and R. C. Cavell; said Cavell assignor to San Diego Consolidated Gas and Electric Co., San Diego, Cal. Current-distributing apparatus. No. 1,213,211; Jan. 23; v. 234; p. 1079.

Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,210,658; Jan. 2; v. 234; p. 98.

Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,210,659; Jan. 2; v. 234; p. 99.

Kleinstück, Martin, Dresden, Germany. Artificially seasoning wood. No. 1,210,491; Jan. 2; v. 234; p. 39.

Klier, William R., Newton, Ill. Belt guide and shifter. No. 1,211,716; Jan. 9; v. 234; p. 490.

Kline, Frederick H., Los Angeles, Cal. Collar. No. 1,211,319; Jan. 2; v. 234; p. 324.

Klocke, William, assignor to E. W. Bliss Company, Brooklyn, N. Y. Drawing-press. No. 1,212,230; Jan. 16; v. 234; p. 700.

Klocksiem, Louis H., Paton, Iowa. Resilient tire. No. 1,214,174; Jan. 30; v. 234; p. 1439.

Klotz, Charles H., Washington, D. C., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Hose-coupling for cars. No. 1,213,110; Jan. 16; v. 234; p. 1011.

Klousnitzer, Frank, *et al.* (See Smolik, Mathias, assignor.)

Kløver-Byggryn-Fabrikken. (See Gerl-Holmen, Niels, assignor.)

Knaack, Gustav J., and C. J. Marquardt, Princeton, Wis. Heating-drum. No. 1,213,212; Jan. 23; v. 234; p. 1079.

Knaack, Gustav J., and C. J. Marquardt, Princeton, Wis. Window-screen. No. 1,213,213; Jan. 23; v. 234; p. 1080.

Knapp, Ada B. (See Knapp, Edward B., assignor.)

Knapp, Edward B., assignor to A. B. Knapp, San Jacinto, Cal. Harness-hook. No. 1,211,320; Jan. 2; v. 234; p. 324.

Knauss, Edward, Mount Vernon, assignor to The K. P. Manufacturing Company, Inc., New York, N. Y. Carbureter. No. 1,212,505; Jan. 16; v. 234; p. 799.

Knauss, Edward, Mount Vernon, assignor to The K. P. Manufacturing Company, Inc., New York, N. Y. Shock-absorber for motor-vehicles. No. 1,212,506; Jan. 16; v. 234; p. 799.

Knieriem, Arthur J., Scribner, and G. H. Hilbers, Hooper, Nebr. Shiftable tractor draw-bar. No. 1,213,385; Jan. 23; v. 234; p. 1141.

Knight, Julian G., New York, N. Y., assignor to J. Gordon Knight Electric Company, Inc. Outlet-box. No. 1,210,492; Jan. 2; v. 234; p. 40.

Knight, Richard G. H., Providence, and G. R. Quimby, Central Falls, R. I. Spindle-adjusting device. No. 1,213,657; Jan. 23; v. 234; p. 1233.

Knight, Sherwood S., Berkeley, Cal. Making steel and iron. No. 1,213,806; Jan. 23; v. 234; p. 1284.

Knothe, Emeline. (See Knothe, Emil M., assignor.)

Knothe, Emil M., assignor to E. Knothe, Seattle, Wash. Car-fender. No. 1,214,175; Jan. 30; v. 234; p. 1439.

Knowles, Camden E., and L. D. Cornelius, Pittsburg, Kans. System for firing explosives in mines. No. 1,212,072; Jan. 9; v. 234; p. 616.

Knowles, Eli H., Malone, Fla. Emergency draft appliance for automobiles. No. 1,212,647; Jan. 16; v. 234; p. 851.

Knowles, George R., deceased, New York, N. Y.; H. A. Knowles, executrix. Ventilating device. No. 1,213,884; Jan. 30; v. 234; p. 1341.

Knowles, Hattie A., executrix. (See Knowles, George R.)

Knox, William J., assignor, by mesne assignments, to General Research Laboratories, New York, N. Y. Medicinal compound. No. 1,210,949; Jan. 2; v. 234; p. 198.

Knutson, Alfred W., assignor to Rowe Manufacturing Co., Galesburg, Ill. Cattle-alining device. No. 1,214,176; Jan. 30; v. 234; p. 1440.

Knutson, Alfred W., assignor to Rowe Manufacturing Co., Galesburg, Ill. Track-hanger. No. 1,214,177; Jan. 30; v. 234; p. 1440.

Knutson, Alfred W., assignor to Rowe Manufacturing Co., Galesburg, Ill. Cattle-alining device. No. 1,214,178; Jan. 30; v. 234; p. 1441.

Kny Scheerer Corporation, The. (See Liptay, John M., assignor.)

Koch, Nicholas, *et al.* (See Lohse, Wilhelm R., assignor.)

Koepp & Co., Rudolph. (See Eyer, Philipp, assignor.)

Kohler, John B., Chicago, Ill., assignor to The Kohler-Liebich Company, Wilmington, Del. Percussion musical instrument. No. 1,210,950; Jan. 2; v. 234; p. 198.

Kohler-Liebich Company, The. (See Kohler, John B., assignor.)

Kohlhepp, John W., assignor to The Allbright Mill Company, Chicago, Ill. Carcass scalding, dehairing, and polishing machine. No. 1,210,951; Jan. 2; v. 234; p. 198.

Kohman, Henry A., Pittsburgh, Pa., C. Hoffman, New York, N. Y., and T. M. Godfrey, Pittsburgh, Pa. Mineral water for use in the manufacture of leavened bread. No. 1,213,210; Jan. 23; v. 234; p. 1079.

Kols, Jacob A., Cleveland, Ohio. Sterilizer. No. 1,214,179; Jan. 30; v. 234; p. 1441.

Kondratieff, Dmitrie S., Wilmington, Del., assignor of one-half to B. Edelhertz, New York, N. Y. Making smokeless powders. No. 1,212,770; Jan. 16 v. 234; p. 895.

Koontz, Augustus O. (See Koontz, Charles L., assignor.)

Koontz, Charles L., assignor of one-half to A. O. Koontz, South Bend, Ind. Gas-burner. No. 1,213,885; Jan. 30; v. 234; p. 1342.

Koontz, Victor R., Waynesboro, Pa. Automatic pipe-cutting machine. No. 1,212,507; Jan. 16; v. 234; p. 800.

Koontz, Victor R., Waynesboro, Pa. Die-head. No. 1,212,508; Jan. 16; v. 234; p. 800.

Koopmann, Kittie M., Waldwick, N. J. Cooking-pot cover. No. 1,210,813; Jan. 2; v. 234; p. 149.

Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,212,963; Jan. 16; v. 234; p. 960.

Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,213,658; Jan. 23; v. 234; p. 1234.

Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,214,180; Jan. 30; v. 234; p. 1441.

Korber, Hermann. (See Condé, Max, assignor.)

Koser, Chester A., Lake Wilson, Minn. Horseshoe. No. 1,211,454; Jan. 9; v. 234; p. 403.

Kosmin, Vasily, New York, N. Y. Shoe-shining machine. No. 1,211,717; Jan. 9; v. 234; p. 490.

Koster, George F., White Plains, and H. D. MacIntyre, Brooklyn, N. Y. Scrubbing-machine. No. 1,211,948; Jan. 9; v. 234; p. 577.

Kotter, Theodore F., R. V. Colton, New York, and S. H. Schwerin, Brooklyn, assignors to Vernart Manufacturing Corporation, New York, N. Y. Ornamenting surfaces. No. 1,211,455; Jan. 9; v. 234; p. 403.

Kozik, Frank J., Easthampton, Mass. Automatic flushing device. No. 1,213,886; Jan. 30; v. 234; p. 1342.

Kozlowski, Wladyslaw, Warsaw, Russia. Automatic stop-motion for yarn-spinning machines. No. 1,211,178; Jan. 2; v. 234; p. 275.

Kraemer, Emil. (See Schuler and Kraemer.)

Kraetsch, Paul H., Astoria, Oreg. Post-card tray. No. 1,211,179; Jan. 2; v. 234; p. 275.

Kraft, Frederick, Highwood Park, N. J. Brake for phonographs. No. 1,214,181; Jan. 30; v. 234; p. 1441.

Kraft, Henry P. (See Schweinert and Kraft.)

Krake, Lewis W., Bonduel, Wis. Track-gage. No. 1,211,180; Jan. 2; v. 234; p. 275.

Kramer, Benjamin G., assignor to Kramer Vacuum Brake Company, Anderson, Ind. Valve construction. No. 1,213,111; Jan. 16; v. 234; p. 1012.

Kramer, Joseph, New York, N. Y. Clothes-drier. No. 1,214,182; Jan. 30; v. 234; p. 1442.

Kramer Vacuum Brake Company. (See Kramer, Benjamin G., assignor.)

Kratz, Franz, assignor to Firm of R. Bosch, Stuttgart, Germany. Electrical connecting device. No. 1,214,183; Jan. 30; v. 234; p. 1442.

Kratz, Oscar A., Hillsdale, Oreg. Tatting-shuttle. No. 1,213,214; Jan. 23; v. 234; p. 1080.

Krause, August E., Phillipsburg, Kans. Friction-clutch for pulleys. No. 1,210,660; Jan. 2; v. 234; p. 99.

Krause, Georg A., Munich, Germany. Method of and apparatus for vaporizing, concentrating, or drying solutions. No. 1,213,659; Jan. 23; v. 234; p. 1234.

Krause, Georg A., Munich, Germany. Vaporizing or concentrating liquids, solutions, emulsions, suspensions, and like substances. No. 1,213,887; Jan. 30; v. 234; p. 1342.

Krauss, Constantin, Cologne-Braunsfeld, and P. Stühelin, Knapsack, near Cologne, Germany. Apparatus for the production of nitrogen compounds. No. 1,211,181; Jan. 2; v. 234; p. 276.

Krauss, Constantin, Cologne-Braunsfeld, and P. Staehelin, Knapsack, near Cologne, Germany. Preparing nitrogen compounds. No. 1,212,504; Jan. 16; v. 234; p. 799.

Kraut, Henry, Summit, N. J. Non-refillable bottle. No. 1,214,324; Jan. 30; v. 234; p. 1495.

Krauth, Albert; Hamilton, Ohio. Manifolding device. No. 1,212,509; Jan. 16; v. 234; p. 801.

Kravitz, Max, Philadelphia, Pa. Gas-burner. No. 1,212,510; Jan. 16; v. 234; p. 801.

Krebs, Charles H., assignor to Byerburn Heater Company, Milwaukee, Wis. Car-heater. No. 1,213,503; Jan. 23; v. 234; p. 1181.

Krementz, Frank J., assignor to Frank Krementz Company, Newark, N. J. Pivoted bridge-spring for eye-glasses. No. 1,214,184; Jan. 30; v. 234; p. 1443.

Kress, Willitts A., Coffeyville, Kans. Auto device. No. 1,211,597; Jan. 9; v. 234; p. 451.

Krieger, Arthur H., assignor to Kieselguhr Company of America, Los Angeles, Cal. Composition for purifying liquids. No. 1,212,648; Jan. 16; v. 234; p. 851.

Krieger, Arthur H., assignor to Kieselguhr Co. of America, Los Angeles, Cal. Kieselguhr filler and preparing it. No. 1,214,185; Jan. 30; v. 234; p. 1443.

Krikorian, Mardiros A., New York, N. Y. Rotary engine. No. 1,212,649; Jan. 16; v. 234; p. 851.

Krippendorf Kalculator Company. (See Krippendorf, Paul F. W. C., assignor.)

Krippendorf, Paul F. W. C., Lynn, Mass., assignor to Krippendorf Kalculator Company, Portland, Me. Calculating apparatus. No. 1,212,231; Jan. 16; v. 234; p. 701.

Kropp, August, Bryan, Tex. Key-ring holder. No. 1,212,511; Jan. 16; v. 234; p. 801.

Krueger, Theodore H., New York, N. Y. Gummed sticker or label. No. 1,210,952; Jan. 2; v. 234; p. 199.

Krueger, William F., Chicago, Ill. Dovetail-locked veneer. No. 1,212,073; Jan. 9; v. 234; p. 616.

Kruger, Anton, Crafton, Pa. Folding crib or cradle. No. 1,212,512; Jan. 16; v. 234; p. 802.

Kruse, Edward H., Fort Wayne, Ind. Mounting-strip for switch-boxes. No. 1,211,182; Jan. 2; v. 234; p. 276.

Kuehner, Charles P., Providence, R. I. Tube-clamp. No. 1,211,718; Jan. 9; v. 234; p. 491.

Kuehner, Charles P., Providence, R. I. Tube-clamp. No. 1,213,504; Jan. 23; v. 234; p. 1181.

Kuess, Roman, Chickasaw, Ohio. Corn-planter. No. 1,213,112; Jan. 16; v. 234; p. 1012.

Kuhlthau, William. (See Hadfield and Kuhlthau.)

Kuhn, Preston, Hammond, Oreg. Train-stopping system. No. 1,213,660; Jan. 23; v. 234; p. 1234.

Kuhn, Robert, Detroit, Mich. Soldering-iron. No. 1,214,186; Jan. 30; v. 234; p. 1443.

Kuhns, Elijah F., Columbus, Kans. Nut-lock. No. 1,212,074; Jan. 9; v. 234; p. 616.

Kuhns, James H., Tulsa, Okla. Swivel-socket for oil and gas well drills. No. 1,212,962; Jan. 16; v. 234; p. 959.

Kulenkampff, Carl A., Brooklyn, N. Y. Lathe attachment. No. 1,211,183; Jan. 2; v. 234; p. 276.

Kuperman, David, New York, N. Y. Hinged spring-wire mattress. No. 1,214,187; Jan. 30; v. 234; p. 1444.

Kuprel, Stanislaus, Bridgeport, Conn. Automatic apparatus for cleaning tobacco-smoking pipes. No. 1,213,215; Jan. 23; v. 234; p. 1080.

Kuss, Rudolph R., Boise, Idaho. Adjustable cushioning means for lever-actuated mechanism. No. 1,214,325; Jan. 30; v. 234; p. 1495.

Kusterlee, Frank, assignor to The Simmons Manufacturing Company, Kenosha, Wis. Metal joint. No. 1,214,043; Jan. 30; v. 234; p. 1397.

Kyle, E. Bryan. (See Street, Fred, assignor.)

L. B. Skinner Manufacturing Co. (See Skinner, Lee B., assignor.)

L. S. Starrett Company, The. (See Starrett, Laroy S., assignor.)

La Croix, Cicero H., Bannister, Tex. Wagon. No. 1,212,232; Jan. 16; v. 234; p. 701.

La Fleleo, John, Pittsburg, Kans., assignor of two-fifths to J. A. Polley, Nowata, Okla. Railway-gate operator. No. 1,211,321; Jan. 2; v. 234; p. 324.

Lacerda, Harry A., Schenectady, N. Y. Fender and tail light system. No. 1,213,505; Jan. 23; v. 234; p. 1181.

Lacey, Ernest G., South Melbourne, Victoria, Australia. Scroll-cutting machine. No. 1,211,456; Jan. 9; v. 234; p. 403.

Lachman, Maurice, assignor to Universal Electric Welding Company, New York, N. Y. Metal panel-work. No. 1,210,953; Jan. 2; v. 234; p. 199.

Ladd, Ernest C., *et al.* (See Thornton, Charles W., assignor.)

Lagergren, Jonas T., Toronto, Ontario, Canada. Water-purifier for ice-making. No. 1,211,184; Jan. 2; v. 234; p. 277.

Lake, Cora H., Chicago, Ill. Method of and apparatus for testing corsets. No. 1,211,598; Jan. 9; v. 234; p. 451.

Lalor, James D., Philadelphia, Pa. Automatic drain-valve. No. 1,211,599; Jan. 9; v. 234; p. 452.

Lamarre, Albert J., Pawtucket, R. I. Track-gage. No. 1,212,075; Jan. 9; v. 234; p. 617.

Lamb, Joseph F., and H. Fagan, assignors to Landers, Frary & Clark, New Britain, Conn. Making table-knives and product thereof. No. 1,212,969; Jan. 16; v. 234; p. 962.

Lamberson, William H., Schenectady, N. Y. Shade and curtain fixture. No. 1,211,719; Jan. 9; v. 234; p. 491.

Lambert, G. A. (See Flick, William S., assignor.)

Lamont, John A., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Auxiliary spring for car-trucks. No. 1,210,493; Jan. 2; v. 234; p. 40.

Lamothe, Jean G., New York, N. Y. Suspender connection. No. 1,213,386; Jan. 23; v. 234; p. 1141.

Lamson Company, The. (See Jennings, Chester S., assignor.)

Lamson Company, The. (See Powell, Frank D., assignor.)

Lanchester, Frederick W., Edgbaston, Birmingham, England. Tooth-form for worm-gear. No. 1,210,494; Jan. 2; v. 234; p. 40.

Landers, Frary & Clark. (See Griffin, John B., assignor.)

Landers, Frary & Clark. (See Lamb and Fagan, assignors.)

Landis Machine Company. (See Goellner, Joseph J., assignor.)

Landreth, Harry, assignor of five-eighths to F. M. Lutschg, one-sixteenth to H. B. Badgley, one-sixteenth to O. J. Dyckman, one-sixteenth to W. G. Dyckman, one-sixteenth to S. D. McKelvey, one-sixteenth to A. T. Hammerschmidt, and one-sixteenth to H. E. Dyckman, Fullerton, Cal. Automatic train-stopping device. No. 1,211,720; Jan. 9; v. 234; p. 491.

Landsberg, Ludwig, Nuremberg, Germany. Manufacture of asphalt-like masses and derivatives therefrom. No. 1,211,721; Jan. 9; v. 234; p. 492.

Landwehr, August H., assignor to Holland Furnace Company, Holland, Mich. Automatic damper. No. 1,211,600; Jan. 9; v. 234; p. 452.

Lane, Franklin L., assignor to P. B. Yates Machine Company, Beloit, Wis. Matcher-head. No. 1,213,888; Jan. 30; v. 234; p. 1342.

Lang, Victor A., North Fort Worth, Tex. Gage-cock. No. 1,214,326; Jan. 30; v. 234; p. 1495.

Langdon, Martin B., Pardeeville, Wis. Flash-light switch. No. 1,211,322; Jan. 2; v. 234; p. 325.

Lange, Berthold A., Webster Groves, Mo. Crate. No. 1,210,954; Jan. 2; v. 234; p. 199.

Lange, John, Jr., assignor of one-third to C. J. Fredrickson and one-third to A. F. Swan, Des Moines, Iowa. Toilet. No. 1,213,118; Jan. 16; v. 234; p. 1012.

Langerman, Richard A., Louisville, Ky. Ammunition-pocket for hunting-coats and the like. No. 1,212,513; Jan. 16; v. 234; p. 802.

Langford, George, Joliet, Ill., assignor to American McKenna Process Company, Milwaukee, Wis. Treatment of worn steel rails. No. 1,212,364; Jan. 16; v. 234; p. 749.

Langford, George, Joliet, Ill., assignor to American McKenna Process Company, Milwaukee, Wis. Treatment of worn steel rails. No. 1,212,365; Jan. 16; v. 234; p. 750.

Langford, George, Joliet, Ill., assignor to American McKenna Process Company, Milwaukee, Wis. Steel rail for railways or the like. No. 1,212,964; Jan. 16; v. 234; p. 960.

Langheck, Gustavus F., Chicago, Ill. Advertising device. No. 1,210,955; Jan. 2; v. 234; p. 200.

Langley, Kate M. (See Mendal, Henry L., assignor.)

Langslow Fowler Company. (See Thum, Martin, assignor.)

Langton, George H., assignor of one-half to J. W. Small, Portsmouth, Va. Locomotive-journal-box mounting. No. 1,213,506; Jan. 23; v. 234; p. 1182.

Langston, Samuel M., Wenonah, assignor to Samuel M. Langston Company, Camden, N. J. Sheet feeding and stacking mechanism. No. 1,214,188; Jan. 30; v. 234; p. 1444.

Lannoye, Joseph G., Detroit, Mich. Toothpick-holder. No. 1,214,327; Jan. 30; v. 234; p. 1496.

Lapierre, Frederick E., Cardiff, Alberta, Canada. Automatic train-stopping apparatus. No. 1,214,328; Jan. 30; v. 234; p. 1496.

Laroche, Olivier, assignor to Canadian Knitting Company, Limited, Hamilton, Ontario, Canada. Stop-motion for knitting-machines. No. 1,212,367; Jan. 16; v. 234; p. 750.

Larsen, Albert T., *et al.* (See Aze, Emile, assignor.)

Larson, Andrew, Oakland, Cal. Cutter-head. No. 1,211,323; Jan. 2; v. 234; p. 325.

Larson, Lawrence, Milford, Iowa. Wagon-jack. No. 1,211,601; Jan. 9; v. 234; p. 453.

Lasche, Oskar, Charlottenburg, Germany, assignor to General Electric Company. Starting mechanism for multi-cylinder internal-combustion engines. No. 1,212,779; Jan. 16; v. 234; p. 897.

Lathorp, George W., St. Paul, and H. F. Abels, Mahtomedi, Minn. Guard. No. 1,212,514; Jan. 16; v. 234; p. 802.

Laumeister, Anton, San Francisco, Cal. Separator. No. 1,214,189; Jan. 30; v. 234; p. 1444.

Lausterer, William J., Jamestown, N. Y., assignor, by mesne assignments, to Automatic Registering Machine Corporation. Party-lever lockout for voting-machines. No. 1,210,495; Jan. 2; v. 234; p. 41.

Lautenschlager, William F., Cincinnati, Ohio, assignor to L. Muther, Newton, Mass. Skiving-machine. No. 1,210,815; Jan. 2; v. 234; p. 150.

Lauter, Philip. (See Gruber and Lauter.)

Lauterbach, Christopher, Baltimore, Md. Vapor, steam, and hot-water generator. No. 1,211,722; Jan. 9; v. 234; p. 492.

Lawaczeck, Frans, Halle-on-the-Saale, Germany. Turbine pump or compressor. No. 1,213,880; Jan. 30; v. 234; p. 1343.

Lawrence, Edward E., Cambridge, Mass., assignor to Loose-Wiles Biscuit Company, Kansas City, Mo. Producing continuous sheets of dough for biscuits or like products. No. 1,210,496; Jan. 2; v. 234; p. 41.

Lawrence, James, assignor to S. G. Ranger, New York, N. Y. Electric heater. No. 1,213,507; Jan. 23; v. 234; p. 1182.

Lawrence, Louis C., Brooklyn, N. Y. Artificial limb. No. 1,213,114; Jan. 16; v. 234; p. 1013.

Laycock, Arthur M., Kingston, Pa. Differential-gear lock. No. 1,210,497; Jan. 2; v. 234; p. 41.

Layne, Mahlon E., Houston, Tex. Pumping mechanism. No. 1,211,457; Jan. 9; v. 234; p. 404.

Lazarus, Simon, Louisville, Ky. Non-refillable bottle. No. 1,214,329; Jan. 30; v. 234; p. 1496.

Lazzure, Settamo. (See Nicholls and Lazzure.)

Lea, Charles, Boston, Mass., assignor to American Warp Drawing Machine Company. Machine for threading tuft-yarns. No. 1,213,216; Jan. 23; v. 234; p. 1080.

Lea, William C., and J. C. George, Los Angeles, Cal. Sash-operating device. No. 1,213,508; Jan. 23; v. 234; p. 1182.

Leader Evaporator Company, The. (See Burt, William E., assignor.)

Leach, Charles D. (See Weaner, Edgar C., assignor.)

Leach, Horace J., Mount Carmel, Ill. Reel. No. 1,214,190; Jan. 30; v. 234; p. 1444.

Leach, John P., Chicago, Ill. Phonograph turn-table. No. 1,214,191; Jan. 30; v. 234; p. 1445.

Lear, Thomas B., Washington, D. C. Stamping-tool or punch. No. 1,210,956; Jan. 2; v. 234; p. 200.

Leary, Charles M. (See Bartholomew and Leary.)

Leathem, James, Lebanon, Pa., assignor to Hermann Aukam & Co., New York, N. Y. Cloth-cutting machine. No. 1,211,185; Jan. 2; v. 234; p. 277.

Leathers, Fred. (See Crockett, Samuel C., assignor.)

Leavens, Philip J., Bridgeton, N. J. Making aluminum rules. No. 1,211,458; Jan. 9; v. 234; p. 404.

Leavitt, Elgin A., Los Angeles, Cal. Check-book. No. 1,211,324; Jan. 2; v. 234; p. 325.

Leavitt, Sheldon, Chicago, Ill. Pillow. No. 1,212,515; Jan. 16; v. 234; p. 803.

Ledbetter, Shufford C., Edneyville, N. C. Clevis for road-scrapers. No. 1,214,330; Jan. 30; v. 234; p. 1496.

Lederer, Irving R., Providence, R. I. Separable link-button. No. 1,214,044; Jan. 30; v. 234; p. 1397.

Lee, Albert P., Chicago, Ill. Movable loading-hopper. No. 1,212,368; Jan. 16; v. 234; p. 751.

Lee, Charles A., Oneida, N. Y. Adjustable friction-hinge. No. 1,211,186; Jan. 2; v. 234; p. 278.

Lee, T. L. (See Lewis, James W., assignor.)

Lee, Thomas L., assignor to North East Electric Company, Rochester, N. Y. Fastening device. No. 1,213,509; Jan. 23; v. 234; p. 1183.

Lee, Ulysses G., Chicago, Ill., assignor to Montague Mailing Machine Co. Printing apparatus with multiple ilster. No. 1,211,459; Jan. 9; v. 234; p. 405.

Leeds, Hosmer W., Chicago, Ill. Ventilator. No. 1,211,602; Jan. 9; v. 234; p. 453.

Lefebvre, Omer F., *et al.* (See Valiquet, Ephrem F., assignor.)

Lefévre, Armand L. F., St.-Denis, France. Draft-regulating device for chain grates. No. 1,213,661; Jan. 23; v. 234; p. 1235.

Léger, Zoël M., Moncton, New Brunswick, Canada. Eyeglasses and spectacles. No. 1,210,498; Jan. 2; v. 234; p. 42.

Leisch, Joseph, Tryon, N. C., assignor to The John Church Company, Cincinnati, Ohio. Player-piano. No. 1,212,369; Jan. 16; v. 234; p. 751.

Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Bowl-casing drain for cream-separators. No. 1,212,370; Jan. 16; v. 234; p. 751.

Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Bearing for centrifugal cream-separators. No. 1,212,371; Jan. 16; v. 234; p. 752.

Lemons, Vallie D., Pontotoc, Miss. Quilting-frame. No. 1,212,516; Jan. 16; v. 234; p. 803.

Lemp, Hermann, and H. W. Stock, Erie, Pa., assignors to General Electric Company. Engine-piston. No. 1,212,517; Jan. 16; v. 234; p. 803.

Lemp, Thomas H., and H. M. Cobb, Bagdad, Fla. Log-chain dog. No. 1,212,076; Jan. 9; v. 234; p. 617.

Lenmar Manufacturing Company. (See Marx and Holden, assignors.)

Lenn, David M., and A. Boomershine, assignors to Mercantile Corporation, Dayton, Ohio. Paper-controlling device. No. 1,213,771; Jan. 23; v. 234; p. 1271.

Lennox, Talbot, Marshalltown, Iowa. Device for applying liquid insecticides to animals. No. 1,211,187; Jan. 2; v. 234; p. 278.

Leonard, Chester S., and C. O. Reeps, assignors to The Willey Company, Incorporated, Philadelphia, Pa. Means for controlling an actuating-rod. No. 1,212,965; Jan. 16; v. 234; p. 961.

Leonard, Edward B. (See Abigt and Leonard.)

Leonard, Ethan A., Aurora, Ill. Trolley-harp. No. 1,213,890; Jan. 30; v. 234; p. 1344.

Leonard, George A., Sheffield, Iowa. Building construction. No. 1,211,725; Jan. 9; v. 234; p. 493.

Leonard, Harry A., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Building-motion for spinning or winding machines. No. 1,212,650; Jan. 16; v. 234; p. 852.

Leopold, George O., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa. Clutch mechanism for power-machines. No. 1,212,966; Jan. 16; v. 234; p. 961.

Leov, George C., Oakland, assignor to American Automatic Press Company, San Francisco, Cal. Sheet-delivery mechanism for printing-presses. No. 1,211,726; Jan. 9; v. 234; p. 494.

Lepper, John G. (See Meyer and Lepper.)

Lerass, Anton A., Spokane, Wash. Detergent for cleaning and polishing purposes. No. 1,211,188; Jan. 2; v. 234; p. 279.

Lerio, Louis, Mobile, Ala. Turpentine-cup. No. 1,211,189; Jan. 2; v. 234; p. 279.

Leschziner, Siegfried, Newark, N. J. Air and gas mixer. No. 1,212,233; Jan. 16; v. 234; p. 701.

Lesser, Gebrüder. (See Lippitz, Wilhelm, assignor.)

Lester, John E., Tacoma, Wash. Hydraulic ram. No. 1,214,192; Jan. 30; v. 234; p. 1445.

Letrich, Joseph, El Centro, Cal. Seed-planter. No. 1,211,603; Jan. 9; v. 234; p. 453.

Lettich, John M. (See Gable, Benjamin F., assignor.)

Leu, Frederick, Long Island City, assignor to M. Calm, Brooklyn, N. Y. Nut-cracking machine. No. 1,213,510; Jan. 23; v. 234; p. 1183.

Leveugle, Leon, Roubaix, France. Apparatus for supplementing the carding and burring of the silver in double-carding machines. No. 1,211,190; Jan. 2; v. 234; p. 279.

Levey, Simon E., Union Hill, N. J. Ventilator. No. 1,211,191; Jan. 2; v. 234; p. 279.

Levis, John H., Jr., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Telephone system. No. 1,210,499; Jan. 2; v. 234; p. 42.

Levy, Fortunato, Paris, France, assignor to General Carbonic Co., Brooklyn, N. Y. Apparatus for spraying or atomizing liquids or liquid compositions such as paints. No. 1,210,500; Jan. 2; v. 234; p. 42.

Levy and Marcus. (See Marcus, Aaron, assignor.)

Levy Max, Philadelphia, Pa. Hæmocytometer. No. 1,214,331; Jan. 30; v. 234; p. 1497.

Lewi, William G., Albany, N. Y. Speed-controlling apparatus for motor-vehicles. No. 1,212,153; Jan. 9; v. 234; p. 644.

Lewis, George W., assignor to Grinnell Washing Machine Company, Grinnell, Iowa. Gearing device. No. 1,211,723; Jan. 9; v. 234; p. 492.

Lewis, Henry. (See Givens and Lewis.)

Lewis, James W., assignor of one-fourth to T. L. Lee, Boley, Okla. Life-preserver. No. 1,212,077; Jan. 9; v. 234; p. 617.

Lewis, Ralph A., assignor of one-third to W. Strait and one-third to W. N. Scales, Grangeville, Idaho. Trap. No. 1,213,387; Jan. 23; v. 234; p. 1141.

Lewis, Reed M., Aliquippa, Pa. Railway signaling system. No. 1,210,816; Jan. 2; v. 234; p. 150.

Lewis, Reed M., Allquippa, Pa. Internal-combustion engine. No. 1,211,604; Jan. 9; v. 234; p. 453.

Lewis, Thomas A. (See Van Zile and Lewis.)

Lewy, Elisa, New York, N. Y. Corsage-bouquet holder. No. 1,210,957; Jan. 2; v. 234; p. 200.

Liberman, Bernard, Philadelphia, Pa. Cigar-wrapper moistener and container. No. 1,214,194; Jan. 30; v. 234; p. 1446.

Liberman, Bernard, and J. C. Wobensmith, Philadelphia, Pa.; said Wobensmith assignor to said Liberman. Cigar-bunching machine. No. 1,214,193; Jan. 30; v. 234; p. 1446.

Library Bureau. (See Kell, Henry F., assignor.)

Liddle, John, *et al.* (See McIntosh, John C., assignor.)

Lieber, Hugo, New York, N. Y. Plastic composition and making the same. No. 1,213,115; Jan. 16; v. 234; p. 1013.

Liebknecht, Otto, and A. Schaidhauf, Frankfort-on-the-Main, Germany, assignors to Roessler and Hasslacher Chemical Company, New York, N. Y. Stable hydrogen peroxid and making the same. No. 1,213,921; Jan. 30; v. 234; p. 1354.

Liebzeit, Henry G., Sheboygan Falls, Wis. Oil-supply system for burners. No. 1,212,078; Jan. 9; v. 234; p. 618.

Light, Samuel, and W. Eichelberger, Pierce, W. Va. Self-moistening and self-soaping brush. No. 1,212,967; Jan. 16; v. 234; p. 962.

Lightburne, Alvan W., Liberty, Mo. Convertible end-gate for wagons. No. 1,214,045; Jan. 30; v. 234; p. 1397.

Lightfoot Cotton Harvester Company. (See Lightfoot, Exta, assignor.)

Lightfoot, Exta, Fort Worth, Tex., assignor to Lightfoot Cotton Harvester Company, Chicago, Ill. Cotton-harvesting machine. No. 1,210,958; Jan. 2; v. 234; p. 201.

Lilly, Owen, Memphis, Tenn. Drying room and apparatus. No. 1,211,325; Jan. 2; v. 234; p. 325.

Lindholm, Jens S., Brooklyn, N. Y. Sidewalk-elevator door. No. 1,210,817; Jan. 2; v. 234; p. 151.

Lindholm, Jens S., Brooklyn, N. Y. Sidewalk-elevator. No. 1,212,518; Jan. 16; v. 234; p. 803.

Lindhorst, George H. W., Bellingham, Wash. Automobile-truck. No. 1,212,780; Jan. 16; v. 234; p. 898.

Lindner, Theodore. (See Baruch, Lindner, and Goldsmith.)

Lindquist, Anton A., Garfield township, Clay county, Kans. Grave-vault. No. 1,212,519; Jan. 16; v. 234; p. 804.

Lindquist, Otto B., Tarentum, assignor to H. E. Sheldon, Pittsburgh, Pa. Corrugating apparatus. No. 1,211,460; Jan. 9; v. 234; p. 405.

Lindström, Knut I., Djursholm, assignor to Aktiebolaget Mjölkningsmaskin Omega, Flen, Sweden. Milk-vessel for milking-machines working with vacuum. No. 1,210,818; Jan. 2; v. 234; p. 151.

Linthicum, Henri C., Durham, N. C. Seat-cover. No. 1,213,511; Jan. 23; v. 234; p. 1183.

Linton, William J., Jersey City, N. J. Boiler. No. 1,214,195; Jan. 30; v. 234; p. 1446.

Lion, John C., St. Marys, Pa. Thermostatic regulator. No. 1,212,234; Jan. 16; v. 234; p. 702.

Lippitz, Wilhelm, assignor to Gebrüder Lesser, Posen, Germany. Potato-planter. No. 1,211,861; Jan. 9; v. 234; p. 545.

Liptay, John M., Van Nest, assignor to The Kny Scheerer Corporation, New York, N. Y. Fastener for sterilizer-doors. No. 1,212,372; Jan. 16; v. 234; p. 752.

Lister, William, Nelson, England. Tension apparatus for yarn-winding frames and the like. No. 1,211,862; Jan. 9; v. 234; p. 545.

Little, Alexander, Pittsburgh, Pa. Lamp shade or globe holder. No. 1,211,724; Jan. 9; v. 234; p. 493.

Little, William G., Shoreham, England. Carbureter. No. 1,214,332; Jan. 30; v. 234; p. 1497.

Littlejohn, Frank P., Fresno, Cal. Stone-setting. No. 1,214,333; Jan. 30; v. 234; p. 1497.

Lively, Orin P., Portsmouth, Va. Telescopic mast. No. 1,212,968; Jan. 16; v. 234; p. 962.

Llewellyn, Thomas W., and J. J. Doyle, assignors, by mesne assignments, to National Chemical Company, Syracuse, N. Y. Collar molding and finishing machine. No. 1,214,196; Jan. 30; v. 234; p. 1447.

Lloyd, Melvin M., Des Moines, Iowa. Packing-ring. No. 1,213,217; Jan. 23; v. 234; p. 1081.

Lloyd, Robert M., New York, N. Y., assignor, by mesne assignments, to General Vehicle Company, Inc. Freight-truck. No. 1,211,949; Jan. 9; v. 234; p. 577.

Lobdell, Edward J., Onaway, Mich. Combined saw and jointer. No. 1,213,512; Jan. 23; v. 234; p. 1184.

Lock-Tite Envelope Corporation, The. (See Jacobs, William H., assignor.)

Lockwood, Burns D., Bellevue, assignor to Pressed Steel Car Company, Pittsburgh, Pa. Railway-tie. No. 1,211,727; Jan. 9; v. 234; p. 494.

Lockwood, Burns D., Bellevue, assignor to Pressed Steel Car Company, Pittsburgh, Pa. Car construction. No. 1,212,235; Jan. 16; v. 234; p. 702.

Lockwood, Burns D., Bellevue, assignor to Pressed Steel Car Company, Pittsburgh, Pa. Car-truck. No. 1,212,236; Jan. 16; v. 234; p. 702.

"Locomobile" Company of America, The. (See Riker, Andrew L., assignor.)

Locomobile Company of America, The. (See Walter, Henry C., assignor.)

Locomotive Superheater Company. (See Oatley and McKee, assignors.)

Loebel, George E., West Allis, Wis. Adjustable window-scaffold. No. 1,210,819; Jan. 2; v. 234; p. 151.

Loftus, John P., Vancouver, British Columbia, Canada. Advertising device. No. 1,213,888; Jan. 23; v. 234; p. 1141.

Logan, William C., Loudsville, Ga. Tire-protector. No. 1,211,192; Jan. 2; v. 234; p. 279.

Logsdon, Frank W., Colfax, Iowa. Spread-roller. No. 1,212,520; Jan. 16; v. 234; p. 804.

Lohmann, Hugo. (See Voigtländer and Lohmann.)

Lohse, Einar W. (See Thomas, Willis H., assignor.)

Lohse, Wilhelm R., assignor of one-third to N. Koch, Milwaukee, and two-thirds to G. H. Crowns, Port Washington, Wis. Butterfly-valve. No. 1,213,513; Jan. 23; v. 234; p. 1184.

Londelius, Christian A., Jr., assignor to C. A. Londelius & Sons Co., Chicago, Ill. Builder's portable hot-water heater. No. 1,211,728; Jan. 9; v. 234; p. 494.

Londress, George, and L. Rogers, Clarksburg, W. Va. Zinc-furnace. No. 1,213,922; Jan. 30; v. 234; p. 1354.

Long, Fred R., Catawissa, Pa. Forging-machine for making hollow bodies. No. 1,211,193; Jan. 2; v. 234; p. 280.

Long, John R., Orrville, assignor of one-fourth to J. C. Gibson, Akron, Ohio. Shellac-jar. No. 1,211,461; Jan. 9; v. 234; p. 405.

Long Manufacturing Company. (See Kaplan, Henry, assignor.)

Longbrake, Russell H., Del Sur, Cal. Railway-crossing gate. No. 1,211,194; Jan. 2; v. 234; p. 280.

Longley, Lester A., Little Falls, Minn. Headlight for automobiles. No. 1,210,504; Jan. 2; v. 234; p. 44.

Longstreet, Alice G., Duluth, Minn. Ironing-board. No. 1,214,334; Jan. 30; v. 234; p. 1497.

Lonson, Albert, Callaway, Minn. Coin-box. No. 1,212,521; Jan. 16; v. 234; p. 804.

Lonson, Albert, Callaway, Minn. Coin-box. No. 1,212,522; Jan. 16; v. 234; p. 805.

Loomer, Henry M., Beverly, Mass. Threading die and holder. No. 1,212,970; Jan. 16; v. 234; p. 963.

Loomer, Henry M., Beverly, Mass. Threading-die and holder. No. 1,212,971; Jan. 16; v. 234; p. 863.
Looram, Matthew M., New York, N. Y. Receptacle. No. 1,213,116; Jan. 16; v. 234; p. 1013.
Loose-Wiles Biscuit Company. (See Lawrence, Edward E., assignor.)
Lorenz, William A. (See Anderson, Nils H., assignor.)
Lorenzen, Edward B., Sandusky, and H. M. Artz, Mansfield, Ohio. Valve. No. 1,211,195; Jan. 2; v. 234; p. 281.
Lorenzen, Frederick G., Battle Creek, Mich. Food product consisting of globules of starchy material and preparing the same. No. 1,211,462; Jan. 9; v. 234; p. 406.
Lossau, Louis von, Saarbrücken, Germany. Liquid-measurer. No. 1,211,794; Jan. 9; v. 234; p. 519.
Lough, Hector V., Plainfield, N. J. Internal-combustion engine. No. 1,211,950; Jan. 9; v. 234; p. 577.
Lough, Hector V., North Plainfield, N. J. Bedstead corner-bracket. No. 1,213,218; Jan. 23; v. 234; p. 1081.
Loughead, Oscar L., Racine, Wis. Vacuum feed device. No. 1,213,117; Jan. 16; v. 234; p. 1014.
Lounsberry, Rowe F., assignor to Mid-Continent Machinery Company, Sheridan, Wyo. Amalgamator. No. 1,211,729; Jan. 9; v. 234; p. 495.
Love, George H., Pueblo, Colo. Tooth-brush. No. 1,212,373; Jan. 16; v. 234; p. 753.
Lovejoy, Frank W., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic film. No. 1,213,514; Jan. 23; v. 234; p. 1185.
Lovin, Frank J., Mahnomen, Minn. Article-holder. No. 1,211,463; Jan. 9; v. 234; p. 406.
Lower, William W., Tyrone, Pa. Pressure indicator and valve. No. 1,213,515; Jan. 23; v. 234; p. 1185.
Lowes Manufacturing Co. (See Sherman, Charles W., assignor.)
Loxterman, Howard B., Pittsburgh, assignor to Blaw Steel Construction Company, Hoboken, Pa. Tunnel-mold form. No. 1,212,523; Jan. 16; v. 234; p. 805.
Lucas, Alzamon I., Seattle, Wash. Collapsible baby-bed. No. 1,211,730; Jan. 9; v. 234; p. 495.
Lucas, Charles T., Cimarron, Kans. Apron. No. 1,212,524; Jan. 16; v. 234; p. 805.
Luce, Byron P. (See Scherr and Luce.)
Luce, Daniel H., and B. S. Janes, Harbor Creek township, Erie county, Pa. Gathering and cutting device. No. 1,212,972; Jan. 16; v. 234; p. 964.
Luce, Moses, Ellington, near Sinclairville, N. Y. Vehicle-brake. No. 1,212,781; Jan. 16; v. 234; p. 898.
Lucore, George F., Arriba, Colo. Conveyer-belt. No. 1,212,651; Jan. 16; v. 234; p. 852.
Ludlow Typograph Company. (See Reade and Metcalf, assignors.)
Luellen, Lawrence W., Newton, Mass. Vending-machine. No. 1,210,501; Jan. 2; v. 234; p. 43.
Luer, Herman, Alton, Ill. Washing-machine. No. 1,210,959; Jan. 2; v. 234; p. 201.
Lukacs, Ludwig, Budapest, Austria-Hungary. Manufacture of artificial-stone plates. No. 1,210,820; Jan. 2; v. 234; p. 151.
Lumb, George F., Harrisburg, Pa. Burglar-alarm. No. 1,213,389; Jan. 23; v. 234; p. 1142.
Lundberg, Endfred, Toronto, Ontario, Canada, assignor of one-half to Otto Higel Company, Inc., Buffalo, and one-half to G. P. Brand, New York, N. Y. Dust-remover for tracking devices. No. 1,212,652; Jan. 16; v. 234; p. 853.
Lundblad, Sven, Seward, Alaska. Combination-bed. No. 1,211,106; Jan. 2; v. 234; p. 281.
Lundell, Alben E. (See Reeves and Lundell.)
Lundell, Alben E., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Point-finder system. No. 1,210,505; Jan. 2; v. 234; p. 44.
Lundholm, Joseph G., Miller, Kans. Automatic air cut-off. No. 1,211,731; Jan. 9; v. 234; p. 496.
Lunkenheimer Company, The. (See Ritter, Henry, assignor.)
Lupton, James M. (See Lupton and Jolliffe.)
Lupton, William T. and J. M., Martinsburg, W. Va., and J. W. Jolliffe, Clear Brook, Va. Vehicle-tire. No. 1,212,973; Jan. 16; v. 234; p. 964.
Lutschg, Fred M., *et al.* (See Landreth, Harry, assignor.)
Lutton, William H., Jersey City, N. J. Greenhouse. No. 1,210,502; Jan. 2; v. 234; p. 43.
Luttrell, Paul S., assignor to Reminder Clock Co., Oakland, Cal. Timing device. No. 1,213,516; Jan. 23; v. 234; p. 1185.
Lutwyche, Edgar J., Chicago, Ill. Combined door-bell and burglar-alarm. No. 1,211,732; Jan. 9; v. 234; p. 496.
Lux, Leopold M., Minneapolis, Minn. Artificial leg. No. 1,213,923; Jan. 30; v. 234; p. 1355.
Lynch, George, London, England. Protective and non-penetrative covering and the like. No. 1,213,118; Jan. 16; v. 234; p. 1014.
Lynch, Harry P., and W. Meck, Wilkes-Barre, Pa. Hat stretcher and steamer. No. 1,214,335; Jan. 30; v. 234; p. 1498.
Lynch, John, Harrisburg, Pa. Starching-machine. No. 1,211,197; Jan. 2; v. 234; p. 281.
Lynch, Thomas F., assignor to National Adhesive Company, Inc., Lynn, Mass. Pasting-machine. No. 1,211,951; Jan. 9; v. 234; p. 578.
Lynch, William J., *et al.* (See Gingras, Joseph N., assignor.)
Lynham, William C., assignor of one-eighth to M. L. Anderson, Richmond, Va. Window-sash fastener. No. 1,214,476; Jan. 30; v. 234; p. 1543.
Lynn, John H., Coplay, Pa. Antislipping tire. No. 1,213,663; Jan. 23; v. 234; p. 1236.
Lyon Metallic Manufacturing Company. (See O'Connor, John B., assignor.)
Lysen, Daniel G., Grand Rapids, Mich. Railway-signal. No. 1,210,503; Jan. 2; v. 234; p. 44.
M. Welte & Sons. (See Welte, Carl M., assignor.)
M. E. Smith and Company. (See Roney, William B., assignor.)
M. H. Treadwell Company. (See Astrom, Carl P., assignor.)
MaLoney, Mato F., Atlantic Beach, Fla. Hat-holder. No. 1,213,392; Jan. 23; v. 234; p. 1143.
MacDonald, William T., Somerville, Mass. Piston-rod packing. No. 1,211,205; Jan. 2; v. 234; p. 284.
MacEwen, Benjamin J., Canutillo, Tex. Windmill. No. 1,214,340; Jan. 30; v. 234; p. 1499.
MacHarg, Carlyle. (See Blood, Burr B., assignor.)
MacIntyre, Hector D. (See Koster and MacIntyre.)
MacLagan, Hector P. (See Hogan and MacLagan.)
MacMurchy, John A., Wilkinsburg, Pa., assignor to The Westinghouse Machine Company. Elastic-fluid turbine. No. 1,212,975; Jan. 16; v. 234; p. 965.
Macbeth-Evans Glass Company. (See Macbeth, George A., assignor.)
Macbeth, George A., deceased; G. D. Macbeth, executor, assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa. Glass. No. 1,214,202; Jan. 30; v. 234; p. 1449.
Macbeth, George D., executor. (See Macbeth, George A.)
Mace, John J., and J. R. Murr, York, Pa. Electroplating and lacquering apparatus. No. 1,210,663; Jan. 2; v. 234; p. 100.
Machamer, Isaac A., Wiconisco, assignor of one-half to A., A., and R. Budd, Williamstown, Pa. Safety mine-car brake. No. 1,214,341; Jan. 30; v. 234; p. 1499.
Macomb, Lester M., Payette, Idaho. Brake-shoe clamp. No. 1,214,342; Jan. 30; v. 234; p. 1500.
Madden, Charles F., Green Bay, Wis. Plumbing structure. No. 1,213,226; Jan. 23; v. 234; p. 1084.
Madden, Timothy E., Eden Valley, Minn. Wire-clamp. No. 1,213,669; Jan. 23; v. 234; p. 1238.
Madison, Charles C., Scandia, Kans. Attachment for traction-wheels. No. 1,211,200; Jan. 2; v. 234; p. 284.
Maes, Michael, Jr., Cincinnati, Ohio. Adjustable window-shade bracket. No. 1,212,080; Jan. 9; v. 234; p. 618.
Magee, Gustave H., New Orleans, La. Egg-holder. No. 1,212,976; Jan. 16; v. 234; p. 965.
Magidson, Frank, Brownsville, assignor of one-half to J. Davis, Uniontown, Pa. Spring-motor escapement. No. 1,212,786; Jan. 16; v. 234; p. 899.
Magidson, Frank, Brownsville, assignor of one-half to J. Davis, Uniontown, Pa. Spring-motor mechanism. No. 1,212,787; Jan. 16; v. 234; p. 900.
Magidson, Frank, Brownsville, assignor of one-half to J. Davis, Uniontown, Pa. Spring-motor. No. 1,212,788; Jan. 16; v. 234; p. 900.
Magidson, Frank, Brownsville, assignor of one-half to J. Davis, Uniontown, Pa. Escapement for spring-motors. No. 1,212,789; Jan. 16; v. 234; p. 901.
Magie, William E., Evansville, Ind., and W. Ferris, Milwaukee, Wis. Hydraulic transmission device. No. 1,212,655; Jan. 16; v. 234; p. 854.
Magné, Jean H. P., Mexico, Mexico. Pure-culture apparatus for yeast, mucorini, molds, bacilli, &c. No. 1,212,656; Jan. 16; v. 234; p. 854.
Magni, Umberto, Los Angeles, Cal. Radiator unit. No. 1,214,203; Jan. 30; v. 234; p. 1449.
Magnus, Gustaf W., and J. O'Banion, Seattle, Wash. Life-saving suit. No. 1,214,478; Jan. 30; v. 234; p. 1544.
Magnuson, Claus E., Hoopeston, Ill. Sand-band for vehicle-wheels. No. 1,212,081; Jan. 9; v. 234; p. 619.
Magoun, Cornelius B., administratrix. (See Waite and Hedin.)
Magrath, Henry J., Poplar, London, England. Treatment of water for softening, sterilizing, and like purposes. No. 1,211,785; Jan. 9; v. 234; p. 497.
Maguire, Alfred T. (See Blundell, Mills, and Maguire.)
Maguire, Peter J., Hutchinson, Kans. Stuffing or packing bearing-box. No. 1,213,926; Jan. 30; v. 234; p. 1356.
Mahlow, William H. (See Endebrock and Mahlow.)
Mahon, James, Ravena, N. Y. Reinforced center frame for boiler-grates. No. 1,213,521; Jan. 23; v. 234; p. 1187.
Mahone, Edwin W., Marshall, Tex. Harness-collar. No. 1,211,207; Jan. 2; v. 234; p. 285.
Mahoney, John J., San Francisco, and W. L. Norris, Berkeley, assignors to California Pipe Line Machine Co., San Francisco, Cal. Pipe-laying machine. No. 1,210,823; Jan. 2; v. 234; p. 152.
Mahoney, John J., San Francisco, and W. L. Norris, Berkeley, assignors to California Pipe Line Machine Co., San Francisco, Cal. Pipe-laying machine. No. 1,210,824; Jan. 2; v. 234; p. 153.
Mahoney, John J., San Francisco, and W. L. Norris, Berkeley, assignors to California Pipe Line Machine Co., San Francisco, Cal. Pipe-screwing machine. No. 1,210,825; Jan. 2; v. 234; p. 153.
Maisch, August T., Brooklyn, N. Y. Game apparatus. No. 1,211,379; Jan. 2; v. 234; p. 342.
Malacove, James M., Tacoma, Wash. Agricultural implement. No. 1,212,377; Jan. 16; v. 234; p. 754.

Malinovszky, Andrew, assignor to H. H. Randolph, Chicago, Ill. Molding-machine. No. 1,210,664; Jan. 2; v. 234; p. 100.
Malleable Iron Fittings Company. (See Pickop, George B., assignor.)
Mallen, Henry T., Chillicothe, Ill. Whip-lock. No. 1,212,977; Jan. 16; v. 234; p. 966.
Malone, Joseph E., Bristol, Va. Pulp saving and washing machine. No. 1,212,978; Jan. 16; v. 234; p. 966.
Malone, Levi D., and H. E. Hubbs, assignors to The Shelby Spring Hinge Company, Shelby, Ohio. Closure-retaining device. No. 1,211,470; Jan. 9; v. 234; p. 408.
Maltby, Clinton H. (See Hopkinson and Maltby.)
Manderscheid, Thomas R., Terrebonne, Oreg. Rake. No. 1,212,790; Jan. 16; v. 234; p. 901.
Manger, Joseph. (See Prussner, Nash, and Manger.)
Manges, Duff G., Tellico Plains, Tenn. Sheave-block. No. 1,213,670; Jan. 23; v. 234; p. 1238.
Manhard, Alonzo, assignor to The Cleveland Electric and Machine Manufacturing Company, Cleveland, Ohio. Handle. No. 1,213,227; Jan. 23; v. 234; p. 1085.
Mankin, Charles A., assignor to J. F. Walton, Sturgis, Mich. Adjusting mechanism. No. 1,211,608; Jan. 9; v. 234; p. 455.
Manly, Charles M., Brooklyn, N. Y. Variable-capacity pump. No. 1,212,791; Jan. 16; v. 234; p. 901.
Mann, Colin, Boothbay Harbor, Me. Receptacle-supporting faucet attachment. No. 1,212,979; Jan. 16; v. 234; p. 966.
Mann, Frederick W., and M. L. Chappell, Berkeley, assignors to Standard Oil Company, Richmond, Cal. Production of aromatic bodies and gas from petroleum-oils. No. 1,214,204; Jan. 30; v. 234; p. 1450.
Mann, Ira A., Pittsburgh, Pa. Water-closet. No. 1,211,471; Jan. 9; v. 234; p. 408.
Manning, Charles C., Minneapolis, Minn. Dental mounting. No. 1,212,532; Jan. 16; v. 234; p. 808.
Manning, Rodney W., Riverside, R. I. Tappet for valves. No. 1,212,980; Jan. 16; v. 234; p. 967.
Mansey, Louis. (See Ordway, Fred L., assignor.)
Mansfield, Harry A., Monroe, Nebr. Railway-spike holder. No. 1,211,609; Jan. 9; v. 234; p. 456.
Manson, Ray H., assignor to The Garford Manufacturing Company, Elyria, Ohio. Automobile or motor-cycle horn. No. 1,211,208; Jan. 2; v. 234; p. 285.
Mantel, Florian J., assignor to Crouse-Hinds Company, Syracuse, N. Y. Hinge construction. No. 1,212,792; Jan. 16; v. 234; p. 902.
Mantle Lamp Company of America, The. (See Johnson, Victor S., assignor.)
Manzel Brothers Company. (See Manzel, Charles W., assignor.)
Manzel, Charles W., assignor to Manzel Brothers Company, Buffalo, N. Y. Air-pump. No. 1,213,522; Jan. 23; v. 234; p. 1188.
Manzella, Ernest V., Chicago, Ill. Electrically-heated sad-iron. No. 1,212,082; Jan. 9; v. 234; p. 619.
Mapel, Elliott B., trustee. (See Blumenberg, Henry, assignor.)
Marburg Brothers *et al.* (See Geisslinger, Johann, assignor.)
Marcelli, Anthony, New York, N. Y. Trousers-protector. No. 1,211,472; Jan. 9; v. 234; p. 409.
Marcello, James, Greenwich, Conn. Directional signal. No. 1,211,330; Jan. 2; v. 234; p. 327.
March, Fred C., Warren, Ohio, assignor to General Electric Company. Packing for incandescent-lamp bulbs and the like. No. 1,212,793; Jan. 16; v. 234; p. 902.
Marcille, Flora L., Thorold, Ontario, Canada. Egg-separator. No. 1,213,120; Jan. 16; v. 234; p. 1014.
Marcus, Aaron, Brooklyn, assignor to Levy and Marcus, New York, N. Y. Necktie. No. 1,212,237; Jan. 16; v. 234; p. 703.
Mariner, Joseph A., St. Louis, Mo. Collar-holder. No. 1,214,205; Jan. 30; v. 234; p. 1450.
Marinka, Eugene, Detroit, Mich. Automobile guard and fender. No. 1,214,049; Jan. 30; v. 234; p. 1399.
Maris, Anna P., *et al.* (See Maris, Frank and C. E., assignors.)
Maris, Charles E. (See Maris, Frank and C. E.)
Maris, Elizabeth P., *et al.* (See Maris, Frank and C. E., assignors.)
Maris, Frank and C. E., assignors to A. P. and E. P. Maris, Lansdowne, Pa. Hoisting mechanism. No. 1,212,981; Jan. 16; v. 234; p. 967.
Mark, John G., Niles, Mich. Game apparatus. No. 1,212,794; Jan. 16; v. 234; p. 902.
Marquardt, Charles J. (See Knaack and Marquardt.)
Marr, Franklin S., and H. R. Miller, Canton, Ill. Chair-seat. No. 1,212,657; Jan. 16; v. 234; p. 855.
Marsh, Richard B., assignor to Hale and Kilburn Company, Philadelphia, Pa. Car-seat. No. 1,212,533; Jan. 16; v. 234; p. 808.
Marshall, Arthur J., Cincinnati, Ohio. Handle for caskets. No. 1,213,671; Jan. 23; v. 234; p. 1239.
Marshall, Charles P., Watertown, N. Y. Tone-purifier for talking-machines. No. 1,214,050; Jan. 30; v. 234; p. 1399.
Marshall, David E., Kansas City, Mo. Apparatus for disintegrating shavings. No. 1,211,736; Jan. 9; v. 234; p. 496.
Marston, Howard F., assignor to Mercantile Corporation, Dayton, Ohio. Composition carrier or holder. No. 1,214,051; Jan. 30; v. 234; p. 1399.
Martin, A. Vere. (See Schlehr, Joseph A., assignor.)
Martin, Archibald J. (See Frick and Martin.)
Martin, Felix E. (See Brooks and Martin.)
Martin, John D., Owensboro, Ky. Road-grader. No. 1,213,672; Jan. 23; v. 234; p. 1239.
Martin, Perry S., Broadway, Va. Incubator-alarm. No. 1,213,798; Jan. 23; v. 234; p. 1281.
Martin, Richard, Alameda, Cal. Shock-absorber. No. 1,213,523; Jan. 23; v. 234; p. 1188.
Martin, Robert D., Humble, Tex. Drill-bit for wells. No. 1,211,331; Jan. 2; v. 234; p. 327.
Martineau, Clarence R., *et al.* (See Schroer, Hans R., assignor.)
Martineau, William C., *et al.* (See Schroer, Hans R., assignor.)
Martini, Andrew A., Buffalo, N. Y. Medicine device. No. 1,211,737; Jan. 9; v. 234; p. 498.
Marty, Bartley N., Lakewood, Ohio. Automatic baseball-pitching machine. No. 1,211,738; Jan. 9; vol. 234; p. 498.
Marvel, Theodore L., Taunton, Mass. Toe-nail protector. No. 1,213,673; Jan. 23; v. 234; p. 1240.
Marvin, Cornelius J., assignor to The Braun Corporation, Los Angeles, Cal. Generating hydrocyanic-acid gas. No. 1,214,206; Jan. 30; v. 234; p. 1451.
Marx, Joseph A., and F. E. Holden, assignors to Lemar Manufacturing Company, Saginaw, Mich. Baling-press. No. 1,212,658; Jan. 16; v. 234; p. 855.
Marye, Clifford P., South Whitley, Ind., assignor of one-third to W. A. Rosenbaum, trustee, New Rochelle, N. Y. Nut and bolt lock. No. 1,210,507; Jan. 2; v. 234; p. 45.
Marye, Clifford P., South Whitley, Ind., assignor of one-third to W. A. Rosenbaum, trustee, New Rochelle, N. Y. Tap. No. 1,210,508; Jan. 2; v. 234; p. 45.
Marye, Clifford P., South Whitley, Ind., assignor of one-third to W. A. Rosenbaum, trustee, New Rochelle, N. Y. Manufacturing nuts. No. 1,210,509; Jan. 2; v. 234; p. 45.
Masbach, Robert J. (See Weiss, Adolf, assignor.)
Mascher, Paul U., East Palestine, Ohio. Ring-gage. No. 1,210,963; Jan. 2; v. 234; p. 203.
Maskrey, Arthur J., Canton, Ohio. Roll-polisher. No. 1,212,534; Jan. 16; v. 234; p. 809.
Maskrey, Arthur J., Canton, Ohio. Roll-polisher. No. 1,212,535; Jan. 16; v. 234; p. 809.
Maslen, George W., Philadelphia, Pa. Saddle. No. 1,213,674; Jan. 23; v. 234; p. 1240.
Mason, William H., Easton, Pa. Apparatus for the manufacture of Portland cement and similar products. No. 1,210,510; Jan. 2; v. 234; p. 46.
Massing, Edward, Irene, Mont. Potato-sprouter. No. 1,211,473; Jan. 9; v. 234; p. 409.
Master Carburetor Corporation. (See Miller and Cadwell, assignors.)
Masteroll Perforating Machine Company. (See Myers, Edgar W., assignor.)
Matheson, Edwin S., West Palm Beach, Fla. Necktie-holder. No. 1,213,524; Jan. 23; v. 234; p. 1188.
Matheson, Gilbert R., and J. B. Shaw, Winnipeg, Manitoba, Canada. Controlling device for automobile-headlights. No. 1,211,474; Jan. 9; v. 234; p. 409.
Matoushek, Frank, Colome, S. D. Motor-cultivator. No. 1,210,511; Jan. 2; v. 234; p. 46.
Matricardi, Giuseppe, Pallanza, Italy, assignor to Société Harle & Cie., Paris, France. Firing mechanism for automatic submarine mines. No. 1,212,536; Jan. 16; v. 234; p. 809.
Matsinger, William A., Philadelphia, Pa. Coupling device for tubular poles. No. 1,213,228; Jan. 23; v. 234; p. 1085.
Matson, Carl A., Lynn, and A. M. Hoyt, Swampscott, Mass. Machine for wax-finishing the edges of the heels of boots and shoes. No. 1,211,866; Jan. 9; v. 234; p. 546.
Matthews, Edwin S., New York, N. Y., assignor, by mesne assignments, to H. H. Williams and A. C. Wall, receivers. Speed-regulator for elevators. No. 1,212,154; Jan. 9; v. 234; p. 645.
Matthews, Frederick W., Los Angeles, Cal. Talking-moving-picture apparatus. No. 1,210,665; Jan. 2; v. 234; p. 101.
Matthews, Frederick W., Los Angeles, Cal. Toy. No. 1,210,666; Jan. 2; v. 234; p. 101.
Matthews, John W., Macon, Mo. Shock-absorber. No. 1,214,343; Jan. 30; v. 234; p. 1500.
Matthews, Thomas F., Philadelphia, Pa. Book-marker. No. 1,210,964; Jan. 2; v. 234; p. 203.
Mauclaire, Raymond G. A., Asnières, France. Motor attachment for cycles. No. 1,212,982; Jan. 16; v. 234; p. 967.
Maul, Henry C., assignor to The Michigan Stove Company, Detroit, Mich. Automatic water-heater valve. No. 1,213,229; Jan. 23; v. 234; p. 1085.
Maurer, Albert, New York, N. Y. Target. No. 1,210,512; Jan. 2; v. 234; p. 46.
Mauzy, Joseph H., Broadway, Va. Buckle. No. 1,214,052; Jan. 30; v. 234; p. 1400.
Maxfield, Fred E. (See Ware, Charles I., assignor.)
Maxim, Hosea F., assignor of one-half to O. Wells, Norfolk, Va. Connector for electric conductors. No. 1,213,393; Jan. 23; v. 234; p. 1143.
May, Alex, Jr. (See Freeman, Richard J., assignor.)
Maycomber, Frank, South Jacksonville, Fla. Bath-tub attachment. No. 1,212,059; Jan. 16; v. 234; p. 855.

Mayer, Heinrich, and G. Schlatter, assignors to Firm A. Saurer, Arbon, Switzerland. Device for locking the differential gear in motor-cars. No. 1,212,795; Jan. 16; v. 234; p. 903.
Mayer, Max. (See Wohl and Mayer.)
Mayer, William E. (See Poynter, William B., assignor.)
Myers, Lewis C. (See Hess and Myers.)
Mayfield, Walker, Scottsville, Ky. File. No. 1,212,083; Jan. 9; v. 234; p. 619.
Maynard, Macy, Auburn, Wash. Oil-burner. No. 1,213,675; Jan. 23; v. 234; p. 1240.
Mayne, Leander M., Columbia, S. C. Detachable drawer. No. 1,213,121; Jan. 16; v. 234; p. 1015.
Mayo, William H., Royalton, Vt. Vehicle-brake attachment. No. 1,212,983; Jan. 16; v. 234; p. 968.
Mayo, William J., Charlottesville, Va. Shade. No. 1,214,344; Jan. 30; v. 234; p. 1500.
Masoch, Anton F., and E. Sladecek, Granger, Tex. Automatic release-hook. No. 1,212,984; Jan. 16; v. 234; p. 968.
McAdams, James, Sausalito, Cal. Combination holder and grip. No. 1,213,517; Jan. 23; v. 234; p. 1186.
McAdams, William A., Bayshore, N. Y. Aluminum alloy. No. 1,212,374; Jan. 16; v. 234; p. 753.
McAllister, James B., St. Johnsville, N. Y. Dental pliers. No. 1,214,197; Jan. 30; v. 234; p. 1447.
McAlister, Stuart G., Washington, D. C., assignor to The T. H. Symington Company, Rochester, N. Y. Draft-rigging. No. 1,213,924; Jan. 30; v. 234; p. 1355.
McCaa, David G., Lancaster, Pa. Apparatus for and method of producing high-frequency currents of electricity. No. 1,211,863; Jan. 9; v. 234; p. 545.
McCall, Andrew J., St. Louis, Mo. Sanitary pump. No. 1,213,390; Jan. 23; v. 234; p. 1142.
McCarter, Charles, assignor of one-half to C. F. Evans, Decatur, Ill. Car-mover. No. 1,212,974; Jan. 16; v. 234; p. 964.
McCarter, Louis N., Norristown, assignor of one-half to S. C. Graham, Pittsburgh, Pa. Block or tile press. No. 1,213,219; Jan. 23; v. 234; p. 1082.
McCarty, Milton T. (See Stinson, Edward A., assignor.)
McCarty, Roy I., Claysburg, assignor of one-third to D. R. Wynn, Philipsburg, Pa., and one-third to W. A. Stanton, New York, N. Y. Brickmaking-machine. No. 1,211,464; Jan. 9; v. 234; p. 406.
McCaskey Register Company, The. (See Dunning, William E., assignor.)
McCaslin, Elmer L., Salina, Kans., assignor of one-half to F. C. Skinner, Webb, Canada. Dirigible light for automobiles. No. 1,213,220; Jan. 23; v. 234; p. 1082.
McCausland, William A., Pittsburgh, Pa. Well-drilling apparatus. No. 1,211,198; Jan. 2; v. 234; p. 281.
McCausland, William A., Pittsburgh, Pa. Well-drilling machinery. No. 1,211,199; Jan. 2; v. 234; p. 282.
McCausland, William H., Los Angeles, Cal. Attaching half-soles to the bases of old shoes. No. 1,211,326; Jan. 2; v. 234; p. 326.
McCay, William S. (See Sheehan, Edward J., assignor.)
McCloskey, Alfred C., Philadelphia, Pa., assignor to Process Paper Manufacturing Company. Photographic paper. No. 1,213,925; Jan. 30; v. 234; p. 1355.
McCloskey, John T., Dayton, Ohio. Tobacco stemming and booking machine. No. 1,214,336; Jan. 30; v. 234; p. 1498.
McClure Company, The. (See Cory, Fred P., assignor.)
McClure, Henry E., Marion, Ind. Battery-lamp. No. 1,210,821; Jan. 2; v. 234; p. 152.
McCollom, Charles R. (See Weeks, McCollom, and Haskell.)
McCollough, William A., Webster City, Iowa. Slidable feeding-trough. No. 1,212,142; Jan. 9; v. 234; p. 640.
McCollum, Earl E., Downers Grove, Ill. Valve-gearing mechanism. No. 1,211,952; Jan. 9; v. 234; p. 578.
McCollum, James H. K., Toronto, Ontario, Canada, assignor to G. H. Gooderham, J. W. L. Forster, and The Argylls Limited, Alexandria, Scotland. Internal-combustion engine. No. 1,212,653; Jan. 16; v. 234; p. 853.
McConnell, Daniel A., Malcom, Iowa. Cultivator attachment. No. 1,214,337; Jan. 30; v. 234; p. 1498.
McConway & Torley Company, The. (See Kelso, William, assignor.)
McConway & Torley Company, The. (See McConway, William, Jr., assignor.)
McConway & Torley Company, The. (See Milliken, Isaac, H., assignor.)
McConway, William, Jr., assignor to The McConway & Torley Company, Pittsburgh, Pa. Car-coupling. No. 1,214,338; Jan. 30; v. 234; p. 1498.
McCormack, George E., Providence, R. I., assignor to Ballou Manufacturing Company. Photograph-case. No. 1,214,477; Jan. 30; v. 234; p. 1543.
McCormick, Langdon, New York, N. Y. Apparatus for lighting the screens used with cinematographs and the like. No. 1,210,960; Jan. 2; v. 234; p. 202.
McCormick, Langdon, Port Huron, Mich. Cinematograph. No. 1,210,961; Jan. 2; v. 234; p. 202.
McCormick, Langdon, London, England. Cinematograph and the like effect. No. 1,211,200; Jan. 2; v. 234; p. 282.
McCourt, James, Albany, Oreg. Railway-tie. No. 1,214,339; Jan. 30; v. 234; p. 1499.
McCown, Charles F., Long Beach, assignor of one-half to J. S. Steely, Los Angeles, Cal. Cooker. No. 1,213,772; Jan. 23; v. 234; p. 1271.
McCoy, Walter E. (See Sprong and McCoy.)
McCracken, Isaac E., Pittsburgh, Pa. Vehicle-brake. No. 1,214,046; Jan. 30; v. 234; p. 1398.
McCray, Harry F., and W. W. Goodrich, Reno, Nev. Engine-valve mechanism. No. 1,213,391; Jan. 23; v. 234; p. 1142.
McCrerey, Alexander, Hiawatha, Kans. Tractor. No. 1,212,525; Jan. 16; v. 234; p. 806.
McCrerey, Alexander, Hiawatha, Kans. Wheel-plow. No. 1,212,526; Jan. 16; v. 234; p. 806.
McCrerey, Alexander, Hiawatha, Kans. Gage-wheel-adjusting mechanism. No. 1,212,527; Jan. 16; v. 234; p. 806.
McCrerey, Alexander, Hiawatha, Kans. Lever and locking mechanism. No. 1,212,528; Jan. 16; v. 234; p. 807.
McCuaig, Anthony W., and T. N. Childs, Los Angeles, Cal. Draftsman's appliance. No. 1,213,664; Jan. 23; v. 234; p. 1236.
McCuin, William H., assignor of one-half to M. Hunter, Sourlake, Tex. Pumping-jack. No. 1,211,327; Jan. 2; v. 234; p. 326.
McCutchen, Homer C. (See Whitaker, Samuel T., assignor.)
McDonal, Charles L., Monticello, assignor of one-half to J. W. Penington, Brookhaven, Miss. Spring-motor. No. 1,212,782; Jan. 16; v. 234; p. 898.
McDonald, Eugene V., Rochester, N. Y. Combined pencil sharpener and holder. No. 1,210,506; Jan. 2; v. 234; p. 44.
McDonald Hydro-Electro Heating Company Limited. (See McDonald, John D., assignor.)
McDonald, John D., Sudbury, Ontario, Canada, assignor to McDonald Hydro-Electro Heating Company Limited. Electrically-heated radiator. No. 1,211,606; Jan. 9; v. 234; p. 454.
McDonald, William E. (See Chapin, Levi J., assignor.)
McDonnell, George P., Mullinahone, Ireland. Starting mechanism for the motors of motor road-vehicles. No. 1,211,605; Jan. 9; v. 234; p. 454.
McDougall, Ralph F., *et al.* (See Hersey, Arthur J., assignor.)
McEwan, William, Freeland Park, Ind. Dumping-wagon. No. 1,210,822; Jan. 2; v. 234; p. 152.
McEwen, Norman S., Nashville, Tenn. Coupling for pneumatic tires. No. 1,213,518; Jan. 23; v. 234; p. 1186.
McEwen, Willard M., Chicago, Ill. Air-circulating device. No. 1,214,199; Jan. 30; v. 234; p. 1448.
McEwen, Willard M., assignor of one-third to G. Olson, Chicago, Ill., and one-third to L. Greenberg, Kokomo, Ind. Electric fan. No. 1,214,198; Jan. 30; v. 234; p. 1448.
McFranklin, Benjamin F., Diamond, Ohio. Lamp-chimney attachment. No. 1,214,200; Jan. 30; v. 234; p. 1449.
McGeouch, William P., Arlington, assignor to Boston Woven Hose & Rubber Co., Cambridge, Mass. Apparatus for treating rubber articles. No. 1,213,665; Jan. 23; v. 234; p. 1237.
McGinnis, David R., Fresno, Cal. Means for saving heat. No. 1,214,047; Jan. 30; v. 234; p. 1398.
McGlinchy, Frank. (See Wilson and McGlinchy.)
McGlone, Martin, Des Moines, Iowa. Clean-out fitting. No. 1,213,221; Jan. 23; v. 234; p. 1083.
McGonegal, Glenn S., Woodburn, Oreg. Nut-lock. No. 1,212,783; Jan. 16; v. 234; p. 898.
McGovern, James, assignor to The White-Warner Company, Taunton, Mass. Combination coal and gas stove. No. 1,211,864; Jan. 9; v. 234; p. 545.
McGrath, Lawrence F., New York, N. Y. Container. No. 1,213,119; Jan. 16; v. 234; p. 1014.
McGrath, Maurice K., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone apparatus. No. 1,211,607; Jan. 9; v. 234; p. 455.
McGuckin, John J., Brooklyn, N. Y. Flash-light. No. 1,211,465; Jan. 9; v. 234; p. 407.
McGurn, Christopher J., and C. L. Tanner, Miles City, Mont. Nut-lock. No. 1,212,143; Jan. 9; v. 234; p. 641.
McIlvenny, John, Norwich, Conn. Garment-supporting clasp. No. 1,212,529; Jan. 16; v. 234; p. 807.
McIntire, Richard E., Chicago, Ill., assignor to International Harvester Company of New Jersey. Shaft-coupling for reels. No. 1,211,865; Jan. 9; v. 234; p. 546.
McIntosh, John C., The Glen, Paisley, assignor to W. H. Alexander and J. Liddle, Glasgow, Scotland. Valve and valve-gear of internal-combustion engines. No. 1,211,201; Jan. 2; v. 234; p. 282.
McIntosh, John C., The Glen, Paisley, assignor to W. H. Alexander and J. Liddle, Glasgow, Scotland. Valve for internal-combustion engines. No. 1,211,202; Jan. 2; v. 234; p. 282.
McKay Concrete Form Company. (See McKay, Stewart R., assignor.)
McKay, Peter M., Rockville, Collingwood, assignor of one-half to R. W. Brickell, Mornington, New Zealand. Artificial arm and the fittings therefor. No. 1,213,222; Jan. 23; v. 234; p. 1083.
McKay, Stewart R., Perth Amboy, assignor to McKay Concrete Form Company, Sewaren, N. J. Concrete-form. No. 1,212,654; Jan. 16; v. 234; p. 854.
McKee, Neal T. (See Oatley and McKee.)

McKee, Walter S., Chicago, and W. G. Nichols, Chicago Heights, Ill., assignors to American Manganese Steel Company, Augusta, Me. Back for excavating-dippers. No. 1,213,666; Jan. 23; v. 234; p. 1237.
McKelvey, Sidney D., *et al.* (See Landreth, Harry, assignor.)
McKenzie, George A. (See Shaw and McKenzie.)
McKerahan, Charles A., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Hose-clamp. No. 1,211,466; Jan. 9; v. 234; p. 407.
McKiernan-Terry Drill Company. (See Sturtevant, Thomas E., assignor.)
McKinney, Caleb W., Fresno, Cal. Tooth-cleaning implement. No. 1,213,667; Jan. 23; v. 234; p. 1238.
McKinney, Clarence, Amherst, S. D. Smut-machine. No. 1,211,734; Jan. 9; v. 234; p. 497.
McKinnie, Earl C., assignor to National X-Ray Reflector Company, Chicago, Ill. Illuminating appliance. No. 1,212,375; Jan. 16; v. 234; p. 753.
McKinstry, George W., Southbridge, Mass. Strainer attachment. No. 1,213,668; Jan. 23; v. 234; p. 1238.
McKnight, Charles J., assignor to Greensburg Swing Company, Greensburg, Pa. Child's push-car. No. 1,212,530; Jan. 16; v. 234; p. 808.
McLaren, Chester, Oakland, Cal. Two-cycle rotary-cylinder internal-combustion engine. No. 1,213,519; Jan. 23; v. 234; p. 1186.
McLaughlin, Frank, Texarkana, Tex. Bread-slicer. No. 1,211,328; Jan. 2; v. 234; p. 326.
McLaughlin, John C., Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,211,203; Jan. 2; v. 234; p. 283.
McLaughlin, John C., Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,211,467; Jan. 9; v. 234; p. 407.
McLaughlin, John C., East Orange, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,212,784; Jan. 16; v. 234; p. 899.
McLaughlin, Samuel M., and H. A. Gainer, Minier, Ill. Vehicle-washer. No. 1,210,962; Jan. 2; v. 234; p. 202.
McLean, John H., *et al.* (See Curtis, George L., assignor.)
McLean, William J., Everett, Mass. Tooth-brush handle. No. 1,211,468; Jan. 9; v. 234; p. 407.
McLeod, Lester C. (See Bidwell, Flavel, Henry, and McLeod.)
McLeod, Nelson W., St. Louis, Mo., assignor to American Motors Tire Company, Detroit, Mich. Apparatus for forming and vulcanizing rubber articles. No. 1,213,223; Jan. 23; v. 234; p. 1083.
McLeod, Nelson W., St. Louis, Mo., assignor to American Motors Tire Company, Detroit, Mich. Apparatus for forming and vulcanizing rubber articles. No. 1,213,224; Jan. 23; v. 234; p. 1084.
McLeod, Nelson W., St. Louis, Mo., assignor to American Motors Tire Company, Detroit, Mich. Mold for making pneumatic tires. No. 1,213,225; Jan. 23; v. 234; p. 1084.
McMahon, Nora E., Columbia, Tenn. Cuff-button guard. No. 1,211,469; Jan. 9; v. 234; p. 408.
McMane, William, Summit, N. J. Safety bomb-signal for trains. No. 1,214,201; Jan. 30; v. 234; p. 1449.
McManus, Charles E., New York, N. Y. Facing material for cork or other disks for bottle-caps. No. 1,213,926; Jan. 30; v. 234; p. 1355.
McMath, William S., El Paso, Tex. Job-press standardizer. No. 1,213,520; Jan. 23; v. 234; p. 1187.
McMillan, John L., Syracuse, N. Y. Telephone attachment. No. 1,212,785; Jan. 16; v. 234; p. 899.
McMillan, Levi, Wilmington, N. C. Envelop-filling machine. No. 1,211,329; Jan. 2; v. 234; p. 327.
McMurry, Fred R., Westwood, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selecting mechanism. No. 1,212,531; Jan. 16; v. 234; p. 808.
McMurtry, Alden L., Sound Beach, Conn. Mechanical interlock for engine self-starters. No. 1,214,048; Jan. 30; v. 234; p. 1399.
McNally, Leo F., Brooklyn, N. Y., assignor to D. W. Pye, Red Bank, N. J. Trap-door lock. No. 1,210,661; Jan. 2; v. 234; p. 99.
McNamara, Dennis, Lexington, Mass. Line-reel. No. 1,212,376; Jan. 16; v. 234; p. 753.
McPartland, James H., Houlton, Me. Search-light. No. 1,211,204; Jan. 2; v. 234; p. 284.
McPherson, Arthur D., Oak Park, Ill. Attaching-hanger for elevator-buckets. No. 1,210,662; Jan. 2; v. 234; p. 100.
McQueen, Ulysses G., New York, N. Y. Casement-adjuster. No. 1,211,733; Jan. 9; v. 234; p. 497.
McRae, John D., Oswego, N. Y. Spare-tire holder. No. 1,212,079; Jan. 9; v. 234; p. 618.
McWhirter, John S., New York, N. Y., assignor to The J. G. Brill Company, Philadelphia, Pa. Brake for cars. No. 1,213,927; Jan. 30; v. 234; p. 1356.
Mead, George A. (See Newlon, William B., assignor.)
Meade, Fred D., Lake Charles, La. Combined receptacle-cover and insect-trap. No. 1,212,660; Jan. 16; v. 234; p. 856.
Mearkle, Louis K., Philadelphia, assignor to Duquesne Sales Company, Pittsburgh, Pa. Collapsible drinking-cup. No. 1,212,378; Jan. 16; v. 234; p. 745.
Meck, William. (See Lynch and Meck.)
Medearis, Eugene F., Quenemo, Kans. Dental mixing-slab. No. 1,210,513; Jan. 2; v. 234; p. 47.
Mefferd, Earl, assignor of one-fifth to R. W. Cain, Denver, Colo. Cushion-tire. No. 1,212,084; Jan. 9; v. 234; p. 619.
Mehlhope, Clarence E., Chicago, Ill. Gearing. No. 1,212,238; Jan. 16; v. 234; p. 703.
Mehrings, Arthur H., Benson, Ill. Steering device for farm-tractors. No. 1,211,332; Jan. 2; v. 234; p. 328.
Meiers, Paul D., Granite City, Ill. Cover for tooth-brushes. No. 1,213,235; Jan. 23; v. 234; p. 1087.
Meigs, Charles H., Philadelphia, Pa., assignor to National Fire Extinguisher Company. Fluid-distributing apparatus. No. 1,214,061; Jan. 30; v. 234; p. 1403.
Mellon, Patrick J., Connersville, Ind. Automatic sprinkler system. No. 1,212,096; Jan. 9; v. 234; p. 623.
Meinhardt, Frederick A. B. (See Well, Hugo C., assignor.)
Melby, Benjamin, Ashby, Minn. Cutting apparatus. No. 1,214,345; Jan. 30; v. 234; p. 1501.
Melhuish, William J., Upper Parkstone, England. Manufacture of artificial milk and the treatment of its residues. No. 1,210,667; Jan. 2; v. 234; p. 101.
Melsted, Valdimar J., Winnipeg, Manitoba, Canada. Boiler compound. No. 1,210,965; Jan. 2; v. 234; p. 203.
Mendal, Henry L., Tampa, Fla. Flour-sifter. No. 1,212,239; Jan. 16; v. 234; p. 703.
Mendal, Henry L., Tampa, Fla., assignor of one-fourth to K. M. Langley, Baltimore, Md. Combination cooking utensil. No. 1,212,661; Jan. 16; v. 234; p. 856.
Mendenhall, Bayard W., Salt Lake City, Utah. Incubator. No. 1,214,053; Jan. 30; v. 234; p. 1400.
Mendenhall, Elbert V., Los Angeles, Cal. Table-mat. No. 1,214,054; Jan. 30; v. 234; p. 1401.
Mensen, Conrad P., San Francisco, Cal. Folding umbrella. No. 1,211,610; Jan. 9; v. 234; p. 456.
Mercantile Corporation. (See Lenn and Boomershine, assignors.)
Mercantile Corporation. (See Marston, Howard F., assignor.)
Merchant's Loan and Trust Company, The, executor. (See Fitzgerald, John M.)
Meredith, Edward W., Bloomsburg, Pa. Fluid-pressure motor. No. 1,211,209; Jan. 2; v. 234; p. 286.
Mergenthaler Linotype Company. (See Boardman, Robert O., assignor.)
Mergenthaler Linotype Company. (See Kennedy, David S., assignor.)
Mergenthaler Linotype Company. (See Muehleisen, Carl, assignor.)
Mergenthaler Linotype Company. (See Röger, Karl, assignor.)
Mergenthaler Linotype Company. (See Rogers, John R., assignor.)
Mergenthaler Linotype Company. (See Rousseau, Joseph L., assignor.)
Mergenthaler Linotype Company. (See Smith, Augustus H., assignor.)
Mericle, Clarence. (See Schlueter and Mericle.)
Meriwether, Ann-Lock, *et al.* (See Galbraith, David G., assignor.)
Merriman, Robert M., Akron, Ohio. Collapsible core. No. 1,213,525; Jan. 23; v. 234; p. 1188.
Merriman, Robert M., Akron, Ohio. Fabric tire. No. 1,213,929; Jan. 30; v. 234; p. 1356.
Messer, Adolf, Frankfort-on-the-Main, Germany. Welding and soldering torch. No. 1,214,055; Jan. 30; v. 234; p. 1401.
Messerschmitt, Anton, Stolberg, Germany. Manufacture of an artificial manure or fertilizer. No. 1,214,346; Jan. 30; v. 234; p. 1501.
Metcalf, Frederick. (See Reade and Metcalf.)
Metcalf, Henry D., assignor of one-half to G. Dougherty, Casey, Ill. Fluid-controlling device. No. 1,212,085; Jan. 9; v. 234; p. 620.
Metrustry, David, Newburgh, N. Y. Process and apparatus for molding and facing cementitious bodies. No. 1,211,953; Jan. 9; v. 234; p. 579.
Metten, John F., Philadelphia, Pa., assignor to The William Cramp & Sons Ship & Engine Building Company. Turbine-nozzle. No. 1,213,930; Jan. 30; v. 234; p. 1357.
Metten, John F., Philadelphia, Pa., assignor to The William Cramp & Sons Ship & Engine Building Company. Steam propulsion apparatus. No. 1,214,207; Jan. 30; v. 234; p. 1451.
Metzger, Emanuel, New York, N. Y. Garment. No. 1,211,954; Jan. 9; v. 234; p. 579.
Meyer, Alfred F., Morton, Ill., assignor to W. H. Simmons, Minneapolis, Minn. Stock-feeding machine. No. 1,212,144; Jan. 9; v. 234; p. 641.
Meyer, Earl H. M., Seattle, Wash. Electric spark-plug. No. 1,210,668; Jan. 2; v. 234; p. 102.
Meyer, John J., Jr., Glenshaw, Pa., and J. G. Lepper, Bridgeport, Conn., assignors to Glenshaw Glass Company, Glenshaw, Pa. Lift-out for bottle-making machines. No. 1,211,611; Jan. 9; v. 234; p. 459.
Meyer, Simon. (See O'Neill, William, assignor.)
Meyers, Raymond L., Miller, Ind. Vending-machine. No. 1,212,662; Jan. 16; v. 234; p. 856.
Michaud, Conrad, Wantagh, N. Y. Chicken-roost. No. 1,213,526; Jan. 23; v. 234; p. 1189.
Michel, Christopher B., Oilfields, Cal. Quick-acting retainer for demountable rims. No. 1,212,379; Jan. 16; v. 234; p. 754.
Michelson, Henry, Garwin, Iowa. Oiler. No. 1,212,086; Jan. 9; v. 234; p. 620.

Michigan Stove Company, The. (See Maul, Henry C., assignor.)
Micon, David, Benton Harbor, Mich. Mattress. No. 1,211,475; Jan. 9; v. 234; p. 409.
Mid-Continent Machinery Company. (See Lounsberry, Rowe F., assignor.)
Mike, Stephen, and S. Soltesz, Cleveland, Ohio. Nut-lock. No. 1,210,669; Jan. 2; v. 234; p. 102.
Mikell, Nobles and Company. (See Mikell, William M., assignor.)
Mikell, William M., assignor of one-half to Mikell, Nobles and Company, Blackshear, Ga. Fish-stringer. No. 1,212,087; Jan. 9; v. 234; p. 620.
Milano, Silvestro, New York, assignor of one-half to G. E. H. Werham, South Nyack, N. Y. Detachable heel. No. 1,212,796; Jan. 16; v. 234; p. 903.
Milecz, Rudolph, Hoboken, N. J. Lathe tool-holder. No. 1,214,347; Jan. 30; v. 234; p. 1501.
Millar, William E., Chicago, Ill. Endless film and reel device for exhibiting pictures, &c. No. 1,211,955; Jan. 9; v. 234; p. 580.
Millard, Henry, Chicago, Ill. Adjustable-unit visible-card index. No. 1,210,670; Jan. 2; v. 234; p. 102.
Millen, Victor A., Akron, Ohio. Stock-watering device. No. 1,212,537; Jan. 16; v. 234; p. 810.
Miller, Albert, Rochester, Minn. Door-operating device. No. 1,210,514; Jan. 2; v. 234; p. 47.
Miller, Andrew E., assignor to S. Himmel, Baltimore, Md. Display-rack. No. 1,214,348; Jan. 30; v. 234; p. 1502.
Miller, Andrew E., assignor to S. Himmel, Baltimore, Md. Display-rack. No. 1,214,479; Jan. 30; v. 234; p. 1544.
Miller, Chalmers A., Mapleton, Iowa. Wheel-tire. No. 1,212,380; Jan. 16; v. 234; p. 755.
Miller, Charles F., Deepcreek, Wash. Warning-signal. No. 1,212,538; Jan. 16; v. 234; p. 810.
Miller, Charles M. (See Schroeder and Miller.)
Miller, Daniel D., New York, N. Y., assignor, by mesne assignments, to Western Electric Company. Switching device for telephone systems. No. 1,211,612; Jan. 9; v. 234; p. 456.
Miller, Edward M., Kent, Ohio. Lock. No. 1,212,381; Jan. 16; v. 234; p. 755.
Miller, Edwin, Taunton, Mass. Collar-fastener. No. 1,212,088; Jan. 9; v. 234; p. 620.
Miller, Fred F., Compton, Ill. Riveting instrument. No. 1,211,333; Jan. 2; v. 234; p. 328.
Miller, George E., and E. B. Cantrell, San Francisco, Cal. Rotary-joint oil-retainer. No. 1,212,089; Jan. 9; v. 234; p. 621.
Miller, Gordon. (See Del Fungo Giera, Philip L. E., assignor.)
Miller, Harry A., Los Angeles, and C. J. Cadwell, Santa Barbara, Cal., assignors, by mesne assignments, to Master Carburetor Corporation, Detroit, Mich. Carbureter. No. 1,213,807; Jan. 23; v. 234; p. 1285.
Miller, Harry L., Pittsburgh, Pa. Signal for moving-picture reels. No. 1,214,208; Jan. 30; v. 234; p. 1451.
Miller, Harry R. (See Marr and Miller.)
Miller, John, Sr., assignor to United Utilities Company, Boston, Mass. Plumber's trap. No. 1,211,210; Jan. 2; v. 234; p. 286.
Miller, John P., *et al.* (See De Camp, James W., assignor.)
Miller, Joseph L., Jersey Mills, Pa. Metallic tie. No. 1,213,122; Jan. 16; v. 234; p. 1015.
Miller, Max A., Maywood, Ill. Signal apparatus for motor-vehicles. No. 1,210,966; Jan. 2; v. 234; p. 203.
Miller, Norman B., West Collingswood, N. J. Packing. No. 1,211,476; Jan. 9; v. 234; p. 410.
Miller, Otto, Crab Orchard, Ill. Adjustable bearing for mowing-machine pitmen. No. 1,213,773; Jan. 23; v. 234; p. 1272.
Miller, Peter J. N. (See Wingire, Ernest C., assignor.)
Miller, Robert W., Woodlawn, Pa. Oil-cloth-vending apparatus. No. 1,214,209; Jan. 30; v. 234; p. 1451.
Miller Rubber Company, The. (See Denman, Walter R., assignor.)
Miller Rubber Company, The. (See Griffith, Richard, assignor.)
Miller, Stephen E., North Attleboro, Mass. Box-fastener. No. 1,210,967; Jan. 2; v. 234; p. 204.
Miller, Thomas W., assignor to The Faultless Rubber Company, Ashland, Ohio. Toy balloon. No. 1,211,369; Jan. 2; v. 234; p. 338.
Miller, Tony A., Morgantown, W. Va. Window-glass-blowing apparatus. No. 1,214,349; Jan. 30; v. 234; p. 1502.
Miller Train Control Corporation, The. (See Murray, William B., assignor.)
Miller, Vena A., Bloomdale, Ohio. Rail-anchor. No. 1,213,128; Jan. 16; v. 234; p. 1016.
Miller, William R. (See Barr and Miller.)
Millett, James J. (See Hill and Millett.)
Milliken, Foster, Lawrence, N. Y. Gate-valve. No. 1,212,090; Jan. 9; v. 234; p. 621.
Milliken, Isaac H., Aspinwall, assignor to The McConway & Torley Company, Pittsburgh, Pa. Car-coupling. No. 1,213,394; Jan. 23; v. 234; p. 1143.
Milliken, Isaac H., Aspinwall, assignor to The McConway & Torley Company, Pittsburgh, Pa. Draft appliance for railway-vehicles. No. 1,213,395; Jan. 23; v. 234; p. 1144.
Milliken, Isaac H., Aspinwall, assignor to The McConway & Torley Company, Pittsburgh, Pa. Car-coupling. No. 1,213,396; Jan. 23; v. 234; p. 1144.
Milliken, Isaac H., Aspinwall, assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling-centering mechanism. No. 1,214,350; Jan. 30; v. 234; p. 1502.
Milliken, Isaac H., Aspinwall, assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling-centering mechanism. No. 1,214,351; Jan. 30; v. 234; p 1503.
Mills, Bertie E., assignor to Mills Novelty Company, Chicago, Ill. Weighing-scale. No. 1,214,056; Jan. 30; v. 234; p. 1401.
Mills, Howard S., Astoria, N. Y. Storage-battery plate. No. 1,214,210; Jan. 30; v. 234; p. 1452.
Mills, John H. (See Blundell, Mills, and Maguire.)
Mills Novelty Company. (See Mills, Bertie E., assignor.)
Mills, William, Birmingham, and W. Morgan, Bristol, England. Hand-grenade, incendiary and other bomb, and the like. No. 1,213,397; Jan. 23; v. 234; p. 1144.
Milner, Bert B., New York, N. Y. Train-resistance-computing means. No. 1,210,515; Jan. 2; v. 234; p. 47.
Milonczyk, Ignatz, Milwaukee, Wis. Portable carousel. No. 1,213,931; Jan. 30; v. 234; p. 1357.
Milwaukee Locomotive Manufacturing Company. (See Goodspeed, Leland F., assignor.)
Milwaukee Locomotive Manufacturing Company. (See Sheldon, Frank D., assignor.)
Miner, James H., Lumberton, Miss. Wheel-flange lubricator. No. 1,213,676; Jan. 23; v. 234; p. 1241.
Miner, William H. (See Dath, Charles E., assignor.)
Minerallac Electric Company. (See Sines, Harold S., assignor.)
Minns, George L., Cleveland, Ohio. Repeater attachment for phonographs. No. 1,214,352; Jan. 30; v. 234; p. 1503.
Minor, William S., assignor of one-half to J. R. Walrath, Northville, N. Y. Door-latch. No. 1,210,826; Jan. 2; v. 234; p. 153.
Miser, Charles E., Watertown, N. Y. Suction-box. No. 1,211,739; Jan. 9; v. 234; p. 499.
Mitchell, Edward S., Syracuse, N. Y. Clothes-pin. No. 1,211,211; Jan. 2; v. 234; p. 287.
Mitchell, Ernest R., assignor to Mitchell Specialty Company, Philadelphia, Pa. Door bumper and retainer. No. 1,212,663; Jan. 16; v. 234; p. 857.
Mitchell Specialty Company. (See Mitchell, Ernest R., assignor.)
Mittasch, Alwin. (See Bosch, Mittasch, and Beck.)
Mittcovsbe, Edward F., Pittsburgh, Pa. Cutting attachment for rakes. No. 1,213,230; Jan. 23; v. 234; p. 1086.
Moan, John H., *et al.* (See Bergren, John A., assignor.)
Moberry, Leonard A. (See Taylor and Moberry.)
Modern Threshing Cylinder Company, The. (See Schneider, Daniel, assignor.)
Moede, Albert, Reedsville, Wis. Frictional gearing. No. 1,213,398; Jan. 23; v. 234; p. 1145.
Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Ruffling-machine. No. 1,210,671; Jan. 2; v. 234; p. 102.
Mohr, Edward C., and R. A. Beach, Bloomfield, Nebr. Filter. No. 1,211,334; Jan. 2; v. 234; p. 328.
Mohr, George A. (See Taylor, James W., assignor.)
Mohun, John L. (See Vincent and Mohun.)
Moir, James. (See Quelle, Ralph J., assignor.)
Moisson, John O., Charleston, S. C. Telephone attachment. No. 1,212,091; Jan. 9; v. 234; p. 621.
Moline Plow Company. (See Smith, Orbin F., assignor.)
Mollan, Charles G., Chicago, Ill. Headlight-lamp. No. 1,212,145; Jan. 9; v. 234; p. 641.
Molyneux, George E., Bayonne, and G. S. Gatchell, Roselle Park, N. J., assignors to The Singer Manufacturing Company. Sewing-machine folder. No. 1,212,539; Jan. 16; v. 234; p. 810.
Mongeau, George E., Lowell, Mass. Outsole and welt stitching machine and guard therefor. No. 1,213,932; Jan. 30; v. 234; p. 1357.
Monroe, Thomas E., Brooklyn, N. Y. Automatic player-piano. No. 1,212,240; Jan. 16; v. 234; p. 704.
Montague Mailing Machinery Co. (See Lee, Ulysses G., assignor.)
Montgomery, Leon F., Fort Recovery, Ohio. Shoe-sole. No. 1,212,985; Jan. 16; v. 234; p. 968.
Moomy, Joseph G., Erie, Pa. Tire-patch and making the same. No. 1,211,867; Jan. 9; v. 234; p. 547.
Moore, Clarence E., Virginia, Minn. Rod-packing ring. No. 1,211,613; Jan. 9; v. 234; p. 457.
Moore, Henry J., Niagara Falls, Ontario, Canada. Window-conservatory. No. 1,214,057; Jan. 30; v. 234; p. 1402.
Moore, Herbert L. G., Hohokus, N. J. Coop for the transportation of live chicks. No. 1,212,540; Jan. 16; v. 234; p. 811.
Moore, Jacob L., Muncie, Ind. Spring-bottom. No. 1,213,231; Jan. 23; v. 234; p. 1086.
Moore, Martin L., Glen Osborne, assignor to Frick & Lindsay Company, Pittsburgh, Pa. Pipe-thread protector. No. 1,211,477; Jan. 9; v. 234; p. 410.
Moore, Nellie C., Virginia, Minn. Nethergarment. No. 1,212,092; Jan. 9; v. 234; p. 622.
Moore, William J. P., New York, N. Y. Carbureter. No. 1,212,986; Jan. 16; v. 234; p. 969.
Moralen, Caleb A., New York, N. Y. Automatic teapot. No. 1,211,614; Jan. 9; v. 234; p. 457.
More, George, New York, and J. Pettigrew, Brooklyn, N. Y. Scaffolding. No. 1,211,868; Jan. 9; v. 234; p. 547.

Moreland, John H., Altoona, Pa. Antifriction-bearing. No. 1,211,956; Jan. 9; v. 234; p. 580.
Morey, Harry J., Syracuse, N. Y. Conduit-box receptacle. No. 1,214,353; Jan. 30; v. 234; p. 1503.
Morey, Harry J., Syracuse, assignor to Pass & Seymour, Inc., Solvay, N. Y. Electric switch. No. 1,213,933; Jan. 30; v. 234; p. 1357.
Morgan Construction Company. (See Bloom, Arvid T., assignor.)
Morgan, Edmund C., Morgan Park, Ill. Mining-machine. No. 1,212,382; Jan. 16; v. 234; p. 755.
Morgan, William. (See Mills and Morgan.)
Morgan, William I., Seaford, N. Y. Screen for percolators. No. 1,213,232; Jan. 23; v. 234; p. 1087.
Morgan & Wright. (See Cederstrom, Emil B., assignor.)
Morley, Joseph D., New York, N. Y., assignor to Scott & Williams, Incorporated, Camden, N. J. Machine for treating knitted webs. No. 1,213,527; Jan. 23; v. 234; p. 1189.
Morris, Benjamin. (See Morris, William M. and B.)
Morris & Company. (See Carlson and Hill, assignors.)
Morris & Company. (See Trescott, Charles B., assignor.)
Morris, Frank L., assignor of one-half to W. D. Peterson, Salt Lake City, Utah. Railway-tie. No. 1,211,957; Jan. 9; v. 234; p. 581.
Morris, Joseph L., Lawrence, Kans. Ball-bearing. No. 1,210,516; Jan. 2; v. 234; p. 48.
Morris, William M. and B., Milford, Conn. Garment-fastener. No. 1,213,677; Jan. 23; v. 234; p. 1241.
Morrow, Lloyd E., Sanford, Fla. Vehicle-spring. No. 1,212,987; Jan. 16; v. 234; p. 969.
Morrow, Wesley W., and C. H. Burgett, Prescott, Ariz. Grease-cup. No. 1,213,678; Jan. 23; v. 234; p. 1241.
Morse, Amelia, New York, N. Y. Doll. No. 1,212,093; Jan. 9; v. 234; p. 622.
Morse, Frank L., Ithaca, N. Y. Valve mechanism for gas-engines. No. 1,210,672; Jan. 2; v. 234; p. 103.
Morse, Frederick H., assignor to Allen-Chapman Company, Boston, Mass. Therapeutical appliance. No. 1,212,541; Jan. 16; v. 234; p. 811.
Morse, George W., Park City, Utah. Dirigible vehicle-headlight. No. 1,213,399; Jan. 23; v. 234; p. 1145.
Morton, Albert H., Lowell, Mass. Thread-board for spinning, twisting, and the like machines. No. 1,214,211; Jan. 30; v. 234; p. 1452.
Morton, Harold A. (See Hibbert and Morton.)
Morton, Tazewell S., Birmingham, Ala. Detachable grass-catcher for lawn-mowers. No. 1,211,740; Jan. 9; v. 234; p. 499.
Morton, Thomas S., Tuxedo Park, N. Y. Adjustable oar-lock. No. 1,213,233; Jan. 23; v. 234; p. 1087.
Mosling, Bernhard A. (See Besserdich, William A., assignor.) (Reissue.)
Motor-Compressor Company, The. (See Spohrer, Gregory J., assignor.)
Mould, Edmund F., assignor to The Adams-Bagnall Electric Company, Cleveland, Ohio. Shade-holder. No. 1,210,673; Jan. 2; v. 234; p. 103.
Moulton, Edwin W. (See Moulton, Warren B. and E. W.)
Moulton, Warren B. and E. W., Riverside, Cal. Vehicle direction-indicator. No. 1,214,058; Jan. 30; v. 234; p. 1402.
Mountford, G. T., *et al.* (See Hall, James T., assignor.)
Moving Advertisement Company. (See Hayes, Albert, assignor.)
Muckle, Emil, assignor to Waterbury Clock Co., Waterbury, Conn. Hammer-wire and hub therefor for clock-movements. No. 1,213,234; Jan. 23; v. 234; p. 1087.
Muehlberg, Karl O., Manitowoc, Wis. Pipe-coupling. No. 1,211,741; Jan. 9; v. 234; p. 500.
Muehleisen, Carl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical composing-machine. No. 1,212,542; Jan. 16; v. 234; p. 812.
Muehleisen, Carl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Distributing mechanism of typographical composing-machines. No. 1,214,354; Jan. 30; v. 234; p. 1504.
Mueller, Philip, and A. C. Schuermann, Decatur, Ill. Wall-fitting for cocks. No. 1,212,797; Jan. 16; v. 234; p. 903.
Muir, William L., South Milwaukee, Wis. Wire-splicer. No. 1,211,478; Jan. 9; v. 234; p. 410.
Mullaney, John F., Colorado Springs, Colo. Receptacle-cover. No. 1,213,400; Jan. 23; v. 234; p. 1145.
Müller, Géza. (See Blum and Müller.)
Mulliner, Arthur J., Shediac, New Brunswick, Canada. Flue-cleaner. No. 1,211,212; Jan. 2; v. 234; p. 287.
Multipost Company. (See Bates, Jesse S., assignor.)
Multipost Company. (See Richmond, John E., assignor.)
Mummert, Arden J., St. Louis, Mo. Packing-ring. No. 1,210,674; Jan. 2; v. 234; p. 104.
Mundale, Oscar M., Frost, Minn. Seed-tester. No. 1,210,675; Jan. 2; v. 234; p. 104.
Murphy Chair Company. (See Balbach, Gustav C., assignor.)
Murphy, Edwin J., Schenectady, N. Y., assignor to General Electric Company. Motor-control system. No. 1,214,355; Jan. 30; v. 234; p. 1504.
Murphy, Harold T., Springfield, Mass. Signaling device for automobiles. No. 1,211,218; Jan. 2; v. 234; p. 287.
Murphy, James J., Maspeth, N. Y. Game apparatus. No. 1,213,679; Jan. 23; v. 234; p. 1241.
Murphy, Walter P. (See Ayers, Augustine R., assignor.)
Murr, John R. (See Mace and Murr.)
Murray, Archibald J., Unity, Oreg. Wire-gate fastener. No. 1,212,988; Jan. 16; v. 234; p. 969.
Murray Company, The. (See Henry, Nelson B., assignor.)
Murray, Finis A., Seymour, Mo. Routing-rack. No. 1,214,059; Jan. 30; v. 234; p. 1403.
Murray, Thomas E. (See Woodrow, Harry R., assignor.)
Murray, Thomas E., New York, N. Y. Vehicle-wheel. No. 1,212,798; Jan. 16; v. 234; p. 904.
Murray, Thomas E., New York, N. Y. Vehicle-wheel. No. 1,212,799; Jan. 16; v. 234; p. 904.
Murray, Thomas E., New York, N. Y. Metal vehicle-wheel. No. 1,212,800; Jan. 16; v. 234; p. 904.
Murray, Thomas E., New York, N. Y. Metal vehicle-wheel. No. 1,212,801; Jan. 16; v. 234; p. 904.
Murray, Thomas E., New York, N. Y. Metal hub for vehicle-wheels. No. 1,212,802; Jan. 16; v. 234; p. 905.
Murray, Thomas E., New York, N. Y. Metal vehicle-wheel. No. 1,212,803; Jan. 16; v. 234; p. 905.
Murray, Thomas E., New York, N. Y. Flanging ends of metal tubes. No. 1,212,804; Jan. 16; v. 234; p. 905.
Murray, William B., Washington, D. C., assignor to The Miller Train Control Corporation, Staunton, Va. Electrically-operated and mechanically-controlled train-stopping device. No. 1,213,801; Jan. 30; v. 234; p. 1344.
Murray, William B., Washington, D. C., assignor to The Miller Train Control Corporation, Staunton, Va. Train-control system. No. 1,213,802; Jan. 30; v. 234; p. 1344.
Muther, Lorenz. (See Lautenschlager, William F., assignor.)
Mutz, George, Pittsburgh, Pa. Mouse-trap. No. 1,214,060; Jan. 30; v. 234; p. 1403.
Myers, Bert C., Saginaw, Oreg. Machine for bunching hay. No. 1,212,094; Jan. 9; v. 234; p. 622.
Myers, Edgar W., San Jose, assignor, by mesne assignments, to Masteroll Perforating Machine Company, Los Gatos, Cal. Paper-feed. No. 1,211,615; Jan. 9; v. 234; p. 457.
Myers, Hubert A., Toledo, Ohio. Toy. No. 1,211,479; Jan. 9; v. 234; p. 411.
Myers, Hubert A., Toledo, Ohio, assignor to Toledo Scale Company, Jersey City, N. J. Scale. No. 1,213,934; Jan. 30; v. 234; p. 1358.
Myers, Israel, assignor to The Superior Ladder Company, Goshen, Ind. Automatic gravity ladder-lock. No. 1,210,827; Jan. 2; v. 234; p. 154.
Myers, John D. (See Fritts, Charles E., assignor.)
Myers, John S. (See Toohey, John W., assignor.)
Myers, Lewis C., Brooklyn, assignor to Royal Typewriter Company, Inc., New York, N. Y. Carriage-shift stop for type-writing machines. No. 1,212,989; Jan. 16; v. 234; p. 970.
Myers, Philip A., assignor to F. E. Myers and Brother, Ashland, Ohio. Power attachment for pumps. No. 1,213,935; Jan. 30; v. 234; p. 1358.
N. Y. Sanitary Food Corp. (See Clayton, Alfred J., assignor.)
Nagy, Steven, Northampton, Mass. Automatic shutter-operating device for photographic apparatus. No. 1,212,383; Jan. 16; v. 234; p. 756.
Nance, Turner H., Birmingham, Ala. Cigarette-paper holder for tobacco-receptacles. No. 1,213,680; Jan. 23; v. 234; p. 1242.
Nardon, Jacques C., Suresnes, France. Power-transmitting device for motor-vehicles. No. 1,211,335; Jan. 2; v. 234; p. 329.
Narragansett Machine Company. (See Armitage, Joseph B., assignor.)
Nash, Charles J., assignor to Universal Draft Gear Attachment Co., Chicago, Ill. Draft-plate. No. 1,211,616; Jan. 9; v. 234; p. 458.
Nash Motors Company, The. (See Petrzilka, Josef, assignor.)
Nash, Philip. (See Prussner, Nash, and Manger.)
Nasmith, John W., Heaton Mersey, England. Box-covering machine. No. 1,212,241; Jan. 16; v. 234; p. 704.
Nasse, Robert, assignor of one-half to A. Prohofsky, St. Paul, Minn. Tanning fur skins. No. 1,210,968; Jan. 2; v. 234; p. 204.
National Adhesive Company. (See Lynch, Thomas F., assignor.)
National Blank Book Company. (See Schade, John, Jr., assignor.)
National Carbon Company. (See Clymer, William R., assignor.)
National Carbon Company. (See Williams, Louis E., assignor.)
National Chemical Company. (See Llewellyn and Doyle, assignors.)
National Equipment Company. (See Kihlgren, Theodor, assignor.)
National Fire Extinguisher Company. (See Meigs, Charles H., assignor.)
National Lock Washer Company, The. (See Brown, Rudolph L., assignor.)
National Lock Washer Company, The. (See Hoyt, Daniel, assignor.)
National Manufacturing Company. (See Huntoon, Frank D., assignor.)
National Paper Can Company. (See Hulbert, Edwin F., assignor.)
National Safety Appliance Company, The. (See Sedgwick, Hiram G., assignor.)
National X-Ray Reflector Company. (See McKinnie, Earl C., assignor.)

Natisch, William, Great Kill, N. Y. Gear-hobbing machine. No. 1,213,286; Jan. 23; v. 234; p. 1088.
Natvig, Christian, Ivanhoe, Minn. Flower-pot. No. 1,214,356; Jan. 30; v. 234; p. 1505.
Naugle, Philip D. (See Weller, Naugle, and Hyde.)
Naul, James M., Plainfield, N. J., assignor to Bosch Magneto Company, New York, N. Y. Projection-lamp. No. 1,210,676; Jan. 2; v. 234; p. 104.
Naul, James M., Plainfield, N. J., assignor to Bosch Magneto Company, New York, N. Y. Flexible coupling. No. 1,212,543; Jan. 16; v. 234; p. 812.
Naylor, Henry A., Valparaiso, Chile. Resilient tire. No. 1,211,869; Jan. 9; v. 234; p. 547.
Naylor, James P., Dulwich, London, England. Apparatus for displaying advertisements, signaling, and the like. No. 1,213,528; Jan. 23; v. 234; p. 1100.
Nedoma, Charles L., Detroit, Mich. Vehicle. No. 1,213,893; Jan. 30; v. 234; p. 1345.
Needham, Harley V., Neosho, Mo. Dirigible automobile-headlight. No. 1,212,095; Jan. 9; v. 234; p. 622.
Neff, Ambrose W., Powell, Ohio, assignor of one-half to G. W. Neff, New York, N. Y. Tire-protector. No. 1,211,214; Jan. 2; v. 234; p. 287.
Neff, George W. (See Neff, Ambrose W., assignor)
Nell, Joseph B., Filbert, assignor to South Carolina Cotton Picker Company, Yorkville, S. C. Cotton-picker. No. 1,213,529; Jan. 23; v. 234; p. 1190.
Nellans, Brodie S., Elbing, Kans. Resilient wheel. No. 1,213,936; Jan. 30; v. 234; p. 1358.
Nelson, Emil A., Ronville, Mich. Brake mechanism for motor-vehicles. No. 1,211,742; Jan. 9; v. 234; p. 500.
Nelson, Fred S., Medicine Bow, Wyo. Safety pocket device. No. 1,213,894; Jan. 30; v. 234; p. 1345.
Nettleton, George R., assignor to The W. & E. T. Fitch Co., New Haven, Conn. Buckle. No. 1,213,530; Jan. 23; v. 234; p. 1191.
Neuberth, Franklin G., assignor to The S. O. & C. Co., Ansonia, Conn. Button. No. 1,210,677; Jan. 2; v. 234; p. 104.
Neuland, Alfons H., San Francisco, Cal., assignor to Neuland Electrical Company Inc. Dynamo-electric machine. No. 1,211,617; Jan. 9; v. 234; p. 458.
Neuland, Alfons H., San Francisco, Cal. Dynamo-electric machine. No. 1,212,544; Jan. 16; v. 234; p. 812.
Neuland Electrical Company. (See Neuland, Alfons H., assignor.)
Neumann, Max P. (See Kipniss and Neumann.)
Neven, Frank A., Dallas, Tex. Radiator-supporting frame. No. 1,213,401; Jan. 23; v. 234; p. 1146.
Nevins-Church Press. (See Reese, Charles, assignor.)
New Departure Manufacturing Company, The. (See Pagé, Victor W., assignor.)
New Idea Spreader Company. (See Synck, Henry, assignor.)
New Jersey Car Spring & Rubber Co. (See Wenzel, Stephen, assignor.)
New Jersey Patent Company. (See Holland, Newman H., assignor.)
New Jersey Patent Company. (See Pierman, Alexander N., assignor.)
New Jersey Zinc Company The. (See Borcherdt, Walter O., assignor.)
New York Revolving Portable Elevator Company. (See Boebck and Germond, assignors.)
Newcome, Thomas J. (See Stevens and Newcome.)
Newhall, Henry R., Jr., Plainfield, and H. W. Pleister, Westfield, N. J.; said Pleister assignor to said Newhall. Concrete-insert. No. 1,212,990; Jan. 16; v. 234; p. 970.
Newhouse, Ray C., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Impact-pulverizer. No. 1,212,991; Jan. 16; v. 234; p. 970.
Newlon, William B., Fremont, assignor of one-half to G. A. Mead, Central City, Nebr. Mill-product-discharging mechanism. No. 1,211,743; Jan. 9; v. 234; p. 500.
Newman Brothers. (See Wagner, Michael, assignor.)
Newman, Marc, Chicago, Ill. Reinforced garment. No. 1,212,805; Jan. 16; v. 234; p. 906.
Newman, Max H., Atlantic City, N. J. Vehicle-signal. No. 1,211,215; Jan. 2; v. 234; p. 288.
Newton, Albert E., and F. K. Hendrickson, Worcester, Mass., assignors to Reed-Prentice Company. Drop-table mechanism for milling-machines. No. 1,213,287; Jan. 23; v. 234; p. 1088.
Newton, Albert S., Providence, R. I. Door-buffer. No. 1,211,480; Jan. 9; v. 234; p. 411.
Newton, Albert S., Providence, R. I. Sanitary-drinking-fountain-supply system. No. 1,214,212; Jan. 30; v. 234; p. 1452.
Newton, George W., Newton, assignor to W. P. Johnson, Des Moines, Iowa. Toy gun. No. 1,211,870; Jan. 9; v. 234; p. 547.
Newton, William G., assignor to The Peck Bros & Co., New Haven, Conn. Combination hot and cold water faucet. No. 1,212,806; Jan. 16; v. 234; p. 906.
Negastri, Joseph, New York, N. Y. Hotbed. No. 1,212,097; Jan. 9; v. 234; p. 623.
Nicholls, John, and S. Lazzure, Seattle, Wash. Music-leaf turner. No. 1,211,744; Jan. 9; v. 234; p. 501.
Nichols, John H., Spencer, Iowa. Drain-trap. No. 1,211,336; Jan. 2; v. 234; p. 329.
Nichols, Wesley G. (See McKee and Nichols.)
Nicholson, Eberhardt P., New York, N. Y. Manufacturing articles of synthetic composition. No. 1,212,098; Jan. 9; v. 234; p. 623.
Nicholson, Eberhardt P., New York, N. Y. Articulated doll. No. 1,212,099; Jan. 9; v. 234; p. 623.
Nickel, Christopher, Denver, Colo. Riding-saddle tree. No. 1,212,545; Jan. 16; v. 234; p. 813.
Nickels, Philip H., Council Grove, Kans. Gearing. No. 1,213,238; Jan. 23; v. 234; p. 1089.
Nicks, Ira G., Norfolk, Va. Internal-combustion engine. No. 1,214,357; Jan. 30; v. 234; p. 1505.
Nicolai, Edward F. (See Hawxhurst and Nicolai.)
Nicolson, Alexander M., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Thermionic amplifier. No. 1,210,678; Jan 2; v. 234; p. 105.
Niedergesaess, Wilhelm, Seattle, Wash. Shaft-coupling. No. 1,210,969; Jan. 2; v. 234; p. 204.
Nielsen, Julian J., Chicago, Ill. Circuit-breaker. No. 1,212,146; Jan. 9; v. 234; p. 642.
Nielsen, Soren P., New Ulm, Minn. Corn-shock tyer. No. 1,211,745; Jan. 9; v. 234; p. 501.
Nielssen, Steffen F., Houston, Tex. Electric-circuit breaker. No. 1,213,937; Jan. 30; v. 234; p. 1359.
Nilson, Jens J., Holmquist, S. D. Road-grader. No. 1,210,517; Jan. 2; v. 234; p. 48.
Nilson, John L., and J. Prince, Chicago, Ill. Automobile-tank filler. No. 1,212,384; Jan. 16; v. 234; p. 756.
Nisbet, James E, Jacksonville, Ala. Fan. No. 1,210,828; Jan. 2; v. 234; p. 154.
Nixon, Edward J. (See Fitzharris, Frank, assignor.)
No-Touch Straw Holder Co. (See Griel and Shee, assignors.)
Noble, Eugene B., Los Angeles, Cal. Heaving-plug. No. 1,212,664; Jan. 16; v. 234; p. 857.
Noble, Franklin, Brooklyn, N. Y. Means for treating water, sewage, and liquid manufacturing-waste. No. 1,211,481; Jan. 9; v. 234; p. 411.
Nolan, Herbert C., Winnipeg, Manitoba, Canada. Folding device for theater-chairs. No. 1,210,518; Jan. 2; v. 234; p. 48.
Nolan, Thaddeus A., Cincinnati, Ohio. Mechanical movement. No. 1,212,385; Jan. 16; v. 234; p. 756.
Noll, Rose E., Marietta, Ohio. Device for cleaning sand and gravel screens. No. 1,213,239; Jan. 23; v. 234; p. 1089.
Norberg, Peter J., New Era, Mich. Milking-stool. No. 1,212,386; Jan. 16; v. 234; p. 757.
Nordloh, John A., Cincinnati, Ohio. Shoe. No. 1,213,128; Jan. 16; v. 234; p. 1015.
Nordstrom, Elof, Newark, N. J., assignor to American Dan Stopper Company, Bridgeport, Conn. Cap-making and bottling machine. No. 1,212,665; Jan. 16; v. 234; p. 858.
Nordström, Hans, Petrograd, Russia. Internal-combustion engine. No. 1,211,746; Jan. 9; v. 234; p. 501.
Norring, Morris, Rolfe, Iowa. Coop. No. 1,213,124; Jan. 16; v. 234; p. 1015.
Norris, William L. (See Mahoney and Norris.)
North Bro's. M'f'g. Co. (See Leopold, George O., assignor.)
North East Electric Company. (See Lee, Thomas L., assignor.)
North, Francis S., assignor to Union Special Machine Company, Chicago, Ill. Shaft-bearing. No. 1,214,062; Jan. 30; v. 234; p. 1403.
Northern Brass Manufacturing Company. (See Brenton, James, assignor.)
Northrup, Elmer C., assignor, by mesne assignments, to Savings Union Bank and Trust Company, San Francisco, Cal. Head-motion for nailing-machines. No. 1,213,895; Jan. 30; v. 234; p. 1346.
Northwestern Expanded Metal Company. (See Arey, Fred C., assignor.)
Northwestern Knitting Company. (See Chatfield, Franklin, assignor.)
Norton, Charles H., assignor to Norton Grinding Company, Worcester, Mass. Clutch-operating means. No. 1,211,747; Jan. 9; v. 234; p. 502.
Norton Door Check Company. (See Norton, Lewis C., assignor.)
Norton, Edward P., Cottonwood Falls, Kans. Vegetable-slicer. No. 1,213,681; Jan. 23; v. 234; p. 1242.
Norton Grinding Company. (See Norton, Charles H., assignor.)
Norton, James, Reeds Ferry, N. H. Detachable handle for trucks. No. 1,213,988; Jan. 30; v. 234; p. 1359.
Norton, Lewis C., assignor to Norton Door Check Company, Chicago, Ill. Door-check. No. 1,211,337; Jan. 2; v. 234; p. 329.
Nott, Joseph H., assignor to Rex Golf Machine Company, Chicago, Ill. Golf driving-machine. No. 1,210,970; Jan. 2; v. 234; p. 204.
Novick, Abraham, Brooklyn, assignor to F. L. Schmidt Company, New York, N. Y. Sheet-synchronising mechanism. No. 1,212,242; Jan. 16; v. 234; p. 705.
Nowka, Alfred, Harvard, Nebr. Motor-tractor. No. 1,211,216; Jan. 2; v. 234; p. 288.
Noyes, Benjamin H. (See Pillings, John H., assignor.)
Nugent, William W., Chicago, Ill. Lubricator. No. 1,212,387; Jan. 16; v. 234; p. 757.
Nunn, Elbert E., Malvern, Ark. Bank-robber trap. No. 1,214,358; Jan. 30; v. 234; p. 1505.

Nystrom, Oscar P., Holland, Mich. Molding-machine. No. 1,211,618; Jan. 9; v. 234; p. 458.
O'Banion, Jay. (See Magnus and O'Banion.)
O'Brien, Adelaide E., St. Louis, Mo. Antifriction device. No. 1,212,992; Jan. 16; v. 234; p. 971.
O'Brien, John O. (See Thornton, John E., assignor.)
O'Connor, Clara B., New York, N. Y. Game apparatus. No. 1,211,748; Jan. 9; v. 234; p. 502.
O'Connor, John B., assignor to Lyon Metallic Manufacturing Company, Aurora, Ill. Locker and cabinet. No. 1,212,993; Jan. 16; v. 234; p. 971.
O'Hearn, George E., assignor to Heywood Brothers and Wakefield Company, Gardner, Mass. Go-cart. No. 1,212,243; Jan. 16; v. 234; p. 706.
O'Neal, Oscar, Fremont, Mich. Headlight control. No. 1,213,126; Jan. 16; v. 234; p. 1016.
O'Neil, John J. (See Kane and O'Neil.)
O'Neill, William, assignor of one half to S. Meyer, New York, N. Y. Bottle-cap remover. No. 1,212,389; Jan. 16; v. 234; p. 758.
O'Riely, Cornelius J., Los Angeles, Cal. Folding frying-pan. No. 1,210,974; Jan. 2; v. 234; p. 206.
O'Toole, Robert, Birmingham, Ala. Display-rack. No. 1,212,245; Jan. 16; v. 234; p. 707.
Oatley, Henry B., Flushing, and N. T. McKee, Yonkers, assignors to Locomotive Superheater Company, New York, N. Y. Superheater. No. 1,210,519; Jan. 2; v. 234; p. 49.
Obermeier, John, Portland, Oreg. Elastic vehicle-wheel. No. 1,213,774; Jan. 23; v. 234; p. 1272.
Odell, Caleb H., New York, N. Y. Dispensing match-holder. No. 1,212,994; Jan. 16; v. 234; p. 972.
Oehring, August J., assignor of one-half to A. L. Tucker, Chicago, Ill. Antiskid or antislip tread. No. 1,211,619; Jan. 9; v. 234; p. 459.
Oeschger, Walter I., assignor to Retlaw Manufacturing Company, Detroit, Mich. Tank-gage. No. 1,211,482; Jan. 9; v. 234; p. 411.
Ogg, C. E., *et al.* (See Clark, Stuart J., assignor.)
Ohio Brass Company, The. (See Brown, John R., assignor.)
Ohio Brass Company, The. (See Gierding, Charles E., assignor.)
Ohio Brass Company, The. (See Gierding and Brown, assignors.)
Ohmer Fare Register Company. (See Fefell and Ohmer, assignors.)
Ohmer Fare Register Company. (See Ohmer, John F., assignor.)
Ohmer Fare Register Company. (See Ohmer and Sibley, assignors.)
Ohmer Fare Register Company. (See Sibley, Harry J., assignor.)
Ohmer, John F. (See Fefell and Ohmer.)
Ohmer, John F., assignor to Ohmer Fare Register Company, Dayton, Ohio, (incorporated in 1902.) Recording-depository. No. 1,210,972; Jan. 2; v. 234; p. 205.
Ohmer, John F., and H. J. Sibley, assignors to Ohmer Fare Register Company, Dayton, Ohio, (incorporated in 1902.) Transfer printing and issuing machine. No. 1,210,971; Jan. 2; v. 234; p. 205.
Ohmer, John F., and H. J. Sibley, assignors to Ohmer Fare Register Company, Dayton, Ohio, (incorporated in 1902.) Transfer-issuing machine. No. 1,210,973; Jan. 2; v. 234; p. 206.
Ohnstrand, Enoch, assignor to O. M. Edwards, Syracuse, N. Y. Sheet-metal filing-box. No. 1,213,240; Jan. 23; v. 234; p. 1089.
Ojerholm, Arthur W., Worcester, Mass. Fishing-tackle. No. 1,212,388; Jan. 16; v. 234; p. 758.
Oldenbusch, Ernest, Brooklyn, N. Y. Ash-tray and cigar-rest. No. 1,212,995; Jan. 16; v. 234; p. 972.
Oldham, Edward L., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Drill-sharpener. No. 1,211,483; Jan. 9; v. 234; p. 412.
Oldham, Herschel, assignor of two-fifths to F. D. Hall, Escondido, Cal. Internal-combustion engine. No. 1,212,100; Jan. 9; v. 234; p. 624.
Oldham, John, Helm, Ky. Transmission mechanism. No. 1,210,829; Jan. 2; v. 234; p. 154.
Oliver Chilled Plow Works. (See Heylman, Edward M., assignor.)
Oliver, Rolliance W., Eldorado, Ohio. Hog-oiler. No. 1,213,682; Jan. 23; v. 234; p. 1243.
Oliver, Thomas L., Cedar Grove, N. C. Soft-drink-vending machine. No. 1,210,520; Jan. 2; v. 234; p. 49.
Olmstead, Williston A. (See Ward, Joseph E, assignor.)
Olson, Elias. (See Hover, Albert H., assignor.)
Olson, Frederick B., and H. G. Gosselin, Berlin, N. H. Automatic mixture-regulator for carbureters. No. 1,212,244; Jan. 16; v. 234; p. 706.
Olson, Gustaf, *et al.* (See McEwen, Willard M., assignor.)
Olson, Joseph W., Minnewaukan, N. D. Wire-fence tightener and post-anchor. No. 1,213,125; Jan. 16; v. 234; p. 1016.
Olson, Nels L., Detroit, Mich. Demountable rim for vehicle-wheels. No. 1,213,241; Jan. 23; v. 234; p. 1089.
Oman, Charles A., Portland, Oreg. Lawn-mower sharpener. No. 1,211,338; Jan. 2; v. 234; p. 330.
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Feeding mechanism for sewing-machines. No. 1,214,063; Jan. 30; v. 234; p. 1404.
Ordway, Arthur D., Newburyport, Mass. Oven. No. 1,212,390; Jan. 16; v. 234; p. 758.
Ordway, Fred L., assignor of one-half to L. Mansey, Old Orchard, Me. Combined antiswaying and spring-guard device for automobiles. No. 1,212,666; Jan. 16; v. 234; p. 858.
Orl, Joseph E., Bloomfield, N. J. Whistle for calliopes. No. 1,213,402; Jan. 23; v. 234; p. 1146.
Orlowski, Stanyslaw, *et al.* (See Pludowski, Aleksander, assignor.)
Orpin, James H., Providence, R. I. Cuff-button. No. 1,212,667; Jan. 16; v. 234; p. 859.
Orr, Edward E. (See Allen and Orr.)
Orr, John S., Augusta, Ky. Shoe. No. 1,210,521; Jan. 2; v. 234; p. 49.
Orr, William V., Cleveland, Ohio. Vacuum cleaning device. No. 1,210,522; Jan. 2; v. 234; p. 50.
Orr, William V., Cleveland, Ohio. Suction cleaning device. No. 1,210,523; Jan. 2; v. 234; p. 50.
Orr, William V., Cleveland, Ohio. Suction cleaning device. No. 1,210,524; Jan. 2; v. 234; p. 50.
Orr, William V., Cleveland, Ohio. Suction cleaning device. No. 1,210,525; Jan. 2; v. 234; p. 51.
Osborn, Alden E., New York, N. Y. Internal-combustion engine. No. 1,212,391; Jan. 16; v. 234; p. 758.
Osborn, Alden E., New York, N. Y. Transmission-gearing. No. 1,213,531; Jan. 23; v. 234; p. 1191.
Osborn, Carl B., San Marcos, Tex. Toy repeating gun. No. 1,213,683; Jan. 23; v. 234; p. 1243.
Osborne, Robert E., and M. T. Horton, Hamburg, N. Y. Display-rack. No. 1,213,127; Jan. 16; v. 234; p. 1016.
Osgood Bradley Car Company. (See Turner, Charles H., assignor.)
Osgood Company, The. (See Barnhart, Harry J., assignor.)
Oshkosh Manufacturing Company. (See Bush, Charles A., assignor.)
Ostenberg, Pontus, Los Gatos, Cal. Internal-combustion method of forcing or compressing fluids. No. 1,210,679; Jan. 2; v. 234; p. 105.
Osterholm, William C., Chicago, Ill., assignor to International Harvester Company of New Jersey. Metal bushing and forming same. No. 1,213,684; Jan. 23; v. 234; p. 1243.
Osterlein Machine Company, The. (See Osterlein, William, assignor.)
Osterlein, William, assignor to The Osterlein Machine Company, Cincinnati, Ohio. Belt-shifter mechanism. No. 1,210,830; Jan. 2; v. 234; p. 155.
Ostheimer, Adam, Cleveland, Ohio. Thermometer. No. 1,213,939; Jan. 30; v. 234; p. 1359.
Oswald, Walter W., Syracuse, N. Y. Artificial tooth. No. 1,211,749; Jan. 9; v. 234; p. 502.
Otis, Arthur H., Cleveland, Ohio. Elevator-door-operating apparatus. No. 1,210,680; Jan. 2; v. 234; p. 105.
Otto Higel Company *et al.* (See Lundberg, Endfred, assignor.)
Ouellet, Amos J. (See Ouellet, Charles J. and A. J.)
Ouellet, Charles J. and A. J., Cambridge, Mass. Locking device for motor-vehicles. No. 1,211,217; Jan. 2; v. 234; p. 288.
Outerbridge, Cyril N., Charlottesville, Va. Internal-combustion engine. No. 1,211,339; Jan. 2; v. 234; p. 330.
Ovaitt, Nelson C., and F. N. Rosenstengel, assignors to Payograph Company, Detroit, Mich. Paying-machine. No. 1,213,532; Jan. 23; v. 234; p. 1191.
Overly, Charles H., and O. A. Thompson, Independence, Kans. Portable pulling-machine. No. 1,213,242; Jan. 23; v. 234; p. 1090.
Overman, Max C., New York, N. Y. Tire. No. 1,211,958; Jan. 9; v. 234; p. 581.
Overton, Samuel E., South Haven, Mich. Corner-post for cabinets and other furniture and manufacturing same. No. 1,211,620; Jan. 9; v. 234; p. 459.
Ovitz, Frank K. (See Katz and Ovitz.)
Owen, Herbert W., Lewiston, Me., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Apparatus for unwrapping yarn-chains. No. 1,212,668; Jan. 16; v. 234; p. 859.
Owens, Macy A., Walnut Hill, Ill. Tumbler-support. No. 1,213,685; Jan. 23; v. 234; p. 1244.
Owens, William D., New York, N. Y. Means for preventing fires in tanks, &c. No. 1,213,686; Jan. 23; v. 234; p. 1244.
P. Wall Manufacturing Supply Company. (See Flitcroft, James E., assignor.)
P. B. Yates Machine Company. (See Lane, Franklin L., assignor.)
P. C. Murphy Trunk Company. (See Juergens, Gustav H., assignor.)
Paal, Carl, Leipzig, Germany. Hydrogenizing olefinic terpene derivatives. No. 1,210,681; Jan. 2; v. 234; p. 106.
Pacaud, Lucien T., *et al.* (See Gingras, Joseph N., assignor.)
Pacific Burt Co. (See Brown, Horace P., assignor.)
Pacific Gas and Electric Company. (See Kins and Wescott, assignors.)
Pacific Products Company. (See Stillson, George H., assignor.)
Pack, Robert E., Sioux City, Iowa. Chicken-renovator. No. 1,213,129; Jan. 16; v. 234; p. 1017.
Packard Motor Car Company. (See Garvey, Henry A., assignor.)

Page, Dora H., Parowan, Utah. Hose and garment supporter. No. 1,214,859; Jan. 30; v. 234; p. 1506.
Page, Lillian, Packwaukee, Wis. Sewing-machine foot. No. 1,211,340; Jan. 2; v. 234; p. 330.
Page, Logan E., assignor to The Hart & Hutchinson Company, New Britain, Conn. Folding hook. No. 1,213,808; Jan. 23; v. 234; p. 1285.
Page, Richard M., assignor of seven-tenths to C. I. Hays, Denver, Colo. Poison-bottle indicator. No. 1,213,130; Jan. 16; v. 234; p. 1017.
Page, Victor W., Bristol, assignor to The New Departure Manufacturing Company, Hartford, Conn. Coaster-brake. No. 1,212,669; Jan. 16; v. 234; p. 859.
Page, Victor W., assignor to The New Departure Manufacturing Company, Bristol, Conn. Driving mechanism. No. 1,213,243; Jan. 23; v. 234; p. 1090.
Paget, George T. C., *et al.* (See Gunter and Eakin, assignors.)
Pagliarul, Joseph, assignor to J. E. Smyth, Chicago, Ill. Stapling-machine. No. 1,212,546; Jan. 16; v. 234; p. 813.
Painter, William A., and J. S. Halfaker, Columbus, Ohio. Window-box. No. 1,210,682; Jan. 2; v. 234; p. 106.
Palm, Otto, Jr., New York, N. Y. Decalcomania window-sign. No. 1,212,392; Jan. 16; v. 234; p. 759.
Palmer, Charles R. (See Palmer, Richard P., assignor.)
Palmer, Edward H., deceased, Reading, and C. T. Berry, Newton, Mass.; said Berry assignor to said Palmer; E. M. and H. V. Palmer, Reading, and W. H. Roberts, Malden, Mass., executors; said executors assignors to E. M. Palmer and H. V. Palmer, individually. Calculating mechanism. No. 1,212,246; Jan. 16; v. 234; p. 707.
Palmer, Edward H., deceased, and W. S. Kinsley; said Kinsley assignor to said Palmer; E. M. and H. V. Palmer, Reading, and W. H. Roberts, Malden, Mass., executors; said executors assignors to E. M. Palmer and H. V. Palmer, individually. Calculating mechanism. No. 1,212,247; Jan. 16; v. 234; p. 708.
Palmer, Edward H., deceased, and W. S. Kinsley; said Kinsley assignor to said Palmer; E. M. and H. V. Palmer, Reading, and W. H. Roberts, Malden, Mass., executors; said executors assignors to E. M. Palmer and H. V. Palmer, individually. Calculating-machine. No. 1,212,248; Jan. 16; v. 234; p. 708.
Palmer, Edward H., deceased, and W. S. Kinsley; said Kinsley assignor to said Palmer; E. M. and H. V. Palmer, Reading, and W. H. Roberts, Malden, Mass., executors; said executors assignors to E. M. Palmer and H. V. Palmer, individually. Calculating mechanism. No. 1,212,249; Jan. 16; v. 234; p. 709.
Palmer, Edward H., deceased; E. M. and H. V. Palmer, Reading, and W. H. Roberts, Melrose, executors, and W. S. Kinsley, Reading, Mass.; said Kinsley assignor to said E. M. Palmer, H. V. Palmer, and W. H. Roberts, executors; said executors assignors to E. M. Palmer and H. V. Palmer, individually. Calculating apparatus. No. 1,212,251; Jan. 16; v. 234; p. 709.
Palmer, Emil M., *et al.*, executors. (See Palmer and Berry.)
Palmer, Emily M., *et al.*, executors. (See Palmer and Kinsley.)
Palmer, Harold V., *et al.*, executors. (See Palmer and Berry.)
Palmer, Harold V., *et al.*, executors. (See Palmer and Kinsley.)
Palmer, Harvey D. (See Baird and Palmer.)
Palmer, Jonathan, Jr. (See Todd, Samuel J., assignor.)
Palmer, Richard P., assignor of one-half to C. R. Palmer, Cincinnati, Ohio. Transmission control for automobiles. No. 1,212,670; Jan. 16; v. 234; p. 860.
Palmer, Robert, and N. H. Adams, Schenectady, N. Y., assignors to General Electric Company. Method and apparatus for comminuting metal. No. 1,213,896; Jan. 30; v. 234; p. 1346.
Palmer, Townsend, assignor to The I. E. Palmer Company, Middletown, Conn. Canopy. No. 1,214,480; Jan. 30; v. 234; p. 1544.
Pangborn, Frank C. (See Stanfield, Jasper H., assignor.)
Pantasote Leather Company. (See Josephson, Edgar, assignor.)
Paper Vessels Company, The. (See Wright, Wilbur L., assignor.)
Paramount Knitting Company. (See Randall, Edison E., assignor.)
Parent, Rufus A., South Tacoma, Wash. Automatic insulator. No. 1,212,547; Jan. 16; v. 234; p. 814.
Parent, Rufus A., South Tacoma, Wash. Chair-brace. No. 1,212,548; Jan. 16; v. 234; p. 814.
Parent, Rufus A., South Tacoma, Wash. Combination rule, compasses, square, and angle. No. 1,212,549; Jan. 16; v. 234; p. 815.
Paris, Louis F., Paris, France. Secreting fur and hair. No. 1,213,403; Jan. 23; v. 234; p. 1147.
Park, James, Hopkins, Minn. Cutting-machine. No. 1,214,860; Jan. 30; v. 234; p. 1506.
Parker, Clark W., assignor to Cadillac Motor Car Company, Detroit, Mich. Transmission-gearing. No. 1,210,683; Jan. 2; v. 234; p. 106.
Parker, Clark W., assignor to Cadillac Motor Car Company, Detroit, Mich. Shifting device. No. 1,210,684; Jan. 2; v. 234; p. 107.
Parker, Clark W., assignor to Parker Rust Proof Company of America, Detroit, Mich. Plating metals. No. 1,211,218; Jan. 2; v. 234; p. 289.
Parker, George W., Jr. (See Pfeiffer and Parker.)
Parker, Joseph N., Bedford, Va. Motor. No. 1,214,361; Jan. 30; v. 234; p. 1506.
Parker, Lee H., Brookline, and E. K. Standish, Stoughton, assignors, by mesne assignments, to Spray Engineering Company, Boston, Mass. Humidifier. No. 1,213,040; Jan. 30; v. 234; p. 1360.
Parker Rust Proof Company of America. (See Parker, Clark W., assignor.)
Parker, Thomas H., San Francisco, Cal. Filter. No. 1,212,996; Jan. 16; v. 234; p. 972.
Parker, Thorinda V., Minneapolis, Minn. Crochet-hook. No. 1,210,975; Jan. 2; v. 234; p. 206.
Parker, William H., Steilacoom, Wash. Book-match machine. No. 1,210,526; Jan. 2; v. 234; p. 51.
Parkin, Joseph W., Philadelphia, Pa. Antitheft device for motor-cars. No. 1,213,244; Jan. 23; v. 234; p. 1091.
Parks, David C., near Kimmswick, Mo. Cereal-machine. No. 1,213,245; Jan. 23; v. 234; p. 1091.
Parks, Dennis, St. Louis, Mo. Machine for slicing and gouging heel-blanks. No. 1,212,807; Jan. 16; v. 234; p. 906.
Parr, Frank E., Buffalo, N. Y. Faucet. No. 1,210,527; Jan. 2; v. 234; p. 51.
Parrett, Raymond M., Stephenson, Mich. Clasp for hose-supporters. No. 1,212,671; Jan. 16; v. 234; p. 861.
Parselle, Absalom P. (See Reimann and Parselle.)
Parsons, Charles A., Newcastle-on-Tyne, and S. S. Cook, Wallsend, England; said Cook assignor to said Parsons. Water-tube boiler. No. 1,210,976; Jan. 2; v. 234; p. 207.
Parsons, Charles A., and E. Bennett, Newcastle-upon-Tyne, England; said Bennett assignor to said Parsons. Reflector for search-lights. No. 1,210,977; Jan. 2; v. 234; p. 207.
Parsons, Charles A., A. Q. Carnegie, Newcastle-upon-Tyne, and S. S. Cook, Wallsend, England; said Carnegie and said Cook assignors to said Parsons. Construction of turbine and like rotors. No. 1,210,978; Jan. 2; v. 234; p. 208.
Parsons, George C., Cicero, Ill. Document-file. No. 1,214,213; Jan. 30; v. 234; p. 1453.
Paschall, Arthur L., San Simon, Ariz. Dental-floss holder. No. 1,214,362; Jan. 30; v. 234; p. 1506.
Pass & Seymour. (See Morey, Harry J., assignor.)
Pate, William E., Garrysburg, assignor of one-half to W T. Whitehead, Weldon, N. C. Casting device. No. 1,212,997; Jan. 16; v. 234; p. 973.
Patents Experiment Corporation. (See Heany, John A., assignor.)
Patrick, Charles A., Hazel Dell, Ill. Ventilating device. No. 1,213,941; Jan. 30; v. 234; p. 1360.
Paul, William C., assignor to Reflex Co., Newark, N. J. Lamp. No. 1,211,750; Jan. 9; v. 234; p. 502.
Paulsen, Peter, Ute, Iowa. Stock-waterer. No. 1,213,897; Jan. 30; v. 234; p. 1347.
Payne, Clarence Q., New York, N. Y. Pneumatic concentrating-table. No. 1,212,393; Jan. 16; v. 234; p. 759.
Payograph Company. (See Ovaitt and Rosenstengel, assignors.)
Peaks, Vernon J., Aurora, Ill. Inking device. No. 1,211,341; Jan. 2; v. 234; p. 330.
Pearse, Norman P., London, England. Cotton-gin. No. 1,212,672; Jan. 16; v. 234; p. 861.
Pearson, Charles, Chicago, Ill., assignor to International Harvester Company of New Jersey. Mowing-machine. No. 1,213,942; Jan. 30; v. 234; p. 1361.
Pearson, John, Chicago, Ill. Car-roof. No. 1,213,246; Jan. 23; v. 234; p. 1091.
Pecinovsky, Joseph W., Webb City, Mo. Toy helicopter. No. 1,213,943; Jan. 30; v. 234; p. 1361.
Peck Bros. & Co., The. (See Newton, William G., assignor.)
Peck, Caid H., Waverly, N. Y., assignor to Ingersoll-Rand Company, Jersey City, N. J. Tool-retainer for percussive tools. No. 1,211,219; Jan. 2; v. 234; p. 289.
Peck, Caid H., Athens, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Fluid-motor drill. No. 1,212,998; Jan. 16; v. 234; p. 973.
Pedersen, Peder O., and V. Poulsen, Frederiksberg, Denmark, assignors to Federal Telegraph Company. Generator of high-frequency currents. No. 1,214,214; Jan. 30; v. 234; p. 1453.
Peebles, Frank J. (See Cromp and Peebles.)
Peebles, Herbert S. (See Cromp and Peebles.)
Peeler, Floyd R., Chester, S. C. Noiseless beefsteak-conditioner. No. 1,212,999; Jan. 16; v. 234; p. 973.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Insulator-support. No. 1,210,685; Jan. 2; v. 234; p. 107.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Insulator-support. No. 1,210,686; Jan. 2; v. 234; p. 107.

Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Insulator-suspension bracket. No. 1,210,687; Jan. 2; v. 234; p. 108.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Insulator-support. No. 1,212,394; Jan. 16; v. 234; p. 760.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Insulator-supporting bracket. No. 1,212,673; Jan. 16; v. 234; p. 861.
Peirce, James W., and C. L. Hannah; said Peirce assignor to O. S. Tam, Orange, Tex. Silo. No. 1,210,688; Jan. 2; v. 234; p. 108.
Pelham, George, Lead, S. D. Stop device for cameras. No. 1,213,687; Jan. 23; v. 234; p. 1244.
Pellegrino, Menotti, New York, N. Y. Coal-emptier. No. 1,212,252; Jan. 16; v. 234; p. 710.
Pelton, Chauncey R. (See Crane and Pelton.)
Pelucha, John, Newark, N. J. Milk-boiler. No. 1,213,404; Jan. 23; v. 234; p. 1147.
Pen Dell, Charles W., Chicago, Ill., assignor to General Electric Company. Automatic substation. No. 1,211,220; Jan. 2; v. 234; p. 289.
Pena, Manuel V., Cotulla, Tex. Connector and releaser. No. 1,211,342; Jan. 2; v. 234; p. 331.
Penington, James W. (See McDonal, Charles L., assignor.)
Pennsylvania Brake Beam Company. (See Applebaugh and Keller, assignors.)
Penseyres, William H., Buffalo, N. Y. Non-slipping traction device for vehicle-wheels. No. 1,213,131; Jan. 16; v. 234; p. 1017.
Peoples, John M., Harrisburg, Pa. Pillow. No. 1,211,871; Jan. 9; v. 234; p. 547.
Peoria Drill and Seeder Company. (See Steele, Benjamin M., assignor.)
Pepper, De Watt, New Milford, Conn. Adjustable chair. No. 1,212,808; Jan. 16; v. 234; p. 907.
Perew, Louis P., North Tonawanda, N. Y. Hydro-aeroplane. No. 1,213,000; Jan. 16; v. 234; p. 974.
Peris, Nicholas U., Lancaster, Pa. Air-valve for radiators. No. 1,213,405; Jan. 23; v. 234; p. 1147.
Perkins-Campbell Company, The. (See Campbell, Wendell B., assignor.)
Perkins, Charles B., Grand Rapids, Mich. Universal joint. No. 1,211,484; Jan. 9; v. 234; p. 412.
Perkins, Charles H., Laconia, assignor to Crane Manufacturing Company, Lakeport, N. H. Knitting-machine. No. 1,211,872; Jan. 9; v. 234; p. 548.
Perkins, Edwin A., Jamaica, N. Y. Roller-bearing. No. 1,212,253; Jan. 16; v. 234; p. 710.
Perkins, Harry J., Grand Rapids, Mich. Universal joint. No. 1,212,395; Jan. 16; v. 234; p. 760.
Perkins, Julius A., Omaha, Nebr. Roller-bearing. No. 1,212,550; Jan. 16; v. 234; p. 815.
Perkins, Julius A., New York, N. Y. Roller-bearing cage. No. 1,212,551; Jan. 16; v. 234; p. 815.
Perrin, Frederic S., Brooklyn, N. Y., assignor to Splitdorf Electrical Co., Newark, N. J. Electric-circuit-breaking device. No. 1,213,799; Jan. 23; v. 234; p. 1282.
Perrin, Roger W., assignor to Theatre Vending Machine Corporation, New York, N. Y. Vending-machine. No. 1,212,674; Jan. 16; v. 234; p. 862.
Perrone, Pio, Rome, assignor to Societa Anonima Italiana Gio. Ansaldo & C., Genoa, Italy. Gun-carriage shield and the embrasure of casemates. No. 1,213,247; Jan. 23; v. 234; p. 1092.
Perry, Wiley C., Oklahoma, Okla. Music-leaf turner. No. 1,211,751; Jan. 9; v. 234; p. 503.
Pershing, Frederick R., Braddock, Pa. Food-chopper. No. 1,211,343; Jan. 2; v. 234; p. 331.
Person, Albert W. and J. E., Harvard, Nebr. Electric heater. No. 1,212,254; Jan. 16; v. 234; p. 711.
Person, Julius E. (See Person, Albert W. and J. E.)
Peters, Arnold G., Minneapolis, Minn. Lamp-box. No. 1,214,363; Jan. 30; v. 234; p. 1507.
Peters, Hubert, assignor of one-half to F. M. Bill, Edmonton, Alberta, Canada. Indicator. No. 1,213,406; Jan. 23; v. 234; p. 1147.
Peters, John F., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Connector for reactance-coils. No. 1,210,528; Jan. 2; v. 234; p. 52.
Peters, Matthew J., St. Louis, Mo. Packing-ring. No. 1,211,344; Jan. 2; v. 234; p. 331.
Petersen, Carl M. (See Hall and Petersen.)
Petersen, Gustav A., Viborg, S. D. Shoe-closure. No. 1,213,533; Jan. 23; v. 234; p. 1192.
Petersen, Marinus, Norma, N. D. Motor-sleigh. No. 1,211,345; Jan. 2; v. 234; p. 331.
Peterson, George A., Oakland, Cal. Pipe-coupling. No. 1,213,132; Jan. 16; v. 234; p. 1018.
Peterson, Jonathan, Brooklyn, N. Y., assignor to Combination Machine Company. Fiber-board container. No. 1,211,873; Jan. 9; v. 234; p. 548.
Peterson, Jonathan, Brooklyn, N. Y., assignor to Combination Machine Company. Fiber-board container. No. 1,212,147; Jan. 9; v. 234; p. 642.
Peterson, Joseph E., assignor of one-half to C. A. Poole, Norwich, Conn. Gun-barrel-drilling machine. No. 1,211,621; Jan. 9; v. 234; p. 450.
Peterson, Nell, Whitewater, Colo. Child's saddle. No. 1,214,364; Jan. 30; v. 234; p. 1507.
Peterson, Ole B., Jackson, Minn. Grain-shocker. No. 1,214,215; Jan. 30; v. 234; p. 1453.
Peterson, Oscar E., Brunswick, Nebr. Bag-holder. No. 1,214,064; Jan. 30; v. 234; p. 1404.
Peterson, Wilford D. (See Morris, Frank L., assignor.)
Petrocchi, Michael, assignor to Rose Patch & Label Company, Grand Rapids, Mich. Label cutting and folding machine. No. 1,211,489; Jan. 9; v. 234; p. 413.
Petroleum Products Company. (See Felt, Willard O., assignor.)
Petrzilka, Josef, Racine, assignor, by mesne assignments, to The Nash Motors Company, Kenosha, Wis. Wire-seat structure. No. 1,213,898; Jan. 30; v. 234; p. 1347.
Pettibone, Mulliken Company. (See Strom, Eugene N., assignor.)
Pettigrew, John. (See More and Pettigrew.)
Petty, Francies M., assignor of one-half to J. E. Simpson, Maud, Okla. Gate-latch. No. 1,213,899; Jan. 30; v. 234; p. 1347.
Pettyjohn, George W., Woodbury, N. J. Convertible chair. No. 1,212,675; Jan. 16; v. 234; p. 862.
Pfahler, Soame E., Hopewell, Va. Concrete mixer and conveyer. No. 1,213,407; Jan. 23; v. 234; p. 1147.
Pfahler, Soame E., Hopewell, Va. Conveyer-bucket. No. 1,213,408; Jan. 23; v. 234; p. 1148.
Pfeifer, Frederick W., St. Louis, Mo. Folding hod-stand. No. 1,213,409; Jan. 23; v. 234; p. 1148.
Pfeiffer, Charles G., and G. W. Parker, Jr., Philadelphia, Pa. Elevator. No. 1,212,396; Jan. 16; v. 234; p. 760.
Pfeiffer, Fred E., Akron, Ohio. Gas-turbine. No. 1,210,831; Jan. 2; v. 234; p. 135.
Pfeiffer, Isadore F., Altoona, Pa. Scale. No. 1,210,689; Jan. 2; v. 234; p. 108.
Pfeiffer, Oscar J., Denver, Colo. Draft-regulating appliance. No. 1,210,529; Jan. 2; v. 234; p. 52.
Pfeiffer, Otto G., St. Louis, Mo. Reversing-gearing for washing-machines. No. 1,211,221; Jan. 2; v. 234; p. 290.
Phare, John J., Cleveland, Ohio. Mop-holder. No. 1,211,485; Jan. 9; v. 234; p. 412.
Philadelphia Drying Machinery Company, The. (See Sibson and Allsop, assignors.)
Philbin, James, Seattle, Wash. Portable sleeping-crib. No. 1,210,690; Jan. 2; v. 234; p. 109.
Philip, George, North Chicago, Ill. Window-washing appliance. No. 1,212,255; Jan. 16; v. 234; p. 711.
Philip Strobel & Sons. (See Brown, Harlow R., assignor.)
Philips, Herman B., assignor to R. S. Philips, New York, N. Y. Therapeutic apparatus. No. 1,213,001; Jan. 16; v. 234; p. 974.
Philips, Ralph S. (See Philips, Herman B., assignor.)
Phillips, Bertram L., Brockley, London, England. Animal-trap. No. 1,213,248; Jan. 23; v. 234; p. 1092.
Phillips, David, Daytona, Fla. Fruit-seeder. No. 1,212,101; Jan. 9; v. 234; p. 625.
Phillips, E. H. (See Hard, Raymond E., assignor.)
Phillips, Edward S. J., New York, N. Y. Fender for ships' piers. No. 1,210,832; Jan. 2; v. 234; p. 155.
Phillips, Ellis J. G., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill. Means for suspending sliding doors. No. 1,213,249; Jan. 23; v. 234; p. 1092.
Phillips, Francis W., Worksop, England. Direction-finder and the like. No. 1,213,534; Jan. 23; v. 234; p. 1192.
Phillips, Gerard J., and L. A. Keller, Sydney, New South Wales, Australia. Davit and means for holding and releasing ships' boats, rafts, and the like. No. 1,210,530; Jan. 2; v. 234; p. 53.
Phillips, John W., Hendon, England. Apparatus for enabling internal-combustion engines to be readily started. No. 1,214,365; Jan. 30; v. 234; p. 1507.
Phillips, Walter W., London, England. India-rubber pad for the soles and heels of boots and shoes. No. 1,214,065; Jan. 30; v. 234; p. 1405.
Piazza, Celso, Marseille, France. Ice-chest or refrigerator. No. 1,210,833; Jan. 2; v. 234; p. 156.
Pickard, Greenleaf W., Amesbury, Mass., assignor to Wireless Specialty Apparatus Company, New York, N. Y. Means for receiving intelligence communicated by electric waves. No. 1,213,250; Jan. 23; v. 234; p. 1093.
Pickering, Oscar W., Springfield, Mass., assignor to Pickering Paint and Pigment Company. Magnesium-containing pigment and paint. No. 1,211,346; Jan. 2; v. 234; p. 332.
Pickering Paint and Pigment Company. (See Pickering, Oscar W., assignor.)
Pickop, George B., New Haven, assignor to Malleable Iron Fittings Company, Branford, Conn. Bung-ring or spud. No. 1,211,486; Jan. 9; v. 234; p. 413.
Piel, Gottfried. (See Halterbeck, John, assignor.)
Pieper, Alphonse F. (See Pieper, Oscar H. and A. F.)
Pieper, Oscar H. and A. F., Rochester, N. Y. Electric controlling mechanism. No. 1,211,752; Jan. 9; v. 234; p. 503.
Pierce-Arrow Motor Car Company, The. (See Sheppy, Charles L., assignor.)
Pierce, Frank C., Campbird, Colo. Insulator. No. 1,213,002; Jan. 16; v. 234; p. 975.
Pierce, George L. (See Pierce, Lillian M., assignor.)
Pierce-Hammond Automatic Sprinkler & Heating Company. (See Hammond, Wilberforce B., assignor.)
Pierce, Lillian M., assignor of one-half to G. L. Pierce, New York, N. Y. Adjustable stool for baby-carriages. No. 1,213,251; Jan. 23; v. 234; p. 1093.
Pierman, Alexander N., Newark, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Phonograph-reproducer. No. 1,211,874; Jan. 9; v. 234; p. 549.

Piernay, Walter, assignor to Stettiner Chamotte-Fabrik Aktien-Gesellschaft Vormals Didier, Stettin, Germany. Furnace for burning refuse. No. 1,211,875; Jan. 9; v. 234; p. 549.

Pierson, Ludvig B., Poteet, Tex. Silo construction. No. 1,212,397; Jan. 16; v. 234; p. 761.

Pigeon, Albert M., assignor to Pigeon Machine Company, Philadelphia, Pa. Circular fashioning knitting-machine. No. 1,213,003; Jan. 16; v. 234; p. 975.

Pigeon, Albert M., assignor to Wildman Mfg. Co., Norristown, Pa. Knitting-machine. No. 1,213,004; Jan. 16; v. 234; p. 975.

Pigeon Machine Company. (See Pigeon, Albert M., assignor.)

Pigione, Emanuel, New York, N. Y. Folding-machine. No. 1,213,900; Jan. 30; v. 234; p. 1347.

Pigott, Reginald J. S., Bridgeport, Conn., assignor of one-half to C. F. Dixon, Buffalo, N. Y. Pressure or vacuum controlled tripping mechanism. No. 1,210,979; Jan. 2; v. 234; p. 208.

Pike, Robert D., San Francisco, Cal. Grinding-machine. No. 1,212,552; Jan. 16; v. 234; p. 816.

Pilcher, John A., Roanoke, Va. Car-truck bolster. No. 1,213,252; Jan. 23; v. 234; p. 1094.

Pilling Artificial Limb Company. (See Pilling and Jewett, assignors.)

Pilling, Charles J., Lansdowne, and F. H. Jewett, assignors to Pilling Artificial Limb Company, Philadelphia, Pa. Artificial leg. No. 1,211,222; Jan. 2; v. 234; p. 290.

Pillings, John H., assignor of one-half to B. H. Noyes, Dayton, Ohio. Automatic operating device for typewriters. No. 1,213,688; Jan. 23; v. 234; p. 1244.

Pillsbury, Albert H., assignor of one-half to V. Czeskleba, London Station, Wis. Obstetrical instrument. No. 1,213,005; Jan. 16; v. 234; p. 976.

Pinckney, Carnot B., Savannah, Ga. Window-sash. No. 1,211,950; Jan. 9; v. 234; p. 581.

Pingree, George A., and R. A. Uhlin, Seattle, Wash. Air-tube and dirt-trap for oil-burners. No. 1,210,980; Jan. 2; v. 234; p. 208.

Pingree, George A., and R. A. Uhlin, Seattle, Wash. Oil-burner-air-supply regulator. No. 1,210,981; Jan. 2; v. 234; p. 209.

Pinkerton, Edward E., Chicago, Ill. Folding box. No. 1,211,223; Jan. 2; v. 234; p. 291.

Pioneer Box Company. (See Stewart, James K., assignor.)

Pipe, Barney, San Diego, Cal. Safety attachment for faucets. No. 1,212,102; Jan. 9; v. 234; p. 625.

Piper, George A., Omaha, Nebr. Lifting-jack and pulling device. No. 1,213,800; Jan. 23; v. 234; p. 1282.

Pippert, Willis, Rumford, Me. Printing-plate clamp. No. 1,214,216; Jan. 30; v. 234; p. 1454.

Pittsburgh Air Brake Company. (See Snyder, Jacob R., assignor.)

Pittsburgh Plate Glass Company. (See Slingluff, Harry G., assignor.)

Pittsburgh Steel Foundry Company. (See Allison, John, assignor.)

Place, Charles I., Sharon, Conn. Carbureter. No. 1,214,366; Jan. 30; v. 234; p. 1507.

Place, Dennis C., Brooklyn, N. Y. Conveyer. No. 1,211,224; Jan. 2; v. 234; p. 291.

Plante, Joseph, Verdun, Quebec, Canada. Annealing-lee. No. 1,214,217; Jan. 30; v. 234; p. 1454.

Plastic Art Novelty and Specialty Co. (See Jaeger, Christian, assignor.)

Platt, Haviland H. (See Reese and Platt.)

Pleister, Henry W. (See Newhall and Pleister.)

Pletz, Arthur C., Cincinnati, Ohio. Tapping or thread-cutting device. No. 1,213,253; Jan. 23; v. 234; p. 1094.

Plofchan, Andrew, and J. Zuraw, Detroit, Mich. Camera-support. No. 1,211,347; Jan. 2; v. 234; p. 332.

Pludowski, Aleksander, assignor of one-third to S. Orlowski and one-third to W. Szczepaniak, Waterbury, Conn. Bath-brush. No. 1,211,225; Jan. 2; v. 234; p. 292.

Pludowski, Aleksander, assignor of one-fourth to W. Wodzinski and one-half to B. Grebziszewki, Waterbury, Conn. Lamp-extinguisher. No. 1,211,226; Jan. 2; v. 234; p. 292.

Plume & Atwood Manufacturing Company, The. (See Boomer, George A., assignor.)

Plumley, Raymond L., Wilmington, Del., assignor to Frederick Osann Company, New York, N. Y. Sewing-machine. No. 1,212,256; Jan. 16; v. 234; p. 711.

Plummer, Frank J., Portland, Me. Car-fender. No. 1,212,103; Jan. 9; v. 234; p. 626.

Poindexter, Robert W., Jr. (See Huber and Poindexter.)

Poister, James C., Topeka, Kans. Safety-razor-blade holder. No. 1,213,133; Jan. 16; v. 234; p. 1018.

Pokorny, Emanuel, McKees Rocks, Pa. Lathe-operating mechanism. No. 1,212,257; Jan. 16; v. 234; p. 712.

Polk, Claude H., Anaconda, Mont. Loading apparatus for powdered materials and the like. No. 1,211,348; Jan. 2; v. 234; p. 332.

Pollak, Fritz, Berlin, Germany. Production of resinlike condensation products. No. 1,210,982; Jan. 2; v. 234; p. 209.

Pollak, Fritz, Berlin, Germany. Manufacture of insoluble condensation products. No. 1,211,227; Jan. 2; v. 234; p. 293.

Polley, J. A. (See La Fleleo, John, assignor.)

Pomeroy, Frederick H., assignor to Safety Gas Lighter Company, Haverhill, Mass. Gas-igniter. No. 1,212,155; Jan. 9; v. 234; p. 645.

Pomeroy, Theodore T., assignor to Safety Gas Lighter Co., Haverhill, Mass. Pyrophoric renewal for gas-lighters. No. 1,212,156; Jan. 9; v. 234; p. 646.

Poole, Charles A. (See Peterson, Joseph E., assignor.)

Poole, Fred, Jewell City, Kans. Liquid-heater. No. 1,210,691; Jan. 2; v. 234; p. 109.

Poole, Fred, Jewell, Kans. Liquid-heater. No. 1,213,254; Jan. 23; v. 234; p. 1095.

Popper, & Co. Gesellschaft mit beschränkter Haftung. (See Zollinger, Adalbert, assignor.)

Porrazzo, Frank. (See Porrazzo, John and F.)

Porrazzo, John and F., New York, N. Y. Folding table. No. 1,210,983; Jan. 2; v. 234; p. 209.

Porter, Elbert B., Penn Yan, N. Y. Aspirator. No. 1,213,901; Jan. 30; v. 234; p. 1348.

Porter, Roswell H., Weston, Mich. Window-screen. No. 1,212,676; Jan. 16; v. 234; p. 863.

Position-Light Signal Company, The. (See Coleman, John P., assignor.)

Position-Light Signal Company, The. (See Rudd, Alexander H., assignor.)

Possons, Minard A., Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo. Forming pipe-taps. No. 1,210,692; Jan. 2; v. 234; p. 109.

Potter, James C., Pawtucket, R. I. Power-operated lathe-chuck. No. 1,211,622; Jan. 9; v. 234; p. 459.

Potter, John C., Alexandria, S. D. Oil-can. No. 1,211,960; Jan. 9; v. 234; p. 582.

Potter & Johnston Machine Company. (See Curtis, Myron S., assignor.)

Potter and Johnston Machine Company. (See Winter, William R., assignor.)

Potter, Winfield S., Pittsburgh, Pa. Heat treatment and manufacture of woven screens. No. 1,212,553; Jan. 16; v. 234; p. 816.

Potter, Winfield S., assignor of one-half to L. M. Slack, New York, N. Y. Carbon-steel car-wheel. No. 1,213,902; Jan. 30; v. 234; p. 1348.

Poull, Theodore, Birmingham, Ala. Roof-crown for open-hearth furnaces. No. 1,214,066; Jan. 30; v. 234; p. 1405.

Poulsen, Valdemar. (See Pedersen and Poulsen.)

Pound, George W. (See Huber, John F., assignor.)

Pouvailsmith Corporation. (See Smith, Grant E., assignor.)

Powell, Ambrose E., Caron, Saskatchewan, Canada. Tire-shoe. No. 1,213,410; Jan. 23; v. 234; p. 1148.

Powell, Elizabeth D., Titusville, Fla. Hat-pin. No. 1,213,903; Jan. 30; v. 234; p. 1349.

Powell, Forrest M., assignor of one-fourth to J. P. Crangle and one-fourth to E. Davis, Chicago, Ill. Furnace draft-regulator. No. 1,213,944; Jan. 30; v. 234; p. 1361.

Powell, Frank D., assignor to The Lamson Company, Boston, Mass. Spread-wire carrier-despatch system. No. 1,210,984; Jan. 2; v. 234; p. 210.

Powell, Frank D., assignor to The Lamson Company, Boston, Mass. Upsend wire-line carrier. No. 1,213,006; Jan. 16; v. 234; p. 976.

Powell, William H., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Dynamo-electric machine. No. 1,214,067; Jan. 30; v. 234; p. 1405.

Poynter, William B., assignor of one-half to W. E. Mayer, Cincinnati, Ohio. Photographic flash-light apparatus. No. 1,210,834; Jan. 2; v. 234; p. 156.

Prache, Charles, Paris, France. Electrical control mechanism. No. 1,212,554; Jan. 16; v. 234; p. 817.

Pragst, George G., assignor to D. & W. Fuse Company, Providence, R. I. Magnetic chuck. No. 1,212,555; Jan. 16; v. 234; p. 817.

Prahl, Hugo, Dusseldorf, Germany. Clockwork-escapement for mechanical time-fuses. No. 1,214,068; Jan. 30; v. 234; p. 1405.

Prahl, Hugo, Dusseldorf, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Mechanical time-fuse. No. 1,214,069; Jan. 30; v. 231; p. 1406.

Prahl, Willi A., Salt Lake City, Utah. Stovepipe-fastener. No. 1,211,349; Jan. 2; v. 234; p. 333.

Prater, Solomon B. (See Fischer, Leigh H., assignor.)

Pratt, Charles R., Montclair, N. J., assignor to Universal Speed Control Company. Means for controlling and synchronizing fluid-gears. No. 1,211,961; Jan. 9; v. 234; p. 582.

Pratt, John T. (See Greuter, Charles R., assignor.)

Pratt & Whitney Company. (See Hanson, Bengt M. W., assignor.)

Pratt, William E., Chicago, Ill. Gas-tank holder. No. 1,210,985; Jan. 2; v. 234; p. 210.

Precision Thermometer & Instrument Company. (See Waser, Carl R., assignor.)

Premier Manufacturing Company. (See Donaldson, Margaret, assignor.)

Prendergast, Alois P. (See Brown and Kain, assignors.)

Prentice, George E., New Britain, Conn. Making snap-fasteners. No. 1,214,481; Jan. 30; v. 234; p. 1545.

Prescott, Arthur T., East Orange, N. J., assignor to George H. Frothingham Company, New York, N. Y. Turnover door. No. 1,213,945; Jan. 30; v. 234; p. 1362.

Pressed Steel Car Company. (See Lockwood, Burns D., assignor.)

Preston, John E., London, England. Galvanic battery. No. 1,213,535; Jan. 23; v. 234; p. 1192.

Price, Bingham S., Rawlins, Wyo. Valve. No. 1,211,876; Jan. 9; v. 234; p. 549.

Price, David R., Winthrop, assignor to G. K. Woodworth, trustee, Brookline, Mass. Inductance-coil. No.1,213,689; Jan. 23; v. 234; p. 1245.

Price, Joseph A., New York, N. Y. Device for attaching and detaching electric bulbs. No. 1,210,835; Jan. 2; v. 234; p. 156.

Price, Raymond B., New York, N. Y., assignor to Rubber Regenerating Company. Manufacture of articles embodying fibrous filaments and vulcanizable plastics. No. 1,211,228; Jan. 2; v. 234; p. 293.

Price, Raymond B., New York, N. Y., assignor to Rubber Regenerating Company. Making conveyer-belts. No. 1,211,350; Jan. 2; v. 234; p. 333.

Price, Raymond B., New York, N. Y., assignor to Rubber Regenerating Company. Manufacturing rubber articles. No. 1,211,351; Jan. 2; v. 234; p. 333.

Price, Raymond B., New York, N. Y., assignor to Rubber Regenerating Company. Treating sheets of vulcanizable plastics. No. 1,211,487; Jan. 9; v. 234; p. 413.

Price, Raymond B., New York, N. Y., assignor to Rubber Regenerating Company. Rubber boot or shoe and manufacturing same. No. 1,211,962; Jan. 9; v. 234; p. 582.

Price, Raymond B., New York, and W. J. Steinle, Elmhurst Heights, N. Y., assignors to Rubber Regenerating Company. Treatment of materials. No. 1,211,370; Jan. 2; v. 234; p. 338.

Price, William W., Dayton, Ohio. Apparatus for forming flanged annular bands or sleeves. No. 1,210,531; Jan. 2; v. 234; p. 53.

Primm, James H., Chicago, Ill. Ironing-board. No. 1,213,255; Jan. 23; v. 234; p. 1095.

Primsler, Karl A., *et al.* (See Smolik, Mathias, assignor.)

Prince, Bianca and H., New York, N. Y. Combined brassière and girdle. No. 1,212,677; Jan. 16; v. 234; p. 863.

Prince, Carl P. (See Hettinger and Prince.)

Prince, Henrietta. (See Prince, Bianca and H.)

Prince, John. (See Nilson and Prince.)

Pritchard, Herbert, Downingtown, Pa. Railway. No. 1,213,946; Jan. 30; v. 234; p. 1362.

Prizma Incorporated. (See Wohl and Mayer, assignors.)

Process Paper Manufacturing Company. (See McCloskey, Alfred C., assignor.)

Procker, Leopold, New York, N. Y. Combination faucet and filter. No. 1,212,104; Jan. 9; v. 234; p. 626.

Proctor, John A., Revere, Mass., assignor to Wireless Specialty Apparatus Company, Boston, Mass. Radio receiving apparatus. No. 1,211,963; Jan. 9; v. 234; p. 582.

Prohofsky, August. (See Nasse, Robert, assignor.)

Proske, Theodore H., Denver, Colo. Apparatus for forming lugs upon a drill-steel. No. 1,214,070; Jan. 30; v. 234; p. 1406.

Prussner, Henry F., P. Nash, and J. Manger, Brooklyn, N. Y. Window. No. 1,213,947; Jan. 30; v. 234; p. 1363.

Pruyn, Frederic, Albany, N. Y., and W. J. De Reamer, Verona, assignors to Seamless Products Corporation, East Orange, N. J. Machine for making articles from pulp. No. 1,211,229; Jan. 2; v. 234; p. 293.

Pullard, Waldo E., Cumberland, Md. Baggage-check protector. No. 1,213,007; Jan. 16; v. 234; p. 977.

Pupke, Arnold W., New York, N. Y. Machine for the continuous manufacture of cement and other tile or pipe. No. 1,211,230; Jan. 2; v. 234; p. 294.

Purcell, John C., Bellevue, Ohio. Wrench. No. 1,213,008; Jan. 16; v. 234; p. 977.

Puritan Chemical Company. (See Emott, James T., assignor.)

Purple, George F., La Grange, Ill., assignor to Flexible Steel Lacing Company, Chicago, Ill. Belt-fastening. No. 1,212,258; Jan. 16; v. 234; p. 712.

Putnam, Alfred R., Valparaiso, Ind. Drag-saw. No. 1,212,678; Jan. 16; v. 234; p. 863.

Pye, David W. (See McNally, Leo F., assignor.)

Pyle-National Electric Headlight Company. (See Dake, Charles W., assignor.)

Pyros, Tom A., Pittsburgh, Pa. Antiskidding device. No. 1,213,256; Jan. 23; v. 234; p. 1095.

Quackenbush, Cleveland H. (See Fagan and Quackenbush.)

Queen, D. T., *et al.* (See Clark, Stuart J., assignor.)

Quelle, Ralph J., assignor of one-half to J. Moir, Burlington, Iowa. Valve system. No. 1,213,536; Jan. 23; v. 234; p. 1193.

Quimby, George R. (See Knight and Quimby.)

Quinane, Michael, Hoboken, N. J. Food and preparing the same. No. 1,214,218; Jan. 30; v. 234; p. 1454.

Quinn, Martin J., Toronto, Ontario, Canada. Foot or check valve. No. 1,211,877; Jan. 9; v. 234; p. 550.

Quinn, Patrick F., New York, N. Y. Ash receptacle and sifter. No. 1,213,009; Jan. 16; v. 234; p. 977.

Quinones, Alfredo, New Orleans, La. Educational board. No. 1,213,690; Jan. 23; v. 234; p. 1245.

R. Hoe and Co. (See White, Bruce C., assignor.)

Raabe, Henry E. A., Jersey City, N. J. Internal-combustion engine. No. 1,211,231; Jan. 2; v. 234; p. 295.

Raber, John E., Canton, Ohio. Window-guard. No. 1,213,537; Jan. 23; v. 234; p. 1193.

Raber, John E., Canton, Ohio. Hinge. No. 1,213,538; Jan. 23; v. 234; p. 1194.

Radiguer, Charles, assignor to The Societe Anonyme des Etablissements Delaunay-Belleville, St.-Denis, France. Steam-generator. No. 1,212,556; Jan. 16; v. 234; p. 817.

Radliff, Charles D., Benchland, Mont. Automobile running-gear. No. 1,213,904; Jan. 30; v. 234; p. 1349.

Radovan, Martin F., McCarthy, Alaska. Rail-joint. No. 1,213,010; Jan. 16; v. 234; p. 978.

Ragan, Edward M. (See Kent, Burton M., assignor.)

Ragotzky, Philip C., Philadelphia, Pa. Device for connecting outside wires to buildings. No. 1,213,011; Jan. 16; v. 234; p. 978.

Rail Joint Company, The. (See Bradley, William J., assignor.)

Railway Devices Company. (See Campbell, Sterling H., assignor.)

Rainone, Pasquale, New York, N. Y. Lock. No. 1,213,691; Jan. 23; v. 234; p. 1245.

Rakestraw, Thomas G., Detroit, Mich. Steam-trap and boiler-feeder. No. 1,211,753; Jan. 9; v. 234; p. 504.

Ralph, Roy A., Auburn, N. Y. Transmission-gearing and shifting means therefor. No. 1,212,398; Jan. 16; v. 234; p. 761.

Ramsey, Clifford H., assignor to James L. Morrison Machine Co., Paterson, N. J. Hydro-extractor. No. 1,210,836; Jan. 2; v. 234; p. 157.

Ramsey, John A., New York, N. Y. Film-printing machine. No. 1,212,259; Jan. 16; v. 234; p. 713.

Randall, Chester J., Naugatuck, Conn., assignor to Boston Rubber Shoe Company. Vulcanizing plastics. No. 1,213,905; Jan. 30; v. 234; p. 1349.

Randall, Edison E., Kankakee, assignor to Paramount Knitting Company, Chicago, Ill. Knitting-machine. No. 1,210,837; Jan. 2; v. 234; p. 157.

Randolph, Harry, *et al.* (See Stephens, James O., assignor.)

Randolph, Harry H. (See Malinovszky, Andrew, assignor.)

Ranger, Stanley G. (See Lawrence, James, assignor.)

Rapid Bottle Washer Co., The. (See Cole, Ira, assignor.)

Rash, Elsie M., New Providence, Iowa. Garment. No. 1,212,679; Jan. 16; v. 234; p. 863.

Rasmus, Peter A., Paxton, Ill. Latch. No. 1,214,071; Jan. 30; v. 234; p. 1406.

Rasmussen, Andrew, Racine, Wis. Power hacksaw-machine. No. 1,211,964; Jan. 9; v. 234; p. 583.

Rassman, Ernest F., Charlottesville, Va. Can-washing machinery. No. 1,211,878; Jan. 9; v. 234; p. 550.

Rassmann, Hugo C., Beaver Dam, Wis. Watering device for cattle. No. 1,210,693; Jan. 2; v. 234; p. 110.

Rathburn, Carl C., Westwood, Cal. Motor-adjusting base. No. 1,211,352; Jan. 2; v. 234; p. 333.

Ratliff, Claude H., Plateau, Ala. Switch-operating mechanism. No. 1,210,838; Jan. 2; v. 234; p. 157.

Raudebaugh, James D., San Diego, Cal. Novelty. No. 1,213,775; Jan. 23; v. 234; p. 1272.

Rauh, Lester, New York, N. Y. Bathing-suit. No. 1,213,257; Jan. 23; v. 234; p. 1095.

Rausch, Carl, Leipzig, Germany. Crippling-machine. No. 1,214,219; Jan. 30; v. 234; p. 1455.

Rautzenburg, Freida, Philadelphia, Pa. Soap-receptacle. No. 1,211,353; Jan. 2; v. 234; p. 334.

Rawlings, William F., Cleveland, Ohio. Combined automobile-jack and tire-pump. No. 1,213,012; Jan. 16; v. 234; p. 978.

Rawls, Paul C., Des Moines, Iowa. Crystal-rectifier. No. 1,211,754; Jan. 9; v. 234; p. 504.

Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky. Planter. No. 1,213,411; Jan. 23; v. 234; p. 1149.

Ray, Frederick, Short Hills, N. J. Expansion-joint. No. 1,213,906; Jan. 30; v. 234; p. 1349.

Ray, Mark G., Jacksonville, Fla. Heater. No. 1,213,013; Jan. 16; v. 234; p. 978.

Ray, Paul J., Lakewood, Ohio. Electrical compression resistance unit. No. 1,213,809; Jan. 23; v. 234; p. 1285.

Raymond Concrete Pile Company. (See Upson, Maxwell M., assignor.)

Raymond, Daniel R., Los Angeles, Cal. Vehicle-spring. No. 1,210,839; Jan. 2; v. 234; p. 158.

Read, Elmer J., Rutherford, N. J. Jointed toy figure. No. 1,211,232; Jan. 2; v. 234; p. 295.

Reade, William A., and F. Metcalf, assignors to Ludlow Typograph Company, Cleveland, Ohio. Typograph mechanism. No. 1,212,680; Jan. 16; v. 234; p. 864.

Reagan, James, Philadelphia, Pa. Boiler and other furnace. No. 1,211,755; Jan. 9; v. 234; p. 504.

Recker, Adolph C., Oakville, assignor to Waterbury Mfg. Co., Waterbury, Conn. Lock-nut. No. 1,210,582; Jan. 2; v. 234; p. 54.

Rector Engine Corporation. (See Rector, Enoch, assignor.)

Rector, Enoch, assignor to Rector Engine Corporation, New York, N. Y. Hydrocarbon-burner. No. 1,213,412; Jan. 23; v. 234; p. 1149.

Red, Christopher C., and O. G. Ross, Turlock, Cal. Machine-brake. No. 1,210,986; Jan. 2; v. 234; p. 210.

Reddig, Charles E., Detroit, Mich. Differential gearing. No. 1,213,258; Jan. 23; v. 234; p. 1096.

Redding, Harry B., assignor of one-fourth to M. A. Fritts, one-half to D. A. Diemert, and one-fourth to The Cleveland Steel Valve Co., Cleveland, Ohio. Steel-plate gate-valve. No. 1,213,259; Jan. 23; v. 234; p. 1096.

Redheffer, Charles R., Philadelphia, Pa. Shoe-horn. No. 1,213,948; Jan. 30; v. 234; p. 1363.

Reece Button Hole Machine Company, The. (See Hagelstein, Christian H. T., assignor.)
Reece Button Hole Machine Company, The. (See Kiewicz, John, assignor.)
Reece Button Hole Machine Company, The. (See St. Clair, Lawrence, assignor.)
Reece Button Hole Machine Company, The. (See Zaleski, Frank, assignor.)
Reece Shoe Machinery Company, The. (See Schoenky, August R., assignor.)
Reece Shoe Machinery Company. (See Zaleski, Frank, assignor.)
Reed-Prentice Company. (See Newton and Hendrickson, assignors.)
Reed, Walter C., Dalton, assignor to The Telelectric Company, Pittsfield, Mass. Electrically-operated piano-player. No. 1,211,623; Jan. 9; v. 234; p. 460.
Reed, William A., Chelsea, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Balancing device. No. 1,211,488; Jan. 9; v. 234; p. 413.
Reeps, Charles O. (See Leonard and Reeps.)
Reese, George A., Chicago, Ill. Golf-stick grip. No. 1,213,014; Jan. 16; v. 234; p. 978.
Reese, Charles, Stapleton, N. Y., assignor to Nevins-Church Press. Advertising-card. No. 1,213,015; Jan. 16; v. 234; p. 979.
Reese, Harvey L., Sharon Hill, and H. H. Platt, Wallingford, Pa., assignors to Reese-Platt Engine Company, Wilmington, Del. Internal-combustion engine. No. 1,212,105; Jan. 9; v. 234; p. 626.
Reese-Platt Engine Company. (See Reese and Platt, assignors.)
Reesman, John S., Highland Park, Ill. Clothes-pin holder. No. 1,214,367; Jan. 30; v. 234; p. 1508.
Reeve, Henry E., New York, N. Y. Thermostat. No. 1,212,260; Jan. 16; v. 234; p. 713.
Reeves, David V., East Dedham, Mass. Submarine life-boat. No. 1,210,840; Jan. 2; v. 234; p. 158.
Reeves, Frank N., Newark, N. J., and A. E. Lundell, New York, N. Y., assignors, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,212,809; Jan. 16; v. 234; p. 907.
Regex Co. (See Paul, William C., assignor.)
Regar Brass Manufacturing Company, The. (See Regar, Joseph, assignor.)
Regar, Joseph, assignor to The Regar Brass Manufacturing Company, Cleveland, Ohio. Faucet attachment. No. 1,214,220; Jan. 30; v. 234; p. 1455.
Reger, Conrad, Danville, Pa. Antiskidding grip-tread for vehicle-wheels. No. 1,213,949; Jan. 30; v. 234; p. 1363.
Reid, William O., Strawn, Tex. Cut-off lock. No. 1,211,756; Jan. 9; v. 234; p. 505.
Reifsnyder, James D., Olney, assignor to Stokes & Smith Company, Summerdale, Pa. Rank-bending machine. No. 1,211,757; Jan. 9; v. 234; p. 505.
Reilly, Mary G., Denver, Colo. Mop. No. 1,210,841; Jan. 2; v. 234; p. 158.
Reimann, Robert, and A. P. Parselle, Birmingham, England. Manufacture of seamless tubes. No. 1,213,539; Jan. 23; v. 234; p. 1194.
Reiner, Morris, Brooklyn, N. Y. Garment. No. 1,214,073; Jan. 30; v. 234; p. 1407.
Reiner, Robert, Weehawken Heights, N. J. Shock-absorber for starting mechanism. No. 1,213,016; Jan. 16; v. 234; p. 979.
Reinert, Peter J., Detroit, Mich. Doll-carriage. No. 1,213,017; Jan. 16; v. 234; p. 979.
Reinhardt-Rutland, Charles E., London, England. Fastener or hook and the like. No. 1,213,540; Jan. 23; v. 234; p. 1194.
Reinhart, Charles W., Forest Lake, Minn. Tug connection for harness. No. 1,213,907; Jan. 30; v. 234; p. 1350.
Relay Automatic Telephone Company, The. (See Aitken, William, assignor.)
Reliance Ball Bearing Door Hanger Company. (See Weiss and Franklin, assignors.)
Reliance Manufacturing Company, The. (See Hart, Edson W., assignor.)
Rembark, Charles, San Francisco, Cal. Gate-operator. No. 1,212,106; Jan. 9; v. 234; p. 627.
Remainder Clock Co. (See Luttrell, Paul S., assignor.)
Remington Typewriter Company. (See Yaw, Clio B., assignor.)
Renault, Louis, Billancourt, France. Carburation device for internal-combustion engines. No. 1,210,533; Jan. 2; v. 234; p. 54.
Renolle, William E., Westminster, London, England. Motor-propelled vehicle. No. 1,213,260; Jan. 23; v. 234; p. 1096.
Renshaw, Clarence, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Time-limit relay-switch. No. 1,214,074; Jan. 30; v. 234; p. 1407.
Renton, Henry N. (See Roper, William, assignor.)
Renton, Henry N., assignor of one-half to W. Roper, Philadelphia, Pa. Metal sash-joint. No. 1,213,541; Jan. 23; v. 234; p. 1195.
Renzansky, Solomon, New York, N. Y. Lamp-extinguisher. No. 1,211,354; Jan. 2; v. 234; p. 334.
Reps, Clinton B., New York, N. Y. Phonograph. No. 1,213,413; Jan. 23; v. 234; p. 1150.
Respiratory Apparatus Company, The. (See Tullar, William E., assignor.)
Retlaw Manufacturing Company. (See Oeschger, Walter I., assignor.)
Rex Golf Machine Company. (See Nott, Joseph H., assignor.)
Rey, Jean A., Paris, France. Apparatus for mixing and conveying fluids. No. 1,212,557; Jan. 16; v. 234; p. 818.
Reynders, Teunis J. M., Rotterdam, Netherlands. Fountain drawing-pen. No. 1,214,072; Jan. 30; v. 234; p. 1407.
Rheinische Metallwaaren- und Maschinenfabrik. (See Prahl, Hugo, assignor.)
Rhoades, Alonzo E., Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me. Automatic weft-replenishing loom. No. 1,212,399; Jan. 16; v. 234; p. 761.
Rhoades, Alonzo E., Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me. Automatic weft-replenishing loom. No. 1,212,400; Jan. 16; v. 234; p. 762.
Rhoades, Alonzo E., Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me. Harness-motion for looms. No. 1,212,401; Jan. 16; v. 234; p. 762.
Rhoades, Alonzo E., Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me. Automatically-threading loom-shuttle. No. 1,212,402; Jan. 16; v. 234; p. 763.
Rhoades, Alonzo E., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Filling-end remover for looms. No. 1,212,681; Jan. 16; v. 234; p. 864.
Rhoades, Alonzo E., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Warp stop-mechanism for looms. No. 1,214,368; Jan. 30; v. 234; p. 1508.
Rhonemus, George M., Independence, Mo. Lid-remover. No. 1,211,233; Jan. 2; v. 234; p. 296.
Riblet, George E., Erie, Pa. Carbureter. No. 1,212,261; Jan. 16; v. 234; p. 714.
Rice, Charles D., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,213,018; Jan. 16; v. 234; p. 980.
Rice, John H., Dallas, Tex. Violin. No. 1,214,075; Jan. 30; v. 234; p. 1408.
Rice, Louis W., New York, N. Y. Device for holding newspapers, magazines, &c., in position. No. 1,214,076; Jan. 30; v. 234; p. 1408.
Rice, Reynold J., Waterloo, Iowa. Hanger for ears of corn. No. 1,211,234; Jan. 2; v. 234; p. 296.
Rice, Richard B., Rochester, N. Y. Variable-speed gearing. No. 1,214,369; Jan. 30; v. 234; p. 1509.
Richards-Wilcox Manufacturing Company. (See Phillips, Ellis J. G., assignor.)
Richards, Willard F., Depew, assignor to Gould Coupler Company, New York, N. Y. Supporting device for couplings. No. 1,213,542; Jan. 23; v. 234; p. 1195.
Richards, Willard F., Depew, assignor to Gould Coupler Company, New York, N. Y. Car-coupling. No. 1,213,543; Jan. 23; v. 234; p. 1195.
Richardson, Holden C. (See Bristol and Richardson.)
Richardson, Jesse H., Philadelphia, Pa. Safety-chuck. No. 1,211,758; Jan. 9; v. 234; p. 506.
Richardson Manufacturing Company. (See Curtis, John D., assignor.)
Richmond, John E., assignor to Multipost Company, Rochester, N. Y. Registering device for stamp-affixers. No. 1,212,403; Jan. 16; v. 234; p. 763.
Richter, August F., Watertown, and T. L. Dunbar, Potsdam, N. Y., SO_2 gas and liquid reclaimer. No. 1,213,414; Jan. 23; v. 234; p. 1150.
Richter, August F., and T. L. Dunbar, Watertown, N. Y. Making sulfite liquor. No. 1,213,416; Jan. 23; v. 234; p. 1150.
Rickman, Herman, Butler, N. J. Making fountain-pen barrels. No. 1,210,842; Jan. 2; v. 234; p. 159.
Riddell, William A., assignor to Eastman Kodak Company, Rochester, N. Y. Focusing device for cameras. No. 1,210,584; Jan. 2; v. 234; p. 54.
Riddell, William A., assignor to Eastman Kodak Company, Rochester, N. Y. Camera-carriage. No. 1,213,544; Jan. 23; v. 234; p. 1196.
Riddle, Grant, Riddle, Idaho. Cover for automobile-tires. No. 1,212,558; Jan. 16; v. 234; p. 818.
Rieg, Swebert B. (See Hoover, Benjamin, assignor.)
Riegel, Hugo E., and D. P. Horning, St. Paul, Minn., assignors to The Super Gas Producer Sales Co. Hydrocarbon-generator. No. 1,214,370; Jan. 30; v. 234; p. 1509.
Rietz, Erich, Elberfeld, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y. Cholic-acid formaldehyde condensation product. No. 1,213,261; Jan. 23; v. 234; p. 1097.
Riker, Andrew L., Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y. Sparking device. No. 1,213,019; Jan. 16; v. 234; p. 980.
Riley, Frank T., Tuppen, N. D. Yielding joint-strip for thresholds. No. 1,210,535; Jan. 2; v. 234; p. 55.
Ringler, Charles C., and J. Beerhalter, assignors of thirty-three and one-third one-hundredths to Fitger Brewing Company, Duluth, Minn. Extracting and modifying proteins or albuminous matter. No. 1,213,546; Jan. 23; v. 234; p. 1197.

Rings, Frederick. (See Frost and Rings.)
Ringsmith, Elijah, Morenci, Ariz. Cushion for billiard-tables. No. 1,213,950; Jan. 30; v. 234; p. 1364.
Ringsmith, Elijah, Morenci, Ariz. Recoil-pad for gun-butts. No. 1,213,951; Jan. 30; v. 234; p. 1364.
Ripper, Claude A., Arncliffe, near Sydney, New South Wales, Australia. Gas stove or range and attachments therefor. No. 1,210,536; Jan. 2; v. 234; p. 55.
Risberg, Johannes V. M., and G. W. Johansson, assignors to Aktiebolaget Baltic, Södertelje, Sweden. Yielding neck-bearing. No. 1,213,540; Jan. 23; v. 234; p. 1197.
Risden, Homer G., and F. Seppi, Orcutt, Cal. Drain device for well-pump tubing. No. 1,213,776; Jan. 23; v. 234; p. 1273.
Ritchie, Henry. (See Roy, Régis, assignor.)
Ritchie, William H. S., West Point, Ky. Runner for draft-tongues. No. 1,210,694; Jan. 2; v. 234; p. 110.
Ritter, Albert W. (See Bodmer and Ritter.)
Ritter, Henry, assignor to The Lunkenheimer Company, Cincinnati, Ohio. Mechanical oil-pump. No. 1,212,682; Jan. 16; v. 234; p. 865.
Ritter, Herman W., Brooklyn, N. Y., assignor to The Goodyear's Metallic Rubber Shoe Company. Covering for irregular surfaces. No. 1,211,624; Jan. 9; v. 234; p. 460.
Rizzo, Charles, Buffalo, N. Y. Lock for doors, &c. No. 1,210,695; Jan. 2; v. 234; p. 110.
Rizzo, Tony, Milwaukee, Wis. Collapsible chair. No. 1,211,355; Jan. 2; v. 234; p. 334.
Robarts, Percival S., Ottawa, Ontario, Canada. Match-striker. No. 1,212,810; Jan. 16; v. 234; p. 907.
Robbins, May, Newark, and H. Dressel, Kearney, N. J. Educational device for teaching arithmetic. No. 1,211,625; Jan. 9; v. 234; p. 460.
Robbins & Myers Company, The. (See Schneider, Charles F., assignor.)
Roberts, Edmund W., assignor, by mesne assignments, to The Roberts Motor Manufacturing Company, Sandusky, Ohio. Construction of cylinders of internal-combustion engines. No. 1,210,537; Jan. 2; v. 234; p. 55.
Roberts, Edward E., assignor to The Johns-Pratt Company, Hartford, Conn. Inclosed-fuse element. No. 1,213,777; Jan. 23; v. 234; p. 1273.
Roberts, Lyman R., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,214,371; Jan. 30; v. 234; p. 1510.
Roberts Motor Manufacturing Company, The. (See Roberts, Edmund W., assignor.)
Roberts, Owen W., Chicago, Ill. Washing-machine. No. 1,213,778; Jan. 23; v. 234; p. 1273.
Roberts, Walter H., *et al.*, executors. (See Palmer and Berry.)
Roberts, Walter H., *et al.*, executors. (See Palmer and Kinsley.)
Robertson, Alexander O. (See Timpson and Robertson.)
Robertson, Charles A. (See Hall, Ray E., assignor.)
Robertson, Frank, Dayton, Ohio. Shell. No. 1,211,626; Jan. 9; v. 234; p. 461.
Robertson, James, Leytonstone, England. Rotary pump or blower. No. 1,211,879; Jan. 9; v. 234; p. 551.
Robertson, William M., Brooklyn, N. Y. Dust-collector. No. 1,211,235; Jan. 2; v. 234; p. 296.
Robins, Thomas, assignor to Supremus Manufacturing Company, New York, N. Y. Illuminable pad-holder. No. 1,211,759; Jan. 9; v. 234; p. 506.
Robinson, Arthur C., East Weymouth, Mass. Filter. No. 1,212,404; Jan. 16; v. 234; p. 763.
Robinson, Charles W., Hamilton, Ontario, Canada, assignor, by mesne assignments, to International Harvester Corporation. Grain-binder. No. 1,211,627; Jan. 9; v. 234; p. 461.
Robinson, D. Russell, assignor of one-third to E. Jarl, Osceola, Iowa. Transmission apparatus. No. 1,212,683; Jan. 16; v. 234; p. 865.
Robinson, Dighton A., Seattle, Wash. Tunneling-machine. No. 1,212,107; Jan. 9; v. 234; p. 627.
Robinson, Frank A., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,213,416; Jan. 23; v. 234; p. 1151.
Robinson, Joseph V., Chevy Chase, Md. Automatic train-pipe connector. No. 1,212,559; Jan. 16; v. 234; p. 819.
Robinson, Joseph V., Chevy Chase, Md. Automatic train-pipe connector. No. 1,212,560; Jan. 16; v. 234; p. 819.
Robinson, Joseph V., New Haven, Conn. Automatic train-pipe coupling. No. 1,212,684; Jan. 16; v. 234; p. 865.
Robinson, Joseph V., Washington, D. C. Flexible metal tubing. No. 1,212,685; Jan. 16; v. 234; p. 866.
Robinson, Joseph V., Chevy Chase, Md. Automatic train-pipe connector. No. 1,212,686; Jan. 16; v. 234; p. 866.
Robinson, Joseph V., Chevy Chase, Md. Automatic train-pipe connector. No. 1,212,687; Jan. 16; v. 234; p. 866.
Robinson, Van King, Gatun, Canal Zone. Water-heater. No. 1,212,108; Jan. 9; v. 234; p. 627.
Robinson, William V., Lansing, Mich. Stove. No. 1,211,236; Jan. 2; v. 234; p. 296.
Roche, William J., assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,212,811; Jan. 16; v. 234; p. 907.
Roche, William J., assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,212,812; Jan. 16; v. 234; p. 908.
Roche, William J., assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,213,952; Jan. 30; v. 234; p. 1364.
Roche, William J., assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,213,953; Jan. 30; v. 234; p. 1365.
Rockwell, Byrd C., Camden, Ark. Joint for end-matching lumber. No. 1,212,262; Jan. 16; v. 234; p. 714.
Rockwell, Horace L., Chicago, Ill., assignor to International Harvester Company of New Jersey. Shocking-machine. No. 1,211,880; Jan. 9; v. 234; p. 551.
Rockwell, Walter S., assignor to W. S. Rockwell Company, New York, N. Y. Gate for air-blasts. No. 1,211,237; Jan. 2; v. 234; p. 297.
Rockwell, Walter S., assignor to W. S. Rockwell Company, New York, N. Y. Frictionally-held blast-gate. No. 1,211,371; Jan. 2; v. 234; p. 339.
Rodger Ballast Car Company. (See Dorey, George B., assignor.)
Rodwick, Ernest C., Santa Barbara, Cal. Wind-motor. No. 1,212,109; Jan. 9; v. 234; p. 628.
Roehrich, Rudolph, New York, N. Y. Internal-combustion engine. No. 1,211,965; Jan. 9; v. 234; p. 583.
Roeske, William A., McKee City, N. J. Level. No. 1,213,020; Jan. 16; v. 234; p. 980.
Roessler & Hasslacher Chemical Co., The. (See Anders, Hanns R., assignor.)
Roessler and Hasslacher Chemical Company. (See Liebknecht and Schaldhauf, assignors.)
Roessler & Hasslacher Chemical Co., The. (See Weber, Friedrich W., assignor.)
Roetker, Frank J., Moffat, Colo. Pencil-top. No. 1,211,356; Jan. 2; v. 234; p. 334.
Röger, Karl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical composing and distributing machine. No. 1,212,561; Jan. 16; v. 234; p. 820.
Rogers, John R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,212,562; Jan. 16; v. 234; p. 820.
Rogers, Leyland. (See Londress and Rogers.)
Rogers, Walter C., Kilkenny, Minn. Smoking-pipe. No. 1,213,021; Jan. 16; v. 234; p. 981.
Roginski, John S., Boston, Mass. Receptacle for cigar-ashes. No. 1,213,262; Jan. 23; v. 234; p. 1097.
Rogister, Joseph, Providence, R. I. Power-transmitting and speed-regulating means. No. 1,212,110; Jan. 9; v. 234; p. 628.
Rohne, Even J., Minneapolis, Minn. Sad-iron support. No. 1,213,263; Jan. 23; v. 234; p. 1097.
Roland, Fred B., and C. D. Chandler, Portland, Oreg. Vehicle-fender. No. 1,212,813; Jan. 16; v. 234; p. 908.
Rollins, George L., Bridgewater, assignor to W. H. McElwain Company, Boston, Mass. Machine for applying reinforcement to insoles. No. 1,210,696; Jan. 2; v. 234; p. 110.
Romain, Fredrich, Marias, Mont. Resilient wheel. No. 1,212,263; Jan. 16; v. 234; p. 714.
Rombacher Hüttenwerke. (See Bronn, Jegor I., assignor.)
Romberger, Floyd T., Elizabethville, Pa. Apparatus for supplying water-vapor to the cylinders of an internal-combustion engine. No. 1,214,372; Jan. 30; v. 234; p. 1510.
Rona, Arnold G., and A. Herfurth, New York, N. Y. Article of manufacture suitable for use as a packing or filling for boxes. No. 1,212,688; Jan. 16; v. 234; p. 867.
Roney, William B., assignor to M. E. Smith and Company, Omaha, Nebr. Convertible collar. No. 1,213,954; Jan. 30; v. 234; p. 1365.
Roof, Charles R., Los Angeles, Cal., assignor to Standard Nut Manufacturing Co., Dover, Del. Nut-making machine. No. 1,212,689; Jan. 16; v. 234; p. 867.
Rookledge, Percival L., Hollister, Cal. Vehicle-spring. No. 1,212,690; Jan. 16; v. 234; p. 867.
Roos, William A., New York, N. Y. Foot scraper and cleaner for automobile running-boards. No. 1,212,111; Jan. 9; v. 234; p. 629.
Roosevelt, André, assignor to Glass Founders Corporation, New York, N. Y. Non-scatterable glass and making it. No. 1,210,087; Jan. 2; v. 234; p. 210.
Roper, William. (See Renton, Henry N., assignor.)
Roper, William, Philadelphia, Pa. Power-transmission mechanism. No. 1,213,418; Jan. 23; v. 234; p. 1151.
Roper, William, assignor of one-half to H. N. Renton, Philadelphia, Pa. Metal sash-joint. No. 1,213,417; Jan. 23; v. 234; p. 1151.
Ropes, Leverett S., Helena, Mont. Mortar ball-mill. No. 1,213,264; Jan. 23; v. 234; p. 1097.
Roquemore, Abb L., and O. M. Fallwell, Palestine, Tex. Internal-combustion engine. No. 1,212,691; Jan. 16; v. 234; p. 868.
Rose, Elias B., Minneapolis, Minn. Air-gage for tires. No. 1,210,538; Jan. 2; v. 234; p. 56.
Rose Patch and Label Company. (See Chatfield, Franklin, assignor.)
Rose Patch & Label Company. (See Petrocchi, Michael, assignor.)
Roseberry, Robert E., Baltimore, Md. Portable machine for reboring engine-cylinders. No. 1,210,843; Jan. 2; v. 234; p. 159.
Rosenbaum, William A., trustee. (See Marye, Clifford P., assignor.)

Rosenberg, Ralph H., assignor to The Kinnear Manufacturing Company, Columbus, Ohio. Steering and driving wheel for motor-vehicles. No. 1,211,238; Jan. 2; v. 234; p. 297.
Rosendahl, Nils M., assignor to F. C. Austin, Chicago, Ill. Liquid-metering tank. No. 1,210,988; Jan. 2; v. 234; p. 211.
Rosendahl, Nils M., assignor to F. C. Austin, Chicago, Ill. Screening and drying apparatus. No. 1,212,264; Jan. 16; v. 234; p. 715.
Rosenfeld & Company, E. (See Stephenson, Burr C., assignor.)
Rosenstengel, Fredrick N. (See Ovaitt and Rosenstengel.)
Rosenthal, Andrew, New York, N. Y. Faucet water-mixer. No. 1,214,221; Jan. 30; v. 234; p. 1455.
Rosevear, Edmund B., *et al.* (See Forrest, Charles N., assignor.)
Ross, Albert, Dallas, assignor of one-third to W. M. Dugan and one-third to J. W. Carter, Tarrant county, Tex. Automatic shift for saw-sharpening machines. No. 1,210,697; Jan. 2; v. 234; p. 111.
Ross, Edward C., Wolcott, Ind. Trunk. No. 1,210,698; Jan. 2; v. 234; p. 111.
Ross, Frank A., Evanston, assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Speedometer drive-train. No. 1,212,814; Jan. 16; v. 234; p. 908.
Ross, Frank A., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Magnetic speedometer. No. 1,213,547; Jan. 23; v. 234; p. 1197.
Ross, James L. (See Spencer and Ross.)
Ross, Margaret N. (See Walker, Andrew, assignor.)
Ross, Oscar G. (See Red and Ross.)
Ross, Walter T., Vancouver, British Columbia, Canada. Nut-lock. No. 1,210,844; Jan. 2; v. 234; p. 159.
Rossi, John A., North Yakima, Wash. Tent attachment. No. 1,213,022; Jan. 16; v. 234; p. 981.
Rossiter, George A., and E. A. Thorne, Brooklyn, assignors to F. G. Carrie, New York, N. Y. Bearing for gyroscopic apparatus. No. 1,213,692; Jan. 23; v. 234; p. 1246.
Rossow, John, Milwaukee, Wis. Window-frame and sashes therefor. No. 1,211,357; Jan. 2; v. 234; p. 335.
Rote, Charles V., assignor to C. V. Rote Brake Shoe Co., Lancaster, Pa. Brake-shoe and brake-head. No. 1,213,419; Jan. 23; v. 234; p. 1152.
Rote, Charles V., assignor to C. V. Rote Brake Shoe Co., Lancaster, Pa. Interlocking means for brake-heads and brake-shoes. No. 1,213,420; Jan. 23; v. 234; p. 1152.
Roth, Adolph F., New York, N. Y. Rotary fan. No. 1,213,955; Jan. 30; v. 234; p. 1365.
Roth, Carl H., Southport, England. Domestic cleaning appliance. No. 1,212,815; Jan. 16; v. 234; p. 909.
Roth, Ernst, Niederutzwil, assignor to Firm of Gebrüder Bühler, Uzwil, Switzerland, Plansifter. No. 1,210,989; Jan. 2; v. 234; p. 211.
Roth, Reuben D., Gettysburg, Pa. Tying implement. No. 1,210,845; Jan. 2; v. 234; p. 160.
Rothweiler, Charles F., Seattle, Wash. Partition. No. 1,211,760; Jan. 9; v. 234; p. 507.
Roudebush, George G., Oshkosh, Nebr. Animal-chute. No. 1,212,112; Jan. 9; v. 234; p. 629.
Rousseau, Clarence A., Riverside, Cal. Chase for printers' use. No. 1,212,405; Jan. 16; v. 234; p. 764.
Rousseau, Joseph L., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Type or matrix. No. 1,214,373; Jan. 30; v. 234; p. 1511.
Rowan, Francis N., assignor to W. J. Flynn, New York, N. Y. Combined fresh-air plate and sewer-gas check. No. 1,214,374; Jan. 30; v. 234; p. 1511.
Rowe, Claude O. (See Jones, Rowe, and Johnson.)
Rowe, Don R. (See Ziehler and Rowe.)
Rowe, Elijah F., Big Falls, Minn. Combined weeder and cultivator. No. 1,212,563; Jan. 16; v. 234; p. 820.
Rowe, Forrest C., Concord, N. H. Dental-motor hood. No. 1,212,564; Jan. 16; v. 234; p. 821.
Rowe, James, Chicago, Ill. Feed attachment for automatic book-trimming machines. No. 1,213,265; Jan. 23; v. 234; p. 1097.
Rowe, James, Chicago, Ill. Book-pad adjuster for automatic book-trimming machines. No. 1,213,266; Jan. 23; v. 234; p. 1098.
Rowe Manufacturing Co. (See Knutson, Alfred W., assignor.)
Rowley, James M. (See Gebhard and Rowley.)
Roy, Régis, assignor of one-fourth to H. Ritchie, Ottawa, Ontario, Canada. Envelop. No. 1,210,699; Jan. 2; v. 234; p. 112.
Royal Typewriter Company. (See Handley, George F., assignor.)
Royal Typewriter Company. (See Hess, Edward B., assignor.)
Royal Typewriter Company. (See Hess and Myers, assignors.)
Royal Typewriter Company. (See Myers, Lewis C., assignor.)
Royce, Frederick H., Derby, England. Brake mechanism. No. 1,210,846; Jan. 2; v. 234; p. 160.
Royer, George F., Wilkes-Barre, Pa. Safety mine-hoist. No. 1,213,556; Jan. 30; v. 234; p. 1366.
Royle, Vernon, Paterson, N. J. Saw-setting apparatus. No. 1,213,267; Jan. 23; v. 234; p. 1099.
Rubber & Celluloid Harness Trimming Co. (See Barry, Thomas F., assignor.)
Rubber Regenerating Company. (See Price, Raymond B., assignor.)
Rubber Regenerating Company. (See Price and Steinle, assignors.)
Rubber Regenerating Company. (See Price, Raymond B., assignor.)
Rubel, Georg, New Orleans, La. Toy ball-thrower. No. 1,210,847; Jan. 2; v. 234; p. 160.
Rubenkoenig, John, *et al.* (See Hawley, Royal A., assignor.)
Ruckgaber, Albert, Brooklyn, N. Y. Speed-regulator for phonographs. No. 1,212,692; Jan. 16; v. 234; p. 868.
Ruckgaber, Albert, Brooklyn, N. Y. Speed-regulator for phonographs. No. 1,212,693; Jan. 16; v. 234; p. 868.
Rudd, Alexander H., Media, Pa., assignor to The Position-Light Signal Company. Signaling system. No. 1,214,375; Jan. 30; v. 234; p. 1511.
Rudd, Henry M., Los Angeles, Cal. Combined pasteurizing, holding, and cooling means. No. 1,214,376; Jan. 30; v. 234; p. 1512.
Rudd, James F., assignor of one-half to G. S. Gladwell, McComas, W. Va. Sledge-hammer. No. 1,210,539; Jan. 2; v. 234; p. 56.
Ruhe, Carleton, Olean, N. Y. Machine for handling hides or leather in bulk. No. 1,210,700; Jan. 2; v. 234; p. 112.
Ruhe, Carleton, Olean, N. Y. Leather-brushing machine. No. 1,213,008; Jan. 30; v. 234; p. 1350.
Rukop, Hans E. R., and W. K. M. Schloemilch, assignors to Gesellschaft für drahtlose Telegraphie m. b. H., Berlin, Germany. Cathode-ray tube. No. 1,210,540; Jan. 2; v. 234; p. 56.
Runkle, Fred A. (See Bayne and Runkle.)
Runquist, Gustaf, assignor to International Money Machine Company, Terre Haute, Ind. Adding and listing machine. No. 1,213,268; Jan. 23; v. 234; p. 1099.
Runyan, James D. (See Taylor and Runyan.)
Runyan, Louis F., Lebanon, Ohio. Hay-rigging. No. 1,213,023; Jan. 16; v. 234; p. 981.
Rushmore, Samuel W., Plainfield, N. J. Controlling device for turbines. No. 1,212,816; Jan. 16; v. 234; p. 909.
Rushton, George L., Omaha, Nebr. Scale. No. 1,211,881; Jan. 9; v. 234; p. 551.
Russ, Adolf F., Pittsburgh, Pa. Aeroplane-wing. No. 1,213,909; Jan. 30; v. 234; p. 1350.
Russell, Calvin L., Tulare, Cal. Hose-coupling. No. 1,212,817; Jan. 16; v. 234; p. 909.
Russell, Calvin T. and J. N., Kinston, Ala. Insect-exterminator. No. 1,213,024; Jan. 16; v. 234; p. 982.
Russell, Charles L. (See Warner, Albion L., assignor.)
Russell, John N. (See Russell, Calvin T. and J. N.)
Rutherford, Frank H., Chicago, Ill. Headlight for vehicles. No. 1,213,269; Jan. 23; v. 234; p. 1099.
Ryan, John F. (See Adams, Harry A., assignor.)
Ryan, Walter D., North Adams, Mass. System of decoration. No. 1,211,239; Jan. 2; v. 234; p. 298.
Ryan, Walter D., North Adams, Mass. Decorative jewel. No. 1,211,240; Jan. 2; v. 234; p. 298.
Rybka, John M., Radisson, Saskatchewan, Canada. Horse-detacher. No. 1,212,265; Jan. 16; v. 234; p. 715.
Rybolt, Henry C., Kenney, Ill. Hog-chute. No. 1,213,421; Jan. 23; v. 234; p. 1153.
Ryden, Axel, assignor to Appleton Electric Company, Chicago, Ill. Conduit-hanger. No. 1,210,701; Jan. 2; v. 234; p. 113.
Ryder, James W., assignor to Specification Soap & Oil Co., Inc., New York, N. Y. Making soft transparent sodium oil-soaps. No. 1,212,818; Jan. 16; v. 234; p. 910.
Ryder, Ross B., Altamont, S. D. Drying-house. No. 1,213,957; Jan. 30; v. 234; p. 1366.
Ryerson, Marie F., Montclair, N. J. Identification device. No. 1,214,222; Jan. 30; v. 234; p. 1456.
Ryker, Jared A., Galena, Ark. Portable fence. No. 1,210,541; Jan. 2; v. 234; p. 57.
S. Karpen & Bros. (See Karpen, Solomon, assignor.)
S. H. Heginbottom & Sons. (See Heginbottom, Frank H., assignor.)
S. K. F. Ball Bearing Company. (See Westerberg, Victor E., assignor.)
S. O. & C. Co., The. (See Neuberth, Franklin G., assignor.)
Sabbow, Fritz, Lestershire, N. Y. Folding pipe-bench. No. 1,213,270; Jan. 23; v. 234; p. 1100.
Sabelberg, Thomas, Port Melbourne, Victoria, Australia. Toaster. No. 1,213,025; Jan. 16; v. 234; p. 982.
Sabin, Jasper J., Coupeville, Wash. Mechanical toy. No. 1,214,377; Jan. 30; v. 234; p. 1512.
Sacek, Johann, assignor to C. H. Fischer, Charlottenburg, Germany. Electrically welding tubes. No. 1,213,422; Jan. 23; v. 234; p. 1153.
Sachs, Joseph, Hartford, Conn. Electric switch. No. 1,211,628; Jan. 9; v. 234; p. 461.
Sachs, Joseph, Hartford, Conn. Electric switching and meter-testing system. No. 1,211,629; Jan. 9; v. 234; p. 462.
Sachs, Joseph, Hartford, Conn. Electric switch. No. 1,214,077; Jan. 30; v. 234; p. 1408.
Sachs, Joseph, Hartford, Conn. Meter-testing appliance. No. 1,214,078; Jan. 30; v. 234; p. 1408.
Sachs, Joseph, Hartford, Conn. Convertible cut-out switch. No. 1,214,079; Jan. 30; v. 234; p. 1409.
Sackett, Charles E., Danbury, Conn. Agricultural implement. No. 1,211,241; Jan. 2; v. 234; p. 298.
Saco-Lowell Shops. (See Goldsmith, William H., Jr., assignor.)

Sadlock, Andrew, Hopwood, Pa. Elevating-jack. No. 1,214,378; Jan. 30; v. 234; p. 1513.
Sadtler, Samuel S., Springfield, Pa. Manufacture of nitrostarch. No. 1,211,761; Jan. 9; v. 234; p. 507.
Safety Car Heating and Lighting Co., The. (See Bijur, Joseph, assignor.)
Safety Gas Lighter Company. (See Pomeroy, Frederick H., assignor.)
Safety Manufacturing Company. (See Bayne, George G., assignor.)
Saffian, Leon, Philadelphia, Pa. Down-spout. No. 1,213,910; Jan. 30; v. 234; p. 1350.
Sage, Ralph V., Columbus, Ohio. Stiffening member for car sides. No. 1,214,080; Jan. 30; v. 234; p. 1409.
Saginaw Plate Glass Company. (See Smith, Carlton L., assignor.)
Sakanal, Fred S., San Francisco, Cal. Nipple. No. 1,212,819; Jan. 16; v. 234; p. 910.
Salisbury, Herbert S., Waltham, Mass. Valve mechanism. No. 1,214,223; Jan. 30; v. 234; p. 1456.
Salmson, Emile J. J. (See Canton, Unné, and Salmson.)
Salt Union, The. (See Chadwick and Hollingshead, assignors.)
Salzman, Adolph, *et al.* (See Gallet, Maurice, assignor.)
Salzman, Fred, *et al.* (See Gallet, Maurice, assignor.)
Samson, Frederick H., Denver, Colo. Sanitary floor-drain. No. 1,211,966; Jan. 9; v. 234; p. 584.
Samuel M. Langston Company. (See Langston, Samuel M., assignor.)
San Diego Consolidated Gas and Electric Co. (See Klauber and Cavell, assignors.)
Sande, Nels H., Scarville, Iowa. Store-shelf. No. 1,213,026; Jan. 16; v. 234; p. 983.
Sanders, Clyde R., Georgetown, Mass. Wood-heel-grooving machine. No. 1,213,271; Jan. 23; v. 234; p. 1100.
Sandwich Manufacturing Co. (See Southwick, Plin C., assignor.)
Sargent & Company. (See Brooks, Julius E., assignor.)
Sargent & Company. (See Sparks, William E., assignor.)
Sarver, Richard S., Kansas City, Mo. Card-exhibiting device. No. 1,213,272; Jan. 23; v. 234; p. 1100.
Sather, Hans, St. Paul, Minn. Grain-door for cars. No. 1,212,820; Jan. 16; v. 234; p. 910.
Saunders, Walter J., Los Angeles, Cal. Flexible pipe connection. No. 1,214,379; Jan. 30; v. 234; p. 1513.
Saunders, Walter S., Westfield, N. J. Temperature-indicating device for internal-combustion engines. No. 1,213,273; Jan. 23; v. 234; p. 1100.
Saurer, Firm of Adolph. (See Eggart, Karl, assignor.)
Saurer, Firm of Adolph. (See Eggart and Fischer, assignors.)
Saurer, Firm of Adolph. (See Mayer and Schlatter, assignors.)
Sauvage, William H., New York, N. Y., assignor, by mesne assignments, to Gould Coupler Company. Slack-adjuster. No. 1,213,779; Jan. 23; v. 234; p. 1274.
Savage, Louis P., Laporte, Ind. Valve mechanism for internal-combustion motors. No. 1,213,027; Jan. 16; v. 234; p. 983.
Savageau, Frederick L., Denver, Colo., assignor to The Independence Coffee and Spice Company. Forming cakes from coffee. No. 1,210,542; Jan. 2; v. 234; p. 57.
Savidge, Albert C., Indianapolis, Ind. Dust-cap for valves. No. 1,210,702; Jan. 2; v. 234; p. 113.
Savings Investment and Trust Company of East Orange *et al.*, executors. (See Aylsworth, Jonas W.)
Savings Union Bank and Trust Company. (See Northrup, Elmer C., assignor.)
Sawyer, Franklin M., Kansas City, Mo. Baby-bed. No. 1,211,702; Jan. 9; v. 234; p. 507.
Scales, Wallace N., *et al.* (See Lewis, Ralph A., assignor.)
Scammell, Charles H., New York, N. Y., assignor to Charles H. Scammell Company. Method and machine for making metal lath. No. 1,210,848; Jan. 2; v. 234; p. 161.
Scammell, Charles H., New York, N. Y., assignor to Charles H. Scammell Company. Metal lath. No. 1,210,849; Jan. 2; v. 234; p. 161.
Scarr, James, Randsburg, Cal. Cleaner for kitchen utensils. No. 1,210,850; Jan. 2; v. 234; p. 161.
Schaanning, Alf, and S. A. Stigant, Manchester, England, assignors to Westinghouse Electric and Manufacturing Company. Fuse. No. 1,212,694; Jan. 16; v. 234; p. 869.
Schade, Edmund A., assignor to The Stanley Rule & Level Company, New Britain, Conn. Spirit-level. No. 1,211,882; Jan. 9; v. 234; p. 551.
Schade, John, Jr., Brooklyn, N. Y. Spring fastening device. No. 1,212,821; Jan. 16; v. 234; p. 910.
Schade, John, Jr., Brooklyn, N. Y., assignor to National Blank Book Company, Holyoke, Mass. Loose-leaf binder. No. 1,212,565; Jan. 16; v. 234; p. 821.
Schaefer, Frederic, Pittsburgh, Pa. Connecting-bar. No. 1,211,763; Jan. 9; v. 234; p. 507.
Schaefer, Henry C. (See Bachmann, Paul I., assignor.)
Schaefer, Otto, New York, N. Y. Electrical connector. No. 1,210,851; Jan. 2; v. 234; p. 162.
Schaerer, Carl A., Pankow, Berlin, Germany. Sterilizing apparatus. No. 1,213,810; Jan. 23; v. 234; p. 1286.
Schaffer, Benno C., Ellinwood, Kans. Display-rack. No. 1,211,242; Jan. 2; v. 234; p. 298.
Schaffer, Henry J., Brooklyn, N. Y. Garbage-can. No. 1,213,423; Jan. 23; v. 234; p. 1153.
Schäfer, Carlos, Merida, Mexico. Hulling-machine. No. 1,212,113; Jan. 9; v. 234; p. 630.
Schaidhauf, Alois. (See Liebknecht and Schaidhauf.)
Schank, John E., Chicago, Ill. Pole-climber. No. 1,210,543; Jan. 2; v. 234; p. 57.
Scheaffer, James E., Burnham, Pa. Compound for covering the top of molten metal in ingot-molds. No. 1,212,825; Jan. 16; v. 234; p. 912.
Schefczik, Wilhelm, Hamborn-on-the-Rhine, Germany. Mechanical roasting-furnace. No. 1,210,852; Jan. 2; v. 234; p. 162.
Scheibe, Harold M., Cambridge, Mass., assignor to Westinghouse Electric and Manufacturing Company. Centrifugal switch. No. 1,214,081; Jan. 30; v. 234; p. 1410.
Scheinpflug, William G., New York, N. Y. Retaining device for umbrella-ribs. No. 1,212,114; Jan. 9; v. 234; p. 630.
Schenkenberger, Philipp E., Temvik, N. D. Oil-heater. No. 1,211,243; Jan. 2; v. 234; p. 299.
Scherff, George H., New York, assignor, by mesne assignments, to George H. Scherff & Company, Inc., Brooklyn, N. Y. Illumination-controller. No. 1,212,115; Jan. 9; v. 234; p. 630.
Scherr, Frederick, Jr., and B. P. Luce, Fajardo, Porto Rico. Groove-cleaner for rolling-mills. No. 1,212,116; Jan. 9; v. 234; p. 631.
Scherzer, Philip, Melvin, Iowa. Harrow attachment. No. 1,211,358; Jan. 2; v. 234; p. 335.
Schettler, Charles A., Cleveland, Ohio. Vegetable-washing machine. No. 1,210,853; Jan. 2; v. 234; p. 162.
Schieb, Henry H., Akron, Ohio. License-lamp. No. 1,214,224; Jan. 30; v. 234; p. 1456.
Schiechel, Friedrich A. M., Frankfort-on-the-Main, Germany. Separating finely-divided ore mixtures in vacuum separating vessels or chambers. No. 1,212,566; Jan. 16; v. 234; p. 821.
Schilder, John J., Fort Worth, Tex. Pump-operating apparatus. No. 1,211,764; Jan. 9; v. 234; p. 508.
Schillberg, Melker W., New York, N. Y. Tool-holder. No. 1,214,225; Jan. 30; v. 234; p. 1457.
Schiott, Johannes. (See De Lony, Knud, assignor.)
Schlatter, Gustav. (See Mayer and Schlatter.)
Schlehr, Joseph A., Rockford, assignor to A. V. Martin, Chicago, Ill. Washboard. No. 1,211,359; Jan. 2; v. 234; p. 335.
Schlehr, Joseph A., Rockford, assignor to A. V. Martin, Chicago, Ill. Washboard. No. 1,211,360; Jan. 2; v. 234; p. 335
Schlepp, August C., Java, S. D. Cuspidor-carrier. No. 1,212,822; Jan. 16; v. 234; p. 911.
Schloemilch, Wilhelm K. M. (See Rukop and Schloemilch.)
Schlueter, Fredrick, and C. Mericle, Detroit, Mich. Carbureter. No. 1,213,028; Jan. 16; v. 234; p. 983.
Schmeltz, Marcus B., Pittsburgh, Pa. Primer for explosive-engines. No. 1,213,093; Jan. 23; v. 234; p. 1246.
Schmid, Albert, Ste. Adresse, France. Internal-combustion engine. No. 1,213,911; Jan. 30; v. 234; p. 1351.
Schmid, Ernst, Oerlikon, Switzerland. Valve-gear for piston-engines. No. 1,213,274; Jan. 23; v. 234; p. 1101.
Schmidt, Adrian P., New York, N. Y. Health-exerciser. No. 1,211,765; Jan. 9; v. 234; p. 508.
Schmidt, Lawrence S., assignor to Schmidt-McCormick Company, Pittsburgh, Pa. Furnace-door frame. No. 1,211,883; Jan. 9; v. 234; p. 552.
Schmidt, Lawrence S., assignor to Schmidt-McCormick Company, Pittsburgh, Pa. Furnace-door. No. 1,211,884; Jan. 9; v. 234; p. 552.
Schmidt-McCormick Company. (See Schmidt, Lawrence S., assignor.)
Schmidt, Walter W., Fond du Lac, Wis. Screen-wire fastener. No. 1,213,029; Jan. 16; v. 234; p. 983.
Schmidt, William F., St. Louis, Mo. Keyway-slotting device. No. 1,210,544; Jan. 2; v. 234; p. 57.
Schmitz, Michael G., Medicine Lake, Mont. Device for raising harrows. No. 1,212,695; Jan. 16; v. 234; p. 869.
Schneider, Charles F., Springfield, Ohio, assignor to The Robbins & Myers Company. Commutator. No. 1,210,703; Jan. 2; v. 234; p. 113.
Schneider, Daniel, assignor, by mesne assignments, to The Modern Threshing Cylinder Company, Spokane, Wash. Electric switch. No. 1,212,567; Jan. 16; v. 234; p. 821.
Schneider, Eberhard, New York, N. Y. Panoramic tilting device. No. 1,214,226; Jan. 30; v. 234; p. 1457.
Schneider, William G., New York, assignor to W. A. Cochrane, Sea Cliff, Long Island, N. Y. Lamp-holder. No. 1,212,406; Jan. 16; v. 234; p. 764.
Schobel, Heinrich. (See Anderwert, Fritzsche, and Schobel.)
Schoell, Reinhold, assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Latch. No. 1,212,117; Jan. 9; v. 234; p. 631.
Schoenky, August R., Somerville, assignor to The Reece Shoe Machinery Company, Boston, Mass. Sewing-machine. No. 1,210,545; Jan. 2; v. 234; p. 58.
Schoenky, Otto B. (See Younger and Schoenky.)
Schoenthaler, Fred C. (See Hachmann, Frederick, assignor.)
Schofield, Frederick C. (See Billings and Schofield.)
Scholl Mfg. Company, The. (See Wilms, Lee W., assignor.)

Schöner, Bernhard. (See Clausius, Schöner, and Siebert.)
Schott, Louis, assignor to The Cincinnati Galvanizing Company, Cincinnati, Ohio. Shipping-case. No. 1,214,082; Jan. 30; v. 234; p. 1410.
Schrader, Adolph P. (See Schrader, Lee B., A. P., and S. A.)
Schrader, Lee B., Shelbyville, A. P. Schrader, Evansville, Ind., and S. A. Schrader, Sapulpa, Okla. Horseshoe. No. 1,212,266; Jan. 16; v. 234; p. 715.
Schrader, Samuel A. (See Schrader, Lee B., A. P., and S. A.)
Schreiber, George P., Baltimore, Md. Cigar-band. No. 1,211,630; Jan. 9; v. 234; p. 462.
Schremp, Edward J., Utica, N. Y. Cutting and making underwear. No. 1,211,766; Jan. 9; v. 234; p. 508.
Schroeder, Ernst R., and C. M. Miller, Alameda, Cal. Process and apparatus for making porcelain inlays. No. 1,211,244; Jan. 2; v. 234; p. 299.
Schroeder, Frederick J., assignor, by mesne assignments, to The Damascus Brake Beam Co., Cleveland, Ohio. Forged fulcrum for brake-beams. No. 1,211,490; Jan. 9; v. 234; p. 414.
Schroeder, Herman D., assignor of one-half to F. G. Wagner, Los Angeles, Cal. Pump. No. 1,211,767; Jan. 9; v. 234; p. 509.
Schroeder, Paul C., assignor to Sears, Roebuck and Company, Chicago, Ill. Punching-machine. No. 1,213,275; Jan. 23; v. 234; p. 1101.
Schroer, Hans R., assignor to W. C. and C. R. Martineau, Albany, N. Y. Game. No. 1,210,854; Jan. 2; v. 234; p. 163.
Schroetter, Arnold, New York, N. Y. Safety-catch for pins. No. 1,213,276; Jan. 23; v. 234; p. 1102.
Schubert, Hermann F., Victoria, Tex. Well-drilling tool. No. 1,210,704; Jan. 2; v. 234; p. 114.
Schubert & Salzer Maschinenfabrik Aktiengesellschaft. (See Cecka, Franz, assignor.)
Schuchardt, Rudolph F., Chicago, Ill. Apparatus for power distribution. No. 1,210,705; Jan. 2; v. 234; p. 114.
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Schuler, George, and E. Kraemer, Woodside, N. Y. Adjustable shade-roller. No. 1,212,696; Jan. 16; v. 234; p. 869.
Schultz, Hjalmar R., Trafford Park, Manchester, England, assignor to Westinghouse Electric and Manufacturing Company. Oil-circuit breaker. No. 1,214,083; Jan. 30; v. 234; p. 1410.
Schultz, Nathanial, Stockton, Cal. Fly-exterminator. No. 1,212,407; Jan. 16; v. 234; p. 764.
Schultz, Wilbur L., Sr., Clay City, Ind. Film-roll holder. No. 1,213,694; Jan. 23; v. 234; p. 1246.
Schulz, Otto C., assignor to Bauer & Black, Chicago, Ill. Adhesive-plaster container. No. 1,210,546; Jan. 2; v. 234; p. 58.
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Schutz, Harry H., Los Lunas, N. Mex. Plug-tobacco cutter. No. 1,212,118; Jan. 9; v. 234; p. 632.
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Schwartzman, Abraham, assignor of one-half to L. S. Bauman, St. Louis, Mo. Bracelet. No. 1,211,631; Jan. 9; v. 234; p. 462.
Schwarzmann, Wolfgang E., and C. M. Wild, Springfield, Mass., assignors to Bosch Magneto Company. Electromagnetic vibrator. No. 1,211,768; Jan. 9; v. 234; p. 509.
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Schweinert, Maximilian C., West Hoboken, and H. P. Kraft, Ridgewood, N. J. Pump connection or the like. No. 1,213,958; Jan. 30; v. 234; p. 1366.
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Schwenk, Elizabeth G., assignor to H. Toegel, Newark, N. J. Strike-plate. No. 1,214,227; Jan. 30; v. 234; p. 1457.
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Schwieterman, Clem J., assignor to Surbrug Chocolate Corporation, New York, N. Y. Coin-operated vending-machine. No. 1,213,548; Jan. 23; v. 234; p. 1198.
Sciponeti, John B., Boston, Mass. Garment-sleeve. No. 1,214,228; Jan. 30; v. 234; p. 1458.
Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Welted knit article and knitting the same. No. 1,210,711; Jan. 2; v. 234; p. 116.
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Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Instrument-actuating device for knitting-machines. No. 1,212,568; Jan. 16; v. 234; p. 822.
Scott, Thomas W., assignor to The American Train Control Company, Baltimore, Md. Speed-controlled electric switch. No. 1,210,709; Jan. 2; v. 234; p. 115.
Scott, Thomas W., assignor to The American Train Control Company, Baltimore, Md. Continuous controlling mechanism for vehicles. No. 1,210,710; Jan. 2; v. 234; p. 116.
Scott, Thomas W., assignor to The American Train Control Company, Baltimore, Md. Train-controlling device. No. 1,212,157; Jan. 9; v. 234; p. 646.
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Scott, William T., San Diego county, Cal. Powder-loading device. No. 1,213,277; Jan. 23; v. 234; p. 1102.
Scott, Zachariah T., Canton, assignor of one-half to R. R. Voorhees, Fairview, Ill. Escape-valve for steam-radiators. No. 1,210,712; Jan. 2; v. 234; p. 117.
Scully, Walter P., assignor to G. Felsenthal & Sons, Chicago, Ill. Pocket savings-bank. No. 1,211,248; Jan. 2; v. 234; p. 301.
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Seaman, Halleck W. (See Fink, Edward, assignor.)
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Seamless Products Corporation. (See Pruyn and De Reamer, assignors.)
Sears, Roebuck and Company. (See Barschow, Hubert A., assignor.)
Sears, Roebuck and Company. (See Dun Lany, William P., assignor.)
Sears, Roebuck and Company. (See Schroeder, Paul C., assignor.)
Seashore, Nels, Minneapolis, Minn. Curtain-pole lifter. No. 1,213,278; Jan. 23; v. 234; p. 1102.
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Sedgwick, Hiram G., Mill Valley, Cal., assignor to The National Safety Appliance Company. Vent-valve for train-stops. No. 1,210,713; Jan. 2; v. 234; p. 117.
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Segal, Samuel, New York, N. Y. Lock. No. 1,212,569; Jan. 16; v. 234; p. 822.
Segal, Samuel, assignor to Burglar Proof Lock and Hardware Corporation, New York, N. Y. Lock. No. 1,212,823; Jan. 16; v. 234; p. 911.
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Segel, Michael, New York, N. Y. Intermittent mechanical movement. No. 1,212,570; Jan. 16; v. 234; p. 823.
Seidler, Max, assignor to Hartmann & Braun A.-G., Frankfort-on-the-Main, Germany. Recording apparatus. No. 1,211,491; Jan. 9; v. 234; p. 415.
Seifert, Ernst T., Richmond Hill, assignor to Julius Kayser & Co., New York, N. Y. Lady's undergarment. No. 1,214,084; Jan. 30; v. 234; p. 1410.
Sell, Harvey A., assignor to Standard Chemical Company, Pittsburgh, Pa. Manufacture of uranium oxid. No. 1,210,714; Jan. 2; v. 234; p. 117.
Sell, Julius F. G., Jerseyville, Ill. Shoe-sole-stamping apparatus. No. 1,214,085; Jan. 30; v. 234; p. 1411.
Sellers, Gilbert, Chicago, Ill. Means for producing raw-water ice. No. 1,212,697; Jan. 16; v. 234; p. 870.
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"Sembusto" Elastische Radbereifungen Gesellschaft m. b. H. (See Bunzlau and Stoll, assignors.)
Sence, Victor, New York, N. Y. Electric belt. No. 1,211,492; Jan. 9; v. 234; p. 415.
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Seppl, Frank. (See Risden and Seppl.)
Sepulchre, Charles, Herstal, Belgium. Lamp for mineral oils. No. 1,212,571; Jan. 16; v. 234; p. 823.
Sergeant, Jasper R., Fort Morgan, Colo. Shifting harrow attachment for double plows. No. 1,213,912; Jan. 30; v. 234; p. 1351.
Serpek, Ottokar, assignor to Societe Générale des Nitrures, Paris, France. Producing aluminium nitrid. No. 1,212,119; Jan. 9; v. 234; p. 632.
Sessions, Albert L., Bristol, Conn. Ceiling-plate. No. 1,212,824; Jan. 16; v. 234; p. 912.
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Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 1,211,493; Jan. 9; v. 234; p. 415.
Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Ill. Clutch device for power-transmitters. No. 1,212,267; Jan. 16; v. 234; p. 716.
Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Ill. Looper mechanism for sewing-machines. No. 1,213,424; Jan. 23; v. 234; p. 1154.
Seymour, Ralph C., Larchmont, N. Y., assignor to Goss Printing Press Company, Chicago, Ill. Associating and binding machine. No. 1,213,425; Jan. 23; v. 234; p. 1154.
Shadbolt, William O., Brooklyn, N. Y. Fifth-wheel for vehicles. No. 1,213,280; Jan. 23; v. 234; p. 1103.
Shadley, Miles A., Kansas City, Mo. Pipe union or coupling seal. No. 1,213,426; Jan. 23; v. 234; p. 1155.
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Shalnwald, Ralph L., Jr., New York, N. Y. Roofing. No. 1,210,855; Jan. 2; v. 234; p. 163.
Sharp, Abia J., and J. O. Foster, Harrisonville, Mo. Safety-drive for drilling-machine drums. No. 1,213,698; Jan. 23; v. 234; p. 1247.
Sharp, Charles S., Auburn, N. Y., assignor to International Harvester Company of New Jersey. Disk harrow. No. 1,213,281; Jan. 23; v. 234; p. 1103.
Sharp, Marcus, Camden, N. J. Game apparatus. No. 1,212,698; Jan. 16; v. 234; p. 870.
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Sharpe, Frederick H., Liverpool, England. Apparatus for carbonating lead oxid. No. 1,214,229; Jan. 30; v. 234; p. 1458.
Shatto, William H., San Jose, Cal. Nest. No. 1,212,268; Jan. 16; v. 234; p. 716.
Shaver, James E., Jr., Philadelphia, Pa., assignor to Underwood Typewriter Company, New York, N. Y. Offset-preventing device for stenciling-machines. No. 1,210,548; Jan. 2; v. 234; p. 59.
Shaw, Edgar S., Minerva, Ohio. Vehicle signal apparatus. No. 1,213,282; Jan. 23; v. 234; p. 1103.
Shaw, Emmerson N., assignor of forty-five one-hundredths to H. S. Wallace, San Francisco, Cal. Stove. No. 1,214,086; Jan. 30; v. 234; p. 1411.
Shaw, Frank E., assignor of one-half to C. H. Kern, Columbus, Ohio. Water-closet-flushing tank. No. 1,213,913; Jan. 30; v. 234; p. 1351.
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Shaw, Otto G., and G. A. McKenzie, Bay City, Mich. Mold. No. 1,211,632; Jan. 9; v. 234; p. 463.
Shaw, William F., Pueblo, Colo. Dental artificial anchor. No. 1,211,494; Jan. 9; v. 234; p. 416.
Shaw, William M., Greeneville, Me. Cableway conveying system. No. 1,212,269; Jan. 16; v. 234; p. 717.
Sheaffer, James E., Burnham, Pa. Hydrocarbon-burner. No. 1,210,856; Jan. 2; v. 234; p. 163.
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Sheehan, Edward J., assignor of one-half to W. S. McCay, Pasadena, Cal. Separating the component parts of liquids. No. 1,211,361; Jan. 2; v. 234; p. 336.
Sheehan, Edward J., assignor of one-half to W. S. McCay, Pasadena, Cal. Extracting essential oils. No. 1,211,969; Jan. 9; v. 234; p. 584.
Sheldon, Frank D., assignor to Milwaukee Locomotive Manufacturing Company, Milwaukee, Wis. Journal-box. No. 1,210,549; Jan. 2; v. 234; p. 60.
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Shelby Spring Hinge Company, The. (See Malone and Hubbs, assignors.)
Shemin, Morris, Bayonne, assignor to J. L. Valentine, Jersey City, N. J. Self-filling fountain-pen. No. 1,214,087; Jan. 30; v. 234; p. 1411.
Shepard, Frank P., Oklahoma, Okla. Drinking-cup. No. 1,213,961; Jan. 30; v. 234; p. 1367.
Shepard, James A., Montour Falls, N. Y. Motor and gearing therefor. No. 1,213,427; Jan. 23; v. 234; p. 1155.
Sheppard, Walter, Toledo, Ohio. Door-check. No. 1,214,230; Jan. 30; v. 234; p. 1459.
Sheppy, Charles L., assignor to The Pierce-Arrow Motor Car Company, Buffalo, N. Y. Carbureter. No. 1,213,914; Jan. 30; v. 234; p. 1352.
Sherer, John M., America, Ala. Beet-topper. No. 1,214,381; Jan. 30; v. 234; p. 1514.
Sherer, William G., Chicago, Ill. Drawer-pull. No. 1,212,408; Jan. 16; v. 234; p. 765.
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Sherman, Charles W., assignor to Lowes Manufacturing Co., Peoria, Ill. Operating-tool. No. 1,210,857; Jan. 2; v. 234; p. 164.
Sherman, Clifton W., Buffalo, N. Y. Making car-wheels. No. 1,211,249; Jan. 2; Gaz. vol. 234; p. 301.
Sherman, Clifton W., Buffalo, N. Y. Side frame for car-trucks. No. 1,214,382; Jan. 30; v. 234; p. 1514.
Sherwood, William E., Canastota, N. Y. Coaster. No. 1,212,409; Jan. 16; v. 234; p. 765.
Shields, David, Edgeworth, Pa. Manufacture of fertilizers. No. 1,212,573; Jan. 16; v. 234; p. 824.
Shigley, John C., Maxbass, N. D. Hen's nest. No. 1,210,550; Jan. 2; v. 234; p. 60.
Shipley, Oscar A., Rahway, N. J. Truss. No. 1,211,250; Jan. 2; v. 234; p. 302.
Shipp, Clarence C., Indianapolis, Ind. Automatic radiator-valve and humidifier. No. 1,212,574; Jan. 16; v. 234; p. 824.
Shoemaker, Louis H., Pittsburgh, Pa. Operating mechanism for lift-bridges. No. 1,210,715; Jan. 2; v. 234; p. 117.
Shore, William, Montesano, Wash. Vacuum gold-separator. No. 1,211,495; Jan. 9; v. 234; p. 416.
Shorrock, Arthur, North Adams, Mass. Candle-guard. No. 1,211,251; Jan. 2; v. 234; p. 302.
Short, Frederick S., Springfield, Mo. Reversible driving-chuck. No. 1,211,633; Jan. 9; v. 234; p. 463.
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Shuping, Will, *et al.* (See Speegle, William A., assignor.)
Shur, Edward J., New Orleans, La. Refrigerator-car. No. 1,211,496; Jan. 9; v. 234; p. 416.
Shute, Alonzo R. (See Baldwin and Shute.)
Sibley, Harry J. (See Ohmer and Sibley.)
Sibley, Harry J., assignor to Ohmer Fare Register Company, Dayton, Ohio. Fare-indicator-selecting mechanism. No. 1,210,858; Jan. 2; v. 234; p. 164.
Sibley, Harry J., assignor to Ohmer Fare Register Company, Dayton, Ohio. Operating mechanism for fare-registers. No. 1,210,859; Jan. 2; v. 234; p. 164.
Sibson, Walter W., and T. Allsop, assignors to The Philadelphia Drying Machinery Company, Philadelphia, Pa. Process and apparatus for drying and conditioning materials. No. 1,213,549; Jan. 23; v. 234; p. 1198.
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Sieber, Gottwalt, assignor to Vogtländische Maschinen-Fabrik, Plauen, Germany. Tambour-frame. No. 1,211,970; Jan. 9; v. 234; p. 585.
Siebert, Otto. (See Clausius, Schöner, and Siebert.)
Siegmann, William G. F., assignor to M. V. Gault, Baltimore, Md. Magneslum cement. No. 1,212,575; Jan. 16; v. 234; p. 824.
Siemann, Henry M., Fort Lupton, Colo. Plant blocking or spacing machine. No. 1,211,971; Jan. 9; v. 234; p. 585.
Signal Motor Truck Company. (See Squires, John, assignor.)
Sigurd, Carl G., San Jose, Cal. Weed-cutter. No. 1,214,383; Jan. 30; v. 234; p. 1514.
Siler, Earnest E., assignor to The Universal Drying Machine Company, Chicago, Ill. Drying apparatus. No. 1,213,962; Jan. 30; v. 234; p. 1368.
Sills, Laura E., St. Paul, Minn. Lamp-director. No. 1,210,990; Jan. 2; v. 234; p. 212.
Silsbee, James A., Elmira, N. Y. Automatic air-valve for engine intake-manifolds. No. 1,210,991; Jan. 2; v. 234; p. 212.
Silvius, Ellis T., Indianapolis, assignor to T. S. Gettle, Greenfield, Ind. Removable cheese-cutter cover. No. 1,210,551; Jan. 2; v. 234; p. 60.
Silvius, Ellis T., Indianapolis, assignor to T. S. Gettle, Greenfield, Ind. Computing cheese-cutter. No. 1,210,552; Jan. 2; v. 234; p. 60.
Simmons, Charles A., Albany, N. Y. Journal-lubricator. No. 1,213,428; Jan. 23; v. 234; p. 1156.
Simmons Manufacturing Company, The. (See Kusterlee, Frank, assignor.)
Simmons, William H. (See Meyer, Alfred F., assignor.)
Simon, Charles W. (See Wonner and Simon.)
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Simpson, Frederick G., Seattle, Wash. Micromagnetic detector. No. 1,211,770; Jan. 9; v. 234; p. 510.
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Sims, Edgar A., Port Townsend, Wash. Apparatus for cooking canned goods. No. 1,210,860; Jan. 2; v. 234; p. 165.
Sims, Frederick L. H., assignor to The Diaphone Signal Company, Limited, Toronto, Ontario, Canada. Splice-bar for rails and the like. No. 1,213,699; Jan. 23; v. 234; p. 1248.
Sims, John J., Massey, Ontario, Canada. Gear-shifting mechanism. No. 1,213,283; Jan. 23; v. 234; p. 1104.
Sinclair, George W., Odda, Norway. Apparatus for the treatment of calcium cyanamid. No. 1,211,252; Jan. 2; v. 234; p. 302.
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Sinclair, James H. and H. L., Denver, Colo. Drill-sharpening machine. No. 1,212,576; Jan. 16; v. 234; p. 824.
Sines, Harold S., assignor to Minerallac Electric Company, Chicago, Ill. Recorder for systems of electrical distribution. No. 1,213,963; Jan. 30; v. 234; p. 1368.
Singer, Helen, New York, N. Y. Boudoir-lamp. No. 1,211,771; Jan. 9; v. 234; p. 510.
Singer Manufacturing Company, The. (See Becker, Rudolph, assignor.)
Singer Manufacturing Company, The. (See Corrall, Herbert, assignor.)
Singer Manufacturing Company, The. (See Molyneux and Gatchell, assignors.)
Singer Manufacturing Company, The. (See Tomanek, Philip, assignor.)
Sinnott, Gilbert J., Brooklyn, assignor to American High Speed Press Company, New York, N. Y. Sheet-register. No. 1,214,232; Jan. 30; v. 234; p. 1459.

Sinnott, Joseph W. (See Van Orden, Howard E., assignor.)
Sinnott, Robert J., Ottawa, Ill. Screen-door. No. 1,210,553; Jan. 2; v. 234; p. 61.
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Sinton, Victor W., Belfast, Ireland. Conveyer. No. 1,210,994; Jan. 2; v. 234; p. 213.
Sisney, Massey, South Bethlehem, Pa. Reciprocating shearing. No. 1,210,861; Jan. 2; v. 234; p. 165.
Skehen, Patrick D., Syracuse, N. Y. Sheet-metal case. No. 1,212,410; Jan. 16; v. 234; p. 765.
Skehen, Patrick D., Syracuse, N. Y. Collapsible form for concrete walls. No. 1,214,233; Jan. 30; v. 234; p. 1460.
Skalicky, Stépán, Česká Skalice, Austria-Hungary. Mowing-machine. No. 1,211,972; Jan. 9; v. 234; p. 585.
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Skillman, Joseph A. (See Kettel, Charles, assignor.)
Skinner, Calvin, Columbus, Ohio. Cattle-guard. (Reissue.) No. 14,247; Jan. 9; v. 234; p. 652.
Skinner, Charles E., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Speed-counter. No. 1,214,088; Jan. 30; v. 234; p. 1411.
Skinner, Frank F., Pine Bluff, Ark. Barefoot house-shoe. No. 1,213,030; Jan. 16; v. 234; p. 984.
Skinner, Fred C. (See McCaslin, Elmer L., assignor.)
Skinner, Lee B., assignor to L. B. Skinner Manufacturing Co., Dunedin, Fla. Fruit-drier. No. 1,214,234; Jan. 30; v. 234; p. 1460.
Skinner, Stephen G., Wilmette, Ill. Apparatus for compressing air. No. 1,213,780; Jan. 23; v. 234; p. 1274.
Skipwith, Claud. (See Byron and Skipwith.)
Slack, Louis M. (See Potter, Winfield S., assignor.)
Sladecek, Edward. (See Mazoch and Sladecek.)
Slate, Thomas B., assignor to American Mechanical Improvement Company, Washington, D. C. Crank-shaft. No. 1,210,996; Jan. 2; v. 234; p. 214.
Slater, Vern, and L. D. West, assignors to The Electro-Fume Company, Denver, Colo. Electric heater. No. 1,211,073; Jan. 9; v. 234; p. 586.
Slathar, Fritz, Bloom City, Wis. Method of and apparatus for harvesting fodder-crops. No. 1,213,284; Jan. 23; v. 234; p. 1104.
Slaughter, William E., *et al.* (See Gunter and Eakin, assignors.)
Slayden, L. T., *et al.* (See Berry, Charles S., assignor.)
Slingluff, Harry G., Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Apparatus for handling glass cylinders. No. 1,213,285; Jan. 23; v. 234; p. 1104.
Slingluff, Harry G., Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Glass-casting apparatus. No. 1,214,089; Jan. 30; v. 234; p. 1412.
Slosser, Vernon H., Bascom, Ohio. Flash-boiler feed mechanism. No. 1,210,995; Jan. 2; v. 234; p. 214.
Small, John W. (See Langton, George H., assignor.)
Small, Thomas W., assignor to The Acme Automatic Street Indicating Company, Cleveland, Ohio. Street-indicating mechanism. No. 1,210,554; Jan. 2; v. 234; p. 61.
Smallfield, Louis A. (See Fehrenkamp and Smallfield.)
Smart, Harry G., St. Cloud, Minn. Tie-plug machine. No. 1,211,974; Jan. 9; v. 234; p. 586.
Smith, Albert, Birmingham, England. Loom for weaving. No. 1,213,700; Jan. 23; v. 234; p. 1248.
Smith, Albert D., Chicago, Ill., assignor to Smith Form-a-Truck Company. Vehicle torsion-arm. No. 1,213,031; Jan. 16; v. 234; p. 984.
Smith, Alfred B., Topeka, Kans. Antiset for hens. No. 1,213,964; Jan. 30; v. 234; p. 1369.
Smith, Alvin L., Washington, D. C. Vacuum massage device. No. 1,213,701; Jan. 23; v. 234; p. 1248.
Smith, Amos H., New York, N. Y., assignor to American Bank Note Company. Numbering-head. No. 1,213,286; Jan. 23; v. 234; p. 1104.
Smith, Augustus H., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,212,411; Jan. 16; v. 234; p. 766.
Smith, Carlton L., assignor to Saginaw Plate Glass Company, Saginaw, Mich. Rack for handling plate-glass. No. 1,213,032; Jan. 16; v. 234; p. 984.
Smith, Charles A. (See Ittner and Smith.)
Smith, Edward M. (See Starbuck, Ernest, assignor.)
Smith, Elda G., assignor to Crouse-Hinds Company, Syracuse, N. Y. Electrical connection. No. 1,212,699; Jan. 16; v. 234; p. 870.
Smith, Elda G., assignor to Crouse-Hinds Company, Syracuse, N. Y. Terminal box. No. 1,213,287; Jan. 23; v. 234; p. 1105.
Smith, Ezra B., assignor to H. B. Dodge & Company, Chicago, Ill. Shade and fixture therefor. No. 1,212,270; Jan. 16; v. 234; p. 717.
Smith Form-a-Truck Company. (See Smith, Albert D., assignor.)
Smith, Frederick C., assignor to Waterbury Mfg. Co., Waterbury, Conn. Lamp-shade. No. 1,211,772; Jan. 6; v. 234; p. 511.
Smith, Grant E., assignor to Pouvailsmith Corporation, Poughkeepsie, N. Y. Steering-wheel post. No. 1,213,811; Jan. 23; v. 234; p. 1286.
Smith, Harry J., New Castle, assignor of one-half to J. S. Wilson, Pittsburgh, Pa. Convertible mold for forming rubber tires. No. 1,211,886; Jan. 9; v. 234; p. 553.
Smith, Herbert L., Westerly, R. I. Transformer-secondary. No. 1,214,235; Jan. 30; v. 234; p. 1460.
Smith, Howard L., St. Louis, Mo. Egg-carrier. No. 1,213,550; Jan. 23; v. 234; p. 1199.
Smith, John F. G., Washington, D. C. Steering-wheel lock. No. 1,213,288; Jan. 23; v. 234; p. 1106.
Smith, John H., assignor of one-half to B. A. Gill, Richmond, Va. Transmission for motor-vehicles. No. 1,212,577; Jan. 16; v. 234; p. 825.
Smith, John W., Brooklyn, N. Y. Automatic gas cut-off. No. 1,211,975; Jan. 9; v. 234; p. 586.
Smith, Julius W., Madison, Minn. Temporary retarding and suspending the setting of dental cements. No. 1,210,555; Jan. 2; v. 234; p. 61.
Smith, Louis, Chicago, Ill. Making cross-ruled sheets. No. 1,210,862; Jan. 2; v. 234; p. 165.
Smith, Louis, Brooklyn, N. Y. Tool-holder. No. 1,212,271; Jan. 16; v. 234; p. 718.
Smith, Orbin F., Moline, Ill., assignor to Moline Plow Company. Land-marker. No. 1,212,412; Jan. 16; v. 234; p. 766.
Smith, Orbin F., Moline, Ill., assignor to Moline Plow Company. Check-wire-operated mechanism for planters. No. 1,212,413; Jan. 16; v. 234; p. 766.
Smith, Orbin F., Moline, Ill., assignor to Moline Plow Company. Seeding-machine. No. 1,212,414; Jan. 16; v. 234; p. 767.
Smith, Thomas J., Pontiac, Mich. Sighting attachment for carpenters' squares. No. 1,210,997; Jan. 2; v. 234; p. 214.
Smith, Victor C., Wheatland, Pa. Heating steel and tin plates. No. 1,211,635; Jan. 9; v. 234; p. 464.
Smith, Walter B., New Haven, Conn. Toy construction member. No. 1,212,700; Jan. 16; v. 234; p. 871.
Smith, William, assignor to Henry Disston & Sons, Incorporated, Philadelphia, Pa. Trowel. No. 1,212,826; Jan. 16; v. 234; p. 912.
Smith, William A., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Tool-retainer. No. 1,212,272; Jan. 16; v. 234; p. 718.
Smith, Willis J., St. Olaf, assignor of one-half to J. J. Tayek, Froelich, Iowa. Combined rail brace and tie. No. 1,212,827; Jan. 16; v. 234; p. 912.
Smithey, Marvin, Lawrenceville, Va. Speedometer. No. 1,211,253; Jan. 2; v. 234; p. 303.
Smolen, Louis, Chicago, Ill. Spring-wheel. No. 1,210,998; Jan. 2; v. 234; p. 215.
Smolik, Mathias, assignor of one-half to F. Klousnitzer and one-half to K. A. Primsler, Pittsburgh, Pa. Figure toy. No. 1,210,999; Jan. 2; v. 234; p. 215.
Smyth, Herbert C. H., London, England. Governor for electric-lighting generators for motor-cars. No. 1,213,702; Jan. 23; v. 234; p. 1249.
Smyth, Joseph E. (See Pagliarul, Joseph, assignor.)
Snelling, Walter O., Pittsburgh, Pa. Process and apparatus for making carbon-black. No. 1,213,915; Jan. 30; v. 234; p. 1352.
Snoddy, James A. (See Campbell, David W., assignor.)
Snow, Clyde H., Sr., Mason, Mich. Silo construction. No. 1,210,716; Jan. 2; v. 234; p. 118.
Snow, Clyde H., Sr., Onondaga, Mich. Metal silo. No. 1,210,717; Jan. 2; v. 234; p. 118.
Snow, Clyde H., Sr., Aurelin, Mich. Roof and cap for silos. No. 1,210,718; Jan. 2; v. 234; p. 118.
Snow, George B., Long Beach, Cal. Condyle-indicator. No. 1,211,254; Jan. 2; v. 234; p. 303.
Snow, Isaac, Lawrence, assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Transferrer for automatic filling-replenishing looms. No. 1,214,384; Jan. 30; v. 234; p. 1515.
Snyder, Jacob R., assignor to Pittsburgh Air Brake Company, Pittsburgh, Pa. Triple valve. No. 1,212,828; Jan. 16; v. 234; p. 912.
Snyder, Jacob R., assignor to Pittsburgh Air Brake Company, Pittsburgh, Pa. Air-brake-control valve. No. 1,212,829; Jan. 16; v. 234; p. 913.
Snyder, Jacob R., assignor to P. E. Donner, Pittsburgh, Pa. Steam-engine reversing-gear. No. 1,212,830; Jan. 16; v. 234; p. 914.
Sobra, Marguerite L., New York, N. Y. Adjustable bust-waist. No. 1,210,863; Jan. 2; v. 234; p. 166.
Società Anonima Italiana Gio. Ansaldo & C. (See Perrone, Pio, assignor.)
Societe Anonyme des Etablissements Delauney-Belleville. (See Radiguer, Charles, assignor.)
Societe Anonyme Des Etablissements L. Bleriot. (See Bossu, Pierre, assignor.)
Societe Anonyme Des Engrenages Citroen. (See Citroen, André, assignor.)
Societe Générale des Nitrures. (See Serpek, Ottokar, assignor.)
Société Harle & Cie. (See Matricardi, Giuseppe, assignor.)
Societe L'Air Liquide (Societe Anonyme Pour L'Etude Et L'Exploitation Des Procedes Georges Claude). See Claude, Georges, assignor.)
Societe Les Fils de A. Piat & Cie. (See Thomas, Léon, assignor.)
Society of Chemical Industry in Basle. (See Anderwert, Fritzsche and Schobel, assignors.)
Society of Chemical Industry in Basle. (See Jagerspacher, Carl, assignor.)
Société Maurice et Pierre Collet et Cie. (See Collet, Albert, assignor.)
Society of Chemical Industry in Basle. (See Engi, Grob, and Straub, assignors.)

Soliday, George, Orrville, Ohio. Stanchion. No. 1,212,701; Jan. 16; v. 234; p. 871.
Soloff, Samuel, Brooklyn, N. Y. Dental-waste receiver. No. 1,213,289; Jan. 23; v. 234; p. 1106.
Soltesz, Samuel. (See Mike and Soltesz.)
Sommers, Charles F., Saginaw, Mich. Machine for packing matches. No. 1,211,773; Jan. 9; v. 234; p. 511.
Sorensen, Jens, Harlan, Iowa. Sales-display cabinet. No. 1,211,774; Jan. 9; v. 234; p. 511.
Sorensen, Joseph P., and R. Thornberg, San Francisco, Cal. Pool-table. No. 1,210,864; Jan. 2; v. 234; p. 166.
Souder, Artemas A., *et al.* (See Souder, Frederick H., assignor.)
Souder, Frederick H., assignor of one-fourth to A. A. Souder and one-fourth to W. C. Stauffer, Lansdale, Pa. Concrete road-culvert. No. 1,213,916; Jan. 30; v. 234; p. 1353.
Souers, William A., Johnston City, Ill. Automatic water-valve. No. 1,213,033; Jan. 16; v. 234; p. 985.
South Carolina Cotton Picker Company. (See Neil, Joseph B., assignor.)
Southwick, Plin C., Sandwich, Ill. Baling-press. No. 1,213,551; Jan. 23; v. 234; p. 1199.
Southwick, Plin C., assignor to Sandwich Manufacturing Co., Sandwich, Ill. Portable elevator and wagon-dump. No. 1,212,273; Jan. 16; v. 234; p. 718.
Sowers, Forrest S., Oak Park, Ill. Household implement. No. 1,213,034; Jan. 16; v. 234; p. 985.
Sparkes, John G., Birmingham, Ala., assignor to Keuffel & Esser Company, Hoboken, N. J. Guard for draftsmen's scales. No. 1,213,781; Jan. 23; v. 234; p. 1275.
Sparks, Vernon C., San Francisco, Cal. Combined vaporizer and homogenizer for explosive-engines. No. 1,211,775; Jan. 9; v. 234; p. 512.
Sparks, William E., assignor to Sargent & Company, New Haven, Conn. Plane. No. 1,213,552; Jan. 23; v. 234; p. 1199.
Spaulding, Charles S. (See Haley, Michael, assignor.)
Spaulding, Thomas, Los Angeles, Cal. Bedclothes-support for folding beds. No. 1,214,090; Jan. 30; v. 234; p. 1412.
Spear, Ellis, *et al.*, trustees. (See Cahill, Thaddeus, assignor.)
Spears, Joseph H., assignor, to Ty-Sa-Man Machine Company, Knoxville, Tenn. Machine for grinding and polishing stones. No. 1,211,776; Jan. 9; v. 234; p. 512.
Specialty Insulation Manufacturing Company. (See Bateholts, Clinton, assignor.)
Specification Soap & Oil Co. (See Ryder, James W., assignor.)
Specketer, Heinrich, and W. Hofmann, Griesheim, assignors to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Manufacture of alkali and alkaline-earth metal sulfids. No. 1,212,702; Jan. 16; v. 234; p. 872.
Speed Adding Machine Company. (See Bair, Joseph H., assignor.)
Speegle, William A., assignor of one-fourth to T. P. Brackman, one-eighth to W. Shuping, and one-eighth to W. L. Cannon, Drexel, N. C. Sharpening-machine for cutter-heads. No. 1,213,703; Jan. 23; v. 234; p. 1249.
Spelman, Mark R., Hyde Park, N. Y. Centrifugal separator. No. 1,212,831; Jan. 16; v. 234; p. 914.
Spencer, Earle J. P., Phoenix, N. Y. Process and apparatus for purifying milk. No. 1,210,865; Jan. 2; v. 234; p. 167.
Spencer, John R., and J. L. Ross, Bartow, Fla. Novelty device. No. 1,211,976; Jan. 9; v. 234; p. 586.
Sperle, Charles H., Somerville, N. J. Incubator-brooder. No. 1,211,977; Jan. 9; v. 234; p. 587.
Sperr, Frederick W., Jr., Oakmont, Pa. Recovering cyanogen and sulfur compounds from fluids. No. 1,213,429; Jan. 23; v. 234; p. 1156.
Sperry, William E., Raton, N. Mex. Portable extension-tippie. No. 1,210,719; Jan. 2; v. 234; p. 119.
Spicer, Charles W., Washington, D. C. Record element for tabulating systems. No. 1,212,832; Jan. 16; v. 234; p. 915.
Spiegel, Alexander S., assignor of one-third to R. Glendinning and one-third to G. Felsenthal, Chicago, Ill. Holder for photographs. No. 1,211,497; Jan. 9; v. 234; p. 417.
Spiegel, George F., Rochester, N. Y. Arch-support. No. 1,211,255; Jan. 2; v. 234; p. 303.
Spiers, William, Leicester, England. Circular-knitting machine. No. 1,210,866; Jan. 2; v. 234; p. 167.
Spirella Company, The. (See Kitchen, John F., assignor.)
Spirella Company, The. (See Roche, William J., assignor.)
Spirella Company, The. (See Wadsworth, Frank L. O., assignor.)
Spirella Company, The. (See Welsh, James M., assignor.)
Spirlin, Louis, New York, N. Y. Cushion-insole. No. 1,213,965; Jan. 30; v. 234; p. 1369.
Spitz, Fannie S., Albuquerque, N. Mex. Nut shelling and separating machine. No. 1,211,978; Jan. 9; v. 234; p. 587.
Spivey, Thomas S., Cincinnati, Ohio, assignor to The American Banker's Safety Company, Wilmington, Del. Burglar-proof safe. No. 1,214,091; Jan. 30; v. 234; p. 1412.
Splitdorf Electrical Co. (See Perrin, Frederic S., assignor.)
Splitdorf Electrical Company. (See Van Deventer, Harry R., assignor.)
Spohrer, Gregory J., East Orange, N. J., assignor to The Motor-Compressor Company. Starting mechanism for internal-combustion engines. No. 1,212,578; Jan. 16; v. 234; p. 825.
Spotts, Joseph J. (See Zappi, Pasquale, assignor.)
Spratlen, Mary, Concordia, Kans. Coal-car cover. No. 1,210,556; Jan. 2; v. 234; p. 62.
Spray Engineering Company. (See Parker and Standish, assignors.)
Spray, William B. A., Vancouver, British Columbia, Canada. Auxiliary air-supply for internal-combustion engines. No. 1,211,636; Jan. 9; v. 234; p. 464.
Spring, William O. (See Clough and Spring.)
Sprong, Severn D., and W. E. McCoy, New York, N. Y. Apparatus for rendering a protective device responsive to phase relations. No. 1,211,000; Jan. 2; v. 234; p. 216.
Squires, John, assignor to Signal Motor Truck Company, Detroit, Mich. Three-point suspension for vehicle-motors. No. 1,211,637; Jan. 9; v. 234; p. 465.
St. Clair, Lawrence, Haverhill, assignor to The Reece Button Hole Machine Company, Boston, Mass. Button-hole-finishing machine. No. 1,212,580; Jan. 16; v. 234; p. 826.
Stabley, Noah C. (See Wonner and Simon, assignors.)
Stack, Ervin B., Monroe, N. C. Belt-dressing. No. 1,211,638; Jan. 9; v. 234; p. 465.
Stackhouse, Emory F., Kensington, Ohio. Pan-cover. No. 1,212,833; Jan. 16; v. 234; p. 915.
Stacy, Elmer N., assignor to Decarie Incinerator Company, Minneapolis, Minn. Incinerator. No. 1,211,979; Jan. 9; v. 234; p. 587.
Stacy, Eugene C., Tiffin, Ohio. Drinking-fountain. No. 1,211,980; Jan. 9; v. 234; p. 588.
Staehelin, Paul. (See Krauss and Staehelin.)
Stähelin, Paul. (See Krauss and Stähelin.)
Stall & Dean Manufacturing Company. (See Stall, Walter T., assignor.)
Stall, Walter T., assignor to Stall & Dean Manufacturing Company, Brockton, Mass. Sporting-shoe. No. 1,212,834; Jan. 16; v. 234; p. 915.
Stanbery, George A., Zanesville, Ohio, assignor to American Encaustic Tiling Co., New York, N. Y. Machine for sizing tiles. No. 1,210,557; Jan. 2; v. 234; p. 62.
Stanbon, Charles P., Saugus, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for folding pliable material. No. 1,211,982; Jan. 9; v. 234; p. 588.
Standard Car Truck Company. (See Barber and Webb, assignors.)
Standard Chemical Company. (See Flannery, Joseph M., assignor.)
Standard Chemical Company. (See Sell, Harvey A., assignor.)
Standard Chemical Company. (See Viol, Charles H., assignor.)
Standard Computing Scale Company, The. (See Buckingham, Fremont H., assignor.)
Standard Light Company. (See Connor, Herschel M., assignor.)
Standard Machine Company. (See Houseman, Harry A., assignor.)
Standard Nut Manufacturing Co. (See Roof, Charles R., assignor.)
Standard Oil Company. (See Mann and Chappell, assignors.)
Standard Oil Company of New York. (See Helmuth, Frederick C., assignor.)
Standard Pail & Package Co. (See Gregory, Charles E., assignor.)
Standard Plunger Elevator Company. (See Dunn, Edward L., assignor.)
Standardized Products Company *et al.* (See Thornton, Charles W., assignor.)
Standish, Edward K. (See Parker and Standish.)
Standley, Cleo R., Boone, Iowa. Non-skid tire-chain. No. 1,213,290; Jan. 23; v. 234; p. 1106.
Stanfield, Jasper H., Muskegon, assignor of one-half to F. C. Pangborn, Grand Rapids, Mich. Cutting device. No. 1,211,777; Jan. 9; v. 234; p. 512.
Stanfield, John W. (See Culp, Arthur J., assignor.)
Stanley, John C. W., Santa Cruz, Cal. Distilling apparatus for kelp and the like. No. 1,212,579; Jan. 16; v. 234; p. 826.
Stanley Rule and Level Company, The. (See Bodmer, Christian, assignor.)
Stanley Rule and Level Company, The. (See Bodmer and Ritter, assignors.)
Stanley Rule & Level Company, The. (See Schade, Edmund A., assignor.)
Stanton, William A., *et al.* (See McCarty, Roy I., assignor.)
Staples, Elial M., Elizabeth, N. J. Automatic rebound-governor. No. 1,211,981; Jan. 9; v. 234; p. 588.
Starbuck, Ernest, assignor to E. M. Smith, Peoria, Ill. Rubbing-post. No. 1,212,415; Jan. 16; v. 234; p. 767.
Starner, Samuel L., Bucyrus, Ohio. Dump-wagon. No. 1,210,867; Jan. 2; v. 234; p. 168.
Starrett, Laroy S., assignor to The L. S. Starrett Company, Athol, Mass. Pliers. No. 1,210,558; Jan. 2; v. 234; p. 63.
State, Alfred J., Montreal, Quebec, Canada. Automobile-fender. No. 1,211,887; Jan. 9; v. 234; p. 554.
Stauffer, Wilson C., *et al.* (See Souder, Frederick H., assignor.)

Staunton, Gray, Muskegon, Mich. Cleansing wool. No. 1,213,966; Jan. 30; v. 234; p. 1360.
Staunton, Gray, Muskegon, Mich., assignor to Staunton Jar Corporation, Buffalo, N. Y. Closure means for hermetically-sealed jars. No. 1,212,274; Jan. 16; v. 234; p. 719.
Staunton, Gray, Muskegon, Mich. Apparatus for drying grain. No. 1,212,275; Jan. 16; v. 234; p. 719.
Staunton Jar Corporation. (See Staunton, Gray, assignor.)
Stearns, Jason C., Worcester, Mass. Connector. No. 1,212,276; Jan. 16; v. 234; p. 719.
Steckle, Edward J., Dixon, Ill. Separating device. No. 1,210,868; Jan. 2; v. 234; p. 168.
Steedman, Edwin H., St. Louis, Mo. Forming hollow forgings. No. 1,212,120; Jan. 9; v. 234; p. 632.
Steele, Benjamin M., Peoria, Ill., assignor to Peoria Drill and Seeder Company, Broadcast seeder. No. 1,212,835; Jan. 16; v. 234; p. 916.
Steele, James H., Pendleton, England. Machine for the manufacture of glass bottles, jars, and the like. No. 1,213,291; Jan. 23; v. 234; p. 1106.
Steely, John S. (See McCown, Charles F., assignor.)
Steen, Halfdan A., Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Circuit-breaker. No. 1,211,778; Jan. 9; v. 234; p. 513.
Steger, Charles C., Dayton, Ohio. Arch-supporter. No. 1,210,869; Jan. 2; v. 234; p. 169.
Stein, Joseph. (See Grubman, Leo, assignor.)
Steinberger, Louis, Brooklyn, N. Y. Disk-type chain insulator. No. 1,212,703; Jan. 16; v. 234; p. 872.
Steinberger, Louis, Brooklyn, N. Y. Disk strain-insulator. No. 1,212,704; Jan. 16; v. 234; p. 872.
Steinberger, Louis, Brooklyn, N. Y. Telephone-receiver casing. No. 1,212,705; Jan. 16; v. 234; p. 873.
Steinberger, Louis, Brooklyn, N. Y. Disk strain-insulator. No. 1,212,706; Jan. 16; v. 234; p. 873.
Steinberger, Louis, Brooklyn, N. Y. Detachable connection for chain-links. No. 1,212,707; Jan. 16; v. 234; p. 873.
Steinberger, Louis, Brooklyn, N. Y. Wire-clamp. No. 1,212,708; Jan. 16; v. 234; p. 874.
Steindorff, Otto W., Wheeling, W. Va. Relieving attachment for lathes. No. 1,214,236; Jan. 30; v. 234; p. 1461.
Steinhauer, August, and T. D. Van Etten, Sidney, Ohio. Double-acting pump. No. 1,213,017; Jan. 30; v. 234; p. 1353.
Steinle, William J. (See Price and Steinle.)
Steinmetz, Joseph A., Philadelphia, Pa. Ordnance-projectile. No. 1,211,001; Jan. 2; v. 234; p. 216.
Steinmetz, Joseph A., Philadelphia, Pa. Wire-entanglement shooter-cutter. No. 1,211,779; Jan. 9; v. 234; p. 513.
Steinway, Theodore E., New York, N. Y. Sostenuto device for pianos. No. 1,214,237; Jan. 30; v. 234; p. 1461.
Stenstrom, Helfrid, Philadelphia, Pa. Monogram-stamp. No. 1,211,498; Jan. 9; v. 234; p. 417.
Stensrud, John A., assignor of one-fourth to O. J. Bolstad, Scotsguard, Saskatchewan, Canada. Washing-machine. No. 1,213,704; Jan. 23; v. 234; p. 1249.
Stephan, C. H. (See Hickman, Samuel L., assignor.)
Stephan, Edith W., Cleveland, Ohio. Surgical cotton-point. No. 1,210,720; Jan. 2; v. 234; p. 119.
Stephany, Ludwig, and O. Grupp, Philadelphia, Pa. Amusement device. No. 1,212,277; Jan. 16; v. 234; p. 720.
Stephens, James O., Big Island, Va., assignor of one-third to J. M. Stephens and one-third to H. Randolph, McComas, W. Va. Internal-combustion engine. No. 1,212,581; Jan. 16; v. 234; p. 827.
Stephens, John M., *et al.* (See Stephens, James O., assignor.)
Stephenson, Benjamin F., Edmonton, Alberta, Canada. Electric-horn control. No. 1,212,709; Jan. 16; v. 234; p. 874.
Stephenson, Burr C., South Bend, Ind., assignor, by mesne assignments, to E. Rosenfeld & Company, Baltimore, Md. Union-pajamas. No. 1,211,002; Jan. 2; v. 234; p. 216.
Stephenson, Charles H. (See Flatter and Case, assignors.)
Stern-Coleman Diamond Machine Company. (See Coleman, Clyde J., assignor.)
Sternberg, George, Agaña, Guam. Wood wind musical instrument. No. 1,211,983; Jan. 9; v. 234; p. 589.
Sterns, Edward, assignor, by mesne assignments, to Efficiency Oil Corporation, St. Louis, Mo. Measuring device for containers. No. 1,213,918; Jan. 30; v. 234; p. 1353.
Stettiner Chamotte-Fabrik Actien-Gesellschaft Vormals Didier. (See Piernay, Walter, assignor.)
Stevens, Frederick A., Providence, R. I. Tray. No. 1,210,870; Jan. 2; v. 234; p. 169.
Stevens, James C., assignor to M. L. Stevens, Apple River, Ill. Hook. No. 1,214,092; Jan. 30; v. 234; p. 1413.
Stevens, Mannette L. (See Stevens, James C., assignor.)
Stevens, Minot M., and T. J. Newcome, Hastings, Pa. Electric cut-off mechanism. No. 1,213,705; Jan. 23; v. 234; p. 1250.
Stevens, William C., assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Tire-stripping machine. No. 1,211,256; Jan. 2; v. 234; p. 304.
Stewardson, Arthur L., and J. D. Harper, Santa Anna, Tex. Dirigible headlight. No. 1,213,706; Jan. 23; v. 234; p. 1250.
Stewart, Alfred C., Los Angeles, Cal. Photographic indicating device. No. 1,211,780; Jan. 9; v. 234; p. 513.
Stewart, Alfred C., Los Angeles, Cal. Actinometer. No. 1,211,781; Jan. 9; v. 234; p. 514.
Stewart, George G., Roseburg, Oreg. Lighting system for vehicles. No. 1,212,836; Jan. 16; v. 234; p. 916.
Stewart, James K., St. Louis, Mo., assignor to Pioneer Box Company, Crawfordsville, Ind. Box-blank-folding table. No. 1,213,812; Jan. 23; v. 234; p. 1287.
Stewart, James Y., Van Houten, N. Mex. Shock-absorber. No. 1,212,837; Jan. 16; v. 234; p. 916.
Stewart, Milton H., Detroit, Mich. Tire-tool. No. 1,213,967; Jan. 30; v. 234; p. 1369.
Stewart-Warner Speedometer Corporation. (See Berg, Joseph, assignor.)
Stewart-Warner Speedometer Corporation. (See Ross, Frank A., assignor.)
Stickle, Cole, Indianapolis, Ind. Electrical control for paper-making machines. No. 1,213,968; Jan. 30; v. 234; p. 1369.
Stickney, Burnham C., Elizabeth, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,214,482; Jan. 30; v. 234; p. 1545.
Stickney, Myron L. (See Hawkins and Stickney.)
Stierheim, Francis A., Pittsburgh, Pa. Belt-gearing. No. 1,213,430; Jan. 23; v. 234; p. 1156.
Stigant, Stanley A. (See Schaanning and Stigant.)
Stillians, Harry E., El Paso, Tex. Combination filing-block and sawing-board. No. 1,211,888; Jan. 9; v. 234; p. 554.
Stillson, George H., Port Townsend, assignor to Pacific Products Company, Seattle, Wash. Apparatus for the reduction of fish-scrap, kelp, and the like. No. 1,212,416; Jan. 16; v. 234; p. 768.
Stimmel, Frederick C., assignor to The Casey-Hedges Co., Chattanooga, Tenn. Steam-boiler furnace. No. 1,211,782; Jan. 9; v. 234; p. 514.
Stimpson, Edward S., Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me. Loom-shuttle. No. 1,212,278; Jan. 16; v. 234; p. 720.
Stimpson, Edward S., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Thread-cutting temple. No. 1,214,385; Jan. 30; v. 234; p. 1515.
Stinson, Edward A., assignor of one-half to M. T. McCarty, Frankfort, Ind. Combination-fuel carbureter. No. 1,211,003; Jan. 2; v. 234; p. 216.
Stinzing, George J., Port Chester, N. Y. Huckster-wagon. No. 1,210,721; Jan. 2; v. 234; p. 119.
Stock, Henry W. (See Lemp and Stock.)
Stock Motorpflug Gesellschaft Mit Beschränkter Haftung. (See Gleiche, Carl, assignor.)
Stokes & Smith Company. (See Reifsnyder, James D., assignor.)
Stoll, Carl L. (See Bunzlau and Stoll.)
Stoll, George J., Louisville, Ky. Motor-tractor. No. 1,212,710; Jan. 16; v. 234; p. 874.
Stoll, George M., and V. S. Beam, Maplewood, N. J. Railway-grade-crossing protective device. No. 1,213,292; Jan. 23; v. 234; p. 1107.
Stone, Clarence N., Newton Highlands, Mass., assignor to Baird-North Co., Augusta, Me. Book or catalogue. No. 1,212,279; Jan. 16; v. 234; p. 721.
Stone, Edward G., and E. J. Siddeley, Sydney, New South Wales, Australia. Molding plastics. No. 1,212,838; Jan. 16; v. 234; p. 917.
Stone, Edward G., and E. J. Siddeley, Sydney, New South Wales, Australia. Mold. No. 1,212,839; Jan. 16; v. 234; p. 917.
Stone, Frederick F., Buffalo, N. Y. Egg-tester. No. 1,211,889; Jan. 9; v. 234; p. 554.
Storck, Frederick W., Boston, assignor, by mesne assignments, to E. C. Drouet, Somerville, Mass. Stamp-affixing machine. No. 1,211,499; Jan. 9; v. 234; p. 417.
Storms, George W., Louisville, Ky. Concrete-culvert form. No. 1,211,890; Jan. 9; v. 234; p. 555.
Storrs, Aaron P., assignor to Storrs Mica Company, Owego, N. Y. Shade-holder. No. 1,213,293; Jan. 23; v. 234; p. 1107.
Storrs Mica Company. (See Storrs, Aaron P., assignor.)
Story, Ward B., Brooklyn, assignor to Ward B. Story Company, Inc., New York, N. Y. Adjustable cam. No. 1,210,559; Jan. 2; v. 234; p. 63.
Straight, Halver R., Adel, Iowa. Hollow-tile building-block. No. 1,212,417; Jan. 16; v. 234; p. 768.
Strait, William, *et al.* (See Lewis, Ralph A., assignor.)
Strand, Carl T., *et al.* (See Bergren, John A., assignor.)
Stratton, William E., Voltage, Oreg. Tool-handle. No. 1,211,783; Jan. 9; v. 234; p. 515.
Straub, Francis J., New Kensington, Pa. Building-block and making the same. No. 1,212,840; Jan. 16; v. 234; p. 917.
Straub, Fritz. (See Engi, Grob, and Straub.)
Strauss, Joseph B., Chicago, Ill. Bascule-bridge. No. 1,211,639; Jan. 9; v. 234; p. 465.
Strauss, Joseph B., Chicago, Ill. Bridge. No. 1,211,640; Jan. 9; v. 234; p. 466.

Strauss, Louis, Brooklyn, N. Y. Garment. No. 1,214,483; Jan. 30; v. 234; p. 1546.
Strawn, Rudolph E., Lacon, Ill. Marking attachment for planters. No. 1,211,004; Jan. 2; v. 234; p. 217.
Street, Fred, assignor of one-half to E. B. Kyle, Philadelphia, Pa. Automatic pilot-light gas-burner. No. 1,211,891; Jan. 9; v. 234; p. 555.
Stringer, Alfred E., Chicago, Ill. Closet bowl and cover mount. No. 1,212,280; Jan. 16; v. 234; p. 721.
Stritter, Karl A., Nahant, Mass. Sewing-machine. No. 1,212,841; Jan. 16; v. 234; p. 917.
Stroback, Chris A., Jr., Austin, Minn. End-gate for wagons. No. 1,214,386; Jan. 30; v. 234; p. 1516.
Strobel & Wilken Company, The. (See Hart, Henry A., assignor.)
Strom, Eugene N., assignor to Pettibone, Mulliken Company, Chicago, Ill. Railway-crossing. No. 1,211,892; Jan. 9; v. 234; p. 555.
Stromberg-Carlson Telephone Manufacturing Company. (See Levis, John H., Jr., assignor.)
Stromberg, John A., Escanaba, Mich. Package-selling system. No. 1,211,641; Jan. 9; v. 234; p. 466.
Strong, Arthur P., Chicago, assignor to Green Engineering Company, East Chicago, Ill. Ash-conveying system. No. 1,211,500; Jan. 9; v. 234; p. 418.
Strong, Berdette E., and H. G. Clemenger, Jamestown, N. Y. Means for holding sheet-veneer while bleaching. No. 1,213,431; Jan. 23; v. 234; p. 1157.
Stronge, Joseph, St. Paul, Minn. Hat. No. 1,212,842; Jan. 16; v. 234; p. 918.
Stroud, John B., Pass Christian, Miss. Tire or casing spreading tool. No. 1,211,005; Jan. 2; v. 234; p. 217.
Stroup, Philip, Cleveland, Ohio. Instantaneous electric-socket attachment. No. 1,213,035; Jan. 16; v. 234; p. 985.
Strubler, Charles G., assignor to Strubler Computing Scale Company, Elkhart, Ind. Platform computing-scale. No. 1,213,294; Jan. 23; v. 234; p. 1108.
Strubler, Charles G., assignor to Strubler Computing Scale Company, Elkhart, Ind. Scale-check device. No. 1,213,295; Jan. 23; v. 234; p. 1108.
Strubler, Charles G., assignor to Strubler Computing Scale Company, Elkhart, Ind. Computing-scale. No. 1,213,296; Jan. 23; v. 234; p. 1109.
Strubler Computing Scale Company. (See Strubler, Charles G., assignor.)
Struchen, Henry C., St. Paul, Minn. Guide-bar support for concrete-gages. No. 1,212,843; Jan. 16; v. 234; p. 918.
Struchen, Henry C., St. Paul, Minn. Toy pistol. No. 1,213,432; Jan. 23; v. 234; p. 1157.
Stuart, John C. K., Montreal, Quebec, Canada. Section-elbow for concrete-conveyers. No. 1,211,784; Jan. 9; v. 234; p. 515.
Stubbe, William J. (See Garlock and Stubbe.)
Stubbs, Robert C., Dallas, Tex. Concrete-cleaner. No. 1,214,093; Jan. 30; v. 234; p. 1413.
Studebaker Corporation, The. (See Heaslet, James G., assignor.)
Sturgis, Charles E., Rochester, N. Y. Brace and locking means for hinged or swinging parts. No. 1,213,069; Jan. 30; v. 234; p. 1370.
Sturrock, John, Chicago, Ill., assignor to International Harvester Company of New Jersey. Oil-cup cover. No. 1,211,893; Jan. 9; v. 234; p. 556.
Sturtevant Mill Company. (See Sturtevant, Thomas J., assignor.)
Sturtevant, Thomas E., assignor to McKiernan-Terry Drill Company, Dover, N. J. Spike-holder for hammer-drills. No. 1,213,970; Jan. 30; v. 234; p. 1370.
Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Rotary beater-mill. No. 1,212,418; Jan. 16; v. 234; p. 769.
Sturtevant, Thomas L., Quincy, Mass., assignor to Sturtevant Mill Company. Rotary beater-mill. No. 1,212,419; Jan. 16; v. 234; p. 769.
Sturzl, John B., Hiles, Wis. Leaf-turning device. No. 1,213,297; Jan. 23; v. 234; p. 1100.
Submarine Signal Company. (See Fessenden, Reginald A., assignor.)
Suffa, George A., Dorchester, Mass. Push-rod. No. 1,210,871; Jan. 2; v. 234; p. 169.
Sultzer, Morton, Brooklyn, assignor to Western Electric Company, Incorporated, New York, N. Y. Coating condensers. No. 1,210,722; Jan. 2; v. 234; p. 120.
Summers, Frank E., Memphis, Mo. Telephonic relay. No. 1,213,298; Jan. 23; v. 234; p. 1110.
Super Gas Producer Sales Co., The. (See Riegel and Horning, assignors.)
Superior Ladder Company, The. (See Myers, Israel, assignor.)
Supremus Manufacturing Company. (See Robins, Thomas, assignor.)
Surbaugh, John S., Vincennes, Ind. Shovel and scoop. No. 1,212,582; Jan. 16; v. 234; p. 827.
Surbrug Chocolate Corporation. (See Schwieterman, Clem J., assignor.)
Suter, Cyrus M., Franklin Grove, Ill. Cistern-cleaning device. No. 1,211,785; Jan. 9; v. 234; p. 515.
Sutherlin, Joseph W. (See Crisler, Horace, assignor.)
Swainson, John, Angusville, Manitoba, Canada. Harrow attachment for gang-plows. No. 1,213,553; Jan. 23; v. 234; p. 1199.
Swan, A. F., *et al.* (See Lange, John, Jr., assignor.)
Swanson, Samuel, *et al.* (See Aze, Emile, assignor.)
Swanstrom, John M., Chicago, Ill. Pneumatic pump. No. 1,213,707; Jan. 23; v. 234; p. 1250.
Swarner, Charles H., Wayne, Nebr. Apparatus for transferring grain. No. 1,213,971; Jan. 30; v. 234; p. 1371.
Sweat, David W., Waycross, Ga. Plow-beam attachment. No. 1,211,894; Jan. 9; v. 234; p. 556.
Sweeney, Daniel B., Bayonne, N. J. Continuous filter-press. No. 1,212,844; Jan. 16; v. 234; p. 918.
Sykes, William W., Richmond, Va. Locomotive ash-pan. No. 1,213,708; Jan. 23; v. 234; p. 1251.
Symons, Arthur H., assignor to Symons Clamp Co., Chicago, Ill. Spring-metal clip for uniting and supporting concrete-reinforcements. No. 1,213,919; Jan. 30; v. 234; p. 1353.
Symons Clamp Co. (See Symons, Arthur H., assignor.)
Synck, Henry, assignor to New Idea Spreader Company, Coldwater, Ohio. Spreader attachment for fertilizer-distributers. No. 1,213,554; Jan. 23; v. 234; p. 1200.
Synthetic Patents Co. (See Rietz, Erich, assignor.)
Szczepaniak, Wladyslaw, *et al.* (See Pludowski, Aleksander, assignor.)
Szymkowiak, Anton, San Francisco, Cal. Theater-chair. No. 1,213,920; Jan. 30; v. 234; p. 1354.
T. H. Symington Company, The. (See McAlister, Stuart G., assignor.)
Tabler, Harry C. (See Dougherty and Tabler.)
Tabler, Jacob B., Star Tannery, Va. Automatic locomotive head-lamp. No. 1,214,387; Jan. 30; v. 234; p. 1516.
Tabor, Roscoe M. (See Cougill, Charles E., assignor.)
Tackaberry, Robert D., Lewiston, Me. Fluid-pressure regulator. No. 1,213,972; Jan. 30; v. 234; p. 1371.
Tacoma, Johannes. (See Vleeschouwer and Tacoma.)
Taggart, Elmer E., Syracuse, N. Y. Lighting device. No. 1,212,711; Jan. 16; v. 234; p. 874.
Taggart, Frank D., Wyomissing, Pa. Alloy roll-steel. No. 1,213,973; Jan. 30; v. 234; p. 1371.
Tait, William S. (See Johnson and Tait.)
Talbot, Stafford C. (See Villar and Talbot.)
Talbot, William W., New York, N. Y., assignor to F. T. Fowler, Chicago, Ill. Gas-generator. No. 1,212,281; Jan. 16; v. 234; p. 721.
Talcott, Mancel W. (See Talcott, Walter O., assignor.)
Talcott, Walter O., assignor of one-half to M. W. Talcott, Providence, R. I. Belt-fastener. No. 1,212,712; Jan. 16; v. 234; p. 875.
Talley, Edwin R., Grinnell, Iowa. Massage apparatus. No. 1,212,845; Jan. 16; v. 234; p. 918.
Tam, Oscar S. (See Peirce and Hannah, assignors.)
Tanner, Arnold J., London, England. Apparatus for printing and issuing tickets. No. 1,210,561; Jan. 2; v. 234; p. 64.
Tanner, Clark L. (See McGurn and Tanner.)
Tanner, Daniel R., La Grande, Oreg. Method of and apparatus for preventing warping and twisting of lumber during kilning. No. 1,212,583; Jan. 16; v. 234; p. 827.
Tappen, Alexander B., Ossining, N. Y. Reinforcement for concrete coverings. No. 1,210,560; Jan. 2; v. 234; p. 63.
Taubert, Gotthart, Pittsfield, Mass. Net-cutting and signal attachment for submarines. No. 1,214,238; Jan. 30; v. 234; p. 1462.
Tay-Pike Company. (See Baash, Lawrence F., assignor.)
Tayek, J. J. (See Smith, Willis J., assignor.)
Taylor, Alfred G., assignor to J. R. Aiken, Greenville, S. C. Electric-current collector. No. 1,211,006; Jan. 2; v. 234; p. 218.
Taylor, Arthur P., and J. D. Runyan, assignors to The Charles Taylor Sons Company, Cincinnati, Ohio. Refractory product and manufacturing the same. No. 1,212,846; Jan. 16; v. 234; p. 919.
Taylor, Arthur P., and J. D. Runyan, assignors to The Charles Taylor Sons Company, Cincinnati, Ohio, Manufacture of plastic products. No. 1,212,847; Jan. 16; v. 234; p. 919.
Taylor, Henry M. (See Cericola, Joseph C., assignor.)
Taylor, Horace H., and L. A. Moberry, Oakland, Cal. Vacuum-cleaner. No. 1,211,786; Jan. 9; v. 234; p. 515.
Taylor, James E., McKinney, Tex. Gin-saw-gumming machine. No. 1,210,723; Jan. 2; v. 234; p. 120.
Taylor, James W., assignor of two-thirds to G. A. Mohr, Lansing, Mich. Valve for pneumatic tires. No. 1,211,501; Jan. 9; v. 234; p. 419.
Taylor, John B., Schenectady, N. Y., assignor to General Electric Company. Projection apparatus. No. 1,213,974; Jan. 30; v. 234; p. 1371.
Taylor, John B., Schenectady, N. Y., assignor to General Electric Company. Projection apparatus. No. 1,213,975; Jan. 30; v. 234; p. 1372.
Taylor, John D., deceased, Wilkinsburg; M. E. Taylor, executrix, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-traffic-controlling apparatus. No. 1,211,788; Jan. 9; v. 234; p. 516.
Taylor, John W., Pleasant Hill, Mo. Mail-box. No. 1,210,562; Jan. 2; v. 234; p. 64.
Taylor, Joseph G., Jr., Springfield, Ill. Shoe. No. 1,213,036; Jan. 16; v. 234; p. 985.
Taylor, Mary E., executrix. (See Taylor, John D.)
Teague, Moses E., Cinderford, Gloucester, England. Governor mechanism for compressor-engines and the like. No. 1,211,007; Jan. 2; v. 234; p. 218.

Tecktonius, Emil C., assignor to E. C. Tecktonius Manufacturing Company, Racine, Wis. Lug for silos and the like. No. 1,212,420; Jan. 16; v. 234; p. 770.

Tegoll, August, Santa Rosa, Cal., assignor to Tegoll Drying Apparatus Manufacturing Company. Drying-machine for alimentary pastes. No. 1,214,239; Jan. 30; v. 234; p. 1462.

Tegoll Drying Apparatus Manufacturing Company. (See Tegoll, August, assignor.)

Telelectric Company, The. (See Reed, Walter C., assignor.)

Temple, Robert W., Cheboygan, Mich. Autographic sales-register. No. 1,212,584; Jan. 16; v. 234; p. 828.

Tenckhoff, Bernhard. (See Altenkirch and Tenckhoff.)

Tenley, Oscar S., Dunbar, Wis. Folding table. No. 1,213,976; Jan. 30; v. 234; p. 1372.

Terry, George E., San Francisco, Cal. Butter container and cutter. No. 1,213,433; Jan. 23; v. 234; p. 1157.

Tetzloff, Wilhelm, New Richland, Minn. Road grading and ditching plow. No. 1,212,421; Jan. 16; p. 234; p. 770.

Tetzloff, Wilhelm, New Richland, Minn. Road grading and ditching plow. No. 1,213,434; Jan. 23; v. 234; p. 1158.

Thackray, George E., Westmont borough, Pa. Coke-oven construction. No. 1,211,502; Jan. 9; v. 234; p. 419.

Thackray, George E., Westmont borough, Pa. Coke-oven. No. 1,211,503; Jan. 9; v. 234; p. 419.

Thayer, Charles S., Middletown, N. Y. Straw-hat filler. No. 1,213,435; Jan. 23; v. 234; p. 1158.

Theatre Vending Machine Corporation. (See Perrin, Roger W., assignor.)

Theiss, John H., Mount Vernon, N. Y. Supporting device. No. 1,211,595; Jan. 9; v. 234; p. 557.

Theriot, James C., Taft, Cal. Safety attachment for well-drilling tools. No. 1,212,848; Jan. 16; v. 234; p. 919.

Thibodeau, Ralph W., Quincy, Mass. Signal for automobiles. No. 1,213,709; Jan. 23; v. 234; p. 1251.

Thie, Charles H., and W. M. Butler, Toledo, Ohio. Internal-combustion engine. No. 1,211,008; Jan. 2; v. 234; p. 219.

Thiefehrn, Hermann G. C., Pittsburgh, Pa. Recovering valuable constituents of ores. No. 1,210,724; Jan. 2; v. 234; p. 120.

Thomas, Charles H., York, Pa. Picture-hanger. No. 1,212,422; Jan. 16; v. 234; p. 770.

Thomas, Charles J., Brooklyn, N. Y. Kite-trolley. No. 1,211,896; Jan. 9; v. 234; p. 557.

Thomas, Hannah J. K., Jacksonville, Fla. Pillow. No. 1,211,257; Jan. 2; v. 234; p. 304.

Thomas, James, Tacoma, Wash. Machine for making cement pipes. No. 1,211,787; Jan. 9; v. 234; p. 516.

Thomas, Léon, La Magdaleine, near Soissons, assignor to Société Les Fils de A. Piat & Cie., Paris, France. Molding-machine. No. 1,213,436; Jan. 23; v. 234; p. 1158.

Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Co., Hoboken, N. J. System of electrical distribution. No. 1,211,380; Jan. 2; v. 234; p. 342.

Thomas, Willis H., assignor of one-half to E. W. Lohse, Portland, Oreg. Air-cooling device. No. 1,213,782; Jan. 23; v. 234; p. 1275.

Thomas Wrigley Company. (See Ahlander, Ernest H., assignor.)

Thompson, Albert R., assignor to Anderson-Barngrover Mfg. Co., San Jose, Cal. Pressure-cooker. No. 1,210,563; Jan. 2; v. 234; p. 65.

Thompson, Frank T., Chicago, Ill. Making electrotype-plates or metallic shells. No. 1,210,872; Jan. 2; v. 234; p. 169.

Thompson, George K., New York, N. Y. Car-truck. No. 1,211,789; Jan. 9; v. 234; p. 517.

Thompson, Henry C., assignor to The Hall-Thompson Company, Hartford, Conn. Automobile-top patch. No. 1,211,642; Jan. 9; v. 234; p. 467.

Thompson, Jesse E., assignor to R. W. Morris Manufacturing Company, Kansas City, Mo. Block for oiling-mops. No. 1,212,423; Jan. 16; v. 234; p. 771.

Thompson, John M., Buffalo, N. Y. Sand-spreading device. No. 1,212,849; Jan. 16; v. 234; p. 919.

Thompson, Joseph F., Brooklyn, N. Y. Kitchen utensil. No. 1,214,388; Jan. 30; v. 234; p. 1516.

Thompson, Lewis H., California, Mo. Shingle-car. No. 1,214,094; Jan. 30; v. 234; p. 1413.

Thompson, Owen A. (See Overly and Thompson.)

Thompson, William S., Sinking Spring, Pa. Wall-paper protector. No. 1,213,977; Jan. 30; v. 234; p. 1372.

Thomsen, Max, Chicago, Ill. Child's vehicle. No. 1,211,897; Jan. 9; v. 234; p. 557.

Thornberg, Royden. (See Sorensen and Thornberg.)

Thorne, Edward A. (See Rossiter and Thorne.)

Thornton, Charles W., assignor, by mesne assignments, of one-half to Standardized Products Company, one-fourth to E. C. Ladd, and one-fourth to H. Howard, Chicago, Ill. Disinfecting device for flush-tanks. No. 1,213,978; Jan. 30; v. 234; p. 1373.

Thornton, George L., Huntington, W. Va. Electric welding-tool. No. 1,211,009; Jan. 2; v. 234; p. 219.

Thornton, John E., West Hampstead, London, assignor to J. O. O'Brien, Manchester, England. Photographic-printing apparatus. No. 1,213,037; Jan. 16; v. 234; p. 985.

Thornton, John E., West Hampstead, London, assignor to J. O. O'Brien, Manchester, England. Film for motion-pictures and making the same. No. 1,213,038; Jan. 16; v. 234; p. 986.

Thorp, Eddie D., Dodge City, Kans. Pneumatic feeder for threshing-machines or the like. No. 1,210,564; Jan. 2; v. 234; p. 65.

Throckmorton, Ray, Philadelphia, Pa. Automobile-fender. No. 1,212,850; Jan. 16; v. 234; p. 920.

Thum, Ellwood F., Philadelphia, assignor to H. L. Watson, Newtown, Pa. Apparatus for regulating the temperature of incubators. No. 1,212,283; Jan. 16; vol. 234; p. 722.

Thum, Martin, assignor to Langslow Fowler Company, Rochester, N. Y. Chair. No. 1,213,299; Jan. 23; v. 234; p. 1110.

Thuneman, Albin J. (See Ensign and Thuneman.)

Thurén, Oskar, Virginia, Minn. Wheel structure. No. 1,211,504; Jan. 9; v. 234; p. 420.

Tickoff, John A., Moline, Ill. Plow-bottom. No. 1,211,258; Jan. 2; v. 234; p. 304.

Tierney, Henry J., Denison, Tex. Sliding door for railway freight-cars. No. 1,211,505; Jan. 9; v. 234; p. 420.

Tierney & Hodgson. (See Hodgson, John, assignor.)

Tiffany, George S., Summit, N. J., assignor to Gray Electric Company, New York, N. Y. Electric fan and motor therefor and for other purposes. No. 1,212,282; Jan. 16; v. 234; p. 722.

Tigerstedt, Eric M. C., Copenhagen, Denmark. Relay for undulatory currents. No. 1,212,163; Jan. 9; v. 234; p. 648.

Tighe, John T., Scranton, Pa. Conductor-support. No. 1,211,010; Jan. 2; v. 234; p. 219.

Tillotson, William L., Denver, Colo. Screen for picture reproduction and mechanism for curving the same. No. 1,212,424; Jan. 16; v. 234; p. 771.

Timpson, Frederick M., Ilford, and A. O. Robertson, assignors to The Tiros Valve Syndicate, London, England. Combined pressure and vacuum relief valve. No. 1,213,710; Jan. 23; v. 234; p. 1251.

Tinsley, Della F., Kansas City, Mo. Sewing-chair. No. 1,212,713; Jan. 16; v. 234; p. 875.

Tiros Valve Syndicate, The. (See Timpson and Robertson, assignors.)

Titsworth, Ellen A. (See Hall, Cassius G., assignor.)

Tkach, Andrew R., Lakefield, Minn. Tractor drive-wheel. No. 1,212,284; Jan. 16; v. 234; p. 723.

Toadvin, Edward S., New York, N. Y. Burglar-alarm. No. 1,212,285; Jan. 16; v. 234; p. 723.

Toda, Sozaburo, Erie, Pa. Combined sifter and mixer. No. 1,212,585; Jan. 16; v. 234; p. 828.

Todd, Roland G., Clearfield, Pa. Drinking-trough for chickens. No. 1,214,240; Jan. 30; v. 234; p. 1462.

Todd, Samuel J., Highland Park, assignor of one-half to J. Palmer, Jr., Detroit, Mich. Work-holder for milling-machines. No. 1,213,300; Jan. 23; v. 234; p. 1110.

Toegel, Herbert. (See Schwenk, Elizabeth G., assignor.)

Toledo Parlor Furniture Company, The. (See De Does, Peter J., assignor.)

Toledo Scale Company. (See Crane, Samuel G., assignor.)

Toledo Scale Company. (See Dunn, Frank P., assignor.)

Toledo Scale Company. (See Myers, Hubert A., assignor.)

Toledo Scale Company. (See Wetzel, Lewis C., assignor.)

Tomanek, Philip, Newark, N. J., assignor to The Singer Manufacturing Company. Binder. No. 1,212,425; Jan. 16; v. 234; p. 771.

Tomasko, Michael, La Fayette, and C. M. Gassner, Monticello, Ind. Cultivator. No. 1,214,095 Jan. 30; v. 234; p. 1413.

Tomlinson, John K., Ronceverte, W. Va. Window-shade fixture. No. 1,213,301; Jan. 23; v. 234; p. 1111.

Tompkins, Robert F., New York, N. Y., assignor to The Binder Company. Roadway composition. No. 1,213,555; Jan. 23; v. 234; p. 1200.

Toohey, John W., assignor of one-half to J. S. Myers, Berlin, N. H. Wrench. No. 1,213,039; Jan. 16; v. 234; p. 986.

Toothaker, Fred L., assignor of one-half to E. B. Gilchrest, Belfast, Me. Moth-nest picker and retriever. No. 1,211,506; Jan. 9; v. 234; p. 420.

Topping, George W., Brooklyn, N. Y. Internal-combustion-engine governor. No. 1,212,851; Jan. 16; v. 234; p. 920.

Toth, Stephen, Furnace Run, Pa. Garbage-receptacle. No. 1,214,389; Jan. 30; v. 234; p. 1516.

Toupal, Frank L., Chicago Heights, Ill. Envelop. No. 1,212,852; Jan. 16; v. 234; p. 921.

Tourtier, Paul, Paris, France. Stand for bicycles and other vehicles. No. 1,211,898; Jan. 9; v. 234; p. 558.

Towart, John, Jr., Peekskill, N. Y. Stove-oven shelf. No. 1,211,984; Jan. 9; v. 234; p. 589.

Towle, Thomas B., Dayton, Ohio. Sparking plug. No. 1,214,390; Jan. 30; v. 234; p. 1517.

Townsend, James L., McDonalds, N. C. Fertilizer-distributing apparatus. No. 1,213,711; Jan. 23; v. 234; p. 1252.

Transom Draft Gear Company. (See Westlake, Charles T., assignor.)

Tredup, Herman, Sebewaing, Mich. Traction-wheel. No. 1,214,391; Jan. 30; v. 234; p. 1517.

Tree Faller & Cutter Company. (See Croman, James E., assignor.)

Tremblay, Joseph P. (See Dostert, Auguste J., assignor.)

Trescott, Charles B., assignor to Morris & Company, Chicago, Ill. Cooking. No. 1,214,392; Jan. 30; v. 234; p. 1517.

Trescott, Charles B., assignor to Morris & Company, Chicago, Ill. Low-temperature cooking apparatus. No. 1,214,393; Jan. 30; v. 234; p. 1518.

Trew, Arthur S., Portland, Oreg. Card-assorting machine. No. 1,214,394; Jan. 30; v. 234; p. 1518.

Trippensee, Christ W., Jefferson City, Mo. Poultry-nest. No. 1,213,712; Jan. 23; v. 234; p. 1252.

Trood, Samuel, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Movable element for electrical measuring instruments. No. 1,214,096; Jan. 30; v. 234; p. 1414.

Trosky, Bernhard, Brooklyn, N. Y. Razor-stropper. No. 1,213,556; Jan. 23; v. 234; p. 1200.

Trotter, John T., New York, N. Y. Tire. No. 1,213,557; Jan. 23; v. 234; p. 1201.

Troy Laundry Machinery Company. (See Balzer, Fritz, assignor.)

Troy Laundry Machinery Company. (See Bartholomew, William, assignor.)

Troy Laundry Machinery Company. (See Bartholomew and Leary, assignors.)

Troy Laundry Machinery Company. (See Conway, William F., assignor.)

Troy Wagon Works Company, The. (See Hudson, Warren R., assignor.)

Tscherning, Henry, Freeport, Ill. Sand-molding apparatus. No. 1,213,079; Jan. 30; v. 234; p. 1373.

Tucker, Albert L. (See Oehring, August J., assignor.)

Tucker, Edwin W., North Prairie, Wis. Automatic brake for baggage and express trucks. No. 1,211,011; Jan. 2; v. 234; p. 220.

Tullar, William E., Chicago, Ill. Controlling means for motor-driven vehicles. No. 1,212,286; Jan. 16; v. 234; p. 723.

Tullar, William E., assignor to The Respiratory Apparatus Company, Chicago, Ill. Apparatus for producing artificial respiration. No. 1,213,302; Jan. 23; v. 234; p. 1111.

Turner, Charles H., assignor to Osgood Bradley Car Company, Worcester, Mass. Metal car-window frame. No. 1,210,565; Jan. 2; v. 234; p. 65.

Turner, Ernest J., Pittsburgh, Pa. Feeder for ingot-molds. No. 1,211,899; Jan. 9; v. 234; p. 558.

Turner, George F., Mahoningtown, Pa. Exhaust-muffler. No. 1,213,558; Jan. 23; v. 234; p. 1201.

Turner & Seymour Manufacturing Co., The. (See Hills, Sidney C., assignor.)

Tuthill, Victor M., Grand Rapids, Mich. Universal knife-holding bar. No. 1,214,241; Jan. 30; v. 234; p. 1463.

Tweedy, Stanley E., Troy, Idaho. Windmill attachment. No. 1,211,643; Jan. 9; v. 234; p. 467.

Twin-Rim Company. (See Frederick, William A., assignor.)

Twombly, Nathaniel, Eastonville, Colo. Door-latch. No. 1,213,040; Jan. 16; v. 234; p. 986.

Ty-Sa-Man Machine Company. (See Spears, Joseph H., assignor.)

Tyrer, Daniel, Stockton, England. Sulfonation of hydrocarbons. No. 1,210,725; Jan. 2; v. 234; p. 120.

Tyrer, Daniel, Stockton, England. Manufacture of phenol. No. 1,210,726; Jan. 2; v. 234; p. 121.

Tyson, Frank, Canton, Ohio. Ice-cream freezer. No. 1,210,727; Jan. 2; v. 234; p. 121.

U. S. Bobbin & Shuttle Company. (See Baldwin, Luther C., assignor.)

Uber, Victor. (See Kirbach and Uber.)

Uffert, Walter B., Hempstead, N. Y. Window-closing device. No. 1,211,012; Jan. 2; v. 234; p. 220.

Uhlein, John C., Watertown, N. Y. Non-refillable bottle. No. 1,210,728; Jan. 2; v. 234; p. 121.

Uhlin, Richard A. (See Pingree and Uhlin.)

Ulferts, Behrend, Lakefield, Minn. Automatic alarm system. No. 1,211,644; Jan. 9; v. 234; p. 467.

Uline, Michiel J., Cleveland, Ohio. Locking device. No. 1,211,013; Jan. 2; v. 234; p. 221.

Under-feed Stoker Company of America. (See Kenney, William J., assignor.)

Underfeed Stoker Company of America. (See Kenney and Grohn, assignors.)

Underwood Computing Machine Company. (See Hart, Frederick A., assignor.)

Underwood Computing Machine Company. (See Stickney, Burnham C., assignor.)

Underwood Engineering Company. (See Underwood, John T., assignor.) (Reissue.)

Underwood, John T., Dayton, Ohio, assignor to Underwood Engineering Company, Detroit, Mich. Brick-kiln. (Reissue.) No. 14,251; Jan. 16; v. 234; p. 1022.

Underwood Typewriter Company. (See Fortin, Benjamin P., assignor.)

Underwood Typewriter Company. (See Helmond, William F., assignor.)

Underwood Typewriter Company. (See Kadry, Vassaf, assignor.)

Underwood Typewriter Company. (See McLaughlin, John C., assignor.)

Underwood Typewriter Company. (See Rice, Charles D., assignor.)

Underwood Typewriter Company. (See Roberts, Lyman R., assignor.)

Underwood Typewriter Company. (See Robinson, Frank A., assignor.)

Underwood Typewriter Company. (See Shaver, James E., Jr., assignor.)

Union Carbide Company. (See Hibbert and Morton, assignors.)

Union Special Machine Company. (See Allan, Edward T., assignor.)

Union Special Machine Company. (See Berger, Joseph, Jr., assignor.)

Union Special Machine Company. (See Chalman, John E., assignor.)

Union Special Machine Company. (See Ketcham, Louis B., assignor.)

Union Special Machine Company. (See Moffatt, James R., assignor.)

Union Special Machine Company. (See North, Francis S., assignor.)

Union Special Machine Company. (See Onderdonk, Lansing, assignor.)

Union Special Machine Company. (See Seymour, Dudley S., assignor.)

Union Special Machine Company. (See Woodward, Russel G., assignor.)

Union Switch & Signal Company, The. (See Coe, Elmer R., assignor.)

Union Switch & Signal Company, The. (See Griffin, Henry W., assignor.)

Union Switch & Signal Company, The. (See Taylor, John D., assignor.)

Union Switch & Signal Company, The. (See Wallace, Herbert A., assignor.)

United Shoe Machinery Company. (See Alexander, Alexander M., assignor.)

United Shoe Machinery Company. (See Allen and Orr, assignors.)

United Shoe Machinery Company. (See Bates, Arthur, assignor.)

United Shoe Machinery Company. (See Bertrand, Frederic E., assignor.)

United Shoe Machinery Company. (See Blanchard, Frank W., assignor.)

United Shoe Machinery Company. (See Braden, Albert R., assignor.)

United Shoe Machinery Company. (See Furber, Frederick M., assignor.)

United Shoe Machinery Company. (See Hall, Harry, assignor.)

United Shoe Machinery Company. (See Hill, George S., assignor.

United Shoe Machinery Company. (See Johnson, Albert E., assignor.)

United Shoe Machinery Company. (See Kelly, William J., assignor.)

United Shoe Machinery Company. (See Keyes, Eugene L., assignor.)

United Shoe Machinery Company. (See Reed, William A., assignor.)

United Shoe Machinery Company. (See Stanbon, Charles P., assignor.)

United States Rubber Company. (See Cobb, Henry Z., assignor.)

United Utilities Company. (See Miller, John, Sr., assignor.)

Universal Butter Machine Company. (See Volkmann, Charles, assignor.)

Universal Draft Gear Attachment Co. (See Nash, Charles J., assignor.)

Universal Drying Machine Company, The. (See Siler, Earnest E., assignor.)

Universal Electric Welding Company. (See Lachman, Maurice, assignor.)

Universal Speed Control Company. (See Pratt, Charles R., assignor.)

Universal Stamping Machine Co. (See Jones, William D., assignor.)

Universal Winding Company. (See Campbell, Leon J., assignor.)

Unné, Pierre G. (See Canton, Unné, and Salmson.)

Upson, Maxwell M., Englewood, N. J., assignor to Raymond Concrete Pile Company, New York, N. Y. Concrete piling and piling element. No. 1,213,437; Jan. 23; v. 234; p. 1158.

Upson, Wilbur S., Mansfield, Ohio. Combined nut and pipe wrench. No. 1,212,287; Jan. 16; v. 234; p. 724.

Upton, George W., Warren, Ohio. Fishing-reel. No. 1,212,288; Jan. 16; v. 234; p. 724.

Utility Compressor Company. (See Holley and Jennings, assignors.)

Vacuum Churn Corporation, The. (See Heller, Ernest B., assignor.)

Vahey, James A., Boston, Mass. Method of and apparatus for testing conductors for faults. No. 1,210,566; Jan. 2; v. 234; p. 65.

Valentine, George E., Port Carbon, Pa. Jar opener and holder. No. 1,214,395; Jan. 30; v. 234; p. 1518.

Valentine, John, Chicago, Ill. Power-transmission mechanism. No. 1,213,303; Jan. 23; v. 234; p. 1112.

Valentine, Joseph L. (See Shemin, Morris, assignor.)

Valerius, Theodore L., Fort Atkinson, Wis., assignor to Creamery Package Manufacturing Company, Chicago, Ill. Apparatus for treating milk or cream. No. 1,210,729; Jan. 2; v. 234; p. 122.

Valerius, Theodore L., Fort Atkinson, Wis., assignor to The Creamery Package Manufacturing Company, Chicago, Ill. Cream-storing cabinet. No. 1,212,586; Jan. 16; v. 234; p. 828.

Vales, Edward J., and J. T. Bishop, Augusta, Ga. Cam attachment for roller-beds of spinning-frames. No. 1,210,873; Jan. 2; v. 234; p. 170.
Valiquet, Ephrem F., assignor of one-fifth to J. F. Desmarais, one-fifth to O. F. Lefebvre and one-fifth to J. C. Desmarais, Montreal, Quebec, Canada. Winding-indicator. No. 1,213,438; Jan. 23; v. 234; p. 1159.
Van Ackeren, Aegidius J., Cedar Rapids, Nebr. Combined hatching and brooding device. No. 1,212,289; Jan. 16; v. 234; p. 725.
Van Brunt, Vanderhoff M. (See Burnett and Van Brunt.)
Van Derveer, Clarence A., assignor to Heywood Brothers and Wakefield Company, Wakefield, Mass. Upholstered structure and fabric therefor. No. 1,213,559; Jan. 23; v. 234; p. 1201.
Van Deventer, Harry R., Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J. Magneto attachment. No. 1,211,507; Jan. 9; v. 234; p. 420.
Van Dorn Girder Plate Company. (See Van Dorn, William E., assignor.)
Van Dorn, William E., Chicago, Ill., assignor to Van Dorn Girder Plate Company. Auxiliary floor for railway-cars. No. 1,212,121; Jan. 9; v. 234; p. 632.
Van Etten, Thomas D. (See Steinhauer and Van Etten.)
Van Geem, John, Erie, Pa. Beer-measuring device. No. 1,210,507; Jan. 2; v. 234; p. 66.
Van Guysling, Walter F., Albany, N. Y. Automatic oiler. No. 1,212,714; Jan. 16; v. 234; p. 875.
Van Guysling, Walter F., Albany, N. Y. Force-feed lubricator. No. 1,212,715; Jan. 16; v. 234; p. 876.
Van Horn, Charles B., Philadelphia, Pa. Barrel-washing machine. No. 1,212,587; Jan. 16; v. 234; p. 829.
Van Ness, Eugene D., New York, N. Y. Dry-pipe valve for automatic fire-extinguishing systems. No. 1,211,014; Jan. 2; v. 234; p. 221.
Van Orden, Howard E., East Orange, N. J., assignor of one-half to J. W. Sinnott, Brooklyn, N. Y. Telephone or other booth. No. 1,211,790; Jan. 9; v. 234; p. 517.
Van Tuyl, Thomas. (See Cook and Van Tuyl.)
Van Wyck, John H., Jersey City, N. J. Dish-washer. No. 1,211,985; Jan. 9; v. 234; p. 589.
Van Zile, Harry L., and T. A. Lewis, New York, N. Y.; said Lewis assignor to said Van Zile. Ventilating apparatus. No. 1,211,900; Jan. 9; v. 234; p. 558.
Vance, Walter N., Chicago Heights, assignor to Durand Steel Locker Company, Chicago, Ill. Metal shelving. No. 1,213,304; Jan. 23; v. 234; p. 1112.
Varley Duplex Magnet Company. (See Varley, Richard, assignor.) (Reissue.)
Varley, Richard, Englewood, assignor to Varley Duplex Magnet Company, Jersey City, N. J. Electrical system for autovehicles. (Reissue.) No. 14,352; Jan. 23; v. 234; p. 1287.
Veatch, John M., Palco, Kans. Harvesting-machine. No. 1,214,242; Jan. 30; v. 234; p. 1463.
Veckruise, Walter R., La Grange, Ill. Grain-tank. No. 1,213,041; Jan. 16; v. 234; p. 987.
Venn, John G., assignor to Jackson Cushion Spring Company, Jackson, Mich. Spring structure. No. 1,213,980; Jan. 30; v. 234; p. 1375.
Verderber, Josef, Cleveland, Ohio. Automobile heating and cooling apparatus. No. 1,213,305; Jan. 23; v. 234; p. 1112.
Vernart Manufacturing Corporation. (See Kotter, Colton, and Schwerin, assignors.)
Vernon, James B., Pittsburgh, Pa. Compression and suction device. No. 1,210,730; Jan. 2; v. 234; p. 122.
Vertical Drainage Company. (See Beall, Albert E., assignor.)
Vertunni, Joseph, Long Beach, Cal. Heel-cutter. No. 1,213,560; Jan. 23; v. 234; p. 1201.
Vickers Limited. (See Burns, William A., assignor.)
Vickers Limited. (See Dawson and Horne, assignors.)
Victor, Alexander F., Davenport, Iowa. Condensing-lens for cinematographs. No. 1,212,853; Jan. 16; v. 234; p. 921.
Victor Talking Machine Company. (See Wickes, Clarence W., assignor.)
Villar, Victor A., New York, N. Y., and S. C. Talbot, London, England. Land-torpedo. No. 1,211,015; Jan. 2; v. 234; p. 222.
Vincent, Harry S., Ridgewood, N. J., and J. L. Mohun, Brooklyn, N. Y. Locomotive-drifting-valve mechanism. No. 1,211,645; Jan. 9; v. 234; p. 467.
Vincent, Harry S., Ridgewood, N. J., and J. L. Mohun, Brooklyn, N. Y. Locomotive-drifting-valve mechanism. No. 1,211,646; Jan. 9; v. 234; p. 468.
Vining, Marion L. (See Hamlin, Fred J., assignor.)
Vintila, John, Cleveland, Ohio. Arc-lamp. No. 1,211,016; Jan. 2; v. 234; p. 222.
Viol, Charles H., assignor to Standard Chemical Company, Pittsburgh, Pa. Therapeutic applicator. No. 1,210,731; Jan. 2; v. 234; p. 122.
Visser, Aart P., The Hague, Netherlands. Dry gas-meter. No. 1,212,290; Jan. 16; v. 234; p. 725.
Vleeschouwer, Camille de, and J. Tacoma, Amsterdam, Netherlands. Latch mechanism for collapsible shelves and doors. No. 1,214,018; Jan. 30; v. 234; p. 1388.
Vogel, Eugene W., Oak Park, assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill. Protective apparatus for electric circuits. No. 1,210,568; Jan. 2; v. 234; p. 66.
Vogel, Eugene W., Oak Park, assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill. Track-drill. No. 1,213,306; Jan. 23; v. 234; p. 1113.
Vogel, Felix A., assignor to General Briquetting Company, New York, N. Y. Manufacture of briquets. No. 1,212,291; Jan. 16; v. 234; p. 725.
Vogelman, Joseph, Richmond, Ind. Piano-back. No. 1,211,791; Jan. 9; v. 234; p. 518.
Voglesong, Clyde C., Oakland, Cal., assignor to American Coin Register Company. Coin separator and counter. No. 1,210,732; Jan. 2; v. 234; p. 122.
Vogtländische Maschinen-Fabrik. (See Granz, Josef, assignor.)
Vogtländische Maschinen-Fabrik. (See Sieber, Gottwalt, assignor.)
Voigtländer, Otto, and H. Lohmann, Essen-on-the-Ruhr, Germany. Producing homogeneous bodies of chemically-pure tungsten metal of any desired shape. No. 1,212,426; Jan. 16; v. 234; p. 772.
Volhard, Charles, San Francisco, Cal. Soap-tray. No. 1,212,588; Jan. 16; v. 234; p. 829.
Volkmann, Charles, assignor to The Universal Butter Machine Company, Chicago, Ill. Butter making and molding machine. No. 1,211,508; Jan. 9; v. 234; p. 421.
Volkwein, Harry J., Pittsburgh, Pa. Hanger for swings. No. 1,213,783; Jan. 23; v. 234; p. 1275.
Vollbrecht, Frederick A., assignor to Industrial Electric Mfg. Company, Detroit, Mich. Toaster. No. 1,213,981; Jan. 30; v. 234; p. 1374.
Vollbrot Patent-Verwertungs-Gesellschaft m. b. H. (See Gross, Paul, assignor.)
Vollmer, John E. (See Good, Francis R., assignor.)
Von Boden, George B., and E. F. Ingles, San Francisco, Cal. Oil-burner. No. 1,211,792; Jan. 9; v. 234; p. 518.
Von Culin, Clayton, New York, N. Y., assignor of one-half to G. W. Beach, Saybrook, Conn. Egg-tester. No. 1,210,733; Jan. 2; v. 234; p. 123.
Von Hassel, Georg M., New York, N. Y. Apparatus for treating building and road material. No. 1,213,982; Jan. 30; v. 234; p. 1374.
Von Horváth, Guido, Philadelphia, Pa. Embroidery outfit. No. 1,211,793; Jan. 9; v. 234; p. 519.
Von Kramer, Hans, Edgbaston, Birmingham, England. Means for the regulation or control of railway and like traffic. No. 1,211,017; Jan. 2; v. 234; p. 222.
Voorhees, Raymond R. (See Scott, Zachariah T., assignor.)
Voss, Edward F., Walworth, Wis. Combination manicuring implement. No. 1,212,589; Jan. 16; v. 234; p. 829.
Vrooman, Harry S., Chicago, Ill. Internal-combustion engine. No. 1,214,097; Jan. 30; v. 234; p. 1414.
Vulcan Valve Company. (See Crews, Thomas B., Jr., assignor.)
Vulcan Valve Company. (See Keppel, Jesse E., assignor.)
Vuono, Giuseppi P., New York, N. Y. Silk-finishing machine. No. 1,212,854; Jan. 16; v. 234; p. 922.
W. D. Allen Manufacturing Company. (See Gibbs, Henry, assignor.)
W. & E. T. Fitch Co., The. (See Nettleton, George R., assignor.)
W. G. Clark & Company. (See Clark, Edward F., assignor.)
W. H. Bundy Recording Company. (See Bundy, Willard H., assignor.)
W. H. McElwain Company. (See Rollins, George L., assignor.)
W. & L. E. Gurley. (See Hess, Wendell, Jr., assignor.)
W. S. Rockwell Company. (See Rockwell, Walter S., assignor.)
Wabel, Charles D., Henry, Ill. Car-step. No. 1,212,716; Jan. 16; v. 234; p. 876.
Wachs, Murray A., New York, N. Y. Ice-skate. No. 1,212,855; Jan. 16; v. 234; p. 922.
Wachs, Walter, and R. L. Gallup, Chicago, Ill. Bottle-washing machine. No. 1,213,307; Jan. 23; v. 234; p. 1113.
Wachs, Walter, and R. L. Gallup, Chicago, Ill. Bottle-conveyer. No. 1,213,308; Jan. 23; v. 234; p. 1114.
Wade, Samuel O., Chicago, Ill. Needle-cutter. No. 1,212,292; Jan. 16; v. 234; p. 725.
Wadsworth, Frank L. O., Pittsburgh, assignor to The Spirella Company, Inc., Meadville, Pa. Garment-stay. No. 1,212,856; Jan. 16; v. 234; p. 922.
Wadsworth, Frank L. O., Pittsburgh, Pa., assignor to The Spirella Company. Machine for making garment-stays. No. 1,212,857; Jan. 16; v. 234; p. 923.
Wagg, James B., administrator. (See Wagg, Solomon R.)
Wagg, Solomon R., deceased, Appleton, Wis.; J. B. Wagg, administrator. Smoothing device for wet paper webs. No. 1,211,259; Jan. 2; v. 234; p. 304.
Wagner Electric Manufacturing Company. (See Fynn, Valère A., assignor.)
Wagner, Frank G. (See Schroeder, Herman D., assignor.)
Wagner, Mathias, Kokomo, Ind., assignor of thirty one-hundredths to F. F. Hunt. Fan attachment for rocking-chairs. No. 1,210,569; Jan. 2; v. 234; p. 67.
Wagner, Michael, assignor, by mesne assignments, to Newman Brothers, Incorporated, Pittsburgh, Pa. Grinding-machine. No. 1,214,098; Jan. 30; v. 234; p. 1414.
Waidele, John. (See Johnson, Christian A., assignor.)
Waigand, Edward, Nampa, Idaho. Tobacco-pipe. No. 1,212,590; Jan. 16; v. 234; p. 829.
Wainwright, Charles, Erie, Pa. Plate-valve. No. 1,214,396; Jan. 30; v. 234; p. 1519.

Waite, Charles N., deceased, Wilmington, Del., by C. B. Magoun, administratrix, West Vancouver, Canada, and J. E. Hedin, Wilmington, Del., assignors of one-third to W. H. Sharp, Philadelphia, Pa. Manufacture of cellulose. No. 1,212,158; Jan. 9; v. 234; p. 647.
Waite, Harry C., assignor to Waite Tractor Company, Chicago, Ill. Gearing for motor-vehicles. No. 1,210,874; Jan. 2; v. 234; p. 170.
Waite Tractor Company. (See Waite, Harry C., assignor.)
Waldron, Carl A., trustee. (See Freese, Herman W., assignor.)
Waldron, Edwin, Schenectady, N. Y. Trolley-ear. No. 1,214,009; Jan. 30; v. 234; p. 1415.
Wales, Rowland T., Sewaren, N. J. Mold for concrete walls and arches. No. 1,211,901; Jan. 9; v. 234; p. 559.
Walker, Albert S., assignor to H. G. Trout Company, Buffalo, N. Y. Portable forge. No. 1,212,293; Jan. 16; v. 234; p. 726.
Walker, Andrew, Somerville, assignor to M. N. Ross, Boston, Mass. Pocket-lining. No. 1,210,734; Jan. 2; v. 234; p. 123.
Walker and Bennett Manufacturing Company. (See Bennett, Frederick, assignor.)
Walker, George H., Worcester, assignor to Heenan & Froude, Limited, Manchester, England. Fluid-cooling apparatus. No. 1,213,042; Jan. 16; v. 234; p. 987.
Walker, George W., and E. H. Harry, Gibson City, Ill.; said Harry assignor to said Walker. Scaffold. No. 1,213,043; Jan. 16; v. 234; p. 987.
Walker, Harry, Anaheim, Cal. Illuminated number-plate. No. 1,213,784; Jan. 23; v. 234; p. 1278.
Walker, Henry, Wellington, New Zealand. Mail-marking machine. No. 1,214,243; Jan. 30; v. 234; p. 1464.
Walker, James A., Genesee, Pa. Neck-yoke. No. 1,211,795; Jan. 9; v. 234; p. 519.
Walker, Lena E., Fayette, Iowa. Egg-beater. No. 1,213,561; Jan. 23; v. 234; p. 1202.
Walker, Walter S., Helena, Mo. Road drag, grader, and scraper combined. No. 1,210,735; Jan. 2; v. 234; p. 123.
Walker, William J., assignor of one-fourth to R. H. Ball, Bolivar, N. Y. Retaining-cup. No. 1,212,294; Jan. 16; v. 234; p. 726.
Wall, Albert C., *et al.*, receivers. (See Matthews, Edwin S., assignor.)
Wallace, Archibald H., New York, N. Y., assignor of one-half to E. Brandquist, Orange, N. J. Spark-plug. No. 1,211,018; Jan. 2; v. 234; p. 222.
Wallace, Charles S. (See Willis, Elijah J., assignor.)
Wallace, David T., Chicago, assignor of one-third to F. M. Hood, Park Ridge, Ill. Nut-lock. No. 1,210,736; Jan. 2; v. 234; p. 124.
Wallace, Hamilton S. (See Shaw, Emmerson N., assignor.)
Wallace, Herbert A., New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,213,309; Jan. 23; v. 234; p. 1114.
Wallace, Herbert A., New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,213,310; Jan. 23; v. 234; p. 1115.
Wallace, Robert M., Santa Ana, Cal. Street-sign. No. 1,213,713; Jan. 23; v. 234; p. 1253.
Walls, John A., Baltimore, Md. Game apparatus. No. 1,213,562; Jan. 23; v. 234; p. 1202.
Walrath, John R. (See Minor, William S., assignor.)
Walsh, Eugene W., New York, N. Y. Door. No. 1,212,591; Jan. 16; v. 234; p. 830.
Walsh, George J., Brooklyn, N. Y. Horseshoe. No. 1,212,592; Jan. 16; v. 234; p. 830.
Walter, Anton J., Brooklyn, N. Y. Mail-bag collecting and delivering apparatus. No. 1,213,430; Jan. 23; v. 234; p. 1159.
Walter, Henry C., Bridgeport, Conn., assignor to The Locomobile Company of America, New York, N. Y. Gearing. No. 1,213,311; Jan. 23; v. 234; p. 1115.
Walter, Will P., Chicago, Ill. Apparatus for administering anesthetics. No. 1,211,647; Jan. 9; v. 234; p. 468.
Walton, Jerrold F. (See Mankin, Charles A., assignor.)
Waltz, Andrew C., Port Arthur, Ontario, Canada. Valve-seat grinder. No. 1,214,244; Jan. 30; v. 234; p. 1464.
Wanner, Albert, Jr., New York, N. Y. Chair. No. 1,213,312; Jan. 23; v. 234; p. 1116.
Waples, Rufus, Wayne, Pa. Railway-tie. No. 1,214,245; Jan. 30; v. 234; p. 1464.
Wârd, Albert. (See Wârd, Karl and A.)
Ward B. Story Company. (See Story, Ward B., assignor.)
Ward, Daniel O., deceased, Oak Park, Ill.; N. L. Ward, administratrix. Lock-nut. No. 1,210,737; Jan. 2; v. 234; p. 124.
Ward, Joseph E., Hanover, N. J., assignor of one-half to W. A. Olmstead, Fort Salonga, Long Island, N. Y. Indicator for faucets. No. 1,210,738; Jan. 2; v. 234; p. 124.
Wârd, Karl and A., Stockholm, Sweden. Centrifugal drier. No. 1,213,983; Jan. 30; v. 234; p. 1374.
Ward, Nellie L., administratrix. (See Ward, Daniel O.)
Ward, Richard H., Queens, N. Y. Control for cabinet-covers. No. 1,210,875; Jan. 2; v. 234; p. 171.
Ware, Charles I., assignor of one-half to F. E. Maxfield, Holyoke, Mass. Bed-plate. No. 1,212,159; Jan. 9; v. 234; p. 647.
Warm, August M., Danbury, Conn. Machine for jacking and brushing hat-bodies. No. 1,210,876; Jan. 2; v. 234; p. 171.
Warner, Albion L., assignor to C. L. Russell, New York, N. Y. Oscillating-chair guide. No. 1,210,739; Jan. 2; v. 234; p. 125.
Warner, Frank L., New York, N. Y. Railway-track cleaner. No. 1,211,902; Jan. 9; v. 234; p. 559.
Warren, John J., Preston, England. Core-making machine for foundry purposes. No. 1,211,796; Jan. 9; v. 234; p. 519.
Warren Webster & Company. (See Dobson, John B., assignor.)
Warren Webster & Company. (See Fitts, James L., assignor.)
Waser, Carl R., assignor to Precision Thermometer & Instrument Company, Philadelphia, Pa. Sphygmomanometer. No. 1,213,984; Jan. 30; v. 234; p. 1375.
Washburn, Wickes, Roselle, N. J. Tobacco-saver. No. 1,210,877; Jan. 2; v. 234; p. 172.
Washburne, Frank L., Westfield, N. J., and G. E. Kimmerlé, Brooklyn, assignors to E. G. Washburne & Company, New York, N. Y. Electrically-indicating weather-vane. No. 1,213,714; Jan. 23; v. 234; p. 1253.
Washtik Company, The. (See Courts, Benjamin D., assignor.)
Wass, Royal A., Berkeley, Cal. Mowing-machine. No. 1,212,427; Jan. 16; v. 234; p. 772.
Waterbury Clock Co. (See Muckle, Emil, assignor.)
Waterbury Mfg. Co. (See Recker, Adolph C., assignor.)
Waterbury Mfg. Co. (See Smith, Frederick C., assignor.)
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Cultivator-shovel. No. 1,212,295; Jan. 16; v. 234; p. 726.
Watkins, Lou V., Fort Worth, Tex. Skirt-gage. No. 1,213,313; Jan. 23; v. 234; p. 1116.
Watrous, Edward L., Des Moines, Iowa, assignor to D. B. Gann, Chicago, Ill. Leg-socket. No. 1,211,797; Jan. 9; v. 234; p. 520.
Watson, Arthur J., London, Ontario, Canada. Filing-cabinet. No. 1,211,798; Jan. 9; v. 234; p. 520.
Watson Development Company. (See Watson, Henry F., assignor.)
Watson, Harold L. (See Thum, Ellwood F., assignor.)
Watson, Henry F., assignor to Watson Development Company, Chicago, Ill. Receptacle. No. 1,212,428; Jan. 16; v. 234; p. 772.
Waugh, James M., Chicago, Ill. Shock-absorbing metallic tire for wheels. No. 1,210,740; Jan. 2; v. 234; p. 125.
Waukesha Motor Co. (See Horning, Harry L., assignor.)
Waxbom, Carl J. E., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Mining-machine. No. 1,212,717; Jan. 16; v. 234; p. 877.
Weaner, Edgar C., assignor of one-half to C. D. Leach, Toledo, Ohio. Snow shovel and loader. No. 1,214,397; Jan. 30; v. 234; p. 1519.
Weaver, Ira A., Springfield, Ill. Automobile-jack. No. 1,211,373; Jan. 2; v. 234; p. 330.
Weaver, Jesse C., Oakland, Nebr. Detachable shoe for the wheels of self-propelled vehicles. No. 1,213,044; Jan. 16; v. 234; p. 988.
Webb, Allie B., *et al.* (See Webb, Richard S., Jr., assignor.)
Webb, Edwin W. (See Barber and Webb.)
Webb, Ellis, Geneva, N. Y. Adjustable radiator foot-rest. No. 1,211,260; Jan. 2; v. 234; p. 305.
Webb, James L., Tioga, Tex., assignor of one-fourth to L. A. Glenn and one-fourth to E. C. and G. O. Hunter, Sherman, Tex. Space-band for line-casting machines. No. 1,210,741; Jan. 2; v. 234; p. 126.
Webb, Mary G., *et al.* (See Webb, Richard S., Jr., assignor.)
Webb, Richard S., Jr., assignor of one-half to A. B. Webb and one-half to M. G. Webb, Lexington, Ky. Hemp-brake. No. 1,211,986; Jan. 9; v. 234; p. 590.
Webb, Samuel C., Pittsburgh, Pa. Check-lock. No. 1,211,648; Jan. 9; v. 234; p. 468.
Weber, Elmer J., Oconomowoc, Wis. Two-cycle engine. No. 1,210,742; Jan. 2; v. 234; p. 126.
Weber, Ervin, Wilkinsburg, Pa. Stove-lid pliers. No. 1,212,858; Jan. 16; v. 234; p. 923.
Weber, Friedrich W., Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y. Stable product containing hydrogen peroxid and making the same. No. 1,210,570; Jan. 2; v. 234; p. 67.
Weber, Peter, Hamilton, Ohio. Clothes-line prop. No. 1,211,261; Jan. 2; v. 234; p. 305.
Weber, Samuel W., Brooklyn, and L. Horinko, New York, N. Y. Convertible chair. No. 1,210,878; Jan. 2; v. 234; p. 172.
Webre, Camille J., New Orleans, La. Implement for cutting belts and punching their ends. No. 1,211,987; Jan. 9; v. 234; p. 590.
Weeks, Benjamin E., Elmhurst, N. Y. Tube-cutter. No. 1,211,988; Jan. 9; v. 234; p. 590.
Weeks, Frederick W., Edgworth, England. Fixation of acid colors on cotton. No. 1,213,045; Jan. 16; v. 234; p. 988.
Weeks, Paul, Los Angeles, C. R. McCollom, Pasadena, and C. O. Haskell, assignors to Centrifugal Machinery Company, Los Angeles, Cal. Centrifugal amalgamator. No. 1,211,019; Jan. 2; v. 234; p. 223.
Wege, Ernest F. and H., La Crosse, Wis. Driving means for cement-mixers. No. 1,212,593; Jan. 16; v. 234; p. 830.

Wege, Henry. (See Wege, Ernest F. and H.)
Weinberg, Morris, *et al.* (See Weinberg, Samuel, assignor.)
Weinberg, Nathan, *et al.* (See Weinberg, Samuel, assignor.)
Weinberg, Samuel, Regan, assignor of one-half to N. Weinberg, Bowdon, and one-half to M. Weinberg, Regan, N. D. Self-propelled sleigh. No. 1,213,715; Jan. 23; v. 234; p. 1253.
Weinstein, Saul, Paterson, N. J. Folding box. No. 1,212,429; Jan. 16; v. 234; p. 773.
Weise, Adolf. Brooklyn, assignor to R. J. Masbach, New York, N. Y. Roasting apparatus. No. 1,212,859; Jan. 16; v. 234; p. 923.
Weiss, Louis T., and H. F. Franklin, Brooklyn, assignors to Reliance Ball Bearing Door Hanger Company, New York, N. Y. Device for opening and closing doors. No. 1,212,296; Jan. 16; v. 234; p. 727.
Welch, Albert C., executor and trustee. (See Woods, Edwin S.)
Welch, Edward J., Fitchburg, Mass. Spring suspension for automobile-trucks. No. 1,213,814; Jan. 23; v. 234; p. 1116.
Welch, Herman L., Los Angeles, Cal. Air-gun. No. 1,214,398; Jan. 30; v. 234; p. 1519.
Welch, Horace T., Quebec, Quebec, Canada. Toy warship. No. 1,213,046; Jan. 16; v. 234; p. 988.
Welch, James F., Cotati, Cal. Vehicle-spring. No. 1,214,246; Jan. 30; v. 234; p. 1465.
Welker, Leonard, New Holstein, Wis. Gate. No. 1,214,100; Jan. 30; v. 234; p. 1415.
Well, Hugo C., assignor of fifty one-hundredths to F. A. B. Meinhardt, New York, N. Y. Internal-combustion engine. No. 1,211,509; Jan. 9; v. 234; p. 421.
Well, Hugo C., assignor of one-half to F. A. B. Meinhardt, New York, N. Y. Internal-combustion engine. No. 1,213,315; Jan. 23; v. 234; p. 1117.
Well, Hugo C., assignor of fifty one-hundredths to F. A. B. Meinhardt, New York, N. Y. Valve mechanism for internal-combustion engines. No. 1,213,316; Jan. 23; v. 234; p. 1117.
Weller, Robert C., Chicago, Ill., P. D. Naugle and S. T. Hyde, Bremerton, Wash. Trucking system. No. 1,213,317; Jan. 23; v. 234; p. 1118.
Wellman, Harvey P., Oakland, Cal. Numerating and recording machine. No. 1,214,399; Jan. 30; v. 234; p. 1519.
Wells, John T., Newport, Ky., assignor to The Edwards Manufacturing Company, Cincinnati, Ohio. Moving-picture-film-printing unit. No. 1,210,743; Jan. 2; v. 234; p. 126.
Wells, John T., Newport, Ky., assignor to The Edwards Mfg. Company, Cincinnati, Ohio. Film-feed mechanism for moving-picture machines. No. 1,210,744; Jan. 2; v. 234; p. 126.
Wells, Otto. (See Maxim, Hosea F., assignor.)
Wells, William, Doland, S. D. Draft-equalizer. No. 1,212,718; Jan. 16; v. 234; p. 877.
Wellsteed, William H., Sr., Brampton, Mich. Wheel. No. 1,210,580; Jan. 2; v. 234; p. 70.
Welsbach Light Company. (See Gulbrandsen, Sverre, assignor.) (Reissue.)
Welsby, Perry A., Sapulpa, Okla. Cable-twisting device. No. 1,211,020; Jan. 2; v. 234; p. 223.
Welsh, James M., deceased; M. E. K. Welsh, administratrix, assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,213,985; Jan. 30; v. 234; p. 1375.
Welsh, Joseph A., Dunkirk, N. Y. Combination flush and local-vent fitting. No. 1,211,262; Jan. 2; v. 234; p. 306.
Welsh, Mary E. K., administratrix. (See Welsh, James M.)
Welte, Carl M., assignor to M. Welte & Sons, Inc., New York, N. Y. Driving and controlling mechanism for music-rolls. No. 1,211,799; Jan. 9; v. 234; p. 521.
Welty, Albert B., assignor to J. I. Case Threshing Machine Company, Racine, Wis. Threshing-machine. No. 1,210,571; Jan. 2; v. 234; p. 67.
Welty, William A., Waterloo, Iowa. Fountain-pen. No. 1,212,207; Jan. 16; v. 234; p. 727.
Wemp, Ernest E., Pontiac, Mich. Spring suspension for vehicle-bodies. No. 1,211,640; Jan. 9; v. 234; p. 469.
Wendt, Gustave A., Spokane, Wash. Water-motor. No. 1,211,650; Jan. 9; v. 234; p. 469.
Wentworth, Richmond A., Hope, Me. Escapement for chronometers. No. 1,213,716; Jan. 23; v. 234; p. 1254.
Wenzel, Stephen, assignor to New Jersey Car Spring & Rubber Co., Jersey City, N. J. Hog-beater belt. No. 1,213,717; Jan. 23; v. 234; p. 1254.
Wenzelmann Mfg. Co. *et al.* (See Evans, Walter P., assignor.)
Weppio, Peter J., Franklin, Minn. Trailer for vehicles. No. 1,213,440; Jan. 23; v. 234; p. 1159.
Werbeck, Walter G., Chicago, Ill. Means for protecting water-gage tubes of steam-boilers. No. 1,213,986; Jan. 30; v. 234; p. 1375.
Werham, George E. H. (See Milano, Silvestro, assignor.)
Werm, Elizabeth, Swoyersville, Pa. Hosiery. No. 1,213,047; Jan. 16; v. 234; p. 988.
Wescott Banker Signal Co., The. (See Wescott, Fred A., assignor.)
Wescott, Edson C. (See Kinz and Wescott.)
Wescott, Fred A., Corning, N. Y., assignor to The Wescott Banker Signal Co., Inc. Window-cleaning device. No. 1,214,247; Jan. 30; v. 234; p. 1465.
Wessel, Peder, Ljan, near Christiania, Norway. Hot-wire alternating-current limiter. No. 1,214,101; Jan. 30; v. 234; p. 1415.
Wessman, Edwin, New York, N. Y. Washing-machine. No. 1,213,048; Jan. 16; v. 234; p. 988.
West, Elmer S., Ewing, Ky. Tool. No. 1,212,430; Jan. 16; v. 234; p. 773.
West, George R., Pittsburgh, Pa. Finishing or polishing glass articles. No. 1,210,572; Jan. 2; v. 234; p. 67.
West, Leonidas D. (See Slater and West.)
Wester, Petrus, Berlin, Germany. Loading-machine for cartridge-belts. No. 1,211,800; Jan. 9; v. 234; p. 521.
Westerberg, Victor E., Gottenborg, Sweden, assignor, by mesne assignments, to S. K. F. Ball Bearing Company, Hartford, Conn. Ball-cage for ball-bearings. No. 1,211,903; Jan. 9; v. 234; p. 560.
Western Electric Company. (See Akin, Allison, assignor.)
Western Electric Company. (See Baldwin, John F., Jr., assignor.)
Western Electric Company. (See Bell, John H., assignor.)
Western Electric Company. (See Clausen, Henry P., assignor.)
Western Electric Company. (See Craft, Edward B., assignor.)
Western Electric Company. (See Dixon, Amos F., assignor.)
Western Electric Company. (See Dunham, Bert G., assignor.)
Western Electric Company. (See Fondiller, William, assignor.)
Western Electric Company. (See Goodrum, Charles, assignor.)
Western Electric Company. (See Harlow, John B., assignor.)
Western Electric Company. (See Johnson, Lewis H., assignor.)
Western Electric Company. (See Lundell, Alben E., assignor.)
Western Electric Company. (See McGrath, Maurice K., assignor.)
Western Electric Company. (See McMurry, Fred R., assignor.)
Western Electric Company. (See Miller, Daniel D., assignor.)
Western Electric Company. (See Nicolson, Alexander M., assignor.)
Western Electric Company. (See Reeves and Lundell, assignors.)
Western Electric Company. (See Sultzer, Morton, assignor.)
Westin, Henry, Smithville, Minn. Sunken-ship indicator. No. 1,211,989; Jan. 9; v. 234; p. 591.
Westinghouse Air Brake Company, The. (See McKeraban, Charles A., assignor.)
Westinghouse Air Brake Company, The. (See Woernley, Harry F., assignor.)
Westinghouse Electric and Manufacturing Company. (See Atherton, Alfred L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Brown, Arthur L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Brown, Harold W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Cheravshoff, Alexander, assignor.)
Westinghouse Electric and Manufacturing Company. (See Davis, David C., assignor.)
Westinghouse Electric and Manufacturing Company. (See Eaton, George M., assignor.)
Westinghouse Electric and Manufacturing Company. (See Peters, John F., assignor.)
Westinghouse Electric and Manufacturing Company. (See Renshaw, Clarence, assignor.)
Westinghouse Electric and Manufacturing Company. (See Schaanning and Stigant, assignors.)
Westinghouse Electric and Manufacturing Company. (See Schelbe, Harold M., assignor.)
Westinghouse Electric and Manufacturing Company. (See Schultz, Hjalmar R., assignor.)
Westinghouse Electric and Manufacturing Company. (See Skinner, Charles E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Trood, Samuel, assignor.)
Westinghouse Machine Company, The. (See MacMurchy, John A., assignor.)
Westlake, Charles T., assignor to Transom Draft Gear Company, St. Louis, Mo. Draw-bar connection. No. 1,212,719; Jan. 16; v. 234; p. 877.
Weston, Milton T., New York, N. Y. Expansion-bolt. No. 1,212,298; Jan. 16; v. 234; p. 727.
Wetherell, Anson B., Pittsburgh, Pa. Structural system. No. 1,212,720; Jan. 16; v. 234; p. 878.
Wetherill, Richard W., Philadelphia, Pa. Game. No. 1,213,718; Jan. 23; v. 234; p. 1254.
Wettengel, George A., St. Louis, Mo. Ladle-stopper-operating mechanism. No. 1,212,860; Jan. 16; v. 234; p. 924.
Wetzel, Lewis C., assignor, by mesne assignments, to Toledo Scale Company, Toledo, Ohio. Scale. No. 1,213,318; Jan. 23; v. 234; p. 1118.
Wetzel, Lewis C., Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Newark, N. J. Weighing-scale. No. 1,218,987; Jan. 30; v. 234; p. 1376.
Wetzel, Paul, New Rochelle, N. Y. Means for protecting corns. No. 1,212,861; Jan. 16; v. 234; p. 924.

Wetzel, Selton M., Port Orchard, Wash. Top plate for screw-jacks. No. 1,214,248; Jan. 30; v. 234; p. 1466.
Whaite, Rene. (See Carleton, Charles H., assignor.)
Wharrad Engineering Company, The. (See Wharrad, Lionel A., assignor.)
Wharrad, Lionel A., assignor to The Wharrad Engineering Company, Limited, Redditch, England. Machine for polishing needles and the like. No. 1,210,745; Jan. 2; v. 234; p. 127.
Wheary, George H., Racine, Wis. Trunk-locking means. No. 1,212,299; Jan. 16; v. 234; p. 728.
Wheaton, Harry S., Dallas, Iowa. Combined cut-out and lightning-arrester for telephone systems. No. 1,212,300; Jan. 16; v. 234; p. 728.
Wheeland, Olive B. (See Edwards, Van Every, assignor.)
Wheeler, Fred H., St. Louis, Mo. Support for mosquito-nets. No. 1,210,573; Jan. 2; v. 234; p. 68.
Wheeler, Harold S., Tacoma, Wash. Lubrication of bearings. No. 1,212,862; Jan. 16; v. 234; p. 924.
Wheeler, Seth, Castleton, N. Y. Dispensing-cabinet. No. 1,211,510; Jan. 9; v. 234; p. 422.
Wheelihan, Matt, *et al.* (See Curtis, George L., assignor.)
Wheeling Corrugating Company. (See Day, Edgar K., assignor.)
Whipple, Charles A. (See Yost, Joseph, assignor.)
Whistler, George F. (See Bolger, Robert S., assignor.)
Whitaker, John, North Wales, Pa. Machine for printing and scarring paper. No. 1,213,049; Jan. 16; v. 234; p. 989.
Whitaker, Samuel T., assignor of one-half to H. C. McCutchen, Columbus, Ga. Sanitary drinking apparatus. No. 1,213,319; Jan. 23; v. 234; p. 1118.
Whitaker, Samuel T., assignor of one-half to H. C. McCutchen, Columbus, Ga. Sanitary drinking apparatus. No. 1,213,320; Jan. 23; v. 234; p. 1119.
Whitcomb, Emory O., assignor to The I. E. Palmer Company, Middletown, Conn. Canopy. No. 1,214,484; Jan. 30; v. 234; p. 1540.
White, Bruce C., assignor to R. Hoe and Co., New York, N. Y. Bed-motion for printing-machines. No. 1,214,102; Jan. 30; v. 234; p. 1416.
White, Charles J., assignor to The C. J. White Manufacturing Company, New Britain, Conn. Button-tab end for hose-supporters. No. 1,210,574; Jan. 2; v. 234; p. 68.
White, Ernest C., Evanston, assignor to The Duplex Lighting System, Inc., Chicago, Ill. Lighting-fixture. No. 1,211,651; Jan. 9; v. 234; p. 470.
White, George A. (See Epple and White.)
White, Herbert E., assignor to The General Fireproofing Company, Youngstown, Ohio. Making expanded-metal structures. No. 1,212,863; Jan. 16; v. 234; p. 924.
White, James E., Walker, Minn. Envelop. No. 1,212,594; Jan. 16; v. 234; p. 830.
White, Jefferson D., Gore, Ga. Cotton-chopper. No. 1,213,321; Jan. 23; v. 234; p. 1119.
White, John F., Pittsburgh, Pa. Cushion-tire for vehicles. No. 1,213,719; Jan. 23; v. 234; p. 1254.
White, John F., assignor to L. E. White, Chicago, Ill. Joint-packing strip. No. 1,210,575; Jan. 2; v. 234; p. 68.
White, Joseph, Piscataway township, assignor to Hall Printing Press Company, Dunellen, N. J. Delivery-tray and support. No. 1,211,511; Jan. 9; v. 234; p. 422.
White, Joseph, Piscataway township, assignor to Hall Printing Press Company, Dunellen, N. J. Sheet-delivery mechanism. No. 1,211,512; Jan. 9; v. 234; p. 423.
White, Joseph, Beechwood Heights, assignor to Hall Printing Press Company, Dunellen, N. J. Printing-press. No. 1,214,485; Jan. 30; v. 234; p. 1546.
White, Lauren V. (See Burleigh and White.)
White, Luella E. (See White, John F., assignor.)
White, Richard P., Chicago, Ill. Jar. (Reissue.) No. 14,254; Jan. 30; v. 234; p. 1550.
White-Warner Company, The. (See McGovern, James, assignor.)
White, William S., Tracy City, Tenn. Cultivator. No. 1,213,050; Jan. 16; v. 234; p. 989.
Whiteford, David, Chicago, Ill. Hot-water heater. No. 1,211,801; Jan. 9; v. 234; p. 522.
Whitehead, William T. (See Pate, William E., assignor.)
Whitlock, John S. (See King and Whitlock.)
Whitney, William M. (See Folsom, Arthur E., assignor.)
Whittaker, Arnold R. (See Jeavons and Whittaker.)
Whyte, Alice T., East Orange, N. J. Garment-hanger. No. 1,210,746; Jan. 2; v. 234; p. 127.
Wick, Jacob O., Clifford, N. D. Fire-escape. No. 1,212,301; Jan. 16; v. 234; p. 728.
Wickes, Clarence S., Merchantville borough, N. J., assignor to Victor Talking Machine Company. Making diaphragms. No. 1,213,051; Jan. 16; v. 234; p. 990.
Wieden, Karl, Ohligs, Germany. Pipe-lighter. No. 1,212,164; Jan. 9; v. 234; p. 648.
Wigle, Wilson B., Fullerton, Cal. Ball-bearing spring casing-hook. (Reissue.) No. 14,253; Jan. 23; v. 234; p. 1288.
Wigle, Wilson B., Fullerton, Cal. Band-wheel construction. No. 1,213,785; Jan. 23; v. 234; p. 1276.
Wigle, Wilson B., Fullerton, Cal. Pump-valve. No. 1,214,400; Jan. 30; v. 234; p. 1520.
Wild, Charles M. (See Schwarzmann and Wild.)
Wilder, Allen B., St. Louis, Mo. Power-brake. No. 1,212,302; Jan. 16; v. 234; p. 729.
Wildey, Arthur T., Honcut, assignor of one-third to J. B. Johnson, Marysville, Cal. Tractor-wheel. No. 1,212,721; Jan. 16; v. 234; p. 878.
Wildman Mfg. Co. (See Pigeon, Albert M., assignor.)
Wiles, Russell, Riverside, Ill. Food product. No. 1,212,722; Jan. 16; v. 234; p. 879.
Wilhelmi, Otto, assignor to Internationale Siegwartbalken-Gesellschaft, Lucerne, Switzerland. Making concrete or reinforced-concrete (ferroconcrete) piles. No. 1,213,441; Jan. 23; v. 234; p. 1160.
Wilkinson, John F., assignor to A. F. Evans, trustee, Winchendon, Mass. Progressive rocking-horse. No. 1,212,122; Jan. 9; v. 234; p. 633.
Will, Anthony J., assignor to The August Maag Company, Baltimore, Md. Baking-pan. No. 1,212,864; Jan. 16; v. 234; p. 925.
Willard, Walter C., Cleveland, Ohio. Hydrocarbon-aerator. No. 1,211,263; Jan. 2; v. 234; p. 306.
Willey Company, The. (See Leonard and Reeps, assignor.)
William Cramp & Sons Ship & Engine Building Company, The. (See Metten, John F., assignor.)
William Mann Company. (See Deckert, Joseph O., assignor.)
Williams, Catherine E. (See Williams, William R., assignor.)
Williams, Edward, Jr., Wrexham, Wales. Means for controlling the opening of railway-carriage doors. No. 1,211,990; Jan. 9; v. 234; p. 591.
Williams, Frank R., Ottumwa, Iowa. Drill. No. 1,210,747; Jan. 2; v. 234; p. 127.
Williams, Fred L., San Francisco, Cal. Power-generating apparatus. No. 1,214,103; Jan. 30; v. 234; p. 1416.
Williams, Frederick A., North Yakima, Wash. Inking attachment for presses. No. 1,210,576; Jan. 2; v. 234; p. 68.
Williams, Howard H., *et al.*, receivers. (See Matthews, Edwin S., assignor.)
Williams, John W., Salisbury, Md. Gravity-filling oil or grease gun. No. 1,211,264; Jan. 2; v. 234; p. 306.
Williams, Joseph A., assignor to The K. W. Ignition Company, Cleveland, Ohio. Regulated fuel-heating device. No. 1,212,595; Jan. 16; v. 234; p. 831.
Williams, Louis E., Fremont, assignor to National Carbon Company, Cleveland, Ohio. Apparatus for lining dry cells. No. 1,210,577; Jan. 2; v. 234; p. 69.
Williams, Louis N. D., Ogontz, Pa. Stitch-transferring device for knitting-machines. No. 1,211,021; Jan. 2; v. 234; p. 224.
Williams, Milton F., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo. Dust-separator. No. 1,212,596; Jan. 16; v. 234; p. 831.
Williams, Milton F., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo. Dust-separator. No. 1,214,249; Jan. 30; v. 234; p. 1466.
Williams Patent Crusher and Pulverizer Company. (See Williams, Milton F., assignor.)
Williams, Rollin A., Lima, Ohio. Ring gate-latch. No. 1,211,022; Jan. 2; v. 234; p. 224.
Williams, Roy P., Santa Barbara, assignor to A. M. Drake, Pasadena, Cal. Spray-nozzle. No. 1,213,563; Jan. 23; v. 234; p. 1203.
Williams, Silas W., Gordo, Ala. Clevis-protector. No. 1,213,720; Jan. 23; v. 234; p. 1255.
Williams, Thomas J., Coalwood, W. Va. Coal-tipple. No. 1,212,723; Jan. 16; v. 234; p. 879.
Williams, William E., Chicago, Ill. Making corrugated disks for wheels. No. 1,213,564; Jan. 23; v. 234; p. 1203.
Williams, William E., Chicago, Ill. Tool for making wheel-disks. No. 1,213,565; Jan. 23; v. 234; p. 1203.
Williams, William R., New York, N. Y., assignor to C. E. Williams, Bakersfield, Cal. Vehicle suspension. No. 1,211,513; Jan. 9; v. 234; p. 423.
Williamson, Charles S., Chicago, Ill. Portable coal-screening rig. No. 1,213,322; Jan. 23; v. 234; p. 1119.
Williamson, Charles S., Chicago, Ill. Conveying apparatus. No. 1,213,323; Jan. 23; v. 234; p. 1119.
Williamson, Glenn S., New York, N. Y. Elevator safety system. No. 1,213,442; Jan. 23; v. 234; p. 1160.
Williamson, John D., Jr., assignor to American Engineering Company, Philadelphia, Pa. Equalizing mechanism for telemotor systems. No. 1,213,721; Jan. 23; v. 234; p. 1255.
Willis, Elijah J., assignor of one-third to C. S. Wallace, Morehead City, N. C. Spark-plug. No. 1,214,401; Jan. 30; v. 234; p. 1520.
Willis, Floyd J., Notasulga, Ala. Mechanical power-transmitting device. No. 1,211,023; Jan. 2; v. 234; p. 224.
Willis, Leland, assignor to Bateman Manufacturing Company, Grenloch, N. J. Mounting the teeth or blades of agricultural implements. No. 1,213,566; Jan. 23; v. 234; p. 1203.
Willmann, Joseph, Derby, Conn. Pasteurizing apparatus. No. 1,210,578; Jan. 2; v. 234; p. 69.
Wills, Saladin H., Newlin, Tex. Cotton-chopper. No. 1,210,579; Jan. 2; v. 234; p. 70.
Wilms, Lee W., assignor to The Scholl Manufacturing Company, Chicago, Ill. Foot-treatment apparatus. No. 1,213,786; Jan. 23; v. 234; p. 1277.
Wilputte, Louis, New York, N. Y. Coke-oven. No. 1,212,865; Jan. 16; v. 234; p. 925.
Wilputte, Louis, New York, N. Y. Coke-oven and operating the same. No. 1,212,866; Jan. 16; v. 234; p. 925.

Wilputte, Louis, New Rochelle, N. Y. Coke-oven. No. 1,213,988; Jan. 30; v. 234; p. 1376.
Wilson, Albert L., and F. McGlinchy, Willoughby, Ohio. Woodworking-vise. No. 1,211,024; Jan. 2; v. 234; p. 225.
Wilson, Hazen L. (See Cunningham and Wilson.)
Wilson, John, Glasgow, Scotland. Sugar-cane mill. No. 1,213,722; Jan. 23; v. 234; p. 1256.
Wilson, John S. (See Smith, Harry J., assignor.)
Wilson, Robert H., Tacoma, Wash. Vaporizing apparatus. No. 1,211,991; Jan. 9; v. 234; p. 591.
Wilson, William W., Wonder, Nev. Drill-extractor. No. 1,213,989; Jan. 30; v. 234; p. 1377.
Wilson, Wyle T., Philadelphia, Pa. Paper cone. No. 1,211,514; Jan. 9; v. 234; p. 423.
Wilt, Wilson W., Elkhart, Ind. Weeder. No. 1,212,303; Jan. 16; v. 234; p. 729.
Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)
Wineman, O. A., *et al.* (See Clark, Stuart J., assignor.)
Wingire, Ernest C., Minneapolis, Minn., assignor of one-half to P. J. N. Miller, Miller, S. D. Portable hoist. No. 1,214,104; Jan. 30; v. 234; p. 1417.
Winkley, Erastus E., Lynn, Mass. Feed mechanism. No. 1,213,052; Jan. 16; v. 234; p. 990.
Winter, Christian, Oskaloosa, Iowa. Pole-step. No. 1,211,992; Jan. 9; v. 234; p. 592.
Winter, William R., Berlin, Germany, assignor to Potter and Johnston Machine Company, Pawtucket, R. I. Safety clutch or coupling. No. 1,211,515; Jan. 9; v. 234; p. 424.
Wirebounds Patents Company. (See Craig, Edward, assignor.)
Wireless Specialty Apparatus Company. (See Pickard, Greenleaf W., assignor.)
Wireless Specialty Apparatus Company. (See Proctor, John A., assignor.)
Wirtz, Leonard P., Pilger, Saskatchewan, Canada. Stove-pipe-holder. No. 1,214,105; Jan. 30; v. 234; p. 1417.
Wise, Joseph C., North Yakima, Wash., assignor of one-half to D. J. Fisher, Portland, Oreg., and one-half to F. B. Ketchum, North Yakima, Wash. Shoe-finishing machine. No. 1,212,724; Jan. 16; v. 234; p. 879.
Witte, Adolf P., assignor of one-half to M. S. Dick, Chicago, Ill. Electric-switch contact-holder. No. 1,212,867; Jan. 16; v. 234; p. 926.
Wm. G. Hesse & Son Mfg. Co., The. (See Hesse, Otto H., assignor.)
Wobensmith, James C. (See Liberman and Wobensmith.)
Woizinski, Wincenty, *et al.* (See Pludowski, Aleksander, assignor.)
Wolfley, Harry F., Pittsburgh, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Coupling attachment. No. 1,211,516; Jan. 9; v. 234; p. 424.
Wohl, Maurice J., Brooklyn, and M. Mayer, New York, N. Y., assignors, by mesne assignments, to Prizma Incorporated. Color photography. No. 1,211,904; Jan. 9; v. 234; p. 560.
Wohlford, George T., Wiggins, Colo. Pump-rod connector. No. 1,212,868; Jan. 16; v. 234; p. 926.
Wolcott, Charles B., West Cheshire, Conn. Jack. No. 1,211,652; Jan. 9; v. 234; p. 470.
Wolcott, Neil B., Washington, D. C. Multiple-disk record for phonographs. No. 1,213,990; Jan. 30; v. 234; p. 1377.
Wollensak, Andrew, assignor to Wollensak Optical Company, Rochester, N. Y. Photographic shutter. No. 1,214,250; Jan. 30; v. 234; p. 1466.
Wollensak Optical Company. (See Wollensak, Andrew, assignor.)
Wolheim and Ossenbach, Industriegesellschaft m. b. H., Heinrich. (See Biberfeld, Arthur, assignor.)
Wolpe, George M., Indianapolis, Ind. Mold for vulcanized-rubber dental plates. No. 1,212,725; Jan. 16; v. 234; p. 879.
Wonner, William W., and C. W. Simon, York; said Wonner assignor to N. C. Stabley, Red Lion borough, Pa. Photographic-printing machine. No. 1,211,993; Jan. 9; v. 234; p. 592.
Wood, Albert B. (See Earl and Wood.)
Wood, Frank W., New York, N. Y., assignor to Floating Wedge Lock Nut Co., Inc. Eyeglasses and spectacles. No. 1,213,324; Jan. 23; v. 234; p. 1120.
Wood, Henry A. W., assignor to Wood Newspaper Machinery Corporation, New York, N. Y. Apparatus for drying matrices. No. 1,211,994; Jan. 9; v. 234; p. 592.
Wood, Henry A. W., New York, and J. A. Isbell, Middletown, assignors, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y. Folding-blade-adjusting mechanism. No. 1,213,325; Jan. 23; v. 234; p. 1120.
Wood, Henry A. W., assignor to American High Speed Press Company, New York, N. Y. Automatic feeding mechanism for bed-and-platen presses. No. 1,213,567; Jan. 23; v. 234; p. 1204.
Wood, Henry A. W., assignor to American High Speed Press Company, New York, N. Y. Automatic tripping mechanism for bed-and-platen presses. No. 1,213,568; Jan. 23; v. 234; p. 1204.
Wood Newspaper Machinery Corporation. (See Wood, Henry A. W., assignor.)
Wood Newspaper Machinery Corporation. (See Wood and Isbell, assignors.)
Wood, Rufus H., Overton, Nebr. Operating mechanism for churns. No. 1,211,517; Jan. 9; v. 234; p. 424.
Woodbridge, Joseph L., Philadelphia, Pa. System of electrical distribution. No. 1,211,802; Jan. 9; v. 234; p. 522.
Woodbridge, Joseph L., Philadelphia, Pa. Voltage regulation. No. 1,211,803; Jan. 9; v. 234; p. 523.
Woodbury, Carl L., Los Angeles, Cal. Spike and other fastener. No. 1,213,787; Jan. 23; v. 234; p. 1277.
Wooding, Benjamin F., Montclair, N. J. Railway-traffic-control equipment. No. 1,211,995; Jan. 9; v. 234; p. 593.
Woodrow, Harry R., assignor to T. E. Murray, New York, N. Y. Electric welding-machine. No. 1,212,869; Jan. 16; v. 234; p. 927.
Woods, Charles C., Denver, Colo. Tuning instrument. No. 1,212,304; Jan. 16; v. 234; p. 729.
Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Talking-machine. No. 1,213,443; Jan. 23; v. 234; p. 1161.
Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Talking-machine. No. 1,214,106; Jan. 30; v. 234; p. 1417.
Woods, Edwin S., deceased, Chicago, Ill.; A. G. Welch, executor, assignor to A. G. Welch, trustee. Antifriction-bearing. No. 1,213,991; Jan. 30; v. 234; p. 1377.
Woods, James W., Grand Junction, Colo. Placer-machine. No. 1,211,518; Jan. 9; v. 234; p. 424.
Woodward, Russel G., Waukegan, assignor to Union Special Machine Company, Chicago, Ill. Feeding mechanism for sewing-machines. No. 1,211,804; Jan. 9; v. 234; p. 523.
Woodworth, George K., trustee. (See Price, David R., assignor.)
Wooldridge, George W., Clarksville, Iowa. Self-cleaning manger. No. 1,213,053; Jan. 16; v. 234; p. 990.
Woonsocket Rubber Company. (See Hadfield and Kuhlthau, assignors.)
Wootton, Henrietta M., Boston, Mass. Ornamental article. No. 1,214,402; Jan. 30; v. 234; p. 1520.
Woratzeck, Frank W., Trenton, Ill. Corn-planter and hill-marker. No. 1,211,265; Jan. 2; v. 234; p. 307.
Wordingham, George, Milwaukee, Wis. Swivel-hook for coat-hangers. No. 1,213,569; Jan. 23; v. 234; p. 1205.
Worsell, John H., Gull Lake, Saskatchewan, Canada. Grain-scoop. No. 1,212,305; Jan. 16; v. 234; p. 730.
Worthington, Charles C., Dunnfield, N. J. Gang lawn-mower. No. 1,210,879; Jan. 2; v. 234; p. 172.
Wray, Joseph H., Salt Lake City, Utah. Combined can opener and sealer. No. 1,212,431; Jan. 16; v. 234; p. 773.
Wright, Anthony T., Froiona, Ga. Shoe-fastener. No. 1,211,996; Jan. 9; v. 234; p. 593.
Wright, Fenton, Kansas City, Mo. Coin-actuated clock-bank. No. 1,212,597; Jan. 16; v. 234; p. 832.
Wright, Fenton, Kansas City, Mo. Lock. No. 1,213,992; Jan. 30; v. 234; p. 1378.
Wright, George P. (See Hobson and Wright.)
Wright, George W., Deming, N. Mex. Process of and apparatus for smelting ores. No. 1,211,805; Jan. 9; v. 234; p. 524.
Wright, Harry E., Spokane, Wash. Rebound-snubber. No. 1,214,403; Jan. 30; v. 234; p. 1520.
Wright, Reuben J., Bliss, N. Y. Card and letter case. No. 1,211,025; Jan. 2; v. 234; p. 225.
Wright, Wilbur L., assignor to The Paper Vessels Company, Baltimore, Md. Apparatus for forming paper container-bodies. No. 1,213,054; Jan. 16; v. 234; p. 991.
Wright, William D., San Diego, Cal. Electric cooking apparatus. No. 1,214,486; Jan. 30; v. 234; p. 1547.
Wright Wire Company. (See Dooley, James P., assignor.)
Wristen, Henry C., and J. W. Henderson, Dexter, N. Mex. Double-acting pump. No. 1,211,519; Jan. 9; v. 234; p. 425.
Wulff, John H. (See Allen and Wulff.)
Wurmnest, Emil, Morton, Ill. Twitch. No. 1,214,251; Jan. 30; v. 234; p. 1467.
Wurzburg, Ludwig, Bellingham, Wash. Can closing and exhausting machine. No. 1,211,266; Jan. 2; v. 234; p. 307.
Wylie, Joseph S., Oklahoma, Okla. Hoisting mechanism. No. 1,210,748; Jan. 2; v. 234; p. 127.
Wyman, George W., Wilmington, Del. Locomotive drifting device. No. 1,212,726; Jan. 16; v. 234; p. 879.
Wynn, D. R., *et al.* (See McCarty, Roy I., assignor.)
Yale & Towne Manufacturing Company, The. (See Augenbraun, Peter F., assignor.)
Yale & Towne Manufacturing Company, The. (See Schoell, Reinhold, assignor.)
Yamamoto, Yukinobu, St. Louis, Mo. Game apparatus. No. 1,214,252; Jan. 30; v. 234; p. 1467.
Yarnall, Harry, Roosevelt, Wash. Foot-lever controlling device. No. 1,214,107; Jan. 30; v. 234; p. 1418.
Yaw, Clio B., Arlington, N. J., assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,211,653; Jan. 9; v. 234; p. 471.
Yeager, Frederick A., Johnstown, Pa. Game apparatus. No. 1,211,026; Jan. 2; v. 234; p. 225.
Yelle, George. (See Kennedy and Yelle.)
Yerkes, Wilmer H., Pittsburgh, Pa. Combined rail chair, fastener, and tie. No. 1,213,326; Jan. 23; v. 234; p. 1120.

Yonker, Nicholas J., Holland, Mich. Humidifying apparatus. No. 1,211,905; Jan. 9; v. 234; p. 560.
Yost, Joseph, assignor of one-half to C. A. Whipple, Ashland, Pa. Ice-cream-cone support. No. 1,213,055; Jan. 16; v. 234; p. 991.
Young, Cyrus H., Nutley, N. J. Inspection-opening for mattresses, &c. No. 1,212,432; Jan. 16; v. 234; p. 773.
Young, Leonard A., Highland Park, Mich. Seat-spring. No. 1,211,267; Jan. 2; v. 234; p. 308.
Youngberg, Alfred F., *et al.* (See Bergren, John A., assignor.)
Younger, Thomas W., and O. B. Schoenky, Sacramento, Cal., assignors to H. Forsyth, Chicago, Ill. Metal diaphragm for car-vestibules. No. 1,211,654; Jan. 9; v. 234; p. 471.
Youngman, Charles A., Louisville, Ky. Bottle-filling machine. No. 1,211,027; Jan. 2; v. 234; p. 226.
Younie, Lewis E., Portland, Oreg. Pulley. No. 1,213,570; Jan. 23; v. 234; p. 1205.
Zachow, William, assignor to J. I. Case Threshing Machine Company, Racine, Wis. Baling-press. No. 1,213,993; Jan. 30; v. 234; p. 1378.
Zadina, Anton, Ceresco, Nebr. Horseshoe. No. 1,211,268; Jan. 2; v. 234; p. 308.
Zaleski, Frank, Somerville, assignor to Reece Shoe Machinery Company, Boston, Mass. Making composite insoles. No. 1,211,520; Jan. 9; v. 234; p. 425.
Zaleski, Frank, Somerville, assignor to The Reece Button Hole Machine Company, Boston, Mass. Buttonhole-sewing machine. No. 1,214,108; Jan. 30; v. 234; p. 1418.
Zappi, Pasquale, assignor of one-fourth to J. J. Spotts, Youngstown, Ohio. Fireproof composition. No. 1,211,028; Jan. 2; v. 234; p. 226.
Zeisel, Adolph, Bel Air, Md. Indicator system. No. 1,213,723; Jan. 23; v. 234; p. 1256.
Zerk, Oscar, Cleveland, Ohio, assignor, by mesne assignments, to G. W. Bowen, Auburn, N. Y. Priming-cup. No. 1,212,727; Jan. 16; v. 234; p. 880.
Ziehler, Bernard H., and J. C. Dawley, Dayton, Ohio; said Dawley assignor to said Ziehler. Recording-lock. No. 1,212,598; Jan. 16; v. 234; p. 832.
Ziehler, Bernard H., and D. R. Rowe, Dayton, Ohio; said Rowe assignor to said Ziehler. Lock. No. 1,212,599; Jan. 16; v. 234; p. 833.
Ziehike, Max, Jefferson, Iowa. Automobile ambulance. No. 1,210,749; Jan. 2; v. 234; p. 128.
Zimmermann, John, Brooklyn, N. Y. Clothes-pounder. No. 1,211,521; Jan. 9; v. 234; p. 425.
Zinkeisen, Oscar T., assignor to Fore Chemical Works Inc., New York, N. Y. Purifying crude acetate of lime. No. 1,213,724; Jan. 23; v. 234; p. 1256.
Zollinger, Adalbert, Leipzig-Eutritzsch, assignor to Popper & Co. Gesellschaft mit beschränkter Haftung, Leipzig, Germany. Music-sheet changer for mechanical musical instruments. No. 1,211,029; Jan. 2; v. 234; p. 226.
Zolninger, Charles. (See Henderson and Zolninger.)
Zolper, William, Wilmington, Del. Device for picking up or lifting pins, needles, &c. No. 1,212,870; Jan. 16; v. 234; p. 927.
Zorger, Adam H., Shermans Dale, Pa. Corn-slicer. No. 1,213,056; Jan. 16; v. 234; p. 992.
Zuckerman, Joseph, New York, N. Y. Combined bathing-cap and suit-bag. No. 1,213,571; Jan. 23; v. 234; p. 1205.
Zuraw, John. (See Plofchan and Zuraw.)
Zurvalecz, John, Martin, Pa. Chair-operated fan. No. 1,212,433; Jan. 16; v. 234; p. 774.
Zwisler, Arthur L. (See Burleigh and White, assignors.)

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

American Electrical Heater Company. (See Kuhn and Shallor, assignors.)

American Steam Gauge & Valve Manufacturing Company. (See Woodman, Frank B., assignor.)

Arnold, John E., *et al.* (See Shoup, Elmer, assignor.)

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J. Bowl for lighting-fixtures. No. 50,117; Jan. 2; v. 234; p. 345.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Lighting-fixture. Nos. 50,154–6; Jan. 16; v. 234; p. 1023.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Canopy for lighting-fixtures. No. 50,157; Jan. 16; v. 234; p. 1023.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Socket-cover for lighting-fixtures. No. 50,158; Jan. 16; v. 234; p. 1023.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Arm for lighting-fixtures. No. 50,159; Jan. 16; v. 234; p. 1024.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Lighting-fixture. Nos. 50,160–8; Jan. 16; v. 234; pp. 1024–5.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Center plate for a chandelier-body. No. 50,169; Jan. 16; v. 234; p. 1025.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Rim for a chandelier-body. Nos. 50,170–1; Jan. 16; v. 234; p. 1026.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Arm for lighting-fixtures. No. 50,172; Jan. 16; v. 234; p. 1026.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Candlestick. No. 50,173; Jan. 16; v. 234; p. 1026.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Chandelier ceiling-ring. No. 50,174; Jan. 16; v. 234; p. 1027.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Canopy for lighting-fixtures. No. 50,175; Jan. 16; v. 234; p. 1027.

Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Socket-cover for lighting-fixtures. No. 50,176; Jan. 16; v. 234; p. 1027.

Baxter, John B., assignor to Covert Manufacturing Company, Watervliet, N. Y. Hook. No. 50,177; Jan. 16; v. 234; p. 1027.

Bayley, Robert W., assignor to Bayley & Sons, Inc., Brooklyn, N. Y. Electric-lighting fixture. Nos. 50,178–9; Jan. 16; v. 234; p. 1028.

Bayley & Sons. (See Bayley, Robert W., assignor.)

Becker, Caspar, Montgomery county, assignor to Becker, Smith & Page, Philadelphia, Pa. Wall-paper. No. 50,118; Jan. 2; v. 234; p. 345.

Becker, Henry, New York, N. Y. Seamstress sewing-cabinet. No. 50,214; Jan. 23; v. 234; p. 1289.

Becker, Smith & Page. (See Becker, Caspar, assignor.)

Beiswanger, John, assignor to Gill Brothers Company, Steubenville, Ohio. Shade-bowl. No. 50,180; Jan. 16; v. 234; p. 1028.

Bessolo, William L., San Diego, Cal. Wrench. No. 50,119; Jan. 2; v. 234; p. 345.

Bigelow Hartford Carpet Company. (See Riddell, Robert F., assignor.)

Bowden, Martin L. and M. L., Jr., Brooklyn, N. Y. Ring or similar article. No. 50,181; Jan. 16; v. 234; p. 1028.

Boyle, Willis J., Sr., Los Angeles, Cal. Canteen. No. 50,182; Jan. 16; v. 234; p. 1029.

Brinckerhoff, Francis M., Englewood, N. J. Light-screen. No. 50,183; Jan. 16; v. 234; p. 1029.

Bromley, Irving, Cranston, R. I., assignor to Old Colony Advertising Company. Sign. No. 50,215; Jan. 23; v. 234; p. 1289.

Brown, John W., Jr., Columbus, Ohio, and L. McCullough, Chicago, Ill., assignors to The John W. Brown Manufacturing Company, Columbus, Ohio. Automobile-lamp. No. 50,184; Jan. 16; v. 234; p. 1029.

Brunswick-Balke-Collender Company, The. (See Hobbs, Frank C., assignor.)

Buckley, Warren B., New York, N. Y. Vehicle-tire. Nos. 50,120–1; Jan. 2; v. 234; p. 345.

Burgess, Thornton W. (See Cady, Harrison, assignor.)

Butler, Murry, Brookhaven, Miss. Book-table. No. 50,122; Jan. 2; v. 234; p. 346.

Cady, Harrison, Brooklyn, N. Y., assignor to T. W. Burgess, Springfield, Mass. Article of manufacture. Nos. 50,223–34; Jan. 30; v. 234; pp. 1551–3.

Cady, Harrison, Brooklyn, N. Y., assignor to T. W. Burgess, Springfield, Mass. Game-board or similar article. No. 50,235; Jan. 30; v. 234; p. 1553.

Cady, Harrison, Brooklyn, N. Y., assignor to T. W. Burgess, Springfield, Mass. Article of manufacture. No. 50,236; Jan. 30; v. 234; p. 1554.

Carver, Thomas A., Colo, Iowa. Dust-pan. No. 50,123; Jan. 2; v. 234; p. 346.

Central Brass Manufacturing Company, The. (See Mortimer, John N., assignor.)

Chas. Polacheck & Bro. Co. (See Polacheck, William, assignor.)

Chianco, Benedetto, Clairton borough, Pa. Barber's cabinet. No. 50,237; Jan. 30; v. 234; p. 1554.

Coatsworth, Louis, Chicago, Ill. Casing for motion-picture apparatus. No. 50,145; Jan. 9; v. 234; p. 652.

Collins, William A., Brooklyn, N. Y.. Kite. No. 50,124; Jan. 2; v. 234; p. 346.

Congoleum Company, The. (See Solms, Martha H., assignor.)

Covert Manufacturing Company. (See Baxter, John B., assignor.)

Davis, Paul M., Brooklyn, N. Y. Toy. No. 50,238; Jan. 30; v. 234; p. 1554.

Dawes, John L., Pittsburgh, Pa. Lamp-casing. No. 50,239; Jan. 30; v. 234; p. 1554.

De Ville, Walter, East Liverpool, Ohio, assignor to The Palm Brothers Company, New York, N. Y. Plate or similar article. No. 50,240; Jan. 30; v. 234; p. 1555.

Domestic Talking Machine Corporation. (See Sheble, Horace, assignor.)

Dunne, James P., Chicago, Ill. Image or doll. No. 50,185; Jan. 16; v. 234; p. 1029.

Eichbaum, Herman W., Venice, Cal. Vehicle-body. No. 50,125; Jan. 2; v. 234; p. 346.

Elkins, David H., Amesbury, assignor to Gray & Davis Inc., Cambridge, Mass. Lamp. Nos. 50,241–2; Jan. 30; v. 234; p. 1555.

Emil Grossman M'f'g Co. (See Rosen, Mayer S., assignor.)

English, John C., Camden, N. J., assignor to Victor Talking Machine Company. Talking-machine casing. No. 50,126; Jan. 2; v. 234; p. 346.

Ericson, Emile, Pelham, and R. Weiss, Brooklyn, N. Y., assignors to Hobbs Wall Paper Company. Border for wall-paper. No. 50,243; Jan. 30; v. 234; p. 1555.

Faerber, William, Chicago, Ill. Shampooing apparatus. No. 50,186; Jan. 16; v. 234; p. 1030.

Fageol, Rollie B., Oakland, Cal. Vehicle. No. 50,146; Jan. 9; v. 234; p. 652.

Fanslow, Benjamin O., Rye, N. Y. Frame for check-protecting machines. No. 50,187; Jan. 16; v. 234; p. 1030.

Fauser, Gustave M., New York, N. Y., assignor to The Hobbs Wall Paper Company. Wall-paper. No. 50,188; Jan. 16; v. 234; p. 1030.

Fauser, Gustave M., New York, N. Y., assignor to Hobbs Wall Paper Company. Border for wall-paper. No. 50,216; Jan. 23; v. 234; p. 1289.

Fawcett, Willis G., Salem, Ohio. Combined hat and clothes hook. No. 50,217; Jan. 23; v. 234; p. 1289.

Ferier, François E., Lyon, France. Silk cloth. No. 50,255; Jan. 30; v. 234; p. 1557.

Finizio, Thomas D., Kitchawan, N. Y. Portable electric lamp. No. 50,189; Jan. 16; v. 234; p. 1030.

Friedley Voshardt Co. (See Mohrmann, Paul, assignor.)

Fritch, Elue O., assignor to Hood Rubber Company, Watertown, Mass. Tire-tread. No. 50,190; Jan. 16; v. 234; p. 1030.

Gayle, James, Carrollton, Ky. Railway bulletin-board. No. 50,147; Jan. 9; v. 234; p. 652.

Geissinger, William T., Pittsburgh, Pa. Font of printing-type. No. 50,191; Jan. 16; v. 234; p. 1030.

General Electric Company. (See Gosling, Joseph W., assignor.)

Gill Brothers Company. (See Beiswanger, John, assignor.)

Gosling, Joseph W., Schenectady, N. Y., assignor to General Electric Company. Lamp-globe. No. 50,192; Jan. 16; v. 234; p. 1031.

Gray & Davis. (See Elkins, David H., assignor.)

Gray, Edwin T., and A. T. Hoevet, New York, N. Y. Automobile signal-box. No. 50,127; Jan. 2; v. 234; p. 346.

Greenberg, David, New York, N. Y. Gem-setting. No. 50,128; Jan. 2; v. 234; p. 347.
Guth, Oscar D., assignor to Luminous Unit Company, St. Louis, Mo. Lighting-fixture. No. 50,193; Jan. 16; v. 234; p. 1031.
Haley, Reuben, Beaver, assignor to United States Glass Company, Pittsburgh, Pa. Glass dish or similar article. No. 50,194; Jan. 16; v. 234; p. 1031.
Haley, Reuben, Beaver, assignor to United States Glass Company, Pittsburgh, Pa. Glass plate or similar article. No. 50,195; Jan. 16; v. 234; p. 1031.
Hamilton, Charles W., Milwaukee, Wis. Paper doily. Nos. 50,196–9; Jan. 16; v. 234; pp. 1031–2.
Harley-Davidson Motor Co. (See Harley, William S., assignor.)
Harley, William S., assignor to Harley-Davidson Motor Co., Milwaukee, Wis. Gear-wheel. No. 50,129; Jan. 2; v. 234; p. 347.
Harris, James, Wyoming, Ohio. Candy tablet or the like. No. 50,148; Jan. 9; v. 234; p. 653.
Hawthorne, Ellsworth A., Bridgeport, Conn. Vehicle-lamp with mirrorscope. No. 50,200; Jan. 16; v. 234; p. 1032.
Hobbs, Frank C., New York, N. Y., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Ceiling-plate. No. 50,201; Jan. 16; v. 234; p. 1032.
Hobbs Wall Paper Company. (See Ericson and Weiss, assignors.)
Hobbs Wall Paper Company. (See Fauser, Gustave M., assignor.)
Hoeveler, John A., Chicago, Ill. Reflector. Nos. 50,130–1; Jan. 2; v. 234; pp. 347–8.
Hoevet, Alfred T. (See Gray and Hoevet.)
Hood Rubber Company. (See Fritch, Elue O., assignor.)
Hopkinson, Ernest, New York, N. Y. Tire. No. 50,202; Jan. 16; v. 234; p. 1032.
Hough, Azel C., Janesville, Wis. Porch-shade. No. 50,203; Jan. 16; v. 234; p. 1032.
Ittig, George P., assignor to W. D. Smith Silver Company, Bridgeport, Conn. Chop-dish or similar article. No. 50,132; Jan. 2; v. 234; p. 348.
Janette, John T., Chicago, Ill. Casing for air-pumps. No. 50,149; Jan. 9; v. 234; p. 653.
Janette, John T., Chicago, Ill. Casing for air pumps and filters. No. 50,150; Jan. 9; v. 234; p. 653.
John W. Brown Manufacturing Company, The. (See Brown and McCullough, assignors.)
Johnson, Edward H., Binghamton, N. Y. Spoon. No. 50,133; Jan. 2; v. 234; p. 348.
Keaton, Robert H., San Francisco, Cal. Vehicle-tire. No. 50,134; Jan. 2; v. 234; p. 348.
Kleint, August G., Fort Wayne, Ind. Charm. No. 50,135; Jan. 2; v. 234; p. 348.
Kremer, Gustav, Paterson, N. J. Hat-band. No. 50,136; Jan. 2; v. 234; p. 349.
Kuenz, Joseph A., Toledo, Ohio. Radiator-core. No. 50,204; Jan. 16; v. 234; p. 1033.
Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Electric heater. No. 50,244; Jan. 30; v. 234; p. 1555.
Luminous Unit Company. (See Guth, Oscar D., assignor.)
Mackemer, Eli M. (See Mackemer, Frank L. and E. M.)
Mackemer, Frank L., Peoria, and E. M. Mackemer, Galesburg, Ill. Automobile-body. No. 50,218; Jan. 23; v. 234; p. 1289.
McAdow, Charles E., Jersey City, N. J. Casing for combined vending and weighing machines. No. 50,205; Jan. 16; v. 234; p. 1033.
McCullough, Lester. (See Brown and McCullough.)
McFarren, Rolandus O., *et al.* (See Shoup, Elmer, assignor.)
McKee Glass Company. (See Smith, Maurice A., assignor.)
McKinnon, Hugh, Truro, Nova Scotia, Canada. Wall-paper. No. 50,137; Jan. 2; v. 234; p. 349.
Mills, Herbert S., Oak Park, Ill. Casing for weighing-scales. No. 50,206; Jan. 16; v. 234; p. 1033.
Mills, Herbert S., Oak Park, Ill. Casing for weighing-scales. No. 50,246; Jan. 30; v. 234; p. 1556.
Mitchell Vance Company, The. (See Barrows and Strahan, assignors.)
Mohrmann, Paul, assignor to Friedley Voshardt Co., Chicago, Ill. Bracket-back for lighting-fixtures. No. 50,207; Jan. 16; v. 234; p. 1033.
Morimura Bros. (See Soga, Toshio, assignor.)
Mortimer, John N., Lakewood, assignor to The Central Brass Manufacturing Company, Cleveland, Ohio. Plumbing-fixture. No. 50,151; Jan. 9; v. 234; p. 653.
O'Donnell, Thomas, Ironwood, Mich. Electric-light fixture. No. 50,138; Jan. 2; v. 234; p. 349.
Old Colony Advertising Company. (See Bromley, Irving, assignor.)
Palm Brothers Company, The. (See De Ville, Walter, assignor.)
Parnall, Archie E., Chicago, Ill. Talking-machine cabinet. No. 50,139; Jan. 2; v. 234; p. 349.
Peck, Eugene H., New York, N. Y., assignor to The Phoenix Glass Co. Globe. No. 50,208; Jan. 16; v. 234; p. 1034.
Phelps, William L., New York, N. Y. Wall-cabinet. No. 50,209; Jan. 16; v. 234; p. 1034.
Phoenix Glass Co., The. (See Peck, Eugene H., assignor.)
Polacheck, William, assignor to Chas. Polacheck & Bro. Co., Milwaukee, Wis. Light-fixture. Nos. 50,247–8; Jan. 30; v. 234; p. 1556.
R. Wallace & Sons Mfg. Co. (See Wilkes, Samuel C., assignor.)
Raymond, Joseph A., Chicago, Ill. Escutcheon. No. 50,219; Jan. 23; v. 234; p. 1290.
Recker, Adolph C., Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn. Carbid-carrier. No. 50,140; Jan. 2; v. 234; p. 349.
Riddell, Robert F., Manhasset, N. Y., assignor to Bigelow Hartford Carpet Company. Rug. No. 50,249; Jan. 30; v. 234; p. 1556.
Rosen, Mayer S., New York, assignor to Emil Grossman M'f'g Co. Inc., Brooklyn, N. Y. Mirror-bracket arm. No. 50,250; Jan. 30; v. 234; p. 1556.
Sapp, Gordon G., Chicago, Ill. Coffee-pot. No. 50,141; Jan. 2; v. 234; p. 350.
Schweitzer, Ernest J. (See Wagner and Schweitzer.)
Shallor, Frank E. (See Kuhn and Shallor.)
Sheble, Horace, assignor to Domestic Talking Machine Corporation, Philadelphia, Pa. Phonograph-cabinet. No. 50,210; Jan. 16; v. 234; p. 1034.
Sherman, Arthur D., Albany, N. Y. Note-book. No. 50,251; Jan. 30; v. 234; p. 1557.
Shoup, Elmer, Winesburg, assignor of one-third to R. O. McFarren, Massillon, and one-third to J. E. Arnold, Mount Hope, Ohio. Reflector for moving-picture-machine light. No. 50,142; Jan. 2; v. 234; p. 350.
Silver, Conover T., New York, N. Y. Automobile-top. No. 50,252; Jan. 30; v. 234; p. 1557.
Silver, Conover T., New York, N. Y. Automobile-radiator. No. 50,253; Jan. 30; v. 234; p. 1557.
Simms, James N., Chicago, Ill. Clock-case. No. 50,152; Jan. 9; v. 234; p. 654.
Smith, Luther D., assignor to The Standard Electric Stove Company, Toledo, Ohio. Stove. No. 50,245; Jan. 30; v. 234; p. 1555.
Smith, Maurice A., assignor to McKee Glass Company, Jeannette, Pa. Glass article. No. 50,221; Jan. 23; v. 234; p. 1290.
Soga, Toshio, Brooklyn, assignor to Morimura Bros., New York, N. Y. Animal figure. No. 50,143; Jan. 2; v. 234; p. 350.
Solms, Martha H., assignor to The Congoleum Company, Philadelphia, Pa. Rug. No. 50,254; Jan. 30; v. 234; p. 1557.
Standard Electric Stove Company, The. (See Smith, Luther D., assignor.)
Strahan, George V. (See Barrows and Strahan.)
Travis, John M., St. Louis, Mo. Syrup-dispensing apparatus. No. 50,222; Jan. 23; v. 234; p. 1290.
United Drug Company. (See Williams, Fred O., assignor.)
United States Glass Company. (See Haley, Reuben, assignor.)
Victor Talking Machine Company. (See English, John C., assignor.)
W. D. Smith Silver Company. (See Ittig, George P., assignor.)
Wagner, Robert G., and E. J. Schweitzer, Los Angeles, Cal. Canopy, hanger, and pan for a lighting-fixture. No. 50,211; Jan. 16; v. 234; p. 1034.
Waterbury Mfg. Co. (See Recker, Adolph C., assignor.)
Weiss, Roger. (See Ericson and Weiss.)
Wilkes, Samuel G., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn. Spoon, fork, or similar article. No. 50,153; Jan. 9; v. 234; p. 654.
Williams, Fred O., Brookline, assignor to United Drug Company, Boston, Mass. Water-bottle, syringe-bag, or similar article. No. 50,144; Jan. 2; v. 234; p. 350.
Woodman, Frank B., assignor to American Steam Gauge & Valve Manufacturing Company, Boston, Mass. Indicating hand or pointer. No. 50,212; Jan. 16; v. 234; p. 1034.
Zinn, Martin, New York, N. Y. Frame for hand-bags. No. 50,213; Jan. 16; v. 234; p. 1034.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Burdsal Co., The, Indianapolis, Ind. Paste and liquid paints, wood and varnish stains, varnishes, &c. No. 114,869; Jan. 9; v. 234; p. 667.
A. G. Spalding & Bros., New York, N. Y. Swimming-suits. No. 114,838; Jan. 2; v. 234; p. 372.
A. J. Tower Company, Boston, Mass. Oiled clothing. No. 115,120; Jan. 23; v. 234; p. 1309.
A. R. Mosler & Co., New York, N. Y. Spark-plugs. No. 115,208; Jan. 30; v. 234; p. 1579.
Abbott Laboratories, The, Chicago, Ill. Medicinal preparation. No. 114,666; Jan. 2; v. 234; p. 367.
Achuff Knitting Mill, Inc., Philadelphia, Pa. Ladies', misses', and children's knit underwear. No. 114,916; Jan. 16; v. 234; p. 1039.
Acorn Movie Cartoon Company, Wilmington, Del. Moving-picture films. No. 115,136; Jan. 30; v. 234; p. 1577.
Adams & Jewell, Rome, N. Y. Refractory cement. No. 114,667; Jan. 2; v. 234; p. 367.
Air Utilities Company, Inc., New York, N. Y. Certain named food products. No. 115,048; Jan. 23; v. 234; p. 1307.
Ajax Metal Company, The, Philadelphia, Pa. Ingots, castings consisting of engine-castings not finished, machine-bearings, and Babbitt metal. No. 114,668; Jan. 2; v. 234; p. 367.
Ajax Metal Company, The, Philadelphia, Pa. Copper base metal alloys. No. 114,669; Jan. 2; v. 234; p. 367.
Ajax Metal Company, The, Philadelphia, Pa. Babbitt metal. No. 114,670; Jan. 2; v. 234; p. 367.
Allen, Joseph C., Plainfield, N. J. Certain named toilet preparations. No. 114,917; Jan. 16; v. 234; p. 1039.
American Asphalt Paint Co., New York, N. Y. Asphalt paint. No. 114,918; Jan. 16; v. 234; p. 1039.
American Can Co., New York, N. Y. Oyster-display cases. No. 114,919; Jan. 16; v. 234; p. 1039.
American Cotton Oil Company, The, Guttenberg, N. J., and New York, N. Y. Cotton-seed oil for screw-cutting and all other lubricating purposes. No. 114,854; Jan. 9; v. 234; p. 667.
American Cotton Oil Company, The, Guttenberg, N. J., and New York, N. Y. Cotton-seed oil for use in the manufacture of printing-inks. No. 115,137; Jan. 30; v. 234; p. 1577.
American Cranberry Exchange, New York, N. Y. Cranberries. No. 114,671; Jan. 2; v. 234; p. 367.
American Health Soup Co., St. Louis, Mo., assignor to American Health Soup Company, Wilmington, Del. Soups, more particularly soups in dry and concentrated form. No. 115,049; Jan. 23; v. 234; p. 1307.
American Heyl Co., New York, N. Y. Colors for rubber, leather, soap, borate of manganese, and siccative. No. 115,050; Jan. 23; v. 234; p. 1307.
American Manufacturing Company, Boston, Mass., and New York, N. Y. Oakum for packing and calking. No. 114,920; Jan. 16; v. 234; p. 1039.
American Piano Company, New York, N. Y. Pianos. No. 115,051; Jan. 23; v. 234; p. 1307.
American Seedtape Company, Incorporated, New York, N. Y. Seeds. No. 114,672; Jan. 2; v. 234; p. 367.
American Wringer Company, The, New York, N. Y. Clothes-wringers and parts thereof. No. 114,921; Jan. 16; v. 234; p. 1039.
American Writing Paper Co., Holyoke, Mass. Writing and printing paper. No. 115,052; Jan. 23; v. 234; p. 1307.
Ames Shovel & Tool Company, Jersey City, N. J., and Boston, Mass. Shovels, spades, and scoops. Nos. 114,673–4; Jan. 2; v. 234; p. 367.
Amsden, Effa B., Minneapolis, Minn. Certain named clothing. No. 114,855; Jan. 9; v. 234; p. 667.
Anaconda Copper Mining Company, Anaconda and Butte, Mont., and New York, N. Y. Spelter or zinc. No. 115,138; Jan. 30; v. 234; p. 1577.
Anglo-Mexican Petroleum Products Co., Ltd., The, London, England. Bitumen, raw or partly prepared, for use in manufactures. No. 114,675; Jan. 2; v. 234; p. 367.
Apex Electric Manufacturing Company, Chicago, Ill. Automobile-gasolene-tank filling and measuring devices. No. 114,922; Jan. 16; v. 234; p. 1039.
Armand Company, The, Des Moines, Iowa. Face-powder, cold-cream, hair-wash, rouge, &c. No. 115,053; Jan. 23; v. 234; p. 1307.
Armour and Company, Chicago, Ill. Bacon and hams. No. 115,054; Jan. 23; v. 234; p. 1307.
Armour Grain Company, Jersey City, N. J., and Chicago, Ill. Clipped white oats. Nos. 114,856–7; Jan. 9; v. 234; p. 667.
Armour Grain Company, Jersey City, N. J., and Chicago, Ill. Mixture of clipped white oats and barley. No. 115,141; Jan. 30; v. 234; p. 1577.
Art Metal Construction Co., Inc., Jamestown, N. Y. Magazine or journal issued monthly. No. 115,142; Jan. 30; v. 234; p. 1577.
Associated Manufacturers Company of New York, New York, N. Y. Certain named packing. No. 115,143; Jan. 30; v. 234; p. 1577.
Atkinson, W. M., Minneapolis, Minn. Wheat-flour. No. 115,055; Jan. 23; v. 234; p. 1307.
Atlantic Insulated Wire & Cable Company, Jersey City, N. J., and Stamford, Conn. Insulated wire. No. 114,858; Jan. 9; v. 234; p. 667.
Atlas Portland Cement Company, The, Northampton, Pa., and New York, N. Y. Monthly magazine. No. 114,677; Jan. 2; v. 234; p. 367.
Austin Company, The, Providence, R. I. Talking-machines. No. 115,056; Jan. 23; v. 234; p. 1307.
Austin, Nichols & Co., Inc., Brooklyn and New York, N. Y. Paprika. No. 114,678; Jan. 2; v. 234; p. 367.
Austin, Nichols & Co., Inc., Brooklyn and New York, N. Y. Grape-juice and apple nectar. No. 114,859; Jan. 9; v. 234; p. 667.
Autifi Company, The, San Francisco, Cal. Tire-fillers. No. 114,679; Jan. 2; v. 234; p. 367.
Auto-Kamp Equipment Co. Inc., Saginaw, Mich. Automobile-trailers. No. 115,057; Jan. 23; v. 234; p. 1307.
B. A. Eckhart Milling Co., Chicago, Ill. Wheat-flour. No. 115,074; Jan. 23; v. 234; p. 1307.
Baca, Fermin L., Bexar county, Tex. Medicinal preparation for the kidneys and liver. No. 114,924; Jan. 16; v. 234; p. 1039.
Bader, William J., Philadelphia, Pa. Candy. No. 114,680; Jan. 2; v. 234; p. 367.
Baer, Gertrude, Brooklyn, N. Y. Metal-polish. No. 114,681; Jan. 2; v. 234; p. 367.
Balboa Amusement Producing Company, Long Beach, Cal. Both positive and negative cineograph and moving-picture films. No. 115,144; Jan. 30; v. 234; p. 1577.
Balstone, Cooke & Co. Ld., Manchester, England. Velvets, velveteens, sateens, cords, &c. No. 115,058; Jan. 23; v. 234; p. 1307.
Banner Coffee Co., Milwaukee, Wis. Ammonia compound, cold-water starch, bluing, baking-soda, &c. No. 114,682; Jan. 2; v. 234; p. 367.
Barber, George R., Clarks Summit, Pa. Polish for automobile-bodies. No. 114,860; Jan. 9; v. 234; p. 667.
Bargar Mfg. Co., The, Columbus, Ohio. Chemical fire-extinguishers. No. 114,861; Jan. 9; v. 234; p. 667.
Barim, Martin, New Haven, Conn. Finishing oils and stains. No. 114,683; Jan. 2; v. 234; p. 367.
Barnes, William S., Chicago, Ill. Power-driven tractors for farm, industrial, and commercial uses. Nos. 114,925–6; Jan. 16; v. 234; p. 1039.
Barrington Graphoprint Company Incorporated, New York, N. Y. Skeleton drawings for aids in child instruction. Nos. 114,927–8; Jan. 16; v. 234; p. 1039.
Barrington Graphoprint Company, Incorporated, New York, N. Y. Skeleton drawings for use as aids in child instruction. No. 115,145; Jan. 30; v. 234; p. 1577.
Barron, John P., Butte, Mont. Furniture, piano, and automobile polish and varnish-renewer. No. 114,862; Jan. 9; v. 234; p. 667.
Bartlett Springs Co., San Francisco, Cal. Natural and carbonated mineral water and non-alcoholic carbonated tonic beverages. No. 114,863; Jan. 9; v. 234; p. 667.
Bauer and Bauer, Bridgeport, Pa. Corn-starch. Nos. 115,146–8; Jan. 30; v. 234; p. 1577.
Bauer & Black, Chicago, Ill. Liquid court-plaster. No. 114,929; Jan. 16; v. 234; p. 1039.
Bayou Land & Lumber Company, The, Cincinnati, Ohio. Hardwood lumber. No. 114,864; Jan. 9; v. 234; p. 667.
Beacon Motor Supply Company, Springfield, Mass. Machinery-lubricating oil. No. 114,684; Jan. 2; v. 234; p. 367.
Beacon Tire Company, Inc., Beacon, N. Y. Pneumatic rubber automobile-tires. No. 114,685; Jan. 2; v. 234; p. 367.
Bender Co., J. S., New York, N. Y. Hair-nets. No. 114,865; Jan. 9; v. 234; p. 667.
Berg Company, The, Philadelphia, Pa. Fertilizers. No. 114,932; Jan. 16; v. 234; p. 1039.
Bernstein, Baum, Cravis & Company, Philadelphia, Pa. Ladies' skirts, suits, coats. No. 114,866; Jan. 9; v. 234; p. 667.
Best-Clymer Manufacturing Company, St. Louis, Mo. Horse and mule feed. No. 115,149; Jan. 30; v. 234; p. 1577.
Best-Clymer Manufacturing Company, St. Louis, Mo. Dairy feed. Nos. 115,150–1; Jan. 30; v. 234; p. 1577.
Best-Clymer Manufacturing Company, St. Louis, Mo. Fattening feed for stock. No. 115,152; Jan. 30; v. 234; p. 1577.

Beyer Bros. Commission Co., New York, N. Y. Butter, eggs, and cheese. No. 115,153; Jan. 30; v. 234; p. 1577.
Bach & Sons, J., Birmingham, Ala. Certain named clothing. No. 114,687; Jan. 2; v. 234; p. 367.
Bock, Alexander E., St. Louis, Mo. Heel lifts and levelers. No. 114,688; Jan. 2; v. 234; p. 367.
Bonney Company, The, Chicago, Ill. Certain pharmaceutical preparations for toilet purposes. No. 114,689; Jan. 2; v. 234; p. 367.
Borom, Schuyler C., Minneapolis, Minn. Polish for wood surfaces. No. 114,933; Jan. 16; v. 234; p. 1039.
Bosman & Lohman Co., Norfolk, Va. Peanut-oil. No. 115,155; Jan. 30; v. 234; p. 1577.
Bousfield, Charlie J., Bay City, Mich. Talking-machines. No. 115,059; Jan. 23; v. 234; p. 1307.
Bowen & Murphy, Birmingham, Ala. Cotton-seed meal. Nos. 114,690–1; Jan. 2; v. 234; p. 367.
Bowles Bros. Co., Los Angeles, Cal. Pancake-flour. No. 115,156; Jan. 30; v. 234; p. 1577.
Boy Scouts of America, New York, N. Y. Motion-picture films. No. 114,692; Jan. 2; v. 234; p. 367.
Boyer, David W., Cairo, Ill. Palliative for cancer, eczema, gangrene, or blood-poison, &c. No. 115,060; Jan. 23; v. 234; p. 1307.
Bradley, Kate A., Atlantic City, N. J. Games. No. 114,930; Jan. 16; v. 234; p. 1039.
Brawley, T. R., Brooklyn, N. Y. Felt washers. No. 114,931; Jan. 16; v. 234; p. 1039.
Brewer & Co., Worcester, Mass. Chemicals, medicines, and pharmaceutical preparations for certain named diseases. No. 114,693; Jan. 2; v. 234; p. 367.
Britton, Stephen, New York, N. Y. Medicinal preparation used as a tonic and nerve-sedative. No. 114,934; Jan. 16; v. 234; p. 1039.
Brodsky Palman Gelber Co., Chicago, Ill. Certain named canned foods. No. 115,061; Jan. 23; v. 234; p. 1307.
Brooksville Citrus Growers Assn., Brooksville, Fla. Citrus fruit. No. 115,062; Jan. 23; v. 234; p. 1307.
Bruce Publishing Company, The, Milwaukee, Wis. Monthly periodicals. No. 114,935; Jan. 16; v. 234; p. 1039.
Brunswick-Balke-Collender Co., The, Chicago, Ill. Billiard-cloth. No. 115,063; Jan. 23; v. 234; p. 1307.
Buckley-Newhall Company, The, New York, N. Y. Certain named clothing. No. 115,064; Jan. 23; v. 234; p. 1307.
Buckley-Newhall Company, The, New York, N. Y. Waterproofed coats for men and women. No. 115,065; Jan. 23; v. 234; p. 1307.
Buffalo Wire Works Co., Buffalo, N. Y. Wire cloth or fabric. Nos. 114,694–5; Jan. 2; v. 234; pp. 367–8.
Buzby, Augustus C., Philadelphia, Pa. Lubricants consisting of oils and greases. No. 115,157; Jan. 30; v. 234; p. 1577.
C. H. Guenther & Son, (Inc.,) San Antonio, Tex. Wheat-flour. No. 114,750; Jan. 2; v. 234; p. 369.
C. H. Wheeler Manufacturing Company, Philadelphia, Pa. Ejectors and air-pumps. No. 115,047; Jan. 16; v. 234; p. 1043.
Cahn, Belt & Company, Baltimore, Md. Whisky. No. 115,066; Jan. 23; v. 234; p. 1307.
Caldwell, James C., Pittsburgh, Pa. Carbon-removing and gasolene-saving oils, chemicals, &c. No. 114,696; Jan. 2; v. 234; p. 368.
Camero, A. Gonzalez, New York, N. Y. Cigars and smoking-tobacco. No. 115,158; Jan. 30; v. 234; p. 1577.
Campbell, Harry J., Butternut, Mich. Cheese. No. 114,697; Jan. 2; v. 234; p. 368.
Canadian Mill & Elevator Co., El Reno, Okla. Poultry feed. No. 115,067; Jan. 23; v. 234; p. 1307.
Canadian Mill & Elevator Co., El Reno, Okla. Wheat-flour. No. 114,698; Jan. 2; v. 234; p. 368.
Cantrell & Cochrane Ltd., Dublin and Belfast, Ireland. Ginger-ale. No. 115,068; Jan. 23; v. 234; p. 1307.
Carbo Hydrogen Co. of America, Pittsburgh, Pa. Gaseous fuel compound for cutting and welding purposes. No. 114,938; Jan. 16; v. 234; p. 1039.
Carlisle Charles S., Oklahoma, Okla. Preparations for the treatment of constipation, rheumatism, gall-stones, &c. No. 114,939; Jan. 16; v. 234; p. 1039.
Carleton Dry Goods Co., St. Louis, Mo. Sheetings, sheets, and pillow-cases. No. 114,940; Jan. 16; v. 234; p. 1039.
Carmichael, David G., New York, N. Y. Gowns, outer suits, wraps, and garments made of fur. No. 114,941; Jan. 16; v. 234; p. 1039.
Casein, Limited, Battersea, London, England. Medicated tonic nerve food. No. 115,159; Jan. 30; v. 234; p. 1577.
Cates, George W., Denver, Colo. Preparation for treatment of certain diseases of the skin. No. 114,699; Jan. 2; v. 234; p. 368.
Centennial Mill Co., Spokane, Wash. Self-rising wheat-flour. No. 114,700; Jan. 2; v. 234; p. 368.
Central Commercial Company, Chicago, Ill. Refined petroleum to be used as a remedy or emollient. No. 114,870; Jan. 9; v. 234; p. 667.
Chain Belt Company, Milwaukee, Wis. Chains and chain-links for conveying and power-transmission purposes. No. 114,701; Jan. 2; v. 234; p. 368.
Chamberlain Co., The, Pittsburgh, Pa. Disinfectant-powder. No. 114,702; Jan. 2; v. 234; p. 368.
Champion Ignition Co., Flint, Mich. Spark-plugs and spark-plug porcelains. No. 115,160; Jan. 30; v. 234; p. 1577.
Chas. A. Schieren Company, New York, N. Y. Leather belting. No. 115,230; Jan. 30; v. 234; p. 1579.
Chase Bag Co., St. Louis, Mo. Bags. No. 114,944; Jan. 16; v. 234; p. 1040.
Chennaux, Nicholas, Le Mars, Iowa. Hog-cholera and foot-and-mouth disease. No. 114,703; Jan. 2; v. 234; p. 368.
Chicago Consolidated Bottling Company, Chicago, Ill. Non-alcoholic carbonated beverages sold as soft drinks. No. 114,871; Jan. 9; v. 234; p. 667.
Chinook Packing Company, Chinook, Wash. Canned salmon. No. 115,161; Jan. 30; v. 234; p. 1577.
Christian Peper Tobacco Co., St. Louis, Mo. Smoking and chewing tobacco. No. 115,221; Jan. 30; v. 234; p. 1579.
Cincinnati Rubber Manufacturing Company, The, Norwood, Ohio. Rubber belting, duck belting, rubber and duck hose, &c. Nos. 114,704–5; Jan. 2; v. 234; p. 368.
Cincinnati Rubber Manufacturing Company, The, Norwood, Ohio. Certain named belting, hose, machinery packing, and brake-band lining. No. 114,706; Jan. 2; v. 234; p. 368.
Cincinnati Rubber Manufacturing Co., The, Norwood, Ohio. Certain named belting, hose, and machinery packing. Nos. 114,707–9; Jan. 2; v. 234; p. 368.
Cincinnati Rubber Manufacturing Co., The, Norwood, Ohio. Rubber belting and hose, duck belting and hose. No. 114,710; Jan. 2; v. 234; p. 368.
Citrus Fruit Juice Co., Pomona, Cal. Lemon-shampoo. No. 114,711; Jan. 2; v. 234; p. 368.
City Manufacturing Corporation, New Bedford, Mass. Yarn. No. 114,945; Jan. 16; v. 234; p. 1040.
Cleveland Tensilite Co., The, Cleveland, Ohio. Flux. No. 114,712; Jan. 2; v. 234; p. 368.
Climalene Chemical Company, Canton, Ohio. Cleansers and water-softeners. No. 114,713; Jan. 2; v. 234; p. 368.
Coast Manufacturing & Supply Co., Livermore, Cal. Safety-fuse. Nos. 114,714–15; Jan. 2; v. 234; p. 368.
Cochrane, J. P., Edinburgh, Scotland. Golf accessories. No. 114,946; Jan. 16; v. 234; p. 1040.
Cohen Goldman & Co., Inc., New York, N. Y. Certain named clothing. No. 114,947; Jan. 16; v. 234; p. 1040.
Collins & Barnard Co., New York, N. Y. Eggs. No. 114,716; Jan. 2; v. 234; p. 368.
Columbia River Packers Association, Astoria, Oreg. Canned salmon. No. 115,069; Jan. 23; v. 234; p. 1307.
Columbus Pharmacal Company, The, Columbus, Ohio. Medicinal preparation for certain named diseases. No. 115,162; Jan. 30; v. 234; p. 1577.
Compton-Price Company, The, Coshocton, Ohio. Phonograph. No. 114,872; Jan. 9; v. 234; p. 667.
Conrad, Elmer E., Newton, Kans. Furniture-polish and sanitary cleaner. No. 114,717; Jan. 2; v. 234; p. 368.
Conrey-Davis Mf'g. Co., Shelbyville, Ind. Certain named furniture. No. 114,718; Jan. 2; v. 234; p. 368.
Continental Piston Ring Co., Memphis, Tenn. Piston-rings. No. 114,719; Jan. 2; v. 234; p. 368.
Corega Chemical Company, Augusta, Me., and Cleveland, Ohio. Dental powder for assisting in holding dental plates in the mouth. No. 114,948; Jan. 16; v. 234; p. 1040.
Cott-a-lap Company, The, Somerville, N. J. Oil-cloth. No. 114,949; Jan. 16; v. 234; p. 1040.
Crown Cork and Seal Co. of Baltimore City, The, Baltimore, Md. Bottle-openers. No. 114,950; Jan. 16; v. 234; p. 1040.
Crownfield, David, Boston, Mass. Electric-lighting fixtures. No. 115,163; Jan. 30; v. 234; p. 1577.
Crusellas y Ca., Habana, Cuba. Hair-tonic. No. 114,937; Jan. 16; v. 234; p. 1039.
Cummer Products Co., Cleveland, Ohio. Cleaner for silks, laces, furs, kid gloves, leathers, feathers, and felt. No. 115,070; Jan. 23; v. 234; p. 1307.
D. & L. Slade Co., Boston, Mass. Flavoring extracts for foods, and spices. No. 115,115; Jan. 23; v. 234; p. 1309.
Daschner, John F., Detroit, Mich. Tables, chairs, serving-cabinets, &c. No. 114,720; Jan. 2; v. 234; p. 368.
Davis, John A., Boston, Mass. Turn-tables for talking-machines. No. 115,071; Jan. 23; v. 234; p. 1307.
Davis, Samuel H., Lansing, Mich. Remedy for catarrh. No. 114,721; Jan. 2; v. 234; p. 368.
Delson Knitting Mills, Chicago, Ill. Knitted and textile sweaters, hosiery, headwear, bathing-suits, &c. No. 115,072; Jan. 23; v. 234; p. 1307.
Demianenko, Yermoly, New York, N. Y. Accordions. No. 115,166; Jan. 30; v. 234; p. 1578.
Detmer Woolen Co., New York, N. Y.; Boston, Mass.; Chicago, Ill.; Kansas City, Mo.; San Francisco and Los Angeles, Cal., and Seattle, Wash. Woolen fabrics in the piece. No. 114,722; Jan. 2; v. 234; p. 368.
Detroit Starter Co., Detroit, Mich. Electric motor-car-lighting systems. No. 114,723; Jan. 2; v. 234; p. 368.
Diehl, W. Lloyd, King City, Mo. Cigars. No. 114,724; Jan. 2; v. 234; p. 368.
Dietz Manufacturing Company, The, Cincinnati, Ohio. Dish-washing machines. No. 114,951; Jan. 16; v. 234; p. 1040.
Dixon, Thomas O., Townsend, Mont. Beer. No. 114,725; Jan. 2; v. 234; p. 368.
Dolle, Fred, Chicago, Ill. Razors and shears. No. 114,952; Jan. 16; v. 234; p. 1040.

Dollfus-Mieg & Cie. Société Anonyme, Mulhouse, Germany. Threads and yarns made of cotton, silk, linen, jute, and ramie. No. 114,726; Jan. 2; v. 234; p. 368.
Dorman, Huxford & Co., Boston, Mass. Canned salmon. No. 114,727; Jan. 2; v. 234; p. 368.
Dr. A. C. Daniels, Inc., Boston, Mass. Hair-tonic. No. 115,164; Jan. 30; v. 234; p. 1577.
Durel, Charles G., New Orleans, La. Roasted coffee. No. 114,728; Jan. 2; v. 234; p. 369.
Durel, Charles G, New Orleans, La. Coffee, chicory, and cacao-seed coats. No. 114,729; Jan. 2; v. 234; p. 369.
Durst & Chartz Furniture Co., Carson City, Nev. Polish for automobiles, carriages, and furniture. No. 115,168; Jan. 30; v. 234; p. 1578.
E. A. Mallory and Sons, Incorporated, Danbury, Conn., and New York, N. Y. Men's and women's fur-felt hats. Nos. 114,792–3; Jan. 2; v. 234; p. 370.
E. & Z. Van Raalte, New York, N. Y. Nettings, veils, and vellings in the piece. No. 114,849; Jan. 2; v. 234; p. 372.
E. L. Patch Co., The, Boston, Mass. Suppositories for the relief of hemorrhoids. No. 115,220; Jan. 30; v. 234; p. 1579.
E. M. Schwarz & Co., New York, N. Y. Cigars, cheroots, and little cigars. No. 115,233; Jan. 30; v. 234; p. 1580.
Earl, Edwin T., Los Angeles, Cal. Newspaper. No. 114,953; Jan. 16; v. 234; p. 1040.
Earl, Edwin T., Los Angeles, Cal. Newspaper. No. 115,169; Jan. 30; v. 234; p. 1578.
Eat and Grow Thin Food Co., New York, N. Y. Canned fruits. No. 114,730; Jan. 2; v. 234; p. 369.
Eaton, Crane & Pike Company, Pittsfield, Mass. Writing and printing paper, envelops, tablets, writing-cards, cardboard. No. 114,954; Jan. 16; v. 234; p. 1040.
Eby, Edwin S., Lewistown, Pa. Non-alcoholic beverage to be sold as a soft drink. No. 114,873; Jan. 9; v. 234; p. 667.
Eckstein, Joseph, New York, N. Y. Ladies', misses', and children's suits, coats, waists, dresses, and skirts. No. 115,170; Jan. 30; v. 234; p. 1578.
Eclipse Milling Company, Inc., The, Graham, Va. Cornmeal. No. 114,731; Jan. 2; v. 234; p. 369.
Edson Moore & Company, Detroit, Mich. Work and negligée shirts, undershirts, overalls, jumpers, rompers. No. 114,874; Jan. 9; v. 234; p. 667.
Edward Wesley Company, The. (See Eha, Clifford F., assignor.)
Eha, Clifford F., assignor to The Edward Wesley Company, Cincinnati, Ohio. Remedy for treatment of the feet. No. 114,732; Jan. 2; v. 234; p. 369.
Elder Manufacturing Company, St. Louis, Mo. Blouses, waists, rompers, play-suits, and shirts. No. 114,956; Jan. 16; v. 234; p. 1040.
Elder Manufacturing Company, St. Louis, Mo. Negligée, work, and under shirts. No. 114,875; Jan. 9; v. 234; p. 667.
Elite Garment Company of Syracuse, N. Y., Inc., Syracuse, N. Y. Children's dresses. No. 115,173; Jan. 30; v. 234; p. 1578.
Elliott Coffee Co., J. S., Newville, Pa. Coffee and tea. No. 115,172; Jan. 30; v. 234; p. 1578.
Emerson-Brantingham Company, Rockford, Ill. Certain named agricultural implements, engines, pumps, &c. No. 115,174; Jan. 30; v. 234; p. 1578.
Erickson, Andrew C., Los Angeles, Cal. Shoe-polish. No. 115,175; Jan. 30; v. 234; p. 1578.
Euclid Stone & Brick Co., The, Cleveland, Ohio. Enamel-coated natural stone. No. 114,957; Jan. 16; v. 234; p. 1040.
Eugene T. Turney Co., Inc., New York, N. Y. Wireless detectors. No. 114,845; Jan. 2; v. 234; p. 372.
Eugenio C. Noe & Co., Buenos Ayres, Argentina. Wire. No. 115,011; Jan. 16; v. 234; p. 1042.
Evansville Mill & Elevator Co., Inc., Evansville, Ind. Self-rising wheat-flour. No. 114,733; Jan. 2; v. 234; p. 369.
Evansville Mill & Elevator Co., Inc., Evansville, Ind. Self-rising wheat-flour. No. 115,176; Jan. 30; v. 234; p. 1578.
Evening Herald Publishing Company, Los Angeles, Cal. Daily newspaper. No. 115,177; Jan. 30; v. 234; p. 1578.
Exchange Trust Company, Boston, Mass. Books containing deposit-slips to be issued to members of a savings-club. No. 115,178; Jan. 30; v. 234; p. 1578.
F. Romeo and Co. Inc., New York, N. Y. Tomato sauce. No. 114,825; Jan. 2; v. 234; p. 371.
F. A. Hardy & Company, Chicago, Ill. Certain named measuring and scientific appliances. No. 114,883; Jan. 9; v. 234; p. 668.
F. G. Dickerson Co., The, Portland, Me., and Chicago, Ill. Certain named canning machinery and the like. No. 115,167; Jan. 30; v. 234; p. 1578.
F. M. Hoyt Shoe Company, Manchester, N. H. Leather boots and shoes. No. 114,887; Jan. 9; v. 234; p. 668.
F. S. Carr Company, Boston, Mass. Waterproof automobile and carriage fabrics. No. 114,942; Jan. 16; v. 234; p. 1039.
Fageol & Tate, Oakland, Cal. Compounds for purifying products of combustion issuing from heaters, stoves, &c. No. 115,075; Jan. 23; v. 234; p. 1308.
Fallon, John, New York, N. Y. Cleaner for enamel surfaces. No. 115,076; Jan. 23; v. 234; p. 1308.
Falls Motors Corporation, Sheboygan Falls, Wis. Engine stop mechanism. No. 114,958; Jan. 16; v. 234; p. 1040.
Faunce and Spinney Inc., Lynn, Mass. Women's, misses', and children's boots, shoes, and slippers of leather and leather and cloth. No. 114,876; Jan. 9; v. 234; p. 667.
Fiberite Heel and Leather Co. Inc., Whitman, Mass. Composition heels, heel-lifts, and soles. No. 114,877; Jan. 9; v. 234; p. 667.
Findlay Electric Porcelain Company, The, Findlay, Ohio. Porcelain insulator-knobs. No. 114,735; Jan. 2; v. 234; p. 369.
Fireproof Fibre Building Boards, Limited, Bloomsbury, London, England. Fire-resisting building-boards made of fiber. No. 114,960; Jan. 16; v. 234; p. 1040.
Fleming & Co. Ltd., Gore, New Zealand. Breakfast cereals. No. 114,736; Jan. 2; v. 234; p. 369.
Flinker, Leon A., Detroit, Mich. Razor-strops. No. 115,078; Jan. 23; v. 234; p. 1308.
Foley Bros. & Quinlan, Incorporated, St. Paul, Minn. Certain named foods. No. 114,737; Jan. 2; v. 234; p. 369.
Foley Bros. & Quinlan, Incorporated, St. Paul, Minn. Coffee. No. 115,077; Jan. 23; v. 234; p. 1308.
Foot, Schulze & Co., St. Paul, Minn. Leather boots and shoes. Nos. 114,738–9; Jan. 2; v. 234; p. 369.
Fort Smith Coffee Company, Fort Smith, Ark. Roasted coffee. No. 114,740; Jan. 2; v. 234; p. 369.
Franklin Simon & Co. Inc., New York, N. Y. Certain named clothing. No. 115,124; Jan. 23; v. 234; p. 1309.
Frederick & Nelson, Seattle, Wash. Trunks. No. 114,961; Jan. 16; v. 234; p. 1040.
Frohlich, Paul, Long Beach, Cal. Lubricating-oils. No. 114,741; Jan. 2; v. 234; p. 369.
Galena-Signal Oil Company, Franklin, Pa. Illuminating and lubricating oils and greases. No. 114,879; Jan. 9; v. 234; p. 668.
Gans, Louis R., New York, N. Y. Mattresses and upholstering. No. 114,743; Jan. 2; v. 234; p. 369.
General Aeronautic Company, New York, N. Y. Aircraft. No. 114,744; Jan. 2; v. 234; p. 369.
General Aluminum & Brass Manufacturing Company, Detroit, Mich. Bearings and bushings. No. 114,880; Jan. 9; v. 234; p. 668.
General Eclipse Company, The, Danielson, Conn. Writing-ink and writing-ink in tablet form. No. 114,881; Jan. 9; v. 234; p. 668.
General Tire and Rubber Company, The, Akron, Ohio. Rubber tires or tire-casings of rubber with suitable strengthening material and inner tubes for pneumatic tires. No. 114,963; Jan. 16; v. 234; p. 1040.
Geo. Bieler Sons Co., The, Cincinnati, Ohio. Whisky. No. 114,686; Jan. 2; v. 234; p. 367.
Geo. E. Keith Company, Brockton, Mass. Boots and shoes of leather, rubber, felt, or other fabric. No. 114,890; Jan. 9; v. 234; p. 668.
George Borgfeldt & Co., New York, N. Y. Night-lights, candles, and tapers. No. 115,154; Jan. 30; v. 234; p. 1577.
Gilson, Anna K., Quechee, Vt. Hand-rakes. No. 114,964; Jan. 16; v. 234; p. 1040.
Glazebrook, Francis H., Morristown, N. J. Remedy for intestinal stasis and constipation. No. 114,965; Jan. 16; v. 234; p. 1040.
Glazier Mill & Elevator Co., The, Glazier, Tex. Wheat-flour. No. 114,745; Jan. 2; v. 234; p. 369.
Gledhill, Charles F., New York, N. Y. Certain named chemicals and pigments for general use. No. 114,966; Jan. 16; v. 234; p. 1040.
Glosemeyer Flour Company, St. Louis, Mo. Wheat-flour. No. 114,746; Jan. 2; v. 234; p. 369.
Goldberg, Shepard J., New York, N. Y. Cigarette-cases. No. 114,747; Jan. 2; v. 234; p. 369.
Goodall Worsted Co., Sanford, Me., and New York, N. Y. Men's, women's, and children's outer garments. No. 114,968; Jan. 16; v. 234; p. 1040.
Goodyear Rubber Company, Middletown, Conn. Rubber boots and shoes. No. 115,082; Jan. 23; v. 234; p. 1308.
Gould, William E., Philadelphia, Pa. Coal and hardwood charcoal. No. 114,748; Jan. 2; v. 234; p. 369.
Grain Chemical Co., Inc., The, New York, N. Y. Organic phosphorus compounds. No. 114,969; Jan. 16; v. 234; p. 1040.
Grasselli Chemical Company, The, Cleveland, Ohio. Metal-pickling compounds and ingredients thereof. No. 115,180; Jan. 30; v. 234; p. 1578.
Graton and Knight Manufacturing Company, The, Worcester, Mass. Leather. No. 114,749; Jan. 2; v. 234; p. 369.
Greenfield Tap and Die Corporation, Greenfield, Mass. Gages and micrometers. No. 114,882; Jan. 9; v. 234; p. 668.
Growers Service Company, North Yakima, Wash. Fresh boxed apples. No. 115,083; Jan. 23; v. 234; p. 1308.
Gurley Candy Company, Minneapolis, Minn. Chocolate candies. No. 114,751; Jan. 2; v. 234; p. 369.
H. Lieber Company, The, Indianapolis, Ind. Picture-frame moldings, picture-frames, and parts of frames. No. 114,994; Jan. 16; v. 234; p. 1041.
H. A. Cassebeer, Inc., New York, N. Y. Hair-tonics. No. 114,943; Jan. 16; v. 234; p. 1040.
H. D. Lee Mercantile Co., The, Salina, Kans., and Kansas City, Mo. Certain named canned foods. No. 115,135; Jan. 23; v. 234; p. 1309.

H. H. Hopkins Company, Chicago, Ill. Lining-paper. No. 115,087; Jan. 23; v. 234; p. 1308.
H. H. Hopkins Company, Chicago, Ill. Roofing material in the form of waterproofed paper or felt sheets. No. 114,886; Jan. 9; v. 234; p. 668.
H. H. Weil & Son, Inc., Waverly and New York, N. Y. Ribbons. No. 115,045; Jan. 16; v. 234; p. 1043.
H. J. McGrath Co., Baltimore, Md. Dried vegetables. No. 115,201; Jan. 30; v. 234; p. 1579.
H. W. Johns-Manville Co., New York, N. Y. Artificial stone possessing the property of absorbing sound. No. 114,973; Jan. 16; v. 234; p. 1040.
H. W. Johns-Manville Co., New York, N. Y. Covering made of hair and canvas placed over hot-water boilers to retain the heat. No. 114,974; Jan. 16; v. 234; p. 1040.
Hager, Dr. A. J., Hartsville, Tenn. Preparation for treating hog-cholera. No. 114,752; Jan. 2; v. 234; p. 369.
Hahn, Charles, Ithaca, N. Y. Chemical compound used as a gasolene-intensifier and carbon-preventive. No. 115,181; Jan. 30; v. 234; p. 1578.
Hall, Hartwell & Co., Troy, N. Y. Collars made of textile material. No. 114,753; Jan. 2; v. 234; p. 369.
Haller, Clarissa J., New York, N. Y. Preparation or dressing for the hair. No. 114,970; Jan. 16; v. 234; p. 1040.
Hammel, Riglander & Co., New York, N. Y. Watch-glasses. No. 115,184; Jan. 30; v. 234; p. 1578.
Hansen, Chr. A., New York, N. Y. Turpentine and turpentine substitute. No. 115,185; Jan. 30; v. 234; p. 1578.
Hardwick & Magee Co., Philadelphia, Pa. Carpets and rugs. No. 115,186; Jan. 30; v. 234; p. 1578.
Harvest Milling Company Inc., Syracuse, N. Y. Wheat-flour. No. 114,754; Jan. 2; v. 234; p. 369.
Hatot, Marie E., New York, N. Y. Ladies' hats. No. 114,755; Jan. 2; v. 234; p. 369.
Heberlein, Firm of Heinrich Th., Jr., Markneukirchen, Germany. Certain named musical instruments, strings for such instruments, and bows for playing the same. No. 114,884; Jan. 9; v. 234; p. 668.
Hee-Tone Company, Waco, Tex. Preparation for the treatment of headaches, fever, nervousness, &c. No. 115,084; Jan. 23; v. 234; p. 1308.
Heppner, Ernest L., New York, N. Y. Canned sardines. No. 115,187; Jan. 30; v. 234; p. 1578.
Heidelberg, Wolff & Co., New York, N. Y. Certain named clothing for men and boys. No. 114,756; Jan. 2; v. 234; p. 369.
Hess Brothers, Allentown, Pa. Certain named clothing. No. 114,885; Jan. 9; v. 234; p. 668.
Hezel Milling Company, East St. Louis, Ill. Wheat-flour. No. 114,757; Jan. 2; v. 234; p. 369.
Hill, Clement V., Trenton, N. J. Coal heaters and stoves. No. 114,758; Jan. 2; v. 234; p. 369.
Hochschar, Frederick, Brooklyn, N. Y. Liquid compound for cleaning floors. No. 114,759; Jan. 2; v. 234; p. 369.
Hoffman & Kropff Chemical Co., Brooklyn, N. Y. Dyes and dye-bases. No. 114,760; Jan. 2; v. 234; p. 369.
Holbert, John F., Chattanooga, Tenn. Overalls, outside shirts, and trousers. No. 114,761; Jan. 2; v. 234; p. 369.
Holland Shoe Co., Holland, Mich. Leather boots and shoes and shoe-soles of leather. No. 114,762; Jan. 2; v. 234; p. 369.
Hollywood Company, The, New York, N. Y. Scotch whisky. No. 114,763; Jan. 2; v. 234; p. 370.
Hulbert, David E., Elgin, Ill. Metallic dippers for skimming milk contained in milk-bottles. No. 115,188; Jan. 30; v. 234; p. 1578.
Hudson Mfg. Co., Incorporated, The, Chicago, Ill. Flavoring extracts for foods. No. 115,088; Jan. 23; v. 235; p. 1308.
Huiskamp Bros. Co., Keokuk, Iowa. Leather boots and shoes. No. 114,765; Jan. 2; v. 234; p. 370.
Hunter Mfg. & Com. Co., New York, N. Y. Cotton piece goods. No. 115,189; Jan. 30; v. 234; p. 1578.
Hurley Bros. Incorporated, St. Paul, Minn. Whisky, brandy, and gin. No. 114,766; Jan. 2; v. 234; p. 370.
Imperial Type Metal Co., Philadelphia, Pa. Type-metal. No. 114,767; Jan. 2; v. 234; p. 370.
Infants Specialty Company Inc., Buffalo, N. Y. Nursing-bottles. No. 114,972; Jan. 16; v. 234; p. 1040.
International Grain Drier & Mill Equipment Co., The, Milwaukee, Wis. Grain-driers. No. 114,768; Jan. 2; v. 234; p. 370.
Isaac Hamburger & Sons, Baltimore, Md. Men's and boys' outer suits, coats, overcoats, and trousers. No. 115,182; Jan. 30; v. 234; p. 1578.
Isard, Reeves H., Atlantic City, N. J. Calendars and pictorial and fancy imprinted cards, such as Christmas, &c., cards. No. 114,770; Jan. 2; v. 234; p. 370.
Israel, Fred W., Wichita, Kans. Ointment for the treatment of certain named diseases. No. 114,771; Jan. 2; v. 234; p. 370.
Italian Bed Spread Co., New York, N. Y. Cotton bedspreads. No. 114,888; Jan. 9; v. 234; p. 668.
Iten Biscuit Co., Omaha, Nebr. Cakes and cookies. No. 114,769; Jan. 2; v. 234; p. 370.
J. A. Finn & Company, New York, N. Y. Cotton piece goods. No. 114,878; Jan. 9; v. 234; p. 667.
J. B. Williams Company, The, Glastonbury, Conn. Shaving and toilet soaps. No. 115,131; Jan. 23; v. 234; p. 1309.
J. M. McCracken Co., Boston, Mass. Tea and coffee. No. 115,200; Jan. 30; v. 234; p. 1579.
Jacob E. Decker & Sons, Mason City, Iowa. Hams. No. 115,165; Jan. 30; v. 234; p. 1578.
Jeffrey Manufacturing Co., The, Columbus, Ohio. Certain named metals and metal castings and forgings. No. 114,772; Jan. 2; v. 234; p. 370.
Jensen Creamery Machinery Company, New York, N. Y. Sanitary pumps, conveyers, butter-cutters, can-washers, and churns. No. 115,191; Jan. 30; v. 234; p. 1578.
John F. Jelke Company, Chicago, Ill. House organ issued monthly. No. 115,089; Jan. 23; v. 234; p. 1308.
John F. Jelke Company, Chicago, Ill. Oleomargarin. No. 115,190; Jan. 30; v. 234; p. 1578.
John Gately Co., Chicago, Ill. Certain named clothing. No. 115,079; Jan. 23; v. 234; p. 1308.
John Hoberg Co., The, Green Bay, Wis. Toilet-paper, paper toweling and napkins. No. 115,085; Jan. 23; v. 234; p. 1308.
John Sexton & Company, Chicago, Ill. Canned fruits and vegetables. No. 115,237; Jan. 30; v. 234; p. 1580.
John Wanamaker, Philadelphia, Philadelphia, Pa. Certain named clothing. No. 115,259; Jan. 30; v. 234; p. 1580.
Johnson Bros., Greenspring, Ohio. Mineral water. No. 114,889; Jan. 9; v. 234; p. 668.
Johnson, George A., Jr., Seattle, Wash. Waterproof garments—namely, slickers, oil-cloth coats, and hats. No. 115,090; Jan. 23; v. 234; p. 1308.
Jose Lovera Company, New York, N. Y. Cigars, cheroots, and little cigars. No. 114,786; Jan. 2; v. 234; p. 370.
Joseph Fels Company, Chicago, Ill. Work-shirts. No. 114,734; Jan. 2; v. 234; p. 369.
Joseph Thorley, Limited, London, England. Substance used as food for calves. No. 115,252; Jan. 30; v. 234; p. 1580.
Judson & Aird, New York, N. Y. Floor-coverings made from felt saturated with asphaltum and coated on both surfaces. No. 115,086; Jan. 23; v. 234; p. 1308.
Juliette Milling Co., Macon, Ga. Cornmeal. No. 114,773; Jan. 2; v. 234; p. 370.
Kalina, Fred, Pittsburgh, Pa. Wine. No. 115,192; Jan. 30; v. 234; p. 1578.
Kalt-Leim-Fabrik O. Messmer, Basel, Switzerland. Glue. No. 114,803; Jan. 2; v. 234; p. 371.
Kaplan Bros., New York, N. Y. Men's trousers and boys suits and trousers. No. 114,975; Jan. 16; v. 234; p. 1041.
Keeton, John P., Atlanta, Ga. Cotton-seed meal. No. 115,193; Jan. 30; v. 234; p. 1578.
Kibbe Bros. Company, Springfield, Mass. Candy, particularly caramel candy. No. 114,774; Jan. 2; v. 234; p. 370.
Kienzle, Herbert, New York, N. Y. Lamps of electric form. No. 114,775; Jan. 2; v. 234; p. 370.
Kirkland Distributing Company, The, Columbia, S. C. Wheat-flour. No. 115,091; Jan. 23; v. 234; p. 1308.
Klein, Benjamin F., Cleveland, Ohio. Gas and combination lighting-fixtures and parts for same. No. 114,976; Jan. 16; v. 234; p. 1041.
Klein, Mme. P., New York, N. Y. Corsets. No. 115,194; Jan. 30; v. 234; p. 1578.
Klotz, Frederick C., Louisville, Ky. Cornmeal and milk. No. 114,776; Jan. 2; v. 234; p. 370.
Kops Bros., New York, N. Y. Apparel-corsets. No. 115,092; Jan. 23; v. 234; p. 1308.
Korssell, Claus F. P., Chicago, Ill. Non-alcoholic beverages put up in bottles, kegs, and barrels. No. 114,891; Jan. 9; v. 234; p. 668.
Kramm, Harry D., Indianapolis, Ind. Aluminum alloys. No. 114,777; Jan. 2; v. 234; p. 370.
Krusius Brothers, New York, N. Y. Razors. No. 114,778; Jan. 2; v. 234; p. 370.
Kuehnrich, P. Max, Los Angeles, Cal. Calcium salts. No. 114,779; Jan. 2; v. 234; p. 370.
Kuttner & Siegel, Inc., Pleasantville, N. Y. Knitted and textile underwear and sweaters. No. 115,093; Jan. 23; v. 234; p. 1308.
Landauer, Jerome R., Chicago, Ill. Gasolene-improvers or preparations for augmenting the energy of motor-fuels. No. 115,094; Jan. 23; v. 234; p. 1308.
Landers, Frary & Clark, New Britain, Conn. Table-knives, knives, and fruit-knives of base metal. No. 114,780; Jan. 2; v. 234; p. 370.
Landers, Frary & Clark, New Britain, Conn. Certain named articles having parts plated with precious metal. No. 114,892; Jan. 9; v. 234; p. 668.
Lang, Gerhard, Buffalo, N. Y. Fresh, smoked, and salted meats and lard. No. 115,195; Jan. 30; v. 234; p. 1578.
Larivière and Jourdain, Lowell, Mass. Tonic for the hair. No. 114,893; Jan. 9; v. 234; p. 668.
Larsen, Harold G., Chicago, Ill. Compound when applied to any pane of glass prevents fogging, steaming, or sweating. No. 114,781; Jan. 2; v. 234; p. 370.
Larson, David C., New York, N. Y. Electric relays, magnets, switches, motors, &c. No. 115,196; Jan. 30; v. 234; p. 1578.
Lawyer, William M., Syracuse, N. Y. Belt-dressing. No. 115,095; Jan. 23; v. 234; p. 1308.
Lax & Burgheimer, Inc., New York, N. Y. Knitted underwear in one and two piece garments. No. 114,894; Jan. 9; v. 234; p. 668.
Lebanon Machine Company, The, Lebanon, N. H. Bits. No. 114,988; Jan. 16; v. 234; p. 1041.

Lee Broom & Duster Company, Lincoln, Nebr. Brooms. Nos. 114,989–91; Jan. 16; v. 234; p. 1041.
Lehigh Coke Company, South Bethlehem, Pa., and New York, N. Y. Coke. No. 114,895; Jan. 9; v. 234; p. 668.
Lehigh & Wilkes Barre Coal Co., Wilkes-Barre, Pa. Anthracite coal. No. 115,197; Jan. 30; v. 234; p. 1578.
Leslie Company, The, Lyndhurst, N. J. Machine parts—viz., couplings and nuts. No. 115,198; Jan. 30; v. 234; p. 1579.
Levi, Charles L., Philadelphia, Pa. Men's dress and negligée shirts. No. 114,992; Jan. 16; v. 234; p. 1041.
Levy, Sarah, New York, N. Y. Dandruff remedy and hair-restorer. No. 114,993; Jan. 16; v. 234; p. 1041.
Lexington Mill & Elevator Co., Lexington, Nebr. Wheat-flour. No. 114,783; Jan. 2; v. 234; p. 370.
Leyser, Green Co., New York, N. Y. Hats. No. 115,096; Jan. 23; v. 234; p. 1308.
Lily of France Corset Co., New York, N. Y. Corsets. No. 114,995; Jan. 16; v. 234; p. 1041.
Lipps, Morris, New York, N. Y. Beds, mattresses, bedsprings. No. 114,996; Jan. 16; v. 234; p. 1041.
Lipscomb, Edwin J., Duncan, Miss., and Memphis, Tenn. Medicine for certain named diseases. Nos. 115,097–8; Jan. 23; v. 234; p. 1308.
Listman Mill Company, La Crosse, Wis. Wheat-flour. No. 114,784; Jan. 2; v. 234; p. 370.
Lloyds of America, Bradley Beach, N. J. Preparation to be applied to coal to render the combustion more complete. No. 114,997; Jan. 16; v. 234; p. 1041.
Locomotive Pulverized Fuel Company. (See United Combustion Company, assignor.)
Long, Benj., Champaign, Ill. Shave-paper cartons. No. 114,785; Jan. 2; v. 234; p. 370.
Loose Wiles Biscuit Company, Kansas City, Mo. Cakes. No. 115,199; Jan. 30; v. 234; p. 1579.
Los Angeles Foundry Company, Los Angeles, Cal. Balls for ball and tube mills. No. 114,896; Jan. 9; v. 234; p. 668.
Luckett, Philip A., Salisbury, Md. Union-suits, undershirts, drawers, and pajamas of textile material. No. 114,897; Jan. 9; v. 234; p. 668.
Lyon, Conklin & Co. Inc., Baltimore, Md. Terne plates. No. 114,898; Jan. 9; v. 234; p. 668.
M. Ufland & Co., New York, N. Y. Ladies' hats. No. 114,846; Jan. 2; v. 234; p. 372.
M. D. Knowlton Company, Rochester, N. Y. Staying-machines. Nos. 114,977–87; Jan. 16; v. 234; p. 1041.
M. H. Aterite Company, Inc., New York, N. Y. Alloys. No. 114,676; Jan. 2; v. 234; p. 367.
M. K. Goetz Brewing Co., St. Joseph, Mo. Beer. Nos. 115,080–1; Jan. 23; v. 234; p. 1308.
MacMillan Chemical Co., Falls City, Nebr. Salve for external use. No. 114,999; Jan. 16; v. 234; p. 1041.
Macy & Co., R. H., New York, N. Y. Cotton piece goods, nainsooks, and long-cloths. No. 114,899; Jan. 9; v. 234; p. 668.
Maddock Pottery Company, Trenton, N. J. Chinaware. No. 114,790; Jan. 2; v. 234; p. 370.
Madison Bottling Works, The, Madison, N. C. Carbonated soft drink. No. 115,099; Jan. 23; v. 234; p. 1308.
Magic Mist, Incorporated, New York, N. Y. Liquid oil preparation for cleaning and polishing furniture and the like. No. 114,791; Jan. 2; v. 234; p. 370.
Malouf, Abraham M., Salt Lake City, Utah. Hats, caps, shirts, collars, cuffs, leather shoes. No. 114,794; Jan. 2; v. 234; p. 370.
Manhattan Electrical Supply Company, Jersey City, N. J., and New York, N. Y. Certain named electrical apparatus, machines, and supplies. No. 114,900; Jan. 9; v. 234; p. 668.
Manhattan Electrical Supply Company, Jersey City, N. J., and New York, N. Y. Electric meters, registers, calculators, and thermostats. No. 115,203; Jan. 30; v. 234; p. 1579.
Manhattan Rubber Mfg. Co., The, New York, N. Y. Belting, hose, and machinery packing made partly of rubber and cotton. No. 114,795; Jan. 2; v. 234; p. 370.
Manhattan Rubber Mfg. Co., The, New York, N. Y. Hose and machinery packing made partly of rubber and cotton. No. 114,796; Jan. 2; v. 234; p. 371.
Manhattan Rubber Mfg. Co., The, New York, N. Y. Belting made partly of rubber and partly of cotton. No. 114,797; Jan. 2; v. 234; p. 371.
Manhattan Rubber Mfg. Co., The, New York, N. Y. Hose made partly of rubber and partly of cotton. No. 115,000; Jan. 16; v. 234; p. 1041.
Maricopa Creamery Co., Phoenix, Ariz. Butter. No. 114,798; Jan. 2; v. 234; p. 371.
Marshall-Stacey Company, The, Aldenville, Pa. Canned food product prepared from meat and other ingredients. No. 114,799; Jan. 2; v. 234; p. 371.
Martin-Klepper Co. Inc., Decatur, Ind. Butter. No. 115,204; Jan. 30; v. 234; p. 1579.
Mason Regulator Company, Boston, Mass. Certain named steam regulating devices, pumps, engines, and the like. No. 115,002; Jan. 16; v. 234; p. 1041.
Master Cutter Machine Company, The, Cincinnati, Ohio. Coffee-mills, meat-choppers, cheese-cutters, &c., and parts. No. 114,800; Jan. 2; v. 234; p. 371.
May & Malone, Chicago, Ill. Certain named jewelry and precious-metal ware. No. 114,901; Jan. 9; v. 234; p. 668.
McAdam, Charles, Chicago, Ill. Paint and varnish removers. No. 114,787; Jan. 2; v. 234; p. 370.
McCarren, Hugh, Jr., New York, N. Y. Fresh fruits and vegetables. No. 114,788; Jan. 2; v. 234; p. 370.
McClanahan, James S., Justin, Tex. Salve for catarrh, sore throat, tonsilitis, and croup. No. 114,998; Jan. 16; v. 234; p. 1041.
McColloch, Frank O., Los Angeles, Cal. Hair-grower composition. No. 114,789; Jan. 2; v. 234; p. 370.
McKay, Edward F., Oklahoma, Okla. Homeopathic preparations for the treatment of colds, grippe, fever, and sore throat. No. 115,202; Jan. 30; v. 234; p. 1579.
Meilicke Calculator Company, Chicago, Ill. Card-indexes. No. 114,902; Jan. 9; v. 234; p. 668.
Merrill & Mayo Co., Waterville, Me. Wheat-flour and stock feeds. No. 114,801; Jan. 2; v. 234; p. 371.
Merrill Metallurgical Company, San Francisco, Cal. Materials for precipitating valuable metals from hydrometallurgical solutions containing the same. No. 115,003; Jan. 16; v. 234; p. 1041.
Mertin, Rudolph, Boston, Mass. Laxatives. No. 115,004; Jan. 16; v. 234; p. 1041.
Merton Dairy Products Company, Merton, Wis. Skimmed-milk powder. No. 114,802; Jan. 2; v. 234; p. 371.
Meyers & Son, Louis, New York, N. Y. Washable leather. No. 115,205; Jan. 30; v. 234; p. 1579.
Migel, Julius A., New York, N. Y. Broad silk in the piece. No. 115,206; Jan. 30; v. 234; p. 1579.
Mikesell, L. F., Traverse City, Mich. Sweet apple cider sold as a soft drink. No. 115,100; Jan. 23; v. 234; p. 1308.
Miller, Israel, New York, N. Y. Fluid preparation for cleaning white leather or white fabrics. No. 115,101; Jan. 23; v. 234; p. 1308.
Milton Bradley Co., Springfield, Mass. Toy cannons No. 114,804; Jan. 2; v. 234; p. 371.
Misko Seal Beverage Company, Montpelier, Vt. Ginger-ale, sodas, and soft drinks. No. 114,805; Jan. 2; v. 234; p. 371.
Modern Machinery Co., Wilmington, Del. Certain named bottle washing, rinsing, and capping machines and allied machinery. No. 115,207; Jan. 30; v. 234; p. 1579.
Mole & Sons, Robt., Birmingham, England. Sword-blades, matchets, and matchet-knives. No. 115,005; Jan. 16; v. 234; p. 1041.
Monroe Drug Company, Quincy, Ill. Baking-powder. Nos. 114,806–7; Jan. 2; v. 234; p. 371.
Montgomery Ward & Co., Inc., New York, N. Y., and Chicago, Ill. Talking-machines. No. 114,903; Jan. 9; v. 234; p. 668.
Morris & Company, Baltimore, Md. Certain named clothing for men, women, and children. No. 114,808; Jan. 2; v. 234; p. 371.
Moser, Byron W., St. Louis, Mo. Desk paper-weights. No. 114,904; Jan. 9; v. 234; p. 668.
Mother's Macaroni Company, Minneapolis, Minn. Wheat breakfast foods. No. 115,209; Jan. 30; v. 234; p. 1579.
Motor Parts Company, Philadelphia, Pa. Electrical conductors or cables. No. 115,210; Jan. 30; v. 234; p. 1579.
Motor Print Company, The, New York, N. Y. Monthly publication. No. 115,211; Jan. 30; v. 234; p. 1579.
Mu-Col Company, The, Buffalo, N. Y. Laxative preparation. No. 114,809; Jan. 2; v. 234; p. 371.
Muller, Gustav A. H., New York, N. Y. Dry paints. No. 114,810; Jan. 2; v. 234; p. 371.
Munising Paper Company, Munising, Mich. Bond and waxing papers. No. 115,102; Jan. 23; v. 234; p. 1308.
Munyon's Homœopathic Home Remedy Co., Philadelphia, Pa. Nerve-tonic. No. 115,006; Jan. 16; v. 234; p. 1041.
National Gauge & Equipment Co., La Crosse, Wis. Temperature-gages. No. 115,007; Jan. 16; v. 234; p. 1041.
National Tire & Rubber Company, The, East Palestine, Ohio. Automobile tire-casings and tire-tubes. No. 114,811; Jan. 2; v. 234; p. 371.
National X-Ray Reflector Company, Chicago, Ill. Metal reflectors. No. 114,812; Jan. 2; v. 234; p. 371.
Nave-McCord Mercantile Co., St. Joseph, Mo. Certain named medicines and pharmaceutical preparations. No. 114,813; Jan. 2; v. 234; p. 371.
Nave-McCord Mercantile Co., St. Louis, Mo. Certain named foods. Nos. 114,814–15; Jan. 2; v. 234; p. 371.
Neenah Paper Company, Neenah, Wis. Bond and ledger paper. No. 115,008; Jan. 16; v. 234; p. 1041.
Nelson, Augusta, Seattle, Wash. Hair-tonics. No. 115,103; Jan. 23; v. 234; p. 1308.
New Orleans Coffee Co. Ltd., New Orleans, La. Rice. No. 115,213; Jan. 30; v. 234; p. 1579.
New Prague Flouring Mill Company, New Prague, Minn. Wheat-flour. No. 115,214; Jan. 30; v. 234; p. 1579.
Newberry-Edmondson Co., Grand Island, Nebr. Rheumatism and neuritis medicine. No. 115,009; Jan. 16; v. 234; p. 1042.
Newgass, George W., New York, N. Y. Motion-picture-projecting apparatus and parts thereof. No. 115,212; Jan. 30; v. 234; p. 1579.
Newspaper Feature Service Inc., New York, N. Y. Newspaper-section. No. 115,010; Jan. 16; v. 234; p. 1042.
Noyes-Norman Shoe Co., St. Joseph, Mo. Men's and youths' leather boots and shoes. No. 115,215; Jan. 30; v. 234; p. 1579.
Nusbaum & Brennerman, Seattle, Wash. Dandruff-remover. No. 115,012; Jan. 16; v. 234; p. 1042.

O. B. Andrews' Company, Chattanooga, Tenn. Certain named poultry appliances. No. 115,139; Jan. 30; v. 234; p. 1577.
O. C. Hansen Mfg. Company, Milwaukee, Wis. Gloves. No. 114,977; Jan. 16; v. 234; p. 1040.
O'Connor, James, New York, N. Y. Electric lamps. No. 115,216; Jan. 30; v. 234; p. 1579.
O'Grady, John H., Chicago, Ill. Antiseptic preparation for diseases of the skin. No. 115,217; Jan. 30; v. 234; p. 1579.
Opurgo Co., Chattanooga, Tenn. Cathartic pills. No. 114,816; Jan. 2; v. 234; p. 371.
Oppenheim, Collins & Company, New York, New York, N. Y. Certain named clothing. No. 114,905; Jan. 9; v. 234; p. 668.
Ostby and Barton Company, Providence, R. I. Finger-rings and card jewelry. No. 115,104; Jan. 23; v. 234; p. 1308.
Otto Eisenlohr & Bros. Incorporated, Philadelphia, Pa. Cigars. No. 114,955; Jan. 16; v. 234; p. 1040.
Palmetto Products Company, Inc., New York, N. Y., assignor to Palmetto Products Company, Jacksonville, Fla. Twines and ropes made from shredded palmetto or palm leaves. Nos. 115,013–14; Jan. 16; v. 234; p. 1042.
Papyrus Artificial Paper Manufacturing Co., Kenilworth borough, N. J. Water-crape and tissue-crape papers, paper flower-pot covers. No. 115,105; Jan. 23; v. 234; p. 1308.
Parfumerie Marceau, Inc., New York, N. Y. Perfumes and toilet waters. No. 115,001; Jan. 16; v. 234; p. 1041.
Paris Milling Company, Paris, Tex. Wheat-flour. No. 115,219; Jan. 30; v. 234; p. 1579.
Parker Preservative Products Co., Brooklyn, N. Y. Paste and ready-mixed paints. No. 115,218; Jan. 30; v. 234; p. 1579.
Parquette Record Mfg. Co. Inc., New York, N. Y. Talking-machine records. No. 114,906; Jan. 9; v. 234; p. 668.
Peerless Handcuff Company, Springfield, Mass. Handcuffs. No. 114,817; Jan. 2; v. 234; p. 371.
Peg Lock Block Company, Inc., New York, N. Y. Toy cannons. No. 115,017; Jan. 16; v. 234; p. 1042.
Peninsular Chemical Company, Detroit, Mich. Hot-water bottles and fountain-syringes. No. 115,015; Jan. 16; v. 234; p. 1042.
Perrucci, Delfo, New York, N. Y. Stomach-tonic. No. 115,016; Jan. 16; v. 234; p. 1042.
Petroleum Products Co. of California, San Francisco, Cal. Gasolene, benzin, naphtha, kerosene, motor-spirit, &c. No. 114,907; Jan. 9; v. 234; p. 668.
Phillips, Lz, Omaha, Nebr. Crockery and earthenware. No. 114,818; Jan. 2; v. 234; p. 371.
Philips, Margaret B., Port Allegany, Pa. Dolls. No. 114,819; Jan. 2; v. 234; p. 371.
Picher Lead Company, Joplin, Mo. Orange mineral, a pigment used as an ink constituent. No. 114,820; Jan. 2; v. 234; p. 371.
Picher Lead Company, Joplin, Mo. Orange mineral, a pigment used as an ink constituent. No. 114,908; Jan. 9; v. 234; p. 668.
Pintsch Compressing Company, New York, N. Y. Oxygen gas. No. 114,821; Jan. 2; v. 234; p. 371.
Pompeian Co., The, Baltimore, Md. Olive-oil emulsion. No. 115,018; Jan. 16; v. 234; p. 1042.
Prange Milling Co., New Douglas, Ill. Wheat-flour. No. 115,223; Jan. 30; v. 234; p. 1579.
Prather, Orville L., Claremore, Okla. Hair-tonic, shampoo preparations, cold-cream, powder, and rouge. No. 115,019; Jan. 16; v. 234; p. 1042.
Pratt-Low Preserving Co., Santa Clara, Cal. Certain named canned foods. No. 115,106; Jan. 23; v. 234; p. 1308.
Pratt, William E., Chicago, Ill. Hog and pig rings. No. 114,909; Jan. 9; v. 234; p. 668.
Procter & Gamble Company, The, Cincinnati, Ohio. Cooking-fat. No. 114,822; Jan. 2; v. 234; p. 371.
Quackenbush, E. & G., New York, N. Y. Ornamental heads adapted to be applied to any article of manufacture. No. 115,224; Jan. 30; v. 234; p. 1579.
Quirin, Emil J. F., Olean, N. Y. Fabric rolls for leather-pressing machines. No. 115,020; Jan. 16; v. 234; p. 1042.
R. E. Funsten Dried Fruit & Nut Co., St. Louis, Mo. Nut-meats. No. 114,742; Jan. 2; v. 234; p. 369.
Racine Auto Tire Company, Racine, Wis. Inner tubes for tires and non-metallic tires and tire-casings composed of rubber or rubber and fabric. No. 115,225; Jan. 30; v. 234; p. 1579.
Radium Luminous Material Corporation, New York, N. Y. Luminous materials containing radium for general use. No. 115,021; Jan. 16; v. 234; p. 1042.
Ransford-Gay, St. Claire, New York, N. Y. Antiseptic compound. No. 115,113; Jan. 23; v. 234; p. 1309.
Regina Cement Company, Washington, D. C. Adhesive cement. No. 115,022; Jan. 16; v. 234; p. 1042.
Reliance Manufacturing Company, Chicago, Ill. Work-shirts. No. 115,023; Jan. 16; v. 234; p. 1042.
Rennous, Kleinle & Company, Baltimore, Md. Certain named brushes. Nos. 115,108–9; Jan. 23; v. 234; p. 1309.
Replogle, Daniel B., Berkeley, Cal., and Toledo, Ohio. Electric vacuum-cleaners and parts thereof. No. 114,823; Jan. 2; v. 234; p. 371.
Rice & Co., Irving W., New York, N. Y. Preparation for cleaning hats, shoes, and clothing. No. 115,226; Jan. 30; v. 234; p. 1579.
Richard Hudnut, New York, N. Y. Certain pharmaceutical preparations for toilet purposes. No. 114,764; Jan. 2; v. 234; p. 370.
Richardson Corporation, Rochester, N. Y. Fruit syrups for certain named purposes. No. 115,110; Jan. 23; v. 234; p. 1309.
Richmond Mica Company, Inc., Richmond, Va. Mica powder. No. 115,227; Jan. 30; v. 234; p. 1579.
Robbins, John B., Malden, Mass. Chewing-gum. No. 115,111; Jan. 23; v. 234; p. 1309.
Roberts Dropsy Cure Co., St. Louis, Mo. Preparation for the treatment of dropsy. No. 115,024; Jan. 16; v. 234; p. 1042.
Roberts, Roy G., Jamestown, N. Y. Antiseptic mouth-wash. No. 114,824; Jan. 2; v. 234; p. 371.
Röhm & Haas, Philadelphia, Pa. Medicinal chemical for treatment of rheumatism. No. 115,025; Jan. 16; v. 234; p. 1042.
Romann & Bush Pig Iron & Coke Co., St. Louis, Mo. Coal. No. 115,026; Jan. 16; v. 234; p. 1042.
Royal Palm Soap Co. Inc., Tampa, Fla. Soap. No. 115,112; Jan. 23; v. 234; p. 1309.
Rueckheim Bros. & Eckstein, Chicago, Ill. Chewing-gum or candied chewing-gum. No. 115,107; Jan. 23; v. 234; p. 1309.
Ruggles-Coles Engineering Co., New York, N. Y.; Chicago, Ill., and York, Pa. Driers. No. 114,826; Jan. 2; v. 234; p. 371.
S. B. Goff & Sons Co., Camden, N. J. Remedy for certain named diseases and affections. No. 114,967; Jan. 16; v. 234; p. 1040.
S. S. Pierce Company, Boston, Mass. Coffee. No. 115,222; Jan. 30; v. 234; p. 1579.
Sacks & Clyman, Philadelphia, Pa. Shoe-dressing for white shoes. No. 115,228; Jan. 30; v. 234; p. 1579.
Salleeby, Samuel K., New York, N. Y. Medical and pharmaceutical preparation for the curing of corns. No. 115,027; Jan. 16; v. 234; p. 1042.
Samstag & Hilder Bros., New York, N. Y. Hair-nets. No. 115,229; Jan. 30; v. 234; p. 1579.
Samuel C. Tatum Co., The, Cincinnati, Ohio. Punching-machines as office appliances for perforating sheets. No. 115,034; Jan. 16; v. 234; p. 1042.
Samuel J. Aronsohn, Inc., Paterson, N. J., and New York, N. Y. Crapes and silks in the piece. No. 114,923; Jan. 16; v. 234; p. 1039.
Sander, Monroe, San Francisco, Cal. Bottled whisky. 114,827; Jan. 2; v. 234; p. 371.
Sanispoon Co., The, Boston, Mass. Paper spoons. No. 114,828; Jan. 2; v. 234; p. 371.
Sanquoit Toilet Paper Co. Inc., New Hartford, N. Y. Toilet-paper. No. 115,028; Jan. 16; v. 234; p. 1042.
Schmidt Co., Arthur P., The, Boston, Mass. Printed books and musical works. No. 115,231; Jan. 30; v. 234; p. 1580.
Schnull & Co., Indianapolis, Ind. Coffee. No. 115,114; Jan. 23; v. 234; p. 1309.
Scholl Manufacturing Company, Inc., Chicago, Ill. Foot-soap. No. 115,232; Jan. 30; v. 234; p. 1580.
Schulze Baking Company, Chicago, Ill. Cake. No. 114,829; Jan. 2; v. 234; p. 371.
Scientific Products Co., New Cumberland, W. Va., and Steubenville, Ohio. Electric warming-pads, vulcanizers toasters, and flat-irons. No. 115,234; Jan. 30; v. 234; p. 1580.
Scott, The estate of Walter, deceased, Plainfield, N. J. Certain named printing machinery. Nos. 114,830–1; Jan. 2; v. 234; p. 372.
Scottsburg Canning Co., Inc., Scottsburg, Ind. Certain named foods. No. 114,832; Jan. 2; v. 234; p. 372.
Seacoast Canning Co., Eastport, Me. Canned American sardines. No. 115,235; Jan. 30; v. 234; p. 1580.
Sea Power Publishing Company, Incorporated, Washington, D. C. Monthly magazines. No. 115,236; Jan. 30; v. 234; p. 1580.
Service Motor Supply Co., Chicago, Ill. Monthly magazine. No. 114,833; Jan. 2; v. 234; p. 372.
Shapiro Brothers, New York, N. Y. Certain named clothing. No. 115,238; Jan. 30; v. 234; p. 1580.
Shapiro Brothers, New York, N. Y. Middy-blouses and middy-blouse dresses for children, misses, and ladies. No. 115,239; Jan. 30; v. 234; p. 1580.
Shepperd, Frederick W., New York, N. Y. Weekly publication. No. 115,240; Jan. 30; v. 234; p. 1580.
Shrauger & Johnson, Atlantic, Iowa. Certain named construction material. No. 115,029; Jan. 16; v. 234; p. 1042.
Sidney Blumenthal & Company, New York, N. Y. Plushes in the piece. No. 114,868; Jan. 9; v. 234; p. 667.
Silvel Metal Manufacturing Company Incorporated, New York, N. Y. Metals and metal alloys, particularly known to the trade as Silver metal. No. 115,241; Jan. 30; v. 234; p. 1580.
Sloat, Harry W., Chicago, Ill. Cakes. No. 115,242; Jan. 30; v. 234; p. 1580.
Slack, Alonzo, Chatham, N. J. Creole sauce. No. 114,834; Jan. 2; v. 234; p. 372.
Smith, Francis S., Boston, Mass. Wheat-flour. No. 114,836; Jan. 2; v. 234; p. 372.
Smith, Lutellus, Chicago, Ill. Certain named toilet preparations. No. 115,243; Jan. 30; v. 234; p. 1580.

Smith's Handy Handkerchief Co., Los Angeles, Cal. Handkerchiefs. No. 114,835; Jan. 2; v. 234; p. 372.
Standard Music Roll Co., Orange, N. J. Perforated music sheets or rolls. No. 115,244; Jan. 30; v. 234; p. 1580.
Smolowitz, Meyer, New York, N. Y. Laces and cotton goods in the piece. No. 114,910; Jan. 9; v. 234; p. 668.
Southern Cement Co., Birmingham, Ala. Hydraulic cement. No. 114,837; Jan. 2; v. 234; p. 372.
Springfield Coffee and Spice Co., Springfield, Ill. Coffee and spices. No. 114,839; Jan. 2; v. 234; p. 372.
Standard Oil Company of New York, New York, N. Y. Certain named oils and greases. No. 114,840; Jan. 2; v. 234; p. 372.
Standard Varnish Works, New York, N. Y. Varnishes, japans, driers, stains, &c. No. 115,245; Jan. 30; v. 234; p. 1580.
Star Bedding Co., St. Louis, Mo. Feather pillows. No. 114,841; Jan. 2; v. 234; p. 372.
Star Company, New York, N. Y. Newspaper-section. No. 114,842; Jan. 2; v. 234; p. 372.
Star Corundum Wheel Co., Detroit, Mich. Grinding-wheels. No. 115,116; Jan. 23; v. 234; p. 1309.
Stark Bro's Nurseries and Orchards Co., Louisiana, Mo. Fruit-trees. No. 115,246; Jan. 30; v. 234; p. 1580.
Steeleville Milling Company, Steeleville, Ill. Self-rising wheat-flour. No. 115,247; Jan. 30; v. 234; p. 1580.
Stenography & Reporting Company, Ltd., Trenton, N. J. Certain named paper and stationery. No. 115,117; Jan. 23; v. 234; p. 1309.
Stephens & Co., Brad, Boston, Mass. Publication issued quarterly. No. 115,248; Jan. 30; v. 234; p. 1580.
Stewart-Warner Speedometer Corporation, Chicago, Ill. Spark-plugs. No. 115,249; Jan. 30; v. 234; p. 1580.
Stonega Coke & Coal Co., Big Stone Gap and Wise and Lee counties, Va. Coal and coke. No. 115,030; Jan. 16; v. 234; p. 1042.
Strohmeyer & Arpe Company, New York, N. Y. Prunes. No. 115,118; Jan. 23; v. 234; p. 1309.
Sumter Electrical Co., Chicago, Ill. Magnetos and magneto parts. No. 115,031; Jan. 16; v. 234; p. 1042.
Sweet & Hodgman, Dallas, Tex. Medicines for preventing hog-cholera and for removal of worms, lice, &c. No. 114,843; Jan. 2; v. 234; p. 372.
Tate Electrolytic Waterproofing Company Incorporated, New York, N. Y. Waterproofed fabric. No. 115,032; Jan. 16; v. 234; p. 1042.
Tate Electrolytic Waterproofing Company Incorporated, New York, N. Y. Waterproofed threads and yarns. No. 115,033; Jan. 16; v. 234; p. 1042.
Terry, Paul H., New York, N. Y. Motion-picture films of animated cartoons issued serially. No. 115,250; Jan. 30; v. 234; p. 1580.
Texas Tobacco Co., The, San Antonio, Tex. Smoking-tobacco. No. 115,035; Jan. 16; v. 234; p. 1042.
Theo. H. Gary Co., New York, N. Y. Hair-nets. No. 114,962; Jan. 16; v. 234; p. 1040.
Theo. Hamm Brewing Company, St. Paul, Minn. Non-alcoholic cereal beverage put up in bottles and kegs. No. 115,183; Jan. 30; v. 234; p. 1578.
Theobald and Oppenheimer Company, Philadelphia, Pa., and New York, N. Y. Cigars. No. 115,251; Jan. 30; v. 234; p. 1580.
Thomas A. Edison, Incorporated, West Orange, N. J. Sound-records and sound-record blanks. No. 115,171; Jan. 30; v. 234; p. 1578.
Thompson, George L., New York, N. Y. Automobiles. No. 115,036; Jan. 16; v. 234; p. 1042.
Thoroughbred Dog Biscuit Co. Inc., New York, N. Y. Dog-biscuits. No. 114,844; Jan. 2; v. 234; p. 372.
Tioga Mill & Elevator Co., Waverly, N. Y. Dairy feed. No. 115,119; Jan. 23; v. 234; p. 1309.
Tmco Mfg. Co. Inc., New York, N. Y. Disinfecting-paint. No. 114,911; Jan. 9; v. 234; p. 668.
Tousey Varnish Company, Chicago, Ill. Driers. No. 115,253; Jan. 30; v. 234; p. 1580.
Traveler Remedy Co., The, Hot Springs, Ark. Liver-tonic. No. 115,037; Jan. 16; v. 234; p. 1042.
Tuska, Clarence D., Hartford, Conn. Monthly magazine publication. No. 115,038; Jan. 16; v. 234; p. 1042.
United Cigar Manufacturers Company, New York, N. Y. Cigars. No. 114,847; Jan. 2; v. 234; p. 372.
United Cigar Manufacturers Company, New York, N. Y. Cigars. No. 115,039; Jan. 16; v. 234; p. 1042.
United Cigar Manufacturers Company, New York, N. Y. Cigars. No. 115,040; Jan. 16; v. 234; p. 1042.
United Cigar Manufacturers Company, New York, N. Y. Cigars. Nos. 115,254–5; Jan. 30; v. 234; p. 1580.
United Combustion Company, New York, N. Y., assignor to Locomotive Pulverized Fuel Company. Combustion-engines, pulverized-fuel locomotives and their parts, &c. No. 115,121; Jan. 23; v. 234; p. 1309.
United Drug Company, Boston, Mass. Candy. No. 115,122; Jan. 23; v. 234; p. 1309.
United States Rubber Company, New Brunswick, N. J., and New York, N. Y. Closure-tops for bottles, jars, and the like. No. 115,041; Jan. 16; v. 234; p. 1042.
United States Rubber Company, New Brunswick, N. J., and New York, N. Y. Rubber, leather, and fabric boots and shoes. No. 114,848; Jan. 2; v. 234; p. 872.
Vacuum Can Co., Chicago, Ill. Food-containers. No. 115,042; Jan. 16; v. 234; p. 1043.
Vacuum Oil Company, Rochester, N. Y. Illuminating, heating, and lubricating oils and greases. No. 115,043; Jan. 16; v. 234; p. 1043.
Valley Chemical Co., Elkins, W. Va. Liniments used in the treatment of certain named diseases. No. 115,256; Jan. 30; v. 234; p. 1580.
Vaporine Co., The, Chicago, Ill. Cleaning and polishing compound for furniture and the like. No. 115,257; Jan. 30; v. 234; p. 1580.
Victor Electrical Equipment Co., Boston, Mass. Motors and drives for talking-machines. No. 115,125; Jan. 23; v. 234; p. 1309.
Victor Electrical Equipment Co., Boston, Mass. Motors and drives for talking-machines. No. 115,258; Jan. 30; v. 234; p. 1580.
W. D. Byron & Sons, Inc., Williamsport, Md. Leather, and particularly japanned or "patent" leather. No. 114,936; Jan. 16; v. 234; p. 1039.
W. R. Grace & Co., New York, N. Y. Chemical preparation to protect potato vines and tubers. No. 115,179; Jan. 30; v. 234; p. 1578.
Wailes Dove Bitumastic Limited, Newcastle-upon-Tyne, England. Ready-mixed and solid-block paints. No. 114,867; Jan. 9; v. 234; p. 667.
Waldes & Company, New York, N. Y. Safety-pins. No. 115,126; Jan. 23; v. 234; p. 1309.
Walker M. Levett Company, New York, N. Y. Metallic alloy. No. 114,782; Jan. 2; v. 234; p. 370.
Wallach & Mayer, Inc., New York, N. Y. Hosiery. No. 115,044; Jan. 16; v. 234; p. 1043.
Wallace, Savannah B., Augusta, Ga. Certain named hair-tonic. No. 115,123; Jan. 23; v. 234; p. 1309.
Waltham Watch Company, Waltham, Mass. Watches, watchcases, all parts of watches, and watch-movements. No. 114,912; Jan. 9; v. 234; p. 669.
Warner Brothers Company, The, Bridgeport, Conn. Brassières. No. 115,127; Jan. 23; v. 234; p. 1309.
Warren Oil Company, Warren, Pa. Illuminating-oils and lubricating oils and greases. No. 115,260; Jan. 30; v. 234; p. 1580.
Warren Oil Company, Warren, Pa. Illuminating and lubricating oils and greases. No. 115,261; Jan. 30; v. 234; p. 1580.
Watertown Carbonating Co., Watertown, S. D. Natural laxative medicinal water. No. 115,128; Jan. 23; v. 234; p. 1309.
Weber, Frederick, Salt Lake City, Utah. Flavoring-syrups and natural mineral waters. No. 114,850; Jan. 2; v. 234; p. 372.
Weiller, William C., Baltimore, Md. Middy-blouses. No. 115,129; Jan. 23; v. 234; p. 1309.
Welcher Brothers, New York, N. Y., and Chicago, Ill. Cigars. No. 115,262; Jan. 30; v. 234; p. 1580.
West Disinfecting Company, New York, N. Y. Disinfectants and insecticides. No. 115,130; Jan. 23; v. 234; p. 1309.
Western Clock Co., Peru, Ill. Clocks and watches. Nos. 114,913–4; Jan. 9; v. 234; p. 669.
Wheeler & Motter Mercantile Company, St. Joseph, Mo. Woolen, cotton, silk, satin, &c., piece goods. No. 115,046; Jan. 16; v. 234; p. 1043.
Whitlock, Miona, Denver, Colo. Cash-discount and cash-discount-savings receipts. No. 114,851; Jan. 2; v. 234; p. 372.
Williams Hardware Co., The, Clarksburg, W. Va. Certain named tools. No. 115,263; Jan. 30; v. 234; p. 1581.
Williams M'f'g Co., Santa Ana, Cal. Electric searchlights. No. 115,264; Jan. 30; v. 234; p. 1581.
Wilson Provision Company, Peoria, Ill. Smoked meats, dried salt meats, and lard. No. 114,852; Jan. 2; v. 234; p. 372.
Wirt Company, Germantown, Pa. Rheostats. No. 115,265; Jan. 30; v. 234; p. 1581.
Wortendyke Manufacturing Co., Richmond, Va. Toilet-paper and paper towels. No. 114,915; Jan. 9; v. 234; p. 669.
Wróblewski, David, New York, N. Y. Liniment for certain named purposes. No. 115,132; Jan. 23; v. 234; p. 1309.
Yale Novelty Company, Leominster, Mass. French-ivory and celluloid combs and fans. No. 115,266; Jan. 30; v. 234; p. 1581.
Zauder Bros. Inc., New York, N. Y. Certain named toilet articles. No. 115,133; Jan. 23; v. 234; p. 1309.
Zimetbaum, Abe, Tampa, Fla. Soft drink. No. 114,853; Jan. 2; v. 234; p. 372.
Zol, Limited, London and Kensington, England. Preparation for the treatment of whooping-cough and like ailments. No. 115,134; Jan. 23; v. 234; p. 1309.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Alaska-Pacific Fisheries, Portland, Oreg. "Luncheon." (For Canned Salmon.) No. 19,846; Jan. 30; v. 234; p. 1582.

Bader, William J., Philadelphia, Pa. "Sugar Doodle." (For Candy.) No. 19,831; Jan. 16; v. 234; p. 1044.

Bradley Manufacturing Co. Inc., Bluefield, W. Va. "Bradley's Corn Remover." (For the Treatment of Corns.) No. 19,847; Jan. 30; v. 234; p. 1582.

Cappiello, Nicola, Dunmore, Pa. "Café Spumante." (For Coffee.) No. 19,853; Jan. 30; v. 234; p. 1582.

Casson, Wilmer, Salisbury, Md. "Casson's Cream Liniment." (For Liniment.) No. 19,832; Jan. 16; v. 234; p. 1044.

Charles, R. G., Wye Mills, Md. "Edible." (For Canned Corn.) No. 19,833; Jan. 16; v. 234; p. 1044.

Commercial Cigar Co., The, Newark, Ohio. "Commercial Club." (For Cigars.) No. 19,834; Jan. 16; v. 234; p. 1044.

Dahnke-Walker Mfg. Co., Union City, Tenn. "Jersey Cream." (For Wheat-Flour.) No. 19,848; Jan. 30; v. 234; p. 1582.

Earle C. Anthony, Inc., Los Angeles, Cal. "Multimotor Cylinder Oil." (For Lubricating-Oil.) No. 19,830; Jan. 16; v. 234; p. 1044.

Earle C. Anthony, Inc., Los Angeles, Cal. "Columbia Motor Oil." (For Lubricating-Oil.) No. 19,843; Jan. 16; v. 234; p. 1044.

G. Mennen Chemical Co., Newark, N. J. "Mennen's Shaving Cream." (For Mennen's Shaving-Cream.) No. 19,851; Jan. 30; v. 234; p. 1582.

G. Mennen Chemical Co., Newark, N. J. "Mennen's Tar Shampooing Cream." (For Mennen's Tar Shampooing-Cream.) No. 19,852; Jan. 30; v. 234; p. 1582.

G. E. Pagani Importing Co., Inc., New York, N. Y. "Rubino Vino Puro Da Pasto." (For Wine.) No. 19,854; Jan. 30; v. 234; p. 1582.

Independent Starch Company, Inc., New York, N. Y. "Fluffy Ruffles Starch." (For Laundry Starch.) No. 19,835; Jan. 16; v. 234; p. 1044.

Keil, Julius M., Western Springs, Ill. "Keil's Deep Well Sparkling Ginger Ale." (For Ginger-Ale.) No. 19,836; Jan. 16; v. 234; p. 1044.

Louis Hilfer Company, The, Chicago, Ill. "Security." (For Matches.) No. 19,849; Jan. 30; v. 234; p. 1582.

Manacea Water Company, New York, N. Y. "Man-A-Cea." (For a Natural Mineral Water.) No. 19,850; Jan. 30; v. 234; p. 1582.

Mother's Macaroni Company, Minneapolis, Minn. "Creamettes." (For Macaroni and other Paste Products.) No. 19,837; Jan. 16; v. 234; p. 1044.

Mueller, Gustave A., Chicago, Ill. "Hamlet y Ofelia." (For Cigars.) No. 19,838; Jan. 16; v. 234; p. 1044.

Parodi Cigar Company, Inc., Jersey City, N. J. "Parodi." (For Cigars.) No. 19,839; Jan. 16; v. 234; p. 1044.

Person's Sons, C., Buffalo, N. Y. "Person's Pennsylvania Pure Rye Whiskey." (For Whisky.) No. 19,855; Jan. 30; v. 234; p. 1582.

Pilcher Manufacturing Company, J. V., Louisville, Ky. "Pilcher's 'Guaranteed' Bachelor Buttons." (For Buttons.) No. 19,845; Jan. 23; v. 234; p. 1310.

S. Glemby, Inc., New York, N. Y. "LockTite." (For Hair-Nets. No. 19,844; Jan. 16; v. 234; p. 1044.

S. S. White Dental Mfg. Co., The, Philadelphia, Pa. "Zinc Cement." (For S. S. White Oxyphosphate-Zinc Cement.) No. 19,857; Jan. 30; v. 234; p. 1582.

S. S. White Dental Mfg. Co., Philadelphia, Pa. "S. S. White Tooth Paste." (For Tooth-Paste.) No. 19,856; Jan. 30; v. 234; p. 1582.

S. S. White Dental Mfg. Co., The, Philadelphia, Pa. "S. S. White Tooth Brush." (For a Tooth-Brush.) No. 19,858; Jan. 30; v. 234; p. 1582.

S. S. White Dental Mfg. Co., The, Philadelphia, Pa. "S. S. White Mouth Wash." (For a Mouth-Wash.) No. 19,859; Jan. 30; v. 234; p. 1582.

S. S. White Dental Mfg. Co., The, Philadelphia, Pa. "Zinc Cement." (For S. S. White Oxyphosphate Zinc.) No. 19,860; Jan. 30; v. 234; p. 1582.

S. S. White Dental Mfg. Co., The, Philadelphia, Pa. "Zinc Cement." (For S. S. White Oxyphosphate-Zinc Cement.) No. 19,861; Jan. 30; v. 234; p. 1582.

S. S. White Dental Mfg. Co., The, Philadelphia, Pa. "S. S. White Tooth Powder." (For Tooth-Powder.) No. 19,862; Jan. 30; v. 234; p. 1582.

S. S. White Dental Mfg. Co., Philadelphia, Pa. "S. S. White Mouth Wash." (For a Mouth-Wash.) No. 19,863; Jan. 30; v. 234; p. 1582.

S. S. White Dental Mfg. Co., Philadelphia, Pa. "S. S. White Tooth Powder." (For Tooth-Powder.) No. 19,864; Jan. 30; v. 234; p. 1582.

Vaile-Kimes Company, The, Dayton, Ohio. "Open-Cylinder Pump." (For Electric Deep-Well Pumps.) No. 19,865; Jan. 30; v. 234; p. 1582.

Yakima Valley Fruit Growers' Association, North Yakima, Wash. "Sno-Kist." (For Apples.) No. 19,840; Jan. 16; v. 234; p. 1044.

Yakima Valley Fruit Growers' Association, North Yakima, Wash. "Blue Stripe." (For Apples.) No. 19,841; Jan. 16; v. 234; p. 1044.

Yakima Valley Fruit Growers' Association, North Yakima, Wash. "Red Stripe." (For Apples.) No. 19,842; Jan. 16; v. 234; p. 1044.

PRINTS.

A. Russell Howe, Buffalo, N. Y. "Nu-Eat-A Nut Cereal." (For Breakfast Food.) No. 4,604; Jan. 16; v. 234; p. 1044.

A. Schrader's Son, Incorporated, Brooklyn, N. Y., and Chicago, Ill. "Twitchell Pneumatic Tire Pressure Gauge." (For Pneumatic-Tire Pressure-Gages.) No. 4,603; Jan. 16; v. 234; p. 1044.

Bullard, Edmond, St. Martinville, La. "Evangeline Tampico Sauce." (For Pepper Sauce.) No. 4,599; Jan. 16; v. 234; p. 1044.

Chr. Hansen's Lab. Inc., Little Falls, N. Y. "Nesnah." (For Nesnah.) No. 4,608; Jan. 30; v. 234; p. 1582.

Cream of Wheat Co., Minneapolis, Minn. "Financially Embarrassed." (For Wheat Breakfast Food.) No. 4,606; Jan. 30; v. 234; p. 1582.

De Laval Separator Company, The, New York, N. Y. "They're Starting Right." (For De Laval Cream-Separators.) No. 4,607; Jan. 30; v. 234; p. 1582.

Imperial Player Roll Co., Chicago, Ill. "'Jazz' Rag." (For Music-Rolls for Automatic Musical Instruments.) No. 4,600; Jan. 16; v. 234; p. 1044.

Lambert Pharmacal Co., St. Louis, Mo. "Listerine—The Safe Antiseptic." (For Listerine.) No. 4,609; Jan. 30; v. 234; p. 1582.

Lambert Pharmacal Co., St. Louis, Mo. "Listerine—The Safe Antiseptic Prevents Infection and is a Beneficial Refreshing Lotion After Shaving." (For Listerine.) No. 4,610; Jan. 30; v. 234; p. 1582.

Lambert Pharmacal Co., St. Louis, Mo. "Listerine—The Safe Antiseptic." (For Listerine.) No. 4,611; Jan. 30; v. 234; p. 1582.

Lambert Pharmacal Co., St. Louis, Mo. "A Safe Antiseptic for General Family use." (For Listerine.) No. 4,612; Jan. 30; v. 234; p. 1582.

Mother's Macaroni Company, Minneapolis, Minn. "Creamettes." (For Macaroni.) No. 4,601; Jan. 16; v. 234; p. 1044.

Moxie Co., The, Boston, Mass. "Drink Moxie." (For Moxie.) No 4,613; Jan. 30; v. 234; p. 1582.

National Biscuit Company, Jersey City, N. J., and New York, N. Y. "Guests are coming." (For Biscuits.) No. 4,602; Jan. 16; v. 234; p. 1044.

Pilcher Manufacturing Company, J. V., Louisville, Ky. "Pilcher's Automatic Bachelor Button." (For Buttons.) No. 4,605; Jan. 23; v. 234; p. 1310.

Postum Cereal Company, Battle Creek, Mich. "Health First." (For Postum Cereal.) No. 4,614; Jan. 30; v. 234; p. 1582.

Potter Drug & Chemical Corp., Boston, Mass. "Cuticura Soap and Ointment." (For Cuticura Soap and Ointment.) No. 4,615; Jan. 30; v. 234; p. 1582.

DISCLAIMERS.

Blessing, John G., Chicago, Ill.; disclaimer filed by assignor, Automatic Electric Company. Automatic telephone switching apparatus. No. 1,145,642; disclaimer filed Dec. 18, 1916; v. 234; p. 377.

Graf, William, and C. F. Nickel, Baltimore, Md.; disclaimer filed by patentees. Machine for making concrete blocks. No. 1,142,696; disclaimer filed Jan. 22, 1917; v. 234; p. 1584.

Lundie, John, New York, N. Y.; disclaimer filed by patentee. Tie-plate. (Reissue.) No. 14,124; disclaimer filed Jan. 15, 1917; v. 234; p. 1051.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF JANUARY, 1917.

[Abbreviations: "Gaz."—Official Gazette.]

Abrading-machine. J. Halterbeck. No. 1,212,213; Jan. 16; v. 234; p. 694.

Abrading-machine. J. Halterbeck. No. 1,212,214; Jan. 16; v. 234; p. 694.

Acetaldehyde, Making. H. Hibbert and H. A. Morton. No. 1,213,486; Jan. 23; v. 234; p. 1175.

Acetaldehyde, Making. H. Hibbert and H. A. Morton. No. 1,213,487; Jan. 23; v. 234; p. 1175.

Acetate of lime, Purifying crude. O. T. Zinkeisen. No. 1,213,724; Jan. 23; v. 234; p. 1256.

Acid-concentrating apparatus, Sulfuric-. T. Kilroy. No. 1,211,594; Jan. 9; v. 234; p. 450.

Acid, Purifying acetic. A. Gorhan. No. 1,210,792; Jan. 2; v. 234; p. 143.

Actinometer. A. C. Stewart. No. 1,211,781; Jan. 9; v. 234; p. 514.

Adding and listing machine. E. R. Barrett. No. 1,214,000; Jan. 30; v. 234; p. 1381.

Adding and listing machine. G. Runquist. No. 1,213,268; Jan. 23; v. 234; p. 1099.

Adding device. M. J. Henoch. No. 1,211,581; Jan. 9; v. 234; p. 446.

Adding-machine. J. H. Bair. No. 1,210,753; Jan. 2; v. 234; p. 129.

Adding-machine. H. M. Harrison. No. 1,214,030; Jan. 30; v. 234; p. 1393.

Addressing-machine. S. Elliott. No. 1,210,440; Jan. 2; v. 234; p. 22.

Adhesive-plaster container. O. C. Schulz. No. 1,210,546; Jan. 2; v. 234; p. 58.

Adhesive-spreader. H. G. Francis. No. 1,213,857; Jan. 30; v. 234; p. 1332.

Adjustable chair. D. Pepper. No. 1,212,808; Jan. 16; v. 234; p. 907.

Adjustable gage. M. Fellows. No. 1,212,134; Jan. 16; v. 234; p. 1018.

Adjustable screen. G. W. Eckert. No. 1,211,560; Jan. 9; v. 234; p. 439.

Adjustable wrench. J. H. Jenner. No. 1,214,473; Jan. 30; v. 234; p. 1542.

Adjusting mechanism. C. A. Mankin. No. 1,211,608; Jan. 9; v. 234; p. 455.

Advertising-card. C. Reese. No. 1,213,015; Jan. 16; v. 234; p. 979.

Advertising device. P. Compton. No. 1,212,741; Jan. 16; v. 234; p. 885.

Advertising device. G. F. Langheck. No. 1,210,955; Jan. 2; v. 234; p. 200.

Advertising device. J. P. Loftus. No. 1,213,388; Jan. 23; v. 234; p. 1141.

Aerator, Hydrocarbon-. W. C. Willard. No. 1,211,263; Jan. 2; v. 234; p. 306.

Aerial photography, Automatic apparatus for. A. B. Baron and C. M. A. Guinard. No. 1,212,884; Jan. 16; v. 234; p. 932.

Aerial-vehicle control. D. F. Cashman. No. 1,210,418; Jan. 2; v. 234; p. 14.

Aeroplane. G. A. Furneaux. No. 1,211,131; Jan. 2; v. 234; p. 257.

Aeroplane. A. G. Holder, Jr. No. 1,212,954; Jan. 16; v. 234; p. 956.

Aeroplane. J. W. Ingleton. No. 1,213,377; Jan. 23; v. 234; p. 1138.

Aeroplane-float. M. L. Bristol and H. C. Richardson. No. 1,213,453; Jan. 23; v. 234; p. 1164.

Aeroplane-wing. A. F. Russ. No. 1,213,909; Jan. 30; v. 234; p. 1350.

Aerotransit. A. C. Freeman, Jr. No. 1,214,150; Jan. 30; v. 234; p. 1431.

Agricultural implement. E. C. Gille. No. 1,211,135; Jan. 2; v. 234; p. 259.

Agricultural implement. J. M. Malacove. No. 1,212,377; Jan. 16; v. 234; p. 754.

Agricultural implement. C. E. Sackett. No. 1,211,241; Jan. 2; v. 234; p. 298.

Agricultural implement, Convertible. M. E. Jones. No. 1,214,041; Jan. 30; v. 234; p. 1396.

Agricultural implements, Mounting the teeth or blades of. L. Willis. No. 1,213,566; Jan. 23; v. 234; p. 1203.

Air and gas mixer. S. Leschziner. No. 1,212,233; Jan. 16; v. 234; p. 701.

Air-blast gate. W. S. Rockwell. No. 1,211,237; Jan. 2; v. 234; p. 297.

Air-brake attachment. M. Henry. No. 1,213,363; Jan. 23; v. 234; p. 1134.

Air-brake-control valve. J. R. Snyder. No. 1,212,829; Jan. 16; v. 234; p. 913.

Air-brake valve, Safety. W. S. Ingram. No. 1,212,955; Jan. 16; v. 234; p. 956.

Air-circulating device. W. M. McEwen. No. 1,214,199; Jan. 30; v. 234; p. 1448.

Air-compressing apparatus. S. G. Skinner. No. 1,213,780; Jan. 23; v. 234; p. 1274.

Air-cooling device. W. H. Thomas. No. 1,213,782; Jan. 23; v. 234; p. 1275.

Air cut-off, Automatic. J. G. Lundholm. No. 1,211,731; Jan. 9; v. 234; p. 496.

Air-heater. W. D. Fleming. No. 1,213,178; Jan. 23; v. 234; p. 1067.

Air-intake. S. C. Crockett. No. 1,212,745; Jan. 16; v. 234; p. 886.

Air or other gas, Apparatus for conditioning. B. R. Andrews. No. 1,214,114; Jan. 30; v. 234; p. 1420.

Air plate and sewer-gas check, Combined fresh-. F. N. Rowan. No. 1,214,374; Jan. 30; v. 234; p. 1511.

Air-proof composition. W. O. Fleckner. No. 1,212,925; Jan. 16; v. 234; p. 946.

Alarm: *See*—
Burglar-alarm.
Fire-alarm.
Time and burglar alarm.

Alarm system. C. A. Kalinbach. No. 1,212,958; Jan. 16; v. 234; p. 958.

Alarm system, Automatic. B. Ulferts. No. 1,211,644; Jan. 9; v. 234; p. 467.

Alkali and alkaline-earth metal sulfids, Manufacture of. H. Specketer and W. Hofmann. No. 1,212,702; Jan. 16; v. 234; p. 872.

Alkaline-earth-metal compounds, Producing. F. W. Huber and R. W. Poindexter, Jr. No. 1,213,375; Jan. 23; v. 234; p. 1137.

Alloy, Aluminum. W. A. McAdams. No. 1,212,374; Jan. 16; v. 234; p. 753.

Alloy, Iron. F. C. T. Daniels. No. 1,211,826; Jan. 9; v. 234; p. 531.

Alloy roll-steel. F. D. Taggart. No. 1,213,973; Jan. 30; v. 234; p. 1371.

Aluminium nitrid, Producing. O. Serpek. No. 1,212,119; Jan. 9; v. 234; p. 632.

Amalgamator. R. F. Lounsberry. No. 1,211,729; Jan. 9; v. 234; p. 495.

Amalgamator, Centrifugal. P. Weeks, C. R. McCollom, and C. O. Haskell. No. 1,211,019; Jan. 2; v. 234; p. 223.

Ammonia, Manufacture of carbonic-acid compounds of. C. Bosch. No. 1,211,393; Jan. 9; v. 234; p. 382.

Ammunition-chest. W. Feller. No. 1,212,201; Jan. 16; v. 234; p. 690.

Amusement device. L. Stephany and O. Grupp. No. 1,212,277; Jan. 16; v. 234; p. 720.

Anesthesia machine, Local-. R. E. Farr. No. 1,211,304; Jan. 2; v. 234; p. 319.

Anesthetics, Apparatus for administering. W. P. Walter. No. 1,211,647; Jan. 9; v. 234; p. 468.

Animal-trap. A. M. Ahern. No. 1,214,404; Jan. 30; v. 234; p. 1521.

Animal-trap. M. D. Arrioja. No. 1,213,997; Jan. 30; v. 234; p. 1380.

Animal-trap. C. C. Hovis. No. 1,213,876; Jan. 30; v. 234; p. 1538.

Animal-trap. B. L. Phillips. No. 1,213,248; Jan. 23; v. 234; p. 1092.

Annealing-leer. J. Plante. No. 1,214,217; Jan. 30; v. 234; p. 1454.

Antifriction device. A. E. O'Brien. No. 1,212,992; Jan. 16; v. 234; p. 971.

Antimonates, Production of. P. Eyer. No. 1,211,564; Jan. 9; v. 234; p. 441.

Antirattling device. J. Kirby, Jr. No. 1,211,860; Jan. 9; v. 234; p. 544.

Antiskid or antislip tread. A. J. Oehring. No. 1,211,619; Jan. 9; v. 234; p. 459.

Antiskidding device. T. A. Pyros. No. 1,213,256; Jan. 23; v. 234; p. 1095.
Antiskidding grip-tread for vehicle-wheels. C. Reger. No. 1,213,949; Jan. 30; v. 234; p. 1363.
Apiary. M. Hoffmann. No. 1,212,223; Jan. 16; v. 234; p. 697.
Apron. C. T. Lucas. No. 1,212,524; Jan. 16; v. 234; p. 805.
Arch and ankle support. H. A. Bernstein. No. 1,211,055; Jan. 2; v. 234; p. 235.
Arch-form, Collapsible. G. A. Compton. No. 1,211,291; Jan. 2; v. 234; p. 315.
Arch-support. G. F. Spiegel. No. 1,211,255; Jan. 2; v. 234; p. 303.
Arch-supporter. C. C. Steger. No. 1,210,869; Jan. 2; v. 234; p. 169.
Argon-concentrating apparatus and process. G. R. Fonda. No. 1,211,125; Jan. 2; v. 234; p. 256.
Arm and fittings therefor, Artificial. P. M. McKay. No. 1,213,222; Jan. 23; v. 234; p. 1083.
Armature-sleeve, Composite. W. J. Bauroth. No. 1,213,818; Jan. 30; v. 234; p. 1319.
Armor, Body-. O. L. Boucher. No. 1,210,407; Jan. 2; v. 234; p. 9.
Armor for soldiers. J. R. Doran. No. 1,212,463; Jan. 16; v. 234; p. 784.
Article-holder. F. J. Lovin. No. 1,211,463; Jan. 9; v. 234; p. 406.
Ash-conveying system. A. P. Strong. No. 1,211,500; Jan. 9; v. 234; p. 418.
Ash receptacle and sifter. P. F. Quinn. No. 1,213,009; Jan. 16; v. 234; p. 977.
Ash tank and settler. L. A. Griffin. No. 1,211,310; Jan. 2; v. 234; p. 321.
Ash-tray. E. B. Cobb. No. 1,212,185; Jan. 16; v. 234; p. 684.
Ash-tray and cigar-rest. E. Oldenbusch. No. 1,212,995; Jan. 16; v. 234; p. 972.
Asphalt-like masses and derivatives therefrom, Manufacture of. L. Landsberg. No. 1,211,721; Jan. 9; v. 234; p. 492.
Aspirator. E. B. Porter. No. 1,213,901; Jan. 30; v. 234; p. 1348.
Assembling-machine. W. R. Jeavons and A. B. Whitaker. No. 1,212,227; Jan. 16; v. 234; p. 699.
Associating and binding machine. R. C. Seymour. No. 1,213,425; Jan. 23; v. 234; p. 1154.
Auto device. W. A. Kress. No. 1,211,597; Jan. 9; v. 234; p. 451.
Auto-mat holder. E. W. Cruikshank. No. 1,213,079; Jan. 16; v. 234; p. 999.
Automatic brake for baggage and express trucks. E. W. Tucker. No. 1,211,011; Jan. 2; v. 234; p. 220.
Automatic control device. C. L. Fortier. No. 1,212,042; Jan. 9; v. 234; p. 606.
Automatic-release hook. A. F. Mazoch and E. Sladecek. No. 1,212,984; Jan. 16; v. 234; p. 968.
Automatic sprinkler. W. B. Hammond. No. 1,213,631; Jan. 23; v. 234; p. 1226.
Automobile ambulance. M. Ziehlke. No. 1,210,749; Jan. 2; v. 234; p. 128.
Automobile attachment, Friction-drive. S. A. Dalager. No. 1,211,416; Jan. 9; v. 234; p. 390.
Automobile auxiliary seat. W. H. Douglas. No. 1,211,108; Jan. 2; v. 234; p. 251.
Automobile-bed. J. D. Axtell. No. 1,210,583; Jan. 2; v. 234; p. 71.
Automobile-brake lock. L. Goldmerstein. No. 1,210,640; Jan. 2; v. 234; p. 91.
Automobile-bumper. T. A. Hoover. No. 1,212,059; Jan. 9; v. 234; p. 612.
Automobile-door opener. G. A. Bosler. No. 1,214,488; Jan. 30; v. 234; p. 1548.
Automobile emergency draft appliance. E. H. Knowles. No. 1,212,647; Jan. 16; v. 234; p. 851.
Automobile-fender. A. J. State. No. 1,211,887; Jan. 9; v. 234; p. 554.
Automobile-fender. R. Throckmorton. No. 1,212,850; Jan. 16; v. 234; p. 920.
Automobile for collecting and distributing. M. B. Church. No. 1,210,762; Jan. 2; v. 234; p. 132.
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Automobile guard and fender. E. Marinka. No. 1,214,049; Jan. 30; v. 234; p. 1399.
Automobile-heater. J. J. Brent. No. 1,213,069; Jan. 16; v. 234; p. 996.
Automobile heating and cooling apparatus. J. Verderber. No. 1,213,305; Jan. 23; v. 234; p. 1112.
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Automobile-jack and tire-pump, Combined. W. F. Rawlings. No. 1,213,012; Jan. 16; v. 234; p. 978.
Automobile-jack, Automatic. E. E. Cunningham and H. L. Wilson. No. 1,212,329; Jan. 16; v. 234; p. 738.
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Automobile or motor-cycle horn. R. H. Manson. No. 1,211,208; Jan. 2; v. 234; p. 285.
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Automobile power-jack. D. S. Everett. No. 1,212,200; Jan. 16; v. 234; p. 689.
Automobile running-boards, Foot scraper and cleaner for. W. A. Roos. No. 1,212,111; Jan. 9; v. 234; p. 629.
Automobile running-gear. C. D. Radliff. No. 1,213,904; Jan. 30; v. 234; p. 1349.
Automobile-seat, Adjustable. J. W. Daniels. No. 1,211,295; Jan. 2; v. 234; p. 316.
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Automobile signaling device. J. K. Burleigh and L. V. White. No. 1,213,456; Jan. 23; v. 234; p. 1165.
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Automobile-wind-shield cleaner. G. E. Goodrich. No. 1,211,698; Jan. 9; v. 234; p. 485.
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Binding-post. F. W. Cole. No. 1,210,764; Jan. 2; v. 234; p. 133.
Bit: *See*—
Drill-bit.
Taper bit.
Bit-brace. S. N. Hall. No. 1,212,481; Jan. 16; v. 234; p. 790.
Bit-brace. S. N. Hall and C. M. Petersen. No. 1,212,480; Jan. 16; v. 234; p. 789.
Blade-adjusting mechanism, Folding-. H. A. W. Wood and J. A. Isbell. No. 1,213,325; Jan. 23; v. 234; p. 1120.

Blank-bending machine. J. D. Reifsnyder. No. 1,211,757; Jan. 9; v. 234; p. 505.
Blast-gate, Frictionally-held. W. S. Rockwell. No. 1,211,371; Jan. 2; v. 234; p. 339.
Block: *See*—
Bed-frame corner-block.
Building-block.
Concrete block.
Filling-block.
Mop-block.
Sheave-block.
Toy construction-block.
Block or tile press. L. N. McCarter. No. 1,213,219; Jan. 23; v. 234; p. 1082.
Block-signal, Safety. G. W. Gerlach. No. 1,211,697; Jan. 9; v. 234; p. 485.
Board: *See*—
Dough-board.
Educational board.
Game-board.
Ironing-board.
Spring-board.
Washboard.
Boat hook, Life-. V. R. Kalbfleisch. No. 1,214,313; Jan. 30; v. 234; p. 1490.
Boat, Submarine life-. D. V. Reeves. No. 1,210,840; Jan. 2; v. 234; p. 158.
Bob-knee, Oscillating. C. E. Barnes. No. 1,212,883; Jan. 16; v. 234; p. 931.
Bobbin-winder guard. S. Gogel. No. 1,213,862; Jan. 30; v. 234; p. 1333.
Bobbin-winding machine. C. E. Hayes. No. 1,210,643; Jan. 2; v. 234; p. 93.
Boiler: *See*—
Hot-water boiler.
Locomotive-boiler.
Milk-boiler.
Steam-boiler.
Water-tube boiler.
Boiler. H. W. Bell. No. 1,210,586; Jan. 2; v. 234; p. 72.
Boiler. W. J. Linton. No. 1,214,195; Jan. 30; v. 234; p. 1446.
Boiler and other furnace. J. Reagan. No. 1,211,755; Jan. 9; v. 234; p. 504.
Boiler compound. V. J. Melsted. No. 1,210,965; Jan. 2; v. 234; p. 203.
Boiler feed mechanism, Flash-. V. H. Slosser. No. 1,210,995; Jan. 2; v. 234; p. 214.
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Boiler-grates, Reinforced center frame for. J. Mahon. No. 1,213,521; Jan. 23; v. 234; p. 1187.
Boiler-tube plug. W. J. Baker. No. 1,213,060; Jan. 16; v. 234; p. 992.
Boilers, Means for protecting water-gage tubes of steam-. W. G. Werbeck. No. 1,213,986; Jan. 30; v. 234; p. 1375.
Boilers, Safety device to prevent the collapsing of hot-water. E. F. Donnelly. No. 1,212,148; Jan. 9; v. 234; p. 642.
Boll-weevil and square collector. J. H. Fike. No. 1,213,087; Jan. 16; v. 234; p. 1002.
Bolt: *See*—
Expansion-bolt.
Self-tightening bolt.
Bolt. W. C. Brubaker. No. 1,210,595; Jan. 2; v. 234; p. 74.
Bolt lock, Double-. G. Blume. No. 1,213,827; Jan. 30; v. 234; p. 1322.
Boltless tie. P. J. Harrigan. No. 1,212,217; Jan. 16; v. 234; p. 695.
Bomb-signal for trains, Safety. W. McMane. No. 1,214,201; Jan. 30; v. 234; p. 1449.
Book. Check-. E. A. Leavitt. No. 1,211,324; Jan. 2; v. 234; p. 325.
Book-marker. T. F. Matthews. No. 1,210,964; Jan. 2; v. 234; p. 203.
Book or catalogue. C. N. Stone. No. 1,212,279; Jan. 16; v. 234; p. 721.
Book or pad, Manifolding. W. E. Dunning. No. 1,213,341; Jan. 23; v. 234; p. 1125.
Book or sales-slip holder, Manifold-. J. F. Huber. No. 1,213,877; Jan. 30; v. 234; p. 1339.
Book-trimming machines, Book-pad adjuster for automatic. J. Rowe. No. 1,213,266; Jan. 23; v. 234; p. 1098.
Book-trimming machines, Feed attachment for automatic. J. Rowe. No. 1,213,265; Jan. 23; v. 234; p. 1097.
Bookbinding device. C. F. Hill. No. 1,212,352; Jan. 16; v. 234; p. 745.
Boot or shoe and manufacturing same, Rubber. R. B. Price. No. 1,211,962; Jan. 9; v. 234; p. 582.
Boot or shoe, Ventilated. E. M. D. Carolin. No. 1,211,542; Jan. 9; v. 234; p. 434.
Boots and shoes, Machine for use in the manufacture of. F. M. Furber. No. 1,212,203; Jan. 16; v. 234; p. 690.
Booth, Telephone or other. H. E. Van Orden. No. 1,211,700; Jan. 9; v. 234; p. 517.
Bottle. E. Greene. No. 1,211,934; Jan. 9; v. 234; p. 571.
Bottle-cap remover. W. O'Neill. No. 1,212,389; Jan. 16; v. 234; p. 758.
Bottle-cap, Sanitary. A. Segall. No. 1,213,959; Jan. 30; v. 234; p. 1367.
Bottle-caps, Facing material for cork or other disks for. C. E. McManus. No. 1,213,926; Jan. 30; v. 234; p. 1355.
Bottle-cleaning device. F. C. Altpeter. No. 1,213,445; Jan. 23; v. 234; p. 1161.
Bottle-closure. F. Hachmann. No. 1,214,026; Jan. 30; v. 234; p. 1391.
Bottle-conveyer. W. Wachs and R. L. Gallup. No. 1,213,308; Jan. 23; v. 234; p. 1114.
Bottle-filling machine. C. A. Youngman. No. 1,211,027; Jan. 2; v. 234; p. 226.
Bottle indicator, Poison-. R. M. Page. No. 1,213,180; Jan. 16; v. 234; p. 1017.
Bottle-making machines, Lift-out for. J. J. Meyer, Jr., and J. G. Lepper. No. 1,211,611; Jan. 9; v. 234; p. 456.
Bottle, Non-refillable. H. Kraut. No. 1,214,324; Jan. 30; v. 234; p. 1495.
Bottle, Non-refillable. S. Lazarus. No. 1,214,329; Jan. 30; v. 234; p. 1496.
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Bottle-stoppers, Machine for applying. J. H. Gruver. No. 1,212,209; Jan. 16; v. 234; p. 692.
Bottle-washing apparatus. J. W. Dawson. No. 1,212,747; Jan. 16; v. 234; p. 887.
Bottle-washing machine. I. Cole. No. 1,214,278; Jan. 30; v. 234; p. 1477.
Bottle-washing machine. J. W. Dawson. No. 1,212,459; Jan. 16; v. 234; p. 783.
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Bouquet holder, Corsage-. E. Lewy. No. 1,210,957; Jan. 2; v. 234; p. 200.
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Ballot-box.
Cigarette-box.
Cigarette and match box.
Coin-box.
Collapsible box.
Filling-box.
Flower and plant box.
Folding box.
Journal-box.
Lamp-box.
Mail-box.
Meter-box.
Outlet-box.
Paint-box.
Paper box.
Sealing-box.
Sheet-metal box.
Signal-box.
Stuffing-box.
Stuffing or packing bearing-box.
Suction-box.
Terminal box.
Wagon-box.
Window-box.
Box. H. E. Hood. No. 1,214,464; Jan. 30; v. 234; p. 1539.
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Box-covering machine. J. W. Nasmith. No. 1,212,241; Jan. 16; v. 234; p. 704.
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Bit-brace.
Chair-brace.
Rail-brace.
Brace and locking means for hinged or swinging parts. C. E. Sturgis. No. 1,213,969; Jan. 30; v. 234; p. 1370.
Bracelet. A. Schwartzman. No. 1,211,631; Jan. 9; v. 234; p. 462.
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Brake-hanger bracket.
Insulator-supporting bracket.
Insulator-suspension bracket.
Ladder-bracket.
Shade-bracket.
Wringer-bracket.
Braiding-machine. W. H. Dunkerley. No. 1,213,601; Jan. 23; v. 234; p. 1216.
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Automatic brake.
Automobile pneumatic brake.
Car-brake.
Coaster-brake.
Hemp-brake.
Machine-brake.
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Power-brake.
Vehicle-brake.
Brake-beam. E. M. Applebaugh and G. M. Keller. No. 1,213,996; Jan. 30; v. 234; p. 1380.
Brake-hanger bracket. L. N. Bear. No. 1,213,729; Jan. 23; v. 234; p. 1258.
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Brake-shoe, Composition-filled. H. Jones and R. C. Augur. No. 1,213,379; Jan. 23; v. 234; p. 1139.
Brake system. N. Fallek. No. 1,210,444; Jan. 2; v. 234; p. 23.
Brassière and girdle, Combined. B. and H. Prince. No. 1,212,677; Jan. 16; v. 234; p. 863.

Bread, Cooling and treating. W. M. Campbell. No. 1,212,900; Jan. 16; v. 234; p. 937.
Bread, Manufacture of whole-grain. P. Gross. No. 1,213,627; Jan. 23; v. 234; p. 1224.
Breathing-bag. R. H. Davis. No. 1,213,160; Jan. 23; v. 234; p. 1061.
Brick-kiln. J. T. Underwood. (Reissue.) No. 14,251; Jan. 16; v. 234; p. 1022.
Brick-pallet. A. J. Bentley. No. 1,213,575; Jan. 23; v. 234; p. 1207.
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Broom-holder. A. B. Holden. No. 1,213,645; Jan. 23; v. 234; p. 1230.
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Buckle. A. Côté. No. 1,212,328; Jan. 16; v. 234; p. 738.
Buckle. G. L. Gilberthorpe. No. 1,212,622; Jan. 16; v. 234; p. 841.
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Building-block, Hollow-tile. H. R. Straight. No. 1,212,417; Jan. 16; v. 234; p. 768.
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Burner: *See*—
Gas-burner.
Hydrocarbon-burner.
Oil-burner.
Pulverized-fuel burner.
Vapor-burner.
Burners, Oil-supply system for. H. G. Liebzeit. No. 1,212,078; Jan. 9; v. 234; p. 618.
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Butter container and cutter. G. E. Terry. No. 1,213,433; Jan. 23; v. 234; p. 1157.
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Button, Separable link-. I. R. Lederer. No. 1,214,044; Jan. 30; v. 234; p. 1397.
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Buttonhole-location marker. C. H. T. Hagelstein. No. 1,211,438; Jan. 9; v. 234; p. 398.
Cabinet, Coin-controlled. E. Blum and G. Müller. No. 1,211,060; Jan. 2; v. 234; p. 236.
Cabinet-covers, Control for. R. H. Ward. No. 1,210,875; Jan. 2; v. 234; p. 171.
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Cabinet, Dispensing-. S. Wheeler. No. 1,211,510; Jan. 9; v. 234; p. 422.
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Cabinet, Kitchen-. W. Sellers. No. 1,213,279; Jan. 23; v. 234; p. 1102.
Cabinet, Staining and finishing. J. A. Brandt. No. 1,213,832; Jan. 30; v. 234; p. 1323.
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Cable-twisting device. P. A. Welsby. No. 1,211,020; Jan. 2; v. 234; p. 223.
Cableway-conveying system. W. M. Shaw. No. 1,212,269; Jan. 16; v. 234; p. 717.
Cage, Mobile poultry and animal. A. S. Holland. No. 1,212,771; Jan. 16; v. 234; p. 895.
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Cameras and the like, Automatic focusing device for copying or enlarging. R. G. A. Dutert. No. 1,211,302; Jan. 2; v. 234; p. 318.
Cameras, Cut-out film blanket-strip for autograph-. H. J. Brown. No. 1,212,447; Jan. 16; v. 234; p. 778.
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Garbage-can. Oil-can.
Can and jar closure. E. Fisher. No. 1,214,147; Jan. 30; v. 234; p. 1431.
Can closing and exhausting machine. L. Wurzburg. No. 1,211,266; Jan. 2; v. 234; p. 307.
Can cover, Garbage-. A. Buchholz. No. 1,212,321; Jan. 16; v. 234; p. 735.
Can-feeding mechanism. P. W. Fleischer. No. 1,212,754; Jan. 16; v. 234; p. 889.
Can-filling machine. G. W. Blake. No. 1,210,403; Jan. 2; v. 234; p. 8.
Can holder, Tobacco-. P. R. Hettinger and C. P. Prince. No. 1,214,161; Jan. 30; v. 234; p. 1435.
Can opener and sealer, Combined. J. H. Wray. No. 1,212,431; Jan. 16; v. 234; p. 773.
Can-surface presser and evener. T. A. Jackson. No. 1,212,489; Jan. 16; v. 234; p. 792.
Can-washing machinery. E. F. Rassman. No. 1,211,878; Jan. 9; v. 234; p. 550.
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Candy-pulling machine and process. J. M. Howarth. No. 1,214,465; Jan. 30; v. 234; p. 1539.
Cane mill, Sugar-. J. J. Armstrong. No. 1,213,573; Jan. 23; v. 234; p. 1206.
Cane mill, Sugar-. J. Wilson. No. 1,213,722; Jan. 23; v. 234; p. 1256.
Canister, Tea-. T. J. Bourek. No. 1,212,892; Jan. 16; v. 234; p. 934.
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- Hose-clamp.
- Insulator-clamp.
- Printing-plate clamp.
- Staging-clamp.
- Tube-clamp.
- Wire-clamp.
- Wringer-clamp.

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- Hose-clasp.
- Hose-supporter clasp.

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- Concrete-cleaner.
- Flue-cleaner.
- Kitchen-utensil cleaner.
- Railway-track cleaner.
- Rolling-mill groove-cleaner.
- Seed-cleaner.
- Vacuum-cleaner.

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Electric machinery, Dynamo-. R. A. Fessenden. No. 1,213,611; Jan. 23; v. 234; p. 1219.
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Fluid-metering system. G. G. Earl and A. B. Wood. No. 1,212,150; Jan. 9; v. 234; p. 643.
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Gas-generator.
Hydrocarbon-generator.
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Vapor, steam, and hot-water generator.
Generator. J. B. Dalbey. No. 1,214,139; Jan. 30; v. 234; p. 1428.
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Household implement. F. S. Sowers. No. 1,213,034; Jan. 16; v. 234; p. 985.
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Hulling-machine. C. Schäffer. No. 1,212,113; Jan. 9; v. 234; p. 630.
Humidifier. L. H. Parker. No. 1,213,940; Jan. 30; v. 234; p. 1360.
Humidifying apparatus. N. J. Yonker. No. 1,211,905; Jan. 9; v. 234; p. 560.
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Mill-product-discharging mechanism. W. B. Newlon. No. 1,211,743; Jan. 9; v. 234; p. 500.
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Milling-machine work-holder. S. J. Todd. No. 1,213,800; Jan. 23; v. 234; p. 1110.
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Mine-hoist, Safety. G. F. Royer. No. 1,213,956; Jan. 30; v. 234; p. 1366.
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Mining-machine. E. C. Morgan. No. 1,212,382; Jan. 16; v. 234; p. 755.
Mining-machine. C. J. E. Waxbom. No. 1,212,717; Jan. 16; v. 234; p. 877.
Miter and try-square. C. Bodmer. No. 1,213,578; Jan. 23; v. 234; p. 1208.
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Cocktail-mixer.
Concrete-mixer.
Faucet water-mixer.
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Ingot-mold.
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Mold. E. G. Stone and E. J. Siddeley. No. 1,212,839; Jan. 16; v. 234; p. 917.
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Molding apparatus. G. C. Clark. No. 1,210,421; Jan. 2; v. 234; p. 15.
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Fluid-pressure motor. Wave-motor.
Rotary motor. Wind-motor.
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Music electrically, Art of and apparatus for generating and distributing. T. Cahill. No. 1,213,804; Jan. 23; v. 234; p. 1283.
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Partition. C. F. Rothweiler. No. 1,211,760; Jan. 9; v. 234; p. 507.
Pasteboard dispensing-package for elastic. H. A. Austin. No. 1,210,883; Jan. 2; v. 234; p. 174.
Pasteurizing apparatus. J. Willmann. No. 1,210,578; Jan. 2; v. 234; p. 69.
Pasteurizing, holding, and cooling means, Combined. H. M. Rudd. No. 1,214,376; Jan. 30; v. 234; p. 1512.
Pasting-machine. T. F. Lynch. No. 1,211,951; Jan. 9; v. 234; p. 578.
Patterns for garments, Instrument for drafting. J. S. Corton. No. 1,214,296; Jan. 30; v. 234; p. 1484.
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Pedal extension. E. J. Bloom. No. 1,213,824; Jan. 30; v. 234; p. 1321.
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Pencil-top. F. J. Roetker. No. 1,211,356; Jan. 2; v. 234; p. 334.
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Phonograph speed-regulator. A. Ruckgaber. No. 1,212,693; Jan. 16; v. 234; p. 868.
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Roll-polisher. A. J. Maskrey. No. 1,212,535; Jan. 16; v. 234; p. 809.
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Block-signal.
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Directional signal.
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Steam-trap and boiler-feeder. T. G. Rakestraw. No. 1,211,753; Jan. 9; v. 234; p. 504.
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Steel and tin plates, Heating. V. C. Smith. No. 1,211,635; Jan. 9; v. 234; p. 464.
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Steel, High-speed. J. M. Flannery. No. 1,210,626; Jan. 2; v. 234; p. 86.
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Steering device. J. R. Buttweiler. No. 1,212,451; Jan. 16; v. 234; p. 780.

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Ceiling-plate. F. C. Hobbs. No. 50,201; Jan. 16; v. 234; p. 1032.
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Chandelier ceiling-ring. R. Y. Barrows and G. V. Strahan. No. 50,174; Jan. 16; v. 234; p. 1027.
Charm. A. G. Kleint. No. 50,135; Jan. 2; v. 234; p. 349.
Check-protecting-machine frame. B. O. Fanslow. No. 50,187; Jan. 16; v. 234; p. 1030.
Chop-dish or similar article. G. P. Ittig. No. 50,132; Jan. 2; v. 234; p. 348.
Clock-case. J. N. Simms. No. 50,152; Jan. 9; v. 234; p. 654.
Coffee-pot. G. G. Sapp. No. 50,141; Jan. 2; v. 234; p. 350.
Dust-pan. T. A. Carver. No. 50,123; Jan. 2; v. 234; p. 346.
Electric heater. F. Kuhn and F. E. Shallor. No. 50,244; Jan. 30; v. 234; p. 1555.
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Escutcheon. J. A. Raymond. Nos. 50,219–20; Jan. 23; v. 234; p. 1290.
Figure, Animal. T. Soga. No. 50,143; Jan. 2; v. 234; p. 350.
Game-board or similar article. H. Cady. No. 50,235; Jan. 30; v. 234; p. 1553.
Gear-wheel. W. S. Harley. No. 50,129; Jan. 2; v. 234; p. 347.
Gem-setting. D. Greenberg. No. 50,128; Jan. 2; v. 234; p. 347.
Glass article. M. A. Smith. No. 50,221; Jan. 23; v. 234; p. 1290.
Glass dish or similar article. R. Haley. No. 50,194; Jan. 16; v. 234; p. 1031.
Glass plate or similar article. R. Haley. No. 50,195; Jan. 16; v. 234; p. 1031.
Globe. E. H. Peck. No. 50,208; Jan. 16; v. 234; p. 1034.
Hat-band. G. Kremer. No. 50,136; Jan. 2; v. 234; p. 349.
Hook. J. B. Baxter. No. 50,177; Jan. 16; v. 234; p. 1027.
Hook, Combined hat and clothes. W. G. Fawcett. No. 50,217; Jan. 23; v. 234; p. 1289.
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Lamp with mirrorscope, Vehicle-. E. A. Hawthorne. No. 50,200; Jan. 16; v. 234; p. 1032.
Light-fixture. W. Polacheck. Nos. 50,247–8; Jan. 30; v. 234; p. 1556.
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Lighting-fixture canopy. R. Y. Barrows and G. V. Strahan. No. 50,157; Jan. 16; v. 234; p. 1023.
Lighting-fixture canopy. G. Y. Barrows and G. V. Strahan. No. 50,175; Jan. 16; v. 234; p. 1027.
Lighting-fixture canopy, hanger, and pan. R. C. Wagner and E. J. Schweitzer. No. 50,211; Jan. 16; v. 234; p. 1034.
Lighting fixture, Electric-. R. W. Bayley. Nos. 50,178–9; Jan. 16; v. 234; p. 1028.
Lighting-fixtures, Socket-cover for. R. Y. Barrows and G. V. Strahan. No. 50,158; Jan. 16; v. 234; p. 1023.
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Mirror-bracket arm. M. S. Rosen. No. 50,250; Jan. 30; v. 234; p. 1556.
Paper, Border for wall-. E. Ericson and R. Weiss. No. 50,243; Jan. 30; v. 234; p. 1555.
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Paper, Wall-. H. McKinnon. No. 50,137; Jan. 2; v. 234; p. 349.
Phonograph-cabinet. H. Sheble. No. 50,210; Jan. 16; v. 234; p. 1034.
Picture apparatus, Casing for motion-. L. Coatsworth. No. 50,145; Jan. 9; v. 234; p. 652.
Picture-machine-light, Reflector for moving-. E. Shoup. No. 50,142; Jan. 2; v. 234; p. 350.
Plate or similar article. W. De Ville. No. 50,240; Jan. 30; v. 234; p. 1555.
Plumbing-fixture. J. N. Mortimer. No. 50,151; Jan. 9; v. 234; p. 653.
Porch-shade. A. C. Hough. No. 50,203; Jan. 16; v. 234; p. 1032.
Pump and filter casing, Air. J. T. Janette. No. 50,150; Jan. 9; v. 234; p. 653.
Pump casing, Air-. J. T. Janette. No. 50,149; Jan. 9; v. 234; p. 653.
Radiator-core. J. A. Knenz. No. 50,204; Jan. 16; v. 234; p. 1033.
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Ring or similar article. M. L. and M. L. Bowden, Jr. No. 50,181; Jan. 16; v. 234; p. 1028.
Rug. R. F. Riddell. No. 50,249; Jan. 30; v. 234; p. 1556.
Rug. M. H. Solms. No. 50,254; Jan. 30; v. 234; p. 1557.
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Sewing-cabinet, Seamstress. H. Becker. No. 50,214; Jan. 23; v. 234; p. 1289.
Shade-bowl. J. Beiswanger. No. 50,180; Jan. 16; v. 234; p. 1028.
Shampooing apparatus. W. Faerber. No. 50,186; Jan. 16; v. 234; p. 1030.
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Silk cloth. F. E. Ferier. No. 50,255; Jan. 30; v. 234; p. 1557.
Spoon. E. H. Johnson. No. 50,133; Jan. 2; v. 234; p. 348.
Spoon, fork, or similar article. S. G. Wilkes. No. 50,153; Jan. 9; v. 234; p. 654.
Stove. L. D. Smith. No. 50,245; Jan. 30; v. 234; p. 1555.
Syrup-dispensing apparatus. J. M. Travis. No. 50,222; Jan. 23; v. 234; p. 1290.
Table, Book-. M. Butler. No. 50,122; Jan. 2; v. 234; p. 346.
Talking-machine cabinet. A. E. Parnall. No. 50,139; Jan. 2; v. 234; p. 349.
Talking-machine casing. J. C. English. No. 50,126; Jan. 2; v. 234; p. 346.
Tire. E. Hopkinson. No. 50,202; Jan. 16; v. 234; p. 1032.
Tire-tread. E. O. Fritch. No. 50,190; Jan. 16; v. 234; p. 1030.
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Vehicle-body. H. W. Eichbaum. No. 50,125; Jan. 2; v. 234; p. 346.
Vending and weighing machines, Casing for combined. C. E. McAdow. No. 50,205; Jan. 16; v. 234; p. 1033.
Wrench. W. L. Bessolo. No. 50,119; Jan. 2; v. 234; p. 345.

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Accordions. Y. Demianenko. No. 115,166; Jan. 30; v. 234; p. 1578.
Aircraft. General Aeronautic Company. No. 114,744; Jan. 2; v. 234; p. 369.
Alloy, Metallic. W. M. Levett Company. No. 114,782; Jan. 2; v. 234; p. 370.
Alloys. M. H. Aterite Company Inc. No. 114,676; Jan. 2; v. 234; p. 367.
Alloys, Aluminum. H. D. Kramm. No. 114,777; Jan. 2; v. 234; p. 370.
Alloys, Copper base metal. The Ajax Metal Company. No. 114,669; Jan. 2; v. 234; p. 367.
Ammonia compound, cold-water and laundry starch, bluing, &c. Banner Coffee Co. No. 114,682; Jan. 2; v. 234; p. 367.
Antiseptic compound. S. Ransford-Gay. No. 115,118; Jan. 23; v. 234; p. 1309.
Antiseptic mouth-wash. R. G. Roberts. No. 114,824; Jan. 2; v. 234; p. 371.
Apples, Fresh boxed. Growers Service Company. No. 115,083; Jan. 23; v. 234; p. 1308.
Automobile-body polish. G. R. Barber. No. 114,860; Jan. 9; v. 234; p. 667.
Automobile, carriage, and furniture polish. Durst & Chartz Furniture Co. No. 115,168; Jan. 30; v. 234; p. 1578.
Automobile-gasolene-tank filling and measuring devices. Apex Electric Manufacturing Company. No. 114,922; Jan. 16; v. 234; p. 1039.
Automobile-trailers. Auto-Kamp Equipment Co. No. 115,057; Jan. 23; v. 234; p. 1307.
Automobiles. G. L. Thompson. No. 115,036; Jan. 16; v. 234; p. 1042.
Bacon and hams. Armour and Company. No. 115,054; Jan. 23; v. 234; p. 1307.
Bags. Chase Bag Co. No. 114,944; Jan. 16; v. 234; p. 1040.
Baking-powder. Monroe Drug Company. Nos. 114,806–7; Jan. 2; v. 234; p. 371.
Balls for ball and tube mills. Los Angeles Foundry Company. No. 114,896; Jan. 9; v. 234; p. 668.
Bearings and bushings. General Aluminum & Brass Manufacturing Company. No. 114,880; Jan. 9; v. 234; p. 668.
Beds, mattresses, bed-springs. M. Lipps. No. 114,996; Jan. 16; v. 234; p. 1041.
Bedspreads, Cotton. Italian Bed Spread Co. No.114,888; Jan. 9; v. 234; p. 668.
Beer. T. O. Dixon. No. 114,725; Jan. 2; v. 234; p. 368.
Beer. M. K. Goetz Brewing Co. Nos. 115,080–1; Jan. 23; v. 234; p. 1308.
Belt-dressing. W. M. Lawyer. No. 115,095; Jan. 23; v. 234; p. 1308.
Belting, hose, machinery packing, &c., Certain named. The Cincinnati Rubber Manufacturing Company. Nos. 114,706–9; Jan. 2; v. 234; p. 368.
Belting, hose, and machinery packing made of rubber and cotton. The Manhattan Rubber Mfg. Co. No. 114,795; Jan. 2; v. 234; p. 370.
Belting, Leather. Chas. A. Schieren Company. No. 115,230; Jan. 30; v. 234; p. 1579.
Belting, Rubber and cotton. The Manhattan Rubber Mfg. Co. No. 114,797; Jan. 2; v. 234; p. 371.
Beverage, Non-alcoholic cereal. Theo. Hamm Brewing Company. No. 115,183; Jan. 30; v. 234; p. 1578.
Beverage to be sold as a soft drink, Non-alcoholic. E. S. Eby. No. 114,873; Jan. 9; v. 234; p. 667.
Beverages, Non-alcoholic carbonated. Chicago Consolidated Bottling Company. No. 114,871; Jan. 9; v. 234; p. 667.
Beverages put up in bottles, kegs, and barrels, Non-alcoholic. C. F. P. Korssell. No. 114,891; Jan. 9; v. 234; p. 668.
Billiard-cloth. The Brunswick-Balke-Collender Co. No. 115,063; Jan. 23; v. 234; p. 1307.
Bits. The Lebanon Machine Company. No. 114,988; Jan. 16; v. 234; p. 1041.
Bitumen, Raw or partly prepared. The Anglo-Mexican Petroleum Products Co. Ltd. No. 114,675; Jan. 2; v. 234; p. 367.
Blouses and middy-blouse dresses, Middy-. Shapiro Brothers. No. 115,239; Jan. 30; v. 234; p. 1580.
Blouses, Middy-. W. C. Weiller. No. 115,129; Jan. 23; v. 234; p. 1309.
Blouses, waists, rompers, play-suits, shirts. Elder Manufacturing Company. No. 114,956; Jan. 16; v. 234; p. 1040.
Boards, Fiber building-. Fireproof Fibre Building Boards Limited. No. 114,960; Jan. 16; v. 234; p. 1040.
Books and musical works, Printed. The A. P. Schmidt Co. No. 115,231; Jan. 30; v. 234; p. 1580.
Books containing deposit-slips to be issued to members of a savings-club. Exchange Trust Company. No. 115,178; Jan. 30; v. 234; p. 1578.
Boots and shoes and boot and shoe soles of leather. Holland Shoe Co. No. 114,762; Jan. 2; v. 234; p. 369.
Boots and shoes, Men's and youths' leather. Noyes-Norman Shoe Co. No. 115,215; Jan. 30; v. 234; p. 1579.
Boots and shoes, Leather.. Foot, Schulze & Co. Nos. 114,738–9; Jan. 2; v. 234; p. 369.
Boots and shoes, Leather. F. M. Hoyt Shoe Company. No. 114,887; Jan. 9; v. 234; p. 668.
Boots and shoes, Leather. Huiskamp Bros. Co. No. 114,765; Jan. 2; v. 234; p. 370.
Boots and shoes, Leather, rubber, felt, &c. Geo. E. Keith Company. No. 114,890; Jan. 9; v. 234; p. 668.
Boots and shoes, Rubber, leather, and fabric. United States Rubber Company. No. 114,848; Jan. 2; v. 234; p. 372.
Boots, shoes, and slippers, Women's misses', and children's. Faunce and Spinney. No. 114,876; Jan. 9; v. 234; p. 667.
Bottle, jar, &c., closure-tops. United States Metal Cap & Seal Company. No. 115,041; Jan. 16; v. 234; p. 1042.
Bottle-openers. The Crown Cork and Seal Co., of Baltimore City. No. 114,950; Jan. 16; v. 234; p. 1040.
Bottle washing, rinsing, and capping machines and allied machinery, Certain named. Modern Machinery Co. No. 115,207; Jan. 30; v. 234; p. 1579.
Bottles, Nursing-. Infants Specialty Company. No. 114,972; Jan. 16; v. 234; p. 1040.
Brassières. The Warner Brothers Company. No. 115,127; Jan. 23; v. 234; p. 1309.
Brooms. Lee Broom & Duster Company. Nos. 114,989–91; Jan. 16; v. 234; p. 1041.
Brushes, Certain named. Rennous, Kleinle & Co. of Baltimore City. Nos. 115,108–9; Jan. 23; v. 234; p. 1309.
Butter. Maricopa Creamery Co. No. 114,798; Jan. 2; v. 234; p. 371.
Butter. Martin-Klepper Co. No. 115,204; Jan. 30; v. 234; p. 1579.
Butter, eggs, and cheese. Beyer Bros. Commission Co. No. 115,153; Jan. 30; v. 234; p. 1577.
Cake. Schulze Baking Company. No. 114,829; Jan. 2; v. 234; p. 371.
Cakes. Loose-Wiles Biscuit Company. No. 115,199; Jan. 30; v. 234; p. 1579.
Cakes. H. W. Sloat. No. 115,242; Jan. 30; v. 234; p. 1580.
Cakes and cookies. Iten Biscuit Co. No. 114,769; Jan. 2; v. 234; p. 370.
Calcium salts. P. M. Kuehnrich. No. 114,779; Jan. 2; v. 234; p. 370.
Calendars and cards. R. H. Isard. No. 114,770; Jan. 2; v. 234; p. 370.
Candles, Chocolate. Gurley Candy Company. No. 114,751; Jan. 2; v. 234; p. 369.
Candy. W. J. Bader. No. 114,680; Jan. 2; v. 234; p. 367.
Candy. United Drug Company. No. 115,122; Jan. 23; v. 234; p. 1309.
Candy, particularly caramel candy. Kibbe Bros. Company. No. 114,774; Jan. 2; v. 234; p. 370.
Canned American sardines. Seacoast Canning Co. No. 115,235; Jan. 30; v. 234; p. 1580.
Canned food product. The Marshall-Stacey Company. No. 114,799; Jan. 2; v. 234; p. 371.
Canned foods, Certain named. Brodsky Palman Gelber Co. No. 115,061; Jan. 23; v. 234; p. 1307.
Canned foods, Certain named. The H. D. Lee Mercantile Co. No. 115,135; Jan. 23; v. 234; p. 1309.
Canned fruit, Certain named. Pratt-Low Preserving Co. No. 115,106; Jan. 23; v. 234; p. 1308.
Canned fruits. Eat and Grow Thin Food Co. No. 114,730; Jan. 2; v. 234; p. 369.
Canned fruits and vegetables. John Sexton & Company. No. 115,237; Jan. 30; v. 234; p. 1580.
Canned salmon. Chinook Packing Company. No. 115,161; Jan. 30; v. 234; p. 1577.
Canned salmon. Columbia River Packers Association. No. 115,069; Jan. 23; v. 234; p. 1307.
Canned salmon. Dorman, Huxford & Co. No. 114,727; Jan. 2; v. 234; p. 368.
Canned sardines. E. L. Hecbner. No. 115,187; Jan. 30; v. 234; p. 1578.
Canning machinery and the like, Certain named. F. G. Dickerson Co. No. 115,167; Jan. 30; v. 234; p. 1578.
Car-lighting systems, Electric motor-. Detroit Starter Co. No. 114,723; Jan. 2; v. 234; p. 368.

Carpets and rugs. Hardwick & Magee Co. No. 115,186; Jan. 30; v. 234; p. 1578.
Cash-discount and cash-discount-savings receipts. M. Whitlock. No. 114,851; Jan. 2; v. 234; p. 372.
Cement, Adhesive. Regina Cement Company. No. 115,022; Jan. 16; v. 234; p. 1042.
Cement, Hydraulic. Southern Cement Co. No. 114,837; Jan. 2; v. 234; p. 372.
Cement, Refractory. Adams & Jewell. No. 114,667; Jan. 2; v. 234; p. 367.
Cereals, Breakfast. Fleming & Co. No. 114,736; Jan. 2; v. 234; p. 369.
Chains and chain-links. Chain Belt Company. No. 114,701; Jan. 2; v. 234; p. 368.
Cheese. H. J. Campbell. No. 114,697; Jan. 2; v. 234; p. 368.
Chemicals and pigments for general use, Certain named. C. F. Gledhill. No. 114,966; Jan. 16; v. 234; p. 1040.
Chemicals, medicines, and pharmaceutical preparations, Certain named. Brewer & Co. No. 114,693; Jan. 2; v. 234; p. 367.
Chinaware. Maddock Pottery Company. No. 114,790; Jan. 2; v. 234; p. 370.
Cider sold as a soft drink, Sweet apple-. L. F. Mikesell. No. 115,100; Jan. 23; v. 234; p. 1308.
Cigarette-cases. S. J. Goldberg. No. 114,747; Jan. 2; v. 234; p. 369.
Cigars. W. L. Diehl. No. 114,724; Jan. 2; v. 234; p. 368.
Cigars. Otto Eisenlohr & Bro. No. 114,955; Jan. 16; v. 234; p. 1040.
Cigars. Theobold and Oppenheimer Company. No. 115,251; Jan. 30; v. 234; p. 1580.
Cigars. United Cigar Manufacturers Company. No. 114,847; Jan. 2; v. 234; p. 372.
Cigars. United Cigar Manufacturers Company. Nos. 115,039–40; Jan. 16; v. 234; p. 1042.
Cigars. United Cigar Manufacturers Company. Nos. 115,254–5; Jan. 30; v. 234; p. 1580.
Cigars. Welcher Brothers. No. 115,262; Jan. 30; v. 234; p. 1580.
Cigars and smoking-tobacco. A. G. Camero. No. 115,158; Jan. 30; v. 234; p. 1577.
Cigars, cheroots, and little cigars. J. Lovera Company. No. 114,786; Jan. 2; v. 234; p. 370.
Cigars, cheroots, and little cigars. E. M. Schwarz & Co. No. 115,233; Jan. 30; v. 234; p. 1580.
Cineograph and moving-picture films. Balboa Amusement Producing Company. No. 115,144; Jan. 30; v. 234; p. 1577.
Cleaner for enamel surfaces. J. Fallon. No. 115,076; Jan. 23; v. 234; p. 1308.
Cleaner for silks, laces, furs, kid gloves, &c. The Cummer Products Co. No. 115,070; Jan. 23; v. 234; p. 1307.
Cleaners and parts thereof, Electric vacuum-. D. B. Replogle. No. 114,823; Jan. 2; v. 234; p. 371.
Cleaning and polishing compound for automobiles, pianos, furniture, &c. The Vaporine Co. No. 115,257; Jan. 30; v. 234; p. 1580.
Cleaning preparation for hats, shoes, and clothing. I. W. Rice & Co. No. 115,226; Jan. 30; v. 234; p. 1579.
Cleansers and water-softeners. Climalene Chemical Company. No. 114,713; Jan. 2; v. 234; p. 368.
Cleansing compound, Liquid. F. Hodschar. No. 114,759; Jan. 2; v. 234; p. 369.
Clocks and watches. Western Clock Co. Nos. 114,913–14; Jan. 9; v. 234; p. 669.
Clothes-wringers and parts thereof. The American Wringer Company. No. 114,921; Jan. 16; v. 234; p. 1039.
Clothing, Certain named. J. Blach & Sons. No. 114,687; Jan. 2; v. 234; p. 367.
Clothing, Certain named. The Buckley-Newhall Company. No. 115,064; Jan. 23; v. 234; p. 1307.
Clothing, Certain named. John Gately Co. No. 115,079; Jan. 23; v. 234; p. 1308.
Clothing, Certain named. Cohen Goldman & Co. No. 114,947; Jan. 16; v. 234; p. 1040.
Clothing, Certain named. Hess Brothers. No. 114,885; Jan. 9; v. 234; p. 668.
Clothing, Certain named. Morris & Company. No. 114,808; Jan. 2; v. 234; p. 371.
Clothing, Certain named. Oppenheim, Collins & Company. No. 114,905; Jan. 9; v. 234; p. 668.
Clothing, Certain named. Shapiro Brothers. No. 115,238; Jan. 30; v. 234; p. 1580.
Clothing, Certain named. Franklin Simon & Co. No. 115,124; Jan. 23; v. 234; p. 1300.
Clothing, Certain named. John Wanamaker, Philadelphia. No. 115,259; Jan. 30; v. 234; p. 1580.
Clothing for men and boys, Certain named. H. Wolff & Co. No. 114,756; Jan. 4; v. 234; p. 369.
Coal. Romann & Bush Pig Iron & Coke Co. No. 115,026; Jan. 16; v. 234; p. 1042.
Coal and coke. Stonega Coke & Coal Co. No. 115,630; Jan. 16; v. 234; p. 1042.
Coal and hardwood charcoal. W. E. Gould. No. 114,748; Jan. 2; v. 234; p. 369.
Coal, Anthracite. Lehigh & Wilkes Barre Coal Co. No. 115,197; Jan. 30; v. 234; p. 1578.
Coffee. Foley Bros. & Quinlan. No. 115,077; Jan. 23; v. 234; p. 1308.
Coffee. S. S. Pierce Co. No. 115,222; Jan. 30; v. 234; p. 1579.
Coffee. Schnull & Co. No. 115,114; Jan. 23; v. 234; p. 1309.
Coffee and tea. J. S. Elliott Coffee Co. No. 115,172; Jan. 30; v. 234; p. 1578.
Coffee, chicory and cacao seed coats. C. G. Durel. No. 114,729; Jan. 2; v. 234; p. 369.
Coffee-mills, coffee-refiners, meat-choppers, &c. The Master Cutter Machine Company. No. 114,800; Jan. 2; v. 234; p. 371.
Coffee, Roasted. C. G. Durel. No. 114,728; Jan. 2; v. 234; p. 369.
Coffee, Roasted. Fort Smith Coffee Company. No. 114,740; Jan. 2; v. 234; p. 369.
Coffees and spices. Springfield Coffee and Spice Company. No. 114,839; Jan. 2; v. 234; p. 372.
Coke. Lehigh Coke Company. No. 114,895; Jan. 9; v. 234; p. 668.
Collars. Hall, Hartwell & Co. No. 114,753; Jan. 2; v. 234; p. 369.
Colors for rubber, leather, soap, &c. American Heyl Co. No. 115,050; Jan. 23; v. 234; p. 1307.
Combs and fans, French-ivory and celluloid. Yale Novelty Company. No. 115,266; Jan. 30; v. 234; p. 1581.
Compound used as a gasolene-intensifier and carbon-preventive, Chemical. C. Hahn. No. 115,181; Jan. 30; v. 234; p. 1578.
Compound which when applied to any pane of glass prevents fogging, steaming, &c. H. G. Larsen. No. 114,781; Jan. 2; v. 234; p. 370.
Compounds for purifying products of combustion issuing from heaters, stoves, &c. Fageol & Tate. No. 115,075; Jan. 23; v. 234; p. 1308.
Construction material, Certain named. Shrauger & Johnson. No. 115,029; Jan. 16; v. 234; p. 1042.
Corn-starch. Bauer and Bauer. Nos. 115,146–8; Jan. 30; v. 234; p. 1577.
Cornmeal. The Eclipse Milling Company. No. 114,731; Jan. 2; v. 234; p. 369.
Cornmeal. Juliette Milling Co. No. 114,773; Jan. 2; v. 234; p. 370.
Cornmeal and milk. F. C. Klotz. No. 114,776; Jan. 2; v. 234; p. 370.
Corsets. Mme. P. Klein. No. 115,194; Jan. 30; v. 234; p. 1578.
Corsets. Lily of France Corset Co. No. 114,995; Jan. 16; v. 234; p. 1041.
Corsets, Apparel-. Kops Bros. No. 115,092; Jan. 23; v. 234; p. 1308.
Cotton piece goods. J. A. Finn & Company. No. 114,878; Jan. 9; v. 234; p. 667.
Cotton piece goods. Hunter Mfg. & Com. Co. No. 115,189; Jan. 30; v. 234; p. 1578.
Cotton piece goods, nainsooks, and long-cloths. R. H. Macy & Co. No. 114,899; Jan. 9; v. 234; p. 668.
Court-plaster, Liquid. Bauer & Black. No. 114,929; Jan. 16; v. 234; p. 1039.
Cranberries. American Cranberry Exchange. No. 114,671; Jan. 2; v. 234; p. 367.
Crapes and silks in the piece. Samuel J. Aronsohn, Inc. No. 114,923; Jan. 16; v. 234; p. 1039.
Crockery and earthenware. Lz. Phillips. No. 114,818; Jan. 2; v. 234; p. 371.
Cultivators, roller-pulverizers, harrows, &c. Emerson-Brantingham Company. No. 115,174; Jan. 30; v. 234; p. 1578.
Dandruff-remover. Nusbaum & Brennerman. No. 115,012; Jan. 16; v. 234; p. 1042.
Dental powder for assisting in holding dental plates in the mouth. Corega Chemical Company. No. 114,948; Jan. 16; v. 234; p. 1040.
Dippers for skimming milk contained in milk-bottles, Metallic. D. E. Hubbell. No. 115,188; Jan. 30; v. 234; p. 1578.
Dish-washing machines. The Dietz Manufacturing Company. No. 114,951; Jan. 16; v. 234; p. 1040.
Disinfectant powder. The Chamberlain Co. No. 114,702; Jan. 2; v. 234; p. 368.
Disinfectants and insecticides. West Disinfecting Company. No. 115,130; Jan. 23; v. 234; p. 1309.
Dog-biscuits. Thoroughbred Dog Biscuit Co., Inc. No. 114,844; Jan. 2; v. 234; p. 372.
Dolls. M. B. Philips. No. 114,819; Jan. 2; v. 234; p. 371.
Drawings for aids in child instruction, Skeleton. Barrington Graphoprint Company. Nos. 114,927–8; Jan. 16; v. 234; p. 1039.
Drawings for use as aids in child instruction, Skeleton. Barrington Graphoprint Company. No. 115,145; Jan. 30; v. 234; p. 1577.
Dresses, Children's. Elite Garment Company of Syracuse, N. Y. No. 115,173; Jan. 30; v. 234; p. 1578.
Driers. Ruggles-Coles Engineering Co. No. 114,826; Jan. 2; v. 234; p. 371.
Driers. Tousey Varnish Company. No. 115,253; Jan. 30; v. 234; p. 1580.
Drink, Carbonated soft. The Madison Bottling Works. No. 115,099; Jan. 23; v. 234; p. 1308.
Drink, Soft. A. Zimetbaum. No. 114,853; Jan. 2; v. 234; p. 372.
Dyes and dye-bases. Hoffman & Kropff Chemical Co. No. 114,760; Jan. 2; v. 234; p. 369.

Eggs. Collins & Barnard Co. No. 114,716; Jan. 2; v. 234; p. 368.
Ejectors and air-pumps. C. H. Wheeler Manufacturing Company. No. 115,047; Jan. 16; v. 234; p. 1043.
Electric-lighting fixtures. D. Crownfield. No. 115,163; Jan. 30; v. 234; p. 1577.
Electric meters, registers, calculators, and thermostats. Manhattan Electrical Supply Company. No. 115,203; Jan. 30; v. 234; p. 1579.
Electric relays, magnets, switches, motors, &c. D. C. Larson. No. 115,196; Jan. 30; v. 234; p. 1578.
Electrical apparatus, machines, and supplies, Certain named. Manhattan Electrical Supply Company. No. 114,900; Jan. 9; v. 234; p. 668.
Electrical conductors or cables. Motor Parts Company. No. 115,210; Jan. 30; v. 234; p. 1579.
Engine stop mechanism. Falls Motors Corporation. No. 114,958; Jan. 16; v. 234; p. 1040.
Engines, locomotives, and motors and their parts, Combustion-. United Combustion Company. No. 115,121; Jan. 23; v. 234; p. 1309.
Fat, Cooking-. The Procter & Gamble Company. No. 114,822; Jan. 2; v. 234; p. 371.
Feed, Dairy. Best-Clymer Manufacturing Company. Nos. 115,150–1; Jan. 30; v. 234; p. 1577.
Feed, Dairy. Tioga Mill & Elevator Co. No. 115,119; Jan. 23; v. 234; p. 1309.
Feed for stock, Fattening. Best-Clymer Manufacturing Company. No. 115,152; Jan. 30; v. 234; p. 1577.
Feed, Horse and mule. Best-Clymer Manufacturing Company. No. 115,149; Jan. 30; v. 234; p. 1577.
Feed, Poultry. Canadian Mill & Elevator Co. No. 115,067; Jan. 23; v. 234; p. 1307.
Fertilizers. The Berg Company. No. 114,932; Jan. 16; v. 234; p. 1039.
Finger-rings and card jewelry. Ostby and Barton Company. No. 115,104; Jan. 23; v. 234; p. 1308.
Fire-extinguishers, Chemical. The Bargar Mfg. Co. No. 114,861; Jan. 9; v. 234; p. 667.
Flavoring extracts for foods. The Hudson Mfg. Co. No. 115,088; Jan. 23; v. 234; p. 1308.
Flavoring extracts for foods, and spices. D. & L. Slade Co. No. 115,115; Jan. 23; v. 234; p. 1309.
Flavoring-syrups for soft drinks, &c. F. Weber. No. 114,850; Jan. 2; v. 234; p. 372.
Floor-coverings made from felt saturated with asphaltum and coated on both surfaces. Judson & Aird. No. 115,086; Jan. 23; v. 234; p. 1308.
Flour and stock feeds, Wheat-. Merrill & Mayo Co. No. 114,801; Jan. 2; v. 234; p. 371.
Flour, Pancake-. Bowles Bros. Co. No. 115,156; Jan. 30; v. 234; p. 1577.
Flour, Self-rising wheat-. Centennial Mill Co. No. 114,700; Jan. 2; v. 234; p. 368.
Flour, Self-rising wheat-. Evansville Mill & Elevator Co. No. 114,733; Jan. 2; v. 234; p. 369.
Flour, Self-rising wheat-. Evansville Mill & Elevator Co. No. 115,176; Jan. 30; v. 234; p. 1578.
Flour, Self-rising wheat-. Steelevillle Milling Company. No. 115,247; Jan. 30; v. 234; p. 1580.
Flour, Wheat-. W. M. Atkinson. No. 115,055; Jan. 23; v. 234; p. 1307.
Flour, Wheat-. Canadian Mill & Elevator Co. No. 114,698; Jan. 2; v. 234; p. 368.
Flour, Wheat-. B. A. Eckhart Milling Co. No. 115,074; Jan. 23; v. 234; p. 1307.
Flour, Wheat-. The Glazier Mill & Elevator Co. No. 114,745; Jan. 2; v. 234; p. 369.
Flour, Wheat-. Glosemeyer Flour Company. No. 114,746; Jan. 2; v. 234; p. 369.
Flour, Wheat-. C. H. Guenther & Son, (Inc.) No. 114,750; Jan. 2; v. 234; p. 369.
Flour, Wheat-. Harvest Milling Company. No. 114,754; Jan. 2; v. 234; p. 369.
Flour, Wheat-. Hezel Milling Company. No. 114,757; Jan. 2; v. 234; p. 369.
Flour, Wheat-. The Kirkland Distributing Company. No. 115,091; Jan. 23; v. 234; p. 1308.
Flour, Wheat-. Lexington Mill & Elevator Co. No. 114,783; Jan. 2; v. 234; p. 370.
Flour, Wheat-. Listman Mill Company. No. 114,784; Jan. 2; v. 234; p. 370.
Flour, Wheat-. New Prague Flouring Mill Company. No. 115,214; Jan. 30; v. 234; p. 1579.
Flour, Wheat-. Paris Milling Company. No. 115,219; Jan. 30; v. 234; p. 1579.
Flour, Wheat-. Prange Milling Co. No. 115,223; Jan. 30; v. 234; p. 1579.
Flour, Wheat-. F. S. Smith. No. 114,836; Jan. 2; v. 234; p. 372.
Flux. The Cleveland Tensilite Co. No. 114,712; Jan. 2; v. 234; p. 368.
Food-containers. Vacuum Can Co. No. 115,042; Jan. 16; v. 234; p. 1043.
Food for calves. Joseph Thorley, Limited. No. 115,252; Jan. 30; v. 234; p. 1580.
Food products, Certain named. Air Utilities Company. No. 115,048; Jan. 23; v. 234; p. 1307.
Foods, Certain named. Foley Bros. & Quinlan. No. 114,737; Jan. 2; v. 234; p. 369.
Foods, Certain named. Nave-McCord Mercantile Co. Nos. 114,814–15; Jan. 2; v. 234; p. 371.
Foods, Certain named. Scottsburg Canning Co. No. 114,832; Jan. 2; v. 234; p. 372.
Foods, Wheat breakfast. Mother's Macaroni Company. No. 115,209; Jan. 30; v. 234; p. 1579.
Fruit, Citrus. Brooksville Citrus Growers Assn. No. 115,062; Jan. 23; v. 234; p. 1307.
Fruits and vegetables, Fresh. H. McCarren, Jr. No. 114,788; Jan. 2; v. 234; p. 370.
Fuel compound for cutting and welding purposes, Gaseous. Carbo Hydrogen Co. of America. No. 114,938; Jan. 16; v. 234; p. 1039.
Fur gowns, outer suits, wraps, and garments. D. G. Carmichael. No. 114,941; Jan. 16; v. 234; p. 1039.
Furniture, Certain. Conrey-Davis Mf'g. Co. No. 114,718; Jan. 2; v. 234; p. 368.
Furniture, piano, and automobile polish and varnish-renewer. J. P. Barron. No. 114,862; Jan. 9; v. 234; p. 667.
Furniture-polish and sanitary cleaner. E. E. Conrad. No. 114,717; Jan. 2; v. 234; p. 368.
Fuse, Safety-. Coast Manufacturing & Supply Co. Nos. 114,714–15; Jan. 2; v. 234; p. 368.
Gages and micrometers. Greenfield Tap and Die Corporation. No. 114,882; Jan. 9; v. 234; p. 668.
Games. K. A. Bradley. No. 114,930; Jan. 16; v. 234; p. 1039.
Garments, Men's, women's, and children's outer. Goodall Worsted Co. No. 114,968; Jan. 16; v. 234; p. 1040.
Gas and combination lighting-fixtures and parts for same. B. F. Klein. No. 114,976; Jan. 16; v. 234; p. 1041.
Gasolene, benzin, naphtha, kerosene, motor-spirit, &c. Petroleum Products Co. of California. No. 114,907; Jan. 9; v. 234; p. 668.
Gasolene-improver or preparations for augmenting the energy of motor-fuels. J. R. Landauer. No. 115,094; Jan. 23; v. 234; p. 1308.
Ginger-ale. Cantrell & Cochrane. No. 115,068; Jan. 23; v. 234; p. 1307.
Ginger-ale, soda, and soft drinks. Misko Seal Beverage Company. No. 114,805; Jan. 2; v. 234; p. 371.
Gloves. O. C. Hansen Mfg. Company. No. 114,971; Jan. 16; v. 234; p. 1040.
Glue. Kalt-Leim-Fabrik O. Messmer. No. 114,803; Jan. 2; v. 234; p. 371.
Golf accessories. J. P. Cochrane. No. 114,946; Jan. 16; v. 234; p. 1040.
Grain-driers. The International Grain Drier & Mill Equipment Co. No. 114,768; Jan. 2; v. 234; p. 370.
Grape-juice and apple nectar. Austin, Nichols & Co. No. 114,859; Jan. 9; v. 234; p. 667.
Gum, Chewing-. J. B. Robbins. No. 115,111; Jan. 23; v. 234; p. 1309.
Gum or candied chewing-gum, Chewing-. Rueckheim Bros. & Eckstein. No. 115,107; Jan. 23; v. 234; p. 1309.
Hair-growing composition. F. O. McColloch. No. 114,789; Jan. 2; v. 234; p. 370.
Hair-nets. J. S. Bender Co. No. 114,865; Jan. 9; v. 234; p. 667.
Hair-nets. Theo. H. Gary Co. No. 114,962; Jan. 16; v. 234; p. 1040.
Hair-nets. Samstag & Hilder Bros. No. 115,229; Jan. 30; v. 234; p. 1579.
Hair, Preparation or dressing for. C. J. Haller. No. 114,970; Jan. 16; v. 234; p. 1040.
Hair-tonic. Crusellas y Ca. No. 114,937; Jan. 16; v. 234; p. 1039.
Hair-tonic. Dr. A. C. Daniels, Inc. No. 115,164; Jan. 30; v. 234; p. 1577.
Hair-tonic. Larivière and Jourdain. No. 114,893; Jan. 9; v. 234; p. 668.
Hair-tonic, Certain named. S. B. Wallace. No. 115,123; Jan. 23; v. 234; p. 1309.
Hair-tonic, shampoo preparations, cold-cream, powder, and rouge. O. L. Prather. No. 115,019; Jan. 16; v. 234; p. 1042.
Hair-tonics. H. A. Cassebeer. No. 114,943; Jan. 16; v. 234; p. 1040.
Hair-tonics. A. Nelson. No. 115,103; Jan. 23; v. 234; p. 1308.
Hams, Jacob E. Deckert & Sons. No. 115,165; Jan. 30; v. 234; p. 1578.
Handcuffs. Peerless Handcuff Company. No. 114,817; Jan. 2; v. 234; p. 371.
Handkerchiefs. Smith's Handy Handkerchief Co. No. 114,835; Jan. 2; v. 234; p. 372.
Hatchets, axes, chisels, &c. The Williams Hardware Co. No. 115,263; Jan. 30; v. 234; p. 1581.
Hats. Leyser, Green Co. No. 115,096; Jan. 23; v. 234; p. 1308.
Hats, caps, shirts, collars, cuffs, and leather shoes. A. M. Malouf. No. 114,794; Jan. 2; v. 234; p. 370.
Hats, Ladies'. M. E. Haupt. No. 114,755; Jan. 2; v. 234; p. 369.
Hats, Ladies'. M. Ufland & Co. No. 114,846; Jan. 2; v. 234; p. 372.
Hats, Men's and women's fur-felt. E. A. Mallory and Sons. Nos. 114,792–3; Jan. 2; v. 234; p. 370.
Heaters and stoves, Coal. C. V. Hill. No. 114,758; Jan. 2; v. 234; p. 369.
Heel lifts and levelers. A. E. Block. No. 114,688; Jan. 2; v. 234; p. 367.
Heels, heel-lifts, and soles, Composition. Fiberite Heel and Leather Co. No. 114,877; Jan. 9; v. 234; p. 667.
Hog and pig rings. W. E. Pratt. No. 114,909; Jan. 9; v. 234; p. 668.
Hog-cholera and foot-and-mouth disease. N. Chennaux. No. 114,703; Jan. 2; v. 234; p. 368.

Hose and machinery packing made of rubber and cotton. The Manhattan Rubber Mfg. Co. No. 114,796; Jan. 2; v. 234; p. 371.
Hose, Rubber and cotton. The Manhattan Rubber Mfg. Co. No. 115,000; Jan. 16; v. 234; p. 1041.
Hosiery. Wallach & Mayer. No. 115,044; Jan. 16; v. 234; p. 1043.
Hot-water-boiler covering. H. W. Johns-Manville Co. No. 114,974; Jan. 16; v. 234; p. 1040.
Hot-water bottles and fountain-syringes. Peninsular Chemical Company. No. 115,015; Jan. 16; v. 234; p. 1042.
House organ issued monthly. John F. Jelke Company. No. 115,089; Jan. 23; v. 234; p. 1308.
Indexes, Card-. Meilicke Calculator Company. No. 114,902; Jan. 9; v. 234; p. 668.
Ingots, castings, &c., and Babbitt metal. The Ajax Metal Company. No. 114,668; Jan. 2; v. 234; p. 367.
Ink and writing-ink in tablet form, Writing-. The General Eclipse Company. No. 114,881; Jan. 9; v. 234; p. 668.
Ink constituent, Orange mineral used as an. Picher Lead Company. No. 114,908; Jan. 9; v. 234; p. 668.
Insulated wire. Atlantic Insulated Wire & Cable Company. No. 114,858; Jan. 9; v. 234; p. 667.
Insulator-knobs, Porcelain. The Findlay Electric Porcelain Company. No. 114,735; Jan. 2; v. 234; p. 360.
Jewelry and precious-metal ware, Certain named. May & Malone. No. 114,901; Jan. 9; v. 234; p. 668.
Knit underwear, Ladies', misses', and children's. Achuff Knitting Mill. No. 114,916; Jan. 16; v. 234; p. 1039.
Knitted and textile sweaters, hosiery, &c. Delson Knitting Mills. No. 115,072; Jan. 23; v. 234; p. 1307.
Knitted and textile underwear and sweaters. Kuttner & Siegel. No. 115,093; Jan. 23; v. 234; p. 1308.
Knitted underwear in one and two piece garments. Lax & Burgheimer. No. 114,894; Jan. 9; v. 234; p. 668.
Knives and fruit-knives, Table-. Landers, Frary & Clark. No. 114,780; Jan. 2; v. 234; p. 370.
Laces and cotton goods in the piece. M. Smolowitz. No. 114,910; Jan. 9; v. 234; p. 668.
Lamps, Electric. J. O'Connor. No. 115,216; Jan. 30; v. 234; p. 1579.
Lamps of electric form. H. Kienzle. No. 114,775; Jan. 2; v. 234; p. 370.
Laxative preparation. The Mu-Col Company. No. 114,869; Jan. 2; v. 234; p. 371.
Laxatives. E. Mertin. No. 115,004; Jan. 16; v. 234; p. 1041.
Leather. Graton and Knight Manufacturing Company, The. No. 114,749; Jan. 2; v. 234; p. 369.
Leather, particularly japanned or "patent" leather. W. D. Byron & Sons. No. 114,936; Jan. 16; v. 234; p. 1039.
Leather-pressing machine, Fabric rolls for. E. J. F. Quirin. No. 115,020; Jan. 16; v. 234; p. 1042.
Leather, Washable. L. Meyers & Son. No. 115,205; Jan. 30; v. 234; p. 1579.
Liniment for certain named purposes. D. Wróblewski. No. 115,132; Jan. 23; v. 234; p. 1309.
Liniments for croup, chest-colds, pneumonia, bruises, &c. Valley Chemical Co. No. 115,256; Jan. 30; v. 234; p. 1580.
Lubricants consisting of oils and greases. A. C. Buzby. No. 115,157; Jan. 30; v. 234; p. 1577.
Lumber, Hardwood. The Bayou Land & Lumber Company. No. 114,864; Jan. 9; v. 234; p. 667.
Luminous materials containing radium for general use. Radium Luminous Material Corporation. No. 115,021; Jan. 16; v. 234; p. 1042.
Machine parts—viz., couplings and nuts. The Leslie Company. No. 115,198; Jan. 30; v. 234; p. 1579.
Magazine, Monthly. The Atlas Portland Cement Company. No. 114,677; Jan. 2; v. 234; p. 367.
Magazine, Monthly. Sea Power Publishing Company. No. 115,236; Jan. 30; v. 234; p. 1580.
Magazine, Monthly. C. D. Tuska. No. 115,038; Jan. 16; v. 234; p. 1042.
Magazine, Monthly. Service Motor Supply Co. No. 114,853; Jan. 2; v. 234; p. 372.
Magazine or journal, Monthly. Art Metal Construction Co. No. 115,142; Jan. 30; v. 234; p. 1577.
Magnetos and magneto parts. Sumter Electrical Co. No. 115,031; Jan. 16; v. 234; p. 1042.
Mattresses and upholstering. L. R. Gans. No. 114,743; Jan. 2; v. 234; p. 369.
Meal, Cotton-seed. Bowen & Murphy. No. 114,691; Jan. 2; v. 234; p. 367.
Meal, Cotton-seed. J. P. Keeton. No. 115,193; Jan. 30; v. 234; p. 1578.
Meal for food, Cotton-seed. Bowen & Murphy. No. 114,690; Jan. 2; v. 234; p. 367.
Measuring and scientific appliances, Certain named. F. A. Hardy & Company. No. 114,883; Jan. 9; v. 234; p. 668.
Meats and lard, Fresh, smoked, and salted. G. Lang. No. 115,195; Jan. 30; v. 234; p. 1578.
Meats, dried salt meats and lard, Smoked. Wilson Provision Company. No. 114,852; Jan. 2; v. 234; p. 372.
Medical and pharmaceutical preparation for the curing of corns. S. K. Saleeby. No. 115,027; Jan. 16; v. 234; p. 1042.
Medicinal chemical for the treatment of rheumatism. Röhm & Haas. No. 115,025; Jan. 16; v. 234; p. 1042.
Medicinal preparation. The Abbott Laboratories. No. 114,666; Jan. 2; v. 234; p. 367.
Medicinal preparation for the kidneys and liver. F. L. Baca. No. 114,924; Jan. 16; v. 234; p. 1039.
Medicinal preparation for the treatment of certain named diseases. The Columbus Pharmacal Company. No. 115,162; Jan. 30; v. 234; p. 1577.
Medicinal preparation for treating hog-cholera. A. J. Hager. No. 114,752; Jan. 2; v. 234; p. 369.
Medicine for certain named diseases. E. J. Lipscombe. Nos. 115,097–8; Jan. 23; v. 234; p. 1308.
Medicine, Rheumatism and neuritis. Newberry-Edmondson Co. No. 115,009; Jan. 16; v. 234; p. 1042.
Medicines and pharmaceutical preparations, Certain named. Nave McCord Mercantile Company. No. 114,813; Jan. 2; v. 234; p. 371.
Medicines for preventing hog-cholera and for removal of worms, &c. Sweet & Hodgman. No. 114,843; Jan. 2; v. 234; p. 372.
Metal, Babbitt. The Ajax Metal Company. No. 114,670; Jan. 2; v. 234; p. 367.
Metal-pickling compounds and ingredients thereof. The Grasselli Chemical Company. No. 115,180; Jan. 30; v. 234; p. 1578.
Metal-polish. G. Baer. No. 114,681; Jan. 2; v. 234; p. 367.
Metal, Silvel. Silvel Metal Manufacturing Company. No. 115,241; Jan. 30; v. 234; p. 1580.
Metals and metal castings and forgings, Certain named. The Jeffrey Manufacturing Co. No. 114,772; Jan. 2; v. 234; p. 370.
Metals from hydrometallurgical solutions containing same, Materials for precipitating valuable. Merrill Metallurgical Company. No. 115,003; Jan. 16; v. 234; p. 1041.
Mica powder. Richmond Mica Company. No. 115,227; Jan. 30; v. 234; p. 1579.
Milk powder, Skimmed-. Merton Dairy Products Company. No. 114,802; Jan. 2; v. 234; p. 371.
Music sheets or rolls, Perforated. Standard Music Roll Co. No. 115,244; Jan. 30; v. 234; p. 1580.
Musical instruments, strings for such instruments, and bows for playing the same. H. T. Heberlein, Jr. No. 114,884; Jan. 9; v. 234; p. 668.
Nerve food, Medicated tonic. Casein, Limited. No. 115,159; Jan. 30; v. 234; p. 1577.
Nettings, veils, and veilings. E. & Z. Van Raalte. No. 114,849; Jan. 2; v. 234; p. 372.
Newspaper. E. T. Earl. No. 114,953; Jan. 16; v. 234; p. 1040.
Newspaper. E. T. Earl. No. 115,169; Jan. 30; v. 234; p. 1578.
Newspaper, Daily. Evening Herald Publishing Company. No. 115,177; Jan. 30; v. 234; p. 1578.
Newspaper-section. Star Company. No. 114,842; Jan. 2; v. 234; p. 372.
Newspaper-section. Newspaper Feature Service. No. 115,010; Jan. 16; v. 234; p. 1042.
Night-lights, candles, and tapers. George Borgfeldt & Co. No. 115,154; Jan. 30; v. 234; p. 1577.
Nut-meats. R. E. Funsten Dried Fruit & Nut Co. No. 114,742; Jan. 2; v. 234; p. 369.
Oakum for packing and calking. American Manufacturing Company. No. 115,920; Jan. 16; v. 234; p. 1039.
Oats and barley, Mixture of clipped white. Armour Grain Company. No. 115,141; Jan. 30; v. 234; p. 1577.
Oats, Clipped white. Armour Grain Company. Nos. 114,856–7; Jan. 9; v. 234; p. 667.
Oil-cloth. The Cott-a-lap Company. No. 114,949; Jan. 16; v. 234; p. 1040.
Oil emulsion, Olive-. The Pompeian Co. No. 115,018; Jan. 16; v. 234; p. 1042.
Oil for cleaning and polishing, Liquid. Magic Mist, Incorporated. No. 114,791; Jan. 2; v. 234; p. 370.
Oil for use in the manufacture of printing-inks, Cotton-seed. The American Cotton Oil Company. No. 115,137; Jan. 30; v. 234; p. 1577.
Oil for screw-cutting and all other lubricating purposes, Cotton-seed. The American Cotton Oil Company. No. 114,854; Jan. 9; v. 234; p. 667.
Oil, Machinery-lubricating. Beacon Motor Supply Company. No. 114,684; Jan. 2; v. 234; p. 367.
Oil, Peanut-. Bosman & Lohman Co. No. 115,155; Jan. 30; v. 234; p. 1577.
Oils and greases, Certain named. Standard Oil Company of New York. No. 114,840; Jan. 2; v. 234; p. 372.
Oils and greases, Illuminating and lubricating. Galena-Signal Oil Company. No. 114,870; Jan. 9; v. 234; p. 668.
Oils and greases, Illuminating and lubricating. Warren Oil Company. Nos. 115,260–1; Jan. 30; v. 234; p. 1580.
Oils and greases, Illuminating, heating, and lubricating. Vacuum Oil Company. No. 115,043; Jan. 16; v. 234; p. 1043.
Oils and stains, Finishing. M. Barlin. No. 114,683; Jan. 2; v. 234; p. 367.
Oils, chemicals, and compounds, Carbon-removing and gasolene-saving. J. C. Caldwell. No. 114,696; Jan. 2; v. 234; p. 368.
Oils, Lubricating-. P. Frohlich. No. 114,741; Jan. 2; v. 234; p. 369.
Oiled clothing. A. J. Tower Company. No. 115,120; Jan. 23; v. 234; p. 1309.
Ointment for treatment of eczema, hay-fever, coughs, &c. F. W. Israel. No. 114,771; Jan. 2; v. 234; p. 370.

Oleomargarin. John F. Jelke Company. No. 115,190; Jan. 30; v. 234; p. 1578.
Ornamental heads adapted to be applied to any article of manufacture. E. & G. Quackenbush. No. 115,224; Jan. 30; v. 234; p. 1579.
Overalls, outside shirts, and trousers. J. F. Holbert. No. 114,761; Jan. 2; v. 234; p. 369.
Oxygen gas. Pintsch Compressing Company. No. 114,821; Jan. 2; v. 234; p. 371.
Oyster-display cases. American Can Co. No. 115,919; Jan. 16; v. 234; p. 1059.
Packing, Certain named. Associated Manufacturers Company. No. 115,143; Jan. 30; v. 234; p. 1577.
Paint and varnish remover. C. McAdam. No. 114,787; Jan. 2; v. 234; p. 370.
Paint, Asphalt. American Asphalt Paint Co. No. 114,918; Jan. 16; v. 234; p. 1039.
Paint constituent, Orange mineral pigment used as a. Picher Lead Company. No. 114,820; Jan. 2; v. 234; p. 371.
Paint, Disinfecting-. Tmco Mfg. Co. No. 114,911; Jan. 9; v. 234; p. 668.
Paints, Dry. G. A. H. Muller. No. 114,810; Jan. 2; v. 234; p. 371.
Paints, Ready-mixed and solid-block. Wailes Dove Bitumastic Limited. No. 114,867; Jan. 9; v. 234; p. 667.
Paints, wood and varnish stains, &c., Paste and liquid. The A. Burdsal Co. No. 114,869; Jan. 9; v. 234; p. 667.
Palliative for cancer, eczema, gangrene or blood-poison, &c. D. W. Boyer. No. 115,060; Jan. 23; v. 234; p. 1307.
Paper and paper towels, Toilet-. Wortendyke Manufacturing Co. No. 114,915; Jan. 9; v. 234; p. 669.
Paper and stationery, Certain named. Stenography & Reporting Company. No. 115,117; Jan. 23; v. 234; p. 1309.
Paper, Bond and ledger. Neenah Paper Company. No. 115,008; Jan. 16; v. 234; p. 1041.
Paper cartons, Shave-. B. Long. No. 114,785; Jan. 2; v. 234; p. 370.
Paper, envelops, tablets, &c., Writing and printing. Eaton, Crane & Pike Company. No. 114,954; Jan. 16; v. 234; p. 1040.
Paper for building purposes and in packing-cases, Lining-. H. H. Hopkins Company. No. 115,087; Jan. 23; v. 234; p. 1308.
Paper, paper toweling and napkins, Toilet-. The John Hoberg Co. No. 115,085; Jan. 23; v. 234; p. 1308.
Paper spoons. Sanispoon Co. No. 114,828; Jan. 2; v. 234; p. 371.
Paper, Toilet-. Sauquoit Toilet Paper Co. No. 115,028; Jan. 16; v. 234; p. 1042.
Paper-weights, Desk. B. W. Moser. No. 114,904; Jan. 9; v. 234; p. 668.
Paper, Writing and printing. American Writing Paper Co. No. 115,052; Jan. 23; v. 234; p. 1307.
Papers, Bond and waxing. Munising Paper Company. No. 115,102; Jan. 23; v. 234; p. 1308.
Papers, paper flower-pot covers, Water-crape and tissue-crape. Papyrus Artificial Paper Manufacturing Co. No. 115,105; Jan. 23; v. 234; p. 1308.
Paprika. Austin, Nichols & Co. No. 114,678; Jan. 2; v. 234; p. 367.
Paste and ready-mixed paints. Parker Preservative Products Co. No. 115,218; Jan. 30; v. 234; p. 1579.
Perfumes and toilet waters. Parfumerie Marceau Inc. No. 115,001; Jan. 16; v. 234; p. 1041.
Periodicals, Monthly. The Bruce Publishing Company. No. 114,935; Jan. 16; v. 234; p. 1039.
Petroleum to be used as a remedy or emollient, Refined. Central Commercial Company. No. 114,870; Jan. 9; v. 234; p. 667.
Petticoats, union-suits, corset-covers, &c. E. B. Amsden. No. 114,855; Jan. 9; v. 234; p. 667.
Pharmaceutical preparations for toilet purposes. The Bonney Company. No. 114,689; Jan. 2; v. 234; p. 367.
Pharmaceutical preparations for toilet purposes, Certain. R. Hudnut. No. 114,764; Jan. 2; v. 234; p. 370.
Phonograph. The Compton-Price Company. No. 114,872; Jan. 9; v. 234; p. 667.
Phosphorus compounds, Organic. The Grain Chemical Co. No. 114,969; Jan. 16; v. 234; p. 1040.
Pianos. American Piano Company. No. 115,051; Jan. 23; v. 234; p. 1307.
Picture films, Moving-. Acorn Movie Cartoon Company. No. 115,136; Jan. 30; v. 234; p. 1577.
Picture films, Moving-. Boy Scouts of America. No. 114,692; Jan. 2; v. 234; p. 367.
Picture films of animated cartoons issued serially, Motion-. P. H. Terry. No. 115,250; Jan. 30; v. 234; p. 1580.
Picture-frame mouldings, picture-frames, and parts of frames. The H. Lieber Company. No. 114,994; Jan. 16; v. 234; p. 1041.
Picture-projecting apparatus and parts thereof, screens, &c., Motion-. G. W. Newgass. No. 115,212; Jan. 30; v. 234; p. 1579.
Pillows, Feather. Star Bedding Co. No. 114,841; Jan. 2; v. 234; p. 372.
Pills, Cathartic. Opurgo Co. No. 114,816; Jan. 2; v. 234; p. 371.
Pins, Safety-. Waldes & Company. No. 115,126; Jan. 23; v. 234; p. 1309.
Piston-rings. Continental Piston Ring Co. No. 114,719; Jan. 2; v. 234; p. 368.

Plushes in the piece. Sidney Blumenthal & Company. No 114,868; Jan. 9; v. 234; p. 667.
Poultry appliances, Certain named. O. B. Andrews' Company. No. 115,139; Jan. 30; v. 234; p. 1577.
Powder, cold-cream, hair-wash, &c., Face-. The Armand Company. No. 115,053; Jan. 23; v. 234; p. 1307.
Precious metal, Certain named articles having parts plated with. Landers, Frary & Clark. No. 114,892; Jan. 9; v. 234; p. 668.
Preparation for cleaning articles made of white leather or white fabrics. I. Miller. No. 115,101; Jan. 23; v. 234; p. 1308.
Preparation for diseases of the skin, Antiseptic. J. H. O'Grady. No. 115,217; Jan. 30; v. 234; p. 1579.
Preparation for the treatment of dropsy. Roberts Dropsy Cure Co. No. 115,024; Jan. 16; v. 234; p. 1042.
Preparation for the treatment of headaches, fever, nervousness, &c. H-J-Tone Company. No. 115,084; Jan. 23; v. 234; p. 1308.
Preparation for the treatment of whooping-cough and like ailments. Zol, Limited. No. 115,134; Jan. 23; v. 234; p. 1309.
Preparation to be applied to coal to render the combustion more complete. Lloyds of America. No. 114,997; Jan. 16; v. 234; p. 1041.
Preparation to protect potato vines and tubers, Chemical W. R. Grace & Co. No. 115,179; Jan. 30; v. 234; p 1578.
Preparation for treatment of diseases of the skin. G. W. Cates. No. 114,699; Jan. 2; v. 234; p. 368.
Preparations for colds, grippe, &c., Homeopathic. E. F. McKay. No. 115,202; Jan. 30; v. 234; p. 1579.
Preparations for the treatment of constipation, rheumatism, gall-stones, &c. C. S. Carlisle. No. 114,939; Jan. 16; v. 234; p. 1039.
Printing machinery, Certain named. The Estate of Walter Scott. Nos. 114,830–31; Jan. 2; v. 234; p. 372.
Prunes. Strohmeyer & Arpe Company. No. 115,118; Jan. 23; v. 234; p. 1309.
Publication issued quarterly. Brad Stephens & Co. No. 115,248; Jan. 30; v. 234; p. 1580.
Publication, Monthly. The Motor Print Company. No. 115,211; Jan. 30; v. 234; p. 1579.
Publication, Weekly. F. W. Shepperd. No. 115,240; Jan. 30; v. 234; p. 1580.
Pumps, conveyers, butter-cutters, &c., Sanitary. Jensen Creamery Machinery Company. No. 115,191; Jan. 30; v. 234; p. 1578.
Punching-machines for perforating sheets. The Samuel C. Tatum Co. No. 115,034; Jan. 16; v. 234; p. 1042.
Rakes, Hand-. A. K. Gilson. No. 114,964; Jan. 16; v. 234; p. 1040.
Razor-strops. L. A. Flinker. No. 115,078; Jan. 23; v. 234; p. 1308.
Razors. Krusius Brothers. No. 114,778; Jan. 2; v. 234; p. 370.
Razors and shears. F. Dolle. No. 114,952; Jan. 16; v. 234; p. 1040.
Remedy and hair-restorer, Dandruff. S. Levy. No. 114,993; Jan. 16; v. 234; p. 1041.
Reflectors, Metal. National X-Ray Reflector Company. No. 114,812; Jan. 2; v. 234; p. 371.
Remedy for catarrh. S. H. Davis. No. 114,721; Jan. 2; v. 234; p. 368.
Remedy for indigestion, constipation, heartburn, &c. S. B. Goff & Sons Co. No. 114,967; Jan. 16; v. 234; p. 1040.
Remedy for intestinal stasis and constipation. F. H. Glazebrook. No. 114,965; Jan. 16; v. 234; p. 1040.
Remedy for treatment of the feet. C. F. Eha. No. 114,732; Jan. 2; v. 234; p. 369.
Rheostats. Wirt Company. No. 115,235; Jan. 30; v. 234; p. 1581.
Ribbons. H. H. Well & Son. No. 115,045; Jan. 16; v. 234; p. 1043.
Rice. New Orleans Coffee Co. No. 115,213; Jan. 30; v. 234; p. 1579.
Roofing material. H. H. Hopkins Company. No. 114,886; Jan. 9; v. 234; p. 668.
Rubber belting and hose, duck belting and hose. The Cincinnati Rubber Manufacturing Company. No. 114,710; Jan. 2; v. 234; p. 368.
Rubber belting and hose, rubber and asbestos machinery packing, asbestos brake-band lining, &c. The Cincinnati Rubber Manufacturing Company. Nos. 114,704–5; Jan. 2; v. 234; p. 368.
Rubber boots and shoes. Goodyear Rubber Company. No. 115,082; Jan. 23; v. 234; p. 1308.
Salve for catarrh, sore throat, tonsilitis, and croup. J. S. McClanahan. No. 114,998; Jan. 16; v. 234; p. 1041.
Salve for external use. MacMillan Chemical Co. No. 114,999; Jan. 16; v. 234; p. 1041.
Sauce, Creole. Alonzo Slack. No. 114,834; Jan. 2; v. 234; p. 372.
Sauce, Tomato. F. Romeo and Co. No. 114,825; Jan. 2; v. 234; p. 371.
Search-lights, Electric. Williams M'f'g Co. No. 115,264; Jan. 30; v. 234; p. 1581.
Seeds. America Seedtape Company. No. 114,672; Jan. 2; v. 234; p. 367.
Shampoo, Lemon. Citrus Fruit Juice Co. No. 114,711; Jan. 2; v. 234; p. 368.
Sheetings, sheets, and pillow-cases. Carleton Dry Goods Co. No. 114,940; Jan. 16; v. 234; p. 1039.

Shirts, Men's dress and negligée. C. L. Levi. No. 114,992; Jan. 16; v. 234; p. 1041.
Shirts, Negligée, work, and under. Elder Manufacturing Company. No. 114,875; Jan. 9; v. 234; p. 667.
Shirts, undershirts, overalls, jumpers, rompers, Work and negligée. Edson Moore & Company. No. 114,874; Jan. 9; v. 234; p. 667.
Shirts, Work-. Joseph Fels Company. No. 114,734; Jan. 2; v. 234; p. 369.
Shirts, Work-. Reliance Manufacturing Company. No. 115,023; Jan. 16; v. 234; p. 1042.
Shoe-dressing for white shoes. Sacks & Clyman. No. 115,228; Jan. 30; v. 234; p. 1579.
Shoe-polish. A. C. Erickson. No. 115,175; Jan. '30; v. 234; p. 1578.
Shovels, spades, and scoops. Ames Shovel & Tool Company. Nos. 114,673–4; Jan. 2; v. 234; p. 367.
Silk in the piece, Broad. J. A. Migel. No. 115,206; Jan. 30; v. 234; p. 1579.
Skirts, suits, coats, Ladies'. Bernstein, Baum, Cravis & Company. No. 114,866; Jan. 9; v. 234; p. 667.
Soap, Foot-. Scholl Manufacturing Company. No. 115,232; Jan. 30; v. 234; p. 1580.
Soap. Royal Palm Soap Co. No. 115,112; Jan. 23; v. 234; p. 1309.
Soaps, Shaving and toilet. The J. B. Williams Company. No. 115,131; Jan. 23; v. 234; p. 1309.
Sound-records and sound-record blanks. Thomas A. Edison, Incorporated. No. 115,171; Jan. 30; v. 234; p. 1578.
Soups. American Health Soup Co. No. 115,049; Jan. 23; v. 234; p. 1307.
Spark-plugs. A. R. Mosler & Co. No. 115,208; Jan. 30; v. 234; p. 1579.
Spark-plugs. Stewart-Warner Speedometer Corporation. No. 115,249; Jan. 30; v. 234; p. 1580.
Spark-plugs and spark-plug porcelains. Champion Ignition Co. No. 115,160; Jan. 30; v. 234; p. 1577.
Spelter or zinc. Anaconda Copper Mining Company. No. 115,138; Jan. 30; v. 234; p. 1577.
Staying-machines. M. D. Knowlton Company. Nos. 114,977–87; Jan. 16; v. 234; p. 1041.
Steam regulating devices, Pumps, engines, and certain named. Mason Regulator Company. No. 115,002; Jan. 16; v. 234; p. 1041.
Stone, Enamel-coated natural. The Euclid Stone & Brick Co. No. 114,957; Jan. 16; v. 234; p. 1040.
Stone possessing the property of absorbing sound, Artificial. H. W. Johns-Manville Co. No. 114,973; Jan. 16; v. 234; p. 1040.
Suits, coats, overcoats, and trousers, Men's and boys'. Outer. Isaac Hamburger & Sons. No. 115,182; Jan. 30; v. 234; p. 1578.
Suits, coats, waists, dresses, and skirts, Ladies', misses', and children's. J. Eckstein. No. 115,170; Jan. 30; v. 234; p. 1578.
Suppositories for the relief of hemorrhoids. The E. L. Patch Co. No. 115,220; Jan. 30; v. 234; p. 1579.
Swimming-suits. A. G. Spalding & Bros. No. 114,838; Jan. 2; v. 234; p. 372.
Sword-blades, matchets, and matchet-knives. Robt. Mole & Sons. No. 115,005; Jan. 16; v. 234; p. 1041.
Syrups for certain named purposes. Richardson Corporation. No. 115,110; Jan. 23; v. 234; p. 1309.
Tables, chairs, serving-cabinets, &c. J. F. Daschner. No. 114,720; Jan. 2; v. 234; p. 368.
Talking-machine motors and drives. Victor Electrical Equipment Co. No. 115,125; Jan. 23; v. 234; p. 1309.
Talking-machine motors and drives. Victor Electrical Equipment Co. No. 115,258; Jan. 30; v. 234; p. 1580.
Talking-machine records. Paroquette Record Mfg. Co. No. 114,906; Jan. 9; v. 234; p. 668.
Talking-machine turn-tables. J. A. Davis. No. 115,071; Jan. 23; v. 234; p. 1307.
Talking-machines. The Austin Company. No. 115,056; Jan. 23; v. 234; p. 1307.
Talking machines. C. J. Bousfield. No. 115,059; Jan. 23; v. 234; p. 1307.
Talking-machines. Montgomery Ward & Co. Inc. No. 114,903; Jan. 9; v. 234; p. 668.
Tea and coffee. J. M. McCracken Co. No. 115,200; Jan. 30; v. 234; p. 1579.
Telegraph, Wireless detector for. Eugene T. Turney Co. Inc. No. 114,845; Jan. 2; v. 234; p. 372.
Temperature-gages. National Gauge & Equipment Co. No. 115,007; Jan. 16; v. 234; p. 1041.
Terne plates. Lyon, Conklin & Co. No. 114,898; Jan. 9; v. 234; p. 668.
Threads and yarns of cotton, silk, linen, jute, and ramie. Dollfus-Mieg & Cie. Société Anonyme. No. 114,726; Jan. 2; v. 234; p. 368.
Tire-casings and tire-tubes, Automobile. The National Tire & Rubber Company. No. 114,811; Jan. 2; v. 234; p. 371.
Tire-fillers. The Autifi Company. No. 114,679; Jan. 2; v. 234; p. 367.
Tires, and non-metallic tires and tire-casings composed of rubber or rubber and fabric, Inner tubes for. Racine Auto Tire Company. No. 115,225; Jan. 30; v. 234; p. 1579.
Tires or tire-casings and inner tubes for pneumatic tires. The General Tire and Rubber Company. No. 114,963; Jan. 16; v. 234; p. 1040.
Tires, Pneumatic rubber automobile-. Beacon Tire Company. No. 114,685; Jan. 2; v. 234; p. 367.
Tobacco, Smoking-. The Texas Tobacco Co. No. 115,035; Jan. 16; v. 234; p. 1042.
Tobacco, Smoking and chewing. Christian Peper Tobacco Co. No. 115,221; Jan. 30; v. 234; p. 1579.
Toilet articles, Certain named. Zauder Bros. No. 115,133; Jan. 23; v. 234; p. 1309.
Toilet preparations, Certain named. J. C. Allen. No. 114,917; Jan. 16; v. 234; p. 1039.
Toilet preparations, Certain named. L. Smith. No. 115,243; Jan. 30; v. 234; p. 1580.
Tonic and nerve-sedative. S. Britton. No. 114,934; Jan. 16; v. 234; p. 1039.
Tonic, Liver-. The Traveler Remedy Co. No. 115,037; Jan. 16; v. 234; p. 1042.
Tonic, Nerve-. Munyon's Homœopathic Home Remedy Co. No. 115,006; Jan. 16; v. 234; p. 1041.
Tonic, Stomach-. D. Perrucci. No. 115,016; Jan. 16; v. 234; p. 1042.
Toy cannons. Milton Bradley Co. No. 114,804; Jan. 2; v. 234; p. 371.
Toy cannons. Peg Leg Block Company. No. 115,017; Jan. 16; v. 234; p. 1042.
Tractors for farm, industrial, and commercial uses, Power-driven. W. S. Barnes. Nos. 114,925–6; Jan. 16; v. 234; p. 1039.
Trees, Fruit-. Stark Bro's. Nurseries and Orchards Co. No. 115,246; Jan. 30; v. 234; p. 1580.
Trousers and boys' suits and trousers, Men's. Kaplan Bros. No. 114,975; Jan. 16; v. 234; p. 1041.
Trunks. Frederick & Nelson. No. 114,961; Jan. 16; v. 234; p. 1040.
Turpentine and turpentine substitute. C. A. Hansen. No. 115,185; Jan. 30; v. 234; p. 1578.
Twines and ropes made from shredded fibers of palmetto or palm leaves. Palmetto Products Company. Nos. 115,013–14; Jan. 16; v. 234; p. 1042.
Type-metal. Imperial Type Metal Co. No. 114,767; Jan. 2; v. 234; p. 370.
Union-suits, undershirts, drawers, and pajamas, Textile. P. A. Luckett. No. 114,897; Jan. 9; v. 234; p. 668.
Varnishes, japans, driers, stains, &c. Standard Varnish Works. No. 115,245; Jan. 30; v. 234; p. 1580.
Vegetables, Dried. H. J. McGrath Co. No. 115,201; Jan. 30; v. 234; p. 1579.
Velvets, velveteens, sateens, cords, &c. Balstone, Cooke & Co. No. 115,058; Jan. 23; v. 234; p. 1307.
Warming-pads, vulcanizers, toasters, and flat-irons, Electric. Scientific Products Co. No. 115,234; Jan. 30; v. 234; p. 1580.
Washers, Felt. T. R. Brawley. No. 114,931; Jan. 16; v. 234; p. 1039.
Watch-glasses. Hammel, Riglander & Co. No. 115,184; Jan. 30; v. 234; p. 1578.
Watches, watchcases, parts of watches, and watch-movements. Waltham Watch Company. No. 114,912; Jan. 9; v. 234; p. 669.
Water and soft drinks, Natural and carbonated mineral. Bartlett Springs Co. No. 114,863; Jan. 9; v. 234; p. 667.
Water, Mineral. Johnson Bros. No. 114,889; Jan. 9; v. 234; p. 668.
Water, Natural laxative medicinal. Watertown Carbonating Co. No. 115,128; Jan. 23; v. 234; p. 1309.
Waterproof automobile and carriage fabrics. F. S. Carr Company. No. 114,942; Jan. 16; v. 234; p. 1039.
Waterproof garments. G. A. Johnson, Jr. No. 115,090; Jan. 23; v. 234; p. 1308.
Waterproofed coats for men and women. The Buckley-Newhall Company. No. 115,065; Jan. 23; v. 234; p. 1307.
Waterproofed fabric. Tate Electrolytic Waterproofing Company. No. 115,032; Jan. 16; v. 234; p. 1042.
Waterproofed threads and yarns, Tate Electrolytic Waterproofing Company. No. 115,033; Jan. 16; v. 234; p. 1042.
Wheels, Grinding-. Star Corundum Wheel Co. No. 115,116; Jan. 23; v. 234; p. 1309.
Whisky. Cahn, Belt & Company. No. 115,066; Jan. 23; v. 234; p. 1307.
Whisky. The Geo. Bieler Sons Co. No. 114,686; Jan. 2; v. 234; p. 367.
Whisky, Bottled. M. Sander. No. 114,827; Jan. 2; v. 234; p. 371.
Whisky, brandy, and gin. Hurley Bros. Incorporated. No. 114,766; Jan. 2; v. 234; p. 370.
Whisky, Scotch. The Hollywood Company. No. 114,763; Jan. 2; v. 234; p. 370.
Wine. F. Kalina. No. 115,192; Jan. 30; v. 234; p. 1578.
Wire. Eugenio C. Moe & Co. No. 115,011; Jan. 16; v. 234; p. 1042.
Wire cloth or fabric. Buffalo Wire Works Co. Nos. 114,894–5; Jan. 2; v. 234; pp. 367–8.
Wood-surface polish. S. C. Borom. No. 114,938; Jan. 16; v. 234; p. 1039.
Woolen, cotton, silk, velvet, &c., piece goods. Wheeler & Motter Mercantile Company. No. 115,046; Jan. 16; v. 234; p. 1043.
Woolen fabrics in the piece. Detmer Woolen Co. No. 114,722; Jan. 2; v. 234; p. 368.
Yarn. City Manufacturing Corporation. No. 114,945; Jan. 16; v. 234; p. 1040.

ALPHABETICAL LIST OF LABELS.

"Blue Stripe." (For Apples.) Yakima Valley Fruit Growers' Association. No. 19,841; Jan. 16; v. 234; p. 1044.
"Bradley's Corn Remover." (For the Treatment of Corns.) Bradley Manufacturing Co. No. 19,847; Jan. 30; v. 234; p. 1582.
"Café Spumante." (For Coffee.) N. Cappiello. No. 19,853; Jan. 30; v. 234; p. 1582.
"Casson's Cream Liniment." (For Liniment.) W. Casson. No. 19,832; Jan. 16; v. 234; p. 1044.
"Columbia Motor Oil." (For Lubricating-Oil.) E. C. Anthony. No. 19,843; Jan. 16; v. 234; p. 1044.
"Commercial Club." (For Cigars.) The Commercial Cigar Co. No. 19,834; Jan. 16; v. 234; p. 1044.
"Creamettes." (For Macaroni and other Paste Products.) Mother's Macaroni Company. No. 19,837; Jan. 16; v. 234; p. 1044.
"Edible." (For Canned Corn.) R. G. Charles. No. 19,833; Jan. 16; v. 234; p. 1044.
"Fluffy Ruffles Starch." (For Laundry Starch.) Independent Starch Company. No. 19,835; Jan. 16; v. 234; p. 1044.
"Hamlet y Ofelia." (For Cigars.) G. A. Mueller. No. 19,838; Jan. 16; v. 234; p. 1044.
"Jersey Cream." (For Wheat-Flour.) Dahnke-Walker Mfg. Co. No. 19,848; Jan. 30; v. 234; p. 1582.
"Keil's Deep Well Sparkling Ginger Ale." (For Ginger-Ale.) J. M. Keil. No. 19,836; Jan. 16; v. 234; p. 1044.
"LockTite." (For Hair-Nets.) S. Glemby. No. 19,844; Jan. 16; v. 234; p. 1044.
"Luncheon." (For Canned Salmon.) Alaska-Pacific Fisheries. No. 19,846; Jan. 30; v. 234; p. 1582.
"Man-A-Cea." (For a Natural Mineral Water.) Manacea Water Company. No. 19,850; Jan. 30; v. 234; p. 1582.
"Mennen's Shaving Cream." (For Mennen's Shaving-Cream.) G. Mennen Chemical Co. No. 19,851; Jan. 30; v. 234; p. 1582.
"Mennen's Tar Shampooing Cream." (For Mennen's Tar Shampooing-Cream.) G. Mennen Chemical Co. No. 19,852; Jan. 30; v. 234; p. 1582.
"Multimotor Cylinder Oil." (For Lubricating-Oil.) E. C. Anthony. No. 19,830; Jan. 16; v. 234; p. 1044.
"Open-Cylinder Pump." (For Electric Deep-Well Pumps.) The Valle-Kimes Company. No. 19,865; Jan. 30; v. 234; p. 1582.
"Parodi." (For Cigars.) Parodi Cigar Company. No. 19,839; Jan. 16; v. 234; p. 1044.
"Person's Pennsylvania Pure Rye Whiskey." (For Whisky.) C. Person's Sons. No. 19,855; Jan. 30; v. 234; p. 1582.
"Pilcher's 'Guaranteed' Bachelor Buttons." (For Buttons.) J. V. Pilcher Manufacturing Company. No. 19,845; Jan. 23; v. 234; p. 1310.
"Red Stripe." (For Apples.) Yakima Valley Fruit Growers' Association. No. 19,842; Jan. 16; v. 234; p. 1044.
"Rubino Vino Puro Da Pasto." (For Wine.) G. B. Pagani Importing Co. No. 19,854; Jan. 30; v. 234; p. 1582.
"S. S. White Mouth Wash." (For a Mouth-Wash.) The S. S. White Dental Mfg. Co. No. 19,859; Jan. 30; v. 234; p. 1582.
"S. S. White Mouth Wash." (For a Mouth-Wash.) S. S. White Dental Mfg. Co. No. 19,863; Jan. 30; v. 234; p. 1582.
"S. S. White Tooth Brush." (For a Tooth-Brush.) The S. S. White Dental Mfg. Co. No. 19,858; Jan. 30; v. 234; p. 1582.
"S. S. White Tooth Paste." (For Tooth-Paste.) S. S. White Dental Mfg. Co. No. 19,856; Jan. 30; v. 234; p. 1582.
"S. S. White Tooth Powder." (For Tooth-Powder.) The S. S. White Dental Mfg. Co. No. 19,862; Jan. 30; v. 234; p. 1582.
"S. S. White Tooth Powder." (For Tooth-Powder.) S. S. White Dental Mfg. Co. No. 19,864; Jan. 30; v. 234; p. 1582.
"Security." (For Matches.) The Louis Hilfer Company. No. 19,849; Jan. 30; v. 234; p. 1582.
"Sno-Kist." (For Apples.) Yakima Valley Fruit Growers' Association. No. 19,840; Jan. 16; v. 234; p. 1044.
"Sugar Doodle." (For Candy.) W. J. Bader. No. 19,831; Jan. 16; v. 234; p. 1044.
"Zinc Cement." (For S. S. White Oxyphosphate Zinc.) The S. S. White Dental Mfg. Co. No. 19,860; Jan. 30; v. 234; p. 1582.
"Zinc Cement." (For S. S. White Oxyphosphate-Zinc Cement.) The S. S. White Dental Mfg. Co. No. 19,857; Jan. 30; v. 234; p. 1582.
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PRINTS.

"A Safe Antiseptic for General Family use." (For Listerine.) Lambert Pharmacal Co. No. 4,612; Jan. 30; v. 234; p. 1582.
"Creamettes." (For Macaroni.) Mother's Macaroni Company. No. 4,601; Jan. 16; v. 234; p. 1044.
"Cuticura Soap and Ointment." (For Cuticura Soap and Ointment.) Potter Drug & Chemical Corp. No. 4,615; Jan. 30; v. 234; p. 1582.
"Drink Moxie." (For Moxie.) The Moxie Co. No. 4,613; Jan. 30; v. 234; p. 1582.
"Evangeline Tampico Sauce." (For Pepper Sauce.) E. Bulliard. No. 4,599; Jan. 16; v. 234; p. 1044.
"Financially Embarrassed." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,606; Jan. 30; v. 234; p. 1582.
"Guests are coming." (For Biscuit.) National Biscuit Company. No. 4,602; Jan. 16; v. 234; p. 1044.
"Health First." (For Postum Cereal.) Postum Cereal Company. No. 4,614; Jan. 30; v. 234; p. 1582.
"'Jazz' Rag." (For Music-Roll for Automatic Musical Instruments.) Imperial Player Roll Co. No. 4,600; Jan. 16; v. 234; p. 1044.
"Listerine—The Safe Antiseptic." (For Listerine.) Lambert Pharmacal Co. No. 4,609; Jan. 30; v. 234; p. 1582.
"Listerine—The Safe Antiseptic." (For Listerine.) Lambert Pharmacal Co. No. 4,611; Jan. 30; v. 234; p. 1582.
"Listerine—The Safe Antiseptic Prevents Infection and is a Beneficial, Refreshing Lotion After Shaving." (For Listerine.) Lambert Pharmacal Co. No. 4,610; Jan. 30; v. 234; p. 1582.
"Nesnah." (For Nesnah.) Chr. Hansen's Lab. No. 4,608; Jan. 30; v. 234; p. 1582.
"Nu-Eat-A Nut Cereal." (For Breakfast Food.) A. R. Howe. No. 4,604; Jan. 16; v. 234; p. 1044.
"Pilcher's Automatic Bachelor-Button." (For Buttons.) J. V. Pilcher Manufacturing Company. No. 4,605; Jan. 23; v. 234; p. 1310.
"They're Starting Right." (For De Laval Cream-Separators.) The De Laval Separator Company. No. 4,607; Jan. 30; v. 234; p. 1582.
"Twitchell Pneumatic Tire Pressure Gauge." (For Pneumatic-Tire Pressure-Gages.) A. Schrader's Son. No. 4,603; Jan. 16; v. 234; p. 1044.

DISCLAIMERS.

Concrete blocks, Machine for making. W. Graf and C. F. Nickel. No. 1,142,696; date of patent June 8, 1915; disclaimer filed Jan. 22, 1917; v. 234; p. 1584.

Telephone switching apparatus, Automatic. J. G. Blessing. No. 1,145,542; date of patent July 6, 1915; disclaimer filed Dec. 18, 1916; v. 234; p. 377.

Tie-plate. J. Lundie. (Reissue.) No. 14,124; date of patent May 2, 1916; disclaimer filed Jan. 15, 1917; v. 234; p. 1051.

CLASSIFICATION OF PATENTS

JANUARY, 1917.

NOTE.—First number—class, second number—subclass, third number—patent number.

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VOLUME CCXXXV.

FEBRUARY,

1917.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1917.

10536

ERRATA.

1,214,658, page 62, first claim, line 4, after the word "endless" insert the word *flexible.*

1,214,692, page 74, third claim, line 19, for the words "vertically adjustable" read *at right angles to the axes of said plungers.*

1,214,777, page 102, first claim, line 3, after the compound word "cross-chains" insert a comma.

1,215,320, page 292, strike out all after number—heading, drawing, and claims—and insert the word WITHDRAWN.

1,215,321, page 292, first claim, line 4, before the word "fluid" insert the word *expansive;* same claim, line 6, strike out the word "expansive"; second claim, line 2, before the word "fluid" strike out the article "the"; third claim, line 4, for the word "expansion" read *expansive.*

1,215,932, page 547, in heading, assignment, name of assignee, for "Rivets Manufacturing Company" read *Riveto Manufacturing Company.*

1,216,338, page 742, first claim, lines 1–2, after the word "material" insert the words *consisting essentially of minute particles of varying size:* same claim, lines 2–3, strike out the words "consisting essentially of minute particles of varying size."

1,216,544, page 816, first claim, line 6, for the word "member" read *element.*

1,216,573, page 827, in heading, assignment, name of assignee, for "George C. Bayne" read *George G. Bayne.*

1,216,999, page 971, in heading, line 2, after the word "Filed" insert the abbreviation *Feb.*

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OF THE

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States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
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Colorado	7	.....	Oregon	10	.....
Connecticut	24	2	Pennsylvania	50	14
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Georgia	5	1	South Dakota	5	1
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Indiana	19	2	Utah	1	1
Iowa	9	3	Vermont	2	1
Kansas	9	1	Virginia	5	2
Kentucky	3	1	Washington	10	1
Louisiana	3	1	West Virginia	5	.....
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Austria-Hungary	1	.....	Netherlands	2	.....
Belgium	1	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	2	.....
Canada	12	1	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	1	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	.....	.....
England	19	2	Spain	.....	.....
Finland	.....	.....	Sweden	2	.....
France	5	.....	Switzerland	3	.....
Germany	9	.....	Turkey	.....	.....
Guatemala	.....	.....	Victoria	2	1
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Ireland	.....	1			
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Mexico	.....	.....			

Adverse Decisions in Interference.

PATENT No. 1,118,490.

On December 22, 1916, a decision was rendered that David S. Hulfish was not the first inventor of the subject-matter covered by claim 16 of his Patent No. 1,118,490, "Automatic telephone system," and no appeal having been taken within the time allowed such decision has become final.

PATENT No. 1,170,197.

On January 6, 1917, a decision was rendered that Harry H. Styll and Harold K. Parsons were not the first inventors of the subject-matter covered by claims 1, 2, and 3 of their Patent No. 1,170,197, "Cement-mold," and no appeal having been taken within the time allowed such decision has become final.

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 2, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 27	Dec. 1	314
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Aug. 11	Nov. 22	580
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Jan. 9	Jan. 12	122
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Nov. 16	Jan. 10	257
167	5. Bookbinding; Harvesters; Jewelry; Music	Oct. 4	Dec. 19	285
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Sept. 20	Jan. 3	278
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Sept. 11	Nov. 24	542
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	July 15	Nov. 15	1149
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	July 27	Dec. 20	533
235	10. Carriages and Wagons; Spring Devices	Aug. 9	Jan. 8	546
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 15	Jan. 16	87
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Oct. 23	Jan. 20	562
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Sept. 22	Jan. 2	501
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Oct. 6	Dec. 14	283
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Jan. 2	Jan. 16	211
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Aug. 4	Jan. 2	.....
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Oct. 14	Dec. 26	195
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Dec. 4	Dec. 26	200
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Aug. 22	Oct. 11	440
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 1	Jan. 11	129
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Nov. 1	Dec. 26	309
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Aug. 22	Dec. 15	489
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Sept. 1	July 25	348
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Sept. 2	Dec. 4	373
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Dec. 15	Dec. 28	161
106	26. Electricity, Generation; Motive Power	May 2	Nov. 17	627
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Dec. 28	Dec. 29	238
65	28. Internal-Combustion Engines	Sept. 11	Nov. 18	535
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Aug. 28	Dec. 2	376
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 14	Jan. 16	368
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Sept. 16	Nov. 23	282
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	July 5	Jan. 8	858
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Sept. 20	Dec. 27	356
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	July 25	Dec. 1	319
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Aug. 26	Jan. 12	601
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Sept. 30	Dec. 30	719
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	June 15	Dec. 8	831
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Jan. 15	Jan. 15	128
321	39. Water Distribution	Aug. 28	Dec. 16	338
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Oct. 17	Jan. 8	527
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Sept. 30	Dec. 19	464
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	July 17	Dec. 8	381
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 6	Dec. 15	129

Oldest new case, May 2; oldest amended, July 25.
Total number of applications awaiting action 18,065

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Dec. 18	Jan. 5	831
	Designs	Dec. 4	Jan. 4	402
	Labels and Prints	Jan. 23	Jan. 22	57

PATENTS

GRANTED FEBRUARY 6, 1917.

1,214,493. BEATER. WILLIAM B. ALLBRIGHT, Chicago, Ill. Filed July 19, 1915. Serial No. 40,642. (Cl. 17—11.)



1. In a device of the class described the combination of flexible beater arms, and yieldable dehairing means thereon impregnated with abrasive.

2. In a non-cutting dehairing device corrugated means impregnated with abrasive for contact with the skin of a carcass.

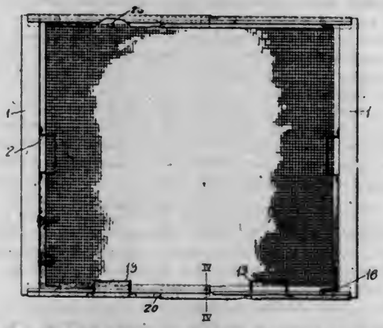
3. In a dehairing device of the class described, a fabric loop, plates secured on said fabric loop one upon the other, and a block of dehairing material secured between said plates and projecting therefrom for contact with and operation over the surface of a surface to be dehaired.

4. In a beater of the class described the combination with fabric loops, of superposed L-shaped plates riveted thereto, yieldable elements secured between said L-shaped plates, and bolts extending through said plates and yieldable elements to retain the elements therein.

5. In a beater of the class described the combination with a shaft and brackets secured thereon, of a fabric loop secured to said brackets, flanged plates riveted in superposed relation upon said loops on the leading surfaces thereof, and elements impregnated with abrasive secured between said flanged plates affording dehairing means on the beater.

[Claims 6 and 7 not printed in the Gazette.]

1,214,494. WIRE SCREEN. JAMES G. ALLEN, Detroit, Mich., assignor of one-half to Herbert C. Fittinger, Detroit, Mich. Filed Mar. 25, 1916. Serial No. 86,574. (Cl. 156—38.)



1. A collapsible screen comprising side rails, adjustable slide plates carried thereby, a screen having edges permanently attached to said slide plates, members pivotally connected to the ends of said slide plates and adapted to have the other ends thereof interlock, and means carried by edges of said screen whereby said screen may be attached to said members.

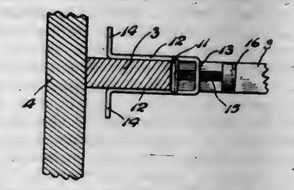
2. A screen comprising side rails, slide plates carried thereby, a screen having the edges thereof connected to said slide plates, channel members pivotally connected to the ends of said slide plates and adapted to have the other ends thereof fit one within the other and interlocked together, and hook members carried by edges of said screen and adapted to detachably engage said members.

3. A collapsible screen comprising side rails, spring pressed adjustable slide plates carried thereby, a screen having the edges thereof attached to said slide plates, channel members pivotally connected to the ends of said slide plates and limited in their opening movement by the ends of said side rails, means adapted for connecting the ends of said members, and means carried by said screen whereby the edges thereof may be detachably connected to said members.

4. A collapsible screen comprising side, top and bottom rails, said top and bottom rails being composed of channel members pivotally connected to said side rails and adapted to be placed in longitudinal alinement to cooperate with said side rails in forming a rectangular frame, means for connecting the confronting ends of said members, and a screen having the edges thereof held by said side rails and detachably held by the members of said top and bottom rails.

5. A collapsible screen comprising side rails, slide plates carried thereby, a screen connected to said slide plates and adapted for rolling on one side of said side rails, members connected to the ends of said slide plates and adapted to be folded into parallelism with said side rails, whereby said screen may be rolled, means for maintaining said members in longitudinal alinement with said side rails spaced apart and said screen taut, and means for connecting said screen to said members.

1,214,495. DRAWER-STOP. CHARLES H. ANDERSON, Grand Rapids, Mich., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Dec. 1, 1915. Serial No. 64,561. (Cl. 45—7.)



1. In combination, a casing having ends and a slotted partition to divide the casing into adjoining drawer receiving openings, and a stop device located in the slot of said partition and adjustably and removably secured thereto, said stop device having oppositely extending parts extending into the path of movement of drawers inserted into said adjoining drawer openings.

2. In combination, a casing having a drawer receiving opening, one side of which is bounded by a slotted member, a stirrup member provided with spaced apart legs positioned in the slot and with a leg located at each side of the slotted member, an extension to a leg of the stirrup member projecting into the drawer opening and means for adjusting the stirrup member with respect to the slotted member, substantially as described.

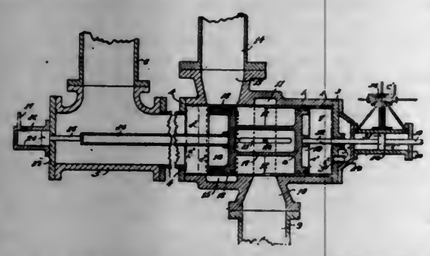
3. In combination, a casing having ends and a slotted partition between the ends to divide the casing into adjoining drawer receiving openings, a U-shaped stirrup member located in the slot of the partition and with a leg thereof at each side of the partition, outwardly projecting extensions at the ends of said legs, and means to adjust the stirrup member with respect to the partition.

4. In combination, a casing having ends and a slotted partition between the ends to divide the casing into adjoining drawer receiving openings, a U-shaped stirrup member located horizontally in the slot of the partition with a leg thereof at each side of the partition, and an extension at the end of each leg projecting into the drawer receiving openings.

5. In combination, a casing, a slotted partition therein to divide the casing into adjoining drawer receiving openings, a U-shaped stirrup member located horizontally in the slot with a leg thereof at each side of the partition, an extension at each end of each leg projecting into the drawer receiving openings, means to adjust the stirrup member with respect to the partition, and means to hold said member in horizontal position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,214,496. VALVE APPARATUS. FRANK H. ARMSTRONG, Vulcan, Mich. Filed Feb. 25, 1915. Serial No. 10,693. (Cl. 138—14.)



1. The combination with a controlling mechanism for hydraulic machines having a main valve, means for operating the main valve and a pilot valve having sufficient lap to prevent leakage for controlling fluid to the operating means, of a means independent of the main valve operating means for moving the main valve to neutral position when the pilot valve cuts off the supply of fluid to the operating means.

2. The combination with a controlling mechanism for hydraulic machines having a main valve, means for operating the main valve and a pilot valve having sufficient lap to prevent leakage for controlling fluid to the operating means controlled by the operating means, of means independent of the main valve operating means for moving the main valve to neutral position when the pilot valve cuts off the supply of fluid to the operating means.

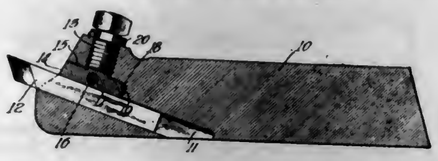
3. In combination in a controlling mechanism for hydraulic machines, a main valve for controlling fluid for operating the machine, means for operating the main valve, a pilot valve having sufficient lap to prevent leakage for controlling the operating means, a lever operated by the operating means for controlling the pilot valve and adapted to move the pilot valve to cut off position when the main valve is out of neutral position, and automatic means independent of the main valve operating means for moving the main valve to neutral position after the pilot valve is moved to cut off position.

4. In combination in a controlling mechanism for hydraulic machines, a main valve for controlling fluid for operating the machine, means for moving the main valve from neutral position to operative position, a pilot valve having sufficient lap to prevent leakage for controlling the operating means having a neutral and operative position, and automatic means independent of the valve moving means whereby the main valve is moved from operative to neutral position when the pilot valve has been moved to neutral position.

5. A controlling mechanism for hydraulic machines comprising a valve chamber, a valve in the chamber for controlling the fluid for the machine, pressure means exerting a constant force on the valve adapted to move it in one direction, a yielding means for opposing the force of the first means and valve operating means independent of the other means for moving the valve.

[Claims 6 to 13 not printed in the Gazette.]

1,214,497. TOOL-HOLDER. JAMES ARMSTRONG, Chicago, Ill., assignor to Armstrong Brothers Tool Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 14, 1916. Serial No. 72,017. (Cl. 29—100.)



1. A tool-holder comprising a body having a tool-receiving socket and having a recess merging into said socket, a member movably fitting into said recess and having a large face arranged to bear against the tool, said member having a transverse opening therethrough, a screw passing loosely through said opening and seated in the body to support said member in the absence of the tool, a screw threaded in the body and bearing at one end against said member to clamp the latter against the tool, and a spacer beneath the head of the latter screw to limit the movement thereof and prevent damage to the first mentioned screw.

2. A tool-holder comprising a body, a member having a large face to bear against the tool, a screw threaded in the body and adapted to engage said member to clamp the latter against the tool, means for supporting said member in the absence of the tool, and a spacer under the head of said screw to limit movement thereof and prevent damage to said supporting means.

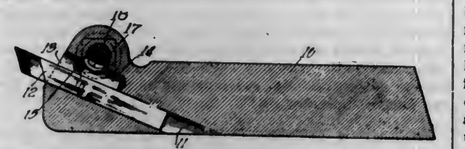
3. A tool-holder, comprising a body having a tool-receiving socket and having a recess merging into said socket, a member movably fitting in said recess and having a large face arranged to bear against the tool, one end of said member having a projection arranged to engage in a depression in the end wall of said recess to partially support said member, said member having a transverse hole therethrough, a screw passing loosely through said hole and seated in the body for supporting said member, and means for clamping said member against the tool.

4. A tool-holder comprising a body having a tool-receiving socket and having a recess merging into said socket, a member movably fitting in said recess and having a large face arranged to bear against the tool, one end of said member being arranged to engage the wall of said recess to partially support said member, a screw seated in the body and arranged to loosely engage in an opening in said member to support the latter, and means for clamping said member against the tool.

1,214,498. TOOL-HOLDER. JAMES ARMSTRONG, Chicago, Ill., assignor to Armstrong Brothers Tool Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 14, 1916. Serial No. 72,018. (Cl. 29—100.)

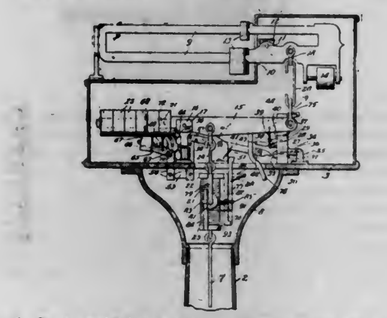
1. A tool holder comprising a body having a tool-receiving socket and having a recess merging into said socket, a member movably fitting in said recess and having at one side a large face to bear against the tool and at its opposite side a cam face, the body having a transverse opening therethrough, a bolt passing through said opening and having a cam face to coöperate with the cam face on said member, and a nut on said bolt for drawing the latter endwise to clamp said member against the tool.

2. A tool holder comprising a body having a tool-receiving socket and having a recess merging into said socket, the end wall of said recess being inclined, a member movably fitting in said recess and having a large face arranged to bear against the tool, one end of said member also being inclined and being adapted to engage the inclined end wall of said recess in the absence of the tool to partially support said member, a screw seated in the body and arranged to loosely engage said member to support the latter, and means for clamping said member against the tool.



3. A tool-holder comprising a body having a tool-receiving socket and having a recess merging into said socket, a member movably fitting in said recess and having at one side a large face to bear against the tool, the body having a transverse opening therethrough, a bolt passing through said opening and having a cam face engaging said member, and a nut on said bolt for drawing the latter endwise to clamp said member against the tool.

1,214,499. COIN-CONTROLLED WEIGHING-SCALE. HARRY W. BARSON, Chicago, Ill., assignor to Acme Scale Co., a Corporation of Illinois. Filed Jan. 19, 1914. Serial No. 813,041. (Cl. 194—35.)



1. In a weighing scale, the combination with a platform, of a counter-balancing weighing beam, normally inoperative connections between said platform and said counter-balancing beam, coin-controlled means for rendering said connections operative, and a weight connected to said platform for counter-balancing the same independently of said beam and for restoring said connections to normal inoperative condition.

2. In a weighing scale, the combination with a platform, of a counter-balancing weighing beam, normally inoperative, coöperating members connected respectively to said platform and to said beam, coin-controlled means for effecting the operative engagement of said members, and a weight connected to said platform for counter-balancing the same independently of said beam and for restoring said connections to normal, inoperative condition.

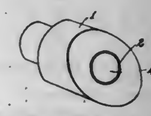
3. In a weighing scale, the combination with a platform, of a counterbalancing weighing beam, coöperating movable members connected respectively to said platform and said counterbalancing beam, a stop device for preventing the operative movement of said members, coin-controlled means for releasing said stop device, a weight connected to said platform for counter-balancing the same independently of said beam and for restoring said stop device to operative position.

4. In a weighing scale, the combination with a platform, of a counter-balancing weighing beam, coöperating members connected respectively to said beam and to said platform and having a lost-motion engagement, a stop device normally preventing the operative movement of said connecting members, coin-controlled means for releasing said stop device, and a counter-weight connected to said platform and arranged to counter-balance the same independently of said beam and restore said stop device to normal operative position.

5. In a weighing scale, the combination with the machine frame and a platform, of weighing levers whereon said platform is mounted, of a counter-balancing weighing beam, an intermediate lever pivotally mounted on the machine frame and connected to said weighing levers, connecting parts between said lever and said beam having a lost-motion connection, a stop device normally preventing the operative movement of said lever and said beam, coin-controlled means for releasing said stop device, and a weight connected to said lever for counter-balancing the unweighted platform independently of said beam and for restoring said stop device to its normal operative condition.

[Claims 6 to 12 not printed in the Gazette.]

1,214,500. ANODE FOR VACUUM DISCHARGE-TUBES. CHARLES FREDERICK WILLIAM BATES, Cleveland, Ohio, assignor of one-half to Charles L. Gebauer, Cleveland, Ohio. Filed Aug. 17, 1915. Serial No. 45,990. (Cl. 250—35.)



1. An anode for vacuum tubes comprising a massive copper body cast around a hollow shield of inert metal as steel, and a target of refractory metal located inside said shield and held in thermal contact with the walls thereof.

2. An anode for discharge tubes comprising a massive copper base, a tungsten target located in a cavity formed in said base, and a thin iron shield interposed between the tungsten and copper.

3. An anode for discharge tubes comprising a hollow iron shield, a copper body cast around said shield, and a target of refractory metal located in said shield and soldered thereto.

4. A blank for an anode comprising a hollow iron shell cast within a massive copper body.

5. A blank for anodes for discharge tubes comprising a hollow shell cast within a body of heat conducting and dissipating metal, a target of refractory metal located within said shell, and a button of more fusible metal located beneath said target.

[Claims 6 and 7 not printed in the Gazette.]

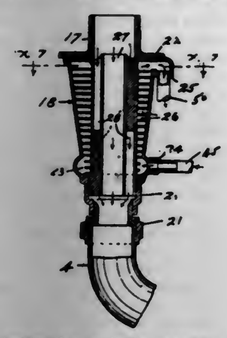
1,214,501. FUEL-HEATER FOR EXPLOSIVE-ENGINES. MICHAEL BECK and NICHOLAS B. BECK, Minneapolis, Minn. Filed July 17, 1915. Serial No. 40,433. (Cl. 257—241.)

1. A fuel heater for explosive engines comprising a casing interposed in the exhaust pipe of an engine and having an exhaust passage and a spiral fuel conveying passage surrounding said exhaust passage, the convolutions of said spiral fuel conveying passage having progressively increasing horizontal width.

2. A fuel heater for explosive engines comprising a casing interposed in the exhaust pipe of an engine and having an exhaust passage and a spiral fuel conveying passage surrounding said exhaust passage, the convolutions of said spiral fuel conveying passage having progressively increasing width in the direction of the passage of the fuel therethrough.

3. A fuel heater for explosive engines comprising a casing interposed in the exhaust pipe of an engine and having an exhaust passage and a spiral fuel conveying pas-

sage surrounding said exhaust passage, said spiral fuel conveying passage progressively increasing in cross section from its receiving end toward its delivery end.

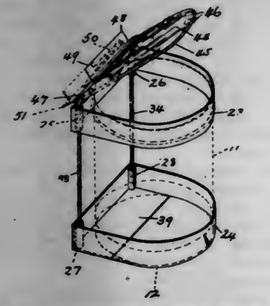


4. A fuel heater for explosive engines comprising a casing interposed in the exhaust pipe of an explosive engine and having a cellular exhaust passage and a fuel conveying passage surrounding said exhaust passage.

5. A fuel heater for explosive engines comprising a casing interposed in the exhaust pipe of an engine and having a cellular exhaust passage and a fuel conveying passage surrounding said exhaust passage, the openings at the receiving end of said exhaust passage being axially staggered with respect to the openings at the delivery end thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,214,502. BOX-HOLDER AND SUPPLEMENTAL DISPLAY-LID. PHILIP A. BECKER, Brooklyn, N. Y. Filed Feb. 1, 1915. Serial No. 5,529. (Cl. 217—11.)



1. A box holder comprising an upper and a lower band, means permanently attached to said upper band and removably secured to said lower band for holding said bands adjacent the top and bottom of a box and in fixed relation to each other, and a transparent plate hingedly attached to the top band substantially as and for the purpose described.

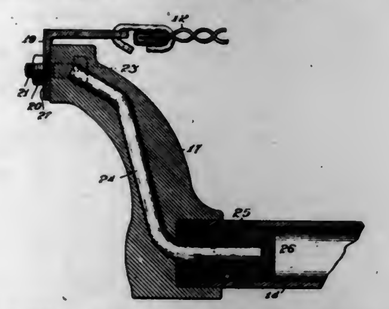
2. A box holder comprising an upper and a lower band, rods attached to said bands for holding same in fixed relation to each other, the portion of said rods attached to said top band projecting slightly above said band and being bent over at right angles thereto, and a cover for said box hingedly secured to said bent portions of said rods, substantially as described.

3. A box holder for boxes with removable lids comprising an upper and a lower band, rods permanently secured to said upper band and removably attached to said lower band for holding said bands in fixed relation to each other, a transparent plate hingedly secured to said upper band and angularly adjustable with relation to the open end of the box for opening and closing same, and an inwardly projecting flange on the said lower band for forming a support whereby the removable lid of the box may be held underneath its bottom.

4. In a box holder and supplemental display lid, an upper inclosing member, a lower inclosing member, a transparent plate hinged on the upper inclosing member for being swung to open and closed positions thereon, and rods removably connecting the inclosing members in spaced relation, substantially as set forth and for the purpose specified.

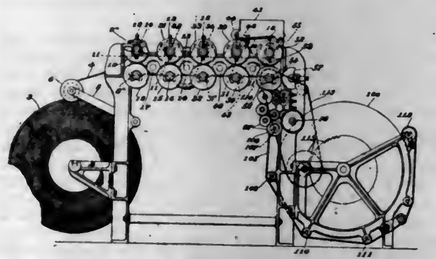
5. In a box holder and supplemental display lid, an upper inclosing member, a lower inclosing member, a frame inclosing a transparent plate hinged on the upper inclosing member for being swung to open and closed positions thereon, a stop on the frame for limiting its upward movement, and rods removably connecting the inclosing members in spaced relation, substantially as set forth and for the purpose specified.

1,214,503. BEDSTEAD CONSTRUCTION. RICHARD BRADSHAW, Montreal, Quebec, Canada. Filed June 2, 1916. Serial No. 101,250. (Cl. 5—63.)



In a bed spring supporting frame, the combination of a longitudinal tubular strut member located a sufficient distance below the spring level to permit sag of the spring when the bed is occupied, a cross member to which the spring is secured, a metal filling cast in the end of said tube, a rod of high tensile strength having one of its ends seated in said filling and having the other end bent to project at an angle from said tube, and a cast iron bracket member cast around said reinforcing member and the end of the tube for connecting said cross member and said strut.

1,214,504. MACHINE FOR MAKING BOTTLE-SEALS. ALFRED H. BRAECKLEIN, Baltimore, Md., assignor to The Sanitary Seal Manufacturing Company, Baltimore, Md., a Corporation of Maryland. Filed June 13, 1916. Serial No. 103,577. (Cl. 93—13.)



1. In a machine for making bottle seals or wrappers, means for supplying a continuous paper web, a successive series of rollers consisting of feeding rollers, cutting rollers, scoring rollers, pasting rollers, doubling rollers, all operating on the continuous web, with means for rotating the rollers, means for severing the doubled blank from the web, and folding and pressing means arranged in the order named.

2. In a machine for making bottle seals and covers, means for feeding a continuous paper web, means for cutting the web to form connected blanks from a continuous web leaving the blanks connected by narrow links, means for creasing the blanks to form edge flaps, means for coating the edge flaps with paste, means for doubling the blanks, means for severing them from the web and means for folding the pasted flaps over the adjacent portions of the blanks and pressing them in position to form a finished container or seal.

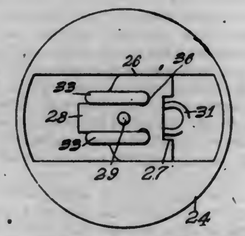
3. In a machine for making bottle seals or coverings of paper, means for feeding a paper web, means for cutting a tapering blank, means for scoring the blank to form an edge flap, means for coating the edge flap with paste, means for doubling the blank, folding means to operate on the edge flap to fold it over the adjacent portion of the blank, and means for varying the position of the folding means to provide for the tapering of the blank and the change of direction of the edges and the edge flaps of the blank.

4. In a machine for making seals or coverings for bottles, means for feeding a paper web, means for cutting from the web a blank having a straight portion and a tapering portion, the tapering portion being on both sides of the center and converging toward the center, the portion of the blank on one side of the center being wider than the portion of the blank on the other side of the center, means for forming a transverse center score, means for scoring the larger part of the blank adjacent the edges to form an edge flap, means for coating the edge portion with paste, means for doubling the blank about the center score, means for folding the edge flaps over the edge portions of the other half of the blank, means for varying the position of the folders to provide for the change of direction of the flap, and means for pressing the flap.

5. In a machine for making paper seals or coverings for bottles, means for feeding a paper web, means for cutting from the web an elongated blank which is straight at the ends and tapered at the center, the tapered portion converging toward the center, the portion of the blank on one side of the center being wider than the portion on the other side, means for coating the edge of the blank with paste, means for doubling the blank about the center, means for folding the edges of the wider part of the blank over the adjacent edges of the narrower portion, and means for varying the position of the folding means to compensate for the change of direction of the edges of the blank.

[Claims 6 to 11 not printed in the Gazette.]

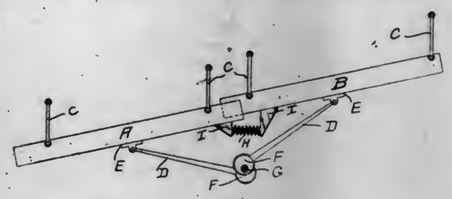
1,214,505. BUTTON-FASTENER. ANDREW G. BRANDT, Scranton, Pa. Filed July 1, 1915. Serial No. 37,552. (Cl. 24—103.)



1. In a button, a body; a keeper assembled with the body; an eye forming member pivotally assembled with the keeper and comprising arched arms adapted to interlock with the keeper; and a wedge slidable on the keeper and coacting with the arms to hold the arms interlocked with the keeper.

2. A button comprising a body; a loop-shaped strip on the body and comprising spaced walls, one end of the strip being formed into a bearing, and the other end of the strip having an opening; a securing device connecting the strip with the body; a U-shaped eye forming member mounted to rock in the bearing and including arched resilient arms, the strip having openings in which the ends of the arms are received; and a wedge-shaped link surrounding the securing device and mounted to slide between the walls of the strip, the link being accessible through the first specified opening, and coacting with the inner edges of the arms of the eye forming member, adjacent the ends of said arms.

1,214,506. SHAKER-SCREEN. WILLIAM BRASACK, Fairmont, W. Va., assignor to Fairmont Mining Machinery Company, a Corporation of West Virginia. Filed Apr. 3, 1916. Serial No. 88,635. (Cl. 83—56.)



1. In combination, a shaker screen, embodying in its construction oppositely moving screening sections, means for positively moving the sections; and energy absorbing and storing means carried by said sections adapted to absorb their potential energy at the period of retardation, and later convert the energy thus absorbed into kinetic energy at the period of acceleration, said energy absorbing and storing means comprising a spring member mounted between confronting portions of two of said sections and with its respective ends fixed to said sections.

2. In combination, a shaker screen, embodying in its construction oppositely moving screening sections, means for positively moving the sections; and energy absorbing and storing means carried by said sections adapted to absorb their potential energy at the period of retardation, and later convert the energy thus absorbed into kinetic energy at the period of acceleration, said energy absorbing and storing means comprising a spring member mounted beneath the confronting ends of two of said sections parallel to the line of their movement and with its respective ends attached to blocks carried by said sections.

3. In combination, a shaker screen, embodying in its construction oppositely moving screening sections, means for positively moving the sections; and energy absorbing and storing means carried by said sections adapted to absorb their potential energy at the period of retardation, and later convert the energy thus absorbed into kinetic energy at the period of acceleration, said energy absorbing and storing means comprising a plurality of spring members mounted beneath the confronting ends of two of said sections and having their respective ends fixed to said sections.

4. A screening apparatus comprising two reciprocating screening sections, means imparting to said sections, simultaneously, movements in opposed directions and resilient means carried by and adapted to be acted upon by both of said sections in each direction of its reciprocation, absorbing the potential energy of said sections at periods of retardation in their movement and giving back said energy at periods of their acceleration, as said sections recede, as well as when they approach each other.

5. In combination, a shaker screen, embodying in its construction oppositely moving screening sections, means for positively moving the sections; and energy absorbing and storing means carried by said sections adapted to absorb their potential energy at the period of retardation, and later convert the energy thus absorbed into kinetic energy at the period of acceleration, said energy absorbing and storing means comprising a spring member mounted between confronting portions of two of said sec-

tions and with its respective ends fixed to said portions, said spring acting resiliently upon said confronting portions by both tension and compression.

[Claim 6 not printed in the Gazette.]

1,214,507. DAMPING DEVICE FOR MEASURING INSTRUMENTS AND THE LIKE. EDUARD BREITINGER, Albisrieden, Switzerland. Filed Feb. 14, 1913. Serial No. 748,392. (Cl. 73—151.)



1. The combination with a measuring instrument comprising a swinging registering member, which is arranged to swing back and forth over the point of registration before coming to a state of rest, of a resisting device comprising a balanced two-armed lever frictionally mounted on the indicating instrument, and means for oscillating said lever in both directions by means of the registering member, there being lost motion in said actuating means to permit the registering member to swing back and forth over the point of registration without moving said frictionally mounted lever, substantially as described.

2. The combination with an indicating instrument having a shaft, a registering member connected to said shaft, said registering member being arranged to swing back and forth over the point of registration by the momentum thereof, of a resisting device comprising a balanced two-armed member frictionally mounted on said shaft, means for causing said lever to oscillate with the registering member, said means being arranged to permit the registering member to swing back and forth over the point of indication a predetermined distance without moving the two-armed lever, substantially as described.

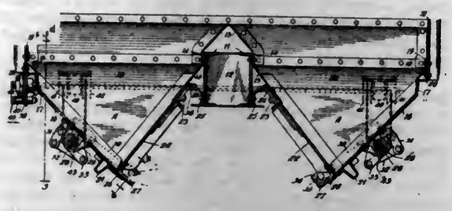
3. The combination with a measuring instrument comprising an indicating member adapted to swing beyond the point corresponding to the measure to be indicated and perform several oscillations before it comes to rest, of a resisting device comprising a frictionally mounted balanced two-armed lever, means for oscillating said lever when the indicating member is oscillated, substantially as described.

4. The combination with a measuring instrument comprising an indicating member adapted to swing beyond the point corresponding to the measure to be indicated and perform several oscillations before it comes to rest, a shaft for said member, of a resisting device comprising a two-armed lever whereof the arms are splayed and are adapted to embrace the shaft of the oscillating body, balancing means for said lever, and means for limiting the large oscillations of said lever, substantially as described.

5. A resisting device for measuring instruments and the like, comprising a balanced lever arranged to coact with the moving member of a measuring instrument, frictional means for causing the resisting device to move with the movable member of the measuring instrument, and a stop for the resisting device for determining its movement with the movable member of the measuring instrument; substantially as described.

[Claim 6 not printed in the Gazette.]

1,214,508. HOPPER-CAR. ARGYLE CAMPBELL, Chicago, Ill., assignor to Enterprise Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Continuation in part of application Serial No. 33,237, filed June 10, 1915. Patented Mar. 7, 1916, No. 1,174,677. This application filed Feb. 26, 1916. Serial No. 80,560. (Cl. 105—185.)



1. In a dump car having hoppers and hinged center dump doors, operating mechanism therefor including a longitudinal shaft extending along the outer side of each of the hoppers, flexible connections from said shaft to the doors, a transversely extending auxiliary shaft, and flexible link connections between said two shafts so arranged that the longitudinal shaft may be rotated in either direction, depending upon the direction of rotation of the auxiliary shaft.

2. In a hopper dump car having hinged center dump doors on each side of the center sill thereof, operating mechanism for all said doors including, a longitudinally arranged shaft on each side of the car, flexible connections from each of said shafts to the adjacent center dump doors, a transversely extending shaft, and flexible link connections between said transversely extending shaft and each of the longitudinal shafts.

3. In a car of the character described, the combination with a car body having hoppers provided with center dump doors, of a longitudinally extending shaft, flexible link connections from said shaft to the hinged doors, a transversely extending shaft located above said longitudinal shaft, a pair of chain winding drums on each of said longitudinal shafts and corresponding pairs of chain winding drums on said transverse shaft, and chain connections extending between the drums on said shafts.

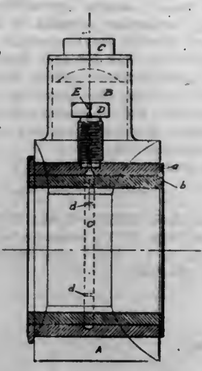
4. In a car of the character described, the combination with a car body having longitudinally extending hoppers on each side of the center sill thereof, each of said hoppers being provided with a hinged center dump door, of a pair of longitudinally extending shafts located on the outer sides of said hoppers, flexible connections from said shafts to the center dump doors, and means for operating said longitudinal shafts simultaneously including, a transversely extending shaft and two sets of chain connections between said transverse shaft and the longitudinal shafts.

5. In a hopper dump car, the combination with a car body having a built-up center sill, of a longitudinally extending sheet having the ridge located above said center sill and provided with outwardly and downwardly extending portions on each side of the center sill, hinged hopper center dump doors pivoted along their upper edges to the under side of said downwardly and outwardly extending portions of said sheet, longitudinally arranged operating shafts, flexible connections from said shafts to said doors, a transversely extending auxiliary shaft, and flexible connections between the longitudinal and transverse shafts.

[Claim 6 not printed in the Gazette.]

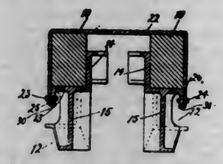
1,214,509. COMBINATION ROD-BUSHING FOR LOCOMOTIVE-ENGINES. EDWARD MARVIN CARROLL, Port Tampa City, Fla. Filed Nov. 22, 1915. Serial No. 62,769. (Cl. 64—24.)

1. A rod bushing for locomotive engines, including a bearing comprising an outer annulus having an annular groove in its inner circumferential surface, an inner annulus fitted within said outer annulus and having a plurality of radial passages communicating with said annular groove and opening through the inner circumferential surface of the annulus, a reservoir, and a plug or keeper having a channel in communication with said reservoir and said annular groove of the outer annulus, said plug having its inner end entering said outer annulus and serving for the retention of the latter.



2. The combination in rod bushing for locomotive engines, of a bearing, comprising outer bushing *a*, made of cast steel, and inner bushing *b*, made of brass, said outer bushing having an inner circumferential groove, one eighth of an inch deep and one fourth of an inch wide, and said inner bushing being provided with holes *d*, one eighth of an inch in diameter, drilled equidistant, a reservoir and a keeper having a channel receiving the contents of the reservoir and delivering said contents into the bushing *a*, said contents being delivered by gravity into the latter, all substantially as shown for the purpose specified.

1,214,510. DRAFT-ARM FOR RAILWAY-CARS. LEWIS T. CANFIELD, Chicago, Ill., assignor to Union Draft Gear Co., a Corporation of Illinois. Filed Aug. 23, 1915. Serial No. 46,965. (Cl. 105—76.)



1. In a draft arm, in combination, a pair of metal beams adapted for attachment to the center sills of a car, and a yoke adapted to pass over the sills and having its ends hooked under the beams.

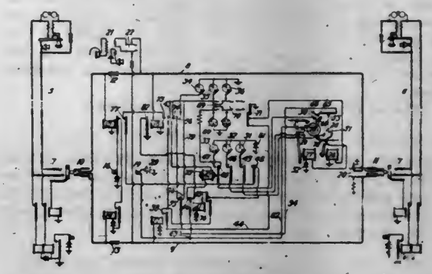
2. In a draft arm, in combination, a pair of metal beams adapted for attachment to the center sills of a car, and a yoke adapted to pass over the sills and having its ends attached one to each of the beams, such yoke having a lateral lip adapted to engage over the end sill of the car.

3. In a draft arm, in combination, a pair of metal beams adapted for attachment to the center sills of a car, and a yoke adapted to pass over the sills and having its ends attached one to each of the beams, such yoke having a lateral lip adapted to engage over the end sill of the car and to receive bolts attaching it thereto.

4. In a draft arm, in combination, a pair of metal beams adapted for attachment to the center sills of a car, and a plurality of yokes in the form of integral straps adapted to pass over the sills and having their ends hooked under and attached directly one to each of the beams.

5. In a draft arm, in combination, a beam having a flange for engagement with a face of a car sill, such flange being provided with a key boss adapted to enter a gain in the sill, and a yoke adapted to pass over the sills of a car and having its end hooked under the beam.

1,214,511. TELEPHONE SWITCHING SYSTEM. HENRY PETER CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 7, 1915. Serial No. 32,694. (Cl. 179—73.)



1. In a telephone switching system, subscribers' lines terminating in a central office, a link circuit at the central office for interconnecting said lines, a source of signaling current adapted to be connected with the called subscriber's line, a timing mechanism adapted when started to operate for a predetermined time, means actuated upon the connection of the link circuit with the called line to start the timing mechanism, and a signaling device controlled by and operating at intervals during the operation of the timing mechanism to indicate to the operator that the called subscriber has not answered.

2. In a telephone switching system, subscribers' lines terminating in a central office, a link circuit for interconnecting said lines, a source of signaling current adapted to be connected with the called subscriber's line, a step-by-step timing mechanism adapted when started to operate for a predetermined time, an electromagnetic device actuated upon connection of the link circuit with the called line to start the timing mechanism, a signaling device, and a circuit for the signaling device completed upon the advancement of the step-by-step mechanism to predetermined positions to cause the signaling device to furnish signals at stated intervals.

3. In a telephone switching system, subscribers' lines terminating in a central office, a link circuit at said central office for interconnecting said lines, supervisory signals associated with the answering and calling ends of said link circuit and controlled over the respective line circuits, a source of ringing current adapted to be connected with the called line, a timing mechanism associated with the calling end of the link circuit and driven at a predetermined rate of speed; and a plurality of branch circuits closed thereby at predetermined intervals and controlling the supervisory signal of this calling end of said link circuit to notify the operator that no response is made by the called subscriber after lapsed periods of time.

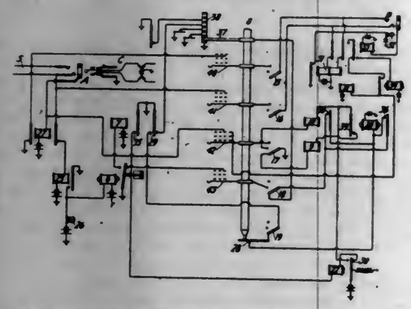
4. In a telephone switching system, subscribers' lines terminating at a central office, link circuits thereat for interconnecting said lines, a source of ringing current at said central office adapted to be connected with a called line upon the connection therewith of said link circuit, a timing mechanism operated automatically upon connection of ringing current with said line and embracing a rotatable contact member adapted to be driven through a complete revolution in a given interval of time, contacts closed successively by said rotatable member during its movement, a characteristic source of interrupted current individual to each of said contacts, and a signal adapted to be separately operated by the several inter-

rupters for indicating different periods of lapsed time from the application of ringing current to the line.

5. In a telephone exchange system, subscribers' lines terminating at a central office, link circuits at said central office for interconnecting said lines, a source of ringing current adapted to be connected with the called line upon the connection therewith of a link circuit, timing mechanism operated during the time that ringing current is connected with the called line, a signal operated by said timing device at predetermined intervals of a given period to indicate that the called subscriber has not answered, switching means adapted to be operated when the called subscriber answers to restore and restart said timing device, and a circuit for said signal completed by said timing device after the lapse of a period of time to indicate to the operator that the lines have been connected for conversation for a predetermined allowable time.

[Claims 6 and 7 not printed in the Gazette.]

1,214,512. TELEPHONE SWITCHING SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 2, 1916. Serial No. 118,242. (Cl. 179—27.)



1. In a telephone exchange system, an operator's switching position, telephone lines terminating thereat, line signals for each of said lines, a time-controlled switching device for each of said lines operating in conjunction with the line signal, a second operator's position, and automatic switching means common to a plurality of lines on said first mentioned position and controlled by said time-controlled mechanism to extend a line with an unanswered call to said second mentioned operator's position.

2. In a telephone exchange system, an operator's switching position, telephone lines terminating thereat, line signaling mechanism for each of said lines, a time-controlled switching mechanism for each line adapted to be operated by the operation of said line signaling mechanism, a second operator's position, and automatic switching means common to a group of lines terminating on said first mentioned operator's position and operated in response to the operation of the time-controlled switching mechanism associated with any one of the lines of the particular group to extend said line to said second mentioned operator's position for service.

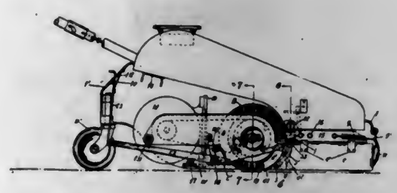
3. In a telephone exchange system, an operator's switching position, telephone lines terminating thereat, line signaling mechanism for each line, a second operator's position, automatic switching mechanism common to a group of the lines for extending any one of the lines to the second operator's position, and time-controlled switching mechanism for each line actuated at the expiration of a predetermined period after the operation of the line signaling mechanism to cause the operation of the automatic switching mechanism.

4. In a telephone exchange system, an operator's switching position, telephone lines terminating thereat, a line relay for each line, a second operator's position, automatic switching mechanism common to the lines for extending any one thereof to the second operator's position, and a slow-operating relay for each line actuated at the expiration of a predetermined period after the operation of the line relay to cause the operation of the automatic switching mechanism.

5. In a telephone exchange system, an operator's switching position, telephone lines terminating thereat, a line relay for each line, a second operator's position, automatic switching mechanism common to the lines for extending any one thereof to the second operator's position, a slow-operating relay for each line actuated at the expiration of a predetermined period after the operation of the line relay to cause the operation of the automatic switching mechanism, and a signaling device at the second operator's position operated upon the extension thereto of one of the telephone lines.

[Claim 6 not printed in the Gazette.]

1,214,513. FLOOR-SCRUBBING MACHINE. MORRIS H. CRAPSER, New York, N. Y., assignor to Emmor J. Stewart, New York, N. Y. Filed May 29, 1915. Serial No. 31,099. (Cl. 15—14.)



1. In scrubbing apparatus of the character designated the combination with the wheeled carriage frame, of a motor mounted thereon, a scrubbing brush actuated by said motor, suspender members upon and between the forward portions of which said brush is mounted, said suspenders being pivotally supported upon and between the side members of said carriage frame, a rock shaft mounted upon and between the said members of the carriage, rocker arms rigidly attached thereto, and pivotally supporting the forward portions of said brush suspenders, and a lever for rocking said rock shaft, for the purpose described.

2. In scrubbing apparatus of the character designated the combination with the wheeled carriage frame, of a motor mounted thereon, a scrubbing brush actuated by said motor, suspender members upon and between the forward portions of which said brush is mounted, said suspenders being pivotally supported at their rear portions upon and between the side members of said carriage frame, a rock shaft mounted upon and between the side members of the carriage, rocker arms rigidly attached thereto and pivotally supporting the forward portions of said brush suspenders, and a lever for rocking said rock shaft, for the purpose described.

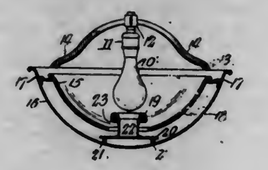
3. In scrubbing apparatus of the character designated, the combination with the wheeled carriage frame, of a motor mounted thereon, a scrubbing brush actuated by said motor, suspender members upon and between the forward portions of which said brush is mounted, said suspenders being pivotally supported at their rear portions upon and between the side members of said carriage frame, a rock shaft mounted upon and between the side members of the carriage, rocker arms rigidly attached thereto and pivotally supporting the forward portions of said brush suspenders, a lever for rocking said rock shaft, and means for securing said lever in a prescribed position, comprising an adjustable manipulating link and latch mechanism, for the purpose described.

4. In scrubbing apparatus of the character designated, the combination with the wheeled carriage frame, of a motor mounted thereon, a scrubbing brush actuated by said motor, suspender members upon and between the forward portions of which said brush is mounted, said suspenders being pivotally supported at their rear portions upon and between the side members of said carriage frame, means for adjustably supporting the forward portions of the suspenders for the purpose of regulating the peripheral contact of the brush and compensating for wear thereof, substantially as set forth.

5. In scrubbing apparatus of the character designated, the combination with the wheeled carriage frame, of a cylindrical brush, a motor for actuating the same, suspender members upon and between the forward portions of which said brush is mounted, said suspenders being pivotally supported at their rear upon and between the side members of the carriage frame, means for adjustably supporting the forward portions of said suspenders, said suspenders being formed with frontal inclined surfaces, a splash apron the lower portion of which is pivotally supported upon and between the side members of the carriage frame, said apron being arranged to contact with the frontal inclined surfaces on the suspenders, and means for holding said splash apron against said frontal inclined surface on the suependers by elastic resilient pressure, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,214,514. LAMP-FIXTURE. AUGUSTUS D. CURTIS, Chicago, Ill., assignor to National X-Ray Reflector Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 9, 1914. Serial No. 817,434. (Cl. 240—103.)



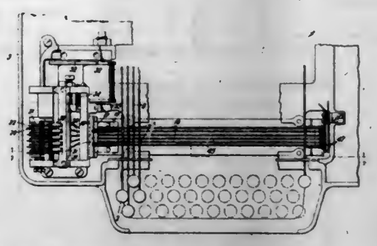
1. In combination with a lamp fixture, a lamp and a reflector, a heat absorbing member in near relation to said lamp for absorbing the heat generated thereby, said member being located within the reflector, a heat dissipating member supported by said fixture without the reflector, and a heat conducting member connecting said heat absorbing member with said heat dissipating member, said heat absorbing, heat conducting and said heat dissipating members being axially arranged with respect to said lamp.

2. In a lamp fixture including a lamp and a reflector of the inverted type, comprising an inner reflecting shell and an outer bowl, means supporting said reflecting shell within said bowl to provide an air space communicating with the outer atmosphere, a heat collecting member located within the reflector, a heat dissipating member located in the air space between said reflecting shell and the said bowl, and heat conducting means connecting said heat collecting member with said heat dissipating member.

3. In a lamp fixture including a lamp and a reflector, a heat absorbing member within said reflector, a heat dissipating member located in close proximity to said reflector and means supporting said heat absorbing member upon said heat dissipating member, said supporting means forming a heat conductor between said heat absorbing and said heat dissipating members.

4. In a lamp fixture including a lamp and a reflector of the inverted type, comprising an inner reflecting shell and an outer bowl, means supporting said reflecting shell within said bowl to provide an air space communicating with the outer atmosphere, a metallic ring within the reflector adapted to absorb the heat from the lamp, a corrugated heat dissipating disk located in the air space between said reflecting shell and bowl and a sleeve mounted on said disk, adapted to support said metallic ring, said sleeve forming a heat conductor between said ring and disk.

1,214,515. SWITCH-SELECTOR. OSCAR A. DANIELSON, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Nov. 2, 1914. Serial No. 869,811. (Cl. 177—380.)



1. A switch selector comprising a plurality of switches, a common actuator therefor, selecting means for said switches, and a flexible connector common to each of said switches for effecting the open and closed condition thereof and coöperating with said means and said actuator, whereby said actuator may selectively operate said switches.

2. A switch selector comprising a plurality of switches, selective means therefor, a common actuator coöperating with said switches and said means whereby selected switches are operated, and an individual latch for each means coöperating therewith upon the operation of the actuator whereby the selected and unselected means and switches are locked until the return of the actuator.

3. A switch selector comprising a plurality of switches, a common actuator therefor, selecting means for said switches, flexible connectors coöperating with said switches and said means whereby said actuator may selectively operate said switches, and a locking device for holding said connectors and switches after being actuated.

4. A switch selector comprising a plurality of selectable members, selectors therefor, a plurality of switches, flexible connectors adapted to coöperate with said members and said switches, a common actuator for moving all of said connectors to operate corresponding switches, and a plurality of latches one for each member and coöperating therewith for locking both the selected and unselected members.

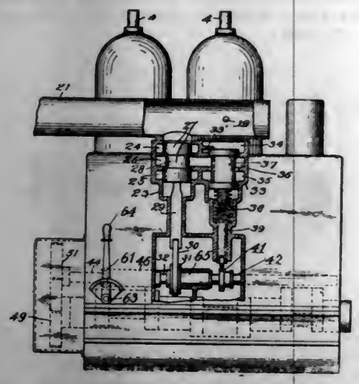
5. A switch selector comprising a plurality of selecting members, a plurality of selectable members less in number than the number of said selecting members, a plurality of switches equal in number to the number of said selectable members, flexible connectors coöperating with each of said switches and selectable members, a common actuator controlled by said selectors and simultaneously moving all of said connectors, whereby only selected connectors actuate their corresponding switches, and a latch for each connector brought into operation by the movement of said actuator to lock all of said connectors and said switches against derangement while said actuator is operated.

[Claims 6 and 7 not printed in the Gazette.]

1,214,516. INTERNAL-COMBUSTION ENGINE. GREGORY C. DAVISON and JOHN W. ANDERSON, New London, Conn., assignors to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 13, 1915. Serial No. 14,072. (Cl. 123—41.)

1. An internal combustion engine comprising the combination of two working cylinders, two scavenger cylinders, pistons in the cylinders, a receiver connected to the working cylinders by ports controlled by the pistons in those cylinders, a valve, means for causing the engine to actuate said valve to successively connect the scavenger cylinders alternately to the receiver and to atmosphere, a source of supply of compressed air, a second valve and means for causing the engine to operate the second valve to disconnect the first valve from the atmosphere and con-

nect it to the source of supply of compressed air; substantially as described.



2. An internal combustion engine comprising the combination of two working cylinders, two scavenger cylinders, pistons in the cylinders, ports in the working cylinders controlled by the pistons therein, a valve movable to successively connect the scavenger cylinders alternately to one of said ports and to atmosphere, so that when one cylinder is connected to one of said ports the other cylinder is connected to atmosphere and vice versa, a cam for actuating said valve, means for rotating the cam from the engine shaft, and means for varying the relation of the cam to the engine shaft; substantially as described.

3. An internal combustion engine comprising the combination of a working cylinder, a scavenging cylinder, pistons therein, a valve controlling the connection of the scavenging cylinder to the working cylinder and to atmosphere, a source of supply of compressed air, a second valve movable to disconnect the first valve from atmosphere and connect it to said source, means for actuating said valves, and means for normally holding the second valve out of coaction with said actuating means; substantially as described.

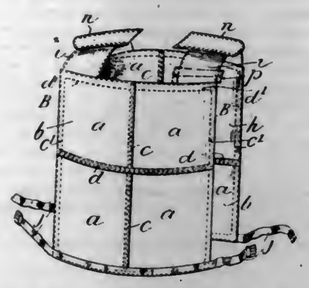
4. A reversible internal combustion engine comprising the combination of an engine-shaft, a cylinder, a piston therein, a source of supply of compressed air to be admitted to the cylinder to start the engine, a cam shaft driven by the engine shaft, a plurality of cams fixed on the cam-shaft, valve mechanism operated by the cam shaft and controlling the operation of the engine, said valve mechanism including a valve operated by one of said cams when the engine is running in one direction and by the other of said cams when the engine is running in the other direction, and a single means for moving the cam shaft spirally relative to the engine shaft to effect reversal of the engine; substantially as described.

5. A reversible internal combustion engine, comprising the combination of an engine shaft, a cylinder, a piston therein, air-starting valve mechanism for the cylinder, a cam-shaft driven by the engine for operating said valve mechanism, a spray-valve, a second cam-shaft driven by the engine for operating the spray-valve, and means for moving both cam-shafts spirally but different amounts to effect reversal of the engine; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,214,517. SHIELD FOR THE USE OF SOLDIERS AND OTHERS. FRANCES DAYTON, Watford, and ERNEST ALBERT WHITFIELD, Berkhamsted, England, assignors to The Whitfield Manufacturing Company, Limited, London, England. Filed May 3, 1916. Serial No. 95,134. (Cl. 89—36.)

1. A body protector consisting of a number of sheet metal plates of approximately equal length and width disposed edgewise relatively one to another, a narrow strip of metal overlapping adjacent edges of said plates, a casing or sheath of textile material inclosing and closely contacting with opposite sides of said plates, and stitching between adjacent edges of the plates and along the margins thereof so as to form a separate pocket for each plate; said stitching between adjacent edges of the plates extending about midway of the protector on both vertical and horizontal lines, so that flexure is permitted on median lines only both vertically and horizontally.



2. A body protector comprising a casing of textile material stitched to form a number of adjacent pockets, metal shield plates inclosed in said pockets with their adjacent edges near together and narrow strips of metal overlapping adjacent edges of the shield plates.

3. A body protector comprising a casing of textile material stitched so as to form adjacent pockets, metal shield plates inclosed in said pockets with their adjacent edges near together, and inner and outer strips of metal overlapping adjacent edges of the shield plates.

4. A body protector comprising a number of adjacent pockets of textile material formed by lines of stitching crossing one another, hard and tough metal shield plates of substantially corresponding dimensions, one in each pocket, closely contacting with said textile material and flexibly interconnected by said lines of stitching, and narrow outer strips of metal overlapping adjacent edges of the hard and tough metal shield plates.

5. A body protector comprising a casing of textile material stitched vertically and horizontally along lines crossing one another perpendicularly so as to form adjacent pockets, metal shield plates inclosed in said pockets with their adjacent edges near together and outer narrow strips of metal overlapping adjacent edges of the shield plates.

[Claim 6 not printed in the Gazette.]

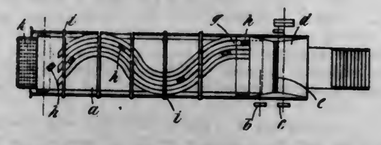
1,214,518. PROCESS OF PREPARING BEVERAGES. GEORGE DEFREN, Newton, Mass. Filed June 29, 1914. Serial No. 847,972. (Cl. 195—32.)

1. The process of preparing alcoholic beverages of the character of beer or ale comprising the following steps: mixing with acidulated water a sufficient quantity of material containing starch and protein to supply in full the desired constituents of the product, heating the same to produce fermentable sugars in quantity equivalent to that obtained for the desired beverage by ordinary malt conversion, checking conversion of the material, leaving the product somewhat acid whereby to hold protein in solution, separating the liquid portion, boiling the same with hops and fermenting with yeast, some acidity persisting in the beverage.

2. The process of preparing alcoholic beverages of the character of beer or ale comprising the following steps: mixing with acidulated water a sufficient quantity of material containing starch and protein to supply in full the desired constituents of the product, heating the same to produce fermentable sugars in quantity equivalent to that obtained for the desired beverage by ordinary malt conversion, checking conversion of the material, leaving the product somewhat acid whereby to hold protein in solution, separating the liquid portion, caramelizing a part thereof and returning the same to the bulk, boiling the product with hops and fermenting with yeast.

3. The process of preparing alcoholic beverages of the character of beer or ale comprising the following steps: mixing with acidulated water a sufficient quantity of material containing starch and protein to supply in full the desired constituents of the product, heating the same to produce fermentable sugars in quantity equivalent to that obtained for the desired beverage by ordinary malt conversion, checking conversion of the material, leaving the product somewhat acid whereby to hold protein in solution, separating the liquid portion, boiling the same with hops, fining with alkaline casein and causing fermentation of the fined product.

1,214,519. MACHINE FOR SORTING CORKS. JEAN DEMUTH, Le Muy, France. Filed Feb. 13, 1915. Serial No. 7,987. (Cl. 130—32.)



1. A machine for facilitating the classification of corks comprising a moving surface with sinuous guides to deflect the cork transversely of the moving surface.

2. A machine for facilitating the classification of corks comprising a traveling band and means superposed thereon adapted to change the normal path of cylindrical bodies carried by said band, said means also serving to restrict the movement of the said bodies in two directions while guiding same in their axial movement.

3. A machine for facilitating the classification of corks comprising a traveling band and guide bars superposed on said band said guide bars being inclined to the direction of travel of said band and serving to restrict the movement of the corks in two directions while guiding it in its axial movement.

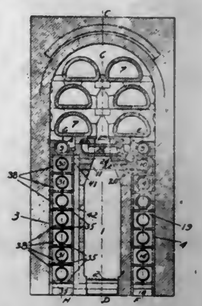
4. A machine for facilitating the classification of corks comprising a feed hopper, a traveling band, and guide bars superposed on said band and inclined to the direction of travel thereof, said guide bars serving to restrict the movement of the cork in two directions while guiding it in its axial movement and serving also to impart a rotary movement to the cork first in one direction and then in the other.

5. A machine for facilitating the classification of cylindrical bodies comprising a moving surface, a series of sinuous guides superposed on said surface, a feed hopper and a distributer.

[Claims 6 to 9 not printed in the Gazette.]

1,214,520. PROCESS OF OPERATING GAS-FIRED FURNACES. HENRY L. DOHERTY, New York, N. Y. Filed Mar. 31, 1909. Serial No. 486,889. (Cl. 110—31.)

1. The process which comprises withdrawing products of combustion from a furnace chamber in a direction of flow substantially transverse to the longitudinal dimension of said furnace chamber as two currents of substantially the same velocity and volume, the velocity of said transverse flow of said currents of products of combustion being maintained substantially the same at all points along the length of said furnace chamber, and distributing said products of combustion of said two currents, after they have been withdrawn from said furnace chamber in regulated proportion between the said two currents, passing the first of said currents of products of combustion through a recuperator to evaporate and heat water and to heat air supplied to a gas-producing apparatus, passing the second of said currents of products of combustion through another recuperator to heat air supplied for the combustion of gas produced in the gas-producing apparatus, the relative volumes of the said two currents of products of combustion being proportioned to the quantity of heat required by the respective air currents, passing the air supplied to said gas-producing apparatus while said air is in process of heating in contact with water, whereby the said air current is loaded with water vapor, superheating the mixture of air and water vapor so produced by the first of said currents of products of combustion, introducing the superheated mixture into said gas-producing apparatus to generate producer gas, and burning said gas by means of the air heated by the second of said currents of products of combustion.



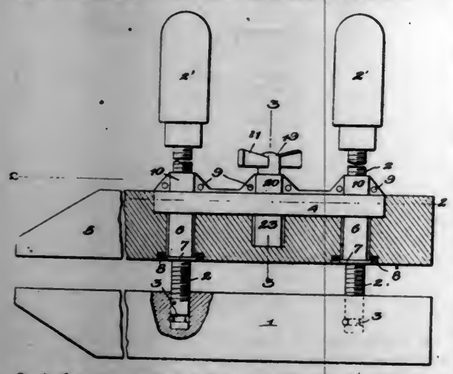
2. The method of operating a gas-heated furnace which comprises heating the air supplied for maintaining combustion in the gas producer of said furnace by a current of hot products of combustion discharged from said furnace, adding water vapor to the said air current while the same is being heated, the said water vapor being added in a plurality of portions, the magnitude of said portions of water vapor increasing with the increased vapor-carrying capacity of the said air current, introducing the mixture of air and water vapor into the said gas producer to generate producer gas, heating a second current of air by a second current of hot products of combustion, conducting the said second current of air and said producer gas into said furnace and burning the said gas therein, withdrawing the products of the said combustion from said furnace as two substantially equal currents and thereafter adjusting the relative amounts of products in said currents by transfer from one to the other, the relative volumes of the two currents being proportioned to the relative quantities of heat required in the heating of the respective air currents.

3. The process which comprises withdrawing the products of combustion from the furnace chamber of a gas consuming apparatus in a plurality of portions of equal volume along the length of said furnace chamber in such manner as to produce a substantially uniform flow at the various points and thereafter producing from such uniform portions two currents of products of combustion of adjusted relative volume by transfer of products of combustion from one such current to the other such current, passing the first of said currents through a recuperator to evaporate and heat the water and to heat the air supplied to a gas producing apparatus, passing the second of said currents through another recuperator to heat the air supplied for the combustion of the gas produced in the gas producing apparatus, the relative volumes of the two currents being proportional to the amount of heat required by the respective air currents, passing the air supplied to said gas producing apparatus while said air is in process of heating in contact with water, whereby the said air current is loaded with water vapor, superheating the mixture of air and water vapor so produced, introducing the superheated mixture into said gas producing apparatus to generate producer gas, and burning said gas by means of the air heated by the second of said currents of products of combustion.

1,214,521. CLAMPING APPLIANCE. PETER DOSCH and CHARLES R. DOSCH, Stratford, Conn. Filed Jan. 5, 1916. Serial No. 70,359. (Cl. 144—301.)

1. A clamp, comprising in combination a pair of wooden clamping jaws, the outer face of the upper jaw being pro-

vided with a recess; a two-part sheet-metal casing or housing secured within said recess and having a metal floor and a metal cover; operating screws extending through said casing and swiveled at their lower ends in the lower jaw; complemental nut bars mounted in the casing, resting on the metal floor thereof, held in place by the metal cover, and adapted to normally engage the operating screws; and means for operating the bars to cause a disengagement thereof from the screws.



2. A clamp, comprising in combination a pair of clamping jaws, the outer face of the upper jaw being provided with a recess; a metal casing or housing seated within the recess; tubular sleeves extending from said casing through the jaw, and secured to the lower face of the jaw; operating screws extending through the casing and sleeves, the lower ends of the screws being swiveled in the lower jaw; nut sections mounted in the casing and normally engaging the screws; and a handle for operating said sections, said handle extending out from the casing.

3. A clamp, comprising in combination a pair of wooden clamping jaws, the outer face of the upper jaw being provided with a recess therein, with a pair of openings extending therefrom through the lower face of the jaw; a longitudinally-divided metal casing seated within said recess, said casing having depending sleeves extending through the openings aforesaid, the sleeves being clenched or flanged at their lower ends to secure the casing in the jaw; operating screws extending through said casing and the sleeves, said screws being swiveled to the lower jaw; nut members housed in the casing, adapted to engage the screws; and means carried by the casing for operating said nut members.

4. A clamp, comprising in combination a pair of wooden clamping jaws, the outer face of the upper jaw being provided with a recess therein with a pair of openings extending therefrom through the lower face of the jaw; a longitudinally-divided metal casing seated within said recess, said casing having depending sleeves extending through the openings aforesaid, the sleeves being clenched or flanged at their lower ends to secure the casing in the jaw, said casing likewise having a centrally-disposed depending chamber, 23; operating screws extending through the casing and the sleeves; nut members housed in the casing, adapted to engage the screws; a spring-actuated operating device mounted in the chamber and engaging the nut members and a handle extending outwardly from the casing for separating said nut members.

1,214,522. CAKE-TURNER. FRANK ECKERT, Chicago, Ill. Filed July 14, 1915. Serial No. 39,752. (Cl. 65—3.)

1. In a device of the character described, the combination of a handle formed of a flat strip of metal, having an end portion bent angularly to form a bearing tongue, a struck-up portion bent to form another bearing tongue, and a downturned pivot lug, a spindle extending through and rotatable in said tongues, a holder secured to the spindle, a lever pivoted to said lug, and means between the spindle and the lever for imparting a partial rotation to the spindle and holder.



2. In a device of the character described, the combination of a handle formed of a flat strip of metal, having portions thereof bent angularly to form a plurality of bearing tongues, a spindle extending through and rotatable in said tongues, a lever pivoted at one side of the handle and provided with a rack, a pinion fixed to the spindle engaging the rack and disposed forwardly of the lugs, and a coil spring on the spindle and between said lugs.

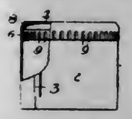
3. The combination of a handle provided with a tongue at one side thereof, a spindle rotatably mounted on the handle, a holder secured to the spindle, a lever pivoted at said tongue to swing vertically, formed of a strip of metal and with integrally inturned stop-tongues above and below the handle respectively, and a gear between the spindle and the lever for imparting a partial revolution to the spindle.

4. The combination of a handle having a bearing thereon, a spindle rotatably mounted in said bearing, a holder secured to the spindle, a lever pivoted to the handle and having an arcuate series of openings therein and a pinion fixed to the spindle having teeth extending into said openings and whereby the lever will serve to hold the pinion and spindle against longitudinal movement, said pinion being disposed in front of the inner end of the handle.

5. The combination of a handle having bearing tongues formed thereon, one of said tongues being struck up from the central portion of the handle so as to leave a slot therein, a spindle mounted in the bearings, a holder secured to the spindle, a lever pivoted to the handle, means between the spindle and the lever for rotating the spindle and a spring on the spindle having one of its ends extended into said slot.

[Claim 6 not printed in the Gazette.]

1,214,523. METAL TOP FOR BOTTLES AND LIKE RECEPTACLES. ALONZO L. EDWARDS, Wheeling, W. Va., assignor to Wheeling Stamping Company, Wheeling, W. Va., a Corporation of West Virginia. Filed Nov. 6, 1915. Serial No. 59,999. (Cl. 215—9.)



1. A two-part metal cap of the character described, comprising a sheet metal open-end body portion, and a top member closing one end of the body portion, the top member having an annular depression in its upper surface and having a depending flange fitting over the upper edge of the body portion and extending below the bottom of the depression, the space between the outer wall of said depression and said flange forming a seat for the body portion, and the walls of said depression, the upper edge of the body portion and the base of the flange being pressed together to form a four-ply locking seam, the edge of the flange extending below said seam and forming with the body portion a two-ply portion of the cap, a portion at least of said flange being bent inwardly with the registering part of the body portion whereby a projecting raw edge is avoided, substantially as described.

2. A two-part metal cap of the character described, comprising a sheet metal open-end body portion, and a top member closing one end of the body portion, the top member having an annular depression in its upper surface and having a depending flange fitting over the upper edge of the body portion and extending below the bottom of the depression, the space between the outer wall of said depression and said flange forming a seat for the body portion, and the walls of said depression, the upper edge of the body portion and the base of the flange being pressed together to form a four-ply locking seam, the edge of the flange extending below said seam and forming with the body portion a two-ply portion of the cap, the edge of said flange and the registering part of the body portion being crimped and forced inwardly so that the crimped edge of the flange is substantially flush with the body portion whereby a projecting raw edge is avoided, substantially as described.

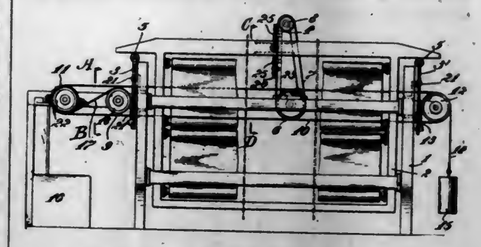
1,214,524. VEHICLE-LAMP. EVAN J. EDWARDS, Cleveland, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Mar. 4, 1915. Serial No. 12,149. (Cl. 240—41.)

1. A reflector for a vehicle lamp comprising a shell of a segment of the surface of a prolate ellipsoid of revolution by a plane of segmentation through the major axis and the shell of an axial segment of the surface of a paraboloid, the axes and planes of segmentation coinciding, the focus of the paraboloid being between the foci of the ellipsoid and one of the shells extending on one side and the other on the opposite side of the common plane of segmentation.

2. In a vehicle lamp, the combination of the shell of a segment of the surface of a prolate ellipsoid of revolution delimited by a substantially horizontal plane of segmentation through the major axis and the shell of an axial segment of the surface of a paraboloid, the axes and planes of segmentation coinciding, the ellipsoidal shell extending above and the paraboloidal shell below the common plane of segmentation, with a concentrated source of light substantially in one of the foci of the ellipsoid and in the rear of the focus of the paraboloid.

1,214,525. EMBROIDERING-MACHINE. KARL EGGART, Arbon, Switzerland, assignor to the Firm of Adolph Saurer, Arbon, Switzerland. Filed Oct. 2, 1915. Serial No. 53,675. (Cl. 112—7.)

1. In an embroidering machine, the combination of a main frame, a fabric frame, vertically movable end supports and a vertically movable intermediate support, all guided on the main frame and supporting the fabric frame, pulleys adjacent to the end supports, a flexible connection between each end pulley and the corresponding support, a movable member provided with a curved surface adjacent to the intermediate support, a second movable member also provided with a curved surface mounted ou the main frame, said two members having a common vertical tangent, a flexible connection secured to said two members and the intermediate support and endless flexible connections between the end pulleys and said member arranged adjacent the intermediate support.



2. In an embroidering machine, the combination of a main frame, a fabric frame, vertically movable end supports and a vertically movable intermediate support, all guided on the main frame and supporting the fabric-frame, a pulley adjacent to one of the end supports, a pulley adjacent to the intermediate support, a driving pulley at the other end, flexible connections between each pulley and the corresponding support, an endless flexible connection between the driving-pulley and the intermediate pulley, and an endless flexible connection between the intermediate pulley and the first mentioned end pulley and operated by the intermediate pulley.

3. In an embroidering machine, the combination of a main frame, a fabric frame, vertically movable end supports and a vertically movable intermediate support, all guided on the main frame and supporting the fabric-frame, a double end pulley adjacent to one of the end supports, a triple pulley adjacent to the intermediate support, a driving-pulley, a flexible connection from each pulley to the corresponding support, an endless flexible connection between the intermediate pulley and the first named pulley, and an endless flexible connection between the driving pulley and the intermediate pulley.

4. In an embroidering machine, the combination of a main frame, a fabric frame, vertically movable end supports and a vertically movable intermediate support, all guided on the main frame and supporting the fabric-frame, pulleys adjacent to the several supports, a flexible connection between each end pulley and the corresponding support, a guide pulley vertically above the intermediate pulley, an endless flexible connection guided on the intermediate pulley and said guide pulley and secured to the intermediate support, and endless flexible connections between the end pulleys and the intermediate pulley.

5. In an embroidering machine, the combination of a main frame, a fabric-frame, vertically movable end supports and a vertically movable intermediate support, all guided on the main frame and supporting the fabric-frame, pulleys adjacent to the several supports, flexible connections between each pulley and the corresponding support, endless flexible connections between the several pulleys, driving means for one of the end pulleys, and a counterbalance connected to the other of the end pulleys.

1,214,526. BLEACHING GRAIN. WYNN E. ELLIS, Chicago, Ill. Filed Sept. 10, 1909, Serial No. 517,048. Renewed July 3, 1916. Serial No. 107,468. (Cl. 83—28.)

1. In apparatus for bleaching grain, the combination of a structure having a chamber therein for retaining a grain-column, means for supplying a bleaching agent and moisture to said grain chamber above the grain-column, means for producing a current downwardly through the column, and means for effecting a simultaneous withdrawal of the bleaching agent and moisture from across the body of said grain-column.

2. In apparatus for bleaching grain, the combination of a structure having a chamber therein for retaining a grain-column, means for supplying a bleaching agent and moisture to said chamber, a series of outlets leading from

the grain chamber and disposed below the inlet for the bleaching agent and across said chamber, and means for producing a downward current through the column and out of said outlets.



3. In apparatus for bleaching grain, the combination of a structure having a chamber therein for retaining a grain-column, means for supplying a bleaching agent and moisture to said chamber, a series of arched cross strips disposed horizontally across said chamber and below the inlet for the bleaching agent and communicating with the exterior of the structure, and means for exerting a suction through said cross strips upon the interior of the chamber to produce a downward current through the column.

4. In apparatus for bleaching grain, the combination of a structure having therein a chamber for a column of grain, means for supplying a bleaching agent and steam to one portion of the grain-column, means for supplying a bleaching agent and air to another portion of the column, and means for causing a current to pass in opposite directions through the grain-column.

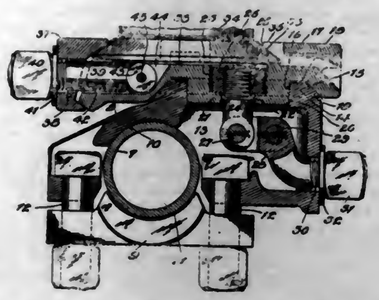
5. In apparatus for bleaching grain, the combination of a structure having a vertically extending chamber therein, and a closed top, means for supplying grain to the top of said chamber, a valved discharge at the bottom of said chamber for maintaining a grain-column in said chamber, means for supplying a bleaching agent and steam to the upper portion of said chamber, means for producing a current downwardly through the grain-column from the upper portion of the grain-chamber, and means for causing the bleaching agent to pass upwardly through the column, and an outlet for the unabsorbed agent from the grain.

[Claim 6 not printed in the Gazette.]

1,214,527. DRILL-MOUNTING. FRED L. EMERSON, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Sept. 30, 1915. Serial No. 53,349. (Cl. 255—51.)

1. In a device of the character set forth, a support-engaging member, a drill holding member rotatably mounted thereon, a clamping bolt disposed axially of the members, an operating lever pivoted to the support engaging member and connected to the clamping bolt for moving the same axially, and means for placing strain upon the lever.

2. In a device of the character set forth, a support clamp including a chambered member having an upstanding ring seat, a drill holding member rotatably mounted on said ring seat and having an axial socket, an axially disposed clamping bolt having a head in said socket, said bolt extending into the chamber, an operating lever pivoted in the chamber and connected with the lower end of the clamp bolt, said operating lever projecting from the member, and a nut on the projecting end of the lever having a bearing against the member.

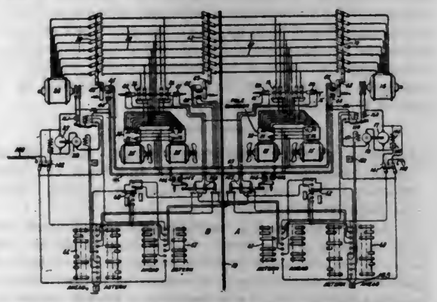


3. In a device of the character set forth, relatively rotatable support engaging and drill holding members, a bolt disposed axially of the members and having an adjustable clamping head engaging one of the same, a lever pivoted to the bolt and having a pivotal mounting on the other member, and means for swinging the lever to effect a clamping action between the head and the member engaged thereby.

4. In a device of the character set forth, the combination with a support engaging clamp including an upper member having an internal chamber and an upstanding ring seat, of a drill holding member rotatable on said seat, means in the chamber and engaged with the drill holding member for clamping it against rotation and in different positions, said drill holding member having a recessed drill base receiving seat in its upper side disposed eccentrically to the ring seat, and means for rotatably mounting the base of a drill in the latter seat and clamping it against rotation and in different positions.

5. In a device of the character set forth, the combination with a support engaging member, of a tool-holding member rotatably mounted thereon, a clamp bolt movable axially of the tool holding member, means for moving the bolt, a clamping head adjustably threaded on the bolt and engaging the tool holding member, and a pin connection between the bolt and head to normally hold them against relative rotation.

1,214,528. ELECTRIC SHIP PROPULSION. WILLIAM L. R. EMMET, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 2, 1915. Serial No. 95. (Cl. 172—8.)



1. In a system of electric ship propulsion, a propeller driving electric motor, an electric generator, an elastic fluid turbine, and a controller adapted to successively connect the motor to the generator for astern operation, effect the energization of the generator with a predetermined degree of over-excitation and control the admission of elastic fluid to the turbine.

2. In a system of electric ship propulsion, a propeller driving electric motor, an electric generator, an elastic fluid turbine, and a controller adapted when moved in one direction from its off position to successively connect the motor to the generator for ahead operation, effect the energization of the alternator field and control the admission of elastic fluid to said turbine and when moved in the other direction from its off position to successively connect the motor to the generator for astern operation, effect the energization of the alternator field and control the admission of elastic fluid to said turbine.

3. In a system of electric ship propulsion including a propeller driving electric motor, an electric generator, and an elastic fluid turbine, the method of reversing which comprises shutting off the admission of elastic fluid to the turbine, deënergizing the generator field, reversing the motor connections, energizing the generator field, and admitting elastic fluid to the turbine.

4. In a system of electric ship propulsion including a propeller-driving electric motor, an electric generator, and an elastic fluid turbine, the method of reversing the direction of motion of the ship which comprises the successive steps of shutting off the admission of elastic fluid to the turbine and deënergizing the generator field, reversing the motor connections, energizing the generator field, and admitting elastic fluid to the turbine when the generator and motor have pulled substantially into synchronism.

5. In a system of electric ship propulsion including a propeller-driving electric motor, an electric generator, and an elastic fluid turbine, the method of reversing the direction of motion of the ship which comprises the successive steps of shutting off the admission of elastic fluid to the turbine, deënergizing the generator field, reversing the motor connections, energizing the generator field with a predetermined degree of over-excitation, and admitting elastic fluid to the turbine when the generator and motor have pulled substantially into synchronism.

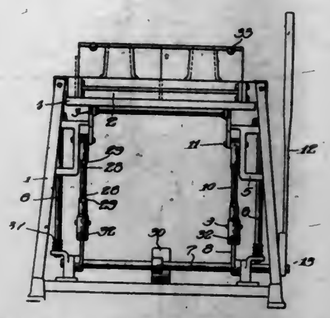
[Claims 6 to 31 not printed in the Gazette.]

1,214,529. BOLTLESS RAIL-JOINT. JAMES D. EVERETT, Crown Point, Ind. Filed Oct. 7, 1914. Serial No. 865,512. (Cl. 239—6.)



The combination with the abutting ends of adjacent rails, each having the under faces of its ball portion contiguous to the web provided with continuous inverted V-shaped retaining grooves having their inner walls of greater height than the outer walls, said rails also having their webs provided with openings; of a chair including a base plate for receiving the bases of the rails and having an upstanding flange adjacent each longitudinal edge of a depth equal to the thickness of the longitudinal edges of the bases of said rails, said flanges being provided on their outer edges with bolt openings, a second longitudinal flange at each longitudinal edge of said base plate extending above the first named flange, angle bars having their upper edges substantially shaped to correspond with the grooves in said rails whereby said upper edges may be engaged in said grooves when mounting the bars in position previous to the engagement of the body portions of the bars with the webs of the rails, the longitudinal edges of the horizontal portions of said bars being adapted to engage the second named flanges when said bars are in position, lugs formed upon said bars and adapted to engage in the openings in the webs of the rails, and fastening devices mounted in the openings formed in the first named flanges of the chair for securing the parts together.

1,214,530. CONCRETE-BLOCK-MAKING MACHINE. JOHN ALBERT FERGUSON, Denver, Colo. Filed May 15 1916. Serial No. 97,651. (Cl. 25—41.)



1. In a machine of the class described, a main mold form frame, a movable bottoming frame adapted to be raised and lowered under the main mold form frame; with a set of removable forms hinged to the main frame and adapted to be lifted clear of the main mold while the latter is being filled and to be lowered and filled after the filling of the main mold form.

2. In a machine of the class described, a molding frame adapted to mold a block with the outer or wall face downward, a series of detachable members having mold pockets and adapted to be set over the main mold and filled in a manner to build projections on to the plastic mass held in the main mold.

3. In a machine of the class described, a main mold frame open at the top and bottom, a movable bottom board carried on a vertically moving supporting frame and adapted to be lifted by the frame into close contact with the bottom of the main mold to form a bottom thereto; with detachable mold members hinged to the frame and adapted to be moved in position over the main mold and provided with mold form pockets adapted to be filled from the top and open at the bottom whereby the filling of the pockets adds projections on to the main molded body, means for lowering the movable frame, board and plastic block downward from the molds.

4. In a machine of the class described, a mold frame horizontally disposed and open at the top and closed with a movable board at the bottom; a series of pocketed members detachably connected and adapted to be adjusted over the top of the main mold frame.

5. In a machine of the class described, a main mold form horizontally disposed, a series of mold pocket members hinged to the mold form by slotted hinge connections, to facilitate their removal and replacement.

[Claims 6 to 10 not printed in the Gazette.]

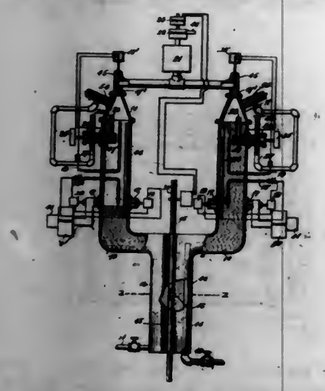
1,214,531. POWER GENERATION. REGINALD A. FESSENDEN, Brookline, Mass. Filed Nov. 18, 1911. Serial No. 661,109. (Cl. 60—15.)

1. The combination of a combined liquid piston internal combustion engine and air compressor, and a turbine adapted to be driven by the compressed air, the liquid piston of the internal combustion engine and compressor being formed by a single column of liquid.

2. The combination of an internal combustion engine, having its chamber adapted to act as an air compressor during one portion of a single reciprocating movement, and as a combustion chamber during a second portion of said movement, and a gas motor adapted to be driven by the compressed air.

3. In combination, an engine having two cylinders with fluid pistons, means for introducing combustible materials and air into the cylinders, means for alternating the explosions and for causing the alternate explosions to compress the air charge in the other cylinder to that in which

the explosion occurred within, and a gas turbine adapted to be driven by the gas so compressed.

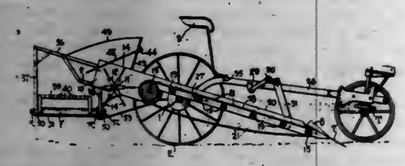


4. In a fluid piston engine, a fluid, means for oscillating said fluid, and means for varying the period of oscillation of said fluid independently of the power of the explosion in accordance with the power to be delivered.

5. In a fluid piston engine, a fluid, means for oscillating said fluid, and electrical means for varying the period of such oscillation independently of the power of the explosion in accordance with the power to be delivered.

[Claims 6 and 7 not printed in the Gazette.]

1,214,532. AGRICULTURAL MACHINE. LEWIS FJELSTAD, Wallace, S. D. Filed Aug. 9, 1916. Serial No. 113,991. (Cl. 56—51.)



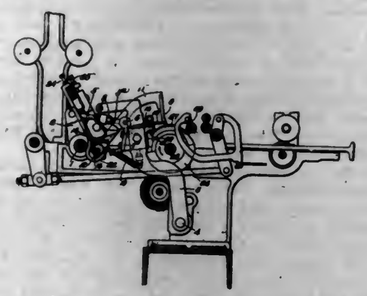
1. A machine of the character described comprising a body, a digging implement carried by the body, a conveyer carried by the body and leading from the digging implement, a cylinder upon which the conveyer discharges, a rock bar positioned above the cylinder, tines carried by the rock bar and overlying the cylinder, and automatic means for urging the tines toward the cylinder.

2. A machine of the character described comprising a body, a digging implement carried by the body, a conveyer carried by the body and leading from the digging implement, a cylinder upon which the conveyer discharges, a rock bar positioned above the cylinder, tines carried by the rock bar and overlying the cylinder, and yieldable means coacting with the rock bar for urging the tines toward the cylinder.

3. A machine of the character described comprising a body, a digging implement carried by the body, a conveyer carried by the body and leading from the digging implement, a cylinder upon which the conveyer discharges, a rock bar positioned above the cylinder, tines carried by the rock bar and overlying the cylinder, automatic means for urging the tines toward the cylinder, and a screening element supported by the body and upon which the cylinder discharges.

4. A machine of the character described comprising a body, a digging implement carried by the body, a conveyer carried by the body and leading from the digging implement, a cylinder upon which the conveyer discharges, a rock bar positioned above the cylinder, tines carried by the rock bar and overlying the cylinder, automatic means for urging the tines toward the cylinder, and a vibratory screening element carried by the body and upon which the cylinder discharges.

1,214,533. COMBING-MACHINE. ARCHIBALD S. FULLER, Newton, Mass. Filed Apr. 16, 1915. Serial No. 21,676. (Cl. 19—6.)



1. In a combing machine of the character described, a comb-cylinder, upper and lower nipper jaws, means to reciprocate the nipper jaws relatively to the comb-cylinder, a nipper jaw guideway positively predetermining a fixed path for the upper jaw, and means permitting movement of the lower jaw with respect to the path of reciprocation for the upper jaw so fixed.

2. In a combing machine of the character described, a comb-cylinder, a nipper frame and means for imparting thereto a reciprocating motion, upper and lower nipper jaws both movably mounted on said nipper frame, fixed means to move the upper jaw with respect to the frame to determine a fixed path therefor during the reciprocations of said frame, and means permitting the lower jaw to move with respect to the upper jaw.

3. In a combing machine of the character described, a comb-cylinder, a nipper frame pivoted to swing relatively to said comb-cylinder, means to reciprocate said frame, upper and lower nipper jaws both movably mounted on said frame, fixed means to guide the upper nipper jaw in a predetermined path other than the arc of a circle centered at the pivot of said frame, said lower jaw being yieldingly mounted to accommodate a variable thickness of sliver.

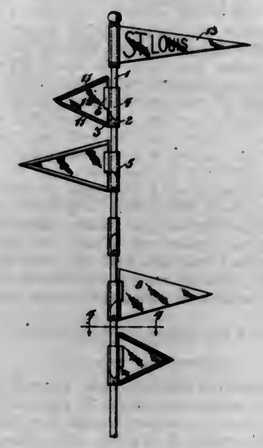
4. In a combing machine of the character described, a comb-cylinder, a nipper frame and means for imparting thereto a reciprocating motion, nipper jaws carried by said frame comprising an upper nipper jaw and a lower nipper jaw both movably mounted on said frame, a nipper guide positively controlling the path of movement of the upper nipper jaw, and means yieldingly urging the lower nipper jaw toward the upper jaw.

5. In a combing machine of the character described, a comb-cylinder, a nipper frame pivoted to swing relatively to said comb-cylinder, means to reciprocate said frame, nipper jaws carried by said frame comprising an upper nipper jaw movably mounted on said frame and a lower nipper jaw yieldingly urged toward said upper jaw, and means positively to guide the upper nipper jaw in a predetermined path.

[Claims 6 to 8 not printed in the Gazette.]

1,214,534. ADVERTISING DEVICE AND THE LIKE. RICHARD M. GAFFNEY, St. Louis, Mo. Filed Dec. 30, 1915. Serial No. 69,464. (Cl. 40—125.)

1. In an advertising device or the like, a mast adapted to be fixed in upright position, a bearing-member fixed on the mast, said bearing-member having a cam-face, a vane-carrying member journaled on the mast and having a cam-face oppositely disposed to the cam-face of the bearing-member, and a display-vane carried by, and rotatably movable on the mast with, said vane-carrying-member, said vane-carrying member bearing at its said cam-face upon, and coöperatively engaging, for the purposes stated, with, the cam-face of said bearing-member.



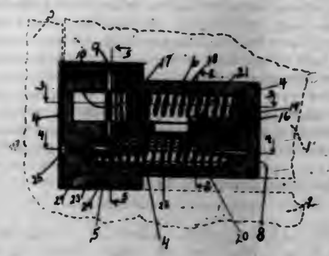
2. In an advertising device or the like, a mast adapted to be fixed in upright position, a plurality of radiating display vanes journaled for rotation upon said mast, and staggered means on the mast coöperatively engaging with the journals of said vanes for normally locking the vanes stationary upon the mast in an annularly staggered series therealong.

3. In an advertising device or the like, a mast adapted to be fixed in upright position, a plurality of bearing-members fixed on the mast in an endwise spaced apart annularly staggered series lengthwise of the mast, a plurality of vane-carrying members journaled for rotatory movement on the mast and bearing respectively upon said bearing-members, and radiating display-vanes carried by, and movable rotatably on the mast with, said vane-carrying members, said vane-carrying and bearing members coöperatively engaging to normally lock said vanes at their said vane-carrying members stationary upon the mast in a similar annularly staggered series long the mast.

4. In an advertising device or the like, a mast adapted to be fixed in upright position, a plurality of bearing-members fixed on the mast in endwise spaced apart relation, each of said members at its upper end having a cam-face and the cam-faces of said several members being disposed in an annularly staggered series lengthwise of the mast, a plurality of vane-carrying members journaled on the mast and each having a cam-face, the cam-faces of said vane-carrying members being oppositely disposed to the cam-faces of said bearing-members, and display vanes carried by, and movable rotatably on the mast with, said vane-carrying members, said vane-carrying members bearing at their respective cam-faces upon, and coöperatively engaging, for the purposes stated, with, respective cam-faces of said bearing-members.

1,214,535. DOOR-CONTROLLING MECHANISM. BLAIR W. GAIR, Chicago, Ill. Filed June 4, 1914. Serial No. 842,860. (Cl. 16—88.)

1. In a device of the kind described and in combination, a casing, and means for securing the same to a door, means for pivotally supporting said casing and door, and said casing provided with an oil containing chamber therein, a plunger arranged in said chamber, a communicating chamber arranged proximate to said plunger chamber, means arranged in said plunger chamber for normally maintaining said plunger in operative position, a yoke member arranged in the adjacent chamber and operatively connected with said plunger, auxiliary means for resiliently maintaining said yoke and plunger in operative positions, a shaft arranged in said adjacent chamber and provided with means for engaging said yoke, said shaft projecting to the exterior of the casing, and means for operatively connecting said shaft to the fixed part of the structure.



2. In a door checking device of the kind described and in combination, a floor plate, a fluid containing casing pivotally carried by said plate and provided with means for securing the same to a door, a shaft arranged in said casing and projecting therefrom at the top side thereof, means carried by said floor plate for engaging said shaft end and preventing the rotation thereof, said casing provided with two communicating chambers arranged one above the other, yieldable means arranged in said chambers and coöperating with said shaft for opposing the movement of the door and casing about its pivotal support and returning the same to a closed position, said means comprising a fluid-controlled plunger arranged in one chamber, resilient means for opposing the movement of said plunger and returning the same to normal position, means controllable from the exterior of the casing for adjusting the resilient means, a shaft engaging member arranged in the other chamber, said member connected with said plunger, and auxiliary resilient means for normally returning the said engaging member to normal position.

3. In a device of the kind described and in combination, an oil containing casing provided with means for securing the same to a door, a floor plate arranged to pivotally support said casing and door, said casing provided with a plurality of oil containing chambers therein, an oil controlled plunger arranged in one of said chambers, a spring arranged within said chamber, and arranged to cooperate with said plunger to oppose the movement thereof or return the same to normal operative position, a yoke member arranged in the adjacent chamber and operatively connected with said plunger, a spring member arranged to engage said yoke member, said casing provided with means for coöperating with said spring member and engaging one end thereof, a shaft arranged in said casing and provided with teeth arranged to engage said yoke, said shaft projecting from the casing on the top side thereof, and means for securing said shaft against rotation, comprising a bracket connected with said floor plate, and provided with means for engaging the upper end of said shaft.

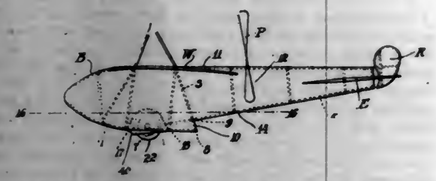
4. The combination in a door closing and checking device of the kind described, of a casing provided with fluid containing chambers therein, means for securing said casing to a door, a fluid controlled plunger arranged in said casing, means for maintaining said plunger in operative position, a shaft projecting from the interior of the casing to the exterior thereof at the top side, said shaft having gear teeth thereon, a yoke member arranged in said casing and extending on each side of the said shaft, and provided with teeth arranged to engage the teeth on said shaft, means for operatively connecting said plunger and yoke, supplemental means arranged in the yoke chamber, and tending to maintain the yoke and plunger in normal positions, and means carried by a fixed part of

the structure for engaging and locking the said shaft against rotation.

5. In a door closing and checking device of the kind described and in combination, a casing provided with oil containing chambers therein, an oil controlled plunger arranged in one of said chambers, a spring arranged to oppose the movement of said plunger in said casing, a shaft arranged in said casing projecting from the top thereof, means arranged in the other of said chambers for engaging said shaft and operatively connecting said plunger therewith, a supplemental spring member engaging said connecting means and a portion of said casing, and means positioned above the casing and secured to a fixed part of the structure for engaging said shaft at the upper end thereof and preventing movement of the shaft upon movement of the casing thereabout, whereby when said casing is moved said plunger will be retracted.

[Claim 6 not printed in the Gazette.]

1,214,536. AEROPLANE. EDSON F. GALLAUDET, Norwich, Conn. Filed Apr. 25, 1913. Serial No. 763,486. (Cl. 244—2.)



1. In a flying machine, a framed body of stream line form which is inclosed throughout except for a cock-pit opening for the operator in its upper side and within which the engine, fuel-tank, and substantially all of the operating and control mechanism are mounted, a single pair of transversely extended wings mounted on opposite sides of the body between the upper side and the center of gravity thereof, control planes mounted at the tail, and running gear comprising wheels yieldingly mounted upon the framework within the body forward of its center of gravity and projecting downwardly through openings in its bottom less than half their diameter.

2. In a flying machine, a combined body and hydroplane boat of stream line form which is inclosed throughout except for a cock-pit opening for the operator in its upper side and has a flat bottom curving downwardly from the nose and extending rearwardly and downwardly to a point well forward of its longitudinal center where it terminates in a transverse rearwardly facing step and from the top of the step a bottom extending rearwardly on an upward incline to the tail, and which carries an engine, fuel tank, and other operating and control mechanism mounted therein so as to bring the center of gravity within the body nearly above the transverse step in its bottom, and a single pair of wings mounted on opposite sides thereof between its upper side and center of gravity.

3. In a flying machine, a combined body and hydroplane boat which is inclosed throughout except for a cock-pit opening for the operator in its upper side, which is so shaped and carries wings so mounted thereon and an engine, fuel tank, and other operating and control mechanism so mounted therein as to bring the center of gravity of the machine within the body well forward of its longitudinal center, and which has a flat bottom curving downwardly from the nose and extending rearwardly and downwardly to a point nearly below the center of gravity where it terminates in a transverse rearwardly facing step, providing a hydroplane surface beneath a relatively short body portion of the body, and from the top of the step a bottom extending rearwardly and on an upward incline beneath an elongated tail portion.

4. In a flying machine, a hydroplane boat body of stream line form which is sheathed and inclosed throughout except for a cock-pit opening for the operator in its upper side and has a flat bottom curving downwardly from the nose and extending rearwardly and downwardly to a point well forward of its longitudinal center where it terminates in a transverse rearwardly facing step, providing a hydroplane surface beneath its relatively short body portion, and from the top of the step a bottom extending rearwardly and on an upward incline to the tail, and an engine, fuel tank, and other operating and control mechanism mounted within the body so as to bring the center of gravity of the machine within the body substantially above the transverse step in its bottom, and wings mounted upon the body on opposite sides thereof with their centers of pressure substantially above the center of gravity of the machine.

5. In a flying machine, a combined body and stepped bottomed hydroplane boat which is provided with running gear comprising one or more wheels yieldingly mounted upon the framework within the body forward of the step so that less than half the wheel projects below the bottom through an opening formed therein and covered with an inverted water-tight casing joined to the bottom.

[Claims 6 to 9 not printed in the Gazette.]

1,214,537. METAL-STUDDED TIRE. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed May 2, 1916. Serial No. 94,894. (Cl. 152—14.)



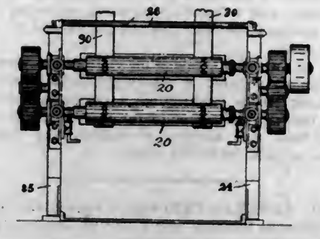
1. A pneumatic tire having in the tread wall thereof a plurality of fabric strips, a series of traction studs each of which has a head at the tire surface, a stem extending through the several said strips, a spacing washer on the stem located between two of said strips, and a rivet washer on the inner end of said stem.

2. A pneumatic tire having in the tread wall thereof a plurality of fabric strips and rubber, a series of traction studs each having an outer head, a stem passing through the several said strips, a washer riveted on the inner end of said stem, and a spacing washer located between two of said strips, said spacing washer being slidably guided on said stem and formed with a series of recesses or openings through which the rubber of the tread wall passes.

3. A pneumatic tire having in the tread wall thereof a plurality of fabric strips and rubber, and a series of traction studs separately anchored to the respective strips, each stud having a head at its outer end undercut on its inner side to receive the tread rubber.

1,214,538. FABRIC-PRINTING MACHINE. LEWIS A. GILL, Jewett City, Conn. Filed Dec. 16, 1915. Serial No. 67,164. (Cl. 101—90.)

1. In combination with, and located between, the pattern and impression rolls of a calico printing machine, a plurality of aprons of yielding material, one of said aprons being formed to register with the engraved portions of the pattern roll, and means for preventing the crawling of the said aprons with respect to the said pattern roll.



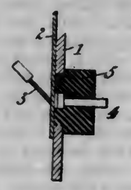
2. In combination with, and located between, the pattern and impression rolls of a calico-printing machine, an apron of yielding material formed to register with the engraved portions of the pattern roll, and means consisting of suction cups for preventing the crawling of said apron with respect to the said pattern roll.

1,214,539. METHOD OF IMPROVING THE ALLOYING QUALITIES OF MANGANESE WITH BRASS AND BRONZE. HANS GOLDSCHMIDT and OTTO WEIL, Essen-on-the-Ruhr, Germany, assignors to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 5, 1914. Serial No. 875,581. (Cl. 75—1.)

1. The method of producing alloys of brass or bronze containing manganese which consists in first improving the alloying quality of the manganese by alloying the same with phosphorus and copper and then adding the pre-alloy thus formed to the metal bath containing the other ingredients of the alloy.

2. The method of producing alloys of brass or bronze containing manganese which consists in first improving the alloying quality of the manganese by alloying ferro-manganese with prosphorus and copper, and then adding the pre-alloy thus formed to the metal bath containing the other ingredients of the alloy.

1,214,540. ELECTRICALLY-OPERATED TABULATING AND LIKE MACHINE. CHRISTIAN AUGUSTINE EVERARD ALFRED GREENE, London, England. Filed Nov. 15, 1915. Serial No. 61,728. (Cl. 200—27.)



1. A device of the character described, comprising a plurality of contacts, one of said contacts being movable relative to the other, and a septum support arranged to hold said septum out of engagement with one of the contacts; substantially as described.

2. A device of the character described, comprising a plurality of contacts arranged to be connected in an electric circuit, one of said contacts being movable relative to the other, said contacts being arranged to permit a septum to be passed between them, and a support for the septum and arranged to hold said septum out of engagement with the relatively fixed contact to prevent the closing of the electric circuit through the contacts by means of conducting material in the septum; substantially as described.

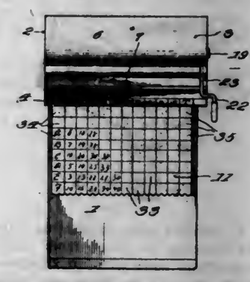
3. A device of the character described, comprising two sets of contacts, the contacts of one set being movable relative to the contacts of the other set, said sets of contacts being arranged to permit the passage of a septum between them, and supporting means for holding the septum out of engagement with one set of contacts during the passage thereof between the contacts; substantially as described.

4. A device of the character described, comprising a plurality of rotating contacts, a plurality of contacts arranged to move toward and from the rotary contacts, said contacts being arranged to permit the passage of a septum between the rotary contacts and the relatively movable contacts, means for retaining the septum out of engagement with the rotary contacts, and a brush in engagement with each of said rotary contacts; substantially as described.

5. A device of the character described, comprising a plurality of rotating contacts, a plurality of contacts arranged to move toward and from the rotary contacts, said contacts being arranged to permit the passage of a septum between the rotary contacts and the relatively movable contacts, means for retaining the septum out of engagement with the rotary contacts, means for rotating the rotary contacts, and a brush in engagement with each of said rotary contacts; substantially as described.

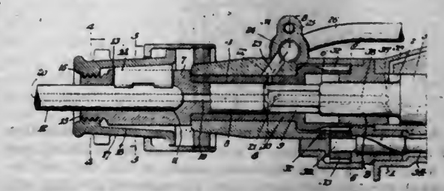
[Claim 6 not printed in the Gazette.]

1,214,541. SCORE-KEEPING APPARATUS. EDWIN WILLIAM GUILFORD, Jr., Washington, D. C. Filed Feb. 17, 1915. Serial No. 8,912. (Cl. 11—22.)



A score keeping apparatus comprising a casing adapted to contain a bowling score sheet having a plurality of transverse rows of boxes to contain the scores, a platen, and means for normally preventing said sheet from being pulled from the casing and for moving said sheet onto the platen to expose a row of boxes when said means is first operated, said means thereafter serving to advance said sheet along the platen one more row of boxes each time said means is operated) whereby sufficient rows may be exposed on the platen for recording the scores of any number of players.

1,214,542. ROCK-DRILL. CHARLES H. HAESELER, Philadelphia, Pa. Filed Feb. 24, 1916. Serial No. 80,109. (Cl. 255—57.)



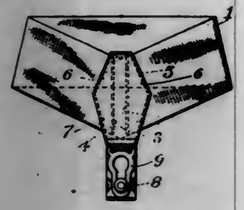
1. In a rock drill, the combination of a stock having a longitudinal socket, transverse ways and a male thread, with a steel having an end in said socket, gibs movable in said ways to clamp said steel, and a sleeve having an inner surface engaging said gibs in wedging relation and a female thread engaging said male thread in loose rela-

tion so as to permit a limited lateral movement between said threads.

2. In a rock drill, having a case and a percussive tool adapted to reciprocate in said case, a stock connected with said case so as to be movable relatively thereto by said tool, said stock having a thread, a drill steel, and means connecting said stock with said case and fixing said steel to said stock, said means comprising a thread loosely engaging said thread first named so as to provide limited lateral movement between said threads.

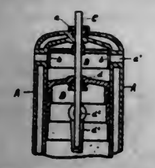
3. In a rock drill, having a case and a percussive tool adapted to reciprocate in said case, a stock connected with said case so as to be movable relatively thereto by said tool, said stock having a screw thread, a drill steel, and means for loosely coupling said stock to said case and fixing said steel to said stock, said means comprising a screw thread loosely engaging said thread first named so as to provide limited lateral movement between said threads, whereby said means are operated by the blow of the tool to tighten without jamming the grip on said steel.

1,214,543. METHOD OF MAKING HOSE-SUPPORTING GARTERS. MYRON B. HAMMOND, Bridgeport, Conn., assignor to The Thomas P. Taylor Co., Bridgeport, Conn., a Corporation of Connecticut. Original application filed Mar. 17, 1916, Serial No. 84,753. Divided and this application filed Oct. 21, 1916. Serial No. 127,000. (Cl. 241—6.)



The method of making hose supporting garters, which consists in first forming a circlet from elastic webbing by coating the abutting ends with an adhesive substance and applying and stitching to these ends cloth strips on both sides of the webbing while moist and tacky, stitching to the webbing a non-elastic unyielding member which envelops said strips and has its lateral edges inclined outwardly and meeting at obtuse angles the stitches through said member and webbing being parallel to said edges while the lower portion of said member depends below the webbing, and securing hose engaging devices to the said depending portion.

1,214,544. VALVE OF INTERNAL-COMBUSTION ENGINES. CLARK WAY HARRISON, Summit, N. J. Filed Oct. 9, 1912. Serial No. 724,820. (Cl. 123—75.)



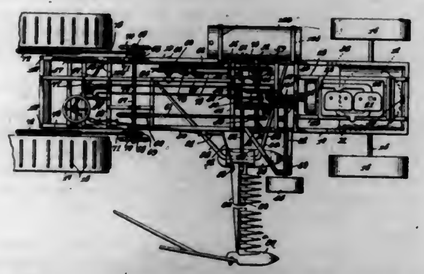
1. In an internal combustion engine, the combination of a cylinder, a piston, a valve within the cylinder, and a longitudinal valve operating shaft having one end extended through the piston into atmospheric pressure and the other end extended through the cylinder head into atmospheric pressure.

2. In an internal combustion engine, the combination of a cylinder, a piston, a valve within the cylinder and a hollow longitudinal valve operating shaft having one end extended through the piston into atmospheric pressure and the other end extended through the cylinder head into atmospheric pressure.

3. In an internal combustion engine, the combination of a cylinder, a piston, a rotary cylindrical valve within the cylinder, and a longitudinal valve operating shaft extending through the center of the piston and through the cylinder head.

4. In an internal combustion engine, the combination of a cylinder, a piston, a rotary cylindrical valve within the cylinder, and a longitudinal valve operating shaft extending through the center of the piston and through the cylinder head and adapted to balance the longitudinal pressures on said valve and shaft.

1,214,545. GENERAL-PURPOSE FARM-TRACTOR. RAY C. HASTINGS, Wichita, Kans. Filed Apr. 8, 1915. Serial No. 20,022. (Cl. 21—114.)



1. The combination with a tractor, of a trailer, and auxiliary side frames rigidly but removably connected to the rear of said tractor, and resiliently pivoted to the front of said trailer for connecting the latter to the former, and means supported on the tractor frame for raising and lowering the rear of the trailer.

2. The combination with a tractor having a chassis, of a trailer having a frame alined therewith, auxiliary side frames pivoted to the front of said trailer frame for removable securement to the rear portion of said tractor chassis, and lever means on one of said auxiliary frames connected to the trailer frame for raising and lowering the rear thereof.

3. The combination with a tractor having a wheeled chassis, of a trailer having a frame alined with said chassis, a pair of auxiliary side frames pivotally connected to forward portions of said trailer frame, vertical securing posts carried by said side frames, and means for removably securing said posts to said tractor chassis.

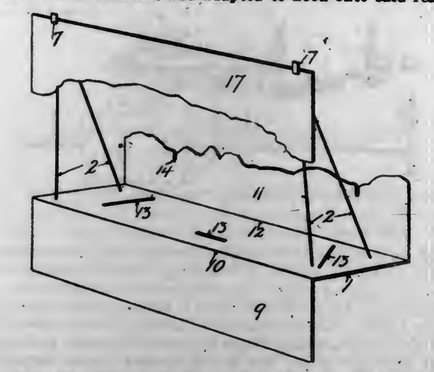
4. The combination with a tractor having a wheeled chassis, of a trailer having a frame alined with said chassis, auxiliary side frames pivoted to the trailer frame and adapted to be removably secured to the rear portion of said tractor chassis in supporting the forward portion of said trailer frame, and a wheel mounted to support the rear portion of said trailer frame, and means for raising and lowering the rear of the trailer frame.

5. The combination with a tractor having a wheeled chassis, of a trailer having a frame alined with said chassis, auxiliary side plates for linking said trailer to said tractor, and including vertical steering posts adapted to removably embrace rear corners of said tractor chassis and pivotally and yieldably supporting the forward portion of said trailer frame, and a plow wheel for supporting the rear extremity of said frame.

[Claims 6 to 12 not printed in the Gazette.]

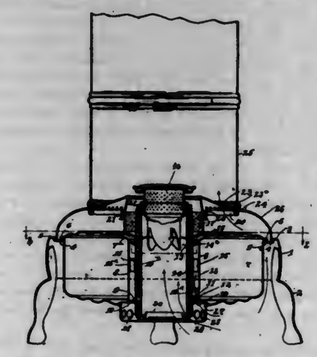
1,214,546. WINDOW-DISPLAY. CLARENCE S. JACKSON, Brooklyn, N. Y., assignor to Bayer-Stroud Corporation, New York, N. Y., a Corporation of New York. Filed June 9, 1915. Serial No. 33,014. (Cl. 211—24.)

A display device for the purpose set forth, comprising a horizontal shelf portion having a slot therein, an upwardly extending rear wall, integral with the shelf and adapted to be folded upon said shelf, a detachable member insertible into said slot and adapted to hook onto said rear



wall for the purpose of holding said shelf portion and said rear wall at right angles to each other and flexible means extending from said shelf portion only and adapted to support said device.

1,214,547. OIL-STOVE. WILLIAM R. JEAVONS and ARNOLD R. WHITTAKER, Cleveland, Ohio. Filed Aug. 6, 1914. Serial No. 855,407. (Cl. 158—94.)



1. In an oil heater, the combination of a base, an annular reservoir supported thereby and providing therewith an air circulating space, a pair of wick tubes within the reservoir and spaced from the inner wall thereof to provide therewith an annular passageway, a gallery extending about the upper portion of the outer wick tube, a drum above said wick tubes and having a bottom adapted to be supported above said passageway, and a collar depending from such bottom and coöperating with the top of the gallery.

2. In an oil heater, the combination of an annular reservoir having an extended top, a ring surrounding and supporting the reservoir and forming therewith a vertically extending annular passageway, a pair of wick tubes within the reservoir and forming with the inner wall thereof a vertically extending annular passageway, a drum above the wick tubes and having an annular bottom adapted to be supported above said passageways, a collar depending from the central portion of such bottom, and a gallery surrounding the outer wick tube and having an imperforate bottom and having a perforated cylindrical wall the top whereof is in operative relation to said collar.

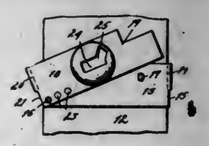
3. In an oil heater, the combination of an annular reservoir having an extended top, a pair of wick tubes within the central portion of the reservoir and forming with the inner wall thereof a vertically extending annular passageway, a drum above the wick tubes and having an annular bottom adapted to be supported above said reservoir and to receive therebeneath air flowing from said passageway and air flowing inwardly above the top of the reservoir, a collar depending from the inner portion of such bottom, and a gallery surrounding the outer wick tube, said gallery having an imperforate bottom extending outwardly above the inner annular passageway and also having a perforated cylindrical wall the top whereof is in operative relation to said collar.

4. In a stove of the character described, the combination of a reservoir having a horizontally extended top, wick tubes projecting upwardly from the reservoir, a gallery extending about the upper portion of the outer wick tube, a drum above the wick tubes and having a bottom, and means whereby air may circulate upwardly about the exterior of the reservoir and upwardly about the outer wick tube and be delivered beneath said bottom and thence through said gallery.

5. In a heater of the character described, the combination of an annular reservoir, a pair of wick tubes within the central wall of the reservoir and communicating with said reservoir and forming a vertically extending annular passageway with the inner wall of said reservoir, a gallery surrounding the upper portion of the outer wick tube and having an imperforate portion extending outwardly above the top of the annular passageway, said gallery being provided with a vertically extending perforated wall through which air flowing through the passageway may be admitted to the space about the top of the outer wick tube.

[Claims 6 to 18 not printed in the Gazette.]

1,214,548. ADJUSTABLE SHADE-HOLDER. ANDREW E. JOHNSON and GUSTAVE E. FRANZEN, Des Moines, Iowa. Filed May 11, 1916. Serial No. 96,838. (Cl. (156—24.)

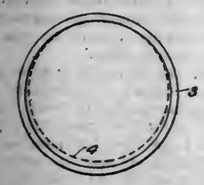


An adjustable shade holder comprising a plate having at one end a flange, and at its opposite end near its lower edge, a lug extending in a direction opposite to that of the flange, a hook member on the same side of said plate as said lug, a second plate having at one end a laterally extending flange of less width than the plate, and having near the same end, near one edge a plurality of holes arranged in a series longitudinally of said second plate, said second plate having a notch in its corner diagonally opposite said holes, means on said second plate for holding the end of a shade roller, the parts being so arranged that the first plate may be placed adjacent to a window strip with its flange adjacent to one side of the strip, and said second plate may be placed diagonally across said first plate with said lug received in one of said holes, and with one edge of the flange of the second plate against the opposite side of said strip, whereupon the notched end of said second plate may be swung toward position where the second plate is substantially parallel with the first plate, spaced from the first plate far enough to clear said hook, and after said hook is cleared the second plate may be moved against the first plate to position where the hook is received in said notch for engaging the second plate for causing said strip to be gripped between the flanges of said plates.

1,214,549. METHOD OF MANUFACTURING PISTON-RINGS. CHARLES E. JOHNSON, Muskegon, Mich., assignor to The Piston Ring Company, Muskegon Heights, Mich., a Corporation of Michigan. Filed Jan. 10, 1916. Serial No. 71,328. (Cl. 29—148.)

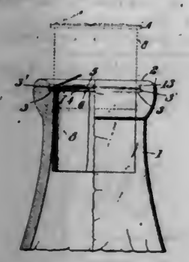
The method of making piston rings and the like which consists in producing an integral pattern of curved out-

line, at one side having an outside radius of curvature substantially the same as the radius of curvature of the cylinder in which the ring is to operate, said radius for the pattern progressively increasing in length from said side to the diametrically opposed side thereof, then casting from said pattern, then removing a section from the



side of the casting having the greatest radius of curvature sufficient that when the ends at the parting produced by said removal of the section are brought together a perfect and circular ring is produced, then compressing the casting to close the opening left on removal of the segment and then finishing the casting to working size while in compressed condition.

1,214,550. BOTTLE-STOPPER. JOHN D. KARLE, Roselle Park, N. J. Filed May 11, 1916. Serial No. 96,743. (Cl. 215—9.)



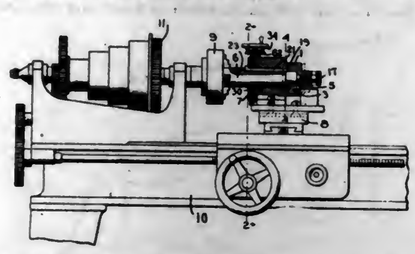
1. A bottle-stopper comprising a disk adapted to be seated in a recess in the mouth of a bottle and to be unseated by the buckling thereof under the action of the contents of the bottle when freezing, said disk being provided with means for protecting the contents of the bottle when unseated in this manner.

2. A bottle-stopper comprising a disk adapted to be seated in an annular series in the mouth of a bottle and to be unseated under the action of the contents of the bottle when freezing, said disk including a downwardly projecting tubular portion.

3. A bottle-stopper comprising a disk having a downwardly projecting expansible tubular portion, the diameter of the disk being greater than that of the tubular portion to form a flange adapted to enter an annular recess in the mouth of a bottle.

1,214,551. MACHINE FOR BENDING RODS. JOHN KARPOUICH, Boston, Mass. Filed Mar. 29, 1916. Serial No. 87,591. (Cl. 153—40.)

1. In a machine for bending rods, tubes and the like, the combination with a driving shaft, of a bearing member therefor, a bending member loosely mounted on said shaft at one side of the bearing member and adapted by its rotation to bend a tube or rod, said bending member having a notch, a clutch member slidable longitudinally of the shaft and extending through the bearing member, said clutch member being rotatable with the shaft and adapted in one position to engage said notch, thereby to couple the bending member to the shaft, and means on the opposite side of the bearing member from the bending member to engage said clutch member and move it longitudinally of the shaft thereby to disconnect it from the bending member when said bending member has rotated through a predetermined angle.



2. In a device of the class described, the combination with a driving shaft, of a bearing member therefor, a bending member loosely mounted on said shaft and constructed by its rotation to form a bend in a tube or rod, said bending member having a notch, a clutch member slidable longitudinally of the shaft and extending through the bearing member, said clutch member being rotatable with the shaft and adapted in one position to engage said notch thereby to couple the bending member to the shaft, and a stationary cam situated to engage the clutch member at a predetermined point in the rotation of the shaft thereby to move it longitudinally and disengage it from the bending member.

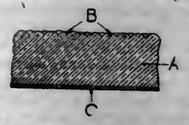
3. In a device of the class described, the combination with a bearing member, of a driving shaft journaled therein, a bending member loosely mounted on the shaft at one side of the bearing member, a clutch member slidable longitudinally of the shaft and extending through said bearing, said clutch member in one position being operative to clutch the bending member to the shaft, a cam carried by the bearing member on the opposite side thereof from the bending member and adapted to engage the clutch member at a predetermined point in the rotation of the shaft and thereby to disengage said clutch member from the bending member.

4. In a device of the class described, the combination with a driving shaft, of a bending member loosely mounted thereon and capable of free sliding movement longitudinally thereof, a clutch member mounted for sliding movement longitudinally of the shaft and normally occupying a position to be engaged by the bending member when the latter is moved longitudinally of the shaft in one direction, and means for withdrawing the clutch member from the bending member at a predetermined point in the rotation.

5. In a device of the class described, the combination with a driving shaft, of a bending member loosely mounted thereon and capable of a limited free movement longitudinally thereof, a clutch member mounted for sliding movement longitudinally of the shaft and normally occupying a position to be engaged by the bending member when the latter is moved to its limit longitudinally of the shaft in one direction, and adjustable means for withdrawing the clutch member from the bending member at a predetermined point in the rotation.

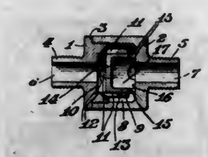
[Claims 6 to 15 not printed in the Gazette.]

1,214,552. FILM FOR PHOTOGRAPHIC PROJECTIONS IN COLORS. ALBERT KELLER-DORIAN, Lyon, France. Filed Dec. 29, 1914. Serial No. 879,476. (Cl. 95—9.)



Lenticulated films for color photography, comprising in combination a transparent support having a large number of minute juxtaposed objectives upon one of its faces, and a sensitive layer upon its other surface.

1,214,553. VALVE. JESSE E. KEPPEL, St. Louis, Mo., assignor to Vulcan Valve Company, a Corporation of Missouri. Filed Apr. 24, 1915. Serial No. 23,562. (Cl. 137—32.)



1. A device of the class described comprising a casing having a valve chamber and a seat portion with a valve seat, a guide surrounding the valve seat supported by said seat portion and extending from said seat into said chamber at a distance from the walls thereof, and a valve slidably mounted in said guide.

2. A device of the class described comprising a casing having a valve chamber and a seat-portion with a valve seat, a cylindrical guide surrounding the valve seat supported by said seat portion and extending from said seat into the casing at a distance from the walls thereof, and a cup form valve slidably mounted in said guide.

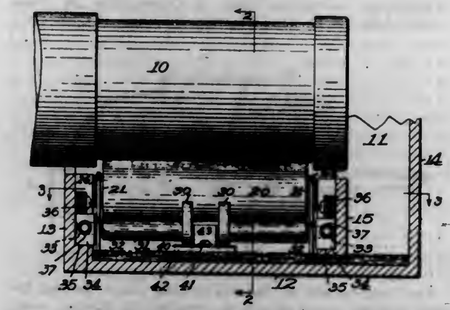
3. A device of the class described comprising a casing having a valve chamber and a seat portion with a valve seat, an annular guide wall surrounding said valve seat supported by said seat portion and extending from said seat into said chamber at a distance from the walls thereof, said guide wall being provided with apertures for letting a fluid pass into or out of the space surrounded by said wall and a valve slidably mounted in said guide.

4. A device of the class described comprising a casing having a valve chamber and a seat-portion with a valve seat, a cylindrical guide wall surrounding the valve seat supported by said seat-portion and projecting into said chamber at a distance from the walls thereof, said guide being provided with apertures located adjacent to said valve seat for letting a fluid pass into or out of the space surrounded by said wall, and a valve slidably mounted in said guide.

5. A device of the character described comprising a casing having a valve chamber and a seat-portion with a valve seat, a cylindrical guide surrounding the valve seat supported by said seat portion and projecting into said chamber at a distance from the walls thereof, said wall having inlet openings therethrough, and a cup-shaped valve slidably mounted in said guide for controlling the flow of a fluid through said openings.

[Claims 6 to 11 not printed in the Gazette.]

1,214,554. JOURNAL-LUBRICATING DEVICE. WALTER H. LANPHEAR, Worcester, Mass. Filed Mar. 6, 1916. Serial No. 82,352. (Cl. 64—34.)



1. A journal lubricating device comprising a journal box, a distributing roll mounted for vertical movement therein and engaging said journal throughout substantially the entire length of its bearing surface, narrow separated feed disks engaging said roll near its center only, supports for said feed disks, and means to force said feed disks toward the center of said box to engage said distributing roll and to force said roll upwardly against the journal.

2. A journal lubricating device comprising a journal box, a distributing roll rotatable in said box and engaging the journal throughout substantially its entire bearing surface, vertically movable spring-pressed bearings for said roll, oppositely-disposed narrow-faced feed disks engaging said roll, shafts for said disks, slidable bearings for said disk shafts, and means to force said bearings yieldingly toward the longitudinal center of the journal box.

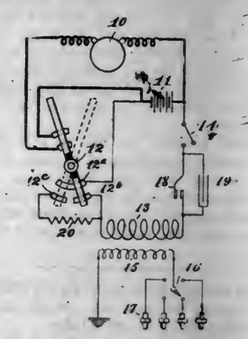
3. A journal lubricating device comprising a journal box, a distributing roll yieldingly mounted for vertical movement in said box and engaging said journal throughout substantially its entire bearing length, two pairs of separated narrow feed disks engaging said roll near its longitudinal center, a shaft for each pair of disks, laterally-sliding boxes for the ends of said shafts, guide-ways for said boxes, and springs engaging said boxes to force each shaft toward the center of the journal box.

4. A journal lubricating device comprising a wide-faced distributing roll, narrow separated feed disks, laterally-slidable supports for said feed disks, a frame mounted to slide laterally with each of said disks, oppositely-disposed gage bars for said disks, and means for adjustably securing said bars to said slidable frame to regulate the amount of oil taken up by said disks for transfer to the distributing roll.

5. A journal lubricating device comprising a journal box, a distributing roll yieldingly mounted for vertical movement in said box and engaging said journal throughout substantially its entire bearing length, two pairs of separated narrow feed disks engaging said roll near its longitudinal center, a set of gage bars effective to control the amount of oil taken up by each pair of said disks for transfer to said distributing roll, slidable frames upon which said bars are adjustably mounted, and means to hold said frames and bars in operative relation with said disks.

[Claim 6 not printed in the Gazette.]

1,214,555. STARTING AND IGNITION APPARATUS. BENNETT M. LEECE, Cleveland, Ohio, assignor to The Leece-Neville Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 25, 1916. Serial No. 116,868. (Cl. 123—179.)



1. In a starting and ignition apparatus for internal combustion engines, a dynamo electric machine for turning over or starting the engine, a battery for supplying current to said machine, an ignition coil having a primary connected to the battery, and means for increasing the ampere turns of the primary when said machine is connected to the battery for starting purposes without changing the connections of the battery.

2. In a starting and ignition apparatus for internal combustion engines, a dynamo electric machine for turn-

ing over or starting the engine, a battery for supplying current to said machine, an ignition coil having a primary connected to the battery, and a switch for varying the connections of the primary circuit so as to compensate for the decrease in battery voltage when the battery is connected to the said machine for starting purposes.

3. In a starting and ignition apparatus for internal combustion engines, a dynamo electric machine for turning over or starting the engine, a battery for supplying current to said machine, an ignition coil having a primary connected to the battery, a switch for controlling the connections between the battery and dynamo electric machine, and means operative upon the shifting of said switch for compensating for the decrease in battery voltage, and hence in voltage impressed upon the primary coil when the battery is connected to said machine for starting purposes.

4. In a starting and ignition system for internal combustion engines, a starting motor, a battery for supplying current thereto, an ignition coil having a primary connected to the battery, a unitary switching mechanism for connecting the battery to the motor and simultaneously varying the normal connections of the primary circuit so as to increase the primary ampere turns and compensate for the drop in battery voltage when the battery is connected to the motor.

5. In a starting and ignition apparatus for internal combustion engines, a dynamo electric machine adapted to serve as a motor to start the engine, a battery for supplying current to said machine, an ignition coil having a primary normally connected to the battery, a switch for controlling the connections between said machine and the battery, and means operative upon the shifting of said switch for increasing the ampere turns of the primary when said machine is connected to the battery for starting purposes without altering the connections of the battery or changing the relation of the cells thereof.

1,214,556. SANITARY TOOTH-BRUSH. NATE LE VENE, San Francisco, Cal., and ESA FEE, Chicago, Ill. Filed Mar. 17, 1915. Serial No. 15,014. (Cl. 15—39.)



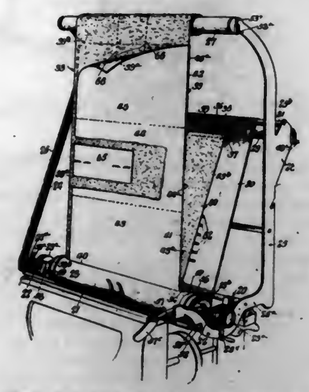
1. As a new article of manufacture, a tooth brush having a seat thereon, a securing member fastened to the forward end of the seat, a cleansing member for use as part of the tooth brush and adapted to fit on the seat, said member consisting of cotton fiber charged with a dry dentifrice and shaped to have a series of grooves extending crosswise and a single groove extending lengthwise, said lengthwise groove adapted to take the securing member of the tooth brush.

2. A cleansing member for use as a part of a tooth brush, said member consisting of a mass of cotton fiber charged with a dry dentifrice, said mass of fiber compressed so as to have a series of grooves extending crosswise and a single groove extending lengthwise, said mass of fiber having a general shape adapting it to a seat on a brush.

1,214,557. ATTACHMENT FOR TYPE-WRITERS. EDWARD Z. LEWIS, Chicago, Ill. Filed May 13, 1914. Serial No. 838,236. (Cl. 197—126.)

1. In a typewriting machine, a platen, and two carbon ribbon sections, said ribbon sections having an end attached to the periphery of the platen along a common longitudinal line thereof, said ribbon sections being adapted to be wound in superposed relation, one upon the other, and the one wound next to the platen being longer than the other.

2. In a typewriting machine, a platen, and two carbon ribbon sections, said carbon ribbon sections each having an end attached to the periphery of the platen along a common longitudinal line thereof, said ribbon sections being adapted to be wound in superposed relation, one upon the other, the one wound next to the platen being longer than the other, and means for varying the length of the shorter carbon ribbon section.



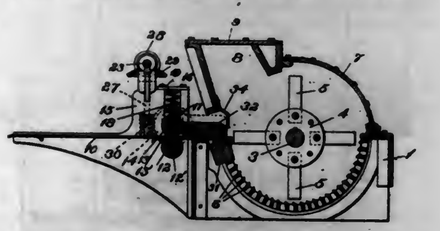
3. In a typewriting machine, a platen, and two carbon ribbon sections, said carbon ribbon sections having an end attached to the periphery of the platen along a common longitudinal line thereof, said ribbon sections being adapted to be wound in superposed relation, the one upon the other, the one wound next to the platen being longer than the other, and means for predetermining the relative lengths of said ribbon sections.

4. In a typewriting machine, a platen, two carbon ribbon sections, said ribbon sections having an end attached to the periphery of the platen along a common longitudinal line thereof, said ribbon sections being adapted to be wound in superposed relation, the one upon the other, the one wound next to the platen being longer than the other, and mechanism for each ribbon section, adapted to produce tension therein.

5. In a typewriting machine, a platen, two carbon ribbon sections, said ribbon sections having an end attached to the periphery of the platen along a common longitudinal line thereof, and being adapted to be wound in superposed relation, the one upon the other, upon said platen, the one wound next to the platen being longer than the other, mechanism for each ribbon section, adapted to produce tension therein, and means for varying the length of the shorter ribbon section.

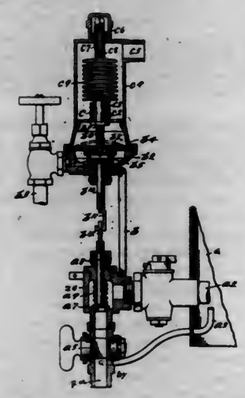
[Claims 6 to 17 not printed in the Gazette.]

1,214,558. PULVERIZER. WILLIAM KELSEY LIGGETT, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed June 25, 1912. Serial No. 705,731. (Cl. 83—11.)



The combination of the pulverizing rotor, having the shaft, and the series of sets of eccentrically pivoted swing hammer bars, the casing around the rotor, the breaker bar or cutter bar adjacent to the horizontal plane of the axis of the rotor and adjacent to the circles of rotation of the hammer bars, means for feeding material horizontally through the casing to said bar comprising the table, the fixed feed roller having the upper part of its surface tangential to the plane of the table, the vertically yielding roller, and the weighted holder plate hinged to the vertically yielding roller and adapted to rise and fall therewith and with its operative face held tangential to the lower part of the surface of said roller and moving in parallelism with the feed table and having its front edge spaced from the planes of the circles of rotation of the hammer bars, but adapted to hold down the material at lines between the feed rollers and the bar, substantially as set forth.

1,214,559. WATER-HEATER. HERBERT J. LONG, New Brunswick, N. J. Filed Dec. 3, 1913. Serial No. 804,360. (Cl. 126—351.)

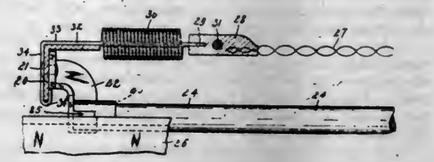


1. A water heater provided with a gas supply, a valve for the latter, a casing, a movable perforated element dividing said casing, means for connecting said element with said gas valve, a leaky valve connection for controlling the perforation in said element, a water inlet conduit on one side of said element, a water outlet conduit on the opposite side of said element, one of said conduits being in connection with the heater, and a thermostat in said last mentioned conduit, said element being adapted to be moved in the assumed direction by a reduction of pressure on the outlet side of said element to open said gas valve, said thermostat being adapted to reduce the pressure on the inlet side of said element to permit a return thereof toward normal position to correspondingly throttle said gas valve.

2. In a water heater provided with a gas supply, a valve therefor, a casing, a flexible element dividing said casing into compartments and provided with an opening, means for maintaining said element in normal position, means for connecting said element with said gas supply valve, a perforated water valve controlling the opening in said element, a water inlet pipe beneath said element, a discharge conduit above said element, the latter adapted to move upwardly by a reduction of pressure thereover to open said gas valve, and a thermostat in operative connection with said water valve above said element and adapted to open said water valve to reduce the pressure beneath said element and permit the latter to move toward normal position to correspondingly throttle the gas supply valve.

1,214,560. BED-SPRING. MORRIS LOWY, New York, N. Y. Filed Oct. 3, 1914. Serial No. 864,846. (Cl. 5—62.)

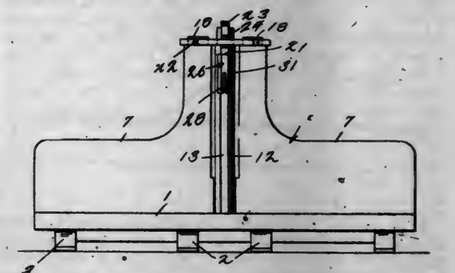
1. A bed spring comprising a supporting frame including transverse end members, a bottom having its ends embedded in retaining strips, the bodies of said retaining strips being made of the same material throughout, and helical springs having their inner ends also embedded in said retaining strips for connecting the latter with said transverse end members.



2. A bed spring comprising a supporting frame including transverse end members, a bottom, mold-fashioned retaining strips inclosing the ends of said bottom, and means connected to said retaining strips and transverse end members for holding said bottom on its supporting frame under tension, said last named means having its inner ends also inclosed by said retaining strips.

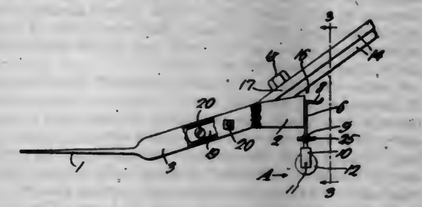
3. A bed spring bottom comprising a wire fabric having the free ends of its wire strands inclosed by mold-fashioned retaining strips, and reinforcing means within said retaining strips.

1,214,561. MITER-BOX. HANS P. MCDONALD, River Falls, Wis. Filed Apr. 7, 1916. Serial No. 89,685. (Cl. 143—89.)



A miter box comprising a work supporting base, a back consisting of sections, said sections having their adjacent edges spaced, a post rotatably engaged on the base and located in the space between the sections, said post having a longitudinal slot formed therein and having grooves formed in its walls, a guide consisting of spaced plates for receiving a saw, said guide having its forward end terminating in depending wings, vertical shoulders formed on the outer surfaces of the wings for engaging opposite sides of the post, ribs carried by the wings and disposed between the shoulders, said ribs being slidably engaged in the grooves.

1,214,562. LAWN-MOWER SHEARS. PATRICK JOHN MCGRATH, Elizabeth, N. J. Filed Aug. 8, 1916. Serial No. 113,790. (Cl. 56—19.)



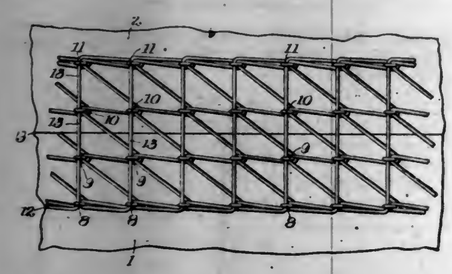
1. In a device of the class described, a pair of shears comprising blades, a back spring, and connections uniting the blades with the back spring, the connections being provided upon their inner faces with longitudinally ex-

tended concaved seats; and a pair of levers including fingers disposed at an angle to the body portions of the levers, the fingers being received in the seats and coacting with the inner faces of the connections; and securing devices uniting the fingers with the connections.

2. In a device of the class described, a pair of shears comprising blades, a back spring, and connections uniting the blades with the back spring; a pair of levers assembled with the connections; a frame pivoted to the back spring for raising and lowering; and a ground-engaging roller journaled in the frame.

3. In a device of the class described, a pair of shears comprising blades, a back spring, and connections uniting the blades with the back spring; a pair of levers assembled with the connection; a frame pivoted to the back spring for raising and lowering; a ground-engaging roller journaled on the frame; and means for holding the frame and the roller in an upturned position.

1,214,563. SEAM FOR SEWED ARTICLES. CHESTER MCNEIL, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 5, 1915. Serial No. 12,347. (Cl. 112—34.)



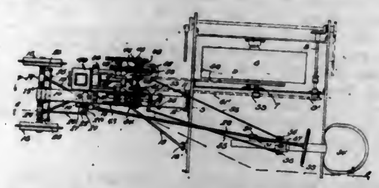
1. In a seam, the combination with two opposing edges of fabric, four parallel rows of needle loops passing through the fabric, two within each edge, a single cross thread connecting all the loops on one face of the fabric, and a cross thread connecting the threads on the other face of the fabric and bound down by said threads between the consecutive loops thereof.

2. In a seam, the combination with two opposing edges of fabric, four parallel rows of needle loops passing through the fabrics, two within each edge, and a single cross thread connecting all the loops on one face of the fabric, and two cross threads connecting the threads on the other face of the fabric and bound down by said threads between the consecutive loops thereof.

3. In a seam, the combination with a fabric, of four parallel rows of needle loops passing through the fabric, and a single cross thread having a strand passing directly through all four of said loops transversely of the seam and having diagonal strands extending longitudinally of the line of seam and alternately encircling and passing through succeeding and preceding needle loops, and cross threads on the upper face of the fabric passing alternately back and forth between the outer rows of loops, crossing each other at the center and bound down by the needle threads between the loops.

4. In a seam, the combination with two opposing edges of fabric, four parallel rows of needle loops passing through the fabrics two within each edge, and a single cross thread having a strand passing directly through all four of said loops transversely of the seam and having diagonal strands extending longitudinally of the line of seam and alternately encircling and passing through succeeding and preceding needle loops, and cross threads on the upper face of the fabric passing alternately back and forth between the outer rows of loops crossing each other at the center and bound down by the needle threads between the loops.

1,214,564. MOTOR-DRIVING ATTACHMENT FOR BINDERS. THOMAS G. MABLEY, Menomonee Falls, Wis. Filed Sept. 1, 1915. Serial No. 48,538. (Cl. 21—114.)



1. An attachment for binders and like machines adapted to travel over the ground and including independently movable mechanism, such attachment comprising a truck member adapted to be connected with a machine, drive means carried by said member, and independent variable speed connections between the said drive means and a ground wheel and the said machine mechanism respectively.

2. An attachment for binders and like tiltable machines including a beam adapted to be secured to the machine in lieu of and in the manner of the usual draft tongue thereof, means for supporting and steering the forward portion of the beam, and means carried by said beam for driving the machine.

3. An attachment for binders and like machines including a gear carrying ground wheel and a gear carrying shaft driven from the gear of said wheel, said attachment comprising a member adapted to be connected with the machine, an engine carried by said member, a pair of counter-shafts, variable speed connections between the drive shafts of the engine and the counter-shafts, and gears on said counter-shafts adapted to be connected with the named gears of the machine upon arranging them in lateral displacement and removing their normal connecting means.

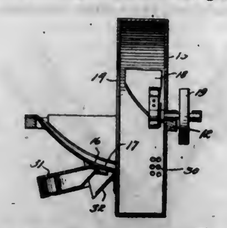
4. An attachment for binders and like machines including a gear carrying ground wheel and a gear carrying shaft driven from the gear of said wheel, said attachment comprising a truck for steering the machine and supporting its forward portion adapted to be secured to the machine in the manner of and in lieu of the usual draft tongue thereof, an engine carried on the truck, a pair of counter-shafts, variable speed connections between the drive shaft of the engine and the counter-shafts, and gears on said counter-shafts adapted to be connected with the named gears of the machine gears upon arranging them in lateral displacement and removing their normal connecting means.

5. A driving attachment for binders and like machines comprising a body member having a steerable support at one end and having its other end adapted for securement to a machine in lieu of and in the manner of the usual draft tongue of the machine, whereby working portions of the machine may be held at different desired elevations, an engine mounted on the body member, a drive means connecting the engine and movable portions of the machine, a control means for the drive means, a steering control means, and both of said control means being operable from the operator's seat of the machine.

1,214,565. STACKER. FRANK J. MACDONALD, Warnerville, N. Y. Filed Oct. 12, 1915. Serial No. 55,403. (Cl. 130—17.)

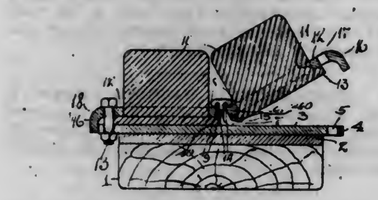
A grain saving device for a stacker comprising a fan casing having an opening in one side, one edge of the casing having a plurality of air outlet openings, a hopper mounted at one side of the casing in position to discharge material through the opening, the bottom of the hopper having an outlet opening and a spout therebelow, said spout inclining downwardly away from the casing, a grating over the opening in the hopper and an air conducting pipe having one end secured to the casing and

covering the said plurality of openings and the other end having a nozzle arranged beneath the grating in position



to discharge a blast of air upwardly through the grating; and inwardly toward the straw opening of the fan casing.

1,214,566. RESILIENT TIRE. GEORGE F. MALLABY, East Cleveland, Ohio, assignor to Kelly-Springfield Tire Company. Filed Sept. 27, 1915. Serial No. 52,793. (Cl. 152—9.)



1. In a resilient tire, the combination of a base rim, an annular retaining ring mounted thereon and having a flanged portion forming a hook member, a block receiving plate having a rib adapted to engage the hook member to hold the plate from lateral movement when the latter is forced into operative position, and means for securing the plate in operative position on the base rim.

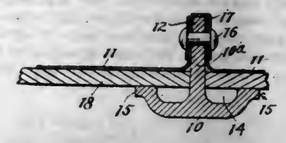
2. In a resilient tire, the combination of a base rim, an annular retaining ring mounted thereon and provided with a beveled base and an upper flanged portion forming a hook member, an apertured plate provided at one edge with a rib adapted to engage said hook member to hold the plate from lateral movement when the latter is forced into operative position, a block secured in said apertured plate and having an edge underlying the same, said underlying edge engaging said beveled base to force the plate into locking engagement with said retaining ring.

3. In a resilient tire, the combination of a base rim, an annular retaining ring mounted thereon and provided with a beveled base and an upper flanged portion forming a hook member, an apertured plate beveled at its inner edge and provided with a rib at said edge adapted to engage said hook member to hold the plate from lateral movement when the latter is forced into operative position, a block secured in said apertured plate and having a flanged portion underlying the same, said underlying portion having a beveled edge to engage the beveled base of said retaining rim to force the plate into locking engagement with the retaining rim.

4. In a resilient tire, the combination of a base rim, an annular retaining ring mounted thereon and having a flanged portion forming a hook member, a block receiving plate having a rib at one edge adapted to engage said hook member and a flange at the opposite edge to overlie the edge of said base rim, and means for securing the plate in operative position on the base rim.

1,214,567. CAR CONSTRUCTION. GEORGE B. MALTBY, Cleveland, Ohio. Filed Dec. 10, 1915. Serial No. 66,033. (Cl. 105—192.)

1. In a car roof construction, the combination of a carline in the form of a double U and adjacent roof plates, the carline having a solid central web with laterally and upwardly extending web or flange portions forming channels on opposite sides of the web, the roof plates being fastened together by fastening devices extending laterally through the central web and through the roof plates.



2. In a car roof construction, the combination of a carline in the form of a double U and adjacent roof plates, the carline having a solid central web with laterally and upwardly extending web or flange portions forming channels on opposite sides of the web, the roof plates being fastened together by fastening devices extending laterally through the central web and through the roof plates, and roof sheathing between the roof plates and said laterally and upwardly extending portions.

3. In a car roof construction, the combination of a carline in the form of a double U and adjacent roof plates, the carline having a solid central web with laterally and upwardly extending webs forming channels on opposite sides of the central web, the laterally and upwardly extending webs having horizontally or outwardly extending flanges at their upper marginal edges, the roof plates being supported by said flanges and being fastened together by fastening devices extending laterally through the central web and through the roof plates.

4. In a car roof construction, the combination of a carline in the form of a double U and adjacent roof plates, the carline having a solid central web with laterally and upwardly extending webs forming channels on opposite sides of the central web, the laterally and upwardly extending webs having horizontally or outwardly extending flanges at their upper marginal edges, the roof plates being supported by said flanges and being fastened together by fastening devices extending laterally through the central web and through the roof plates, and roof sheathing between the roof plates and said flanges.

5. In a car roof construction, the combination of a pair of adjacent roof plates and a carline, the latter being in the form of a double U, having a solid central web, and laterally and upwardly projecting web portions forming channels and provided with horizontal flanges at their upper marginal portions, said flanges supporting the roof plates and the central web projecting up into the joint between the plates, and rivets passing through the marginal portions of the plates and laterally through the web for fastening the plates to the latter.

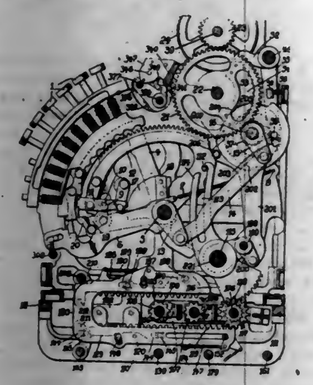
[Claims 6 to 10 not printed in the Gazette.]

1,214,568. MULTIPLE-TOTAL-PRINTING CASH-REGISTER. HAAKON A. MARTIN, Dayton, Ohio, assignor to The National Cash Register Company, (incorporated in 1906,) Dayton, Ohio, a Corporation of Ohio. Filed Nov. 19, 1910. Serial No. 593,202. (Cl. 235—3.)

1. In a machine of the class described, the combination with an accumulator comprising a plurality of movable elements, of differentially movable members, and devices carried thereby for actuating the accumulator elements, operating means for driving the differentially movable members and actuating devices in entering items upon the accumulator, type carriers, controlled by the differentially movable members, for recording the items entered upon the accumulator and the total thereof, and means for driving the differentially movable members by the accumulator elements in the same direction to take totals as they are driven in entering items upon the accumulator.

2. In a machine of the class described, the combination with an accumulator comprising a plurality of movable elements, of differentially movable members for actuating the accumulator elements, the differential members and accumulator elements being normally out of engagement.

operating means for engaging the differential members and accumulator elements and driving the differential members in entering items upon the accumulator, type carriers, controlled by the differential members, for recording the items entered upon the accumulator and the total thereof, and means controlling the engagement of the accumulator elements and the differential members in such a manner that the said members may be driven by the accumulator elements in the same direction to take totals as they are driven in entering items upon the accumulators.



3. In a machine of the class described, the combination with an accumulator comprising a plurality of movable elements, of actuators therefor, operating means for driving the actuators in entering items upon the accumulator, type carriers, controlled by the actuators, for recording the items entered upon the accumulator and the total thereof, accumulator driving devices carried by the actuators, and means for controlling the engagement of the accumulator elements and the devices controlled so that the actuators may be driven by the accumulator elements in the same direction in the taking of totals as they are driven in entering items upon the accumulator.

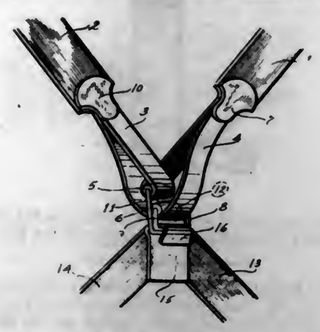
4. In a machine of the class described, the combination with an accumulator comprising a plurality of movable elements, of actuators therefor, operating means for driving the actuators in entering items upon the accumulator, type carriers, controlled by the actuators, for recording the items entered upon the accumulator and the total thereof, an adjustable total lever, devices, set by said lever, and controlling the engagement of the accumulator elements and the actuators constructed so that the actuators are driven by the accumulator elements in the same direction in the taking of totals as they are driven in entering items upon the accumulator.

5. In a machine of the class described, the combination with an accumulator comprising a plurality of movable elements, of actuators therefor, means for driving the actuators in entering items upon the accumulator, type carriers, controlled by the actuators, for recording the items entered upon the accumulator and the total thereof, and means for causing movement of the accumulator into engagement with the actuators constructed so that the actuators may be driven by the accumulator elements in the same direction in the taking of totals as they are driven in entering items upon the accumulator.

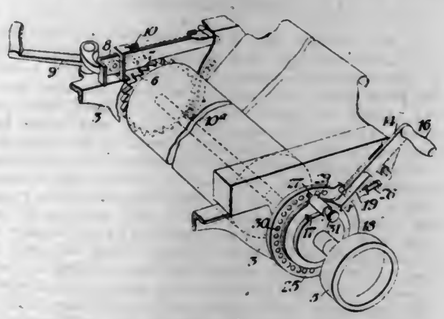
[Claims 6 to 82 not printed in the Gazette.]

1,214,569. SUSPENDERS. WALTER MATZER, Mansfield, Ohio. Filed Aug. 4, 1915. Serial No. 43,675. (Cl. 241—12.)

A two-point suspension suspender, comprising a pair of button fasteners, a pair of rear straps connected together at their upper ends and looped adjacent their opposite ends, the looped portion of each strip passing through one of the button fasteners, a pair of front straps connected at their lower ends to the looped ends of the rear straps at a point above the button fasteners, means carried by the connected ends of the rear straps, and a pair of straps connecting the upper ends of the front straps, and said connecting straps passing through said means for forming a yielding connection.



1,214,570. TYPE-WRITING MACHINE. EDWIN S. MAULSBY, Ridgewood, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 17, 1913. Serial No. 807,177. (Cl. 197—114.)



1. The combination with a revoluble platen, of means for giving the same successive mechanically limited rotations, including a driver normally disconnected from the platen; a stop against which said driver normally rests during the advance rotation of the platen; means for giving the platen initial advance movements independently of the driver; means for automatically connecting said driver, during its active stroke, to said platen at any point to which the latter may have been advanced independently of the driver, so as to drive the platen forwardly a variable distance necessary to complete the forward rotation thereof through such mechanically limited distance; and a stop separate from the first-named stop for arresting the active stroke of said driver.

2. The combination with a revoluble platen, of means for giving the same successive mechanically limited rotations, including a driver normally disconnected from the platen; a stop against which said driver normally rests during the advance rotation of the platen; means for giving the platen initial advance movements independently of the driver; means for automatically connecting said driver, during its active stroke, to said platen at any point to which the latter may have been advanced independently of the driver, so as to drive the platen forwardly a variable distance necessary to complete the forward rotation thereof through such mechanically limited distance; and a stop separate from the first-named stop for arresting the active stroke of said driver, said stops being relatively adjustable.

3. The combination with a platen, of means for giving the platen in instalments a rotation through a fixed, predetermined distance, including a driver having an active stroke or movement of definite extent; a stop against which said driver normally rests; said platen being movable away from the driver while the latter is stationary, and means for enabling said driver to overtake the platen and thereafter positively rotate the platen throughout the final instalment of its said rotation.

4. The combination with a revoluble platen, of means for rotating the same in instalments through a fixed cycle, comprising step-by-step line-spacing mechanism, a crank for rotating the platen through its final instalment, a dog driven by said crank and normally withdrawn, a tooth fixed to the platen to be engaged by said dog for driving the platen, means dependent upon the movement of the crank for projecting the dog, a stop for arresting the platen and crank with the platen in a predetermined rotative position at the completion of the cycle, a spring for returning said crank to normal position while the platen remains stationary, and means for automatically withdrawing the dog upon the return of the crank to normal position, so that said tooth may, during the ensuing step-by-step line-feed of the platen, pass by said dog in a position to be reëngaged thereby at the next driving operation of the crank.

5. The combination with a revoluble platen, of means for rotating the same in instalments through a fixed cycle, comprising step-by-step line-spacing mechanism, a crank for rotating the platen through its final instalments, a dog driven by said crank and normally withdrawn, a tooth fixed to the platen to be engaged by said dog for driving the platen, means dependent upon the movement of the crank for projecting the dog, a stop for arresting the platen and crank with the platen in a predetermined rotative position at the completion of the cycle, a spring for returning said crank to normal position while the platen remains stationary, and means for automatically withdrawing the dog upon the return of the crank to normal position, so that said tooth may, during the ensuing step-by-step line-feed of the platen, pass by said dog in a position to be reëngaged thereby at the next driving operation of the crank, said crank or resting stop being adjustable to vary the extent of throw of the crank.

[Claims 6 to 15 not printed in the Gazette.]

1,214,571. CEMENT-BLOCK MOLD. FRIEDRICH WILLIAM MELDE, Norfolk, Va. Filed May 11, 1916. Serial No. 96,890. (Cl. 25—121.)



1. A block mold comprising a pair of sides, and means for varying the shape of the upper edges of said sides for constructing blocks of different designs.

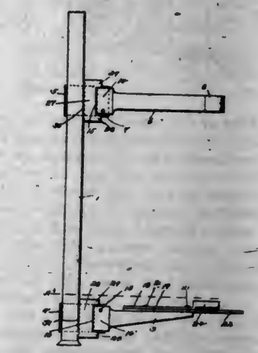
2. A block mold comprising a pair of sides, and a pair of side addition members having lower edges shaped to conform to and adapted to be secured in contact with the upper edges of said sides, the upper edges of said members being differently shaped from the lower edges thereof.

3. A block mold comprising a pair of sides each having a convex and a concave edge, and side addition members curved on one edge for contact with said convex and concave edges, the edges of said members opposite their curved edges being straight.

4. A block mold comprising a pair of sides and a number of transverse partitions extending between them, side addition members having lower edges designed for contact with the upper edges of the sides, the upper edges of said members being shaped differently from said lower edges thereof, and a pair of bars to which the addition members of the two sides are secured.

5. A block mold comprising a pair of sides and a number of transverse partitions extending between them, the edges of each side between said partitions being respectively concave and convex, side addition members curved on one edge for contact with said concave and convex edges, the edges of said members opposite their curved edges being straight, and a pair of bars to which said members are secured.

1,214,572. VALVE-SPRING LIFTER. HERMAN B. MERTZ, Beach View, Pa. Filed Feb. 13, 1912. Serial No. 677,400. (Cl. 29—87.1.)



1. In combination a rod, two serrated members arranged to bear against said rod, two collars surrounding said rod and said members, means for holding said members against displacement from said collars, two arms fulcrumed at their inner ends upon said collars and arranged to wedge said members against said rod, a valve-rod receiving member carried by one of said arms, and a vertically movable screw carried by the other arm and opposed to said member.

2. In combination, a rod, a collar arranged to bear against said rod at one side, said collar projecting from said rod at the opposite side of the latter and being open, a serrated member disposed in the projecting end of said collar, an arm fulcrumed eccentrically to said collar, and oppositely-arranged shoulders being formed on said member and straddling said arm, said arm arranged to wedge the serrated face of said member against said rod.

3. In combination with a rod, an arm slidably mounted on said rod, a member extensibly mounted on said arm, a fork formed on said member, and a U-shaped member mounted slidably on said fork and being relatively wider.

4. In combination a rod, an arm projecting therefrom, said arm being bifurcated, a U-shaped member slidably mounted on said arm and a second arm slidable on said rod adapted to coact with said first arm to raise a spring.

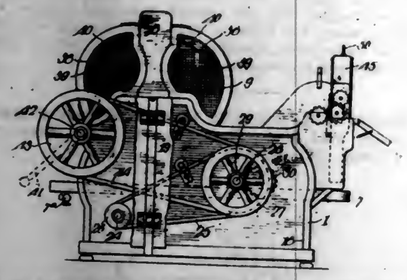
5. The described device consisting of a rod, an arm slidably mounted thereon, a forked arm extending at right angles to said rod, and a relatively shorter and wider U-shaped member slidably adjustable on said forked arm.

1,214,573. [WITHDRAWN.]

1,214,574. WASHING-MACHINE. CHARLIS METZWITZ, Chicago, Ill. Filed June 19, 1916. Serial No. 104,468. (Cl. 68—21.)

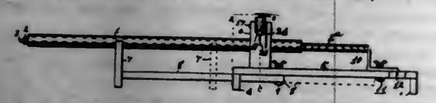
1. In a machine of the class described in combination, a frame, a washing receptacle mounted in said frame so as to rock on a horizontal axis, a standard on said frame projecting above the level of said axis, an oscillatory lever pivoted on the upper part of said standard and extending downwardly therefrom, said lever having a loop-

like portion provided with a toothed rack and the washing receptacle having a pinion meshing with said rack, arms extending outwardly and downwardly from said standard, and springs connecting said arms with the ends of the loop portion.



2. In a machine of the class described in combination, a frame, a washing receptacle mounted in said frame so as to rock on a horizontal axis, a standard on said frame projecting above the level of said axis, an oscillatory lever pivoted on the upper part of said standard and extending downwardly therefrom, said lever having a loop-like portion provided with a toothed rack, and the washing receptacle having a pinion meshing with said rack, arms extending outwardly and downwardly from said standard, springs connecting said arms with the ends of the loop portion, a reciprocating link for oscillating said lever, an auxiliary lever pivoted to said first mentioned lever and a sleeve slidable on said auxiliary lever for operatively connecting and disconnecting the same from said first mentioned lever.

1,214,575. WINDOW-SHADE TRIMMER AND ROLLER-CUTTER. EARNEST H. MILLER, Ladysmith, Wis. Filed Sept. 20, 1915, Serial No. 51,644. Renewed June 24, 1916. Serial No. 105,710. (Cl. 164—44.)

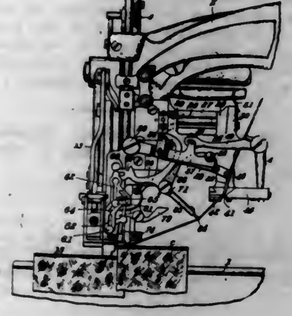


1. A window shade trimmer and roller cutter comprising a frame, a block mounted upon said frame and having an aperture therethrough for receiving said roller with a shade wound thereon and being adapted for supporting said roller and shade therein the lower half of the inclosing walls of said aperture terminating in an approximate right angle at the lowest point thereof, a support for the roller and shade at a point between said block and the end of the roller that is to remain uncut having an open top, a stop for gaging the width of the shade and length the roller is to be cut adjustable toward and from said block, said block having slots arranged parallel with each other across the roller and spaced apart the distance the roller is to be cut off beyond the edge of the shade, a knife blade having a handle at one end and an angular terminal at the other pivotally mounted between the side walls of one slot at a point above the transverse center of the knife blade and beyond a line passing vertically through the roller and arranged to trim the shade by an upward and downward movement of the handle thereof, and the side walls of the other slot being spaced apart for receiving a hand saw to be reciprocated therebetween for cutting off said roller.

2. A window shade trimmer and roller cutter comprising a frame, a block mounted upon said frame and having an aperture therethrough for receiving said roller with a shade wound thereon and being adapted for supporting said roller and shade therein, a support for the roller and shade at a point between said block and the end of the roller that is to remain uncut, having an open top, a stop for gaging the width of the shade and length the roller is to be cut adjustable toward and from said block, said block having slots arranged parallel with each other across the roller and spaced apart the distance the roller is to be cut off beyond the edge of the shade, a knife blade having a handle at one end and an angular terminal at the other pivotally mounted between the side walls of one slot at a point above the transverse center of the knife blade and beyond a line passing vertically through the roller and arranged to trim the shade by an upward and downward movement of the handle thereof, and the side walls of the other slot being spaced apart for receiving a hand saw to be reciprocated therebetween for cutting off said roller.

3. A window shade trimmer and roller cutter comprising a frame, a block mounted upon said frame and having an aperture therethrough for receiving said roller with a shade wound thereon and being adapted for supporting said roller and shade therein, the lower half of the inclosing walls of said aperture terminating in an approximate right angle at the lowest point thereof, a support for the roller and shade at a point between said block and the end of the roller that is to remain uncut having an open top, a stop for gaging the width of the shade and length the roller is to be cut, adjustable toward and from said block, said block having slots arranged parallel with each other across the roller and spaced apart the distance the roller is to be cut off beyond the edge of the shade, a knife blade having a handle at one end and an angular terminal at the other pivotally mounted between the side walls of one slot at a point above the transverse center of the knife blade and beyond a line passing vertically through the roller and arranged to trim the shade by an upward and downward movement of the handle thereof, and the side walls of the other slot being spaced apart for receiving a hand saw to be reciprocated therebetween for cutting off said roller.

1,214,576. SEWING-MACHINE. JAMES R. MOFFATT and RALPH S. KELSO, Chicago, Ill., assignors to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 19, 1911. Serial No. 650,123. (Cl. 112—24.)



1. The combination of stitch-forming mechanism, a feeding mechanism, a fabric support, devices for applying an end of tape to a fabric, including a tape carrier movable at right angles to the line of feed, and manual means for moving said tape carrier to position the tape relative to the fabric and the stitch-forming mechanism, said manual means including an operating lever yieldingly connected to the tape-carrier.

2. The combination of stitch-forming mechanism, a fabric support and devices for applying an end of tape to a fabric, including a tape carrier, a cutting device, manually-controlled means including an operating lever yieldingly connected to the tape-carrier for positioning the tape relative to the fabric and stitch-forming mechanism and the cutting device, and devices controlled by said means for subsequently operating the cutting device.

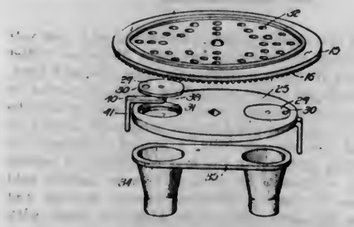
3. The combination of stitch-forming mechanism, a fabric support, feeding mechanism and devices for applying an end of tape to a fabric, including a tape carrier, manually-controlled means for moving said tape carrier in a direction substantially at right angles to the line of feed to position the tape relative to the fabric and stitch-forming mechanism, a folding finger for subsequently folding under the end of the tape, and means for operating said folding finger.

4. The combination of stitch-forming mechanism, a fabric support, feeding mechanism and devices for applying an end of tape to a fabric, including a tape carrier, manually-controlled means for moving said tape carrier in a direction substantially at right angles to the line of feed to position the tape relative to the fabric and stitch-forming mechanism, a folding finger for subsequently folding under the end of the tape, and devices controlled by said means for operating said folding finger.

5. The combination of stitch forming mechanism, a fabric support, devices for applying a section of tape to the line of stitching including a tape guide, a folding finger for folding under the forward end of the tape, and manually controlled means for moving said tape guide toward the stitch forming mechanism for presenting an end of tape thereto and for subsequently moving the folding finger to fold the end of the tape.

[Claims 6 to 43 not printed in the Gazette.]

1,214,577. CORN-PLANTER. CLINTON MOLL, Olathe, Kans. Filed Aug. 2, 1915. Serial No. 43,126. (Cl. 111—6.)



1. The combination with a container, having a bottom provided with delivery openings, of a valve plate located beneath the container, and having an arcuate slot, a disk rotatably mounted on the valve plate and having openings adapted for constant communication with the slot in said plate and for variable communication with the openings in the container bottom, means for adjusting said valve disk and a conduit adapted for receiving grain from the arcuatile slot.

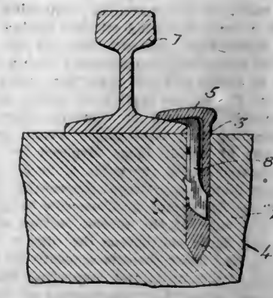
2. The combination with a container, having a bottom portion provided with a plurality of openings, each opening being adapted for containing a single grain, and the number of openings in each set varying as to number, a valve member having an opening adapted for registration with the openings in the container bottom, a support for the valve member, having a slot adapted for delivering the grain from the valve opening, means for adjusting the valve member, and a conduit adapted for receiving grain from the valve opening to conduct said grain to delivery position.

3. The combination with a container, having a perforated bottom, of means for revolving the container bottom, valve mechanism below the container for controlling the delivery of grain from the container through the bottom openings, a housing in the bottom of the container, an arm pivotally mounted in the said housing and having a roller on its free end adapted for travel in the bottom of the container and for projection into said openings, a stud slidably projected through the arm, and a spring on said stud to urge the arm toward the bottom of the container.

4. The combination with a container, of a disk rotatably mounted in the bottom of the container and having a plurality of rows of apertures therein, a slotted disk located beneath said rotatable disk, a plate adjustably mounted in said slotted disk and having an aperture adapted for establishing communication between the container disk apertures and the disk slot, means for positioning the plate to register its aperture with apertures in either row in the container disk, and means for rotating the container disk, for the purpose set forth.

5. The combination with a container, of a rotatable disk forming the bottom of the container and provided with apertures, a relatively fixed disk having sockets facing the container disk and provided with slots, a plate rotatable in each of said sockets and having an aperture in communication with the relative slot and adapted for communication with apertures in the rotatable disk, means for adjusting the plates, conduits adapted for receiving seed from the fixed disk slots, means for actuating the rotatable plate, and a checking device for controlling said means.

1,214,578. RAIL-SPIKE. DAVID W. O'BRYAN, Mount Auburn, Ill. Filed Jan. 7, 1916. Serial No. 70,854. (Cl. 85—23.)

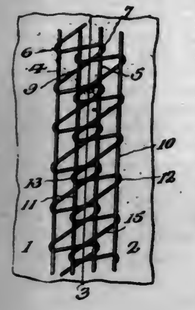


A spike including a shank and a head extended from one side thereof at the upper end of the shank, said shank having a longitudinal recess in one side, the lower end of the recess being curved and extended through the shank to the opposite side thereof, the upper end of said recess being turned in the opposite direction and extended in the bottom of said head, a locking member including a narrow shank engaged in said recess and provided with the turned pointed upper end to be received in the upper end of said recess, said locking member having an enlarged lower end provided with opposite curved faces adapted to normally engage the curved walls of the lower turned end of said recess, said locking member having a pivoted spur formed at its lower end and extended in a direction opposite to the enlargement of said lower end, said spur normally resting in the main straight portion of said recess, and a pin extended across said recess opposite the narrow shank portion of said locking member to limit transverse movement of the latter within said recess.

1,214,579. DUPLEX FLAT JOINING AND COVERING SEAM. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 27, 1915. Serial No. 11,025. (Cl. 112—34.)

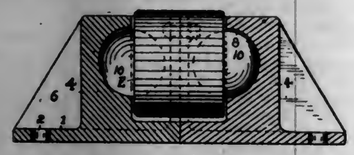
1. A duplex seam for sewed articles comprising abutted edges of fabric, a seam including stitches having parallel rows of loops disposed on opposite sides of the abutted edges, one row of loops being considerably within the edge of one section of fabric and the other row being contiguous the edge of the second section of fabric, and cross threads respectively disposed on opposite sides of the fabric and connecting said loops, and a second seam having parallel rows of needle loops disposed on opposite sides of said abutted edges, and one row being considerably within the edge of the second section of fabric, and the other row being contiguous the edge of the first section of fabric, and cross threads respectively disposed on opposite sides of the fabric and connecting said needle loops of the second seam, the cross threads of the second

seam binding the cross threads of the first seam against the fabric.



2. A duplex seam for sewed articles comprising abutted edges of fabric, a seam including stitches having parallel rows of loops disposed on opposite sides of the abutted edges, one row of loops being considerably within the edge of one section of fabric and the other row being contiguous the edge of the second section of fabric, and cross threads respectively disposed on opposite sides of the fabric and connecting said loops, and a second seam having parallel rows of needle loops disposed on opposite sides of said abutted edges, the pairs of needle loops in said seam being disposed between consecutive pairs of needle loops of the first seam, and one row being considerably within the edge of the second section of fabric, and the other row being contiguous the edge of the first section of fabric, and cross threads respectively disposed on opposite sides of the fabric and connecting said needle loops of the second seam, the cross threads of the second seam binding the cross threads of the first seam against the fabric.

1,214,580. SIDE BEARING. ALWIN PAGE, Jr., Bellevue borough, Pa. Filed June 6, 1916. Serial No. 101,902. (Cl. 64—64.)



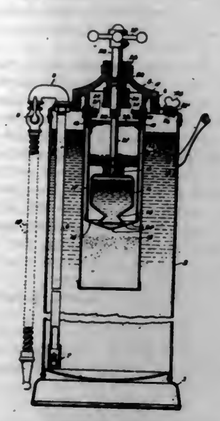
1. A side bearing comprising a base member provided with a runway, the side walls of which runway are provided with raceways, a roller adapted to travel in said runway and having a ball seat in each of its ends, and balls supporting the roller by engaging said seats and said raceways.

2. A side bearing comprising a base member provided with a runway, the side walls of which runway are provided with raceways curving upwardly toward their ends, a roller adapted to travel in said runway and having a ball seat in each of its ends, and balls supporting said roller by engaging said seats and said raceways.

3. A side bearing comprising a base member provided with a runway, the side walls of which runway are provided with raceways, a roller of proper length to loosely fit in said runway and having a ball seat in each of its ends, and spherical balls engaging said seats and said raceways whereby said roller is free to travel along said runway and to rock longitudinally.

4. A side bearing comprising a base member provided with a runway, the side walls of which runway are provided with raceways curving upwardly toward their ends, a roller of the proper length to loosely fit in said runway and having a ball seat in each of its ends, and balls engaging said seats and said raceways whereby said roller is free to travel along said runway rising toward the ends of its travel and to rock longitudinally.

1,214,581. FIRE-EXTINGUISHER. GEORGE T. PEARSONS, New York, N. Y. Filed May 5, 1916. Serial No. 95,523. (Cl. 169—7.)



1. In a fire extinguisher, the combination of a reservoir for a fire extinguishing liquid having a discharge outlet and an opening therein; a removable cover for said opening; a receptacle for a gas generating material carried by the cover suspended in the reservoir and with which the cover coöperates to provide a closed receptacle having an outlet leading into the reservoir; a second receptacle for a gas generating material in the first receptacle; a carrier for the latter receptacle; a plunger to abut against said second receptacle; and a plunger passing through and having screw threaded connection with the cover with means to operate the same exterior of the reservoir to have movement into the carrier for the second receptacle and adapted to coöperate with the plunger abutting against the second receptacle to rupture the latter, substantially as and for the purpose specified.

2. In a fire extinguisher, the combination of a reservoir for a fire extinguishing liquid having a discharge outlet and an opening therein; a removable cover for said opening; a receptacle for a gas generating material carried by the cover suspended in the reservoir and with which the cover coöperates to provide a closed receptacle; a valved outlet from said receptacle leading into the reservoir; a receptacle of fragile material for another gas generating material; a tubular carrier for said receptacle to carry said receptacle from the cover suspended in the first receptacle, and having an opening in the bottom to connect it with the first receptacle; and a plunger carried by the cover operable from the exterior thereof to rupture said fragile receptacle, substantially as and for the purpose specified.

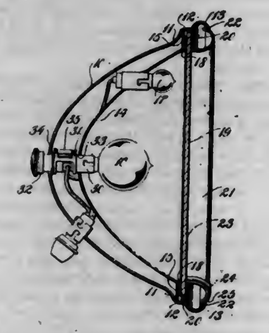
3. In a fire extinguisher, the combination of a reservoir for a fire extinguishing liquid having a discharge outlet and an opening therein; a removable cover for said opening having a depending annular flange; a receptacle for a gas generating material connected to the depending flange of the cover to suspend said receptacle in the reservoir and with which the cover coöperates to provide a closed receptacle; valved outlets in the depending flange of the cover leading into the reservoir; a second receptacle connected to the depending flange of the cover to suspend said receptacle in the first receptacle with the bottom of said second receptacle at some distance above the bottom of the first receptacle and having an opening in the bottom to connect the two receptacles; a fragile receptacle for a gas generating material carried by the second receptacle; a plunger normally abutting against said fragile receptacle; and means passing through the cover operable from the exterior of the receptacle to cooperate with said plunger to rupture the fragile receptacle, substantially as and for the purpose specified.

4. In a fire extinguisher, the combination of a reservoir for a fire extinguishing liquid having a discharge outlet and an opening therein; a removable cover for said opening having an annular depending flange with internal and external screw threads; a receptacle for a gas generating material having screw threaded connection with the external threads of the cover flange to suspend said receptacle in the reservoir and with which the cover coöperates to provide a closed receptacle; valves in said cover flange opening into and closing out from the reservoir; a second receptacle having screw threaded connection with the internal screw threads of the cover flange to suspend said receptacle in the first receptacle with the bottom at some distance above the bottom of the first receptacle, the bottom of the second receptacle inclining downward from the walls to the center and having openings therein; a fragile receptacle for a gas generating material supported in said second receptacle; and means including a part passing through the cover and operable from the exterior of the reservoir to rupture said fragile receptacle, substantially as and for the purpose specified.

5. In a fire extinguisher, the combination of a reservoir for a fire extinguishing liquid having a discharge outlet and an opening therein; a removable cover for said opening; a receptacle for a gas generating material connected to said cover to suspend said receptacle in the reservoir and having an outlet leading into the reservoir; a fragile receptacle for another gas generating material, said receptacle having an annular contracted and thinned portion adjacent the bottom; means connected to the cover to carry said fragile receptacle suspended in the first receptacle; and means including a part passing through the cover and operable from the exterior of the reservoir to rupture said fragile receptacle, substantially as and for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

1,214,582. AUTOMOBILE-LAMP. WILLIAM F. PERSONS, Lakewood, Ohio, assignor to The Guide Motor Lamp Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 16, 1915. Serial No. 67,118. (Cl. 240—41.)



1. In a lamp, a divided retaining ring of spring sheet metal, said ring being channeled transversely and having a reversely extended flange along one edge extending at an angle to the adjacent portion of said ring.

2. In a lamp, a divided retaining ring of spring sheet metal and curved or channeled transversely, the ends of said ring overlapping, the overlapping end being offset, said ring having a reversely extended flange extending around the edge thereof except at the overlapping offset portion.

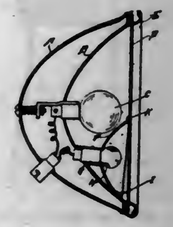
3. In a lamp, the combination with a lamp body having an inwardly rolled front edge, of a divided retaining ring having an outwardly extending flange bent away from the body portion of the rim and adapted to engage the inwardly rolled front of the lamp body.

4. In a lamp, the combination with a lamp body having an inwardly rolled front edge, of a divided retaining ring having an outwardly extending flange adapted to fit within the inwardly rolled front edge of the lamp body, the ends of said divided retaining ring overlapping.

5. In a lamp, the combination with a lamp body having a rolled front edge, of a divided retaining ring having an outwardly extending flange adapted to engage the rolled edge of the lamp body, the ends of said ring overlapping.

[Claims 6 to 13 not printed in the Gazette.]

1,214,583. AUTOMOBILE-LAMP. WILLIAM F. PERSONS, Lakewood, Ohio, assignor to The Guide Motor Lamp Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 5, 1916. Serial No. 113,217. (Cl. 240—41.)



1. In a lamp, the combination with a main unbroken reflector, of a supplemental reflector arranged within the confines of the main reflector and adjacent the edge thereof, said supplemental reflector being of less diameter than the main reflector.

2. In a lamp, the combination with a main unbroken reflector and its source of light, of a supplemental reflector and its source of light, said supplemental reflector being arranged within the confines of the main reflector and at an angle to the axis of said main reflector.

3. In a lamp, the combination with a main unbroken reflector and its source of light, of a supplemental reflector and its source of light, said supplemental reflector being of considerably less diameter than the main reflector, arranged within the confines thereof adjacent one edge and at an angle to the axis of said main reflector.

4. In a lamp, the combination with an unbroken reflector and its source of light, of a supplemental reflector and an independent source of light, said supplemental reflector being of considerably less diameter than the main reflector and arranged within the confines thereof.

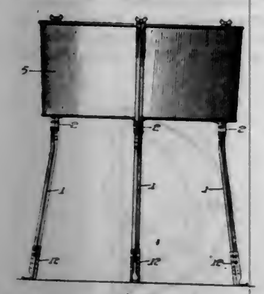
5. In a lamp, the combination with an unbroken reflector and its source of light, of a supplemental reflector and its source of light, said supplemental reflector being arranged within the confines of the main reflector adjacent one edge thereof and in advance of the source of light of the main reflector, both the inner and outer surfaces of said supplemental reflector being reflecting surfaces.

1,214,584. ADJUSTABLE SUPPORT. FRANK PFEIFER, Chicago, Ill. Filed Apr. 4, 1916. Serial No. 88,792. (Cl. 68—35.)

1. An adjustable leg for supporting vessels comprising a leg made of suitable material carrying upon its upper end a sleeve, the leg and sleeve partially embracing each other, permitting a sliding movement of one upon the other, said sleeve provided with an overhanging and downwardly extending hook adapted to engage the edge of the vessel and a backwardly extending plate reinforcing the hook, in combination with an operating rod loosely

engaging the plate member and in threaded engagement with a part carried by the leg, whereby the sleeve and leg may be adjusted one upon the other.

2. A supporting leg for vessels comprising a leg of suitable material, a supporting shelf provided with a sleeve partially embracing and secured to the leg, adapted to support the lower edge of a vessel, in combination with a sleeve conforming to the contour of the leg and in longitudinal engagement therewith, the upper end of the sleeve provided with an overhanging and downwardly extending leg arranged to engage the upper edge of a vessel, a backwardly extending plate carried by the upper end of the sleeve and hook and reinforcing the latter, a rotatable controlling rod loosely engaging the plate with its lower end in threaded engagement with a nut member carried by the leg, whereby the relative distance between the hook and the shelf may be adjusted as desired.



3. In a device of the kind described, a leg of suitable material provided with an upwardly and outwardly extending shelf member having a sleeve extension loosely embracing the leg and adjustably secured thereto, in combination with a longitudinal movable sleeve mounted on the upper end of the leg, provided with an overhanging and downwardly extending hook, a backwardly extending plate secured to the hook and serving to reinforce the same, a rotatably threaded rod loosely connected to the plate with its lower end in threaded engagement with a nut member carried by the leg.

4. In a device of the kind described, a sleeve formed to longitudinally move upon the upper end of a leg, provided with an overhanging and downwardly extending hook, in combination with a coöperating plate, arranged above the hook, with the marginal edges of the hook bent over to embrace the edges of the plate, and a threaded controlling rod loosely engaging the plate.

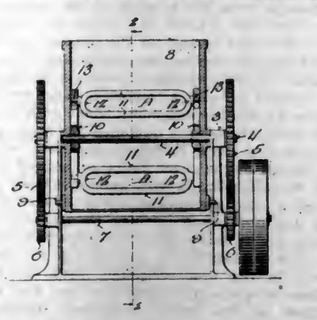
5. In a device of the kind described and in combination a supporting leg, a supporting shelf secured thereto, a longitudinal movable sleeve upon the upper end of the leg, provided with an overhanging and downwardly extending hook carrying a backwardly extending plate secured thereto, a rotatable controlling rod with its upper end loosely engaging the plate and its lower end in threaded engagement with a nut member carried by the leg, and a longitudinally movable foot upon the lower end of the leg conforming to the contour and partially embracing the same, whereby the length of the leg may be regulated as desired.

[Claims 6 and 7 not printed in the Gazette.]

1,214,585. DOUGH-MIXING MACHINE. MIKE J. PODZEAMSKI, Milwaukee, Wis. Filed Apr. 3, 1916. Serial No. 88,449. (Cl. 259—110.)

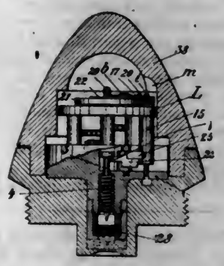
1. A dough mixing machine comprising a container, a rotatable carrying member, an agitator member in the container journally carried by said rotatable member, and the center of gravity of said agitator member being disposed laterally of its rotative axis whereby upon rotation of the carrying member, said agitator member will be imparted independent rotative movement upon engagement with work material.

2. A dough mixing machine comprising a container, rotatable members at the sides of the container, agitator



loops and pintles at the ends of the loops journaled in said rotatable members, said pintles being disposed laterally of the axes of said loops.

1,214,586. FUSE FOR SHELLS. HUGO PRAHL, Dusseldorf, Germany, assignor to Rheinische Metall-Waaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Filed July 25, 1913. Serial No. 781,171. (Cl. 102—37.)



1. A shell fuse comprising a spring-impelled firing-pin, means for normally holding said firing pin retracted and capable of being moved to release said pin by the recoil of the spring thereof, a trip for said holding means comprising a rotatably-movable member, and time mechanism for permitting the rotation of said trip member under the recoil of said spring.

2. A shell fuse comprising a spring-impelled firing-pin, means for normally holding said firing-pin retracted and capable of being moved to release said pin by the recoil of the spring thereon, a trip for said holding means comprising a rotatably-movable member, and time-mechanism for permitting the rotation of said trip-member under the recoil of said spring, said rotatably-movable member preventing action of said time-mechanism before firing.

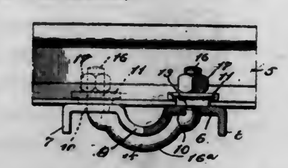
3. A shell fuse comprising a spring-impelled firing-pin, means for normally holding said firing-pin retracted and capable of being moved to release said pin by the recoil of the spring thereof, a trip for said holding means comprising a longitudinally and rotatably-movable bolt, and time-mechanism for permitting the rotation of said bolt, which latter normally prevents action of said time-mechanism but is automatically moved out of the way upon firing.

4. The combination with a spring-impelled firing-pin, of a holding member therefor designed to be moved into releasing position by the tension of the firing-pin spring, said holding member having two shoulders on different planes, a longitudinally-movable trip-bolt having a projection for successively engaging said shoulders, said bolt being moved longitudinally on firing to disengage its pin from one shoulder and permit it to be engaged by the other shoulder, and timing-mechanism for permitting said bolt to rotate to disengage its pin from said second shoulder at a predetermined point after firing.

5. The combination with a spring-impelled firing-pin, of a rotatable holding member therefor having a spiral flange with which the head of the firing pin engages, said member also having shoulders, a bolt having a pin for successively engaging said shoulders, and means for permitting said bolt to release said holding member.

[Claims 6 to 9 not printed in the Gazette.]

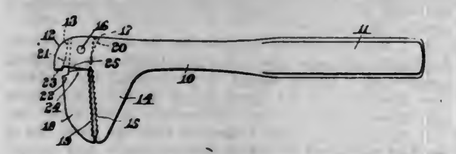
1,214,587. RAIL-FASTENER. EDWARD PRENDERGAST, St. Louis, Mo. Filed Aug. 26, 1916. Serial No. 117,106. (Cl. 238—5.)



1. In combination with a tie having a ribbed portion and bolt holes on either side of the ribbed portion, a substantially U-shaped bolt having threaded prongs and shaped to conform with the ribbed portion of the tie, and angular portions next the threaded prongs.

2. A rail fastener comprising in combination a tie having parallel downturned flanges and pairs of bolt holes near the ends thereof, a substantially U-shaped bolt arranged to be inserted through each of the pairs of openings, a portion of the body of each bolt arranged to engage the underneath surface of the tie and the remainder thereof arranged to project in a plane beneath said portion engageable with the tie in order to minimize movements of the tie incident to traffic.

1,214,588. WRENCH. GEORGE H. PUTNAM, Boston, Mass. Filed Oct. 21, 1916. Serial No. 127,018. (Cl. 81—98.)



1. A wrench consisting of a member provided with a handle and having a jaw intermediate its ends, substantially parallel bearing surfaces extending transversely of the outer end of said member and a movable jaw pivoted thereto provided with bearing surfaces on opposite sides thereof adapted when in use to engage with the bearing surfaces on said member whereby all strain is removed from the pivot member.

2. A wrench consisting of a member provided with a handle and having a jaw formed integral therewith intermediate its ends, substantially parallel bearing surfaces extending transversely of said member between its outer end and said jaw, and a movable jaw pivoted thereto provided with bearing surfaces on opposite sides of the pivot member adapted when in use to engage with the bearing surfaces on said member whereby all strain is removed from said pivot member.

3. A wrench consisting of a member having a handle at one end and a transverse inclosed slot in the opposite end, said member being provided with a fixed jaw adjacent said slot and between it and said handle, a movable jaw having an arm positioned in said slot, a pivot mounted in said member and arm, and inclined surfaces for said slot on opposite sides of said pivot adapted to be engaged by opposite sides of said arm when the wrench is in use.

4. A wrench consisting of a member having a handle at one end and a transverse slot in its opposite end and provided with a working jaw at one end of said slot and a laterally extending projection at the opposite end, said slot having inclined bearing surfaces on opposite sides and at opposite ends of said slot, a movable working jaw provided with an arm positioned in said slot and having a shoulder adapted to bear against said projection when said jaw is in operative position, and means for pivoting said movable jaw to said member.

5. A wrench consisting of a member having a slotted extension beyond a fixed jaw thereon, a movable jaw having an arm alined therewith and pivotally mounted in said slotted extension, the slot of which is provided with inclined bearing surfaces coacting with the opposite faces of said arm when the wrench is in use and said movable jaw being provided with shoulders coacting with a wall of said extension to prevent movement thereof toward its pivot.

[Claims 6 to 8 not printed in the Gazette.]

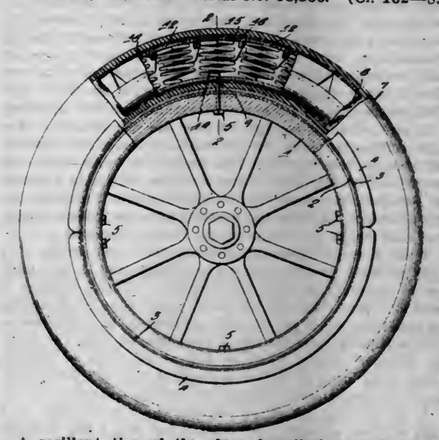
1,214,589. HACKSAW-BLADE FOR METAL-SAWING MACHINES. ANDREW RASMUSSEN, Racine Junction, Wis. Filed Apr. 3, 1916. Serial No. 88,424. (Cl. 29—95.)



1. A hack saw blade for metal sawing machines of that class in which the blade is relieved from the bottom of the saw cut during the non-cutting stroke of the saw, said blade being provided throughout the principal portion of its length with coarse teeth, and provided at its entering end with a short length of fine teeth, said latter teeth being so fine as to prevent breakage thereof when brought into contact with the work or against relatively sharp or angular surfaces, but sufficiently long as to present a coarse file-like cutting surface.

2. A hack saw blade for metal sawing machines of that class in which the blade is relieved from the bottom of the saw cut during the non-cutting stroke of the saw, said blade being provided throughout the principal portion of its length with coarse teeth of uniform length and provided at its entering end with a short length of coarse file-like cutting teeth, the cutting ends of which are in the plane of the cutting ends of the coarse teeth.

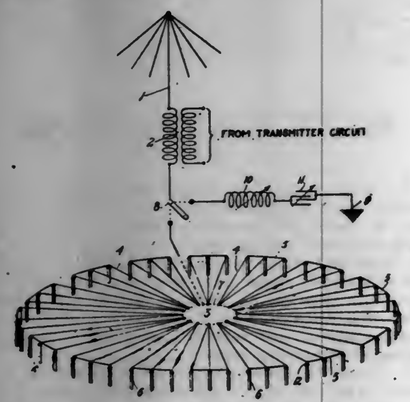
1,214,590. TIRE. WILLIAM N. RETTINGER, Bourbon, Ind. Filed May 18, 1916. Serial No. 98,366. (Cl. 152—8.)



A resilient tire of the class described comprising an outer casing, a plurality of tread links, each tread link

provided with a substantially T-shaped aperture near one end thereof and a substantially T-shaped head at the opposite end thereof, the T-shaped head of one link adapted to fit through the T-shaped notch of the adjoining link for producing an endless chain of links around the tread of a tire, each link provided with an inwardly struck bridge portion at the outer end of each T-shaped notch for constituting a pocket for receiving the neck of said T-shaped head, each tread link provided with side flanges, a channel plate shielding said side flanges, and spring means interposed between said channel plate and tread links for yieldably spacing said tread links and channel plate apart.

1,214,591. ANTENNA FOR RADIOTELEGRAPH-STATIONS. GUSTAV REUTHE, Sayville, N. Y., assignor to Atlantic Communication Company, New York, N. Y., a Corporation of New York. Filed Apr. 29, 1916. Serial No. 94,351. (Cl. 250—33.)



1. In a radio telegraph station the combination of a high vertical antenna for transmitting and a low horizontal antenna for receiving, said vertical antenna being connected electrically during transmission with said horizontal antenna as a counterpoise, said horizontal antenna being disconnected from the vertical antenna during receiving.

2. In a radio telegraph station, the combination of a high vertical antenna for transmitting, and a low horizontal antenna for receiving, having a suitable number of sections, said vertical antenna being connected during transmitting with all of said sections as a counterpoise, said horizontal antenna being disconnected from the vertical antenna during receiving and at least one of its sections being used as a low horizontal antenna for receiving.

3. In a radio telegraph station, the combination of a high vertical antenna for transmitting and a low horizontal antenna for receiving, said vertical antenna being connected electrically during transmitting with said horizontal antenna as a counterpoise, said horizontal antenna being disconnected from the vertical antenna during receiving, and means for detuning the vertical antenna.

4. In a radio telegraph station, the combination of a high vertical antenna for transmitting, and a low horizontal antenna for receiving, having a suitable number of sections, said vertical antenna being connected during transmitting with all of said sections as a counterpoise, said horizontal antenna being disconnected from the vertical antenna during receiving and at least one of its sections being used as a low horizontal antenna for receiving, and means for detuning the vertical antenna.

5. In a radio telegraph station the combination of a high vertical antenna for transmitting and a low horizontal antenna for receiving, said horizontal antenna consisting of a suitable number of radially extending wires forming an approximately circular area and being connected in suitable numbers in individual groups to form independent sectors of the circle, said vertical antenna being connected during transmission with all of said sectors as a counterpoise, said horizontal antenna being disconnected from the vertical antenna during receiving, and at least one of its sectors being used as a low horizontal antenna for receiving.

[Claims 6 to 11 not printed in the Gazette.]

1,214,592. KITE. ARMANDO ROA, New York, N. Y. Filed Aug. 14, 1916. Serial No. 114,712. (Cl. 244—22.)



1. A kite comprising a framework, a covering disposed over the framework, stiffening means carried by the framework and extending below the main body of the kite to form a plane, a double tail secured to the body of the framework, and means for attaching a cord to the framework.

2. A kite comprising a framework, a covering disposed over the framework, stiffening means carried by the framework and extending below the main body of the kite to form a plane, a double tail of unequal lengths secured to the body of the framework, and means for attaching a cord to the framework.

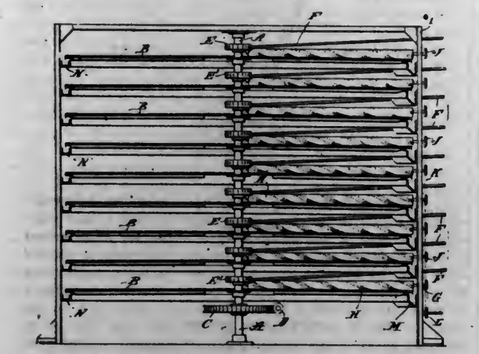
3. A kite comprising a frame having a cover thereon, having its opposite sides of equal length, an attaching member of a length nearly approximating the distance from the center to the upper end of the kite, two attaching members having their ends secured to the upper corners of the frame, a tail suspended from the lower end of the first mentioned attaching member, and a cord secured to the free ends of the last mentioned attaching members.

4. A kite comprising a framework of four intersecting members, one of which projects below the others; a cord disposed around three of the intersecting members, a second cord disposed around the ends of projecting member and one of the other intersecting members, a cover disposed over the framework and the cords, a tail secured to the bottom of the framework, and means for attaching a securing cord to the framework.

1,214,593. APPARATUS FOR SEPARATING SOLIDS FROM LIQUIDS. WILLIAM RUSSELL, London, England, assignor to The Dorr Company, Denver, Colo., a Corporation of Delaware. Filed Oct. 27, 1916. Serial No. 128,101. (Cl. 127—23.)

1. Apparatus for separating solids from liquids, comprising a table inclined slightly downward from its center to its periphery and from which the liquid drains, a trough for receiving the liquid, a separate receptacle for the solid matter, means for supplying pulp to the central portion of the table, devices for detaching the deposited material from the table and for moving it radially toward the receiver for solid matter.

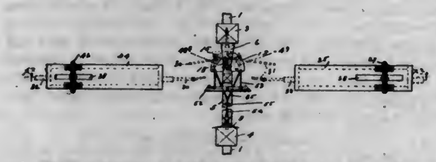
2. Apparatus for separating solids from liquids, comprising a table inclined slightly downward from its center to its periphery and from which the liquid drains, a distributing box partially surrounding the axis of the table, and having a closed portion on one side, and devices extending radially from said closed portion of the box for detaching the deposited material from the table and for moving it radially toward the receptacle for the solid matter.



3. Apparatus for separating solids from liquids, comprising a rotary table slightly inclined downward from its center to its periphery and from which the liquid drains, means for distributing pulp on the central portion of the table, means for mechanically removing solid matter deposited on the table, a trough extending partly around the periphery of the table and adapted to receive the liquid drained from it, and a pocket having a discharge opening into which the solid matter is directed.

4. Apparatus for separating solids from liquids, comprising a table inclined slightly downward from its center to its periphery and from which the liquid drains, a distributing box partially surrounding the axis of the table and having a closed portion on one side, means for slowly rotating the table, a rotary brush having spirally arranged bristles extending from the closed portion of the distributing box toward the periphery of the table, means for receiving solid matter from the brush and means for collecting liquid draining from the table.

1,214,594. GATE-ACTUATING MECHANISM. OSCAR S. SAND, Goodridge, Minn. Filed July 29, 1916. Serial No. 112,113. (Cl. 39—32.)



1. The combination with a swinging gate, of mechanism for swinging the gate in both directions, and through normally interlocked members, one of which moves with the gate and the other two of which are alternately released from the third member by reverse swinging movement of the gate.

2. The combination with a swinging gate and a coupling head connected thereto, of reversely acting arms both having normal interlocking engagement with the coupling head, and means whereby the initial movement of one of the arms will uncouple the other arm from the coupling head.

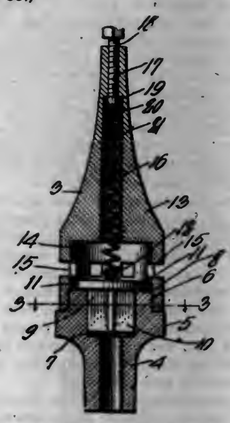
3. The combination with a swinging gate and a coupling head carried thereby, of a pair of arms normally interlocked with the coupling head and arranged to open the gate, the one in one direction and the other in the opposite direction, connections for independently operating the arms, and means for rendering one of the arms inoperative while the other arm is operating to open the gate.

4. The combination with a swinging gate and coupling head carried thereby, of a pair of arms normally interlocked with the coupling head and arranged to open the gate, the one in one direction and the other in the opposite direction, connections for independently operating the arms, and automatic means for rendering one of the arms inoperative while the other arm is operating to open the gate.

5. The combination with a swinging gate and a coupling head carried thereby, of a pair of arms normally interlocked with the coupling head and arranged to open the gate, the one in one direction and the other in the opposite direction, connections for alternately operating the arms to open and then close the gate, and means for rendering one of the arms inoperative while the other arm is operating to open the gate.

[Claims 6 and 7 not printed in the Gazette.]

1,214,595. RELIEF-VALVE. NATHAN B. SANDS, Baltimore, Ohio. Filed Mar. 30, 1912. Serial No. 687,381. (Cl. 137—53.)

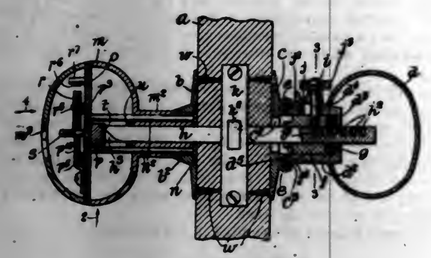


The combination with a pipe having a T-joint, of a pressure relief valve comprising a coupling member engaging said joint and having an exteriorly screw threaded reduced portion, there being a counter bore within said member, the end of the reduced portion constituting a valve seat, an interiorly threaded chambered member detachably engaging the reduced threaded portion of the first named member and having an annular series of outlet openings, there being a recess extending longitudinally within said chambered member and communicating with the chamber therein, a spring seated snugly within said recess, a valve including a disk and wings extending therefrom, said spring normally bearing against the disk to hold it upon the seat and said wings being slidably mounted within the counter bore in the coupling member, the length of the chamber being less than the length of the valve whereby the lower ends of the wings of the valve are maintained constantly within the counter bore, and means adjustably mounted in the end wall of the recess for varying the compression of the spring, the recess being of such length that the spring serves also as a guide for the valve.

1,214,596. KNOB-LOCK FOR DOORS. FRANK J. SCHALOW, Evergreen, N. Y. Filed June 14, 1916. Serial No. 103,604. (Cl. 70—91.)

1. In a lock mechanism of the class described, a door, plates mounted on the opposite sides thereof, knobs rotatably connected with said plates, a spindle movably mounted in said door and said knobs, means mounted in connection with one of said knobs for moving said spindle transversely thereof, tensionally controlled means mounted in connection with the other knob whereby said spindle may be locked against rotation, and means for moving said

last named means so as to permit the rotation of said spindle.



2. In a lock mechanism of the class described, a door, plates mounted on the opposite sides thereof, knobs rotatably connected with said plates, a spindle movably mounted in said door and said knobs, one of said plate members being provided with a rectangular aperture, a spring controlled clutch mounted in connection with the knob corresponding with said plate member, means passed through the sleeve portion of said knob, said clutch member and said spindle for moving said clutch and spindle into different positions and for locking the same in one of said positions, and a lock mechanism mounted in the other of said knobs whereby the operation thereof will move said spindle transversely of the door.

3. In a lock mechanism of the class described, a door, plates mounted on the opposite sides thereof, knobs rotatably connected with said plates, a spindle movably mounted in said door and said knobs, means mounted in connection with one of said knobs for moving said spindle longitudinally, tensionally controlled means mounted in connection with the other knob whereby said spindle may be locked against rotation, and means passed through the shank portion of said last named knob and engaging said tensionally controlled means for moving the same so as to permit the rotation of said spindle.

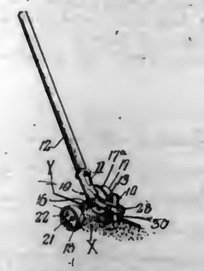
4. In a lock mechanism of the class described, a door, plates mounted on the opposite sides thereof, knobs rotatably connected with said plates, a spindle movably mounted in said door and said knobs, means mounted in connection with one of said knobs for moving said spindle longitudinally, tensionally controlled means mounted in connection with the other knob whereby said spindle may be locked against rotation, means passed through the shank portion of said last named knob and engaging said tensionally controlled means for moving the same so as to permit the rotation of said spindle, said tensionally controlled means being movable into position by the means passed through the shank portion of said knob to lock the spindle against rotation.

5. In a lock mechanism of the class described, a door, plates mounted on the opposite sides thereof, knobs rotatably connected with said plates, a spindle movably mounted in said door and said knobs, a lock mechanism mounted in one of said knobs, a dog operated by said lock mechanism to move the spindle transversely of said door, a sleeve mounted on said spindle within the shank portion of the other of said knobs, and means passed through said shank portion and secured in said sleeve and said spindle for moving said sleeve and spindle into different positions.

[Claims 6 and 7 not printed in the Gazette.]

1,214,597. LAWN-EDGER. CHRISTIAN L. SCHNEIDER, Davenport, Iowa. Filed July 1, 1916. Serial No. 107,084. (Cl. 97—28.)

1. A device of the kind described comprising a bracket casting, which includes a forwardly extending arm, a vertically adjustable cutting device carried by said arm, means for securing a handle to the bracket casting, a main and an auxiliary supporting wheel mounted on said bracket casting, one of said wheels being capable of a floating movement in a direction transverse to its path of travel.



2. A device of the kind described comprising a bracket casting, which includes a socket member and a forwardly extending arm, a handle member adapted for engagement in said socket member, a vertically adjustable J shaped knife carried by said arm at its end, a main supporting wheel journaled on one side of said bracket casting, a transversely extending lug made integral with but on the opposite side of said bracket casting, an arm pivoted at one end to said lug and capable of angular adjustment relative thereto, a bearing stud pivoted to the free end of said arm and an auxiliary supporting wheel mounted on said bearing stud.

3. A device of the kind described comprising a bracket casting, which includes a socket member and a forwardly extending arm, a handle member adapted for engagement in said socket member, a vertically adjustable J shaped knife carried by said arm at its end, a laterally extending stud carried on one side of said bracket casting, a main supporting wheel journaled on said stud, a transversely extending lug carried on the other side of said bracket casting, an arm pivotally attached to said lug, said arm being capable of adjustment relative to said lug, means locking said arm to said lug in the desired adjusted position, a bearing stud carried by said arm and an auxiliary supporting wheel mounted on said bearing stud.

4. A device of the kind described comprising a bracket casting which includes an upwardly and rearwardly inclined socket member and a normally horizontally disposed forwardly extending arm, said arm having a recess near its end, a cutting device mounted in said recess and a clamping bar carried by said arm adjacent said recess to clamp said knife in position therein, a stud projecting laterally from one side of said bracket casting, a main supporting wheel journaled on said stud, a lug projecting laterally from the opposite side of said bracket casting, an arm pivotally and adjustably connected to said lug, means locking said arm in the desired adjusted position, a bearing stud loosely pivoted to the end of said laterally extending arm and an auxiliary supporting wheel journaled on said bearing stud.

1,214,598. PINEAPPLE PRODUCT. SAMUEL E. SHAFFNER, St. Louis, Mo. Filed May 15, 1916. Serial No. 97,703. (Cl. 99—11.)

1. As a new article of manufacture, a crude, inedible pineapple product for uses substantially as described, said product including flaked or shredded raw pineapple peel, said flakes or shreds being in externally dried condition, but retaining and possessing internally the juice and chemical elements or compounds of the pineapple fruit.

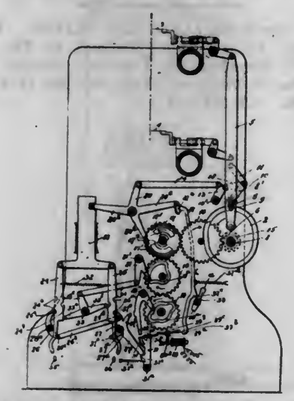
2. As a new article of manufacture, a crude, inedible pineapple product for uses substantially as described, said product including in flaked or shredded form the raw peel and core of the pineapple fruit, said flakes or shreds being in externally dried condition, but retaining and possessing internally the juice and chemical elements or compounds of the pineapple fruit.

3. As a new article of manufacture, a crude, inedible pineapple product for uses substantially as described, said product including in flaked or shredded form the raw peel, core, and that part only of the edible fruit of the pineapple which in the paring of the fruit is cut away with, and adheres to, the peel and core, said flakes or shreds being in externally dried condition, but retaining and possessing internally the juice and chemical elements or compounds of the pineapple fruit.

4. As a new article of manufacture, a crude, inedible, and unfermented pineapple product for uses substantially as described, said product including in flaked or shredded form the raw peel, core, and that part only of the edible fruit of the pineapple which in the paring of the fruit is cut away with, and adheres to, the peel and core, said flakes or shreds being in externally dried condition, but retaining and possessing internally the juice and chemical elements or compounds of the pineapple fruit.

5. As a new article of manufacture, a crude, dried, inedible, and unfermented pineapple product for use substantially as described, said product including in flaked or shredded form the raw peel, core, and that part only of the edible fruit of the pineapple, which in the paring of the fruit is cut away with, and adheres to, the peel and core, said flakes or shreds being characterized by possessing approximately all the beneficial properties of the fresh pineapple fruit.

1,214,599. EMBROIDERING-MACHINE. GOTTWALT SIEBER, Plauen, Germany, assignor to Vogtländische Maschinenfabrik, Plauen, Germany. Filed Jan. 19, 1915. Serial No. 3,185. (Cl. 112—7.)



1. In an embroidering machine, the combination with embroidering implements, of a controlling mechanism including a constantly moving member, means which during any stroke of the machine are capable of engaging and have the tendency to engage with said member and means for normally preventing such engagement and which on receiving an impulse will release said first named means and allow of their engagement with said member, whereby they will so affect the said implements as to either render them ineffective or effective without influencing the operation of other parts of the machine.

2. In an embroidering machine, the combination with embroidering implements and their actuating means, of a controlling mechanism including a constantly moving member, means operatively connected to said actuating means and which during any stroke of the machine are capable of engaging and have the tendency to engage with said member and means for normally preventing such engagement and which on receiving an impulse will release the said means and allow of their engagement with said member whereby they will so adjust said actuating means as to render said implements ineffective or effective without influencing the operation of other parts of the machine.

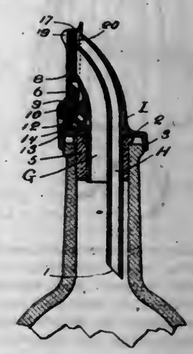
3. In an embroidering machine, the combination with embroidering implements and actuating means therefor including a cam and rollers, of a controlling mechanism including a constantly rocking member, members operatively connected to said rollers and which during any stroke of the machine are capable of engaging and have the tendency to engage with said rocking member and means for normally preventing such engagement and which on receiving an impulse will release said members and allow of their engagement with the said rocking member whereby they will so adjust the rollers relative to the said cam, as to render the said implements ineffective or effective without influencing the operation of other parts of the machine.

4. In a pantograph embroidering machine, the combination with the stitching implements and actuating means therefor, including a cam and rollers coöperating therewith, of a toggle mechanism operatively connected to said rollers and a controlling mechanism operatively connected to said toggle mechanism and which on receiving an impulse will automatically operate the said toggle mechanism so as to adjust said rollers into inoperative or operative position relative to their cam and to correspondingly arrest or start the stitching implements, without affecting the operation of other parts of the machine.

5. In a pantograph embroidering machine, the combination with embroidering implements, of a controlling mechanism comprising a constantly moving member, a double armed slide operatively connected to said implements and which on receiving an impulse is capable of engaging with said moving member at any stroke of the machine and to render the said implements ineffective or effective without affecting the operation of other parts of the machine and means for starting said mechanism.

[Claims 6 to 20 not printed in the Gazette.]

1,214,600. POUR-OUT. WILLIAM E. SILVERTHORNE, New York, N. Y. Filed Sept. 15, 1915. Serial No. 50,772. (Cl. 215—55.)



1. A device of the class described, comprising a liquid outlet conduit and a closure therefor, said closure being movable into open and closed position, and means for braking the movements of the closure toward one of said positions.

2. A device of the class described, comprising a liquid outlet conduit and a closure therefor, said closure being movable into open and closed position, spring means for moving the closure, and means whereby the spring means is adapted to brake the movement of the closure toward one of said positions.

3. A device of the class described, comprising a liquid outlet conduit and a closure therefor, said closure being movable into open and closed position, spring means for moving the closure into closed position, said spring means serving also to move the closure to open position, and means whereby said spring means will brake the movement of the closure before the closure reaches fully open position.

4. A device of the class described, comprising a body member having an air inlet and a liquid outlet conduit therethrough, a closure for one of said conduits comprising a member pivotally mounted upon the body to swing into and out of closing position, a socket formed in the

body member adjacent the pivot of the closure, a spring pressed member arranged within said socket to engage the pivotal portion of the closure, the pivotal portion of the closure being shaped so that said spring pressed member will urge the closure into closed position or open position and said pivotal portion being further shaped so that said spring pressed member will serve as a frictional brake to retard the movement of the closure toward one of said positions.

5. A bottle stopper, comprising an outlet conduit and a closure for said conduit, in combination with a bottle to which said stopper is connected, means whereby said closure is pivotally mounted to swing from a position closing said conduit downwardly and inwardly to a position adjacent a portion of the bottle, the closure being likely to injure the bottle by contact therewith, spring means arranged for snapping said closure toward its position adjacent the bottle, and means for braking the movement of the closure prior to contact of the closure with the bottle.

[Claims 6 and 7 not printed in the Gazette.]

1,214,601. WOMAN'S DRESS. BERNARD SIROTTA, New York, N. Y. Filed Dec. 5, 1916. Serial No. 135,234. (Cl. 2—135.)



1. The combination with a woman's garment, of gaiters comprising depending strips extending from the bottom of the material of the garment, and located on either side thereof, laterally extending portions formed on said depending strips, and means for securing together the free ends of the depending strips and laterally extending portions.

2. The combination with a woman's garment, of gaiters comprising detachable depending strips extending from and below the material of the garment and located on either side thereof, laterally extending portions formed on said depending strips, and means for securing together the free ends of the depending strips and laterally extending portions.

3. The combination with a woman's garment, of gaiters comprising depending strips formed of the material of the garment and located on either side thereof, laterally extending portions formed on said depending strips, and means for securing together the free ends of the depending strips and laterally extending portions.

4. In a woman's garment having a skirt portion, the provision of gaiters extending from said skirt portion and means for securing said gaiters out of view when they are turned up under said skirt portion.

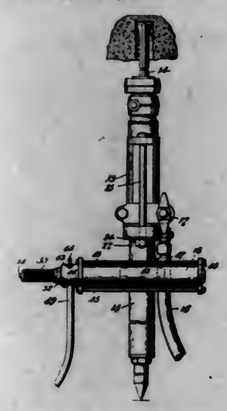
1,214,602. AUTOMATIC SASH-HOLDER. NORMAN H. SMITH, Babylon, N. Y. Filed Mar. 14, 1916. Serial No. 84,224. (Cl. 16—19.)

A sash holder, comprising in combination, a continuous metallic strip shaped to provide an elongated bottom plate, vertical ends at each end of said bottom plate, and inwardly faced recesses formed on the free extremities of said ends, an outwardly bowed spring strip having its ends inserted in said recesses and bridging said ends and



a coil spring interposed between said bottom plate and the bowed portion of said spring strip, the inserted ends of said spring strip being longitudinally notched to surround the fastening screws passed through the walls of said recesses to secure the device to a sash.

1,214,603. ROCK-DRILLING APPARATUS. WILLIAM A. SMITH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Feb. 23, 1916. Serial No. 80,015. (Cl. 255—47.)



1. The combination with drilling apparatus, of a motor movably mounted on the drilling apparatus for turning the same, means for supplying actuating fluid to the motor, and a common handle for holding the motor against turning with the drilling apparatus and controlling the supply of actuating fluid to the motor.

2. The combination with drilling apparatus, of a motor movably mounted on the drilling apparatus for turning the same, means for supplying actuating fluid to the motor, a device controlling the actuating fluid supply to the motor, and a handle for holding the motor against turning with the drilling apparatus, said handle being movable on the motor and controlling the supply of actuating fluid thereto.

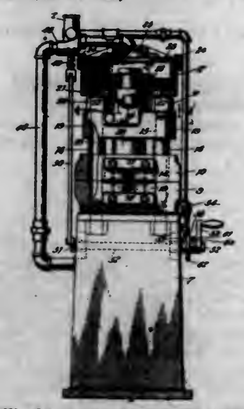
3. The combination with drilling apparatus, of a motor movably mounted on the drilling apparatus for turning the same, means for supplying actuating fluid to the motor, a valve controlling the fluid supply to the motor, and a handle connected to the motor for holding the latter against turning, said handle being rotatably mounted on the motor and having a connection with the valve for operating it.

4. The combination with drilling apparatus, of a motor movably mounted on the drilling apparatus for turning the same, means for supplying actuating fluid to the motor, a common handle for holding the motor against turning with the drilling apparatus and controlling the supply of actuating fluid to the motor, and means for normally maintaining the handle in a position to cut off the supply of fluid to the motor.

5. The combination with drilling apparatus, of a motor movably mounted on the drilling apparatus for turning the same, means for supplying actuating fluid to the motor, a device controlling the actuating fluid supply to the motor, a handle for holding the motor against turning with the drilling apparatus, said handle being movable on the motor and controlling the supply of actuating fluid thereto, and means for yieldingly maintaining the handle in a position to cut off the supply of fluid to the motor and cause it to assume such position when in released condition.

[Claims 6 to 20 not printed in the Gazette.]

1,214,604. DRILL-SHARPENING APPARATUS. WILLIAM A. SMITH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Feb. 23, 1916. Serial No. 80, 016. (Cl. 76—5.)



1. In a drill sharpener, the combination with a base having an anvil, of a movable head coacting with the anvil, a power cylinder supported above the anvil and head, a power piston operating in the cylinder and connected to the head, a return piston of smaller area than the power piston and located therebeneath, means for supplying motive fluid to the machine and conveying a portion to the power piston and a portion to the return piston and maintaining the same against the latter, means for controlling the fluid supplied to the power piston and exhausting it therefrom, and a fluid operated shaping hammer and dolly mounted on the base.

2. In a drill sharpener, the combination with a base having an anvil, of a movable head coacting with the anvil, a fixed head supported above the movable head and having an upper large piston chamber and a plurality of lower and smaller piston chambers communicating therewith, a power piston operating in the large piston chamber, return pistons in the smaller chamber operating against the power piston, means for supplying motive fluid to the machine and conveying a portion to the power piston chamber and a portion to the smaller piston chamber and maintaining the same in the latter, means for controlling the fluid supplied to the power piston chamber and exhausting it therefrom, and a fluid operated shaping hammer and dolly mounted on the base.

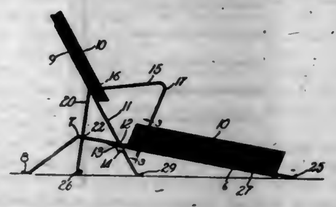
3. In a drill sharpener, the combination with a base having an anvil, of spaced guide rods fixed to the base and projecting above the anvil, a head block located between and slidable on the guide rods, a cylinder fixed to the guide rods above the head block, a piston in the cylinder having a depending connection with the head block and located between the spaced guide rods, and a fluid operated shaping hammer and dolly coacting with the anvil and head block.

4. In a drill sharpener, the combination with a base having an anvil, of spaced guide rods fixed to the base and projecting above the anvil, a head block slidably mounted on the guide rods, a cylinder having outstanding ears disposed below and in spaced relation thereto, said ears being secured to the guide rods, a piston in the cylinder having a depending connection with the head block, and a fluid operated shaping hammer and dolly coacting with the anvil and head block.

5. In a drill sharpener, the combination with a base having an anvil, of spaced upstanding guide rods fixed upon the base, a head block slidably mounted on the guide rods, a cylinder located above the guide rods and head block and having a depending neck and outstanding ears, the latter being mounted upon the guide rods, a piston operating in the cylinder and having a piston rod slidable in the neck and connected to the head block, and a fluid operated shaping hammer and dolly coacting with the anvil and head block.

[Claims 6 to 11 not printed in the Gazette.]

1,214,605. HOLDER FOR CALENDAR-PADS AND THE LIKE. WILLIAM A. SPURRIER, Newton, Mass. Filed May 28, 1915. Serial No. 31,086. (Cl. 40—120.)



1. A device of the class described having, in combination, a base, a back connected with and disposed at an angle to said base, a support for said back extending therefrom rearwardly into engagement with said base, and leaf guiding means extending from said back forwardly into engagement with said base.

2. A device of the class described having, in combination, a base provided with a perforation adjacent one end thereof, a back constructed of sheet material and arranged to fit said perforation, a portion of said back being bent to secure said back within said perforation, means on said back extending through said base and constituting a support therefor, and leaf guiding means extending from said back to said base.

3. A device of the class described having, in combination, a base formed of sheet material and provided with a perforation, a back also formed of sheet material and provided with a tongue adapted to project through said perforation, means on said tongue constructed and arranged to be bent laterally relatively thereto to secure said tongue within said perforation, and leaf guiding means formed integral with said back by partially detaching portions of the material thereof, said leaf guiding means being constructed and arranged to interlock with said base.

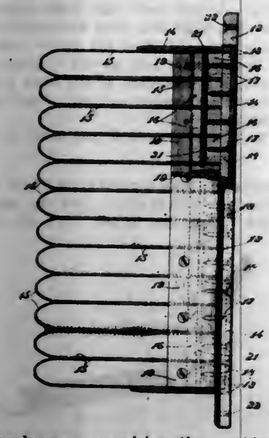
4. A device of the class described having, in combination, a base formed from sheet material, a back also formed from sheet material and constructed and arranged to interlock with said base, a pair of supporting members for said back, said supporting members being formed integral with said back and adapted to interlock with said base at the rear of the interlocking point of said base and said back, and leaf guiding means formed integral with said back and constructed and arranged to interlock with said base at a point in front of said back.

5. A device of the class described having, in combination, a base formed from sheet metal and provided with a

slot adjacent one end thereof, a back also formed from sheet metal and provided with a tongue adapted to fit said slot, portions of said tongue being constructed and arranged to lock said tongue within said slot, a pair of leaf guiding members formed integral with said back and extending forwardly from said back into interlocking engagement with said base, and a pair of supporting members formed integral with said back and adapted to interlock with said base at the rear of said back, said supporting members being constructed and arranged to support said base.

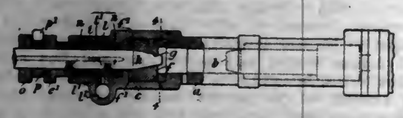
[Claims 6 to 8 not printed in the Gazette.]

1,214,606. CLOTHES-HANGER. ANNA L. STEIG, Churchs Ferry, N. D. Filed Sept. 4, 1915. Serial No. 48,951. (Cl. 211—13.)



A clothes hanger comprising the combination with a back-board having a mortise, of a U-shaped metal strip the body of which is arranged in said mortise and which strip is attached to said back-board, a series of bow-springs within the arms of said metal strip, a series of blocks within the open ends of said bow-springs, said blocks being attached to said back-board, wooden housing and bracing strips also secured to said back-board and disposed above and below the inner ends of said bow-springs, and a rod passing through said blocks and the inner ends of said bow-springs and also through the arms of said U-shaped strip, the ends of said rod being riveted to said arms to secure said blocks, bow-springs and arms together.

1,214,607. ROCK-DRILLING MACHINE. WILLIAM CHARLES STEPHENS, Cornwall, England. Filed May 19, 1915. Serial No. 29,138. (Cl. 255—42.)



1. A rock drilling machine comprising a working cylinder provided with a chuck having a flat surface inclined to the longitudinal axis of said cylinder, a hammer piston mounted in said cylinder, and a drill bit mounted in said chuck and provided at its inner end with a flat inclined surface in engagement with the flat surface of the chuck.

2. A rock drilling machine comprising a working cylinder provided with a chuck having an adjustable member provided with a flat surface inclined to the longitudinal axis of said cylinder, a hammer mounted in said cylinder, and a drill bit mounted in said chuck and provided at its inner end with a flat inclined surface in engagement with the flat surface of the chuck.

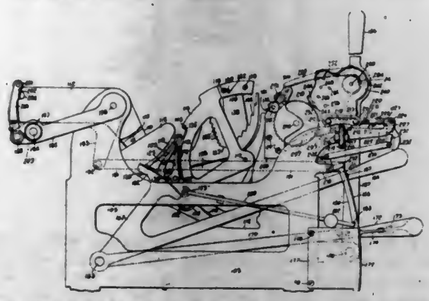
3. In a rock drilling machine, the combination with a working cylinder, of a hammer piston mounted in said cylinder, a front cover secured to the working cylinder and provided with a chuck having a flat surface inclined to the longitudinal axis of the cylinder, and a drill bit mounted in said cover and provided at its inner end with a flat inclined surface in engagement with the inclined surface of the chuck.

4. In a rock drilling machine, the combination with a working cylinder capable of a rotating or oscillating movement, of a hammer piston mounted therein, a front cover secured to said cylinder and provided with a chuck having a flat surface inclined to the longitudinal axis of the cylinder, and a drill bit mounted in said cover and provided at its inner end with a flat inclined surface in engagement with the flat inclined surface of the chuck.

5. In a rock drilling machine, the combination with a working cylinder, of a hammer piston mounted therein, a front cover secured to the working cylinder and provided with a chuck having a flat surface inclined to the longitudinal axis of the cylinder, a drill bit mounted in said cover and provided at its inner end with a flat inclined surface in engagement with the inclined surface of the chuck, a stuffing box formed integral with the cover, packing mounted in said stuffing box and surrounding said bit, and means for compressing said packing in said stuffing box for holding said bit in engagement with the chuck.

[Claims 6 and 7 not printed in the Gazette.]

1,214,608. COMPUTING-MACHINE. ROBERT H. STROTHER, Montclair, N. J., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Apr. 14, 1916. Serial No. 91,050. (Cl. 235—81.)



1. The combination of a series of sums elements, one for each of a plurality of denominations, a series of differences elements, one for each of said denominations, means for setting the sums and differences elements of the several denominations each in accordance with one of the digits of a multiplicand having a plurality of digits, and means for setting all of said sums and differences elements in accordance with one digit of a multiplier.

2. The combination of means for setting up in each of a plurality of denominations the several digits of a multiplicand having a plurality of digits, and means for changing said setting in all of said denominations in accordance with a digit of a multiplier so as to produce in each denomination a setting appropriate to the sum of said digit multiplier and that digit of the multiplicand which was set up in that denomination and also a setting appropriate to the difference between the said multiplier digit and the said multiplicand digit of each denomination.

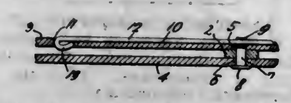
3. The combination of a series of sums elements, one for each of a plurality of denominations, a series of differences elements one for each of said denominations, means for operating the sums element and the differences element in each denomination in accordance with a digit of a multiplicand having a plurality of digits, and means for simultaneously changing in all of said denominations all of said settings in accordance with a digit of a multiplier.

4. The combination of a plurality of denominational sections each containing a sums element and a differences element, means for setting the sums and differences elements in each separate section independently of the other sections to set up the digits of a multiplicand, and means for setting all of said elements in all of the sections in accordance with a multiplier.

5. The combination of a series of sums elements, one for each of a plurality of denominations, a series of differences elements, one for each of said denominations, means for setting up in the several denominations the several digits of a multiplicand having a plurality of digits, means for setting up in all of said denominations a multiplier, a register, means for operating said register in each denomination in accordance with the excess over 10, if any, of the sum of the multiplier and multiplicand in the next lower denomination, and means for operating said register in each denomination in accordance with the difference in that denomination between the principal product corresponding to the sum of the factors and the principal product corresponding to the difference of the factors.

[Claims 6 to 35 not printed in the Gazette.]

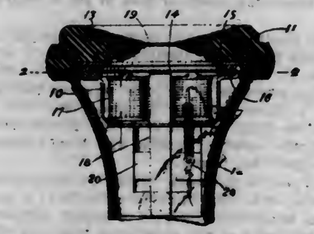
1,214,609. RAZOR-HANDLE. JOHN ARTHUR STUBBLEFIELD and ROSS R. THOMPSON, Thermopolis, Wyo. Filed Sept. 21, 1916. Serial No. 121,451. (Cl. 30—12.)



1. A handle having two apertures, a blade pivot extending through one aperture and having an aperture, and a resilient retaining element extending through the aperture of the pivot and bent to assume a bowed shape, the retaining element having a portion to snap into the other aperture of the handle when the retaining element is in a position to bow away from the handle and to prevent the retaining element from turning out of position.

2. A handle having an aperture, a groove intersecting said aperture and a second aperture at one end of said groove, a blade pivot extending through the first mentioned aperture and having an aperture, and a resilient retaining element seatable in said groove having a bend adjacent one end and a loop at its other end, the first mentioned end of the retaining element being insertible through the aperture of the pivot and the loop being engageable in the second mentioned aperture to hold the retaining element in position so that it has a tendency to bow away from the handle.

1,214,610. TELEPHONE-RECEIVER. NAHO TANNAKA, New York, N. Y. Filed Sept. 30, 1915. Serial No. 53,442. (Cl. 179—119.)



1. In a telephone receiver, a casing, a diaphragm yieldingly held therein by cushions, magnetic means arranged symmetrically so as to urge said diaphragm to vibrate integrally in the intended operations, and a resilient washer pressing the central portion of the diaphragm against the magnetic force of said means.

2. In a telephone receiver, a casing, a diaphragm cushioned at the front, back and peripheral edge thereof by soft washers or cushions under pressure in the casing, a plurality of electro-magnets arranged to act symmetrically on the diaphragm, and permanent magnets acting directly at the center and coöperatively with said electro-magnets at the outer portion on the diaphragm.

3. In a telephone receiver, a receiver housing, a casing comprising a double flanged cup and a ring cover clamped thereto within said housing, a diaphragm held between cushions under pressure in the casing, and a yielding lining disposed over the peripheral edge of the diaphragm.

4. In a telephone receiver, the combination with a casing, a vibratory body, and magnetic means; of a pad disposed over the peripheral edge of the vibratory body, and a pliable washer at the central portion of the said vibratory body for separating the said body from the magnetic means against the magnetic force.

5. In a telephone receiver, the combination with a casing, a vibrator and magnetic means; of a yielding cushion disposed at the peripheral front portion of said vibrator, and a resilient washer at the back central portion thereof, holding said vibrator therebetween under pressure, so as to allow said vibrator to vibrate at the peripheral portion thereof under the influence of said magnetic means.

[Claims 6 to 8 not printed in the Gazette.]

1,214,611. MANUFACTURE OF VARNISHES, PAINTS, AND OTHER PROTECTIVE OR COATING PREPARATIONS. HENRI TERRISSE, Geneva, Switzerland, assignor to The Indestructible Paint Company, Limited, London, England. Filed Apr. 22, 1915. Serial No. 23,163. (Cl. 134—26.)

1. Process for the manufacture of a coating preparation, comprising heating glycerin ester of fossil resin acid with a siccative oil, adding driers and diluting with a volatile diluent.

2. Process for the manufacture of a coating preparation, comprising heating glycerin ester of fossil resin acid with a siccative oil, adding driers and a volatile diluent, and grinding with a pigment.

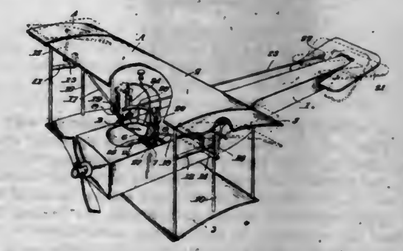
3. Process for the manufacture of a coating preparation, comprising heating glycerin ester of fossil resin acid with a siccative oil, adding driers and a volatile diluent, and grinding with oxid of zinc.

4. A coating preparation comprising esterified fossil resin in solution in a solvent medium.

5. A coating preparation comprising ester of a high boiling alcohol with fossil resin acid, in solution in a solvent medium.

[Claims 6 to 9 not printed in the Gazette.]

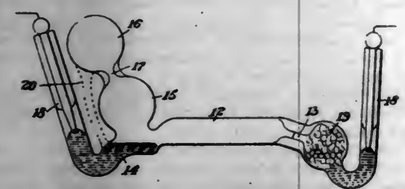
1,214,612. AEROPLANE STABILIZER OR CONTROL. NERI TERRY, Hardisty, Alberta, Canada. Filed Mar. 29, 1915. Serial No. 17,879. (Cl. 244—29.)



In an aeroplane, pivotally mounted auxiliary planes, a pivotally mounted seat, means connecting the seat and auxiliary planes consisting of link and bell crank mechanism adapted to automatically actuate said planes when the seat is oscillated, means for securing the seat in a rigid position and manually operating levers pivotally at-

tached to the seat coacting with the link mechanism and adapted to actuate the auxiliary planes when the seat is rendered rigid.

1,214,613. VAPOR ELECTRIC APPARATUS. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Sept. 12, 1912. Serial No. 719,925. (Cl. 176—42.)

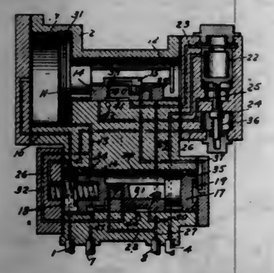


1. A mercury vapor apparatus comprising a container sealed and exhausted to a high degree of purity having a light-giving portion, a mercury electrode therein, a condensing chamber in communication with the vapor space of said apparatus, a second condensing chamber in communication with the interior of said lamp through a restricted opening adapted to pass a material weight of mercury only under normal operating pressure.

2. A mercury vapor apparatus comprising a container, electrodes therein, electrical means for operating such apparatus, and a condensing chamber connected thereto by a neck having an opening sufficient in area to permit the free passage of mercury thereto only above the minimum normal operating pressure.

3. A mercury vapor lamp comprising a light giving container and suitable electrodes therein including a supplementary condensing chamber and a communicating passage thereto having an area of opening capable of passing sufficient vapor to operate said condensing chamber only under normal operating pressure in said lamp.

1,214,614. FLUID-PRESSURE BRAKE APPARATUS. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed July 29, 1913. Serial No. 781,732. (Cl. 188—15.)



1. In a fluid pressure brake, the combination with a train pipe and an equalizing valve device operated upon a reduction in train pipe pressure for supplying fluid to the brake cylinder, of a separate valve device for controlling the brake cylinder exhaust and means operated by said equalizing valve device in applying the brakes for effecting the movement of said release valve device.

2. In a fluid pressure brake, the combination with a train pipe and a valve device controlled by train pipe pressure for supplying fluid to the brake cylinder, of a separate valve device for controlling the brake cylinder exhaust and means operated by the flow of fluid to the brake cylinder for effecting the operation of said release valve device.

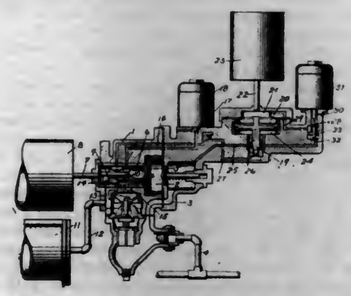
3. In a fluid pressure brake, the combination with a train pipe and an equalizing valve device operated by a reduction in train pipe pressure for supplying fluid to the brake cylinder, of a separate valve device for controlling the exhaust of fluid from the brake cylinder and means operated by the flow of fluid to the brake cylinder for effecting the operation of said release valve device to close the brake cylinder exhaust.

4. In a fluid pressure brake, the combination with a train pipe and an equalizing valve device operated by a reduction in train pipe pressure for supplying fluid to the brake cylinder, of a release valve device comprising a valve for controlling the brake cylinder exhaust and a piston for operating said valve, and a valve mechanism operated by the flow of air to the brake cylinder for varying the pressure on said piston to operate said release valve device and close the brake cylinder exhaust.

5. In a fluid pressure brake, the combination with a train pipe and an equalizing valve device operated by a reduction in train pipe pressure for supplying fluid to the brake cylinder, of a release valve device comprising a valve for controlling the brake cylinder exhaust and a piston having two heads for operating said valve, a piston controlling the flow of fluid to the brake cylinder, and a valve operated by said piston for controlling communication from one piston head of the release valve device to an atmospheric exhaust port controlled by the equalizing valve device.

[Claims 6 and 7 not printed in the Gazette.]

1,214,615. ELECTRICALLY-CONTROLLED BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Oct. 3, 1914. Serial No. 864,873. (Cl. 188—4.)



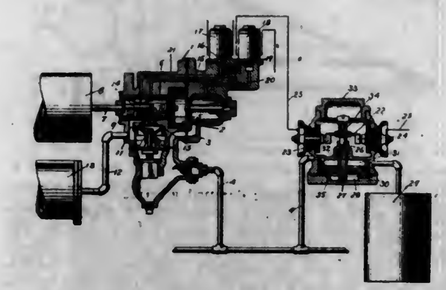
1. In an electro-pneumatic brake, the combination with a train brake pipe, of an apparatus on a car of a train comprising an equalizing reservoir, an equalizing discharge valve device subject on one side to equalizing reservoir pressure for locally venting fluid from the brake pipe, and an electrically controlled valve for venting fluid from the equalizing reservoir side of the discharge valve device.

2. In an electro-pneumatic brake, the combination with a train brake pipe, of an apparatus on each car of a train comprising an equalizing reservoir, a piston subject to the opposing pressures of the brake pipe and the equalizing reservoir, a valve operated by said piston for venting fluid from the brake pipe at each car, and an electrically controlled pilot valve for venting fluid from the equalizing reservoir side of the piston.

3. In an electro-pneumatic brake, the combination with a brake pipe, of an apparatus on each car of a train comprising an equalizing reservoir, a piston subject to the opposing pressures of the train brake pipe and the equalizing reservoir, a valve operated by said piston for locally venting fluid from the brake pipe, a pilot valve for venting fluid from the equalizing reservoir side of the piston at a predetermined rate, and a magnet for operating said valve.

4. In an electro-pneumatic brake, the combination with a brake pipe, of an apparatus on the car comprising an equalizing reservoir, a piston subject to the opposing pressures of the brake pipe and the equalizing reservoir, a valve operated by said piston for venting fluid from the brake pipe at the car, a normally closed check valve for controlling communication through which the equalizing reservoir is charged, and an electrically controlled pilot valve for venting fluid from the equalizing reservoir side of the piston and adapted in open position to hold said check valve closed.

1,214,616. ELECTROPNEUMATIC BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Oct. 3, 1914. Serial No. 864,874. (Cl. 188—4.)



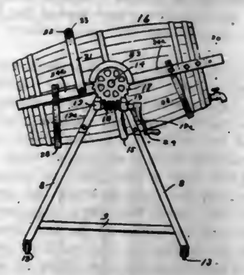
1. In an electro-pneumatic brake, the combination with an electrically controlled valve for venting fluid from the brake pipe to effect an application of the brakes, of a switch device normally closing the electric circuit of said valve during an application of the brakes and adapted to open said circuit upon the rate of reduction in brake pipe pressure exceeding a predetermined degree.

2. In an electro-pneumatic brake, the combination with a brake pipe and an equalizing valve device operated by a reduction in brake pipe pressure for effecting an application of the brakes, of a magnet valve device for venting fluid from the brake pipe and a switch device adapted under a reduction in brake pipe pressure in effecting an application of the brakes for maintaining the circuit of the magnet closed and operated when the rate of reduction in brake pipe pressure exceeds a predetermined maximum to open the magnet circuit.

3. In an electro-pneumatic brake, the combination with a brake pipe, of an electrically controlled valve for venting fluid from the brake pipe to effect an application of the brakes, a switch in the control circuit of said valve and a piston normally holding said switch closed during an application of the brakes and operated by fluid under pressure when the rate of brake pipe reduction exceeds a predetermined limit for actuating said switch to open the control circuit.

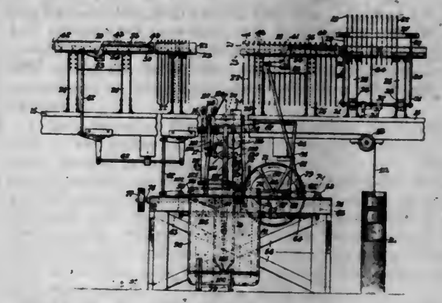
1,214,617. BARREL-SUPPORT. ROBERT ULVIG, Logan township, Minnehaha county, S. D. Filed May 29, 1916. Serial No. 100,433. (Cl. 248—17.)

1. A cask-support comprising a supporting frame including side members, a shaft having its end portions rotatably supported by said members and its intermediate portion curved downwardly to conform approximately to the contour of a cask, means for rocking the shaft, including a crank-operated worm rotatably mounted on one of said members, and a worm-wheel mounted on the shaft and intermeshed with the worm, and a tilting frame carried by the shaft and including parallel side strips secured to the shaft and engageable with an end of the cask, curved cask hangers depending from the tilting frame and positioned on opposite sides of the shaft, lateral arms on said strips engageable with the other end of the cask and adjustable longitudinally of the strips, and means carried by the strips engageable with the upper side of the cask.



2. A cask-support comprising a supporting frame including side members, a shaft having its end portions rotatably supported by said members and its intermediate portion curved downwardly to conform approximately to the contour of a cask, means for rocking the shaft including a crank-operated worm mounted on one of said members and a worm-wheel mounted on the shaft and intermeshed with the worm, and a tilting frame carried by the shaft and including parallel side strips, each embodying two separate pieces disposed laterally to and on opposite sides of the shaft, and a cross member secured to the shaft and interconnecting the adjacent ends of said pieces, a cross member interconnecting the rear ends of said strips and engageable with one end of the cask, lateral arms on the forward ends of the strips, engageable with the other end of the cask and adjustable longitudinally of the strips, forward and rear cask hangers depending from the strips, and means secured to the strips for engaging the upper side of the cask.

1,214,618. GREASING-MACHINE. CHARLES VAN AMBURGH, Tacoma, Wash., assignor to American Smelting & Refining Co., a Corporation of New Jersey. Filed May 5, 1915. Serial No. 26,182. (Cl. 91—31.)



1. In a device of the class described, the combination with a coating tank a pair of tracks adapted to receive a column of plates therebetween with portions thereof resting on the tracks and designed to lead the plates toward the tank, of means for centering the plates before they are lowered onto the tracks, said means comprising a pair of alining bars positioned above the tracks and extending lengthwise thereof, and manually actuated means for moving said bars toward each other in a direction transversely of the length of the tracks thereby to engage opposite edges of the plates to move the same within the lines of the tracks.

2. In a device of the class described, the combination of a greasing tank of a plate centering device comprising a pair of spaced apart parallel alining bars mounted for bodily movement transversely of their length toward and from each other, toggle levers for moving said bars, manually controlled means linked to said levers for moving the bars toward each other, a spring acting on one

of said means for moving the bar attached thereto in a direction away from the other bar thereby to open the bars relative to each other and means for acting on said alined plates to advance the same toward said greasing tank.

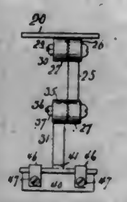
3. In a device of the class described, the combination with a greasing tank, of means for feeding the plates toward said tank including a plate feeding mechanism comprising a track adapted to support the plates, a feed rack mounted for reciprocatory movement parallel to the track and provided with a projection from its upper side for engaging the rear of the plate to advance the same, means for raising the rack to bring the projection above the level of the track and into engagement with the plate as the rack is advanced in one direction and for lowering the projection as the rack is returned in the opposite direction whereby the plate is advanced by a step-by-step movement along the track.

4. In a device of the class described, the combination with a greasing tank, of a track adapted to have a plate carried thereby to be fed to the tank, a reciprocating feed rack positioned below the track and having a movement parallel thereto, said rack having plate engaging means positioned above the track when moving in one direction and positioned below the track when moving in the opposite direction, said positions of the tracks being operatively dependent upon the direction of movement of the rack whereby said bar in its forward movement is adapted to advance the plate along the track and in its movement in the reverse direction is depressed in inoperative position.

5. In a device of the class described, the combination of a tank, of a plate feeding mechanism comprising a track leading to said tank, a lifting bar slidably mounted for movement parallel to said track and below the same, a feed rack slidably mounted on said lifting bar and normally positioned below said track, means for reciprocating said feed rack, a wedging engagement between said rack and bar whereby the upper part of said feed rack is raised above said track as it is advanced in one direction.

[Claims 6 to 48 not printed in the Gazette.]

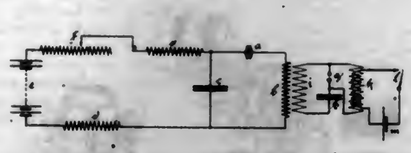
1,214,619. ADJUSTABLE-STEP PEDAL ATTACHMENT. STEPHEN G. VAN DERBECK, Hackensack, N. J., assignor to Van Derbeck-Sayers-Murdock Co., Inc., a Corporation of New York. Filed Aug. 20, 1915. Serial No. 46,409. (Cl. 74—81.)



1. An adjustable step pedal attachment adapted to be connected to a vehicle pedal, comprising an arm having one member of a ratchet coupling thereon, clamping brackets adjustably connected to said arm to connect it to the regular step pedal of a motor vehicle, a link with one member of a ratchet coupling at its ends, one of the latter ratchet coupling members locking with the ratchet coupling member of said arm, and a bracket having formed at one end a step pedal and at the other end a member of a ratchet coupling, the latter locking with the other ratchet coupling of said link to locate the said step pedal at various angles.

2. An adjustable step pedal attachment adapted to be connected to a vehicle pedal, comprising an arm with one member of a ratchet coupling, adjustable clamping brackets to connect the arm to the regular step pedal of a motor vehicle, a link in the attachment with a member of a ratchet coupling at each end thereof, the ratchet coupling member of the arm adjustably connected to one of the ratchet coupling members of the link by means of a bolt and a step pedal in the attachment having a bracket with one member of a ratchet coupling, the latter adjustably connected to the other ratchet coupling member of said link by means of a bolt to locate the said step pedal at various angles and distances from the vehicle pedal.

1,214,620. MEANS FOR PRODUCING ELECTRICAL OSCILLATIONS WITH THE AID OF AN AUXILIARY OSCILLATION-CIRCUIT. GEORG VON ARCO and ALEXANDER MEISSNER, Berlin, Germany, assignors to Gesellschaft fur Drahtlose Telegraphie, M. B. H., Berlin, Germany. Filed Sept. 17, 1912. Serial No. 720,897. (Cl. 250—37.)



1. Means for producing damped electric oscillations of high or medium frequency comprising a main primary oscillation circuit containing a spark gap, a capacity and an inductance, means for supplying a working current to said circuit and an auxiliary high frequency oscillation circuit having a capacity smaller than that of the main oscillation circuit, and means for supplying electric energy to said auxiliary circuit, said two oscillation circuits being suitably connected to cause the high frequency energy produced in the auxiliary circuit to break the gap in said main oscillation circuit.

2. Means for producing damped electric oscillations of high or medium frequency, comprising a main primary oscillation circuit containing a spark gap, a capacity and an inductance, means for supplying a working current to said circuit and an auxiliary high frequency oscillation circuit having a capacity smaller than that of the main oscillation circuit, and means for supplying electric energy to said auxiliary circuit, said two oscillation circuits being coupled by a transformer to cause the high frequency energy produced in the auxiliary circuit to break the gap of said main oscillation circuit.

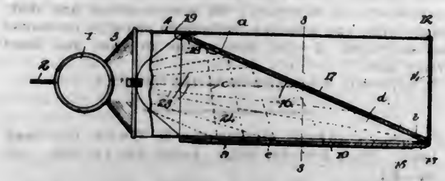
3. Means for producing damped electric oscillations of high or medium frequency, comprising a main primary oscillation circuit containing a plurality of spark gaps, a capacity and an inductance, means for supplying a working current to said circuit and an auxiliary high frequency oscillation circuit having a capacity smaller than that of the main oscillation circuit, and means for supplying electric energy to said auxiliary circuit, said two oscillation circuits being suitably connected to cause the high frequency energy produced in the auxiliary circuit to break all of said gaps in said main oscillation circuit.

4. Means for producing damped electric oscillations of high or medium frequency, comprising a main primary oscillation circuit containing a plurality of spark gaps, capacity and an inductance, means for supplying a working current to said circuit and an auxiliary high frequency oscillation circuit having a capacity smaller than that of the main oscillation circuit and means for supplying electric energy to said auxiliary circuit, said two oscillation circuits being suitably connected to cause the high frequency energy produced in the auxiliary circuit to break at least some of said plurality of gaps in said oscillation circuit.

5. Means for producing damped electric oscillations of high or medium frequency, comprising a main primary oscillation circuit containing a spark gap, a capacity and an inductance, means for supplying a working current to said circuit, and an auxiliary high frequency oscillation circuit having a capacity smaller than that of the main oscillation circuit and means for supplying electric energy to said auxiliary circuit, the inductance of the main oscillation circuit forming simultaneously the inductance of the auxiliary circuit to cause the high frequency energy produced in the auxiliary circuit to break the gap of said main oscillation circuit.

[Claims 6 to 13 not printed in the Gazette.]

1,214,621. VEHICLE DISPLAY DEVICE. THOMAS H. WADDEN, Keokuk, Iowa. Filed Nov. 6, 1913. Serial No. 799,544. (Cl. 40—131.)



1. In a vehicle display device, the combination with a lamp having a light concentrating and projecting means associated therewith, a casing to receive longitudinal projection of the light rays therethrough from said lamp and having the outer end thereof open, said casing having a wall open at a point laterally of the projection of the rays from said lamp, a display plate for closing said opening, a reflector plate in said casing, a backing member for supporting the reflecting plate, an abutment for holding the backing member and reflecting plate at one point in the casing, and a cover plate for the outer open end of said casing engaging said backing member to anchor the same at another point in said casing.

2. In a vehicle display device, the combination with a lamp structure, of a rectangular casing extending therefrom to receive projection of the light rays longitudinally therein, said casing having a display opening, a display plate spanning said opening, a reflecting plate in said casing, a backing member for supporting said reflecting plate, an abutment for engaging the reflecting plate and backing member to hold the same against movement in said casing in one direction, said casing having an open end, and a cover plate for the open end engaging said backing member to hold the reflecting plate against said abutment and against movement in another direction.

3. In a vehicle display device, a rectangular elongated casing having an open end and closure guides at the open end thereof, means for projecting light into said casing, a display plate for said casing, a reflecting plate obliquely arranged in the casing, a backing plate for supporting said reflecting plate, abutments for engaging the ends of said backing plate and said reflecting plate at one end of the casing, one portion of said backing plate being flanged to engage one of the closure guides at the open end of said casing, and a cover plate slidable in the guides of the open end of said casing engageable with said flange to cause the backing plate to hold the reflecting plate in engagement with one wall of said casing and against displacement therein, said reflecting plate being adapted to reflect light to the display matter, substantially as described.

4. In a vehicle display device, the combination with light projecting means, of a casing of substantially rectangular cross section to receive said projected light longitudinally, a reflecting plate closely fitting longitudinally within the casing and diagonally between opposite side walls thereof, a cover plate, and a plurality of abutments on the rear wall for engagement with one portion of the reflecting plate to prevent its movement in one direction, and means on the reflecting plate engageable by the cover plate at a point diagonally opposite from the abutments to prevent accidental movement of the reflecting plate in another direction.

1,214,622. MEANS FOR REMOVING AND DISENGAGING WELL-PACKERS. HENRY B. WALKER, Lancaster, Ohio. Filed Apr. 14, 1916. Serial No. 91,162. (Cl. 166—10.)



1. In a device of the character described, the combination of the tubing, a packer, an upwardly-extending tubular portion on said packer coinciding with said tubing, an enlargement in said tubular extension, a sleeve carried by said tubing having a slot engaged by the enlargement on said tubular extension.

2. In a device of the character described, the combination of the tubing, a packer, an upwardly-extending tubular portion on said packer coinciding with said tubing, an enlargement in said tubular extension, a sleeve carried by said tubing having shoulders engaged by the enlargement.

3. In a device of the character described, the combination of the tubing, a packer, an upwardly-extending tubular extension on said packer coinciding with said tubing, an enlargement on said tubular extension, a sleeve carried by said tubing having a slot with closed ends, said slot having an outlet communicating with a second slot in said sleeve open at its lower end whereby upon raising said tubing and at the same time turning the same, disengagement of said enlargement with said sleeve may be effected.

4. In a device of the character described, the combination of the tubing, a packer, an upwardly-extending tubular portion on said packer coinciding with said tubing, an enlargement on said tubular extension, a sleeve having a slot therein engaged by said tubular extension, a sleeve having a slot therein engaged by said enlargement, an outer casing connected to said tubing inclosing said tubular extension and said sleeve, and a frangible connection connecting said tubular extension, said sleeve and said outer casing.

5. In a device of the character described, the combination of the tubing, packer and upwardly-extending tubular extension on said packer coinciding with said tubing, an enlargement on said tubular extension, a sleeve surrounding said tubular extension, connections between said sleeve and said tubing, said sleeve having a slot formed therein engaged by said enlargement.

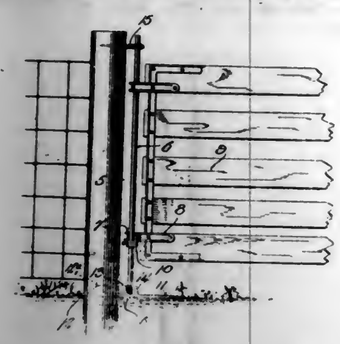
[Claims 6 and 7 not printed in the Gazette.]

1,214,623. DEVICE FOR PREVENTING SAGGING OF GATE-POSTS. MICHAEL WEBER, Kiel, Wis. Filed July 17, 1916. Serial No. 109,660. (Cl. 39—87.)

1. A device for preventing sagging of gate posts comprising a ground engaging plate adapted to fit loosely about a gate post, anchor ribs on the bottom of a gate plate and a gate supporting means carried by said plate.

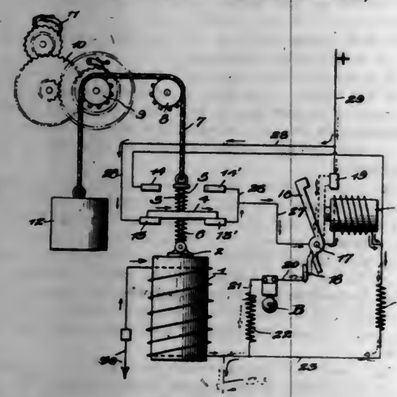
2. A device for preventing sagging of gate posts com-

prising a ground engaging plate provided in one end with an open slot adapted to loosely receive the bottom portion



of a gate post, anchor ribs on the bottom of the plate and a gate supporting means carried by said plate.

1,214,624. ALARM FOR RAILROAD-CROSSINGS. BEECHER D. WHITCOMB, Shawomet, R. I. Filed July 26, 1915. Serial No. 42,015. (Cl. 177—311.)



1. In a device of the character described, a normally opened signal circuit including a deënergized relay operable upon energization to close the circuit, said relay having its armature pivoted between its ends, a spring adapted to be placed under tension by one end of the armature engaging therewith when the armature is attracted by its magnet whereby when the relay is short-circuited the spring will act as a restoring means for the armature, means for energizing the relay to close the circuit, and other means for short-circuiting the magnet of the relay to permit the spring performing its function.

2. In a device of the character described, a relay, a main circuit including the relay armature and having spaced branch circuits, one branch circuit including a signal and the other branch circuit including the relay magnet, a relay short-circuit, a relay initially-energizing circuit, and means for successively closing the last two circuits including a timing mechanism.

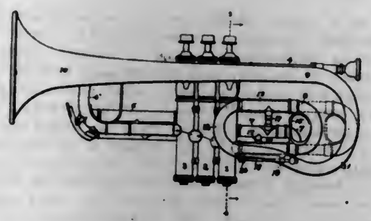
3. In a device of the character described, a relay, a main circuit including the relay armature and having spaced branch circuits, one branch circuit including a signal and the other branch circuit including the relay magnet, a relay short-circuit having spaced contacts, a relay circuit for initially energizing the relay and having spaced contacts, and a single means movable between the contacts of the last two circuits to successively close the latter.

4. In a device of the type set forth, a normally opened signal circuit including a deënergized relay operable upon energization to close the circuit, a normally opened branch circuit adapted to initially energize the relay, a short circuit wire normally opened and adapted when closed to short circuit the relay, and a single mechanism operable to successively electrically close the branch circuit and the short circuit wire.

5. In a device of the type set forth, a normally opened signal circuit including a deënergized relay operable upon energization to close the circuit, a normally opened branch circuit adapted to initially energize the relay, a short circuit wire normally opened and adapted when closed to short circuit the relay, means operable to close successively and electrically the branch circuit and short circuit wire, and a timing mechanism operable to control the movement of said first means to close the short circuit wire.

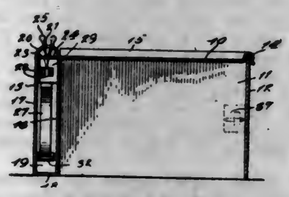
[Claims 6 to 8 not printed in the Gazette.]

1,214,625. CORNET. HENDERSON N. WHITE, Cleveland, Ohio. Filed Feb. 10, 1913. Serial No. 747,255. (Cl. 84—8.)



A cornet comprising three valves and valve slides, a mouth pipe and bell tube connected with the third and first valves respectively, said bell tube having a large crook portion and a reversely bent crook portion of smaller dimensions terminating in a straight extension projecting in the direction of the mouth end of the instrument and located between the first valve and the mouth end of the mouth pipe, and the first valve having a straight tube paralleling said extension on a lower horizontal plane and adjacent the lower return bend of the bell tube, and a slide engaged with said extension and tube located wholly between the first valve and the mouth end of said mouth pipe and adapted to be withdrawn at the side of the larger crook portion of the bell tube.

1,214,626. TRAP. ADOLPH B. WIKSTROM, Strandquist, Minn. Filed Mar. 21, 1916. Serial No. 85,622. (Cl. 43—27.)

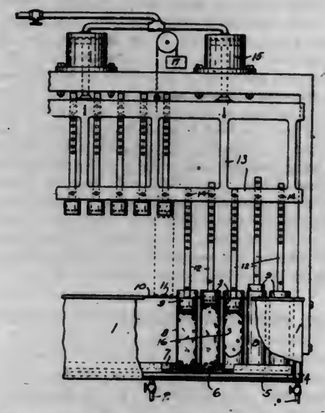


1. A trap comprising a body portion having an upper wall and a front wall, the front wall constituting a housing having inner and outer walls provided with inlet openings permitting communication with the interior of said body portion, a tongue extending from said upper wall through an opening formed in the upper portion of the inner wall of the housing, means engaging said tongue to releasably connect the housing with the upper wall, and trapping means positioned in said housing in operative relation to the inlet openings including a trigger positioned within the housing.

2. A trap comprising a body portion including a wall constituting a housing, having inlet openings permitting communication with the interior of said body portion, a bracket in said housing, jaws having shanks slidably connected with said bracket, and having their free end portions extending across the inlet openings, resilient means engaging said shanks to yieldably hold said jaws in a closed position, and triggers mounted in said housing and extending across the inlet openings thereof, said triggers being positioned to engage the free ends of said jaws and releasably hold the same in an open position.

3. A trap comprising a body portion having a front wall constituting a housing having inner and outer walls, side walls, means releasably connecting the front wall with the side walls, a rear wall releasably connected with said side walls, an upper wall engaging the upper edge portions of said rear and side walls, a tongue extending from said upper wall through an opening formed in said inner wall of the housing, and means for releasably engaging said tongue to releasably connect the housing to the upper wall.

1,214,627. ART OF COOKING HAMS. JOSEPH L. WILD, Tacoma, Wash., assignor of one-half to Sidney MacSween, Tacoma, Wash. Filed May 6, 1915. Serial No. 26,393. (Cl. 90—8.)



1. In an apparatus for cooking meats, the combination with a tank containing heat conveying means; a cover to said tank, and having a hole therethrough; an open-ended meat container within the tank and extending through the hole in the cover; a piston in the open end of said meat container; and means whereby a pressure may be applied to said piston.

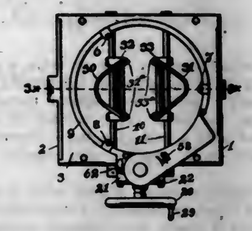
2. In an apparatus for cooking meats, the combination with a tank containing heat conveying means; a cover to said tank, and having a hole therethrough; an open-ended meat container within the tank and extending through the hole in the cover; a cup-shaped piston having holes therein communicating with the interior of the meat container, and adapted to receive, collect and partially restore the meat juices during cooking; and means whereby a pressure may be applied to the piston.

3. In an apparatus for cooking meats, the combination with a tank containing heat conveying means; an open-ended meat container partially immersed in said heat conveying means but having its open end free therefrom; a piston in said open end of said container; and means whereby a pressure may be applied to the piston.

4. In an apparatus for cooking meats, the combination with a tank containing heat conveying means; a cover to said tank having a plurality of holes therethrough; a plurality of open-ended meat containers within the tank and each extending through a hole in the cover; a piston in the open end of each one of said meat containers; and means whereby equal pressure may be simultaneously applied to each of said pistons.

5. In an apparatus for cooking meats, the combination with a tank containing heat conveying means; a cover to said tank having a plurality of holes therethrough; a plurality of open-ended meat containers within the tank and each extending through a hole in the cover; a piston in the open end of each one of said meat containers; pressure means; and individually adjustable connecting means joining each piston to said pressure means whereby equal pressure may be simultaneously applied to each of said pistons.

1,214,628. BAG-SHAKING MACHINE. LOUIS P. WILLSEA, Rochester, N. Y. Filed Nov. 4, 1914. Serial No. 870,298. (Cl. 15—8.)



1. In a bag shaking machine the combination of a pair of beaters adapted to support an inverted bag from the inside, and means to oscillate said beaters in opposite directions to each other causing them to strike the bag from the inside.

2. A bag shaking machine comprising a support, and a pair of beaters mounted to oscillate thereon, said beaters being mounted parallel to each other on rock shafts and means to rock the shafts so as to cause their free ends to move toward and away from each other.

3. A bag shaking machine comprising a support, and a pair of beaters mounted to oscillate thereon, said beaters being mounted parallel to each other on rock shafts and means to rock the shafts so as to cause their free ends to move toward and away from each other, each of said beaters having the shape of a bail.

4. A bag shaking machine comprising a support, and a pair of beaters mounted to oscillate thereon, said beaters being placed parallel to each other and being adapted to rock their free ends toward and away from each other, each of said beaters having the shape of a bail, one of said beaters being larger than the other and adapted to nest therein when they come together.

5. In a bag shaking machine the combination of a support, a pair of shafts mounted to oscillate in said support and having beaters thereon, a crank on each shaft, a rod mounted to reciprocate on said support and connected to said cranks whereby said cranks and their shafts are oscillated on the reciprocation of said rod, and means for reciprocating said rod.

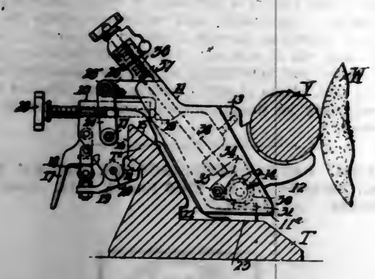
[Claims 6 to 17 not printed in the Gazette.]

1,214,629. STEADY-REST. JOSEPH S. WILCOX, Jr., ALBERT TURNER, and HOWARD W. DUNBAR, Worcester, Mass., assignors to Norton Grinding Company, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 28, 1916. Serial No. 94,236. (Cl. 51—4.)

1. In a grinding machine, a work table, a stand, means to secure said stand in adjusted, longitudinal position on said table, and a guide shoe support movably mounted on said stand, said stand and support being link-connected at their upper outer ends whereby separation of the parts is prevented and the path of movement of said support is determined, and said support at its lower end being free to move relatively to said stand.

2. In a grinding machine, a work table, a stand, means to secure said stand in adjusted, longitudinal position on said table, and a guide shoe support movably mounted on said stand, said support being entirely sustained by said

stand and being adjustable both vertically and horizontally thereon.



3. In a grinding machine, a work table, a stand, means to secure said stand in adjusted, longitudinal position on said table, and a guide shoe support movably mounted on said stand, the lower inner portion of said support being provided with a roll engaging a depending bearing portion of said stand, whereby said support is vertically positioned.

4. In a grinding machine, a work table, a stand, means to secure said stand in adjusted, longitudinal position on said table, and a guide shoe support movably mounted on said stand, said stand and support being link-connected at their upper outer ends and said support at its lower end being free to move on said stand and being entirely sustained thereby, means being also provided for forcing the support horizontally toward the work and for raising it relatively to said stand.

5. In a grinding machine, a work table, a stand, means to secure said stand in adjusted, longitudinal position on said table, and a guide shoe support movably mounted on said stand, said support and stand having depending cooperating bearing portions effective to sustain the inner lower end of said support and said support forming a casing for said depending bearing portions, whereby dirt and water are excluded therefrom.

[Claims 6 to 9 not printed in the Gazette.]

1,214,630. PROCESS OF MAKING TIGHT CASTINGS. ROBERT B. WOLF, Berlin, N. H. Filed Mar. 4, 1914. Serial No. 822,378. (Cl. 91—68.)

1. The herein described process of plugging metallic castings, which consists in subjecting said castings alternately to vacuum and pressure in the presence of an acid, and then filling the pores and interstices thereof with a sulfate insoluble in water.

2. The herein described process of plugging metallic castings, which includes subjecting said castings to alternate pressure and vacuum in the presence of a pore-filling mineral salt insoluble in water.

3. The herein described process of closing the pores and interstices of metallic castings, which consists in exhausting the air from such pores and interstices and precipitating in the same a sulfate insoluble in water.

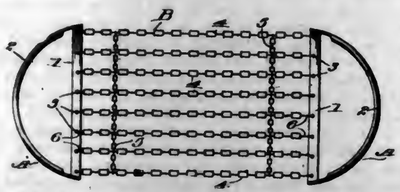
4. The herein described process of treating metallic castings, which consists in cleaning the pores and interstices thereof with a suitable acid under conditions of alternating vacuum and pressure, and precipitating a mineral compound in said pores and interstices.

5. The herein described process of closing the pores and interstices of metallic castings, which consists in subjecting the castings alternately to vacuum and pressure, and simultaneously precipitating in said pores and interstices a mineral compound insoluble in water.

[Claims 6 and 7 not printed in the Gazette.]

1,214,631. KITCHEN UTENSIL. DAVID B. WOLFORD, Echo, Oreg. Filed Jan. 13, 1915. Serial No. 1,904. (Cl. 65—12.)

1. A kitchen utensil having a metallic holder section flexible to assume a substantially flat position to receive an article and to fold intermediate its ends, said section comprising a plurality of substantially parallel chains being independent of each other at their lower extremities when folded.

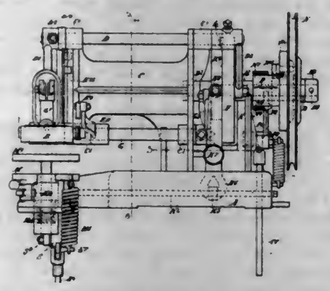


2. A kitchen utensil having a metallic holder section flexible to assume a substantially flat position to receive an article and to fold intermediate its ends, said section comprising a plurality of substantially parallel chains being independent of each other at their lower extremities when folded, and connecting means for the chains above the said lower portions.

3. A kitchen utensil having a metallic holder section flexible to assume a subtsantially flat position to receive an article and to fold intermediate its ends, said section comprising a plurality of substantially parallel chains, being independent of each other at their lower portions when folded, relatively wide handles, said chains at opposite ends being connected to the handles, and flexible elements connecting the chains intermediate the handles and the lower portions of the chains when folded.

4. A kitchen utensil having a metallic holder section flexible to assume a substantially flat position to receive an article and to fold intermediate its ends, said section comprising a plurality of substantially parallel spaced chains being independent of each other at their lower portions when folded, relatively wide handles provided with apertures therethrough, said chains at opposite ends having links extending through said apertures connecting the chains to the handles, and metallic chains connected to the said chains intermediate the handles and the lower portions of the chains when folded.

1,214,632. PRINTING AND MARKING MACHINE. ERASTUS WOODWARD, Somerville, Mass., assignor, by mesne assignments, of one-half to John J. Sheehan and one-half to William P. Egan, Lynn, Mass. Filed Nov. 12, 1909, Serial No. 527,633. Renewed June 21, 1916. Serial No. 105,081. (Cl. 101—83.)



1. In a printing and marking machine, the combination with a type-carrier, of an inking device for inking the type, independent mechanisms for separately carrying and operating said type-carrier and said inking device, continuously-operating driving mechanism normally disconnected from said independent mechanisms, means for connecting said driving mechanism with said independent mechanisms whereby said inking device and said type carrier coöperate to ink the type and to separate to permit an impression from said type, and means for disconnecting said driving means from said independent mechanism after said impression has been made.

2. In a printing and marking machine, the combination with a type-carrier, of an inking roll for inking the type, independent mechanisms for operating said type-carrier and said inking roll, continuously-operating driving mechanism normally disconnected from said independent mechanisms, means for connecting said driving mechanisms with said independent mechanisms whereby said inking roll and said type carrier coöperate to ink the type and to separate to permit an impression from said type, means for disconnecting said driving means from said independent mechanisms after said impression has been made, and means normally disconnected from and adapted to automatically shift said inking roll at each impression to engage a different portion of the same with said type to ink the same.

3. In a printing and marking machine, the combination with a type carrier, of mechanism for operating said type carrier, an adjustable platen for supporting the work to receive the impression of the type and adapted to be operated thereby, and mechanism independent of the type carrier for automatically locking said platen in any position to which it has been moved by the impression of said type and for graduating the movement of said platen when released.

4. In a printing and marking machine, the combination with a type carrier, of mechanism for operating said type-carrier, an adjustable platen for supporting the work to receive the impression of the type and adapted to be operated thereby, mechanism normally locking said plates in any position to which it has been moved by the type, and means independent of the type carrier for automatically releasing said locking mechanism when the type carrier has reached a predetermined position to readjust said platen to receive the impression.

5. In a printing and marking machine, a type carrier, mechanism for operating said type carrier, an adjustable platen for supporting the work to receive the impression of the type and adapted to be operated thereby, yielding means normally holding said platen to cushion the impression of said type, and means independent of the type carrier for locking said platen in adjusted position against movement toward said type carrier and for graduating the movement of said platen when released.

[Claims 6 and 7 not printed in the Gazette.]

1,214,633. SAFETY-PIN. ARTHUR WRIGHT, New York, N. Y. Filed Mar. 23, 1912. Serial No. 685,649. (Cl. 24—158.)



1. In a safety pin, a head having an abutment, a sharpened prong, a second prong connected thereto and having an offset portion engaging with the abutment in the plane of the prongs and releasable from engagement therewith to release the sharpened prong by a movement of the prongs in said plane, said abutment being located between the two prongs.

2. In a safety pin, a head having an abutment in the interior of the head, between the two sides thereof, a sharpened prong, a second prong connected thereto and having an offset portion engaging with the abutment in the plane of the prongs and releasable from engagement therewith to release the sharpened prong by a movement of the prongs in said plane.

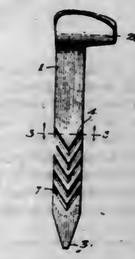
3. In a safety pin, a head having an abutment in the interior of the head, a sharpened prong, a second prong connected thereto and having an offset portion engaging with the abutment in the plane of the prongs and releasable therefrom to release the sharpened prong by a movement of the prongs in said plane, said abutment being located between the two prongs.

4. In a safety pin, a head having an abutment in the interior of the head between the two sides thereof, a sharpened prong, a second prong connected thereto and having an offset portion engaging with the abutment in the plane of the prongs and releasable from engagement therewith to release the sharpened prong by a movement of the prongs in said plane, and said head having a second abutment preventing the separation of the prong from the head.

5. In a safety pin, a head having an abutment in the interior of the head, a sharpened prong, a second prong connected thereto and having an offset portion engaging with the abutment in the plane of the prongs and releasable therefrom to release the sharpened prong by a movement of the prongs in said plane, said abutment being located between the two prongs, and said head having a second abutment preventing the separation of the prong from the head.

[Claims 6 to 15 not printed in the Gazette.]

1,214,634. RAILROAD-SPIKE. HARTWELL S. WRIGHT, Van Duzer, Ark. Filed May 13, 1916. Serial No. 97,352. (Cl. 85—21.)



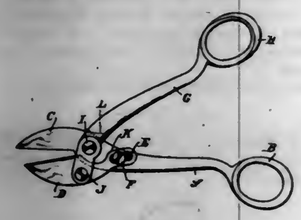
1. As a new article of manufacture a railroad spike comprising a body having a head formed thereon, said body having a plurality of V-shaped grooves formed in its side portions, said grooves extending downwardly for a considerable distance into said body, thereby forming cutting edges communicating with the side surface of said body, said spike being adapted to be driven into a tie so as to permit the tie to spring back and partially fill said grooves when the inward movement of the spike is limited so that in case any outward pressure is exerted upon the spike the cutting edges will dig into the tie and prevent the outward movement of the spike, while the V-shaped construction of the grooves will cause the tie to further wedge in the central portions of the grooves for providing an additional resistance to outward movement of the spike.

2. As a new article of manufacture a spike comprising a body having a head formed thereon, said spike having a plurality of V-shaped grooves formed in each side thereof, the grooves upon one side of said spike communicating with the grooves upon the adjacent side thereof, said grooves extending downwardly for a considerable distance into said body, thereby forming upwardly extending cutting edges, the cutting edges upon each side of said spike also being V-shaped to correspond with said grooves, whereby after the spike has been driven into the side portions of a tie in the wake of the cutting edges it may spring back to its normal position into said grooves so as to fit over said cutting edges, whereby the cutting edges will bite into the tie throughout their entire length, while the tie will further bind upon the central portions of the cutting edges owing to their V-shaped construction so as to prevent the accidental displacement of the spike.

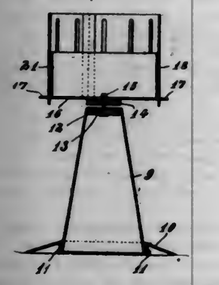
1,214,635. SHEARS. CHARLES F. ZIMMERMAN, Jersey City, N. J. Original application filed Jan. 25, 1912, Serial No. 673,289. Divided and this application filed Apr. 23, 1913. Serial No. 762,990. (Cl. 30—13.)

A shears comprising a main handle, a blade formed integrally therewith and having a straight cutting edge, an

auxiliary handle, a pivot located in close proximity to the inner end of the cutting edge of said integral blade and pivotally connecting said auxiliary handle to said main handle, a second blade having a straight cutting edge, an integral member extending rearwardly from said second blade and provided with a slot, a second pivot extending through said slot whereby said second blade is pivotally and slidably connected with said main handle, said second pivot being located entirely below an imaginary line forming a continuation of the cutting edge of said integral blade, a projection on said auxiliary handle extending beyond the first and second pivots and a pivot located below said second pivot in all positions of the shears whereby said projection is pivotally connected to said second blade and moves the latter from an open position, first forwardly relatively to said integral blade to bring the cutting edges of said blades into a parallel position without exerting any appreciable cutting action and then toward said integral blade to effect a chopping cut.



1,214,636. KNOCKDOWN STROBOSCOPE. WILLIAM H. ZINN, Anniston, Ala. Filed Jan. 10, 1916. Serial No. 71,238. (Cl. 88—16.)

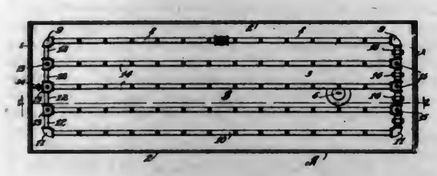


1. In a knockdown stroboscope the combination of an image cylinder provided with image slots, and a pedestal for revolubly supporting said image cylinder; said pedestal being collapsible for purposes of shipment.

2. In a stroboscope, the combination of a revoluble disk made of sheet material and provided with tongues extending radially outwardly therefrom, and a blank having slots to engage said tongues and also having image slots, said blank being bendable so as to form an image cylinder around said disk.

3. In a stroboscope the combination of a disk made of sheet material and provided with tongues extending radially outward and a blank having the general form of a card and provided with openings for receiving said tongue in order to support said blank when the latter is bent substantially into the form of a cylinder, said blank being further provided with image slots and with images and being normally flat so that said blank and said disk may be packed in compact form.

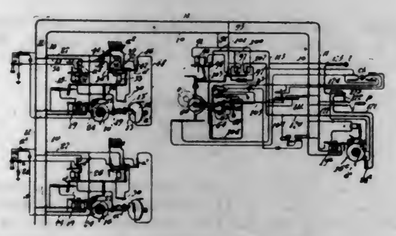
1,214,637. AERATING DEVICE. OSCAR ZISTEL, Sandusky, Ohio. Filed May 4, 1914. Serial No. 836,081. (Cl. 119—5.)



1. An aerating device for fish tanks, said device comprising a pair of longitudinal tubular members, transverse tubular members connecting the corresponding ends of the longitudinal members, the tubular members intercommunicating and certain of them being provided with threaded openings, and perforated threaded tips, one of which is adapted to be screwed into each of the aforesaid openings, said tips acting to spray the air substantially horizontally into the water.

2. An aerating device for fish tanks, said device comprising a pair of longitudinal tubular members, transverse tubular members connecting the corresponding ends of the longitudinal members, intermediate longitudinal members connecting the aforesaid transverse members, all of the tubular members intercommunicating and certain of them being provided with threaded openings, perforated threaded tips, one of which is adapted to be screwed into each of the aforesaid openings, said tips acting to spray the air substantially horizontally into the water, and an inlet connection carried by one of the tubes.

1,214,638. SELECTIVE LOCKOUT TELEPHONE SYSTEM. FRANK W. ADSIT, St. Paul, Minn., assignor to Adsit General Electric Company, Minneapolis, Minn., a Corporation of Minnesota. Filed June 30, 1914. Serial No. 848,161. (Cl. 179—30.)



1. In a selective telephone signaling system, the combination with a metallic line, of subscribers' instrument sets, each including a grounded bell, and at each subscriber's station a source of alternating current supply, a step-up selector responsive to alternating current adapted on a predetermined step to connect the instrument set with the line, and settable means coöperating with the selector to control the number of steps duration of current flow to the line from the source of alternating current supply at said station.

2. In a selective telephone signaling system, the combination of a metallic line; at each subscriber's station an instrument set including a grounded bell; a source of alternating current supply, a step-up selector responsive to alternating current adapted, after a predetermined number of steps, electrically to connect said instrument set and bell to the line, a selector setter comprising a switch set-

table to close at a predetermined position of the selector, means for bridging the source of alternating current supply on the line wires, and means controlled by said switch of the selector setter for automatically interrupting the bridging connection and grounding the bell side of the line through said source of current supply to ring the grounded bell at the selected station.

3. In a selective telephone signaling system, the combination of two line wires; at each subscriber's station an instrument set including a grounded bell; an alternating current generator; a selector responsive to alternating current in the line and adapted, on a certain step, to condition the bell for ground connection on one side of the line and the telephone instrument for bridging connection with the line; a selector-bridging relay having its magnet normally connected with the source of current supply and acting when energized to bridge the source of current supply on the line, thereby to actuate all selectors; selector setting means including a switch settable to close after any predetermined number of selector steps; a circuit local to said station, and means therein responsive to alternating current from said source of supply, and controlled by said settable switch, to operate on switch-closure, for disconnecting said source of current supply from one side of the line and grounding it for operation of the bell at the called station.

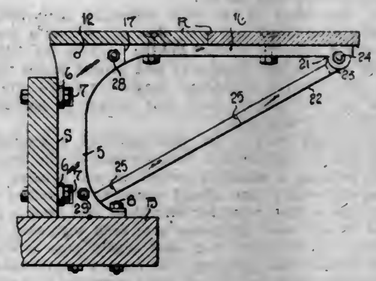
4. In a selective telephone signaling system, the combination of two line wires; at each subscriber's station an instrument set including a grounded bell; an alternating current generator; a selector responsive to alternating current in the line and adapted, on a certain step, to condition the bell for ground connection on one side of the line and the telephone instrument for bridging connection with the line; a selector bridging relay having its magnet normally connected with the source of current supply and acting when energized to bridge the source of current supply on the line, thereby to actuate all selectors; a selector controlled switch for breaking said normal connection, a circuit local to said station, and means therein responsive to alternating current from said source of supply, and controlled by said settable switch to operate on switch-closure, for disconnecting said source of current supply from one side of the line and grounding it for operation of the bell at the called station.

5. In a selective signaling system the combination with two line wires, of subscribers' apparatus at each station comprising an instrument set having a grounded bell, a switch hook for connection with one line wire and telephone instruments connected with the other side of the line; a magneto generator; a step-up selector responsive to magneto current in the line; a bridger relay; a selector controlled switch normally connecting said bridger relay with said magneto; a selector-controlled switch for connecting the switch hook to its side of the line after a predetermined number of steps; a selector setter comprising a switch adjustable for closure after predetermined number of steps of the selector; and a magneto-grounding relay having its magnet controlled by said switch of the selector setter, the switch means of said relay adapted to break the bridge connection of the magneto with the line and connect a side of the line with the local switch hook.

[Claims 6 to 49 not printed in the Gazette.]

1,214,639. ATTACHMENT FOR HAY-RACKS. LAWRENCE ARNOLD, Deer Plain, Ill. Filed Mar. 18, 1916. Serial No. 85,183. (Cl. 21—74.)

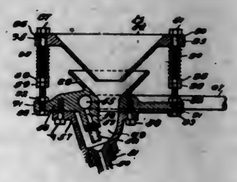
1. A vehicle attachment of the character described including a channeled bracket adapted to be secured to the longitudinal sill of the vehicle frame, the side walls of said bracket having spaced bolt receiving openings and a vertical web connecting said side walls between the spaced openings, a supporting bar having a reduced shank on one end and shoulders at the inner end of said shank, said reduced end of the bar being adapted for engagement between said web and the opposed wall of the bracket when the bar is vertically disposed and having an opening therein to coincide with the corresponding openings in the wall of the bracket to receive a suitable fastening bolt, said bar when disposed in a horizontal position being engaged between the side walls of the bracket and resting upon the upper end of said web and the opening therein coinciding with the other bolt receiving openings in the bracket walls to receive the fastening bolt.



2. A vehicle attachment of the character described including a channeled bracket adapted to be secured to the longitudinal sill of the vehicle frame, the side walls of the bracket having spaced bolt receiving openings and a vertical web integrally connecting said walls between the openings, the intermediate wall of the bracket having an opening therein at its upper end, a supporting bar having a reduced shank on one end provided with a bolt receiving opening, said shank being adapted to be vertically disposed between the web and the intermediate wall of the bracket, said opening alined with the corresponding bolt receiving openings in the bracket walls to receive a suitable fastening bolt, said supporting bar being also adapted for arrangement in a horizontal position and the reduced shank disposed between the spaced bracket walls and upon the upper end of the web, the opening in said shank being alined with the other bolt receiving openings in the bracket walls to receive the fastening bolt and said shank having a terminal projection for engagement against the upper end of the opening in the intermediate wall of the bracket.

1,214,640. [WITHDRAWN.]

1,214,641. SAND-BLAST APPARATUS. CLARENCE E. BILLINGS, New Haven, Conn. Filed Feb. 4, 1915. Serial No. 6,194. (Cl. 51—4.)



1. A sand blast of the class described, comprising revolving spray heads, a sand chute disposed over the path of said spray heads in the rotation thereof, a delivery valve in said chute, and a valve operating trip actuated by said spray heads to discharge a quantity of sand from said chutes to said sand blasts in the rotation of said spray heads.

2. A sand blast of the class described, comprising a revolving fitting having a continuous air supply thereto, sand blasts carried by said fitting, hoppers carried by said spray heads, a chute disposed over the path of said hoppers, a trip carried by said chute and actuated by said hoppers for delivering a quantity of sand into said hoppers, said hoppers having vertical movement with respect to said trip dependent upon the quantity of sand contained therein, and said hopper engaging said trip when in raised position to refill said hopper.

3. A sand blast of the class described, comprising a rotatable sand blast, said sand blast comprising a hopper to receive a quantity of sand therein, a chute for delivering said sand to said hopper as said hopper passes thereunder, and a valve mechanism carried by said chute actuated by said hopper when said hopper is positioned properly under said chute.

4. In a sand blast of the class described, a housing, a supply pipe for delivering a fluid pressure to the interior of said housing, a standard carried by said housing supporting said supply pipe, a head carried by the end of said supply pipe, a shell rotatably carried by said head, a plug carried by said shell to envelop said head with said shell and plug, an extension from said supply pipe rotatably carried by said shell and plug with respect to said head, a spray head carried by said rotatable extension and means for rotating said shell about said head.

1,214,642. RADIATOR. KINDERMAN M. BOBLETT, Toledo, Ohio. Original application filed July 12, 1911, Serial No. 638,057. Divided and this application filed Nov. 25, 1912. Serial No. 733,384. (Cl. 257—130.)



1. In a radiator, a plurality of independent plates arranged in spaced relation, a flange projecting laterally from the terminal edge of each plate and a flange projecting laterally from the longitudinal edge of each plate, said flanges being extended in opposite directions from the plane of the plate and connected with the adjacent plates at opposite sides thereof.

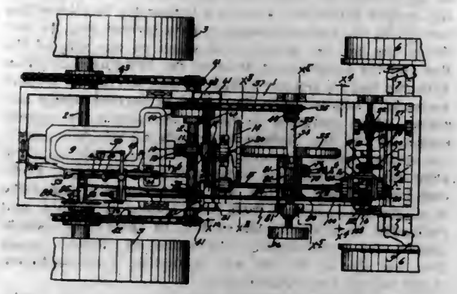
2. In a radiator, a plurality of substantially parallel spaced plates having both transverse and longitudinal flanges the transverse and terminal flanges being extended in opposite directions from the plane of the plate and connecting the succeeding plates one with another.

3. A radiator member comprising a plate the terminal edge of which is bent laterally in one direction from the plane of the plate and the longitudinal edge of which is bent laterally in the opposite direction from the plane of the plate, a plurality of said plates being adapted to be arranged in spaced relation and connected one to another by said laterally bent edges.

4. A radiator comprising a series of independent side plates, a marginal flange upon one edge of each plate, a terminal flange upon the end of each plate turned in a direction opposite that of the said marginal flange, the terminal flange of each plate being connected with the adjacent plate upon one side and the marginal flange being connected with the adjacent plate upon the opposite side.

5. A radiator core comprising a plurality of substantially flat independent parallel plates arranged side by side in spaced relation, and intermediate flanges connecting the plates one with the other, the flanges being alternately arranged at the sides and ends of the plates whereby there will be formed intermediate the plates alternating vertical and transverse passages one for air and the other for water.

1,214,643. TRACTOR. VITUS A. BOKER, Minneapolis, Minn. Filed Oct. 18, 1915. Serial No. 56,508. (Cl. 21—114.)



1. In a motor propelled vehicle, the combination with motor propelled steering mechanism and motor propelled transmission mechanism, of a common controller having two different movements, the one movement thereof serving to manipulate said transmission mechanism and the other movement thereof serving to manipulate said steering mechanism, and an auxiliary manually operated steering device operative at will and without interfering with the adjustment of said transmission mechanism.

2. In a motor-propelled vehicle, a motor-propelled transmission mechanism, a motor-propelled steering mechanism, including reversible and irreversible elements, and a manually operated steering device connected to the reversible element of the said motor propelled steering mechanism.

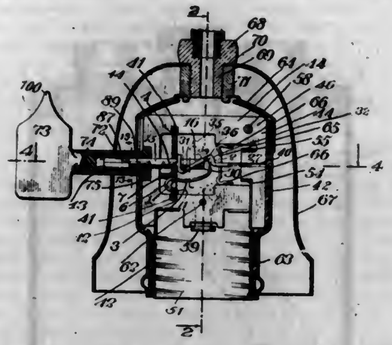
3. In a motor-propelled vehicle, a motor-propelled transmission mechanism and a motor-propelled steering mechanism, said latter including a driving shaft driven in a constant direction, a reversible driven shaft and a reversible frictional drive for connecting said driving and driven shafts, in combination with a manually operated auxiliary steering device connected to the said reversible driven shaft of said motor-propelled steering mechanism.

4. In a transmission mechanism, the combination with coöperating members, of means for adjusting one of the said members in respect to the other, comprising a slide having connections to the adjustable member, a lock for securing said slide in different positions, a yieldingly anchored trip for said lock having a limited movement only in respect to said slide, connections for separating the said members, and means operative on said connections to secure said members in separated positions and to again restore the same to connected positions, without interfering with the adjustments of said slide.

5. The combination with coöperating friction wheels, of means for adjusting one of said friction wheels in respect to the axis of the other, for variable speeds, a fixed guide having ratchet teeth, a slide mounted on said guide and having a lock dog engageable with the ratchet teeth thereof, to lock said slide in different positions, the said slide having connections for adjusting said movable friction wheel for different speeds, a pawl trip frictionally anchored to said guide and having a limited movement only in respect to said slide, the said guide having a toothless portion, whereby said trip may be caused to release said dog, connections for effecting the separation of said friction wheels, and a lock for said latter connections operative to hold said friction wheels separated and to release the same for coöperative engagement without changing the adjustment of said slide.

[Claims 6 to 15 not printed in the Gazette.]

1,214,644. ELECTRIC-LIGHT SOCKET. TONJES AUGUST CARL BOTH, Malden, Mass., assignor to The Zee Socket & Mfg. Co., Boston, Mass., a Corporation of Massachusetts. Filed Apr. 16, 1912. Serial No. 691,110. (Cl. 173—346.)



1. An electric light socket comprising contacts; a rotary resilient operating member; a reciprocating member having longitudinal movement with relation to the operating member and provided with opposite inclined bearing surfaces coöperating with the resilient rotary member to reciprocate the reciprocating member to make and break the circuit through said contacts.

2. An electric light socket comprising contacts; a rotary resilient operating member; a longitudinally reciprocating member operated by the operating member to bridge said contacts; and means to prevent longitudinal movement of the operating member.

3. An electric light socket comprising contacts; a rotary resilient operating member; and a reciprocating member operated by the operating member to bridge said contacts and having longitudinal movement with relation to the operating member to bridge said contacts.

4. An electric light socket comprising contacts; a rotary resilient operating member including a disk, a spring secured to the disk, and a reciprocating member provided with opposite inclined surfaces to coöperate with the spring, said reciprocating member bridging said contacts.

5. An electric light socket comprising contacts; a rotary resilient operating member and a reciprocating member provided with opposite inclined surfaces and with engaging members all of which coöperate with the rotary resilient member, said reciprocating member being movable to bridge said contacts.

[Claims 6 to 15 not printed in the Gazette.]

1,214,645. BLOW-OFF VALVE. NATHANIEL N. BOYDEN, Knoxville, Tenn., assignor of one-half to William S. Murrian, Knoxville, Tenn. Filed Jan. 15, 1916. Serial No. 72,288. (Cl. 137—5.)

1. A device of the class described comprising assembled casing sections, one of which is provided with an inlet port and the other with an outlet port substantially alined therewith, one wall of one section being formed with a bearing socket and the other section being provided at its inner face with a valve seat surrounding the outlet port and having a smooth continuous seating face, there being a transverse bearing opening formed in the last-mentioned section and spaced from the valve seat, and a valve movable across the face of the valve seat and having its opposite faces contacting with the inner faces of the sections around the inlet and outlet ports when the valve is in closed position, said valve having a stem, one end of which is seated in the socket and the other end thereof extended through the bearing opening for engagement with an operating device, the valve being held against lateral movement with respect to its stem.

2. A device of the class described including assembled casing sections, one of which is provided with an inlet port and the other with an outlet port alined therewith, the first-mentioned section being formed with a seating recess, the wall of which is provided with a bearing socket, the second-mentioned section being provided at its inner face with a valve seat, the said second section being formed with a bearing opening surrounded by an annular shoulder the face of which is disposed in the same plane with the valve seat, a valve comprising a body provided at one face with a projecting stem section rotatably fitted in the bearing socket and provided at its other face with an annular shoulder adapted to bear against the face of the shoulder surrounding the bearing opening and defining a reduced stem section rotatably fitted within said bearing opening, and an operating handle connected with the outer end of the reduced stem section, the valve being held against lateral movement with respect to its stem and designed to constantly contact the seat in both open and closed positions.

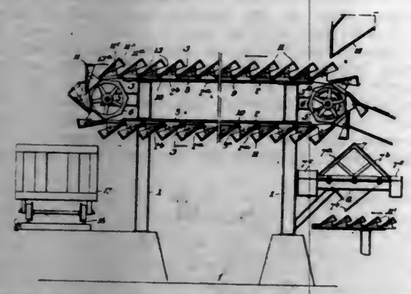


3. A device of the class described including mating casing sections having perforated ears adapted to register with each other, one of said casing sections being provided with a flange defining a seating recess, the wall of which is formed with a bearing socket extending only partially therethrough and having an inlet port communicating with the recess and adapted to register with an outlet port in the mating section, said mating section being provided with a smooth continuous valve seat and having a transverse bearing opening arranged in alinement with the bearing socket, and a valve fitting within the seating recess and having its opposite faces contacting with the inner faces of the sections around the inlet and outlet ports when the valve is in closed position, said valve being provided with a stem, one end of which is enlarged and fitting in the bearing socket and the other end reduced and extended through the bearing opening, there being a shoulder formed on the valve stem at the junction of the enlarged and reduced portions thereof and adapted to bear against the inner face of the adjacent casing section, an operating handle secured to the reduced end of the valve, and fastening devices extending through the perforated ears of the casing sections for holding said sections in assembled position, the valve being held against lateral movement with respect to its stem.

4. A device of the class described including a valve casing having registering inlet and outlet ports and provided with a seating recess, one wall of the valve casing being provided with a bearing socket opening into the seating recess, there being a bearing opening formed in the valve casing and registering with the bearing socket, a valve operating within the seating recess for controlling the passage of fluid through the casing and having its opposite faces contacting with the inner walls of the casing around the inlet and outlet ports when the valve is in closed position, said valve being provided with a stem one end of which is fitted in the bearing socket, the other end of the stem being provided with a shoulder bearing against the inner wall of the casing, the stem beyond

said shoulder being extended through the bearing opening, and means connected with the extended end of the valve stem for operating the valve.

1,214,646. COAL-HANDLING MACHINERY. SAMUEL BUTLER, Sharples, W. Va. Filed Apr. 24, 1915. Serial No. 23,596. (Cl. 83—56.)



1. In apparatus of the character described, conveying means having flexibly connected overlapping adjacent sections with inclined surfaces and apertures between said sections through which material sliding down said surfaces is adapted to pass.

2. In apparatus of the character described, conveying means provided with upper overlapping carriers having inclined surfaces with apertures between them, lower overlapping carriers adapted for receiving materials discharged from said upper carriers through said apertures, and means for discharging the materials deposited on said lower carriers.

3. In apparatus of the character described, an endless conveyer and grader comprising pivotally connected carriers each having oppositely inclined surfaces of unequal length and end links flexibly connected to links of adjacent carriers, and means comprising wheels for causing said carriers to travel in lower and upper courses.

4. In apparatus of the character described, a flexible belt conveyer provided with carriers adapted to be tilted and separated, and means whereby said conveyer is carried and flexed at an end of a straight course of its movement, so that said carriers are tilted and separated to discharge materials thereon.

5. In apparatus of the character described, a flexible conveyer provided with carriers having arched exteriors and recessed interiors, and means for flexing said conveyer so as to pass a grade of material on upper carriers thereof to lower carriers thereof and thereafter discharge and separate materials received on said lower carriers in combination with a grader to which material from said lower carriers is discharged.

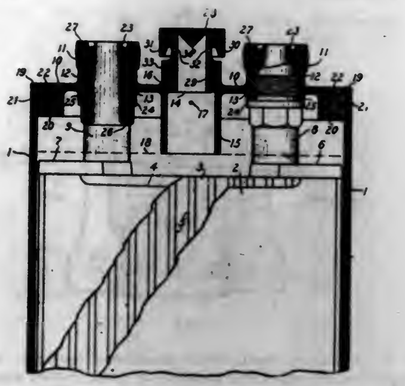
[Claims 6 to 13 not printed in the Gazette.]

1,214,647. BATTERY-CELL. CAMPBELL C. CARPENTER and ROY J. ELLIS, Niagara Falls, N. Y., assignors to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Apr. 6, 1916. Serial No. 89,290. (Cl. 204—29.)

1. In combination, a battery jar, battery plates therein, said plates being provided with a cell post, a cover for said jar through which said post is adapted to extend, a bushing for said post, a link engaging said bushing, said post, bushing and link being integrally united.

2. In combination, a battery cell cover, a cell post adapted to extend through an aperture in said cover, a bushing for said post secured in said cover, said post and bushing being integrally united and a gasket located between said cover and part of said bushing to act as a seal therebetween.

3. In combination, a battery cell cover, a cell post adapted to extend through an aperture in said cover, a bushing for said post located in said aperture, a gasket located between said cover and a part of said bushing to act as a seal therebetween, and a link adjacent said bushing, said post, bushing and link being integrally united.

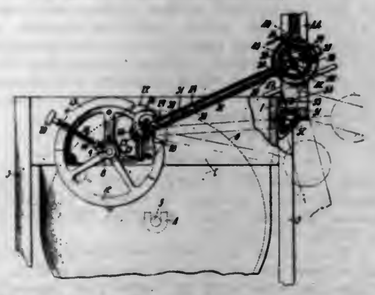


4. In combination, a battery cell cover, a cell post adapted to extend through an aperture in said cover, a bushing surrounding said post and located in said aperture, said cover and said bushing being tightly sealed, and said bushing and said post being integrally united.

5. In combination, a battery cell cover, a cell post adapted to extend through an aperture in said cover, a bushing surrounding said post and located in said aperture, means for sealing said cover and said bushing, said bushing and said post being integrally united.

[Claims 6 to 11 not printed in the Gazette.]

1,214,648. OPERATING MECHANISM FOR WASHING-MACHINES. ALBERT T. CHURCH, Highland Park, Mich., assignor to Crystal Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 26, 1915. Serial No. 47,415. (Cl. 74—59.)



1. In a machine of the class described, the combination of a support, a frame mounted to swing vertically thereon, a pair of roller shafts carried by the frame, said roller shafts being arranged to turn in opposite directions, and mechanism whereby the roller shafts may be connected to a source of power mounted on the support when the frame is in either of a plurality of positions in respect to the support.

2. In a machine of the class described, the combination of a support, a frame mounted to swing vertically thereon, a pair of roller shafts carried by the frame, said roller shafts being arranged to turn in opposite directions, and mechanism whereby the roller shafts may be connected to a source of power mounted on the support when the frame is in either of a plurality of positions in respect to the support, said mechanism including a telescopic driving shaft, the end portions of which are respectively mounted to swing in reference to the axis of one of the roller shafts and in reference to the support.

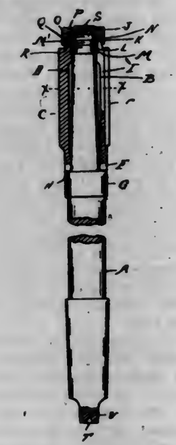
3. In a machine of the class described, the combination of a support, a frame mounted to swing vertically thereon, a pair of roller shafts carried by the frame, said roller shafts being arranged to turn in opposite directions, a horizontal driving shaft on the support, a telescopic shaft free to swing at one end about the axis of the driving shaft and at the other end about the axis of one of the roller shafts, and gearing for connecting the telescopic shaft to the other shafts.

4. In a machine of the class described, the combination of a support, a frame mounted to swing vertically thereon, a pair of roller shafts carried by the frame, said roller shafts being arranged to turn in opposite directions, a horizontal driving shaft on the support, a telescopic shaft free to swing at one end about the axis of the driving shaft and at the other end about the axis of one of the roller shafts, and gearing for connecting the telescopic shaft to the other shafts, said gearing including reversing means operatively connected to the end of the telescopic shaft nearest the frame.

5. In a machine of the class described, the combination of a support, a frame mounted to swing vertically thereon, a pair of roller shafts carried by the frame, said roller shafts being arranged to turn in opposite directions, a driving shaft on the support, a telescopic shaft free to swing at one end in respect to the driving shaft and free to swing at the other end about the axis of one of the roller shafts, and means for connecting the several shafts so that the telescopic shaft may be driven from the driving shaft and so that the roller shafts may be driven from the telescopic shafts.

[Claims 6 to 18 not printed in the Gazette.]

1,214,649. REAMER. STUART A. COGSDILL, Detroit, Mich., assignor to Detroit Reamer Salvage Co., Detroit, Mich., a Corporation of Michigan. Filed Mar. 18, 1916. Serial No. 85,023. (Cl. 77—76.)



1. A reamer, comprising a shank, a shell detachably mounted upon the shank, said shell being provided with a plurality of slots extending from the forward end of the shell for a portion only of its length whereby the forward end of said shell is expansible and its rear end unexpansible, and means engaging the forward end of the shell for securing the slotted portions against movement in any direction.

2. A reamer, comprising a shank, a shell detachably mounted upon the shank, said shell being provided with a plurality of slots extending from the forward end of the shell for a portion only of its length whereby the forward end of said shell is expansible, means adjustable upon the shank engaging the forward end of the shell for expanding the latter, and means coöperating with the first-mentioned means for rigidly clamping the forward end of the shell against movement.

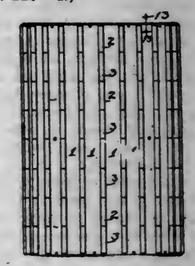
3. A reamer, comprising a shank having a spindle at one end thereof terminating in a threaded portion, a shell upon said spindle, said shell detachably mounted being provided with a plurality of slots extending from the forward end thereof for a portion only of the length of the shell, whereby the forward end of the shell is expansible, a nut engaging said threaded portion arranged within the forward end of the shell, and a second nut also engaging said threaded portion surrounding the end of the shell and coöperating with said first-mentioned nut to rigidly clamp the forward end of the shell against movement.

4. A reamer, comprising a shank provided with a tapering spindle that terminates in a threaded stud, alined bearings respectively in one end of said shank and in the end of said threaded stud, a shell engaging said spindle having an unexpansible inner end and provided with an expansible portion at the forward end of the shell, a nut engaging said threaded stud arranged within the forward end of the shell, and a cup-shaped nut engaging said threaded stud and coöperating with the first-mentioned nut to rigidly clamp the forward end of the shell against movement.

5. A reamer, comprising a shank provided with a spindle terminating at its forward end in a threaded stud, a shell having an unexpansible portion at its inner end and having the forward portion thereof expansible, there being a collar on said shank against which the inner end of said shell abuts, coöperating interlocking portions upon the collar and shell acting to hold the latter against rotation in relation to the shank, a nut upon the threaded stud having a part arranged within the forward end of the shell and adapted to expand the latter, a cup-shaped nut engaging the threaded stud and surrounding the forward end of the shell, said nuts coöperating to clamp the forward end of the shell against movement and acting to retain the inner end of the shell in engagement with said collar.

[Claims 6 to 8 not printed in the Gazette.]

1,214,650. COLLAPSIBLE BARREL. THOMAS W. CORKELL, Chicago, Ill. Filed Dec. 24, 1915. Serial No. 68,513. (Cl. 220—4.)



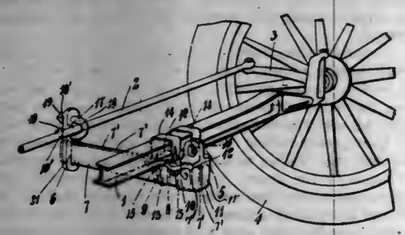
1. A collapsible metal barrel, comprising a plurality of stave elements recessed at their corners, hinge members formed on each edge thereof with the hinge elements of one edge staggered with respect to those of another element, headed hinge pintle rods adapted to be inserted through the registering hinge elements of a number of staves laid adjacent one another, said recesses receiving the pintle heads, flanged heads adapted to be inserted into the cylindrical body formed by said stave elements, and marginal flanges on said heads adapted to engage over and around the ends of said stave elements to maintain the same in proper relation.

2. A collapsible metal barrel, comprising a plurality of curved staves, hinge members formed on each edge thereof

in staggered relation adapting a number of said staves to be laid adjacent to one another with the respective hinge elements thereof registering, pintle rods adapted to be inserted through the registering hinge members pivotally to connect said staves one to another, heads adapted to be inserted into the cylindrical body formed by said connected staves, and means for attaching said heads to said staves, certain of said staves being free to permit the same to be swung open to give access to the interior of the barrel through the side thereof.

3. A collapsible metallic barrel, comprising curved metallic staves some of which are shorter than the others, hinge members formed integrally on each side of each of said staves, pintle rods inserted through the registering hinge members to maintain said staves pivotally connected to one another, and barrel heads around which said staves are adapted to be disposed and connected and provided with marginal flanges adapted to fit over the ends of the lower staves, said flanges being struck inwardly or flattened for a portion of their length so as to abut against the ends of the shorter staves to permit the same to swing outwardly to give access to the interior of the barrel.

1,214,651. STEERING ATTACHMENT. POWEL CROSLEY, Jr., Cincinnati, Ohio. Filed Jan. 8, 1916. Serial No. 69,929. (Cl. 21—200.)



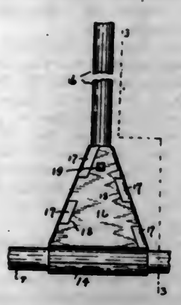
1. In a steering attachment, a primary fulcrum, an attenuated spring secured by said fulcrum near one end, engaging means to engage in either direction with said spring near its other end, secondary fulcrums flanking said spring, and means for securing said fulcrums to one and said engaging means to another of relatively movable parts of a vehicle, one of said parts being a part of the steering apparatus of the vehicle.

2. In a steering attachment, a primary fulcrum, a flat spring secured by said primary fulcrum near one end, engaging means to engage in either direction with said spring near its other end, secondary fulcrums flanking said spring but spaced away from the spring to allow initial deflection of the spring before it engages with the secondary fulcrums, a bracket on which said primary fulcrum and said secondary fulcrums are fixed, and means for securing said bracket and said engaging means to relatively movable parts of a vehicle, one of said parts being a part of the steering apparatus of the vehicle.

3. In a steering attachment, a primary fulcrum, an attenuated spring secured by said primary fulcrum near one end, engaging means to engage in either direction with said spring near its other end, secondary fulcrums flanking said spring but spaced away from the spring to allow initial deflection of the spring before it engages with the secondary fulcrums, and being flared apart along the spring in direction away from the primary fulcrum to support the spring laterally during its increasing deflection, a bracket on which said primary fulcrum and said secondary fulcrums are fixed, means for securing said bracket and said engaging means to relatively movable parts of a vehicle, one of said parts being a part of the steering apparatus of said vehicle.

1,214,652. LIGHTNING-ROD STRUCTURE. JOHN E. CURTI, Omaha, Nebr. Filed Apr. 8, 1916. Serial No. 88,610. (Cl. 173—31.)

1. In a lightning rod structure, a horizontal cable, a metallic, tubular standard flattened adjacent its lower end and having said flattened portion incised longitudinally to provide prongs and secondary prongs at the terminals of the first named prongs, said standard being disposed vertically with its secondary prongs in engagement with the cable, an elongated, metallic housing plate bent midway between its ends to provide a part for embracing the cable and secondary prongs and having opposed, convergent ends for embracing the first named prongs, and a plurality of fastening devices at the opposed edges of the convergent ends of said housing plate in engagement with the first named prongs.



2. In a lightning rod structure, the combination with a cable and a metallic tubular standard having terminal, divergent prongs disposed in line with and engaging the cable, of a housing plate bent midway between its ends to provide a part for embracing the cable and having opposed, convergent ends for embracing the prongs, and a plurality of fastening devices at the opposed edges of the convergent ends of said housing plate in engagement with said prongs.

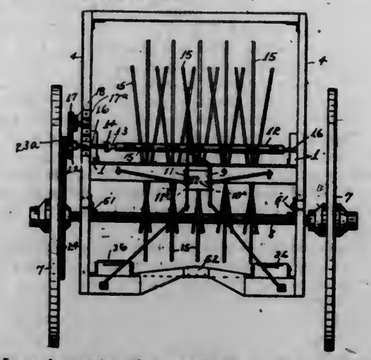
3. In a lightning rod structure, a cable, a metallic tubular member having outwardly divergent prongs at one of its ends and disposed transversely of the cable its prongs being in line with and engaging said cable, and a metallic, elongated plate having convergent end-portions provided with recesses and flanges, said plate being bent midway between its ends to provide a loop for engaging the cable and to provide a pair of side members for engaging the prongs, the flanges of each side member being adapted to be disposed in the recesses of the other side member.

4. In a lightning rod structure, a horizontal cable, a metallic, tubular member incised longitudinally to provide a pair of outwardly divergent prongs and secondary prongs at the terminals of the first named prongs, said tubular member being disposed transversely of the cable, its secondary prongs being disposed stridingly upon and its first named prongs being disposed in line with said cable, a metallic, elongated plate having convergent end-portions provided with recesses and flanges, said plate being bent midway between its ends to provide a loop for engaging the cable and secondary prongs and to provide a pair of side members for engaging the first named prongs, the flanges of a side member engaging in the recesses of the other side member, and a keeper traversing the side members of said elongated plate.

5. In a lightning rod structure, a horizontal cable, a metallic, tubular member flattened adjacent to its lower end and having said flattened portion incised longitudinally to provide a pair of outwardly divergent prongs and secondary prongs at the terminals of the first named prongs, and an elongated plate formed convergent at its ends and provided with a plurality of flanges and recesses, said plate being bent to provide a pair of side members for embracing the cable and prongs after the tubular member has been disposed vertically with its secondary prongs in engagement with the cable, the flanges of one side member engaging in the recesses of the other side member.

1,214,653. PEA PICKER OR HARVESTER. WILLIAM Y. E. DAVIS, Norfolk, Va. Filed Nov. 6, 1915. Serial No. 59,974. (Cl. 56—1.)

1. In a harvester the combination of a shaft having spirally arranged threshing members, with a frame having a channelway for guiding the vines into the path of the threshing members for stripping and threshing the vines, said shaft being inclined to the said channelway, and means for rotating said shaft.



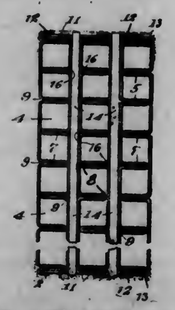
2. In a harvester the combination of a shaft having spirally arranged threshing members, with a frame having a channelway running longitudinally thereof for guiding the vines into the path of the threshing members, said shaft being inclined to the said channelway and having the threshing members arranged perpendicular to the shaft, and means for rotating the said shaft.

3. In a harvester the combination with a shaft having spirally arranged threshing members, of a frame having a channelway running longitudinally thereof for guiding the vines into the path of the threshing members, said shaft being disposed in a horizontal plane above said channelway and inclined thereto and having the said threshing members arranged perpendicularly to said shaft, and means for rotating the shaft.

4. In a harvester the combination with a shaft having a plurality of spirally and radially arranged threshing members, of a frame having a channelway extending longitudinally thereof for guiding the vines into the path of said threshing members, said shaft being inclined with relation to said channelway and having the plurality of spirally and radially arranged threshing members equally inclined toward each other perpendicularly to the said shaft, and means for rotating the shaft.

5. In a harvester the combination with a shaft having a plurality of spirally arranged threshing members, of a frame having a channelway extending longitudinally thereof for guiding the vines into the path of travel of the said threshing members, the said shaft being inclined with relation to the said channelway and having the threshing members passed through the shaft and arranged perpendicularly thereto, and means for rotating the shaft.

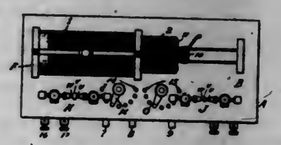
1,214,654. RADIATOR. GEORGE DE FÉVRE and JAMES E. WOODBRIDGE, New York, N. Y., assignors to The A-Z Company, a Corporation of New York. Filed Apr. 21, 1909. Serial No. 491,301. (Cl. 257—130.)



1. In a radiator, a unit formed of a strip of metal having plaits therein, said strip being folded intermediate its ends to form a box-like structure and to bring the plaits between the side walls thereof, said plaits extending entirely across the space between said side walls to support both of the same against collapse and vibration, one end of said strip being bent to form a plurality of open plaits as a terminal thereof and the open side of the terminal plait being faced toward the other end of said strip, said latter end being bent at an angle and extended into said open terminal plait to form an interlocking joint.

2. In a radiator, a unit formed of a strip of metal having a plurality of spaced-apart, hollow plaits formed therein, said strip being folded intermediate its ends to form a hollow structure and to bring the plaits between the side walls thereof, said plaits extending entirely across the space between said side walls to support both of the same against collapse and vibration, one end of said strip being bent to form a plurality of open plaits as a terminal thereof and the open side of the terminal plait being faced toward the other end of said strip, said latter end being bent at an angle and extending into said open terminal plait.

1,214,655. WIRELESS-TELEPHONE APPARATUS. BURR V. DEITZ, Slingerlands, N. Y. Filed Oct. 15, 1913. Serial No. 795,384. (Cl. 250—31.)

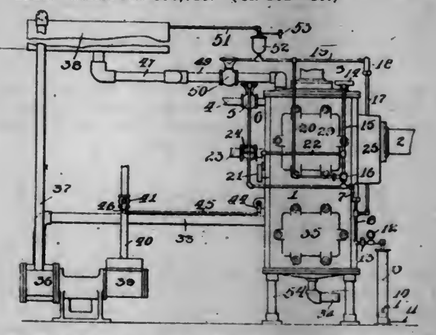


1. A detector for wireless signals, comprising the minerals fused silicon, zinkite and ore of copper, together forming a simple voltaic cell.

2. A detector for wireless signals, comprising the minerals zinkite, silicon and pyrites of any kind.

3. A detector for wireless signals, comprising a mass of zinc oxid held firmly in a cup; a piece of chalcopyrite held firmly in another cup, with their rough surfaces extending toward each other, the cups movable and adjustable, having a mass of silicon clamped between the two.

1,214,656. AUTOMATICALLY-CONTROLLED WATER-HEATER. OBIE J. DILLIN, Chicago, Ill. Filed Aug. 14, 1914. Serial No. 856,725. (Cl. 261—39.)



1. In a device of the class described, a water heater, inlets and outlets to permit a flow of water through said heater, temperature controlled mechanisms associated with said heater acting automatically to vary the quantity of inlet water to prevent the temperature of the outlet water falling below a predetermined degree, a reservoir to receive the heated water from said outlet, an overflow connection from said reservoir back into said heater, and a device for closing the inlet to said means during overflow from the reservoir and operated by said overflow.

2. In a device of the class described, a water heater, inlet and outlet pipes communicating therewith, a valve controlling the flow of water into said heater, thermostatic

means associated with said heater and operatively connected with said valve to vary the opening thereof to limit the inflow of water to said water heater, a reservoir connected to said heater adapted to receive the water therefrom, an overflow connection between said reservoir and said heater, and means operated automatically by the overflow of said reservoir to close said valve for inlet flow of water into the heater.

3. In a water heating system of the class described, a water heater, a valve controlling the inlet of water thereto, inlet and outlet passages for steam for said heater, thermostatic means connected in said heater connected to actuate said inlet water valve, a reservoir for the heated water, a pump for pumping the water from the heater to said reservoir, piping connections between said pump, said reservoir and said heater, operative connections between said heater and said pump whereby with a lowering of the level in the water in said heater said pump is automatically cut out of operation, a return overflow pipe from said reservoir to the heater whereby excess water admitted to the reservoir may be discharged, and means operated automatically by an overflow from said reservoir back to said heater to close said inlet water valve.

4. In a water heating system, a water heater, an inlet valve controlling the flow of cold water thereinto, thermostatic means mounted within said heater and controlling said valve to vary the opening thereof proportionately to maintain the temperature of the outflowing water at or above a predetermined minimum degree, a reservoir to receive the heated water, a connection between said reservoir and said heater adapted to be opened to permit a flow to take place from said reservoir when an excess quantity of water flows into said reservoir, and means operated automatically by said excess flow to close said inlet valve of the water heater.

5. In a water heating system, a water heater, inlets for steam therein, inlets and outlets for water, a water valve for controlling the flow of inlet water to said heater, thermostatic means associated with the heater controlling the opening of said valve to vary the quantity of inlet water to prevent the temperature of the outlet water from falling below a certain minimum degree, a reservoir to receive the heated water from said heater, means transferring the heated water to said reservoir, a normally closed overflow pipe from said reservoir to said heater, automatically acting mechanism to effect opening of said pipe between said reservoir and heater when an excess of water is admitted to the reservoir, and means acting automatically to close the inlet water valve to said heater during a flow from the reservoir to the heater.

[Claims 6 to 8 not printed in the Gazette.]

1,214,657. GAS-PRODUCER. JOHN R. DONNELLY, Fort Wayne, Ind., assignor to Wayne Process Company, Fort Wayne, Ind., a Corporation. Filed June 15, 1912. Serial No. 703,874. (Cl. 158—79.)



1. In a device of the class described, the combination of a shell, a vaporizing coil on the shell, means to close one end of the shell having apertures for admitting outside air, means to control the passage of air through the apertures, a bushing within the shell having means thereon for closing the other end of said shell, a nozzle connected to the vaporizing coil and adapted in operation to discharge vapor from the coil into the bushing wherein a portion of the vapor is combusted to continuously heat the bushing, and means in connection with the bushing into which the remainder of the vapor is discharged from the bushing and ignited.

2. The combination with a vaporizing coil, of a shell within the coil, a head secured to one end of the shell having a plurality of apertures for the entrance of outside air, means to control the entrance of air through said apertures, a bushing within the shell and in spaced relation to the shell, said bushing having means to close the other end of the shell, a nozzle connected to the vaporizing coil and adapted in operation to discharge vapor from the coil into the bushing and a burner into which, in operation, the vapor is discharged from the bushing and combusted, a portion of the vapor being consumed in the bushing to continuously heat the same.

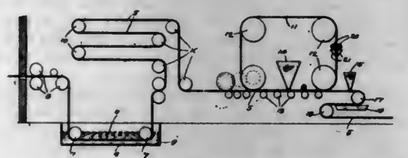
3. The combination of a vaporizing coil, for conveying liquid fuel under pressure, a shell within the coil, a head secured to one end of the shell and having apertures therein for admitting outside air, means to control the passage of air through said apertures, a bushing within the shell and in spaced relation thereto, means on the bushing for closing the other end of the shell, and a nozzle within the head and connected to the vaporizing coil and adapted in operation to discharge vapor from the coil into the bushing.

4. The combination with a vaporizing coil for conveying liquid fuel under pressure, of a bushing within the coil, means between the coil and bushing for forming an air space between said coil and bushing, a nozzle connected to the coil and adapted, in operation, to discharge vapor from the coil into the bushing, means adjacent one end of the bushing for controllably admitting air into the bushing, and openings in the wall of the bushing for providing communication between the bushing and the air space.

5. The combination with a vaporizing coil for conveying liquid fuel under pressure, of a shell within and adjacent to the coil, a head secured to the rear end of the shell having apertures therein for admitting outside air into the head, a bushing within the shell having ribs thereon which space the bushing from the shell, openings in the wall of the bushing which provide means of communication between the interior of the bushing and the space between the bushing and shell, a boss on the bushing making tight contact with the forward end of the shell, a nozzle connected to the vaporizing coil and adapted in operation to discharge vapor from the coil into the bushing, an air mixer and a burner having connection with the bushing into which vapor is discharged from said bushing and ignited, a portion of the vapor being consumed in the bushing to continuously heat the same.

[Claims 6 to 8 not printed in the Gazette.]

1,214,658. APPARATUS FOR PRODUCING ORNAMENTAL ROOFING. WILLIAM P. DUN LANY, Chicago, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Nov. 6, 1915. Serial No. 59,932. (Cl. 91—16.)



1. An apparatus for producing ornamental sheet roofing, comprising means for applying a binding medium to a flexible sheet, means for causing the sheet to travel, an endless stencil associated with the sheet and arranged to travel at the same speed, a hopper containing grit located above one run of the stencil and said sheet, and another hopper containing grit of a contrasting color, beneath which latter hopper the sheet is caused to pass after leaving the stencil.

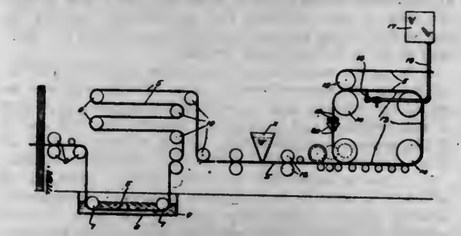
2. An apparatus for producing ornamental sheet roofing, comprising means for applying a binder to a flexible sheet, means for causing the sheet to travel, an endless flexible stencil having a horizontal lower run beneath and close to which said sheet is guided after having the binder applied thereto, a hopper located above the lower run of said stencil and arranged to deposit grit through the spaces in the stencil onto said binder, and a second hopper containing grit of a contrasting color, beneath which second hopper the sheet is caused to pass after leaving said stencil.

3. An apparatus for producing ornamental roofing, comprising means for causing a sheet to travel, a stencil arranged to travel in proximity to the sheet, stationary means for depositing grit through said stencil onto said sheet, means for thereafter depositing grit over the sheet to fill unoccupied spaces, means for doubling the sheet back in its travel, and means arranged to catch the surplus grit which does not adhere to the sheet after the second deposit.

4. An apparatus for producing ornamental sheet roofing, comprising an endless flexible stencil, a plurality of rollers about which said stencil travels, means for causing a flexible sheet to travel in association with the lower run of said stencil, means located above said lower run for depositing grit through the stencil onto said sheet, cleaning means contacting the face of the stencil to prevent fouling thereof, and a second means for depositing grit on the sheet after it leaves the stencil to fill the unoccupied spaces.

5. An apparatus for producing ornamental sheet roofing comprising an endless traveling ribbon stencil, means for causing a flexible base to travel close to said stencil, stationary means for applying an element to the base through said stencil, means for causing said stencil to travel around said stationary means, and means outside of the stencil for applying a second element to the base after leaving said stencil.

1,214,659. APPARATUS FOR PRODUCING ORNAMENTAL ROOFING. WILLIAM P. DUN LANY, Chicago, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Nov. 6, 1915. Serial No. 59,933. (Cl. 91—16.)

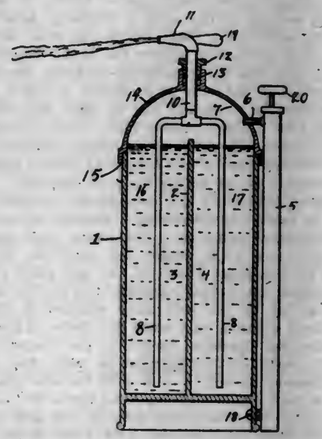


1. An apparatus for producing ornamental sheet roofing comprising means for causing a flexible base to travel between two points, means for applying a binder to said base, means for depositing a material upon the base to form a background, a stencil positioned in close proximity to the background-carrying surface of the base, means for causing the stencil to travel with the base, and a paint spraying nozzle positioned to discharge coloring matter upwardly through said stencil, the binder applying means, the back ground applying means, the stencil and nozzle all being located between the two points of travel of the base.

2. An apparatus for producing ornamental sheet roofing comprising means for causing a flexible base to travel between two points, means for applying a binder to said base, means positioned to subsequently deposit a background upon said base, a paint container provided with an upwardly projecting discharge nozzle, an endless ribbon stencil positioned in close proximity to the background-carrying surface of said base, and means for causing said stencil to travel around said nozzle and with said base.

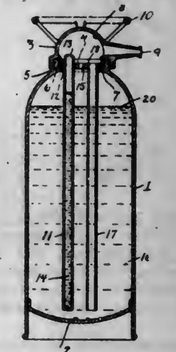
1,214,660. APPARATUS FOR AND PROCESS OF GENERATING FOAM. JAMES B. ERWIN and ORLANDO R. ERWIN, Milwaukee, Wis. Filed Feb. 14, 1916. Serial No. 78,118. (Cl. 169—7.)

1. In a device of the described class, the combination of a liquid receptacle, a partition subdividing said receptacle into two compartments, a cap for said receptacle, two branch ducts communicating with each other within the said cap substantially centrally between the said cap and the upper edge of the said partition and respectively extending into the said compartments, a central third duct communicating with the said branch ducts within the cap and extending therethrough, with a discharge nozzle upon said central duct, and means for applying pressure to the surface of the liquids in said compartments, whereby the same are commingled, converted into foam and discharged together through said nozzle upon a fire.



2. A fire extinguisher comprising a receptacle, a chambered cap upon the receptacle, a transverse partition within the receptacle terminating within the said cap and providing receiving chambers within said receptacle and cap, branch outlet pipes arranged within the said chambers spanning the upper end of the said partition within the chamber of the cap, an enlarged outlet pipe connected to the said branch pipes and centrally extending through the said cap and fluid pressure producing means communicating with the said chambers through the said cap.

1,214,661. FOAM-GENERATING APPARATUS. JAMES B. ERWIN and ORLANDO R. ERWIN, Milwaukee, Wis. Filed Mar. 4, 1916. Serial No. 82,048. (Cl. 169—7.)



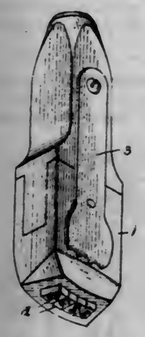
1. A foam generator comprising a receptacle having a threaded collar at its open end and provided with an annular inwardly-extending flange at the base of the said collar, a perforated plate arranged within the said collar upon the said flange and having a dished upper face, a cap secured upon the said collar and having inwardly-extending projections restrainingly overlying the said plate providing

a generating chamber within the said cap and dished portion of the plate, a discharge member carried by the said cap, and a container carried by the said plate having a discharge duct within the said generating chamber.

2. A receptacle for foam generating fluid having a threaded collar at its open end and provided with an annular inwardly-extending flange at the base of the said collar, a perforated plate arranged within the said collar upon the said flange and having a dished upper face, a cap secured upon the said collar and having inwardly-extending projections restrainingly overlying the said plate providing a generating chamber within the said cap and dished portion of the plate, a discharge member carried by the said cap, a foam conducting pipe carried by the said plate extending within the said receptacle and communicating with the generating chamber, an acid container carried by the said plate having a closed end arranged within the receptacle and an open end positioned within the said chamber, and a foam conducting pipe carried by the inner end of the said container communicating with the interior thereof and extending axially outwardly of the container outlet within the said chamber.

3. A foam generating fire extinguisher adapted to be operated by inversion comprising a storing receptacle for a foam producing solution, a perforated plate upon the said receptacle, a dome-shaped cap upon the receptacle overlying the marginal points of the said plate and providing a foam generating chamber therein, an acid receptacle carried by the said plate adapted to discharge acid into said chamber only when the device is inverted, a foam conducting expulsion means for the contents of the said acid receptacle communicating with the interior thereof adjacent its bottom and with the said generating chamber, a foam conducting expelling means for said solution receptacle communicating between the said chamber and spaced above the solution level when the device is inverted.

1,214,662. DIE-HOLDER. JOSEPH ESCHER, Pittsburgh, and JOHN NAGY, West View, Pa., assignors to James H. Matthews & Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 10, 1916. Serial No. 108,377. (Cl. 101—169.)

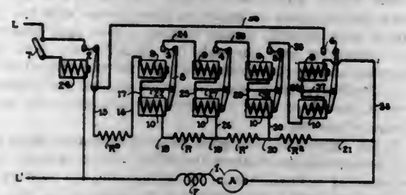


1. In a die holder provision for seating and carrying a plurality of dies, and a spring-impelled latch capable of movement to protrude from and recede within the walls of said die-seat, said latch including a succession of prongs corresponding in number to the number of dies which the said die-seat is adapted simultaneously to receive.

2. In a die-holder provision for seating and carrying a plurality of dies in curvilinear arrangement, and a spring-impelled latch capable of movement to protrude from and recede within the walls of said die-seat, said latch including a succession of prongs corresponding in number to the number of dies which the said die-seat is adapted simultaneously to receive, said succession of prongs arranged in a curved line corresponding to the curvilinear arrangement of the seated dies.

3. In a die-holder provision for seating and carrying a plurality of dies in curvilinear arrangement, and a spring-impelled latch capable of movement to protrude from and recede within the walls of the die-seat, said latch including a succession of prongs corresponding in number and spacing to the number and size of the dies which the said die-seat is adapted simultaneously to receive.

1,214,663. MOTOR-CONTROLLER. CLARENCE T. EVANS, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 2, 1914. Serial No. 835,944. (Cl. 172—288.)



1. A motor controller provided with a plurality of electromagnetic accelerating switches, said switches having separate series operating and lockout windings and each but the last upon responding including in series with its own operating winding the windings of the next succeeding switch and connections whereby said last switch upon responding excludes from circuit the windings of the preceding switches.

2. A motor controller provided with a plurality of accelerating switches to operate in a definite sequence, an operating winding and an opposing restraining winding for each of said switches and connections whereby the last switch of the sequence excludes from circuit the windings of all of the preceding switches.

3. A motor controller provided with a plurality of accelerating switches to operate in a definite sequence, an operating winding and a restraining winding for each of said switches and connections whereby the last switch of the sequence excludes from circuit the windings of all of the preceding switches and its own restraining winding.

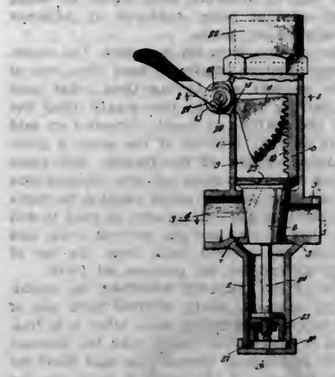
4. A motor controller provided with a plurality of switches to operate in a definite sequence, an operating winding and a restraining winding for each of said switches and connections whereby each of said switches, upon responding, excludes from circuit its restraining winding and whereby one of said switches, upon responding, also excludes from circuit the operating windings of the preceding switches.

5. A motor controller provided with a plurality of accelerating switches to operate in a definite sequence, a set of series of windings for each switch including an operating winding and a lockout winding and connections providing for sequential operation of said switches and for excluding from circuit upon response of the last switch of the sequence the windings of the preceding switches.

[Claims 6 to 12 not printed in the Gazette.]

1,214,664. FLUSHING-VALVE. ALEXANDER FELEKI, New York, N. Y. Filed Mar. 14, 1916. Serial No. 84,126. (Cl. 137—93.)

1. In a flushing apparatus, the combination of a casing comprising axially alined inlet and outlet nipples, a cylinder rising from said nipples and a second cylinder depending from said nipples, a spindle journaled on the upper cylinder, an operating lever carried by one end of said spindle externally of the cylinder, a valve plug adapted to seat in the upper end of the lower cylinder and against the inner end of the inlet nipple and cut off the flow through said nipple, a head rising from said valve within the upper cylinder and having a longitudinally extending diametrically disposed recess, a rack on the end wall of said recess, a segment secured on said spindle and fitting between the side walls of the recess and meshing with the rack on the end wall of the same, and a retarding piston depending from the valve plug and playing in the lower cylinder.



2. In a flushing apparatus, the combination of a casing comprising upper and lower cylinders and axially alined inlet and outlet nipples disposed between said cylinders and having a lower wall in common, said lower wall having a valve-receiving opening and a drain opening leading into the lower cylinder, a valve adapted to seat in said valve-receiving opening and against the inner end of the inlet nipple and cut off the flow therethrough, a retarding piston carried by the valve and playing in the lower cylinder, a head rising from the upper end of the valve within the upper cylinder, and means mounted on the wall of said upper cylinder and acting on said head to unseat the valve.

1,214,665. ROCK-DRILL. SEYMOUR FERGUSON, Ocotlan, Mexico. Filed June 30, 1911, Serial No. 636,199. Renewed Dec. 26, 1916. Serial No. 139,047. (Cl. 255—42.)



1. The combination with a casing, of a reciprocating cross head, a driver cylinder closed at both ends, and a piston within said cylinder and attached to said cross head, said cross head being provided with a cup adapted to closely receive a portion of said driver cylinder therein and form a cushion of compressed air between the two, substantially as set forth.

2. The combination with a casing, of a reciprocating cross head, a cup-shaped member removably inserted in the forward end thereof, a cylinder closed at both ends and having a portion closely receivable into said cup-shaped member, a piston in said cylinder, and a piston rod connected thereto and engaged in said cross head to secure the cup-shaped member in place, substantially as set forth.

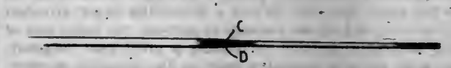
3. The combination with a casing, of means therein comprising a cylinder closed at both ends and having intake ports, a piston in said cylinder, a piston rod having an air passage connecting the space in advance of the piston with the space in the rear of the cylinder, a valve controlling said passage, and means for receiving the rear end of the cylinder during the reciprocation of the piston to form an air cushion and to discharge air through said air passage, substantially as set forth.

4. The combination with a casing, of a reciprocating cross head, a driver cylinder closed at both ends, and a piston within said cylinder and attached to said cross head by its piston rod, said cross head being provided with a cup adapted to closely receive a portion of said driver cylinder therein to form an air cushion between the two, and said piston and its rod being provided with an air passage having a port and a valve therein, through which air is forced from said cushioning cup into the chamber in front of said piston, substantially as set forth.

5. The combination with a casing, of a reciprocating cross head, a driver cylinder closed at both ends, and a piston within said cylinder and attached to said cross head by its piston rod, said cross head being provided with a cup adapted to closely receive a portion of said driver cylinder therein to form an air cushion between the two, and said piston and its rod being provided with an air passage having a port and the inlet of said air passage being so placed as to be closed by said cylinder before said cylinder reaches the end of its rearward stroke, substantially as set forth.

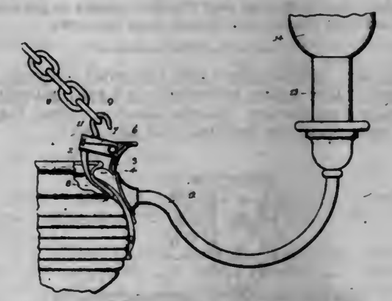
[Claims 6 to 27 not printed in the Gazette.]

1,214,666. BOOT AND SHOE SOLE. JAMES A. FORD, Jamaica Plain, Mass., assignor to Plymouth Rubber Company, Canton, Mass., a Corporation of Massachusetts. Filed May 31, 1916. Serial No. 100,805. (Cl. 36—25.)



An integral, flexible, composition sole for boots and shoes symmetrical with respect to its transverse, medial plane and comprising a toe portion and a shank portion of less thickness than the toe portion with the said portions merging by similar, oppositely disposed, converging bevels so arranged that when secured to the boot or shoe, either face may be pressed into substantially the same plane throughout to form the inner face thus increasing the angle of the bevel of the opposite face and enabling the sole to be used either as a right or left and in either case to present a well defined exterior bevel.

1,214,667. SUPPORTING MEANS FOR ELECTRIC-LIGHT FIXTURES. HENRY A. FRAMBURG, Berwyn, Ill., assignor to H. A. Framburg & Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 27, 1915. Serial No. 58,254. (Cl. 240—91.)



1. In a hanger for illumination bowls and the like, an external escutcheon member adapted to lie on the outside of the bowl, said member having a portion adapted to lie above the rim of the bowl, a holding member pivoted to said escutcheon member, said pivots being located intermediate the ends of both members whereby they both constitute levers of the first class, said holding member comprising a substantially horizontal portion and a gripping finger depending from the rear end of said horizontal

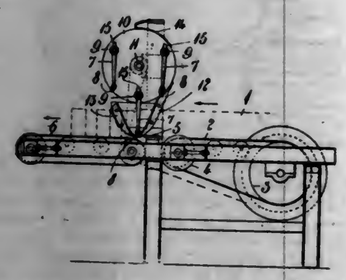
portion, the forward end of said horizontal portion having a pivot part coöperating with a part on the escutcheon member, and having a suspending hook and resilient means for holding said holding member and said escutcheon member against opposite sides of the bowl, said horizontal member being adapted to lie immediately above the rim of the bowl.

2. A spring gripping hanger for illuminating bowls adapted to be applicable with one hand, said hanger comprising an external member and a gripping member, said members being pivoted to each other intermediate their ends to form levers of the first class, and spring means to hold said lower ends of the members with yielding pressure against opposite sides of the bowl, the upper ends of both members being adapted to be held together between the thumb and finger of the operator for positioning upon the bowl and a supporting chain or the like secured to the top of one of said members.

3. A spring gripping hanger for illuminating bowls adapted to be applicable with one hand, said hanger comprising an external member and a gripping member, said members being pivoted to each other intermediate their ends to form levers of the first class and spring means to hold said lower ends of the members with yielding pressure against opposite sides of the bowl, the upper ends of both members being adapted to be held together between the thumb and finger of the operator for positioning upon the bowl, said external member comprising a plate or escutcheon, said internal member comprising a substantially horizontal portion having a hook attached to the upper side and having a depending finger attached at the rear end of the horizontal portion, the inner end of said horizontal portion comprising a pivot part coöperating with the corresponding part on the external member.

4. In a hanger for illuminating bowls and the like, an external member adapted to lie on the outside of the bowl, said member having a portion adapted to lie above the rim of the bowl, a holding member pivotally connected to said external member, the pivotal connection being made intermediate their length in order that both members may constitute levers of the first class, said holding members comprising a gripping finger and a suspending hook, resilient spring means for holding said internal holding member and said external member against opposite sides of the bowl, one of said members having a substantially horizontal portion adapted to lie above the rim of the bowl, said horizontal portion spacing said members apart to permit of a wide opening between both members in proximity to the pivotal connection, the tops of said members being adapted to be gripped between the thumb and fingers of one hand so that pressure upon the tops of said members opens the lower ends of said members against the tension of said resilient means to permit the device to be readily positioned upon the bowl.

1,214,668. APPARATUS FOR CUTTING BRICKS AND THE LIKE FROM CONTINUALLY-FED MATERIAL. NILS FREDRIKSSON, Svedala, Sweden. Filed Oct. 21, 1914. Serial No. 867,706. (Cl. 25—110.)

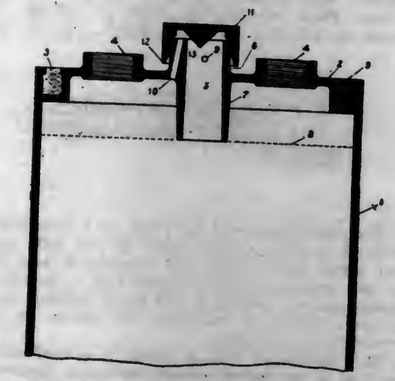


1. In a machine of the character described, the combination of a rotary support, shafts secured with one of their ends to the support and having their other ends free, and pendulous cutting frames of less length than the distance between the shafts and loosely threaded on said shafts, for the purpose of an easy removal of the frames from the shafts and of allowing each frame to swing around its shaft without being hindered by adjacent shafts, substantially as set forth.

2. In a machine of the character described, the combination of a rotary support, shafts secured with one of their ends to the support and having their other ends free, pendulous cutting frames of less length than the distance between the shafts and loosely threaded on said shaft for securing an easy removal of the same, a guide for the downward movement of the frames, said guide adapted to direct the movement of the cutting-wire through the bar of clay, another guide adapted to direct the upward movement of the cutting-wire so that it will touch neither the bar of clay nor the severed brick, and means for removing the severed brick from the bar of clay, substantially as and for the purpose set forth.

3. In a machine of the character described, the combination of a rotary support, shafts secured with one of their ends to the support and having their other ends free, pendulous cutting frames of less length than the distance between the shafts and loosely threaded on said shaft for securing an easy removal of the same, a guide for the downward movement of the frames, said guide adapted to direct the movement of the cutting-wire through the bar of clay, another guide adapted to direct the upward movement of the cutting-wire so that it will touch neither the bar of clay nor the severed brick, means for feeding the bar of clay, and means adjacent to said guides for removing the severed brick from the bar of clay, said means being arranged to operate at a higher rate of speed than the feeding means for the bar of clay, substantially as and for the purpose set forth.

1,214,669. BATTERY-CELL. JULIUS M. GAUSS, Niagara Falls, N. Y., assignor to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Apr. 8, 1916. Serial No. 89,972. (Cl. 204—53.)



1. A battery cell having a cover provided with an aperture, an inwardly projecting collar surrounding said aperture and a second aperture, and a common means for covering without closing said apertures.

2. A battery cell having a cover provided with an aperture, an inwardly projecting collar surrounding said aperture and a second aperture, and shielding means for said apertures, said shielding means being provided with a downwardly projecting liquid dropping point.

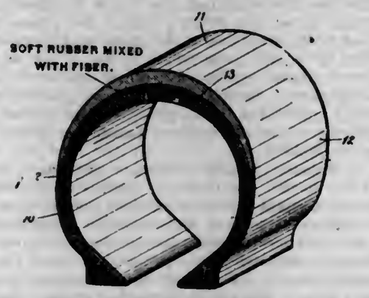
3. A battery cell having a cover provided with an aperture and means for preventing the filling of the cell beyond a certain level, said cover being also provided with a vent, the operativeness of said means for the purpose specified being dependent upon the closure of said vent, and means for simultaneously shielding said aperture and vent, said shielding means being provided with a downwardly projecting cone-shaped liquid dropping projection.

4. A battery cover provided with an aperture and a collar surrounding said aperture, said collar being provided with a vent hole extending through said cover.

5. A battery cover provided with an aperture and a collar surrounding said aperture, said collar being provided with a vent hole extending through said cover, and a cap for said collar.

[Claims 6 to 18 not printed in the Gazette.]

1,214,670. PNEUMATIC TIRE. WILLIAM C. GEER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Oct. 7, 1916. Serial No. 124,275. (Cl. 152—13.)



A pneumatic tire comprising a carcass and a rubber tread thereon having on its inner side adjacent to the carcass a breaker strip composed of soft rubber mixed with shredded or ground-up fiber, the whole being vulcanized.

1,214,671. METHOD OF REGRINDING REAMERS. JOHN C. GLENZER, Highland Park, Mich., assignor to Detroit Reamer Salvage Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 17, 1916. Serial No. 78,828. (Cl. 76—101.)

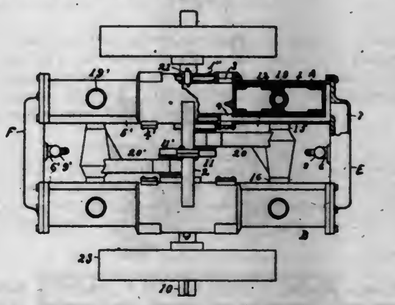


In the method of restoring hardened tools, the re-centering of the hardened tools by grinding a recess or channel in the end portion of the tool securing a soft metal insert in said recess or channel and cutting a center in the insert.

1,214,672. INTERNAL-COMBUSTION ENGINE. ROBERT S. GRAHAM, St. Joseph, Mo. Filed June 24, 1916. Serial No. 105,727. (Cl. 123—54.)

1. In an internal combustion engine, a pair of lower tubes mounted on a fixed object with a space between them; a pair of upper tubes mounted on said lower tubes directly above the latter with spaces between said lower and upper tubes; a combustion chamber formed in the central portion of each one of said tubes; fuel intake means whereby a charge of gaseous fuel is directed into each one of said combustion chambers; exhaust; a crank shaft rotatably mounted between the lower and upper combustion chambers; a pair of diametrically opposed cranks formed on the central portion of said crank shaft; a piston in one end portion of each one of said tubes; an opposed piston in the opposite end portion of each one of said tubes; and rod and wristpin connecting means whereby said pistons and said opposed pistons are respectively connected with said cranks.

2. In an internal combustion engine, four tubes mounted parallel to each other with spaces between them; an end piece for each end of said engine, each one of said end pieces having four cylinder heads formed integrally therewith said heads being flange bolted on the ends of said tubes, said heads and end pieces having fuel passages formed therein for admitting a gaseous fuel into the ends of said tubes; a check valve in each one of said end pieces for preventing return flow of fuel through said passages; a combustion chamber formed in the central portion of each one of said tubes dividing the latter into a cylinder and an opposed cylinder in the respective end portions of said tube; inlet and exhaust ports for said combustion chambers; by-passes for said cylinders whereby their respective outer ends are connected with said inlet ports, and a manifold pipe adapted to have a carbureter connected therewith one of said pipes being connected with each one of said end pieces.



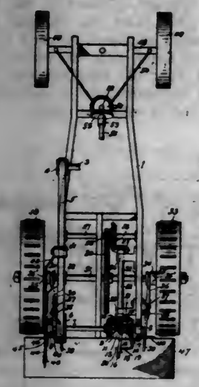
3. In an internal combustion engine, a crank shaft; a pair of diametrically opposed cranks formed on said shaft; four cylinders grouped adjacent to each other at one end of said engine, the two upper ones of said cylinders having apertures formed through the centers of the upper sides thereof; all of said cylinders having slots formed through the centers of their adjacent sides; a piston in each one of said cylinders all of said pistons having countersinks formed in the centers of their upper sides, the two upper ones of said pistons having apertures therethrough connected with said countersinks; a wristpin; a connecting rod whereby said wristpin is connected with one of said cranks; a cross arm in which one end of said wristpin is secured; another cross arm in which the other end of said wristpin is slidably mounted; two lower cross arm pins secured in the lower arms of said cross arms the lower end portions of said pins being mounted in said lower countersinks; two upper cross arm pins having heads formed on their upper ends; spiral springs in said upper countersinks; said upper pins being passed downward through said springs and upper pistons and having their lower ends secured in the upper arms of said cross arms with the heads of said upper pins tightly pressed upon said springs; the whole forming yieldable wristpin connecting means for connecting said group of pistons with said connecting rod, whereby the weight of said connecting means is distributed and carried by the four pistons of said group.

1,214,673. TRACTOR. HILLIS A. HARRAH, Pomona, Kans. Filed Jan. 11, 1915. Serial No. 1,582. (Cl. 21—114.)

1. In a tractor, a frame adapted to support a motor, a rotary axle supporting said frame, two traction carrying wheels supporting and independently rotatable in either direction on said axle, means for independently locking said carrying wheels to said axle, a shaft rotatably mounted on said frame, means adapted to be actuated by said motor for rotating said shaft, and transmission driving means connecting said shaft and said axle by which the axle may be driven in either direction.

2. In a tractor, a frame adapted to support a motor, a rotary axle supporting said frame, two traction carrying wheels supporting said axle and rotatable independently of each other in either direction thereon, means for inde-

pendently locking said carrying wheels to said axle, a shaft rotatably mounted on said frame, means adapted to be actuated by said motor for rotating said shaft, two driving gears rotatable on said shaft, a driven gear meshing with said driving gears and adapted to be driven thereby alternately in opposite directions, means for transmitting rotation from the driven gear to said axle, and means for releasably locking either of said driving gears to said shaft.

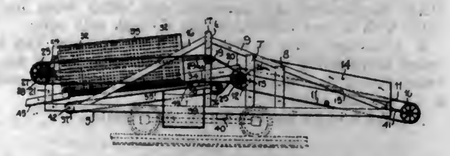


3. In a tractor, a frame adapted to support a motor, a rotary axle supporting said frame, two traction carrying wheels supporting said axle and independently rotatable in either direction thereon, means for independently locking said carrying wheels to said axle, a shaft rotatably mounted on said frame, means adapted to be actuated by said motor for rotating said shaft, two driving gears rotatable on said shaft, a clutch member rotatable with said shaft and movable alternately into locked engagement with said driving gears, means for so moving said clutch member, a driven gear meshing with said driving gears and adapted to be driven alternately in opposite directions thereby, and means for transmitting rotation from said driven gear to said axle.

4. In a tractor, a frame adapted to support a motor, a rotary axle supporting said frame, two traction carrying wheels supporting said axle and rotatable thereon independently of each other in either direction, two clutch members rotatable with said axle and respectively slidable thereon into locked engagement with said two carrying wheels, means for independently moving said clutch members lengthwise on said axle so as to respectively engage said carrying wheels, a shaft rotatably mounted on said frame, means adapted to be actuated by said motor for rotating said shaft, two driving gears rotatable on said shaft, a third clutch member rotatable with said shaft and movable alternately into locked engagement with said driving gears, means for so moving said third clutch member, a driven gear meshing with said driving gears and adapted to be driven thereby alternately in opposite directions, and means for transmitting rotation from said driven gear to said axle.

5. In a tractor, a frame adapted to support a motor, a rotary axle supporting said frame, two traction carrying wheels supporting said axle and rotatable thereon independently of each other in either direction, means for independently locking the carrying wheels to the axle, a shaft rotatably mounted on said frame parallel with said axle, means adapted to be actuated by said motor for rotating said shaft, two driving gears rotatable on said shaft, means for releasably locking said driving gears to said shaft alternately and independently of each other, a driven gear meshing with said driving gears and adapted to be driven thereby alternately in opposite directions, a second shaft secured to said driven gear and disposed at right angles to the first named shaft, and driving means connecting the axle with said second shaft.

1,214,674. BALLAST-SCREENING MACHINE. GEORGE C. HARRIS, Peabody, and WILLIAM F. MUFF, Newton, Kans. Filed Apr. 24, 1916. Serial No. 93,205. (Cl. 83—56.)



1. The combination with a motor operated hand car having laterally extending supporting beams, of a ballast screening mechanism comprising a supporting frame normally resting upon the beams, a rotatable screen mounted thereon and discharging at one end of the frame, a conveyer delivering into the rear end of the screen and extending to the other end of the frame, and a conveyer extending below the whole length of the screen to receive the waste discharged from the screen, means for causing the discharge of materials from the last named conveyer laterally beyond the frame, and a unitary driving means for the screen and the conveyer operatively driven by the hand car motor.

2. A ballast screening machine comprising a supporting frame having longitudinally directed sills, a rotatable upwardly inclined screen operatively supported upon the sills and above the same and extending longitudinally of the sills, said screen discharging at one end of the frame, a conveyer extending from the opposite end of the frame to the raised end of the screen and discharging thereinto, a belt conveyer operatively supported beneath the entire length of the screen, a transversely extending laterally projecting chute into which said belt conveyer discharges, a power shaft mounted on the frame, and means for driving the several conveyers and the screen from said power shaft.

3. A ballast screening machine comprising a supporting frame having longitudinally directed sills, a rotatable inclined screen mounted upon the frame above the sills and discharging at one end of the frame, a transverse shaft mounted in said last named end of the frame and operatively geared to the screen and having a sprocket wheel, a belt conveyer operatively supported upon the frame above the sill beams and extending beyond the sill beams at one end, a shaft upon which the conveyer is mounted having a sprocket wheel geared with the first named sprocket wheel, said shaft constituting a driving shaft, a chute discharging into the upper end of the screen and onto which said conveyer discharges, a belt conveyer operatively supported upon the frame above the sill beams and disposed beneath the entire length of the screen, means driven by said driving shaft operating with said belt conveyer in its upper flight moving upward and toward the upper end of the screen, and a laterally disposed chute into which said last named conveyer discharges, the chute being supported upon the frame and extending laterally beyond the frame.

1,214,675. SEALING-CLOSURE FOR BOTTLES, JARS, AND OTHER RECEPTACLES. WILLIAM E. HEATH, Baltimore, Md. Filed May 5, 1915. Serial No. 26,121. (Cl. 215—83.)



1. A locking band of the character substantially as described, having a top horizontal flange severed by slits,

and a vertical flange severed from its lower edge to said horizontal flange excepting for a circumferentially arranged connecting ligament holding the band against spreading, and lever means integral with said vertical flange for fracturing said ligament to release the band from the receptacle mouth.

2. A locking band of the character substantially as described, having a top horizontal flange rendered expansible by a radial cut, and a depending vertical flange, said band having a handle lever formed by slits extending throughout the radial length of said top flange and extending downwardly different distances along said vertical flange, said vertical flange being formed with a notch extending upwardly through its lower edge toward and in line with the shorter one of said slits and terminating short of the lower end of said short slit.

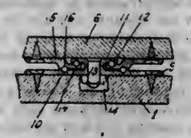
3. A locking band of the character substantially as described, composed of a depending vertical flange and a top horizontal flange radially cut to render the same expansible, said band being slit to form a handle lever, the handle portion of which is radially arranged in the top flange and the base portion of which is arranged in and integral with the vertical flange, said vertical flange having a notch extending through its lower edge and upwardly along said flange in line with one longitudinal edge of said lever, the continuity of said vertical flange being maintained by a fragile ligament arranged at the upper end of said notch.

4. A locking band of the character substantially as described, composed of a depending vertical flange and a top horizontal flange radially cut to render the same expansible, said band being cut by a pair of adjacent slits extending completely across the top flange and continued downwardly along the vertical flange and terminating at different distances from the lower edge of the vertical flange, for the purposes substantially as set forth.

5. A locking band of the character substantially as described, composed of a depending vertical flange and a top horizontal flange radially cut to render the same expansible, said band being cut by a pair of adjacent slits extending completely across the top flange and continued downwardly along the vertical flange and terminating at different distances from the lower edge of the vertical flange, said vertical flange having a notch extending upwardly through its bottom edge to a point adjacent to one of said slits leaving an intervening fragile ligament.

[Claims 6 to 8 not printed in the Gazette.]

1,214,676. CABINET. JOHN HERZOG, Saginaw, Mich. Filed Mar. 6, 1915. Serial No. 12,592. (Cl. 45—64.)



In a cabinet, a stationary frame having a base and top, and a case revolubly mounted therein, pivotal connections between the top of said case and the top of the body and between the bottom of the case and the bottom of the frame, said connections adapted to prevent separation of the top and bottom members of the body and case respectively, each of said connections comprising a bottom plate secured to the frame of the cabinet, said bottom plate formed with a ball race, a top plate formed with a ball race, said top and bottom plates secured together in spaced relation, an intermediate plate secured to said revoluble case, said intermediate plate formed with a ball race on each side thereof and registering respectively with the ball races of said top and bottom plates.

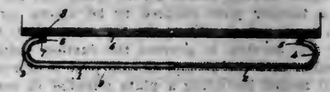
1,214,677. CABINET. JOHN HERZOG, Saginaw, Mich. Filed Mar. 6, 1915. Serial No. 12,594. (Cl. 45—64.)

In a cabinet, the combination of a frame comprising a base, an upright back fixed to the base, and a forwardly projecting top carried by the back, a pair of cases pivotally mounted in said frame, each case comprising a side and a front member, shelves carried by said cases, the shelves of one case being staggered with relation to the shelves of the other case, and means operatively connecting said cases and adapted to cause the cases to turn,



their fronts moving forwardly and outwardly, to their open position, in which position the cases are disposed close together and side by side at the front of the frame, said means adapted to close the cases simultaneously when either case is operated.

1,214,678. CURTAIN-ROD. SIDNEY C. HILLS, Torrington, Conn., assignor to The Turner & Seymour Manufacturing Co., Torrington, Conn., a Corporation. Filed Nov. 16, 1914. Serial No. 872,841. (Cl. 156—19.)



1. The combination of a curtain rod having a main central portion and being curved rearwardly at its ends to provide end portions extending parallel to and in spaced relation to said main central portion and brackets for engaging said rear portions, and for maintaining said main central portion and end portions in substantially the same horizontal plane whereby the curtains may be draped in depending rolls at said end portions and the inner edges of said curtains, the brackets and curtain rod are substantially concealed.

2. The combination of a pair of brackets each provided with a horizontally disposed recess having an open end, and a curtain rod having its ends curved back toward each other and fitted into the open ends of the recesses of said brackets.

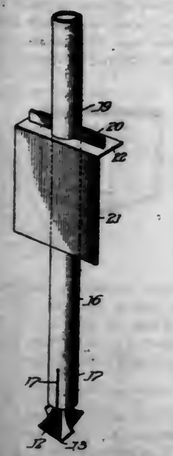
3. The combination of a bracket comprising a main portion and hook like flanges at its opposite horizontal edges forming a horizontally open recess, a fastening device carried by said main portion, a curtain rod having its end bent back upon itself in a wide bend and beads located at the terminating portion of said end and adapted to extend into said recess and fit within said hook like flanges and frictionally engage the same.

1,214,679. ANCHOR FOR FENCE-POSTS. PERCY J. HINDMARSH, Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Oct. 23, 1915. Serial No. 57,474. (Cl. 189—31.)

1. In a fence post and anchor, the combination of a spreader element adapted to be driven into the ground and provided with an aperture, near its upper end, a post adapted to be driven over said spreader, said post being provided with an elongated transverse aperture, a key adapted to be passed through said aperture, and a plate adapted to underlie said key, whereby said spreader is prevented from further entrance into the ground while said post may be driven further, substantially as described.

2. In a device of the class described, the combination of a spreader having means at its lower end for flaring a post, a tubular post adapted to be driven over said spreader, and means disengageably connected to said spreader and serving to prevent the further entrance of

said spreader into the ground as said post is driven thereover, substantially as described.



3. In a device of the class described, the combination of a spreader having means at its lower end for flaring a post, a tubular post adapted to be driven over said spreader, and means disengageably connected to said spreader and serving to prevent the further entrance of said spreader into the ground as said post is driven thereover, said means including a plate adapted to rest upon the surface of the ground, and a key engaging said spreader and resting upon said plate, substantially as described.

4. In a device of the class described, the combination of a spreader having a shank and provided at its lower end with means for flaring the lower end of a post, a post adapted to be driven over said spreader, said post and spreader being provided with registering apertures, the aperture in the post being elongated with respect to the aperture in the spreader, a plate resting upon the surface of the ground and located beneath the plane of said aperture, and a key passing through said post and spreader and resting upon said plate, whereby said spreader is prevented from further entrance into the ground, while said post is permitted to enter further into the ground, substantially as described.

1,214,680. MOTOR-DRILL. GUSTAV F. HOCHRIEM and LUDWIG E. HOCHRIEM, Chicago, Ill. Filed July 26, 1915. Serial No. 42,089. (Cl. 77—6.)

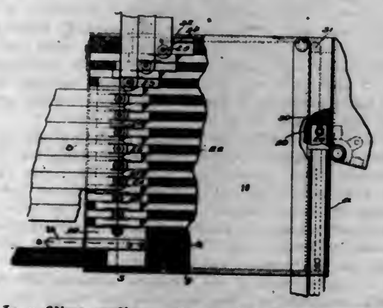


1. In a machine of the class described, the combination with an electric-motor and a tool, of a clutch interposed between the motor and tool and connecting means whereby the disengagement of the clutch will automatically stop the motor, comprising a connecting rod, a lever pivoted to the connecting rod, and a movable terminal in the motor circuit linked to the lever.

2. In a machine of the class described, the combination with a motor and a tool, of a clutch interposed between the motor and tool and having a movable member adapted to disengage itself upon the application of abnormal strain upon the tool, a sleeve in which said movable clutch member slides, said sleeve and clutch member having recesses which together form a chamber, and a clutch tensioning spring in said chamber.

3. In a machine of the class described, the combination with an electric-motor and a tool, of a clutch interposed between the motor and tool and having a movable member adapted to disengage itself upon the application of abnormal strain upon the tool, and a motor circuit breaking mechanism including a switch, a lever controlling said switch and a rod connected to the lever and having a lateral pin projecting into connection with the clutch member.

1,214,681. FILING APPLIANCE. GEORGE JACOBS, Roswell, N. Mex., assignor to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Original application filed Feb. 21, 1911, Serial No. 609,973. Renewed Jan. 25, 1916, Serial No. 74,276. Divided and this application filed Jan. 31, 1916. Serial No. 75,240. (Cl. 129—34.)



1. In a filing appliance, the combination of supporting means, a series of swingably mounted leaves one end leaf of which is pivotally mounted on said supporting means, sets of blocks, one set arranged at each side of the leaves, the blocks of each set slidable relative to each other and each alternate block forming a bearing for the pivot of the adjacent leaf, means between each bearing block and the adjoining blocks above and below it for causing relative movement between said blocks when the leaf carried by the bearing block is operated.

2. In a filing appliance, the combination of supporting means, a series of swingably mounted leaves one end leaf of which is pivotally mounted on said supporting means, sets of blocks, one set arranged at each side of the leaves, the blocks of each set slidable relative to each other and each alternate block forming a bearing for the pivot of the adjacent leaf, guides for supporting and guiding alternate blocks of each set, and means between each bearing block and the adjoining blocks above and below it for causing relative movement between said blocks when the leaf carried by the bearing block is operated.

3. In a filing appliance, the combination of a support, a series of leaves adapted to swing relatively to each other, a plurality of sets of blocks for connecting said leaves together, and inter-engaging means between the blocks of each set and operating, when one of the leaves is swung, to move the adjacent blocks relatively to each other.

4. In a filing appliance, the combination of supporting means, a series of swingably mounted leaves one end leaf of which is pivotally mounted on said supporting means, sets of blocks, one set arranged at each side of the leaves, the blocks of each set slidable relative to each other and each alternate block forming a bearing for the pivot of the adjacent leaf, and the remaining blocks being provided with racks on their upper and lower surfaces, and gears carried by the pivots of each leaf meshing with the racks of the adjacent blocks above and below them, and operating when a leaf is swung from one position to another to cause relative movement between the bearing blocks for the leaf and the adjacent blocks above and below them.

5. In a filing appliance, the combination of supporting means, a series of swingably mounted leaves one end leaf of which is pivotally mounted on said supporting means, sets of blocks, one set arranged at each side of the leaves, the blocks of each set slidable relative to each other and each alternate block forming a bearing for the pivot of the adjacent leaf, and the remaining blocks being provided with racks on their upper and lower surfaces, gears carried by the pivots of each leaf meshing with the racks of the adjacent blocks above and below them, and operating when a leaf is swung from one position to another to cause relative movement between the bearing blocks for the leaf and the adjacent blocks above and below them, and guide means for the bearing blocks.

[Claims 6 to 8 not printed in the Gazette.]

1,214,682. CAN-OPENER. RAPHAEL JACOBUCCI, Fall River, Mass. Filed Jan. 25, 1916. Serial No. 74,116. (Cl. 30—3.)



1. A can opener having a blade and a cup thereunder, said blade having a point.

2. A can opener having a blade and a cup thereunder, said blade having a point, the walls of said cup converging into said point.

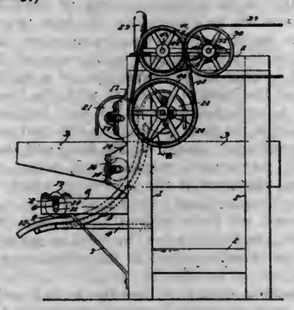
3. A can opener having a blade and a cup thereunder, said blade having a point, the walls of said cup converging into said point, whereby a wedge is formed for permitting the cup to be forced into a can.

4. A can opener having a blade and a cup thereunder, said blade having a point, the walls of said cup converging into said point and a rider overhanging said blade.

5. A can opener having a blade and a cup thereunder, said blade having a point, the walls of said cup converging into said point, a rider overhanging said blade, said rider projecting farther on one side than on the other.

[Claims 6 to 9 not printed in the Gazette.]

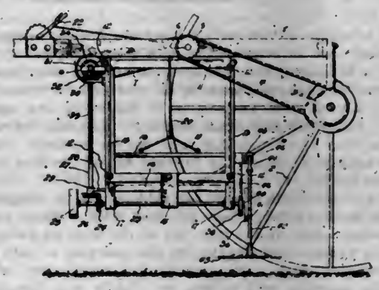
1,214,683. SPLITTING-MACHINE. AGNAR JOHNSON, Rockford, Ill. Filed Jan. 31, 1916. Serial No. 75,407. (Cl. 69—9.)



1. In a splitting machine, the combination of a supporting frame, a curved work bed carried thereby, guide rollers carried by said frame for coöperation with said work bed, oppositely disposed work-propelling rollers carried by said frame and arranged at one end of said work bed, and a series of rotary cutters disposed in a common plane between said work-propelling rollers, the successive cutters moving in relatively opposite directions.

2. In a splitting machine, the combination of a supporting frame, a curved work bed carried thereby, guide rollers carried by said frame for coöperation with said work bed, oppositely disposed work-propelling rollers carried by said frame and arranged at one end of said work bed, a drive shaft carried by said frame, a plurality of knife shafts, worm gears connecting said knife shafts and said drive shaft, the successive worm gears having their teeth pitched in relatively opposite directions, and rotary knives carried by said knife shafts and disposed in a common plane between the said work-propelling rollers for engagement with the work as it passes between the same.

1,214,684. COTTON-CHOPPER. MARTIN A. JONES, McGregor, Tex. Filed Mar. 7, 1916. Serial No. 82,718. (Cl. 97—45.)



1. In an apparatus for the purpose set forth, the combination of a stationary frame provided with vertical ways at its ends, a vertically movable frame comprising end plates slidably engaging said ways and longitudinal beams connecting said end plates, a chopper shaft mounted in the said end plates, means at the front ends of the two frames for rotating the said shaft, and means mounted upon the rear end of the vertically movable frame for operatively connecting a chopper to said shaft.

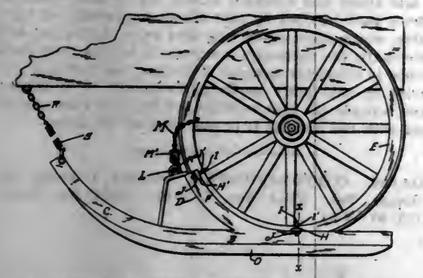
2. The combination of a chopper-carrying frame, a chopper shaft carried thereon, means for rotating said shaft, an eccentric on said shaft, a lever fulcrumed upon the frame and having one end forked to embrace the said eccentric, a crank secured to said shaft and connected with the said eccentric, a wrist pin on said crank, a chopper fulcrumed upon said wrist pin, and connections between the upper end of the said lever and the said chopper.

3. In an apparatus for the purpose set forth, the combination of a chopper-carrying frame, a chopper shaft mounted therein, a crank upon said shaft, a chopper having its shank fulcrumed upon said crank, an eccentric fitted upon said shaft and secured to the crank, a lever engaged and oscillated by said eccentric, a shuttle bar slidably mounted upon the chopper-carrying frame, a link connecting said shuttle bar with the upper end of said lever, and a link connecting the shuttle bar with the upper end of the chopper shank.

4. In an apparatus for the purpose set forth, the combination of a crank, means for rotating said crank, an eccentric arranged to rotate with said crank, a chopper having its shank hung upon the crank, a reciprocating bar, connections between said bar and the upper end of the chopper shank, and means actuated by the eccentric for operating said reciprocating bar.

5. In an apparatus for the purpose set forth, the combination of a chopper, means tending to impart a rotary movement to the chopper, a slidably mounted bar above the chopper, operative connections between the slidable bar and the chopper, and means for reciprocating said slidably mounted bar and thereby imparting oscillatory movement to the chopper.

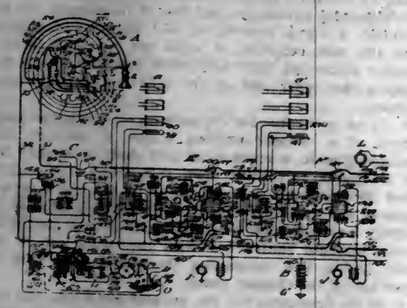
1,214,685. SLEIGH-RUNNER ATTACHMENT FOR WHEELED VEHICLES. LOUIS W. KAUSCH, North Milwaukee, Wis. Filed Mar. 8, 1915. Serial No. 12,788. (Cl. 21—96.)



1. A runner attachment for vehicle wheels, comprising a runner shoe in combination with a set of upwardly projecting flanges at the side margins of said shoe, forming a horizontal channel, open at its rear end to receive the wheel, a stop block adapted to fit the wheel and against which the wheel may abut, means for securing the wheel to the stop block and shoe, and flexible resilient connections adapted to secure the forward end of the shoe to the vehicle frame.

2. A runner attachment for vehicle wheels, comprising a shoe having a broad base provided with a wheel receiving socket, open at the rear end of the shoe, and a set of narrow runners underneath the side margins of said base for contact with the surface over which the vehicle travels, together with means for rigidly and detachably clamping the shoe to the felly of the wheel at the bottom and front sides, and means for resiliently connecting the forward end of said shoe with the vehicle frame, whereby vertical oscillation of the shoe may be opposed by said resilient connection, and lateral oscillations prevented by said double runner.

1,214,686. SUPERVISORY SYSTEM. ALEXANDER E. KEITH, Chicago, Ill., assignor, by mesne assignments, to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 14, 1907. Serial No. 373,650. (Cl. 179—27.)



1. In a trunking telephone system, line switches, selector switches including a side switch having a plurality of operative positions, a plurality of trunk lines extending from the line switches to the selector switches, a jack for each trunk line, said jacks divided into groups, a signal for each group, means for displaying said signal whenever any one of the trunks of its group is seized, and means for maintaining said signal displayed until the side switch of the seized selector leaves its second position.

2. In a trunking telephone system, first selector switches, second selector switches, side switches for said selector switches having a plurality of operative positions, a plurality of trunk lines extending from the first selectors to the second selectors, a jack for each trunk line, said jacks divided into groups, a signal for each group, means for displaying said signal whenever any one of the trunks of its group is seized, and means for maintaining said signal displayed until the side switch of the seized second selector leaves its second position.

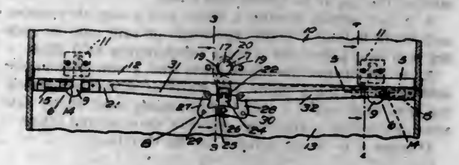
3. In a trunking telephone system, a connector switch including a side switch having a plurality of operative positions, a plurality of trunk lines leading to said connector, a jack for each trunk line, said jacks divided into groups, a signal for each group adapted to be displayed as soon as a trunk is seized and to remain lighted until the side switch of the connector leaves its second position, a second signal for each of said groups adapted to be displayed when the connector passes to third position, a third signal for each of said groups included in a normally open circuit, and means for closing said circuit to ascertain if any connector is off normal when neither of the first two signals is displayed.

4. In a trunking telephone system, a plurality of selector switches, trunks extending to said switches, jacks divided into groups associated with said trunks, a busy signaling device for supplying busy test current to said jacks, and means independent of said jacks for extending a connection over said trunks to said switches.

5. In a trunking telephone system, a plurality of connectors, trunks extending to said connectors, jacks associated with said trunks, and a signaling device for supplying busy test current to said jacks and for also supplying busy signaling current to the calling subscriber when the called subscriber's line is busy.

[Claims 6 to 60 not printed in the Gazette.]

1,214,687. TRUNK-LOCK. STANLEY KLEIN and JOSEPH LUTTMANN, Cincinnati, Ohio, assignors to The Mendel-Drucker Company, Norwood, Ohio, a Corporation of Ohio. Filed Dec. 15, 1915. Serial No. 67,077. (Cl. 70—115.)

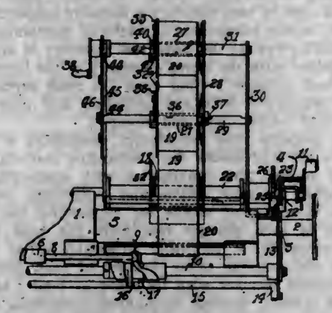


1. In combination in a trunk lock for trunks having relatively movable members, a hasp pivotally secured to the front and adjacent to the edge of one of the members, means mounted on the coöperating edge of the coöperating member adapted to be engaged by the hasp whereby the hasp may be moved into locking engagement therewith, locking devices located adjacent to the ends of the trunk, each of said locking devices consisting of a hook secured to the edge of the member provided with the hasp receiving means, a reciprocally mounted bolt located in the member to which the hasp is pivotally attached, and mechanism for operatively connecting the hasp and the locking devices, said mechanism consisting of levers pivotally mounted upon the front of the member to which the bolts and hasp are attached and adapted to operate in a plane parallel thereto, and links connecting the hasp, the levers and the bolts, adapted to move the bolts in opposite directions when the hasp is moved to its locking or unlocking positions.

2. In a locking device for trunks having coöperating members, a hasp pivotally mounted centrally of and adjacent to the edge of the front of one of the members, a locking device located adjacent to each end of the members, each of said locking devices being so located as to operate in opposition to one another and comprising a bolt secured to the edge of one of the members, and a hook located between the hasp and the bolt of each of said locking devices, each bolt being adapted to be moved into locking engagement with its coöperating hook when the edges of the members are brought into abutting engagement and means operatively connecting the hasp with the bolts and adapted to move the bolts toward the hasp and into locking engagement with the hooks when the hasp is moved to its locking position.

3. In combination in a trunk lock a longitudinal pivot secured near the edge of one of the members of the trunk, a hasp mounted upon the pivot and adapted to swing thereon toward and away from the face of the member, reciprocating bolts mounted at opposite ends of the trunk member, a pair of pivotally mounted levers secured adjacent to the hasp, reciprocating links connecting the bolts, the levers and the hasp, and hooks secured to the coöperating trunk member located between the bolts and the hasp, adapted to be engaged by the bolts when the hasp is moved to its locking position.

1,214,688. TYPE-WRITING MACHINE. ALFRED G. F. KUBOWSKI, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 28, 1913. Serial No. 751,188. (Cl. 197—132.)



1. The combination with a main platen, of a tally-strip spool, a carbon strip spool, a tally-strip platen substantially exceeding in length the width of said spools or the strips thereon, said spools being adjustable to different positions along the tally-strip platen, releasable pressure roll mechanism for the main platen, means rendered effective by the operation of said releasable roll mechanism for line-feeding the tally-strip and carbon strip regardless of the position to which they are adjusted along said tally-strip platen, means connecting the spools to shift them as a unit along said platen, means for holding them when shifted, and means for re-winding said carbon-strip spool regardless of the position to which it is shifted along the tally-strip platen.

2. In combination with a revoluble platen and a stationary segmental platen arranged end to end and together extending between the ends of the platen frame, a tally-strip, a carbon roll from which a carbon strip is adapted to be fed around said segmental platen, a winding spool, means to rotate said spool and wind said strips thereon; said tally-strip and carbon roll being mounted to rotate upon bearings attached to a frame confining the said winding spool, to permit shifting the entire device laterally along said segmental platen, and a latch on said frame to lock the device in position.

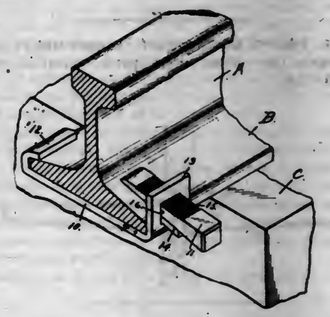
3. In combination with a revoluble platen and a stationary segmental platen arranged end to end and together extending between the ends of a platen frame, a tally-strip and a carbon roll from which a carbon strip is adapted to be fed around said segmental platen, a winding spool, means to rotate said spool and wind said strips thereon, and a frame located beyond the end of the revoluble platen; said tally-strip, carbon roll and winding spool mounted in said frame and shiftable laterally along said segmental platen.

4. In combination with a revoluble platen and a stationary segmental platen arranged end to end and together extending between the ends of a platen frame, a tally-strip and a carbon roll from which a carbon strip is adapted to be fed around said segmental platen, a winding spool, means to rotate said spool and wind said strips thereon, a drive shaft to which said winding spool is splined, and a frame at the end of the revoluble platen in which said winding spool, tally-strip and carbon roll are shiftable to adjust the position of the said strips along said segmental platen.

5. The combination with a main platen, of a tally-strip supply spool, a tally-strip winding spool, a tally-strip platen extended to exceed in length the width of the spools or the strip thereon and over which the tally-strip extends between the spools, the spools being connected for adjustment as a unit to adjust the tally-strip to different positions along the tally-strip platen, said platens being arranged end to end with their printing surfaces in position to permit a work-sheet on the main platen to extend laterally beyond the main platen over the tally-strip platen in superposed relation to the tally-strip, the latter being located beyond the main platen, releasable pressure-roll mechanism for the main platen, and means rendered effective by the operation of said releasable pressure-roll mechanism for line-feeding the tally-strip regardless of the position to which it is adjusted along said tally-strip platen.

[Claims 6 to 23 not printed in the Gazette.]

1,214,689. ANTICREEPER. EDWARD LAAS, Chicago, Ill., assignor, by mesne assignments, to Otto R. Barnett, Chicago, Ill. Filed Apr. 22, 1916. Serial No. 92,949. (Cl. 238—4.)



1. An anti-creeper comprising a spring member to extend under the base of a rail provided with means at one end for engaging the rail, and a wedge engaging the base of the rail and adapted to bend the other end of said member and bind the same in clamped relation with said rail.

2. An anti-creeper comprising a spring member to extend under the base of a rail, formed on one end with a jaw adapted to engage one edge of the rail base, and a wedge engaging the base of the rail and adapted to bend the other end of said member and bind the same in clamped relation with said rail.

3. An anti-creeper comprising a spring member to extend under the base of a rail provided with means at one end for engaging the rail, the other end of said member having a set downwardly away from the rail base, and a wedge adapted to bend said member up against the rail and bind the same in clamped relation therewith.

4. An anti-creeper comprising a spring member to extend under the base of a rail, formed at one end with a jaw adapted to extend around one edge of the base of the rail, the other end of said member having a set downwardly away from the rail base, and a wedge adapted to bend said member up against the rail and bind the same in clamped relation therewith.

5. An anti-creeper comprising a spring member to extend under the base of a rail provided with means at one end for engaging the rail, and a wedge engaging the base

of the rail and adapted to bend the other end of said member and bind the same in clamped relation with said rail, said wedge and member having a locked relation when in engagement which prevents a retrograde movement of the wedge.

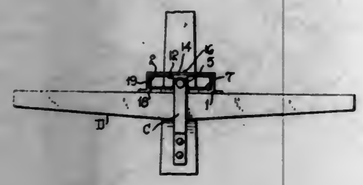
[Claims 6 to 24 not printed in the Gazette.]

1,214,690. ROTATION-METER. EDWARD A. LARSON, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Mar. 25, 1915. Serial No. 16,855. (Cl. 235—117.)



A meter comprising a casing; a dial covering the front of the casing; a glass on one side of the dial, and indicator mechanisms, all of which are on the other side of the dial; operating mechanisms for the indicator mechanism, a re-setting key which passes through the dial and the glass, and which is normally disconnected from the indicator mechanism but which is longitudinally movable for connection therewith, and means for disconnecting the indicator mechanism from the operating mechanisms when the key is longitudinally moved.

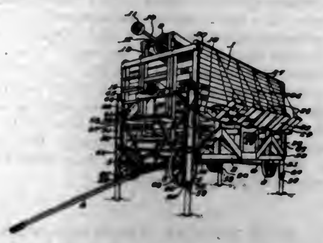
1,214,691. DRAFT-EQUALIZER. ALBERT HENRY LEAVITT, Cloverdale, Cal. Filed July 5, 1916. Serial No. 107,644. (Cl. 21—76.)



1. In combination with a double-tree, a draft equalizer adapted to be secured to the outer face thereof and including a casting provided with a guideway disposed longitudinally of the tree, the outer surface of the inner wall of the casting being provided with teeth, a clevis block insertible within the guideway and provided with teeth adapted to intermesh with the teeth of the casting, a locking block adapted to be inserted between the clevis block and the outer wall of the guideway, the outer face of the clevis block being provided with a pocket, and a spring-pressed pin carried by the locking block adapted to be inserted within the pocket of the clevis block.

2. In combination with a double-tree, a draft equalizer adapted to be secured to the outer face thereof and including a casting provided with a guideway disposed longitudinally of the tree, the outer surface of the inner wall of the casting being provided with teeth, a clevis block insertible within the guideway and provided with teeth adapted to intermesh with the teeth of the casting, a locking block adapted to be inserted between the clevis block and the outer wall of the guideway, the outer face of the clevis block being provided with a pocket, a spring-pressed pin carried by the locking block adapted to be inserted within the pocket of the clevis block, the outer wall of the guideway being provided with a longitudinally disposed slot, and a pin carried by the locking block disposed through said slot.

1,214,692. PORTABLE ROAD MACHINERY. ROBERT E. LEIGHTON and JAMES H. CLEARWATER, Kingston, N. Y., assignors to Universal Road Machinery Co., a Corporation of New York. Filed Jan. 20, 1913. Serial No. 743,053. (Cl. 254—86.)



1. In portable road machinery, comprising a vehicle having means to discharge material therefrom by gravity, the combination with a plurality of supporting plungers comprising adjustably related telescopic members, of means carried by said vehicle for movably supporting said plungers, means comprising a vertically adjustable collar to adjustably engage the respective members of said plungers together with the lower extremity of the lower member of each plunger resting upon the road surface, and means coöperative with and including said plungers to elevate said vehicle upon said plungers.

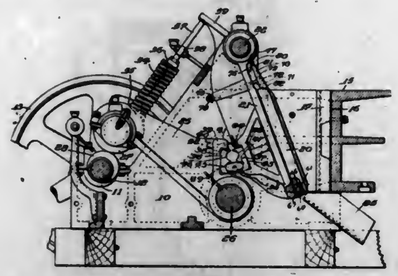
2. In portable road machinery, comprising a vehicle having a bin and means for discharging material therefrom by gravity, the combination with supporting plungers carried by said vehicle and comprising relatively movable members, of means for supporting one of the members of each plunger free from the road surface, means comprising a vertically adjustable collar for adjustably securing the other member of each plunger to the supported member with its lower extremity engaging the road surface, winding mechanism comprising a worm gear, and means connecting said winding mechanism and said plunger, operative to effect the elevation of said vehicle with respect to said plungers.

3. In portable road machinery, comprising a vehicle having a bin and means for discharging material therefrom by gravity, the combination with a plurality of plungers carried by said vehicle and comprising relatively adjustable telescopic members, of means for supporting one member of each of said plungers, means for securing the other member telescopically disposed within the first mentioned member and supported free from the road surface, means comprising an adjustable collar for adjustably securing the members of each plunger together with the extremities of the adjustable members in engagement with the road surface and in position to support said vehicle, vertically alined guides for said plungers secured to said vehicle and comprising members relatively adjustable at right angles to the axis of said plungers, winding mechanism, means coöperative with said winding mechanism and plungers connected to elevate said vehicle on said plungers, and means for adjusting the members of said guides vertically adjustable to secure said vehicle with said plungers when thus elevated.

1,214,693. CRUSHER. ROBERT EUBANK LEIGHTON, Kingston, N. Y., assignor to Universal Road Machinery Co., a Corporation of New York. Filed Feb. 3, 1916. Serial No. 75,908. (Cl. 83—53.)

1. In a crusher, the combination with a jaw, of a jaw plate supported thereby, said jaw being provided with a plurality of horizontally alined spaced projections rigid therewith and extending outwardly therefrom and engaging respectively in a plurality of spaced openings provided therefor in said jaw plate, said openings being so arranged that the outer ends of said projections are protected by said jaw plate.

2. In a crusher, the combination with a jaw provided with a projection, of a jaw plate supported by said jaw and covering said projection provided with an opening in which said projection engages, and means arranged to clamp said jaw plate against said projection.



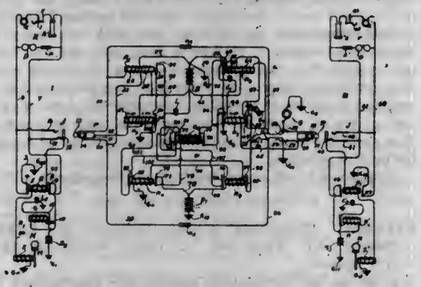
3. In a crusher, the combination with a jaw provided with a plurality of spaced projections, of a jaw plate supported by said jaw and provided with a plurality of spaced openings in which said projections engage respectively, and means arranged to clamp said jaw plate against said projections, said openings being arranged so that the outer ends of said projections are protected by said jaw plate, and said projections and said openings having coöperating walls arranged to clamp said jaw plate against said jaw as said jaw plate is clamped against said projections.

4. In a crusher, the combination with a jaw provided with a marginal projection, of a jaw plate provided with a marginal recess in which said projection engages, and means arranged to clamp said jaw plate against said projection, said recess being arranged so that the outer end of said projection is protected by said jaw plate, and said projection and said recess having walls coöperative to clamp said jaw plate against said jaw as a result of the clamping of said jaw plate against said projection.

5. In a crusher, the combination with a jaw provided with a projection, of a jaw plate carried by said jaw and having an opening in which said projection engages, said projection extending from said jaw in the direction of the working face of said jaw plate and terminating at a point spaced between said working face and said jaw and behind the outer surface of said working face.

[Claims 6 to 9 not printed in the Gazette.]

1,214,694. TELEPHONE SYSTEM. ALBION D. T. LIBBY, Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 9, 1911. Serial No. 601,539. (Cl. 179—9.)



1. In a telephone system, the combination of a central station, a plurality of telephone lines terminating at said central station, substations on said lines, means to connect said lines together for conversation, a service meter at the central station, a relay controlling said service meter and means to cause the operation of said relay at the termination of the use of the substation set and a locking relay under the control of said connecting means, said locking relay preventing the subsequent operation of said controlling relay.

2. In a telephone system, the combination of a central station, a plurality of subscribers' lines terminating thereat, means to connect said lines together for conversation, a service meter, electro-magnetic means controlling said meter, a slow acting relay, the actuation of said electro-magnetic means being adapted to open the circuit of the coil of said slow acting relay, whereby said relay is de-energized and to close a circuit through said service meter whereby the service meter will receive a single impulse to actuate the same.

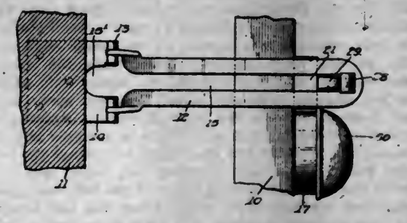
3. In a telephone system, the combination with a plurality of telephone lines, means to connect said lines together for conversation, a service meter, a circuit therefor, a relay associated with said means, a locking circuit therefor, a second relay having normally closed contacts in said locking circuit, said relay also having normally open contacts in the service meter circuit, whereby the actuation of said second relay will close the circuit of the service meter and cause the operation of the same.

4. In a telephone system, the combination of a main station, a plurality of substation sets, telephone lines connecting the substation sets and the main station, a cord circuit at the main station including talking strands, a source of current associated with the cord circuit, switchboard plugs connected to the cord circuit, jacks connected to the lines, said plugs and jacks adapted to connect the cord to the lines, a service meter associated with said cord circuit, circuit conductors associating said meter and said source of current, a relay under the control of the subscriber adapted when actuated to connect said meter in circuit with said source whereby said meter is automatically actuated at the termination of the conversation, and means to prevent the actuation of said relay more than a single time for each conversation.

5. In a telephone system, the combination with a plurality of telephone lines, means to connect said lines together for conversation, a service meter, a relay controlling said meter, a locking relay associated with said means, a circuit for said locking relay initially under control of the called subscriber and thereafter under control of said first named relay and contacts of said two relays in the circuit of said service meter.

[Claims 6 to 9 not printed in the Gazette.]

1,214,695. BURGLAR-ALARM LOCK. LOUIS F. LOHRENS, Chicago, Ill. Filed Apr. 1, 1916. Serial No. 88,197. (Cl. 116—44.)



1. The combination with a door guard comprising a pivotally mounted slotted hasp member and pivotally mounted latch member adapted to engage the slot in the hasp, one member being arranged for attachment to a door and the other to a door casing, of an audible signal, and means actuated by movement of the latch to initiate operation of the signal.

2. The combination with a door guard comprising a slotted hasp and latch adapted to be secured to relatively movable parts of the door; of an audible signal adjacent the latch, means connecting the latch with the part of the door upon which it is mounted and permitting a limited movement of the latch relative thereto, and means

connecting the latch and signal whereby movement of the former will initiate operation of the signal.

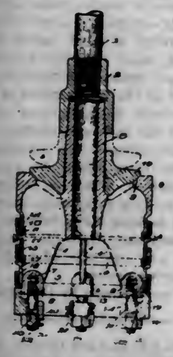
3. The combination with a door guard comprising a pivotally mounted slotted hasp; of a pivotally mounted latch member, two projections thereon, either one of which is adapted to engage the slot in the hasp, an audible signal, and means actuated by movement of the latch member to initiate operation of the signal.

4. The combination with a door guard comprising a pivotally mounted slotted hasp; of a pivotally mounted latch member, a fixed headed projection extending from the end of the latch member adjacent the hasp, a flat rotatable thumb bolt projecting from the front of the latch member, both said projection and said thumb bolt being arranged for engagement with the slot in the hasp, an audible signal, and means actuated by movement of the latch member to initiate operation of the signal.

5. The combination with a door guard comprising a pivotally mounted slotted hasp; of a latch member adapted for engagement with the slot in the hasp; a support for the latch, means connecting the latch with its support to permit limited relative movement with respect to the support, a spring motor bell mounted on the latch support, and a bell release plunger adapted to be actuated on movement of the latch.

[Claim 6 not printed in the Gazette.]

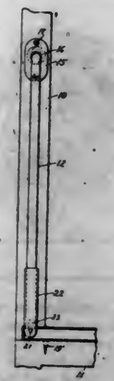
1,214,696. PUMP-PISTON. SAMUEL W. LUITWIELER, Rochester, N. Y. Filed Feb. 28, 1913. Serial No. 751,250. (Cl. 103—63.)



A pump piston comprising a frame embodying a hub and a plurality of radially extending ribs formed on the hub, the ribs being connected at their upper ends by an annular surface and extending at their lower ends below the hub, enlargements carried by the lower ends of the ribs, packing rings loosely mounted upon the ribs, the uppermost of which is adapted to engage said annular surface, spacing rings also loosely mounted upon the ribs and disposed between the packing rings, a securing ring a portion of the inner face of which is mounted in sliding engagement with the ribs and adapted to retain the lowermost packing ring, said securing ring being open at its center and mounted independently of the hub, enlargments projecting inwardly from the securing ring and terminating substantially beneath the first mentioned enlargements and means carried by the second mentioned enlargements in engagement with the first for supporting said securing ring.

1,214,697. WINDOW-LOCK. WILLIAM D. LUTS, Allendale, N. J., and BEVERLY W. SMITH, Yonkers, N. Y. Filed May 1, 1916. Serial No. 94,592. (Cl. 16—18.)

1. The combination with a sliding window sash, of locking means therefor comprising a bar connected to the sash and to a support relatively to which the sash slides, the bar being slidable at one of said connections in a direction transverse to that in which the sash slides from a position in which it locks the sash closed, to a position permitting the window to be only partly opened, and in which the window is locked by said bar against being further opened, and a stop to prevent the bar from moving beyond said last mentioned position.



2. The combination with a window having upper and lower sliding sashes, of a locking bar pivoted to one sash, means slidably connecting said bar with the other sash, and guiding said bar from an upright position in which the sashes are locked shut thereby, to an inclined position in which a sash is partly open and is locked by said bar against being opened farther, and a stop in the path of the bar to prevent it from moving beyond said last mentioned position.

3. The combination with a window having upper and lower sliding sashes, of a locking bar pivoted to one sash, a keeper secured to the other sash, said bar having a slidable connection with the keeper from a vertical position in which the sashes are both locked shut by the bar, to an inclined position in which one sash is open a short distance only, said connection providing a stop to prevent the bar from moving beyond said inclined position, whereby the said open sash is locked against being opened farther.

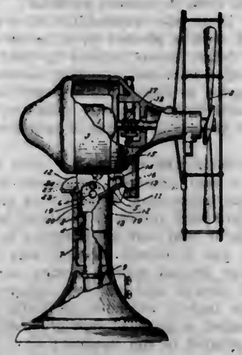
4. The combination with a window having upper and lower sliding sashes, of a locking bar pivoted to one sash, a keeper secured to the other sash, said bar having a slidable connection with the keeper from a vertical position in which the sashes are both locked shut by the bar, to an inclined position in which one sash is open a short distance, means to prevent the bar from being disconnected from said keeper while the bar is in an inclined position, the bar being releasable from its keeper when in said vertical position, to permit the sash to be opened.

5. The combination of a window having upper and lower sliding sashes, of an upright locking bar pivoted at its upper end to the upper sash and having a horizontal sliding connection at its lower end with the upper horizontal frame-piece of the lower sash, whereby the locking bar is guided to swing about its point of pivotal connection with the upper sash from said upright position to a position in which it is inclined downwardly from its pivot, and a stop to arrest the locking bar at said inclined position and thereby prevent it from swinging to or beyond a horizontal position.

[Claims 6 to 10 not printed in the Gazette.]

1,214,698. ELECTRIC FAN. WILLARD M. MCEWEN, Chicago, Ill. Filed Oct. 11, 1915. Serial No. 55,267. (Cl. 230—1.)

1. In an air circulating device, the combination of a support, a pair of members pivotally connected together, one of said members being journaled on said support on an axis transverse to said pivotal connection, rotary blower mechanism carried by the other said member, mechanism for tilting said blower mechanism and thereby through gyratory forces causing said blower mechanism to oscillate in a plane transverse to the plane of tilting, and coacting means yieldingly resisting said tilting movement.



2. In an air circulating device, the combination of a support, a pair of members pivotally connected together, one of said members being journaled on said support on an axis transverse to said pivotal connection, rotary blower mechanism carried by the other said member, mechanism for tilting said blower mechanism and thereby through gyratory forces causing said blower mechanism to oscillate in a plane transverse to the plane of tilting, and coacting means yieldingly resisting and limiting said tilting movement.

3. In an air circulating device, the combination of a support, a pair of members pivotally connected together, one of said members being journaled on said support on an axis transverse to said pivotal connection, rotary blower mechanism carried by the other said member, mechanism for tilting said blower mechanism and thereby through gyratory forces causing said blower mechanism to oscillate in a plane transverse to the plane of tilting, a cam on one of said members, and means on the other said member yieldingly urged into engagement with said cam so as to variably resist the tilting movement of said blower mechanism.

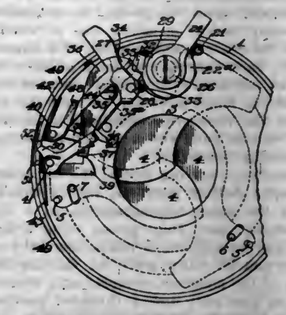
4. In an air circulating device, the combination of a support, a pair of members pivotally connected together, one of said members being journaled on said support on an axis transverse to said pivotal connection, rotary blower mechanism carried by the other said member, mechanism for tilting said blower mechanism and thereby through gyratory forces causing said blower mechanism to oscillate in a plane transverse to the plane of tilting, a cam on one of said members, and means on the other said member yieldingly urged into engagement with said cam so as to variably resist the tilting movement of said blower mechanism, said cam having a shoulder adapted to coact with said means for limiting the tilting of said blower mechanism.

5. In an air circulating device, the combination of a support, a shaft journaled therein, blower mechanism tiltably mounted on said shaft on an axis transverse thereto, rotary mechanism for tilting said blower mechanism and thereby through gyratory forces causing said blower mechanism to oscillate in a plane transverse to the plane of tilting, a cam formed on said blower mechanism concentrically with the axis of tilting, and a shoulder yieldingly mounted on said shaft and adapted to engage said cam for yieldingly resisting the tilting movement of said blower mechanism.

[Claims 6 and 7 not printed in the Gazette.]

1,214,699. PHOTOGRAPHIC SHUTTER. PAUL J. MARKS, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 27, 1915. Serial No. 52,879. (Cl. 95—63.)

1. In a photographic shutter, the combination with shutter blades and an actuating pin therefor, of a driving member provided with a spring latch adapted to ride over the actuating pin when the driving member is moved in one direction and to displace the pin and actuating the blades when the driving member is moved in the other direction.



2. In a photographic shutter, the combination with shutter blades and an actuating pin therefor having an inclined end face, of a rotary driving member provided with a spring latch adapted to ride over the actuating pin when the driving member travels in one direction and having a cam faced end portion adapted to displace the pin laterally and actuate the blades when the driving member is moved in the other direction.

3. In a photographic shutter, the combination with shutter blades and an actuating pin therefor, of a driving element or master member arranged to operate the pin, the latter also serving as a stop for finally arresting the driving movement of the element.

4. In a photographic shutter, the combination with a partition plate having a slot therein and shutter blades adjacent thereto, of an actuating pin for the shutter blades projecting through the slot in the plate and a driving element or master member arranged to operate the pin, the latter being adapted to abut against the end of the slot and serve as a stop for finally arresting the driving movement of the element.

5. In a photographic shutter, the combination with a driving or master member and a time stop, of a lever having a short arm to receive the impact of the driving member and a long arm adapted to engage the time stop.

[Claims 6 to 11 not printed in the Gazette.]

1,214,700. SHUTTER-OPERATING DEVICE. PAUL J. MARKS, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed July 27, 1916. Serial No. 111,622. (Cl. 64—30.)



1. In a shutter operating device, the combination with inner and outer flexible members, one of which is inextensible and the other incompressible, of a finger-piece for each member, said finger-pieces being slidably upon each

other and one of them carrying a stop engaged by the other to determine their normal relationship, a spring for actuating the finger-pieces, relatively, to the said position of normal relationship and an adjustable connection between one of the members and its finger-piece for varying the normal relationship of the members.

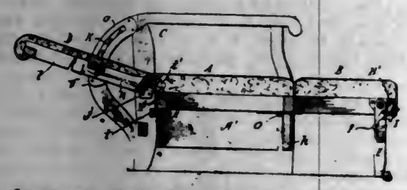
2. In a shutter operating device, the combination with inner and outer flexible members, one of which is inextensible and the other incompressible, of a finger-piece for each member, said finger-pieces being slidable upon each other, and an adjustable connection between one of the members and its finger-piece for varying the normal relationship of the members, comprising a threaded coupling sleeve on one part and a threaded portion on the other coöperating therewith.

3. In a shutter operating device, the combination with inner and outer flexible members, one of which is inextensible and the other incompressible, of a finger-piece for each member, said finger-pieces being slidable upon each other, and an adjustable connection between one of the members and its finger piece for varying the normal relationship of the members, comprising a threaded coupling sleeve on one part and a threaded portion on the other coöperating therewith, said coupling sleeve also serving as a stop to limit the relative movement of the finger-pieces.

4. In a shutter operating device, the combination with a flexible incompressible tube, an inextensible flexible member operating therein and finger-pieces for the tube and member, respectively, slidable one within the other, of a sleeve at one end of the tube, a covering for the latter attached to the sleeve, a threaded coupling connecting the inner finger-piece and the sleeve and threaded upon the latter for relative adjustment of the normal positions of the inner member, and a nut threaded on the sleeve to abut and lock the coupling and having a skirt overlapping the end of the covering on the tube.

5. In a shutter operating device, the combination with inner and outer flexible members, one of which is inextensible and the other incompressible, of a finger-piece for each member slidable one within the other, the outer one being of greater diameter and the inner one being provided with a locking shoulder, and a catch mounted on the outer finger-piece and having an engaging portion movable laterally into coöperation with the said locking shoulder on the inner finger-piece.

1,214,701. COMBINATION EASY-CHAIR. MAURICE MERNYK, Detroit, Mich. Filed Oct. 20, 1915. Serial No. 57,012. (Cl. 155—6.)



1. In an easy chair, the combination of a supporting frame, a pivoted seat, a pivoted back, coöperating means carried by the back and supporting frame for holding the back in adjusted position, and means actuated by said seat for releasing said holding means upon pivotal movement of said seat from its normal position.

2. In an easy chair, the combination of a supporting frame, a pivoted seat, a pivoted back, racks in said supporting frame, pawls carried by said back and held in engagement with said racks by said seat when in its normal position, and means adapted to move said pawls out of engagement with said racks when said seat is shifted to an abnormal position.

3. In an easy chair, the combination of a supporting frame, a pivoted seat, a pivoted back, yieldable racks carried by said supporting frame adapted to limit the movement of said back in one direction, holding means carried by said back, for engaging said racks to hold said back in an adjusted position, and means actuated by said seat for releasing said holding means upon pivotal movement of said seat, from its normal position.

4. In an easy chair, the combination of a supporting frame, a pivoted seat, a pivoted back, racks carried by said supporting frame, pawls carried by said back and normally engaging said racks, a locking member carried by said back adapted to simultaneously shift said pawls, and means actuated by said seat for releasing said locking member upon pivotal movement of said seat from its normal position.

5. In an easy chair, the combination of a supporting frame, a back, a seat pivotally connected at its rear edge to said frame independent of said back and adapted to have its forward edge raised, a limb rest held by the forward free edge of said seat and adapted to be swung down when said seat is raised, foldable legs carried by said limb rest, and pivoted gravity locking members carried by the inner sides of said limb rest adapted to maintain said foldable legs in extended positions when said limb rest is extended relative to said pivoted seat.

[Claim 6 not printed in the Gazette.]

1,214,702. WIRE-BOUND-BOX-BLANK MACHINE. JULIUS J. MILLER, St. Joseph, Mich., assignor, by mesne assignments, to Wirebounds Patents Company, Kittery, Me., a Corporation of Maine. Original application filed Oct. 11, 1909, Serial No. 522,156. Divided and this application filed Oct. 26, 1911. Serial No. 656,970. (Cl. 1—15.)



1. A wire bound box blank machine comprising parallel cleat guides arranged to permit the cleats to slide endwise, spacing members extending transversely of said guides, but movable longitudinally thereof and arranged to relatively position the elements of the blank, means for wiring the elements together, a belt arranged to one side of each guide, to which said members are secured, and means for operating said belts.

2. A wire bound box blank machine comprising parallel cleat guides arranged to permit the cleats to slide endwise, spacing members extending transversely of said guides, but movable longitudinally thereof and arranged to relatively position the elements of the blank, means for wiring the elements together, a belt arranged to one side of each guide, to which said members are secured, and means for operating said belts, said members serving both to space the cleats and support said belts.

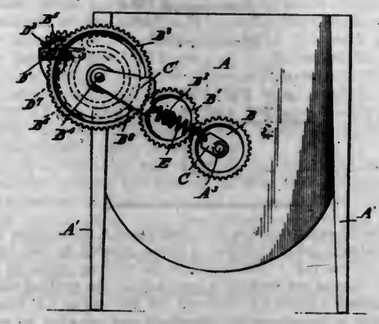
3. A wire bound box blank machine comprising parallel cleat guides arranged to permit the cleats to slide endwise, spacing members extended transversely of said guides, but movable longitudinally thereof and arranged to relatively position the elements of the blank, means for wiring the elements together, a belt arranged to one side of each guide, to which said members are secured, and means for operating said belts, only the end portions of said members being secured to said belts, in such manner that said members and cleats alternate in said guides, said members being movable relatively to each other to vary the distances between them.

4. A wire bound box blank machine comprising parallel cleat guides arranged to permit the cleats to slide endwise, spacing members extending transversely of said guides, but movable longitudinally thereof, and arranged to relatively position the elements of the blank, means for wiring the elements together, a belt arranged to one side of each guide, to which said members are secured, and means for operating said belts, the said members being movable toward and away from each other, and the friction in the guides serving to keep the sections of the blank in tight contact with the front sides of said members.

5. A machine for making box blanks from side material and cleats, comprising traveling means having elements for spacing the cleats apart endwise, stationary members for engaging the sides of the cleats to prevent lateral displacement thereof, mechanism for wiring together the previously unconnected parts of the blanks by successive operations thereon, and devices for actuating said means and thereby feeding the parts to said mechanism, said means including endless belts to which said elements are rigidly secured in position to engage the ends of the cleats, and said members also acting as guides for said elements.

[Claims 6 to 11 not printed in the Gazette.]

1,214,703. REVERSING-GEAR MECHANISM. GEORGE WASHINGTON MOORE, Tulsa, Okla. Filed Mar. 14, 1916. Serial No. 84,198. (Cl. 74—50.)



In a washing machine a frame, a spindle projecting therethrough, a gear wheel fixed to said spindle, a plate pivoted on the spindle and projecting laterally therefrom and apertured, a stub shaft upon the frame, a gear wheel journaled upon the stub shaft, a circular series of pins projecting from one face of said gear wheel journaled upon the stub shaft, and a single pin from its opposite face, a driving shaft, a pinion thereon meshing with said series of pins, a wheel intermeshing between said gear wheels, a plate pivoted on the stub shaft and having a notch in one edge thereof adapted to engage said single pin, a portion of the notched plate projecting beyond the circumference of the pin carrying wheel and having an eye in its end, and a spring engaging said eye and the aperture in the plate on the spindle.

1,214,704. GARMENT-FASTENER. LEWIS L. MOORE, Massillon, Ohio. Filed Dec. 23, 1915. Serial No. 68,349. (Cl. 24—81.)



1. A garment fastener including a corrugated plate, and clamping means on opposite sides of said plate adapted to coöperate with the plate to bind the garments against opposite sides of the plate.

2. A garment fastener including a plate having grooves in its opposite sides, clamping devices pivotally mounted on the plate and adapted to lie within said grooves, and means on the plate for locking the clamping devices in operative position.

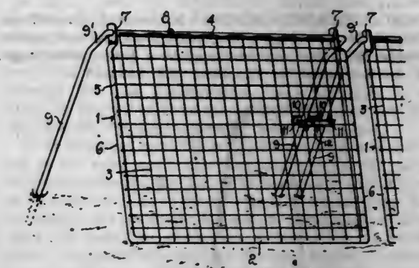
3. A garment fastener including a plate having grooves in its opposite sides, clamping devices pivotally mounted on the plate at its opposite ends and adapted to lie within said grooves, and keepers on the opposite ends of the plate for locking the clamping devices in operative position.

4. A garment fastener including a plate formed from a blank sheet of metal and having grooves on its opposite sides, and clamping devices pivotally mounted on the plate and adapted to lie within said grooves, there being keepers formed on the plate for the free ends of said clamping devices.

5. A garment fastener including a plate having a single groove in one side and a pair of grooves in its opposite side, a clamping pin pivotally mounted on the plate and adapted to lie within the single groove, a keeper on the plate for the free end of said pin, a U-shaped clasp pivotally mounted on the plate having legs adapted to lie within said pair of grooves, and a keeper on the plate for the free end of the clasp.

[Claim 6 not printed in the Gazette.]

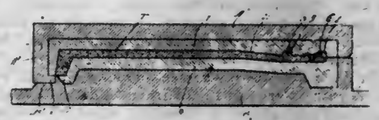
1,214,705. FENCE. ROBERT C. NEELY, Waynesboro, Ga. Filed Oct. 28, 1916. Serial No. 128,288. (Cl. 256—31.)



1. A fence section comprising standards adapted to be secured in the ground, a cross bar connecting said standards together at their upper ends, a U-shaped frame having apertured ends pivotally mounted upon the cross bar, a filling secured to said frame, and means carried by said standards for connecting the corresponding standards of adjoining sections.

2. A fence comprising a plurality of correspondingly formed sections, each of which embodies a pair of standards, cross bars connecting said standards together at their upper ends, frames pivotally mounted upon said cross bars, the legs being secured in the ground in a position oblique to the vertical and the frame resting upon the ground at an inclination opposite to the inclination of the standards, clips connected to said standards, and yokes designed to embrace adjacent clips, as and for the purpose set forth.

1,214,706. TILE-FORMING APPARATUS. LEWIS CLIFFORD NELSON, Coffeyville, Kans., assignor to Ludowici-Celadon Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 14, 1915. Serial No. 45,529. (Cl. 25—43.)



1. A pair of molding dies for tile or the like, a portion of one of which is adapted to project beyond the face of the other in the direction of the closing movement of the dies along one edge when the dies are closed to make a tile, whereby the corresponding edge of the tile will be trimmed during the molding operation.

2. A pair of molding dies for tile or the like, comprising a lower die and an upper die, adapted to close upon the stock to make tile, one of said dies being cut away along

one edge and the other thereof provided with a projecting portion adapted to overlap and shear along said cut away edge in the direction of the closing movement of the dies as the dies are closed, to prevent the escape of plastic clay under pressure along said edge.

3. A die for tile having a flange projecting substantially normally from its face along one edge, but slightly beveled on its inner face.

4. A pair of dies for tile or the like, one of which is cut away along two edges and the other of which is provided with projections extending substantially at right angles away from its face upon corresponding edges, whereby said edges of the mold close first and prevent the formation of fins upon the tile upon its corresponding edges during the closing of the dies.

5. A mold section, comprising a casing, a die therein, the casing being extended at one edge beyond the rim of the die and provided with an inwardly directed flange to cover and protect said rim.

[Claims 6 to 9 not printed in the Gazette.

1,214,707. FUR-STRETCHER. MILFORD J. NEWHOUSE, Sherrill, N. Y., assignor to Oneida Community, Limited, Oneida, N. Y., a Corporation of New York. Filed Sept. 25, 1916. Serial No. 122,068. (Cl. 149—21.)



1. In a pelt stretcher, a pair of connected arms, and a spur mounted on each arm and rotatable with respect to the arm.

2. In a pelt stretcher, a pair of resiliently connected arms, and a spur mounted on each arm and rotatable with respect to the arm.

3. In a pelt stretcher, a pair of resiliently connected spring arms, and a spur mounted on each arm and rotatable with respect to the arm.

4. In a pelt stretcher, a pair of connected arms, and a spur mounted on each arm and rotatably and longitudinally movable with respect to the arm.

5. In a pelt stretcher, a pair of resiliently connected arms, and a spur mounted on each arm and rotatably and longitudinally movable with respect to the arm.

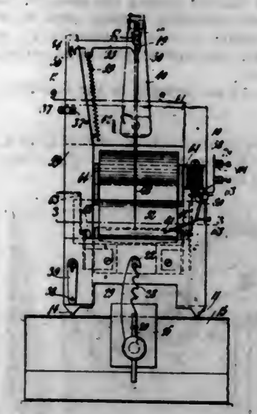
[Claims 6 to 12 not printed in the Gazette.]

1,214,708. EXTENSOMETER. DIRK OKHUIZEN, The Hague, Netherlands, assignor of one-half to Rudolph Welcker, Springfield, Mass. Filed Mar. 9, 1914. Serial No. 823,448. (Cl. 234—16.)

1. In an extensometer, a frame having a single biting point; a lever fulcrumed to the frame and having a single biting point; a stylus; a recording means for carrying tape past the stylus; an operative connection between the stylus and the lever; a clamp; and a resilient connection between the clamp and frame.

2. In an extensometer, the combination of a frame having a fixed biting point; a lever pivoted to the frame and provided with a biting point; a table on the frame; means for feeding tape on the table; a stylus for marking on the tape; an operative connection between the lever and the stylus; a clamping device; and a resilient connection between said clamp and frame.

3. In an extensometer, the combination of a frame having a fixed biting point; a lever pivoted to the frame and provided with a biting point; a table on the frame; means for feeding tape on the table; a stylus for marking on the tape; a multiplying operative connection between the lever and the stylus; a clamp; and a resilient connection between said clamp and frame.

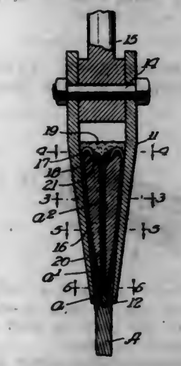


4. In an extensometer, the combination of a frame having a biting point thereon; a lever pivoted to the frame and also having a biting point; a writing table on the frame; means for feeding a tape across the writing table; a standard adjustably mounted on the frame; a pointer pivotally mounted on the standard and adapted to mark on said tape; and a link connecting said lever and pointer.

5. In an extensometer, the combination of a frame having a fixed part; a table; a pointer pivoted in said frame over said table and provided with a pair of pins; a movable part in said frame associated with the fixed part; and a link operatively connected to the fixed part and having a notch adapted to engage one of said pins.

[Claims 6 to 12 not printed in the Gazette.]

1,214,709. MEANS FOR AND METHOD OF FASTENING CABLE ENDS. ARTHUR ORR, St. Charles, Ill. Filed Feb. 17, 1916. Serial No. 78,941. (Cl. 24—126.)



1. In a device of the character described the combination of the spread strands of a high tension, hard tempered cable and an encompassing shell, of a body of relatively soft metal of relatively low melting point, soldering the strands together and to the shell adjacent to the tip of the shell, and a body of harder metal of higher melting point soldering the strands within the larger portion of the shell.

2. In a structure of the character described the combination of a cable having portions of its strand wires separated and inbent at their extremities, a tapering shell encompassing the separated portions of the wires, a body of relatively soft metal having a relatively low melting point, soldering the portions of the strands adjacent to the shell tip to each other and to the contiguous pre-formed structure, and a body of harder metal having a higher melting point similarly soldering the inbent portions of the strands.

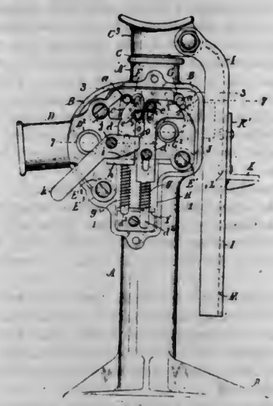
3. The method of anchoring the cable ends in a conical socket which consists in passing the cable through the small end of the socket, spreading its wires, hook-bending the ends thereof, engaging said hooked ends with a member that will pass into the socket, applying tension to the cable to position its wires in the socket under strain, and solder-filling the open areas of the socket.

4. The method of anchoring the cable ends in a conical socket which consists in passing the cable through the small end of the socket, spreading its wires, hook-bending the ends thereof, engaging said hooked ends with a member that will pass into the socket, applying tension to the cable to position its wires in the socket under strain, and filling the socket below the hook bends with a molten solder of relatively low melting point as described, and filling the area containing the wire hooks with a solder of higher melting point as described.

5. In a device of the character described the combination with a cable end having its wire courses spread and hook-formed at their ends and a conical shell receiving such spread wires, of a pre-formed member engaged by the hooked ends of the wires, and a solder body filling the spaces between the pre-formed parts and embedding said hooked ends.

[Claims 6 to 13 not printed in the Gazette.]

1,214,710. AUTOMOBILE LIFTING-JACK. ADOLPH PETELER, New York, N. Y. Filed Mar. 8, 1916. Serial No. 82,796. (Cl. 254—111.)



1. In a lifting jack, the combination, with a casing and a toothed lifter-bar, of a detent hinged upon the casing to engage the teeth of the bar, and a hand-lever socket hinged upon the casing with a pawl pivoted thereon to engage the teeth of the bar, means to press the detent and the pawl normally into the said teeth, pins projected respectively from the detent and the pawl at one side of the casing, and cams movable contiguous to the pins and having springs operating normally to press the cams upon the pins to retract the pawl and detent from the teeth.

2. In a lifting jack, the combination, with a casing and a toothed lifter-bar, of a detent hinged upon the casing to engage the teeth of the bar, and a hand-lever socket hinged upon the casing with a pawl pivoted thereon to engage the teeth of the bar, means to press the detent and the pawl normally into the said teeth, pins projected respectively from the detent and the pawl at one side of the casing, cams movable contiguous to the pins, springs pressing the cams normally against the pins, and means for moving the cams to an inoperative position for the purpose set forth.

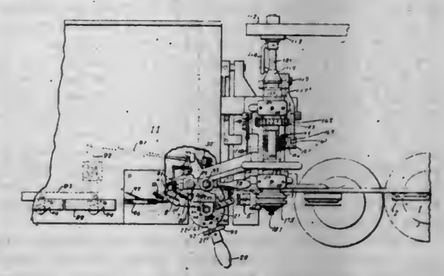
3. In a lifting jack, the combination, with a casing and a toothed lifter-bar, of a detent hinged upon the casing to engage the teeth of the bar, and a hand-lever socket hinged upon the casing with a pawl pivoted thereon to engage the teeth of the bar, means to press the detent and the pawl normally into the said teeth, pins projected respectively from the detent and the pawl at one side of the casing, cam-bodies movable parallel with one another between the said pins and having outwardly sloped cam-faces to press the pins apart, and springs operating upon the cam-bodies to press the cam-faces normally against the said pins.

4. In a lifting jack, the combination, with a casing having a box open upon one side and a lifter-bar movable vertically through the box, of a journal-plate secured on the box, a hand-lever socket and a detent having journals at their opposite sides fitted respectively to the rear side of the box and the journal-plate, a pawl pivoted upon the hand-lever socket to engage the teeth of the lifter-bar, pins projected respectively from the detent and the pawl through the said journal-plate, cams mounted to move upon the journal-plate in contact with the pins, and means for pressing the cams normally toward the pins.

5. In a lifting jack, the combination, with a casing having a box open upon one side and a lifter-bar movable vertically through the box, of a hand-lever socket pivoted on the casing, a pawl pivoted upon the hand-lever socket to engage the teeth of the bar, a journal-plate secured upon the open side of the box, a detent hinged upon the casing to engage the teeth of the bar, means to press the detent and pawl normally into the said teeth, pins projected respectively from the detent and the pawl through the said journal-plate, cams mounted to move upon the journal-plate in contact with the pins, and springs for pressing the cams normally toward the said pins.

[Claims 6 to 12 not printed in the Gazette.]

1,214,711. WIRE-INTERLACING MACHINE. WILBER J. PINE, Oshkosh, Wis. Filed Jan. 14, 1915. Serial No. 2,137. (Cl. 140—8.)



1. A wire interlacing machine, including the combination with means for rotating and axially advancing a coil of wire, of a rotatable guiding member adapted to bear against the coil, said member being rotatable in a plane diagonal to the line of advancement of the coil.

2. A wire interlacing machine, including the combination with means for rotating and axially advancing a coil of wire, of a rotatable guiding member located in a plane diagonal to the axis of the coil, said guiding member having a circular periphery provided with projections between which the wire of the coil may pass, substantially as described.

3. A wire interlacing machine, including the combination with means for rotating and axially advancing a coil of wire, of a rotatable guiding member adapted to move

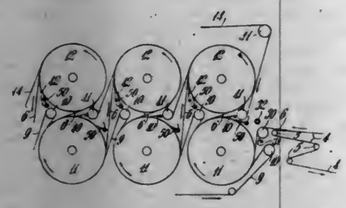
against and push the coil along a line diagonal to its line of advancement, and means for manually actuating said guiding member in step by step rotative movements.

4. A wire interlacing machine, including the combination with means for rotating and axially advancing a coil of wire, of a rotatable guiding member adapted to bear against the coil at an angle to its line of advancement, means for manually actuating said guiding member in step by step rotative movements, and means for shifting a portion of the actuating means to vary the length of the individual steps independently of the manual actuating operation.

5. A wire interlacing machine, including the combination with means for rotating and axially advancing a coil of wire, of a guiding member rotatable in a plane diagonal to the axis of the coil and adapted to push the coil along a line diagonal to its line of advancement, and means cooperative with the guiding member for maintaining a parallel relation between the interlaced coils and the interlacing coil.

[Claims 6 to 26 not printed in the Gazette.]

1,214,712. PAPER-MACHINE. CHARLES E. POPE, Holyoke, Mass. Filed Mar. 6, 1916. Serial No. 82,409. (Cl. 34—48.)



1. In a paper making machine, the combination of a set of drying cylinders, aprons therefor, means to guide the web to the driers, the apron on a bottom drier being arranged to hold the web against the drier until it reaches a point where it travels substantially horizontally on the upper surface of the drier, means to strip the web from the bottom drier, the apron on a companion top drier being arranged to form with its drier an entrance in line with the substantially horizontally traveling web stripped from the lower drier, whereby the web is transferred automatically from a lower to an upper drying cylinder.

2. In a paper making machine, the combination of a set of drying cylinders, an apron for the lower tier of cylinders and an apron for the upper tier of cylinders, means to guide the aprons to and from the cylinders, whereby the web has a very short exposed travel in passing from a lower to an upper cylinder and a comparatively long exposed travel from an upper to a lower cylinder, whereby the vapor may escape from the surface of the web in its long travel and the web may be readily fed from one cylinder to another.

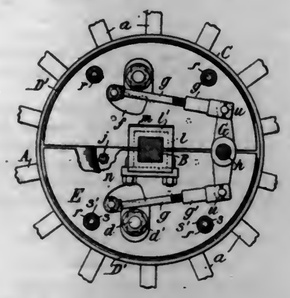
3. In a paper making machine, the combination with upper and lower drying cylinders, aprons therefor, means to guide the latter to and from the cylinders, arranged so that the web in passing from one cylinder to another is exposed on both sides for a portion of its travel, and means on either side of the exposed portion of the web to remove the moisture laden air and thus advance the drying operation.

4. In a paper making machine, the combination of sets of companion drying cylinders, the horizontal axes of the cylinders in each set being substantially in the same vertical plane one with the other, an apron for the lower cylinders and an apron for the upper cylinders, guiding means to direct the apron to an upper cylinder in a line substantially radial with respect to its companion lower cylinder and to direct the apron away from the upper cylinder to the adjacent upper cylinder in a substantially common tangent line, and guiding means to direct the apron to and from the lower cylinders in just the reverse manner.

5. In a paper making machine, the combination of a set of drying cylinders, an apron for a lower tier of driers and an apron for an upper tier of driers, the apron on a lower drier arranged to hold the web against the drier until it reaches a point where it travels substantially horizontally on the upper surface of the drier, the apron on a companion upper drier being arranged to form with its drier an entrance for the substantially horizontally traveling web, and means to loosen the web from the lower drier and direct the same into said entrance, whereby the web is transferred automatically from a lower to an upper drying cylinder.

[Claims 6 to 14 not printed in the Gazette.]

1,214,713. VEHICLE-BRAKE. MORGAN POTTER, Beacon, N. Y. Filed Apr. 3, 1915. Serial No. 18,972. (Cl. 21—8.)



1. A vehicle brake comprising in combination a drum attached to the wheel, a stationary shell mounted on the axle, shoes within the drum having non-rotative engagement with the shell, springs for drawing the brake shoes inwardly, independent means engaging the middle portions of said shoes for pressing them outwardly into braking contact with the drum, each said means carried by and reacting against said shell, an operative part for operating both said means, and intervening equalising means for distributing the operative thrust to the shoe-gaging means.

2. The combination of a brake drum, a stationary shell, a brake shoe having non-rotative engagement with the shell, springs for drawing the brake shoe inwardly, and a lever pivoted eccentrically to the shell and having an eccentric face for forcing the shoe outwardly against the drum.

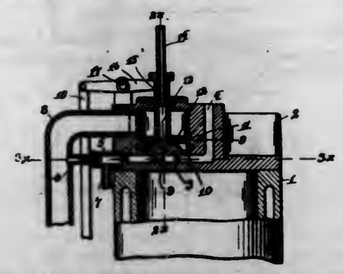
3. The combination of a brake drum, a stationary shell, a brake shoe having non-rotative engagement with the shell, springs for drawing the brake shoe inwardly, and an eccentric faced lever pivoted eccentrically to the shell and engaging the middle portion of the shoe for forcing the shoe outwardly.

4. The combination of a brake drum, a stationary shell, a brake shoe having non-rotative engagement with the shell, springs for drawing the brake shoe inwardly, an eccentric faced lever pivotally supported on the shell for forcing the shoe outwardly, and a rocking piece receiving the thrust of said lever and pivotally engaging the shoe.

5. The combination of a brake drum, a stationary shell, a brake shoe having non-rotative engagement with the shell, springs for drawing the brake shoe inwardly, an eccentric faced lever pivotally supported on the shell for forcing the shoe outwardly, and a rocking piece receiving the thrust of said lever and pivotally engaging the shoe, said lever having flanges between which the rocking piece is engaged.

[Claims 6 to 13 not printed in the Gazette.]

1,214,714. VALVE FOR INTERNAL-COMBUSTION ENGINES. FRANCIS M. RITES, deceased, Ithaca, N. Y., by Charles H. Gallagher, executor, Ithaca, N. Y., assignor to Perle Clapp Rites, Ithaca, N. Y., guardian of Marion B. Rites. Original application filed Jan. 17, 1913, Serial No. 742,720. Divided and this application filed May 27, 1915. Serial No. 30,852. (Cl. 123—33.)



1. In a valve mechanism for an internal combustion engine the combination of a chamber, a stationary valve seat therein having two stationary concentric tapering surfaces thereon with an annular opening between them, a valve in said chamber engaging therewith and having two concentric tapering surfaces thereon to engage with the surfaces of the seat, a passage in the chamber for conveying one element of combustion to one surface of the valve seat, a stem on said valve, a passage through said stem for conveying another element of combustion to the other surface of said valve seat.

2. In a valve mechanism for an internal combustion engine the combination of a chamber, a valve seat therein having two concentric tapering surfaces thereon with an annular opening between them, a valve in said chamber engaging therewith and having two concentric tapering surfaces thereon to engage with the surfaces of the seat; said valve having a perforated stem through which it is adapted to pass one element of combustion into the opening, the other element of combustion surrounding the valve stem and passing along the outside of said valve into said opening, means for heating said valve seat from outside of the engine to promote the combustion of the elements admitted by said valve.

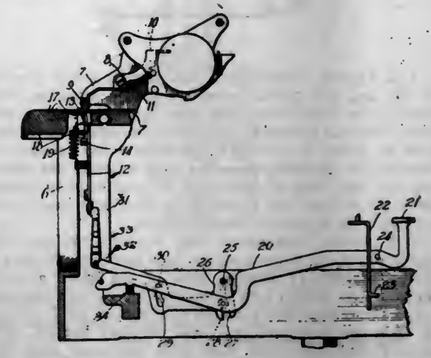
3. In a valve mechanism for an internal combustion engine the combination of a chamber, a valve seat therein having two concentric tapering surfaces thereon with an annular opening between them, a valve in said chamber engaging therewith and having two concentric tapering surfaces thereon to engage with the surfaces of the seat, said valve having a perforated stem through which it is adapted to pass one element of combustion into the opening, the other element of combustion surrounding the valve stem and passing along the outside of said valve into said opening, said valve seat having an opening therethrough sealed from the chamber and communicating with the outside air through which said valve seat may be heated to cause the heating and burning of the combustible elements as they pass into the cylinder.

4. In a valve mechanism for an internal combustion engine, the combination of a chamber, a valve seat therein having two concentric tapering surfaces thereon extending between two parallel horizontal planes and sloping toward each other with an annular opening between them, a mixing valve in said chamber engaging therewith and having two concentric tapering surfaces thereon to engage with the surfaces on the seat, means for introducing a separate fluid to each concentric surface, said fluids mixing in the annular opening when the valve lifts.

5. In a valve mechanism for an internal combustion engine, the combination of a chamber, a valve seat therein having two concentric tapering surfaces thereon extending between two parallel horizontal planes and sloping toward each other with an annular opening between them, a mixing valve in said chamber engaging therewith and having two concentric tapering surfaces thereon to engage with the surfaces on the seat, said valve having a perforated stem through which it is adapted to pass one element of combustion into the opening, the other element of combustion surrounding the valve stem and passing along the outside of said valve into said opening.

[Claims 6 and 7 not printed in the Gazette.]

1,214,715. TYPE-WRITER BACK-SPACING MECHANISM. ALVAH C. ROEBUCK and ADOLPH J. PRUSZYNSKI, Woodstock, Ill., assignors, by direct and mesne assignments, to Woodstock Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Oct. 26, 1914. Serial No. 868,562. (Cl. 197—91.)



1. In typewriter back spacing mechanism, the combination with a movable rack bar, of a back feed dog, a slotted plate to hold the dog normally out of engagement with the rack bar, the dog being movable through the plate into position to engage with the teeth of the rack, and mechanism to move the dog quickly through a small portion of its travel to engage the rack and to move the dog slowly in the back spacing direction through the remainder of its travel after engagement with the rack.

2. In typewriter back spacing mechanism, the combination with a movable rack bar, of a back feed dog to engage the teeth of the rack and having a projecting arm, a pivoted lever to which the dog is pivoted having stops to engage the arm of the dog and limit its movement in both directions, a fixed slotted plate through which the dog extends, the dog normally engaging one end of the slot to hold the dog out of engaging position with respect to the rack and in contact with one of the said projections, and means for moving the lever to actuate the dog.

3. In typewriter back spacing mechanism, the combination with a movable rack bar, of a back feed dog to engage the teeth of the rack, a plate with a slot in which the dog moves and engages at one end to hold the dog out of rack engaging position, means for actuating the dog comprising a pivoted key lever, and means for limiting the movement of the key lever and the dog to one back space, said means comprising a detent on the key lever and a fixed projection engaged thereby.

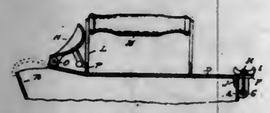
4. In typewriter back spacing mechanism, the combination with a movable rack bar, of a back feed dog provided with a guard edge to engage the face of the rack and with a tooth to engage the teeth of the rack, and means for actuating the dog comprising a lever and an irregular slot engaged by the lever for moving the tooth of the dog quickly into engagement with the teeth of the rack through a small portion of the travel of the lever and for continuing the movement of the dog at a slower speed in the back spacing direction through the remainder and larger part of the travel of the lever.

5. In typewriter back spacing mechanism, the combination with a movable rack bar, of a back feed dog for engaging and moving the rack in the back spacing direction, and means for actuating the dog comprising a pivoted lever with an irregular cam slot and a key lever with

a member to engage in a portion of the slot for moving the other lever with a quick initial movement and in another portion of the slot to produce a slower continuing movement in the same direction.

[Claims 6 to 10 not printed in the Gazette.]

1,214,716. COMBINED FOOD-COOKING UTENSIL AND TEA-KETTLE. FRANK C. ROOT, Detroit, Mich. Filed Mar. 1, 1915. Serial No. 11,165. (Cl. 53—8.)



1. A utensil, comprising a body having a full opening at the top, and further provided with a spout or nose open at the top, lifting lugs upon opposite sides of said body, inwardly-extending lugs upon opposite sides of the nose or spout, a cover for closing said top recessed to receive said inwardly-extending lugs, a clamp for securing the rear edge of said cover to said body, a hinged spout lid or cover, and means for holding said spout cover alternatively in open or closed position.

2. A utensil, comprising a body having a full open top and an open-top pouring spout, lugs projecting inwardly from said body at opposite sides of the spout, a cover for said body formed with recesses to receive said lugs and cut-away between said recesses, a lid for the spout mounted upon the cover adjacent said cut-away portion, said lid and said lugs being flush with the cover when the latter is applied to the utensil, and means for engaging the cover with the body at a point substantially diametrically opposite the spout.

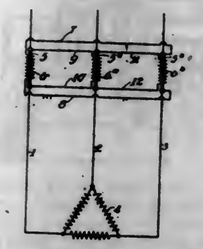
3. A utensil, comprising a body having a full open top and an open-top nose or spout, a cover detachably, engaged with said body, a lid for said spout pivotally carried by the cover, a handle on said cover arranged longitudinally with respect to the plane of the spout, and forming a lifting and pouring handle for the whole utensil, and a handle for the spout lid, said spout lid being pivotally movable to and from the main handle, whereby the hand grasping the main handle may actuate the spout lid.

1,214,717. SAFETY-HOOK. ALBERT C. SCHMIDT, Melvin, Iowa. Filed Dec. 21, 1915. Serial No. 68,033. (Cl. 24—231.)



As a new article of manufacture, a safety hook formed from a single length of metal having an intermediate portion thereof bent to form a substantially straight shank, the metal at one end of the shank being bent to form an attaching eye and the metal at the other end thereof being bent upwardly and laterally on one side of the shank to form an open loop, the metal after the loop is formed being inclined downwardly and laterally with the terminal thereof extended beyond the other side of the shank and beyond the lower surface of the closed end of the loop to form a depending guard.

1,214,718. OVERLOAD CIRCUIT-OPENER. EDMUND O. SCHWEITZER, Chicago, Ill. Filed Apr. 21, 1913. Serial No. 762,463. (Cl. 175—294.)

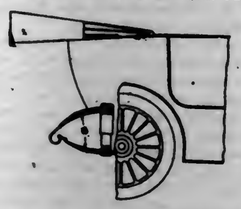


1. The combination of several circuits, a fuse included in one circuit, and a heating coil for operating said fuse included in shunt in another circuit.

2. The combination of a plurality of circuits, of fuses in said circuits, and heating coils for operating said fuses, the heating coil for each fuse being included in shunt in another circuit.

3. The combination with a polyphase system having its line conductors provided with fuses, of heating coils in heating proximity to said fuses and circuit connections connecting said heating coils in shunt with line conductors other than those in which the fuses are respectively included.

1,214,719. DASH-POT FOR SHOCK-ABSORBERS. CHARLES H. SLATTERY, Cuyahoga Falls, Ohio. Filed Mar. 11, 1916. Serial No. 83,570. (Cl. 74—69.)

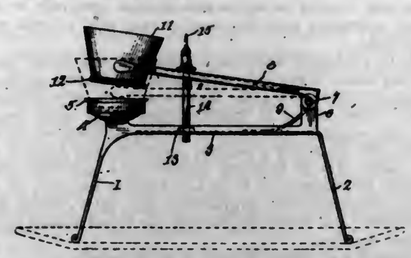


A dash pot for shock absorbers comprising a cylinder, and a piston therein, the inner wall of the cylinder having a channel traversed by the piston and adapted to bypass fluid from one end of the cylinder to the other, said channel decreasing in area toward both ends of the cylinder, the decrease being relatively long and gradual toward one end of the cylinder and short and abrupt toward the other end thereof, said channel terminating short of each end of the cylinder.

1,214,720. DEVICE FOR SEPARATING THE WHITES AND YOLKS OF EGGS. AUGUST SOBECK, Chicago, Ill. Filed July 24, 1916. Serial No. 110,867. (Cl. 65—12.)

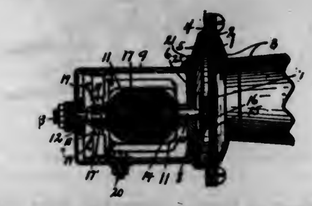
1. A device for separating the white from the yolk of an egg comprising a fixed cup in size adapted to receive the yolk of the egg, and a funnel mounted to move toward and away from said cup, the smaller end of said funnel being adapted to be received within the cup.

2. A device for separating the white from the yolk of an egg consisting of a base, a cup supported thereupon, the cubic capacity of the yolk of the egg, and a funnel pivotally mounted upon and movable toward or away from said cup, the lower end of said funnel being adapted to be received within said cup.



3. A device of the character described comprising a base, a cup, the cubic capacity of which is substantially the same as the cubic contents of the yolk of an egg, an arm in pivotal relation to said base, a funnel secured upon said arm, one end of said funnel being adapted to be received within said cup, and means coöperating with said arm and said base and adapted to draw said members toward each other and hold the same in fixed relation to each other.

1,214,721. SIGNAL. WILLIAM SPARKS, Jackson, Mich., assignor to The Sparks-Withington Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 8, 1915. Serial No. 54,737. (Cl. 177—7.)



1. In a signal, a diaphragm having a wear piece, a motor including a case and having its armature shaft presented endwise toward the diaphragm, a rotor having teeth, and means for varying the overlap of said teeth upon the wear-piece by movement of said case in a plane substantially parallel with the diaphragm.

2. In a signal, a diaphragm having a wear piece, a motor including a case and having its armature shaft presented endwise toward the diaphragm, a rotor having teeth, and means for varying the overlap of said teeth upon the wear-piece by a movement of said case in a plane perpendicular to the axis of rotation of said rotor.

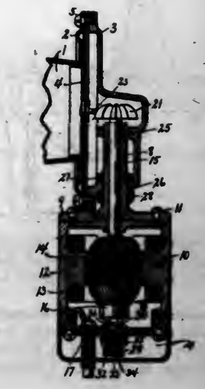
3. In a signal, a diaphragm having a wear-piece associated therewith, a driving shaft presented endwise toward the diaphragm, a rotor on said shaft, and means for varying the overlap of said rotor upon said wear-piece by movement of said rotor in a plane perpendicular to its axis of rotation.

4. In a signal, a diaphragm having a wear-piece associated therewith, a driving shaft presented endwise toward the diaphragm, a rotor on said shaft, and means for varying the overlap of said rotor upon said wear-piece by movement of said rotor in a direction substantially parallel with the diaphragm.

5. In a signal, a diaphragm having a wear-piece associated therewith, a driving shaft presented endwise toward the diaphragm, a crown cam on said shaft and having its teeth angularly disposed with respect to the plane of the diaphragm, and means allowing movement of said cam solely in a direction transverse its axis of rotation to vary the degree of overlap of said cam upon said wearpiece.

[Claims 6 to 18 not printed in the Gazette.]

1,214,722. SIGNAL. WILLIAM SPARKS, Jackson, Mich., assignor to The Sparks-Withington Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 18, 1915. Serial No. 62,247. (Cl. 177—7.)



1. In a signal, a diaphragm having an impulse-receiving portion, a rotary driving shaft disposed substantially parallel with the diaphragm, a rotor carried by said driving shaft, said rotor having teeth projecting radially therefrom for contact with said impulse-receiving portion, and means for moving said rotor in a direction substantially parallel with the diaphragm to vary the degree of overlap of said teeth upon said impulse-receiving portion in a direction radially of the axis of rotation of the rotor.

2. In a signal, a diaphragm having a wear-piece thereon, a motor having its armature shaft disposed substantially parallel with the diaphragm, a cam upon the motor shaft, said cam having its actuating portions disposed obliquely to the axis of rotation of the cam, and means for adjusting the armature shaft longitudinally of its axis.

3. In a signal, a diaphragm having an impulse-receiving portion, a rotary driving shaft disposed substantially parallel with the diaphragm, a rotor carried by said driving shaft, said rotor having teeth projecting radially therefrom for contact with said impulse-receiving portion, and means for moving said shaft longitudinally to vary the degree of overlap of said teeth upon said wear-piece in a direction radially of the axis of rotation of the rotor.

4. In a signal, a diaphragm having a wear-piece thereon, a rotary cam rotating in a plane substantially perpendicular to the diaphragm and having its actuating projections obliquely disposed with respect to the axis of rotation of the cam, means for rotating the cam, and means for moving the cam axially to vary the degree of overlap of the cam projection on said wear-piece.

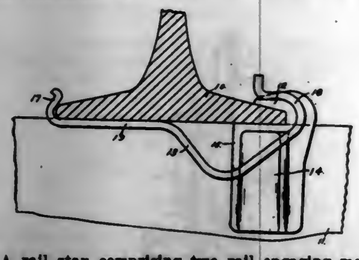
5. In a signal, a diaphragm having a wear-piece thereon, a driving shaft disposed substantially parallel with the plane of the diaphragm, a cam mounted on said shaft for coöperative engagement with said wear-piece, said cam having its actuating projections obliquely disposed with respect to the axis of said shaft, means for moving the cam axially to vary the degree of overlap of said projections upon said wear-piece.

[Claims 6 to 10 not printed in the Gazette.]

1,214,723. RAIL-STAY. HIRAM H. SPONENBURG, Gurnee, Ill., assignor, by mesne assignments, to Otto R. Barnett, Chicago, Ill. Filed Feb. 14, 1916. Serial No. 78,170. (Cl. 238—4.)

1. A rail stay comprising two rail engaging members, one of which is elastic and flexed over a web formed on the other so that the device takes a resilient hold on the rail.

2. A rail stay comprising two rail engaging members, one of which is provided with a tie abutting portion and the other of which is elastic and flexed over a web formed on the first-named member.



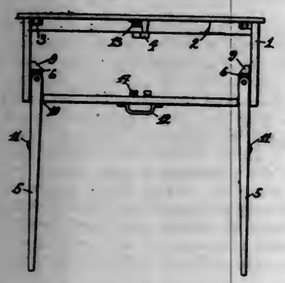
3. A rail stay comprising two rail engaging members, one of which is elastic and extends around the base of the rail, engages the other member and is flexed over a web on said other member.

4. A rail stay comprising two rail engaging members, one of which is elastic and extends around the base of the rail, engages the other member and is flexed over a web located on the under side of the other member beneath the rail base.

5. A rail stay comprising two rail engaging members, one of which is elastic and is flexed over a web formed on the under side of the other member beneath the rail base.

[Claims 6 to 19 not printed in the Gazette.]

1,214,724. PORTABLE TABLE. ERNST NATHANAEL STENING, Söderköping, Sweden. Filed Sept. 27, 1916. Serial No. 122,392. (Cl. 45—116.)



1. In a foldable table, the combination of a frame; a pair of leaves hinged to the upper part of the frame and adapted to assume horizontal position or to fold against the frame; and legs secured within said frame by a universal connection and adapted to lie within the frame or to be swung outwardly and downwardly into position to support the table.

2. In a foldable table, the combination of a frame; a pair of leaves hinged to the upper part of the frame and adapted to assume horizontal position or to fold against the frame; legs secured within said frame by a universal connection and adapted to lie within the frame or to be swung outwardly and downwardly into position to support the table; and means for holding the legs rigidly in said last named position.

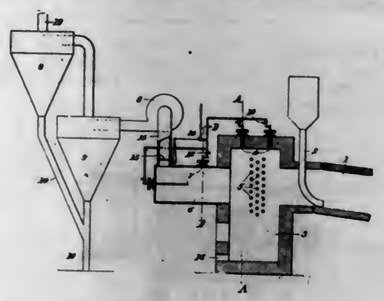
3. In a foldable table, the combination of a frame; a pair of leaves hinged to the upper part of the frame and adapted to assume horizontal position or to fold against the frame legs secured within said frame by a universal connection and adapted to lie within the frame or to be swung outwardly and downwardly into position to support the table; and means for holding the leaves in said horizontal position.

4. In a foldable table, the combination of a frame comprising upper, lower and end members; the lower member being provided with guide notches at both sides of both ends; leaves hinged at opposite edges of the upper member and adapted to assume a horizontal position or to form with the frame a box-like structure; and legs secured to the inner part of each end member by a universal connection and adapted to lie in said box-like structure or to move outwardly and downwardly into said notches respectively.

5. In a foldable table, the combination of a frame comprising upper, lower and end members; the lower member being provided with guide notches at both sides of both ends; leaves hinged at opposite edges of the upper member and adapted to assume a horizontal position or to form with the frame a box-like structure; legs secured to the inner part of each end member by a universal connection and adapted to lie in said box-like structure or to move outwardly and downwardly into said notches respectively; and means for holding the leaves in said horizontal position.

[Claims 6 to 12 not printed in the Gazette.]

1,214,725. PROCESS FOR THE RECOVERY OF MATERIAL IN THE FORM OF DUST FROM ROTARY-CEMENT-KILN GASES. LEVI STEVENS, Alpena, Mich., assignor to Jermin and Stevens, Alpena, Mich., a Firm composed of Frank Jermin and Levi Stevens. Filed Aug. 19, 1915. Serial No. 46,334. (Cl. 183—121.)



1. The process of treating cement-kiln gases carrying suspended matter, which consists in commingling water therewith, converting said water into vapor by the heat of the gases, passing the cooled gases through a dust-separator, and precipitating the suspended matter from said gases in a dry condition.

2. The process of treating cement-kiln gases carrying suspended matter, which consists in commingling a regulated supply of water therewith, converting said water into vapor by the heat of the gases, passing the cooled gases through a dust-separator and precipitating the suspended matter from said gases in a dry condition.

3. The process of treating cement-kiln gases carrying suspended matter, which consists in commingling a regulated supply of water therewith, automatically increasing the water-supply as the temperature of the gases increases, and automatically decreasing it as the temperature decreases, converting the water into vapor by the heat of the gases, passing the cooled gases through a dust-separator and precipitating the suspended matter in a dry condition.

4. The process of treating cement-kiln gases carrying suspended matter, which consists in commingling with said gases upon their exit from the kiln a regulated supply of water, converting said water into vapor by the heat of the gases and thereby cooling the gases, automatically increasing the water-supply as the temperature of the gases increases, and decreasing the supply as the temperature decreases, passing the cooled gases through a dust-separator and precipitating the suspended matter in a dry condition.

5. The process of treating cement-kiln gases carrying suspended matter, which consists in commingling therewith a regulated supply of water as the gases issue from the kiln, converting the water into vapor by the heat of the gases and controlling the water-supply in accordance with variations in temperature of the gases.

[Claims 6 to 9 not printed in the Gazette.]

1,214,726. BAKING-POWDER. MOOSHEGH VAYGOUNY, Berkeley, Cal., assignor to Royal Baking Powder Company, a Corporation of New Jersey. Filed Feb. 1, 1912. Serial No. 674,750. (Cl. 99—10.)

1. As a new article of manufacture, a baking powder containing racemic acid.

2. As a new article of manufacture, a baking powder containing a mixture of racemic and mesotartaric acid.

3. As a new article of manufacture, a baking powder containing as an acid component a mixture of acid material comprising the racemic acid radical and acid material comprising the mesotartaric acid radical.

4. As a new article of manufacture, a baking powder containing racemic acid and a bicarbonate of an alkali-forming metal.

5. As a new article of manufacture, a baking powder containing a mixture of racemic acid, mesotartaric acid and a bicarbonate of an alkali-forming metal.

[Claims 6 to 12 not printed in the Gazette.]

1,214,727. WELDING-TORCH. RUDOLPH VUILLEUMIER, New Rochelle, N. Y., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Sept. 29, 1913. Serial No. 792,287. (Cl. 158—27.4.)



1. A welding-torch having, in combination, means for the admission of gases thereto under control; means for mixing the gases; means for separating the mixed gas into two independent streams and means whereby one of the streams, in its passage through the torch, entrains another gas therewith.

2. A welding-torch having, in combination, means for admitting gases thereto under control; means for mixing the gases; means for separating the mixed gas into independent streams; and means whereby one of the streams may have another gas combined therewith in its passage through the torch.

3. A torch having a head, and means for admitting gas thereto; a tip, and means for discharging gas therefrom; and means between the head and tip providing a vent to prevent noise during operation.

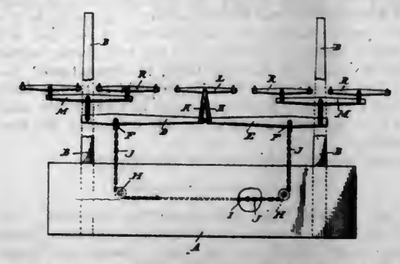
4. A torch having a head and tip; means for admitting gas to the head; means for discharging gas from the tip; and means separably connecting the head and tip enabling a vent to be provided to prevent noise during operation.

5. A welding torch having means for admitting different gases thereto; means for mixing the gases therein; a combustion chamber for the gases within the torch; and means for preventing intermittent combustion and noises in the operation of the torch.

[Claims 6 to 31 not printed in the Gazette.]

1,214,728. FIVE-HORSE EVENER. FRED P. WADDELL, Maddock, N. D. Filed Sept. 23, 1916. Serial No. 121,814. (Cl. 21—76.)

A five-horse evener comprising, in combination with a drill frame having forwardly extending shafts, pulleys journaled upon said frame, eveners having their outer ends flush with the outer edges of said shafts, eccentrically mounted clevises pivotally connected to said eveners, chains passing about said pulleys and connected one to each of said clevises, a whiffletree, links pivotally connected to the center thereof and one connected to the inner



end of each of said eveners, doubletrees with link connections intermediate the same and the outer ends of said eveners and above said shafts, and swingle trees pivotally connected to the doubletrees.

1,214,729. PROCESS OF PRODUCING BEVERAGES. MAX WALLERSTEIN and LEO WALLERSTEIN, New York, N. Y. Filed June 21, 1916. Serial No. 104,917. (Cl. 99—11.)

1. The process of making a beverage consisting in dissolving a synthetic extract containing the reaction products of amino bodies and sugar in water, boiling with hops, cooling and filtering.

2. The process of making a beverage consisting in dissolving a synthetic extract containing the reaction products of amino bodies and sugar in water, boiling with hops, cooling, filtering and carbonating.

3. The process of making a beverage consisting in dissolving a synthetic extract containing the reaction products of amino bodies and sugar in water, boiling with hops, cooling, adding yeast, and filtering.

4. The process of making a beverage consisting in dissolving a synthetic extract containing the reaction products of amino bodies and sugar in water, boiling with hops, cooling, adding yeast, filtering and carbonating.

5. The process of making a beverage consisting in dissolving a synthetic extract containing the reaction products of amino bodies and sugar in water, boiling with hops, adding yeast, allowing the mixture to ferment, interrupting the fermentation when the desired percentage of alcohol is developed, cooling, and filtering.

[Claims 6 to 8 not printed in the Gazette.]

1,214,730. EXTRACT HAVING THE FLAVOR AND AROMA OF MALT AND PROCESS OF PRODUCING THE SAME. MAX WALLERSTEIN and LEO WALLERSTEIN, New York, N. Y. Filed June 21, 1916. Serial No. 104,918. (Cl. 99—11.)

1. A composition or synthetic extract having an aroma and flavor similar to that of malt and containing the reaction products of amino bodies and sugar.

2. A composition or synthetic extract having an aroma and flavor similar to that of malt and containing the reaction products of amino bodies having the characteristics produced by the hydrolyzation of proteins, and sugar.

3. The process of producing an extract consisting in allowing amino bodies to react with a sugar which has the characteristic during the reaction of developing an aroma and flavor similar to that of malt, the reaction being carried on until this characteristic flavor and aroma are developed.

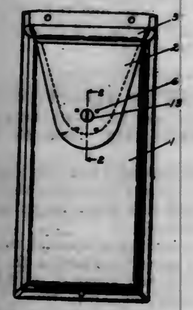
4. The process of producing an extract consisting in mixing amino bodies having the characteristics of amino bodies produced by the hydrolyzation of proteins with a sugar or sugars having the characteristic of reacting with such amino bodies to produce a flavor and aroma similar to that of malt, the mixture being in concentrated

condition, and allowing the mixture to react until the flavor and aroma of malt are produced.

5. The process of producing an extract consisting in mixing amino bodies having the characteristics of amino bodies produced by the hydrolyzation of proteins with a sugar or sugars having the characteristic of reacting with such amino bodies to produce a flavor and aroma similar to that of malt, the mixture being in concentrated condition, and allowing the mixture to react until the flavor and aroma of malt are produced, the mixture being maintained at a temperature of about 90° C. during the reaction period.

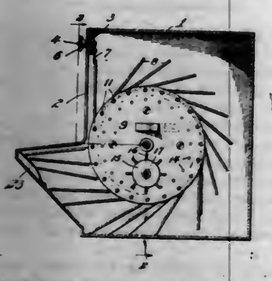
[Claims 6 to 10 not printed in the Gazette.]

1,214,731. LOCK FOR SHEET-METAL BOXES. VICTORY HOWARD WATTLES and PERRY A. REYNOLDS, Battle Creek, Mich. Filed Jan. 24, 1916. Serial No. 73,832. (Cl. 70—115.)



The combination of a sheet metal box with a sheet metal lid hinged thereto, a bolt lock with a sheet metal front plate disposed in the plane of said lid and having a keeper formed integrally therewith, with the engaging portion thereof at right angles to the direction of the plane of the lock bolt, the side of the box being perforated for engagement with the engaging portion of said keeper at a point in proximity to the end of the bolt and the bolt being disposed to engage the inside of the wall of said box near said perforation, as specified.

1,214,732. CARD-DISPLAY DEVICE. ROBERT HOPKINS and ALBERT G. WEIDENSEE, Sheffield, Ala. Filed Aug. 13, 1915. Serial No. 45,311. (Cl. 40—35.)

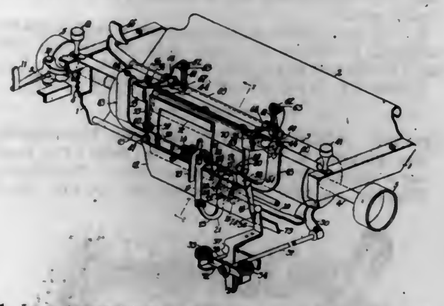


1. In a card display device, the combination of a drum, a series of card supports carried thereby, an annular series of pins secured to said drum, a drive pinion comprising a body and a series of independently detachable teeth adapted to mesh with said series of pins, and means for rotating said drive pinion.

2. In a card display device, the combination of a casing provided with a display opening, a rotatable drum, a series of card supports on said drum, an adjustable shutter for varying the size of said display opening, stops on said shutter for engaging the respective card supports, an annular series of pins secured to said drum, a drive pinion comprising a body and a series of independently detachable teeth adapted to mesh with said series of pins, and means for rotating said drive pinion.

3. In a card display device, the combination of a drum, a series of card supports spaced equally about the periphery thereof, spring stops for engaging the respective card supports, an annular series of equally spaced pins secured to said drum and corresponding in number to the number of card supports in said series, a drive pinion comprising a body and a series of independently detachable teeth adapted to mesh with said annular series of pins, and means for rotating said drive pinion.

1,214,733. TYPE-WRITING MACHINE. LESTER A. WERNERY, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 21, 1915. Serial No. 35,211. (Cl. 197—135.)



1. In a typewriting machine, the combination with a platen, of guides between which cards may be fed across the printing line, said guides arranged to engage the edges of the cards and control their position lengthwise of the platen, rollers carried by said guides for holding the cards against the platen at the printing line, means to move said guides to carry the rollers away from the platen, and means for varying the pressure of the rollers on the cards.

2. In a typewriting machine, the combination with a platen, of guides having guiding surfaces arranged to engage the edges of cards and between which the cards may be fed across the printing line, and rollers, carried by the guides, for holding the cards against the platen at the printing line, said guides being mounted for movement perpendicularly to the platen axis so that the pressure of the rollers on the cards may be relieved or intensified.

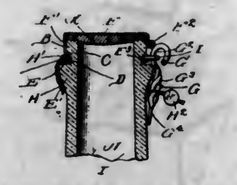
3. In a typewriting machine, the combination with a platen, of edge guides for cards on the platen, rollers for holding the cards against the platen at the printing line, the rollers being mounted on said guides, and means for shifting the guides and thereby lifting the rollers from the platen to permit the insertion of a card.

4. In a typewriting machine, the combination with a platen, of edge guides for cards on the platen, rollers for holding the cards against the platen at the printing line, the rollers being mounted on said guides, means for shifting the guides and thereby lifting the rollers from the platen to permit the insertion of a card, and means for locking the rollers in said lifted position.

5. In a typewriting machine, the combination with a platen frame and platen, of a support mounted on the platen frame ends and extending along the platen above the printing line, rollers bearing against the platen at the printing line, rock arms depending from said support and on which the rollers are carried, brackets on said support, springs connecting the roller arms to the brackets, and cams between the brackets and roller arms for throwing the rollers from the platen against the action of the springs.

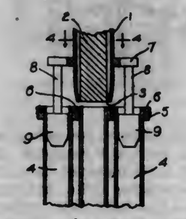
[Claims 6 to 38 not printed in the Gazette.]

1,214,734. BOTTLE AND CAP. GEORGE A. WILLIAMS, Waterbury, Conn., assignor to The Williams Sealing Corporation, Waterbury, Conn., a Corporation of Connecticut. Filed Mar. 21, 1910. Serial No. 550,674. (Cl. 215—88.)



The combination with a bottle, of a cap adapted to fit upon the mouth of said bottle, a lever connected with said cap and adapted to fasten the same upon said bottle mouth, said lever being adapted to rest against the neck of the bottle when said cap is fastened, and a wire connected to said cap, at the rear central portion, said wire encircling the neck of said bottle, the forward free ends of said wire being fastened around said lever when at rest against said bottle neck, whereby a seal is provided, as set forth.

1,214,735. BURNER. WILLIAM H. WINSLOW, Chicago, Ill., assignor to Winslow Safety High-Pressure Boiler Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 8, 1912. Serial No. 682,426. (Cl. 113—79.)



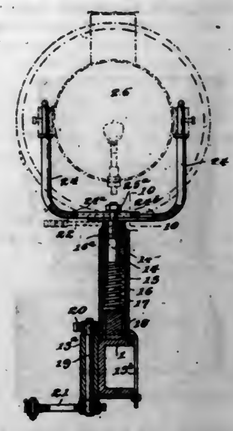
1. In combination, a manually movable burner for brazing or fusing metals having a nozzle delivering a hollow cylindrical flame, and a gage attached to said burner, said gage having a conical member fitting into regularly spaced openings in said work to bring the flame of said burner into accurate alinement about an opening in said work.

2. Means for joining tubes to a boiler tube sheet, or the like, by autogenous welding, comprising a burner delivering a hollow cylindrical flame of a diameter corresponding to the adjacent edges of the tube and sheet to be joined, gage-means secured to said burner and having a cylindrical plug fitting closely within an open tube but allowing movement in and out of said tube to adjust the flame from the burner relative to the work.

3. Means for joining tubes to adjacent parts by autogenous welding, comprising a burner delivering a hollow cylindrical flame of an outline corresponding to the edge of the tube and adjacent part or parts to which it is to be joined, gage-means comprising a cylindrical plug with a tapered end adapted to enter the open end of one of said tubes to aline the burner with the edges to be joined, said gage-means being adjustable with respect to the parts to be joined to allow of proper adjustment of the flame relatively to the tubes to be joined.

4. Means for joining tubes to a tube-sheet or the like by autogenous welding, said means comprising a burner delivering a hollow cylindrical flame of a diameter corresponding to the adjacent edges of the tube and sheet to be joined, gage means secured to said burner, said gage means comprising a plug with a tapered front portion of a diameter less than the open end of the tube, and a rear portion of a diameter substantially that of the open tube, said plug being relatively movable axially of the tube to permit adjustment of the burner flame relatively to the work.

1,214,736. DIRIGIBLE HEADLIGHT. LEO JOSEPH WOGENSTAHL, San Antonio, Tex., assignor to Automatic Search Light Company, Phoenix, Ariz., a Corporation of Arizona. Filed Apr. 24, 1914. Serial No. 834,226. (Cl. 240—62.)



1. In a vehicle of the class described, the combination with the frame, the steering mechanism, the lamp, and the rotatable and vertically movable lamp-carrying spindle, of the spur gear on the spindle in permanent working relation therewith as it moves vertically, a second spur gear mounted in fixed position on the main frame and held in permanent mesh relation with the spur gear on the spindle, and operating connections between the second gear and the steering mechanism and mounted in fixed positions on the frame.

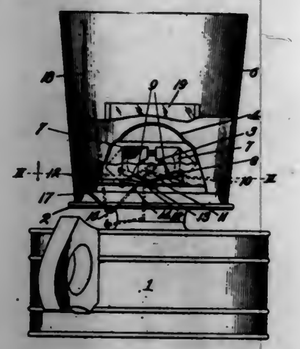
2. In a vehicle of the class described, the combination with the frame, the steering mechanism, the lamp, and the rotatable and vertically movable lamp-carrying spindle, of the spur gear on the spindle having relatively elongated spur teeth and held in fixed working relation with the spindle, a second spur gear mounted in fixed position on the main frame and having relatively short teeth held in permanent mesh relation with the gear on the spindle, and operating connections between the fixed gear and the steering mechanism and mounted in fixed positions on the frame.

1,214,737. LAMP FLAME-REGULATING BURNER. CORNELIUS R. WOLCOTT, McLouth, Kans. Filed Sept. 5, 1916. Serial No. 118,473. (Cl. 67—72.)

1. The combination with a lamp burner, having a wick tube, a wick, and a burner tip inclosing the upper end of the wick tube and wick and having a slot vertically above the same, of a pair of parallel shafts journaled in the burner tip at opposite sides of the wick tube and provided within the latter with outwardly projecting cranks, and exterior to said tip with inwardly projecting cranks having a slidable interlocked relation whereby either shaft may transmit power to the other shaft, a pair of flame hoods respectively secured to the outwardly projecting cranks of said shafts and adapted to respectively cover and uncover the upper corners of the wick tube and the upper end of the wick, and a crank arm forming an extension of one of the inwardly projecting cranks and disposed exteriorly of the burner, and adapted when operated to rock the shafts and transmit power to the hoods thereof.

2. The combination with a lamp burner, having a wick tube and wick, of a pair of shafts suitably journaled and provided with crank arms slidingly interlocked to transmit power from one to the other, a pair of flame hoods mounted on said shafts and adapted when swung inwardly by said shafts to cover the wick outward of its

center, and when swung in the opposite directions to uncover the wick; one of said crank arms having an arm extending downward through the underlying part of the burner and the last-named arm an arm projecting outwardly beyond the plane of the periphery of the burner and terminating at its outer end in a crank, and a rod connected to swing said last-named crank upwardly or downwardly to effect covering or uncovering movements of said hoods.

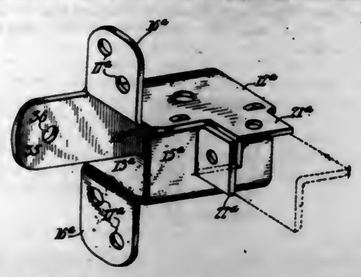


3. The combination with a lamp burner, having a wick tube and a wick therein and also having a burner tip and a slot exterior to said burner tip, of a pair of parallel shafts extending across the burner tip and journaled therein at opposite sides of the wick tube, and provided centrally with cranks fitting around the outer edges of the wick tube, and provided also with inwardly projecting cranks externally of the burner tip, one of said cranks being slotted and the other provided with an outwardly projecting pin engaging the slotted crank, and one of said last-named cranks having an arm extending down through and adapted to swing in said slot of the burner, means for swinging said arm and thereby reversely rotating said shafts simultaneously, and flame hoods secured to the said central cranks of said shafts and adapted under corresponding movements of the latter, to swing inwardly over the wick and wick tube or outwardly to uncover the wick and wick tube.

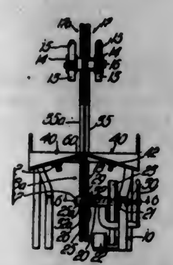
4. The combination with a lamp burner, having a wick and wick tube, a burner tip and a slot exterior to said burner tip, of a pair of parallel shafts extending through and journaled in the burner tip at opposite sides of the wick tube, and provided with outwardly projecting cranks through which the wick tube extends; said shafts at corresponding ends being provided with inwardly projecting cranks having a pin and slot connection, the slotted crank having an arm extending downward through the said slot of the burner, an arm projecting outwardly from the lower end of the downwardly extending arm and a crank extending upwardly and laterally from the outer end of the last-named arm, means connected to said crank to swing the same and thereby rock said shafts simultaneously in opposite directions, and substantially triangular flame hoods rigidly secured to the first-named cranks of said shaft and adapted to be swung by the latter to cover or uncover the wick.

1,214,738. CORNER-POST FASTENING. AARON WOLF, New York, N. Y. Filed May 27, 1913. Serial No. 770,095. (Cl. 5—55.)

A corner post fastening including a tubular member formed from a sheet metal blank having its opposite edges secured together, said member having the top and bottom walls thereof provided with extensions bent upwardly and downwardly respectively, to lie in substantially the same vertical plane and adapted for direct engagement with the side of a corner post to hold said tubular member in a substantially horizontal position, the top wall extending laterally beyond one side wall to form an attaching lug for a cross-rail and the end of said tubular member opposite to said corner post being open to receive therein the end of a side-rail.



1,214,739. MEAT-CUTTER. WILSON R. WOODS, Los Angeles, Cal. Filed Apr. 7, 1916. Serial No. 89,707. (Cl. 17—24.)

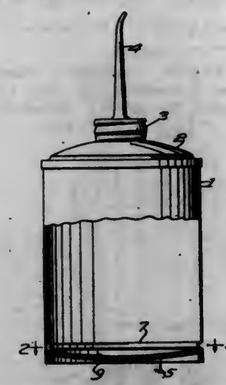


1. In combination, a frame, two sets of wheels mounted upon the frame, a band saw mounted upon one set of wheels and a band knife mounted upon the other set of wheels, means for operating either the band saw or band knife, the band saw and band knife being arranged back to back in the same plane, and a meat carrying table mounted upon the frame and adapted to slide horizontally in a direction parallel to the plane of the band saw and band knife, an upwardly extending ledge upon each of the ends of the carrying table, against which ledges the meat may be placed when it is to be moved with the table.

2. In combination, a frame, two sets of wheels mounted upon the said frame, a band saw mounted upon one set of wheels and a band knife mounted upon the other set of wheels, means for operating either the band saw or band knife, the band saw and band knife being arranged back to back in the same plane, and a meat carrying table mounted upon the frame and adapted to slide horizontally in a direction parallel to the plane of the band saw and band knife, an upwardly extending ledge upon each of the ends of the carrying table, against which ledges the meat may be placed when it is to be moved with the table, the meat carrying table being at one side of the plane of the band saw and band knife, and a table mounted upon the frame on the other side of the plane of the band saw and band knife and sloping away from the band saw and band knife, such table adapted to receive the slice severed from the piece of meat.

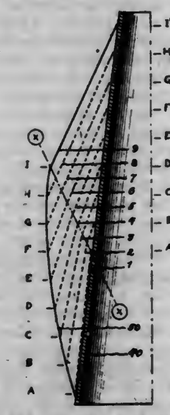
3. In combination, a frame, two sets of wheels mounted upon the said frame, a band saw mounted upon one set of wheels and a band knife mounted upon the other set of wheels, means for operating either the band saw or band knife, the band saw and band knife being arranged back to back in the same plane, and a meat carrying table mounted upon the frame and adapted to slide horizontally in a direction parallel to the plane of the band saw and band knife, an upwardly extending ledge upon each of the ends of the carrying table, against which ledges the meat may be placed when it is to be moved with the table, the meat carrying table being at one side of the plane of the band saw and bank knife, and a table mounted upon the frame on the other side of the plane of the band saw and the band knife and sloping away from the band saw and band knife, such table adapted to receive the slice severed from the piece of meat, said sloping table having a slot extending from end to end parallel to the plane of the band saw and knife, and a gage plate adjustably mounted upon said table through the medium of means passing through and slidable along said slot.

1,214,740. OIL-CAN. EDWARD YOUNG, Jeffersonville, Ohio, assignor of one-half to Auburn W. Duff, Washington Court-House, Ohio. Filed Apr. 7, 1916. Serial No. 89,619. (Cl. 221—48.)



An oil can comprising a body; an oil outlet carried by the body; a resilient bottom mounted on the body, the body being pressed inwardly to form a circumscribing rib disposed above the bottom; and a spring strip resting on the bottom and having its ends engaged beneath the rib, the ends of the rib being spaced apart to define an opening through which one end of the spring may be inserted beneath the rib after the other end of the spring has been mounted beneath a remote part of the rib, the body being dented inwardly between the ends of the rib to form a projection alined with the rib circumferentially of the body, and constituting means for preventing either end of the spring from being disengaged from beneath the rib, through the opening, when the spring is rotated.

1,214,741. KNITTING-YARN PACKAGE. JACOB K. ALTEMUS, Philadelphia, Pa. Filed Apr. 7, 1915. Serial No. 19,727. (Cl. 242—161.)

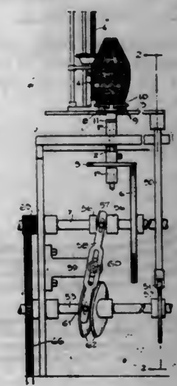


1. A knitting yarn package including a conical foundation having wound thereon successive coniform layers all of uniform traverse and uniform gain, the spirals of the layers being laid closer together at the base than at the top portions of the layers.

2. A knitting yarn package including a conical foundation having wound thereon successive coniform layers of uniform traverse and uniform gain, the spirals being gradually closer together at the base than at the top portions of the layers.

3. A knitting yarn package including a conical foundation having wound thereon successive progressive and retroprogressive coniform layers of uniform traverse and gain, the spirals of said layers being closer together at the base than at the top portions of said layers, the progressive layers having more spirals than the retroprogressive layers.

1,214,742. YARN-WINDING MACHINE. JACOB K. ALTEMUS, Philadelphia, Pa. Filed Apr. 7, 1915. Serial No. 19,728. (Cl. 242—31.)



1. In a winding machine, a rotary winding head, a yarn delivery guide associated therewith, means for imparting uniform traversing strokes of increasing speed toward their upper limits to said guide, independently acting mechanical means to impart uniform gain movement to said yarn guide, and means for increasing the winding head speed when the yarn guide increases its rate of movement.

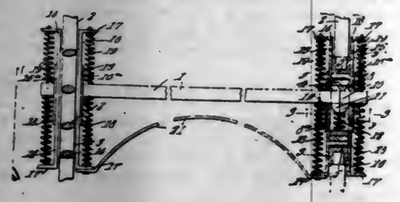
2. In a winding machine, a winding head, a yarn delivery guide associated therewith, means for imparting to said guide progressive and retroprogressive traversing strokes of increasing speed toward their upper limits, traversing strokes of one kind alternating with and being slower than those of the other kind, means for imparting uniform gain movement to said yarn guide after the latter has made strokes of both kinds, and means for increasing the winding head speed when the yarn guide increases its rate of movement.

1,214,743. SPRING-WHEEL MOUNTING. FRANK M. ARNOLD, Grand Rapids, Ohio. Filed May 31, 1916. Serial No. 100,867. (Cl. 21—187.)

1. In a device of the character described, a member having a vertical slot, a wheel hub rotatable upon said member, plates secured to the opposite sides of said member and overlapping said hub, said plates having vertical slots registering with the aforesaid slot, an axle projecting through said slots, said plates having brackets, and springs between said brackets and axle for yieldably moving said member downwardly relative to the axle.

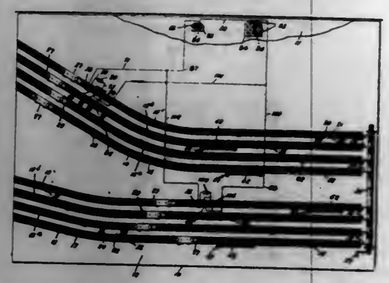
2. In a device of the character described, a disk composed of segmental-shaped sections having a slot therebetween and grooves in their adjacent edges, a ring in which said disk is fitted, a wheel hub rotatable upon said ring, plates resting against the opposite sides of said disk and overlapping said ring and hub to hold them in rela-

tive position, said plates having vertical slots registering with the aforesaid slot, an axle projecting through said slots and having lugs working in said grooves, securing



means engaging through said plates and sections of said disk, said plates having brackets, and springs between said brackets and axle for yieldably moving said disk downward relative to the axle.

1,214,744. MECHANICAL BATTLE. JOSEPH BAILEY, Newark, N. J., assignor of one-half to Henry A. Jaeger, Jersey City, N. J. Filed Oct. 19, 1916. Serial No. 126,557. (Cl. 46—70.)



1. In a mechanical battle, a plurality of tracks, a war ship member movable on each track and having guns, a lamp on each of the guns, a normally open electric circuit on each ship member leading to each lamp for lighting the lamps, operative means on each ship member whereby the electric circuit may be closed and opened, and a trip on each track, adapted when the ship members are moved to coact with the operative means of each ship member to close the circuit thereof so that the lamps may be lighted.

2. In a mechanical battle, a plurality of tracks, a war ship member movable on each track and having guns, a lamp on each of the guns, a normally open electric circuit on each ship member leading to each lamp for lighting the lamps, a switch on each ship member whereby the electric circuit may be closed and opened, and a trip on each track, adapted when the ship members are moved to coact with the switch of each ship member to close the circuit thereof so that the lamps may be lighted.

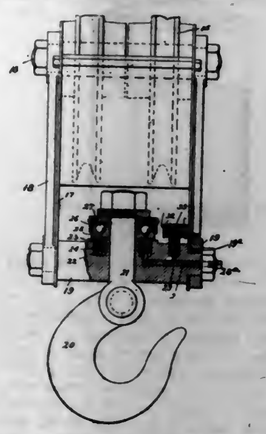
3. In a mechanical battle, a plurality of tracks, a war ship member movable on each track and having guns, a lamp on each of the guns, a normally open electric circuit on each ship member leading to each lamp for lighting the lamps, a plurality of switches on each ship member whereby the electric circuit may be closed and opened to alternately light the lamps, and a plurality of spaced trips on each track, adapted when the ship members are moved to coact with each switch of each ship member to close the circuit thereof so that the lamps may be successively lighted.

4. In a mechanical battle, a plurality of tracks, a war ship member movable on each track and having guns, a lamp on each of the guns, a normally open electric circuit on each ship member leading to each lamp for lighting the lamps, and means adapted when each ship is moved to cause the circuit to be opened and closed whereby the lamps of each ship will be successively lighted.

5. In a mechanical battle, a plurality of tracks, a war ship member movable on each track and having guns, a lamp on each of the guns, a normally open electric circuit on each ship member leading to each lamp for lighting the lamps, operative means on each ship member whereby the electric circuit may be closed and opened, a plurality of spaced stationary trips on each track, adapted when the ship members are moved to coact with the operative means of each ship member to close the circuit thereof at intervals so that the lamps may be successively lighted, and a movable series of trips on each track to operate the operative means for closing the circuit of each ship to cause the lamps to be lighted in quick succession independent of the lighting of the lamps by the stationary trips.

[Claims 6 to 18 not printed in the Gazette.]

1,214,745. HOIST-BLOCK. CLEMENT E. BEARD, Columbiana, and WALTER G. STEPHAN, Cleveland, Ohio. Filed May 15, 1911, Serial No. 627,111. Renewed June 29, 1915. Serial No. 37,118. (Cl. 73—101.)



1. In combination with a hoisting apparatus having a frame and a load supporting member, means for weighing the load supported by said member comprising an electrical measuring instrument, a controlling device associated with said instrument, a pressure actuated device associated with said controlling device, a cylinder and piston to the latter of which the load supporting member is connected, and means for transmitting pressure from the said cylinder to said pressure actuated device.

2. In combination with hoisting apparatus having a frame and a load supporting member, means for weighing the load supported by said member comprising an electrical measuring instrument, a variable electrical device carried by the frame and connected to said instrument, and means for varying said device to a degree dependent upon the load supported by said member comprising a cylinder and piston to one of which the variable electrical device is operatively connected, a cylinder and piston to one of which the load supporting member is connected, and means for transmitting pressure from the part connected to the load supporting member to the part connected to the variable electrical device.

3. In combination with a hoisting apparatus having a frame and a load supporting member, said frame having a cylinder formed therein, a piston in the cylinder, the load supporting member being carried by the said piston, a second cylinder in the frame, the second cylinder and first mentioned cylinder being connected by a fluid filled passageway, a piston coöperating with the second cylinder, a pressure rheostat, the second mentioned piston forming a part of said rheostat, an electrical measuring instrument, said instrument being electrically connected with the rheostat.

4. In combination with a hoisting apparatus having a frame and a load supporting member, means for weighing the load supported by said member comprising an electrical measuring instrument, a variable risistance device carried by the frame and connected with the said instrument, and means for varying the resistance in said device in accordance with the load supported, comprising a well formed in the frame and a piston which supports the load, a second well formed in the frame, and connected with the first mentioned well by a fluid filled passageway, a piston in said second mentioned well, and operatively connected with the resistance device.

1,214,746. BOTTLE-CAP. THOMAS S. BELL, Baltimore, Md. Filed June 15, 1915. Serial No. 34,158. (Cl. 215—24.)



1. A bottle cap in the form of a paper disk covering the mouth of the bottle and having a crimped skirt to inclose the lip and a considerable portion of the neck of the bottle, the disk having at its edge and at the end of a diameter extending in the direction of the grain of the paper, a tab serving as a grip to be used in tearing the cap in two to remove it.

2. A bottle cap in the form of a paper disk covering the mouth of the bottle and having a skirt to inclose the lip and a considerable portion of the neck of the bottle, the disk having a tab at the end of a diameter extending in the direction of the grain of the paper, and means for fixing the point diametrically opposite the tab to form a tearing point toward which the line of rupture extends when tension is applied to the tab.

3. A bottle cap in the form of a paper disk covering the mouth of the bottle and having a skirt to inclose the lip and a considerable portion of the neck of the bottle, the disk having a tab at the end of a diameter extending in the direction of the grain of the paper, means for fixing the diametrically opposite point to form a tearing point toward which the line of rupture extends when tension is applied to the tab, and a pasted paper band encircling the edge of the cap, drawn tight to cause the edge of the skirt to hug the neck of the bottle.

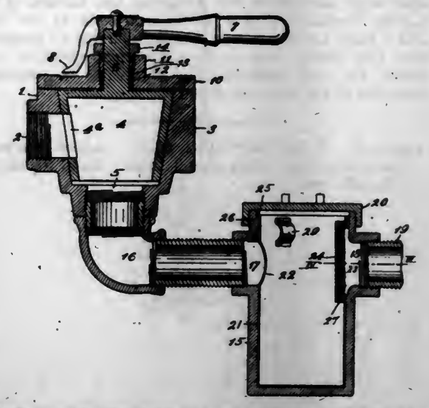
4. A bottle cap in the form of a paper disk covering the mouth of the bottle and skirted to inclose the lip and a large portion of the neck, the cap having a paper tab on one side and a notch on the other, and a pasted paper band encircling the periphery of the skirt to cause it to hug the bottle neck, the paste on the band engaging the bottle neck through the aperture formed by the notch to form a fixed point toward which the cap is torn when tension is applied to the tab.

5. A bottle cap in the form of a paper disk covering the mouth of the bottle and skirted to inclose the lip and a large portion of the neck, the cap having a paper tab on one side and a notch diametrically opposite in the direction of the grain of the paper, and a pasted paper band encircling the periphery of the skirt to cause it to hug the bottle neck, the paste on the band engaging the bottle neck through the aperture formed by the notch to form a stationary point toward which the cap is torn when tension is applied to the tab.

[Claims 6 to 9 not printed in the Gazette.]

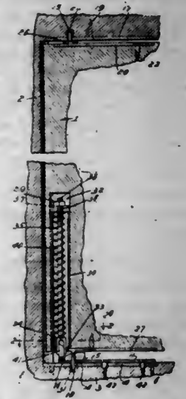
1,214,747. MULTIWAY VALVE. EDWARD T. BETKER, Kansas City, Mo. Filed Nov. 22, 1915. Serial No. 62,758. (Cl. 210—16.)

1. A trap having a depressed circular shoulder on its interior and beneath its top and also having a side inlet and an outlet, a strainer in the trap having its upper end turned outwardly and engaged with said shoulder, said strainer having an inlet and an outlet, said trap having a recessed part surrounding the outlet thereof, a screen extending over the strainer outlet, and a bead surrounding the margin of said screen and conformably fitted in the recessed part of the trap which surrounds the trap outlet.



2. In combination with a trap having an inlet and an outlet, a strainer in the trap having its top open and terminating below the top of the trap, interengaging means between the strainer top and the trap top to seal the space between the two, said strainer having an inlet, a screen extending across the strainer outlet, and interengaging means between the strainer at points surrounding the screen and the trap outlet to seal the space between the strainer and screen at points surrounding the screen.

1,214,748. DOOR CLOSER-HINGE. MORRIE BRAND, San Francisco, Cal., assignor of one-half to Joseph Hughes, San Francisco, Cal. Filed June 1, 1916. Serial No. 101,086. (Cl. 16—25.)



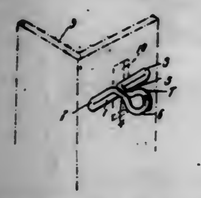
1. A door closer hinge embodying a plate for attachment to the floor, an adjusting plate for coöperation therewith having oppositely disposed cam faces, a plate for attachment to a door having a depending member engaged in coincident openings in said plates, a tubular member and a spring-actuated beveled wheel movable within said tubular member and engageable with said cam surfaces.

2. A door closer hinge comprising a plate for attachment to the floor and having an elongated slot, an adjusting plate having transversely elongated slots and a plate for attachment to a door having a pin engageable in an opening in said adjusting plate and in the elongated slot

of the floor plate, said adjusting plate having a member with oppositely disposed cam surfaces and a spring-actuated wheel engageable with said cam surfaces.

3. In a door closer hinge, a plate attachable to the bottom edge of a door and having a depending pin and an upwardly extended barrel, a stem guided in said barrel, a wheel revolubly carried by said stem, a spring around said stem and means for adjusting the tension of the spring, combined with a plate attachable to the floor and a plate for coöperation therewith having an elongated slot and having cam surfaces for engagement by said wheel, the said depending pin engageable in coincident openings in the last-named plates.

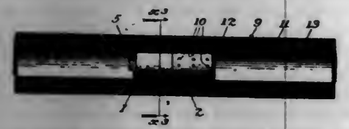
1,214,749. WIRE-SECURING CLIP. ANTON BRUFLAT, Barneveld, Wis. Filed May 6, 1916. Serial No. 95,872. (Cl. 256—48.)



1. A wire securing clip for use in conjunction with a metal post having elongated openings therein, comprising a single piece of wire bent and folded upon itself to form an elongated and substantially flat anchoring portion to be received through one of the openings of the post and to be held in place therein as the clip is given a quarter turn, and a portion of the wire shaped to be closed upon the line wire which is to be secured and to thus fasten the line wire in place on the post and at the same time hold the clip against return movement to the relation in which it can be removed from the opening of the post.

2. A wire securing clip for use in conjunction with a metal post having slotted openings therein, comprising a single piece of wire bent up and shaped to form an elongated anchoring portion, the ends of the wire being bent angularly from one side of the anchoring portion and then shaped to form securing fingers originally disposed in a spread relation, and all of said parts being so arranged that the anchoring portion may be inserted through the slotted opening and when the clip has been turned to dispose the anchoring portion in a relation to be held against displacement the wire to be secured may be inserted between the fingers and these fingers may be closed down upon the wire to secure the same against displacement and to also hold the clip against turning movement to become dislodged from the anchoring relation within the slotted opening.

1,214,750. CONTAINER-CORE FOR ROLLS OF PAPER AND THE LIKE. ALVIN G. BURTIS, Huntington Park, Cal., assignor of one-half to Sylvester L. Weaver, Los Angeles, Cal. Filed Mar. 22, 1916. Serial No. 85,812. (Cl. 206—47.)

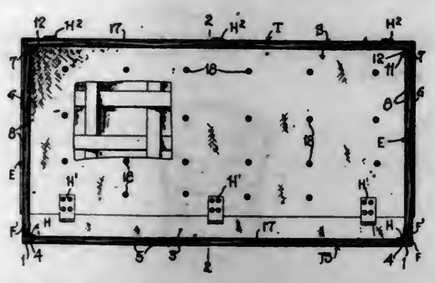


1. The combination with a roll of sheet material, of a core therefor forming a container, said container having projections in its peripheral wall to hold it in place.

2. The combination with a roll of sheet material, of separate containers telescoped for a portion of their length to form a cylindrical unitary core of uniform diameter and having openings in their outer ends and having removable closures for said openings.

3. The combination with a roll of sheet material, of a container provided with means to engage the interior surface of the roll to prevent endwise slipping of the container relative to the roll.

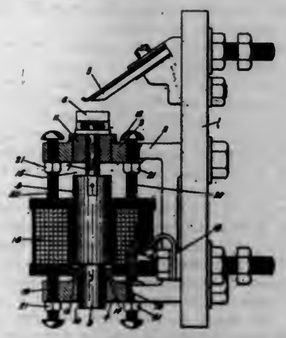
1,214,751. INVOLUTE CASE. COLIN D. CAMERON, Amesbury, Mass. Filed June 3, 1916. Serial No. 101,577. (Cl. 217—15.)



1. A case comprising a bottom panel, side panels hinged thereto and adapted to fold inwardly thereon, end panels hinged to the bottom panel and adapted to fold inwardly thereon, each of said bottom panels, side panels and end panels including a skeleton frame, and an incasing cover of fabric, each of said frames being provided with longitudinally and transversely disposed straps arranged in inter-woven relation, the laminations of the incasing cover being secured one to the other at points intermediate said straps.

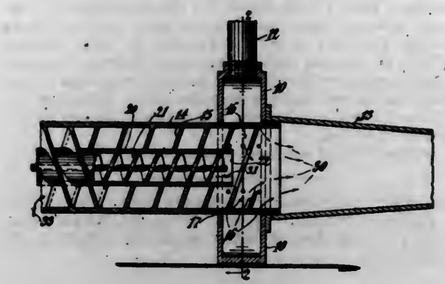
2. A case including a panel, said panel comprising a skeleton frame, and an incasing cover, said frame being provided with longitudinally and transversely disposed straps, the laminations of the incasing cover being secured one to the other at points intermediate said straps.

1,214,752. ELECTRIC SWITCH. HARRY R. CANFIELD, Cleveland, Ohio, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 9, 1911. Serial No. 607,560. (Cl. 175—281.)



In an electro-magnetic switch, a switch contact, a movable member of magnetic material, a second switch contact movable thereby into engagement with the first-named contact, a magnetic circuit including the movable member, a winding for magnetizing the circuit, there being a gap in the circuit adjacent to each end of the movable member, a magnetic shunt around one of the gaps for preventing the operation of the movable member to close the switch by current in the winding above a predetermined value, and means for adjusting the winding in the direction of its axis to vary the relation of the magnetic pulls at the gaps.

1,214,753. SYSTEM FOR FEEDING PULVERIZED FUEL. VIRGINIUS Z. CARACRISTI, Albany, N. Y., assignor to Locomotive Pulverized Fuel Company, a Corporation of Delaware. Filed Oct. 4, 1913. Serial No. 793,311. (Cl. 110—104.)



1. In a burner for pulverized fuel, comprising feeding means for feeding fuel, return means concentric with said feeding means and extending beyond the point where the fuel is discharged from said feeding means in the direction of feed for returning portions of the fed fuel, and air feeding means at the discharge end of said fuel feeding means for feeding air to said fuel as it leaves the fuel feeding means and as it commences its return movement in the return fuel means, said air feeding means concentrically surrounding the discharge end of the fuel feeding means and directing the stream circumferentially against all sides of the fuel as it leaves the fuel feeding means, said air feeding means being located intermediate the point where the fuel is fed from said feeding means, and the point where it is returned by said return means.

2. In a burner for pulverized fuel, an inclosed mixing space connected therewith, means for feeding a current of fuel, means for injecting inclined currents of air into said mixing space underneath said current of fuel and beyond the end of the fuel feeding means, and means around said fuel feeding means for returning the fuel not swept along by the air current to its original receptacle.

3. In a burner for pulverized fuel, an inclosed space for mixing air and fuel, means for injecting currents of fuel and air therein, moving surfaces, and means for impinging the air current upon moving said surfaces in the direction of the fuel flow before it impinges upon the current of fuel.

4. In a burner for pulverized fuel, an inclosed space for mixing said fuel with air, air feeding means for feeding the current of air to said inclosed space, and concentric feed and return screws operating in opposite directions to respectively feed the fuel against the air current and to return the fuel not swept along by said air current to its original receptacle, the said return screw extending beyond the said feed screw in the direction in which the fuel is fed from said feed screw, the said air feeding means being located intermediate the discharge end of the feed screw from which the fuel is fed, and the adjacent end of the return screw.

5. In a burner for pulverized fuel, an inclosed space for mixing air and fuel, means for feeding a current of fuel therein, means for injecting a current of air therein, against said current of fuel, and means for returning the fuel not swept along by said air current to its original receptacle, said air current being admitted in the return path of the fuel to its original receptacle.

[Claims 6 to 12 not printed in the Gazette.]

1,214,754. COUNTERBORING-TOOL AND HOLDER. DEAN F. CARSCADDEN, Flint, Mich. Filed Nov. 17, 1915. Serial No. 61,928. (Cl. 29—141.)



1. In a device of the character described, a socket member, an inwardly projecting pin carried by the wall of the socket member, a tool having a shank formed with a spiral groove to receive the pin, whereby the tool may be locked to the socket member, said shank having a chamfered edge and an annular depression, a ball supporting cage mounted in the wall of the socket member, a ball housed within the cage, and a spring adapted to project said ball outwardly and into the depression formed in the shank of the tool, whereby the latter may be held against accidental release from the socket member.

2. In a device of the character described, a socket member, a yieldable engaging device mounted in the wall of the socket member adapted to engage the shank of a tool inserted therein, an inwardly directed pin projecting from the wall of the socket member, a counterboring tool having a shank fitted to the socket member, and an adjustable pilot rod having a screw engagement with the tool, the shank of said counterboring tool having a depression to receive the yieldable engaging device, and also a spiral groove to receive the pin of the socket member.

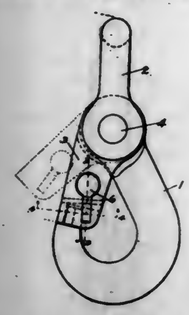
3. In a device of the character described, a socket member, a pin carried by the socket member having one side of its end projecting into the bore of the socket member to engage the shank of a tool, the opposite side of the pin being backed by the wall of said socket member, whereby it may sustain the rotative thrust of the tool, a tool having a shank fitted to the socket member formed with a spiral groove to receive the end of the pin, said shank also provided with a depression, and a spring actuated detent carried by the socket member adapted to enter the depression in the shank of the tool.

4. In a device of the character described, a socket member, a pin carried by the socket member having one portion only of its end projecting into the bore of the socket member to engage the shank of a tool, the other portion of the end of the pin being backed by the wall of the socket member, whereby it may sustain the rotative thrust of the tool, and a tool having a shank fitted to the socket member formed with a spiral groove to receive the projecting portion of the end of the pin.

1,214,755. HOOK. DENNIS CAVANAUGH, Portland, Oreg., assignor of one-half to Ed Halseth, Portland, Oreg. Filed Mar. 26, 1914. Serial No. 827,511. Cl. 24—241.)

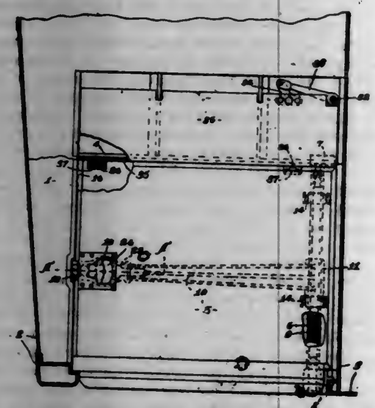
A hook of the character shown and described and comprising a hook having an eyelet at one end and a reduced end portion at its hooked end, a latch member pivotally connected at one end by means of a pin through said eyelet, and at its other end adapted to fit over the reduced end of said hook, whereby to inclose the same, said latch member swinging in the plane of said hook, and a pivoted

dog set in a side of the latch member parallel to one side of the hook, whereby as said latch member is gripped between the thumb and finger by its opposite sides, said



dog may be depressed, said dog being adapted to engage the reduced end of the hook when said latch is closed, whereby to prevent the opening of said latch, substantially as shown and described.

1,214,756. TRAP-DOOR FOR RAILWAY-CAR PLATFORMS. EDWARD F. CHAFFEE, Syracuse, N. Y., assignor to The O. M. Edwards Company, Inc., Syracuse, N. Y., a Corporation of New York. Filed July 23, 1915. Serial No. 41,529. (Cl. 105—84.)



1. A hinged trap door for railway car platforms comprising a floor, supporting means for the floor including a hinge member and a portion located under the floor, the floor being movable relatively to its supporting means, and a latch for holding the door in closed position, carried under the floor, by the supporting means, substantially as and for the purpose set forth.

2. A hinged trap door for railway car platforms comprising a floor, supporting means for the floor including a hinge member and a portion located under the floor, the floor being movable relatively to its supporting means, a latch carried under the floor by the supporting means for holding the door in closed position, and means exposed on the top side of the floor and coacting with the latch to operate the same, substantially as and for the purpose described.

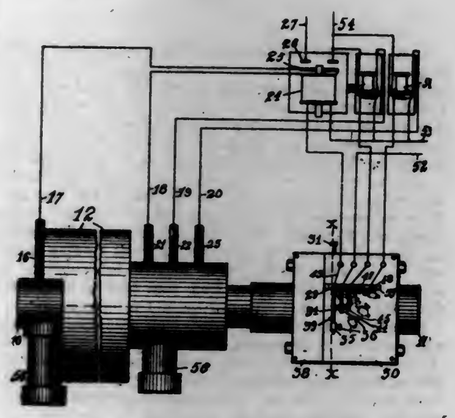
3. A hinged trap door for railway car platforms comprising a floor, supporting means for the floor including a hinge member and a portion located under the floor and extending around the edge thereof, the floor being movable relatively to said portion, a latch for holding the door in closed position, the latch being carried under the floor by the supporting means, and means carried by the floor of the door for operating the latch; in combination with means located at said edge of the door with which the portion of the supporting means extending around the edge engages, and a keeper for coacting with the latch, substantially as and for the purpose specified.

4. A hinged trap door for railway car platforms comprising a floor, a hinge member, a bracket mounted on the hinge member and underlying the floor, the floor being movable relatively to the bracket and the hinge member, and a latch for holding the door in closed position, the latch being carried by the bracket at the free end thereof, substantially as and for the purpose described.

5. A hinged trap door for railway car platforms comprising a floor, a hinge member, a bracket mounted on the hinge member and underlying the floor, the floor being slidable relatively to the bracket and the hinge member, a latch for holding the door in closed position, the latch being carried by the bracket near the free edge of the door, and means for operating the latch, carried by the floor and movable therewith, substantially as and for the purpose described.

[Claims 6 to 14 not printed in the Gazette.]

1,214,757. ELECTRIC WATER-HEATER AND AUTOMATIC CONTROL. DUDLEY B. CLARK, Bemus Point, N. Y. Filed May 9, 1916. Serial No. 96,309. (Cl. 219—39.)



1. An automatic control for an electric water heater comprising an electric heating element arranged for multiple heats for the water, and variable flow controlled means for said multiple heats to change the heating capacities with predetermined changes in the velocity of the water flow.

2. An electric water heater comprising an electric heating element provided with multiple heating means for said water, and a progressive, flow-actuated electrical control for progressively energizing said multiple heating means to obtain increased heating capacity with an increased velocity of the flow of the water.

3. An automatic control for an electric water heater comprising an electric heater having a plurality of resistance wires to heat the water, inlet and outlet pipes for the water to said heater, a valve in said outlet pipe actuated by the flow of the water, and a switch actuated by said valve having a plurality of electric contacts connected to said resistance wires to obtain different degrees of heat as desired by the action of said valve.

4. An automatic control for an electric water heater comprising a plurality of resistance wires for heating the water to obtain different degrees of heat therefrom, inlet and outlet pipes at opposite ends of said heater, a valve in said outlet pipe actuated by the flow of the water, an electric switch actuated by said valve, and a plurality of adjustable electric contacts on said switch connected to said resistance wires one to each wire to adjust the heating of the water by the velocity of the flow of said water.

5. A device of the class described comprising an electric water heater, a plurality of spaced resistance wires in said heater, inlet and outlet pipes in the opposite ends of said heater, an electrically connected valve in said outlet pipe to be actuated by the flow of the water, and a plurality of swing contact bars in spaced relation to said valve and connected to said resistance wires one to each wire to successively connect said resistance wires according to the flow of water through said outlet pipe.

[Claims 6 to 16 not printed in the Gazette.]

1,214,758. DRIVING-STIRRUP. JOSEPH S. COATES, Goshen, N. Y., assignor to Walter Tyrie Stevens, New York, N. Y. Filed Apr. 12, 1916. Serial No. 90,549. (Cl. 21—56.)



1. The combination with the thill of a vehicle, of a driving stirrup, a connection between the said stirrup and the thill detachable by movement of the stirrup in a direction other than the direction of the normal strains of use, said connection constructed and arranged to connect the stirrup and thill in different relative positions.

2. The combination with the thill of a vehicle, of a driving stirrup, a connection between the said stirrup and the thill detachable by movement of the stirrup in a direction other than the direction of the normal strains of use, and said connection comprising a series of projections, an extension on the stirrup pressable into the recesses between said projections and engaging between them.

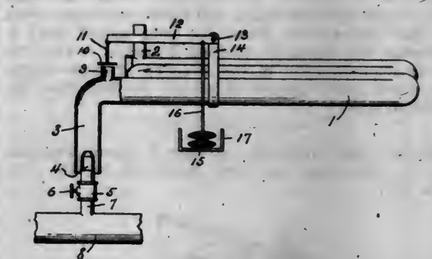
3. The combination with a thill of a vehicle, of a driving stirrup, a connection between the said stirrup and the thill detachable by movement of the stirrup in a direction other than the direction of the normal strains of use, said connection constructed and arranged to connect the stirrup and thill in different relative positions, comprising an extension on the said stirrup and a part extending from the stirrup in a direction different from the said projection, and means for constantly pressing one of the said two last named parts into contact with a portion of the connection secured to the thill.

4. In combination with the thill of a vehicle a driving stirrup detachably connected therewith spaced projections on said thill, means connected with said stirrup for adjusting the same longitudinally and for holding the same at different points to which it may be adjusted against movement in all directions comprising a member extending from the stirrup adapted to enter between the projections of the thill and a spring member extending from the stirrup having a position normally away from its connection with the vehicle, but adapted to be flexed to bring it into connection therewith and to thereby exert pressure upon the extension of the stirrup first mentioned, and a detachable connection between said spring member and the vehicle.

5. In a device of the character described, the combination of a stirrup, a ratchet device connected with the thill, a portion of said stirrup being constructed and arranged to engage the said ratchet device when the stirrup is in one position and to automatically disengage therefrom when the stirrup is moved to another position angular to the first mentioned position, and means for holding the stirrup in the first mentioned position.

[Claims 6 to 10 not printed in the Gazette.]

1,214,759. HEAT-RADIATOR. HARRISON H. COOK, Kansas City, Kans., assignor of one-half to Josephine Anthony, Kansas City, Kans. Filed Dec. 26, 1912, Serial No. 738,636. Renewed June 29, 1916. Serial No. 106,727. (Cl. 237—3.)



1. A heat radiator having an inlet for air mixed with steam, means by which steam is discharged at relatively low pressure into said inlet and mixed with relatively cold air passing therethrough, the radiator having an outlet for the mixed air and steam disposed at a greater elevation than said inlet, the inlet and outlet both being open to the atmosphere.

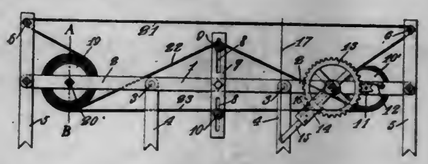
2. A heat radiator having a coil provided with an inlet and an outlet for steam and air, the convolutions of the coil being disposed in increasing elevations from the inlet end toward the outlet end, and means by which steam is discharged at relatively low pressure into the inlet and mixed with relatively cold air passing therethrough, the inlet and outlet both being open to the atmosphere.

3. A heat radiator comprising a conduit having an inlet and an outlet both open to the atmosphere and relatively so arranged that fluid is circulated through the conduit by natural draft, and means for supplying the inlet with steam at relatively low pressure mixed with relatively cold air.

4. A heat radiator having a conduit provided with an air inlet and an outlet and having a discharge opening intermediate of the inlet and outlet, means for supplying said air inlet with steam at relatively low pressure to be mixed with air entering therethrough, and means for controlling the discharge through said discharge opening.

5. A heat radiator having an air inlet and an outlet, the outlet being disposed higher than the inlet, and the radiator having a discharge opening intermediate of the inlet and outlet, means for supplying the air inlet with steam at relatively low pressure to be mixed with air entering therethrough, and means for controlling the discharge through said discharge opening.

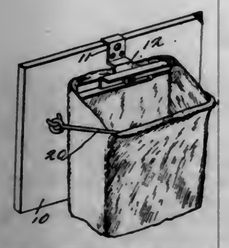
1,214,760. APPARATUS FOR FILTERING AIR. SUTTON COOPER, Evansville, Ind., assignor of one-half to Fred Offermann, Evansville, Ind. Filed Oct. 26, 1915. Serial No. 58,037. (Cl. 261—80.)



1. In air filtering apparatus, a liquid containing drum having peripheral apertures, a take-up drum, separate aprons resting one upon the other and each having its ends wrapped about the respective drums, said aprons being extended across the space between the drums and being spaced apart in said space, and means for actuating the drums to shift the aprons in the direction of their length.

2. The combination with an air conduit, of air filtering apparatus within and extending across the conduit, said apparatus including spaced drums having peripheral apertures, one of said drums constituting liquid supplying means, aprons arranged one against the other and each secured at its ends to the respective drums, said ends being wound upon the drums, said aprons extending across the space between the drums and being spaced apart in said space, and means for rotating the drums to shift the aprons simultaneously in the direction of their length, said aprons being adapted to receive moisture from the apertured drum.

1,214,761. BAG-HOLDER. ALBERT P. CRAIG, Drayton, N. D. Filed May 19, 1916. Serial No. 98,676. (Cl. 83—26.)



1. A bag holder comprising a supporting part, a bracket carried by the supporting part, a cross member carried by the bracket and spaced from the supporting part and under and over which the mouth of the bag is adapted to be engaged with the bag disposed between the cross member and the supporting part, and a bail pivoted to the supporting part a predetermined distance beneath the cross member and over the free portion of which the mouth of the bag is adapted to be engaged whereby the tendency of the free end of the bail to move downwardly under the influence of gravity will stretch the mouth of the bag fully open with the forward portion of the mouth disposed below the rear portions.

2. A bag holder comprising a supporting part, a bracket yieldingly held against the supporting part, and movable away from same, a cross member carried by the bracket over which the mouth of the bag is adapted to be engaged with the bag disposed between the cross member and the supporting part, and a bail pivoted to the supporting part and over the free end of which the mouth of the bag is adapted to be engaged whereby the tendency of the free end of the bail to move downwardly under the influence of gravity will stretch the mouth of the bag fully open.

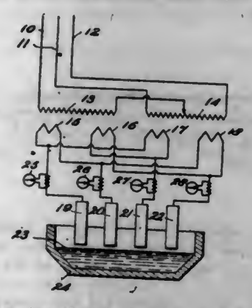
1,214,762. DOOR-HANGER. CHARLES ROY CROWELL, Greensburg, Pa. Filed Mar. 8, 1916. Serial No. 82,906. (Cl. 16—90.)



1. In a device of the class described, a hanger embodying a head having a substantially horizontal dove-tailed groove, the head being provided with a substantially vertical passage open at one end and communicating with the groove; and a bracket embodying a tongue shaped to fit in the dove-tailed groove of the hanger and slidably mounted therein, the passage in the hanger constituting an outlet for dirt pushed forwardly in the groove by the end of the rib.

2. In a device of the class described, a hanger including a hook-shaped portion and having a substantially horizontal head having a dove-tailed groove, the head being provided with a substantially vertical passage open at one end and communicating with the groove; a roller journaled between the hook-shaped portion of the hanger and the head, the upper extremity of the hook-shaped portion of the hanger being disposed above the roller; and a bracket embodying a tongue shaped to fit in the dove-tailed groove of the hanger and slidably mounted therein, the passage in the hanger constituting an outlet for the dirt pushed forwardly in the groove by the end of the rib.

1,214,763. ELECTRICALLY-HEATED STEEL-FURNACE. JOSEPH LAWTON DIXON, Detroit, Mich. Filed Oct. 14, 1916. Serial No. 125,558. (Cl. 204—64.)



1. In an arcing electric furnace, and in suitable combination with the electrodes thereof, a two phase transformer having two primary windings and two secondary windings for each primary winding, and conductors interconnecting the terminals of the secondary windings so as to produce a delta connection expressed by a rectangular vector diagram.

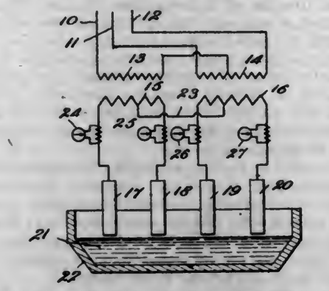
2. In an arcing electric furnace, a two phase transformer having two primary windings and two secondary windings for each primary winding, conductors inter-connecting the terminals of said secondary windings so as to produce a delta connection expressed by a rectangular vector diagram, a crucible, four electrodes over the same, and conductors connecting said electrodes to said secondary windings at the corners of the square in said vector diagram.

3. In an arcing electric furnace, a two phase transformer having two primaries and a pair of secondary windings for each primary, and conductors inter-connecting said secondary windings so that the left and right terminals of the left hand member of each pair are connected respectively with the left hand terminal of the left hand member and with the left hand terminal of the right hand member of the other pair, the remaining free terminals being mutually connected.

4. In an arcing electric furnace, a two phase transformer having two primary windings and a pair of secondary windings for each primary winding, said secondary windings being inter-connected so as to produce a delta connection expressed by a rectangular vector diagram; in combination with a crucible, and four electrodes over the same, two of said electrodes being connected respectively with the right and left terminals of the left hand member of one of said pairs of secondary windings, while the other two electrodes are connected respectively with the right and left terminals of the right hand winding of the same pair.

1,214,764. ELECTRIC STEEL-FURNACE. JOSEPH LAWTON DIXON, Detroit, Mich. Filed Oct. 14, 1916. Serial No. 125,559. (Cl. 204—64.)

1. In an arcing electric furnace of the type wherein the crucible forms no part of the circuit, two pairs of arcing electrodes, a suitable two-phase transformer connected therewith through two secondaries, and an electric connection between the neutral points of said secondaries.



2. In an arcing electric furnace of the type wherein the crucible forms no part of the circuit, two pairs of arcing electrodes, a transformer primary and secondary for each pair of electrodes so connected therewith as to supply two phase current thereto, a connection between the neutral points of the two secondaries and independent controlling devices of the ammeter type in electric relation with the respective leads of said electrodes and said devices.

1,214,765. EXPLOSIVE POWDER. JOHN L. DONNER, Oregon City, Oreg., assignor, by direct and mesne assignments, to John Brosnan, Jr., Washington, D. C. Filed June 13, 1916. Serial No. 103,567. (Cl. 52—1.)

1. An explosive powder including a mixture of the following ingredients: water, potassium chlorate, manganese dioxid, sugar and crude oil, the last mentioned element being in such proportion in relation to the composition, so as to allow for a quick and ready drying of the same.

2. An explosive mixture, consisting of a chlorate, manganese dioxid, sugar and crude oil.

3. An explosive mixture consisting of particles of chlorate, manganese dioxid, sugar and crude oil, in which the crude oil forms an envelop around the individual particles of chlorate.

4. The herein described process of producing an explosive compound which consists in mixing sugar with water and heating the same, then adding to the mass while hot manganese dioxid, then adding to the mass while hot crude oil, then adding to the mass while hot potassium chlorate and then drying the mixture.

1,214,766. EXPLOSIVE POWDER. JOHN L. DONNER, Oregon City, Oreg., assignor, by direct and mesne assignments, to John Brosnan, Jr., Washington, D. C. Filed June 13, 1916. Serial No. 103,568. (Cl. 52—1.)

1. An explosive powder including a mixture of the following ingredients: water, potassium chlorate, sugar, and crude oil, the last mentioned element being in such small proportion in relation to the composition as to allow for a quick and ready drying of the same.

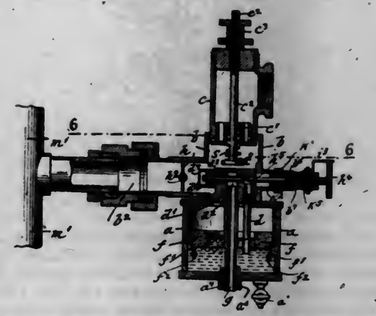
2. An explosive mixture, consisting of a chlorate, sugar and crude oil.

3. An explosive mixture, consisting of particles of chlorate, sugar and crude oil, in which the crude oil forms an envelop around the individual particles of chlorate.

4. The process of producing an explosive compound which consists in mixing sugar with water and heating the same, then adding crude oil to the mass while hot, then adding potassium chlorate to the hot mass and then drying the same.

1,214,767. CARBURETER. JOHN L. DRESSLER, New York, N. Y. Filed Mar. 8, 1913. Serial No. 752,891. (Cl. 261—51.)

1. In a carbureter, an outlet pipe for said carbureter, a revoluble throttle valve in said outlet pipe, a revoluble spindle in said outlet pipe, said throttle valve being mounted on said spindle, means on one end of said spindle for turning said throttle valve, a cam on the other end of said spindle, and adapted to be revolved therewith, a fuel pipe for said carbureter, a valve for said fuel pipe comprising a slidable non-rotatable interiorly threaded valve casing, a threaded valve stem slidably engaging said threaded valve casing, and controlling the opening of said fuel pipe, a hand wheel on said valve stem, and a pivoted forked lever engaging at its forked end said valve casing, a reciprocating rod disposed between the opposite end of said lever and said cam, and having contacting engagement therewith, and a spring on said valve casing adapted to maintain engagement of said cam, rod and forked lever, whereby the movement of said cam proportionately reciprocates said valve casing and said valve stem, said valve stem adapted to be rotatably moved independently of said casing by movement of said hand wheel.



2. In a carbureter, an outlet pipe for said carbureter, a revoluble throttle valve in said outlet pipe, a revoluble spindle in said outlet pipe, said throttle valve being mounted on said spindle, means on one end of said spindle for turning said throttle valve, a cam on the other end of said spindle, and adapted to be revolved therewith, a fuel pipe for said carbureter, a valve for said fuel pipe comprising a slidable non-rotatable interiorly threaded valve casing, a threaded valve stem rotatably engaging said threaded valve casing and controlling the opening of said fuel pipe, a hand wheel on said valve stem, provided on its periphery with serrations, and a pivoted forked lever engaging at its forked end said valve casing, a reciprocating rod disposed between the opposite end of said lever and said cam, and having contacting engagement therewith, and a spring on said valve casing adapted to maintain engagement of said cam, rod and forked lever, whereby the movement of said cam proportionately reciprocates said valve casing and said valve stem, said valve stem adapted to be rotatably moved independently of said casing by movement of said hand wheel, and a spring indicator on said valve casing extending over said periphery of said hand wheel, and resiliently engaging between the serrations thereof to accurately determine the movement of said hand wheel, and retain the said hand wheel in position.

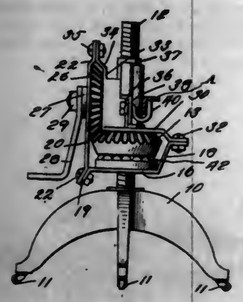
1,214,768. RESILIENT TIRE-CASING EXPANDER. THOMAS RUFFUS FELTS, Berlin, Ala. Filed May 15, 1916. Serial No. 97,638. (Cl. 152—8.)



An annular tire casing expander of arcuate cross section adapted to fit snugly in a tire casing and having overlapped end portions, the inner end portion having a longitudinal

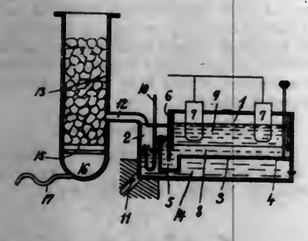
slot, an inwardly projecting ear attached to the outer end portion and projecting through said slot, a U-shaped member secured to the inner side of the inner end portion with its bend adjacent the respective end of the expander and with its limbs projecting away from said end along the edges of the said slot, the bend of said member having an inwardly projecting ear, and a retractile spring connecting said ears.

1,214,769. BED ELEVATING AND TRANSPORTING DEVICE. SALOME FILLION, Lake Linden, Mich. Filed Dec. 9, 1915. Serial No. 65,988. (Cl. 254—7.)



A bed elevating and transporting device comprising a stand having a vertical threaded shaft, a bevel pinion threadedly engaged on the shaft, a second similar pinion meshing therewith, means for rotating the second pinion, a casing inclosing the pinions and including an L-shaped portion disposed above the first pinion and partially supporting the second pinion, a tubular sleeve embracing the shaft and supported on the horizontal portion of the L-shaped member, laterally extending wings on the vertical portion of the L-shaped member, and a transversely extending plate having its ends provided with bed rail engaging hooks and detachably secured to the said wings, said transversely extending plate having its intermediate portion formed with a semi-cylindrical part which partially embraces the tubular sleeve.

1,214,770. PROCESS OF MAKING CYANOGEN COMPOUNDS. HANS FOERSTERLING and HERBERT PHILIPP, Perth Amboy, N. J., assignors to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed June 2, 1910. Serial No. 564,672. Renewed June 21, 1916. Serial No. 105,086. (Cl. 204—21.)



1. The method of making cyanogen compounds consisting in vaporizing a metal, capable of forming cyanogen compounds, from an alloy containing the same, and reacting upon the vaporized metal with nitrogenous and carbonaceous matter.

2. The method of making cyanogen compounds consisting in vaporizing a metal, capable of forming cyanogen compounds, from an alloy containing the same, by blowing an inert gas through the molten alloy and reacting upon the vapors with nitrogenous and carbonaceous matter.

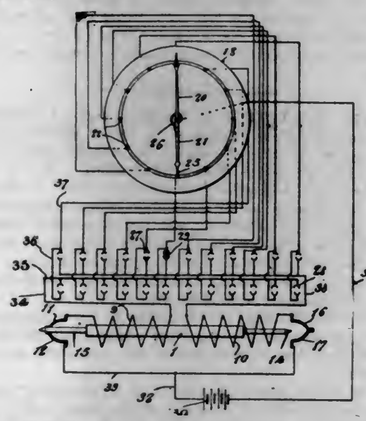
3. The method of making cyanogen compounds consisting in vaporizing a metal, capable of forming cyanogen compounds, from an alloy containing the same, by passing a current of nitrogen through the molten alloy and reacting upon the vapor mixture with carbonaceous matter.

4. The method of making cyanogen compounds consisting in electrolyzing a metallic compound containing a metal capable of forming cyanogen compounds, alloying said metal with another metal, separating the first metal by vaporization and reacting upon the vapors with nitrogenous and carbonaceous matter.

5. The method of making cyanogen compounds consisting in electrolyzing a metallic compound containing a metal capable of forming cyanogen compounds, alloying said metal formed with another metal, vaporizing the first metal in the presence of a current of nitrogen and reacting upon the vapor mixture with carbonaceous matter.

[Claims 6 to 38 not printed in the Gazette.]

1,214,771. TIME-SWITCH. ULYSSES D. FORTIER, Tulsa, Okla. Filed June 13, 1916. Serial No. 103,529. (Cl. 161—27.)

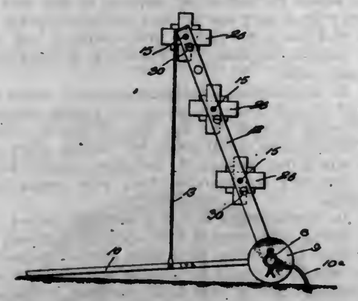


1. In a time controlled switch circuit, a power source, a time controlled circuit closer connected to one terminal of the power source, a switchboard, one set of terminals of the switchboard being independently connected to various contacts of the time controlled circuit closer, a pair of solenoids, the opposite set of switch board contacts being connected to the adjacent terminals of the solenoids, contact springs at the opposite terminals of the solenoids, a sliding armature for the solenoids, means carried by opposite terminals of the armature for alternate engagement between the springs and wires connecting the springs to the opposite terminals of the power source.

2. In a switch of the class described, a pair of solenoids, a sliding core operable through said solenoids, a time controlled switch, a power source, one terminal of said power source being connected to the time controlled switch, a pair of manually controlled switches connected to the opposite terminal of the time controlled switch, one of the last named switches being connected to one of the solenoids while the other of said switches is connected to the other solenoid whereby when either of the switches and the time controlled switch are in circuit one or the other of said solenoids will be energized.

3. In a switch of the class described, a pair of solenoids, a sliding core operable through said solenoids, a time controlled switch, a power source, one terminal of said power source being connected to the time controlled switch, a pair of manually controlled switches connected to the opposite terminal of the time controlled switch, one of the last named switches being connected to one of the solenoids while the other of said switches is connected to the other solenoid whereby when either of the switches and the time controlled switch are in circuit one or the other of said solenoids will be energized, a pair of spacing plates on opposite ends of the core and contacts in circuit with the solenoids adapted to be separated by said spacing plates whereby when said core is fully withdrawn into one or the other of said solenoids, the circuit through these solenoids will be broken.

1,214,772. WIRE CARRIER AND STRETCHER. JOHN A. FOUTS, Osborne, Kans. Filed Oct. 5, 1915. Serial No. 54,240. (Cl. 254—64.)



1. A wire carrier and stretcher including an axle, supporting wheels rotatably secured to said axle, a handle carried by said axle, a pair of parallel uprights secured to said axle and arranged at an angle to said handle, bracing members connecting the upper extremities of said uprights with said handle.

2. A wire carrier and stretcher including an axle, supporting wheels rotatably secured to said axle, a handle carried by said axle, a pair of uprights secured in spaced relation to said axle, bracing members connecting the upper extremities of said uprights to said handle, and curved anchoring members pivotally secured to said axle and projecting forwardly thereof.

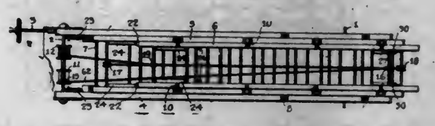
1,214,773. BORING-TOOL. EMIL GAIRING, Cleveland, Ohio. Filed Dec. 31, 1915. Serial No. 69,546. (Cl. 29—145.)



1. In a device of the character described, a socket member, a tool provided with a circular shank fitted to the socket member, a short groove in the shank, a straight passage leading into said groove, a pin on the socket member for engaging said groove and locking the tool in the socket member, said straight passage permitting the pin to engage the groove, a second annular groove in said shank, a detent on the socket for engaging said annular groove, a circular spring for operating said detent, the said detent and annular groove forming means for retaining the tool in the shank in the event of the first named locking means between the tool and the shank becoming disengaged.

2. In a device of the character described, a socket member, a tool having a shank fitted to the socket member, means for locking the tool shank in the socket member upon rotation of the tool in the driven direction and unlocking said tool from said socket member upon rotation of the tool in the backward or reverse direction, an annular groove in said shank, a detent on the socket for engaging said annular groove, a circular spring for operating said detent, said detent and annular groove forming means for retaining the tool in the shank in the event of the locking means between the tool shank and socket member becoming disengaged due to the accidental turning of the tool in the socket in a backward direction.

1,214,774. AERIAL LADDER FOR FIRE SERVICE. TAYLOR B. GRANT, Brooklyn, N. Y., assignor to the City of New York, a Municipal Corporation. Filed Feb. 28, 1916. Serial No. 80,888. (Cl. 228—28.)



1. A sectional fire ladder, comprising a bed section, first and second aerial sections, automatic catches for supporting said aerial sections when elevated, said catches being releasable upon slight upward movement of the section supported thereby, coöperative stops on the aerial sections to arrest the upward movement of the second relative to the first, one of said stops being movable, to permit said upward movement for releasing the catches of the second aerial section, and means for withdrawing the movable stop.

2. A sectional fire ladder, comprising a bed section, first and second aerial sections, automatic catches for supporting said aerial sections when elevated, said catches being releasable upon slight upward movement of the section supported thereby, a device for arresting the upward movement of the second aerial section relative to the first in order to compel the first to rise, and means for automatically rendering said device ineffective on lowering of the aerial sections, so that the second aerial section may be moved upward an extra distance to release its catches.

3. A sectional fire ladder, comprising a bed section, first and second aerial sections, automatic catches for supporting said aerial sections when elevated, said catches being releasable upon slight upward movement of the section supported thereby, a movable stop on the upper part of the first aerial section coöperative with a portion of the second section to arrest the relative upward movement of the latter, and means coöperative with the bed section for controlling said movable stop.

4. A sectional fire ladder, comprising a bed section, first and second aerial sections, automatic catches for supporting said aerial sections when elevated, said catches being releasable upon slight upward movement of the section supported thereby, a movable stop on the upper part of the first aerial section coöperative with a portion of the second section to arrest the relative upward movement of the latter, and a pivoted trigger device mounted in connection with said movable stop for controlling the same by coöperation with the bed section.

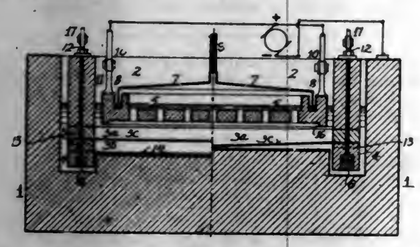
5. A sectional fire ladder, comprising a bed section first and second aerial sections, automatic catches for supporting said aerial sections when elevated, said catches being releasable upon slight upward movement of the section supported thereby, a movable stop on the upper part of the first aerial section coöperative with a portion of the second section to arrest the relative upward movement of the latter, a spring tending to retract said stop, a cam member for projecting the same, spring means for urging said cam to project the stop, and a trigger connected with the cam and coöperative with the bed section.

[Claims 6 to 10 not printed in the Gazette.]

1,214,775. ELECTROLYTIC APPARATUS. WILLIAM E. GREENAWALT, Denver, Colo. Filed Aug. 18, 1913. Serial No. 785,256. (Cl. 204—5.)

1. In electrode bell of electrolytic apparatus, a top piece forming the sides of the electrode bell; a bottom piece; a diaphragm bolted between the top and bottom pieces; means of protecting the bolt head from the direct action of the electrolyte, and means in the frame so con-

structed, for the escape of gases from the under side of the diaphragm.



2. In electrode bell of electrolytic apparatus, a top piece forming the sides of the electrode bell; a bottom piece; a diaphragm supported by a diaphragm frame and bolted between the top and bottom pieces; means with the bottom piece of protecting the bolts from the corrosive action of the electrolyte, and means in said frame work for the escape of gases from the under side of the diaphragm.

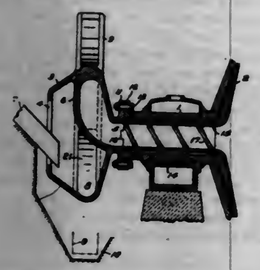
3. In electrode bell of electrolytic apparatus, a top piece forming the sides of the electrode bell; a bottom piece; a diaphragm bolted between the top and bottom pieces; means with said bottom piece of protecting the bolts from the action of the electrolyte, and means in the bottom piece for the escape of gases from the under side of the diaphragm.

4. In electrode bell of electrolytic apparatus, a top piece forming the sides of the electrode bell; a bottom piece; a diaphragm bolted between the top and bottom pieces; means with the bottom piece of protecting the bolts from the corrosive action of the electrolyte; means for the escape of gases from the under side of the diaphragm; a perforated electrode in the electrode bell; a hood over the electrode, and a liquid seal between the electrode and the hood.

5. In electrode bell of electrolytic apparatus, an electrode in said electrode bell; a hood over the electrode; a liquid seal between the hood and electrode for the collection and withdrawal of electrode gases, perforations in the electrode through which the electrode gases are delivered from the under side of the electrode into the hood, and a flange projecting downwardly along the outside edge of the electrode.

[Claims 6 to 11 not printed in the Gazette.]

1,214,776. FEEDER. ROY C. GREENFIELD, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Jan. 31, 1916. Serial No. 75,866. (Cl. 83—9.)



1. In combination, means forming a conduit rotatable about an axis, said conduit having ends one remote from and another adjacent to said axis, means for feeding material requiring reduction into said end of said conduit remote from said axis, means for delivering material from said end of said conduit adjacent to said axis, and means for feeding other material into said conduit at a point intermediate said ends.

2. A feeder comprising a spiral rotatable about an axis and extending around and gradually approaching said axis, the end of said spiral which is farther from said axis being formed to receive material and the end which is nearer said axis being formed to discharge said material, said feeder having an opening adjacent said axis and having a passage, said passage leading from said opening to said spiral at a point intermediate its ends.

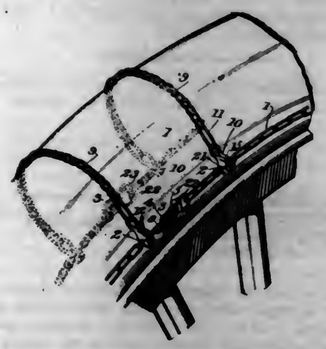
3. In combination, means forming a conduit rotatable about an axis, said conduit having ends one remote from and another adjacent to said axis, means for feeding material into said end of said conduit remote from said axis, means for delivering material at one side of said conduit from said end of said conduit adjacent to said axis, and means for feeding other material into said conduit from the opposite side thereof at a point intermediate said ends.

4. In combination, a hollow trunnion, a casing adjacent an end of said trunnion, means for feeding material into said casing through the side thereof axially remote from said trunnion, a spiral scoop for feeding other material into said casing through the periphery thereof, and means for delivering the material from said casing into said trunnion.

5. In combination, a casing rotatable about an axis, said casing being formed with openings adjacent its axis and with an opening through a portion thereof remote from said axis, means for feeding material into said casing through one of said axial openings, an outer spiral scoop for feeding other material into said casing through said opening remote from said axis, and an inner spiral scoop for delivering the material from said casing through another of said axial openings.

[Claims 6 to 8 not printed in the Gazette.]

1,214,777. ANTISKID DEVICE FOR WHEELS. CLAYBORNE G. GREENLEAF, West Richfield, Ohio. Filed Jan. 14, 1916. Serial No. 72,101. (Cl. 152—14.)



1. An anti-skid device for wheels, having longitudinal chains, cross-chains, connections between said longitudinal chains and said cross-chains which permit of free rotation of said longitudinal chains therein to prevent tangling of the device when not in use, and means for connecting the meeting ends of said longitudinal chains when the device is applied to a wheel.

2. An anti-skid device for wheels, having longitudinal chains provided with straight single-piece links, cross-chains connected with said links so as to have a swiveling action thereon to prevent tangling when the device is not in use, and means for connecting the meeting ends of said longitudinal chains.

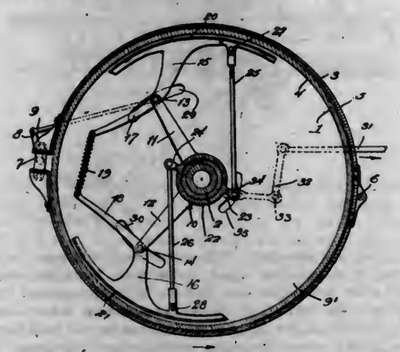
3. An anti-skid device for wheels, having a pair of longitudinal chains, each having a series of straight single-piece links arranged at intervals throughout its length, means for detachably connecting the meeting ends of said chains, and cross-chains connected at their opposite ends with opposite single-piece links of said longitudinal chains so as to have a swiveling action thereon to prevent tangling of the device when not in use, the connections between said cross-chains and longitudinal chains being detachable for renewal purposes.

4. An anti-skid device, having longitudinal chains and end connections therefor, and cross-chains terminating in connection members which are provided with seats to receive the longitudinal chains, and blocks arranged in the connection members next to the seats and fasteners for said blocks to detachably fix the engagement of the connection members with the longitudinal chains.

5. In an anti-skid device, cross-chains having connection members at their ends including cheek-pieces arranged parallel and provided with transverse openings, and detachable blocks for closing said openings about the part engaged, and means for securing the blocks in place.

[Claims 6 to 8 not printed in the Gazette.]

1,214,778. BAND-BRAKE. WILLIAM T. HAEN, Mantador, N. D. Filed Sept. 15, 1915. Serial No. 50,882. (Cl. 74—37.)

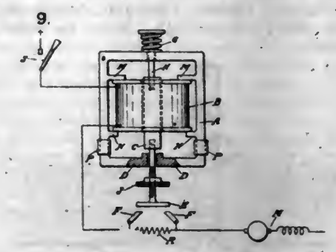


1. A brake, including a drum, mounted on an axle, exterior braking means for said drum, a spider having radiating arms freely rotatable on said axle, brake shoes carried by the free extremities of said arms, yieldable connecting means for said brake shoes, means connecting said brake shoes with said exterior braking means, guide means therefor, a sleeve on said axle and independently rotatable of said spider and said shaft having connection with an actuating rod, and means connecting said sleeve with said brake shoes to force the latter into braking position.

2. A brake, including a drum mounted on an axle, exterior braking means for said drum, a spider having radiating arms freely rotatable on said axle, brake shoes carried by the free extremities of said arms, means connecting said brake shoes with said exterior braking means, guide means therefor, a sleeve on said axle and independently rotatable of said spider and said axle having connection with a manually operable actuating rod, arms pivotally connected with said sleeve and said brake shoes to force the latter into braking position, and spring means for assisting said brake shoes in moving into braking position.

1,214,779. ELECTRIC SWITCH. JAY H. HALL, Cleveland, Ohio, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 24, 1913. Serial No. 750,191. (Cl. 175—281.)

1. In an electro-magnetically operated device, a movable member, a second member separted therefrom, a winding arranged upon energization to generate flux in both members, and means tending to prevent the movable member from moving toward the second member, the flux generated by the winding tending to move the movable member toward the second member but capable of moving the movable member away from the second member when the winding is energized above a predetermined value.



2. In an electromagnetically operated device, a member movable in two directions from its normal position, a second member separated from the movable member by a gap, a winding for producing across the gap a magnetic force for moving said member to a certain position, means for holding the said member away from the said certain position when the winding is not energized, and means acted upon by the flux produced by the winding for causing the movement of the said member still farther away from the said certain position and thereby lengthening the said gap when the current in the winding exceeds a certain value.

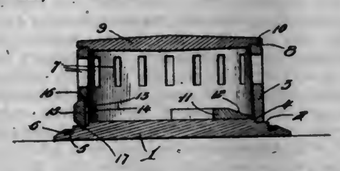
3. In an electro-magnetically-operated device, a member movable in opposite directions from its normal position, a winding for producing the actuating force for moving said member to a certain position, a second member moved by said winding, and means by which the second member prevents the movement of the movable member to the said certain position when the current in the winding exceeds a predetermined value.

4. In a switch, a magnetizing winding, a pair of contacts, means normally acting to separate said contacts, a member movable in opposite directions from its normal position and attracted by the winding for closing the contacts, and a second member movable with respect to the first member and moved by the winding to prevent the closure of the contacts when the current in the winding exceeds a certain value.

5. A controlling device for electric circuits, comprising a switch member movable in two directions from its normal position, and an electro-magnet for magnetically holding the same in closed position, means for holding said member in open position when the magnet is not energized, the magnet moving said member to a position of greater opening when the current is relatively high and permits it to be closed when the current falls to a predetermined value.

[Claims 6 to 8 not printed in the Gazette.]

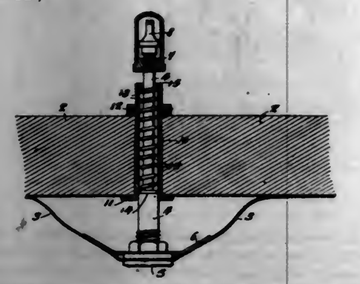
1,214,780. CHICKEN-COOP. CHARLES A. HARP, Buffalo, Tex. Filed Nov. 13, 1916. Serial No. 131,106. (Cl. 119—21.)



1. A chicken coop embodying an annular body, and an arcuate member fitting the same and sloped outwardly to provide a space for nests.

2. A chicken coop embodying a base, an annular body seated thereon, and a crescent shaped member seated upon the base and fitting the body, said member being sloped outwardly to provide a space for nests.

1,214,781. PNEUMATIC-TIRE-PRESSURE GAGE. CHARLES HARRISON and KENNETH LAMOND, Vancouver, British Columbia, Canada, assignors to Vancouver Motor Supplies Limited, Vancouver, British Columbia, Canada. Filed Jan. 11, 1916. Serial No. 71,506. (Cl. 152—12.)



1. A tire pressure gage, comprising the combination with the rim of a wheel and the inner tube of a tire, of a bushing tube secured to the rim and passing through the aperture in the same, a tire valve member endwise movable in said bushing tube, means for clamping the inner end of said member to the inner tube, said tire valve member adapted to be pressed outwardly by the inflation of the inner tube, resilient means opposing the outward movement and a tire inflating valve within said tire valve member, said tire valve member having a passage through the same controlled by said tire inflating valve whereby the inner tube of the tire may be inflated through said tire valve member.

2. A tire pressure gage, comprising the combination with the rim of a wheel and the inner tube of a tire, of a bushing tube secured to the rim and passing through an aperture in the same, a tubular tire valve member endwise movable in said bushing tube, a tire inflating valve in said tubular tire valve member whereby the tire may be inflated through said tire valve member, means for clamping the inner end of said member to the inner tube, said tire valve member adapted to be pressed outwardly by the inflation of the inner tube, resilient means opposing the outward movement, and pressure indicating instrumentalities coöperating with said tire valve member and said bushing tube for indicating the air pressure within the tire tube.

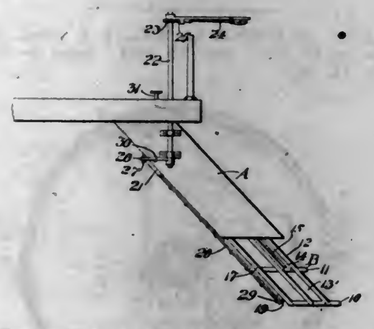
3. A tire pressure gage, comprising the combination with the rim of a wheel and the inner tube of a tire, of a bushing tube secured to the rim and passing through the aperture in the same, a tire valve member endwise movable in said bushing tube, and having a passage through which the tire may be inflated, a tire inflating valve in said valve member passage, means for clamping the inner end of said member to the inner tube, said tire valve member adapted to be pressed outwardly by the inflation of the inner tube, resilient means opposing the outward movement, and a guard member located between the rim and the tire tube adjacent to the tire valve member.

4. A tire pressure gage, comprising the combination with the rim of a wheel and the inner tube of a tire, of a bushing tube secured to the rim and passing through the aperture in the same, a tire valve member endwise movable in said bushing tube, said tire valve member having a passage through the same and an inflating valve located in said passage whereby the tire may be inflated through said tire valve member, means for clamping the inner end of said member to the inner tube, said tire valve member adapted to be pressed outwardly by the inflation of the inner tube, resilient means opposing the outward movement, a guard member located between the rim and the tire tube adjacent to the tire valve member, said pressure indicating instrumentalities comprising graduation marks on said bushing tube and an indicating sleeve carried by said tire valve member and fitting over said bushing tube to coöperate with said graduation marks substantially as shown and described.

5. A tire pressure gage, comprising the combination with the rim of a wheel and the endwise slidable valve tube through which the inner tube of the tire is inflated, of a spring one end of which is connected to the rim of the wheel and the other end to the valve tube, means for indicating endwise movement of the valve tube, and means for securing the inner end of said valve tube to the inner tube of the tire, an inflating valve in said valve tube, said valve tube being adapted to communicate with the interior of the inner tube of the tire whereby the tire may be inflated through said valve tube.

[Claims 6 to 10 not printed in the Gazette.]

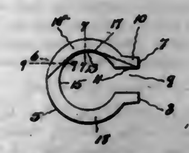
1,214,782. CAR-STEP. WILBUR J. HAVILAND, Marlboro, N. Y. Filed Sept. 15, 1916. Serial No. 120,367. (Cl. 105—87.)



1. The combination with permanent passenger coach steps, of extensible steps comprising hangers slidably fitted with each other and slidable in the permanent steps, step sections carried by the hangers, means for extending and retracting the step sections, means for locking the said means when the step sections are retracted, said permanent steps being cut away to form guides for the hangers, and a back connected with the outermost step section and slidably supported in the permanent steps.

2. The combination with permanent passenger coach steps, of extensible steps comprising hangers slidably fitted with each other and slidable in the permanent steps, step sections carried by the hangers, means for extending and retracting the step sections, means for locking the said means when the step sections are retracted, said permanent steps being cut away to form guides for the hangers, a back connected with the outermost step section and slidably supported in the permanent steps, and a ratchet lever for operating the first named means.

1,214,783. NUT-LOCK. ZACHARIAH HAWKINS, Canton, Ohio, assignor of one-half to George W. Hawkins, Canton, Ohio. Filed July 12, 1916. Serial No. 108,843. (Cl. 151—36.)



1. In a nut lock, a lock-washer comprising a ring with lugs extending beyond the outer circumference thereof provided with substantially parallel knife edges.

2. In a nut lock, a lock-washer comprising a ring having lugs extending laterally beyond the outer circumference thereof provided with inclined surfaces terminating in substantially parallel knife edges.

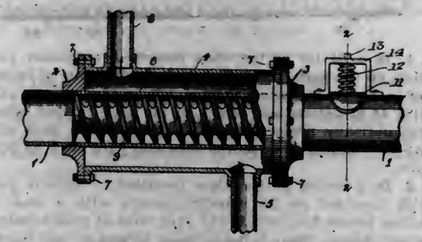
3. In a nut lock, a lock-washer comprising a ring having inclined surfaces or faces, curved knife edges, lugs extended laterally beyond the outer circumference of the said ring and having substantially parallel knife edges, the said knife edges being in different planes.

4. In a nut lock, a lock-washer comprising a ring having curved knife edges, reduced portions extending from the knife edges to the outer edge of the ring and lugs having knife edges.

5. In a nut lock, a lock-washer comprising a spirally twisted ring having reduced portions and curved knife edges and lugs extending laterally beyond said ring provided with substantially parallel knife edges.

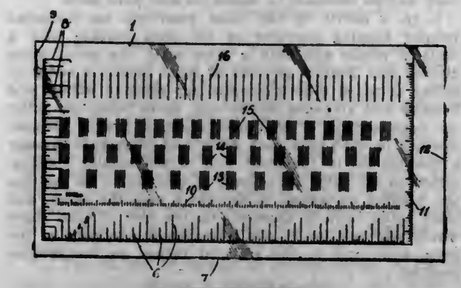
[Claims 6 to 8 not printed in the Gazette.]

1,214,784. ENGINE-INTAKE HEATER. HOMER C. HIATT, Bliss, Okla. Filed Nov. 27, 1915. Serial No. 63,786. (Cl. 257—241.)



A heater of the class specified, comprising an outer tubular shell having heat inlet and outlet openings adjacent to the opposite ends thereof, an inside tubular shell of less external diameter than the internal diameter of the outer shell and concentric therewith, heads at opposite ends of the outer and inner shells leaving an annular exhaust circulation space between the outer and inner shells, said heads being centrally extended outwardly and bored to receive the opposite extremities of said inside shell and also to receive pipe inlet and outlet connections, and a fixed spiral deflector within said inner shell.

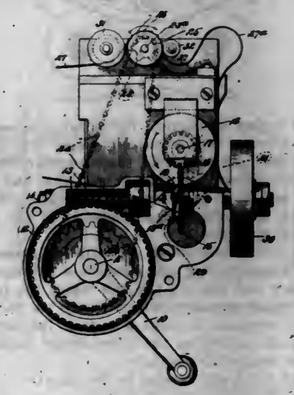
1,214,785. DEVICE FOR PREPARING STENCIL-SHEETS. EDWARD W. HILL, Chicago, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 12, 1915. Serial No. 55,365. (Cl. 33—1.)



1. In a stencil-making apparatus, a sheet of thin transparent material having spaced rulings thereon in various series, different series being formed to different scales, lines of one series extending inwardly at right angles from a side edge and an end edge of the sheet, said lines being adapted to act as guides for ruling scaled quadrilles on paper placed above the sheet; and other series of lines in the central portion of the sheet, parallel to an end edge, adapted to act as guides for ruling staff lines of music, lines of said series being arranged in groups of five each, the groups of one series being spaced apart different distances from the groups of another of said series, substantially as set forth.

2. In stencil-making apparatus, a sheet of thin transparent material having spaced rulings thereon in various series, different series being formed to different scales, lines of one series extending inwardly at right angles from a side edge and an end edge of the sheet, said lines being adapted to act as guides for ruling scaled quadrilles on paper placed above the sheet; and other series of lines in the central portion and adjacent the opposite side edge of the sheet, one of said series being composed of parallel lines arranged in groups of five each, said groups being separated by distances different from the distances between lines in a group, and another of said series having lines spaced equidistantly, substantially as set forth.

1,214,786. INTERMITTENT WORM-GEARING. HARRY M. HILL, St. Louis, Mo., assignor to Educational Motion Picture Machine & Film Co., a Corporation of Missouri. Filed Nov. 10, 1913. Serial No. 800,114. (Cl. 74—36.)



1. In an intermittent work gearing the combination of a disk having a peripheral flange and a single worm-tooth whose advancing end is parallel with said flange; and a film-actuating gear-wheel having its edges provided with serrations formed by intersecting transverse and oblique cuts, said oblique cuts registering with the pitch of the worm-tooth.

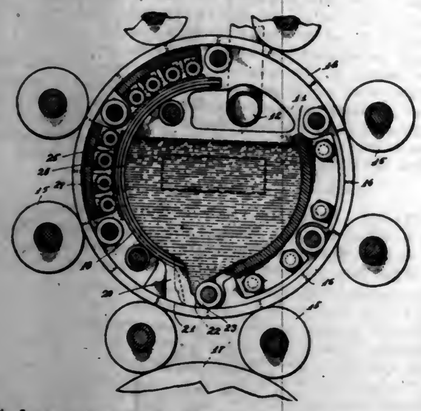
2. In a mechanism of the class described, a worm gear arranged for continuous rotation and having a relatively long peripheral holding portion disposed normal to the axis of rotation and a relatively short portion pitched relative to the holding portion, and an intermittently rotated gear having teeth with faces disposed to coöperate with the holding portion of the worm gear and other faces disposed to coöperate with the pitched portion thereof.

1,214,787. INKING MECHANISM. ROBERT HOE, Battle Creek, Mich., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Dec. 16, 1914. Serial No. 877,566. (Cl. 101—71.)

1. In an inking mechanism for printing presses, an ink container, mechanism for intermittently feeding the ink by liquid pressure through passages from the container in different columns or sections corresponding with the matter to be printed, the said mechanism being normally in motion during the actuation of the press and controlling by said motion the feeding of the ink.

2. In an inking mechanism for printing presses, an ink container, a series of feeding devices for intermittently supplying ink under liquid pressure in different columns or sections corresponding with the matter to be printed, the said devices being normally in motion during the actuation of the press.

3. In an inking mechanism for printing presses, an ink container and a series of intermittently operative feeding devices adapted respectively to supply ink from the container by liquid pressure in different columns or sections corresponding with the matter to be printed.

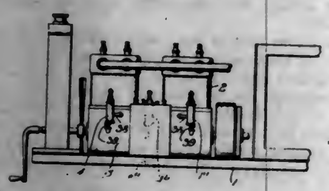


4. In an inking mechanism for printing presses, an ink container, a series of intermittently operative feeding devices for supplying ink from the container under liquid pressure in different columns or sections, and adjusting means for said devices whereby the supply of ink for any column may be regulated independently of the regulation for the other columns.

5. In an inking mechanism for printing presses, an ink container, a distributing roll, a series of passages between the container and the roll through which the ink may be fed under liquid pressure intermittently to the roll, and mechanism normally in motion during the actuation of the press and controlling the intermittent feeding of ink through the respective passages.

[Claims 6 to 18 not printed in the Gazette.]

1,214,788. OIL-INDICATOR. JAMES MONROE HONS and EDWARD WALLACE APLIN, Chicago, Ill., assignors to George A. Rees, Chicago, Ill. Filed Aug. 26, 1914. Serial No. 858,602. (Cl. 184—1.)



1. A control system for internal combustion engines comprising an internal combustion engine having a lubricant container and an ignition circuit, and means associated with said lubricant container near the extremities thereof responsive to the lubricant level at their respective extremities to control said ignition circuit.

2. A control system for internal combustion engines comprising an internal combustion engine having a lubricant container and an ignition circuit, and means associated with said lubricant container near the extremities thereof responsive to the lubricant level at their respective extremities to jointly control said ignition circuit.

3. A control system for internal combustion engines comprising an internal combustion engine having a lubricant container, float controlled means responsive to the level and velocity of flow of the lubricant to control said engine, said float controlled means having two tubes leading from different levels of said means to different levels of said container and means for causing a flow of lubricant through said tubes.

4. A device of the character described comprising an oil containing cylinder, an internal concentric cylinder having orifices in its upper and lower portions, a float in said second cylinder, and contacts in said second cylinder directly controlled by said float.

1,214,789. COMBINED YARDSTICK AND COMPUTING DEVICE. WALTER E. HOSCH, St. Louis, Mo. Filed Aug. 7, 1913. Serial No. 783,590. (Cl. 33—127.)



1. In a device of the class described, a tubular yard stick, on the surface of which is formed a scale of inches, and a series of spring pressed lugs seated in the yard stick at predetermined points on the scale thereof, which lugs normally project beyond the face of the yard stick and are adapted to be moved into said yard stick by pressure.

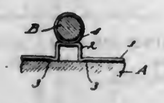
2. In a device of the class described, a tubular yard stick provided on its exterior surface with a scale of inches, blocks fixed within the yard stick at predetermined points therein, there being recesses formed in said blocks, and spring pressed lugs positioned in the recesses in said block and normally projecting above the surface of the yard stick.

3. In a device of the class described, the combination with a tubular yard stick provided on its outer surface with a scale of inches, and a price scale, of blocks fixed within the yard stick and located at predetermined points with relation to the scales on said yard stick, a spring actuated roller having bearings in said blocks, a chart attached to and adapted to wind upon said roller, a reinforcing rod carried by the outer end of said chart, there being a slot formed in the yard stick through which the chart passes during its movement onto and from the roller, a portion of the wall of the yard stick adjacent to said slot being bent inward to form a pocket adapted to receive the reinforcing rod and the outer end of the chart when the body of the latter is wound onto the roller, and there being rows of numerals on the face of the chart, which numerals bear relation to the price scale and to the scale of inches on said yard stick.

4. In a device of the class described, an elongated tubular housing provided on its outer surface with a scale of inches and with a price scale, the latter being divided into definite sections of equal length, a series of spring actuated rollers mounted for rotation within said housing and arranged end to end, there being one roller for each section of the price scale, a flexible member adapted to wind onto each roller and to operate through a slot formed in the front wall of the tubular housing, means on the outer end of each of said charts for limiting the winding movement of the chart onto the roller, and there being rows of numerals on the face of each chart which bear relation to the corresponding sections of the price scale and to the scale of inches on the tubular housing.

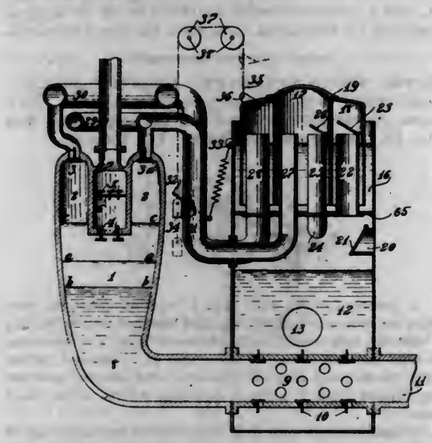
1,214,790. COMBINATION TIE AND GAGE MEMBER FOR REINFORCED-CONCRETE FLOOR CONSTRUCTION. WILLIAM B. HOUGH, Chicago, Ill., assignor, by mesne assignments, to Patented Devices Company, Portland, Me., a Corporation of Maine. Filed Nov. 4, 1911. Serial No. 658,479. (Cl. 72—122.)

1. A combined tie and gage member for reinforced concrete construction comprising a relatively narrow flat strip of metal provided with spaced apart substantially rectangular chairs, each consisting of spaced apart upwardly bent portions of said strip united by a seat for a reinforcing bar, extending substantially parallel with the main portion of the strip, and tie strips attached to the chairs and having free ends capable of being passed over said reinforcing bar.



2. A combined tie and gage member for reinforced concrete construction comprising a relatively narrow flat strip of metal provided with spaced apart substantially rectangular chairs, each consisting of spaced apart upwardly bent portions of said strip united by a seat for a reinforcing bar, extending substantially parallel with the main portion of the strip, the bends connecting the chairs with the strip being shaped to space the body of the strip from its supporting surface.

1,214,791. METHOD OF RAISING OR FORCING LIQUID. HERBERT ALFRED HUMPHREY, London, England, assignor to Humphrey Gas Pump Company, a Corporation of New York. Filed July 22, 1911, Serial No. 639,972. Renewed June 27, 1916. Serial No. 106,261. (Cl. 160—1.)



1. The method of raising or forcing liquid, which consists in reciprocating a column of liquid, the outstroke of said reciprocation being due to an expansive force, utilizing the movement of the outstroke in introducing a fresh expansible charge and expelling the exhaust.

2. The method of raising or forcing liquid, which consists in reciprocating a column of liquid, the outstroke of said reciprocation being due to an expansive force, utilizing the movement of the outstroke in introducing a fresh expansible charge and expelling the exhaust, and utilizing the movement of the return stroke to compress said charge.

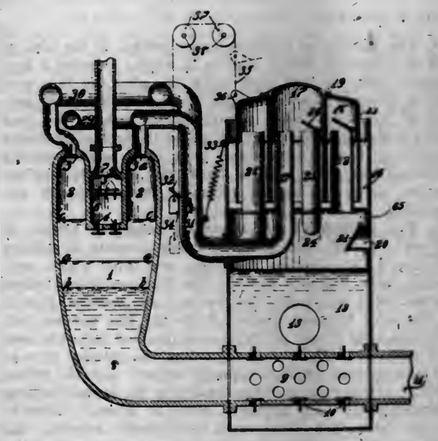
3. The method of raising or forcing liquid, which consists in reciprocating a column of liquid, the outstroke of said reciprocation being due to an expansive force, utilizing the movement of the outstroke in introducng a fresh expansible charge and expelling the exhaust, and utilizing the changes of level of a liquid supply for controlling the level to which the liquid falls in the expansion space during the outstroke and thus affecting the volumetric intake of the fresh expansible charge.

4. The method of raising or forcing liquid, which consists in reciprocating a column of liquid, the oustroke of said reciprocation being due to an expansive force, utilizing the movement of the outstroke in introducing a fresh expansible charge and expelling the exhaust, and utilizing the changes of level of a liquid supply for controlling the level to which the liquid falls in the expansion space during the outstroke and thus affecting the vounmetric intake of the fresh expansible charge and the displacement of the exhaust.

5. The method of raising or forcing liquid, which consists in reciprocating a column of liquid, the outstroke of said reciprocation being due to an expansive force, utilizing the movement of the outstroke in introducing a fresh expansible charge and expelling the exhaust, after the lowering of the level of the liquid during the instroke has drawn a fresh charge into the space vacated by said liquid.

[Claims 6 and 7 not printed in the Gazette.]

1,214,792. APPARATUS FOR RAISING OR FORCING LIQUID. HERBERT ALFRED HUMPHREY, London, England, assignor to Humphrey Gas Pump Company, a Corporation of New York. Filed July 22, 1911. Serial No. 639,973. (Cl. 160—1.)



1. The combination of a play pipe for the reciprocation of a liquid column, a power chamber provided with intake and discharge means, and means for utilizing the movement of the outstroke in introducing a fresh expansible charge and in expelling the exhaust.

2. The combination of a play pipe for the reciprocation of a liquid column, a power chamber provided with intake and discharge means, means for utilizing the movement of the outstroke in introducing a fresh expansible charge and in expelling the exhaust, and means for utilizing the movement of the return stroke to compress said charge.

3. In combination with a liquid supply, an expansion chamber, a play pipe for the reciprocation of a liquid column, means for utilizing the movement of the outstroke in introducing a fresh expansible charge and expelling the exhaust, and means for utilizing the change of level of the liquid supply for controlling the level to which the liquid falls in the expansion space during the outstroke and thus affecting the volumetric intake of the fresh expansible charge.

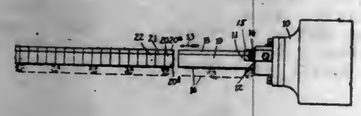
4. In combination with a liquid supply, an expansion chamber, a play pipe for the reciprocation of a liquid column, means for utilizing the movement of the outstroke in introducing a fresh expansible charge and expelling the exhaust, and means for utilizing the change of level of the liquid supply for controlling the level to which the liquid falls in the expansion space during the outstroke

and thus affecting the volumetric intake of the fresh expansible charge and the displacement.

5. The combination with a liquid supply, of a play pipe for the reciprocation of a liquid column, a power chamber provided with intake and discharge means and means for utilizing the movement of the outstroke in introducing a fresh expansible charge and in expelling the exhaust after the lowering of the level of the liquid during the instroke has drawn a fresh charge into the space vacated by said liquid.

[Claims 6 and 7 not printed in the Gazette.]

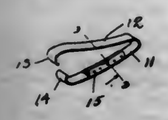
1,214,793. METHOD OF MANUFACTURING ENAMELED BRICKS. BERNARD JACQUART, South River, N. J. Filed May 27, 1915. Serial No. 30,733. (Cl. 25—156.)



1. The method of manufacturing bricks, in the wet or stiff mud process, which consists in wholly severing a face portion from the wet brick-blank, pressing the face portion in intimate contact against the remaining refuse portion of the brick-blank, simultaneously baking the face and remaining refuse portion while in pressed intimate contact with each other, and then after baking wholly removing the face portion from the remaining refuse portion, along the line of severance made while in wet condition.

2. The method of manufacturing enameled bricks, in the wet or stiff mud process, which consists in wholly severing a face portion from the wet brick blank, subjecting both the face portion and the remaining refuse portion from which the face portion was severed, jointly to the brick forming process, while the face portion and the remaining refuse portion are in pressed intimate contact with each other, then enameling the exterior face of the face portion, while in intimate contact with the refuse portion, drying both portions for drying the enamel, baking simultaneously both portions while in pressed intimate contact with each other, and then wholly severing the enameled face portion from the refuse portion along the line of severance made while in wet condition.

1,214,794. CLASP. THOMAS R. KILKENNY, North Providence, R. I., assignor, by mesne assignments, to the Firm of H. N. Pervear Co., Providence, R. I., a Copartnership comprising Thomas R. Kilkenny, North Providence, R. I., and Hilary W. Kilkenny, Schenectady, N. Y. Filed Sept 18, 1916. Serial No. 120,605. (Cl. 24—259.)

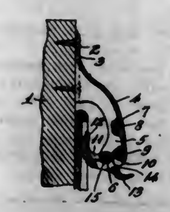


1. A clasp device of the character described comprising an arm formed of sheet metal having integral portions folded to form a receptacle, said receptacle having perforations therein, and means for attaching said arm to a garment.

2. A clasp device of the character described comprising an arm formed of sheet metal having its longitudinal edges provided with integral flanges bent toward each other to form a receptacle, said flanges being perforated, and means for attaching said arm to a garment.

3. A clasp device of the character described comprising a narrow sheet metal arm, one face of which is provided with a receptacle having perforations, and means for attaching said arm to a garment.

1,214,795. ARTICLE-HOLDER. AUGUST R. KINKELAAR, Cleveland, Ohio. Filed Apr. 30, 1915. Serial No. 24,942. (Cl. 24—253.)



An article holding device, comprising a base adapted to be secured to a support, an outwardly extending depending arm on said base, a pivoted dog carried by the lower end of said arm and at one end arranged to engage an article for clamping it against said support, stop devices for preventing said dog from contacting with said support, and a cushion carried by said arm to be engaged by said dog for preventing noise when the dog is retracted.

1,214,796. SUCTION-CLEANER. JAMES B. KIRBY, Cleveland, Ohio. Original application filed Aug. 19, 1911. Serial No. 644,956. Divided and this application filed Oct. 19, 1915. Serial No. 56,688. (Cl. 150—3.)



1. A closure for the dust bags of suction cleaners, comprising an elongated, rigid, channel-member, a rod having one end pivoted inside said channel upon a transverse axis near one end of the member, and an elongated button pivoted to said rod near its free end, said channel member being formed with a narrow slot adapted to receive said button.

2. A combined closure and support for the dust bag of a suction cleaner, comprising an elongated rigid channel member adapted to receive and retain the collapsed lips of the discharge mouth of said bag, and a suspending device secured at about the middle of said channel member, the opposite end of said suspending device having means for attachment to the cleaner handle.

3. A combined closure and support for dust bags comprising a channel member and a second member pivoted between the walls thereof and adapted to be swung into the channel from end to end, each of said members being at least as long as the width of the collapsed bag and adapted to receive between them the lips of the opening, whereby said lips may be drawn together with a rubbing motion, means for securing together the ends of said members removed from such pivot, and a supporting device secured to said channel member between said means and pivot.

1,214,797. POP-GUN. ARTHUR KLEINFELDT, Hoboken, N. J. Filed Feb. 11, 1916. Serial No. 77,552. (Cl. 124—8.)

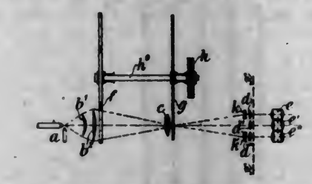
1. A pop-gun having a barrel and an enlarged chamber at one end to receive the plug and provided with an air vent between the ends of the gun and adjacent the enlarged end.

2. A pop-gun having a tapered barrel, an enlarged chamber at one end to receive the plug, the edge of the chamber being beveled to form a cutting edge for the



punching of the plug from raw materials, an internal bead formed in the barrel near the muzzle, and an air vent in the wall of the cylindrical chamber.

1,214,798. CINEMATOGRAPHIC APPARATUS. JOHANNES LEHMANN, Jena, Germany, assignor to the Firm of Carl Zeiss, Jena, Germany. Filed Apr. 24, 1913. Serial No. 763,449. (Cl. 88—16.4.)



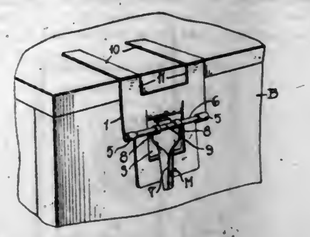
1. In a cinematographic apparatus a source of light, a condenser near the source of light, a film adapted to travel through the path of the rays coming from the source of light, optical means adapted to form an image of the said film, a screen movably disposed between the source of light and the said optical means in the path of the said rays and other optical means adapted to form an image of the said screen in the locus of the first named optical means.

2. In a cinematographic apparatus a plurality of objectives, a source of light, a condenser near the source of light, a film adapted to travel through the path of the rays coming from the source of light, a screen movably disposed in the path of the said rays at a locus, in which there is an image of the source of light, formed by the said condenser, and optical means adapted to form an image of the said screen in the locus of the said objectives.

3. In a cinematographic apparatus a plurality of objectives, a source of light, a condenser near the source of light, a film adapted to travel through the path of the rays coming from the source of light, a screen movably disposed in the path of the said rays at a locus, in which there is an undivided image of the source of light, formed by the said condenser, and optical means adapted to form an image of the said screen in the locus of the said objectives.

1,214,799. FASTENER. ALFRED M. LEWIS, Minter, Tex. Filed July 8, 1916. Serial No. 108,207. (Cl. 70—8.)

1. A fastener of the class described comprising a plate having an end portion returned, a tongue struck from the plate and opposed to the returned portion thereof, and angular extensions carried by the end of the plate at opposite sides of the returned portion thereof, said extensions terminating at the side of the plate which the returned portion overlies.

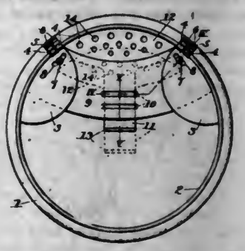


2. A fastener of the class described comprising a plate having an end portion returned, a tongue struck from the plate and opposed to the returned portion thereof, angular extensions carried by the end of the plate at opposite sides of the returned portion thereof, and means carried by the plate for forcing the tongue inwardly toward the returned portion thereof.

3. A fastener of the class described comprising a plate having an end portion returned, a tongue struck from the plate and opposed to the returned portion thereof, angular extensions carried by the end of the plate at opposite sides of the returned portion thereof, said plate being provided at opposite sides of the tongue with the returned portions affording knuckles, a pin mounted in said knuckles and disposed transversely of the tongue, and a member pivotally engaged with said pin and coacting with the tongue for forcing the same inwardly.

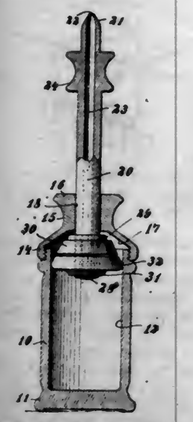
4. A fastener of the class described comprising a plate having an end portion returned, a tongue struck from the plate and opposed to the returned portion thereof, angular extensions carried by the end of the plate at opposite sides of the returned portion thereof, a pin disposed transversely of the plate at a point substantially midway the length of the tongue, and an elongated member provided adjacent one end with returned portions affording knuckles through which the pin is directed and whereby said member is capable of rocking movement, the portion of the member inwardly of the knuckles being angularly disposed in a direction toward the tongue and adapted to contact with the tongue upon rocking movement of the member in one direction for forcing the tongue inwardly.

1,214,800. ADJUSTABLE POT-STRAINER. ERNEST G. LINK, College Point, N. Y., assignor to Charles Nostrand, College Point, N. Y. Filed Apr. 19, 1916. Serial No. 92,125. (Cl. 53—8.)



A pot strainer comprising a plate to extend across a pot and leave a pouring opening between one edge of the plate and the adjacent portion of the rim of the pot, adjustable wings at the ends of the plate to fit pots of different sizes, means for detachably fastening the wings to the rim of the pot, and a straining member having a perforated portion to fit over the pouring opening, and a shank portion slidably connected to the plate for the purpose specified.

1,214,801. MUSTARD-DISPENSER. CARL LINKE, New York, N. Y., assignor, by direct and mesne assignments, to Paul Wittkopf, New York, N. Y. Filed May 24, 1915. Serial No. 29,974. (Cl. 65—45.)

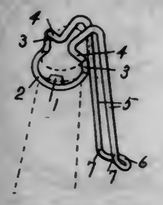


1. In a device of the class described, the combination with a cylindrically bored container and a cap screw-threaded thereto, of a hollow stem slidable in said cap, said stem being straight and having a contracted orifice, a flexible conical frustum secured to said stem within said container, said frustum having an annular edge portion partially separated from the main portion tightly engaging the bore of said container, and means for securing said frustum to said stem.

2. In a device of the class described, the combination with a container and cap removably engaged therewith, a flexible plunger having an annular groove approximately midway between its upper and lower surfaces the lower wall of said groove lying on a horizontal plane and its upper wall being diagonally disposed to the lower wall and a hollow stem secured to said plunger.

3. In a device of the class described, the combination with a container and cap removably engaged therewith, a hollow stem slidably carried by said cap, a washer carried by said hollow stem adjacent its inner end, a nut removably engaging the inner end of said hollow stem and a flexible plunger compressibly confined between said washer and nut on the inner end of said hollow stem with an annular groove disposed on a horizontal plane midway between its upper and lower surfaces.

1,214,802. BOTTLE-OPENER. THEODORE H. LOW, New Haven, Conn. Filed Feb. 15, 1911. Serial No. 608,842. (Cl. 65—46.)



1. A crown cap remover comprising a handle, a fulcrum point adapted to rest on top of the cap and a head rigidly mounted on said handle and having a nib adapted to fit under the edge of the cap flange, said head extending around a portion of the periphery of the cap flange and offset at substantially a right angle therewith.

2. A crown cap remover constituting a bell crank lever comprising a handle spaced clear of the cap and extending downward approximately vertically, a fulcrum adapted to rest on top of the cap and a cap engaging head rigidly mounted on said handle and having a nib fitting under the edge of the cap flange and parts extending therefrom horizontally around at least a semi-circumference of the cap flange then bending up over the top of the cap, such bend being adapted to grip the flange so as to protect the nib from slipping away from the cap flange on exerting horizontal pressure on the handle.

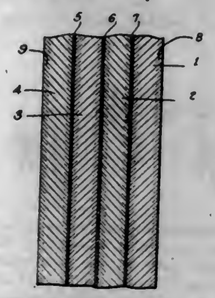
3. A crown cap remover comprising a cap engaging and cap lifting member, and a downwardly disposed operating lever rigid thereto, and means for locking the cap-engaging and cap-lifting member to the bottle cap so as to resist inward pressure tending to force the cap engaging member away from the bottle cap, while leaving the lever arm free.

4. A bottle opener comprising a cap-engaging head, a fulcrum resting on top of the cap and a handle in such angular relation to the head that when the bottle opener is in operative position the handle extends downwardly substantially parallel to the bottle.

5. A bottle opener comprising a cap-engaging head fulcruming on top of the cap and a handle extending downward and spaced from the bottle neck so closely as to be readily grasped by a hand encircling the bottle neck and so far as to keep clear of contact with the bottle neck until the cap has been lifted from the bottle mouth.

[Claims 6 to 18 not printed in the Gazette.]

1,214,803. WALL-BOARD. RALPH C. LOWARY, Buffalo, N. Y., assignor to The Beaver Company, Buffalo, N. Y., a Corporation of Ohio. Filed Apr. 27, 1916. Serial No. 93,852. (Cl. 154—45.9.)



1. A rigid wall board comprising a plurality of flexible wood pulp plies cemented together with a sodium silicate cement, said board having its face impregnated with oil of cedar to serve as a moth repellent.

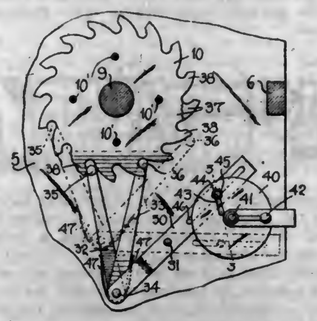
2. A rigid wall board comprising a plurality of wood pulp plies cemented together with a sodium silicate cement containing oil of cedar.

3. A multiply wood pulp wall board having its plies secured together with a sodium silicate cement and containing oil of cedar entrapped between adjacent layers of cement, whereby the board may act as a moth-repellent for a long time, substantially as described.

4. A rigid wood pulp wall board comprising a plurality of plies cemented together, the faces of said board being impregnated with oil of cedar, and a decorative coating for one face of the board partially sealing the oil within the board, substantially as described.

1,214,804. LEVER-ACTUATED POWER-TRANSMISSION GEARING. WILLIAM T. LOWE, Sr., Nashville, Tenn. Filed Oct. 7, 1916. Serial No. 124,390. (Cl. 74—54.)

1. In combination with power transmission gearing including spaced, relatively fixed ratchet disks, an oscillatory lever, independently operable, spring-pressed pawls mounted upon one end of said lever, said pawls extending between the ratchet disks and having terminal means to co-act with the teeth of the disks and impart a continuous rotation thereto in one direction in the oscillation of the lever, and manually operable means for oscillating said lever.



2. In combination with power transmission gearing including a ratchet, an oscillatory lever, means operatively mounted upon one end of said lever and co-acting with the ratchet to impart a continuous rotation thereto in one direction in the oscillation of the lever, a manually rotatable wheel having a radially disposed slot therein, and a wrist pin adjustable in said slot, said lever having a longitudinal slot in which said wrist pin is operatively engaged to oscillate the lever in the rotation of said wheel.

3. In combination with power transmission mechanism, said mechanism including spaced ratchet disks, an oscillatory lever fulcrumed intermediate of its ends, pawls having a common pivotal connection to one end of said lever, the free ends of said pawls operating between the ratchet disks and each being provided with a lug to operatively engage the teeth of the spaced disks, springs co-acting with the pawls to yieldingly urge the lugs thereon into operative engagement with the ratchet teeth, one of said pawls acting to rotate the ratchet in the movement of the lever in one direction and the other pawl continuing the rotation of the ratchet in the reverse movement of the lever, and manually rotatable means for actuating the lever including an adjustable element coöperatively engaged with the lever, whereby the extent of its oscillating movement may be varied.

1,214,805. BED-SPRING. MORRIS LOWY, New York, N. Y. Filed Mar. 3, 1915. Serial No. 11,806. (Cl. 5—62.)



A bed spring, comprising a supporting frame including transverse end members, a bottom having its free ends inclosed in mold-fashioned retaining strips, eyelets in said retaining strips, said strips being molded around said eyelets, and helical stretcher springs having their free ends hooked into said eyelets and their outer ends connected with said transverse end members.

1,214,806. STOPPING MECHANISM FOR PHONOGRAPHS. WILLIAM A. LUCKER, St. Paul, Minn. Filed July 22, 1915. Serial No. 41,401. (Cl. 74—46.)

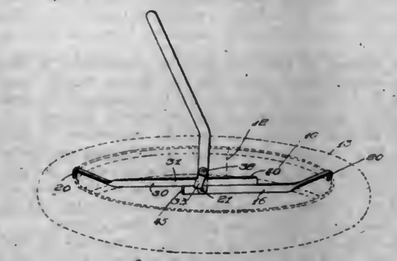
1. The combination in a phonograph of a rotating member, a brake member for coöperation with said rotating member, a latch, an actuating member adapted for automatic movement into engagement with said latch to actuate the same, a movable impinging member carried by said actuating member, a dial member controlling the position of said impinging member, and a spring cover plate for the dial having an aperture therein, and a detent pin to position said impinging member.

2. The combination in a phonograph of a rotating member, a brake member for coöperation with said rotating member, a latch, an actuating member adapted for automatic movement into engagement with said latch to actuate the same, a sector of an internal gear slidably mounted in said actuating member, so as to be movable therein along a circle of the same radius as said sector, a stem fixed in said actuating arm at right angles thereto,



a dial member having an extended end carrying a pinion journaled on said stem, said pinion meshing with said sector, a spring cover plate fixed on said stem and covering the dial, except for an aperture in said cover plate, and a detent pin in said spring cover plate registering with depressions in said dial for locating said dial with respect to the aperture in said cover plate.

1,214,807. RIM-TOOL FOR AUTOMOBILE-RIMS. GUSTAVE E. LUNDBERG, Kewanee, Ill. Filed Oct. 30, 1915. Serial No. 58,746. (Cl. 157—1.)



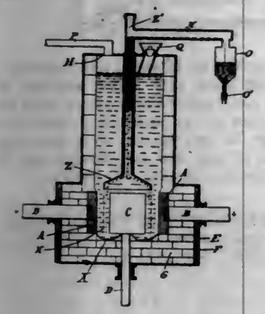
1. A tool for expanding yielding rims comprising a lever and two bars free and independent of each other and the lever, except for a pivotal connection of one to the lever and an engagement of the other to the lever by a lapping dog, the outer ends of said bars being offset toward the handle end of the lever so that when the rim is placed upon a level surface, outward movement of the bars tend to thrust them toward such surface.

2. A rim tool adapted to engage a yielding circular rim at two points to contract or expand the same, such rim tool comprising two bars arranged with their ends overlapping and their opposite or outer ends hook shaped to engage the rim to contract or expand the same, a swinging lever having its end pivotally connected directly to one of such bars near its inner end, a clip pivoted to the swinging lever near the pivoted end of the latter, such clip having an opening therethrough, and the second bar extending through such clip and having notches adapted for engagement thereby, whereby a movement of the swinging lever in either direction acts to bind the clip upon the notched bar and move the latter endwise to expand or contract the two hook shaped ends, said outer ends being offset toward the handle end of the lever so that a movement of the lever to spread such ends apart will exert a down thrust on the center part of the tool.

3. A rim tool adapted to engage a yielding circular rim at two points to contract or expand the same, such rim tool comprising two bars arranged with their ends overlapping and their opposite ends hook shaped to engage the rim to contract or expand the same, a swinging lever with its end pivoted to one of the bars, the latter bar having its inner end bent over toward the other bar and

adapted to engage against the surface of such other bar, and a pivoted clip secured to the swinging lever near the pivoted end of the latter, embracing the second bar and having a dogging shoulder engaging said second bar, whereby a movement of the swinging lever in either direction acts to bind the clip upon the second bar and move the same endwise to expand or contract the two hook shaped ends.

1,214,808. METHOD OF REDUCING METALS. ROBERT J. MCNITT, Niagara Falls, N. Y., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Original application filed Jan. 2, 1913, Serial No. 739,710. Divided and this application filed May 12, 1915. Serial No. 27,474. (Cl. 204—21.)



1. A method of reducing metallic compounds to their metals, consisting in subjecting the molten metallic compounds in the zone of electrolysis to comparatively great hydrostatic pressure during the electrolytic process.

2. A method of reducing metallic compounds to their metals by electrolysis, consisting in subjecting the molten metallic compounds in the zone of electrolysis to the pressure of a column of fluid high relative to the cross section of the electrolytic chamber and electrolyzing the metallic compounds under the pressure thus exerted.

3. A method of reducing metallic compounds to their metals by electrolysis, consisting in subjecting the molten metallic compounds in the zone of electrolysis to the pressure of a column of the molten metallic compound high relative to the cross section of the electrolytic chamber and then electrolyzing the same under the pressure thus exerted.

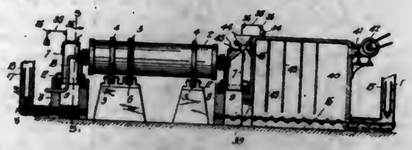
4. A method of reducing metallic compounds to their metals by electrolysis, consisting in introducing said metallic compounds forming the electrolyte, in a molten state, into the electrolytic zone, superimposing a high column of said molten metallic compounds on the zone of electrolysis, passing the electric current through the bath of metallic compounds, separating the products generated at the electrodes as desired and controlling the applied pressure by the height of the column of the molten metallic compounds.

5. A method of reducing metallic sodium from its compounds, consisting in subjecting the molten sodium compound in the zone of electrolysis to the pressure of a column of fluid high relative to the cross section of the electrolytic chamber and then electrolyzing the sodium compounds under the pressure thus exerted.

[Claims 6 and 7 not printed in the Gazette.]

1,214,809. APPLIANCE FOR SEALING THE FEED AND DISCHARGE OPENINGS OF ROTARY CONTAINERS. JOHN L. MALM, Denver, Colo., assignor to The Midwest Metals Company, a Corporation of Colorado. Filed Feb. 23, 1916. Serial No. 79,965. (Cl. 266—15.)

1. The combination with a rotary container having an opening for the admission or discharge of material, of a non-rotating, air-tight appliance providing a receptacle and a passage connecting said receptacle with said opening, means for removing solid matter from said receptacle, and a flexible gas-tight joint between said container and said appliance.



2. The combination with a rotary container having an opening for the admission or discharge of material, of a non-rotating, air-tight appliance providing a receptacle and a passage connecting said receptacle with said opening, a gas-tight joint between said container and said appliance, and a device for the removal of solid matter from the receptacle, adapted to be sealed against the passage of gases, by the material it removes.

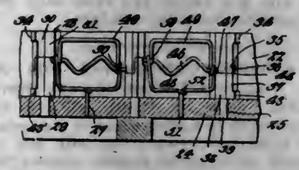
3. The combination with a rotary container having an opening for the admission or discharge of material, of a non-rotating, air-tight appliance providing a receptacle and a passage connecting said receptacle with said opening, a gas-tight joint between said container and said appliance, a tubular housing connected with said receptacle in a substantially horizontal position, a screw-conveyer having a rotary movement in said housing to move material from said receptacle to a point exteriorly thereof, and means for the removal of material conveyed through said housing, at a point above the level of the upper portion of its interior.

4. The combination with a rotary container having an opening for the admission or discharge of material, of a non-rotating air-tight appliance providing a receptacle and a passage connecting said receptacle with said opening, a gas-tight joint between said container and said appliance, a tubular housing connected with said receptacle in a substantially horizontal position, a screw-conveyer having a rotary movement in said housing to move material from said receptacle to a point exteriorly thereof, a shaft connected at the outer end of said conveyer, and an elevator in said shaft for the removal of material conveyed through said housing at a point above the level of the upper portion of its interior.

5. The combination with a rotary container having an opening for the admission or discharge of material, of an appliance including a stationary receptacle, a non-rotatable hood providing a passage connecting said opening with said receptacle, means for the removal of solid matter from the receptacle, and joints connecting said hood flexibly with said container and with said receptacle, said joints being sealed against the passage of gases.

[Claims 6 to 22 not printed in the Gazette.]

1,214,810. CONCRETE-BLOCK MOLD. FRANK JOSEPH MARX and BERNARD ALFONS STEINKE, Botkins, Ohio; said Steinke assignor to said Marx. Filed May 18, 1916. Serial No. 98,428. (Cl. 25—121.)



1. In a device of the class described, a pallet; an inner ring rigidly secured to the pallet; a flexible outer ring surrounding the inner ring, the rings being provided with notches; partitions having projections received in the notches; a depending foot at one end of the outer ring; the pallet supporting both rings and provided with a seat receiving the foot; and a tightening device connecting one end of the outer ring with the other end of the outer ring.

2. In a device of the class described, a pallet having spaced openings; spaced walls mounted on the pallet; and partitions between the walls, each partition comprising an upper plate having an outstanding rib provided within its lower end with a recess open at one side and defining a rim having a notch, the rib being provided with a depending pin, each partition comprising also a lower plate having an outstanding rib provided in its upper end with a recess open at one side and defining a rim having a notch, the last specified rib having a seat receiving the pin, the recesses coöperating to define a compartment, the rib of the lower plate embodying a pin seated in one opening of the pallet; and a tie passing through the notches of adjacent partitions and provided with eyes located in the compartments and engaging the first specified pins of the partitions, the tie having a depending finger engaged in the other opening of the pallet.

3. In a device of the class described, a pallet having spaced openings; spaced walls mounted on the pallet; and partitions between the walls, each partition comprising an upper plate having an outstanding rib provided in its lower end with a recess open at one side and defining a rib having a notch, the rib being provided with a depending pin, each partition comprising also a lower plate having an outstanding rib provided at its upper end with a recess open at one side and defining a rim having a notch, the recesses coöperating to define a compartment, the rib of the lower plate embodying a pin seated in one opening of the pallet; and a tie passing through the notches of adjacent partitions and provided with eyes located in compartments and engaging the first specified pins of the partitions, the tie having a depending finger engaged in the other opening of the pallet.

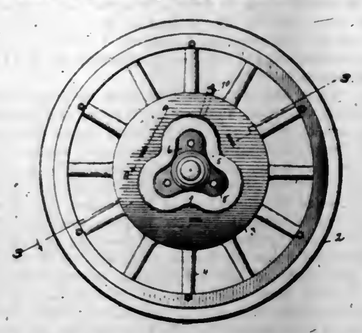
4. In a device of the class described, a pallet having an opening; spaced walls mounted on the pallet; and partitions between the walls, each partition comprising an upper plate having an outstanding rib provided in its lower end with a recess open at one side and defining a rim having a notch, the rib being provided with a depending pin, each partition comprising also a lower plate having an outstanding rib provided in its upper end with a recess open at one side and defining a rim having a notch, the last specified rib having a seat receiving the pin, the recesses coöperating to define a compartment, the rib of the lower plate embodying a pin seated in the said opening of the pallet; and a tie passing through the notches of adjacent partitions and provided with eyes located in the compartments and engaging the first specified pins of the partitions.

5. In a device of the class described, a pallet having spaced openings; spaced walls mounted on the pallet; and partitions between the walls, each partition comprising an upper plate having an outstanding rib provided in its lower end with a recess open at one side and defining a rim having a notch, the rib being provided with a depending pin, each partition comprising also a lower plate having an outstanding rib defining a rim having a notch, the last specified rib having a seat receiving the pin, the recesses coöperating to define a compartment, the rib of the lower plate embodying a pin seated in the opening of the pallet; and a tie passing through the notches of adjacent partitions and provided with eyes located within the compartments and engaging the first specified pins of the partitions.

[Claims 6 and 7 not printed in the Gazette.]

1,214,811. PNEUMATIC VEHICLE-WHEEL. LUIS MAYOLINO, Habana, Cuba, assignor to Ruedas y Neumaticos Mayolino, Habana, Cuba, a Corporation of Cuba. Filed Mar. 25, 1916. Serial No. 86,579. (Cl. 152—42.)

1. A wheel comprising a hub section having a sinuous outer perimeter to form a plurality of outwardly extending rounded projections and intervening rounded depressions, a rim section having a sinuous inner perimeter, to form a plurality of inwardly extending rounded projections having sloping side walls and intervening rounded depressions, and an air tube between the hub section and the rim section, the hub-projections being shorter than the depth of the rim depressions and longer than the distance of the sloping side walls from the wheel center, whereby the hub-projections are adapted to operatively engage said sloping side walls at a driving angle upon a deflation of the air tube, said hub section being centered within the rim section upon said deflation.

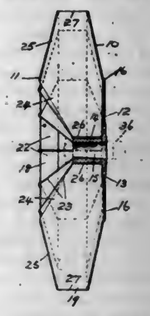


2. A vehicle wheel comprising a rim section having inwardly extending projections, a hub section having outwardly extending projections, an air tube between the rim section and hub section, and means for locking the outwardly extending projections against said inwardly extending projections, upon a deflation of said tube.

3. A vehicle wheel comprising a rim section having inwardly extending projections, a hub section having outwardly extending projections adapted to operatively engage said inwardly extending projections, an intervening air tube, a plurality of pawls on the rim section, a member carried by the hub section, and a plurality of segmental racks on said member which are adapted to be engaged by said pawls whereby the hub-projections are locked against the rim projections upon a deflation of the air tube.

4. A vehicle wheel comprising a rim section, having inwardly directed projections, a hub section having outwardly directed projections adapted to operatively engage the inwardly directed projections of the rim section, a pneumatic tube interposed between said sections, a face plate carried by the hub section, said face plate having racks, and pawls carried by the rim section and adapted to engage said racks whereby the hub-projections are locked against the rim-projections upon a deflation of the air tube.

1,214,812. ROTARY FAN. HUBERT MEREDITH-JONES, New York, N. Y., assignor to The Rotor Vacuum Cleaner Company, Inc., a Corporation of New York. Filed Dec. 16, 1913. Serial No. 807,039. (Cl. 253—200.)

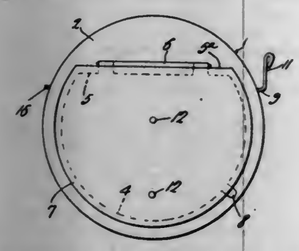


1. A rotary fan, comprising a hub adapted to be secured to a shaft, a plurality of radial blades secured to the hub, a concave plate with a central convex portion connected to one end of the hub and to the corresponding edges of the radial blades, said plate having radial grooves therein

and one of the corresponding edges of the blades being seated in each groove, a second concave plate having a circular opening therethrough, and having on its inner surface radial grooves in which are seated the second edges of the blades, said blades being of a width exceeding the length of the hub and having their inward edges formed on angles so as to form a diagonal line extending from the inner edge of the opening in the second plate to the end of the hub, thereby providing a conical opening for the admission of air into the fan, substantially as and for the purposes set forth.

2. In a fan of the character described, the combination of a plurality of radial blades with tapered end portions, a central hub to which all of said blades are secured, said hub of a length substantially one-half the width of the blades, said hub being adapted to be secured to a driven shaft, two concaved plates having radial grooves therein serving as seats for the edges of the blades, one of said plates having a central convex surface communicating with and secured to the rear end of the hub, and serving as a deflecting element for the air to contribute to the centrifugal movement of the air passing through the fan, and the oposite plate having a circular opening of substantially the same diameter as the convex portion of the opposed plate for admission of air into the fan, the blades being formed on an angle from the inner edge of the opening to the forward end of the hub whereby a conical opening to the forward end of the hub is provided in the fan for the admission of air, substantially as shown and described.

1,214,813. BARREL-COVER. WALTER F. MOORE, Livingston, Mont. Filed Apr. 22, 1916. Serial No. 92,935. (Cl. 217—57.)



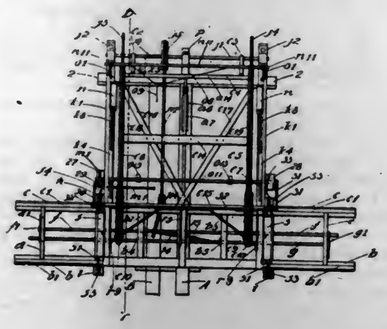
1. In a device of the class described, a body including a top having an opening; a lid hinged to the top and constituting a closure for the opening, the top having an aperture extended beneath the lid and constituting a prize tool seat; and body carried means operatively connected with the lid to effect an opening and a closing of the lid.

2. In a device of the class described, a body including a top having an opening and a depending flange assembled with the top; a lid hinged to the top and constituting a closure for the opening; a keeper on the under face of the lid; a shaft journaled for rotation in the flange and provided at one end with an exposed operating means, the shaft including a crank slidably received in the keeper.

3. In a device of the class described, a body provided with an opening; a lid hinged to the body and constituting a closure for the opening; a keeper secured to the under face of the lid and having a shoulder; a shaft journaled for rotation in the body and provided with a crank slidably received in the keeper, to effect an opening and a closing of the lid when the shaft is rotated, the intermediate portion of the crank being adapted to coact with the shoulder to prevent a rearward swinging of the lid beyond a predetermined position.

1,214,814. BOX-MAKING MACHINE. LYMAN H. MORGRIDGE, San Diego, Cal. Filed Dec. 14, 1915. Serial No. 66,719. (Cl. 1—15.)

1. The combination, in a box making machine of a pair of parallel, slidably mounted horizontal members, an end shook holder provided with a shook support mounted on the end of each of said horizontal members for moving the end shooks into position for fastening the side and bottom shooks thereto, a clamping means mounted on each of said horizontal members and attached to the frame of said machine, and a lever means mounted in said machine in operative connection with both of said clamping means to cause the latter to move the horizontal members in one direction.



2. The combination, in a box making machine, of a side and bottom shook carriage having a main driving shaft at its rear end, a cam actuated support member having the front end of said shook carriage pivotally mounted thereon, two sprocket wheels rigidly mounted on said main driving shaft, one near each end thereof, pulleys mounted on the other end of said carriage one opposite to each of said sprocket wheels, a channeled track mounted on said carriage between each of said sprocket wheels and its respective pulley, two endless sprocket chains, one on each of said sprocket wheels and its respective pulley and resting in one of said channeled tracks, a two-member ratchet pulley provided with a groove in its perimeter mounted on said main driving shaft between said sprocket wheels, rigidly attached thereto by its inner member, a spring means mounted on said main shaft adjacent to said ratchet pulley and attached to said carriage at its one end and to the outer member of said ratchet pulley at its other end, a pressure spring means for holding the side and bottom shooks firmly on said sprocket chains rigidly mounted on said cam actuated support member, a drive chain attached at its one end to the outer edge of said ratchet pulley in said groove in the perimeter thereof, and a lever operatively connected to the other end of said drive chain for causing the operation of said sprocket chains in said shook carriage.

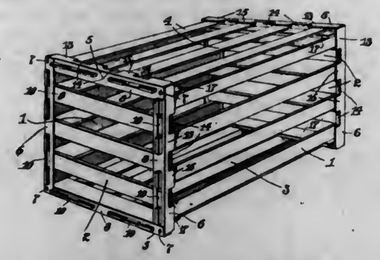
3. The combination, in a box making machine, with a cam actuated shook carriage and its support, of a plurality of cam members for operating said carriage and rigidly mounted on said carriage support, each comprising a pulley having integral therewith on one side a cam portion provided with a compoundly curved pathway and, on its surface and commencing on the side opposite said cam portion, a groove running at an angle diagonally toward the middle of the surface of said pulley and continuing along near the middle of it parallel to the side thereof for a portion of the circumference thereof.

4. The combination, in a box making machine, of right and left end shook holders, each comprising a crank shaft member pivotally mounted at its ends on two support portions on the frame of said machine, having one end extended beyond its support and turned at an angle thereto, an operating means in operative connection with each of said crank shaft members, a flat member provided with a flange along one side and pivotally mounted on said crank shaft member on the side opposite to said flange and between said two support portions, and a support member mounted at each end on the said supports on which said crank shaft is mounted and extending parallel to the above said flanged side of said flat member and pivotally attached to said flat member near its middle.

5. The combination, in a box making machine, of yielding means for holding side and bottom shooks on the conveying chain mounted on the carriage of said machine, comprising a spring support member pivotally mounted at one end, a plurality of curved spring members mounted at one end on the side of said support member adjacent to said shook conveying chain and extending downwardly from said support member toward the conveying chain, another spring support member rigidly mounted above and adjacent to said pivotally mounted support member and provided with a downwardly slanting surface, and a spring pressure member mounted on said downwardly slanting surface and having its extending portion resting upon the top of said pivotally mounted support member.

[Claims 6 to 8 not printed in the Gazette.]

1,214,815. CRATE. ISAAC J. MORRIS, New York, N. Y. Filed Jan. 7, 1916. Serial No. 70,775. (Cl. 217—43.)



1. In a crate, the combination with a series of slats, of a metallic member having slots formed therein to receive the slats, said slots being widened at one point and having tangs in alinement with said widened portion.

2. In a crate, the combination with a series of slats, of a metallic member of right angular formation having in one of its faces a plurality of slots to receive said slats, and having its other face formed with a plurality of tangs adapted to be turned into engagement with, and intermediate of, said slats.

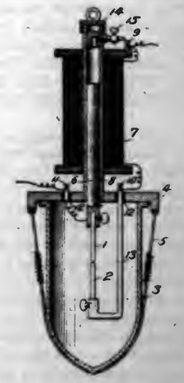
3. In a crate, the combination with a metallic corner member having slots formed with a central widened portion and narrow portions at either side thereof, of a plurality of slats having transverse grooves in their ends and adapted to be received by the widened portions of said slots and to be shifted laterally into said narrow portions, and means forming part of said member and adapted to prevent the lateral displacement of said slats.

1,214,816. ELECTRIC LAMP. MOSES SOLOMON OKUN, New York, N. Y., assignor of one-third to Glen E. Smith, Chicago, Ill. Filed Jan. 26, 1912, Serial No. 673,684. Renewed June 22, 1916. Serial No. 105,292. (Cl. 176—28.)

1. An electric lamp having electrodes, means for engaging the electrodes in contact under slight pressure during the operation of the lamp and means to regulate automatically the electrical resistance of said contact, so as to maintain the current and the voltage of the lamp approximately constant, substantially as described.

2. An electric lamp having electrodes, means for engaging the electrodes in contact under slight pressure during the operation of the lamp and means operated by the electric current, passing through the lamp for regulating the electrical resistance of said contact, so as to maintain the current and the voltage of the said lamp approximately constant, substantially as described.

3. An electric lamp having electrodes in contact under slight pressure during the operation of the lamp, an electromagnetic device associated with the electrodes and a circuit passing through said electrodes and said electromagnetic device for regulating the pressure of said contact, so as to maintain the current and the voltage of the lamp approximately constant, substantially as described.

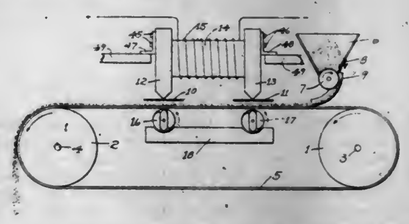


4. An electric lamp having electrodes, means for engaging the electrodes in contact under slight pressure during the operation of the lamp, means to separate the said electrodes when the current is not passing through the lamp and means operated by the electric current for regulating the pressure of the contact of the electrodes, substantially as described.

5. An electric lamp having electrodes, means for engaging the electrodes in contact under slight pressure during the operation of the lamp, means to regulate automatically the electrical resistance of said contact, so as to maintain the current and the voltage of the lamp approximately constant, an inclosure from which the air is exhausted and into which said electrodes are placed in order to retard the consumption of the same, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,214,817. MEANS FOR EFFECTING MAGNETIC OR INDUCTIVE SEPARATION OF SUBSTANCES. SAMUEL W. OSGOOD, Chicago, Ill. Filed Sept. 18, 1911, Serial No. 649,950. Renewed June 30, 1916. Serial No. 106,956. (Cl. 83—71.)



1. In a magnetic and inductive separator, the combination of an electromagnet, means for moving material to be treated under the magnet, a revolving armature in the magnetic field produced by the electromagnet and adapted to produce waves in the field flowing in a direction different from that taken by the material being treated in passing through the separator, and means for preventing the material from making contact with the revolving armature.

2. In a magnetic and inductive separator, the combination of an electromagnet, means for directing material to be treated adjacent to the poles of the electromagnet, devices for directing the magnetic field produced through the material treated, a revolving armature having helically-shaped poles located in the path of the flux from the

magnet and means for preventing the material from making contact with the revolving armature.

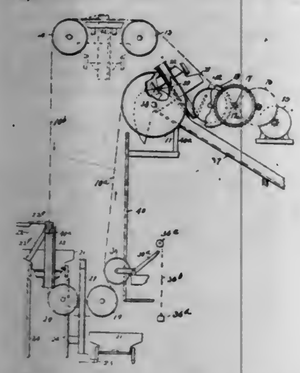
3. In a magnetic and inductive separator, the combination of an electromagnet, means for directing material to be treated adjacent to the poles of the electromagnet, devices for directing the magnetic field produced through the material treated, a revolving armature having helically-shaped poles located in the path of the flux from the magnet, and shields of non-conducting material between the poles of the electromagnet and the material being treated.

4. In a magnetic and inductive separator, the combination of means for moving the material to be treated through the separator, a direct current electromagnet having its poles adjacent to said material moving means, means for distorting the magnetic flux produced through said material to produce magnetic waves flowing in a direction different from the motion of the material through the separator and means for preventing the material from making contact with said poles.

5. In a magnetic and inductive separator, the combination of means for moving the material to be treated through the separator, a direct current electromagnet having its poles adjacent to said material moving means, means for distorting the magnetic flux produced through said material to produce magnetic waves flowing in a direction different from the motion of the material through the separator, said pole pieces presenting tapered edges to the material treated and means for preventing the material from making contact with said poles.

[Claims 6 to 27 not printed in the Gazette.]

1,214,818. HOIST. CHARLES G. PALMER, Cleveland, Ohio. Filed Feb. 4, 1914. Serial No. 816,607. (Cl. 214—12.)



1. In a hoist, a carrier adapted to hold a car, means for hoisting and lowering the carrier having ascending and descending sections, tracks for loaded and empty cars adjacent the lower ends of the ascending and descending sections respectively, the inner rails of the tracks having gates to permit the passage of a portion of the carrier therethrough from one track to the other.

2. In a hoist, a carrier adapted to hold a car, endless means for elevating and lowering the carrier, and provided with ascending and descending sections and with sections at the ends thereof for moving the carrier laterally, tracks for loaded and empty cars adjacent the lower ends of the ascending and descending sections respectively, gates in the inner rails of the tracks, and means for automatically actuating said gates, so as to permit the passage of a portion of the carrier therethrough as the carrier moves laterally from one track to the other.

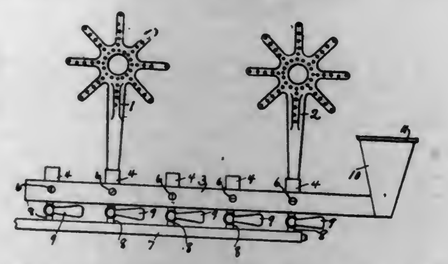
3. In a hoist, a carrier adapted to hold a car, endless hoisting and elevating means for the carrier, provided with ascending and descending sections and with sections for moving the carrier laterally between the ascending and descending sections, tracks for loaded and empty cars at the lower part of the hoist, means being provided to permit the bottom of the carrier to pass downwardly between the rails of the track for the empty cars, thence laterally beneath the inner rails of the two tracks, and thence upwardly between the rails of the track for the loaded cars.

4. In a hoist, a carrier for a car, endless means for elevating and lowering the carrier and provided with ascending and descending sections and with sections at the ends thereof by which the carrier is moved laterally, tracks for empty and loaded cars at the lower part of the hoist, portions of the inner rails of the two tracks being supported from above so as to permit the passage thereunder of the lower part of the carrier as the same is moved laterally from the track for the empty cars to the track for the loaded cars.

5. In a hoist, a carrier for a car, endless means for elevating and lowering the carrier provided with ascending and descending sections and with portions for moving the carrier laterally between the same, tracks for loaded and empty cars at the bottom of the hoist, the inner rails of both tracks having gates for the passage therethrough of a portion of the carrier, and sections of the inner rails being supported from above so that the bottom portion of the carrier may pass beneath the same from the track for the empty cars to the track for the loaded cars.

[Claims 6 to 17 not printed in the Gazette.]

1,214,819. AIR-FILTERING GAS-BURNER. WILLIAM B. PARKS, Fort Worth, Tex. Filed Apr. 3, 1916. Serial No. 88,450. (Cl. 158—118.)

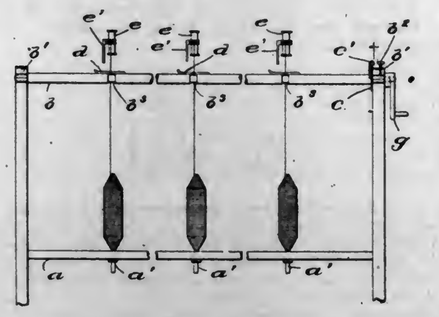


1. The combination with a series of gas burners of an air filterer comprising an air feeding chamber, a series of mixing chambers rigid therewith and having communication therewith, and connected with said series of burners, a series of valves for said mixing chambers, each valve projecting down through said air feeding chamber and adapted to open more or less the opening into each mixing chamber, a receiver for said air chamber having an enlarged outer end, and a screen closing said enlarged outer end.

2. The combination with a series of gas burners of an air filterer comprising an air feeding chamber communicating with said series of burners, a receiver connected to said chamber and having a relatively large flared receiving end and said receiver tapering down to the cross section size of said air feeding chamber, and a screen covering said receiving end.

1,214,820. TENSION DEVICE FOR WINDING YARN. JOSEPH D. PENNELL, Boston, Mass. Filed Oct. 22, 1915. Serial No. 57,268. (Cl. 242—147.)

1. A tension device for yarn winding embracing in combination means for holding a series of yarn cops, a main guide member mounted above said cop-holder in position to engage and frictionally retard the yarn ends, and a series of coöperating yarn-retaining members mounted at intervals along said guide member, said yarn-retaining members being movable around the axis of the main guide member to increase or diminish the frictional contact of the yarn ends with said main guide member, substantially as described.



2. A tension device for yarn winding embracing a rock shaft forming a guide member for the different yarn ends, a series of individual yarn-engaging members secured thereto so as to be revoluble around the axis of the rock shaft to various positions of adjustment in order to vary the extent of circumferential contact of each yarn end with the main guide member, substantially as described.

3. A tension device for winding yarn embracing in its construction a rotatable yarn-engaging member arranged in position to form frictional contact with the ends of yarn to be wound, a series of individual yarn-retaining members movable about the axis of said yarn-engaging member simultaneously to vary the degree of contact of the yarn ends against said member, and an indicator device coördinated therewith to indicate the proper position of adjustment of the yarn-retaining members appropriate to different counts of yarn, substantially as described.

4. The combination with a rotatable guide member provided with a series of yarn-receiving grooves arranged at intervals, a series of yarn-retaining fingers extending over said grooves in position to allow each yarn end to be inserted and retained in its appropriate groove, and means for adjustably securing said guide member in its various positions of rotation, substantially as described.

5. In a tension device the combination of a rock shaft provided with a series of regularly spaced circumferential grooves, a series of retaining fingers secured in line along said rock shaft with their free ends projecting over the respective grooves, means for clamping said rock shaft in different positions of rotative adjustment, and an indicator device connecting with said rock shaft to indicate the counts of yarn appropriate to different positions of adjustment, substantially as described.

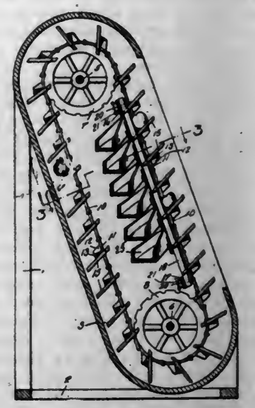
[Claims 6 and 7 not printed in the Gazette.]

1,214,821. MACHINE FOR GRADING FRUIT. HENRY E. PETERSON, Seattle, Wash. Filed Jan. 28, 1916. Serial No. 74,743. (Cl. 130—32.)

1. A machine for grading fruit having substantially vertical grading strips extending in downwardly diverging relation, means to adjust said strips to vary the space therebetween, a conveyer belt, inclined shelves mounted upon said belt adapted to support specimens of fruit thereon and associated with said strips whereby the fruit is disposed to engage said strips during the downward travel of the shelves.

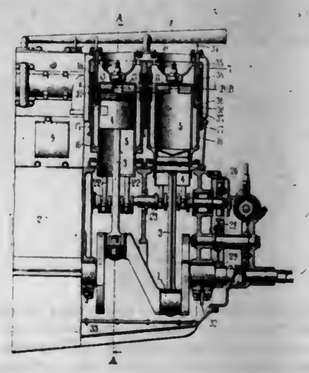
2. A machine for grading fruit having substantially vertical grading strips extending in downwardly diverging relation, means to vary the space between said strips, sprocket wheels mounted for rotation in substantially superposed relation, a conveyer belt operatively connected with said wheels, inclined shelves associated with said belt adapted to support specimens of fruit thereon and formed with a lip extending between said strips whereby the fruit may pass between said strips.

3. A machine for grading fruit, having substantially vertical grading strips extending in downwardly diverging relation, means to vary the space between said strips, sprocket wheels mounted for rotation in substantially superposed relation, a conveyer belt operatively connected with said wheels, inclined shelves associated with said belt adapted to support specimens of fruit thereon and formed with a lip extending between said strips whereby the fruit may pass between said strips, and a speed-governing device to control the movement of said belt.



4. In a machine for grading fruit, the combination of a pair of conveyer belts arranged to travel in side by side parallel relation, said belts having a plurality of connecting transverse slats, an inclined shelf upon each said slat, each shelf adapted to support a single specimen of fruit, and a pair of adjustable downwardly diverging spaced strips against which the fruit is disposed to lean in the downward travel of said belts, said belts being actuated by the gravity of the fruit supported upon said shelves.

1,214,822. SLEEVE-VALVE ENGINE. FINLEY R. PORTER, Port Jefferson, N. Y., assignor, by direct and mesne assignments, to Knight American Patents Company, Chicago, Ill., a Corporation of Delaware. Filed Dec. 28, 1915. Serial No. 69,021. (Cl. 123—75.)



1. An explosion engine comprising a fixed cylinder, inner and outer telescoping sleeve valves working thereon and a piston working in said cylinder, said sleeve valves and cylinder having suitable inlet and outlet ports arranged to be brought into and out of coaction by the movement of said sleeve valves, the sleeve valve inlet

ports opening by a movement of the sleeve valves in opposite directions and closing at the bottom of the cylinder port by a movement of the sleeve valves in the same direction.

2. An explosion engine comprising a fixed cylinder, inner and outer telescoping sleeve valves working thereon and a piston working in said cylinder, said sleeve valves and cylinder having suitable inlet and outlet ports arranged to be brought into and out of coaction by the movement of said sleeve valves, the sleeve valve inlet ports opening by a movement of the sleeve valves in opposite directions from a point about midway between the top and bottom of the cylinder port and closing at the bottom of the cylinder port by a movement of the sleeve valves in the same direction.

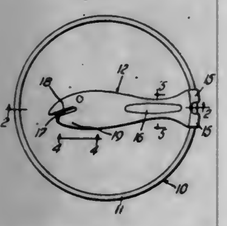
3. An explosion engine comprising fixed inner and outer concentric cylinders, inner and outer telescoping sleeve valves working between said cylinders and a piston working in the inner cylinder, said sleeve valves and cylinders having suitable inlet and outlet ports arranged to be brought into and out of coaction by the movement of said sleeves, the sleeve valve inlet ports opening by a movement of the sleeve valves in opposite directions and closing at the bottom of the cylinder ports by a movement of the sleeve valves in the same direction.

4. An explosion engine comprising fixed inner and outer concentric cylinders, inner and outer telescoping sleeve valves working between said cylinders and a piston working in the inner cylinder, said sleeve valves and cylinders having suitable inlet and outlet ports arranged to be brought into and out of coaction by the movement of said sleeves, the sleeve valve inlet ports opening by a movement of the sleeve valves in opposite directions from a point about midway between the top and bottom of the cylinder ports, and closing at the bottom of the cylinder ports by a movement of the sleeve valves in the same direction.

5. An explosion engine comprising a fixed cylinder, inner and outer telescoping sleeve valves working thereon and a piston working in said cylinder, said sleeve valves and cylinder having suitable inlet and outlet ports arranged to be brought into and out of coaction by the movement of said sleeve valves, the sleeve valve inlet ports opening by the downward movement of the inner sleeve and upward movement of the outer sleeve, and closing at the bottom of the cylinder port by a downward movement of both sleeve valves.

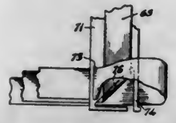
[Claims 6 to 16 not printed in the Gazette.]

1,214,823. CAN-OPENER. HENRY CLAUDE PRIVETT, Long Beach, Cal., assignor to Pacific Canning Machinery Company, a Corporation of California. Filed Aug. 28, 1915. Serial No. 47,821. (Cl. 30—3.)



A device of the class described comprising an elongated resilient flat sheet metal body of sharpened can opener form at one end, attaching means at the opposite end of the body for fastening the device to the peripheral head of a can, said means comprising spaced hook-shaped resilient portions arranged transversely of the body adapted for removable engagement with the bead of a can whereby the body of the opener is positioned flatly engaging the adjacent portion of the can when normally arranged, the said body having a struck-up longitudinal reinforcing rib intermediate its ends.

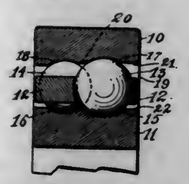
1,214,824. MANIFOLD ATTACHMENT FOR TYPEWRITERS. LEOPOLD RAUH, Dayton, Ohio, assignor to The Egry Register Company, Dayton, Ohio, a Corporation of Ohio. Filed Oct. 27, 1913, Serial No. 797,386. Renewed Dec. 23, 1916. Serial No. 138,620. (Cl. 197—153.)



1. A manifolding device for typewriters comprising a pair of ribbon spools, carried by the carriage of the typewriter, a single continuous web of ribbon thereon, means for automatically actuating the spools for feeding the ribbon from one to the other, and ribbon guides mounted on the carriage for supporting a plurality of folds of said ribbon, said guides having inclosed apertures therein for each fold, and one of said guides having an inclosed slot and a diagonal edge adjacent said slot to permit the ribbon to be doubled on itself, and then passed between the two folds thereof.

2. A manifolding device for typewriters comprising a pair of ribbon spools, carried by the carriage of the typewriter, a single continuous web of ribbon thereon, means for automatically actuating the spools for feeding the ribbon from one to the other, and ribbon guides mounted on the carriage for supporting a plurality of folds of said ribbon, said guides comprising plates having projecting arms inclosing triangular openings for directing and receiving the ribbon from the spools, and an inclosed slot adjacent the diagonal edge of the opening in one of the guides for holding and guarding the intermediate folds.

1,214,825. BALL-BEARING. JAMES FREDERICK RICHARDSON, Jamestown, N. Y. Filed May 20, 1916. Serial No. 98,816. (Cl. 64—59.)



1. A ball bearing comprising an outer race ring and an inner race ring with oppositely placed different sized race ways on their outer and inner surfaces and correspondingly different sized balls supported in said different sized race ways between said race rings with their axes equidistant from the axis of the ball bearing.

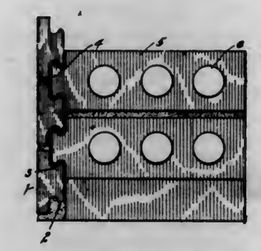
2. A ball bearing comprising inner and outer race rings with a plurality of rows of different sized balls therebetween, said race rings having race ways interferingly close to one another for said rows of different sized balls, and means for holding said balls in staggered relation in said close race ways.

3. A ball bearing comprising an inner race ring and an encircling outer race ring with pairs of different sized race ways oppositely placed on their opposed surfaces, the outer wall of one race way on each ring being higher than the outer wall of adjacent race way, and correspondingly different sized balls supported in the different sized race ways between said rings with their axes in a common cylinder whose axis coincides with the axis of the ball bearing.

4. A ball bearing comprising an inner race ring having a plurality of different sized race ways on its outer surface, an outer race ring having a plurality of different sized race ways on its inner surface, rows of correspondingly different sized balls in said race ways, the wall of each of said race ways toward the larger race way side of said outer ring being lower than the wall toward the smaller race way side to permit the assemblage of said inner race ring and said rows of different sized balls into said outer race ring from said larger race way side of said outer ring.

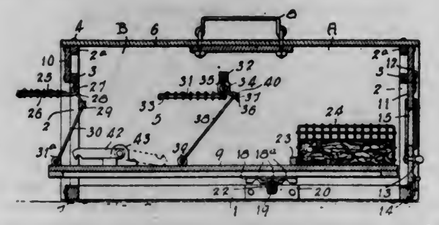
5. A ball bearing comprising an inner race ring and an encircling outer race ring with pairs of different sized race ways oppositely placed on their opposed surfaces, the outer wall of one race way on each ring being higher than the outer wall of adjacent race way, and rows of balls arranged in the race ways between the rings, the balls of one row being different sized from and staggered relative to the balls of the adjacent row, and the axes of all of the balls being equidistant from the axis of the ball bearing.

1,214,826. WALL STRUCTURE. WILLARD D. RICHARDSON, Columbus, Ohio. Filed Dec. 21, 1914. Serial No. 878,258. (Cl. 72—21.)



A wall structure having a relatively thin facing veneer and made up of a plurality of superimposed backing units of such thickness as to extend through and form the burden bearing portion of the wall and of the height and length of a standard brick and having parallel upper and lower faces, each of said units having a longitudinally extending, centrally disposed dovetail rib formed along its front face, the facing veneer comprising thin slabs of facing material of the length and height of a standard brick and having longitudinally extending dovetail ribs centrally disposed upon their rear faces, whereby when the dovetail ribs of the facing slabs are disposed between the dovetail ribs of the superimposed backing units said slabs overlie the joints between the said units to prevent the formation of a mortar joint completely through the wall, said slabs being so disposed longitudinally of the backing units that the vertical joints between the slabs lie out of alinement with the vertical joints between the backing units.

1,214,827. COMBINATION NEST-PROTECTOR AND TRAP-NEST. DAVID F. ROACH, Kansas City, Mo. Filed Sept. 9, 1916. Serial No. 119,184. (Cl. 119—49.)



1. A device of the character described, including a housing provided with an entrance, a tilting platform pivoted at a point between its ends and arranged with a heavy end toward the entrance, a nest on the opposite end of the tilting platform, a gate arranged at the entrance and operatively connected to the platform, and a movable nest guard spaced from the gate for coöperation therewith to provide a trap compartment, said nest guard being also operatively connected to the platform.

2. A device of the character described, including a housing provided with an entrance, a tilting platform pivoted between its ends and arranged with a heavy end toward the entrance, a nest on the opposite end of the platform, a swinging gate for the entrance, an operative connection between the gate and the platform, an outwardly swinging nest guard arranged in a spaced relation to the gate for coöperation therewith to provide a top compartment, an operative connection between the nest guard and the platform, said nest guard being adapted to swing outwardly into an open position independently of the platform, and a latch for locking the gate in a closed position.

3. A device of the character described, including a housing provided with an entrance, a tilting platform pivoted between its ends and arranged with a heavy end toward the entrance, a nest on the opposite end of the tilting platform, a gate at the entrance, an operative connection between the gate and swinging platform, an outwardly swinging nest guard arranged in a spaced relation to the gate so as to coöperate therewith to provide a nest compartment, said nest guard having notched portions in the swinging edge thereof to receive the head and neck of a hen, an operative connection between the nest guard and the platform, whereby the nest guard swings into operative position when the gate is closed, but can swing outwardly into inoperative position independently of the platform, and a latch for locking the gate in a closed position.

4. A device of the character described, including a housing provided with an entrance, a tilting platform pivotally mounted between its ends and arranged with a heavy end toward the entrance, a nest on the opposite end of the tilting platform, a swinging gate at the entrance, an operative connection between the gate and the platform, for swinging the gate into a closed position when the platform is tilted by the weight of a hen in the nest, an outwardly swinging nest guard arranged in a spaced relation to the gate for coöperation therewith to provide a trap compartment, a crank arm projecting from the nest guard and terminating in an eye, a link connected to the platform and passing loosely through the eye, the extremity of the link terminating in a head which engages the eye to open the nest guard when the gate is opened, said nest guard closing automatically when the tilting of the platform closes the gate and being movable outwardly into an open position independently of the platform, and a latch for holding the gate in a closed position.

1,214,828. HIGH-SPLICING MECHANISM FOR CIRCULAR-KNITTING MACHINES. FRANK W. ROBINSON, Reading, Pa., assignor to Nolde & Horst Company, Reading, Pa., a Corporation of Pennsylvania. Filed Sept. 20, 1915. Serial No. 51,576. (Cl. 66—12.)

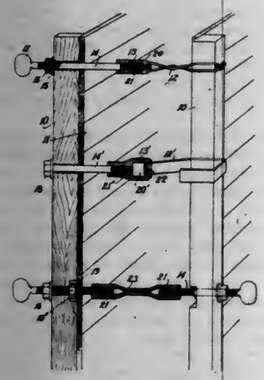


1. In a circular knitting machine having a plating-thread carrier, a thread-carrier latch ring provided with separate guide apertures for a knitting thread and a reinforcing thread, and separate series of needles operative upon said knitting thread with and without said reinforcing thread respectively: a thread-guide plate carried by said latch ring and provided with an inclined thread-guiding edge and with a thread-engaging slot.

2. In a circular knitting machine having a plating-thread carrier, a thread-carrier latch ring provided with separate guide apertures for a knitting thread and a reinforcing thread, and separate series of needles operative upon said knitting thread with and without said reinforcing thread respectively; a thread-guide plate carried by said latch ring and provided with an inclined thread-guiding edge and with a thread-engaging slot arranged approximately parallel with said edge.

3. In a circular knitting machine having a plating-thread carrier, a thread-carrier latch ring provided with separate guide apertures for a knitting thread and a reinforcing thread, and separate series of needles operative upon said knitting thread with and without said reinforcing thread respectively; a thread-guide plate carried by said latch ring and provided with an inclined thread-guiding edge and with a thread-engaging slot, and an automatically operated thread cutter operative upon successive slot-engaged threads extending between said thread-guide plate and their engaging needles.

1,214,829. MOLD FOR CONCRETE. JOSEPH F. ROSS, Ipswich, Mass. Filed Sept. 11, 1913. Serial No. 789,332. (Cl. 25—131.)



1. A mold comprising walls and a composite tie therefor passing through the mold; one component of the tie being within the mold at a distance from the mold face and having no part reaching the mold; another engaging the first removably, adapted to rotate it, extending out through the mold wall, and provided with means by which it may be rotated; and a third component rotatable by the first, connecting the first with the other mold wall, and adapted when rotated, to shorten the tie.

2. A mold comprising walls and a composite tie therefor passing through the mold, one component of the tie being within the mold at a distance from its face; a second component engaged removably therewith, extending out through the mold face, and adapted to rotate the first mentioned component; and a third component engaged between the first and the other mold face and adapted to be shortened by being twisted when the first mentioned component is rotated.

3. A mold comprising walls and a composite tie therefor passing through the mold, one component of the tie being a link ending within the mold at a distance from the mold face, with space of the mold between it and said face whereby it will become enveloped by material filling the mold; and another component being a rod screw-threaded into said end of said link, passing outside the mold wall, and there having screw threads in the reverse direction and a nut thereon adapted to engage the outside of the mold wall.

4. A mold comprising walls and a composite tie therefor passing through the mold, one component of the tie being a link set within the mold and having two holes through it perpendicular to each other; one of said holes extending toward the adjacent mold face and having means internally to engage a second component; and the other of said holes extending substantially parallel to the mold face and adapted to engage a third component; said second component, projecting outside the wall, means thereon engaging the exterior of the wall; and said third component, looped through said hole and adapted to extend integrally to and be connected to the opposite face.

5. A composite tie for a mold comprising a wire loop adapted to be engaged with one wall of the mold, a link within the mold space having a hole through which the wire is looped and a bolt adapted to engage the link removably and provided with means to engage the other mold wall.

[Claim 6 not printed in the Gazette.]

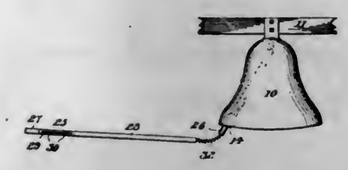
1,214,830. MOISTURE-PROOF SWITCHBOARD-CORD. WILLIAM L. RUNZEL, Chicago, Ill., assignor to Runzel-Lenz Electric M'f'g. Co., Chicago, Ill. Filed May 24, 1915. Serial No. 30,057. (Cl. 173—264.)



1. A flexible switchboard cord consisting of a flexible inner conductor adapted to form part of an electric circuit, a concentric flexible outer conductor adapted to form part of an electric circuit, said conductors being concentric and helically wound, insulation between said conductors, a wrapping of moisture proof insulating material about said outer conductor, and a flexible insulating protecting covering about said wrapping, thereby forming a pliable and flexible multiple conducting cord.

2. A flexible switchboard cord consisting of a flexible inner conductor adapted to form part of an electric circuit, a concentric flexible outer conductor adapted to form part of an electric circuit, said conductors being concentric and helically wound, insulation between said conductors, a layer of insulating material impregnated with a moisture proof compound surrounding said outer conductor, and a flexible insulating protecting covering about said moisture proof layer, thereby forming a pliable and flexible multiple conducting cord.

1,214,831. BELL-OPERATING DEVICE. WLADYSLAW SAK, Chicago, Ill. Filed Mar. 30, 1916. Serial No. 87,740. (Cl. 116—40.)



A bell ringing device including the combination with a rigidly mounted bell having a swinging clapper pivoted therein, of a rigid extension depending from said clapper, an operating wheel, a pitman formed in two parts adjustably connected together, one end of one of said parts having an eccentric pivotal attachment with said wheel, and a flexible elastic connection between the end of said extension and one end of the other of said pitman parts.

1,214,832. FABRIC SAMPLE OR SWATCH. ROBERT SCHEY, New York, N. Y. Filed Feb. 20, 1914. Serial No. 819,893. (Cl. 35—17.)



A sample of the kind described comprising a specimen of undyed fabric, and a representation of a garment or the like produced in color only upon one surface thereof so as to cover only a portion of said surface.

1,214,833. CLOSURE FOR FLUID-RECEPTACLES. LAWRENCE R. SCHIEFER, Fort Wayne, Ind., assignor of one-half to George E. Eaton, Chicago, Ill. Filed Nov. 6, 1915. Serial No. 59,908. (Cl. 221—60.)



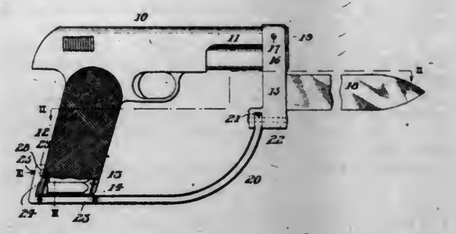
1. The combination with a collapsible tube having a discharge orifice, of a cap secured to the tube and over the orifice and having a discharge orifice in alinement with the first named orifice, two flap-velves secured to the inner face of the cap and adapted to be forced outwardly through and exteriorly of the discharge orifice in the cap by the moving contents of the tube when the tube is compressed and to automatically retract and close said opening upon the release of said compressing force.

2. The combination with a collapsible tube having a discharge orifice of a cap secured to the tube and over the orifice and having a discharge orifice in alinement with the first named orifice, a diaphragm secured within the cap and having two elastic flaps provided therein which are adapted to be opened outwardly by the moving contents of the tube when the tube is compressed, the flaps in the open position extending through and exteriorly of the orifice in the cap and preventing contact of the contents of the tube with the opposite walls of the said orifice, the said flaps upon the release of pressure on the tube automatically retracting and closing said orifice.

1,214,834. SWORD AND GUARD ATTACHMENT FOR PISTOLS. PIOTR SCUBELEK, Wilmington, Del. Filed Oct. 19, 1916. Serial No. 126,548. (Cl. 42—53.)

1. An attachment for automatic pistols comprising a bracket removably secured to the barrel thereof, a blade carried by the said bracket projecting forwardly of the barrel, a hand guard hinged to the said bracket having a foot portion restrainingly positioned adjacent the butt of the pistol when the device is operatively arranged and resilient retaining connections between the stock of the pistol and the extreme end portion of the said guard.

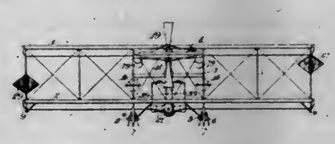
2. An attachment for automatic pistols having a cartridge magazine removable from the butt end of the stock of the pistol, a bracket mounted adjacent the muzzle of the barrel of the pistol, a blade carried by the said bracket, a combined hand guard and magazine retainer hinged at one end to the said bracket with an enlarged foot portion adjacent its other end normally arranged in contact with the said magazine within the operative path of movement thereof, and spring catch connections between the enlarged extreme end of the said guard and the stock of the pistol.



3. An attachment for automatic pistols having a cartridge magazine removable from the butt end of the stock of the pistol, a bracket mounted adjacent the muzzle of the barrel of the pistol, a blade carried by the said bracket, a combined hand guard and magazine retainer hinged at one end to the said bracket with an enlarged foot portion adjacent its other end normally arranged in contact with the said magazine within the operative path of movement thereof, the stock of the pistol having a recess therein, a curved leaf spring secured within the said recess, a plate carried by the said spring normally projected substantially flush with the adjacent surface of the stock and having curved sided spaced transverse ribs adapted for the seating reception of the said guard end therebetween and a spring pressed depressing pin for the said plate carried by the said guard end.

4. A device of the class described comprising in combination with a pistol, a bracket attached thereto, a combined hand guard and magazine retainer pivoted at one end to the said bracket extending forwardly of the stock and spanning the butt of the latter when normally arranged, the said guard having an enlarged free end, the stock of the pistol having a recess therein, a curved leaf spring secured within the said recess, a plate carried by the said spring normally projected substantially flush with the adjacent surface of the stock and having curved sided spaced transverse ribs adapted for the seating reception of the said guard end therebetween and a spring pressed depressing pin for the said plate carried by the said guard end.

1,214,835. FLYING-MACHINE. JOHN THOMAS SIMPSON, Newark, N. J. Filed July 12, 1910. Serial No. 571,557. (Cl. 244—29.)



1. A flying machine having stabilizing planes, semi-automatic mechanism operating the same, stand-by mechanism interconnected with said semi-automatic mechanism, said stand-by mechanism including a wheel, and a rim loosely mounted to turn upon the wheel.

2. A flying machine having an air engine, devices for controlling the engine, a shaft turned by the engine, a second shaft, connections to the two shafts, drums on the second shaft, stabilizing planes, connections between the drum and the stabilizing planes, the connections to the

second shaft and drums permitting longitudinal movement of the said shaft, connections controlled by the longitudinal movement of the second shaft for effecting the dip of the machine, and a manual controlling device for effecting longitudinal movement of the second shaft.

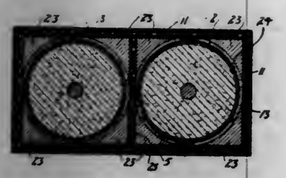
3. A flying machine having a longitudinally movable shaft, a wheel on the shaft, said wheel having a rotatable rim, connections between the wheel and rim to permit the rim to rotate independently of the wheel, automatic mechanism for turning the shaft, a disconnecting mechanism for the automatic mechanism, and mechanism for controlling the dip of the flying machine actuated by the longitudinal movement of the shaft.

4. An aileron having a pair of plates, each the shape of a right angle triangle, and each hinged along a side adjacent the right angle to a common axis.

5. A flying machine having a frame with X-members, a plate pivoted to turn about one member as an axis, a sleeve sliding on the other member and connections between the sleeve and plate.

[Claims 6 to 13 not printed in the Gazette.]

1,214,836. BATTERY-PACKAGE. JOHN SMITH, Brooklyn, N. Y., assignor, by mesne assignments, to Hi-Po Waterproof Battery Corporation, a Corporation of New York. Filed May 1, 1916. Serial No. 94,525. (Cl. 204—53.)



1. A dry cell battery package comprising positive and negative elements, an electrolyte, a depolarizer, and a cellular sealed waterproof casing inclosing said elements.

2. A dry cell battery package comprising a plurality of cylindrical positive elements, a negative element within each positive element, intermediate connections between said elements, and a cellular sealed waterproof casing inclosing said elements having a top of sealing compounds inclosing the intermediate connections.

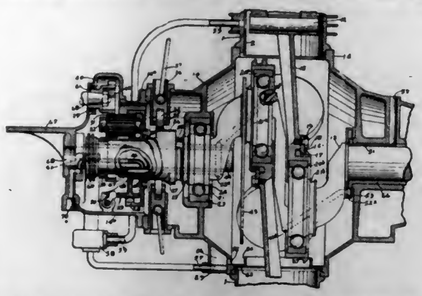
3. A dry cell sealed battery package comprising positive and negative elements, an electrolyte, a depolarizer, a cellular waterproof casing inclosing said elements, a sealed top closing the cellular sides, one of said sides being provided with a hanging extension.

4. A dry cell battery package comprising a zinc cylinder having a non-metallic bottom, a carbon element within said zinc cylinder, a waterproof cellular sealed casing inclosing said elements, and a waterproof sealing compound covering said elements and closing the cells of said casing.

1,214,837. INTERNAL-COMBUSTION ENGINE. JOHN W. SMITH, Chicago, Ill. Filed Jan. 4, 1912. Serial No. 669,470. (Cl. 123—44.)

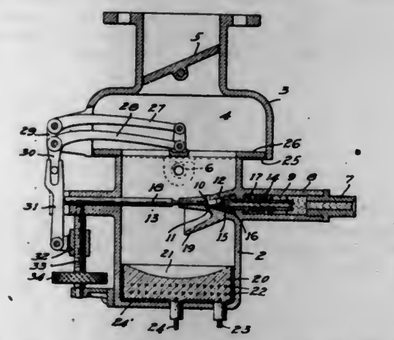
1. An internal combustion engine including in combination, a crank case, a plurality of radially disposed cylinders mounted thereon and disposed substantially in the same plane, a one-piece shaft having opposed cranks disposed in separate planes and mounted in said case, a ball bearing for each crank, the outer member of which consists of a freely mounted ring, a piston for each cylinder, a pitman rod coöperating therewith, alternate pitmen being connected to the respective cranks, each pitman rod having an enlarged concave bearing surface having sliding engagement with the periphery of its respective ball bearing ring, and a retaining ring for holding the ends of the rods in engagement with the ring of the ball bearing.

2. An internal combustion engine including in combination, a crank case, a plurality of radially disposed cylinders mounted thereon, a one-piece shaft having opposed cranks mounted in said case, a ball bearing for each crank, the outer member of which consists of a freely mounted ring, a piston for each cylinder, a pitman rod cooperating therewith, each pitman rod having an enlarged



concave bearing surface having sliding engagement with the periphery of its respective ball bearing ring, a depending lip overlapping the ring and preventing the rod from lateral movement relative to the ring, and a retaining ring for holding the ends of the rods in engagement with the ring of the ball bearing.

1,214,838. VAPORIZER. EDWIN G. STAUDE, Minneapolis, Minn. Filed Jan. 30, 1913. Serial No. 745,303. (Cl. 48—107.)



1. A vaporizer comprising a casing having a mixing chamber and an air intake opening, and valve therefor, a retort arranged within said casing and having a heating means, an oil supply duct arranged to deliver oil to said retort, a valve for said duct, an air valve arranged to close said air intake opening, a plunger arranged to actuate said oil supply valve, and mechanism actuated by the opening of said air valve for operating said plunger to move said oil supply valve.

2. A vaporizer comprising a casing having a fuel supply, a valve therefor in its side wall and an air intake opening, a valve above said fuel supply, means mounted in the wall of said casing opposite said supply and operatively connected with said air valve for automatically opening said fuel supply valve through the movement of said air valve, and a retort arranged beneath said fuel supply and upon which the fuel is dripped, a chamber being formed within said casing above said retort wherein the generated gas accumulates before contacting with the air, and a mixing chamber communicating with said generating chamber and with said air intake.

3. A vaporizer comprising a casing having an air intake opening and valve therefor, a retort arranged within said casing and consisting of a suitable block of non-conducting material having a depression therein and a resistance coil embedded therein and having electric conductors, an

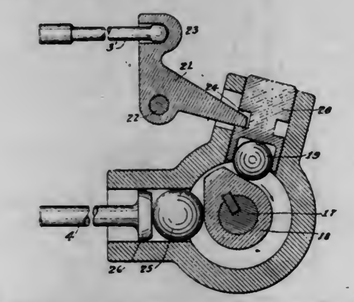
oil supply duct arranged to deliver oil to said depression, whereby when said block is heated the oil will be vaporized, a valve for said oil supply duct, said casing having a mixing chamber wherein the vapor will be sucked by the incoming currents of air when said valve is opened, and mechanism actuated by the opening of said valve for imparting a corresponding movement to said oil supply valve.

4. A vaporizer comprising a casing having a mixing chamber and an air intake opening and valve therefor, a retort provided within said casing, an oil supply duct arranged to deliver oil to said retort, a valve for said oil supply duct, a plunger for opening said valve, an upright adjusting screw, a block vertically movable on said screw, an arm pivotally connected with said block and having a forked upper end, and pivoted arms having a sliding connection with said fork, and pivotally connected with said air supply valve.

5. A vaporizer comprising a casing, a retort mounted in the lower portion thereof, an air intake valve in the upper portion of said casing, a fuel supply and regulating valve therefor in the side wall of said casing, intermediate to said retort and said air valve, means connected with said air valve to be actuated thereby for opening said fuel supply valve, said fuel supply valve having means for directing the drippings upon said retort, and a generating chamber provided within said casing between said retort and said air valve.

[Claims 6 to 10 not printed in the Gazette.]

1,214,839. VALVE-CONTROL MECHANISM FOR INTERNAL-COMBUSTION ENGINES. CHARLES A. STICKNEY, Chicago, Ill. Filed Sept. 17, 1915. Serial No. 51,283. (Cl. 123—91.)

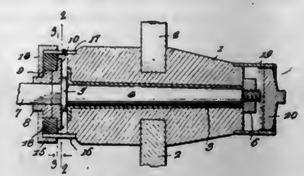


1. In valve control mechanism for an internal combustion engine the combination of two valves, each of said valves having a push rod associated therewith, a cam, a ball intermediate between one end of one push rod and said cam, a ball cup having an annular groove therein and containing said ball in the cup portion thereof, said ball being located intermediate between said cam and said ball cup, a pivoted lever, one end of which coacts with the second of said push rods, the other end of which is located in the annular groove of said ball cup and actuated by the motion of said ball cup.

2. In valve control mechanism for an internal combustion engine the combination of an inlet valve and an exhaust valve, a cam driven at a predetermined relative speed by said engine, a ball cup having a cup portion therein, a ball positioned in said ball cup, said ball being located between said cup portion of said ball cup and said cam, a pivoted lever, one end of which coacts with said inlet valve and the other end of which coacts with said ball cup.

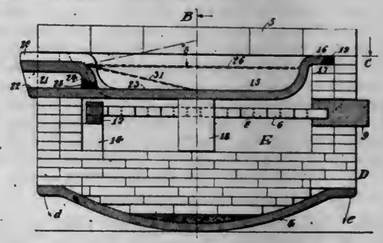
3. In valve control mechanism for an internal combustion engine the combination of an inlet valve and an exhaust valve, a cam driven by said engine at a predetermined relative speed, a ball intermediate of said exhaust valve and said cam and coacting therewith, a ball cup, a ball intermediate of said ball cup and said cam, and a pivoted lever one end of which coacts with said ball cup.

1,214,840. GUARD FOR WHEEL-HUBS. JAMES M. TAYLOR, Burley, Idaho. Filed Nov. 28, 1914. Serial No. 874,470. (Cl. 64—22.)



The combination with an axle having a squared portion and a collar and a hub provided with a band extending over the said portion, of a plurality of complemental base members having reduced extensions and circumferential flanges, said members having flattened portions on their outer peripheries to receive a means for fastening the members together, the complemental flanges being inserted within and being spaced from the band and hub, a cupped disk carried by the extensions and engaging with the band forming a pocket with the band, flanges and base members, and an absorbent washer arranged in the pocket.

1,214,841. ELECTRIC FURNACE FOR FUSING METALS. JOHN THOMSON, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 28, 1916. Serial No. 74,827. (Cl. 204—64.)



1. An electric metals fusing furnace provided with a chamber whose bottom, sides and ends are lined with refractory material; a radiating carbon resistor suspended in said chamber and an outer-lying inclosing melting tank whose rim is in contact with the upper edges of the chamber-walls but having a free space around its sides and between its bottom and the resistor.

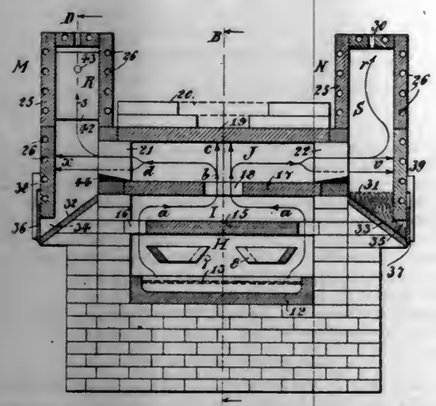
2. An electric metals fusing furnace having a carbon resistor suspended within an open topped refractory chamber, an open topped melting tank completely inclosing the said chamber, the bottom and sides of which tank are in free space to be acted upon by directly radiated and reflected heat emitted by said resistor and a removable cover above the tank.

3. An electric metals furnace having an open topped melting tank serving to inclose the top of a refractory chamber, a suspended carbon resistor beneath the tank and acting thereon by radiation, a pouring spout on or at one end of said tank and a rocker, upon which the furnace is mounted, the center of whose arc is located above the furnace.

1,214,842. ELECTRIC ZINC-DISTILLING FURNACE AND CONDENSER FOR PRODUCING BLUE POWDER. JOHN THOMSON, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 28, 1916. Serial No. 74,828. (Cl. 204—64.)

1. In an electric furnace for distilling fumable metals by means of a radiating resistor suspended above a bath, a compound septum formed of plates suspended above the resistor, the lower series being provided with a plurality of end ports while the upper series is provided with a plu-

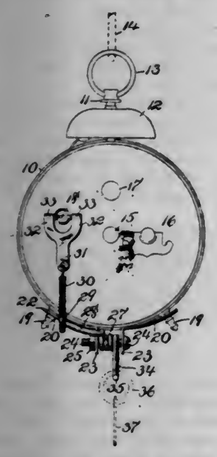
rality of center ports, whereby the fume will first pass upwardly, next in a head-on direction between the two series of septum plates, thence vertically through the center ports into an overlying chamber and finally in reversed right and left hand directions to both sides of an upper chamber.



2. In an electric furnace for distilling spelter having right and left hand condensers, a ported septum through which the hot fume passes into direct contact with the longitudinal center of the roof, the rate of heat radiation from the roof being controllable, whereby the temperature of the fume is reduced prior to entering the condensers.

3. An electric zinc furnace for distilling spelter having an attached condenser, or condensers, adapted to receive zinc-fume from a chamber formed by a ported septum and an overlying roof, the rate of heat radiation from said roof being controllable, whereby the temperature of the hot fume from the ported septum is reduced, by contact with the roof, prior to entering the condenser.

1,214,843. TRIPPING ATTACHMENT FOR CLOCKS. DAVID H. TILLERY and THOMAS H. TILLERY, Newark, N. J. Filed Jan. 12, 1916. Serial No. 71,617. (Cl. 161—1.)



1. The combination, with a clock having suspending means at its top and comprising an alarm winding key, of means for releasably supporting an object from and beneath the clock and substantially in line with the clock suspending means, and means on the clock and operated by the alarm winding key of the clock for releasing an object so supported.

2. An attachment for alarm clocks comprising a lever, a pivot for said lever, means for detachably securing said pivot to the clock casing by engagement with the legs thereof, a supporting hook on the lever, and a connection on the lever for engaging the alarm winding key of the clock.

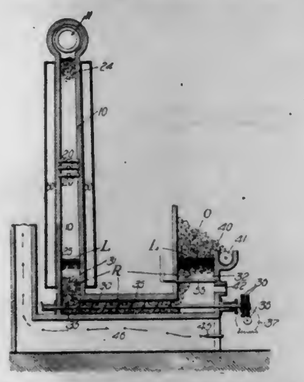
3. An attachment for alarm clocks comprising a lever, a pivot for said lever, means for detachably securing said pivot to the clock casing, a supporting hook on the lever and beneath the clock, a tripping plate, and a spring connecting the lever and the tripping plate.

4. An attachment for alarm clocks comprising a lever, a pivot for said lever, means for detachably securing said pivot to the clock casing, a supporting hook on the lever and beneath the clock, a forked tripping plate with bent ends on said forks, and a spring connecting the lever and the tripping plate.

5. An attachment for alarm clocks comprising bearing plates with hook ends, the hooks being adapted to engage with the legs on the clock casing, means for drawing the bearing plates toward each other, and a lever pivoted between the bearing plates.

[Claims 6 to 8 not printed in the Gazette.]

1,214,844. APPARATUS FOR REDUCING AND METALLIZING ORES. HARMON N. TRACY, Los Angeles, Cal. Filed Oct. 12, 1915. Serial No. 55,527. (Cl. 266—9.)



1. Apparatus of the character described, embodying a vertical ore reducing stack into whose upper end ore is fed, a liquid metal reservoir at the bottom of the stack, said reservoir embodying a horizontal portion with a vertical arm at each end, one vertical arm being a direct continuation of the stack so that reduced ore from the stack moves downwardly directly into the said vertical arm of the liquid metal reservoir, means to move the ore through the horizontal portion of the reservoir, and means at the top of the other vertical arm for removing the spent ore, said reservoir being adapted to hold molten metal to a level above the horizontal portion, so that the ore is completely submerged in the molten metal when it is carried through the horizontal portion.

2. Apparatus of the character described, embodying a vertical ore reducing stack into whose upper end ore is fed, a liquid metal reservoir at the bottom of the stack, said reservoir embodying a horizontal portion with a vertical arm at each end, one vertical arm being a direct continuation of the stack so that reduced ore from the stack moves downwardly directly into the said vertical arm of the liquid metal reservoir, means to move the ore through the horizontal portion of the reservoir embodying a spiral conveyer, and means at the top of the other vertical arm for removing the spent ore, said reservoir being adapted to hold molten metal to a level above the horizontal portion, so that the ore is completely submerged in

the molten metal when it is carried through the horizontal portion.

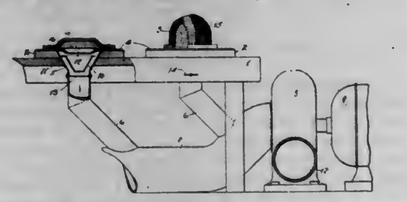
3. Apparatus of the character described, embodying a vertical ore reducing stack into whose upper end ore is fed, a liquid metal reservoir at the bottom of the stack, said reservoir embodying a horizontal portion with a vertical arm at each end, one vertical arm being a direct continuation of the stack so that reduced ore from the stack moves downwardly directly into the said vertical arm of the liquid metal reservoir, means to move the ore through the horizontal portion of the reservoir embodying a spiral conveyer, and means at the top of the other vertical arm for removing the spent ore, embodying a wall of the arm slightly above the surface of the liquid ore so that the ore floating in and above the liquid may flow over said wall, said reservoir being adapted to hold molten metal to a level above the horizontal portion, so that the ore is completely submerged in the molten metal when it is carried through the horizontal portion.

4. In a device of the character described, a liquid metal reservoir embodying a horizontal portion and a vertical arm rising from each end of the horizontal portion, the reservoir being adapted to hold molten metal to a level in the two arms and above the horizontal portion so that the horizontal portion is completely filled with liquid metal, means to introduce ore to one of the vertical arms, means to move the ore through the horizontal portion, and means to cause the discharge of the spent ore from the other vertical arm embodying a wall of said arm being low so that the upper parts of the mass of ore floating in and above the liquid in that arm may flow over said wall.

5. In a device of the character described, a liquid metal reservoir embodying a substantially horizontal portion and vertically extending arms one at each end of the horizontal portion, one of said arms being extended to considerable height, and the reservoir being adapted to hold molten metal to a level up in the arms above the horizontal portion, so that the weight of a column of ore in the said high arm is sufficient to force the ore beneath the surface of the molten metal in that arm down to the horizontal portion of the reservoir, and means to cause discharge of the spent ore from the other arm of the reservoir.

[Claims 6 and 7 not printed in the Gazette.]

1,214,845. MANUFACTURE OF HATS. JAMES J. TRACY, Cleveland, Ohio. Filed Apr. 3, 1913. Serial No. 758,564. (Cl. 223—31.)



1. The method of manufacturing hats of straw or like material, which consists in applying liquid glue or size to the hat-part; then drying the same by passing air therethrough; and maintaining such part in the form desired during such drying.

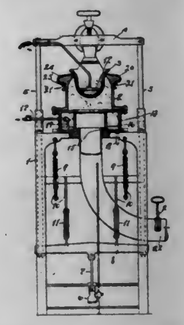
2. The method of manufacturing hats of straw or like material, which consists in applying liquid or size to the hat-part; then drying the same by passing air therethrough; and holding such part, during such drying, against a mold of the form desired.

3. The method of manufacturing hats of straw or like material, which consists in applying liquid or size to the hat-part; then drying the same by passing air therethrough; and holding such part, during such drying, against a mold of the shape desired by the same air used in drying.

4. In the manufacture of hats of straw or like material, the steps which consist in placing the hat-part with one side in contact with a mold of the form desired; applying liquid glue to such part while thus in contact with such mold; and passing a current of air through such part and mold to hold the former in place against the latter and dry the glue thus applied.

5. In the manufacture of hats of straw or like material, the steps which consist in placing the hat-part over a perforated mold of the form desired so as to have one side in contact with such mold; applying liquid glue to such part while thus in contact with such mold; and simultaneously drawing a current of air through such part and mold, whereby the former is held in place against the latter, such current of air being continued long enough to dry the glue thus applied.

1,214,846. MANUFACTURE OF HATS. JAMES J. TRACY, Cleveland, Ohio. Filed Apr. 7, 1913. Serial No. 759,283. (Cl. 223—31.)



1. In the manufacture of felt hats, the steps which consist in drawing the hat to be formed over a suitable mold, such hat being previously sized, but sufficiently damp to be soft; and thereupon passing a current of air through the same until it has dried and set.

2. In the manufacture of felt hats, the steps which consist in drawing the hat to be formed over a suitable mold, such hat being previously sized but sufficiently damp to be soft; withdrawing said mold; and thereupon passing a current of air through such hat until it has dried and set.

3. In the manufacture of felt hats, the steps which consist in drawing the hat to be formed over a suitable mold; steaming such hat; and thereupon passing a current of air through the same until it has dried and set.

4. In the manufacture of felt hats, the steps which consist in drawing the hat to be formed over a suitable mold; exposing such hat while on the mold to the action of steam; withdrawing said mold; and thereupon passing a current of air through such hat until it has dried and set.

5. In the manufacture of felt hats, the steps which consist in preliminarily heating a suitable mold; drawing the hat in damp, sized condition over such mold; and thereupon passing a current of air through such hat until it has dried and set.

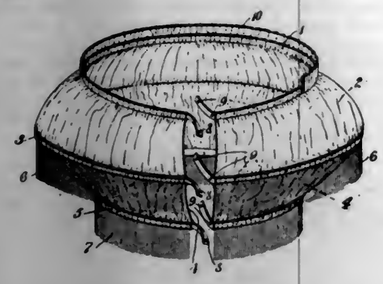
[Claims 6 to 9 not printed in the Gazette.]

1,214,847. LAMP-SHADE. OLIVIA W. TUCKER, Brooklyn, N. Y. Filed Sept. 16, 1916. Serial No. 120,502. (Cl. 240—108.)

1. A lamp shade comprising an upper and lower flexible skirt portion, a reinforcing band between the same, an expansible and contractible band at the upper edge of the upper skirt, and a reinforcing band at the lower edge of the lower skirt.

2. A lamp shade comprising an upper and lower flexible skirt portion, a reinforcing band between the same, an expansible and contractible band at the upper edge of the upper skirt, and a reinforcing band at the lower edge of the lower skirt, the upper band being elastic.

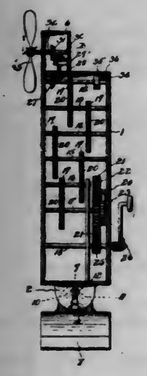
3. A lamp shade comprising an upper and lower flexible skirt portion, a reinforcing band between the same, an expansible and contractible band at the upper edge of the upper skirt, and a reinforcing band at the lower edge of the lower skirt, one of said bands being adjustable as to length.



4. A lamp shade comprising an upper and lower flexible skirt portion, a reinforcing band between the same, an expansible and contractible band at the upper edge of the upper skirt, and a reinforcing band at the lower edge of the lower skirt, all of said bands being adjustable as to length.

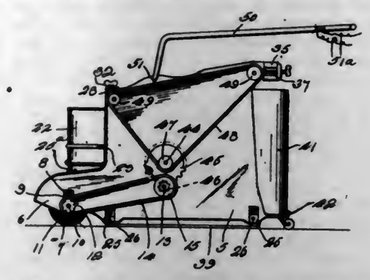
5. In a lamp shade of the character described, a plurality of bands, a fabric skirt-like connection between said bands with pockets therein within which said bands are located, means for connecting the ends of said bands, said pockets being arranged to permit the fabric to be slid over said connections to hide the same and to form a continuous shade.

1,214,848. SPRING-MOTOR FOR FANS. GEORGE WASHINGTON TURNER, Argenta, Ark., assignor of one-half to John Bowers, Jr., Argenta, Ark. Filed May 20, 1916. Serial No. 98,946. (Cl. 230—1.)



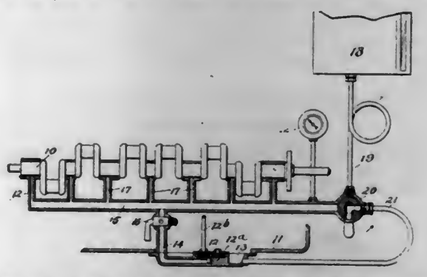
In a spring motor for fans, a base, a closed casing the lower portion of which is directly pivoted to said base, means for securing said closed casing in angularly adjusted positions about said pivot, a train of gearing, a gear having a spring therein for actuating said train of gearing and means for winding the spring in said gear all located in said closed casing, a reduced closed cap at the upper portion of said closed casing, a fan shaft and gears mounted within said reduced closed cap operatively connected with the train of gears in said closed casing, a fan on said fan shaft located outside of the closed cap and casing and beyond the front faces thereof and a brake lever mounted in said closed casing.

1,214,849. SCRUBBING AND DRYING MACHINE. MANUEL VERA, Brooklyn, N. Y. Filed May 13, 1914. Serial No. 838,403. (Cl. 15—14.)



A machine of the character described comprising a frame structure, a motor mounted in said frame structure, a plurality of rollers rotatably mounted in said frame, one in each corner, an endless cloth adapted to travel upon said rollers, driving connections between said motor and the rollers, a receptacle supported in the rear portion of said frame, a wringer roller mounted in said frame adjacent to the upper rear roller, spring pressed rollers mounted in the lower front and rear corners of said frame for normally holding the endless cloth in contact with the ground, and means for adjusting the upper front roller for tightening the endless cloth and the driving connection in one operation.

1,214,850. LUBRICATING SYSTEM. GEORGE R. WADSWORTH, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 31, 1913. Serial No. 770,852. (Cl. 184—6.)



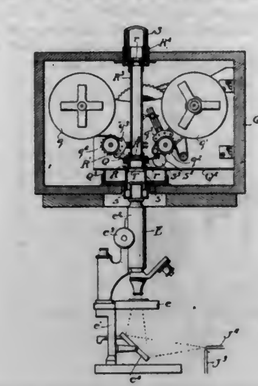
In a lubricating system, a manifold adapted for connection with bearings to be lubricated, a pump having its discharge side connected to the manifold, a storage receptacle supported above the manifold, a connection between the receptacle, the manifold and inlet side of the pump and valvular means controlling the connection between the receptacle, and the manifold or the pump.

1,214,851. PHOTOMICROGRAPHIC APPARATUS. ROBERT L. WATKINS, New York, N. Y. Continuation of application Serial No. 373,985, filed May 16, 1907. This application filed Apr. 14, 1913. Serial No. 760,871. (Cl. 88—18.)

1. An apparatus for making photographs of enlarged images in rapid succession embodying a casing, means for supporting and intermittently feeding a sensitized transparent film, means for projecting magnified images of a subject onto said film, and means positioned for viewing from the rear of the film the magnified images projected thereon.

2. An apparatus for making photographs of images in rapid succession embodying a casing, means for supporting a sensitized transparent film therein, means for feeding said film intermittently, means positioned in front

of the film for projecting images of a subject onto said film, and observation means positioned at the rear of the film for viewing said images as they are projected on the film.



3. An apparatus for obtaining photomicroscopic enlargements of subjects in rapid succession embodying a light-tight casing provided with a light inlet, film-supporting means positioned within said casing, means for feeding and exposing said sensitized film intermittently, a microscope positioned in register with said light inlet for projecting enlarged images of the subjects onto said sensitized film, means whereby the admission of light rays to the interior of said casing is excluded except through said microscope, and a source of light the rays of which are directed through said microscope.

4. An apparatus for obtaining photomicroscopic enlargements of subjects in rapid succession embodying a casing, film-supporting means therein, means for feeding and exposing said film intermittently, a source of light, a microscope positioned in operative relation to the casing and to the source of light whereby a beam of light is adapted to be directed through said microscope and to project onto the film enlarged images of the subjects, and means in coöperative relation to the casing and to the microscope for excluding all other light rays from the casing except the beam of light.

5. An apparatus for obtaining photomicroscopic enlargements of subjects in rapid succession embodying a casing, film-supporting means therein, feed means for intermittently moving and exposing said film, a source of light affording an intense beam for securing instantaneous photographic exposures, and a microscope positioned in operative relation to the casing and to the source of light whereby the beam of light is adapted to be directed through the microscope for projecting onto the film enlarged images of the subjects, said microscope being removable at will from operative relation to said casing.

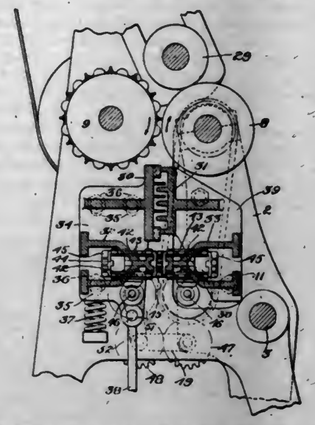
[Claims 6 to 10 not printed in the Gazette.]

1,214,852. SKIN, HIDE, AND LEATHER WORKING MACHINE. FRANCIS WAYLAND, Salem, Mass. Filed May 18, 1912. Serial No. 698,094. (Cl. 149—16.)

1. In a machine of the character described, a pair of stretching belts mounted end to end, and adapted to travel in opposite directions from their adjacent ends, an opposed element or elements between which and said stretching belts the material passes, and means to support said belts between their ends against the pressure exerted by said opposed element or elements.

2. In a machine of the character described, a pair of stretching belts mounted end to end, and adapted to travel in opposite directions from their adjacent ends, and an opposed element or elements between which and said stretching belts the material passes, said belts provided with projections adapted to engage and act upon said material.

3. In a machine of the character described, a pair of stretching belts mounted end to end, adapted to travel in opposite directions from their adjacent ends, and an opposed element or elements between which and said stretching belts the material passes, said belts provided with vanes inclined to the path of travel of said belts.

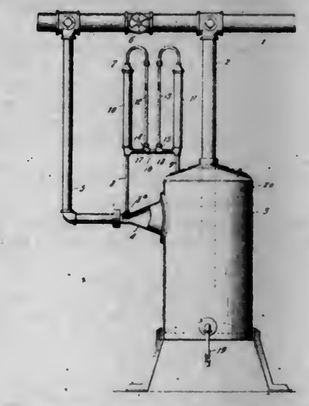


4. In a machine of the character described, a pair of stretching belts mounted end to end, adapted to travel in opposite directions from their adjacent ends, and an opposed element or elements provided with working projections, said opposed element or elements coöperating with said stretching belts to act upon the material passing between them.

5. In a machine of the character described, a pair of stretching belts mounted end to end, adapted to travel in opposite directions from their adjacent ends, each belt comprising a pair of parallel sprocket chains between which extend means for engaging and acting upon the material, sprocket wheels on which said chains are mounted, and means to support said chains between said sprocket wheels.

[Claims 6 to 19 not printed in the Gazette.]

1,214,853. APPARATUS FOR INDICATING THE RATE OF FLOW OF FLUIDS IN PIPES. CHARLES L. WEIL, St. Clair, Mich. Filed Dec. 18, 1913. Serial No. 807,408. (Cl. 73—167.)

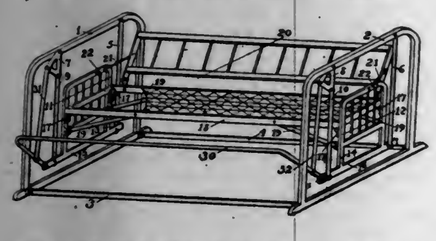


1. A fluid meter consisting of a main pipe in which the fluid is flowing, a closed receptacle of relatively large cross-section connected to said main pipe, a pipe of relatively small cross-section leading from said closed recep-

tacle and connecting with said main pipe at a different point, a valve in said main pipe between the point at which said receptacle is connected to said main pipe and the point at which said outlet pipe is connected with said main pipe, and means for measuring the difference between the pressure of the fluid in said receptacle and the pressure of the fluid at a point in said outlet pipe.

2. A combined steam meter and separator consisting of a closed receptacle into which the steam is introduced and of so large a cross-section that the steam in it is practically at rest, a drain pipe connecting with the bottom of said receptacle, an outlet pipe leading from said receptacle, and means for measuring the difference between the pressure of the fluid in said receptacle and the pressure of the fluid at a point in said outlet pipe comprising a U tube containing a liquid, and air chambers inserted between the ends of said tube and the points at which the pressure is to be measured.

1,214,854. SWING. JOHN WEIL, Mansfield, Ohio. Filed Feb. 21, 1916. Serial No. 79,521. (Cl. 155—36.)



1. In a swing, a stand, a parallel bar swinging mechanism, pivotally supported by the stand and movable for imparting movement to the swinging mechanism by moving certain of the pivotal connections between the swinging mechanism and stand.

2. In a swing, a stand, a parallel bar swinging mechanism, pivotally connected to the stand, certain of the pivotal connections having a plurality of pivotal points and means for imparting movement to the swinging mechanism through operation of the plural pivotal points.

3. In a swing, a stand, a parallel bar swinging mechanism, certain of said bars including bell crank connectors and means for imparting movement to the swinging mechanism through operation of the bell crank connectors.

4. In a swing, a stand, a swinging frame, bars connecting the swinging frame and stand, certain of the bars including bell crank connectors intermediate the same and stand, and means for imparting movement to the frame by operation of the bell crank connectors.

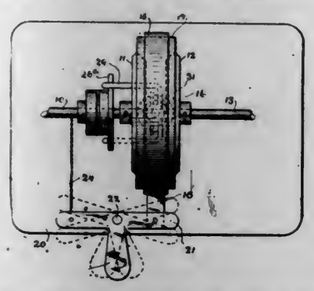
5. In a swing, a stand, a swinging frame, bars pivotally connected to similar ends of the frame and to the stand, bars pivotally connected to the opposite end of the frame, bell cranks connected to said latter bars and to the stand, an operating member supported on the frame and connections between said member and bell cranks for imparting movement to the frame.

[Claims 6 to 8 not printed in the Gazette.]

1,214,855. TRANSMISSION-GEAR. ARTHUR C. WELLS, Amityville, N. Y. Filed Mar. 16, 1916. Serial No. 84,582. (Cl. 74—34.)

1. A transmission comprising a shaft having a gear wheel affixed thereto, a second shaft having a gear wheel similar to and arranged opposite the first gear wheel, a frame or support rotatable between and on a common axis with the gear wheels, pinions journaled on the frame on opposite sides of the axis of the gear wheels, said pinions being in constant connection with the gear wheels, means radially opposite the frame or support for checking its rotation, and means for checking the axial rotation of the pinions.

2. A transmission comprising a shaft having a gear wheel affixed thereto, a second shaft alining with the first and having a similar gear wheel affixed to it, a frame arranged between the gear wheels and turning on an axis common to the axis of the gear wheels, said frame having a braking surface, pinions journaled on the frame and connecting with the gear wheels on opposite sides of the axis of the latter, a brake for the frame, and a brake controlling the axial rotation of the pinions.

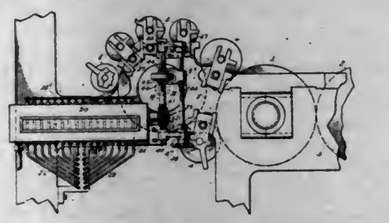


3. A transmission comprising a shaft and a gear wheel affixed thereto, a second shaft alining with the first and having a similar gear wheel affixed thereto, a frame rotatable between the gear wheels and on an axis common to that of the gear wheels, said frame having a braking surface, a brake for said surface, pinions journaled on the frame and connecting with the gear wheels on the opposite sides of their axis, a brake controlling the axial rotation of the pinions, and a single lever having an operative connection with both the aforesaid brakes.

4. A transmission comprising a rotatable shaft having a gear wheel affixed thereto, a second shaft alining with the first shaft and having a similar gear wheel affixed thereto, a rotatable frame arranged between the gear wheels and turning on an axis common to that of the gear wheels, pinions journaled on the frame on opposite sides of the axis of the gear wheels, said pinions being in constant contact with the gear wheels, a braking surface on the aforesaid frame, a brake engaging said surface, a second brake engaging the hubs of the pinions, and means for selectively operating the aforesaid brakes.

5. A transmission comprising a shaft having a gear wheel affixed thereto, a second shaft alining with the first and having a similar gear wheel affixed thereto, a rotatable frame journaled between the gear wheels and rotating on an axis common to that of the gear wheels, pinions journaled on the frame and connecting the gear wheels, a braking surface on the frame, a brake engaging said braking surface, a brake engaging the hubs of the pinions, a sliding collar on the first mentioned shaft, an operative connection between said sliding collar and the brakes of the pinion hubs, and a lever connected with the first mentioned brake to operate it and also connected to the aforementioned collar to slide it.

1,214,856. INKING MECHANISM. BRUCE C. WHITE, New York, N. Y., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Oct. 24, 1913. Serial No. 797,003. (Cl. 101—350.)



1. In a printing machine, the combination with a printing couple the form member of which carries a form a plurality of columns wide, of a plurality of separate ink conduits, one for each column, arranged side by side for delivering an independent supply of ink for each column, an ink pump for each conduit, means for supplying ink to said pumps, and means for distributing the ink delivered from the conduits.

2. In a printing machine, the combination with a printing couple the form member of which carries a form a plurality of columns wide, of a plurality of separate ink conduits, one for each column, arranged side by side, for delivering an independent supply of ink for each column, an ink pump for each conduit, means for supplying ink to said pumps, means for distributing the ink delivered from the conduits, and means for regulating the supply of ink delivered by each pump independently of the others.

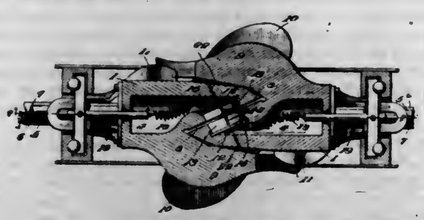
3. In a printing machine, the combination with a printing couple the form member of which carries a form a plurality of columns wide, of a plurality of separate ink conduits, one for each column, arranged side by side, for delivering an independent supply of ink for each column, an ink pump for each conduit, means for supplying ink to said pumps, means for distributing the ink delivered from the conduits, and means for simultaneously regulating the ink supplied by a plurality of said pumps.

4. In a printing machine, the combination with a printing couple the form member of which carries a form a plurality of columns wide, of a plurality of separate ink conduits, one for each column, arranged side by side, for delivering an independent supply of ink for each column, an ink pump for each conduit, means for supplying ink to said pumps, means for distributing the ink delivered from the conduits, and means for regulating the supply of ink of each pump independently of the others and for stopping said supply of ink of each pump independently of the others.

5. In a printing machine, the combination with a printing couple the form member of which carries a form a plurality of columns wide, of a plurality of separate ink delivery nozzles, one for each column, arranged side by side for delivering an independent supply of ink to each column, a supply reservoir, independent connections from the supply reservoir to each delivery nozzle, a plurality of pumps in the supply reservoir, one for supplying each delivery nozzle, and means for regulating the quantity of ink supplied by each pump independently of the others.

[Claims 6 to 17 not printed in the Gazette.]

1,214,857. TRAIN-COUPLING FOR ELECTRICAL CONDUCTORS. WALTER C. WHITE, Los Angeles, Cal. Filed Dec. 1, 1913. Serial No. 804,081. (Cl 173—332.)



1. In a train pipe coupling, a coupler head having a body provided with an open-ended chamber provided with longitudinal grooves in its opposed walls at its outer end, an insulating sleeve fitting snugly but detachably in the outer end of said chamber and having ribs engaging said grooves, electric terminals fitted in and projecting through both ends of said sleeve, and conductors secured to the inner ends of said terminals and playing freely in the rear end of the chamber.

2. A coupling comprising a coupler head provided with a longitudinally disposed chamber and having an open port at the front end of said chamber, an electrical conductor passing longitudinally through said chamber and coiled loosely therein, an insulating sleeve slidably mounted in said port and engaged therein and removable therefrom through the front end thereof, and a terminal detachably secured to the conductor and embedded in said sleeve and projecting beyond the forward end of the same to form a sliding contact with an opposed terminal.

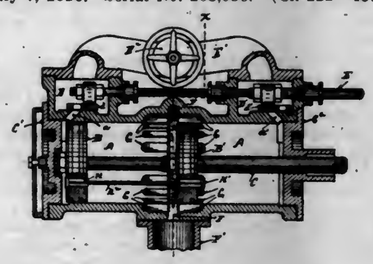
3. A coupling comprising a coupler head having a longitudinally disposed chamber, an electrical conductor entering said chamber, a plug forming a terminal for said conductor, and an insulating sleeve fitted around said plug and seated in the front end of said chamber, the front wall of the coupler head being disposed at an inclination to its axis and the ends of the plug and of the insulating sleeve being beveled to correspond to the inclination of the front wall of the head.

4. A train pipe coupling comprising a coupler head having a longitudinally disposed chamber provided with ports in its front and rear ends, a plug seated in the port in the front end of said chamber, an electrical conductor extending from said plug through the chamber and supported loosely in the port in the rear end thereof, said conductor having a terminal extending through and projecting beyond the outer end of the plug to contact with a terminal in an opposed coupling head, and frictional retaining devices between the side of the plug and the wall of the port in the front end of the chamber.

5. A coupling comprising a coupler head having a port in its front wall and a longitudinal chamber leading to and opening directly into the inner end of said port, an electrical conductor extending loosely through said chamber to said port, an annular seat at the inner end of said port, an elastic ring resting on said seat, a plug slidably fitting in and closing the port in the front wall of the head and bearing at its rear end against said elastic ring, and a terminal for the conductor carried by and extending through the plug and projecting beyond both ends of the same.

[Claims 6 to 9 not printed in the Gazette.]

1,214,858. STEAM-ENGINE. WILLIAM M. WILKIN, Erie, Pa. Filed Nov. 19, 1914, Serial No. 872,981. Renewed July 7, 1916. Serial No. 108,056. (Cl. 121—45.)



1. The combination in a steam engine of a cylinder having its interior wearing surface cut away at a point coincident with termination of the forward stroke of the piston, and longitudinal grooves in said wearing surface, extending from said point toward the head of said cylinder, and a piston in said cylinder adapted to reciprocate between the head of said cylinder and the point where said wearing surface is cut away, whereby steam may be allowed to exhaust through said longitudinal grooves, substantially as set forth.

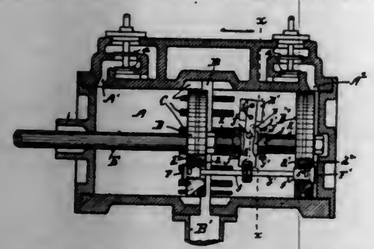
2. The combination in a steam engine of a cylinder having its interior wearing surface divided at the central portion by an annular groove therein, and having longitudinal exhaust grooves in said interior surface extending from said annular groove toward the heads thereof, steam ports at the ends of said cylinder, a piston rod in said cylinder, a pair of pistons on said rod so spaced thereon that each will uncover the ends of said exhaust grooves nearest the cylinder heads, but not pass said annular groove, whereby steam will be permitted to exhaust through said longitudinal grooves, a non-return valve in each of said pistons, a rod connecting said valves so that when one of said

valves is opened, the other will be closed, whereby compression between said pistons and the cylinder heads may be relieved, and means to control the admission of steam to said cylinder, substantially as set forth.

3. The combination in a steam engine of a cylinder having steam inlet ports at the ends thereof and exhaust passages at the intermediate portion thereof, a piston rod therein, a pair of pistons so spaced on said rod that each will, in turn, uncover said exhaust passages, a non-return valve in each of said pistons seated against the faces thereof toward the inlet ports, and a rod connecting said valves so that when the valve in the piston which is taking steam, is closed, the valve in the other piston will be open, whereby compression between the piston and cylinder heads will be relieved, substantially as set forth.

1,214,859. STEAM-ENGINE. WILLIAM M. WILKIN, Erie, Pa. Filed July 7, 1916. Serial No. 108,058. (Cl. 121—45.)

1. In a steam engine, a cylinder having inlet ports at the ends and exhaust ports at the intermediate portion thereof, a piston-rod, twin pistons having valve openings therethrough secured on said rod in spaced relation to each other adapted to control said exhaust ports, con-



nected valves in said openings adapted to alternately seat against outer sides of said pistons and counterweight controlled mechanism supported between said pistons, to counterbalance the inertia of said connected valves, substantially as set forth.

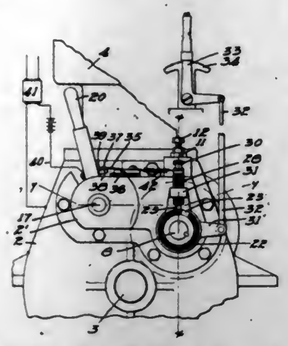
2. In a steam engine, the combination of an engine cylinder having a steam inlet port at one end of its piston stroke and exhaust ports at the other end of its piston stroke, a piston therein adapted to control said exhaust ports, a non-return valve in said piston seated against the steam side thereof, and counterweight controlled mechanism traveling in unison with said piston adapted to counterbalance the inertia of said valve, substantially as set forth.

3. In a steam engine, the combination of an engine cylinder having a steam inlet port at one end of its piston stroke and exhaust ports at the opposite end of its piston stroke, a piston therein adapted to control said exhaust ports, a non-return valve in said piston seated against the steam side thereof, a valve-stem thereon, a piston-rod connected to said piston, a lever supported on said piston-rod, one end thereof connected to said valve-stem, and a counterweight secured to the opposite end thereof, substantially as set forth.

4. In a steam engine, the combination of an engine cylinder having a steam inlet port at one end of its piston stroke and exhaust ports at the opposite end of its piston stroke, a piston therein adapted to control said exhaust ports, a non-return valve in said piston seated against the steam side thereof, a valve-stem, a piston-rod secured to said piston, a block secured upon said piston-rod, a lever pivoted upon said block having one end thereof engaging said valve-stem, and a counterweight secured to the opposite end of said lever, substantially as set forth.

5. In a steam engine, the combination of an engine cylinder having inlet ports at one end of its piston stroke and exhaust ports at the opposite end thereof, a piston in said cylinder adapted to control said steam exhaust ports, a valve opening in said piston having a valve-seat on the steam side thereof, a valve adapted to seat on said valve-seat, a cylindrical projection on said valve adapted to close said valve opening prior to the seating of said valve, and mechanism traveling with said piston adapted to counterbalance the inertia of said valve, substantially as set forth.

1,214,860. REVERSING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. GEORGE WILSON, Mankato, Minn. Filed Feb. 8, 1915. Serial No. 6,779. (Cl. 123—41.)



1. The combustion, with a single cylinder internal combustion engine and its crank shaft, of a cam shaft geared thereto, cams secured on said shaft, an exhaust valve actuating tappet, a loosely mounted tappet arm arranged to be moved to a point between said cams and said tappet, a longitudinally movable shaft whereon said arm is loosely mounted, an operating lever for said shaft, and a second arm mounted on said shaft and having an end portion engaging said tappet arm.

2. The combination, with a single cylinder internal combustion engine and its crank shaft, of a cam shaft geared thereto, cams secured on said shaft, an exhaust valve actuating tappet, an arm interposed between said tappet and cams and capable of movement transversely of said tappet to transmit movement of either one of said cams to said tappet, and means for shifting said arm when the direction of movement of the cam shaft is reversed to reverse the engine, said means including a rock shaft having a hub thereon and an arm projecting outwardly in position to engage and lift said tappet arm.

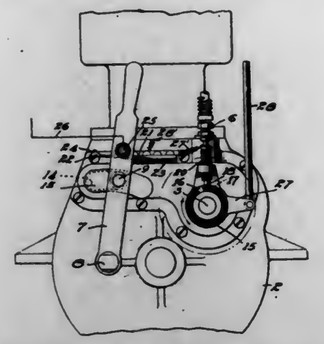
3. The combination, with a single cylinder internal combustion engine and its crank shaft, of a cam shaft geared thereto, cams secured on said shaft, an exhaust valve actuating tappet, an arm interposed between said tappet and cams, a sliding shaft whereon said arm is loosely mounted, a lever secured on said shaft and movable therewith and having means for engaging said arm, the sliding movement of said shaft shifting said arm from its position in the path of one cam to a position in the path of the other cam.

4. The combination, with an internal combustion engine cylinder and its crank shaft, of a cam shaft geared thereto, cams secured on said shaft, an exhaust valve actuating tappet and means interposed between said tappet and cams and capable of movement transversely of said tappet to transmit movement of either one of said cams to said tappet for forward or reverse movement of said engine, a lever mounted to move said interposed means from the path of one cam to the path of the other cam, an electric circuit having insulated contact springs and an insulated pin mounted in said lever to engage said contact springs alternately when said lever is moved to adjust the mechanism for forward or reverse movement.

5. The combination, with an internal combustion engine cylinder and crank shaft, of a cam shaft geared to said crank shaft, cams secured on said shaft, an exhaust valve actuating tappet, a lever and means actuated thereby for transmitting movement to one or the other of said cams and said tappet, means having notches therein to receive said lever in its normal stationary position, an electric circuit, a pair of contact springs in said circuit, means carried by said lever and engaging said springs alternately for shifting the circuit from one spring to the other and for locking said lever temporarily in one or the other of said notches.

[Claims 6 to 13 not printed in the Gazette.]

1,214,861. REVERSING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. GEORGE WILSON, Mankato, Minn. Filed Aug. 2, 1915. Serial No. 43,100. (Cl. 123—41.)



1. The combination, with a cam shaft, its cams and an exhaust valve tappet, of a lever, an arm connected with said lever and positioned to be interposed alternately between said cams and said tappet, an electric circuit, a pair of contact springs in said circuit, means carried by said lever and engaging said springs alternately with the alternate engagement of said arm with said cams for shifting the circuit from one spring to the other and for holding said lever in its two positions.

2. The combination, with a cam shaft and its cams and an exhaust valve tappet, of a lever, arms connected therewith to be interposed respectively between said cams and said tappet, an electric circuit, a pair of contact springs in said circuit, means carried by said lever and engaging said springs alternately for shifting the circuit from one spring to the other, and means for holding said lever at the limit of its stroke in each direction.

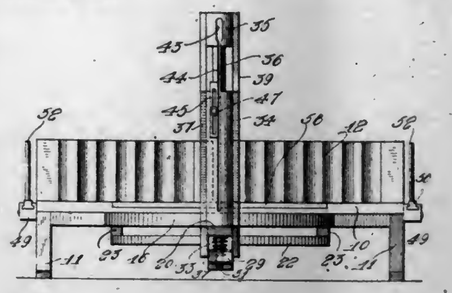
3. The combustion, with an internal combustion engine cylinder and its crank shaft, of a cam shaft geared thereto, cams secured on said shaft, an exhaust valve actuating tappet, means interposed between said tappet and cams and positioned for adjustment to transmit the movement of said cams alternately to said tappet, a housing for said cams having a slotted opening therein, and a lever connected with said interposed means and having a cover for normally concealing said slot and thereby excluding dust and cinders from said housing.

4. The combination, with a cam shaft and its cams, and a housing therefor and an exhaust valve tappet, of a lever, arms connected therewith and positioned to be interposed respectively between said cams and said tappet, said lever operating through a slotted opening in said housing, an electric circuit, a pair of contact springs in said circuit, and means carried by said lever and engaging said springs alternately for shifting the circuit from one spring to the other, and holding said lever in its two positions.

5. The combination, with a cam shaft and its cams and a housing therefor and an exhaust valve tappet, of a lever, arms connected therewith in position to be interposed respectively between said cams and said tappet, said lever operating through an opening in said housing, an electric circuit, a pair of contact springs in said circuit, a pin carried by said lever and engaging said springs alternately for shifting the circuit from one spring to the other, said springs having means for engaging said pin and holding said lever at the limit of its stroke in each direction.

[Claims 6 to 8 not printed in the Gazette.]

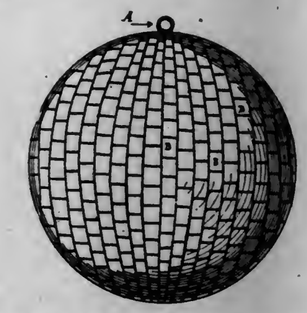
1,214,862. MITER-BOX. ODELON D. WILSON, Greenville, S. C. Filed Dec. 23, 1914. Serial No. 878,777. (Cl. 143—89.)



1. In a mitering table of the class described, a top, supporting means for said top, a lever pivoted to said top, fixed guiding members having extended side portions mounted upon said lever and provided with guide grooves in said extended side portions, said fixed guide members having longitudinal bores and slots communicating with said bores to accommodate a saw, movable stems mounted in said guide members and adapted for reciprocating movement in said longitudinal bores, said stems having slots communicating with the slots of the fixed guide members, heads mounted upon said stems and provided with slots connecting with the upper ends of the slots of said stems and adapted to receive the back of a saw, said heads having extended side portions, and lateral guide members depending from said side portions for movement in the first-mentioned grooves of said fixed guide members.

2. In a mitering table, the combination of a top, a horizontally swinging lever pivoted to the under side of the same and extending transversely beyond the front and rear edges thereof, a fixed vertical saw guiding member having a cylindrical bore, mounted on each end of said lever, each member having an exterior longitudinal groove in one side, a cylindrical saw guiding stem movable vertically in the bore of each fixed guiding member, alined slots in each fixed member and movable stem, and a finger depending from the upper end of said stem and engaging the groove in the side of the fixed member to prevent rotation of said stem and maintain said slots in alinement.

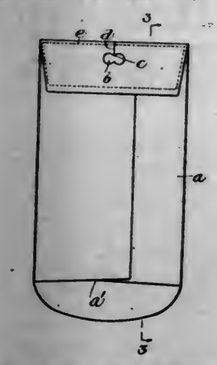
1,214,863. MYRIAD REFLECTOR. LOUIS BERNARD WOESTE, Newport, Ky., assignor of one-half to William A. Stephens, Cincinnati, Ohio. Filed Feb. 12, 1916. Serial No. 78,086. (Cl. 240—103.)



1. A myriad reflector comprising mirrors mounted to form a polyhedron bounded by a convex system of plane faces in combination with means for suspending the device so that it may be swung and rotated simultaneously to produce myriad reflections when light rays from an extraneous source are thrown thereon.

2. A myriad reflector comprising mirrors mounted to form a polyhedron bounded by a convex system of plane faces, said mirrors being separated from each other by a non-reflecting substance, in combination with means for suspending the device so that it may be swung and rotated simultaneously to produce myriad reflections when light rays from an extraneous source are thrown thereon.

1,214,864. TAG. WILLIAM W. WOODRUFF, Ardmore, Pa., assignor to The Rand Company, North Tonawanda, N. Y., a Corporation of New York. Filed Dec. 18, 1915. Serial No. 67,677. (Cl. 229—74.)



1. A tag of the character described, having an aperture cut therein of such configuration as to form a pointed projection, and a slit extending from the edge of the tag into said aperture through the apex of the pointed projection.

2. A tag of the character described having an aperture cut therein of such configuration as to form a pointed projection, and a slit, the sides of which are normally closed together, extending from the edge of the tag into said aperture through the apex of the pointed projection.

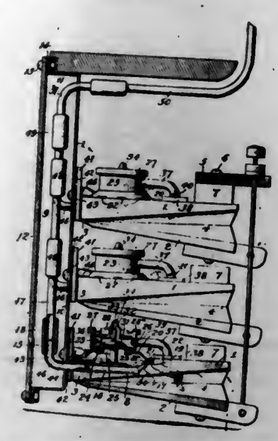
3. A tag of the character described, having a reinforcement of resilient sheet material secured thereto, the reinforced part of said tag having an aperture cut therein of such configuration as to form a pointed, reinforced projection, and a slit extending from the edge of the tag into said aperture through the apex of the pointed reinforced projection.

4. A tag-envelop, one margin of which is reinforced with resilient sheet material secured between the plies of the envelop, said reinforced part of the tag-envelop having an aperture cut therein of such configuration as to form a pointed reinforced projection, and a slit extending from the edge of the tag-envelop through the reinforced margin and the apex of the pointed reinforced projection into said aperture.

1,214,865. PNEUMATIC ACTION FOR MUSICAL INSTRUMENTS. MORRIS S. WRIGHT, Worcester, Mass. Filed Nov. 3, 1914. Serial No. 870,034. (Cl. 84—178.)

1. In a pneumatic action for musical instruments, the combination of an elongated vacuum chamber casing, a plurality of superimposed motor pneumatics arranged upon one side of the casing and supported thereupon, one wall of the motor pneumatics being stationary and having a recess therein, and primary pneumatic elements, one for each of said recesses comprising opposed metallic walls and an interposed diaphragm, the lower wall being adapted to fit in said recessed portion of the power pneumatics, valve casings supported upon the primary pneumatic elements, and a conduit projecting from the lower wall of the pneumatic elements at a point beneath the diaphragm, and extending through the vacuum chamber casing and having a vent opening in the chamber formed by said casing.

2. In a pneumatic action for musical instruments, the combination of a vacuum chamber casing, a motor pneumatic supported upon one wall of said casing, said motor pneumatic having a fixed wall with a recess in the outer surface thereof, a primary pneumatic element comprising a metallic bottom cup-shaped wall loosely positioned in the recess of the fixed wall of the motor pneumatic, a top wall, an interposed diaphragm between said walls, a valve casing positioned on the top wall, valves within the casing operatively associated with the diaphragm, a conduit leading from the valve casing to the motor pneumatic, and a conduit leading from the bottom wall of the primary pneumatic element and passing through the vacuum chamber casing.



3. In a pneumatic action, the combination with a vacuum chamber casing, of a motor pneumatic, said motor pneumatic having a fixed wall, and a relatively movable wall, said fixed wall having a recessed part, a metallic unit comprising a combined primary pneumatic and valve casing, said primary pneumatic having a cup-shaped bottom wall adapted to loosely rest in said recessed part of the fixed wall of the pneumatic, and means for detachably supporting said unit to the vacuum chamber casing.

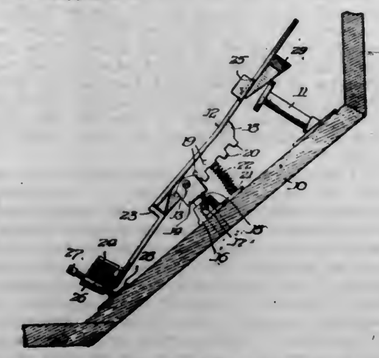
4. In a pneumatic action, the combination of a motor pneumatic comprising relatively movable walls, one of which has a receiving recess in its outer surface, a metallic primary pneumatic loosely positioned within said recess, means for detachably supporting said primary pneumatic in place, and means for detachably supporting said primary pneumatic in place on the power pneumatic whereby the same may be removed independently of the motor pneumatic, said means including a valve casing mounted on the primary pneumatic and a conduit leading from the valve casing and connected to the power pneumatic, and establishing communication between these parts.

5. In a pneumatic action, the combination of a motor pneumatic, comprising relatively movable walls, one of which has a receiving recess in its outer surface, a metallic primary pneumatic loosely positioned within said recess, and unconnected with the wall surrounding said recess and means for detachably supporting said primary pneumatic in place whereby the same may be removed independently of the motor pneumatic, a metallic valve casing supported upon and removable with the primary pneumatic, a vacuum chamber casing, and a conduit leading from the valve chamber and extending longitudinally through the vacuum chamber casing and adapted at its opposite end to be connected with a tracker bar or the like.

[Claims 6 to 12 not printed in the Gazette.]

1,214,866. ACCELERATOR-CONTROLLING MECHANISM. JACOB H. YOUNG, Chicago, Ill. Filed Oct. 21, 1916. Serial No. 126,855. (Cl. 74—81.)

1. In an accelerator controlling mechanism, a support for the entire foot of the operator, a pivot rod extending transversely of said support and substantially parallel with the plane of said support, a yoke supporting said pivot rod, a supporting rod projecting from said yoke, a mounting block for supporting said supporting rod, a flange projecting from the under surface of said foot support and having teeth thereon, a stud projecting outwardly from said mounting block, and a spring supported between said stud and one of said teeth for holding the toe portion of said foot support in its outermost position, said flange having a plurality of holes therethrough for receiving said pivot rod in different positions longitudinally of said foot support.



2. In an accelerator controlling mechanism, a support for the entire foot of the operator, a pivot rod extending transversely of said support and substantially parallel with the plane of said support, a yoke supporting said pivot rod, a supporting rod projecting from said yoke, a mounting block for supporting said supporting rod, a flange projecting from the under surface of said foot support and having teeth thereon, a stud projecting outwardly from said mounting block, a spring supported between said stud and one of said teeth for holding the toe portion of said foot support in its outermost position, said flange having a plurality of holes therethrough for receiving said pivot rod in different positions longitudinally of said foot support, and a screw stop carried by the heel portion of said foot support for limiting the outward motion of the toe portion of said foot support.

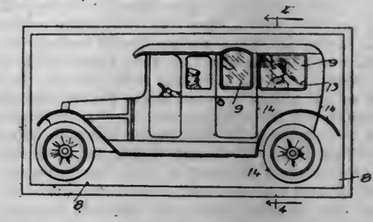
3. In an accelerator controlling mechanism, a support for the entire foot of the operator, a pivot rod extending transversely of said support and substantially parallel with the plane of said support, a yoke supporting said pivot rod, a supporting rod projecting from said yoke, a mounting block for supporting said supporting rod, a flange projecting from the under surface of said foot support and having teeth thereon, a stud projecting outwardly from said mounting block, a spring supported between said stud and one of said teeth for holding the toe portion of said foot support in its outermost position, said flange having a plurality of holes therethrough for receiving said pivot rod in different positions longitudinally of said foot support, a screw stop carried by the heel portion of said foot support for engaging the accelerator of the automobile to depress said accelerator an amount greater than the amount of depression of the corresponding portion of the foot support.

4. In an accelerator controlling mechanism, the combination of a support for the entire foot of an automobile operator, a pivot rod for said support extending transversely thereof and substantially parallel with the surface thereof, a mounting block supporting said pivot rod, a longitudinal flange extending from the under surface of said support and having a plurality of teeth projecting from its edge, said flange having a plurality of holes therethrough for receiving said pivot rod in different positions of said foot support relatively to said mounting block, and a returning spring engaging one of said teeth for holding said foot support with its toe portion in its outermost position.

5. In an accelerator controlling mechanism, the combination of a support for the entire foot of an automobile operator, a pivot rod for said support extending transversely thereof and substantially parallel with the surface thereof, a mounting block supporting said pivot rod, a longitudinal flange extending from the under surface of said support and having a plurality of teeth projecting from its edge, said flange having a plurality of holes therethrough for receiving said pivot rod in different positions of said foot support relatively to said mounting block, a returning spring engaging one of said teeth for holding said foot support with its toe portion in its outermost position, and a motion limiting screw carried by the heel portion of said foot support.

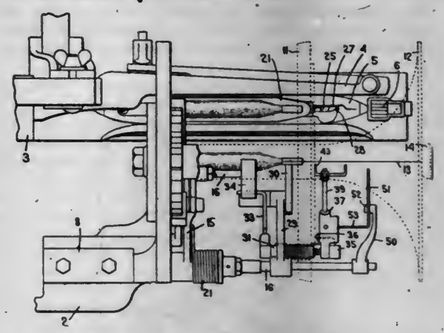
[Claims 6 to 14 not printed in the Gazette.]

1,214,867. MAILING-CARD. SAMUEL W. YOUNG, New York, N. Y. Filed May 13, 1914. Serial No. 838,229. (Cl. 46—37.)



A postal card consisting of a single piece of material having a flap adapted to be folded back onto the card, said flap portion having a picture or outline of a vehicle upon its outer portion and a cut out portion in said flap to form the window of said vehicle, a transparent sheet applied over said cut out portion, and a retaining pocket located on the back of said card adapted to receive a photograph in such position as to disclose said photograph through said cut out portion and said transparent sheet in said flap.

1,214,868. SHUTTLE-THREADING MECHANISM FOR AUTOMATIC FILLING-REPLENISHING LOOMS. HENRY YOUNGQUIST, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed May 12, 1916. Serial No. 97,197. (Cl. 139—85.)



1. An automatic filling replenishing loom comprising a hopper provided with a supply of fresh filling carriers, a shuttle having an eye and a threading slot leading into the eye, means operated upon failure or exhaustion of the running filling to transfer a fresh filling carrier from the hopper into the shuttle, and means acting upon transfer to seize the filling on both sides of the shuttle threading slot and positively to force the filling into threading position.

2. An automatic filling replenishing loom comprising a hopper provided with a supply of fresh filling carriers; a shuttle having an eye, a threading slot leading into the eye, and retaining means which when passed by the filling in its passage into the threading slot prevents the withdrawal of the filling from the threading slot and induces its passage out through the eye; means operated upon failure or exhaustion of the running filling to transfer a fresh filling carrier from the hopper into the shuttle; and means acting upon transfer to seize the filling on both sides of the said retaining means and positively to force the filling therepast into threading position.

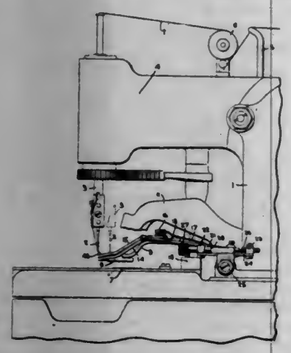
3. An automatic filling replenishing loom comprising a hopper provided with a supply of fresh filling carriers, a shuttle having an eye and a threading slot leading into the eye, means operated upon failure or exhaustion of the running filling to transfer a fresh filling carrier from the hopper into the shuttle; and means acting upon transfer to seize the filling, enter the shuttle at both sides of the threading slot and positively force the filling down into said slot and into threading position.

4. An automatic filling replenishing loom comprising a hopper provided with a supply of fresh filling carriers; a shuttle having an eye, a threading slot leading into the eye, and retaining means which when passed by the filling in its passage into the threading slots prevents the withdrawal of the filling from the threading slot and induces its passage out through the eye; means operated upon failure or exhaustion of the running filling to transfer a fresh filling carrier from the hopper into the shuttle; means acting upon transfer to seize the filling on both sides of the said retaining means, enter the shuttle on both sides of the retaining means, and positively force the filling down past the said retaining means into threading position in the slot.

5. An automatic filling replenishing loom comprising a hopper provided with a supply of fresh filling carriers, a shuttle having an eye and a threading slot leading into the eye, means operated upon failure or exhaustion of the running filling to transfer a fresh filling carrier from the hopper into the shuttle, means acting upon transfer to seize the filling on both sides of the shuttle threading slot and positively to force the filling into threading position, and means acting upon the said movement of the seizing means simultaneously to catch and elevate the filling between the seizing means and its point of attachment to the hopper.

[Claims 6 to 14 not printed in the Gazette.]

1,214,869. SEWING-MACHINE. FRANK ZALESKI, Somerville, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed July 26, 1915. Serial No. 41,834. (Cl. 112—29.)



1. In a sewing-machine, the combination with a frame carrying stitch-forming mechanism, of work-clamping means, said work-clamping means and frame having a relative movement, a thread-clamping device carried by the work-clamping means, and an actuating cam therefor slidably mounted on the frame and adapted during the relative movement of the frame and work-clamping means to effect the clamping of the needle thread at the end of a stitching operation and the release of said thread during the formation of the initial stitches at the next succeeding stitching operation.

2. In a sewing machine, the combination with a frame carrying stitch-forming mechanism, of work-clamping means, said work-clamping means and frame having a relative movement, a thread-clamping device carried by the work-clamping means, an actuating cam therefor slidably mounted on the frame and adapted during the relative movement of the frame and work-clamping means to effect the clamping of the needle thread at the end of a stitching operation and the release of said thread during the formation of the initial stitches at the next succeeding stitching operation, and adjustable means for limiting said sliding movement thereby to determine the point in the cycle of operations at which the needle thread is to be released.

3. In a sewing machine, the combination with a frame carrying stitch-forming mechanism, of work-clamping means, said work-clamping means and frame having a relative movement, a thread-clamping device carried by the work-clamping means, an actuating cam therefor mounted on the frame and adapted during the relative movement of said frame and work-clamping means to effect the clamping of the needle thread at the end of a stitching operation and to release the said thread during the formation of the initial stitches at the next succeeding stitching operation, and means for adjusting said cam thereby to determine the particular point in the cycle of operation at which the needle thread is to be released.

4. In a buttonhole sewing machine, the combination with a frame carrying stitch-forming mechanism, of work-clamping means, said work-clamping means and stitch-forming mechanism having a relative movement, a thread-clamping device mounted on one of said parts, an actuating cam therefor mounted on the other part and capable of limited movement relative thereto, said cam being operative in one position during the relative movement of the stitch-forming mechanism and work-clamping means to cause the actuation of the thread-clamping device to clamp then eedle thread at the end of a stitching operation and in another position to actuate said thread-clamping device to release the needle thread during the formation of the initial stitches at the next succeeding stitching operation.

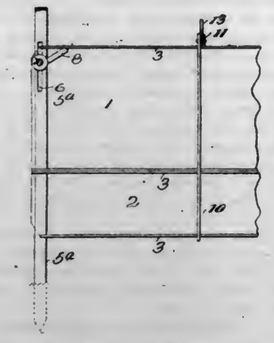
5. In a sewing machine, the combination with a frame carrying stitch-forming mechanism, of work-clamping means, said work-clamping means and frame having a relative movement, a thread-clamping device mounted on the work-clamping means, an actuating cam mounted on the frame and capable of limited movement relative thereto, said cam being operative in one position during the relative movement of the frame and work-clamping means to cause the actuation of the thread-clamping device to clamp the needle thread at the end of a stitching operation and in another position to actuate said thread-clamping device to release the needle thread during the formation of the initial stitches at the next succeeding stitching operation.

[Claim 6 not printed in the Gazette.]

1,214,870. MOLD FOR MAKING CONCRETE CURBS. JOHN R. ZEISER, Berwick, Pa. Filed Dec. 17, 1915. Serial No. 67,426. (Cl. 25—118.)

1. In a mold of the character described, the combination of a slotted upright, a side piece, and a support comprising an arm and a shank, the arm engaging the side piece and sustaining the same in the adjusted position and the shank passing through the slot of the upright and binding therein by the action of the weight of the side piece.

2. In a mold of the character specified, a slotted upright, a side piece, and a support comprising a shank and an arm, the latter engaging the side piece and the shank passing through the slot of the upright and of such form as to bind against opposite edges of the upright bordering upon the slot when the arm is sustaining the weight of the side piece.



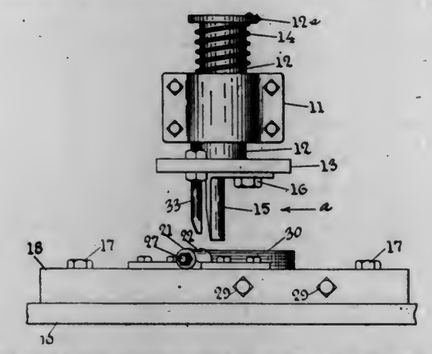
3. In a mold of the character described, the combination of a slotted upright, a side piece having a laterally extending flange engaging the upright, and a support comprising a shank passing through a slot of the upright, and an arm coming between such upright and side piece and engaging under the flange of the side piece, such support holding the side piece in the adjusted position by the binding action of the shank against opposite edges of the upright bordering upon the slot therein when the arm is sustaining the weight of the side piece.

4. In a mold of the character described, side pieces, a U-shaped support arranged with its side members engaging the outer faces of the side pieces, and an adjustable spacer secured to the cross piece of the U-shaped support.

5. In a mold of the character described, a U-shaped support, and a sectional spacer plate attached to the cross piece of the support, one of such sections being fixed and the other section movable.

[Claims 6 to 10 not printed in the Gazette.]

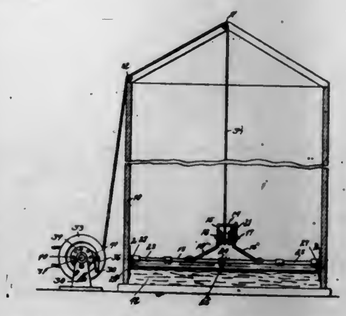
1,214,871. HEEL-BREASTING MACHINE. WILLIAM H. ALBEE, Marlboro, Mass. Filed Nov. 6, 1915. Serial No. 60,123. (Cl. 12—47.)



1. A heel breasting machine, including a reciprocating knife, means for positioning and supporting a heel in the path of the knife, laterally movable plungers, means for automatically holding said plungers in abutment with the heel, and additional vertically movable plungers cooperating with said laterally movable plungers for withdrawing said laterally movable plungers from such abutment with the heel during the heel-cutting operation, said laterally movable plungers, during the upward movement of said vertically movable plungers, being forced by the action of their automatically holding means, to engage and dispose of the breating chip.

2. A heel breating machine, including a reciprocating knife, means for positioning and supporting a heel in the path of the knife, laterally movable plungers, means for automatically holding said plungers in aboutment with the heel, each plunger having a vertical passage therethrough with one wall of said passage inclined downwardly toward the opposite wall thereof, and additional plungers for effecting the withdrawal of said laterally movable plungers from such abutment with the heel during the heel-cutting operation, said additional plungers each having a beveled lower end engaging the inclined passage wall of each of the first referred to plungers.

1,214,872. SILO-TAMPER. ISAAC ANDERSON, Madrid, Iowa. Filed Jan. 11, 1916. Serial No. 71,463. (Cl. 100—57.)



1. In a device of the class described, a horizontal bar, a vertical bar extending downwardly therefrom, supporting members operatively connected with the outer ends of said horizontal bar, and wires secured to said supporting members and mounted on said vertical bar.

2. In a device of the class described, a horizontal bar, a vertical bar extending downwardly therefrom, supporting members operatively connected with the outer ends of said horizontal bar, and wires secured to one of said supporting members and slidably extended through said vertical members, said wires being adjustably secured to the other supporting member.

3. In a device of the class described, a horizontal bar, a vertical bar extending downwardly therefrom, supporting members operatively connected with the outer ends of said horizontal bar, and wires secured to said supporting members and mounted on said vertical bar, said wires being spaced from each other in a substantially horizontal plane at their outer ends.

4. In a device of the class described, a horizontal bar, a vertical bar extending downwardly therefrom, supporting members operatively connected with the outer ends of said horizontal bar, and wires secured to one of said supporting members and slidably extended through said vertical members, said wires being adjustably secured to the other supporting member, said wires being spaced from each other substantially in a horizontal plane at their outer ends.

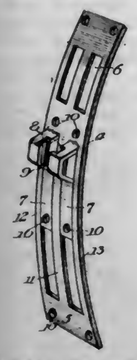
5. In a device of the class described, a horizontal bar, a vertical bar extending downwardly therefrom, supporting members operatively connected with the outer ends of said horizontal bar, wires secured to said supporting members and mounted on said vertical bar, a frame on said horizontal bar, a drum mounted on said frame, and means for locking said drum against rotation in verious positions of its movement.

[Claims 6 and 7 not printed in the Gazette.]

1,214,873. BRAKE-SHOE. CHARLES W. ARMBRUST, Chicago, Ill., assignor, by mesne assignments, to The American Brake-Shoe & Foundry Company, Wilmington, Del., a Corporation of Delaware. Original application filed Feb. 19, 1916, Serial No. 79,236. Divided and this application filed May 19, 1916. Serial No. 98,539. (Cl. 188—82.)

1. A back for a brake shoe consisting of a body strip provided with a centrally located key lug whose three sides

are formed of two tongues drawn from the body of said strip in the same direction.



2. A back for a brake shoe consisting of a body strip provided with a key lug formed of two tongues drawn in the same direction from the body of said strip from either end to a point beyond the center of said strip.

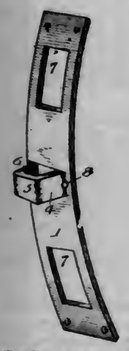
3. A back for a brake shoe provided with a key lug, said key lug consisting of two fingers formed out of the body of the back, each forming a portion of said lug, and each having a cut-away portion to form a part of the key slot, said fingers being drawn in the same direction and forming the complete key lug.

4. A back for a brake shoe provided with a key lug, said key lug consisting of two fingers drawn in the same direction out of the body of the back, each of the said fingers forming a portion of the key lug, and both together forming the complete key lug.

5. A back for a brake shoe provided with a key lug, said key lug consisting of two fingers drawn in the same direction out of the body of the back, each of the said fingers forming a portion of the key lug, and both together forming the complete key lug, the material between said fingers and on both sides thereof forming three strips adapted to hold the back and shoe together.

[Claims 6 and 7 not printed in the Gazette.]

1,214,874. BRAKE-SHOE. CHARLES W. ARMBRUST, Chicago, Ill., assignor, by mesne assignments, to The American Brake-Shoe & Foundry Company, Wilmington, Del., a Corporation of Delaware. Original application filed Feb. 19, 1916, Serial No. 79,236. Divided and this application filed May 19, 1916. Serial No. 98,540. (Cl. 188—82.)



1. A back for a brake shoe consisting of a body strip provided with a key lug whose three sides are formed of a sidewise tongue drawn from said body strip transversely without bending the remaining portions of the said body strip.

2. A back for a brake shoe consisting of a body strip provided with a holding lug formed of a sidewise tongue drawn from said body strip transversely, and having its free end fastened to the shoe body.

3. A back for a brake shoe consisting of a body strip provided with a continuous key lug whose three sides are formed of a sidewise tongue drawn from said body strip transversely and having means for its formed sides to be fastened to the metal of the shoe.

4. A back for a brake shoe consisting of a body strip provided with a holding lug consisting of a continuous strip of metal formed of a sidewise tongue drawn from said body strip transversely to form the three sides of said lug, thereby forming means for fastening the said body strip to the shoe body underneath the said holding lug.

5. A back for a brake shoe consisting of a body strip provided with a key lug formed by a tongue drawn transversely from said body strip and from a protruding portion thereof, which protruding portion is substantially the width of said body strip.

[Claims 6 to 10 not printed in the Gazette.]

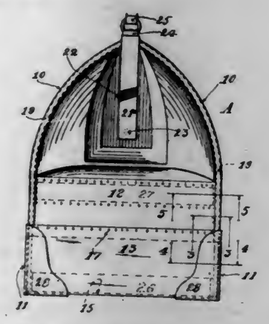
1,214,875. AROMATIZING DRY COFFEE EXTRACT. KNUT ÅSLUND and TEOFRON BOBERG, London, England. Filed Feb. 2, 1916. Serial No. 75,682. (Cl. 99—11.)

1. In the grinding of roasted coffee beans into a fine powder, the addition to such beans of a suitable quantity of dry coffee extract to prevent the formation of a sticky mass while grinding.

2. A dry coffee composition for producing a beverage composed of ground dry extract derived from coffee beans intimately mixed with a fine powder derived from grinding roasted coffee beans.

3. A dry coffee composition for producing a beverage composed of ground dry extract of roasted coffee beans intimately mixed with a fine powder derived from grinding roasted coffee beans, the relative amount of the said powdered coffee beans from one to five per cent. by weight of the original coffee beans used in preparing the extract and the fine powder.

1,214,876. TRAVELING-BAG. MAYER AXELMAN, Chicago, Ill. Filed May 19, 1916. Serial No. 98,547. (Cl. 190—49.)



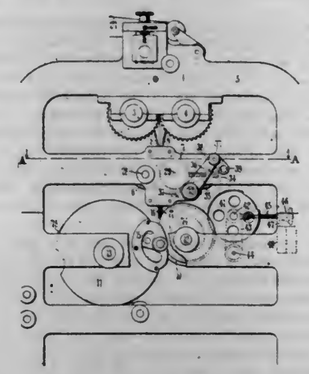
1. A traveling bag, said bag comprising lower side, and end members, and upper side and end members, said upper and lower members being stitched one to the other by horizontal seams, said lower members having inwardly extending flaps, a bottom member secured to said flaps, a vertically disposed post at each corner of the bag, said posts being resilient, said upper side members of the bag being turned around said posts and then passed back of said side members, the vertical margins of said upper end members being turned at right angles back of the vertical margins of said upper side members and stitched thereto, whereby outwardly extending beads are formed at the four corners of the upper portion of the bag without exposing

end material at said corners, and rectangular bands horizontally disposed in said bag constructed to prevent movement of said posts.

2. A traveling bag, including side members, end members, a bottom member, a hinge frame connecting the upper edges of said side members, resilient corner posts, the vertical marginal edges of said side members being lapped around said posts and doubled back, said end members having marginal flaps fastened to said doubled back marginal portion of said sides, behind said posts, a rectangular metallic frame adjacent the bottom of the bag, and a second rectangular metallic frame near the middle of the bags, said frames being constructed to preserve the contour of the bag and prevent movement of said posts.

3. A traveling bag, comprising side and end members and a bottom, said bag being of rectangular contour, there being in said bag at the vertical corners thereof resilient posts, said side members being lapped around said posts, there being in the lower end of said bag and medially thereof endless rectangular bands, said bands being constructed to maintain the rectangular contour of the bag and to retain said posts in proper position.

1,214,877. CUTTING AND FOLDING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed May 6, 1915. Serial No. 26,422. (Cl. 101—120.)



1. In a machine of the character described, sheet folding means and independent means engaging each of a plurality of sheets for holding the sheets in register during the folding operation.

2. In a machine of the character described, sheet folding means and independent means engaging the back edges of each of a plurality of sheets for holding the sheets in register during the folding operation, leaving their front edges free to be pulled back by said folding operation.

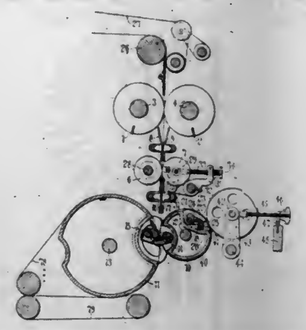
3. In a machine of the character described, sheet folding means and independent means engaging each of two sheets or groups of sheets for holding them in register during the folding operation.

4. In a machine of the character described, sheet folding means and independent means engaging the back edges of two sheets or groups of sheets for holding the sheets in register during the folding operation, leaving their front edges free to be pulled back by said folding operation.

5. In a machine of the character described, sheet folding means, sheet collecting means, means for engaging the advance edges of the sheets and releasing them before the folding operation, and means for holding the sheets in register by their back edges during the folding operation.

[Claims 6 and 7 not printed in the Gazette.]

1,214,878. CUTTING AND FOLDING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Original application filed May 6, 1915, Serial No. 26,422. Divided and this application filed Oct. 16, 1915. Serial No. 56,251. (Cl. 101—120.)



1. In a machine of the character described, a sheet collecting cylinder having alined sets of grippers and means for operating the sets together at a certain point and means for separately operating one of the sets at the same point.

2. In a machine of the character described, a sheet collecting cylinder having alined sets of grippers, means for operating the grippers together at a plurality of points and means for separately operating one of the sets at one of said points.

3. In a machine of the character described, a sheet collecting cylinder having two alined sets of grippers, means for operating both sets at two points and means for separately operating one of the sets at one of said points.

4. In a machine of the character described, a sheet collecting cylinder having two alined sets of grippers, a common means for operating both sets of grippers at the receiving point during the first revolution of the cylinder and at the releasing point during the second revolution of the cylinder, and independent means for operating one of the sets of grippers at the receiving point during the second revolution of the cylinder.

5. In a machine of the character described, a sheet collecting cylinder having two alined sets of grippers, a traveling cam for operating both sets of grippers at the receiving point during the first revolution of the cylinder and at the releasing point during the second revolution of the cylinder and a stationary cam for operating one of the sets of grippers at the receiving point during the second revolution of the cylinder.

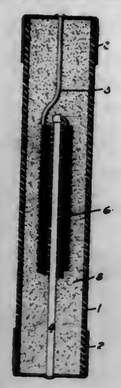
[Claims 6 to 11 not printed in the Gazette.]

1,214,879. ELECTRIC-CIRCUIT-PROTECTING FUSE. SYDNEY N. BARUCH, San Francisco, Cal., assignor to Baruch Electric Controller Corporation, San Francisco, Cal., a Corporation of California. Filed Aug. 25, 1915. Serial No. 47,331. (Cl. 175—275.)

1. A protective device for the energizing windings of an electrical apparatus, comprising a fusible element, and conducting means adjacent thereto and in circuit therewith having a low heat dissipation and acting thermally thereon to alter the carrying capacity of said fusible element in accordance with changes in the thermal condition of the windings of the protected apparatus.

2. A protective device for the energizing winding of an electrical apparatus, comprising a fusible element, and a preheating conducting element in circuit therewith having a low heat dissipation and acting thermally thereon to modify the current-carrying capacity of the fusible element and thereby change the critical current value at which said element will fuse under the action of the current flowing therethrough.

3. A protective device for the energizing winding of an electrical apparatus, comprising a fusible element, and a preheating conducting element in circuit therewith and acting thermally thereon to alter the carrying capacity of said fusible element, means for retarding the thermal action of said preheating element, and means inclosing said elements acting to modify the thermal effect of said preheating element upon said fusible element.



4. A protective device for the current-carrying winding of an electrical apparatus, comprising a fusible element in circuit therewith and thermally acting means for automatically altering the carrying capacity of said fusible element, said thermally acting means being spaced from said fusible element a distance sufficient to maintain the integrity of the latter under all conditions of said means.

5. The combination with an electrical apparatus having a current-carrying winding, of protective means in circuit therewith having a fusible element and means acting thermally thereon in proportion to the thermal condition of said winding, but insufficient to fuse said element.

[Claims 6 and 7 not printed in the Gazette.]

1,214,880. GAS-TORCH. EUGEN BECHER, New York, N. Y., assignor to Blaugas Company of America, New York, N. Y., a Corporation of New Jersey. Filed July 3, 1913. Serial No. 777,149. (Cl. 158—27.4.)



1. A gas torch comprising in combination a blast burner comprising a tubular shell open at one end and having an air inlet opening and a gas nozzle for discharging a jet of gas within and directed toward the open end of the shell, a tubular rod by which the burner is carried and through which gas is supplied to the burner, a handle connected to said rod, and cut-off means for controlling the flow of gas through the tubular rod to the burner having an operating device adjacent the handle, said means being formed to permit when operated to shut off the torch flame a small flow of gas through the tubular rod to the burner to burn with a small flame at the nozzle within the burner shell to serve as a re-lighting flame when the full flow of gas is again established.

2. A gas torch comprising in combination a blast burner comprising a tubular shell open at one end and having an air inlet opening and a gas nozzle for discharging a jet of gas within and directed toward the open end of the shell, a conduit for supplying gas to the burner, and cut-off means for controlling the flow of gas through the conduit to the burner formed to permit when operated to shut off the torch flame a small flow of gas through the conduit to the burner to burn with a small flame at the nozzle within the burner shell to serve as a re-lighting flame when the full flow of gas is again established.

3. A gas torch comprising in combination a blast burner comprising a tubular shell open at one end and having an air inlet opening and a gas nozzle for discharging a jet of gas within and directed toward the open end of the shell, a conduit for supplying gas to the burner, and a valve and valve seat in said conduit for controlling the flow of gas therethrough, one of said last mentioned members being formed with a notch or groove to permit a restricted flow of gas between said members into the conduit when the valve is seated whereby a small flame is maintained at the nozzle within the burner shell to serve as a re-lighting flame when the full flow of gas is again established.

4. A gas torch comprising in combination a blast burner comprising a tubular shell open at one end and having an air inlet opening and a gas nozzle for discharging a jet of gas within and directed toward the open end of the shell, a tubular rod by which the burner is carried and through which gas is supplied to the burner, a handle connected to said rod, and a valve for automatically reducing the flow of gas through the tubular rod to a predetermined minimum, and operating means adjacent the handle whereby the valve may be operated to permit the full flow of gas through the tubular rod to maintain the torch flame.

5. A gas torch comprising a gas burner, a pipe for supplying gas thereto, a valve and a valve seat in said pipe, and a resilient member for holding the valve against the seat in closing position, said valve and seat being formed to permit a restricted flow of gas between the valve and the valve seat into the conduit when the valve is seated, whereby a small flame is maintained at the burner to serve as a re-lighting flame when the full flow of gas is again established, and means for unseating said valve to permit free flow of gas through the pipe.

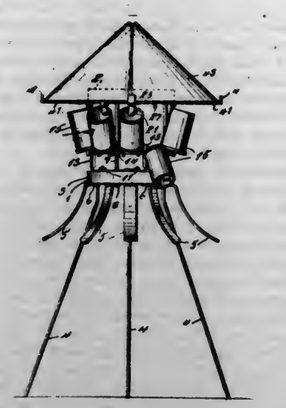
[Claims 6 and 7 not printed in the Gazette.]

1,214,881. AUTOMATIC CHICKEN-FEEDING MACHINE. AXEL C. BERNTZEN, Eugene, Oreg. Filed Feb. 9, 1915. Serial No. 7,202. (Cl. 161—10.)

1. In an automatic chicken feeding machine the combination of a support, a plurality of cans pivotally mounted upon said support, and means for releasably engaging said cans for releasing the same thereby causing the cans to be swung so as to empty the food carried thereby.

2. In an automatic chicken feeding machine, the combination of a support, a plurality of cans pivotally mounted upon said support, a plurality of trip arms mounted upon said support, and means for operating said trip arms so as to release said cans whereby the cans may be swung for emptying the food carried thereby.

3. In an automatic chicken feeding machine, the combination of a support, trip arms pivotally mounted upon said support, a plurality of cans pivotally mounted upon said support, a trigger carried by said support, means for swinging said trigger in a circle, said trigger being adapted to engage said trip arms so as to swing the same to one side at intermittent intervals, whereby the trip arms will release said cans for allowing the cans to swing downwardly thereby distributing the food which is emptied therefrom.

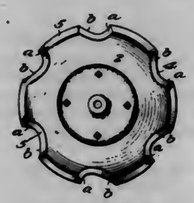


4. In an automatic chicken feeding machine, the combination of a support, a plurality of strips carried by said support and terminating in vertically extending ends, a strand carried by said vertically extending ends, a plurality of cans pivotally mounted upon said strand, means for releasably retaining said cans in a set position, said means being adapted to release said cans so as to allow the same to swing downwardly whereby the contents of the can will be emptied therefrom.

5. In an automatic chicken feeding machine, the combination of a support, a plurality of strips mounted upon said support and terminating in vertically extending ends, a strand carried by said vertically extending ends, a plurality of cans positioned above said strand, a pivot bracket positioned upon the lower portion of the can, each pivot bracket provided with spurs passing through the lower portion of the can whereby the pivot bracket will be fixedly retained in engagement with the can, said pivot bracket having depending portions provided with alined openings, said strand passing through said alined openings whereby the can will be pivotally mounted upon said strand, and means for releasably retaining said cans in a set position whereby the said means may release said cans for allowing the same to swing downwardly for distributing food carried thereby.

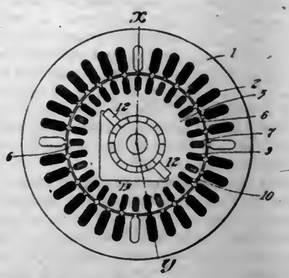
[Claims 6 to 13 not printed in the Gazette.]

1,214,882. DISK FOR DISK PLOWS. FREDERICK R. BESSANT, Atkinson, Ill., assignor of one-half to Harley J. Peck, Atkinson, Ill. Filed May 21, 1915. Serial No. 29,596. (Cl. 97—64.)



In a disk plow, a disk formed with a scalloped or recessed peripheral cutting edge, the recesses having a relatively sharp curve or arc at one end and a relatively longer curve or arc extended from the sharper curve and toward the other end, both curves describing a concave line, substantially as described.

1,214,883. ALTERNATING-CURRENT MOTOR. DONALD M. BLISS, West Orange, N. J., assignor to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed Mar. 13, 1911. Serial No. 614,276. (Cl. 172—277.)

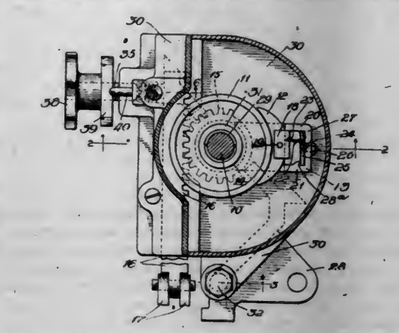


1. An armature comprising a core of magnetic material having openings located near the periphery thereof, a squirrel cage system of conductors located in alternate openings, and a commutated winding located in the remainder of the openings, substantially as described.

2. An armature comprising a core of magnetic material having two sets of alternately arranged axially extending openings near the periphery thereof and substantially equidistant therefrom, a closed circuited winding in one of said sets of openings and a commutated winding in the other of said sets, substantially as described.

3. An alternating current motor comprising a stator and a rotor, one of said members being provided with axially extending slots, and having a commutated winding carried in said slots, and short circuited conductors located between said slots, substantially as described.

1,214,884. FEEDING MECHANISM. GEORGE J. BLUM, Chicago, Ill., assignor to Armstrong-Blum Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 26, 1914. Serial No. 814,270. (Cl. 74—53.)



1. A feeding mechanism comprising a friction drum, a shoe reciprocatingly mounted adjacent to said drum, means for adjusting the position of said shoe with reference to said drum, means for imparting to said shoe a reciprocatory rotary movement, and means for changing the center of rotation of said movement with reference to the center of said drum.

2. A feeding mechanism comprising a feed shaft, a friction drum mounted on said shaft concentric therewith, a friction shoe movably mounted adjacent the periphery of said drum, means for imparting to said shoe a reciprocatory rotary movement, and means for varying the position of the axis of rotation of said shoe with reference to the axis of said drum while said mechanism is in operation.

3. A feeding mechanism comprising a shaft, a drum fixed to and concentric with said shaft, a friction shoe movably mounted adjacent to the periphery of said drum.

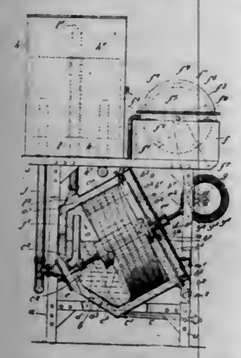
means for imparting a reciprocating rotary motion to said shoe, means for varying the position of the axis of rotation of said shoe with reference to the axis of said drum, and means for pressing said shoe against said wheel during the central portion only of the movement.

4. A feeding mechanism comprising a framework, a friction drum journaled in said framework, a shoe movably mounted adjacent to the periphery of said drum, means for imparting to said shoe a reciprocatory rotating movement, and means for varying the position of the axis of rotation of said shoe with reference to the axis of said drum, said latter means comprising a member movably mounted upon said framework and supporting said shoe, and a screw threaded into said member, the end of said screw pressing against said framework.

5. A feeding mechanism comprising a drum, a friction shoe movably mounted adjacent to the periphery of said drum, means for imparting to said shoe a reciprocatory rotating movement, and means for varying the distance between said drum and said shoe, said latter means comprising a bracket movably supporting said shoe, a flange projecting upwardly from said bracket, a plate positioned edgewise substantially radial to said drum between said shoe and said flange, the respective edges of said plate being immovable with reference to said shoe and said flange, and means for producing relative movement of said shoe and said flange tangential to said drum.

[Claims 6 to 13 not printed in the Gazette.]

1,214,885. CARBURETING APPARATUS. FRITZ WILHELM OTTO BOECKEM, London, England, assignor to Arthur Morris, Reigate, England. Filed Mar. 5, 1914. Serial No. 822,732. (Cl. 261—18.)



1. A carbureting apparatus comprising a water receptacle, a rotatory pump in said receptacle, means for supplying liquid hydrocarbon and air to be carbureted to said pump, a second receptacle adjacent to and communicating with the water receptacle by an opening at the normal water level to permit water to overflow into the second receptacle from the water receptacle when the water level therein exceeds the normal, means for returning the overflow water to the water receptacle, and an extension casing on the pump to receive the carbureted air from the latter and a draw-off pipe opening into the top of the extension casing, substantially as set forth.

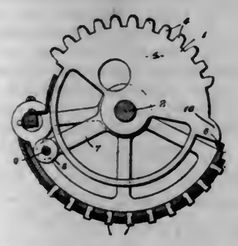
2. A carbureting apparatus comprising a water receptacle, a rotatable pump drum in said receptacle, means for supplying the liquid hydrocarbon and air to be carbureted to said pump, a partitioned-off extension of said receptacle giving a water-overflow chamber, a water-level opening in the partition between the overflow chamber and the pump chamber to permit water to overflow into the second receptacle from the water receptacle when the water level therein exceeds the normal, means for returning overflow water to the pump chamber on the rotation of the pump, and an extension casing on the pump to receive the carbureted air from the latter and a draw-off pipe communicating with said extension chamber, substantially as set forth.

3. In a carbureter a pump chamber, a partition dividing the chamber into two separate chambers, a shaft extending through both chambers, a rotatory pump body mounted on said shaft in one of the chambers, an extension casing of the pump on one side, a draw-off pipe opening into the top of the extension casing, and a water-level opening in the partition between the pump chamber and the other chamber, and water scoops in the latter mounted on the shaft, substantially as set forth.

4. A carbureting apparatus comprising a water receptacle, a rotatory scoop pump comprising a series of helical conduits in said receptacle, means for supplying liquid hydrocarbon and air to be carbureted to said pump, a second receptacle communicating with the water receptacle by an opening at the normal water level to permit water to overflow into the second receptacle from the water receptacle when the water level therein exceeds the normal, means for returning the overflow water to the water receptacle, and an extension casing on the pump to receive the carbureted air from the latter and a draw-off pipe opening into the top of the extension casing. substantially as set forth.

5. A carbureting apparatus comprising a water receptacle, a rotatory pump in said receptacle, means for supplying liquid hydrocarbon and air to be carbureted to said pump, a second receptacle communicating with the water receptacle by an opening at the normal water level to permit water to overflow into the second receptacle from the water receptacle when the water level therein exceeds the normal, means for returning the overflow water to the water receptacle, and an extension casing on the pump to keep the carbureted air issuing from the pump from mixing with the air in the water receptacle and a draw-off pipe for the carbureted air opening into the top of the extension casing, substantially as set forth.

1,214,886. CARRYING-OVER AND CLEARING MECHANISM FOR CALCULATING-MACHINES. WILLIAM H. BROWN, Syracuse, N. Y., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 14, 1910. Serial No. 592,227. (Cl. 235—63.)



1. In a calculating machine, a series of independently movable calculating elements, carrying over mechanism comprising a series of independently movable members for coacting respectively with the calculating elements, and means for moving one series bodily toward and from the other during each operation of the machine, said elements and members having means arranged to engage and actuate the calculating elements to carry over during such bodily movement, substantially as and for the purpose set forth.

2. In a calculating machine, a series of independently movable calculating elements, and carrying over mechanism comprising a series of independently movable members for coöperating with the calculating elements respectively and being normally out of position to coöperate therewith, and elements comprising parts normally holding said members from movement into operative position, the parts being arranged to release said members by the movement of the calculating elements and one series being movable toward and from the other during each operation of the machine to effect the coöperation of said elements and said members, substantially as and for the purpose specified.

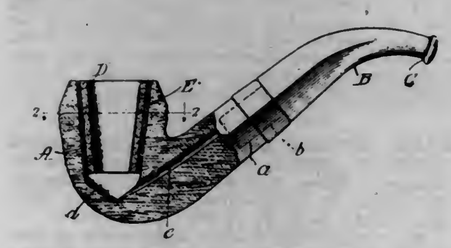
3. In a calculating machine, a series of rotatable calculating wheels, each having a notch, and carrying over mechanism comprising members coacting with the wheels, respectively, and being normally out of operative position with respect to such wheels, and each member having means for entering the notch of its companion wheel at a predetermined point in the rotation of the wheel and also means for controlling the moving of the next member to the left into operative position when the member to the right enters the notch of its companion wheel, substantially as and for the purpose specified.

4. In a calculating machine, a series of rotatable calculating wheels, each having a shoulder and a notch, and carrying over mechanism comprising parts for coacting with the wheels, respectively, and normally extending into the path of such shoulders, said mechanism also including members for coacting respectively with the wheels and being normally out of position to coact with the wheels, and each of said parts having means for controlling the movement into operative position of the member coacting with the wheel of next higher denomination than the wheel with which said part coöperates, when said part is operated by the shoulder of the wheel of lower denomination, substantially as and for the purpose set forth.

5. In a calculating machine, a series of rotatable wheels, each having a notch and a shoulder, and carrying over mechanism comprising members coacting with the wheels, respectively, and being normally out of operative position with respect to the wheels, each member having a tooth arranged to enter the notch of its companion wheel at a predetermined point in the rotation of the wheel and also having means for controlling the moving of the member to the left into operative position, and parts for controlling the operation of said members into operative position, each part normally extending into the path of the shoulder of the wheel of the next lower denomination than the wheel with which the companion member of said part coacts, substantially as and for the purpose described.

[Claims 6 to 47 not printed in the Gazette.]

1,214,887. SMOKING-PIPE. JACOB D. BURGER, Chicago, Ill. Filed Sept. 23, 1916. Serial No. 121,708. (Cl. 131—12.)

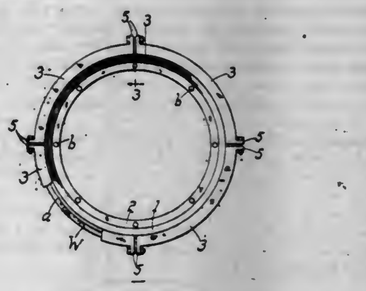


1. A smoking pipe comprising an outer bowl of soft long grained wood, a bottomless inner bowl of porous baked pipe-clay, and a binder of cementitious material between the outer surface of the inner bowl and the inner surface of the outer bowl to hold the inner bowl permanently in place, with the soft wood exposed immediately below the lower end of said inner bowl.

2. A smoking pipe comprising an outer bowl of wood, a porous inner bowl of baked pipe-clay, and a binder of cementitious material between the outer surface of the inner bowl and the inner surface of the outer bowl to hold the inner bowl permanently in place, said outer bowl being of long grained wood with the grain thereof extending transversely across the bowl toward the stem of the pipe.

3. A smoking pipe comprising an outer bowl of soft absorbent wood, a porous inner bowl of baked pipe-clay, and a binder of cementitious material between the outer surface of the inner bowl and the inner surface of the outer bowl to hold the inner bowl permanently in place, said inner bowl being entirely open at the bottom thereof and terminating short of the bottom of said outer bowl to provide a chamber extending under the lower end of said inner bowl, and said outer bowl having an integral stump provided with a bore communicating with said chamber, so that with an outer bowl of soft wood the moisture will be absorbed while the smoke is passing from the bottom of the inner bowl to the mouthpiece of the pipe.

1,214,888. TIRE-CASING MOLD. WILLIAM H. BURRITT, St. Louis, Mo. Filed Mar. 29, 1915. Serial No. 17,782. (Cl. 18—35.)



1. A mold of the character described, comprising an annular member or ring having a transversely arched surface for the deposit and support of the material to be shaped or molded, the center of the arch being nearest the geometric center of the ring, and the portions of the arch on either side of the center thereof being at greater distances from said geometric center, and a member detachable from the ring clamping the material thus supported, to the ring during vulcanization.

2. A tire-casing mold of the character described, comprising an annular member or ring having a transversely arched surface for the deposit of the material to be shaped or molded, the center of the arch being nearest the geometric center of the ring, annular formations adjacent the edges of said surface for the support of beads forming component parts of the casing, and clamps adapted to pass over the beads thus supported for holding the latter to their supporting surfaces during the vulcanizing process.

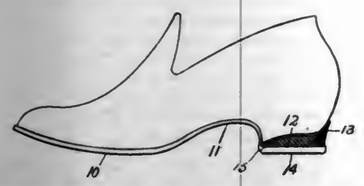
3. A tire-casing mold of the character described, comprising an annular member or ring having a transversely arched surface for the deposit of the material to be shaped or molded, the center of the arch being nearest the geometric center of the ring, annular formations on the sides of the arched surface for the support of beads forming component members of the finished casing, and clamps operating to hold the beads to said formations and the material to the supporting face aforesaid.

4. A tire-casing mold comprising a ring provided with a peripheral transversely arched depression for the support of the material to be molded, flanges bounding the sides of said depression and projecting radially beyond the surface of said depression, the peripheral faces or edges of the flanges forming supporting surfaces for the bead components of the casing, and sectional annular channel clamps passed over the beads thus supported and spanning the sides of the flanges, the inner flange of the clamp being provided with an extension curved to conform to the material molded on the surface of the peripheral depression aforesaid, and hold said material to the mold during vulcanization of the tire.

5. A mold ring for tire casings provided with a peripheral external concaved depression and bounding bead-supporting formations disposed on the sides of said depression, in combination with members operating to encompass the beads and hold the same to the formations aforesaid.

[Claims 6 to 11 not printed in the Gazette.]

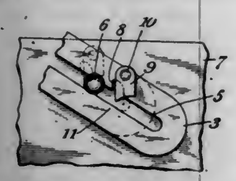
1,214,889. SOLE FOR RUBBER SHOES. STEPHEN W. BOURN, Providence, R. I. Filed Dec. 4, 1914. Serial No. 875,526. (Cl. 36—32.)



1. An outsole for a rubber boot or shoe, comprising a forepart portion, a shank portion, a heel base portion and a heel stay portion, all made of a single continuous sheet of rubber compound without joint or seam, the heel and stay portions being formed thinner than the forepart portion, and a heel lift of a quality different from that of the outsole attached to said heel base portion.

2. An outsole for a rubber boot or shoe, comprising a forepart portion, a shank portion, a heel base portion and a heel stay portion, all made of a single continuous sheet of rubber compound without joint or seam, the heel base and stay portions being formed thinner than the forepart portion, a lip raised at the forward edge of the heel base portion, and a lift of different material from that of the outsole attached to the heel base portion with its forward edge abutting said lip.

1,214,890. SELF-RELEASING LID-SUPPORT. GEORGE HENRY BOWEN, Jr., Toronto, Ontario, Canada, assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Mar. 24, 1915. Serial No. 16,817. (Cl. 217—60.)



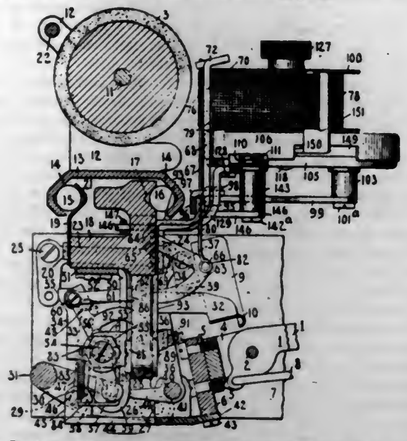
An automatically-releasing lid-support for boxes or the like, consisting of a slotted prop swinging from the lid and having a seat communicating with said slot, a support carried by the box and engaged by said slot, and a dog pivoted upon said prop adjacent said seat and protruding over said slot.

1,214,891. TYPE-WRITING MACHINE. ARTHUR J. BRIGGS, Syracuse, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Nov. 24, 1913. Serial No. 802,785. (Cl. 197—151.)

1. In a typewriting machine, the combination of a covered casing, a ribbon spool outside of but adjacent to said casing, an actuating pawl contained within said casing, a ratchet wheel contained within said casing and with which said pawl co-acts, means for detachably connecting the ribbon spool to said ratchet wheel, a reversing device in said casing and operative to control the engagement between said pawl and ratchet wheel, a ribbon, and means whereby the pull on the ribbon is rendered effective to shift said reversing device.

2. In a typewriting machine, the combination of a covered casing, a ribbon spool outside of but adjacent to said casing, an actuating pawl contained within said casing, a ratchet wheel contained within said casing and with which said pawl co-acts, means for detachably connecting the ribbon spool to said ratchet wheel, a reversing device in said casing and operative to control the engagement between said pawl and ratchet wheel, said reversing device being provided with a ribbon guide, a ribbon, and a contact device carried by said ribbon and operative on the ribbon guide to shift the reversing device.

3. In a typewriting machine, the combination of a shiftable platen, a pair of casings arranged at opposite sides of the machine and shiftable with the platen and each having a detachable cover, a movable arm contained in each of said casings, a pawl carried by each of said arms, a ratchet wheel contained in each casing and with which the associated pawl co-acts, a ribbon spool arranged outside of each casing and adjacent to the cover thereof, and means for communicating movement from each of said ratchet wheels to the associated ribbon spool.



4. In a typewriting machine, the combination of a shiftable platen, a pair of casings arranged at opposite sides of the machine and shiftable with the platen and each having a detachable cover, a movable arm contained in each of said casings, a pawl carried by each of said arms, a ratchet wheel contained in each casing and with which the associated pawl co-acts, a ribbon spool arranged outside of each casing and adjacent to the cover thereof, means for communicating movement from each of said ratchet wheels to the associated ribbon spool, and a reversing device in each casing and coöperative with the pawl therein to control its engagement with the associated ratchet wheel.

5. In a typewriting machine, the combination of ribbon spools; and ribbon feed mechanism comprising a bar which is actuated at each printing operation, and ribbon-spool actuating-devices which are moved in opposite directions by a movement of the bar in one direction.

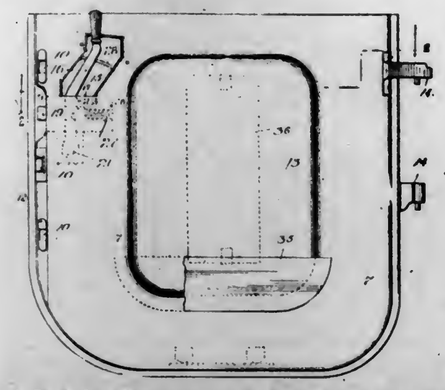
[Claims 6 to 22 not printed in the Gazette.]

1,214,892. METALLIC DOOR AND LOCK MECHANISM THEREFOR. EDWARD GOWEN BUDD, Philadelphia, Pa., assignor to Edward G. Budd Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 3, 1915. Serial No. 37,795. (Cl. 21—125.)

1. In a metallic door structure, an inner and an outer panel offset form each other, one of said panels having a portion terminating in a laterally extending lip at its bounding edges, said flange portion being curved to receive and overlie the bumper blocks carried thereby, the other of said panels having its edges bent or turned over said lip and integrally secured thereto.

2. In a metallic door structure, an inner and an outer sheet metal panel, one of said panels having a flange portion along its side and bottom edges, said flange portion bent out of the plane of the body of said panel and terminating in a laterally extending lip, the adjacent edge of the other panel being bent inwardly over said lip, and a channel shaped stamping interposed between said panels along the upper edges thereof, the upper edge of one of said panels having a lip turned inwardly over the adjacent edge of said stamping.

3. In a metallic door structure, metal panels off-set from each other and secured together at their edges to form an interior chamber between them, a bolt housing positioned within said chamber, a bolt loosely fitting said housing, a spring seated in the housing and against which the bolt bears, one of said panels having an opening therethrough, an operating lever extending through said opening into said chamber and through said housing, and having engagement with said bolt, and means detachably engaged by said lever to form a fulcrum therefor whereby said lever may be readily detached and removed to permit the removal of the bolt.

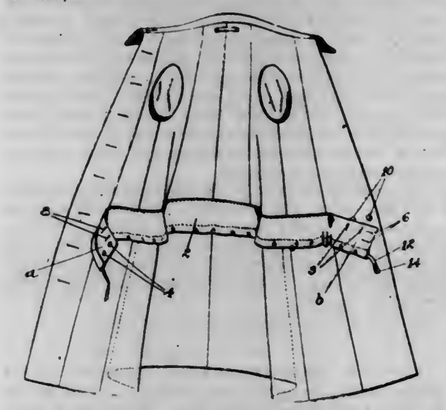


4. In a door structure, panels having their body portions offset from each other and secured together at their edges to form an interior chamber, a housing extending into said chamber, a spring and bolt removably arranged within said housing, said bolt having a recess in one face thereof and an operating lever arranged to be removably inserted into said chamber and transversely through said housing and through said recess to operate said bolt.

5. In a door structure, panels offset from each other and having edge flanges secured together to form an interior chamber, a housing extending into said chamber, a spring and bolt removably arranged within said housing, said bolt extending through the edge of one of said panels and having a recess in one face thereof and an operating lever arranged to be removably inserted into said chamber and transversely through said housing and said recess, said lever having a rounded projection to work against the inner wall of said recess.

[Claims 6 to 20 not printed in the Gazette.]

1,214,893. OVERCOAT. FERGUS A. BUTLER, Danvers, Mass. Filed Apr. 24, 1916. Serial No. 93,251. (Cl. 2—86.)

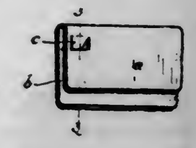


1. An overcoat having a short skirt constructed to encircle the wearer's body and secured at its upper edge to the inside of the coat, the other edge of said skirt being free, and means for fastening said free edge snugly about the body of the wearer to close the space between his body and the inside of the overcoat.

2. An overcoat having a short skirt constructed to encircle the wearer's body in the region of the hips, one edge of said skirt being secured to the inside of the overcoat in the region between the hips and the arm holes, and the other edge of said skirt being free, a flexible fastening means for securing said free edge of the skirt snugly about the body of the wearer, said skirt having ends at the front of the overcoat, and means for fastening said ends together.

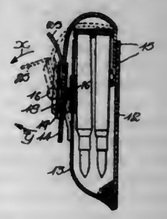
3. An overcoat having a short loose skirt constructed to encircle the wearer's body, and secured at one edge to the inside of the coat, the other edge of said skirt being free, means for securing said free edge snugly about the wearer's body, said skirt having free end portions at the front of the overcoat and means for fastening said portions together and to the overcoat.

1,214,894. ENVELOP-OPENER. GIUSEPPE CAMILLIERI, Chelsea, Mass. Filed Feb. 21, 1916. Serial No. 79,709. (Cl. 164—80.)



An envelop opener conformed from a single sheet of metal folded to provide two plates that are spaced apart from each other, one of said plates having a knife blade punched therefrom and the companion plate having an opening adapted to receive and support the free end of said knife.

1,214,895. CARTRIDGE-CARRIER. FRED S. CARR, Brookline, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed July 21, 1916. Serial No. 110,585. (Cl. 224—23.)



1. In a cartridge carrier, in combination, a flexible pocket, a cover formed as a flexible flap attached to the rear side of the pocket, and having a neck portion adapted to extend across the pocket mouth, and an end portion adapted to overlap the outer side of the pocket, the normal shifting of the flap from its closed to its open position involving a swinging movement of its outer end outward and upward from the front of the pocket to a point above the pocket mouth, and complemental inner and outer fastening members adapted to positively prevent said normal shifting, the inner member being attached to the pocket and the outer member movable relatively to the inner member to effect disengagement, said members being provided with interengaging parts adapted to confine the flap in its closed position, separable by an endwise tipping movement of the outer member outwardly and downwardly from the neck portion of the flap, and inseparable by an opposite endwise tipping movement of the outer member, whereby the normal shifting movement of the flap is positively prevented when said members are interengaged.

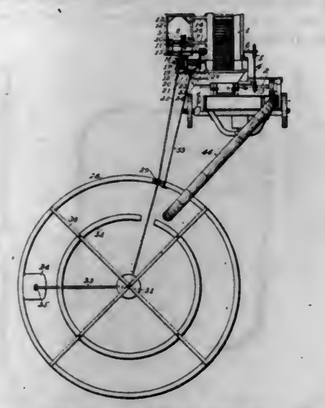
2. In a cartridge carrier, in combination, a flexible pocket, a cover formed as a flexible flap attached to the rear side of the pocket, and having a neck portion adapted to extend across the pocket mouth, and an end portion adapted to overlap the outer side of the pocket, the normal shifting of the flap from its closed to its open position involving a swinging movement of its outer end outward and upward from the front of the pocket to a point above the pocket mouth, complemental inner and outer fastening members adapted to positively prevent said normal shifting, the inner member being attached to the pocket and the outer member movable relatively to the inner member to effect disengagement, said members being provided with interengaging parts adapted to confine the flap in its closed position, separable by an endwise tipping movement of the outer member outwardly and downwardly from the neck portion of the flap, and inseparable by an opposite endwise tipping movement of the outer member, whereby the normal shifting movement of the flap is positively prevented when said members are interengaged, and a flexible handle attached to the outer member and adapted to be pulled in the direction required to tip said member outwardly and downwardly from the neck portion of the flap.

3. In a cartridge carrier, in combination, a flexible pocket, a cover formed as a flexible flap attached to the rear side of the pocket, and having a neck portion adapted to extend across the pocket mouth, and an end portion adapted to overlap the outer side of the pocket, the normal shifting of the flap from its closed to its open position involving a swinging movement of its outer end outward and upward from the front of the pocket to a point above the pocket mouth, and complemental inner and outer fastening members adapted to positively prevent said normal shifting, the inner member being attached to the pocket and the outer member attached to the flap, said members being provided with interengaging parts adapted to confine the flap in its closed position, separable by a tipping movement of the outer member requiring an abnormal bending or bulging of the upper portion of the flap, and inseparable by an opposite tipping movement of the outer member requiring a normal movement of the flap.

4. In a cartridge carrier, in combination, a flexible pocket, a cover formed as a flexible flap attached to the rear side of the pocket, and having a neck portion adapted to extend across the pocket mouth, and an end portion adapted to overlap the outer side of the pocket, the normal shifting of the flap from its closed to its open position involving a swinging movement of its outer end outward and upward from the front of the pocket to a point above the pocket mouth, complemental inner and outer fastening members adapted to positively prevent said normal shifting, the inner member being attached to the pocket and the outer member attached to the flap, said members being provided with interengaging parts adapted to confine the flap in its closed position, separable by an abnormal movement of the outer member requiring an outward bending or bulging of the upper portion of the flap, and inseparable by an opposite tipping movement of the outer member, and a flexible handle attached to the outer member and flap and located between said member and the neck whereby the upper portion of the flap may be abnormally moved and the outer member tipped outwardly and downwardly from the neck portion of the flap.

1,214,896. ENSILAGE-TAMPING DEVICE FOR SILOS. GEORGE WILLARD CISCO and JOHN EDWARD HALL, Fremont township, Butler county, Iowa. Filed Feb. 5, 1916. Serial No. 76,361. (Cl. 100—57.)

1. In combination, a power-shaft, a driven-shaft, a slide-body mounted to slide transversely relative to said shafts, a counter-shaft mounted on said slide-body, an integrally-connected roller and sheave mounted rotatably on said counter-shaft, a cam-wiper and a pinion mounted on said driven-shaft and said cam-wiper adapted to wipe said roller and push said slide-body in one direction, another rotary shaft, a winding-drum rotatably non-slidably mounted on the last-mentioned shaft and having a hub provided with a clutch-face, a gear-wheel slidably non-rotatably mounted on the last-mentioned shaft and in mesh with said pinion, said gear-wheel being of less width than the pinion and having a clutch-face mating with the other clutch-face, means for moving said clutch-members into or out of engagement, a cable wound on said winding-drum and carried about said sheave, and a tamping-head secured upon the free end of said cable.



2. In combination, a sheave mounted to reciprocate, means for reciprocating said sheave, a winding-drum rotatably mounted, a cable wound about said drum and carried about said sheave, a tamping-head secured on said cable, and disengageable means for rotating said drum.

3. In combination, a sheave mounted to reciprocate, means for reciprocating said sheave, a winding-drum rotatably mounted, a cable wound about said drum and carried about said sheave, a tamping-head secured to the free end of said cable, disengageable means for rotating said drum, said drum having at one end a fixed friction ring, a band-brake mounted upon said ring and means adapted to act to release the band-brake while engaging the drum with its rotating-means, and to engage the ring while disengaging said rotating-means from the drum.

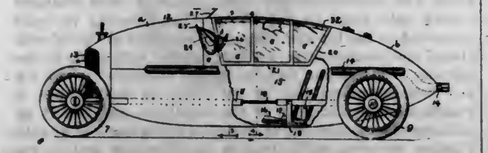
4. In combination, a sheave mounted to reciprocate, means for reciprocating said sheave comprising a rotatable wiper adapted to intermittently move the sheave mounting in one direction, a winding-drum, a cable wound on said drum and carried about said sheave, a tamping-head secured on the free end of said cable, rotary shafts on which said wiper and said drum are respectively mounted, the drum having a friction ring, fixed on one end and a clutch-face, a relatively thick pinion on the wiper carrying shaft, a narrower gear-wheel on the drum carrying shaft in mesh with said pinion, said gear-wheel being slidably non-rotatably mounted on its shaft and having a mating clutch-face for the other clutch-face, the drum being rotatably non-slidably mounted on said shaft, a band-brake mounted about said friction ring, and a rock-body movably connected to both said band-brake and said gear carrying clutch-member, and adapted when in one position to release said band-brake and engage said clutch-members, and when in another position to engage said band-brake and disengage said clutch-members.

5. In combination, removable supporting-means mounted on a silo-top, an arm swingingly supported on said supporting-means, sheaves on said arm, a cable carried about said sheaves, a tamping head mounted on one end of the cable within the silo, and mechanism connected operatively to said cable adapted to lift said tamping-head and release the same alternately.

[Claims 6 and 7 not printed in the Gazette.]

1,214,897. RACING-VEHICLE. HARRY D. CLARKE, Omaha, Nebr., assignor to Efficiency Motor Corporation, Omaha, Nebr., a Copartnership. Filed July 3, 1916. Serial No. 107,256. (Cl. 21—90.)

1. In a racing vehicle, a frame, a hanger projecting below the frame, seats secured to the hanger, a casing substantially of torpedo-shape circumscribing the seats and frame and provided midway between its ends with an entrance way, a cover conforming to the convexed contour of the casing for closing said entrance way, and a plurality of mirrors mounted upon the casing adjacent to said seats to permit operators within the casing to visibly inspect the space at the front and rear of the vehicle.



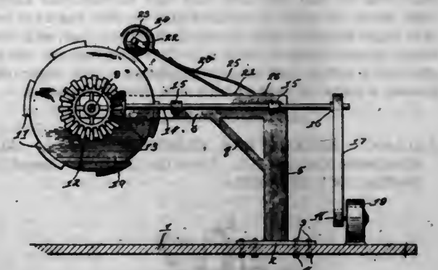
2. In a racing vehicle of the type described having a plurality of cylinders, a frame, seats disposed below and secured to the frame, a casing substantially of torpedo-shape circumscribing the seats and frame, a plurality of mirrors mounted upon the casing adjacent to said seats to permit occupants of the casing to visibly inspect the space at the front and rear of the vehicle, a jacket circular in cross-section having a longitudinal curvature corresponding substantially to the longitudinal curvature of and disposed at the side of the casing, said jacket having a terminal part disposed at the rear and in line with the longitudinal axis of the casing, and a plurality of exhaust conduits disposed in said jacket each having a segmental form in cross-section.

3. In a racing vehicle of the type described having a plurality of cylinders, a frame, seats disposed below and connected with the frame, a casing substantially of torpedo-shape circumscribing the seats and frame and having a convergent part at its front end, said casing being provided midway between its ends with a chamber and an entrance way thereto, a cover consisting of a frame and transparent plates for making a closure of said entrance way, a plurality of mirrors mounted upon the casing to permit operators within the chamber to visibly inspect the space at the front and rear of the vehicle, a plurality of conduits each being in communication with an exhaust port of a cylinder, a jacket circumscribing the conduits and having a terminal part disposed rearwardly of and in line with the longitudinal axis of the casing, said cover having a form corresponding substantially to the convexity of said casing.

4. In a racing vehicle, a frame, a hanger extending below the frame, seats secured to the hanger, a casing having a forwardly tapered part with a convergent terminal part and having a cone-shaped rear end, said casing being disposed to circumscribe the seats and frame and being provided substantially midway between its ends with an entrance way, a truss-bar disposed in the medial line of the casing above said entrance way, a cover conforming to the convexed contour of the casing for engaging the truss-bar and making a closure of said entrance way, and a plurality of mirrors mounted on the casing adjacent to said seats to permit occupants of the casing to visibly inspect the space at the front and rear of the vehicle.

1,214,898. CANCELING-MACHINE. GEORGE M. CULLEN, Milwaukee, Wis. Filed July 23, 1914. Serial No. 852,679. (Cl. 101—81.)

A canceling machine for packages or the like, comprising, a standard to be secured upon a table, an arm laterally projecting from said standard for a predetermined distance, a disk rotatably supported on the free end of said arm and to be in spaced relation with said table, a gear on said disk a shaft rotatably supported on said arm and carrying a pinion to mesh with said gear on the disk, one end of said shaft being adapted to be connected to a driving means whereby said disk is rotated, a plurality of type characters mounted on the periphery of said disk in a substantially uniformly spaced relation, a substantially resilient arm secured to said lateral arm and having rotatably mounted thereon an ink supplying roller to engage with the type characters on said disk, and spring means engaging upon said resilient arm for holding said



roller in constant engagement with the type characters on the disk with a predetermined pressure, substantially as and for the purposes set forth.

1,214,899. SLIP-COVER CAN. SAMUEL H. CURRAN, Brooklyn, N. Y., assignor to Royal Baking Powder Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 8, 1912. Serial No. 682,397. (Cl. 220—92.)



1. A can for holding baking powder consisting of a cylindrical body-portion having a bottom closing the lower end thereof and at the joint between said body and bottom a laterally projecting annular ridge, and a slip-cover extending to the outer upper end edges of said body-portion and then downwardly upon and tightly fitting the upper end of said body-portion to effectually close the can, and said cover having adjacent to its upper edge a laterally projecting annular ridge, said ridges being similarly projected so that the cans may roll thereon and also so that when the cans are placed side by side together only said ridge-portions will engage each other.

2. A can for holding baking powder consisting of a cylindrical body-portion having a bottom closing the lower end thereof and at the joint between said body and bottom a laterally projecting annular ridge, and a slip-cover extending to the outer upper end edges of said body-portion and then downwardly upon and tightly fitting the upper end of said body-portion to effectually close the can, and said cover having adjacent to its upper edge a laterally projecting annular ridge, said ridges being similarly projected so that the cans may roll thereon and also so that when the cans are placed side by side together only said ridge portions will engage each other, and said cover being in one integral piece and the ridge thereon being a grooved beading.

3. A can for holding baking powder consisting of a cylindrical body-portion having a bottom closing the lower end thereof and at the joint between said body and bottom a laterally projecting annular ridge, and a slip-cover extending to the outer upper end edges of said body-portion and then downwardly upon and tightly fitting the

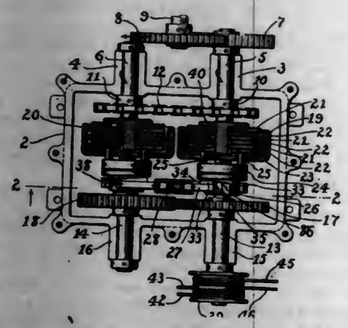
upper end of said body-portion to effectually close the can, and said cover having adjacent to its upper edge a laterally projecting annular ridge, said ridges being similarly projected so that the cans may roll thereon and also so that when the cans are placed side by side together only said ridge portions will engage each other, and said cover being in one integral piece and the ridge thereon being a grooved beading, and said body-portion at its upper edge having a ridge to expand into said grooved beading.

1,214,900. SOCKET FOR ELECTRIC LAMPS. JOHN CUTHBERT, Chicago, Ill. Filed Dec. 2, 1915. Serial No. 64,634. (Cl. 173—322.)



A socket comprising a shell open at one end to receive a translating device and open at the other end to receive circuit wires; an insulating block within said shell, having perforations to receive said wires; a rotatable bushing for insertion in the latter shell opening, having a plurality of perforations registrable with the perforations in said block, for a corresponding number of wires, and a yieldable ratchet means to permit the bushing to be rotated in one direction only, out of registration, to twist said wires within said shell.

1,214,901. STABILIZER FOR FLYING-MACHINES. JOSEPH S. DALE, Jr., New York, N. Y. Filed Mar. 25, 1915. Serial No. 16,937. (Cl. 244—29.)



1. A flying machine stabilizer including in combination power driven means comprising two shafts adapted for synchronous rotation in the same direction, a drum mounted for rotation in either direction, a clutch on each of said shafts for transmitting rotation to said drum, reversing means between one of said clutches and said drum, an oscillatable stabilizer plane, a wire wrapped around said drum and having its ends connected to the top and bottom respectively of said plane, a weight movable laterally of the stabilizer, and means on said movable weight for at one time operating one of said clutches to rotate said drum in one direction and at another time operating the other of said clutches to rotate said drum in the opposite direction.

2. A flying machine stabilizer including in combination power driven means comprising two shafts adapted for synchronous rotation in the same direction, a drum mounted for rotation in either direction, a clutch on each of said shafts for transmitting rotation to said drum, reversing means between one of said clutches and said drum, two oscillatable stabilizer planes, a wire wrapped around said drum in one direction and having its ends connected to the top and bottom respectively of one of said planes and another wire wrapped around said drum in the opposite direction and having its ends connected to the top and bottom respectively of the other of said planes, a weight movable laterally of the stabilizer, and means on said movable weight for at one time operating one of said clutches to rotate said drum in one direction and at another time operating the other of said clutches to rotate said drum in the opposite direction.

3. A flying machine stabilizer including in combination power driven means comprising two shafts adapted for synchronous rotation in the same direction, a drum mounted for rotation in either direction, a clutch on each of said shafts for transmitting rotation to said drum, reversing means between one of said clutches and said drum, two oscillatable stabilizer planes, means operatively connecting said drum with said planes for synchronously moving each plane in a direction opposite to that of the other plane upon rotation of the drum, a weight movable laterally of the stabilizer, and means on said movable weight for at one time operating one of said clutches to rotate said drum in one direction and at another time operating the other of said clutches to rotate said drum in the opposite direction.

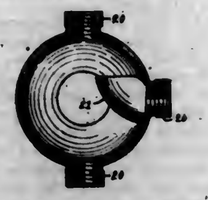
4. A flying machine stabilizer including in combination power driven means comprising two shafts adapted for synchronous rotation in the same direction, a drum mounted for rotation in either direction, a clutch on each of said shafts for transmitting rotation to said drum, reversing means between one of said clutches and said drum, an oscillatable stabilizer plane, a wire wrapped around said drum and having its ends connected to the top and bottom respectively of said plane, a weight movable laterally of the stabilizer, and wedges on said movable weight for at one time operating one of said clutches to rotate said drum in one direction and at another time operating the other of said clutches to rotate said drum in the opposite direction.

5. A flying machine stabilizer including in combination power driven means comprising two shafts adapted for synchronous rotation in the same direction, a drum mounted for rotation in either direction, a clutch on each of said shafts for transmitting rotation to said drum, reversing means between one of said clutches and said drum, two oscillatable stabilizer planes, a wire wrapped around said drum in one direction and having its ends connected to the top and bottom respectively of one of said planes and another wire wrapped around said drum in the opposite direction and having its ends connected to the top and bottom respectively of the other of said planes, a weight movable laterally of the stabilizer, and wedges on said movable weight for at one time operating one of said clutches to rotate said drum in one direction and at another time operating the other of said clutches to rotate said drum in the opposite direction.

[Claims 6 and 7 not printed in the Gazette.]

1,214,902. AIR AND WATER SEPARATOR. LINCOLN S. DEAL, Kalamazoo, Mich., assignor to Comstock Automatic Pump Co., Comstock, Mich. Filed Apr. 26, 1916. Serial No. 93,702. (Cl. 103—79.)

1. In a structure of the class described, the combination with a pump adapted to pump air and water, a pressure storage tank, and a draw-off pipe, of a separating chamber casing having a side connection to said pump, a top connection to said tank and a bottom connection to said draw-off pipe, said casing being provided with a partition embracing said pump connection so that the water and air entering therethrough is spread and discharged upwardly into the chamber.



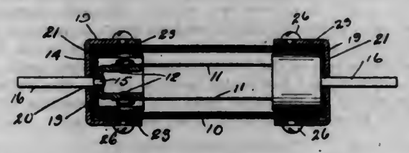
2. In a structure of the class described, the combination with a pump adapted to pump air and water, a pressure storage tank, and a draw-off pipe, of a separating chamber casing having a side pump connection, a connection to said tank above said pump connection and a connection to said draw-off pipe below said pump connection, said chamber being provided with means for discharging the water and air entering through said pump connection upwardly into the chamber toward said tank connection.

3. A structure of the class described comprising a substantially spherical casing having an inlet connection at one side, a tank connection at the top and a delivery system connection at the bottom, there being an upwardly projecting spherically curved deflecting wall embracing said inlet connections, the upper edge of said wall being above the upper edge of the inlet opening whereby the fluid entering therethrough is spread and discharged upwardly.

4. A structure of the class described, comprising a casing having an inlet connection at one side, a tank connection in a plane above said inlet connection, and a delivery system connection in a plane below said inlet connections, there being a partition wall embracing the inlet connections whereby the fluid entering therethrough is spread and discharged upwardly toward the tank connection.

5. A structure of the class described comprising a casing having an inlet connection at one side, a tank connection in a plane above said inlet connection, and a delivery system connection in a plane below said inlet connection, said casing being provided with means whereby the fluid entering through said inlet connection is discharged upwardly toward the tank connection.

1,214,903. FUSE. LOUIS W. DOWNES and RALPH CLIFTON PATTON, Providence, R. I., assignors to D & W Fuse Company, Providence, R. I., a Corporation of Rhode Island. Filed Oct. 23, 1915. Serial No. 57,584. (Cl. 175—273.)



1. An electric fuse comprising a fuse link, a link inclosing casing, end closures therefor, and means including a sleeve portion on the outside of the casing end and a sleeve portion on the inner side of the casing end providing between them an extended cooling area over which the escaping gas generated within the casing must pass.

2. An electric fuse comprising a fuse link, a link inclosing casing, end closures therefor, means including a sleeve member on the side of the casing end and a sleeve member on the outer side of the casing end providing between them an extended cooling area over which the escaping gas generated within the casing must pass, and means for reversing the direction of travel of the gas on its way to the open.

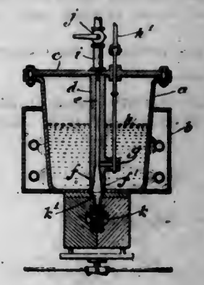
3. An electric fuse comprising a fuse link, a casing therefor, cup-shaped closures covering the ends of said casing, said closures being provided with vent openings, and means within said casing coöperating with said closures for spreading the escaping gases into a thin film both inside and outside of the casing to facilitate cooling.

4. An electric fuse comprising a fuse link, a casing therefor, a cup-shaped closure extending into the inside and one extending over the outside of said casing ends and attached thereto, passageways being provided between the casing walls and those of both the inner and outer cups for relieving the gas pressure when generated within the casing.

5. An electric fuse comprising a fuse link, a casing therefor, a cup-shaped closure extending into the inside and one extending over the outside of said casing ends and attached thereto, passageways being provided between the casing walls and those of both the inner and outer cups for relieving gas pressure when generated within the casing.

[Claims 6 to 12 not printed in the Gazette.]

1,214,904. ART OF AND APPARATUS FOR CASTING FLUID METALS. HERMAN H. DOEHLER, Brooklyn, N. Y., assignor to Doehler Die Casting Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 23, 1915. Serial No. 16,340. (Cl. 22—209.)



1. The art or method of casting fluid metals consisting in maintaining a mass of molten metal about a chamber having a downwardly presented normally open discharge port in the bottom thereof adapted to communicate with the ingate of a die or mold, permitting a measured quantity of molten metal sufficient only for one casting operation to flow from said mass of molten metal through said chamber into the ingate of a die or mold and applying pressure to the metal delivered to said chamber while it is flowing therefrom to the die.

2. The art or method of casting fluid metal consisting in flowing molten metal through an elongated chamber of small dimensions having a normally open discharge port at the bottom thereof into the ingate of a die or mold, limiting the quantity of metal passed through said chamber to that required for a single casting operation, applying pressure to the surface of the metal in said chamber when the desired quantity thereof has been delivered thereto to force the entire charge therefrom with each casing operation while it is flowing from the chamber from said mold ingate to the mold and maintaining the metal while in said chamber in a molten state during the casting operation and until it is delivered in its entirety in the mold or die.

3. The art or method of casting fluid metals consisting in the rapid flowing of molten metal through an elongated chamber of small dimensions, having a normally open port in the bottom thereof into a constricted ingate of a die or mold thereby delivering a charge to said chamber, checking the flow of said molten metal when a sufficient quantity for a single casting operation is delivered to said chamber, applying pressure to the surface of said metal within said chamber while said metal is flowing under gravity into the said mold thereby accelerating the rate of flow of said metal into the mold and maintaining the metal in said chamber during the entire casting opera-

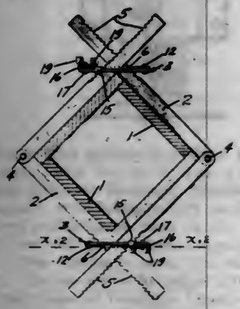
tion in a molten state until it is delivered to the die or mold.

4. The art or method of casting fluid metals consisting in maintaining a mass of molten metal about an elongated chamber of small dimensions having a downwardly presented normally open discharge port in the bottom thereof in communication with a constricted ingate of a mold, flowing metal from said mass intermediate the top and bottom thereof through said chamber into the ingate of a mold or die, limiting the quantity of metal delivered to said chamber to that required for a single casting operation, applying pressure to the surface of said metal within said chamber while said metal is flowing under gravity into the said mold thereby accelerating the rate of flow of said metal into the mold and maintaining the metal in said chamber during the entire casting operation in a molten state until it is delivered to the die or mold.

5. An apparatus for casting fluid metals embodying therein a melting-pot, a furnace about said melting pot, a casing forming an elongated chamber of small dimensions within said melting pot, said casing having a normally open discharge port at the bottom thereof opening outwardly of said melting-pot and an intake port within said melting-pot, means supporting a die with its ingate in communication with said discharge port, means whereby the volume of metal delivered to said chamber may be controlled, and independently operative means whereby said metal may be forced through said discharge port into said die.

[Claims 6 to 12 not printed in the Gazette.]

1,214,905. COLUMN-CLAMP. ISAAC G. ENGSTROM, Minneapolis, Minn. Filed Mar. 31, 1915. Serial No. 18,265. (Cl. 144—291.)



1. A clamp of the kind described comprising bars having overlapped ends, a two-part draw head embracing the overlapped ends of the bars for drawing said bars endwise one upon the other and for holding the same against lateral separation, the members of the draw head having sliding engagement one upon the other and provided with coöperating shoulders having interlocking engagement with the longitudinal edges of the bars, and means operative on the members of the draw head for moving their shoulders toward each other.

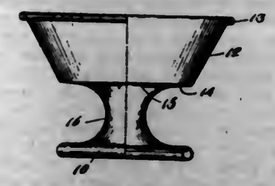
2. A clamp of the kind described comprising bars having overlapped ends, a two-part draw head embracing the overlapped ends of the bars for drawing said bars endwise one upon the other and for holding the same against lateral separation, the members of the draw head having sliding engagement one with the other and provided with coöperating shoulders having interlocking engagement with the bars at different longitudinal points, and a cam operative on the members of the draw head for moving their shoulders toward each other.

3. A clamp of the kind described comprising bars having overlapped ends, a two-part draw head embracing the overlapped ends of the bars for drawing said bars endwise one upon the other and for holding the same against lateral separation, said draw head comprising a pair of members having pivotal and sliding movements one with the other and provided with coöperating shoulders having interlocking engagement with the bars, and means operative on the members of the draw head for moving their shoulders toward each other.

4. A clamp of the kind described comprising bars having overlapped ends, a two-part draw head embracing the overlapped ends of the bars for drawing said bars endwise one upon the other and for holding the same against lateral separation, said draw head comprising a pair of members having pivotal and sliding movements one with the other and provided with coöperating shoulders having interlocking engagement with the bars, a cam operative on the members of the draw head for moving their shoulders toward each other, and lugs on the cam by which the same may be rotated.

5. A clamp of the kind described comprising bars having overlapped ends, a two-part draw head embracing the overlapped ends of the bars for drawing said bars endwise one upon the other and for holding the same against lateral separation, said draw head comprising a pair of members having pivotal and sliding movements one with the other and provided with coöperating shoulders having interlocking engagement with the bars, and a cam operative on the members of the draw head for moving their shoulders toward each other, said cam holding the members of the draw head against pivotal separation.

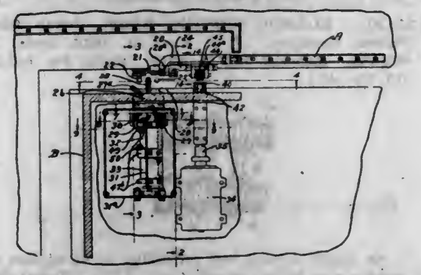
1,214,906. HOLDER FOR PAPER FINGER-BOWLS. LUKE W. FARMER, Somerville, Mass. Filed Feb. 2, 1914. Serial No. 816,002. (Cl. 65—13.)



A holder for paper finger bowls or the like, constructed of sheet metal, and formed to provide a pedestal of circular outline in transverse section, the wall of the pedestal curving outwardly above and below the central portion thereof, and presenting approximately horizontal upper and lower base portions, the material beyond the upper base portion being projected upwardly and outwardly to form a receiver of inverted truncated cone shape, having a minimum diameter equal to the maximum diameter of the upper base portion, the edge of the lower base portion being rolled to present an annular rounded supporting edge for the holder, the lower base portion, pedestal and upper base portions having an opening therethrough from a continuation of the receiver space, the upper base portion presenting a horizontal ledge to receive the marginal edge portion of the finger bowl, the central portion of the bottom of said finger bowl being unsupported.

1,214,907. MEANS FOR CONTROLLING ELEVATORS. FRANK M. FITZGERALD and RALPH S. HATCH, Chicago, Ill., assignors of one-third to Frank M. Hatch, Chicago, Ill. Filed Dec. 12, 1914. Serial No. 876,919. (Cl. 187—31.)

1. Means for controlling elevators, comprising, in combination with an elevator-gate and an elevator-cab having controlling means, a member pivotally mounted in the elevator-shaft and in the path of the gate whereby the elevator-gate is normally held against complete opening thereof, means adapted to be affected by the initial movement of the elevator-gate, said means comprising a striker portion arranged to move into different vertical planes intermediate of the gate and the cab, oscillating means carried by the elevator-cab and adapted to be operated by said striker portion of the first mentioned means when the elevator-cab reaches a predetermined point in proximity to the elevator-gate, pivoted means carried by the elevator-cab and adapted to control said member, and electrically controlled means adapted to be affected by said second mentioned oscillating means, whereby the pivoted means on the cab is forced into contact with said member and the latter moved out of locking position.



2. Means for controlling elevators, comprising, in combination with an elevator-gate and a cab having controlling means, a horizontally oscillating latch member whereby the gate is normally held against complete opening, an elongated striker member pivotally mounted along the path of the gate and adapted to be moved through the arc of a vertically disposed circle in a direction opposite to the direction of movement of the gate, a member pivotally mounted on the cab at a point adapted to register with the latch member and arranged to be swung toward said latch member, and electrically controlled means carried by the cam adapted to be affected by said striker member when the cab is brought to a predetermined point whereby an electric circuit is induced and the member pivotally mounted on the cab forced against the latch member causing the latter to move out of latching position.

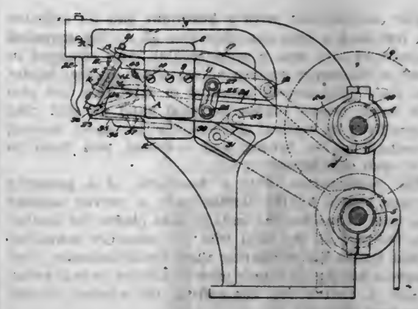
3. In combination with the controlling means of an elevator, a gate-locking member, means adapted to be affected by movement of the gate before the latter reaches said locking-member, a portion of said means being adapted to swing through a vertically disposed arc in a direction opposite to the direction of movement of the gate, electrically operated means for controlling said gate-locking member and said elevator controlling means, and switch mechanism arranged to control the circuit of said electrically operated means, said switch mechanism being adapted to be controlled by said second mentioned means whereby the electric circuit is closed and the electrically operated means forced into locking engagement with the elevator controlling means and also into engagement with the gate-locking member whereby the latter is moved out of locking position.

4. In combination with the controlling means of an elevator, a gate-locking member, pivotally mounted means adapted to be affected by movement of the gate before the latter reaches said locking member, said means comprising a striker portion arranged to swing into different vertical positions, electrically operated means adapted to control said locking member and said elevator-controlling means, and tiltably mounted switch mechanism arranged to control the circuit of said electrically operated means, said switch mechanism being adapted to be tilted by movement of the striker portion of said pivotally mounted means whereby the electric circuit is closed and the electrically operated means forced into locking engagement with the elevator controlling means and also into engagement with the gate-locking member whereby the latter is moved out of locking position.

5. Means of the class described, comprising, in combination with an elevator-gate and an elevator-cab having controlling means, a gate-locking member, one end whereof is disposed in the path of the gate and arranged to permit slight movement of the gate, while the other end is disposed toward the elevator-cab, means tiltably mounted in the elevator-shaft intermediate of the gate and the cab, a portion whereof is arranged to be moved into different vertical planes by movement of the gate before the latter reaches said locking-member, electrically operated means mounted on the elevator-cab for controlling the gate-locking member and the controlling means of the elevator, and switch mechanism pivotally mounted on the elevator-cab arranged to control the circuit of said electrically operater means, said switch mechanism being adapted to be controlled by said tiltably mounted means whereby the electric circuit is closed and the electrically operated means forced into locking engagement with the controlling means on the elevator-cab and also into engagement with the gate-locking member so as to force the latter out of locking position.

[Claims 6 to 21 not printed in the Gazette.]

1,214,908. TACK PULLING AND REDRIVING MACHINE. LOUIS G. FREEMAN, Cincinnati, Ohio, assignor to himself and Charles F. Freeman, trustees, Cincinnati, Ohio. Filed Nov. 5, 1912. Serial No. 729,612. (Cl. 12—16.)



1. A machine for operating upon the bottoms of lasted boots and shoes, comprising means to partially withdraw a tack, and a driving tool having means to drive and to bend lasting tacks inwardly to tighten their lasting hold on the upper, after said lasting tacks have been partially withdrawn.

2. A machine for operating upon the bottoms of lasted boots and shoes, comprising means to partially withdraw a tack, and a driving tool reciprocable at an angle to the plane of the shoe bottom and with its tack engaging portion formed to partially drive a lasting tack, while simultaneously bending said tack inwardly, after said lasting tacks have been partially withdrawn.

3. A machine for operating upon the bottoms of lasted boots and shoes, comprising yielding means to deflect the shank portion of a lasting tack while driving said tack to increase the lasting tension of said tack.

4. A machine for operating upon the bottoms of lasted boots and shoes, comprising means to partially withdraw a tack, and a driver operable on a selected one of the lasting tacks to bend the tack and increase the lasting hold of said tack, after said tack has been partially withdrawn.

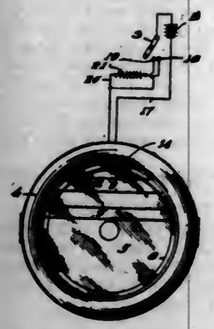
5. In a machine of the class described, a tack driver, means coöperating with said driver to partially withdraw a lasted tack, and means to actuate said driver to redrive said tack from the height to which it was withdrawn.

[Claims 6 to 20 not printed in the Gazette.]

1,214,909. HEADLIGHT-DIMMER. CHARLES B. GAMBLE and FREDERICK C. SHEPARD, Minneapolis, Minn. Filed Apr. 8, 1916. Serial No. 89,785. (Cl. 240—45.2.)

1. The combination, with a headlight and its reflector, and a lens and a lens cap therefor, of a ring mounted in the rear of said lens and having oppositely arranged slots therein, dimmer blades having slotted ends to enter the slots in said ring and mounted to oscillate with respect thereto, said blades extending across the upper half substantially of said lens, means for tilting said blades to

divert the rays of light downwardly, and means for returning said blades to their normal position.



2. The combination, with a headlight and its reflector and a lens and a lens cap therefor, of a ring mounted in the rear of said lens, a semi-circular band arranged in the rear of the upper portion of said ring, dimmer blades having their ends loosely mounted in said ring and also in said band, means supporting said band on said ring and permitting its vertical movement with respect thereto, and mechanism for raising and lowering said band to close or open said blades.

3. The combination, with a headlight, of a plurality of dimmer blades having slotted ends, a curved member having slots to receive the ends of said blades for oscillation in the rear of the light lens, an armature connected with said blades for oscillating them simultaneously, electro-magnets having their pole pieces adjacent to said armature, and a switch for controlling the electric circuit through said magnets.

4. The combination, with a headlight, of a plurality of dimmer blades, a member having opposing slots to receive the ends of said blades, an armature having slots to receive said blades for oscillating them simultaneously, electro-magnets having their pole pieces adjacent to said armature, an electric circuit for said magnets, a switch, contact points therefor in said circuit, and a resistance coil in circuit with one of said contact points.

5. The combination, with a headlight, of a plurality of dimmer blades mounted for oscillation in the rear of the light lens, an armature, semi-circular in form, connected with said blades for oscillating them simultaneously, a spring for normally holding said blades in position to direct the rays of light forwardly through said lens, an electro-magnet having its pole pieces adjacent to said armature and an electric circuit for said magnet, the energizing of said magnet attracting said armature to tilt said blades to an oblique position, and means for returning said blades to their normal position when the circuit is broken through said magnet.

[Claims 6 and 7 not printed in the Gazette.]

1,214,910. MANUFACTURE OF CEMENT. JOSEPH FREEMAN GODDARD, Holloway, London, England. Filed May 5, 1915. Serial No. 26,008. (Cl. 106—25.)

1. The method of making Portland cement comprising mixing the clinker with gypsum previously treated or incorporated with tannic acid and grinding the mixture to cement, for the purpose described.

2. Portland cement consisting of a mixture of ground clinker and gypsum, said gypsum having incorporated therewith a tannin water proofing agent.

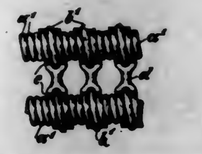
3. In the manufacture of Portland cement, mixing the clinker with gypsum previously treated or incorporated with tannin and grinding the mixture to cement, for the purposes described.

4. In the manufacture of Portland cement, mixing the clinker with gypsum previously treated and incorporated with tannic acid and grinding the mixture to cement.

5. In the manufacture of Portland cement, the process consisting in preparing a clinker, treating the gypsum with a tannin water proofing agent and drying the same, and grinding the clinker with the gypsum.

[Claims 6 and 7 not printed in the Gazette.]

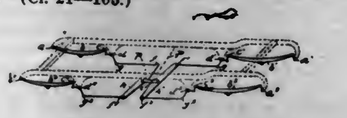
1,214,911. ELASTIC DRIVING-BELT. JOSEF GRANZ, Plauen, Germany. Filed Nov. 24, 1913, Serial No. 802,688. Renewed Jan. 2, 1917. Serial No. 140,304. (Cl. 74—42.)



1. An elastic driving belt consisting of an endless coil of springy wire having convolutions of two different sizes, the convolutions of the larger size forming protuberances at regular intervals along the belt.

2. An elastic driving belt comprising in combination two parallel endless coils of springy wire, each formed of convolutions of two different sizes, convolutions of the larger size alternating at regular intervals with convolutions of the smaller size, and transverse connecting members having at their ends eyes which embrace the convolutions of smaller size.

1,214,912. COMPENSATING DEVICE FOR VEHICLE SUSPENSION. RENÉ GUILLERY, Aubervilliers, France, assignor to Societe Des Etablissements Mallcet & Blin, Aubervilliers, France. Filed Mar. 2, 1915. Serial No. 11,502. (Cl. 21—105.)



1. A spring suspension for vehicles comprising in combination a plurality of suspension springs, a plurality of bell-crank levers each supporting one end of a spring, two swing-bars pivoted to each other and extending transversely of the vehicle, and connections between the ends of each swing-bar and the free ends of each pair of bell-crank levers.

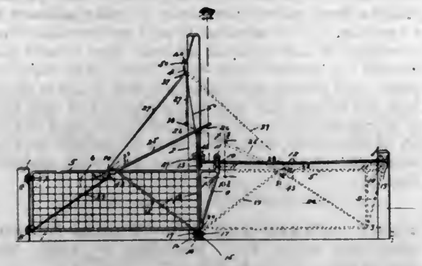
2. A spring suspension for vehicles comprising in combination a plurality of suspension springs, a plurality of bell-crank levers each supporting one end of a spring, an adjustable turn-buckle, two swing-bars pivoted to the ends of said turn-buckle and extending transversely of the vehicle, connections between the ends of each swing-bar and the free ends of each pair of bell-crank levers, and a connection between the swing-bars and the vehicle adapted to prevent undesirable movements.

3. A spring suspension for vehicles comprising in combination a plurality of bell-crank levers each supporting a wheel, two blade springs pivoted to each other and extending transversely of the vehicle, and connections between the ends of each blade-spring and the free ends of each pair of bell-crank levers.

1,214,913. GATE-ACTUATING MECHANISM. ROBERT R. HAGE, Great Falls, Mont. Filed Dec. 16, 1915. Serial No. 66,098. (Cl. 39—73.)

1. The combination with a gate, of a pivoted support for the gate, mounted to move from one side to the other of a dead center, a lock mounted on the gate support above its pivot and adapted to be secured thereto at the limit of its travel in either direction, and means for rendering the lock operative and for moving the gate support from one side to the other of a dead center.

2. The combination with a gate, of a pivoted support for the gate, mounted to move from one side to the other of a dead center, a lock mounted on the gate support above its pivot for bodily traveling movement under the action of gravity and to be secured thereto at the limit of its travel in either direction, and means for rendering the lock operative and for moving the gate support from one side to the other of a dead center.



3. The combination with a gate, of a pivoted support for the gate, mounted to travel from one side to the other of a dead center and having a track rail above its pivot, the angularity of which is changed by the movement of the gate support, a lock mounted on the track rail for bodily traveling movement under the action of gravity and to be secured thereto at the limit of its travel in either direction, and means for rendering the lock operative and for moving the gate support from one side to the other of a dead center.

4. The combination with a gate support, comprising a pair of upwardly diverging arms and pivoted at its lower end portion for movement from one side to the other of a dead center, of a gate, a pair of links suspending the gate from the arms of the gate support, a track rail connecting said arms, a lock lever mounted on the track rail for bodily traveling movement under the action of gravity and to be secured thereto at the limit of its travel in either direction and a cable attached to the lock lever for operating the same and for moving the gate support from one side to the other of a dead center.

5. The combination with a gate support, comprising a pair of upwardly diverging arms and pivoted at its lower end portion for movement from one side to the other of a dead center, of a gate, a pair of links suspending the gate from the arms of the gate support, a track rail connecting said arms, a lock lever mounted on the track rail under the action of gravity and to be secured thereto at the limit of its travel in either direction, a cable attached to the lock lever for operating the same and for moving the gate support from one side to the other of a dead center, and means for tripping the lock lever when released by the cable.

[Claims 6 to 13 not printed in the Gazette.]

1,214,914. RAILROAD-TIE. GEORGE H. HARDMAN, Fall River, Mass. Filed Sept. 28, 1916. Serial No. 122,755. (Cl. 238—1.)

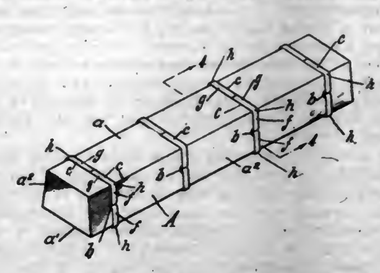
1. In a railroad tie, the combination of a body provided with a hole extending therethrough, a rod seated in the hole, and clamping arms upon both ends of the rod engaging the exterior of the body.

2. In combination, a railroad tie comprising a non metallic body provided with a hole extending transversely therethrough, a rod seated in the hole, and clamping arms upon the rod embracing the exterior of the tie.

3. In a railroad tie, the combination of a body provided with a hole extending therethrough, a rod seated in the hole and flexible clamping arms on both ends of the rod embracing the body.

4. In a railroad tie, the combination of a body provided with a hole extending therethrough, a rod seated in the hole, and diverging arms on the ends of the rod engaging the adjacent exterior faces of the body.

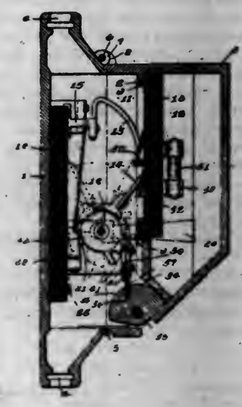
5. In a railroad tie, the combination of a body provided with a longitudinal series of transversely disposed holes, rods in the holes extending from side to side of the body,



and diverging clamping arms integral with the ends of the rods overlapping the exterior of the body.

[Claim 6 not printed in the Gazette.]

1,214,915. SERVICE-BOX AND SWITCH. MORTON HAVENS, Jr., and FRANCIS R. MEGINNISS, Albany, N. Y. Filed Aug. 18, 1916. Serial No. 785,260. (Cl. 175—292.)



1. A service box having two compartments, a fuse located in one of said compartments, the box having a pivotally mounted displaceable part forming a portion of the inclosing wall of said compartment, said part having a hub portion projecting into the other compartment, a switch located in the last-named compartment and including a movable switch member,—means for shifting the same, and a sliding bolt also located in the last-named compartment, movable with the movable switch member and coöperating with the said hub portion for preventing movement of the displaceable part in one position of the movable switch member said hub having a recess for receiving the sliding bolt, substantially as and for the purpose set forth.

2. A service box having two compartments, a fuse located in one of said compartments, said box having a displaceable part forming a portion of the inclosing wall of the last-named compartment, said part having a hub portion provided with a slot, a switch located in the other compartment of the box and including a movable switch member, a sliding bolt for coöperating with the slot in said hub, a support in the last-named compartment for guiding the locking element in its movement, and a tooth member movable with the movable switch member and cooperating with the locking element, substantially as and for the purpose described.

3. A service box comprising a base section having means for connection to a conduit and an open side, an intermediate section hinged at one edge of said open side, and

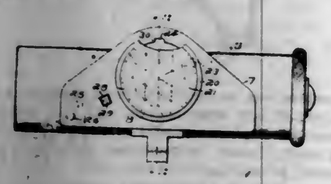
forming with the base member a substantially closed compartment, and an outside section hinged to said intermediate section and forming therewith a second substantially closed compartment, a fuse located in the last-named compartment, a switch located in the first compartment and including a movable switch member, means for preventing movement of the intermediate and outside sections in one position of said movable switch member, and means for preventing movement of the latter in one position of said outside section, substantially as and for the purpose specified.

4. A service box including a base section having means for connection to a conduit and an open side, an intermediate section hinged at one edge to one edge of said open side and forming with the base member a substantially closed compartment, an outside section hinged to said second section for forming therewith a second substantially closed compartment, a fuse located in the last-named compartment, a switch located in the first-named compartment including a movable switch member, and interlocking means also located in the first-named compartment and movable with said movable switch member, substantially as and for the purpose set forth.

5. A service box including a base section having means for connection to a conduit and an open side, an intermediate section arranged in advance of said open side and forming with the base section a substantially closed compartment, an outside movable section forming a substantially closed compartment with the intermediate section and having a part projecting into the first-named compartment, a fuse located in the second compartment, a switch located in the first-named compartment including a movable switch member, and interlocking means located in the first-named compartment and movable with the switch member, said means coöperating with the portion of the outside section extending in the first compartment for preventing movement of the outside section in one position of the movable switch member, substantially as and for the purpose described.

[Claims 6 to 17 not printed in the Gazette.]

1,214,916. LAMP. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed June 25, 1913. Serial No. 775,624. (Cl. 240—111.)



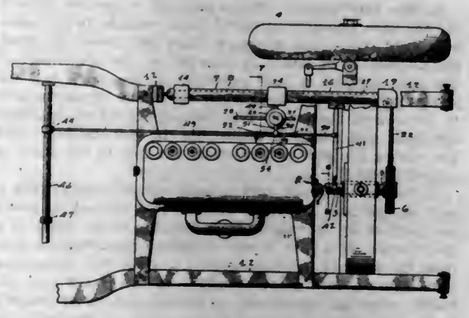
1. In a lamp, the combination of a casing provided with an aperture, a bezel mounted in said aperture and having means normally to prevent said bezel from being withdrawn axially, said casing having provision to permit said bezel to be rotated to a position to permit the same to be detached from said casing, and a yieldingly mounted finger normally interlocking with said bezel to hold the same against rotation, said casing being provided with an aperture, through which said finger is accessible from the exterior of said casing.

2. In a lamp, the combination of a casing provided with an aperture, a bezel mounted in said aperture and having a plurality of lugs engaging an inner face of said casing normally to prevent said bezel from being withdrawn axially, said casing having provision to permit said bezel to be rotated to a certain position and then withdrawn axially, said bezel being provided with a notch, and a locking member within said casing normally located in said notch to lock said bezel against rotation, said casing being provided with an aperture through which said locking member is accessible.

3. In a lamp, the combination of a casing provided with an aperture, a bezel mounted in said aperture and having a plurality of lugs engaging an inner face of said casing normally to prevent said bezel from being withdrawn axially, said casing having provision to permit said bezel to be rotated to a certain position and then withdrawn axially, said bezel being provided with a notch, said casing being provided with an opening, and a locking member within said casing normally engaging said notch to lock said bezel against rotation, said locking member being provided with a projection extending through said opening.

4. In a lamp, the combination of a casing provided with an aperture, a bezel mounted in said aperture and having a plurality of lugs engaging an inner face of said casing normally to prevent said bezel from being withdrawn axially, said casing being provided with a notch through which one of said lugs may be introduced and then turned out of register with said notch, means to limit the rotation of said bezel when the lug is in register with said notch, and means normally to lock said bezel against rotation.

1,214,917. STARTING DEVICE. WILLIAM C. HENDERSON, Paso Robles, Cal. Filed Mar. 10, 1916. Serial No. 84,974. (Cl. 123—179.)

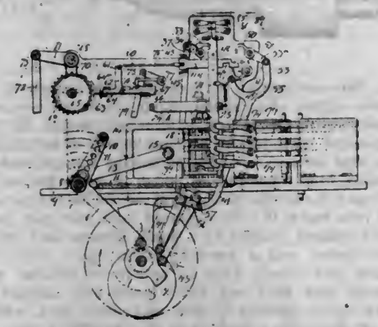


1. A starting device for internal combustion motors comprising a sleeve rotatably and slidably mounted in alinement with and adapted to engage the crank shaft of the motor and normally disconnect therefrom; a pulley secured to the sleeve; a pair of cylinders; a pair of pistons slidably mounted within the cylinders; a cable wound around the pulley and having the ends thereof connected to the pistons; a source of compressed air; and means adapted to simultaneously connect the sleeve with the crank shaft and the source of compressed air with one of the cylinders and thereby spin said crank shaft.

2. A starting device for internal combustion motors comprising a sleeve rotatably and slidably mounted in alinement with and adapted to engage the crank shaft of the motor and normally disconnected therefrom; a pulley secured to the sleeve; a pair of cylinders; a pair of pistons slidably mounted within the cylinders; a cable wound around the pulley and having the ends thereof connected to the pistons; a source of compressed air; means adapted to simultaneously connect the sleeve with the crank shaft and the source of compressed air with one of the cylinders and thereby spin said crank shaft; and to disconnect the sleeve from the shaft and to connect the compressed air to the other cylinder and thereby return the starting device to a starting position.

3. A starting device for internal combustion motors comprising a sleeve rotatably and slidably mounted in alinement with and adapted to engage the crank shaft of the motor and normally disconnected therefrom; a pulley secured to the sleeve; a pair of cylinders; a pair of pistons slidably mounted within the cylinders; a suitable cable wound on the pulley and having the ends thereof connected to the pistons; a source of compressed air; a valve arranged to connect either cylinder with the source of compressed air and the other cylinder with the atmosphere; a lever operatively connected to the sleeve and adapted to connect and disconnect the same with the crank shaft; and means operatively connected to the valve and to the lever and adapted to operate the same whereby one cylinder may be connected to the compressed air and the other to the atmosphere and the sleeve to the crank shaft thereby rotating the sleeve and spinning the crank shaft, and to disconnect the sleeve from the crank shaft and to operate the valve whereby the first cylinder may be connected to the atmosphere and the second cylinder to the compressed air source thereby returning the starting device to a normal or starting position.

1,214,918. JACQUARD. LOUIS HERZOG, Beacon, N. Y., assignor to Glenham Embroidery Company, a Corporation of New York. Filed June 9, 1915. Serial No. 33,010. (Cl. 112—7.)



1. In an embroidering machine jacquard, the combination of tambour frame moving devices, operating devices for operating them, coupling devices for coupling the operating devices and the tambour frame moving devices, jacquard card actuated members for selecting the coupling devices, and means for locking said tambour frame moving devices and adapted to be operated by said coupling devices independently of said jacquard card actuated members to unlock the tambour frame moving devices.

2. In an embroidering machine jacquard the combination of tambour frame moving devices, operating devices for operating them, coupling devices for coupling the operating devices and the tambour frame moving devices, jacquard card actuated members for selecting the coupling devices, and means for locking said tambour frame moving devices and adapted to be actuated by said coupling devices independently of said jacquard card actuated members to unlock the tambour frame moving devices.

3. In an embroidering machine jacquard, the combination of tambour frame moving devices, operating devices therefor, coupling devices for coupling the operating devices and the tambour frame moving devices, jacquard card actuated members for selecting the coupling devices, and a plurality of means for locking said tambour frame moving devices, each of said locking means being actuated by any one of a plurality of the coupling devices to unlock the tambour frame moving devices.

4. In an embroidering machine jacquard the combination of tambour frame moving devices, operating devices for operating them, coupling devices for coupling the operating devices and the tambour frame moving devices, and means for locking said tambour frame moving devices and having a rocking engagement with said coupling devices whereby the latter will actuate the locking devices to unlock the tambour frame moving devices.

5. In an embroidering machine jacquard the combination of tambour frame moving devices, operating devices therefor, coupling devices for coupling the operating devices and the tambour frame moving devices, means for locking said tambour frame moving devices, means for operating to unlock said locking devices to permit the tambour frame moving devices to operate, and means for locking said unlocking devices during the operation of the tambour frame moving devices.

[Claims 6 to 20 not printed in the Gazette.]

1,214,919. PROCESS FOR THE MANUFACTURE OF FUSEL-OIL OR SIMILAR PRODUCTS FROM PETROLEUM. HAROLD HIBBERT, HARRY ESSEX, and BENJAMIN T. BROOKS, Pittsburgh, Pa., assignors to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Apr. 8, 1915. Serial No. 19,876. (Cl. 23—24.)

1. The method of producing a fusel oil product containing a mixture of hexyl alcohol and of pentyl alcohols, which comprises subjecting a petroleum distillate containing pentanes and hexanes to the action of chlorin under conditions to form monochlorids as the chief products of the operation, and subjecting the resulting chlorinated product containing a mixture of pentyl and hexyl monochlorids, at high pressure and moderate temperature to the action of a reagent capable of converting it in part into a mixture of alcohols containing pentyl and hexyl alcohols; substantially as described.

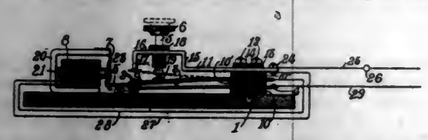
2. The method of producing a fusel oil product containing a mixture of hexyl alcohol and of pentyl alcohols, which comprises subjecting a pentroleum distillate containing pentanes and hexanes to the action of chlorin under conditions to form mono-chlorids as the chief products of the operation, and subjecting the resulting chlorinated product containing a mixture of pentyl and hexyl mono-chlorids, at high pressure and moderate temperature to the action of an acetate capable of converting it in part into a mixture of alcohols containing pentyl and hexyl alcohols; substantially as described.

3. The method of producing a fusel oil product containing a mixture of pentyl and hexyl alcohols, which comprises subjecting a petroleum distillate containing pentanes and hexanes to the action of chlorin under conditions to form mono-chlorids as the chief products of the operation, subjecting the chlorinated product containing a mixture of pentyl and hexyl mono-chlorids, at high pressure and moderate temperature, to the action of an acetate, and thereby producing a mixture of pentyl and hexyl alcohols and of olefins, and subjecting the olefins to the action of dilute sulfuric acid and subsequent hydrolysis to produce a further amount of pentyl and hexyl alcohols; substantially as described.

4. The method of producing a fusel oil product containing a mixture of hexyl alcohol and of pentyl alcohols, which comprises subjecting a petroleum distillate containing pentanes and hexanes to the action of chlorin under conditions to form mono-chlorids as the chief products of the operation, and subjecting the resulting chlorinated product containing a mixture of pentyl and hexyl monochlorids, under a pressure as high as 300 pounds per square inch, and at a temperature within the range of about 170° C. to 250° C., to the action of an acetate, and thereby producing a mixture of pentyl and hexyl alcohols and of olefins, and subjecting the olefins to the action of dilute sulfuric acid and subsequent hydrolysis to produce a further amount of pentyl and hexyl alcohols; substantially as described.

5. The method of producing a fusel oil product containing a mixture of pentyl and hexyl alcohols, which comprises subjecting a petroleum distillate having a boiling point of 25° C. to 75° C., and containing pentanes and hexanes to the action of chlorin under suitable conditions to produce a product made up principally of pentane and hexane mono-chlorids, and subjecting the resulting mixture to the action of an acetate under a pressure as high as 300 pounds per square inch, and at a temperature within the range of about 170° C. to 250° C. and thereby converting the chlorinated mixture in part into a mixture of pentyl and hexyl alcohols, and recovering the mixture of alcohols by fractional distillation; substantially as described.

1,214,920. ELECTRIC SWITCH. NEWMAN H. HOLLAND, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Feb. 16, 1914. Serial No. 818,894. (Cl. 175—284.)



1. In an electric switch, the combination of a pair of contacts spaced apart, a third contact movable to engage the first contacts and bridge the same, resilient means tending to hold the movable contact away from the first named contacts, means for forcing the movable contact into bridging position with respect to the first named contacts, a catch to engage the movable contact and hold the same in said position, and automatic means for releasing the catch to allow the movable contact to move quickly out of said position, substantially as described.

2. In an electric switch, the combination of a pair of contacts, a contact movable into position to engage and bridge the same, resilient means normally holding the movable contact out of bridging position with respect to said pair of contacts, a stem to force the movable contact into bridging position with respect to said pair of contacts, a catch to hold the movable contact in said position, and means actuated upon movement of said stem to release said catch, substantially as described.

3. In an electric switch, the combination of a pair of contacts spaced apart, a contact movable into position to bridge the said contacts, resilient means normally tending to hold the movable contact out of bridging position with respect to said pair of contacts, means for forcing the movable contact into engagement with the fixed contacts, a catch having means to engage the movable contact and hold the same in bridging position with respect to said pair of contacts and having also a cam edge, and means for engaging said cam edge to release the catch from the movable contact, substantially as described.

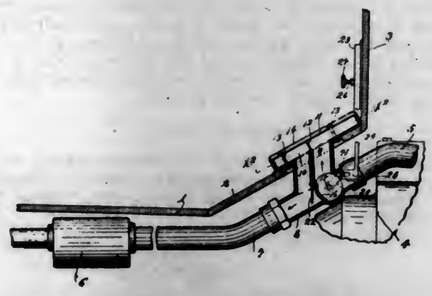
4. In an electric switch, the combination of a contact, a second contact movable to engage the first contact, a stem for forcing the movable contact to engage the first contact, a catch having means for holding the movable contact in engagement with the first contact, said catch being provided with a cam, means carried by the stem and coacting with said cam to release the catch from the movable contact, and resilient means engaging the movable contact to separate the same quickly from the first contact when the movable contact is released by the catch, substantially as described.

5. In an electric switch, the combination of a contact, a second contact movable into engagement with the first contact, a stem for forcing the movable contact into position to engage the first contact, resilient means normally acting to hold the movable contact out of engagement with the first contact, a catch having a projection to act upon the movable contact to hold the same in engagement with said first contact, said catch having a second projection with a cam edge, and means carried by the stem and arranged to coact with said cam edge to release the catch from the movable contact, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

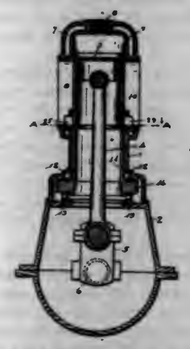
1,214,921. AUTOMOBILE-HEATER. THOMAS C. HOUGH, Minneapolis, Minn. Filed Sept. 8, 1914. Serial No. 860,512. (Cl. 237—21.)

1. The combination with the exhaust conduit from an explosive engine, of a radiator having inlet and outlet ports connecting the same to the exhaust conduit, and a switch valve movable from a position in which it closes said inlet port and opens the direct exhaust conduit, into a position in which it opens said inlet port and closes the direct exhaust conduit at a point between said inlet and outlet ports, and a gravity opened check valve of the flapper type hung in said direct exhaust conduit between said inlet and outlet ports and adapted to be blown by the exhaust into a position to close said outlet port, when the said inlet port is closed by said switch valve.



2. The combination with the exhaust conduit of an explosive engine, of a radiator having inlet and outlet ports connecting the same to said exhaust conduit, an oscillatory cut-off valve located at the junction of said inlet port with said exhaust conduit and having a segmental flange movable from a position in which it closes the said inlet port and opens the direct exhaust conduit, into a position into which it will open said inlet port and close the direct exhaust conduit at a point between said inlet and outlet ports, and a gravity opened check valve of the flapper type loosely hung in said direct exhaust conduit between said inlet and outlet ports and adapted to be blown into a position to close said outlet port, when said cut-off valve is in a position to close said inlet port.

1,214,922. INTERNAL-COMBUSTION ENGINE. WILLIAM S. HOWARD, Belleville, N. J., assignor, by mesne assignments, to Russell M. Everett, Bloomfield, N. J. Filed Dec. 23, 1911. Serial No. 667,435. (Cl. 123—80.)



1. In an internal combustion engine, a piston, a cylinder having in its side wall a port opening extending substantially the length of travel of said piston, a valve having a port adapted to coöperate with said cylinder port, and means for moving said valve so that its port will cooperate with said cylinder port while the piston is moving over it.

2. In an internal combustion engine, a piston, a cylinder having in its side wall a port opening extending substantially the length of travel of said piston, a valve having a port adapted to coöperate with said cylinder port, and means for turning said valve so that its port will cooperate with said cylinder port while the piston is moving over it.

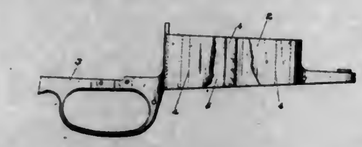
3. In an internal combustion engine, a piston, a cylinder having in its side wall a port opening extending substantially the length of travel of said piston, a valve having a port adapted to coöperate with said cylinder port, and means for continuously rotating said valve so that its port will coöperate with said cylinder port while the piston is moving over it.

4. In an internal combustion engine, a piston, a cylinder having in its side wall a port opening extending substantially the length of travel of said piston, a sleeve valve between said piston and cylinder having a port adapted to coöperate with said cylinder port, and means for moving said sleeve valve so that its port will cooperate with said cylinder port while the piston is moving over it.

5. In an internal combustion engine, a piston, a cylinder having in its side wall a port opening extending substantially the length of travel of said piston, a sleeve valve between said piston and cylinder having a port adapted to coöperate with said cylinder port, and means for turning said sleeve valve so that its port will cooperate with said cylinder port while the piston is moving over it.

[Claims 6 to 73 not printed in the Gazette.]

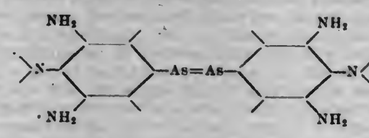
1,214,923. COMBINED BOX-MAGAZINE AND FINGER GUARD FOR BOLT-ACTION FIREARMS. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Aug. 11, 1916. Serial No. 114,379. (Cl. 42—18.)



A combined box-magazine and finger-guard for bolt-action firearms, the said magazine and guard being made in one piece, and the inner faces of the side walls of the magazine being formed with a plurality of inwardly projecting integral cartridge-positioning abutments for direct engagement by the cartridges, the said abutments of one face being located opposite the abutments of the other face and being initially made of full length for cartridges of the smallest size and adapted to be progressively cut away for cartridges of larger size on an ascending scale up to the largest.

1,214,924. COMPLEX ARSENO COMPOUNDS AND PROCESS OF MAKING SAME. PAUL KARRER, Frankfort-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Dec. 10, 1915. Serial No. 66,097. (Cl. 23—24.)

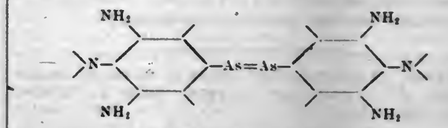
1. The process of preparing complex arseno-compounds, which consists in getting together in solution compounds containing the atomic complex:



as hexaminoarsenobenzene and derivatives thereof, with 3.3¹-diamino-4.4¹-dioxyarsenobenzene.

2. The process of preparing complex arseno-compounds, which consists in dissolving in water 3.3¹-4.4¹.5.5¹-hexaminoarsenobenzene together with 3.3¹-diamino-4.4¹-dioxyarsenobenzene, both in the form of their hydrochlorids, and gently heating this solution.

3. As new products, the complex arseno compounds, wherein a body containing the atomic complex:



is combined with 3.3¹-diamino-4.4¹-dioxyarsenobenzene; said compounds being soluble in caustic soda lye and sodium bicarbonate, in the form of their hydrochlorids also soluble in water, insoluble in ether.

4. As a new product, a complex arseno compound, wherein hexaminoarsenobenzene is combined with 3.3¹-diamino-4.4¹-dioxyarsenobenzene; being soluble in caustic soda lye and sodium bicarbonate, in the form of its hydrochlorid also soluble in water, almost insoluble in alcohol, insoluble in ether.

1,214,925. SHEET-METAL CONTAINER. HENRY A. KEINER, New York, N. Y. Filed June 26, 1915. Serial No. 36,471. (Cl. 220—1.)



1. The combination, with a sheet-metal container comprising a body or side portion with head or end portions joined thereto, of an annular hoop or band forced on the body portion of said container and being curved inwardly to embrace the joint between body and head portions throughout the entire length thereof.

2. The combination, with a sheet-metal container comprising a body or side portion with head or end portions joined thereto, of an annular hoop or band forced on the body portion of said container and being curved inwardly to embrace the joint between body and head portions throughout the entire length thereof, said hoop or band being of solid metal and having an exterior face of substantially convex configuration.

3. The combination, with a sheet-metal container comprising a body or side portion with head or end portions joined thereto, of an annular hoop or band of substantially tapering cross-sectional configuration having its base forced on and snugly fitting the body portion of said container, the narrower edge portion of said band being bent over inwardly to firmly embrace the joint between body and head portions throughout the entire length thereof.

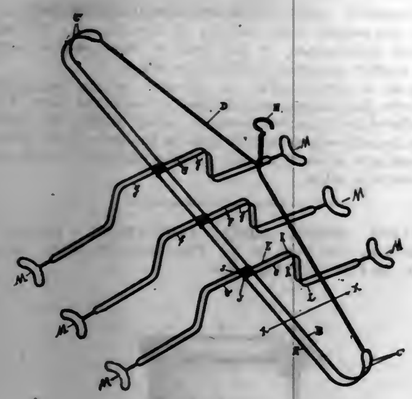
4. The combination, with a sheet-metal container comprising a body or side portion with head or end portions double-seamed thereto, said seam forming an exteriorly projecting rib or bead, of an annular hoop or band forced on the body portion of said container below said seam and being curved to snugly embrace said seam throughout the entire length thereof.

5. The combination, with a sheet-metal container comprising a body or side portion with head or end portions double-seamed thereto, said seam forming an exteriorly projecting rib or bead, of an annular hoop or band forced on the body portion of said container below said seam and being curved to snugly embrace said seam through-

out the entire length thereof, said hoop or band being of solid metal and having an exterior face of substantially convex configuration.

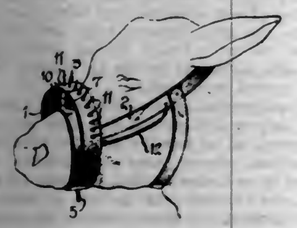
[Claims 6 to 8 not printed in the Gazette.]

1,214,926. COAT-HANGER. GRACE A. KIMBALL, Adamsville, R. I. Filed July 15, 1915. Serial No. 39,998. (Cl. 211—13.)



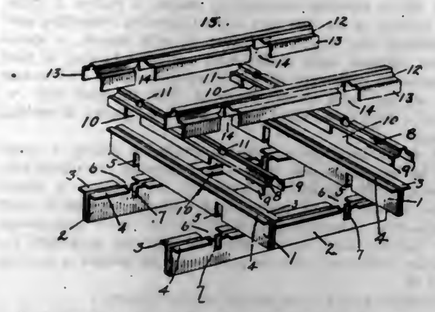
A nest of coat hangers, comprising two wires arranged throughout a portion of their length parallel to each other, forming a slideway for the hangers, and then twisted together; with a hook secured at the ends of the twisted portions, adjusted about midway between the ends of the parallel portions and spaced therefrom; and a series of adjustable hangers adapted to be folded together, each hanger comprising two sections, each section threaded upon one of said wires and resting, when in operative position, upon the other of said wires, and each section provided at its end with a curved portion adapted to fit in the shoulder of a garment.

1,214,927. WEANING DEVICE. FRANK E. KNITTEL, Moreland, Okla. Filed July 15, 1916. Serial No. 109,563. (Cl. 119—130.)



A weaning device of the character described, comprising a nose band provided with means whereby it may be supported upon the nose of a colt or calf, a ring encircling said band and provided with spurs, a connection between said ring and band permitting lateral pivotal movement of one relative to the other as well as a bodily movement of one in respect to the other, a prong carried by one of these parts and normally concealed within the other and arranged to be projected within the nose band upon the forward movement of the latter relative to the ring, spring means normally tending to hold the nose band in its rearward position with the prong sheathed, and means for limiting the relative lateral pivotal movement between said ring and band.

1,214,928. WINDOW SASH OR FRAME. MAURICE LACHMAN, New York, N. Y., assignor to Universal Electric Welding Company, Long Island City, N. Y., a Corporation of New York. Filed Nov. 15, 1911. Serial No. 660,372. (Cl. 189—77.)

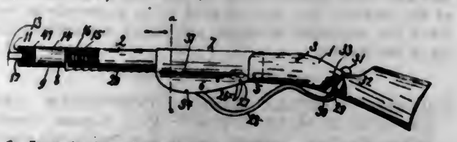


1. A metal sash or frame comprising T-shaped intersecting foundation members and continuous molding members intersecting each other and superimposed on and secured to said foundation members, one of said molding members provided with an opening in its upper portion through which a portion of the other molding member passes at the intersecting point.

2. A metal sash or frame comprising T-shaped intersecting foundation members, continuous molding members superimposed on said foundation members and secured to the flanges thereof, one of said molding members being provided with a slot in its upper surface and a bead on the other molding member located in said slot at the point of intersection whereby the molding members are continuous and all parts lie in the same plane.

3. In a fireproof window sash, crossed munnions, consisting of inner members secured together and outer members secured to the inner members, one of the outer members having an opening at the crossing point and the other outer member extending through said opening.

1,214,929. CATTLE-KILLING DEVICE. ANTON LARSON, Denham, Minn., assignor of one-half to Fred L. Olson, Denham, Minn. Filed Apr. 27, 1916. Serial No. 93,873. (Cl. 17—30.)



1. In a device of the kind described, a spring barrel having a longitudinal slit and its front end closed by an internal collar, a plunger arranged to slide in the barrel and having a forward rod arranged to project through and beyond the collar, a compressible coil spring rearward of the plunger, means to prevent escape of said spring through the rear end of the barrel, a ratchet rack slidable in the slit and having its front end connected with the plunger, a lever having a long operating arm and a short arm with a pivoted pawl on it for engaging and moving the rack bar, a spring-pressed lever having a short arm with a tooth arranged to engage the rack and hold it while the pawl takes a new hold, said lever having also a long arm, a trigger arranged to act on said long arm and thereby release the rack, and means for automatically holding the pawl disengaged from the rack when the operating lever is folded into idle position.

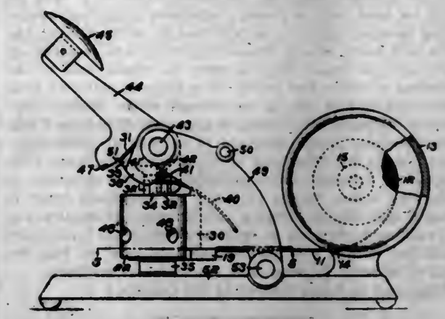
2. In a device of the kind described, a spring barrel having a longitudinal slit and its front end closed by an internal collar, a plunger arranged to slide in the barrel and having a forward rod arranged to project through and beyond the collar, a compressible coil spring rearward of the plunger, means to prevent escape of said spring through the rear end of the barrel, a ratchet rack slidable in the slit and having its front end connected with the plunger, a lever having a long operating arm and a short arm with a pivoted pawl on it for engaging and moving the rack bar, a spring-pressed lever having a short arm with a tooth arranged to engage the rack and hold it while the pawl takes a new hold, said lever having also a long arm, a trigger arranged to act on said long arm and thereby release the rack, and means for automatically holding the pawl disengaged from the rack when the operating lever is folded into idle position, and a spring-pressed finger operated catch automatically locking the operating lever in idle position.

3. In a device of the kind described, a spring barrel having a longitudinal slit and its front end closed by an internal collar, a plunger arranged to slide in the barrel and having a forward rod arranged to project through and beyond the collar, a compressible coil spring rearward of the plunger, means to prevent escape of said spring through the rear end of the barrel, a ratchet rack slidable in the slit and having its front end connected with the plunger, a lever having a long operating arm and a short arm with a pivoted pawl on it for engaging and moving the rack bar, a spring-pressed lever having a short arm with a tooth arranged to engage the rack and hold it while the pawl takes a new hold, said lever having also a long arm, a trigger arranged to act on said long arm and thereby release the rack, and means for automatically holding the pawl disengaged from the rack when the operating lever is folded into idle position, and a comparatively light coil spring arranged between the plunger and the internal front collar in the barrel.

4. In a device of the kind described, a spring barrel having a longitudinal slit and its front end closed by an internal collar, a plunger arranged to slide in the barrel and having a forward rod arranged to project through and beyond the collar, a compressible coil spring rearward of the plunger, means to prevent escape of said spring through the rear end of the barrel, a ratchet rack slidable in the slit and having its front end connected with the plunger, a lever having a long operating arm and a short arm with a pivoted pawl on it for engaging and moving the rack bar, a spring-pressed lever having a short arm with a tooth arranged to engage the rack and hold it while the pawl takes a new hold, said lever having also a long arm, a trigger arranged to act on said long arm and thereby release the rack, and means for automatically holding the pawl disengaged from the rack when the operating lever is folded into idle position, a wooden stock secured upon the rear portion of said spring barrel, a downwardly open-sided sleeve secured about the rear portion of the barrel and having downwardly projecting parallel cheeks between which said levers and trigger are mounted.

1,214,930. MACHINE FOR MAKING AND APPLYING STAPLES. CHARLES LEA, Boston, Mass., assignor to The Lea-Irving Manufacturing Co., Boston, Mass., a Corporation of Massachusetts. Filed Mar. 23, 1915. Serial No. 16,457. (Cl. 1—2.)

1. In a machine for forming and driving sharp-pronged staples from a continuous flat metallic strip having substantially straight parallel longitudinal edges, the combination of means to guide and feed the strip longitudinally, a straight-edged cutting die having its cutting edge positioned in a plane extending obliquely across the path in which the strip is fed; combined cutting and bending means comprising a pair of outer members having cutting edges for slitting opposite edges of said strip inwardly along the oblique line of the cutting edge of said die, and having opposed bending edges which are substantially parallel with each other and substantially at right angles to said plane and oblique to said path whereby the planes of said prongs will be substantially at right angles to said oblique line and whereby said prongs are formed with oppositely inclined sharp points; a central cutting and driving member arranged between said outer members and having a cutting edge in the oblique plane of the other cutting edges; an anvil arranged to coöperate with said central member; means for actuating said outer members to cause the latter by an initial movement to slit the edges of said strip obliquely and by further movement to bend the partially severed portions to form prongs; and means for actuating said central member to cause the latter by an initial movement to sever said strip in said oblique plane and by continued movement to coöperate with said anvil to drive and clench said prongs.



2. In a machine for forming and driving sharp-pronged staples from a continuous flat metallic strip having substantially straight parallel longitudinal edges, the combination of means to guide and feed the strip longitudinally, a straight-edged cutting die having its cutting edge positioned in a plane extending obliquely across the path in which the strip is fed; combined cutting and bending means comprising a pair of outer members having cutting edges for slitting opposite edges of said strip inwardly along the oblique line of the cutting edge of said die; and having opposed bending edges which are substantially parallel with each other and substantially at right angles to said plane and oblique to said path whereby the planes of said prongs will be substantially at right angles to said oblique line and whereby said prongs are formed with oppositely inclined sharp points; the cutting edge of one of said members forming an obtuse angle with the adjacent edge of said strip and the cutting edge of the other member forming an acute angle with the other edge of said strip, the length of the cutting edge of the first member when measured from the adjacent edge of the strip to the bending edge of such member, being greater than the length of the cutting edge of the second member measured from the other edge of said strip to the bending edge of such member; a central cutting and driving member arranged between said outer members and having a cutting edge in the oblique plane of the other cutting edges, an anvil arranged to coöperate with said central member; means for actuating said outer members to cause the latter by an initial movement to slit the edges of said strip obliquely and by further movement to bend the partially severed portions to form prongs, and means for actuating said central member to cause the latter by an initial movement to sever said strip in said oblique plane and by continued movement to coöperate with said anvil to drive and clench said prongs.

3. In a machine for completely forming and driving a staple during a single cycle of operation, the combination of an actuator having a two-stroke cycle, mechanism operated by said actuator during its working stroke to form staple legs from a strip of material, sever the strip and drive the completed staple all during one stroke of said actuator, and strip feeding means operated by said actuator and having a two-stroke cycle comprising an idle backward stroke during the bending of the staple legs and prior to the severing of the strip and a forward working stroke during the idle stroke of said actuator, said mechanism including an abutment for the staple legs to prevent retrograde movement of said strip during such idle backward stroke.

4. In a machine for forming and driving staples from a continuous flat metallic strip of substantially uniform width, the combination of strip feeding mechanism comprising reciprocating strip-engaging means for gripping by frictional engagement and imparting a longitudinal feeding movement to a strip of sheet material, means for severing said strip transversely and forming a staple, and means for varying the amplitude of reciprocation of said strip-engaging means, whereby the width of the staple may be varied.

5. In a staple machine, the combination of a base, an anvil on said base, a frame comprising a pair of spaced frame members pivoted on said base to swing toward and from said anvil, means connecting said frame members to each other to cause them to move in unison, said means including a cutter and guide for a strip of material from which the staples are to be formed, staple forming and driving mechanism including a plurality of plungers supported by said frame members to partake of their movement toward and from said anvil, an actuating hand lever interposed between and supported on said members to swing the latter, means operated by said hand lever to actuate said staple forming and driving mechanism and to cause said plungers to coöperate with said cutter and guide, and means also operated by said lever to feed the strip of material between said spaced frame members.

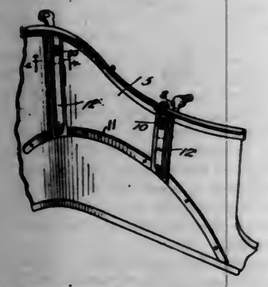
[Claims 6 to 8 not printed in the Gazette.]

1,214,931. PROCESS FOR OBTAINING THREADS OF ARTIFICIAL SILK, FILMS, AND OTHER OBJECTS. LÉON LEDUC, Couture St. Germain, and HENRI JACQUEMIN, Maransart, Belgium. Filed Mar. 14, 1913. Serial No. 754,359. (Cl. 18—54.)

1. A process of forming filaments comprising subjecting viscose to a precipitation bath composed of a solution of sodium chlorid with the addition of hydrochloric acid, substantially as described.

2. A process of forming filaments comprising subjecting viscose to a precipitation bath composed of a solution of sodium chlorid and hydrochloric acid in the proportion of 9 liters of a concentrated solution of sodium chlorid to 1 liter of concentrated commercial hydrochloric acid containing about 4 per cent. hydrochloric acid.

1,214,932. VEHICLE-TOP-IRON SUPPORT. JOSEPH LEDWINKA, Philadelphia, Pa., assignor to Edward G. Budd Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 21, 1916. Serial No. 85,599. (Cl. 21—7.)



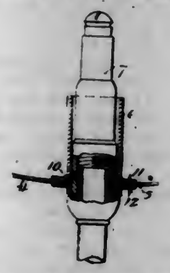
1. In a top iron support for vehicles, and in combination with the vehicle body shell, a channel member applied to the inner surface of the body shell, a block housed within the channel of said member, said shell, block and channel member having registering holes therethrough, and a supporting iron having its end inserted through said holes and a nut applied thereto to clamp the parts together.

2. In a top iron support for vehicles, and in combination with the vehicle body shell, a channel member applied to the inner surface of the body shell, a block housed within the channel of said member, a shouldered supporting iron having its end extended through said shell block and channel member, and nut to clamp said parts together

3. In a top iron support for vehicles, and in combination with the vehicle body shell, having a strap iron applied to the inner surface of said shell, a vertically extending channel also applied to the inner surface of the shell and secured thereto and to the strap iron, a supporting iron having a shouldered end extended through the shell from the outside and through said vertically extending channel, and a nut applied to said iron end to clamp the parts together.

4. In a top iron support for vehicles, and in combination with the vehicle body shell, a strap applied to the inner surface of said shell, a supporting member also applied to the inner surface of said shell and secured to said strap, a supporting iron having a shouldered end extended through the shell from the outside, and through said supporting member, and a nut applied to said iron end to clamp the parts together.

1,214,933. GLOBE OR SHADE HOLDER FOR LIGHTING-FIXTURES. LOUIS LEICHT, Yonkers, N. Y., assignor of one-half to Henry Classen, New York, N. Y. Filed Mar. 16, 1916. Serial No. 84,546. (Cl. 240—116.)



A holder of the class described comprising an annular ring or support for receiving a globe or shade, a central portion and radial arms for supporting said annular ring from said central portion, a tube and detachable means screw threaded on said tube for rigidly clamping said tube to said central portion, said tube being slidable over a gas nipple and adapted to form an extended vertical bearing for said holder.

1,214,934. ELECTROLYTIC GAS-GENERATOR. ISAAC H. LEVIN, New York, N. Y. Filed Dec. 20, 1915. Serial No. 67,834. (Cl. 204—5.)



1. In an electrolytic gas generator, a closed receptacle or casing formed from two similar dished casing members the free edges of which lie adjacent one another; two electrodes located within the casing; filling means for the casing; and means for conducting the gases produced from the interior of the casing.

2. In an electrolytic gas generator, a closed receptacle or casing made up of a plurality of parts or sections secured together; a partition located within the upper portion of the casing and between two adjacent sections thereof, whereby the interior of the casing is divided to thereby provide two gas chambers; two electrodes located within the casing; and means for conducting the gases produced from said gas chambers.

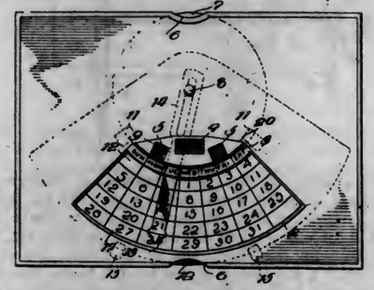
3. In an electrolytic gas generator, a closed receptacle or casing; a partition located within the upper portion of the casing whereby the interior thereof is divided to thereby provide two gas chambers; a diaphragm extending downward from said partition; two electrodes located within the casing; and means for conducting the gases produced from said gas chambers.

4. In an electrolytic gas generator, a closed receptacle or casing formed from two similar dished casing members the free edges of which lie adjacent one another; a partition located within the upper portion of the casing and which partition extends between the edges of said casing members, whereby the upper portion of the interior of the casing is divided to thereby provide two gas chambers; two electrodes located within the casing; filling means for the casing; and means for conducting the gases produced from said gas chambers.

5. In an electrolytic gas generator, a closed receptacle or casing formed from two dished casing members the free edges of which lie adjacent one another; a partition located within the upper portion of the casing and which partition extends between the edges of said casing members, whereby the upper portion of the interior of the casing is divided to thereby provide two gas chambers; two electrodes located one within each of the dished casing members aforesaid; filling means for the casing; and means for conducting the gases produced from the gas chambers.

[Claims 6 to 28 not printed in the Gazette.]

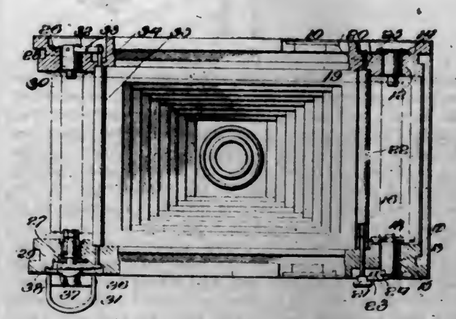
1,214,935. CALENDAR. CARL E. LUNDBERG, Spokane, Wash. Filed Dec. 31, 1915. Serial No. 69,629. (Cl. 40—115.)



1. A calendar comprising a face plate having a large display opening in its lower portion and provided above said opening with other smaller openings and having designations for the days of the week displayed in chronological order above the first-named opening and below the said smaller openings, a dial mounted upon the back of the face plate and having the names of the months and the number of days in the several months designated thereon in position to be displayed through some of the upper display openings in the face plate and provided with a plurality of slots each adapted at times to register with an upper display opening in the face plate, and a card mounted on the back of the face plate and having designated thereon a plurality of years in position to be displayed through one of the upper display openings in the face plate and the slot in the dial registering with said display opening and having the days of the month designated chronologically below the designations for the years and arranged to be displayed through the larger display openings in the face plate.

2. A calendar comprising a face plate having an arcuate display opening in its lower portion and having designations for the days of the week along the upper edge of said opening and further provided above said designations with a plurality of smaller display openings, one of said display openings being disposed above the others and all located on radii of said arcuate opening, a dial pivoted on the back of the face plate and having displayed thereon the names of months in position to be read through the last-mentioned display opening and the number of days in a month t obe read through one of the said lower display openings above the days of the week, the dial being provided with a plurality of slots each adapted at times to register with the other of said display openings, and a card mounted upon the back of the face plate concentric with the said dial and having displayed thereon the days of the month arranged in arcuate lines and radial columns to be displayed within the arcuate display opening of the face plate, the said card having numbers of a plurality of years designated thereon above the days of the month in position to be displayed through the registering slot in the dial and display opening in the face plate.

1,214,936. FILM-SPOOL-HOLDING MECHANISM FOR PHOTOGRAPHIC APPARATUS. JOHN A. MAKER, Duluth, Minn. Filed Oct. 27, 1915. Serial No. 58,196. (Cl. 242—71.)



1. In photographic apparatus, coacting centering devices, and means rigidly connected with one of said devices and having pivotal connection with the other for simultaneously actuating the said devices to release a film spool operatively supported thereby.

2. In photographic apparatus, coacting centering devices, and means rigidly connected with one of said devices and having pivotal connection with the other for shifting the said devices in opposite directions to release a film spool operatively supported thereby.

3. In photographic apparatus, coacting centering devices, a lever associated with one of said devices, and rigid connecting means between the said lever and the other of said devices for shifting the said devices away from each other out of engagement with a film spool operatively supported thereby.

4. In photographic apparatus, coacting centering devices, means operatively connected with the said devices with the said means fixed with respect to one of said devices and movable with respect to the other for shifting the said devices to inactive position to release a film spool operatively supported thereby, and means engaging said first mentioned device and normally acting to urge the said devices to active position.

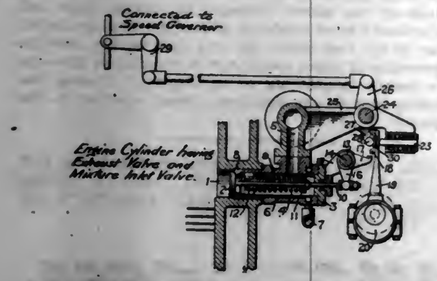
5. In photographic apparatus having side members, coacting centering devices shiftable upon the said side members, and a push rod shiftable through the said members for moving the said centering devices in opposite directions out of engagement with a film spool operatively supported thereby.

[Claims 6 to 9 not printed in the Gazette.]

1,214,937. INTERNAL-COMBUSTION ENGINE. HOLBERRY MENSFORTH, Manchester, England, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 20, 1910. Serial No. 598,449. (Cl. 123—1.)

1. In combination with the cylinder of an internal combustion engine provided with an exhaust valve and a gas and air mixture inlet valve, a liquid fuel supplemental supply, a supply of air under pressure, a valve common to said supply of air under pressure and said liquid fuel supply and adapted to control the admission of the same to said engine cylinder, a speed governor for said engine and a tripping mechanism operating synchronously with said

engine under the control of said governor for opening said valve.



2. In combination with the cylinder of an internal combustion engine having a fuel admission port, an exhaust port, and an auxiliary mixture supply port, an auxiliary fuel supply, and an auxiliary air supply communicating with said auxiliary port, an auxiliary valve for controlling the delivery of fuel and air from said auxiliary supplies, and governor controlled means for opening said auxiliary valve at a determined point of the engine cycle and for timing the duration of the open period of the valve in response to variations in the load demand.

3. In combination in an internal combustion engine having a cylinder provided with a main admission port, an exhaust port and an auxiliary fuel supply port, an auxiliary fuel supply and an auxiliary air supply communicating with said auxiliary fuel supply port, an auxiliary valve for controlling the delivery of fuel and air through said auxiliary port, and means controlled by the engine governor for opening said valve at an invariable point in the engine cycle, and for timing the period of opening in response to variations in the load demand on the engine.

4. In combination in an internal combustion engine having a cylinder provided with a mixture supply port, an exhaust port and an auxiliary fuel admission port, a valve for controlling the delivery of liquid fuel through said auxiliary port and governor controlled variable cut-off trip mechanisms for opening said valve and for timing the open period of said valve in response to variations in the load demand on the engine.

5. In combination with an internal combustion engine having a cylinder provided with a mixture admission port, an exhaust port and an auxiliary fuel supply port, an auxiliary liquid fuel supply and an auxiliary air supply communicating with said auxiliary port, an auxiliary valve for controlling the delivery of air and liquid fuel through said auxiliary port and a governor controlled trip mechanism for opening said valve at an invariable point in the engine cycle and for timing the duration of the open period of said valve in response to variations in the load demand.

1,214,938. POISON-BOTTLE GUARD. HUGH METCALFE, Almonte, Ontario, Canada. Filed June 3, 1916. Serial No. 101,652. (Cl. 215—113.)

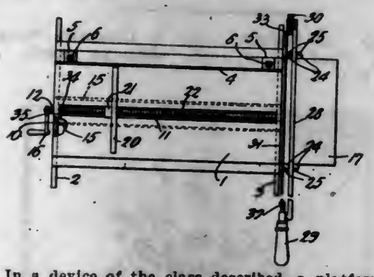


1. A poison indicator for bottles, including a flexible strip adapted to be wrapped around the neck of a bottle and having sharp prongs projecting outwardly therefrom, said strip being formed with a continuous longitudinally extending channel, and a retaining wire wrapped around the bottle neck and received within the channel to retain the strip in position upon the bottle neck.

2. A poison indicator for bottles, including a flexible strip adapted to be wrapped around the neck of a bottle and having sharp prongs projecting outwardly therefrom, said strip being formed with a continuous longitudinally extending channel having a flexible flange at one side thereof, and a retaining wire wrapped around the bottle neck and received within the channel to retain the strip in position upon the bottle neck, the flexible flange being adapted to be bent over the retaining wire.

3. A poison indicator for bottles, including a flexible strip adapted to be wrapped around the neck of a bottle and having sharp prongs projecting outwardly therefrom, said strip being formed with outstanding flanges at the edges thereof, and also with outstanding longitudinally extending crimps coöperating with the respective edge flanges to provide longitudinal channels, and retaining wires wrapped around the bottle neck and received within the said channels to retain the strip in position upon the bottle neck, the edge flanges being adapted to be bent over the respective retaining wires.

1,214,939. MEAT-SLICER. CHARLES R. MILLER and TEXAL ARMOY KEY, Whitesboro, Tex. Filed June 1, 1915. Serial No. 31,567. (Cl. 17—24.)



1. In a device of the class described, a platform; opposed pairs of uprights upstanding above the platform; a cutter comprising a rigid frame having laterally offset ends, a flexible blade, and means for connecting the blade terminally with the offset ends of the frame, one of said means being a tightening device for the blade; the frame being received between the uprights of the pairs to guide the cutter independently of the blade and to prevent a flexing of the blade.

2. In a meat cutter, a platform provided with depending feet; a lead screw journaled in the feet and provided with a shoulder engaging one foot; a guide abutting against said foot and received in the other foot; a table secured to the last specified foot and constituting means for maintaining the lead screw and the guide assembled with the feet; a cutter operating adjacent the table; and a feed member into which the lead screw is threaded, the feed member being mounted to reciprocate on the guide.

1,214,940. COLORING OR DYEING PHOTOGRAPHIC IMAGES. HOYT MILLER, New York, N. Y., assignor to Brewster Film Corporation, Newark, N. J., a Corporation of New York. Filed Feb. 26, 1915. Serial No. 10,831. (Cl. 95—88.)

1. The herein described method, comprising converting the silver of a photographic image into a transparent dye-absorptive substance, and treating the same with a dye of the desired color.

2. The herein described method, comprising converting the silver of a photographic image into a transparent adsorption compound of silver, and treating the same with a dye of the desired color.

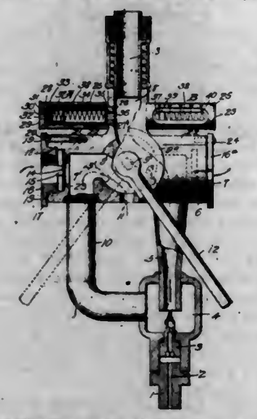
3. The herein described method, comprising treating the silver of a photographic image with a halogen and a halogen salt, and treating the same with a dye of the desired color.

4. The herein described method, comprising treating the silver of a photographic image with a halogen and an iodid, and treating the same with a dye of the desired color.

5. The herein described method, comprising converting the silver of a photographic image into a hydrosol or hydrogel of a halogen compound of silver, and treating the same with a dye of the desired color.

[Claims 6 to 19 not printed in the Gazette.]

1,214,941. RESUSCITATING DEVICE. FRANK FAIRCHILD MORRIS, Pittsburgh, and FREDERICK MELCHIOR LUCHS, Wilkinsburg, Pa., assignors to the Firm of Drägerwerk, Heinr. and Bernh. Dräger, Lübeck, Germany. Filed Dec. 24, 1915. Serial No. 68,499. (Cl. 128—13.)



1. In a resuscitating device, the combination with a casing having two chambers therein and a port between them, a conduit connection, a valve controlling the connection of said conduit connection with one chamber and the simultaneous connection of the port with the other chamber, one of said chambers having an inlet pipe and the other having an outlet pipe, and an injector arranged between the two pipes to discharge into one of them and to thereby entrain air or gas from the other pipe; of means controlling the connection of each chamber with the atmosphere.

2. A resuscitating device having a breathing conduit for attachment to a breathing mask, means to produce suction and pressure in said conduit, and a controllable valve between said means and conduit, in combination with a pressure indicator and a suction indicator on said conduit, said indicators being in permanent operative relation to the conduit and arranged to indicate pressure and suction in said conduit under all conditions of operation.

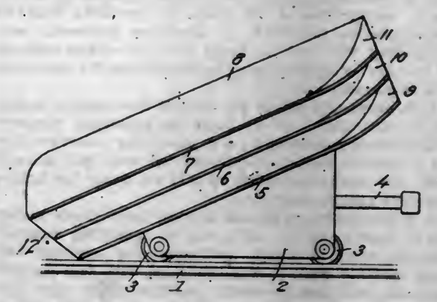
3. The combination with a breathing tube and manually operated means to direct a stream of gas into or from said tube; of means to indicate the suction and pressure produced throughout the whole duration of the suction and pressure periods, and means to control the energy of said stream of gas during the suction and pressure periods and thereby vary the suction and pressure produced by said stream in said conduit.

4. The combination with controllable means for producing alternately suction and pressure in the breathing conduit of a resuscitating device; of separate indicators respectively indicating the suction and pressure produced in said device, and separately operating valves respectively admitting air to said device during the suction period and venting pressure gas to the atmosphere during the compression period.

5. In a resuscitating device, a substantially cylindrical casing having a port between its ends, a pipe connection between its ends, a valve dividing the casing into two chambers, a suction pipe connected to one chamber and a forcing pipe connected to the other chamber, a plate closing each end of the casing, a tubular screw in each casing end connected to said plate, whereby said plates may vent said chambers to the atmosphere.

[Claims 6 to 9 not printed in the Gazette.]

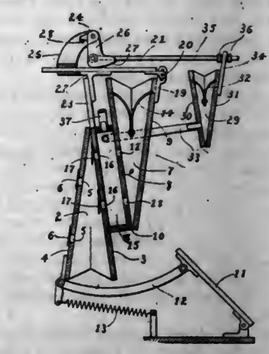
1,214,942. SNOW-PLOW. JOHN D. MORRIS, Waynesboro, Va. Filed Sept. 11, 1915. Serial No. 50,209. (Cl. 104—51.)



1. A snow plow, including a frame mounted on wheels, a plurality of superposed parallel spaced blades carried in an inclined position on said frame, the front extremities of each said blades being shorter than the adjacent to allow the uppermost thereof to remove a layer of snow in advance of the intermediate and lowermost blades, a vertically disposed partition arranged intermediate the blades and extending throughout the length thereof, and the rear extremities of said blades being curved upwardly toward their respective centers into engagement with a portion of the partition to form an abutment for the snow and to deflect the same outwardly on both sides of the plow.

2. A snow plow, including a wheeled frame, a plurality of superposed parallel spaced blades carried in inclined position on said frame, a vertically disposed partition arranged intermediate the blades and extending longitudinally throughout the length thereof, and the rear extremities of said blades being curved upwardly toward their respective centers into engagement with a portion of said partition to form an abutment for the snow for causing the same to be deflected outwardly on both sides of the plow.

1,214,943. ACCENTING DEVICE FOR MECHANICAL MUSICAL INSTRUMENTS. JAMES O'CONNOR, New York, N. Y. Filed Nov. 6, 1913. Serial No. 799,473. (Cl. 84—168.)



1. A pneumatic player for musical instruments including in combination an air pump, an equalizing reservoir communicating therewith, an actuating pneumatic communicating with said air pump and governed thereby, and means actuated by said actuating pneumatic for restraining the operation of said equalizing reservoir.

2. A pneumatic player for musical instruments including in combination an air pump, an equalizing reservoir communicating therewith, said equalizing reservoir having a movable wall, an actuating pneumatic communicat-

ing with said air pump and governed thereby, and means actuated by said actuating pneumatic for restraining the movement of said movable wall.

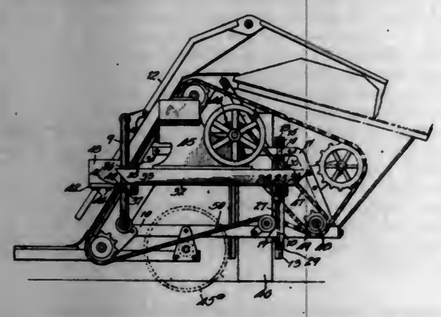
3. A pneumatic player for musical instruments including in combination an air pump, an equalizing reservoir communicating therewith, an actuating pneumatic communicating with said air pump, and cam means actuated by said actuating pneumatic for restraining the movement of said movable wall.

4. A pneumatic player for musical instruments including in combination an air pump, an equalizing reservoir communicating therewith, said equalizing reservoir having a movable wall, a slide connected with said movable wall, and means controlled by said air pump for locking said slide against movement.

5. A pneumatic player for musical instruments including in combination an air pump, an equalizing reservoir communicating therewith, said equalizing reservoir having a movable wall, a slide connected with said movable wall, an actuating pneumatic communicating with said air pump, and means actuated by said actuating pneumatic for locking said slide against movement.

[Claims 6 to 12 not printed in the Gazette.]

1,214,944. SUPPORT FOR GRAIN-BINDER ENGINES. HARVEY H. NELSON, Roselawn, Ind. Filed Mar. 25, 1916. Serial No. 86,689. (Cl. 248—30.)



1. A support for binder engines comprising in combination an upright bar, one or more clamps adapted for removably securing said bar at its ends directly to and against the top and bottom bars and the arch bar of a binder frame, supporting bars respectively projecting from said upright bar and clamp and means for vertically adjusting said upright bar and clamp.

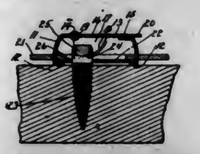
2. A support for binder engines comprising in combination an upright bar, a clamp, means for securing said bar and clamp respectively to the top and bottom bars, and the arch bar of a binder frame, supporting bars respectively projecting from said upright bar and clamp, and means for vertically adjusting the supporting bars.

3. A support for binder engines comprising in combination an upright bar, a clamp, means for securing said bar and clamp respectively to the top and bottom bars and the curved arch bar of a binder frame, supporting bars respectively projecting from said upright bars and clamp, and means for vertically adjusting said upright bar, clamp and supporting bars.

4. A support for binder engines comprising in combination an upright bar, means for detachably connecting said bar toward its opposite ends to the top and bottom bars of a binder frame, a horizontally projecting supporting bar, a brace connecting the outer end of the supporting bar with the lower end of the upright bar, and means for adjusting said supporting bar and brace.

5. A support for binder engines comprising in combination of a two part clamp adapted to embrace the arch bar of a binder, means for detachably securing said clamp thereto, a supporting bar detachably secured to said clamp, an upright bar, means for detachably supporting said bar from the top and bottom bars of the binder frame, a supporting bar and means for detachably connecting said supporting bar with the upright bar.

1,214,945. SEPARABLE FASTENER. GEORGE R. NETTLETON, New Haven, Conn., assignor to The W. & E. T. Fitch Co., New Haven, Conn., a Corporation. Filed Oct. 6, 1916. Serial No. 124,181. (Cl. 24—211.)



1. A separable fastener comprising a casing provided with means for securing it in position, said casing formed in its outer face with an opening, a lever pivotally connected with the casing and formed on opposite sides with arms adapted to extend through the said opening into the casing, combined with a post independent of the casing with which said arms are adapted to engage.

2. A separable fastener comprising a casing, means for securing it in position, said casing formed in its outer face with an opening, a lever pivotally connected with the casing and formed on opposite sides with arms adapted to enter the casing through the opening in the top thereof, said arms each formed with inwardly projecting curved flanges, and a post independent of the casing with which said lever is adapted to engage.

3. A separable fastener comprising a casing provided with means for securing it in place, said casing formed in its outer face with an opening, a lever pivotally connected with the casing and formed on opposite sides with arms extending through said opening, the edges of said arms formed with inwardly projecting curved flanges, combined with a post independent of the casing having a head beneath which said flanges are adapted to pass.

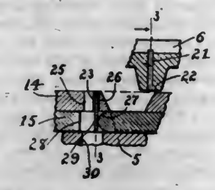
4. A separable fastener comprising a casing provided with means for securing it in place, said casing formed in its outer face with an opening, a lever pivotally connected with the casing and formed on opposite sides with side walls adapted to enter the casing through the opening in the face thereof, said side walls slightly bowed in a vertical plane, combined with a post independent of the casing with which said lever is adapted to engage.

5. A separable fastener comprising a casing provided with means for securing it in place, said casing formed in its outer face with an opening, an integral finger projecting into the said opening from one end thereof, a lever corresponding in width to the width of said opening, said lever formed with a slot through which said finger extends, and whereby said lever is pivotally connected with the casing, said lever formed on opposite sides with inwardly projecting arms, and a post independent of the casing with which said arms are adapted to engage when the lever is in the closed position.

[Claim 6 not printed in the Gazette.]

1,214,946. CHECK-CONTROLLED MECHANISM. HENRY NIAS and WILLIAM POSTER, Brooklyn, N. Y., assignors to Public Service Cup Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 3, 1914. Serial No. 816,241. (Cl. 194—99.)

1. Check controlled mechanism including in combination two parallel contiguous members each having check engaging means normally in register with each other, the check engaging means of one of said members being adapted for gripping opposite faces of the check upon one side of a given diameter and for holding said check against material deviation from normality to the common plane of said parallel members, and the check engaging means of the other of said members being adapted for impinging upon one side of that portion of said check on the other side of said given diameter at a single point remote from said diameter.



2. Check controlled mechanism including in combination two parallel contiguous members each having check engaging means normally in register with each other, the check engaging means of one of said members being adapted for gripping opposite faces of the check upon one side of a given diameter and for holding said check against material deviation from normality to the common plane of said parallel members, and the check engaging means of the other of said members being adapted for impinging upon one side of a remote portion of said check on the other side of said given diameter whereby one of said contiguous members may be actuated by the movement in one direction or the other of said contiguous members, and means for manually actuating one of said members.

3. Check controlled mechanism including in combination two coaxial and axially contiguous rotatable rings, each having check engaging means normally in register with each other, check guiding means adjacent to one of said rings, the check engaging means of one of said rings being adapted for gripping portions of the check upon one side of a given diameter of said check and the check engaging means of the other of said rings being adapted for impinging upon one side of a remote portion of said check on the other side of said given diameter.

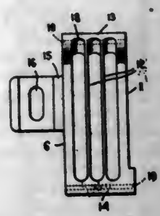
4. Check controlled mechanism including in combination two coaxial and axially contiguous rotatable rings, each having check engaging means normally in register with each other, the check engaging means of one of said rings being adapted for gripping opposite portions of the check upon one side of a given diameter of said check and for holding said check against deviation from parallelism with the axis of said rings, and a projection on the other of said rings for engaging said check on one side of that portion thereof lying on the other side of said given diameter remote from the gripping portions of said first ring.

5. Check controlled mechanism including in combination two coaxial and axially contiguous rotatable rings, each having check engaging means normally in register with each other, check guiding means adjacent to one of said rings, said check guiding means terminating closely adjacent to the receiving side of the check engaging means of said ring, and means adjacent to the delivery side of the check engaging means of the other of said rings for normally supporting a check in operative position relatively to said rings, the check engaging means of one of said rings being adapted for gripping opposite portions of the check upon one side of a given diameter of said check and the check engaging means of the other of said rings being adapted for impinging upon one side of a remote portion of said check on the other side of said given diameter.

[Claims 6 and 7 not printed in the Gazette.]

1,214,947. FILLING-FORK GRID FOR LOOMS. CHARLES E. NUTTING, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Feb. 11, 1916. Serial No. 77,748. (Cl. 139—54.)

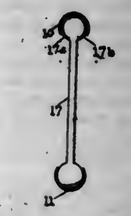
1. An integral cast metal fork grid for looms slotted longitudinally to present a plurality of parallel ribs and transverse end webs combined with a transverse metal reinforcing member of greater tensile strength than that of the material of which the body of the grid is composed, embedded in one of said webs and extending throughout the width of the grid whereby without increasing its bulk the grid is enabled to withstand the continued shock and jar of the loom without breakage of said web.



2. An integral cast metal fork grid for looms comprising a body portion having a lateral supporting extension, said body portion being slotted longitudinally to present a plurality of parallel ribs and transverse end webs combined with transverse metal reinforcing members of greater tensile strength cast in said webs and extending throughout the width of the grid whereby without increasing its bulk the grid is rendered capable of withstanding continued shock without breakage of the webs.

3. An integral cast metal fork grid for looms slotted longitudinally to present a pair of parallel longitudinal ribs and transverse end webs combined with transverse reinforcing members of cold drawn steel wire embedded in the casting and extending throughout the width of the grid whereby the strength of the grid is increased without increase in its bulk.

1,214,948. REED. ARTHUR W. OJERHOLM, Worcester, Mass. Filed Feb. 20, 1915. Serial No. 9,568. (Cl. 139—87.)



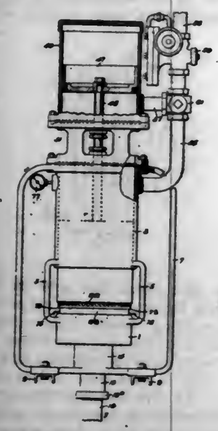
1. In a reed, a series of reed dents having irregular enlarged upper and lower ends, said enlarged ends being mounted within semi-circular retainers, said dents being independently removable by partially rotating said retainers on said enlarged ends.

2. In a reed, a series of reed dents having irregular enlarged upper and lower ends, said enlarged ends being mounted within semi-circular retainers, said dents being independently removable by a partial rotation of said retainers on said enlarged ends, spaces between said dents.

3. In a reed, a series of reed dents having irregular enlarged upper and lower ends, said enlarged ends being mounted within semi-circular retainers, said dents being independently removable by a partial rotation of said retainers on said enlarged ends, said enlarged ends having lateral projections forming the required spaces between said dents.

4. In a reed, a series of reed dents having irregular enlarged upper anad lower ends, said enlarged ends being mounted within semi-circular retainers, said dents being independently removable by a partial rotation of said retainers on said enlarged ends, said enlarged ends having lateral projections forming the required spaces between said dents, said projections being formed in such a manner as to act to guide a thread in said dents at either their upper or lower ends.

1,214,949. MACHINE FOR HARDENING ARTICLES. WILLIAM J. PERRY, Bridgeport, Conn. Filed May 16, 1913. Serial No. 768,021. (Cl. 266—6.)



1. A machine of the class described comprising, in combination, members formed to conform to portions of a gear of different mass, means for pressing said members to said gear to confine the latter against distortion, said members being automatically relatively movable in response to different degrees of contraction of said different portions of said gear, and means for differentially distributing cooling liquid to parts of said gear according to the mass thereof.

2. A machine of the class described comprising, in combination, a work cylinder; a pressure cylinder; a spring pressed piston in said work cylinder; and a fluid pressure actuated piston in said pressure cylinder, said pistons having provision for engaging an article to confine the same against distortion while cooling.

3. A machine of the class described comprising, in combination, a work cylinder; a pressure cylinder; a spring pressed piston in said work cylinder; and a plural-part piston in said pressure cylinder for confining an article against distortion; and means for moving said pistons to press an article and subject the same to the action of a cooling medium.

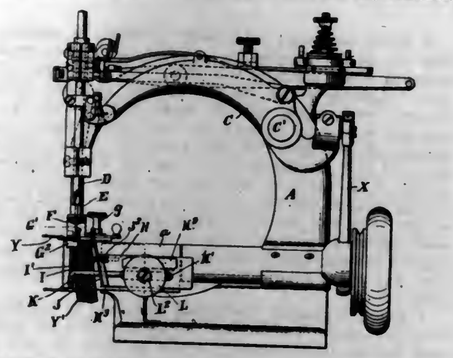
4. A machine of the class described comprising, in combination, a work cylinder; a pressure cylinder; a spring pressed piston in said work cylinder; a fluid pressed piston in said pressure cylinder, said pistons having provision for receiving an article between them; and means for moving said pistons against the resistance of said spring to subject the article to the action of a cooling medium.

5. A machine of the class described comprising, in combination, a work cylinder; a pressure cylinder; a piston in the former; a spring tending to hold the upper face of said piston above the level of a cooling medium; a piston in said pressure cylinder, said pistons having provision for receiving an article between them; and means for forcing said pistons downward against the resistance of said spring to submerge the article in said medium.

[Claims 6 to 22 not printed in the Gazette.]

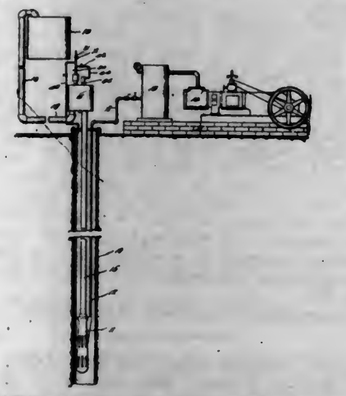
1,214,950. WORK FEEDING AND GUIDING MECHANISM. RAYMOND L. PLUMLEY, Wilmington, Del., assignor to Frederick Osann Company, New York, N. Y., a Corporation of New York. Filed Apr. 17, 1915. Serial No. 21,986. (Cl. 112—31.)

1. In a sewing machine, the combination with the stationary frame work, of work guiding mechanism mounted thereon and comprising a sliding body formed with a slot and provided with rack teeth alongside said slot, an axle member passing through the slot in said body and screwed at its inner end into said frame work and formed at its outer end with an enlarged head portion, a knob journaled on said axle member and comprising a spur gear portion meshing with said rack teeth, said knob being formed with a central passage of which a portion adjacent the frame work fits about, and forms a bearing on said axle member while an outer portion is enlarged to form an elongated spring receiving space surrounding the outer portion of said axle member, and a helical spring located in said space and surrounding said axle member and acting between said knob and the head of said axle member to frictionally grip said body between said knob and frame work and thereby to frictionally hold said knob and body in their different adjustments.



2. In a sewing machine, the combination with the stationary frame work, of work guiding mechanism mounted thereon and comprising a sliding body formed with a slot and provided with rack teeth alongside said slot, a knob comprising a spur gear portion meshing with said rack teeth, a stud passing through the slot in said body and secured at its inner end to said frame work, a spring acting between said stud and knob, whereby said body is frictionally gripped between said knob and frame work and the knob and body are thereby frictionally held in their different adjustments and a work engaging wear plate detachably clamped to the end of said body.

1,214,951. AIR-LIFT SEPARATOR-PUMP. ORAN M. PRUITT, Indianapolis, Ind., assignor to Indiana Air Pump Company, Indianapolis, Ind., a Corporation of Indiana. Filed Apr. 26, 1916. Serial No. 93,635. (Cl. 103—84.)



1. An airlift separator pump, comprising an airlift pump having an eduction pipe, a separating chamber into which said eduction pipe discharges, said separating chamber having an outlet for permitting escape of air from the upper part thereof, a water-outflow pipe leading from said chamber, and a float-controlled valve controlling the inlet to said water-outflow pipe, said float-controlled valve moving toward open and closed positions upon rise and fall respectively of the water level in said separating chamber.

2. An airlift separator pump, comprising an airlift pump having an eduction pipe, a separating chamber into which said eduction pipe discharges, said separating chamber having an outlet for permitting escape of air from the upper part thereof, a water-outflow pipe leading from said chamber, and a float-controlled valve controlling the inlet to said water-outflow pipe.

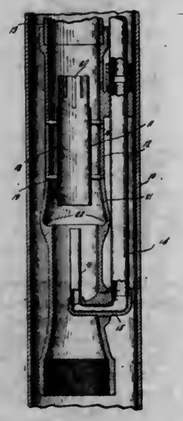
3. An airlift separator pump, comprising an airlift pump having an eduction pipe, a separating chamber into which said eduction pipe discharges, said separating chamber having an outlet for permitting escape of air from the upper part thereof, a water-outflow pipe having its intake end projecting upward into said separating chamber, a bell surrounding the intake end of said water-outflow pipe, said bell being provided with a water-admitting slot wider at the top than at the bottom, a cut-off ring slidable on said bell to variably open and close said slot, and a float carrying said cut-off ring and movable upon change in water level in said separating chamber to vary the position of said cut-off ring and the effective size of opening of said slot.

4. An airlift separator pump, comprising an airlift pump having an eduction pipe, a separating chamber into which said eduction pipe discharges, said separating chamber having an outlet for permitting escape of air from the upper part thereof, a water-outflow pipe having its intake end projecting upward into said separating chamber, a bell surrounding the intake end of said water-outflow pipe, said bell being provided with a water-admitting slot, a cut-off ring slidable on said bell to variably open and close said slot, and a float carrying said cut-off ring and movable upon change in water level in said separating chamber to vary the position of said cut-off ring and the effective size of opening of said slot.

5. An airlift separator pump, comprising an airlift pump having an eduction pipe, a separating chamber into which said eduction pipe discharges, a water-outflow pipe leading from said chamber, a shell mounted on the top of said separating chamber and having a water-return pipe leading therefrom into said separating chamber below the minimum water level therein and also having a passage leading from the top of said separating chamber tangentially into the upper part of said shell, an air-escape pipe projecting into the middle of said shell, and a valve controlling the effective size of said air-escape pipe.

[Claims 6 to 17 not printed in the Gazette.]

1,214,952. AIR-LIFT PUMP. ORAN M. PRUITT, Indianapolis, Ind., assignor to Indiana Air Pump Company, Indianapolis, Ind., a Corporation of Indiana. Filed Apr. 26, 1916. Serial No. 93,636. (Cl. 103—84.)



1. An airlift pump, comprising a tubular outer casing, and an air nozzle within and discharging axially along such casing, the inner wall of such outer casing having a curved inwardly directed shoulder which faces in the direction of eduction and serves to deflect inward into the path of the air discharged from such nozzle any water sliding backward along the inner surface of said tubular casing.

2. An airlift pump, comprising a tubular outer casing, and an air nozzle discharging within such casing, the inner wall of such outer casing having a curved inwardly directed shoulder which faces in the direction of eduction and serves to deflect inward into the path of the air discharged from such nozzle any water sliding backward along the inner surface of said tubular casing.

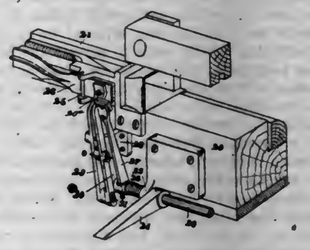
3. An airlift pump, comprising a tubular outer casing, an air nozzle within and discharging axially along such casing, the inner wall of such outer casing having a curved inwardly directed shoulder which faces in the direction of eduction and serves to deflect inward into the path of the air discharged from such nozzle any water sliding backward along the inner surface of said tubular casing, and an open-ended mixing cylinder mounted within and spaced from the walls of said tubular outer casing on the discharge side of said air nozzle.

4. An airlift pump, comprising a tubular outer casing, an air nozzle discharging within such casing, the inner wall of such outer casing having a curved inwardly directed shoulder which faces in the direction of eduction and serves to deflect inward into the path of the air discharged from such nozzle any water sliding backward along the inner surface of said tubular casing, and an open-ended mixing cylinder mounted within and spaced from the walls of said tubular outer casing on the discharge side of said air nozzle.

5. An airlift pump, comprising a tubular outer casing, and an air nozzle within and discharging axially along such casing, the inner wall of said tubular casing flaring downward above the air nozzle and terminating at the lower end of such flare in an inwardly curved upwardly facing annular shoulder at about the point where the air nozzle discharges air into the water around it, so as to throw inward into the path of such air any water sliding backward along the inner surface of said tubular casing.

[Claim 6 not printed in the Gazette.]

1,214,953. LOOM. ALFRED N. REEVES, Nashua, N. H. Filed Aug. 21, 1915. Serial No. 46,651. (Cl. 139—29.)

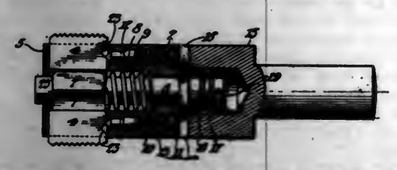


In a loom, in combination with the shuttle binder and protector rod, an arm secured to said rod, and means consisting of a plurality of levers between the free end of said arm and the binder, said levers being fulcrumed at different elevational points, and having a slotted and pin connection at their lower ends, the movement of the upper end of one lever being controlled by the shuttle-binder and the movement of the corresponding end of the other lever controlling the movement of said arm, whereby the movement of the binder will be relatively increased when transmitted to the said arm.

1,214,954. COLLAPSIBLE TAP. BENJAMIN F. RINDFLEISCH, Cleveland, Ohio, assignor, by mesne assignments, to The National-Acme Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 25, 1916. Serial No. 86,562. (Cl. 10—144.)

1. A collapsible tap comprising a body, one or more radially shiftable cutters carried thereby, a shank having

a hub of no greater diameter than the body, said body and hub being rotatable together and axially shiftable one relatively to the other thereby to release such body and hub for independent rotary movement, and means secured to the hub and extending into the body for shifting the cutters relatively to the body, the diameter of the cutters being greater than any other part of the tap.



2. A collapsible tap comprising a body, one or more radially shiftable cutters carried thereby, a shank having a hub of no greater diameter than the body, said body and hub being rotatable and axially shiftable one relatively to the other, means secured to the hub and extending into the body for shifting the cutters relatively to the body, the diameter of the cutters being greater than any other part of the tap, and means for locking the body and hub together for rotation and adapted to be released on the axial shifting of the body to permit the independent rotation of said body.

3. A collapsible tap comprising a body, one or more radially shiftable cutters carried thereby, a shank having a hub of no greater diameter than the body, said body and hub being rotatable and axially shiftable one relatively to the other, means secured to the hub and extending into the body for shifting the cutters relatively to the body, the diameter of the cutters being greater than any other part of the tap, means for locking the body and hub together for rotation and adapted to be released on the axial shifting of the body to permit the independent rotation of said body, and means for limiting the rotation of such body.

4. A collapsible tap comprising a body, one or more radially shiftable cutters carried thereby, a shank having a hub of no greater diameter than the body, said body and hub being rotatable and axially shiftable one relatively to the other, means secured to the hub and extending into the body for shifting the cutters relatively to the body, the diameter of the cutters being greater than any other part of the tap, means for locking the body and hub together for rotation and adapted to be released on the axial shifting of the body to permit the independent rotation of said body, and means for limiting the rotation of such body, said means adjustable relatively to the hub.

5. A collapsible tap comprising a body, one or more radially shiftable cutters carried thereby, a shank having a hub of no greater diameter than the body, said body and hub being rotatable together and axially shiftable one relatively to the other thereby to release such body and hub for independent rotary movement, means secured to the hub and extending into the body for shifting the cutters relatively to the body, the diameter of the cutters being greater than any other part of the tap, and adjustable means located between the hub and the body for limiting the rotary movement of the body independently of the hub.

[Claims 6 to 38 not printed in the Gazette.]

1,214,955. AEROPLANE-RIB. WILLIAM C. ROBINSON, Grinnell, Iowa. Filed Mar. 27, 1916. Serial No. 87,118. (Cl. 244—31.)

1. An improved aeroplane rib comprising an upper longitudinal member substantially T-shaped in cross section, a lower longitudinal rib member substantially inverted T-shaped in cross section, each of said rib members being formed of a single piece of material, and a series of struts slotted at their ends to receive the flanges of the longitudinal rib members, for the purposes stated.

2. An improved aeroplane rib comprising an upper longitudinal member substantially T-shaped in cross section, a lower longitudinal rib member substantially inverted T-shaped in cross section, each of said rib members being formed of a single piece of material, a series of struts slotted at their ends to receive the flanges of the longi-



tudinal rib members, and connecting means such as tacks, extended through the ends of the strut members and through the flanges of the longitudinal rib members, for the purposes stated.

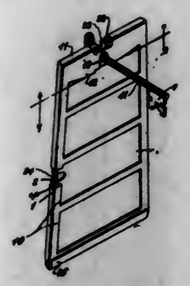
1,214,956. INSULATOR. CHARLES W. ROGERS, Exeter, N. H. Filed June 5, 1914. Serial No. 843,294. (Cl. 173—314.)



1. An insulator comprising complementary sections which when placed in confronting relation constitute a tubular member, a bushing insertible in each end of the member, clamping bands encircling the sections at each end for holding the same in clamped engagement, and also serving to prevent disengagement of the bushings, a line wire engaged in the bushings, and held from contact with the ends of the member by said bushings, an intermediate bushing mounted in the member and having its entire outer surface contacting with the interior surface of the member, said bushing being engaged around the line wire, and serving to hold the same against sagging between the end bushings.

2. An insulator of the class described, comprising two semi-cylindrical halves having metal walls and insulating ends projecting therefrom having means for receiving and clamping the wire, the walls having a free chamber therein between said ends and being provided with drain holes.

1,214,957. HOTEL-KEY TAG. CLARENCE ROSENFIELD, VIRGIL L. HELM, and EMMETT KEY, Fort Worth, Tex., assignors to The Safety Key Tag Company, a Corporation of Texas. Filed Sept. 5, 1916. Serial No. 118,879. (Cl. 40—2.)



1. In a device of the character described, two frames each having dovetailing side edges and top edges, a means for interlocking the top edges together when said frames are in dovetail relationship, complemental recesses formed in said top edges for the reception and retention of the key, said key transversing said recesses at right angles to the faces of said frame and an advertising card inclosed between said interlocked frames.

2. In a hotel key tag, two interlocking frames traversed at one end by the key, said key locked by said

frames to project at right angles to the faces of the frame and an advertising card inclosed between the frames and supported therein to exhibit its faces through said frames.

1,214,958. COP. VERNON ROYLE, Paterson, N. J. Filed Aug. 22, 1914. Serial No. 858,107. (Cl. 242—118.)



1. A cop core comprising a cop receiving sleeve provided with a roughened surface to permit a coarse wind thereon and a spindle intimately united with the sleeve, the spindle being provided with journals at its ends for use in a shuttle and with a clutch member for use in a winding machine, whereby the core may be used both as a cop receiving and cop delivering element without change.

2. A cop core comprising a cop receiving sleeve provided with a roughened surface to permit a coarse wind thereon, and a spindle, the spindle being provided with journals at its ends for use in a shuttle, with a clutch member for use in a winding machine and with end sleeves for holding the cop receiving sleeve securely in position on the spindle.

1,214,959. ILLUMINATED FOUNTAIN-PEN. EDMUND O. SCHAFFER, Derby, Conn. Filed June 27, 1916. Serial No. 106,135. (Cl. 240—8.4.)



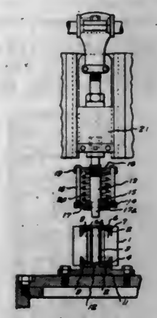
1. An implement of the character described comprising a body having an ink reservoir, a battery compartment and an eccentric enlargement, a pen carrier communicating with the ink reservoir and having a socket to receive an electric lamp, electric connections and a cap adapted to engage the body and enlargement and cover the pen and lamp when not in use.

2. An implement of the character described comprising a body having an ink reservoir and a compartment, a battery in said compartment, a pen carrier communicating with the ink reservoir and having a socket to receive an electric lamp, a metallic cap for retaining the battery in place, a spring between the cap and the battery, an electric contact from the center contact of the lamp to one pole of the battery, another electric contact engaging the metallic cap and a circuit closer intermediate the last mentioned contact and the screw shell of the lamp.

1,214,960. METHOD OF ASSEMBLING COMMUTATORS. JEAN L. SCHIMMELFENG, Warren, Pa. Filed Mar. 1, 1916. Serial No. 81,394. (Cl. 29—89.)

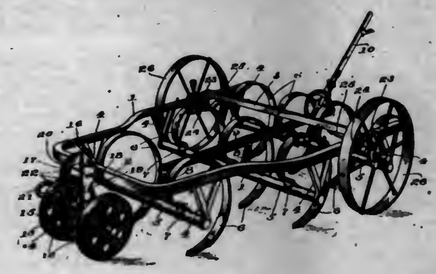
1. The method of assembling commutators comprising commutator bars having dovetailed shanks with beveled ends; interposed insulating strips; tapered end rings on the beveled surfaces of the dove-tailed shanks; and interposed insulating material between the rings and the bars which consists in exerting axial pressure on the rings to draw the bars inwardly and compress them and the interposed insulation circumferentially and securing the rings together while under pressure.

2. The method of assembling commutators comprising commutator bars having dove-tailed shanks with beveled ends; interposed insulating strips; tapered end rings on the beveled surfaces of the dove-tailed shanks; interposed insulating material between the rings and the bars; and a connecting shaft between the rings, one end of the shaft extending through one of the rings, which consists in exerting axial pressure on the rings to draw the bars



inwardly and compress them and the interposed insulating material circumferentially and heading over the shaft while the rings are subjected to the axial pressure.

1,214,961. HARROW. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Aug. 1, 1912. Serial No. 712,629. (Cl. 55—92.)



1. In a tillage implement, a frame having spaced side members, tillage implement carrying members connected between the side members thereof, a supplemental transverse brace connecting said side members, stub axles attached to the ends of said brace and protruding laterally from said frame, and transport wheels rotatably mounted on said axles.

2. In a tillage implement, a frame having spaced side members, a transverse brace rigidly connecting said side members, axle members attached to said brace and protruding laterally from the frame, brackets carried on the side members of said frame through which said axles extend, and wheels rotatably mounted on the protruding ends of said axles.

3. In a tillage implement, a frame comprising a substantially U-shaped member and a transverse brace rigidly connecting the rearwardly extending arms thereof, supplemental axle members attached to said frame protruding laterally therefrom at points adjacent the rear ends of the frame arms, transport wheels rotatably mounted on said axles at points on opposite sides of said frame, and a coöperating frame-supporting tongue truck rotatably mounted on the bowed front end of said frame.

4. A harrow having, in combination, a U-shaped main frame member, a forecarriage connected with the head of said frame member, a transversely arranged frame member having opposite ends thereof secured to the rear end of the side members of said main frame member, turnable tooth carrying bars carried by said main frame member, bracket members secured to the side frame members and provided with laterally extending sleeve portions, stub axles having the body portions thereof received by said

sleeves and the inner ends thereof turned inward and upward and secured to the said transversely arranged frame member, and carrying wheels journaled upon the opposite ends of said axles.

1,214,962. ADVERTISEMENT-DISPLAYING APPARATUS. MAXIMILIAN SKARETA, Vienna, Austria-Hungary. Filed Aug. 3, 1914. Serial No. 854,829. (Cl. 40—31.)



1. An advertisement displaying apparatus comprising in combination a display band, a roller at each end on which it is wound, pneumatically controlled means for rotating the rollers, pneumatically controlled means for reversing the direction of rotation, and a switch device for controlling the pneumatic operations.

2. An advertisement displaying apparatus comprising in combination a roller at each end of the apparatus, a display band wound on said rollers, a continuously running driving motor, pneumatically actuated means for throwing said rollers one at a time into driving connection with said motor, pneumatically actuated means for throwing both of said rollers out of driving connection with said motor, pneumatically actuated means for restoring the driving connection between said motor and one or other of said rollers, a switch device for controlling each of said pneumatically actuated means, and means for automatically operating said switch devices at the desired times.

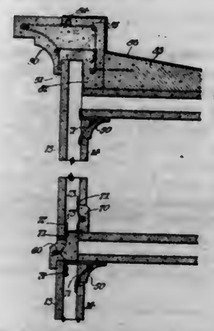
3. An advertisement displaying apparatus comprising in combination a perforated display band, a roller at each end on which it is wound, a stationary member having openings with which the perforations in said band are adapted to register, a driving motor, a main shaft driven thereby, an auxiliary driving shaft to each of the said rollers, pneumatically controlled means for driving the display band in one direction and stopping the driving periodically, pneumatically controlled means for driving the display band in the other direction and also stopping the band periodically, a switch device for controlling the pneumatic operations, and means for operating said switch device by the passage of air through said openings in the stationary member.

4. An advertisement displaying apparatus comprising in combination a display band, a roller at each end on which it is wound, a driving motor, a main shaft driven thereby, an auxiliary driving shaft for each of the said rollers, pneumatically controlled means whereby the main shaft drives one of the said auxiliary shafts at a time, pneumatically controlled means whereby the main shaft ceases to drive both of the auxiliary shafts for a predetermined period, pneumatically controlled means whereby after the expiration of such period the main shaft again drives one of the auxiliary shafts, and a switch device for controlling the pneumatic operations.

5. An advertisement displaying apparatus comprising in combination a display band, a roller at each end on which it is wound, a driving motor, a main shaft driven thereby, an auxiliary shaft for driving each of the said rollers, a pneumatically actuated clutch whereby the main shaft drives one of the said auxiliary shafts at a time, a pneumatically controlled clutch whereby the main shaft ceases to drive both of the auxiliary shafts for a predetermined period, pneumatically controlled means whereby after the expiration of such period, the main shaft again drives one of the auxiliary shafts through the aforesaid pneumatic clutch, and a switch device for controlling the pneumatic operations.

[Claims 6 to 9 not printed in the Gazette.]

1,214,963. REINFORCED HOLLOW-WALL CONSTRUCTION. GEORGE E. SMALL, Richmond Hill, N. Y. Filed May 6, 1915. Serial No. 26,209. (Cl. 72—39.)



1. A reinforced hollow wall construction comprising an outer row of slabs or blocks and an inner row of slabs or blocks located to break joint, each of said slabs having reinforcing means provided with projecting eyes or loops at its edges and an intermediate eye or loop projecting horizontally with relation to said slab or block, the eyes or loops of one block adapted to overlap the eyes or loops of companion blocks, a rod for locking said overlapping loops together, and a pipe located in each of said slabs for the passage of said rod.

2. A reinforced hollow wall construction comprising an outer row of slabs or blocks and an inner row of slabs or blocks located to break joint, each of said slabs having a reinforcing beam provided at intervals with recesses, reinforcing means located in each of said blocks and having at the opposite edges thereof projecting eyes or loops and between its edges projecting eyes or loops extending into said recesses, the eyes or loops at the meeting edges of a pair of blocks extending into the recesses in the beam of a companion block, a rod projecting through said loops for locking them together, and a pipe located in each of said slabs for the passage of said rod.

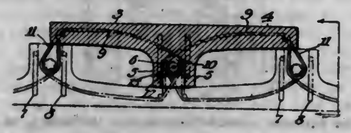
3. A reinforced hollow wall construction comprising an outer row of slabs or blocks and an inner row of slabs or blocks located to break joint, each of said slabs having reinforcing means provided with projecting eyes or loops at its edges and an intermediate eye or loop projecting horizontally with relation to said slab or block, the eyes or loops of one block adapted to overlap the eyes or loops of companion blocks, a rod for locking said overlapping loops together, a pipe located in each of said slabs for the passage of said rod, and a removable plug for the end of said pipe.

4. A reinforced hollow wall construction comprising an outer row of slabs or blocks and an inner row of slabs or blocks located to break joint, each of said slabs having a reinforcing beam provided at intervals with recesses, reinforcing means located in said beam and having at the opposite edges thereof projecting eyes or loops and between its edges projecting eyes or loops extending into said recesses, the eyes or loops at the meeting edges of a pair of blocks extending into the recesses in the beam of a companion block, a rod projecting through said loops for locking them together, a pipe located in each of said slabs for the passage of said rod, and a removable plug for the end of said pipe.

5. A reinforced hollow wall construction comprising an outer row of slabs or blocks and an inner row of slabs or blocks located to break joint, each of said slabs having a reinforcing beam provided at intervals with recesses, reinforcing means located in each of said blocks and having at the opposite edges thereof projecting eyes or loops and between its edges projecting eyes or loops extending into said recesses, the eyes or loops at the meeting edges of a pair of blocks extending into the recesses in the beam of a companion block, a rod projecting through said loops for locking them together, and pipe sections located in said beam and communicating with said recesses for the reception of said rod.

[Claims 6 to 8 not printed in the Gazette.]

1,214,964. BLOCK OR SLAB FOR REINFORCED HOLLOW-WALL CONSTRUCTION. GEORGE E. SMALL, Richmond Hill, N. Y. Original application filed May 6, 1915, Serial No. 26,209. Divided and this application filed Sept. 15, 1915. Serial No. 50,725. (Cl. 72—39.)



1. A construction block or slab having a pair of projecting wing portions and on the inner side thereof a lengthwise extending centrally located beam portion, the beam portion of each block having a face adapted to abut against the wing portions of a pair of companion blocks, said beam having at intervals in its length recesses therein located in the abutting face thereof and reinforcing means located in said slab at intervals and having loops or eyes projecting into said recesses.

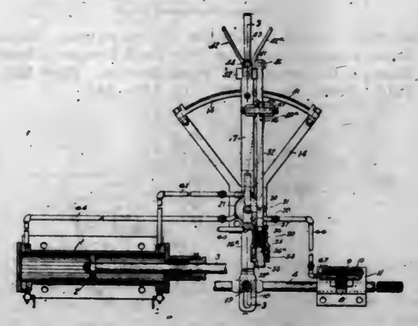
2. A construction block or slab having a pair of projecting wing portions and on the inner side thereof a lengthwise extending centrally located beam portion, the beam portion of each block having a face adapted to abut against the wing portions of a pair of companion blocks, said beam having at intervals in its length recesses therein located in the abutting face thereof and reinforcing means located in said slab at intervals and having loops or eyes projecting into said recesses and also having loops or eyes projecting at the edges of said block.

3. A construction block or slab comprising a pair of wing portions and a reinforcing beam portion, said slab having one of its dimensions of materially greater length than another and said beam portion extending in the direction of the greatest dimension of the slab and having recesses at intervals throughout its length, said recesses being located in the rear face of the beam portion, and reinforcing means located in the slab and having eyes or loops extending into said recesses and also having eyes or loops projecting from the edges of said slab.

4. A construction block or slab comprising a pair of wing portions and a reinforcing beam portion, said slab having one of its dimensions of materially greater length than another and said beam portion extending in the direction of the greatest dimension of the slab and of equal length therewith and having recesses at intervals throughout its length, said recesses being located in the rear face of the beam portion, and reinforcing means located in the slab and having eyes or loops extending into said recesses and also having eyes or loops projecting from the edges of said slab.

1,214,965. STEAM-ENGINE REVERSING-GEAR. JACOB RUSH SNYDER, Pittsburgh, Pa., assignor to Percy E. Donner, Pittsburgh, Pa. Filed Nov. 3, 1915. Serial No. 59,404. (Cl. 121—98.)

1. In valve reversing mechanism, the combination of a reversing fluid pressure motor, a reversing rod actuated thereby, a fluid pressure actuated locking device for said rod, and valve mechanism controlling the supply and exhaust of motive fluid to and from the two sides of said motor and to and from said locking device and arranged while setting said valve mechanism to the desired position to maintain fluid pressure in said locking device and exhaust it from said motor, and when said valve mechanism has been set to the desired position to exhaust the motive fluid from said locking device and admit motive fluid to one side of said motor.



2. In valve reversing mechanism, the combination of a reversing fluid pressure motor, a reversing rod actuated thereby, a fluid pressure actuated locking device for said rod, valve mechanism controlling the supply and exhaust of motive fluid to and from the two sides of said motor and to and from said locking device and arranged to admit motive fluid to the locking device when setting the valve mechanism to the desired position, to exhaust motive fluid from said locking device and simultaneously admit motive fluid to one side of the motor when the valve mechanism has been set in the desired position, and means actuated by the travel of the reversing rod for causing said valve mechanism when the rod has traveled the required distance to exhaust said motor and simultaneously admit motive fluid to said locking device.

3. In valve reversing mechanism, the combination of a reversing fluid pressure motor, a reversing rod actuated thereby, a fluid pressure actuated locking device for said rod, an actuating handle, valve mechanism controlling the supply and exhaust of motive fluid to and from the two sides of said motor and to and from said locking device and arranged to admit motive fluid to said locking device upon movement of said handle, to release motive fluid from said locking device and simultaneously admit motive fluid to the motor to move said rod upon movement of the handle to the desired position, and after movement of said rod to the desired extent to again admit motive fluid to the locking device and simultaneously exhaust it from said motor.

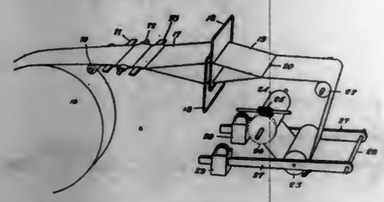
4. In valve reversing mechanism, the combination of a reversing fluid pressure motor, a reversing rod actuated thereby, an actuating handle, a fluid pressure actuated locking device for said rod, valve mechanism controlling the supply and exhaust of motive fluid to and from the two sides of said motor and to and from said locking device and arranged upon movement of said handle to admit motive fluid to the locking device, and when the handle has been moved to the desired position to release motive fluid from said locking device and simultaneously admit motive fluid to the motor to move the rod, and means actuated by the travel of said reversing rod for causing said valve mechanism when the rod has traveled the required distance to exhaust said motor and simultaneously admit motive fluid to said locking device.

5. In valve reversing mechanism, the combination of a reversing fluid pressure motor, a reversing rod actuated thereby, an actuating handle, a locking member for said handle, a fluid pressure actuated locking device for said rod, and valve mechanism controlling the supply and exhaust of motive fluid to and from the two sides of said motor and to and from said locking device and arranged

when the handle locking member is actuated to release the handle to admit motive fluid to the rod locking device, upon movement of said handle to the desired position to exhaust motive fluid from the rod locking device and simultaneously admit it to the actuating motor, and upon movement of the handle locking member to again lock the handle to exhaust motive fluid from the motor and simultaneously admit it to the rod locking device.

[Claims 6 to 14 not printed in the Gazette.]

1,214,966. LOOM. WILLIAM S. SOUTHWICK, Clinton, Mass., assignor to Clinton Wire Cloth Company, Boston, Mass., a Corporation of Massachusetts. Filed May 6, 1915. Serial No. 26,329. (Cl. 139—54.)



1. In a loom, the combination with fabric-engaging means adapted to move to let back the fell, and warp let-off means, of filling-controlled means arranged to act on the warp between said let-off means and the fell to move the latter backward in consequence of failure or breakage of the filling.

2. In a loom, the combination with fabric-engaging means adapted to move to let back the fell, and warp let-off means, of a lease-rod, and filling controlled means arranged to turn said lease-rod to move the fell backward in consequence of failure or breakage of the filling.

3. In a loom, the combination with fabric-engaging means adapted to move to let back the fell, and warp let-off means, of a filling detector, and means controlled by said detector and arranged to displace the warp members transversely of their length to move the fell backward in consequence of failure or breakage of the filling.

4. In a loom, the combination with fabric-engaging means adapted to move to let back the fell, and warp let-off means, and operating mechanism therefor, of filling-controlled mechanism arranged to be operated by said operating mechanism to act upon the warp between said let-off means and the fell in consequence of failure or breakage of the filling, said filling controlled mechanism being arranged to move the fell backward.

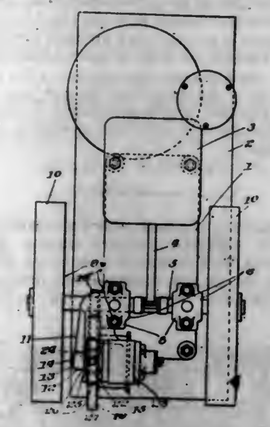
5. In a loom, the combination with fabric-engaging means adapted to move to let back the fell, and warp let-off means, of a warp-engaging member arranged to engage the warp between said let-off means and the fell, operating mechanism arranged to be connected to said let-off means or to said warp-engaging member, to let off the warp or to pull back the fell, as the case may be, and filling-controlled means arranged to disconnect said operating mechanism from said let-off means and connect the former to said warp-engaging member in consequence of failure or breakage of the filling.

[Claim 6 not printed in the Gazette.]

1,214,967. INTERNAL-COMBUSTION ENGINE. LEONARD B. SPERRY, Wauwatosa, Wis., assignor to International Harvester Corporation, a Corporation of New Jersey. Filed July 15, 1915. Serial No. 40,003. (Cl. 123—198.)

1. An internal combustion engine including, in combination, an engine frame, a crank shaft journaled in fixed bearing members carried by said frame, separable bearing caps coacting with said fixed members, and a gear carrying bracket integral with one of said separable caps.

2. An internal combustion engine including, in combination, an engine frame, a crank shaft journaled in fixed bearing members carried by said frame, separable bearing caps coacting with said fixed members, a pinion secured to said shaft, a bracket member integral with one of said separable caps, a magneto carried by said bracket, and gear means journaled upon said bracket and operatively connected said pinion with said magneto.



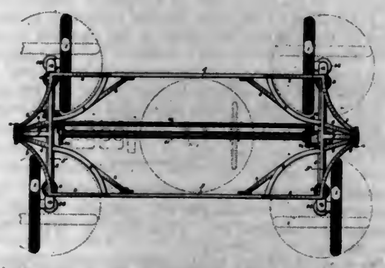
3. An internal combustion engine including, in combination, an engine frame, a crank shaft journaled in fixed bearing members carried by said frame, separable bearing caps coacting with said fixed members, and a gear carrying bracket integral with one of said separable caps, said bracket having a laterally disposed shelf adapted to receive a magneto.

4. An internal combustion engine including, in combination, an engine frame, a crank shaft journaled in fixed bearing members carried by said frame, separable bearing caps coacting with said fixed members, a pinion secured to said shaft, a bracket member integral with one of said separable caps, a magneto carried by said bracket, and gear means journaled upon said bracket and operatively connected said pinion with said magneto.

5. An internal combustion engine including, in combination, an engine frame, a crank shaft journaled in fixed bearing members carried by said frame, separable bearing members coacting with said fixed members, a pinion secured to said shaft, a bracket member integral with one of said separable bearing members, a magneto carried by said bracket, studs secured to said bracket member, a gear member journaled upon one of said studs and engaging with said pinion, a driving pulley secured to said gear member, an intermediate pinion journaled upon said remaining stud and meshing with said gear member, and a pinion forming part of the magneto mechanism.

[Claims 6 to 9 not printed in the Gazette.]

1,214,968. MOTOR-VEHICLE. CHARLES BREWSTER STEELE, New York, N. Y. Filed Apr. 18, 1907. Serial No. 368,806. (Cl. 21—90.)



1. In a motor vehicle, a frame provided with end beams, connected with side beams, substantially at right angles

with the side beams, said side beams being bowed upward at each end near their union with the end beams, an extension at each end of the frame from the center of each end beam, the outer end of the extension being curved downwardly, braces connecting each corner of the frame with the outer end of the extension, said braces being curved and adapted to admit of the wheels passing beneath them.

2. In a vehicle, a running gear composed of the following elements, front and rear axles, a frame consisting of side beams having bowed extensions to form wheel ports, and end beams suitably connected with the bowed extensions connecting the axles, turn knuckles on the extremities of said axles, wheels upon said turn knuckles, a steering handle, connecting mechanism between the turn knuckles and the steering handle, said frame being provided with recesses, the general arrangement being such that the wheels may be placed at right angles to the axis of the vehicle in two positions, namely, both in front of and at the rear of said axles, springs connecting the bowed extensions of the end beams with the side beams, said springs being bowed downwardly and also inwardly.

3. In a vehicle, a running gear, composed of the following elements, front and rear axles, a frame consisting of side beams having bowed extensions to form wheel ports, and end beams suitably connected with the bowed extensions connecting the axles, turn knuckles on the extremities of said axles, wheels upon said turn knuckles, a steering handle, connecting mechanism between the turn knuckles and the steering handle, said frame being provided with recesses, the general arrangement being such that the wheels may be placed at right angles to the axis of the vehicle in two positions, namely, both in front of and at the rear of said axles, leaf springs connecting the outward bowed extensions of the end beams with the side beams, the form of the springs being bowed downwardly in a direction at right angles with the plane of the leaves, and inwardly in a direction parallel with the leaves.

4. In a vehicle, front and rear and side beams forming substantially an oblong rectangular frame, the side beams being bowed upwardly at both ends of the side beams, perpendicular posts connecting the top extremities of the bows on the side beams with the end beams, downwardly bowed and curved extensions connecting said posts with the end beams, braces connecting the end beams with the side beams, said braces being curved to permit the traction wheels to turn at right angles to the axis of the side beams.

5. In a vehicle, a frame of substantially an oblong rectangle, the longer sides of the frame being provided with recesses adapted to receive the rim of the wheels, projections extending outwardly from the center of the short sides of the frame, springs connecting the ends of said projections with the long sides of the frame, said springs being bowed downwardly and inwardly in order to accommodate the rims of the wheels.

[Claims 6 to 39 not printed in the Gazette.]

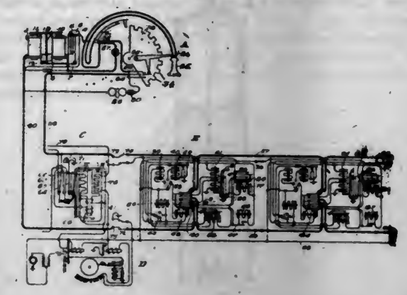
1,214,969. MEASURED-SERVICE TELEPHONE SYSTEM. SAMUEL S. STOLP, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 29, 1912. Serial No. 680,690. (Cl. 179—6.5.)

1. In a telephone system, calling and called subscribers' lines, means for extending a connection between two of said lines, a measured service device upon certain of said lines, an operating magnet therefor, and means for operating said magnet as a buzzer to transmit a signal to the called subscriber to indicate to said subscriber that the subscriber calling is on a measured service line.

2. In a telephone system, a telephone line, a measured service device upon said line, an operating magnet therefor, and means for operating said magnet as a buzzer for transmitting a signal over said line.

3. In a telephone system, a measured service device, an operating magnet therefor, and means for operating said magnet as a buzzer to transmit a signal.

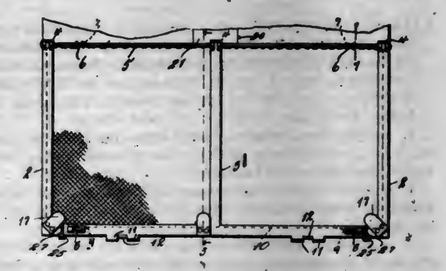
4. In a telephone system, calling and called subscribers' lines, means for extending a connection between any two of said lines, a coin-controlled device on certain of said lines, and means at said coin-controlled device for automatically indicating to the called subscriber when a subscriber upon a coin-controlled line is calling.



5. In a telephone system, calling and called subscribers' lines, means for extending a connection between any two of said lines, a coin-controlled device on certain of said lines, and means at said coin-controlled device for giving a signal upon the response of the called subscriber to indicate that the subscriber calling is on a coin-controlled line.

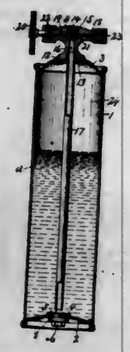
[Claims 6 to 28 not printed in the Gazette.]

1,214,970. MATTRESS AND SPRING. BELLE D. THOMPSON, Fort Gay, W. Va. Filed May 11, 1915. Serial No. 27,411. (Cl. 5—43.)



As a new article of manufacture, a mattress, a frame for supporting a portion of said mattress, said frame comprising an upper and lower portion hingedly connected together and being similarly constructed, spring pockets secured to each section of said frame adjacent the corners thereof, springs interposed between said pockets and adapted to yieldably force the outer ends of said sections apart, pivotally mounted hooks secured to said upper sections provided with upwardly turned lower ends, said lower sections provided with a plurality of apertures for receiving said hooks, said hooks being adapted to hold said sections against upward swinging movement while in a normal condition, pins carried by said upper sections and projecting beyond the edges thereof, a pivoted latching plate secured to said lower section and provided with a plurality of vertically alined apertures formed therein, said apertures adapted to fit over said pins for holding one section of said frame in an adjusted relation with respect to the other section, means carried by said upper frame for holding a portion of the mattress thereon, and said latching plate being adapted to extend beyond the upper face of the upper section for permitting the same to be easily and conveniently thrown out of engagement with the pins of said upper section, thereby allowing the ready adjustment of one section of said frame with respect to the other.

1,214,971. FIRE-EXTINGUISHER. WALTER H. TIBBALS, Syracuse, N. Y. Filed May 27, 1913. Serial No. 770,119. (Cl. 169—12.)



A hand fire extinguisher comprising an air-tight cylinder having a liquid chamber in one end and an air chamber of less length than the liquid chamber in its opposite end, a valve case secured to one end of the cylinder and provided with a pipe extending through both chambers to a point in proximity to the opposite end of the cylinder and communicating only with the liquid chamber and valve case, said pipe being supported solely by the valve case independently of the cylinder, the valve case having an exit passage wholly to one side of the axis of the pipe, and a needle valve screwing into the valve case at the opposite side of said axis and extended across such axis for controlling the exit passage.

1,214,972. COHERING OR BINDING COMPOSITION FOR ROADS OR OTHER PURPOSES AND ROADS OR PATHS COMPRISING THE SAME. ROBERT FULTON TOMPKINS, New York, N. Y., assignor to The Binder Company, a Corporation of New Jersey. Filed Aug. 15, 1913. Serial No. 784,884. (Cl. 134—10.)

1. A cohering or binding composition for roads or other purposes, comprising a hygroscopic glucosid and a fixed water insoluble water resistant.

2. A cohering or binding composition for roads or other purposes, comprising an aromatic glucosid and a water resistant.

3. A cohering or binding composition for roads or other purposes, comprising a hygroscopic glucosid and a water insoluble resinous substance.

4. A cohering or binding composition for roads or other purposes, comprising an aromatic glucosid and a resinous substance.

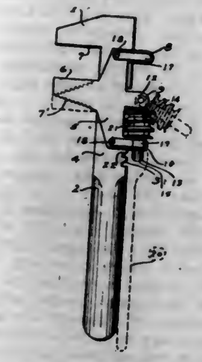
5. A cohering or binding composition for roads or other purposes, comprising a glucosid and a fixed oil.

[Claims 6 to 17 not printed in the Gazette.]

1,214,973. COMBINED NUT AND PIPE WRENCH. WILBUR S. UPSON, Mansfield, Ohio. Filed Nov. 13, 1916. Serial No. 130,972. (Cl. 81—178.)

1. In a wrench comprising a stationary jaw having a shank which is provided with a series of teeth, a reversible and movable jaw slidably fitted to said shank, ears provided on said movable jaw having alined slots formed therein, a pin secured to one of said ears, a spindle pivotally connected to said pin, which is adapted to be turned on said pin through an angle of one hundred and eighty degrees to permit coöperation of the adjusting means with the teeth of the shank when either face of the movable jaw is reversed to co-act with the stationary jaw, and means mounted on said spindle, which is adapted to mesh with the teeth on the shank to impart movement to the movable jaw.

2. In a wrench comprising a stationary jaw having a shank which is provided with a series of teeth, a reversible and movable jaw slidably fitted to said shank, ears provided on said movable jaw having alined slots formed therein, a pin secured to one of said ears, a spindle pivotally connected to said pin, which is adapted to be turned on said pin through an angle of one hundred and eighty degrees to permit coöperation of the adjusting means with the teeth of the shank when either face of the movable jaw is reversed to co-act with the stationary jaw, means mounted on said spindle, which is adapted to mesh with the teeth on the shank to impart movement to the movable jaw, and yielding means to exert a pressure upon said spindle.



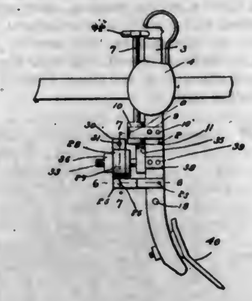
3. In a wrench, a stationary jaw provided with a shank having a series of cog teeth formed thereon, a movable and reversible jaw slidably fitted to said shank, a lever provided with a reduced portion which is pivotally attached to the movable jaw, which is adapted to be turned on said pin through an angle of one hundred and eighty degrees to permit coöperation of the adjusting means with the teeth of the shank when either face of the movable jaw is reversed to co-act with the stationary jaw, an exteriorly threaded nut rotatably mounted on said reduced portion of the lever and adapted to mesh with the series of cog teeth to impart movement to the movable jaw and arranged to be disengaged therefrom for rapid adjustment when the lever is pivoted.

4. In a wrench, a stationary jaw having a shank which is provided with a series of cog teeth, a removable and reversible jaw slidably fitted to said shank, actuating means which is adapted to be turned to pivot through an angle of one hundred and eighty degrees to permit cooperation of the actuating means with the teeth of the shank when either face of the movable jaw is reversed to co-act with the stationary jaw, pivoted to the movable jaw and which is adapted to normally engage the cog teeth of the shank to impart a screw adjustment to the movable jaw and which is adapted to be pivoted to be disengaged from the cog teeth to permit of sliding movement of the movable jaw.

5. In a wrench, a stationary jaw having a shank which is provided with a series of cog teeth, a removable and reversible jaw slidably fitted to said shank, actuating means which is adapted to be turned to pivot through an angle of one hundred and eighty degrees to permit cooperation of the actuating means with the teeth of the shank when either face of the movable jaw is reversed to co-act with the stationary jaw, and which is pivoted to the movable jaw and adapted to normally engage the cog teeth of the shank to impart a screw adjustment to the movable jaw and adapted to be pivoted to be disengaged from the cog teeth to permit of sliding movement of the movable jaw, and yielding means to normally maintain the pivoted actuating means in mesh with the cog teeth and to maintain frictional contact therebetween to prevent movement of the actuating means under normal conditions.

[Claims 6 to 10 not printed in the Gazette.]

1,214,974. CULTIVATOR-STANDARD. WILLIAM A. F. URBAN, Yoakum, Tex. Filed Apr. 18, 1916. Serial No. 91,912. (Cl. 97—11.)



1. In a cultivator standard structure, the combination of a standard, a foot structure pivotally connected to the lower end of said standard by a break pin, a plate attached to said standard, a pin formed upon and extending rearwardly from said plate, a nut adjustably mounted upon said pin, and means connecting said nut to said pivoted foot for pivotally moving the foot upon adjustment of the nut, for regulating the angle of said foot with respect to said standard.

2. In a cultivator standard structure, the combination, of a standard, a foot pivotally connected to the lower end of said standard by a break pin, a pair of bars attached to the upper end of said foot, a plate carried by said standard, a pin formed integrally with and extending rearwardly from said plate, a nut adjustably mounted upon said pin, means connecting said nut and said second mentioned bar for pivotally moving said foot upon adjustment of said nut.

3. In a cultivator standard structure, the combination, of a standard, a foot pivotally connected to the lower end of said standard by a break pin, a pair of bars attached to the upper end of said foot, a plate carried by said standard, a pin formed integrally with and extending rearwardly from said plate, a nut adjustably mounted upon said pin, means connecting said nut and said second mentioned bar for pivotally moving said foot upon adjustment of said nut, and means adjustably carried by said standard for pivotally connecting the standard to a cultivator beam.

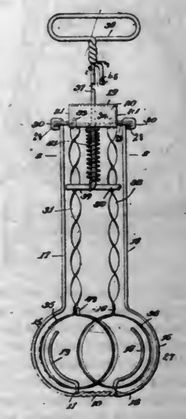
4. In a cultivator standard structure, the combination, of a standard, a casting carried by said standard, and having a shank formed thereon and extending transversely therefrom, said shank adapted for connection with a cultivator beam, said standard extending slidably through said casting, and means carried by said standard for moving the standard vertically with respect to the casting.

1,214,975. EGG AND CREAM WHIPPER. FREDERICK S. USHER, Indiana Harbor, Ind. Filed Apr. 6, 1916. Serial No. 89,422. (Cl. 259—100.)

1. In a device of the class described, a hoop shaped beater mounted for rotation, and a frame including an outer member and an inner member, said inner member extending through one wall of the hoop shaped beater and forming a bearing therefor whereby the sides of the hoop shaped beater operate alternately between the outer and inner frame members.

2. In a device of the class described, hoop shaped beaters mounted for rotation side by side, a frame including oppositely curving outer portions, means for connecting the beaters at their lower sides, inner frame members each including an upwardly directed vertical lower portion rising from the frame members at the terminals of the connecting means and upon which the beaters are rotatable, said inner frame members extending into the beaters and between which and the outer frame members the beaters alternately rotate.

3. In a device of the class described, a frame with the upper portion formed of sides spaced apart and oppositely curving lower portions united at their lower ends, inner frame members directed upwardly from the outer frame members, a connecting device at the upper ends of said outer frame members, oppositely twisted members pivoted at their upper ends in said connecting device and provided with hoop shaped beaters at their lower ends mounted for rotation upon the vertical bearings of the inner frame members and operating alternately between the oppositely curving frame portions and the inner frame members, a slide member engaging said twisted members, and a rod movable through said connecting device and connected to said slide member.



4. In a device of the class described, a frame formed of two sections of wire twisted together to unite them near one end with the shorter untwisted portions extending vertically to form bearings and thence curved in opposite directions and the longer untwisted portions curved in opposite directions in parallel relation to the shorter curved portions and thence extended for the remainder of the lengths in parallel relation to each other, a connecting device at the free ends of the last-mentioned parallel portions, oppositely twisted members pivoted at their upper ends in said connecting device and provided with hoop shaped beaters at their lower ends mounted for rotation on the vertically extending bearings of the shorter curved portions and alternately operating between the oppositely curved frame portions, a slide member engaging said twisted members, and a rod movable through said connecting device and connected to said slide member.

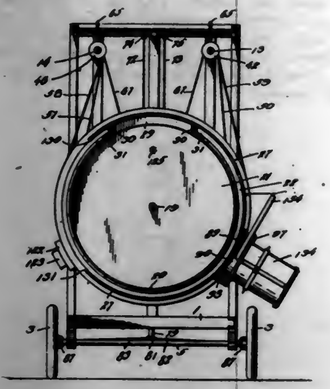
5. In a device of the class described, a connecting device comprising a sheet metal body having laterally extending sides and longitudinally extending ends, the sides and portions of the ends bent at right angles to the body and the outer portions of the ends bent into parallel relation to the body, a base member held by its ends and sides by the turned over sides and ends, a frame having the upper portions of its sides spaced apart and connected to the extended ends of the connecting device, oppositely twisted members pivoted at their upper ends in the base of said connecting device and with beaters at their outer ends, and coacting with the frame members, a slide member engaging said twisted members, and a rod movable through said connecting device and connected to said slide member.

[Claims 6 and 7 not printed in the Gazette.]

1,214,976. ASH AND GARBAGE COLLECTING AND CONVEYING CART. ROBERT W. VAIL, New York, N. Y., assignor of one-half to Clifford W. Hartridge, New York, N. Y. Filed Feb. 12, 1915. Serial No. 7,910. (Cl. 214—1.)

1. The combination with a body-wall, of an outer shell encircling the body wall having openings therein, means for supporting barrels or cans on the outer shell over the openings, said body-wall having an opening therein with

which the openings of the outer shell are adapted to be brought in registry, and means for rotating the outer shell for causing the openings therein to be brought in registry with the opening of the body wall so that the contents of the barrels or cans can be discharged into the body-wall.



2. The combination with a body wall having an opening therein, of an outer shell encircling the body wall for normally closing the opening of the body wall, said outer shell having openings therein, means for supporting barrels or cans on the outer shell over the openings thereof, and means for rotating the outer shell to cause the barrels to be brought into registry with the opening of the body-wall so that the contents of the barrels may be discharged into the body-wall.

3. The combination with a frame-work, of a body wall rotatably mounted thereon having an opening therein, an outer shell encircling the body wall and normally closing the opening of the body wall, said shell being provided with openings for the admission of material to the body wall, and an opening through which the contents of the body wall may be discharged, and means for rotating the body-wall and outer shell simultaneously and independently.

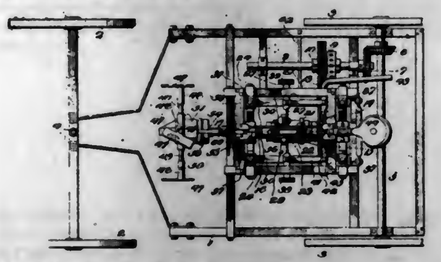
4. The combination with a frame-work having a motor mounted thereon, a motor shaft connected to the motor, winding shafts mounted on the frame-work, means connecting the winding shafts to the motor shaft so that the winding shafts will be rotated upon the rotation of the motor shaft, of a rotary body-wall mounted on the frame work, and having an opening therein, an outer shell encircling the body-wall for normally closing the opening of the body wall, and means for transmitting motion to the body-wall and outer shell, whereby they may be rotated independently and simultaneously.

5. The combination with a frame-work having a motor mounted thereon, a motor shaft connected to the motor, winding shafts mounted on the frame-work, means connecting the winding shafts to the motor shaft for operating the winding shafts, of a rotary body-wall mounted on the frame-work, and having an opening therein, an outer shell encircling the body wall for normally closing the opening of the body-wall, means for transmitting motion from the winding shafts to the body-wall and outer shell for rotating them simultaneously and independently, and means for controlling the rotation of the body-wall and outer shell.

[Claims 6 to 13 not printed in the Gazette.]

1,214,977. COTTON-CHOPPER. BENJAMIN VAN HOESEN, Mart, Tex. Filed Nov. 27, 1915. Serial No. 63,804. (Cl. 97—46.)

1. The combination of a supporting frame, a driving shaft mounted thereon, a chopper shaft mounted upon the frame, means for transmitting motion from the driving shaft to the chopper shaft including a gear loosely mounted upon the chopper shaft and having a clutch hub, a clutch member slidably mounted upon the chopper shaft but constrained to rotate therewith and adapted to engage said clutch hub, a spring bearing upon said clutch member and holding it normally in engagement with the clutch hub, means for disengaging said member from the clutch hub, and a brake disposed adjacent the slidable clutch member and engaged by the same when it is disengaged from the clutch hub.



2. The combination of a supporting frame, a driving shaft mounted thereon, a chopper shaft mounted upon the frame, means for transmitting motion from the driving shaft to the chopper shaft comprising a gear loosely mounted upon the chopper shaft and having a clutch hub, a clutch member slidably mounted upon the chopper shaft and constrained to rotate therewith, means for holding said clutch member normally in engagement with the clutch hub, the clutch member being provided with an annular shoulder in its forward portion, a brake spring supported above said slidable clutch member and depending in advance of said annular shoulder to be engaged by the same, and means for releasing the said slidable clutch member from the clutch hub.

3. The combination of a supporting frame, a driving shaft mounted thereon, a chopper shaft carried by the frame, means for moving said chopper shaft in a vertical plane, means for transmitting motion from the driving shaft to the chopper shaft including a gear mounted upon the chopper shaft and having a clutch hub, a slidable clutch member mounted on the chopper shaft and constrained to rotate therewith and adapted to engage said clutch hub, a lever fulcrumed above the said slidable clutch member and having a yoke at its lower end engaging the same, and a brake supported above the slidable clutch member and depending past the same to be engaged thereby in any vertical position of the chopper shaft.

4. The combination of a main frame comprising rectangularly spaced standards having overhanging brackets at their upper ends, a chopper frame disposed between said standards and having its corners slidably fitted thereto, adjustable suspending devices mounted in the said brackets, springs connecting said suspending devices with the respective corners of the chopper frame, a chopper shaft mounted upon the chopper frame, a driving shaft on the main frame, and means for transmitting motion from the driving shaft to the chopper shaft.

5. The combination of a main frame comprising standards provided with overhanging brackets at their upper ends, upper blocks slidably fitted to said standards and yieldably suspended from said overhanging brackets, lower slidable blocks arranged below the first-mentioned blocks, brackets connecting the upper and lower blocks, bearings secured to and extending between the said brackets, a chopper shaft mounted in said bearings, a driving shaft upon the main frame, and means for transmitting motion from the driving shaft to the chopper shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,214,978. PRESSURE-REGULATOR. CARL J. VELEY, Kalamazoo, Mich., assignor to Comstock Automatic Pump Co., Comstock, Mich. Filed Feb. 10, 1916. Serial No. 77,541. (Cl. 103—92.)

1. In a structure of the class described, the combination of a diaphragm casing, a diaphragm in said casing, an actuating rod having a reduced inner end, its outer end being adapted to receive a wrench, a diaphragm engaging shoe for said actuating rod provided with a stem arranged to reciprocate in an opening in said casing and having a longitudinal bore receiving the reduced end of said actuating rod, a collar on the reduced end of said actuating rod having a slot at one side thereof, washers above and below the collar, the lower washer being adapted to coact as a stop with said casing, an actuated member pivotally mounted on said casing with one end disposed in said slot in said collar between said washers, a pair of spring support members, the inner member being threaded upon said actuating rod, said rod being movable through the outer member, supporting rods for the outer support member mounted on said casing, said inner member being slidable on said supporting rods, a coiled spring arranged between said support members, a coiled spring of less strength than the spring arranged between said support members arranged on said actuating rod with its inner end resting upon the outer support member, and an adjusting member for said second spring threaded upon said actuating rod.



2. In a structure of the class described, the combination of a diaphragm casing, a diaphragm in said casing, an actuating rod having a reduced inner end, its outer end being adapted to receive a wrench, a diaphragm engaging shoe for said actuating rod provided with a stem arranged to reciprocate in an opening in said casing and having a longitudinal bore receiving the reduced end of said actuating rod, an actuated member pivotally mounted on said casing and operatively connected to said actuating rod, a pair of spring support members, the inner member being threaded upon said actuating rod, said rod being movable through the outer member, supporting rods for the outer support member mounted on said casing, said inner member being slidable on said supporting rods, a coiled spring arranged between said support members, a coiled spring of less strength than the spring arranged between said support members arranged on said actuating rod with its inner end resting upon the outer support member, and an adjusting member for said second spring threaded upon said actuating rod.

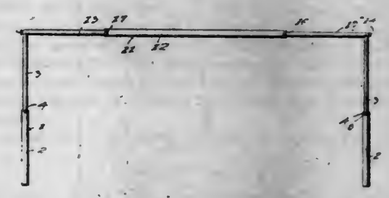
3. In a structure of the class described, the combination of a diaphragm casing, a diaphragm in said casing, an actuating rod having a reduced inner end, its outer end being adapted to receive a wrench, a diaphragm engaging shoe for said actuating rod provided with a stem arranged to reciprocate in an opening in said casing and having a longitudinal bore receiving the reduced end of said actuating rod, an actuated member pivotally mounted on said casing and operatively connected to said actuating rod, a pair of spring support members, the inner member being threaded upon said actuating rod, said rod being movable through the outer member, supporting rods for the outer support member mounted on said casing, said inner member being slidable on said supporting rods, a coiled spring arranged between said support members, said spring being arranged to embrace said supporting rods, a coiled spring of less strength than the spring arranged between said support members arranged on said actuating rod with its inner end resting upon the outer support member, and an adjusting member for said second spring threaded upon said actuating rod.

4. In a structure of the class described, the combination of a diaphragm casing, a diaphragm in said casing, an actuating rod having a reduced inner end, its outer end being adapted to receive a wrench, a diaphragm engaging shoe for said actuating rod provided with a stem arranged to reciprocate in an opening in said casing and having a longitudinal bore receiving the reduced end of said actuating rod, a collar on the reduced end of said actuating rod having a slot at one side thereof, washers above and below the collar, the lower washer being adapted to coact as a stop with said casing, an actuated member pivotally mounted on said casing with one end disposed in said slot in said collar between said washers, a pair of spring support members, the inner member being threaded upon said actuating rod, said rod being movable through the outer member, supporting rods for the outer support member mounted on said casing, said inner member being slidable on said supporting rods, and a coiled spring arranged between said support members.

5. In a structure of the class described, the combination of a diaphragm casing, a diaphragm in said casing, an actuating rod having a reduced inner end, its outer end being adapted to receive a wrench, a diaphragm engaging shoe for said actuating rod provided with a stem arranged to reciprocate in an opening in said casing and having a longitudinal bore receiving the reduced end of said actuating rod, an actuated member pivotally mounted on said casing and operatively connected to said actuating rod, a pair of spring support members, the inner member being threaded upon said actuating rod, said rod being movable through the outer member, supporting rods for the outer support member mounted on said casing, said inner member being slidable on said supporting rods, and a coiled spring arranged between said support members.

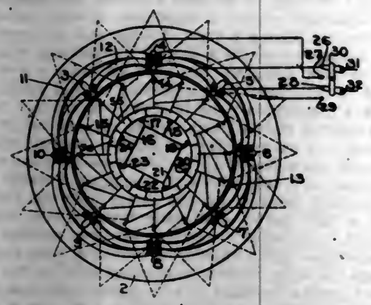
[Claims 6 to 8 not printed in the Gazette.]

1,214,979. COLLAPSIBLE TENT-POLE. PAUL FREDERICK VON AHNEN, Caspar, Cal. Filed Oct. 29, 1915. Serial No. 58,601. (Cl. 135—15.)



A supporting frame for tents comprising a pair of hollow standards having bayonet slots formed adjacent their upper ends, rods adapted to fit into the ends of said standards, pins carried by the rods and adapted to enter the bayonet slots, the ends of the rods opposite those carrying the pins being concave to provide ridge pole seats, pins extending from the ends of the rods and adapted to enter opposite ends of a ridge pole to hold the same in place on the standards, a ridge pole comprising a hollow tubular body, rods adapted to fit into opposite ends of said body, the said body being provided with bayonet slots adjacent its opposite ends, pins on the rods adapted to engage in said bayonet slots to hold the rods in place in the body, the ends of the rods opposite those carrying the pins being provided with transversely extending bores to receive the pins of the first mentioned rods whereby the ridge pole is held in position on the standards, and buttons extending longitudinally from opposite ends of the rods when the device is in assembled position to provide supports for the guy ropes of a tent.

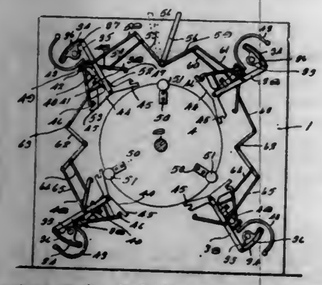
1,214,980. ALTERNATING-CURRENT MOTOR. HANS WECHSAL, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 12, 1915. Serial No. 20,697. (Cl. 172—276.)



1. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a commuted winding having a pitch greater than the pitch of the largest number of stator poles available and smaller than the pitch of the smallest number of stator poles available, and means for short-circuiting the commuted winding to render it inductively responsive to more than one number of stator poles, said means being inoperative at starting.

2. In an alternating current motor, the combination of means for successively producing different numbers of stator poles, a rotor provided with a commuted winding having a pitch greater than the pitch of the largest number of stator poles available and smaller than the pitch of the smallest number of stator poles available, and means for inter-connecting all of the elements of the commuted winding when a desired speed is attained.

1,214,981. ROTARY ENGINE. CHARLES N. WIKANDER, Meskill, Wash. Filed May 16, 1916. Serial No. 97,853. (Cl. 121—54.)



1. A rotary engine including a casing having a circular opening and provided at intervals with inwardly projecting partitions, said casing being provided at opposite sides of the partitions with feed and exhaust passages, a rotary piston arranged in the said opening in spaced relation with the wall thereof, the space between the piston and the casing being divided by the said partitions into a plurality of arcuate steam chambers, a plurality of abutment wheels mounted on the said piston and having projecting blades adapted to be engaged by the said partitions for rotating the abutment wheels, means for controlling the feed of steam to and the exhaust of the same from the arcuate steam chambers, locking devices comprising locking wheels connected with the abutment wheels and provided with recesses corresponding with the blades of the abutment wheels, a spring actuated locking member arranged to engage the said recesses for holding the locking wheels against rotary movement and cams located in the path of the locking members for releasing the locking wheels to permit the abutment wheels to be rotated by the said partitions.

2. A rotary engine including a casing, a rotary piston mounted within the casing, an oscillatory valve for controlling the admission of steam to the piston and the exhaust of steam therefrom and valve gear comprising an arm connected with the valve and having an arcuate slot extending to opposite sides of the valve, a radially arranged slidable member, means shiftable along the slot for connecting the slidable member with the said arm, a spring for moving the slidable member in one direction and means operated by the piston for moving the slidable member in the opposite direction.

3. A rotary engine including a casing, a rotary piston mounted within the casing, an oscillatory valve for controlling the admission of steam to the piston and the exhaust of steam therefrom and valve gear comprising an arm connected with the valve and extending from opposite sides thereof, a radially movable bar or member, means for connecting the bar or member with the said arms, said means being shiftable to opposite sides of the center of the arm, means for yieldably urging the bar or member in one direction, and means actuated by the piston for moving the bar or member in the opposite direction.

4. A rotary engine including a casing, a rotary piston mounted within the casing, an oscillatory valve for controlling the admission of steam to the piston and the exhaust of steam therefrom and valve gear comprising an arm connected at an intermediate point with the valve and extending from opposite sides of the same, a radially movable member, means shiftable from one end of the arm to the other for connecting the said arm to the said member, a pivotally mounted reverse yoke having opposite engaging portions, a lever pivoted at an intermediate point to the slidable member, and provided at opposite sides of its pivot with means for engaging the sides of the yoke whereby the lever is fulcrumed thereon and means carried by the piston for engaging the lever to actuate the sliding member.

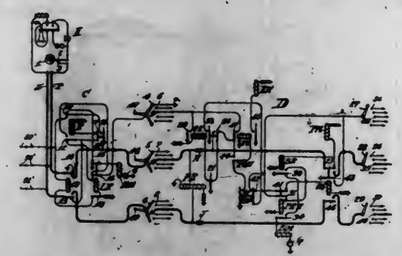
5. A rotary engine including a casing, a rotary piston mounted within the casing, an oscillatory valve for controlling the admission of steam to the piston and the exhaust of steam therefrom and valve gear comprising an arm connected at an intermediate point with the valve and extending from opposite sides of the same, a radially movable member, means shiftable from one end of the arm to the other for connecting the said arm to the said member, a pivotally mounted reverse yoke having opposite engaging portions, a lever pivoted at an intermediate point to the slidable member, and provided at opposite sides of its pivot with means for engaging the sides of the yoke whereby the lever is fulcrumed thereon and means carried by the piston for engaging the lever to actuate the sliding member, and a spring connected with the said member for moving the same in the opposite direction.

[Claims 6 to 8 not printed in the Gazette.]

1,214,982. AUTOMATIC TELEPHONE SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 11, 1910. Serial No. 554,595. (Cl. 179—18.)

1. An automatic telephone system comprising a subscriber's telephone line, a plurality of selector switches, a line switch for said telephone line having access to said plurality of selector switches, a driving magnet for said line switch, an energizing circuit for said driving magnet closed upon the initiation of a call from said telephone line to cause said magnet to operate said switch to connect said telephone line with an idle one of said selectors, means for opening said circuit when said line switch has connected with said idle selector, and means for again closing an energizing circuit for said driving magnet to restore said line switch.

2. An automatic telephone system comprising a subscriber's telephone line, a plurality of selector switches, a line switch for said telephone line having access to said plurality of selector switches, a magnet for said line switch, an energizing circuit for said magnet, closed upon the initiation of a call from said telephone line to cause said magnet to operate said switch off normal to connect said telephone line with an idle one of said selectors, means for opening the said circuit when said line switch has connected with said idle selector, a release relay for said line switch energized upon the first movement of said line switch off normal, and means under the control of the subscriber at said telephone line for deënergizing said relay, whereby the said line switch is restored.



3. An automatic telephone system comprising a subscriber's telephone line, a plurality of selector switches, a line switch for said telephone line having access to said plurality of selector switches, a magnet for said line switch, an energizing circuit for said magnet closed upon the initiation of a call from said telephone line to cause said magnet to operate said switch off normal to connect said telephone line with an idle one of said selectors, means for opening the said circuit when said line switch has connected with said idle selector, a release relay for said line switch energized upon the first movement of said line switch off normal, and means under the control of the subscriber at said telephone for deënergizing said relay, whereby the said magnet is again operated to restore said switch.

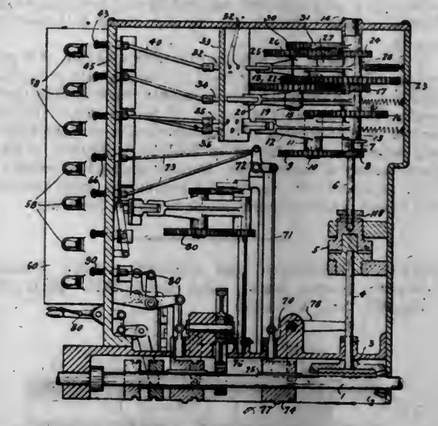
4. A telephone system comprising a plurality of subscribers' telephone lines, including a calling line, a plurality of selector switches less in number than the number of telephone lines, a plurality of line switches, one connected to each line, the line switch connected to said calling line being adapted to automatically connect said line to one of said idle selector switches, a primary relay for said selector switch for controlling the primary movement thereof, a secondary relay for said selector relatively slow to release its armature, a third relay for said selector relatively slow to release its armature, a release relay for said line switch, a release relay for said selector, and means under the control of said third relay to affect said release relays, whereby their associated switches are restored.

5. An automatic telephone system comprising a telephone line, first selector switches, a line switch individual to said line for automatically connecting said line with an idle one of said first selector switches, a second selector and a connector switch, a quick releasing relay for said first selector for controlling the primary adjustment of said selector and connector switches, and a slow releasing relay for each of said selector and connector switches for controlling the secondary adjustment thereof.

[Claims 6 to 16 not printed in the Gazette.]

1,214,983. METAL-WORKING MACHINE. EDWARD V. WURTS, Pittsburgh, Pa., assignor to Steel Utilities, Incorporated, a Corporation of New York. Filed Jan. 28, 1914. Serial No. 814,890. (Cl. 164—113.)

1. A machine for operating upon structural shapes including in combination tool equipped means, means for traveling and positioning a shape relatively to said tool equipped means to be operated upon thereby, said means including settable distance devices and coöperating devices for preventing erroneous positioning of the shape relatively to the tool equipped means.



2. A machine for operating upon structural shapes including in combination tool equipped means, means for traveling and positioning a shape relatively to said tool equipped means to be operated upon thereby, said means including devices for preventing erroneous positioning of the shape relatively to the tool equipped means, and an error indicating signal coöperating therewith.

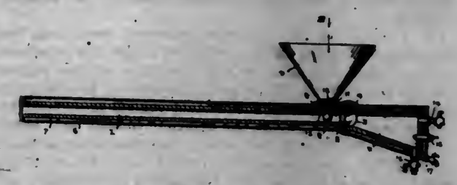
3. A machine for operating upon structural shapes including in combination tool equipped means, means for traveling and positioning a shape relatively to said tool equipped means to be operated upon thereby, said means including devices for preventing erroneous positioning of the shape relatively to the tool equipped means, and a sensory error indicating signal coöperating therewith.

4. A machine for operating upon structural shapes including in combination tool equipped means, means for traveling and positioning a shape relatively to said tool equipped means, said means including settable distance determining devices and devices coöperating therewith for preventing erroneous positioning of a shape relatively to said tool equipped means.

5. A machine for operating upon structural shapes including in combination tool equipped means, means for traveling and positioning a shape relatively to said tool equipped means, said means including distance determining devices and devices coöperating therewith for preventing erroneous positioning of a shape relatively to said tool equipped means, and error indicating means coöperating therewith.

[Claims 6 to 52 not printed in the Gazette.]

1,214,984. FIREARM. HARLEY D. APPS and LEWIS S. LOW, Dolph, Mich. Filed Apr. 11, 1916, Serial No. 90,499. Renewed Dec. 1, 1916. Serial No. 134,501. (Cl. 89—7.)



1. In a firearm, the combination with a barrel, of a projection extending laterally from the barrel, said projection having a longitudinally extending slot therethrough, a slide block mounted in said slot, said slide block having a vertical bore, and a projectile containing a hopper positioned on said extension and at one side of the barrel, said

hopper having an opening communicating with the bore in the slide block, whereby when the slide block is moved outwardly a projectile will descend in said bore and be deposited in said barrel when the slide block is moved inwardly.

2. In a firearm, the combination with a barrel, of a projection extending laterally from the barrel, said projection having a longitudinally extending slot therethrough intersecting the bore of the barrel, a frusto conical hopper carried by that portion of the projection beyond the barrel, said hopper being adapted to contain projectiles, a slide block having a vertical bore therein adapted to receive a projectile from the hopper, and convey the same into the said barrel when the slide block is moved inwardly.

1,214,985. COUPLING OR CLUTCH. JOHN WESLEY BARBER, Newton, Mass. Filed Dec. 2, 1912. Serial No. 734,491. (Cl. 189—36.)



1. A device of the character described consisting of two members, one having a cone-surfaced portion fitting within a surrounding cone-surfaced portion of the other, each member having a cylindrical bore in substantial alinement, and having the axes of said cone-surfaced portions eccentric to the axes of said cylindrical bores.

2. A coupling consisting of two members, one having a cone-surfaced portion fitting within a surrounding cone-surfaced portion of the other, each member having a cylindrical bore in substantial alinement, and having the axes of said cone-surfaced portions eccentric to the axes of said cylindrical bores, means being provided to prevent relative rotation of the coupling members.

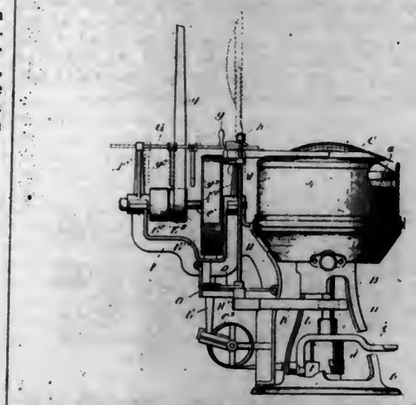
3. A coupling consisting of two members, one having a cone-surfaced portion fitting within a surrounding cone-surfaced portion of the other, each member having a cylindrical bore in substantial alinement, and having the axes of said cone-surfaced portions eccentric to the axes of said cylindrical bores, in combination with a cylindrical member inside the coupling, means being provided to prevent rotation of the coupling members relatively to said cylindrical member.

4. A device of the character described comprising two pipe members and a third member to couple the pipe members together, one pipe member having a conical portion and an annular rib, the second pipe member having an internal face corresponding with said conical portion of the first member and having an external conical face eccentric to the said inner face, the coupling member having a bearing face and a shoulder to coact with the rib of the first mentioned pipe member and having an internal conical face to coact with the external conical face of the second pipe member, the said bearing face being eccentric to the axis of the internal conical face of the coupling member.

5. A device of the character described comprising two pipe members and a third member to couple the pipe members together, one pipe member having a conical portion and an annular rib, the second pipe member having an internal face corresponding with said conical portion of the first member and having an external conical face eccentric to the said inner face, the coupling member having a bearing face and a shoulder to coact with the rib of the first mentioned pipe member and having an internal conical face to coact with the external conical face of the second pipe member, the said bearing face being eccentric to the axis of the internal conical face of the coupling member, means being provided to bear against one end of the coupling member to steady it in its rotative movements.

[Claim 6 not printed in the Gazette.]

1,214,986. SAFETY DEVICE FOR CENTRIFUGAL EXTRACTORS. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Company, Ltd., Chicago, Ill., a Corporation of New York. Filed Feb. 18, 1913. Serial No. 749,138. (Cl. 74—46.)



1. In a centrifugal extractor, the combination with a rotary basket, a casing within which the basket is inclosed, a cover for said casing, means for rotating said basket, a manually operative latch for locking said cover closed, a plurality of projections rotated by said means for rotating the basket, and a movable member connected with said latch and extending in the path of rotation of said projections when the latch is in unlocked position, whereby the operation of said latch to unlock the cover is prevented during the rotation of said basket.

2. In a centrifugal extractor, the combination with a rotary basket, a casing within which the basket is inclosed, a cover for said casing, means for rotating said basket, a latch for automatically locking said cover closed, means for manually operating said latch to unlock the cover, a plurality of projections rotated by said means for rotating the basket, and a movable member connected with said latch and extending in the path of rotation of said projections when the latch is in unlocked position, whereby the operation of said latch to unlock the cover is prevented during the rotation of said basket.

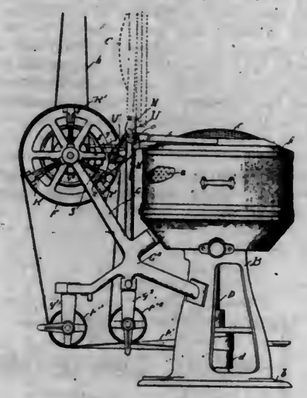
3. In a centrifugal extractor, the combination with a rotary basket, a casing within which said basket is inclosed, a cover for said casing, power transmitting mechanism for rotating said basket, a latch automatically locking said cover closed, means for manually operating said latch to unlock the cover, a plurality of projections rotated by said power transmitting mechanism, a movable member connected with said latch and extending into the path of rotation of said projections when the latch is in unlocked position, whereby the operation of said latch to unlock the cover during the rotation of the basket is prevented.

4. In a centrifugal extractor, the combination with a rotary basket, a casing within which said basket is inclosed, a cover for said casing, a spindle on which said basket is supported and by which it is rotated, means for rotating said spindle, a latch for automatically locking said cover when closed in closed position, means for manually operating said latch to unlock the cover, and mechanism for preventing the actuation of said manual means to unlock the cover comprising a member projecting eccentrically from and rigidly connected with said spindle below said basket.

5. In a centrifugal extractor, the combination with a rotary basket, a casing within which said basket is inclosed, a cover for said casing, power transmitting mechanism for rotating said basket, a latch for locking said cover closed, a lever operatively connected with said latch for controlling the movement thereof, and a plurality of elements actuated by the power transmitting mechanism and having a path of movement intersecting the path of said lever, whereby the movement of said lever necessary to permit the disengagement of the latch from the cover is prevented during the rotation of the basket.

[Claims 6 to 12 not printed in the Gazette.]

1,214,987. SAFETY DEVICE FOR CENTRIFUGAL EXTRACTORS. WILLIAM BARTHOLOMEW and JAMES F. BRODERICK, Chicago, Ill., assignors to Troy Laundry Machinery Company, Ltd., Chicago, Ill., a Corporation of New York. Filed Feb. 18, 1913. Serial No. 749,139. (Cl. 74—46.)



1. In a centrifugal extractor, the combination with a rotary basket, a belt for rotating said basket, a driving pulley engaging said belt, a cover for said basket, a lock for retaining said cover closed, and a movable member connected to said lock for controlling the movement thereof, said means when the cover is closed extending into the path of movement of elements carried by said driving pulley and prevented by successive contacts of said elements therewith from being moved into position to disengage the bolt from the cover.

2. In a centrifugal extractor, the combination with a rotary basket, of a belt for rotating said basket, a driving pulley engaging said belt, a cover for said basket, a bolt for locking said cover in closed position, and means controlled by said driving pulley and operatively connected with said bolt for preventing the disengagement thereof from the cover during the rotation of said pulley.

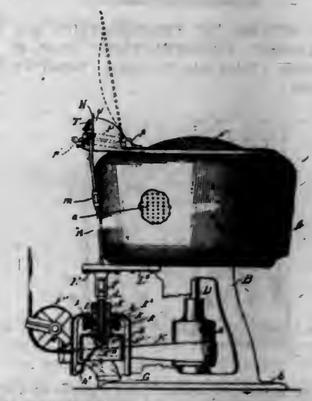
3. In a centrifugal extractor, the combination with a rotary basket, of a casing within which said basket is inclosed, a cover pivotally mounted on the casing, a belt for rotating said basket, a driving pulley engaging said belt, a reciprocating bolt supported upon said casing and adapted to lock said cover in closed position, and means controlled by said driving pulley for preventing the disengagement of said bolt from the cover during the rotation of said pulley.

4. In a centrifugal extractor, the combination with a rotary basket, of a cover for closing said basket, a belt for rotating said basket, a driving pulley engaging said belt, a bolt for locking said cover closed, a bell crank lever operatively connected with said bolt, and means controlled by said driving pulley for preventing the movement of said bell crank lever to disengage said bolt from the cover during the rotation of said driving pulley.

5. In a centrifugal extractor, the combination with a rotary basket, of a casing inclosing said basket, a cover pivotally mounted on said casing, a bolt for locking said cover closed, a belt for rotating said basket, a driving pulley engaging said belt, a bell crank lever pivotally mounted on said casing and operatively connected to said bolt, a reciprocating rod connected with said bell crank lever, and means controlled by said driving pulley for obstructing the movement of said rod and thereby preventing said bell crank lever being moved to unlock the cover.

[Claims 6 to 10 not printed in the Gazette.]

1,214,988. SAFETY-GUARD FOR CENTRIFUGAL EXTRACTORS. WILLIAM BARTHOLOMEW, JAMES F. BRODERICK, and FRITZ BALZER, Chicago, Ill., assignors to Troy Laundry Machinery Company, Ltd., Chicago, Ill., a Corporation of New York. Filed Feb. 18, 1913. Serial No. 749,141. (Cl. 74—46.)



1. In a centrifugal extractor, the combination with a rotary member, of a safety guard for said member, manually operable locking mechanism for retaining said guard in closed position, an element controlling the operation of said locking mechanism, and a stop actuated by centrifugal action to prevent the movement of said element necessary to permit the unlocking of said guard during the rotation of said member.

2. In a centrifugal extractor, the combination with a rotary basket, of a cover for closing said basket, means for rotating said basket, locking mechanism operable when said cover is closed for retaining said cover in closed position, an element controlling the operation of said locking mechanism, and a stop actuated by centrifugal action to prevent the movement of said element necessary to permit the unlocking of said cover during the rotation of said basket.

3. In a centrifugal extractor, the combination with a rotary member, of a safety guard for said member, locking mechanism for retaining said guard in closed position, an element connected to and controlling the operation of said locking mechanism, an oscillatory stop controlling the movement of said element, a weight connected with said stop for oscillating the same into a position to permit the movement of said element necessary to unlock said guard, and means for subjecting said weight to centrifugal action during the rotation of said member and thereby oscillating said stop into position to prevent the movement of said element necessary to permit the unlocking of said guard.

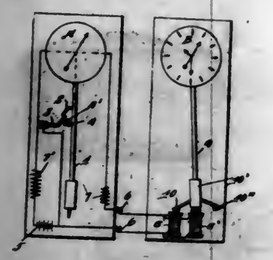
4. In a centrifugal extractor, the combination with a rotary basket, of a cover for closing said basket, means for rotating said basket, locking mechanism for retaining said cover in closed position, a rod connected to and controlling the operation of said locking mechanism, an oscillatory stop controlling the movement of said rod in a direction to permit the operation of said locking mechanism to unlock the cover, a weight connected to said stop for oscillating the same, and means for subjecting said weight to centrifugal action during the rotation of said basket and thereby oscillating said stop into position to prevent the movement of said rod necessary to permit the unlocking of said basket.

5. In a centrifugal extractor, the combination with a rotary member, of a safety guard for said member, locking

mechanism for retaining said guard in closed position, a vertical reciprocatory rod connected to and controlling the operation of said locking mechanism, a belt for rotating said member, a pulley having a vertical axis engaging said belt and rotating simultaneously with said member, a weight pivotally mounted on said pulley eccentric to its axis of rotation, and a stop actuated by said weight to prevent the movement of said rod necessary to permit the operation of said locking mechanism to unlock said guard during the rotation of said member.

[Claims 6 to 13 not printed in the Gazette.]

1,214,989. AUTOMATIC TELEGRAPHIC OR RADIO-TELEGRAPHIC TRANSMITTER. EDOUARD BELIN, Paris, France. Filed Mar. 12, 1914. Serial No. 824,244. (Cl. 58—33.)



1. An apparatus for transmitting signals at any desired moment by telegraphy, comprising in combination a clock, a contact adapted to be actuated by said clock at a predetermined instant, a cylinder adapted to rotate and having cam shaped surfaces which represent signals, a tracing point in contact with said cylinder and adapted to be actuated by said cam surfaces, said tracing point being adapted to control the transmission of signals, and electromagnetic means for holding the said cylinder adapted to release said cylinder when said contact of said clock is actuated.

2. An apparatus for transmitting signals at any desired moment by telegraphy, comprising in combination a clock, a contact adapted to be actuated by said clock at a predetermined instant, a cylinder adapted to rotate and provided with cam shaped surfaces in a helicoidal path on said cylinder, a tracing point in contact with said cylinder and adapted to be actuated by said cam surfaces, said tracing point being adapted to control the emission of signals, electromagnetic means for holding said cylinder adapted to release said cylinder when said contact of said clock is actuated, and means to provide a longitudinal displacement of said cylinder and said tracing point relative to each other, in order that said tracing point may follow said helicoidal path.

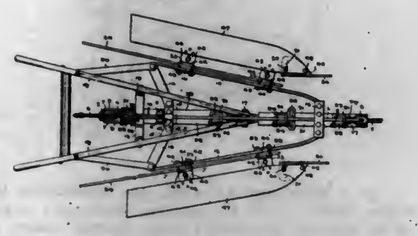
3. An apparatus for transmitting signals at any desired moment by telegraphy, comprising in combination a clock, a contact adapted to be actuated by said clock at a predetermined instant, a cylinder adapted to rotate and having cam shaped surfaces which represent signals, a tracing point in contact with said cylinder and adapted to be actuated by said cam surfaces, said tracing point being adapted to control the transmission of signals, a pawl and ratchet device adapted to hold said cylinder, and an electromagnet adapted to release said device and allow the cylinder to rotate.

4. An apparatus for transmitting signals at any desired moment by telegraphy, comprising in combination a clock, a contact adapted to be actuated by said clock at a predetermined instant, a cylinder provided with cam shaped surfaces in a helicoidal path on its surface, a shaft having one portion threaded and the other portion provided with a key-way on which the cylinder is fixed, said cylinder being adapted to rotate with said shaft and to be displaced longitudinally relative to said shaft, a gravity motor for rotating said shaft and actuating said cylinder, guides to direct said cylinder in a path parallel to its axis, and a tracing point adapted to be actuated by said cam surfaces on said cylinder and to control the transmission of signals.

5. An apparatus for transmitting signals at any desired moment by telegraphy, comprising in combination a clock, a contact adapted to be actuated by said clock at a predetermined instant, a cylinder provided with cam surfaces in a helicoidal path on its surface, a shaft having one portion threaded and the other portion provided with a key-way on which the cylinder is fixed, said cylinder being adapted to rotate with said shaft and to be displaced longitudinally relative to said shaft, a gravity motor for rotating said shaft and actuating said cylinder, guides to direct said cylinder in a path parallel to its axis, a tracing point adapted to be actuated by said cam surfaces on said cylinder and to control the transmission of signals, and means to electrically wind up said gravity motor and to return said cylinder to its original position.

[Claims 6 to 11 not printed in the Gazette.]

1,214,990. HARVESTER. WILLIAM A. BIRDSELL, Sr., Ravenna, Mich. Filed June 13, 1916. Serial No. 103,444. (Cl. 56—1.)



1. A device for harvesting beans and the like, comprising a main frame, means for adjusting the width of the main frame at will, vertically adjustable supporting means upon the sides of the main frame, and a knife adjustably mounted upon each side of the main frame upon the said supporting means.

2. A device for harvesting beans and the like, comprising a main frame, means for adjusting the width of the main frame at will, vertically adjustable standards upon the sides of said main frame, and a knife arranged on each side of the main frame and supported on said standards, each knife having pivotal adjustment on an axis parallel to the ground.

3. A device for harvesting beans and the like, comprising a main frame, means for adjusting the width of the main frame at will, a cutting knife carried by each side of the said frame, and an upwardly inclined guard adjustably attached to the forward end of each knife blade.

4. A device for harvesting beans and the like, comprising a main frame, means for adjusting the width of the main frame at will, a cutting knife carried by each side of said frame, and a guard pivotally mounted on the forward end of each blade and adjustable in a plane parallel to the blade.

5. A device for harvesting beans and the like, comprising a main frame provided with a center bar and laterally swingingly adjustable side bars, means for actuating said side bars for varying the width of said main frame, means adjustably mounted upon said center bar adapted to penetrate into the ground for preventing the lateral displacement of the device during the harvesting operations, means for regulating the depth of said penetrating means, means for laterally adjusting certain of said penetrating means for maintaining the device in the true line of draft when desired, and severing and delivering members carried by said side bars.

[Claims 6 to 10 not printed in the Gazette.]

1,214,991. PRODUCTION OF ALUMINA AND POTASSIUM SULFATE FROM ALUNITE. EARL BLOUGH and THOMAS MCINTOSH, Pittsburgh, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 1, 1916. Serial No. 75,490. (Cl. 23—13.)

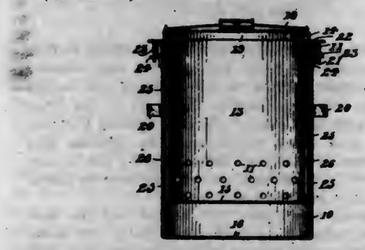
1. The process of treating alunite, comprising mixing the alunite with common salt, heating the mixture whereby the salt is decomposed, dissolving out sodium sulfate and potassium sulfate from the reaction product separating the latter sulfate from the solution, heating together sodium sulfate thus obtained and the residue from the solution, whereby the sodium sulfate is broken up, and from the residue of the latter heating dissolving out alumina as sodium aluminate.

2. The process of treating alunite for the purpose described, comprising mixing together finely divided alunite and common salt, sintering the mixture to decompose the salt with evolution of hydrochloric acid gas, dissolving out sodium sulfate and potassium sulfate from the sinter, recovering the potassium sulfate from the solution, mixing and heating sodium sulfate thus obtained and the residue left from dissolving out the sulfates mentioned whereby the sodium sulfate is decomposed and sulfur oxids are evolved, collecting the latter, and treating the residue of the last-mentioned heating with water to dissolve out alumina as sodium aluminate.

3. In a process of treating alunite, the steps comprising mixing the alunite with common salt, heating the mixture whereby the salt is broken up and sodium and potassium sulfate formed, and dissolving out sodium sulfate and potassium sulfate from the solid residue.

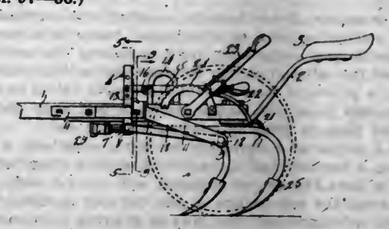
4. The process of treating alunite, comprising heating the same with an alkali-metal chlorid sufficiently to decompose the latter, leaching from the reaction product the soluble alkali-metal sulfates contained therein, heating the leached residue with an alkali-metal sulfate to form a soluble alkali-metal aluminate, and dissolving out the latter.

1,214,992. CULINARY BOILER. NORINE BOLERATZ, Detroit, Mich. Filed Mar. 15, 1916. Serial No. 84,388. (Cl. 53—1.)



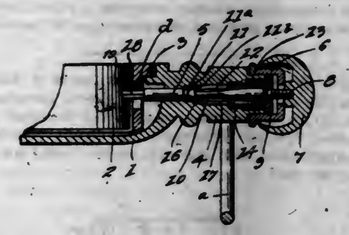
A culinary boiler comprising a receptacle having laterally extending flat lugs secured thereto upon opposite sides and near the top thereof, a ring member of T-shape in cross-section adapted to rest upon the upper edge of said receptacle, the vertical flange of said ring member being adapted to embrace the outer upper portion of said receptacle and the horizontal portion thereof having a smaller internal diameter than said receptacle and provided with opposite notches in the inner edge thereof, opposite depending flat hooks secured to the outer face of said vertical flange and adapted for engagement with said laterally extending lugs, a second receptacle adapted to be placed within said first mentioned receptacle having an external diameter substantially equal to the internal diameter of the horizontal portion of said ring member and having a bead around the top edge thereof adapted to rest upon said horizontal portion of said ring member and support the second receptacle within the first mentioned receptacle with the bottoms of said receptacles in spaced relation, said second receptacle being provided with perforations in the sides and near the bottom thereof, opposite vertical flat strips secured to said second receptacle and provided with horizontal interruptions at points even with the uppermost of said perforations, said strips being of a form and size in cross-section similar to the form and size of said notches and the unnotched portions of said horizontal portion of said ring member being adapted to engage in said interruptions or slots of said strips to hold said second receptacle in elevated position with the perforated portion of said second receptacle below the top edge of said first mentioned receptacle.

1,214,993. PLOW. WILLIAM H. BONKEMEYER, Randleman, N. C. Filed Apr. 14, 1916. Serial No. 91,186. (Cl. 97—36.)



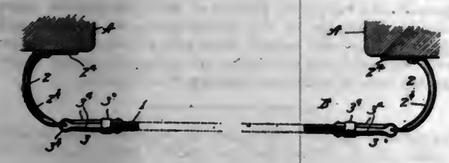
A plow of the class described comprising a tongue, a vertical frame having its side bars slidably engaging the sides of the tongue, an arched axle having its bight portion pivotally connected to the frame, a hand adjusting lever pivotally supported by the tongue and pivotally connected to the frame, shovel supporting beams pivotally connected at their forward ends to the bight portion of the axle, means connected to the tongue for raising and lowering the beams, bars having their forward ends rigidly connected to the tongue, and having their rear ends pivotally connected to the axle, and draft means connected to the bight portion of the axle.

1,214,994. STEM FOR SWING-RING WATCHCASES. EDWARD M. BOSCH, Winnemucca, Nev. Filed Oct. 6, 1914. Serial No. 865,364. (Cl. 58—95.)



A watch including a case provided at its top portion with a bearing, a movement carrying ring hinged to the top of the case and provided with an opening registering with the socket of the setting arbor of said movement, a notch engaging sleeve carried by the bearing, a stem slidably and rotatably mounted in the bearing and passing through said sleeve, and a crown secured to the outer end of said stem, said stem being provided with a squared inner end passing through said opening into said setting arbor and with setting and winding notches, said stem having a third notch located between said second notch and the free end of said squared portion and said third notch being so spaced from the free end of said squared portion, that when the stem is pulled outwardly to bring the said third notch into engagement with the said sleeve, the squared portion will not be fully withdrawn but will be sufficiently withdrawn from said setting arbor to permit the movement ring to be swung into opened position.

1,214,995. CURTAIN-ROD. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 21, 1915. Serial No. 57,128. (Cl. 156—19.)



1. In means of the character set forth, the combination of a coil-spring, and an attachment device in alinement therewith and comprising arms embracing the end portion of the coil and having inturned extremities conforming to a groove of the coil, said arms being united at their outer ends by an eye, and a sleeve on said arms serving to hold them in gripping relation with the coil.

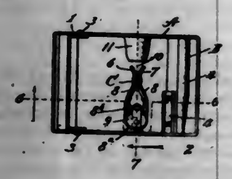
2. A device of a character set forth comprising a coil spring, a bracket, and a connecting member comprising a pair of jaws and an eye engaging said bracket, said jaws embracing the end portion of the coil and equipped with a slide serving to hold the jaws in gripping relation with the end portion of the coil.

3. A device of the character set forth comprising a coil, a bracket, and a connecting member having an eye portion engaging the bracket and arms embracing an end portion of the coil, one of said arms having an inwardly projecting stop limiting the insertion of the coil, and a sleeve embracing said arms and holding the extremities in gripping engagement with the coil.

4. A device of the character set forth comprising a coil spring, a bracket, and a connecting member comprising an eye engaging the bracket and arms having inturned extremities shaped to conform to a groove of the coil, and a sleeve on said arms serving to hold the arms in gripping relation with the coil.

5. A device of the character set forth comprising a pair of brackets provided with eyes, a coil spring, and connecting members joining the extremities of the coil spring to said brackets, each connecting member comprising an eye engaging the eye of the corresponding bracket, and arms embracing the adjacent extremities of the coil, the arms of each connecting member carrying a sleeve serving to hold the arms in gripping engagement with the coil.

1,214,996. PENCIL-SHARPENER. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 20, 1915, Serial No. 56,924. Divided and this application filed Mar. 31, 1916. Serial No. 87,933. (Cl. 120—89.)



1. A pencil sharpener comprising a container-holder having an opening in one wall and a registering guide projecting inwardly from said wall, and a pair of spring-held opposed file-members, located in said container-holder and having separated extremities disposed in alinement with said guide.

2. A pencil sharpener comprising a container-holder, a pair of spring-arms carried thereby, a pair of opposed file-members confined between said spring-arms and having oppositely turned extremities affording a space between them, and a taper guide-member carried by one wall of said casing, and having its inner end in alinement with the space between said file-members.

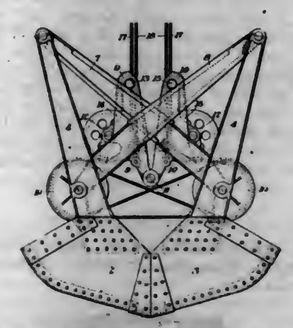
3. A pencil sharpener comprising a container-holder having one wall provided with a perforation and equipped with a tapering guide, a pair of opposed file-members having diverging extremities affording between them a space in alinement with said guide, a pair of spring-arms carrying said file-members, and means securing said spring-arms to a wall of said container-holder.

4. A pencil sharpener comprising a holder, a pair of opposed file-members, spring-arms between which said file-members are confined, and a tapering pencil guide carried by said holder and disposed in alinement with the space between said file-members.

5. A sharpening device comprising a holder element, a pair of spring-arms carried thereby, a pair of file-members having opposed concavo-convex portions and diverging extremities, said file-members carried by said spring-arms and having smooth adjacent surfaces at their extremities, and a tapering pencil guide carried by said holder and disposed in alinement with the space between said file-members.

[Claim 6 not printed in the Gazette.]

1,214,997. GRAB-BUCKET. EDGAR E. BROSIUS, Pittsburgh, Pa. Filed Apr. 5, 1916. Serial No. 89,052. (Cl. 37—30.)



1. A grab bucket comprising two bucket sections having upwardly extending long lever arms, and a link member connecting the upper portion of the arms of one bucket section with the lower portions of the arms of the other bucket section, said link members having guiding portions coacting with each other throughout the opening and closing movements of said sections to thereby act to mutually restrain the sections against relative endwise movement, substantially as described.

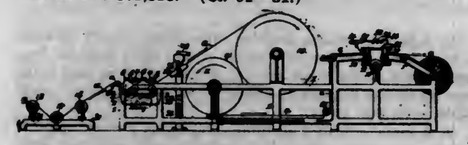
2. A grab bucket comprising two bucket sections having upwardly extending long lever arms, and a link member connecting the upper portion of the arms of one bucket section with the lower portions of the arms of the other bucket section, one of said link members passing through a slotted opening in the other link member and said link members exerting a guiding and restraining action each upon the other to prevent relative endwise movement of the bucket sections, substantially as described.

3. A grab bucket comprising two bucket sections having upwardly extending long lever arms, and a link member connecting the upper portion of the arms of one bucket section with the lower portions of the arms of the other bucket section, said link members having mutually engaging guiding surfaces and each link member acting upon the other to restrain relative endwise movement of the bucket sections, substantially as described.

4. A grab bucket comprising two bucket sections each of which has upwardly extending lever arms, a link member connecting the upper portion of each pair of arms with the lower portion of the arms of the other bucket section, each of said link members having a projection and an opening lever attached to said projection, one of said link members being slotted to receive therethrough the other link member and its projection, and the last named link member being also slotted to receive therethrough the projection of the first named link member, substantially as described.

5. A grab bucket comprising two bucket sections each having a pair of upwardly extending long lever arms, diagonal intersecting links, each of said links connecting the upper portion of one pair of lever arms with the lower portion of the other pair of lever arms, a pair of opening levers pivotally connected to each other and each carrying a sheave, a double sheave mounted on each pair of lever arms, an opening line connected to each of the opening members, and a closing line or cable passing under the sheaves on the opening members and having a double pass around said double sheaves, substantially as described.

1,214,998. YARN-SIZING MACHINE. BRITTON E. BYRD, Durham, N. C., assignor, by mesne assignments, to Mill Devices Company, Lyon Park, near Durham, N. C., a Corporation of North Carolina. Filed Nov. 10, 1914. Serial No. 871,318. (Cl. 91—31.)



1. In a yarn sizing machine, the combination with the sizing tank, the sizing roller, the squeezing rolls, the means for drawing the yarn through the said rolls and a tension device to hold the yarn from backward movement; of a mechanism for raising the said sizing roller from immersion and advancing the yarn between the sizing roller and the squeezing rolls a sufficient distance to squeeze out the surplus sizing substance from the yarn, the said last named mechanism comprising standards, said standards including vertically extensible members, side arms rockably mounted on the standards, transverse guide rollers mounted on the ends of the said side arms and over which the threads pass, a weighted tension element movable vertically between the said standards, and including a transverse member adapted for passing down between the thread guide rollers when the tension element is lowered, and means for lifting the tension element and supporting it with its transverse yarn engaging member raised above the said yarn.

2. In a yarn sizing machine, the combination with the sizing tank, the sizing roller, the squeezing rolls, the means for drawing the yarn through the rolls and a tension device to hold the yarn from backward movement; of a mechanism for raising the said sizing roller from immersion and advancing the yarn between the sizing roller and squeezing rolls a sufficient distance to squeeze out the surplus sizing substance from the yarn, the said mechanism comprising standards that include upper extensible sections, each of which has a groove extending the full length thereof, rocker arms pivotally mounted on the said standard sections, transverse guide rollers journaled in the ends of the rocker arms for engaging the yarn threads, a weighted extension element mounted on the standards and having vertical movement between the standards, the said element including members slidable in the grooves of the standards, a cross bar journaled between the said slidable members and adapted when the members are moved downwardly to engage the yarn threads and carry them down in a loop form between the transverse guide rollers on the rockable arms, lifting members hingedly connected to the upper ends of the said slidable members and adapted for being swung over the upper ends of the standards to hold the said slidable members and the cross member when the latter is elevated above the yarn threads.

3. A slack take-up mechanism for yarn sizing machines comprising a pair of oppositely disposed standards each consisting of a lower and fixedly held portion, and an upper portion vertically adjustable upon the said lower portion, the said upper portions of the standards having a continuous groove on the inner face thereof and a series of vertically disposed apertures in the upper ends thereof, a cross arm for each of the upper sections, a pivotal connection that joins the said arms with the said upper sections, transverse guide rollers, a pair of oppositely disposed slide bars mounted in the grooves of the said upper sections, a transverse presser member secured to the slidable bars and adapted, when the yarn is passing over the transverse guide rollers for being moved down between the said rollers to form a loop and draw the threads between the squeezing rolls and a lifting member slidably connected to the slide bars and adapted when the bars are lifted to swing over the upper ends of the standards to hold the slide bars up and to swing into alinement with the slide bars to move with the said bars in the standard grooves.

4. In a sizing machine of the class described, the combination of a sizing tank, a sizing roller movable vertically in the tank, a drying cylinder, squeeze rollers disposed in the line of feed of the threads between the said squeezing roller and the drying cylinder, guide standards arranged in the line of feed of the threads between the squeeze rolls and the drying cylinder, side arms rockably mounted on the guide standards, transverse guide members over which the threads pass, the said guide members being journaled in the ends of the rockably mounted arms, and a weighted tension element that includes means for engaging the standards to normally hold the said element out of contact with the threads, the said element being adapted when released to travel on the side standards down between the aforesaid transverse guide members to carry the threads below the said guide members to form a bight or loop in the yarns and tension the same to raise the sizing roller and cause the yarns to pass between the squeeze rolls.

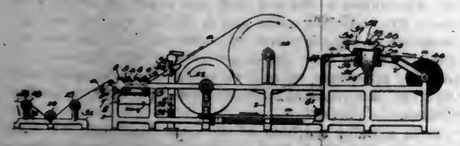
5. In a yarn sizing machine of the character stated; the combination with the sizing rollers and means for drawing the yarn through the rolls and other means for holding the yarn from backward movement; of a mechanism for raising the said sizing roller from immersion and advancing the yarn between the sizing roller and the squeezing rollers a sufficient distance to squeeze out the surplus sizing substance from the yarn, the said mechanism comprising a pair of oppositely disposed standards, each of which includes an upper extensible section having a vertical groove that extends the full length thereof, a pair of rocker arms pivotally and adjustably mounted on the said extensible standard members, transverse yarn guide rollers journaled in the opposite ends of the said rocker arms, a weighted extension element mounted on the grooved standard members, the said element including members slidable in the groove of the said standard members, and weighted arms hingedly journaled with the members that slidably engage the aforesaid grooved standards and are adapted to be extended in alinement with the said slidable members when it is desired to lower the weighted extension element to take up the slack in the yarn, and adapted to be swung out at right angles to the said slidable members to rest upon the upper ends of the grooved standard sections to thereby hold the weighted member from dropping down between the said standards

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1,214,999. TENSION DEVICE FOR YARN-SIZING MACHINES. BRITTON E. BYRD, Durham, N. C., assignor, by mesne assignments, to Mill Devices Company, Lyon Park, near Durham, N. C., a Corporation of North Carolina. Original application filed Nov. 10, 1914, Serial No. 871,318. Divided and this application filed Feb. 11, 1916. Serial No. 77,601. (Cl. 28—7.)

1. In a yarn sizing machine of the character described, the combination with guides for the sized yarn and the loom beam on which the yarn is wound; of a tension device for the yarn located between the said guides and the loom beam, the said device including a pair of transverse

tension rollers, slotted guides on the opposite sides of the machine frame in which the ends of the said tension rollers are guided, a stationary roller located below and between the pair of tension rollers, under which pass the yarns that extend over the pairs of tension rollers, a lifter device for each end of the pairs of trunnion rollers, each of the said lifter devices including a lever pivotally connected with each lifter device and fulcrumed on fixed bearings on the opposite side frames, the fulcrum ends of the levers and their respective lifter devices having interlocking portions for holding the said lifter devices and the movable tension rollers to the elevated position.

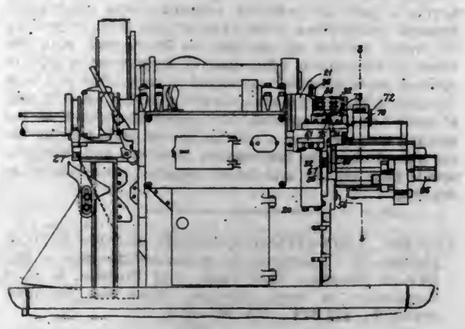


2. A tension means for yarn sizing machines, of the character stated, comprising in combination with opposite side portions of the main frame of the machine; a fixedly held transverse guide roller under which the yarns pass, a pair of loosely held transverse tension rollers, one at each side of the fixed roller, and over which the yarns pass, a lifter device for each end of the pair of transverse tension rollers, said lifter devices each including a cross bar that extends under the transverse tension rollers, and an upright arm, said arms being pivotally connected at their lower ends with their respective cross bars, each of said arms having a lock notch in one edge, a lever for each of the lifter arms, each of said levers being fulcrumed at the lower end and provided with a lug that forms the pivotal connection for the upper end of the lifter arms, said levers also each having a lateral lug for interlocking with the notches in their respective lifter arms when said arms and the tension rollers are elevated to apply tension to the yarns.

3. In a machine of the character described, the combination with the opposite portions of the main frame; of a tension means for the yarn comprising a pair of oppositely disposed housings, adjustable clamping means cooperating therewith for securing the same to the side portions of the main frame, a main tension roller that extends transversely between and is journaled in the side portions of the framing under which the yarns or threads pass, a hanger pivotally supported on each housing, a lifter bar adjustably connected to the lower end of each of the said hangers, a pair of transverse tension rollers whose ends are loosely supported upon the oppositely disposed lifter bars, the said rollers being located above and one at each side of the fixedly held roller, a lever device cooperating with each hanger for raising it and the lifter bar, and means coöperating with each lever for locking it when shifted to raise the hanger.

4. In a machine of the character described, the combination with the opposite portions of the main frame; of a tension means for the yarn that consists of a pair of oppositely disposed housings, adjustable clamping means coöperating therewith for securing the said housings to the side portions of the main frame, a main tension roller that extends transversely between and is journaled in the side portions of the framing under which the yarns pass, a hanger arm supported on each housing, a lifter bar adjustably connected to the lower end of each of the hanger arms, a pair of transverse tension rollers whose ends are loosely supported upon the oppositely disposed lifter bars, said rollers being located above and one to each side of the fixedly held roller, a lever device adjustably mounted one on each housing on the opposite sides of the main frame, said lever devices coöperating with their respective hanger arms for raising such arms and the lifter bar, and means for interlocking the said levers and their respective hanger arms when the latter are raised to hold the loosely mounted tension rollers at their elevated position.

1,215,000. METAL-WORKING MACHINE. FRANK L. CONE, Windsor, Vt., assignor, by mesne assignments, to The National-Acme Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 23, 1915. Serial No. 62,967. (Cl. 29—41.)



1. A metal-working machine comprising a work spindle, a cam, a lever actuated thereby, a tool slide movable longitudinally of the work spindle, a cross slide on said main tool slide, and separable means for interlocking said cross slide with said lever.

2. A metal-working machine comprising a work spindle, a main tool slide, means for revolving said main tool slide to move it into and out of potential working position, a cross slide on said main tool slide, a member for actuating said cross slide, said cross slide and said member having complemental separable interlocking elements, and means for moving said main slide to cause said cross slide to interlock with said actuating member.

3. A metal-working machine comprising a work spindle, a turret movable about an axis parallel with that of the work spindle, a main tool slide thereon, a cross slide mounted on said main slide, means for holding said cross slide from movement when the main slide is withdrawn, means for moving said main tool slide on said turret toward and from the work spindle, a cam, and a lever actuated thereby for automatically operating said cross slide when it is in a forward position adjacent the spindle.

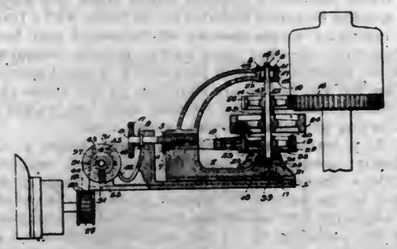
4. A metal-working machine comprising a main frame, a work spindle journaled therein, a turret movable about an axis parallel with that of the work spindle, a cross slide thereon, mechanism for effecting a relative movement of said cross slide and said spindle in a direction lengthwise of said spindle, a rotary cam supported on said bed, and a cam-operated lever supported on said bed for moving said cross slide transversely with relation to said work spindle.

5. A metal-working machine comprising a main frame, a work spindle journaled therein, a turret movable about an axis parallel with the work spindle, a cross slide thereon, mechanism for moving said cross slide bodily lengthwise of said work spindle, a lever supported by said bed, mechanism for automatically rocking said lever, and complemental interlocking members on said lever and said cross slide adapted to be alternately engaged and disengaged by the movement of the cross slide toward and from the work spindle.

[Claims 6 to 13 not printed in the Gazette.]

1,215,001. DRIVING ATTACHMENT FOR FIELD-COILS. FRANK J. COUPAL, Buffalo, N. Y. Filed June 3, 1916. Serial No. 101,510. (Cl. 74—31.)

1. In a device of the character set forth, a base, a G-shaped frame thereon having a raised table formed with a shaft bearing and an overhanging arm formed with an upwardly opening recess having a shaft receiving opening in its bottom, a vertical shaft journaled in the table bearing and extending upwardly through the opening and into the recess of the arm, roller bearings arranged in the arm recess about the shaft, and means arranged between the table and overhanging arm for rotating the shaft.



2. In an attachment of the class described, a drive gear, a normally meshing driven gear, a slidably supporting frame for the driven gear, a sprocket gear supported on the frame and connected with the driven gear, a second sprocket gear, a chain connecting the sprocket gears, and a yieldable idler bearing against the chain to hold the same taut during adjustment of the frame.

3. In an attachment of the class described, a base having a standard thereon, a G-shaped frame slidable thereon and having vertical bearings, a shaft journaled in the frame bearings, a drive gear toward and from which the frame is adjustable, a driven gear on the shaft adapted to mesh with the drive gear, a fly-wheel on the shaft, a sprocket gear fixed on the latter, a chain passing over the sprocket gear, a second sprocket gear over which the chain passes and means on the standard for adjusting the frame.

4. In an attachment of the class described, a base having a standard thereon, a G-shaped frame slidable thereon and having vertical bearings, a shaft journaled in the frame bearings, a drive gear toward and from which the frame is adjustable, a driven gear on the shaft adapted to mesh with the drive gear, a fly-wheel on the shaft, a sprocket gear fixed on the latter, a chain passing over the sprocket gear, a second sprocket gear over which the chain passes and a shaft journaled in the standard and having threaded connection with the frame for adjusting the latter.

5. In a device of the character set forth, a base having a pair of vertically slotted standards, a slidable support interposed between the standards with its ends sliding in the slots thereof, a shaft extending through the support, idlers on the projecting ends of the shaft, means yieldably urging the shaft support upwardly in the standard slots, an adjustable gear on the base, a drive chain passing over the gear and idlers, and a second gear over which the chain passes.

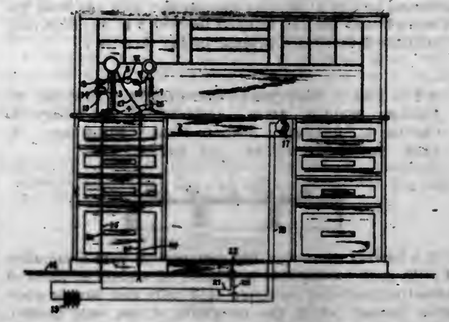
[Claims 6 to 10 not printed in the Gazette.]

1,215,002. TELEPHONE APPARATUS. ELDRIDGE A. COX, Dayton, Ohio, assignor of one-fourth to Carl W. Thatcher, one-fourth to John H. Bogart, and one-fourth to Burr F. Westlake, Dayton, Ohio. Filed Mar. 6, 1916. Serial No. 82,310. (Cl. 179—147.)

1. A telephone apparatus comprising a telephone instrument, a hook therefor, a receiver-holder adapted to be placed adjacent said telephone instrument, a member pivoted to said receiver-holder for depressing said hook, and electrical means for withdrawing said member from the hook, substantially as described.

2. A telephone apparatus comprising a telephone instrument, a hook therefor, a receiver-holder adapted to be placed adjacent said telephone instrument, a member pivoted to said receiver-holder for depressing said hook, and electrical means controlled by the foot for raising said member above the hook, substantially as described.

3. A telephone apparatus comprising a telephone instrument, a hook therefor, a receiver-holder adapted to be placed adjacent said telephone instrument, a member pivoted to said receiver-holder for depressing said hook, an armature formed on the end of said member opposite that which engages said hook, a magnet below said armature end, and electrical means controlled by the telephone user for energizing said magnet to draw the armature end of said member toward it, whereby to raise the other end of the latter above said hook, substantially as described.

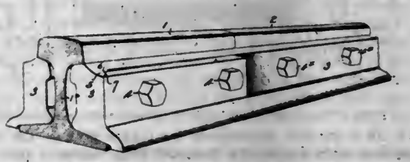


4. A telephone apparatus comprising a telephone instrument, a hook therefor, a receiver-holder adapted to be placed adjacent said telephone instrument, a lever arm pivoted to said receiver-holder for depressing said hook, an armature formed on the end of said lever arm opposite that which engages said hook, a magnet carried by said receiver-holder, below said armature end, electrical means for energizing said magnet, and a foot-controlled device for connecting said electrical means and magnet, to move the lever arm above said hook, substantially as described.

5. A telephone apparatus comprising a telephone instrument, a hook therefor, a standard adapted to be placed adjacent said telephone instrument for holding the receiver of the latter, a lever pivoted to said standard, having one end formed to engage and normally hold said hook in its depressed position, an armature formed on the other end of said lever, a magnet carried by said standard, below the armature end of said lever, a source of electric current, means establishing an electric circuit between said source and magnet, and a device controlled by the telephone user for closing said circuit, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,215,003. RAIL-JOINT. WILMER E. DANAT, Buffalo, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed July 22, 1915. Serial No. 41,865. (Cl. 239—9.)



1. A rail joint including, in combination, the rails, a joint bar, the joint bolts, and a device coöperating with the joint bar and the joint bolts for forcing the rail ends into abutting contact upon the tightening of the bolts.

2. A rail joint including, in combination, the rails, a joint bar having a rigid connection with one rail, the joint bolts, and means for moving said bar in a direction to carry the rail coupled therewith into abutting contact with the other rail.

3. A rail joint including, in combination, the rails, the joint bolts, a joint bar rigidly connected by certain of said bolts with one rail, and means, actuated by other joint bolts, for moving said joint bar in one direction.

4. A rail joint including, in combination, the rails, the joint bolts, a joint bar rigidly connected by certain of said bolts with one rail, and means, actuated by the tight-

ening of other ones of said bolts, for moving said joint bar in a direction to bring the rail ends into abutting contact.

5. A rail joint including, in combination, the rails, the joint bolts, a joint bar rigidly coupled with one rail, and a device operated by the tightening of certain of the joint bolts and having a cam-like engagement with the joint bar to move it and the rail coupled therewith in one direction.

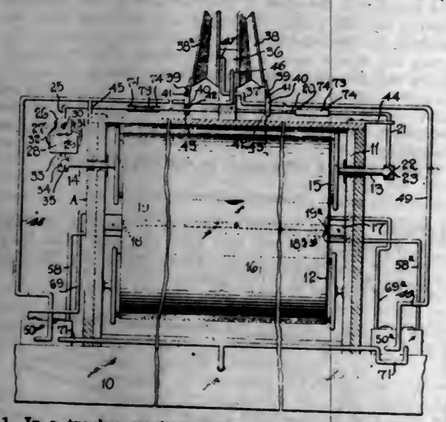
[Claims 6 to 13 not printed in the Gazette.]

1,215,004. BATTERY-CONNECTOR. SPENCER M. DECKER, Malden, Mass., assignor of one-fourth to Charles L. Ridgway, Boston, Mass. Filed Apr. 21, 1916. Serial No. 92,749. (Cl. 204—52.)



In a battery connector, the combination with a plurality of cells, each having two terminals, of a plate or sheet of insulating material overlying said cells and having apertures through which the terminals of the cells project, and connector members of conducting material, each adapted to connect a terminal of one cell to a terminal of another cell, each connector member being in the form of a strap and having associated therewith circular flanges that extend through the terminal-receiving apertures, the edges of said flanges being spun over against the face of the sheet thereby securing the connector member to the sheet and providing metal-lined terminal-receiving apertures.

1,215,005. TRACKER MECHANISM FOR PLAYER-PIANOS. JUDSON ROGERS DE NOYELLES, Detroit, Mich. Filed Mar. 2, 1916. Serial No. 81,581. (Cl. 84—161.)



1. In a tracker mechanism for player pianos, the combination with oppositely disposed longitudinally movable roll supporting spindles, of a tracker rod movable parallel to the axes of the spindles, one end of the tracker rod being extended downward to a point opposite one of said spindles and being there provided with a socket, the corresponding head being formed with a ball rotatable in said socket, the other end of the tracker rod being downwardly extended and provided with a terminal member, a member hingedly connected to the terminal member for movement in the plane of movement of the corresponding head and tracker rod, said hinged member having a socket, the corresponding spindle being formed with a ball engaging with the socket, said terminal member carrying a stop engaging with the hinged member to prevent its movement toward the oppositely disposed head, a spring mounted upon the terminal member and engaging with the hinged member to yieldingly hold the hinged member from movement away from the stop, and means for shifting the tracker rod.

2. In a tracker mechanism for player pianos, a supporting frame, oppositely disposed alined music roll supporting spindles rotatably mounted in the frame, and a tracker rod extending across the top of the frame and having downwardly extending ends having rotative engagement with the spindles, a pair of pneumatics mounted above the tracker rod and having arms movable by the action of the pneumatics, and members clamped upon the tracker rod and having pivotal connection to said arms.

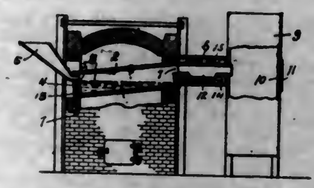
3. In a tracker mechanism for player pianos, a longitudinally movable rotatably supported roll supporting spindle, a tracker rod bent at one end to extend at right angles to the spindle, a member pivotally connected to the angularly bent end of the tracker rod for engagement with the extremity of the roll supporting spindle, a stop limiting the movement of the member in one direction, and a spring urging said member against the stop.

4. In a tracker mechanism for player pianos, a rotatably supported music roll supporting spindle longitudinally shiftable along its axis, and a tracker rod having at its extremity a socket, the adjacent extremity of the supporting spindle being provided with a ball fitting in said socket, and means for longitudinally shifting the tracker rod.

5. In a tracker mechanism for player pianos, a supporting frame, oppositely disposed alined roll supporting spindles rotatably mounted in the frame for longitudinal movement, a tracker rod extending across the top of the frame and slidably supported thereon and having downwardly extending ends having rotative engagement with the spindles, the tracker rod and spindles having unitary longitudinal movement, the tracker rod being made in sections slidably engaged with each other for longitudinal adjustment, and means for longitudinally shifting the tracker rod.

[Claim 6 not printed in the Gazette.]

1,215,006. METHOD OF TREATING ZINC-BEARING MATERIALS. CHARLES A. H. DE SAULLES, New York, N. Y. Filed June 19, 1915. Serial No. 35,150. (Cl. 75—153.)



1. The method consisting in charging a retort with molten zinc material vaporizing the zinc in the charge, and then permitting the zinc vapor to rapidly expand at a relatively low temperature to form blue powder.

2. The method consisting in charging a retort with molten zinc bearing material, vaporizing the zinc in the charge, then passing the zinc vapor through a condenser which is retained at a temperature at which a portion of the vapor will be condensed into spelter, and then permitting the remainder of the zinc vapor to be rapidly expanded at a relatively low temperature to form blue powder.

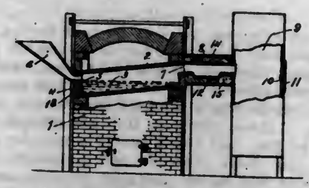
3. The method consisting in charging a retort with molten zinc bearing material, heating the charge to approximately 1350 degrees centigrade, and then permitting the zinc vapor to rapidly expand at a relatively low temperature to form blue powder.

4. The method consisting in successively charging a retort, in a continuous operation, with charges of molten zinc bearing material, vaporizing the charges, and then permitting the zinc vapor to rapidly expand at a relatively low temperature to form blue powder.

5. The method consisting in successively charging a retort, in a continuous operation, with charges of molten zinc bearing material, heating the charges to approximately 1350 degrees centigrade, and then permitting the zinc vapor to rapidly expand at a relatively low temperature to form blue powder.

[Claim 6 not printed in the Gazette.]

1,215,007. APPARATUS FOR TREATING ZINC-BEARING MATERIAL. CHARLES A. H. DE SAULLES, New York, N. Y. Filed June 28, 1915. Serial No. 36,884. (Cl. 266—19.)



1. A retort having a vapor discharge opening and provided at one end with a closure having a feed opening, the closure below said feed opening being provided with an opening for the discharge of molten material, and means for feeding molten material into the retort through said feed opening.

2. A retort, means for feeding molten material into said retort, a precipitating chamber, and a condenser connecting the retort and said chamber.

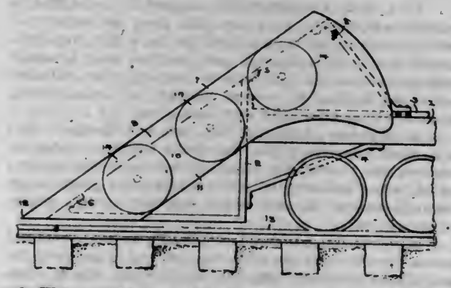
3. A retort having at one end a feed opening, a precipitating chamber, a condenser connecting the other end of the retort with said chamber, and a funnel for feeding molten material into the retort through said opening.

4. A retort having at one end a feed opening and below said opening an opening for the discharge of molten material, a condenser into which the retort discharges, and a precipitating chamber into which the condenser discharges.

5. A retort having at one end a feed opening and below said opening an opening for discharge of molten material, a condenser into which the retort discharges, a precipitating chamber into which the condenser discharges, and means for feeding molten material into the retort through said feed opening.

[Claims 6 to 15 not printed in the Gazette.]

1,215,008. SNOW-PLOW. MICHAEL M. DOMNK, Ivanhoe, Minn. Filed June 13, 1916. Serial No. 103,503. (Cl. 104—36.)



1. The combination with a car structure, of a frame attached to said car structure, said frame disposed in alinement with and inclined to the said car structure, a mold board having oppositely inclined faces mounted upon the inclined frame, and cutting disks rotatably mounted on said mold board at an angle thereto.

2. The combination with a car structure, of an inclined frame, brace bars connecting the frame with the car structure, a mold board attached to said inclined frame, said mold board having oppositely inclined faces, and a plurality of cutting disks rotatably secured to each face of the mold board in direct alinement, said disks being disposed at an angle to the inclined faces of the mold board.

3. The herein described snow plow comprising an angular frame, a ridge bar attached to the free ends of the vertical and horizontal sections of the angular frame, a mold board resting upon said ridge bar, reinforcing members below the mold board, means to attach the mold board to a moving vehicle, a plurality of cutting disks, and means to attach the cutting disks to the mold board whereby said disks will rest at an angle to the inclined faces of the mold board.

1,215,009. CABLE-HANGER. DANIEL G. EDWARDS, Atlanta, Ga. Filed Jan. 24, 1914. Serial No. 814,133. (Cl. 248—33.)



1. A cable hanger comprising a band of metal bent to form a substantially closed loop with upwardly extending ends or projections, said loop adapted to receive and hold a cable and said ends being oppositely bent to form overlapping hooks which when the hanger is in position will rest upon the suspension or messenger wire one within the other with the ends on opposite sides of the wire, whereby the ends are secured together and with the loop form a closed figure, independent movement of the ends under suspension strains or swaying being prevented.

2. A cable hanger comprising a band of metal bent to form a loop adapted to hold a conductor cable, and provided at its upper end with a supporting hook formed of strip metal and concaved on the under side of its top whereby it engages the messenger cable by its opposite edges as contradistinguished from its central portion.

3. A cable hanger for use with a messenger wire or cable comprising a band of stiff metal formed into a closed cylindrical loop of greater diameter than the cable to be supported therein, the opposite edges of the band being turned over all around the loop to form a narrow stiffening flange, whereby the shape of the loop is preserved under strain and the cable permitted to ride freely therein on a broad cylindrical surface, while the ends of the band are extended radially with respect to the loop having a hook integrally formed upon them to engage the messenger wire, said hook being concaved or channeled on its inner surface, whereby its weight and the weight of the cable will be supported upon its outer edges, and longitudinal sliding movement to the messenger wire will be reduced to a minimum.

4. A cable hanger comprising a band of metal bent into a loop with outwardly extending ends or projections, said loop adapted to receive and hold a cable and said ends bent to form suspension hooks for the loop, the said hooks being concaved or channeled on their inner surfaces to form edges for engagement with a support.

5. A cable hanger for use with a messenger wire or cable comprising a band of stiff metal formed into a closed cylindrical loop of greater diameter than the cable to be supported therein, the opposite edges of the band being turned over all around the loop to form a narrow stiffening flange, whereby the shape of the loop is preserved under strain and the cable permitted to ride freely therein on a broad cylindrical surface, while the ends of the band are extended radially with respect to the loop having a hook integrally formed upon each of them to engage the messenger wire, said hooks having their open ends turned

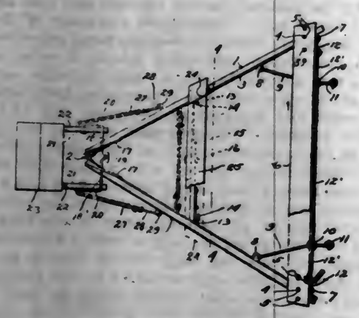
in opposite directions, and long enough to come below the messenger wire when in position, whereby said messenger wire is inclosed between two members of the band on each side, and lateral displacement thereof is prevented by the weight of the loop and the weight of the cable.

1,215,010. PENCIL-HOLDER AND ENVELOP-OPENER. DAVID ERIKSON, Drayton, N. D. Filed May 17, 1916. Serial No. 98,139. (Cl. 120—35.)



An attachment for pencils and the like comprising a spring material clasp consisting of a body portion arranged to extend alongside of the pencil and having intermediate its ends a pair of wings bent into substantially circular form to embrace the pencil, a member having a shank connected to one of the wings and having a hook at its free end, one of said wings having a pair of spaced perforations and having the material between the perforations bent to form a hinge eye, and a wire member having one end passing through the perforations and held in the eye, the other end of said member being bent to form a laterally opening V adapted to lie with the extremity of the wire close to the side of the pencil when applied thereto.

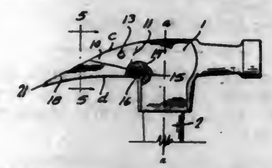
1,215,011. ROAD-DRAG. WILLIAM FINDLEY, Emmett, Idaho. Filed Jan. 28, 1916. Serial No. 74,845. (Cl. 37—5.)



A device of the class described comprising a pair of drag bars having their rear ends hingedly connected, means for holding the drag bars in adjusted diverging positions, drag boards connected to the inner sides of the drag bars, said drag boards having their adjacent ends overlapping and adjustably connected, loops carried by the drag bars, a bar having its ends engaged in the loops and engaged with the upper edges of the drag boards, second loops carried by the rear ends of the drag bars, a sled, a lever having arms pivotally connected to the runners of the sled and slidable in the second named loops, as and for the purpose set forth.

1,215,012. CLEFT NAIL OR LIKE EXTRACTOR. CURTISS W. FINNEY, Spokane, Wash. Filed Apr. 12, 1915, Serial No. 20,845. Renewed July 5, 1916. Serial No. 107,693. (Cl. 254—24.)

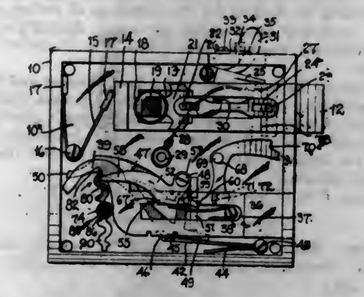
1. In a nail extractor, an extractor body having a fixed claw provided with a crotch point and having a shank cavity extending from said crotch point at an oblique angle to the axis of said body and terminating in a shank abutment, and a movable claw having a shank pivoted in said cavity and terminating in a face shaped to engage said abutment to limit movement of the pivoted claw beyond a predetermined point, substantially as described.



2. In a nail extractor, an extractor body having a fixed claw and provided with a forked or bifurcated portion extending from the base of said fixed claw, said bifurcated portion having a shank abutment and one of the forked portions having a shoulder abutment, a movable claw having a shank extending into and pivoted in said bifurcated portion, said shank having a face for engagement with said shank abutment and a shoulder for engagement with said forked abutment to limit movement of said pivoted claw beyond a predetermined extent, substantially as described.

3. In a cleft extractor, a movable claw, and an extractor body provided with a fixed claw and having fixed portions engaging said movable claw to hold the latter toward the fixed claw when plying stress is applied to said body, and a spring for moving said movable claw away from said fixed claw, substantially as described.

1,215,013. TUMBLER-LOCK. GEORGE B. FISCHER, East Chicago, Ind., assignor of one-half to Edward A. Muha, East Chicago, Ind. Filed Aug. 7, 1916. Serial No. 113,577. (Cl. 70—29.)



1. In a lock, a locking bolt adapted to be shifted, a tumbler adapted to hold the bolt from movement but shiftable out of its holding position by a key, key actuatable means for releasing said tumbler, and a second tumbler holding the bolt from retraction, a key actuated means for shifting the second tumbler, said means being disposed out of alinement with each other.

2. A lock and a coacting key, the lock having a bolt and means operatively preventing the bolt from being retracted, the key having relatively shiftable bit sections which, when adjusted in one predetermined position operatively engage the said means and shift it into inoperative position.

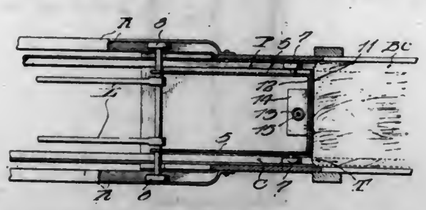
3. A lock and a coacting key, the lock having a bolt and means operatively preventing the shifting of the bolt, the key having relatively shiftable bit sections which, when adjusted in a single predetermined position operatively engage the said means and shift it to an inoperative position permitting the shifting of the bolt by the key.

4. A lock and a coacting key, the lock having a bolt, and means acting to prevent the bolt being either retracted or projected by the key, the key having relatively shiftable bit sections which when adjusted in a single predetermined position operatively engage the said means to shift them into inoperative position and to permit the projection of the bolt by the key and which, when adjusted in another single predetermined position operatively engage said means and shift them into inoperative position and permit the retractions of the bolt.

5. A lock and a coacting key, the lock having a bolt, a tumbler engaging the bolt in its projected position and preventing retraction of the bolt, a tumbler actuating member engaging the tumbler and shiftable in one direction to release the tumbler from the bolt, the key having a bit formed of sections, one of said sections being adjusted toward or from the other section, and said shiftable section having a portion engageable only with the actuating member when the shiftable section is in a predetermined position.

[Claims 6 to 11 not printed in the Gazette.]

1,215,014. BALING-PRESS. CLIFFORD A. FLEMING, BURTON S. FLEMING, and CHARLES F. LADWIG, Huntsville, Mo. Filed Feb. 15, 1915. Serial No. 8,420. (Cl. 100—29.)



1. A baling press comprising a receiving chamber having in its top an inlet, a baling chamber extending horizontally from said receiving chamber, a pair of horizontal tracks extending across the bottom of the receiving chamber and into the baling chamber, an additional pair of horizontal tracks spaced above said first-named tracks and also extending across the receiving chamber into the baling chamber, a transverse shaft having rollers at its ends mounted on said last-named tracks, a reciprocating bar leading rearwardly from and connected with said shaft, a pair of side members extending forwardly from and connected to the ends of said shaft, said members having rollers at their front end traveling on the first-named tracks, a transverse upright plate extending between and secured to said front ends of said members, a flat substantially horizontal depressible deck overlying said members, an upright apron depending from the front end of said deck in substantially parallel relation to the aforesaid plate, a hinge connecting the rear end of said deck to the rear end of the aforesaid members to receive all rearward thrust exerted on said deck, and a spring beneath the latter for yieldingly upholding the same.

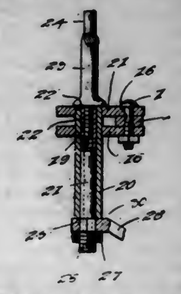
2. A baling press comprising a receiving chamber having in its top an inlet, a baling chamber extending horizontally from said receiving chamber, a pair of horizontal tracks extending across the bottom of the receiving chamber and into the baling chamber, an additional pair of horizontal tracks spaced above said first-named tracks and also extending across the receiving chamber into the baling chamber, a transverse shaft having rollers at its ends mounted on said last-named tracks, a reciprocating bar leading rearwardly from and connected with said shaft, a pair of upright parallel side plates connected with and extending forwardly from said shaft, an upright transverse front plate secured to and connecting the front ends of said side plates, rollers at the lower front corners of said side plates traveling on the first-named tracks, a substantially horizontal deck overlying said side plates and said front plate, said deck having its front end bent downwardly into sliding engagement with the front face of said front plate, a stop rigidly secured to and projecting rearwardly from the aforesaid front plate, said stop having an aperture therethrough, an upright rod connected to and depending from said deck through said aperture, a coiled spring surrounding said rod between the deck and stop to yieldably uphold the former, an additional stop on the lower end of said rod for cooperation with the other stop to limit the upward movement of said deck, and hinge means connecting the rear end of said deck with the rear upper corners of the aforesaid side plates to receive all rearward thrust exerted on said deck.

1,215,015. HAT-PIN PROTECTOR. MAUD I. RAY FLOCKER, Pittsburgh, Pa. Filed Nov. 23, 1915. Serial No. 63,091. (Cl. 24—155.)



A hat pin point guard consisting of a flat sheet metal base having inwardly extending flanges along three edges thereof, two of said flanges being substantially parallel, one of said parallel flanges forming a keeper guard adapted to laterally receive the point of a hat pin, an L-shaped wire having its L-shaped end secured to said base by the other two flanges, one leg of the L-shaped wire being relatively long and projecting outwardly in substantially a straight line from the other of said parallel flanges and terminating at its outer end in an eye or loop, the plane of said eye making an angle with the axis of said leg and said eye being out of direct line with said keeper guard, whereby when the hat pin shank is passed through said loop and the point thereon is sprung into said keeper there will be a distorting force between the wire and pin shank at the loop causing the loop to firmly grip the pin shank, the pin shank and looped wire being substantially in the plane of the metal base when the pin point is in the keeper guard.

1,215,016. DIRIGIBLE AUTOMOBILE-HEADLIGHT. DOMENICO FORNIRASEO, Klamath Falls, Oreg. Filed Mar. 1, 1916. Serial No. 81,496. (Cl. 240—62.)

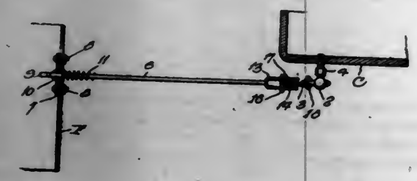


1. In a dirigible headlight, a plate having an aperture near its forward end, a sleeve secured in said aperture, a hollow shaft rotatably mounted in said sleeve, the upper end of the shaft being provided with internal screw threads, a lamp bracket, an external screw threaded downwardly extending boss formed on the lamp bracket arranged to enter the threaded portion of the shaft, a squared portion on the lower end of said shaft, an arm secured on the squared portion, means to hold the arm in

position, arms at the upper end of the lamp bracket for supporting a lamp in place and means operatively connecting the arm secured on the squared portion of the shaft with the steering gear of a vehicle.

2. In a dirigible headlight, the combination with a fender support provided with a horizontal offset portion, of a plate arranged to engage the underside of said offset portion, said plate being provided with an aperture near its forward end, a coöperating plate arranged to engage the upper side of the offset portion, said upper plate being provided with an aperture adapted to register with the aperture in said lower plate, a sleeve secured in said apertures, and extending downwardly therefrom, means rotatably supported in said sleeve, a bolt extending through the plates and offset portions to hold the bracket in position, a lamp bracket carried by said rotatable means in said sleeve, and means operatively connected to said rotatable means in said sleeve and the steering gear of a vehicle.

1,215,017. ATTACHMENT FOR AUTOMOBILES. FREDRICK WILLIAM GERSTENSCHLAGER, Harbor Beach, Mich. Filed Nov. 22, 1915. Serial No. 62,885. (Cl. 137—139.)



1. In a device of the class described, a pet cock, an operating rod, a fork on the end of said rod, a T-shaped member having its shank secured to the handle of said cock, the head of said member being loosely connected to the arms of said fork, a handle on the opposite end of said rod for rotating the same to open or close the cock, means to prevent accidental rotation of said rod.

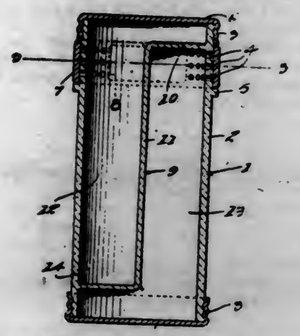
2. In a device of the class described, a pet cock, an operating rod, a fork on one end of said rod, a T-shaped member having its shank secured to the handle of said cock, the head of said member having openings on the opposite sides of the shank, said openings being adapted to slidably and loosely receive the arms of said fork, a handle on the opposite end of said rod for rotating the same to open or close the cock, and means to prevent accidental rotation of said rod.

3. In a device of the class described, a pet cock, an operating rod, a U-shaped fork secured at its base to one end of said rod, a T-shaped member formed from a single piece of material bent upon itself to form a double shank and head, said member being secured by its shank to the handle of said pet cock, the head thereof having an opening on each side of said shank to loosely and slidably receive the arms of said fork, the free ends of said arms being flattened to prevent disengagement of the member therefrom, a handle on the opposite end of said rod, and means for locking said handle against rotation.

4. The combination with a vehicle, of a pet cock, an operating rod, a slidably, non-rotatable connection between one end of said rod and the handle of said pet cock, a plate secured to the vehicle and having an opening to rotatably receive said rod, a handle on the other end of said rod, a keeper carried by the plate and comprising a bolt having a notch in the head thereof to receive the handle of said rod, and a spring on said rod to move the same in a direction to hold said handle in said notch.

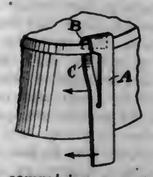
1,215,018. COMBINED SALT AND PEPPER SHAKER. JOSEPH GROSSMAN, New York, N. Y. Filed June 25, 1915. Serial No. 36,255. (Cl. 65—45.)

1. A combination salt and pepper shaker including a cylindrical body having both ends open, a vertical partition wall arranged centrally within the body and terminating adjacent the opposite open ends thereof, horizontal branch walls secured to the upper and lower ends of the vertical partition wall and directed therefrom in opposite directions and connected to the walls of the cylindrical body forming compartments, said compartments extending longitudinally of the body, said cylindrical body being provided with a plurality of apertures near its upper end, screw caps arranged to form closures for the body, an annular rim formed adjacent the apertures, and a ring rotatable exteriorly of the cylindrical body upon said rim and arranged to close or open the apertures and thereby control the flow of material from the chambers of the body through the apertures.



2. A salt and pepper shaker including a cylindrical body open at both ends, screw caps on the ends of the body forming closures therefor, the body being provided with a plurality of apertures adjacent one end at diametrically opposite points, a vertical partition wall arranged centrally within and connected to the inner face of the walls of the cylindrical body, said vertical partition wall terminating short of the upper and lower ends of the cylindrical body, horizontal branch walls connected to the upper and lower ends of the vertical partition wall and directed in opposite directions therefrom and connected to the cylindrical body dividing the same into separate compartments, one compartment being arranged to receive salt and the other compartment being arranged to receive pepper, an annular rim formed exteriorly around the cylindrical body adjacent its upper end and located beneath the apertures, and a ring rotatable exteriorly of the body and upon said rim for closing said apertures, said ring being provided with apertures to register with the apertures in the opposite side walls of the body and permit the contents of the body to pass therefrom.

1,215,019. OPENER FOR HERMETIC CANS OR THE LIKE. GUSTAV ADOLF HANSEN, Christiania, Norway. Filed Nov. 22, 1915. Serial No. 62,786. (Cl. 30—3.)

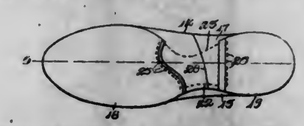


1. A can opener comprising a metal strip of uniform width having one end bent back upon itself to form a hook between the sides thereof and adapted to fit over the seam of a can, a tongue extending toward the edge of the hook and adapted to engage beneath the seam on the outside of the can when the hook is in position and serving as a fulcrum for pressing the hook edge through the cover when the free end of the ribbon is moved laterally.

2. A can opener comprising a metal strip of uniform width having one end angularly cut and bent back upon itself to form a hook between the sides thereof and adapted to fit over the seam of a can with its edge approximately extending down to the cover on the inside of the seam, a tongue extending toward the edge of the said hook and adapted to engage a seam on the outside of the can when the hook is in position, said tongue serving as a fulcrum for pressing the edge of the hook through the cover by swinging the free end of the ribbon.

3. A can opener comprising a metal strip of uniform width having one end bent back upon itself to form a hook between the sides thereof and adapted to fit over the seam of a can, a yielding tongue cut out and extending longitudinally of the ribbon toward the edge of the hook and adapted to engage beneath a seam on the outside of the can, when the hook is in position, the end of said tongue serving as a fulcrum for pressing the edge of the hook through the cover by swinging the free end of the ribbon,

1,215,020. SHOE. HANS M. HANSEN, Quincy, Mass., assignor to Lena De Rusha, Boston, Mass. Filed Apr. 14, 1915, Serial No. 21,339. Renewed Nov. 14, 1916. Serial No. 131,827. (Cl. 36—47.)



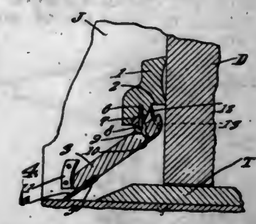
1. A shoe comprising an upper having an extension projecting from the lower edge of one of its side portions and bent across the shoe bottom to form an exposed member of the shank portion of said bottom, one end of said extension overlapping the lower edge portion of the opposite side portion of the upper, an inner sole attached to said extension and to the said overlapped edge portion by longitudinally extending fastenings, the shank portion of the inner sole and the upper extension forming a flexible two-part shank, and two spaced-apart outer sole members stitched to the upper, one forming a fore part tap and the other a heel tap, said members covering the forward and rear edges of the said extension and being secured thereto by transversely extending fastenings.

2. A shoe comprising an upper having an extension projecting from the lower edge of one of its side portions and bent across the shoe bottom to form an exposed member of the shank portion of said bottom, one end of said extension overlapping the lower edge portion of the opposite side portion of the upper, an inner sole attached to said extension and to the said overlapped edge portion by longitudinally extending fastenings, the shank portion of the inner sole and the upper extension forming a flexible two-part shank, and two spaced-apart outer sole members stitched to the upper, one forming a fore part tap and the other a heel tap, said members covering the forward and rear edges of the said extension and being secured thereto by transversely extending fastenings, a part of the material of said extension and of the portion of the upper on which it is formed being cut away to form spaced-apart edges which are brought together and united to take up the surplus material.

1,215,021. WEATHER-STRIP. JOHN W. HENRY, Crawfordsville, Ind. Filed Oct. 18, 1916. Serial No. 126,360. (Cl. 20—67.).

1. In a device of the character described, a supporting strip having a rabbet, an apron strip hinged to the supporting strip and having an edge swingable into said rabbet, an approximately straight torsional spring disposed within said rabbet and having one end engaged non-rotatively with the apron strip adjacent said edge thereof, and means carried by the supporting strip for slidably guiding the other terminal of said spring within said rabbet, the last mentioned terminal of the spring having means engaging the supporting strip to prevent the rotation thereof.

2. In a device of the character described, a supporting strip having a rabbet, an apron strip hinged to the supporting strip and having an edge swingable into said rabbet, an approximately straight torsional spring disposed within said rabbet and having one end engaged non- rotatably with the apron strip adjacent said edge thereof, and means carried by the supporting strip for slidably guiding the other terminal of said spring within said rabbet, the supporting strip having a narrow slot adjacent said rabbet, and the last mentioned terminal of the spring having a portion working in said slot to prevent the rotation of said terminal.



3. In a device of the character described, a supporting strip having a rabbet, an apron strip hinged to the supporting strip and having an edge to swing into said rabbet, an approximately straight torsional spring having one end engaged non-rotatably with the apron strip adjacent said edge thereof, said spring being disposed within said rabbet, the supporting strip having a longitudinal slot above the rabbet, and a guide element carried by the supporting strip below said slot, the other terminal of said spring being slidable through said guide element and having an upwardly projecting eye slidable in said slot to prevent the rotation of said terminal.

1,215,022. PAINT COMPOSITION. GEORGE CLEVELAND HICKS, Chicago, Ill. Filed Aug. 6, 1915. Serial No. 44,132. (Cl. 134—39.)

1. A coating composition the vehicle of which consists substantially of glucose and linseed oil.

2. A coating composition comprising glucose and linseed oil combined with a pigment.

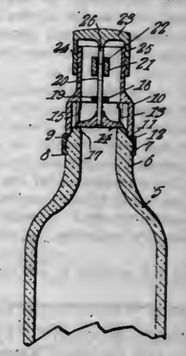
3. A coating composition comprising glucose and linseed oil combined with a filler.

4. A coating composition comprising more than 50% of linseed oil and less than 50% of glucose.

5. A coating composition consisting of a vehicle containing more than 50% linseed oil and less than 50% glucose, and a pigment.

[Claims 6 to 12 not printed in the Gazette.]

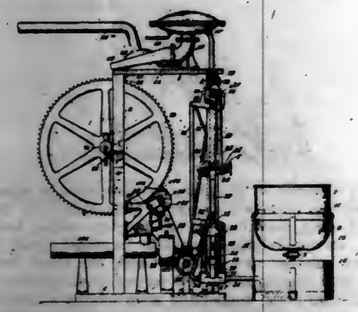
1,215,023. NON-REFILLABLE AND SELF-CLOSING BOTTLE. ANDREW J. HITCHCOCK, Nashville, Tenn. Filed June 8, 1916. Serial No. 102,536. (Cl. 215—62.)



In a closure for bottles, a bottle having a circumferential groove near its upper end, a casing having a groove, said casing resting on the bottle, a securing ring having flanges partially embedded in the groove of the bottle and the groove of the casing, guides on the interior of the

casing, a combined guard and closure adapted to seat on the neck of the bottle, a stem projecting from the closure, a guide having an aperture into which the upper end of the stem extends, a cap for the casing, and a member depending from the cap and extending into the guide for engaging the end of the stem for holding the closure in place.

1,215,024. AUTOMATIC CREAM-MACHINE. JOHN T. HOHBERGER, Chicago, Ill. Filed Dec. 24, 1912. Serial No. 738,439. (Cl. 107—4.)



1. In a device of the kind described, a mixer, a receiver, a tubular cooker open at both ends and a cooler, in combination with means permanently connecting said receiver to one end of said cooker for continuously directing fluid from said receiver to the cooker, said cooked having a fixed trough-like portion at its opposite end for directing material from said cooker to the cooler.

2. In a device of the kind described, a mixer, a receiver, a tubular cooker open at both ends and a rotatable cooler, in combination with means for continuously directing fluid from said receiver through said cooker to the cooler, said cooker having a trough like portion at its discharge end for directing the cooked material to said cooler.

3. In a device of the kind described, a mixer, a receiver, a tubular cooker open at both ends and a rotatable cooler, in combination with means for continuously directing fluid from said receiver through said cooker to the cooler, said cooker having a trough-like portion at its discharge end for maintaining the temperature of the cooked material and discharging the same to said cooler, and means for controlling the movement of fluid through said cooker.

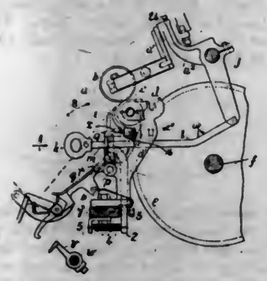
4. In a device of the kind described, a mixer, a receiver, a tubular cooker open at both ends and a rotatable cooler, in combination with means for permanently connecting said receiver and cooker for directing fluid from said receiver through said cooker to the cooler, means for controlling the movement of fluid through said cooker, and means for continuously removing the cooled material from said cooler.

5. In a device of the kind described, a mixer, a receiver, a tubular cooker open at both ends and a rotatable cooler, in combination with means for directing fluid from said receiver through said cooker to the cooler, said cooker having a trough-like portion at its discharge end for maintaining the temperature of the cooked material and discharging the same to said cooler, means for controlling the movement of fluid through said cooker and means for continuously removing the material from said cooler.

[Claims 6 to 10 not printed in the Gazette.]

1,215,025. WINDING-MACHINE. FRANK ASHWORTH HOLT, Rochdale, and GRINDROD KERSHAW, Whitworth, England. Filed Aug. 24, 1915. Serial No. 47,182. (Cl. 242—37.)

1. In a winding machine, a driving roll, a holder whereon material may be wound adapted to coöperate with the driving roll so that winding is effected by friction, means for supporting such holder and enabling it to be moved toward and away from the driving roll, a link for moving such holder connected to said means and furnished with a handle, a stop motion comprising a part with a space through which the said link is passed allowing limited movement of such link in the direction of the length of the space, an engaging device pivoted in such part to form a rest for and to engage the link and movable thereby to bring such link against one end of the said space and allowing the link when disengaged from the engaging means to be pushed or pulled through the said space whereby the said holder when moved away from the driving roll by the stop mechanism is prevented from being accidentally moved again toward it, substantially as hereinbefore described.



2. In a winding machine, a driving roll, a holder whereon material may be wound adapted to coöperate with the driving roll so that winding is effected by friction, means for supporting such holder and enabling it to be moved toward and away from the driving roll, a rod for moving such holder connected to the said means and furnished with a handle and rack, a stop mechanism comprising a part with a space through which the said rod is passed allowing limited movement of such rod in the direction of the length of the space, a pawl pivoted in such part to form a rest for and to engage the rack and movable thereby to bring such rod against one end of the said space and allowing the said rod when disengaged from the pawl to be pushed or pulled through the said space, whereby the said holder when moved away from the driving roll by the stop mechanism is prevented from being accidentally moved again toward it, substantially as hereinbefore described.

3. In a winding machine a driving roll, a holder whereon material may be wound adapted to coöperate with the driving roll so that winding is effected by friction, means for supporting such holder and enabling it to be moved toward and away from the driving roll, a rod for moving such holder connected to the said means and furnished with a handle and rack, a stop mechanism comprising an arm with a slot through which the said rod is passed allowing limited movement of such rod in the direction of the length of the slot, a pawl mounted in such arm to form a rest for and to engage the rack and movable thereby to bring such rod against one end of the said slot and allowing the said rod when disengaged from the pawl to be pushed or pulled through the said slot whereby the said holder when moved away from the driving roll by the stop mechanism is prevented from being accidentally moved again toward it, substantially as hereinbefore described.

1,215,026. GARBAGE-RECEPTACLE. WILL B. HULL, Buffalo, N. Y. Filed Nov. 28, 1913. Serial No. 803,392. (Cl. 220—115.)

1. A garbage receptacle comprising, an outer container, a hinged cover for said container, a cover operating mechanism located near the base of said container comprising, a foot lever extending diametrically across the bottom of said container and having one end pivotally secured to said container near the rear side thereof, while its other end extends beyond the front thereof, an operating lever extending diametrically across the bottom of said container and having one end loosely mounted on said container, means for pivotally uniting said operating lever and said foot lever near their centers, and an operating rod pivotally connecting the outer end of said operating lever and said cover, whereby said levers, when operated, have a shear like action.

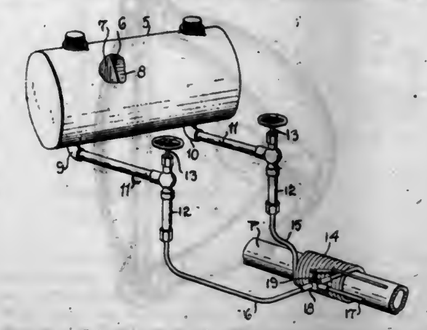


2. A garbage receptacle comprising, an outer container, a cover, a hinge uniting said outer container and coyer, said hinge being provided with an arm for limiting the backward motion of said cover, cover operating mechanism located near the base of said container comprising, a foot lever extending diametrically across the bottom of said container and having one end pivotally secured to said container near the rear side thereof, while its other end extends beyond the front thereof, an operating lever extending diametrically across the bottom of said container and having one end loosely mounted on said container, means for pivotally uniting said operating lever and said foot lever near their centers, and an operating rod pivotally connecting the outer end of said operating lever and said cover, whereby said levers, when operated, have a shear like action.

3. A garbage receptacle comprising, an outer container, a hinged cover for said container, a cover operating mechanism located near the base of said container comprising, a foot lever extending diametrically across the bottom of said container and having one end pivotally secured to said container near the rear side thereof, while its other end extends beyond the front thereof, a strap secured to the lower part of said container, an operating lever extending diametrically across the bottom of said container and having its lower end slidably supported by said strap, means for pivotally uniting said operating lever and said foot lever near their centers, and an operating rod pivotally connecting the outer end of said operating lever and said cover, whereby said levers, when operated, have a shear like action.

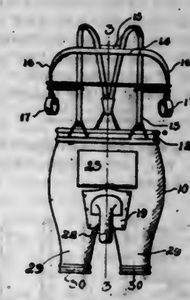
1,215,027. FUEL-VAPORIZER FOR INTERNAL-COMBUSTION ENGINES. BERTIE R. JAMES, Carter, Okla., assignor of one-fourth to W. C. Daniel and one-fourth to George F. Watson, Carter, Okla., and one-fourth to C. F. Cornels, Sayre, Okla. Filed May 22, 1916. Serial No. 99,168. (Cl. 123—127.)

In a fuel vaporizer for internal combustion engines, a fuel receptacle having separate kerosene and gasolene compartments, a discharge pipe leading from each of said compartments and provided with a controlling valve, a coiled tube surrounding the exhaust pipe of an engine and connected at one of its ends to the pipe leading from the kerosene compartment, a tube connected at one of its ends to the pipe leading from the gasolene compartment, a conducting pipe through which the fuel is supplied to the engine cylinders, a three-way valve connecting the other ends of said tubes to the conducting pipe, and means for manually operating said valve to establish communication



between the tube connected to the outlet pipe of the gasolene compartment and said conducting pipe, or to cut off such communication and establish communication between the coiled tube and the conducting pipe.

1,215,028. SURGICAL APPLIANCE. ALFRED M. JONES, Des Moines, Iowa, assignor to Hobert R. Jones, Columbus, Ohio. Filed Nov. 2, 1915. Serial No. 59,184. (Cl. 128—3.)



1. A surgical appliance comprising a bifurcated nether garment formed of flexible wire screen covered with canvas, suspenders for the suspension of the garment, the rear of the garment being split vertically and having reinforcements in the edges thereof, a removable flexible pouch carried at the front of the garment, and a movable flap secured to the garment above the pouch and depending thereover to protect the pouch from the rubbing wear of the outer garments of the wearer.

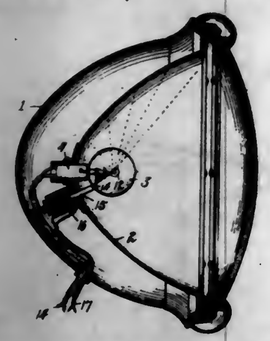
2. A surgical appliance comprising a bifurcated nether garment, means for suspending the same on the patient, a removable member on the front of the garment, a soft rubber pouch carried by the removable member, restraining device for the hands of the patient carried by the suspending means, non-elastic bands on the lower ends of the legs of the garment, a reinforced protective closure in the rear of the garment, and a non-elastic belt on the upper end of the garment.

1,215,029. SHUTTER MEANS FOR LAMPS. LLEWELLYN J. JONES and GIBSON R. MONBO, Toledo, Ohio. Filed Mar. 15, 1916. Serial No. 84,335. (Cl. 240—45.)

1. In combination, an incandescent lamp, means interiorly of the lamp movable into and out of light obstructing position, and means operable without the lamp to control the movements of said first means.

2. The combination with an incandescent lamp, of means mounted interiorly thereof and having a part

movable into and out of light obstructing position, and means operable to control the movements of said part.



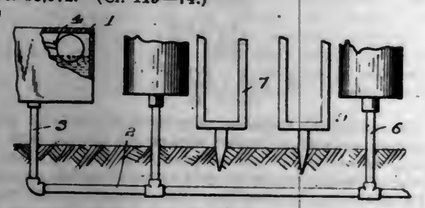
3. The combination with an incandescent lamp, of a shutter member disposed within the lamp normally in unobstructing relation to the light rays of the lamp, and means operable to move said shutter member into position to limit, to a predetermined extent, the area of diffusion of rays from the light source of the lamp.

4. The combination with an incandescent lamp, of means interiorly of the lamp movable into and out of light obstructing position with respect to the light source, and electrically controlled means for controlling the movements of said first means.

5. The combination with an incandescent lamp, of means interiorly of the lamp movable into and out of light obstructing relation to the light source thereof, and magnetic means controlled from without the bulb for controlling the movements of said first means.

[Claims 6 to 24 not printed in the Gazette.]

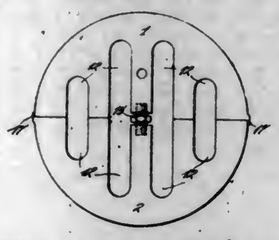
1,215,030. STOCK-WATERING APPARATUS. JOSEPH C. JORDAN, Granton, Wis. Filed Sept. 28, 1915. Serial No. 53,072. (Cl. 119—74.)



1. In stock watering apparatus, a source of water supply, a plurality of receptacles, pipes connecting the water supply with the receptacles, a single valve to control the supply of water to all of the receptacles, a cylindrical sleeve connected with each of the receptacles at the lower end thereof and communicating with certain of the distributing pipes, a valve seat formed in the upper end of said sleeve, said sleeve communicating with the receptacles, a semi-spherical cap threaded into the lower wall of the receptacles and incasing the valve seat, and a concavo-convex valve mounted upon the seat, an upstanding stem carried by the valve and extending through the cap, said cap having a number of perforations therein.

2. In stock watering apparatus, a water supply tank, a horizontal distributing pipe, upstanding pipes connected with the distributing pipe, receptacles communicating with the upstanding pipes, cylindrical sleeves mounted on the upper ends of the upstanding pipes and communicating with the receptacles, each of said sleeves having a valve seat formed on its upper end, a concavo-convex valve to coöperate with the seat, a perforated cap mounted within the receptacle and over the valve, a stem carried by the valve and extending upwardly through one of the perforations in the cap.

1,215,031. BOILER OR HEATER. WILLIAM KANE, Philadelphia, Pa. Filed Oct. 16, 1916. Serial No. 125,940. (Cl. 122—230.)



1. A boiler or heater including two hollow cast sections having hollow registering extensions forming flues, certain of said hollow extensions being shorter than others and providing a space between their adjacent ends, nipples connecting said latter ends of the extensions and having wrench engaging portions located within said space, the other of said extensions of each section being designed to engage corresponding extensions on the other section, substantially as described.

2. A boiler or heater including two hollow cast sections having hollow registering extensions forming flues, certain of said hollow extensions being centrally located and shorter than others and providing a space between their adjacent ends, nipples connecting said latter ends of the extensions and having wrench engaging portions located within said space, the other of said extensions of each section being designed to engage corresponding extensions on the other section, substantially as described.

3. A boiler or heater including two hollow cast sections having hollow registering extensions forming flues, certain of said hollow extensions being shorter than others and providing a space, nipples connecting said latter extensions and having a wrench engaging portion located within said space, the other of said extensions of each section being designed to engage corresponding extensions on the other section, and a detachable hood forming a chamber which communicates with the top of said flues, substantially as described.

4. A boiler or heater including two hollow cast sections having hollow registering extensions forming flues, certain of said hollow extensions being shorter than others and providing a space between their adjacent ends, nipples connecting said latter ends of the extensions and having wrench engaging portions located within said space, the other of said extensions of each section being designed to engage corresponding extensions on the other section, each of said sections having an integral flanged skirt at the bottom providing a hollow base closure in direct communication with said flues, substantially as described.

5. A boiler or heater including two hollow cast sections having hollow registering extensions forming flues, certain of said hollow extensions being shorter than others and providing a space, nipples connecting said latter extensions and having a wrench engaging portion located within said space, the other of said extensions of each section being designed to engage corresponding extensions on the other section, a hood forming a chamber which communicates with the top of said flues, and means providing a hollow base communicating with the bottom of said flues, substantially as described.

1,215,032. CURTAIN-SHADE AND ROLLER CONNECTOR. DANIEL E. KERR, Portland, Me. Filed Oct. 2, 1915. Serial No. 53,756. (Cl. 156—25.)

A connector for shade rollers including a strip of flexible material having one surface thereof gummed, said strip having a series of tongues struck therefrom, complemental apertures arranged in said strip opposite said tongues, said tongues and apertures being spaced from the adjacent marginal edges of the strip, the strip being adapted to wrap about the roller and engage a shade between the remaining gummed ends thereof, said tongues being adapted to pass through said apertures and adhesively connect with said strip, as and for the purpose set forth.



1,215,033. GAME APPARATUS. JAMES KING, Leicester, England. Filed Mar. 22, 1915. Serial No. 16,087. (Cl. 46—41.)



1. A game apparatus comprising, in combination, a table device, a flat playing board thereon, a convex playing board thereon, said boards having holes or recesses therein, means to support the table in such a manner as to permit a universal tilting movement thereof, and handles on the table by which the player may tilt and manipulate the latter to control the direction of movement of a ball on either of the playing boards, for the purpose described.

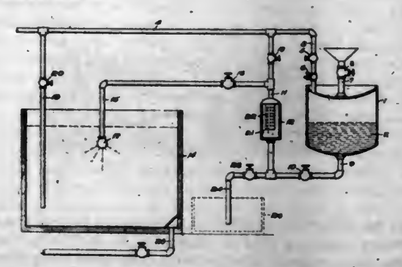
2. A game apparatus comprising, in combination, a table device, a playing board or boards thereon having holes or recesses therein, an upwardly inclined margin round some of the said holes or recesses, and means to support the table in such a manner as to permit a universal tilting movement thereof, for the purpose described.

3. A game apparatus comprising, in combination, a table device, a playing board or boards thereon having a convex surface and holes or recesses therein, an upwardly inclined margin round some of the said holes or recesses, and means to support the table in such a manner as to permit a universal tilting movement thereof, for the purpose described.

4. A game apparatus comprising, in combination, a table device adapted for scoring points by the use of a ball thereon, a supporting stand and a pivot point thereon, a hollow conical cap on the table adapted to rest upon the pivot point and arranged so that the point of support is situated above the center of gravity of the table whereby the latter automatically balances, said table being formed in halves hingedly connected whereby it may be folded, and the aforesaid cap being also formed in halves which parts are attached to the respective halves of the table and arranged to meet to form the complete supporting cap when the table portions are extended, for the purpose described.

1,215,034. APPARATUS FOR PREPARING RESIN SIZE FOR PAPER MANUFACTURE. BRUNO KNIFFLER, Winchester, and WILLIAM A. OPPEN, Stoneham, Mass. Original application filed Feb. 5, 1914, Serial No. 816,800. Divided and this application filed Sept. 14, 1914. Serial No. 861,580. (Cl. 134—21.)

1. In an apparatus for preparing resin size for paper manufacture, the combination with a closed, size-containing vessel having means whereby the size may be introduced into the same, means for applying heat and high pressure to the size while confined in the closed vessel, an emulsion container adapted to contain water, and means for forcing the size from the closed, size-containing vessel to the emulsion container including a submerged delivery outlet provided with a restricted discharge orifice, whereby the size emerges therefrom in a fine stream suddenly relieved of high pressure and heat, and immediate emulsification is effected.



2. In an apparatus for preparing resin size for paper manufacture, the combination with a closed, size-containing vessel having means whereby the size may be introduced into the same, means for applying heat and high pressure to the size while confined in the closed vessel, an emulsion container adapted to contain water, and means for forcing the size from the closed, size-containing vessel to the emulsion container including a submerged delivery outlet within said emulsion container and provided with a restricted orifice, whereby the size emerges therefrom in a fine stream suddenly relieved of high pressure and heat, and immediate emulsification is effected.

3. In an apparatus for preparing resin size for paper manufacture, the combination with a closed, size-containing vessel having means whereby the size may be introduced into the same, means for applying heat and high pressure to the size while confined in the closed vessel, an emulsion container adapted to contain water, and means for forcing the size from the closed, size-containing vessel to the emulsion container including a submerged delivery outlet having a pressure-preserving obstruction provided with a restricted discharge orifice, whereby the size emerging through said obstruction in a fine stream is suddenly relieved of high pressure and heat, and immediately emulsification is effected.

4. In an apparatus for preparing resin size for paper manufacture, the combination with a closed, size-containing vessel having means whereby the size can be introduced into the same, a pipe connected to the top portion of the vessel, a pipe connected to the bottom portion of the vessel, means for introducing steam under pressure through either of said pipes at will, a container, a size-delivering pipe leading into said container and having a delivery outlet provided with a pressure-preserving obstruction having a restricted discharge orifice, whereby the size emerging through said obstruction in a fine stream is suddenly relieved of high pressure and heat, and immediate emulsification is effected.

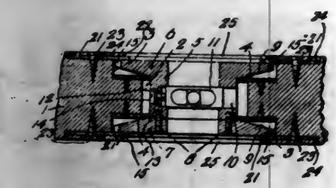
5. In an apparatus for preparing resin size for paper manufacture, the combination with a closed size-containing vessel having means whereby size can be introduced into the same, pipes connected to the top of the vessel and to the bottom thereof, means for introducing steam under pressure through either of said pipes at will, a container, a size-delivery pipe leading to and within said container, means for connecting said delivery pipe to the bottom of said size containing vessel to cause the expulsion of the size therethrough, and a size-filtering device between the container and the size-containing vessel.

[Claims 6 to 10 not printed in the Gazette.]

1,215,035. ADJUSTABLE LEVEL. MICHAEL KOCISKO, Angus, Minn., assignor to Oscar Myhran, Barton, N. D. Filed May 12, 1916. Serial No. 97,107. (Cl. 33—214.)

1. An adjustable spirit level comprising in combination, a rotary body consisting of a tubular element, flanges rising from the ends of said tubular element, bearing plates extending between the flanges and carrying the tubular member, a level tube mounted transversely within

said tubular element, and means operating on said flanges for rotating said tubular element.



2. An adjustable spirit level comprising in combination, a rotary body, a level tube supported in said body, flanges rising from opposite ends of said body, bearing plates located behind said flanges and supporting said body for rotation, one of said flanges being removable from the body to permit the insertion of the body through the bearing plate, and means operating on said flanges for rotating said body.

3. An adjustable spirit level comprising in combination, a rotary body consisting of a tubular portion, a flange rising from one end of said tubular portion, a pair of bearing plates rotatably supporting said body, an annular plate secured to the free end of said tubular portion and securing the latter in position within said bearing plates, a level tube mounted transversely through said tubular portion, means for adjusting said level tube within said tubular portion, a shaft mounted adjacent said body, pinions carried by said shaft and operating on the edges of said flange and said plate, and a thumb wheel for rotating said shaft.

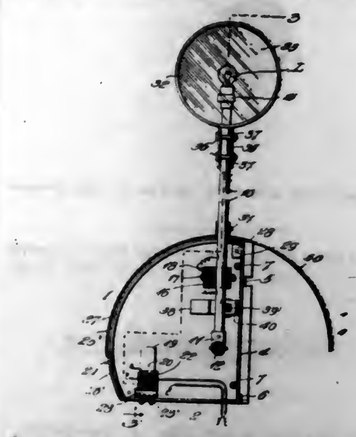
1,215,036. PHOTOGRAPH-CASE. JOSEPH P. KOLLER, Chicago, Ill. Filed Sept. 30, 1916. Serial No. 123,133. (Cl. 40—152.)



A photograph case comprising two sections formed with interfitting flanges and hinged to each other, one of said sections being formed with a plurality of display openings arranged in a circular series and a pair of disks disposed within said last named section but removable therefrom adapted to contain photographs between them, one of said disks being formed with a plurality of display openings registrable with the display openings of the section.

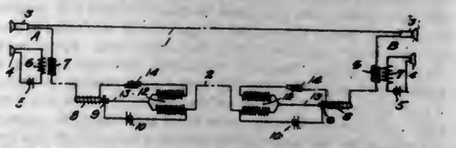
1,215,037. SIGNAL FOR AUTOMOBILES. DAVID J. LANEHART, Baltimore, Md. Filed May 16, 1916. Serial No. 97,834. (Cl. 177—311.)

1. A signal of the character specified comprising an oblong casing closed at the bottom and ends and open at the top, a signal arm pivotally mounted therein, a lamp at the upper end of the signal arm, a crank for swinging the signal arm either up or down, a casing provided with a transparent plate, inclosing the lamp and secured to the upper end of the signal arm, a source of electrical energy, suitable connections for establishing a circuit through the lamp when the signal arm is down, a switch in the circuit, a cover plate for the top of the casing, said plate provided with a central longitudinal slot throughout the greater part of its length through which the signal arm works and a flat metal guard strip of greater length than the cover plate, secured to and movable with the signal arm, said guard strip working over the top of the cover plate and serving to exclude dirt, dampness or rain from entering the casing through the slot or opening in the latter.



2. A signal of the character specified comprising a quadrant-like casing closed at the bottom and open at its top or outer edge, a removable cover plate closing the top of the casing, a signal arm pivotally mounted at its lower end in the casing and working between the side walls of the latter, a lamp at the upper end of the signal arm, manually operated means for operating the signal arm, a source of current, connections including a switch for closing the circuit through the lamp when the signal arm is down, a cover plate for the top of the casing, said plate provided with a central longitudinal slot through which the signal arm works and a packing strip interposed between the bottom of said cover plate and the outer edges of the side walls of the casing to prevent moisture or rain from entering the casing at the sides of the cover plate, said packing strip having a slot or opening corresponding and registering with that of the cover plate.

1,215,038. TELEPHONE-CIRCUIT ARRANGEMENTS. CHARLES D. LANNING, Boston, and STEPHEN C. DREW, Brookline, Mass., assignors to Charles D. Lanning, Boston, Mass. Continuation of application Serial No. 374,280, filed May 17, 1907. This application filed Aug. 2, 1911. Serial No. 642,009. (Cl. 179—170.)



1. In a telephone system in combination with the main line and its terminal instrumentalities, a voice-current-energized conductor in said system and a voice-current-repeating device, said conductor and device being inductionally connected by a transformer, said transformer having a portion of its windings in series with said conductor and a portion in series with the circuit controlled by said device, the said transformer being so wound and constructed that a portion at least of the secondary winding lies within the space limited by the outer radial limits of the primary winding; the said second mentioned portion of said winding having fixed connections to a direct-current-energized circuit with a current-varying device therein operatively controlled by said voice-current-energized conductor; the said repeating device being connected to said system solely for series actuation thereby.

2. In a telephone system in combination with the main line and its terminal instrumentalities, a voice-current-energized conductor in said system and a voice-current repeating device, said conductor and device being inductionally connected by a transformer, said transformer having its winding composed of an interior portion of coarse wire and an exterior portion of fine wire and having its whole winding in series with said conductor and a portion in series with another circuit related to said repeating device.

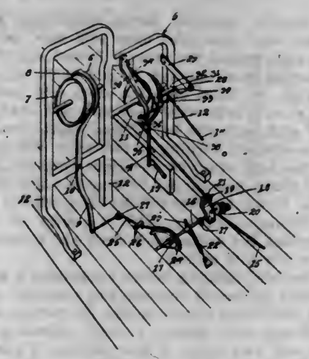
3. In combination with a telephone main line system and its terminal instrumentalities, a line-actuated voice-current repeater arrangement comprising a receiving element and a transmitting element operated thereby, said transmitting element being inductionally connected to said line system by a transformer; said transformer having the interior portion of windings composed of coarse wire and the balance thereof of relatively fine wire and having its whole winding in series with the line, and said coarse wire portion in series with the related repeater device.

4. In combination with a telephone line system a voice-current reinforcer arrangement actuated by a voice-current energized conductor in said system and serially related to said conductor and operably related serially only to said conductor, said reinforcer comprising a receiving element and a transmitting element operated thereby and said transmitting element being inductionally connected to said conductor by a transformer; said transformer having its winding composed of an interior portion of coarse wire and an exterior portion of relatively fine wire and having its whole winding in series with said conductor and said coarse wire portion in series with the related repeater devices.

5. In a telephone system, the combination of a station provided with transmitting and receiving instruments, a metallic circuit connecting the same with another station, a local reinforcing circuit operably related to but one of the sides of said metallic circuit and provided with a battery and a varying resistance medium, in said reinforcing circuit, an induction coil energized by the current undulations of said reinforcing circuit, the windings of said coil being in series with one another and the said side of the metallic circuit and an electromagnet operatively connected with the main line for actuating said resistance medium.

[Claims 6 to 22 not printed in the Gazette.]

1,215,039. MULE STOP-MOTION. ARTHUR R. LAYMAN, Dover, N. H. Filed Aug. 27, 1913. Serial No. 786,912. (Cl. 74—46.)

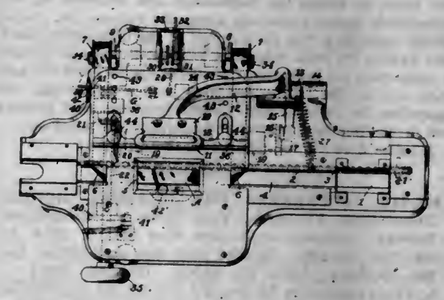


1. The combination with loose and driving pulleys, a vertically disposed shipper lever pivoted intermediate of its ends and having its upper portion arranged adjacent to the said pulleys and adapted to shift a belt from one pulley to another, a scroll draft rope, a rock shaft, disposed transversely with relation to the draft rope at one side of the same, a segmental member secured to the rock shaft, a flexible connection secured at one end to the segmental member and connected at the other end with the lower end of the shipper lever, pulleys for guiding the flexible connection intermediate the segmental member and the shipper lever whereby a rocking of the shaft will actuate the shipper lever to move a belt from the driving pulley to the loose pulley, a spring for urging the rock shaft to move the shipper lever from the driving pulley to the loose pulley, and an arm having a laterally extending pulley engaged by the lower flight or stretch of the draft rope, said arm being connected with the rock shaft and adapted to release the same to permit the spring to actuate the rock shaft when the draft rope breaks or slackens.

2. The combination with loose and driving pulleys, a vertically disposed shipper lever pivoted intermediate of its ends and provided at its upper end with a belt receiving portion, a scroll draft rope and a stop motion comprising a rock shaft having an arm provided with a laterally projecting pulley wheel extending beneath the lower flight or stretch of the draft rope, a tension pulley mounted above the lower flight or stretch of the draft rope and engaging the same adjacent to the said wheel, a segmental member secured to the rock shaft, a flexible connection attached at one end to the segmental member and connected at its other end with the lower terminal of the shipper lever, pulleys for guiding the flexible connection intermediate the segmental connection and the shipper lever whereby a rocking of the shaft will actuate the shipper lever to move a belt from a driving pulley to a loose pulley and a spring for urging the rock shaft for actuating the shipper lever when the draft rope breaks or slackens.

3. The combination of a draft rope, a crank shaft, having a crank portion provided with a pulley engaging the upper flight of the draft rope, said crank shaft having an arm, a vertical rod having a slotted connection at its upper end with the said arm, a lever connected to the lower end of the said rod and designed to be connected with a clutch, and a spring connected with the crank shaft for actuating the same when the upper flight of the draft rope breaks or slackens.

1,215,040. AUTOMATIC OFFICE-ADDRESSER. ULYSSES GRANT LEE, Chattanooga, Tenn., assignor to Montague Mailing Machinery Co., a Corporation of Tennessee. Filed May 29, 1913, Serial No. 770,784. Renewed Sept. 17, 1915. Serial No. 51,288. (Cl. 101—1.)



1. In combination in a printing apparatus, a hand operated impression arm pivotally mounted and having a handle at its free end, a table having a straight runway for individual printing plates, a plate hopper and a receiver at opposite ends of said straight runway, a feeder for the individual printing plates operating along said straight runway and moving in a plane at right angles to the plane of pivotal movement of the impression arm, and a connection from the pivoted end of the impression arm to the plate feeder for operating the same, substantially as described.

2. In combination in a printing apparatus, a table, a hand operated impression arm pivotally mounted and having a handle at its free end, a hopper and receiver for individual printing plates supported by the said table, a runway on the table for the individual printing plates extending straight from the hopper to the receiver, a printing plate feeder operating along said straight runway and moving in a plane at right angles to the plane of pivotal movement of the impression arm and a connection from said impression arm to the printing plate feeder for operating the same, said connection including an arm extending from the axis of the impression arm and lying beneath the plane of the upper surface of the table and moving in a plane transverse to the plate feeder with means for transmitting the movement of said arm to the plate feeder, substantially as described.

3. In combination in an addressing machine, a manually operated impression arm pivotally mounted, having a handle at its free end, a hopper and a receiver for individual printing plates, a table supporting said hopper and receiver, a runway extending along said table straight from the hopper to the receiver, a printing plate feeder operating along said straight runway and moving in a plane at right angles to the plane of pivotal movement of the impression arm and a connection from said impression arm to the printing plate feeder for operating the same, said connection including an arm reaching from the axis of the impression arm and lying beneath the plane of the upper surface of the table and moving in a plane transverse to the said plate feeder with means for transmitting the movement of said arm to the said plate feeder, said means including a crank member operated by the said arm, substantially as described.

4. In combination a frame, a pivoted impression arm with means for manually operating the same, a runway for the address plates extending transversely of the plane in which the impression arm works, an endless feed chain operating along the runway, a shaft beneath the frame extending parallel with the plate feeding chain, a connection between the pivoted impression arm and the said shaft transmitting the movement of said arm to said shaft, a cross shaft geared to the first shaft, and pawl and ratchet mechanism for transmitting the movement of the shafts to the plate feed chain to move it step by step in one direction.

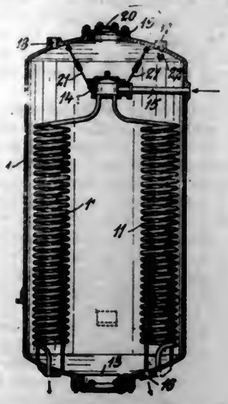
5. In combination a frame, a pivotally mounted impression arm with means for operating it manually, a runway for individual address plates extending transversely of the plane in which the impression arm operates, an address plate feeder operating along the runway, an inking ribbon extending over the runway at the impression point, and having its ends extending rearwardly, ribbon spools, a connection for operating the ribbon spools from the pivoted end of the impression arm, and a connection for operating the address plate feeder from the said pivoted end of the impression arm, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,215,041. APPARATUS FOR HEATING LIQUIDS. JACOB OTTO LUNDBERG, Torp Brug, pr. Fredrikstad, Norway. Original application filed Nov. 9, 1914, Serial No. 871,185. Divided and this application filed Feb. 28, 1916. Serial No. 80,993. (Cl. 257—229.)

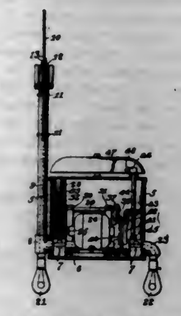
1. In an apparatus for heating liquids, the combination of a cylindrical vessel, a series of longitudinally arranged heating worms one beside the other in the peripherical part of the vessel so that in the central part of the vessel an open space is formed of a diameter not less than that of the worm windings, and a manhole arranged in the vessel and having a diameter not less than that of the worm windings.

2. In an apparatus for heating liquids, the combination of a cylindrical vessel, a series of longitudinally arranged heating worms one beside the other in the peripherical part of the vessel so that in the central part of the vessel an open space is formed of a diameter not less than that of the worm windings, and a manhole arranged in the vessel and having a diameter not less than that of the worm windings, a steam box suspended in the vessel and receiving the ends of the heating worms, and a steam



supply pipe fitted tightly in the steam box and in the wall of the vessel.

1,215,042. AUTOMATIC SIGNAL DEVICE. GEORGE C. MARTIN, Los Angeles, Cal., assignor to John M. Carson, Los Angeles, Cal. Filed Apr. 2, 1913. Serial No. 758,294. (Cl. 177—288.)



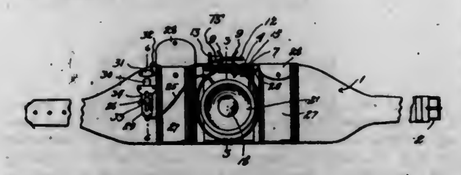
1. An electric signaling device comprising a base, a hollow rock shaft journaled upon said base and projecting at its ends beyond the same, a hollow signal carrying arm projecting from one end of said shaft, signal lamps projecting in the other direction from said shaft one at each end, an arm projecting from said rock shaft, a crank connected with said arm but of less length than the arm whereby continuous turning of the crank will operate to oscillate the said arm and the signal devices projecting from said shaft, gearing for turning the said crank and an electric motor for driving the said gearing and continuous wiring extending from a source of electrical energy through the hollow rock shaft and hollow oscillating arm to the said signals.

2. An electric signaling device comprising a base plate, a rock shaft journaled thereon and carrying oppositely extending oscillating signals, means for rocking said shaft and oscillating said signals, a shaft extending at right angles to said rock shaft, a gear thereon, a gear on said rock shaft meshing therewith for communicating movement directly from the rock shaft to the other shaft and a gong device operated by said latter shaft whereby the gong striker and signals are moved simultaneously.

3. An electric signaling device comprising a base plate, a rock shaft mounted thereon and having signals at its ends, an actuating arm secured to the said shaft, a rock shaft extending at right angles to the rock shaft and having a gong sounding hammer thereon, a gear on said shaft, a segmental gear secured to the rock shaft and meshing with said gear whereby the gong will be sounded when the rock shaft is operated for moving the signals, a gong and electrical mechanism for rocking said shaft.

4. A signaling device comprising a housing, a rock shaft mounted therein and carrying a vibrating signal arm, arms projecting from said rock shaft, actuating means mounted in the housing and connected with one of said arms for rocking said rock shaft, a sounding device mounted on said housing, a tapper for engaging said sounding device, a rock shaft carrying said tapper, a gear for turning said shaft and a gear segment intermeshing with said latter gear and carried by the other arm upon said rock shaft whereby the tapper will be actuated when the warning signal is vibrated.

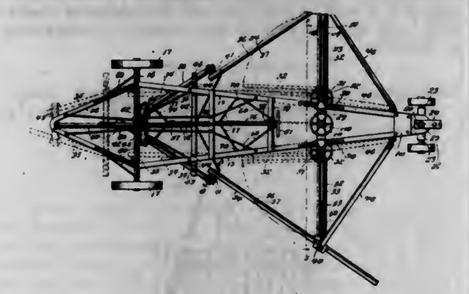
1,215,043. SEARCH-LIGHT. MICHAEL MATZ, Mineola, N. Y. Filed May 19, 1916. Serial No. 98,643. (Cl. 240—59.)



1. A head lamp, comprising in combination with a head band, a battery support on said head-band, a housing also on said head-band, a lamp casing, spring arms mounted in said housing and having trunnions supporting said lamp casing to swing between said arm, and a screw element passing through said spring arms and adapted to draw the latter into fastening engagement around said casing.

2. A head lamp, comprising in combination with a head band, battery pockets carried by said head band, a housing on said head band and including top and bottom extensions, a spring yoke supported on said bottom extension and having its arms projected through said top extension, means for drawing said arms together, a lamp casing having bearings on said spring arms, a switch, and electrical connections adapted to complete the circuit through said lamp casing and said switch, and cells mounted in said battery pockets.

1,215,044. ROAD-LEVELING MACHINE. NATHANIEL S. MONROE, Arthur, Ill. Filed Feb. 6, 1913. Serial No. 746,490. (Cl. 37—7.)



1. In a road working machine, a pair of forwardly divergent and rearwardly convergent scrapers each comprising front and rear members flexibly jointed together by a universal joint, and a link connecting the rear members together.

2. In a road working machine, a pair of forwardly divergent and rearwardly convergent scrapers each comprising a front member, a rear member and a joint, the latter including pivot members at substantially right angles to one another, a link bar whereby said rear members are connected together with freedom for pivotal movement with respect to said link bar, and a cross bar with which said rear members are adjustably connected near their forward ends.

3. In a road working machine, a wheeled carrying frame, a pair of forwardly divergent and rearwardly convergent scrapers, one at each side of the machine, each scraper comprising a front member, a rear member and a universal joint permitting independent movement of the front and rear members of the scrapers in various planes, means whereby the angles between the front members and the rear members of the scrapers may be independently varied, and said front and rear members retained at various adjustments, and hoisting means whereby vertical adjustment of the front ends of the front members and the rear ends of the rear members of the scrapers may be effected.

4. In a road working machine, a wheeled carrying frame, a pair of forwardly divergent and rearwardly convergent scrapers, one at each side of the machine, each scraper comprising a front member, a rear member and a universal joint permitting independent movement of the front and rear members of the scrapers in various planes, means whereby the angles between the front members and the rear members of the scrapers may be independently varied, and said front and rear members retained at various adjustments, and hoisting means whereby vertical adjustment of the front ends of the front members, the rear ends of the rear members and the intermediate jointed portions of the front and rear members of the scrapers may be independently effected.

5. In a machine of the class described, a wheeled frame, scrapers each composed of front and rear bars flexibly connected together, means for supporting and vertically adjusting the front ends of the front scraper bars, means for supporting and vertically adjusting the rear ends of the rear scraper bars, and means for supporting and vertically adjusting the scrapers adjacent to the joints connecting the front scraper bars and the rear scraper bars including a flexible element connecting the scrapers adjacent to the joints, a sheave supported in the bight of said flexible element, a flexible hoisting element and a drum shaft with which said flexible hoisting element is connected, said hoisting element passing through the sheave, and a supporting member on the frame with which the other end of the hoisting element is adjustably connected.

[Claims 6 to 10 not printed in the Gazette.]

1,215,045. ROAD-MACHINE. NATHANIEL S. MONROE, Arthur, Ill. Filed June 16, 1915. Serial No. 34,380. (Cl. 37—7.)



1. In a machine of the class described and including a wheeled frame, a scraper bar, a spreader link pivotally connecting said scraper bar with the frame, and adjusting and supporting means for said scraper bar including a suitably guided chain, and a guide pulley connected with the scraper bar for free sliding movement longitudinally thereof and over which said chain is trained.

2. In a machine of the class described, a wheeled frame, a scraper bar, a spreader link pivotally connecting the scraper bar with the frame, means for supporting and adjusting the scraper bar including a hoisting chain and a drum shaft on which said chain may be wound, a guide pulley for said chain supported on the wheeled frame, and a second guide pulley over which the hoisting chain is trained, said second guide pulley being movably connected

with the scraper for self-adjusting longitudinal movement with respect thereto.

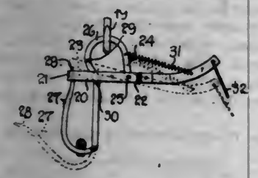
3. In a machine of the class described, a wheeled frame, a scraper bar, a spreader link pivotally connecting the scraper bar with the frame, means for adjustably and flexibly supporting the scraper bar with respect to the frame including a guided chain and a drum shaft on which said chain may be wound, a swinging crane mounted on the frame, a guide pulley for the chain carried by said crane, and a second guide pulley over which the chain is trained, said second guide pulley being connected with the scraper bar for self-adjusting longitudinal movement with respect thereto.

4. In a machine of the class described, a wheeled frame, a scraper bar, a spreader link pivotally connecting the scraper bar with the frame, means for adjusting and flexibly supporting said scraper bar including a swinging crane, a guided chain and a drum shaft on which said chain may be wound, a longitudinal track bar connected with the scraper bar, a carriage traveling on said track bar and having a guide pulley over which the hoisting chain is trained, and a second guide pulley carried by the crane.

5. In a machine of the class described, a wheeled frame, swinging cranes carried on said frame, rearwardly convergent scraper bars, spreader links pivotally connecting the scraper bars with the frame, means for vertically adjusting and flexibly supporting said scraper bars including hoisting chains and drum shafts on which said chains may be wound, guide pulleys for the hoisting chains carried by the cranes, longitudinal track bars connected with the scraper bars, carriages traveling freely and unobstructedly on said track bars, and guide pulleys on said carriages over which the hoisting chains are trained.

[Claims 6 to 10 not printed in the Gazette.]

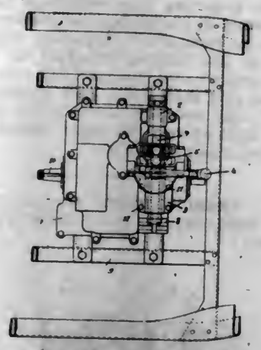
1,215,046. TRIP DEVICE FOR HAY-CARRIERS. GEORGE B. MONTGOMERY, Rupert, Idaho. Filed Apr. 26, 1916. Serial No. 93,751. (Cl. 57—128.)



1. In a trip device of the character described, a supporting member having a looped portion, a depending shank, and a hook-shaped bill pivoted to the shank, a keeper pivoted to the extremity of the looped portion embracing the straight shank and normally engaging over the free end of the bill, a spring acting to hold the looped portion of the keeper in engagement with the free end of the bill, a trip connection attached to the other end of the keeper, and stops projecting from the supporting member and limiting the oscillation of the keeper relative thereto.

2. A trip device of the character described including a supporting member having a looped portion, a straight depending shank, a bill pivoted to the lower end of the shank, the bill normally extending upward, a keeper comprising a strip of metal bent upon itself to form an elongated loop, the extremity of the looped portion of the supporting member being disposed within one end of the loop and pivoted to the keeper, the loop embracing the supporting member at the junction of the looped and straight portions thereof, and the extremity of the keeper being adapted to engage over the bill, stops projecting laterally from the supporting member and adapted to engage the keeper and limit its movement, and a spring attached to the supporting member and normally holding the looped end of the keeper in a depressed position where it is adapted to engage the bill.

1,215,047. GEARING. FREDRICK E. MOSKOVICS, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed July 31, 1909. Serial No. 510,504. (Cl. 74—58.)



1. In a motor vehicle, the combination with a frame, of a transmission mechanism supported thereby and having shifting movement with respect thereto, a controller for said transmission mechanism, and means for causing said controller to move with said transmission mechanism in said shifting movement of the latter with respect to said frame; substantially as described.

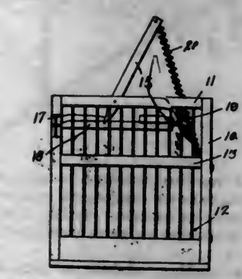
2. In a motor vehicle or the like, a flexible vehicle frame, a casing connected therewith, shifting devices carried by said casing, and a movable controller for said shifting devices mounted upon said casing; substantially as described.

3. In a motor vehicle or the like, a vehicle frame, a casing connected therewith, shifting devices carried by said casing, and a movable controller for said shifting devices mounted upon said casing and located in approximately the transverse center of said frame; substantially as described.

4. In a device of the class specified, a transmission case, a bushing integral therewith, and a removable bushing mounted thereon in alinement with each other, movable transmission mechanism, and means for operating the transmission mechanism, said means being wholly mounted on said transmission case; substantially as described.

5. In a device of the class specified, a transmission case, shiftable transmission mechanism carried thereby, a bushing integral with said case, a removable bushing mounted on said case, a rod engaging both of said bushings, and a movable controller for operating said mechanism upon said rod between said bushings; substantially as described.

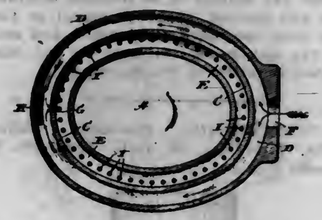
1,215,048. BIRD-TRAP. WILLIAM JAMES MOYLE, Houghton, Mich. Filed Sept. 23, 1915. Serial No. 52,272. (Cl. 43—19.)



1. A bird trap comprising a cage divided into an upper trap chamber and a lower decoy chamber, a pivoted spring urged door in the top of the trap chamber, and a bait lever movably mounted on the rear wall of the trap chamber and formed with a notch intermediate its length for the reception of the lower and pointed end of said door to hold the door against the resilient closing means.

2. A bird trap comprising a cage, the walls of which include vertical spaced bars, a pivoted spring closed door in the top of the cage and having an inner pointed end, and a combined bait holder and detent mounted for vertical sliding movement on one of the bars of the rear wall of the cage, said detent having a bait pan on the forward end thereof and a notch intermediate its length for the reception of the pointed end of the door to hold said door in open position.

1,215,049. WATER-CLOSET BOWL. CHARLES H. MUCKENHIRN, Detroit, Mich., assignor to Standard Sanitary Manufacturing Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 2, 1912. Serial No. 688,061. (Cl. 4—22.)



In a bowl of the character described, a flushing rim comprising a pair of channels one within the other, the outermost channel having an inlet opening at the rear of the bowl and a discharge opening at its front end for positively directing a heavy stream of water against the inner face of the front wall of the bowl, the inner channel having a plurality of relatively fine outwardly and downwardly directed discharge apertures arranged around the same to positively direct jets of water against the inner face of the bowl, the inner channel being closed adjacent to the inlet to the outer channel to compel the water to travel entirely around said outer channel to the discharge opening at the front of the bowl and having a communicating passage with the outer channel at said front of the bowl compelling the water admitted to the inner channel to traverse in a return path rearwardly relative to the bowl, substantially as and for the purpose described.

1,215,050. HOSE-COUPLING. FRANK X. MÜLLER, Buffalo, N. Y., assignor to Republic Hose Coupler Corporation, Buffalo, N. Y., a Corporation of New York. Filed Feb. 26, 1915. Serial No. 10,723. (Cl. 137—28.)



A hose coupling comprising a tubular ferrule of absorbent material adapted to be inserted at its opposite ends into the opposing ends of two hose sections, and a non-absorbent lining arranged within the bore of said ferrule and having its ends provided with outwardly projecting integral flanges which engage with the ends of said ferrule and cover the entire surfaces of said ends.

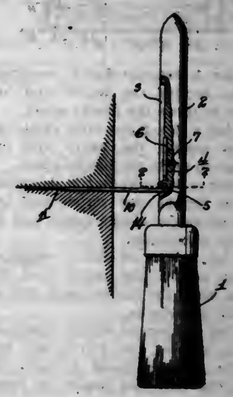
1,215,051. CIGAR-BAND. GUSTAV JOHANNES NAGEL, New York, N. Y., assignor to Garrett Harris Smith, Upper Montclair, N. J. Filed Feb. 15, 1916. Serial No. 78,400. (Cl. 40—21.)

1. An elongated strip of material adapted to be folded into an annular band and having two oppositely disposed integral lateral flaps adjacent one end of said band, one of said flaps being of sufficient length to overlap at least a portion of the other and to securely embrace the other end of said band when said flaps are folded and the said end is inserted therebetween.



2. An elongated strip of material adapted to be folded into an annular band and having two oppositely disposed integral lateral flaps adjacent one end of said band, said flaps being adapted to fold about axes outwardly converging with respect to each other and the opposite end of said band being of greater width than the width between the said outer terminals of said axes, one of said flaps being of sufficient length to overlap at least a portion of the other and to securely embrace the other end of said band when said flaps are folded and the said end is inserted therebetween.

1,215,052. PAINT-BRUSH HOLDER. MALVIN M. NELSON, Victorville, Cal. Filed Mar. 15, 1916. Serial No. 84,409. (Cl. 248—50.)



1. A device of the character described, including a handle having a recess, a flat spring mounted in the recess, a blade having one end bifurcated and pivotally engaged with the said flat spring, the ends of said bifurcated portion being provided with loops adapted to be pivotally received by said spring, and a shoulder formed at the end of the recess in said handle for restricting the swinging movement of said blade.

2. A device of the character described, including a handle provided with a recess having its lower end wall beveled, the beveled wall of the recess merged into a semi-circular depression at the end of the recess, a flat spring mounted in said recess and extending downwardly and having its end disposed half way across the semi-circular depression, a blade having loops formed on its terminal, said flat spring carrying lugs adapted to register with the loops of said blade and for retaining the loops in registration with the said semi-circular recesses, the bottom edges of said lugs adapted to contact with said blade and hold the same in engagement with the said beveled end of the recess.

3. A device of the character described comprising a handle provided with a recess, said recess being deeper at one end and terminating with a beveled end wall, a spring element mounted in the deeper portion of said recess, a blade, means rotatably receiving the end of the blade and connecting said blade to said spring element whereby said blade will be held in either horizontal or angular disposition of said blade.

4. A device of the character described including a handle provided with a recess means carried by the handle for supporting the same and including loops adapted to be disposed within said recess, a flat spring mounted in said recess, lugs formed on said flat spring disposed within said loops whereby the rotation of said loops upon said lugs in coördination with the resiliency of said spring will permit said supporting means to be varied with respect to its angular disposition on said handle.

5. A device of the character described, including a handle provided with a recess, a flat spring mounted on said recess, lugs formed on said flat spring member, a blade, and loops formed on said blade for the reception of said lugs and adapted to clench said lugs with said blade as rotated thereon.

[Claims 6 to 10 not printed in the Gazette.]

1,215,053. HOLDER FOR BRACELET-WATCHES. CHARLES J. OLNEY, Waltham, Mass., assignor to Waltham Watch Company, Waltham, Mass., a Corporation of Massachusetts. Filed Feb. 9, 1916. Serial No. 77,166. (Cl. 211—28.)



1. A holder for a bracelet-watch comprising two separable blocks to receive the watch and bracelet about them and means to press the blocks apart.

2. A holder for a bracelet-watch comprising two separable blocks to receive the watch and bracelet about them and springs to press the blocks apart.

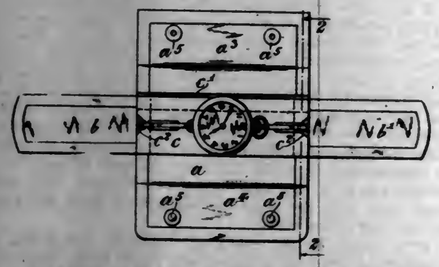
3. A holder for a bracelet-watch comprising two separable blocks to receive the watch and bracelet about them, means to press the blocks apart, and a flexible one-piece covering for the blocks.

4. A holder for a bracelet-watch comprising two separable blocks to receive the watch and bracelet about them, springs to press the blocks apart, and a flexible one-piece covering for the blocks.

5. A holder for a bracelet-watch comprising two separable blocks to receive the watch and bracelet about them, the blocks being recessed to form seats for the watch and the bracelet, and means to press the blocks apart.

[Claims 6 and 7 not printed in the Gazette.]

1,215,054. CARRIER FOR BRACELET-WATCHES. CHARLES J. OLNEY, Waltham, Mass., assignor to Waltham Watch Company, Waltham, Mass., a Corporation of Massachusetts. Filed Oct. 28, 1916. Serial No. 128,150. (Cl. 150—52.)



1. A carrier for a watch and bracelet comprising a back member, a supporting member hinged along one side to the back member and adapted to be encircled lengthwise by the watch and bracelet, end flaps hinged to the back member to cover the watch and bracelet, and means to secure the end flaps in position.

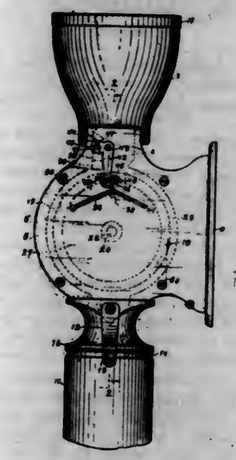
2. A carrier for a watch and bracelet comprising a back member, a supporting member hinged along one side to the back member and adapted to be encircled lengthwise by the watch and bracelet, and side flaps hinged to the back member to cover the watch and bracelet.

3. A carrier for a watch and bracelet comprising a back member, a supporting member hinged along one side to the back member and adapted to be encircled lengthwise by the watch and bracelet, and side flaps hinged to the back member to cover the watch and bracelet, the side flaps being provided with fastening devices.

4. A carrier for a watch and bracelet comprising a back member, a supporting member hinged along one side to the back member and adapted to be encircled lengthwise by the watch and bracelet, end flaps hinged to the back member to cover the watch and bracelet, and side flaps hinged to the back member to cover the end flaps.

5. A carrier for a watch and bracelet comprising a back member, a supporting member hinged along one side to the back member and adapted to be encircled lengthwise by the watch and bracelet, end flaps hinged to the back member to cover the watch and bracelet, and side flaps hinged to the back member to cover the end flaps, and fastening devices carried by the side flaps.

1,215,055. CUTTING-MILL. FREDERICK J. OSIUS, Racine, Wis. Filed Mar. 25, 1916. Serial No. 86,536. (Cl. 83—6.)



1. A cutting mill, comprising a support, a stationary cutting member mounted on the support, a rotary member mounted on the support, and a cutting member carried by the rotary member which co-acts with the stationary cutting member only when the rotary member is revolved at a predetermined rate of speed.

2. A cutting mill, comprising a casing, a stationary cutting member mounted in the casing, a rotary member mounted in the casing, and a cutting member carried by the rotary member which co-acts with the stationary cutting member only when the rotary member is revolved at a predetermined rate of speed.

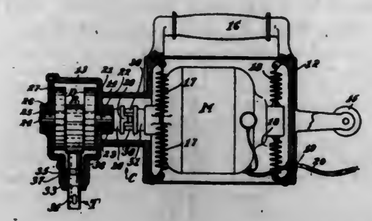
3. A cutting mill, comprising a casing, a stationary cutting member mounted therein, and a rotary member journaled in the casing and having a cutting portion which is moved outwardly by centrifugal force to a position to co-act with the stationary cutting member when the rotary member is revolved at a predetermined rate of speed.

4. A cutting mill, comprising a casing, a stationary cutting member mounted in the casing and having downwardly extending teeth, a rotary member mounted in the casing, and a cutting member carried by the rotary member which co-acts with the stationary cutting member only when the rotary member is revolved at a predetermined rate of speed, said rotary cutting member having outwardly extending teeth which pass between the teeth of the stationary cutting member when co-acting therewith.

5. A cutting mill, comprising a casing having an inlet and an outlet opening, a stationary cutting member mounted in the inlet portion of the casing, a rotary member in the form of a fly wheel mounted in the casing and having its periphery adjacent the inlet opening, and a cutting member carried by the rotary member and co-acting with the stationary cutting member when the rotary member is revolved at a predetermined rate of speed.

[Claims 6 to 15 not printed in the Gazette.]

1,215,056. MECHANICAL MOVEMENT. CARL PAULI, Roselle Park, N. J., assignor to Garwood Company, Garwood, N. J., a Corporation of New Jersey. Filed Sept. 17, 1915. Serial No. 51,187. (Cl. 255—41.)



1. In a mechanical movement, a rotatable shaft, an anchoring member encircling said shaft and mounted on said shaft, and an annular hammer encircling said shaft and anchored by said anchoring member to be actuated by the rotation of said shaft thereby to be swung into a position where its center of gravity is remote from the center of gravity of said shaft, said floating member being in the form of a ring.

2. In a mechanical movement, a rotatable shaft, an eccentric guiding member mounted to rotate with said shaft, and an annular hammer through which said shaft extends and guided by said eccentric and adapted to be actuated by the rotation of said shaft to be swung into a position where its center of gravity is remote from the center of gravity of said shaft.

3. In a mechanical movement, a rotatable shaft, an eccentric mounted to rotate with said shaft, and an annular hammer through which said shaft extends and guided by said eccentric and adapted to be actuated by the rotation of said shaft to swing into a position where its center of gravity is remote from the center of gravity of said shaft.

4. In a mechanical movement, an annular hammer, a shaft extending through said hammer, and means for locating said hammer eccentric to said shaft so that when said shaft is rotated said hammer will be thrust into a position where its center of gravity is remote from the center of gravity of said shaft.

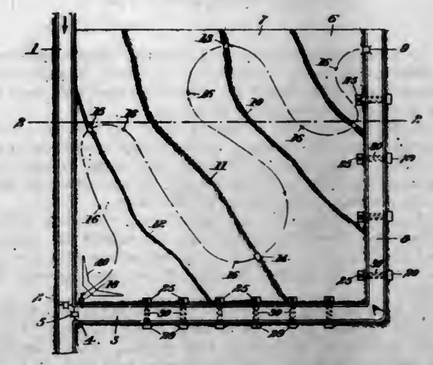
5. In a mechanical movement, an annular hammer, a shaft extending through said hammer, means for locating said hammer in a position eccentric to said shaft, said hammer having considerable play for movement relative to said shaft, and means for normally maintaining said hammer in a position where its center of gravity is remote from the center of gravity of said shaft.

[Claims 6 to 17 not printed in the Gazette.]

1,215,057. FROST-PROTECTION SYSTEM. ALLEN JEFFERSON PERKINS, Lake Charles, La. Filed May 29, 1916. Serial No. 100,581. (Cl. 137—66.)

1. The process of protecting crops growing on a tract of land from an injurious lowering of the atmospheric temperature, which consists in repeatedly circulating water while heating the same at a plurality of places over said tract to a temperature sufficiently high to afford the intended protection, substantially as described.

2. The process of protecting crops growing on a tract of land from injurious changes in temperature which consists in causing water to flow by gravity to the highest point of said land, and from said highest point in a zigzag course across and over said land to its lowest point; and raising said water to a temperature above that of the atmosphere during the protecting operation, substantially as described.



3. In a tract of land suitable for protection against frost, the combination of a main water channel; a distribution channel supplied from said main channel; a plurality of water heating means located under and across said distribution channel; controlling connections between said channels; controlling connections between said distribution channel and a selected point on the land to be protected; a plurality of baffles on said land adapted to cause the heated water to flow from said selected point across and over said land; and means for collecting said heated water at a single point on said land whence it may be delivered back to said distribution channel, substantially as described.

4. In a tract of land suitable for protection against frost, the combination of a main water channel; a distribution channel supplied from said main channel; means for heating the water as it flows along said distribution channel; controlling connections between said channels; controlling connections between said distribution channel and a selected point on the land to be protected; a plurality of baffles on said land adapted to cause water to flow from said selected point across and over said land; and means for collecting said heated water at a single point on said land whence it may be delivered back to said distribution channel, substantially as described.

1,215,058. SECURING-CLASP. GUY A. POUND, Wasco, Oreg. Filed Nov. 9, 1915. Serial No. 60,490. (Cl. 24—259.)



A clasp formed from a single piece of sheet metal comprising a body portion having an oblong slot formed therein, one end of said body portion bent to form a right angular extension, and a wing formed integral with each side of said extension and extended in parallel relation to each other, the outer edges of said wings extending in a line substantially parallel to the body portion, while the inner edges are arcuate and disposed in the said slot, the wings having knurled outer side faces whereby the wings may be grasped to lift their arcuate edges from the slot

1,215,059. INTERNAL METAL LAP. LORENCE S. RASMUSEN, Rock Island, Ill., and HERMAN B. CARLSON, Davenport, Iowa. Filed Feb. 28, 1916. Serial No. 81,007. (Cl. 51—4.)



1. A tubular lap unbroken at its ends, its exterior being normally cylindrical throughout its length, and yielding means tending to spread the portion between said ends so as to enlarge the surface thereof.

2. An internal lap having between its ends an active surface which is normally substantially cylindrical, and yielding means tending to distort the shape of said lap between its ends and enlarge the circumference of said surface without enlarging it at said ends.

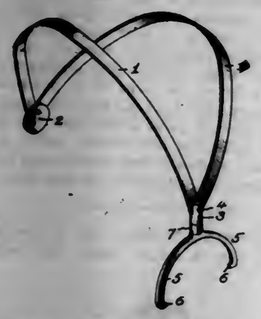
3. A lap internally cylindrical and externally cylindrical and normally of one size throughout its length, and yielding means movable longitudinally within the lap and tending to enlarge the size of the same between its ends.

4. A tubular lap unbroken at its ends and longitudinally slotted between them, its exterior being normally of one size throughout its length, and yielding means tending to spread the slotted portion between said ends so as to enlarge the surface thereof.

5. An internal lap longitudinally slotted between its ends and hollow throughout its slotted portion, said portion having a normally cylindrical working surface, a spreader within said hollow portion for enlarging the body of the lap where it is slotted, and yielding means for advancing said spreader but permitting its recession.

[Claims 6 to 14 not printed in the Gazette.]

1,215,060. TELEPHONE HEAD-GEAR. THOMAS RHODUS, Chicago, Ill., assignor to The Magniphone Company, a Corporation of Arizona. Filed Oct. 7, 1915. Serial No. 54,483. (Cl. 179—156.)



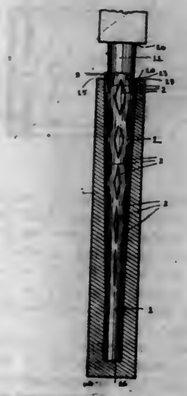
1. In a head gear for telephone receivers, the combination of a head band having flat sides, a yoke having flat sides adapted for engagement with a telephone receiver, and intermediate adjustable means adapted to vertically aline the flat side of said yoke with the flat side of one end of said head band, substantially as set forth.

2. In a head gear for telephone receivers, the combination of a head band, a hub formed with a recess at one end for connection with said head band and provided with a central orifice in its other end, a transverse pin forming a pivotal connection between said hub and band, and a yoke adapted for engagement with a telephone receiver and having an attaching neck formed with a shank for turning engagement in the hub orifice aforesaid, substantially as set forth.

3. In a headgear for telephone receivers, the combination of a resilient head band, a hub formed with a slotted end for connection with said head band and provided with a central screw-threaded orifice in its other end, a transverse pin forming a pivotal connection between said hub and band and a yoke adapted for engagement with a telephone receiver and having an attaching neck formed with a central screw-threaded shank for engagement in the screw-threaded orifice of the hub aforesaid, substantially as set forth.

4. In a head gear for telephone receivers, the combination of a resilient head band having flat sides, and a yoke having flat sides adapted for engagement with a telephone receiver and attached to said head band, said yoke having inturned end prongs formed integrally with the yoke, the flat sides of the yoke being in the same plane as the sides of the prongs, substantially as set forth.

1,215,061. PROCESS OF FORMING EXPANDED RETICULATED CONSTRUCTIONS. CYRUS W. RICE and CHARLES W. DAKE, Grand Rapids, Mich. Filed Apr. 12, 1915. Serial No. 20,613. (Cl. 164—6.6.)



1. The process of forming a reticulated construction of the character described, which consists in slitting a hollow body and transversely expanding and forming the same bodily deflecting in cross section in the plane of the direction of the expanding.

2. The process of forming a tubular reticulated construction of the character described, which consists in slitting a tubular body and expanding the same transversely by spreading means operating against the inner surface of said body.

3. The process of forming a reticulated construction of the character described, which consists in slitting a hollow body, heating the same sufficiently to render it reformable and thereupon transversely expanding and forming the same bodily deflecting in cross section in the plane of the direction of the expanding.

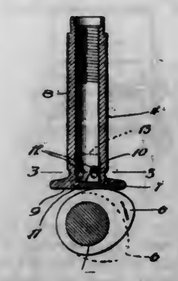
4. The process of forming a tubular reticulated construction of the character described, which consists in slitting a tubular body and heating the same sufficiently to facilitate expanding and thereupon expanding the body transversely by spreading means operating against the inner surface of said body.

5. The process of forming a reticulated construction of the character described, which consists in slitting a hollow body and transversely expanding and forming the same bodily deflecting in cross section in the plane of the direction of the expanding, such expanding being initiated in successive portions of the body progressively in the longitudinal direction of the body.

[Claims 6 to 18 not printed in the Gazette.]

1,215,062. TAPPET. GEORGE R. RICH, Oak Park, Ill. Filed Sept. 18, 1916. Serial No. 120,740. (Cl. 74—1.)

1. A tappet, comprising a case hardened single piece, consisting of a hollow stem portion formed with a head on one end, there being openings through the stem portion adjacent the head whereby the head and adjacent stem portion may be case hardened on their outer and inner sides.



2. A tappet comprising a case-hardened single piece, consisting of a stem portion and a disk-like head portion, there being openings through the stem portion adjacent the head for the admission of a carbonising element.

3. A tappet comprising a single piece, consisting of a stem and a disk-like head on one end, there being a hollow space in the stem adjacent the disk, opening out through the wall of the stem, and the surface portion of the head and surface portion of the hollow of the stem adjacent the head being case hardened.

4. A tappet comprising a single piece, consisting of a stem having a disk-like head on one end, said stem having a bore extending therethrough terminating adjacent the head to thereby leave a thin wall between the face of the head and bore, and there being openings adjacent the head leading out from said bore, the external surface portion of said stem and head and the internal surface portion of part of the stem, head and openings being hardened.

1,215,063. SWIMMING APPLIANCE. WILLIAM H. ROBERTS, Newburyport, Mass. Filed Mar. 24, 1916. Serial No. 86,467. (Cl. 9—21.)



1. A swimming appliance comprising a buoyant member including angularly disposed body supporting and saddle portions of substantially uniform thickness, the latter of said portions being shorter than the former, and said member having leg clearance notches in each edge thereof between said angularly related portions.

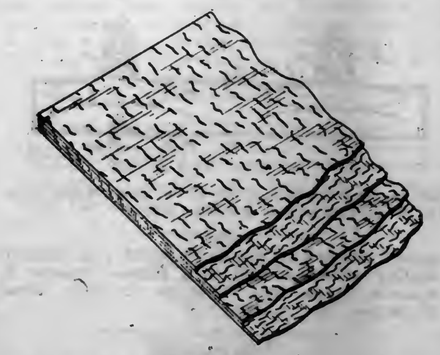
2. A swimming appliance comprising a buoyant member including a flat body supporting member having one end thereof reduced in width, a flat saddle member also having one end thereof reduced in width, and a triangular block for connecting the reduced end portions of said body and straddle members at an angle.

1,215,064. SEMIMETALLIC FIBER SHEET. LOUIS L. RYAN, Bridgeport, Conn., assignor to The Royal Equipment Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 29, 1916. Serial No. 111,966. (Cl. 154—45.5.)

1. A sheet of the character described comprising fiber, a gum, shredded metal and a filler, mixed together and rolled into sheet form.

2. A semi-metallic sheet of the character described comprising asbestos fiber, rubber, shredded metal and a filler, mixed together and rolled into sheet form.

3. A sheet of the character described comprising asbestos and cotton fiber, a gum, shredded metal and a filler, mixed together and rolled into sheet form.



4. A sheet of the chaarcter described comprising a plurality of individual sheets, each consisting of fiber, a gum, shredded metal and a filler, mixed together and rolled into sheet form, said individual sheets being cemented together.

5. A sheet of the character described comprising a plurality of individual sheets, each consisting of fiber, a gum, shredded metal and a filler, mixed together and rolled into sheet form, said individual sheets being laid with the grain in different directions and cemented together.

[Claims 6 to 9 not printed in the Gazette.]

1,215,065. PROCESS OF DEOXIDIZING AND REFINING FERROUS METALS. EDWARD H. SCHWARTZ, Chicago, Ill. Filed Jan. 6, 1916. Serial No. 70,612. (Cl. 75—50.)

1. The process of deoxidizing and refining herein specified ferrous metals to obtain a product of relatively high carbon content, which consists in mixing with the metal in solid condition to be treated, a manganese-containing alloy, and melting the mixture in the presence of carbonaceous material.

2. The process of deoxidizing and refining herein specified ferrous metals to obtain a product of relatively high carbon content, which consists in mixing with the metal in solid condition to be treated, solid spiegeleisen, and melting the mixture in the presence of carbonaceous material.

3. The process of deoxidizing and refining steel to obtain a product of relatively high carbon content, which consists in mixing with carbon-steel scrap, a manganese-containing alloy, and melting the mixture in the presence of carbonaceous material.

4. The process of deoxidizing and refining steel to obtain a product of relatively high carbon content, which consists in mixing with steel-scrap, spiegeleisen, adding limestone, and melting the charge in the presence of carbonaceous material.

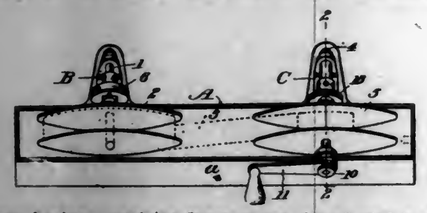
5. The process of deoxidizing and refining steel to obtain a product of relatively high carbon content, which consists in mixing with carbon-steel scrap, spiegeleisen and high-silicon pig-iron, adding limestone, and melting the charge in the presence of carbonaceous material.

[Claim 6 not printed in the Gazette.]

1,215,066. PICTURE-FILM-REWINDING DEVICE. RALPH SHIPMAN, Sunbury, Pa. Filed Apr. 30, 1913. Serial No. 764,654. (Cl. 242—55.)

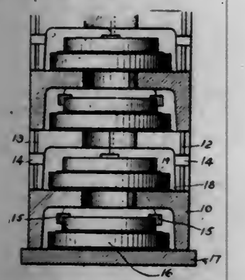
In a rewinding device for picture film reels, a supporting stand, a winding shaft and a countershaft mounted therein, the former shaft projecting forwardly from the support, a fast gear and a loose gear on the winding shaft, a clutch member connected to the latter gear, said loose gear and clutch member being in front of said stand,

intermediate gears on said counter-shaft engaging the gears on the winding shaft, one of said intermediate



gears having a retaining flange on one side adapted to engage the forward side of said loose gear.

1,215,067. APPARATUS AND PROCESS FOR BAKING EMERY-WHEELS AND THE LIKE. HERBERT R. SIMONDS, Dayton, Ohio. Filed Mar. 25, 1916. Serial No. 86,660. (Cl. 25—157.)



1. Apparatus for baking emery wheels and the like, comprising a tile on which to lay a wheel, and a saggar resembling an inverted box without a cover, the interior thereof being large enough to enable it to cover the tile and rest upon a surface in the same plane as that of the surface on which the tile rests, without imposing any of its weight upon the tile.

2. Apparatus for baking emery wheels and the like, comprising a tile on which to lay the wheel, and a saggar resembling an inverted box with a hole in its bottom and no lid, the interior thereof being large enough to enable it to cover the tile and rest upon a surface in the same plane as that of the surface on which the tile rests, without imposing any of its weight on the tile.

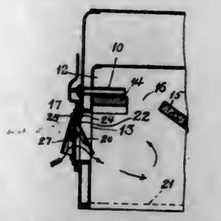
3. Apparatus for baking emery wheels and the like, comprising a tile on which to lay a wheel, and a saggar resembling an inverted box without a cover, the interior thereof being large enough to enable it to cover the tile and rest upon a surface in the same plane as that of the surface on which the tile rests without imposing any of its weight upon the tile, the saggar being composed of segments locked together by tongues and grooves.

4. Apparatus for baking emery wheels and the like, comprising a tile on which to lay a wheel, and a saggar resembling an inverted box without a cover, the interior thereof being large enough to enable it to cover the tile and rest upon a surface in the same plane as that of the surface on which the tile rests, without imposing any of its weight upon the tile, the saggar having apertures in its sides to admit heat to the interior thereof.

5. Apparatus for baking emery wheels and the like, comprising a tile on which to lay a wheel, a saggar resembling an inverted box without a cover, the interior thereof being large enough to enable it to cover the tile and rest upon a surface in the same plane as that of the surface on which the tile rests, without imposing any of its weight upon the tile, and a sheet of paper between the tile and wheel, the composition of said paper comprising a refractory substance which will remain and act as a bedding for the wheel after the combustible components have been consumed.

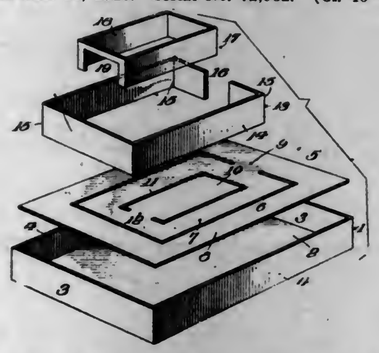
[Claims 6 to 11 not printed in the Gazette.]

1,215,068. FIRE-BOX. SAMUEL W. SIMONDS, Boston, Mass. Filed Oct. 21, 1915. Serial No. 57,160. (Cl. 110—66.)



A fire box having a rear wall containing a fire door opening, a rear arch above said opening, a front arch extending from the front wall of the fire box toward the rear arch and separated from the latter by an intermediate throat through which the products of combustion pass from the fire box to the boiler tubes, air heater tubes extending through the rear wall for supplying heated air to the said throat, and additional means for supplying heated air below said throat, said means including an apertured fire door associated with said opening, and a deflector on said door arranged to direct the air entering through the door downwardly into the fire box and cause it to be heated before impinging on the arch portions forming the sides of said throat.

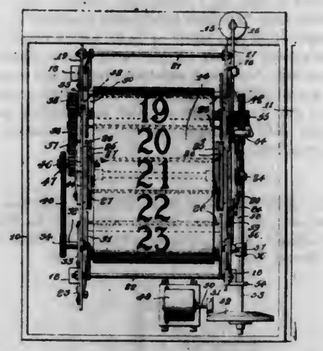
1,215,069. PUZZLE. JAMES E. SMITH, Baltimore, Md. Filed Jan. 14, 1916. Serial No. 72,062. (Cl. 46—41.)



In a puzzle apparatus, a tray, a supplemental bottom provided in said tray and having cut out slots forming a plurality of tongues, one of which is arranged within the other, the inner one of said tongues being connected to the outer tongue at a point opposite the point at which the outer tongue is connected to the main body, and walled inclosures provided with oppositely disposed openings and having their lower edges inserted in said slots and engaging the edges of said tongues, the lower edges of said inclosures being secured to the upper surface of the bottom of the tray.

1,215,070. STREET CAR AND RAILWAY INDICATOR. ERNEST H. STACY, Atlanta, Ga. Filed Apr. 12, 1916. Serial No. 90,728. (Cl. 40—57.)

1. An indicator comprising a supporting frame, rollers carried by said frame, actuating means for said rollers including a driving shaft, a ribbon passing from one roller to the other, means for controlling movement of said ribbon including a disk, a latch lever for engaging said disk, an electrically operated motor for driving said indicator, a motor energizing circuit including a switch closed by said latch lever when moved to an inoperative position, an actuating lever for moving said latch lever to an inoperative position, a solenoid having its core connected with said actuating lever, a solenoid energizing circuit including a normally open switch, and a second solenoid energizing circuit including spaced contacts carried by the actuating lever and a bridge strip carried by said disk.



2. An indicator including a supporting frame, spools rotatably connected with said frame, a ribbon carried by said spools, feed control means for said ribbon including a disk having its edge portion provided with notches, a latch lever carried by said frame and yieldably held in engagement with said disk to prevent movement of said ribbon, an actuating lever for moving said latch lever to an inoperative position, a motor energizing circuit including a switch closed when said latch lever is in an inoperative position, a solenoid having its core connected with said actuating lever for moving the actuating lever to draw the latch lever to an inoperative position, means yieldably holding said actuating lever in an inoperative position, and a solenoid energizing circuit including contact strips carried by said actuating lever in spaced relation and bridge strips carried by said disk between the notches thereof.

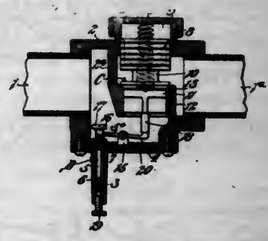
3. An indicator including a supporting frame, rollers rotatably connected with said supporting frame, a ribbon carried by said rollers, a driven shaft, means for selectively transmitting rotary movement from said driven shaft to one of said rollers, a driving shaft, means for transmitting rotary motion from said driving shaft to said driven shaft, means for controlling movement of said ribbon including a disk, a latch lever yieldably held in engagement with said disk and having connection with said driving shaft whereby movement of said latch lever to an inoperative position will move said driving shaft longitudinally to an operative position, a motor energizing circuit including a switch closed by the latch lever when moved to an inoperative position, and means for moving said latch lever to an inoperative position.

4. An indicator including a supporting frame, spools carried by said supporting frame, a shaft rotatably connected with said supporting frame between said spools, disks carried by said shaft and having their peripheries provided with notches, a ribbon mounted upon said spools, cross rods carried by said ribbon for fitting into the notches of said disks, a driven shaft, means for selectively transmitting rotary motion of said driven shaft to one of said spools, a locking disk carried by said first mentioned shaft, a latch lever yieldably held in engagement with said locking disk, a driving shaft, means for transmitting motion of said driving shaft to said driven shaft, electrically controlled means for rotating said driving shaft including a switch closed by said latch lever when moved to an inoperative position, an actuating lever for moving said latch lever to an inoperative position, and electrically controlled means for moving said actuating lever in one direction including a circuit having contact strips carried by said actuating lever in spaced relation, and a bridge strip carried by said locking disk.

5. An indicator including a supporting frame, spools rotatably connected with said supporting frame, a ribbon wound upon said spools, pins extending beyond the edges of said ribbon, means for controlling the movement of said ribbon including pin engaging means and a locking disk, latching means yieldably held in engagement with said locking disk, and means for rotating said spools when the latch is in an inoperative position including a driving shaft and means for transmitting rotary motion of the driving shaft to a selected one of said spools.

[Claims 6 and 7 not printed in the Gazette.]

1,215,071. UNLOADING-VALVE FOR COMPRESSORS. GEORGE F. STEEDMAN, St. Louis, Mo., assignor to Curtis & Co. Mfg. Co., Wellston, Mo., a Corporation of Missouri. Filed Jan. 29, 1916. Serial No. 75,067. (Cl. 230—24.)



1. In an apparatus of the character described, the combination of a compressor, a storage tank, a check valve arranged in the discharge line from said compressor, an unloading valve for said discharge line, said valves being arranged out of alinement with each other, means for cutting off the flow of the medium in said discharge line when the compressor stops, and means controlled by said check valve for causing said unloading valve to open automatically before said check valve seats.

2. In an apparatus of the character described, the combination of a compressor, a storage tank, a check valve arranged in the discharge line from said compressor, an unloading valve for said discharge line, said valves being arranged out of alinement with each other, means for cutting off the flow of the medium in said discharge line when the compressor stops, means controlled by said check valve for causing said unloading valve to open automatically before said check valve seats, and means for regulating the discharge of the medium from said unloading valve.

3. In an apparatus of the character described, the combination of a compressor, a check valve arranged in the discharge line from said compressor, an unloading valve adapted to unload the discharge line between the compressor and the check valve, means for cutting off the flow of the medium through the discharge line when the check valve is near its seat, a dampening means combined with said check valve to prevent its rapid movement to and from its seat, and means controlled by said check valve for causing said unloading valve to open automatically before said check valve sents but after the flow of the medium through the discharge line has ceased.

4. In an apparatus of the character described, the combination of a compressor, a check valve arranged in the discharge line from said compressor, an unloading valve adapted to unload the discharge line between the compressor and the check valve, means for cutting off the flow of the medium through the discharge line when the check valve is near its seat, and means controlled by said check valve for causing said unloading valve to open automatically before said check valve seats.

5. In an apparatus of the character described, the combination of a compressor, a check valve arranged in the discharge line from said compressor, an unloading valve adapted to unload the discharge line between the compressor and the check valve, means for cutting off the flow of the medium through the discharge line when the check valve is near its seat, a dampening means combined with said check valve to prevent its rapid movement to and from its seat, means controlled by said check valve

for causing said unloading valve to open automatically before said check valve seats but after the flow of the medium through the discharge line has ceased, and means for regulating the discharge of the medium from said unloading valve.

[Claims 6 to 8 not printed in the Gazette.]

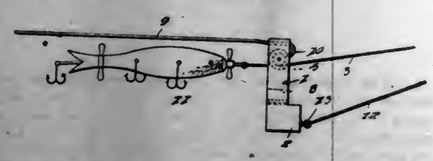
1,215,072. CONDENSATION PRODUCT. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 2, 1915. Serial No. 267. (Cl. 106—22.)

1. A non-inflammable resin consisting of the condensation product of a halogenated phenolic body and a substance containing an aldehyde group.

2. A non-inflammable resin consisting of the condensation product of monochlor-phenol and formaldehyde.

3. A new composition of matter consisting of a resinous, non-inflammable condensation product of a halogenated phenol and formaldehyde.

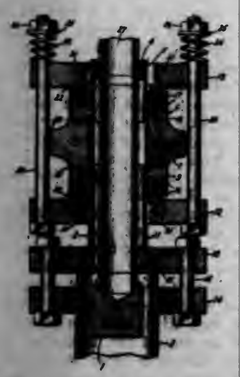
1,215,073. FISH-HOOK RELEASER. JAMES C. STEVENS, Bedford, Ind. Filed June 15, 1916. Serial No. 103,775. (Cl. 43—7.)



1. In a device as set forth, a body having its lower end weighted, said body provided with an opening extending therethrough and with a slot communicating with the body for permitting the mounting of the body upon a fishing line, a roller rotatably supported within said opening and having a concaved periphery, and a wire loop attached to and extending outwardly from the upper end of said body.

2. In a device as set forth, a weighted body adapted for mounting upon a fishing line, and a loop attached to and extending outwardly from one side of one end of said body and adapted for passing about an artificial fishing bait for releasing the bait from an object with which it has become entangled.

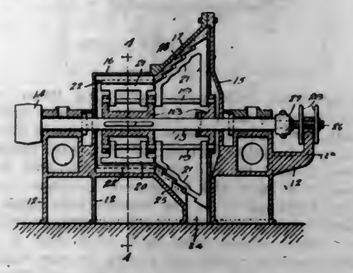
1,215,074. INSULATING GAS-TIGHT SEAL. WILLIAM E. STORY, Jr., Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 19, 1914. Serial No. 862,568. (Cl. 175—354.)



1. The combination of a container, an electrical conductor, an insulator interposed between said conductor and said container and resilient members connecting said insulator respectively to said conductor and said container, said members having a lower heat conductivity than said container.

2. The combination of a container, an electrical conductor, a ring of mineral insulation interposed between said conductor and said container, metal rings adjoining said mineral ring, washers interposed respectively between said mineral ring and each of said metal rings, tubes of resilient material having thinner walls than said container and a relatively low heat conductivity joined respectively one to a metal ring and the container, and another to a metal ring and the conductor and mechanical means for maintaining said metal rings and said mineral ring in gas-tight relation.

1,215,075. ROTARY-BEATER MILL. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Mar. 16, 1916. Serial No. 84,503. (Cl. 83—11.)



1. In a crushing mill, the combination with a rotary shaft and pivoted swinging beaters connected therewith and having inclined outer or working faces, of a casing part affording a reducing chamber, corrugated liners within said casing part and having inclined faces formed in steps, and means, located outside of the mill casing, for adjusting the said beaters longitudinally of said chamber for the purpose of varying the space between said beaters and liners.

2. In a crushing mill, the combination with a rotary shaft and pivoted swinging hammers or beaters connected therewith and the outer ends or faces of which are inclined relative to the axis of said shaft, of casing parts affording a mill chamber, coöperating stationary corrugated liners also inclined relative to the axis of said shaft, and means for adjusting said shaft longitudinally of said chamber while the mill is running, for the purpose of taking up wear or varying the distance between the outer working ends or faces of said hammers or beaters and said liners.

3. In a rotary beater mill, the combination with a mill casing and a rotary shaft, of pivoted swinging hammers or beaters carried thereby, the working ends or faces of said hammers or beaters being inclined relative to the axis of said shaft, corrugated liners in said casing and also inclined relative to the axis of said shaft, a flaring casing increasing in diameter toward the outlet part of the mill and the working faces of said beaters increasing in distance from said shaft toward the outlet part of the mill.

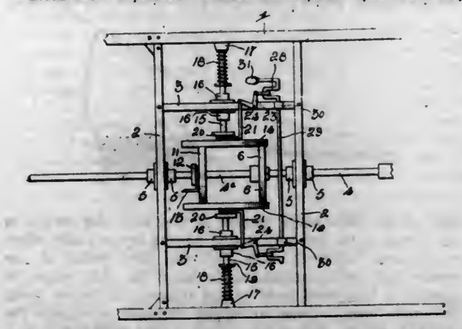
4. In a rotary beater mill, the combination with a rotary shaft and two sets of pivoted swinging hammers or beaters carried thereby, a casing part, forming the mill chamber, having cylindrical and conical portions, said conical portion flaring toward the outlet part of the mill, one set of said hammers or beaters working in said cylindrical portion and the other set of said hammers or beaters working in said conical portion, the last-named hammers or beaters having inclined faces flaring outward from said shaft toward the outlet part of the mill.

5. A rotary beater pulverizing mill having a casing providing a reducing chamber which is partly cylindrical and partly conical, a set of pivoted beaters working in each

of said casing parts, the cylindrical part of said casing being provided with a hopper or feed opening, and the conical portion of said casing having a discharge opening at its largest part.

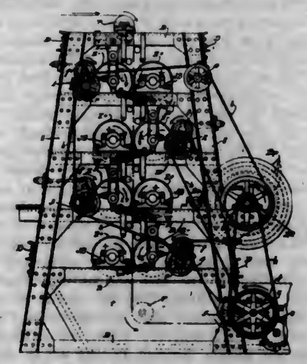
[Claims 6 to 15 not printed in the Gazette.]

1,215,076. FRICTION TRANSMISSION-GEAR FOR AUTOVEHICLES. JACOB W. TABOR, near Eddy, Okla. Filed Feb. 24, 1915. Serial No. 10,255. (Cl. 74—26.)



In combination, an automobile frame including a pair of transverse bars and a pair of inner frame bars, of a drive shaft journaled in one of said transverse bars, a friction drive disk secured to the shaft, a bearing cap secured to the disk, roller bearings located in said cap, a driven shaft journaled in said cap and in the other transverse bar, a driven friction disk slidably secured to the driven shaft, means for sliding the driven disk toward and from the drive disk, bearings secured to the frame, transverse shafts journaled in the bearings and in the frame bars, friction disks secured to the transverse shafts, coiled springs mounted on the transverse shafts for normally holding the last mentioned disks into engagement with the periphery of the driven and drive disks, grooved collars secured to the transverse shafts, forked levers connected to the collars, bell crank levers pivoted to the inner frame bars and connected to the forked levers and an operating rod connecting the bell crank levers for moving the transverse shaft longitudinally to disengage the disks thereon from the periphery of the driven and drive disks so that the driven disk may be moved on the driven shaft to change the speed thereof.

1,215,077. MACHINE FOR WATERPROOFING FIBROUS MATERIALS. ALFRED O. TATE, Montreal, Quebec, Canada, assignor to Tate Electrolytic Waterproofing Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Feb. 20, 1915. Serial No. 9,687. (Cl. 204—1.)



1. A machine for making fibrous materials non-absorbent embracing one or more pairs of electrodes through which the material is adapted to be advanced, in combination with means for applying an electrolytic agent on opposite sides of the material being treated as it is being advanced therethrough.

2. A machine for making fibrous materials non-absorbent embracing a plurality of electrodes through which the material is adapted to be advanced, in combination with means for subjecting the material to a different electrolytic agent on each side thereof, while it is being advanced therethrough.

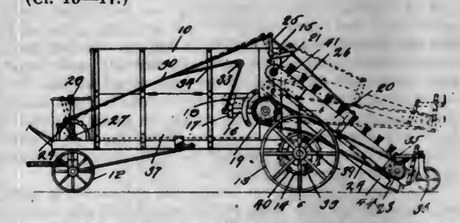
3. A machine for making fibrous materials non-absorbent embracing a plurality of pairs of electrodes through which the material is adapted to be advanced, and a source of electrical energy having its opposing poles successively connected thereto in alternating order, together with means for subjecting the material to a different electrolytic agent on each side as it is successively advanced between the pairs of electrodes.

4. A machine for making fibrous materials non-absorbent, embracing a plurality of pairs of electrodes through which the material is adapted to be advanced, and a source of electrical energy having its opposing poles successively connected thereto in alternate order, together with means adjacent each pair of electrodes for applying an electrolytic agent to the material prior to its passage therethrough.

5. A machine for making fibrous materials non-absorbent embracing a plurality of pairs of electrodes, and a source of electrical energy having its opposing poles successively connected thereto in alternate order, together with means for simultaneously and successively subjecting the material to opposite sides to electrolytic agents.

[Claims 6 to 28 not printed in the Gazette.]

1,215,078. STREET-SWEEPER. FRED G. THIESFELD, Lorton, Nebr. Filed Jan. 18, 1916. Serial No. 72,779. (Cl. 15—17.)



1. The street sweeping machine comprising in combination with a receptacle, and a running gear therefor, a sweeping frame pivoted upon said receptacle, and extending rearwardly therefrom, an endless sweeping element mounted in said frame, and endless driving connection having one bearing upon said frame, and operative with said sweeping element, a second bearing for said endless connection on the receptacle, a movable mounting for said bearing, and a driving element operative by said running gear adapted to engage a run of said endless driving connection when said frame is lowered, and means for raising and lowering said frame, said movable bearing for the endless driving connection adapted to be moved simultaneously with a movement of said frame in order to compensate for the tautening and slackening of the runs of the endless driving connection, when the frame is swung.

2. A street sweeping machine, comprising in combination with a wheeled receptacle, a swinging frame pivoted upon the receptacle and extending rearwardly therefrom, sweeping mechanism carried by said frame, an endless driving connection having one bearing upon the frame, and another upon the receptacle, a movable mounting for the bearing for the connection upon the receptacle, a driving element carried upon the running gear of the receptacle adapted to engage the intermediate portion of said endless driving connection when said frame is lowered, said connection swinging away from said element when the frame is elevated.

1,215,079. CANDELABRUM-SOCKET. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Feb. 16, 1916. Serial No. 78,680. (Cl. 173—358.)



1. A candle socket, comprising an insulating body, lamp terminals mounted at one end thereof, means mounted at the opposite end thereof for securing the socket to a wire conduit, wire terminals electrically connected to the lamp terminals and having binding screws arranged at substantially right angles to the longitudinal axis of the socket, an insulating casing carried by one of the lamp terminals and surrounding both the lamp terminals and the wire terminals.

2. A candle socket, comprising an insulating body, screw shell and center contact lamp terminals mounted at one end thereof, means mounted at the opposite end thereof for securing the socket to a wire conduit, wire terminals electrically connected to the lamp terminals and having binding screws arranged at substantially right angles to the longitudinal axis of the socket, an insulating casing having a threaded area screwed upon the screw shell lamp contact and surrounding both the lamp terminals and the wire terminals.

3. A candelabrum socket comprising an insulating body, wire terminals and a lamp socket screw-shell side contact mounted thereon, an insulating casing threaded on said shell and inclosing said wire terminals and abutting against said body at one end.

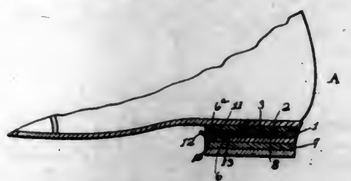
4. An electric lamp socket, comprising an insulating body with a peripheral shoulder, wire terminals and a screw shell lamp-receiving contact mounted on said body to one side of said shoulder, in combination with an insulating casing carried by said screw shell and inclosing said wire terminals, said casing abutting at one end against said shoulder on the insulating body.

5. An electric lamp socket, comprising an insulating body with a peripheral shoulder, wire terminals and screw shell lamp-receiving contact mounted on said body to one side of said shoulder, in combination with an insulating casing having a threaded area externally screwed upon said screw shell and inclosing the wire terminals, said casing abutting at one end against said shoulder on the insulating body.

[Claim 6 not printed in the Gazette.]

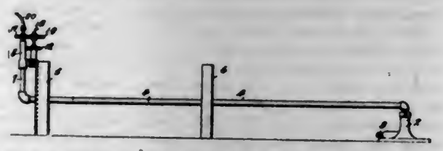
1,215,080. DETACHABLE SHOE-HEEL. FREDERICK M. THOMSON, Atlanta, Ga. Filed Sept. 5, 1912. Serial No. 718,694. (Cl. 36—42.)

The hereindescribed detachable heel including a permanent relatively thick lift carried by the shoe and provided in its lower face with a substantially oblong recess extending rearwardly from the front edge of the said lift and terminating short of the rear edge thereof, a detachable heel section, a fixed substantially oblong metallic plate secured to the relatively thick lift and contained wholly within the said recess and arranged in flush relation with the lower face of the said lift, said plate being provided in its lower face with a recess extending inwardly from the front edge of the plate and having inwardly beveled side walls and provided adjacent to its front end with a transverse shoulder extending entirely across the recess and formed by a thickened portion of the said plate, and a removable plate secured to the upper



face of the detachable section of the heel and fitting in the recess of the fixed plate and having beveled side edges to slidably interlock with the said side walls of the recess and split longitudinally near its side edges to provide a relatively wide spring tongue, the latter being angularly bent to form an upper shoulder to engage the shoulder of the said recess, said tongue being also provided at its front end with an integral finger of less width than the tongue and extending upwardly at the front edge of the fixed plate.

1,215,081. TRAVELING LAWN-SPRINKLER. WILLIAM C. TODD and JAMES W. POMEROY, Victoria, British Columbia, Canada. Filed Apr. 20, 1916. Serial No. 92,473. (Cl. 137—66.)



1. In a traveling lawn sprinkler, the combination with a central standard to which a water service is connected and a radial pipe one end of which is mounted on the central standard to travel around it in a substantially horizontal plane, an upwardly extending spraying nozzle rotatably mounted in the free end of said radial pipe directed from the vertical, a turbine through which the water passes to the rotatable nozzle, means operative by the turbine for moving the radial pipe around the central standard, and means for rotating the spraying nozzle around a vertical axis.

2. In a traveling lawn sprinkler, the combination with a central standard to which a water service is connected and a radial pipe one end of which is mounted on the central standard to travel around it in a substantially horizontal plane, a wheel supporting the free end of the radial pipe, an upwardly extending spraying nozzle rotatably mounted in the free end of said radial pipe and directed from the vertical, a turbine through which the water passes to the rotatable nozzle, means operative by the turbine for rotating the supporting wheel, and for rotating the spraying nozzle around a vertical axis.

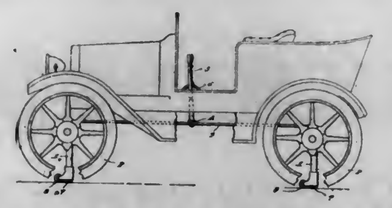
3. In a traveling lawn sprinkler, the combination with a central standard to which a water service is connected, a pipe mounted on the standard to radially travel around it the outer end of said pipe being upturned, a wheel rotatably mounted on the free end of said pipe adjacent the upturned end, a turbine into the casing of which the upturned end of the radial pipe is connected, a pipe rotatably mounted in the delivery from the turbine, an inclined spraying nozzle secured in the outer end of the delivery pipe by an angularly adjustable connection, means for rotating the turbine delivery pipe from the turbine, and means for rotating the supporting wheel from the same.

4. In a traveling lawn sprinkler, the combination with a central standard, a horizontally disposed pipe mounted on said standard and susceptible of radial movement around the same, means for supplying water service to the pipe, said pipe having an upturned end, a spraying nozzle mounted on said upturned end, means for moving the radial pipe around the central standard and means coöperative with said moving means for rotating the spraying nozzle at a variable velocity.

5. A traveling sprinkler, comprising in combination a central standard to which a water service is connected, a horizontally disposed pipe mounted at one end on the standard to travel radially around it and at the other end upturned, a rotatable delivery nozzle connected with said upturned end, a supporting wheel rotatably mounted on the free end of the pipe adjacent the upturned end, a turbine interposed between the upturned end and the delivery nozzle, means operative by the turbine for rotating the supporting wheel at a substantially uniform velocity and for rotating the delivery nozzle at a variable velocity.

[Claims 6 to 8 not printed in the Gazette.]

1,215,082. AUTOMOBILE-JACK. LOUIS TOWNSEND, Evansville, Ind. Filed Sept. 15, 1916. Serial No. 120,284. (Cl. 254—86.)



1. The combination with a vehicle, of a lifting jack pivotally connected thereto provided with a supporting cushion and a roller or wheel disposed substantially parallel to the vehicle wheels, the roller being disposed in advance of the cushion.

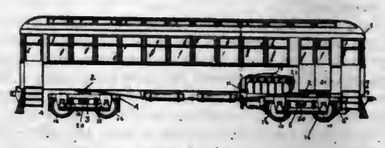
2. The combination with a vehicle and a box carried thereby, of a lifting jack pivotally mounted therein, means for swinging the jack to render it active or inactive, and stops on the box and jack for limiting the movements of the jack when folded or let down.

3. The combination with a vehicle and a box carried thereby, having a pair of stops projecting from its end face, of a sleeve rotatable in the box, a jack mounted on the end of the sleeve and provided with stops adapted to engage the stops on the box to limit the movements of the jack when folded or let down, and means for swinging the jack to fold or lower it.

4. The combination with a vehicle and a box carried thereby, having a pair of stops projecting from its end face, of a sleeve rotatable in the box, a jack mounted on the end of the sleeve and provided with stops adapted to engage the stops on the box to limit the movements of the jack when folded or let down, teeth on the sleeve, a rack slidable in the box and meshing with the teeth, and means for shifting the rack to raise or lower the jack.

1,215,083. RAILWAY MOTOR-CAR. HENRY CLINTON TULLY, Toledo, Ohio. Filed July 26, 1915. Serial No. 41,837. (Cl. 105—28.)

1. A car body, a truck having pivotal connection therewith, said truck embodying a plurality of pairs of wheels, a motor actuated first shaft, a second shaft at an angle to the first shaft and driven thereby, said shafts having their axes disposed in a common plane, a variable speed transmission device between the motor and first shaft, and driving connections oppositely extending from the second shaft on opposite sides of the motor shaft to the different pairs of wheels, said second shaft and first shaft forming an angle approximating the axis of the pivotal connection of the truck to the car body.



2. A car body, a truck having a truck bolster transversely of the car body, wheels for the truck midway as to which wheels said bolster is disposed, and a motor on the truck provided with a drive shaft for said truck extending toward the bolster, said truck movable relatively to the car body, and said car body having an opening for the motor toward one end of the car body from the truck bolster.

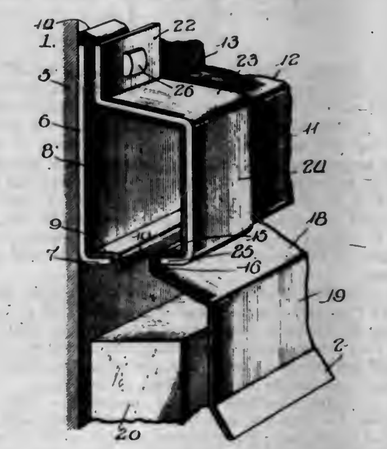
3. A car body having an opening therethrough broader near one end thereof, a sustaining truck for the body having a truck bolster transverse of the body laterally of which bolster the opening extends.

4. A car body having an opening, an opening reinforcement broadening toward one end thereof, a sustaining truck for the body having a truck bolster transverse of the body laterally of which bolster the opening extends.

5. A car body, a truck therefor embodying a truck frame, and a bolster coincidentally stable with the truck frame transversely of the car body, and a vertical motor for driving said truck mounted on the truck frame within the length of the car body toward one end of the truck from the bolster, said car body being mounted on the bolster whereby a follower truck may be substituted for a driving truck.

[Claims 6 to 14 not printed in the Gazette.]

1,215,084. HOODED TROLLEY-TRACK AND BRACKET. GEORGE F. VAN DVENTER, Aurora, Ill. Filed Jan. 24, 1916. Serial No. 73,794. (Cl. 16—7.)

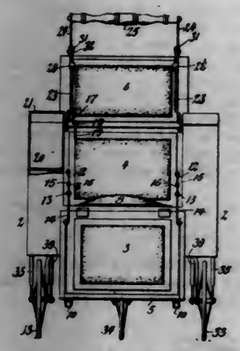


1. A door hanger trolley track, comprising a housing consisting of an inner and an outer oppositely disposed member each terminating at their lower ends in a track member, an apron depending from the outer track portion, and a roof extending upwardly and inwardly from the upper end of the outer track member, the upper ends of said members being disposed in juxta vertical planes, a series of supporting brackets consisting each of two members conforming to the configuration of the housing with their lower ends spaced and under the housing while

their upper ends are in juxta vertical planes relatively to each other and to the upper ends of the housing members, whereby a single bolt may secure the upper ends of the housing and bracket members together and to a support at a given point.

2. In a door hanger trolley track, the combination with a section of track consisting of a wall plate having a laterally bent lower portion adapted to form the tread of the track, of a second section of track comprising a length of sheet metal bent to provide a roof above said first named track section, a vertical wall continuous from said roof the lower portion of which is bent laterally inward to provide a track tread opposite said first mentioned tread, the remaining portion of said length of metal inclined downwardly and outwardly from said track tread, brackets conforming to the configuration of the track members with their tops adjacent to the tops of the track members whereby a single bolt may secure the upper ends of the track members and brackets together and to a support at a given point.

1,215,085. FOLDING CHILD'S CARRIAGE. ANDREW T. WANNENWETSCH, Buffalo, N. Y. Filed Apr. 21, 1915. Serial No. 22,800. (Cl. 21—83.)



1. A folding children's carriage comprising a body having a lower section, a rear section pivoted on the lower section to form a back rest, a front section pivoted on the lower section to form a leg rest, and means for holding said leg and back rests in position relatively to each other comprising front and rear retaining bars which are pivoted respectively to said leg and back rests and each of which is provided with a guide eye which embraces the other and a stop which is arranged on the rear section in rear of its guide eye and which is adapted to be engaged by the front side of the guide eye on said front section.

2. A folding child's carriage comprising a body having a back rest, and a head rest pivoted to the back rest, and means for limiting the relative movement of said back and head rests comprising a guide bar mounted on one of said body members and a link pivoted on the other body member and having an eye sliding on said bar.

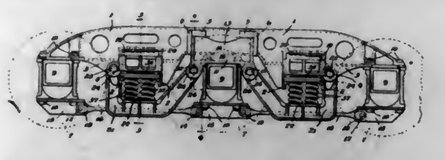
3. A folding children's carriage comprising a body, and a handle for operating said body comprising two side bars each of which has a lower section pivoted to the body, an upper section pivotally connected to the lower section, said lower section having an arm arranged above said pivotal connection and said upper section having an arm arranged below said pivotal connection, a stop lug arranged on one of said arms and engaging with the adjacent edge of the other handle bar section, and a catch adapted to engage the corresponding edge of the other arm and pivoted on the adjacent handle bar section.

4. A folding children's carriage comprising a body having a pocket on its underside, a rock shaft journaled on said body, a fork pivoted on said shaft, a wheel mounted on the fork, and means for locking said wheel in a folded position in said pocket comprising a locking bar arranged transversely in said pocket and adapted to engage with the underside of said wheel and having longitudinal guide rods at its opposite ends, guides which are arranged on the body and on which said rods slide, and a spring operating to hold said locking bar yieldingly in engagement with said wheel.

5. A folding children's carriage comprising a body having pockets at opposite ends of its underside, two vertically swinging forks arranged in said pockets and pivoted on the body, wheels mounted on the forks, a rock shaft journaled on the body and provided at opposite ends with rock arms, links connecting said rock arms and forks, and means for retaining said wheels in an unfolded position comprising two longitudinally movable guide rods slidably mounted on said body, locking arms arranged on the guide rods and adapted to engage over the upper side of or with said rock arms, a cross bar connecting said guide rods, and a spring for holding said locking arms yieldingly in engagement with said rock arms.

[Claims 6 and 7 not printed in the Gazette.]

1,215,086. CAR-TRUCK. EDWIN W. WEBB and CHARLES S. WALTON, Chicago, Ill., assignors to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed Sept. 9, 1916. Serial No. 119,239. (Cl. 105—244.)



1. In a six-wheeled car truck, the combination with side frames and journal boxes, of yokes on the intermediate journal boxes and having interlocking vertical sliding engagement with the side frames, equalizers secured to the yokes, and a bolster supported on the equalizers.

2. In a six wheeled car truck, the combination with side frames and journal boxes, the intermediate journal boxes being mounted with freedom for vertical movement with respect to the side frames, of equalizers fulcrumed on the side frames and secured to the intermediate journal boxes, a bolster supported from the equalizers, and links flexibly connecting the end and intermediate journal boxes.

3. In a six wheeled car truck, the combination with side frames and journal boxes, the intermediate journal boxes being mounted with freedom for vertical movement with respect to the side frames, of equalizing levers between the end and intermediate journal boxes and having intermediate spring seats, the outer ends of the equalizing levers being fulcrumed on the side frames and the inner ends thereof being secured to the intermediate journal boxes, a bolster, springs supporting the bolster from the spring seats on the equalizing levers, and cross tie bars connecting the side frames above the bolster.

4. In a six wheeled car truck, the combination with side frames and journal boxes, the intermediate journal boxes being mounted with freedom for vertical movement with respect to the side frames, of equalizing levers between the end and intermediate journal boxes and having intermediate spring seats, the outer ends of the equalizing levers being fulcrumed on the side frames and the inner ends thereof being secured to the intermediate journal boxes, a bolster, springs supporting the bolster from the spring seats on the equalizing levers, and links flexibly connecting the end and intermediate journal boxes.

5. In a six wheeled car truck, the combination with side frames and journal boxes, the intermediate journal boxes being mounted with freedom for vertical movement with respect to the side frames, of equalizers fulcrumed on the side frames and secured to the intermediate journal boxes, a bolster, and spring supported lateral motion devices supporting the bolster from the equalizers.

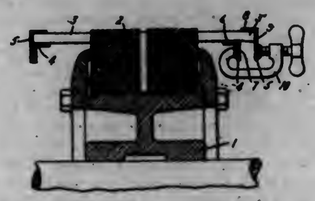
[Claims 6 to 16 not printed in the Gazette.]

1,215,087. ATTACHMENT OF DENTAL MANIKIN-HEADS TO THE PATIENTS' HEAD-RESTS OF DENTAL CHAIRS. FANEUIL D. WEISSE, New York, N. Y., assignor to Dental Manikin Head Co. Inc., a Corporation of New York. Original application filed Oct. 1, 1912, Serial No. 723,726. Divided and this application filed June 18, 1913. Serial No. 774,339. (Cl. 35—16.)



In combination, a dental manikin head having a bracket, a headrest of a dental chair having a central stem, and a clamp consisting of double grooved metal plates; said clamp being adjustable to said bracket and stem by means of a screw.

1,215,088. END RING FOR SQUIRREL-CAGE WINDINGS. FRANCIS M. WHITNEY, San Diego, Cal., assignor to General Electric Company, a Corporation of New York. Filed May 28, 1914. Serial No. 841,635. (Cl. 172—120.)



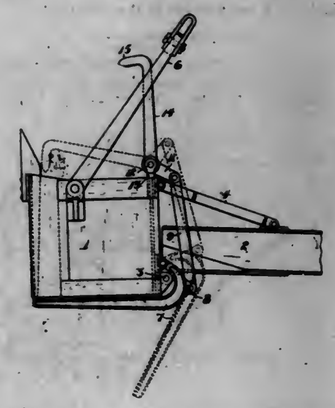
1. A squirrel cage winding comprising conductor bars of substantially rectangular cross section, and an end ring connecting said bars comprising two annular members each provided with a transverse flange, the flange on one of said members engaging one periphery of said bars, the flange on the other of said bars engaging the other periphery of said bars in substantially the same plane as said first mentioned flange and forcing said bars into engagement therewith, said annular members being also provided with radial flanges, one of which overhangs the ends of said bars and the other of which is contiguous thereto and in electrical contact therewith.

2. A squirrel cage winding, comprising conductor bars of substantially rectangular cross section, and an end ring connecting said bars comprising two annular members each provided with a transverse flange, the flange on one of said members engaging the outer periphery of said bars, the flange on the other of said members engaging the inner periphery of said bars in substantially the same plane as said first mentioned flange and forcing said bars into engagement therewith, said annular members being also provided with radial flanges one of which overhangs the ends of said bars and the other of which is contiguous thereto and in electrical contact therewith.

3. The method of securing an end ring to the bars of a squirrel cage winding, which consists in placing an annular member in engagement with one periphery of said bars away from the ends thereof, slightly bending the ends of said bars toward said annular member, applying another annular member to the other periphery of said bars, the latter member having its engaging surface of a diameter slightly different from the normal diameter of the periphery of the bars to which it is applied, and then forcing the two members into substantially the same plane, whereby the bars are tightly gripped therebetween.

4. The method of securing an end ring to the bars of a squirrel cage winding, which consists in placing an annular member in engagement with the inner periphery of said bars, away from the ends thereof, slightly bending the ends of said bars inwardly, applying another annular member over the bent ends of said bars, the difference in the radii of the engaging surfaces of said annular members being slightly less than the radial thickness of said bars, and then forcing the two members into substantially the same plane, whereby said members are tightly held in engagement with said bars.

1,215,089. STEAM-SHOVEL DIPPER. WILLIAM G. WOOD, Sacramento, Cal., assignor of one-half to Frank B. McKevitt, Sacramento, Cal. Filed Apr. 24, 1916. Serial No. 93,155. (Cl. 37—16.)



1. In combination with the movable bottom of the dipper of a steam shovel, means arranged to impinge downwardly upon the material heaped in the top of the dipper, an operative connection between said bottom and means whereby, when said bottom opens, said means so impinges.

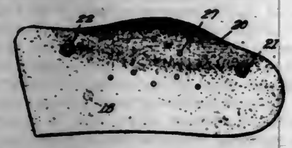
2. In combination with a dipper of a steam shovel or the like having a movable bottom, a device pivotally connected to said dipper and arranged in its pivotal movement to impinge upon the material heaped in the top of the dipper, an arm extending from said device, and a bar pivotally connected to said arm and operatively connected to the bottom of the dipper, whereby, when said bottom opens, said device descends upon the material in the top of the dipper.

1,215,090. ARCH-SUPPORT. WILLIAM H. WOOD, Cleveland, Ohio, assignor to Stanley W. Cook, trustee, Chicago, Ill. Filed July 15, 1916. Serial No. 109,549. (Cl. 36—71.)

1. An arch support comprising a plurality of superimposed plates of duplicate form having nesting ribs, said plates joined by rivet means located in said ribs.

2. In an arch support, a plurality of duplicate plates having longitudinally extending ribs, said plates superimposed with the ribs nesting, and a single rivet uniting said plates.

3. In an arch support, a plurality of duplicate plates having longitudinally extending ribs, said plates superimposed with the ribs nesting, and a single rivet uniting said plates and located in one of the ribs.

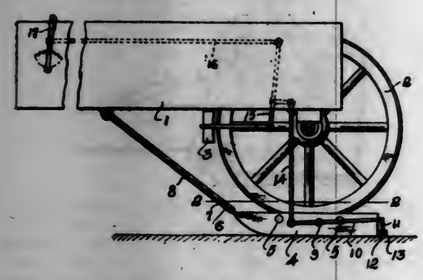


4. In an arch support, a cover piece, an arch plate riveted thereto at points to one side of the longitudinal median line of the plate, a duplicate arch plate underlying the first said arch plate, and rivet means uniting said plates and free from the cover piece, such rivet means located to the other side of the median line of the plate from the first mentioned rivets.

5. In an arch support, a cover piece, an arch plate riveted thereto at points to one side of the longitudinal median line of the plate, a duplicate arch plate underlying the first said arch plate, and rivet means uniting said plates and free from the cover piece, such rivet means located to the other side of the median line of the plate from the first mentioned rivets, said plates having interengaging portions to prevent their relative displacement.

[Claims 6 and 7 not printed in the Gazette.]

1,215,091. SLED-RUNNER FOR WHEELED VEHICLES. ARTHUR R. ZIMMERMAN, Shamokin, Pa. Filed Feb. 8, 1916. Serial No. 76,961. (Cl. 21—96.)



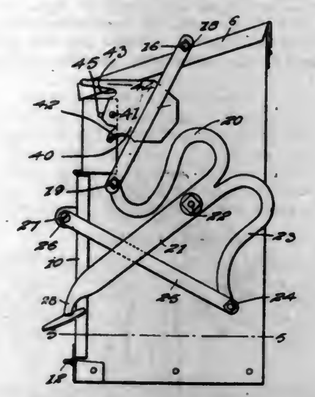
The combination with a wheeled vehicle, of a pair of runners, transverse rods having their ends connected to the runners to hold the same in spaced parallel relation, means for detachably connecting the runners to the body of the vehicle, said rods being arranged for engagement with the wheel of the vehicle at a point below the upper edges of the runners.

1,215,092. NECKTIE-HOLDER AND COLLAR-SUPPORT. DANIEL JOSEPH AHEARN, Brooklyn, N. Y. Filed Sept. 13, 1916. Serial No. 119,830. (Cl. 24—62.)



A device as characterized comprising a closed loop portion, and a clip portion integrally connected with said loop portion and coöperating therewith for engaging a collar-band when disposed in service; and means for closing in service said loop portion, said means embodying a bent resilient end of the loop portion forming one side of said loop portion, said end being adapted for yieldingly engaging the end of the loop portion forming the opposite side of said loop portion, whereby said loop portion may be opened for receiving the portion of a necktie to be supported therein.

1,215,093. RURAL MAIL-BOX. STEPHEN ALDAL, Donnybrook, N. D. Filed Apr. 26, 1915. Serial No. 23,990. (Cl. 232—25.)



1. In a rural mail box structure, a box having two separate compartments, an independent closure for each compartment, a lever pivotally connected to said box body, said lever having one end forked and having the ends thereof bent upwardly, inwardly and then outwardly, arms pivotally connected to said curved ends, the arms having their free ends pivotally connected to said closures, and a handle formed on the free end of said lever, whereby said closures can be operated synchronously.

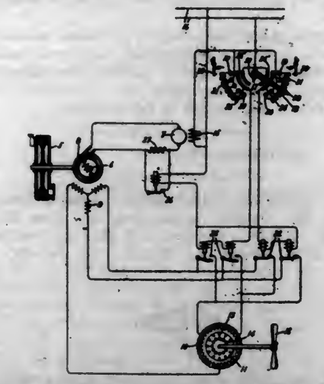
2. In a rural mail box structure, a box having a relatively large compartment and a relatively small compartment positioned upon the top of the relatively large compartment, said relatively small compartment having its upper end open, a hinged cover for forming a closure for said open top of said small compartment, a door hingedly connected to the front side of said relatively large compartment and forming a closure for the opening therein, a lever having a forked end pivotally connected to said box body, arms pivoted to the ends of said forked portion, one of said arms being pivotally connected to the cover of said relatively small compartment and the other to the door of said relatively large compartment, and a handle formed on the free end of said lever.

1,215,094. SYSTEM OF SHIP PROPULSION. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 26, 1913. Serial No. 763,696. (Cl. 172—8.)

1. In a system of electric ship propulsion including an electric generator arranged to deliver electric energy to an electric motor operatively coupled to a propeller, the method of reversing the direction of motion of the ship which comprises reversing the connections of said motor and simultaneously increasing the excitation of said generator above its normal running excitation.

2. In a system of electric ship propulsion including an alternating current generator arranged to deliver electric energy to a polyphase induction motor operatively coupled to a propeller, the method of reversing the direction of motion of the ship which comprises reversing the phase rotation between the motor and the generator and simultaneously increasing the excitation of said generator above its normal running excitation.

3. A system of ship propulsion, comprising in combination a polyphase alternator, a polyphase induction motor electrically connected to said alternator, a propeller operatively connected to said motor, and means for reversing the direction of rotation of said propeller consisting of means for reversing the direction of rotation of said motor and means for simultaneously increasing the excitation of said alternator.

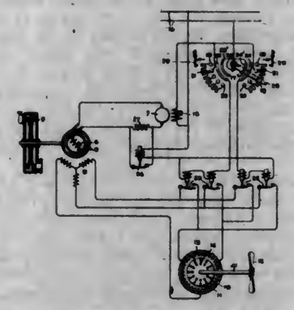


4. In a system of electric ship propulsion including an alternating current generator arranged to deliver electric energy to a polyphase induction motor operatively coupled to a propeller, the method of reversing the direction of motion of the ship which comprises reversing the phase rotation between the motor and the generator and increasing the torque of the motor during the act of reversal by increasing the excitation of the generator.

5. An electric system of ship propulsion, comprising in combination an alternating current generator, an induction motor electrically connected to said generator and having a permanently short circuited secondary winding of variable effective resistance, a propeller operatively connected to said motor, means for reversing the direction of rotation of the motor and of the propeller consisting of means for reversing the phase rotation between the motor and the generator and of means for simultaneously increasing the excitation of the generator, the effective resistance of said short circuited secondary winding being relatively low under normal navigating conditions and being relatively high during the reversal of the propeller.

[Claims 6 to 8 not printed in the Gazette.]

1,215,095. SYSTEM OF SHIP PROPULSION. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 13, 1916. Serial No. 125,507. (Cl. 172—8.)



1. An electric system of ship propulsion comprising in combination, an alternating current generator, an induction motor electrically connected to said generator and having a secondary member including a permanently short-circuited secondary winding of variable effective resistance, a propeller operatively connected to said motor, means for reversing the direction of rotation of the motor and of the propeller, the effective resistance of said secondary winding being relatively low during normal conditions of navigation and being sufficiently high when the propeller is to be reversed to develop a torque large enough to break the propeller away from the water and effect its reversal, said secondary member being proportioned to absorb the heat generated in said secondary winding during the reversal of the propeller.

2. An electric system of ship propulsion comprising in combination, an alternating current generator, an induction motor electrically connected to said generator and having a magnetic core carrying a permanently short-circuited secondary winding, a propeller operatively connected to said motor, means for reversing the direction of rotation of the motor and of the propeller, the effective resistance of said short-circuited secondary winding being relatively low under normal navigating conditions and being relatively high during the reversal of the propeller, the heat storage capacity of said magnetic core and of said secondary winding being large enough to absorb the heat generated in the latter during the reversal of the propeller.

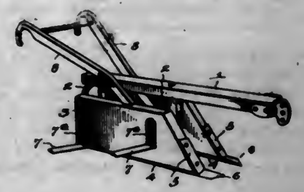
3. An electric system of ship propulsion comprising in combination, an alternating current generator, an induction motor electrically connected to said generator and having a magnetic core carrying a permanently short-circuited secondary winding of variable effective resistance, a propeller operatively connected to said motor, and means for reversing the direction of rotation of the motor and of the propeller, the effective resistance of said secondary winding being relatively low during normal conditions of navigation and relatively high during the reversal of the propeller, said magnetic core and said secondary winding being proportioned to absorb the heat generated in the latter during the reversal of the propeller.

4. An electric system of ship propulsion comprising in combination, an alternating current generator, an induction motor electrically connected to said generator and having a permanently short-circuited secondary winding composed of two components one of which is a squirrel cage winding of relatively high resistance, a propeller operatively connected to said motor, means for reversing the direction of rotation of the motor and of the propeller, said high resistance squirrel cage winding constituting a principal part of the effective secondary winding circuit during the reversal of the propeller.

5. An electric system of ship propulsion comprising in combination, an alternating current generator, an induction motor electrically connected to said generator and having a short-circuited secondary winding composed of two components one of which is a squirrel cage winding of relatively high resistance while the other component is a permanently short-circuited winding of relatively low resistance, a propeller operatively connected to said motor, means for reversing the direction of rotation of the motor and of the propeller, the effectiveness of the resistance of said secondary winding being determined by its low resistance component during normal conditions of navigation and by its high resistance component during the reversal of the propeller.

[Claims 6 to 12 not printed in the Gazette.]

1,215,096. CULTIVATOR. SAMUEL J. ALLEN, Atchison, Kans. Filed Nov. 13, 1916. Serial No. 131,129. (Cl. 97—10.)



1. In a cultivator, the combination of a pair of runners connected to each other, shoes carried by the lower edges

of said runners and projecting in advance of them to form cutting points, said points being obliquely beveled, slanting rearwardly and sharpened, a draft beam connected to said runners, and handles attached to the said runners.

2. In a cultivator, the combination with a pair of parallel runners, of arches connecting and spacing said runners, the arches being secured to the inner faces of the runners, said runners sloping downwardly and forwardly at their front ends and having projecting cutting members, said cutting members sloping forwardly and laterally, and having their front end portions cut obliquely, outwardly and rearwardly, a draft beam secured to said arches, handles attached to the runners, and adjustable subsoilers secured to said runners in pairs, the subsoilers of each pair being in different vertical planes.

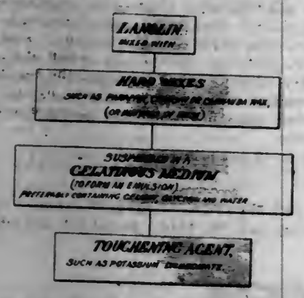
1,215,097. INDICATOR FOR VEHICLES. ABRAHAM L. ARCH, Harrisburg, Pa. Filed Aug. 23, 1915. Serial No. 46,852. (Cl. 116—31.)



1. In an indicator for vehicles, a casing having a slot in its back wall, and vertically disposed notches extending downwardly from the slot, an indicator slidable in the casing and visible from the front thereof, an indicator securing means including a member hinged to the indicator and adapted to enter the notches for holding the said indicator at different positions of adjustment, and means for securing the said casing to a wind shield.

2. In an indicator, a casing having a slotted back wall with notches therein and a guiding flange at the front, an indicator slidable in the casing and held therein by the flange, an indicator retaining device comprising a length of material having its ends pivotally connected to the indicator, said retaining device extending through the slot in the casing and adapted to enter the notches of the back wall for retaining the indicator at different positions of adjustment.

1,215,098. STENCIL-SHEET AND BATH FOR MAKING SAME. JAMES A. BAILEY and HENRY E. KALUSOWSKI, Washington, D. C., assignors to Addressograph Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 19, 1915. Serial No. 15,557. (Cl. 41—38.6.)



1. A bath for making stencil sheets consisting of lanolin and a hard wax dissolved in a volatile solvent and held in emulsified condition in a toughened gelatinous medium.

2. A bath for making stencil sheets consisting of lanolin, ceresin and carnauba wax dissolved in carbon tetrachlorid and held in emulsified condition by a solution of gelatin in water and glycerin to which potassium dichromate has been added.

3. A stencil sheet consisting of a fibrous, porous sheet provided with a stencil composition containing a mixture of lanolin and hard wax held in divided state in a toughened gelatinous matrix.

4. A stencil sheet consisting of a fibrous, porous sheet provided with a stencil composition containing a mixture of lanolin, ceresin, and carnauba wax held in divided state in a gelatinous matrix to which potassium dichromate has been added.

5. A stencil sheet consisting of a fibrous porous sheet provided with a stencil composition containing emulsified wax and lanolin in a gelatin matrix containing water, glycerin and a toughening agent.

[Claims 6 to 9 not printed in the Gazette.]

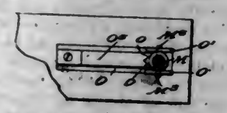
1,215,099. [WITHDRAWN.]

1,215,100. BUTTON-FASTENING. JOSEPH BENBENEK, Duquoin, Ill. Original application filed June 23, 1915, Serial No. 35,966. Divided and this application filed May 10, 1916. Serial No. 96,601. (Cl. 24—94.)



A button fastening consisting of a button proper, an eye member secured centrally to the inner side of said button, a fastening member comprising a collapsible tapering tubular member having a lateral flange surrounding its major end, and a bridge pin, extending across the major end of the member and engaged through the eye member.

1,215,101. SASH-CORD FASTENER. MENZO M. BENSTER, Gettysburg, S. D. Original application filed Feb. 16, 1915, Serial No. 8,485. Divided and this application filed July 23, 1915. Serial No. 41,488. (Cl. 16—16.)



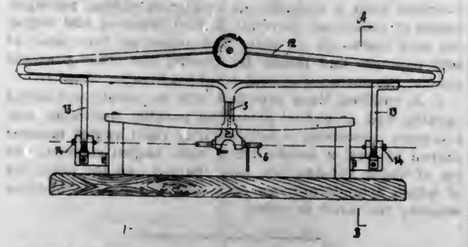
1. In a window comprising a frame, a sliding sash and cord guiding means at the top of the frame, said means including a vertical opening to guide the cord and enlarged at its lower end, a lining thimble in said enlargement, a sash cord and a fastener therefor consisting of a tubular sleeve secured to one end of said cord, lateral projections at the lower end of the sleeve, the sash carrying a spring catch secured to the upper rail thereof adapted to be engaged by said lateral projections on the sleeve to detachably couple the sash and cord.

2. In a window including a slidable sash and a frame provided with a cord guide at its upper corner, a sash cord running through the top of the frame at the upper corner, a metal sleeve rigidly secured at the opposite end of the sash cord and provided with lateral projections adjacent its lower end, and a latch secured to the upper face of the top rail of the sash and comprising a base, spaced and undercut vertical ears adapted to receive and hold the projections of the sash cord, and a spring keeper secured to the latch base to retain the sleeve between the spaced ears.

3. A sash cord fastener for securing a sash cord to the top rail of a sash, consisting in combination of a tubular sleeve secured to one end of the cord, said sleeve having lateral projections adjacent its lower ends and a latch member consisting of spaced apart undercut ears to receive the said projections, and means for preventing removal of the projections from the undercut ears.

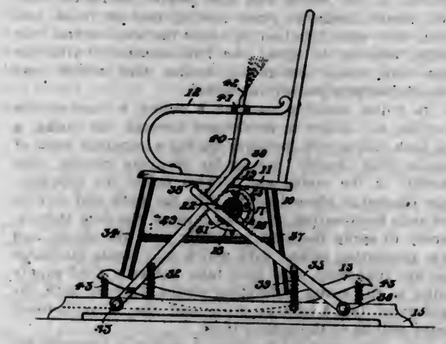
1,215,102. TYPE-WRITER. KARL BJÖRKSTEN, Petrograd, Russia. Filed July 6, 1915. Serial No. 38,264. (Cl. 197—49.)

1. In a typewriter, the combination with a type-wheel rotatable on a fixed axis, and mechanism for laterally and longitudinally feeding a sheet past said wheel, of a hammer frame, a small head centrally mounted thereon and movable thereby in a fixed vertical plane to and from the wheel, said frame having a transverse slotted portion adapted to permit longitudinal and lateral movement of the sheet therein.



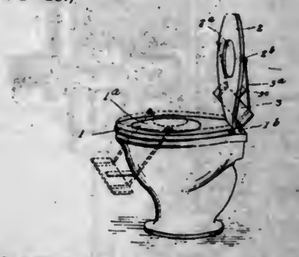
2. In a typewriter, the combination with a type-wheel rotatable on a fixed axis, and mechanism for laterally and longitudinally feeding a sheet past the periphery of said wheel, of a hammer frame pivoted behind the latter, a small head centrally mounted on the frame and movable thereby in a fixed vertical plane to and from the wheel, said frame having a transverse slotted portion adapted to permit longitudinal and lateral movement of the sheet therein, a central lever supporting the frame, lateral supporting arms on said frame pivoted on axes coinciding with the axis of the lever, and springs to yieldingly support said arms.

1,215,103. CHAIR-ACTUATED BLOWER. MICHAEL BLANARIK, South Norwalk, Conn. Filed Mar. 6, 1916. Serial No. 82,460. (Cl. 230—7.)



A device of the class described comprising base members, a rocking chair operatively positioned upon the said members, a fan casing suspendingly secured to the bottom of the said chair at one side thereof, an outwardly projecting power shaft journaled in the said case, a fan secured to the said shaft within the said case, a ratchet wheel keyed to the said shaft substantially centrally of the projecting portion thereof, a large gear journaled upon the said shaft between the said casing and ratchet, a pawl upon the said gear in mesh with the teeth of the said ratchet, an operating lever pivoted at its lower end to the forward portion of the adjacent base member and having a toothed lower side engaging the teeth of the said gear and a compression spring connecting the said lever and the adjacent base member, a small gear journaled upon the said shaft outwardly of the said ratchet, a spring pressed pawl carried by the said small gear engaging the teeth of the said ratchet at a point substantially diametrically opposite from the point of engagement of the said rear gear pawl therewith, a rear operating lever pivoted to the adjacent base member at the rear portion thereof and having an upper toothed edge in mesh with the lower portion of the said small gear and an expansion spring positioned between the said rear lever and the adjacent base member.

1,215,104. TOILET-SEAT. JAMES A. BONNER, San Diego, Cal. Filed Sept. 30, 1915. Serial No. 53,286. (Cl. 4—18.)



1. In a toilet seat, the combination of an ordinary or conventional seat member, another seat member hinged thereto adapted to fold over the same provided with a smaller hole suitable for children and a foot rest pivotally mounted on said second seat member adapted to be carried back by said seat member out of the way when said second seat member is not in use.

2. In a toilet seat, the combination of an ordinary or conventional seat member, another seat member hinged thereto adapted to fold over the same provided with a small hole suitable for children, a foot rest pivotally mounted on said second seat member adapted to be carried back by said seat member out of the way when said second seat member is not in use and means for adjusting the position of said foot rest relatively to said second seat member.

3. In a toilet seat, the combination of an ordinary or conventional seat member, another seat member hinged thereto adapted to fold over the same provided with a small hole suitable for children, a foot rest pivotally mounted on said second seat member adapted to be carried back by said seat member out of the way when said second seat member is not in use and means for adjusting the position of said foot rest relatively to said second seat member comprising a board supported by two tension members and a member slidable relatively to said board with one end adapted to rest against the toilet seat body.

1,215,105. TYPE-WRITING MACHINE. ARTHUR J. BRIGGS, Syracuse, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Dec. 11, 1913. Serial No. 805,927. (Cl. 197—151.)

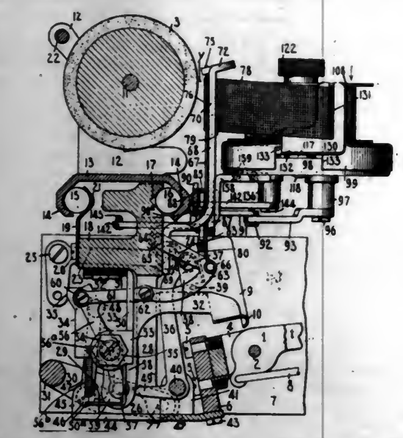
1. In a typewriting machine, the combination of a ribbon feed actuating bar which extends transversely across the machine, means controlled thereby for feeding the ribbon, a ribbon vibrator, and means controlled thereby for operating said actuating bar.

2. In a typewriting machine, the combination of a ribbon feed actuating bar which extends transversely across the machine, means controlled thereby for feeding the ribbon, a ribbon vibrator, and means controlled thereby for effecting a back and forth movement of said actuating bar in the direction of the length thereof at each operation of the ribbon vibrator.

3. In a typewriting machine, the combination of ribbon spools arranged at opposite sides of the machine, an actuating bar which extends transversely of the machine, ribbon spool actuating means associated with each ribbon spool and operated by said actuating bar, a ribbon vibrator, and means controlled thereby for operating said actuating bar.

4. In a typewriting machine, the combination of a ribbon feed actuating bar which extends transversely across the machine, means controlled thereby for feeding the ribbon, a ribbon vibrator, means controlled thereby for

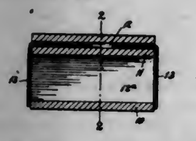
operating said actuating bar, and automatically operating reversing means for changing the direction of the feed of the ribbon.



5. In a typewriting machine, the combination of a ribbon feed actuating bar which extends transversely across the machine, means controlled thereby for feeding the ribbon, a ribbon vibrator, means controlled thereby for effecting a back and forth movement of said actuating bar in the direction of the length thereof at each operation of the ribbon vibrator, and automatically operating reversing means coöperating with said ribbon feeding means to render the movements of said actuating bar effective to feed the ribbon first in one direction and then in the other.

[Claims 6 to 13 not printed in the Gazette.]

1,215,106. HOLLOW BLOCK FOR BUILDING PURPOSES. FERDINAND BURCHARTZ, New York, N. Y., assignor to Burchartz Fireproofing Company, Inc., a Corporation of New York. Filed Oct. 12, 1910. Serial No. 586,608. (Cl. 72—66.)



1. A building block provided with an axially extending opening, and a closure comprising a substantially rectangular member of substantially even dimensions throughout and of greater width than said opening, said member being shaped to form a substantially right angled element, one leg of which lies in surface engagement with an axial surface of said block and the other leg of which extends over an open end of the axial opening whereby the latter is completely covered.

2. A building block provided with an axially extending opening and a channel located above the same, said channel being greater in width than said opening and being less in vertical dimension, and a closure comprising a substantially rectangular member of substantially even dimensions throughout and shaped to form a substantially right angled element, one leg of said element extending into and fitting said channel and the other leg extending over an open end of the axial opening whereby the latter is completely covered.

3. In a floor or ceiling construction, a series of open ended blocks arranged in rows in axial alinement and spaced from each other to form channels, a continuous strip of fabric extending lengthwise of each row along one face of the blocks therein, across the open ends thereof and across the channels below the end openings of the blocks and means in said channels for maintaining the strips under tension against and across said open ends.

4. In a floor or ceiling construction the combination of a plurality of blocks arranged in rows and spaced apart to form intersecting channels, said blocks being each provided with a plurality of axially extending passages, beams of coalescent material in said channels and engaging said blocks on all sides and extending into some of said passages and means for closing the other passages against the entrance of coalescent material.

5. A building block provided with an axially extending opening and a channel extending parallel therewith, and a closure comprising a substantially right angled member shaped to form a substantially right angled element, one leg of which extends into said channel and the other leg of which extends over an open end of the axial opening whereby the latter is closed.

1,215,107. DISH-WASHER. ARTHUR DERMONT BUSH, Olivet, Mich. Filed Dec. 30, 1915. Serial No. 69,385. (Cl. 141—3.)



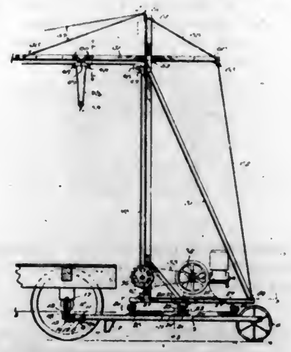
1. In a dish washing machine, a casing, a conveyer for conveying the dishes to be cleaned through the casing, a fluid tank below said conveyer having a constant level of cleaning fluid therein, means for spraying rinsing fluid upwardly in the casing and also located below the conveyer, steam discharge pipes leading into the tank and having their ends terminating below the level of the fluid therein, whereby to spray the fluid upwardly with the steam, and steam generating means with which said steam discharge pipes are connected.

2. In a dish washing machine, a casing, a conveyer for conveying the dishes to be cleaned through the casing, a fluid tank below said conveyer having a constant level of cleaning fluid therein, means for spraying rinsing fluid upwardly in the casing and located below the conveyer, steam discharge pipes leading into the tank and having their ends terminating below the level of the fluid therein, whereby to spray the fluid upwardly with the steam, and steam generating means with which said steam discharge pipes are connected, said fluid tank having a fluid supply leading to the steam generating means whereby both the steam from the discharge pipes and the spray induced thereby will be of the same nature.

3. In a dish washing machine, a casing, a conveyer for conveying the dishes to be cleaned through the casing, means below the conveyer for spraying a cleaning fluid upwardly within the casing, steam and water spray pipes at opposite sides of said fluid spraying means, heating coils with which said spray pipes communicate, a supply common to the said coils, and a heating burner beneath each of said coils, said casing having covered compartments at opposite sides of the said fluid spraying means, for housing said coils and said burners, provided with outlets for the products of combustion from the burners.

1,215,108. TURN-TABLE STRUCTURE FOR CORN-STACKING MACHINES. GARFIELD H. CALEY, Waterford, Wis., assignor of one-third to Herman J. Hembrook, Waterford, Wis. Filed Mar. 30, 1915. Serial No. 18,047. (Cl. 21—137.)

1. In a structure of the class described, a triangular frame, a turn table on the frame, hoisting mechanism mounted on the turn table, wheels at the base end of the frame, means at the apex end of the frame for suspending it from the rear axle structure of a vehicle, and a rub plate at the apex end of the frame extending laterally of the sides of the frame and adapted for engagement with the vehicle.



2. In a structure of the class described, a frame, a turn table on the frame, hoisting mechanism mounted on the turn table, wheels at the rear end of the frame, a supporting leg at the forward end of the frame, and means for suspending the forward end of the frame, from the rear portion of a vehicle with its supporting legs spaced above the ground, said means comprising a windlass carried by the frame, a pulley at the forward end of the frame, a cable on the windlass trained about said pulley and a member carried by the cable and adapted for detachable connection with a vehicle carried member.

3. In a structure of the class described, a triangular frame comprising convergent side sills connected at their forward end, and a rear sill, a wheeled support for the frame, a circular track of greater diameter than the distance between intermediate side sill portions of the frame and secured to the side sills at its points of intersection therewith whereby said sides are braced transversely of the frame, and a turn table member engageable on the track.

1,215,109. BABBITT-RETAINING COMPOSITION. LEWIS CAMERON, Elora, Ontario, Canada. Filed Sept. 21, 1916. Serial No. 121,495. (Cl. 22—188.)

1. A babbitt retainer consisting of fiber asbestos and fire clay in equal parts and one-quarter pint of oil to each pound of the aforesaid ingredients.

2. A babbitt retainer consisting of fiber asbestos and fire clay in equal parts, pencil graphite one ounce to each pound, sand four ounces and cylinder oil one-quarter pint.

3. A babbitt retainer consisting of fiber asbestos and fire clay in equal parts, pencil graphite one ounce to each pound and cylinder oil one-quarter pint.

1,215,110. PLEASURE-SWING. JOHN E. CAREY, El Reno, Okla. Filed May 1, 1916. Serial No. 94,630. (Cl. 155—35.)

1. In a pleasure swing, a swinging seat frame, hanger bars upon which the same is suspended, a supporting frame in which the said seat frame is movable with the said hanger bars, including an upper cross beam, a rigid sector disposed centrally and transversely of the said cross beam and having a plurality of recesses in its length, a pull bar fulcrumed adjacent its upper end in the supporting frame and having a plunger at its upper end movable into the recesses of the said sector, the lower end of said pull bar depending to a point adjacent the swinging seat frame, handles supported at the lower ends of the said pull bar, a spring normally holding the said plunger in retracted inoperative position, a lever for moving the plunger outwardly against the tension of its spring and into engagement with the sector, and a flexible connection between the said lever and the said handles of the pull bar, all for the purpose described.

2. In a pleasure swing, a rigid supporting frame, a swinging seat frame, hanger bars upon which the seat frame is mounted to swing in the supporting frame, and manually controlled impulse means including a pull bar disposed vertically in the supporting frame with its lower end adjacent the said seat frame, a fulcrum adjacent the upper end of the said pull bar upon which the latter works, relatively engaging means carried by the supporting frame and the upper end of the said pull bar whereby the latter may be locked to the supporting frame, and including a movable plunger carried by the pull bar, a spring normally holding said plunger in inactive position, a lever for moving the plunger to active position, handles supported by the lower end of the pull bar, and a connection between the said handles and the said lever whereby to actuate the latter.



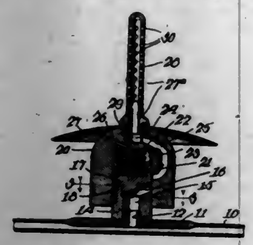
3. A pleasure swing including a swinging seat frame, a rigid supporting frame in which the seat frame is mounted for swinging movement, a pull bar depending in said supporting frame adjacent the seat frame, and spring controlled manually actuated means for locking the said pull bar to the supporting frame.

4. In a pleasure swing, a rigid supporting frame, a swinging seat frame including upright hanger bars and an upper cross bar, the latter of which has bearings in the supporting frame, a pull bar fulcrumed adjacent its upper end upon the said cross bar, and having its lower end depending adjacent one of the hanger bars, a guide carried by the said hanger bar in which the lower end of the pull bar works, handles carried by the lower end of the pull bar, relatively engageable means carried by the supporting frame and the upper end of said pull bar whereby to lock the latter to the supporting frame, a spring normally preventing engagement of the said means, a lever for engaging said means, and a connection between the said lever and the said handles whereby to actuate the lever from the swinging seat frame.

1,215,111. CASCADE OR FOUNTAIN FOR INTERNAL BATHS. EUGENE CARLSEN, Chicago, Ill. Filed Nov. 23, 1916. Serial No. 132,936. (Cl. 128—47.)

1. In a device of the character described, the combination with a collapsible container having means for supplying liquid thereto, of a disk having centrally therein a tube, the said disk being fixed to one side of the container with its tube connecting with the interior of said container, a member mounted on the tube and having a channel or port leading from the said tube through the wall of said member, another member movably mounted on the first named member and having an opening located opposite to the said tube and also provided with a channel leading from said opening to the opening in which the first named member is located, a spring interposed between

said members for moving the movable member in one direction, and a nozzle detachably connected to the movable member in communication with said opening therein.



2. In a device of the character described, the combination with a collapsible container having means for supplying liquid thereto, a disk embedded in one side of said container and having a tube centrally located therein and communicating with the interior of the container, a member mounted on the tube and having a channel or port leading from said tube through the wall of said member, another member having an opening therein to receive the first named member upon which it is movably mounted, said movable member having an opening at a point opposite the said tube and provided with a channel leading from the last named opening to the opening in which the first named member is located, a spring interposed between said members for moving the movable member in one direction, means for restricting the movement of the movable member, and a nozzle detachably connected to the movable member in communication with the discharge opening therein.

1,215,112. RAILROAD-TIE. WILLIAM EDWARD CHESNEY, Halifax, Nova Scotia, Canada. Filed Mar. 18, 1916. Serial No. 85,160. (Cl. 238—3.)



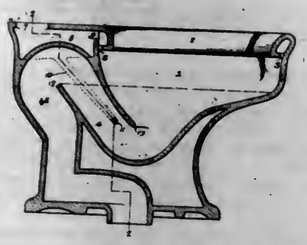
1. A railway tie including concrete end blocks, a concrete bar connecting the blocks, the said bar being triangular in cross section with the base of the triangle uppermost and the inverted apex at the under side, the said blocks being broader than the said bar, three reinforcing rods ranging longitudinally within the said bar in triangular relation corresponding with the cross section of said bar, and reinforcing elements in the said end blocks, said elements including a substantially rectangular base frame, a substantially rectangular top frame of smaller dimensions than the base frame, cross rods connecting the side members of the base frame at the ends and between the ends, members integral with the longitudinal rods and with the side members of the base frame, and bent around the inner ends of the top frame, and members connecting the base frame and top frame at the outer ends thereof, said members being integral with the side members of the base frame.

2. A railway tie including concrete end blocks and a concrete bar connecting said blocks, the said bar being triangular in cross section with the base of the triangle uppermost, and the said blocks being of greater width than the said bar, each block being in the form of a frustum of a pyramid, reinforcing elements in the said blocks, including top frames and base frames and members connecting said frames at the inner and outer ends, and longitudinal reinforcing rods in the said bar integral with one of said frames, there being three of said rods disposed in triangular relation corresponding with the cross section of the said bar.

3. A railway tie including concrete end blocks, a concrete bar integral with said end blocks, said blocks having pockets therein, wood blocks in said pockets adapted to receive spikes, reinforcing elements in said blocks including base frames and top frames, cross rods connecting the side members of the base frames directly beneath the said pockets, elements connecting the top frame and bottom frame in each block, and longitudinally ranging reinforcing rods in the said concrete bar and connected with the reinforcing elements in the said blocks.

4. A reinforced concrete railway tie including end blocks having vertical pockets therein, plugs in said pockets, each plug being formed of a vertically disposed body member and a vertically disposed auxiliary member, and reinforcing elements in the said blocks, the reinforcing elements including members directly beneath the said pockets.

1,215,113. SIPHON WATER-CLOSET. ANDREW COCHRAN, Trenton, N. J. Filed Oct. 15, 1913. Serial No. 795,336. (Cl. 4—22.)



1. A water closet bowl of the siphon type having a hollow flushing rim, an enlarged shallow water-receiving chamber at the rear of the bowl and in communication with said flushing rim, a siphon conduit leading from said bowl and comprising intake and discharge legs, passages formed in the walls of the closet structure on opposite sides of the intake leg of the siphon conduit, said passages leading from the sides of the water-receiving chamber at the rear of the bowl and opening at their lower ends into said intake leg above the lip of the same and discharging across said leg, and an inlet for the delivery of flushing water to said shallow water-receiving chamber.

2. A water closet bowl of the siphon type having a hollow flushing rim, an enlarged shallow water-receiving chamber in communication with said flushing rim, a siphon conduit leading from said bowl and comprising intake and discharge legs, said water-receiving chamber being disposed at the rear of the bowl above the siphon conduit and wholly within the lines of the rear portion of the body of the bowl, an inlet for the delivery of flushing water to the top of said water-receiving chamber, and passages formed in the walls of the closet structure on opposite sides of the intake leg of the siphon conduit and substantially paralleling the same, said passages leading from the sides of the water-receiving chamber and opening into said intake leg at their lower ends and discharging upwardly and across the latter, said passage outlets being disposed above the lip of the intake leg of the siphon conduit.

1,215,114. LABEL-HOLDING CAP OR COVER OF A CAN, JAR, OR OTHER BODY. MAURICE H. COHEN, Philadelphia, Pa. Filed June 29, 1916. Serial No. 106,560. (Cl. 215—9.)

1. A cap or cover of a can, jar, or like body, composed of integral members comprising a side wall, an outwardly channeled rim on the upper end of said side wall, a flange inturned from the inner terminal of said rim, said flange leaving a central opening in the cap, the opposite terminal walls of said rim being disposed to clamp opposite sides of a label with its central portion appearing at said opening.

2. A cap or cover of a can, jar, or like body, composed of integral members comprising a side wall, an outwardly

channeled rim on the upper end of said side wall, a flange inturned from the inner terminal of said rim, said flange leaving a central opening in said cap and oppositely extended beads at the junctions of said rim, side, and flange respectively.



3. A cap or cover of a can, jar, or like body, composed of integral members comprising a side wall, an outwardly channeled rim on the upper end of said side wall, a flange inturned from the inner terminal of said rim, a disk-like member seated on the top of said side wall, and a label imposed on said member, the peripheral portions of said label and member being adapted to enter said channeled rim, and opposed means at or about the inner terminals of the wall of said rim adapted to clamp directly between them said member and label about the peripheral portions thereof, said member resting upon the lowermost of said means.

4. A cap or cover of a can, jar, or like body, composed of integral members comprising a side wall, an outwardly channeled rim on the upper end of said side wall, and a flange inturned from the inner terminal of said rim, said flange leaving a central opening in said cap, the terminal portion of said flange being doubled on itself forming a rounded edge of said portion, said cap being formed with oppositely extended beads at the inner sides of said rim.

5. A cap or cover of a can, jar, or like body, comprising in a single integral element a depending side wall, an outwardly channeled rim on the upper end of said side wall and a flange inturned from the inner terminal of said rim and leaving a central opening in said cap, said rim being formed with oppositely disposed beads at its junction with said side wall and flange to support and clamp a label therebetween.

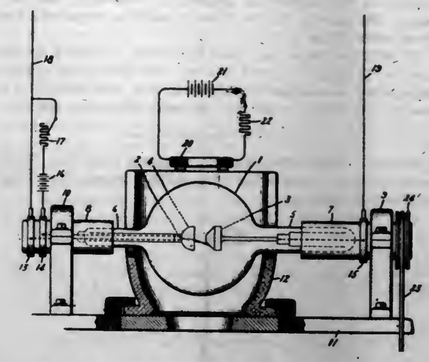
1,215,115. PROCESS OF FORMING WALLS. EDWARD CONNELLEY and CHARLES C. CREW, Houston, Tex. Filed June 21, 1915. Serial No. 35,195. (Cl. 72—16.)



1. The process of forming a structure consisting of securing reticulated walls in spaced relation to each other, then filling the space between the walls with coarse aggregate, then introducing plastic material through said walls on each side of the structure so as to fill the spaces between the particles of aggregate only part of the way to the center of the structure and leave the center of the structure free from the plastic material to permit the air to circulate between the particles of the aggregate.

2. The process of forming a structure consisting of securing wire mesh walls in spaced relation to each other, then filling the space between said walls with coarse aggregate, then forcing plastic material by means of a spraying device against the outer side of each of said walls and continuing said operation until said material penetrates said wire mesh and fills the spaces between the particles of aggregate only part of the way to the center of the structure on each side, leaving the center of the structure free from the plastic material to form an air space in the center of the structure.

1,215,116. X-RAY APPARATUS. WILLIAM D. COOLIDGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 1, 1915, Serial No. 25,150. Renewed Oct. 24, 1916. Serial No. 127,498. (Cl. 250—35.)



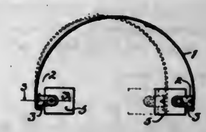
1. An X-ray apparatus comprising the combination of an X-ray tube containing coöperating electrodes, means for rotating said tube, means for producing therein an X-ray generating cathode discharge, means for deflecting and holding said discharge out of line with the axis of rotation of said tube.

2. An X-ray apparatus comprising the combination of an X-ray tube, electrodes therefor, means for producing between said electrodes an X-ray generating electrical discharge, magnetic means for deflecting said discharge to cause it to impinge on the anode at a point removed from the center of rotation of said anode, and means for rotating said tube, whereby the bombarded area on said anode is renewed.

3. An X-ray apparatus comprising the combination of an X-ray tube containing a cathode and an anode, means for rotating said tube, and means for holding fixed in space the cathode beam to focus on the anode at a point removed from the center of rotation of said anode.

4. The combination of an X-ray device, comprising a bulb containing a cathode, an anode, means for focusing rays from said cathode on the anode and means for causing motion of said beam of cathode rays in said device relative to the bulb, thereby distributing the heating effect of said rays over an area on the anode greater than the focal spot.

1,215,117. WRINKLE-REMOVER. LORENZO D. CORNISH, Cincinnati, Ohio. Filed Apr. 22, 1915. Serial No. 23,189. (Cl. 128—28.)



1. In a device of the class described, a curved resilient member, and adhesive means positioned between and connected to the free ends of said member, said member adapted to exert a separating pull at said free ends, whereby said adhesive means when attached to the skin will cause a pull on the skin between the ends of said member.

2. In a device of the class described, a curved resilient member, and adhesive elements connected to the ends thereof, said member adapted to apply its tension to said adhesive elements to draw the same away from each other.

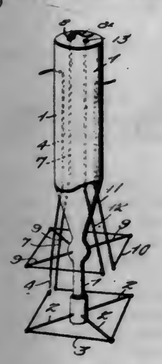
3. In a device of the class described, a curved resilient member, attaching means secured at the ends thereof, and adhesive elements connected to said attaching means,

said member adapted to apply its tension to draw said adhesive elements away from each other.

4. In a device of the class described, a curved resilient member having its ends folded over, attaching means connected to said folded ends, and adhesive elements connected to said attaching means, said member adapted to apply its tension to draw said adhesive elements away from each other.

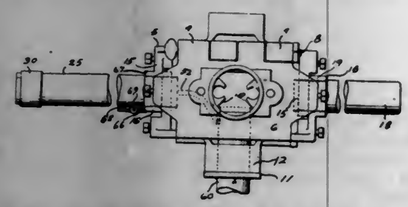
5. In a device of the class described, a curved resilient member having its ends folded, attaching clips adapted detachably to engage said folded ends, and adhesive elements detachably connected to said attaching means.

1,215,118. ELECTRIC LAMP. ALBERT DOW COX, Winterville, N. C. Filed Dec. 22, 1915. Serial No. 68,195. (Cl. 176—26.)



An incandescent electric lamp comprising an insulating filament support, two sets of laterally extending arms carried by said support, a filament carried by each of said sets of arms, a screw plug secured to one end of said insulating support, said screw plug having a pair of contact surfaces and an inner filling between said contacting surfaces and said insulating support, a spring contact having a bowed contact portion, said spring contact being secured to the end of the insulating support adjacent to the screw plug and being connected to one of said filaments, the other terminal of the filament being connected with the conducting portion of the screw plug, a contact button carried at the same end of said insulating support and arranged to be engaged by said spring contact, said contact button being connected with the other of said filaments, the opposite terminal of said last named filament being in electrical connection with the contacting surface of the screw plug, and a bulb inclosing said filaments.

1,215,119. HANDLE FOR CUTTING-TOOLS, DIE-STOCKS, &c. MORRIS CRAMER, Cleveland, Ohio. Filed July 22, 1916. Serial No. 110,638. (Cl. 10—126.)



1. The combination with a die stock having a number of separate cutting dies, a handle secured to the stock for rotating the same and comprising a hollow tubular member adapted to carry oil, a tube leading from the inner end of the handle and movable so that it may be brought to a position to lead oil to any one of the dies.

2. The combination with a die stock having a number of separate cutting dies, a handle secured to the stock for rotating the same and comprising a hollow tubular member adapted to carry oil, a tube leading from the inner end of the handle and bent laterally therefrom and movable so that it may be brought to a position to lead oil to any one of the dies, and a manually operated valve controlling said passage for intermittently discharging oil to the surfaces operated on.

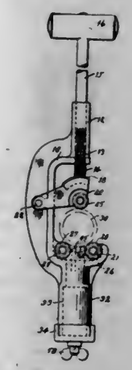
3. The combination with a multiple die stock wherein dies are arranged substantially in the same radial plane, a handle secured to said stock at substantially right angles to said plane, said handle comprising a tubular member, a plug closing the outer end of said tubular member having a vent opening, a valve closing said opening, a passage including a tube leading from the inner end of the handle to the interior of the die stock, said tube being bent and revoluble and adapted to be rotated whereby it may be positioned to lead oil to any of the dies, a valve controlling said passage and connected with the first mentioned valve, and means for manually operating both valves.

4. The combination with a die stock having a number of separate cutting dies, a handle secured to the stock for rotating the same and comprising a hollow tubular member adapted to carry oil, a tube leading from the inner end of the handle, said handle rotatably engaging the die stock to bring said tube to a position to lead oil to any one of the dies, and a latch adapted to secure the handle in any one of said positions.

5. The combination with a hand operated cutting tool, of a handle therefor comprising a tube, a cap closing one end of the tube and having a vent opening leading longitudinally toward the tube, a plunger extending through the cap, a rod axially positioned in the tube and connected with said plunger, said plunger having a laterally extending disk closing the vent opening, a plug closing the inner end of the tube, a valve seating in said plug, a spring pressing against said valve from the inner end of the handle, a receptacle around said valve formed in said plug, and a compression spring in said receptacle to close the valve and the vent opening, and a passage for leading oil from the inner end of the tube.

[Claims 6 to 8 not printed in the Gazette.]

1,215,120. PIPE-CUTTER. MORRIS CRAMER, Cleveland, Ohio. Filed Sept. 28, 1916. Serial No. 122,621. (Cl. 81—189.)



1. In a pipe cutter, the combination of a frame adapted to be revolved about a pipe, a cutting tool carried by the frame and having a narrow cutting edge, yielding means for urging the cutting tool toward the pipe whereby it may sever the same by cutting the metal of the pipe while the frame is revolved there about, and a guide for the pipe independent of such yielding means.

2. The combination, with a pipe cutter frame adapted to embrace and be revolved about a pipe, of a tool for actually cutting the metal of the pipe and carried by said frame, a compression spring for urging said tool into the pipe to cut the same as the frame is revolved about the pipe, and guides for the revolving pipe independent of the action of said spring.

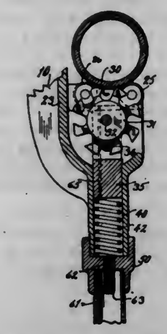
3. In a pipe cutter, the combination of a frame for revolubly embracing a pipe, a cutting tool carried by the frame, a compression spring for urging said cutting tool into the pipe as the frame is revolved about the pipe, guide rollers mounted on fixed axes, and means for adjusting the compression of said spring.

4. In a pipe cutter, the combination of a frame, a pair of fixed axially separated rollers and a movable roller with means for adjusting it toward and away from the other rollers whereby they may engage pipes of different sizes, a cutting tool carried by the frame adjacent the fixed rollers, and adjustable means for yieldingly urging said tool into the pipe.

5. In a pipe cutter, the combination of a frame, rollers carried thereby for revolubly embracing the exterior of a pipe, a substantially radially movable cutting tool having a narrow cutting edge, a member movable with the tool and adapted to engage the metal of the pipe ahead of the tool, and yielding means for urging said tool and member toward the pipe, said tool being adapted to cut a groove in the exterior of the pipe which deepens to sever the pipe as the cutter is revolved, said member limiting the inward movement of the tool by engaging the metal ahead of the same in said groove.

[Claims 6 to 12 not printed in the Gazette.]

1,215,121. PIPE-CUTTER. MORRIS CRAMER, Cleveland, Ohio. Filed Oct. 20, 1916. Serial No. 126,782. (Cl. 81—189.)



1. In a pipe cutter, the combination of a frame adapted to be revolved about a pipe, a cutter disk rotatably carried by the frame and having a plurality of outwardly extending individual cutter teeth, each provided with a cutting point and a depth-limiting heel, means for locking the cutter disk in various positions, and means for holding the pipe in position for the point of one cutting tool to enter the stock of the pipe and the heel of the next tool to engage the stock of the pipe within the path of the tool which is cutting.

2. The combination with a pipe cutter frame adapted to embrace and be revolved about a pipe, of a cutting tool having a plurality of individual cutting edges, means for movably carrying the tool whereby each of the several edges may be presented to the pipe, means for locking the cutter in any of said positions, and means for feeding the cutter into the pipe.

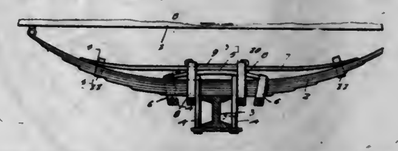
3. In a pipe cutter, the combination of a frame, means carried by the frame for revolubly embracing the pipe, a cutting tool carried by the frame comprising a rotatable member having a plurality of outwardly projecting cutting teeth, means for locking said cutter in position to present any one of said teeth to a pipe embraced by an embracing means.

4. In a pipe cutter, the combination of a frame adapted to revolve about a pipe, a member rotatably carried by the frame and having a plurality of separated alined cutting teeth, means for locking the cutter in position to present any one of said teeth to the pipe, said teeth being so arranged that a tooth adjacent the cutting tooth may engage the pipe to prevent too rapid feeding of the cutting tooth.

5. In a device of the character described, the combination with a pipe-embracing means, a plurality of separated individual cutters, a member rigidly carrying each of said cutters and movable to present each cutter to the pipe, said cutters being so arranged that when one of them is cutting a portion of an adjacent cutter remote from its cutting edge may bear against the metal operated upon just ahead of the tool which is cutting.

[Claims 6 to 11 not printed in the Gazette.]

1,215,122. SHOCK-ABSORBER. WILLIAM A. CROOK, Brewton, Ala. Filed Aug. 19, 1916. Serial No. 115,829. (Cl. 267—27.)



1. In combination, a semi-elliptical spring having an axle secured thereto, a leaf spring positioned upon the semi-elliptical spring and resting upon the securing means between the semi-elliptical spring and the axle, means for securing the free ends of the leaf spring to the semi-elliptical spring to form a spring preserver, and a shock absorber positioned upon the leaf spring and bearing upon the semi-elliptical spring to absorb the rebound of the semi-elliptical spring.

2. In combination, a semi-elliptical spring mounted upon an axle and substantially U-shaped clips securing the semi-elliptical spring to the axle, a spring preserver secured to the semi-elliptical spring and resting upon the substantially U-shaped clip to distribute the strain upon the semi-elliptical spring, a leaf spring positioned upon the spring preserver and having its ends in engagement with the semi-elliptical spring, and substantially U-shaped clamps surrounding the semi-elliptical spring and leaf spring to secure the leaf spring upon the spring preserver and prevent the substantially U-shaped clamps from lateral movement upon the semi-elliptical spring.

1,215,123. MATCH-BOX. WILFRED A. DALTON and OMER J. RAINVILLE, Pawtucket, R. I. Filed July 10, 1916. Serial No. 108,256. (Cl. 206—28.)

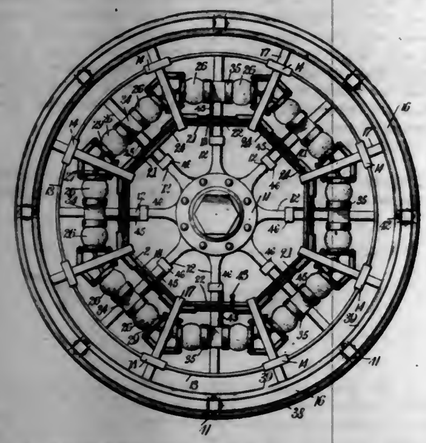


In a match box, a box proper having its front doubled upon itself to provide a flexible tongue concaved on its inner face and at its outer end, said tongue having a central cut-out and end cut-outs, and a lip on the box bottom curved upwardly toward the tongue but spaced therefrom to permit a match to pass through said space, the lip having a central and end cut-outs which register with the respective first named cut-outs.

1,215,124. VEHICLE-WHEEL. HENRY CLEMENT DAUPHINAIS, Fargo, N. D. Filed Apr. 16, 1913. Serial No. 761,487. Renewed July 18, 1916. Serial No. 110,007. (Cl. 152—28.)

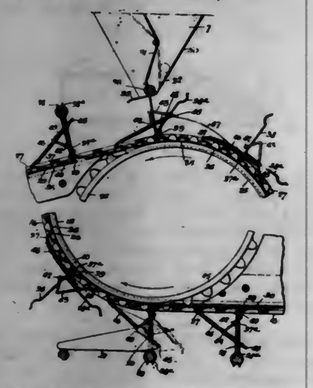
1. A vehicle wheel, having a hub section and a rim section, said sections being structurally separated; a series

of spokes mounted rigidly on said hub section to radiate therefrom, the diametric spread of said spokes being less than the inner diameter of said rim section; a second series of spokes mounted rigidly on said rim section to converge therefrom in line with the center thereof; a plurality of resilient members disposed between the sides of the spokes of said series, to support the weight of said sections laterally on said spokes; and a plurality of rings, each rigidly connecting the ends of one of said series of spokes, to support the same.



2. A vehicle wheel, having a hub section and a rim section, said sections being structurally separated; a series of spokes mounted rigidly on said hub section to radiate therefrom, the diametric spread of said spokes being less than the inner diameter of said rim section; a second series of spokes mounted rigidly on said rim section to converge therefrom in line with the center thereof; a plurality of resilient members disposed between the sides of the spokes of said series, to support the weight of said sections laterally on said spokes; means operatively connecting said resilient members throughout said wheel to transfer and equalize the pressure therein; and a plurality of rings, each rigidly connecting the ends of one of said series of spokes, to support the same.

1,215,125. PLANT-SETTING MACHINE. SAMUEL T. DAVIS, Philadelphia, Pa. Filed Apr. 20, 1915. Serial No. 22,642. (Cl. 55—121.)



1. In a plant setting machine, the combination of a frame adapted to be traversed over the ground, an endless chain carried by said frame, means for moving said chain, plant gripping fingers carried by said chain, one of said fingers being fixed to the chain while the other finger is hingedly connected thereto, a slotted plate adapted to one of said fingers and movable to different positions with respect to the same, and a spring connected to said slotted plate and serving to hold the fingers open when the plate is in one position and closed when the plate is in another position.

2. In a plant setting machine, the combination of a frame adapted to be traversed over the ground, an endless chain carried by said frame, means for moving said chain, a pair of plant gripping fingers carried by said chain, one of said fingers having a relatively fixed position with respect to the chain while the other finger is hingedly connected to said chain, a slotted plate hinged to one of said fingers and movable to different positions with respect to the same, and a spring connected to said slotted plate and serving to permit the fingers to hold open when the plate is in one position and to hold the fingers closed when the plate is in another position.

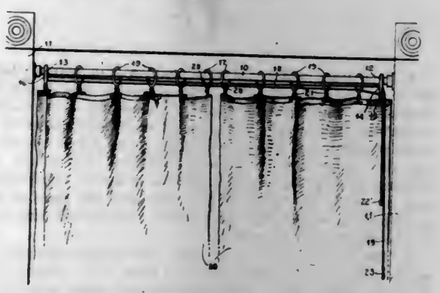
3. In a plant setting machine, the combination of a hopper having a fixed side and a bottom portion, and a movable side, said hopper being adapted to receive plants, an endless chain, gripping means carried by said endless chain, said gripping means adapted to engage and actuate the movable side of said hopper to release the plants, and means for holding said gripping fingers in the open position to receive the plants.

4. In a plant setting machine, the combination of a hopper having a fixed side and a bottom portion, and a movable side, said hopper adapted to receive plants, an endless chain, gripping means carried by said endless chain, said gripping means adapted to engage and actuate the movable side of said hopper to release the plants, means for holding said gripping fingers in the open position to receive the plants, and a cam disposed for releasing said holding means as the gripping fingers engage the movable side of the hopper; the means for holding said gripping fingers in the open position serving also for holding said fingers in the closed position after they leave the hopper.

5. In a plant setting machine, a hopper having a movable side, an endless chain having plant gripping fingers adapted to move the movable side of the hopper and release plants therefrom, and means for closing said fingers upon a plant release from said hopper; the gripping fingers being presented thereto in open position.

[Claims 6 to 20 not printed in the Gazette.]

1,215,126. TRAVERSE-CORD FASTENER. JOHN A. DONNELLY, New York, N. Y. Filed July 22, 1916. Serial No. 110,665. (Cl. 156—20.)



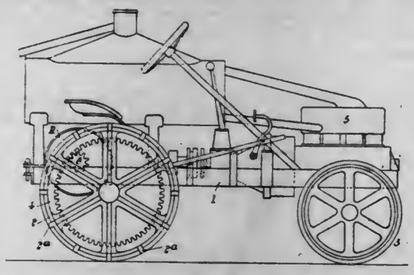
1. The herein described traverse ring having in one side a depression and a pit formed in the center thereof, and a cord clamp having a relatively stationary jaw secured in said depression and having at its center a depression extending into said pit and forming a cord seat, said clamp including a relatively movable jaw having spring connection at one end with the stationary jaw, and means to bind the movable jaw in binding engagement with the cord.

2. The combination with a traverse ring, of a traverse cord attachment means coöperating therewith, said attachment means comprising a clamp having relatively fixed and movable jaws formed of a single piece of spring material, the fixed jaw having a seat to receive the cord and the movable jaw having a projection extending into said seat, said seat and projection being provided with serrations, and means serving to hold the free end of the movable jaw in gripping position.

3. The herein described traverse ring having in one side a depression and a pit formed at the center thereof, and a cord clamp having a relatively stationary jaw secured in said depression and having at its center a depression extending into said pit and forming a cord seat, said clamp including a relatively movable jaw having spring connection at one end with the stationary jaw, and means slidable endwise of the clamp to bind the movable jaw in positive binding engagement with the cord.

4. The combination with a traverse ring, of a traverse cord attachment means coöperating therewith, said attachment means comprising a clamp having relatively fixed and movable jaws formed of a single piece of spring material, the fixed jaw having a seat to receive the cord and the movable jaw having a projection extending into said seat, said seat and projection being provided with serrations, and a keeper slidable longitudinally of the clamp to hold the free end of the movable jaw in gripping position.

1,215,127. AGRICULTURAL MOTOR-TRACTOR. HUGH PERCIVAL DUNGEY, Middletons, Cranbrook, England. Filed Nov. 26, 1915. Serial No. 63,465. (Cl. 21—114.)



An agricultural motor tractor consisting in the combination of a frame, driving and steering wheels supporting the frame, a spur ring on each driving wheel, a countershaft arranged at right angles to the longitudinal axis of the frame and lying above the frame, a bevel spur wheel fixed to said counter-shaft, spur pinions one fixed to each end of said countershaft and respectively gearing with said spur rings on the driving wheels, a motor above but mounted on the frame, a driving shaft therefor, a Carden shaft connected by a universal coupling with the driving shaft, a bevel gear fixed to the Carden shaft and gearing with the bevel wheel on the countershaft, a casing inclosing the gear, and a seat at the rear of the frame, and motor control and steering mechanism readily accessible from said seat, all substantially as heretofore described.

1,215,128. COLLARET-STRIP. GEORGE W. EBERLEY, Whitesboro, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 6, 1912. Serial No. 729,836. (Cl. 2—66.)

1. A fabric strip comprising a series of connected blanks cut to a predetermined shape.

2. A collaret strip comprising a series of connected blanks cut to a predetermined shape, each of which may be used for forming a collaret.

3. A collaret strip comprising a series of connected blanks, each of which is cut so as to form parallel side sections and end portions tapering toward the connecting points between adjacent blanks.

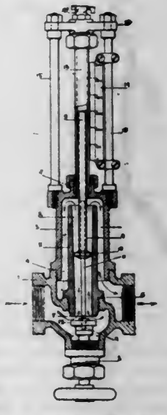
4. A collaret strip comprising a series of connected blanks cut to a predetermined shape, each of which is formed with a crease therein, centrally between the ends of the blank.



5. A collaret strip comprising a series of connected blanks, each of which is cut so as to form parallel side sections and end portions tapered toward the connecting points between adjacent blanks, each of said blanks having a crease therein, centrally between the ends thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,215,129. FLOW-INDICATING VALVE. PAUL EDLICH, Passaic, N. J. Filed Jan. 11, 1916. Serial No. 71,505. (Cl. 73—167.)



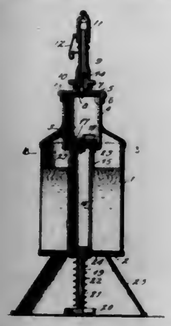
1. In a device for measuring the flow of fluid, the combination with a casing having inlet and discharge passages therein, and a partition located within the casing and having a port therein, of a hollow body associated with the casing and having its interior communicating with the interior of the casing, a second hollow body having its opposite ends open and having one end extending into the casing and received by the port in the partition wall and its opposite end extending into the first-mentioned hollow body, the said second-mentioned hollow body being adapted to establish communication between the inlet and discharge passages in the casing, a gage glass carried by the first-mentioned hollow body and having its interior communicating therewith, and a fluid controlled indicating element operable through the first and second-mentioned hollow bodies and through the gage glass, for the purpose specified.

2. In a device for measuring the flow of fluid, the combination with a casing having inlet and discharge passages therein and a hollow body for providing communication between the inlet and outlet passages, of a second hollow body carried by the casing and engaging over the first-mentioned body, a guide extending through the first-mentioned hollow body and through one end of the second-mentioned hollow body, a gage glass carried by the mentioned end of the second hollow body and having its interior communicating with the interior of the second body, a tubular indicating element slidably mounted on the guide and operable through the mentioned end of the second body and through the gage glass, a graduated plate located adjacent the gage glass, and a piston head connected to the inner end of the indicating element, for the purpose specified.

3. In a device for measuring the flow of fluid, the combination with a casing having inlet and discharge pas-

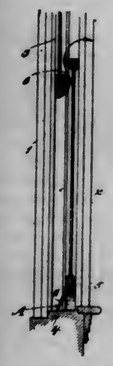
sages therein, of a hollow body carried by the casing and having its interior communicating with the interior of the casing, rods carried by the hollow body, a transversely extending plate carried by the rods, a gage glass located between the rods and interposed between the plate and the hollow body and secured thereto and having its interior communicating with the interior of the hollow body, a second plate located adjacent the gage glass and carried by one of the rods and having a series of graduations thereon, and a fluid operated indicating element operable through the hollow body and the gage glass and disposed in the path of communication between the inlet and outlet passages in the casing, for the purpose specified.

1,215,130. OIL-CAN. WILLIAM ELLIOTT, Langlois, Oreg. Filed June 27, 1916. Serial No. 106,193. (Cl. 221—47.)



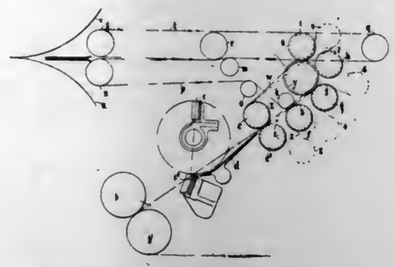
An oil can having in the top thereof a cylindrical chamber provided with lateral ports opening into the can and having a detachable cap at its outer end provided with a nozzle and with a port communicating with the nozzle, a spring controlled check valve normally closing the port, said can having a tubular member extending fram the cylindrical chamber toward the opposite end of the can and opening into the chamber, a plunger movable in the tubular member and having a head within the chamber, and a stem at the opposite end extending through the head of the can, and a spring normally acting to hold the plunger withdrawn, said lateral ports communicating with the can above the level of the plunger when the plunger is withdrawn.

1,215,131. WINDOW-VENTILATOR. CHARLES A. ERICKSON, Cashton, Wis. Filed Mar. 23, 1916. Serial No. 86,095. (Cl. 98—31.)



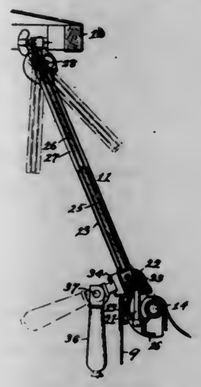
The combination of a window frame and sash therein, with a ventilator carried wholly by the sash and movably mounted on the bottom bar of the sash on the outside thereof and adapted to coöperate with the sill of the window frame to close the opening left by the sash when raised less than the height of the ventilator.

1,215,132. PRINTING MACHINERY. ARTHUR BURROUGHES EVANS, Leeds, England, assignor to George Mann and Company Limited, Leeds, England. Filed Apr. 2, 1915. Serial No. 18,859. (Cl. 101—232.)



In all-size web printing machinery means for feeding the web, means for separating the sheets, printing cylinders, means for carrying the sheets when separated to said printing cylinders, said means for feeding the web and said means for carrying the sheets running at different speeds, and dusting rollers interposed between said sheet separating means and said means for carrying the sheets, said rollers running at a peripheral speed intermediate between the peripheral speed of said web feeding means and the peripheral speed of said sheet carrying means.

1,215,133. WIND-SHIELD. KARL FEILCKE, Indianapolis, Ind. Filed Apr. 15, 1916. Serial No. 91,327. (Cl. 21—148.)



1. A wind shield, comprising a support, a frame pivoted thereto, a lower glass carried by said frame, an upper glass in pivotal connection with said frame, a handle for swinging said frame on its pivot, and means connected with said handle for swinging said upper glass on its pivot.

2. A wind shield, comprising a support, a frame pivoted thereto, a lower glass carried by said frame, an upper glass in pivotal connection with said frame, a handle movable in a vertical plane to swing said frame on its pivot and means connected with said handle for swinging said upper glass on its pivot in the movement of said handle in a horizontal plane.

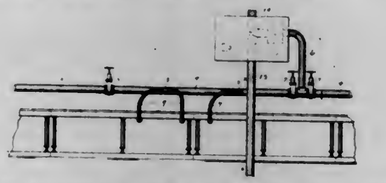
3. A wind shield, comprising a support, a frame pivoted thereto, a lower glass, an upper glass in pivotal connection with said frame, a handle for swinging said frame on its pivot, means for yeildingly locking said frame in desired positions, and means connected with said handle for swinging said upper glass on its pivot.

4. A wind shield, comprising a support, a frame pivoted thereto, a lower glass, an upper glass in pivotal connection with said frame, a handle for swinging said frame on its pivot, a balance spring for counterbalancing the weight of said frame, and means connected with said handle for swinging said upper glass on its pivot.

5. A wind shield, comprising a support, a frame pivoted thereto, a lower glass, an upper glass in pivotal connection with said frame, a pivotally mounted handle for swinging said frame on its pivot, means including a lever connected with said handle for swinging said upper glass on its pivot, and means for holding said handle in operative and in inoperative positions with respect to said lever.

[Claim 6 not printed in the Gazette.]

1,215,134. APPARATUS FOR REMOVING WATER FROM WATER-BEARING SAND. JOHN M. FERRY, Baltimore, Md., assignor to James Ferry & Sons, Incorporated, a Corporation of Pennsylvania. Filed June 5, 1916. Serial No. 101,670. (Cl. 103—79.)



1. The combination of a main pipe line comprising a number of independently connected detachable sections, a pump, a pipe connecting the pump with the main pipe line, a number of perforated pipes adapted to be driven into the sand, and flexible connections between said perforated pipes and the main pipe line.

2. The combination of a main pipe line comprising a number of sections, a gate valve between each two sections, a pump, a pipe connecting the pump with the main pipe line, a number of valves in each of the main pipe line sections, a number of perforated pipes adapted to be driven into the sand, and a flexible connection between the said perforated pipes and the valves of said main line sections.

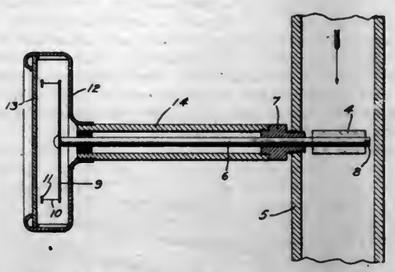
3. The combination of a main pipe line comprising a number of sections, a gate valve between each two sections, a pump, a pipe connecting the pump with the main pipe line, a number of valves in each section of the main pipe line, a number of perforated pipes adapted to be driven into the sand, a fine meshed screen surrounding the perforated portion of said perforated pipes, a flexible connection between each of said perforated pipes and a valve of the main pipe line sections, and a discharge pipe leading from said pump.

1,215,135. FLUID-FLOW-INDICATING MECHANISM. ERNEST F. FISHER, Pittsburgh, Pa., assignor to General Electric Company, a Corporation of New York. Filed July 11, 1914. Serial No. 850,447. (Cl. 73—167.)

1. A fluid flow indicating device, comprising a vibration tachometer secured to the walls of the passage, through which fluid is flowing, for indicating the frequency of vibrations occasioned by the fluid traversing the passage.

2. In a flow meter, the combination with a conduit through which a fluid to be metered flows, of a device located in the conduit and responsive to vibrations set up by the flowing fluid, and an indicating mechanism connected to said device.

3. A fluid flow indicating device, comprising a member having a fluid flow passage therethrough, a sensitive member located in said passage to respond to vibrations set up by the passing fluid, a device for indicating the amplitude of such vibrations, and means for transmitting the vibrations to the indicating device.



4. A fluid flow indicating device, comprising a member having a fluid flow passage therethrough, a sensitive member located in said passage to respond to vibrations set up by the passing fluid, a device for indicating the amplitude of such vibrations, and means for transmitting the vibrations to the indicating device, including means for amplifying the vibrations.

1,215,136. LINING, MARKING, COPYING, OR OTHER INDICATING GUIDE. MARY E. FITCH, Brookline, Mass. Filed Apr. 6, 1916. Serial No. 89,309. (Cl. 33—107.)



1. A liner composed of a bar, a tongue formed of the body of the same punched-out therefrom between the sides thereof having its head end connected integrally with the head of said bar, and being offset outwardly from the head of said bar.

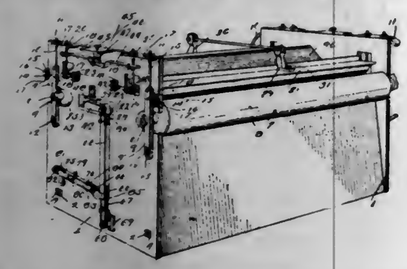
2. A liner composed of a bar, a tongue formed of the body of the same punched-out therefrom between the sides thereof having its head end connected integrally with the head of said bar, and being offset outwardly from the head of said bar, the free terminal of said tongue having thereon a laterally turned shoulder.

3. A liner composed of a bar, a tongue formed of the body of the same punched-out therefrom between the sides thereof having its head end connected integrally with the head of said bar, said tongue and said sides having graduations thereon, and the face of said slide having thereon a mark adapted to register with either of said graduations.

1,215,137. COTTON-GIN OF THE DOUBLE-ROLLER TYPE. LELAND L. FOSS, Vidalia, Ga., assignor of one-half to Moses Leader, Vidalia, Ga. Filed Jan. 25, 1916 Serial No. 74,206. (Cl. 242—7.)

1. In a cotton gin, end frames having vertical and horizontal slotted flanges, a ginning roller, a breast having end trunnions, and upwardly extending arms, a ginning blade

carried by said breast and adapted to contact tangentially with said roller, and means for adjusting said breast bodily and arcuately to adjust said blade with relation to said roller from its tangential contacting line with the roller as a center, including intersecting vertical and horizontal bolts engaging slots of said flanges and in the inner intersecting ends of which said trunnions are mounted, and nuts threaded upon the outer ends of said bolts and engaging said flanges and a transverse lengthwise adjustable rod connecting said arms.



2. In a cotton gin, end frames having vertical and horizontal slotted flanges, a ginning roller, a breast having end trunnions, and upwardly extending arms, a ginning blade carried by said breast and adapted to contact tangentially with said roller, and means for adjusting said breast bodily and arcuately to adjust said blade with relation to said roller from its tangential contacting line with the roller as a center, including intersecting vertical and horizontal bolts engaging slots of said flanges and in the inner intersecting ends of which said trunnions are mounted, nuts threaded upon the outer ends of said bolts and engaging said flanges and a transverse lengthwise adjustable rod connecting said arms, said vertical bolts having lateral extensions, and spring means engaging said lateral extensions for resisting upward movement of said breast and the ginning blade carried thereby.

3. In a cotton gin, end frames having vertical and horizontal slotted flanges, a ginning roller, a breast having end trunnions, and upwardly extending arms, a ginning blade carried by said breast and adapted to contact tangentially with said roller, and means for adjusting said breast bodily and arcuately to adjust said blade with relation to said roller from its tangential contacting line with the roller as a center, including intersecting vertical and horizontal bolts engaging slots of said flanges and in the inner intersecting ends of which said trunnions are mounted, nuts threaded upon the outer ends of said bolts and engaging said flanges, and a transverse lengthwise adjustable rod connecting said arms, and spring means engaging said lateral extensions for resisting upward movement of said breast and the ginning blade carried thereby, and means for adjusting said rollers bodily in two directions including vertical bars carrying said rollers and having lower slots, bolts carried by said end frames and engaging said lower slots, upper vertical bolts engaging slots of said horizontal flanges, at their lower ends having pivotal engagement with said bars and from which said bars and said rollers are suspended, and horizontal bolts engaging slots of said vertical flanges and at their inner ends pivotally engaging said bars, and nuts threaded upon the outer ends of said vertical and horizontal bolts and engaging said flanges.

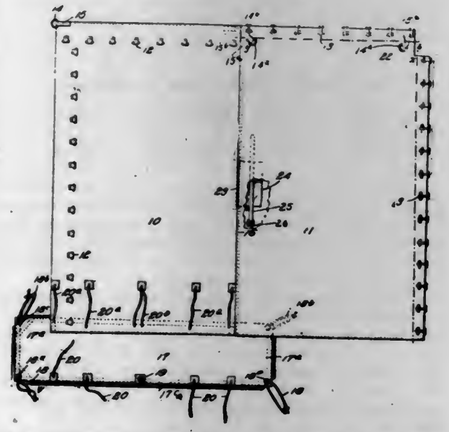
4. In a double roller cotton gin, end frames having vertical and horizontal slotted flanges, ginning rollers, breasts provided with end trunnions and upwardly extending arms, ginning blades carried by said breasts and adapted to contact tangentially with said rollers, intersecting vertical and horizontal bolts engaging the slots of said flanges and having at their inner intersecting ends eyes in which said trunnions are mounted, said bolts having at their outer ends nuts threaded thereon and engaging said flanges, a transverse lengthwise adjustable rod connecting said upwardly extending arms, a transverse bar engaging said vertical bolts, and spring means for exerting pressure upon said bar.

1,215,138. BRAZING MATERIAL. TRUMAN S. FULLER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 29, 1915. Serial No. 5,141. (Cl. 75—1.)

1. The combination of a plurality of metal parts and an intervening alloy joined to and uniting said parts, said alloy consisting of a malleable, tenacious alloy of silver and cadmium, containing about 57 to 65 per cent. of silver, said alloy having a melting point of about 750° C.

2. The combination of copper parts and an intervening metal film joined to and uniting said copper parts, said film consisting of an alloy containing about 57 to 65 parts of silver, about 38 to 29 parts of cadmium and several per cent. of copper.

1,215,139. COMBINATION SHELTER OUTFIT. GEORGE WILLIAM GAIL, Jr., Baltimore, Md. Filed Aug. 28, 1915. Serial No. 47,734. (Cl. 2—60.)



1. A convertible outfit, including a sheet of material, comprising two side members and presenting a median folding line to fold one side onto the other, or to unfold the sheet into spread form, fastening means to detachably secure the side members to each other near the outer side edges and transversely along the foot, and a transverse flap secured at its rear edge to one of the said side members, at the head of the latter, and the said flap extending forwardly beyond the said side members and extending at its ends laterally beyond the side member to which it is secured, the other side member being free from the overlapping end of said flap and being adapted to fold or unfold independently of the said flap.

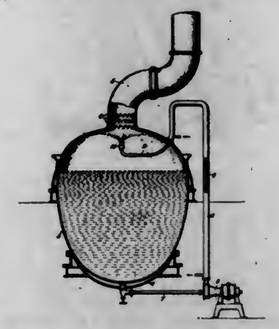
2. A convertible outfit, including a sheet of material comprising two side members and presenting a median folding line to fold one side onto the other, or to unfold the sheet into spread form, fastening means to detachably secure the side members to each other near the outer side edges and transversely along the foot, a transverse flap secured at its rear edge to one of the said side members, at the head of the latter, and the said flap extending forwardly beyond the said side members and extending at its ends laterally beyond the side member to which it is secured, the other side member adapted to fold or unfold independently of the said flap, means to separately stake the side members when unfolded, and means to stake the said flap independently of the said side members.

3. A convertible outfit, including a sheet of material, comprising two side members and presenting a median folding line to fold one onto the other, or to unfold the sheet into spread form, fastening means to detachably secure the side members to each other near the outer side edges and transversely along the foot, a transverse flap secured at its rear edge to one of the said side members, at the head of the latter, the said flap extending forwardly beyond the said side members and extending at its ends laterally beyond the side member to which it is secured, the other side member being adapted to fold or unfold independently of the said flap, and there being a longitudinal slit in the sheet adjacent to the median folding line and running substantially parallel therewith to form an opening for the head of the wearer to convert the said sheet into a poncho.

4. A convertible outfit, including a sheet of material, comprising two side members and presenting a median folding line to fold one onto the other, or to unfold the sheet into spread form, fastening means to detachably secure the side members to each other near the outer side edges and transversely along the foot, a transverse flap secured at its rear edge to one of the said side members, at the head of the latter, the said flap extending forwardly beyond the said side members and extending at its ends laterally beyond the side member to which it is secured, the other side member being adapted to fold or unfold independently of the said flap, there being a longitudinal slit in the sheet adjacent to the median folding line and running substantially parallel therewith to form an opening for the head of the wearer to convert the said sheet into a poncho, and a collar secured to the sheet along the sides of the slit and continuous at the ends of the slit, the said collar being foldable into flat form onto the sheet, with its sides in close relation, and covering the slit, when the sheet is in spread form.

5. A convertible outfit, including a sheet of material, comprising two side members and presenting a median folding line to fold one side onto the other, or to unfold the sheet into spread form, fastening means to detachably secure the side members to each other near the outer side edges and transversely along the foot, a transverse flap secured at its rear edge to one of the said side members, at the head of the latter, the said flap extending forwardly beyond the said side members and extending at its ends laterally beyond the side member to which it is secured, the other side member being adapted to fold or unfold independently of the said flap, and there being tie strings on the flap at its front transverse edge and mating tie strings on the adjacent side member rearward of the flap, the ends of the flap being foldable onto the body thereof and the flap being foldable into the said adjacent side member, the tie strings serving to secure the flap in said folded position.

1,215,140. EVAPORATOR. WALTER JOHN GILLER, Warsaw, Ill. Filed Mar. 10, 1916. Serial No. 83,316. (Cl. 127—9.)

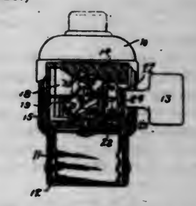


1. An evaporator of the class described comprising a kettle for boiling liquids, a pump, a conduit from the kettle bottom to the pump inlet, a conduit from the pump outlet to the top of the kettle, a nozzle on said conduit within the kettle for breaking up the liquid into a finely divided spray, means for carrying off the vapors from the kettle, and means for preheating the liquid in the conduit from the pump outlet to the kettle.

2. An evaporator of the class described comprising a kettle for boiling liquids having a vapor exhaust at the top thereof, baffle plates in said exhaust, a pump adapted to draw liquid from the kettle and discharge the same into the kettle above the liquid level of the kettle, means for breaking up the discharged liquid within the kettle into a finely divided spray, and means for preheating the liquid on its discharge from the pump to the kettle.

3. An evaporator of the class described comprising a kettle for boiling liquids having a vapor exhaust at the top thereof, angularly disposed rows of baffle plates in the exhaust at the kettle, a pump, a conduit from the bottom of the kettle to the inlet of the pump, a conduit from the outlet of the pump into the kettle at a point above the liquid level of the kettle, a multiple-spray nozzle on said conduit for breaking up the liquid into finely divided sprays, and a steam jacket on the conduit from the outlet of the pump to the kettle for preheating the liquids flowing through the conduit.

1,215,141. ELECTRIC-LAMP SOCKET. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Sept. 14, 1916. Serial No. 120,156. (Cl. 173—346.)



1. An electric lamp socket having an insulating body, a switch frame having a base mounted thereon, means for securing said frame to the body, and an interengaging rib and groove on said body and base to prevent swiveling of said parts with relation to each other.

2. An electric lamp socket having an insulating body, a switch frame mounted thereon and having a base and a pair of side uprights, means engaging said base to secure the latter on the body and a boss on said body engaged between the said frame uprights to prevent relative movement of the frame on the body.

3. An electric lamp socket having an insulating body, a switch frame mounted thereon and having an end upright and a pair of side uprights extending beyond said end upright, in combination with a boss on said body bearing against said end upright and lying between said extended side uprights, for the purpose described.

4. An electric lamp socket having a chambered insulating body, a switch frame having a base mounted on the bottom of said chamber, side uprights on said base and extending beyond the end of the latter, and a ledge in the top of said chamber against which the extended ends of said side uprights abut, for the purpose described.

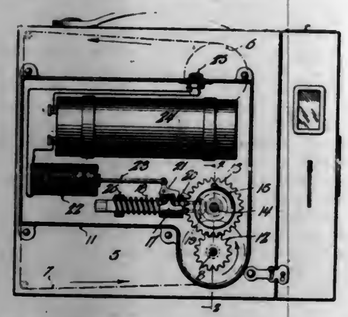
5. An electric lamp socket having a chambered insulating body, a switch frame and means for mounting the same on the bottom of said chamber, an end upright and a pair of side uprights embracing and extending beyond said end upright and a boss engaged between said side uprights beyond said end upright.

[Claims 6 and 7 not printed in the Gazette.]

1,215,142. FILM-WINDING DEVICE FOR CAMERAS. JOSEPH P. CAMILLE GRANGER, Milwaukee, Wis., assignor of one-third to Gustav Schielke, Milwaukee, Wis. Filed Sept. 30, 1916. Serial No. 122,993. (Cl. 242—71.)

1. The combination with a camera including a film winding shaft of a member engageable with said shaft to

rotate it, a stop means for preventing actuation of said member upon a predetermined degree of rotation of the spool winding shaft, means for adjusting said stop means to vary the permitted degree of rotation of the spool winding shaft, and means for actuating said stop means to procure successive operations thereof.

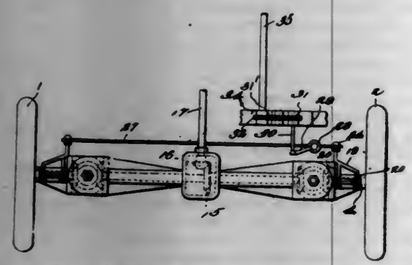


2. The combination with a winding shaft of a gear wheel on the shaft, a spring driven gear wheel meshing with the first wheel, a pawl member engageable with one of the wheels to prevent rotation thereof, means for disengaging the pawl member from the wheel and means controlled by rotation of the wheel for engaging the pawl member with the wheel after a predetermined degree of rotation of said wheel.

3. The combination with a camera including a winding shaft, of a gear wheel on the shaft, a spring driven gear wheel meshing with the first wheel, a shaft driven by one of said wheels, threads on the shaft, a sleeve slidable on the shaft and engageable with the wheel to prevent rotation thereof, a pawl carried by the sleeve and engageable with the threads of the shaft, and means for moving the sleeve away from the wheel.

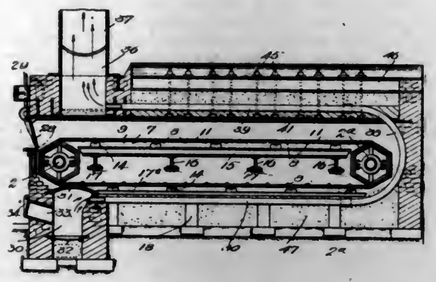
4. The combination with a camera including a winding shaft, of a gear wheel on the shaft, a spring driven gear wheel meshing with the first wheel, a shaft driven by one of said wheels, threads on the shaft, a sleeve slidable on the shaft and engageable with the wheel to prevent rotation thereof, a pawl carried by the sleeve and engageable with the threads of the shaft, and means for moving the sleeve away from the wheel including a switch controlled solenoid connected with the pawl.

1,215,143. FORE-WHEEL DRIVE FOR MOTOR-VEHICLES. WILLIAM M. GREEN, New Haven, Wyo. Filed July 20, 1915. Serial No. 40,966. (Cl. 21—197.)



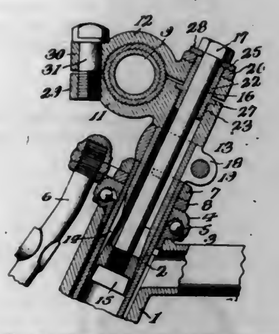
In a device as set forth, the combination, of a main axle, a plurality of pivotally supported stub axles, a housing mounted about said stub axles, a cross rod, means connecting said cross rod and said stub axle inclosing housings including bodies, a plurality of diverging arms formed upon said bodies and extending transversely therefrom, said arms being detachably connected to said housings, a head formed upon said bodies and extending oppositely from said arms for connection to said cross rod, and means for moving said cross rod longitudinally for moving said stub axles upon their pivotal support.

1,215,144. OVEN. EMIL CHRISTIAN GREINER, Globe, Ariz. Filed May 4, 1916. Serial No. 95,343. (Cl. 107—57.)



An oven having a baking chamber and having at one end thereof and below the same a combustion chamber, and having above the said baking chamber at the said end a smoke receiving chamber, and a series of U-shaped pipes connecting the combustion and the smoke receiving chambers, each pipe comprising a body portion at the opposite end of the baking chamber from the combustion chamber, and arms arranged above and below the said baking chamber and connected with the combustion and smoke receiving chambers, said arms being arranged within the walls of the oven and the body portions being within the baking chamber, and means for conveying the loaves to be baked from the opposite end toward the combustion chamber.

1,215,145. HANDLE-BAR CLAMP FOR MOTOR-CYCLES. CARL J. GUSTAFSON and ROBERT W. ELLINGHAM, Springfield, Mass., assignors to Hendee Manufacturing Company, Springfield, Mass., a Corporation of Massachusetts. Filed Oct. 27, 1913. Serial No. 797,605. (Cl. 208—116.)



1. A handle bar clamp for motorcycles including a sleeve extending into the steering stem, devices for securing said sleeve to said stem, a clamping member formed integral with said sleeve and having a semi-circular recess for the handle bar, said clamping member having a horizontally projecting portion, a second clamping member having a semi-circular recess for the handle bar anad having a horizontally projecting portion spaced from the horizontally projecting portion on the first clamping member, means for forcing said horizontally projecting portions toward each other, said second clamping member having a projecting portion on the opposite side of the handle bar from the first named projecting portion thereon which is disposed in a plane substantially at right angles to the steering stem, and clamping means concentric with the axis of the steering stem for engaging the last named projecting portion and forcing the second clamping member against the handle bar.

2. A handle bar clamp for motorcycles including a sleeve extending into the steering stem, devices for securing said sleeve to said stem, a clamping member formed integral with said sleeve and having a semi-circular recess for the handle bar, a horizontally projecting ear carried by said clamping member, a second clamping member having a semi-circular recess for the handle bar, and a horizontally projecting ear spaced from the ear on the lower clamping member, a threaded bolt for forcing said ears toward each other, a collar carried by said second clamping member on the opposite side of the handle bar from said ears, said collar being disposed in a plane substantially at right angles to the axis of the steering stem, a second sleeve threaded into the lower clamping member and adapted to extend through the collar on the upper clamping member, and a nut for engaging said last named sleeve and pressing against said collar for forcing the same toward the lower clamping member.

3. A handle bar clamp for motorcycles including a sleeve extending into the steering stem, means for securing said sleeve to said stem, a collar clamped on said sleeve and having projecting lugs adapted to engage recesses formed in the upper end of the steering stem, said sleeve having a clamping member formed integral therewith, which clamping member is provided with a recess for the handle bar, a second clamping member separate from the first clamping member and having a recess for the handle bar, and devices on opposite sides of the handle bar for securing the clamping members together.

1,215,146. TWO-STAGE THROTTLE-VALVE FOR PERCUSSIVE TOOLS. CHARLES H. HAESELER, Chicago, Ill. Filed July 17, 1916. Serial No. 109,655. (Cl. 136—11.)



1. A percussive tool handle provided with a motive fluid passage, and throttle mechanism controlling said passage comprising the following instrumentalities: a bushing having ports communicating with said passage, a main valve slidable in said bushing and controlling said ports, said main valve having a passage communicating with said ports, an auxiliary valve controlling the main valve passage, a ball located above said valves, and means coacting with said ball to effect the opening first of said auxiliary valve anad thereafter of said main valve, whereby the initial opening of said auxiliary valve will cause the hammering piston to operate at a minimum speed and the opening of the main valve will cause the hammering piston to operate at a maximum speed.

2. A percussive tool handle provided with a grasping portion and having a passage for the motive fluid, and a throttle mechanism controlling said passage and comprising a bushing having ports communicating with said passage and having a valve seat, a main valve slidable in said bushing and controlling said valve seat, said main valve having a passage through it communicating with said ports, an auxiliary valve controlling said main valve passage, a spring coöperating with one of said valves, a ball located above said valves and a lever to actuate said ball and valves and arranged to open the auxiliary valve prior to the opening of the main valve, whereby the initial opening of said auxiliary valve will cause the hammering piston to operate at a minimum speed and the opening of the main valve will cause the hammering piston to operate at a maximum speed.

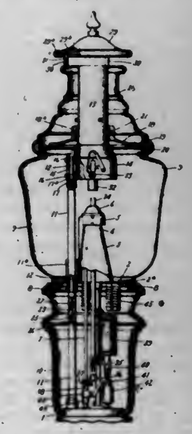
3. A percussive tool handle provided with a grasping portion and having a motive fluid passage, and a throttle valve mechanism comprising a bushing having ports communicating with said passage, a main valve slidable in said bushing and controlling said bushing ports, said main valve having a passage through it communicating with the bushing ports, an auxiliary valve controlling the main valve passage, a lever on said handle, and a ball valve actuated by said lever to effect the opening first of said auxiliary valve and thereafter of said main valve, whereby the initial depression of said lever will open said auxiliary valve and cause the hammering piston to operate at a minimum speed and a further depression of said lever will open said main valve and cause the hammering piston to operate at a maximum speed.

4. A percussive tool handle provided with a grasping portion and having a passage for the motive fluid, and a throttle mechanism comprising the following instrumentalities: a bushing having ports communicating with said passage, and having a valve seat, a main valve having a head slidable within said bushing and having a valve head controlling said valve seat, said main valve having a passage through it communicating with said ports and provided with a valve seat, an auxiliary valve controlling the main valve passage and having a stem passing through said main valve, a lever carried by said handle, a ball interposed between the auxiliary valve stem and said lever and adapted to contact with the main valve on the opening of the auxiliary valve, and a spring acting on the auxiliary valve to close it.

5. A percussive tool handle having a motive fluid passage, and throttle mechanism controlling said passage and comprising a main valve controlling said passage, said main valve having a passage communicating with the handle passage, an auxiliary valve controlling the main valve passage and extending through the main valve, a ball carried by said main valve and coöperating with both valves to effect their opening, and means to move said ball.

[Claims 6 to 17 not printed in the Gazette.]

1,215,147. ARC-LAMP. CROMWELL A. B. HALVORSON, Jr., Saugus, and WALTER L. HARRADEN, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Mar. 1, 1913. Serial No. 751,478. (Cl. 176—52.)



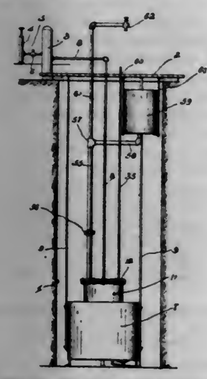
1. In an arc lamp, an arc inclosing globe open at the top, a chimney passing through the top of said globe, a vertically movable member for supporting said chimney from the base, and a member slidably surrounding the chimney and adapted to seat on the globe and form a sub-

atantially air tight joint with both the chimney and the globe.

2. In an arc lamp, an arc inclosing globe open at the top, a chimney passing through the top of said globe, a vertically movable member for supporting said chimney from the base, and a plate slidably surrounding the chimney and adapted to seat on the globe, said plate being provided on its inner face with a packing ring to form a substantially air tight joint between the chimney and the plate.

3. In an arc lamp, an arc inclosing globe open at its top, a chimney passing through the top of said globe, a vertically movable eccentric member for supporting said chimney from the base, and a plate slidably surrounding the chimney and movable with said chimney to its elevated position, said plate being adapted to seat on the globe and form a substantially air tight joint with both the chimney and the globe.

1,215,148. PUMP. JOSEPH C. HARRISON, Eldorado, Ill., assignor of one-sixth to Willis E. Stinson and one-sixth to Robert E. Stinson, Eldorado, Ill. Filed Jan. 28, 1915. Serial No. 4,891. (Cl. 103—8.)

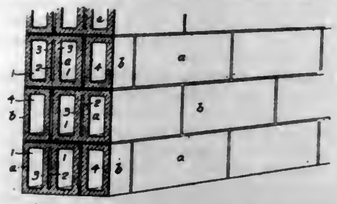


In a pump, the combination of a tank adapted to be inserted into a well, an automatically operating valve in the bottom of said tank, a compressed air tank, said well tank connected to said compressed air tank, means for controlling the air passing from said compressed air tank into said well tank, an outlet pipe connected at its inner end to and communicating with said well tank, a valve on the inner end of said outlet pipe, a storage tank communicating with said outlet pipe, a float mounted within said well tank and means for operating said float within said well tank for operating said air retaining means for permitting of an inlet of air into said well tank for forcing the water upwardly through the outlet pipe into said storage tank and compressing the air retained therein, said float also operating the valve on the inner end of the outlet pipe permitting water to be forced in the storage tank, and a valve arranged in said outlet pipe to prevent the back flow of water from the storage tank into the well tank.

1,215,149. HOLLOW-WALL CONSTRUCTION. FREDERICK HEATH, Tacoma, Wash. Filed July 7, 1913. Serial No. 777,665. (Cl. 72—41.)

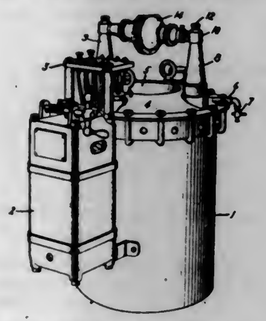
1. A building wall composed of hollow blocks laid horizontally in courses one above another, each course including blocks having three longitudinal voids and laid with relation to similar blocks in the next course as described, so that the central void in one block is always directly opposite the space or joint between the blocks in adjacent courses and the webs in one course are in vertical alinement with webs in the next course, as described.

2. A building wall composed of horizontal courses each formed of blocks having a single void, and other blocks having three voids arranged parallel longitudinally, the blocks being laid adjacently and alternating with each



other, the central void of the three-void blocks being in direct vertical alinement with the space between blocks in adjacent courses, as described.

1,215,150. ELECTRICAL TESTING APPARATUS. ALLAN B. HENDRICKS, Jr., Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 9, 1915. Serial No. 20,220. (Cl. 175—183.)



1. In a liquid testing outfit, a liquid testing spark gap comprising a rotatable casing provided with a cavity open at one side for the liquid to be tested and spark gap terminals within the cavity.

2. In a liquid testing outfit, a liquid receptacle comprising a rotatable casing provided with a cavity open at one side for the liquid to be tested and means within the cavity for testing the liquid therein.

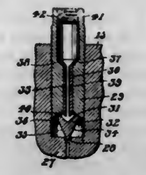
3. In a liquid testing outfit, the combination of upright standards, electrically conducting means carried thereby, and a liquid testing receptacle comprising a rotatable casing provided with a liquid containing cavity open at one side, means within the cavity for testing the liquid therein, and means for carrying the liquid receptacle on the standards and for electrically connecting the testing means of the receptacle with the conducting means of the standards.

4. In a liquid testing outfit, the combination of a source of energy, a liquid testing receptacle comprising a rotatable casing provided with a liquid containing cavity open at one side and means within the cavity for testing the liquid therein, and standards carried by the source of energy and carrying said receptacle at a distance therefrom.

5. In a liquid testing outfit, the combination of a source of energy, a cover therefor provided with an upwardly opening recess, upright standards carried by said source of energy at the sides of said recess, electrically conducting means electrically connected to said source of energy and carried by said standards, and a liquid testing receptacle comprising a rotatable casing provided with a liquid containing cavity open at one side, means within the cavity for testing the liquid therein and means for carrying the liquid receptacle on the standards immediately over the recess in the cover and for electrically connecting the testing means of the receptacle with the conducting means of the standards.

[Claim 6 not printed in the Gazette.]

1,215,151. FLUID-CHARGING VALVE. REINHOLD HERMAN, Pittsburgh, Pa. Filed July 1, 1915. Serial No. 37,518. (Cl. 137—69.)



1. In a fluid charging valve, a valve-receiving head having an interiorly-threaded chamber and an inlet port, said head having a valve seat at the entrance to said inlet port, a valve-carrying member threaded in said chamber having a bore therethrough and formed at its inner end around said bore with a valve seat, a valve having a hollow stem reciprocable in said bore and in engagement therewith throughout its length, said valve having radial outlet ports communicating with the bore of the stem and having seating faces for engagement respectively with the valve seat on the valve carrying member and the valve seat of the head, and a conical extension carried by the outer end of the hollow valve stem adapted to engage the valve carrying member to be limited in its inward movement.

2. In a fluid charging valve, a head having a chamber and a fluid inlet port leading from the inner end of said chamber, a valve-carrying member adjustably mounted in said chamber and having a central bore, a valve seat formed on the inner end of said member around the bore, a valve having a face for engaging said seat and a face for closing the inlet port of the head, a hollow valve stem slidable in the bore of the carrying member and engaging the same throughout its length, the valve having an outlet port leading from the bore of the valve stem.

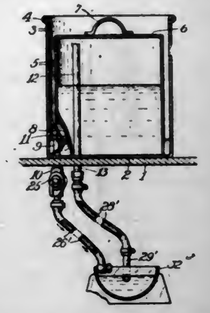
3. In a fluid charging valve, a head having a chamber, an inlet port extending through the head from the inner end of said chamber, a valve seat surrounding said port at the inner end of the chamber, a valve carrying member threaded into said chamber, and having a bore therethrough, a valve seat formed on the inner end of said member around the bore, a valve having oppositely tapered faces for engaging respectively with the valve seat on the valve-carrying member and the valve seat around the inlet port, a hollow stem carrying the valve extending through the valve carrying member and frictionally engaging the same, the valve having an outlet communicating with the bore of the stem.

4. In a fluid charging valve, a valve carrying member having a bore and provided at opposite ends of the bore with valve seats, a conical valve having a face for engagement with the seat on the inner end of the carrying member, a hollow stem reciprocable in the bore of the carrying member and having a head on the outer end for engaging the valve seat at the outer end of the bore in said carrying member, the said stem frictionally engaging the bore, said valve having outlet ports leading from the bore of said stem.

5. In a fluid charging valve, a chambered receiving head having an inlet port and a valve seat therearound, a valve carrying member threaded into the chamber of said head and having a bore therethrough, a valve seat on the inner end of said member around the bore, a valve having faces for simultaneous engagement with the valve seats of the carrying member and head respectively and having an outlet port opposite the seat on the carrying member, and a hollow stem carrying said valve and reciprocable in the bore of the carrying member, and in frictional contact therewith.

1,215,152. AUTOMATIC WATER-SUPPLYING APPARATUS. WILLIAM HOFFA, Crawfordsville, Ind. Filed Mar. 27, 1916. Serial No. 87,054. (Cl. 137—68.)

1. Water-supplying apparatus including a reservoir having a flat bottom, an outlet-pipe extending through the bottom and secured thereto, a bell removably seated upon the bottom of the reservoir but not covering the outlet-pipe, and an air-duct extending through and secured to the bottom of the reservoir, the air-duct extending upward into the bell and nearly to the top thereof.



2. Water-supplying apparatus comprising a support, a reservoir seated upon the support, a bell removably seated upon the bottom of the reservoir, an outlet-pipe secured in the bottom of the reservoir and extending upward in the reservoir at the outer side of the bell, an air-duct secured in the bottom of the reservoir and extending upward in the bell, a clamp bar extending across the top of the bell and seated upon the top of the reservoir, and retaining rods connected to the support and the clamp bar.

3. Water-supplying apparatus including a reservoir comprising a bottom and a side wall, a bell in the reservoir, an outlet-pipe secured in the bottom of the reservoir and extending upward between the wall of the reservoir and the wall of the bell, and an air-duct having its terminal end in the bell adjacent to the top thereof, the inlet end of the air-duct being on a lower level than that of the terminal end of the outlet-pipe.

4. Water-supplying apparatus including a reservoir, a bell removably seated upon the bottom of the reservoir, an outlet-pipe secured in the bottom of the reservoir and extending upward between the bell and the side wall of the reservoir, an air-duct secured in the bottom of the reservoir and extending upward in the bell and nearly to the top thereof, a stop-cock connected to the lower end of the outlet-pipe, a conduit connected to the stop-cock, and a conduit connected to the lower end of the air-duct.

5. Water-supplying apparatus including a reservoir comprising a bottom and a side wall, a bell in the reservoir, the wall of the bell being removably seated upon the bottom of the reservoir and having a concavity in the lower outer side thereof, an outlet-pipe secured in the bottom of the reservoir and extending upward into the concavity, a guide secured to the inner side of the wall of the reservoir and extending downward at an inclination and adjacent to the top of the outlet-pipe, and an air-duct terminating in the upper portion of the bell.

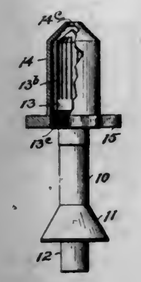
[Claims 6 and 7 not printed in the Gazette.]

1,215,153. BURNER. GEORGE W. HOPKINS, Cleveland, Ohio, assignor to The Acetylene Stove Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 26, 1913. Serial No. 769,792. (Cl. 67—96.)

1. A burner comprising a chambered member having restricted orifices and a delivery cap surrounding the same and provided with an orifice, the base portions of the chambered member and cap having engaging threaded portions of considerable length and area.

2. A burner comprising a chambered member having restricted orifices and a delivery cap surrounding the same and provided with an orifice, the base portions of the chambered member and cap having engaging threaded portions of considerable length and area, there being a mass of heat conducting material at the junction of said member and cap.

3. A burner comprising a conduit for conveying the medium to be burned, a chamber provided with restricted orifices having a threaded connection with said conduit, the engaging threaded portions being of considerable length and area, and a delivery cap surrounding the chamber.

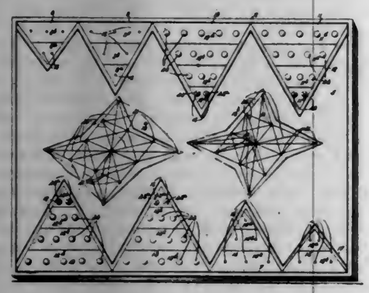


4. A burner comprising a conduit for conveying the medium to be burned, a chamber provided with restricted orifices having a threaded connection with said conduit, the engaging threaded portions being of considerable length and area, and a delivery cap surrounding the chamber, there being a mass of heat conducting material at the junction of the conduit and chamber.

5. A burner comprising a conduit for supplying the medium to be burned, a chamber provided with restricted orifices communicating with the conduit, and a delivery cap provided with a delivery orifice, surrounding the chamber, the base of the cap being screwed onto the base of the chamber, there being a mass of heat conducting material at the junction of the chamber and cap.

[Claims 6 to 10 not printed in the Gazette.]

1,215,154. GAME APPARATUS. DAVID HORVITZ, Detroit, Mich. Filed May 13, 1916. Serial No. 97,262. (Cl. 46—21.)



1. In a game apparatus, a game board having opposite sides at each of which there are a plurality of positions, the positions being each composed of a plurality of sections with stations therein, the number of stations in each section being different from the number of stations in adjacent sections, tand two sets of pieces.

2. In a game apparatus, a game board having opposite sides at each of which there are a plurality of positions, the positions being each composed of a plurality of sections with stations therein, the number of stations in each section being different from the number of stations in adjacent sections, there being a plurality of lines between the positions at one side of the board and the positions at the other side of the board, the said lines crossing each other and having positions indicated thereon at certain meeting points of the lines, and two sets of pieces.

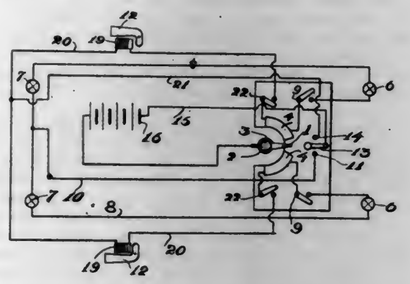
3. In a game apparatus, a board having opposite sides between which there is shown a figure representing trenches and having a plurality of rows of central positions, certain of the rows of positions crossing each other.

4. In a game apparatus, a game board having opposite sides at each of which there are a plurality of positions each composed of a plurality of sections, there being a figure representing a trench between the said positions at the sides of the board, the figure having lines crossing each other and having central positions indicated at certain meeting points of the lines, and two sets of pieces.

5. In a game apparatus, a game board having two opposite sides at each of which there are a plurality of positions each composed of a plurality of sections, there being disposed between the positions a plurality of figures representing trenches, each figure having a plurality of rows of indicated central positions which cross each other.

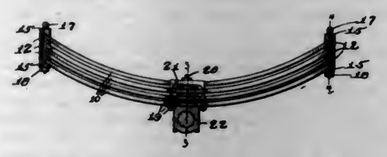
[Claims 6 and 7 not printed in the Gazette.]

1,215,155. AUTOMOBILE-SIGNAL. CHARLES MCKEON HOSFORD, Brooklyn, N. Y. Filed May 4, 1915. Serial No. 25,749. (Cl. 177—337.)



An automobile signal of the class described including a main switch arm designed to be mounted on the steering shaft, side contact plates arranged in the path of the steering arm, signal lamps located at opposite sides of the automobile at the front and back of the same, wires connecting the signal lamps with the side contacts, pivoted signal arms arranged at opposite sides of the automobile so as to project laterally therefrom, electromagnets for actuating the arms, wires connecting the electromagnets with the side contacts, a signal switch having a pivoted switch arm connected with a source of electric current supply and provided with opposite points connected respectively with the said wires between the side lamps and the signal arms, means for connecting the main switch arm with the source of current supply, and separate cut-out switches arranged in pairs connected with the wires of the lamps and the electromagnets for cutting out the same at either or both sides of the automobile.

1,215,156. VEHICLE-SPRING. NICHOLAS F. HOWE, Round Mountain, Nev. Filed July 28, 1915. Serial No. 42,412. (Cl. 267—33.)



A vehicle spring comprising a plurality of superimposed metal strips, the ends of which are provided with oppositely disposed notches, slotted spacing blocks between the ends of the strips, means for clamping the blocks and strips together, and rotatable elements within the slots of the blocks and bearing against the mutually adjacent faces of the strips.

1,215,157. RAILWAY-GATE OPERATOR. DAYTON EUGENE HUSK, Easton, Pa., and THOMAS CHARLES COOPER, Newark, N. J. Filed Oct. 6, 1916. Serial No. 124,037. (Cl. 269—3.)



1. The combination with the rails and gates of a railway, of an electric motor in a normally open circuit for closing said gates, means for closing said circuit controlled by a car on said rails, a time relay for holding said circuit closed for a predetermined period, a latch for locking said gates in closed position, and means controlled by said relay for disengaging said latch at the end of said period to permit said gates to open.

2. The combination with the rails and gates of a railway, of an electric motor in a normally open circuit for closing said gates, a time relay for closing said circuit and holding the same closed for a predetermined period, means for locking said gates in closed position, means controlled by said relay for operating said locking means to release said gates at the end of said period to permit said gates to open, and an electro-magnet normally energized through said rails for normally prevepting the energization of said relay.

3. The combination with the rails and gates of a railway, of an electric motor in a normally open circuit for closing said gates, a time relay for closing said circuit and holding the same closed for a predetermined period, means for locking said gates in closed position, means controlled by said relay for releasing said locking means to release said gates at the end of said period to permit said gates to open, an electromagnet normally energized through said rails for normally preventing the energization of said relay, and means for rendering said electro-magnet inoperative to permit the closing of said motor circuit.

4. The combination with the rails and gates of a railway, of an electric motor in a normally open circuit for closing said gates, an electro-magnet, for preventing the closing of the motor circuit, normally energized through said rails, means for rendering said electro-magnet inoperative, and time controlled means for closing said motor circuit operable when said electro-magnet is rendered inoperative.

5. The combination with the rails and gates of a railway, of an electric motor in a normally open circuit for closing said gates, means controlled through said rails for closing said circuit, means on said gates for opening said circuit when said gates are closed, and means for holding said gates closed for a predetermined period.

[Claim 6 not printed in the Gazette.]

1,215,158. GLOVE-FORM. JOSEPH A. ISAACS, Westfield, N. J. Filed Mar. 25, 1916. Serial No. 86,602. (Cl. 223—18.)

1. A glove form, comprising skeleton fingers formed from a single piece of wire and having the side members extended to form a skeleton forearm, one member of the forearm being provided with kinks, and a skeleton thumb formed of single piece of wire, the members of which are of unequal length and terminate in eyes engaging the kinks of the forearm, the inner shorter member being approximately parallel with the forefinger and the outer longer member gradually inclining inwardly to the forearm.



2. A glove form comprising skeleton fingers, a skeleton forearm, the said fingers and forearm being made of a single piece of wire, a skeleton thumb made of wire and pivoted on a member common to both the forefinger and the said forearm, and a skeleton palm formed of a single piece of wire and extending between the outer members of the said forearm and abutting against the inner ends of the said fingers.

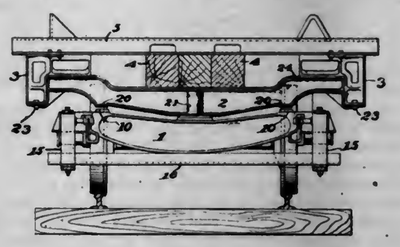
3. A glove form comprising two skeleton forms each having skeleton fingers, and a skeleton forearm, the said fingers and forearm being made of a single piece of wire, the ends of the forearms of one form being provided with eyes and the ends of the other form having arms extending through said eyes and hingedly connecting the forms with each other.

4. A glove form comprising two skeleton forms each having skeleton fingers, a skeleton forearm, the said fingers and forearm being made of a single piece of wire, the ends of the forearms of the two forms being hingedly connected with each other, a skeleton palm of a single piece of wire attached to the outer members of the said forearm adjacent the inner ends of the said fingers, and a thumb hinged on one side member of the forearm.

5. A glove form, comprising two parts each having fingers and forearm formed of a single piece of wire, the members of one part having eyes at their ends, and the members of the other part having arms extending through the said eyes and having their ends twisted together to form a suspending hook.

[Claim 6 not printed in the Gazette.]

1,215,159. LOGGING-CAR AND BUNK. HERBERT C. JARVIS, Renton, Wash., assignor to Seattle Car & Foundry Co., Seattle, Wash., a Corporation of Washington. Filed Nov. 27, 1916. Serial No. 133,604. (Cl. 105—32.)



1. In a logging car, in combination, a bolster extending substantially the width of the car and having each end provided with a beam receiving seat, and a filler block of L shape secured with one arm within said seat and the other arm upon the top surface of the bolster inward from said seat.

2. In a logging car, in combination, a bolster extending substantially the width of the car and having each end provided with a beam receiving seat, and a filler block of L shape secured with one arm within said seat and the other arm upon the top surface of the bolster inward from said seat, and a bunk secured on top of the said filler blocks.

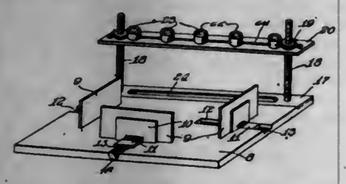
3. In a logging car, in combination, a bolster having beam receiving and supporting surfaces in the central portion thereof and a depressed beam-receiving pocket at each end, a filler block entering each of said pockets and overlapping upon the bolster inward from and adjacent said pockets, longitudinal car beams carried upon the central part of said bolster, and a bunk bearing upon said beams and filler blocks.

4. In a logging car, in combination, a bolster extending substantially the width of the car, an L-shaped block fitting over each end of the bolster and secured thereto, and a bunk secured to the top of said block.

5. In a logging car, in combination, a bolster extending substantially the width of the car, an L-shaped block fitting over each end of the bolster and secured thereto, and a bunk secured to the top of said block, and longitudinal frame beams secured between the bolster and bunk at the central part thereof.

[Claim 6 not printed in the Gazette.]

1,215,160. BOOKBINDING APPLIANCE. GEORGE H. JENKINS, Oak Park, Ill. Filed May 11, 1914. Serial No. 837,899. (Cl. 11—2.)



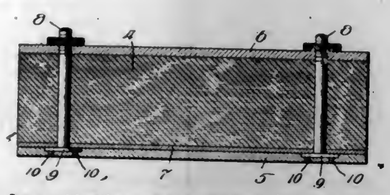
1. A book binding appliance comprising a base on which a quantity of leaves may be stacked, the base being formed with a groove in the upper surface thereof, means for evening the leaves prior to binding consisting of a block arranged perpendicularly to the base and movable thereon, and a member secured to the block and arranged to maintain the block in perpendicular relation to the base, a portion of the said member being arranged to lie within the base groove beneath the leaf stack, and means for securing the block in a selected fixed position of adjustment upon the base, substantially as described.

2. A book binding appliance comprising a base on which a quantity of leaves may be stacked, means for evening the leaves prior to binding consisting of a block arranged perpendicularly upon the base and movable with respect thereto, and a member arranged to maintain the block in perpendicular relation to the base, the said member being provided with ratchet teeth arranged to engage with the base, there being complementary ratchet teeth upon the base for engaging therewith to prevent retractive movement of the block from a selected position upon the base, substantially as described.

3. A book binding appliance comprising a base on which a quantity of leaves may be stacked, means for evening the leaves prior to binding comprising a block arranged perpendicularly to the base and movable thereon, and a member arranged to maintain the block in perpendicular relation to the base secured to the block and in engagement with the base, the said member being partially disposed beneath the stack of leaves whereby the weight of the leaf stack serves to hold the member perpendicular to the base, and means for preventing retractive movement of the block upon the base, substantially as described.

1,215,161. BINDER. GEORGE H. JENKINS, Oak Park, and SAMUEL A. HYERS, Chicago, Ill. Filed Aug. 8, 1914. Serial No. 855,870. (Cl. 129—12.)

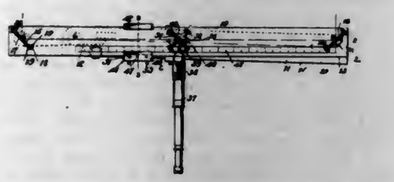
1. In combination with a quantity of stacked leaves, temporary covers adapted to be secured on opposite sides of the leaf stack, a permanent cover arranged adjacent to and inside of one of said temporary covers, removable temporary binding elements arranged to engage with each of said leaves and covers, and to be disengaged therefrom when desired, a second permanent cover adapted to replace the temporary cover which lies adjacent to the leaf stack, the temporary binding elements being capable prior to removal of compressing the leaves between the permanent covers, and permanent binding elements for tying the leaves and permanent covers together, substantially as described.



2. In combination with a quantity of stacked leaves, temporary covers adapted to be secured on opposite sides of the leaf stack, a permanent cover arranged adjacent to and inside of one of said temporary covers, removable temporary binding elements arranged to engage with each of said leaves and covers, and to be disengaged therefrom when desired, and a second permanent cover adapted to replace the temporary cover which lies adjacent to the leaf stack, and to be bound to said leaf stack by means independent of the temporary binding elements, said binding elements being capable when disengaged from the temporary covers of compressing the leaves between the permanent covers, substantially as described.

3. In combination with a quantity of stacked leaves, temporary covers adapted to be secured on opposite sides of the leaf stack, a permanent cover arranged adjacent to and inside of one of said temporary covers, removable temporary binding elements arranged to engage with each of said leaves and covers, and to be disengaged therefrom when desired, and a second permanent cover adapted to replace the temporary cover which lies adjacent to the leaf stack, the temporary binding elements being capable prior to removal of compressing the leaves between the permanent covers, substantially as described.

1,215,162. TELEMETER. FRANK N. JOHNSON, Holly Grove, Ark. Filed Oct. 29, 1914. Serial No. 869,251. (Cl. 88—2.7.)



1. In a telemeter, an arm constituting a side of a triangle formed with the object, a second arm pivoted to the first arm, an auxiliary arm also pivoted to the first arm, a system of light reflection embodying reflecting members carried by the first arm and the auxiliary arm, the reflecting member carried by the auxiliary arm being adjustable with said arm to secure coincidence of the images of the object viewed, and means for angularly adjusting the second arm relative to the first arm at a given ratio, the said second arm controlling the adjustment of said auxiliary arm and the reflecting member carried thereby, whereby the distance to the object viewed can be ascertained.

2. A device for ascertaining the distance between a point and an object viewed, comprising an arm constituting a side of a triangle formed with the object, a second arm pivoted to the first arm and adjustable relatively thereto at a given ratio, an auxiliary arm also pivoted to the first arm, a system of light reflection embodying reflecting members carried by the first arm and the auxiliary arm, the reflecting member carried by the auxiliary arm being adjustable with said arm to secure coincidence of the images of the object viewed, a slide cooperating with the first and second arms to angularly adjust the second arm relative to the first arm, the said second arm controlling the adjustment of said auxiliary arm to cause a minute angular displacement thereof relative to the second arm.

3. A device for ascertaining the distance between a point and an object viewed, comprising an arm constituting a side of a triangle formed with the object, a second arm pivoted to the first arm and adjustable relatively thereto at a given ratio, an auxiliary arm also pivoted to the first arm and adjusted angularly when the said second arm is adjusted, a system of light reflection embodying reflecting members carried by the first arm and the auxiliary arm, the reflecting member carried by the auxiliary arm being capable of adjustment to secure coincidence of the images of the object viewed, a sighting instrument coöperating with the reflecting system; the first mentioned arm being provided with a scale decimally divided, a slide embodying pivoted plates engaged with the first and second arms, means carried by the slide for shifting the arms therein, whereby when the slide is adjusted longitudinally the pivoted arms will be angularly adjusted, whereby their angle of divergence may be varied, said slide having a mark coöperating with the indications of the scale, whereby when coincidence is obtained the distance may be measured on the scale.

4. A telemeter comprising an upper and a lower arm pivotally connected, a light reflecting system including reflecting members carried by the arms, the reflecting member carried by the lower arm being adapted to move with said arm, a telescope for receiving the reflected rays from a distant point, a slide for varying the degree of divergence between the arms as the slide is shifted, the said slide embodying a pair of plates pivotally connected at their centers, the plates having their opposite edges bent in angular direction to overlie the bottom face of the lower arm and the upper face of the upper arm, means carried by the slide for varying the degree of divergence between the arms independent of the movement of the slide, a scale extending longitudinally on the upper arm, and an indicator carried by the upper plate and adapted to coöperate with the scale to indicate the distance to be measured.

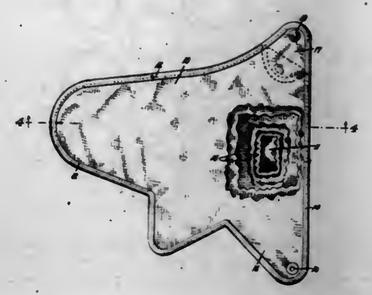
5. A telemeter comprising a pair of arms pivotally connected, a light reflecting system including reflecting members carried by the arms, the reflecting member carried by one arm being movable therewith, a telescope for receiving the reflected rays from a distant point, a slide for varying the degree of divergence between the arms as the slide is shifted, the said slide embodying a pair of plates pivotally connected at their centers, the opposite edges of said plates being bent in angular directions to overlie the bottom face of the lower arm and the upper face of the upper arm, means carried by the slide for varying the degree of divergence between the arms independent of the movement of the slide, a second slide slidable on the lower arm, means connecting the said second slide with a depending arm on the first slide for adjusting the slides relative to each other, a scale on the upper arm, the first slide being adapted to coöperate with the scale to indicate the distance to be measured when coincidence is effected.

[Claims 6 to 10 not printed in the Gazette.]

1,215,163. HAND-PROTECTOR. MARY JOHNSON, New York, N. Y. Filed Apr. 12, 1916. Serial No. 90,595. (Cl. 2—104.)

1. As an article of manufacture, a hand protector in the form of a mitten made of a textile fabric and provided at the inside with a pad overlying the under side of the finger and palm portions and formed of a plurality of superimposed layers of textile materials with the edges attached to the edges of the mitten, the bottom layer of the pad being of the same material as the mitten and the remaining layers being of a lighter material than the said bottom layer.

2. As an article of manufacture, a hand protector in the form of a mitten made of a textile fabric and provided at the inside with a pad overlying the under side of the finger and palm portions and formed of a plurality of superimposed layers of textile materials with the edges



attached to the edges of the mitten, the palm having its sides extended in an outward direction to form closing flaps adapted to pass onto the back of the hand and to overlap thereon, and fastening devices on the said flaps for fastening the flaps together at the back of the hand.

1,215,164. COLLAPSIBLE PONTOON. GREENHOW JOHNSTON, Richmond, Va. Filed Mar. 9, 1916. Serial No. 83,155. (Cl. 9—2.)

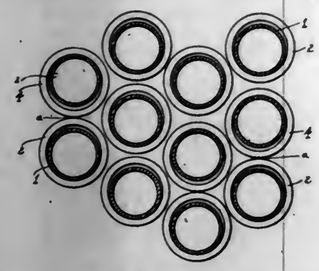


1. A pontoon member comprising an interior frame and an exterior waterproof fabric covering therefor, said interior frame comprising side members having curved ends, a bottom member hinged to said side members and having a spring end arranged to be bent up into engagement with the rounded ends of said side members, means for securing the spring end of the bottom, said securing means comprising a flange secured to the top member of the interior frame and arranged to engage said spring end and bolts for securing the top frame member to the side members of the frame.

2. A pontoon member comprising an interior frame, said interior frame consisting of side members having curved forward ends, a bottom member hinged to said side members and having a spring end arranged to be bent up into engagement with the curved ends of said side members, means for securing the spring end of the bottom member to the curved side members, and an exterior waterproof covering made in the shape of a bag, said bag being longer than the pontoon member whereby the bag may be folded over one end of the pontoon member, and means for securing the folded portion of the bag.

3. A pontoon member comprising an interior frame, said interior frame consisting of side members having curved forward ends, a bottom member hinged to said side members and having a spring end arranged to be bent up into engagement with the curved ends of said side members, means for securing the spring end of the bottom-member to the curved side members, and a waterproof covering for the frame, said covering comprising a bag having one end rounded to conform with the curved end of the frame, said frame being arranged to enter the bag, and said bag being prolonged beyond the frame whereby the bag may be folded over one end of the frame, and means for securing the folded end of the bag.

1,215,165. AUTOMATIC FLUE-CLEANER. JOHN R. KARR, Tracy, Cal. Filed May 3, 1916. Serial No. 95,043. (Cl. 122—379.)



1. The combination with boiler tubes, of a plurality of independent rings hung on each tube, each ring bearing against one side of the tube and being spaced from the opposite side.

2. The combination with a plurality of boiler tubes, of a plurality of loose members mounted on the tubes and arranged to be continually shifted by the movement of the water around the tubes, the loose members on one tube being arranged to touch those on another as they shift to different positions.

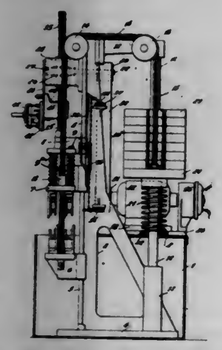
3. The combination with boiler tubes, of a plurality of independent rings hung on each tube, a portion of the rings bearing against the top side of the tube and being spaced from the underside, and the balance of the rings bearing against the underside of the tube and being spaced from the top side.

4. The combination with boiler tubes, of a plurality of loose rings hung on the same in shiftable relation, a portion of said rings being solid and a portion being sufficiently hollow to give them a density less than that of the water in which they are submerged.

5. The combination with boiler tubes, of a plurality of loose rings hung on the same in shiftable relation, a portion of said rings being of greater density and a portion of them of less density than the water in which they are submerged.

[Claims 6 and 7 not printed in the Gazette.]

1,215,166. TIMING MECHANISM AND APPARATUS INVOLVING THE SAME. JOSEPH M. KELLER, Jr., Cleveland, Ohio. Filed Mar. 13, 1916. Serial No. 83,782. (Cl. 161—24.)



1. The combination with apparatus involving means for actuating the same to inaugurate a process, and means independent of the first for actuating the apparatus to terminate such process, of timing mechanism that is set in action by the operation of the first mentioned means and actuates the second mentioned means upon the completion of the action of said timing mechanism, and means for regulating the duration of such action.

2. The combination with apparatus involving means for actuating the same to inaugurate a process, and further means for actuating the apparatus to terminate such process, of an electro-magnetic device for operating the second means, timing mechanism that is set in action by the operation of the first means and comprising contact members that are brought into engagement thereby after a predetermined period of time, and an electric circuit including the electromagnetic device and the aforesaid contact members.

3. The combination with apparatus involving means for actuating the same to inaugurate a process, an electric circuit for actuating the apparatus to terminate such process, a switch for closing said circuit, timing mechanism that is set in action by and upon the actuation of the first mentioned means and which closes the aforesaid switch upon the termination of its action, and means for regulating the duration of the action of said timing mechanism.

4. The combination with apparatus involving means for actuating the same to inaugurate a process, an electric circuit for actuating the apparatus to terminate such process, a switch for closing said circuit, timing mechanism that is set in action by and upon the actuation of the first mentioned means and which closes the aforesaid switch.

5. The combination with apparatus involving means for actuating the same to inaugurate a process, and further means for actuating the apparatus to terminate such process, of an electromagnetic device for operating the second means, timing mechanism comprising a power storing element, and a movable member operatively connected thereto for movement in one direction to store power in the element and movable thereby in the opposite direction, operative connections between the first mentioned means and said movable member for moving the member in the first direction when said means is operated, a contact member wherewith the movable member engages when said movable member assumes normal position, and an electric circuit including the electromagnetic device, the aforesaid contact member, and the movable member.

[Claims 6 to 22 not printed in the Gazette.]

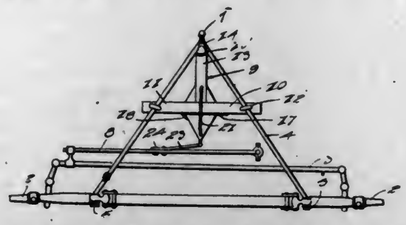
1,215,167. POD-OPENER. ALBERT H. KEMP, Pasadena, Cal. Filed June 19, 1915. Serial No. 35,153. (Cl. 130—30.)



1. In a pod opener, a supporting body, a plate secured to the upper surface of said supporting body, one end of said plate being bent downwardly and engaging the end of said body, a pair of spaced wings formed upon said plate adjacent to said downwardly bent end, said wings being bent upwardly, for forming a pod receiving trough, a portion of said plate intermediate said wings being cut free to form a substantially triangularly shaped knife, said knife being bent upwardly from said plate and positioned substantially equidistant of said wings for ripping a pod upon passage between the wings.

2. In a pod opener, a body block, a metallic plate lying upon and attached to the upper surface of said body block, portions of said plate at one end of the same being bent upwardly to provide upstanding spaced wings forming a trough, a portion of said plate being cut free to form a knife, said knife bent upwardly from said plate whereby when pods are drawn through said trough they will be split.

1,215,168. STEERING-GEAR ATTACHMENT. LEWIS T. KENNEDY, Hannibal, Mo. Filed Feb. 23, 1916. Serial No. 79,983. (Cl. 21—200.)

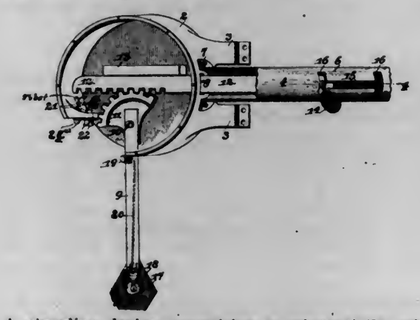


1. A device of the character described comprising a substantially T-shaped support, a plate hinged to said support, a triangular block hinged to said plate, means for attaching the apex of said triangular block to the steering gear of the automobile, and tension means secured to the block and support for normally holding and returning the front wheels of the automobile to a straight path.

2. A device of the character described comprising a substantially T-shaped support secured to the radius rod of an automobile, a plate hinged at one end thereof to the support, a substantially triangular block hinged to the other end of said plate and adapted to normally rest upon said plate, a rod pivoted to the apex of said triangular block and connected to the steering gear of the automobile, and tension means secured to the block and support for normally holding and returning the front wheels of the automobile to a straight path.

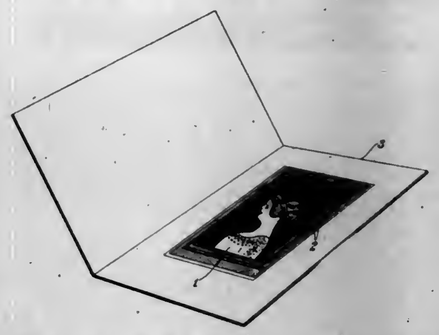
3. In combination with a V-shaped radius rod of an automobile, a substantially T-shaped support including a stem and horizontal arms, clips secured to said arms and to the radius rod, the free end of said stem reduced to fit into the apex of said radius rod, an off-set portion formed on said stem and adapted to overlie and be secured to the apex portion of the radius rod, a block hinged to said arms, means for connecting said block to the steering gear of an automobile, and tension means secured to the block and said stem for normally holding and returning the front wheels of the automobile to a straight path.

1,215,169. SIGNALING DEVICE. GEORGE JOHN KLOEPFER and CARL F. KLOEPFER, Springfield, Ohio. Filed July 26, 1916. Serial No. 111,444. (Cl. 177—311.)



A signaling device, comprising a substantially cylindrical casing, a tubular member connected with the casing, a signaling arm pivoted in the casing, said casing having an opening for permitting the arm to swing into vertical or horizontal position, a gear segment at the inner end of the arm, a rack bar mounted in the tubular member and engaging the teeth of the segment, a guide above the rack bar for holding the same in engagement with the teeth of the segment, a handle hinged to the inner end of the rack bar and mounted to swing upwardly and downwardly, the tubular member having a longitudinal slot for permitting the passage of the handle and having an extension at each end thereof for engagement by the handle when the same is released to lock the signal in operative and inoperative position, electric lighting apparatus mounted on the signal arm, and means controlled by the swinging of the arm into operative and inoperative position for controlling said light.

1,215,170. PROCESS OF MOUNTING PHOTOGRAPHS. CHARLES WILLIAM LAURELL, St. Louis, Mo., assignor of one-half to Julius C. Strauss, St. Louis, Mo. Filed Oct. 23, 1913. Serial No. 796,976. (Cl. 41—35.)



The herein-described process of mounting photographs and the like, which consists in placing a photograph on top of a sheet of paper, then trimming the photograph with the trimmed edges thereof parallel and simultaneously cutting into the paper sheet so as to leave an opening in the latter having parallel edges to receive the trimmed photograph, then placing the sheet of paper on a second sheet of paper and trimming the first sheet of paper, simultaneously cutting into the second sheet of paper to leave an opening therein to receive the trimmed first sheet of paper, then placing the second sheet of paper on the front sheet of a mount to one side thereof and trimming the second sheet of paper, simultaneously cutting into the front sheet of the mount to provide an opening therein to receive the trimmed second sheet of paper, then securing the front sheet of the mount, both of the first- and second-named sheets of paper, and the photograph to the back sheet of the mount with an adhesive material, placing the whole in a power press until the adhesive dries under pressure, and then folding both front and back sheets of the mount through the center adjacent one side of the photograph.

1,215,171. SIGHT-LIGHT FOR FIREARMS. CLIFFORD A. LEWIS, Portland, Oreg. Filed Dec. 2, 1914. Serial No. 875,072. (Cl. 88—24.)

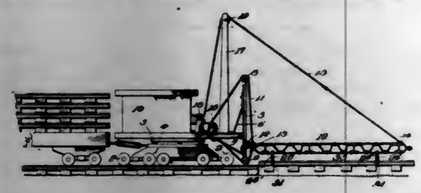


In a device of the character described, a tubular member, a lamp mounted therein and provided in the center of its end with a dark spot and two coöperating lenses adjustably mounted therein and adjustable with relation to each other and to said lamp, substantially as indicated.

1,215,172. TRACK-LAYING MACHINE. ADAM LIGHTELL, Port-Allen, La., assignor of one-half to James Murray, New Orleans, La. Filed Feb. 29, 1916. Serial No. 81,126. (Cl. 212—43.)

1. In a track laying machine, the combination with a frame, of a turntable on said frame, a mast carried by said

turntable, bracing means independently mounted on said turntable, a boom mounted upon said bracing means, a cable connected between one end of the boom and the mast, means for operating said cable, a means for operating the other end of said boom, said last mentioned means adapted to prevent oscillation of said boom.



2. In a track laying machine the combination with a rotatable frame, of a mast carrying a roller, a vertical brace, rollers mounted on said brace, a horizontal boom slidably mounted on said brace, a cable passing over said rollers on said brace and engaging said boom, means for operating said cable, hoisting means connected to another portion of said boom and passing over the roller on said mast, means for operating said hoisting means, and means for supporting a track to be laid.

3. In a track laying machine the combination with a rotatable frame carrying drums, of a mast mounted on said frame carrying a roller, a brace mounted independently of said mast on said frame, rollers on said brace, a boom carrying an idler roller slidably mounted on said brace, hoisting means running from one of the drums over the rollers of said brace engaging the boom, a second hoisting means fastened to the boom running over the roller of said mast to another of said drums, and means on said boom for holding the rails.

4. In a track laying machine, the combination with a frame, of a mast mounted thereon, a vertical brace mounted on said frame in a different location from but in a plane substantially parallel with said mast, a boom vertically movable upon said brace, means for raising and lowering said boom, and grappling means carried by said boom for the engagement of track rails to be laid.

5. In a track laying machine, the combination with a frame, of a mast mounted thereon, a vertical brace mounted on said frame in a different location from but in a plane substantially parallel with said mast, said brace comprising a plate having longitudinal ribs thereon, a boom vertically movable upon said brace, means for raising and lowering said boom, and grappling means carried by said boom for the engagement of track rails to be laid.

[Claim 6 not printed in the Gazette.]

1,215,173. RAILWAY SIGNAL SYSTEM AND APPARATUS. MATTHEW H. LOUGHRIDGE, New York, N. Y. Filed Mar. 5, 1913. Serial No. 752,222. (Cl. 246—59.)

1. The combination of a vehicle having power-controlling and speed-retarding mechanism; power means carried on said vehicle and arranged to actuate said mechanism; an adjustable apparatus interposed between said power means and said mechanism to determine which of said mechanisms is to be affected by said power means; and a plurality of devices disposed in separated relation in the path of said vehicle to operate said apparatus.

2. The combination of a vehicle having power-controlling and speed-retarding mechanisms; power means carried on said vehicle and arranged to actuate said mechanisms; an adjustable apparatus interposed between said power means and said mechanisms to determine which of said mechanisms is to be affected by said power means; a plurality of devices disposed in grouped arrangement in the path of said vehicle, said devices being adapted each to operatively engage said apparatus to actuate the same in accordance with its character; and means manually operable for selectively arranging said devices to operate said apparatus.

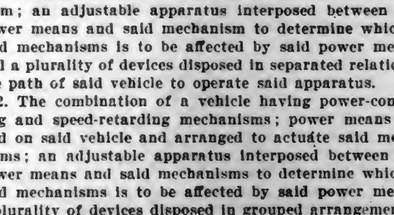
3. The combination of a vehicle having power-controlling and speed-retarding mechanisms; power means carried on said vehicle and arranged to actuate said mechanisms; an adjustable apparatus interposed between said power means and said mechanisms to determine which of said mechanisms is to be affected by said power means; and a plurality of actuating plates disposed in the path of said vehicle, said plates being variously shaped to produce corresponding results in said apparatus.

4. The combination of a vehicle having power-controlling and speed-retarding mechanisms; power means carried on said vehicle and arranged to actuate said mechanisms; an adjustable apparatus interposed between said power means and said mechanisms to determine which of said mechanisms is to be affected by said power means; and a plurality of actuating plates disposed in the path of said apparatus to operate the same in a manner corresponding with each plate.

5. The combination of a vehicle having power-controlling and speed-retarding mechanisms; an air compressor having a rod operable from the roadbed; a power transmission operatively connecting said mechanisms and said air compressor, said transmission embodying a single main; a plurality of branch ducts; and means operatively connected with said branch air ducts for reversely affecting said supplying and retarding mechanisms; a permutation valve interposed between said main and branch ducts and embodying a plurality of ported members movable to register with said ducts; an operating mechanism for said ported members, embodying rods extending adjacent to and operable from the roadbed; and a plurality of actuating plates disposed in the path of said rods to move the same in a manner corresponding with each of said plates.

[Claims 6 to 16 not printed in the Gazette.]

1,215,174. WIND-SHIELD ATTACHMENT. MARGERY E. N. LUDLOW, Haverford, Pa. Filed Feb. 21, 1916. Serial No. 79,604. (Cl. 21—148.)



1. In a device of the class described, a body member having a gutter and adapted for attachment adjacent the edge of a wind shield, a member slidable with respect to said body member and supported thereby and also having a gutter forming an extension of the gutter on said body member, and means to secure said members to a wind shield.

2. In a device of the class described, the combination with a body member having a gutter and a channel adapted to receive the edge of a wind shield glass, of a member slidable with respect to said body member and also having a gutter forming a continuation of the gutter of said body member, means operative to adjustably support said slidable member upon said body member, and means operative to secure the device to the edge of a wind shield.

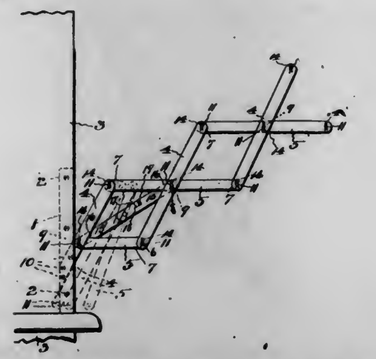
3. In a device of the class described, the combination of a pair of hingedly connected body members each having a gutter, a member adjacent the outer end of each of said body members and also having a gutter, each of said last mentioned members being slidably adjustable with respect to said body members, and means for supporting said members adjacent the edge of a wind shield glass.

4. In a device of the class described, the combination of a pair of channeled hingedly connected body members each having a gutter inclined with respect to its longitudinal axis, an adjustable member adjacent that end of each body member removed from the hinge and also comprising a gutter operative to form a continuation of the gutter on the adjacent body member, and means operative to secure said members adjacent the edge of a wind shield glass.

5. In a device of the class described, the combination of a pair of body members each having a channel to receive the edge of a wind shield glass and a gutter inclined with respect to said channel, said body members being hinged together for relatively rotatable movement, means adapted to removably secure said members to a wind shield glass, a member also comprising an inclined gutter adjacent an end of each of said body members, and means operative to support each of said last mentioned members upon its adjacent body member to permit of its longitudinal adjustment with respect thereto.

[Claims 6 and 7 not printed in the Gazette.]

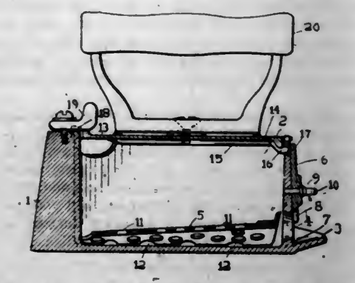
1,215,175. CLOTHES-RACK. JANE KILLIAN MCAFEE, Brooklyn, N. Y. Filed Aug. 8, 1916. Serial No. 113,771. (Cl. 68—34.)



1. An extensible clothes rack comprising supporting members adapted to be secured to the sides of a window frame near the bottom thereof, parallel bars on both sides, the inner outer bar on each side secured at an angle to the corresponding supporting member, telescopic rods extending across the window and pivotally connecting the parallel bars at their extremities and centers, and jointed arms provided with locking devices and adapted to extend the rack and hold it in an extended position.

2. An extensible clothes rack comprising supporting members adapted to be pivotally secured to the sides of a window frame near the bottom thereof, locking devices mounted on the sides of the window frame and adapted to maintain the supporting members in a vertical position, sides of the lazy tong type the innermost member of the links on each side of the lazy tongs adapted to be secured at an angle to the corresponding supporting member, telescopic rods forming the pivots of the lazy tongs and adapted to extend across the window and jointed arms adapted to extend the rack and hold it extended and provided with locking devices to hold them extended.

1,215,176. SAD-IRON. LOUIS MARGOLIS, New York, N. Y. Filed June 17, 1914. Serial No. 845,524. (Cl. 68—26.)

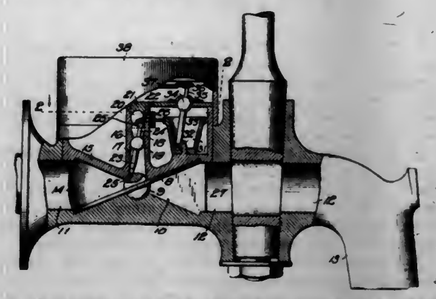


1. In an internally heated sad-iron, the combination with a hollow body provided with an inlet-port in the rear thereof, an outlet-port in the front thereof, a curved perforated grate sloping from the inlet-port to the front of the hollow body extending over the entire bottom thereof, substantially as described.

2. In an internally heated sad-iron, the combination of a hollow body provided with an inlet-port in the rear thereof, the inlet-port having its lower line above the bottom of the hollow body, and an ash tray integral with the hollow body the bottom of which is located beneath the lower line of the inlet-port, substantially as described.

3. In an internally heated said-iron the combination with a hollow body provided with an inlet-port in the rear thereof, the inlet-port having its lower line above the bottom of the hollow body and constituting the segment of a circle, an ash tray integral with the hollow body the bottom of which is located beneath the lower line of the inlet-port, and a regulator pivoted to the rear of the hollow body circular in form with a portion cut away and adapted to ride over and overlap the lower line of the inlet-port in closing the inlet-port, substantially as described.

1,215,177. MOTOR-POWER TRANSMISSION. ADOLPH MASS, Newark, N. J. Filed Nov. 20, 1915. Serial No. 62,582. (Cl. 73—98.)



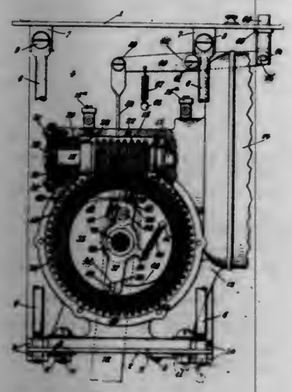
1. An apparatus as characterized comprising a wabble disk having a centrally disposed bearing ball; a gear train embodying a driven shaft and connecting disk therefor; a transmission ball having a pin extended therefrom; and a transmission rod operatively connecting said transmission ball and the bearing ball of said disk, the points of engagement of said rod with said bearing ball and transmission ball being at points on the outer surface of said balls approximately ninety degrees removed from the said pin and from the plane of said disk, respectively.

2. An apparatus as characterized comprising a wabble disk having a centrally disposed bearing ball; a gear train embodying a centrally disposed shaft and connecting disk therefor; a transmission ball having a pin extended therefrom; a transmission rod operatively connecting said transmission ball and bearing ball of said disk, the points

of engagement of said rod with said bearing ball and transmission ball being at points at the outer surface of said balls approximately ninety degrees removed from the said pin and from the plane of said disk, respectively; an auxiliary bearing ball intermediate the ends of said transmission rod; and a supporting seat for said auxiliary bearing ball for relieving the pressure of said transmission rod on said transmission ball and bearing ball of said disk.

3. An apparatus as characterized comprising a wabble disk having a centrally disposed bearing ball; a gear train; and a transmission mechanism operatively connecting said disk and train, said mechanism embodying a connecting rod having intermediate the ends thereof, a bearing ball for resisting the thrust on said rod, one end of said rod being contained in a socket formed in said bearing ball in line with the axis of said disk.

1,215,178. AUTOMATIC OPERATING MEANS FOR TICKET VENDING AND REGISTERING MACHINES. ALBERT J. MEIER, Glendale, and WILLIAM L. SWIFT, St. Louis, Mo., assignors to The Temco Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 10, 1913. Serial No. 753,273. (Cl. 211—8.)



1. In combination with a ticket vending and registering machine and an actuator therefor, a driven member, a shaft, clutch mechanism for operatively connecting said shaft with said member, a reciprocatory member operatively connected with said shaft, and means connecting said reciprocatory member with the actuator.

2. In combination with a ticket vending and registering machine and an actuator therefor, a driven member, a shaft, clutch mechanism for operatively connecting said shaft with said member, a reciprocatory member operatively connected with said shaft, and resilient means connecting said reciprocatory member with the actuator.

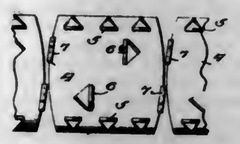
3. In combination with a ticket vending and registering machine and an actuator therefor, a driven member, a shaft, clutch mechanism for operatively connecting said shaft with said member, an arm borne by said shaft, a reciprocatory member operatively connected with said arm, and means connecting said reciprocatory member with the actuator.

4. In combination with a ticket vending and registering machine and an actuator therefor, a driven member, a shaft, clutch mechanism for operatively connecting said shaft with said member, an arm borne by said shaft, a reciprocatory member, a link connecting said reciprocatory member with said arm, and means connecting said reciprocatory member with the actuator.

5. In combination with a ticket vending and registering machine and an actuator therefor, a driven member, a shaft, clutch mechanism for operatively connecting said shaft with said member, an arm borne by said shaft, a reciprocatory member, a link connecting said arm with said reciprocatory member, and resilient means connecting said reciprocatory member with the actuator.

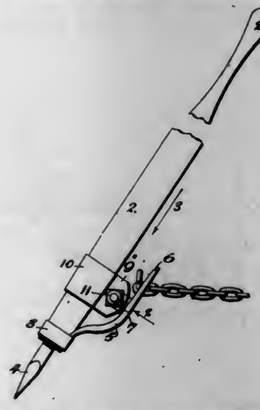
[Claims 6 to 13 not printed in the Gazette.]

1,215,179. ANTISKIDDING ATTACHMENT. ANGELO MONTANARI, Pensacola, Fla. Filed June 4, 1915. Serial No. 32,128. (Cl. 152—16.)



An anti-skidding attachment for tires comprising a plurality of curved plates, and chains for engaging said plates at each side for holding them in position on the wheel, each of said plates having two series of cleats struck therefrom, one series being at the outer edges of the tread surfaces of said plates and parallel therewith, and the other series being intermediate said former series and disposed transversely of said plates and in staggered relation, and a cleat struck up from each end of said plates on opposite sides of the longitudinal center line thereof.

1,215,180. STEVEDORE'S PEAVEY. ALFRED JOHN MORROW, Vancouver, British Columbia, Canada. Filed Aug. 12, 1916. Serial No. 114,596. (Cl. 254—77.)



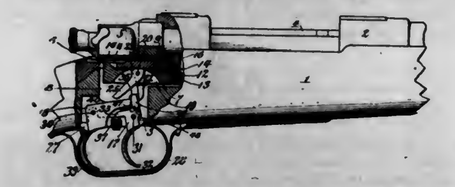
1. A stevedore's peavey, comprising the combination with a bar pointed at one end, of a fulcrum forming projection secured to the bar adjacent the point and curving backward therefrom and outward from the bar, a clasp encircling the bar, and means for directly connecting the fulcrum forming projection to the clasp.

2. A stevedore's peavey, comprising the combination with a bar pointed at one end, of a fulcrum forming projection secured to the bar adjacent the pointed end, and curving backward therefrom and outward from the bar, the free end of said projection having an acute V notch to engage the link of a chain, a clasp encircling the bar adjacent the fulcrum forming projection, and means for directly connecting the fulcrum forming projection to the clasp.

3. A stevedore's peavey, comprising the combination with a bar having a ferrule secured on its lower end and a pointed member inserted in the ferruled end of the bar, a fulcrum forming member one end of which is secured to the ferrule which member is bent outward from the bar and backward from its point, a clasp on the bar adjacent the fulcrum forming member, a bolt for securing said clasp on the bar, and means for connecting that member to the bolt of the clasp.

4. A stevedore's peavey, comprising the combination with a notched bar having a ferrule secured on one end and a pointed member inserted in the ferruled end of the bar, a fulcrum forming member one end of which is inserted in a notch of the bar under the ferrule, which member is bent outward and backward from that end of the bar and has at its free end an acute V notch, an eye member securely riveted in the fulcrum forming member to project toward the bar, a clasp encircling the bar adjacent the eye member and a bolt securing the clasp on the bar and the eye member to the clasp.

1,215,181. TRIGGER MECHANISM FOR FIREARMS. CHARLES NEWTON, Buffalo, N. Y., assignor of one-half to John F. Nagel, Buffalo, N. Y. Filed Apr. 22, 1916. Serial No. 92,802. (Cl. 42—69.)



1. A firearm comprising a movable firing head having a bent, a sear adapted to engage said bent, direct and indirect knock-offs mounted on said sear and engaging a relatively stationary abutment, a releasing trigger engaging with said direct knock-off, and a set trigger engaging said indirect knock-off and controlled by said releasing trigger.

2. A firearm comprising a movable firing head having a bent, a sear adapted to engage said bent, direct and indirect knock-offs pivoted on said sear and each having a cam engaging with a relatively stationary abutment and having a depending operating arm, a releasing trigger having a lower fingerpiece and an upper catch arm engaging the operating arm of said direct knock-off, a set trigger having a lower fingerpiece and an upper hammer arm adapted to engage the operating arm of said indirect knock-off and also adapted to be engaged by said catch arm and held thereby in a retracted position, and a spring device for turning said triggers so that their fingerpieces move forwardly.

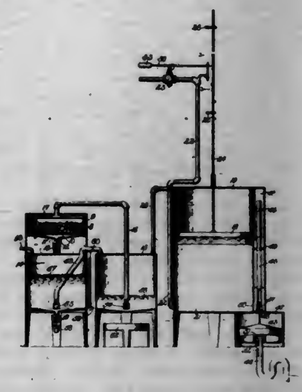
3. A firearm comprising a movable firing head having a bent, a sear adapted to engage said bent, direct and indirect knock-offs pivoted on said sear and each having a cam engaging with a relatively stationary abutment and having a depending operating arm, a releasing trigger having a lower fingerpiece and an upper catch arm engaging the operating arm of said direct knock-off, a set trigger having a lower fingerpiece and an upper hammer arm adapted to engage the operating arm of said indirect knock-off and also adapted to be engaged by said catch arm and held thereby in a retracted position, a spring device for turning said triggers so that their fingerpieces move forwardly and stops for limiting movement of said triggers under the action of said spring device.

4. A firearm comprising a movable firing head having a bent, a sear adapted to engage said bent, direct and indirect knock-offs pivoted on said sear and each having a cam engaging with a relatively stationary abutment and having a depending operating arm, a releasing trigger having a lower fingerpiece and an upper catch arm engaging the operating arm of said direct knock-off, a set trigger having a lower fingerpiece and an upper hammer arm adapted to engage the operating arm of said indirect knock-off and also adapted to be engaged by said catch arm and held thereby in a retracted position, a frame provided with a slot through which said triggers project and with a supporting lug adjacent to said slot to which the triggers are pivoted, and a spring operating to turn said triggers in the direction in which the fingerpieces of the same move forwardly.

5. A firearm comprising a movable firing head having a bent, a sear adapted to engage said bent, direct and indirect knock-offs pivoted on said sear and each having a cam engaging with a relatively stationary abutment and having a depending operating arm, a releasing trigger having a lower fingerpiece and an upper catch arm engaging the operating arm of said direct knock-off, a set trigger having a lower fingerpiece and an upper hammer arm adapted to engage the operating arm of said indirect knock-off and also adapted to be engaged by said catch arm and held thereby in a retracted position, a frame provided with a slot through which said triggers project and with a supporting lug adjacent to said slot to which the triggers are pivoted, and a spring operating to turn said triggers in the direction in which the fingerpieces of the same move forwardly comprising upper and lower spring arms connected at one of their corresponding ends while their opposite ends engage said triggers, respectively.

[Claims 6 to 9 not printed in the Gazette.]

1,215,182. APPARATUS FOR EXTRACTING VALUES FROM BODIES. RICHARD LESLIE OGDEN, Rahway, N. J. Filed Sept. 22, 1916. Serial No. 121,590. (Cl. 23—31.)



1. An apparatus for extracting soluble constituents from solids comprising a container for solvent; a container for soluble bodies; a container for solution; means for operatively connecting said containers *in seriatim* for establishing a circulation of liquids progressively in the order named under suitable conditions; a plurality of pipes connecting said first-mentioned and second-mentioned containers, and said third-mentioned and first-mentioned containers, said pipes being provided with check valves for controlling the flow through said pipes in one direction only; and means for alternately increasing and decreasing the atmospheric pressure in the first-mentioned container.

2. An apparatus for extracting soluble constituents from solids comprising a container for solvent; a container for soluble bodies; a container for solution; means for operatively connecting said containers *in seriatim* for establishing a circulation of liquids progressively in the order named under suitable conditions; a plurality of pipes connecting said first-mentioned and second-mentioned containers, and said third-mentioned and first-mentioned containers, said pipes being provided with check valves for controlling the flow through said pipes in one direction only; and means for alternately increasing and decreasing the atmospheric pressure in the first-mentioned container, said means embodying an air compressor in open communication with said first-mentioned container, and means automatically operable in corre-

spondence with said compressor for increasing and reducing the pressures therein alternately.

3. An apparatus for extracting soluble constituents from solids comprising a container for solvent; a container for soluble bodies; a container for solution; means for operatively connecting said containers *in seriatim* for establishing a circulation of liquids progressively in the order named under suitable conditions; a plurality of pipes connecting said first-mentioned and second-mentioned containers, and said third-mentioned and first-mentioned containers, said pipes being provided with check valves for controlling the flow through said pipes in one direction only; an air tank in open communication with said first-mentioned container; a water piston for said air tank; means operable by said piston for suspending the operation of said piston; and means for reciprocating said piston in said tank for increasing and diminishing the pressure in said first-mentioned container successively.

4. An apparatus for extracting soluble constituents from solids comprising a container for solvent; a container for soluble bodies; a container for solution; means for operatively connecting said containers *in seriatim* for establishing a circulation of liquids progressively in the order named under suitable conditions; a plurality of pipes connecting said first-mentioned and second-mentioned containers, and said third-mentioned and first-mentioned containers, said pipes being provided with check valves for controlling the flow through said pipes in one direction only; an air tank in open communication with said first-mentioned container; a water piston for said air tank; means operable by said piston for suspending the operation of said piston; and means for reciprocating said piston in said tank for increasing and diminishing the pressure in said first-mentioned container successively, said means embodying a float, an auxiliary tank, said auxiliary and air tanks having open communication, and a valve controlling said communication, said valve being operable by said float.

5. An apparatus for extracting soluble constituents from solids comprising a container for solvent; a container for soluble bodies; a container for solution; means for operatively connecting said containers *in seriatim* for establishing a circulation of liquids progressively in the order named under suitable conditions; a plurality of pipes connecting said first-mentioned and second-mentioned containers, and said third-mentioned and first-mentioned containers, said pipes being provided with check valves for controlling the flow through said pipes in one direction only; an air tank in open communication with said first-mentioned container; a water piston for said air tank; means operable by said piston for suspending the operation of said piston; means for reciprocating said piston in said tank for increasing and diminishing the pressure in said first-mentioned container successively, said means embodying a float, an auxiliary tank, said auxiliary and air tanks having open communication, and a valve controlling said communication, said valve being operable by said float; and means for continuing the flow of water from said auxiliary tank after the communication between said air and auxiliary tanks is closed.

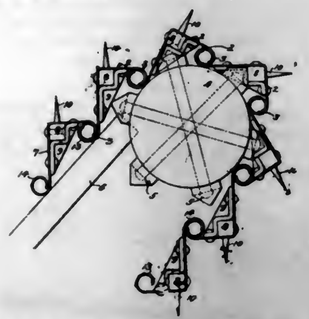
[Claim 6 not printed in the Gazette.]

1,215,183. SPIKED FEED-APRON. WILLIAM D. PALEN and HARRY COULSTON, Philadelphia, Pa., assignors to The Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 25, 1916. Serial No. 127,677. (Cl. 193—8.)

1. A section for a feed apron consisting of a sheet metal plate bent at an angle and having spikes secured thereto and having two longitudinal edges rolled to form hinged joints, so that the rolled edge of one section will couple with the rolled edge of an adjoining section.

2. A section for a feed apron consisting of a sheet metal plate bent at an angle and having each longitudinal edge rolled to form a hinged joint, so that each edge can be coupled to the rolled edge of an adjoining section; an insert secured in the angle of the plates; and spikes extending through the plate and into the insert.

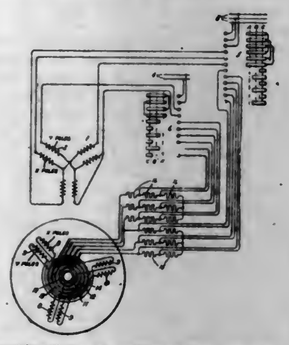
3. A section for a feed apron consisting of a sheet metal plate bent at an angle and having its edges rolled to form hinged joints, so that one section can be coupled to another; a rectangular metallic insert; spikes extending through the sheet metal plate and into the insert; and braces secured to the plate and acting as stiffening members for the sections.



4. A spiked feed apron consisting of a series of sections, each section consisting of a sheet metal plate rolled at each edge, the rolled edge of one plate interlocking with the other plate and forming an articulated joint; a rectangular steel insert secured to the plate; spikes extending through the plate and into the insert; and braces forming stiffening members for the sections, the inserts being arranged so as to be engaged by the teeth of a sprocket wheel.

5. The combination in a spiked feed apron, of a series of sections, each consisting of a sheet metal plate bent at right angles and having longitudinal edges rolled to form hinged joints, the rolled edge of one section coupling with the rolled edge of an adjoining section; an insert rectangular in cross section located in the angle of the plate; and spikes on each section, the rectangular insert being so proportioned that it will act as an abutment for the teeth of the sprocket wheel around which the apron passes.

1,215,184. INDUCTION-MOTOR CONTROL. KARL A. PAULY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 30, 1915. Serial No. 5,310. (Cl. 172—274.)



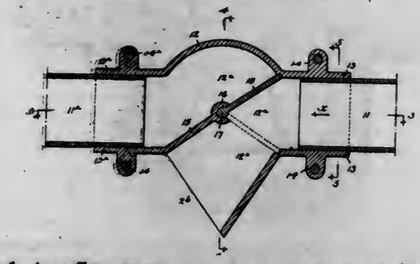
1. In combination, an alternating current source, a direct current source, an induction motor having a primary and a secondary member, said primary member being provided with two windings of different pole numbers, said secondary member being provided with two windings of corresponding pole numbers, means for connecting said alternating current source to one of the primary windings, means for connecting said direct current source to the other primary winding, and means for varying the resistances of the circuits of the windings on said secondary member.

2. In combination, an alternating current source, a direct current source, an induction motor having a primary and a secondary member, said primary member being provided with two windings of different pole numbers, said secondary member being provided with two windings of corresponding pole numbers, sets of resistances, means for connecting said alternating current source to one of the primary windings and one of said sets of resistances to one of the secondary windings, and a second means for connecting said direct current source to the other of said primary windings and the other set of resistances to the other of the secondary windings.

3. The method of operating an induction motor having two windings of different pole numbers on one of its members which consists in supplying alternating current to one of said windings for normal operation, then supplying direct current to the other of said windings for braking, and finally disconnecting said alternating current source from said first mentioned winding.

4. The method of operating an induction motor having two windings of different pole numbers on each of its members which consists in supplying alternating current to one of said primary windings for normal operation, then supplying direct current to the other of said primary windings for braking, then disconnecting said alternating current source from said first mentioned winding, and finally varying the resistance of the circuit of one of the secondary windings of said motor to vary the braking speed of said motor.

1,215,185. MUFFLER CUT-OUT FOR MOTOR-CARS. NICHOLAS A. PETAY, Philadelphia, Pa. Filed Mar. 10, 1916. Serial No. 83,255. (Cl. 137—26.)



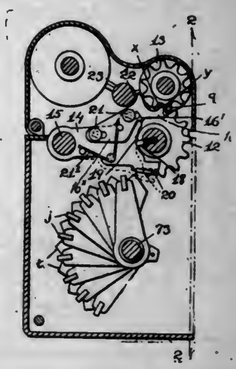
1. A muffler cut-out comprising a casing having a central member with longitudinally projecting end members for application to the muffler pipe, and a cut-out branch projecting from said central member at an angle to the pipe receiving members, said central member also having an inwardly projecting transverse partition disposed at an angle to the axial line of the end members, and a swinging valve pivoted at the inner end of said partition and adjustable to a position to close the through passage or to a position to close the cut-out branch, the latter being formed partly within the central member of the casing.

2. A muffler cut-out comprising a casing having a central member with longitudinally curved top and straight sides, longitudinally projecting end members for application to the muffler pipe, and a cut-out branch projecting from said central member at an angle to the pipe receiving members, said central member also having an inwardly projecting inclined transverse partition, and a swinging valve pivotally mounted at the inner end thereof, and free to assume a position substantially in line with the partition for closing the longitudinal passage through said central member or a position substantially at a right angle to the inclined partition for closing the entrance to the cut-out branch.

3. A muffler cut-out having a casing comprising a central member with longitudinally projecting end members for application to the muffler pipe, a cut-out branch projecting from said central member at an angle to the pipe receiving members, an inwardly projecting inclined transverse partition and a valve pivotally mounted at the inner end of the latter and adjustable in respect thereto so as either to close the muffler pipe and open the cut-out branch or close the cut-out branch and open the muffler pipe, said casing being composed of laterally separable members and said inclined transverse partition extending across the casing from side to side and being formed integrally with one of said laterally separable members.

4. A muffler cut-out comprising a casing having a central member with longitudinally projecting end members for application to the muffler pipe, and a cut-out branch projecting at an angle to said end members, said central member also having an inwardly projecting transverse partition disposed at an angle to the axial line of the end members, and a swinging valve pivoted at the inner end of said partition and adjustable in respect thereto so as either to close the muffler pipe and open the cut-out branch or close the cut-out branch and open the muffler pipe, that portion of the valve which projects beyond its seat on the partition being narrower radially than the diameter of the pipe receiving members.

1,215,186. CARRYING MECHANISM FOR CALCULATING-MACHINES. EDGAR E. PHINNEY, New York, N. Y., assignor to Monroe Calculating Machine Company, New York, N. Y., a Corporation of New York. Filed Aug. 3, 1914. Serial No. 854,708. (Cl. 235—138.)



1. In a calculating machine, a carriage having a series of numeral wheels, a series of gear wheels in operating engagement with said numeral wheels, and carrying mechanism comprising a rotary shaft having carrying members, and depressible pivoted carrying arms operated by said numeral wheels and having engagement with said members, and means for allowing extra movement of the numeral wheels when suddenly checked, without depression of said arms.

2. In a calculating machine, a carriage having a series of numeral wheels, a series of gear wheels in operating engagement with said numeral wheels, and carrying mechanism comprising a rotary shaft having carrying members, depressible pivoted carrying arms having each a slide engaging said numeral wheels to depress said arms for engagement with said members without operation of the slide upon movement of the numeral wheels in one direction, and means coöperating with the slide to depress said arms upon movement of the numeral wheels in the opposite direction.

3. In a calculating machine, a carriage having a series of numeral wheels, a series of gear wheels in operating engagement with said numeral wheels, and carrying mechanism comprising a rotary shaft having carrying members, depressible pivoted carrying arms having each a slide top engaging said numeral wheels to depress said

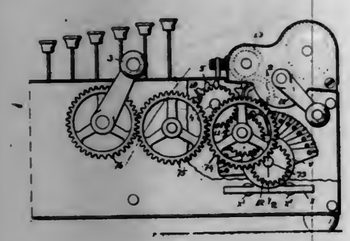
arms for engagement with said members without operation of the slide upon movement of the numeral wheels in one direction, and a bar coöperating with the slide top to depress said arms upon movement of the numeral wheels in the opposite direction.

4. In a calculating machine, a carriage having a series of numeral wheels, a series of gear wheels in operating engagement with said numeral wheels, and carrying mechanism comprising a rotary shaft having carrying members, depressible pivoted carrying arms having each a slide provided with an extension engaging a lateral tooth of the respective numeral wheel to depress the arms for engagement with said members without operation of the slide upon movement of the numeral wheels in one direction, and a bar coöperating with the slide to depress said arms upon movement of the numeral wheels in the opposite direction, said carrying arms allowing extra movement of the numeral wheels when suddenly checked, without depression of said arms.

5. In a calculating machine, a carriage, a series of numeral wheels thereupon, a series of gear wheels in operating engagement with said numeral wheels, carrying mechanism comprising a rotary shaft having carrying members, and depressible carrying devices operated by said numeral wheels and having engagement with said members, and means for allowing extra movement of the numeral wheels when suddenly checked, without depression of said devices.

[Claims 6 to 11 not printed in the Gazette.]

1,215,187. MEANS TO PREVENT REVERSE MOVEMENT IN CALCULATING-MACHINES. EDGAR E. PRINNEY, New York, N. Y., assignor to Monroe Calculating Machine Company, New York, N. Y., a Corporation of New York. Filed Aug. 27, 1915. Serial No. 47,645. (Cl. 74—14.)



1. Means to prevent reverse movement of a rotary member, including a rotary element, reciprocatory locking means, and friction means for bringing said locking means into engagement with said element upon reverse movement of said member.

2. Means to prevent reverse movement of a rotary member, including a rotary element, reciprocatory locking means normally out of engagement with said element, and friction means for bringing said locking means into engagement with said element upon reverse movement of said member.

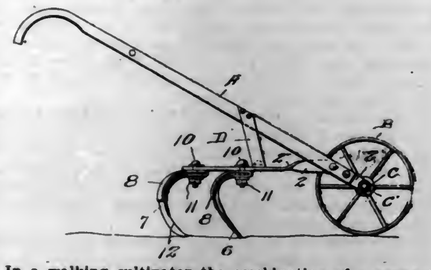
3. Means to prevent reverse movement of a rotary member, including a rotary toothed element, reciprocatory toothed locking means, and friction means for bringing said locking means into engagement with said element upon reverse movement of said member.

4. Means to prevent reverse movement of a rotary member, including a rotary toothed element, reciprocatory toothed locking means normally out of engagement with said rotary element, and friction means for bringing said locking means into engagement with said element upon reverse movement of said member, in either direction.

5. Means to prevent reverse movement of a rotary member, including a rotary toothed wheel, a toothed slide normally out of engagement with said wheel, and friction means for moving said slide to bring the tooth thereof into locking engagement with said wheel upon reverse movement of said member, in either direction.

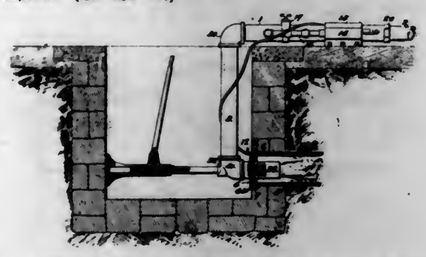
[Claims 6 to 8 not printed in the Gazette.]

1,215,188. WALKING-CULTIVATOR. JOHN A. PRATTON, Trent, Oreg. Filed Aug. 29, 1916. Serial No. 117,462. (Cl. 97—42.)



In a walking cultivator the combination of a supporting wheel and a tooth frame, comprising a pair of twisted metallic straps one of which is located each side the wheel, said straps diverging toward the rear, a tooth secured at the end of each said strap and an intermediate tooth secured to one of the straps, and one of said outer teeth having a cutting edge toward the front of the implement.

1,215,189. SEWER-CLEANING MEANS. JUDSON PRICE, Poplar Bluff, Mo. Filed May 18, 1916. Serial No. 98,328. (Cl. 182—2.)

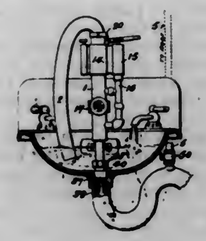


1. A sewer cleaning means comprising a nozzle adapted to be inserted into the duct to be flushed, a member on the nozzle for closing the end of the duct that surrounds the nozzle and for holding the nozzle from being forced downward into the duct, means for forcibly holding the closure member on the nozzle seated over the duct and other means for effecting a fluid tight sealing of the said closure member over the duct, and further means for forcing fluid through the nozzle into the duct, the said first named means consisting of a brace jack adapted to engage a part of the casing surrounding the duct to be flushed, and the nozzle.

2. A sewer cleaning means comprising a nozzle member adapted to be inserted into the duct to be flushed, means for sealing the said member in the duct, means for holding the said member in the duct and means for forcing fluid through the nozzle into the duct, said means including a main pipe in connection with the nozzle and with the fluid supply, a gate valve in the main pipe, a force pump having laterals, one of which communicates with the main pipe at the rear of the gate valve and the other of which communicates with the said pipe in front of the gate valve, each of the said laterals including a back check valve.

3. In a sewer cleaning means of the character described; the combination with a fluid injecting pipe, a nozzle attached thereto and means for holding the said nozzle fluid tight and extended into the duct to be flushed, the said fluid injecting pipe including a main or body portion; of a gate valve located in the said main pipe, a force pump, means for attaching the said pump to the main pipe, the said pump including valved laterals, one of which discharges into the main pipe in advance of and the other of which discharges into the main pipe to the rear of the gate valve.

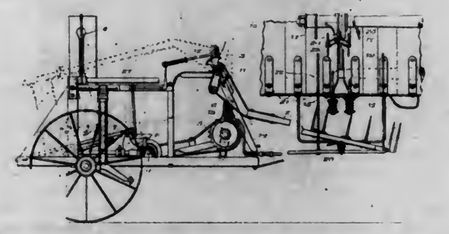
1,215,190. WASTE-PIPE-CLEANING MEANS. JUDSON PRICE, Poplar Bluff, Mo. Original application filed May 18, 1916, Serial No. 98,326. Divided and this application filed June 20, 1916. Serial No. 104,788. (Cl. 137—70.)



1. A waste pipe cleaning means, comprising a nozzle adapted to be inserted into the duct to be flushed, the said nozzle including an externally threaded portion and an internally threaded end, a yieldable plug mounted on the end of the nozzle, a clamp nut that engages the internally threaded end of the nozzle for holding the plug in position, a wedge slidable on the nozzle for spreading the plug when inserted into the duct, whereby to effect a fluid tight closure of the said duct, a nut engaging the said externally threaded portion of the nozzle, the said nut and the wedge being joined whereby the wedge is shifted along the nozzle as the nut is turned, and means for forcing the fluid through the nozzle into the duct.

2. A waste pipe cleaning means comprising a nozzle member adapted to be inserted into the duct to be flushed, means for sealing the said member in the duct, means for holding the said member in the duct and means for forcing fluid through the nozzle into the duct, said means including a main pipe in connection with the nozzle and with the fluid supply, said means for holding the nozzle member in the duct comprising a rubber plug mounted on the nozzle and a wedge member for expanding the plug freely slidable on the nozzle and a nut adjustably mounted on the said nozzle member with which the wedge member is swivelly connected.

1,215,191. GRAIN-SHOCKING MACHINE. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Oct. 2, 1913. Serial No. 793,052. (Cl. 56—121.)



1. In combination, a harvester, a prostrate shocker cradle operatively connected thereto, and a single means intermediate said harvester and cradle simultaneously positioning side by side and prostrate in said cradle a plurality of sheaves discharged from said harvester.

2. In combination, sheaf discharging mechanism, sheaf delivery mechanism including an oscillating sheaf delivery member, and means for supporting in the path of said member the load therefor discharged by said discharging mechanism.

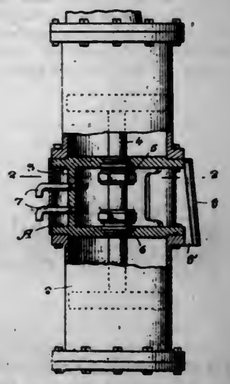
3. In combination, sheaf discharging mechanism, sheaf delivery mechanism including an oscillating sheaf delivery member, and means for supporting in the path of said member a plurality of sheaves discharged by said discharging mechanism.

4. In combination, a binder deck, sheaf discharging mechanism adjacent thereto, means for supporting a sheaf discharged by said mechanism adjacent the edge of said deck, and sheaf delivery means including an oscillatory sheaf delivery member movable upward about its pivot into engagement with said sheaf when so supported.

5. In combination, a binder deck, sheaf discharging mechanism adjacent the same, means for supporting a sheaf discharged by said mechanism in parallel relation to the edge of said deck, and sheaf delivery means including a swinging sheaf delivery member movable in a fore and aft direction and into engagement with said sheaf when so supported.

[Claims 6 to 34 not printed in the Gazette.]

1,215,192. STEAM-DRIVEN AIR-COMPRESSOR. DOMINICK A. REAGEN, Altoona, Pa. Filed June 23, 1915. Serial No. 35,874. (Cl. 121—8.)

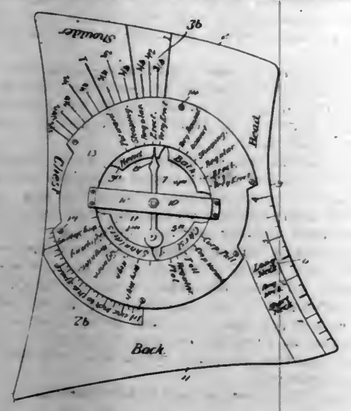


In a device of the class described, in combination a cylinder, a center piece separating the cylinder into a lower and upper section, said centerpiece having an open portion upon its front side and circumference and having a pair of vertically separated horizontal flanges extending outwardly of the wall of said cylinder, a relatively thin sheet metal circular member secured upon the flanges of said centerpiece so as to be spaced from the main body portion of the latter and provide an annular channel, a circumferentially spaced apart series of upper and lower outlet nozzles, secured upon said centerpiece and having terminal, downturned portions placed in advance of said sheet metal member, and a door hingedly connected upon said plate with its lower edge extending below the lowest flange of said center piece, said door being angularly inclined outwardly of said center piece so as to be spaced with its lower edge at a greater distance from the lower flange of the center piece than it is spaced at its upper edge from the upper flange.

1,215,193. TAILOR'S MEASURING INSTRUMENT. CHARLES E. REED, Warrensburg, Mo. Filed June 18, 1915, Serial No. 34,891. Renewed May 31, 1916. Serial No. 100,966. (Cl. 33—7.)

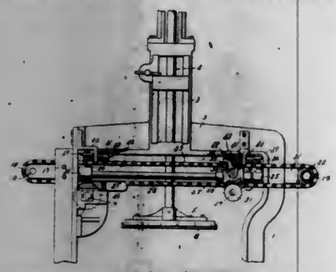
An instrument of the class described comprising a board having edges respectively shaped and proportioned to conform with and to fit against the shoulders, back of

head, back and chest of a person, and also having a centrally arranged pivotally mounted and weighted indicating



hand and scales over which said hand sweeps and provided with designating subdivisions.

1,215,194. ADHESIVE-APPLYING MEANS FOR STENCILING-MACHINES. JAMES D. REIFSNYDER and HENRY G. SCHWERDTLE, Philadelphia, Pa., assignors to Stokes & Smith Company, a Corporation of Pennsylvania. Filed July 2, 1912. Serial No. 707,279. (Cl. 91—47.)



1. In apparatus of the class described, and in combination, a vertically reciprocating stencil, a horizontally reciprocating carriage, an adhesive applying roller for supplying adhesive to the stencil, an endless carrier for alternately moving said carriage with its roller back and forth across the path of movement of and into contact with the stencil when the latter is in elevated position, coöperating interconnecting devices carried by the carriage and endless carrier respectively, and means for actuating said interconnecting devices at proper intervals to cause a dwell in the movements of the said carriage and its roller at the end of each reciprocation thereof, said means and interconnecting devices being so organized that the duration of each dwell will be sufficient to allow the stencil to descend, perform its work and return again to starting position.

2. In a stenciling machine and in combination, a vertically reciprocating stencil, an endless carrier adapted to travel continuously in a direction crossing that of said stencil and having oppositely moving runs, a revolving support for said carrier at each end, a reciprocating carriage movable back and forth by the opposite runs of said carrier and having a limit of movement in each direction less than that of said carrier runs, an adhesive applying means for the stencil mounted on said carriage, coöperating connecting means between the carrier and the carriage for moving the latter, and means for simultaneously disengaging said connecting means from one run of the carrier at the limit of the carriage movement in each direction and positioning the same for later engaging the oppositely moving run of the carrier whereby to provide a dwell of sufficient duration in the movement of the carriage at each end to allow the stencil to descend to operating position and return again to starting position.

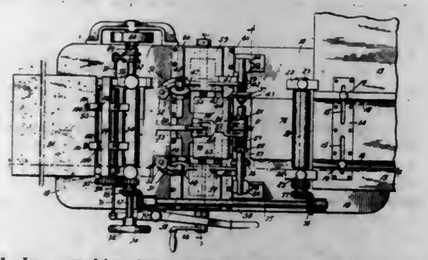
3. In a stenciling machine and in combination, a vertically reciprocating stencil, an endless carrier adapted to travel continuously in a direction crossing that of said stencil and having oppositely moving runs, a support for said carrier at each end around which it travels, a reciprocating carriage movable by said carrier, an adhesive applying means for the stencil mounted on said carriage, a pair of independently pivoted carrier engaging fingers on said carriage each to alternately engage one of the runs of said carrier, and means for disengaging a finger from one of said runs simultaneously with the movement of the other finger into engaging position with the other run, said disengagement occurring short of the end supports and operating to provide a dwell of sufficient duration to permit the stencil to descend and return again to starting position.

4. In a stenciling machine and in combination, a vertically reciprocating stencil, an endless carrier adapted to travel continuously in a direction crossing that of said stencil and having oppositely moving runs, a revolving support for said carrier at each end, a reciprocating carriage movable back and forth by the opposite runs of said carrier, an adhesive applying means on said carriage, a pair of carrier engaging fingers pivotally mounted on said carriage and arranged to alternately engage the oppositely moving runs of said carrier, means including an oscillatory member for simultaneously moving and locking one of said fingers into carrier engaging position and disengaging the other from said carrier before reaching the revolving support to provide a dwell of sufficient duration for the carriage and adhesive applying means at each side while the stencil descends to perform its work and returns.

5. In combination, a vertically movable stencil, a continuously moving endless carrier, provided with a lug, a carriage coöperatively associated therewith, a glue applying roller supported by the carriage, and a pair of fingers independently pivoted on said carriage and movable on their pivots to withdraw one or the other alternately from engagement with said lug and simultaneously move the other into lug engaging position for traversing said glue applying roller back and forth in contact with said stencil, said fingers being disconnected from the lug at the end of each movement to allow a dwell of sufficient duration to permit the stencil to descend and rise again.

[Claims 6 to 11 not printed in the Gazette.]

1,215,195. STRIP-COVERING MACHINE. JAMES D. REIFSNYDER, Philadelphia, Pa., assignor to Stokes & Smith Company, Summerdale, Pa., a Corporation of Pennsylvania. Filed May 8, 1913. Serial No. 766,483. (Cl. 154—36.)



1. In a machine for attaching paper strips together in combination, means for feeding a stiff body strip longitudinally forward, means for feeding a facing strip wider than the body strip longitudinally forward lying flat against the said body strip and with an adhesive between said strips, a folding roller on each side for positively guiding the body strip and for bending up the side edges of said facing strip on the edges of said body strip as a fixed axis into a plane substantially at right angles to the plane in which said strips are guided, means for engaging said stiff body strip at a point in the space between the said rollers and removed from the bent side edges of the facing strip for holding said stiff body strip when said first named rollers are bending up the side edges of said facing strip, means for further bending the side edges of the facing strip from the said right angle position into a position inclining inwardly from the edge of the body strip, and means for forcing the side edges of the said facing strip from the said inclined position flatly down upon the body strip.

2. In a machine for attaching paper strips together in combination, means for feeding a stiff body strip longitudinally forward, means for feeding a facing strip wider than the body strip longitudinally forward lying flat against the said body strip and with an adhesive between said strips, a folding roller on each side for positively guiding the body strip and for bending up the side edges of said facing strip on the edges of said body strip as a fixed axis into a plane substantially at right angles to the plane in which said strips are guided, a roller in the space between said first named rollers for engaging said stiff body strip at a point removed from the bent side edges of the facing strip for holding said stiff body strip when said first named rollers are bending up the side edges of said facing strip, means for further bending the side edges of the facing strip from the said right angle position into a position inclining inwardly from the edge of the body strip, and means for forcing the side edges of said facing strip from the said inclined position flatly down upon the body strip.

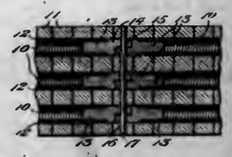
3. In a machine for attaching paper strips together, in combination, means for feeding a stiff body strip longitudinally forward, means for feeding a facing strip wider than the body strip longitudinally forward lying flat against the said body strip and with an adhesive between said strips, a feeding roller on each side for positively guiding the body strip and for bending up the side edges of said facing strip on the edges of said body strip as a fixed axis into a plane substantially at right angles to the plane in which said strips are guided, a guide roller for engaging said stiff body strip between said first named rollers and holding said strip in place when said first named rollers are bending up the side edges of said facing strip, a pair of axially inclined rollers disposed adjacent the edges of the facing strip beyond said first named rollers, said axially inclined rollers having substantially plane faces disposed at substantially right angles to the axes of the rollers and adapted to engage the edges of the facing strip to fold the same farther inwardly, and means for forcing the inwardly folded edges down flatly upon the body strip.

4. In a machine of the class described in combination means for feeding longitudinally forward a body strip with a facing strip wider than the body strip and lying flat thereagainst and with an adhesive applied to one of said strips, means on each side for positively guiding the body strip and for simultaneously bending the side edges of the facing strip at the edges of said body strip into a plane substantially at right angles to the plane in which said strips are guided, a pair of oppositely disposed rollers mounted to rotate on inclined axes, said rollers having substantially plane faces disposed substantially at right angles to the axes thereof, adapted to engage the edge of the facing strip and fold the same farther inwardly and into an inwardly inclined position, said rollers having studs formed thereupon adjacent said plane faces adapted to engage the edges of the body strip, and means for forcing the side edges of the facing strip from the inclined position flatly down upon the body strip.

5. A machine for covering strips of paper and the like with flexible material, comprising means for coating one side of the covering material with an adhesive, means for feeding the strip and the coated covering material together through the machine and pressing the two sheets into close contact, a series of folding and alining rollers on each side of the path of movement of the said strip for turning the projecting edges of the covering material over the strip, a pair of oppositely arranged slides each carrying a pair of upwardly and oppositely extending arms upon which said series of rollers are mounted respectively, means for simultaneously adjusting said slides to move the rollers carried thereby toward and from each other, and a roller for pressing the folded edges of said covering material upon a face of the strip.

[Claims 6 to 10 not printed in the Gazette.]

1,215,196. SELF-ADJUSTING DRIVING-BELT. EDWARD J. RICHARDSON and JAMES ROY RICHARDSON, Chamberlain, S. D., assignors of one-third to George R. Warner, Chamberlain, S. D. Filed May 12, 1916. Serial No. 97,142. (Cl. 74—62.)



A belt of the character described comprising a plurality of springs, a plurality of leather strips arranged in face to face contact, and having alined openings to receive said springs, a pin threaded in each end of the springs and having a head formed with a reduced apertured extension, the extensions on the heads of the adjacent ends of each spring being overlapped, the extensions of all of said springs being disposed in alinement and having their apertures in alinement, and a rod extended through one of the leather strips embracing said extensions, and also through the apertures in the extensions of all of said springs, whereby a flexible coupling is provided for the adjacent ends of the belt.

1,215,197. SANITARY WATER-CLOSET SEAT. MAX ROSEN, Philadelphia, Pa. Filed Oct. 27, 1916. Serial No. 128,000. (Cl. 4—18.)



1. A sanitary seat for a water closet comprising a guttered base adapted to contain material of a sanitary nature, a seat proper which is adapted to enter said base, a swinging arm which is pivotally mounted on a member rising from said base, and a ball and socket like joint, the members of which are connected respectively with said seat and arm adapting said seat proper to be raised and lowered from and to said base and reversed, and present either of the faces of said seat proper for occupation above, and either face into said base.

2. In a sanitary seat for a water closet, a base provided with a gutter and a channel below said gutter in communication therewith, said channel being adapted to contain material of a sanitary nature, and a seat proper adapted to be raised and lowered and reversed and have either of its faces enter said gutter, said channel having therein a piece of absorbent for said material and an open sheath around said piece adapted to weight the same.

3. A sanitary seat for a water closet comprising a guttered base adapted to contain material of a sanitary nature, a seat proper which is adapted to enter said base, a swinging arm, a bearing on said base for said arm, a ball and socket like joint, the members of which are connected respectively with said seat and arm adapting said seat proper to be raised and lowered from and to said base and reversed, and present either of the faces of said seat

proper for occupation above, and either face into said base, and means on said base adapting the combined base and seat proper for connection with the closet adapting them to be raised and lowered as one respectively from and to the closet bowl.

4. In a sanitary seat for a water closet, a base provided with a gutter adapted to contain material of a sanitary nature, and a seat proper adapted to be raised and lowered and reversed and have either of its faces enter said gutter, the latter having therein a piece of absorbent for said material, said gutter having in its lowered portion a channel adapted to contain said piece of absorbent therein.

5. In a sanitary seat for a water closet of the character stated composed of a guttered base, a seat proper adapted to enter said base, a hanger arm pivotally mounted on a member rising from said base, and a ball and socket like joint having its members adapted to be connected respectively with said seat and arm.

1,215,198. CUSHION INSTEP-RAISER. JOSEPH ROTHSTEIN, Brooklyn, N. Y. Filed Sept. 21, 1916. Serial No. 121,419. (Cl. 36—54.)



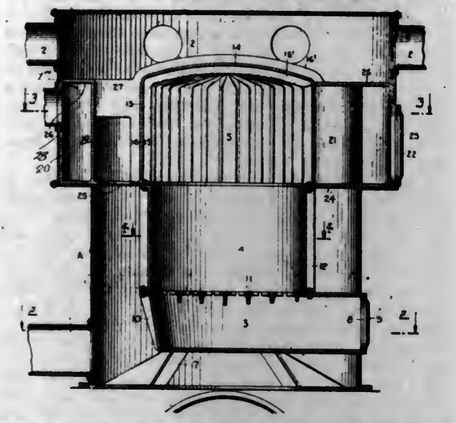
1. As an article of manufacture, a cushion instep raiser for shoes, comprising a pad formed of a casing of a soft flexible material and containing a filling material, and an attaching means for attaching the pad to the under side of the tongue or fly of a shoe.

2. As an article of manufacture, a cushion instep raiser for shoes, comprising a pad formed of a casing of a soft flexible fabric material containing a filling of hair, the casing gradually decreasing in width from the top to the bottom, and an adhesive substance covering the upper face of the casing to permit of attaching the pad to the under side of the tongue or fly of a shoe.

3. As a new article of manufacture, a cushion instep raiser for shoes, comprising a pad decreasing in width from its upper to its lower end and decreasing in thickness toward its sides, and provided on its upper side with an adhesive substance for securing it to the underside of the tongue or fly of a shoe.

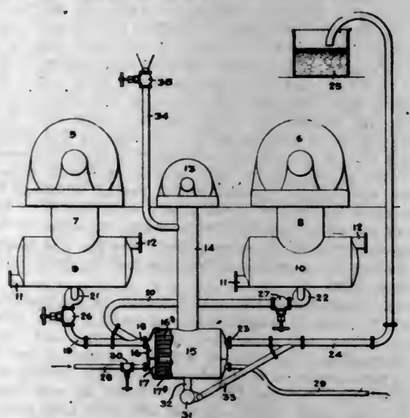
1,215,199. HEATING-FURNACE. LEROY EDGAR RUSSELL, Deposit, N. Y. Filed Mar. 18, 1915. Serial No. 15,259. (Cl. 126—99.)

A furnace comprising a casing circumferentially enlarged at its upper portion and having a cold air inlet at its bottom and hot air outlets at the top, there being an annular shoulder between the bottom of the enlarged portion and the lower portion of the casing, and a structure within the casing for burning fuel, said structure comprising an ash-box, a fire-box mounted thereon and having a smooth interior and vertical integral ribs on its outer surface, there being a substantial space between the wall of the casing and the ribs on the fire-box, a combustion chamber supported on the top of the fire-box and having internal and external ribs on its circumference and extending vertically, and internal and external ribs on the top, a flue connected with the front of the combustion chamber and extending in opposite directions around the same and uniting at the rear, and an outlet connected with the rear of the flue, said flue being spaced from the wall of the combustion chamber and the intermediate space communicating with the space between the casing, and the fire-box for permitting an unobstructed up-flow of air from the bottom of the casing to the space between the top



thereof and the top of the combustion chamber, said flue being disposed in the enlarged part of the casing and directly over the said shoulder, there being an opening at the juncture of the flue with the combustion chamber through which coal is supplied to the fire-box.

1,215,200. POWER-GENERATING PLANT. FREDERICK SAMUELSON, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Sept. 8, 1915. Serial No. 49,533. (Cl. 121—122.)



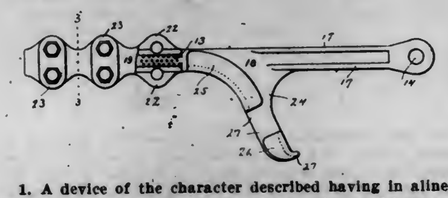
1. The combination of a prime mover, a condenser therefor, a second prime mover, a condenser for it, and means for conveying the condensate from the first named condenser to the second condenser to be used as the cooling medium therein.

2. The combination of a prime mover, a condenser therefor, a second prime mover, a condenser for it having two separate compartments for cooling medium, means for conveying the condensate from the first named condenser to one of said compartments to be used as the cooling medium therein, and means for supplying cooling medium from another source to the other of said compartments.

3. The combination of a main condensing prime mover, a condenser therefor, a non-condensing prime mover which drives the auxiliaries for the first, a condenser for the non-condensing prime mover which utilizes the condensate from the first named condenser as cooling fluid whereby it serves to heat the same for feed water, and means for supplying a separate auxiliary supply of cooling fluid to the second named condenser when the supply of condensate from the first named condenser is insufficient to condense all the exhaust from the non-condensing prime mover.

4. The combination of a main condensing prime mover, a condenser therefor, a non-condensing prime mover which drives the auxiliaries for the first, a condenser for the non-condensing prime mover having a single condensing chamber and two distinct sets of tubes for cooling fluid, a hot well, means connecting one of said sets of cooling tubes to receive the condensate from the first named condenser, and discharge it to the hot well, means connecting the other set of cooling tubes to a separate supply of cooling fluid, and a conduit for conveying the condensate from the second named condenser to the hot well.

1,215,201. ELECTRIC-CABLE ATTACHMENT. JOSEPH A. SANDFORD, Jr., East Liverpool, Ohio, assignor to The R. Thomas and Sons Company, East Liverpool, Ohio, a Corporation of Ohio. Filed Feb. 14, 1913. Serial No. 748,440. (Cl. 24—135.)



1. A device of the character described having in alinement a clamping portion and an eye portion, and between them a deflecting guide arm at an angle to the body of the clamp to deflect and guide the cable gripped by the clamp, together with oppositely faced guide webs on said deflecting arm engaging the cable on its upper and lower surfaces.

2. A device of the character described having in alinement a clamping portion and an eye portion, and between them a deflecting guide arm at an angle to the body of the clamp to deflect and guide the cable gripped by the clamp, together with oppositely faced guide webs spaced longitudinally apart on said deflecting arm.

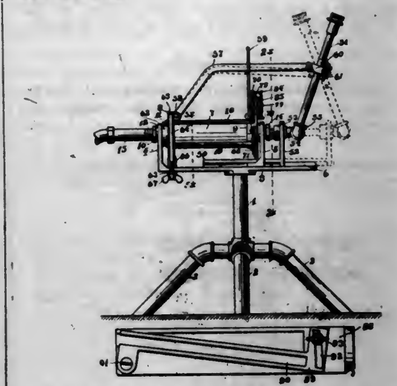
3. A cable jumper clamp of the character described, having in alinement a cable clamping portion and a portion having means for attaching the device to a suspension insulator, in combination with a deflecting arm rigid with said device and having means to freely engage the jumper loop of the cable, said means comprising oppositely faced guide webs extending from the upper and lower margins of said arm and spaced longitudinally apart thereon.

1,215,202. AUTOMATIC SPRINKLER. GEORGE G. SCHELTER, Rochester, N. Y. Filed Oct. 3, 1914. Serial No. 864,923. (Cl. 137—59.)

1. In a sprinkling machine the combination of a nozzle, and means for moving said nozzle back and forth through a series of parallel paths at successive elevations, said means comprising a cylinder having a piston working therein, said piston being driven by the water flowing through said machine.

2. In a sprinkling machine the combination of a nozzle, an arm on which said nozzle is adapted to swing back and forth, a cylinder, a piston working in said cylinder, said piston causing said arm to swing back and forth horizontally, and means to change the elevation of the nozzle.

3. In a sprinkling machine the combination of a nozzle, an arm on which said nozzle is adapted to move back and forth, a cylinder having a piston working therein, said piston causing said arm to swing back and forth horizontally, and means to change the elevation of the nozzle through a series of step by step movements in the same direction.

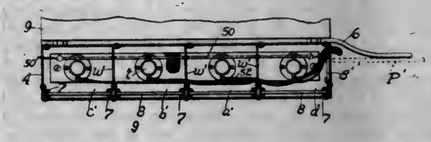


4. In a sprinkling machine the combination of a nozzle, an arm on which said nozzle is adapted to move back and forth, a cylinder having a piston working therein, said piston causing said arm to swing back and forth horizontally, means to change the elevation of the nozzle through a series of step by step movements in the same direction, and means for reversing the movement of the nozzle at the end of said movement in one direction.

5. In a sprinkling machine the combination of a piston having a chamber therein, a partition extending across said chamber, said partition having flanges on both sides thereof to form two channels parallel to the ends of said piston, said flanges being adapted to bear against the ends of said piston and hold said partition in place in said piston.

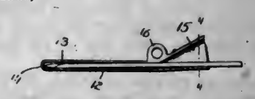
[Claims 6 to 28 not printed in the Gazette.]

1,215,203. SIGNAL DEVICE FOR AUTOMOBILES. LEONARD L. SCHMIDT and THEODORE W. BEUCHEL, Belleville, Ill. Filed June 12, 1915. Serial No. 33,720. (Cl. 40—132.)



In a signaling device for vehicles, a casing provided with a series of horizontally disposed compartments, means for lighting the interior of said compartments, a front slide for each compartment provided with a transparent or light-conducting signal symbol, and partitions separating said compartments, the partitions having their edges at the front of the casing formed into oppositely disposed grooves open at the top of the casing, each groove cooperating with the opposite groove on the adjacent partition to form a pair for receiving the aforesaid slides.

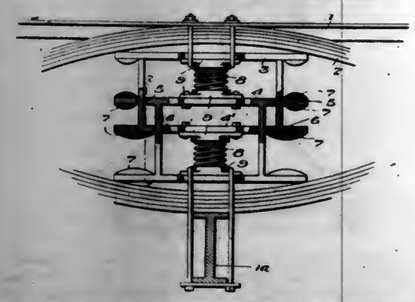
1,215,204. HAT-PIN GUARD. GARDNER E. SCHWARTZ, Waldoboro, Me. Filed May 8, 1913. Serial No. 766,389. (Cl. 24—155.)



A hat pin guard comprising a funnel shaped member and a tubular member, said tubular member extending angularly from the apex of the funnel shaped member and in such a position that a portion thereof extends in an upwardly inclined plane with relation to the bottom wall

of the tubular member, the upwardly inclined portion and the top wall of the tubular member being adapted to engage and grip a hat pin and a loop formed on the members at the point where they join to form attaching means.

1,215,205. CUSHIONING MEANS. WALTER F. A. SCOTT, Doylestown, Pa. Filed July 5, 1916. Serial No. 107,584. (Cl. 267—23.)



1. A buffer construction comprising lower and upper sections, each section having upper and lower horizontal bars and vertical rods or bars connecting said upper and lower bars, and the upper section having apertures in its lower bar receiving the vertical rods of the lower section, and the lower section having apertures in its upper bar receiving the vertical rods of the upper section; helical springs interposed between the upper bars of the two sections and the lower bars of said sections, respectively, and cushioning pads arranged in opposed relation on the horizontal bars of the sections.

2. The combination in a vehicle, of a chassis, an axle, an elliptical spring interposed between and connected with the chassis and the axle, and a buffer construction interposed between and connected with the upper and lower members of said spring, and also connected with the chassis and axle and comprising lower and upper sections, each section having upper and lower horizontal bars and vertical rods connecting said bars, and the upper section having apertures in its lower bar receiving the vertical rods of the lower section, and the lower section having apertures in its upper bar receiving the vertical rods of the upper section, helical springs interposed between the upper bars of the two sections and the lower bars of said sections, respectively, and cushioning pads arranged in opposed relation on the horizontal bars of the sections.

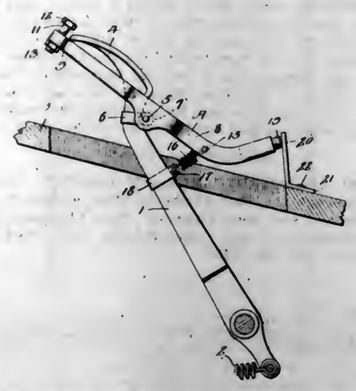
3. In means for the purpose described, the combination of an axle, a movable frame above and spaced from the axle, a lower spring connected with the axle, an upper spring connected with the frame, a connection intermediate the lower spring and the frame, and a connection intermediate the upper spring and the axle, whereby said springs are adapted by compression to ease the movements of the axle and frame with respect to each other.

4. In means for the purpose described, the combination of an axle, a movable frame above and spaced from the axle, lower and upper coiled springs arranged in vertical alinement and spaced relation between the axle and frame; the lower spring being connected at its lower end with the axle and the upper spring being connected at its upper end with the frame, a connection intermediate the upper end of the lower spring and the frame, and a connection intermediate the lower end of the upper spring and the axle.

5. In means for the purpose described, the combination of an axle, a movable frame above and spaced from the axle, lower and upper spaced springs located between the axle and frame, a connection intermediate the lower portion of the lower spring and the axle, a connection intermediate the upper portion of the upper spring and the frame, a buffer section connecting the upper portion of the lower spring with the frame, and a buffer section connecting the lower portion of the upper spring with the axle; said buffer sections being each guided on the other.

[Claim 6 not printed in the Gazette.]

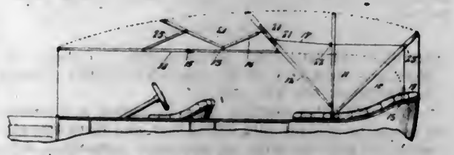
1,215,206. TRANSMISSION-CONTROL DEVICE FOR MOTOR-VEHICLES. JOHN SHANNON, Stonington, Conn. Filed Sept. 30, 1916. Serial No. 123,164. (Cl. 74—81.)



1. The combination with the transmission lever of a motor vehicle, of a stop secured in fixed relation to the vehicle body, and a latch pivotally mounted on said lever and adapted to be shifted into position to engage said stop or into position to clear said stop, said latch embodying a threaded member having an adjustable relation thereto and adapted to abut against the stop, said threaded member providing for increasing or diminishing the distance between the latch and the transmission lever.

2. The combination with the transmission lever of a motor vehicle, of a stop secured in fixed relation to the vehicle body, a latch pivotally mounted on said lever and adapted to be shifted into position to engage said stop or into position to clear said stop, and a toe-piece having a threaded and adjustable connection with said latch at a point beyond the extremity of the transmission lever, said toe-piece being adjustable in a plane substantially at a right angle to the latch.

1,215,207. FOLDING TOP FOR VEHICLES. JACOB M. SHARRER, New York, N. Y. Filed Dec. 27, 1913. Serial No. 808,029. (Cl. 21—62.)



1. A folding top for vehicles comprising a rear bow, a main bow, a forward bow, an outrigger bow extending from the forward bow, links for supporting the outrigger bow and a flexible connection extending from each of said links and attached to relatively stationary points, said flexible connections serving as suspension means for the links and outrigger bow.

2. A folding top for vehicles comprising a rear bow, a main bow, a forward bow, links extending from the forward bow, an outrigger bow hinged to the links, another pair of links pivoted to the first mentioned links and flexible connections extending from said links passing over a supporting point on the forward bow and fastened to relatively stationary points.

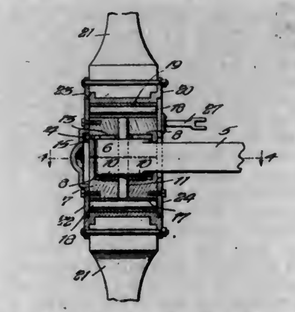
3. A folding top for vehicles comprising a main bow, a forward bow, an outrigger bow extending therefrom, a pair of guides, one above the other disposed upon the forward bow and a flexible suspending member connected to the outrigger bow passing over the upper and lower guides and fastened to a relatively stationary point.

4. A folding top for vehicles comprising a main bow, a forward bow, an outrigger bow extending therefrom a pair of guides, one above the other disposed upon the forward bow, a guide upon the main bow and a flexible suspending member connected to the outrigger bow passing over the upper and lower guides upon the forward bow through the guide upon the main bow and fastened to a relatively stationary point.

5. A folding top for vehicles comprising a main bow, a forward bow, an outrigger bow extending therefrom two pairs of pulleys disposed upon the forward bow, one over the other and a guide upon the main bow and a flexible suspending member connected to the intermediate bow passing between each pair of pulleys and through the guide upon the main bow and fastened to a relatively stationary point.

[Claims 6 to 9 not printed in the Gazette.]

1,215,208. MOTOR-VEHICLE-WHEEL HUB. JACOB TURNER SHOAF, Eureka, Cal. Filed June 28, 1915. Serial No. 36,688. (Cl. 21—142.)

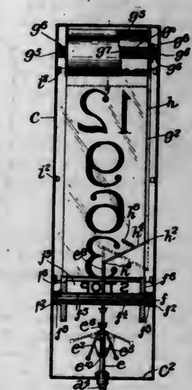


1. In a device of the class described, the combination of an axle having an annular horizontally arranged enlargement at one end, a vertically arranged annular hub bearing provided centrally with an opening into which said enlargement extends, the upper and lower faces of the enlargement extending into the upper and lower portions of the opening beyond the adjacent faces of the axle, said hub bearing being further provided with a bell-shaped opening communicating with the first said opening and through which the axle extends, anti-friction bearings arranged between the lower surface of the enlargement and the adjacent surface of the hub bearing, a wedge arranged between the upper surface of the enlargement and the adjacent surface of the hub bearing, a sleeve encircling said bearing, a spoke ring encircling the sleeve in spaced relation thereto and being provided with a second sleeve, a plurality of rollers arranged between the sleeves, an outer hub plate fixedly connected with the hub bearing and extending at its outer edges into an annular rabbet formed in the spoke ring, an inner hub plate fixedly connected with the hub bearing and likewise extending at its outer edge into an annular rabbet provided in the spoke ring, said inner hub plate being provided with an elongated opening registering with said bell-shaped opening, and knuckles carried by the inner hub plate one above the axle and one in advance of the same, and adapted to be connected respectively with a steering post operated link and with a reach rod.

2. A device of the class described, including an axle, a hub bearing surrounding the axle at one end, a pin pivotally connecting the hub bearing and the axle end, a wedge surrounding the pin and arranged between the hub bearing and axle end and having means extending through an opening in the hub bearing whereby the wedge may be adjusted, and a cap carried by the hub bearing and overlying the said means.

3. A device of the class described including an axle having an enlargement, a hub bearing surrounding the enlargement, a pin pivotally connecting the hub bearing and enlargement, a wedge arranged between the hub bearing and enlargement and having a slot through which the pin extends and being provided with a lug extending through an opening in the hub bearing, and means carried by the lug without the hub bearing whereby the wedge may be shifted relatively to the hub bearing and enlargement for taking up wear between them.

1,215,209. SIGNAL DEVICE FOR AUTOMOBILES. EDMUND SIMPSON, New York, N. Y., assignor of one-half to William W. Duncan, Ridgewood, N. J. Filed Nov. 4, 1915. Serial No. 59,678. (Cl. 116—65.)



1. In a device of the class described, a suitable casing, a shutter mounted therein, means mounted in said casing and in operative connection with the driving mechanism of a vehicle for operating said shutter, a stop indicating device mounted in said casing and means connected with said shutter for operating said stop indicating device.

2. In a speed signal device for vehicles, a suitable casing the front of which is provided with an aperture, a transparent panel mounted in said aperture, a flexible shutter, a drum mounted in the top of said casing and with which one end of said shutter is connected, the other end of which is connected with a similar drum mounted adjacent to the bottom of said casing, a governor mounted in the bottom of said casing and in operative connection with said drum, means in operative connection with the driving mechanism of a vehicle for operating said governor to operate said shutter, and means whereby the operation of said shutter will operate a stop indicating device.

3. In a speed signal device for vehicles, a suitable casing the front of which is provided with an aperture, a transparent panel mounted in said aperture, a translucent panel mounted rearwardly of said transparent panel and on which is arranged numerals indicating miles, a flexible shutter mounted in said casing and between said transparent and translucent panels, means in operative connection with the driving mechanism of a vehicle for operating said shutter in the movement of said vehicle so as to indicate the speed thereof, and means for indicating when said vehicle is at a standstill.

4. In a speed signal device for vehicles, a suitably supported flexible shutter, a governor in operative connection with said shutter, means in operative connection with the driving mechanism of a vehicle for operating said governor, and a device operated by said shutter for indicating that a vehicle is at a standstill.

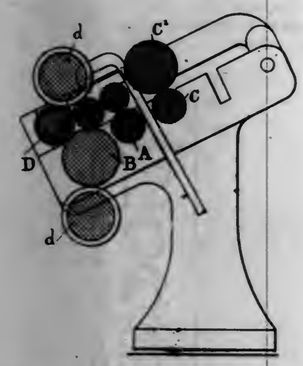
1,215,210. EMBALMING FLUID. GEORGE Q. SMITH, Chicago, Ill., assignor to William R. Clayton, Chicago, Ill. Filed May 19, 1916. Serial No. 98,672. (Cl. 99—1.)

1. An embalming fluid including calcium chlorid and formaldehyde.

2. An embalming fluid including calcium chlorid, formaldehyde and alcohol.

3. An embalming fluid including calcium chlorid, formaldehyde, alcohol, water, and a suitable coloring agent.

1,215,211. MACHINE FOR DRAWING AND SPINNING SHORT FIBERS. WILLIAM T. SMITH, Bolton, England. Filed May 14, 1912. Serial No. 697,244. (Cl. 19—28.)

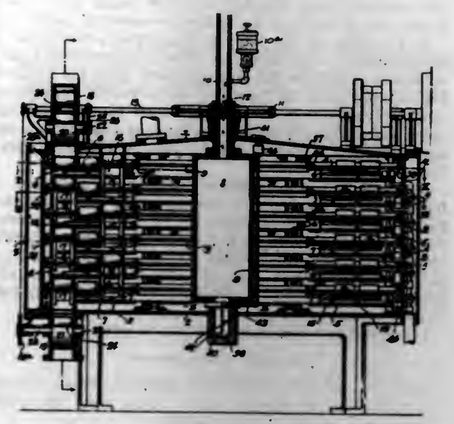


1. A machine for spinning staple composed of intermixed long and short fibers, consisting of a pair of coacting back drawing rollers; a pair of coacting front drawing rollers located in advance of the back drawing rollers and at a distance therefrom equal to the length of the shortest fibers to be operated upon; and a pair of coacting check rollers located behind said back drawing rollers and at a distance from the front drawing rollers equal to the length of the longest fibers to be operated upon, the said check rollers and back drawing rollers rotating at the same surface speed.

2. A machine for spinning staple composed of intermixed long and short fibers, consisting of a pair of coacting back drawing rollers of small diameter; a bottom front drawing roller of large diameter; a top front drawing roller of small diameter mounted upon the bottom front drawing roller and having its center located behind that of the latter roller, said front drawing rollers being located a distance in advance of the back drawing rollers equal to the length of the shortest fibers to be operated upon; an auxiliary roller mounted upon said bottom front drawing roller in advance of said top front drawing roller; and a pair of check rollers located behind said back drawing rollers and at a distance from the front drawing rollers equal to the length of the longest fibers to be operated upon, the said check rollers and back drawing rollers rotating at the same surface speed.

3. A machine for spinning staple composed of intermixed long and short fibers consisting of a pair of fluted, back drawing rollers of small diameter; a fluted, bottom front drawing roller of large diameter; a pair of plain drawing rollers mounted one behind the other upon the bottom front drawing roller with their centers located at opposite sides of that of the latter roller, for bringing the nip of the drawing rollers close together to grip the shortest fibers to be operated upon and to support the same; and a pair of checking rollers, the lower of which is fluted and the upper plain, located behind the back drawing rollers and at a distance from the front drawing rollers equal to the length of the longest fibers to be operated upon.

1,215,212. CONTINUOUS-PROCESS COOKER. FRANK P. SOUDER, Bridgeton, N. J. Filed May 26, 1916. Serial No. 100,046. (Cl. 126—272.)



1. In a cooker, the combination of a casing, a rotating steam chamber within the same, a series of successively communicating spaced troughs suitably fixed within the casing, pushers carried by the rotating steam chamber, means for feeding the cans from one trough to a lower succeeding trough, means for feeding the cans to the trackway of the uppermost trough, and means for discharging the cans from the lowermost trough.

2. In a cooker, the combination of a casing, a rotating steam chamber centrally disposed within the same, a series of successively communicating spaced troughs suitably fixed within the casing, helical trackways mounted in said troughs, pushers carried by the rotating steam chamber to move cans along said trackways, means at the ends of the several trackways for effecting the delivery of the cans from one trough to a lower succeeding trough, means for feeding the cans to the trackway of the uppermost trough, and means for discharging the cans from the lowermost trough.

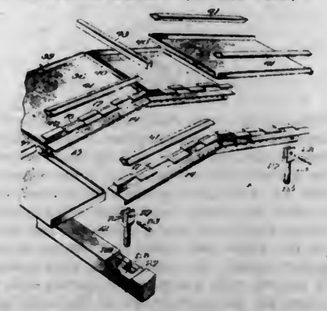
3. In a cooker, the combination of a casing, a rotating steam chamber within the same, a series of successively communicating spaced troughs suitably fixed within the casing and surrounding the rotating steam chamber, helical trackways mounted in said troughs, radial steam pipes having exit orifices carried by the rotating steam chamber, inclined ends for the respective trackways whereby the cans may be delivered from one trough to the trackways of a lower succeeding trough, means for feeding the cans to the trackway of the uppermost trough, and means for discharging the cans from the lowermost trough.

4. In a cooker, the combination of a casing, a plurality of annular troughs disposed within the casing, helical or convolute tracks mounted within the respective troughs, said troughs adapted to contain water, means for heating said water, and means for moving the cans around the troughs and discharging the cans from one trough to a succeeding lower trough, said means including elevated portions at the receiving and discharge ends of the helical tracks.

5. In a cooker, the combination of a casing, a plurality of annular troughs disposed within the casing, helical or convolute tracks mounted within the respective troughs, said troughs adapted to contain water, means for heating said water, a rotatable steam chamber within the casing, arms carried by said steam chamber for moving the cans and for discharging the cans from one trough to a succeeding trough, and elevated portions at the discharge and receiving ends of the helical tracks.

[Claims 6 to 30 not printed in the Gazette.]

1,215,213. METALLIC ROOF FOR RAILWAY-CARS. JACOB J. SOUDER, Washington, D. C. Filed Nov. 20, 1915. Serial No. 62,495. (Cl. 108—5.4.)



1. As a new article of manufacture, a carline for supporting roofing sections formed to provide a longitudinally extending channel, and a strip of sheet metal secured in said channel and co-extensive therewith, and extending upward therefrom, said strip being formed into alternate oppositely disposed flanges adapted to be bent into engagement with the roofing sections for securing the latter rigidly in position.

2. As a new article of manufacture, a carline for supporting roofing sections formed of sheet metal bent to provide a substantially U-shaped channel portion, flanges formed at opposite sides of said channel portion and of a length to project beyond the planes of the opposite ends of the latter, a fastening means of sheet metal secured in said channel and co-extensive with said flanges, and means formed with said fastening means and adapted to be bent into engagement with the roofing sections for securing the latter rigidly in position.

3. As a new article of manufacture, a carline for supporting roofing sections formed of sheet metal and bent to provide a substantially U-shaped channel portion, flanges formed at opposite sides of said channel portion and of a length to project beyond the planes of the opposite ends of the latter, a strip of sheet metal secured in said channel and co-extensive with said flanges and extending upward therefrom, and alternate oppositely disposed flange sections formed at the upper edge of said strip and adapted to be bent into engagement with the roofing sections for securing the latter rigidly in position.

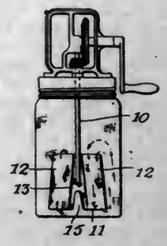
4. A railway car comprising a body, a roof, of unitary construction, mounted for movement vertically of said body, vertically disposed U-headed bolt-members carried at opposite sides of said body, and means engaged in the U-heads of said bolt-members for loosely connecting the roof thereto.

5. A railway car comprising a body, carlines spaced transversely of the body, sectional roofing elements carried by the carlines and secured thereto, bolt-members carried at opposite sides of the body, U-shaped heads formed with said bolt-members and adapted to loosely receive the opposite ends of the carlines, and a loosely fitting means connecting the carline ends with the U-shaped heads of the bolt-members, whereby the carlines, and the roofing elements carried thereby, have independent movement with respect to the body under normal running conditions.

[Claims 6 to 11 not printed in the Gazette.]

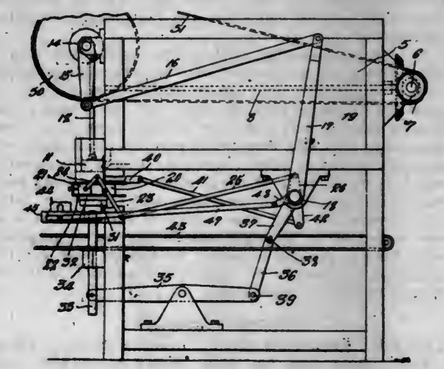
1,215,214. DASHER. CHARLES A. STEWART, Worcester, Mass. Filed May 31, 1916. Serial No. 100,794. (Cl. 259—126.)

1. As an article of manufacture, a churn dasher comprising two oppositely inclined flat blades and a thin vertical central web member connecting them and constituting a support therefor, said central member having a passage therethrough extending up from the bottom for the liquid in which it is used, to reduce the resistance to its operation, and provided with flanges at the sides of said passage extending the full length of the inclined blades to form troughs at the bottom for engaging and guiding the current of liquid.



2. As an article of manufacture, a dasher for the purposes described consisting of a single piece of sheet metal bent in three planes, the vertical height of the three parts being substantially the same, but the central one having a passage therethrough at the bottom extending from a point a material distance from one of its edges to a corresponding point near the other edge.

1,215,215. BRICKMAKING-MACHINE. DAVID STRICKLAND, New York, N. Y. Filed Mar. 18, 1911, Serial No. 615,198. Renewed June 26, 1916. Serial No. 106,059. (Cl. 25—101.)



1. In a brick-making machine, the combination with a mud spout, of a separable mold open top and bottom and fixedly supported below the mud spout, a pallet support movable toward and from the bottom of the mold in a vertical path below the bottom of the mold, and mechanism for actuating the mold and the support in sequential timing for opening the mold and lowering the pallet and the molded brick from the mold.

2. In a brick making machine, the combination with a mud spout, mechanism for discharging mud from the spout, and mechanism timed for intermittently actuating the discharging mechanism, of a separable mold located in position to receive the discharge from the spout, mold actuating mechanism in operative connection with the discharging means for closing the mold prior to each discharge and for opening the same after each discharge, a pallet-conveyer, a pallet support, actuating mechanism for the support in operative connection with the discharging means and located in position to shift a pallet to the mold prior to the discharge and hold the same at the mold during the discharge and after the opening of the mold to shift the pallet from the mold to the conveyer, a sand box, sand box guides extending toward the mold, and sand box actuating mechanism for shifting said box on the guides and timed for bringing the sand box into

operative position relative to the mold after the pallet support has been moved away from the mold.

3. In a brick making machine, the combination with a mud spout, mechanism for discharging mud from the spout, and mechanism timed for intermittently actuating the discharging mechanism, of a separable mold located in position to receive the discharge from the spout, mold actuating mechanism, means timed for closing the mold prior to each discharge and for opening the same after each discharge, a knife timed to dress the top of the mold after discharge from the spout, a pallet-conveyer, a pallet support, actuating mechanism for the support located in position and timed to shift a pallet to the mold prior to the discharge and hold the same at the mold during the discharge and after the opening of the mold to shift the pallet from the mold to the conveyer, a sand box, sand box guides extending toward the mold, and sand box actuating mechanism for shifting said box on its guides and timed for bringing the sand box into operative position relative to the mold after the pallet support has been moved away from the mold.

4. In a brick making machine the combination with a spout and a plunger located therein, of a mold provided with several mold spaces located in position to receive the discharge from the spout and comprising a stationary side bar and a side bar shiftable toward and from the same, said side bars being provided upon their opposed faces with mortises, partitions located between said side bars for dividing off the mold spaces and having their ends disposed in said mortises, each partition being chamfered at its ends, plunger actuating mechanism, a lever mounted upon the stationary bar, a link connected to the movable bar and pivoted to said lever, and an operative connection between said lever and the plunger actuating mechanism.

5. In a brick making machine the combination with a spout and a plunger located therein, of a mold provided with a plurality of mold spaces located in position to receive the discharge from the spout and comprising a stationary side bar, and a side bar shiftable toward and from the same, said side bars being provided upon their opposed faces with mortises, partitions located between said side bars for dividing off the mold spaces and having their ends disposed in said mortises, each partition being chamfered at its ends, pins carried by the partition ends and supported by the side bars for movement longitudinally thereof, plunger actuating mechanism, and side bar actuating mechanism in operative connection with the plunger actuating mechanism.

1,215,216. NON-SKID TIRE. JOHN L. SWARTZ, Akron, Ohio. Filed Aug. 23, 1915. Serial No. 46,868. (Cl. 152—14.)



A tire comprising a casing formed of highly yieldable rubber, having an integral annular imperforate band of semi-hard rubber molded in and surrounded on all sides by the highly yieldable rubber forming the tread portion of said casing, said band continuing throughout the circumference of said portion and being of a width substantially equal to the tread proper of the casing, and a multiplicity of tread members having portions molded in the aforesaid band, the remainder of said members being molded in the tread of the casing.

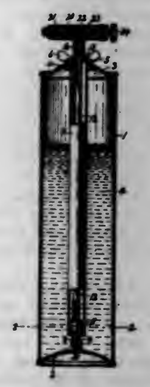
1,215,217. BUTTON. EMIL TESKA, Racine, Wis. Filed June 13, 1916. Serial No. 103,508. (Cl. 24—218.)



1. A button of the class described, comprising a button proper formed with a central opening, a removable headed stem disposed through said opening and formed with an annular groove adjacent one end, a plate formed centrally with an externally projecting hollow dome cooperating with said stem, said dome being provided on opposite sides with slots, and a latch carried by and exteriorly of the plate and embodying spring arms yieldingly disposed within the dome slots, said spring arms being each formed with a spring coil therein and adapted to spring into the annular groove of the stem when the end of the stem is inserted through the said plate into the hollow dome thereof between the spring arms.

2. A button of the class described, comprising a button proper formed centrally with an opening, a removable stem having a rounded end disposed through said opening and formed with an annular groove adjacent the rounded end, a plate formed exteriorly with a hollow dome cooperating with said stem, said dome being provided with slots on opposite sides, and a latch carried by and mounted exteriorly of the plate and embodying spring arms each having a spring loop therein, said arms being yieldingly disposed within the dome slots and extending through and beyond the dome, said spring arm adapted to spring into the annular groove of the stem to retain the stem in locking engagement within the dome of said plate.

1,215,218. DISINFECTING APPARATUS. WALTER H. TIBBALS, Syracuse, N. Y. Filed May 7, 1914. Serial No. 837,066. (Cl. 137—67.)



1. In an apparatus of the character described, a container for liquid and air, a piston pump having a cylinder extending from one end of the container to a point in proximity to its opposite end and also having a tubular piston-rod in constantly open communication with the interior of the cylinder at a point beyond the inner end of the piston, said cylinder having a passage in its inner end opening into the container, a self-closing valve controlling such passage, means secured to the inner end of the tubular piston rod for opening said valve as the piston approaches the limit of its inward stroke for permitting the passage of the liquid through the tubular piston-rod, and means on the outer end of the tubular piston-rod for controlling the escape of the liquid therefrom.

2. In a device of the character described, the combination of a container, a hand-operated piston pump extending thereinto and having an outlet in its handle, said pump having a piston rod provided with a valveless passage connecting the inlet and outlet, a valve in the handle controlling the outlet, a single self-closing valve controlling the flow of liquid from the container through the inlet and into said passage, and means actuated by the piston when moved to a certain position for opening the self-closing valve.

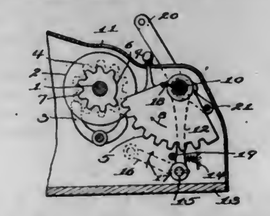
3. In an apparatus of the class described, a container for liquid and air, a pump cylinder secured in one end of the container and extending to a point in proximity to the opposite end and having its inner end provided with a passage communicating with the interior of the container, a self-closing valve in said passage, a piston movable in the cylinder and provided with a tubular piston-rod extending through the outer end of the cylinder and container and having its inner end provided with an opening at the inner end of the piston and in constantly open communication with said passage and also provided with means rigid thereon for opening the valve as the rod approaches the limit of its inward movement to allow the liquid to pass out through the tubular rod, a handle on the outer end of the tubular rod having a discharge passage, and a valve in the handle controlling said discharge passage.

4. In a device of the character described, a container for liquid and air under pressure, a pump cylinder secured to one end of the container and extending to a point in proximity to the opposite end and having its inner end provided with a passage connecting the interior of the cylinder with the interior of the container, a self-closing valve in the passage, a piston and hollow piston-rod therefor having an opening at the inner end of the piston in constantly open communication with said passage, said piston-rod having its inner end provided with means for opening the valve when the rod is at the limit of its inward movement, coöperative locking devices on the inner ends of the piston-rod and cylinder, respectively, adapted to be brought into interlocking engagement with each other by the turning of the rod for holding said rod in its innermost position and thereby holding the valve open, a handle on the outer end of the rod having a discharge passage, and a valve in the handle for controlling said discharge passage.

5. In an apparatus of the class described, a fluid container, a pump cylinder secured in one end of the container and extending to a point near the opposite end, said cylinder having its inner end provided with a passage opening into the interior of the container, a self-closing valve in said passage, a piston, a tubular piston rod extending through the outer end of the cylinder and communicating at all times with said passage at a point between the piston and valve, means actuated by the piston rod when moved to a certain position for opening said valve, a handle on the outer end of the piston rod having a delivery passage, and a valve for the delivery passage.

[Claims 6 to 8 not printed in the Gazette.]

1,215,219. CALCULATING-MACHINE. FRANZ TRINKS, Brunswick, Germany. Filed Oct. 23, 1914. Serial No. 868,308. (Cl. 235—144.)



1. In a calculating machine, the combination, with a series of numeral wheels, each provided upon opposite sides with a pair of gears, one gear of each pair being adapted to drive the associated wheel to different predetermined extents to run up different digits thereon; of a series of individually-operable sectors, one for each wheel, each sector engageable with the other gear of the corresponding pair to alternatively run up a digit on the associated wheel or turn said wheel to zero.

2. In a calculating machine, the combination, with a series of numeral wheels, each provided with a gear; of a series of individually-operable toothed elements engageable with said gears, to rotate the accordant wheels, said gears normally out of position for such engagement; and means whereby said wheels may be rotated to bring said gears into position for such engagement.

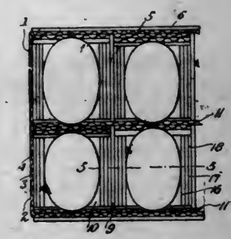
3. In a calculating machine, the combination, with a series of numeral wheels each having a gear on one side thereof; of a series of individually-operable toothed elements engageable with said gears, to rotate the accordant wheels, said gears normally out of position for such engagement; and a gear fixed to the opposite side of each wheel from the first-named gear, to rotate said wheel and thereby bring said first-named gear into position for such engagement.

4. In a calculating machine, the combination, with a series of numeral wheels, each provided with a gear having a portion thereof cut away; of a series of individually-operable toothed elements engageable with said gears, to rotate the accordant wheels, said gears normally disposed with their cut-away portions opposite said toothed elements, so as to preclude such engagement; and means whereby said wheels may be rotated so as to bring the teeth of said gears opposite said elements, to permit such engagement.

5. In a calculating machine, the combination, with a series of numeral wheels each provided with a gear; of a series of individually-operable toothed elements, one for each gear, engageable with said gears to rotate said wheels; a common supporting shaft whereon said elements are loosely mounted; and means connected to shift said shaft bodily away from said gears, to disengage said elements therefrom.

[Claims 6 to 11 not printed in the Gazette.]

1,215,220. EGG-CONTAINER. THOMAS DE QUINCY TULLY, Brooklyn, N. Y. Filed Feb. 12, 1915. Serial No. 7,904. (Cl. 229—15.)

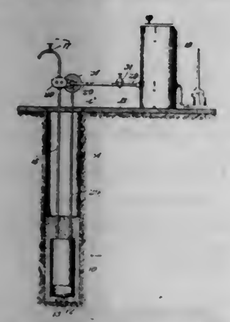


1. An egg container comprising a case including a cover, a cell structure provided with a series of cells for receiving the eggs, said structure fitting the interior walls of the case whereby the cells are held in a relatively immovable position, a pad fitting the interior walls of the case, and provided with cup-shaped depressions corresponding in number with the number of cells, the said depressions being so arranged that when the cell structure is placed upon the pad, the centers of the mentioned depressions will fall in line with the centers of the cells, a wrapper located in each cell and having a depth less than that of the cell in which it is mounted so that when an egg is placed therein, one end thereof will engage in the next adjacent depression in the pad and the other end of the egg will protrude above the opposite end of the wrapper, a filler fitting the interior walls of each cell, each filler having a cup-shaped depression to receive the protruding end beyond said opposite end of the wrapper and co-acting with the pad to hold the egg in an upright and rigid position within the cell and the said cover of the case serving with the pad and fillers respectively to hold the ends of

the eggs in secure confinement in the mentioned depressions in said pad and the fillers.

2. An egg container, comprising, a case, a cell structure fitting the interior walls of the case, and adapted to be held against lateral movement through engagement with the walls, the said structure having cells which are each of a less depth than that of the case, a pad fitting the interior walls of the case and engaged by said walls so as to be held uniformly in the same vertical line with the cell structure and provided with depressions corresponding in number with the number of cells, and adapted to fall in line with the centers of the cells through engagement of the walls of the case with the pad, and means fitting each of said cells and provided with a depression, the walls of the cell engaging with said means so as to hold the depression in said means in the same vertical line with the depression in the pad at the opposite end of the cell, the cells being adapted to receive the eggs whereby the ends of the eggs will respectively project into the depressions in the pad and also in the depressions in said means at the opposite ends of the cells so that the eggs are held in a relatively rigid perpendicular position, and means in each cell adapted to embrace the egg and hold the same against lateral movement.

1,215,221. APPARATUS FOR RAISING WATER. FREDERICK H. UMHOLTZ, Oklahoma, Okla. Filed Jan. 15, 1915. Serial No. 2,447. (Cl. 103—8.)

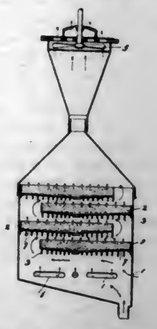


An apparatus of the character described comprising a pair of water containers adapted to be lowered within a water well spaced from its bottom and having valved inlets, a compressed air tank adapted to be located exteriorly of the well, a water discharge pipe common to said containers, a gear casing arranged in said discharge pipe, gear wheels journaled in the casing and meshing with each other, a valve casing connected with the gear casing and having dual communication with the compressed air tank, the said valve casing having a pair of exhaust ports, branch air supply pipes leading from the valve casing to the container, and a valve within the casing having driven connections with one of the gears in the gear casing and adapted to alternately allow admission of air to one receptacle and the exhausting of air from the other receptacle.

1,215,222. TREATING AND SIMULTANEOUSLY STERILIZING OF AIR. REINDER PIETERS VAN CALCAR, Degstgeest, and JAN ELLERMAN and HENDRIKUS JOHANNES MARTIJN, The Hague, Netherlands. Filed Mar. 15, 1913. Serial No. 754,446. (Cl. 34—1.)

1. A process for drying and sterilizing air, which consists in subjecting the air to an artificial whirling motion in the lower part of an apparatus, interposing an absorbing agent in the path of said air, then subjecting the air to a further treatment causing the absorbing agent to flow out by reason of the absorbed humidity of the air, and enlarging the surface contact between the dust particles and the particles of moisture, compelling the air to ascend in a zigzag course past the out flowing absorptive agent and on the other hand to traverse the absorbing agent whereby the air is subjected to a continuous and uninterrupted complementary whirling motion.

2. An apparatus of the character described comprising the combination with a suction device of a square casing having air-inlet apertures formed in three sides, the fourth side being left imperforate; and pans arranged in said casing above said air-inlet apertures.



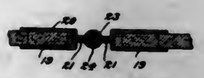
3. An apparatus of the character described comprising the combination with a suction device of a square casing formed with air-inlet apertures in three sides, the fourth side of the casing being substantially imperforate; said air-inlet apertures varying in size to produce air-currents of different intensities.

4. An apparatus of the character described comprising the combination of a square casing having pans built therein and provided with downwardly-directed baffles mounted at the bottom of the pan; said casing being formed with air-inlet passages on three of its sides below the pan, while the fourth side of the casing is substantially imperforate.

5. A process for treating air which consists in drying and sterilizing the air to remove the moisture therefrom, subjecting the air to a continuous and uninterrupted whirling motion and changing the temperature of said air to a degree to remove therefrom the detrimental moisture leaving unaltered the constituent and hygienic properties of the air and increasing the surfaces of contact between the dust particles and the particles of humidity of the air on the one hand and the outflowing absorbing agent on the other hand and giving it a circuitous motion.

[Claim 6 not printed in the Gazette.]

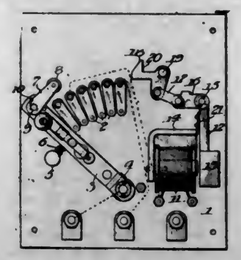
1,215,223. ASBESTOS MAT. WILLIAM HUGHES VANDERPOEL, Newark, N. J. Filed Oct. 3, 1914. Serial No. 864,912. (Cl. 65—53.)



A mat of the class described comprising a plurality of independent sections, flexible strips secured to the respective surfaces of the sections and of less width than the corresponding dimensions of the sections, said strips intermediate and immediately adjacent the edge of each section being stitched in contact to provide intermediate the sections a small, substantially circular casing, and a fire-proof filling interposed between the strips intermediate said lines of stitching.

1,215,224. STARTING DEVICE. HERMAN L. VAN VALKENBURG, Milwaukee, Wis., assignor to Industrial Controller Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 2, 1915. Serial No. 5,686. (Cl. 200—15.)

1. A starting device of the character described having an actuating arm, an electromagnetically controlled detent, a yielding detent arm having a roller carried by said actuating arm, said detent having a finger provided with a holding surface substantially at right angles to the line of travel of said roller when said detent is in its arm detaining position, connections for said detent whereby said finger is adapted to change its angular position upon said release, and means for impelling said actuating arm to off position upon release by the said electromagnetically controlled detent.



2. A starting device of the character described having an actuating arm, an electromagnetically controlled detent, a yielding detent arm having a roller carried by said actuating arm, said detent having a finger provided with a holding surface substantially at right angles to the line of travel of said roller when said detent is in its arm detaining position, connections for said detent whereby said finger is adapted to change its angular position upon release, said roller due to the yielding motion of the arm on which it is connected releasing said actuating arm when said detent is shifted slightly from its detaining position, and means for impelling said actuating arm to off position upon release by the said electromagnetically controlled detent.

3. A starting device of the character described having an actuating arm, a yielding catch carried by said arm, a detent for coöperating with said catch, an electromagnet to control said detent, an armature for said electromagnet connected with said detent, toggle mechanism interposed between said armature and said detent, a weight carried by said armature, and means for impelling said actuating arm to off position upon release of said armature.

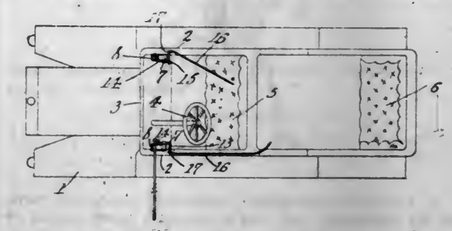
4. A starting device of the character described having an actuating arm, a detent, a yielding detent arm carried by said actuating arm, an electromagnet, an armature for said electromagnet, toggle mechanism interposed between said armature and said detent, and means for impelling said actuating arm to off position upon release of said armature.

5. A starting device of the character described having an actuating arm, a yielding detent arm carried by said arm, a detent for coöperating with said detent arm, an electromagnet to control said detent, an armature for said electromagnet connected with said detent, toggle mechanism interposed between said armature and said detent, a weight carried by said armature, said yielding detent arm carrying a roller and said detent having a finger provided with a surface substantially at right angles to the movement of said roller, said toggle mechanism serving to tilt said detent when in its release position, and means for impelling said actuating arm to off position upon release of said armature.

[Claims 6 and 7 not printed in the Gazette.]

1,215,225. VEHICLE ATTACHMENT. WILEY P. WALKER, San Antonio, Tex. Filed Mar. 13, 1916. Serial 83,946. (Cl. 116—31.)

1. In a device of the class described, a vehicle body comprising a side wall; a standard located adjacent the inner face of the side wall; a loop-shaped guide disposed above the upper edge of the side wall and including horizontally disposed inner and outer arms attached respectively to the opposite sides of the standard, the inner arm being located at a greater height than the outer arm; an upright indicator disposed within the guide and mounted therein to move upwardly between the arms, and to move outwardly in slidable contact with the outer arm, the inner arm coacting with the upper edge of the indicator to hold the same in a substantially horizontal position when the indicator is moved outwardly; a shaft journaled on the standard and comprising arms, one of which is offset, the other of which is pivotally assembled with the lower end of the indicator; a direction-changing element and means for supporting the same; and a flexible member passed through the direction-changing element, one end of the flexible member being connected with the offset arm.



2. A vehicle body comprising a side wall; a standard adjacent the inner face of the side wall; a loop-shaped guide disposed above the upper edge of the side wall and including horizontally disposed inner and outer arms assembled with the standard, the inner arm being located at a greater height than the outer arm; an upright indicator disposed within the guide and mounted therein to move upwardly between the arms and to move outwardly in slidable contact with the outer arm, the inner arm coacting with the upper edge of the indicator to hold the same in a substantially horizontal position when the indicator is moved outwardly; and means for raising the indicator and moving the same outwardly.

1,215,226. FLYING-MACHINE. GEORGE M. WANDE, Oakland, Cal. Filed June 30, 1916. Serial No. 106,937. (Cl. 244—12.)

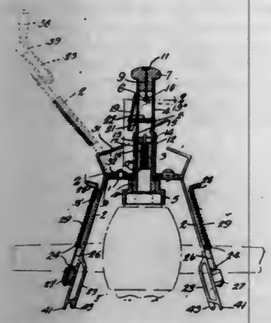


1. A flying machine having a supporting surface comprising a pair of lower planes having downwardly and inwardly curved converging inner ends, and having their outer ends helicoidally curved in a downward and rearward direction the intervening portions of the planes being curved downwardly and rearwardly to a lesser angle of incidence than the outer ends of said planes, and a hood-shaped upper plane above the inner ends of the lower planes and its extremities connected with the body portions of the lower planes between the curved portions thereof, said upper planes having a trail portion of less angle of incidence than its lead portion, and said trail portion having its central part of a less curvature than its extremities.

2. A flying machine having a supporting surface comprising a pair of lower planes having concaved lower surfaces and convex upper surfaces, said lower planes having their inner ends disposed in proximity at the median longitudinal line of the machine, and an upper plane longitudinally and transversely curved and having its concaved side facing the convex upper surface of the lower planes, said upper plane having its central portion disposed above the inner ends of the lower planes and its extremities connected with the lower planes at points adjacent to but beyond the fore-and-aft centers of said lower planes, the trail portion of the upper plane having a less

angle of incidence than the lead portion of said plane, and said trail portion of the upper plane having its central part of a less curvature than its extremities.

1,215,227. WRENCH. WILLIAM R. WELLER, Millstone, Md. Filed Nov. 25, 1916. Serial No 133,419. (Cl. 81—74.)



1. A wrench embodying a member, means carried thereby for engaging a nut, and a reversible prong carried by said member to engage the spokes of a wheel in one position and to provide a crank arm in another position for manually rotating said member.

2. A wrench embodying a member, nut-engaging means carried thereby and a prong, said prong and member having interengageable means for applying the prong to said member in either of two positions, the prong when in one position being engageable with the spokes of a wheel and when in the other position serving as a crank handle for manually rotating said member.

3. A wrench embodying a member, means carried thereby for engaging a nut, a reversible prong carried by said member to project in one direction for engaging the spokes of a wheel and to project in another direction for providing a crank arm, and a crank handle attachable to said prong.

4. A wrench embodying a member, means carried thereby for engaging a nut, a prong, said prong having means engageable with said member in different positions of the prong, the prong in one position projecting in a direction to engage the spokes of a wheel, and when in another position projecting in another direction to serve as a crank handle.

5. A wrench embodying a member, nut engaging means carried thereby, and a prong having diverging portions at its butt end engageable with said member in different positions of the prong.

[Claim 6 not printed in the Gazette.]

1,215,228. WHIP-SOCKET. EMIL W. WILDE, Warsaw, Ill. Filed Oct. 20, 1916. Serial No. 126,787. (Cl. 21—130.)



A whip socket, spring catches therein, secured thereto and arranged to engage around a whip, a disk to support the whip, arranged for vertical movement in the socket and connected to and held by the spring catches, spring pressed pivoted dogs to directly engage the disk and hold the latter in lowered position thereby securing the spring catches in whip locking position, said dogs having lever arms and means to engage the arms of the dogs and cause the latter to release the disk.

1,215,229. FLUID-FUEL BURNER. SAMUEL TULLY WILLSON, Brooklyn, N. Y. Filed Sept. 23, 1916. Serial No. 121,874. (Cl. 158—112.)



1. A burner comprising a shell and a cluster of upright non-angular elements standing in said shell parallel to its axis in close contact with each other and extending uninterruptedly across it, the outermost elements being in close contact with said wall so as to communicate their heat thereto, said elements constructed to provide a series of ducts each outwardly flaring at their outer ends.

2. In a burner, a shell and a grid composed of bars parallel to the axis of the shell, each having differential diameters at different points longitudinally and standing parallel in close contact with each other and extending uninterruptedly across the interior of the shell.

3. In a burner, a tubular shell and a grid across it between its upper and lower ends composed of longitudinally tapering elements of refractory material disposed parallel to the shell axis so as to produce interstices.

4. A burner comprising a shell and a grid arranged across the interior thereof and made up of a number of elements arranged parallel to the axis of the shell forming parallel interstices and standing in close contact with each other, said elements having their upper ends tapered.

5. A burner comprising an upright tubular shell, and a grid supported across the interior thereof and made up of a number of individual cylindrical elements standing in close contact with each other and having their upper ends tapered to points.

[Claims 6 to 12 not printed in the Gazette.]

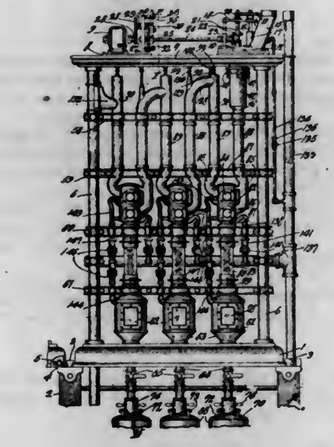
1,215,230. ORE CLASSIFIER OR SEPARATOR. JOHN N. WINGETT, Denver, Colo. Filed June 16, 1913. Serial No. 774,073. (Cl. 83—82.)

1. Apparatus for separating values, including a separating chamber, means for directing an elevating column of separating fluid upwardly through said chamber, means for saturating the values while cut off from the separating chamber, and means for feeding the saturated values into the separating chamber in measured quantities without opening communication between said chamber and the point where saturation is effected.

2. Apparatus for separating values, including a separating chamber, means for directing an elevating column of separating fluid upwardly through said chamber, means for saturating the values while cut off from the separating chamber, means for feeding the saturated values into the separating chamber in measured quantities without opening communication between said chamber and the point where saturation is effected, and means for agitating the values prior to their admission to the separating chamber and after leaving said feeding means.

3. Apparatus for separating values, including a separating chamber, a feed tube opening thereinto, means for feeding measured quantities of saturated values into said tube, means below and spaced from the feeding means for agitating said saturated values within the said feed tube prior to their admission to the separating chamber, and means below and spaced from the agitating means for subjecting the values, while in the separating chamber, to the lifting action of an ascending column of separating fluid.

4. Apparatus for separating values including a collecting chamber, a settling chamber thereabove and opening thereinto, a separating chamber above and opening at its bottom into the settling chamber, a supplemental separating chamber above the said separating chamber, said supplemental chamber and the settling chamber being of less transverse areas than the separating chamber, means for directing values into said chamber, and means for directing a jet of fluid transversely across the separating chamber above the opening in the bottom of said chamber and directly below the inlet for the values, thereby to prevent downward movement of the values in the separating chamber and settling chamber under the impulse imparted to the values during their gravitation within the supplying means.

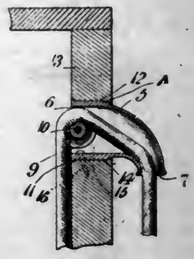


5. Apparatus for separating values, including a separating chamber, an outflow tube thereabove, a collecting chamber below the separating chamber, means for directing values into the separating chamber along lines extending substantially horizontally thereacross, means for directing into the bottom of the collecting chamber an ascending column of separating fluid, a connection between the top of the collecting chamber and the bottom of the separating chamber for directing said ascending column into the bottom of said separating chamber, supplemental means for directing a jet of fluid through the side of the separating chamber above the open bottom thereof and below the value inlet for offsetting the downward impulse imparted to the values during their gravitation within the supplying means, and a connection between the top of the separating chamber and the outflow pipe, said connecting means and the separating chamber being proportioned to produce variable velocities of the ascending column.

[Claims 6 to 21 not printed in the Gazette.]

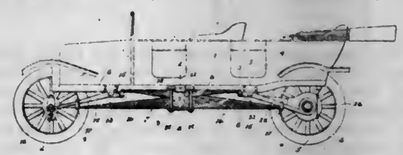
1,215,231. WINDOW-PULLEY. EDWARD B. YOUNG, Okmulgee, Okla., assignor to A. R. Bradshaw, Okmulgee, Okla. Filed Jan. 7, 1916. Serial No. 70,836. (Cl. 16—17.)

A sash cord pulley comprising a shell tapering throughout its longitudinal extent to provide the same with an enlarged front end and a contracted rear end, the contracted rear end of the shell being disposed at right angles with respect to the enlarged front end thereof, and flared, an annular flange formed on the enlarged front end of said shell, ribs formed on the outer periphery of the shell and extending longitudinally thereof, the walls of the shell forming the enlarged front opening thereof being provided with thickened portions serving as a reinforcement therefor, a grooved pulley journaled within the thickened walls, the said thickened portions of the casing retaining the pulley in longitudinal alinement with the



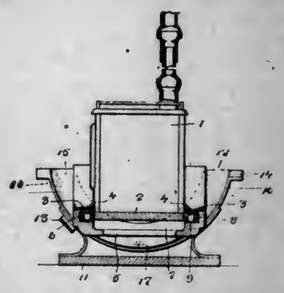
flared contracted rear end of the shell, substantially as and for the purpose specified.

1,215,232. VEHICLE-SPRING. EUGENE C. ABERNETHY, Hollis, Okla. Filed May 24, 1916. Serial No. 99,579. (Cl. 21—105.)



In a wheeled vehicle, a resilient body supporting structure interposed between the body and axles, the same comprising two spring members each tapering from the center toward the extremities thereof, a clamp rigidly connecting the central portions of said spring members and having a pivotal connection with the frame of the vehicle, and two armed levers connected by pivotal links to the opposite extremities of said spring members, said levers being pivotally connected to the frame of the vehicle and connected at their outer extremities with the front and rear axles.

1,215,233. COOKING STOVE OR RANGE FOR MARINE VESSELS. JAMES ALFORD, Jacksonville, Fla. Filed Feb. 7, 1916, Serial No. 76,812. Renewed Dec. 19, 1916. Serial No. 137,913. (Cl. 114—191.)



A support for galley stoves comprising an inner cradle in the form of a trough-shaped body, said body being provided with arcuately curved side and end walls, the said side and end walls projecting to provide rails of the character described, and the said end walls being provided with guide grooves on their inner faces, said grooves being adapted to receive rails and rollers upon the stove, and an outer cradle receiving said inner cradle, said outer cradle having its side walls provided with arcuate grooves slidably receiving the arcuate side rails of the inner cradle.

1,215,234. MULTIPLE-DROP STATION FOR CABLE-CARRIER APPARATUS. GEORGE A. AMSDEN, Littleton, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed May 8, 1914. Serial No. 837,297. (Cl. 186—15.)



1. In cable carrier apparatus, high-line tracks having stations therealong two of which are at different levels from each other, and drop-station apparatus, to serve said stations, comprising a track section common to said two stations and leading up therefrom to one of said high-line tracks, means to propel carriers up said common track section from either of said stations, means to selectively remove carriers, destined for either of said two stations, from the other of said high-line tracks, and means to selectively deliver the so removed carriers respectively to which ever of said two stations it is intended that said carriers shall deliver to.

2. In cable carrier apparatus, high-line tracks having stations therealong two of which are at different levels from each other, and drop-station apparatus common to both of said two stations and having a substantially vertical track up which carriers may be despatched from either of said two stations to one of said high-line tracks, and means to propel said carriers up said vertical track.

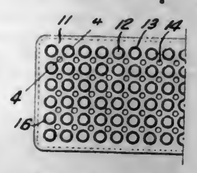
3. In cable carrier apparatus, high-line tracks having stations therealong two of which are at different levels from each other, and drop-station apparatus common to both of said two stations and having a substantially vertical track up which carriers may be despatched from either of said two stations to one of said high-line tracks, means to propel said carriers up said vertical track, and cross-over means to permit the passage of through carriers, *en route* along said main track past both of said stations.

4. In cable carrier apparatus, high-line tracks having stations therealong one of which is a considerable distance below the level of said high-line tracks, a track leading down from one of said high-line tracks to said station, a propelling cable one limb of which extends down in proximity to said last mentioned track and which limb runs downwardly, means to remove a carrier destined for said low level station, from one of said high-line tracks and deliver said carrier to said track leading down to said station, means to automatically connect the so delivered carrier to said descending limb of said cable, and means to thereafter automatically free said carrier from said cable.

5. In cable carrier apparatus, a plurality of vertical tracks along which are disposed a plurality of stations one above another, a cable running adjacent said tracks vertically past said stations, means to engage carriers being despatched from any of said stations along one of said tracks, with said cable, and means to selectively deliver carriers to said stations from the other of said vertical tracks, said last mentioned means including a substantially vertical switch at at least one of said stations and an auxiliary track, leading from said switch, to which carriers removed from said vertical track by said vertical switch, are delivered.

[Claims 6 to 16 not printed in the Gazette.]

1,215,235. TREAD-PLATE. WILLIAM S. ATWOOD, Montreal, Quebec, Canada. Filed Jan. 14, 1915. Serial No. 2,177. (Cl. 20—79.)



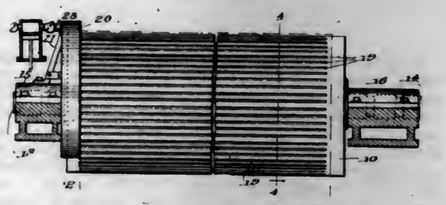
1. A device of the character described, comprising a plate having apertures therein, upstanding burs surrounding said apertures and drainage means between said apertures.

2. A device of the character described, comprising a plate having apertures therein, burs surrounding said apertures and drainage openings between said apertures in a lower horizontal plane than said apertures.

3. A device of the character described, comprising a plate having apertures, upstanding burs surrounding said apertures, and drainage means between said apertures comprising unburred openings.

4. A device of the character described, comprising a plate having apertures therein, and upstanding burs surrounding alternate apertures on opposite sides of said plate.

1,215,236. DRYING-ROLL. JOHN P. BADENHAUSEN, Philadelphia, Pa. Filed May 29, 1915. Serial No. 31,245. (Cl. 34—4.)



1. A drying roll comprising a revoluble body having a series of steam passages in the periphery thereof, said passages extending longitudinally of the body, and a vacuum casing partially inclosing one end of the body and having said passages communicating therewith.

2. A paper drying roll comprising a cylinder having surface depressions formed in the periphery thereof, adapted to be closed by and to receive moisture from the paper stock traveling directly in surface contact with said cylinder, and means for discharging from said depressions the moisture deposited therein from said stock.

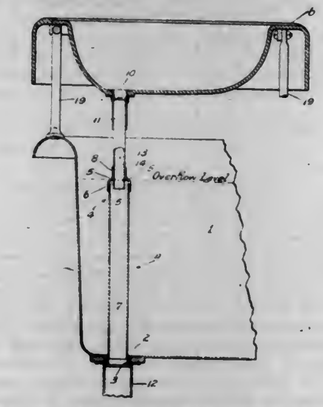
3. A drying roll comprising a hollow body forming an internal heating chamber, the periphery of said body having longitudinally extending steam passages formed therein, steam supplying and exhaust connections communicating with the heating chamber of the body, a casing partially encircling the body and having said passages communicating therewith, and suction means coöperating with the casing for drawing products deposited in said passages into said casing.

4. A stock drying roll comprising a revoluble body having longitudinally extending depressions formed in the periphery thereof, arranged to be closed in the rotation of the body by the movement of the stock over said periphery, said depressions extending beyond the line of a margin of the stock, a casing communicating with the portions, the passages extending beyond such margin of the stop, and a suction device for forming a partial vacuum in said casing.

5. A stock drying roll comprising a hollow rotating body forming a heating chamber, the periphery of said body being provided with longitudinally extending depressions formed therein, terminating at one side of the body within the line of one of the lateral margins of a web of stock lying upon the periphery of the body, and projecting at the opposite side of the body beyond the line of the other lateral margin of the stock, a casing communicating with the projecting portions of the depressions, and a suction device for forming a partial vacuum in said casing.

[Claims 6 and 7 not printed in the Gazette.]

1,215,237. BATH-TUB AND LAVATORY DIRECT WASTE. GEORGE H. BARKER, Pasadena, Cal., assignor to Improved Sanitary Fixture Company, Los Angeles, Cal., a Corporation of California. Filed June 1, 1915. Serial No. 31,607. (Cl. 4—27.)



1. The combination with a waste pipe, of a connection having a reduced upper part slidable thereon and being provided with a lower widened part, said lower part having an overflow inlet thereinto at its junction with said upper part, a pipe having its upper end removably connected to the lower part of said connection, and a waste outlet in which said pipe is removably seated.

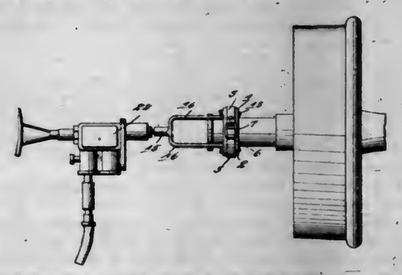
2. In combination with a waste pipe, a connection having a reduced upper part slidable upon the waste pipe and being provided with a lower widened part, said lower part having an overflow inlet at its junction with said upper part; a stand-pipe removably seated in said outlet and having its upper end removably connected with the lower part of said connection; and said waste pipe extending below said overflow inlet into said stand pipe without contacting with the interior wall of the stand pipe when said stand pipe is seated in the waste outlet.

3. In combination with a bath-tub provided with a waste outlet and having a lavatory bowl supported above the bath-tube and a waste-pipe connected to and extending down from the lavatory bowl; a connection having a reduced upper part slidable upon the waste pipe and being provided with a lower widened part; said lower part having an overflow inlet at its junction with said upper part; a stand pipe removably seated in said outlet and having its upper end removably connected with the lower part of said connection; and said waste pipe extending below said overflow inlet into said stand pipe without contacting with the interior wall of the stand pipe when the stand pipe is seated in the waste outlet.

4. In combination with a bath-tub provided with a waste outlet and having a lavatory bowl supported above the bath-tub, a waste pipe connected to and extending down from the lavatory bowl; a connection having a reduced upper part slidable upon the waste pipe and being provided with a lower widened part; said lower part having an overflow inlet at its junction with said upper part; a stand pipe removably seated in said outlet and having its upper end removably connected with the lower part of said connection; and said waste pipe being insertible into and removable from the space between the outlet and the waste pipe when said connection is detached from the stand pipe.

5. In connection with a bath-tub provided with a waste outlet and having a lavatory bowl supported above the bath-tub and a waste pipe connected to and extending down from the lavatory bowl; a connection having a reduced upper guide section fitted to and slidable on the waste pipe and at the lower end a widened screw-threaded section; an overflow inlet between said sections; and a stand pipe having its upper end screwed into said lower section and its lower end seated in said waste pipe.

1,215,238. JOURNAL-POLISHER. WILLIAM H. BASENBERG, Birmingham, Ala. Filed June 8, 1916. Serial No. 102,605. (Cl. 51—4.)



1. A journal polisher of the class described comprising a plurality of sections, means for hingedly connecting said sections together, tightening means carried by one section and engaging the other section for binding the same upon a journal, and a removable polisher carried by each section.

2. A journal polisher of the class described comprising a plurality of sections, a metallic band secured to the outer face of each section and hingedly connecting said sections together, each band provided with a projecting lip at the outer end thereof, a link connected to one of said projecting lips, a binding screw carried by said link and adapted to draw said sections together, a detachable polishing band secured to the inner face of each section.

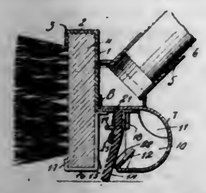
3. A journal polisher of the class described comprising a plurality of sections, means for tightening said sections upon a journal, a polishing band secured to each section, an abutment plate secured to one face of each section for preventing the accidental displacement of said band upon one side of said polisher, and pivoted buttons carried by the opposite side of each section and releasably engaging said polishing bands for detachably holding said bands in engagement with said sections.

4. A journal polisher of the class described comprising a plurality of sections, means for tightening said sections upon a journal, a polishing band secured to each section, an abutment plate secured to one face of each section for preventing the accidental displacement of said band upon one side of said polisher, pivoted buttons carried by the opposite sides of each section and releasably engaging said polishing band for detachably holding said bands in engagement with said sections, and abutment plates carried by the ends of each section and engaging the respective ends of said polishing bands.

5. A journal polisher of the class described comprising a polishing body, said polishing body provided with sockets formed therein, laterally extending pockets communicating with said sockets, and driving means fitting within said sockets and pockets for detachably engaging said polishing body.

[Claims 6 and 7 not printed in the Gazette.]

1,215,239. SCRUBBING AND MOPPING BRUSH. PATRICK A. BAYLESS, Minneapolis, Minn., assignor of one-half to Homer Ray, Minneapolis, Minn. Filed May 2, 1916. Serial No. 94,961. (Cl. 15—13.)



1. A device of the class described comprising a body, a water receiving receptacle secured thereto, said receptacle comprising an elongated body being inclined toward each end thereof, said receptacle provided with an inwardly extending flange constituting a water containing flange, and a flexible mopping strip secured to said water receiving receptacle.

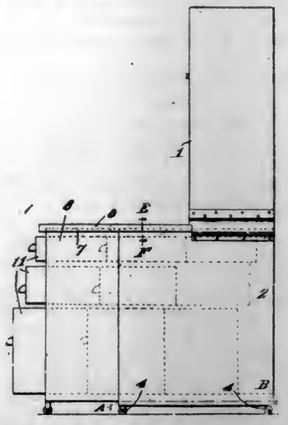
2. A device of the class described comprising a body, a water receiving receptacle secured thereto, said receptacle comprising an elongated body being inclined toward each end thereof, said receptacle provided with an inwardly extending flange constituting a water containing flange, said receptacle provided with a lug supporting flange, lugs secured to said flange, a flexible mopping strip, and means engaging said lugs and also engaging said mopping strip for firmly holding said mopping strip upon said water receiving receptacle.

3. A device of the class described comprising a body, a water receiving receptacle secured thereto, said receptacle comprising an elongated body being inclined toward each end thereof, said receptacle provided with an inwardly extending flange constituting a water containing flange, a flexible mopping strip secured to said water receiving receptacle, said water receiving receptacle provided with projecting lugs formed thereon, said lugs provided with apertures formed therein, a flexible mopping strip fitting over said lugs, and a metallic clamp engaging said lugs and fitting against said mopping strip for firmly holding said mopping strip upon said lugs.

4. A device of the class described comprising a body, a water receiving receptacle secured thereto, said receptacle comprising an elongated body being inclined toward each end thereof, said receptacle provided with an inwardly extending flange constituting a water containing flange, a flexible mopping strip secured to said water receiving receptacle, said water receiving receptacle provided with projecting lugs formed thereon, said lugs provided with apertures formed therein, a flexible mopping strip fitting over said lugs, a metallic clamp engaging said lugs and fitting against said mopping strip for firmly holding said mopping strip upon said lugs, said metallic clamping member comprising an elongated body having a rolled edge along one side thereof, a plurality of pins carried by said clamping member and fitting in said apertures of said lugs for firmly holding said mopping strip upon said water receiving receptacle.

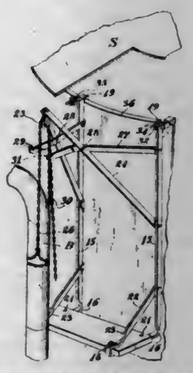
5. A device of the class described comprising a body, a water receiving receptacle secured thereto, said receptacle comprising an elongated body being inclined toward each end thereof, said receptacle provided with an inwardly extending flange constituting a water containing flange, a flexible mopping strip secured to said water receiving receptacle, said water receiving receptacle provided with projecting lugs formed thereon, said lugs provided with apertures formed therein, a flexible mopping strip fitting over said lugs, a metallic clamp engaging said lugs and fitting against said mopping strip for firmly holding said mopping strip upon said lugs, said metallic clamping member comprising an elongated body having a rolled edge along one side thereof, a plurality of pins carried by said clamping member and fitting in said apertures of said lugs for firmly holding said mopping strip upon said water receiving receptacle, and said clamping bar provided with bulged portions struck therefrom adjacent the ends thereof for producing a spring clamp for holding said flexible mopping strip in engagement with the inner edge of said water receiving receptacle.

1,215,240. KITCHEN-CABINET. CHARLES C. BECKER, Indianapolis, Ind. Filed May 6, 1914. Serial No. 836,802. (Cl. 45—16.)



A kitchen cabinet embodying a base section constituting a housing and having sides and a bottom, an upper section spaced above the base section, the base section being extended forwardly beyond the upper section, a leaf slidably mounted between the sections and extending over the edges of the sides of the base section, said leaf being slidable forwardly from under the upper section, a supplemental casing movable snugly within the base section and having its upper portion connected to and closed by said leaf to move therewith, anti-frictional supporting means carried by the supplemental casing in front of the bottom of the base section to move upon the supporting surface of the cabinet, anti-friction supporting means carried by the bottom of the base section at its forward edge to support the supplemental casing, and anti-friction means carried by the bottom of the supplemental casing at the rear edge thereof to bear upon the bottom of the base section.

1,215,241. HOISTING DEVICE FOR ENSILAGE-BLOWERS. WALTER EDWARD BEREITER, Zion City, Ill. Filed Nov. 14, 1916. Serial No. 131,322. (Cl. 254—142.)



1. In a device of the class described, a frame comprising side members having forwardly extending arms at

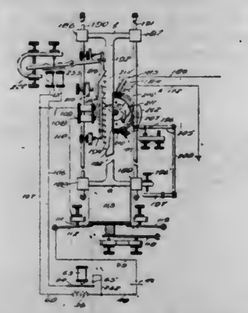
their lower ends, a step supported on said members, supporting means at the upper ends of the side members whereby the frame may be suspended in position for operation, forwardly converging arms supported by the side members, and hoisting means carried by said arms.

2. In a device of the class described, a frame comprising members having forwardly extending arms at their lower ends, said arms having terminal hooks, inclined braces connecting the hooks with the side members, a step secured on the arms with its forward edge beneath the hooks, said step serving to connect and to space apart the lower ends of the side members, forwardly convergent arms connected with the side members, means whereby said arms are secured together at their front ends, a hoisting pulley supported by said arms, and means secured at the upper ends of the side members whereby the frame may be suspended in position for operation.

3. In a device of the class described, a frame comprising side members having forwardly extending arms, a step secured on said arms, forwardly convergent arms connected with the side members, a pulley supported by said arms, brace arms connecting the first mentioned arms with the side members, said brace arms being provided with terminal hooks at their free ends, a chain connected with one of the arms, keepers at the upper extremities of the side members, shanks secured slidably and adjustably in the keepers, and hook members at the rearward ends of the shanks.

4. In a device of the class described, a frame comprising suitably spaced and connected side members, a step at the lower ends of the side members, and hoisting mechanism supported by the frame, brace arms reinforcing the brace mechanism and having terminal hooks and a chain connected with one of said brace arms, and means at the upper ends of the side members of the frame, whereby said frame may be suspended in position for operation.

1,215,242. CIRCUIT-CLOSER FOR AUTOMATIC SIGNALING SYSTEMS. CLINTON L. BOPP, Hawkeye, Iowa. Filed June 3, 1914. Serial No. 842,771. (Cl. 200—27.)



1. In a circuit closing device, a rotary member carrying contacts, a reciprocating member, means for operating the former from the latter, means for operating the reciprocating member, a retaining device for the latter engaging the means last mentioned, and a magnet for releasing the retaining device and operating means simultaneously.

2. In a circuit closing apparatus, a plurality of devices certain of which are operated in a given direction upon receiving a current impulse, a contact device remaining stationary while the apparatus is receiving said impulse, mechanism causing the operation of said devices in the opposite direction for transmitting an impulse, a circuit arranged to be closed when the devices last mentioned are operated, and means for releasing the devices, transmitting the impulse.

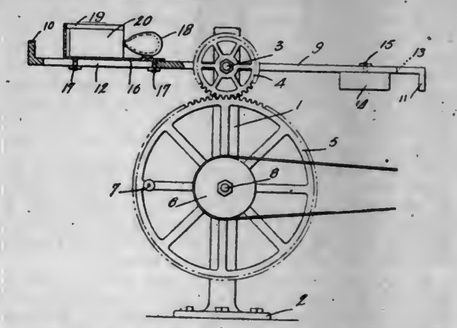
3. In a circuit closing device, a reciprocable member, means for operating the latter when receiving a current impulse, a rotary contact member remaining stationary while the impulse is being received, and means connecting these members for causing the reciprocable member to operate the other member when transmitting an impulse.

4. In a circuit closing device, a reciprocating weight, a notched bar connected with the weight, electro-magnetically energized means engaging the notched bar for raising the weight, means engaging said bar for retaining the latter in a raised position, a rack carried by the bar, a gear engaging the rack, contact members mounted to move simultaneously with the bar when the latter descends, means driven from the gear and carrying the contact members, means for releasing the bar, and a circuit adapted to be closed by the contact members as the bar descends for rotating the gear.

5. In a circuit closing device, a reciprocating notched bar, electro-magnetic means associated with the bar for raising the latter, a rack moving with the bar, a gear engaging the rack, a drum carrying contacts, means for rotating the drum from the gear, means holding the drum against rotation in one direction, separate electro-magnetically controlled means associated with a notched bar for retaining and releasing the same, and a circuit adapted to be closed as the bar rotates the drum.

[Claims 6 to 13 not printed in the Gazette.]

1,215,243. APPARATUS FOR AND PROCESS OF DIE-CASTING PURE ALUMINUM, ITS ALLOYS, AND OTHER LIGHTER METALS. FREDERICK H. BOAST, Artesian, S. D. Filed June 22, 1916. Serial No. 105,232. (Cl. 22—209.)



1. The process of die casting aluminum or equivalent material, consisting of rotating a crucible of the molten material at the inner side of a die for receiving the material by centrifugal force, and permitting the air to flow from the outer end of the die toward the inner end thereof in a direction substantially opposite to the flow of material into the die.

2. The process of die casting aluminum or equivalent material, consisting in rotating a die and a crucible of the molten material with the crucible at the inner end of said die whereby the material is delivered by centrifugal force into the die, permitting the air to be discharged from the outer end of the die toward the inner end thereof in a direction opposite to the direction of the flow of material into the die, and jarring the die during the rotation thereof.

3. An apparatus for die casting aluminum or equivalent material embodying a rotatable member, a die carried thereby having means for receiving the material at its inner end and means for the discharge of air extending from the outer end of the die toward the inner end thereof, and a crucible for the molten material carried by said member adjacent the inner end of the die.

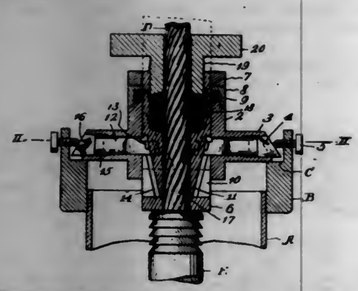
4. An apparatus for die casting aluminum or equivalent material, comprising a rotatable member having a stop, a slide carried by said member and movable outwardly against said stop, a die carried by said slide and having means at its inner end for receiving molten material and

having means for the outlet of air from the outer end of the die toward the inner end thereof, and a crucible carried by said slide adjacent to the inner end of the die.

5. An apparatus for die casting aluminum or equivalent material, comprising a bar mounted for rotation between its ends and having stops at its ends, a slide carried by one arm of said bar and movable outwardly against the respective stop, a counter weight slidably carried by the other arm of the bar and movable outwardly against the respective stop, a die carried by the slide and having means at its inner end for receiving molten material and having means for the outlet of air from the outer end of the die toward the inner end thereof, and a crucible carried by said slide adjacent to the inner end of the die.

[Claims 6 and 7 not printed in the Gazette.]

1,215,244. OIL-SAVER. LESLIE G. BOWEN, Kansas City, Mo. Filed June 17, 1916. Serial No. 104,271. (Cl. 166—14.)



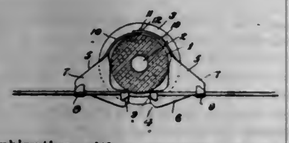
1. The combination of a casing head, a closure for said casing head, releasable means for securing said closure to the casing head, and means slidable in the closure and provided with downwardly converging grooves the walls of which control said releasable means.

2. The combination of a casing head, a closure for said casing head, releasable means for securing said closure to the casing head, said means being provided with T-shaped terminals, and means slidable in the closure and provided with converging grooves to receive said T-shaped terminals and control the releasable means.

3. The combination of a casing head, screws in the upper portions thereof, latches slidable in the closure and having beveled outer terminals for engagement with said screws, and means slidable in the closure and engaging the inner terminals of said latches to move the same in and out of engagement with the casing head.

4. The combination of a casing head, a closure for said casing head, latches slidable in said closure and adapted to secure the same to the casing head, a plunger slidable in the closure and having grooves with walls engaging the latches to move the same in and out of engagement with the casing head, means to limit the movement of said plunger, and packing between the plunger and the closure.

1,215,245. TIE-WIRE FOR INSULATORS. ROBERT L. BOYTER, Lakeview, Tex. Filed Aug. 28, 1916. Serial No. 117,322. (Cl. 173—313.)



The combination with a supporting insulator, and an electric current carrying conductor, of an attaching device for holding the conductor to the insulator embodying complementary sections each formed from a single piece of metal formed to provide a base having one section curved to conform to the curvature of the insulator, an outwardly projecting lug formed on the inner edge of the base adjacent to one end thereof, an overlying hook on said lug, a second hook on said base adjacent to the other end thereof and turned in a direction reverse to the first mentioned hook and overlying said base, straps integral with said base members respectively, and each twisted to a position at right angles to the base and adapted to fit into a groove in the insulator, the outer ends of said straps being formed to interlock, and said insulators being adapted to receive said conductor and coöperating with the interlocking straps to hold the device on the insulator and secure the conductor to the insulator.

1,215,246. PROCESS FOR TREATING FUR. WILLIAM P. BRAUN, Brooklyn, N. Y. Filed Sept. 20, 1916. Serial No. 121,304. (Cl. 38—12.)

1. The process of treating hair or fur for hatters' stock, which consists in subjecting the same to the action of a solution of soda ash (sodium carbonate) heated to a high temperature.

2. The process of treating hair or fur for hatters' stock, which consists in separating the hair or fur from the hide and then subjecting the hair or fur to the action of a solution of soda ash (sodium carbonate) heated to a high temperature.

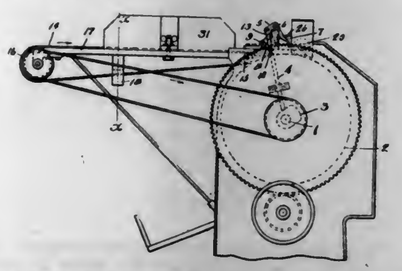
3. The process of treating hair or fur for hatters' stock, which consists in immersing the hair or fur in boiling water containing soda ash (sodium carbonate).

4. The process of working hatters' stock, which consists in immersing hair or fur for such stock in boiling water containing soda ash (sodium carbonate), forming the stock, and shrinking or felting the same by the application of hot water.

5. The process of treating hair or fur for hatters' stock, which consists in removing the hair or fur for hatters' stock, and boiling the hair or fur, so removed, in water containing soda ash (sodium carbonate).

[Claims 6 to 9 not printed in the Gazette.]

1,215,247. SHEET-FEEDING MEANS. HARRY L. BRIGHAM, Brockton, Mass., assignor to Tolman Print Incorporated, Brockton, Mass., a Corporation of Massachusetts. Filed Sept. 29, 1916. Serial No. 122,822. (Cl. 101—38.)



1. A sheet-feeding apparatus comprising a gage for holding a sheet in delivering position and movable from said position to permit delivery of the sheet, continuously-operated feeding-means for conducting the sheet to said position, an intercepting-device movable between an intercepting position, in which it prevents feeding movement of the sheet by said feeding-means, and a position in which it permits such feeding movement, and means to move said intercepting-device to reëngage the sheet, as said gage is moved out of sheet-holding position, to prevent forward movement thereof beyond said delivering position by said feeding-means and permit forcible withdrawal thereof from said position.

2. A sheet-feeding apparatus comprising a continuously-operating sheet-feeding means, a gage movable into the path of movement of a sheet fed by said feeding-means, to hold the sheet against movement beyond a predetermined delivering position, and movable from said path to permit withdrawal of the sheet from said position, a sheet-intercepting device adapted and arranged to hold the sheet against movement by said feeding-means to said position and to permit withdrawal of the sheet from said position while engaged with the sheet, and means to move said intercepting-device into its sheet intercepting position as said gage is moved out of the path of the sheet.

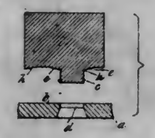
3. A sheet-feeding apparatus comprising a continuously-operating sheet-feeding means, a gage movable into the path of a sheet fed by said feeding-means to intercept the sheet and hold it in a delivering position, and movable out of said path to permit withdrawal of the sheet from said position, a supplemental sheet-intercepting device, adapted and arranged frictionally to engage the sheet and to hold it against movement by said feeding-means, and automatic means to cause simultaneous movement of said intercepting-device out of intercepting position and said gage into sheet-holding position, and to cause simultaneous opposite movement thereof, to cause reëngagement of the sheet by said intercepting-device, thereby to prevent movement of the sheet beyond said delivering position by said feeding-means, and permit it to be forcibly withdrawn from said position.

4. A sheet-feeding apparatus comprising a gage for holding a sheet in delivering position, sheet-feeding means arranged frictionally to engage the sheet to conduct it to said delivering position, a sheet-intercepting device, means to move said device to and from a position to rest on the sheet, to prevent movement thereof by said feeding-means and permit forcible withdrawal thereof from said delivering position, and means relatively timed to move said gage out of its sheet-holding position and simultaneously to move said intercepting-device into its sheet-engaging position, and to move said gage into its sheet-holding position and simultaneously move said intercepting-device out of sheet-engaging position, alternately.

5. A sheet-feeding apparatus comprising a gage-device movable to and from a sheet-positioning position, a continuously operating sheet-feeding means arranged frictionally to engage a sheet to move it against said gage-device when in said position, a sheet-intercepting device and means to move said intercepting device into engagement with the sheet to prevent feeding movement thereof by said feeding-means, as said gage-device is moved out of sheet-positioning position.

[Claims 6 to 10 not printed in the Gazette.]

1,215,248. MANUFACTURE OF ENVELOPS, POSTAL WRAPPERS, AND THE LIKE. HENRY BROWN, Wimbledon, England. Filed Feb. 28, 1916. Serial No. 81,033. (Cl. 93—61.)



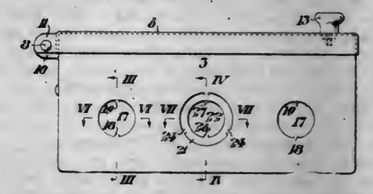
1. The combination, with a series of punches having around them convex surfaces, said punches also having an oppositely inclined surface extending around and outside of said convex surfaces, of a die for coacting with said punches and with said inclined surfaces, for the purpose specified.

2. An apparatus for shaping the flaps of envelops, postal wrappers and the like, such apparatus comprising a series of punches for cutting material from the stock and having a series of oppositely inclined shaping surfaces, and a flat surface arranged between said inclined shaping surfaces, in combination with a die comprising apertures for coacting with said punches and surfaces for coacting with said inclined shaping surfaces.

3. An apparatus for use in the manufacture of envelops, postal wrappers and the like, said apparatus comprising a punch for cutting material from the stock and having an inclined surface adjacent to said punch and a channel between said punch and said inclined surface, and a die for coacting with said punch and with said inclined surface, for the purpose specified.

4. An apparatus for use in the manufacture of envelops, postal wrappers and the like, said apparatus comprising a punch for cutting material from the stock, and having an inclined surface adjacent to said punch and a channel between said punch and said inclined surface, an oppositely inclined surface extending outside the punches, and a die for coacting with said punches and with said inclined surfaces.

1,215,249. ELECTRIC SWITCH-BOX. JAMES F. BURNS, Philadelphia, Pa. Filed Dec. 31, 1912. Serial No. 739,425. (Cl. 247—7.)



1. An electric connection box having a metal wall with a partially formed aperture normally closed by two concentric circular blanks, the outer blank being annular and connected with the remainder of the wall by three uncut unitary bridges, equally spaced circumferentially, and the inner blank being a disk connected with said outer blank by an uncut unitary bridge intermediate of said outer bridges and having, diametrically opposite to it, a lug frictionally engaging said wall; said two blanks being disposed in respectively different planes with respect to said wall, the outer one of said blanks being displaced inwardly with respect to said wall, and the inner blank being displaced outwardly with respect to said outer blank; whereby, said inner blank may be knocked out, in one direction, without disturbing said outer blank and leaving a small opening in said wall, and, said outer blank may be knocked out, in the opposite direction, together with said inner blank, leaving a larger opening in said wall.

2. An electric connection box having a metal wall with a partially formed aperture normally closed by two concentric circular blanks, the outer blank being annular and connected with the remainder of the wall by three uncut unitary bridges, equally spaced circumferentially, and the inner blank being a disk connected with said outer blank by an uncut unitary bridge intermediate of said outer bridges and having, diametrically opposite to it, a lug frictionally engaging said wall; said two blanks being disposed in respectively different planes with respect to said wall, the inner blank being displaced outwardly with respect to said outer blank; whereby, said inner blank may be knocked out without disturbing said outer blank and leaving a small opening in said wall, and said outer blank may be knocked out, together with said inner blank, leaving a larger opening in said wall.

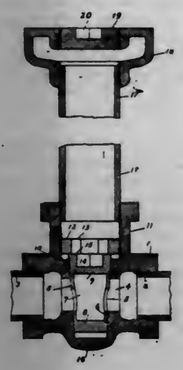
3. An electric connection box having a metal wall with a partially formed aperture normally closed by two concentric circular blanks, the outer blank being annular and connected with the remainder of the wall by three uncut unitary bridges, equally spaced circumferentially, and the inner blank being a disk connected with said outer blank by an uncut unitary bridge intermediate of said outer bridges and having, diametrically opposite to it, a lug frictionally engaging said wall; said two blanks being disposed in respectively different planes with respect to said wall; whereby, said inner blank may be knocked out without disturbing said outer blank and leaving a small opening in said wall, and said outer blank may be knocked out, together with said inner blank, leaving a larger opening in said wall.

4. An electric connection box having a metal wall with a partially formed aperture normally closed by two blanks, one within the other, the outer blank being annular and connected with the remainder of the wall by three uncut unitary bridges, equally spaced circumferentially, and the inner blank being a disk connected with said outer blank by an uncut unitary bridge intermediate of said outer bridges and having, diametrically opposite to it, a lug frictionally engaging said wall; said two blanks being disposed in respectively different planes with respect to said wall, the outer one of said blanks being displaced inwardly with respect to said wall, and the inner blank being displaced outwardly with respect to said outer blank; whereby, said inner blank may be knocked out, in one direction, without disturbing said outer blank and leaving a small opening in said wall, and, said outer blank may be knocked out, in the opposite direction, together with said inner blank, leaving a larger opening in said wall.

5. An electric connection box having a metal wall with a partially formed aperture normally closed by two blanks, one within the other, the outer blank being annular and connected with the remainder of the wall by three uncut unitary bridges, equally spaced circumferentially, and the inner blank being a disk connected with said outer blank by an uncut unitary bridge intermediate of said outer bridges and having, diametrically opposite to it, a lug frictionally engaging said wall; said two blanks being disposed in respectively different planes with respect to said wall, the inner blank being displaced outwardly with respect to said outer blank; whereby, said inner blank may be knocked out without disturbing said outer blank and leaving a small opening in said wall, and said outer blank may be knocked out, together with said inner blank, leaving a larger opening in said wall.

[Claims 6 to 22 not printed in the Gazette.]

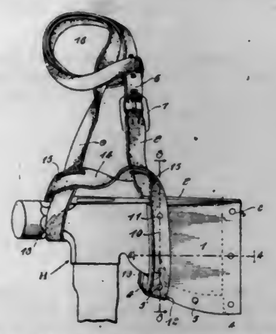
1,215,250. CURB-COCK. FREDERICK H. CASSIDY, Randolph, Mass. Filed Jan. 25, 1916. Serial No. 74,261. (Cl. 137—13.)



1. A curb cock comprising a valve body having a chamber formed with an inlet and an outlet orifice, an inlet and an outlet service pipe connected respectively with said orifices, said body having an aperture through one side to receive a plug, a plug which extends through said aperture and is seated on the opposite side of the chamber, said plug being formed with a transverse aperture and being rotatable to open and close the passage from the inlet to the outlet service pipe, said body having an internally threaded flange around the aperture which receives said plug, a clamping nut having a screw threaded outer periphery which engages with the threads of said annular flange and is adapted to be screwed down against the outer end of said plug, the plug having a surface coöperating with the clamping nut whereby the plug is held in place, the plug having a recess below the nut, said recess inlet being flush with the said coöperating surface, the said nut having an opening wider than the recess in the plug, and a stand-up pipe connected with said flange, the nut and plug being adapted to receive suitable wrenches.

2. A curb cock comprising a valve body having a chamber and having an inlet orifice through the wall of the body leading into said chamber, and an outlet orifice through another part of the wall, the valve body surrounding each of said orifices having a tapped-out boss, an inlet service pipe leading from the main pipe and having threaded connection with the boss surrounding the inlet orifice, a service supply pipe having threaded connection with the boss which surrounds said outlet orifice, said body having a tapered circular aperture through one side and a tapered circular recess in the interior of the wall of the body opposite said tapered aperture between said inlet and outlet orifices, a tapered rotary plug which extends through said tapered aperture and into said tapered recess, said plug being formed with a transverse passage and being rotatable to open and close the passage through the valve from the inlet service pipe connection to the outlet service pipe connection, said body having an internally threaded annular flange around the aperture which receives said plug, a clamp nut having a screw-threaded outer periphery which engages with the threads of said annular flange and is adapted to be screwed down against the outer end of said plug to hold said plug in its bearing in the valve body, said plug having a polygonal recess in the outer end thereof to receive the polygonal sided head of a wrench, the inner periphery of said nut being also polygonal and of larger diameter than the recess in said plug to receive the polygonal sided head of a wrench, and a pipe having a screw-threaded connection at one end with said flange of the valve body, said pipe extending upward toward the surface of the ground and having a removable cover therefor, said pipe being of sufficient size to permit the introduction from the upper end of the pipe when the cover is removed of a wrench having a suitably shaped head to engage with the polygonal recess in said plug and to admit a wrench with a suitably shaped head to engage with the polygonal aperture in said nut whereby said clamp nut and said plug may be operated.

1,215,251. HATCHET-SHEATH. MILTON CLAUSER, Salt Lake City, Utah. Filed July 24, 1916. Serial No. 111,015. (Cl. 224—1.)



1. A device of the class described comprising a hatchet blade receiving guard formed of two flat sides secured together at one end and diverging outwardly, a wedge-shaped spacing strip between said sides, and a supporting strap having a portion thereof engaging the guard, and a loop adapted for engagement with the hammer end of the hatchet when the same is positioned in said guard.

2. A device of the class described comprising a hatchet blade receiving guard formed of two flat sides secured together at one end and diverging outwardly, a wedge-shaped spacing strip between said sides forming a bottom for the guard, a transversely extending rivet between the sides adapted to be positioned in the slot in the hatchet blade, a supporting strap having a portion thereof engaging the guard, and a loop adapted for engagement with the hammer end of a hatchet when the same is positioned in said guard.

3. A device of the class described comprising a hatchet blade receiving guard formed of two flat sides secured together at one end and diverging outwardly, a wedge shaped spacing strip between said sides forming a bottom for the guard, a rivet extending transversely through the sides adjacent the bottom adapted to be positioned in the slot of the hatchet blade, and a supporting strap having a portion surrounding the guard and secured thereto, and a loop spaced therefrom adapted to surround the hammer end of the hatchet when the same is positioned in the guard.

4. A device of the class described comprising a substantially wedge-shaped guard adapted to receive a hatchet blade therein, and a supporting strap having a looped portion thereof surrounding said guard and secured thereto, and additional spaced loops adapted to engage the hammer end of said hatchet, and an integral cross strap connecting said loops.

5. A device of the class described comprising a substantially wedge shaped guard adapted to receive a hatchet blade therein, a supporting strap having one end portion thereof extending downwardly and surrounding said guard, the other end portion of said strap surrounding the hammer end of a hatchet, a horizontally extending integral cross strap above the top of said hatchet connecting said end portions, and strap engaging means on said cross strap for engagement with the end portions of said strap to form spaced loops at the ends of the same.

1,215,252. CAR-WHEEL. VINCENT J. CONCES, Sr., and VINCENT J. CONCES, Jr., East Chicago, Ind. Filed Sept. 15, 1916. Serial No. 120,413. (Cl. 105—144.)



1. A car wheel comprising a member having a curved lower face and provided with an upright bore opening through the top of the member and through its lower face, means for removably closing the upper end of said bore, flanges on said lower face restricting the lower end of the bore, and a ball in such bore resting upon said flanges and projected below said lower face by contact with said means.

2. A car wheel comprising a member having a curved and channeled lower face and provided with an upright bore opening through the top of the member and through its lower face into said channel, a bearing for removably closing the upper end of said bore, flanges on said lower face and within its channel restricting the lower end of the bore, and a ball in such bore resting upon said flanges and projected below said lower face by contact with said bearing.

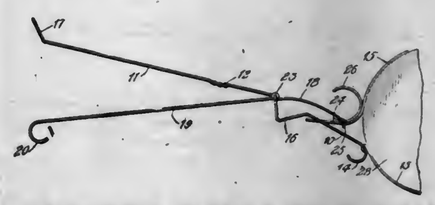
3. A car wheel comprising a member having its lower face curved and its body provided with an upright cylindrical bore opening through its top and through said face, the bore being threaded at its upper end and restricted at its lower end, a plug screwed into such threaded end with its lower extremity forming a bearing, and a ball within such bore resting on the restricted end thereof and projected beyond the curved face of said member by contact with said bearing.

4. A car wheel comprising a member having a curved base portion, and an opening formed therein, the lower end of the opening being restricted, spaced flanges formed on the curved portion and disposed upon the opposite sides of said opening, a ball mounted within said opening and having a portion thereof exposed between said flanges and a bearing removably mounted within said opening and engageable with said ball.

5. A car wheel comprising a base and a tread section, said sections being detachably connected to each other, the tread section being of arcuate shaped formation and having spaced arcuate shaped flanges formed on the tread section, said tread section having an opening formed therein, the lower end of which is restricted and disposed between said flanges, a ball journaled within the opening having a portion disposed between said flanges, a bearing mounted within said opening, and a plate interposed between said sections and spanning said opening to retain the bearing within the opening.

[Claim 6 not printed in the Gazette.]

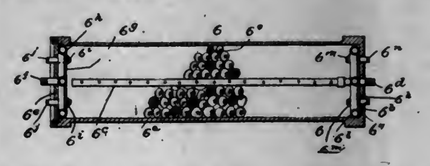
1,215,253. PAN AND JAR LIFTER. OSCAR W. CROPLEY, Juniata, Nebr. Filed Jan. 13, 1916. Serial No. 71,951. (Cl. 65—26.)



1. An implement of the character described comprising pivotally connected members, each having a handle and a jaw, one of said jaws being provided with side bars having their end portions extended in overlapping relation and terminating in engaging hooks, a flexible strip having one end portion secured about the overlapped end portions of the side bars of said jaw, the other of said jaws being provided with side bars having their end portions connected and extending to provide a spur and a guiding finger, the free end portion of said strip being provided with openings to receive said spur, and the handle of said last mentioned jaw being provided with a hook coöperating with the hooks of said first mentioned jaw.

2. An implement of the character described comprising pivotally connected members, each having a handle and a jaw, one of said jaws being provided with side bars having their end portions terminating in engaging hooks, a flexible strip having one end portion secured between the hooks of said jaw, the other of said jaws being provided with side bars having their end portions terminating in a spur and a guiding finger, the free end portion of said strip being provided with openings to receive said spur and the handle of said last mentioned jaw being provided with a hook coöperating with the hooks of the first mentioned jaw.

1,215,254. ART OF PRESERVING. NEWTON J. DARDEN, Memphis, Tenn. Filed Oct. 15, 1912. Serial No. 725,872. (Cl. 99—15.)



1. The preserving process consisting in subjecting the organic substance to be preserved to a washing current of aseptic air and alternating the direction of its flow and washing said air for reuse.

2. The preserving process consisting in subjecting the organic substance to be preserved to a washing current of aseptic, ozonized air and washing and reusing said air as stated.

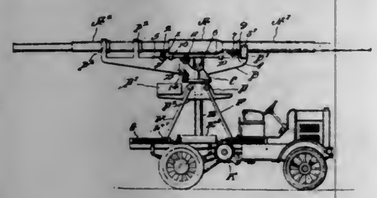
3. The preserving process consisting in subjecting the organic substance to be preserved to alternated washing currents of aseptic ozonized air and washing and reusing said air as stated.

4. The preserving process consisting in subjecting the organic substance to be preserved to alternated washing currents of aseptic, cold ozonized air and washing and reusing said air as stated.

5. The preserving process consisting in subjecting the organic material to be preserved to alternated washing currents of dry, aseptic, cold ozonized air and cleansing and reusing said air as stated.

[Claims 6 to 26 not printed in the Gazette.]

1,215,255. FIELD AND SIEGE ARTILLERY. GREGORY C. DAVISON, Groton, Conn. Filed Dec. 9, 1915. Serial No. 65,970. (Cl. 89—40.)



1. In field or siege artillery, the combination with a gun support, of a non-recoil gun mounted thereon, composed of a hollow tube open at both ends and comprising a front barrel and a rear barrel with interrupted screw threads connecting the two, trunnions on the front gun barrel, and trunnion bearings therefor on the gun support, and guides on said gun support engaging the rear gun barrel, said guides permitting the rear gun barrel to slide longitudinally and turn axially therein, with means for rotating said rear gun barrel to unlock the same, and for moving the same axially to clear the breech of the forward gun barrel.

2. In field or siege artillery, the combination with a gun support, of a non-recoil gun mounted thereon, composed of a hollow tube open at both ends and comprising a front barrel and a rear barrel with interrupted screw threads connecting the two, trunnions on the front gun barrel, and trunnion bearings therefor on the gun support, and guides on said gun support engaging the rear gun barrel, said guides permitting the rear gun barrel to slide longitudinally and turn axially therein, with means for rotating said rear gun barrel to unlock the same, and for moving the same axially to clear the breech of the forward gun barrel, said means comprising an L-shaped spiral rack secured to the exterior of the rear gun barrel, a worm meshing in said rack, and means for rotating said worm.

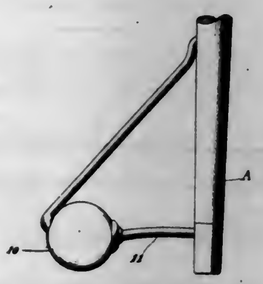
3. In field or siege artillery, the combination with a gun support, of a non-recoil gun mounted thereon, composed of a hollow tube open at both ends and comprising a front barrel and a rear barrel with interrupted screw threads connecting the two, trunnions on the front gun barrel located near the breech end thereof so as to give muzzle preponderance to the front barrel and to permit its breech to swing up when disengaged from the rear barrel, and trunnion bearings therefor on the gun support, and guides on said gun support engaging the rear gun barrel, said guides permitting the rear gun barrel to slide longitudinally and turn axially therein, with means for rotating said rear gun barrel to unlock the same, and for moving the same axially to clear the breech of the forward gun barrel, said means comprising an L-shaped spiral rack secured to the exterior of the rear gun barrel, a worm meshing in said rack, and means for rotating said worm.

4. In field or siege artillery, the combination with a gun support, of a non-recoil gun mounted thereon, composed of a hollow tube open at both ends and comprising a front barrel and a rear barrel with interrupted screw threads connecting the two, trunnions on the front gun barrel located near the breech end thereof so as to give muzzle preponderance to the front barrel and to permit its breech to swing up when disengaged from the rear barrel, and trunnion bearings therefor on the gun support, and guides on said gun support engaging the rear gun barrel, said guides permitting the rear gun barrel to slide longitudinally and turn axially therein, with means for rotating said rear gun barrel to unlock the same, and for moving the same axially to clear the breech of the forward gun barrel, said means comprising an L-shaped spiral rack secured to the exterior of the rear gun barrel, a worm meshing in said rack, and means for rotating said worm.

5. In field or siege artillery, the combination with a gun support, of a non-recoil gun mounted thereon, composed of a hollow tube open at both ends and comprising a front barrel and a rear barrel with interrupted screw threads connecting the two, trunnions on the front gun barrel, and trunnion bearings therefor on the gun support, and ring-shaped guides on said gun support engaging the rear gun barrel, said guides permitting the rear gun barrel to slide longitudinally and turn axially therein, with means for rotating said rear gun barrel to unlock the same, and for moving the same axially to clear the breech of the forward gun barrel.

[Claims 6 to 26 not printed in the Gazette.]

1,215,256. CANE OR CRUTCH ATTACHMENT. MILS MARTIN DAWSON, Montgomery, Ala. Filed June 6, 1916. Serial No. 102,056. (Cl. 135—54.)

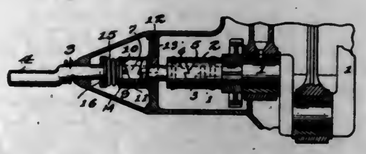


1. A cane or crutch attachment comprising a non-slipping surface engaging member, and means for supporting the member spaced laterally from the lower end of the article.

2. A cane or crutch attachment comprising a non-skidding surface engaging member of spherical contour offset relatively to the lower end of the article, and means for rotatably supporting the member.

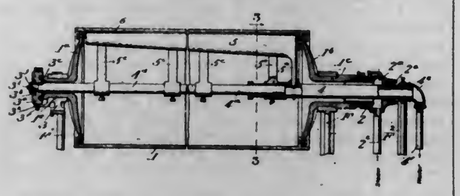
3. A cane or crutch attachment comprising a substantially V-shaped rod projecting from the article adjacent its lower end, and a non-slipping surface engaging member supported upon one limb of the rod and spaced laterally from the adjacent end of the article.

1,215,257. SAFETY ENGINE-CRANKING DEVICE. WILLIAM A. DILLON, Marling, Mo. Filed Feb. 11, 1916. Serial No. 77,671. (Cl. 123—185.)



In safety cranking mechanism for internal combustion engines, the combination with an engine shaft having a tubular clutch member fast thereon, of a longitudinally movable cranking shaft in alinement with the engine shaft, a tubular clutch member fast on said cranking shaft and movable into and out of engagement with the first named clutch member, a thrust sleeve normally loose on and slidable longitudinally of the cranking shaft and provided with diametrically opposite notches in its forward face and cam faces converging toward and leading to said notches, a pin inserted through the cranking shaft and adapted to be acted upon by said cam faces to move the cranking shaft away from the engine shaft, a clutch face on the opposite end of said sleeve, a stationary clutch cooperating with the last named clutch face to prevent rotation of said sleeve when the engine shaft turns in a reverse direction, a loose collar on the cranking shaft normally bearing against the forward face of said sleeve, and a spring bearing against said loose collar and coacting therewith to hold the clutch face of the sleeve in engagement with the stationary clutch face.

1,215,258. MEANS FOR REMOVING WATER OF CONDENSATION FROM DRYING-CYLINDERS. OTIS WM. DODGE, Spokane, Wash., assignor of one-half to Walter H. Bowes Company, Port Chester, N. Y., a Corporation of New York. Filed May 24, 1913, Serial No. 769,762. Renewed July 11, 1916. Serial No. 108,724. (Cl. 34—4.)



1. Apparatus for removing water of condensation from rotary steam heated drying cylinders comprising relatively stationary means within the cylinder for brushing water of condensation from the wall thereof, and means for discharging such water from the cylinder.

2. In combination with a rotary steam heated drying cylinder, relatively fixed means adapted to brush water of condensation from the inner surface of the cylinder, and means for discharging the water from the cylinder.

3. In combination with a rotary steam heated drying cylinder, relatively fixed means extending longitudinally of the cylinder and located above the axis thereof for brushing water of condensation from the inner surface of the cylinder, and means for discharging the water.

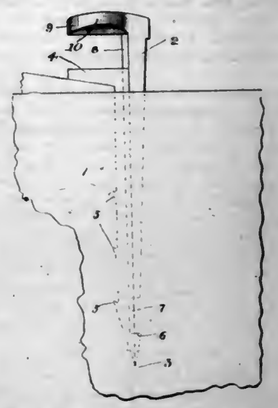
4. In combination with a rotary steam heated drying cylinder, relatively fixed means for removing water of condensation therefrom, comprising devices within the cylinder for brushing water from the wall thereof as the cylinder rotates, and devices for discharging such water from the cylinder.

5. In combination with a rotatable steam heated cylinder, relatively stationary means extending longitudinally of and within the cylinder and located above the axis thereof adapted to brush water of condensation from the inner surface of the cylinder as the latter rotates, and means for discharging the water.

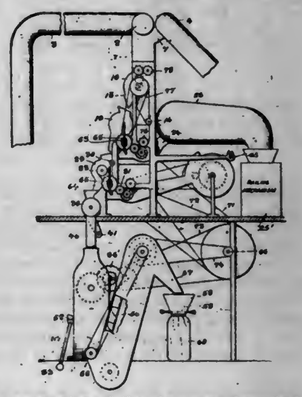
[Claims 6 to 11 not printed in the Gazette.]

1,215,259. RAILROAD-SPIKE. WILLIAM DRAPER, Waverly township, Cheboygan county, and CHRISTIAN JOHNSON, Onaway, Mich. Filed Aug. 8, 1916. Serial No. 113,800. (Cl. 85—23.)

A spike comprising a main member having toothed bobs on one side and a head at its upper end, projecting from the same side and a key member, slidably fitted on the main member and having a head to bear on the head of the main member and also widened to project laterally from and overhang the head of the main member, the said main and key members being provided one with a dovetailed groove and the other with a correspondingly shaped tongue to slidably and detachably connect said members together and permit the separate removal thereof.



1,215,260. COTTON-TREATING APPARATUS AND PROCESS. SAMUEL H. DUNLAP, Bryan, Tex. Filed Mar. 3, 1915. Serial No. 11,812. (Cl. 13—9.)



1. In an apparatus of the character described, the combination of a gin, a baling means for the long fiber from the gin, a delinter, lapping means for the short fiber from the delinter, and means for operating the working parts.

2. In an apparatus of the character described, the combination of a gin, a baling means for the long fiber from the gin, a reginner or delinter, means for cleaning and agitating the seed on its passage from the gin to said reginner or delinter, a lapping means for the short fiber from the reginner or delinter, and means for operating the working parts.

3. In an apparatus of the character described, pneumatic feed mechanism, a feeding and screening device for acting upon the material delivered thereby, a ginning mechanism to act upon the material received from said feeding and screening device, a reginning mechanism, feeding and screening means between the same and the ginning mechanism, means for baling the long fiber from the gin, means for forming a bat from the lint from the ginning mechanism, and means for operating the working parts.

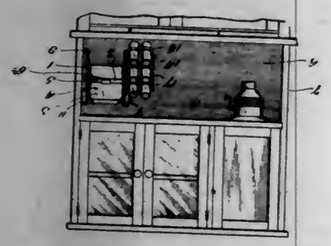
4. In an apparatus of the character described, the combination with a ginning mechanism, and means for delivering the cotton thereto, of a baling mechanism, pneumatic means for delivering the ginned cotton from the

ginning mechanism to the baling mechanism, a reginning apparatus, arranged below said ginning mechanism, for the gravitative feed of the seed thereto, said reginning apparatus being operative for delinting the seed, a bat former for forming a bat from the lint, and pneumatic means for delivering the lint thereto from said reginning apparatus.

5. In an apparatus of the character described, the combination, with a ginning mechanism, and means for delivering the cotton thereto, of a baling apparatus for baling the bulk of ginned cotton, pneumatic means for delivering the cotton thereto from the ginning mechanism, a reginning apparatus arranged below the ginning mechanism for the gravitative feed of the seed thereto, said reginning apparatus being operative for delinting the seed, a refuse screen arranged in the line of feed of the seed from the ginning mechanism to the reginning apparatus, and including means for carrying off the refuse material, a bat former, and means for pneumatically delivering the lint from the reginning apparatus to the said bat former.

[Claims 6 and 7 not printed in the Gazette.]

1,215,261. KITCHEN-CABINET. DARRELL FRANK DYKE, Chicago, Ill., assignor to The Seng Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 14, 1916. Serial No. 91,028. (Cl. 45—16.)



1. The combination with the wall of a compartment in a kitchen-cabinet, of a pair of lazy-tong sections, the rear ends of which are loosely connected at vertically opposite points to said wall and above the bottom of the compartment, and a receptacle-holder supported between the outer ends of said sections, and positioned with relation to the same that when said sections are retracted or closed said holder occupies approximately a horizontal position and when opened or extended occupies an inclined position above and out of contact with the bottom of the compartment.

2. The combination with the wall of a kitchen-cabinet, of a pair of lazy-tong sections loosely connected thereto at their rear ends and each having its lower front member extended above its pivot point, and a receptacle-holder connected rigidly to said extended portions of said members, whereby the receptacle-holder is maintained in approximately horizontal position when the sections are retracted and in a position inclined to the horizontal when the sections are extended.

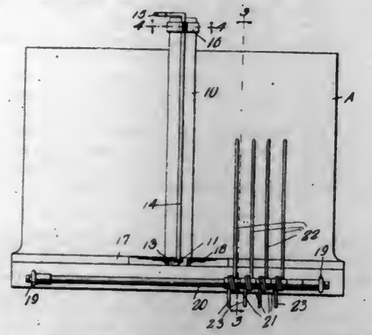
3. The combination with the wall of a kitchen-cabinet, of a lazy-tong extensible bracket connected loosely thereto, a frame forming a main receptacle-holder at the outer end of the bracket, and a series of smaller frames forming receptacle-holders secured at one side of the bracket and extending laterally therefrom so as to move therewith and the main receptacle holder.

4. The combination with the wall of a kitchen-cabinet, of a pair of lazy-tong sections loosely connected thereto at their rear ends, a receptacle-holder mounted between the free front ends of the sections, a frame extending laterally from one of the members of one of said sections, and transverse frames mounted in said laterally extending frame and forming receptacle-holders.

5. The combination with the wall of a kitchen-cabinet, of a pair of lazy-tong sections loosely connected thereto at their rear ends, a receptacle-holder mounted between the free front ends of said sections, an inclined laterally extending frame connected to one of the members of one of said sections and receptacle-holders arranged in inclined series in said laterally extending frame.

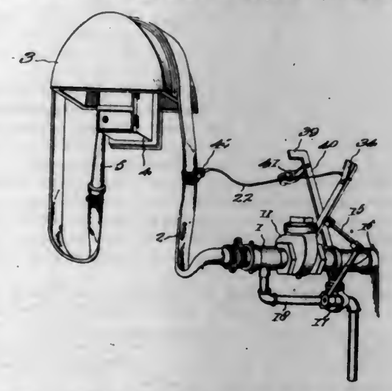
[Claims 6 and 7 not printed in the Gazette.]

1,215,262. MUSIC-LEAF TURNER. CHARLES FAIST, Spring Valley, N. Y. Filed Apr. 21, 1916. Serial No. 92,747. (Cl. 84—17.)



A music leaf turner comprising a body, means on the body for securing sheets of music theerto, a rod mounted transversely of the body, a plurality of sleeves slidably and rotatably mounted on the rod, a plurality of leaf turning arms having portions thereof encircling respective sleeves and fixed with respect to the sleeves, each of said arms extending above as well as below the related sleeves whereby one end of the arm constitutes an operating handle and the other, a leaf engaging portion and means for moving the leaf engaging portions of the arm away from the body during sliding movement of the related sleeves on the rod.

1,215,263. COMBINED FIRE-ALARM BOX AND HYDRANT. EDWARD E. FERGUSON, Portsmouth, Va., assignor of one-half to C. Van Fleming, Norfolk, Va. Filed Nov. 1, 1916. Serial No. 128,922. (Cl. 137—31.)



1. The combination of a service-pipe, a valve therein, a hose coupled to said service-pipe, a lever connected to actuate said valve, an arm adjacent said lever, a connection between said hose and lever, a releasable device on said lever for yieldingly holding said connection including a pivoted part adapted to strike said arm and actuate said releasable device when the lever is swung, substantially as described.

2. The combination of a service-pipe, a valve therein, a hose coupled to said pipe, a lever in operative relation to said valve, a connection between said hose and lever, an arm extending in the path of said lever, and a releasable device on said lever for yieldingly holding said connection including a tooth, and a pivoted finger adapted to be struck by said arm and shift the tooth out of engagement with said connection, substantially as described.

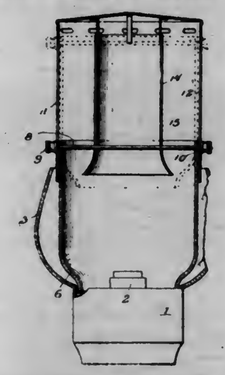
3. In a device of the character described, the combination of a water supply pipe, a hose connected to said pipe, a valve in said pipe, a lever connected to actuate said valve, a connection between said lever and hose, and a releasable device on said lever for yieldingly holding said connection, said releasable device including a tooth, spring means for yieldingly forcing said tooth into engagement with said connection, and a pivoted finger on said lever in connection to actuate said tooth, said finger adapted to strike against a fixed part when the lever is swung over to open said valve, substantially as described.

4. In a device of the character described, the combination of a water supply pipe, a hose coupled to said pipe, a support for the hose, a valve in said pipe, a lever for actuating said valve having an opening and an intersecting socket therein, a connection between said lever and hose, a tip on said connection adapted to be received in the opening in said lever and having a notch therein, a tooth movable in said socket and adapted to engage the notch in said tip, spring means for yieldingly urging said tooth into said notch, and means for releasing said tooth from engagement with said notch when the lever is swung over to open the valve, substantially as described.

5. In a device of the character described, the combination with an alarm box, of a support placed near thereto, a water supply pipe, a hose coupled to said pipe and adapted to be held on said support, a valve in said pipe, a device for actuating said valve, means between said device and hose for operating the former when the hose is removed from said support and drops by gravity, a nozzle on said hose, and complementary parts between said nozzle and fire alarm box for providing a support for the nozzle and for holding the alarm mechanism inoperative while the nozzle is in place thereon but in readiness to be placed in operation when the nozzle is removed, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

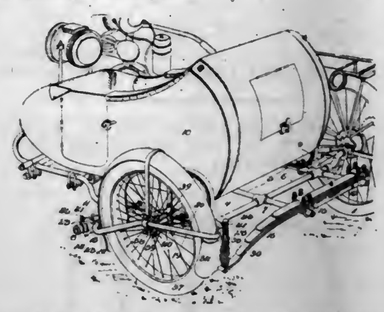
1,215,264. LAMP. GEORGE M. FIERO, Pittsburgh, Pa. Filed Aug. 9, 1916. Serial No. 113,966. (Cl. 240—39.)



A signal lamp comprising a base, a main globe supported by the base, a hood supported above the base, said hood being formed with a pair of vertically extending slots each having a lateral extension at its top and bottom ends, the extension at the bottom being formed with inclined walls, an auxiliary globe arranged within the main globe and slidably mounted in said hood, a rod passing across said auxiliary globe and mounted in the wall thereof at diametrical points and a nut mounted on each end of the rod and adapted to bind against the hood.

1,215,265. SIDE CAR. ROBERT S. FINLAY, Melbourne, Victoria, Australia. Filed Oct. 24, 1916. Serial No. 127,456. (Cl. 208—45.)

1. In a side car, the combination of a chassis, a cradle, means for supporting the cradle on the chassis, including a connection to permit the cradle to rock vertically and laterally, and a spring to absorb shocks incident to the vertical and lateral movement of the cradle, and a wheel mounted in the cradle.



2. In a side car, the combination of a chassis having a stub shaft, a cradle, a universal connection between the cradle and the stub shaft, a resilient connection between the opposite end of the cradle and the chassis, and a wheel supported in the cradle.

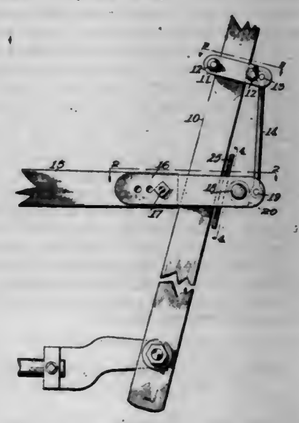
3. In a side car, the combination of a chassis, a cradle comprising two parallel spaced bars connected at their ends, a universal connection between one end of the cradle and the chassis, a resilient connection at the opposite end of the cradle and the chassis, a bearing on each of the side bars of the cradle, a shaft supported at its ends in said bearings, and a wheel mounted on the shaft.

4. In a side car, the combination of a chassis having a stub shaft extending therefrom, a cantaliver spring extending from and supported on the chassis, a cradle, a universal connection between the stub shaft and the cradle, a resilient connection between the cradle and the outer end of the cantaliver spring, and a wheel supported in the cradle.

5. In a side car, the combination of a chassis and a cradle carrying a wheel, means for supporting the cradle on the chassis to permit vertical and lateral movement, including a cantaliver spring supported on and extending from the chassis.

[Claims 6 to 20 not printed in the Gazette.]

1,215,266. PICKER-STICK CONNECTION. FRANK T. FURGAL, Warren, Mass. Filed Sept. 20, 1916. Serial No. 121,297. (Cl. 139—48.)

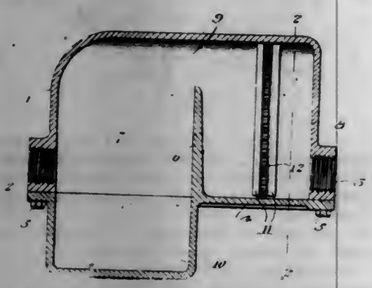


1. The combination with a pickerstick, of driving means therefor comprising a transverse bolt arranged at the back of the pickerstick, means for operating the bolt, and a rawhide member consisting of a portion of a used picker

surrounding the bolt for delivering the blow to the edge of the pickerstick.

2. The combination with a pickerstick, of driving means therefor comprising a pair of plates spaced apart to receive the pickerstick between them, a bolt connecting them at the back of the pickerstick, and a rawhide member surrounding the bolt for delivering the blow to the edge of the pickerstick, said rawhide member extending around the bolt and having its edges riveted together.

1,215,267. STRAINER OR SEPARATOR. LAURITZ A. GUNST, Omar, W. Va. Filed June 23, 1916. Serial No. 105,479. (Cl. 210—15.)



1. A separator of the character described comprising a casing having an inlet and an outlet, located at opposite sides thereof, said casing being provided with a detachable bottom portion having a depending pocket or chamber located at its side adjacent to said inlet, a screen extending the full depth of the casing and arranged between said pocket or chamber and the outlet of the casing, and an imperforate baffle plate fixed to the detachable bottom between the pocket or chamber and the screen, said plate extending from the detachable bottom upwardly to a point below the top of the casing.

2. A separator of the character described comprising a casing having an inlet and an outlet, located at opposite sides thereof, said casing being provided with a detachable bottom portion, said detachable bottom portion being provided with a depending pocket or chamber and a baffle plate extending upwardly into said casing to a point below the top of the casing between the said pocket or chamber and outlet and carried by and removable with said detachable bottom.

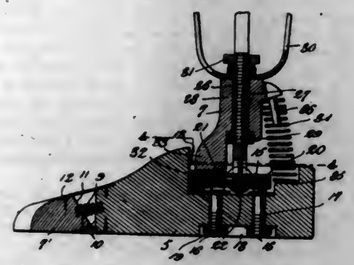
3. A separator of the character described comprising a casing having an inlet and an outlet, located at opposite sides thereof and provided with a detachable bottom, a baffle fixed to the detachable bottom and extending upwardly into said casing between the inlet and outlet, and a screen fixed to the detachable bottom and slidably engaging the casing between the baffle and outlet.

4. A separator of the character described comprising a casing having an inlet at one side thereof, an outlet at the opposite side thereof, a detachable bottom plate closing the bottom of the casing, said plate having a depending portion forming a trap or pocket adjacent to said inlet, a baffle plate rising from the detachable bottom between the trap and outlet and terminating below the top of the casing, and a screen disposed within the casing between the baffle and outlet, said screen slidably engaging the casing so as to be held in position by the bottom plate and being movable with the latter.

1,215,268. ARTIFICIAL LIMB. JUSTUS T. HAGEY, Hatfield, Pa. Filed June 23, 1916. Serial No. 105,445. (Cl. 3—6.)

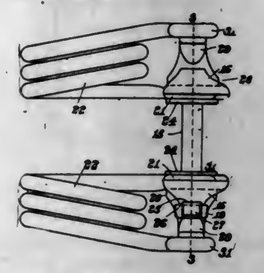
1. An artificial limb comprising lower leg and foot sections, an ankle joint including a bolt member associated with the foot section and capable of oscillating forwardly, rearwardly, and transversely thereof, an instep section supported on said bolt, a yieldable element interposed between said instep and foot sections respectively, and a resilient means for maintaining said instep section in contact with the yieldable element for the purpose set forth.

2. An artificial limb comprising lower leg and foot sections, an ankle joint including bolts secured to the foot section, a shaft journaled between said bolts, a spherical member fitted on the shaft for partial rotation therewith, pintles projecting from said member at right angles to said bolts, a third bolt having a yoke at its lower extremity pivoted upon said pintles, whereby the last mentioned bolt is mounted for oscillatory movement forwardly, rearwardly and transversely of the foot section, and resilient means to regulate and limit the movement of said bolt.



3. An artificial limb comprising lower leg and foot sections, an ankle joint connecting said sections, said joint embodying anchoring bolts secured to said foot section, a shaft extending through said bolts and serving as a journal for a ball member rotatably mounted thereon, pintles formed with said ball and disposed at right angles to said shaft, a bolt pivotally supported upon said pintles and capable of rotating with and in the direction opposite to the normal course of rotation of said ball member, means for securing said bolt to said lower leg section, an instep section situated between said lower leg section and said foot section and supported by said bolt member, and resilient means coöperating with said instep member to maintain the same in a normal position and to regulate and limit the rocking movement thereof.

1,215,269. SHOCK-ABSORBER. BENJAMIN K. HALL, Merrimac, Mass. Filed Apr. 13, 1916. Serial No. 91,499. (Cl. 267—17.)



1. In a device of the class described, a yoke adapted to be secured to an end of a leaf spring and provided with two parallel slotted arms having depressions in their inner faces; a member secured to another end of said leaf spring and extending through the slots in said arms and movable therein; and two helical springs having their outer ends secured to said movable member and their inner ends positioned within said depressions and connected to said yoke.

2. In a device of the class described, a yoke adapted to be secured to an end of a leaf spring and provided with two parallel slotted arms having depressions in their inner faces; a member secured to another end of said leaf spring and extending through the slots in said arms and movable therein, said movable member having upwardly extending arms each provided with an outwardly extending stud; and two helical springs having their outer ends provided with loops surrounding said studs on said movable member and their inner ends positioned within said depressions and connected to said yoke.

3. In a device of the class described, a yoke adapted to be secured to an end of a leaf spring and provided with two parallel slotted arms; a member slidable in the slot of each arm and provided with an outwardly extending stud; a bolt extending through one of said slidable members and threaded to the other of said slidable members and connected to another end of said leaf spring; and two helical springs having their outer ends secured respectively to said yoke and said studs.

4. In a device of the class described, a yoke adapted to be secured to an end of a leaf spring and provided with two parallel slotted arms; a member slidable in the slot of each arm and provided with an outwardly extending stud; a bolt extending through one of said slidable members and threaded to the other of said slidable members and connected to another end of said leaf spring; means for preventing the rotation of said bolt; and two helical springs having their outer ends secured respectively to said yoke and said studs.

5. In a device of the class described, a yoke adapted to be secured to an end of a leaf spring and provided with two parallel slotted arms; a member slidable in the slot of each arm and provided with an outwardly extending stud; a bolt extending through one of said slidable members and threaded to the other of said slidable members and connected to another end of said leaf spring; means surrounding said bolt and provided with two ears adapted to be bent over against a flat side of the bolt head and the end of a slidable member to lock said bolt from rotation; and two helical springs having their outer ends secured respectively to said yoke and said studs.

[Claims 6 to 9 not printed in the Gazette.]

1,215,270. MOP. LOUIS HARLOW, East Milton, Mass., assignor to Brown Daisy Products Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 15, 1912. Serial No. 683,954. (Cl. 15—28.)



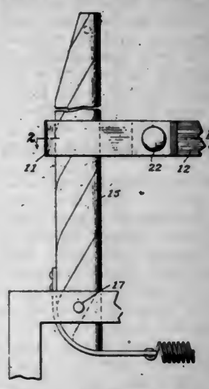
1. A mop comprising a head having a longitudinal recess in its bottom, a clamp removably positioned in said recess and adapted to retain a mop fabric, said clamp being composed of an upper and a lower clamping member, said upper member being carried by said lower member, arms on said lower member whereby said clamping members are removably suspended in said recess, and means for securing said members together to retain therebetween a mop fabric.

2. A mop comprising a head having a longitudinal recess in its bottom; a clamp demountably positioned in said recess and adapted to retain a mop fabric; said demountable clamp being composed of two parallel bars, a supporting bar and a carried bar; means for securing said carried bar to said supporting bar, supporting arms on each end of said supporting bar, said arms being upturned at an angle to the plane of said bars, and means carried by said head demountably to suspend said arms from said head, whereby said mop-retaining clamp may be easily demounted from said head for cleansing or for substitution.

3. A mop comprising a head having a longitudinal recess in its bottom and vertical end recesses; a clamp demountably positioned in said longitudinal recess and composed of parallel bars, a lower supporting bar and an upper carried bar; rivets adapted permanently to secure said upper bar to said lower bar and to cause said bars coöperatively to retain a mop fabric; arms on said lower bar upwardly extended and adapted to be positioned in said end recesses; and means for demountably securing said arms in said end recesses; whereby said mop-retaining clamp may be demounted from said recess for substitution or for mop fabric cleansing.

4. A mop comprising a head having a longitudinal recess in its bottom; a clamp demountably positioned in said recess and composed of two parallel metal bars including a supporting bar and a carried bar; a plurality of rivets adapted permanently to secure said carried bar to said supporting bar whereby a mop fabric is retentively held therebeween; integral arms on each end of said supporting bar, said arms being upturned at an angle to the plane of the bars and having apertures in their upper portions; screws adapted to be inserted through said apertures and to engage said head whereby said arms are demountably secured to said head and said clamp may be removed from said head for substitution or mop cleansing.

1,215,271. PICKER-STICK. HENRY M. HARMON, Webster, Mass., and RICHARD O. LIBBEY, Norwich, Conn. Filed Mar. 10, 1916. Serial No. 83,418. (Cl. 139—48.)



1. As an article of manufacture, a picker-stick comprising a core formed of metal extending throughout the length of the stick and having a coating surrounding the same of paper material compressed on the core and extending throughout the length thereof.

2. As an article of manufacture, a picker-stick comprising a core of substantially the length of the picker-stick comprising substantially parallel strips of thin metal having between them paper stock secured together and secured to the metal strips and having a layer of paper stock in a compressed and hardened condition entirely surrounding them.

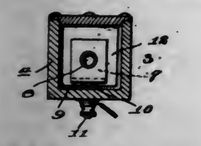
3. As an article of manufacture, a picker-stick comprising a core having a continuous homogeneous coating of paper stock in sheet form wound about the same and adhering thereto.

4. As an article of manufacture, a picker-stick composed mainly of paper stock in a hardened and compressed condition and provided with a metallic core extending therethrough from end to end to prevent its warping.

1,215,272. SIGNAL APPARATUS FOR MOTOR-VEHICLES. PAUL R. HARSH, Toledo, Ohio. Filed Dec. 30, 1915. Serial No. 69,450. (Cl. 200—27.)

A circuit closer comprising a casing, a stud carried by one end of said casing, a plunger in said casing capable of sliding movement therein, a stud on said plunger adapted to engage the first-named stud, a binding post secured to one side of said casing, a conductor strip secured to said plunger and connected to the stud thereon and designed to wipe over said binding post in the move-

ment of the plunger, a guide block in said casing, a rod connected to said plunger and projecting through said guide block, a spring surrounding said rod between said plunger and guide block and acting to slide said plunger



to engage said studs with each other, and a cord connected to said rod and projecting through one end wall of the casing and acting to hold the plunger against movement under the action of said spring.

1,215,273. METHOD OF MAKING ROADS, PAVEMENTS, AND THE LIKE. WALTER E. HASSAM, Worcester, Mass., assignor to Hassam Paving Company, a Corporation of Massachusetts. Filed Nov. 29, 1915. Serial No. 63,954. (Cl. 94—1.)

1. The method of making a pavement or the like, which consists in spreading a layer of uncoated aggregate material, rolling it until the voids are small, applying to it a thin cement grouting until the voids are filled and the grouting seeks its level substantially at the surface of said layer of aggregate material, then while said grouting is in its wet state and before its surface has been disturbed placing upon it a layer formed of a mixture of aggregate material, emulsified bitumen, and Portland cement thoroughly incorporated together, and finally rolling.

2. The method of making a pavement or the like, which consists in spreading a layer of uncoated broken stone, rolling it until the voids are small, applying to it a thin cement grouting in a creamy state until the voids are filled and the grouting rises to the top of the layer of stone, then before the grouting commences to set placing upon it a layer formed of a mixture of broken stone, emulsified bitumen, Portland cement, and sand thoroughly incorporated together, finally rolling to force the upper layer of broken stone into the grouting while still wet, force the surplus moisture directly out of the grouting and up through the bituminous layer and solidify said bituminous layer.

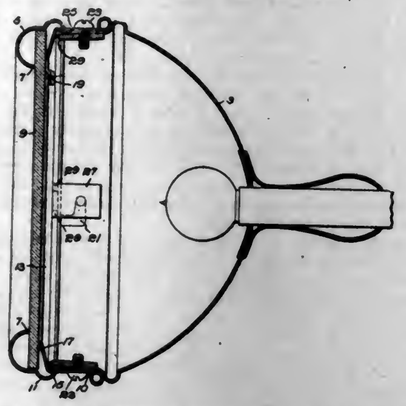
3. The method of making a pavement or the like which consists in spreading a layer of dry, uncoated, broken stone on a foundation, rolling it to compact it throughout and bring its top surface into a uniform condition, pouring upon it a thin cement grouting in a creamy state until the voids among the stones are filled and the grouting rises substantially to the top of the stone layer, then before the grouting commences to set and while in a liquid state, placing upon it in a cold state a thin layer formed of a mixture of broken stone, emulsified bitumen, Portland cement, and sand thoroughly incorporated together, and rolling to force the upper layer into the grouting while still wet and before it has commenced to set.

4. The method of making a pavement or the like which consists in spreading a base layer of dry, uncoated, broken stone on a foundation, rolling it to compact it throughout and bring its top surface into a uniform condition, pouring upon it a thin cement grouting in a creamy state until the voids among the stones are filled, then placing upon said layer in a cold state a layer formed of a mixture of broken stone, emulsified bitumen, Portland cement, and sand, thoroughly incorporated together, and rolling to force the upper layer into the base layer while still wet.

5. A pavement having a base layer of hard, rolled, uncoated stone and a grouting of cement filling the voids therein, and a top layer formed of a mixture of broken stone, emulsified bitumen, Portland cement, and sand thoroughly incorporated together and united with the base layer.

[Claim 6 not printed in the Gazette.]

1,215,274. DOOR AND GLAZING RETAINER. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed Aug. 1, 1916. Serial No. 112,598. (Cl. 240—41.)



1. In a lamp a casing, a door having a flange adapted to fit said casing and having a seat for a glazing, a retaining member for holding a glazing against said seat, and adjustable clamping devices for securing together said flange and casing having provision for engaging said member for holding the same in position.

2. In a lamp a casing, a door having a flange adapted to fit said casing and having a seat for a glazing, a retaining member for holding a glazing against said seat, and means for securing together said flange and casing comprising two-part screw clamps carried by one of said elements and having slot connection with the other, one part of said clamps being arranged to engage and hold said member.

3. In a lamp a casing, a door adapted to fit said casing having a seat for a glazing and a groove adjacent said seat, one or more glazing-retaining devices each comprising a flange adapted to bear on the glazing and a bead or channel arranged to seat in said groove and clamping members for securing together said door and casing having hook portions adapted to enter said beads or channels and hold them in the groove.

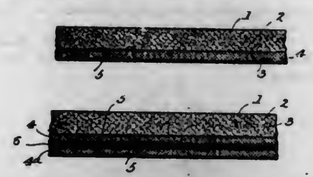
4. In a lamp a casing, a door having a flange adapted to fit said casing having a seat for a glazing and a groove adjacent said seat, one or more glazing retaining devices each having a flange adapted to bear on the glazing and a part to seat in said groove, adjustable members extending from said devices through said casing and flange and having slot connection with one of them, said members being susceptible of adjusting manipulation from the exterior of said casing to draw outwardly said retaining devices.

5. In a lamp a casing, a door adapted to fit said casing and having a seat for a glazing, one or more glazing retaining devices each having a flange adapted to bear on said glazing and an exterior, inwardly opening bead or channel arranged to seat on the door frame, and clamping members for securing together said door and casing having hook portions adapted to enter said beads or channels and hold said devices seated.

[Claims 6 to 17 not printed in the Gazette.]

1,215,275. ARTICLE OF MANUFACTURE. ALBERT H. HENDERSON, Baltimore, Md., assignor to The Henderson Rubber Company, Baltimore, Md., a Corporation of Maryland. Filed Jan. 13, 1912. Serial No. 671,045. (Cl. 154—52.)

1. The herein described article of manufacture, the same consisting in a woven mercerized fabric in which throughout the entire pattern a series of warps pass indirectly from its face to its back and in so passing interlace by engaging with and partly encircling intervening wefts within the body of the fabric, combined with rubber admitted to the interior and coated upon the exterior of each fiber and filling the spaces existing between the juxtaposed fibers, substantially as set forth.



2. The herein described article of manufacture, the same consisting in a diagonally and reversely woven mercerized fabric in which throughout the entire pattern a series of warps pass indirectly from its face to its back and in so passing interlace by engaging with and partly encircling intervening wefts within the body of the fabric, combined with rubber admitted to the interior and coated upon the exterior of each fiber and filling the spaces existing between the juxtaposed fibers, substantially as set forth.

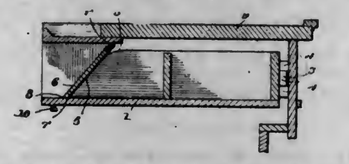
3. The herein described article of manufacture, the same consisting in a woven mercerized fabric in which throughout the entire pattern a series of warps pass indirectly from its face to its back and in so passing interlace by engaging with and partly encircling intervening wefts within the body of the fabric, combined with rubber admitted to the interior and coated upon the exterior of each fiber and filling the spaces existing between the juxtaposed fibers, the rubber being vulcanized, substantially as set forth.

4. The herein described article of manufacture, the same consisting in a diagonally and reversely woven mercerized fabric in which throughout the entire pattern a series of warps pass indirectly from its face to its back and in so passing interlace by engaging with and partly encircling intervening wefts within the body of the fabric, combined with rubber admitted to the interior and coated upon the exterior of each fiber and filling the spaces existing between the juxtaposed fibers, the rubber being vulcanized, substantially as set forth.

5. The herein described article of manufacture, the same consisting in a woven mercerized fabric in which throughout the entire pattern a series of warps pass indirectly from its face to its back and in so passing interlace by engaging with and partly encircling intervening wefts within the body of the fabric, combined with rubber admitted to the interior and coated upon the exterior of each fiber and filling the spaces existing between the juxtaposed fibers, such rubber treated fabric being combined with a body formed of fragmentary, granulated or macerated rawhide impregnated with rubber, the said rubber treated fabric and rawhide being consolidated, substantially as set forth.

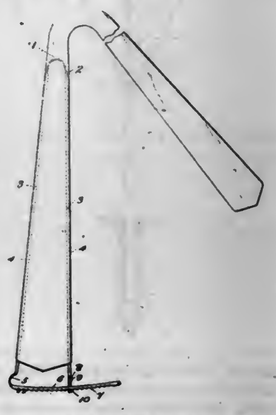
[Claims 6 to 9 not printed in the Gazette.]

1,215,276. AUTOMATIC DRAWER-COVER. RICHARD J. HOFFMEYER, Lowell, Ariz. Filed June 6, 1914. Serial No. 843,465. (Cl. 45—7.)



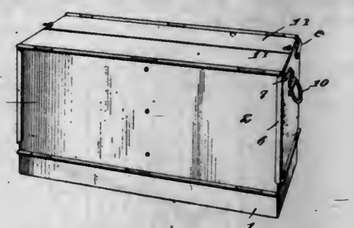
In a cabinet, a drawer slidably mounted therein and having sides with rearwardly inclined front edges and rounded corners at its upper plane, the bottom of the drawer extending beyond said sides, a closure pivoted at its upper end within the cabinet and normally disposed at an acute angle to rest against said inclined edges for closing the drawer compartment, said closure being elevated a distance approximately forty-five degrees to a full opened position by said inclined edges when the drawer is pulled out of the cabinet and supported by the upper edges of the drawer within the cabinet in its opened position, said closure being lowered by gravity as the drawer is retracted, and said rounded edges of the sides permitting said closure to gradually assume its closed position.

1,215,277. NECKTIE-STRETCHER. JERRY J. HOLECEK, New York, N. Y. Filed Aug. 27, 1915. Serial No. 47,638. (Cl. 223—19.)



A stretcher comprising a single piece of flat metal bent to form a curved connecting portion, straight branches extending from said curved portion and being twisted at their points of juncture with the curved portion, and having their flat sides lying approximately at right angles to the flat sides of the said curved portion, one of said branches having an eye located at its free end and the other branch having an extremity received in the eye and provided with teeth engageable with the eye, said extremity having its flat side lying approximately in the same planes as those in which the flat sides of the said branch portion lie.

1,215,278. COLLAPSIBLE EGG-CASE. JOHN A. HURST, New Philadelphia, Ohio. Filed Mar. 1, 1916. Serial No. 81,502. (Cl. 220—17.)



A shipping case comprising a bottom member, side and end panels hingedly connected therewith, top panels hingedly connected with the side panels, the end panels having ledges upon which the ends of the top panels may rest when the parts are in setup position, the said side panels having at their ends angularly disposed flanges provided at their ends with recesses which are located beyond the inner surfaces of the side panels, the said end panels having at their free edges and at points within their side edges recesses adapted to register with the recesses in the flanges of the side panels and hooks pivoted to the end panels at the opposite sides of the median

lines thereof and engageable in said recesses when the same are in register with each other to hold the side and end panels against movement with relation to each other.

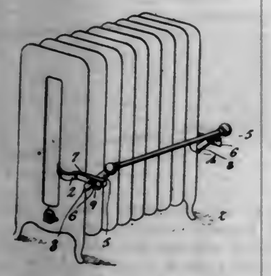
1,215,279. TRAP. JOHN E. ISAACSON, Kimball, Minn. Filed Dec. 23, 1915. Serial No. 68,401. (Cl. 43—21.)



1. In a device of the character described, a supporting member, bait holding means provided thereon, and a plurality of arms adjustably mounted on said supporting member and projecting upwardly at an acute angle with respect thereto, substantially as described.

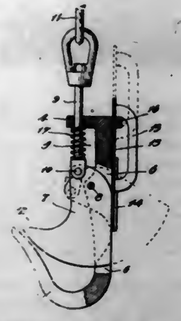
2. In a device of the character described, a supporting member, said member being sharpened at one end to facilitate its attachment to the ground and at the other end to facilitate the attachment of bait thereto, said member provided with transverse openings intermediate its ends, a plurality of holding arms, members to be passed through certain of said openings to affix one end of said holding arms to said member, and said holding arms being bent to extend at an acute angle with respect to the general extent of said member to form a sharp apex at their point of connection to said member, as and for the purpose specified.

1,215,280. RADIATOR FOOT-REST. ROSCOE JENSEN, Sprague, Wash. Filed May 19, 1916. Serial No. 98,626. (Cl. 155—9.)



A radiator foot rest comprising a pair of brackets having jaw members at their inner ends to engage around opposite sides of the radiator coils and also having outwardly extending arms; a rest bar or rod, and lever arms attached to the rest bar or rod and pivotally connected to the arms of the brackets, the pivots being intermediate the ends of the lever arms, and so spaced from the inner ends of said lever arms as to cause said arms to be arranged in inclined position with outer ends uppermost and to hence exert stress outwardly on the jaw members and grip the latter against the inner side of the coils.

1,215,281. SAFETY-HOOK. MARCELLUS W. JONES, Carthage, Mo. Filed June 19, 1915. Serial No. 35,096. (Cl. 24—241.)



1. A safety hoisting hook having a stem the upper portion of which is chambered and the lower part slotted, a latch pivoted in the slotted portion of the stem and movable, from the rear, across the throat of the hook to close it and to a position below the point of the hook, and a hoisting element pivotally connected with the latch in front of the pivot that unites it with the stem of the hook and exending therefrom through the chambered part of the stem, whereby weight suspended from the hook tends to cause the latch to close the hook.

2. A safety hoisting hook having a stem the upper portion of which is chambered and the lower part slotted, a latch pivoted in the slotted portion of the stem and movable, from the rear, across the throat of the hook to close it, a hoisting element pivotally connected with the latch in front of the pivot that unites it with the stem of the hook and extending therefrom through the chambered part of the stem, whereby weight suspended from the hook tends to cause the latch to close the hook, and a spring located in the chamber of the hook arranged to open the latch when weight is removed from the hook.

3. A safety hoisting hook having a stem that is slotted opposite the throat of the hook, a latch pivoted in the slotted portion of the stem and movable, from the rear, across the throat of the hook to close it, a locking slide arranged to bear against the rear of the latch to hold it in closing position, and guide ways in which the slide moves secured to the rear side of the stem of the hook and arranged to direct the slide across the slotted portion of the stem.

4. A safety hoisting hook having a stem portion slotted opposite the throat of the hook, a latch pivoted in the slotted portion of the stem and movable, from the rear, across the throat of the hook to close it, a hoisting element pivotally connected with the latch at a point in front of its pivotal connection with the stem of the hook whereby draft upon such element tends to move the latch into closing position, a locking slide adapted to act on the rear face of the latch and hold it in closing position, guide ways at the rear of the stem of the hook in which the locking slide moves, a handle by which the slide is manipulated, and a stop for limiting the upward movement of the slide.

1,215,282. PUMP. WALTER KIESER and GUSTAV PAGEL, Charlottenburg, Germany, assignors to General Electric Company, a Corporation of New York. Filed Oct. 20, 1915. Serial No. 56,969. (Cl. 103—43.)

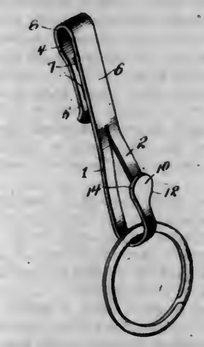
1. In a liquid pump, the suction opening of which is at times only partially supplied with liquid, the combination of a casing, an impeller in the casing, a wall surrounding the eye of the impeller and forming a suction chamber directly in front of it, said wall having an opening at its lower portion, and means forming a conduit for supplying fluid to said opening, said conduit extending from a point above the opening down to it whereby the fluid will be supplied to it by gravity and a trap formed to prevent the admission of gases to the impeller.



2. The combination with a centrifugal pump having a suction chamber, of a partition member in the suction chamber which surrounds the eye of the impeller and defines an opening at the lowest point thereof for the admission of the liquid to be pumped to the impeller.

3. The combination of a casing having an inlet, an impeller in the casing, a discharge scroll surrounding it, and a partition member in the casing which surrounds the eye of the impeller and has an opening at its lowest point for admitting liquid to the impeller, said partition member defining a passage for conveying liquid from the inlet to said opening.

1,215,283. KEY-RING HOLDER. WILLIAM L. KIRKLAND, Birmingham, Ala. Filed June 22, 1915. Serial No. 35,631. (Cl. 24—3.)

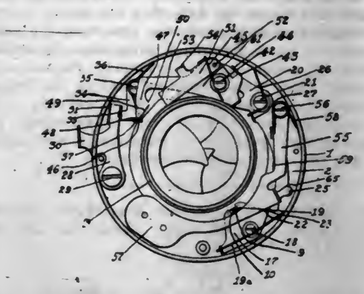


1. A key ring holder comprising a length of resilient metal split longitudinally to afford a pair of legs, one of said legs being bent at its free end and extended reversely thereof, the other leg being disposed obliquely with respect to the longitudinal axis of the length of metal and normally lying against said reversed end of the first mentioned leg, the length of metal being bent at its opposite end to afford a garment engaging member.

2. A key ring holder formed from a single length of resilient metal bent at one end to provide a garment engaging hook, and split at its opposite end to afford a pair of legs, one of said legs being bent at its free end and extended reversely thereof, said reversed end terminating in a rounded enlargement which extends obliquely with respect to the longitudinal axis of the length of metal, the other leg normally lying against the enlargement.

3. A key ring holder comprising a length of resilient metal bent at one end to provide garment engaging means, and split at its opposite end to afford a pair of legs, one of the legs being bent at its free end and extended reversely thereof, said reversed end terminating in a rounded enlargement, the other leg being bent obliquely with respect to the longitudinal axis of the length of metal and normally lying against the rounded enlargement.

1,215,284. PHOTOGRAPHIC SHUTTER. RUDOLPH KLEIN and THEODOR BRUECK, Rochester, N. Y. Filed Dec. 29, 1915. Serial No. 69,258. (Cl. 95—63.)



1. In a photographic shutter, a casing having a partition provided with an aperture and an annular depressed portion about the aperture, a ring fitting in said depressed portion, blades operated by the ring, and a plate secured over the ring to hold it to the partition.

2. In a photographic shutter, a casing having a partition provided with an aperture, a plate secured to said partition and provided with openings, a ring secured between the partition and the plate and having pins projecting therefrom through the openings, and blades pivotally mounted on said pins and operating in contact with said plate.

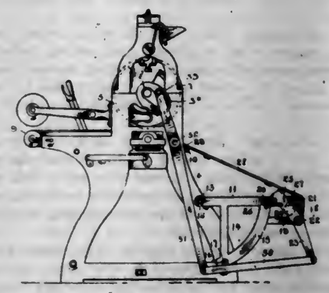
3. In a photographic shutter, a casing having a partition provided with an aperture, a plate secured to said partition and provided with a bearing, a ring turning on said bearing between the plate and the partition, and blades operated by said ring.

4. In a photographic shutter, a casing having a partition provided with an aperture and a depressed portion about the aperture, a ring secured in said depressed portion, a plate secured to said partition and having a bearing portion on which the ring turns and also provided with openings, pivot pins carried by the ring and projecting through the openings and blades connected to said pins.

5. In a photographic shutter, a casing ring, a partition within said ring forming chambers on opposite sides thereof and provided with an aperture and a depressed portion surrounding the aperture, a ring arranged in said depressed portion, pivot pins carried by said ring, a plate secured to said partition and having openings through which the pins project, said plate having a bearing portion thereon projecting into the ring to provide a journal for the latter, and blades connected to said pins.

[Claims 6 to 14 not printed in the Gazette.]

1,215,285. DELIVERY ATTACHMENT FOR PRINTING-PRESSES. HENRY L. KOEHLER, Louisville, Ky. Filed Mar. 28, 1916. Serial No. 87,240. (Cl. 101—29.)

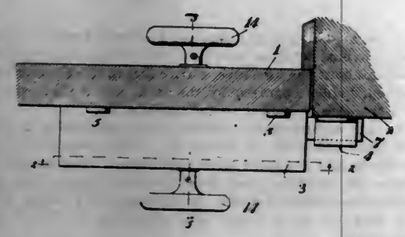


1. In combination with a printing press frame, a sheet delivering mechanism comprising an auxiliary frame, a

pivoted delivery fan carried by the auxiliary frame, studs carried by the press frame, arms having slots, forming a part of the auxiliary frame, the slots of the arms adapted to embrace the studs for removably supporting the auxiliary frame, and means for actuating the fan.

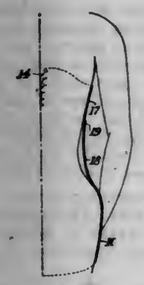
2. In combination with a printing press and the main frame thereof, a sheet delivering mechanism comprising an auxiliary fan frame having horizontally disposed side arms, arcuate brace arms forming a part of the frame, means carried by the main frame for coöperating with the side arms and arcuate brace arms for removably securing the auxiliary frame to the main frame, and means for actuating the sheet delivering mechanism.

1,215,286. DOOR-LOCK. HENRY KOLLMEYER, Concordia, Mo. Filed Nov. 15, 1916. Serial No. 131,520. (Cl. 70—42.)



In a locking means, a slotted toothed bolt, a toothed wheel co-engaging with the teeth of the bolt, a knob spindle connected to the toothed wheel and passing through the slot in the bolt, said spindle having a cranked portion, spring means connected with the said crank, and the said crank being so disposed as to be off of the vertical center when the bolt is moved to its locking or to its unlocking position.

1,215,287. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Aug. 10, 1916. Serial No. 114,090. (Cl. 2—73.)

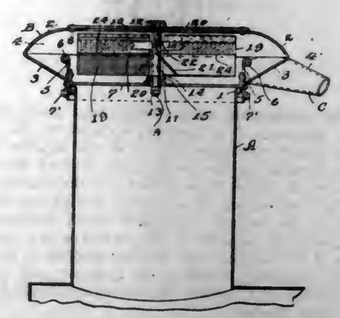


1. In an apparel corset and in each corset body half thereof, spaced stay members, and means between the spaced stay members whereby a portion of the corset body half is caused to extend across a depression in the body of the wearer and to be spaced therefrom at said depression.

2. In an apparel corset and in each corset body half thereof, gore members placed at the side of the garment and connected together adjacent the waist line so as to cause a portion of these gore members to extend across a depression in the body of the wearer and to be spaced therefrom at said depression.

3. In an apparel corset and in each corset body half thereof, a gore section placed in the upper side portion of the corset body half and having a convex lower edge, and a gore section placed in the lower side portion of the corset body half and having a concave upper edge, the lower edge of the upper gore section being cut at a different curvature than the upper edge of the lower gore section and the said edges of the said gore sections being so connected that a portion of the said gore sections is caused to extend across a depression in the body of the wearer and to be spaced therefrom at said depression.

1,215,288. SPARK-ARRESTER. ARCHIBALD LAKE, Parkland, Alberta, Canada. Filed Mar. 18, 1916. Serial No. 85,219. (Cl. 110—137.)



1. In combination with a stack, a shaft mounted concentrically in the stack, blades rotatably mounted on the shaft, the said blades each having a portion thereof inclined, a groove formed on the blade, and a vertical portion connecting the groove to the inclined portion.

2. In combination with a stack, a shaft mounted concentrically in the stack, blades rotatably mounted on the shaft, said blades each having a portion thereof inclined, a groove formed on the blade, and a vertical corrugated portion connecting the groove and the inclined portion.

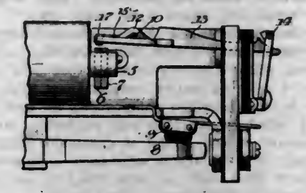
3. In combination with a stack, a shaft mounted concentrically in the stack, blades rotatably mounted on the shaft, said blades each having a portion thereof inclined, a groove formed on the blade, and a vertical perforated corrugated portion connecting the groove and the inclined portion.

4. In combination with a stack, a shaft mounted concentrically in the stack, blades rotatably mounted on the shaft, a receptacle surrounding said blades, each of said blades having a portion thereof inclined, a groove formed on the blades and a vertical perforated portion connecting the groove and the inclined portion.

5. In combination with a stack, a spark arrester comprising an annular receptacle having diverging top and bottom walls, an annulus secured to the inner edge of the bottom wall and coöperating with said bottom wall to form a cinder receiving chamber, cross bars spanning said receptacle and arranged upon the opposite sides thereof, the bars upon the lower side of the receptacle adapted to engage the stack to limit the downward movement of the receptacle, securing members carried by said annulus, a shaft mounted in said cross bars and connecting the same, and blades rotatably mounted on said shaft, said blades each having a portion thereof inclined and a groove formed on the blade, and a vertical portion connecting the groove to the inclined portion.

1,215,289. ANNUNCIATOR. OSCAR M. LEICH, Genoa, Ill., assignor to Cracraft, Leich Electric Company, Genoa, Ill. Filed Apr. 16, 1915. Serial No. 21,783. (Cl. 177—329.)

1. A drop annunciator having a drop shutter, an actuating electromagnet, a shutter arm to control said drop shutter, an armature for actuating said shutter arm, said shutter arm being of the short type and extending between said electromagnet and said drop shutter, and a spring interposed between said armature and said electromagnet, said spring being of a substantially U-shape having one extremity fastened to said armature, and having the opposite extremity adapted to engage said electromagnet.



2. A drop annunciator having a drop shutter, an actuating electromagnet, a shutter arm to control said drop shutter, an armature for actuating said shutter arm, said shutter arm being of the short type and extending between said electromagnet and said drop shutter, and a spring interposed between said armature and said electromagnet operative after the release of said drop shutter by said shutter arm to establish a yielding restraint against the attractive force of said electromagnet, said spring being of a substantially U-shape having one extremity fastened to said armature, and having the opposite extremity adapted to engage said electromagnet.

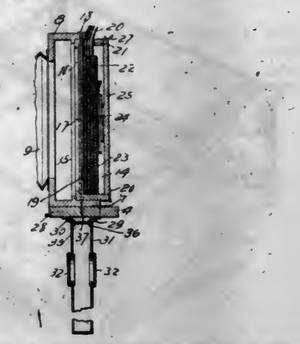
3. A drop annunciator having a drop shutter, an actuating electromagnet, a shutter arm to control said drop shutter adapted to release said shutter from said shutter arm when said shutter arm is actuated, a gravity restored armature carrying said shutter arm, said shutter arm being of the short type and extending between the rear extremity of said electromagnet and said drop shutter, said shutter arm and armature having a low moment of inertia, yielding means interposed between the said armature and said electromagnet, and positive means for controlling said yielding means whereby said yielding means is inoperative to effectively oppose the movement of said armature until the shutter arm has released the shutter, said yielding means thereafter causing a rattling of said armature when undulatory currents are energizing said electromagnet.

4. A drop annunciator having a drop shutter, an actuating electromagnet, a shutter arm to control said drop shutter adapted to release said shutter from said shutter arm when said shutter arm is actuated, a gravity restored armature carrying said shutter arm, said shutter arm being of the short type and extending between the near extremity of said electromagnet and said drop shutter, said shutter arm and armature having a low moment of inertia, a spring interposed between said armature and said electromagnet, and positive means for controlling said spring whereby said spring is inoperative to effectively oppose the movement of said armature until the shutter arm has released the shutter, said spring thereafter causing a rattling of said armature when undulatory currents are energizing said electromagnet.

1,215,290. PHOTOGRAPHIC CAMERA. JAMES A. LONDON, Elvins, Mo. Filed Oct. 4, 1915. Serial No. 54,057. (Cl. 95—13.)

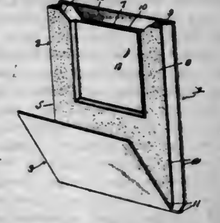
1. In a camera, a main exposing casing; a developing tank supported below the main casing; an auxiliary, plate holding casing movable with respect to the main casing and provided with a first opening, the auxiliary casing having a second opening communicating with the tank; plates mounted in the auxiliary casing; opaque sheets interposed between the plates, the ends of the opaque sheets projecting through the first opening in the auxiliary casing; a slide mounted to reciprocate in the auxiliary casing and constituting means whereby a plate may be ejected through the second opening into the tank when the slide is moved; and resilient, plate compressing means acting at an angle to the plane of reciprocation of the slide.

2. In a camera, a casing having an opening; a developing tank supported below the casing and provided with a spout, one end of the tank having an opening establishing a communication between the interior of the tank and the interior of the spout; a movable closure for the spout; a movable slide constituting a closure for the top of the tank; means for supporting a sensitized element in the casing above the tank; and means for expelling the sensitized element into the tank through the opening in the casing when the slide is removed.



3. In a camera, a casing; a developing tank; a pack of sensitized elements in the casing; means for exposing the sensitized elements successively; a slide mounted to reciprocate in the casing and constituting means for advancing the sensitized elements successively into the tank; and a covering inclosing the pack, whereby the same may be placed in the casing in daylight, the covering being severable along one edge of the pack, to permit the sensitized element to be ejected into the tank by the slide.

1,215,291. COMBINED CIGAR AND MATCH CASE. JOHN A. MCCASKEY, Hagerhill, Ky. Filed Jan. 21, 1916. Serial No. 73,487. (Cl. 229—15.)

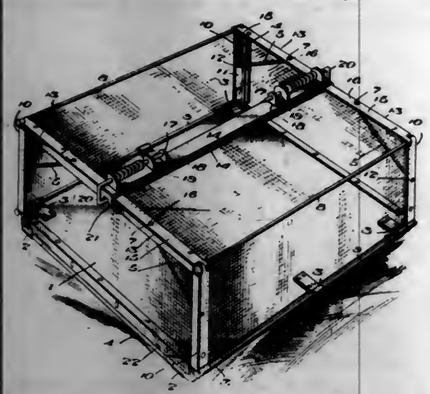


A combined cigar and match case formed from a blank of material having a flap provided with a tongue, a second flap upon the blank foldable upon the body of the blank to provide a collapsible compartment within the case, said last mentioned flap having depressions upon opposite sides of the compartment formed therefrom, one of said depressions coacting with the first mentioned flap to provide a match compartment, and the other depression coacting with a portion of the blank to provide a compartment for the reception of the tongue on the first mentioned flap.

1,215,292. CRATE. JAMES JOHNATHAN MCKAY, Dossville, Miss. Filed June 9, 1916. Serial No. 102,758. (Cl. 220—132.)

1. A coop or crate including a substantially rectangular base, sides and ends hingedly secured to the base, said ends having angular brace members projecting beyond the upper and outer members thereof to provide lugs, the side members being slotted to receive the longitudinal lugs, a top comprising two sections one hingedly secured to each of the sides, and one of the sections adapted to have its end overlap the other section, said top sections having slots to receive the vertical lugs in the ends, spring

pressed locking means upon the overlapping section of the top co-engaging with the undersection of the said top, and said locking means including hook members to engage with the ends of the device.



2. A coop comprising a flat base, side and end members hingedly connected with the base and arranged to permit of the ends folding under the base and the sides over the base, interengaging elements between the ends and sides, a top comprising two sections, one of which being hingedly secured to each of the sides, interengaging means between the ends and the said top sections, locking means for the top sections, and said locking means co-engaging with the end sections and adapted to also engage with the base when the sides and top sections are swung over the base and over each other, and means upon the base for locking the ends thereto when the said ends are swung under the base.

3. A collapsible crate or coop including a base having butts at the sides and ends thereof and projecting beyond the said sides and ends, end members each including a frame comprising upper and lower parallel rods and end rods connecting the said upper and lower rods and the lower rods passing through the end butts of the base, angular reinforcing rods for the ends which project beyond the corner members and the upper members of the said ends to provide lugs, the side members comprising upper and lower parallel rods and plates hingedly secured to the ends thereof and the lower rods passing through butts at the sides of the base, said connecting plates being slotted to receive the lugs at the corner members of the ends when the sides are swung against the ends, said connecting plates having their outer edges flanged inwardly, a top comprising two sections each including end plates which are hingedly connected with the upper rods of the sides, said end plates having outer flanges and being provided with slots to receive the lugs upon the upper members of the sides, longitudinal plates connecting the end members of the top, and one of said longitudinal plates adapted to overlie the other, the underlying plate having slotted lugs, spring pressed locking means upon the upper plates for engaging in the slotted lugs of the underplates, each of the said locking means including a rod member having its outer end hooked and the said hooks adapted to engage with the flanges of the said top sections and to engage with the upper member of the end members, when the device is set up, the frames for the sides and tops having a covering of metal netting, a spring pressed bolt upon the underface of the base having oppositely disposed hooks which are adapted to engage with the end members when the device is collapsed and the said end members are swung under the base, and the hook members of the first mentioned blocks are adapted to be received in openings in the ends of the base when the side and end sections are swung over the base and over each other when the device is in its collapsed condition.

1,215,293. PIGMENT-POWDER AND PROCESS OF MAKING THE SAME. SAMUEL M. MCMURRAY, Smyrna, and JAMES R. PARRISH, Nashville, Tenn. Filed Feb. 3, 1916. Serial No. 75,907. (Cl. 134—58.)

1. The herein described pigment powder for intensifying impressions and rendering them resistant to the action of gasolene, which consists of a mixture of a saccharine substance, a coloring matter, and an inert filler.

2. The herein described composition of matter for intensifying inked impressions and rendering said impressions resistant to the action of gasolene, which consists of a mixture of a saccharine substance, a coloring matter, and an inert filler, said mixture being in the form of a fine, dry powder homogeneous throughout.

3. The herein described composition of matter for rendering inked impressions resistant to the action of gasolene, which consists of a mixture of a saccharine substance, a coloring matter, and an inert filler in the proportions of one part of the saccharine substance, three parts of the coloring matter, and five to twenty per cent. of the inert filler.

4. The herein described composition of matter for rendering inked impressions resistant to the action of gasolene and for intensifying said impressions, which consists of a mixture of one part of glucose, three parts of lamp black, and twenty per cent. of starch.

5. The herein described process of preparing a pigment powder which consists in mixing together a saccharine substance and a coloring matter, treating the mixture with water to render the mixture plastic, drying the mixture, powdering the same, and adding an inert filler.

1,215,294. MOP-HOLDER. WILLIAM A. MACDONALD, Reading, Mass. Filed Mar. 29, 1915. Serial No. 17,819. (Cl. 45—28.)

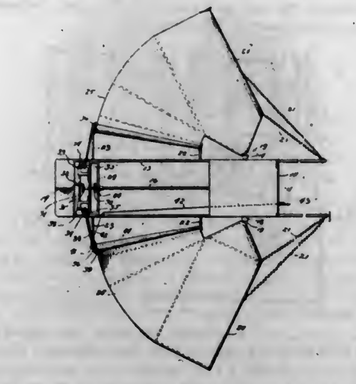


In a holder for toilet mops and the like, in combination, a receptacle adapted to support the mop in upright position and provide with a dished bottom having a drain outlet and an open top, a removable strainer plate in the bottom on which the mop is adapted to rest, a removable cover for said receptacle, a flexible pipe connected with said outlet adapted to be bent to draining position beneath the seat of the toilet, and bendable supporting clamps secured to said receptacle adapted to embrace the flush pipe leading to the toilet or directly engage the wall adjacent thereto and hold said receptacle in operative relation to said toilet.

1,215,295. AEROPLANE. DONALD MACKAY, Thetford Center, Vt. Filed Mar. 14, 1916. Serial No. 84,197. (Cl. 244—14.)

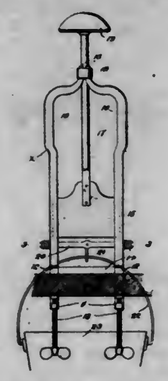
1. In an aerostructure, a frame, sustaining planes movably mounted on the frame, flexible auxiliary plane surfaces connected to the sustaining planes at their one end and windable on the frame at their other ends, means for causing the winding of the flexible planes to move the sustaining planes rearwardly, means for moving and holding the sustaining planes in a forward position yieldably, and holding means for the flexible plane surfaces releasable to permit the said plane surfaces to be unwound by the sustaining planes.

2. In an aerostructure, a frame, sustaining planes mounted on the frame at the sides thereof and shiftable forwardly and rearwardly, auxiliary plane surfaces connected to the sustaining planes and movable forwardly thereby, and means for simultaneously reducing the exposed areas of the auxiliary plane surfaces and moving the sustaining planes rearwardly.



3. In an aerostructure, a frame, sustaining planes pivotally mounted at the sides of the frame and movable forwardly and rearwardly, rollers mounted rearwardly of these planes, auxiliary plane surfaces rolled thereon and connected to the said planes, means for shifting the planes forwardly, means for controlling the unwinding movements of the rollers, and means for rotating the rollers to cause the simultaneous winding of the auxiliary plane surfaces and movement of the sustaining planes.

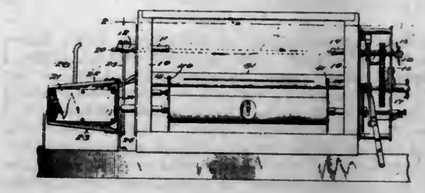
1,215,296. VEGETABLE-SLICER. GEORGE S. MATTHEWS, Brotherton, Tenn. Filed July 25, 1916. Serial No. 111,233. (Cl. 146—7.)



1. A vegetable slicer comprising a pair of spaced standards, a base pivotally mounted between said standards, a transverse element connecting the standards adjacent their lower ends and spaced from the adjacent edge of said base, a knife blade slidably fitted between the standards, said supports being spaced at their upper ends and adapted to be separated to permit the blade to be fitted between the standards, an operating rod connected to the blade, and means for holding the upper ends of the standard operatively associated with said rod.

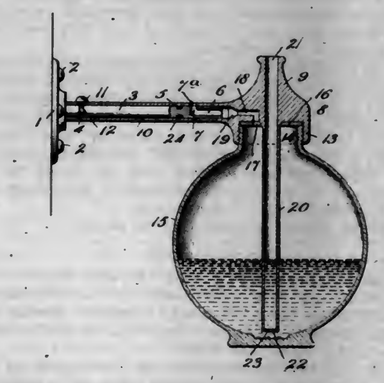
2. A vegetable slicer comprising a pair of spaced standards, each having its lower extremity offset at right angles to the main portion of the standard, a lug projecting from each standard immediately above the offset terminal thereof and defining with the latter a clamp to embrace a support, a clamp screw adjustably associated with said offset terminal, a base pivotally mounted between the lugs of said standard, a cutting blade slidably fitted between said standards, and means for operating said blade.

1,215,297. AUTOMATIC TRACKER ATTACHMENT. JOHN S. MAXWELL, Richmond, Ind., assignor to The Starr Piano Company, Richmond, Ind., a Corporation of Indiana. Filed Oct. 16, 1913. Serial No. 795,588. (Cl. 84—161.)



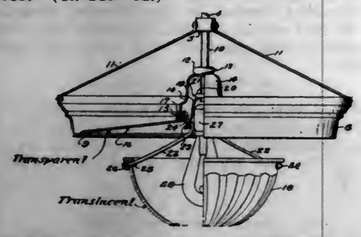
In a piano player including a fixed tracker bar, feed spool, and longitudinally movable trunnions, an attachment comprising a double pneumatic, mechanism actuated thereby for adjusting the feed spool with relation to the tracker bar, the latter having recesses formed in its rear side and continued into reduced openings extending through its face beyond its row of ports, a valve-block seated in each recess and having an L-shaped passage, connections between the rear end of said passage and the double pneumatic, a lever pivoted at its rear end to the outer side of the block and having a tongue at its front end projecting through the opening in the tracker bar, a valve on the lever closing the front end of the passage, a coiled spring around the pivot of the lever holding the valve normally closed, and a screw in the tracker bar against the block, for the purpose set forth.

1,215,298. LIQUID-SOAP DISPENSER. MARK G. MELVIN, Scranton, Pa. Filed Aug. 24, 1915. Serial No. 47,090. (Cl. 221—98.)



A dispensing device comprising a stem having a longitudinal vent bore provided with a lateral branch, a nozzle having a sleeve rotatably mounted on the stem and provided with a passage adapted to register with the said lateral branch when the nozzle is directed upwardly and to be out of register therewith when the nozzle is directed downwardly, and a container attached to the nozzle, said nozzle having also a bore which communicates with the bore of the stem and with the container.

1,215,299. LIGHTING-FIXTURE. EUGENE J. MEYBERG, Los Angeles, Cal. Filed Apr. 8, 1916. Serial No. 89,789. (Cl. 240—92.)



1. In a lighting fixture, the combination with a fixture pipe, of an annular frame provided with an inturned flange; a spider detachably secured to said frame and said fixture support; a reflector of conoidal form having an opening at its center disposed on the flange of said frame; a bowl supporting spider; a shell detachably secured to said fixture and to said bowl supporting spider; and a lamp socket detachably secured to said fixture pipe.

2. In a lighting fixture, the combination with a fixture support, of a frame encompassing said support, spaced therefrom and provided with a shoulder fixedly secured thereto; means detachable from said frame for securing the latter to said support; a reflector detachably mounted on said shoulder extending inwardly from said frame; a reflector support mounted on said fixture support provided with means for detachably securing said reflector thereto; and a source of light disposed below and outside of said reflector.

3. In a lighting fixture, the combination with a fixture support, of an annular frame encompassing said support spaced therefrom and provided with a shoulder fixedly secured thereto; means detachable from said frame securing the latter to said fixture support; a light transmitting reflector detachably disposed on said shoulder and extending inwardly; a reflector support secured to said fixture support; and a source of light disposed below and outside of said reflector.

4. In a lighting fixture, the combination with a fixture pipe, of an annular frame provided with a shoulder fixedly secured thereto; means detachable from said frame for detachably securing the latter to said fixture pipe; a reflector of conoidal form disposed on the shoulder of said frame; a reflector supporting shell detachably secured to said fixture pipe, and a source of light disposed below and outside of said reflector.

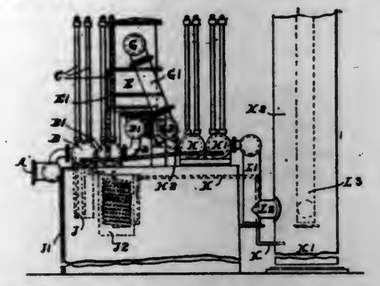
5. In a lighting fixture, the combination with a fixture pipe, of an annular frame provided with an inturned flange; a spider detachably secured to said frame and to said fixture support; a reflector of conoidal form having a lip at its inner edge and disposed on the flange of said frame; a reflector supporting shell detachably secured to said fixture pipe and provided with set screws for engagement with said lip; and a source of light secured to and depending from said fixture pipe.

[Claims 6 to 10 not printed in the Gazette.]

1,215,300. PROCESS FOR THE TREATMENT AND RECOVERY OF TAR AND AMMONIA LIQUOR FROM PRODUCER OR OTHER GAS. QUINTIN MOORE, Ridrie, Glasgow, Scotland. Filed Jan. 26, 1915. Serial No. 4,503. (Cl. 183—110.)

1. Process for the treatment and recovery of tar and ammonia liquor from producer and other gas in which the gas is first cooled in condensers to a temperature suitable for the extraction from it of tar and is then led through a tar extractor from which tar and water of condensation flow back to the condenser and travel therein generally opposite to the flow of the gas, the gas after leaving the extractor being further cooled, the tar and liquor leaving the condensers being separated and the liquor cooled and used in towers or scrubbers to wash the gases as described.

2. Process for the treatment and recovery of tar and ammonia liquor from producer and other gas in which the gas is first cooled in condensers to a temperature suitable for the extraction from it of tar and is then led through a tar extractor from which tar and water of condensation flow back to the condenser and travel therein generally opposite to the flow of the gas, the gas after leaving the extractor being treated in an acid bath and then further cooled, the tar and liquor leaving the condensers being separated and the liquor cooled.



3. The process for recovering tar from hot gas, which consists in cooling the gas, leading the cooled gas through a tar extractor, leading the extracted tar back into contact with the hot gases in the condenser whereby the tar is dehydrated and the light and heavy tars mixed, and recovering the thus dehydrated tar in a condition of practically uniform consistency.

4. The process for recovering tar from hot gas, which consists in cooling the gas to a temperature between 100° F. and 160° F., leading the cooled gas through a tar extractor, leading the extracted tar back into contact with the hot gases in the condenser whereby the tar is dehydrated and the light and heavy tars mixed, and recovering the thus dehydrated tar in a condition of practically uniform consistency.

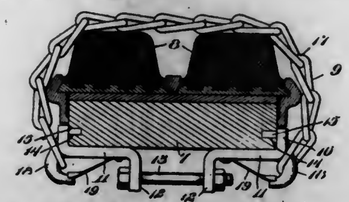
1,215,301. PORTABLE TRACK AND TIRE-PROTECTOR. JOHN B. MUNSON and PETER F. HAGERTY, Phillipsburg, N. J. Filed Aug. 7, 1916. Serial No. 113,673. (Cl. 152—16.)



A tire armor comprising a plurality of transversely arranged plates with recesses on their inner faces adapted to engage the tread of a tire, wings carried by the outer ends of said plates and projecting laterally from opposite sides of the tire, said wings having centrally disposed openings therethrough, rivets in said openings with enlarged heads disposed on the outer surface of each wing, the inner ends of said rivets extending beyond the inner surface of each wing and being bent to form alining eyes, a pair of flexible cables positioning one on each side of the tire and extending through said eyes, and means for connecting the ends of the cables to retain the plates in position.

1,215,302. NON-SKID DEVICE. JOHN A. MURRAY and CHARLES N. WILT, Pontiac, Mich. Filed July 21, 1916. Serial No. 110,592. (Cl. 152—14.)

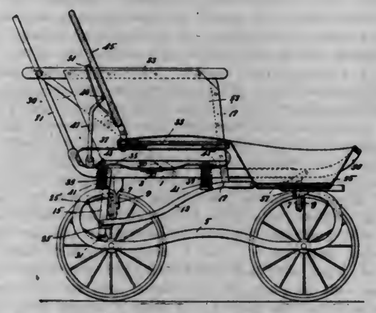
1. The combination with a vehicle wheel having a felly formed with sockets, and a tire on said felly, a saddle detachably connected to the felly and terminally provided with angularly bent lips, means formed on the lips adapted to engage in the sockets of the felly for preventing any circumferential movement of the saddle, hooks formed on the terminals of the saddle and extending in opposite directions to the lips, and cross chains detachably connected with the hooks of the saddle and holding the same transversely on the tire.



2. A non-skidding device including a saddle comprising a pair of adjustably connected sections, each of said sections having an up-bent lip on the outer terminal thereof, inwardly extending prongs formed on the said lips, hooks formed on the outer terminals of each of the said sections and depending therefrom, and cross chains detachably connected with said hooks.

3. In combination with a vehicle wheel having its felly formed with a series of sockets; a tire on said felly, and a saddle detachably connected under the felly, said saddle comprising a pair of sections each provided on their confronting ends with depending apertured ears, a bolt extending through the apertures of the ears for adjustably connecting the saddle to said felly, the free end of each section of the saddle being bent to provide an upstanding lip, means formed integral with the lips for engagement in the sockets of the felly preventing any circumferential creeping movement of the saddle with respect to said felly, hooks formed on the outer faces of said lips and extending in an opposite direction to the lips, and cross chains detachably connected with the hooks of the saddle for holding the chains across the tire.

1,215,303. COLLAPSIBLE VEHICLE. GEORGE B. AMBLER, Leominster, Mass., assignor to F. A. Whitney Carriage Company, Leominster, Mass., a Corporation of Massachusetts. Filed June 12, 1914. Serial No. 844,785. (Cl. 21—83.)



1. A vehicle comprising in combination, a body frame, a wheel carrier therefor foldable into collapsed and erected positions, means for folding said carrier including a controlling member extending longitudinally of said frame, members pivotally connecting said controlling member to said frame, means on said carrier coöperating with said controlling member for folding the wheel carrier, and locking elements on said carrier, one of said connecting members being movable into locking engagement with said elements to secure the carrier in erected position.

2. A vehicle comprising in combination, a body frame, a wheel carrier therefor foldable into collapsed and erected positions, a tappet on said carrier, means including a bar movable longitudinally of the vehicle for engaging said tappet to fold said carrier transversely of the vehicle, locking elements on said carrier, and a member carried by said frame movable by said bar into locking engagement with said elements to hold said carrier in erected position.

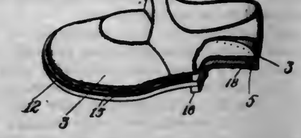
3. A vehicle comprising in combination, a body frame, a wheel carrier therefor foldable transversely of the vehicle, locking elements on said carrier, a bar coöperating with said carrier to fold the latter into erected position, a member pivotally connected to said frame and bar for locking engagement with said elements, handle bars, connections therefrom to said carrier folding bar for actuating the latter by the former, and means for holding said handle bars in erected position.

4. A vehicle comprising in combination, a body frame, a wheel carrier therefor foldable transversely of the vehicle, locking elements on said carrier, a bar coöperating with said carrier to fold the latter into erected position, a member pivotally connected to said frame and bar for locking engagement with said elements, handle bars, connections therefrom to said carrier folding bar for actuating the latter by the former, and toggle lever means for holding said handle bars in erected position.

5. A vehicle comprising in combination, a body frame having side members 1, a bracket 7 rigid with each side member, wheel carriers 5, each having a pair of locking elements 25 fast thereon, means pivotally connecting each carrier to its bracket, a handle 21, and members 15 operated by said handle, each adapted for engagement with a pair of said elements to secure the carriers in erected positions.

[Claims 6 to 12 not printed in the Gazette.]

1,215,304. METHOD OF MAKING SHOES. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 22, 1915. Serial No. 23,100. (Cl. 12—142.)



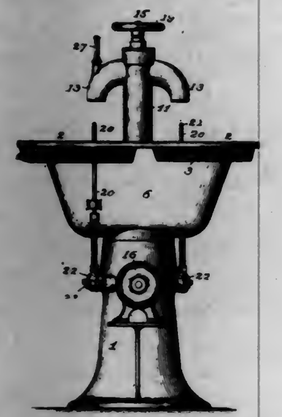
1. That improvement in the art of making shoes which consists in molding the heel end of an upper to provide an inturned flange, splitting the heel end of the sole to form a flap, assembling the upper and sole upon a last with the inturned flange of the upper positioned between the flap and the heel end of the sole, and securing the heel portion of the sole to the inturned flange of the upper and the flap in a single operation.

2. That improvement in the art of making shoes which consists in molding the heel end of an upper to provide an inturned flange, forming a tongue upon the heel end of the sole in such manner that the original thickness of the sole is retained about the marginal edge thereof, assembling the upper and sole upon a last with the inturned flange extending between the flap and the heel end of the sole, securing the upper to the sole about the forepart, and securing together the heel portion of the sole, the inturned flange of the upper and the flap in one operation.

3. That improvement in the art of making shoes which consists in splitting the heel end of a sole, molding the heel end of an upper to provide an inturned flange, assembling the upper and sole upon a last with the inturned flange of the upper positioned between the split portions of the heel end of the sole, securing the upper to the sole about the forepart, and securing together the split portions of the sole and the flange of the upper simultaneously.

4. That improvement in the art of making shoes which consists in molding the heel end of an upper to provide an inturned flange, splitting the heel end of the sole to form a flap, assembling the upper and sole upon a last with the inturned flange of the upper positioned between the flap and the heel end of the sole, and securing the heel portion of the sole and a heel to the inturned flange of the upper and the flap in a single operation.

1,215,305. COATING-MACHINE. GEORGE F. DICKSON, Chicago, Ill., assignor to Confectioners and Bakers Supply Co., Chicago, Ill., a Corporation of Illinois. Filed Feb. 26, 1915. Serial No. 10,712. (Cl. 91—3.)



1. In a coating apparatus, the combination of an open top melting pot, a fixed work table projecting laterally from the margin of said pot, and a pump associated with said pot and adapted to effect a flow of a stream of the fluid contents of the pot in a downward direction back into the pot, substantially as set forth.

2. In a coating apparatus, the combination of an open top melting pot, a fixed table projecting laterally from the margin of said pot, a pump associated with said pot and adapted to effect a flow of a stream of the fluid contents of the pot in a downward direction back into the pot, and a jarring means extending vertically through the work table adjacent to the margin of the pot, substantially as set forth.

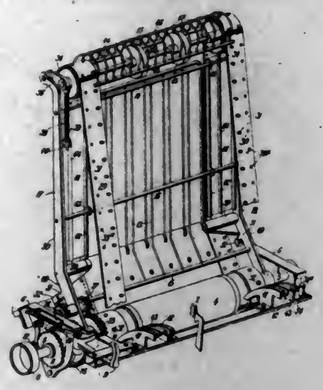
3. In a coating apparatus, the combination of an open top melting pot, a fixed table projecting laterally from the margin of said pot, a pump associated with said pot and adapted to effect a flow of a stream of the fluid contents of the pot in a downward direction back into the pot, and a discharge head located above the table aforesaid and adapted to discharge a cooling medium thereon, substantially as set forth.

4. In a coating apparatus, the combination of an open top melting pot, a fixed table projecting laterally from the margin of said pot, a pump associated with said pot and adapted to effect a flow of a stream of the fluid contents of the pot in a downward direction back into the pot, a jarring means extending vertically through the work table adjacent to the margin of the pot, and a discharge head located above said table and adapted to discharge a cooling medium thereon, substantially as set forth.

5. In a coating apparatus, the combination of an open top melting pot, a heating jacket surrounding said pot, a heating member having circulatory connection with said heating jacket, a fixed table projecting laterally from the margin of said pot, and a pump associated with said pot and adapted to effect a flow of a stream of the melted contents of the pot in a downward direction back into the pot, substantially as set forth.

[Claims 6 to 23 not printed in the Gazette.]

1,215,306. TYPE-WRITING MACHINE. FREDERICK A. HART, Newark, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 3, 1916. Serial No. 69,745. (Cl. 197—126.)



1. In a typewriting machine, the combination with a roller platen; of a sheet-collating device comprising a frame mounted to swing about the platen axis from an upright position to a horizontal sheet-assembling position, said device comprising a frame having side members and a transverse brace rod concentric with the platen and rigidly uniting the side members.

2. In a typewriting machine, the combination with a rotary platen; of a sheet-collating device comprising a sheet-supporting table and a framework therefor, said framework comprising side members and a transverse member concentric with the platen and rigidly uniting said side members, the platen being rotatably mounted on said transverse member.

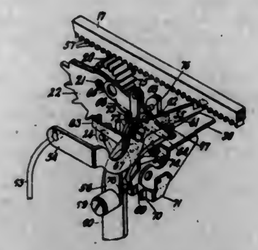
3. In a typewriting machine, the combination with a rotary platen; of a sheet-collating device comprising a sheet-supporting table, a framework therefor, said framework comprising side members and a transverse member concentric with the platen and rigidly uniting said side members, the platen being rotatably mounted on said transverse member, a platen axle journaled in said transverse member; and means for transmitting motion from the platen axle to the platen for rotating the latter.

4. In a typewriting machine, the combination with a rotary platen; of a sheet-collating device comprising a sheet-supporting table, a framework therefor, said framework comprising side members and a transverse member concentric with the platen and rigidly uniting said side members, the platen being rotatably mounted on said transverse member, a platen axle journaled in said transverse member; and a gear train connecting the platen axle and platen, said train comprising gears connected to the axle and the platen, respectively; pinions meshing with said gears; and a shaft to which said pinions are fixed, said last mentioned shaft journaled in one of said side members of the frame, said frame mounted to swing about the platen axis from a normal position in which it extends upwardly from the platen, to a reclining, sheet-assembling position.

5. In a typewriting machine, the combination with a rotary platen; of a sheet-collating device comprising a table or support for the arrangement of work-pieces thereon, and a supporting frame for said table, said frame mounted to swing about the platen axis, and comprising side frame bars and a transverse brace rod concentric with the platen and rigidly uniting said side bars, said rod forming bearings on which the platen is rotatably mounted between the side frame bars.

[Claims 6 to 21 not printed in the Gazette.]

1,215,307. TYPE-WRITING MACHINE. ARTHUR A. JOHNSON, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 11, 1916. Serial No. 130,696. (Cl. 197—91.)



1. In a typewriting machine, the combination with a carriage, of means for causing the carriage to feed letter-space distances step by step in one direction, and back-spacing means for repositioning the carriage one and a half letter-spaces from the original position, provision being made for returning said carriage automatically one and a half spaces to original position when released from said repositioning means.

2. In a typewriting machine, the combination with a carriage, of means for causing the carriage to feed letter-space distances step by step in one direction, means for repositioning the carriage one and a fraction letter-spaces from the original position, means for temporarily holding the carriage repositioned, and means for releasing the carriage when held by said holding means.

3. In a typewriting machine, the combination with a carriage and escapement mechanism therefor, of keys operating the escapement mechanism to cause the carriage to feed letter-space distances step by step in one direction, means for repositioning the carriage one and a fraction letter spaces, means for temporarily holding the carriage repositioned, and means controlled by said keys for releasing the carriage from said holding means, to allow the carriage to move to original position.

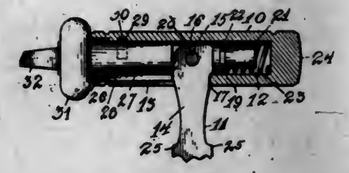
4. In a typewriting machine, the combination with a carriage and escapement mechanism therefor, of keys operating the escapement mechanism to cause the carriage to feed letter-space distances step by step in one direction, key-operated means for repositioning the carriage to a position one and a fraction letter-spaces from original position, mechanical means for temporarily holding the carriage repositioned, and means operated by the depression of a key for releasing the carriage from said holding means.

5. In a typewriting machine, the combination with a carriage and escapement mechanism therefor, of keys operating the escapement mechanism to cause the carriage to feed letter-space distances step by step in one direction, means adapted to disconnect the carriage from the escapement mechanism and to reposition the carriage one and a fraction letter-spaces from original position, and means for holding the escapement mechanism against movement, while the carriage and escapement mechanism are thus disconnected.

[Claims 6 to 35 not printed in the Gazette.]

1,215,308. COMBINATION-TOOL. JOHN EMIL JOHNSON, Jamestown, N. Y., assignor to Crescent Tool Company, Jamestown, N. Y., a Corporation. Filed Nov. 10, 1914. Serial No. 871,267. (Cl. 145—61.)

1. A tool comprising a handle formed with a socket extending through one end thereof and provided with a slot extending partially the length of the socket from the opened end thereof whereby the inner end portion of the slot forms a rigid abutment immovably secured to the socket, a tool shank pivoted in the socket of the handle adjacent the inner end of the slot to extend either through the latter or through the socket and when extending through the slot to seat against said abutment, and means automatically operating abutting the shank at all times to automatically release and hold the shank and when the latter extends through the slot holding said shank against the rigid abutment provided by the inner end wall of the slot.



2. A tool comprising a tubular handle closed at one end and opened at the opposite end and formed with a relatively narrow slot opening through the opened end thereof, a thin flat tool shank pivoted in the handle to lie disposed either through the slot or through the opened end of the handle, a spring-pressed plunger arranged in the handle between the closed end thereof and the tool shank to exert pressure against the latter and automatically shifted by the shifting of the tool shank, means insertible in the opened end of the handle, when the tool shank extends through the handle slot, for constituting an auxiliary handle and abutting the tool shank and coöperating with the plunger in holding the shank so disposed, and means to positively lock said means against movement.

3. A tool comprising a tubular handle closed at one end and opened at the opposite end whereby a device may be inserted in the latter end and formed with a relatively narrow slot opening through the opened end thereof, a thin flat tool shank pivoted in the handle to lie disposed either through the slot or through the opened end of the handle, means yieldably disposed in the closed end portion of the handle and engaging the tool shank on one side when the latter extends through the handle slot and on the inner end when said shank extends through the opened end of the handle, and a device removably disposed in the opened end of the handle and closing the slot of the latter, said device constituting an auxiliary handle and abutting the opposite side of the tool shank for positively holding the same and having a spring latch interlocking with the handle.

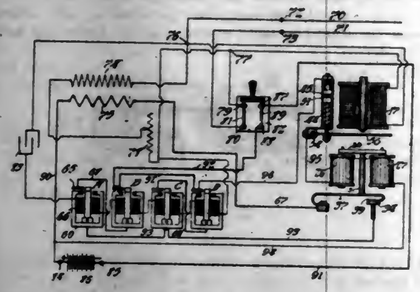
4. A tool comprising a tubular handle closed at one end and opened at the opposite end whereby a device may be inserted in the latter end and formed with a relatively narrow slot opening through the opened end thereof, a thin flat tool shank pivoted in the handle to lie disposed either through the slot or through the opened end of the handle, and a tool device entirely plugging and removably fixed in the opened end of the handle, when the tool shank extends through the handle slot, for abutting the tool shank to hold the latter immovable and for constituting an auxiliary handle.

1,215,309. MEANS FOR CHARGING STORAGE BATTERIES. SAM G. LANGLEY, West Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed June 18, 1912. Serial No. 704,338. (Cl. 171—314.)

1. In a system of the class described, the combination of a storage battery and means for supplying unidirectional current thereto, including a source of alternating current, rectifying means, and means controlled by the voltage of said source for connecting said battery to said rectifying means, substantially as described.

2. In a system of the class described, the combination of a storage battery and means for supplying unidirectional current thereto, including a source of alternating current, rectifying means, and automatic means for maintaining the connection of the battery to the rectifying means while the voltage of the source is in excess of a predetermined value and for breaking the connection when

the voltage of the source falls below said value, substantially as described.



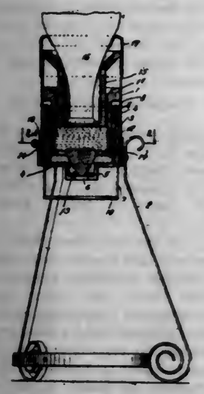
3. In a system of the class described, the combination of a storage battery and means for charging the same, including a source of alternating current, rectifying means, a manually operated switch, and an automatic switch governed by the voltage of the source for controlling the connection and disconnection of the battery and rectifying means, said automatic switch being operable to connect the battery and rectifying means only when the manually operated switch is closed, substantially as described.

4. In a system of the class described, the combination of a storage battery and means for charging the same, including a transformer having primary and secondary windings, rectifying means, an automatic switch having a winding supplied with current from the primary and having contacts controlled by said switch winding for making and breaking connection between the battery and the rectifying means, and a manually operated switch for controlling the automatic switch circuit and the battery connection, substantially as described.

5. In a system of the class described, the combination of a storage battery and means for supplying unidirectional current thereto, including a source of current, rectifying means, and means for automatically establishing connection between said storage battery and said rectifying means whenever a predetermined electrical condition exists in said source, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,215,310. FRUIT-JUICE-DISPENSING DEVICE. WILLIAM G. MCCREA, Bronxville, N. Y. Filed Mar. 27, 1916. Serial No. 86,902. (Cl. 221—115.)



1. A dispensing device for fruit juice and other liquids, comprising means for supporting a bottle of the liquid in inverted position, a cup or receptacle surrounding the mouth of the bottle and provided with an opening in its bottom, a sealing device in said receptacle arranged when lowered to close said opening and when raised to seal the mouth of said bottle, and operating means for raising and lowering said sealing device, whereby charges of the liquid may be dispensed from said bottle into the receptacle upon lowering the sealing device, and from said receptacle upon raising the sealing device.

2. A dispensing device for fruit juice and other liquids, comprising means for supporting a bottle of the liquid in inverted position, a cup or receptacle adjustable with respect to said supporting means surrounding the mouth of the bottle and provided with an opening in its bottom, a sealing device in said receptacle arranged when lowered to close said opening and when raised to seal the mouth of said bottle, and operating means for raising and lowering said sealing device, whereby charges of the liquid may be dispensed from said bottle into the receptacle upon lowering the sealing device and from said receptacle upon raising the sealing device.

3. A dispensing device for fruit juice and other liquids, comprising an outer casing and supporting means therefor, bottle-holding means supported by said casing for holding a bottle in inverted position, a cup or receptacle within said casing surrounding the mouth of the bottle and provided with an opening in its bottom, a sealing device in said receptacle arranged when lowered to close said opening and when raised to seal the mouth of said bottle, and means operable by a drinking glass arranged below said opening for raising and lowering said sealing device, whereby charges of the liquid may be dispensed from said bottle into the receptacle upon lowering the sealing device and from said receptacle into the glass upon raising the sealing device.

4. A dispensing device for fruit juice or other liquids, comprising a casing and supporting means therefor, bottle-holding means supported by the casing for holding a bottle in inverted position, a cup or receptacle arranged within said casing surrounding the mouth of the bottle and provided with an opening in its bottom, means for raising and lowering said receptacle with respect to the casing and the mouth of the bottle, a sealing device in said receptacle arranged when lowered to close the opening in said receptacle and when raised to seal the mouth of the bottle, and operating means for raising and lowering said sealing device, whereby charges of the liquid may be dispensed from said bottle into the receptacle upon lowering the sealing device and from said receptacle upon raising the sealing device, and whereby the charge of liquid may be varied by raising and lowering said receptacle with respect to the mouth of the bottle.

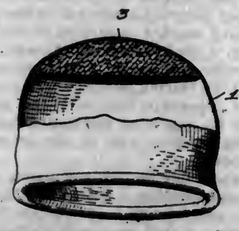
5. A dispensing device for fruit juice and other liquids, comprising an outer casing and supporting means therefor, means within said casing for supporting the bottle in inverted position, a cover member at the top of said casing adjustable with respect thereto to close the space between the top of the casing and the bottle, a cup or receptacle surrounding the mouth of the bottle and provided with an opening in its bottom, a sealing device in said receptacle arranged when lowered to close said opening and when raised to seal the mouth of the bottle, whereby charges of the liquid may be dispensed from said bottle into the receptacle upon lowering the sealing device and from said receptacle upon raising the sealing device.

[Claims 6 to 9 not printed in the Gazette.]

1,215,311. BATHING-CAP. THOMAS W. MILLER, Ashland, Ohio, assignor to The Faultless Rubber Co., Ashland, Ohio, a Corporation of Ohio. Filed Nov. 17, 1916. Serial No. 131,892. (Cl. 2—106.)

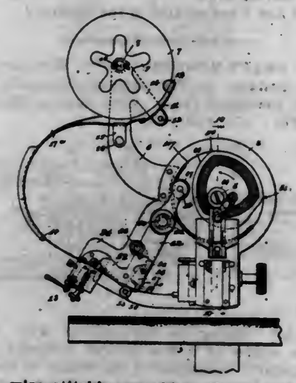
1. A bathing cap, embodying a flexible water-proof body, and a band of sponge rubber.

2. A bathing cap, embodying a flexible water-proof body, and an unbroken band of sponge rubber, around which the edge of the cap is folded, said edge being cemented thereto and said edge and roll constituting the cap rim.



3. A bathing cap, embodying a flexible water-proof body, and a pad of sponge rubber fixed to the interior central portion of said body.

1,215,312. WIRE-STITCHING MACHINE. JOSEPH PAGLIARUL, Chicago, Ill., assignor to Joseph E. Smyth, Chicago, Ill. Filed June 22, 1914. Serial No. 846,432. (Cl. 1—7.)



1. In a wire stitching machine, the combination of a frame having an operating shaft, a cam keyed to said shaft, a spring-retracted wire feed lever pivoted to said frame and carrying a roller adapted to be engaged by said cam and having an arc-shaped feed-wire track with gripping means coöperating with said track, a swinging arm having its pivot substantially co-axial with said lever-pivot and provided with a projection substantially halfway between said arc-shaped feed-track and said pivot and with a back-stop adapted to engage said lever, forming mechanism, cutting mechanism at one side of said forming mechanism, and a slide carrying said cutting mechanism and adjustable to vary the distance between said cutting mechanism and said forming mechanism and having a slot the sides of which tangentially engage said projection.

2. In a wire-stitching machine, wire-cutting and clamping mechanism comprising a body portion, a die fixed in said body portion, a knife adapted to slide in said body portion and coöperate with said die, a clamping plunger provided with transverse teeth crossing the axis of the wire, said plunger being adapted to slide in said body portion, parallel with said knife, resilient means for raising said plunger out of contact with the wire, means for depressing said plunger and adapted to prevent rotation thereof and a spring interposed between said plunger depressing means and said plunger.

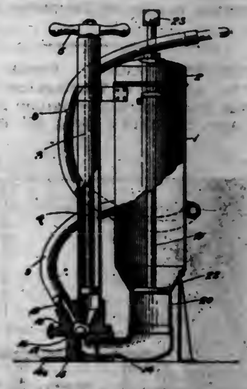
3. In a wire-stitching machine, wire-cutting and clamping mechanism comprising a body portion, a die secured in said body portion, a knife coöperating with said die and adapted to slide in said body portion, a clamping plunger parallel with said knife and provided at its upper end with a transverse notch, and a pin carried by the end of said knife and arranged to engage said notch and depress the plunger.

4. In wire-stitching mechanism, the combination of a spring-pressed horizontally slidable forming-die having a horizontal slot at its outer end for receiving and forming the wire, the outer end of said plunger having a vertically extending notch deep enough to expose the wire when located against the rear wall of the slot, and a vertically swinging spring-pressed guide member adapted to enter said notch by movement in a horizontal direction and guide the wire into the bottom of said slot.

5. In wire-stitching mechanism, the combination of a spring-pressed horizontally slidable forming-die having a horizontal slot at its outer end for receiving and forming the wire, the outer end of said plunger having a vertically extending notch deep enough to expose the wire when located against the rear wall of the slot, and a vertically swinging spring-pressed guide member adapted to enter said notch and guide the wire into the bottom of said slot, said guide member being beveled on the side adjacent the wire-feed.

[Claims 6 and 7 not printed in the Gazette.]

1,215,313. GREASE-CABINET. JAMES RUNYEN and DAVID RUNYEN, Grand Rapids, Mich. Filed Dec. 7, 1914. Serial No. 875,841. (Cl. 221—51.)



1. In a device of the character described, a receptacle having at its lower end a reduced cylindrical extension, a plunger mounted in the receptacle having a head adapted to operate in said extension, an outlet member communicating with said extension, a pumping device communicating with the outlet member, a movable valve seated between the pumping device and receptacle, and a flexible outlet tube of relatively great length and small inner sectional area also communicating with the outlet member and the pumping device, the valve also being located between the outlet member and tube, substantially as described.

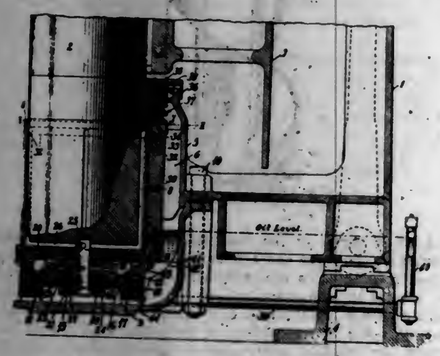
2. In a device of the character described, a receptacle having at its lower end a reduced cylindrical extension, a manually operable plunger mounted in the receptacle having a head adapted to operate in said extension, an outlet member communicating with the said extension, a casting having a passageway secured to the outlet member and communicating therewith, a movable valve seated at the end of said passageway, a casting provided with two passageways secured above the first casting and valve, a pumping device and a flexible outlet tube of relatively great length and small inner sectional area attached to said second casting and communicating with the said passageway therein, substantially as described.

3. In a device of the character described, a receptacle having an open upper end, a removable cover for said open end, a barrel located outside and alongside the receptacle and secured thereto adjacent its upper end, a member having a passageway therein into which the

lower end of the barrel is threaded, the interior of the barrel communicating with the passageway, said member being secured to the receptacle and its passageway communicating with the interior of the receptacle, a movable valve interposed in the passageway between the barrel and receptacle, a foot piece secured to said member, a flexible conduit connected to said member having a passage freely communicating with the passage in the member, there being a free and unobstructed passage between the barrel and said conduit, and a piston movably mounted in the barrel.

4. In a device of the character described, a receptacle having means for the insertion of grease or the like therein, a barrel located outside and alongside of the receptacle, a member having a passageway therein into which the lower end of the barrel is passed and secured, the interior of the barrel communicating with the passageway, said member being secured to the receptacle and its passageway communicating with the interior of the receptacle, a movable valve interposed in the passageway between the barrel and receptacle, a piston movably mounted in the barrel and having an operating member connected thereto extending above the barrel, a foot member connected with the device, a flexible conduit connected to the first mentioned member having a passage communicating with the passage in said member there being a passage between the barrel and said conduit and a handle secured to the upper end of the operating member for the piston, substantially as described.

1,215,314. THRUST-BEARING. ROBERT SIEGFRIED, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 20, 1912. Serial No. 685,061. (Cl. 64—49.)



1. A thrust bearing comprising an oil well, annular bearing members operating therein, and a shaft carrying one of the annular members at its end and having a projection extending through said members into said oil well and provided with passages through which oil is supplied to the bearing members.

2. A thrust bearing comprising an oil well, a substantially vertical shaft having a recessed projection extending into the well, rings forming a ball race in the well at the end of the shaft, a plurality of bearing balls in said race, and radial passages in the shaft projection which terminate near the bearing balls and through which oil is supplied thereto.

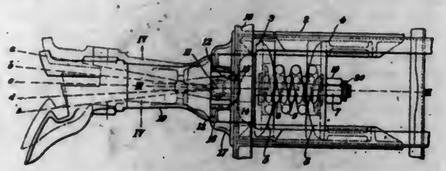
3. A thrust bearing comprising an oil well, a stationary supporting ring in the well having a concave spherically curved surface, a bearing ring having a convex surface adjustably mounted on the supporting ring, a substantially vertical shaft having a longitudinally recessed shaft projection extending through the ring members into the oil well, interposed bearing balls between the bearing ring and the end of the shaft, and radial passages in the shaft projection communicating with the longitudinal recess and terminating near the bearing balls.

4. A thrust and guide bearing comprising a stationary cylindrical housing member, a lubricating-fluid receptacle secured thereto and forming a part of the bearing housing, a bearing member pivotally supported in the receptacle, a cylindrical bearing member supported in said cylindrical housing member, a shaft extending through the cylindrical bearing member and having a recessed projection extending through the bearing member in the receptacle, and radial passages communicating with the recess in the shaft projection for supplying lubricating fluid to the cylindrical bearing member and to the bearing member within the receptacle.

5. A thrust and guide bearing comprising a stationary cylindrical housing member, a lubricating-fluid receptacle secured thereto and forming a part of the bearing housing, rings forming a ball race and pivotally supported within the receptacle, a plurality of bearing balls operated in the ball race, a cylindrical bearing member supported in said cylindrical housing member, a shaft extending through the cylindrical bearing member and having a recessed projection extending through the bearing member in the receptacle, and radial passages communicating with the recess in the shaft projection for supplying lubricating fluid to the cylindrical bearing member and to the bearing balls.

[Claims 6 and 7 not printed in the Gazette.]

1,215,315. DRAFT-RIGGING. JOHN WILLISON, Derby, England, assignor to The National Malleable Castings Company, Cleveland, Ohio. Filed June 4, 1913. Serial No. 771,574. (Cl. 213—42.)



1. In draft rigging, in combination with a coupler adapted to couple by a free lateral movement, a draft member pivotally connected to the shank of the coupler, springs and followers encircling said draft member, the coupler in normal coupling position being free to angle laterally relative to the central member to a limited extent unrestrained by either spring, one of said springs being at all times under compression and acting to return the coupler into the normal coupling position, and the other of said springs being under compression only during buffing and draft.

2. In draft rigging, in combination with a coupler adapted to couple by a free lateral pivotal movement, a draft member pivotally connected to the shank of said coupler, springs and a member intermediate the springs and coupler, shoulders upon the coupler shank in spaced relation to shoulders upon the intermediate member adapted to limit the amount of free lateral movement of the coupler, the shoulders on the coupler shank and the shoulders on said member being normally out of contact with each other.

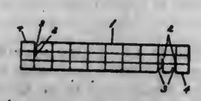
3. In draft rigging in combination with a coupler adapted to couple by a free lateral pivotal movement, a draft member pivotally connected to the shank of the coupler, springs and followers in connection with said draft member, said draft member engaging the coupler shank to limit the coupler from an excessive lateral swing in either direction.

4. In shock absorbing mechanism, a central member having a plurality of springs mounted thereon and having a pivoted engagement with the draft member, followers on the central member, and a separate longitudinally movable bearing block between the front follower and the draft member, held against forward movement when in normal position, said bearing block having surfaces cooperating with corresponding surfaces on the draft member, said bearing block surfaces lying substantially in a plane passing through the point of pivotal engagement at right angles to the central member, said bearing block being also adapted to be driven rearwardly against the front follower by either an excessive lateral or a rearward longitudinal movement of the draft member.

5. In shock absorbing mechanism, a laterally swinging draft member, a central member having a pivoted engagement with the draft member, springs mounted on the central member, a longitudinally movable member in engagement with the draft member and held against forward movement when in normal position, shoulders on the movable member, out of line with the central longitudinal plane of the mechanism, said shoulders forming limits for the free lateral movement of the draft member and fulcrums against which the draft member bears under excessive lateral movements to compress one of said springs.

[Claims 6 and 7 not printed in the Gazette.]

1,215,316. GOLF-TEE. BERT R. BENJAMIN, Oak Park, Ill. Filed Jan. 24, 1916. Serial No. 73,966. (Cl. 46—4.)



1. A golf tee blank comprising a straight strip of flexible material carrying means for pivotally connecting its ends.

2. A golf tee blank comprising a straight strip of flexible material having oppositely disposed transverse slits in its opposite ends.

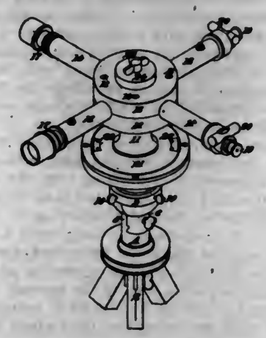
3. A cylindrical laterally yieldable golf tee formed of a straight strip of flexible material having its ends pivotally connected.

4. A cylindrical golf tee formed of a straight strip of flexible material having coöperating interlocking portions pivotally connecting its ends.

5. A cylindrical golf tee formed of a straight strip of flexible material, having connecting means on its ends permitting relative angular movement thereof.

[Claims 6 to 15 not printed in the Gazette.]

1,215,317. DISTANCE-METER. THEODORE CHABRE, Alameda, Cal. Filed Jan. 10, 1916. Serial No. 71,235. (Cl. 33—63.)



1. In a surveying instrument, the combination with a base member having a spindle mounted thereon, of a sleeve turnable on the spindle, a head member carried by the sleeve, and a pair of telescopes rigidly secured on the head and positioned at right angles to each other.

2. In a surveying instrument, the combination with a base member having a spindle mounted thereon, of a sleeve turnable on the spindle, a head member carried by the sleeve, and a pair of telescopes rigidly secured on the head and intersecting and positioned at right angles to each other.

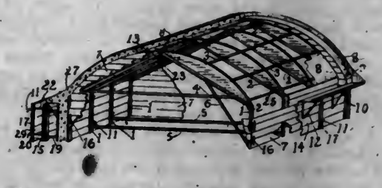
3. In a surveying instrument, the combination with a base member having a spindle mounted thereon, of a sleeve turnable on the spindle, a head member carried by the sleeve, a pair of telescopes rigidly secured on the head and intersecting and positioned at right angles to each other, and a turnably mounted shutter positioned at the intersecting point of the telescopes adapted to close one telescope or the other.

4. In a surveying instrument, the combination with a base member and a spindle on said base member, of a sleeve turnable on said spindle, a head carried by said sleeve, a pair of telescopes secured on the head and positioned at right angles to each other, an alidade on said sleeve and a horizontal circle associated with said alidade for measuring horizontal angles.

5. A survey instrument comprising a pair of telescopes mounted at right angles to each other and adapted to turn in horizontal plane, an alidade connected with the telescopes, a horizontal circle associated with said alidade for measuring horizontal angles, and a turnably mounted shutter positioned at the intersecting point of the telescopes adapted to close one telescope or the other.

[Claim 6 not printed in the Gazette.]

1,215,318. CONCRETE HOUSE AND CAVE BUILDING FORM. FRED A. COOK, Longview, Ill. Filed May 5, 1916. Serial No. 95,677. (Cl. 25—124.)



1. The combination, in concrete house and cave form construction having angle and channel iron studding to hold the form walls in upright position, channel iron rafters, arch-shape timbers held thereby, angle irons extending transversely of and embedded in said timbers, a sheet iron cover thereover to form a roof, angle pins fastening the rafter ends to said studding, angle iron tier connected to opposed rafters intermediate of their length and angle pins connecting said two last named elements.

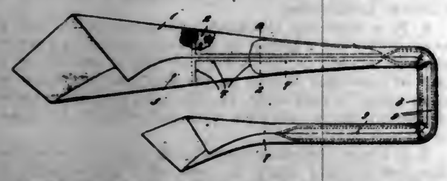
2. The combination in concrete house and cave forms, of outer walls consisting of angle iron studding and forms fastened thereto, an inner wall and an adjustable self-spacing wall tie connecting said walls, said tie consisting of a tapering square-headed bolt threaded at one end and a crank nut, the shoulder and arm of such crank nut being of such length as to permit the wall form to be spaced and adjusted to the exact required position for the width of the concrete wall, all in combination with a structural iron extending along said outer wall and having a flange which forms an abutment for said crank nut, substantially as specified.

3. In a concrete form, channel iron uprights, forms, and means for connecting said forms to said uprights, consisting of a narrow strap of metal with holes at each end thereof, a raised tapering boss in the center thereof, and a threaded hole in such boss, said strap being embedded in the form flush with the inner side thereof, and a screw-headed bolt passing through the channel iron and engaging said tapered boss to tie said forms to said channel iron, substantially as specified.

4. In concrete house and cave form, a cornice form comprising a stiff sheet iron extending outwardly and upwardly from the outer wall of the main form, an angle iron fastened to the upper edge of the cornice from where it runs horizontal, a round rod fastened to the upper edge where it is arch-shaped, brackets supporting the same, headed bolts passing through the brackets and bolt

anchors, each consisting of a narrow strap of metal with a raised tapering threaded boss, said anchors being embedded in and fastened to the wall form, substantially as specified.

1,215,319. NECKWEAR AND THE METHOD OF MAKING THE SAME. SIMON M. FRANK, St. Louis, Mo. Filed Oct. 9, 1915. Serial No. 55,052. (Cl. 2—11.)

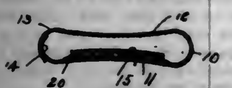


1. The herein-described method of making a necktie, said method comprising extending a piece of tie material shaped appropriately to the form of the finished tie, dividing an appropriately-shaped piece of lining material into a plurality of parts, sewing each of said parts to the reverse side of said extended tie material, one edge of each of said parts being adjacent to the outer edge of said extended tie material and another of the edges of said parts being spaced apart on said extended tie material a distance corresponding substantially to the width of the finished tie, folding the portions of said extended tie material bearing said parts to the right and left, respectively, to bring the outer longitudinal edges of said extended tie material together substantially centrally of the folded form with said parts on the outside, sewing said edges together to form a seam, said folded and seamed form now being tubular, and reversing or turning said form inside out to bring said parts forming said lining inside the tubular form to form the finished necktie.

2. A scarf or similar object of suitable fabric folded and shaped in a flat hollow form and embodying a relatively narrow portion intermediate its ends and wider end portions and a lining extending through the main part of the length of the scarf, said lining being formed of an appropriately-shaped piece of material divided longitudinally into a plurality of parts, said parts being sewed to the reverse side of the tie material independently of each other.

3. A necktie composed of a piece of suitable fabric having on its reverse side lapped edges of said fabric, said edges being sewed together to form a longitudinal seam substantially centrally of said reverse side, and a lining of suitable material between said reverse side and the body portion or front of the said tie, said lining being divided longitudinally into a plurality of parts, said parts being sewed on the inside of the said reverse side portion independently of each other, an edge of each of said parts being adjacent to one of said lapped edges.

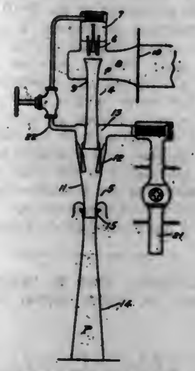
1,215,320. CLASP. THOMAS R. KILKENNY, North Providence, R. I., assignor to the firm of G. H. Perrar Co., Providence, R. I., a Copartnership comprising Thomas R. Kilkenny and Hilary Kilkenny. Original application filed Sept. 18, 1916, Serial No. 120,605. Divided and this application filed Dec. 11, 1916. Serial No. 136,163. (Cl. 24—259.)



1. A clasp of the character described comprising an arm, a separate perforated casing attached to said arm, and means for attaching said arm to a garment.

2. A clasp of the character described comprising a sheet metal arm, a separate perforated sheet metal casing, having walls attached to said arm, and means for attaching said arm to a garment.

1,215,321. EJECTOR. MAURICE LEBLANC, Val-sur-Seine, Croissy, France, assignor to Societe Anonyme Pour L'Exploitation Des Procedes Westinghouse-Leblanc, Paris, France. Filed June 22, 1915. Serial No. 35,647. (Cl. 230—13.)



1. In combination in an ejecting apparatus, a principal ejector comprising a combined combining and diffuser tube having an inlet to which fluid to be ejected is delivered, and at least one expansion nozzle for delivering fluid to said tube, and an augmenting ejector having a relatively expansive small ratio of compression compared to the ratio of compression of the principal ejector arranged to communicate with the source of fluid to be ejected and to discharge both the fluid ejected and the motive fluid delivered to it to the inlet of the principal ejector.

2. In an ejecting apparatus, a plurality of steam actuated ejectors arranged to operate in series on the fluid to be ejected, the first ejector of the series communicating with the source of fluid to be ejected and having a relatively low ratio of compression as compared to the ratio of compression of the second ejector of the series.

3. An ejecting apparatus including an ejector comprising a convergent divergent tube communicating at its inlet with a source of fluid to be ejected, an expansion nozzle for delivering expansion motive fluid to said tube and a source of motive fluid supply communicating with said nozzle, and a second expansive fluid actuated ejector communicating with the outlet of the tube of the first ejector and having a relatively large ratio of compression as compared to the ratio of compression of the first ejector.

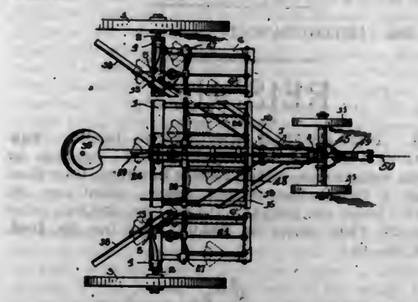
4. An ejecting apparatus including a steam actuated ejector communicating with a source of fluid to be ejected and having a relatively low ratio of compression, a second steam actuated ejector communicating with the outlet of the first ejector and receiving therefrom the fluid ejected and the steam employed in the first ejector and having a relatively high ratio of compression.

5. A vacuum pump comprising a plurality of fluid actuated ejectors operating in series on fluid to be ejected, the first of said ejectors communicating with the vessel to be evacuated and having a relatively low ratio of compression, the second ejector of the series receiving all of the fluid traversing the first ejector and comprising a convergent divergent passage to which the fluid discharged from the first ejector is delivered, and an expansion nozzle for delivering expansive motive fluid to the passage, said second ejector having a relatively high ratio of compression.

[Claims 6 to 16 not printed in the Gazette.]

1,215,322. CULTIVATING IMPLEMENT. RICHARD A. MINTERN, Horsham, Victoria, Australia. Original application filed Sept. 28, 1916, Serial No. 122,662. Divided and this application filed Dec. 11, 1916. Serial No. 136,327. (Cl. 21—188.)

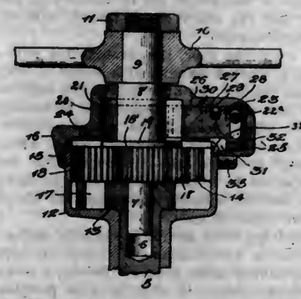
1. A wheeled implement having an axle beam, removable axles on the ends of said beam, transport wheels carried by said axles, a beam fitted to and extending forwardly from the center of the axle beam, diagonal bars connecting the forwardly extending beam to the axle beam, rearward extensions on said diagonal bars, and clamps and bolts for connecting said extensions and said axle beam, respectively, to the frame of a supplemental wheeled implement.



2. The combination of an implement having an axle beam provided with a vertical web at its rear edge, a beam fitted to and extending forwardly from the center of said axle beam, diagonal bars connecting the forwardly extending beam to the axle beam, said bars having rearward extensions projecting beyond said axle beam, with a second implement having a cross beam at its front end, said cross beam having a web at its front end adapted to fit closely against the vertical web of said axle beam and to be firmly clamped thereto, and means whereby said extensions may be fastened to said second implement.

3. A wheeled implement having an axle beam having a vertical web at its rear edge, removable axles on the ends of said beam, transport wheels carried by said axles, a beam fitted to and extending forwardly from the center of said axle beam, diagonal bars connecting the forwardly extending beam to the axle beam, said bars having rearward extensions projecting beyond said axle beam, and means whereby said extensions and said web may be fastened to a supplemental implement frame.

1,215,323. LOCKING DEVICE FOR AUTOMOBILES. IRA D. PERRY, Chicago, Ill. Filed Dec. 7, 1916. Serial No. 135,610. (Cl. 70—90.)



1. In a locking device for automobiles the combination of a steering head comprising a planetary gearing, a stud shaft on which the center pinion of said gearing is mounted, said stud shaft being movable from a position in which the center pinion is enmeshed to a position in which it is out of mesh, a housing containing said gearing, a cap for said housing, and a unitary device having means for locking the cap on the housing and also means for locking the stud shaft in either meshed or demeshed position.

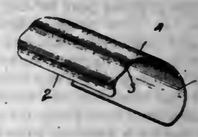
2. In a locking device for automobiles the combination of a steering head comprising a planetary gearing, a stud shaft on which the center pinion of said gearing is mounted, said stud shaft being movable from a position in which the center pinion is enmeshed to a position in which it is out of mesh, a housing containing said gearing, a cap for said housing, and a locking bolt having a part for locking the cap on the housing and also a part for locking the stud shaft in either meshed or demeshed position.

3. In a locking device for automobiles the combination of a steering head comprising a planetary gearing, a stud shaft on which the center pinion of said gearing is mounted, said stud shaft being movable from a position in which the center pinion is enmeshed to a position in which it is out of mesh, a housing containing said gearing, a cap for said housing, and a shouldered locking bolt having a part for locking the cap on the housing and also a part for locking the stud shaft in either meshed or demeshed position.

4. In a locking device for automobiles the combination of a steering head comprising a planetary gearing, a stud shaft on which the center pinion of said gearing is mounted, a slotted housing containing said gearing, a cap for said housing, and a shouldered locking bolt for locking the cap on the housing, and the stud shaft whether the stud shaft is in meshed or demeshed position, the shoulder of said bolt being adapted to fit within the slot in said housing when the bolt is moved into locking position.

5. In a locking device for automobiles the combination of a steering head comprising a planetary gearing, a stud shaft on which the center pinion of said gearing is mounted, a slotted housing containing said gearing, a slotted cap for said housing the slot in said cap being adapted to register with the slot in the housing when the parts are assembled, and a shouldered locking bolt for locking the cap on the housing, and the stud shaft whether the stud shaft is in meshed or demeshed position, the shoulder of said bolt being adapted to fit within the slot in said housing when the bolt is moved into locking position.

1,215,324. CARD AND LABEL HOLDER FOR TYPEWRITING MACHINES. OTTO PETERMANN, Groton, N. Y., assignor to Corona Typewriter Company, Incorporated, a Corporation of New York. Filed Nov. 29, 1912, Serial No. 734,227. Renewed Nov. 1, 1916. Serial No. 129,039. (Cl. 197—136.)



1. A card and label holder adapted to fit about the platen of a typewriting machine and having a resilient curved sheet-like body provided with a gripping edge and a pressable part normally extending away from the platen and adapted when pressed toward the platen to extend the body and force the gripping edge away from the platen.

2. In a typewriting machine, the combination of a platen, and a card and label holder having a curved resilient metal body adapted to yieldingly clasp the platen and provided with a gripping edge, a part parallel with the gripping edge adapted to serve as a fulcrum when forced against the platen, and a bulged part extending away from the body of the platen and adapted to force the fulcrum part against the platen and force the gripping edge away from said platen.

3. In a typewriting machine, the combination of a platen, and a resilient sheet metal card and label holder independent of and detachable from the platen and having its body curved to yieldingly clasp the same, said body having a gripping part, and a bulged part adapted when compressed toward the platen to force the gripping part away from said platen.

4. A label holder for a typewriting machine comprising a resilient sheet-like body part adapted to normally contract about a printing platen and formed with a gripping edge, a fulcrum point adjacent said gripping edge and normally out of contact with the platen surface and an

outwardly bulged part adjacent said fulcrum point and extending throughout the length of the body, whereby upon forcing inwardly the bulged portion the gripping edge will be moved outwardly away from the platen surface.

5. A sheet-like resilient body curved transversely to adapt it for attachment to a platen and provided with a work sheet holding part at one edge, and an outwardly extending inwardly pressable part integral with the work sheet holding part, and with an inwardly bent fulcrum part between the work sheet holding part and the inwardly pressable part, whereby when the pressable part is forced inwardly the work sheet holding part will be forced away from the platen to release the work sheet.

[Claims 6 to 8 not printed in the Gazette.]

1,215,325. LABEL-HOLDER FOR TYPE-WRITING MACHINES. OTTO PETERMANN, Groton, N. Y., assignor to Corona Typewriter Company, Inc., a Corporation of New York. Filed Apr. 12, 1916. Serial No. 90,660. (Cl. 197—136.)



1. A device of the character described adapted to fit about the platen of a typewriting machine, having a resilient curved sheet-like body provided with platen gripping portions and a pressable gripping part of greater length than the said gripping portions and adapted to engage and hold a work sheet, said pressable part having a finger portion normally extending away from the platen and adapted when pressed toward the platen to force the pressable gripping part away therefrom.

2. A device of the character described adapted to be removably held about the platen of a typewriting machine, having a resilient curved one piece sheet-like body provided with gripping and work sheet alining portions and an integral movable gripping part having a clamping edge extending beyond the work sheet alining portions, said body having a part normally extending away from the platen and adapted when pressed toward the platen to force the movable gripping part away therefrom.

3. A device of the character described adapted to be removably and adjustably held about the platen of a typewriting machine, having a resilient curved sheet-like body conforming to the curvature of the peripheral surface of the platen and provided with gripping portions and a movable gripping part provided with a gripping edge to engage a work sheet, and an integral finger part for moving the gripping edge of the movable gripping part away from the platen to release the work sheet and permit its adjustment or renewal.

4. A device of the character described, adapted to be detachably held about the platen of a typewriting machine and having a short one piece resilient curved thin sheet-like steel body provided with gripping portions at the front and rear thereof and a movable part at the front portion thereof having a gripping edge extending beyond the front gripping portions to engage and hold the work sheet, said body being slotted to separate the movable part and front gripping portions and provided with a finger part normally extending away from the platen and adapted when pressed toward the said platen to force the gripping edge away from the platen.

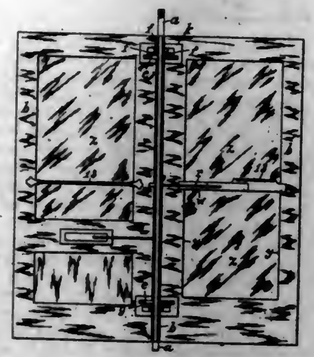
5. A device of the class described, comprising a resilient sheet-like body curved transversely to adapt it for attachment to a platen, resilient platen-clasping portions at the ends of said body, an independently movable sheet-gripping portion formed integrally with said body intermediate the ends thereof and having its free outer end extending beyond the outer ends of the adjacent platen-clasping portions, and an outwardly extending inwardly pressable portion integral with said gripping portion and adapted when pressed inwardly to lift the outer end of the sheet-gripping portion from the platen, the ends of the platen-gripping portions at each side of the sheet-gripping portion forming sheet-alining stops.

[Claims 6 to 19 not printed in the Gazette.]

1,215,326. [WITHDRAWN.]

REISSUES.

14,255. COLLAPSIBLE REVOLVING DOOR. THEOPHILUS VAN KANNEL, Yardville, N. J., assignor, by mesne assignments, to Van Kannel Revolving Door Company, a Corporation of New Jersey. Filed Dec. 29, 1916. Serial No. 139,713. Original No. 836,843, dated Nov. 27, 1906, Serial No. 284,980, filed Oct. 30, 1905. (Cl. 20—18.)



1. In a revolving door, a central spindle, a series of wings pivoted thereto, and having flexible ties connecting the adjacent sides of the wings, said wings provided with automatically detachable fastenings, adjusted to permit the automatic detaching of the wings under abnormal pressure, whereby upon the application of excessive pressure to some of the wings, the tie connection therebetween is broken, and the other wings folded, without releasing the ties therebetween.

2. In a revolving door, the combination with a suitable casing and a central spindle, of a series of wings pivoted thereto, and flexible ties attached to the adjacent sides of the wings and secured by detachable fastenings, adapted to hold the wings normally in radial position upon the spindle, and adjusted to release the wings when subjected to abnormal pressure, the tie connection between the wings subjected to abnormal pressure breaking and the the wings folding without disturbing the tie connections between the other wings.

3. A revolving door having a suitable casing, a spindle centered therein with hanger plates near its opposite ends, said plates having guide grooves therein, a series of wings adapted to be moved to side by side position to make emergency exits and having fulcrum pins floating in said grooves whereby a series of wings may be collapsed to folded position from any direction.

4. A revolving door having a suitable casing, a spindle centered therein and provided with toothed pinions, and a series of wings having "fulcrum-pins" movably supported upon a spindle and provided each with a toothed segment engaging such pinion to cause its pins to move so as to bring the wing tangential to the spindle when the wing is moved relatively to the spindle.

5. A revolving door having a suitable casing, a spindle centered therein with fulcrum disks and pinions near its opposite ends, and a series of wings having fulcrum-pins movable upon said fulcrum-disks and provided each at opposite ends with a toothed segment engaging a pinion, to cause the pins of each wing to move so as to bring the wing tangential to the spindle when the wing is moved relatively to the spindle.

6. A revolving door having a suitable casing, a spindle centered therein with fulcrum-disks and pinions near its opposite ends, and a series of wings having fulcrum-pins movable upon the fulcrum-disks and provided each at opposite ends with a toothed segment engaging a pinion, to cause the pins of each wing to move so as to bring the wing tangential to the spindle when the wing is moved relatively to the spindle, the segments upon the several wings being arranged to operate at different levels upon the said pinions so as to clear one another when collapsed at one side of the spindle.

7. A revolving door having a suitable casing, a spindle centered therein and provided with toothed pinion, and a series of wings having fulcrum-pins so as to be capable of movement concentric with the spindle and provided each with a toothed segment engaging such pinion, the teeth in such segment proportioned to engage a semicircumference of the pinion, whereby any of the wings may be rolled one hundred and fifty-five degrees from its normal position.

8. A revolving door having a suitable casing, a spindle centered therein with fulcrum disks and pinions near its opposite ends, a series of wings having fulcrum-pins supported so as to be capable of movement concentric with the spindle, and the wings provided each at opposite ends with toothed segments engaging such pinions, and stops to limit the rolling of the segments upon the pinions.

9. A revolving door having a suitable casing, a spindle centered therein with fulcrum disks and pinions near its opposite ends, a series of wings having fulcrum-pins supported so as to be capable of movement concentric with the spindle and the wings provided at opposite ends with toothed segments engaging such pinions, stops to limit the rolling of the segments upon the pinions, and spring-catches for engaging the wings, when in their normal quadrantal positions, detachably with the disk.

10. A revolving door having a suitable casing, a spindle centered therein with fulcrum disks and pinions near its opposite ends, and a series of wings having each recesses near its opposite ends to fit over the disks and pinions, and fulcrum-boxes fitted to the recesses and provided each with a fulcrum-pin movable upon the disk and with a toothed segment engaging the pinion, the toothed segments in the several boxes being arranged to engage the pinions at different levels, whereby the segments clear one another when the wings are folded to one side of the spindle.

11. A revolving door having a suitable casing, a spindle centered therein with fulcrum disks and pinions near its opposite ends, and a series of wings having each recesses near its opposite ends to fit over the disks and pinions, and fulcrum-boxes fitted to the recesses and provided each with a fulcrum-pin movable upon the disk and with a toothed segment engaging the pinion, the boxes having partitions *n*, with seats provided at different levels upon the several wings with the toothed segments attached to such seats, whereby the teeth may be cut in the segments before they are attached to the boxes.

12. A revolving door having a suitable casing, a spindle centered therein with fulcrum disks and pinions near its opposite ends, the opposed faces of the disks having each a groove near its periphery, a series of wings having each a fulcrum-pin fitted to the said groove, and a toothed segment concentric with such pin and engaging the pinion, whereby the wings may be collapsed by the rolling of the segments upon the pinions and the shifting of the fulcrum-pins in the grooves.

13. In a revolving door having collapsible wings, the combination with a flexible tie fastened upon one wing, of a fastening device upon the adjacent wing, arranged and operated to grasp the end of such tie detachably and to resist the normal pressure upon the wings and adjusted to release the tie under abnormal pressure, the flexibility of the tie being such that upon the breaking of the connection between the adjacent sides of two wings, the wings will be permitted to be automatically folded without disturbing the other ties.

14. In a revolving door having collapsible wings, the combination with a flexible tie fastened upon one wing and having a knob upon the end, of a fastening device upon the adjacent wing, comprising an abutment for one side of the knob and a spring gripper opposed thereto and adjusted to retain the knob under the normal operation of the door, and to release the knob under abnormal pressure, the ties being such that the release of one of them will permit the folding of the wings without the release of the others, whereby the reëstablishment of any one of the broken connections will reëstablish the wings in normal operative position.

15. In a revolving door having collapsible wings, the combination, with each wing, of a fixture attached to the wing and having apertures upon opposite sides, a clamp within each fixture adjacent to one of the apertures for gripping one end of the cord, and a fastening device within the fixture adjacent to the other aperture having a spring-gripper to grasp the end of an adjacent cord detachably, whereby all of the wings are detachably connected, and the wings may be automatically collapsed when abnormal pressure is applied to any one of them.

16. In a revolving door having collapsible wings, the combination, with each wing, of a fixture attached to the wing and having apertures upon opposite sides, a clamp within each fixture adjacent to one of the apertures for gripping one end of the cord, and a fastening device within the fixture adjacent to the other aperture comprising an abutment provided with a roller and an adjacent spring-gripper provided with a roller, and cords connecting the several fixtures and secured each at one end in the fixture-clamp, and provided at the other end with a knob to engage the rollers in one of the fixtures.

17. In a revolving door, a wing-fixture combined with a cord to retain the wings detachably in an operative position, the fixture consisting of the box *u* attached to the wing with aperture in the bottom and clamp adjacent to the aperture for holding the end of the cord, a cover hinged upon the box and having an aperture for the insertion of a cord with knob upon the end, an abutment upon the cover having a roller adjacent to such aperture, and a spring-gripper provided with a roller, with space at the ends of the rollers to pass the knob beyond the same, and a latch to hold the cover normally closed upon the box.

18. In a revolving door, a tie formed of a wire rope *r* provided with screw-threaded shank *s* upon one end and a knob *t* upon the opposite end, fixtures upon the wings adapted to engage the screw-thread adjustably and to retain the knob detachably, whereby the length of the tie may be adjusted and it may be automatically released when subjected to abnormal pressure.

19. In a revolving door, a tie formed of a wire rope *r* provided with screw-threaded shank *s* upon one end and knob *t* upon the opposite end, and fixtures upon the wings provided each with the threaded clamp-socket 3 to engage the screw-thread *s* adjustably, and a spring-gripper to engage the knob *t* detachably, as and for the purpose set forth.

20. In a revolving door, the combination with hinged door-wings, of ties extended between the adjacent faces of the wings, and fixtures upon the wings provided each with a clamp for one end of the tie, and a spring-gripper to engage the opposite end of a tie detachably, such spring-gripper being hinged upon the said fixture to facilitate the engagement of the tie with the spring-gripper.

21. In a revolving door, the combination, with the wings furnished with glass panels and connected by ties between their adjacent faces, of the cross-bar *w* provided with grooves upon its upper and lower edges for the glass, the hand-rail 14 for pushing the wing, and containing a fixture for clamping one end of a tie and for holding the opposite end of a tie detachably, whereby the wings may be collapsed under abnormal pressure.

22. In a revolving door, a central spindle, a series of wings pivoted thereto, and flexible ties connecting the adjacent sides of the wings automatically-detachable to permit the automatic collapsing of the wings under ab-

normal pressure, the ends of said flexible ties being connected with the wings at points intermediate the top and bottom thereof, approximate to the points of application of the pressure upon the wings, said flexible ties being adapted to hold the wings normally in radial position upon the spindle and adapted to automatically release the wings upon application of excessive pressure to some of the wings sufficient to break the tie connection therebetween, without disturbing the tie connections of the other wings.

23. A revolving door having a suitable casing, a spindle centered therein with hanger plates near its opposite ends, said plates having guide grooves therein, a series of wings adapted to be moved to side by side position to make emergency exits and having fulcrum pins floating in said grooves whereby a series of wings may be collapsed to folded position from any direction, said wings being provided with automatically-detachable fastenings adjusted to permit the automatic collapsing of the wings upon the application of excessive pressure applied to the wings.

24. A revolving door having a suitable casing, a spindle centered therein with hanger plates near its opposite ends, said plates having guide grooves therein, a series of wings adapted to be moved to side by side position, to make exits on the sides of the central standard, and having fulcrum pins floating in said grooves, whereby a series of wings may be collapsed to folded position from any direction, and flexible ties between the adjacent sides of the wings and serving to hold the wings in normal radial relation to each other, and permitting all of the wings to be folded upon the release of one of the ties.

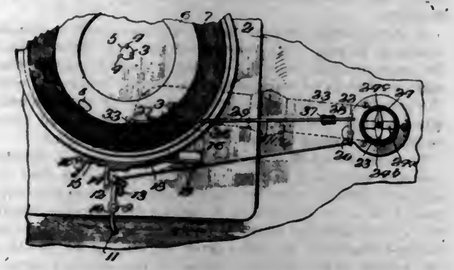
14,256. INSULATOR. WILLIAM H. WILLIAMS, Carey, Ohio. Filed Sept. 19, 1916. Serial No. 121,093. Original No. 1,176,801, dated Mar. 28, 1916, Serial No. 693,487, filed Apr. 26, 1912. (Cl. 173—314.)



1. A two part insulator, each part comprising a square block having a rib on one face extending between two opposite sides midway between and parallel with the other sides, the ends of the rib being flat and flush with the first mentioned sides, the sides of the rib being flat and other, said lugs being tapered and having transverse notch midway between its ends forming a pair of lugs, the sides of the notch being inclined away from each other, said lugs being tapered and having a transverse V-shaped corrugated grooves in their ends, said grooves being spaced from the ends of the rib and sides of the notch, the said face of the block having V-shaped grooves midway between, spaced from and parallel with the sides of the rib and the second mentioned sides of the block, and extending to the first mentioned sides of the block, the said rib being disposed wholly between the second mentioned grooves, the first mentioned and second mentioned grooves being relatively short and long respectively, the second mentioned grooves being corrugated midway between their ends, and the block having a central bolt opening extending to the bottom of the notch; whereby the lugs of each part may straddle the central portion of the rib of the other part, with the first mentioned grooves of each part coöperating with the central portions of the second mentioned grooves of the other part, with the bolt openings of the two parts in register, and with the corners of the blocks and ends of the ribs spaced apart to form corner pockets.

2. A two-part insulator, each part comprising a block having a rib on one face extending between two opposite sides midway between and parallel with the other sides, the rib having a transverse notch midway between its ends forming a pair of lugs, said lugs having transverse grooves in their ends, the said face of the block having grooves between and parallel with the sides of the ribs and the second mentioned sides of the block, and extending to the first mentioned sides of the block, the said rib being disposed wholly between the second mentioned grooves, and the block having a central bolt opening extending to the bottom of the notch; whereby the lugs of each part may straddle the central portion of the rib of the other part, with the first mentioned grooves of each part coöperating with the central portions of the second mentioned grooves of the other part, with the bolt openings of the two in register, and with those portions of the blocks between said sides and ends of the ribs spaced apart to form corner pockets.

14,257. AUTOMATIC STOPPING DEVICE FOR SOUND-REPRODUCING MACHINES. HENRY C. MILLER, Waterford, N. Y., assignor to Victor Talking Machine Company, Camden, N. J., a Corporation of New Jersey. Filed Oct. 20, 1915. Serial No. 57,003. Original No. 1,076,385, dated Oct. 21, 1913, Serial No. 321,014, filed June 9, 1906. (Cl. 74—46.)



1. In a talking machine comprising a rotatable record support, a spring-actuated brake adapted to engage the record support, a sound box having a stylus, a sound box carrying-arm having movement over the record, and a record having sound grooves adapted to automatically propel the stylus over the same by contact, the combination therewith of a movable catch device adapted to be set to tension the brake-spring and maintain the brake normally out of contact with the record, a pivoted latch provided with means to cause it to move into engagement with the catch element, connecting means pivoted at one of its terminals to said latch, a lever hinged to the other end of said connecting means and operating to rock the latch on its pivot, and a member brought into operative relation to said lever on the completion of the operative movement of the arm carrying the sound box over the sound grooves of the record.

2. In a sound reproducing machine, the combination with a rotatable record support, a brake therefor, a record provided with trip operating means, a movable tripping member adapted to be operated by the operating means on the record, means between the tripping member and the brake for releasing the latter, and automatic means for returning the tripping member to normal position after the brake has been released.

3. In a sound reproducing machine, the combination with a rotatable record support, a spirally grooved record, a sound box and stylus adapted to be automatically propelled across the same by said grooves, and sound box supporting means adapted to have a free swinging movement over the record, of a spring-controlled brake device, a catch device adapted to be set to counteract the brake spring, a pivoted latch, a rocking lever, connecting means between said latch and lever, and a tripping member adapted to be brought into operative relation to said lever.

4. In a sound reproducing machine, the combination of a sound box, a rotatable record support, a brake to stop the record support at a predetermined point in its movement, a tripping member movable with the sound box, means for operating the tripping member, and means between the tripping member and the brake for operating the latter, said means being separated from but in the path of movement of the tripping member.

5. In a sound reproducing machine, the combination of a rotatable record support, a brake therefor, a record having a trip-engaging part, a tripping member coöperating therewith, a lever adapted to be engaged by the tripping member, a catch device operating normally to hold the brake in inoperative position, a pivoted spring actuated latch, and connecting means between said lever and the latch.

6. In a sound reproducing machine, the combination of a sound box, a record support, and brake mechanism for stopping the movement of the record support at a determinate point, said brake mechanism comprising a tripping member mounted to move with the sound box, a brake having a catch, a pivoted latch, a pivoted lever with which the tripping member coöperates, and a connection between the pivoted lever and the latch.

7. The combination with a sound reproducing machine, of a cut-off comprising brake mechanism, means for releasing the same which in part moves with the reproducer of the machine, mechanical means mounted to move with the rotatable record support of the machine for operating directly on said releasing means, and means for automatically returning to normal position the part of the releasing means movable with the reproducer.

8. The combination with a sound reproducing machine comprising a movable supporting arm, and a sound box carried thereby, and a rotatable record support, of a cut-off therefor comprising a brake, means for normally holding the brake in operative position, a catch device and a coöperating latch for holding the brake in inoperatitve position, tripping means for the latch mounted to move with the sound box and with the movable arm supporting the same, and means brought into operative position by the rotation of the record, for engaging the tripping means to actuate it and release the latch.

9. A talking machine comprising a rotating record support, a reproducer movable relatively thereto, a brake for said support, means for normally holding said brake in braking position, a latch for holding said brake in inoperative position, tripping means for the latch mounted to move with the reproducer, and means carried by the rotating record support for engaging the tripping means to move said tripping means and thereby release the latch.

10. The combination with a talking machine including a movable arm and a record formed with a depression, of a trip mechanism movably carried by the movable arm of the machine and including a body designed to engage the depression in the record, a rod actuated in the movement of the body under the influence of the record, and a brake mechanism automatically actuated by said rod.

11. In a talking machine, the combination with a movable record, a sound reproducing device adapted to move over said record, a stop for controlling the movement of said record, and a stop-controlling member, of positively actuated means permanently connected to said stop-controlling member and controlled by the movement of said sound-reproducing device for actuating said stop-controlling member.

12. In a talking machine, the combination with a movable record, a sound-reproducing device adapted to move over said record, a stop for controlling the movement of said record, and a stop-controlling member, of means for positively actuating said stop-controlling member, mechanism for operating said actuating means, and means connected to said sound-reproducing device for controlling said operating means.

13. In a talking machine, the combination with a movable record, a sound-reproducing device adapted to move over said record, a stop for controlling the movement of said record, and a stop-controlling member, of a movable bar operatively connected to said stop-controlling member and adapted to be actuated simultaneously with said sound-reproducing device as the latter moves toward the end of the record, and means controlled by the movement of said sound-reproducing device for controlling the movement of said bar.

14. In a talking machine, the combination with a movable record, an arm movably supported above said record, a sound-reproducing device carried by said arm and adapted to move over said record, a stop for controlling the movement of said record, and a stop-controlling member, of means movably mounted on a fixed part of said machine for automatically actuating said stop-controlling member, and a finger carried by said arm for controlling the movement of said actuating member.

15. In a talking machine the combination with a rotatable record support, a sound record, a sound box, and means to move the sound box across the record, of a device operative to stop the rotation of said record support, a latch for holding said device inoperative, a lever movably connected to said latch and adapted to release the same, and means for automatically actuating said lever when the sound box reaches a pre-determined point on the record.

16. In a talking machine, the combination with a movable record support, and a sound box arranged to traverse a record thereon, of a brake, means for applying said brake to said record support, a latch for holding said brake in inoperative position, mechanical means having a jointed connection with the latch and adapted to release the same, and means movable with the sound box for actuating the last-named means when the sound box reaches the end of the record.

17. In a talking machine, the combination with a record support and a sound box adapted to traverse the same, of a brake adapted to engage the record support, two pivoted members operatively connected together at all times and one of which is adapted to engage the brake and forms a latch therefor to hold the same in inoperative position, and means movable with the sound box for engaging the other member to release the brake when the sound box reaches a predetermined point on the record.

18. In a talking machine, the combination with a record support, a movable sound box arm and a sound box carried thereby, of a brake adapted to engage the record support, two pivoted members operatively connected together at all times and one of which is adapted to engage the brake and forms a latch therefor to hold the same in inoperative position, and a finger carried by said sound box arm and adapted to engage said other member to release the brake when the sound box reaches a predetermined point on the record.

19. In a talking machine, including a rotatable record support, and a tone arm mounted to carry a sound box over and in operative relation to the record, the combination therewith of a brake device to stop the movement of the record support, comprising a tripping member mounted to move in accord with the movement of the sound box, a brake, a pivoted latch for holding the brake in inoperative position, and a lever movably connected to the latch and coöperating with the tripping member to release the brake when the sound box reaches a predetermined point on the record.

20. In a talking machine, the combination with a movable sound record support and a sound box arm movable across the same, of brake mechanism for stopping the movement of the record support at a determinate point, said brake mechanism comprising a brake, a catch and coacting pivoted latch for holding the brake in inoperative position, a lever movably connected to the latch and adapted to release the same, and tripping means intermediate said lever and said sound box arm for releasing the latch when the sound box reaches the end of the record.

21. In a talking machine, the combination with a sound box and a record support, of brake mechanism for stopping the movement of the record support at a determinate point, said brake mechanism comprising a brake having a catch, a pivoted latch adapted to engage said catch, a lever movably connected to the latch and adapted to release the same, and means for automatically actuating the lever when the sound box reaches a predetermined

point on the record, to move the latch and release the brake.

22. In a talking machine, the combination with a movable sound box arm, a sound box and a record support, of brake mechanism for stopping the movement of the record support at a determinate point, said brake mechanism comprising a brake having a catch, a pivoted latch adapted to engage said catch, a lever movably connected to said latch and adapted to release the same, and a finger movable with said sound box arm and adapted to engage said lever when the sound box reaches a predetermined point on the record, to move said latch and release the brake.

DESIGNS.

50,256. HANDLE FOR SPOONS OR ANALOGOUS UTENSILS. GROSVENOR N. ALLEN, Oneida, N. Y., assignor to Oneida Community, Limited, Oneida, N. Y., a Corporation of New York. Filed Sept. 25, 1916. Serial No. 122,163. Term of patent 7 years.



The ornamental design for a handle for a spoon or analogous utensils as shown.

50,257. HANDLE FOR SPOONS OR ANALOGOUS UTENSILS. GROSVENOR N. ALLEN, Oneida, N. Y., assignor to Oneida Community, Limited, Oneida, N. Y., a Corporation of New York. Filed Sept. 25, 1916. Serial No. 122,164. Term of patent 7 years.



The ornamental design for a handle for a spoon or analogous utensils as shown.

50,258. HANDLE FOR SPOONS OR ANALOGOUS UTENSILS. GROSVENOR N. ALLEN, Oneida, N. Y., assignor to Oneida Community, Limited, Oneida, N. Y., a Corporation of New York. Filed Sept. 25, 1916. Serial No. 122,166. Term of patent 7 years.



The ornamental design for a handle for a spoon or analogous utensils as shown.

50,259. HANDLE FOR SPOONS OR ANALOGOUS UTENSILS. GROSVENOR N. ALLEN, Oneida, N. Y., assignor to Oneida Community, Limited, Oneida, N. Y., a Corporation of New York. Filed Sept. 25, 1916. Serial No. 122,167. Term of patent 7 years.



The ornamental design for a handle for a spoon or analogous utensils as shown.

50,260. HANDLE FOR SPOONS OR ANALOGOUS UTENSILS. GROSVENOR N. ALLEN, Oneida, N. Y., assignor to Oneida Community, Limited, Oneida, N. Y., a Corporation of New York. Filed Sept. 25, 1916. Serial No. 122,168. Term of patent 7 years.



The ornamental design for a handle for a spoon or analogous utensils as shown.

50,261. HANDLE FOR SPOONS OR ANALOGOUS UTENSILS. GROSVENOR N. ALLEN, Oneida, N. Y., assignor to Oneida Community, Limited, Oneida, N. Y., a Corporation of New York. Filed Sept. 25, 1916. Serial No. 122,169. Term of patent 7 years.



The ornamental design for a handle for a spoon or analogous utensils as shown.

50,262. HANDLE FOR SPOONS OR ANALOGOUS UTENSILS. GROSVENOR N. ALLEN, Oneida, N. Y., assignor to Oneida Community, Limited, Oneida, N. Y., a Corporation of New York. Filed Sept. 25, 1916. Serial No. 122,170. Term of patent 7 years.



The ornamental design for a handle for a spoon or analogous utensils as shown.

50,263. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1916. Serial No. 129,233. Term of patent 7 years.



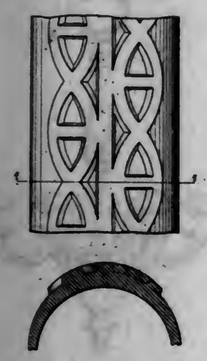
The ornamental design for a lighting fixture, as shown.

50,264. WALL-PLATE FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 27, 1916. Serial No. 133,798. Term of patent 7 years.



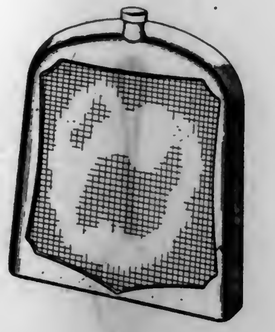
The ornamental design for a wall plate for lighting fixtures, as shown.

50,265. TIRE-TREAD. ARTHUR L. BREITENSTEIN, Akron, Ohio, assignor to The Lancaster Tire & Rubber Company, Lancaster, Ohio, a Corporation of Ohio. Filed Nov. 16, 1916. Serial No. 131,805. Term of patent 7 years.



The ornamental design for a tire tread, as shown.

50,266. RADIATOR FOR AN AUTOMOBILE. THERON P. CHASE, Detroit, Mich. Filed Nov. 11, 1916. Serial No. 130,912. Term of patent 14 years.



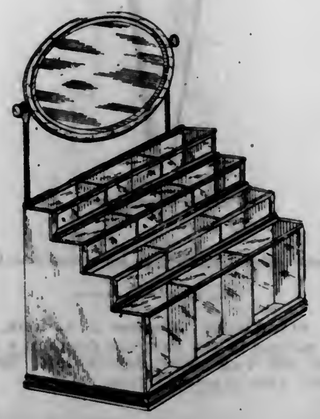
The ornamental design for a radiator for an automobile, as shown.

50,267. LIGHT-DIFFUSING REFLECTOR. ALFRED B. L. CLAUSEN, Columbus, Ohio, assignor to The Bryant Brothers Company, Columbus, Ohio, a Corporation of Ohio. Filed Oct. 6, 1916. Serial No. 124,196. Term of patent 7 years.



The ornamental design for a light diffusing reflector, as shown.

50,268. DISPLAY-CASE WITH MIRROR. MAX A. SKALL, New York, N. Y. Filed Oct. 4, 1916. Serial No. 123,780. Term of patent 7 years.



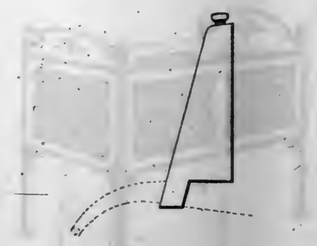
The ornamental design for a display case with mirror as shown.

50,269. AUTOMOBILE-TIRE. PETER DE MATTIA and BARTHOLD DE MATTIA, Clifton, N. J. Filed Oct. 28, 1916. Serial No. 128,329. Term of patent 14 years.



The ornamental design for an automobile tire as shown.

50,270. AUTOMOBILE-RADIATOR. FRANK R. FAGSOL, Piedmont, Cal. Filed Sept. 21, 1916. Serial No. 121,514. Term of patent 14 years.



The ornamental design for an automobile radiator, as shown.

50,271. NUT-BOWL. WILLIAM E. HUNTER, Chicago, Ill. Filed Oct. 26, 1916. Serial No. 127,953. Term of patent 7 years.



The ornamental design for a nut bowl as shown.

50,272. WASHSTAND. ALFRED W. JANSEN, Brooklyn, N. Y. Filed June 3, 1916. Serial No. 101,621. Term of patent 7 years.



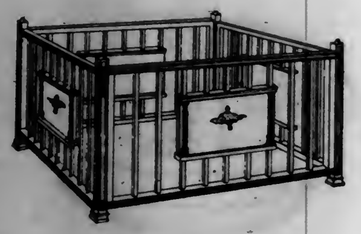
The ornamental design for a washstand as shown.

50,273. NURSERY-CRIB. ALFRED W. JANSEN, Brooklyn, N. Y. Filed June 28, 1916. Serial No. 106,526. Term of patent 7 years.



The ornamental design for a nursery crib as shown.

50,274. NURSERY PLAY-YARD. ALFRED W. JANSEN, Brooklyn, N. Y. Filed June 28, 1916. Serial No. 106,527. Term of patent 7 years.



The ornamental design for a nursery play yard, as shown.

50,275. NURSERY-WARDROBE. ALFRED W. JANSEN, Brooklyn, N. Y. Filed June 28, 1916. Serial No. 106,528. Term of patent 7 years.



The ornamental design for a nursery wardrobe as shown.

50,276. ICE-CREAM-CONE HOLDER. EDWARD E. KELLEY, West Falmouth, Mass. Filed Feb. 16, 1916. Serial No. 78,773. Term of patent 7 years.



The ornamental design for an ice cream cone holder as shown.

50,277. PIANO-CASE. HERBERT J. LA JOIE, Orange, N. J., assignor to The Autopiano Company, a Corporation of New York. Filed Sept. 8, 1916. Serial No. 119,129. Term of patent 7 years.

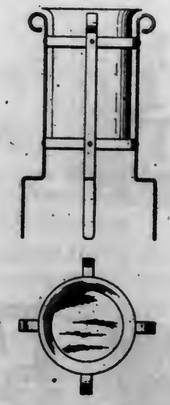
The ornamental design for a piano case as shown.

50,278. GRAPE-FRUIT, PARING, AND CORING KNIFE. JOHN J. MENDENHALL, Clearwater, Fla. Filed Aug. 16, 1916. Serial No. 115,301. Term of patent 14 years.



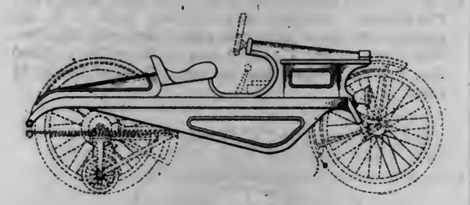
The ornamental design for a grapefruit, paring, and coring knife, as shown.

50,279. CEMETERY FLOWER-VASE. WILLIAM H. MOHR, Reading, Pa. Filed Nov. 20, 1916. Serial No. 132,479. Term of patent 7 years.



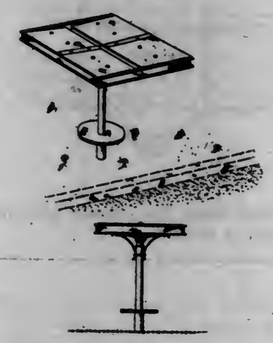
The ornamental design for a cemetery flower vase, as shown.

50,280. TWO-WHEELED AUTOVEHICLE. WILLIAM GEORGE MOORE, Miami, Fla. Filed Feb. 2, 1916. Serial No. 75,855. Term of patent 7 years.



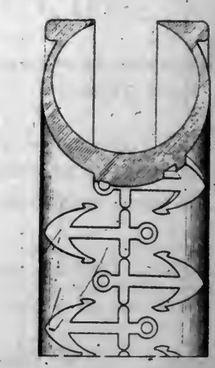
The ornamental design for a two-wheeled autovehicle, as shown.

50,281. SHELTER-SHED. ORLANDO W. NORCROSS, Worcester, Mass. Filed July 5, 1916. Serial No. 107,711. Term of patent 3½ years.



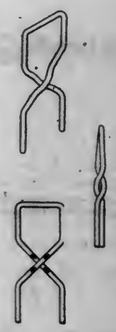
The ornamental design for a shelter shed as shown.

50,282. TIRE-CASING. GEORGE W. ODELL, South Bend, Ind. Filed Nov. 17, 1916. Serial No. 131,965. Term of patent 7 years.



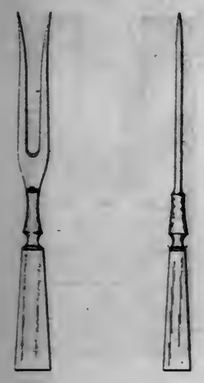
The ornamental design for a tire casing, as shown.

50,283. PAPER-CLIP. WALTER F. PEET, Philadelphia, Pa. Filed Oct. 11, 1916. Serial No. 125,126. Term of patent 14 years.



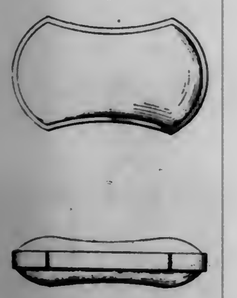
The ornamental design for a paper clip as shown.

50,284. FORK. ARTHUR J. ROWLAND, Shelburne Falls, Mass., assignor to Lamson & Goodnow Manufacturing Company, Shelburne Falls, Mass., a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,346. Term of patent 7 years.



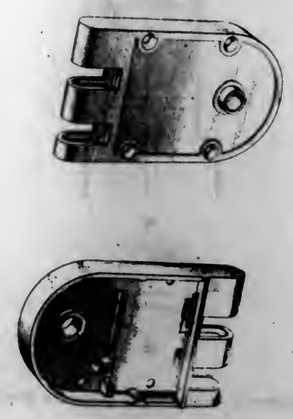
The ornamental design for a fork, as shown.

50,285. CAKE OF SOAP. ALTER L. SCHWARTZBERG, Shreveport, La. Filed Sept. 21, 1916. Serial No. 121,519. Term of patent 14 years.



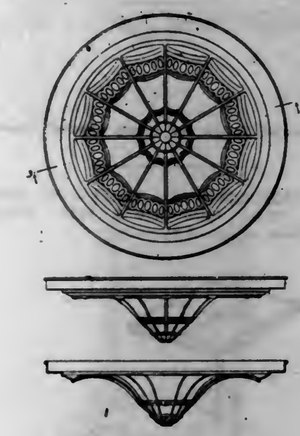
The ornamental design for a cake of soap, as shown.

50,286. LOCK-CASING. SAMUEL SEGAL, New York, N. Y., assignor to Burglar Proof Lock and Hardware Corporation, New York, N. Y., a Corporation of New York. Filed Dec. 11, 1914. Serial No. 876,738. Term of patent 14 years.



The ornamental design for a lock casing, as shown.

50,287. SHOWER-PLATE FOR GAS AND ELECTRIC FIXTURES. SOLOMON SHAPIRO, New York, N. Y., assignor to Reliance Metal Spinning & Stamping Co., Inc., New York, N. Y., a Corporation of New York. Filed Dec. 9, 1916. Serial No. 136,106. Term of patent 3½ years.



The ornamenal design for a shower plate for gas and electric fixtures, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 6, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 82,530. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LOUIS C. WEDGEFUTH, Yonkers, N. Y. Filed Nov. 11, 1914.

IODOSOL

Particular description of goods.—A Medicinal Soap Having in Solution a Pure Soluble Iodin.
Claims use since Sept. 1, 1904.

Ser. No. 85,548. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE PORTAGE RUBBER CO., Barberton, Ohio. Filed Mar. 30, 1915.

ROADGRIP

Particular description of goods.—Rubber Vehicle-Tires.
Claims use since Mar. 24, 1915.

Ser. No. 89,589. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) R. & H. SIMON COMPANY, Union Hill, N. J., and New York, N. Y. Filed Oct. 1, 1915.

Armure Rousseau

Consisting of the arbitrary term "Armure Rousseau," no claim being made to either the word "Armure" or the word "Rousseau" *per se*.
Particular description of goods.—Silk Piece Goods.
Claims use since about May, 1915.

Ser. No. 90,904. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) INTERNATIONAL CORK COMPANY, Brooklyn, N. Y. Filed Nov. 24, 1915.

INTERNATIONAL

Particular description of goods.—Bottle, Can, and Jar Stoppers and Closures Made Wholly or Partly of Cork or of Compositions Resembling Cork.
Claims use since December, 1914.

Ser. No. 91,113. (CLASS 39. CLOTHING.) WISE BROTHERS, INC., Baltimore, Md., and New York, N. Y. Filed Dec. 2, 1915.



SANDOW

The representation of the human figure being fanciful.
Particular description of goods.—Overshirts, Overalls, Underwear, and Workingmen's Garments.
Claims use since 1904.

Ser. No. 91,589. (CLASS 39. CLOTHING.) B. COHEN & CO., INC., New York, N. Y. Filed Dec. 18, 1915.

Society

Particular description of goods.—Ladies' Silk Negligées, Ladies' Silk Dressing-Sacks, Silk Envelop-Chemise, Silk Combination-Suits, Silk Petticoats, Silk Camisoles, Silk Bloomers, and Silk Vests.
Claims use since about the 20th day of September, 1915.

Ser. No. 91,674. (CLASS 39. CLOTHING.) JOHN WANAMAKER, NEW YORK, New York, N. Y. Filed Dec. 21, 1915.

REST RIGHT

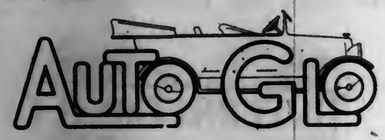
Particular description of goods.—Underwaists for Boys and Girls.
Claims use since about Feb. 2, 1910.

Ser. No. 92,236. (CLASS 2. RECEPTACLES.) EISEMAN, KAISER & Co., Chicago, Ill. Filed Jan. 19, 1916.

HOLDALL

Particular description of goods.—Containers for Toilet Articles.
Claims use since on or about Dec. 1, 1915.

Ser. No. 93,121. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) B. HELLER & Co., Chicago, Ill. Filed Feb. 26, 1916.



Particular description of goods.—A Polish for Vehicle-Bodies and the Like.
Claims use since Nov. 15, 1915.

Ser. No. 93,127. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HO-MAYDE PRODUCTS Co., Detroit, Mich. Filed Feb. 26, 1916.



No claim being made to the exclusive use of the words "Bread Improver" apart from the mark as shown.
Particular description of goods.—Yeast-Flour.
Claims use since September, 1915.

Ser. No. 94,283. (CLASS 38. PRINTS AND PUBLICATIONS.) FROST BROTHERS COMPANY, Chicago, Ill. Filed Apr. 10, 1916.



No claim being made to the words "Our linguistic printing covers the world" apart from the mark shown in the drawing.
Particular description of goods.—Advertising Matter, Announcements, Books, Booklets, Cards, Circulars, Pamphlets, Catalogues, Labels, and Prints, All Being Printed Either from Types, Plates, Blocks, or Stones.
Claims use since Mar. 1, 1916.

Ser. No. 94,602. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) AMERICAN MOISTENING COMPANY, Boston, Mass. Filed Apr. 21, 1916.



Particular description of goods.—Humidifiers, Atomizers, Humidity-Controllers for Use in Ventilating Buildings.
Claims use since the 29th day of March, 1916.

Ser. No. 94,920. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) FORE RIVER SHIPBUILDING CORPORATION, Quincy, Mass. Filed May 5, 1916.



Particular description of goods.—Battle-Ships, Cruisers, Destroyers, Submarines, Colliers, Freight-Ships, Tankers, Passenger Vessels, Light-Ships, Naval Auxiliaries, Yachts, Barges, Tugs, Fishing-Steamers, and Car-Floats, Crank-Shafts, Thrust-Shafts, Line-Shafts, Propeller-Shafts, and Impeller-Shafts for Vehicles.
Claims use since Feb. 1, 1916.

Ser. No. 95,567. (CLASS 10. FERTILIZERS.) UNION SEED & FERTILIZER COMPANY, Guttenberg, N. J. Filed May 31, 1916.

UNION

Particular description of goods.—Fertilizer Consisting of Cotton-Seed Meal.
Claims use since Apr. 16, 1914.

Ser. No. 95,960. (CLASS 39. CLOTHING.) DEVINE & YUNGEL SHOE MFG. Co., Harrisburg, Pa. Filed June 19, 1916.



Applicant makes no claim to the exclusive right to the use of the word "Line" apart from the mark shown in the drawing.
Particular description of goods.—Men's, Boys', Ladies', Misses', and Children's Leather Shoes.
Claims use since June, 1914.

Ser. No. 96,717. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MATTHEWS & LIVELY Co., Atlanta, Ga. Filed July 21, 1916.

ONCE OVER

Particular description of goods.—Razors, Knives of Base Metal other Than Surgical Knives, and Shears.
Claims use since June 15, 1915.

Ser. No. 97,052. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LONSDALE COMPANY, Providence, R. I. Filed Aug. 3, 1916. Under ten-year proviso.

SCOTCH BEETLED HOLLANDS

Particular description of goods.—Cotton Piece Goods.
Claims use since 1890.

Ser. No. 97,571. (CLASS 12. CONSTRUCTION MATERIALS.) THE ANGLO-MEXICAN PETROLEUM PRODUCTS Co. LTD., London, England. Filed Aug. 23, 1916.

MONOLASTIC

Particular description of goods.—Blocks and Slabs for Use in Road Construction.
Claims use since the 17th day of August, 1914.

Ser. No. 97,607. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE E. THEODOROPOULOS, New York, N. Y. Filed Aug. 24, 1916.



The words "Tooth Powder" being disclaimed, the portrait shown being that of applicant.
Particular description of goods.—Tooth-Powder.
Claims use since Sept. 1, 1915.

Ser. No. 97,674. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM L. VOIOT, New York, N. Y. Filed Aug. 28, 1916.

Tache-Ol

Particular description of goods.—A Preparation in Liquid Form for Removing Oils and Greases from Woolens and other Textile Fabrics.
Claims use since June 15, 1916.

Ser. No. 97,675. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM L. VOIOT, New York, N. Y. Filed Aug. 28, 1916.

SANS TACHE

Particular description of goods.—A Preparation in Liquid Form for Removing Oils and Greases from the Skin.
Claims use since June 15, 1916.

Ser. No. 97,914. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WILLIAM A. MCFADDEN, New York, N. Y. Filed Sept. 11, 1916.



Particular description of goods.—Hammers.
Claims use since Aug. 30, 1916.

Ser. No. 97,960. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) SUPERIOR MANUFACTURING Co., Knoxville, Tenn. Filed Sept. 12, 1916.

SAPPHIRE

Particular description of goods.—Automobile-Polish.
Claims use since Aug. 19, 1916.

Ser. No. 98,248. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE SCHMITT, Newark, N. J. Filed Sept. 26, 1916.



Particular description of goods.—A Non-Poisonous Balsam for Burns and Scalds of Every Degree, Cuts and Bruises, Sloughing and All Infected Wounds, Frost-Bites, Felons, Ulcers, Carbuncles, All Inflammation and Soreness.
Claims use since Aug. 5, 1916.

Ser. No. 98,343. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) CHAS G. ROBIN, INC., New York, N. Y. Filed Sept. 30, 1916.

C.G.R.

Particular description of goods.—Electrical Specialties and Conduit-Fittings—Namely, Adjustable Ground-Clamps, Porcelain Covers for Outlet-Boxes and Pipelets.
Claims use since January, 1914.

Ser. No. 98,636. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT F. MARKS, Park Falls, Wis. Filed Oct. 13, 1916.

P.A.C. HEADACHE POWDERS

No claim being made for the term "Headache Powders" apart from the mark shown in the drawing.
Particular description of goods.—Headache-Powders for Headache, Neuralgia, Backache, Toothache, Grippe, Each Powder Containing Four Grains Acetphenetidin, (Acetanilid Derivative.)
Claims use for approximately four years.

Ser. No. 98,747. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FULTON SHOE POLISH COMPANY, INC., New York, N. Y. Filed Oct. 18, 1916.



No claim being made to the words "Fulton Shoe Polish Co., Inc.," "New York," "U. S. A.," "Brand," and "Trade Mark."
Particular description of goods.—Shoe-Polish Pastes.
Claims use since Jan. 1, 1910.

Ser. No. 98,880. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG CO., Green Bay, Wis. Filed Oct. 25, 1916. Under ten-year proviso.

A. One.

Particular description of goods.—Toilet-Paper.
Claims use since Nov. 11, 1893.

Ser. No. 98,909. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY ELIZABETH PHILLIPS, Indianapolis, Ind. Filed Oct. 26, 1916.

PHILHAGRO

Particular description of goods.—Hair-Grower.
Claims use since Aug. 1, 1916.

Ser. No. 98,939. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CRIBBEN & SEXTON COMPANY, Chicago, Ill. Filed Oct. 28, 1916.

UNIVERSAL

Particular description of goods.—Stoves, Ranges, and Hot-Air Furnaces of the Types Heated by Coal, Wood, and Gas, and Parts of Such Stoves, Ranges, and Hot-Air Furnaces.
Claims use on stoves and ranges since Jan. 1, 1880, and on furnaces since the spring of 1912.

Ser. No. 99,042. (CLASS 38. PRINTS AND PUBLICATIONS.) MOTION PICTURE NEWS, INC., New York, N. Y. Filed Nov. 2, 1916.

Motion Picture News Studio Directory

Particular description of goods.—A Semi-Annual Publication.
Claims use since Oct. 10, 1916.

Ser. No. 99,051. (CLASS 12. CONSTRUCTION MATERIALS.) STEWART K. TAYLOR, Mobile, Ala. Filed Nov. 2, 1916.



Particular description of goods.—Hardwood and Fine Timber and Lumber.
Claims use since 1908.

Ser. No. 99,067. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ALBERT W. MARCKS, St. Louis, Mo. Filed Nov. 8, 1916.

Shine It

No claim being made to the word "Shine" apart from the mark shown in the drawing.
Particular description of goods.—Automobile and Furniture Polish.
Claims use since about Oct. 1, 1916.

Ser. No. 99,118. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BAPTISINE PHARMACAL CO., St. Louis, Mo. Filed Nov. 6, 1916.

BAPTISINE

Particular description of goods.—An Antiseptic Lotion.
Claims use since Nov. 1, 1916.

Ser. No. 99,141. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LULU O'DELL, St. Louis, Mo. Filed Nov. 6, 1916.

RE-NU

Particular description of goods.—A Preparation Used in Dressing and Growing Hair.
Claims use since February, 1916.

Ser. No. 99,168. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) IMPERIAL PLAYER ROLL CO., Chicago, Ill. Filed Nov. 8, 1916.

JAZZ

Particular description of goods.—Music-Rolls for Automatic Musical Instruments.
Claims use since about Sept. 15, 1916.

Ser. No. 99,204. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BLAKESLEE MANUFACTURING CO., Duquoin, Ill. Filed Nov. 10, 1916. Under ten-year proviso.

BLAKESLEE

Particular description of goods.—Single and Duplex Steam-Pumps, Jet and Bilge Pumps, and Air-Compressors.
Claims use since 1870.

Ser. No. 99,213. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE MILLER RUBBER COMPANY, Akron, Ohio. Filed Nov. 10, 1916.

WEE-NEE SQUAWKER

No claim being made to the exclusive use of the word "Squawker" apart from the mark shown.
Particular description of goods.—Toy Balloons.
Claims use since Oct. 16, 1916.

Ser. No. 99,235. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES BRIZZOLARA, Richmond, Va. Filed Nov. 11, 1916.

LOLICUM

Particular description of goods.—A Medicine for Use in the Treatment of Rheumatism and Gout.
Claims use since Oct. 23, 1916.

Ser. No. 99,242. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS A. FOIX, Ysleta, Tex. Filed Nov. 11, 1916.



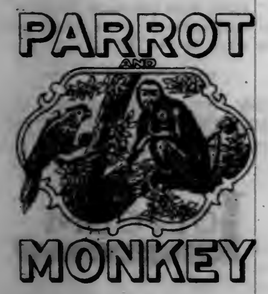
The trade-mark, which is a portrait of myself.
Particular description of goods.—A Remedy for Indigestion.
Claims use since Oct. 1, 1915.

Ser. No. 99,273. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GULFPORT GROCERY COMPANY, Gulfport, Miss. Filed Nov. 13, 1916.



The letters of the word "Cuckoo" being partly colored in blue and brown, as indicated in the drawing.
Particular description of goods.—Wheat-Flour.
Claims use since the 18th day of September, 1916.

Ser. No. 99,371. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CENTRAL GRO. CO., Tifton, Ga. Filed Nov. 18, 1916.



Particular description of goods.—Self-Rising Flour.
Claims use since Sept. 15, 1916.

Ser. No. 99,397. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PIERCE ABBOTT DIETRICH, Philadelphia, Pa. Filed Nov. 20, 1916.



Including a portrait of myself.
Particular description of goods.—Corn and Callus Plaster, Headache and Neuralgia Powders, Laxcara Pills, Used as a Laxative and Cathartic, Cold-Tablets, Liniment for Exterior Application to the Skin and as an Internal Remedy for Cramps, Colic, &c., and Digestive Tablets.
Claims use since Feb. 1, 1915.

Ser. No. 99,519. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE FLASH COMPANY, Greenville, S. C. Filed Nov. 24, 1916.

FLASH

Particular description of goods.—Hair and Scalp Remedy.
Claims use since on or about Mar. 1, 1913.

Ser. No. 99,536. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE CINCINNATI IRON & STEEL COMPANY, Cincinnati, Ohio. Filed Nov. 25, 1916.

CISCO

Particular description of goods.—Special Stay-Bolt Iron; Special Engine-Bolt Iron; Led Kote Sheets (a Plain Sheet Treated with a Covering of Lead to Make it Rust-Proof) for Roofing, Siding, Stamping; Galvanized Sheets; Cold-Rolled Sheets, One Pass; Blue-Annealed Sheets.
Claims use since February, 1908.

Ser. No. 99,554. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD J. MOORE SONS, New York, N. Y. Filed Nov. 25, 1916.



The exclusive right under the present registration to the words "Dr. Sangers" being disclaimed except in association with the arbitrary matter displayed in the drawing.
Particular description of goods.—Capsules for Diseases of the Urinary Organs and Bladder.
Claims use since Oct. 1, 1912.

Ser. No. 99,574. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) J. D. JOHNSON CO., Brooklyn, N. Y., assignor to J. D. Johnson Co. Inc., a Corporation of Delaware. Filed Nov. 27, 1916.

SPHINX

Particular description of goods.—Water-Closets.
Claims use since May 15, 1915.

Ser. No. 99,587. (CLASS 15. OILS AND GREASES.) HARRY E. ROGERS, Bakersfield, Cal. Filed Nov. 27, 1916.

Quakerlene

The lining shown representing merely shading.
Particular description of goods.—Motor-Lubricating Oils and Greases.
Claims use since Oct. 1, 1916.

Ser. No. 99,613. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ZIEGFELD CINEMA CORPORATION, New York, N. Y. Filed Nov. 28, 1916.



The word "Ziegfeld" appearing in the handwriting of William K. Ziegfeld, the word "Films" being disclaimed.
Particular description of goods.—Moving-Picture Films.
Claims use since the 24th day of November, 1916.

Ser. No. 99,621. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DENTAL AND TOILET PRODUCTS CORPORATION, New York, N. Y. Filed Nov. 29, 1916.

BENTHEI-FORM

Particular description of goods.—A Mouth-Wash, Antiseptic, and Astringent.
Claims use since June 27, 1916.

Ser. No. 99,665. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) H. R. MALLINSON & CO., New York, N. Y. Filed Dec. 1, 1916.

ROCKAWAY HUNT

Particular description of goods.—Silk Piece Goods.
Claims use since July 15, 1916.

Ser. No. 99,682. (CLASS 39. CLOTHING.) KOPS BROS., New York, N. Y. Filed Dec. 2, 1916.

LITTLE NEMO

Particular description of goods.—Apparel-Corsets, Corsets, Corset-Covers, and Corset-Waists.
Claims use since Dec. 1, 1916.

Ser. No. 99,693. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) TUBE BRUSH CO., Boston, Mass. Filed Dec. 2, 1916.

KAXO

The word "Kaxo."
Particular description of goods.—A Shoe-Polish.
Claims use since Nov. 1, 1915.

Ser. No. 99,701. (CLASS 38. PRINTS AND PUBLICATIONS.) THE CLASS JOURNAL COMPANY, New York, N. Y. Filed Dec. 4, 1916.

The
TIRE RATE
BOOK

Particular description of goods.—A Periodical Issued Three Times Yearly.
Claims use since September, 1915.

Ser. No. 99,702. (CLASS 38. PRINTS AND PUBLICATIONS.) THE CLASS JOURNAL COMPANY, New York, N. Y. Filed Dec. 4, 1916.

Tire Rate Book
Standard Telegraphic
Code

Particular description of goods.—A Section of a Periodical Which is Issued Three Times Yearly.
Claims use since September, 1916.

Ser. No. 99,775. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) CARL E. SCHMIDT & CO. INC., Detroit, Mich. Filed Dec. 7, 1916.

CHIFTON CALF

The word "Calf" being disclaimed.
Particular description of goods.—Leather.
Claims use since Sept. 15, 1916.

Ser. No. 99,825. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) RITE SPECIALTY CO., New York, N. Y. Filed Dec. 9, 1916.

IVORITE

Comprising the word "Ivorite."
Particular description of goods.—Celluloid.
Claims use since Dec. 6, 1916.

Ser. No. 99,850. (CLASS 17. TOBACCO PRODUCTS.) LILLY, DUNGAN & COMPANY, Baltimore, Md. Filed Dec. 11, 1916.

CLEAR HAVANA LONG FILLED
CLE-HAV-LO-FIL

No claim being made to the exclusive use of the words "Clear Havana Long Filled" apart from the mark shown in the drawing.
Particular description of goods.—Cigars and Cigarettes.
Claims use since June 15, 1916.

Ser. No. 99,885. (CLASS 39. CLOTHING.) CHARLES M. BERNSTEIN, New York, N. Y. Filed Dec. 13, 1916.

Maison Charles

No claim is made to the word "Maison" apart from the trade-mark shown in the drawing.
Particular description of goods.—Ladies' Dresses, Cloaks, and Suits.
Claims use since November, 1913.

Ser. No. 99,908. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) XTEND-A-FORD COMPANY, Philadelphia, Pa., assignor to Commercial Car Unit Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 13, 1916.

XTEND-A-FORD

Particular description of goods.—A Truck-Chassis.
Claims use since about the early part of April, 1916.

Ser. No. 99,927. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Dec. 14, 1916.

50

Particular description of goods.—Photographic Film.
Claims use since July, 1915.

Ser. No. 99,928. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Dec. 14, 1916.

51

Particular description of goods.—Photographic Film.
Claims use since July, 1915.

Ser. No. 99,929. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Dec. 14, 1916.

52

Particular description of goods.—Photographic Film.
Claims use since July, 1915.

Ser. No. 99,930. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Dec. 14, 1916.

53

Particular description of goods.—Photographic Film.
Claims use since July, 1915.

Ser. No. 99,931. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Dec. 14, 1916.

54

Particular description of goods.—Photographic Film.
Claims use since July, 1915.

Ser. No. 99,938. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HYDRAGAS CORPORATION, New York, N. Y. Filed Dec. 14, 1916.

HYDRAGAS

Particular description of goods.—Liquid Fuel for Internal-Combustion Engines or a Liquid Composition for Mixing with the Water of the Radiator or Otherwise to Cause the Vapors Thereof to be Introduced into the Combustion-Chamber of the Engine.
Claims use since Dec. 1, 1916.

Ser. No. 99,954. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Dec. 15, 1916.

FACTOGRAPH

Particular description of goods.—Cameras.
Claims use since July 1, 1915.

Ser. No. 99,972. (CLASS 15. OILS AND GREASES.) TIDE WATER OIL CO., New York, N. Y. Filed Dec. 15, 1916. Under ten-year proviso.

MATCHLESS

Particular description of goods.—Illuminating-Oils.
Claims use since Mar. 15, 1886.

Ser. No. 99,986. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ULRIK R. T. LUND, North Catasauqua, Pa. Filed Dec. 16, 1916.

BLACK DIAMOND

Particular description of goods.—Ribbons.
Claims use since May 1, 1916.

Ser. No. 100,012. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) KLEVER PICTURES, INC., New York, N. Y. Filed Dec. 18, 1916.

KK

Particular description of goods.—Moving-Picture Films.
Claims use since October, 1916.

Ser. No. 100,039. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN CHATILLON & SONS, New York, N. Y. Filed Dec. 19, 1916.

Particular description of goods.—Weighing-Scales.
Claims use since Dec. 29, 1908.

Ser. No. 100,084. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE S. S. WENZELL MACHINE COMPANY, Philadelphia, Pa. Filed Dec. 21, 1916. Under ten-year proviso.

EICK

Particular description of goods.—Bottle-Washing Machines.
Claims use since about Sept. 10, 1891.

Ser. No. 100,092. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) J. W. GODDARD & SONS, INCORPORATED, New York, N. Y. Filed Dec. 22, 1916.

BOMBAX
FABRICS

No claim of right to the exclusive use of the word "Fabrics" being made except as shown in the accompanying drawing.
Particular description of goods.—Cotton Piece Goods.
Claims use since Dec. 20, 1916.

Ser. No. 100,104. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

TUTEXKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 7, 1916.

Ser. No. 100,106. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

BUSTERKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 7, 1916.

Ser. No. 100,107. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

KARTERKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 7, 1916.

Ser. No. 100,111. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

KASTORKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 7, 1916.

Ser. No. 100,112. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

KLEVERKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 7, 1916.

Ser. No. 100,113. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

KRAFTKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 7, 1916.

Ser. No. 100,118. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

KASTLEKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 7, 1916.

Ser. No. 100,119. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

KARLTONKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 7, 1916.

Ser. No. 100,121. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

KALDWELLKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 14, 1916.

Ser. No. 100,122. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

KIPPERKOTE

Particular description of goods.—Overcoats.
Claims use since Dec. 23, 1915.

Ser. No. 100,127. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

RIPPLEKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 10, 1916.

Ser. No. 100,131. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

KLUBBYKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 15, 1916.

Ser. No. 100,134. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

KARSLEYKOTE

Particular description of goods.—Overcoats.
Claims use since Aug. 7, 1916.

Ser. No. 100,136. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOSEPH WELSH, Pasadena, Cal. Filed Dec. 22, 1916.

"TELARANA NOVA"

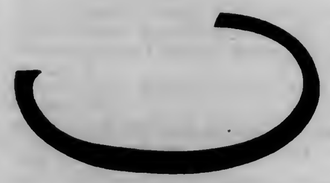
Particular description of goods.—A Leader Used in Angling.
Claims use since May 1, 1913.

Ser. No. 100,181. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) STEIN BROTHERS, Chicago, Ill. Filed Dec. 26, 1916.

Essbee

Particular description of goods.—Lemon Horehound Rock and Rye, Sloe-Gin, and Dry Gin.
Claims use since the year 1914.

Ser. No. 100,315. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill. Filed Jan. 2, 1917.



Particular description of goods.—Foot-Soaps.
Claims use since 1915.

Ser. No. 100,352. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) SAML. GABRIEL SONS & COMPANY, New York, N. Y. Filed Jan. 4, 1917.

MOTHER GOOSE

Particular description of goods.—Dolls.
Claims use since Dec. 28, 1916.

Ser. No. 100,397. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ILFORD, LIMITED, Ilford, London, England. Filed Jan. 6, 1917. Under ten-year proviso.



Particular description of goods.—Photographic Dry Plates, Photographic Films, and Prepared Paper for Photographic Purposes.
Claims use since 1887.

Ser. No. 100,398. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ILFORD, LIMITED, Ilford, London, England. Filed Jan. 6, 1917. Under ten-year proviso.

ILFORD

Particular description of goods.—Photographic Dry Plates, Photographic Films, and Prepared Paper for Photographic Purposes.
Claims use since 1887.

Ser. No. 100,452. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOHN T. SIMPSON, Newark, N. J. Filed Jan. 8, 1917.

PIT-O-PAT

Particular description of goods.—Games and Apparatus for Playing the Same.
Claims use since Dec. 20, 1916.

TRADE-MARK REGISTRATIONS GRANTED

FEBRUARY 6, 1917.

115,267. SILK AND VELVET PIECE GOODS. ACORN SILK CO. INC., New York, N. Y.
Filed December 8, 1915. Serial No. 91,288. PUBLISHED NOVEMBER 28, 1916.

115,268. SILK AND VELVET PIECE GOODS. ACORN SILK CO. INC., New York, N. Y.
Filed December 8, 1915. Serial No. 91,284. PUBLISHED NOVEMBER 28, 1916.

115,269. ROPE, CORD, LINES, AND TWINE MANUFACTURED FROM VEGETABLE FIBER. AMERICAN MANUFACTURING COMPANY, Boston, Mass., and Brooklyn, N. Y.
Filed October 10, 1916. Serial No. 98,536. PUBLISHED NOVEMBER 21, 1916.

115,270. SUGAR FOR USE AS A FOOD. THE AMERICAN SUGAR REFINING COMPANY, Jersey City, N. J., and New York, N. Y.
Filed October 11, 1916. Serial No. 98,550. PUBLISHED NOVEMBER 28, 1916.

115,271. SUGAR FOR USE AS A FOOD. THE AMERICAN SUGAR REFINING COMPANY, Jersey City, N. J., and New York, N. Y.
Filed October 11, 1916. Serial No. 98,552. PUBLISHED NOVEMBER 28, 1916.

115,272. CERTAIN NAMED CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. AMPOULE DRUG COMPANY, INC., New York, N. Y.
Filed May 24, 1916. Serial No. 95,888. PUBLISHED DECEMBER 5, 1916.

115,273. LUMBER AND SHINGLES. HARRY C. ANGELL, Grand Rapids, Mich.
Filed August 7, 1916. Serial No. 97,157. PUBLISHED NOVEMBER 21, 1916.

115,274. FACE-POWDER, COLD-CREAM, HAIR-WASH, TOOTH-PASTE, ROUGE, SHAMPOO PREPARATIONS, AND PERFUME. THE ARMAND COMPANY, Des Moines, Iowa.
Filed August 23, 1916. Serial No. 97,568. PUBLISHED DECEMBER 5, 1916.

115,275. TOOL-STEELS. ATLAS CRUCIBLE STEEL COMPANY, Dunkirk, N. Y.
Filed October 21, 1916. Serial No. 98,795. PUBLISHED DECEMBER 5, 1916.

115,276. TOOL-STEELS. ATLAS CRUCIBLE STEEL COMPANY, Dunkirk, N. Y.
Filed October 21, 1916. Serial No. 98,797. PUBLISHED DECEMBER 5, 1916.

115,277. LIQUID-FREEZERS. AUTO VACUUM FREEZER COMPANY, INC., New York, N. Y.
Filed September 12, 1916. Serial No. 97,943. PUBLISHED NOVEMBER 21, 1916.

115,278. CERTAIN NAMED FOODS AND INGREDIENTS OF FOODS. BALTIMORE PEARL HOMINY COMPANY, Baltimore, Md.
Filed July 17, 1916. Serial No. 96,615. PUBLISHED NOVEMBER 28, 1916.

115,279. PREPARED ASPHALT ROOFING. BALTIMORE ROOFING AND ASBESTOS MFG. CO., Wilmington, Del., and Asbestos, Md.
Filed March 21, 1916. Serial No. 93,734. PUBLISHED NOVEMBER 28, 1916.

115,280. CLEANSING THE HAIR OF ALL NITS, VERMIN, DANDRUFF, GERMS, AND DIRT. LEON BARON, New York, N. Y.
Filed July 29, 1916. Serial No. 96,945. PUBLISHED DECEMBER 5, 1916.

115,281. CITRUS FRUITS. SHEPARD C. BASS, Fort Myers, Fla.
Filed December 8, 1915. Serial No. 91,285. PUBLISHED NOVEMBER 7, 1916.

115,282. SALVES TO BE APPLIED EXTERNALLY FOR CERTAIN NAMED SKIN DISEASES. ROSCOE FRANK BEAUCHAMP, Philadelphia, Pa.
Filed October 21, 1916. Serial No. 98,800. PUBLISHED DECEMBER 5, 1916.

115,283. ATTACHMENT-PLUGS, LAMP-SOCKETS, AND OUTLET-BOX RECEPTACLES. THE BEST ELECTRIC COMPANY, Pittsburgh, Pa.
Filed August 7, 1916. Serial No. 97,132. PUBLISHED DECEMBER 5, 1916.

115,284. BUILDING AND CONSTRUCTION TOYS. BENJAMIN-SELLAR MFG. CO., Chicago, Ill.
Filed November 22, 1915. Serial No. 90,811. PUBLISHED DECEMBER 5, 1916.

115,285. BUTTER, EGGS, AND CHEESE. BEYER BROS. COMMISSION CO., New York, N. Y.
Filed October 6, 1916. Serial No. 98,456. PUBLISHED NOVEMBER 21, 1916.

115,286. WRITING OR LETTER PAPER. WILLIAM EDWARD BLAKE, Toronto, Ontario, Canada.
Filed May 24, 1916. Serial No. 95,392. PUBLISHED DECEMBER 5, 1916.

115,287. TOILET POWDER AND ROUGE OR SOLID FACE-POWDER. A. BOURJOIS & CO., INC., New York, N. Y.
Filed September 1, 1915. Serial No. 88,947. PUBLISHED DECEMBER 5, 1916.

115,288. COFFEE. BOWERS BROS. INC., Richmond, Va.
Filed October 18, 1916. Serial No. 98,625. PUBLISHED NOVEMBER 14, 1916.

115,289. CASKETS. BOYERTOWN BURIAL CASKET CO., Boyertown and Philadelphia, Pa.
Filed September 10, 1915. Serial No. 89,128. PUBLISHED NOVEMBER 28, 1916.

115,290. SHOES MADE OF CERTAIN NAMED MATERIALS OR SUBSTITUTES FOR SAID MATERIALS AND COMBINATIONS THEREOF. BROKAW BROTHERS, New York, N. Y.
Filed May 4, 1916. Serial No. 94,885. PUBLISHED DECEMBER 5, 1916.

115,291. CERTAIN NAMED TOY. JULIUS E. BROWN, Peekskill, N. Y.
Filed June 26, 1916. Serial No. 96,133. PUBLISHED NOVEMBER 28, 1916.

115,292. GAME PLAYED WITH A BALL AND CUE, AS IN BILLIARDS. JULIUS E. BROWN, Peekskill, N. Y.
Filed June 26, 1916. Serial No. 96,134. PUBLISHED NOVEMBER 28, 1916.

115,293. TOY CONSISTING OF A BOUNCING HORSE ON WHEELS. JULIUS E. BROWN, Peekskill, N. Y.
Filed June 26, 1916. Serial No. 96,135. PUBLISHED NOVEMBER 21, 1916.

115,294. SHIRTS, PAJAMAS, NIGHTGOWNS, AND UNDERWEAR. BROWNSTEIN-LOUIS COMPANY, Los Angeles, Cal.
Filed October 14, 1916. Serial No. 98,646. PUBLISHED DECEMBER 5, 1916.

115,295. BITS, SPURS, STIRRUPS, AND SADDLERY HARDWARE. AUGUST BUERMANN MANUFACTURING COMPANY, Newark, N. J.
Filed October 28, 1916. Serial No. 98,937. PUBLISHED DECEMBER 5, 1916.

115,296. CANDY. BUNTE BROTHERS, Chicago, Ill.
Filed January 26, 1914. Serial No. 75,426. PUBLISHED DECEMBER 5, 1916.

115,297. CANNED VEGETABLES. BURTON & DAVIS CO., New York, N. Y.
Filed October 20, 1916. Serial No. 98,783. PUBLISHED DECEMBER 5, 1916.

115,298. AUTO OR MOTOR TRUCKS. CADILLAC AUTO TRUCK COMPANY, Cadillac, Mich.
Filed October 6, 1916. Serial No. 98,462. PUBLISHED DECEMBER 5, 1916.

115,299. STRUCTURAL ANGLES, BEAMS, BARS, CAPS, CHANNELS, COLUMNS, FRAMES, PLATES, PRESSED STEEL, SHEETS. A. M. CASTLE & CO., Chicago, Ill.
Filed January 29, 1916. Serial No. 92,492. PUBLISHED NOVEMBER 28, 1916.

115,300. BOND-PAPER. CHOPE-STEVENS PAPER CO., Detroit, Mich.
Filed July 31, 1916. Serial No. 96,977. PUBLISHED DECEMBER 5, 1916.

115,301. REMEDY FOR GONORRHEA. PAUL CHOVANECZ, Johnstown, Pa.
Filed November 11, 1916. Serial No. 99,237. PUBLISHED DECEMBER 5, 1916.

115,302. RUBBER BELTING, RUBBER HOSE, DUCK BELTING, DUCK HOSE, RUBBER MACHINERY PACKING, AND ASBESTOS MACHINERY PACKING. THE CINCINNATI RUBBER MANUFACTURING COMPANY, Norwood, Ohio.
Filed August 21, 1916. Serial No. 97,502. PUBLISHED DECEMBER 5, 1916.

115,303. RUBBER BELTING, RUBBER HOSE, DUCK BELTING, DUCK HOSE, RUBBER MACHINERY PACKING, AND ASBESTOS MACHINERY PACKING. THE CINCINNATI RUBBER MANUFACTURING COMPANY, Norwood, Ohio.
Filed August 21, 1916. Serial No. 97,503. PUBLISHED DECEMBER 5, 1916.

115,304. PUZZLES. ADELAIDE CLARK, New York, N. Y.
Filed October 20, 1916. Serial No. 98,785. PUBLISHED DECEMBER 5, 1916.

115,305. CERTAIN NAMED DENTAL TOOLS AND SUPPLIES. THE CLEVELAND DENTAL MANUFACTURING COMPANY, Cleveland, Ohio.
Filed June 23, 1916. Serial No. 96,080. PUBLISHED NOVEMBER 21, 1916.

115,306. SUBSTITUTE FOR COFFEE. COFFETONE MANUFACTURING COMPANY, Minneapolis, Minn.
Filed January 20, 1916. Serial No. 92,265. PUBLISHED DECEMBER 5, 1916.

115,307. MEDICINAL SALVE FOR TREATMENT OF CERTAIN NAMED AFFECTIONS AND FOR SKIN ERUPTIONS. GEORGE COLLINS, Pittsburgh, Pa.
Filed October 3, 1916. Serial No. 98,383. PUBLISHED DECEMBER 5, 1916.

115,308. VARNISH, ENAMEL, FURNITURE-POLISH, AND VARNISH-REMOVER. CONTINENTAL VARNISH COMPANY INC., New York, N. Y.
Filed August 9, 1916. Serial No. 97,210. PUBLISHED DECEMBER 5. 1916.

115,309. PERFUMES, PERFUMERY EXTRACTS, TOILET WATERS, SMELLING-SALTS, TOILET POWDER, AND SACHET-POWDER. THE C. L. COTTON PERFUME & EXTRACT CO., Earlville, N. Y.
Filed August 12, 1915. Serial No. 88,560. PUBLISHED OCTOBER 19, 1915.

115,310. VULCANIZABLE FABRIC TIRE-REPAIR MATERIAL. WILLIAM UPHAM COWAN, Chicago, Ill.
Filed April 6, 1916. Serial No. 94,187. PUBLISHED NOVEMBER 28, 1916.

115,311. BREAKFAST CEREAL. CREAM OF RICE CO., Chicago, Ill.
Filed December 20, 1915. Serial No. 91,596. PUBLISHED MAY 2, 1916.

115,312. BOTTLE-OPENERS. THE CROWN CORK AND SEAL CO., OF BALTIMORE CITY, Baltimore, Md.
Filed September 26, 1916. Serial No. 98,239. PUBLISHED DECEMBER 5, 1916.

115,313. CANNED PORK AND BEANS. THE CUDAHY PACKING COMPANY, Chicago, Ill.
Filed October 27, 1916. Serial No. 98,921. PUBLISHED DECEMBER 5, 1916.

115,314. REMEDY FOR RHEUMATISM AND KIDNEY DISEASES. WARREN J. DAVIS, Camden, N. J.
Filed July 17, 1916. Serial No. 96,623. PUBLISHED DECEMBER 5, 1916.

115,315. CERTAIN NAMED FOODS AND INGREDIENTS OF FOODS. DECATUR EXTRACT CO., Decatur, Ill.
Filed September 11, 1916. Serial No. 97,899. PUBLISHED NOVEMBER 28, 1916.

115,316. TOWEL-RACKS, FOLLOWER-BOARDS, AND LUGS. DIAMOND INDIVIDUAL TOWEL SYSTEM CO., Spokane, Wash.
Filed July 24, 1916. Serial No. 96,793. PUBLISHED NOVEMBER 28, 1916.

115,317. KNITTED UNDERWEAR—VIZ., SHIRTS, DRAWERS, AND UNION-SUITS. DUOFOLD HEALTH UNDERWEAR COMPANY, Mohawk, N. Y.
Filed May 12, 1915. Serial No. 86,567. PUBLISHED DECEMBER 5, 1916.

115,318. AUTOMOBILES. ELGIN MOTOR CAR CORPORATION, Wilmington, Del., and Chicago, Ill.
Filed October 4, 1915. Serial No. 89,628. PUBLISHED NOVEMBER 21, 1916.

115,319. COTTON SHIRTINGS IN THE PIECE. EVERETT MILLS, Lawrence and Boston, Mass.
Filed August 31, 1916. Serial No. 97,731. PUBLISHED DECEMBER 5, 1916.

115,320. FURNITURE CLEANER AND POLISH. EXCELSIOR MANUFACTURING CO., LTD., Pittsburgh, Pa.
Filed October 11, 1916. Serial No. 98,560. PUBLISHED DECEMBER 5, 1916.

115,321. SHAMPOOING APPARATUS. WILLIAM FABRBER, Chicago, Ill.
Filed November 8, 1916. Serial No. 99,165. PUBLISHED DECEMBER 5, 1916.

115,322. HOUSEHOLD RUBBER GLOVES. THE FAULTLESS RUBBER CO., Ashland, Ohio.
Filed August 19, 1916. Serial No. 97,450. PUBLISHED DECEMBER 5, 1916.

115,323. CANDIES, CHOCOLATES, CHOCOLATE CREAMS, BONBONS, CHEWS, STICK-CANDY, TAFFIES, GUM-DROPS. LIBBIE R. FENN, Los Angeles, Cal.
Filed May 9, 1916. Serial No. 95,010. PUBLISHED NOVEMBER 14, 1916.

115,324. GLASS-CUTTERS, TUBE-CUTTERS, OVAL-CUTTERS, CIRCLE-CUTTERS. THE FLETCHER, TERRY COMPANY, Bristol, Conn.
Filed July 29, 1916. Serial No. 96,953. PUBLISHED DECEMBER 5, 1916.

115,325. VARNISH. FLOOR-SHINE MANUFACTURING COMPANY, St. Louis, Mo.
Filed September 5, 1916. Serial No. 97,787. PUBLISHED DECEMBER 5, 1916.

115,326. DRY BATTERY. GOLD SEAL BATTERY & ELECTRIC CO. INC., New York, N. Y.
Filed October 6, 1916. Serial No. 98,464. PUBLISHED DECEMBER 5, 1916.

115,327. CANNED FRUITS. GRIFFITH-DURNEY COMPANY, San Francisco, Cal.
Filed March 1, 1916. Serial No. 93,206. PUBLISHED MAY 23, 1916.

115,328. LAUNDRY-WASHING MACHINE. GRINNELL WASHING MACHINE COMPANY, Grinnell, Iowa.
Filed October 7, 1916. Serial No. 98,508. PUBLISHED DECEMBER 5, 1916.

115,329. COTTON-SEED MEAL. GULFPORT GROCERY CO., Gulfport, Miss.
Filed October 5, 1916. Serial No. 98,435. PUBLISHED NOVEMBER 28, 1916.

115,330. SHOCK-ABSORBERS. THE H. & D. COMPANY, Goodland, Ind.
Filed October 16, 1916. Serial No. 98,696. PUBLISHED NOVEMBER 21, 1916.

115,331. ANTISEPTIC LOTION FOR USE AFTER SHAVING AND TREATING CHAPPED SKIN, BURNS, AND HEADACHE. SOLOMON R. HAMBLETON, Memphis, Tenn.
Filed October 11, 1916. Serial No. 98,563. PUBLISHED DECEMBER 5, 1916.

115,332. FERTILIZERS. HAMPTON GUANO COMPANY, Norfolk, Va.
Filed November 18, 1915. Serial No. 90,720. PUBLISHED AUGUST 1, 1916.

115,333. CERTAIN NAMED CLOTHING FOR MEN AND BOYS. HARRISON & LITTRELL, Woodward, Okla.
Filed July 20, 1916. Serial No. 96,691. PUBLISHED DECEMBER 5, 1916.

115,334. ELECTRIC LAMPS. THE HAWTHORNE MANUFACTURING COMPANY, INCORPORATED, Bridgeport, Conn.
Filed September 27, 1916. Serial No. 98,255. PUBLISHED DECEMBER 5, 1916.

115,335. COFFIN-BOX. ALBERT HEATH, Escanaba, Mich.
Filed October 6, 1916. Serial No. 98,468. PUBLISHED DECEMBER 5, 1916.

115,336. HORSE-COLLARS. HERMANN-SANFORD SADDLERY COMPANY, Springfield, Mo.
Filed September 11, 1916. Serial No. 97,904. PUBLISHED NOVEMBER 21, 1916.

115,337. HORSE-COLLARS. HERMANN-SANFORD SADDLERY COMPANY, Springfield, Mo.
Filed September 11, 1916. Serial No. 97,905. PUBLISHED NOVEMBER 21, 1916.

115,338. CANNED RAW OYSTERS. WILLIAM HEYSER, Baltimore, Md.
Filed October 9, 1916. Serial No. 98,516. PUBLISHED NOVEMBER 28, 1916.

115,339. PREPARATION FOR POLISHING AUTOBODIES, PIANOS, FURNITURE, HARDWOOD FLOORS, AND ALL VARNISHED SURFACES. Hiscox & Co., Patchogue, N. Y.
Filed October 21, 1916. Serial No. 98,808. PUBLISHED DECEMBER 5, 1916.

115,340. REMEDY FOR LA GRIPPE AND COLDS, NEURALGIA, HEADACHE, AND RHEUMATIC PAINS. CHARLES W. HOLZHAUER, Newark, N. J.
Filed March 22, 1916. Serial No. 93,761. PUBLISHED MAY 2, 1916.

115,341. COMPOUND OF VANILLA AND TONKA. THE HUDSON MFG. CO., Chicago, Ill.
Filed July 11, 1916. Serial No. 96,496. PUBLISHED SEPTEMBER 19, 1916.

115,342. CAKES AND COOKIES. ITEN BISCUIT CO., Omaha, Nebr.
Filed September 5, 1916. Serial No. 97,793. PUBLISHED DECEMBER 5, 1916.

115,343. CAKES AND COOKIES. ITEN BISCUIT CO., Omaha, Nebr.
Filed September 5, 1916. Serial No. 97,794. PUBLISHED DECEMBER 5, 1916.

115,344. CHEMICAL COAL-SAVING COMPOUND. JACOB JAFFE, Far Rockaway, N. Y.
Filed October 12, 1914. Serial No. 81,820. PUBLISHED DECEMBER 5, 1916.

115,345. TEAS, SPICES—NAMELY, CLOVES, PIMENTO, CINNAMON, GINGER, MUSTARD, PEPPER—AND PREPARED MUSTARD. JOHNSON & MURRAY INCORPORATED, Utica, N. Y.
Filed May 22, 1916. Serial No. 95,339. PUBLISHED NOVEMBER 28, 1916.

115,346. SHAMPOOS AND CORN REMEDIES. MARTIN KAPLAN, New York, N. Y.
Filed September 25, 1916. Serial No. 98,232. PUBLISHED DECEMBER 5, 1916.

115,347. PIPES, CIGAR-HOLDERS, AND CIGARETTE-HOLDERS. KAUFMANN BROS. & BONDY, New York, N. Y.
Filed October 11, 1916. Serial No. 98,564. PUBLISHED NOVEMBER 21, 1916.

115,348. CANDIES AND CONFECTIONS. KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich.
Filed October 5, 1916. Serial No. 98,436. PUBLISHED NOVEMBER 28, 1916.

115,349. NEWSPAPER-SECTION. ETHEL V. KEMPER, Chicago, Ill.
Filed June 10, 1916. Serial No. 95,786. PUBLISHED DECEMBER 5, 1916.

115,350. CANDY, PARTICULARLY CHOCOLATES. KIBBE BROS. COMPANY, Springfield, Mass.
Filed July 3, 1916. Serial No. 96,299. PUBLISHED NOVEMBER 28, 1916.

115,351. STOMACH, LIVER, AND BOWEL REMEDY. WILLIAM A. KNOLL, Berwick, N. D.
Filed April 29, 1916. Serial No. 94,795. PUBLISHED JUNE 27, 1916.

115,352. AUTOMOBILES. ELLIS LANDGREN, Grand Rapids, Mich.
Filed July 17, 1916. Serial No. 96,629. PUBLISHED SEPTEMBER 12, 1916.

115,353. READY-MIXED PAINT. W. W. LAWRENCE & COMPANY, Pittsburgh, Pa.
Filed October 13, 1916. Serial No. 98,635. PUBLISHED NOVEMBER 21, 1916.

115,354. CANNED FRUITS, CANNED VEGETABLES. THE H. D. LEE MERCANTILE CO., Salina, Kans.
Filed March 18, 1916. Serial No. 93,656. PUBLISHED MAY 23, 1916.

115,355. INNER TUBES. LEE TIRE & RUBBER CO., Whitemarsh township, Montgomery county, Pa.
Filed June 5, 1916. Serial No. 95,626. PUBLISHED AUGUST 1, 1916.

115,356. POWDER FOR THE TREATMENT OF DANDRUFF. BERNHARD LEMOHN, New York, N. Y.
Filed March 2, 1916. Serial No. 93,236. PUBLISHED MARCH 28, 1916.

115,357. POLISHING-CLOTHS. CREW LEVICK COMPANY, Philadelphia, Pa.
Filed November 10, 1916. Serial No. 99,207. PUBLISHED DECEMBER 5, 1916.

115,358. CORSETS. LILY OF FRANCE CORSET CO., New York, N. Y.
Filed November 8, 1916. Serial No. 99,169. PUBLISHED DECEMBER 5, 1916.

115,359. COMPLEXION-POWDER. JANIE LINCOLN, Toledo, Ohio.
Filed July 27, 1916. Serial No. 96,893. PUBLISHED DECEMBER 5, 1916.

115,360. FOOD AND TONIC FOR PLANTS, FLOWERS, &c. GEORGE A. LIPPINCOTT, Philadelphia, Pa.
Filed September 30, 1916. Serial No. 98,339. PUBLISHED NOVEMBER 21, 1916.

115,361. CAKES OF THE KIND KNOWN AS COOKIES. LOOSE-WILES BISCUIT COMPANY, New York, N. Y., and Kansas City, Mo.
Filed June 19, 1916. Serial No. 95,970. PUBLISHED NOVEMBER 28, 1916.

115,362. MOTION-PICTURE FILMS. ALEC LORIMORE, New York, N. Y.
Filed October 19, 1916. Serial No. 98,765. PUBLISHED DECEMBER 5, 1916.

115,363. WHEAT-FLOUR. JOS. LOUDENSLAGER ESTATE, Tiffin, Ohio.
Filed August 16, 1916. Serial No. 97,373. PUBLISHED NOVEMBER 28, 1916.

115,364. CANNED FRUITS, CANNED VEGETABLES, CANNED SALMON, CANNED HOMINY, AND CANNED PORK AND BEANS. MCKNIGHT-KEATON GROCERY CO., Cairo, Ill.
Filed June 2, 1915. Serial No. 87,051. PUBLISHED AUGUST 24, 1915.

115,365. MILK FOOD FOR INFANTS AND INVALIDS. THE BACCHUS MARSH CONCENTRATED MILK CO. LTD., Melbourne, Victoria, Australia.
Filed September 21, 1914. Serial No. 81,362. PUBLISHED SEPTEMBER 7, 1915.

115,366. SELF-CLOSING TOBACCO-POUCHES. CHAUNCEY MARSHALL, Jr., Brooklyn, N. Y.
Filed October 12, 1916. Serial No. 98,600. PUBLISHED NOVEMBER 21, 1916.

115,367. APPLES, COFFEE, OLEOMARGARIN, AND JELLY. MEYER & DEGERDON, New York, N. Y.
Filed May 31, 1916. Serial No. 95,556. PUBLISHED NOVEMBER 28, 1916.

115,368. CANDY. MILLER-ELMER MANUFACTURING CO., LTD., New Orleans, La.
Filed October 27, 1916. Serial No. 98,929. PUBLISHED DECEMBER 5, 1916.

115,369. SOFT DRINK. MORRIS & MORRIS, Baltimore, Md.
Filed March 15, 1916. Serial No. 93,555. PUBLISHED APRIL 4, 1916.

115,370. WEEKLY PUBLICATIONS. THE MOTOR WORLD PUBLISHING CO., New York, N. Y.
Filed October 6, 1916. Serial No. 98,476. PUBLISHED DECEMBER 5, 1916.

115,371. TENNIS-RACKETS. CURT B. MUELLER, Cleveland, Ohio.
Filed June 14, 1916. Serial No. 95,874. PUBLISHED NOVEMBER 28, 1916.

115,372. COFFEE AND TEA. MUTUAL COFFEE CO., Montgomery, Ala.
Filed April 23, 1915. Serial No. 86,145. PUBLISHED AUGUST 3, 1915.

115,373. TROUSERS AND RAIN-COATS. SOLOMON NEWMAN, New York, N. Y.
Filed August 19, 1916. Serial No. 97,457. PUBLISHED DECEMBER 5, 1916.

115,374. HARNESS AND SADDLE PADS. NORFOLK WOOLEN CO., Franklin, Mass.
Filed August 31, 1916. Serial No. 97,736. PUBLISHED NOVEMBER 28, 1916.

115,375. FELTED-VEGETABLE-FIBER HEAT-INSULATING MATERIAL. NORTHERN INSULATING COMPANY, St. Paul, Minn.
Filed July 29, 1915. Serial No. 88,283. PUBLISHED DECEMBER 5, 1916.

115,376. CERTAIN NAMED PAPER AND STATIONERY. NORTHERN PAPER MILLS, Green Bay, Wis.
Filed April 8, 1916. Serial No. 94,262. PUBLISHED JUNE 6, 1916.

115,377. CANNED FRUITS AND VEGETABLES, SALMON, HOMINY, PORK AND BEANS, AND CATSUP. M. O'CONNOR AND COMPANY, Indianapolis, Ind.
Filed September 8, 1916. Serial No. 97,865. PUBLISHED NOVEMBER 28, 1916.

115,378. LANGUAGE-TEACHING PUBLICATIONS, AND PARTICULARLY FOR SUCH PUBLICATIONS IN CARD FORM. OLD-WIL PUBLISHING CO., Milwaukee, Wis.
Filed September 23, 1916. Serial No. 98,194. PUBLISHED DECEMBER 5, 1916.

115,379. PIGMENTS FOR USE IN THE RUBBER AND LINOLEUM INDUSTRIES. ORRS ZINC WHITE LIMITED, London and Widnes, England.
Filed September 25, 1916. Serial No. 98,219. PUBLISHED DECEMBER 5, 1916.

115,380. CARDBOARD CUT-OUT TOYS. OXFORD-PRINT, Boston, Mass.
Filed September 14, 1915. Serial No. 89,188. PUBLISHED NOVEMBER 28, 1916.

115,381. SUPPORTING DEVICES FOR BABIES, KNOWN AS BABY-JUMPERS. C. R. PATTEN & CO., Tacoma, Ohio.
Filed September 23, 1916. Serial No. 98,195. PUBLISHED NOVEMBER 21, 1916.

115,382. POLISH FOR FURNITURE, AUTOMOBILE-BODIES, PIANOS, AND WOODWORK GENERALLY. JOSEPH E. PERRAULT, Springfield, Mass.
Filed October 23, 1916. Serial No. 98,844. PUBLISHED DECEMBER 5, 1916.

115,383. COTTON-WASTE ESPECIALLY ADAPTED FOR USE IN CLEANING AND POLISHING AUTOMOBILES. WILLIAM C. PERRY, Duchesne, Utah.
Filed September 30, 1916. Serial No. 98,342. PUBLISHED DECEMBER 5, 1916.

115,384. MEDICINE FOR RHEUMATIC PAINS. FRED. PHILLIPS, New York, N. Y.
Filed September 5, 1916. Serial No. 97,809. PUBLISHED DECEMBER 5, 1916.

115,385. CERTAIN NAMED HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES. POLACK TYRE & RUBBER CO., New York, N. Y.
Filed October 9, 1916. Serial No. 98,525. PUBLISHED DECEMBER 5, 1916.

115,386. MACARONI, CHEESE, AND OLIVE-OIL EMULSION. THE POMPEIAN CO., Baltimore, Md.
Filed April 20, 1916. Serial No. 94,581. PUBLISHED NOVEMBER 7, 1916.

115,387. CERTAIN NAMED CLOTHING FOR MEN, WOMEN, AND CHILDREN. PROTEXWEL MANUFACTURING CORPORATION, Chicago, Ill.
Filed February 23, 1916. Serial No. 93,054. PUBLISHED DECEMBER 5, 1916.

115,388. SHOTGUN-CARTRIDGES, LOADED AND EMPTY. THE REMINGTON ARMS UNION METALLIC CARTRIDGE COMPANY, New York, N. Y., and Bridgeport, Conn.
Filed October 23, 1916. Serial No. 98,846. PUBLISHED DECEMBER 5, 1916.

115,389. TOWELINGS AND TOWELS. REMY, SCHMIDT & PLEISSNER, New York, N. Y.
Filed September 19, 1916. Serial No. 98,097. PUBLISHED DECEMBER 5, 1916.

115,390. TURKEYS. LEON RENAKER, Winchester, Ky.
Filed October 24, 1916. Serial No. 98,865. PUBLISHED DECEMBER 5, 1916.

115,391. WHEAT-FLOUR, GRAHAM FLOUR, AND PANCAKE-FLOUR. CLARE CARLE REPLOGLE, Shenandoah, Iowa.
Filed October 6, 1916. Serial No. 98,484. PUBLISHED DECEMBER 5, 1916.

115,392. TEA. RICE BROS., Philadelphia, Pa.
Filed October 18, 1916. Serial No. 98,756. PUBLISHED NOVEMBER 28, 1916.

115,393. COTTON PIECE GOODS. JOSEPH T. RICHMAN, New York, N. Y.
Filed March 31, 1916. Serial No. 94,021. PUBLISHED DECEMBER 5, 1916.

115,394. CANDY. RIDLEY'S, THE OLD CHAMBERS ST. CANDY MANUFACTORY, New York, N. Y.
Filed September 6, 1916. Serial No. 97,822. PUBLISHED NOVEMBER 28, 1916.

115,395. SILVER-PLATED FLAT AND HOLLOW WARE AND CUTLERY. WM. A. ROGERS, LIMITED, New York and Niagara Falls, N. Y.
Filed April 23, 1915. Serial No. 86,155. PUBLISHED JULY 4, 1916.

115,396. PHARMACEUTICAL PREPARATION FOR CHECKING EXCESSIVE SECRETIONS OF THE SKIN AND PREVENTING THE ODOR. ROYAL REMEDIES COMPANY, Waukegan, Ill.
Filed September 18, 1916. Serial No. 98,059. PUBLISHED DECEMBER 5, 1916.

115,397. COFFEE. ROYAL VALLEY COFFEE CO., Detroit, Mich.
Filed September 13, 1916. Serial No. 97,979. PUBLISHED NOVEMBER 28, 1916.

115,398. COD-LIVER OIL. RUSSIA CEMENT COMPANY, Gloucester, Mass.
Filed November 9, 1916. Serial No. 99,201. PUBLISHED DECEMBER 5, 1916.

115,399. CERTAIN NAMED FOODS AND INGREDIENTS OF FOODS. RUST-PARKER COMPANY, Duluth, Minn.
Filed August 5, 1916. Serial No. 97,121. PUBLISHED NOVEMBER 28, 1916.

115,400. RING-BUFFS—VIZ., BUFF-STICKS. SARAH J. SANGER, Lima, N. Y.
Filed October 19, 1916. Serial No. 98,773. PUBLISHED DECEMBER 5, 1916.

115,401. CEREAL BREAKFAST FOOD AND WHEAT-FLOUR. ANDREW H. SCOBLE, New York, N. Y.
Filed September 12, 1916. Serial No. 97,958. PUBLISHED NOVEMBER 28, 1916.

115,402. MEN'S AND CHILDREN'S COATS, VESTS, AND TROUSERS. LOUIS SHAPIRO & CO., New York, N. Y.
Filed May 4, 1916. Serial No. 94,904. PUBLISHED DECEMBER 5, 1916.

115,403. BLUING, AMMONIA, BAKING-POWDER, SODA OR SALERATUS, CREAM-TARTAR, GLOSS-STARCH. SHERER-GILLETT COMPANY, Chicago, Ill.
Filed October 4, 1915. Serial No. 89,048. PUBLISHED AUGUST 15, 1916.

115,404. CERTAIN NAMED GAMES, TOYS, AND SPORTING GOODS. SLAZENGERS, LIMITED, London, England.
Filed August 15, 1916. Serial No. 97,359. PUBLISHED DECEMBER 5, 1916.

115,405. HOSIERY. SNYDER BROTHERS, Boston, Mass.
Filed November 10, 1916. Serial No. 99,228. PUBLISHED DECEMBER 5, 1916.

115,406. COMPLETE FERTILIZERS AND ACID PHOSPHATE. SOUTHERN FERTILIZER & CHEMICAL COMPANY, Savannah, Ga.
Filed August 2, 1916. Serial No. 97,040. PUBLISHED NOVEMBER 28, 1916.

115,407. SHOWER-HEADS. SPEAKMAN SUPPLY & PIPE COMPANY, Wilmington, Del.
Filed November 7, 1916. Serial No. 99,152. PUBLISHED DECEMBER 5, 1916.

115,408. SALAD-DRESSING, PEANUT-BUTTER, MUSTARD, PEPPER SAUCE, AND VINEGAR. SQUIRE DINGEE COMPANY, Chicago, Ill.
Filed July 20, 1916. Serial No. 96,701. PUBLISHED NOVEMBER 28, 1916.

115,409. SOAP. STANDARD POLISH COMPANY, Rapid City, S. D.
Filed October 12, 1916. Serial No. 98,608. PUBLISHED DECEMBER 5, 1916.

115,410. NEWSPAPER-SECTIONS. STAR COMPANY, New York, N. Y.
Filed October 16, 1916. Serial No. 98,709. PUBLISHED DECEMBER 5, 1916.

115,411. WATERPROOFING PREPARATION FOR INCORPORATING IN CEMENT, PLASTER, BRICKS, AND STUCCO. JULIAN STRZYCZKOWSKI, New York, N. Y.
Filed October 4, 1916. Serial No. 98,420. PUBLISHED NOVEMBER 28, 1916.

115,412. TRANSMISSION AND GEAR-CASE GREASE. SWAN & FINCH CO., New York, N. Y.
Filed May 10, 1916. Serial No. 95,055. PUBLISHED DECEMBER 5, 1916.

115,413. REMEDIES, OINTMENTS, AND LINIMENTS FOR CERTAIN NAMED DISEASES AND AFFECTIONS. NATHAN TEPLOW, New York, N. Y.
Filed December 27, 1915. Serial No. 91,790. PUBLISHED DECEMBER 5, 1916.

115,414. CEREAL OF OATS, CORN, OR WHEAT AND DRIED AND DESICCATED VEGETABLES. JOHN THOMPSON & SONS L'D., Belfast, Ireland.
Filed June 17, 1915. Serial No. 87,374. PUBLISHED NOVEMBER 28, 1916.

115,415. COMPOSITION FOR HEALING PUNCTURES IN PNEUMATIC TIRES. THE TIREOID COMPANY, Chicago, Ill.
Filed September 15, 1916. Serial No. 98,015. PUBLISHED NOVEMBER 28, 1916.

115,416. FIBER USED FOR PLASTERING PURPOSES. TOMKINS BROTHERS, Newark, N. J.
Filed September 23, 1916. Serial No. 98,198. PUBLISHED NOVEMBER 28, 1916.

115,417. CERTAIN NAMED MEDICINES AND PHARMACEUTICAL PREPARATIONS. THE TROPICAL PHARMACAL CO., New York, N. Y.
Filed October 5, 1916. Serial No. 98,450. PUBLISHED DECEMBER 5, 1916.

115,418. CERTAIN NAMED RUBBER GOODS. UNITED DRUG COMPANY, Boston, Mass.
Filed October 7, 1916. Serial No. 98,505. PUBLISHED NOVEMBER 28, 1916.

115,419. OLIVES. S. J. VALK & BRO., New York, N. Y.
Filed October 23, 1916. Serial No. 98,852. PUBLISHED DECEMBER 5, 1916.

115,420. JELLY-POWDERS, ICE-CREAM POWDERS, AND GELATINS. WAUKESHA PURE FOOD COMPANY, Waukesha, Wis.
Filed November 2, 1916. Serial No. 99,052. PUBLISHED DECEMBER 5, 1916.

115,421. STRAW HATS. SAM WEIL, St. Louis, Mo.
Filed June 9, 1916. Serial No. 95,766. PUBLISHED DECEMBER 5, 1916.

115,422. CHILDREN'S VEHICLES. H. C. WHITE CO., North Bennington, Vt.
Filed September 22, 1916. Serial No. 98,175. PUBLISHED NOVEMBER 28, 1916.

115,423. DRINKING-CHOCOLATE. STEPHEN F. WHITMAN & SON, INCORPORATED, Philadelphia, Pa.
Filed September 7, 1916. Serial No. 97,847. PUBLISHED NOVEMBER 14, 1916.

115,424. CHILD'S VEHICLE. THE WILKINSON MANUFACTURING CO., Binghamton, N. Y.
Filed October 3, 1916. Serial No. 98,397. PUBLISHED DECEMBER 5, 1916.

115,425. BITUMINOUS PAVING AND PAVING MATERIALS. WILLITE ROAD CONSTRUCTION COMPANY OF AMERICA, New York, N. Y.
Filed September 22, 1916. Serial No. 98,176. PUBLISHED DECEMBER 5, 1916.

115,426. MEDICINE FOR THE TREATMENT OF CERTAIN NAMED DISEASES OF HORSES. O. G. WILSON, Centralia, Mo.
Filed August 16, 1916. Serial No. 97,382. PUBLISHED DECEMBER 5, 1916.

115,427. BOXES AND PACKING-CASES. WIREBOUNDS CORPORATION, Portland, Me., and Chicago, Ill.
Filed October 25, 1916. Serial No. 98,892. PUBLISHED NOVEMBER 28, 1916.

115,428. CERTAIN NAMED HOUSEHOLD, STORE, AND OFFICE FURNITURE. LOUIS E. WISER, Philadelphia, Pa.
Filed September 27, 1916. Serial No. 98,276. PUBLISHED NOVEMBER 21, 1916.

PRINTS

REGISTERED FEBRUARY 6, 1917.

4,616.—*Title:* "NITE LITE." (For an Apparatus for Illumination.) HOWARD F. MARSTON, Dayton, Ohio. Filed October 20, 1916.

DECISIONS
OF THE
COMMISSIONER OF PATENTS
AND OF
UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

MANLY *v.* JANNEY.

Decided December 4, 1916.

INTERFERENCE — PRIORITY — REDUCTION TO PRACTICE — SUFFICIENCY OF PROOFS.

Where M. proved the construction and test of an apparatus by evidence sufficient to make out a *prima facie* case of reduction to practice, the burden was upon his opponent to overcome that showing in some way, as by calling the witness whose testimony he contended would have shown a different state of facts.

Mr. W. B. Morton for the appellant.
Mr. Heath Sutherland for the appellee.

ROBB, *J.:*

This is an appeal from a decision of the Commissioner of Patents in an interference proceeding awarding priority of invention to the appellee Janney, on the ground that Manly had not proven reduction to practice prior to the filing of Janney's application, which occurred less than a month before Manly's application was filed.

The invention, according to the Janney specification—

relates to controlling apparatus for hydraulic variable speed gear devices,

while according to the Manly specification it—

relates to control apparatus for power driven mechanism and particularly to apparatus for controlling the driving mechanism of the revolving gun turrets employed in modern naval vessels.

Accepting these statements as to the general character of the invention, the Patent Office placed the applications in the class of hydraulics. Upon the declaration of the interference Janney moved to dissolve, upon the ground of non-patentability. This motion the Commissioner sustained, and thereupon suggested the following count as defining the common patentable subject-matter of the applications:

The combination of a driving member, a driven member, a hydraulic variable speed gear interposed between these members, and means for controlling the gear comprising a manually rotatable controlling member, and means for altering the gear ratio with changes of speed of movement of the controlling member, whereby the driven member is caused to move at a speed proportionate to the speed of movement of the controlling member.

Janney took no testimony and, therefore, is restricted to his filing date of September 16, 1911. Manly's claim to priority is based upon a prior application, now Patent No. 1,101,864, and on evidence of actual reduction to practice of the specific embodiment of the subject-matter of the count.

The Examiner of Interferences ruled that the earlier application did not disclose the subject-matter of the issue, and in this ruling he was sustained by the higher tribunals. He found, however, that in July of 1909 Manly constructed and operated a full-sized device embodying the issue. This device was introduced in evidence and its authenticity was not questioned, but the Examiner was not satisfied with the proof of its successful operation; in other words, he ruled that reduction to practice had not been proven and, therefore, awarded priority to Janney. The Examiners-in-Chief reversed this decision and awarded priority to Manly upon the ground that his evidence proved reduction to practice as claimed. On appeal the Commissioner directed attention to the fact that he had—

thought the device patentable because of alleged utility in the particularly difficult art of turret construction.

and hence that Manly's evidence as to reduction to practice might—

properly be more strictly criticized than would ordinarily be warranted.

He accepted Manly's testimony as candid and the statements of his witness McDonald as quite probable.

Moreover—

said the Commissioner—

Janney could have tested the apparatus to refute what Manly and McDonald claimed for it.

Notwithstanding these expressions, however, the Commissioner, being of opinion that the range of operation in the tests mentioned by Manly and McDonald did not cover speeds in the neighborhood of zero and that it had not been demonstrated that "his apparatus was useful for some definite purpose," ruled that reduction to practice had not been established and therefore awarded priority to Janney.

We first will consider the question whether Manly has proven reduction to practice prior to Janney's filing date, for if that question is determined in the affirmative it will be unnecessary to examine the earlier application; and in approaching a consideration of this question we must have in mind that the use of the apparatus involved is not restricted to gun-turrets, either in the applications of the parties or in the terms of the issue. The question therefore is, as intimated by the Commissioner, whether from the evidence we are able to say that the apparatus which Manly constructed and tested "was useful for some definite purpose."

Mr. Manly is vice-president and chief engineer of the Manly Drive Co., and before his connection with that company was a consulting mechanical engineer. It appears that he has a wide range of knowledge and is highly skilled in this art. In May, 1909, the Bethlehem Steel Company, with which Mr. Manly had a working agreement, submitted bids to the Navy Department to supply hydraulic variable-speed gears for operating the turrets of battleships. Thereupon a Mr. Stout, who had charge of the matter for the Bethlehem Company, held various conferences with Mr. Manly, and finally the latter constructed a crude device embodying the invention of the issue and this, early in July, was shown Mr. Stout. Mr. Manly testified that Mr. Stout—

criticized the sluggishness of the control at very low speeds, and stated that it did not seem to him to be as positive and as free from lost motion at center as we ought to have for the turret turning gear.

Thereupon Mr. Manly explained another and more simple system which appealed more strongly to Mr. Stout, although Mr. Manly preferred the device of the issue, believing that the faults which Mr. Stout criticized were due "to the crudeness of the apparatus" with which the first tests were made. A little later the Bethlehem Company, in a letter to Mr. Manly's company, inclosed a copy of their report to the Navy Department, containing the following:

We beg to state that we have developed and tested two systems of distant control for this gear both of which show very satisfactory results. As tested, the controls were made of materials picked up in the shop and were consequently rather crude. Being satisfied by the preliminary results thus obtained we are now proceeding to manufacture a control of each kind more carefully worked out and constructed.

After his interview with Mr. Stout Mr. Manly immediately commenced the construction of full-sized devices for carrying out the two systems referred to in the Bethlehem Company's report to the Navy Department. The apparatus embodying the issue was built in conformity to the drawings of the Manly application; in other words, it was a full-sized working apparatus. It is unnecessary to explain it in detail since, as previously stated, its authenticity was not questioned by any of the tribunals. Upon the completion of this apparatus it was operated, according to Mr. Manley's testimony, almost continuously for several days. He says:

In making the tests we had a tachometer which instantaneously showed the speed at the delivery end or motor shaft of the gear, and I myself usually during the tests held the tachometer against the motor shaft, and by signaling to one of our workmen, usually McDonald, who was operating the hand pump, would have him bring the speed of the motor shaft to whatever speed I wanted, by turning his hand pump at the proper rate. * * * Mr. McDonald, who operated the hand pump most of the time, during the tests, became quite expert at quickly bringing the speed of the hydraulic motor to whatever speed I called out for him to give me. It took a little practice for a man to get so that he could turn perfectly steadily, and thus hold the speed of the hydraulic motor steady, *as the control cylinder responded very sensitively to changes in the rate at which the man pumped.*

Mr. McDonald, who was foreman of the shop, was asked to describe how the control mechanism operated, and replied:

I stood on one side of the room where the hand pump was located. Mr. Manly stood on the other side of the room by the testing machine, and held the tachometer on the hydraulic motor shaft, and called out to me the speeds that he wanted, and signaled whether I should go faster or slower in order to give the speeds that he wanted. Sometimes Mr. Manly would call for a sudden change in speed from very high speed to very low speed, or from very low speed to very high speed, and signal accordingly, whether I was to turn faster or slower, *and bring it to exactly the point he wanted.*

Mr. McDonald gave the names of three other employees of the shop who were present at these tests. On July 28th Mr. Stout witnessed a test of this apparatus, as well as the other mentioned in the Navy Department letter. He thought that system cheaper to build and simpler, and therefore concluded not to show the Department the system of the issue unless some objection was raised to the other. Mr. Stout expressed no objection to the apparatus of the issue but preferred the other for the reasons stated.

It thus appears that long prior to Janney's filing date Manly constructed an apparatus involving the invention covered by the count of the issue, which apparatus he preserved and introduced in evidence. He testified that in the tests of this apparatus he was able fully to control the speed of the motor-shaft—

as the control cylinder responded very sensitively to changes in the rate at which the man pumped.

In this we think he was fully corroborated by the witness McDonald, for Mr. McDonald testified that—

sometimes Mr. Manly would call for a sudden change in speed from very high speed to very low speed, or from very low speed to very high speed, and signal accordingly, whether I was to turn faster or slower, and bring it to exactly the point he wanted.

If we are to accept this testimony at its face value, and we see no reason why we should not, the conclusion is irresistible that the tests made demonstrated the utility of the apparatus, for any purpose to which such an apparatus could be applied. Janney did not even cross-examine Manly and his witness McDonald, but he now attempts to criticize Mr. Manly for not calling Mr. Stout as a witness. We do not think this criticism well founded. Manly, as above noted, clearly proved the construction and test of the apparatus by evidence which we find to be consistent and convincing. As pointed out by the Commissioner, Mr. Stout—

was a man of large business and it might have been difficult to induce him to testify voluntarily.

Moreover, having at least made out a *prima facie* case of reduction to practice, the burden then was shifted to Janney, and this burden he did not attempt to sustain. It certainly would have been as easy for him to call Mr. Stout in rebuttal as it would have been for Manly to produce him in proving his case.

There is another feature of the case that must not be left out of view. Janney here depends wholly upon a constructive reduction to practice. Manly's evidence, as above noted, clearly establishes the making of the very apparatus of the issue. Had Janney really entertained any doubt as to the operativeness of that apparatus, he could have tested it when it was introduced in evidence. Had its operation been unsuccessful, there would have been some reason for Janney to challenge Manly's contention that it was successfully operated when originally tested. (*Stanton* v. *Howe*, 34 App. D. C., 418; *Smith* v. *Kihlgren*, 43 App. D. C., 193.)

The decision must be reversed and priority awarded Manly.

Reversed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Beckwith reissue patent, No. 12,396, (original No. 790,879,) for a railway-torpedo, *Held* not infringed. *Central Ry. Signal Co.* v. *Metallic Shell & Tube Co.*, 237 Fed. Rep., 197.

(U. S. C. C. A.) The Fowler reissue patent, No. 13,561, (original No. 962,425,) for a box-car body, *Held* void for lack of patentable novelty. *Fowler Car Co.* v. *Chicago, B. & Q. R. Co.*, 237 Fed. Rep., 202.

(U. S. C. C. A.) The Marwick patent, No. 851,179, for a machine for bundling scrap, construed and *Held* not infringed by defendant's device. *Moore* v. *Wright Wire Co.*, 237 Fed. Rep., 87.

(U. S. C. C. A.) The Murray patent, No. 967,412, for a box-car body, *Held* not infringed. *Fowler Car Co.* v. *Chicago, B. & Q. R. Co.*, 237 Fed. Rep., 202.

(U. S. C. C. A.) The Jackson patent, No 824,019, for a track-torpedo, *Held* void for lack of invention and also not infringed. *Central Ry. Signal Co.* v. *Metallic Shell & Tube Co.*, 237 Fed. Rep., 197.

(U. S. D. C.) The Snook patent, No. 954,056, for an X-ray machine, *Held* not anticipated, valid, and infringed. *Snook-Roentgen Mfg. Co.* v. *Stetson Hospital of Philadelphia*, 237 Fed. Rep., 204.

Amendment to Patent Statutes.

An act amending sections four hundred and seventy-six, four hundred and seventy-seven, and four hundred and forty of the Revised Statutes of the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section four hundred and seventy-six of the Revised Statutes be, and the same is hereby, amended to read as follows:

"SEC. 476. There shall be in the Patent Office a Commissioner of Patents, one First Assistant Commissioner, one Assistant Commissioner, and five Examiners-in-Chief, who shall be appointed by the President, by and with the advice and consent of the Senate. The First Assistant Commissioner and the Assistant Commissioner shall perform such duties pertaining to the office of Commissioner as may be assigned to them, respectively, from time to time by the Commissioner of Patents. All other officers, clerks, and employees authorized by law for the Office shall be appointed by the Secretary of the Interior upon the nomination of the Commissioner of Patents, in accordance with existing law."

SEC. 2. That section four hundred and seventy-seven of the Revised Statutes be amended to read as follows:

"SEC. 477. The salaries of the officers mentioned in the preceding section shall be as follows:

"The Commissioner of Patents, $5,000 a year.

"The First Assistant Commissioner of Patents, $4,500 a year.

"The Assistant Commissioner of Patents, $3,500 a year.

"Five Examiners-in-Chief, $3,500 a year each."

SEC. 3. That so much of section four hundred and forty of the Revised Statutes as follows the words "In the Patent Office," and refers to said Office only, be amended to read as follows:

"One Chief Clerk, who shall be qualified to act as a Principal Examiner.

"One Librarian, who shall be qualified to act as an Assistant Examiner.

"Five Law Examiners.

"One Examiner of Classification.

"One Examiner of Interferences.

"One Examiner of Trade-Marks and Designs.

"One First Assistant Examiner of Trade-Marks and Designs.

"Six Assistant Examiners of Trade-Marks and Designs.

"Forty-three Principal Examiners.

"Eighty-six First Assistant Examiners.

"Eighty-six Second Assistant Examiners.

"Eighty-six Third Assistant Examiners.

"Eighty-six Fourth Assistant Examiners; and such other Examiners and Assistant Examiners in the various grades as the Congress shall from time to time provide for."

Approved February 15, 1916.

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 30, 1917.

Wm. Schutte & Co., their assigns or legal representatives, take notice:

A cancelation proceeding has been instituted by this Office upon the application of Abraham A. Malouf, of 146 S. W. Temple street, Salt Lake City, Utah, to effect the cancelation of the trade-mark registration of Wm. Schutte & Co., of Barmen, Rhenish Prussia, Germany, registered January 6, 1885, No. 11,848, and the notice of such proceeding sent by registered mail to said Wm. Schutte & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Wm. Schutte & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Interference Notices

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 25, 1917.

Albert Manley Stockwell, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Burnham-Munger-Root Dry Goods Co., of Eighth and Broadway, Kansas City, Mo., and the application of The Greenwald & Reich Co., of 1321 West Sixth street, Cleveland, Ohio, for registration of a trade-mark and trade-mark registered June 26, 1894, No. 24,913, to Albert Manley Stockwell, of Leominster, Mass., and a notice of such declaration sent by registered mail to said Albert Manley Stockwell at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Albert Manley Stockwell, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 25, 1917.

M. Ballin & Sons, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Bittner, Hunsicker & Co., of 23–25 North Seventh street, Allentown, Pa., for registration of a trade-mark and trade-mark registered May 31, 1898, No. 31,608, to M. Ballin & Sons, of 102 Franklin street, New York, N. Y., and a notice of such declaration sent by registered mail to said M. Ballin & Sons at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said M. Ballin & Sons, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 23, 1917.

Joseph P. R. James, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Standard Oil Company, of Richmond, Cal., for registration of a trade-mark and trade-mark registered December 5, 1899, No. 33,861, to Joseph P. R. James, of Clinton, Iowa, and a notice of such declaration sent by registered mail to said Joseph P. R. James at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph P. R. James, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

F. W. H. CLAY, *Assistant Commissioner.*

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ISSUE OF FEBRUARY 13, 1917.

Patents	1029	No. 1,215,227 to No. 1,216,256,	inclusive.
Designs	43	No. 50,236 to No. 50,280,	inclusive.
Trade-Marks	43	No. 115,429 to No. 115,471,	inclusive.
Labels	35	No. 19,866 to No. 19,900,	inclusive.
Prints	4	No. 4,617 to No. 4,621,	inclusive.
Reissues	2	No. 14,259 to No. 14,260,	inclusive.
Total	1097		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	.....	North Carolina	2	1
Arizona	6	.....	North Dakota	4	.....
Arkansas	3	.....	Ohio	69	3
California	47	2	Oklahoma	6	.....
Colorado	7	1	Oregon	11	.....
Connecticut	24	3	Pennsylvania	80	2
Delaware	.....	.....	Rhode Island	1	.....
Florida	2	.....	South Carolina	1	.....
Georgia	3	2	South Dakota	7	.....
Idaho	4	.....	Tennessee	4	5
Illinois	84	7	Texas	22	.....
Indiana	26	.....	Utah	3	.....
Iowa	18	.....	Vermont	2	1
Kansas	11	1	Virginia	6	.....
Kentucky	6	2	Washington	14	.....
Louisiana	3	2	West Virginia	4	2
Maine	9	.....	Wisconsin	31	2
Maryland	8	3	Wyoming	.....	.....
Massachusetts	59	7			
Michigan	21	2	Alaska, District of	.....	.....
Minnesota	12	.....	Canal Zone	.....	.....
Mississippi	3	.....	District of Columbia	10	.....
Missouri	22	2	Hawaii Territory	.....	1
Montana	6	1	Philippine Islands	.....	.....
Nebraska	9	.....	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	5	1	U. S. Navy	.....	.....
New Jersey	37	2			
New Mexico	1	.....	Total to residents of the United States	809	81
New York	186	27			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	2	1	Netherlands	1	.....
Belgium	.....	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	19	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	1	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	5	.....
Denmark	.....	.....	South Australia	.....	.....
England	12	.....	Spain	1	.....
Finland	.....	.....	Sweden	1	.....
France	4	.....	Switzerland	1	.....
Germany	22	.....	Transvaal	.....	.....
Guatemala	.....	.....	Victoria	1	.....
India	.....	.....	Wales	1	.....
Ireland	.....	.....	Western Australia	1	.....
Italy	.....	.....			
Japan	1	.....	Total to residents of foreign countries	73	1
Mexico	.....	.....			

Adverse Decisions in Interference.

PATENT No. 1,175,579.

On December 30, 1916, a decision was rendered that Fritz Aldendorff was not the first inventor of the subject-matter covered by claim 1 of his Patent No. 1,175,579, subject, "service-meter circuit for telephone systems," and no appeal having been taken within the time allowed such decision has become final.

Renewal of Forfeited Cases.

A petition for the renewal of a forfeited application need not be signed by the inventor or assignee, but may be signed by the attorney.

A power of attorney in the original application authorizing an attorney to transact all business in the Patent Office in connection with the application construed to be of sufficient scope to include the signing of a petition for renewal and the subsequent prosecution of the application. (*Ex parte Ayee*, 101 O. G., 1609.)

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

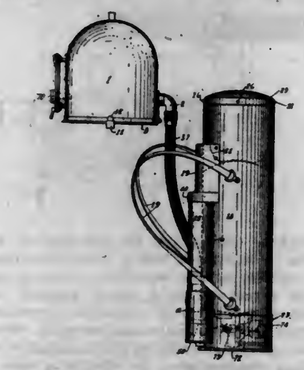
Condition at Close of Business February 9, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 1	Dec. 1	313
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Aug. 21	Dec. 26	564
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Jan. 9	Jan. 13	66
234	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Nov. 16	Jan. 19	257
167	5. Bookbinding; Harvesters; Jewelry; Music	Oct. 9	Dec. 22	282
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Oct. 9	Jan. 3	281
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Sept. 25	Nov. 24	613
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	July 20	Dec. 1	1135
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Aug. 3	Jan. 5	536
235	10. Carriages and Wagons; Spring Devices	Aug 19	Jan. 12	340
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 2	Feb. 3	96
324	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Nov. 2	Jan. 24	557
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Oct. 6	Jan. 5	506
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Oct. 16	Dec. 18	289
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Jan. 10	Jan. 23	206
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Sept. 5	Jan. 4	619
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Oct. 14	Jan. 2	200
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Dec. 6	Jan. 3	195
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Aug. 22	Nov. 1	438
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 15	Jan. 18	199
182	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Nov. 4	Jan. 4	209
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Aug. 30	Dec. 21	498
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Sept. 1	July 25	364
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Oct. 2	Dec. 5	366
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 3	Jan. 6	155
105	26. Electricity, Generation; Motive Power	May 12	Nov. 17	627
378	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Dec. 22	Jan. 15	242
68	28. Internal-Combustion Engines	Sept. 5	Nov. 18	534
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Sept. 8	Dec. 9	366
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 18	Jan. 22	404
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Sept. 22	Nov. 23	200
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	July 10	Jan. 9	900
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Sept. 26	Jan. 2	363
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Aug. 9	Dec. 1	312
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Sept. 2	Jan. 18	690
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Oct. 2	Jan. 17	705
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	June 24	Dec. 16	826
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Jan. 19	Jan. 19	128
321	39. Water Distribution	Sept. 18	Dec. 14	330
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Oct. 21	Jan. 18	542
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Oct. 3	Dec. 30	455
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	July 20	Dec. 13	383
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 6	Jan. 18	119
	Oldest new case, May 13; oldest amended, July 25. Total number of applications awaiting action			18,112
163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Dec. 18	Jan. 20	802
	Designs	Dec. 6	Jan. 6	476
	Labels and Prints	Jan. 28	Jan. 22	105

PATENTS

GRANTED FEBRUARY 13, 1917.

1,215,327. RESPIRATORY SYSTEM FOR SMOKE-HELMETS. CHARLES H. ACKERMAN, Milwaukee, Wis. Filed Sept. 28, 1914. Serial No. 863,833. (Cl. 128—42.)



1. A smoke helmet, provided with a flexible impervious web secured to its neck portion, means for winding the same about the neck of the user, and latch means for holding the web in any desired position of adjustment.

2. A smoke helmet, provided with a plurality of rings secured to its neck portion, means for rotating one of said rings upon the other, and a flexible impervious webbing ring folded longitudinally upon itself and having its margins secured to the respective rings, with the folded portion projecting inwardly therefrom.

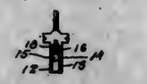
3. A smoke helmet, provided with a plurality of flexible neck bands, folded longitudinally, and means for actuating said bands with a winding motion about the neck of a user.

4. A smoke helmet, provided with a plurality of flexible neck bands, folded longitudinally, means for actuating said bands with a winding motion about the neck of a user, one of said bands being impervious to air and the other being of less width and composed of fabric.

5. A smoke helmet, provided with a plurality of flexible neck bands, folded longitudinally, means for actuating said bands with a winding motion about the neck of a user, together with a holding member secured to one margin of each of said bands, and an actuating member secured to the other margins thereof.

[Claims 6 to 12 not printed in the Gazette.]

1,215,328. NEEDLE ATTACHMENT. PORTER H. ADAMS, Brookline, Mass. Filed Jan. 27, 1915. Serial No. 4,716. (Cl. 274—37.)



A reproducing device for machines of the kind indicated including a stylus bar, a needle holder rigidly carried thereby, comprising a body having a longitudinal channel opening on its outer end, an elongated clamping plate alined with the channel and movable to engage a needle interposed in the channel, a leaf spring attached to the body and to the plate, shaped to hold the plate yieldably at the outer limit of its movement, an extension of the body disposed over the channel and a screw engaged therethrough impinging upon the plate.

1,215,329. EXPLOSIVE-CAP PROTECTION. CHARLES H. ALLISON, Glendale, Cal. Filed Apr. 20, 1916. Serial No. 92,433. (Cl. 102—10.)



1. In combination, an explosive cap having an opening through its shell communicating with its interior, and a plastic envelop about the cap.

2. In combination, an explosive cap having an opening through its shell communicating with its interior, and a plastic envelop completely surrounding the cap.

3. In combination, an explosive cap having an opening through its shell communicating with its interior, and an envelop of solid water proof material about the cap, said material being plastic when subjected to high fluid pressure.

4. In combination, an explosive cap having an opening through its shell communicating with its interior, and an envelop of solid water proof material about the cap, said material being plastic when subjected to high fluid pressure and capable of being rendered plastic and kneadable by heat.

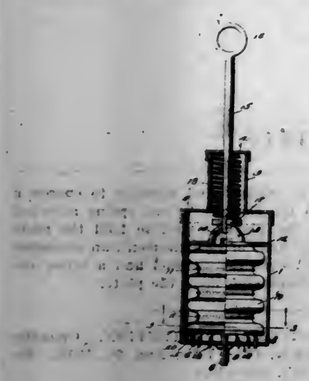
5. In combination, an explosive cap having an opening through its shell communicating with its interior, and a plastic envelop about the cap, the material of the envelop being of relatively low disruptive strength.

[Claims 6 to 14 not printed in the Gazette.]

1,215,330. AUTOMATIC FIRE-EXTINGUISHER. ALBERT R. APGAR, Columbia, Pa. Filed Jan. 25, 1916. Serial No. 74,213. (Cl. 169—14.)

1. A fire extinguisher comprising a casing, a member movable within said casing, a collapsible container supported upon said movable member, pointed tubular members carried by said casing, means for releasing said movable member, said tubular members being adapted to

penetrate said movable member, and means to move the container into engagement with said tubular members.



2. A fire extinguisher comprising a casing, a false bottom arranged in said casing, a plurality of tubular members extended through said casing, means to hold the false bottom in spaced relation with said casing and tubular members means to move the false bottom upon release of its holding means, a container arranged between the moving means and the false bottom, said false bottom and container being adapted to be penetrated by said tubular members upon movement of said false bottom toward said casing, and means for guiding said false bottom.

3. A fire extinguisher comprising a casing, a false bottom arranged in said casing, a shank on said false bottom, means connecting the shank with the casing, tubular members carried by said casing and provided with sharpened extremities, a container carried by said false bottom, a follower plate in engagement with said container, and means engaged with said follower plate to collapse the container upon release of the means connecting the shank with the casing, said false bottom and container being penetrated by the tubular members prior to collapse of the container.

4. A fire extinguisher comprising a casing, a member movable within said casing, a container supported upon said movable member, a tubular member carried by said casing, said tubular member being adapted to extend through an opening in the movable member, means to release the movable member, and means to move the container into engagement with the tubular member.

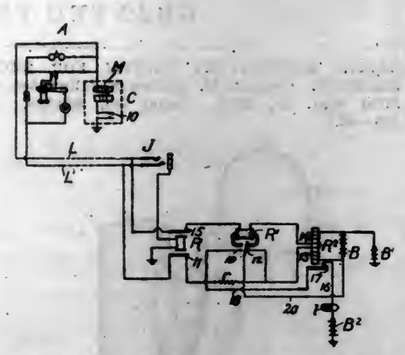
5. A fire extinguisher comprising a casing, a false bottom arranged within said casing, said bottom being provided with a plurality of openings, a plurality of tubular members carried by the casing, said tubular members being alined with said openings, means to hold the false bottom in spaced relation from the casing means to move the false bottom upon release of its holding means, and a container arranged between the moving means and the false bottom.

[Claim 6 not printed in the Gazette.]

1,215,331. TELEPHONE TOLL SYSTEM. HENRY M. BASCOM, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Sept. 30, 1915. Serial No. 53,313. (Cl. 179—7.)

1. In a telephone toll system, the combination with a central station, a substation and a line connecting the stations, of contacts at the substation operable in the satisfaction of a toll charge, a signal situated at the central station and capable of actuation independently of the substation contacts, and means normally under the influence of the substation contacts for modifying such independent actuation of the signal.

2. In a telephone toll system, the combination with a central station, a substation and a line connecting the stations, of contacts at the substation operable in the satisfaction of a toll charge, a signal situated at the central station and capable of actuation independently of the substation contacts, relay mechanism at the central station for modifying such independent actuation of the signal, and a normal circuit for the relay mechanism including the substation contacts.



3. In a telephone toll system, the combination with a central station, a substation and a line connecting the stations, of contacts at the substation operable in the satisfaction of a toll charge, a signal situated at the central station and capable of actuation independently of the substation contacts, and means normally under the influence of the substation contacts and responsive to current of different charateristics for modifying such independent actuation of the signal.

4. In a telephone toll system, the combination with a central station, a substation and a line connecting the stations, of contacts at the substation operable in the satisfaction of a toll charge, a signal situated at the central station and capable of actuation independently of the substation contacts, and means normally under the influence of the substation contacts and responsive to current of a definite direction for modifying such independent actuation of the signal.

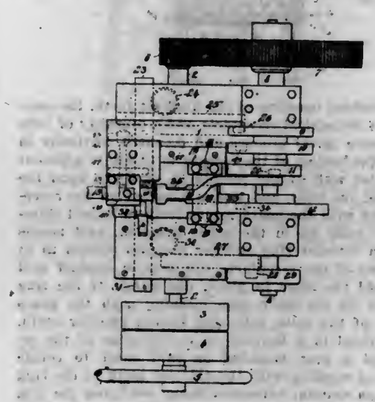
5. In a telephone system, the combination with a central station, a substation and a line connecting the stations, of a toll apparatus at the substation, a signal at the central station, controlling means for the signal, and means for discriminating in the control of the signal between the operation of the toll apparatus and attempts to simulate its normal operation.

[Claims 6 to 15 not printed in the Gazette.]

1,215,332. EYE-FORMING MECHANISM. ANDREW BERG, Bridgeport, Conn., assignor to The Coulter & McKenzie Machine Company, Bridgeport, Conn. Filed Mar. 7, 1916. Serial No. 82,582. (Cl. 153—49.)

1. Mechanism for forming an eye on the end of a metal strip, comprising a support and means for temporarily securing the strip thereto, a reciprocating arbor, a reciprocating tool adapted to force the end of the strip against the edge of the arbor to form the initial bend for the proposed eye, a reciprocating eye shaping tool having a concave face, a trimming tool located in advance of the eye shaping tool and adapted to force the partially formed eye against the arbor and scarf the end of the strip, means for retreating the arbor to permit the eye shaping tool to engage the partially formed eye and force the same against the concave seat of a stationary support, and a reciprocating sizing pin adapted to be forced through the opening of the eye to finish said opening and also exert an outward pressure against said concave face.

2. Mechanism for forming an eye on the end of a metal strip, comprising a support for temporarily securing the strip thereto, a reciprocating arbor having a convex edge, a reciprocating initial bending tool adapted to force the strip upon the arbor and against its convex edge to partially form the eye, a reciprocating eye shaping tool having a concave face, a trimming tool located in advance of the eye shaping tool and moving in unison therewith, said trimming tool adapted to first engage the partially formed eye and force the same against the arbor and scarf the end of the strip, and means for retreating said arbor at the completion of the trimming process and while the eye shaping and trimming tools are advancing to allow the eye shaping tool to scroll up the end of the strip into eye form and force the same against a support having a concave seat and thus complete the eye.



3. In eye forming tools adapted to form an eye in the end of a metal strip and in one operation, a support and means for temporarily securing the strip thereto, a reciprocating arbor, a reciprocating tool adapted to force the end of the strip against the arbor to give the initial bend for the proposed eye, combined trimming and eye shaping tools, means for reciprocating the same, the trimming tool located in advance of the eye shaping tool, means for retreating the arbor, and a support having a concave seat, said eye shaping tool adapted to engage the partially formed eye and force it firmly against the concave seat of said support and complete the eye.

1,215,333. HOLDER OR CASTER FOR CONDIMENT-RECEPTACLES. ANTONIO BONGIOVANNI, Barnesboro, Pa. Filed Aug. 2, 1916. Serial No. 112,754. (Cl. 65—55.)



In a caster, the combination of an extensible frame consisting of a plurality of lazy-tong bars and a standard comprising two sections, one of which being fixed to one of the lazy-tong bars of the frame and pivoted to an adjacent bar thereof, of detent ratchet means between the two sections, whereby one section may be held adjustably revoluble in the other section, said frame having condiment container holders, and handles carried by the pivots of the lazy-tong bars, for extending and collapsing the frame.

1,215,334. HYDROGENIZATION AND DEHYDROGENIZATION OF COMPOUNDS CONTAINING CARBON. CARL BOSCH, ALWIN MITTASCH, and CHRISTIAN SCHNEIDER, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed June 4, 1914. Serial No. 842,958. (Cl. 23—28.)

1. The process of hydrogenizing compounds containing carbon by treating such compounds with hydrogen in the presence of a heated intimate mixture of nickel and an oxygen-containing compound of boron.

2. The process of hydrogenizing compounds containing carbon by treating such compounds with hydrogen in the presence of a heated intimate mixture of nickel and boron oxid.

1,215,335. HYDROGENIZATION AND DEHYDROGENIZATION OF CARBON COMPOUNDS. CARL BOSCH, ALWIN MITTASCH, and CHRISTIAN SCHNEIDER, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed June 4, 1914. Serial No. 843,024. (Cl. 23—28.)

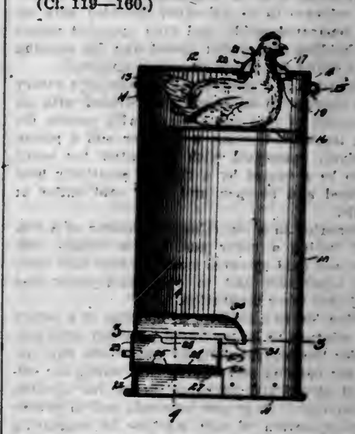
1. A catalytic agent for use in the hydrogenization and dehydrogenization of compounds containing carbon, comprising an intimate mixture of a common metal acting as a catalyzer for the said reactions and a phosphate of an alkaline earth metal.

2. A catalytic agent for use in the hydrogenization and dehydrogenization of compounds containing carbon, comprising an intimate mixture of a metal of the iron group and a phosphate of an alkaline earth metal.

3. A catalytic agent for use in the hydrogenization and dehydrogenization of compounds containing carbon, comprising an intimate mixture of nickel and a phosphate of an alkaline earth metal.

4. A catalytic agent for use in the hydrogenization and dehydrogenization of compounds containing carbon, comprising an intimate mixture of nickel and calcium phosphate.

1,215,336. POULTRY-FUMIGATOR. EDNA V. BRATTON, Luray, Kans. Filed Aug. 7, 1916. Serial No. 113,678. (Cl. 119—160.)

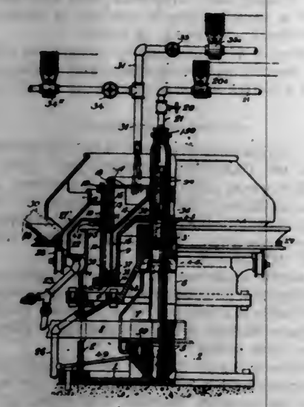


1. In a fowl fumigator, a casing, a top hinged to said casing and having an opening therethrough for the protrusion of a fowl's neck, a foraminous platform below said top on which the fowl rests, a drawer for combustibles slidable into and out of the lower part of said casing, and a flame deflecting shield mounted within the said casing over said drawer.

2. In a device of the kind described, a casing having a drawer receiving opening in one side, a supporting plate for a drawer located in the casing flush with the lower

edge of the opening and provided with a series of openings therein, a drawer slidable into said opening and having a bottom provided with openings adapted to be brought into registry with the openings in the plate.

1,215,337. CENTRIFUGAL MACHINE. THOMAS E. BROWN, New York, N. Y. Filed Apr. 22, 1914. Serial No. 833,641. (Cl. 233—21.)



1. The method of effecting the separation of solid particles from liquids consisting in supplying operating fluid to a rotary vessel provided with an outlet for separated solids, whereby the pressure of said operating fluid closes said outlet, then supplying the mixture to be separated to said vessel, varying the pressure of the operating fluid in harmonious relation to the separation of the solids from the mixture, whereby the outlet for the discharge of solids from said vessel opens at proper intervals, discharging said solids from said vessel, again varying the pressure of said operating fluid in such manner as to again close said outlet, and so on in continuous ordered succession.

2. The combination in a centrifugal machine of a rotary vessel for the mixture to be separated provided with an outlet for the separated solids, and fluid operated means for positively holding said outlet closed and for opening and closing the outlet for solids at proper intervals.

3. The combination in a centrifugal machine of a rotary vessel for the mixture to be separated provided with an inlet for the supply of said mixture and with outlets for the separating liquid and solids, a cylinder and a piston therein operatively connected with the outlet for solids and adapted to be actuated by a fluid to positively hold said outlet closed and to open and close said outlet at proper intervals.

4. The combination in a centrifugal separator of a separating vessel having a cover and ejector rigidly connected together and fluid operated means to hold said cover closed during separation and to open said cover and actuate said ejector after separation.

5. The combination in a centrifugal machine of a rotary vessel for the mixture to be separated provided with separate outlets for the separated liquid and solids, fluid operated means for opening and closing said outlet for solids, valves and electrically operated means for opening and closing said valves at proper intervals and in proper relation to the operation of said machine in separating the solid and liquid constituents of said mixture.

[Claims 6 to 41 not printed in the Gazette.]

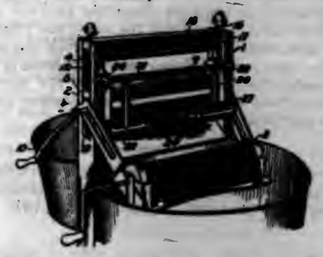
1,215,338. WASHING-MACHINE. BLOM O. BRYNOLSON, Dunbar, Iowa. Filed Sept. 27, 1916. Serial No. 122,410. (Cl. 68—37.)

1. In a washing machine of the kind set forth, the combination of a cylindrical receptacle and a plurality of rolls having opposite spiral grooves and mounted vertically in bearings of the bottom of the receptacle to rotate adjacent to the interior wall of the receptacle, of gears upon the upper ends of the rolls, and means mounted on the receptacle meshing with the gears respectively to impart movement to the rolls, all in the same direction.



2. In a washing machine of the kind set forth, the combination of a cylindrical receptacle and a plurality of rolls having opposite spiral grooves and mounted vertically in bearings of the bottom of the receptacle to rotate adjacent to the interior wall of the receptacle, of gears upon the upper ends of the rolls, and means mounted on the receptacle meshing with the gears respectively to impart movement to the rolls all in the same direction, said means comprising a circular ring angular in cross section to fit the upper end of the receptacle, brackets to support said ring and hold the same in place, one flange of the ring having teeth on its inner edge meshing with the gears respectively of the rolls, said ring having exterior teeth, a shaft mounted in a bearing on the exterior of the receptacle, and a gear mounted on said shaft to rotate therewith and meshing with the exterior teeth of the ring and having an annular extension flange overlying the ring to prevent raising of the ring, and means for rotating said shaft.

1,215,339. CLOTHES-WRINGER. HARRY BUDD, Independence, Kans. Filed Apr. 12, 1915. Serial No. 20,727. (Cl. 68—32.)



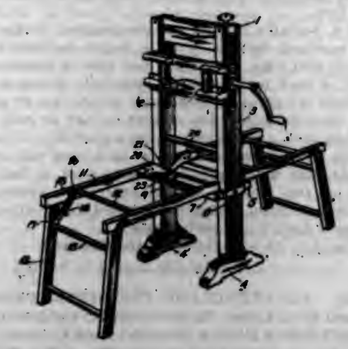
1. A wringer comprising a pair of wringer rollers, a second pair of rollers arranged crosswise of the first, and means for yieldingly urging the rollers in the second pair toward each other.

2. A wringer comprising horizontal rollers, spaced supports arranged parallel to the horizontal rollers, rollers slidably mounted in said supports, and means for urging said rollers toward each other.

3. A wringer comprising horizontal rollers, means for yielding urging said rollers toward each other, spaced supports arranged parallel to the rollers, and having facing slots, rollers having end axles slidably mounted in said slot, and springs in said support engaging the axles to urge the rollers toward each other.

4. A wringer comprising horizontal rollers, spaced supports arranged parallel to the rollers, the lower of said supports being formed in end sections to provide a space therebetween, and all of said supports being provided with longitudinal slots, rollers having axles projected into said slots, and springs in said supports engaging the axles to urge the rollers toward each other.

1,215,340. WASHBENCH. HARRY BUDD, Independence, Kans. Filed Nov. 26, 1915. Serial No. 63,640. (Cl. 68—35.)



1. The combination with spaced standard members, of a bench support carried by said members, a bench having a platform portion adapted to rest on the support on said standard members, and anchoring means carried by the standard members, for engaging the inner end of the bench to retain the bench on the support.

2. The combination with spaced standard members, of a fulcrum rail carried by the standard members, a wash bench comprising a body portion, having inner ends adapted for seating on the fulcrum rail, and for projecting between the standard members, and means on the standard members for engagement by the inner ends of said body portion to support the said body portion on the fulcrum rail.

3. The combination with a standard, having a fulcrum rail spaced therefrom, of a rod carried by the standard, and a bench comprising platform rails adapted for support on the fulcrum rail at their inner ends and having hooks for engaging said rod.

4. The combination with a standard, having a rail spaced from the side thereof, and having a rod inset from said rail, of a bench comprising side rails adapted for support at their inner ends on the standard rail, and arm members on said bench having upwardly facing hooks adapted for taking under said rod.

5. The combination with a standard comprising spaced posts, of a fulcrum rail mounted on the post and spaced from the side edges thereof, a rod connecting the post below the upper edge of said rail, a bench comprising a platform member, having side rails, and having a leg member pivotally connected with the outer ends of said side rails, and arms on the inner ends of said side rails, adapted for projection between the posts, and having upwardly facing hooks at their ends, adapted for engaging said rod from beneath.

1,215,341. VENTILATOR. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed June 15, 1914. Serial No. 845,238. (Cl. 98—22.)



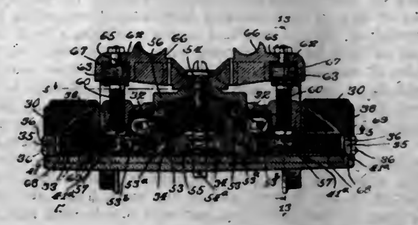
1. In a car the combination with an ice loading hatch, of a combined sealing and ventilating member consisting of a unitary sheet-metal cover having one side hingedly secured to the car and having its opposite side open for ventilating purposes; a screen extending across said opening and being rigidly secured to the cover and movable in unison therewith, said screen consisting of a pair of frames of equal dimensions spaced apart and rigidly secured together, each frame having a sheet of wire netting stretched completely across the same, the outer sheet being adapted to act as a baffler.

2. A hatch cover for box cars consisting of a unitary sheet metal body having three flanged sides, a ventilating member or screen completing the unflanged side and consisting of a pair of oblong rectangular frames, means rigidly securing such frames together in spaced relation, a member of inverted U cross-section riveted to both ventilating member and cover, and a stiffening band extending completely around the cover and screen and riveted in place, the said band constituting a part of the outer frame of the screen, a pair of sheets of wire netting completely covering the said spaced frames the outer of said sheets being adapted to act as a baffler, the said screen having an opening in its bottom communicating with the interior thereof for the purpose set forth.

3. A hatch cover for box cars having a screen rigidly secured thereto for ventilating purposes, said screen consisting of a pair of spaced sheets of material pervious to air, said sheets being relatively immovable.

4. In a car the combination with an ice loading hatch, of a combined sealing and ventilating member consisting of a unitary sheet metal cover having one side open, a stiffening member of comparatively narrow width surrounding and being rigidly secured to the cover and extending across said open side, and a screen member extending across said opening and being rigidly secured to the cover and stiffening member, said screen consisting of a pair of spaced relatively immovable sheets of wire netting, and means hingedly connecting the cover to the car.

1,215,342. TRUCK. WILLIAM A. CASWELL, Chicago, Ill. Filed June 1, 1915. Serial No. 31,468. (Cl. 105—243.)



1. A truck composed of a unitary structure comprising wheel-sides, journal-housings and a cross-girder all formed integral, and independent reinforcing means embedded in and extending lengthwise of the wheel-sides and lengthwise of the cross-girder.

2. A truck formed of metal, with the wheel-sides, journal-housings and a cross-girder constituting a unitary structure; the journal-housing being provided with an integral outer side wall.

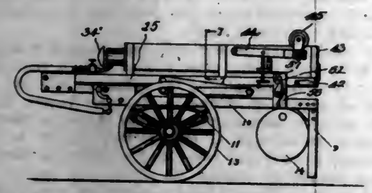
3. A truck wherein the wheel-sides, journal-housings and cross-girder form a metallic unit, with the cross-girder provided with an independent reinforcing flanged metallic member extending lengthwise of the cross-girder.

4. A truck comprising wheel-sides and a cross-girder cast integral, with the cross-girder provided with an independent reinforcing member extending from wheel-side to wheel-side and cast integral therewith.

5. A truck comprising metallic wheel-sides having journal-housings formed integral therewith, and a metallic cross-girder cast integral with the wheel-sides, said girder being formed with upwardly presented sides and a central reinforcing rib on the lower side thereof.

[Claims 6 to 61 not printed in the Gazette.]

1,215,243. PORTABLE HEATER. WILFRID G. CHAUSSE, Detroit, Mich., assignor to The Chausse Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 15, 1916. Serial No. 84,473. (Cl. 126—271.2.)



1. In a portable heater, the combination of an axle, wheels mounted thereon, springs on said axle, a main frame carried by said springs, brackets secured at the rear corners of said main frame, a swinging bar pivoted intermediate its ends on each of said brackets, a bracket secured to the lower end of each of said swinging bars, a hood supporting bar pivoted on each of said last named brackets, toggle links connecting said hood supporting bars with the upper ends of said swinging bars, a hood carried by said hood supporting bars, links pivoted on the sides of said hood, casters carried by the free ends of said links, brackets secured to the sides of said hood, rods threaded in said brackets and connected at their lower ends to said links, hand-wheels on the upper ends of said rods, a distributing pipe, a plurality of burners extending through the end wall of said hood and detachably connected with said distributing pipe, a fuel tank carried by the forward end of said main frame, and connections between said tank and said distributing pipe including a flexible connecting tube.

2. In a portable heater, the combination of an axle, wheels mounted thereon, springs on said axle, a main frame carried by said springs, brackets secured at the rear corners of said main frame, a swinging bar pivoted on each of said brackets, a bracket secured to the lower end of each of said swinging bars, a hood supporting bar pivoted on each of said last named brackets, a hood carried by said hood supporting bars, links pivoted on the sides of said hood, casters carried by the free ends of said links, brackets secured to the sides of said hood, rods threaded in said brackets and connected at their lower ends to said links, hand-wheels on the upper ends of said rods, a distributing pipe, a plurality of burners extending through the end wall of said hood and detachably connected with said distributing pipe, a fuel tank carried by the forward end of the main frame and connections between said tank and said distributing pipe including a flexible connecting tube.

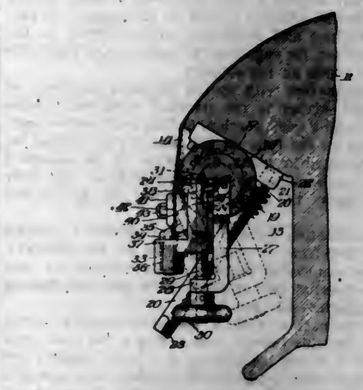
3. In a portable heater, the combination of an axle, wheels mounted thereon, springs on said axle, a main frame carried by said springs, brackets secured at the rear corners of said main frame, a swinging bar pivoted on each of said brackets, a bracket secured to the lower end of each of said swinging bars, a hood supporting bar pivoted on each of said last named brackets, a hood carried by said hood supporting bars, casters carried by the sides of said hood and vertically adjustable with reference thereto, a distributing pipe, a plurality of burners extending through the end wall of said hood and detachably connected with said distributing pipe, a fuel tank carried by the forward end of said main frame, and connections between said tank and said distributing pipe including a flexible connecting tube.

4. In a portable heater, the combination of an axle, wheels mounted thereon, springs on said axle, a main frame carried by said springs, brackets secured at the rear corners of said main frame, a swinging bar pivoted intermediate its ends on each of said brackets, a bracket secured to the lower end of each of said swinging bars, a hood supporting bar pivoted on each of said last named brackets, a hood carried by said hood supporting bars, a distributing pipe, a plurality of burners extending through the end wall of said hood and detachably connected with said distributing pipe, a fuel tank carried by the forward end of said main frame, and connections between said tank and said distributing pipe including a flexible connecting tube.

5. In a portable heater, the combination of an axle, wheels mounted thereon, a main frame resiliently supported by said axle, a swinging bar pivoted intermediate its ends at each rear corner of said main frame, a hood supporting bar pivotally connected to the lower end of each of said swinging bars, a hood carried by said hood supporting bars, a distributing pipe, a plurality of burners extending through the end wall of said hood and detachably connected with said distributing pipe, a fuel tank carried by the forward end of said main frame, and connections between said tank and said distributing pipe including a flexible connecting tube.

[Claims 6 to 10 not printed in the Gazette.]

1,215,344. BLANKET-CLAMP FOR OFFSET-PRESSES. EDWARD L. C. CLARK, Taunton, Mass., assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 22, 1915. Serial No. 29,741. (Cl. 272.)



1. The combination with the cylinder of an offset press or the like, and a blanket superposed thereon, of a bracket carried by the cylinder, a screw spindle mounted in the bracket, a block threaded on the spindle, a clamp engaging the blanket edge, and a snap connection between the clamp and block, whereby upon the turning of the screw spindle the blanket will be tensioned by the clamp.

2. The combination with the cylinder of an offset press or the like, and a blanket superposed thereon, of a plurality of brackets carried by the cylinder, a screw spindle mounted in each of the brackets, a block threaded on each of the spindles, clamps engaging the blanket edge, snap connections between the clamps and the blocks, whereby upon the turning of the screw spindle the blanket will be tensioned locally by each of the clamps.

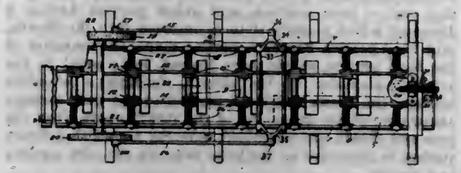
3. The combination with the cylinder of an offset press or the like, and a blanket superposed thereon, of a plurality of brackets carried by the cylinder, a screw spindle mounted in each of the brackets, a block threaded on each of the spindles, clamps engaging the blanket edge, snap connections between the clamps and the blocks, whereby upon the turning of the screw spindle the blanket will be tensioned locally by each of the clamps, and means to adjust the several brackets in unison whereby to tension the blanket simultaneously at the several local points.

4. The combination with the cylinder of an offset press or the like, and a blanket superposed thereon, of a bracket carried by the cylinder, a screw spindle mounted in the bracket, a block threaded on the spindle and having a pair of spaced opposed arms projecting therefrom, a spring pressed catch mounted in one of the arms, a pin projecting from the other arm, and a clamp for engaging the blanket edge, said clamp having a recess adapted to receive the pin and also having a lip adapted to engage behind the catch, whereby upon the turning of the screw spindle the blanket will be tensioned by the clamp.

5. The combination with the cylinder of an offset press or the like, and a blanket superposed thereon, of a plurality of brackets carried by the cylinder, a screw spindle mounted in each of the brackets, a block-threaded on each of the spindles and having a pair of spaced opposed arms projecting therefrom, a spring pressed catch mounted in one of the arms, a pin projecting from the other arm, and a clamp for engaging the blanket edge, said clamp having a recess adapted to engage the pin and also having a lip adapted to engage behind the catch, whereby upon the turning of the screw spindles the blanket will be tensioned locally by each of the clamps.

[Claims 6 to 12 not printed in the Gazette.]

1,215,345. PLACER-MINING MACHINE. VIVIAN V. CLARK, Tucson, Ariz. Filed Mar. 25, 1916. Serial No. 86,810. (Cl. 83—81.)



1. In a placer-mining machine of the class described, the combination with a concentrating trough comprising a bottom member, and side walls, of a plurality of pairs of truck-wheels; and truck-axles disposed to adapt the wheels to travel back and forth on the top edges of the side walls of said trough-like box; a plurality of flights each mounted on a different one of said truck-axles and adapted to be slidably moved endwise thereon and further adapted to swing upwardly thereon from a substantially vertical position; a helical compression spring disposed to surround each end portion of said truck-axle between the flight thereon and a respective truck-wheel thereon; upwardly projecting lugs provided on each of said flights; links extending between the lugs of each of the adjacent ones of said flights and articulated therewith to form a chain-like structure comprising all of said truck-axles, truck-wheels, flights and links, whereby all such parts of said chain-like structure may be moved back and forth in unison; means of communicating backward and forward movements to said chain-like structure; and a plurality of blades each secured to a different one of said flights, said blades being of such dimensions that when said flights are in a substantially vertical position then there shall be a substantial space between them and the bottom and side walls of said trough-like box.

2. In a placer-mining machine of the class described, the combination with a concentrating trough having one end higher than its other end; of a chain-like structure embodying swingingly mounted and transversely sliding flights to adapt it to serve as a conveyer of earthy material, the said flights being cushioned during transverse sliding movement, said chain-like structure being provided with trucks which are disposed to travel on the top edges of the side walls of said concentrating trough; means for communicating back and forth movements to said chain-like structure; and mechanism embodying a cable, pulleys and a weight so associated and connected with said chain-like structure that such mechanism shall assist a forward movement of said chain-like structure and offer resistance to the backward movement thereof.

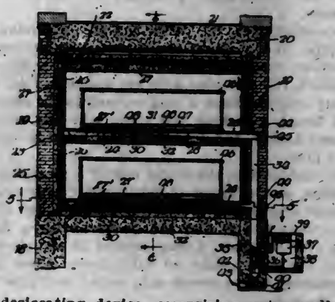
3. In combination with a concentrating trough having a bottom provided with an inclined portion, and side walls, an agitating conveyer operable in said trough comprising a plurality of longitudinally spaced transverse supports, flights pivotally and transversely movably mounted upon said supports and extending part way across the trough, opposing yieldable resilient means attached to each of the supports and bearing against the flight carried by such support and adapted to permit a lateral yield of the flight on encountering an obstruction, and means for reciprocating the supports and their flights longitudinally of the trough.

4. In combination with a concentrating trough having a bottom provided with an inclined portion, an agitating conveyer operable in said trough comprising a plurality of longitudinally spaced transverse supports, flights loosely mounted on said supports, means associated with said supports and flights whereby the flights are resiliently shiftable in transverse directions, and means for reciprocating the conveyer.

5. In combination with a concentrating trough, an agitating conveyer operable in said trough comprising a plurality of longitudinally spaced transverse supports, flights loosely mounted on said supports, means associated with said supports and flights whereby the flights are resiliently shiftable in transverse directions, and means for reciprocating the conveyer.

[Claims 6 to 9 not printed in the Gazette.]

1,215,346. DESICCATING APPARATUS. WILLIAM B. CLAYTON, Evanston, Ill. Filed Dec. 2, 1915. Serial No. 64,669. (Cl. 99—2.)



1. A desiccating device, comprising outer walls forming a sealed chamber, and inner walls consisting of hollow porous tile, the hollows of said tile containing a desiccating material.

2. A desiccating device comprising outer walls forming a sealed chamber, inner walls consisting of hollow porous tile, the hollows of said tile containing a desiccating material, and a layer of waterproof material between said outer and inner walls.

3. A desiccating device comprising outer walls forming a sealed chamber, inner walls consisting of hollow porous tile, the hollows of said tile containing a desiccating material, a layer of waterproof cement between said outer and inner walls, and a false floor in said chamber above the bottom layer of tile.

4. A desiccating device comprising outer walls forming a sealed chamber, inner walls consisting of hollow porous tile, the hollows of said tile containing a desiccating material, a layer of waterproof cement between said inner and outer walls, and a trapped drain connected to said chamber to allow egress of liquids and gases.

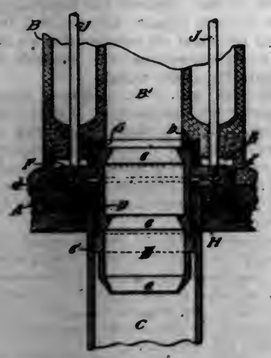
5. A desiccating device, comprising outer walls forming a sealed chamber, and inner walls consisting of hollow porous tile, the hollows of said tile being filled with calcined gypsum.

[Claims 6 to 21 not printed in the Gazette.]

1,215,347. PIPE-UNION. DAVID CRAIG, Peabody, Mass. Filed May 4, 1914. Serial No. 836,101. (Cl. 137—94.)

1. In combination, the outlet end of a plumbing fixture, a soil pipe, and a union therebetween comprising an interior sleeve extending into the soil pipe and having there-

on an annular collar, a hub extending between the soil pipe and said sleeve, and a packing seal between said hub, soil pipe and collar.



2. In combination, the outlet end of a plumbing fixture, a soil pipe, and a union therebetween comprising an interior sleeve extending into the soil pipe and having thereon an annular collar, a hub extending between the soil pipe and said sleeve, a packing seal between said hub, soil pipe and collar, and a packing seal between said sleeve and fixture.

3. In combination, the outlet end of a plumbing fixture, a soil pipe, and a union therebtween comprising an interior sleeve extending into the soil pipe, a hub extending between the soil pipe and the sleeve having a flange extending over the floor, a ring secured to the sleeve above the hub flange, a packing seal above said ring between the sleeve and fixture, and a packing seal between said sleeve and soil pipe.

4. In combination, the outlet end of a plumbing fixture, a soil pipe, and a union therebetween comprising an interior sleeve extending into the soil pipe, a hub extending between the soil pipe and the sleeve having a flange extending over the floor, a ring secured to the sleeve above the hub flange, a collar on said sleeve below the hub, and a packing seal between said collar, soil pipe and the end of the hub.

5. In combination, the outlet end of a plumbing fixture, a soil pipe, and a union therebetween comprising an interior sleeve extending into the soil pipe, a hub extending between the soil pipe and the sleeve having a flange extending over the floor, a ring secured to the sleeve above the hub flange, a collar on said sleeve below the hub, a packing seal between said collar, soil pipe and the end of the hub, and fastening connections between said ring and said plumbing fixture adapted to draw and hold both of said packing seals tight.

[Claims 6 to 8 not printed in the Gazette.]

1,215,348. TELEPHONE AND TELEGRAPH RELAY OR REPEATER. JOHN H. CUNTZ, Hoboken, N. J. Original application filed Feb. 19, 1903, Serial No. 144,134. Divided and this application filed Aug. 10, 1912. Serial No. 714,337. (Cl. 179—170.)



1. A relay or repeater, including a plurality of auxiliary coils, through which is flowing current from an independent source, and coils in circuit with the line wires and in inductive relation to the auxiliary coils.

2. A relay or repeater, including an independent source of direct current, a plurality of iron cores, a plurality of auxiliary coils one on each core, through which flows a direct current from said source, and a plurality of coils in circuit with the line wires each in inductive relation to one of the auxiliary coils and to the iron cores.

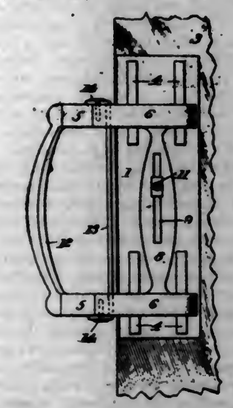
3. A relay or repeater, including a plurality of auxiliary coils, through which is flowing direct current from an independent source, and coils in circuit with the line wires and in inductive relation to the auxiliary coils.

1,215,349. TOOL FOR REPAIRING TIRES. CONRAD DIERIG, Lawrence, Mass. Filed Feb. 11, 1916. Serial No. 77,756. (Cl. 152—27.)



In a tool for repairing tires, the combination with a tubular sheath, of a core member presenting a shank portion and a head portion, said shank portion having a diameter which permits it to be inserted into the sheath, said head portion having a conical shape, the diameter of the head portion at the base thereof being equal to the exterior diameter of the sheath, forming a shoulder between the shank and head portion of the core member against which the inner end of the sheath abuts when the core and sheath are assembled, whereby a smooth exterior surface is presented at the point between the core member and sheath.

1,215,350. PLATE-GLASS CARRIER. AUGUST DIETRICH, Columbus, Nebr. Filed Feb. 23, 1916. Serial No. 79,917. (Cl. 57—9.)



1. The combination with a pair of gripping plates having wedges on their outer faces at the upper and lower portions thereof, of a handle member having upper and lower clamping jaws provided with grooves to fit the upper and lower wedges respectively.

2. The combination with a pair of gripping plates having wedges on their outer faces at the upper and lower portions thereof, of a handle member having upper and lower clamping jaws provided with grooves to fit the upper and lower wedges respectively, and means of connection between said handle member and plates which allows the former to move on the latter along the wedges.

3. The combination with a pair of gripping plates having wedges and lugs on their outer faces, of a handle member having clamping jaws to engage said wedges and slots through which said lugs are passed, there being caps on said lugs for connecting the handle member to the gripping plate while permitting the former to move on the latter along the wedges.

4. The combination with a pair of gripping plates having wedges and lugs on their outer faces, of a handle member having clamping jaws to engage said wedges and slots through which said lugs are passed, the slotted portions of said handle member being parallel to the wedges, and there being caps on the lugs for connecting the handle member to the gripping plates while permitting the former to move on the latter along the wedges.

5. The combination with a pair of gripping plates, of a handle member having an upper and a lower pair of clamping jaws embracing said plates, and a protecting strip connecting the horizontal portions of said jaws for the purpose specified.

[Claims 6 to 8 not pirnted in the Gazette.]

1,215,351. PROCESS FOR PRODUCING ALUMINIUM HYDRATE. CHARLES A. DORRMUS, New York, N. Y., assignor of one-half to John Sherman Hoyt, Darien, Conn. Filed Feb. 27, 1914. Serial No. 821,564. (Cl. 23—18.)

1. The process of producing aluminium hydrate from aluminium fluorid, which consists in treating a solution of aluminium fluorid with alkali to precipitate aluminium hydrate and a fluorid, then adding sodium hydrate to form sodium aluminate in solution, separating this from the fluorid precipitate, then treating the solution of sodium aluminate to precipitate aluminium hydrate, and separating the aluminium hydrate from the alkaline solution.

2. The process of producing aluminium hydrate from aluminium fluorid, which consists in treating a solution of aluminium fluorid with calcium hydrate to precipitate aluminium hydrate and a fluorid, then adding sodium hydrate to form sodium aluminate in solution, separating this from the fluorid precipitate, then treating the solution of sodium aluminate to precipitate aluminium hydrate, and separating the aluminium hydrate from the alkaline solution.

3. The process of producing aluminium hydrate from aluminium fluorid, which consists in oxidizing any iron in a solution of aluminium fluorid, treating the solution with alkali to precipitate aluminium hydrate and a fluorid, then separating the aluminium hydrate from the fluorid to produce an iron free aluminium hydrate.

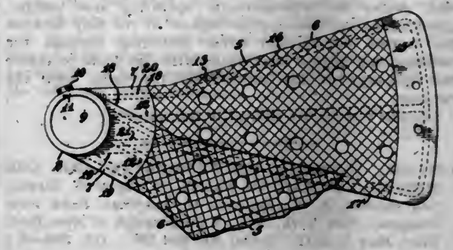
4. The process of producing aluminium hydrate from aluminium fluorid, which consists in oxidizing any iron in a solution of aluminium fluorid, treating the solution with alkali to precipitate aluminium hydrate and a fluorid, then adding sodium hydrate to form sodium aluminate in solution, separating this from the fluorid precipitate, then treating the solution of sodium aluminate to precipitate aluminium hydrate, and separating the aluminium hydrate from the alkaline solution.

5. The process of producing aluminium hydrate from aluminium fluorid, which consists in oxidizing any iron in a solution of aluminium fluorid, treating the solution with alkali to precipitate aluminium hydrate and a fluorid, then adding sodium hydrate to form sodium aluminate in solution, separating this from the fluorid precipitate, then treating the solution of sodium aluminate to precipitate aluminium hydrate, and separating the aluminium hydrate from the alkaline solution.

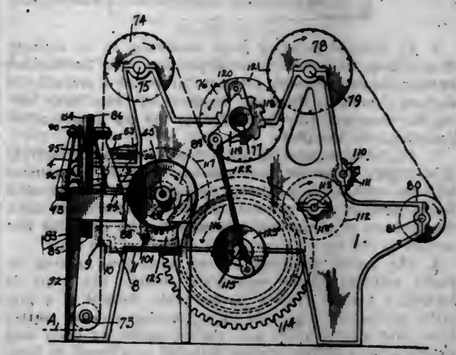
1,215,352. STEP FOR SPIRAL STAIRWAYS. PIERRE DUVINAGE, Brooklyn, N. Y. Filed Dec. 2, 1915. Serial No. 64,728. (Cl. 189—44.)

1. A step for a spiral stairway, said step having a hub, and having edges adjacent to said hub parallel to each other and extending a sufficient distance from the hub that a perpendicular erected thereto will traverse the periphery of the second lower step in a stairway, said step having edges diverging from said parallel sides.

2. A step for a spiral stairway, said step having a hub, and having parallel edges adjacent to the hub and tangential thereto, said edges extending a sufficient distance from the hub that a perpendicular erected thereto will traverse the periphery of the second lower step in a stairway, said step having edges diverging from said parallel sides.



1,215,353. WIRE-FENCE MACHINE. JOHN W. DWIGGINS, Muncie, Ind., assignor to John E. Fredrick, Kokomo, Ind. Filed Sept. 17, 1909. Serial No. 518,291. (Cl. 140—12.)



1. A wire-fabric-making machine having, in combination, a series of twisters for attaching a stay-wire to a series of strands, bevel-pinions on the twister spindles, a drive-shaft, a series of mutilated gear-wheels having toothed portions set at successively different angles thereon, and gearing interposed between said mutilated gears and the bevel-pinions on the spindles.

2. A wire fabric loom, including a series of twisters, and twister operating machanism including a series of driving gears, one for each of said twisters except the first one, said driving gears being arranged out of line and said twisters being in line, whereby relative movement of the gears and twisters will cause the twisters to be brought into action one after another.

3. A wire fabric loom, including a plurality of wire connecting devices operative to connect the same stay to a series of wires, certain of said devices provided with retractable hooked pins and certain other of said devices having only straight pins, mechanism for concurrently operating certain of said devices having straight and hooked pins, and mechanism for progressively operating the remainder of said devices.

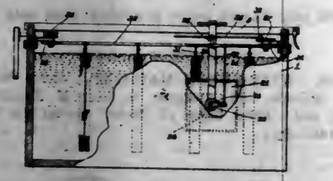
4. In a wire fabric loom, in combination, a plurality of wire connecting devices, a drum having a plurality of wire receiving grooves disposed transversely of said devices, means for feeding stay sections endwise to the grooves in said drum, means for operating the drum to deliver the stay sections laterally to said devices, pivotally supported fingers coöperating with said drum for discharging the stays from the drum onto the devices, and means for operating said fingers.

5. In a wire fabric loom, in combination, a plurality of loopers and twisters arranged to form loops in the stay

and to wrap said loops upon a series of line wires, means for operating said loopers and twisters, a transversely disposed stay carrier, means for feeding stays to the carrier, means for intermittently operating said carrier, guide blocks for insuring the deposit of the stay between the loopers and strand wires extending through the twisters, and fingers coöperating with the drum to insure the discharge of the stays from the drum onto the twisters.

[Claims 6 to 11 not printed in the Gazette.]

1,215,354. INTAGLIO PRINTING-PLATE AND THE METHOD OF MAKING SAME. WILLIAM S. EATON, Sag Harbor, N. Y., assignor to American Bank Note Company, New York, N. Y., a Corporation of New York. Filed May 1, 1912. Serial No. 694,366. (Cl. 204—1.)



1. An intaglio printing plate consisting in its entirety of a highly tempered electro-deposition of a ferruginous material having thereon a design formed of a plurality of shallow depressed lines, the surfaces of these lines having the same granular formation as the top or non-printing surface of the plate.

2. An intaglio printing plate consisting in its entirety of a highly tempered homogeneous mass of ferruginous material containing a hardening agent having thereon a design formed of a plurality of shallow depressed lines, the surfaces of these lines having the same granular formation as the top or nonprinting surface of the plate.

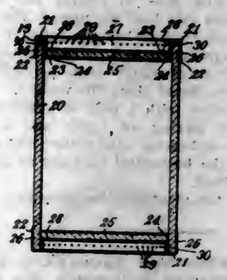
3. The herein described art or method of making intaglio printing plates embodying therein the steps of making a design, upon a master plate, formed of a plurality of shallow depressed lines, forming a metal matrix from said master plate and electro-depositing upon said matrix a mass of ferruginous material to a depth to form the entire plate whereby the design of said master plate will be reproduced upon said plate of electro-deposited ferruginous material and the granular formation of the top or non-printing surface of said last named plate and of the depressed lines therein will be of the same character.

4. The herein described art or method of making intaglio printing plates embodying therein the steps of making a design upon a master plate formed of a plurality of shallow depressed lines, forming a metal matrix from said master plate and electro-depositing upon said matrix a mass of ferruginous material to a depth to form an entire plate by submerging said matrix in an electrolytic bath containing iron sulphate whereby the design of said master plate will be reproduced upon said plate of electro-deposited ferruginous material and the granular formation of the top or non-printing surface of said last named plate and of the depressed lines therein will be of the same character.

5. The herein described art or method of making intaglio printing plates embodying therein the steps of making a design, upon a master plate, formed of a plurality of shallow depressed lines, forming a metal matrix from said master plate and electro-depositing upon said matrix a mass of ferruginous material to a depth to form an entire plate by submerging said matrix in an electrolytic bath containing iron surfate and a neutralizing agent whereby the design of said master plate will be reproduced upon said plate of electro-deposited ferruginous material and the granular formation of the top or non-printing surface of said last named plate and of the depressed lines therein will be of the same character.

[Claims 6 to 11 not printed in the Gazette.]

1,215,355. BARREL. JULIAN O. ELLINGER, New York, N. Y., assignor to W. Tyson Romaine, New York, N. Y. Filed May 20, 1913. Serial No. 768,799. (Cl. 217—89.)



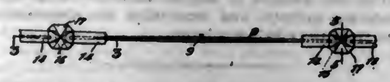
1. A shipping case comprising a tube, a shoulder carried on the inner face of the tube and disposed below the upper end of the same, a cover being of a diameter substantially that of the interior of said tube resting on said shoulder, said tube being provided with a plurality of notches, a split ring retainer positioned above the cover, and projections carried by said ring adapted to register with the notches.

2. In a device of the class described, a cylinder, a reinforcing band secured to each end of the cylinder, said band having spaced walls fitting on the inner and outside of the cylinder, a head, means for supporting the head, a ring resting on the head to secure the head in place and projections stamped from said ring to hold the ring in place.

3. In a keg or barrel consisting of a cylinder, a reinforcing band secured to each end of the cylinder, said band having inner and outer walls, the outer walls provided with projections entering into the cylinder to hold the band in place, a head, means for supporting the head, the inner wall of the band being provided with sockets therein, a ring fitting inside the band and resting on the head and having projections entering the said sockets.

4. In a keg or barrel consisting of a cylinder, a reinforcing band secured to each edge of the cylinder, said band having inner and outer walls, the outer walls being provided with projections entering into the cylinder to hold the band in place, the inner wall of the band being provided with an inturned flange, a head seated on said flange, projections formed on the inner wall of the band and extending into the cylinder, said projections having cavities formed in the rear thereof, and a ring fitting inside of the band and having projections seating in the cavities, said ring being provided with an inturned flange resting upon said head.

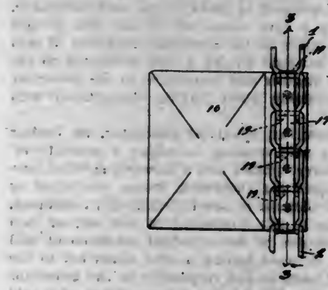
1,215,356. POST-AND-BAR FENCE. FREDERICK A. EMERICK, Oswego, N. Y. Filed Oct. 21, 1916. Serial No. 126,828. (Cl. 256—19.)



1. The combination of a fence post having oppositely disposed vertical bar-receiving grooves; an upstanding threaded clamp member; a series of bar ends in each groove; a series of spacers in each groove between the bar ends therein, such spacers interlocking at their ends with the bar ends; top rails each having an end in a post groove; for each top rail a horizontal cap-board, the opposed ends of the cap-boards bearing on the post top, and said clamp member passing upwardly between such opposed ends; a post-cap having alined bottom grooves each of which fits on an end of a cap-board with an end wall of each groove opposed to an end of a cap-board, the cap having a hole through it whereby the cap fits over said threaded clamp member; and a nut thereon and bearing against said cap, each end of each of said spacers being slanted in the direction of the open side of the bar-holding groove, and each interlocking bar having slanted corner portions bearing on and thereby interlocking with the slanted ends of the spacers.

2. In post-and-rail fence construction, the combination of a post provided at its upper end with an upstanding threaded projection and with a vertical groove for reception of rail ends and for reception of separable rail spacers; a series of rails corresponding ends of which are mounted in said groove; a series of spacers located in said groove, one between each two opposed rail ends, each of said spacers interlocking at each end with an end of a rail; and means for clamping the assembled rail ends and spacers demountably in said groove; each end of each of said spacers being slanted in the direction of the open side of the bar-holding groove, and each interlocking bar having slanted corner portions bearing on and thereby interlocking with the slanted ends of the spacers.

1,215,357. BRIDLE. SAMUEL E. ESTES, Ruby, Ky. Filed Aug. 25, 1916. Serial No. 116,840. (Cl. 54—6.)



In a bridle of the kind set forth, the combination of the side chains of the bridle and armor plate blinds, the links of the side chains having cross rods, of means engaging the cross rods of the links of the side chains to secure the blinds to the sides of the bridle, said means comprising an elongated metal strip having a plurality of recesses engaging the cross rods of the links of the side chains of the bridle, and screws passing through the blind and into the strip, thereby clamping the parts together.

1,215,358. COMPOSITION OF MATTER. GEORGE FALCONER, Fremont, Nebr., assignor to Universal Glas-Solvo Company, Chamberlain, S. D., a Corporation. Filed Mar. 13, 1916. Serial No. 83,939. (Cl. 252.)

1. The herein described composition of matter, comprising, in apothecary's weight, potassium of permanganate 10 grains, and bichlorid of mercury 5 grains, dissolved in approximately 1 pound of oil of origanum.

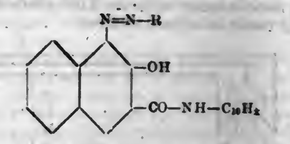
2. A composition of matter comprising, in apothecary's weight, approximately 1 to 10 grains of potassium permanganate, and approximately 1 to 5 grains of bichlorid of mercury, dissolved in 1 pound of oil of origanum.

3. The herein described composition of matter comprising approximately 10 grains of potassium permanganate, 5 grains of bichlorid of mercury, and volatile oil, the quantity of said volatile oil being sufficient to cause the potassium permanganate and bichlorid of mercury to dissolve when placed therein.

4. A composition of matter comprising approximately in weight 1 to 10 grains of potassium permanganate and 1 to 5 grains of bichlorid of mercury dissolved in approximately 1 pound of volatile oil.

1,215,359. DYES AND PROCESS OF DYEING. JOSEPH FLACHSLAENDER and PAUL GEORG LIST, Leverkusen, near Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed July 29, 1916. Serial No. 111,998. (Cl. 8—1.)

1. As new articles of manufacture the azo dyes, which may be obtained from diazo compounds and a hydro-alpha-naphthalid of 2.3-oxynaphthoic acid having most probably the following general formula:



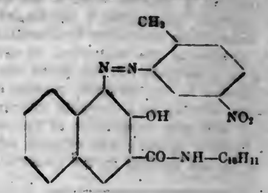
(R meaning an aromatic radical and x standing for more than 7 hydrogen atoms), which are after being dried and pulverized dark powders soluble in concentrated sulfuric acid yielding upon reduction with tin and hydrochloric acid an aromatic amin and a hydro-alpha-naphthalid of 2.3-oxynaphthoic acid, dyeing shades fast to washing, substantially as described.

2. As new articles of manufacture the azo dyes having most probably the following general formula:

$$R—N=N—R'$$

R meaning a nitro-aryl of the benzene series and R' standing for the radical of a 2.3-oxynaphthoyl-hydronaphthalid having the azo group in the 1-position, which dyes are after being dried and pulverized dark powders soluble in concentrated sulfuric acid and dyeing cotton reddish shades fast to washing, substantially as described.

3. As a new article of manufacture the azo dye which may be obtained from diazotized para-nitro-ortho-toluidin and the tetrahydro-alpha-naphthalin of 2.3-oxynaphthoic acid having most probably the formula:



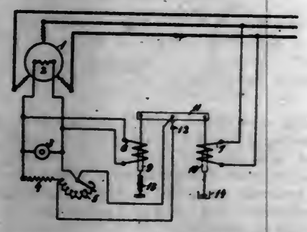
which is after being dried and pulverized a dark red powder soluble in concentrated sulfuric acid with a red coloration; yielding upon reduction with tin and hydrochloric acid diaminotoluene and the tetrahydro-alpha-naphthalid of the 2.3-oxynaphthoic acid; and dyeing cotton red shades, substantially as described.

4. Production of azo dyes on the fiber consisting in impregnating the fiber with a solution of a hydro-alpha-naphthalid of the 2.3-oxynaphthoic acid and treating it with a diazo compound, substantially as described.

1,215,360. AUTOMATIC PRESSURE-REGULATOR FOR ELECTRIC MACHINES. MAX FUSS, Berlin, Germany. Filed Mar. 21, 1911. Serial No. 616,013. (Cl. 171—229.)

1. In combination, an electrical generator, an exciter therefor having in circuit a variable resistance and an automatic tension regulator comprising electromagnetic means energized by the electrical condition of the exciter circuit and other electromagnetic means energized by the electrical condition in the generator circuit, a fixed contact and a floating contact member in circuit shunting the resistance in the exciting dynamo circuit, and connections between said member and said two named means whereby said exciter and generator circuits act independently of each other upon the floating member to make and break contact with the fixed contact for different floating positions of said member.

2. In combination, a source of current to be regulated, and a separate source of current associated therewith, a pair of contacts one of which is a floating member, electromagnetic means energized by the first-named source of current and other electromagnetic means energized by the other source of current, and connections between said means and said member whereby said means are adapted to support said member in different floating positions while variations of current in said means enable said member to make and break contact with the fixed contact for different floating positions of said member.



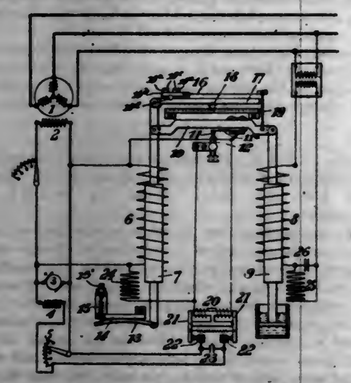
3. In a regulator for dynamo electric machines, a stationary contact, a movable arm coöperating therewith to open and close a circuit, a solenoid, a core therefor mechanically connected to said arm, a movable fulcrum for said arm, and another solenoid controlling the movements of said fulcrum.

4. In combination, a dynamo electric machine, a voltage regulator therefor comprising a stationary contact, a movable arm coöperating therewith to determine the excitation of said machine, means, serving as a movable fulcrum point for said arm, responsive to the terminal voltage of said machine, and means responsive to the excitation of said machine for vibrating said arm around said fulcrum, thereby opening and closing said contacts.

5. In combination, a dynamo electric machine, a voltage regulator therefor comprising a stationary contact, a movable arm coöperating therewith intermediate the ends of the arm to determine the excitation of said machine, means, serving as a movable fulcrum point for one end of said arm, responsive to the terminal voltage of said machine, and means, serving as a movable fulcrum point for the other end of said arm, responsive to the excitation of said machine, thereby opening and closing said contacts.

[Claims 6 to 12 not printed in the Gazette.]

1,215,361. ELECTRICAL POTENTIAL-REGULATOR. MAX FUSS, Berlin, Germany. Filed Dec. 8, 1912. Serial No. 734,738. (Cl. 171—229.)



1. In combination, an electrical generator, an exciter therefor having a field winding including a separate resistance, a stationary contact and a movable member having a contact coöperating therewith, electromagnetic means controlled by said contacts and adapted to short circuit said resistance, a solenoid having a core connected to one end of said member and responsive to the electrical condition of said exciter, a second solenoid having a core connected to the other end of said member and responsive to the generator tension, and a curved lever having a bearing surface on which it is adapted to roll, one end being connected to one of said cores and a spring attached to the opposite end acting to oppose the pull of the solenoid on said core.

2. In combination, an electrical generator, an exciter therefor having a field winding including a separate resistance, a stationary contact and a movable member having a contact coöperating therewith, a short circuit around said resistance having contacts under control of said movable member, a solenoid having a core connected to one end of said member and responsive to the electrical condition of said exciter, a second solenoid having a core connected to the other end of said member and responsive to the generator tension, and a curved lever having a bearing surface on which it is adapted to roll, one end being connected to one of said cores and a spring attached to the opposite end acting to oppose the pull of the solenoid on said core.

3. In combination, an electrical generator, an exciter therefor having a field winding including a separate resistance, a stationary contact and a movable member having a contact coöperating therewith, means controlled by said contacts and adapted to short circuit said resistance, a solenoid having a core connected to one end of said member and responsive to the electrical condition of said exciter, a second solenoid having a core connected to the other end of said member and responsive to the generator tension, and a yielding blade having connections with said member.

4. In combination, an electrical generator, an exciter therefor having a field winding including a separate resistance, a stationary contact and a movable member having a contact coöperating therewith, means controlled by said contacts and adapted to short circuit said resistance, a solenoid having a core connected to one end of said member and responsive to the electrical condition of said exciter, a second solenoid having a core connected to the other end of said member and responsive to the generator tension, and a yielding blade having connections with said member and provided with an adjustable support.

5. In combination, an electrical generator, an exciter therefor having a field winding including a separate resistance, a stationary contact and a movable member having a contact coöperating therewith, means controlled by said contacts and adapted to short circuit said resistance, a solenoid having a core connected to one end of said member and responsive to the electrical condition of said exciter, a second solenoid having a core connected to the other end of said member and responsive to the generator tension, a yielding blade having connections with said member and provided with an adjustable support, and a spring-resisted roller member connected to one of said cores to oppose the pull of its solenoid.

[Claims 6 to 14 not printed in the Gazette.]

1,215,362. MEAT-CHOPPER. PHILIP GANZHORN, Chicago, and CHARLES S. GANZHORN, Glenellyn, Ill. Filed Feb. 21, 1916. Serial No. 79,687. (Cl. 17—20.)



A meat chopper having a perforated plate and a rotary cutter working over the same, said plate having a central aperture which is rabbeted at both ends, a sleeve seating in the aperture and having an end flange seating in one of the rabbets, and a nut screwed on the sleeve against one side of the plate, said plate being reversible on the sleeve and clamped between the flange and the nut.

1,215,363. FOOD PRODUCT. WILLIAM B. GERR, Syracuse, N. Y., assignor to Merrell-Soule Company, Syracuse, N. Y., a Corporation of New York. Filed Feb. 1, 1915. Serial No. 5,501. (Cl. 99—5.)

1. A soluble powdered milk of approximately the following composition: 18 per cent. butter fat; 57.8 per cent. milk sugar; 8.6 per cent. casein; 7.5 per cent. lact-albumin; 7.3 per cent. ash; 1.2 per cent. moisture.

2. A soluble powdered milk containing active enzyms and of approximately the following composition: 18 per cent. butter fat; 57.8 per cent. milk sugar; 8.6 per cent. casein; 7.5 per cent. lact-albumin; 7.3 per cent. ash; 1.2 per cent. moisture.

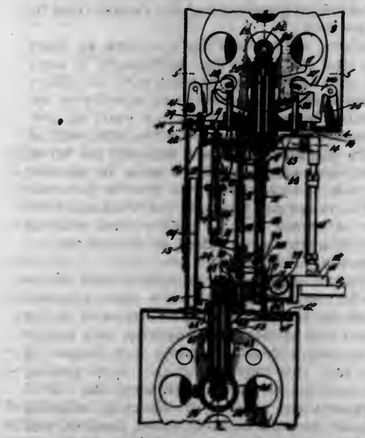
3. A soluble powdered milk which reacts to the Leffman test for enzyms and of approximately the following composition: 18 per cent. butter fat; 57.8 per cent. milk sugar; 8.6 per cent. casein; 7.5 per cent. lact-albumin; 7.3 per cent. ash; 1.2 per cent. moisture.

4. A soluble powdered milk composed of spherical particles and of approximately the following composition: 18 per cent. butter fat; 57.8 per cent. milk sugar; 8.6 per cent. casein; 7.5 per cent. lact-albumin; 7.3 per cent. ash; 1.2 per cent. moisture.

5. A soluble powdered milk composed of spherical particles and characterized by the practical absence of bacteria and the presence of active enzyms and which is of approximately the following composition: 18 per cent. butter fat; 57.8 per cent. milk sugar; 8.6 per cent. casein; 7.5 per cent. lact-albumin; 7.3 per cent. ash; 1.2 per cent. moisture.

[Claims 6 and 7 not printed in the Gazette.]

1,215,364. REWINDING DEVICE FOR MOVING-PICTURE MACHINES. JOHN F. GILMORE, New York, N. Y. Filed June 23, 1913. Serial No. 775,228. (Cl. 88—17.)



1. In combination with a film winding device mounted on a motion picture apparatus, consisting of two revoluble reel supports for a plurality of reels, locking devices on the supports, connected with each other by a bar and levers, to operate the locks simultaneously on both supports and to maintain the supports in parallel alinement with the optical axis of the motion picture apparatus.

2. In combination with a motion picture apparatus a film winding device consisting of two revoluble reel supports each for a plurality of reels, a stationary film channel between the supports, a spring door on said channel, a projection on said door and a projection on at least one of said reel supports, adapted to engage the projection on the door when said reel support is being revolved, thereby opening the door of the channel to receive a film at and during a predetermined period.

3. In combination with a film winding device having a plurality of revoluble reel supports each for a plurality of reels above and below the optical axis of a motion picture apparatus, a stationary film channel between the supports, a door on said channel held in closed position by a spring, and a projection on the door, and a projection on the revoluble reel support, said door being operated automatically by revolving of the reel supports as the projection on the revoluble support engages the projection on the door of the channel.

4. In combination with a film winding device having a plurality of reel supports for a plurality of reels, driving means for the reel supports, a device controlled by the film to engage and disengage the driving means of a reel automatically, said device consisting of a movable lever mounted in the support and in contact with a film, said lever being operatively connected with a clutch mounted between the driving means and the reels in the support.

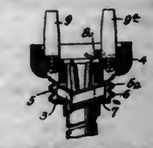
1,215,365. CABLE-ARMOR. HENRY R. GILSON, Baden, Pa., assignor to National Metal Molding Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 2, 1914. Serial No. 864,613. (Cl. 173—267.)



1. A cable armor formed of inner and outer metallic strips arranged in superposed interlocking helical coils, one of such strips having an extended flat base portion with its opposite immediately-adjoining sides bent at less than a right angle thereto to form a continuous interlocking portion, and the other strip being arc-shaped in cross section, said bent sides of the first named strip resting in the concavity of the second named arc-shaped strip, and the convex side of the arc-shaped strip forming one wall of the armor.

2. A cable armor formed of inner and outer metallic strips arranged in superposed interlocking helical coils, the inner strip being arc-shaped in cross section with its concave side facing outwardly, and the outer strip having an extended flat base portion with its opposite immediately adjoining sides bent at less than a right angle thereto to form a continuous interlocking portion, said sides resting in the concavity of the inner strip.

1,215,366. ARMORED-CABLE CONNECTOR. HENRY R. GILSON, Baden, Pa., assignor to National Metal Molding Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 28, 1916. Serial No. 74,807. (Cl. 173—322.)



1. A connector for an armored cable, comprising a thimble adapted to receive a cable, a slot in the wall of the thimble extending to the edge thereof and adapted to receive an outwardly turned end of an armor strip, and a member secured to said thimble and having a portion closing the open edge of said slot.

2. A connector for an armored cable, comprising an externally threaded thimble adapted to receive the end of a cable, a slot in the wall of the thimble extending to the edge thereof and adapted to receive an outwardly turned end of an armor strip, and a bushing having screw threads to engage said thimble and provided with an inwardly-turned flange adapted to engage the edge of the outwardly turned armor strip and thereby clamp the cable in said thimble.

3. The combination with an armored cable having the end of an armor strip turned outwardly, of a connector surrounding the end of the cable and having a wall provided with a slot extending to the edge thereof, said slot receiving said outwardly turned strip end, and means for retaining said strip end in said slot.

4. The combination with an armored cable having the cut end of an armor strip turned outwardly, of a connector, comprising an externally threaded thimble surrounding the end of the cable, a slot in the wall of the thimble extending to the cable-receiving end thereof and containing said outwardly-turned strip end, and a bushing having screw threaded engagement with said threaded thimble and provided with an inwardly extending flange at the cable receiving end of the thimble, said flange closing the end of said slot and thereby securing the cable to the thimble.

1,215,367. TOE-CALK. OSCAR B. HANSON, Hartford, S. D. Filed May 17, 1916. Serial No. 98,035. (Cl. 168—34.)



1. A toe calk for horseshoes comprising a body, fastening means for detachably connecting the calk to the shoe consisting of a shoe engaging member having a fastening element at its extremity bendable in one direction to engage the shoe, and a hoof engaging member bendable in the opposite direction for engaging the hoof.

2. A toe calk for horseshoes comprising a body, fastening means for detachably connecting the calk to the shoe consisting of a plate extension bent at an angle and in spaced relation to the body to engage the upper surface of the shoe, said plate terminating in a fastening prong adapted to be bent about the shoe, and a separate hoof engaging element adapted to coöperate with the hoof.

3. A toe calk for horseshoes comprising a body, fastening means for detachably connecting the calk to the shoe consisting of a plate extension bent at an angle and in spaced relation to the body to engage the surface of the shoe, said plate terminating in a clip adapted to be bent at an angle to the plate and against the hoof to which the shoe is attached.

4. In combination, a horseshoe having an apertured flange extending therefrom, a detachable calk coöperating with the shoe and arranged adjacent to the flange, a bendable extension on the calk engageable with the shoe at one side thereof, and means projecting from the calk and engageable in the aperture of said flange to hold the calk in place upon the shoe.

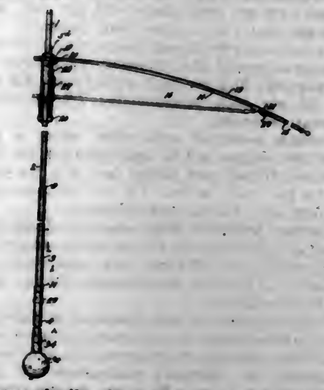
1,215,368. HEEL-CALK. OSCAR B. HANSON, Hartford, S. D. Filed May 17, 1916. Serial No. 98,036. (Cl. 168—31.)



1. In combination, a horseshoe having a notched flange projecting downwardly therefrom at each heel extremity, a calk adapted to be detachably connected to said extremity and comprising an apertured body through which a heel extremity is received, and a bendable projection extending inwardly from the face of said body beneath the aperture aforesaid and adapted to be bent upwardly into the notch of the heel flange and about said flange to interlock the calk on said shoe.

2. In combination, a horseshoe having reduced heel extremities, a flange projecting therefrom at each heel extremity, a calk adapted to be detachably connected to each extremity and comprising an apertured body in which an extremity is received, a bendable projection extending from said extremity and engageable about the flange to interlock the calk on said shoe, the reduced portion aforesaid being apertured, and a pin seated in said aperture constituting auxiliary means for retaining the calk on the shoe.

1,215,369. FOLDING UMBRELLA. CHARLES A. HART, Findlay, Ohio. Filed Oct. 2, 1915. Serial No. 58,797. (Cl. 135—26.)



1. In an umbrella, the combination of a stick, a cover structure connected with the stick and including stretchers, a runner connected with the stretchers and movable on the stick into a position in which the stretchers exert an outward and downward tension action on the ribs tending to maintain the cover structure in open position, and means on the stick adapted to be received in the runner and to snugly and frictionally engage with the latter to prevent accidental displacement of the runner from its rib tensioning position.

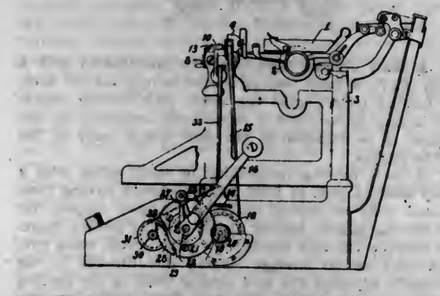
2. In an umbrella, the combination of a stick, an upper notch thereon, ribs connected with said notch, a cover carried by the ribs, stretchers connected with the ribs, a runner connected with the stretchers and movable on the stick to a position wherein the stretchers exert an outward and downward tension action on the ribs, and an upward pressure against the runner whereby the latter is held against downward movement when in position with the cover raised, and whereby the ribs for the cover are maintained in raised position, said notch being formed with a tubular extension, and the runner being adapted in its position with the cover raised to frictionally receive said extension.

3. In a collapsible umbrella, a collapsible stick structure composed of telescoping sections, a catch disposed in one of said sections and consisting of a piece of spring wire bent upon itself to form a spring loop, and spaced side portions bearing outwardly against said section, a nib on one of said side portions of the catch passing through said section thereby interlocking the catch against displacement and adapted to engage an adjacent section to lock the sections in an extended position, and another section telescoping in that carrying the catch and engageable with the free end of one of the side portions of the catch to disengage the nib of the latter from its locking position, said free end of the catch being bent inward to coact with the telescoping section.

4. In a collapsible umbrella, the combination of a stick and a cover structure including inner and outer rib sections of channel metal, locking means for holding said rib sections extended consisting of a spring catch, a stretcher pivotally secured to the inner section and movable therewith and securing the upper portion of the said catch in place, the outer rib section having a loop receiving the inner section above mentioned, said catch being formed with a notch to engage the last mentioned loop so as to lock the rib sections in extended positions, the catch being also formed with an offstanding shoulder intermediate its end portions, and a stretcher connected with the pivot loop of the rib section carrying the catch and adapted to press against the shoulder of the catch to disengage the second mentioned loop from the notch of the catch whereby to permit of relative movement of the sections of the rib, the outermost and innermost portions of the catch being received in the channels of the channel metal comprising the said sections.

5. In an umbrella, the combination of a stick comprising a tip section, a catch carried by the tip section to coöperate with the adjacent portion of the stick to hold the tip section extended, a notch screwed upon the stick adjacent to said tip section, a cover structure comprising ribs connected with said notch, and stretchers, a runner mounted on the stick and attached to the stretchers, and a nut screwed upon the stick aforesaid to engage the notch and removable to permit of detachment of the cover structure as a whole by unscrewing of the nut from the stick and removal thereof along with the runner and other parts of the cover structure, said catch engaging said nut to prevent accidental unscrewing of the nut as well as maintaining the tip in proper relation to the cover structure.

1,215,370. TYPE-WRITING MACHINE. FREDERICK A. HART, Jersey City, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Aug. 9, 1911, Serial No. 643,109. Renewed Jan. 29, 1916. Serial No. 75,170. (Cl. 197—65.)



1. The combination with a typewriter carriage, of an operator for manipulating said carriage, a stop for limiting the travel of said carriage, and controlling means adjusted by said stop for governing the effective movement of said operator to correspond to the extent of travel of said carriage determined by said stop.

2. The combination with a typewriter carriage, of an operator for manipulating said carriage, a stop for limiting the travel of said carriage, and controlling means adjusted by said stop for governing the effective movement of said operator to correspond to the extent of travel of said carriage determined by said stop; said stop being located in a readily accessible position in front of said carriage.

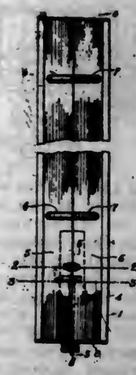
3. The combination with a carriage, of a stop for limiting the travel of said carriage, an operator for traversing said carriage, a control for governing the extent of movement of said carriage by said operator, and connections between said stop and said control, whereby the action of the latter is governed from the former.

4. The combination with a carriage, a scale arranged in juxtaposition to said carriage, a margin-regulating device mounted to move along said scale to determine the extent of travel of said carriage, an operator for traversing said carriage, and operative connections between said margin regulating device and said operator, whereby the effective movement of the latter is determined by the position of the former.

5. The combination with a carriage, of a stop for limiting the movement of said carriage, means for traversing said carriage, an operator for actuating said means, a mechanism for connecting said operator to said means for a portion of the movement of said operator, and connections between said mechanism and said stop whereby said stop determines the extent of effective movement of said operator.

[Claims 6 to 48 not printed in the Gazette.]

1,215,371. LOOSE-LEAF HOLDER. ROSS HAWKINS, Chicago, Ill. Filed Aug. 30, 1915. Serial No. 48,010. (Cl. 129—24.)



1. A loose leaf holder comprising a pair of ring plates, a support for said ring plates, a yielding anchor engaging said support, means extending through the support connecting said ring plates with said anchor, and means carried by said support for moving said ring plates into opening position.

2. A loose leaf holder comprising a pair of ring plates, a channel shaped support for said ring plates, a yielding anchor, means connecting said anchor and said ring plates for maintaining said ring plates normally in closed position, and rotary means associated with said support and said ring plates for moving said ring plates into opening position.

3. A loose leaf holder comprising a pair of ring plates, a channel shaped rigid support, said ring plates being movably held within the channel-opening of said support, a resilient anchor engaging the outside of said support, an element connecting both of said ring plates with said resilient anchor, and rotary means guided in said support for overcoming the resiliency of said anchor to move said ring plates into opening position.

4. A loose leaf holder comprising a pair of ring plates, a channel shaped rigid back in which said ring plates are movably supported, a resilient anchor, a stud loosely connecting said ring plates with said resilient anchor, and means for moving said ring plates into opening position and placing said anchor under tension.

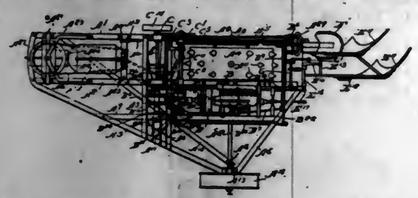
5. A loose leaf holder comprising a pair of ring plates, a channel shaped rigid back supporting said ring plates, a resilient anchor disposed on said channel on the side opposite to the side on which the ring plates are supported, a stud extending through said support firmly connected with said anchor and loosely connected with said ring plates, a rod rotatably guided on said support and means on said rod engaging said ring plates for opening the same and for placing the resilient anchor under tension.

[Claims 6 to 8 not printed in the Gazette.]

1,215,372. TRACTOR. ANDREW P. HAWN, Goodland, Ind., assignor, by mesne assignments, to Advance-Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed July 9, 1914. Serial No. 849,878. (Cl. 21—114.)

1. A frame for tractors made up of two parallel frame members extending substantially the whole length of the

frame, two inclined members tying the two ends of the longitudinal members together and intersecting at a point removed from them, a short longitudinal member parallel with said main longitudinal members and supported on the inclined members, an engine mounted between said short member and one of the longer ones, a tractor wheel at one side of the engine, an idler wheel at the other, said tractor wheel being interposed between the two parallel longitudinal frame members, and a steering wheel in front of and in line with the tractor wheel.

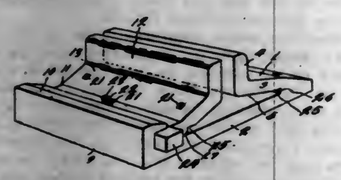


2. A tractor having a single drive wheel, an idler wheel at one side thereof having its axis in the same vertical plane as the axis of the driving wheel, a steering wheel in front of the driving wheel substantially in line with it and a draft connection at the rear end of the machine off-set a short distance beyond the center of the drive wheel away from the idler wheel, an engine supported between the driving and the idler wheel having its center of gravity substantially in the line between them, a power transmission interposed between said engine and the drive wheel and arranged to exert an upward lift on the engine frame.

3. A tractor having a single drive wheel, an idler wheel at one side thereof, a steering wheel in front of the driving wheel substantially in line with it and a draft connection at the rear end of the machine off-set a short distance beyond the center of the drive wheel away from the idler wheel, an engine supported between the driving and the idler wheel having its center of gravity substantially in the line between them, a power transmission interposed between said engine and the drive wheel and arranged to exert an upward lift on the engine frame.

4. A tractor having a single drive wheel, a steering wheel in front of and in line with the drive wheel, and a frame made up of two parallel side members, one on either side of said wheels, said members being tied together by cross members, and being supported on the two wheels, an idler wheel at one side of the tractor member, diagonal frame members extending from the ends of said two parallel side members converging toward the idler wheel, and a longitudinal member carried by them parallel with the two side members.

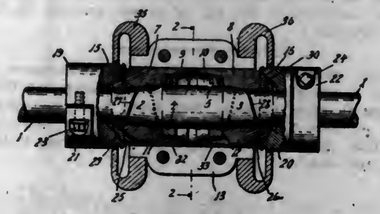
1,215,373. RAIL-JOINT AND CHAIR THEREFOR. JOHN F. HILL, Griffin, Ga. Filed Aug. 2, 1916. Serial No. 112,738. (Cl. 239—6.)



1. In a rail joint of the kind set forth, the combination of a rail chair having a base and integral with this base a fish plate which overhangs the flange of the rail sections and wedges between the flange and the tread of said sections, an opposing fish plate separable from the chair but similarly wedging between the tread and the flange of the rail sections, an undercut flange integral with the base, a wedge acting against this flange to force the fish plate into firm contact with the rail sections, means for securing the chair to a tie, means for securing the separable fish plate to the chair and means for securing the whole to the tie.

2. In a rail joint of the kind set forth, the combination of a rail joint chair having a base and integral with this base a fish plate which overhangs the flange of the rail sections and wedges between the flange and the tread of said sections, an opposing fish plate separable from the chair but similarly wedging between the tread and the flange of the rail section, an elongated slot in the bottom of said fish plate, a bolt set in the base and passing through this elongated slot to secure the fish plate against lateral movement when seated, an under-cut flange integral with the base, a wedge acting against this flange to force the fish plate into firm contact with the rail section, means for securing the chair to a tie and means for securing the separable fish plate, the chair and rails to the tie.

1,215,374. BEARING. PER F. HOLMGREN, Brooklyn, N. Y. Filed Apr. 18, 1916. Serial No. 91,882. (Cl. 64—55.)



1. A shaft bearing comprising, in combination with a rotary shaft, a fixed bearing sleeve having conical ends, and locking collars upon the shaft, such locking collars each having at one end a recess complementary to and adapted to be engaged by the said conical ends of the bearing sleeves.

2. A shaft bearing comprising, in combination with a rotary shaft, a pair of fixed bearing sleeves having their removed ends of conical shape, a common support for said bearing sleeves having an oil passage leading thereinto between the said sleeves, the said sleeves being provided with an oil passage leading therethrough to the said shaft adjacent the said conical ends of the bearing sleeves, and lock collars upon the shaft having recesses complementary to and adapted to be engaged by the said conical ends of the bearing sleeves.

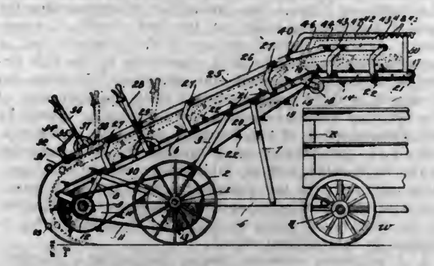
3. A shaft bearing comprising, in combination with a rotary shaft, a pair of fixed bearing sleeves having their removed ends of conical shape, a common support for said bearing sleeves having an oil passage leading thereinto between the said sleeves, the said sleeves being provided with an oil passage leading therethrough to the said shaft adjacent the said conical ends of the bearing sleeves, and lock collars upon the shaft having recesses complementary to and adapted to be engaged by the said conical ends of the bearing sleeves, the said complementary recesses having spiral oil grooves formed therein.

4. A shaft bearing comprising, in combination with a shaft having a pair of oppositely tapered portions, a pair of bearing sleeves bored to fit said tapered portions of the shaft, said bearing sleeves each having one end cone-shaped, and a pair of lock collars upon said shaft each having at one end a recess complementary to and adapted to be engaged by the said cone-shaped ends of the bearing sleeves.

5. A shaft bearing comprising, in combination with a shaft having a pair of tapered portions, a pair of bearing sleeves bored to fit said tapered portions, said bearing sleeves each having one end cone-shaped, and a pair of lock collars upon the shaft each having at one end a recess complementary to and adapted to be engaged by the said cone-shaped ends of the bearing sleeves.

[Claims 6 to 8 not printed in the Gazette.]

1,215,375. HAY-LOADER. WILLIAM BRUTUS HOOPER, Winifred, Kans. Filed July 24, 1916. Serial No. 111,076. (Cl. 193—8.)



1. In combination, a main inclined conveyer frame, an auxiliary conveyer frame pivoted to the upper end of said main frame, an endless belt conveyer trained around said frames, a main inclined guard frame above the main conveyer frame, parallel links connecting said main guard and main conveyer frames, an auxiliary guard frame loosely connected with the front end of said main guard frame and extending over the auxiliary conveyer frame, additional links connecting said auxiliary conveyer and auxiliary guard frames, means for supporting both auxiliary frames and for permitting vertical adjustment thereof, and means for permitting longitudinal adjustment of the two guard frames.

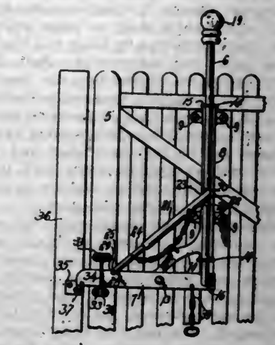
2. In combination, a main inclined conveyer frame, an auxiliary conveyer frame pivoted to the upper end of said main frame for vertical movement, an endless belt conveyer trained around the two frames, a main guard frame above the main conveyer frame, parallel links pivoted at their ends to said main conveyer and main guard frames, an auxiliary guard frame above the auxiliary conveyer frame, links pivoted at their upper and lower ends to the two auxiliary frames, means flexibly connecting the adjacent ends of the main and auxiliary guard frames, means for supporting the two auxiliary frames in vertically adjusted positions, and means for permitting longitudinal adjustment of the two guard frames.

3. In combination, a main inclined conveyer frame, an auxiliary conveyer frame pivoted to the upper end of said main frame for vertical movement, an endless belt conveyer trained around the two frames, a main guard frame above the main conveyer frame, parallel links pivoted at their ends to said main conveyer and main guard frames, an auxiliary guard frame above the auxiliary conveyer frame, links pivoted at their upper and lower ends to the two auxiliary frames, both guard frames having transverse rods at their adjacent ends, longitudinal slats secured at one end to said rods, a plurality of auxiliary slats having their ends pivotally mounted on said rods whereby to connect the two guard frames for simultaneous movement, and means for supporting the two auxiliary frames.

1,215,376. GATE-LATCH. FRANK L. HOWARD, Fuqua, Tex. Filed Nov. 22, 1915. Serial No. 62,883. (Cl. 70—28.)

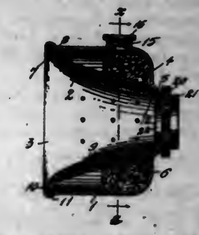
1. A gate latch comprising a bracket provided with spaced vertically alined ears, a latch lever pivotally mounted to the lower part of the bracket, the fulcrum of said lever being located intermediate its ends, a rod slidable through said ears and engaging the rear end of the latch lever, and a spring tensioned telescopic member connected at one end to the rod intermediate its end and at the other end to the outer end of said latch lever.

2. A gate latch comprising a bracket having spaced vertically alined ears, a latch lever pivoted intermediate its ends to the lower part of the bracket, the rear end of said latch member lying below and in alinement with the lowermost ear, a rod passing through said ears and having a bifurcated lower end engaging the rear end of the latch lever, a bifurcated rod engaging the first rod intermediate the ends of the latter, a sleeve mounted on the last-mentioned rod and directed downwardly and outwardly toward the front end of the latch lever, a spring mounted within said sleeve and bearing at one end against said bifurcated rod,



and a third rod telescopically mounted in the sleeve and having its inner end bearing against said spring, the outer end of said third rod being bifurcated and straddling the outer end of the latch lever.

1,215,377. SANITARY TELEPHONE-MOUTHPIECE. ED M. JENKINS, Italy, Tex. Filed Jan. 19, 1915. Serial No. 3,033. (Cl. 179—185.)



1. In a telephone transmitter mouth-piece, the combination of an inner shell, an outer shell equipped with means for storing a disinfectant therein, the inner shell being tapered and having its inner end engaging in the end wall of the outer shell, said inner shell being constructed to disseminate the fumes from the disinfectant, and a coupling engaging the outer shell and attached to the inner shell and fastening said shells together, said coupling being constructed to engage a telephone transmitter and support the mouth-piece.

2. In a telephone transmitter mouth-piece, the combination of an outer tubular member, an inner tubular member, an intermediate tubular member disposed between the other two members and within the outer member, a disinfectant storing member surrounding the intermediate member within the outer member, the intermediate member being constructed to admit the disinfectant fumes from the outer member, the members being arranged so that the fumes cannot escape except through the intermediate member, the inner member having provision for disseminating the disinfectant fumes therein, and means for fastening the members together.

3. In a telephone transmitter mouth-piece, the combination of an outer shell, an inner shell separate from but fitting within the outer shell, the outer shell having a tapering collar at its inner end, the inner shell having its inner end frictionally engaging in the collar of the outer shell, and a coupling member engaging in the inner shell and bearing against the outer shell whereby the inner shell is drawn within the outer shell, said coupling member being separate and distinct from the shells and having

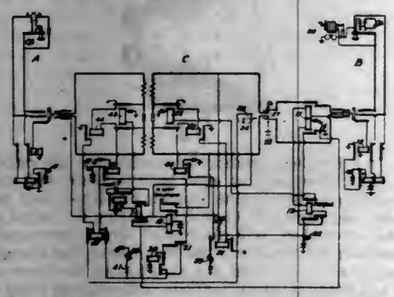
provision for engaging in a telephone transmitter, the outer shell having provision for storing a disinfectant between the same and the inner shell.

4. In a sanitary telephone transmitter mouth-piece, the combination of an outer shell having provision for storing a disinfectant therein, a tapering collar provided on the inner end of the outer shell, an inner shell fitting within the outer shell and having its inner end frictionally engaging in the collar, an intermediate shell disposed within the outer shell and surrounding the inner shell, said intermediate shell having its inner end projecting into the joint formed by the inner ends of the outer and inner shells, and a coupling member separate from the shells engaging the inner end of the inner shell and bearing against the outer shell whereby the inner shell is drawn within the outer shell, said coupling member having provision for engaging in a telephone transmitter.

5. In a telephone transmitter mouth-piece, the combination of an outer tubular member, an inner tubular member, an intermediate tubular member disposed between the other two members and within the outer member, a disinfectant storing member surrounding the intermediate member within the outer member, the intermediate member being constructed to admit the disinfectant fumes from the outer member, the members being arranged so that the fumes cannot escape except through the intermediate member, the inner member having provision for disseminating the disinfectant fumes therein, and a separate coupling member engaging the inner shells and fastening all the shells together, said coupling having means for engaging a transmitter.

[Claims 6 and 7 not printed in the Gazette.]

1,215,378. TELEPHONE-EXCHANGE SYSTEM. LEWIS H. JOHNSON, Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed July 29, 1916. Serial No. 112,043. (Cl. 179—73.)



1. A telephone exchange system comprising a plurality of subscribers' lines, a link circuit for interconnecting the lines, a supervisory relay and a second relay operating when the link circuit is connected with a calling line, a third relay actuated upon the operation of the supervisory and second relays, a locking circuit for the third relay established upon the deënergization of the second relay, a signaling device, and a source of interrupted current brought into circuit with the signaling device upon the subsequent deënergization of the third relay and the energization of the supervisory relay.

2. A telephone exchange system comprising a plurality of subscribers' lines, a link circuit for interconnecting the lines, a supervisory relay and a second relay energized when the link circuit is connected with a calling line, a third relay actuated upon the energization of the supervisory and second relays, a locking circuit for the third relay established upon the deënergization of the second relay, a signaling device and interrupter mechanism, a circuit therefor open at two points, the circuit being closed at one point by the subsequent deënergization of the third relay upon the release of the supervisory relay and closed at the other point by the subsequent energization of the supervisory relay to cause the intermittent operation of the signaling device.

3. A telephone exchange system comprising a plurality of subscribers' lines, a link circuit for interconnecting the lines, a supervisory relay for the link circuit, a supervisory signaling device, an operator's telephone set, a listening relay operating upon connection of the link circuit with a line to include the operator's telephone set in circuit, a third relay energized upon the operation of the listening relay, a locking circuit therefor closed by the deënergization of the listening relay, the deënergization of the supervisory relay causing the deënergization of the third relay, and an interrupter brought into operative relation with the signaling device by the deënergization of the third relay and the subsequent energization of the supervisory relay to cause the signaling device to furnish an intermittent signal.

4. A telephone exchange system comprising a plurality of subscribers' lines, a link circuit for interconnecting the lines, a supervisory relay, an operator's telephone set, a listening relay operating when the link circuit is connected with a line to include the operator's telephone set in circuit, a third relay actuated upon the operation of the listening relay, a locking circuit for the third relay established upon the deënergization of the listening relay, a signaling device, interrupter mechanism brought into operative relation with the signaling device by the deënergization of the third relay and the subsequent energization of the supervisory relay, and an operator controlled key for causing the subsequent energization of the listening relay to interrupt the operative association of the interrupter mechanism and the signaling device and to again include the operator's telephone set in circuit.

5. A telephone exchange system comprising a plurality of subscribers' lines, a link circuit for interconnecting the lines, a supervisory relay, an operator's telephone set, a listening relay operating when the link circuit is connected with a line to include the operator's telephone set in circuit, a third relay actuated upon the operation of the listening relay, a locking circuit for the third relay established upon the deënergization of the listening relay, a signaling device, interrupter mechanism brought into operative relation with the signaling device by the deënergization of the third relay and the subsequent energization of the supervisory relay, and an operator controlled key for causing the subsequent energization of the listening relay to again include the operator's telephone set in circuit, the actuation of the listening relay causing the energization of the third relay to interrupt the operative association of the interrupter mechanism and the signaling device.

1,215,379. CASING FOR VEHICLE-SPRINGS. SIMON JOSEPH, London, England, assignor to Brown Brothers Limited, London, England. Filed Aug. 8, 1916. Serial No. 113,735. (Cl. 267—28.)



1. A casing for a vehicle spring, said casing being formed of strong flexible material adapted to be wrapped around the spring, means for closing the overlapping edges and the ends of the casing in a fluid tight manner so as to prevent ingress of moisture, a pad of absorbent material inside the casing adapted to lie along the overlapping spring leaves, said pad being channeled longitudinally, and means for supplying lubricant to the longitudinal channel of the said pad when the casing is closed, whereby the lubricant supplied will be conducted along the surface of the spring leaves where they overlap.

2. A casing for a vehicle spring, said casing being formed of strong flexible material adapted to be wrapped around the spring, strips of absorbent material applied along the edges of the casing where they overlap, and adapted when soaked with grease to form a fluid tight closure where such overlapping occurs, a pad of absorbent material inside the casing adapted to lie along the overlapping spring leaves, and means for maintaining the supply of lubricant to the said pad.

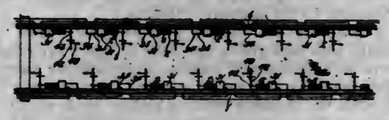
3. A casing for a vehicle spring, said casing being formed of strong flexible material adapted to be wrapped around the spring, strips of absorbent material applied along the edges of the casing where they overlap and also at the ends of the casing where it is wrapped around the spring, said strips of material being adapted when soaked with grease to form a fluid tight closure at the overlapping edges and around the ends of the casing so as to prevent ingress of moisture, a pad of absorbent material inside the casing adapted to lie along the overlapping spring leaves, and means for maintaining the supply of lubricant to the said pad.

4. A casing for a vehicle spring, said casing being formed of strong flexible material adapted to be wrapped around the spring, means for closing the overlapping edges and the ends of the casing in a fluid tight manner so as to prevent ingress of moisture, a pad of absorbent material inside the casing adapted to lie along the overlapping spring leaves, said pad being formed with conducting channels in its inner face adapted to lead the lubricant along the surface of the spring leaves and laterally thereof at a plurality of points, a nipple for the supply of lubricant opening into the channel of the said pad and extending outside the casing, and means for closing the said nipple outside the casing.

5. A casing for a vehicle spring consisting of a sheet of leather adapted to be wrapped around the spring, means for fastening the casing around the spring, strips of absorbent material along the overlapping edges and inside the ends of the casing where they embrace the spring when said casing is closed, said strips when saturated with lubricant being adapted to form a closure which will repel the ingress of moisture, a pad adapted to lie along the surface of the leaves of the vehicle spring, a nipple projecting through the casing and terminating in the said pad, such nipple being so disposed as to project at a point adjacent to the line where the overlapping edge of the casing lies when the casing is closed.

[Claim 6 not printed in the Gazette.]

1,215,380. STOPPING APPARATUS FOR RAILWAYS. EMIL JUSLIN, Philadelphia, Pa., assignor of one-third to Ernest Carlson, Philadelphia, Pa. Filed Dec. 29, 1913. Serial No. 809,158. (Cl. 246—59.)



1. In an apparatus of the character stated, a series of pairs of cylinders, a piston for each cylinder, means actuated by a passing locomotive or car for moving forwardly both pistons of a pair of cylinders, independent means for locking each piston in its forward position, means carried by each piston for releasing its locking means, and separate means for returning said pistons to normal position and to release their locking means, one means operating from one of a distant pair of cylinders in advance of the locked piston and the other from one of a distant pair of cylinders in the rear of the other locked piston.

2. In an apparatus of the character stated, a series of pairs of cylinders, a piston for each cylinder, means actuated by a passing train for moving forwardly both pistons of a pair, means for locking said pistons in their forward position, means carried by each piston for releasing its respective locking means, a pipe connected with one cylinder of one pair and with one cylinder of a distant pair in advance thereof, a pipe connecting the other cylinder of the pair with one cylinder of a distant pair in the rear thereof, and fluid means actuated by the distant pistons to return the pistons to release the locking means and to return the parts to unlocking position.

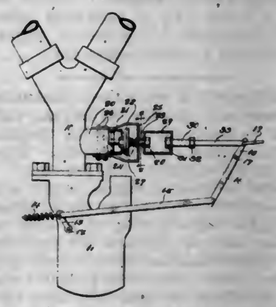
3. In apparatus of the character stated, a cylinder having an outlet at one end, a piston in said cylinder and having a rod provided with a beveled shoulder, a guide rod formed with a notch, a bar having means for reciprocating it and formed with a yoke, a lever fulcrumed on the yoke having one end adapted to engage the notch of the guide-rod and the other end to engage the shoulder upon the piston rod, and a spring upon the piston-rod and bearing against the piston and the yoke.

4. In apparatus of the character stated, a cylinder having an outlet at one end, a piston in said cylinder and having a piston rod, a guide-rod having a notch, a yoke movable upon said piston rod and guide-rod, means for sliding said yoke, a spring between said piston and yoke, and a lever fulcrumed on the yoke having one end adapted to engage the notch in the guide-rod and its other end constructed to be engaged by the piston-rod to be actuated by the same to disengage its other end from the notch in the guide-rod.

5. In apparatus of the character stated, a casing stationarily supported near the rail of a track, a casing sliding in said stationary casing and having a bar projecting from one end, a bolt sliding in said sliding casing, a substantially segmental cam pivoted in the sliding bolt and extending and longitudinally projecting in the walls of said bolt, sliding casing and stationary casing and formed with a notch in its curved edge, a lever pivoted in a recess in the slidable bolt and having a hooked end capable of being engaged in the notch of the cam and a projecting opposite end, a stop carried by the stationary casing with which the end of the lever engages, a catch in the stationary casing and adapted to engage a stop in the sliding casing, a bolt projecting from the forward end of the sliding bolt, a wall in the forward end of the sliding casing and having said bolt slidable in it, and a spring secured to the forward end of said bolt and against the wall.

[Claims 6 to 8 not printed in the Gazette.]

1,215,381. DRIFTING-VALVE FOR EXPLOSION-ENGINES. WILLIAM KEMP, Altoona, Pa. Filed Apr. 17, 1916. Serial No. 91,785. (Cl. 123—198.)



1. In an explosion engine having a throttle valve, a drifting valve adapted to control the admission of air directly into the cylinder of the engine, means for positively operating the throttle valve, resilient means tending to hold the drifting valve closed, means provided with lost motion for opening the drifting valve, and means carried by the throttle valve operating means for opening the drifting valve when closing the throttle valve.

2. In an explosion engine, a port opening into the intake pipe direct from the atmosphere, a valve controlling said port, a throttle valve also opening into the intake pipe, means for positively operating said throttle valve,

a lost motion connection between said first-named valve and the throttle valve operating means to open said valve when the throttle valve is closed, and means for adjusting the degree of lost motion in said connection.

3. In an explosion engine having a port opening into the intake pipe direct from the atmosphere, a valve controlling said port, a carbureter connected to said intake pipe and having a throttle valve therein, means for positively operating said throttle valve, resilient means tending to maintain the air controlling valve closed, a connection between said air-controlling valve and the throttle valve operating means having slip connection to provide lost motion therein, and means for adjusting the degree of lost motion in said section.

4. In an explosion engine having an intake pipe, a port in said pipe opening to the atmosphere, a valve adapted to close said port, a carbureter, a throttle valve between said carbureter and the intake pipe, means for operating the throttle valve, a spring for closing the air controlling valve, a link connected to the stem of the valve, a bushing slidable freely in said link, a connection between said bushing and the throttle valve operating means, and nuts on said bushing to limit the length of its sliding movement.

1,215,382. ART OF MAKING MOTTLED RUBBER FLOORING. ARTHUR B. KEMPEL, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1915. Serial No. 59,199. (Cl. 154—2.)



1. The method of making flooring slabs having a mottled rubber surface which consists in forming a loose layer of various-colored particles of vulcanizable rubber compound, rolling and thereby compacting said layer, and vulcanizing said layer upon a backing under mechanical pressure and heat.

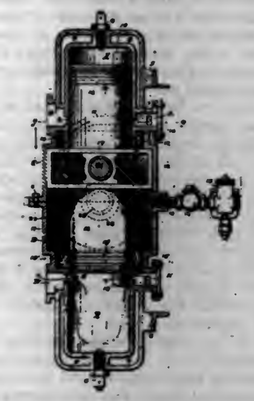
2. The method of making flooring slabs having a mottled rubber surface which consists in preparing a slab of backing material, spreading a layer of various-colored particles of vulcanizable rubber compound thereon to form a facing layer, compressing said layer on the backing by a rolling action, and vulcanizing the backing and facing layers together between heated press plates.

3. A flooring tile comprising a stiff backing plate of relatively cheap material adapted to adhere to a rubber facing, and a facing layer of vulcanized rubber thereon composed of vari-colored homogeneously united particles, together presenting a mottled appearance.

1,215,883. TWO-CYCLE INTERNAL-COMBUSTION ENGINE. BERTRAM C. KENYON, Mishawaka, Ind., assignor of one-half to Dodge Manufacturing Company, Mishawaka, Ind., a Corporation of Indiana. Filed Mar. 9, 1914. Serial No. 823,623. (Cl. 123—56.)

1. In internal combustion engines, a pair of pistons integrally formed with each other having an enlarged transverse rectangular frame serving as a compressor therebetween whose walls in one plane are approximately the same as the piston diameter and in a plane perpendicular thereto project radially from the pistons forming a rectangular space within the walls with open sides thereto, a suitable casing for the pistons having walls which inclose separate cylinders and preliminary compression chambers the latter being rectangular to conform to the shape of the compressor frame forming a guide for such frame and at the same time closing the open sides of the frame, inlet and outlet ports to the cylinders, separate passage-ways connecting from the compressing chambers to the inlet ports of opposite cylinders, whereby as the pistons move to and fro flow is established in the passage ways in alternate sequence.

2. In internal combustion engines, a pair of oppositely placed interconnected cylinders, an enlarged rectangular chamber between them inclosed by their connecting walls, an integrally formed power unit comprising an open sided rectangular frame between the two pistons the pistons and frame being simultaneously movable respectively in the cylinders and said chamber, a crank shaft, crank disks thereon, recesses in the walls of the enlarged chamber for said disks, a crank pin connecting the disks, a movable member on said pin, means for operatively connecting the member and the frame of the power unit, and means embodying the walls of the enlarged chamber and the disks for closing the open sides of the frame.



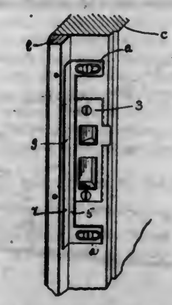
3. In internal combustion engines, a two-part casting comprising a rectangular portion forming a compression chamber one-half in each part, a cylinder in each part connecting with the chamber, a supplemental enlarged annular chamber between each cylinder and the compression chamber, suitable bearings transverse of such chamber, circular recesses formed on the inner walls of the chamber concentric with the bearings, crank disks in such recesses, a crank pin joining the disks, suitable shafts extending into the bearings from the disks, a one-piece reciprocating member comprising two power pistons slidable in the cylinders aforesaid and an open sided rectangular frame movable in the compression chamber between the cylinders its open sides being closed by the crank disks and the side walls of the chamber, a cross head on the crank pin and slidable within the rectangular frame, and suitable passage ways from the supplementary annular chambers to the opposite cylinders.

4. A double ended piston, a rectangular frame cast integrally with said piston the walls of which are adapted to serve as supplemental pistons, a rectangular two-part chamber inclosing said walls, separate cylinders cast integrally with the chamber walls, a sliding block within the rectangular frame, circular recesses within the chamber walls, crank disks rotatable in said recesses, a crank pin passing through the sliding block and connected to each crank disk, shaft extensions to the disks, and suitable ducts or passage ways leading between the cylinders and the rectangular chambers.

1,215,384. GUARD FOR DOOR-LATCHES. CHARLES F. KLINE, Cleveland, Ohio, assignor of one-half to W. C. Kline, Cleveland, Ohio. Filed Sept. 8, 1916. Serial No. 118,990. (Cl. 70—16.)

1. As a new article of manufacture, a guard for door latches consisting of sheet metal and having a relatively narrow body provided with a right angled flange along its outer edge and a flat inward projection at each end in the plane of said body having each a slot lengthwise and adapted to be adjusted to doors of different thickness.

2. As a new article of manufacture, a guard for door latches constructed of two substantially equal members having overlapping slotted ends slidably connected, and each member having an inward projection at its outer end



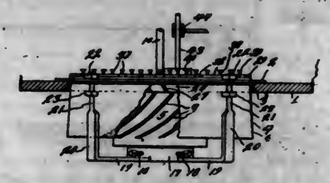
provided with a slot lengthwise thereof and a flange in overlapped relations with a flange on the other member.

1,215,385. FILTERING MEDIUM FOR CLEANING FURNACE-GASES. FRED E. KLING, Youngstown, Ohio, assignor of one-half to Luther B. Weidlein. Filed Dec. 11, 1915. Serial No. 66,854. (Cl. 75—30.)

1. A filtering medium for mechanically extracting dust from hot furnace gases consisting of a matted body of steel threads.

2. A filtering medium for mechanically extracting dust from hot furnace gases consisting of a body of steel wool.

1,215,386. WATER-MOTOR. BERNHARD J. KROGH, Cambridge, Wis. Filed May 3, 1916. Serial No. 95,181. (Cl. 253—156.)



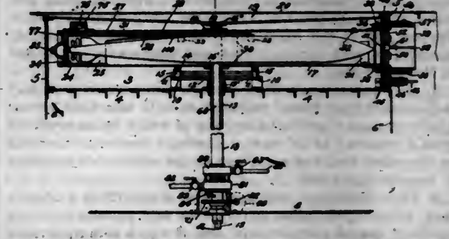
1. A submerged water turbine for flumes comprising a revoluble drum having annularly arranged inclined blades, said drum having thrust bearing, a frame for the support of said drum, a plate secured on said frame above the drum and provided with annularly arranged openings provided with plates inclined the opposite to the blades, and means for controlling the amount of fluid passing through said opening of said plate, said means comprising a valve carrying plate having a plurality of openings and the plurality of radial arms alternating with the openings of the valve plate.

2. A submerged water turbine for flumes comprising a revoluble drum having annularly arranged inclined blades, said drum having thrust bearing, a frame for the support of said drum, a plate secured on said frame above the drum and provided with annularly arranged openings provided with plates inclined the opposite to the blades, and means for controlling the amount of fluid passing through said opening of said plate, said means comprising a valve carrying plate having a plurality of openings and the plurality of radial arms alternating with the openings of the valve plate, and the plurality of auxiliary valve plates loosely carried by said radial arms coöperating with the openings of the first plate for controlling the fluid therethrough.

3. A submerged water turbine for flumes comprising a revoluble drum having annularly arranged inclined blades, said drum having thrust bearing, a frame for the support of said drum, a plate secured on said frame above the drum and provided with annularly arranged openings provided with plates inclined the opposite to the blades, and means for controlling the amount of fluid passing through said opening of said plate, said means comprising a valve carrying plate having a plurality of openings and the plurality of radial arms alternating with the openings of the valve plate, and the plurality of auxiliary valve plates loosely carried by said radial arms coöperating with the openings of the first plate for controlling the fluid therethrough, and means for adjusting said valve plate.

4. A submerged water turbine for flumes comprising a revoluble drum having annularly arranged inclined blades, said drum having thrust bearing, a frame for the support of said drum, a plate secured on said frame above the drum and provided with annularly arranged openings provided with plates inclined the opposite to the blades, and means for controlling the amount of fluid passing through said opening of said plate, said means comprising a valve carrying plate having a plurality with the openings and the plurality of radial arms alternating with the openings of the valve plate, a plurality of auxiliary valve plates, the main valve plate having annular recesses in its under face to receive said auxiliary valve plates, said auxiliary valve plates having studs loosely mounted in said arms and designed to coöperate with the opening of the first plate to control the fluid through the openings of the first plate, said main valve plate having a partial annular flange provided with gear teeth, and a rocking shaft having a pinion to engage said gear teeth for adjusting the valve plate.

1,215,387. TORPEDO-LAUNCHING APPARATUS FOR SUBMARINE BOATS. SIMON LAKE, Milford, Conn., assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn., a Corporation of Maine. Filed May 15, 1915. Serial No. 28,363. (Cl. 114—17.)



1. A submarine boat having a recess or pocket in the main hull thereof, a revoluble torpedo discharging tube mounted in said recess or pocket, means located at one end of said recess or pocket for closing the muzzle end of said tube to permit the loading of the tube from within the hull of the boat when the boat is submerged, and means for operating said closing means.

2. In a submarine boat, having a recess or pocket in the main hull thereof open to the surrounding body of water when the boat is submerged, a revoluble torpedo discharging tube mounted in said recess or pocket, a closure for the muzzle end of the torpedo discharging tube when said tube is housed within its recess or pocket, means operable from within the main hull for operating said closure whereby to render said tube water-tight to permit the loading of said tube from within the main hull, and means for closing the loading opening water-tight prior to the adjustment of the tube to firing position.

3. In a submarine boat, a revoluble torpedo discharging tube mounted thereon, means operable from within the boat for closing the muzzle end of said torpedo tube water-tight to permit the loading of said tube from within the boat when the boat is submerged, and means also operable from within the boat for closing the loading opening of the boat prior to the adjustment of said torpedo discharging tube into discharging or firing position.

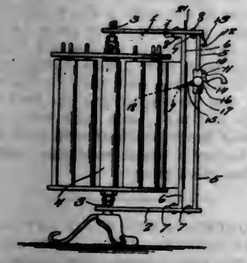
4. In a submarine boat, a revoluble torpedo discharging tube mounted thereon, means carried by and operable from

within the main hull of the boat for closing the muzzle end of the said torpedo discharging tube to permit the loading of said tube when the boat is completely submerged, and means for supplying air under pressure to said tube for expelling its charge after said tube has been adjusted into firing position.

5. In a submarine boat, a revoluble torpedo discharging tube mounted thereon, a piston operating in said tube having a spoon, and means for locking a torpedo to said spoon, said locking means being releasable when said piston reaches the end of its stroke, substantially as specified.

[Claims 6 to 17 not printed in the Gazette.]

1,215,388. CUTTING MECHANISM FOR DISPLAY-RACKS. DAVID L. LANFORD, Coleman, Tex. Filed Jan. 30, 1915. Serial No. 5,241. (Cl. 164—73.)



1. In combination, a U-shaped vertical supporting frame adapted to be secured swivelly on a standard of a display rack, said frame having a pair of vertical guide bars, which are rectangular in cross section and one being provided with a guide slot, a carriage block vertically movable on one of the bars, and a cutting device adjustably mounted in said carriage block and engageable in the slot in the other bar.

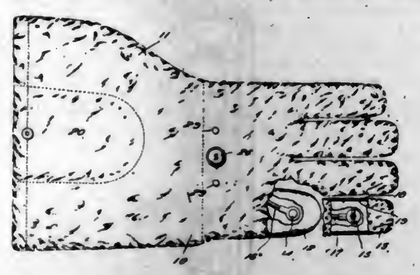
2. In combination with a vertical standard of a display rack, a U-shaped frame swiveled on said standard having a pair of spaced vertical bars, one of which being provided with a vertical guide slot, a carriage vertically movable on the other bar, and a cutting device adjustably mounted in the carriage block.

3. In combination with a vertical standard of a display rack, a U-shaped frame swiveled on said standard having a pair of spaced vertical bars, one of which being provided with a vertical guide slot, a carriage vertically movable on the other bar, and a cutting device adjustably mounted in the carriage block, and extending into the guide slot, and means for holding the carriage block in a raised position on the U-shaped frame.

4. In combination with a vertical standard of a display rack, a U-shaped frame swiveled on said standard having a pair of spaced vertical bars, one of which being provided with a vertical guide slot, a carriage vertically movable on the other bar, and a cutting device adjustably mounted in the carriage block, and extending into the guide slot, said carriage block designed to be moved vertically downwardly to sever the oil cloth vertically, said frame adapted to be swung upon the standard so that the knife will sever the oil cloth horizontally, the walls of the guide slot having a plurality of cuts to receive the cutting blade when cutting substantially horizontally..

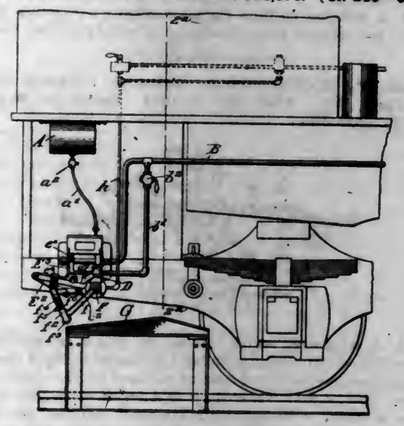
1,215,389. SIGNAL-GAUNTLET. FRANCIS E. LAURAY, Detroit, Mich. Filed Feb. 28, 1916. Serial No. 80,992. (Cl. 240—8.4.)

A signaling gauntlet comprising a closed body having a skirt, a patch piece fixed to the skirt centrally thereof to form a pocket for receiving a source of electrical supply, a lamp socket loosely mounted in the body at the back thereof, a strap riveted near the ends thereof to the body at opposite sides of the point of location of the socket and adapted to bridge the inner end of said socket, electric circuit wires connected with the source of supply within the patch piece and the socket, and circuit-closing



contacts mounted in the thumb and one finger of the glove body and connected to the ends of the wire for the closing of the electric circuit when the contacts are brought together.

1,215,390. AUTOMATIC TRAIN-STOP MECHANISM. WILLIAM E. LAWN and JAMES A. RYAN, Rochester, N. Y., assignors to Automatic Railroad Appliances Co. Inc., Rochester, N. Y., a Corporation of New York. Filed Mar. 14, 1914. Serial No. 824,594. (Cl. 246—59.)



1. In an automatic train stop mechanism, the combination with the service pipe and the emergency pipe of an air brake system, of a valve controlling both of said pipes, and automatically operable means arranged on the train and having operative connection with the valve.

2. In an automatic train stop mechanism, the combination with the service pipe and the emergency pipe of an air brake system, said pipes terminating in an annular casing, of a rotary valve movable on said casing and controlling both of said pipes, and automatically operable means arranged on the train and operatively connected with the valve.

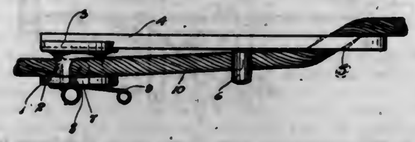
3. In an automatic train stop mechanism, the combination with a valve controlling the air brake system, of a pivoted lever coöperating with the valve, and an actuator in engagement with the lever and provided with a shoe adapted to engage a stationary abutment while the train is moving, the actuator being laterally adjustable to move the shoe out of coöperative relation with the stationary abutment.

4. In an automatic train stop mechanism, the combination with a valve controlling the air brake system, of an actuator operatively connected with the valve and provided with a shoe adapted to engage a stationary abutment while the train is moving, the actuator being laterally adjustable to move the shoe out of coöperative relation with the stationary abutment.

5. In an automatic train stop mechanism, the combination with a valve controlling the air brake system, of a pivoted lever coöperating with the valve, and an actuator in engagement with the lever and provided with a shoe adapted to engage a stationary abutment while the train is moving, the actuator being laterally adjustable to move the shoe out of coöperative relation with the stationary abutment, and fluid pressure controlled means for adjusting the actuator.

[Claims 6 to 11 not printed in the Gazette.]

1,215,391. LINE APPLIANCE. OLOF J. LOFQUIST, Grand Rapids, Mich. Filed Mar. 4, 1916. Serial No. 82,219. (Cl. 24—71.3.)

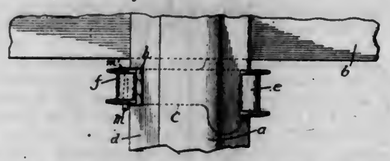


1. In a device of the character described, a drum provided with a circumferential groove and with a diametrically disposed slot in one face, a handle attached to the opposite face of the drum, said handle having a diagonally disposed slot in one edge adjacent its free end, and a pin projecting from the handle, in the same direction as the drum and located between the drum and the slot in the handle.

2. In a device of the character described, a drum provided with a circumferential groove and with a slot in one face, a handle secured to the opposite face of the drum, said handle having a slot adjacent its free end, and a spring retaining member attached at one end to the drum, extending across the slot therein and having its free end extending beyond the edge of the drum.

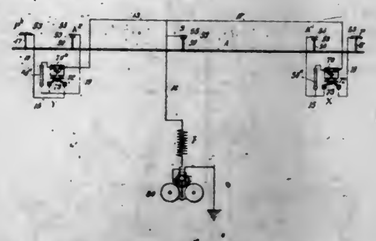
3. In a device of the character described, a drum provided with a circumferential groove and a diametrically disposed slot in one face, a handle secured to the opposite face of the drum, said handle having a diagonally disposed slot in one edge adjacent the free end of the handle, a pin projecting from the handle in the same direction as the drum and between the drum and the slot in the handle, and a spring retaining member attached at one end to the drum, passing across the slot in the drum and having its free end extending beyond the edge of the drum.

1,215,392. ANTICREEPER FOR RAILWAY-RAILS. PATRICK H. McCOOE, Indiana Harbor, Ind. Filed Jan. 22, 1916. Serial No. 73,541. (Cl. 238—4.)



An anticreeper for railway rails including one clamping member having a portion c for underlying the base of a rail and terminating in upwardly projecting hooks e and f whose tops overlie the space that receives the base of a rail; a second clamping member g adapted to engage the base of the rail and movable transversely of the rail along the first clamping member, this second clamping member having the top lip h and two separated bottom lips i, the clamp portion c being recessed to receive the lips i and having a tongue k passing into the space between the lips i to prevent the second clamping member g from moving longitudinally of the rail whose base is engaged by and between the lips h and i while resting upon the clamping portion c, the top of the hook f overlying the channel formed by the lips h and i and thereby overlying the base of a rail that is received in this channel; a key m interposed between the upright portion of the hook f and the adjacent face of the clamping member g to force this clamping member into engagement with the base of the rail; and a tie abutting lug depending from the clamp portion c and projecting beyond the same to afford a space between a tie engaged by said lug and the clamp portion c.

1,215,393. TROLLEY-CONTROLLED APPARATUS. JAMES F. McELROY, Albany, N. Y.; Susie H. McElroy, executrix of said James F. McElroy, deceased, assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed June 1, 1912. Serial No. 700,929. (Cl. 246—36.)



1. The combination with a railway line conductor, of a receiving device, a plurality of starting circuits each including said receiving device and a relay magnet, distant circuit closers controlling the respective starting circuits, maintaining circuits in series with portions of the respective starting circuits to include the relay magnets and respectively controlled by said magnets, circuit breakers for the respective maintaining circuits, and a local circuit controller acting on all of said maintaining circuits.

2. The combination with a line-conductor on a single-track railway of a local receiving device to be controlled by the trolley thereon, a starting circuit including said device and extended in both directions to a distant point, a stopping and starting device at both distant points and a local stopping device near the said receiving device.

3. The combination with the line conductor on a single-track railway, of a local receiving device to be controlled by a trolley thereon, a circuit including said device and branching in opposite directions therefrom to a distant point, a relay in each branch and beyond each relay two sub-branch circuits, one of which is a starting circuit containing a circuit-closer operated by the trolley, and the other a maintaining circuit containing a circuit-breaker operated by the trolley and also contacts controlled by the corresponding relay, and a local circuit-controller near the said receiving device and also operated by the trolley.

4. The combination with the line conductor on a single-track railway, of a local receiving device to be controlled by a trolley thereon, a starting circuit including said device and extending to distant points in opposite directions respectively, two distant starting devices, two maintaining circuits in series with the starting circuit, two distant controlling devices for said maintaining circuits and a local controller for both maintaining circuits near the said receiving device.

5. The combination with the line-conductor on a single-track railway, of a local receiving device to be controlled by a trolley thereon, a line-wire extending between two distant points on opposite sides respectively of said receiving device, a conductor extending from said line wire to said device with a resistance included therein, two distant relays in said line-wire, said line wire having two branch starting circuits at the respective distant points, one branch circuit containing a circuit-closer operated by the trolley to connect its branch circuit to the line-con-

ductor, the other containing contacts controlled by the corresponding distant relay and also a circuit-breaker located beyond the aforesaid circuit-closer and operated by the trolley to break the connection between the branch circuit which contains it and the line wire, and a local circuit-controller between the said line-wire and the receiving device.

[Claim 6 not printed in the Gazette.]

1,215,394. SWING. AMELIA MCPHERSON, Edmonton, Alberta, Canada, assignor of one-half to Robert William Conn, Edmonton, Alberta, Canada. Filed Dec. 27, 1915. Serial No. 68,875. (Cl. 155—35.)



In combination in a swing, a supporting element, a secondary support extending laterally therefrom, seat carrying ropes suspending from said element, hand grips slidably mounted on said ropes, brackets on said secondary support, a frame pivotally mounted therein, a counter balance weight on said frame, crank arms on said frame ropes connecting said hand grips to said crank arms, and guide members for said connecting ropes carried by said suspending ropes.

1,215,395. AUTOMOBILE-WHEEL ANCHOR. GEORGE W. MARCHANT and CHARLES B. BURCH, Marion, Iowa. Filed Feb. 28, 1916. Serial No. 80,804. (Cl. 152—14.)



A wheel anchor shoe, comprising a traction stirrup adapted to straddle the tire and rim, and an attached fastener therefor, consisting of a loop, as of chain, connecting with the corners of one stirrup leg, and a chain attached to one corner of the other leg, and suitable means at the other corner of said leg to connect with the free end of the chain after passing through said loop.

1,215,396. CATALYTIC AGENT. ALWIN MITTASCH, CHRISTIAN SCHNEIDER, and HUGO MORAWITZ, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed June 4, 1914. Serial No. 842,959. (Cl. 23—28.)

1. A catalytic agent containing the elements of a platinum metal and an aluminate silicate.

2. A catalytic agent containing the elements of a platinum metal and an alkali metal aluminate silicate.

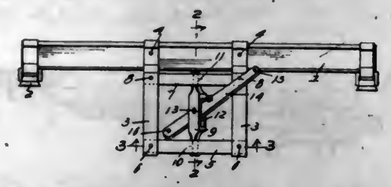
3. A catalytic agent containing the elements of a platinum metal and a zeolite.

4. A catalytic agent containing the elements of a platinum metal and an aluminate silicate in a reduced form.

5. A catalytic agent containing the elements of a platinum metal and an alkali metal aluminate silicate in a reduced form.

[Claims 6 to 18 not printed in the Gazette.]

1,215,397. BRAKE-BEAM. CHARLES D. MORRIS, Norfolk, Va. Filed June 7, 1916. Serial No. 102,222. (Cl. 188—22.)



1. The combination with a brake beam, of fulcrum pull braces secured thereto and a swiveled fulcrum mounted to take the strain away from the center of the beam.

2. A brake beam attachment comprising fulcrum pull braces attachable to the beam and a fulcrum swiveled between said braces entirely to one side of the beam.

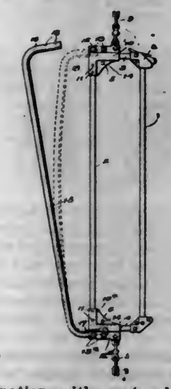
3. An attachment for a brake beam comprising fulcrum pull braces attachable to the beam, a fulcrum equalizing brace connecting the ends of said pull braces and a fulcrum swiveled at one end in said fulcrum equalizing brace.

4. An attachment to a brake beam comprising fulcrum pull braces attachable to the beam, a fulcrum equalizing brace connecting the ends of the pull braces at a distance from the beam and a fulcrum swiveled at one end in said fulcrum equalizing brace and at the other end fulcrumed adjacent the beam.

5. An attachment to a brake beam comprising fulcrum pull braces attachable to the beam, a fulcrum equalizing brace connecting the ends of the pull braces at a distance from the beam and a fulcrum swiveled at one end in said fulcrum equalizing brace and at the other end fulcrumed adjacent the beam, and a lever pivotally mounted in said fulcrum.

[Claim 6 not printed in the Gazette.]

1,215,398. SURE-STOP ATTACHMENT FOR STANCHIONS. MALCOLM B. MOYER, Montevideo, Minn. Filed Dec. 2, 1915. Serial No. 64,759. (Cl. 119—149.)



1. The combination with a stanchion, of an upright resilient stop bar spaced laterally therefrom and sprung to place it under tension, and coacting coupling means on said stop-bar and stanchion held in detachable engagement by the tension of said stop bar.

2. The combination with a stanchion, of upper and lower abutments carried respectively by the upper and lower ends thereof, and a yieldable sure-stop sprung to place it under tension and having laterally projecting arms bearing respectively against one side of the upper abutment and the other side of the lower abutment, said arms having shoulders coöperating with said abutments, the tension of the sure-stop being exerted to retain the aforesaid shoulders and abutments in engagement.

3. The combination with a stanchion, of an upright yieldable sure-stop sprung to place it under tension, said sure-stop being detachably connected at one end to the stanchion and having at its other end a laterally projecting arm, a guide on the stanchion receiving said arm, and a transverse pin passing through the guide, the arm being formed with a notch receiving said pin and the tension of the sure-stop being exerted to retain the notch in engagement with the pin.

4. The combination with a stanchion having at one end a channel bar, and a pair of plates projecting vertically from said bar beyond the channeled side thereof, of a yieldable sure-stop sprung to place it under tension and having one end detachably connected with the stanchion, said sure-stop having at its other end a laterally projecting arm received snugly in the channel of the aforesaid bar, and a transverse stop pin spanning the space between the two plates, the arm being formed with a notch receiving said pin and the notch and pin being retained in engagement by the tension of the sure-stop.

5. A sure-stop for stanchions in the form of a resilient bar having laterally extending attaching arms at its upper and lower ends, such arms being formed with notches for coöperation with abutments on the stanchion, the notch in one arm being in the opposite side thereof from the notch in the other arm.

[Claims 6 and 7 not printed in the Gazette.]

1,215,399. SEALING-WASHER FOR JARS. JOHN NEUMANN, Chicago, Ill. Filed Apr. 5, 1916. Serial No. 89,022. (Cl. 154—45.5.)



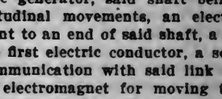
1. An annular sealing washer, having an annular groove in the face thereof and a waxy material in said groove.

2. An annular hollow sealing washer substantially U-shaped in cross section, and a wax substance in the hollow portion of the washer of a consistency capable of being squeezed out by the application of pressure to the washer.

3. An annular hollow sealing washer, substantially U-shaped in cross section and having annular grooves in its side portions.

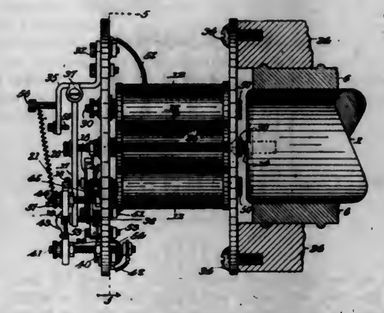
1,215,400. EMBROIDERED TRIMMING. MAHLON J. NEUMANN, Wymore, Nebr. Filed Dec. 13, 1910. Serial No. 597,134. (Cl. 112—34.)

In a strip of embroidered trimming of the Schiffli type, having festoons comprising parallel edge stitches formed of one needle thread and one shuttle thread for each festoon on the foundation fabric, the improvement which consists in a series of parallel rows of locking stitches for each festoon formed of the same threads as the parallel edge stitches in said festoon and extending longitudinally throughout the festoons, transversely across the parallel edge stitches near the outer ends of said stitches, following substantially the outline of the edge of the embroidered trimming, and forming a bead or purl as a wearing surface on the outer edge, said transverse locking stitches for each festoon crossing and reinforcing the meeting



points of the festoons and fastening the festoons together and fastening down and binding together the parallel edge stitches, thus preventing the parallel edge stitches from separating laterally or from fraying out when the foundation fabric is cut away.

1,215,401. MAGNETIC RECIPROCATOR FOR ELECTRIC GENERATORS. ELBERT R. O'KEEFFE, Omaha, Nebr., assignor of one one-hundredth to Arthur H. Sturges, Omaha, Nebr. Filed Oct. 13, 1915. Serial No. 55,635. (Cl. 171—317.)

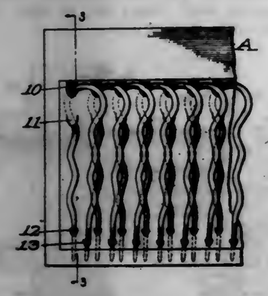


1. In combination with the shaft, armature and the coils of an electric generator, said shaft being journaled to permit longitudinal movements and the armature being normally maintained in the plane of the coils, an electromagnet positioned adjacent to an end of said shaft, an electrical conductor, a source of electric supply in communication with the conductor designated herein as the first electrical conductor to energize the electromagnet for moving the shaft longitudinally, an actuating member movable by the longitudinal movement of the shaft for terminating the communication of said conductor with said source of electric supply, a second electrical conductor designated herein as the second electric conductor in communication with the electromagnet, and means to establish a connection between the second conductor and the source of electric supply after the communication of the first named conductor with said source of electric supply has been terminated.

2. In combination with the shaft, armature and coils of an electric generator, said shaft being journaled to permit longitudinal movements, an electromagnet positioned adjacent to an end of said shaft, a link, designated herein as the first electric conductor, a source of electric supply in communication with said link or conductor to energize the electromagnet for moving the shaft longitudinally, an actuating member movable by the longitudinal movement of the shaft while interposed between the link and shaft for terminating the communication of the link with said source of electric supply to permit a reverse longitudinal movement of the shaft by operation of the coils, a metallic strip in communication with the electromagnet, and means to establish a circuit between the metallic strip and the source of electric supply after the electrical communication of the link with said source of electric supply has been terminated and after the shaft has performed its reverse longitudinal movement.

3. In combination with the shaft, armature and coils of an electric generator, said shaft being journaled to permit longitudinal movements, an electromagnet positioned adjacent to an end of said shaft, a pivotally mounted link, a source of electric supply in communication with the link to energize the electromagnet for moving the shaft longitudinally, an actuating member movable by the longitudinal movement of the shaft for terminating the communication of the link with said source of electric supply to permit a reverse longitudinal movement of the shaft by operation of the coils, a resilient strip having a metallic connection with the electromagnet, and means to establish a connection between the metallic strip and the source of electric supply after the shaft has performed its reverse longitudinal movement.

1,215,402. CARD FOR MOUNTING HAIR-PINS AND THE LIKE. HARVEY M. OWENS, Leominster, Mass., assignor to Viscoloid Company, a Corporation of Massachusetts. Filed Dec. 3, 1915. Serial No. 64,906. (Cl. 211—34.)



1. As an article of manufacture, a card for hair pins and the like, said card being provided with a single pair of openings in vertical alinement near the top thereof for receiving one leg of each hair pin, and two openings near the bottom thereof for receiving the ends of the two legs of the pin.

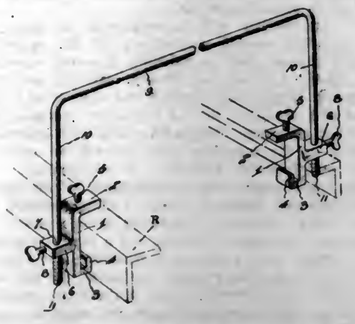
2. As an article of manufacture, a card for hair pins having three openings substantially in alinement for receiving one leg of each pin and only one opening for the other leg.

3. As an article of manufacture, a card for hair pins and the like, said card having two rows of openings at the top, those in the lower row being substantially in vertical alinement with those in the top row, each two alined openings constituting a pair for receiving one leg of a hair pin, the pairs of openings being arranged nearer together than the width of a hair pin so that the pins overlap, and twice as many sets of openings at the bottom of the card as there are openings in the top row for receiving the points of the legs of the hair pins.

1,215,403. BEDSTEAD ATTACHMENT. JOEL DANIEL PARKER, Lagrange, Tex. Filed Feb. 15, 1916. Serial No. 78,492. (Cl. 5—22.)

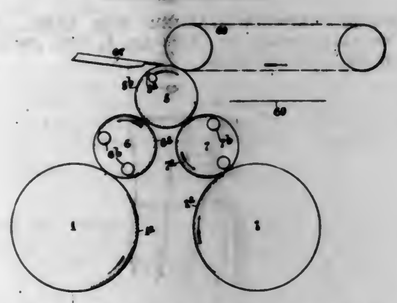
1. In a device of the class described, bracket members designed for application to the side rails of a bedstead and each comprising a body portion provided at its upper end with means for clamping engagement with the upper side of the said rail and at its lower end with means for engagement with the under side of the said rail, a frame including a cross member and side members, and extension sections separably connected with the said side members of the said frame and adjustably connected with the said brackets.

2. In a device of the class described, bracket members designed for application to the side rails of a bedstead, a frame including a cross member and side members, and extension sections separably connected with the side members of the frame and adjustably connected with the said brackets.



3. In a device of the class described, bracket members designed for application to the side rails of a bedstead and each having an opening, a frame including a cross member and side members, extension sections separably connected with the said side members of the frame, the said side members of the frame and the extension sections being designed to be interchangeably fitted through the said openings in the bracket respectively when the extension sections are connected with and disconnected from the said side members of the frame, and means for adjustably securing the said side members and said extension sections in said openings.

1,215,404. ROTARY OFFSET-PRINTING PRESS. HERBERT PEARCE and THOMAS ROBERT GILLETT PARKER, Broadheath, England, assignors to Linotype and Machinery Limited, London, England. Filed Nov. 12, 1913. Serial No. 800,443. (Cl. 101—100.)

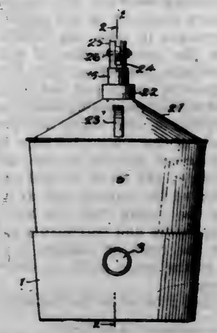


1. A rotary offset printing press having in combination two plate cylinders, two transfer cylinders each in operative contact with one of the plate cylinders, and a single impression cylinder coöperating with both the transfer cylinders, the five said cylinders being arranged with their axes in planes forming substantially an equilateral triangle, those of the two plate cylinders being in a plane below and that of the impression cylinder being in a plane above the axes of the transfer cylinders, and means for tripping and untripping the impression cylinder with reference to either both transfer cylinders simultaneously or either cylinder independently of the other.

2. A rotary offset printing press having in combination two plate cylinders, two transfer cylinders each of the latter in operative contact with one of the plate cylinders, and a single impression cylinder coöperating with both of the transfer cylinders, the five plate, transfer and impression cylinders being arranged with their axes in planes forming substantially an equilateral triangle, those of the two plate cylinders being in a plane below, and that of the impression cylinder being in a plane above, the axes

of the transfer cylinders, and means operative to move the impression cylinder off impression with the two transfer cylinders either in alternation or simultaneously.

1,215,405. CLOTHES-WASHING MACHINE. ROBERT J. S. PERRY, Belton, Tex. Filed Jan. 8, 1916. Serial No. 71,061. (Cl. 68—19.)

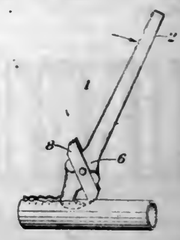


1. A washing machine comprising an outer receptacle adapted to contain a washing fluid, an inner clothes containing wall made perforate throughout its entirety provided with a rim flange at its lower end and adapted to be fitted in the outer receptacle to rest upon the bottom thereof and to be held in slightly spaced relation from the side wall, a perforated substantially conical bottom for the clothes container made of a size to be received within the carrier wall to be supported on the rim above the bottom of the outer receptacle and said bottom provided with a centrally disposed upwardly extending tubular guide, a tubular stem mounted on the tubular guide to be capable of vertical reciprocatory movement, a perforated plunger head mounted on the lower end of the tubular stem provided with top and bottom walls having different inclines, and means to be manually actuated to give the plunger head a reciprocatory movement toward and away from the perforated conical bottom to thus circulate the washing fluid in and through the receptacles and through the perforations of the bottom and the walls of the plunger.

2. A washing machine comprising an outer receptacle adapted to contain washing fluid, an inner clothes containing carrier wall formed of wire mesh made of a size to be received within the outer receptacle to rest upon the bottom thereof and to be disposed in spaced relation from the inner wall of the receptacle, a rim flange provided around the lower inner edge of the carrier wall and having its upper edge raised above the bottom of the outer receptacle, a perforated bottom for the clothes containing wall made of a size to be received within the wall and to rest upon the flange so that this perforated bottom is raised above the bottom of the outer receptacle, a tubular guide rigidly connected with said bottom portion substantially at the center thereof and arranged to extend vertically upwardly from the bottom, a tubular stem mounted on the tubular guide to be capable of reciprocatory movement in a vertical path, a perforated plunger head rigidly mounted on the lower end of the tubular stem to thus be disposed above the perforated bottom, a cover for the outer receptacle provided with a central opening through which the tubular stem is extended, and means mounted on the receptacle and connected with the extending end of the stem to be manually actuated to thus cause reciprocatory movement of the plunger with respect to the perforated oottom.

1,215,406. CUTTING-TOOL. FRANS PERSSON, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed May 20, 1916. Serial No. 98,774. (Cl. 164—80.)

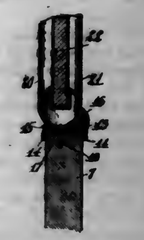
1. A cutting tool comprising a lever bar having a cutting edge at one end thereof, and a fulcrum member removably secured to the bar, said member being serrated at each end, whereby the member may be reversed to use either end as a fulcrum point.



2. A cutting tool comprising a lever bar having a cutting edge at one end thereof, fulcrum members pivoted to said bar, and lugs upon the bar arranged at each side of the fulcrum members, to limit the movement thereof, said lugs forming a bearing for the fulcrum member at each side of the pivotal point.

3. A cutting tool comprising a lever bar having a cutting edge on one end thereof, said bar being widened at a point adjacent to the cutting edge, a pair of fulcrum members pivoted to the bar at the widened portion thereof, and lugs upon the widened portion of the bar, one at each side of the fulcrum members to limit the movement thereof, said lugs forming a bearing for the fulcrum member at each side of the pivotal point.

1,215,407. WIND-SHIELD. WILLIAM F. POLSON, Buffalo, N. Y. Filed Oct. 27, 1913. Serial No. 797,545. (Cl. 21—148.)



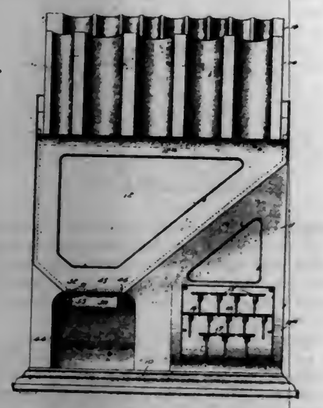
1. In combination with the dash-board, a yielding strip secured to the upper edge thereof and having a rear marginal rib along its upper face and a forward marginal web also along its upper face, and a panel pivotally secured to a suitable support and having its lower edge bearing against said rib and web.

2. In combination with the dash-board, a yielding strip having a channel on its under side to receive the upper edge of said dash-board and a rib and web at its upper side extending along opposite marginal portions, supports extending upwardly at opposite ends of said dash-board, and a panel pivotally attached at its upper end to said supports and having its lower edge in contact with said rib and web.

3. In combination with a fixed member, supports at opposite ends of said fixed member, a transparent member normally alined with said fixed member and pivotally attached to said supports, and a weather guard secured to one of said members, said guard having a rib and web on its exposed face along opposite marginal portions against which the other member bears.

4. In combination with a fixed member, a yielding strip having a rib and a web at its upper side extending along opposite marginal portions thereof, a metallic strip between said rib and web, means for fastening said yielding strip and said metallic strip to said fixed member, and a panel pivotally supported and having one of its edges in contact with said web.

1,215,408. CHANGE-DELIVERING MACHINE. THOMAS IRVING POTTER, Portland, Oreg., assignor to Coin Machine Manufacturing Company, Portland, Oreg., a Corporation of Oregon. Filed Aug. 28, 1913. Serial No. 787,126. (Cl. 133—4.)



1. In a coin delivering machine, the combination with a plurality of coin holders, each provided with an ejector guideway intersecting its lower portions, of a plurality of independent shafts journaled on parallel axes, a forwardly projecting key lever mounted for pivotal movement with each shaft and having a finger piece at its extremity, an upwardly projecting arm rigidly mounted on each shaft and forming with said shaft and key lever a bell crank mechanism, and an ejector pivotally mounted directly upon the upper end of each of said arms, each of said ejectors being adapted to work in one of the ejector guideways intersecting the bottom of a coin holder.

2. In a coin delivering mechanism, the combination with a plurality of coin holders, each having an ejector guideway intersecting its lower portion, of a plurality of shafts journaled on parallel axes and extending under the coin holders, a forwardly extending key lever mounted for pivotal movement with each shaft and having at its forward end a finger piece, an upwardly extending arm rigidly mounted at its lower end on each shaft, there being one of said arms positioned in the plane of each of the coin holders, and an ejector pivotally mounted directly on the upper end of each arm with its forward end working in the guideways intersecting the bottom of the coin holder in the plane of which its carrying arm is located.

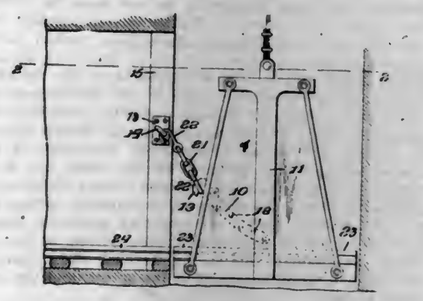
3. In a coin delivering machine, the combination with parallel rows of coin holders located one in front of the other and each holder having an ejector guideway intersecting its lower portion, of a series of horizontal shafts journaled on parallel axes and arranged in groups located at different levels, a key lever rigidly mounted at one end on each of the shafts and having at its forward end a finger piece, an upwardly extending arm rigidly mounted on each of said shafts, one being in substantially the plane of each of the coin holders, and the arms on the lower group of shafts being in the planes of the rear coin holders, and an ejector pivotally mounted directly on the upper end of each of said arms with its forward portion operating in the guideway in one of the holders, the ejectors for the rear holders being mounted on the arms of the lower shafts.

4. In a coin delivering mechanism, the combination with plurality of coin holders each having an ejector guide-way intersecting its lower portion, of a plurality of shafts journaled on parallel axes below the coin holders, a forwardly extending key lever rigidly mounted on each shaft and having a finger piece at its forward extremity, an upwardly extending arm rigidly mounted at its lower end on each shaft, there being one of said arms positioned in the plane of each of the coin holders, an ejector pivotally mounted at a point intermediate its length directly on the upper end of each arm and with its forward end working in one of said guideways, a tension spring connecting the rear end of each ejector and its supporting arm for holding the forward end of the ejector upwardly with a yielding pressure, and a tension spring for returning each arm and ejector to its normally retracted position.

5. In a coin delivering machine, the combination with a casing, coin holders mounted in the upper portion of said casing and arranged in rows one behind the other, shafts journaled in the lower portion of the casing on parallel axes, forwardly projecting key levers rigidly mounted on the respective shafts and having finger pieces thereon on the front side of the casing near one end thereof, arms rigidly mounted on said shafts and prejecting upwardly in the planes of the respective coin holders, and ejectors pivotally mounted directly on the upper ends of said arms, of a chute at the front of said casing having its discharge opening at the bottom and at a point near the opposite end of the casing from the key levers, said chute being flared upwardly and rearwardly to receive the coins from both of the rows of holders to conduct the same downwardly to the same point of delivery at one side of the key levers.

[Claims 6 and 7 not printed in the Gazette.]

1,215,409. DEVICE FOR HOLDING MINE-CAGES. WILLIAM H. PRICE, Butte, Mont. Filed Aug. 15, 1916. Serial No. 115,047. (Cl. 187—73.)



1. A device of the class described comprising a bar adapted to be attached to a mine cage and formed with a downwardly opening hook, and a flexible element adapted to be attached at one end to a stationary portion of a mine shaft and detachably engaging the hook portion of the bar at the other end.

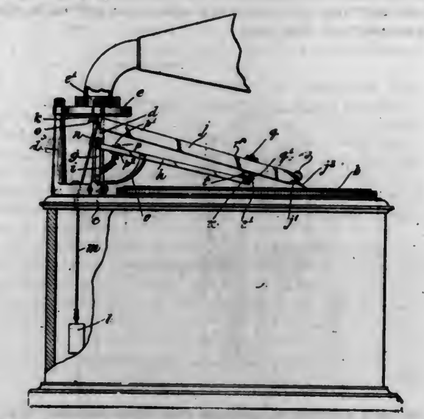
2. A device of the class described comprising an eye adapted to be attached to the stationary portion of a mine shaft, a bar having a downwardly opening terminal hook and adapted to be attached to a mine cage, and a connecting element having means at the ends for detachable engagement respectively with the eye and with the hook.

3. A device of the class described comprising a bar adapted to be attached to a movable structure and formed with a downwardly opening hook, and a flexible element adapted to be attached at one end to a stationary structure and detachably engaging the hook portion of the bar at the other end.

4. A device of the class described comprising an eye adapted to be attached to a stationary structure, a bar having a downwardly opening terminal hook and adapted to be attached to a movable structure, and a connecting element having means at the ends for detachable engagement respectively with the eye and with the hook.

5. A device of the class described comprising an eye and a bar adapted to be attached respectively to a stationary structure and a movable structure, said bar having a downwardly opening hook, and a connecting element having means at the ends for detachable engagement respectively with the eye and with the hook.

1,215,410. PHONOGRAPH. CLINTON B. REPP, Plainfield, N. J. Filed Oct. 29, 1912. Serial No. 728,435. (Cl. 274—26.)



1. A phonograph, embodying therein a movable record support, a sound box adjacent thereto and spaced away therefrom, a diaphragm mounted in said sound box, a transmitter or vibrator arm adapted to carry a reproducing stylus or point, projecting from adjacent said sound box over said record support, means whereby sound vibrations are transmitted from said arm to said diaphragm, means acting on said arm intermediate the diaphragm and the record support, whereby a downward pressure is exerted thereon, a weight, and a flexible, nonresonant strand connecting said weight and said arm adjacent said diaphragm, whereby said diaphragm and the means transmitting vibrations thereto from said arm are placed under constant, uniform tension.

2. A phonograph embodying therein a movable record support, a sound box adjacent thereto and spaced away therefrom, a diaphragm mounted in said sound box, a transmitter or vibrator arm adapted to carry a reproducing stylus or point, projecting from adjacent said sound box over said record support, means whereby sound vibrations are transmitted from said arm to said diaphragm, means acting on said arm intermediate the diaphragm and the record support, whereby a downward pressure is exerted thereon, a tensioning member, and a flexible nonresonant strand connecting said tensioning member and said arm adjacent to said diaphragm, whereby said diaphragm and the means transmitting vibrations thereto from said arm are placed under constant, uniform tension.

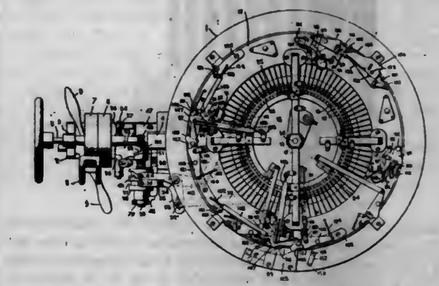
3. A phonograph embodying therein a movable record support, a sound box adjacent thereto and spaced away therefrom, a diaphragm mounted in said sound box, a transmitter or vibrator arm adapted to carry a reproducing stylus or point, projecting from adjacent said sound box over said record support, means whereby sound vibrations are transmitted from said arm to said diaphragm, means acting on said arm intermediate the diaphragm and the record support, whereby a downward pressure is exerted thereon, a tensioning member, and connections between said tensioning member and said arm adjacent to said diaphragm, whereby said diaphragm and the means transmitting vibrations thereto from said arm are placed under constant, uniform tension, said last named connections having an elastic section therein whereby flexure of the diaphragm is permitted without overcoming the inertia of said tensioning member.

4. A phonograph embodying therein a movable record support, a sound box adjacent thereto and spaced away therefrom, a diaphragm mounted in said sound box, a transmitter or vibrator arm adapted to carry a reproducing stylus or point, projecting from adjacent said sound box over said record support, means whereby sound vibrations are transmitted from said arms to said diaphragm, means acting on said arm intermediate the diaphragm and the record support, whereby a downward pressure is exerted thereon, a tensioning member, a coiled spring, and flexible cords extending therefrom to said tensioning member and to said arm adjacent said diaphragm respectively, whereby said diaphragm and the means transmitting vibrations thereto from said arm are placed under constant, uniform tension, and flexure of the diaphragm is permitted without overcoming the inertia of said tensioning member.

5. A phonograph embodying therein a movable record support, a sound box adjacent thereto and spaced away therefrom, a diaphragm mounted in said sound box, a transmitter or vibrator arm adapted to carry a reproducing stylus or point, projecting from adjacent said sound box over said record support, means whereby sound vibrations are transmitted from said arm to said diaphragm, means acting on said arm intermediate the diaphragm and the record support, whereby a downward pressure is exerted thereon, a tensioning member, a flexible, non-resonant strand connecting said tensioning member and said arm adjacent said diaphragm, whereby said diaphragm and the means transmitting vibrations thereto from said arm are placed under constant, uniform tension, and means adapted to be engaged by said flexible strand whereby the direction of the stress of said tensioning member upon the diaphragm may be varied to adapt the instrument to a lateral cut or gramophone record.

[Claims 6 to 12 not printed in the Gazette.]

1,215,411. KNITTING-MACHINE. JOHN H. RICE, Manchester, N. H., assignor to Leighton Machine Company, Manchester, N. H., a Corporation of New Hampshire. Filed June 21, 1915. Serial No. 35,238. (Cl. 66—22.)



1. A knitting machine comprising a plurality of sets of needles, means for racking said needles, a plurality of means for causing the coöperation of said needles to knit at a corresponding plurality of points, and means for suspending, during the racking operation, the action of certain of said means for causing the operation of the needles.

2. A knitting machine comprising two sets of needles, means for racking the needles of one set, a plurality of actuating mechanisms for causing the coöperation of said needles to knit at a corresponding plurality of points, means for suspending, during the racking operation, the action of certain of the actuating mechanisms for one set of needles.

3. A rib stitch knitting machine comprising a plurality of sets of needles, means for racking one set of needles, a plurality of actuating mechanisms for causing the coöperation of said needles to knit at a corresponding plurality of points, means for suspending the action of certain of the actuating mechanisms for one set of needles during the racking operation, and means operable in synchronism with said racking means for insuring the suspension of operation of said actuating mechanisms during the racking operation.

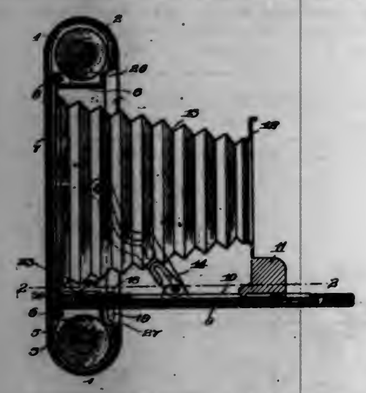
4. A rib stitch knitting machine comprising a plurality of sets of needles, means for racking one set of needles, a plurality of needle actuating mechanisms for causing the coöperation of said needles to knit at a corresponding plu-

rality of points, means for feeding yarn to the needles at such points, means for suspending the action of certain of the needle actuating mechanisms during the racking operation and means for cutting and holding the yarn leading to the suspended knitting mechanisms during the racking operation.

5. A rib stitch knitting machine comprising a plurality of sets of needles, means for racking one set of needles, a plurality of needle actuating mechanisms for causing the cooperation of said needles to knit at a corresponding plurality of points, means for feeding yarn to the needles at such points, means for suspending the action of certain of the needle actuating mechanisms during the racking operation, means for cutting and holding the yarn leading to the suspended knitting mechanisms during the racking operation and automatically operable means for releasing said holding mechanism upon resumption of operation by the suspended needle actuating mechanisms.

[Claims 6 to 18 not printed in the Gazette.]

1,215,412. FOLDING-CAMERA BED. WILLIAM A. RIDDELL, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 20, 1915. Serial No. 56,948. (Cl. 95—40.)



1. In a folding photographic camera, the combination with a body, of a bed hinged thereto and also having one end slidable relatively to the body in a direction transverse to the plane of the bed when the latter is in operative position.

2. In a folding photographic camera, the combination with a body, of a bed having a slidable and a pivotal connection with the body.

3. In a folding photographic camera, the combination with a body having a bellows chamber and a bed constituting a door for said chamber, of a sliding pivot connecting the body and bed.

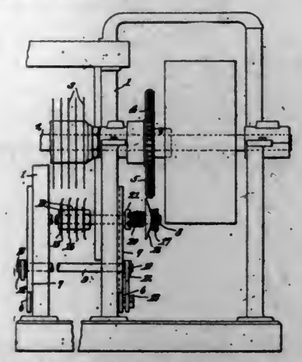
4. In a folding photographic camera, the combination with a body, a bed hinged thereto and a lens carriage movable on the bed, of a bridge piece connecting the bed and body and adapted to receive the carriage, said bridge piece being slidably connected to one part and hinged to the other on a fixed pivot.

5. In a folding photographic camera, the combination with a body, a bed hinged thereto on a sliding axis and a lens carriage movable on the bed, of a rigid bridge piece connecting the bed and body and adapted to receive the carriage, said bridge piece being slidably connected to one part and pivotally connected to the other.

[Claims 6 to 11 not printed in the Gazette.]

1,215,413. GEARING FOR GIN-SAW CLEANERS. OSBORN BRAGG ROBERTSON, Gonzales, Tex., assignor to Flowers-Lynch Gin Saw Cleaner Co., Gonzales, Tex. Filed June 19, 1916. Serial No. 104,551. (Cl. 74—7.)

1. In a gearing mechanism, two gears movable transversely of their axes to bring their axes closer together and farther apart to bring them into and out of mesh, one gear being rotated for driving the other, and means for starting the rotation of the driven gear during the time that the two gears are moved toward each other transversely of their axes.



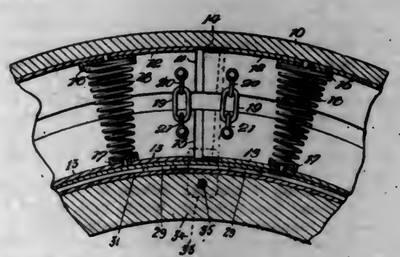
2. In a gearing mechanism, two gears movable toward and away from each other transversely of their axes into and out of mesh, one gear being rotated for driving the other, and means for starting and accelerating the movement of the driven gear as the gears are moved transversely of their axes toward each other.

3. In a gearing mechanism, two gears movable transversely of their axes toward and away from each other into and out of mesh, and a friction disk carried by one gear and engageable with the other during the time that the two gears are moved transversely of their axes toward each other.

4. In a gearing mechanism, gears movable toward and away from each other into and out of mesh and movable relatively into and out of a common plane, one gear having a beveled surface, and a spring pressed conical friction member connected to the other gear and engageable with said beveled surface during the time that the gears are moved toward each other.

5. In a gearing mechanism, a driving gear having a beveled surface at one face, a shaft, said shaft and driving gear being movable toward and away from each other, a gear slidable upon the shaft, a conical friction member secured to the second mentioned gear to contact with said beveled surface when the shaft and first mentioned gear are moved toward each other, and a spring for moving said friction member and second mentioned gear to press the friction member against the beveled surface.

1,215,414. VEHICLE-TIRE. EDWARD W. RUSSEY, Seymour, Tex., and HENRY J. COYLE and JAMES R. COYLE, Huntsville, Ala.; said Henry J. Coyle and said James R. Coyle assignors of one-sixth of the entire right to said Russey. Filed Dec. 31, 1915. Serial No. 69,587. (Cl. 152—8.)



1. In a vehicle tire, a plurality of outer and inner sections conforming to and adapted to closely engage the inner face of a tire casing and entirely inclosed thereby,

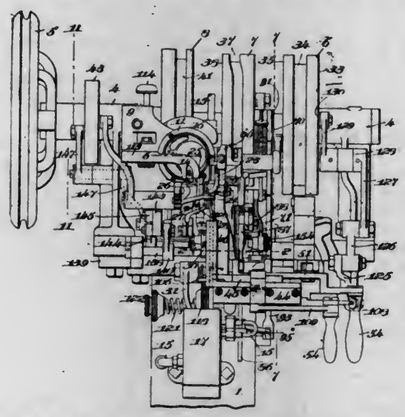
the longitudinal edges of the sections being spaced apart, a plurality of yieldable devices bearing against the inner faces of the sections at their longitudinal centers, and coupling devices connected to the inner faces of the sections and spaced inwardly from the edges of the same, said coupling devices operating to limit the outward movement of the outer sections.

2. In a vehicle tire, a plurality of outer and inner sections conforming to and adapted to closely engage the inner face of the tire casing and entirely inclosed thereby, the longitudinal edges of the sections being spaced apart, a plurality of yieldable devices bearing against the inner faces of the sections at their longitudinal centers, eyes attached to the inner faces of said sections and spaced inwardly from their edges, and links connected respectively to said eyes.

3. In a vehicle tire, a plurality of outer and inner sections conforming to and adapted to closely engage the inner face of a tire casing and entirely inclosed thereby, the longitudinal edges of the sections being spaced apart, a plurality of yieldable devices bearing against the inner faces of the sections at their longitudinal centers, and coupling devices connected to said sections and spaced inwardly from the edges of and disposed entirely within the same.

4. The combination with a wheel including the rim and tire casing, of a plurality of outer and inner rigid sections conforming to and closely engaging the inner face of the casing and the exposed portion of the rim and entirely inclosed thereby, the longitudinal edges of the sections being spaced apart, and a plurality of coupling devices connected to the inner faces of the sections and spaced inwardly from their edges, said coupling devices operating to limit the outward movement of the outer sections.

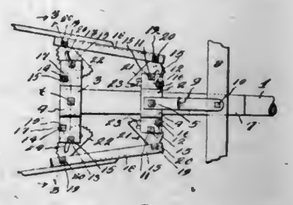
1,215,415. SEWING-MACHINE. AUGUST R. SCHOENKY, Somerville, Mass., assignor to The Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Sept. 13, 1913. Serial No. 789,624. (Cl. 112—20.)



1. In a two-thread lock-stitch shoe outsole stitching machine for a shoe having a channel preformed along its outsole and a shallow gutter preformed along the face of its welt, the combination of a work support on top of which the inverted shoe is supported and fed with the face of the shoe welt against the top side of the work support and the shoe upper against the edge of the support, a curved hooked needle, a work feeding awl, and a welt-gutter-engaging guide arranged to project upwardly in proximity to the work support so as to be engaged by the preformed welt gutter for guidance of the shoe as the stitching progresses, whereby the stitching at the welt side of the shoe is accurately counter-sunk.

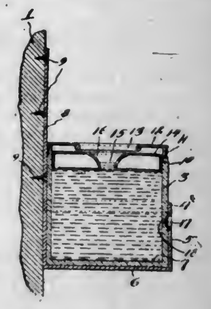
2. In a two-thread lock-stitch shoe outsole stitching machine for a shoe having a channel preformed along its outsole and a shallow gutter preformed along the face of its welt, the combination of a work support on top of which the inverted shoe is supported and fed with the face of the shoe welt against the top side of the work support, a curved hooked needle, work feeding means, a shiftable welt-gutter-engaging guide incapable of cutting the material and arranged to project upwardly in proximity to the work support so as to be engaged by the preformed welt gutter for guidance of the shoe as the stitching progresses, a device for adjusting the work feeding means to alter the stitch length at suitable times, and connections whereby the adjustment of said device automatically shifts said welt-gutter guide between operative and inoperative position.

1,215,416. ADJUSTABLE TONGUE-HOUND FOR WAGONS. ROBERT C. SCHOFIELD, Freeport, Ill. Filed Nov. 2, 1916. Serial No. 129,137. (Cl. 21—36.)



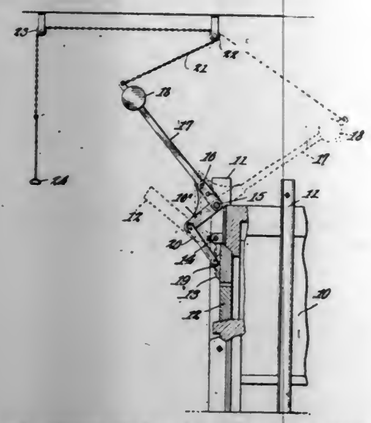
In adjustable tongue hounds for wagons, the combination of a tongue and plates, arranged in pairs, and secured to the rear portion of the tongue, of a pair of hound bars having at their ends adjustably pivoted segment plates provided with adjustable pivotal slot and pin connections between the ends of both pairs of plates of said tongue, said segment plates having gear teeth, pinions mounted between the ends of both pairs of plates of said tongue, to be engaged by the teeth of the segment plates, and bolts passing through the tongue hounds and the segment plates, and through the ends of the plates of the tongue and through the segment plates and the pinions and provided with nuts for holding the various parts in adjusted positions.

1,215,417. POULTRY-FOUNTAIN FOR CHICKEN-COOPS. HARRY SCOTT, Hamill, S. D. Filed Nov. 2, 1916. Serial No. 129,120. (Cl. 119—18.)



A poultry fountain comprising a receptacle having a cover threaded thereto, said cover having a central opening, and a hollow circular member to float upon the water in said receptacle below the cover, to prevent excessive splashing of the water as it is consumed, said float member having a central opening concentric with the opening of the cover, the wall of said opening of the float member tapering inwardly and downwardly, thereby being of a diameter less than the diameter of the upper part of said opening, to only permit a portion of the head of one fowl at a time to enter.

1,215,418. FURNACE-DOOR-OPERATING MEANS. THEODORE G. SELLECK, Chicago, Ill., assignor to Deere & Company, Moline, Ill., a Corporation. Filed Apr. 3, 1916. Serial No. 88,577. (Cl. 110—176.)



1. The combination with a pivoted furnace door, of an operating means therefor, comprising an angle lever, a link connecting one of the branches of the lever to the door, means connected to the other branch of the lever for swinging the lever, a shaft carrying the lever, and forming the fulcrum thereof, and a weight having a connection with the operating means to hold said means against a return movement at the limits of their door-opening and closing movements.

2. The combination with a pivoted furnace door, of an operating means therefor, comprising an angle lever, a link connecting one of the branches of the lever to the door, means connected to the other branch of the lever for swinging the lever, a shaft carrying the lever and forming the fulcrum thereof, and a weight having a connection with the operating means to hold the door open and closed.

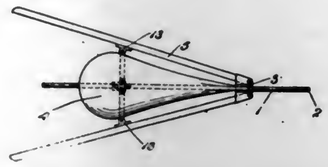
3. The combination with a pivoted furnace door, of an operating means therefor, comprising an angle lever, a link connecting one of the branches of the lever to the door, the other branch of the lever being provided with an extension, means for swinging the lever, a shaft carrying the lever and forming the fulcrum thereof, and a weight carried by the aforesaid lever extension, said lever extension swinging past the vertical center line of the shaft in both directions.

4. The combination with a pivoted furnace door, of an operating means therefor, comprising an angle lever, a link connecting one of the branches of the lever to the door, the other branch of the lever being provided with an extension, hauling means connected to the lever extension, a shaft carrying the lever and forming the fulcrum thereof, and a weight carried by the aforesaid lever extension, said lever extension swinging past the vertical center line of the shaft in both directions.

1,215,419. ADJUSTABLE SPREADER FOR TUBULAR FABRICS. HARRY A. SHIELDS, Grand Rapids, Mich. Filed Oct. 9, 1916. Serial No. 124,630. (Cl. 26—8.)

1. In a device of the character described, a rod, a block secured to the rod, arms pivotally connected to the block on opposite sides thereof and extending along the length of the rod, a pair of wings pivotally connected one on each side of the block and between the points of pivotal connection of said arms, said wings being widened and formed with convex outer surfaces adjacent their free ends, and means to simultaneously adjust both arms and wings with respect to the rod, substantially as described.

2. In a device of the character described, a rod, a block secured to the rod, arms pivotally connected to the block on opposite sides thereof and extending along the length of the rod, a pair of wings also pivotally secured to the block one on each side thereof and between the arms, said wings being widened and curved adjacent their free ends to provide convex outer surfaces, means to simultaneously adjust both arms and wings with respect to the rod, and means to adjust the wings with respect to the arms, substantially as described.



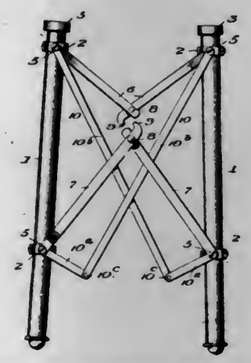
3. In a device of the character described, a rod, a block secured to the rod, arms pivotally connected to the block on opposite sides of the rod, wings pivotally connected to the block on opposite sides of the rod and between the arms, said wings each adjacent its free end being widened and curved to form a convex outer surface, a sleeve adjustably mounted on the rod, and link connections between the sleeve and said arms and wings.

4. In a device of the character described, a rod, a block secured to the rod, arms pivotally connected to the block on opposite sides of the rod, wings pivotally connected to the block on opposite sides of the rod and between the arms, said wings each adjacent its free end being widened and curved to have a convex outer surface, a sleeve adjustably mounted on the rod, links pivotally connected to the sleeve and said arms, and independently adjustable connections between said sleeve and the wings, substantially as described.

5. In a device of the character described, a rod, a section at one end of said rod turned at an angle to form a hook, a block secured to the rod, wings pivotally connected to the block on opposite sides of the rod, said wings adjacent their free ends being widened and curved to form convex outer surfaces, arms pivotally connected to the block between the wings and extended a distance beyond the ends of said wings, a sleeve slidably mounted on the rod, means to secure the sleeve in any one of a plurality of positions on the rod, and connections between the sleeve and said wings and arms, substantially as described.

[Claim 6 not printed in the Gazette.]

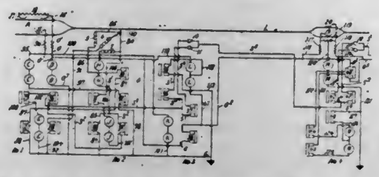
1,215,420. FOLDING STAND. CARLETON W. SMITH, New York, N. Y., assignor, by mesne assignments, to Folding Utilities Corporation, New York, N. Y., a Corporation of New York. Filed Mar. 23, 1914, Serial No. 826,570. Renewed July 31, 1916. Serial No. 112,478. (Cl. 45—117.)



1. A foldable or collapsible stand having relatively bodily movable legs, lateral foldable compression braces composed of jointed sections pivotally connected to the legs and constituting a direct connection therebetween, and tension braces each composed of jointed sections or links, each brace being pivoted to two of said legs and constituting a direct connection therebetween.

2. A foldable or collapsible stand having relatively bodily movable legs, a plurality of bracing panels for said legs, each panel comprising upper and lower lateral foldable braces composed of jointed sections pivoted to the legs, and braces each composed of jointed sections, the braces of said panels being arranged and foldable in substantially a single plane, the legs and braces being arranged and combined to define, when extended, a plurality of tetrahedral structures, and said legs being adapted to fold together in substantial parallelism.

1,215,421. BLOCK-SIGNAL SYSTEM. ROBERT H. SOUDER and HOWELL W. SOUDER, Tamaqua, Pa. Filed Nov. 18, 1915. Serial No. 62,089. (Cl. 246—36.)



1. In a block signal system, a signal at the entrance to a block, operating means adapted to change said signal when a car leaves the block, such means including an operating line extending from end to end of the block, said operating line forming part of a normally open circuit adapted to be closed by a car leaving the block, and means adapted to be operated by a car in the block to prevent an operating current flowing in said operating line.

2. In a block signal system, a signal at the entrance to a block, operating means adapted to change said signal when a car leaves the block, such means including an operating line extending from end to end of the block, said operating line forming part of a normally open circuit adapted to be closed by a car leaving the block, and means adapted to be operated by a car in the block to establish a break in said operating line.

3. In a block signal system a through-block signal at the entrance to a block, operating means therefor adapted to change said signal when a car leaves the block, spacer signals in the block, means adapted to operate said spacer signals, the operation of said last mentioned means preventing change of said through-block signal by the first mentioned means.

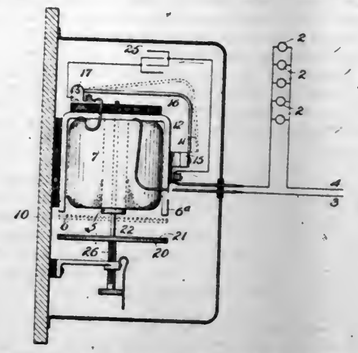
4. In a block signal system, a through-block signal at the entrance to a block, operating means therefor adapted to change said signal when a car leaves the block, such means including an operating line extending from end to end of the block, spacer signals in the block, means adapted to operate said spacer signals, the operation of such means establishing a break in said operating line.

5. In a block signal system, signals at either end of the block, operating means adapted to change the signals at both ends of the block when a car enters or leaves the latter, such means including an operating line extending from end to end of the block, and means adapted to be operated by a car on the block to establish a break in said operating line.

[Claims 6 to 21 not printed in the Gazette.]

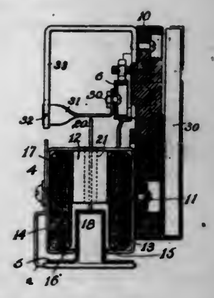
1,215,422. CURRENT-LIMITER. CHARLES H. SPANGLER, Reading, Pa., assignor of one-half to C. Clarence Long, Reading, Pa. Filed Feb. 4, 1915. Serial No. 6,011. (Cl. 175—268.)

A current limiter for electric circuits, comprising an electromagnet having spaced parallel pole members of one polarity and a wound intermediate pole member of opposite polarity with an axial opening therethrough, an adjustably-supported armature disk having a lever-operated rod extending through said opening, a fixed contact, a fixed lever support, a freely swinging contact-carrying



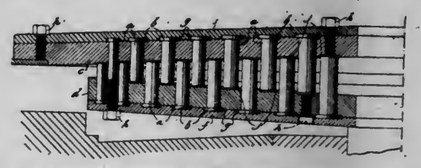
lever pivoted to said support and operated by said armature rod, and a condenser shunted across the gap.

1,215,423. CURRENT-LIMITER. CHARLES H. SPANGLER, Reading, Pa., assignor of one-half to C. Clarence Long, Reading, Pa. Filed Aug. 16, 1915. Serial No. 45,690. (Cl. 175—268.)



In a current limiter mechanism comprising an electromagnet and armature, fixedly-spaced contacts forming a break in the line, a roller bridging-contact, an armature-operated carrier lever for the latter arranged to swing in a plane approximately at right angles to the plane of said fixedly-spaced contacts, and means for imparting a turning movement to said bridging contact in making and breaking the circuit.

1,215,424. ROTARY DISINTEGRATING, PULVERIZING, OR MIXING APPARATUS. JACOB WILLIAM SPENSLEY, Manchester, England. Filed Dec. 23, 1915. Serial No. 68,372. (Cl. 83—11.)

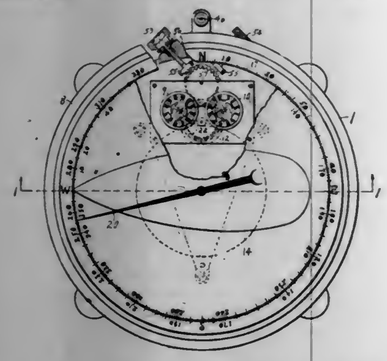


1. In a rotary disintegrating, pulverizing or mixing apparatus, the combination with a pair of dished disks each having a plurality of concentric grooves in their adjacent faces, the grooves of one disk alternating with the grooves in the other disk, and each disk having a plurality of holes formed in concentric circles and alternating with the grooves, the axes of the grooves and holes being parallel to the central axes of the disks, fixed bushes for

lining said holes, and flats formed on the rear faces of the disks around the ends of the holes, a plurality of hardened plain pins having enlarged heads forced into said holes and arranged so that the pins in one disk face the concentric grooves in the other disks with a slight clearance between the ends of the pins and the grooves, cover plates for the rear faces of said disks provided with a plurality of concentric grooves of sufficient depth just to receive the pin heads and prevent axial movement of the pins, and means for securing the cover plates to the disks.

2. In a rotary disintegrating, pulverizing or mixing apparatus, the combination with a pair of disks each having a plurality of concentric grooves in their adjacent faces, the grooves of one disk alternating with the grooves in the other disk, and each disk having a plurality of holes formed in concentric circles and alternating with the grooves, the axes of the grooves and holes being parallel to the central axes of the disks, fixed bushes for lining said holes, a plurality of hardened plain pins having enlarged heads forced into said bushes and arranged so that the pins in one disk face the concentric grooves in the other disk with a slight clearance between the ends of the pins and the grooves, cover plates for the rear faces of said disks provided with a plurality of concentric grooves of sufficient depth just to receive the pin heads and prevent axial movement of the pins, and means for securing the cover plates to the disks.

1,215,425. PLOTTING-INDICATOR. ELMER A. SPERRY, Brooklyn, N. Y., assignor to The Sperry Gyroscope Company, New York, N. Y., a Corporation of New York. Filed Dec. 18, 1914. Serial No. 877,953. (Cl. 177—351.)



1. A nautical instrument comprising an azimuth indicator, a lubber's line indicator and a target bearing index; the several parts being conjointly readable and adapted to be automatically actuated.

2. In navigational apparatus, the combination with a master compass and a target bearing telescope, of a fixed indicator, a plurality of movable indicators adapted to be automatically controlled by said compass and telescope all of said indicators being conjointly readable, whereby the bearings of the target both with respect to the meridian and to the lubber's line of the ship are shown simultaneously.

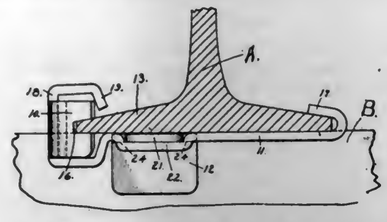
3. A telemetric azimuth indicating device for use on shipboard comprising an indicator normally fixed on the ship and adapted to show arbitrary points in azimuth, and a lubber's line indicator rotatably mounted adjacent said azimuth indicator and adapted to be actuated from a master compass.

4. A plotting indicator comprising a fixed dummy compass scale, a rotatable lubber's line indicator, a target bearing indicator and automatic means to operate each of said indicators, whereby the bearings of the ship and target are shown both with respect to each other and with respect to a fixed chart.

5. In a target bearing indicating system, the combination with a sighting instrument and a compass, each being provided with a transmitter, a repeater motor actuated from each transmitter, a lubber's line indicator connected to said compass motor, and a target bearing indicator connected to both of said motors.

[Claims 6 to 9 not printed in the Gazette.]

1,215,426. ANTICREEPER. HIRAM H. SPONENBURG, Gurnee, Ill., assignor, by mesne assignments, to Otto R. Barnett, Chicago, Ill. Filed May 29, 1916. Serial No. 100,453. (Cl. 238—4.)



1. An anti-creeper comprising a spring member, the extremities of which are notched for engagement with the edge of the base flange of a rail, and means for binding the same against the rail.

2. An anti-creeper comprising a spring member adapted to engage a rail at opposite ends, and means provided with a tie-abutting foot for binding said spring member against the rail.

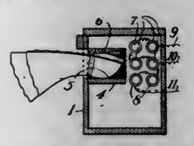
3. An anti-creeper comprising a spring member, the extremities of which are notched for engagement with the edge of the base flange of a rail, and means provided with a tie-abutting foot for binding said spring member to the rail.

4. An anti-creeper comprising a spring member to bear against a rail, means for engaging the same with the rail and a foot member to bear against the tie with which said rail-engaging means has free sliding engagement.

5. An anti-creeper comprising a spring member, the extremities of which are notched for engagement with the base flange of a rail, engaging means which extends around the spring member and rail to bind the spring member to said rail, and a foot member to bear against a tie with which said engaging means has free sliding relation.

[Claims 6 to 16 not printed in the Gazette.]

1,215,427. ELECTRICAL HEATER. LAWRENCE E. STOCKER, Lynn, Mass. Filed Apr. 22, 1915. Serial No. 23,206. (Cl. 34—26.)



1. A heater for heating the stiffening pieces of boot and shoe uppers, comprising a substantially inclosed heater; a plurality of electrical heating coils mounted in said heater; a source of electrical current; means for controlling the current so as to cause it to flow through a portion, or all of the coils, as desired; openings in said heater to permit the insertion of the portion of the upper containing the stiffening piece; and means for protecting the upper from direct contact with the heating coils.

2. A heater for heating the stiffening pieces of boot and shoe uppers, comprising a substantially inclosed heater; a plurality of electrical heating coils mounted in said heater; a source of electrical current; means for controlling the current so as to cause it to flow through a portion, or all of the heating coils, as desired; openings in said heater to permit the insertion of the portion of the upper containing the stiffening piece; means for protecting the shoe upper from direct contact with the heating coils; and a shelf to support the inserted portion of a boot or shoe upper, said shelf being composed of non-heat conducting material.

1,215,428. ARTICLE OF JEWELRY. JOHN M. TERRY, El Dorado, Ark., assignor to Eisenstadt Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 4, 1915. Serial No. 43,531. (Cl. 63—29.)



A rigid finger ring composed of but two pieces, an integral band and a head, said band having its ends spaced and said head bridging the space between the band ends and having a pair of spaced slots which receive the ends of the band, said band being formed of bendable metal and the ends thereof being firmly engaged on top of the head ends and with the end edges of the head and seating on the band periphery radially thereof so as to be rigidly connected to the head.

1,215,429. COIL STRUCTURE FOR ELECTROMAGNETIC DEVICES. CHESTER H. THORDARSON, Chicago, Ill. Original application filed Jan. 24, 1913, Serial No. 744,001. Divided and this application filed June 30, 1913. Serial No. 776,521. (Cl. 175—21.)



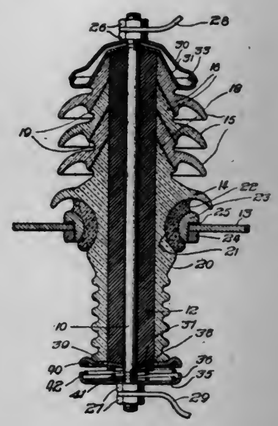
1. An electro-magnetic coil composed of a plurality of turns of bare flat wire, with a plurality of thin flexible insulating strips between adjacent turns, the adjacent turns being separated only the distance due to the thickness of the multi-ply insulation between turns, each strip being so thin as not to afford in itself a reliable insulation between the turns and the total thickness of the strips between adjacent turns being less than that of a single strip of the same material of equal insulating efficiency.

2. In an electro-magnetic device, a winding composed of a plurality of turns of bare narrow flat wire, with two or more superimposed insulating strips between adjacent turns, said strips being of uniform thickness from edge to edge and extending at the edges thereof beyond the bare edges of the wire in a manner to expose the bare edge of each turn at the side of the winding and to insulate the bare edges of adjacent turns from each other, each insulating strip being so thin as not to afford in itself a reliable insulation between the turns and the combined thickness of the multi-ply insulation between adjacent turns being less than that of a single strip of the same material of equal insulating efficiency.

3. An electro-magnetic winding composed of a plurality of turns of narrow, flat thin bare wire, with two or more thin insulating strips between adjacent turns, each strip being so thin as not to afford in itself a reliable insulation between the turns and with the combined thickness of the strips between adjacent turns less than that of a single thickness strip of the same material of equal insulating efficiency, the bare edge of each turn of said wire being exposed at the side of the winding and insulated from adjacent edges by said strips, and the cross section of the flat wire being small relatively to the bare exposed area of the side edge thereof.

4. An electro-magnetic winding composed of a plurality of turns of flat, bare, transversely continuous wire, the edges of all of the turns of which are exposed at the side of the winding, an insulating medium separating the turns and lying against the bare faces thereof, the insulating medium being of uniform thickness from edge to edge and extending at the edge thereof laterally beyond the line of contact thereof with the flat wire to provide means for avoiding short-circuiting of adjacent turns upon each other, and arranged to maintain the edges of the turns exposed to free access to an enveloping cooling medium, and to prevent obstruction or retardation in the free interchange of heat between said edges and such medium.

1,215,430. INSULATED TERMINAL FOR TRANSFORMERS AND THE LIKE. CHESTER H. THORDARSON, Chicago, Ill. Filed Feb. 10, 1915. Serial No. 7,232. (Cl. 173—311.)



1. An insulated terminal for high potential transformers and the like comprising, in combination with a conducting element, a yieldable insulating tube surrounding the same, a rigid insulating casing surrounding said tube from end to end and yielding clamping means coöperating with the ends of the tube and casing.

2. An insulated terminal for high potential transformers and the like comprising a conducting element, a yieldable insulating tube surrounding the same, a rigid insulating casing surrounding said tube and yielding holding means acting endwise against said tube and said casing to hold them in assembled relation.

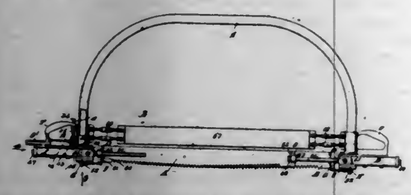
3. An insulated terminal for high potential transformers and the like comprising, in combination with a conducting element, a yieldable insulating tube surrounding the same, and a rigid sectional casing surrounding said tube, with yieldable clamping means acting against the ends of the tube and casing for holding the tube and the casing in assembled relation.

4. An insulated terminal for high potential transformers and the like comprising a conducting element, a yieldable insulating tube surrounding the same, and a sectional casing of rigid material surrounding said tube, with means for holding the tube and the casing in assembled relation, the casing sections meeting in annular joints disposed obliquely to the axis of the terminal.

5. An insulated terminal for high potential transformers and the like comprising a conducting element, a yieldable insulating tube surrounding the same, and a sectional casing of rigid material surrounding said tube, with means for holding the tube and the casing in assembled relation, the casing sections meeting in annular joints disposed obliquely to the axis of the terminal and said sections being provided with petticoat flanges which overlap said joints.

[Claims 6 to 11 not printed in the Gazette.]

1,215,431. SAWING APPARATUS. EDWARD DE VOE TOMPKINS, New York, N. Y. Filed May 1, 1914. Serial No. 835,607. (Cl. 143—68.)



1. In a device of the character described, the combination, with a pair of saw blades arranged to work in the same kerf, of means for drawing each blade alternately in opposite directions, the means for drawing one blade being arranged to operate simultaneously with but in opposite direction to the corresponding means for drawing the other blade.

2. In a device of the character described, the combination, with a pair of saw blades arranged to work in the same kerf, each blade having teeth set oppositely to those of the other blade, of means for drawing each blade alternately in opposite directions, the means for drawing one blade being arranged to operate simultaneously with but in opposite direction to the corresponding means for drawing the other blade.

3. In a machine of the character described, the combination, with a plurality of saw blades arranged to work side by side in the same kerf, of means attached to each end of each blade, each means being arranged to draw its blade in one direction, and connections whereby the means of one blade operate in alternation with each other and simultaneously with but in opposite direction to the corresponding means of the other blade.

4. In a portable sawing device, the combination, with a pair of saw blades arranged to work side by side in the same kerf, of a plurality of pistons, one for each end of each saw blade and connected thereto, and means for supplying fluid pressure alternately to the respective pistons of one blade in a direction to force each of said pistons outward, whereby the respective blade is pulled alternately in each direction, and means for supplying fluid pressure alternately to the pistons of the other blade in a direction to force each of said pistons outward, the means for supplying fluid pressure to the pistons of one blade acting in a direction opposite to that of the means for supplying fluid pressure to the other blade, whereby the blades are pulled in alternately opposite directions relative to each other.

5. The combination of a plurality of reciprocating cutting blades adapted to work in the same kerf, and pressure-operated mechanism for imparting simultaneously drag motion to each of said blades in opposite directions.

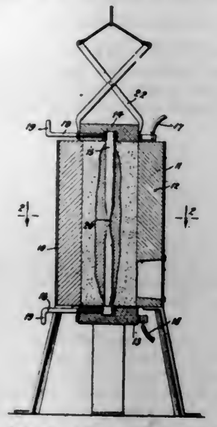
[Claims 6 to 16 not printed in the Gazette.]

1,215,432. PROCESS OF PRODUCING ARTICLES OF QUARTZ GLASS. OTTO C. TRAUTMANN, New York, N. Y., assignor to Sidio Company of America, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 10, 1916. Serial No. 114,104. (Cl. 204—64.)

1. The process of making quartz glass tubes consisting in heating the quartz into a plastic state in an electric resistance furnace about a resistance core, then breaking the resistance core and grasping the core portions and plastic and drawing the latter out into a tube with the core portions remaining in the ends thereof.

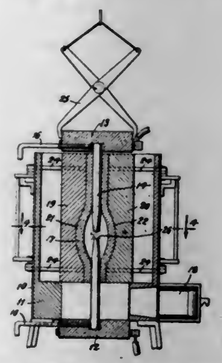
2. The process of making quartz glass tubes consisting in heating the quartz in an electric resistance furnace about a resistance core, the latter being reduced in section at a point intermediate the ends thereof, then breaking the core at its reduced portion and drawing out the tube with the portions of the core remaining in the ends thereof.

3. The process of making quartz glass tubes consisting in heating the quartz into a plastic state in an electric resistance furnace about a resistance core, then twisting the end of the core so as to break the same intermediate the ends thereof, and grasping the core portions and plastic and drawing the latter out into a tube with the core portions remaining in the ends thereof.



4. The process of making quartz glass tubes consisting in heating the quartz in an electric resistance furnace about a resistance core, the latter being reduced in section at a point intermediate the ends thereof, then twisting the end of the core so as to break the same intermediate the ends thereof at its reduced portion and drawing out the tube with the portions of the core remaining in the ends thereof.

1,215,433. PROCESS OF PRODUCING ARTICLES OF QUARTZ GLASS. OTTO C. TRAUTMANN, New York, N. Y., assignor to Sidio Company of America, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 10, 1916. Serial No. 114,105. (Cl. 204—64.)



1. The process of forming quartz glass vessels consisting in fusing the quartz material in an electric resistance furnace and then transforming the resistance furnace into an arc furnace whereby gases are generated by the arc to form a pressure to expand the plastic into a mold.

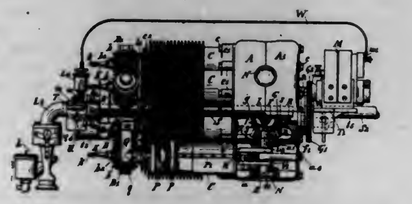
2. The process of forming quartz glass vessels consisting in heating quartz material in a resistance furnace to form a plastic mass about the resistance core, removing the unfused quartz material, and then transforming the resistance furnace into an arc furnace whereby gases are generated by the arc to form a pressure to expand the plastic into the mold.

3. The process of forming quartz glass vessels consisting in heating quartz material in a resistance furnace to form a plastic mass about the resistance core, removing the unfused quartz material, positioning a mold about the plastic, and then transforming the resistance furnace into an arc furnace whereby gases are generated by the arc to form a pressure to expand the plastic into the mold.

4. The process of forming quartz glass vessels consisting in fusing the quartz material in an electric resistance furnace around a resistance core, applying a stress upon the resistance core so as to break the same into two portions and drawing the portions out into an arc to generate gases to create a pressure in the interior of the plastic body.

5. The process of forming quartz glass vessels consisting in fusing the quartz material in an electric resistance furnace around a resistance core, applying torsion upon the resistance core so as to break the same into two portions and drawing the portions out into an arc to generate gases to create a pressure in the interior of the plastic body.

1,215,434. INTERNAL-COMBUSTION ENGINE. HENRY L. F. TREBERT, Rochester, N. Y., assignor to H. L. F. Trebert Rotary Motor Co., Inc., Rochester, N. Y., a Corporation of New York. Filed Oct. 18, 1911. Serial No. 655,326. (Cl. 123—43.)



1. In an engine a series of independent but connected units each comprising, a combustion chamber, a piston working therein, a crank shaft and a connecting rod between the crank shaft and piston, the combustion chambers arranged with their axes substantially parallel to each other; an element centrally disposed relative to the units; operative connections between the crank shafts and the central element comprising a sun gear on the central element and planet gears on the crank shafts; the central element terminating at one end within the series of units but outside of the sun gear and extending at the other end beyond the series of units; suitable bearings between the series of units and the central element permitting their relative rotation and maintaining their alinement; an induction and an eduction chamber mounted on the central element having suitable intake and exhaust ports; a suitable support for the central element; a suitable bearing for revolubly supporting the connected series of units; a hollow cylindrical valve casing for each unit of the series with its bore extending radially with reference to the central element and in each casing a hollow cylindrical valve member, spring actuated against the induction and eduction chamber to successively register with the respective ports and having a lateral opening therein and comprising an intake and exhaust connection to the corresponding combustion chamber of the series, an ignition device for each valve chamber, and means for successively energizing at suitable intervals each ignition device.

2. In an engine a series of independent but connected units each comprising, a combustion chamber, a piston working therein, a crank shaft and a connecting rod between the crank shaft and piston, the combustion chambers arranged with their axes substantially parallel to each other; an element centrally disposed relative to the units; operative connections between the crank shafts and the central element comprising a sun gear on the central element and planet gears on the crank shafts; the central element terminating at one end within the series of units but outside of the sun gear and extending at the other end beyond the series of units; suitable bearings between the series of units and the central element permitting their relative rotation and maintaining their alinement; an induction and an eduction chamber mounted on the central element having suitable intake and exhaust ports; suitable supporting means for the connected system of units and for the central element permitting their relative rotation; a hollow cylindrical valve casing for each unit of the series with its bore extending radially with reference to the central element and in each casing a hollow cylindrical valve member, spring actuated against the induction and eduction chambers, to successively register with the respective ports and having a lateral opening therein and comprising an intake and an exhaust connection to the corresponding combustion chamber of the series, an ignition device for each valve chamber and means for successively energizing at suitable intervals each ignition device.

3. In an engine a series of independent but connected units each comprising, a combustion chamber, a piston working therein, a crank shaft and a connecting rod between the crank shaft and piston, the combustion chambers arranged with their axes substantially parallel to each other; an element centrally disposed relative to the units; operative connections between the crank shafts and the central element comprising a sun gear on the central element and planet gears on the crank shafts; the central element terminating at one end within the series of units but outside of the sun gear and extended at the other end beyond the series of units; suitable bearings between the series of units and the central element permitting their relative rotation and maintaining their alinement; an induction and an eduction chamber mounted on the central element having suitable intake and exhaust ports; a suitable support for the central element; a suitable bearing for revolubly supporting the connected series of units; a hollow cylindrical casing for each unit of the series with its bore extending radially with reference to the central element and in each casing a hollow cylindrical valve member, spring actuated against the induction and eduction chambers to successively register with the respective ports and having two lateral openings therein, one of which connects with and leads to the corresponding combustion chamber and comprising an intake and an exhaust connection to the corresponding combustion chamber of the series, an ignition device located at the other lateral opening of each valve member and means for successively energizing at suitable intervals each ignition device.

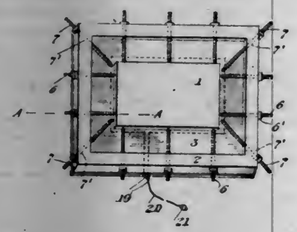
4. In an engine a series of independent but connected units each comprising, a combustion chamber, a piston working therein, a crank shaft and a connecting rod between the crank shaft and piston, the combustion chambers arranged with their axes substantially parallel to each other; an element centrally disposed relative to the units; operative connections between the crank shafts and the central element comprising a sun gear on the central element and planet gears on the crank shafts; the central element terminating at one end within the series of units but outside of the sun gear and extended at the other end beyond the series of units; suitable bearings between the series of units and the central element permitting their relative rotation and maintaining their alinement; an induction and an eduction chamber mounted on the central element having suitable intake and exhaust ports; a suitable support for the central element; a suitable bearing for revolubly supporting the connected series of units; a hollow cylindrical valve casing for each unit of the series with its bore extending radially with reference to the central element and in each casing a hollow cylindrical valve member, spring actuated against the induction and eduction chambers to successively register with the respective ports and having two lateral openings therein, one of which connects with and leads to the corresponding combustion chamber and comprising an intake and an exhaust connection to the corresponding combustion chamber of the series, an ignition device located at the other lateral opening of each valve member and means for suc-

cessively energizing at suitable intervals each ignition device.

5. In an engine a series of independent but connected units each comprising, a combustion chamber, a piston working therein, a crank shaft and a connecting rod between the crank shaft and piston, the combustion chambers arranged with their axes substantially parallel to each other; an element centrally disposed relative to the units; operative connections between the crank shafts and the central element comprising a sun gear on the central element and planet gears on the crank shafts; the central element terminating at one end within the series of units but outside of the sun gear and extended at the other end beyond the series of units; suitable bearings between the series of units and the central element permitting their relative rotation and maintaining their alinement; an induction and an eduction chamber mounted on the central element having suitable intake and exhaust ports; suitable supporting means for the connected system of units and for the central element permitting their relative rotation; suitable connecting means between each combustion chamber and the induction and eduction chamber adapted to coöperate with the ports therein for suitably timing the supply to, the compression in, and the exhaust from, each combustion chamber; for each combustion chamber an ignition device and means for successively energizing at suitable intervals each ignition device.

[Claims 6 to 10 not printed in the Gazette.]

1,215,435. MOUNTING-BLOCK FOR EMBOSSING-DIES. HORATIO E. VAN DOREN, South Bend, Ind. Filed Oct. 13, 1913. Serial No. 794,759. (Cl. 101—383.)



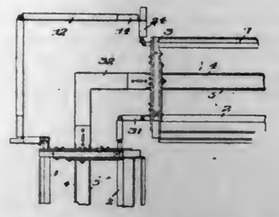
1. A flat mounting block for embossing and like dies, means carried by the block for securing a die thereon, heating means carried by the block and arranged below the same and a plate secured to the block and underlying the heating means, the vertical aggregate dimension of the block, the heating means and plate being such as to support a die type high and the block as an entirety being adapted for use on an ordinary platen printing press.

2. A flat mounting block for embossing and like dies including a block formed with a die receiving recess, means carried by the block to engage and secure a die within said recess, a heating element beneath the block and underlying the recess, a non-conducting strip arranged below the heating element and a bottom plate secured to the block and underlying the non-conducting strip, said block, heating element, non-conducting strip back plate together with a coöperating die being type high, whereby to permit the use of the mounting block on an ordinary platen printing press.

3. A flat mounting block for embossing and like dies including a block formed with a die receiving recess, means carried by the block to secure a die within the recess, a heating element arranged beneath the block and underlying the die receiving recess, edge strips secured to the block beyond the heating element whereby to confine the heating in effect to the recess portion of the block, and heat insulating means underlying and secured to the block, said heat insulating means, heating element and block being of a dimension to support a coöperating die type-high to permit the use of the block in an ordinary platen printing press.

4. As an adjunct for platen printing presses to adapt said presses for embossing purposes, consisting in a unitary structure including a mounting block, means for securing the embossing die in fixed relation to said block, and a heating means carried by the block to direct the heat to the die, such unitary structure being of a dimension to support a coöperating die type high.

1,215,436. MOLDING-MACHINE. WILL H. VAN GUILDER, New Rochelle, N. Y. Filed Apr. 25, 1914. Serial No. 834,339. (Cl. 25—131.)



1. In combination with two molding apparatus each having two walls for forming a molding space between them, and a connection between the walls by which the latter may be moved toward and from each other, a pilaster attachment connecting a wall on each apparatus and having a front face-forming wall and a lateral face-forming wall at an angle to the front face-forming wall, said lateral face-forming wall being hinged to one molding apparatus in order to permit the attachment to swing away from the corner formed thereby and a latch for securing the swinging end of the pilaster attachment to the other apparatus.

2. In combination with two molding apparatus each having two connected walls for forming a molding space between them, and a connection between the walls by which the latter may be moved toward and from each other, a pilaster attachment connecting a wall on each apparatus and having a front face-forming wall and a lateral face-forming wall rigid with the front face-forming wall, the lateral face-forming wall being hinged to the molding machine in order to permit the attachment to swing on one molding apparatus in order to be carried away from the corner formed by such attachment, and a latch for securing the swinging end of the pilaster attachment on the other apparatus.

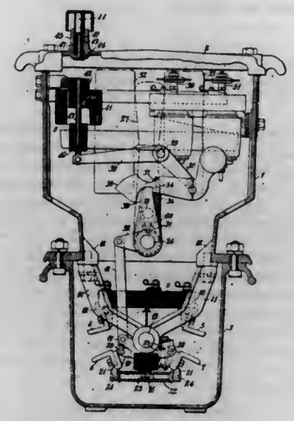
3. In combination with two molding apparatus each having two connected walls for forming a molding space between them and a connection between the walls by which the latter may be moved toward and from each other, a pilaster attachment connecting a wall on each apparatus and having a longitudinally adjustable front face-forming member and a lateral face-forming member rigid with and adjustable on the front face-forming member, said lateral face-forming member being hinged to one molding machine in order to permit the attachment to swing away from the corner formed by such attachment and a latch for securing the swinging end of the pilaster attachment on the apparatus.

4. A pilaster mold comprising two front face-forming members hinged together and, when in molding position, arranged at angles to each other, and two side face-forming members each rigidly secured to a front face-forming member at an angle to the latter, the ends of said side face-forming walls when in operative position being spaced apart and having at their free edges means adapting said members for attachment to two molding machines at angles to each other.

5. A pilaster mold comprising two connected front face-forming members arranged at right angles to each other, and two side face-forming members connected to the front face-forming members and arranged at right angles to each other, and to the front face-forming members, the side face-forming members being shorter than the front face-forming members so that their ends are spaced apart, and the free edges of said side face-forming members having means adapting the mold for attachment to two molding machines.

[Claims 6 to 11 not printed in the Gazette.]

1,215,437. ELECTRIC-CIRCUIT CONTROLLER. THEODORE VARNEY, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 27, 1912. Serial No. 700,055. (Cl. 200—8.)



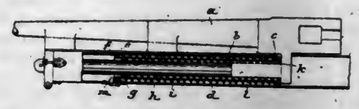
1. A controller for electric circuits comprising two sets of stationary contact terminals, an intermediate rock-shaft, a contact-supporting member rotatively mounted upon the rock-shaft, two independently pivoted sets of contact terminals carried by said supporting member, means for resiliently connecting oppositely disposed pairs of said terminals and means for producing such rotative movements of the contact-supporting member as to effect engagement of the one or the other of its sets of contact terminals with the corresponding stationary contact terminals.

2. A controller for electric motors comprising two sets of stationary contacts, an intermediate rock shaft, a set of movable contacts rotatively supported by the rock shaft, a lever for producing such a rotative adjustment of the rock shaft as to bring the movable contacts into engagement with one set of stationary contacts for motor-starting and into engagement with the other set of contacts for motor running and means dependent upon the engagement of the contacts in the motor-running position for locking the lever to maintain said position.

3. A controller for electric circuits comprising two sets of stationary contacts, an intermediate rock shaft, a set of movable contact-bearing members rotatively supported by the rock shaft, contacts pivotally secured to the contact-bearing member at opposite sides of the rock shaft, stops for limiting the rotative movement of the movable contacts on their pivots, and springs interposed between pairs of movable contacts and tending to force them against said stops.

4. A controller for electric circuits comprising two sets of stationary contacts, an intermediate rock shaft, a set of movable contact-bearing members rotatively supported by the rock shaft, contacts pivotally secured to the movable contact-bearing members at opposite sides of the rock shaft, stops for limiting the rotative adjustment of the movable contacts on their pivots, springs interposed between pairs of opposite movable contacts and tending to force them against said stops, and means for producing such rotative movement of the rock shaft as to bring the movable contacts into engagement with either the one or the other set of stationary contacts.

1,215,438. RUNNING OUT TELESCOPIC SPRINGS OF GUNS WITH RECOILING BARRELS. KARL VÖLLER, Dusseldorf, Germany. Filed Aug. 25, 1914. Serial No. 858,472. (Cl. 89—44.)



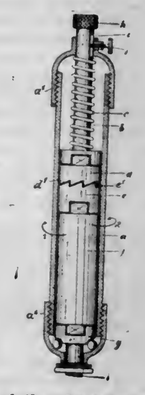
1. In combination with a gun having a recoiling barrel, and a cradle therefor, running-out gear for said barrel located in said cradle and comprising telescoping springs, the outer ends of said springs being spaced from the outer end of said cradle, a movable bearing plate for one of said springs, and a stop in the path of said movable bearing plate to prevent displacement of said plate beyond its normal position.

2. In combination with a gun having a recoiling barrel, and a cradle therefor, running-out gear for said barrel located in said cradle and comprising telescoping springs, the outer ends of said springs being spaced from the outer end of said cradle, a movable bearing plate for one of said springs, and a stop projecting into the path of said plate to prevent accidental displacement thereof, said stop being capable of being moved out of the path of said bearing plate to provide access to said springs.

3. In combination with a gun having a recoiling barrel, and a cradle therefor, running-out gear for said barrel located in said cradle and comprising telescoping springs, the outer ends of said springs being spaced from the outer end of said cradle, a movable bearing plate for one of said springs, and a pivoted stop normally in the path of said bearing plate for preventing displacement of the latter beyond its normal position.

4. In combination with a gun having a recoiling barrel, and a cradle therefor, running-out gear for said barrel located in said cradle and comprising telescoping springs, the outer ends of said springs being spaced from the outer end of said cradle, a movable bearing plate for one of said springs, and a pawl mounted on said cradle and projecting into the path of said bearing plate for preventing displacement of the latter beyond its normal position, said pawl being capable of being withdrawn from said cradle.

1,215,439. POWER-DRIVEN TOOL. HUBERT WAGNER, Gauting, near Munich, Germany. Filed May 22, 1916. Serial No. 99,260. (Cl. 74—14.)



1. In a tool of the character set forth, the combination of a casing, a power-driven rotor therein, teeth extending from the top of said rotor, a tool-supporting plunger in said casing, teeth extending from the base of said plunger, the said two sets of teeth being of practically identical pitch and equal in number, means for

retaining said plunger in yielding operative contact with said rotor, and means for preventing rotary movement but allowing axially reciprocatory movement of said plunger relative to said casing.

2. In a tool of the character set forth, the combination of a casing, a rotor therein adapted to be power-driven in either direction, a head piece to said rotor and ratchet teeth on said head piece, a tool-receiving plunger in said casing, a foot piece to said plunger and ratchet teeth on said foot piece, said rotor and said plunger with their respective toothed end pieces all being in axial alinement, resilient means for allowing said plunger to ascend the height of said teeth but retaining it always in operative contact with said rotor, the said two sets of practically identically shaped and disposed ratchet teeth in conjunction with said resilient means allowing said rotor to operate on said plunger in a reciprocatory lifting manner when rotating in the one direction, and in a rotary manner when revolving in the opposite direction, and means for preventing at will rotary movement of said plunger relative to its casing.

3. In a tool of the character set forth, the combination of a casing, a rotor therein adapted to be power-driven in either direction, ratchet teeth on said rotor, a tool-receiving plunger in said casing, ratchet teeth on said plunger, the said sets of ratchet teeth coöperating with each other either skippingly or couplingly according to the direction of drive, a helical spring encircling the shank of said plunger and tending to yieldingly press the said plunger teeth home on the said rotor teeth, and releasable means for preventing the said plunger from rotating within its casing.

1,215,440. METHOD OF MAKING SHOES. ARTHUR J. WAITE, Binghamton, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 14, 1916. Serial No. 109,308. (Cl. 12—142.)



1. That improvement in methods of making shoes which comprises assembling on a last an upper and a molded heel stiffener having an outturned flange; and shaping the upper to produce a sole attaching flange for the rear part of a stitch-down shoe by forming the upper into the angle between the body and the flange of the stiffener and fastening it with the margin of the upper turned outwardly over the flange of the stiffener.

2. That improvment in methods of making stitch-down shoes which comprises assembling an innersole, an upper and a molded stiffener having an outturned flange; shaping the upper by forming it into the crease between the flange and the body of the stiffener, and inserting through the upper, stiffener and innersole, staples located in said crease and having their bars extending lengthwise of the crease.

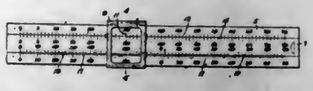
3. That improvement in methods of making shoes which comprises assembling a molded heel stiffener having an outturned flange between an upper and a lining, using the outer face and the outturned flange of the stiffener as a form over which to shape the upper, and securing the upper in shaped relation in the angle between the flange and said face of the stiffener.

4. That improvement in methods of making shoes which comprises assembling a molded heel stiffener having an outturned flange between an upper and a lining, using the outer face and the outturned flange of the stiffener as a form over which to shape the upper, and stitching a welt in position to hold the margin of the upper snugly in the angle between the flange and said face of the stiffener.

5. That improvement in methods of making shoes which comprises assembling a molded heel stiffener having an outturned flange and an upper together and using the stiffener as a form to which to shape the heel portion of the upper to produce an outturned flange and a welt crease, and confining the upper in such shaped relation to the stiffener.

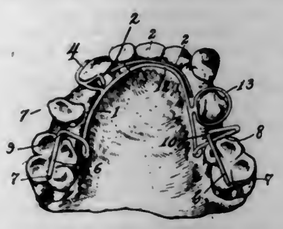
[Claim 6 not printed in the Gazette.]

1,215,441. LOCATING-RULE FOR TYPE-WRITERS. MARTHA S. WALKER, Westwood, Mass. Filed Dec. 26, 1913. Serial No. 808,774. (Cl. 33—111.)



In apparatus for locating a typewritten heading or item of predetermined length in predetermined relation to the sheet without measurement from the margin of the sheet, the combination of a scale member having graduations and numbers thereon corresponding and equal to those of a typewriter printing point scale, a co-acting scale element having similar graduations for measuring the length of said heading or item and slidably mounted relative to said scale member, and a coöperating sliding index element for indicating the relative position of the center of the typewritten heading or item and the predetermined relation to the sheet of said center, while the starting point of said heading or item is indicated by the graduation on said scale member corresponding to the zero of said co-acting element.

1,215,442. ORTHODONTIA APPLIANCE. WILLIAM E. WALKER, New Orleans, La.; J. Mort Walker, New Orleans, La., administrator of said Wm. E. Walker, deceased. Original application filed Oct. 14, 1911, Serial No. 654,769. Divided and this application filed Dec. 30, 1912, Serial No. 739,383. Renewed June 29, 1916. Serial No. 106,731. (Cl. 32—19.)



1. In orthodontia appliances, an anchorage band adapted for surrounding a tooth and provided with recesses on opposite sides, a fork-shaped gripper adapted to embrace the tooth and enter said recesses, a carrying member supported by said gripper, and pressure delivering fingers on said carrying member.

2. In orthodontia appliances, an anchorage band adapted for surrounding a tooth and provided with recesses on opposite sides, a fork-shaped gripper adapted to embrace the tooth and enter said recesses, a carrying member supported by said gripper, and pressure delivering fingers on said carrying member, comprising a member projecting in position to receive pressure from occlusion.

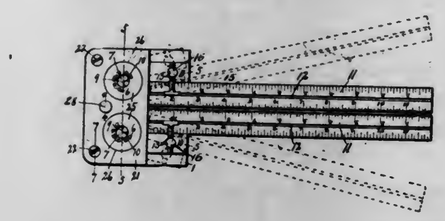
3. In orthodontia appliances, an anchorage band adapted for surrounding a tooth and provided with recesses on opposite sides, a fork-shaped gripper adapted to embrace the tooth and enter said recesses, a carrying member supported by said gripper, and a pressure delivering finger on said carrying member, comprising a member projecting in position to receive pressure from occlusion of one tooth and suspended from said carrying member in an approximately perpendicular direction thereto in order to deliver said pressure to the occlusal surface of another tooth, at a point to one side of its axis.

4. In orthodontia appliances, the combination of a carrying member, an anchorage for said carrying member on one tooth, having detachable connection with said member, a circumferential positioning member connected with said carrying member and fitting on another tooth in the same jaw, a pressure developing finger projecting from said carrying member into position to encounter a tooth in the opposite jaw by occlusion and deliver pressure to a tooth in the first named jaw.

5. In orthodontia appliances, the combination of a carrying member, an anchorage for said carrying member on one tooth having detachable connection with said member, a circumferential positioning member connected with said carrying member and fitting on another tooth in the same jaw, a pressure developing finger constructed to deliver pressure on a tooth in the same jaw and projecting from said carrying member into position to encounter a tooth in the opposite jaw by occlusion; said carrying member having two arms located on opposite sides of the dental arch; the pressure developing finger and the circumferential positioning member being connected to the respective arms of the carrying member.

[Claims 6 to 10 not printed in the Gazette.]

1,215,443. TAPER AND ANGLE MEASURING DEVICE. JOHN M. WALL and CHARLES MELDRUM, Syracuse, N. Y. Filed Aug. 7, 1915. Serial No. 44,182. (Cl. 33—91.)



1. In a taper-and-angle measuring device, the combination of two gear-connected arms movable about the axes of their respective gears and provided with radial abutments leading from said axes at right angles to each other, rectangular elongated bars seated edgewise and endwise against said abutments, and clamping devices on the arms for locking the bars thereto to turn therewith.

2. In a taper-and-angle measuring device, the combination of a base plate, a pair of intermeshing gears journaled thereon, coöperative arms secured to the gears and provided with radial abutments at right angles to each other, rectangular bars seated endwise and edgewise against said abutments and extending some distance beyond the free ends of the arms, and separate devices for clamping the bars to the arms.

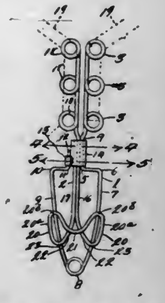
3. In a taper-and-angle measuring device, the combination of a pair of gear-connected arms, bars mounted on the arms and each having a straight edge extending radially from the axis of its supporting arm, and separate devices for clamping the bars to the arms.

4. In a taper-and-angle measuring device, the combination of a pair of gear-connected arms, bars mounted on the arms and each having a straight edge extending radially from the axis of its supporting arm, separate devices for clamping the bars to the arms, and means for locking the gears against rotation.

5. In a taper-and-angle measuring device, the combination of a base plate, intermeshing gears journaled thereon, arms secured to the gears and provided with central holes coaxial with their gears, each arm having radial abutments leading from the holes at right angles to each other, separate bars seated edgewise and endwise against said abutments and having straight edges and lengthwise grooves, separate clamping devices on the arms engaging in said grooves for locking the bars to said arms, and means for locking the gears in their adjusted positions.

[Claims 6 to 8 not printed in the Gazette.]

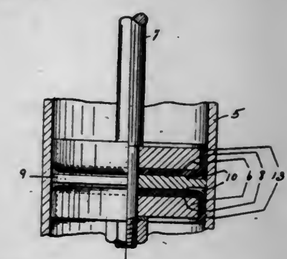
1,215,444. HOSE-SUPPORTER. SIDNEY C. WALLACE, Chicago, Ill. Filed Mar. 22, 1916. Serial No. 85,980. (Cl. 24—246.)



1. A hose supporter, comprising two clamping members provided with garter attaching means at their upper ends, means for clamping said members together, one of said members comprising an elongated loop, the other constructed from a single length of wire bent to provide a pair of adjacent parallel parts, which extend downwardly centrally of the loop member and then extend inwardly, and gradually curve outwardly, said outwardly extending portions of said parts diverging laterally, overlying the sides of said elongated loop, and terminating in side loops, the upper portions of said side loops extending inwardly toward and engaging the sides of the elongated loop, and said side loops connected by a bridge.

2. A hose supporter, comprising two clamping members, one constructed of a single length of wire bent to form a tapering loop provided at its lower end with a spring coiled eye, said loop having a short free spring portion and an upwardly extending elongated part having garter attaching means at its upper end, the other clamping member having parts in parallelism with said elongated part, one of said parallel parts of the second member having garter attaching means at its upper end, said second clamping member having side clamping loops at its lower end to overlie and engage the sides of the tapering loop, a sleeve clamp surrounding and binding said parallel parts of both members together, and provided with a lateral hook to be engaged by the extremity of said short free spring portion.

1,215,445. PUMP-PLUNGER. PERRY J. WALLER, Los Angeles, Cal. Filed Nov. 15, 1915. Serial No. 61,512. (Cl. 103—63.)

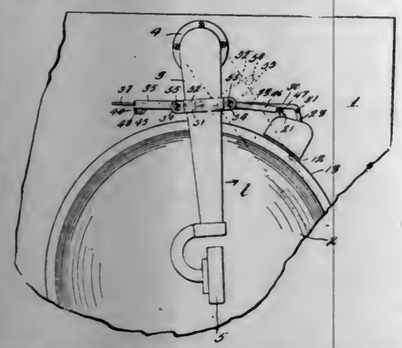


1. A plunger pump follower plate having a central hole therein and a peripheral margin rabbeted, the central portions being adapted to support the central portions of the cup leather when pumping, and the edges to contact with the pump barrel, in combination with a plunger rod to

which said plate is attached, a cup leather and a pump barrel.

2. In a pump, the combination of a pump barrel; a plunger rod; a follower plate having a working fit in the pump barrel secured to said rod, said plate having the central portions thicker than the portion adjacent to the pump barrel; and a cup leather having the central portions thereof contacting with the central portions of the plate and its outer portions spaced from the outer portions of the plate.

1,215,446. STOP FOR TALKING-MACHINES. WILLIAM S. WARD, Charlottesville, Va. Filed Apr. 14, 1916. Serial No. 91,081. (Cl. 74—46.)



1. In a stopping and release device for talking machines, a plate on the casing of the machine, a spring tensioned brake lever pivoted to the plate and having a brake shoe to engage the peripheral edge of the turn table of the talking machine, a dog movably mounted upon the plate, and a link pivoted to said dog and designed to be actuated by a member upon the tone arm of the machine to actuate the dog to operate the brake lever, whereby the shoe is thrown out of engagement with the table, and a detent lever to engage the brake lever to hold its shoe out of engagement with the table, and means pivotally connected to the detent lever and adapted to be actuated by the member on the tone arm to disengage the detent lever from the brake lever, allowing the spring tensioning means of the brake lever to actuate the same to throw the shoe in contact with the table.

2. In a stopping and release device for talking machines, a pivoted spring tensioned brake lever having a brake shoe to engage the edge of the turn table of a talking machine, a dog to actuate the brake lever to throw its shoe out of engagement with the table, a link pivoted to the dog and designed to be actuated by a member on the tone arm to operate the dog, a detent lever, said brake lever having a shoulder to be engaged by one end of the detent lever to hold the brake lever with its shoe out of engagement with the table, a link pivoted to the other arm of detent lever and having an elongated slot, in which the first link is slidably connected, said slotted link at one end having adjustable means to be engaged by the member on the tone arm for pulling the slotted link and actuating the detent lever to release the brake lever.

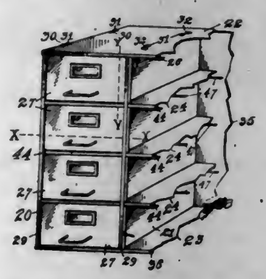
3. In a stopping and release device for talking machines, a pivoted spring tensioned brake lever having a brake shoe to engage the edge of the turn table of a talking machine, a dog to actuate the brake lever to throw its shoe out of engagement with the table, a link pivoted to the dog and designed to be actuated by a member on the tone arm to operate the dog, a detent lever, said brake lever having a shoulder to be engaged by one end of the detent lever to hold the brake lever with its shoe out of engagement with the table, a link pivoted to the other arm of detent lever and having an elongated slot, in which the first link is slidably connected, said slotted link having at one end an enlargement provided with a slot, a rod mounted in openings of ends of the enlargement to be engaged by the member on the tone arm for pulling the slotted link and actuating the detent lever to release the brake lever, spring tensioning means for said rod, and a spring tensioned detent lever mounted in said second slot to hold the rod in adjusted positions.

4. In a stopping and release device for talking machines, a pivoted spring tensioned brake lever having a brake shoe to engage the edge of the turn table of the machine, and provided with a shoulder, a pivoted dog to engage said shoulder to rock the brake lever whereby the brake shoe will be moved out of engagement with the turn table, a link pivoted to the dog and designed to be engaged by a member of the tone arm to actuate the dog.

5. In a stopping and release device for talking machines, a pivoted spring tensioned brake lever having a brake shoe to engage the edge of the turn table of the machine, and provided with a shoulder, a pivoted dog to engage said shoulder to rock the brake lever, whereby the brake shoe will be moved out of engagement with the turn table, a link pivoted to the dog and designed to be engaged by a member of the tone arm to actuate the dog, said brake lever having a second shoulder, a pivoted detent lever having an angled end to engage the second shoulder for holding the brake lever with its shoe out of engagement with said turn table, and a link having means at one end to be engaged by a member on the tone arm to actuate the detent lever to release the brake lever.

[Claim 6 not printed in the Gazette.]

1,215,447. SHEET-METAL-CASE CONSTRUCTION. WILLIAM W. WATSON and CHARLES A. ANDERSON, Jamestown, N. Y., assignors to Watson Manufacturing Company, a Corporation of New York. Filed Apr. 16, 1915. Serial No. 21,776. (Cl. 45—2.)



1. In a sheet metal case, a bottom formed with a downwardly and rearwardly extending tubular part at its front edge, said bottom being provided with openings which lead into said tubular part, vertical members seating at their lower ends on said bottom and having tubular parts at their fronts which latter extend downwardly through said openings and at their lower end edges seat on the rearwardly extending portion of the tubular part of the bottom, and a top connecting the vertical members.

2. In a sheet metal case, a bottom formed with a tubular part therebeneath at its front edge portion, said bottom being provided with openings which lead into said tubular part, vertical members having tubular parts at their fronts which are extended downwardly through said openings and into the tubular part of and beneath the bottom, said bottom openings extending through the side edges of the bottom so that the tubular parts of the vertical members will extend beyond the side edges of the bottom and below the bottom and form finished parts therefor, and a top connecting the vertical members.

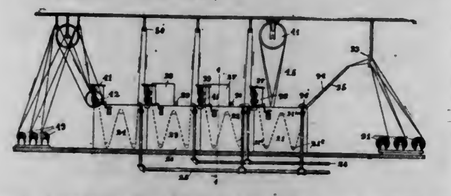
3. In a sheet metal case, vertical members formed with tubular front edge parts, a top and a bottom, each of said latter elements having a tubular part projecting downwardly and inwardly, and side flanges on the top and on the bottom, the tubular part of the top and said bottom each having cut-away parts which open upon their side edges, the cut-away part of the bottom communicating with the tubular part of the latter so that said cut-away parts may receive the ends of the tubular parts of the vertical members, and the flanges on the top and bottom may engage said vertical members, and means to secure the parts in their assembled relation.

4. In combination with vertical members having tubular front edge parts and a top and bottom connecting said members, shelves between the members, each shelf having vertically extending side and front flanges and said tubular parts having vertical slits, the side flanges of the shelves abutting the vertical members and the front flanges of the shelves having end extensions forming continuations of the front flanges of the shelves and projecting through the slits of the tubular parts, and means to secure the side flanges to the vertical members.

5. In a sheet metal case, a top and a bottom, and vertical members connected to the top and bottom, said vertical members being provided with flat longitudinal side offset portions spaced from their front edges and having their front edges bent into tubular form and then extended inwardly and terminating in flat parts which seat in the offset portions to have the outer faces of their flat parts lie flush with the faces of the vertical members on which the offset portions are formed.

[Claims 6 and 7 not printed in the Gazette.]

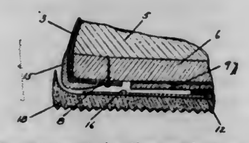
1,215,448. MACHINE FOR DYEING YARNS. CHARLES D. WHITE, Norwich, Conn. Filed Aug. 31, 1915. Serial No. 48,151. (Cl. 8—19.)



1. Apparatus for dyeing yarns, including means for successively washing, dyeing and oxidizing the yarns, and guiding means for said yarns, comprising a suspended element provided with eyes receiving said yarns, and an element including a plurality of slats over which pass said yarns in entering said apparatus, as stated.

2. An apparatus for dyeing yarns, including a plurality of washing and dyeing chambers, means for supplying dyeing material to one or more of said chambers, means for passing yarns through said chambers and guiding means for said yarns, comprising a suspended member provided with eyes receiving said yarns and a frame equipped with a plurality of slats over which pass said yarns in entering said chambers, for the purpose set forth.

1,215,449. RUBBER-SOLED SHOE. MELBOURNE W. WHITE, Cliftondale, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 24, 1915. Serial No. 16,718. (Cl. 12—142.)



1. That improvement in the method of making shoes which consists in assembling on a last an upper and a fiber innersole which has sufficient body to adapt it for holding metallic fastenings, stretching the upper about the last and securing it under tension to the innersole by metallic fastenings, applying vulcanizable outersole material to the bottom of the shoe and uniting the outersole material to the edge of the upper and the fiber innersole by vulcanization.

2. That improvement in the method of making shoes which comprises assembling on a last a fabric upper and a vegetable fiber innersole which has sufficient body to adapt it for holding lasting tacks, lasting the upper step by step in the usual manner and securing it under lasted tension to the innersole by the usual lasting tacks, applying vulcanizable outersole material to the bottom of the shoe and uniting the outersole material to the overlasted edge of the upper and to the fiber innersole by vulcanization.

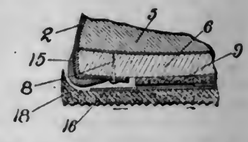
3. That improvement in the method of making shoes which consists in assembling an upper, a counter and a fiber innersole on a last, lasting the upper over on the innersole and permanently securing it to the innersole, applying a shank stiffener to the shoe, applying vulcanizable outersole material, shaping said material to the bottom of the shoe, attaching a fiber heel to the shoe, and uniting the outersole material to the overlasted edge of the upper and the fiber insole by vulcanization.

4. That improvement in the method of making shoes which consists in assembling on a last an upper and a fiber innersole, lasting the upper over on the innersole and permanently securing it to the innersole, applying a filler of vulcanizable material in the space within the overlasted edge of the upper, applying a covering sheet of friction fabric over the entire shoe bottom, applying vulcanizable outersole material, shaping said material to the bottom of the shoe and uniting the bottoming materials and the upper by vulcanization.

5. That improvement in the method of making shoes which consists in assembling on a last an upper and a fiber innersole, lasting the upper over on the innersole and permanently securing it to the innersole under tension, applying a filler of vulcanizable material shaped to occupy the space within the overlasted edge of the upper, locating a shank stiffener incased between two sheets of friction fabric upon the filler, applying a vulcanizable outersole and subjecting the bottoming materials to a vulcanizing heat.

[Claims 6 to 8 not printed in the Gazette.]

1,215,450. RUBBER-SOLE SHOE. MELBOURNE W. WHITE, Cliftondale, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Mar. 24, 1915, Serial No. 16,718. Divided and this application filed July 11, 1916. Serial No. 108,686. (Cl. 36—14.)



1. A rubber sole shoe comprising, a fiber innersole, an upper lasted over on the innersole and secured while under tension to the innersole by metallic fastenings, and an outersole of rubber composition united to the upper and the innersole by vulcanization.

2. A rubber sole shoe comprising, a fiber innersole, a fabric upper lasted over on the innersole and secured while under tension to the innersole by metallic fastenings, an outersole of rubber composition united to the upper and innersole by vulcanization, and a fiber heel attached to the shoe by metallic fastenings.

3. A rubber sole shoe comprising, a fiber innersole, a fabric upper lasted over on the innersole and secured while under tension to the innersole by metallic fastenings, a filler of vulcanizable material vulcanized to the innersole, a binder of friction fabric covering the filler and overlapping the overlasted edge of the upper to present a substantially uninterrupted outer sole receiving surface, and an outersole of rubber composition united to the upper and the innersole by vulcanization.

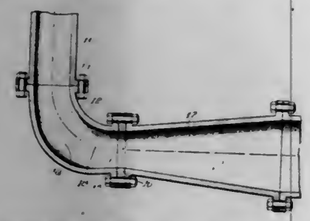
4. A rubber sole shoe comprising, a fiber innersole, a fabric upper lasted over on the innersole and secured to the innersole while under tension, a fiber heel located on the heel seat and attached to the innersole by metallic fastenings, and an outersole of rubber composition cover-

ing the shoe bottom forward of the heel and united to the innersole and the upper by vulcanization.

5. A rubber sole shoe comprising a fiber innersole, a fabric upper lasted over on the innersole and secured while under tension to the innersole by metallic fastenings, a shank stiffener extending from the heel seat to the ball portion of the shoe, a fiber heel located on the heel seat and extending over the rear end of the shank stiffener, metallic fastenings attaching the heel to the innersole, and an outersole of rubber composition covering the shoe bottom forward of the heel and united to the innersole and the upper by vulcanization.

[Claims 6 and 7 not printed in the Gazette.]

1,215,451. HYDRAULIC EQUALIZER. WILLIAM M. WHITE, Milwaukee, Wis. Filed Apr. 19, 1915. Serial No. 22,232. (Cl. 253—17.)



1. An equalizer bend for closed conduits having a constricted outlet, and an enlarged intermediate interior portion, constructed to overcome the centrifugal action of the water in flowing around the bend and cause it to issue from the constricted outlet in substantially parallel stream lines of substantially equal velocity.

2. An equalizer bend for closed conduits, gradually increasing in capacity from the entrance to an intermediate enlargement and gradually decreasing in capacity from the said enlargement toward the outlet, with a constriction at the outlet so that a body of water flowing around the bend will issue from the constricted outlet in substantially parallel stream lines of substantially equal velocity.

3. An equalizer bend for closed conduits comprising a portion of gradually increasing capacity from entrance to mid-section, and a portion of gradually decreasing capacity from mid-section to its outlet, so that a body of water flowing around the bend will issue from the constricted outlet in substantially parallel stream lines of substantially equal velocity.

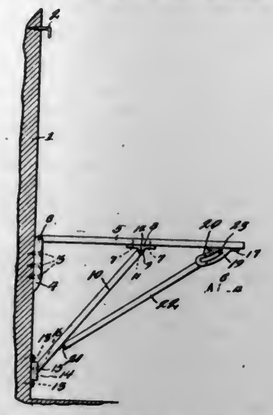
4. An equalizer bend for closed conduits comprising a section gradually increasing in capacity and a section gradually decreasing in capacity, said last named section forming a constriction at the discharge end of the bend, so that a body of water flowing around the bend will issue from the constricted outlet in substantially parallel stream lines of substantially equal velocity.

5. The combination with a flaring tube, of an equalizer bend having an enlarged intermediate interior portion and a restricted outlet communicating with the small end of said flaring tube, so that the water flowing around the bend will enter the flaring tube in substantially parallel stream lines of substantially equal velocity.

[Claims 6 to 31 not printed in the Gazette.]

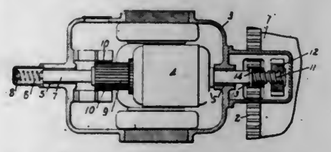
1,215,452. IRONING-BOARD. ISHAM FRANKLIN WILCOXSON, Dryden, Okla. Filed May 17, 1916. Serial No. 98,090. (Cl. 68—10.)

In an ironing board, the combination of a stationary vertical support and an ironing board hingedly connected thereto and adapted to extend horizontally therefrom or collapsed thereagainst, of a socket plate secured to the stationary support below the hinged connection of the board to the support, a brace hingedly connected to the underface of the ironing board substantially midway its ends and having its free lower end engaging the socket of the socket plate, a plate secured to the underface of the ironing board near its outer extremity and having a pair of spaced ears extending downwardly and toward the support, an auxiliary brace hinged to the dominant brace near



its lower end portion and having its outer upper end portion loosely connected to said spaced ears.

1,215,453. STARTING MECHANISM FOR AUTOMOBILES. CHARLES E. WILSON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 5, 1915. Serial No. 587. (Cl. 172—239.)



1. In a starting mechanism, the combination with a pair of coacting gear wheels, and a screw-threaded shaft for supporting one of said gear wheels, of means for simultaneously rotating said shaft and shifting it longitudinally,

2. In a starting mechanism, the combination with a pair of coacting gear wheels, and a screw-threaded shaft for supporting one of said gear wheels, of electro-responsive means for simultaneously rotating said shaft and shifting it longitudinally.

3. In a starting mechanism, the combination with a pair of coacting gear wheels, and a screw-threaded shaft for supporting one of said gear wheels, of a motor for simultaneously rotating said shaft and shifting it longitudinally.

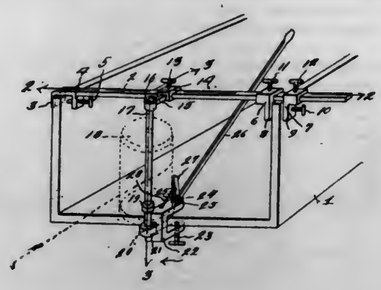
4. In a starting mechanism, the combination with a pair of coacting gear wheels, of means for shifting one of said gear wheels, into and out of mesh with the other, said means comprising a screw-threaded shaft and means for shifting the shaft longitudinally and rotating it relatively to said pinion.

5. In a starting mechanism, the combination with a pair of coacting gear wheels, of means for shifting one of said gear wheels into and out of mesh with the other, said means comprising a screw-threaded shaft and electro-responsive means for shifting the shaft longitudinally and rotating it relatively to said pinion.

[Claims 6 to 8 not printed in the Gazette.]

1,215,454. REEL DEVICE FOR BARB FENCE-WIRE AND THE LIKE. RICHARD W. WINCHELL, White River, S. D. Filed June 6, 1916. Serial No. 101,915. (Cl. 242—90.)

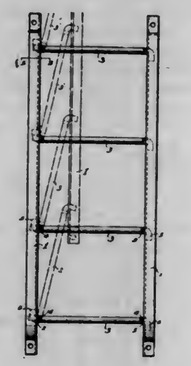
1. In a reel device for barb fence wire, the combination of a support and a bracket adjustably secured on the bottom of the support, of a bar extending transversely of the upper part of the support, a slide on said bar, a spindle having its lower end mounted in a bearing of the bracket and its upper end in a bearing of said slide, and a reel revolubly supported upon the spindle.



2. In a reel device for barb fence wire, the combination of a support and a bracket adjustably secured on the bottom of the support, of a bar extending transversely of the upper part of the support, a slide on said bar, a spindle having its lower end mounted in a bearing of the bracket and its upper end in a bearing of said slide, and a reel revolubly supported upon the spindle, and means carried by the bracket held yieldably and frictionally in engagement with the reel to prevent the wire from unreeling too rapidly.

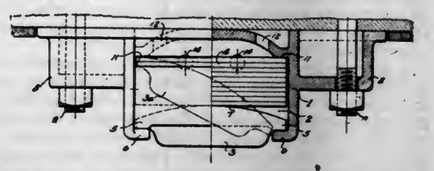
3. In a reel device for barb fence wire, the combination of a support and a bracket adjustable transversely on the bottom of the support, of a bar mounted upon the upper part of the support transversely thereof and provided with means whereby the bar may fit different widths of supports, a slide adjustable on the bar, a spindle mounted in a bearing of said bracket, and a bearing carried by the slide for the reception of the upper end of said spindle, a reel revolubly mounted upon the spindle, a collar on the spindle to support the reel, an angular lever pivoted on the bracket and having a short arm to frictionally engage the lower flange of said reel to prevent the wire from unreeling too rapidly.

1,215,455. CAR-LADDER. WILLIAM E. WINE, Toledo, Ohio. Filed Sept. 3, 1914. Serial No. 860,042. (Cl. 228—1.)



A ladder comprising stiles provided with openings in their opposed faces, a detachable rung having its ends passing through the said openings and the said ends deflected in the opposite directions to engage a face of said stile said rungs provided with shoulders near their opposite ends to coöperate with the said deflected ends in securing the rung in its said position.

1,215,456. CAR BUFFING DEVICE. WILLIAM E. WINE, Toledo, Ohio. Filed Apr. 3, 1916. Serial No. 88,622. (Cl. 213—39.)

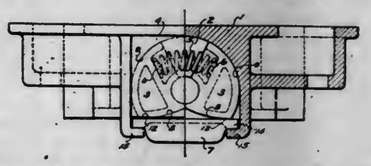


1. In a buffing device, the combination of a housing provided with an integral rear wall portion, a leaf spring member, and buffing means communicating with said spring member, said housing also being provided with a contracted opening for the reception of said buffing means, said buffing means being adapted to be inserted through said opening and positioned within the housing, said spring member having a bearing on said buffing means and the rear walls of said housing and positioned to prevent the removal of said buffing means.

2. In a buffing device, the combination of a housing provided with an integral rear wall portion having two oppositely disposed seats, a leaf spring member engaging said seats, and buffing means communicating with said spring member, said housing being also provided with a contracted opening for the reception of said buffing means, said buffing means being adapted to be inserted longitudinally through said opening and revolved horizontally into position within the housing, said spring member being adapted when in position to prevent the removal of said buffing means.

3. In a buffing device, the combination of a housing provided with an integral rear wall portion having seats thereon, said housing also having a portion of its front wall cut away forming flanges on opposite sides thereof, a leaf spring member comprising a plurality of flat spring plates adapted to engage said seats and a buffing means provided with a rearwardly extending portion of a curved form adapted to engage said spring member, said buffing means being provided with end portions engaging the flanges on said housing, said housing being also provided with an opening for the insertion of said leaf spring plates, said buffing means being adapted to be inserted longitudinally into said housing between said flanges and positioned within the housing with the end portions thereof in engagement with said flanges, said spring member being adapted when in position to prevent the removal of said buffing means.

1,215,457. FRICTION BUFFING DEVICE FOR RAILWAY-CARS. WILLIAM E. WINE, Toledo, Ohio. Filed Apr. 3, 1916. Serial No. 88,623. (Cl. 213—39.)



1. In a buffing device for cars, the combination of a housing having a chamber therein and provided with a curved wall, a buffer member in said chamber adapted to be moved inwardly by a draw bar, a pivoted friction member slidably engaging said curved wall and adapted to coöperate with said buffer member and to be moved inwardly thereby, and a resilient means for opposing the movement of said friction member, the axis of the pivot of said friction member being substantially coincident with the axis of said curved wall.

2. In a buffing device for cars, the combination of a housing having a chamber therein and provided with a curved rear wall, a buffer member in said chamber adapted to be moved inwardly by a draw bar, a pivoted friction member having a sliding contact with said curved wall

and provided with a curved front wall adapted to cooperate with said buffer member and to be moved inwardly thereby, and a spring for opposing the movement of said curved friction member, the axis of the pivot of said friction member being substantially coincident with the axis of said curved wall.

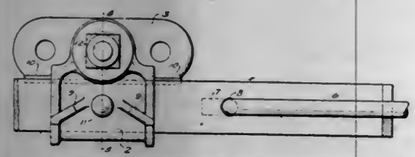
3. In a buffing device for cars, the combination of a housing having a chamber therein, said chamber being provided with a curved wall portion, a buffer member in said chamber adapted to be moved inwardly by a draw bar, and a pivoted friction member having a sliding engagement with the curved wall portion of said chamber, said friction member also having a varying contact with said buffer member and adapted to be moved inwardly thereby, and a resilient means for opposing the movement of said curved friction members, the axis of the pivot of said friction member being substantially coincident with the axis of said curved wall.

4. In a buffing device for cars, the combination of a housing having a chamber therein, and provided with a semi-circular rear wall, a buffer member in said chamber adapted to be moved inwardly by a draw bar, a pair of pivoted curved friction members slidably engaging said semi-circular rear wall and also adapted to coöperate with said buffer member and be moved inwardly thereby, and a resilient means for opposing the movement of said curved friction members, the axes of the pivots of said friction members being substantially coincident with the axis of said curved wall.

5. In a buffing device for cars, the combination of a housing having a chamber therein and provided with a semi-circular rear wall, a buffer member in said chamber adapted to be moved inwardly by a draw bar, a pivoted curved friction member having a sliding engagement with the semi-circular wall of said chamber, said curved friction member being also provided with curved front wall, which varyingly coöperates with said buffer member and a resilient means for opposing the movement of said friction member, the axis of the pivot of said friction member being substantially coincident with the axis of said curved wall.

[Claims 6 to 9 not printed in the Gazette.]

1,215,458. UNCOUPLING DEVICE. WILLIAM E. WINE, Toledo, Ohio. Filed Apr. 3, 1916. Serial No. 88,624. (Cl. 213—59.)



1. In a release rigging, the combination of an uncoupling lever and means for pivotally mounting same, comprising a bearing thereon and a bracket for the reception of said bearing, said bearing being provided with means adapted to limit its pivotal movement.

2. In a release rigging, the combination of an uncoupling lever and means for pivotally mounting same, comprising a bearing thereon and a bracket for the reception of said bearing, said bearing being provided with ribs adapted to engage said bracket to limit its pivotal movement.

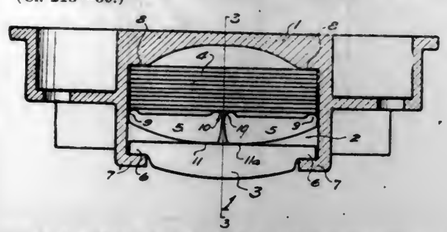
3. In a release rigging, the combination of a hand lever, means for pivotally mounting said hand lever comprising a bracket having a trunnion thereon, a bearing attached to said hand lever and engaging said trunnion and means for holding said bearing in engagement with said trunnion, and an uncoupling lever coöperating with said hand lever.

4. In a release rigging, the combination of a hand lever, means for pivotally mounting said hand lever, comprising a bearing thereof and a bracket for the reception of said bearing, and an uncoupling lever coöperating with said hand lever, said bearing being provided with means adapted to limit its pivotal movement.

5. In a release rigging, the combination of a hand lever, means for pivotally mounting said hand lever comprising a bracket having laterally disposed lugs thereon and a bearing attached to said hand lever provided with lugs adapted to engage said lugs on said bracket to limit its pivotal movement and an uncoupling lever coöperating with said hand lever.

[Claim 6 not printed in the Gazette.]

1,215,459. CAR BUFFING DEVICE. WILLIAM E. WINE, Toledo, Ohio. Filed May 22, 1916. Serial No. 99,172. (Cl. 213—39.)



1. In a buffing device for cars, the combination of a housing, a plate spring member, a buffer block and a cam member provided with bearings on movable and stationary portions of said spring member and also with a varying bearing on another member.

2. In a buffing device for cars, the combination of a housing, a plate spring member, a buffer block, and a cam member coöperating with said spring member, said cam member being provided on one side with bearings on movable and stationary portions of said spring member, the opposite side of said cam member being provided with a varying bearing on another member.

3. In a buffing device for cars, the combination of a housing, a plate spring member, buffer block, and a cam member having movable and stationary bearings on movable and stationary portions respectively of said spring member, said cam member also having a varying bearing contact with said buffer block.

4. In a buffing device for cars, the combination of a housing, a plate spring member, a buffer block, and a cam member interposed between said buffer block and said spring member, said cam member having a bearing at each end thereof on said spring member, one of said bearings being on a stationary portion and another on a movable portion of said spring member, said cam member also having a rolling bearing contact with said buffer block.

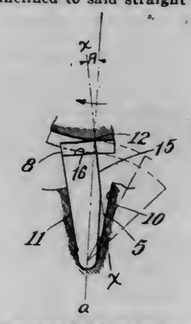
5. In a buffing device for cars, the combination of a housing, a plate spring member, a buffer block, and cam members, said cam members being provided on one side thereof with bearings which coöperate with stationary and movable portions of said spring member, the opposite side of said cam members being provided with curved walls which provide rolling bearings on another member.

[Claims 6 to 11 not printed in the Gazette.]

1,215,460. NUT-LOCK. FRANK W. WOOD, New York, N. Y., assignor, by direct and mesne assignments, to Floating Wedge Lock Nut Co. Inc., a Corporation of New York. Filed Mar. 30, 1915, Serial No. 17,964. Renewed July 25, 1916. Serial No. 111,274. (Cl. 151—25.)

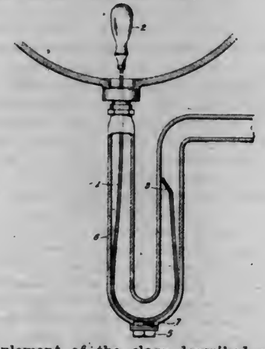
1. A nut lock comprising a nut of the character described having a V-shaped recess therein, and a V-shaped rocking member of less width than the said recess and having a face at the inner end threaded to register with the thread on the nut when in the unlocked position of said locking member, said rocking member adapted to engage one of the walls of the recess when in the unlocked position, the locking member having one edge substantially perpendicular to the tangential line extending through the point of intersection between said threads of the rocking member and such edge and adapted to form a toggle action with the bolt and to engage the other wall of the recess when in locked position.

2. A bolt nut the threaded bore of which is formed with a gap the walls of which converge in the direction of the periphery of the nut in combination with a locking member laterally movable in the gap, and comprising a wedge-shaped member having threads on its enlarged end and one edge substantially perpendicular to a tangential line passing through the point of intersection between said edge and said threads, the bolt and the locking member constituting a toggle the theoretical pivot of which toggle is at the upper end of said locking member whereby a gouging action is effected by said locking member upon the bolt when the nut is moved relatively to the bolt in the reverse direction, said gap and said locking member so constructed that the latter contacts with and is limited in its movement by one of the walls of the former when the axis of the bolt, the center of oscillation of the locking member and the theoretical center of the toggle are substantially located in the same straight line and a line passing through the perpendicular edge of said locking member will be inclined to said straight line.



3. A bolt nut the threaded bore of which is formed with a gap the walls of which converge in the direction of the periphery of the nut, in combination with a locking member laterally movable in the gap and having means cooperating with means on the nut for maintaining said member in said gap, the rocking member comprising a wedge-shaped member having threads on its enlarged end and one edge substantially perpendicular to a tangential line passing through the point of intersection between said edge and said threads, the thread portions at the perpendicular edge constituting the engaging teeth of the wedge, the bolt and the said locking member constituting a toggle the theoretical pivot of which toggle is substantially at one of the upper corners of said locking member whereby a gouging action is effected between the crests of the threads of said nut and the troughs of the engaging teeth of said wedge when the nut is reversely moved relatively to the bolt.

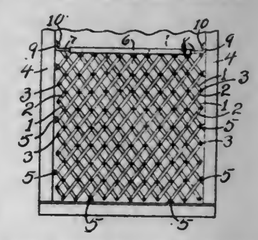
1,215,461. IMPLEMENT FOR CLEANING DRAINS. JAY H. WOOLHISER, Elmhurst, N. Y. Filed Nov. 20, 1915. Serial No. 62,642. (Cl. 137—70.)



1. An implement of the class described comprising a flexible rod formed by coiling a resilient wire in such manner that the turns in the coil are held in close contact by the tension of the wire, said rod being provided with a handle at one end whereby it may be grasped for facilitating a simultaneous thrust and rotation of the rod, and having at its opposite end a short permanently offset rigid portion bent at an angle to the axis of the coil with the turns thereof spaced apart.

2. An implement of the class described comprising a flexible rod formed by coiling a resilient wire into a coil having an internal diameter not substantially greater than the diameter of the wire, the turns of the coil being in close contact throughout substantially the entire length of the rod, a handle fixed to said rod at one end, said rod having at its opposite end a short permanently offset rigid portion bent at an angle to the axis of the coils with several turns of the wire between the bend and the end of the offset portion spaced apart, said rod having its extreme end free of any penetrating projection which would cause the end of the rod to work into the soft metal of a pipe upon rotation of the rod.

1,215,462. GUARD FOR DOORS AND THE LIKE. HOWARD L. AGEE and SIDNEY A. AGEE, Fort Worth, Tex. Filed Nov. 9, 1916. Serial No. 130,342. (Cl. 20—71.)



1. A door guard comprising an expansible member consisting of flat metal bars crossing each other at angles and pivot bolts connecting the cross-bars together at their crossings and at their ends, means for attaching the lateral edges of said expansible member to the door frame, and an extensible brace consisting of tubular members telescoping together and having slots in the lower sides thereof for engaging the upper edge of said expansible member and held in engagement therewith by the pivot bolts in the upper ends of said metal bars.

2. A door guard comprising an expansible member consisting of flat metal bars crossing each other at angles and pivot bolts connecting the cross-bars at their crossings and at their ends, brackets for attaching the lateral edges of said expansible member to the door frame, and an extensible brace for the upper and lower edges of said expansible member consisting of tubular telescopic members having longitudinal slots to receive the edges of said expansible member and held in engagement therewith by the heads of said pivot bolts.

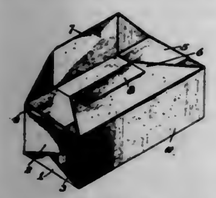
3. A door guard comprising an expansible member consisting of flat metal bars crossing each other at angles and pivotally connected together, brackets for attaching the lateral edges of said expansible member to the frame, extensible braces for the upper and lower edges of said expansible member consisting of tubular telescopic members having lugs at their outer ends for attaching the extensible member to the frame and having longitudinal slots in the sides to receive the edges of said expansible member, and means for holding said extensible members in operative relation with said expansible member.

1,215,463. PROCESS FOR RUST-PROOFING METAL. WILLIAM H. ALLEN, Detroit, Mich., assignor to Parker Rust-Proof Company of America, Detroit, Mich., a Corporation of Michigan. Filed Nov. 6, 1915. Serial No. 60,072. (Cl. 148—41.)

1. The process of rendering articles of iron and steel rust-proof which consists in immersing the same in a solution of ferric acid phosphate.

2. The process of rendering articles of iron and steel rust-proof which consists in immersing the same in a substantially boiling bath of water containing about eight-tenths per cent. of ferric acid phosphate.

1,215,464. PACKAGE AND METHOD OF SEALING PACKAGES. HARRY Y. ARMSTRONG, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed Nov. 27, 1914. Serial No. 874,136. (Cl. 93—2.)



1. A package comprising an article, a wrapper folded about said article and a strip of sheet material carrying a readily fusible substance inserted between the wrapper flaps and secured to the wrapper flaps by said fusible substance.

2. A package comprising an article and a wrapper folded about said article, and a strip of material carrying a readily fusible substance, said strip overlapping both flaps of the wrapper and being sealed to both of said flaps by the melting and subsequent cooling of said substance while in contact with said flaps.

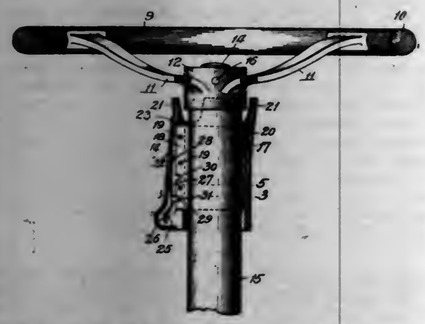
3. A package comprising an article, a wrapper of lightly paraffined paper folded about said article and a strip of heavily paraffined paper to which both flaps of the wrapper are united by the paraffin carried by said strip.

4. The method of sealing package wrappers which consists in introducing between the overlapping flaps to be sealed a strip of material carrying a readily fusible substance and heating said flaps and material sufficiently to melt said substance and thereby secure said flaps together.

5. The method of sealing package wrappers which consists in overlapping the wrapper flaps to be sealed on a heavily paraffined strip of material, heating said flaps and strip sufficiently to melt the paraffin and allowing the heated parts to cool while pressing the flaps and strip together until the paraffin has hardened.

[Claim 6 not printed in the Gazette.]

1,215,465. LOCKING DEVICE FOR MOTOR-VEHICLES. EDWARD P. BAIRD, Evanston, Ill. Filed May 26, 1915. Serial No. 30,520. (Cl. 70—90.)



1. The combination with steering mechanism comprising a column and a steering wheel mounted at the top of the column, of a band fitting around the column, means for clamping the band to the column, a locking sleeve for securing said wheel against rotation, slidably mounted on the band, and means for locking the sleeve in position to secure the wheel against rotation.

2. The combination with steering mechanism comprising a column and a steering wheel mounted at the top of the column, of a longitudinally split band fitting around the column, means for clamping the band on the column, a locking sleeve for securing the wheel against rotation, slidably mounted on the sleeve, and means for locking the sleeve in position to secure the wheel against rotation.

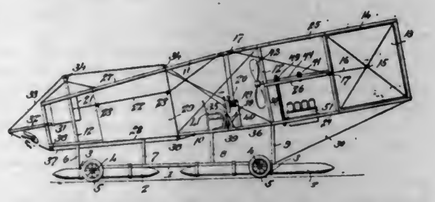
3. The combination with steering mechanism comprising a column and a rotatable controller wheel over the column, and having spokes, of a sleeve movable vertically along the column and provided with means adapted to pass between the spokes of the wheel to secure it against rotation and prevent the vehicle from being steered, and locking-means for securing said sleeve in position to lock said wheel.

4. The combination with steering mechanism comprising a column and a rotatable controller wheel over the column and having spokes, of a sleeve movable vertically along the column, provided with means adapted to pass between the spokes of the wheel to secure it against rotation and prevent the vehicle from being steered and secured against rotation around the column and locking-means for said sleeve.

5. The combination with steering mechanism comprising a column and a rotatable controller wheel over the column and having spokes, of a band clamped to the column, a sleeve movable vertically along the band and provided with means adapted to pass between the spokes of the wheel to secure it against rotation and prevent the vehicle from being steered, and locking-means between said sleeve and said band.

[Claims 6 to 8 not printed in the Gazette.]

1,215,466. AEROPLANE. JOHN WILLIAM BARCUS, Baltimore, Md. Filed Sept. 7, 1915. Serial No. 49,305. (Cl. 244—14.)

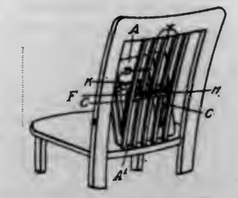


1. In an aeroplane, a frame, a pair of fixed superimposed planes at the forward end of said frame, the said planes being of equal length and width and having their lateral edges inclined forwardly and inwardly, superimposed planes at the rear portion of said frame, and the upper of said rear planes having its lateral edges inclined inwardly and rearwardly, substantially as described.

2. In an aeroplane comprising a frame having propelling and steering mechanism, superimposed spaced supporting planes at the forward end of said frame, said planes being of substantially trapezoidal shape and having their shortest longitudinal edges disposed forwardly, an intermediate plane arranged parallel with and between said first mentioned planes and being of a width equal thereto, and the said intermediate plane being of a width equal to that of the first mentioned plane and of a length equal to the longest side of said trapezoidal planes, substantially as described.

3. In an aeroplane comprising a frame having propelling and steering mechanism, superimposed spaced supporting planes in arrears of the propelling mechanism, the uppermost of said planes being of trapezoidal shape and having its longest edge disposed forwardly, and the lowermost of said planes being of rectangular shape and substantially smaller than said upper plane, and vertical planes connecting said superimposed planes, substantially as described.

1,215,467. AUXILIARY BACK-REST FOR CHAIRS. THOMAS N. BEARFIELD, Chicago, Ill., assignor of one-half to James W. Elliker, Chicago, Ill. Filed Dec. 7, 1914. Serial No. 875,782. (Cl. 155—26.)



1. A back rest device comprising upright spring arms, a back panel to the lower portion of which the lower ends of said spring arms are secured with their free upper ends diverging from the panel but adapted to yield toward it, and means for fastening said upper ends of said arms to a chair back.

2. A back rest device comprising upright spring arms, a back panel to the lower portion of which the lower ends of said spring arms are secured with their free upper ends diverging from the panel but adapted to yield toward it, a cross tie connecting said upper ends of said arms, and means on the cross tie for fastening the device to a chair back.

3. A back rest device comprising upright spring arms, a back panel to the lower portion of which the lower ends of said spring arms are secured with their free upper ends diverging from the panel but adapted to yield toward it, a cross tie connecting said upper ends of said arms, a pair of loops loosely carried on said cross tie, and a securing strap adapted to be passed through said loops.

4. A back-rest device comprising an attaching element composed of two upright spring arms and a cross-tie connecting their upper ends; a back panel composed of flexible sheet material and a frame work of flat spring members to which said material is secured, the spring arms of the attaching element being secured to the frame members of the back panel near the lower edge thereof, said spring arms diverging upwardly from the panel above their points of attachment thereto, and being adapted to yield for rendering the device resilient, together with means for securing the cross-tie of said attaching element to a chair back.

5. A back rest device comprising two upright spring arms, a back panel composed of flexible sheet material and a framework of flat spring members to which said material is secured, the spring arms being attached to the frame members of the back panel near the lower edge thereof with their free ends diverging from the panel but adapted to yield toward it, a cross tie connecting said free upper ends of the spring arms, and means on said cross ties for fastening the device to a chair back.

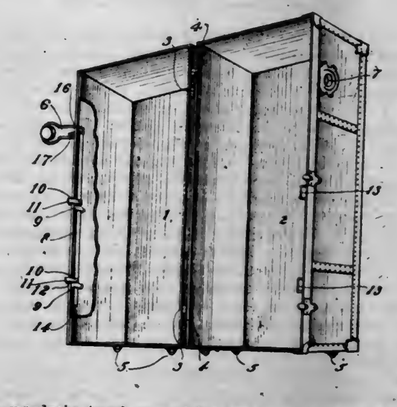
[Claim 6 not printed in the Gazette.]

1,215,468. HAT. CHARLES H. BLOCK, St. Louis, Mo., assignor to Delmar Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed June 21, 1916. Serial No. 104,922. (Cl. 2—108.)



In a hat, a brim consisting of an elongated approximately rectangular section of flexible material folded transversely upon itself throughout its length, the ends of the folded section being annularly brought into contiguous relation and fixed permanently together, the meeting edges of the folded section being also fixed together and the folded section thereby forming a hollow approximately ring-shaped casing, the central opening of the casing forming a head-opening that is originally adapted to fit a predetermined size of head, a contracting-ring of elastic material disposed within the casing at and around said head-opening, said ring being arranged within the casing while in stretched condition and on contracting resiliently reducing the head-opening to expansibly fit sizes of head smaller than said predetermined size, a second ring disposed within the casing for stiffening the brim at and around its outer rim only, said second ring being laterally resilient, but longitudinally inextensible and of fixed circumferential length, and a crown of flexible material rising from said casing and attached at its base only to the casing at and around said head-opening, the casing and crown being adapted to flexibly yield simultaneously with and outwardly from the head-opening to accommodate therewith said heads of various sizes.

1,215,469. FASTENING FOR WARDROBE-TRUNKS. SAMUEL BLUMENFELD, Chicago, Ill. Filed Feb. 21, 1916. Serial No. 79,636. (Cl. 70—115.)



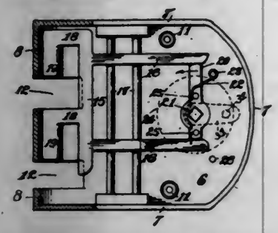
A wardrobe trunk comprising two box-like parts hinged together, a hasp for locking the two parts together, a bar slidably mounted on the inner side of one of said parts, said one part having a slot therein located beneath and covered by said hasp when said hasp is in locked position, a bent end on said bar for traveling in said slot, latching hooks carried by said bar, means on the other part of the trunk for being engaged by said latching hooks, yielding means for normally urging said latching hooks into engagement with said first mentioned means when the two trunk parts are in closed position, and an operating handle on said bent end of the slidably mounted bar for shifting said bar to disengage said latching means.

1,215,470. LOCK. AUGUST BOUCHERY, Brooklyn, N. Y. Filed Feb. 24, 1916. Serial No. 80,132. (Cl. 70—14.)

1. In a lock, the combination with a keeper having a perforated ear, of a lock casing having a recess in one end in which the keeper ear is adapted to engage; a bolt having a tongue extending parallel with the bolt located in the recessed portion of the lock casing to engage in the ear perforation when in locking position, and having a pair of lateral extensions whereby the bolt is mounted in the casing to have to and fro sliding movement in line with the ear perforation and prevent said bolt from having rotative and lateral movement; and an operating member rotatable in the casing to engage between said extensions and cooperating with one of said extensions to throw the bolt into the perforation in the ear and maintain it therein, and to coöperate with the other extension to throw the bolt out of the ear perforation and maintain it in such position.

2. In a lock, the combination with a keeper having perforated ears, of a lock casing having recesses in one end

in which the keeper ears are adapted to engage; a bolt having a pair of lateral extensions and tongues extending parallel with the bolt, said tongues being located in the recessed portion of the casing and adapted to engage in the ear perforations, and a pair of rods in the casing upon which the bolt extensions are slidably mounted to permit movement of the bolt longitudinally of the keeper and prevent the bolt from having lateral and rotative movement, substantially as and for the purpose specified.



3. In a lock, the combination with a keeper having perforated ears, of a lock casing having a convexedly formed portion at one end with recesses therein and in which recesses the keeper ears are adapted to engage; a bolt having a pair of parallel lateral extensions whereby it is mounted in the casing to have to and fro movement longitudinal of the keeper and prevented from having lateral and rotative movement, said bolt having tongues extending parallel with the bolt located in the convexedly formed portion of the casing and adapted to engage in the ear perforations when the bolt is in locking position; rotatable means to coöperate with said lateral extensions of the bolt to throw the bolt to cause the bolt tongues to engage in the ear perforations and to throw them out of said ear perforations; and a spring to coöperate with said rotatable means to maintain said means in position with the bolt engaging in or thrown out of engagement with the ear perforations, substantially as and for the purpose specified.

4. In a lock, the combination with a keeper having perforated ears, of a casing having a convexedly formed portion at one end with recesses therein in which the keeper ears are adapted to engage; a bolt having a pair of lateral extensions and tongues on the side opposite from said extensions extending parallel with the bolt located in the convexedly formed portion of the casing and adapted to engage in the ear perforation of the keeper; guides in the casing upon which the lateral extensions of the bolt are slidably mounted to permit movement of the bolt in a direction longitudinally of the keeper and prevent said bolt from having lateral and rotative movement; rotatable means in the casing operable from the exterior thereof to coöperate with said lateral extensions of the bolt to cause the bolt tongues to engage in the ear perforations of the keeper and maintain them therein, and to throw said tongues out of said ear perforations and a spring to coöperate with said rotatable means to maintain said means in position with the bolt engaging in or thrown out of engagement with the ear perforations, substantially as and for the purpose specified.

5. In a lock, the combination with a keeper having perforated ears, of a lock casing having recesses formed in one end in which the keeper ears are adapted to engage; a bolt having a pair of lateral extensions and a pair of tongues extending parallel with the bolt on the side opposite to the extensions, said tongues being located in the recessed portion of the casing and adapted to engage in the ear perforations of the keeper; a pair of rods in the casing upon which the lateral extensions of the bolt are slidably mounted to permit said bolt to have movement longitudinally of the keeper only; and a cam rotatably mounted in the casing between said lateral extensions of the bolt operable from the exterior of the casing and adapted to coöperate with one of said bolt extensions to throw the bolt tongues into and maintain them in the ear perforations of the keeper, and coöperate with the other bolt extension to throw said bolt tongues out of the ear perforations of the keeper and maintain the bolt in such position.

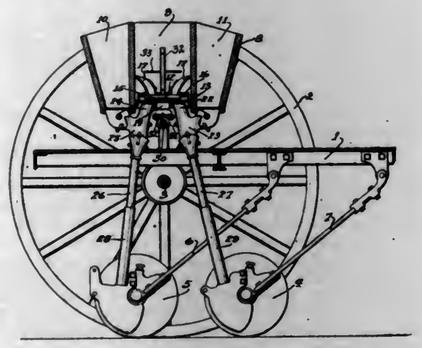
[Claim 6 not printed in the Gazette.]

1,215,471. COMPOSITION FOR PRODUCING ARTIFICIAL RUST. CHARLES M. BOWMAN, Lebanon, Pa. Filed Sept. 17, 1915. Serial No. 51,263. (Cl. 134—1.)

1. A composition for producing artificial rust as a binding agent between metallic surfaces, consisting of the reaction products of iron, ammonium chlorid, sulfur and an acid, substantially in the proportions described.

2. A composition for producing artificial rust as a binding agent between metallic surfaces, and as a preventive for the formation of destructive natural rust on said surfaces, consisting of the reaction products of finely comminuted iron, fifty (50) parts; ammonium chlorid, four (4) parts; sulfur, two (2) parts, and a ten per cent. (10%) solution of acetic acid in sufficient quantity to make a semi-liquid or pasty mass.

1,215,472. SEEDING-MACHINE. WILLIAM L. BRALEY, Springfield, Ohio, assignor to The American Seeding Machine Company, Springfield, Ohio, a Corporation of Ohio. Filed Aug. 9, 1915. Serial No. 44,479. (Cl. 111—18.)



1. In a seeding machine, furrow openers one arranged in advance of the other, a transversely arranged hopper having a central fertilizer compartment, said compartment having openings in the bottom thereof, said openings being arranged in two parallel series, one series on one side of said hopper and the other series on the opposite side of said hopper, the forward series of openings having a communication with the forward furrow openers and the rear series of openings a communication with the rear furrow openers, and means in said compartment for discharging the fertilizer through said opening.

2. In a seeding machine, furrow openers, one arranged forward of the other, a hopper having a central transversely extending fertilizer compartment and seed compartments on each side of said fertilizer compartment and parallel therewith, said fertilizer compartment having discharge openings arranged on opposite sides thereof, the forward openings communicating with the forward furrow openers and the rear openings with the rear furrow openers, conduits extending from said hopper to said furrow openers and communicating with the respective openings in said fertilizer compartment and also with the seed compartments, and means in said fertilizer compartment for discharging fertilizer through said openings.

3. In a seeding machine, furrow openers one arranged forward of the other, a hopper having a central transversely extending fertilizer compartment, said compartment having a series of discharge openings arranged on opposite sides thereof, the forward openings having a communication with the forward furrow openers and the rear opening a communication with the rear furrow openers, and distributing wheels each common to one front and one rear opening for discharging the fertilizer therethrough.

4. In a seeding machine, furrow openers, one arranged in advance of the other, a hopper having a central transversely extending fertilizer compartment, a seed compartment on each side of said fertilizer compartment and arranged parallel therewith, said fertilizer compartment having discharge openings arranged on opposite sides thereof, the forward opening communicating with the forward furrow openers and the rear openings with the rear-furrow openers, conduits extending from said hopper to said furrow openers and communicating with the respective openings in said fertilizer compartment and also with the seed compartments, and distributing wheels each common to one front and one rear opening for discharging the fertilizer therethrough.

5. In a seeding machine, a main frame, a transversely extending hopper supported on said frame, said hopper being divided into a transversely extending central fertilizer compartment and transversely extending seed compartments arranged on opposite sides of said fertilizer compartment, and furrow openers one arranged in advance of the other, the forward seed compartment and the fertilizer compartment having a feeding communication with the forward furrow opener and the rear seed compartment and said fertilizer compartment having a feeding communication with the rear furrow opener.

[Claims 6 to 10 not printed in the Gazette.]

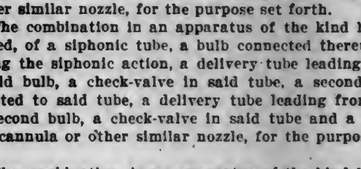
1,215,473. COMBINATION PENCIL SHARPENER AND HOLDER. CHARLES J. W. BRELAND, Spiro, Okla. Filed Feb. 11, 1915. Serial No. 7,535. (Cl. 120—84.)

1. In a sharpener device, in combination with a supporting article, a holder mounted on said article being inherently flexible to frictionally engage the article, a cutter blade disposed between the holder and article, said holder abutting the article and being tensioned to press the blade against the article, said holder having an elongated slot, a stud integral with said blade at its inner end and of less width than the slot and passable through said slot and having a head to overlap the blade at the slot after turning of the blade subsequent to passage of the stud through the slot, and lugs on the holder to prevent lateral displacement of the blade, said lugs being bendable and integral with the holder and at one end thereof overlapping the blade at opposite longitudinal edges, said lugs and stud extending in opposite directions laterally of the blade.

2. In a sharpener device, in combination with a supporting article, a holder mounted on said article being inherently flexible to frictionally engage the article, a cutter blade disposed between the holder and article, said holder abutting the article and being tensioned to press the blade against the article, a head on said blade of a length corresponding to the width of the blade, a reduced stud extending at an angle to the blade anad integral with the blade and head, said holder having an elongated slot through which the head is passable when the cutter blade is disposed at an angle to the holder, the cutter blade being turnable after passage of the head through the slot so that the head will overlap the holder at the slot, said holder at its active end having bendable lugs integral therewith, said bendable lugs being bent into overlapping engagement with the cutting blade at opposite longitudinal edges.

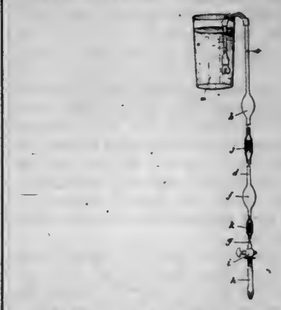
1,215,474. ANTIFRICTION-BEARING. FRED E. BRIGHT, Philadelphia, Pa., assignor to The Hess-Bright Manufacturing Company, a Corporation of Delaware. Filed May 21, 1914. Serial No. 839,949. (Cl. 64—36.)

1. A ball bearing comprising inner and outer casing elements having two raceways between them for two series of balls, one of which raceways is formed by an external groove in the inner casing element and an opposing internal groove in the outer casing element, the said inner casing element being provided with a non-full-depth filling notch in the inner side of the groove therein, and the said outer casing element being provided with a non-full-depth filling notch in the inner side of its internal groove, said two filling notches being adapted to coöperate with each other in admitting balls to the raceway, and one of the casing elements being provided with a filling opening therethrough leading to the filling notch therein, the opposing grooves constituting said raceways being so formed and disposed that the load on the bearing will act to urge the two series of balls from the filling opening.



2. A ball bearing comprising inner and outer casing elements having two raceways between them for two series of balls, which raceways are formed by two grooves in the inner side of the outer casing element inclined outwardly in opposite directions from each other, and two grooves in the outer side of the inner casing element also inclined outwardly in opposite directions from each other and disposed opposite the other grooves, the grooves of one of said raceways being formed at their inner sides with non-full-depth coöperating filling notches to admit the balls to said raceway, and said inner casing element being provided between the grooves therein with a filling opening extending through the casing element and leading to the filling notches; whereby the load on the bearing will act to urge the two series of balls outwardly and away from the filling opening.

1,215,475. APPARATUS FOR NASAL DOUCHES, INJECTIONS, AND OTHER LIKE PURPOSES. WILLIAM GOULD BROKAW, Paris, France. Filed Oct. 9, 1916. Serial No. 124,702. (Cl. 128—47.)



1. The combination, in an apparatus of the kind herein specified, of a siphonic tube, a bulb connected thereto for starting the siphonic action, a delivery tube leading from the said bulb, a check-valve in said delivery tube, a second bulb connected to the said delivery tube, a delivery tube leading from the said second bulb to a nasal piece, cannula or other similar nozzle, for the purpose set forth.

2. The combination in an apparatus of the kind herein specified, of a siphonic tube, a bulb connected thereto for starting the siphonic action, a delivery tube leading from the said bulb, a check-valve in said tube, a second bulb connected to said tube, a delivery tube leading from the said second bulb, a check-valve in said tube and a nasal piece, cannula or other similar nozzle, for the purpose set forth.

3. The combination, in an apparatus of the kind herein specified, of a siphonic tube, a bulb connected thereto for

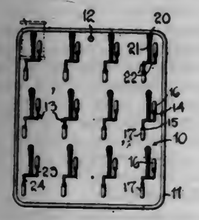
starting the siphonic action, a tube connected to said bulb, a check-valve in said tube, a second bulb connected to the said delivery tube, a delivery tube connected to the said second bulb, a nasal piece, cannula or other similar nozzle and a tap, for the purpose set forth.

4. The combination, in an apparatus of the kind herein specified, of a siphonic tube, a bulb connected thereto for starting the siphonic action, a delivery tube connected to said bulb, a check-valve in said tube, a second bulb connected to said delivery tube, a delivery tube connected to said second bulb, a check-valve in said tube, a nasal piece, cannula or other similar nozzle and a tap, for the purpose set forth.

5. The combination in an apparatus of the kind herein specified, of a siphonic tube, a bulb connected thereto for starting the siphonic action, a delivery tube leading from the said bulb, a check-valve in said tube, a second bulb connected to said tube, a delivery tube leading from the said second bulb of substantially smaller cross-section than the delivery tube situated above said second bulb, a check valve in the last-mentioned tube, and a nasal piece, cannula, or other similar nozzle, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,215,476. SPOOL-HOLDER. VILETTA A. BROUILLET, San Luis Obispo, Cal. Filed Dec. 27, 1915. Serial No. 68,766. (Cl. 248—26.)



1. A spool support of the character described including a plate having a pair of perforations spaced from each other, and a supporting member having angularly and oppositely extending extremities inserted through said perforations, said angularly extending extremities bearing partly against the back of the plate and partly against the front of the plate whereby to prevent movement of the supporting member at right angles to the face of the plate.

2. A spool support of the character described including a plate having a pair of perforations spaced from each other both laterally and longitudinally, and a supporting member having legs divergently inclined with respect to each other and extending inward toward the face of the plate, said legs being formed with angular extremities extending in opposite directions, one of said extremities inserted through one of said perforations and the other through the other perforation.

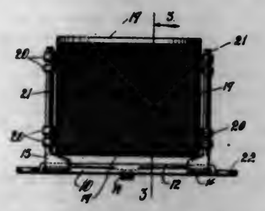
3. A support of the character described including a plate having a pair of perforations, the metal of the plate on one side of one perforation and the opposite side of the other perforation being outwardly pressed to form longitudinally extending seats, and a supporting member having angular extremities extending in opposite directions to each other, said extremities being longer than the seats and inserted through said perforations and bearing partly against the inside faces of said seats and partly against the front of the plate.

4. A supporting device of the character described including a plate having a pair of perforations in it, the metal of the plate on one side of one perforation and the opposite side of the other perforation being outwardly pressed to form longitudinally extending seats, said perforations of the seats being out of alinement with each other, and a supporting member having angular extremities extending in opposite directions and also disposed out of alinement with each other, said extremities being insertible through said perforations and bearing partly against the front face of the plate and partly against the rear faces of said seats.

5. A device of the character described including a plate having a pair of perforations formed in the plate, the perforations being out of alinement with each other, the metal of the plate on one side of one perforation and on the other side of the other perforation being outwardly pressed whereby to form longitudinally extending seats, and a supporting member formed of a single piece of wire bent upon itself, the legs so formed being angularly bent at their ends with relation to the body of the wire and in divergent relation to each other, the extremities of said angularly bent legs being angularly bent in opposite directions and parallel to the body of the wire for reception each in one of said seats.

[Claim 6 not printed in the Gazette.]

1,215,477. WATER-BAG RECEPTACLE. FREDERICK W. BURCH, Pueblo, Colo. Filed Aug. 1, 1916. Serial No. 112,523. (Cl. 224—29.)



1. In a device of the class described, a base plate secured in position, a pair of standards removably mounted on said base plate, and a body portion removably mounted on said standards, said body portion being formed of two pervious sections so shaped that when joined they form a receptacle adapted to receive and support a water bag.

2. In a device of the class described, a base plate secured in position, a pair of standards removably mounted on said base plate and complementary body portions each removably mounted on said standards, said body portions being so shaped that when in position they form a receptacle adapted to receive and support a water bag.

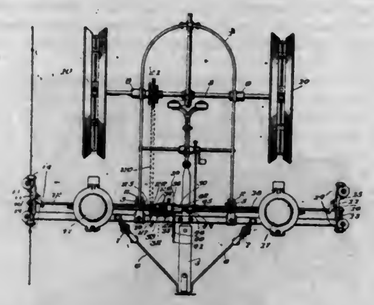
3. In a device of the class described, a base plate, means for securing said base plate to an automobile running board or the like, said base plate being narrowest adjacent its middle and horizontally flanged adjacent each end, a pair of standards adapted to be mounted on said base plate, each standard comprising a vertical rod and a foot adapted to straddle the narrow portion of said base and having grooves adapted to receive said flanges, and a body portion adapted to be removably mounted on said rods.

4. In a device of the class described, a base plate, means for securing said base plate to an automobile running board or the like, said base plate being narrowest adjacent its middle and horizontally flanged adjacent each end, a pair of standards adapted to be mounted on said base plate, each standard comprising a vertical rod and a foot adapted to straddle the narrow portion of the base and having grooves adapted to receive said flanges, and complementary body sections each carrying on its vertical edges loops adapted to engage said rods.

5. In a device of the class described, a centrally perforated base plate, means for securing said base plate to an automobile running board or the like, said base plate being narrowest adjacent its middle and horizontally flanged adjacent each end, a pair of standards adapted to be mounted on said base plate, each standard comprising a vertical rod and a foot adapted to straddle the said narrow portion of the base and having grooves adapted to receive said flanges, and complementary body sections each carrying on its vertical edges loops adapted to engage said rods, said feet and base plate being so shaped as to drain any water falling thereon toward said perforation.

[Claim 6 not printed in the Gazette.]

1,215,478. CLUTCH MECHANISM FOR CORN-PLANTERS. EDWARD W. BURGESS, Chicago, Ill., assignor to International Harvester Corporation, a Corporation of New Jersey. Filed Apr. 29, 1914. Serial No. 835,112. (Cl. 111—5.)



1. In a seed planter, rotatable seed dropping elements, a clutch mechanism including a constantly rotatable element, intermittently operable means for connecting said rotatable clutch element with said seed dropping elements, and means carried by said rotatable clutch element and operative to control the degree of actuation of said seed dropping elements.

2. In combination, a feed shaft, a constantly rotatable clutch element, intermittently operating mechanism for imparting an aliquant part of a revolution of said clutch element to said feed shaft, and means for controlling said intermittently operating mechanism.

3. In combination, a feed shaft, a clutch mechanism including a constantly rotatable clutch element, intermittently operative mechanism connecting said clutch element with said shaft through an aliquant part of its revolution, and means for controlling an operation of said clutch mechanism.

4. In combination, a feed shaft, a constantly rotatable clutch element, intermittently operating mechanism adapted to connect said clutch element with said shaft for either an aliquant or an aliquot part of a revolution of said clutch element, and means for controlling said intermittently operating mechanism.

5. In a seed planter, a seed shaft, a constantly rotatable clutch element, intermittently operating mechanism adapted to connect said clutch element with said seed shaft for a whole or an aliquant part of its revolution, and means for controlling said clutch mechanism.

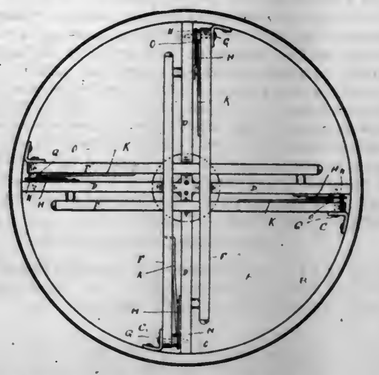
[Claims 6 to 34 not printed in the Gazette.]

1,215,479. FOLDING TABLE. FRANK M. BURROWES, Portland, Me. Filed Mar. 12, 1913. Serial No. 753,652. (Cl. 45—11.)

1. In a table, a table top provided with legs pivotally attached to the bottom thereof, plates secured to the underside of the table and provided with slots having unequally curved sections and spring braces secured to the legs and terminating in offsets adapted to travel in said curved slots, whereby the braces are caused to travel automatically from the outer to the inner portions of the slots as the legs are unfolded and to be held yieldingly under tension in unfolded position.

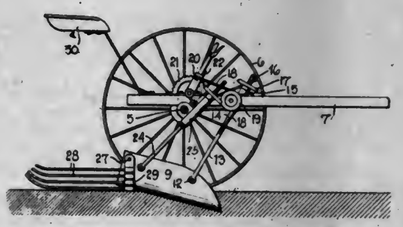
2. In a table, a top provided with legs pivotally attached thereto, a central post secured to said table, springs mounted upon said post, radial bars extending outwardly from a point near said post, whereby said legs when folded are engaged and yieldingly held between said bars and springs.

3. In a table, a table top provided with legs pivotally attached to the bottom thereof, plates secured to the bottom of the table top provided with slots having upwardly extending curved offsets, spring braces having one end secured to the legs and the other terminating in an offset adapted to travel in said slot and springs adapted automatically to cause said offsets to travel to the inner ends of said slots as the legs are unfolded.



4. In a folding table, a top provided with a downwardly extending peripheral flange, four legs longer than the semi-diameter of the table pivotally attached to the bottom of the table at points diagonally opposite each other and adapted to fold against the bottom of the table outside the center thereof, a post located at the center of the table and provided with four springs, said springs being adapted to yieldingly engage the legs intermediate their ends, and fixed bars on the under side of the table adapted to engage the opposite sides of the legs.

1,215,480. POTATO-HARVESTER. RICHARD CAMBER, Hesperia, Mich. Filed Apr. 24, 1916. Serial No. 93,277. (Cl. 55—54.)



1. A harvesting machine including a wheeled frame having an axle and tongue, a shovel, means vertically adjustable upon the wheel axle in which the rear end of the shovel is pivotally mounted to position said shovel with respect to the ground, a rearwardly projecting separator connected to the rear end of the shovel, and additional means adjustably mounted in the tongue and connected to the forward end of the shovel to raise or lower the same.

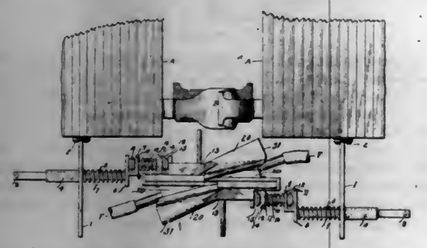
2. A harvesting machine of the character described including a wheeled supporting frame, a shovel, relatively fixed guides carried by the frame, rods pivotally connected to the rear end of the shovel and extending through said guides, adjustable stops on the rods to limit their downward movement through the guides, a separator pivotally connected to the rear end of the shovel, and means adjustably mounted in the frame and operatively connected to the forward end of the shovel to raise or lower the same.

3. A harvesting machine of the character described including a wheeled frame, a shovel, spaced guide sleeves mounted in the frame, rods loosely movable through said sleeves and pivotally connected at their lower ends to the rear end of the shovel, adjustable stops threaded upon the upper ends of the rods to limit their downward movement through the sleeves, means for suspending the forward end of the shovel from the frame, and manually operable

means mounted in the frame and connected to said suspending means to raise the same and elevate the forward end of the shovel.

4. A harvesting machine of the character described including a wheeled frame having an axle and a tongue, a shovel, means adjustably mounted upon the axle and pivotally connected to the rear end of the shovel to raise or lower the same, a rearwardly projecting separator pivotally connected to the rear end of the shovel, adjustable means mounted in the tongue and operatively connected to the forward end of the shovel to raise or lower the same, a manually operable lever mounted upon the frame, and a flexible connection between said lever and said last named means to elevate the forward end of the shovel to an inoperative position.

1,215,481. AUTOMATIC TRAIN-PIPE COUPLING. PHILIAS CANTIN, Somersworth, N. H. Filed May 13, 1916. Serial No. 97,247. (Cl. 188—13.)



1. A drawhead for train pipe couplings comprising two sections, a valve interposed between said sections, means of communication between the train pipe and one section, and means whereby said valve may be manually and automatically operated.

2. The combination with a car and a coupling head, of a bracket depending from the car, a spring actuated main supporting rod arranged within said bracket whereby the same may move longitudinally, means for preventing said main supporting rod from axial rotation, an auxiliary rod flexibly connected to said main rod, the coupling head being flexibly connected to said auxiliary rod, said auxiliary rod being held against rotation and means whereby said auxiliary rod will be held normally in a longitudinal position.

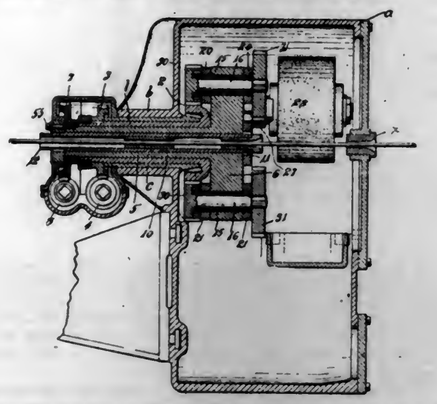
3. The combination with a car, of a coupling head comprising two sections, means of communication between said sections, a valve for controlling said means of communication, a lever for operating said valve, said lever adapted to be thrown out of operative engagement when two opposing coupling heads are coupled and a flexible connection between the coupling head and the car for the purpose set forth.

1,215,482. CLEANING-MACHINE. VALENTINE B. CHAMBERLAIN, New Britain, Conn., assignor to The Stanley Works, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 12, 1915. Serial No. 61,054. (Cl. 51—4.)

1. In a machine of the character described, a rotatable gear, revoluble brush holders, brushes carried thereby, driving connections between said brushes and said gear, independent means operable one at a time for rotating said gear or for revolving said brush holders, and an axial passage for stock.

2. In a machine of the character described, a sleeve having a gear at one end and driving means at its opposite end, a second sleeve mounted within the first, brush holders at one end of said sleeve and driving means at its opposite end, means for driving said brush holders and said gear independently of one another, driving connections between said brushes and said gear, and means for adjusting said brushes toward and away from one another.

3. In a machine of the character described, a sleeve having a gear at one end and driving means at its opposite end, a second sleeve mounted within the first, brush holders at one end of said sleeve and driving means at its opposite end, means for driving said brush holders and said gear independently of one another, driving connections between said brushes and said gear, and means for adjusting the angular position of said brushes.



4. In a machine of the character described, a casing, a bearing, a pair of hollow stems, one mounted within the other and supported in said bearing, a gear at the inner end of the outer stem, a T-head at the inner end of the inner stem, shafts mounted in the ends of said T-head, pinions at the outer ends of said shafts meshing with said gear, gears at the inner ends of said shafts, brush holders mounted at the ends of said T-head, shafts carried by said brush holders, pinions on said shafts meshing with the last mentioned gears, and brushes on said shafts driven by said pinions.

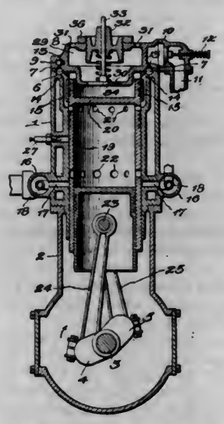
5. In a machine of the character described, a casing, a bearing, a pair of hollow stems, one mounted within the other and supported in said bearing, a gear at the inner end of the outer stem, a T-head at the inner end of the inner stem, shafts mounted in the ends of said T-head, pinions at the outer ends of said shafts meshing with said gear, gears at the inner ends of said shafts, brush holders mounted at the ends of said T-head, shafts carried by said brush holders, pinions on said shafts meshing with the last mentioned gears, brushes on said shafts driven by said pinions, and means for driving said stems one at a time and for holding the undriven stem.

[Claims 6 and 7 not printed in the Gazette.]

1,215,483. TWO-CYCLE INTERNAL-COMBUSTION ENGINE. SYLVESTER CHARLES, San Jose, Cal. Filed Oct. 7, 1915. Serial No. 54,623. (Cl. 123—50.)

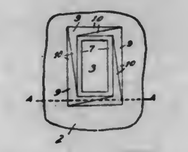
1. In an internal combustion engine, a pair of oppositely moving pistons between which the explosive mixture is compressed and fired, a cylinder in which said pistons are disposed, said cylinder having an open end disposed in a plane at right angles to its axis and formed with an annular groove, said cylinder also having a number of circumferentially spaced intake ports leading from said groove, and a cylinder head secured in contact with said end of the cylinder and having an annular groove registering with the aforesaid groove and forming therewith a fuel heating channel, said head also having an annular fuel heating reservoir with a fuel inlet, and a plurality of circumferentially spaced ports leading from said reservoir into said channel.

2. In an internal combustion engine, a cylinder having an open end disposed in a plane at right angles to its axis, said end being formed with an annular groove, intake ports leading from said groove into the cylinder, unobstructed by-passes leading from said ports and discharging into the cylinder at points spaced therefrom, a cylinder head secured in contact with the aforesaid end of the cylinder and having an annular groove registering with the aforesaid groove and forming therewith a fuel heating channel, said head also having an annular fuel heating reservoir with a valved inlet, and a plurality of circumferentially spaced ports leading from said reservoir into the aforesaid channel, the body of the cylinder being provided with a series of circumferentially spaced exhaust ports spaced from the by-passes, a tubular piston slidable in the cylinder and having a closed inner end formed with a series of circumferentially spaced intake ports for registration with the aforesaid by-passes, said piston also having an annular series of spaced exhaust ports for registration with the exhaust ports in the cylinder, a second piston movable in the tubular piston, a crank shaft having opposed cranks, and connecting rods connecting said opposed cranks with the two pistons.



3. In an internal combustion engine, a cylinder, a tubular piston therein adapted to draw explosive mixture into said cylinder and force it into its own interior, a second piston operable in said tubular piston for compressing the explosive mixture therein, a head for said cylinder in the form of a shell having a perforated outer side formed with a central opening and having a valve seat in its inner side communicating with the interior of the cylinder, a bushing threaded in the aforesaid opening, an outwardly opening valve normally closing the aforesaid valve seat and having a stem slidable in the bushing, and a coil spring interposed between the latter and said valve, substantially as and for the purpose specified.

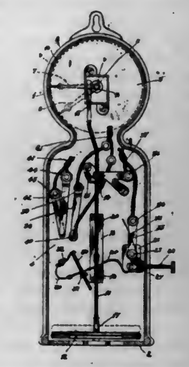
1,215,484. VALVE-PORT PACKING. MARK E. CHIVVIS, Manton, Mich. Filed Mar. 24, 1916. Serial No. 86,339. (Cl. 123—80.)



1. In combination with a ported valve case having a channel in the face thereof adjacent to and surrounding the port therein and a valve embracing said valve case for controlling said port, an expansible packing member composed of a series of adjoining diagonally overlapping sections slidably interengaged and movably seated as a whole within said channel, and a flexible member seated in said channel and bearing against said packing member to retain it yieldably engaged with said valve.

2. In combination with a ported valve case having a channel in the face thereof surrounding the port therein and a valve embracing said case for controlling said port, an expansible packing member composed of a plurality of right-angled sections having diagonally overlapping tapering extensions provided with interengaging tongues and grooves slidably joining and retaining said sections against lateral displacement, the whole being movably seated within said channel, and a leaf-spring flexibly seated in said channel and bearing against said packing member to yieldably retain said member in contact with said valve.

1,215,485. THERMOSTATIC FIRE-ALARM. CESAR JOSEPH CID, Quebec, Quebec, Canada. Filed Jan. 28, 1916. Serial No. 74,948. (Cl. 200—31.)



1. In a thermostatic fire alarm in combination with a thermic cell, an insulated rod resting on said thermic cell, a pole electrically connected to said rod, a bracket provided with an outwardly projecting lug, an arm pivotally mounted on said lug, a pole electrically connected to said bracket, means to adjust said arm and contacting means between said rod and said arm in order to close the circuit, a number of poles electrically connected to a corresponding number of contact plates and means provided on said arm to successively close said contact plates and form a circuit in relation with the poles.

2. In a thermostatic fire alarm in combination with a thermic cell, an insulated rod resting on said thermic cell, said rod being provided with an inwardly projecting arm, a pole electrically connected to said rod, an arm pivotally secured at one end to a bracket, a pole electrically connected to said bracket, means to adjust said arm, poles electrically connected to contact plates, means provided on said arm to close the contact plates and form a circuit with their respective poles and means to regulate the time to close said contacts at a pre-determined temperature.

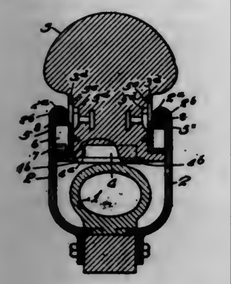
3. In a thermostatic fire alarm in combination with a thermic cell, an insulated rod resting on said thermic cell, provided with an inwardly projecting arm, a pole electrically connected to said rod, an arm pivotally connected to a bracket, a pole electrically connected to said bracket, means to adjust said arm, means to carry said arm from its abnormal position to its normal position, series of poles electrically connected to contact plates, means provided on said arm to close said contact plates and form a circuit with their respective poles, means to adjust the time of contact to a predetermined temperature and means automatically to indicate the degree of temperature as it rises.

4. In a thermostatic fire alarm in combination with a thermic cell, a rod resting on said thermic cell and insulated therefrom, said rod being provided with an inwardly projecting contact arm, means provided at the outer end of said rod to indicate the degree of temperature, a pole electrically connected to said rod, an arm

pivotally connected at one end to a bracket the other end of said arm being inwardly curved, means to adjust the arch of said curve, means to adjust said arm, means to carry said arm back to its normal position, a pole electrically connected to said bracket, a rod suitably supported and resting on said arm and means provided at its outer end to indicate at what temperature the said arm has been adjusted, series of poles electrically connected to contact plates, said plates being automatically closed at successively pre-determined temperatures by means of said curved end provided on said arm.

5. In a thermostatic fire alarm in combination with a thermic cell, a rod resting on said thermic cell and suitably insulated therefrom and provided with an inwardly projecting contact arm which is adapted to slide in a suitable bracket at its outer end, said rod being suitably supported by a bracket intermediate thereof, a rack provided at the upper end of said rod adapted to engage a gear mounted on a collar and an indicating clock hand mounted on said collar, said collar being loosely mounted on a shaft, a pole electrically connected to said bracket supporting said rod, an arm pivotally connected at one end to a bracket and provided with a boss, an adjustable screw suitably supported in said bracket and adapted to engage said boss in order to adjust said arm, said arm being arched at its outer end, an adjustable screw being provided in said arm to adjust said arch, said arch being provided with a contact block of insulating material, a flat spring secured at the other end of said arm and adapted to carry said arm from its abnormal position to its normal position, a pole electrically connected to said bracket, a rod suitably supported by a bracket and provided at one end with a weight which rests on said arm, the other end of said rod being provided with a rack engaging a gear mounted on said above mentioned shaft and a clock hand mounted on said shaft indicating the degree of temperature to which the said arm has been adjusted, series of poles electrically connected to contact plates, said insulating block on the end of the pivoted arm being adapted to gradually close one contact plate after the other and form a circuit in relation with their respective poles as the arm is gradually forced upwardly by the contact arm mounted on said rod which in turn is lifted by the expansion of the thermic cell.

1,215,486. VEHICLE-WHEEL TIRE. MELVILLE CLARK, Chicago, Ill. Filed May 8, 1916. Serial No. 96,010. (Cl. 152—10.)



1. In a vehicle wheel, a tire comprising lateral guards at opposite sides of the wheel; a flexible elastic tread member embraced between the guards; a series of metallic fittings embedded in the tread member at each side, each of said fittings having a pocket elongated radially of the wheel to accommodate a guide stud, said fittings at one side of the tread member being positioned substantially opposite the middle point between two consecutive similar fittings at the opposite side of the tread, the lateral guards having studs projecting inwardly for engaging the pockets in the metallic fittings respectively.

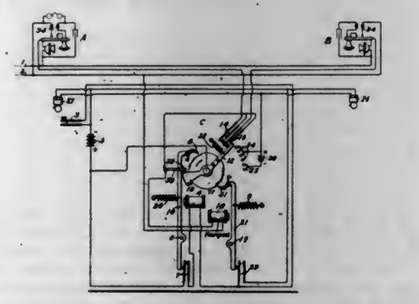
2. In a vehicle wheel tire comprising lateral guards at opposite sides of the wheel and extending circumferentially therefrom and a flexible elastic tread member embraced between the guards, said guards having each a circumferential groove opening toward the wheel axis; separate inelastic lug members permanently engaged with the opposite sides of the tread member against detachment therefrom by lateral stress, having lugs projecting into engagement with the grooves of the guards respectively; and having flanges extending in a plane parallel to the guards positioned in lugs respectively, the tread member having in its lateral surfaces recesses or pockets in which said flanges are accommodated, so as to be flush with the outer surfaces of the tread member, said pockets being elongated radially of the wheels beyond the outer ends of the flanges to accommodate the latter in the compression of the tread member under load.

3. In a vehicle wheel, a tire comprising separate lateral guards at opposite sides of the wheel, a flexible and elastic tread member embraced between the guards, said guards having each a circumferehtial groove opening toward the wheel axis; separate inelastic lug members permanently engaged with the opposite sides of the tread member against detachment therefrom by lateral stress, having lugs projecting into engagement with the grooves of the guards respectively, the body of the lug member inwardly opposite the lug being embedded in the tread member and being wedge shaped at its outer end to avoid presenting an abrupt shoulder against the compression of the tread member.

4. A wheel tire comprising lateral guards and an intervening flexible and elastic tread member, and an inclosed pneumatic tube or air spring, the tread member having distributed throughout its inner circumference a plurality of wooden blocks embedded in said tread member, and exposed beyond the inner circumference thereof for contact with the outer circumference of the pneumatic tube, said blocks being flanged about their inner ends for resistance to distortion in their seats.

5. A wheel tire comprising lateral guards and an intervening flexible and elastic tread member, and an inclosed pneumatic tube or air spring, the tread member having distributed throughout its inner circumference a plurality of wooden blocks embedded in said tread member, and exposed beyond the inner circumference thereof for contact with the outer circumference of the pneumatic tube, said blocks being flanged about their inner ends for resistance to distortion in their seats, the pockets in the tread member being rabbeted to receive the flanges, nearly to the full thickness of the latter, the protruding edges of the flanges being rounded to prevent engagement with the pneumatic tube.

1,215,487. TELEPHONE SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 2, 1916. Serial No. 118,243. (Cl. 179—89.)



1. In a telephone system, a line circuit, a plurality of subscribers' telephones connected thereto, a signaling device for one of the telephones, apparatus adapted when started to operate continuously for a predetermined period of time to cause the operation of the signaling device, and means controlled at another of the telephones for starting the apparatus.

2. In a telephone system, a line circuit, a main and an extension telephone connected thereto, a signaling device for the extension telephone, apparatus adapted when started to operate for a predetermined length of time, means controlled at the main telephone for starting the apparatus, and a source of current brought into circuit with the signaling device by the operation of the apparatus.

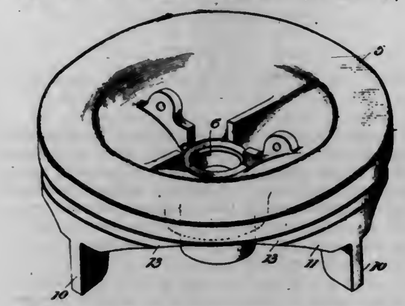
3. In a telephone system, a line circuit, a main and an extension telephone connected thereto, a signaling device for the extension telephone, an electromagnetically controlled step-by-step device adapted when started to operate for a predetermined length of time, means controlled at the main telephone for starting the step-by-step device, and a source of current brought into circuit with the signaling device by the operation of the step-by-step device.

4. In a telephone system, a line circuit, a main and an extension telephone connected thereto, a signaling device for the extension telephone, an electromagnetically controlled step-by-step device adapted when started to operate for a predetermined length of time, means controlled at the main telephone for starting the step-by-step device, a source of current brought into circuit with the signaling device by the operation of the step-by-step device for causing the signaling device to furnish a signal, and means brought into circuit with the source of current and the signaling device at a predetermined advanced position of the step-by-step device for causing the signaling device to furnish a different signal.

5. In a telephone system, a line circuit, a main and an extension telephone connected thereto, a signaling device for the extension telephone, an electromagnetically controlled step-by-step device adapted when started to operate for a predetermined length of time, means controlled at the main telephone for starting the step-by-step device, a source of current brought into circuit with the signaling device by the operation of the step-by-step device for causing the signaling device to furnish a signal, and a second source of current brought into circuit with the signaling device at a predetermined advanced position of the step-by-step device for causing the signaling device to furnish a different signal.

[Claims 6 to 9 not printed in the Gazette.]

1,215,488. THROTTLE-VALVE. JOSEPH M. COFFEY, New York, N. Y., assignor to Chambers Valve Company, New York, N. Y., a Corporation of New York. Filed May 19, 1916. Serial No. 98,666. (Cl. 137—4.)



In a throttle valve, in combination, a valve seat, a valve member of general cylindrical shape having an outwardly projecting angularly disposed seating surface near its upper part adapted to coact with said valve seat, a plurality of guides associated with the valve member adapted to center the valve with respect to the valve seat, the valve member comprising cut away walls between the guides forming relatively broad arcs in said walls whereby the area of the passage between the valve and the valve seat is progressively increased for uniform movement of the valve during the first part of the opening thereof, said valve member being provided with a central opening having a valve seat associated therewith within which a valve stem may be loosely mounted.

1,215,489. GRAND-PIANO ACTION. JAMES F. CONOVER, Chicago, Ill. Filed Feb. 16, 1916. Serial No. 78,570. (Cl. 84—26.)



1. A piano action comprising a hammer butt; a wippen; a jack pivoted to the wippen and having a connection with the hammer butt; a lever pivoted on the wippen; a fixed stop; means on the lever adapted to disconnect the jack from the hammer butt upon the latter engaging said stop; and a repetition lever pivoted to said first mentioned lever, said repetition lever being adapted to be moved by the hammer butt upon the return movement of the latter to facilitate reconnecting the jack with the hammer butt.

2. A piano action comprising a hammer butt; a wippen; a jack pivoted to the wippen and having a connection with the hammer butt; a lever pivoted on the wippen; a fixed stop; means on the lever adapted to engage the stop and disconnect the jack from the hammer butt; a spring pressed repetition lever pivoted on said first mentioned lever and adapted to temporarily resist the return movement of the hammer butt; and a spring engaging the jack and adapted to reconnect the latter with the hammer butt while the repetition lever is temporarily retarding the return movement of said hammer butt.

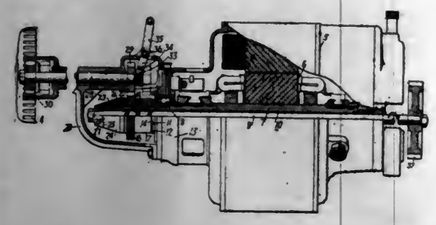
3. A piano action comprising a hammer butt; a wippen; a jack pivoted to the wippen and having a connection with the hammer butt; a lever pivoted on the wippen; a fixed stop; means on the lever adapted to engage the stop and disconnect the jack from the hammer butt; a cam on the hammer butt; a repetition lever pivotally mounted and having one of its ends adapted to engage the cam upon the return movement of the hammer butt to retard the return movement of the latter; and a spring engaging the jack and adapted to reconnect the jack with the hammer butt while the latter is being retarded upon its return movement.

4. A piano action comprising an oscillatory hammer butt; a knuckle on the hammer butt; a cam on the hammer butt adjacent the knuckle; a wippen; a jack mounted on the wippen and engaging the hammer butt; a lever mounted on the wippen; a repetition lever mounted on the first mentioned lever; and means on the first mentioned lever for disengaging the jack from the knuckle before the return movement of the hammer butt begins; said cam being adapted to engage the repetition lever upon the return movement of the hammer butt to facilitate reengagement of the jack and knuckle.

5. A piano action comprising an oscillatory hammer butt; a knuckle on the hammer butt; a cam on the hammer butt adjacent the knuckle; a wippen; a jack mounted on the wippen and engaging the hammer butt; a lever mounted on the wippen; a repetition lever mounted on the first mentioned lever; means on the first mentioned lever for disengaging the jack from the knuckle before the return movement of the hammer butt begins, said cam being adapted to engage the repetition lever upon the return movement of the hammer butt to retard the return movement of the latter; and a spring connected with the jack and adapted to bring the latter into engagement again with the knuckle while the hammer butt is being retarded.

[Claims 6 to 9 not printed in the Gazette.]

1,215,490. STARTING MECHANISM FOR AUTOMOBILES. FRANK CONRAD, Swissvale, and JOHN P. NIKONOW, Pittsburgh, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 2, 1913. Serial No. 776,949. (Cl. 74—59.)



1. The combination with an engine member, of a dynamo-electric machine having an armature provided with a hollow shaft, a rod within said hollow shaft, and means for operatively connecting said rod to said engine member and to said shaft.

2. The combination with an engine shaft, of a dynamo-electric machine having a hollow armature shaft, a shaft loosely mounted in said hollow shaft and means for operatively connecting each of said last named shafts to said engine shaft and to each other.

3. The combination with an engine member, of a dynamo-electric machine having a hollow armature shaft and a shaft rotatably mounted in said hollow shaft, means for operatively connecting each of the shafts to said engine member at different speed ratios, and a one-way clutch between said shafts.

4. The combination with an engine member, of a dynamo-electric machine having a hollow armature shaft and a shaft rotatably mounted in said hollow shaft, means for operatively connecting each of said shafts to said engine member, and means for operatively connecting said shafts only when one of said shafts is the driving member.

5. The combination with an engine member, of a dynamo-electric machine having a hollow armature shaft and a shaft rotatably mounted in said hollow shaft, means for operatively connecting each of said shafts to said engine member at different speed ratios, and means for operatively connecting said shafts.

[Claims 6 to 14 not printed in the Gazette.]

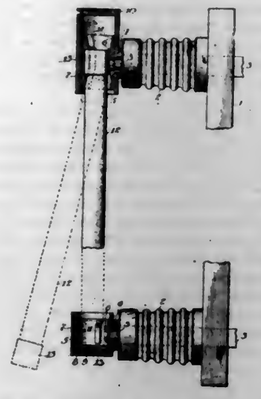
1,215,491. FUSE OR LIKE DEVICE. NICHOLAS J. CONRAD, Chicago, Ill., assignor to Schweitzer & Conrad, a Corporation of Illinois. Filed Apr. 19, 1913. Serial No. 762,249. (Cl. 175—273.)

1. The combination of a supporting member, a pair of insulators mounted on said supporting member, metallic rods extending through said insulators, a pair of separate insulating housings axially in line with each other, said housings being permanently secured to the ends of said rods opposite said supporting member, said housings containing metallic contact devices for a fuse device, said contact devices having spring means for yieldingly holding the fuse device.

2. The combination of a pair of holders made with sockets to receive the end of a fuse, one of said sockets being closed at its end farthest from the other socket, and said other socket having its end farthest from the first mentioned socket provided with an openable end piece.

3. In combination an insulator, a metallic rod extending through said insulator, a housing of cylindrical form made of insulating material and permanently secured to the end of said rod, and metallic contact devices inside of said housing connected with said rod, said contact devices comprising spring means projecting from the side walls of the housing toward the center thereof and adapted yieldingly to engage a fuse device.

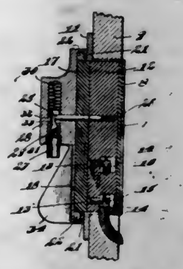
4. The combination of a pair of holders having sockets adapted to receive the ends of a fuse device, said sockets being arranged one above and substantially axially in line with the other, the other end of the lower socket being closed and the upper end of the upper socket being provided with a hinged cover.



5. In a fuse mounting, a socket member of inverted cup-shape, adapted to receive the upper end of a cylindrical fuse device, and a metallic terminal within said socket for engaging and making contact with the upper ferrule of the fuse device, the closed end of said socket comprising a hinged cover, said cover being adapted to provide a ready vent axially in line with a fuse which vents from its upper end.

[Claims 6 to 14 not printed in the Gazette.]

1,215,492. SWITCH. ELMER E. COOK, Chicago, Ill. Filed Mar. 23, 1914. Serial No. 826,687. (Cl. 175—282.)



1. A switch comprising in combination, a fixed element, a rotatable element, contact members on said elements adapted to engage when said rotatable element is in operative position, a plurality of movably mounted sectional pins for normally locking said rotatable element in inoperative position, and manually operable means for individually manipulating said pins to unlock said rotatable element, substantially as described.

2. A switch comprising in combination, a fixed element, a rotatable element, contact members on said elements adapted to engage when said rotatable element is in operative position, a plurality of movably mounted sectional pins for normally locking said rotatable element in inoperative position, manually operable means for individually manipulating said pins to unlock said rotatable element and means on said rotatable element engaging between the fingers of the hand manipulating said manually operable means whereby said rotatable element may be readily turned while holding the device in unlocked position, substantially as described.

3. A switch comprising in combination, a fixed element, a rotatable element, contact members on said elements adapted to engage when said rotatable element is in inoperative position; a plurality of sectional pins movably mounted in elongated sockets extending perpendicularly of the joint between and into the contiguous surfaces of said elements, for releasably locking said rotatable element in inoperative position, each of said pins consisting of two sections arranged end to end, said rotatable element being locked in inoperative position by said pins except when the joints between the contiguous ends of said pin sections are in registration with the joint between the contiguous surfaces of said fixed and rotatable elements; spring held manually depressible members extending at substantially right angles to said pins for individually moving the latter, and means on said rotatable member engaging between the fingers of the hand operating said depressible means, substantially as described.

4. A switch comprising in combination, a fixed element, a rotatable element, contact members on said elements adapted to engage when said rotatable element is in inoperative position; a plurality of sectional pins movably mounted in elongated sockets extending perpendicularly of the joint between and into the contiguous surfaces of said elements, for releasably locking said rotatable element in inoperative position, each of said pins consisting of two sections arranged end to end, said rotatable element being locked in inoperative position by said pins except when the joints between the contiguous ends of said pin sections are in registration with the joint between the contiguous surfaces of said fixed and rotatable elements; spring held depressible members having exteriorly projecting portions adapted for manual engagement to individually move said pins, and means on said rotatable member engaging between the fingers of the hand operating said depressible means, substantially as described.

5. In a device of the class described, the combination of a cup-formed circular body; a circular relatively fixed element secured in said body; a second circular relatively movable element rotatably mounted upon said fixed element; a rotatable carrier in which said movable element is fixed; a connection between said carrier and said body locking the same together but permitting of limited rotary movement of said carrier; spaced contact points on said fixed element; means on said movable element adapted, when the latter is in one position, to register with and electrically connect said contact points; a plurality of sectional pins for normally locking said movable element against rotation; a corresponding number of manually operable means for individually manipulating said pins to unlock said elements, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,215,493. PROCESS FOR PRODUCING PRINTING-PLATES. GEORGE R. CORNWALL, Rye, N. Y., assignor, by mesne assignments, to James G. Coffin, trustee. Filed Mar. 20, 1905, Serial No. 251,095. Renewed July 6, 1916. Serial No. 107,871. (Cl. 41—41.5.)

1. The process of producing a metal planographic printing plate having a printing surface consisting of a single metal which comprises subjecting a part of the surface of said metal to such treatment as will put the metal in such physical state or condition as to render it ink-rejecting to form the non-design element of the printing surface and in subjecting another part of said surface to such treatment, prior and preparatory to placing ink or like design defining material thereon, as will put it in such physical state or condition as to make it ink-taking to form the design element of the printing surface.

2. The process of producing an all metal planographic printing plate which comprises compacting the metal of that portion of the surface of the plate which is to constitute the design and, prior and preparatory to placing ink or like design defining material thereon, rendering non-compact the non-design or ink-rejecting portions of said surface.

3. The process of producing a planographic printing plate having a printing surface consisting of a single metal which comprises indurating a part of the surface of said metal to adapt it as the ink-taking element of the plate and treating the remainder of said surface so that it may have an open or non-compacted structure to adapt it to act as the ink-rejecting element of the plate.

4. The process of producing a planographic printing plate having a printing surface consisting of a single material which consists in polishing a part of the surface of said material which is to constitute the ink-taking element of the plate and graining the remainder of the surface so that it may form the non-printing part of the plate.

5. The process of producing a planographic printing plate having a printing surface consisting of a single metal which consists in polishing a part of the surface of said metal which is to constitute the ink-taking element of the plate and graining the remainder of the surface so that it may form the non-printing part of the plate.

[Claims 6 to 8 not printed in the Gazette.]

1,215,494. PRINTING-PLATE. GEORGE R. CORNWALL, Rye, N. Y., assignor, by mesne assignments, to James G. Coffin, trustee. Filed Mar. 20, 1905, Serial No. 251,096. Renewed July 6, 1916. Serial No. 107,872. (Cl. 101—130.)



1. A metal planographic printing plate having the metal of the printing face in a dense or compacted condition in the design parts and in an open or non-compacted but coherent and unamalgamated condition in the non-design parts.

2. A planographic printing plate having its printing surface of a single metal, a portion of said surface being in a dense or compacted state or condition and the remainder of the surface of said plate being in an open or non-compacted state or condition, said portions being arranged or disposed with reference to each other so as to define the design; said portions constituting the ink-taking and ink-rejecting parts of the surface, respectively.

3. A planographic printing plate having its printing surface consisting of a single metal, a portion of said surface being in an indurated state or condition and the remainder of said surface being in a non-indurated state or condition, said portions being arranged or disposed with reference to each other so as to define the design; said portions constituting the ink-taking and ink-rejecting parts of the surface, respectively.

4. A planographic printing plate having its printing surface consisting of a single material, a portion of said surface being polished and a portion thereof grained, said portions being arranged or disposed so as to define the design; said portions constituting the ink-taking and ink-rejecting parts of the surface, respectively.

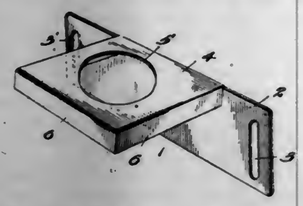
5. A planographic printing plate having its printing surface consisting of a single metal, a portion of said surface being polished and a portion thereof grained, said portions being arranged and disposed so as to define the design; said portions constituting the ink-taking and ink-rejecting parts of the surface, respectively.

[Claim 6 not printed in the Gazette.]

1,215,495. BOTTLE-BRACKET. CHARLES W. CRUM, Olney, Ill. Filed Apr. 21, 1916. Serial No. 92,652. (Cl. 120—58.)

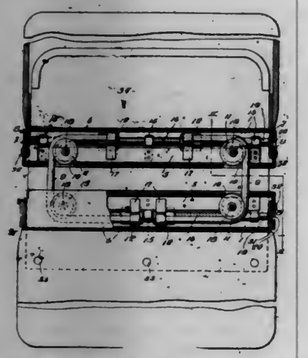
A bracket comprising a pair of angularly disposed plates one being elongated and formed with a slot near each end and screws in the slots securing the bracket to a support, and the other plate having an opening to fit around

the neck of a bottle, and flanges depending from the edges of this plate to fit over the body of the bottle, said opening



being located in position so that the slotted plate will cooperate with the flanges to hold the bottle stable.

1,215,496. LOOSE-LEAF BINDER. BURTON E. CUMMINGS, Ridgefield Park, N. J., assignor to Leonard Day, New York, N. Y. Filed Mar. 14, 1912. Serial No. 683,701. (Cl. 129—41.)



1. In a temporary binder, the combination comprising a pair of clamping members; a pair of covers pivotally connected to said clamping members, flexible means extending between and connecting said members; and quick-acting mechanism comprised in one of said clamping members adapted for taking up said flexible means to move said clamping members into clamping position.

2. In a temporary binder, the combination comprising a pair of clamping members; a pair of covers pivotally connected to said clamping members, flexible means extending between and connecting said members; screw actuated means comprised in one of said clamping members for taking up said flexible means; and quick-acting means comprised in the other of said clamping members for taking up said flexible means, all for adjusting said clamping members into clamping position.

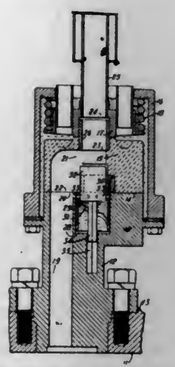
3. In a temporary book binder, the combination of a pair of hollow clamping members; a pair of flexible connectors extending between said members; book covers pivotally connected to said members; means fixed to one of said book covers and telescoping into the other of said book covers and adapted to cover said clamping members when the book is closed; and a pair of separate mechanisms located in one of said clamping members and each secured to one of said flexible connectors for the purpose of taking up the same in order to adjust said clamping members into clamping position.

4. In a temporary book binder, the combination comprising a pair of hollow clamping members; a flexible connector extending between said members; a longitudinally disposed stiffening rib formed within one of said clamping members; a slidable member guided by said stiffening rib carrying one end of said flexible connector; and means for sliding said slidable member for taking up said flexible connector to adjust said clamping members into clamping position.

5. In a temporary binder, the combination of a pair of clamping members; a plurality of flexible connectors extending between and connecting said clamping members; quick-acting means comprised in one of said clamping members for rapidly taking up said flexible connectors; and mechanism comprised in the other of said clamping members and secured to said flexible connectors for the purpose of taking up said connectors by exerting leverage thereon.

[Claim 6 not printed in the Gazette.]

1,215,497. LIQUID-SEALED VALVE. DAVID C. DAVIS, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 4, 1915. Serial No. 25,778. (Cl. 137—7.)



1. The combination with a valve provided with a mechanical closure, of a body of liquid associated therewith, and automatic means whereby, when said valve is closed, said liquid is moved to seal said closure, and whereby when said valve is opened, said liquid is removed from the point of closure.

2. The combination with a valve provided with a fluid passage therethrough, of a mechanical closure for said passage, a body of sealing liquid, and means whereby, when said mechanical closure is closed, said liquid is moved to fill a portion of said passage and whereby, when said closure is opened, said liquid is removed from said passage.

3. The combination with a valve provided with a fluid passage therethrough, of a mechanical closure for said passage, a body of sealing liquid, and means whereby, after said mechanical closure is closed, said liquid is moved to fill a portion of said passage, and whereby, before said closure is opened, said liquid is removed from said passage.

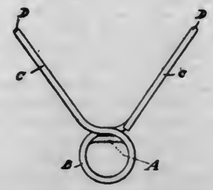
4. In a valve, means for mechanically stopping the flow of a fluid through a passage, and means for subsequently automatically closing said passage by a liquid seal.

5. In a valve provided with means for closing a fluid passage both by a mechanical closure and by a liquid seal, means for automatically opening said liquid seal before said mechanical closure.

[Claims 6 to 13 not printed in the Gazette.]

1,215,498. SPIRAL SPRING FOR THE CLOSING OF DOORS. FRED DIETZ, Irvington, N. J. Filed Nov. 14, 1914, Serial No. 872,233. Renewed Sept. 23, 1916. Serial No. 121,904. (Cl. 16—9.)

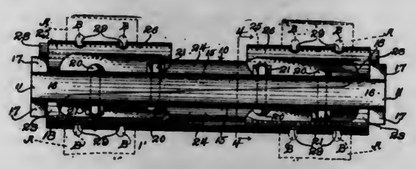
1. A door-spring comprising a coiled-spring body the ends of which terminate in and form a pair of oppositely and laterally extending arms having bearing portions formed at their free ends, said arms being adapted to respectively engage a door-body and a portion of the door-frame in which the door is hung, and means formed in a convolution of said coiled-spring body for engaging the head of a door-hinge pintle inserted in said coiled-spring body to prevent the accidental displacement of the latter from assembled operative relation to the pintel of a door-hinge.



2. A door-spring comprising a coiled-spring body the ends of which terminate in and form a pair of oppositely and laterally extending arms having bearing portions formed at their free ends, said arms being adapted to respectively engage a door-body and a portion of the door-frame in which the door is hung, and means connected with said coiled-spring body for engaging the head of a door-hinge pintle inserted in said coiled-spring body to prevent the accidental displacement of the latter from assembled operative relation to the pintle of a door-hinge, said means comprising an inwardly pressed straight laterally extending stop-member formed in connection with one of the convolutions intermediate of the ends of said coiled-spring body, and extending laterally through the interior and to one side of the longitudinal opening through the convolutions of said coiled-spring body.

3. A door spring comprising a coiled-spring body having its ends extending laterally in opposite directions forming arms, the said coiled-spring body being constructed to receive a member attached to the door or its casing and introduced into the coiled-spring body in the direction of the axis of the said body, and means located within the coiled-spring body and connecting the said body and the said member to prevent the displacement of the body with respect to the said member.

1,215,499. RAIL-JOINT. ALEXANDER S. DIMITROFF, Glasgow, Mont. Filed Sept. 5, 1916. Serial No. 118,460. (Cl. 239—6.)



1. A rail joint comprising two rails, each of said rails having a fish plate formed integral therewith and having a series of apertures formed therein for the reception of a series of bolts adapted to bind said rails substantially together, and an extension formed intermediate the length of each of said fish plates and integral therewith, as a means for preventing the undesired longitudinal movement of said rails.

2. A rail joint comprising two rails, each of said rails having a wedge shaped end formed thereon, a series of bolts adapted to bind said rails together, a reinforcing member supporting said rails, a rail guard formed integral with said reinforcing member at one end thereof, a second rail guard formed integral therewith at the opposite end thereof, a plurality of rail guards movable longitudinally at the opposite side of said reinforcing member as a means whereby each of the same is brought into transverse alinement with one of the said integral rail guards at opposite ends of the said reinforcing member to engage in transverse alinement said rails in close proximity to the wedge shaped ends thereof and means provided for substantially securing said reinforcing member to a plurality of ties through the coöperation of said rail guards with the last mentioned means.

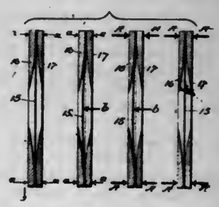
3. A rail joint comprising two rails, a plate supporting the same, a plurality of rail guards formed integral therewith, a means formed integral with said plate to permit a second plurality of rail guards to be moved thereon and a means provided by each of said rail guards for the reception of fastening members to substantially hold said plate in position.

4. A rail joint comprising two rails, a plate supporting the same, a plurality of rail guards formed integral therewith, a plurality of guide rails formed integral with said plate to permit the movement thereon of a second plurality of rail guards, a means provided upon each of the last mentioned rail guards to limit the movement of the same, and a means provided by each of the first mentioned and last mentioned rail guards for the reception of fastening members to substantially hold said plate in position.

5. A rail joint comprising two rails, a reinforcing member supporting the same, a plurality of spaced rail guards formed integral with said reinforcing member at one side thereof, a second plurality of rail guards adapted to be moved longitudinally upon said reinforcing member at the opposite side thereof until in transverse alinement with said integral rail guards to produce a means for substantially engaging said rails at the opposite ends of said reinforcing member and each of said rail guards having a series of recesses formed therein as a means whereby said reinforcing member may be substantially held in position.

[Claims 6 to 13 not printed in the Gazette.]

1,215,500. METHOD OF MOUNTING DIAPHRAGMS IN SOUND-BOXES. PARKER DODGE, Washington, D. C. Filed May 18, 1915. Serial No. 28,910. (Cl. 181—31.)



1. The method of mounting diaphragms in sound-boxes and the like, which consists in producing a contraction of the periphery of the diaphragm by deflecting the central portion of the diaphragm, and then positively clamping said periphery while contracted.

2. The method of mounting diaphragms in sound-boxes and the like which consists in placing the diaphragm between a pair of clamping members adapted to engage its opposite faces at or near its periphery, producing a contraction of said periphery by deflecting the central portion of said diaphragm, and then forcing said clamping members together to clamp said diaphragm positively between them while its periphery is contracted.

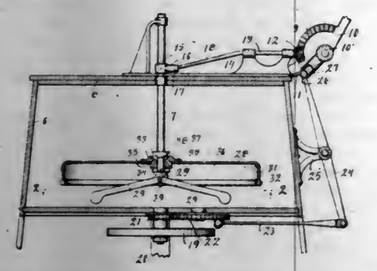
3. The method of mounting diaphragms in sound-boxes and the like which consists in deflecting the central portion of the diaphragm to contract the periphery thereof, and then while maintaining said deflection positively clamping said contracted periphery.

4. The method of mounting diaphragms in sound-boxes and the like which consists in placing the diaphragm between a pair of clamping members adapted to engage its opposite faces at or near its periphery, deflecting the central portion of said diaphragm to contract its periphery, then while maintaining said deflection, clamping said diaphragm between said clamping members, and then relieving said diaphragm from the deflecting stress.

5. The method of mounting acoustic diaphragms which consists in contracting the periphery of the diaphragm by the application of force, and thereafter maintaining said contraction by means of a positive peripheral clamp.

[Claims 6 and 7 not printed in the Gazette.]

1,215,501. WASHING-MACHINE. JOHN P. DORAU, Jefferson, Wis. Filed Oct. 25, 1915. Serial No. 57,683. (Cl. 259—99.)



1. In a washing machine, the combination, with a vertically and horizontally reciprocated shaft, of a pounder slidably mounted on said shaft to turn therewith, and a valve operating automatically to admit air to the pounder on its upward movement and to exclude air therefrom when the pounder strikes the clothes.

2. In a washing machine, the combination, with a vertically and horizontally reciprocated shaft, of a pounder mounted on said shaft to turn therewith and provided with an opening in its top, and means fixedly carried by said shaft operable to close said opening on the downward movement of the shaft and to open the same on the upward movement thereof for the purpose described.

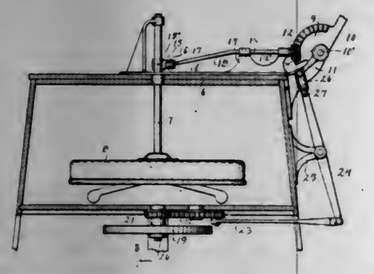
3. In a washing machine, the combination, with a pounder shaft, of a pounder comprising an open bottom casing, and agitator blades pivotally mounted within the hollow of said casing.

4. In a washing machine, the combination, with a vertically and horizontally reciprocated shaft, of a pounder vertically slidably movable with respect to said shaft and connected to turn therewith comprising an open bottom casing having an opening in its top and a valve fixedly carried by said shaft and operated thereby to open and close said opening.

5. In a washing machine, the combination, with a vertically reciprocated shaft, of a pounder vertically slidably connected to said shaft comprising an open bottom casing having an opening in its top, a valve carried by said shaft and operated thereby to open and close said opening, and a plurality of agitator blades pivotally mounted within the hollow of the pounder casing.

[Claims 6 and 7 not printed in the Gazette.]

1,215,502. DRIVING MECHANISM. JOHN P. DORAU, Jefferson, Wis. Filed May 10, 1916. Serial No. 96,485. (Cl. 74—14.)



1. In a driving mechanism, the combination, with a vertical shaft, of a drive shaft disposed at an angle thereto, a member fixed to the vertical shaft and provided with a bore, said drive shaft having an offset portion pivotally and slidably mounted in said bore, and means for operating said drive shaft.

2. In a driving mechanism, the combination, of a vertical shaft, a drive shaft disposed at an angle thereto and provided with an offset portion, a member fixed to said vertical shaft and operatively connected to said offset portion to form a sliding and pivotal driving connection between said shafts, and means for imparting an alternately reversed rotation to said drive shaft.

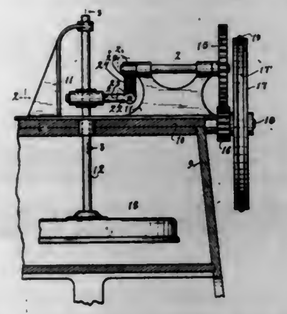
3. In a driving mechanism, the combination of a vertical shaft, a drive shaft disposed at an angle thereto and provided with an offset portion, a member having a bore therein fixed to said vertical shaft, said offset portion of the drive shaft being provided with a rounded end for sliding and pivotol movement within said bore, an oscillating lever, and a gearing connection between said lever and drive shaft to impart an alternately reversed rotation to said drive shaft on the operation of said lever.

4. In a driving mechanism, the combination, with a vertical shaft, of a drive shaft disposed at an angle thereto, a member fixed to the vertical shaft and provided with a bore, said drive shaft having an offset portion pivotally and slidably mounted in said bore, a gear mounted on the drive shaft, an oscillatory lever, and a segmental gear carried by said lever and in mesh with the gear on said drive shaft.

5. In a driving mechanism, the combination, with a vertical shaft, of a drive shaft disposed at an angle thereto, a member fixed to the vertical shaft and provided with a bore, said drive shaft having an offset portion pivotally and slidably mounted in said bore, a gear mounted on the drive shaft, an oscillatory lever, a segmental gear carried by said lever and in mesh with the gear on said drive shaft, and means operatively connected to said lever for imparting the necessary momentum to said drive shaft.

[Claim 6 not printed in the Gazette.]

1,215,503. DRIVING MECHANISM FOR WASHING-MACHINES. JOHN P. DORAU, Jefferson, Wis. Filed July 17, 1916. Serial No. 109,617. (Cl. 74—14.)



1. In a driving mechanism, the combination, with a vertical shaft, of a drive shaft disposed at an angle thereto, and a driving connection between said shafts for imparting a progressive rotary movement of the vertical shaft in one direction, intermittently interrupted by rotary movements of said vertical shaft in the reverse direction, and for vertically reciprocating said vertical shaft during the rotation of the drive shaft.

2. In a driving mechanism, the combination, with a vertical shaft, of a drive shaft disposed at an angle thereto, and a driving connection between said shafts comprising a member having an offset universal joint connection with one of said shafts and a gearing connection with the other of said shafts.

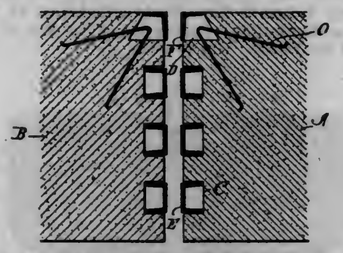
3. In a driving mechanism, the combination, with a vertical shaft, of a drive shaft disposed at an angle thereto, and a driving connection between said shafts comprising a member having an offset universal joint connection with said drive shaft and a worm and wheel connection with said vertical shaft.

4. In a driving mechanism, the combination, with a vertical shaft, of a drive shaft disposed at an angle thereto, and a driving connection between said shafts including a worm and wheel connection with one of said shafts and an offset connection with the other of said shafts.

5. In a driving mechanism, the combination, with a vertical shaft, of a drive shaft disposed at an angle thereto, and a driving connection between said shafts comprising a member having an offset universal joint connection with said angularly disposed shaft, and a yieldingly connected gearing connection with said vertical shaft.

[Claims 6 to 12 not printed in the Gazette.]

1,215,504. METHOD OF JOINING CAISSONS. JOHN W. DOTY, Brooklyn, N. Y., assignor to The Foundation Company, a Corporation of New York. Filed Apr. 28, 1915. Serial No. 24,438. (Cl. 61—3.)



1. In the making of a joint between piers sunk in the earth the method which consists in sinking two caissons with a slight space between them and with registering vertical grooves at one end of said space and rods embedded in the piers and extending into said grooves, excavating the earth at the side of the caissons on which said grooves are located, and filling said grooves with concrete extending across the intermediate space so as to tie the two caissons together.

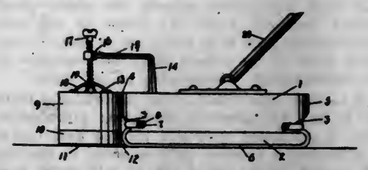
2. In the making of a joint between piers sunk in the earth the method which consists in sinking two caissons with a slight space between them and with registering vertical grooves at one end of said space and rods embedded in the piers and extending into said grooves, excavating the earth at the side of the caissons on which said grooves are located, tying together the exposed portions of said rods and filling said grooves with concrete extending across the intermediate space so as to tie the two caissons together.

3. In the making of a joint between piers sunk in the earth the method which consists in sinking two caissons with a slight space between them and with registering vertical grooves at one end of said space which are undercut back from the sides of the caissons, excavating the earth at the side of the caissons on which said grooves are located and filling said grooves with concrete extending across the intermediate space so as to tie the two caissons together.

4. In the making of a continuous wall of foundation piers the method which consists in building above ground concrete piers with their ends adjacent, and with grooves extending upward continuously from the cutting edge to the top, removing the forms so as to leave the adjacent grooved ends of naked concrete except for filling pieces in said grooves, sinking said piers, removing said filling pieces and exposing the concrete side faces of said grooves, and filling said grooves with concrete extending across the intermediate space so as to form a concrete to concrete joint continuously from the cutting edge to the top.

5. In the making of a continuous wall of foundation piers the method which consists in building above ground concrete piers with their ends adjacent to each other and with grooves extending upward continuously from the cutting edge to the top, removing the forms so as to leave the adjacent grooved ends of naked concrete, sinking said piers by the pneumatic caisson method, and filling said grooves with concrete extending across the intermediate space so as to form a concrete to concrete joint continuously from the cutting edge to the top.

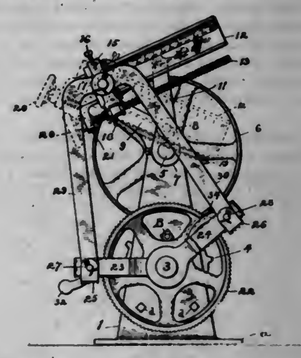
1,215,505. FLOOR-WAXING DEVICE. ARTHUR ALBERT DOWNING, Toronto, Ontario, Canada. Filed July 6, 1915. Serial No. 38,890. (Cl. 91—39.)



1. In a floor waxer, a base, a metal block mounted on said base and supporting at one of its ends a hollow wax receptacle, a base secured on the under side of said receptacle, a distributer pad on the first mentioned base, rods securing the ends of said pad in notches in the ends of said block, a guide strip on the under side of said second mentioned base guiding the wax under said pad, a cover closing the upper end of said wax receptacle, means secured to said block for exerting a downward pressure on said cover and a handle for operating the device over the floor.

2. In a floor waxer, a base, a metal block mounted on said base and supporting at one of its ends a hollow wax receptacle, a base secured to the under side of said receptacle, a distributer pad on the first mentioned base, having its ends extending into notches in the ends of said block, rods extending through said notches over said ends, set screws adjustably securing said rods to said block, a guide strip on the under side of said second mentioned base guiding the wax under said pad, a cover closing the upper end of said receptacle, metal straps secured in arch shape on said cover, a metal arm extending outwardly from said block over said receptacle and having at its outer end a threaded eye, a set screw engaging said eye and having its lower end engaging said straps for exerting a downward pressure on said cover and a handle for operating the device over the floor.

1,215,506. VARIABLE-SPEED MECHANISM. EMIL R. DRAVER, Richmond, Ind. Filed Feb. 26, 1912. Serial No. 679,895. (Cl. 74—54.)



1. A variable speed mechanism comprising a driving-shaft, a crank carried by said shaft, a pitman operable by the crank, a graduated scale-arm connected near its center to said pitman, a stationary bearing to which one end of the scale-arm is pivoted, a block slidable on the scale-arm, a pivot extending out from the block and parallel with said shaft, a driven shaft located parallel with the driving-shaft, a ratchet wheel secured on the driven-shaft, a pair of diametrically opposed stirrups pivoted on the driven shaft and striding the periphery of

the ratchet wheel, a plurality of ratchets mounted in each of said stirrups and adapted to operate on opposite sides of the periphery of the ratchet wheel whereby the upward movement of one ratchet and the downward movement of the other ratchet will tend to revolve the ratchet wheel and the driven shaft in one direction, a connecting bar extending from each stirrup and operatively connected with the pivot which is carried by the sliding block, and means whereby the sliding block may be moved manually along the length of the scale-arm while the mechanism is in operation in order to vary the ratio of speed of the driven shaft with relation to that of the driving-shaft, substantially as set forth.

2. A variable speed mechanism comprising a stationary frame having an upwardly projecting pivot-bearing extension, a graduated scale-arm pivoted near one end to said extension, a driving shaft mounted in the frame, a crank carried by the outer end of said shaft, a pitman operable by the crank and pivoted to the central portion of said scale-arm, a block slidable along the length of the scale-arm and carried thereby, a screw shaft for moving said block along the scale-arm and carried thereby and parallel therewith, means for manually revolving the screw shaft, a driven shaft located below and parallel with the drive shaft, a pair of oppositely disposed ratchets adapted to engage the periphery of the ratchet wheel on opposite sides of the center thereof, means whereby the ratchets are caused to swing concentric with the ratchet wheel including stirrups adapted to stride the ratchet wheel on opposite sides thereof and each being pivoted on the driven shaft, means for mounting the ratchets in the respective stirrups, a connecting bar extending upward from each of the stirrups, a pivot extending out from the sliding block, means for pivoting the upper ends of both of the connecting bars on the last mentioned pivot, all substantially as shown and described.

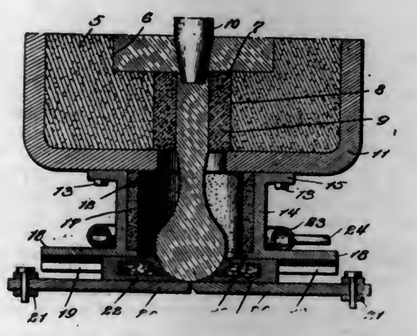
3. A self contained variable speed mechanism substantially as set forth, comprising a main frame, a relatively stationary pivot carried by the main frame, a graduated arm pivoted at one end on said pivot, a driving shaft carried in the said frame, a pitman operable by the driving shaft, a second pivot extending back from said arm and to which the pitman is connected, a sliding block movable along the entire length of said arm, the rear portion of said block being open whereby the block may pass the pivots above mentioned, a forwardly extending pivot varied by the block, the same being adapted to be brought into alinement with either the first or the second mentioned pivots, oppositely disposed arms mounted at their upper ends on the forwardly extending pivot, a shaft to be driven, a ratchet wheel secured on the last mentioned shaft, ratchets adapted to engage the periphery of the ratchet wheel, and means for connecting the ratchets to the respective arms to be raised and lowered thereby.

4. A self contained variable speed mechanism comprising a main frame, a driving shaft and a driven shaft carried thereby, a fixed pivot carried by the frame, a graduated arm pivoted at one end on said pivot, a second pivot extending back from said arm parallel with the first pivot and with said shafts, a pitman driven by the driving shaft and connected to the second pivot whereby as the driving shaft is rotated the free end of said arm will be given an upward and a downward movement at each revolution thereof, a block slidable along on said arms, the central portion of the back of said block being formed open whereby it may pass said pivots, a forwardly extending pivot carried by said block, arms independent of each other with their upper ends pivoted on the forwardly extending pivot from which they extend divergently and downward, a ratchet wheel carried by the driven shaft, ratchets carried by the lower ends of said arms whereby said ratchets are adapted to operate alternately upon the ratchet wheel to rotate the driven shaft in one direction and at a rate of speed predetermined by the position of said block with relation to the graduated arm.

5. A self contained variable speed mechanism comprising a frame, a fixed pivot carried by the frame, a graduated arm mounted at one end on said pivot and adapted to swing vertically, a sliding block mounted on said arm, means for retaining said block at any point along the length of said arm, a pivot carried by said block and adapted to be brought into alinement with the fixed pivot, a pair of oppositely disposed connecting arms having their upper ends journaled independently of each other on the pivot carried by the block, ratchets carried by the lower ends of said connecting arms, a ratchet wheel on which said ratchets operate to transmit intermittent rotary movement thereto with the rate of speed depending on the position of said block upon the graduated arm, and a shaft to which said ratchet wheel is connected, all substantially as shown and described.

[Claim 6 not printed in the Gazette.]

1,215,507. DROP-FEEDING DEVICE FOR GLASS-MACHINES. LEO ALBERT DREY, St. Louis, Mo., assignor to Drey Automatic Glass Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 5, 1916. Serial No. 76,480. (Cl. 49—55.)

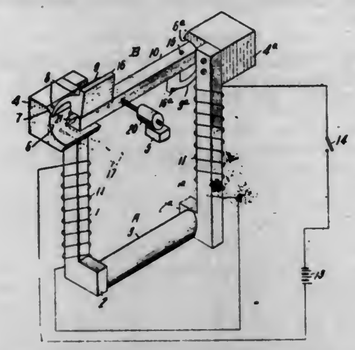


1. The combination with a glass furnace having an orifice through which glass is discharged by the action of gravity, a removable heating chamber of greater cross sectional dimensions than said orifice whereby a stream of glass flowing from the orifice will flow through said heating chamber without engaging its walls, of movable means beneath the heating chamber comprising glass severing means whereby to support or hold the accumulated glass within the chamber and removed from the walls thereof, and means for applying heat to the outer surface of said chamber whereby the temperature of the batch of glass accumulated within said chamber may be regulated.

2. In combination with a furnace having a discharge orifice, a chamber, means for securing said chamber to the furnace surrounding its discharge orifice, a bottom in said chamber comprising partible elements, means carried by said chamber for slidably supporting said partible bottom elements, and means for applying external heat to said chamber comprising an element surrounding said chamber whereby batches of glass may be gathered in said chamber with portions thereof in free suspension and such portions enveloped in heat derived from a source independent of the furnace from which the gatherings are discharged and the glass itself.

3. The combination with a molten glass receptacle having a discharge orifice, of an auxiliary chamber surrounding said orifice, whose upper wall is formed by said receptacle, a gob collecting and severing means forming the bottom of said chamber, said chamber maintaining when the gob collecting and severing means is closed, a heated gaseous envelop around the accumulated glass, and means for applying heat to the exterior surface of said chamber whereby the temperature of the heated envelop and consequently the gob of glass itself, may be regulated and the temperature of the chamber when the gob collecting and severing means is open may be regulated.

1,215,508. ELECTROMAGNETIC DEVICE. CHARLES W. DUNHAM, Swissvale, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Sept. 12, 1914. Serial No. 861,379. (Cl. 175—336.)



1. An electromagnetic device comprising a field member having two poles, an armature mounted to oscillate and having two members, said poles being offset along the axis of oscillation of said armature and said armature members being offset to be in operative relation to said poles respectively.

2. An electromagnetic device comprising a field member having two concave pole-faces facing in opposite directions but offset from each other along the axis of curvature of said pole-faces, and a Z-armature having its two legs offset along the said axis so that they are in operative relation to said pole-faces respectively.

3. An electromagnetic device comprising a field member having two concave pole-faces facing in opposite directions but offset from each other along the axis of curvature of said pole-faces, the arc of each pole-face being substantially 90° in length, and a Z-armature having its two legs offset along the said axis so that they are in operative relation to said pole-faces respectively, the arc of each armature leg being substantially 90° in length, whereby the armature is capable of oscillation through an angle of substantially 90°.

4. An electromagnetic device comprising a field member having two concave pole-faces facing in opposite directions but offset from each other, along the axis of curvature of said pole-faces, and a Z-armature having its two legs offset along the said axis so that they are in operative relation to said pole-faces respectively, said legs being so disposed that the outer edge of one leg is adjacent one edge of its pole-face when the outer edge of the other leg is adjacent the opposite edge of the other pole-face.

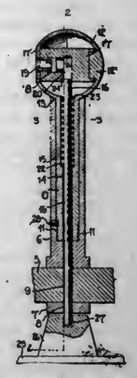
5. An electromagnetic device comprising a field member and an armature mounted to oscillate, said field member having two pole-pieces offset from each other along the axis of oscillation of said armature, and said armature having two members off-set along the said axle so that they are in operative relation to said pole-pieces respectively, whereby each armature member is influenced by the corresponding pole-piece but not by the other pole-piece.

[Claim 6 not printed in the Gazette.]

1,215,509. LOCKING DEVICE FOR GEAR-SHIFTING LEVERS OF AUTOMOBILES. IRA C. ELLIS, East St. Louis, Ill. Filed July 8, 1916. Serial No. 108,216. (Cl. 74—39.)

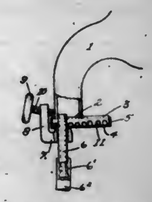
1. The combination with a tubular gear shifting lever, of a longitudinally bored rod fitted within said lever, a locking rod operating in the bore of said first named rod, a keeper, a spring normally acting to hold said locking rod out of engagement with the keeper, and means mounted upon the outer end of said first named rod to co-act with the other end of the locking rod and project said rod into locking engagement with the keeper.

2. The combination with a tubular gear shifting lever, of a rod detachably fitted within said tubular lever and having a longitudinal bore, a keeper, a locking rod operating in said bore, a spring surrounding the rod and normally acting to yieldingly hold the same out of engagement with the keeper, and cam means mounted upon the outer end of said first named rod to co-act with the locking rod and project the same into locking engagement with the keeper.



3. The combination with a shaft and a tubular lever thereon, said shaft and lever having coinciding openings communicating with the inner end of the tubular lever, of a rod detachably fitted within said tubular lever and having a longitudinal bore to communicate with said openings, a locking rod shiftable through said bore and said openings, a keeper, a spring acting to normally hold the locking rod out of engagement with said keeper, said first named rod being provided with a spherical head on its outer end, and a rotatable cam mounted within said head to co-act with one end of the lever and project the other end thereof into locking engagement with said keeper.

1,215,510. COUPLING. CARL O. ENGSTROM, Sacramento, Cal. Filed Feb. 15, 1916. Serial No. 78,433. (Cl. 137—28.)



1. A hose and faucet coupling consisting of a plate for positioning over the faucet outlet, a yieldable surface carried by said plate for contacting with the faucet outlet, an open-ended outlet pipe extending through said plate and yieldable surface and adapted at its upper end to project into said faucet outlet to contact with the inner surface thereof, an arm associated with said plate, and an adjustable clamping screw carried by said arm and downwardly inclined toward said plate for forcing against the outer surface of said faucet, said clamping means adapted to draw said yieldable surface upwardly against the peripheral edge of said faucet outlet and to draw the upper end of said outlet pipe tightly against the inner wall surface of said faucet.

2. A hose and faucet coupling consisting of a closure plate for positioning over the faucet outlet, means extended upwardly from said closure plate for projecting into the faucet outlet and for contacting with the inner wall surface thereof, a clamping means coöperating with said closure and for engaging the outer surface of said faucet adjacent said upwardly projecting means to draw the

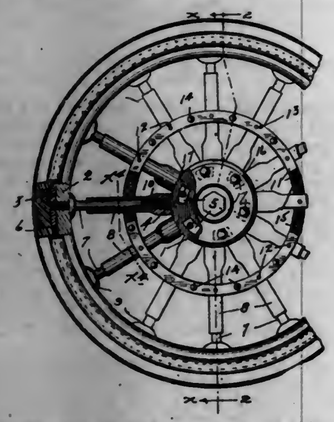
same tightly against the inner surface of the faucet and to also draw said closure upwardly against the peripheral edge of the faucet, and a fluid outlet extending through said closure plate.

3. A hose and faucet coupling consisting of a closure for positioning over the faucet outlet, means extended upwardly from said closure for projecting into the faucet outlet and for contacting with the inner wall surface thereof, an arm coöperating with said closure and extending above the same, an adjusting screw carried by said arm and downwardly inclined toward said closure for engaging the outer surface of the faucet adjacent said upwardly projecting means to draw the same tightly against the inner surface of the faucet and to draw said closure upwardly against the peripheral edge of the faucet, and a fluid outlet extended through said closure.

4. A hose and faucet coupling consisting of a plate having a yieldable surface for positioning over the faucet outlet, an open ended tubular outlet extended through said plate and projecting at its upper end above the yieldable surface adjacent the edge of the plate and said upper end adapted to contact with the inner surface of said faucet, an arm adjustably mounted on said tubular outlet beneath said plate and adapted to contact with the under surface thereof, said arm projecting above said plate and its upwardly projecting portion terminating in proximity of the tubular outlet, and an adjusting screw carried by said arm and inclined toward said plate and adapted to contact with the outer surface of said faucet to draw said upwardly projecting tubular portion against the inner surface thereof and to secure said plate in position on said faucet.

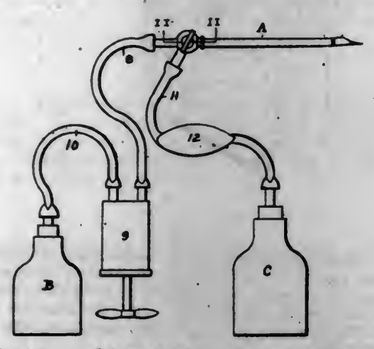
5. A hose and faucet coupling consisting of a plate provided with an upturned annular flange, a yieldable packing supported on said plate within said flange, said yieldable packing adapted for positioning over the faucet outlet, an open ended tubular outlet extended through said plate and yieldable packing adjacent one edge thereof and projecting ft its opposite ends beyond said plate and packing, a substantially L-shaped arm slidably mounted on said tubular outlet below said plate and the upper portion thereof terminating in proximity to the upper end of the tubular outlet, and an adjustable clamping member carried by the said arm and downwardly inclined toward said plate, said screw adapted to contact with the outer surface of the faucet to draw the upwardly projecting end of said tubular outlet against the inner surface thereof and maintain a fluid-tight joint between the faucet outlet and said packing.

1,215,511. RESILIENT WHEEL. WILLIAM F. EWALD, Java, S. D. Filed Oct. 7, 1915. Serial No. 54,531. (Cl. 152—47.)



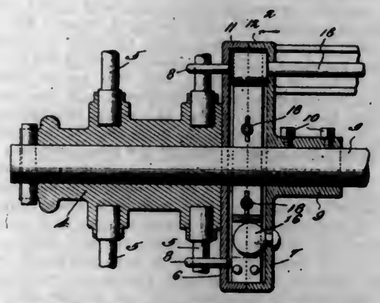
A resilient wheel including a hub member having a plurality of radial studs circumferentially spaced and externally screw-threaded, a rim, and two-part spokes connecting the hub member and rim, the inner members of the spokes being tubular and having screw-threaded engagement with the studs of the hub member and the outer members thereof having screw-threaded engagement with the rim, said outer member also having shoulders engaging the rim.

1,215,512. TROCAR. DAVID H. FETZER, Dormont borough, Allegheny county, Pa. Filed Jan. 4, 1916. Serial No. 70,323. (Cl. 27—18.)



A trocar comprising a straight tubular body, one end of which is formed for engagement with a removable puncturing end-piece, and the other end of which is bifurcated to provide two branches, the bore of one of said branches forming a straight extension of the bore of said body, and a rotatable two-way valve at the junction of said branches with said body, and having a diametric port therethrough, the valve being rotatable to bring said port in alinement with the bore of said body and with the bore of said extension, providing an unobstructed passage through said body, extension, and valve, whereby a straight cleaning-rod may be projected therethrough.

1,215,513. CLUTCH. PAUL FICHTER, Randolph, Iowa. Filed June 19, 1916. Serial No. 104,568. (Cl. 192—13.)



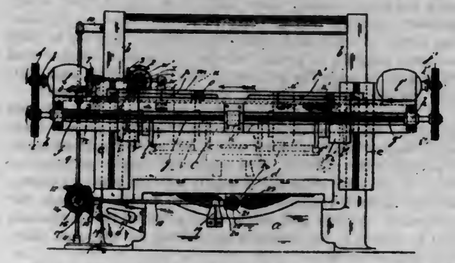
1. In a device of the class described, the combination with a pair of independently rotatable members, of housing sections carried by said members, a connector element within said housings and a cam for forcing said connector element into contact with said housing sections simultaneously, substantially as described.

2. In a device of the class described, the combination with a pair of independently rotatable members, of housing sections secured to said members, a connector element within said housings, and means for forcing said connector element into contact with said housings simultaneously, substantially as described.

3. In a device of the class described, a shaft, a rotatable member on said shaft, housing sections secured to said shaft and rotatable member respectively, arcuate band sections carried by one of said housing sections, a cam between the ends of said band sections and adapted to force said sections into engagement simultaneously with said housings, and an operating rod connected to said cam, substantially as described.

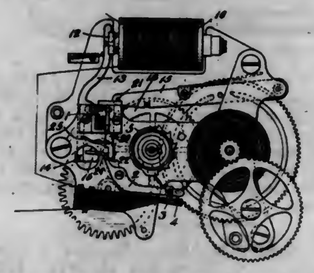
4. In a device of the class described, a shaft, a drum section fixed to said shaft, a rotatable member on said shaft, a drum section carried by said rotatable member and coöperating with said fixed section to form a drum, arcuate band sections hinged together at one end within said drum and carried by the fixed section thereof, springs normally holding said band sections disengaged from the annular walls of said drum, the free ends of said band sections being spaced apart, a cam interposed between said spaced ends, and a shaft for rotating said cam, substantially as described.

1,215,514. METAL-PLANING MACHINE. CHARLES F. FREDE, St. Louis, Mo., assignor to Commonwealth Steel Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 13, 1914. Serial No. 831,518. (Cl. 90—42.)



In a metal planing machine, the combination with the bed and the platen having a suitable housing, of a center-rail arranged above and across the platen and vertically adjustable on the housing, a cutter-head slidable along the center-rail on each side of the longitudinal center of the machine and adapted to cut transversely to the platen, motors carried by the center-rail and adapted to reciprocate the cutter-heads respectively, along the center-rail, means for electrically controlling the said motors, so that, either of the said cutter-heads may be stopped and started independent of the other, and that, when one cutter-head only is in action and the other is started, the said cutter-heads will automatically operate in opposite directions.

1,215,515. NON-INTERFERENCE SUCCESSIVE SIGNAL-BOX. ROBERT J. GASKILL, Fort Wayne, Ind., assignor to Gamewell Fire Alarm Telegraph Company, Newton Upper Falls, Mass., a Corporation of New York. Filed July 3, 1916. Serial No. 107,231. (Cl. 177—361.)



1. In a non-interference successive signal-box, the combination with a signaling-train having signal-formulating means including a signal-key, a locking-lever for the train, non-interference devices arranged to control the signal-key, of means controlled by the signal-key and arranged to prevent the locking-lever from returning to locking position after releasing the train, until the signal-key has been moved to open its signaling-contacts, substantially as described.

2. In a non-interference successive signal-box, the combination with a signaling-train having signal-formulating means including a signal-key, a locking-lever for the train, and non-interference devices arranged to control the signal-key, of means arranged between the locking-lever and signal-key, and adapted to be held by said key in position to prevent return movement of said lever until said key is moved to disengage said means, substantially as described.

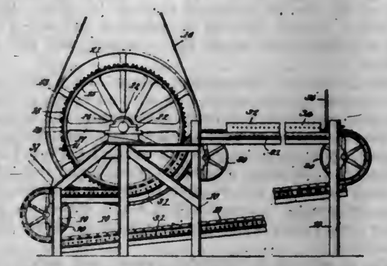
3. In a non-interference successive signal-box, the combination with a signaling-train having a pull and also having signal-formulating means including a signal-key, a locking-lever for the train, and non-interference devices arranged to control the signal-key, of means arranged to be operated by the pull and also arranged to lift the locking-lever and to engage the signal-key, whereby return movement of the locking-lever is thereafter controlled by the signal-key, substantially as described.

4. In a non-interference successive signal-box, the combination with a signaling-train having signal-formulating means including a signal-key, a locking-lever for the train, and non-interference devices arranged to control the signal-key, of a prop having a latch, said prop being arranged between the locking-lever and signal-key for coöperation with both, by which the locking-lever is prevented from returning to locking position until after the key has been moved to disengage the prop and open its contacts, substantially as described.

5. In a non-interference successive signal-box, the combination with a signaling-train having signal-formulating means including a signal-key, a locking-lever for the train, and non-interference devices arranged to control the signal-key, of a sliding prop arranged for movement between the locking-lever and signal-key to lift the lever and to engage the key so that the lever is prevented from returning to locking position until after the key has been moved to disengage the prop, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,215,516. WOOD-PULP-FORMING MACHINE. WILLIAM GATKE, Portland, Oreg. Filed Mar. 16, 1916. Serial No. 84,556. (Cl. 92—54.)



1. A molding apparatus comprising a series of mold units, and a series of former units coöperating therewith and shaped to enter the cavities of the molds, one of said series being connected to form an endless belt, a rotatable element on the periphery of which the other series of units is mounted, and means for guiding the belt past the rotatable element in coöperative relation therewith.

2. A molding apparatus comprising a series of mold units, and a series of former units coöperating therewith and shaped to enter the cavities of the molds, one of said series being connected to form an endless belt, a rotatable element on the periphery of which the other series of units is mounted, means for guiding the belt past the rotatable element in coöperative relation therewith, driving means for said element, and coöperating means on the units of the respective series for driving the belt from the rotatable element.

3. A molding apparatus comprising a series of mold units, and a series of former units coöperating therewith and shaped to enter the mold cavities, one of said series being connected to form an endless belt, a rotatable element on the periphery of which the other series of units is mounted, means for guiding the belt past the rotatable element in coöperative relation therewith, and a drying oven through which the belt passes after leaving the rotatable element.

4. A molding apparatus comprising a series of mold units, and a series of former units coöperating therewith and shaped to enter the mold cavities, one of said series being connected to form an endless belt, a rotatable element on the periphery of which the other series of units is mounted, means for guiding the belt past the rotatable element, and a drying oven through which the belt passes after leaving the rotatable element, said oven being an inclosure open at its ends for the ingress and egress of the belt, and spaced heating elements in the inclosure between which elements the belt passes.

5. A molding apparatus comprising a series of mold units, and a series of former units coöperating therewith, the mold units being connected to form an endless belt and each mold unit having a series of cavities provided with a raised rim, a rotatable element on the periphery of which the former units are mounted, each of said former units having a series of protuberances shaped to enter the mold cavities and provided with a base portion engageable with the mold units inside the rims thereof for driving the belt, and means for guiding the belt past the rotatable element in coöperative relation therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,215,517. PROCESS FOR OBTAINING POTASH FROM POTASH-ROCKS. FREDERICK C. GILLEN, Milwaukee, Wis., assignor to William A. Krasselt, Milwaukee, Wis. Filed Apr. 19, 1915. Serial No. 22,384. (Cl. 23—22.)

1. The process of decomposing potash rock which consists in mixing ground potash rock with an excess of fixed alkali hydrate, adding water to this mixture and heating it under pressure to form a solution of fixed alkali silicate and potassium aluminate, adding alkaline borate to this solution to temporarily prevent the formation of the double salt of alkali aluminium silicate, and then adding a reagent to this solution while it is under the temporary action of the alkaline borate to separate the silica therefrom and to form a solution of potassium salt and fixed alkali carbonate from which the potassium salt may be separated.

2. The process of decomposing potash rock which consists in mixing ground potash rock with an excess of fixed alkali carbonate, adding water to this mixture and heating it to form a solution of fixed alkali silicate and potassium aluminate, adding alkaline borate to prevent the formation of a double salt of alkali aluminium silicate, and then adding carbon dioxid to this solution to form a solution containing potassium carbonate, fixed alkali carbonate and alkaline borate from which the potassium carbonate may be separated.

3. The process of decomposing potash rock which consists in mixing ground potash rock with water and an excess of fixed alkali carbonate and subjecting this mixture to pressure and heat to form a solution containing fixed alkali silicate and potassium aluminate, adding alkaline borate to this solution to temporarily prevent the formation of a double salt of alkali aluminium silicate, and then adding carbon dioxid to the solution while it is under the action of the alkaline borate to form a solution containing potassium carbonate and fixed alkali carbonate from which the potassium may be separated.

4. The steps of the process for treating potash rock which consists in decomposing the ground rock in a heated solution of alkali hydrate and adding alkaline borate to this heated solution to break down the rock into compounds from which the potash, alumina and silica may be separated.

5. The steps of the process for treating potash rock which consist in mixing the ground rock with a strong solution of alkali hydrate, heating the mixture under pressure and adding alkaline borate to the heated solution.

1,215,518. PROCESS FOR DECOMPOSING FELDSPAR AND OTHER POTASH-BEARING SILICIOUS MINERALS. WILLIAM H. GILLEN, Milwaukee, Wis. Filed Feb. 21, 1916. Serial No. 79,483. (Cl. 23—22.)

1. The process of decomposing potash-bearing silicious minerals which consists in mixing ground potash rock with alkaline borate, water and an excess of fixed alkali hydrate and heating this mixture to break the rock down into alkali silicate and aluminum silicate.

2. The process of decomposing potash-bearing silicious minerals which consists in mixing ground potash rock with borax, water and an excess of fixed alkali hydrate, and digesting this mixture with heat and under pressure to form a mixture containing alkali silicate and aluminum silicate.

3. The process for decomposing potash-bearing silicious minerals which consists in mixing ground potash rock with alkaline borate, water and an excess of fixed alkali hydrate, heating this mixture to form a mixture containing alkali silicate and aluminum silicate, adding to this mixture reagent to precipitate the aluminum silicate and silica and to keep the potassium salt in solution, and suitably recovering the alumina, silica and potassium salt.

4. The process of decomposing potash-bearing silicious minerals which consists in mixing ground potash rock with borax, water and an excess of fixed alkali hydrate, digesting this mixture with heat and under pressure to form a mixture containing alkali silicate and aluminum silicate, adding reagent to this mixture to precipitate the aluminum silicate and silica and to keep the potassium salt in solution, and suitably recovering the alumina, silica and potassium salt.

5. The process of decomposing potash-bearing silicious minerals which consists in mixing ground potash rock with borax, water and an excess of fixed alkali hydrate, digesting this mixture with heat and under pressure to form a mixture containing alkali silicate and aluminum silicate, adding carbon dioxid to this mixture to precipitate the aluminum silicate and silica and to keep the potassium carbonate in solution, whereby the rock is broken down into aluminum silicate, silica and alkaline carbonate from which the alumina, silica and carbonate may be separated.

1,215,519. TOBACCO-USER'S APPLIANCE. CHARLES P. GLOVER, Atlanta, Ga., assignor of one-half to Thomas P. Ledbetter, Atlanta, Ga. Filed June 21, 1916. Serial No. 104,978. (Cl. 131—59.)



A tobacco user's appliance comprising a handle with a pair of spaced, upturned end prongs fashioned with knife edge points to enter a tobacco plug and forming a space between them, and a pair of integral lugs at the under side of the handle located at an angle thereto and each formed with a curved front face and a sharpened fulcrum point to bear against and penetrate the plug for the purpose described.

1,215,520. CAR-DOOR SEAL. WILLIAM V. GOODNOW, Washington, D. C. Filed May 14, 1914. Serial No. 838,540. (Cl. 70—98.)

1. A seal of the character described comprising a shackle and a lock therefor having a pair of slits, said shackle consisting of a strip of foldable material threaded through one of the slits and provided with projections at opposite sides of the lock to prevent displacement thereof, said shackle being adapted to be folded intermediate of its ends and one of its ends passed through the other slit in the lock, the lock being in the form of a thin metal plate with the slits adjacent opposite edges thereof and the ends of the slits terminating adjacent the other opposite edges of the plate, said plate being brittle so as to prevent prying open of the slits without rupturing the plate, and said plate also having a hardness to prevent enlarging of the slits by cutting, filing or otherwise without breaking the plate.



2. A seal of the character described comprising a shackle and a lock therefor having a pair of substantially parallel slits, said shackle consisting of a strip of foldable material having a lateral enlargement located at one end thereof and projecting at opposite sides of the strip in the plane of the strip, said shackle being received through one of the slits of the lock said lock disposed adjacent the lateral enlargement of the shackle, said shackle being provided with a shoulder or projection adjacent to and at the other side of the lock, said lock lying between the enlargement and the projection or shoulder to prevent displacement of the lock, and the free end of the shackle being adapted to be passed through the other slit in the lock.

3. A seal of the character described comprising a shackle and a lock therefor having a pair of slits, said shackle consisting of a strip of foldable material and adapted to have its ends passed through the respective slits in the lock, said lock consisting of a thin metal plate with the slits located adjacent opposite edges thereof and the ends of the slits terminating adjacent the other opposite edges of the lock, and said lock being brittle so as to prevent prying open of the slits without rupturing the lock, and said lock also having a hardness to prevent enlarging of the slits by cutting, filing or otherwise without breaking the lock.

4. A seal of the character described comprising a shackle and a lock therefor, the lock being in the form of a plate having a pair of substantially parallel slits therein, the shackle being a metallic blank in the form of a long narrow strip of a width to pass through the slits of the lock, one end of the blank having an integral enlargement projecting laterally of the body of the strip and in the plane thereof, and the other end portion of the blank being free from projections and capable of being thrust through the slots in the plate.

5. A seal of the character described comprising a T-shaped shackle and a lock-plate, the lock-plate having a pair of substantially parallel slits therein, the shank portion of the shackle being free from projections, and of a width to be passed through the slits of the locking plate.

[Claim 6 not printed in the Gazette.]

1,215,521. OPERATING DEVICE FOR SIGNALS. ALBERT A. GOTTFRIED, Detroit, Mich. Filed Nov. 29, 1915. Serial No. 64,007. (Cl. 74—14.)

1. An actuating device for signals comprising an oblong casing, a slotted cover plate therefor, a block slidable in said casing and operable from the exterior of said casing, means carried by said block and adapted to engage said casing to hold said block in an adjusted position, and cables extending into said casing and connected to said block and adapted to be shifted thereby.



2. An actuating device for signals adapted to be operated by cables, comprising a casing, a block slidable in said casing and adapted for attachment to a cable, means carried by said block engaging said casing for holding said block in adjusted position, and means exterior of said casing to facilitate moving said block.

3. An actuating device for cable operated signals, comprising a casing, a slotted cover plate thereon provided with indicia, a block slidable in said casing adapted for attachment to cables, means carried by said block engaging said casing to hold said block in adjusted position, an indicator plate movable with said block in proximity to the indicia on said cover plate, and means connecting said indicator plate to said block and facilitating moving said block within said casing.

1,215,522. RAILWAY SIGNALING. HENRY W. GRIFFIN, New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Original application filed Jan. 27, 1913, Serial No. 744,367. Divided and this application filed July 24, 1913. Serial No. 780,999. (Cl. 246—30.)



1. In combination, a stretch of railway track, a source of signaling current connected with the track rails adjacent the middle of the stretch, two track relays connected with the track rails adjacent the ends of the stretch respectively, two end signals located adjacent the ends of the stretch respectively, two intermediate signals located respectively on opposite sides of the middle of the stretch, a signal relay for the control of each intermediate signal, a circuit for each signal relay controlled by the track relay which is connected to the portion of the stretch remote from the intermediate signal controlled by said signal relay, and a circuit for each end signal controlled by the signal relay for the adjacent intermediate signal and also by the adjacent track relay.

2. In combination, a stretch of railway track, two track relays connected with the track rails adjacent the ends of the stretch respectively and arranged to be opened successively by a car or train passing through the stretch, the relay first opened remaining open until after the other relay has opened, means for energizing said relays, two end signals located respectively adjacent the ends of the stretch, two intermediate signals located respectively in advance of the end signals but in the rear of the point at which a car or train passing through the stretch from said end causes the track relay at the opposite end of the stretch to open, a signal relay for the control of each intermediate signal, a circuit for each signal relay controlled by the track relay for the end of the stretch remote from the intermediate signal controlled by said signal relay, and a circuit for each end signal controlled by the signal relay for the adjacent intermediate signal and also by the adjacent track relay.

3. In combination, a stretch of railway track, two track relays connected with the track rails adjacent the ends of the stretch respectively and arranged to be opened successively by a car or train passing through the stretch, the relay first opened remaining open until after the other

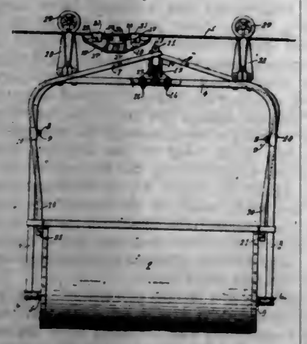
relay has opened, means for energizing said relays, two end signals located respectively adjacent the ends of the stretch, two intermediate signals located respectively on opposite sides of the middle of the stretch, means for controlling each end signal by both track relays and for controlling each intermediate signal by the track relay on the other side of the middle of the stretch, and means for also controlling each intermediate signal by the end signal on the opposite side of the middle of the stretch so that such intermediate signal can indicate proceed only when such end signal indicates stop.

4. In combination, a stretch of railway track, two track relays connected with the track rails adjacent the ends of the stretch respectively and arranged to be opened successively by a car or train passing through the stretch, the relay first opened remaining open until after the other relay has opened, means for energizing said relays, two end signals located respectively adjacent the ends of the said stretch for governing the entrance of cars or train into the stretch, two intermediate signals located respectively in advance of the end signals but in the rear of the point at which a car or train passing through the stretch from the said end causes the track relay at the other end of the stretch to open, a polarized signal relay for each intermediate signal, means for controlling each polarized relay by the track relay for the end of the stretch remote from the intermediate signal controlled by said signal relay, a circuit for each end signal controlled by the adjacent track relay and also by a neutral contact of the polarized relay for the adjacent intermediate signal, and means controlled by each end signal for reversing the polarity of the current in the polarized relay on the opposite side of the middle of the stretch according as such end signal indicates stop or proceed.

5. In combination, a stretch of railway track, a source of signaling current connected with track rails adjacent the middle of the stretch, two track relays connected with the track rails adjacent the ends of the stretch respectively, two end signals located adjacent the ends of the stretch respectively, two intermediate signals located respectively on opposite sides of the middle of the stretch, a polarized signal relay for the control of each intermediate signal, a circuit for each polarized relay controlled by the track relay for the end of the stretch remote from the intermediate signal controlled by said signal relay, a circuit for each end signal controlled by the adjacent track relay and also by a neutral contact of the polarized relay for the adjacent intermediate signal and means controlled by each end signal for reversing the polarity of the current in the signal relay for the intermediate signal on the opposite side of the middle of the stretch according as such end signal indicates stop or proceed.

[Claims 6 and 7 not printed in the Gazette.]

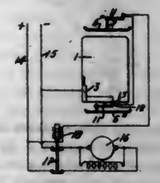
1,215,523. LITTER-CARRIER. WILLIAM GUTENKUNST, Milwaukee, Wis. Filed Oct. 4, 1915. Serial No. 53,874. (Cl. 214—14.)



1. In a litter carrier, a receptacle, a pivoted bail therefor, a pair of levers pivoted to the bail, extending upwardly and overlapping at their upper ends, a fixed bracket on the bail, a second bracket slidable in the fixed bracket, a spring interposed between the two brackets, a passageway in the sliding bracket through which the upper ends of the levers extend, and a contact bearing located at the top of the slidable bracket.

2. In a litter carrier, a receptacle, a pivoted bail therefor, a pair of levers pivoted to the bail, extending upwardly and overlapping at their upper ends, a fixed bracket on the bail, a second bracket slidable in the fixed bracket, a spring interposed between the two brackets, a passageway in the sliding bracket through which the upper ends of the levers extend, and a roller at the top of the slidable bracket and forming one side of said passageway.

1,215,524. SAFETY DEVICE FOR ELEVATORS. EDWARD A. HANFF, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 30, 1914. Serial No. 854,017. (Cl. 187—41.)

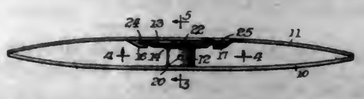


1. In an elevator system, the combination with a car, a structure for inclosing said car, a motor for actuating said car and a controller for said motor, of means for rendering said controller and said motor inoperative when an object is interposed between said car and said inclosing structure, said means comprising an electromagnetic switch for controlling the motor circuit having an actuating coil in series with said controller and a yielding member for controlling the circuit of said coil.

2. In an elevator system, the combination with a car, a structure for inclosing said car, a motor for actuating said car and a controller for said motor, of means for rendering said controller and said motor inoperative when an object is interposed between said car and said inclosing structure, said means comprising an electromagnetic switch for controlling the motor circuit having an actuating coil in series with said controller, a switch for controlling the circuit of said coil and said controller and a yielding member for controlling said switch.

3. In an elevator system, the combination with a car, a structure for inclosing said car, a motor for actuating said car and a controller for said motor, of means for rendering said controller and said motor inoperative when an object is interposed between said car and said inclosing structure, said means comprising an electromagnetic switch for controlling the motor circuit having an actuating coil that is normally energized when the controller occupies an operative position and a yielding member for effecting the opening of the circuit of said coil under predetermined conditions.

1,215,525. TATTING-SHUTTLE. AUGIE L. HANSEN, Evanston, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 17, 1915. Serial No. 28,535. (Cl. 66—10.)



1. In a tatting shuttle, the combination of two elliptical plates, a bobbin hub secured to one of the plates and having a flange at its outer end, said flange having openings, tongues on said other plate adapted to pass through said openings when the plates are brought together at an angle with each other and to pass underneath the flange to lock the plates against separation when the plates are rotated away from their angular position, and an abutment on said tongued plate adapted to spring into one of said openings when the plates are brought into parallelism to yieldingly lock the plates against relative rotation.

2. In a tatting shuttle, the combination of two elliptical plates, a bobbin hub extending from one of said plates and having a flange at its outer end provided with openings, tongues on said other plate adapted to pass through said openings when said plates are brought together at an angle with each other and to then engage the under side of said flange to lock the plates against separation when said plates are rotated away from said angular position, a projection on said tongued plate engaging said flange to exert pressure thereagainst tending to hold the tongues firmly against the under side of the flange, said projection being in position to spring into one of said openings when the plates are brought into parallelism to then coöperate with the opening edges to yieldingly lock the plates against relative rotation.

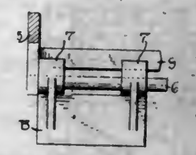
3. In a tatting shuttle, the combination of two elliptical plates, a disk on one of said plates having openings therethrough, tongues on said other plate adapted to pass through said openings when said plates are brought together at an angle with each other and to engage the underside of said disk to lock the plates against separation when they are rotated away from their angular position, a projection on said tongued plate, a depression in said disk for receiving said projection when said plates are first brought together to apply the tongues in said openings, said projection riding out of the depression to the adjacent higher sections of the disk when the plates are turned to thereby force the tongues to engage frictionally with said disk, the position of said projection being such that it will spring into one of said openings when the plates are brought in parallelism to then yieldingly lock the plates against relative rotation.

4. In a tatting shuttle, the combination of two elliptical plates, a disk on one of said plates having openings therethrough, tongues on said other plate adapted to pass through said openings when said plates are brought together at an angle with each other and to engage the under side of said disk to lock the plates against separation when they are rotated away from their angular position, a projection on said tongued plate, a depression on said disk for receiving said projection when said plates are first brought together to apply the tongues in said openings, said projection riding out of the depression to the adjacent higher sections of the disk when the plates are turned to thereby force the tongues to engage frictionally with said disk, the location of said projection and depression being such that when the plates are rotated into parallelism said projection will spring into one of said openings and one of said tongues will be in position below said depression.

5. In a tatting shuttle, the combination of two elliptical plates, a bobbin hub on one of said plates having a flange at its outer end provided with diagonally opposite notches, tongues on said other plate adapted to pass through said notches to the under side of the flange when said plates are brought together at an angle with each other and to then engage the under side of the flange and then to pass below the flange adjacent said openings when said plates are turned away from said angular position, said flange having diagonally opposite depressions intermediate said notches, projections on said other plate for engaging in said depressions to permit passage of the tongues through said notches when the plates are first brought together, said projections riding out of said depressions and over the flange to draw the tongues into frictional engagement with the under side of the flange when the plates are rotated away from such angular position, the location of the projections and depressions being such that when the plates are brought into parallelism said depressions will spring into said notches and said tongues will engage under said depressions whereby their frictional engagement with the flange will be maintained and said plates will be yieldingly locked against relative rotation by the coöperation of said projections with the notch sides.

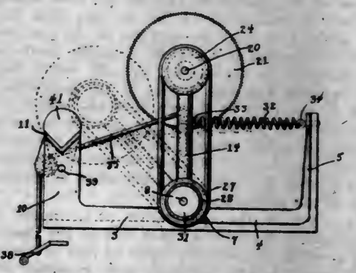
[Claim 6 not printed in the Gazette.]

1,215,526. AGITATOR FOR TREATING MINERAL OILS. JULIUS HANSEN, Coffeyville, Kans. Filed June 3, 1916. Serial No. 101,524. (Cl. 259—109.)



In combination with a container cylindrical in cross section, a rotatable shaft disposed through the still at its axial center, arms radiating from the shaft and positioned within the container adjacent opposite ends thereof, a rod connecting longitudinally alined arms, a scraping blade pivotally engaged with the rod, a member connecting said longiudinally alined arms at a point inwardly of the rod, said blade being provided with a tail having a bifurcated extremity bridging the member whereby the blade is held against back-thrust.

1,215,527. CIRCULAR-SAW MACHINE. WILBERT H. HARDING, Fort Wayne, Ind. Filed May 25, 1915. Serial No. 30,381. (Cl. 29—69.)



1. In a circular saw machine, a base having a frame pivotally mounted thereon, a saw shaft in said frame, a driving shaft on said base about which said frame is adapted to rock, a strengthening web on said frame, and means connected to said web for rocking said frame to move the saw into operative position.

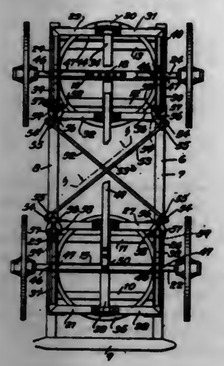
2. In a circular saw machine, a base having a frame pivotally mounted thereon, a driving shaft on said frame carrying a circular saw, a driving shaft on the base about which said frame is adapted to rock, a strengthening web on said frame, a flexible connection fixed to said web, and means secured to the free end of said flexible connection for rocking the frame to move the saw into operative position.

3. The combination with a circular saw machine including a base having a rocking frame thereon, a saw shaft in said frame, a driving shaft on said base about which the frame is adapted to rock, a work-holder and guide carried by the base formed of substantially V-shaped figuration, a plurality of standards formed on said base for supporting said work-holder, and means for rocking the frame to move the saw into operative position.

4. The combination with a circular saw machine including a base having a rocking frame thereon, a saw shaft in said frame, a driving shaft on said base about which said frame is adapted to rock, a strengthening web on said frame, a work-holder and guide carried by the base formed

of substantially V-shaped figuration, a plurality of standards formed on said base for supporting said work-holder, means connected with said web for rocking the frame to move the saw into operative position, and spring means connected with the frame and with the base for returning said frame to inoperative position.

1,215,528. VEHICLE. GEORGE J. HEBBELER, Cincinnati, Ohio. Filed Apr. 17, 1916. Serial No. 91,575. (Cl. 21—144.)



1. A vehicle comprising a chassis, platforms pivotally mounted on the chassis, tie rods connecting the diagonally opposite adjacent corners of the platforms, and stops mounted on the platforms and the tie rods adjacent to the points of connection of the tie rods with the platforms, adapted to limit the rotation of the platforms.

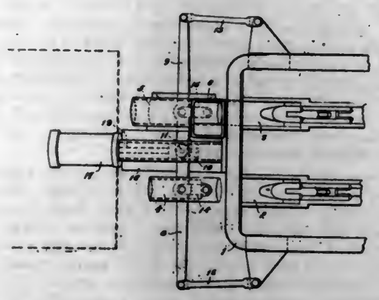
2. In combination in a vehicle, a chassis, platforms pivotally mounted on the chassis, tie rods connecting diagonally opposite adjacent corners of the platforms, stops located at the ends of the tie rods and adapted to cooperate with the platforms to limit the movement thereof with relation to the chassis, and additional stops located at points intermediate the ends of the rods, adapted to coöperate with the first mentioned stops in limiting the motion of the platforms.

3. In a vehicle the combination of a chassis, a platform rotatively mounted at each end of the chassis and having a width substantially equal to that of the chassis, a fifth wheel located between each platform and the chassis and having a diameter substantially equal to the width of the chassis and the platforms, an axle and road wheels for each platform, springs located between each axle and each platform and secured thereto at points vertically beneath the outer points of contact of each fifth wheel with the platform, tie rods connecting diagonally opposite inner corners of the platform, and stops mounted on the platforms and the tie rods adjacent to the points of connection of the tie rods with the platforms, adapted to limit the rotation of the platforms.

4. In combination in a vehicle, a chassis, platforms pivotally mounted on the chassis, tie rods connecting diagonally opposite adjacent corners of the platforms, stops located at the ends of the tie rods and adapted to cooperate with the platforms to limit the movement thereof with relation to the chassis, each of said stops consisting of a fork rotatively mounted on each inner corner of each platform and connected with each end of said rods, and a pin secured to the platforms between the branches of each fork, adapted to be engaged by first one branch and then the other branch when the rods and platforms are moved.

5. A vehicle comprising a chassis, platforms mounted on the chassis, tie rods connecting diagonally opposite adjacent corners of the platforms, stops located at the ends of the tie rods and adapted to coöperate with the platforms to limit the movement thereof with relation to the chassis, each of the stops consisting of a fork rotatively mounted on each inner corner of each platform and connected with each end of said rods, and a pin secured to the platforms between the branches of each fork, adapted to be engaged by first one branch and then the other branch when the rods and platforms are moved, and additional stops located at points intermediate the ends of the rods, adapted to coöperate with the first mentioned stops in limiting the motion of the platforms.

1,215,529. STOKER MECHANISM. WILLIAM C. A. HENRY, Columbus, Ohio. Filed Feb. 26, 1913. Serial No. 750,802. (Cl. 110—44.)



1. In combination with a firebox provided with a pair of underfeed troughs, a pair of feed plungers for feeding fuel into the troughs, a crosshead guided for right line movement intermediate the plungers and working longitudinally thereof, an engine intermediate the plungers for reciprocating the crosshead, operating levers for the plungers pivoted at their inner ends to the crosshead, and a fulcrum for the outer end of each lever, the levers being secured intermediate their ends to the plungers.

2. In combination with a firebox provided with an underfeed trough, a feed plunger mounted for reciprocation at the end of the trough, a crosshead at one side of the trough, an engine in alinement with the crosshead for operating such crosshead, a lever pivoted at its inner end to the crosshead and pivoted intermediate its ends to the plunger, and a pivoted fulcrum link to which the outer end of the lever is pivoted.

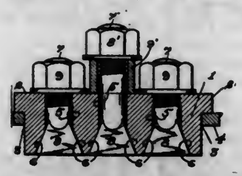
3. In combination with a firebox provided with a pair of underfeed troughs, a pair of feed plungers for feeding fuel into the troughs, an engine intermediate the plungers provided with a piston, a pair of transversely extending levers pivoted together at their inner ends and guided at such ends for right line movement parallel to the path of movement of the plungers, connections for reciprocating such inner ends from the piston, connections from the levers to the plungers, and means for fulcruming the outer ends of the levers.

4. In combination with a firebox provided with a pair of underfeed troughs, a pair of feed plungers for feeding fuel into the troughs, an engine intermediate the plungers provided with a piston, a pair of transversely extending levers pivoted together at their inner ends, connections for reciprocating such inner ends from the piston, connections from the levers to the plungers, and means for fulcruming the outer ends of the levers so as to permit an endwise movement thereof.

5. In combination with a firebox provided with a pair of underfeed troughs, a pair of feed plungers for feeding fuel into the troughs, an engine intermediate the plungers provided with a piston, a pair of transversely extending levers pivoted together at their inner ends, connections for reciprocating such inner ends from the piston, connections from the levers to the plungers, and links for fulcruming the outer ends of the levers mounted for transverse oscillation.

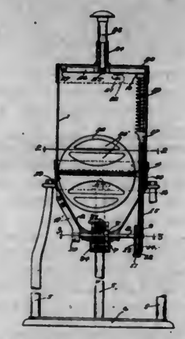
[Claims 6 and 7 not printed in the Gazette.]

1,215,530. REPAIR PATCH OR PLUG FOR METALLIC STRUCTURES. CHARLES G. HIGHTOWER, Eureka, Cal. Filed Aug. 28, 1915. Serial No. 47,780. (Cl. 137—99.)



In an expansion repair plug, the combination with an elongated headed plug member formed of soft expansible metal for insertion in an opening to be closed, said member provided with a plurality of alined bores extending therethrough, a plurality of expansion bolts within the bores in the plug member and each provided with a pyramid head connected at its apex to the respective bolt shank and arranged in said plug with certain edges of the faces of said heads in alinement with each other, and in a plane parallel with the sides of said headed plug member, and a nut coöperating with each expansion bolt to draw the headed end thereof into its coöperating bore to expand the metal of the plug member for the described purpose.

1,215,531. DISPENSING APPARATUS. WILLIAM HILL, San Francisco, and LAWRENCE GARDELLA, Oroville, Cal. Filed Mar. 25, 1915. Serial No. 16,944. (Cl. 221—106.)



1. A dispensing apparatus comprising a container having a discharge opening at its lower end, a rotatable discharge gate in said opening for delivering a measured quantity of material on each operation thereof, a rotatable agitator in said container and a common means for simultaneously rotating such agitator and said discharge gate, said operating means adapted to rotate said agitating means immediately prior to rotation of said discharge gate and at an increased speed over the rotation of the same.

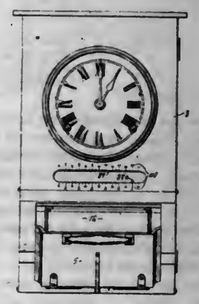
2. A dispensing apparatus comprising a container having a discharge opening at its lower end, a rotary discharge gate mounted in said opening and comprising a plurality of radially disposed blades each formed with one or more openings therein, and means within the path of travel of said blades for registering with said openings on the rotation of said gate to prevent the adhering of material to the faces of said blades.

3. A dispensing apparatus comprising a container having a discharge opening at its lower end, a rotatably mounted discharge gate positioned in said opening and comprising a plurality of radially disposed blades each formed with a plurality of open ended slots, and means within the path of travel of said blades for registering with said slots on the rotation of said gate to prevent the adhering of material to the blades thereof.

4. A dispensing apparatus comprising a container having a discharge opening at its lower end, a rotatably mounted discharge gate in said opening, an agitator rotatably mounted in said container, and means for rotating said discharge gate in one direction and for rotating said agitator in both directions.

5. A dispensing apparatus comprising an open topped container, having a discharge opening at its lower end, a rotatably mounted discharge gate in said opening, actuating means coöperating with said gate, said actuating means extending upwardly within said container, a spring for normally maintaining said actuating means in an elevated position, a removable cover for said container and operating means carried by said cover which coöperate with said actuating means for operating the same to rotate said gate in one direction.

1,215,532. TIME-RECORDER. WILLIAM F. HITCHCOCK, Rochester, and WILLIAM D. HAWLEY, Syracuse, N. Y. Filed Oct. 21, 1907, Serial No. 398,341. Renewed July 12, 1915. Serial No. 39,520. (Cl. 234—43.)



1. In a workman's time-recorder, two elements, a carriage for one of the elements, the carriage having a cycle of movement relatively to the other element, and said element supported by the carriage being movable with the carriage during its cycle of movement, and having a cycle of movement relatively to the carriage, and the other element, and time-operated mechanism for automatically controlling the movement of said carriage and the element supported thereby, substantially as and for the purpose described.

2. In a workman's time-recorder, a card holder, a marker, a carriage for the marker, the carriage being movable relatively to the card holder, and the marker being movable with the carriage and also independently of the carriage relatively to the card holder, and time-operated mechanism for automatically controlling the movement of the carriage and the marker, substantially as and for the purpose specified.

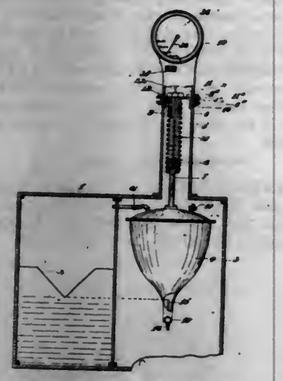
3. In a workman's time-recorder, a card holder, a carriage movable in reverse directions relatively to the holder, a marker supported by the carriage and movable therewith and also movable independently of said carriage, and time-operated mechanism for controlling the movement of the carriage and the marker, substantially as and for the purpose set forth.

4. In a workman's time-recorder, a card holder, a carriage movable in reverse directions relatively to the holder, a marker supported by the carriage and movable therewith and also movable independently of the carriage in a direction at an angle to the path of movement of the carriage, and time operated mechanism for controlling the movement of the carriage and the marker, substantially as and for the purpose described.

5. In a workman's time recorder, two elements, one a card holder and the other a marker, the marker being movable relatively to the holder in opposite directions and in different substantially straight paths, and time-controlled mechanism for automatically moving the marker as aforesaid, substantially as and for the purpose described.

[Claims 6 to 24 not printed in the Gazette.]

1,215,533. DEVICE FOR MEASURING THE FLOW OF LIQUIDS. JOHN J. HOPPES, Springfield, Ohio, assignor to The Hoppes Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Jan. 9, 1913. Serial No. 741,077. (Cl. 73—167.)



1. In a device for measuring the flow of liquid, a weir over which the liquid is adapted to flow at varying heights, a movable liquid-actuated member, a liquid communication between said member and the liquid whereby said member may be acted upon directly by said liquid, said member being so formed as to be moved by said liquid proportionately to the rate of flow, and devices connected with said liquid-actuated member by which the flow of said liquid may be determined.

2. In a device for measuring the flow of liquid, a weir over which the liquid is adapted to flow at varying heights, a movable liquid-receiving member arranged to be operated upon by the liquid, said member being so formed as to be moved by said liquid proportionately to the rate of flow, and devices connected with said liquid-actuated member by which the flow of said liquid may be determined.

3. In a device for measuring the flow of liquid, a weir over which the liquid is adapted to flow at varying heights, a movable liquid-actuated member arranged to be operated upon by the liquid, a yieldable support for said member, said member being so formed as to be moved by said liquid proportionately to the rate of flow, and devices connected with said liquid-actuated member by which the flow of said liquid may be determined.

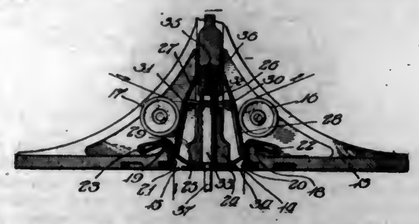
4. In a device for measuring the flow of liquid, a weir over which the liquid is adapted to flow at varying heights, a movable liquid-actuated member arranged to be operated upon oy the liquid, means connected with said member for resisting the movement thereof, said member being so formed as to be moved by said liquid proportionately to the rate of flow, and devices connected with said member by which the flow of said liquid may be determined.

5. In a device for measuring the flow of liquid, a weir over which the liquid is adapted to flow at varying heights, a movable liquid-actuated container, a liquid communication between the liquid and the interior of said container, said container being so formed as to be moved by said liquid proportionately to the rate of flow thereof, and devices connected with said container by which the flow of said liquid may be determined.

[Claims 6 to 13 not printed in the Gazette.]

1,215,534. FILM-MAGAZINE FOR CINEMATOGRAPH OR MOTION-PICTURE CAMERAS. ALBERT S. HOWELL, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 6, 1915. Serial No. 6,457. (Cl. 88—17.)

1. A film magazine for cinematographic cameras comprising a suitable compartment for the reception of film and provided with an opening for the passage of film, means for closing said opening comprising a strip of material adapted to be moved across said opening, a device within said magazine for moving said strip, and an element actuated by the camera door adapted to move said device.



2. A film magazine for cinematographic cameras comprising two compartments for the reception of the film and provided with openings through which the film passes to and returns from the camera, and means actuated by the camera door for closing said openings simultaneously during the opening of the camera door.

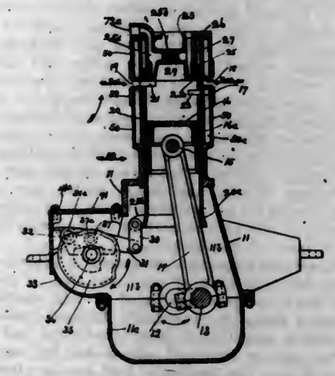
3. A film magazine for cinematographic cameras comprising two compartments for the reception of the film and provided with openings through which the film passes to and returns from the camera, and means for closing said openings, comprising separate strips of material adapted to be moved across said openings, and simultaneously operated devices actuated by the camera door for moving said strips.

4. A film magazine for cinematographic cameras comprising two compartments for the reception of the film and provided with openings through which the film passes to and returns from the camera, means for closing said openings comprising separate strips of flexible material secured at their respective ends to produce a sagging intermediate portion, and devices for extending said intermediate portion across said openings.

5. A film magazine for cinematographic cameras comprising two compartments for the reception of the film and provided with openings through which the film passes to and returns from the camera, and means for closing said openings comprising separate strips of flexible material secured at their ends to produce a sagging intermediate portion, pivoted swinging plates adapted to engage and extend the intermediate portions of said material across said openings, and devices for swinging said plates.

[Claims 6 to 12 not printed in the Gazette.]

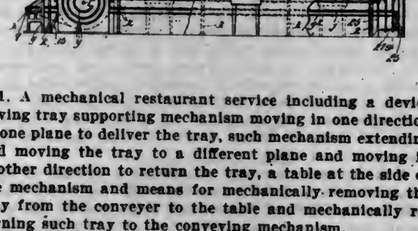
1,215,535. GAS-ENGINE. AVERY E. HOYT, Chicago, Ill. Filed Aug. 18, 1913. Serial No. 785,351. (Cl. 123—75.)



1. In a device of the class described, a crank case, cylinders mounted upon said crank case, sleeves reciprocably mounted in said cylinders, said sleeves and cylinders being provided with ports therein, pistons reciprocably mounted in said sleeves, a rotatable crank shaft journaled in said crank case, piston rods connecting said crank shaft and pistons, a valve cam shaft below and at one side of said cylinders, a casing for said shaft, said casing being provided with a removable cover plate, bearings carried by said casing, said cam shaft being journaled in said bearings, brackets carried by and projecting into said casing, said brackets being provided with bearings, levers fulcrumed in said bracket bearings, cams carried by said cam shaft, said levers being provided with rollers coacting with said cams, and links connecting said levers with said sleeves whereby the latter may be reciprocated upon rotation of said cam shaft.

2. In a device of the class described, cylinders, sleeves reciprocably mounted in said cylinders, said sleeves and cylinders being provided with ports therein, pistons reciprocably mounted in said sleeves, a rotatable crank shaft, piston rods connecting said crank shaft and pistons, a cam shaft at one side of and below said cylinders, cams carried by said shaft, levers having one end fulcrumed, said levers being provided with rollers intermediate their extremities, said cams being grooved, said rollers fitting in said grooves, and links connecting said levers with said sleeves whereby rotation of said cams will operate said sleeves, said grooves in said cams being arranged to maintain said cylinder ports closed during substantially the whole of the compression and explosion strokes of said pistons and to maintain said cylinder ports in open position during substantially the entire exhaust and intake strokes of said piston when said cam shaft is properly rotated.

1,215,536. MECHANICAL RESTAURANT-SERVICE. JOSEPH HUTCHINSON, New York, N. Y. Filed May 3, 1913. Serial No. 765,387. (Cl. 186—1.)



1. A mechanical restaurant service including a device having tray supporting mechanism moving in one direction in one plane to deliver the tray, such mechanism extending and moving the tray to a different plane and moving in another direction to return the tray, a table at the side of the mechanism and means for mechanically removing the tray from the conveyer to the table and mechanically returning such tray to the conveying mechanism.

2. A mechanical restaurant service including a conveyer adapted to carry a tray and means for operating the conveyer including a rotatable member, a standard adjacent to the rotatable member and co-acting devices extending between said member and standard for indicating the position of the carried tray.

3. A mechanical restaurant service including a conveyer adapted to carry a tray and means for operating the conveyer including a rotatable member, a stationary member adjacent to the rotatable member, an indicating device upon one of said members and a projection upon the other of said members and adapted to engage with the indicating device to indicate the position of the carried tray.

4. A mechanical restaurant service including a conveyer adapted to carry a tray, a rotatable member for moving the conveyer and means for indicating the position of the tray including a stationary member adjacent to the rotatable member and an electrical conductor upon each of the members, and adapted to engage to close an electrical circuit.

5. A mechanical restaurant service including a conveyer, an operating wheel supported adjacent to and operatively connected to one end of the conveyer, such operating wheel being of a size to move the conveyer the full length of its travel in one revolution and having a radially disposed series of holes therein, a standard having a series of circular slots therein, concentric with the operating wheel and each disposed opposite to one of the holes in the latter, the slots being of varying lengths to correspond to different points in the travel of the conveyer, electrical contacts in each of said slots and included in an open electrical circuit and a removable plug adapted to be inserted in one of said holes in the operating wheel, travel in one of the said slots and engage with the electrical contacts therein to close the circuit.

[Claims 6 to 18 not printed in the Gazette.]

1,215,537. BRIDGE CONSTRUCTION. JAMES DAVID HYATT, Wadesboro, N. C. Filed Feb. 6, 1915. Serial No. 6,619. (Cl. 14—1.)



1. A bridge of the class described comprising a plurality of crib piers, said piers each including a plurality of interlocked timber elements having their upstream ends lower than their downstream ends, a baffle floor closing the upstream portion of the bottom of the cribs, leaving the downstream portion open, an anchor filling within said cribs and resting on the baffle floor portion and also engaging with the stream bed through the open portion, stringers for connecting the crib piers, and a bridge floor having its upstream side lower than its downstream side arranged on said stringers.

2. A bridge of the class described including a plurality of crib piers each comprising a plurality of interlocked timber elements, baffle floors arranged in spaced overlapping relation in the bottom of the upstream end of the crib leaving the down-stream end open, and a traffic floor supported on said crib piers.

3. A bridge of the class described including a plurality of crib piers each comprising side trunks of graduated lengths, upstream and down-stream cross timbers interlocked with said side timbers, the lowermost down-stream cross timber supporting the down-stream end of the lowermost side timbers to set the latter at an incline and render the downstream end of the crib higher than the upstream side, an upstream bed-sill flushly abutting the upstream end of the lowermost side timbers, baffle floors partially covering the bottom of the crib, and a traffic floor supported on said crib piers.

4. A bridge of the class described including a plurality of piers having their upstream ends lower than their downstream ends, and each having baffle floors arranged in the bottom thereof in spaced overlapping relation at the upstream end of the pier leaving the downstream end open, means for connecting said piers, and a traffic floor having its upstream edge lower than its downstream edge.

1,215,538. ERASER FOR FOUNTAIN-PEN CAPS. WALTER W. IHNE, Chicago, Ill. Filed Oct. 23, 1916. Serial No. 127,210. (Cl. 120—39.)



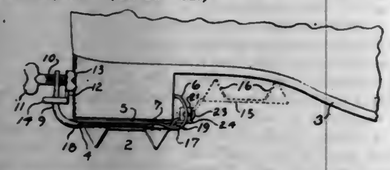
1. The combination with a fountain pen cap, of a removable eraser member attached to one end thereof and when not in use forming a closure for the cap, the latter including an exteriorly threaded tubular member, an erasing member mounted therein and provided with a

disk head upon one end and a concealing member for the cap having an interiorly threaded socket for receiving the tubular member and coöperating therewith to clamp the erasing member firmly in place.

2. The combination with a fountain pen cap, of a removable eraser member attached to one end thereof and when not in use forming a closure for the cap, the latter including a closure for the reduced portion for engaging the cap and being further provided with an interior screw threaded socket, an erasing member having a cylindrical shank and a disk head, the head of which seats within the socket adjacent the closed end thereof, and a tubular locking member receiving the shank of the erasing member and fitting within the socket of the closure to clamp the erasing member in position.

3. A fountain pen cap open at both ends one end of the cap being interiorly screw-threaded, a closing plug for the cap having an internally threaded socket and an exteriorly threaded reduced portion, the latter portion being adapted to engage the threads of the cap to close the end of the cap, an erasing member having a shank terminated in a flat head upon one end, said head being adapted to fit within the socket of the closure member against the bottom thereof, and an eraser locking member consisting of a tubular double diametered member the reduced diameter being exteriorly threaded and being adapted to threadedly engage the socket of the closure member, the shank of the eraser being mounted through said tubular member and having its disk head clamped firmly against the bottom of the socket of the closure member.

1,215,539. ANTISLIPPING DEVICE. FRITZ ISCHER, Torrington, Conn., assignor to Schroeder Brothers Manufacturing Company, Torrington, Conn., a Copartnership consisting of Hugo F. Schroeder, Ernest E. Schroeder, Richard F. W. Schroeder, Gustave A. Schroeder, Jr., and Arthur E. R. Schroeder. Filed Oct. 11, 1916. Serial No. 124,965. (Cl. 36—61.)

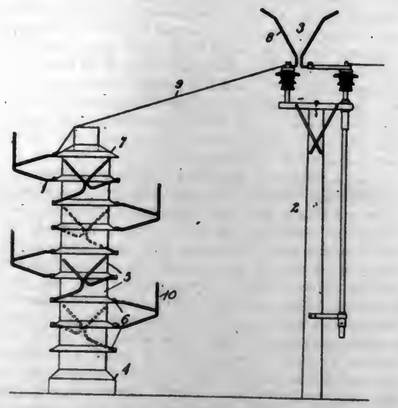


1. An anti-slipping device comprising an attaching element having on the under surface thereof a series of rounded bearing projections, and a calk member connected with the attaching element for movement into and out of operative positions respectively, the calk member when in the operative position fitting against said under surface and when in the inoperative position uncovering said under surface to leave said bearing projections exposed.

2. An anti-slipping device comprising an attaching element and a calk member, the attaching element consisting of sheet metal sections, the forward one of which has upstanding heel-engaging hooks and also has longitudinal rows of slots, the slots being transversely alined, the other section having projections to interchangeably fit the slots and also having an upstanding projection at its rear, a screw threaded through said upstanding projection, and a plate in swiveled connection with the screw and provided with forwardly extending prongs and rearwardly extending arms straddling said projection, the calk member being pivotally connected with the front section of the attaching member for movement into operative and inoperative positions and said front section having an integral spring to hold said calk member in said positions.

1,215,540. LIGHTNING-ARRESTER. RAY P. JACKSON, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 6, 1910. Serial No. 580,765. (Cl. 175—30.)

1. A lightning arrester comprising a column of alternately disposed metal plates and high resistance blocks, and horn-shaped arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt relation to the blocks between the plates to which they are connected.



2. A lightning arrester comprising a column of alternately disposed metal plates and high resistance blocks, and horn-shaped arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt relation to the blocks between the plates to which they are connected, adjacent pairs of arcing members being displaced with respect to each other.

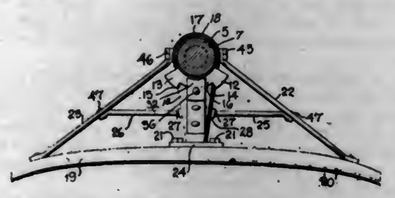
3. A lightning arrester comprising a column of high resistance blocks, metal plates between the blocks and thereby spaced apart sufficiently to substantially prevent the occurrence of arcs between them, and horn-shaped arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt to the blocks between the plates to which they are connected.

4. A lightning arrester comprising a column of high resistance blocks, metal plates between the blocks and thereby spaced apart sufficiently to substantially prevent the occurrence of arcs between them, and horn-shaped arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt to the blocks between the plates to which they are connected, adjacent pairs of arcing members being displaced with respect to each other.

5. A lightning arrester comprising a column of alternately disposed metal plates and high resistance blocks, and arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt relation to the blocks between the plates to which they are connected, said metal plates being provided with outwardly and downwardly-extending flanges to constitute a series of superposed petticoats.

[Claim 6 not printed in the Gazette.]

1,215,541. HORSE-DETACHER. LESTER E. JACQUES, McCook, Nebr. Filed May 1, 1916. Serial No. 94,785. (Cl. 21—75.)



1. An animal detacher comprising a tongue member including a radial segment provided with wings at the ends thereof, a socket member, an interlocking member carried thereby including a forwardly projected portion having a recess formed therein, and a pin disposed transversely of the recess, one wall of the recess lying in the same plane as and below the open end of the socket member, said pin and recess adapted to coöperate with the segment to provide a detachable connection between the tongue member and the socket and interlocking members.

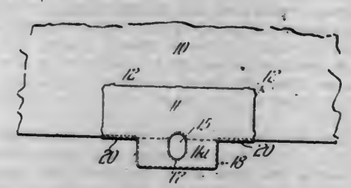
2. An animal detacher comprising a tongue member including a thimble and a segment having a recess formed in the central portion thereof to produce spaced wings at the extremities of the segment, a socket member adapted to receive the thimble, an interlocking member carried by the socket member adapted to engage with the central portion of the segment, when the thimble is inserted into the socket and partly rotated and a pin carried by the interlocking member and disposed through the recess of the segment.

3. An animal detacher comprising a tongue member including a radial segment provided with wings at the ends thereof, a socket member, an interlocking member carried thereby including a forwardly projected portion having a recess formed therein, and a fibrous pin disposed transversely of the recess, one wall of the recess lying in the same plane as and below the open end of the socket member, said pin and recess adapted to coöperate with the segment to provide a detachable connection between the tongue member and the socket and interlocking members.

4. An animal detacher comprising a tongue member including a radial plate provided with a recess, a socket member provided with a forwardly projected portion at its receiving end, said portion being provided with a recess, and a pin carried by the projected portion of the socket and intersecting the recess therein and disposed through the recess in the plate of the tongue member when said tongue member and socket member are in assembled relation.

5. An animal detacher comprising a tongue member including a radial plate provided with a recess, a socket member provided with a forwardly projected portion at its receiving end, said portion being provided with a recess, and a pin carried by the projected portion of the socket and intersecting the recess therein and disposed through the recess in the plate of the tongue member when said tongue member and socket member are in assembled relation, the end walls of the recess in the plate serving to sever the pin upon relative rotation of the tongue member and socket member beyond a predetermined point.

1,215,542. GUIDE-CARD. HOWARD O. JENKINS, Los Angeles, Cal. Filed Feb. 3, 1916. Serial No. 76,046. (Cl. 129—16.7.)



1. A filing card, embodying a paper body having a substantially straight lower edge, a thin sheet metal reinforcing member having a body portion secured to the paper body and having its lower edge turned under and around the lower edge of the paper body and pressed against the back face of the paper body, the metal reinforcing sheet having an apertured tongue projecting beyond its edge and the edge of the paper body, the edge of the sheet metal of said tongue being bent back upon itself to form a reinforcing bead around the complete edge of the tongue, and the edge of the sheet metal forming said tongue being also bent back upon itself to form a reinforcing bead around the complete edge of the aperture.

2. A filing card, embodying a paper body having a substantially straight lower edge, a thin sheet metal reinforcing member having a body portion secured flatly to the paper body, the lower edge of the reinforcing sheet body portion being substantially on a line with the lower edge of the paper body, and a central perforated tongue integral with the body of reinforcing sheet metal projecting from its lower edge, the lower edge of the reinforcing body at each side of the tongue being turned under and behind the lower edge of the paper body to secure the lower edges together and provide a smooth rounded metal surface at the lower edge on each side of the tongue.

3. A filing card, embodying a paper body having a substantially straight lower edge, a thin sheet metal reinforcing member having a body portion secured flatly to the paper body, the lower edge of the reinforcing sheet body portion being substantially on a line with the lower edge of the paper body, and a central perforated tongue integral with the body of reinforcing sheet metal projecting from its lower edge, the lower edge of the reinforcing body at each side of the tongue being turned under and behind the lower edge of the paper body to secure the lower edges together and provide a smooth rounded metal surface at the lower edge on each side of the tongue, the metal of the tongue being turned back on itself around the complete edge of the tongue to reinforce that edge and around the complete edge of the perforation to reinforce that edge and provide a smooth rounded metal surface at that edge.

4. A filing card, embodying a paper body, a thin sheet metal reinforcing member having a body portion secured flatly to the paper body, the lower edge of said body portion being turned under and behind the lower edge of the paper body to secure the lower edges together and form a smooth metal surface, and a central perforated tongue integral with and projecting downwardly from the sheet metal body portion beyond its lower edge.

1,215,543. PROCESS OF RECOVERING CONSTITUENTS OF VALUE FROM ALKALINE DEPOSITS. LOUIS C. JONES and FRED L. GROVER, Syracuse, N. Y., assignors to The Solvay Process Company, Solvay, N. Y., a Corporation of New York. Filed Aug. 30, 1916. Serial No. 117,592. (Cl. 23—22.)

1. The process of recovering constituents of value from alkaline brines containing sodium carbonate and potassium salts which consists in carbonating the brine to convert sodium carbonate into sodium bicarbonate and precipitating and removing the bicarbonate, adding to the solution sodium carbonate in such quantity as to prevent upon concentration the precipitation of potassium salts until the solution is saturated with potassium chlorid, concentrating the solution at a high temperature so as to convert boric acid and less soluble boric acid salts into more soluble sodium metaborate and precipitate sodium carbonate, sodium chlorid, and sodium sulfate and leave the potassium salts in solution and finally cooling to precipitate potassium chlorid.

2. The process of recovering constituents of value from alkaline brines containing sodium carbonate and potassium salts which consists in carbonating the brine to convert sodium carbonate into sodium bicarbonate, and removing the sodium bicarbonate, adding to the solution sodium carbonate in such quantity as to prevent upon concentration the precipitation of potassium salts until the solution is saturated with potassium chlorid, concentrating the solution at a high temperature so as to precipitate sodium carbonate, sodium chlorid, and sodium sulfate while leaving sodium metaborate and potassium chlorid in solution and finally cooling the solution to precipitate potassium chlorid.

3. The process of recovering constituents of value from alkaline brines containing sodium carbonate and potassium salts which consists in carbonating the brine to convert sodium carbonate into sodium bicarbonate and removing the sodium bicarbonate, adding to the solution sodium carbonate in such quantity as to prevent, upon concentration, the precipitation of potassium salts until

the solution is saturated with potassium chlorid, concentrating the solution at a high temperature so as to precipitate sodium carbonate, sodium chlorid and sodium sulfate and, in the succeeding repetitions of the process, adding the sodium carbonate thus precipitated to the solution after the removal of the sodium bicarbonate.

4. The process of recovering constituents of value from alkaline brines containing sodium carbonate and potassium salts which consists in carbonating a portion of each batch of brine to convert its sodium carbonate content into sodium bicarbonate and removing the bicarbonate, adding the treated portion of the batch to the untreated portion and then concentrating at a high temperature so as to precipitate sodium carbonate, solution chlorid and sodium sulfate while leaving potassium chlorid in solution and finally cooling to precipitate potassium chlorid.

1,215,544. PROCESS OF RECOVERING POTASSIUM CHLORID FROM ALKALINE DEPOSITS. LOUIS C. JONES and FRED L. GROVER, Syracuse, N. Y., assignors to The Solvay Process Company, Solvay, N. Y., a Corporation of New York. Filed Aug. 30, 1916. Serial No. 117,593. (Cl. 23—22.)

1. The process of recovering potassium chlorid from alkaline brines containing sodium carbonate which consists in concentrating the brine at a high temperature, then filtering out the precipitated less soluble sodium salts leaving potassium chlorid and the boric acid content of the brine in solution and finally cooling so as to precipitate only potassium chlorid while leaving the boric acid content of the brine in solution to be subsequently recovered.

2. The process of recovering potassium chlorid from alkaline brines containing sodium carbonate which consists in heating and concentrating the brine so as to convert boric acid and boric acid salts present into more soluble sodium metaborate and precipitate less soluble sodium salts while leaving the potassium content of the brine in solution, then filtering out the precipitated salts and cooling the solution to precipitate potassium chlorid.

3. The process of recovering potassium chlorid from alkaline brines containing sodium carbonate which consists in heating and concentrating the brine so as to convert boric acid and boric acid salts present into more soluble sodium metaborate and precipitate less soluble sodium salts while leaving potassium chlorid in solution, filtering out the precipitated sodium salts and then cooling the solution to precipitate potassium chlorid and finally returning the mother liquor to the brine to effect a further recovery of potassium chlorid.

4. The process of recovering potassium chlorid from alkaline brines containing sodium carbonate which consists in heating and concentrating the brine so as to convert boric acid and boric acid salts present into more soluble sodium metaborate and precipitate less soluble sodium salts while leaving the potassium content of the brine in solution and continuing the concentration until the solution is saturated with potassium chlorid at the temperature employed, removing the precipitated sodium salts and then cooling to precipitate potassium chlorid and returning the mother liquor to the succeeding batch of brine to effect a further recovery of potassium chlorid.

5. The process of recovering potassium chlorid from alkaline brines containing sodium carbonate which consists in heating and concentrating the brine so as to convert boric acid and boric acid salts present into more soluble sodium metaborate and precipitate less soluble sodium salts while leaving the potassium content of the brine in solution and continuing the concentration until the solution is saturated with potassium chlorid at the temperature employed, removing the precipitated sodium salts and then cooling to precipitate potassium chlorid leaving sodium metaborate in solution, returning the mother liquor to the succeeding batch of brine and repeating the operation until the mother liquor approaches saturation in sodium metaborate, then precipitating sodium metaborate as borax and again returning the mother liquor to the brine to effect a further recovery of potassium chlorid.

1,215,545. PROCESS OF RECOVERING BORAX FROM ALKALINE DEPOSITS. LOUIS C. JONES and FRED L. GROVER, Syracuse, N. Y., assignors to The Solvay Process Company, Solvay, N. Y., a Corporation of New York. Filed Aug. 30, 1916. Serial No. 117,594. (Cl. 23—13.)

1. The process of recovering borax from alkaline brines containing sodium carbonate which consists in heating the brine to convert boric acid and less soluble boric acid salts into more solube sodium metaborate, concentrating the solution at a high temperature to precipitate sodium carbonate, sodium sulfate and sodium chlorid and then cooling to precipitate potassium chlorid while leaving sodium metaborate in solution and finally converting sodium metaborate into sodium tetraborate and precipitating the tetraborate as borax.

2. The process of recovering borax from alkaline brines which consists in converting boric acid and less soluble boric acid salts into more soluble sodium metaborate, precipitating out less soluble sodium salts and potassium chlorid while leaving sodium metaborate in solution and finally converting sodium metaborate into sodium tetraborate and precipitating the tetraborate as borax.

3. The process of recovering borax from alkaline brines which consists in converting boric acid and less soluble boric acid salts into more soluble sodium metaborate, precipitating out less soluble sodium salts and potassium chlorid while leaving sodium metaborate in solution and finally heating and carbonating the solution to convert sodium metaborate into sodium tetraborate and precipitating the tetraborate as borax.

4. The process of recovering borax from alkaline brines containing sodium carbonate which consists in heating the brine to convert boric acid and less soluble boric acid salts into more soluble sodium metaborate, concentrating the solution at a high temperature to precipitate sodium carbonate, sodium sulfate, and sodium chlorid and then cooling to precipitate potassium chlorid while leaving sodium metaborate in solution and finally heating and carbonating the solution to convert sodium metaborate into sodium tetraborate and precipitating the tetraborate as borax.

5. The improvement in the process of recovering borax from alkaline brines which consists in precipitating potassium chlorid and sodium salts present, other than the borate, while maintaining the boric acid content of the brine in solution and finally converting the boric acid content of the brine into sodium tetraborate and precipitating this as borax.

1,215,546. PROCESS OF RECOVERING POTASSIUM AND MAGNESIUM CHLORIDS FROM NATURAL DEPOSITS. LOUIS C. JONES, FRED L. GROVER, and JOSEPH L. SILSBEE, Syracuse, N. Y., assignors to The Solvay Process Company, Solvay, N. Y., a Corporation of New York. Filed Oct. 23, 1916. Serial No. 127,065. (Cl. 23—22.)

1. The process of treating brines containing chlorids of sodium, potassium and magnesium which consists in evaporating the brine at a relatively low temperature until it is nearly saturated with respect to potassium chlorid and freeing the concentrated solution from the precipitated sodium chlorid, evaporating the liquor at high temperature with removal of the precipitated sodium chlorid until it is saturated with potassium chlorid but not with magnesium chlorid at that temperature and finally cooling the solution to precipitate potassium chlorid while leaving the magnesium chlorid in solution.

2. The process of treating brines containing chlorids of sodium, potassium, and magnesium which consists in evaporating the brine at a relatively low temperature until it is nearly saturated with respect to potassium chlorid and freeing the concentrated solution from the precipitated sodium chlorid, evaporating this liquor at a high temperature with removal of the precipitated sodium chlorid until it is saturated with potassium chlorid but not with magnesium chlorid at that temperature, cooling to precipitate potassium chlorid and removing the precipitate, again saturating the solution by evaporation at a high temperature with potassium chlorid only and removing the hot crop of sodium chlorid and again cooling to precipitate a second crop of potassium chlorid while leaving the magnesium chlorid in solution.

3. The process of treating brines containing chlorids of sodium, potassium and magnesium which consists in evaporating the brine at a relatively low temperature until it is nearly saturated with respect to potassium chlorid and freeing the concentrated solution from the precipitated sodium chlorid, evaporating this liquor at a high temperature with removal of the precipitated sodium chlorid, until it is saturated with potassium chlorid but not with magnesium chlorid at that temperature, cooling to precipitate potassium chlorid and removing the precipitate, again saturating the solution by evaporation at a high temperature with potassium chlorid only and removing the hot crop of sodium chlorid and again cooling to precipitate a second crop of potassium chlorid and removing this while leaving the magnesium chlorid in solution and finally evaporating the mother liquor at a high temperature with precipitation and removal of carnallite until a melt of about 48 per cent. $MgCl_2$ and 52 per cent. H_2O is produced.

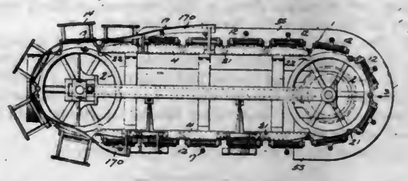
4. The process of treating brines containing chlorids of sodium, potassium and magnesium which consists in evaporating the brine at a relatively low temperature until it is nearly saturated with respect to potassium chlorid and freeing the concentrated solution from the precipitated sodium chlorid, evaporating this liquor at a high temperature, with removal of the precipitated sodium chlorid, until it is saturated with potassium chlorid but not with magnesium chlorid at that temperature, cooling to precipitate potassium chlorid and removing the precipitate, again saturating the solution by evaporation at a high temperature with potassium chlorid only and removing the hot crop of sodium chlorid and again cooling to precipitate a second crop of potassium chlorid and removing this while leaving the magnesium chlorid in solution, evaporating the final mother liquor at a high temperature, with precipitation and removal of carnallite until a melt of about 48 per cent. $MgCl_2$ and 52 per cent. H_2O is produced and recovering the solid potassium chlorid from the carnallite by dissolving away the magnesium chlorid in it in a liquor saturated with potassium chlorid but not with magnesium chlorid.

5. The process of recovering potassium chlorid from brines containing sodium chlorid, potassium chlorid and magnesium chlorid which consists in alternately evaporating the solution at a high temperature to saturation with respect to potassium chlorid but not with respect to magnesium chlorid at that temperature and cooling to precipitate potassium chlorid, the precipitated sodium chlorid being removed from the hot solution, whereby the bulk of the potassium chlorid is recovered, while the magnesium chlorid is still in solution and precipitating the remainder of the potassium chlorid in the form of carnallite while further evaporating the solution at a high temperature to concentrate in magnesium chlorid.

[Claims 6 and 7 not printed in the Gazette.]

1,215,547. CONVEYER. CHARLES A. JUENGST, Croton Falls, N. Y., assignor, by mesne assignments, to American Assembling Machine Company, a Corporation of Delaware. Continuation in part of application Serial No. 550,305, filed Mar. 19, 1910. This application filed Sept. 1, 1914. Serial No. 859,606. (Cl. 193—2.)

1. In a machine of the character set forth, a plurality of clamps, hinges connecting said clamps to form an endless conveyer arranged to travel about vertical axes, horizontally disposed upper and lower rolls on the hinges having vertical axes, a vertically disposed roller on each clamp mounted on a horizontal axis, upper and lower guides and upper and lower sprockets at each end, the vertical bearer traveling between the upper and lower guides and between the upper and lower sprockets, the horizontally disposed upper and lower rolls traveling respectively in the upper and lower guides and engaging respectively the upper and lower sprockets.



2. In a machine of the character set forth, upper and lower guides arranged on opposite sides of the machine, upper and lower sprockets at each end of the guides, a plurality of clamps hinged together to form an endless conveyer, upper guide rolls on the conveyer engaging with the upper guides and upper sprockets, lower guide rolls on the conveyer engaging with the lower guides and lower sprockets, and a vertical roller on the conveyer engaging with the upper and lower guides and upper and lower sprockets.

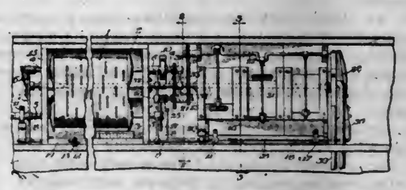
3. In a machine of the character described, a plurality of links hinged together to form an endless conveyer, a clamping member carried by and pivoted to each link, a latch for holding said clamping member in clamping position, and means for moving said latch and said clamping member to releasing position during the progress of the conveyer.

4. An endless conveyer comprising: a plurality of links, a movable member carried by each link and adapted to coöperate therewith to form a clamp, spring pressed means for latching said movable member in clamping position, and means for simultaneously moving said latch against the tension of said spring and said clamping member to releasing position during the progress of the conveyer.

5. An endless conveyer comprising: a plurality of links, a movable member carried by each link and adapted to coöperate therewith to form a clamp, spring pressed means carried by said movable member for latching said movable member in clamping position, and means mounted on a fixed support for automatically moving said movable member and the latch carried thereby against the tension of said spring to releasing position.

[Claims 6 to 14 not printed in the Gazette.]

1,215,548. MECHANICAL MUSICAL INSTRUMENT. PAUL B. KLUGH, Chicago, Ill., assignor to The Cable Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 10, 1910. Serial No. 596,680. (Cl. 84—161.)



1. An instrument of the class specified having a music sheet propelling motor mounted for bodily shifting movement longitudinally of the tracker board.

2. An instrument of the class specified, having a tracker board and a music sheet propelling motor mounted for rectilinear shifting movement longitudinally of the tracker board.

3. An instrument of the class specified, having a tracker board, a music propelling motor mounted for shifting move-

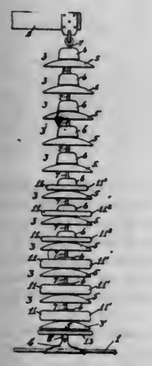
ment in a direction longitudinally of the tracker board, and means for bringing about a relative movement between the music sheet and tracker board.

4. An instrument of the class specified having a tracker board, a motor mounted for bodily shifting movement and a carrier for the music rolls also mounted for bodily shifting movement relatively to the tracker board, and means for bringing about a simultaneous shifting movement on the part of the motor and said carrier.

5. The combination with the music spools of a tracker board, a motor arranged at one side of the music spools, the music spools and motor being shiftable in a direction lengthwise of the tracker board, and driving mechanism between the motor and music spools, shiftable with the music spools and motor.

[Claims 6 to 36 not printed in the Gazette.]

1,215,549. ELECTRIC-CONDUCTOR-INSULATING SUPPORT. JOHN A. KOONTZ, Jr., Palo Alto, Cal., assignor of one-half to Edward W. Beardsley, San Francisco, Cal., and one-fourth to Richard W. Shoemaker, Alameda, Cal. Filed July 26, 1916. Serial No. 111,398. (Cl. 117—318.)



1. An electric-conductor insulating-support, comprising a plurality of interconnected insulating units, and a hollow metallic disk interposed between two adjacent insulating units for increasing the electrostatic capacity thereof.

2. An electric-conductor insulating-support, comprising a plurality of interconnected insulator units, and conducting members interposed between said insulating units, said conducting members varying in thickness.

3. An electric-conductor insulating-support, comprising a plurality of interconnected insulating units, and removable conducting members interposed between said insulating units, said conducting members varying in diameter.

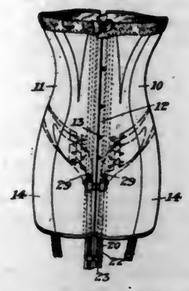
4. An electric-conductor insulating-support, comprising a plurality of interconnected insulating units adapted to support a conductor, and conducting members interposed between said insulating units, said conducting members being of greater thickness and diameter nearer said conductor.

5. An electric-conductor insulating-support, comprising a plurality of interconnected insulating units, and conducting members interposed between said units, said conducting members varying in thickness and diameter.

[Claims 6 and 7 not printed in the Gazette.]

1,215,550. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Jan. 26, 1916. Serial No. 74,287. (Cl. 128—26.)

1. In an apparel corset and in each corset body half thereof, a strap permanently secured at one end distant from the lower front portion of the front steel and extending forwardly, a pad secured to said strap, and means associated with the forward end of the strap for adjustably securing the same and the pad in position in the garment.



2. In an apparel corset and in each corset body half thereof, a strap permanently secured at one end distant from the lower front portion of the front steel and also attached to the lower front portion of the garment adjacent the front steel, a pad secured to said strap, and means associated with the forward end of the strap for so adjusting the same and the pad to position in the garment as to cause the latter to simultaneously exert an inward and an upward pressure against the body of the wearer.

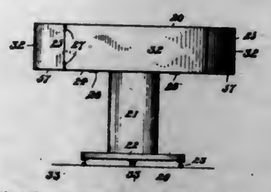
3. In an apparel corset and in each corset body half thereof, a pad strap secured at one edge distant from the lower portion of the front steel and also attached to the lower front portion of the garment adjacent the front steel, a support pad secured in the said pad strap, and means depending from the pad strap for adjustably securing the same and said pad in position in the garment.

4. In an apparel corset and in each corset body half thereof, a pad strap secured at one edge distant from the lower portion of the front steel and also attached to the lower front portion of the garment adjacent the front steel, a pad secured to said pad strap, means depending from the pad strap for adjustably securing the same in position in the garment, and an uplifting tension device between the said pad strap and pad in the lower front portion of the garment for causing the said pad to exert a predetermined pressure against the body of the wearer.

5. In an apparel corset and in each corset body half thereof, a pad strap secured at one edge distant from the lower portion of the front steel and also attached to the lower front portion of the garment adjacent the front steel, a pad secured to said pad strap, an adjusting strap secured to and depending from the said pad strap, and adapted to be secured in place to determine the position of the pad strap and pad in the garment, an uplifting tension device between the said pad strap and pad and the lower front portion of the garment, and means adjustable exteriorly of the garment for determining the position of the uplifting tension device.

[Claim 6 not printed in the Gazette.]

1,215,551. EXTENSION-TABLE. MICHAEL KRECZKOWSKI, New York, N. Y. Filed Mar. 17, 1916. Serial No. 84,929. (Cl. 45—9.)



1. A combination table comprising a standard, extension members for said table, an inclosing means for said extension members carried by the standard, a rectangular top carried above the said standard and pairs of curved edge members hinged to the said inclosing means and adapted for engaging the edges of the said top inclosing the said top and means, the said edge members having outer curved faces whereby the appearance of a solid cylindrical table top is presented when the device is operatively arranged.

2. An extensible table comprising a standard, a rectangular table top and bottom carried by the said standard, segmental edge members arranged in pairs, the members of each pair being hinged together at the ends thereof and one member of each pair being hinged at one of its longitudinal edges to lower opposite corners of the said bottom, the said edge members being adapted for circularly inclosing the said top and bottom when the device is in its normally closed arrangement with the upper faces in the same plane as the table top.

3. An extensible table comprising a standard, a rectangular table top and bottom carried by the said standard, segmental edge members arranged in pairs, the members of each pair being hinged together at the ends thereof and one member of each pair being hinged at one of its longitudinal edges to lower opposite corners of the said bottom, the said edge members being adapted for circularly inclosing the said top and bottom when the device is in its normally closed arrangement with the upper faces in the same plane as the table top, releasable retaining catches upon each edge of the said top, each of the said edge members having a receiving keeper for one of the said latches at a point adjacent thereto when the device is assembled as a round table.

4. An extensible table comprising a standard, a rectangular table top and bottom carried by the said standard, segmental edge members arranged in pairs, the members of each pair being hinged together at the ends thereof and one member of each pair being hinged at one of its longitudinal edges to lower opposite corners of the said bottom, the said edge members being adapted for circularly inclosing the said top and bottom when the device is in its normally closed arrangements with the upper faces in the same plane at the table top, releasable retaining catches upon each edge of the said top, each of the said edge members having a receiving keeper for one of the said latches at a point adjacent thereto when the device is assembled as a round table, sides and ends carried by the said bottom, depressible mounting means for the said top whereby the top rests upon the said sides and ends when depressed, slides shiftably arranged through the said ends, legs hinged to the outer ends of the said slides, and foldable table leaves carried by the said slides and adapted for engaging the opposite edges of the said top when operatively arranged in horizontal alinement therewith.

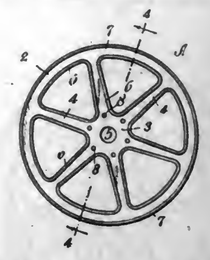
5. A combination table comprising a standard, top, bottom, sides and ends carried by the said standard forming an inclosure, extension table members oppositely arranged foldably positioned within the said inclosure, and pairs of segmental edge members foldable together hingedly carried by the said bottom and normally encirclingly surrounding the said inclosure with the upper faces in the same plane as the table top.

[Claim 6 not printed in the Gazette.]

1,215,552. METAL WHEEL. MAURICE LACHMAN, New York, N. Y., assignor to Structural Pressed Steel Wheel Company, Inc., New York, N. Y., a Corporation of New York. Filed June 12, 1916. Serial No. 103,145. (Cl. 21—69.)

1. A metal wheel comprising a sheet metal disk having a plurality of openings therein to form a hub portion, a rim portion and connecting spoke members, the edges of the rim, spoke and hub portions surrounding said openings being thickened to reinforce said material and form a spoke member substantially I-shaped in cross section.

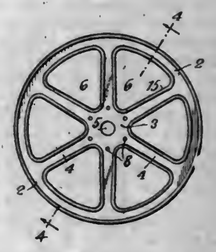
2. A metal wheel including a single sheet metal disk having a plurality of openings therein to form hub, rim and spoke portions and a separate member secured to the material of the disk at the edge of said openings and adapted to thicken said edges on both faces of said disk and reinforce said disk against lateral strains.



3. A metal wheel including a single sheet metal disk having openings therein to form rim, hub and spoke portions and a thickening element on the edge of the material completely surrounding each opening and projecting laterally in opposite directions from the faces of the disk.

4. In a metal wheel, a sheet metal disk having openings to form spokes integral with the continuous rim and center, combined with a continuous strip of metal bent around the edge of the metal constituting the edge of the disk around said openings and against the opposite surfaces.

1,215,553. METAL WHEEL. MAURICE LACHMAN, New York, N. Y., assignor to Structural Pressed Steel Wheel Company, Inc., New York, N. Y., a Corporation of New York. Original application filed June 12, 1916, Serial No. 103,145. Divided and this application filed July 12, 1916. Serial No. 108,875. (Cl. 21—69.)



1. In a sheet metal wheel, a metal disk having openings to form spokes integral with the continuous rim and center and a continuous tubular reinforcement around each opening formed of metal integral with the metal of the flat portion of the disk.

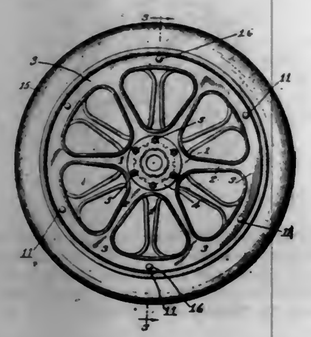
2. In a sheet metal wheel, a sheet metal disk having openings to form spokes integral with the continuous rim and center, the edges of the flat metal spokes and rim around said openings being bent into the form of a tube.

3. In a sheet metal wheel, a sheet metal disk having openings to form spokes integral with the continuous rim and center and a continuous tubular reinforcement around each said opening in the flat metal.

4. In a sheet metal wheel, a plate embracing a hub or center portion, spokes or arms radiating therefrom and a continuous rim all integral and having on the edge of the metal plate around each opening bounded by spokes and rim a tubular reinforcement integral with the metal of the plate.

5. In a sheet metal wheel, a sheet metal disk having openings to form spoke, center and rim portions all integral, the edges of the flat metal of said rim and spokes around the openings being bent into the form of a tube and a tubular reinforcement around the periphery of the rim as and for the purpose described.

1,215,554. VEHICLE-WHEEL. MAURICE LACHMAN, New York, N. Y., assignor to Structural Pressed Steel Wheel Company, Inc., New York, N. Y., a Corporation of New York. Filed July 7, 1916. Serial No. 107,909. (Cl. 21—69.)



1. A sectional wheel divided in a plane transverse to the wheel's axis and comprising an inner and an outer section each embodying a center, a web, and an unbroken circumference, a hub, the inner one of said sections being permanently secured to the hub while the outer of said sections has a complete tire carrying rim permanently secured to it and adapted to bear detachably upon the circumference of the inner section, combined with means for detachably fastening the center of the outer section to the wheel hub and for detachably securing the two sections together near their circumference.

2. A sectional wheel for pneumatic tires comprising two sections or elements separable from one another in a plane transverse to the wheel's axis, the inner one of said sections comprising a center, a spoke or web portion and an unbroken circumference, a hub, the center being permanently attached to or incorporated with the structure of the hub, and the outer section adapted to engage the hub detachably by its center and provided on its circumference with an inflated tire carrying rim permanently secured thereto and adapted to bear removably upon the circumference of the inner section by a series of isolated wedging lugs combined with means for detachably clamping the center of the outer section to the hub and with bolts for drawing the two sections together near their circumference.

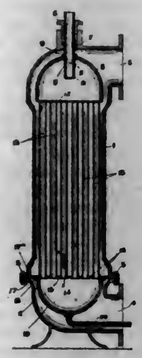
3. A vehicle wheel comprising two metal disks or stampings separable from one another in a plane transverse to the axis of the wheel and each comprising a center, web and continuous circumference, a hub, the center of the inner section being permanently fastened to the hub of the wheel while the center of the outer section is adapted to bear detachably against the hub and is provided on its circumference with a complete permanently attached inflatable tire carrying rim adapted to bear detachably upon the circumference of the inner disk or stamping.

4. A two-part or sectional disk wheel the inner element of which is secured by its center to the hub of the wheel and is provided at its circumference with a flange having isolated wedging seats or lugs while the outer element is provided at its circumference with a permanently attached tire carrying rim adapted to support and lock an inflated shoe or tire in place and adapted to engage the wedge seats with a wedging action, combined with means for detachably securing the center of the outer disk to the hub and with bolts and nuts for detachably tying or drawing the two disks together near their circumference.

5. A two-part metal vehicle wheel comprising two metal dished disks or stampings separable from one another in a plane transverse to the axis of the wheel, a hub, the inner disk being permanently fastened to the hub while the outer disk is detachably secured thereto and a complete tire carrying rim permanently carried by the outer disk and removably supported by the inner disk.

[Claims 6 and 7 not printed in the Gazette.]

1,215,555. HEATER. ALBERT LANGEVIN, Montreal, Quebec, Canada. Filed Jan. 14, 1916. Serial No. 72,090. (Cl. 257—227.)



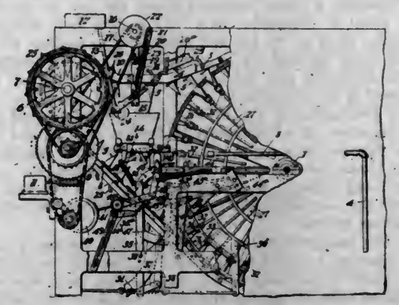
1. A heater of the character described comprising a casing and a base, a water inlet in said base and a water outlet in said casing, a dome in the upper part of said casing, a dome in the base, tubes secured to said upper dome, means to secure said tubes to the lower dome, a condensation water-pipe connected to the lower part of said dome and projecting through the water inlet, and means to supply steam in said upper dome substantially as described.

2. A heater of the character described comprising a casing and a base, a water inlet in said base and a water outlet in said casing, a dome in the upper part of said casing, a dome in the base, tubes secured at one end of said upper dome, means to secure the lower ends of said tubes to the lower dome, said means compressing a bushing for their lower inner ends, which reduces their diameter, a condensation water pipe connected to the lower part of said lower dome leading through the water inlet, and means to supply steam through the top of the upper dome substantially as described.

3. A heater of the character described comprising a casing and a base, a water inlet in said base and a water outlet in said casing, a dome in the uppermost part of the said casing provided with a plurality of threaded perforations; a plate secured between the lower end of the casing and the base, the said plate being provided with a plurality of threaded perforations and with holes through its outer circumference; a lower dome suitably secured to the under side of said plate; tubes threaded at their upper ends in the perforations of the upper dome, said tubes being provided with an inner thread, their lower ends resting on said plate above said threaded perforations; a nipple provided with an expanded head and threaded on its outer side and engaging the threads in said perforations and tubes; a condensation water pipe secured to the lower part of said lower dome leading through the water inlet outside of the base, substantially as described.

1,215,556. MACHINE FOR FORMING AND BAKING HOLLOW PASTRY FORMS. EDWARD H. LANIER and FRANK K. DRIESBACH, Cincinnati, Ohio. Filed Apr. 21, 1915. Serial No. 22,902. (Cl. 107—58.)

1. In a machine for the purpose described, the combination of a series of cores, an endless carrier supporting the cores, a series of molds each adapted to receive one of the cores during a portion of the travel thereof, means for successively effecting relative movement between each core and its mold, to loosen the pastry from the core, an extracting device adapted to move into and from the molds from which the cores have been withdrawn successively, and means for disengaging the pastry from the mold in which said device is positioned.



2. In a machine for the purpose described, the combination of a series of cores, an endless carrier supporting the cores, a series of molds each adapted to receive one of the cores during a portion of the travel thereof, means for successively effecting relative movement between each core and its mold, to loosen the pastry from the core, an extracting core, means for moving said extracting core into and from the molds from which the forming cores have been withdrawn successively, means for disengaging the pastry from the mold in which the extracting core is positioned to permit it to be withdrawn with said core, and means for rocking the extracting core to discharge the pastry form therefrom.

3. In a machine for the purpose described, the combination of a series of forming cores, an endless carrier supporting the cores, a series of sectional molds each adapted to receive one of said cores during a portion of the travel thereof, an extracting core movable into and from the molds from which the forming cores have been withdrawn successively, and means for effecting relative movement between the sections of the mold in which the extracting core is positioned to release the article therein and permit it to be withdrawn on the extracting core.

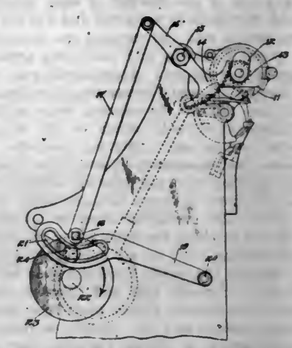
4. In a machine for the purpose described, the combination of a series of forming cores, an endless carrier supporting the cores, a series of sectional molds each adapted to receive one of said cores during a portion of the travel thereof, and to have the sections thereof adjusted to open or closed position by movement in the direction of its length, an extracting core movable into and from the molds from which the forming cores have been withdrawn successively, and means for moving the mold in which the extracting core is positioned longitudinally as the core is moving outward to adjust the sections thereof to open position and release the article therein so that it will be withdrawn on the extracting core.

5. In a machine for the purpose described, the combination of a drum-like body provided with a series of peripheral sectional molds, a series of forming cores, an endless carrier for said cores, each mold being adapted to receive one of the forming cores during a portion of the travel thereof, means for heating the molds, means for successively effecting relative movement between each core and its mold while the sections of the latter are in closed relation to loosen the baked article from the core, an extracting core movable into and from the molds from which the forming cores have been withdrawn successively, and means for effecting relative movement between the sections of the mold in which the extracting core is positioned to release the article therein and permit it to be withdrawn on the extracting core.

[Claims 6 to 20 not printed in the Gazette.]

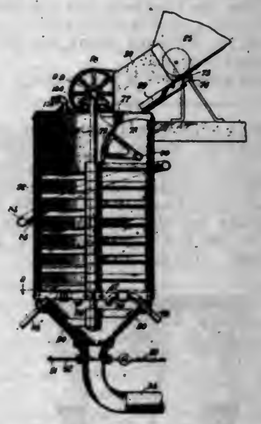
1,215,557. SHUTTLE-DRIVE. OSCAR L. LAWSON and JAMES H. REED, Lynn, Mass. Filed Mar. 23, 1915. Serial No. 16,453. (Cl. 112—20.)

In a shoe sewing machine, the combination of a shuttle, a gear sector actuating said shuttle, a lever arm, operating the gear sector, a crank member having a crank pin, a lever having a curved slot in which said crank pin moves, said lever being pivoted on a line forming an extension of



a chord of the curve of the cam slot and at a distance therefrom and a link connecting the lever arm of the gear sector and said slotted lever, said link being on the concave side of said curved slot.

1,215,558. CONCRETE MIXING AND DISTRIBUTING SYSTEM. THOMAS S. LEAKE, St. Louis, Mo., assignor, by mesne assignments, to Concrete Mixing and Conveying Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 7, 1907, Serial No. 396,270. Renewed June 24, 1916. Serial No. 105,721. (Cl. 83—73.)



1. In a concrete mixing and conveying apparatus, the combination of a delivery conduit, a vertically arranged receptacle, having a feed opening and provided with walls which converge downward to an apex and open into the conduit, the converging walls serving to guide all the material in the receiver downward on converging lines to the conduit, a positively actuated stirring device in the receiver arranged to leave the opening into the delivery conduit unobstructed, a closure for the feed opening, and means for supplying a pressure fluid to the receptacle for forcing material therefrom along the said converging walls to the apex thereof and into the conduit.

2. In a concrete mixing and conveying apparatus, the combination of a relatively extended delivery conduit, a receptacle having its walls converging downward toward the conduit and joining the conduit walls with substantial smoothness, a movable device in the receiver for automatically mixing and agitating material contained therein, means for completely closing the receptacle except for the opening into the delivery conduit, means for introducing air under pressure into the upper part of the re-

ceptacle above the contained mass of material to tend to cause it to move toward the entrance to the conduit, and means adjacent the entrance to the delivery conduit for introducing a jet of air moving at high velocity to impinge against the mass of material and aid its movement from the receptacle into and through the delivery conduit.

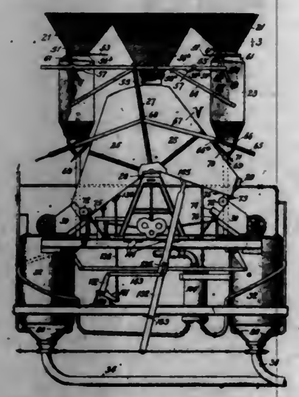
3. In a concrete mixing and conveying apparatus, the combination of a relatively extended delivery conduit, a receptacle having its walls converging downward toward the conduit and joining the conduit walls with substantial smoothness, a movable device in the receptacle for automatically mixing and agitating material contained therein, means for completely closing the receptacle except for the opening into the delivery conduit, means for introducing air under pressure into the upper part of the receptacle above the contained mass of material, means in the receptacle adjacent the entrance to the delivery conduit for introducing a jet of air moving at high velocity to impinge against the mass of material and aid its movement from the receptacle into and through the delivery conduit, and a mechanical stirrer positioned between said jet introducing means and the conduit entrance.

4. In combination, a closed chamber for containing plastic concrete, a conduit leading therefrom, a mechanical stirrer in the chamber, and a compressed air inlet pipe terminating in a nozzle within the chamber at a point between said stirrer and the outlet to said nozzle, said nozzle being directed toward the outlet opening.

5. In a concrete mixing and conveying apparatus, the combination of a relatively extended delivery conduit, a receptacle the walls of which converge toward the conduit and smoothly join the conduit walls, moving means in the receptacle for automatically mixing and agitating materials contained therein, means for delivering a jet of air at high velocity against the mass of materials to assist its movement from the receptacle into and through the delivery conduit, and a moving stirring device interposed between the said jet delivering means and the entrance to the said delivery conduit.

[Claims 6 to 22 not printed in the Gazette.]

1,215,559. APPARATUS FOR PREPARING AND HANDLING CONCRETE. THOMAS S. LEAKE, Chicago, Ill., assignor, by mesne assignments, to Concrete Mixing and Conveying Co., Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 7, 1907, Serial No. 396,270. Divided and this application filed Apr. 18, 1912, Serial No. 691,610. Renewed Dec. 2, 1916. Serial No. 134,738. (Cl. 221—96.)



1. The combination of a stationary bin having a bottom opening, a vessel mounted below the bin for horizontal reciprocation and having two separate chambers open at the top and located to register alternately with the said bin opening to be filled, and gate controlled discharge ducts connected with the respective chambers, the said ducts being widely separated horizontally and arranged to deliver the contents of the respective chambers at widely separated points.

2. The combination of a stationary bin having a bottom opening, a vessel mounted below the bin for oscillation about a horizontal axis and having two separate chambers open at the top and positioned to register alternately with the said bin opening to be filled, the position of the aforesaid axis being such that the weight of the material in the chamber at either side will cause the vessel to automatically tilt toward that side and bring the said chamber out of register with the bin opening and the other chamber into register, and gate controlled discharge ducts connected with the respective chambers, the said ducts being widely separated horizontally and arranged to deliver the contents of the respective chambers at widely separated points.

3. The combination of a stationary bin having a bottom opening, a vessel mounted below the bin for oscillation about a horizontal axis and having two separate chambers open at the top and located to aline alternately with the said bin opening to be filled, manually releasable means for holding the vessel in either of its extreme positions, the position of the aforesaid axis being such that the weight of material in the chamber at either side will cause the vessel when released to automatically tilt toward that side and bring the said chamber out of register with the bin opening and the other chamber into register, and gate controlled discharge ducts connected with the respective chambers, the said ducts being widely separated horizontally and arranged to deliver the contents of the respective chambers at widely separated points.

4. The combination of a stationary bin having a bottom opening, a vessel mounted below the bin for horizontal reciprocation and having two separate chambers open at the top and located to register alternately with the said bin opening to be filled and provided respectively with discharge outlets widely spaced horizontally and arranged to deliver the contents of the respective chambers at widely separated points, gates for closing the said outlets respectively, and automatic means for opening the gate at the side toward which the vessel is moved.

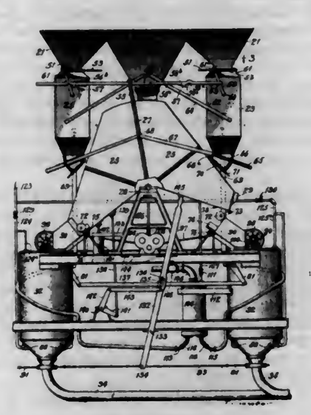
5. The combination of a stationary bin having a bottom opening, a vessel mounted below the bin for horizontal reciprocation and having two separate chambers open at the top and located to register alternately with the said bin opening to be filled and provided respectively with discharge outlets widely spaced horizontally and arranged to deliver the contents of the respective chambers at widely separated points, gates for closing the said outlets respectively, and automatic means for opening the gate at the side toward which the vessel is moved and closing the gate at the other side.

[Claims 6 to 35 not printed in the Gazette.]

1,215,560. APPARATUS FOR PREPARING AND HANDLING CONCRETE. THOMAS S. LEAKE, Chicago, Ill., assignor, by mesne assignments, to Concrete Mixing and Conveying Co., Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 7, 1907, Serial No. 396,270. Divided and this application filed Apr. 18, 1912. Serial No. 691,611. (Cl. 83—73.)

1. In a mechanism for forming a mixed concrete mass, the combination of two separate receptacles adapted to receive and hold a mass of concrete forming materials, each receptacle being provided with a feed aperture near its top and a discharge aperture near its bottom, valves for the discharge apertures, means for mixing materials in the two receptacles, a feeding apparatus arranged to deliver materials first through the feed aperture of one receptacle and then through the feed aperture of the other receptacle, and means operatively connected with the feeding apparatus for closing the valve at the bottom of the receptacle to which material is delivered by the feeding apparatus and opening the valve at the bottom of the other receptacle.

2. In a mechanism for forming a mixed concrete mass, the combination of two separate receptacles adapted to receive and hold a mass of concrete forming materials, each receptacle being provided with a feed aperture near its top, valves for the feed apertures, means for mixing materials in the two receptacles, a feeding apparatus arranged to deliver materials first through the feed aperture of one receptacle and then through the feed aperture of the other receptacle, and means operatively connected with the feeding apparatus for opening the valve for the feed aperture of the receptacle to which material is delivered by the feeding apparatus and closing the valve for the feed aperture of the other receptacle.



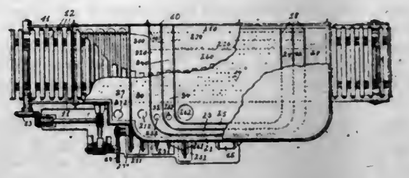
3. In a mechanism for forming a mixed concrete mass, the combination of two separate receptacles adapted to receive and hold a mass of concrete forming materials, each receptacle being provided with a feed aperture near its top and a discharge aperture near its bottom, valves for the feed apertures, valves for the discharge apertures, a feeding mechanism for delivering materials first through the feed aperture of one receptacle and then through the feed aperture of the other receptacle, means operatively connected with the feeding apparatus for opening the valve at the feed aperture of the receptacle to which material is delivered by the feeding apparatus and closing the valve at the discharge aperture of the same receptacle and for simultaneously closing the valve at the feed opening of the other receptacle and opening the valve at the discharge opening of the said other receptacle, and means for mixing the material which is delivered to the receptacle.

4. In a mechanism for forming a mixed concrete mass, the combination of two separate receptacles adapted to receive and hold a mass of concrete forming materials, each receptacle being provided with a feed aperture near its top and a discharge aperture near its bottom, valves for the discharge apertures, valves for the feed apertures, means for opening the discharge valve of one receptacle and closing the discharge valve of the other and for simultaneously closing the feed valve of the first receptacle and opening the feed valve of the second receptacle, and means for mixing the material which is delivered to the receptacle.

5. In a concrete mixing apparatus, a mixing chamber adapted to have separated charges of concrete mixed therein and to receive therefor quantities of rock, sand, cement and water proportioned for said charges, and having a feed aperture and a discharge aperture, a valve for the feed aperture, a valve for the discharge aperture, a shifting measuring mechanism above the feed opening having a discharge duct which registers with the said opening when the vessel is in one position, a gate in the duct of the measuring vessel, a valve for the discharge aperture of the receptacle, and means to open the gate and the valve of the feed aperture when the vessel shifts toward the mixing chamber and to open the valve for the discharge opening of the mixing chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,215,561. PASTEURIZER. CHARLES H. LOEW, Lakewood, Ohio. Filed Jan. 21, 1914. Serial No. 813,413. (Cl. 126—272.)



1. A device of the character described comprising a receptacle, and means for establishing therein a series of zones of falling water of different temperatures, said zones arranged in communicating pairs, a central zone being of a pasteurizing temperature, and the zones on one side of the central zone progressively increasing in temperature and on the other side of the central zone progressively decreasing in temperature.

2. A device of the character described comprising a receptacle, and means for establishing therein a series of zones of falling water of different temperatures, a central zone being of a pasteurizing temperature, and the zones on one side of the central zone progressively increasing in temperature and on the other side of the central zone progressively decreasing in temperature, such means including a series of chambers arranged at the upper part of the receptacle, with foraminous bottoms to permit of the discharge of the water, the chambers progressively placed in communicating pairs with respect to the central chamber.

3. A device of the character described comprising a receptacle, and means for establishing therein a series of zones of falling water of different temperatures, a central zone being of a pasteurizing temperature, and the zones on one side of the central zone progressively increasing in temperature and on the other side of the central zone progressively decreasing in temperature, such means including a series of chambers arranged at the upper part of the receptacle, with foraminous bottoms to permit of the discharge of the water, the chambers progressively placed in communicating pairs with respect to the central chamber, and a similar series of chambers arranged at the lower part of the receptacle.

4. A device of the character described comprising a receptacle, and means for establishing therein a series of zones of falling water of different temperatures, a central zone being of a pasteurizing temperature, and the zones on one side of the central zone progressively increasing in temperature and on the other side of the central zone progressively decreasing in temperature, such means including a series of chambers arranged at the upper part of the receptacle, with foraminous bottoms to permit of the discharge of the water, the chambers progressively placed in communicating pairs with respect to the central chamber, and a similar series of chambers arranged at the lower part of the receptacle, and a series of lifting devices whereby the water descending from a communicating pair of upper chambers to a similar communicating pair of lower chambers is transferred from such lower chambers to such upper chambers.

5. An apparatus for pasteurizing milk in bottles comprising a receptacle with open ends, a moving conveyer adapted to pass through the same, a series of spraying tanks arranged above the conveyer, a similar series of water collecting tanks arranged beneath the conveyer, each tank in both series being separated from its neighbor by a partition impervious to water, each series including a

ceptacle above the contained mass of material to tend to cause it to move toward the entrance to the conduit, and means adjacent the entrance to the delivery conduit for introducing a jet of air moving at high velocity to impinge against the mass of material and aid its movement from the receptacle into and through the delivery conduit.

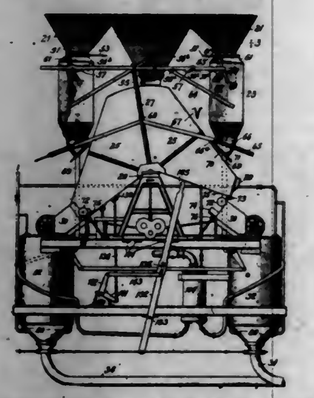
3. In a concrete mixing and conveying apparatus, the combination of a relatively extended delivery conduit, a receptacle having its walls converging downward toward the conduit and joining the conduit walls with substantial smoothness, a movable device in the receptacle for automatically mixing and agitating material contained therein, means for completely closing the receptacle except for the opening into the delivery conduit, means for introducing air under pressure into the upper part of the receptacle above the contained mass of material, means in the receptacle adjacent the entrance to the delivery conduit for introducing a jet of air moving at high velocity to impinge against the mass of material and aid its movement from the receptacle into and through the delivery conduit, and a mechanical stirrer positioned between said jet introducing means and the conduit entrance.

4. In combination, a closed chamber for containing plastic concrete, a conduit leading therefrom, a mechanical stirrer in the chamber, and a compressed air inlet pipe terminating in a nozzle within the chamber at a point between said stirrer and the outlet to said nozzle, said nozzle being directed toward the outlet opening.

5. In a concrete mixing and conveying apparatus, the combination of a relatively extended delivery conduit, a receptacle the walls of which converge toward the conduit and smoothly join the conduit walls, moving means in the receptacle for automatically mixing and agitating materials contained therein, means for delivering a jet of air at high velocity against the mass of materials to assist its movement from the receptacle into and through the delivery conduit, and a moving stirring device interposed between the said jet delivering means and the entrance to the said delivery conduit.

[Claims 6 to 22 not printed in the Gazette.]

1,215,559. APPARATUS FOR PREPARING AND HANDLING CONCRETE. THOMAS S. LEAKE, Chicago, Ill., assignor, by mesne assignments, to Concrete Mixing and Conveying Co., Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 7, 1907, Serial No. 396,270. Divided and this application filed Apr. 18, 1912, Serial No. 691,610. Renewed Dec. 2, 1916. Serial No. 134,738. (Cl. 221—96.)



1. The combination of a stationary bin having a bottom opening, a vessel mounted below the bin for horizontal reciprocation and having two separate chambers open at the top and located to register alternately with the said bin opening to be filled, and gate controlled discharge ducts connected with the respective chambers, the said ducts being widely separated horizontally and arranged to deliver the contents of the respective chambers at widely separated points.

2. The combination of a stationary bin having a bottom opening, a vessel mounted below the bin for oscillation about a horizontal axis and having two separate chambers open at the top and positioned to register alternately with the said bin opening to be filled, the position of the aforesaid axis being such that the weight of the material in the chamber at either side will cause the vessel to automatically tilt toward that side and bring the said chamber out of register with the bin opening and the other chamber into register, and gate controlled discharge ducts connected with the respective chambers, the said ducts being widely separated horizontally and arranged to deliver the contents of the respective chambers at widely separated points.

3. The combination of a stationary bin having a bottom opening, a vessel mounted below the bin for oscillation about a horizontal axis and having two separate chambers open at the top and located to aline alternately with the said bin opening to be filled, manually releasable means for holding the vessel in either of its extreme positions, the position of the aforesaid axis being such that the weight of material in the chamber at either side will cause the vessel when released to automatically tilt toward that side and bring the said chamber out of register with the bin opening and the other chamber into register, and gate controlled discharge ducts connected with the respective chambers, the said ducts being widely separated horizontally and arranged to deliver the contents of the respective chambers at widely separated points.

4. The combination of a stationary bin having a bottom opening, a vessel mounted below the bin for horizontal reciprocation and having two separate chambers open at the top and located to register alternately with the said bin opening to be filled and provided respectively with discharge outlets widely spaced horizontally and arranged to deliver the contents of the respective chambers at widely separated points, gates for closing the said outlets respectively, and automatic means for opening the gate at the side toward which the vessel is moved.

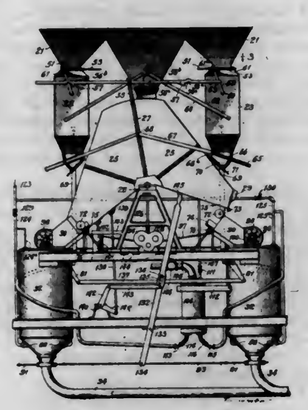
5. The combination of a stationary bin having a bottom opening, a vessel mounted below the bin for horizontal reciprocation and having two separate chambers open at the top and located to register alternately with the said bin opening to be filled and provided respectively with discharge outlets widely spaced horizontally and arranged to deliver the contents of the respective chambers at widely separated points, gates for closing the said outlets respectively, and automatic means for opening the gate at the side toward which the vessel is moved and closing the gate at the other side.

[Claims 6 to 35 not printed in the Gazette.]

1,215,560. APPARATUS FOR PREPARING AND HANDLING CONCRETE. THOMAS S. LEAKE, Chicago, Ill., assignor, by mesne assignments, to Concrete Mixing and Conveying Co., Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 7, 1907, Serial No. 396,270. Divided and this application filed Apr. 18, 1912. Serial No. 691,611. (Cl. 83—73.)

1. In a mechanism for forming a mixed concrete mass, the combination of two separate receptacles adapted to receive and hold a mass of concrete forming materials, each receptacle being provided with a feed aperture near its top and a discharge aperture near its bottom, valves for the discharge apertures, means for mixing materials in the two receptacles, a feeding apparatus arranged to deliver materials first through the feed aperture of one receptacle and then through the feed aperture of the other receptacle, and means operatively connected with the feeding apparatus for closing the valve at the bottom of the receptacle to which material is delivered by the feeding apparatus and opening the valve at the bottom of the other receptacle.

2. In a mechanism for forming a mixed concrete mass, the combination of two separate receptacles adapted to receive and hold a mass of concrete forming materials, each receptacle being provided with a feed aperture near its top, valves for the feed apertures, means for mixing materials in the two receptacles, a feeding apparatus arranged to deliver materials first through the feed aperture of one receptacle and then through the feed aperture of the other receptacle, and means operatively connected with the feeding apparatus for opening the valve for the feed aperture of the receptacle to which material is delivered by the feeding apparatus and closing the valve for the feed aperture of the other receptacle.



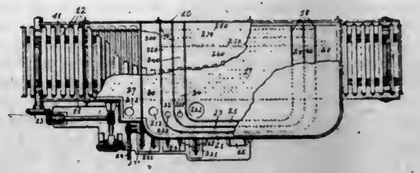
3. In a mechanism for forming a mixed concrete mass, the combination of two separate receptacles adapted to receive and hold a mass of concrete forming materials, each receptacle being provided with a feed aperture near its top and a discharge aperture near its bottom, valves for the feed apertures, valves for the discharge apertures, a feeding mechanism for delivering materials first through the feed aperture of one receptacle and then through the feed aperture of the other receptacle, means operatively connected with the feeding apparatus for opening the valve at the feed aperture of the receptacle to which material is delivered by the feeding apparatus and closing the valve at the discharge aperture of the same receptacle and for simultaneously closing the valve at the feed opening of the other receptacle and opening the valve at the discharge opening of the said other receptacle, and means for mixing the material which is delivered to the receptacle.

4. In a mechanism for forming a mixed concrete mass, the combination of two separate receptacles adapted to receive and hold a mass of concrete forming materials, each receptacle being provided with a feed aperture near its top and a discharge aperture near its bottom, valves for the discharge apertures, valves for the feed apertures, means for opening the discharge valve of one receptacle and closing the discharge valve of the other and for simultaneously closing the feed valve of the first receptacle and opening the feed valve of the second receptacle, and means for mixing the material which is delivered to the receptacle.

5. In a concrete mixing apparatus, a mixing chamber adapted to have separated charges of concrete mixed therein and to receive therefor quantities of rock, sand, cement and water proportioned for said charges, and having a feed aperture and a discharge aperture, a valve for the feed aperture, a valve for the discharge aperture, a shifting measuring mechanism above the feed opening having a discharge duct which registers with the said opening when the vessel is in one position, a gate in the duct of the measuring vessel, a valve for the discharge aperture of the receptacle, and means to open the gate and the valve of the feed aperture when the vessel shifts toward the mixing chamber and to open the valve for the discharge opening of the mixing chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,215,561. PASTEURIZER. CHARLES H. LOEW, Lakewood, Ohio. Filed Jan. 21, 1914. Serial No. 813,413. (Cl. 126—272.)



1. A device of the character described comprising a receptacle, and means for establishing therein a series of zones of falling water of different temperatures, said zones arranged in communicating pairs, a central zone being of a pasteurizing temperature, and the zones on one side of the central zone progressively increasing in temperature and on the other side of the central zone progressively decreasing in temperature.

2. A device of the character described comprising a receptacle, and means for establishing therein a series of zones of falling water of different temperatures, a central zone being of a pasteurizing temperature, and the zones on one side of the central zone progressively increasing in temperature and on the other side of the central zone progressively decreasing in temperature, such means including a series of chambers arranged at the upper part of the receptacle, with foraminous bottoms to permit of the discharge of the water, the chambers progressively placed in communicating pairs with respect to the central chamber.

3. A device of the character described comprising a receptacle, and means for establishing therein a series of zones of falling water of different temperatures, a central zone being of a pasteurizing temperature, and the zones on one side of the central zone progressively increasing in temperature and on the other side of the central zone progressively decreasing in temperature, such means including a series of chambers arranged at the upper part of the receptacle, with foraminous bottoms to permit of the discharge of the water, the chambers progressively placed in communicating pairs with respect to the central chamber, and a similar series of chambers arranged at the lower part of the receptacle.

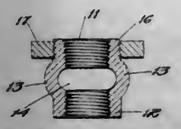
4. A device of the character described comprising a receptacle, and means for establishing therein a series of zones of falling water of different temperatures, a central zone being of a pasteurizing temperature, and the zones on one side of the central zone progressively increasing in temperature and on the other side of the central zone progressively decreasing in temperature, such means including a series of chambers arranged at the upper part of the receptacle, with foraminous bottoms to permit of the discharge of the water, the chambers progressively placed in communicating pairs with respect to the central chamber, and a similar series of chambers arranged at the lower part of the receptacle, and a series of lifting devices whereby the water descending from a communicating pair of upper chambers to a similar communicating pair of lower chambers is transferred from such lower chambers to such upper chambers.

5. An apparatus for pasteurizing milk in bottles comprising a receptacle with open ends, a moving conveyer adapted to pass through the same, a series of spraying tanks arranged above the conveyer, a similar series of water collecting tanks arranged beneath the conveyer, each tank in both series being separated from its neighbor by a partition impervious to water, each series including a

central tank larger than the others, and all of the other tanks in each series being arranged in communicating pairs.

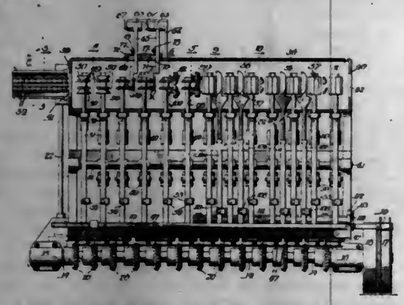
[Claims 6 to 24 not printed in the Gazette.]

1,215,562. HICKEY. LOUIS MCCARTHY, Boston, Mass., assignor to The Macallen Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 18, 1915. Serial No. 56,391. (Cl. 240—85.)



The improved hickey comprising tubular end members connected together with an opening between them, one of said end members being split from the outer edge thereof to the said opening, internal threads on said split end member tapering outwardly toward the outer edge thereof and adapted to receive the correspondingly threaded end of an insulating joint, external threads on said split end member tapering inwardly to the outer edge thereof, and a nut having threads tapering to correspond to said external threads, said nut being adapted to be screwed onto said split end member and thereby to wedge it inwardly and together with the oppositely tapering end of the insulating joint to clamp the split end securely in position.

1,215,563. CORN-CUTTING MACHINE. JOHN C. MCINTYRE, Hoopeston, Ill., assignor to Sprague Canning Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 10, 1913. Serial No. 760,136. (Cl. 130—9.)



1. In a machine of the character described, the combination with tools arranged to act on the ears, of a feed trough, and a traveling conveyer in the trough having a depressed medial portion adapted to center the ear with reference to the tools, the medial portion of the trough being lower than said medial portion of the conveyer, the width and depth of the medial depression being such that an ear of corn will be supported therein longitudinally of the conveyer and out of contact with the trough, substantially as described.

2. In a machine of the character described, the combination with tools arranged to act on the ears, of a feed trough, and a traveling conveyer in the trough having a depressed medial portion adapted to center the ear with reference to the tools, said conveyer comprising a pair of belt members arranged in spaced parallel relation between the side walls of the trough, the medial portion of the trough being lower than the upper part of said belt members, the distance between said members and their height above the medial portion of the trough being such that an ear of corn will be supported therebetween longitudinally of the conveyer and out of contact with the trough, substantially as described.

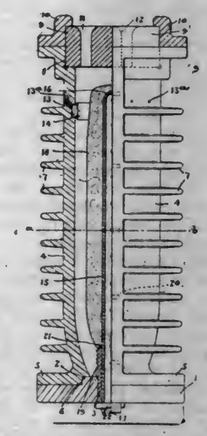
3. In a machine of the character described, the combination with tools arranged to act on the ears, of a feed trough, and a traveling conveyer in the trough having a depressed medial portion adapted to center the ear with reference to the tools, said conveyer comprising a pair of chain members arranged in spaced parallel relation between the side walls of the trough and having upwardly projecting ear engaging portions, the medial portion of said trough being lower than the upper part of said chain members, the distance between said members and their height above the medial portion of the trough being such that an ear of corn will be supported therebetween longitudinally of the conveyer and out of contact with the trough, substantially as described.

4. In a machine of the character described, a plurality of pairs of horizontally disposed vertically spaced tool holders pivotally mounted at one end in the machine frame, the free ends of the members of each pair disposed on opposite sides of and movable toward and from the machine axis, springs connecting the members of each pair, and means disposed between the members of each pair near their pivotal connection, said means acting in unison to force the pivot ends of the members apart whereby to increase the tension of the springs, substantially as described.

5. In a machine of the character described, a plurality of pairs of horizontally disposed vertically spaced tool holders pivotally mounted at one end in the machine frame, the free ends of the members of each pair disposed on opposite sides of and movable toward and from the machine axis, springs connecting the members of each pair, a cam rod extending between the members of the several pairs near their pivotal connection, and means to adjust the rod angularly whereby to force the pivoted ends of the members apart to increase the tension of the springs, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,215,564. MOLD FOR CASTING SHELLS. JOHN C. MCLACHLAN, Toronto, Ontario, Canada. Filed Oct. 18, 1915, Serial No. 56,365. Renewed Dec. 22, 1916. Serial No. 138,492. (Cl. 22—127.)

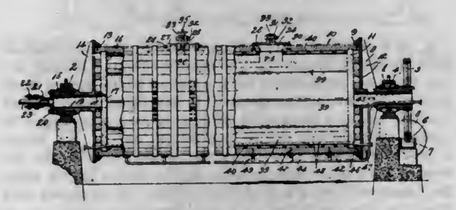


1. A shell mold, comprising, a rigid base having a central opening, a sectional chill forming the outer wall of the mold adapted to be centered upon and removably secured to said base, a hollow perforate core center centered in the opening in said base and provided with a projecting shoulder forming a support for the core, means engaging the lower end of said core center and adapted to clamp same rigidly to said base to rigidly support same axially within the mold, and a head block closing the top of the mold and having pouring and overflow vents.

2. A shell mold comprising, a base having a central opening, a sectional chill adapted to be centered upon and removably secured to said base to form a mold, a sleeve centered in the opening in said base and extending upwardly therefrom and having a threaded exterior forming the inner wall of the lower part of the mold, and a perforate core center rigidly supported in said sleeve and extending upwardly into the mold.

3. A shell mold, comprising, a base having a central opening, a sleeve fitted in said opening and extending perpendicularly upward from said base, said sleeve having a threaded exterior, a perforate tube extending through said sleeve and having a ring resting upon the upper end of said sleeve, means connected to the bottom of said perforate tube for locking said tube and sleeve in said base, a sand core encircling said perforate tube, and a sectional chill centered upon said base and surrounding said core and having pouring and vent openings at the top.

1,215,565. BARREL. JOHN L. MALM, Denver, Colo. Filed May 26, 1914. Serial No. 841,083. (Cl. 266—12.)



1. In a combined treating and agitating barrel, a pair of heads, a cylindrical body arranged between said heads, suitable linings for said heads, a supply for the material leading into the barrel, a plurality of baffle supporting strips spaced around the inner wall of said body, a filtering medium extending into the groove between the baffle supporting strips of one pair and into the groove between the baffle supporting strips of the adjacent pair, baffles arranged in said grooves and engaging the edges of the filtering medium and holding the same in place, means for draining the filtrate from between the filtering medium and the inner wall of the body, and means for imparting a movement to the barrel.

2. In a combined treating and agitating barrel, a pair of heads, a cylindrical barrel body arranged between said heads, a head lining within said body adjacent to each head, one of said heads being provided with a central opening, a trunnion carried by each head, the trunnion adjacent the head lining having an opening communicating therewith, a supply pipe connected with said trunnion, a plurality of pairs of baffle supporting strips spaced around the inner wall of said body, a filtering medium extending into the groove between the baffle supporting strips of one pair and into the groove between the baffle supporting strips of the next adjacent pair, baffles arranged in said grooves and engaging the edges of the filtering medium and holding the same in place, means for draining the filtrate from between the filtering medium and the inner wall of the body, and means for agitating said barrel.

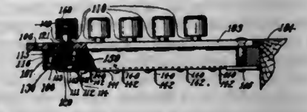
3. In a combined treating and agitating barrel, a pair of heads, a cylindrical barrel body arranged between said heads, a head lining within said body adjacent to each head, one of said heads being provided with a central opening, a trunnion carried by each head, the trunnion adjacent the head lining having an opening communicating therewith, a supply pipe connected with said trunnion, a plurality of pairs of baffle supporting strips spaced around the inner wall of said body, a filtering medium extending into the groove between the baffle supporting strips of one pair and into the groove between the baffle supporting strips of the next adjacent pair, baffles arranged in said grooves and engaging the edges of the filtering medium and holding the same in place, filtering medium supporting strips arranged between the pairs of the baffle supporting strips and spaced apart to form chambers, said strips being provided with means for establishing communication between adjacent chambers, means for draining the filtrate from said chambers, and means for agitating the barrel.

4. In a combined treating and agitating barrel, a pair of heads, a cylindrical barrel body arranged between said heads, a head lining within said body adjacent to each head, one of said heads being provided with a central opening, a trunnion carried by each head, the trunnion adjacent the head lining having an opening communicating therewith, a supply pipe connected with said trunnion, a plurality of pairs of baffle supporting strips spaced around the inner wall of said body, a filtering medium extending into the groove between the baffle supporting strips of one pair and into the groove between the baffle supporting strips of the next adjacent pair, baffles arranged in said grooves and engaging the edges of the filtering medium and holding the same in place, means for draining the filtrate from between the filtering medium and the inner wall of the body, and means for agitating said barrel.

5. In a barrel, a pair of supporting heads each provided with a suitable trunnion, a lining for each head, a barrel body arranged between the heads, a filter bed arranged upon the inner wall of said barrel, means for draining the filtrate from said bed, a charging door arranged in the periphery of the body portion, and means for supplying gas throughout the length of said barrel at a point opposite to the door.

[Claim 6 not printed in the Gazette.]

1,215,566. CIRCUIT-CONTROLLER. RAY H. MANSON, Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed July 13, 1914. Serial No. 850,640. (Cl. 179—177.)



1. In a circuit controller, the combination of a perforated plate adapted to be normally employed as a common terminal for a plurality of conductors, an insulating member, means to connect said insulating member to said plate, said insulating member being provided with a plurality of channels concentric with the perforations in said plate, a plurality of push button plungers each adapted to have electrical engagement with said perforated plate, one mounted in each of said perforations and its concentric channel and adapted to reciprocate therein, a spring for maintaining each plunger in normal position, a plurality of contact members mounted upon said insulating member and each extending over the bottom of one of the channels therein and adapted to engage the end of the plunger when it is depressed.

2. In a device of the class described, the combination of a plate provided with a plurality of perforations and adapted normally to serve as a common terminal for a plurality of conductors, an insulating member and means to mount said insulating member upon the bottom of said plate, said insulating member provided with a plurality of channels concentric with the perforations in the plate, a plurality of push button plungers each normally engaging said plate, one mounted in each of the perforations in said plate and in the channel of the insulating member concentric therewith, said plungers adapted to reciprocate in said perforations and channels, a spring for returning said plungers to normal, a plurality of terminals connected to said insulating member, one having a flexible end extending over the bottom of the channel and adapted to engage the plunger when it is depressed to make a wiping electrical contact therewith.

3. In a device of the class described, the combination of a plate having a perforation therein, said plate adapted normally to serve as a terminal of an electrical circuit, an insulating member having a channel therein and means to mount said insulating member upon the bottom of said plate with the channel concentric with the perforation in the plate, the channel extending clear through the insulating member, a push button plunger normally engaging said plate mounted to reciprocate in said perforation and channel, a spring for returning said plunger to normal position, an electrical terminal mounted on said insulating member, said terminal having a flexible end extending over the bottom of said channel and adapted to engage said plunger when the plunger is depressed.

4. In a device of the class described, the combination of a perforated plate adapted normally to serve as a terminal of an electric circuit, an insulating member having a channel therein extending through said member, means to connect said member to said plate with the channel concentric with the perforation in the plate, an electrical terminal mounted upon said member and having a flexible end extending over the mouth of the channel, a push button plunger adapted to engage said plate mounted to reciprocate in said perforation and channel, a collar on said plunger permitting the plunger to be reciprocated in the channel but retaining it therein, a shoulder in said channel, a bearing plate on said shoulder, a spring between the bearing plate and the collar on the plunger, said plunger when depressed having a wiping engagement with the flexible end of the terminal to complete a circuit between the conductor connected to said terminal and the conductor connected to said plate.

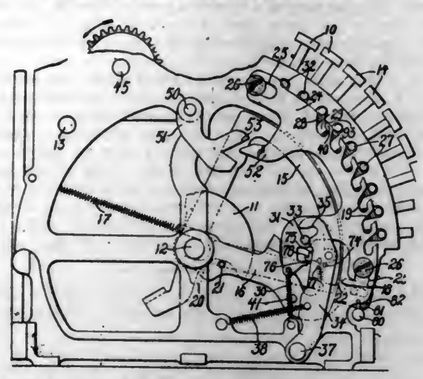
5. In a device of the class described, the combination of a plate having an opening therein, an insulating block having a channel therein, means to connect said block to said plate with the channel substantially concentric with the perforation in the plate, a plunger mounted to reciprocate in said perforation and channel, a shoulder in said channel, a bearing plate on said shoulder, a collar on said plunger, a spring between said bearing plate and said collar, a second shoulder in said channel for limiting the movement of the plunger and adapted to engage the collar on the plunger to limit the downward movement of said plunger, and an electrical terminal mounted on said insulating member having a flexible end in the path of the plunger adapted to make a wiping engagement with said plunger when the same is depressed, both said plate and said terminal adapted to be connected to an electric conductor, whereby a circuit may be closed when said plunger is depressed to engage said terminal.

1,215,567. LOCKING MECHANISM FOR CASH-REGISTERS. HAAKON A. MARTIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed July 13, 1914. Serial No. 850,659. (Cl. 235—26.)

1. In a machine of the class described the combination with operating means, of a normally effective locking device therefor, a plate having two movements for rendering said locking device ineffective, depressible keys for giving said plate one movement, and means for automatically giving said plate its second movement when the plate has received its first movement.

2. In a machine of the class described the combination with operating means, of a normally effective locking device therefor, a plate having two movements for rendering said locking device ineffective, depressible keys for giving said plate one movement, and spring means for giving said plate its second movement when the plate has received its first movement.

3. In a machine of the class described the combination with operating means, of a normally effective locking device therefor, depressible keys, means for rendering said locking device ineffective and for locking the depressed keys in depressed position and partially operated by said keys, and means for automatically completing the operation of said rendering means, when a key is depressed completely, to render said locking device ineffective and lock the depressed key in depressed position.

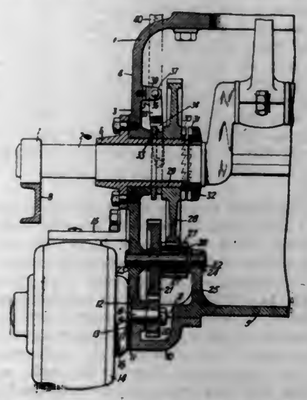


4. In a machine of the class described the combination with operating means, of a normally effective locking device therefor, depressible keys, a detent plate having hook projections, for locking the keys in depressed position, and inclined edges, and capable of having two movements to render said locking device ineffective, one of the movements being given thereto by the coöperation of the depressed keys with said inclined edges, and a spring operated member having a camming surface for engaging said detent to give the latter its second movement when one of said keys is fully depressed.

5. In a machine of the class described the combination with operating means, of a normally effective locking device therefor, depressible keys, a detent plate having inclined edges and hook projections, for locking the keys in depressed position, and capable of having two movements to render said locking device ineffective, one of the movements being given thereto by the coöperation of the depressed keys with said inclined edges, and means, automatically operated for giving said detent its second movement when one of said keys is fully depressed.

[Claims 6 to 37 not printed in the Gazette.]

1,215,568. STARTING DEVICE FOR AUTOMOBILES. CHESTER B. MILLS, East McKeesport, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 28, 1913. Serial No. 757,365. (Cl. 74—7.)



1. In a starting device, the combination with an engine having a crank shaft and a crank case, of a starting motor, and means within said crank case for operatively connecting said motor to said crank shaft.

2. In a starting device, the combination with an engine having a shaft and a crank case, of a motor, and gear mechanism within said crank case for operatively connecting said motor to said shaft.

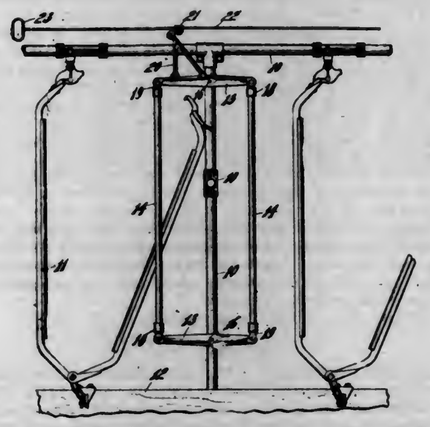
3. In a starting device, the combination with an engine having a crank shaft and a crank case, of a motor outside said crank case, and reduction gear mechanism inside said crank case for operatively connecting said motor to said shaft.

4. In a starting device, the combination with an engine having a crank shaft and a crank case, of a motor, gear mechanism within said crank case operatively connected to said motor, and means for operatively connecting said mechanism to said crank shaft.

5. In a starting device, the combination with an engine having a crank shaft and a crank case, of a clutch mechanism within said crank case comprising two members, one of which rotates with said crank shaft, and a motor operatively connected to one of said clutch members.

[Claims 6 to 13 not printed in the Gazette.]

1,215,569. GUARD FOR STALLS. WILLIAM MITCHELL, Milwaukee, Wis. Filed Feb. 8, 1913. Serial No. 747,007. (Cl. 119—148.)



1. A stall guard, comprising a collapsible guard frame adapted for connection with the division standard of a stall frame for occupying space between said standard and the adjacent stanchions to prevent the animal entering its head between the standard and the stanchions when driven into the stall.

2. A stall guard, comprising a collapsible frame in the form of a parallelogram adapted to be mounted on the division standard of the stall frame with its upright members forming guard bars positioned between the standard and the stanchions in the operative position of the frame.

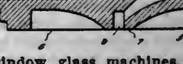
3. A stall guard, comprising a pair of levers pivotally connected at intermediate points to the division standard of a stall frame, upright guard bars pivotally connecting the ends of the levers, and means for swinging the levers to cause the guard bars to occupy positions between the standard and the stanchions.

4. A stall guard for a row of stall frames provided with stanchions, comprising a pair of levers pivotally connected with the division standard of the stall frame, upright guard bars pivotally connected to the ends of the levers, a bracket on one end of one of the levers, and an operating rod extending lengthwise of the row of stalls and having the bracket pivotally connected therewith.

5. A stall guard, comprising a pair of levers having bracket arms to engage the division standard of a stall frame to form a pivotal connection therewith and to form a stop for limiting the pivotal movements of the levers by engaging the standard, guard bars pivotally connected to the levers adjacent both sides of the standard, and means for swinging the levers.

[Claims 6 to 10 not printed in the Gazette.]

1,215,570. REINFORCED VENEER. MELVILLE W. MIX, Mishawaka, Ind. Filed Aug. 29, 1916. Serial No. 117,500. (Cl. 20—89.)



1. In laminated veneers, a plurality of plies of material having a longitudinal grain disposed at an angle to each other, separate reinforcements interposed between and embedded in one face of such plies and disposed parallel to the grain of the respective ply in which they are embedded.

2. In laminated veneers, separate layers of wood suitably cemented to each other, and independent reinforcing elements combined with one or more of such layers in parallel relation to the grain of the layer with which it is combined.

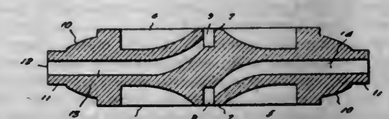
3. In laminated veneers, separate layers of veneer cemented to each other, and independent reinforcing elements combined with certain of such layers by being embedded in one face thereof while disposed parallel to the grain thereof.

4. As a new article of manufacture a composite veneer composed of laminæ of material having a longitudinal grain suitably held together so as to present the grain of adjacent laminæ at an angle to each other, and independent reinforcements combined with individual laminæ in directions parallel to the grain thereof so that the different sets of reinforcements are disposed at an angle to each other in the completed product.

5. The method of reinforcing veneers consisting in superposing separate layers of material having a longitudinal grain with individual reinforcements placed therebetween parallel to the grain of an adjacent layer, cementing the layers, and lastly subjecting the combined layers and reinforcements to pressure so as to embed the reinforcements in their respective layers and complete the adhesion of the elements to each other to form a composite structure.

[Claims 6 and 7 not printed in the Gazette.]

1,215,571. POT FOR WINDOW-GLASS MACHINES. CHARLES W. MODLIN and HARRY J. LUTZ, Monongahela, Pa. Filed Apr. 5, 1916. Serial No. 89,117. (Cl. 49—53.)

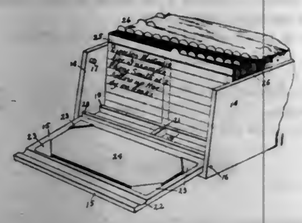


A pot for window glass machines, having two oppositely disposed circular recessed portions, each of which is provided with a concentric port, two oppositely and diametrically disposed ported projections exteriorly of the pot, the body of said pot being provided with two channels, one connecting each of the concentric ports with its respective ported projection.

1,215,572. DAY-BY-DAY BOX. JOHN A. ORRALL, Winthrop, Mass. Filed Apr. 1, 1916. Serial No. 88,260. (Cl. 129—16.5.)

1. A card system of the character described, comprising a series of separate and individually shiftable tab cards equaling the number of days of the year, the tab of each card bearing the designation of a month and the day of a month, and a container constructed to support the

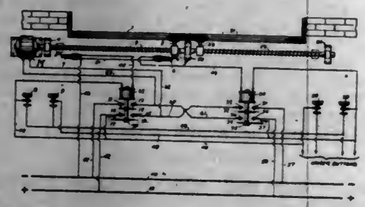
entire series of cards with all of their tabs and the face of the front card in visible position.



2. A card system of the character described, comprising a series of separate and individually shiftable tab cards equaling the number of days of a year, the tab of each card bearing the designation of a month and the day of a month, and a container constructed to support the entire series of cards with all of their tabs and the face of the front card in visible position, said container having an upwardly and rearwardly inclined bottom.

3. A card system of the character described, comprising a series of separate and individually shiftable tab cards equaling the number of days of a year, the tab of each card bearing the designation of a month and the day of a month, and a container having a hinged front, an upwardly and rearwardly inclined bottom, and a movable cover, whereby, when the cover is displaced and the front swung forward, all of the card tabs and the face of the front card may be viewed without displacing the cards from their relative positions.

1,215,573. DOOR-OPERATING DEVICE. ARTHUR H. OTIS, Cleveland, Ohio. Filed Aug. 7, 1915, Serial No. 44,270. Renewed Dec. 19, 1916. Serial No. 137,911. (Cl. 268—8.)



1. The combination with a door, of a collar associated with said door, a threaded shaft engaging said collar, a motor to drive said shaft and move said collar to operate said door, electromagnetic means separate from and for controlling the operation of said motor, means for initially operating said electromagnetic means, means operated by said electromagnetic means for maintaining said electro-magnetic means in operation after being mutually operated, and means controlled by said collar in the operation of said door for disabling said electromagnetic means.

2. The combination with a door, of a collar permanently associated with said door, a threaded shaft engaging said collar, a motor to drive said shaft and move said collar to open or close said door, electromagnetic means separate from and for controlling the operation of said motor in one direction to open said door, electromagnetic means separate from and for controlling the operation of said motor in a reverse direction to close said door, a switch for each of said electromagnetic means for controlling their initial operation, means controlled by each of said electromagnetic means for maintaining said electro-magnetic means in operation after being mutually operated, and means controlled by said collar in the opening and closing of said door for disabling said electromagnetic means.

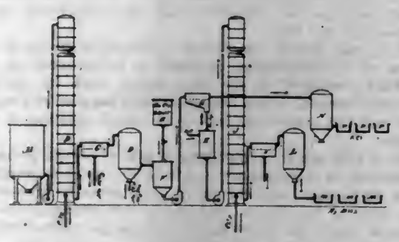
3. The combination with a door, of a collar permanently associated with said door, a threaded shaft engaging said collar, a motor to drive said shaft, electromagnetic means separate from and for controlling the operation of said motor in one direction to open said door, electromagnetic means separated from and for controlling the operation of said motor in a reverse direction to close said door, a switch for each of said electromagnetic means for controlling their initial operation, means associated with each of said electromagnetic means for maintaining said electro-magnetic means in operation after being mutually operated, and means comprising sets of contacts controlled by said collar for disabling said electromagnetic means.

4. The combination with a door, with a collar permanently associated with said door, a threaded shaft engaging said collar, a motor to drive said shaft and move said collar to open and close said door, electromagnetic means separate from and for operating said motor in one direction to open said door, electromagnetic means separate from and for operating said motor in a reverse direction to close said door, a switch individual to each of said electromagnetic means for causing their initial operation, means controlled by each of said electromagnetic means for maintaining itself in operation, a set of contact springs individual to each of said electromagnetic means and engageable by said collar for disabling said electromagnetic means.

5. The combination with a door, of a collar associated with said door, a threaded shaft engaging said collar, a motor to drive said shaft and move said collar to open and close said door, electromagnetic means separate from and for controlling the operation of said motor in one direction to open said door, a second electromagnetic means separate from and for controlling the operation of said motor in a reverse direction to close said door, a controlling switch for each of said electromagnetic means, the operation of said switches serving to cause an initial operation of its respective magnetic means, means controlled by said collar for preventing the operation of the first mentioned electromagnetic means when the door is open, and means controlled by said collar for preventing the operation of the second mentioned electromagnetic means when the door is closed.

[Claim 6 not printed in the Gazette.]

1,215,574. PROCESS OF RECOVERING CONSTITUENTS OF VALUE FROM NATURAL ALKALINE DEPOSITS. JOHN D. PENNOCK, LOUIS C. JONES, and FRED LESLIE GROVER, Syracuse, N. Y., assignors to The Solvay Process Company, Solvay, N. Y., a Corporation of New York. Filed Dec. 16, 1915. Serial No. 67,141. (Cl. 23—22.)



1. The process of separating and recovering components of value from natural alkaline deposits which consists in treating a solution thereof to convert the contained sodium carbonate into sodium bicarbonate and removing the bicarbonate; concentrating the solution by evaporation to throw down sodium chlorid and sodium sulfate with retention of the potassium salts; treating the resulting solution with calcium chlorid and milk of lime to convert the sulfate, borate and carbonate radicals into insoluble calcium salts; filtering the product and subjecting the cleared solution to alternate hot and cold crystallization to separately recover the contained sodium chlorid and potassium chlorid.

2. The process of separating and recovering components of value from natural alkaline deposits which consists in treating a solution thereof to convert the contained sodium carbonate into sodium bicarbonate and removing the bicarbonate; concentrating the solution by evaporation to throw down sodium chlorid and sodium sulfate with retention of the potassium salts; treating the resulting solution to convert the contained sulfate, borate and carbonate radicals into insoluble salts leaving in solution sodium chlorid and potassium chlorid; filtering the product and subjecting the cleared solution to alternate hot and cold crystallization to separately recover the contained sodium chlorid and potassium chlorid.

3. The process of separating and recovering components of value from natural alkaline deposits which consists in first freeing a solution thereof of the contained sodium carbonate; concentrating the freed solution by evaporation to throw down sodium chlorid and sodium sulfate with retention of the potassium salts; treating the resulting solution to convert the contained sulfate, borate and carbonate radicals into insoluble salts leaving in solution sodium chlorid and potassium chlorid; filtering the product and subjecting the cleared solution to alternate hot and cold crystallization to separately recover the contained sodium chlorid and potassium chlorid.

4. In the process of recovering refined potassium chlorid from natural alkaline deposits the method of separating the potassium salts from sulfate, borate and carbonate radicals contained in solution therewith which consists in treating the solution with a solution of calcium chlorid and milk of lime whereby said radicals are converted into insoluble calcium salts leaving the potassium salts in solution and filtering out the precipitate from the solution.

1,215,575. PROCESS OF RECOVERING CONSTITUENTS OF VALUE FROM NATURAL ALKALINE DEPOSITS. JOHN D. PENNOCK, LOUIS C. JONES, and FRED LESLIE GROVER, Syracuse, N. Y., assignors to The Solvay Process Company, Solvay, N. Y., a Corporation of New York. Filed Jan. 14, 1916. Serial No. 72,032. (Cl. 23—22.)

1. The process of recovering components of value from alkaline lake water which consists in removing the sodium carbonate by carbonation and precipitation, then evaporating and concentrating the solution at a high temperature to precipitate, first, sulfate and chlorid of sodium and removing the precipitate as formed, and then potassium sulfate and sodium chlorid, leaving potassium chlorid in solution and finally cooling the solution to effect precipitation of potassium chlorid and borax.

2. The process of recovering components of value from alkaline lake waters which consists in forming a solution, including the batch of lake water to be treated freed from sodium carbonate, of such composition that upon concentration by evaporation at high temperature with removal of the precipitated salts all the sulfate radical will be precipitated so as to leave in solution approximately double the equivalent of the potassium content of the lake water in the batch, concentrating such solution by evaporation so as to precipitate first sodium sulfate and chlorid and removing these, and then precipitating and removing potassium sulfate and sodium chlorid, leaving in solution potassium chlorid.

3. The process of recovering components of value from alkaline lake waters which consists in forming a solution, including the batch of lake water to be treated freed from sodium carbonate, of such composition that upon concentration by evaporation at a high temperature all the sulfate radical will be precipitated so as to leave in solution approximately double the equivalent of the potassium content of the lake water in the batch, then concentrating such solution by evaporation at a high temperature with removal of the precipitated salts and finally cooling to precipitate potassium chlorid.

4. The process of recovering constituents of value from alkaline lake waters which consists in forming a solution containing potassium sulfate, potassium chlorid and sodium chlorid and adding thereto such quantity of carbonated lake water that upon concentration by evaporation at a high temperature all the sulfate radical will be precipitated so as to leave in solution approximately double the equivalent of the potassium content of the introduced lake water, concentrating the solution by evaporation at a high temperature to precipitate, first, sodium sulfate and chlorid and removing these and then precipitating and removing potassium sulfate and sodium chlorid, leaving potassium chlorid in solution and finally cooling the solution to precipitate the salts whose solubilities are exceeded by cooling.

5. The process of recovering constituents of value from alkaline waters which consists in carbonating the water to remove sodium carbonate and then treating it so as to effect the precipitation of potassium sulfate and sodium chlorid and removing these leaving potassium chlorid in solution, cooling the solution to precipitate, in the form of potassium chlorid, the equivalent of the potassium content of the alkaline water treated and adding to the mother liquor the precipitated mixture of potassium sulfate and sodium chlorid and a fresh batch of carbonated alkaline water to form a solution for repeating the process.

1,215,576. PROCESS OF SEPARATING MIXED POTASSIUM CHLORID AND BORAX. JOHN D. PENNOCK, LOUIS C. JONES, and FRED L. GROVER, Syracuse, N. Y., assignors to The Solvay Process Company, Solvay, N. Y., a Corporation of New York. Original application filed Jan. 14, 1916, Serial No. 72,032. Divided and this application filed Sept. 12, 1916. Serial No. 119,629. (Cl. 23—13.)

1. The process of separately recovering potassium chlorid and borax from a mixture thereof which consists in adding the mixed salts to a highly heated solution of the same which at high temperature is fully saturated with potassium chlorid and less than saturated with sodium tetraborate, filtering out the undissolved potassium chlorid and adding water in sufficient quantity to prevent the precipitation of potassium chlorid when the solution is cooled and finally cooling the solution to crystallize out borax and filtering off the borax.

2. The process of separately recovering potassium chlorid and borax from a mixture thereof which consists in adding the mixed salts to a highly heated solution thereof which at a high temperature is saturated with potassium chlorid but less than saturated with sodium tetraborate until the solution is just saturated with sodium tetraborate, removing the undissolved potassium chlorid from the hot solution and adding water in sufficient quantity to prevent the precipitation of potassium chlorid when the solution is cooled and finally cooling the solution to crystallize out borax and filtering off the borax.

3. The process of separately recovering potassium chlorid and borax from a mixture thereof which consists in adding the mixed salts to a highly heated solution thereof which at a high temperature is saturated with potassium chlorid but less than saturated with sodium tetraborate, removing the undissolved potassium chlorid from the solution and adding water in sufficient quantity to prevent the precipitation of potassium chlorid when the solution is cooled, cooling the solution to crystallize out borax and filtering off the borax and finally heating to evaporate the added water and reconstitute the solution as at the outset to receive a fresh batch of the mixed salts.

4. The process of separately recovering potassium chlorid and borax from a mixture thereof which consists in adding the mixed salts to a highly heated solution thereof which at a high temperature is saturated with potassium chlorid but less than saturated with sodium tetraborate until the solution is just saturated with sodium tetraborate, removing the undissolved potassium chlorid from the hot solution and adding water in sufficient quantity to prevent the precipitation of potassium chlorid when

the solution is cooled, cooling the solution to crystallize out borax and filtering off the borax and finally heating to evaporate the added water and reconstitute the solution as at the outset to receive a fresh batch of the mixed salts.

5. The process of separately recovering potassium chlorid and borax from a mixture thereof which consists in forming a solution having approximately the composition 23.6 parts potassium chlorid and 8.6 parts sodium tetraborate in 67.8 parts water, highly heating and concentrating the solution until at a high temperature it is fully saturated with potassium chlorid, adding the mixed salts to the solution until it is, at the high temperature, saturated with sodium tetraborate without precipitation of borax, removing from the solution the undissolved potassium chlorid while the solution is hot, adding to the solution the amount of water before removed by evaporation and finally cooling the solution to crystallize out borax and removing the borax.

1,215,577. ELASTIC VEHICLE-TIRE. LESTER R. REEDER, Akron, Ohio, assignor of one-half to Wilbert J. Quillen, Akron, Ohio. Filed Sept. 21, 1916. Serial No. 121,486. (Cl. 152—5.)



An elastic vehicle tire comprising an annular carcass the lateral edges of which are provided with hook shaped beads for coöperation with the clencher flanges of a rim, said carcass provided on the inner face of the tread portion thereof with a circumferentially-extending inwardly-projecting rib, said rib formed of an elastic and resilient material, and a reinforcing element positioned within said carcass between said rib and said rim, said reinforcing element provided on its outer face with a groove approximating the formation of the inner face of said rib and constituting a seat therefor, said reinforcing element provided with a longitudinally-extending opening centrally disposed thereof to thereby provide a pair of arcuate side walls the inner faces of which are seated upon the inner faces of the side walls of said carcass, the inner face of said reinforcement along said rim being provided with a circumferentially-extending groove to provide two spaced ribs adapted to seat on said rim.

1,215,578. LOOM-SHUTTLE. ALONZO E. RHOADES, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Nov. 9, 1916. Serial No. 130,453. (Cl. 139—27.)



1. A loom shuttle for filling carriers having butts provided with rings and with parallel positioning faces comprising a pair of grooved spring jaws adapted to engage said bobbin rings, a pair of guiding and positioning members to engage the said positioning faces of the filling carrier butt and guide the filling carrier in proper axial position into engagement with said jaws, and means acting to engage the filling carrier tip if and when the filling carrier butt engages said jaws without being guided and positioned by said guiding and positioning members and thus to pinch the filling against the bobbin as it is drawn off the tip and thereby cause the filling to break.

2. A loom shuttle for filling carriers having butts provided with rings and with parallel positioning faces comprising a pair of grooved spring jaws adapted to engage said bobbin rings, a pair of guiding and positioning members to engage the said positioning faces of the filling carrier butt and guide the filling carrier in proper axial position into engagement with said jaws, a resilient finger mounted on the shuttle and acting to engage the filling carrier tip if and when the filling carrier butt engages said jaws without being guided and positioned by said guiding and positioning members and thus to pinch the filling against the bobbin as it is drawn off the tip and thereby cause the filling to break.

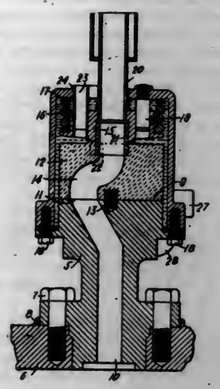
3. A loom shuttle for filling carriers having butts provided with rings and with parallel positioning faces comprising a pair of grooved spring jaws adapted to engage said bobbin rings, a pair of guiding and positioning members to engage the said positioning faces of the filling carrier butt and guide the filling carrier in proper axial position into engagement with said jaws, and a pair of oppositely disposed resilient fingers mounted on the shuttle and acting to engage the tip of the filling carrier if and when the filling carrier butt engages said jaws without being guided and positioned by said guiding and positioning members and to pinch the filling when drawn off the tip and thereby cause the filling to break.

4. A loom shuttle comprising filling carrier butt gripping means and means acting if and when the filling carrier butt is insecurely caught by the gripping means to engage and pinch the filling when drawn off the tip and thereby cause the filling to break.

5. A loom shuttle comprising filling carrier butt gripping means, guiding and positioning means to guide the filling carrier butt into the said gripping means and to position the bobbin axially, and means acting upon the failure of the guiding and positioning means to function to engage and pinch the filling when drawn off the tip and thereby cause the filling to break.

[Claims 6 and 7 not printed in the Gazette.]

1,215,579. LIQUID-SEALED VALVE. EDWARD E. ROSE, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 9, 1914. Serial No. 844,105. (Cl. 137—7.)



1. A valve comprising a body member, a rotatable plug member bearing thereupon in a flat surface, and means for introducing a sealing fluid into the fluid passage and for withdrawing it therefrom without opening said passage to the atmosphere.

2. A valve comprising a body member provided with a flat seat having a port therein, a plug member bearing on said flat seat, adapted to be rotated thereon and having a suitable port so located as to aline with the port in the body member in one position of the plug member, and a body of sealing fluid overlying the plug member.

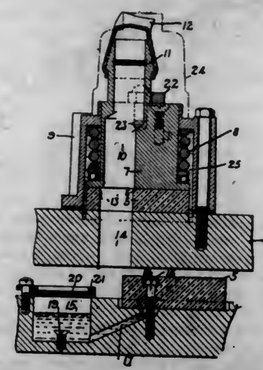
3. A valve comprising a body member provided with a flat seat having a port therein, a plug member bearing on said flat seat, and adapted to be rotated thereon, and having a suitable port so located as to aline with the port in the body member in one position of the plug member, and a body of sealing fluid overlying the plug member, said members being constructed of dissimilar materials.

4. A valve comprising a body member provided with a flat seat having a port therein, a plug member bearing on said plane seat, adapted to be rotated thereon, and having a suitable port so located as to aline with the port in the body member in one position of the plug member, and a body of sealing fluid overlying the plug member, one of said members being formed from metal and the other of said members being formed from porcelain.

5. A valve comprising a metallic body member provided with a flat seat having a port therein, a plug member of vitreous material bearing on said plane seat, adapted to be rotated thereon and having a suitable port so located as to aline with the port in the body member in one position of the plug member and a body of sealing fluid overlying the plug member.

[Claims 6 to 19 not printed in the Gazette.]

1,215,580. VALVE. EDWARD E. ROSE, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 12, 1915, Serial No. 39,363. Renewed Dec. 27, 1916. Serial No. 139,196. (Cl. 137—7.)



1. The combination with a valve including fixed and movable members, each of which is provided with a port therethrough, of a reservoir containing sealing fluid and communicating with an auxiliary port in one of said members, and means whereby said movable member may be so turned that said auxiliary port will be brought into alinement with one of said main ports and said sealing fluid caused to flow into and seal said main port under the influence of the pressure of the medium within said main port.

2. The combination with a valve including fixed and movable members, each of which is provided with a port therethrough, of a reservoir containing sealing fluid and communicating with an auxiliary port in said fixed member, and means whereby said movable member may be so turned that said auxiliary port will be brought into alinement with the main port therein and said main port will be sealed by fluid from said reservoir under the influence of the pressure of the medium within said port.

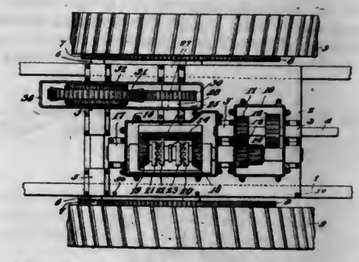
3. The combination with a valve including fixed and movable members, each of which is provided with a port therethrough, of a reservoir containing a sealing fluid subject to substantially constant pressure on the surface thereof, an auxiliary port in said fixed member, and means whereby said movable member may be so turned that the main port therein will aline with said auxiliary port and said fluid be drawn up to seal said main port when the pressure therein is less than that on the surface of the fluid in said reservoir.

4. A combined closing and sealing valve for a vacuum line comprising fixed and movable members, each of which is provided with a main port therethrough, said main ports being in alinement in the open position of the valve, a reservoir containing a sealing fluid and subject to atmospheric pressure, an auxiliary port in said fixed member in connection with said fluid, and means whereby said movable member may be turned to bring the port therein into alinement with said auxiliary port in order to draw sealing fluid up thereinto and whereby said movable member may be further turned so that the port therein is closed and sealed.

5. The combination with a vacuum line, of means for mechanically closing said line and for sucking sealing fluid over said mechanical closure.

[Claims 6 to 11 not printed in the Gazette.]

1,215,581. EXPLOSION-ENGINE TRACTOR. JOHN A. RUTHERFORD, Great Falls, Mont. Filed July 3, 1914. Serial No. 848,837. (Cl. 74—34.)



A transmission unit for tractors, including a flat base plat, separate end and intermediate housings detachably secured upon the base plate, parallel longitudinal shafts journaled within the intermediate housing and one of the end housings, parallel transverse shafts the first one of which is journaled in the intermediate housing and the other end housing and the other being in alinement and journaled within said last named end housing, a differential connected to the alining shafts, means for transmitting motion from the differential to the first transverse shaft, a gear carried by said first transverse shaft and within the intermediate housing, opposed gears within said intermediate housing and upon one of the shafts, said gears being loosely mounted, and meshing with the gear on the transverse shaft, means for coupling either of said opposed gears to its longitudinal shaft, gears shiftable along said longitudinal shaft and within the other end housing, spaced gears upon the other longitudinal shaft and within said end housing, said gears and the shiftable gears constituting change speed gearing.

1,215,582. TIRE-PLUG. ROBERT W. SAMPSON, Melba, Whitestone, N. Y., assignor of one-half to Louis Schwab, East Orange, N. J. Filed Feb. 5, 1916. Serial No. 76,272. (Cl. 152—28.)



1. A tire plug embodying an interior head, an exterior cap having a central portion of uniform thickness, a

threaded hole therethrough, and a circumferential bevel on its lower side, and a coöperating shank threaded to engage the thread of the cap.

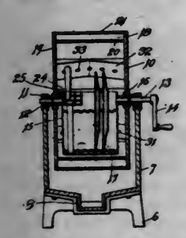
2. A tire plug embodying a head having a stiffened central portion and an elastic circumferential portion, a cap of a greater diameter than the stiffened central portion of the head and having a substantially uniform under surface opposed to the centrally stiffened portion of the head and a bevel extending therefrom to the circumference of the cap and opposed to the elastic circumferential portion of the head, and a coöperating clamping shank.

3. A tire plug embodying interior closing means, clamping means, and rigid, exterior, closing means adapted to exert a substantially uniform central pressure, and a gradually diminishing marginal pressure in opposition to the head when the closing means are clamped toward each other.

4. A tire plug embodying interior closing means having an extended, elastic, circumferential portion, clamping means, and rigid exterior closing means adapted to exert a pressure, in opposition to the elastic, circumferential portion of the head, gradually diminishing toward the periphery of the exterior closing means when the plug is clamped into a puncture.

5. A tire plug embodying an interior closing member provided with a rigid central element embedded in an elastic cushion, clamping means, and an exterior closing member adapted to exert a substantially uniform pressure in opposition to the rigid central element of the interior closing means, and to exert a gradually diminishing pressure beyond the periphery of said rigid element and in opposition to the surrounding portion of the elastic cushion.

1,215,583. DISH-WASHING MACHINE. ALBERT L. SESSIONS, Bristol, Conn. Filed May 3, 1912. Serial No. 694,899. (Cl. 141—9.)



1. A dish washing machine including a tub, a barrel rotatably mounted in the tub, a basket suspended within the barrel, means upon the bottom of the basket and on opposite sides thereof to engage the edges of dishes and hold them spaced apart in an upright position, and means for gathering water from within the tub and dashing it in different direction against the front and back faces of the dishes within the basket.

2. A dish washing machine including a tub, a basket for dishes or like articles suspended within the tub, means for supporting dishes faced in a predetermined direction within the basket, and means for gathering water from within the tub and for projecting it in different directions transverse to that in which the dishes are faced and against the front and back faces of said dishes.

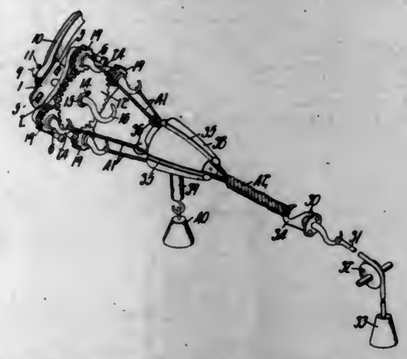
3. A dish washing machine including a tub, a barrel rotatably mounted within the tub, a basket suspended within the barrel, buckets having troughs extending lengthwise of the barrel on the inner surface thereof, the bottoms of some of the troughs being each inclined in a different direction lengthwise of the barrel from that of other troughs and with holes through said inclined bottoms arranged to project the water in different directions against the faces of the dishes, and means for rotating the barrel.

4. A dish washing machine including a tub, a barrel rotatably mounted within the tub, a basket suspended within the barrel, means for supporting the dishes on edge with their faces toward the ends of the barrel, buckets extending along the inner face of the barrel lengthwise thereof, a part of the bottoms of some of the buckets being inclined each in a different direction lengthwise of the barrel from that of another part thereof and the bottoms in some of the buckets being inclined in different directions from those in some of the other buckets, said buckets having openings through their bottom walls to project the water against the dishes.

5. A dish washing machine including a tub, a barrel rotatably mounted within the tub, a basket suspended within the barrel, buckets extending along the inner face of the barrel lengthwise thereof, the bottoms of some of the buckets being each inclined in a different direction obliquely to the axis of the barrel from that of other bottoms, said bottoms having openings therethrough extending at right angles to the plane thereof, and means for rotating the barrel.

[Claims 6 and 7 not printed in the Gazette.]

1,215,584. ROPE-MAKING MACHINE. NATHAN E. SHERWOOD, Highland Park, Mich., assignor to Plymouth Motor Castings Company, Plymouth, Mich., a Corporation of Michigan. Filed Apr. 19, 1916. Serial No. 92,075. (Cl. 28—2.)



1. Means for twisting flexible strands into cords and the latter into a cable comprising a supporting frame including a rear pressure plate and a front pinion supporting plate between which a support is adapted to be received, bearing means rigid with and supported by the pinion supporting plate on the front side thereof, combined pinions and twisting hooks rotatably supported on the front side of said pinion supporting plate solely by said bearing means, and adjustable means carried by the pinion supporting plate for taking up slack between said plates and the support.

2. Means for twisting flexible strands into cords and the latter into a cable comprising a supporting frame including a rear pressure plate and a front pinion supporting plate between which a support is adapted to be received, bearing means rigid with and supported by the pinion supporting plate on the front side thereof, combined pinions and twisting hooks rotatably supported on the front side of said pinion supporting plate solely by said bearing means, and a pair of adjusting screws carried by the pinion supporting plate for taking up slack between said plate and support.

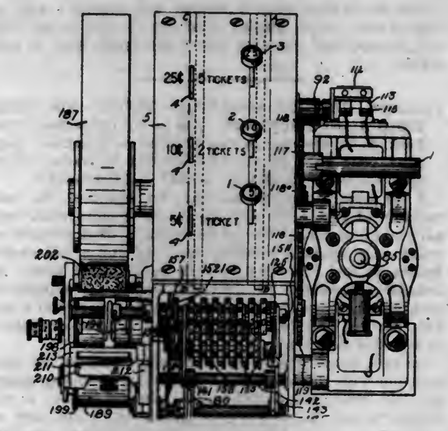
3. Means for twisting flexible strands into cords and the latter into a cable comprising a supporting frame including a rear pressure plate and a front pinion supporting plate between which a support is adapted to be received, said pressure plate having lugs thereon on the side nearest the pinion supporting plate, bearing means rigid with and supported by the pinion supporting plate on the front side thereof, combined pinions and twisting hooks rotatably supported on the front side of said pinion supporting plate solely by said bearing means, and adjustable means carried by the pinion supporting plate for taking up slack between said plates and the support.

4. Means for twisting flexible strands into cords and the latter into a cable comprising a supporting frame including a rear pressure plate and a front pinion supporting plate between which a support is adapted to be received, bearing means non-rotatable in respect to and supported by said pinion supporting plate and projecting from the latter on the front side thereof, said pressure plate and pinion supporting plate having alined perforated bosses thereon, a main driving shaft passing through the plates and bearing in the bosses, said frame also including a connecting plate for joining the pressure plate and the pinion supporting plate, said connecting plate being spaced from the shaft and inclosing the latter on one side, a driving gear secured to the shaft, and combined pinions and twisting hooks in mesh with the gear, said combined pinions and twisting hooks being supported solely by said bearing means on the front side of the pinion supporting plate.

5. Means for twisting flexible strands into cords and the latter into a cable comprising a supporting frame which includes a rear pressure plate and a front pinion supporting plate between which a support is adapted to be received, combined pinions and twisting hooks on the front side of the pinion supporting plate, a driving shaft passing through the frame, a driving gear on the shaft, said gear and said combined pinions and twisting hooks being in mesh, said combined pinions and twisting hooks each including two parts, one a hook and the other a pinion, said pinions including slotted tubular flanges on the front side thereof, and said hooks having lugs received in said slots, the metal of the flanges being bent about the hooks to retain the latter in position on the pinions, and studs, on which the pinions are revoluble, projecting from the pinion supporting plate, said studs having heads received within the tubular flanges of the pinions.

[Claims 6 to 12 not printed in the Gazette.]

1,215,585. TICKET-PRINTING MACHINE. FRANCESCO SKERL, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio. Original application filed May 7, 1913, Serial No. 766,054. Divided and application filed July 18, 1914, Serial No. 851,758. Divided and this application filed May 17, 1916. Serial No. 98,147. (Cl. 235—3.)



1. In a machine of the class described, the combination with a locking member to be differentially positioned, of a determining member therefor, an accounting device, an actuating rack therefor, manipulative means for differentially positioning said rack, connections intermediate said rack and said determining member, whereby said determining member is differentially positioned, and operating means whereby said connections are rendered inoperative after said determining member is positioned differentially thereby.

2. In a machine of the class described, the combination with an accounting device, of an actuating member therefor, a series of manipulative devices, a plate adjacent each manipulative device and adapted to be moved thereby, and links connecting said plates and said actuating member whereby movement of one of said plates by its adjacent manipulative device differentially positions said actuating member.

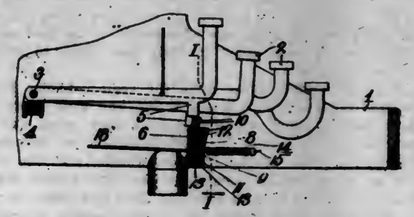
3. In a machine of the class described, the combination with an accounting device, of an actuator therefor, manipulative means for controlling said actuator, and operating means having a variable number of cycles of operation during different operations of the machine and constructed to operate the actuator only during the first cycle of operation.

4. In a machine of the class described, the combination with an accounting device, of an actuator therefor, manipulative means for controlling said actuator, operating means having a variable number of cycles of operation and constructed to operate the actuator only during the first cycle of operation, and means controlled by said manipulative means for controlling the number of cycles of the operating mechanism.

5. In a machine of the class described, the combination with an accounting device, of actuating means therefor normally out of engagement therewith, operating means having a variable number of operations, means operated by the operating mechanism for engaging said actuating means and said accounting device, and means for operating the actuating means only during the first cycle of operation of the operating mechanism.

[Claims 6 to 8 not printed in the Gazette.]

1,215,586. LINE-LOCK FOR TYPE-WRITING MACHINES. JAMES F. SMATHERS, Kansas City, Mo. Filed June 28, 1915. Serial No. 36,877. (Cl. 197—110.)



1. The combination in a typewriting machine, of the key levers, a movable bar below the said levers, and fingers carried by said bar in the planes of movement of the respective levers, each finger being yieldingly controlled and when the bar is moved to operative position, caused to take a position below its respective lever or to engage and yield to the resistance offered by its respective lever if the latter is in its depressed position.

2. The combination in a typewriting machine, of the key levers, a movable bar below the said levers, fingers carried by said bar in the planes of movement of the respective levers, each finger being yieldingly controlled and when the bar is moved to operative position, caused to take a position below its respective lever or to engage and yield to the resistance offered by its respective lever if the latter is in its depressed position, and means for returning the movable bar to its initial or inoperative position.

3. The combination in a typewriting machine, of the key levers, a movable bar below the said levers, fingers carried by said bar in the planes of movement of the respective levers, each finger being yieldingly controlled and when the bar is moved to operative position, caused to take a position below its respective lever or to engage and yield to the resistance offered by its respective lever if the latter is in its depressed position, and a spring for re-

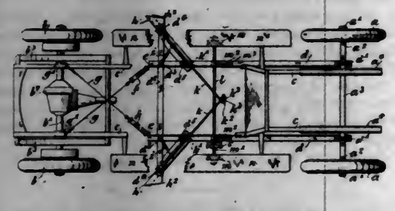
turning the movable bar to its initial or inoperative position.

4. The combination in a typewriting machine, of the key levers provided with depending heels, a suitably-journaled rock bar extending transversely of the machine, and provided with upwardly projecting fingers, a spring normally holding said rock bar with its fingers forward of the heels of the key levers, and means for applying yielding pressure on said fingers individually whereby any one of the fingers may yield upon encountering the heel of a depressed key lever, and resume its position in line with the other fingers when its respective key lever is re-elevated.

5. In a typewriting machine, a line lock bar pivoted to rock about its longitudinal axis and provided along its length with upwardly projecting yieldingly controlled fingers, all of which stand in the same radial plane with relation to the axis of said bar and are capable of being individually sprung back out of the plane of the remaining fingers and of spring forwardly into said plane.

[Claims 6 to 8 not printed in the Gazette.]

1,215,587. SNOW-PLOW FOR ROAD-VEHICLES. RICHARD F. STEWART, Briarcliff, N. Y. Filed Mar. 1, 1916. Serial No. 81,304. (Cl. 37—7.)



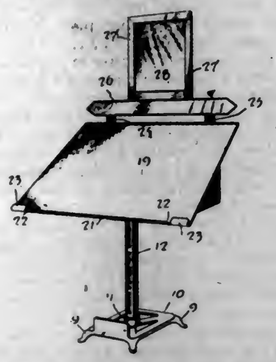
1. A convertible snow plow for road vehicles having traction wheels comprising a frame and four blade sections, two of which are spaced from each other and are mounted on the frame directly in front of the traction wheels, and the other two of which are attachable to the first named blades and to each other at their free edges to form a continuous plow.

2. A convertible snow plow for road vehicles having traction wheels comprising a frame and four blade sections, two of which are spaced from each other and are mounted in oppositely inclined positions on the frame directly in front of the traction wheels, and the other two of which are attachable to the first named blades, respectively, and to each other, at their free edges to form a continuous plow under the vehicle having oppositely inclined symmetrical faces.

3. A convertible snow plow for road vehicles having traction wheels comprising a frame and four blade sections, two of which are spaced from each other and are mounted in oppositely inclined positions on the frame directly in front of the traction wheels, and the other two of which are attachable to the first named blades, respectively, and to each other, at their free edges to form a continuous plow under the vehicle having oppositely inclined symmetrical faces, and either of the last named sections being also attachable at its free edge to the opposite side of the frame to present a continuous inclined face extending from one side of the chassis to the other.

4. A convertible snow plow for road vehicles having traction wheels comprising a frame and four blade sections, two of which are spaced from each other and are mounted in oppositely inclined positions on the frame directly in front of the traction wheels, and the other two of which are attachable to the first named blades, respectively, and to each other, at their free edges to form a continuous plow under the vehicle having oppositely inclined symmetrical faces, and either of the last named sections being also attachable at its free edge to the opposite side of the frame to present a continuous inclined face extending from one side of the chassis to the other and the remaining section being attached to the rear face of such other section to reinforce the same.

1,215,588. DISPLAY-STAND FOR SWATCH-BOOKS. EDWARD E. STRAUSS, Chicago, Ill. Filed Apr. 29, 1916. Serial No. 94,338. (Cl. 45—60.)



1. A stand comprising a base, a post arising therefrom, a substantially rectangular-shaped cabinet supported upon the upper end of said post and provided with an open upper portion, a hinged closure for said cabinet consisting of a rectangular metal plate provided at its lower edge with an upturned flange intermediate its ends, a lateral member depending from the upper edge of said plate, whereby when said closure is raised the lateral member thereof will engage a wall of said cabinet, and a display structure secured to said lateral member and extended above the upper edge of said plate.

2. A stand comprising a base, a post arising therefrom, a substantially rectangular-shaped cabinet supported upon the upper end of said post and provided with an open upper portion, the side walls of said cabinet increasing in height toward the rear wall thereof, a hinged closure for said cabinet consisting of a rectangular metal plate provided at its lower edge with an upturned flange intermediate its ends, a lateral member depending from the upper edge of said plate, whereby when said closure is raised the lateral member thereof will engage a wall of said cabinet, and a display structure secured to said lateral member and extended above the upper edge of said plate.

1,215,589. TENSION-ADJUSTING DEVICE FOR COUNTERBALANCE-SPRINGS. ALVAR K. TERNSTEDT, New York, N. Y., assignor to Perfect Window Regulator Company, New York, N. Y., a Corporation of Maine. Filed July 17, 1915. Serial No. 40,387. (Cl. 16—53.)

1. In a mechanism of the character described, the combination of a movable part, means for reciprocating said part and comprising a two-part wheel, a fixed support on which said wheel is rotatably mounted and a coil spring having an end connected to each part of said wheel, an annularly arranged pin and slot device for adjustably securing one part of said wheel to said support and a key for rotating said part and clamping it to said support in adjusted position.

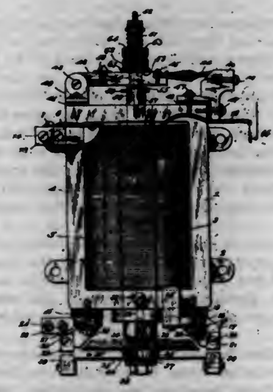
2. In a mechanism of the character described, the combination with the window, of raising and lowering means for the same and embodying a two-part wheel, a coil spring having one of its ends connected to one part of said wheel and its other end to the other part, one part of said wheel being operated by said means and the other being secured to a fixed support by a pin and slot connection and a key by which said part may be rotated and clamped to its support.

3. In a mechanism of the character described, the combination with the window, of a chain drive for operating the same and embodying a two-part sprocket wheel one part of which is operated by the chain and the other part being provided with a plate and a hub on which said chain part rotates, a fixed support for said wheel, an annularly arranged pin and slot device whereby said plate may be held to said support at a number of adjusted positions, a coil spring having one of its ends connected to one part and its other end to the other part of said wheel and means for rotating said plate and hub independent of the other part of the wheel to adjust the tension of said spring.



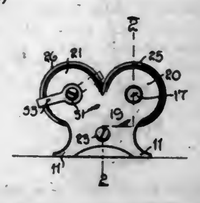
4. In a mechanism of the character described, the combination with the window, of a chain drive for operating the same and embodying a two-part sprocket wheel one part of which is operated by the chain and the other part being provided with a plate and a hub on which said chain part rotates, a fixed support for said wheel, an annularly arranged pin and slot device whereby said plate may be held to said support at a number of adjusted positions, a coil spring having one of its ends connected to one part and its other end to the other part of said wheel and a key adapted to rotate said plate independent of the sprocket part of said wheel to adjust the tension of said spring and to also clamp said plate in adjusted position to its support.

1,215,590. ELECTRIC SWITCH. HARRISON G. THOMPSON, Glen Ridge, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Nov. 12, 1909. Serial No. 527,589. (Cl. 175—281.)



In an electromagnetic switch, a high resistance coil and a low resistance coil, a magnetic core subject to the combined flux of both coils and carrying main and shunt contacts so related to the device that the shunt and main contacts are engaged successively, one end of the low resistance coil being connected to one of the main contacts, a pivoted switch arm and a stationary switch contact at the other end of the device, a lost motion connection between the similar end of the core and the switch arm, and adjustable resilient means acting on said switch arm in opposition to the movement of the core due to the flux.

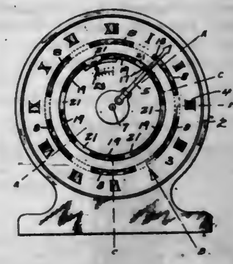
1,215,591. KNIFE-SHARPENER. EDWARD C. TOBIN, Stockton, Cal. Filed Mar. 8, 1916. Serial No. 82,988. (Cl. 76—87.)



1. A sharpening device including supporting members oppositely disposed sharpening disks rotatably mounted upon said supporting members and having slightly overlapping margins, means for holding said sharpening disks from rotation, and a guard shiftable into a position over one of said sharpening disks and in proximity to the intersection of the disks.

2. A sharpening device including supporting members oppositely disposed sharpening disks rotatably mounted upon said supporting members and having slightly overlapping margins, means for holding said sharpening disks from rotation, and a guard shiftable into positions over one of said sharpening disks and in proximity to the intersection of the disks, said guard being pivotally mounted upon one of said supporting members, extending radially outward and transversely across the sharpening disks.

1,215,592. ELECTRIC CONTROLLER. CLARENCE DALE VEST, Martinez, Cal., assignor of one-half to Frederick A. Young, Martinez, Cal. Filed July 17, 1915. Serial No. 40,492. (Cl. 161—27.)



1. An electric controller comprising a dial of insulating material, a hand overlying said dial, clock mechanism for rotating said hand, a series of contacts on said dial arranged concentrically with respect to the center of rotation of said hand, a second series of contacts arranged concentrically with respect to said first named series and movable circularly with relation thereto, an open electric circuit connected to said two series of contacts and means on the hand adapted to close said circuit.

2. An electric controller comprising a circularly arranged series of segmental contacts, a second series of segmental contacts arranged concentrically with and movable circularly with respect to said first series, an open electric circuit connected to said two series and a concentrically movable conductor adapted to open and close the circuit between said two series of contacts.

1,215,593. SILO-DOOR HINGE. CARL W. VOSS, Minneapolis, Minn. Filed Mar. 10, 1915. Serial No. 13,352. (Cl. 16—106.)



In a hinge adapted to be used on a door the combination of a circular bearing plate with a sleeve attached secured to the exterior of the silo at the top of the opening, and an arm with a circular bearing attached pivotally connected to the plate, permitting the other end of the arm to swing the door from the center of the opening at the top end inwardly and around to side wall of the silo at the upper corner of the opening, when opening the door, and back to center of the opening when closing the door, and this end of the arm pivotally connected to the bracket C, with two lugs and slide rod, permitting the inside of the door to be kept to the inside of the silo when opening and closing the door, and adjusting the door when closing, and the bearing side of bracket C, with lug *c*, attached to one edge pivotally connected to the door plate *D* with lug *d*, and sleeve attached and the other side of door plate secured to the door in the center at top end, permitting the door to be turned up over the opening and carried in an upright position by the lugs when open, and will turn down and hang squarely in front of the opening when closing.

1,215,594. SCALE. GEORGE WALKER, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 14, 1916. Serial No. 84,064. (Cl. 73—46.)



1. In a device of the character described, a scale head axially apertured, a tubular member adjustably mounted in the aperture in said head and projecting to the exterior thereof, a headed spring support carried by said member and with its stem extending therethrough, and a spring carried by said support.

2. In a device of the character described, a scale head provided on its upper side with a loop and axially apertured between the branches of said loop, a tubular member adjustably mounted in the aperture with its end projecting into said loop, a headed spring support carried by said member and with its stem projecting therethrough to a point below said head, and a spring carried by said support.

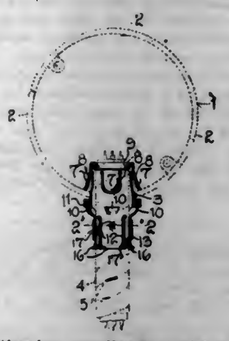
3. In a device of the character described, a head provided at its upper end with a loop and having a threaded axial aperture, an adjusting member threaded into said aperture from the underside of the head to present an operative part between the branches of the loop, and a spring supporting member carried by said adjusting member.

4. In a device of the character described, a head, a barrel formed of two semi-cylindrical sheet metal shells secured at their upper ends to said head, and with their abutting edges slightly spaced apart, a base ring to which the lower ends of said shells are secured, a spring located within said barrel and supported by said head, and cooperative indicating devices on said barrel and spring.

5. In a device of the character described, a head, a barrel formed of two semi-cylindrical sheet metal shells secured at their upper ends to said head, a base ring to which the lower ends of said shells are secured, a spring located within said barrel and supported by said head, a sheet metal tail piece secured to the lower end of said spring, pointer bars secured to and upstanding from said tail piece, and pointers at the ends of said bars cooperating with the scale on said barrel.

[Claim 6 not printed in the Gazette.]

1,215,595. SELF-LOCKING JUNCTION-BOX COUPLING. ALVIN W. WEIKERT and JAMES PETTIBONE, Washington, D. C. Filed Aug. 18, 1915. Serial No. 45,341. (Cl. 247—1.)



1. A junction box coupling comprising a metallic sleeve provided near its forward end with integral outwardly extending yieldable spring arms adapted to be pressed inwardly by the wall of the opening in a junction box when the forward end of the sleeve is inserted in the box and automatically move outwardly after the arms are entirely within the box for locking the sleeve to said box, automatically operating means provided near the rear end of said sleeve for engaging the outer surface of the box and drawing the ends of the arms into contact with the inner surface of the box, and means for locking the sleeve to a conduit.

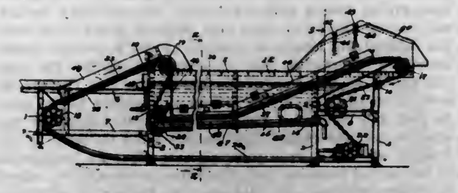
2. A junction box coupling carrying outwardly extending yieldable spring arms for engaging the inner surface of a wall of the junction box, said spring arms having their central portions cupped, means for engaging the outer surface of said wall, and means for gripping a conduit.

3. A junction box coupling carrying outwardly extending yieldable spring arms for engaging the inner surface of a wall of the junction box, said arms having their central portions cupped, automatically operating means for engaging the outer surface of said wall, and means for gripping a conduit.

4. A junction box coupling carrying inwardly yieldable spring arms for engaging the inner surface of a wall of the junction box, said spring arms having their central portions cupped, a buffer spring for automatically engaging the outer surface of said wall, and means for gripping the conduit.

5. A junction box coupling comprising a tubular member provided at its forward end with outwardly extending yieldable spring arms for engaging the inner surface of a wall of the junction box, said arms having their central portions cupped, outwardly extending lugs provided on said tubular member intermediate its ends, a buffer spring provided on said tubular member between said lugs and the free ends of said arms, spirally arranged inwardly projecting teeth also provided on said tubular member adapted to engage the threads of a conduit cover, and means for forcing said teeth inwardly, whereby said conduit is firmly gripped.

1,215,596. FRUIT-WASHER. OTIS B. WESCOTT, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed June 24, 1914. Serial No. 847,021. (Cl. 146—14.)



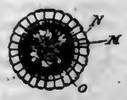
1. In a fruit-washing machine, the combination with the tank for wash water, of means for supporting the articles and while supporting them conveying them continuously in one direction, said means comprising a conveyer section arranged to receive the articles at the bottom of the body of water and at one end of the vessel and convey them in horizontal paths along said bottom, a second conveyer section arranged to take the articles from the last aforesaid section and carry them upward on inclined lines to points above the surface of the water, and a conveyer section at the receiving end of the apparatus which is positioned above the water in the tank and arranged to initially receive the articles and deliver them to the tank.

2. In a fruit washing machine, the combination of a tank for containing wash water, and a continuous endless flight conveyer having an intial fruit receiving section positioned above the level of the water in the tank and a second fruit receiving section in the tank below the end of the first section and moving in the same direction, the fruit being discharged from the first section into the water and settling through the water onto the second section, and a guard screen in the tank for holding the fruit away from the part of the conveyer between the aforesaid sections.

3. In a fruit-washing machine, the combination of a tank for wash water and an endless conveyer traveling continuously around an orbit on supports which establish three operative sections of said conveyer, the first section being positioned to receive the articles outside of the water and carry them to points above its surface, the second section being positioned approximately horizontally along the bottom of the water tank, and the third section extending from the bottom of the tank to points above the level of the water, the discharge end of the first section and the receiving end of the second section being arranged substantially as set forth to cause the articles delivered from the first section to escape from the conveyer at the receiving end of the tank and to settle through the water to the receiving end of the second conveyer section and then to be continuously supported by the second and third sections and thereby carried through and out from the water.

4. In a fruit washing machine, the combination of a tank for containing wash water, and an endless conveyer having an upwardly inclined receiving section with its delivery end above the level of the water, a second section at the bottom of the water, an intermediate idle section inclined away from the path of the dropping material, and a third section for elevating the material from the bottom of the tank to points above the water, that portion of the conveyer submerged in the water being adapted to hold indiscriminately a mass of the articles to be washed.

1,215,597. STOCK FOOD AND PROCESS FOR PRODUCING THE SAME. OTIS B. WESCOTT, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Nov. 5, 1914. Serial No. 870,463. (Cl. 99—11.)



1. The hereindescribed process of producing stock food which consists in grinding while green and moist the corn cobs from which the green kernels have been cut, and heating the meal resulting from the said grinding and thereby drying and cooking it.

2. The hereindescribed process of producing stock food which consists in grinding while green and moist the corn cobs from which the green kernels have been cut, heating the meal resulting from the said grinding and thereby drying and cooking it, and cooling the meal immediately after the said drying, heating and cooking.

3. A process for the production of stock food consisting in comminuting fresh green cobs, drying the resulting meal at a high temperature, and cooling the product preparatory to packing.

4. A process for the production of stock food consisting in the comminution, while fresh and green and containing all of the natural juices, of the cobs from which the kernels of green corn have been cut, drying the resulting meal at a temperature sufficiently high to convert the sugars into caramel, and immediately cooling the product preparatory to packing.

5. A process for the production of stock food, consisting in the comminution of fresh green corn cobs from which the green kernels have been cut, drying the resulting meal at a temperature sufficiently high to convert the sugars into caramel, and cooling the product preparatory to packing.

[Claims 6 and 7 not printed in the Gazette.]

1,215,598. STRINGED MUSICAL INSTRUMENT. HARRY W. WEYMANN, Philadelphia, Pa. Filed Apr. 14, 1916. Serial No. 90,999. (Cl. 84—123.)



1. In a stringed musical instrument, a body having a stretched membrane, a neck having a finger board and also having an extension across the body and secured thereto, strings and means for securing the same in position, combined with means for adjusting the alinement of the finger board with respect to the general plane of the membrane to change the distance between the strings and the finger board, said means consisting of a metal bar across the back of the body and means between the extension and metal bar for bending the extension relatively to the body and thereby adjusting the alinement of the neck.

2. In a stringed musical instrument, the body and strings combined with a neck having a finger board and

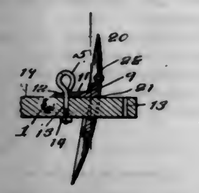
a transverse nut at its outer end upon which the strings rest beyond the finger board and said neck further having a flexible extension extending through the body, and means for bending the extension for raising or lowering the outer or free end of the neck and its nut for adjusting the strings relatively to the finger board.

3. In a stringed musical instrument, the body and strings combined with a neck having a finger board and a transverse nut at its outer end upon which the strings rest beyond the finger board and said neck further having a flexible extension extending through the body, and means for bending the extension for raising or lowering the outer or free end of the neck and its nut for adjusting the strings relatively to the finger board, said means consisting of a brace connected at one end to the end of the extension most distant from the neck and connected at its other end to the neck near the body, and a screw between the brace and extension for bending the latter.

4. In a stringed musical instrument, the combination of the hoop having a membrane stretched thereon, a neck having an extension extending through the side of the hoop and held at its other end, a metal brace bar secured at one end to the end of the extension and to the hoop and at the other end to the neck just outside of the hoop, and an adjusting screw between the brace bar and the middle part of the extension for bending the same, whereby the neck may be adjusted upon the hoop.

5. In a stringed musical instrument, the combination of the body having a stretched membrane, with a neck having an extension arranged across the body and adjustably connected therewith to provide for movement of the neck in a plane transverse to the general plane of the membrane, means for bending the extension for regulating the extent of said adjustment of the neck relatively to the body, and strings connected to the body and to the free end of the neck, whereby said strings may be raised and lowered relatively to the neck.

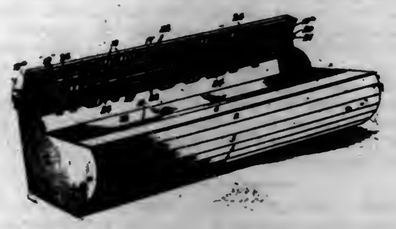
1,215,599. DISK MARKER FOR CORN-PLANTERS. CHARLES E. WHITE, Moline, Ill., assignor to Deere & Mansur Company, a Corporation of Illinois. Filed May 16, 1910, Serial No. 561,594. Renewed June 9, 1916. Serial No. 102,799. (Cl. 111—24.)



1. In a corn planting marking device, the combination of a concavo-convex disk with a reduced central aperture and when in operation permanently held in fixed angular relation to the ground, a non-rotatable, bodily reversible pole, straight from end to end, adjustable bodily through the central aperture of the disk, and a non-rotatable disk holder having at its outer end a radially flanged plate with a concave surface conforming and fitted to the concave surface of the disk, and an inwardly projecting bracket integral with the flange and open on one side and loosely engaging with the pole on the other sides to prevent its rotating about the pole, and a single, detachable, adjustable fastening device positively holding the bracket and disk to the pole axially and angularly after the end part of the pole has been adjusted bodily through the disk aperture.

2. In a disk marker for a corn planter, the combination of a marker pole, a journal piece formed with a ring portion having a rectangular aperture to receive the pole, with an eccentrically located arm extending from the ring along and in engagement with one side of the pole only, and with longitudinal ribs embracing the pole and serving as braces between the ring portion and the arm, means for securing the arm against the pole, and a disk mounted on the ring for rotation about an axis at an angle to the axis of the pole.

1,215,600. ILLUMINATED SIGN. ROY R. WILEY, Buffalo, N. Y. Filed Oct. 15, 1914. Serial No. 866,817. (Cl. 40—130.)



1. An illuminated sign comprising an elongated opaque casing containing elongated reflecting means and elongated light-giving means associated with the reflecting means, said casing having an open face through which light from the light-giving means is directed by the reflecting means associated therewith, and an elongated carrier for sign characters mounted on the casing on the side thereof remote from the light-giving means and related to the open face of the casing to receive light emitted through the open face of the casing, said carrier being mounted to tilt toward said open face upon an axis disposed lengthwise of the casing whereby light from the casing may be caused to strike reflecting sign characters on the carrier at angles to reach the eye of an observer while the light-giving elements and reflectors are hidden by the casing from the eye of the observer.

2. An illuminated sign comprising an opaque casing with one face open, light-giving means and reflectors within the casing for reflecting light through the open face of the casing, and a carrier with sign characters mounted thereon and provided with reflecting faces, said carrier being mounted on the casing to receive light directed through the open face of the casing and tiltable in a direction toward the light-giving elements and reflectors within the casing to cause the reflecting surfaces of the sign characters on the carrier to direct the light reaching them toward the eye of an observer positioned to have the opaque portion of the casing completely hide the light-giving means and reflectors from view.

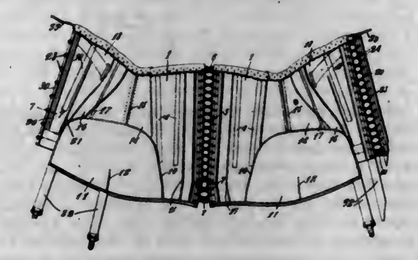
3. An illuminated sign comprising an elongated opaque casing with one long face open to emit light therethrough, illuminating means and reflectors corresponding in length to the casing and contained within the latter to be hidden from view by the casing and to direct light through the open face of the casing, and an elongated carrier with sign characters thereon provided with light reflecting faces, said carrier being mounted on the casing exterior thereto and extending along that side of the open face of the casing remote from the observed side of the casing and tiltable toward the said open face of the casing, whereby light directed through the open face of the casing and striking the sign characters may be reflected from the latter toward the eye of an observer shielded by the opaque portion of the casing from view of the light-giving means and reflectors within the casing.

4. An illuminated sign comprising an opaque casing as long as the sign and provided with internal reflecting means and light producing means associated therewith and both extended in the direction of the length of the casing, said casing having one long face open for the emission of light therethrough, and an elongated carrier mounted on the casing exterior thereto at the side of the open face remote from the light-giving means, said carrier having sign characters thereon provided with mirror surfaces, and said carrier being tiltable toward the open face of the casing to direct light emitted from the casing and striking the mirror faces of the sign characters toward the eye of an observer from whom the light-giving and reflecting means are hidden by the opaque wall of the casing toward said observer.

5. An illuminated sign comprising an elongated casing having the side toward the observer opaque and with the top face open, light-giving means within the casing adjacent to the opaque face, reflectors on the side of the light-giving means toward the opaque face and positioned to direct light through the open face toward the side of the casing remote from the opaque face, and a carrier with sign characters thereon located exterior to the casing and mounted on that side of the casing remote from the reflectors, said carrier being tiltable toward the open face of the casing to cause light reaching the carriers from the light-giving elements and the reflectors to be directed toward the eye of an observer on the opaque side of the casing with said opaque side hiding the light-giving elements and reflectors from the eye of the observer.

[Claims 6 to 25 not printed in the Gazette.]

1,215,601. CORSET. CORA BELLE WILLIAMS, Malvern, Iowa. Filed Dec. 16, 1915. Serial No. 67,232. (Cl. 2—73.)

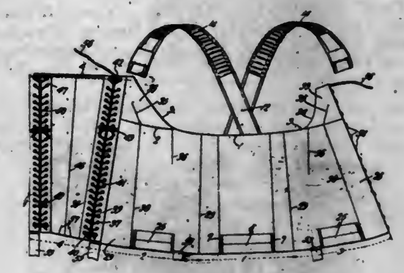


1. In a device of the class described, a pair of back pieces the lower forward edges of which are concaved; means for uniting the back pieces; hip pieces the rear edges of which are secured to the concaved edges of the back pieces; reversely curved shaping strips secured at their lower ends to the upper edges of the hip pieces adjacent the outer corners thereof; upwardly converging gores interposed between the shaping strips and the back pieces and having their lower ends secured to the upper edges of the hip pieces; front members secured to the forward edges of the shaping strips; reinforcing strips secured to the forward edges of the front members and extended downwardly below the lower ends of the front members; and elastic garments disposed transversely of the garment and located below the lower ends of the front members, the rear ends of the elastic elements being secured to the forward edges of the hip pieces, and the forward edges of the elastic elements being secured to the rear edges of the reinforcing strips; and means for uniting the reinforcing strips detachably.

2. A garment of the class described, comprising a pair of back pieces; pads on the inner surfaces of the back pieces adjacent their inner edges and adjacent their upper ends; an inelastic lacing cord threaded upwardly through the back pieces and having its ends secured adjacent the upper edge of the garment; and an elastic lacing cord threaded downwardly through the lower portions of the back pieces and having its ends secured adjacent the lower edge of the garment.

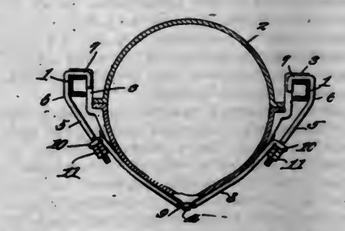
1,215,602. BINDER. CORA BELLE WILLIAMS, Malvern, Iowa. Filed Dec. 16, 1915. Serial No. 67,233. (Cl. 2—73.)

1. A binder of the class described, comprising a back, sides and a front, the front being of blunted V-shape with its wider end uppermost; downwardly converging stays on the front; stays on the back and the sides and terminated in spaced relation to the lower edge of the binder; circumferentially elastic strips interposed in the lower edge of the binder; an elastic draw cord forming a connection between the front and one side and located adjacent the lower edge of the binder and in circumferential alinement with the elastic strips; and an inelastic draw cord forming a connection between the front and said side and located above the inelastic draw cord, the free ends of both cords being at opposite ends thereof.



2. A binder of the class described comprising a back; a longitudinal back pad attached to the back adjacent the upper edge of the back; and a transverse pad attached to the back adjacent the upper edge of the back and superposed on the longitudinal pad, the longitudinal pad extending below the transverse pad, and the transverse pad extending laterally beyond the longitudinal edges of the longitudinal pad, thereby to form a double thickness adjacent the centers of the pads, and to form a single thickness adjacent the ends of the transverse pad.

1,215,603. AUXILIARY TRANSMISSION - CASE HANGER. SAMUEL T. WINDSOR, Normangee, Tex. Filed Apr. 25, 1916. Serial No. 93,510. (Cl. 74—56.)



1. An auxiliary transmission case hanger embodying a plurality of rods certain of which have remote terminals extending upwardly to rest against the outer sides of the beams of an automobile chassis, said terminals having inturned hooks for engaging and seating upon said beams, the rods being adapted to extend under and support a transmission case between said beams, and means adjustably connecting the rods.

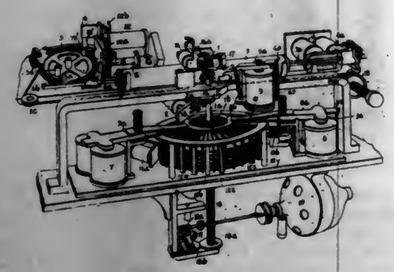
2. An auxiliary transmission case hanger embodying a pair of rods having hooks to engage the side beams of an automobile frame, an intermediate rod having means between its ends for engaging the lower portion of a transmission case, the ends of the intermediate rods being slidably connected to the pair of rods, and means upon certain rods for adjusting them relatively to one another.

3. An auxiliary transmission case hanger embodying a pair of rods having forks whose arms are formed into hooks to engage over the side beams of an automobile, an intermediate rod having a loop between its ends to engage the lower portion of a transmission case, and

means adjustably connecting the ends of the intermediate rod with the aforesaid rods.

4. An auxiliary transmission case hanger embodying a pair of rods having upper forks whose arms are formed into hooks to engage over the side beams of an automobile, an intermediate rod having a loop between its ends to engage the lower portion of a transmission case and having eyes at its ends slidable upon the aforesaid rods, and retaining elements upon the first mentioned rods to bear against said eyes.

1,215,604. AUTOMATIC PRINTER. GEORGE M. YORKE, New York, N. Y., assignor to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Apr. 26, 1915. Serial No. 23,815. (Cl. 178—27.)



1. A printing telegraph receiver comprising selecting magnets, selecting disks controlled thereby, and each having permutation means, the permutation means of each disk adapted for coöperation with the permutation means of the other disks for selection purposes, an auxiliary-function mechanism and means controlled by the permutation means of said selecting disks controlling the operation of such auxiliary-function mechanism.

2. A printing telegraph receiver comprising selecting magnets, selecting disks controlled thereby, and each having permutation means, the permutation means of each disk adapted for coöperation with the permutation means of the other disks for selecting purposes, an auxiliary-function mechanism comprising an operating magnet, and contact means controlled by the permutation means of said disks controlling such magnet.

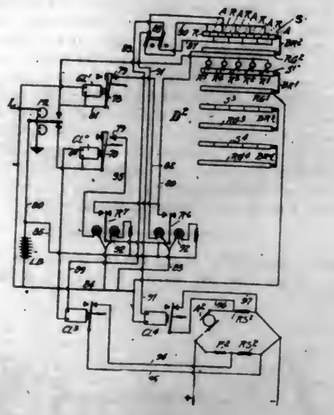
3. A printing telegraph receiver comprising selecting magnets, selecting disks controlled thereby, and each having permutation means, the permutation means of each disk adapted for coöperation with the permutation means of the other disks for selection purposes, an auxiliary-function mechanism comprising an operating magnet, contact means controlled by the permutation means of said disks for closing a circuit through such magnet, means operated by such magnet when energized for closing a holding circuit through said magnet, and means controlled by said disks for breaking such holding circuit.

4. In a printing telegraph receiver the combination of a plurality of selecting disks, each having permutation means, the permutation means of each disk adapted for coöperation with the permutation means of the other disks for selection purposes, means for causing said disks to select, a longitudinally movable paper carriage, carriage feed means and means controlled by the permutation means of said disks for returning said carriage.

5. In a printing telegraph receiver the combination of a plurality of selecting disks, each having permutation means, the permutation means of each disk adapted for coöperation with the permutation means of the other disks for selection purposes, electromagnetic means for causing said disk to select, a longitudinally movable paper carriage, carriage feed means, contacts controlled by the permutation means of said disks, and means controlled by said contacts for returning said carriage

[Claims 6 to 16 not printed in the Gazette.]

1,215,605. MEANS FOR SYNCHRONIZING ROTARY DEVICES. GEORGE M. YORKE, New York, N. Y., and GEORGE R. BENJAMIN, Jersey City, N. J., assignors to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Original application filed Jan. 5, 1915, Serial No. 654. Divided and this application filed Aug. 21, 1915. Serial No. 46,641. (Cl. 178—53.)



1. In a synchronous telegraph system the combination of a rotary distributer comprising a commutator divided into segments, and a brush for such commutator, means arranged to produce relative motion between said commutator and said brush, two electrically controlled speed-varying means, one arranged when operated to increase the speed of such relative motion, the other arranged when operated to decrease the speed of such relative motion, one of such speed-varying means connected to alternate segments of the commutator and the other to the intermediate segments of the commutator, and means for applying current to said commutator brush, and for limiting the period of such application of current.

2. In a synchronous telegraph system the combination of a rotary distributer comprising a commutator divided into segments, and a brush for such commutator, means arranged to produce relative motion between said commutator and said brush, two electrically controlled speed-varying means, one arranged when operated to increase the speed of such relative motion, the other arranged when operated to decrease the speed of such relative motion, one of such speed-varying means connected to alternate segments of the commutator and the other to the intermediate segments of the commutator, and means for applying current to said commutator brush, and for limiting the period of such application of current, comprising a line relay and delay-action means controlled thereby.

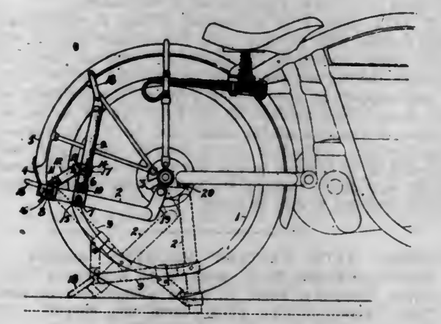
3. In a synchronous telegraph system the combination of a rotary distributer comprising a commutator divided into segments, and a brush for such commutator, means arranged to produce relative motion between said commutator and said brush, two electrically controlled speed-varying means, one arranged when operated to increase the speed of such relative motion, the other arranged when operated to decrease the speed of such relative motion, one of such speed-varying means connected to alternate segments of the commutator and the other to the intermediate segments of the commutator, and means for applying current to said commutator brush, and for limiting the period of such application of current, and comprising a line relay and two delay-action relays each controlling the supply of current to said commutator brush, said delay-action relays being actuated alternately by operation of said line relay.

4. In a synchronous telegraph system the combination of a rotary distributer comprising a commutator divided into segments and a brush for such commutator, means arranged to produce relative motion between said commutator and said brush, two electrically controlled speed-varying means, one arranged when operated to increase the speed of such relative motion, the other arranged when operated to decrease the speed of such relative motion, one of such speed-varying means connected to alternate segments of the commutator and the other to the intermediate segments of the commutator, and means for applying current to said commutator segments alternately, and for limiting the period of such application of current comprising a line relay, two delay-action relays operated alternately by said line relay, and two secondary relays, each controlled by one of said delay action relays, and each controlling the application of current to said commutator segments.

5. In a synchronous telegraph system the combination of a rotary distributer comprising a commutator divided into segments, and a brush for such commutator, means arranged to produce relative motion between said commutator and said brush, two electrically controlled speed-varying means, one arranged when operated to increase the speed of such relative motion, the other arranged when operated to decrease the speed of such relative motion, one of such speed-varying means connected to alternate segments of the commutator and the other to the intermediate segments of the commutator, and means for applying current to said commutator brush, and for limiting the period of such application of current comprising a line relay, two delay-action relays actuated alternately by said line relays, and two secondary relays, each comprising a magnet coil and a circuit therefor which is closed by the main line relay when that main line relay actuates the corresponding delay action relay, said circuit arranged to be broken by the corresponding delay action relay when it operates, each such secondary relay further comprising means for returning such secondary relay to normal condition upon the breaking of said circuit of said secondary relay by the corresponding delay-action relay.

[Claims 6 to 15 not printed in the Gazette.]

1,215,606. MOTOR-CYCLE SUPPORT. HENRY J. ANDERSON and HENRY VAN WIE, San Francisco, Cal. Filed Nov. 1, 1916. Serial No. 128,911. (Cl. 208—78.)

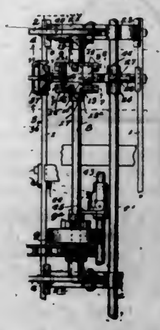


1. In combination with a support for a motor-cycle at rest, pivoted to the motor-cycle frame at a point adjacent to the rear wheel axle, an arm extending from a side of the support upwardly and of such length and direction that, when the outer end of said support rests upon the ground, the outer end of said arm will be to the rear of the outer end of the support, and a pedal on the outer end of said arm.

3. In combination with a support for a motor-cycle at rest, pivoted to the motor-cycle frame at a point adjacent to the rear wheel axle, an arm rigidly connected to a side of the support and extending upwardly and of such length and direction that, when the outer end of said support rests upon the ground, the outer end of said arm will be to the rear of the outer end of the support.

4. In combination with a support for a motor-cycle at rest, pivoted to the motor-cycle frame at a point adjacent to the rear wheel axle, an arm detachably connected to a side of the support and extending upwardly and of such length and direction that, when the outer end of said support rests upon the ground, the outer end of said arm will be to the rear of the outer end of the support.

1,215,607. VARIABLE-DROP MECHANISM. JOHN R. ANDERSON, Moline, Ill., assignor to Deere & Mansur Company, Moline, Ill., a Corporation of Illinois. Filed May 18, 1914. Serial No. 839,421. (Cl. 111—5.)



1. In a planter, the combination of the seed-delivering mechanisms one at each side of the machine, the intermittingly actuated devices for delivering from each seeder mechanism at each actuation a series of seeds one by one, a longitudinally stationary seeder shaft connected by fixed gear to both of said seeder mechanisms, a continuously acting driver, a countershaft, means for taking a predetermined fixed movement from the said driver to the countershaft, three differing sets of driving teeth or projections on the countershaft, the teeth of each set being uniformly spaced around said shaft and all said teeth being rotatable in equal circles of rotation, an adjustable set of driven teeth slidably mounted on the seeder shaft, and a lever for bodily shifting said adjustable set of teeth relatively to the seeder shaft and from a position of engagement with the teeth of one of the aforesaid sets to a position of engagement with the teeth of another set.

2. In a planter, the combination of intermitttingly actuated devices for delivering at each actuation a series of seeds, one by one, a continuously acting driver, means for taking a predetermined fixed movement from the said driver, power transmitting mechanism between said driver and the seed-delivering devices comprising a driving and a driven element, of which one is held yieldingly bodily in relation to the other, and one of which is provided with two or more varying sets of teeth, and the other of which has a single series of bodily adjustable teeth.

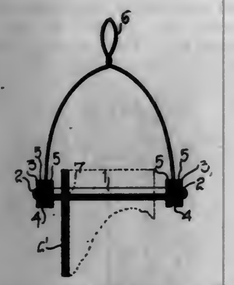
3. The combination of the seeding mechanism, the seeder shaft, the counter shaft for driving the seeder shaft and the interposed transmission gearing comprising an adjustable toothed gear member, and a companion toothed gear member having an axially extended series of differing sets of teeth, the teeth of the transmission gearing each having a flat side for operative engagement with an opposing tooth, and having its back surface formed with chamfered end edges to permit one tooth to pass another axially.

4. The combination of the seeding mechanism, the seeder shaft, the counter shaft, means for intermittingly

rotating the counter shaft, the variable transmission gearing connecting the shafts and the yielding support for one of said shafts held normally in predetermined operative position.

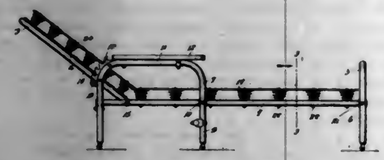
5. The combination of the seeding mechanism, the seeder shaft, the counter shaft, the power devices at one end of and for rotating the counter shaft, the variable transmission gearing between said shafts and connected with the opposite end of the counter shaft, and yielding means for holding in predetermined operative position the last said end of the counter shaft.

1,215,608. HOLDER. SARAH ANDERSON, Ridgewood, N. J. Filed June 10, 1914. Serial No. 844,257. (Cl. 211—2.)



The combination with a holder including a supporting bar, of a plurality of cards through the upper ends of which the bar is loosely passed, removable nuts threaded upon each end of the bar and preventing accidental detachment of the cards from the bar, each of said nuts being formed with a circular peripheral groove, and a hanger bent to form yieldable divergent legs, the ends of said legs being bent to form eyes disposed within said grooves on the nuts, whereby to permit rotation of the nuts to permit detachment or attachment of the nuts upon the bar without detaching the hanger therefrom.

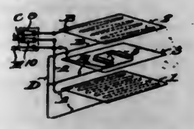
1,215,609. RECLINING-COUCH. HARRY B. ARNOLD, New Britain, Conn., assignor to The National Spring Bed Company, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 2, 1913. Serial No. 792,972. (Cl. 5—16.)



A reclining couch including inverted substantially U-shaped supports, duplicates each of the others, one being located at the foot of the structure and two facing each other and located at the head end at a distance apart substantially equal to the width of the foot end, a side rail secured to both branches of a head end member and one branch of a foot end, and a frame conforming in shape and of substantially the same size and structure as said end supports and pivotally secured to the side rails between the head ends forming a reclining frame.

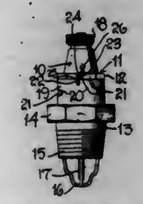
1,215,610. ELECTRIC HEATING-PAD. HARVEY E. BLOOMER, Milwaukee, Wis., assignor, by mesne assignments, to The Sun-Ray Mfg. Co., Oshkosh, Wis. Filed Nov. 15, 1915. Serial No. 61,709. (Cl. 219—46.)

1. A heating pad comprising a sheet of material, a resistance member secured to said sheet of material, a second sheet of material, a second resistance member of lower resistance secured to said second sheet of material, a third sheet of material, thermostat members carried by said third sheet of material, means for securing said sheets together, wires extending from the resistance and thermostat members and corresponding wires of the resistance and thermostat members being disposed at adjacent edge portions of the respective sheets.



2. A heating pad including a body sheet of material, resistance wires secured on the body sheet and bent to procure a series of parallel stretches, and spacing strips carried by the body strip at the ends of said stretches and overlapping alternate adjacent bends of the wire, whereby to prevent contact of the bends upon shrinkage of the body sheet, and consequent projection of the bends past the securing means of the said stretches of wire.

1,215,611. SPARK-PLUG. DAVID L. BOGGESS, Liberty, Mo. Filed Apr. 19, 1916. Serial No. 92,253. (Cl. 123—169.)



1. In a spark plug, a bushing having an upstanding wall formed with bayonet slots and with vertical slots between the bayonet slots, a core supporting base having pins engageable in said slots, and a spring-detent engageable in any one of the vertical slots to prevent the reverse rotation of the base with relation to the bushing.

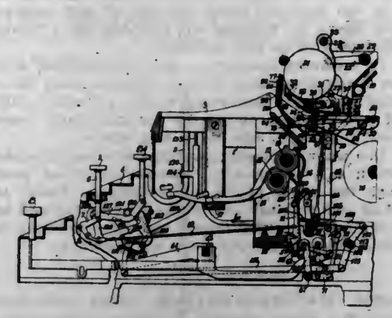
2. In a spark plug, a bushing having an upstanding wall formed with bayonet slots, the entrance ends of the slots being inclined to the axis of the bushing, said wall between the bayonet slots being formed with vertical slots, a core supporting base having a flange, the periphery of the flange being notched at one point, and a spring attached to the face of the flange and having an angular terminal end projecting down through said notch and adapted to be engaged in any one of the vertical notches in the wall of the bushing, the spring being provided with means whereby it may be lifted.

1,215,612. TYPE-WRITING MACHINE. ARTHUR J. BRIGGS, Syracuse, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Dec. 24, 1915. Serial No. 68,477. (Cl. 197—157.)

1. The combination of a platen; a ribbon vibrator; actuating means for said vibrator including a lever, a link operated by said lever, and a universal bar for operating said lever; means for imparting a case shift to said platen, vibrator, lever and link; and means operable in both case positions of the parts for adjusting said link along the arm of said lever to which it is connected.

2. The combination of a platen; a ribbon vibrator; a lever to which said vibrator is connected; a link for operating said lever; a second lever to which said link is pivoted; a universal bar connected with said second lever; means for imparting a case shift to said platen, vibrator, levers and links; and means operable in both case positions of the parts for adjusting said link to vary the leverage-ratio between the said levers.

3. The combination of a platen; a ribbon vibrator; actuating means for said vibrator comprising a lever and a link operated by said lever and having a sliding connection with an arm of said lever; means for operating said lever; means for imparting a case shift to said platen, vibrator, link and lever; and means for adjusting said link by sliding it along said lever arm, said means including an adjusting link connected at one end to the first said link and a non-shifting adjusting device connected to said adjusting link.

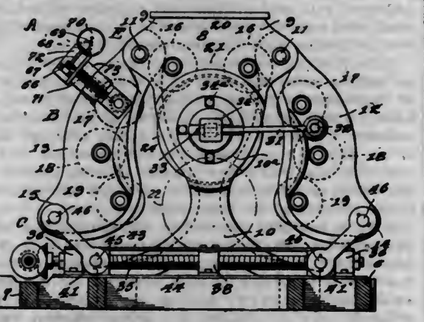


4. The combination of a platen; a ribbon vibrator; actuating means for said vibrator comprising a bell-crank having horizontal and vertical arms and a link having sliding connection with said horizontal arm whereby said link is operated; a universal bar; means including a horizontal link connected to said vertical arm whereby said universal bar operates said bell-crank; means for imparting a vertical case shift to said platen, said vibrator-actuating link and said bell-crank; and means mounted in the stationary frame-work for adjusting said vibrator-actuating link by sliding it along said horizontal arm of the bell-crank.

5. The combination of a traveling platen, a non-traveling shift frame, means to operate said frame to impart a case shift to said platen, a ribbon vibrator, a lever mounted on said shift frame and having said vibrator connected thereto, a second lever mounted on said shift frame, a link connecting said levers, a universal bar adapted to operate said second lever in both positions of the shift frame, and means for adjusting said link to vary the leverage-ratio between said levers.

[Claims 6 to 10 not printed in the Gazette.]

1,215,613. BALING-PRESS. GEORGE RAYMOND BROWN, Oklahoma, Okla., assignor of one-third to Benjamin Clayton and one-third to William L. Clayton, Oklahoma, Okla. Filed Feb. 12, 1914. Serial No. 818,288. (Cl. 100—1.)



1. In a baling press, the combination of a series of compression rolls arranged on horizontal axes around the bale-forming chamber, means for moving horizontally and bodily away from their working positions all of the rolls below the horizontal plane of the axis of the baling chamber and for holding them stationarily during the time the bale is forming, and a frame for supporting the said rolls and roll-moving mechanism, it being formed with an escape passage extending vertically downward through it for the direct downward escape of the bales.

2. In a baling press, the combination of a series of compression rolls arranged on horizontal axes around a bale-forming chamber, means for moving horizontally and bodily away from their working positions the rolls below that part of the bale which is the widest horizontally and for holding them stationarily during the time the bale is forming, and a frame for supporting the said rolls and roll-moving mechanism formed with an escape passage extending vertically downward through it for the direct downward escape of the bales.

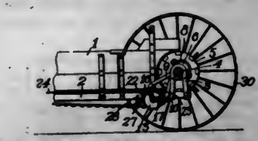
3. In a baling press, the combination of a series of compression rolls arranged on horizontal axes around a bale-forming chamber, means for opening a passage from the said chamber through which the bale can pass directly downward on vertical lines therefrom, and a frame for supporting the said rolls and roll-moving mechanism provided with an escape passage extending vertically downward through it for the direct downward escape of the bales.

4. In a baling mechanism, the combination of a frame, a series of compression rolls on horizontal axes arranged around a baling chamber, means holding said rolls stationary during the time of bale forming, and means for moving one or more rolls in one direction from the vertical plane or the axis of the baling chamber, means for moving one or more rolls in the opposite direction from the said plane and for returning the first said rolls and the second said rolls in the opposite directions to their working positions.

5. In a baling mechanism, the combination of the frame, a series of rolls on horizontal axes around the baling chamber, the roll-supporting devices having two oppositely-moving roll-carriers, and means for moving the said roll-carriers from the working positions and returning them oppositely thereto and adapted to hold them stationary during the time the bale is forming.

[Claims 6 to 22 not printed in the Gazette.]

1,215,614. MANURE-SPREADER. THEOPHILUS BROWN, Worcester, Mass, assignor, by mesne assignments, to Marseilles Company, East Moline, Ill., a Corporation of Illinois. Filed Apr. 10, 1911. Serial No. 620,145. (Cl. 111—40.)



1. In a manure spreader the combination of the body, the rotary beater, the movable bottom on which the load is supported and which tends to move therewith forward or backward according to the direction of its inclination, and means for positively feeding the body forward comprising two permanently interengaged elements which move in orbital paths around a common line transverse to the planes of their movements the first of which is connected to the bottom and the second of which is adapted to drive the first element through its orbital movements and is also adapted to lock it against movement in either direction.

2. In a manure spreader the combination of the body, the rotary beater, the movable bottom on which the load is supported and which tends to move therewith under the action of gravity toward or from the beater, means comprising a rotary shaft engaging with and actuating the bottom, shaft-driving devices which comprise two interlocking elements both mounted to move in orbital

paths around a common line transverse to the planes of their movements the first of which elements is operatively connected to the aforesaid bottom, and a prime driving device, the second of said elements transmitting power from the driving device to the first said element and adapted to rotate it when the driving device is in action and to lock it against motion in either direction when the driving device is inactive.

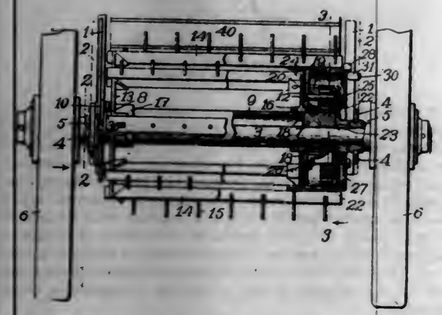
3. In a manure spreader the combination of the body, the rotary beater, the movable bottom on which the load is supported and which tends to move therewith under the action of gravity and is adapted to be driven by power, and means for positively feeding the body forward comprising a rotary wheel connected to the bottom, a prime driving device and a power transmitter between the driving device and said wheel and adapted to rotate the wheel when the driving device is in action and to lock the wheel against motion in either direction when the driving device is inactive.

4. In a manure spreader, the combination of the ground wheels, the axle, the load-carrying body, the body support resting on the axle inside of the ground wheel, a prime power device driven by the axle and arranged inside of the said body support, the feeding apron, the apron shaft, the speed-reducing driving mechanism for the apron shaft comprising two intermeshing gear wheels, and power transmitting devices between said prime power device and the said gear wheels, the said prime power device, the said two intermeshing gear wheels and the said power transmitting devices being all located in substantially the same vertical planes.

5. In a manure spreader, the combination of the ground wheel, the axle, the body, the body support resting on the axle inside of the ground wheel, the beater on an axis passing through the ground wheel, the feeding apron, the apron shaft on an axis passing through the ground wheel, the step-by-step moving speed-reducing driving mechanism for the apron shaft between the ground wheel and the body and comprising two intermeshing gear wheels moving in the same plane, a prime power device driven by the axle and positioned between the said body support and the body, and power transmitting means between the prime power device and the said gear wheels, the said two intermeshing gear wheels the said prime power device and the said power transmitting means being all located in substantially the same vertical planes.

[Claim 6 not printed in the Gazette.]

1,215,615. MANURE-SPREADER. THEOPHILUS BROWN, Worcester, Mass., assignor, by mesne assignments, to Marseilles Company, East Moline, Ill., a Corporation of Illinois. Filed Oct. 2, 1911. Serial No. 652,421. (Cl. 111—40.)



1. In a manure spreader, a movable bottom, an axle extending transversely across the spreader above the plane of the bottom, a beater journaled eccentrically on said axle, means for holding the beater with its axis in either of several positions relatively to the axis of the axle, and supporting wheels mounted on the ends of said axle.

2. In a manure spreader, a movable bottom, a pair of supporting wheels having a common axis of rotation above the plane of the supporting surface of said bottom, a beater journaled on bearings eccentric to the axis of said supporting wheels, and means for rotating said eccentric beater bearings about the axis of said supporting wheels, whereby the beater is moved toward or away from the load.

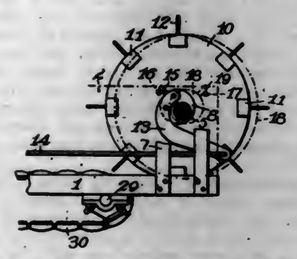
3. In a manure spreader, a pair of supporting wheels having a common axis of rotation, beater bearings eccentric to and rotatable about the axis of said supporting wheels, means for rotating said bearings, and a rotatable beater journaled on said bearings.

4. In a manure spreader, a pair of supporting wheels, beater bearings eccentric to and rotatable about the axis of rotation of said supporting wheels, a beater rotatable about said bearings, and means for operatively connecting said beater and said supporting wheels.

5. In a manure spreader, bearings for a beater rotatable about an axis eccentric to the beater axis and passing through the circles of the said bearings, a beater journaled on said bearings, and means for rotating said bearings to move the beater toward and away from the load.

[Claims 6 to 38 not printed in the Gazette.]

1,215,616. MANURE-SPREADER. THEOPHILUS BROWN, Worcester, Mass., assignor, by mesne assignments, to Marseilles Company, East Moline, Ill., a Corporation of Illinois. Filed Oct. 7, 1911. Serial No. 653,453. (Cl. 111—40.)



1. In a manure spreader, a rotatable beater journaled on bearings rotatable about an axis eccentric to the axis of said beater, a driving gear having its axis eccentric to the axis of the beater, a pinion carried by the beater, an intermediate pinion driven by said driving gear, and means for rotating the bearings of the beater to carry the beater pinion into and out of engagement with said intermediate pinion.

2. In a manure spreader, a rotatable beater journaled on bearings rotatable about an axis eccentric to the axis of the beater, a driving mechanism for the beater comprising a driving gear having its axis eccentric to the axis of the beater, an intermediate pinion held in constant engagement with said driving gear, a pinion carried by the beater and capable of being carried into and out of operative connection with said intermediate pinion.

3. In a manure spreader, a rotatable beater journaled on bearings rotatable about an axis eccentric to the axis of the beater, a driving mechanism for said beater comprising a driving member consisting of an internal gear concentric with the axis of the beater bearings, and a driven member consisting of a pinion concentric with and carried by the beater and capable of being carried into and out of operative connection with said driving member by the rotation of the beater bearings.

4. In a fertilizer distributer, the combination of the load-carrying body having vertical side-walls, the power transmitting devices having a driven element carried by the beater, a driving element actuated by the ground wheels, and a secondary driving element actuated by the aforesaid driving element, the driven element on the beater and the secondary driving element being optionally separable.

5. In a manure spreader, the combination of the load-carrying body having vertical side-walls, the rotary beater arranged to extend from one side-wall to the other, the ground wheels, the gear wheel carried by the beater, the primary drive gear actuated by the ground wheel, the intermediate gear, the stationary supports secured to the body for the intermediate wheel, the beater gear and the intermediate gear being separable at will.

[Claims 6 to 13 not printed in the Gazette.]

1,215,617. BUBBLE-BLOWER. RAFAEL DIAZ BUITRAGO, New York, N. Y. Filed May 8, 1916. Serial No. 96,054. (Cl. 46—31.)



1. The combination with a reservoir having a tube passing through it and forming a part of it, of a blowing tube located within said reservoir tube and fitting tightly therein, and provided at one end with a cup forming a bubble seat, the said tubes provided with apertures adapted to register and thereby to place the blowing tube in communication with the reservoir.

2. The combination with a reservoir having a tube passing through it and forming a part of it, of a blowing tube located within said reservoir tube and fitting tightly therein, and provided at one end with a cup forming a bubble seat, the said tubes provided with apertures adapted to register and thereby to place the blowing tube in communication with the reservoir, said blowing tube rotatable within the reservoir tube to bring such apertures into or out of registry.

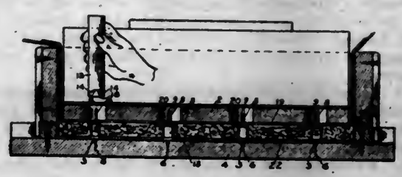
3. The combination with a reservoir having a tube passing through it and forming a part of it, of a blowing tube located within said reservoir tube and fitting tightly therein, and provided at one end with a cup forming a bubble seat, the said tubes provided with apertures adapted to register and thereby to place the blowing tube in communication with the reservoir, said blowing tube rotatable within the reservoir tube to bring such aperture into or out of registry, and means for limiting rotation of the one tube with respect to the other.

4. The combination with a reservoir having a tube passing through it and forming a part of it, of a blowing tube located within said reservoir tube and fitting tightly therein, and provided at one end with a cup forming a bubble seat, the said tubes provided with apertures adapted to register and thereby to place the blowing tube in communication with the reservoir, there being a solution pocket at the base of the said cup.

5. The combination with a blowing tube formed in sections connected together, one of such sections having an enlargement forming a bubble seat, of a reservoir fitting over one of such sections, and having a tubular projecting portion, such projecting portion and the tube section upon which it is mounted having the one a projecting pin and the other a slot in which such pin works, there being a gap in such slot permitting disconnection of the pin from the slot, and permitting removal of the reservoir upon disconnection of the two sections of such tube.

[Claim 6 not printed in the Gazette.]

1,215,618. TUFTING MECHANISM. WILLIAM E. BUSER, Chillicothe, Ohio. Filed Mar. 26, 1913. Serial No. 756,897. (Cl. 155—43.)



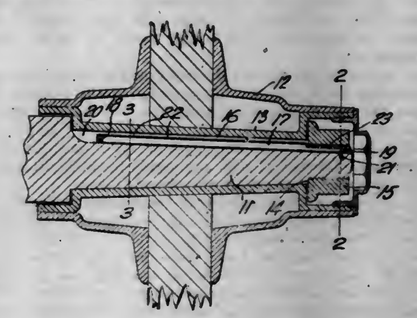
1. The method of making tufted pads which comprises mounting a plurality of fasteners on supports in spaced relation and of such form relative to the fasteners that clenching of the fasteners will cause their release from such supports, applying the pad material upon the fasteners so that the fasteners extend therethrough, and clenching such fasteners whereby they are released from such supports.

2. The method of making tufted pads which comprises bracing a plurality of resilient fasteners in upright position, maintaining such fasteners against accidental displacement by their own resilience, applying the pad material upon the fasteners so that the fasteners extend therethrough, then bending the projecting part of the fastener to bind the pad material together, the bending being accompanied by a destruction of the resilient property of the fastener whereby it is released from its initially supported position.

3. The method of making tufted pads which comprises mounting a plurality of resilient fasteners on supports of such form in relation thereto that accidental release of the fasteners is precluded by friction of their resilient legs, applying the pad material upon the fasteners so that the fasteners extend through, and clenching such fasteners whereby the resilience of their legs and consequent friction is destroyed.

4. The method of making tufted pads which comprises mounting a plurality of resilient U-shaped fasteners in depressions so that the frictional contact of the legs of such fasteners with the walls of such depression precludes accidental displacement, applying the pad material upon the fasteners so that the fasteners extend through, and clenching such fasteners by bending their legs so that the resilience and frictional retention is destroyed.

1,215,619. AXLE. JAMES J. CARNEY, Haverhill, Mass. Filed June 9, 1914, Serial No. 844,011. Renewed Apr. 1, 1916. Serial No. 88,397. (Cl. 64—27.)



1. A vehicle axle having a bearing portion terminating in a threaded portion, said bearing and threaded portions having a groove formed longitudinally therein, a nut screwed on the threaded portion, and a tube in the groove passing into the bore of the nut and out of contact therewith.

2. A vehicle axle having a bearing portion threaded at one end, a nut screwed on the threaded end, said axle having a longitudinal groove therein intersecting the threads, a tube seated in said groove having one end thereof partially cut away to the depth of the threads, said nut having a groove intersecting the threads thereof arranged to complete the tube bore in the cut away portion thereof.

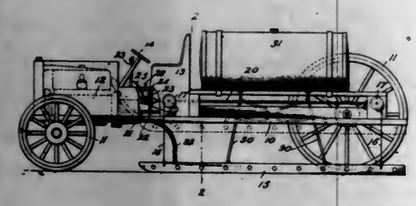
3. A device of the character described, comprising the combination with an axle having a longitudinal groove traversing the wheel bearing surface from end to end and extending to the end of the axle, of a nut screwed on said axle, a tube inserted in said groove having the outer end portion thereof cut away to clear the nut threads.

4. A device of the character described comprising the combination with an axle having a groove therein, a nut on the end of the axle having a groove in register with the axle groove, and a tube inserted in said axle groove having the entrance passage thereto formed partly in the bore of the tube and partly in the nut groove.

5. A device of the character described comprising an axle having a longitudinal groove therein, a nut having a groove therein positioned to register with the axle groove when the nut is tight, and a tube in said axle groove having the bore thereof completed by the nut groove.

[Claims 6 to 8 not printed in the Gazette.]

1,215,620. SNOW-MELTER. JULIAN CARRILLO, New York, N. Y. Filed May 20, 1915. Serial No. 29,442. (Cl. 126—271.1.)



1. A snow melting apparatus comprising a vehicle, a substantially horizontal heat-conducting plate supported beneath the same and adapted to be laid in direct contact with the snow surface, heating means for said plate supported over the same and adapted to move with it and means on the vehicle adapted to lower the plate against the snow surface and to lift it away from the same at will.

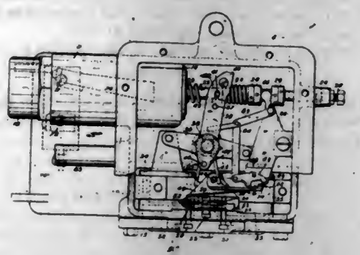
2. A device of the class described comprising a vehicle, a heating plate beneath the same, a motor adapted to move the vehicle, a hoisting device for said plate on the vehicle, heating means on said plate and vehicle, and means for connecting said motor at will to operate said hoisting device.

3. A device of the class described comprising a vehicle, a heating plate beneath the same, a motor adapted to move the vehicle, hoisting drums on the vehicle, cables from said drums to said plate, means on the plate and vehicle for heating the plate, means for connecting said motor to said drums at will, and means for preventing unwinding of the drums when the plate is lifted.

4. A snow melting apparatus comprising a vehicle, a substantially horizontal metal plate supported movably beneath the same, electric heating coils for said plate supported immediately over the same and adapted to move with it, means on the vehicle for hoisting and lowering said plate and electric heater, an electric generator on the vehicle, and flexible electric connections between said generator and said coils above the heating plate.

5. A snow melting apparatus comprising a substantially horizontal heat-conducting plate adapted to be lowered into contact with the snow surface, heating means for said plate supported above the same, and means for raising and lowering said plate so as to bring it at will either into or out of contact with said snow surface.

1,215,621. PNEUMATIC GOVERNOR. HERBERT W. CHENEY, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Apr. 27, 1910. Serial No. 558,051. (Cl. 175—308.)



1. In combination, a switch, means for operating said switch comprising a plurality of pistons, a valve for controlling the admission of operating fluid to said pistons, means comprising an element movable in response to predetermined fluid pressure conditions for causing the operation of said controlling valve, and means comprising an operative connection between said pressure responsive element and said switch operating means independent of said valve for causing said switch operating means to assist in the operation of said pressure responsive element.

2. In a fluid pressure governor, the combination of a switch, actuating means therefor comprising a fluid pressure operated piston, a member movable with said piston, a valve for controlling the movements of said piston, valve actuating means, an energy storing member, a rod movable by said latter member, means for flexibly connecting said first member and said rod and permitting said first member to assist in the movement of said rod, and connections between said rod and said valve actuating means for rendering said valve actuating means effective.

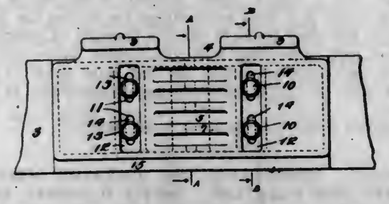
3. In combination, a switch having fixed and movable contacts, fluid actuated means for operating said switch, said means including a plurality of pistons one side of each of which is exposed to the same pressure at any instant, a valve for controlling the passage of actuating fluid to and from said pistons, a duct adapted to communicate with the cylinder of one of said pistons for carrying exhaust fluid therefrom to said contacts to destroy arcs formed on the separation of said contacts, said valve simultaneously affording communication between said latter cylinder and said duct and connecting the cylinder of another of said pistons to the source of actuating fluid, and means operable in response to variations in fluid pressure for causing the actuation of said valve.

4. In a fluid pressure governor, a casing, an element within said casing and movable in response to the pressure of fluid in said casing, an energy storing device adapted to absorb energy from and transmit energy to said movable element, a circuit controlling switch, operating means for said switch comprising a piston having one side open to the fluid within said casing, a valve for controlling communication between the interior of said casing and the other side of said piston, and means operable by said movable element on the occurrence of predetermined pressure conditions within said casing for causing the operation of said valve.

5. In a fluid pressure governor, the combination of a casing, an element within said casing and movable in response to the pressure of fluid in said casing, a circuit controlling switch, operating means for said switch comprising a piston, a valve for controlling said admission of actuating fluid from said casing to said piston, means for actuating said valve comprising a spring operatively associated with said switch and placed under stress on operation of said switch, a latch for holding said valve-actuating means against operation, and means operable by said movable element for causing the release of said latch.

[Claims 6 to 8 not printed in the Gazette.]

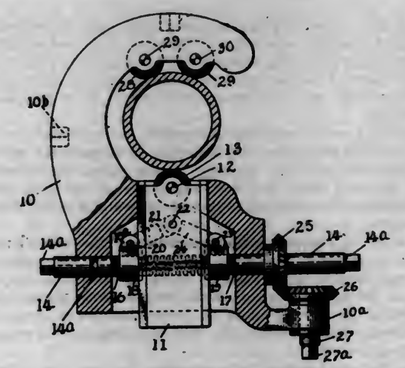
1,215,622. LOCOMOTIVE-BUMPER. FREDERICK C. COSEO, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Nov. 8, 1911, Serial No. 659,186. Renewed July 1, 1916. Serial No. 107,151. (Cl. 213—2.)



1. In combination with a bumper of the type described, having vertical bolt receiving slots formed therein and provided with a recess in the back thereof, of a plate adapted to fit within said recess and provided with bolt holes, and attachment bolts for said bumper.

2. In combination with a bumper of the type described, having vertical bolt receiving slots formed therein and provided with a recess in the back thereof, of a plate adapted to fit within said recess and provided with a vertically arranged series of bolt holes, and attachment bolts for said bumper.

1,215,623. PIPE-CUTTING WRENCH. ROBERT E. CREAMER, Worcester, Mass. Filed May 27, 1916. Serial No. 100,334. (Cl. 81—191.)



A pipe cutter of the type described, including a carrying frame having an arm equipped with rotary cutters and opposed to, and spaced from the base of said carrying frame, a driven right and left hand threaded screw having bearings in said frame, a slidable member positioned in said carrying frame, opposite the cutter-equipped arm of said carrying frame, and equipped with a rotary cutter arranged with respect to the cutters of said arm, collars having threaded connections with said right and left hand threaded screw, and pivoted-together toggle-link connection between said collars, the pivot between the links of the latter connection also pivoting in said slidable cutter-carrying member, and a screw and annular recess connection between said carrying frame and said right and left hand threaded screw.

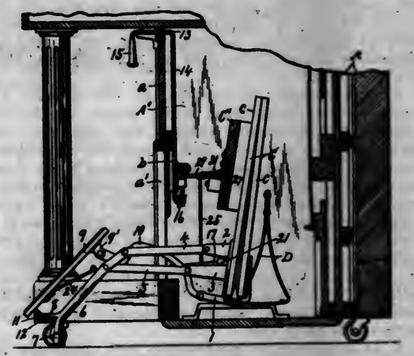
1,215,624. GAME ATTACHMENT FOR POCKET-BILLIARD TABLES. ALEXANDER DEBELACK and GEORGE DEBELACK, Sheboygan, Wis. Filed July 29, 1916. Serial No. 112,065. (Cl. 46—61.)

1. A game device comprising a board for arrangement across one end of a billiard table, an eight pointed star centrally delineated on said board and having a point directed to each edge of said board, said star having a central aperture and an aperture in each of the points which is directed toward a board edge, imperforate points alternating with the apertured points, letters on either side of said star, each outlined by six apertures having different colored borders around them.



2. A game device comprising a board for arrangement across one end of a billiard table, an eight pointed star centrally delineated on said board and having a point directed to each edge of said board, said star having a central aperture and an aperture in each of the points which is directed toward a board edge, imperforate points alternating with the apertured points, letters on either side of said star, each outlined by six apertures having different colored borders around them, said board having front and rear series of apertures, each series being composed of two rows of longitudinally disposed spaced apertures arranged adjacent one edge of the board, one series being above and the other below said latters, the apertures in one row alternating with those of the adjacent row, the apertures of each series being consecutively numbered, those of one series being arranged opposite to those of the other, the numbers of the rear series increasing from the right to the left and those of the front series from the left to the right, and a beveled edge on the front of said board to form an entrance thereto.

1,215,625. PEDAL-ACTION FOR SELF-PLAYING MUSICAL INSTRUMENTS. LEWIS B. DOMAN, East Syracuse, N. Y., assignor to Amphion Piano Player Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 10, 1914. Serial No. 856,060. (Cl. 84—169.)

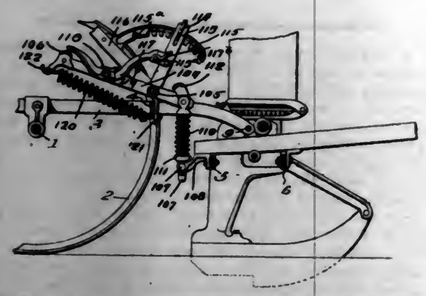


1. In a self-playing musical instrument, the combination with a case having an opening in its front side, a laterally sliding door for said opening, a pumping bellows, a pedal action for said bellows movable into and out of the case through said opening, of means separate from the pedal action for opening and closing the door, a detent for holding the pedal action within the case, door-operated means for tripping the detent only when the door is opened, and means separate from the bellows for projecting the pedal action outwardly when the detent is tripped.

2. In a self-playing musical instrument, the combination with a case having an opening in its front side, a laterally sliding door for said opening and a pumping bellows, of a pedal action separate from the door and movable into and out of the case through said opening,

a detent for holding the pedal action within the case, a rock-shaft and connections between it and the detent for tripping said detent, said rock-shaft having a crank arm, means on the door for operating the crank-arm to trip the detent when the door is opened, and means operable at will independently of the pedal action for opening and closing the door.

1,215,626. PLANTER. CLARENCE H. DOOLEY, Rock Island, Ill. Filed Mar. 24, 1910, Serial No. 551,234. Renewed Aug. 25, 1916. Serial No. 116,937. (Cl. 111—6.)



1. In a planter, the combination with a main wheel frame, a front transverse frame and soil opening runners, the said front frame being adapted to carry seed separating mechanism and seed depositing mechanism, of a means for moving the front frame relatively to the main frame comprising a foot lever pivoted on the main frame and connected with the front frame and having two foot rests, one for elevating the front frame and one for depressing the front frame, a hand lever pivoted to the main frame and adapted to be locked in any one of a number of positions, and a latch for detachably connecting the foot and hand levers, the said latch being mounted on the foot lever in position to be engaged by the operator's foot on the rest for elevating the front frame, whereby the operator may by a single motion and without shifting the position of his feet on the lever disconnect the foot lever from the hand lever and elevate the front frame.

2. In a planter, the combination with a main wheel frame, a transverse front frame hinged to the wheel frame, and soil opening runners, the said front frame being adapted to carry seed separating and dropping mechanism, of means for moving the front frame relative to the wheel frame comprising a foot lever pivoted on the wheel frame and connected to the front frame, a locking hand lever pivoted on the wheel frame, and a foot latch mounted on the foot lever and adapted to detachably connect the foot lever either to the hand lever or to the wheel frame, whereby the front frame can be adjusted by moving the hand lever or can be adjusted and held in adjusted position by the foot lever independently of the hand lever.

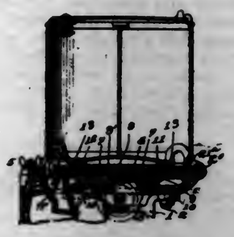
3. In a planter, the combination with the wheel frame and the runner frame adjustably connected thereto, of two lifting levers pivoted on the wheel frame, a connection between one lever and the runner frame, means for locking the other lever to the main frame in adjusted position, means for locking the two levers together in a manner to prevent relative movement in either direction, and means for locking the first said lever to the main frame, the last two said locking means being so related that one is inoperative when the other is operative and vice versa.

4. In a planter, the combination of a main wheel frame, a runner frame pivotally connected thereto, a foot lever pivoted to the main frame and connected with the runner frame, the said foot lever being provided with a foot rest for elevating the runner frame and a foot rest for depressing the runner frame, a hand lever pivoted on the main frame, means for locking the hand lever to the main frame, and a means controllable by the operator's foot on the elevating foot rest for detachably connecting the foot lever to the hand lever or to the main frame.

5. In a planter, the combination with a main wheel frame, and a runner frame pivotally connected to the wheel frame, of a hand lever, means for locking the hand lever to the wheel frame in one of a plurality of positions, a foot lever connected with the runner frame, and a single foot latch for locking the foot lever either to the hand lever or to the wheel frame, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,215,627. SEED-PLATE AND AGITATOR MECHANISM FOR PLANTERS. DELMAR D. DOOLEY, Rock Island, Ill., assignor to Deere & Mansur Company, Moline, Ill., a Corporation of Illinois. Filed May 18, 1914. Serial No. 839,425. (Cl. 111—6.)



1. In a seed-separating mechanism, the combination with a movable seed plate with cells, of a seed-agitating device movable independently of the seed plate and in the cells thereof and adapted to permit seeds to move downward from the cells successively while it is positioned therein.

2. In a seed-separating mechanism, the combination with a movable seed plate having cells, of an agitator having seed-engaging parts movable in the cells independently of the seed plate and adapted to permit seeds to move downward from the cells successively while it is positioned therein.

3. In a seed-separating mechanism, the combination with a movable seed plate having cells, of the agitating means having seed-engaging parts in the cells movable with the seed plate and also independently thereof and adapted to permit seeds to move downward from the cells successively while the seed-engaging parts are positioned therein.

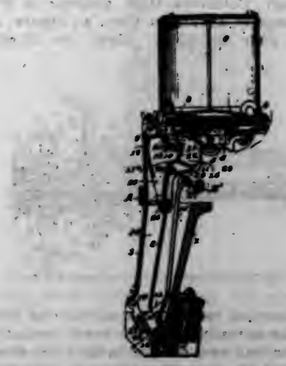
4. In a seed-separating mechanism, the combination with a movable seed plate having cells, of the agitating means supported below the seed plate and having seed-engaging parts movable vertically through the seed plate from points below it, said seed-engaging parts being adapted to permit the passage of seed downward from the cells while said parts are positioned therein.

5. In a seed-separating mechanism, the combination with the movable seed plate having cells, of the agitating means having seed-engaging parts lying in the seed cells and movable vertically through the cells from points below them, and adapted to permit the seed to escape downward from the cells while said seed-engaging parts are situated therein.

[Claims 6 to 20 not printed in the Gazette.]

1,215,628. VALVE MECHANISM FOR PLANTERS. DELMAR D. DOOLEY, Rock Island, Ill., assignor to Deere & Mansur Company, Moline, Ill., a Corporation of Illinois. Filed July 3, 1914. Serial No. 848,906. (Cl. 111—6.)

1. In a planting mechanism, the combination of a boot having an approximately vertical chuteway or guide, a valve at the lower end of said guide near the ground, a seed holder above the boot, a rotary plate for intermittingly withdrawing seed from said holder, a short chute immediately below the plate to receive "hills" of seed therefrom, a chamber immediately below the short chute having a stationary bottom 10 and a cut-off 9, a second chamber situated in vertical lines remote from those of the main chuteway, and having a stationary bottom 11 inclined away from said chuteway, and vibrating devices for positively advancing the hill of seeds from the first stationary bottom to the second, and then positively advancing them upward on the second stationary bottom to the main chuteway, and adapted to deliver them to the chuteway at points in unobstructed paths on vertical lines to said bottom valve.



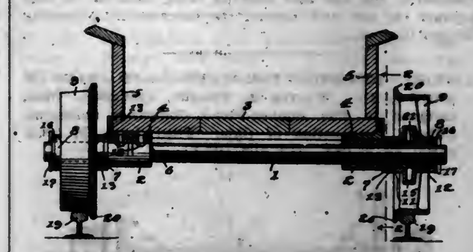
2. In a planting mechanism, the combination of an initial intermittingly acting seed delivering device, a chuteway or guide, a valve at the lower end of said chuteway near the ground, two successively acting seed arresting devices in different horizontal planes but relatively close together and close to the initial seed delivering devices, the second seed arresting device having a stationary bottom inclined away from the chuteway and means positively engaging with the seeds for pushing them off from the said arresting devices at each actuation of the seed delivering device, the lower of the said two arresting devices holding the seed until the lower valve is closed.

3. In a planting mechanism, the combination of an initial intermittingly acting seed delivering device, a passageway for the seeds delivered thereby having a short upper section immediately below the seed delivering device, a second section which is relatively short and normally closed against the passage of seed, a third section which is relatively short and normally closed to the entrance of seed, and a fourth section which is relatively long, a valve at the bottom of the fourth section, and means adapted to positively engage with the seeds at the lower ends of each of said sections of the passageway and push those from the second section to the third, those from the third section to the fourth, and those in the fourth section to the ground.

4. The combination with a seed delivering device, of a down passage in four sections, means for delivering a plurality of seeds to the first section, means for positively engaging with the seeds in the three lower sections and forcing them from the second section to the third, from the third section to the fourth, and from the fourth section to the ground during each actuation of the seeding mechanism, and means for preventing the passage of seeds from the first to the second section during the time of the aforesaid delivery from the second section to the third and from the third to the fourth.

1,215,629. MOUNTING FOR WHEELS AND AXLES OF MINE-CARS. WALTER A. DORSEY, Columbus, Ohio, assignor to The Bonney-Floyd Company, Columbus, Ohio, a Corporation of Ohio. Filed July 13, 1915. Serial No. 39,558. (Cl. 105—67.)

1. The herein described wheel mounting for a coal mine car having in combination with the car body and the bearing boxes secured thereto, the axle mounted loosely in the said boxes and free of longitudinal engagement therewith, the wheels, and the bushings in the hubs of the wheels and having circumferentially presented shoulders whereby they are separably locked to the hubs of the wheels, the said bushings being arranged to bear against the outer ends of the said boxes respectively.



2. The herein described wheel mounting for a coal mine car having in combination the car body, the bearing boxes secured thereto, the axle formed of round rod mounted loosely in said boxes and adapted to be passed longitudinally therethrough, the wheels formed with hubs having recesses or sockets, the bushings having lugs or projections detachably seated in said sockets or recesses and arranged to bear against the outer ends of the said boxes, substantially as set forth.

3. The herein described wheel mounting for a coal mine car having in combination a car body, the boxes each formed with an integral bearing tube and secured to the body, the cylindrical axle rotatably mounted in the said boxes and adapted to be passed longitudinally therethrough, the wheels each formed with a hub having sockets or recesses at its inner end, and the bushings within the hubs each having one or more lugs or projections detachably seated in said sockets or recesses, and arranged to bear against the outer ends of the said boxes, substantially as set forth.

1,215,630. MOUNTING FOR WHEELS AND AXLES OF MINE-CARS. WALTER A. DORSEY, Columbus, Ohio, assignor to The Bonney-Floyd Company, Columbus, Ohio, a Corporation of Ohio. Filed July 13, 1915. Serial No. 39,559. (Cl. 105—67.)



1. The herein described wheel mounting for a coal mine car, having in combination the car body, the bearing secured thereto, the round rod axle mounted loosely in the bearings and adapted to move longitudinally therethrough, the wheels each loose upon and tightly inclosing an end of the axle, non-rotary devices carried by the car body engaging with the wheel to hold it longitudinally, and the bushing between the axle and the wheel and interlocking with the latter and bearing against the bearing box.

2. The herein-described wheel mounting for a coal mine car having in combination the body, the bearing box secured thereto having the upper part adapted to rest upon the axle, the downwardly extending axle-guiding and holding flanges and an integral laterally acting wheel retainer, the axle mounted loosely in the bearing box and adapted

to be moved transversely to its axis on vertical lines between the said guiding and holding flanges into and out of working position in the bearing box, the wheel loosely mounted on and inclosing the end of the axle and formed with a hub having an integral wheel-retaining device to engage the retaining device on the bearing, and a bushing tube loosely fitted within the hub and interlocking therewith, the hub and bushing being adapted to bear against the box and against the downwardly extending flanges thereon.

1,215,631. MOUNTING FOR WHEELS AND AXLES OF MINE-CARS. WALTER A. DORSEY, Columbus, Ohio, assignor to The Bonney-Floyd Company, Columbus, Ohio, a Corporation of Ohio. Filed June 29, 1915. Serial No. 37,085. (Cl. 105—67.)



1. In a mounting for a car axle and its wheels, the combination of the boxes secured to the car at points inside the wheels, the axle mounted in the said boxes and arranged to neither receive or transmit pressure longitudinally from or to the boxes, the wheel rigidly secured to the axle at one end and rotating therewith, the wheel loosely mounted on the axle at the other end and thrust elements within the boxes, the hub of each wheel being arranged to take from the said thrust element of the adjacent bearing the side thrust of the car exterted toward said wheel.

2. In a mounting for a car axle and its wheels, the combination of the boxes secured to the car at points inside the wheels, the axle mounted in said boxes and arranged to either receive or transmit pressure longitudinally from or to the boxes, the wheel rigidly secured to the axle at one end and rotating therewith, the wheel loosely mounted on the axle at the other end, thrust elements within the boxes, the hub of each wheel being arranged to take from the said thrust element and adjacent bearing the side thrust of the car exerted toward said wheel, and the removable wearing washer interposed between the hub and the adjacent bearing.

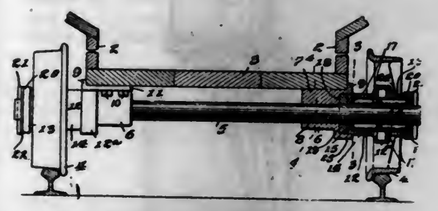
3. In a mounting for the axle and its wheels of a mine car, the combination of the boxes at the sides of the car, the axle adapted to be passed loosely longitudinally from end to end through the boxes, the wheel rigidly secured to the axle, the wheel loosely mounted on the axle and thrust elements within the boxes, the hub of each wheel being arranged to take from the said thrust element and adjacent bearing all the side thrust of the car exerted toward said wheel.

4. In a mounting for the axle and its wheels of a mine car, the combination of the boxes secured to the car, the axle adapted to be passed loosely longitudinally through the boxes from side to side of the car, the wheel rigidly secured to the axle and rotating therewith, the wheel loosely mounted on the axle, thrust elements within the boxes, the hub of each wheel being arranged to take from the said thrust element and adjacent bearing the side thrust of the car exerted toward said wheel, and the removable wearing washer interposed between the hub and the adjacent bearing.

5. In a mounting for a car axle and its wheels, the combination of the boxes secured to the car at points inside the wheels, the axle mounted in said boxes and arranged to neither receive or transmit pressure longitudinally from or to the boxes, the wheel rigidly secured to the axle at one end and rotating therewith, the wheel loosely mounted on the axle at the other end, the hub of each wheel being arranged to take from the adjacent bearing the side thrust of the car exerted toward said wheel, the interposed axially acting thrust device between the bearing and the hub, the anti-friction devices between the bearing and the axle, and the removable wearing washers respectively interposed between the bearing and the axially acting thrust device and between the latter and the hub.

[Claims 6 to 9 not printed in the Gazette.]

1,215,632. WHEEL-MOUNTING FOR MINE-CARS WALTER A. DORSEY, Columbus, Ohio, assignor to The Bonney-Floyd Company, Columbus, Ohio, a Corporation of Ohio. Filed June 29, 1915. Serial No. 37,087. (Cl. 105—67.)



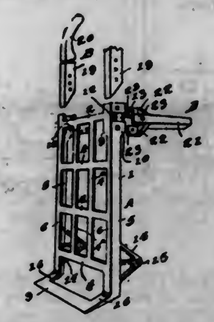
1. The herein described means for mounting the body of a mine car having in combination the boxes secured to the body of the car and each formed with a relatively deep chamber around the axis, the wheels having hubs loosely mounted on the axles, the enlarged wearing blocks in the chambers in the boxes and bearing against the hubs, the rotary axle 5 mounted and freely movable longitudinally and rotatable in said boxes and wheels, and means on the axle outside of the wheels for preventing the lateral displacement of either wheel therefrom, each wheel being free on the axle and movably confined between its wearing block and the said means on the axle outside of the wheel.

2. The herein described means for mounting the body of a mine car having in combination the boxes secured to the body of the car, the axle mounted longitudinally and rotatively loosely in said boxes and adapted to be passed entirely through them, the wheels one at each end of the axle, each wheel having a relatively enlarged hub with an inward turned flange at the inner end, the sets of antifriction rollers mounted between the hub and the axle, the relatively large thick bearing plate interposed between the wheel hub and the box, the cap at the outer end of the hub, and the lock pins or keys in the outer ends of the axle for holding, longitudinally, the parts together which are mounted on the axle, substantially as set forth.

3. The herein described means for mounting the body of a mine car having in combination the boxes secured to the body of the car, the axle mounted longitudinally in said boxes and adapted to be passed entirely through them, and through the wheels, the wheels one at each end of the axle, each wheel having a relatively enlarged hub with an inward turned flange at the inner end and inserted in the outer end of the box, the sets of antifriction rollers mounted between the hub and the axle, the separate cap at the outer end of the hub, and the lock pins or keys in the outer ends of the axle for holding, longitudinally, the parts together which are mounted on the axle.

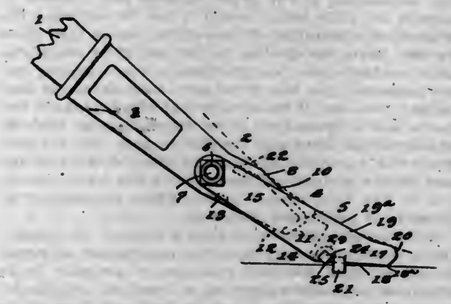
1,215,633. TWO-WHEELED TRUCK. WALTER A. DORSEY, Columbus, Ohio, assignor to The Bonney-Floyd Company, Columbus, Ohio, a Corporation of Ohio. Filed June 29, 1915. Serial No. 37,088. (Cl. 21—65.)

1. In a truck of the class described, the wheel-mounted base frame having cross bars and side bars cast integrally together and cast with short longitudinally arranged handle boxes at the rear end of the frame, each box having an outer vertical wall and an inner vertical wall with openings therethrough in combination with short handles, each having its inner ends seated in one of said boxes, and legs D, each having upwardly projecting transversely spaced extensions 23 slidably fitting in the openings in the vertical walls of a box and embracing the inner ends of one of said handles, and fastening devices passing through each handle and through the adjacent box walls and leg.



2. In a two wheeled service truck, the combination of the base frame having the sills, the girts, the nose bar and the boxes at the rear ends of the sills all cast integral in one piece of metal, the handles inserted longitudinally into the rear ends of the said boxes, the legs having horizontally extending braces bearing against the under side of the frame and having vertically extended arms to prevent lateral displacement, fastening devices for the arms and legs, the axle mounted below the front end of the truck and the wheels on the said axle, substantially as set forth.

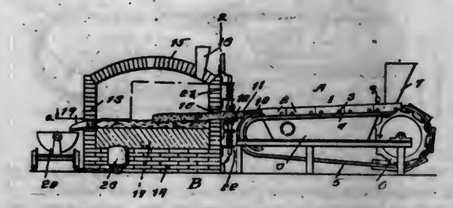
1,215,634. CAR-MOVER. WALTER A. DORSEY, Columbus, Ohio, assignor to The Bonney-Floyd Company, Columbus, Ohio, a Corporation of Ohio. Filed June 29, 1915. Serial No. 37,089. (Cl. 254—88.)



1. The combination with the main lever having the forward operating end formed with the wheel engaging shoulder 8, relatively near the pivot axis of the lever, the contact surface 10 extending from said shoulder to the end of the lever, and the stops, of the vibratable wheel-contacting pinch par movable vertically with the main lever and engaging the wheel independently of said lever and having the solid forward end 17 with the rounded nose 20, the guides 21 fitting the sides of the rail, and the detachable and adjustable fulcrum pin, substantially as described.

2. The combination of the main lever having the forward projecting end with the upper wheel engaging face adapted to provide rolling contact with the wheel and extending from the end of the lever to a transverse line near the pivot, and the vertically vibratable pinch bar or supplemental lever connected by a pivot near the upper end of said rolling surface to the main lever and formed with the forwardly projecting solid wheel-contacting vertically movable nose part, and having the rail-engaging fulcrum pin therein, and rail-engaging guide lugs rocking around said fulcrum pin.

1,215,635. SINTERING AND SMELTING ORE. ARTHUR S. DWIGHT, New York, N. Y. Filed Mar. 31, 1910, Serial No. 552,578. Renewed June 15, 1916. Serial No. 103,863. (Cl. 204—63.)



1. The herein described process of sintering and smelting ore, which consists in sintering a layer of ore into a continuous sinter cake, continually moving the said cake away from the region of sintering, subjecting the cake intermediate its ends to the action of an electric current, and subjecting it at its advance end to the action of an electric current which passes from the end of the cake to a relatively stationary conductor body, substantially as set forth.

2. The herein described process of sintering and smelting ore, which consists in sintering a layer of ore into a continuous sinter cake, continually moving the cake away from the region of formation and subjecting the said cake to the action of an electric current, the said current passing through the cake and from the advance end of the cake to a relatively stationary electrode, substantially as set forth.

3. The herein described process of sintering and smelting ore, which consists in sintering a layer of ore into a continuous cake and subjecting the said cake while it still retains the heat of sintering to the action of an electric current, the said current passing through the cake, and from the advance end of the cake to a relatively stationary electrode, substantially as set forth.

4. The herein described process of sintering and smelting ore of the class adapted to be sintered by the combustion of materials contained therein, which consists in arranging the ore in a continually moving layer, igniting the layer to cause combustion and sintering and subjecting the sintered layer to the action of an electric current, while it still retains the heat of sintering, the said current passing through the cake, and from the advance end of the cake to a relatively stationary electrode, substantially as set forth.

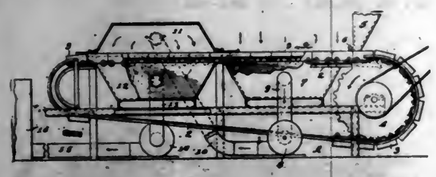
5. The herein described process of sintering and smelting ore, which consists in forming a continuous cake of sintered ore, continually moving the cake away from the region of formation, smelting the advance end of the said moving cake, and passing an electric current through the said cake intermediate its ends to raise the temperature thereof, substantially as set forth.

[Claims 6 to 28 not printed in the Gazette.]

1,215,636. PROCESS FOR TREATING ORES. ARTHUR S. DWIGHT, New York, N. Y., assignor to Dwight & Lloyd Sintering Company, New York, N. Y., a Corporation of Delaware. Filed July 7, 1913. Serial No. 777,782. (Cl. 23—1.)

1. The herein described method of treating sulfid ore for the obtaining therefrom of gas charged highly with

sulfur and simultaneously obtaining a uniformly porous sinter, the same consisting in exposing the sulfid ore in a relatively shallow layer or stratum, passing air therethrough and causing combustion therein, collecting said air after passing through the ore and while containing a relatively low percentage of sulfur, causing the said combustion to form a uniformly porous sinter body, then passing the said air with its sulfur contents again through the sintered ore and oxidizing more or less of the sulfur residue therein, charging the air volume with the sulfur gases derived therefrom.



2. The herein described method of treating sulfid ores to obtain from them simultaneously with the formation of a porous sinter, a gas rich in sulfur and sulfur products, which method consists in subjecting layers or strata of ore to ignition and supplying combustion-supporting air at two stages thereto after ignition, the air supplied during the second stage being of the same character as that which is delivered to the ore during the first stage.

3. The herein described method of roasting sulfid ores, whereby a porous sinter is obtained together with gaseous products of combustion rich in sulfur content, which consists in arranging ore in shallow layers, igniting it, passing air through said layers to remove or consume sulfur found therein, and collecting and returning said air and the gases of combustion to said ore, in order to complete the burning of the contained sulfur, whereby the gases of combustion thus obtained being charged with sulfur dioxid from the two passages through the sulfur layer, are rich in sulfur products.

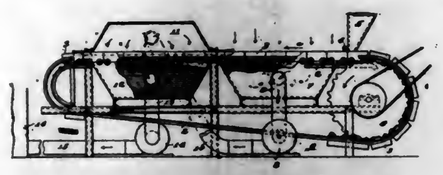
4. The herein described method of roasting sulfid ores, whereby a porous sinter is obtained together with gaseous products of combustion rich in sulfur content, which consists in arranging ore in shallow layers, igniting it, passing air through said layers to remove or consume sulfur found therein, and collecting and returning said air and the gases of combustion to said ore while said ore is still hot, in order to complete the burning of the contained sulfur, whereby the gases of combustion thus obtained being charged with sulfur dioxid from the two passages through the sulfur layer, are rich in sulfur products.

5. The herein described method of roasting sulfid ores, whereby a porous sinter is obtained together with gaseous products of combustion rich in sulfur content, which consists in arranging ore in shallow layers, igniting it, passing air through said layers to remove or consume sulfur found therein, and collecting and returning said air and the gases of combustion to said ore while both the ore and the air and gases of combustion are still hot, in order to complete the burning of the contained sulfur, whereby the gases of combustion thus obtained being charged with sulfur dioxid from the two passages through the sulfur layer, are rich in sulfur products.

[Claims 6 to 11 not printed in the Gazette.]

1,215,637. APPARATUS FOR ROASTING AND SINTERING ORES. ARTHUR S. DWIGHT, New York, N. Y., assignor to Dwight and Lloyd Sintering Company, Inc., New York, N. Y., a Corporation of Delaware. Original application filed July 7, 1913, Serial No. 777,732. Divided and this application filed Oct. 21, 1914. Serial No. 867,861. (Cl. 266—21.)

1. In an apparatus for treating sulfid ore, the combination of an ore holder adapted to support a relatively shallow layer or stratum of the ore, means for passing air therethrough and causing combustion therein, means for collecting the air after it passes through the ore and also the sulfur gases carried thereby the aforesaid means being arranged as substantially set forth to form a porous sinter body from the ore, means for causing the said and sulfur gases in the said collector to pass a second time through the sintered ore to further effect the desulfurizing thereof and add sulfur gases to those already in the said air, substantially as set forth.



2. In an apparatus for the roasting of sulfur-bearing ore, the combination of two grate surfaces each adapted to support a layer of ore during the roasting operation, an air duct leading from the lower side of one grate surface to the upper side of the other grate surface, and means for causing air to flow downward through an ignited layer of ore on the first grate surface, then through the air duct and finally downward through an ignited layer of ore on the second grate surface.

3. In an apparatus for the roasting of sulfur-bearing ore, the combination of two grate surfaces, each adapted to support a layer of ore during the roasting operation, a fan, an air duct leading from the lower side of one grate surface to the suction side of the fan, and a second air duct leading from the pressure side of the fan to the upper side of the other grate surface, the arrangement being such that the fan sucks air downward through a layer of ignited ore on the first grate surface and forces the same air downward through a layer of ignited ore on the second grate surface.

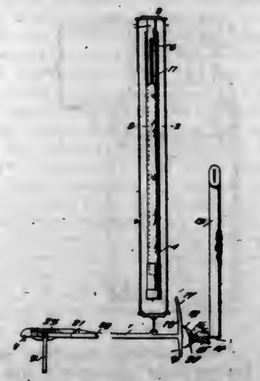
4. In an apparatus for roasting sulfur-bearing ore, the combination of two grate surfaces, each adapted to support ore while being roasted, a box for collecting the products of combustion of the roasting ore on each grate surface, means for dividing the air box under one of the grate surfaces into two chambers, a hood covering the ore supported upon one of the grate surfaces, an air duct leading from one of the chambers of the divided air box to the said covering hood, a fan for causing the products of combustion from said chamber to pass into the said hood, and ducts leading from the other chamber of the said divided air box and from the air box below the air box of the hood-covered grate surface for taking the products of combustion therefrom.

5. In an apparatus for treating a mass of ore containing a combustible component, the combination of means for supporting a relatively thin layer of ore prior to its treatment and also supporting a layer of treated ore, means for igniting the ore of the first said layer at its surfaces, means for causing air to flow through the last named layer after ignition, and means for conducting the products of the combustion of said layer to and passing them through the second said section of treated ore.

[Claims 6 to 8 not printed in the Gazette.]

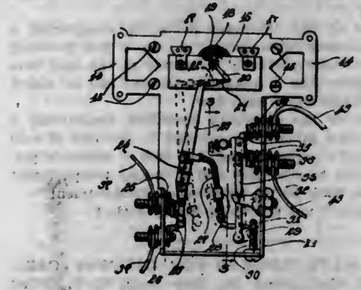
1,215,638. WEIGHING-SCALE. ARTHUR SAMUEL DYSART, Norfolk, Va. Filed Dec. 26, 1914. Serial No. 879,076. (Cl. 73—23.)

In a weighing scale, the combination with a scale beam, of a hydrostatic counterpoise including a vertical tubular transparent liquid reservoir, a float member immersed in the liquid within the said reservoir, and having its surface contiguous to the reservoir walls having a longitudinal groove, and having a graduated scale directly thereon



and extending along the said groove, and connections between the said float member and the scale beam.

1,215,639. STARTING AND STOPPING MECHANISM FOR ENGINES. AUSTIN D. EBERLY, Spokane, Wash. Filed Mar. 4, 1916. Serial No. 82,194. (Cl. 200—31.)



1. In a thermal controlled electrical switch mechanism, a support for the mechanism, an expanding and contracting means, a switch lever adapted to be actuated by said means, contact means carried by said lever, engaging contact means therefor; an additional switch lever fulcrumed in said support, contact means carried by the last mentioned lever, engaging contact means therefor; a linking member for connecting said levers, and a yielding connecting member for connecting said linking member and said additional switch lever.

2. In a thermostatic switch of the class described, a casing, an expanding and contracting spring suitably mounted therein, a shaft operated by said spring, a switch lever fulcrumed within the casing and having adjustable connection with said shaft, a pair of contacts carried on one end of said switch lever, a pair of contact posts mounted in the casing for engagement therewith, an additional switch lever fulcrumed within the casing, a linking member connected with the first mentioned switch member, and a yielding connection between said linking member and said last mentioned switch lever, whereby to operate the latter upon the operation of the first mentioned switch lever.

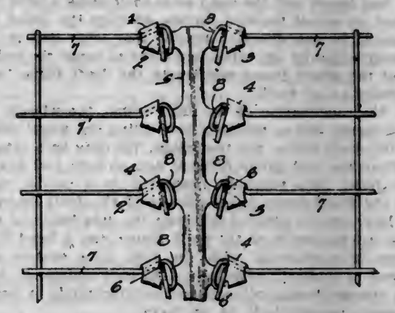
3. In a switch member of the class described, a casing adapted to be secured adjustably to an exhaust pipe, an expanding and contracting spring member suitably mounted in said casing, a switch lever fulcrumed within said casing and having adjustable connection with said spring member, electrical contact members on said lever, additional contact members on said casing for engagement therewith, a fork-like switch lever fulcrumed within said casing and having contact members at one end thereof, additional contact members carried on the casing adapted for engagement with the last mentioned contact members, a linking member connected at its one end with said first mentioned switch lever, a guiding support for the opposite end of said linking member, the last mentioned end of said linking member being directed between the arms of said second mentioned switch lever, and a coil spring member engaged with the lower end of said linking member and the crown of said fork-like switch lever, whereby to operate the latter upon the operation of the first switch lever.

1,215,640. WRENCH. FRANK JOHN EBLE, New York, N. Y. Filed May 29, 1916. Serial No. 100,535. (Cl. 81—91.)



A device of the class described comprising a relatively fixed jaw, a movable jaw pivoted thereto, a short shank on said relatively fixed jaw, a long shank on said movable jaw having an inclined inner face diverging outwardly from the opposite face of the short shank, a countersunk ratchet disposed in said inclined face and positioned between the sides of the same, a handle pivoted to the end of said short shank, coacting shoulders between said handle and shank to limit the movement of the handle in one direction, a projection on said handle, a pawl extending therefrom and engaging the ratchet in said long shank of the movable jaw, said pawl being adapted for various adjustments therewith to vary the space between the jaws, and a spring on the pivot between said jaws adapted to hold the ratchet in engagement with the pawl.

1,215,641. FENCE-WIRE FASTENER. JULIUS C. FORD, Summit, Miss. Filed May 18, 1916. Serial No. 98,843. (Cl. 256—47.)

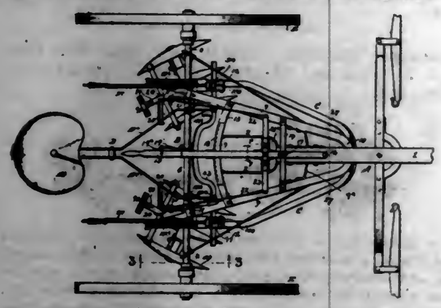


A device for connecting continuous ends of adjacent wires, consisting of a bar having lateral extended arms, the free ends of each of said arms having laterally disposed hooks; fence strands engaging said hooks and coiled about said arms; the free end of each of said coils engaging one of said notches beneath the coil, for the purpose set forth.

1,215,642. CULTIVATOR. CHARLES P. A. FRIBERG, Moline, Ill., assignor to Deere & Mansur Company, Moline, Ill., a Corporation of Illinois. Filed Jan. 2, 1908. Serial No. 409,034. (Cl. 97—35.)

1. In a cultivator, the combination of the wheels, the arched wheel frame, the draft frame, the two tool gangs, the two drag bars extending from the central longitudinal vertical planes of the machine outward, downward and backward and having their front ends arranged to swing laterally of the machine independently of the draft frame,

the tool gangs secured to the lower rear ends of the drag bars, an intermediate frame rigid with the arched frame and pivotally connected near the arched frame to the draft frame and extending forward from the pivotal connection to the centrally arranged front ends of the drag bars, means for laterally moving the front ends of the drag bars and of the intermediate frame independently of the draft frame, and a sliding guide and bracing mechanism in transverse vertical planes between the aforesaid pivotal connection and the front ends of the drag bars.



2. The combination of the wheel frame, the draft frame, means pivotally connecting the wheel frame and the draft frame, the tool supporting devices, the hand lever adapted to swing the wheel frame relative to the draft frame, the foot lever carried by the wheel frame, and a connection between the foot lever carried by the wheel frame, and the hand lever comprising a lever fulcrumed on one of the said frames whereby the latter may be actuated by the foot lever to swing the wheel frame relative to the draft frame, substantially as set forth.

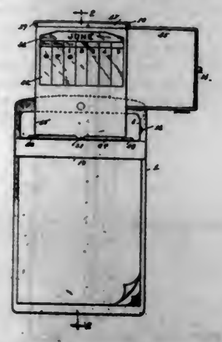
3. The combination of the wheel frame, the draft frame, means pivotally connecting the wheel frame and the draft frame, the tool supporting devices, the hand lever adapted to swing the wheel frame relative to the draft frame, foot levers carried by the wheel frame and connections between said foot levers and the hand lever comprising a lever fulcrumed on one of the said frames, whereby the latter can be moved in one direction by one foot lever and in the other direction by the other foot lever to cause the swinging of the wheel frame relative to the draft frame, substantially as set forth.

4. The combination of the draft frame, the wheels, the wheel frame, means pivotally connecting the wheel frame and the draft frame, the tool gangs, the drag bars extending from the tool gangs forward and upward and having their front ends pivotally connected to a carrier rigid with the wheel frame independently of the draft frame, a foot lever system adapted to adjust the drag bars and tool gangs independently of the draft frame, and a hand lever system interconnected with the foot lever system and adapted to similarly adjust the drag bars and gangs, said lever systems being optionally usable alternately or simultaneously, substantially as set forth.

5. The combination of the draft frame, the wheels, the wheel frame, means pivotally connecting the wheel frame and the draft frame, the tool gangs, the drag bars extending forward and upward from the tool gangs and having their front ends pivotally attached to a carrier rigid with the wheel frame independently of the draft frame, a foot lever system and a hand lever system interconnected with each other and both adapted to move the front ends of the drag bars and the wheel frame laterally, and means for locking both of the lever systems in different angular positions.

1,215,643. PAD-HOLDER. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Oct. 14, 1915. Serial No. 55,789. (Cl. 11—11.)

1. A device of the character described, comprising a back plate, a spring-actuated jaw pivotally connected to one end of said back plate, and a compartment adapted to hold a card or the like carried by said jaw.



2. A device of the character described, comprising a back plate, a jaw pivotally connected to one end of the back plate and a compartment, one end of which is pivotally connected to said jaw.

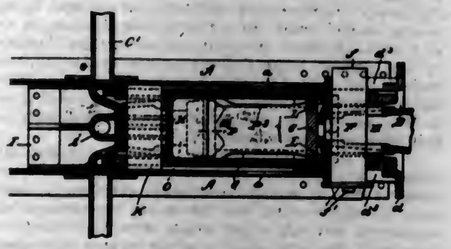
3. A device of the character described, comprising a back plate, a spring-actuated jaw pivotally connected to one end of said back plate, a compartment adapted to h l a card or the like carried by said jaw and a second compartment slidably secured to the back of the first-named compartment.

4. A device of the character described, comprising a back plate, provided with apertured ears, a jaw provided with apertured ears pivotally connected to the said ears of the back plate and a compartment, one end of which is pivotally connected to said jaw.

5. A device of the character described, comprising a back plate, a jaw pivotally connected to one end of said back plate, and a compartment, one end of which is pivotally connected to said jaw and a second compartment secured to the back of the first-named compartment.

[Claims 6 and 7 not printed in the Gazette.]

1,215,644. DRAFT-RIGGING FOR RAILWAY-CARS. RICHARD D. GALLAGHER, Jr., New York, N. Y. Filed May 9, 1914, Serial No. 837,550. Renewed Aug. 21, 1916. Serial No. 116,190. (Cl. 213—64.)



1. In a draft rigging for railway cars, the combination with spaced longitudinal car sills, of a casting bridging the space between and rigidly connecting the ends of said car sills, said casting embodying a face plate bridging the ends of the sills and having a central substantially rectangular opening therethrough for the reception of a correspondingly shaped coupler shank, whereby the coupler will be supported and guided by the casting, a rear follower block, a stop for limiting the rearward movement of said block, a transverse pin loosely mounted in said casting and forming one member of a connection between the coupler shank and the rear follower block, said pin being movable with the coupler shank under draft strains and stationary under buffing strains, side links connecting said rear follower block and pin, and having their forward ends extended into the rectangular opening in the casting whereby the lateral movement of the coupler shank relatively to the casting is limited by the forward ends of the side links, a front follower plate seated against the rear face of the casting and bridging the coupler shank opening therein and against which the coupler shank rests, and a yielding pressure resisting member interposed between the front follower plate and rear follower block.

2. In a draft rigging for railway cars, the combination with the spaced longitudinal car sills, a casting bridging and rigidly connecting the ends of said sills, said casting having a face plate forming a stop for the head of the coupler and having a central substantially rectangular aperture therethrough for the coupler shank, a seat on its rear face for a forward follower plate, and a guiding flange projecting rearwardly of said seat, the follower plate normally resting in said seat within the flange and bridging the rear end of the opening through the casting, a rear follower block, a casting rigidly connecting the sills in rear of said follower block and forming a stop therefor, pins extending transversely through the follower block and casting at the end of the sills, side links connecting said pins, a yielding pressure resisting member mounted between the follower plate and follower block for yieldingly resisting relative movements of said parts toward each other, and a coupler shank having an elongated aperture therein through which the pin at the forward end of the side link passes, whereby the coupler shank may move rearwardly independently of said pin to compress the pressure resisting member through the action of the forward follower plate.

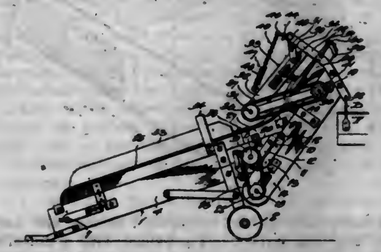
3. In a draft rigging for railway cars, the combination with the spaced longitudinal car sills, of a casting rigidly mounted between and bridging the ends of said sills, said casting embodying a face plate forming an ultimate stop for the inward movement of the coupler head and having a substantially rectangular opening therethrough in which the coupler shank is guided and mounted, a transverse longitudinally elongated opening for a coupler shank engaging pin, a seat on the rear face of said casting for the reception of the follower plate, and a guiding flange projecting rearwardly around said seat, a rear follower block, a stop for limiting the rearward movement of the block, a follower plate seating against the front casting, a yielding pressure resisting member intermediate the follower plate and follower block, side links connected at their rear ends with the follower block, a transverse pin mounted in the opening in the front casting and coöperating with said side links, and a coupler shank loosely mounted on said pin and normally resting at its rear end against the follower plate, said coupler shank having a longitudinally elongated opening for the reception of the pin, whereby under draft strains the follower block, links, pin and coupler will move forwardly in unison, and under buffing strains the coupler and forward follower plate will move rearwardly independently of the link and pin.

4. In a draft rigging for railway cars, the combination with the spaced longitudinal car sills, a casting rigidly connecting and bridging the space between said sills at their ends, said casting having an opening therethrough for the support and guiding of a coupler shank, a front follower plate resting against said casting, a rear follower block, a stop casting against which said rear follower block rests, side links with connections at the forward ends thereof for coöperation with the coupler shank, a transverse pin extending through the rear follower block and links, the ends of said pin being confined between and guided by the webs of the sills, said webs having an opening therein for the insertion of said pin located forwardly of the normal position of the pin to facilitate the assembling of the parts.

5. In a draft rigging for railway cars, the combination with the spaced longitudinal car sills, yielding pressure resisting member, rear follower block, stop for limiting the rearward movement of said block, and front follower plate, of a casting rigidly connecting and bridged between the front ends of the sills, said casting embodying a front plate forming an ultimate stop for the coupler head under buffing strains and having a substantially rectangular opening therethrough for the reception of the coupler shank, a seat at its rear side for the follower plate, a guiding flange projecting rearwardly from said seat, and a transverse pin opening therein elongated longitudinally of the car, a transverse pin mounted in said pin opening for retaining the coupler shank in position, and side links connecting said pin and rear follower block, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,215,645. FEEDER FOR THRESHING-MACHINES. JESSE W. GILBERT, Delavan, Kans. Filed Oct. 5, 1916. Serial No. 123,933. (Cl. 193—14.)



1. In combination, a support, an inclined conveyer frame hinged to one end thereof to fold onto the same, an inclined presser frame above said conveyer frame, means pivotally connecting the lower end of the presser frame with the upper end of the conveyer frame, rigid arms rising from the upper end of said conveyer frame, a transverse shaft detachably connected at its ends with said arms, and slotted links connecting the upper end of the presser frame with said shaft.

2. In combination, a support, an inclined conveyer frame hinged to one end thereof to fold onto the same, an inclined presser frame above said conveyer frame, means pivotally connecting the lower end of the presser frame with the upper end of the conveyer frame, rigid arms rising from the upper end of said conveyer frame and having notches in their upper ends, a transverse shaft having blocks at its ends received in said notches, means for detachably holding said blocks in the notches, and means connecting the upper end of the presser frame with said shaft and serving to permit vertical movement of said presser frame.

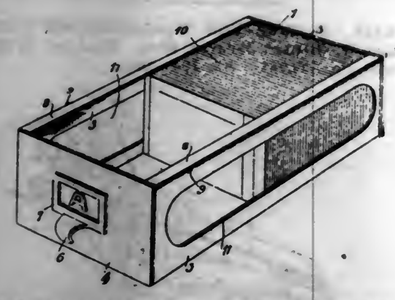
3. In combination, a support, an inclined conveyer frame hinged to one end thereof to fold onto the same, an inclined presser frame above said conveyer frame, means pivotally connecting the lower end of the presser frame with the upper end of the conveyer frame, rigid arms rising from the upper end of said conveyer frame and having notches in their upper ends, one wall of said notches having an overhanging nose at its upper end, a transverse shaft having blocks at its ends for reception in the notches and beneath said noses when the shaft is turned a fraction of a revolution, means for so turning said shaft and holding it in such position, and means connecting the upper end of the presser frame with said shaft and serving to permit vertical movement of said presser frame.

4. In combination, a main conveyer frame having a dividing wall extending longitudinally thereof, an auxiliary conveyer frame hinged to one end of said main frame to fold thereon, an auxiliary dividing wall for said auxiliary frame hinged to the aforesaid dividing wall, and a transverse bar at the upper end of the auxiliary frame having a seat to loosely receive said auxiliary dividing wall when the latter is in operative position and to release said auxiliary wall when the auxiliary frame is folded onto the main frame.

5. In combination, a main conveyer frame having a dividing wall extending longitudinally thereof, an auxiliary conveyer frame hinged to one end of said main frame to fold thereon, an auxiliary dividing wall for said auxiliary frame hinged to the aforesaid dividing wall,

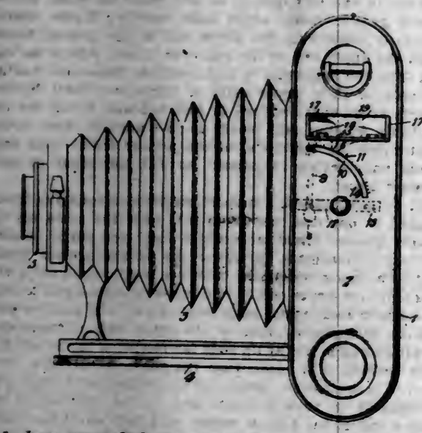
and a transverse bar at the upper end of the auxiliary frame having its intermediate portion depressed to form a seat for loosely receiving the free end of said auxiliary dividing wall when the latter is in operative position.

1,215,646. INDEX-CARD DRAWER FOR FILING-CABINETS. ROY E. GREEN, Peacham, Vt. Filed Apr. 12, 1916. Serial No. 90,707. (Cl. 129—16.)



An index card drawer, including a bottom, side and end walls, said side walls being provided with a plurality of openings exposing the marginal edges of the index cards, the said side walls having recesses formed along the upper edge of said side walls, angle irons each having one of their sides adapted to seat in said recesses, the other side providing means for engaging the index cards and prevent displacement thereof.

1,215,647. RANGE-FINDER FOR CAMERAS. ROY E. GREEN, Peacham, Vt. Filed Apr. 13, 1916. Serial No. 90,893. (Cl. 33—71.)

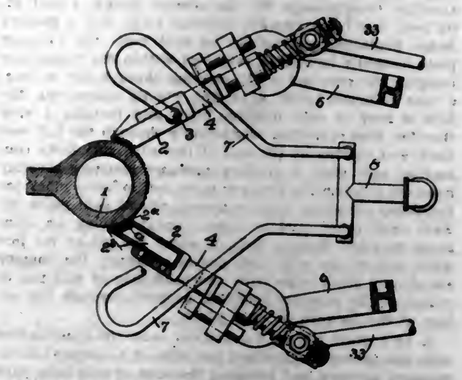


1. In a range finder, a camera having a side wall provided with an arcuate elongated aperture, an indicating arm pivoted on said side wall and having a laterally extending finger projecting through said aperture, means for retaining said arm in a position predetermined upon the movement of the camera, and a foldable sighting device carried by said side wall.

2. In a range finder a camera, an arm pivoted to the side wall of the camera and having a weighted extremity, said wall having an arcuate scale adjacent the free end of said arm, and a spring arm carried by said camera wall for engagement with first said arm to retain the same in a position to which the same is moved.

3. In a range finder, in combination with a camera having a side wall, a pin mounted on said side wall, an indicator comprising an arm, said arm being pivoted by means of the said pin, a spring strip permanently attached to the wall providing means to retain the indicator arm in indicating positions, said spring strip being provided with an aperture to engage said pin, a knob formed intermediate the ends of said strip to provide means for releasing the indicator arm.

1,215,648. TIRE-FORMING APPARATUS. RICHARD T. GRIFFITH, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Oct. 26, 1916. Serial No. 127,888. (Cl. 154—10.)



1. Apparatus of the class described comprising a core to receive the fabric to be shaped thereon, and a hollow element having a perforated face curved to conform approximately to the surface of said core, means for supplying fluid under pressure to said element, said element and said core being movable relatively to each other.

2. Apparatus of the class described comprising a revoluble core to receive tire forming material and a pair of hollow elements adapted to move radially of the core and having perforated faces curved to conform approximately to the surface of the core and means for supplying fluid under pressure to the interiors of said elements.

3. An apparatus of the class described comprising a revoluble core to receive tire material, a pair of elements adapted to move radially of the core and having faces curved to conform approximately to the surface of said core, and means for maintaining a cushion of fluid between the working faces of said elements and the tire material.

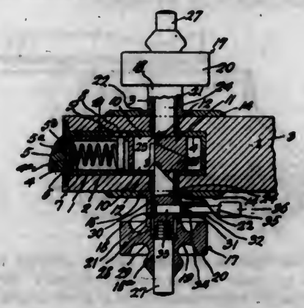
4. Apparatus of the class described comprising a revoluble core to receive the tire material, a pair of hollow elements having faces curved to conform approximately to the surface of the core, said faces having a plurality of perforations therethrough, means for supplying fluid under pressure to the interior of said elements, and means for causing said elements to move radially with relation to the core and to be swung to maintain the perforated faces concentric with the core during such radial movement.

1,215,649. LATCH. ARCHIBALD B. GRUBER, San Bernardino, Cal. Filed Sept. 1, 1916. Serial No. 118,120. (Cl. 70—42.)

1. In a latch, a slidable latch bolt having a T-portion, and a slidable plunger having a bifurcated cam straddling said portion and bearing against the head thereof.

2. A latch embodying a case, a spring pressed latch bolt slidable in said case and having a T-shaped heel, a guide attached to one side of the case, and a plunger slidable in said guide and having a bifurcated cam projecting into the case, straddling said heel and bearing against the head thereof.

3. A latch embodying a case, a spring pressed latch bolt slidable in said case and having a T-shaped heel, a guide attached to one side of the case, a plunger slidable in said guide and having a bifurcated cam projecting into the case, straddling said heel and bearing against the head thereof, and a knob secured upon said guide and having a reduced portion, the plunger having a stem slidable through said reduced portion and means to bear thereagainst for limiting the outward movement of the plunger.

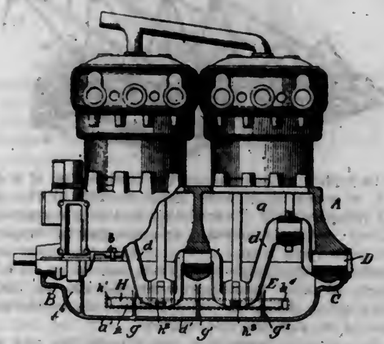


4. A latch embodying a case, a guide attached to one side thereof, a latch bolt slidable within the case, a plunger slidable within the guide for operating the latch bolt, said guide being provided at one side with a detent guide, a detent slidable in the detent guide to engage the plunger and prevent movement thereof, and a stem pivoted to the detent and swingable into alinement therewith to operate it.

5. A latch embodying a case, a latch bolt slidable therein, a guide attached to one side of the case, a knob having a tubular shank engaged upon said guide, a plunger slidable in said guide and having a stem projecting from the shank of said knob, said plunger being operatively connected with the latch bolt for retracting it, an outstanding guide carried by said shank behind the said knob, and a detent slidable in the second mentioned guide, the latch bolt having an aperture for receiving said detent.

[Claims 6 and 7 not printed in the Gazette.]

1,215,650. LUBRICATOR. EUGENE GRUENEWALD, Moline, Ill., assignor to Moline Automobile Co., a Corporation of Illinois. Filed June 11, 1910, Serial No. 566,369. Renewed July 23, 1915. Serial No. 41,620. (Cl. 184—13.)



1. In a lubricator for multiple cylinder portable engines, the combination of a crank casing having in its lower part transverse plates or webs forming a longitudinel series of lubricant-holding chambers, and means for conducting lubricant from each chamber to the other chambers, said conducting means being positioned above the bottom of the crank casing and opening into each chamber at a point above the bottom thereof and being adapted when the crank casing is horizontal to conduct by gravity an excess of lubricant in any one of the chambers to the other chambers.

2. In a lubricator for multiple cylinder portable engines, the combination of a crank casing having in its lower part transverse plates or webs forming a longitudinal series of lubricant holding chambers, and means for conducting lubricant from each chamber to the other chambers, said conducting means being positioned above the bottom of the crank casing and opening into each chamber at a point above the bottom thereof and being adapted, irrespective of the amount of lubricant therein, to conduct by gravity an excess of lubricant in any one of the chambers to the other chambers when the crank case is horizontal.

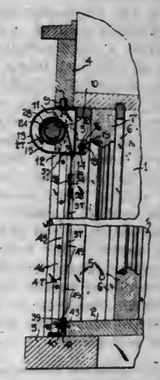
3. In a lubricator for multiple cylinder portable engines, a crank casing comprising in combination an upper part and an integrally cast lower part removably secured thereto, said lower part comprising an exterior oil retaining wall, a series of transverse plates or webs forming a series of lubricant chambers, and means for conducting lubricant from each chamber to the other chambers, said conducting means being positioned above the bottom of the crank casing and opening into each chamber at a point above the bottom thereof and being adapted when the crank case is horizontal to conduct by gravity an excess of lubricant in any one of the chambers to the other chambers.

4. In a lubricator for multiple cylinder portable engines, a crank casing comprising in combination an upper part and an integrally cast lower part secured thereto, said lower part comprising an exterior oil retaining wall, transverse plates or webs forming a series of lubricant chambers, and a longitudinally extending duct formed in the exterior wall above the bottom of the casing and having openings which connect with the several chambers at points above the bottom thereof.

5. In a lubricator for a multiple cylinder portable engine, the combination of the crank case having in its lower portion transverse plates forming a longitudinal series of lubricant holding chambers, and a conduit for conveying lubricant from one chamber to another, said conduit being open at both ends positioned within the said casing and extending from the center of one of the end oil chambers to the center of the oil chamber at the opposite end, said conduit being further provided with openings communicating with the intermediate oil chambers.

[Claims 6 to 8 not printed in the Gazette.]

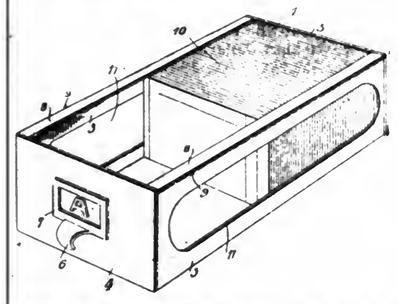
1,215,651. ROLLING SCREEN. JOSEPH GUMBER, PAUL GUMBER, and JOHN HARDER, East Moline, Ill. Filed Mar. 27, 1916. Serial No. 87,015. (Cl. 156—39.)



1. A device of the character described comprising in combination with a supporting structure, a casing mounted thereon, said casing being closed at its ends, a portion of the ends being pressed inwardly to provide supporting flanges, a pole supported by said flanges, a roller mounted upon said pole, and a screen carried by said roller.

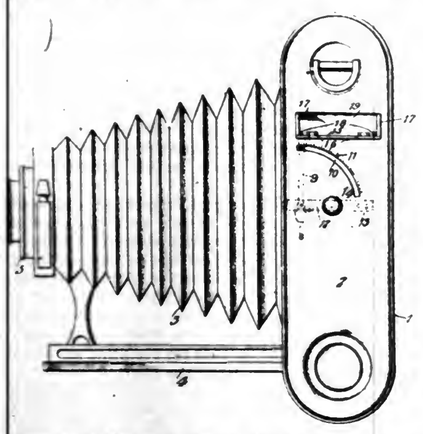
and a transverse bar at the upper end of the auxiliary frame having its intermediate portion depressed to form a seat for loosely receiving the free end of said auxiliary dividing wall when the latter is in operative position.

1,215,646. INDEX-CARD DRAWER FOR FILING-CABINETS. ROY E. GREEN, Peacham, Vt. Filed Apr. 12, 1916. Serial No. 90,707. (Cl. 129—16.)



An index card drawer, including a bottom, side and end walls, said side walls being provided with a plurality of openings exposing the marginal edges of the index cards, the said side walls having recesses formed along the upper edge of said side walls, angle irons each having one of their sides adapted to seat in said recesses, the other side providing means for engaging the index cards and prevent displacement thereof.

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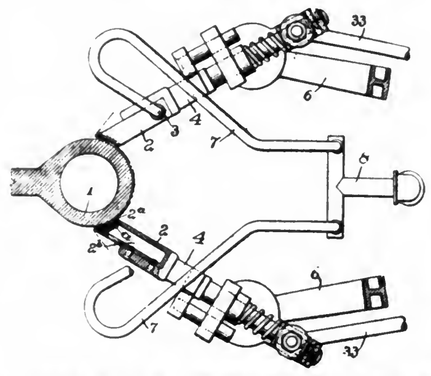


1. In a range finder, a camera having a side wall provided with an arcuate elongated aperture, an indicating arm pivoted on said side wall and having a laterally extending finger projecting through said aperture, means for retaining said arm in a position predetermined upon the movement of the camera, and a foldable sighting device carried by said side wall.

2. In a range finder a camera, an arm pivoted to the side wall of the camera and having a weighted extremity, said wall having an arcuate scale adjacent the free end of said arm, and a spring arm carried by said camera wall for engagement with first said arm to retain the same in a position to which the same is moved.

3. In a range finder, in combination with a camera having a side wall, a pin mounted on said side wall, an indicator comprising an arm, said arm being pivoted by means of the said pin, a spring strip permanently attached to the wall providing means to retain the indicator arm in indicating positions, said spring strip being provided with an aperture to engage said pin, a knob formed intermediate the ends of said strip to provide means for releasing the indicator arm.

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2. Apparatus of the class described comprising a revoluble core to receive tire forming material and a pair of hollow elements adapted to move radially of the core and having perforated faces curved to conform approximately to the surface of the core and means for supplying fluid under pressure to the interiors of said elements.

3. An apparatus of the class described comprising a revoluble core to receive tire material, a pair of elements adapted to move radially of the core and having faces curved to conform approximately to the surface of said core, and means for maintaining a cushion of fluid between the working faces of said elements and the tire material.

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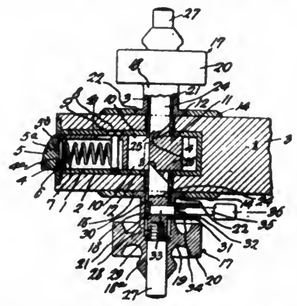
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2. A latch embodying a case, a spring pressed latch bolt slidable in said case and having a T-shaped heel, a guide attached to one side of the case, and a plunger slidable in said guide and having a bifurcated cam projecting into the case, straddling said heel and bearing against the head thereof.

3. A latch embodying a case, a spring pressed latch bolt slidable in said case and having a T-shaped heel, a guide attached to one side of the case, a plunger slidable

in said guide and having a bifurcated cam projecting into the case, straddling said heel and bearing against the head thereof, and a knob secured upon said guide and having a reduced portion, the plunger having a stem slidable through said reduced portion and means to bear thereagainst for limiting the outward movement of the plunger.

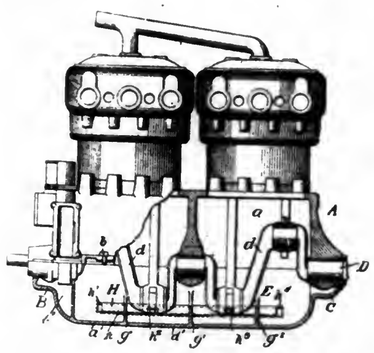


4. A latch embodying a case, a guide attached to one side thereof, a latch bolt slidable within the case, a plunger slidable within the guide for operating the latch bolt, said guide being provided at one side with a detent guide, a detent slidable in the detent guide to engage the plunger and prevent movement thereof, and a stem pivoted to the detent and swingable into alinement therewith to operate it.

5. A latch embodying a case, a latch bolt slidable therein, a guide attached to one side of the case, a knob having a tubular shank engaged upon said guide, a plunger slidable in said guide and having a stem projecting from the shank of said knob, said plunger being operatively connected with the latch bolt for retracting it, an outstanding guide carried by said shank behind the said knob, and a detent slidable in the second mentioned guide, the latch bolt having an aperture for receiving said detent.

[Claims 6 and 7 not printed in the Gazette.]

1,215,650. LUBRICATOR. EUGENE GRUENEWALD, Moline, Ill., assignor to Moline Automobile Co., a Corporation of Illinois. Filed June 11, 1910, Serial No. 566,369. Renewed July 23, 1915. Serial No. 41,620. (Cl. 184—13.)



1. In a lubricator for multiple cylinder portable engines, the combination of a crank casing having in its lower part transverse plates or webs forming a longitudinal series of lubricant-holding chambers, and means for conducting lubricant from each chamber to the other chambers, said conducting means being positioned above the bottom of the crank casing and opening into each chamber at a point above the bottom thereof and being adapted when the crank casing is horizontal to conduct by gravity an excess of lubricant in any one of the chambers to the other chambers.

2. In a lubricator for multiple cylinder portable engines, the combination of a crank casing having in its lower part transverse plates or webs forming a longitudinal series of lubricant holding chambers, and means for conducting lubricant from each chamber to the other chambers, said conducting means being positioned above the bottom of the crank casing and opening into each chamber at a point above the bottom thereof and being adapted, irrespective of the amount of lubricant therein, to conduct by gravity an excess of lubricant in any one of the chambers to the other chambers when the crank case is horizontal.

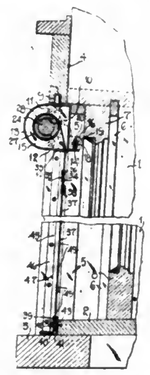
3. In a lubricator for multiple cylinder portable engines, a crank casing comprising in combination an upper part and an integrally cast lower part removably secured thereto, said lower part comprising an exterior oil retaining wall, a series of transverse plates or webs forming a series of lubricant chambers, and means for conducting lubricant from each chamber to the other chambers, said conducting means being positioned above the bottom of the crank casing and opening into each chamber at a point above the bottom thereof and being adapted when the crank case is horizontal to conduct by gravity an excess of lubricant in any one of the chambers to the other chambers.

4. In a lubricator for multiple cylinder portable engines, a crank casing comprising in combination an upper part and an integrally cast lower part secured thereto, said lower part comprising an exterior oil retaining wall, transverse plates or webs forming a series of lubricant chambers, and a longitudinally extending duct formed in the exterior wall above the bottom of the casing and having openings which connect with the several chambers at points above the bottom thereof.

5. In a lubricator for a multiple cylinder portable engine, the combination of the crank case having in its lower portion transverse plates forming a longitudinal series of lubricant holding chambers, and a conduit for conveying lubricant from one chamber to another, said conduit being open at both ends positioned within the said casing and extending from the center of one of the end oil chambers to the center of the oil chamber at the opposite end, said conduit being further provided with openings communicating with the intermediate oil chambers.

[Claims 6 to 8 not printed in the Gazette.]

1,215,651. ROLLING SCREEN. JOSEPH GUMBER, PAUL GUMBER, and JOHN HARDER, East Moline, Ill. Filed Mar. 27, 1916. Serial No. 87,015. (Cl. 156—39.)



1. A device of the character described comprising in combination with a supporting structure, a casing mounted thereon, said casing being closed at its ends, a portion of the ends being pressed inwardly to provide supporting flanges, a pole supported by said flanges, a roller mounted upon said pole, and a screen carried by said roller.

2. The combination with a supporting structure, of a casing, spring latch devices carried by the casing to cooperate with the supporting structure and detachably sustain the casing in position thereon, a spring-actuated roller mounted in the casing, and a screen connected to said roller.

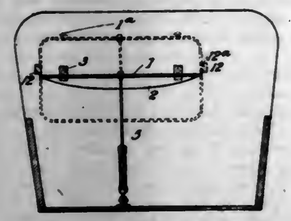
3. A device of the character described comprising in combination with a supporting structure, a casing mounted thereon, a roller mounted within the casing, straps carried by said roller, a screen, and a detachable connection between the straps and the screen.

4. A device of the character described comprising in combination with a supporting structure, a casing mounted thereon, a spring actuated roller mounted within the casing, straps secured to said roller, a screen, links carried by said screen, and a detachable connection between the links and the straps.

5. A device of the character described comprising in combination with a supporting structure, a casing mounted thereon, a roller mounted within said casing, a screen, a strip secured to said screen, straps secured to the roller, links carried by the strip, said straps being adapted for engagement with the links, and slides for engagement with the straps to secure the same to the links.

[Claims 6 to 8 not printed in the Gazette.]

1,215,652. BABY-HOLDING ATTACHMENT FOR VEHICLES. EDWARD T. HALE, San Diego, Cal. Filed Oct. 30, 1915. Serial No. 58,794. (Cl. 5—59.)



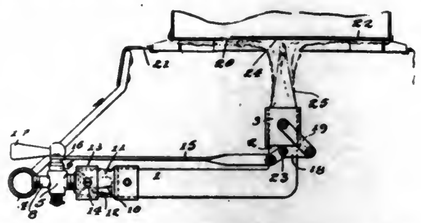
1. In a device of the class described, the combination of a bed frame mounted on the rear side of the front seat of a vehicle so as to be readily attached to and removed therefrom, a rod pivoted centrally to the other side of said bed frame so as to be readily attached and detached therefrom and cushion means in connection with the lower end of said rod connected to the floor of the vehicle, whereby said rod is cushioned thereon and provided with radial movement.

2. In a device of the class described the combination of a bed frame detachably secured to the rear side of the front seat of a vehicle, a rod detachably pivoted centrally to the other side of said bed frame, cushion means in connection with the lower end of said rod secured to the floor of the vehicle, and means for supporting said bed frame flat-wise against the rear surface of the front seat of the vehicle, whereby said device may be folded against said seat and held in said folded position.

3. In a device of the class described, the combination of a rectangularly shaped frame mounted on the back of the front seat of a vehicle, a canvas secured thereto so that it sags in the center, a rod pivotally connected to said frame at the opposite side from its attachment to said seat and a cushion means comprising double acting springs pivotally connected to the vehicle floor, whereby said rod is cushioned relatively to said floor for both upward and downward movement and is also permitted to move radially on said pivot.

1,215,653. GAS MIXER AND BURNER. STEPHEN H. HALE, Kansas City, Mo. Filed June 19, 1915. Serial No. 35,111. (Cl. 158—117.)

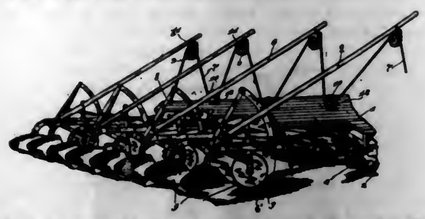
1. The combination of a burner adapted to form a flame with a predetermined transverse plane of greatest heat application and to vary the position of the base part of said flame, a mixer communicating with the said burner, air supply devices communicating with the mixer, a gas supply for the mixer, means for regulating the gas supply, and means connecting the gas regulating means with the burner and adapted to shift the base part of the flame relatively to the said heat plane in correspondence with the variations in the gas supply.



2. The combination of a gas burner adapted to form a flame with an inner carbon-monoxid-forming cone having its apex situated approximately in a predetermined transverse plane, means for supplying gas to the burner, means for supplying air thereto, means for regulating the supply of gas, and means connecting the gas regulating means to the burner and adapted to shift the base of the said cone from one position to another in correspondence with the variations in the gas supply.

3. The combination of a two-part gas burner adapted to form a flame with an inner carbon-monoxid-forming cone having its apex situated approximately in a predetermined transverse plane, and one of the parts of said burner being adjustable relatively to the other to vary the base part of said cone, means for supplying gas to the burner, means for supplying air therto, means for regulating the supply of gas and means connecting the gas regulating means to the movable part of said burner for shifting it in correspondence with variations in the gas supply.

1,215,654. GANG-PLOW. D. MAURICE HARTSOUGH, Minneapolis, Minn., assignor to Deere and Company, Moline, Ill., a Corporation of Illinois. Filed Jan. 11, 1912. Serial No. 670,555. (Cl. 97—59.)



1. In a plowing mechanism, the combination of a draft frame, a series of plowing units pivoted to the draft frame independently of each other and each comprising a relatively vertically movable ground-engaging support, a power device, and means connected with the power device for differentially applying the force thereof to all of the supports to move them downward and thereby lift the plowing units, the speed ratios between the power device and all of the supports being equal.

2. In a plowing mechanism, the combination of a draft frame, a series of plowing units pivoted to the draft frame and each comprising a relatively vertically movable ground-engaging support by means of which the unit can be lifted, a power device, and a power transmitting means connected with the power device and having uniformly speeded connections with the several supports whereby each serves as an abutment for the transmission of power to the others.

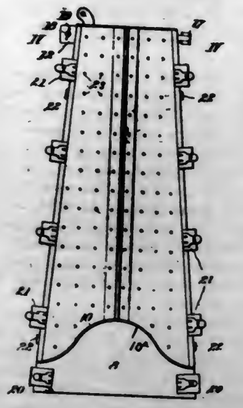
3. In a plowing mechanism, the combination of a draft frame, a series of plowing units flexibly connected to the draft frame independently of each other and means for lifting the several units in succession at uniform intervals comprising a single rope having connections with all of them, the rope tension decreasing successively between the successive connections.

4. The combination with a truck, of plows having beams pivotally connected to said truck, plow lifting levers secured to and projecting forward from said plow beams, cable guiding sheaves applied, in alternated arrangement, to said levers and to said truck, a single cable anchored to said truck at one end and passed directly and alternately over the guide sheaves on said levers and under the guide sheaves on said truck, and means applied to the other end of said cable, for lifting and lowering the plows.

5. The combination with a truck, of plows having beams independently pivoted to said truck at their front ends, of lifting levers secured to said plow beams and projecting forward over said truck, alternated cable guides on said lifting levers and on said truck, a cable anchored to said truck and passed directly and alternately through the cable guides on said levers and truck, and a power device applied to the other end of said cable for lifting and lowering said plows.

[Claims 6 to 8 not printed in the Gazette.]

1,215,655. CLOTHES-PRESSING APPARATUS. EDWARD AUSTIN HERR, Philadelphia, Pa. Filed Sept. 20, 1915. Serial No. 51,619. (Cl. 100—57.)



1. A press for trousers, comprising upper and lower members each consisting of a thin metal plate reinforced along its longitudinal center by a rib formed therein and having a groove on the inside to receive a seam of the trousers, and means for clamping said upper and lower members together.

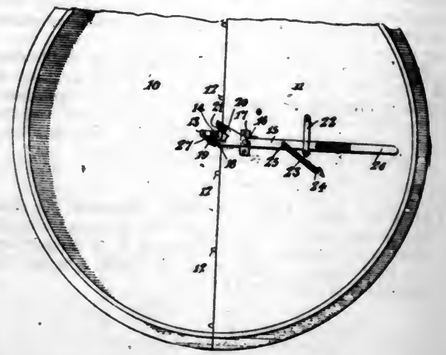
2. A press for trousers, comprising upper and lower members each consisting of a thin metal plate having its edge portions turned over to form reinforcing beads, and cloth linings for said metal plates secured to said beads.

3. A press for trousers, comprising upper and lower members one of which is longer than the other, the shorter member having one end concavely curved transversely and said curved end flaring away from the longer member for the purpose specified, and means for clamping the two members together.

4. A press for trousers, comprising upper and lower members, means on one end portion of one member for clamping the bottom of the garment thereto, clamps at the opposite edges of the other end portion of the same member for securing the upper end portion of the garment in a transversely stretched condition and the whole garment in a longitudinally stretched condition to said member before the other member of the press is secured thereto, and means for clamping the two members together for pressing the stretched garment.

5. A press for trousers comprising upper and lower members, the upper member being shorter than the lower member, means on one end of the lower member for clamping the bottoms of a pair of trousers, the upper member overlapping said clamping means and having its overlapping portion offset for that purpose, the connecting portion between the upper member and offset portion being curved away from the lower member for the purpose specified.

1,215,656. COMBINED LOCK AND OPENER FOR EXTENSION-TABLES. OSCAR HERRMANN, New York, N. Y., assignor to H. Herrmann Furniture Company, New York, N. Y., a Corporation of New York. Filed Nov. 8, 1915. Serial No. 60,428. (Cl. 45—9.)



1. In an extension table having opposed sections, a keeper on one of the sections, a lever hinged to the other section and provided with a latch hook adapted to engage the keeper, and said lever having a cam in spaced relation to the hook and in position to engage the keeper, and a spring connected to the lever for normally holding the latter in position to bring the hook into engagement with the keeper when the table sections are closed, said lever having a handle extension for the manipulation of the lever to release the hook from the keeper and engage the cam against the keeper to force the table sections apart.

2. In an extension table provided with opposed sections, a keeper on one section, and a lever on the other section having a limited swinging movement, said lever having a hook at the end toward the keeper with a rounded extremity to constitute a latch and also provided with a cam portion adjacent to the hook, and a spring tending at all times to move the hook into the path of the keeper, the cam and hook being relatively positioned to release the hook from the keeper and engage the cam against the latter to force the table sections apart, and the spring holding the hook in the path of the keeper, whereby the keeper will snap into engagement with the hook when the table sections are brought together.

1,215,657. PLAYING-CARDS. RUFUS LEE HICKS, Columbia, Mo. Filed June 12, 1916. Serial No. 103,241. (Cl. 46—25.)

1. A card game having the same number of suits and different symbols, with each suit including all the symbols of which one is common to all the cards of a suit and the other symbols each occurring once in the suit.

2. A card game having an odd number of different symbols and as many suits as symbols, with the number of cards in a suit equal to one-half of a number represented by one less than the number of symbols.

3. A card game having an odd number of different symbols and as many suits as there are symbols with the number of cards in a suit equal to one-half of a number represented by one less than the number of symbols, and the cards of the suit containing all the symbols of which

one occurs on all the cards of the suit and the other symbols occur but once in the suit.

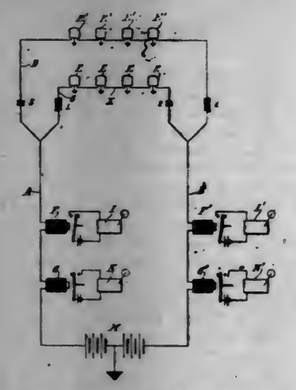


4. A card game having a plurality of suits and including an odd number of symbols with the cards of a suit including all the symbols and each card of each suit containing an odd number of different symbols of which one is common to all the cards of the suit.

5. A card game including cards divided into a plurality of suits, with each card of a suit containing a group of different symbols arranged diagonally of the card, with one symbol common to all the cards of the suit and the other symbols differing and occurring but once in a suit.

[Claims 6 to 10 not printed in the Gazette.]

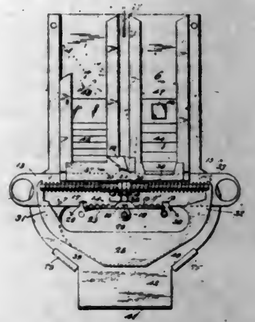
1,215,658. SIGNALING SYSTEM. RICHARD M. HORKIRA, New York, N. Y., assignor to American District Telegraph Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 28, 1916. Serial No. 106,333. (Cl. 177—360.)



1. A signaling system such as described, comprising outgoing and return main circuit conductors with receiving means connected thereto, and a plurality of branch conductors connecting said main circuit conductors and each provided with a transmitter or transmitters, each such branch circuit conductor connected to one main circuit conductor through a relatively low resistance, and connected to the other main circuit conductor through a relatively high resistance, the low resistance of each such branch circuit conductor connected to that main circuit conductor to which the high resistance of the other branch conductor is connected.

2. A signaling system such as described, comprising outgoing and return main circuit conductors with a plurality of circuit receiving means connected to each, one such signal receiving means of each conductor arranged to operate upon an increase of current strength and the other to operate upon a decrease of current strength, and a plurality of branch conductors connecting said main circuit conductors and each provided with a transmitter or transmitters of the type which, when operated, both interrupt the main circuit through them and close a ground circuit connection, each such branch circuit conductor connected to one main circuit conductor through a relatively low resistance and connected to the other main circuit conductor through a relatively high resistance, the low resistance of each such branch circuit conductor connected to that main circuit conductor to which the high resistance of the other branch conductor is connected, and grounded current supply means for said main circuit conductors.

1,215,659. COIN-OPERATED VENDING-MACHINE. MAURICE HOFHEIMER, Baltimore, Md., assignor, by mesne assignments, to Autosales Gum and Chocolate Company, New York, N. Y., a Corporation of New York. Filed Sept. 10, 1908, Serial No. 452,418. Renewed June 16, 1916. Serial No. 104,119. (Cl. 194—80.)



1. In a coin-controlled vending machine, the combination of a casing having two magazines arranged side by side, said magazines having lateral discharge openings at their lower outer ends, a coin-carrier mounted mid-way beneath said magazines and freely operable in either direction from its central position to carry the deposited coin into ejecting engagement with the lowermost package in either magazine, means connected with said coin-carrier and projecting out of said casing for manually operating said carrier, and spring means for normally holding said carrier in a position mid-way of said magazines and automatically returning said carrier to normal position after every operation thereof.

2. In a coin-controlled vending machine, the combination of a casing having two magazines arranged side by side, said magazines having lateral discharge openings at their lower outer ends, a coin-carrier mounted mid-way beneath said magazines and freely operable in either direction from its central position to carry the deposited coin into ejecting engagement with the lowermost package in either magazine, a pair of handles extending in opposite directions from said coin-carrier and projecting through the sides of said casing for manually operating said carrier in one direction or the other from its central position, and spring means for normally holding said carrier in a position mid-way of said magazines and automatically returning said carrier to normal position after every operation thereof.

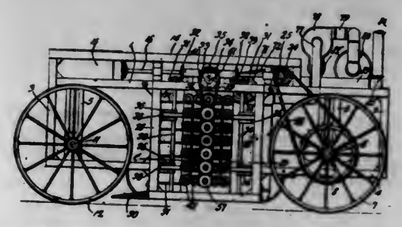
3. In a coin-controlled vending machine, the combination of a casing having two magazines arranged side by side, said magazines having lateral discharge openings at their lower outer ends, a coin-carrier mounted mid-way beneath said magazines, and freely operable in either direction from its central position to carry the deposited coin into ejecting engagement with the lowermost package in either magazine, means connected with said coin-carrier and projecting out of said casing for manually operating said carrier in one direction or the other from its central position, spring means for normally holding said carrier in a position mid-way of said magazines and automatically returning said carrier to normal position after every operation thereof, and means to prevent return of said coin-carrier prior to a completion of its forward movement.

4. In a coin-controlled vending machine, the combination of a casing having two magazines arranged side by side, said magazines having lateral discharge openings at their lower outer ends, a coin-carrier mounted mid-way beneath said magazines and freely operable in either direction from its central position to carry the deposited coin into ejecting engagement with the lowermost package in either said casing for manually operating said carrier in one direction or the other from its central position, spring means for normally holding said carrier in a position midway of said magazines and automatically returning said carrier to normal position after every operation thereof, and a coin-sustaining rail beneath said coin-carrier for holding the coin in the carrier during the ejecting movement in either direction and permitting the same to drop from the carrier at the end of said movement.

5. In a coin-controlled vending machine, the combination of a casing having two magazines arranged side by side, said magazines having each a lateral discharge opening at its lower outer end, a reciprocating ejector bar arranged behind said magazines and provided with hand-operable means projecting through said sides of the casing, a coin-carrier fixed to and extending forwardly from said bar and arranged beneath said magazines, and spring means for normally holding said coin-carrier mid-way of said magazines, whereby said coin-carrier is freely movable with said bar in either direction from its normal position to cause ejection of the packages from either magazine through the medium of the deposited coin, said spring means automatically returning the coin-carrier to normal position after every operation thereof.

[Claims 6 to 22 not printed in the Gazette.]

1,215,660. COTTON-PICKER. BILLIE JOHNSON, Temple, Tex. Filed Apr. 24, 1916. Serial No. 93,189. (Cl. 56—118.)



1. A machine for harvesting cotton including opposed cotton receivers having open inner sides, guides extending across said open inner sides, endless means traveling within the guides and having portions extending beyond the guides for maintaining plants in upstanding positions during the passage of the machine along the row of plants, picking devices movable transversely across and between the receivers, means for stripping cotton from the picking devices while in the receivers, means at the bottom of each receiver for receiving the picked cotton, and means for removing the cotton from said receiving means.

2. A machine for harvesting cotton including a portable structure having an opening therethrough for the reception of plants in a row, heads mounted for transverse reciprocation at opposite sides of the opening, a plurality of revoluble guides at each side of the opening and slidably engaged by the heads, needles revoluble with the guides, means for transmitting motion from the heads to the needles whereby the heads and needles reciprocate together.

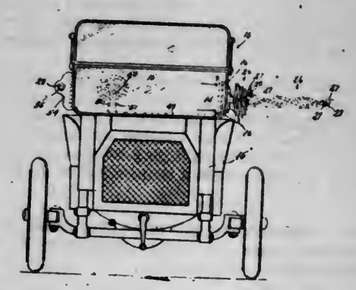
3. A machine for harvesting cotton including a portable structure having an opening therethrough for the reception of plants in a row, heads mounted for transverse reciprocation at opposite sides of the opening, a plurality of revoluble guides at each side of the opening and slidably engaged by the heads, needles revoluble with the guides, means for transmitting motion from the heads to the needles whereby the heads and needles reciprocate together, the corresponding needles at the two sides of the opening being in substantially horizontal alinement, the alining needles being of different lengths.

4. In a machine for harvesting cotton, a portable structure, transverse guides therein, there being a longitudinal opening within said structure for the reception of plants in a row, a plurality of tubular guides at each side of the opening, means for rotating all of the guides simultaneously, needles mounted for reciprocation within the respective revoluble guides, a head slidably mounted on all of the guides at each side of the opening, means for transmitting motion from the heads to the needles during the rotation of the needles and their guides, longitudinally slotted arms extending from each of the heads, and shafts mounted for rotation and having cranks working within the slots, said cranks coöperating with the arms to reciprocate the heads toward and from each other during the rotation of the needles and their guides.

5. In a machine for harvesting cotton, the combination with a portable structure having an opening therethrough for the reception of plants in a row, and a receiver at each side of the opening and extending longitudinally and vertically thereof, of means working transversely of the receiver and the opening for picking cotton and discharging it into the receiver, separate sacking hoods, and means for directing the cotton from the receiver into either of said hoods.

[Claims 6 to 10 not printed in the Gazette.]

1,215,661. SIGNAL APPARATUS FOR AUTOVEHICLES. TORAKI KITAOKA, Pasadena, Cal. Filed Feb. 19, 1916. Serial No. 79,455. (Cl. 116—31.)



1. The combination of a frame, a pivot thereon, rack bars slidably mounted on the frame, a lazy tongs arm mounted on said pivot and carrying a signal, operative connections between the lazy tongs and the rack bars, a pinion in mesh with said rack bars, a shaft connected to the pinion, a crank disk secured to said shaft and provided with a wrist-pin, a slide mounted on said frame, a retracting spring connected to said slide and to said frame, an arm pivotally mounted on the wrist-pin, a tension spring connected to said arm and to said frame, a bar having one end portion thereof pivotally mounted on said wrist-pin and having its other end normally in contact with said slide, means for operating the slide, and posts arranged adjacent to said crank disk substantially as and for the purpose set forth.

2. The combination of a frame, a signal arm mounted thereon, a slide, a retracting spring connected to the slide and to the frame, a crank disk having a wrist-pin thereon, means operatively connecting the signal arm to the crank disk, an arm pivotally mounted on the wrist-pin, a tension spring connected to said arm and to said frame, a bar having one end portion thereof pivotally mounted on said wrist-pin and having its other end normally in contact with said slide, means for operating the slide, and posts arranged adjacent to said crank disk substantially as and for the purpose set forth.

1,215,662. HOLLOW-CAST BALL. GILBERT R. KITTLE, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Aug. 17, 1915. Serial No. 45,936. (Cl. 83—9.)

1. The herein described hollow metal ball having a main chambered body part of cast metal and a plug part of cast

metal similar to that of the body part, the plug part having an offset inner portion embedded in and interlocking with the metal of the body part, and an exterior surface forming part of the continuous exterior surface of the ball.



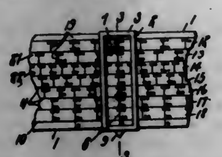
2. The herein described hollow metal ball having a main chambered body part of cast metal and a plug part of similar cast metal having an offset inner portion embedded in and interlocking with the metal of the body part and an exterior surface forming part of the continuous exterior surface of the ball, the metal of the plug and body parts being welded together to form a substantially unitary metallic body.

3. The herein described hollow cast metal ball having an open central chamber, and a unitary metallic plug embedded in the metal of the wall of the ball and having an outer narrower part and an inner wider part to prevent the narrower part from moving outward.

4. The herein described hollow cast metal ball having an open central chamber, and a unitary metallic plug embedded in the metal of the wall of the ball and formed with an outer narrower part and an inner wider part both having their surfaces secured by welding to the metal of the ball.

5. The herein described hollow cast metal ball having an open central chamber, a refractory plug in the metal of the wall adjacent the inner chamber, and a metal plug between the refractory plug and the surface of the ball adapted to lock the refractory plug in place and having the metal at its surface welded to the metal of the ball.

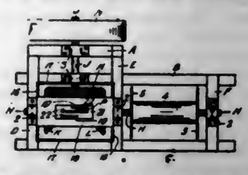
1,215,663. INDICATOR-CARD SCALING-RULE. LEWIS A. KNUDSEN, Mason City, Iowa. Filed June 17, 1915. Serial No. 34,686. (Cl. 33—111.)



In an indicator card scaling rule, the combination with a body portion having a plurality of scales thereon, of a slide adapted to be moved on the body portion for a distance equal to the combined lengths of the ordinates of an indicator card and to coöperate with certain of the said scales to produce the reading of the mean effective pressures, said slide having a hair line arranged to travel over the scales as the scale moves and being provided adjacent the underside of the body with a pointer having its apex in vertical alinement with said hair line.

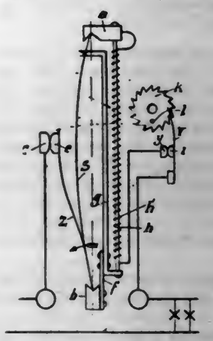
1,215,664. FORWARD AND REVERSE GEARING MECHANISM. ROBERT M. LAMPMAN, Ancaster, Ontario, Canada. Filed Aug. 7, 1916. Serial No. 113,603. (Cl. 74—59.)

1. In forward and reverse gear mechanism, a first shaft, a second shaft, a gear secured to the first shaft, pinions provided with clutch portions loose on the second shaft and meshing with the gear on the first shaft, an intermediate clutch member splined to the second shaft and adapted to engage the pinion clutch portions, a plate having a central slot and two parallel lateral slots, one end of each lateral slot terminating in transverse alinement with the corresponding end of the central slot, and the opposite end of the lateral slots terminating in proximity to the middle part of the central slot, a shifting lever loosely connected to the said clutch member, fulcrumed beyond the same and extending through and slidable in said central slot, lateral auxiliary levers pivotally connected to said shifting lever and extending through and slidable one in each said lateral slot, lateral stop members secured to said shafting lever and adapted to engage each a lateral lever, for the purpose specified.



2. In forward and reverse gear mechanism, a first shaft, a second shaft, a gear secured to the first shaft, pinions provided with clutch portions loose on the second shaft and meshing with the gear on the first shaft, an intermediate clutch member splined to the second shaft and adapted to engage the pinion clutch portions, a plate having a central slot and two parallel lateral slots, one end of each lateral slot terminating in transverse alinement with the corresponding end of the central slot, and the opposite ends of the lateral slots terminating in proximity to the middle part of the central part, a shifting lever loosely connected to the splined clutch member, fulcrumed beyond the same and extending through and slidable in said central slot, lateral auxiliary levers pivotally connected to said shifting lever and extending through and slidable one in each said lateral slot, lateral stop members secured to said shifting lever and adapted to engage each a lateral lever, and a series of ropes connected to said levers, as and for the purpose set forth.

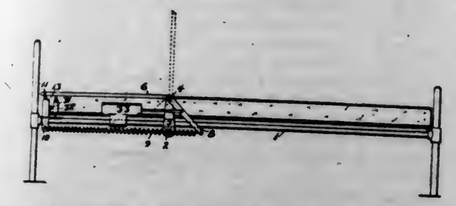
1,215,665. SPRING ARRANGEMENT ESPECIALLY FOR CONTACT DEVICES. HEINRICH LANDIS, Zug, Switzerland. Filed Apr. 5, 1915. Serial No. 19,408. (Cl. 177—347.)



1. A spring arrangement of the character described adapted for opening and closing circuits comprising in combination, a blade spring, a tongue on said spring, two bearings holding said spring under tension in bent position, means to act on said spring for reversing the curve thereof, and terminals of a circuit between which said spring plays, substatnially as described.

2. A spring arrangement of the character described adapted for opening and closing circuits, comprising in combination, a blade spring, tongues on said spring, two bearings holding said spring under tension in a bent position, a bar engaging said spring to open a circuit, means to heat said bar by the action of the current, said tongues being adapted to be shifted by hand for closing the circuit, substantially as described and for the purpose set forth.

1,215,666. MEANS FOR AROUSING SLEEPERS. JOSEPH H. LEAL, San Francisco, Cal. Filed Nov. 24, 1915. Serial No. 63,309. (Cl. 161—22.)

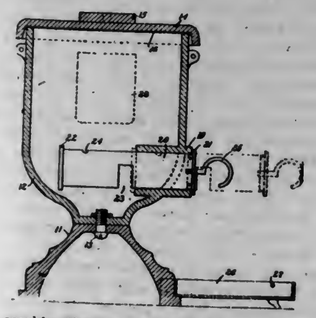


1. An arousing attachment for a bed comprising a frame operatively connected to the bed to assume either an upwardly extending or a substantially horizontal position, means connected to said frame for supporting a sleeper, means for raising the frame from the latter to the former position, locking mechanism for holding the frame in its latter position, a spring for withdrawing said locking means from its operative position, means for preventing the operation of said spring, said frame being free to move from said latter to said former position when released from said locking mechanism, and clock-work mechanism for releasing said means.

2. An arousing attachment for a bed comprising a frame operatively connected to the bed to assume either an upwardly extending or a substantially horizontal position, means connected to said frame for supporting a sleeper, means for raising the frame from the latter to the former position, locking mechanism for holding the frame in its latter position, a spring for withdrawing said locking means from its operative position, means for preventing the operation of said spring, said frame being free to move from said latter to said former position when released from said locking mechanism, clock-work mechanism for releasing said means, and a dash-pot for controlling said raising means.

3. An arousing attachment for a bed comprising a frame operatively connected to the bed to assume either an upwardly extending or a substantially horizontal position, means connected to said frame for supporting a sleeper, means for raising the frame from the latter to the former position, locking mechanism for holding the frame in its latter position, a spring for withdrawing said locking means from its operative position, means for preventing the operation of said spring, said frame being free to move from said latter to said former position, when released from said locking mechanism, an alarm clock, and an operative connection between said locking mechanism and the alarm-sounding shaft of the alarm clock.

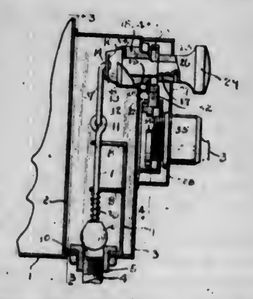
1,215,667. CEMENT-CAN. ALFRED G. LEGGE, Brockton, Mass. Filed Feb. 9, 1915. Serial No. 7,180. (Cl. 221—104.)



1. In combination, an air tight container having a tubular boss, one end of which extends into the interior of the chamber, and the other end of which extends beyond the wall of the said container, a dispensing tube closed at its ends and slidably mounted in said boss and having a delivery port midway of its length, said delivery tube having a length at least equal to twice the length of the boss plus the width of the delivery port.

2. In combination, an air tight container having a tubular boss, one end of which extends into the interior of the chamber, and the other end of which extends beyond the wall of the said container, a dispensing tube closed at its ends and slidably mounted in said boss and having a delivery port midway of its length, said delivery tube having a length at least equal to twice the length of the boss plus the width of the delivery port, and having an air vent on the inner end of said delivery tube.

1,215,668. SAFETY TANK-LOCK. JOHN LESS, Indianapolis, Ind. Filed Jan. 25, 1915. Serial No. 4,342. (Cl. 137—27.)



1. In combination with a liquid containing tank having an exit, a vertically reciprocable valve for closing said exit, a valve stem, a link flexibly connected to the upper end of the stem, a rotatable shaft, a handle at the outer end of said shaft for operating the same, a radially extended arm at the inner end of the shaft flexibly connected at its extremity to the upper end of said link, a locking bolt, said shaft having a slot in the lower part of its periphery to engage said bolt, and said shaft having on the upper part of its periphery a slot elongated slightly beyond the distance between two adjacent diameters of the shaft at right angles, a stop pin engaging said upper slot, said radial arm being movable from a horizontal position to a position beyond the center line of the shaft.

2. In combination with a liquid containing tank having an exit, a valve for closing said tank, a rotatable shaft, a turning knob on said shaft, connections between said shaft and valve for lifting the latter from its seat, a hub mounted in the tank wall and in which said shaft is mounted, said hub and shaft having conical interfitting parts and a flexible packing washer at the joint between said parts.

1,215,669. APPARATUS FOR CONTROLLING THE VELOCITY OF A FLUID FLOWING THROUGH A PASSAGE. HENDRIK MATHÏS LIEBEN, Hamburg, Germany. Filed Sept. 17, 1913. Serial No. 790,349. (Cl. 73—167.)

1. In an apparatus of the class described, the combination with a closed receptacle comprising two communicating chambers, and a liquid supply to and a liquid discharge from said receptacle, of a conduit for a fluid comprising at least one measuring passage, opposite sides of said measuring passage communicating each with one of said chambers, and means controlled by the levels of the liquid within said chambers to adjust the area of the measuring passage.

2. In an apparatus of the class described, the combination with a closed receptacle comprising two communicating chambers, and a liquid supply to and a liquid discharge from said receptacle, of a conduit for a fluid comprising at least one measuring passage, opposite sides of said measuring passage communicating each with one of said chambers, means controlled by the levels of the liquid

metal similar to that of the body part, the plug part having an offset inner portion embedded in and interlocking with the metal of the body part, and an exterior surface forming part of the continuous exterior surface of the ball.



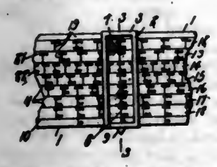
2. The herein described hollow metal ball having a main chambered body part of cast metal and a plug part of similar cast metal having an offset inner portion embedded in and interlocking with the metal of the body part and an exterior surface forming part of the continuous exterior surface of the ball, the metal of the plug and body parts being welded together to form a substantially unitary metallic body.

3. The herein described hollow cast metal ball having an open central chamber, and a unitary metallic plug embedded in the metal of the wall of the ball and having an outer narrower part and an inner wider part to prevent the narrower part from moving outward.

4. The herein described hollow cast metal ball having an open central chamber, and a unitary metallic plug embedded in the metal of the wall of the ball and formed with an outer narrower part and an inner wider part both having their surfaces secured by welding to the metal of the ball.

5. The herein described hollow cast metal ball having an open central chamber, a refractory plug in the metal of the wall adjacent the inner chamber, and a metal plug between the refractory plug and the surface of the ball adapted to lock the refractory plug in place and having the metal at its surface welded to the metal of the ball.

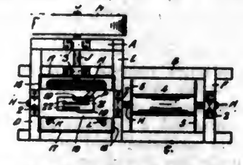
1,215,663. INDICATOR-CARD SCALING-RULE. LEWIS A. KRUEGER, Mason City, Iowa. Filed June 17, 1915. Serial No. 34,686. (Cl. 33—111.)



In an indicator card scaling rule, the combination with a body portion having a plurality of scales thereon, of a slide adapted to be moved on the body portion for a distance equal to the combined lengths of the ordinates of an indicator card and to coöperate with certain of the said scales to produce the reading of the mean effective pressures, said slide having a hair line arranged to travel over the scales as the scale moves and being provided adjacent the underside of the body with a pointer having its apex in vertical alinement with said hair line.

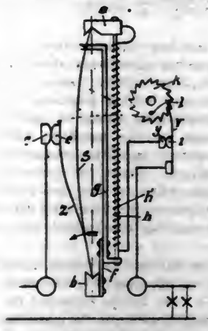
1,215,664. FORWARD AND REVERSE GEARING MECHANISM. ROBERT M. LAMPMAN, Ancaster, Ontario, Canada. Filed Aug. 7, 1916. Serial No. 113,603. (Cl. 74—59.)

1. In forward and reverse gear mechanism, a first shaft, a second shaft, a gear secured to the first shaft, pinions provided with clutch portions loose on the second shaft and meshing with the gear on the first shaft, an intermediate clutch member splined to the second shaft and adapted to engage the pinion clutch portions, a plate having a central slot and two parallel lateral slots, one end of each lateral slot terminating in transverse alinement with the corresponding end of the central slot, and the opposite end of the lateral slots terminating in proximity to the middle part of the central slot, a shifting lever loosely connected to the said clutch member, fulcrumed beyond the same and extending through and slidable in said central slot, lateral auxiliary levers pivotally connected to said shifting lever and extending through and slidable one in each said lateral slot, lateral stop members secured to said shafting lever and adapted to engage each a lateral lever, for the purpose specified.



2. In forward and reverse gear mechanism, a first shaft, a second shaft, a gear secured to the first shaft, pinions provided with clutch portions loose on the second shaft and meshing with the gear on the first shaft, an intermediate clutch member splined to the second shaft and adapted to engage the pinion clutch portions, a plate having a central slot and two parallel lateral slots, one end of each lateral slot terminating in transverse alinement with the corresponding end of the central slot, and the opposite ends of the lateral slots terminating in proximity to the middle part of the central part, a shifting lever loosely connected to the splined clutch member, fulcrumed beyond the same and extending through and slidable in said central slot, lateral auxiliary levers pivotally connected to said shifting lever and extending through and slidable one in each said lateral slot, lateral stop members secured to said shifting lever and adapted to engage each a lateral lever, and a series of ropes connected to said levers, as and for the purpose set forth.

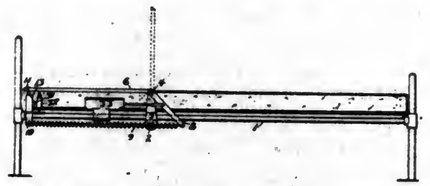
1,215,665. SPRING ARRANGEMENT ESPECIALLY FOR CONTACT DEVICES. HEINRICH LANDIS, Zug, Switzerland. Filed Apr. 5, 1915. Serial No. 19,403. (Cl. 177—347.)



1. A spring arrangement of the character described adapted for opening and closing circuits comprising in combination, a blade spring, a tongue on said spring, two bearings holding said spring under tension in bent position, means to act on said spring for reversing the curve thereof, and terminals of a circuit between which said spring plays, substatnially as described.

2. A spring arrangement of the character described adapted for opening and closing circuits, comprising in combination, a blade spring, tongues on said spring, two bearings holding said spring under tension in a bent position, a bar engaging said spring to open a circuit, means to heat said bar by the action of the current, said tongues being adapted to be shifted by hand for closing the circuit, substantially as described and for the purpose set forth.

1,215,666. MEANS FOR AROUSING SLEEPERS. JOSEPH H. LEAL, San Francisco, Cal. Filed Nov. 24, 1915. Serial No. 63,309. (Cl. 161—22.)

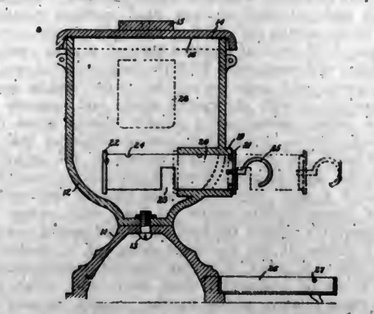


1. An arousing attachment for a bed comprising a frame operatively connected to the bed to assume either an upwardly extending or a substantially horizontal position, means connected to said frame for supporting a sleeper, means for raising the frame from the latter to the former position, locking mechanism for holding the frame in its latter position, a spring for withdrawing said locking means from its operative position, means for preventing the operation of said spring, said frame being free to move from said latter to said former position when released from said locking mechanism, and clock-work mechanism for releasing said means.

2. An arousing attachment for a bed comprising a frame operatively connected to the bed to assume either an upwardly extending or a substantially horizontal position, means connected to said frame for supporting a sleeper, means for raising the frame from the latter to the former position, locking mechanism for holding the frame in its latter position, a spring for withdrawing said locking means from its operative position, means for preventing the operation of said spring, said frame being free to move from said latter to said former position when released from said locking mechanism, clock-work mechanism for releasing said means, and a dash-pot for controlling said raising means.

3. An arousing attachment for a bed comprising a frame operatively connected to the bed to assume either an upwardly extending or a substantially horizontal position, means connected to said frame for supporting a sleeper, means for raising the frame from the latter to the former position, locking mechanism for holding the frame in its latter position, a spring for withdrawing said locking means from its operative position, means for preventing the operation of said spring, said frame being free to move from said latter to said former position, when released from said locking mechanism, an alarm clock, and an operative connection between said locking mechanism and the alarm-sounding shaft of the alarm clock.

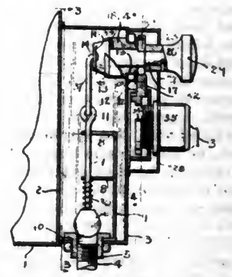
1,215,667. CEMENT-CAN. ALFRED G. LEGGE, Brockton, Mass. Filed Feb. 9. 1915. Serial No. 7,180. (Cl. 221—104.)



1. In combination, an air tight container having a tubular boss, one end of which extends into the interior of the chamber, and the other end of which extends beyond the wall of the said container, a dispensing tube closed at its ends and slidably mounted in said boss and having a delivery port midway of its length, said delivery tube having a length at least equal to twice the length of the boss plus the width of the delivery port.

2. In combination, an air tight container having a tubular boss, one end of which extends into the interior of the chamber, and the other end of which extends beyond the wall of the said container, a dispensing tube closed at its ends and slidably mounted in said boss and having a delivery port midway of its length, said delivery tube having a length at least equal to twice the length of the boss plus the width of the delivery port, and having an air vent on the inner end of said delivery tube.

1,215,668. SAFETY TANK-LOCK. JOHN LEES, Indianapolis, Ind. Filed Jan. 25, 1915. Serial No. 4,342. (Cl. 137—27.)



1. In combination with a liquid containing tank having an exit, a vertically reciprocable valve for closing said exit, a valve stem, a link flexibly connected to the upper end of the stem, a rotatable shaft, a handle at the outer end of said shaft for operating the same, a radially extended arm at the inner end of the shaft flexibly connected at its extremity to the upper end of said link, a locking bolt, said shaft having a slot in the lower part of its periphery to engage said bolt, and said shaft having on the upper part of its periphery a slot elongated slightly beyond the distance between two adjacent diameters of the shaft at right angles, a stop pin engaging said upper slot, said radial arm being movable from a horizontal position to a position beyond the center line of the shaft.

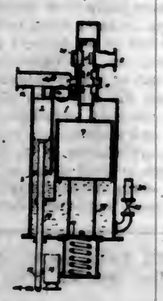
2. In combination with a liquid containing tank having an exit, a valve for closing said tank, a rotatable shaft, a turning knob on said shaft, connections between said shaft and valve for lifting the latter from its seat, a hub mounted in the tank wall and in which said shaft is mounted, said hub and shaft having conical interfitting parts and a flexible packing washer at the joint between said parts.

1,215,669. APPARATUS FOR CONTROLLING THE VELOCITY OF A FLUID FLOWING THROUGH A PASSAGE. HENDRIK MATHYS LIESS, Hamburg, Germany. Filed Sept. 17, 1913. Serial No. 790,349. (Cl. 73—167.)

1. In an apparatus of the class described, the combination with a closed receptacle comprising two communicating chambers, and a liquid supply to and a liquid discharge from said receptacle, of a conduit for a fluid comprising at least one measuring passage, opposite sides of said measuring passage communicating each with one of said chambers, and means controlled by the levels of the liquid within said chambers to adjust the area of the measuring passage.

2. In an apparatus of the class described, the combination with a closed receptacle comprising two communicating chambers, and a liquid supply to and a liquid discharge from said receptacle, of a conduit for a fluid comprising at least one measuring passage, opposite sides of said measuring passage communicating each with one of said chambers, means controlled by the levels of the liquid

within said chambers to adjust the area of the measuring passage, and means to measure the area of the measuring passage.



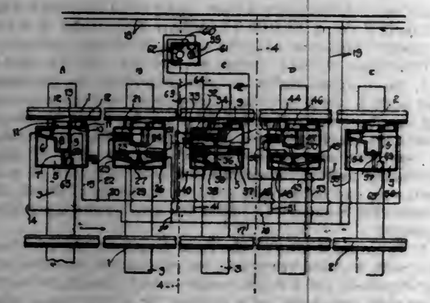
3. In an apparatus of the class described, the combination with a closed receptacle comprising two communicating chambers, and a liquid supply to and a liquid discharge from said receptacle, of a conduit for a fluid comprising at least one measuring passage and at least one throttling passage, opposite sides of said measuring passage communicating with one of said chambers, and means controlled by the levels of the liquid within said chambers to adjust the area of the throttling passage.

4. In an apparatus of the class described, the combination with a closed receptacle comprising two communicating chambers, and a liquid supply to and a liquid discharge from said receptacle, of a conduit for a fluid adapted to be connected with either one of its ends to the fluid supply and comprising at least one measuring passage, opposite sides of said measuring passage communicating each with one of said chambers, means controlled by the levels of the liquid within said chambers to adjust the area of the measuring passage, and means to reverse the relative position of the levels of the liquid within said chambers.

5. In an apparatus of the class described, the combination with a closed receptacle comprising two communicating chambers, and a liquid supply to and a liquid discharge from said receptacle, of a conduit for a fluid adapted to be connected with either one of its ends to the fluid supply and comprising at least one measuring passage and at least one throttling passage, opposite sides of said measuring passage communicating each with one of said chambers, means controlled by the levels of the liquid within said chambers to adjust the area of the throttling passage and means to reverse the relative position of the levels of the liquid within said chambers.

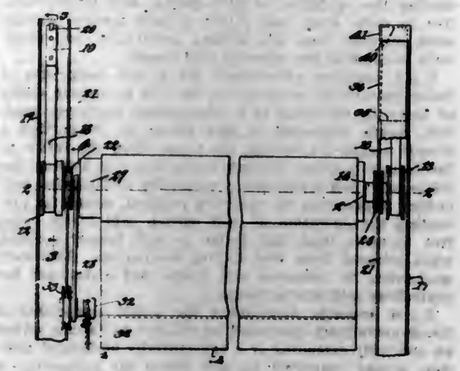
[Claim 6 not printed in the Gazette.]

1,215,670. AUTOMATIC RAILWAY-CROSSING DANGER-SIGNAL. JAY B. LINKER, Charlotte, N. C. Filed Feb. 28, 1914. Serial No. 821,795. (Cl. 246—23.)



In a railway crossing signal system, a signal; a pair of conductors 16—17 for connection with a source of electrical energy; a third conductor 20; a series of train actuated circuit controllers A, B, C, D and E arranged in the order mentioned; the controllers A and E each including a normally open switch connected to the conductor 20 and train actuated means for closing said switch; the controllers B, C, and D each embodying an electromagnet and a normally open switch connected in series with one another and connected in parallel between conductors 16 and 20; the switches of controllers A and E being connected to the conductor 17; the controlleds B and D each having a second normally open switch; the controller C having a pair of normally closed switches connected in series with the second switches of the controllers B and D respectively and signal; the signal being connected to one of the conductors 16—17 and the second switches of the controllers B and D being connected to the other of said conductors; and each of the controllers B, C and D including train actuated means for operating its switches and a lock for said means controlled by the respective electromagnet.

1,215,671. SHADE-ROLLER MOUNTING. JOHN CHARLES LION, St. Marys, Pa. Filed Mar. 8, 1916. Serial No. 82,949. (Cl. 156—27.)



1. In a device of the character described, a vertically movable non-rotatable means, a roller movable vertically therewith and rotatable at any fixed vertical position thereof, spring means for rotating the roller in one direction at any fixed vertical position thereof, coöperating means carried by the non-rotatable means and roller for preventing such rotation of the roller, and means operatively connected with the spring means and operable to bring the spring means under greater tension when the non-rotating means is moved in one direction, whereby said spring means is operable to move the non-rotating means in the opposite direction.

2. In a device of the character described, vertically movable non-rotatable means, a roller movable vertically therewith and rotatable at any fixed vertical position thereof, spring means for rotating said roller in one direction at any fixed vertical position thereof, a pawl carried by the roller and engageable with the non-rotatable means for preventing such rotation of the roller, means operatively connected with the spring means and operable to bring the spring means under greater tension when the non-rotating means is moved in one direction so that it tends to move the non-rotating means in the opposite direction, the third mentioned means including a rotatable element and a pawl carried by said element engageable with the non-rotatable means to hold said means in various positions against the tension of said spring means.

3. In a device of the character described, a vertically movable shaft, a roller rotatable thereon independently thereof, a spring connecting said shaft and roller for rotating them relative to one another, means for moving said shaft vertically when it is rotated, a non-rotating ratchet member upon said shaft, a pawl carried by the roller and engageable with said member to prevent the rotation of the roller by the spring, and a pawl movable with the shaft and engageable with said member to prevent the rotation of the shaft.

4. In a device of the character described, a shaft, vertical guides for the terminals thereof, said guides and terminals of the shaft having coöperating means whereby the shaft moves vertically when it is rotated, a roller rotatable upon the shaft between the guides, spring means between the shaft and roller for rotating them relative to one another, a non-rotating ratchet member upon the shaft, and pawls carried by the roller and shaft and engageable with said ratchet member to prevent the rotation of said roller and shaft, the pawls being disengageable from said member by centrifugal action.

5. In a device of the character described, a pair of vertical channel-shaped guides, a vertically movable shaft having its terminals entering said guides, means operatively connecting the terminals of said shaft and certain flanges of said guides whereby when the shaft is rotated it is moved upwardly and when the shaft is moved downwardly it is rotated, the other flanges of the guides having openings adjacent their upper ends, removable pieces normally closing said openings, a roller rotatable upon the shaft between the guides, a spring connecting said shaft and roller for rotating them relative to one another, a ratchet sleeve upon the shaft adjacent one end of the roller, pawls carried by said end of the roller and the corresponding terminal of the shaft and engageable with said sleeve to prevent the rotation of the roller and shaft by said spring, the pawls being disengageable from said sleeve by centrifugal action, and a downwardly projecting member connected to said sleeve and having means in its lower end engaging the respective guide, to prevent the rotation of the sleeve, the last mentioned member being adapted to be moved manually for adjusting the vertical position of the shaft and roller.

1,215,672. PROCESS FOR TREATING METALLIFEROUS ORES. RICHARD LEWIS LLOYD, New York, N. Y., assignor to Dwight & Lloyd Metallurgical Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 30, 1912, Serial No. 739,835. Renewed Nov. 1, 1915. Serial No. 59,149. (Cl. 75—60.)



1. The herein described process for treating metalliferous ores in fine condition, which consists in projecting a stream of the ore fines into a confined chamber, subjecting the scattered particles to a high heat thereby causing initial chemical reactions therein, then while in a highly heated and nascent state suddenly arresting said particles while being driven by the force of projection and before reaching the chamber exit and causing them to mass together to form relatively small accretional bodies wherein incipient smelting action occurs, and then collecting the said bodies in a smelting bath, substantially as set forth.

2. The herein described process for treating metalliferous ores in fine condition, which consists in air blasting a stream of the ore fines into a confined chamber, oxidizing them at a high heat by the oxygen of the blast, then while in a highly heated and nascent state suddenly arresting said particles while being driven by the force of projection and before reaching the chamber exit and causing them to mass together to form relatively small accretional bodies wherein incipient smelting action occurs, and then collecting the said bodies in a smelting bath.

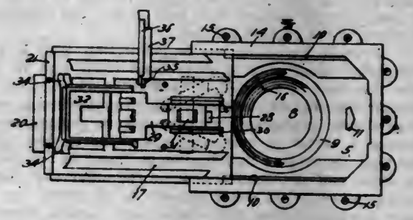
3. The herein described process for treating the sulfids, and the like, of metals, in fine condition, which consists in projecting a stream of the fines into a confined chamber, subjecting the scattered particles to a high heat thereby oxidizing them and lowering the quantity of the sulfur, or the like, component of the said particles, suddenly arresting them while in a highly heated and nascent state and before they reach the chamber exit causing them to mass together to form relatively small accretional bodies and collecting the said bodies in a bath.

4. The herein described process for treating the sulfids, and the like, of metals, in fine condition, which consists in air blasting the fines in a stream into a confined chamber, subjecting the separated particles to a high heat thereby oxidizing them and lowering the quantity of the sulfur, or like, component of the said particles, suddenly arresting said particles while in a highly heated and nascent state and causing them to mass with each other, forming relatively small molten bodies of the agglomerated particles and collecting the said bodies in a bath, and permitting the gaseous products to be withdrawn from the interior of the confined chamber, substantially as set forth.

5. The herein described process for treating sulfid ores, and the like, in fine condition, which consists in air blasting the fines in a stream into a confined chamber, subjecting the separated particles to a heat sufficiently high to effect smelting reactions, suddenly arresting them, and before they reach the chamber exit causing them to mass with each other when in a highly heated and nascent state to form relatively small molten bodies, collecting the relatively small molten bodies in a bath, and causing the gaseous products to be diverted from the paths of the metallic particles, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,215,673. SANITARY CUSPIDOR. NICOLA LOVECE, San Antonio, Tex. Filed May 27, 1916. Serial No. 100,324. (Cl. 4—39.)



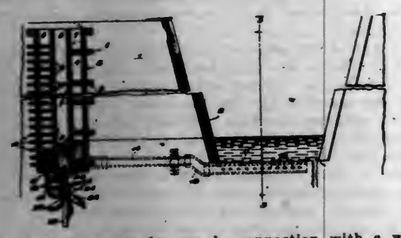
1. In a device of the class described, a base; a cuspidor carried by the base; a cover mounted to slide on the base and housing the cuspidor; a latch movably mounted on the cover; a keeper on the base, wherewith the latch coacts to hold the cover above the cuspidor; a slide mounted to move on the cover; means for connecting the slide with the latch whereby the latch will be actuated when the slide is moved; a lid hinged to the slide and housing the slide; and a movable means carried by the cover and coöperating with the slide to hold the slide advanced and to hold the lid in closed position with respect to the slide.

2. In a device of the class described, a base; a cuspidor carried by the base; a cover mounted to slide on the base and housing the cuspidor; a latch movably mounted on the cover; a keeper on the base, wherewith the latch coacts to hold the cover above the cuspidor; a slide mounted to move on the cover; means for connecting the slide with the latch whereby the latch will be actuated when the slide is moved; and a lid hinged to the slide and housing the slide.

3. In a device of the class described, a base; a cuspidor carried by the base; a cover mounted to slide on the base and housing the cuspidor; a latch movably mounted on the cover; a keeper on the base, wherewith the latch coacts to hold the cover above the cuspidor; a slide mounted to move on the cover; and means for connecting the slide with the latch whereby the latch will be actuated when the slide is moved.

4. In a device of the class described, a base; a cuspidor carried by the base; a cover mounted to slide on the base and housing the cuspidor; a keeper on the base; a pair of latches having their rear ends pivoted to the cover, the forward ends of the latches being provided with means for engaging the keeper; an actuating member slidable on the latches to move the same toward and away from each other; a slide mounted to reciprocate on the cover and disposed on the opposite side of the cover from the actuating member; and means for connecting the actuating member with the slide, the cover having an opening in which said means is adapted to move.

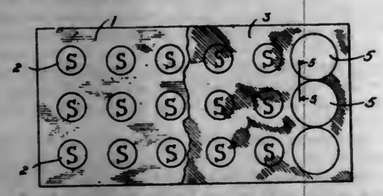
1,215,674. WATER-METER. RAY JAY LYMAN, Twin Falls, Idaho. Filed July 10, 1916. Serial No. 108,443. (Cl. 73—167.)



1. A water meter for use in connection with a weir, said meter comprising a water conducting pipe to lead from the crest of the weir, a tank having a number of compartments into one of which said pipe discharges, another of said compartments having an outlet, and all of said compartments being in communication through a plurality of spaced ports, a water turbine to be driven by the water discharged from said outlet, and registering means actuated by said turbine.

2. A water meter for use in connection with a weir, said meter comprising a water conducting pipe to lead from the crest of the weir, a tank to be disposed on the downstream side of the weir, said tank having a series of vertically extending compartments in communication through a series of vertically spaced ports, the aforesaid pipe discharging into the compartment at one end of the series and the compartment at the other end thereof having an outlet, a water turbine to be driven by the water discharged from said outlet and a register actuated by said turbine.

1,215,675. PROCESS OF MAKING BUTTONS. JOSEPH L. LYNCH, Chicago, Ill. Filed Jan. 12, 1914. Serial No. 811,544. (Cl. 41—18.)

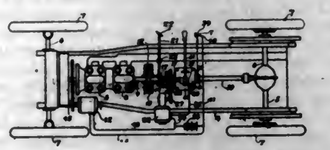


1. A metal button, having a design applied to its outer face, and a coating of elastic transparent material covering said design.

2. The process of preparing a button blank, which consists in applying to its outer face a design, and then coating the same with an elastic transparent covering by applying the same thereon in liquid form and permitting the same to harden.

3. The process of forming button blanks, which consists in applying a number of designs upon a sheet of metal, then coating the sheet with a transparent elastic covering, and finally stamping the button blanks from the sheet.

1,215,676. ELECTRIC SYSTEM FOR VEHICLES. RAY H. MANSON, Elyria, Ohio, assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed Apr. 10, 1912. Serial No. 689,737. (Cl. 123—179.)



1. In combination with the running gear of a vehicle, of a prime mover adapted to be connected to such gear, means controlling the connection of such prime mover to such gear, a starting motor for the prime mover, and a circuit for said motor, two switches in series in said circuit, one of which is controlled by said means.

2. In combination with the running gear of a vehicle, a prime mover adapted to be connected therewith, a starting motor for said prime mover, a circuit for said motor, a plurality of switches in series in said circuit, and means controlling the connection of said prime mover to said running gear and one of said switches.

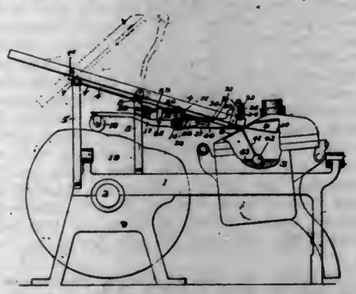
3. In combination with the running gear of a vehicle, a prime mover, means for transmitting motion from said prime mover to said gear, said means being normally connected to said prime mover, means for disconnecting said prime mover and said transmission means, and a starting motor for said prime mover adapted to be connected to said transmission means to operate the same, without operating either the gear or the prime mover, said transmission means being independent of said motor.

4. In combination with the running gear of a vehicle, a prime mover, transmission means for transmitting power from said prime mover to said gear, a clutch normally operating to connect said prime mover to said means, but adapted to be operated to disconnect said elements, means to disconnect said means and said gear, and a starting motor independent of said transmission means adapted to be connected to said means when said means is disconnected from said prime mover and said gear.

5. In combination with the running gear of a vehicle, a prime mover, transmission means for transmitting power from said prime mover to said gear, mechanism for disconnecting said means from said gear and said prime mover, and a starting motor for starting said prime mover normally disconnected from said transmission means, but adapted to be connected to said means when said means is disconnected from said gear and said prime mover.

[Claims 6 and 7 not printed in the Gazette.]

1,215,677. PIG-FEEDING APPARATUS FOR LINOTYPE-MACHINES. GEORGE E. MARLATT, Pasadena, Cal. Filed Sept. 17, 1913, Serial No. 790,367. Renewed June 17, 1916. Serial No. 104,235. (Cl. 22—80.)



1. In a pig-feeding mechanism for linotype machines, a reciprocating melting-pot, a magazine for pigs, a supplemental laterally inclined chute arranged within the pot, independent of said magazine and at right angles thereto, and means independent of the reciprocations of the pot and controlled by the level of the molten metal in the pot for feeding the pigs intermittently from the said magazine into the said pot.

2. In a pig-feeding mechanism for linotype machines, a reciprocating pot, a magazine for pigs, a supplemental laterally inclined chute arranged within the pot, independent of said magazine and at right angles thereto, and a hit-and-miss device independent of the reciprocations of the pot and controlled by the level of the molten metal in the pot for feeding the pigs intermittently from the said magazines into the said pot.

3. In a pig-feeding mechanism for linotype machines, a reciprocating pot, a magazine for pigs, a supplemental laterally inclined chute arranged within the pot, independent of said magazine and at right angles thereto, and a hit-and-miss device independent of the reciprocation of the pot and controlled by the level of the molten metal in the pot for feeding the pigs intermittently from the said magazine into the said pot, one element of said device being actuated by the linotype machine and the other intermittently by the level of the metal in the pot.

4. In a pig-feeding mechanism for linotype machines, a melting-pot, a magazine for pigs, movable means for retaining the pigs in the magazine, a reciprocating element, and a second element controlled by the level of the metal in the pot for operatively connecting said reciprocating element to said retaining means when the said metal is below a predetermined level.

5. In a pig-feeding mechanism for linotype machines, a melting pot, a magazine for pigs, a cam shaft, a dog reciprocated thereby, a float in the pot, a catch controlled by the float to cause the former to come into the path of the dog when the float is below a predetermined level and to be out of the path of the dog when the float is above said level, and means connected with said block for releasing a pig from the magazine.

[Claims 6 to 15 not printed in the Gazette.]

1,215,678. FILLING MATERIAL FOR TEETH. MISSAK MAROUKE, Louisville, Ky., assignor to Henry F. Reitz, Louisville, Ky. Filed July 13, 1916. Serial No. 109,173. (Cl. 75—1.)

1. A dried powdered substance suitable for a filling for teeth comprising finely divided gold particles mixed with a relatively small amount of mercury.

2. A dried powdered substance suitable for filling teeth containing a powdered metallic filling substance associated with a relatively small amount of mercury.

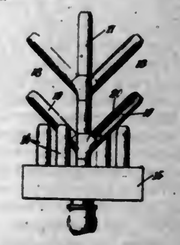
3. The method of producing a filling material for teeth consisting in subjecting a body of finely powdered gold to the action of heat, adding to the powdered mass a relatively small amount of mercury and thoroughly triturating the combined mass.

4. The method of producing a material for use in filling teeth consisting in adding to a body of dried finely powdered precious metal filling material a relatively small amount of mercury and triturating the mass to cause the mercury to come in contact with the various particles of the metal and maintaining the mass in a dried state after treatment.

1,215,679. GAS-BURNING RANGE. SEBASTIANO MARTOCCIO, New York, N. Y. Filed Mar. 3, 1916. Serial No. 81,826. (Cl. 158—104.)

1. A burner comprising a mixing chamber and a pipe having one end communicating therewith and its other end open, said pipe being provided with oppositely-disposed, laterally-extending branches communicating therewith intermediate the ends thereof, substantially as specified.

2. A burner comprising a mixing chamber and a pipe having one end communicating therewith and its other end open, said pipe being provided with laterally-extending branches communicating therewith intermediate the ends thereof, the point of communication of one of said branches being nearer the open end of said pipe than is the point of communication of the other of said branches, substantially as specified.



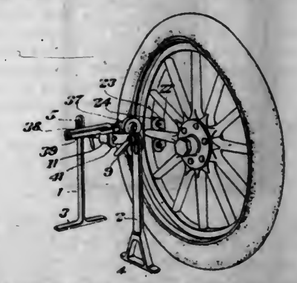
3. A burner comprising a mixing chamber and an open-ended pipe extending upwardly therefrom and communicating therewith, said pipe being provided with open-ended branches communicating therewith intermediate the ends thereof, the open end of one of said branches being positioned in a plane below the plane of the open end of the other of said branches, substantially as specified.

4. A burner comprising a mixing chamber and an open-ended pipe extending upwardly therefrom and communicating therewith, said pipe being provided with oppositely-disposed, open-ended branches communicating therewith intermediate the ends thereof, the open end of one of said branches being positioned in a plane below the plane of the open end of the other of said branches, substantially as specified.

5. A burner comprising a mixing chamber, a plurality of rows of pipes communicating therewith, a row of pipes provided with laterally-extending branches and communicating with said mixing chamber, said row of pipes being positioned between two adjacent rows of said plurality of rows of pipes, substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]

1,215,680. TIRE REMOVER AND REPLACER. ALFRED N. MASON, Paducah, Ky. Filed Nov. 20, 1915. Serial No. 62,594. (Cl. 157—6.)



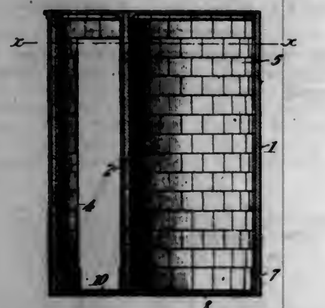
1. In a portable device for removing and replacing pneumatic tire casings from vehicle wheels while the latter remain on the vehicle, the combination of a substantially horizontal frame, means for supporting said frame at an elevation and permitting the same to be raised and lowered to suit wheels of different diameters, said frame embodying a pair of bowed sections pivoted to each other for relative movement on a substantially vertical axis and shaped to extend past opposite sides of a tire into the circular plane of the rim, means for moving the free ends of said sections toward each other and holding them in fixed relation, pressure sustaining rim engaging rollers carried by each of said frame sections, and means carried by one frame section and adapted to operate against a tire for shifting said tire laterally in relation to the rim of the wheel as the wheel is turned on its axis.

2. In a portable device for removing and replacing pneumatic tire casings from vehicle wheels while the lat-

ter remain on the vehicle, the combination of a substantially horizontal frame, means for supporting said frame at an elevation and permitting the same to be raised and lowered to suit wheels of different diameters, said frame embodying a pair of bowed sections pivoted to each other for relative movement on a substantially vertical axis and shaped to extend past opposite sides of a tire into the circular plane of the rim, means for moving the free ends of said sections toward each other and holding them in fixed relation, pressure sustaining rim engaging rollers carried by each of said frame sections, and interchangeable devices detachably fastened to one frame section and adapted to act upon the tire to crowd the tire laterally in relation to the rim as the wheel is turned on its axis.

3. In a portable device for removing and replacing pneumatic tire casings from vehicle wheels while the latter remain on the vehicle, the combination of a substantially horizontal frame, means for supporting said frame at an elevation and permitting the same to be raised and lowered to suit wheels of different diameters, said frame embodying a pair of bowed sections pivoted to each other for relative movement on a substantially vertical axis and shaped to extend past opposite sides of a tire into the circular plane of the rim, means for moving the free ends of said sections toward each other and holding them in fixed relation, pressure sustaining rim engaging rollers carried by one of said frame sections, and means carried by said frame for shifting a tire laterally in relation to a rim, the last named means embodying a tapered roller journaled on said frame section and against which the tire bears, and a flanged roller coöperating with the wheel rim to sustain said tapered roller in a definite relation to the tire and rim.

1,215,681. SHOWER-BATH. MASON MAURY and WILLETT C. MAGRUDER, Louisville, Ky. Filed Nov. 17, 1915. Serial No. 61,941. (Cl. 4—26.)



1. A shower bath structure of such shape that the line of the inner wall of a cross section thereof describes substantially a spiral, the surfaces of the inner wall being substantially smooth and unbroken, the bath comprising a water spray for directing the water toward the inner end of the wall.

2. A concrete shower bath structure of such shape that the line of the inner wall of a horizontal section thereof describes substantially a spiral, the surface of the inner wall being substantially smooth and unbroken, the bath comprising a water spray for directing the water toward the inner end of the wall.

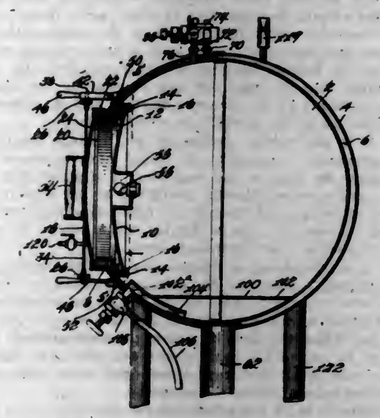
3. A concrete shower bath structure, the vertical, or side walls of which are made in one piece and of such shape that the inner line of a horizontal section thereof describes substantially a spiral, the inner surface of the side walls of the structure being substantially smooth and unbroken, the bath comprising a water spray for directing the water toward the inner end of the wall.

4. A shower bath, the side or vertical wall of which is curved with the outer end separated a distance from the end of said wall and over-lapping it, the inner surface of the side or vertical wall being substantially smooth and unbroken, the bath comprising a water spray for directing the water toward the inner end of the wall.

5. A shower bath the side or vertical wall of which is curved with the outer end separated a distance from the inner end of the wall and overlapping the same and a water spraying device disposed with relation to the side wall so that the water spray will be directed toward the inner end of the wall.

[Claim 6 not printed in the Gazette.]

1,215,682. STERILIZER. WILLIAM H. MAY, Yonkers, N. Y., assignor to Bramhall Deane Company, New York, N. Y., a Corporation of New York. Filed Aug. 14, 1915. Serial No. 45,457. (Cl. 220—124.)



1. An apparatus of the class described, having, in combination, a vessel adapted to withstand either internal pressure, as of a gas under compression, or external pressure, as when vacuum conditions obtain within, said vessel being provided with an opening, and a double closure for said opening comprising a door arranged to be seated by internal pressure and a second door arranged to be seated by external pressure, said doors being unconnected and so arranged that each acts as a closure only when the appropriate pressure condition prevails.

2. An apparatus of the class described, having, in combination, a vessel adapted to withstand either internal pressure, as of a gas under compression, or external pressure, as when vacuum conditions obtain within, said vessel being provided with an opening, and means for closing said opening comprising a normally loosely seated pressure door and a normally tightly seated vacuum door, said vacuum door being yieldingly held against internal pressure whereby each door acts as a closure only when the appropriate pressure condition prevails.

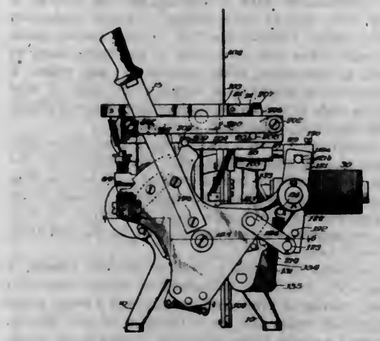
3. An apparatus of the class described, having, in combination, a vessel adapted to withstand either internal pressure, as of a gas under compression, or external pressure, as when vacuum conditions obtain within, said vessel being provided with an opening, and means for closing said opening comprising a pressure door arranged to be seated upon the inside of said vessel and a vacuum door arranged to be seated upon the outside of said vessel, said doors being unconnected and so arranged that each is held in chamber sealing position by the appropriate pressure condition and only when said condition prevails.

4. In a sterilizing apparatus for use in sterilizing under successive conditions of vacuum and pressure, in combination, a vessel adapted to resist both internal pressure and external pressure and having an opening through which articles to be sterilized may be introduced into said vessel, and a double closure for said opening comprising a door arranged to be seated by internal pressure, a second door arranged to be seated by external pressure and means for supporting said doors for independent movement into and out of closing relation to said opening, that one of the doors which lies within the vessel with respect to the other being freely movable away from its seat whereby said doors are automatically held in their respective operative positions by the respective pressure conditions.

5. In a sterilizing apparatus for use in sterilizing under successive conditions of vacuum and pressure, in combination, a vessel having an opening through which articles to be sterilized may be introduced into said vessel, and means for closing said opening comprising a vacuum door and a pressure door each having a seat about said opening, each of said doors being supported for movement independently of the other and being arranged to be automatically moved away from its seat under the action of the pressure condition which serves to seat the other.

[Claims 6 to 8 not printed in the Gazette.]

1,215,683. TIME-RECORDING REGISTER. HORACE B. MCCABE, Madison, Wis., assignor to Gisholt Machine Company, Madison, Wis., a Corporation of Wisconsin. Filed Aug. 18, 1915. Serial No. 46,037. (Cl. 234—43.)



1. In a time-recording register, the combination of a chute to receive a card, means for printing a record on said card while in said chute, means for locking the printing means against operative movement when the chute is empty, means for holding said locking means normally unlocked, and means for preventing said locking means from locking when a card is inserted in the chute.

2. In a time-recording register, the combination of a chute, to receive a card, card-positioning means associated with said chute, means for printing a record on said card while in said chute, means controlled by said card-positioning means for locking the printing means against operative movement when the chute is empty, means for holding said locking means normally unlocked, and means for preventing said locking means from locking when a card is inserted in the chute.

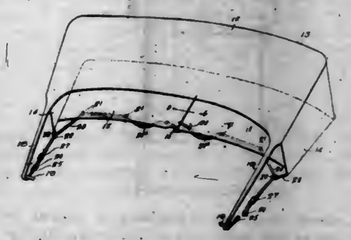
3. In a time-recording register, the combination of a chute to receive a card, means, including a manually operable handle, for printing a record on said card while in said chute, means adapted to lock said handle against operative movement when the chute is empty, means for holding said locking means normally unlocked, and means for preventing said locking means from locking when a card is inserted in the chute.

4. In a time-recording register, the combination of a chute to receive a card, card-positioning means associated with said chute, means, including a manually operable handle, for printing a record on said card while in said chute, means controlled by said card-positioning means adapted to lock said handle against operative movement when the chute is empty, means for holding said locking means normally unlocked, and means for preventing said locking means from locking when a card is inserted in the chute.

5. In a time recording register, the combination of a chute to receive a card, automatic means associated with said chute for positioning a card therein so as to receive spaced impressions at successive insertions of the card, a movable stop member actuated by said card positioning means, means, including a manually operable handle, for impressing a printed record on said card while in said chute, and a movable locking device for said handle controlled by said movable stop member.

[Claims 6 to 8 not printed in the Gazette.]

1,215,684. AUTOMOBILE-HOOD. ALEXANDER G. MCGREGOR, Warren, Ariz. Filed Feb. 29, 1916. Serial No. 81,162. (Cl. 21—62.)



1. A hood or cover, for folded vehicle tops, consisting of top, back, side and bottom portions, the bottom portion of the said hood or cover being constructed with an opening or vent afforded by separated edges, all of the said portions of the hood being permanently associated so that said hood is practically all in one piece excepting its vented bottom portion, combined with draw or tension straps connected with said separated edges and extending thence forward, and straps connected to said top portion and with which said first-named straps are or may be detachably joined.

2. A hood or cover, for folded vehicle tops, consisting of top, back, side and bottom portions, the bottom portion of the said hood or cover being constructed with an opening or vent afforded by separated edges which extend approximately from front to back of said bottom portion, all of the said portions of the hood being permanently associated so that said hood is practically all in one piece excepting its vented bottom portion, combined with draw or tension straps connected with said separated edges and extending thence forward, and straps connected to said top portion and with which said first-named straps are or may be detachably joined.

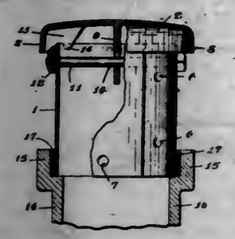
3. A hood or cover, for folded vehicle tops, consisting of top, back, side, and bottom portions, the bottom portion of the said hood or cover being constructed with an opening or vent afforded by separated edges, all of the said portions of the hood being permanently associated so that said hood is practically all in one piece excepting its vented bottom portion, combined with draw or tension straps connected with said separated edges and passing through loops attached to said bottom portion, and extending thence forward, and straps connected to said top portion and with which said first-named straps are or may be detachably joined.

4. A hood or cover, for folded vehicle tops, consisting of top, back, side and bottom portions, the bottom portion of the said hood or cover being constructed with an opening or vent afforded by separated edges which extend approximately from front to back of said bottom portion, all of the said portions of the hood being permanently associated so that said hood is practically all in one piece excepting its vented bottom portion, combined with draw or tension straps connected with said separated edges and passing through loops and straps connected to said top portion and with which said first-named straps are or may be detachably joined.

5. A hood or cover, for folded vehicle tops, consisting of top, back, side and bottom portions, the bottom portion of said hood or cover being adjustable so as to be capable

of being opened out more or less when the said hood or cover is to be applied to or removed from a folded vehicle top, combined with tension cords or straps, attached to said bottom portion, for drawing the latter taut when said hood or cover is in its operative position, and hooks on the back of the vehicle with which said cords or straps may be engaged for connecting said hood with said vehicle back.

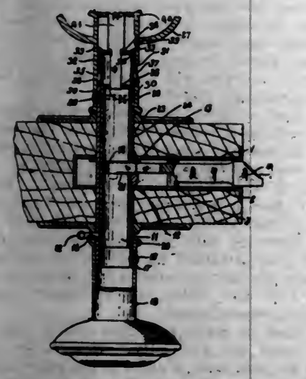
1,215,685. SEWER-VENT CAP. MICHAEL L. MCGUIRE, Syracuse, N. Y. Filed Sept. 18, 1913. Serial No. 790,500. (Cl. 4—21.)



1. A sewer vent cap comprising a tubular body, a hooded top at the upper end of the body, the top being formed with lugs on its lower face, the lugs being formed with shoulders for engaging the inner and outer faces of the tubular body, and means for securing the top to the body, substantially as and for the purpose described.

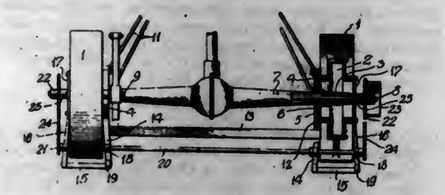
2. A sewer vent cap comprising a tubular body, a top at the upper end of the body, the top being formed with lugs on its inner face, the lugs being formed with shoulders for engaging the inner and outer faces of the tubular body, the top being also formed with a lug depending centrally into the body, a bolt extending transversely through the body and the lug, and a nut screwing on the bolt against the periphery of the body, substantially as and for the purpose described.

1,215,686. DOOR-LOCK. DANIEL MCKAY, Arnprior, Ontario, Canada. Filed Feb. 5, 1914. Serial No. 816,792. (Cl. 70—91.)



A door lock comprising a casing, a latch-bolt slidably arranged in said casing and spring held to its outer position, a knob-tube extending laterally through said casing and having a peripheral slot into which the inner end of said latch-bolt extends and tumbler arms extending therefrom and engaging with said latch-bolt and a peripheral groove adjacent one end thereof, a knob having a central bore and fitting over one end of said knob-tube and having a longitudinal groove through the shank thereof into said bore, a screw inserted through a suitable orifice in the shank of said knob and into the groove in said knob-tube, an inner tube arranged within said knob-tube and having a peripheral slot registering with the peripheral slot in said knob-tube and a closed end having a key recess therein, a clutch tube slidably arranged in the bore of said knob and interlocking with the end of said knob-tube and having a spring-finger extending into the longitudinal slot in said knob-shank and a closed end with a key opening therethrough and a key inserted through the bore of said knob and the key opening in said clutch tube and fitting the key recess in said inner tube.

1,215,687. ATTACHMENT FOR TRACTORS. CHARLES F. MEGOW, Detroit, Mich. Filed Apr. 8, 1916. Serial No. 89,749. (Cl. 21—90.)



1. The combination with a tractor having wheels, a rear driven axle, and an axle casing, of heads connected to said axle casing, yokes connected to said heads, heads carried by said yokes and connected to the outer sides of said wheels, a transverse shaft carried by said yokes, a power transmission mechanism between the ends of said shaft and the ends of said axle, and means whereby power may be derived from either end of said axle.

2. The combination with a tractor having wheels, a rear driven axle, and an axle casing, of yokes connecting the outer sides of said wheels to the ends of said axle casing, a power transmission mechanism supported by said yokes whereby the ends of said axle may be driven in synchronism, and means whereby power may be derived from an end of said axle.

3. The combination with a tractor having wheels, a rear driven axle, and an axle casing, of heads connected to said axle casing, a brace connecting said heads, yokes connected to said heads and the outer sides of said wheels, a shaft carried by said yokes, a power transmission mechanism between the ends of said shaft and the ends of said axle, means whereby power may be derived from the end of said axle.

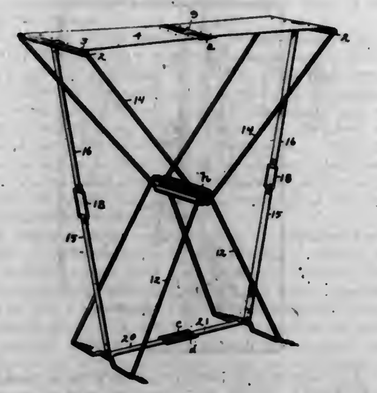
4. A tractor attachment comprising yokes adapted to connect the outer sides of tractor wheels to an axle casing, a shaft supported by said yokes and adapted to extend between the spokes of tractor wheels, and a power transmission mechanism at each end of said shaft whereby the ends of an axle may be driven in synchronism.

1,215,688. GLOVE AND MITTEN. JOHAN PETER MÖLLER, Kewanee, Ill., assignor to Boss Manufacturing Company, Kewanee, Ill., a Corporation of Illinois. Filed July 29, 1916. Serial No. 112,087. (Cl. 2—9.)



A glove formed of a single ply of woven cotton or the like and having its various parts formed of material arranged with its threads diagonally disposed with relation to the length of the said parts.

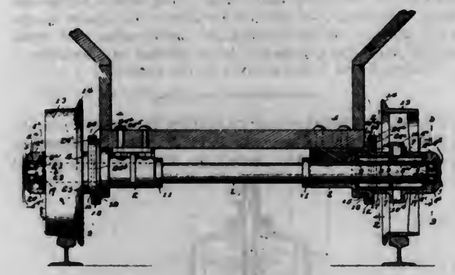
1,215,689. FOLDING STOOL. DOUGLAS M. NEFF, East Cleveland, Ohio, assignor to The Neff Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 27, 1914. Serial No. 834,673. (Cl. 155—32.)



1. A folding stool having a sheet metal seat formed in sections hinged together in the middle of the seat and said seat having a recess in its middle on the line of its hinge and links at its sides adapted to fold across said recess from opposite sides.

2. A folding stool having a sheet metal seat hinged at its middle and provided with a recess at its center, in combination with links at the side of said stool having a middle connecting member and adapted to fold and to lie across said recess from opposite sides within the plane of folded members of the stool.

1,215,690. CAR-WHEEL CONSTRUCTION. NORTON A. NEWDICK, Columbus, Ohio, assignor to The Bonney-Floyd Company, Columbus, Ohio, a Corporation of Ohio. Filed Oct. 24, 1914. Serial No. 868,476. (Cl. 105—67.)



1. The combination of the body, the bearing, a wheel having a hub, means engaging with the hub to limit its moving axially and to permit its rotating, the axle passing loosely, axially, through the bearing and having its end extended into the wheel hub, and the anti-friction bearing device between the end surface of the axle and the wheel hub and adapted to rotate relatively to both and held permanently in position in the wheel hub independently of the axle.

2. The combination of the body, the bearing, the wheel having a hub with an axial chamber, the axle slidable axially relatively to the bearing and to the wheel, means for holding the wheel axially relatively to the bearing and permitting it to rotate, the anti-friction device between the surface of the end of the axle and the end of the hub and adapted to rotate relatively to both, and means engaging with the hub for holding the anti-friction device permanently in position in the hub.

3. The combination of the body, the bearing, the wheel having a hub with an axle chamber, the axle movable axially in the bearing and in the wheel hub, means interposed between the axle and the body to limit the axial movement of the axle, the axially arranged bearing rollers between the axle and the hub, and the anti-friction device between the end of the axle and the end of the hub and adapted to rotate relatively to both.

4. The combination of the bearing, the wheel, having the hub with an axle chamber a roller bearing chamber around the axle and a chamber for the anti-friction device at the end of the axle, means independent of the axle for limiting the axial movements of the wheel, means independent of the wheel for limiting the axial movement of the axle, the axially arranged bearing rollers between the axle and the wheel, and the anti-friction device in the aforesaid chamber at the end of the axle and rotatable independently of the axle and the wheel.

1,215,691. WHEEL OR SULKY CULTIVATOR. MILTON NOAKER, Akron, Ohio, assignor to The Akron Cultivator Company, Akron, Ohio, a Corporation. Filed Mar. 10, 1913. Serial No. 753,338. (Cl. 97—35.)



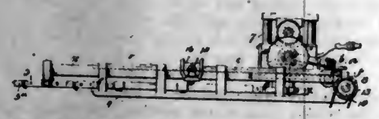
1. As a new article of manufacture, a convertible gang frame for wheel cultivators consisting of two metallic bars permanently united at both ends and variably spaced apart between their ends, and said frame provided with a relatively narrowed portion at its rear having parallel sides and each of said sides having two seats for a single interchangeable cultivator standard on each side and provided further with a single seat at the rear of said frame and a single seat on the inside thereof near its middle, whereby a straight or a zig-zag disposition of teeth can be obtained in a single gang frame.

2. A frame for convertible cultivator gangs as described, having an outwardly extending portion at its rear end provided with a bracket and a seat on said bracket for a cultivator standard, and said frame having a relatively inwardly extending portion on its inner side provided with a seat for a standard and parallel sides between said seats provided each with a pair of seats for cultivator standards, whereby a single tooth standard may be exchanged from one seat to the other in each of said pair of seats.

3. A convertible gang for wheel cultivators consisting of a frame having seats for cultivator standards in parallel lines on opposite sides at its front and rear respectively and two pairs of seats at opposite sides between said front and rear seats and relatively inward therefrom in parallel lines, the space between the two seats of one of said pairs being greater than the space between the two seats in the other pair.

4. A gang frame for wheel cultivators constructed of metallic bars bent outward at their rear ends in respect to the remainder of the frame and a bracket on said rear end provided with a seat for a cultivator standard, the outer of said bars being straight from said bend to the front end and the inner bar bent inward at about its middle parallel to the outer bar, and said frame having a contracted portion between said bends with parallel sides, a seat on said inner bar on its inward bent portion and a pair of seats on each side of the said parallel contracted portion of the frame, the spaces between occupied seats successively being substantially the same and cultivator standards supported from each of said front and rear seats and a single standard supported from each set of middle seats.

1,215,692. MINING-MACHINE. GEORGE B. NORRIS, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Dec. 18, 1915. Serial No. 292,372. (Cl. 125—14.)



In a mining machine, the combination with a relatively smooth bottomed bed frame adapted to rest directly upon the ground and to be freely moved in any direction, of a kerf cutting mechanism on the bed frame operative when moved forward perpendicularly to a coal face, a cable adapted to be anchored externally of the machine, and mechanism on the machine for engaging the cable to guide and wind it, the guiding parts of the said mechanism being bodily movable along lines substantially parallel to the lines of forward movement of the cutting mechanism to permit adjustment of the line of draft.

1,215,693. ELECTRIC SOLDERING-IRON. HARRY A. ORME, Washington, D. C. Filed Nov. 20, 1916. Serial No. 132,389. (Cl. 219—27.)



1. In a device of the kind described, a handle, a solder carrying reel, a solder feed tube passing through said handle, feed mechanism carried by said tube, a resistance coil carried by the tube, an iron having a passage therein and secured to said coil, the passage alining with the coil core, and a conductor carried by the handle and tube and leading to said coil.

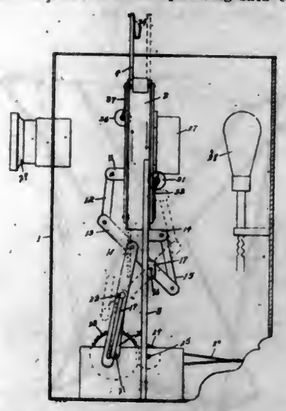
2. In a device of the kind described, an iron having a longitudinal passage, a heating unit connected to said iron the core of which alines with the said passage, a solder feeding tube supporting said unit and also alining with the core, the solder passing through said core into said iron, a tube carrying an electrical conductor in circuit with said heating unit, an insulator of meerschaum arranged adjacent said unit and through which said conductor passes, and a telescoping sleeve carried by the conductor tube and abutting on said insulator.

1,215,694. PICTURE-DISPLAY MACHINE. JAMES M. OSBORNE, Fort Worth, Tex. Filed Apr. 29, 1916. Serial No. 94,310. (Cl. 88—28.)

1. A picture display machine comprising a casing having vertical guide ways therein, vertically movable carriers operating in said guide ways, one carrier having hooks for drawing one slide down at a time and the other carrier having hooks for lifting one slide at a time, brackets supporting the slides in the upper part of the casing and brackets supporting slides in the lower part of the casing, and means for shifting said slides on said brackets from one carrier to the other.

2. A picture display machine comprising a casing having vertical guideways therein, vertically movable carriers operating in said guide-ways, brackets horizontally disposed in said casing, the down carrier having hooks for drawing one slide down at a time and the up carrier having hooks for lifting one slide at a time, springs for shifting slides on said brackets from one carrier to the other, and means for operating said carriers.

3. A picture display machine comprising a casing having guideways therein and provided with a condenser, brackets horizontally disposed in said casing, an up carrier having hooks for lifting one slide at a time, a down carrier having hooks for drawing one slide at a time to position the same against said condenser, means for pressing the slide against the condenser until said down carrier presses another slide down to take its place, means for forcing the slides on said brackets from one carrier to the other, and means for operating said carriers.

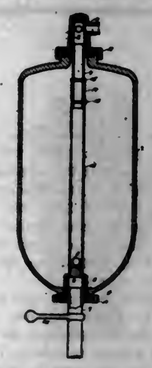


4. A picture display machine comprising a casing having guideways therein and provided with a condenser, brackets horizontally disposed in said casing, up and down carriers operating in said guide ways, the up carrier having hooks for lifting one slide at a time, a down carrier having hooks for drawing one slide at a time to position the same against said condenser, a spring for pressing the slide against the condenser until said down slide brings another slide down and forces the slide below away from the condenser, means for operating said carriers, and means for projecting a light through said condenser.

5. A picture display machine comprising a casing having a condenser and having vertical guide-ways therein, an up-carrier and a down-carrier moving in said guideways, upper and lower brackets in said casing, said up-carrier lifting one slide at a time from the lower bracket to the upper bracket and said down-carrier bringing one slide from the upper bracket down to position the same against said condenser, a spring for holding said slide against the condenser until said down-carrier brings another slide down and forcing the lower slide down to the lower bracket, spring bearings for positioning said slides on said brackets, and means for actuating said carriers.

[Claims 6 and 7 not printed in the Gazette.]

1,215,695. FLUSHING APPARATUS WITH AIR-CHAMBER. FREDERIK JOHANNES PAFF, Utrecht, Netherlands. Filed Sept. 23, 1916. Serial No. 121,813. (Cl. 4—5.)



1. A flushing device comprising an air chamber having oppositely-disposed inlet and outlet ports, valves for the ports, a tubular rotatable valve stem extending between and connected to the valves, said stem being in communication with the inlet port through the inlet valve and also provided with an outlet within the chamber, the two valves being arranged so that when either is open the other is closed, and means for controlling the valve stem to manipulate the valves.

2. A flushing device comprising an air chamber having oppositely-disposed inlet and outlet ports, valves for the ports, a tubular rotatable valve stem extending between and connected to the valves, said stem being in communication with the inlet port through the inlet valve and also provided with an outlet within the chamber, said stem also including telescopic sections and an interposed expansion spring to hold the valves against their seats, the two valves being arranged so that when either is open the other is closed, and means for controlling the valve stem to manipulate the valves.

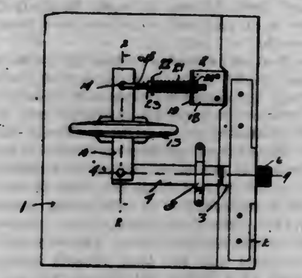
3. A flushing device comprising an air chamber having an inlet valve including a casing having a tapered seat and a hollow turning plug mounted in the seat, an outlet valve disposed opposite the inlet valve and including a casing having a tapered seat and a hollow tapered turning plug fitting the seat, a tubular stem connecting the valves and provided with an outlet within the chamber, said stem including telescopic members and an interposed expansion spring to hold the valves against their seats.

4. A flushing device comprising an air chamber, an inlet valve comprising a casing having a tapered seat and a hollow tapered turning plug mounted in the seat, an outlet valve having a casing provided with a tapered seat and a hollow turning plug fitting the seat, each casing and turning plug having openings which are registered in the open position of the valve, and a tubular valve stem extending between and connected to the two valves, one end of the valve stem being in communication with the hollow turning plug of the inlet valve, and said valve stem also having an outlet opening communicating with the interior of the air chamber.

5. A flushing device comprising an air chamber having an inlet valve including a casing having a tapered seat and a hollow turning plug mounted in the seat, an outlet valve disposed opposite the inlet valve and including a casing having a tapered seat and a hollow tapered turning plug fitting the seat, a tubular stem connecting the valves and provided with an outlet within the chamber, said stem including telescopic members and an interposed expansion spring to hold the valves against their seats, and a rotatable off-take pipe connected to and communicating with the interior of the turning plug of the outlet valve.

[Claim 6 not printed in the Gazette.]

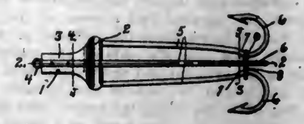
1,215,696. LATCH. WALTER M. PARSON, Antigo, Wis. Filed July 31, 1916. Serial No. 112,450. (Cl. 70—42.)



1. A latch, comprising in combination, a latch bolt, a turn bolt, a link secured upon said turn bolt and pivotally connected to said latch bolt, a bar also pivotally connected to said link and means operated with said bar for limiting the movement of the latch bolt, said limiting means being adjustable to regulate the amount of projection of the latch bolt.

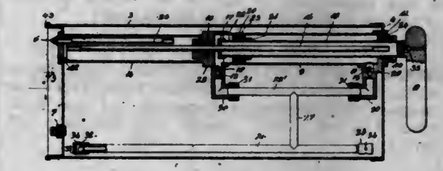
2. A latch, comprising in combination, a latch bolt, a turn bolt, a link fixed upon said turn bolt and pivotally connected to said latch bolt, a bar also pivotally connected to said link, a bearing plate through which said bar is guided, a stop nut threaded upon said bar and bearing against said bearing plate to limit the movement of said bar, and a coil spring threaded upon said bar and tensioned to normally throw the latch bolt into latching position.

1,215,697. FISH-HOOK. GEORGE E. PAULSEN, Chicago, Ill. Filed June 2, 1916. Serial No. 101,360. (Cl. 43—31.)



A fish hook of the class described comprising a head, said head having a plurality of angularly disposed faces, an annular shoulder carried by the head, fish hooks having the upper ends of their shanks connected to the faces and engaged with the shoulder, and a chain having one end fixed to one of the hooks and its other end detachably engaged with another hook, said chain being engaged around the hooks to hold the shanks under tension.

1,215,698. FIRE-EXTINGUISHER. GEORGE T. PEARSONS, New York, N. Y. Filed Jan. 15, 1916. Serial No. 72,207. (Cl. 169—17.)



1. The combination of a cylinder having suction intakes adjacent opposite ends; a hollow piston rod projecting from one end of said cylinder and having an operating handle connected to said end and ports adjacent its inner end; a piston in the cylinder mounted on the piston rod to be reciprocated thereby and having a limited free movement thereon during the initial outward and inward movement of the piston rod to control the opening and closing of the ports to alternately connect the piston rod with the cylinder at opposite sides of the piston; and a tube slidable in the cylinder end extending into the piston rod and reciprocable therewith, substantially as and for the purpose specified.

2. In a syringe, the combination of a reservoir having a discharge outlet; a cylinder therein connected at opposite ends with the reservoir; a hollow piston rod extending from the reservoir opposite to the discharge outlet and having ports adjacent its inner end; a piston operable to alternately draw liquid from the reservoir to opposite ends of the cylinder and control the opening and closing of the ports in the piston rod to discharge the liquid from the cylinder into the piston rod; a tube extending through the end of the cylinder into the piston rod and reciprocable therewith and means to connect said tube with the reservoir outlet to connect the cylinder through the piston rod and the tube with the reservoir outlet, substantially as and for the purpose specified.

3. In a syringe, the combination of a reservoir having an outlet; a cylinder therein connected at opposite ends with the reservoir; a piston to reciprocate in the cylinder; a hollow piston rod extending from the end of the reservoir opposite to the outlet; a tube extending into the piston rod and reciprocable therewith, said tube being slidable in the cylinder end and connected with the reser-

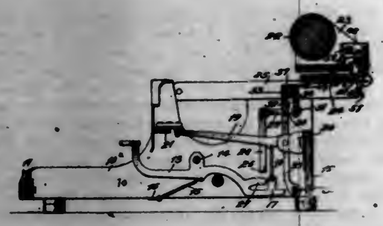
voir outlet, and ports in the piston rod the opening and closing of which ports is controlled by the piston to discharge the liquid from the cylinder alternately from opposite ends of the piston through the piston rod and tube, substantially as and for the purpose specified.

4. In a syringe, the combination of a reservoir having a discharge outlet in one end; a cylinder therein connected at opposite ends with the reservoir; a hollow piston rod projecting from the end of the cylinder and reservoir opposite to the discharge outlet, said rod having an operating handle fixed to said projecting end and ports adjacent its inner end; a piston mounted on the piston rod to have a limited free movement on the rod during the initial outward and inward movements of the piston rod to control the opening and closing of the ports to control the flow of liquid from the cylinder to the piston rod alternately from opposite ends of the piston, and a tube slidable in the cylinder end and reciprocable with the piston and piston rod to connect the cylinder through the piston rod with the discharge outlet, said tube fixed to and extending into the piston rod to a point adjacent the operating handle, substantially as and for the purpose specified.

5. In a syringe, the combination of a reservoir having an outlet; a cylinder therein connected with the reservoir adjacent opposite ends; a hollow piston rod extending from the reservoir opposite to the outlet and having an operating handle connected thereto; a piston reciprocable in the cylinder; a tube reciprocable with the piston rod and connected with the reservoir outlet, said tube extending into the piston rod to a point adjacent the operating handle; and ports in the piston rod controlled by the piston to alternately discharge the liquid from the cylinder at opposite ends of the piston through the piston rod and tube, substantially as and for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

1,215,699. TYPE-WRITING MACHINE. OTTO PETERMANN, Groton, N. Y., assignor to Corona Typewriter Company, Incorporated, a Corporation of New York. Filed Aug. 26, 1913. Serial No. 786,693. (Cl. 197—112.)



1. In a typewriting machine, the combination of a support, a carriage adapted to travel along said support, a key-actuated member, a bar having a relative rocking movement only mounted on said carriage, a device adjustably held to said bar and pendent therefrom, a lever pivotally held to the support and having one end provided with two spaced engaging parts arranged in the path of movement of said device and having its other end adapted to be moved into the path of movement of said key-actuated member and adapted to directly engage said member and hold the same against movement when either of said engaging parts are engaged by said device, and means for releasing the device from engagement with the key-actuated member whereby said member may be held against movement at two distinct points.

2. In a typewriting machine, the combination of a support, a carriage adapted to travel along said support, a key-actuated rocking frame, a horizontally arranged bar having a rocking movement and mounted on said carriage, a device held to said bar and pendent therefrom, a horizontally arranged lever pivotally held to the support and having one end provided with a plurality of engaging parts arranged in the path of movement of said device and having its other end adapted to be moved into the path of movement of said rocking frame and adapted to directly engage said frame and hold the same against movement when said engaging parts are engaged by said device, and means for releasing the device from engagement with the lever.

3. In a typewriting machine, the combination of a support, a carriage adapted to travel along said support, a key-actuated member, a bar having a rocking movement and mounted on said carriage, a device held to said bar and pendent therefrom, a lever pivotally held to the support under the same and having one end provided with spaced engaging parts arranged in the path of movement of said device and having its other end adapted to be moved into the path of movement of the key-actuated member and adapted to engage directly said member and hold the same against movement when said engaging parts are engaged by said device, and a finger lever for rocking the bar and releasing the device from engagement with the key-actuated member to hold the same against movement at distinct points.

4. In a typewriting machine, the combination of a movable carriage, a support therefor, a platen supported on the carriage, a rocking frame, key-operated levers for moving said frame, a horizontally arranged and pivotally held locking lever located under the support and adapted to move into the path of a part of the rocking frame and prevent the same from moving, a spring normally forcing the locking lever in one direction, said lever having two spaced projecting portions, and a pendent and rocking device movable with the carriage and adapted to engage the projecting portions of the lever in succession and to be released therefrom to permit movement of the frame and then automatically lock the frame again against movement.

5. In a typewriting machine, the combination with a support, of a carriage adapted to move along the support, a bar supported by the carriage and having a rocking movement only thereon, a device carried by the bar, a rocking bar having a projection, a lever provided with two projecting parts spaced apart and adapted to be engaged by the device mounted on said bar and having its other end provided with a downwardly extending end adapted to engage the projection on the movable bar to lock the same against movement, and a spring for forcing the lever out of engagement with said projection.

[Claims 6 to 9 not printed in the Gazette.]

1,215,700. CARBON ELECTRODE AND METHOD OF MANUFACTURING SAME. ROBERT D. PIKE, San Francisco, Cal. Filed Mar. 13, 1916. Serial No. 83,766. (Cl. 204—65.)

1. As an article of manufacture, a carbon formed from "lamp black" derived from the waste by-products of the manufacture of oil gas, and a carbonaceous binder intermixed therewith.

2. The method of producing carbon electrodes from the refuse "lamp black" product of the manufacture of gas, which consists in eliminating from said product foreign impurities, thence forming the material into a plastic body, thence producing green sticks therefrom and finally baking said sticks for the production of carbon electrodes.

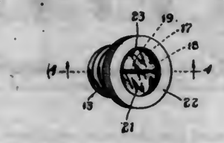
3. The method of producing carbon electrodes from the lamp black refuse derived from the manufacture of gas from oil, which consists first in eliminating therefrom by washing the tar contained therein, thence removing the soluble ash, thence roasting under agitation for the removal of moisture and the high volatile hydrocarbons, thence roasting at a higher temperature for the elimination of remaining hydrocarbons, thence reducing the material to a powder, adding thereto a suitable flux and forming the whole into a plastic body, thence forming the same into green carbon sticks and finally baking the same for the production of the required carbon electrodes.

4. The method of producing carbon electrodes from lamp black refuse derived from the manufacture of gas from oil, which consists first in eliminating from the material by washing and roasting the impurities contained therein, thence forming the material into a plastic body, thence producing green sticks therefrom and finally baking said sticks for the production of carbon electrodes.

5. The method of producing carbon electrodes from lamp black refuse derived from the manufacture of gas from oil, which consists first in eliminating from the material by washing and roasting the impurities contained therein, thence reducing the material to a powder having incorporated therein a suitable flux, then forming the material into a plastic body and producing therefrom green sticks, and finally baking said sticks for the production of the carbon electrodes.

[Claims 6 to 8 not printed in the Gazette.]

1,215,701. FUSE-PLUG. CLARENCE D. PLATT, Bridgeport, Conn. Filed July 14, 1914. Serial No. 850,912. (Cl. 175—277.)



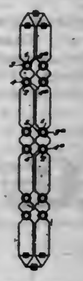
1. A fuse block comprising a substantially cup-shaped insulating body providing a longitudinally-elongated and centrally-disposed chamber therein, said chamber being provided with an internal shoulder, a window of transparent material closing the open end of said chamber, a center contact in the closed end of said chamber, a screw shell inclosing a portion of said body, a tell-tale disk of inflammable material resting upon said shoulder, and a fuse having one end attached to said center contact and the other end attached to said screw shell, an intermediate portion of said fuse being extended transversely across the outer face of said tell-tale disk.

2. A fuse block comprising a substantially cup-shaped insulating body providing a longitudinally-elongated and centrally-disposed chamber therein, said chamber being provided with an internal shoulder, a window of transparent material closing the open end of said chamber, a center contact in the closed end of said chamber, a screw shell inclosing a portion of said body, a tell-tale disk of inflammable material resting upon said shoulder, and a fuse having one end attached to said center contact and passing upwardly through said chamber and transversely across the outer face of said tell-tale disk, the portion of said fuse below the face of said disk being provided with a protective covering.

3. A fuse block comprising a substantially cup-shaped insulating body providing a longitudinally-elongated and centrally-disposed chamber therein, said chamber being provided with an internal shoulder, said chamber also being provided with a longitudinal groove and said body with an exterior channel, both said groove and said channel opening into the space within said chamber above said shoulder, a window of transparent material closing the open end of said chamber, a center contact in the closed end of said chamber, a screw shell inclosing a portion of said body and covering said channel, a tell-tale disk of inflammable material resting upon said shoulder, and a fuse having one end attached to said center contact, passing upwardly within said groove, thence transversely across the upper face of said disk and thence through said channel to connection with said shell.

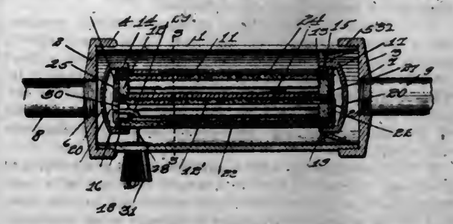
1,215,702. LOADING DUPLEX OR MULTIPLEX TELEPHONE-LINES. HENNING BERNHARD MATHIAS I'LEIJEL and AXEL HERMAN OLSSON, Stockholm, Sweden. Filed Apr. 27, 1914. Serial No. 834,664. (Cl. 178—46.)

1. Duplicate double telephone lines worked on the Pupin system, loaded with induction coils and wherein the coils of the main lines consist of separate windings on separate iron cores laid together and so connected electrically that the phantom line becomes loaded by the stray fields created between the separate coils by the current in the phantom line.



2. Duplicate double telephone lines worked on the Pupin system, and loaded with induction coils each of which consists of two double coils consisting of separate windings on separate iron cores laid together and so connected electrically that the magnetic poles created by the current on the phantom line will be of opposite polarity at any one point in either pair of coils.

1,215,703. LIQUID-HEATER. FRED POOLE, Jewell, Kans. Filed Feb. 2, 1915. Serial No. 5,741. (Cl. 219—39.)



1. A liquid heater, including a casing interposed in a water conduit or the like, a heating device associated therewith comprising a plurality of parallel spaced apart tubular heat radiating members, end plates for supporting said tubular heat radiating members, an electric heating unit associated with each of said tubular heat radiating members, protecting caps carried by said end plates for preventing the contacting of the fluid with the end connections of the electric heating elements, and means carried by one of said caps to support said heating device and prevent longitudinal movement thereof in one direction.

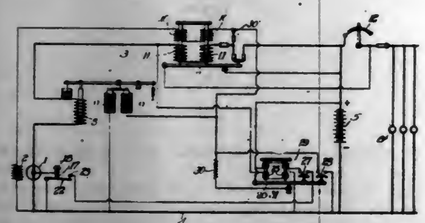
2. A liquid heater, including a casing interposed in a liquid conduit, a heating device comprising a plurality of tubular members in parallel spaced arrangement having each a heating unit, end plates for supporting said tubular members, caps threaded on said end plates to form housings to protect the end connections of the heating units from the fluid, and means for supporting said structure within the casing.

3. A liquid heater, including a casing interposed in a pipe line, a plurality of tubular members in parallel spaced arrangement, end plates, said tubular members having threaded connection with the end plates, insulating means on the plates, and protecting caps threaded on the peripheries of the plates to house the end connections of the heating units from the fluid.

4. A liquid heater, including a casing interposed in a pipe line, a heating device carried in said casing comprising a plurality of spaced parallel arranged tubes, end plates for supporting said tubes, protecting caps carried by said end plates for preventing the contacting of the fluid with the end connection of the heating element,

means for supporting one end of said heating device in said casing, and means on the opposite end comprising a band having legs thereon for maintaining said heating device in spaced relation to the inner periphery of said casing.

1,215,704. AUTOMATIC ELECTRIC REGULATOR WITH STOP-CHARGE RELAY. HARRY H. POWELL, London, England, assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Oct. 9, 1912. Serial No. 724,824. (Cl. 171—313.)



1. A regulator for variable speed generators, comprising means for regulating the field strength of the generator, and means for short circuiting said field upon predetermined voltage rise of said generator, said short circuiting means being controlled by auxiliary means responsive to speed of armature rotation.

2. A regulator for variable speed generators, comprising a variable resistance arranged in a shunt circuit around the generator field, and means for closing a short circuit around said variable resistance, said means including a holding coil connected in circuit across the terminals of a storage battery, said circuit being controlled by the operation of said means and by an additional circuit closer.

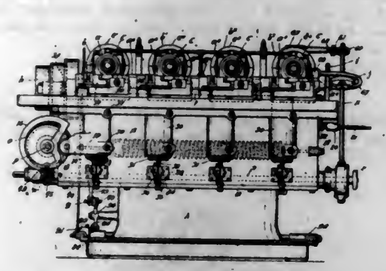
3. The combination with a variable speed generator and a storage battery which is charged thereby, of a centrifugally operated circuit closer controlled by the rotation of the generator armature, a voltage relay connected across the generator terminals and arranged to short circuit the generator field upon the attainment of a predetermined voltage, and an auxiliary circuit closed by the operation of said relay, said circuit closer being arranged in said auxiliary circuit.

4. The combination with a variable speed generator and storage battery which is charged thereby, of a centrifugally operated circuit closer controlled by the rotation of the generator armature, a voltage relay connected across the generator terminals and arranged to short circuit the generator field upon the attainment of a predetermined voltage, said relay having auxiliary coils connected in a shunt circuit around said battery, said centrifugally operated circuit closer being also arranged in said shunt circuit and arranged to open said circuit when the generator armature is rotating below the critical speed, and additional contacts in said circuit closed by the operation of said relay, whereby said auxiliary coils hold said relay closed until speed of armature rotation has been reduced nearly to zero.

5. The combination with a variable speed generator and a storage battery which is charged thereby, of a centrifugally operated circuit closer controlled by the rotation of the generator armature, a voltage relay connected across the generator terminals and arranged to short circuit the generator field upon the attainment of a predetermined voltage, said relay having auxiliary coils connected in a shunt circuit around said battery, said centrifugally operated circuit closer being also arranged in said shunt circuit and arranged to close said circuit when the generator armature is rotating above the critical speed, and additional contacts in said circuit closed by the operation of said relay, whereby said auxiliary coils hold said relay closed until speed of armature rotation has been reduced nearly to zero, at which time said shunt circuit is opened by the operation of said centrifugally operated circuit closer, thereby permitting the relay to fall open.

[Claims 6 to 20 not printed in the Gazette.]

1,215,705. MULTIPLE-SPINDLE MILLING-MACHINE AND THE LIKE. CHARLES DE LOS RICE, Hartford, Conn. Filed June 17, 1913. Serial No. 774,123. (Cl. 90—21.)



1. In a machine of the character described, a bed, a rotating tool-carrying element, arranged transversely of the bed, a longitudinally movable work-holding element, a feed and return mechanism therefor, a main shaft mounted on the bed, driving means therefor, driving connections between said main shaft and said tool-carrying and work-holding elements, means for starting said main shaft, and means for automatically stopping said main shaft.

2. In a machine of the character described, a bed, a rotating tool-carrying element arranged transversely of the bed, a longitudinally movable work-holding element, a feed and return mechanism therefor, a main shaft mounted on the bed, driving means therefor normally inoperative, driving connections between said main shaft and said tool-carrying and work-holding elements, a latch mechanism for said main shaft drive when in operative position, and a trip mechanism in said feed and return mechanism coöperating with said latch mechanism to disconnect and stop the main shaft drive at the end of each complete movement of said feed and return mechanism.

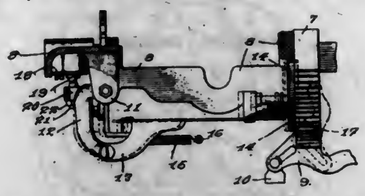
3. In a machine of the character described, a bed, a rotary tool-carrying spindle arranged transversely of the bed and supported in suitable bearings, a table slide at the front of the bed extending longitudinally thereof under the spindle, a table mounted for movement on said slide, a work-holder located on said table, a main shaft supported in bearings on the bed, driving connections between said shaft and spindle, a feed and return mechanism for said table, driving connections between said main shaft and said mechanism, and automatically operating means for stopping said spindle and said table at the end of the return motion of the latter.

4. In a machine of the character described, a bed, a rotary tool-carrying spindle arranged transversely of the bed and supported in suitable bearings, a table slide at the front of the bed extending longitudinally thereof under the spindle, a table mounted for movement on said slide, a work-holder located on said table, feed and return mechanism for said table, a common driving shaft for said spindle and table supported in suitable bearings on said bed, and automatically operating means for stopping said driving shaft at the end of each return motion of the table.

5. In a machine of the character described, a bed, a rotary tool-carrying spindle arranged transversely of the bed and supported in suitable bearings, a table supported on and movable longitudinally of the bed underneath the spindle, a work holder mounted on the table, means for moving said table to carry said holder under and by said spindle, means for returning the table to normal position, a common drive for said spindle and table-operating mechanism, and means for disconnecting said drive from the spindle and table each time the latter returns to normal position.

[Claims 6 to 14 not printed in the Gazette.]

1,215,706. TYPE-BAR-REBOUND SPRING. ALVAH C. ROEBUCK and ARTHUR J. STEINKE, Woodstock, Ill., assignors, by direct and mesne assignments, to Woodstock Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Sept. 28, 1914. Serial No. 863,789. (Cl. 197—33.)



1. In a typewriter, the combination with type bars, of a universal bar engaged and moved thereby, means for movably supporting said bar, and a type bar rebound spring attached to the frame having one end free and spaced from but operable to engage said means when the universal bar is near the end of its stroke to return the type bars quickly from their printing position.

2. In a typewriter, a frame, type bars movable to a common printing position, a universal bar engaged thereby, means comprising a pivoted yoke for supporting the bar for reciprocal movement, and a spring supported by the frame and free from engagement with the yoke except when the universal bar has been actuated and is near the end of the stroke.

3. In a typewriter, a frame, type bars movable to a common printing position, a universal bar engaged thereby, means comprising a pivoted yoke for supporting the bar for reciprocal movement, and a spring comprising a spiral metal coil attached at one end to the frame and having its other end spaced from but operative to engage the yoke for returning the type bars quickly from the printing position to prevent blurring the paper.

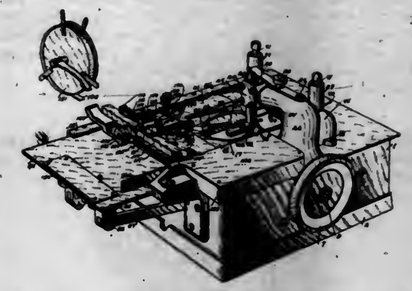
4. In a typewriter, the combination with a frame, of a plurality of pivoted type bars movable to a common printing position, a universal bar mounted for movement in the frame engaged and moved by each type bar as the type bar is moved to printing position, a yoke for supporting the universal bar, and a flat spring for engaging the yoke and opposing the movement of the universal bar at one end only of its movement when any one of the type bars is at or near the printing position for quickly returning the type bar from the printing position.

5. In a typewriter, the combination with a frame, of a universal bar supported for movement in the frame, type bars movable to a common printing position and adapted to engage and move the universal bar in their movement, a spring to return the universal bar, and means comprising an additional spring secured at one end to the frame and having one free end and adapted to oppose the movement of the universal bar only when any one of the type bars is near the printing position for causing the type bar to rebound quickly from the printing position.

[Claims 6 to 9 not printed in the Gazette.]

1,215,707. LABEL CUTTING AND FOLDING MACHINE. ARTHUR ROSENTHAL and MARTIN ROSENTHAL, Grand Rapids, Mich., assignors to The Rose Label Machine Co., Grand Rapids, Mich. Filed Mar. 13, 1915. Serial No. 14,237. (Cl. 223—15.)

1. In an automatic label cutting and folding machine, the combination of a suitable frame; a shaft with driving means; an oscillating feed member with connections to said shaft to actuate the same to secure a step-by-step four motion feed; a feed plate of parallel serrated bars; a work plate with suitable central guide bars intermeshing with the serrated bars of said feed plate; a presser shoe with folding devices coöperating with the said feed member; pairs of creaser rolls coöperating with said folding plate to receive the label from said presser shoe and crease and fold the same; cut off shears comprising an upper and a lower blade, with means for actuating the upper blade; a latch for holding the same and a trip means for releasing the same; a reciprocating carrier plate with means of reciprocating the same; connections to said plate for actuating said shears and trip means when the plate is reciprocated to and from the front of the machine; a reel for the label strip or tape carried by said reciprocating carriage plate; a pay out device for said label strip carried by said reciprocating carriage plate, with means for actuating the same; automatic gripping jaws for said jay out device and trips timed to open and close the same to properly engage and pay out and release said labels; all coacting substantially as described for the purpose specified.



2. In an automatic label cutting and folding machine, the combination of a suitable frame; a shaft with driving means; an oscillating feed member with connections to said shaft to actuate the same to secure a step-by-step four motion feed; a feed plate of parallel serrated bars; a work plate with suitable central guide bars intermeshing with the serrated bars of said feed plate; a presser shoe with folding devices coöperating with the said feed member; pairs of creaser rolls coöperating with said folding plate to receive the label from said presser shoe and crease and fold the same; cut off shears; a reciprocating carrier plate with means of reciprocating the same; connections to said plate for actuating said shears and trip means when the plate is reciprocated to and from the front of the machine; a reel for the label strip or tape; a pay out device for said label strip carried by said reciprocating carriage plate, with means for actuating the same; and automatic gripping jaws for said pay out device and trips timed to open and close the same to properly engage and pay out and release said labels, all coacting substantially as described for the purpose specified.

3. In an automatic label cutting and folding machine, the combination of a suitable frame; a shaft with driving means; an oscillating feed member with connections to said shaft to actuate the same to secure a step-by-step four motion feed; a feed plate of parallel serrated bars; a work plate with suitable central guide bars intermeshing with the serrated bars of said feed plate; a presser shoe with folding devices coöperating with the said feed member; pairs of creaser rolls coöperating with said folding plate to receive the label from said presser shoe and crease and fold the same; cut off shears; a reciprocating carrier plate with means of reciprocating the same; connections to said plate for actuating said shears and trip means when the plate is reciprocated to and from the front of the machine; a reel for the label strip or tape; and a pay out device for said label strip, all coacting substantially as described for the purpose specified.

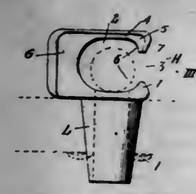
4. In an automatic label cutting and folding machine, the combination of a suitable frame; a shaft with driv-

ing means; an oscillating feed member with connections to said shaft to actuate the same to secure a step-by-step four motion feed; a feed plate of parallel serrated bars; a work plate with suitable central guide bars intermeshing with the serrated bars of said feed plate; a presser shoe with folding devices coöperating with the said feed member; pairs of creaser rolls coöperating with said folding plate to receive the label from said presser shoe and crease and fold the same; cut off shears; a reciprocating carrier plate with means of reciprocating the same; connections to said plate for actuating said shears and trip means when the plate is reciprocated to and from the front of the machine; a reel for the label strip or tape; and a pay out device for said label strip, all coacting substantially as described for the purpose specified.

5. In an automatic label cutting and folding machine, the combination of a suitable framework; a feed device for feeding the labels; folder devices for folding the labels as they are fed; creaser rolls to receive the labels from the folder and crease the same; cut off shears for cutting the label from a strip; a reel for the label strip; automatic pay out devices for paying out the label from said reel; and automatic grip devices for grasping said label to pay it out and release it when cut off, all coacting substantially as described for the purpose specified.

[Claims 6 to 18 not printed in the Gazette.]

1,215,708. HOOK FOR SHOE-LACES AND THE LIKE. MORRIS ROSENWASSER, Astoria, N. Y. Filed Oct. 26, 1916. Serial No. 127,761. (Cl. 24—146.)



1. A device of the class described, comprising a head having a shank adapting it to be attached to a shoe or similar article, said head having a transverse opening extending therethrough, and having two projecting portions which approach each other from opposite directions, thereby providing a slit leading into said opening.

2. A device of the class described, comprising a head having a shank adapting it to be attached to a shoe or similar article, said head having a transverse opening extending therethrough, and having two projecting portions which approach each other from opposite directions, thereby providing a slit leading into said opening, the outside walls of said projecting portions being inclined inwardly.

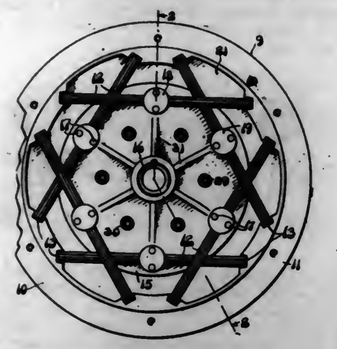
3. A device of the class described, comprising a head having a shank adapting it to be attached to a shoe or similar article, said head having a transverse opening extending therethrough, and having two projecting portions which approach each other from opposite directions, thereby providing a slit leading into said opening, the inner walls of said projecting portions joining the walls of said slit so as to provide abrupt shoulders.

4. A device of the class described, comprising a head having a shank adapting it to be attached to a shoe or similar article, said head having a transverse opening extending therethrough, and having two projecting portions which approach each other from opposite directions thereby providing a slit leading into said opening, the outside walls of said projecting portions being inclined inwardly and the inner walls of said projecting portions joining the walls of said slit so as to provide abrupt shoulders.

5. A device of the class described, comprising a head having a shank adapting it to be attached to a shoe or similar article, said head having a transverse opening extending therethrough, and having two projecting portions which approach each other from opposite directions thereby providing a slit leading into said opening, the outside walls of said projecting portions being inclined inwardly, and said shoulders continuing in a straight line throughout approximately the entire width of the head.

[Claim 6 not printed in the Gazette.]

1,215,709. VEHICLE-WHEEL. FREDERICK M. ROSS, Cincinnati, Ohio. Filed Nov. 17, 1913. Serial No. 801,367. (Cl. 152—45.)



1. In combination in a wheel, a hub portion comprising a rim, disks surrounded by and spaced radially from the rim, two sets of springs located between the disks, one set contacting one disk and the other set contacting the other disk, spools mounted in the disks and having their ends contacting with the edges of the springs, and pins mounted in the spools and contacting with the faces of the springs.

2. A spring wheel comprising central disks, a rim surrounding and spaced from the disks, a plurality of sets of springs mounted at their ends on the rim and between the disks, spools rotatively mounted in the disks with their ends contacting the edges of the springs, pins rotatively mounted at their ends in the spools and engaging intermediate points of the faces of each set of springs.

1,215,710. SIGNAL. LOUIS P. ROTHFORD, San Jose, Cal. Filed June 14, 1916. Serial No. 103,654. (Cl. 40—65.)

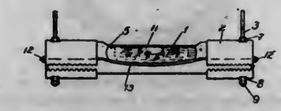


1. A signal comprising a frame, a sign carrying member longitudinally movable with relation to said frame slidably mounted therein, a covering member slidably and yieldingly mounted in each end of said frame in front of said sign carrying member, means for operating said sign carrying member, means attached to said sign carrying member adapted to engage one of said covering members when moved in one direction and the other cover when moved in the other direction, and releasable means for securing said sign carrying member against longitudinal movement.

2. A signal comprising a frame, a longitudinally adjustable sign carrying member slidably mounted in said frame, a covering member slidably and yieldingly mounted in each end of said frame and interposed between said frame and said sign carrying member, means for operating said sign carrying member, means attached to said sign carrying member adapted to engage one of said covering members when moved in one direction, a separate means attached to said sign carrying member adapted to engage the other covering member when moved in the opposite direction, and means for securing said sign carrying member in position when adjusted.

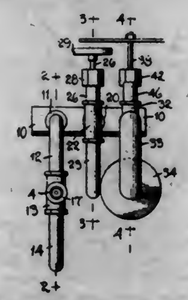
3. A signal comprising a frame, a longitudinally adjustable sign carrying member slidably mounted in said frame and having a sign placed on each side of each end thereof and on the central portion of the front thereof, two covering members slidably mounted in said frame and interposed between said frame and said sign carrying member, each of said members being yieldingly connected to said frame and having a stop formed on the inner surface of its inner end, means for operating said sign carrying member, means attached to said sign carrying member adapted to engage the stop on one of said covering members when moved in one direction, a separate means attached to said sign carrying member adapted to engage the stop on the other covering member when moved in the opposite direction, and means for securing said sign carrying member in position when adjusted.

1,215,711. LEVELING DEVICE. HERBERT G. ROUNDS, Bay City, Mich. Filed Mar. 6, 1915. Serial No. 12,535. (Cl. 33—207.)



In a level, the combination of a holder having a spirit tube therein, I-bolts, each bolt having a threaded shank and an adjusting nut near the upper end of the shank, an adjusting nut at the lower end of the shank, said nuts engaging the holder, a weight secured to each end of the holder, said weight adapted to be adjusted for the purpose of balancing the level.

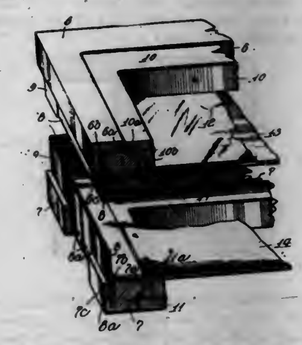
1,215,712. VAPOR-GENERATING BURNER. GEORGE L. ROWEKAMP, Winona, Minn. Filed Apr. 24, 1916. Serial No. 93,238. (Cl. 67—43.)



1. In a gas generating burner of the character described, a generating chamber comprising a short section of pipe closed at its ends, a supply pipe having one end entering the side wall of the generating chamber adjacent one end thereof, a pipe extending outward from the middle of the generating chamber and having an extension leading therefrom and discharging against the exterior of the generating chamber, said pipe constituting an auxiliary burner or torch, a valve controlling the passage through the auxiliary burner, a main burner pipe extending outward from the side wall of the generating chamber and bent upon itself and extended toward and in a plane approximately parallel to the auxiliary burner pipe, a burner mounted on the end of said burner pipe, a valve for controlling passage of vapor from the generator into the burner pipe, and an air inlet nozzle in the burner pipe between the burner and the valve, the auxiliary burner pipe being disposed in relatively close relation to the main burner whereby the main burner may be ignited from the auxiliary burner.

2. In a gas generating burner, a generating chamber comprising a short section of pipe having a relatively small bore and a relatively thick wall and closed at its ends, a U-shaped pipe, one end of which is connected to the generating chamber adjacent one end thereof and constitutes a supply pipe, a wick disposed in the supply pipe and extending into the generating chamber, the other branch of said U-shaped pipe constituting a support for a shade, a pipe extending outward from the middle of the generating chamber and having an extension leading therefrom and discharging against the exterior of the generating chamber and constituting an auxiliary burner or torch, a valve controlling passage through this pipe, a main burner pipe extending out from the side wall of the generating chamber adjacent the auxiliary burner pipe and bent upon itself and extending toward the auxiliary burner pipe and in a plane approximately parallel thereto, a burner mounted on the end of the main burner pipe relatively adjacent the extremity of the auxiliary burner pipe, and a valve controlling the passage of the vapor into the main burner pipe, said main burner pipe being formed with an air inlet between the valve and the main burner.

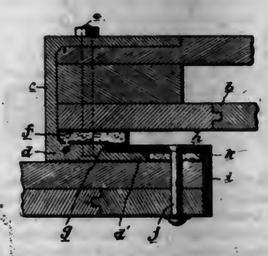
1,215,713. KNOCKDOWN BOX. HENRY B. RUGGLES, Chicago, Ill. Filed Jan. 2, 1914. Serial No. 809,896. (Cl. 217—65.)



1. A container composed of top and bottom frames having tapering kerfs therein, sheets of fibrous material secured to the inner surfaces of said frames, and adapted to form the top and bottom walls of said container, other sheets of fibrous material having perforated margins extending within the tapering kerfs and forming the sides of said container, and means for sealing said perforated margins within said kerfs.

2. In a container, end frames having tapering kerfs therein, collapsible side walls having perforated margins adapted to fit within said kerfs, and means for securing said margins therein consisting of a flux adapted to flow into said kerf and pass through said perforations, there to set and harden.

1,215,714. CAR-DOOR. JAMES W. RUMSEY, West Berkeley, Cal., assignor of one-half to Frank T. Hays, Chicago, Ill. Filed July 14, 1915. Serial No. 39,828. (Cl. 20—26.)

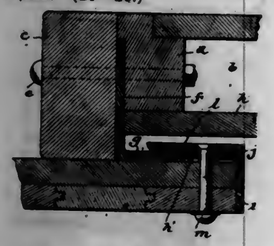


1. In combination with a car wall and a door post structure embodying an abutment plate supported at a distance

from the outer face of the car wall, said abutment plate being provided with a longitudinal shoulder along its inner face, a packing strip clamped between said abutment plate and the adjacent face of the car wall, a slidable car door having fastened to its inner face a metal strip adapted to overlap upon the reduced edge of the abutment plate to contact with the shoulder thereon and the packing held thereby, and another packing strip clamped between said metal strip and the inner face of the door, for the purpose set forth.

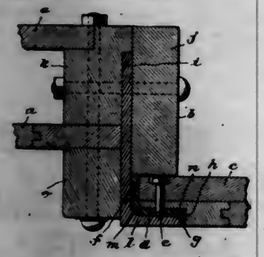
2. In combination, a car wall and a door post structure having an abutment plate supported at a distance from the outer face of the car wall, a packing strip being clamped against the face of the car wall by said abutment plate, a car door having clamped on its inner face a metal strip adapted to overlap the abutment plate and engage the packing strip therebehind, and a packing strip clamped against the door by said metal strip and adapted to contact with the edge of the abutment plate, for the purpose set forth.

1,215,715. DOOR STRUCTURE FOR CARS. JAMES W. RUMSEY, West Berkeley, Cal., assignor of one-half to Frank T. Hays, Chicago, Ill. Filed July 14, 1915. Serial No. 39,829. (20—26.)



In a box-car-door structure, the combination of a car wall; a post structure, an abutment plate affixed to the post structure extending beyond the face of the car wall and provided with a flange along its front edge, a sliding door having an angle iron affixed to its rear edge, one flange or plate of this angle iron extending along the inner face of the door, a series of separated cam plates projecting beyond the inner edge of the aforesaid flange of the angle iron, and a packing strip clamped between said flange and the inner face of the door and projecting beyond the inner edge of the flange and adapted to contact with the edge of the flange on the car wall when the door is closed.

1,215,716. BOX-CAR-DOOR STRUCTURE. JAMES W. RUMSEY, West Berkeley, Cal., assignor of one-half to Frank T. Hays, Chicago, Ill. Filed July 14, 1915. Serial No. 39,830. (Cl. 20—26.)



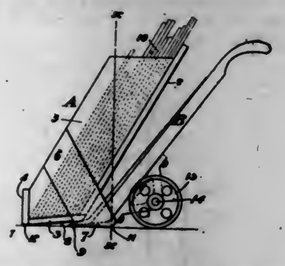
The combination with a post of a box-car, said post having anchored to it an abutment plate whose front edge is provided with a laterally extending flange to form a vertical groove for the front edge of the door, and a sliding door provided along its front edge with an angle iron whose plates or flanges lie against the front edge of the door as well as against the front face of the door, the plate lying on the front face of the door being rabbeted into the face of the door and being provided along its free edge with an outwardly extending flange, said outwardly extending flange as well as the outer face of the flange of the abutment plate lying approximately flush with the face of the door.

1,215,717. PNEUMATIC TIRE. ALBERT FRANCIS RUTHVEN, Kansas City, Mo. Filed Feb. 10, 1913. Serial No. 747,478. (Cl. 152—10.)



In a tire of the character described, an inner tube having a peripheral opening, flaps on the inner tube to close said opening, a supplemental tire to close said flaps, and a rim of hard material within the inner tube coacting with said supplemental tire to close the flaps.

1,215,718. PORTABLE COLLECTING-BOX. FRANK W. SALISBURY, James City, Pa., assignor to American Plate Glass Company, Kane, Pa., a Corporation of New Jersey. Filed Nov. 26, 1915. Serial No. 63,351. (Cl. 217—36.)



1. An open front box having a rear upwardly and backwardly inclined wall, an upwardly and backwardly inclined bottom, and rearwardly located pedestals supporting the back portion of the bottom away from the floor and having terminals providing tilting bearings for the box backwardly beyond its center of gravity.

2. An open-front box having a rear upwardly and backwardly inclined wall, an upwardly and backwardly inclined bottom adapted to rest upon the floor by its front edge portion, and rearwardly located pedestals having supporting and pivoting terminals extending to a transverse plane slightly beyond the center of gravity of the box.

3. An open-front box having a pocketed bottom portion within and formed by a rearwardly and upwardly sloping back and a rearwardly and upwardly sloping bottom, vertically arranged sides, and a low front wall; and having at each side supporting and pivoting pedestals terminating backwardly of the center of gravity of the box.

4. In an open-front box for the purpose described, in combination, a rearwardly inclined back wall, a bottom adapted to rest upon the floor by its front edge and sloping upwardly with a slight diverging clearance space to the lower edge of the back wall, vertically arranged backwardly disposed sides, a comparatively narrow front wall secured to the sides and bottom, and supporting and pivoting pedestals secured to the box and having supporting terminals extending rearwardly beyond the normal center of gravity of the box.

1,215,719. TIRE-PLUG. ROBERT W. SAMPSON, Melba, Whitestone, N. Y., assignor of one-half to Louis Schwab, East Orange, N. J. Filed Feb. 8, 1916. Serial No. 76,923. (Cl. 152—26.)



1. A tire plug embodying exterior and interior closing members presenting opposed, elastic faces, one of said closing members being provided with a centrally disposed socket, and the other of said closing members being provided with an elastic sealing element carried thereby and adapted to engage within the socket in the other sealing member, and a coöperating clamping member.

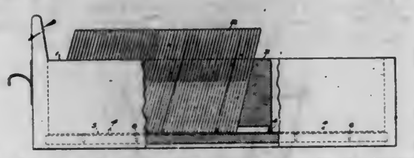
2. A tire plug embodying exterior and interior closing members, a coöperating, clamping member, and a flexible sealing member tapered toward the interior closing member and disposed between the closing members.

3. A tire plug embodying exterior and interior closing members, one thereof being provided with a centrally disposed recess, and the other closing member having an extended sealing element adapted to engage in and against the bottom of said recess, so as to form a close contact with the sides thereof, and a coöperating, clamping member.

4. A tire plug embodying exterior and interior closing members, one thereof being provided with a centrally disposed recess, and the other closing member having an extended, tapered, sealing element adapted to engage in said recess, and a coöperating, clamping member.

5. A tire plug embodying exterior and interior closing members, a laterally expansible sealing member tapered toward the interior closing member and interposed between the closing members, and a coöperating, clamping member.

1,215,720. POSITIONING MEANS FOR VERTICALLY-ARRANGED ARTICLES. HOLLIS H. SAWYER, Newton, Mass. Filed Apr. 22, 1916. Serial No. 92,977. (Cl. 129—16.)



1. A receptacle for holding vertical records, the bottom of which presents a series of projections of relatively low height formed to project between the records and spaced to receive a number of records between adjacent projections whereby spontaneous movement in the receptacle of the lower parts of the records is prevented.

2. A receptacle for holding vertical records having narrow strips therein secured longitudinally thereto, said strips having projections of relatively low height formed to project between the records and spaced along the strips to receive records between adjacent projections.

3. As a new article of manufacture a metal strip having provision for securing the same longitudinally in a receptacle for vertical records and having projections of low height spaced therealong.

1,215,721. RUNNING-BOARD SUPPORT FOR USE ON AUTOMOBILES. WILTON SUMNER SCHUYLER, Savannah, Mo. Filed May 27, 1916. Serial No. 100,290. (Cl. 21—55.)

In a support of the class described, a bar extending transversely beneath the chassis of an automobile the end portions of said bar being extended beneath the running boards of said automobile; a block on each one of said end portions of said bar, said blocks being adapted to be held by said running boards against longitudinal movement on said bar, the bottom surfaces of said blocks having grooves formed therein for engaging said bar and holding said blocks against transverse movement thereon; suspending means whereby said bar is suspended from



said chassis; adjusting means on said suspending means whereby said bar is adjusted for maintaining the same in alinement; inclined braces having their ends connected with said suspending means and bar respectively; and brace adjusting means whereby the tensions of said braces are adjusted for tightly pressing said blocks against said running boards.

1,215,722. CIRCUIT-PROTECTING DEVICE. EDMUND O. SCHWEITZER and NICHOLAS J. CONRAD, Chicago, Ill., assignors to Schweitzer & Conrad, a Corporation of Illinois. Filed May 22, 1911. Serial No. 628,804. (Cl. 175—273.)



1. A fuse device, having a removable lid or cover, and a structure with a knife edge coöperating with said lid or cover and cementing material for holding the lid or cover in position and for allowing its removal upon exertion of pressure from within the device.

2. A device of the class specified, having a tubular casing, one of the ends of which is provided with a metal ferrule having a knife edge, a metal cap fitted to the knife edge end of said ferrule and soldered for holding the lid or cover in place alongside the line of connection between the lid or cover and said knife edge.

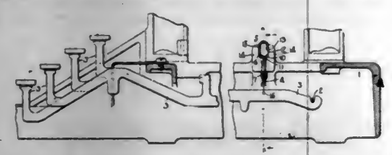
3. The combination of a tube a fuse therein and a venting device consisting of a thin disk at one end of the tube, and a ferrule surrounding said end of the tube, said disk being soldered to the ferrule by solder adapted to permit said disk to be blown off by the explosion of said fuse.

4. The combination of a tube a fuse therein, a metal ferrule surrounding an end portion of said tube, a disk fitted across the end of the tube and ferrule so as to close the tube, said disk being soldered to said ferrule by solder adapted to permit said disk to be blown off by the explosion of said fuse.

5. The combination of a fuse casing having a fuse chamber containing a fuse, a wall portion of said chamber being detachably mounted so as to permit its removal to vent said chamber by an explosion of the fuse, and a fuse terminal extended through said removable wall portion and connected with said fuse.

[Claims 6 to 16 not printed in the Gazette.]

1,215,723. TYPE-WRITING MACHINE. GEORGE A. SEIB, Ilion, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Sept. 13, 1916. Serial No. 119,803. (Cl. 197—33.)



1. In a typewriting machine, the combination of an oval-shaped hollow supporting bar provided with tongues, ways in which the ends of the bar are slidably mounted, means for effecting a bodily adjustment of the bar in said ways, and springs each connected at one end to one of said tongues.

2. In a typewriting machine, the combination of a hollow supporting bar which is substantially C-shaped in cross-section and is provided with a series of engaging tines along one edge and within the outline of said bar, key actuated members, and contractile returning springs each having one end hooked over one of said tines and connected at its opposite end to one of said key actuated members.

3. In a typewriting machine, the combination of a machine frame provided with slotted bearings or ways, a hollow sheet metal supporting bar provided with engaging tines and mounted at its ends for bodily adjustment in said ways, the end portions of the bar having each a greater dimension longitudinally of its slotted bearing than transversely thereof, whereby a turning movement of the bar in its bearings is prevented without interfering with said bodily adjustments, and springs connected to said tines.

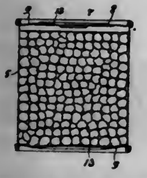
4. In a typewriting machine, the combination of a machine frame having open-ended slots formed therein, a supporting bar received and guided in said slots and adapted to be inserted in or removed therefrom through the open ends of the slots, set screws which extend through tapped openings in the bottom walls of the slots and bear at their end portions against the supporting bar to effect an adjustment thereof in the slots, and returning springs connected to said bar.

5. In a typewriting machine, the combination of a machine frame having an upwardly extending lug on each side of the base thereof, said lugs being slotted to form ways; a supporting bar received and guided in said slots; means for effecting a bodily adjustment of the bar in said slots; and returning springs connected to said bar.

[Claims 6 to 8 not printed in the Gazette.]

1,215,724. METAL RECEPTACLE. FRANK SHAFFER, Everett, Wash., assignor to American Can Company, a Corporation of New Jersey. Filed Apr. 6, 1915. Serial No. 19,541. (Cl. 220—94.)

1. A container for products, a portion of which is outwardly yieldable and expansible under internal pressure



to increase the cubic contents of the container, the said expansible portion comprising means whereby it is held in an outwardly expanded position after said internal pressure is removed, and against external atmospheric pressure, to maintain a partial vacuum within the container.

2. A container for products, a portion of which is outwardly yieldable and expansible under internal pressure to increase the cubic contents of the container, the said expansible portion comprising means whereby it is held in an outwardly expanded position after said internal pressure is removed, and against external atmospheric pressure, to maintain a partial vacuum within the sealed container, the central part of said portion being partly collapsed inward.

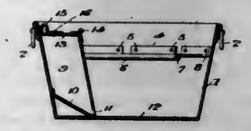
3. A container for food products to be processed and preserved, a portion of which is outwardly yieldable and expansible under internal pressure, after the container is sealed and during the processing, to increase the cubic contents of the container, the said portion having means whereby it is held in an outwardly expanded position after the product has cooled and said internal pressure is removed, and against external atmospheric pressure, to maintain a partial vacuum within the container.

4. A container for products, a portion of which is outwardly yieldable and expansible under internal pressure to increase the cubic contents of the container, the said expansible portion having means whereby it is held in an outwardly expanded position after said internal pressure is removed, and against external atmospheric pressure, to maintain a partial vacuum within the sealed container, said means comprising outer and central panels united by a radially yieldable and resilient portion, the said central panel being partly collapsed inward.

5. A sheet metal can end having an annular vertical wall for abutting the inner side of a can body when applied thereto, an annular portion connected directly with the lower edge of such wall and inclined inwardly and downwardly therefrom under the normal conditions of equal pressure above and below the top when the can top is attached to can body, thus forming an obtuse angle with the wall, said top having also a central portion and an annular bend intervening the latter and the outer or obtuse angle portion; the angle of the wall and the contiguous inclined portion and also the bent portion surrounded by the latter both coöperating as hinges to allow the cover to expand in processing, the cover thereafter retaining an expanded position, as shown and described.

[Claims 6 to 10 not printed in the Gazette.]

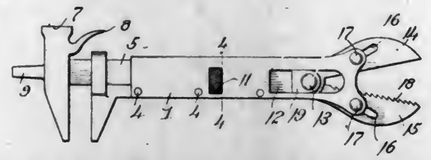
1,215,725. SLOW-FEEDING SANITARY TUB FOR STOCK. JAMES T. SHELLEY, Louisville, Ky. Filed Apr. 24, 1916. Serial No. 93,131. (Cl. 119—52.)



A portable feed tub for stock comprising a body, a flange contained within, and continuously joined at its outer edge to, the body below the upper edge thereof, said flange being provided with openings at intervals in the region of the juncture thereof with the wall of the body, and a feed hopper contained within the body and provided with a closure at its top, a self-feeding bottom and a mouth in its inner face adapted to deliver the feed to the central portion of the bottom of the body below the flange, the ends of said flange being joined to the opposite sides of said hopper.

1,215,726. TOOL. GROVER C. SHEW, West Brownsville, Pa. Filed Oct. 23, 1915. Serial No. 57,560. (Cl. 81—113.)

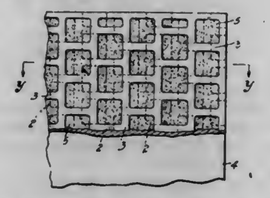
1. In a tool of the class described, a handle portion comprising a sheet of metal bent longitudinally into substantially U-shape and having its side portions adjacent one end provided with longitudinally disposed slots, a base member connecting the ends of said side portions, pins connecting the extremities of said side portions and arranged in spaced relation, a link slidably mounted in said handle portion and extending at its sides into said slots, a pair of jaws pivotally connected at their inner ends to said link and protruding at their free ends beyond said handle portion, the said jaws having elongated slots inclosing said pins, and means for moving said link longitudinally of said handle portion.



2. In a tool of the class described, a handle portion formed of a sheet of metal bent longitudinally into substantially U-shape and having its side portions provided with laterally alined longitudinally disposed slots, a link slidably arranged within said handle portion, raised portions on the opposite sides of said link engaged within said slots and being equal in width to the latter, jaws pivoted at their inner ends to said link, and means for sliding said link within said handle.

3. In a tool of the class described, a handle portion formed of a sheet of metal bent longitudinally into substantially U-shape and having each of its side portions provided with a pair of apertures, one of said apertures on each of said sides being elongated and disposed longitudinally of said handle, a link slidably arranged in said handle portion, raised portions on the opposite sides of said link engaged in said elongated slots, jaw members pivoted at their inner ends to said link and protruding from said handle, a threaded slidable shank in said handle connected at one end to said link, and a rotatable nut inclosing said shank and protruding at its periphery through the others of said apertures.

1,215,727. HEAT-RESISTING STRUCTURAL MATERIAL AND PROCESS OF MAKING SAME. JOHN SLATTERY, Chrome, N. J. Filed Nov. 6, 1915. Serial No. 60,063. (Cl. 29—181.)



1. A metal article such as described comprising a metal body having within it pockets containing heat resisting material, such pockets being hermetically sealed.

2. A metal article such as described comprising a central portion having on opposite sides pockets containing heat resisting material and metallic covering for such pockets united to such central portion and sealing the pockets hermetically.

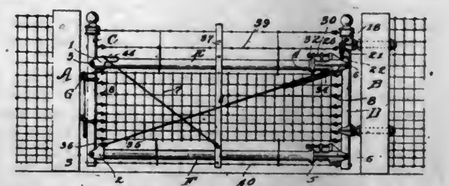
3. A metal article such as described comprising a central portion having on opposite sides pockets containing heat resisting material, the pockets on opposite sides of such portion being staggered relatively so that webs between pockets on one side are opposite pockets on the other side, and metallic covering for such pockets united to such central portion and sealing the pockets hermetically.

4. A compound metal article such as described comprising a central layer having pockets in opposite sides containing heat resisting material and outer layers welded to said central layer and hermetically closing said pockets.

5. A compound metal article such as described comprising a central layer having pockets in opposite sides containing heat resisting material, the pockets on opposite sides of such central layer being staggered relatively so that webs between pockets on one side are opposite pockets on the other side, and outer layers welded to said central layer and hermetically closing said pockets.

[Claim 6 not printed in the Gazette.]

1,215,728. GATE. STEPHEN A. SLAUSON, Cedar Rapids, Iowa. Filed June 25, 1913. Serial No. 775,827. (Cl. 39—80.)



1. The combination with a folding swinging wire gate, of vertical wire-carrying posts, horizontal bars, socket members receiving the ends of the horizontal bars and pivotally connected with the vertical posts, and a resilient connector between and uniting two of the diagonally disposed sockets whereby the tendency is to normally elevate one end of the gate.

2. A gate having in combination a frame comprising an upper horizontal bar, a lower horizontal bar, a series of parallel vertical bars of which one is arranged at the vertically movable end of the gate and another is arranged at the hinging end, the vertical bars being each hinged to each of the horizontal bars, an elastically extensible tension device arranged to tend to lift one end of said frame relatively to the other, and an adjustable controlling device arranged to permit the vertically movable end bar to be bodily raised and also to positively stop the rising of said bar at any of several points.

3. A gate having a longitudinal extensible parallel-rule-like frame formed with vertical bars and parallel horizontal bars hinged together, means for supporting the frame at one end upon an approximately vertical axis, and means for positively holding the parts of the frame at the other end in either of several predetermined positions vertically, substantially as set forth.

4. A gate having a longitudinal extensible parallel-rule-like frame formed with vertical bars and parallel horizontal bars hinged together, means for suspending the frame at one end vertically adjustably upon a stationary support and hinging it upon an approximately vertical axis, and means for rigidly holding the other end of the frame in either of several positions vertically relatively to the hinged end.

5. A gate having a longitudinal extensible parallel-rule-like frame formed with vertical bars and parallel horizontal bars hinged together, means for hinging one end of said frame on an approximately vertical axis, means for holding the horizontally swinging end of the frame in either of several positions vertically relatively to the hinged end, and means for automatically causing the swinging end to move horizontally toward a predetermined vertical plane through the hinge axis.

[Claims 6 to 8 not printed in the Gazette.]

1,215,729. SHUTTLE FOR CONTINUOUS WEFT-LOOMS. ALBERT SMITH, Birmingham, England. Original application filed Oct. 27, 1915, Serial No. 58,190. Divided and this application filed Oct. 24, 1916. Serial No. 127,465. (Cl. 139—27.)



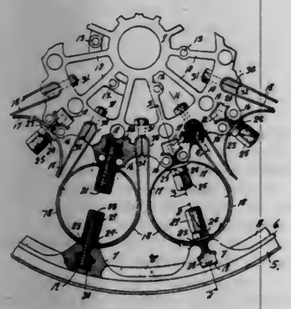
1. A shuttle for continuous weft looms comprising a shuttle body of suitable form provided with two yarn guiding openings in the front face, that is to say, in the face

presented to the fell of the cloth, which yarn guiding openings allow the yarn to enter and emerge from the shuttle on the said front face whereby the yarn is permitted to pass continuously through the shuttle.

2. A shuttle for continuous weft looms having in its front face two longitudinal parallel slots, one terminating at one end nearer the tip of the shuttle than the other, the said ends being curved so as to bring them into the same or approximately the same horizontal plane, the other ends of the slots terminating in horizontal planes preferably situated as far apart as is admitted by the depth of the shuttle, the two longitudinal slots opening on their inner edges in a vertical slot extending preferably from top to bottom of the shuttle.

3. A shuttle for continuous weft looms comprising a shuttle body of suitable form provided with two distinct yarn guiding slot-like longitudinal apertures in one side, said apertures communicating with each other within the body of the shuttle, and being divergent on the face of the shuttle, whereby a loop of yarn entering one aperture and passing out through the other will be drawn together when the shuttle is thrown in one direction and will be held open when it is thrown in the other direction.

1,215,730. SPRING-WHEEL. CICERO G. SMITH, Palisades, Colo., assignor to The Smith Spring Wheel Company, Albuquerque, N. Mex., a Corporation of Arizona. Filed Feb. 11, 1913. Serial No. 747,602. (Cl. 152—50.)

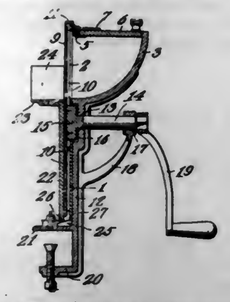


1. In a spring wheel, means for clamping flat springs consisting of an element having an opening therein, said springs adapted to be inserted in said opening, clamping blocks also arranged in said opening, the adjacent faces of said blocks being each cut away to form a common threaded bore tapering toward the mouth of said opening and a correspondingly tapered bolt threaded into said bore from the rear of the opening.

2. In a spring wheel, means for clamping flat springs consisting of an element having an opening therein, adapted to receive the ends of the springs along oppositely disposed walls, clamping blocks arranged in said opening adjacent the springs, the adjacent faces of said blocks being each cut away to form a common bore tapering toward the mouth of the opening and a correspondingly tapered bolt extending into said bore from the inner extremity of the opening.

3. In a wheel, a hub, a rim, spring members located between and connecting the hub and rim, the said members being approximately semi-circular in shape and arranged in pairs to form approximately circular elements, the extremities of the two members of each element being bent outwardly to form eyes, the rim and hub being respectively provided with members of counterpart shape which the said eyes respectively engage, radially alined bolts located between the eyes of each pair of spring members of each spring element, and extending both interiorly and exteriorly of the said eyes, and abutments applied to the adjacent extremities of the said bolts for the purpose set forth.

1,215,731. VEGETABLE-SLICER. KIRK SMITH, Columbus Grove, Ohio. Filed Feb. 17, 1916. Serial No. 78,948. (Cl. 146—11.)



A vegetable slicing machine comprising a vertically disposed circular plate having a marginal flange provided with a notch, said plate having an opening therein, a hopper having communication with the opening for receiving the vegetable to be sliced, a bracket connected to the plate, a jaw carried by the bracket, a rib carried by the jaw, a rotary cutter associated with the hopper, a tray supporting arm removably engaged with the jaw and having a notch formed therein, said notches when alined being engaged by the rib.

1,215,732. PROCESS OF PURIFYING OILS. WALTER O. SNELLING, Pittsburgh, Pa., assignor of fifty-one one-hundredths to John T. Milliken, St. Louis, Mo. Filed Apr. 8, 1915. Serial No. 19,864. (Cl. 196—26.)

1. The process of removing sulfur from hydrocarbon oils which comprises heating a sulfur containing oil in the presence of a cracked oil capable of absorbing sulfur.

2. The process of removing sulfur from hydrocarbon oils which comprises distilling such an oil in the presence of a heavy cracked oil capable of absorbing sulfur.

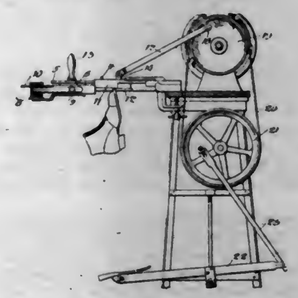
3. The process of removing sulfur from low boiling petroleum oils which comprises heating such a low boiling oil in the presence of a heavy cracked oil capable of absorbing sulfur.

4. The process of removing sulfur from low boiling petroleum oils which comprises distilling such a low boiling oil in the presence of a heavy cracked oil capable of absorbing sulfur.

5. The process of removing sulfur from low boiling petroleum oils which comprises mixing a crude petroleum with a cracked high boiling oil capable of absorbing sulfur and heating them together.

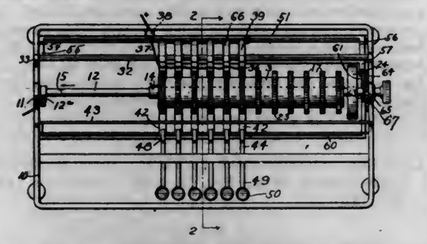
[Claims 6 and 7 not printed in the Gazette.]

1,215,733. SOLE-STITCHING MACHINE. MATHEW SOENS, Streator, Ill. Filed Mar. 28, 1916. Serial No. 87,168. (Cl. 112—20.)



A sole stitcher of the Gritzner type, comprising a table, a horizontally reciprocating operating member above the table, thread feeding mechanism and needle mechanism actuated by said operating member, a casing carried by the table in which said operating member moves, said casing having a slot formed therein, said slot extending parallel with the direction of movement of the reciprocating member, a pin connected to the operating member and extending through said slot to a point beyond the outer wall of the casing, a power driven member, and a connection between said pin and power driven member, substantially as described.

1,215,734. TELEGRAPH-CALL. CHARLES SPIRO, New York, N. Y. Filed Apr. 6, 1916. Serial No. 89,325. Cl. 178—83.)



1. In a telegraph call, a rotatable call disk having contacts thereon, a coöperating contact lever, key operated means for moving said lever into contact with said disk, and means for actuating the latter for a plurality of rotations by a single operation of said key operated means.

2. In a telegraph call, a rotatable disk, a coöperating contact lever, means for rotating said disk, key operated means for actuating said lever and rotating means whereby the disk may be successively rotated by a single operation of said key operated means to effect a plurality of calls, and means for automatically retaining said lever in contact with said disk during the continued revolutions thereof.

3. In a telegraph call, a rotatable disk, a coöperating contact lever, means for rotating said disk, key operated means for actuating said lever and rotating means whereby the disk may be successively rotated by a single operation of said key operated means to effect a plurality of calls, means for automatically retaining said lever in contact with said disk, and means actuated by said rotating means for releasing said retaining means.

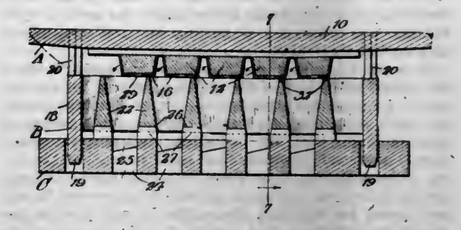
4. In a telegraph call, a rotatable disk, a coöperating contact lever, means for rotating said disk, key operated means for actuating said lever and rotating means whereby the disk may be successively rotated by a single operation of said key operated means to effect a plurality of calls, means for automatically retaining said lever in contact with said disk, means directly actuated by said rotating means for releasing said retaining means, and means for automatically breaking contact between said lever and disk when the former is released.

5. In a telegraph call, a rotatable disk, a coöperating contact lever, means for rotating said disk, key operated means for actuating said lever and rotating means whereby the disk may be successively rotated by a single operation of said key operated means to effect a plurality of calls, means for automatically retaining said lever in contact with said disk, means actuated by said rotating means for releasing said retaining means, means for automatically breaking contact between said lever and disk when the former is released, and means for restoring said key operated means independent of the contact lever.

[Claims 6 to 40 not printed in the Gazette.]

1,215,735. HOLDING-FORMS FOR BUFFING ARTICLES. CHARLES S. STACEY, Dover, Ohio. Filed Sept. 13, 1916. Serial No. 119,882. (Cl. 51—12.)

1. In a device as specified, the combination of a base holding frame provided with a plurality of pockets, the top holding frame having a plurality of forms thereon to receive articles, and a transferrer having a plurality of partitions to remove and guide the articles from the top frame to the bottom frame and change the angular disposition of said articles.



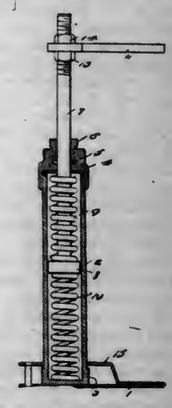
2. A device as specified, including the combination of a base holding frame provided with a plurality of pockets, a top holding frame having a plurality of forms thereon to receive articles, a transferrer for the articles having a plurality of partitions to engage the articles on the top frame and deflect and guide the same into the pockets of the base frame.

3. In an article holder, the combination of a top frame having a plurality of forms thereon, to receive articles, a base frame having a plurality of pockets to receive articles, a plurality of lugs formed on the base frame between the pockets, a transferrer for the articles having a plurality of partitions to aline the said lugs, said partitions serving to guide the articles from one frame to the other, said lugs being formed with recesses, and a rod to extend through said recesses and through the articles to retain the same in position on said base frame.

4. In an article holder, the combination of a top frame having a plurality of forms thereon to receive articles, a base frame having a plurality of pockets to receive articles, a plurality of lugs carried on the base frame between the pockets, a transferrer having a plurality of partitions, means on the transferrer to aline the partitions with the lugs on the base frame and to dispose the free edges of said partitions in offset engagement with the articles to be transferred to deflect and guide the latter into said pockets.

5. In an article holding device, the combination of a base holding frame, a top holding frame, and a transferrer for changing the articles from the first to the second said frame and altering the positions of the articles to exhibit portions other than those first exhibited.

1,215,736. SHOCK-ABSORBER. GEORGE A. STAFFORD, Sour Lake, Tex. Filed Feb. 7, 1916. Serial No. 76,524. (Cl. 21—105.)

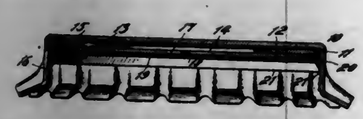


1. A shock absorber comprising a barrel, a support for said barrel for attaching the barrel to a vehicle axle consisting of two parts, one part supporting the barrel and

the other part engaging the barrel loosely to prevent displacement of the barrel, a plunger rod adapted to reciprocate in said barrel and projecting therefrom, means for closing the barrel about said rod, a plunger in said barrel carried by said rod, means for retarding the motion of the plunger, and means for connecting said rod with a movable part of the vehicle.

2. A shock absorber comprising a barrel having a shoulder on the lower part of the barrel, a support for the barrel in two parts for attaching the barrel to a vehicle axle, the lower supporting the barrel and the upper having an opening larger than the barrel and engaging the barrel loosely above said shoulder to prevent removal of the barrel, a rod adapted to reciprocate in said barrel and projecting therefrom, a plunger in said barrel carried by said rod, means for retarding the motion of said plunger, and means for attaching said rod to a movable part of the vehicle.

1,215,737. CLOSURE FOR BOTTLES, JARS, AND OTHER RECEPTACLES. GEORGE EMIL STAHL, Jersey City, N. J. Filed May 10, 1915. Serial No. 26,978. (Cl. 215—10.)



1. A closure for bottles and the like, comprising a sheet metal cap of the crown type having a dome and a depending edge flange, and a sealing structure within said cap comprising a yielding body to engage at its outer edges the side walls of the cap and the edge of the bottle mouth and confining air to act by expansion for effectually maintaining the sealing of the bottle, said sealing structure in its lower peripheral part being initially flanged downwardly and closely engaging the flange of the cap and also being impervious to moisture and of a character to adhere at its edges to the said flange so as to make a hermetic seal trapping said air.

2. A closure for bottles and the like, comprising a sheet metal cap of the crown type having a dome and a depending edge flange, and a sealing structure within said cap comprising a yielding body to engage at its outer edges the side walls of the cap and the edge of the bottle mouth, said sealing structure having an upper cushioning portion and a lower portion initially flanged downwardly along its peripheral edges and closely engaging the flange of the cap and having a lower coating of material rendering the sealing structure impervious to moisture and of a character to adhere at its edges to the said flange, so as to form a circumferential hermetic seal.

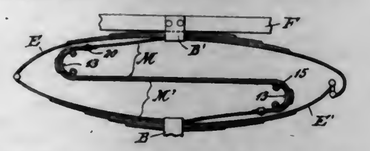
3. A closure for bottles and the like, comprising a sheet metal cap of the crown type having a dome and a depending edge flange, and a sealing structure within said cap comprising a yielding body to engage at its outer edges the side walls of the cap and the edge of the bottle mouth, said sealing structure having an upper cushioning portion and a lower portion initially flanged downwardly along its peripheral edges and closely engaging the flange of the cap and having a lower coating of gutta percha rendering the sealing structure impervious to moisture and of a character to adhere at its edges to the said flange, so as to form a circumferential hermetic seal.

4. A closure for bottles and the like, comprising a sheet metal cap of the crown type having a dome and a depending edge flange, and a sealing structure within said cap comprising a yielding body to engage at its outer edges the side walls of the cap and the edge of the bottle mouth, said sealing structure having an upper cushioning portion and a lower portion initially flanged downwardly along its peripheral edges and closely engaging the flange of the cap and having a lower coating of gutta percha rendering the sealing structure impervious to moisture and of a character to adhere at its edges to the said flange, so as to form a circumferential hermetic seal, said gutta percha having on its lower surface a thin tissue to prevent it from adhering so tightly to the bottle mouth as to pull the sealing structure from the cap on the uncapping of the bottle.

5. A closure for bottles and the like, comprising a sheet metal cap of the crown type having a dome and a depending edge flange, and a sealing structure within said cap comprising a yielding body to engage at its outer edges the side walls of the cap and the edge of the bottle mouth and containing a definite air chamber in which a body of air is effectually sealed to act by expansion for maintaining the sealing of the bottle, said sealing structure having at its lower part a layer of gutta percha closely bound thereto and thereby rendering the structure impervious to moisture and to the entrance of gas from the bottle, and said layer of gutta percha being in engagement with the flange on the cap so as to effect a circumferential seal therewith and also adapted to seal along the bottle mouth, whereby the bottle becomes sealed and the air in said chamber becomes effectually confined.

[Claims 6 to 8 not printed in the Gazette.]

1,215,738. SUSPENSION DEVICE. JOHN P. STANTON, Detroit, Mich. Filed Feb. 12, 1916. Serial No. 77,887. (Cl. 267—27.)



1. A spring comprising a pair of members, each member being bent into V form substantially midway of its length to form a pair of leaves, one leaf of each member having a return bend and these same leaves being assembled to bring the return bend of one member into the main bend of the other member.

2. A spring comprising a pair of members, each member being bent into V form substantially midway of its length to form a pair of leaves, one leaf of each member having a return bend and these same leaves being assembled to bring the return bend of one member into the main bend of the other member, and a reinforcing device disposed within the return bend.

3. A spring comprising a pair of members, each member being bent into V form substantially midway of its length to form a pair of leaves, one leaf of each member having a return bend and these same leaves being assembled to bring the return bend of one member into the main bend of the other member, and means for slidably supporting each return bend on the main outer leaf of the other main member.

4. A spring comprising a pair of members, each member being bent into V form substantially midway of its length to form a pair of leaves, one leaf of each member having a return bend and these same leaves being assembled to bring the return bend of one member into the main bend of the other member, and a pair of auxiliary spring leaves secured to the outer leaves of the main members, and means for connecting the outer ends of said auxiliary leaves with the main bends of the main members.

5. A spring comprising a pair of members, each member being bent into V form substantially midway of its length to form a pair of leaves, one of said members having a return bend at the outer end of one of its leaves for receiving the middle bent portion of the other of said members.

[Claims 6 and 7 not printed in the Gazette.]

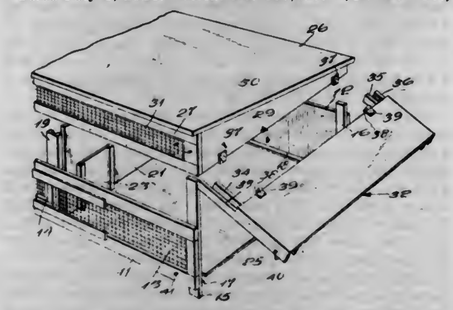
1,215,739. FEEDING MECHANISM. HENRY J. STEHLI, Montclair, N. J., assignor to Dwight & Lloyd Metallurgical Company, a Corporation of New Jersey. Filed Apr. 27, 1911. Serial No. 623,594. (Cl. 83—44.)

1. In mechanism for producing a homogeneous composite mass, of predetermined dimensions, of fines, from initially delivered strata or streams of predetermined number and volumes and of predetermined varying qualities, the combination of a plurality of initial receptacles adapted to be arranged in respect to their operation in one or another set of a series of sets, each set composed of a plurality of selected receptacles, a flat conveyer belt at the bottom of each receptacle for the support of the material therein and for withdrawing it therefrom, means for optionally stopping, and for varying the rate of the discharge of material from each receptacle independently of the others, a continuously traveling endless conveyer moving transversely to the paths of the aforesaid conveyers and having its receiving side arranged to take the streams or strata deposited by the aforesaid conveyers and adapted to maintain them as an approximately flat stratified stream and to display the stratified mass thereon, means for receiving the said mass, means for breaking up the strata and forming a homogeneous composite mass with the particles of the several strata uniformly distributed therethrough, and means for delivering the mass, after being made homogeneous, to a supporting mechanism and for forming a stratum thereof uniform in depth and constitution on said supporting mechanism,



2. In a mechanism for producing a homogeneous composite mass of fines, from initially delivered strata or streams of predetermined number and volumes and of predetermined varying qualities, the combination of a plurality of initial receptacles adapted to be arranged in respect to their operation in one or another set of a series of sets, each set composed of a plurality of selected receptacles, a flat conveyer belt at the bottom of each receptacle for the support of the material therein and for withdrawing it therefrom, means for optionally stopping, and for varying the rate of the discharge of material from each receptacle independently of the others, a continuously traveling endless conveyer moving transversely to the paths of the aforesaid conveyers and having its receiving side arranged to take the streams or strata deposited by the aforesaid conveyers and adapted to maintain them as an approximately flat stratified stream and to display the stratified mass thereon, means for receiving the said mass, and means for breaking up the strata and forming a homogeneous composite mass with the particles of the several strata uniformly distributed therethrough.

1,215,740. HOUSE. MOSES STEINER, Bluffton, Ohio. Filed July 3, 1916. Serial No. 107,429. (Cl. 119—19.)



1. In a house of the character described; side-members provided near their ends with legs projecting above the same for a substantial distance, a top member comprising side and end portions for arrangement upon the side-members and adapted to receive the legs; and end-members provided at their ends with pairs of spaced locking bars, to receive the side-members and the side portions of the top member.

2. In a house of the character described; side-members provided near their ends with transverse elements projecting above the same for a substantial distance; a top member comprising side and end portions for arrangement upon the side-members and adapted to receive the transverse elements; and end-members carrying devices adapted to engage with the side-members and the side portions of the top member.

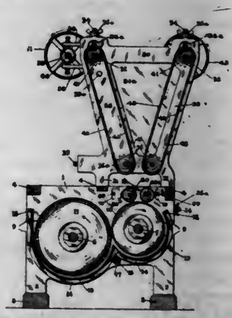
3. A house of the character described, comprising; side-members provided near their ends with transverse elements projecting above the same for a substantial distance; a top member comprising side and end portions for arrangement upon the side-members and adapted to receive the upper ends of the transverse elements; and end-members hinged to the end portions of the top member and carrying near their ends pairs of spaced locking bars adapted to receive therebetween the ends of the side-members and the ends of the side portions of the top member.

4. In a house of the character described; side-members provided near their ends with transverse elements projecting above the same for a substantial distance; floor supporting elements arranged upon the inner side of the side-members and secured thereto; a floor removably mounted upon the floor supporting elements and adapted to be moved longitudinally through one end of the house; a top member comprising side and end portions for arrangement upon the side-members and adapted to receive the upper ends of the transverse elements; and end-members having detachable hinged connections with the end portions of the top member and carrying near their ends pairs of spaced locking bars adapted to receive therebetween the ends of the side-members and the ends of the side portions of the top member.

5. In a house of the character described; side-members; a top member comprising side and end portions for arrangement upon the side-members; and end-members connected with the end portions of the top member and carrying pairs of spaced locking bars adapted to receive therebetween the side-members and the side portions of the top member.

[Claims 6 and 7 not printed in the Gazette.]

1,215,741. COTTON-REGINNING MACHINE. LOUIS K. STEPHENS, Dallas, Tex., assignor, by mesne assignments, to Garner Regin Machinery Company, Houston, Tex., a Corporation of Texas. Filed July 30, 1912. Serial No. 712,253. (Cl. 13—9.)



1. In a device of the character described, the combination with a gin saw cylinder and a brush cylinder mounted in the usual coöperative relation, of a pair of saw cylinders having a comparatively small diameter mounted above the gin saw cylinder and spaced horizontally from each other, means for subjecting said cylinders to a longitudinal reciprocating motion, a hopper mounted above the last named two cylinders and adapted to discharge material between

the same, and means for communicating rotation to the saw cylinder, the brush cylinder, and the two saw cylinders of small diameter.

2. In a device of the character described, the combination with a gin saw cylinder and a brush cylinder mounted in the usual coöperative relation, of a pair of saw cylinders having a comparatively small diameter spaced vertically above the gin saw cylinder and horizontally from each other, means for communicating a longitudinal reciprocating motion to the last named two saw cylinders, a hopper mounted above said cylinder and adapted to discharge material between the same, the inclined side walls of said hopper being formed by downwardly traveling aprons, means for maintaining the travel of said aprons, and means for communicating rotation to the gin saw cylinder, the brush cylinder, and the two saw cylinders of comparatively small diameter.

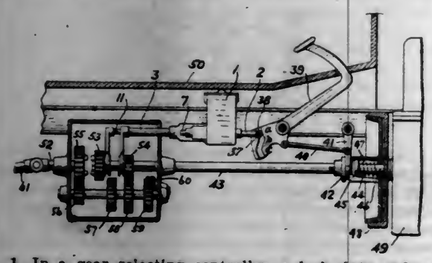
3. In a device of the character described, the combination with a gin saw cylinder and a brush cylinder mounted in the usual coöperative relation, of a pair of saw cylinders having a comparatively small diameter mounted above the gin saw cylinder and spaced horizontally from each other, means for subjecting said small cylinders to a longitudinal reciprocating motion, means for communicating opposite rotation to the saw cylinders of small diameter, and means for communicating rotation to the brush cylinder and large saw cylinder.

4. In a device of the character described, the combination with a gin saw cylinder and a brush cylinder mounted in the usual coöperative relation, of a pair of feed cylinders having a comparatively small diameter mounted above the gin saw cylinder and adapted to feed material downwardly between the adjacent portions, means for subjecting said feed cylinders to longitudinal reciprocating motion, a means for communicating rotation to a large saw cylinder, the small feed cylinder and the brush cylinder.

5. In a device of the character described, the combination with a gin saw cylinder and a brush cylinder mounted in the usual coöperative relation, of a pair of saw cylinders having a comparatively small diameter spaced vertically above the gin saw cylinder and horizontally from each other, means for communicating a longitudinal reciprocating motion to the last named two saw cylinders, a hopper mounted above said cylinder and adapted to discharge material between the same, the inclined side walls of said hopper being formed by downwardly traveling aprons, means for maintaining the travel of said aprons, means resiliently supporting the lower end of one of said aprons in its proper spaced relation to the lower end of the other apron, said means serving to permit an increased spacing of the lower apron extremities during the passage of an abnormally large mass of material between the same, and means for communicating rotation to the gin saw cylinder, the brush cylinder, and the two saw cylinders of comparatively small diameter.

[Claims 6 to 15 not printed in the Gazette.]

1,215,742. GEAR-SELECTING CONTROLLER. JOHN H. STORTZ, Philadelphia, Pa., assignor to Stortz Gear Shift Company, Wilmington, Del. Filed July 27, 1914. Serial No. 853,450. (Cl. 74—58.)



1. In a gear selecting controller, a lock-plate and rod supported by said plate, a gear shifter, a lever connecting the rod with said shifter, a latch adapted to lock the plate with the rod, and an electromagnet adapted to operate the latch, for the purposes set forth.

2. In a gear selecting controller a lock comprising a plate, a rod and a latch, and an electro-magnet adapted to operate the latch whereby the plate becomes operatively connected with the rod.

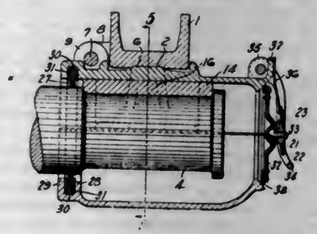
3. A gear selecting controller, comprising a gear shifter, lever adapted to operate the shifter in opposite directions, rods adapted to operate the lever, each rod provided with a pair of recesses, a latch for each rod, and an electromagnet for each latch adapted to force the latch out of one recess of a rod and into another recess of said rod.

4. A gear selecting controller, comprising a gear shifter, two rods movable in opposite directions adapted to operate the shifter, each rod provided with a pair of recesses, a latch for each rod, an electro-magnet adapted to cause the latch to alternately move into one of said recesses and out of the other, a switch to establish a circuit through the electro-magnet, and a circuit breaker adapted to open the circuit independently of the switch.

5. A gear selecting controller, comprising a shifter, operating rods therefor, each provided with two recesses, a latch for each rod, a plate carrying the latches, a horizontal series of loosely mounted balls, and adapted to be wedged by a latch, an electromagnet for each latch adapted to move the latch out of one recess of a rod so as to cause it to wedge the balls and to move it out of said recess to cause it to unwedge the balls.

[Claims 6 to 26 not printed in the Gazette.]

1,215,743. JOURNAL-BOX. EDGAR W. SUMMERS, Pittsburgh, Pa. Original application filed Apr. 15, 1916, Serial No. 91,342. Divided and this application filed June 12, 1916. Serial No. 103,164. (Cl. 64—10.)



1. In combination, a journal box having its top circular on its inner surface and provided with a recess transverse to said circular surface and extending upwardly thereof, and a bearing having a circular upper surface and a transverse key portion extending upwardly from said circular top surface and into the recess in the box.

2. In combination, a journal box having a circular inside wall to its top and a transverse recess extending upwardly from said circular wall, and a bearing having its upper face conforming to the circular inside wall of the top of the box and provided midway between its ends with a key portion extending transversely thereof and extending into the recess in the top of the box.

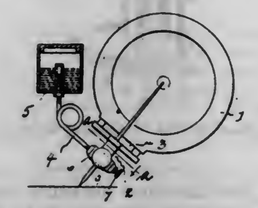
3. In combination, a journal box having its top circular on its inner surface and provided with a recess extending upwardly from said circular surface, and a bearing having its inner surface conforming to the circular axle and having its outer surface formed on a circle struck from a center located farther out than the center from which the inner surface bearing is struck and provided with a projection extending upwardly from its outer circular surface and fitting in the recess in the top of the box.

4. In combination, a journal box having its top circular on its inner surface and provided with a recess extending upwardly from said circular surface, and a bearing having its inner surface conforming to the circular axle and having its outer surface circular and eccentric to its inner surface and provided with a projection extending upwardly from its outer circular surface and fitting in the recess in the top of the box, said bearing being thicker at its longitudinal center than at its edges.

5. In combination, a journal box provided on its top with an upwardly projecting transverse bearing portion and having the inside of its top circular and provided with recesses extending upwardly from said circular surface, and a journal bearing having its outer surface circular to fit against the circular inside top wall of the box and provided with upwardly projecting lugs extending into said recesses.

[Claims 6 to 10 not printed in the Gazette.]

1,215,744. VIBRATION-GOVERNING DEVICE FOR SOUND-REPRODUCING MACHINES. WILLIAM J. TANNER, Bridgeport, Conn. Filed Jan. 9, 1914. Serial No. 811,205. (Cl. 274—1.)

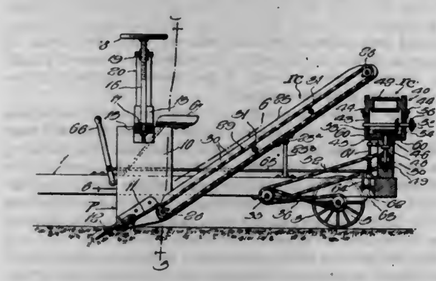


1. In a sound reproducer for machines of the class described, a vibrating stylus holder, an arm secured thereto and a weight containing a movable body carried by said arm.

2. In a sound reproducer for machines of the class described, a vibrating stylus holder, an arm secured thereto and an adjustable weight containing a movable body carried by said arm.

3. In a sound reproducer for machines of the class described, a vibrating stylus holder, a resilient arm secured thereto and a weight containing a movable body carried by said arm.

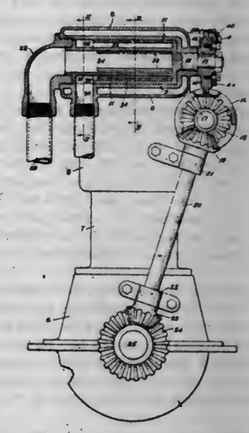
1,215,745. BEET DIGGING AND LIFTING MACHINE. GARRISON C. THAYER, Bartlesville, Okla. Filed Apr. 13, 1916. Serial No. 90,945. (Cl. 55—51.)



1. In combination, a portable frame, a pair of transversely spaced upright tracks carried thereby, a plow mounted between said tracks, said plow including a pair of spaced upright side plates contacting slidably with said tracks and having guides engaging the same, an earth penetrating plate extending between the lower ends of said side plates, and a rigid transverse bar extending between the upper ends thereof; an arched frame secured to and rising from the upper ends of the aforesaid tracks, and an adjusting screw mounted on said frame and having connection with the aforesaid transverse bar, said screw being adapted to adjust the entire plow vertically between the tracks.

2. In combination, a portable frame including a pair of longitudinally extending side bars, a pair of upwardly and inwardly inclining arms having horizontal and vertical flanges on their lower ends secured in contact respectively with the upper and inner sides of said side bars, a pair of vertically disposed tracks carried by the upper ends of said arms, an arched transverse bar secured rigidly at its ends to the upper ends of said tracks, a pair of side plates adjacent the inner sides of said tracks and having guides traveling thereon to permit vertical sliding of said plates, a rigid transverse bar secured to and extending between the upper ends of said side plates, a jack screw supporting said transverse bar from the aforesaid arched bar, an upwardly and rearwardly inclined bottom plate extending between and secured to the lower ends of the side plates, the lower edge of said bottom plate having an earth penetrating shovel, an upwardly and rearwardly inclined conveyer having its front end pivotally mounted between the side plates beneath the rear end of said bottom plate, and means for supporting the rear end of said conveyer.

1,215,746. ROTARY VALVE. WILLIE J. TOWER, Seattle, Wash. Filed Dec. 22, 1915. Serial No. 68,283. (Cl. 123—190.)

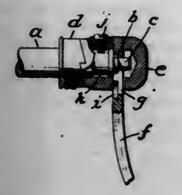


An internal combustion engine comprising a cylinder having an offset valve casing carried thereby, a rotary valve mounted in said casing, said valve including concentric cylinders closed at one end by an integral right-angularly extending wall, the opposite end of the outer cylinder terminating inwardly of the outer end of the inner cylinder, an annular peripheral collar carried by the inner cylinder adjacent the open end with the outer edge lying in the same plane as the outer edge of the outer cylinder, radial connecting members between the cylinders dividing the space between the cylinders into non-communicating chambers, ports extending through said connecting members from the interior of the inner cylinder to the exterior of the outer cylinder constituting an exhaust passage, and ports in the outer cylinder communicating with the chambers constituting gas inlets, a combined inlet and exhaust port in the engine cylinder adapted successively to register with the valve ports, and means for rotating the valve.

1,215,747. ADJUSTABLE CRANK. MAHLON C. TURNER, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Feb. 25, 1914. Serial No. 820,860. (Cl. 74—33.)

1. An adjustable crank construction comprising a crank shaft, a crank arm, means for connecting the crank arm and shaft and permitting the crank arm to turn freely in

one direction independently of the shaft and to move in the direction of its length relatively to the shaft to vary the distance between the shaft and the free end of the crank arm, and locking connections between the shaft and crank arm adapted to maintain the crank arm in fixed relation to the shaft in either of its longitudinal positions in the turning movement of the crank arm in the opposite direction.



2. An adjustable crank construction comprising a driven crank shaft, a driving crank arm, means for connecting the crank arm and shaft and permitting the crank arm to freely revolve in one direction independently of the shaft and to slide in the direction of its length relatively to the shaft to provide a relatively long or short effective length of crank arm, and means to maintain the crank arm when in either longitudinal position in fixed relation to the shaft in the turning movement of the crank arm in the opposite direction.

3. An adjustable crank construction comprising a crank shaft, a crank arm, means permitting the crank arm to move in the direction of its length relatively to the shaft to vary the distance between the axis of the shaft and the free end of the crank arm, and a plurality of locking connections between the crank arm and shaft corresponding to the several longitudinally adjustable positions of the crank arm and each adapted to be rendered inoperative when the crank arm is withheld from rotation with the shaft.

4. An adjustable crank construction comprising a crank shaft, a crank arm, means permitting the crank arm to move axially along the shaft and also slide in the direction of its own length relatively to the shaft when in one of its axial positions, and locking means to maintain the crank arm when in either longitudinal position in fixed relation to the shaft when in the other of its axial positions.

5. An adjustable crank construction comprising a crank shaft, a crank arm, and connections between the crank arm and shaft including, first, guiding members permitting movement of the crank arm both in the direction of its length and in the direction of the axis of the shaft and, second, locking means maintaining the crank arm when in either longitudinal position in fixed relation to the shaft when turned in one direction but adapted to yield to allow axial displacement of the crank arm when turned in the other direction.

[Claims 6 to 8 not printed in the Gazette.]

1,215,748. ELECTRIC HEATER. WEEDEN B. UNDERWOOD, Rochester, N. Y., assignor to Wilmot Castle Company, Rochester, N. Y., a Corporation. Filed Dec. 14, 1915. Serial No. 66,821. (Cl. 219—38.)

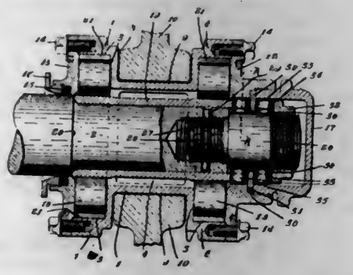
1. An electric heater comprising a plurality of separate hollow bodies each having a chamber and openings at opposite ends of the chamber, said openings providing two continuous passageways at the ends of the heater, the two passages being connected by the chambers, and electrical heating units interposed between the hollow bodies at points between the two passageways.

2. An electric heater comprising a plurality of separate hollow bodies lying in abutting relation and formed with chambers between them, each body having an internal chamber and openings at opposite ends of the chamber, said openings providing two continuous passageways at the ends of the heater, the two passageways being connected by the internal chambers, and electric heating



units interposed in the chambers between the hollow bodies.

1,215,749. ANTIFRICTION-BEARING FOR AXLES. JAMES N. VANDEGRIFT, Syracuse, N. Y. Filed Apr. 7, 1911. Serial No. 619,496. (Cl. 64—39.)



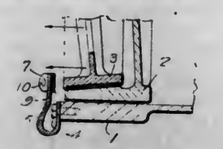
1. The combination with an axle, a journal box inclosing the axle, the outer end portion of the axle extending beyond the outer end of the sleeve, a thrust bearing, around the extension of the axle to take the thrust in opposite directions including anti-friction members engaging directly with the end of the sleeve, substantially as and for the purpose described.

2. The combination with an axle having an extension at its end detachably secured thereto of less diameter than the normal diameter of the axle, a journal box inclosing the axle, a sleeve mounted on the axle, the extension of the axle extending beyond the end of the sleeve and the sleeve at its outer end extending slightly beyond the end of the larger portion of the axle and slightly overhanging the extension, an annular abutment fixed to the box and being opposed to and spaced apart from the outer end of the sleeve, an annular shoulder at the outer end of the extension and spaced apart from the abutment, anti-friction members between the abutment and the end face of the sleeve and being disengaged from the end face of the larger portion of the axle, and anti-friction members interposed between the abutment and the annular shoulder.

3. The combination with an axle having an extension at its end, of less diameter than the normal diameter of the axle, a journal box inclosing the axle, a sleeve mounted on the axle, the extension of the axle extending beyond the end of the sleeve and the sleeve at its outer end extending slightly beyond the end of the larger portion of the axle and slightly overhanging the extension, an annular abutment fixed to the box and being opposed to and spaced apart from the outer end of the sleeve, an annular

shoulder at the outer end of the extension and spaced apart from the abutment, anti-friction members between the abutment and the end face of the sleeve and being disengaged from the end face of the larger portion of the axle, and anti-friction members interposed between the arms and the annular shoulders.

1,215,750. AUTOMOBILE CONE-CLUTCH BRAKE. RONAYNE M. WALDRON, 2d, Washington, D. C. Filed July 17, 1916. Serial No. 109,842. (Cl. 74—46.)

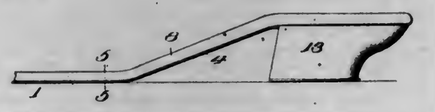


1. In an automobile, the combination, with a revoluble and rectilinearly-movable clutch, of a clutch-brake supported adjacent said clutch and comprising a resilient, metallic member provided with a basal portion adapted to be secured to a support, and with a bowed or looped portion, and with a terminal arranged in the path of rectilinear movement of said clutch, so as to be engaged thereby.

2. An automobile clutch brake, adapted to be secured to an automobile fly-wheel casing, comprising a resilient, metallic member provided, at one end, with ears bent at an angle to the plane thereof, and a wear-facing secured to said ears.

3. An automobile clutch brake, adapted to be secured to an automobile fly-wheel casing, comprising a resilient, metallic member bent, intermediate its ends, on a curve, forming a loop, and provided, at one end, with ears bent at an angle to the plane thereof, and a wear-facing secured to said ears.

1,215,751. SLIPPER-SOLE. JOHN H. WALLACE, Gloversville, N. Y. Filed May 18, 1916, Serial No. 98,389. Renewed Jan. 5, 1917. Serial No. 140,843. (Cl. 36—30.)



1. An article of manufacture comprising a sole consisting of superposed layers, the upper layer having a bound edge, padding provided upon the upper surface of the upper layer, and a cover inclosing said padding and the bound edge of the upper layer, and having its edges secured between the layers.

2. An article of manufacture comprising a sole consisting of two superposed layers, padding provided upon the upper surface of the upper layer, and a cover inclosing said padding and the edge of the upper layer, and having its edges secured between the layers.

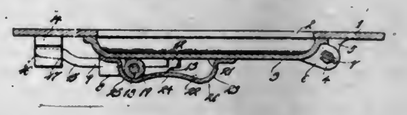
3. An article of manufacture comprising a sole consisting of superposed layers, the upper layer having a bound edge, padding provided upon the upper surface of the upper layer, and a cover inclosing said padding and the bound edge of the upper layer and having its edges secured between the layers by an adhesive substance.

4. An article of manufacture comprising a sole consisting of superposed layers, padding provided upon the upper surface of the upper layer, a cover inclosing said padding and the edge of the upper layer and having its edges secured between the layers, and a heel secured to the sole beneath the rear portion of the same.

5. An article of manufacture comprising a sole consisting of a plurality of superposed layers, a shank stiffener secured to the rear portion of the upper surface of the upper layer of the sole, padding provided upon the upper surfaces of the upper layer, and shank stiffener, a cover inclosing said padding and the edge of the upper layer and having its edges secured between the layers, and a heel secured to the rear portion of said sole by nails which pass through said stiffener and sole.

[Claims 6 to 8 not printed in the Gazette.]

1,215,752. FASTENING DEVICE FOR DOORS. CHARLES ELWOOD WALRAVEN, Woodbury, N. J. Filed Oct. 31, 1916. Serial No. 128,652. (Cl. 70—42.)

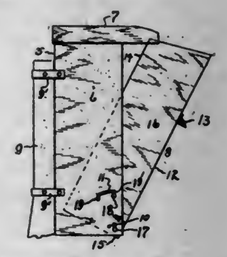


1. A fastening device for a door, comprising a bolt, means pivoted to said door for moving the bolt, an elongated resilient member having its ends curved inwardly and secured to said door, said bolt-moving means being operative between said resilient member and the door, said resilient member having a central inwardly projecting portion normally operative to hold the bolt-moving means in different positions against accidental pivotal movements, substantially as described.

2. A fastening device for a door, comprising a bolt, a handle lever pivoted to said door and having a pin and slot connection with said bolt, an elongated resilient member having its ends curved inwardly and secured to said door and having an inwardly projecting portion designed to be engaged and moved outwardly by said lever when the latter is manually operated to move the bolt into and out of operative position, said inwardly projecting portion being designed to retain the handle lever in different positions adjacent opposite ends of the resilient member, substantially as described.

3. A fastening device for a door, comprising a bolt, a handle lever pivoted to said door and having a pin and slot connection with said bolt, a cylindrical stem on said lever, a roller on said stem, an elongated resilient member mounted on said door and having an inwardly projecting portion designed to be engaged by said roller when the lever is manually operated to move the bolt into and out of operative position, said inwardly projecting portion being designed to retain the handle lever in different positions adjacent opposite ends of the resilient member, and being movable outwardly by said roller during a swinging movement of the handle lever, substantially as described.

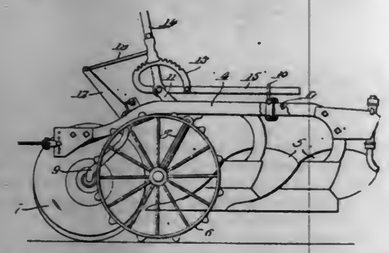
1,215,753. MAIL-BOX. AMOS J. WALTERMIRE, Omaha, Nebr., assignor of one-third to Austin W. Raymond, Omaha, Nebr. Filed Jan. 19, 1916. Serial No. 72,868. (Cl. 232—28.)



In a mail box, an elongated, upright casing comprising a back and two opposed sides and a hood projecting forwardly of its sides, each of its sides being provided near its lower end with a rectilinear slot extending longitudinally thereof and a curved slot disposed above and having recesses opening thereon which extend downwardly substantially parallel with said rectilinear slot, a receptacle formed rectangular in cross-section provided with an open-

ing in its top, each of its sides being provided with trunnions adapted to be disposed in the slots of the casing to permit forward and rearward swinging movements of the receptacle and for normally maintaining the receptacle in a stationary position after it has completed a swinging movement.

1,215,754. PLOW. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Original application filed Dec. 16, 1915, Serial No. 67,202. Divided and this application filed May 23, 1916. Serial No. 99,452. (Cl. 97—36.)



1. In a plow, the combination of a frame, a supporting wheel therefor mounted with capacity for vertical movement relatively to the frame, an upstanding hand lever permanently connected with the wheel for adjusting it vertically to different positions from which the wheel is moved vertically with respect to the frame for raising and lowering the same, and means for causing the said hand lever to be moved back and forth in a substantially parallel movement as the frame is raised and lowered.

2. In a plow, the combination of a frame, crank members pivotally connected with the frame, a land and a furrow wheel mounted on said crank members, and a connection between the crank members including an upright adjustable hand lever whereby the crank members may be rocked in unison and may be rocked relatively by adjustment of the hand lever, the lever being so mounted that it will be moved back and forth in a substantially parallel movement upon rocking the crank members to raise and lower the frame.

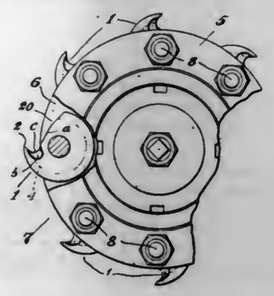
3. In a plow, the combination of a frame, crank members pivotally connected with the frame, a land and a furrow wheel mounted on said crank members, an upwardly projecting arm secured to each crank member, a sector pivoted to one of the arms, said sector having a horizontally extending portion slidably engaging a frame element so as to hold the sector against swinging on its pivot with respect to the frame when the sector-carrying arm is rocked, an upright hand lever adjustably coöperating with the sector, and a link pivotally connecting the hand lever and the second mentioned arm whereby the crank members will rock in unison and may be relatively rocked by the adjustment of said hand lever and whereby also the hand lever will be moved back and forth in a substantially parallel movement when the crank members are rocked.

4. In a plow, the combination with a frame, of a pair of crank members pivoted thereon, a supporting wheel mounted on each crank member, a rocker arm secured to each crank member, and a connection between said rocker arms including a sector and a hand lever adjustably coöperating therewith and mounted so as to travel back and forth longitudinally of the plow in a substantially parallel movement as the crank members are rocked to raise and lower the plow, the hand lever being adjustable for rocking one crank member relatively to the other.

5. In a plow, the combination of a frame, a pair of crank members pivoted thereon, a supporting wheel mounted on each of said crank members, and means connecting the crank members so that they will rock in unison, said means including an adjustable hand lever adapted for rocking one crank member relatively to the other and being so mounted that upon rocking the crank members it will be moved thereby back and forth longitudinally of the plow in a substantially parallel movement.

[Claims 6 to 8 not printed in the Gazette.]

1,215,755. JOINTING AND MATCHING CUTTER. EDWARD H. WAUGH, Seattle, Wash. Filed June 30, 1914. Serial No. 848,196. (Cl. 144—234.)



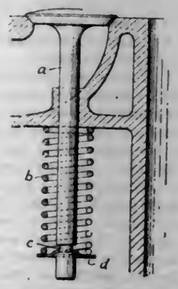
1. A detachable cutter for a cutter head having throats formed on its advancing face inward from the cutting edge and inclined to an axial plane to form a forwardly facing apex.

2. A detachable cutter for a cutter head having its cutting edge provided with a groove and throats formed on the advancing face inward from the cutting edges and inclined to an axial plane to make a forwardly facing apex at the groove.

3. A detachable disk cutter having a peripheral surface of conical character extending from a side face inward with the larger radius at the outer face and a transversely extending notch extending across said surface at an angle to form a cutting edge which is inclined to an axial plane with the rearwardly positioned end of said cutting edge at the side of said conical surface which is of largest radius.

4. A cutter head comprising a rotative cutter-carrying body, and a series of cutters adjustably mounted about the periphery of said body, said cutters each having two separated jointing edges and a forming groove connecting said jointing edges, the opposite sides of said groove conforming respectively to roughing and finishing shapes and alternate cutters, as mounted upon the body, having said roughing and finishing edges reversed in position.

1,215,756. REMOVABLE SPRING-ABUTMENT. ERNEST E. WEMP, Pontiac, Mich. Filed Dec. 13, 1915, Serial No. 66,436. Renewed Jan. 5, 1917. Serial No. 140,704. (Cl. 137—32.)



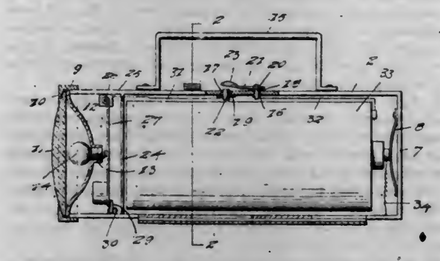
1. In a spring abutment, the combination of a stem, a spring coiled thereabout, and a washer finally assembled upon the said stem by lateral movement, said washer being provided with an extension or tab by which it may be disassembled from the stem by grasping the tab and pulling laterally of the stem on said tab.

2. A spring abutment, having in combination with a stem provided with a reduced and shouldered portion and a spring encircling the stem, a washer constructed to form a central cup whose interior diameter is calculated to just fit over the large portion of the stem so that the washer centralizes itself and whose exterior and interior gradually flare so the cup just fits in the coils of the spring to centralize the spring, the said washer being perforated at the center to fit around the reduced portion of the stem and having an eccentric opening communicating with the central perforation to permit of the assembling of the washer upon the reduced portion of the stem, substantially as described.

3. A spring abutment, having in combination with a stem provided with a reduced and shouldered portion and a spring encircling the stem, a washer cupped centrally to form a boss of dome-shape, the interior of the top of the dome-like bosa being calculated to just fit over the large portion of the stem so that the washer centralizes itself and the dome-like boss enlarging toward its base so that the spring resting on the flat marginal portion of the washer is centralized by the lower portion of the boss which is enlarged to just fit into the interior of the spring, the said washer being perforated at the center to just fit around the reduced portion of the stem and having an eccentric opening communicating with the central perforation to permit of the assembling of the washer upon the reduced portion of the stem, substantially as described.

4. In a device for the purpose specified, the combination of a stem provided with a reduced portion forming a shoulder, a coiled spring engaging thereabout, and a washer constructed of metal of substantially uniform thickness and having a central aperture, the bordering metal for which fits around the reduced portion of the stem and lies against the said shoulder, said washer having an eccentric opening merging into the central opening by which the washer can be assembled upon the stem by lateral movement to a concentric relation with respect to the stem, the said washer having its central portion cupped to provide a dome whose interior diameter near the top of the dome just fits over the outside of said shoulder to centralize the washer on the stem and the dome enlarging in diameter toward its base where it merges with the outside portions of the washer to form an annular flange acting as a seat for said coiled spring, the size of the base of the dome being calculated to just fit into the coiled spring to centralize the same.

1,215,757. FLASH-LIGHT. WILLIAM L. WHITE, Birmingham, Ala. Filed June 13, 1916. Serial No. 103,477. (Cl. 240—8.5.)



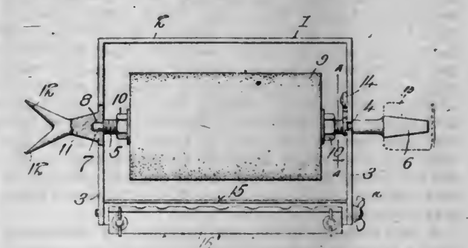
1. A flashlight comprising a casing consisting of a pair of semi-cylindrical sections hinged together along one edge, a reflector at one end of the casing, a battery within the casing one terminal of the battery being connected with the casing, a switch on the exterior of the casing, the opposite terminal of said battery being connected with one terminal of the switch, a hinged contact arm within the casing and insulated therefrom, the opposite terminal of the switch being connected to the hinged contact arm, and a lamp bulb within the reflector having a central contact adapted to be engaged by the hinged contact arm when the lamp is in operative position.

2. A flashlight comprising a casing consisting of a pair of semi-cylindrical sections hinged together along one edge, a reflector at one end of the casing, a battery within the casing one terminal of the battery being connected with the casing, a switch on the exterior of the casing, the opposite terminal of said battery being connected with one terminal of the switch, a hinged contact arm within the casing and insulated therefrom, the opposite terminal of the switch being connected to the hinged contact arm, and a lamp bulb within the reflector having a central contact adapted to be engaged by the hinged contact arm when the lamp is in operative position, and means to hold the arm in operative position at the desire of the user.

3. A flashlight comprising a casing, a reflector at one end of the casing, a handle intermediate the ends of the casing, an arm pivoted within the casing near its forward end, a battery within the casing one terminal of the battery be-battery within the casing one terminal of the battery being connected to the casing, the opposite terminal of the battery being connected to the arm, a lamp mounted in the reflector and a weight on the arm to cause the same to engage the central contact of the lamp when the flashlight is in horizontal position.

4. A flashlight comprising a casing, a reflector at one end of the casing, a handle intermediate the ends of the casing, an arm pivoted within the casing near its forward end, a battery within the casing one terminal of the battery being connected to the casing, the opposite terminal of the battery being connected to the arm, a lamp mounted in the reflector and a weight on the arm to cause the same to engage the central contact of the lamp when the flashlight is in horizontal position, and pivoted means within the casing to hold the arm in operative position.

1,215,758. FRAME FOR SUPPORTING GRINDING-STONES. WILLIAM A. YARWOOD, La Salle, N. Y. Filed May 25, 1916. Serial No. 99,885. (Cl. 51—7.)



A device of the class described comprising a frame, a shank associated with the forward end of the frame and having spurs carried thereby, bearings carried by the ends of the frame, a shaft rotatably engaged in said bearings, the forward end of said shaft being detachably engaged with the bearing carried by the adjacent end of the frame, a grind stone adjustably connected to the shaft, a head carried by the rear end of the shaft, a bar pivotally and adjustably connected to the end bars of the frame, a clamping plate adjustably connected to said bar, said spurs being adapted to be engaged with a support, and means detachably engaged with the head to rotate the shaft and to aid in holding the spurs engaged with the support.

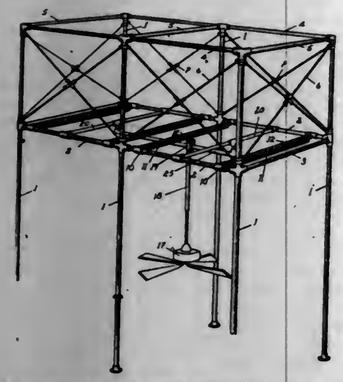
1,215,759. TEMPERING COMPOUND. CARL J. ANDERSON, Muskegon, Mich., assignor of one-half to John G. Sandvall, Muskegon, Mich. Filed Dec. 20, 1915. Serial No. 67,881. (Cl. 148—38.)

1. A tempering compound made from liquor drawn from crushed oats and wheat bran soaked in water and mixed with a solution formed from bicarbonate of potash,

common salt and permanganate of potash to which mixture is added a small amount of nitrate of strontium.

2. A tempering compound comprised of liquor drawn from crushed oats soaked in water and mixed with a solution of bi-carbonate of potash, common salt and permanganate of potash to which mixture is added a small amount of nitrate of strontium.

1,215,760. PAPER-CURING MACHINE. EDWARD M. BARNES, Hastings, Mich., assignor to Acme Paper Curing Co., Kalamazoo, Mich. Filed Jan. 7, 1916. Serial No. 70,755. (Cl. 34—26.)



1. In a structure of the class described, the combination with a frame comprising side bars, of paper hangers comprising hanger bars mounted on said side bars in spaced pairs, a series of hanger members having collars sleeved upon said hanger bars to support said hanger members thereon front to back, said hanger members being open on their front sides and provided with forwardly and downwardly inclined roller ways, clutch rollers arranged on said ways in said hanger members to coact with the backs of the adjacent hanger members in front for clutching the sheets, the hanger members being open at their sides to permit the manipulation of rollers to release the sheets, a track disposed centrally and transversely below said hanger bars, track supporting bars mounted on said side bars between said pairs of hanger bars, a fan disposed below the paper supported by said hangers, and a fan supporting bar provided with a carriage traveling on said track so that the position of the fan below the paper may be shifted.

2. In a structure of the class described, the combination with a frame of hangers comprising hanger bars mounted on said frame, a series of hanger members having collars sleeved upon said hanger bars to support said hanger members thereon front to back, said hanger members being open on their front sides and provided with forwardly and downwardly inclined roller ways, clutch rollers arranged on said ways in said hanger members to coact with the backs of the adjacent hanger members in front for clutching the sheets, the hanger members being open at their sides to permit the manipulation of rollers to release the sheets, a track disposed centrally and transversely below said hanger bars, a fan disposed below the paper supported by said hangers, and a fan supporting bar provided with a carriage traveling on said track so that the position of the fan below the paper may be shifted.

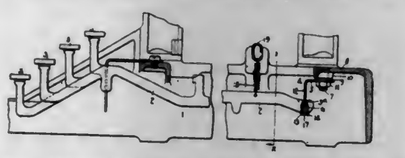
3. In a structure of the class described, the combination with a frame, of paper hangers comprising hanger bars mounted transversely of said frame, a series of hanger members having collars sleeved upon said hanger bars to support said hanger members thereon front to back, said hanger members being open on their front sides and provided with forwardly and downwardly inclined roller ways, clutch rollers arranged on said ways in said hanger members to coact with the backs of the adjacent hanger members in front for clutching the sheets, the hanger members being open at their sides to permit the manipulation of rollers to release the sheets, and a fan mounted for horizontal adjustment below the paper supported by said hangers.

4. In a structure of the class described, the combination with a frame, of paper hangers comprising hanger bars mounted transversely of said frame, a series of hanger members having collars sleeved upon said hanger bars to support said hanger member thereon front and back, said hanger members being open on their front sides and provided with forwardly and downwardly inclined roller ways, clutch rollers arranged on said ways in said hanger members to coact with the backs of the adjacent hanger members in front for clutching the sheets, the hanger members being open at their sides to permit the manipulation of rollers to release the sheets, and a fan disposed below the paper supported by said hangers.

5. In a structure of the class described, the combination with a frame comprising side bars, of paper hangers comprising hanger bars mounted on said side bars in spaced pairs, paper holding devices mounted upon said hanger bars, a track disposed centrally and transversely below said hanger bars, track supporting bars mounted on said side bars between said pairs of hanger bars, a fan disposed below the paper supported by said hangers, and a fan supporting bar provided with a carriage traveling on said track so that the position of the fan below the paper may be shifted.

[Claims 6 to 8 not printed in the Gazette.]

1,215,761. TYPE-WRITING MACHINE. EDWIN E. BARNEY, Ilion, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Sept. 13, 1916. Serial No. 119,827. (Cl. 197—106.)



1. In a typewriting machine, the combination of a sheet metal plate having tongues off-set laterally from and beyond the body of the plate, a pivot rod arranged in the channel formed by the tongues of the plate, and a plurality of actuating members fulcrumed on said pivot rod.

2. In a typewriting machine, the combination of a pivoted actuating member; and a pivotal support therefor comprising a sheet metal plate slotted at an edge thereof to receive said member and having portions thereof bent in opposite directions from the body of the plate on opposite sides of each of said slots to form a channel, and a pivot rod seated in said channel and on which said member is adapted to turn.

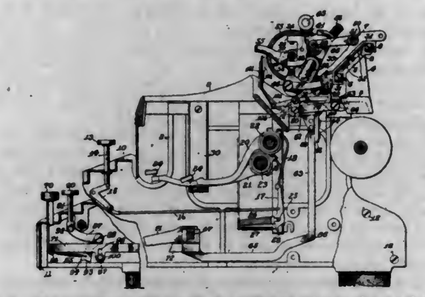
3. In a typewriting machine, the combination of a pivoted actuating member; and a pivotal support therefor comprising a sheet metal plate having tines which are bent off laterally from the plane of said plate at opposite sides thereof, and a pivot rod which extends longitudinally of the plate and is received between said tines, the actuating member extending transversely of said plate between the tines and receiving a pivot bearing on the pivot rod.

4. In a typewriting machine, the combination of a sheet metal plate having off-set tongues forming a channel, the roots of all tongues being in a single row in the plane of the body of the plate, a pivot rod arranged in the channel and extending longitudinally thereof, and a plurality of actuating members fulcrumed on said pivot rod.

5. In a typewriting machine, the combination of a pivoted actuating member; and a pivotal support therefor comprising a sheet metal plate having portions which are bent off laterally in opposite directions from the plane of the body of the plate to form a channel, a pivot rod seated in said channel, and means for preventing an endwise displacement of said pivot rod.

[Claims 6 to 24 not printed in the Gazette.]

1,215,762. TYPE-WRITING MACHINE. JOHN H. BARR, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Jan. 27, 1916. Serial No. 74,577. (Cl. 197—73.)



1. The combination with a shiftable platen frame having a rail, of a rock shaft, an arm projecting from said shaft toward the front of the machine and having a shift key, an arm projecting from the middle of said shaft toward the rear of the machine, a post pivoted to said rear arm, a roller or wheel for said rail carried by said post, and a guide link for the upper end of said post.

2. The combination with a shiftable platen and platen frame, of means for shifting said frame, said means consisting of a lever of the first order in the base of the machine, said lever having two forward arms carrying shift keys and one rearward arm at the middle of the machine, a post carried by said rearward arm, means at the upper end of said post to shift the platen frame, and a guide for the upper end of said post.

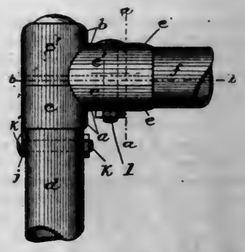
3. In a typewriting machine, the combination with a platen, a carriage truck, and a platen frame shiftably mounted in said truck and comprising a rail, of a post having a wheel for coöperation with said rail, a lever arm for moving said post up and down and for supporting and guiding the lower end of said post, and guiding means for the upper part of said post, said upper guiding means consisting of a link having two parallel bars and a connecting bar, one of said parallel bars being pivoted to the frame of the machine and the other to said post.

4. In a typewriting machine, the combination with a platen and a shiftable platen frame having a rail, of means for shifting said frame comprising post 63 having wheel 60 and bracket 82, said wheel coöperating with said rail, and the guide link comprising arm 76, wide bearing part 78 pivoted to said bracket 82, and also wide bearing part 77 pivoted to the frame of the machine.

5. The combination with a shiftable platen and platen frame comprising a bar which constitutes a rail, of means for shifting said platen and frame comprising a vertical post having thereon a wheel on which said rail travels and having a bracket with ears spaced apart, a guide link pivoted in said spaced ears and pivoted also to the fixed framework, and means for shifting said post.

1,215,763. COUPLING. WILLIAM GEORGE BEATTY, Fergus, Ontario, Canada. Filed Feb. 23, 1916. Serial No. 80,085. (Cl. 189—36.)

1. A coupling for posts, rails, or the like, comprising two separable and substantially-similar coupling members each provided with a cylindrical sleeve for a vertical post, and a semi-cylindrical sleeve extending horizontally from the cylindrical sleeve to partly encircle a horizontal rail, the interlocking meeting edge at one side of each coupling member being formed to underlie, and the interlocking meeting edge at the other side of each coupling member being formed to overlie, the corresponding interlocking meeting edge of the other coupling member, the underlying meeting edge of each coupling member extending slightly beyond the overlying meeting edge, and these underlying meeting edges where they terminate forming engaging shoulders coöperating with the interlocking meeting edges to prevent the rotary movement of the coupling members around the vertical axis of the cylindrical sleeves independently of each other.



2. A coupling for posts, rails, or the like, comprising two separable and substantially-similar coupling members each provided with a cylindrical sleeve for a vertical post, and a semi-cylindrical sleeve extending horizontally from the cylindrical sleeve to partly encircle a horizontal rail, the interlocking meeting edge at one side of each coupling member being formed to underlie, and the interlocking meeting edge at the other side of each coupling member being formed to overlie, the corresponding interlocking meeting edge of the other coupling member, the underlying meeting edge of each coupling member extending slightly beyond the overlying meeting edge, and these underlying meeting edges where they terminate forming engaging shoulders coöperating with the interlocking meeting edges to prevent the rotary movement of the coupling members around the vertical axis of the cylindrical sleeves independently of each other, the cylindrical sleeve of one of the coupling members being formed with a bifurcated lug to straddle an appropriate abutment to support the coupling in its set position.

1,215,764. PROCESS OF MARKING UMBRELLAS AND THE LIKE. WILLIAM HENRY BEEHLER, Baltimore, Md., assignor to William Beehler, Incorporated, Baltimore, Md., a Corporation of Maryland. Filed June 1, 1908, Serial No. 435,987. Renewed June 7, 1915. Serial No. 32,729. (Cl. 41—26.)



1. A process, consisting in applying a pattern bearing a design to a fabric, embroidering the design through the pattern and fabric, and then coloring one side of the design.

2. A process, consisting in placing a design upon a pattern, attaching the pattern to an article to be embroidered, stitching the design through the pattern and article, and applying color to one side of the embroidered design.

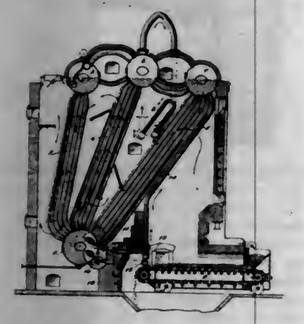
3. A process, consisting in placing a design upon a pattern, attaching the pattern to an article to be embroidered, stitching the design through the pattern and article, and then applying color to the pattern-side of the design before removing the pattern.

4. A process, consisting in applying a piece of paper to a fabric, embroidering through the paper and fabric and then applying color to the paper side of the embroidered design.

5. A process, consisting in applying a piece of paper to a fabric, embroidering through the paper and fabric, applying coloring to the paper side of the embroidered design, and then removing the paper.

[Claim 6 not printed in the Gazette.]

1,215,765. STEAM-BOILER. JOHN E. BELL, Brooklyn, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Oct. 23, 1915. Serial No. 57,411. (Cl. 122—292.)



1. A steam boiler furnace comprising a chain grate stoker, a bridge wall, and two water boxes placed one above the other at the rear of the stoker, the lower of said boxes being curved in section and the upper square or rectangular in section, said boxes being connected at one end to the mud drum and at the other end to a steam and water drum.

2. A steam boiler furnace comprising a chain grate stoker, a bridge wall and two water boxes placed one above the other at the rear of the stoker, each box having a separate inlet connection from the boiler mud drum at one end and a separate outlet connection leading to the steam and water drum at the other end.

3. A steam boiler furnace comprising a chain grate stoker, a bridge wall and two water boxes placed one above the other at the rear of the stoker, each box having a separate inlet connection from the boiler mud drum at one end, and a separate outlet connection leading to the steam and water drum at the other end, the inlet connections being protected from the heat of the fire.

4. A steam boiler furnace comprising a chain grate stoker, a bridge wall and two water boxes placed one above the other at the rear of the stoker, each box having a separate inlet connection from the boiler mud drum at one end and a separate outlet connection leading to the steam and water drum at the other end, the outlet connections being exposed in part or in whole to the heat of the furnace.

5. A steam boiler furnace comprising a chain grate stoker, a bridge wall having a portion thereof extending over the rear of the stoker, and two water boxes placed one above the other in the space between the stoker and the overhang of the bridge wall, the lower of said boxes being curved in section and the upper square or rectangular in section, said boxes being connected at one end to the mud drum and at the other end to a steam and water drum.

1,215,766. TRUCK-BOLSTER CONSTRUCTION. SAMUEL A. BENNER, Pittsburgh, Pa. Filed Mar. 27, 1914. Serial No. 827,523. (Cl. 105—106.)

1. A car bolster comprising an integral rolled steel compression member consisting of a top web with outwardly opening channel members extending along either edge thereof, and an integral rolled steel tension member of fish belly shape having flattened ends secured to the ends of said channel members and having flanges intermediate its ends secured to the lower flanges of said channel member.



2. A car bolster comprising an integral rolled steel compression member consisting of a top horizontal web and side walls of channel form and an integral rolled steel tension member of fish belly shape having flattened ends secured to the lower flanges of said channel members and having lateral flanges intermediate of its ends also secured to the lower flanges of said channel members.

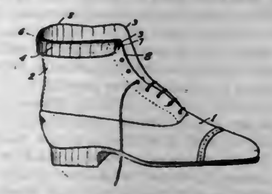
3. A car bolster comprising a compression member consisting of a single rolled section having a horizontal web and outwardly opening channel formed side walls and a tension member consisting of a rolled section of fish belly shape, having flattened ends secured to the extremities of said channel members and having out-turned flanges intermediate of its ends riveted to the lower out-turned flanges of said channel members.

4. A car bolster comprising a compression member consisting of a sihgle rolled section having a horizontal top web and outwardly opening channel form side walls having inturned flanges at their lower edges and a tension member consisting of a rolled and pressed section of fish belly form having flattened ends secured to the lower flanges of said side walls and having lateral flanges intermediate its ends, also secured to the lower flanges of said side walls.

5. A car bolster comprising a compression member consisting of a rolled section of channel form, the web of said section being extended into lateral flanges extending outwardly throughout the length of said section, the outer edges of the side walls of said section having inturned and out-turned flanges throughout the length thereof, and a tension member consisting of a rolled channel section having a thickened portion extending longitudinally throughout the length of the web thereof, said section being pressed intermediate its ends to fish belly shape leaving flat end portions and lateral out-turned flanges extending throughout the length of the section, said end portions and flanges being riveted to the flanges at the outer edges of the side walls of said compression member.

[Claims 6 to 44 not printed in the Gazette.]

1,215,767. SHOE. EDWARD H. BINNS, Pittsburgh, Pa. Filed Feb. 25, 1916. Serial No. 80,428. (Cl. 36—56.)



1. A shoe comprising an upper having the top thereof provided with a cuff surrounding the exterior of said top and permanently spaced therefrom to form a hand grip for pulling the shoe upon the foot, the end edges of said cuff being spaced rearwardly with respect to the front edges of the upper.

2. A shoe comprising an upper having the top thereof provided with a cuff surrounding the exterior of said top and permanently spaced therefrom to form a hand grip for pulling the shoe upon the foot, said cuff connected at its top with the top edge of the upper, said connection being rounded, and means arranged against the inner face of said rounded connection for maintaining the cuff spaced from the outer face of the upper.

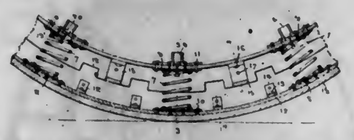
3. A shoe comprising an upper having the top thereof provided with a cuff surrounding the exterior of said top and permanently spaced therefrom to form a hand grip for pulling the shoe upon the foot, said cuff connected at its top with the top edge of the upper, said connection being rounded, the end edges of said cuff being spaced rearwardly with respect to the front edges of the upper.

4. A shoe comprising an upper having the top thereof provided with a cuff surrounding the exterior of said top and permanently spaced therefrom to form a hand grip for pulling the shoe upon the foot, said cuff connected at its top with the top edge of the upper, said connection being rounded, and means arranged against the inner face of said rounded connection for maintaining the cuff spaced from the outer face of the upper, the end edges of said cuff being spaced rearwardly with respect to the front edges of the upper.

5. A shoe comprising an upper having secured to the top edge thereof a cuff providing a hand grip to assist in pulling the shoe upon the foot, said cuff extending around the outer face of the upper, and means secured to the outer face of the upper near the top thereof for permanently spacing said cuff from the upper.

[Claims 6 and 7 not printed in the Gazette.]

1,215,768. SPRING-WHEEL. MALON C. BOLT, SYLVESTER L. BOLT, and EDWARD E. GOAD, Switchback, W. Va. Filed Mar. 25, 1915. Serial No. 16,911. (Cl. 152—37.)



In a device of the character described a rim composed of substantially channel-shaped telescoping members, angle braces secured to the base and side walls of the one member, angle braces secured to the base and side walls of the other member, the outer edges of the side walls of the last named member having notches for coöperation with the inwardly extended ends of the angle braces of the other member, and springs interposed between and bearing against the bases of said members.

1,215,769. VALVE. CHARLES FRANKLIN BRADBURN, Delmer, Ontario, Canada. Filed July 7, 1916. Serial No. 108,013. (Cl. 123—188.)



1. In combination, a valve casing containing a valve chamber having inhaust and exhaust ports, a valve sleeve moving within and axially of the valve chamber, having two ports spaced axially of the sleeve, and a double piston moving within and axially of the sleeve having a spacing between the pistons corresponding to the spacing between the ports of the sleeve, the piston adjacent to the engine end of the valve chamber having a passage through it in communication with said spacing.

2. In combination, a valve casing containing a valve chamber having inhaust and exhaust ports, a valve sleeve moving within and axially of the valve chamber, having two ports spaced axially of the sleeve and registering with those of the valve chamber, a double piston moving within and axially of the valve sleeve, having a spacing between the pistons corresponding to the spacing between the ports of the valve sleeve, the piston adjacent to the engine end of the valve chamber having a passage through it.

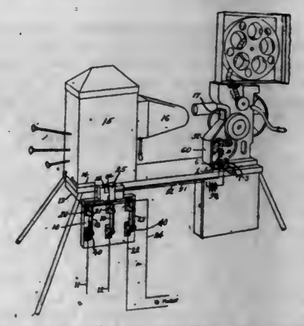
3. In combination, a valve casing containing a valve chamber having inhaust and exhaust ports, a valve sleeve moving within and axially of the valve chamber, having two ports spaced axially of the sleeve and registering with those of the valve chamber, a double piston moving within and axially of the valve sleeve, having a spacing between the pistons corresponding to the spacing between the ports of the valve sleeve, the piston adjacent to the engine end of the valve chamber having a passage through it, and means for the movement of the valve sleeve and piston, causing their combined action to bring the piston spacing into and out of line with the ports of the sleeve and the valve chamber.

4. In combination, a valve casing containing a valve chamber having inhaust and exhaust ports, a valve sleeve moving within and axially of the valve chamber, having two ports spaced axially of the sleeve, and a double piston moving within and axially of the sleeve having spacing between the piston corresponding to the spacing between the ports of the sleeve, and means imparting a differential movement to the valve sleeve and double piston, whereby the piston spacing and one port of the valve sleeve will register with one port of the valve chamber during part of the cycle of action, and the other port of the valve sleeve and piston spacing will register with the other port of the valve chamber during a remaining part of the cycle of action, the piston adjacent to the engine end of the valve chamber having a passage through it in communication with said spacing.

5. In combination, a valve casing containing a valve chamber having inhaust and exhaust ports, an expansile and contractile valve sleeve moving within and axially of the valve chamber having two ports spaced axially of the sleeve, and a double piston moving within and axially of the valve sleeve having spacing between the pistons corresponding to the spacing between the ports of the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,215,770. MOVING-PICTURE MACHINE. GLEN D. BRADY, Detroit, Mich. Filed May 22, 1915. Serial No. 29,770. (Cl. 88—17.)



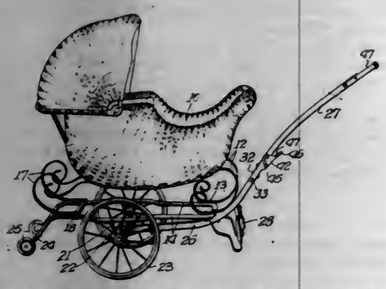
1. In a moving picture machine, in combination, a switch for the electric light circuit, springs tending to hold the switch open, a latch carried by the switch member, a control device having a latch engageable by the switch latch when the switch is closed, a locking device

for holding the controller latch from movement, an electro-magnet adapted to operate the lock to release the controller latch and thus release the switch to actuation by the springs, an electrical circuit for the electro-magnet, and a switch for the magnet circuit adapted to be held normally open by the film passing through the machine when under tension, said switch adapted to be closed by gravity to energize the magnet circuit.

2. In a moving picture machine, in combination, a spring operated switch for breaking the electric light and motor circuits, a locking device tending to hold the switch closed, an electro-magnet adapted to release the locking device and allow the switch to open, an electrical circuit for the magnet, and a switch for the magnet circuit, said switch having a shaft in said circuit provided with a contact point and a contact plate also in said circuit, a roller riding in contact with the film, means intermediate the roller and shaft whereby the contact point on the shaft is held from engagement with the contact plate while the roller is maintained in position by the film, said roller being adapted to close the switch upon its release to movement by gravity.

3. In a moving picture machine, in combination, a switch for both the electric light and motor circuits, springs tending to hold the switch open, a latch carried by the switch member, a control device comprising a spring-controlled latch engageable by the switch latch when the switch is closed, a second latch adapted when operated to actuate the spring controlled latch and release the switch latch and switch to actuation by the springs, an electro-magnet adapted upon energization to operate said second latch, an electric circuit for the electro-magnet, and a switch for the magnet circuit adapted to be held normally open by the film passing through the machine when under tension, said switch being adapted to be closed by gravity to energize the magnet circuit.

1,215,771. CHILD'S SULKY. REINHARDT H. BROWN, Laporte, Ind. Filed Jan. 3, 1916. Serial No. 69,791. (Cl. 21—12.)



1. In a device of the class described, the combination with a substantially U-shaped frame constructed of a continuous piece of metal and having its ends turned downward, of an axle extending transversely thereof and supported therefrom, wheels journaled on the axle, leaf springs secured to the parallel portions of the U-shaped frame, and a body supported from said springs.

2. In a device of the class described, the combination with a substantially U-shaped frame having its ends turned downward, of an axle extending transversely thereof and supported therefrom, wheels journaled on the axle, leaf springs secured to the U-shaped frame, a body supported from said springs, and a standard secured to the U-shaped frame beneath the front end of the body.

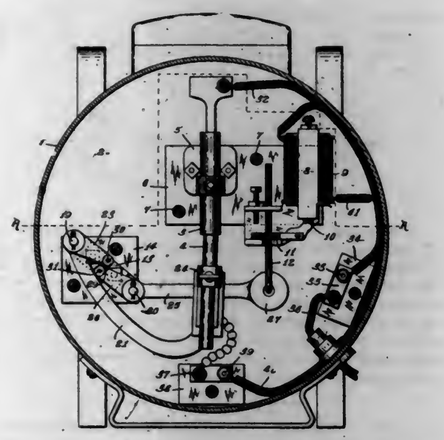
3. In a device of the class described, the combination with a substantially U-shaped frame having its ends turned downward, of an axle extending transversely thereof and supported therefrom, wheels journaled on the axle, leaf springs secured to the U-shaped frame, a body supported from said springs, and a tongue directly secured to the center of the axle and to the forward end of the U-shaped frame.

4. In a device of the class described, the combination with a substantially U-shaped frame having its ends turned downward, of an axle extending transversely thereof and supported therefrom, wheels journaled on the axle, leaf springs secured to the U-shaped frame, a body supported from said springs, a tongue secured to the center of the axle and to the forward end of the U-shaped frame, and a standard secured to the U-shaped frame and to the tongue beneath the front end of the body.

5. In a device of the class described, the combination with a substantially U-shaped frame having its ends turned downward, of an axle extending transversely thereof and supported therefrom, wheels journaled on the axle, leaf springs secured to the U-shaped frame, a body supported from said springs, a tongue secured to the center of the axle and to the forward end of the U-shaped frame, and a U-shaped standard having the top of its central portion secured to the tongue and the upper ends of its side portions secured to the U-shaped frame.

[Claims 6 to 13 not printed in the Gazette.]

1,215,772. HEADLIGHT. FRANK BUCHANAN, Syracuse, N. Y. Filed Apr. 24, 1911. Serial No. 622,877. (Cl. 176—52.)

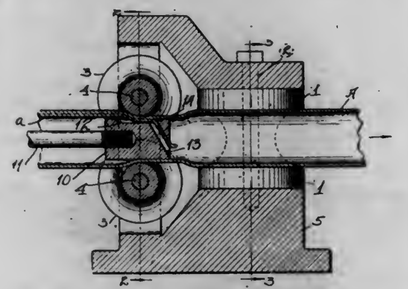


1. In a headlight, the combination of a casing having a back, a bracket within the casing supported by the back and comprising a base and posts of different lengths at the ends of the base, pivot pins carried respectively by the posts and extending parallel to each other, fixed and movable electrodes within the casing, lamp mechanism for supporting and feeding the movable electrode, said mechanism including a pivoted member having a bearing mounted on the pivot pin carried by the longer post, the bearing abutting against the end of the longer post, and said pivoted member also including arms projecting in the same general direction from the opposite ends of the bearing, the arm at the outer end being longer than that at the inner end and serving to support the movable electrode, and the arm at the inner end of the bearing terminating between said pivot pins, and a pivoted member having a bearing mounted on the pivot pin carried by the shorter post and abutting against the shorter post and having an arm projecting toward the shorter arm of the first-mentioned pivoted member, and means connecting said arms, substantially as and for the purpose set forth.

2. In a head light, the combination of a casing having a back, a bracket within the casing supported by the back and comprising a base and posts of different lengths at the ends of the base, pivot pins carried respectively by the posts and extending parallel to each other, fixed and movable electrodes within the casing, and lamp mechanism for supporting and feeding the movable electrode, said

mechanism including a pivoted member having a bearing mounted on the pivot pin carried by the longer post, the bearing abutting against the end of the longer post, and said pivoted member also including arms projecting in the same general direction from the opposite ends of the bearing, the arm at the outer end being longer than that at the inner end and serving to support the movable electrode, and the arm at the inner end of the bearing terminating between said pivot pins, and a pivoted member having a bearing mounted on the pivot pin carried by the shorter post and abutting against the shorter post, and having an arm projecting toward the shorter arm of the first-mentioned pivoted member, and a link pivoted at its ends to the last-mentioned arms, substantially as and for the purpose described.

1,215,773. METHOD OF AND APPARATUS FOR REMOVING INTERIOR BURS FROM TUBES. HARRY E. BUTCHER, Cleveland, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 14, 1915. Serial No. 45,567. (Cl. 29—148.)



1. The method of removing a bur, or the like, from the interior of pipe or tubing, which consists in passing such pipe or tubing over a suitable member within the same provided with a cutting edge normally out of operative contact with the interior; and simultaneously deflecting the portion of the wall of such pipe or tubing to be operated upon into engagement with such cutting edge.

2. The method of removing a bur, or the like, from the interior of pipe or tubing, which consists in passing such pipe or tubing over a suitable member within the same provided with a cutting edge normally out of operative contact with the interior; simultaneously deflecting the portion of the wall of such pipe or tubing to be operated upon into engagement with such cutting edge; and thereupon restoring such wall-portion to its normal position.

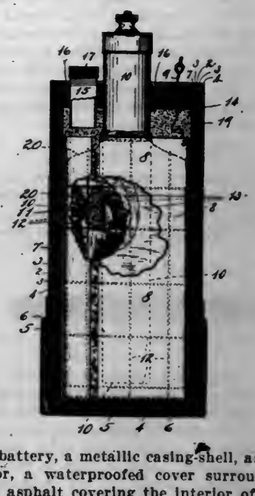
3. The method of removing a bur, or the like, from the interior of pipe or tubing, which consists in passing such pipe or tubing over a suitable member within the same provided with a cutting edge normally out of operative contact with the interior; and simultaneously pressing inwardly upon such pipe or tubing from opposite sides in a plane approximately co-incident with such cutting edge so as to deflect the portion of its wall to be operated upon into engagement with such cutting edge.

4. The method of removing a bur, or the like, from the interior of pipe or tubing, which consists in passing such pipe or tubing over a suitable member within the same provided with a cutting edge normally out of operative contact with the interior; simultaneously pressing inwardly upon such pipe or tubing from opposite sides in a plane approximately co-incident with such cutting edge so as to deflect the portion of its wall to be operated upon into engagement with such cutting edge; and thereafter pressing inwardly upon such pipe or tubing from opposite sides at right angles to such first-mentioned sides, so as to restore the pipe or tubing to its normal cross-section.

5. In apparatus of the class described, the combination with a suitable member adapted to be inserted and held within a section of pipe or tubing and provided with a cutting edge normally out of operative contact with the interior thereof; of means adapted to deflect the portion of the wall of such pipe or tubing to be operated on into engagement with such cutting edge.

[Claims 6 to 8 not printed in the Gazette.]

1,215,774. PRIMARY BATTERY. EDWIN F. CALLENDER, Galesburg, Ill., assignor of one-half to L. Belle Callender, Galesburg, Ill. Filed May 29, 1916. Serial No. 100,546. (Cl. 204—53.)



1. In a battery, a metallic casing-shell, asphalt covering its exterior, a waterproofed cover surrounding said asphalt, and asphalt covering the interior of the shell.

2. In a battery, a metallic casing-shell, asphalt covering its interior, and a pitch lining covering the asphalt.

3. In a battery, a metallic casing-shell, asphalt covering its interior and exterior, and a pitch lining for the interior asphalt.

4. In a battery, a metallic casing-shell, asphalt covering its interior and exterior, a pitch lining for the interior asphalt, and a paraffined cover for the exterior asphalt.

1,215,775. METHOD OF MAKING CYLINDER-RINGS. JAMES CAMPBELL, St. Louis, Mo., assignor to St. Louis Felling Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed July 13, 1916. Serial No. 109,156. (Cl. 29—148.)



1. The method of manufacturing split rings which consists in securing one end of a metal strip to a round mandrel, winding the strip spirally around the mandrel, securing its opposite end to prevent unwinding of the strip, forming the periphery of the spirally wound strip to the desired shape and cutting the coiled strip on a line parallel to the axis, thereby separating the same into a plurality of split rings.

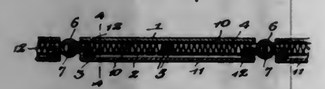
2. The method of manufacturing split rings which consists in securing one end of a metal strip to a round mandrel, winding the strip spirally around the mandrel, with the convolutions in close contact, one with another, securing the opposite end to the mandrel, grinding the periphery of the coiled strip to the desired size, and sub-

sequently cutting the coils to separate them into a plurality of rings.

3. The method of manufacturing split rings which consists in winding a strip of metal spirally upon a round mandrel, securing the opposite ends to prevent unwinding of the strip, grinding the periphery of the strip to the desired size, and then transversely saw-cutting the wound convolutions to separate the same into a plurality of split rings.

4. The method of manufacturing expansible split packing rings which consists in securing one end of a metal strip of rectangular cross section to a round mandrel, winding the strip under tension spirally around the mandrel with the convolutions in close contact, one with another, securing the opposite end to the mandrel to prevent uncoiling of the strip, mounting the mandrel eccentrically and grinding the periphery of the coiled strip to the desired size, and subsequently saw-cutting the wound convolutions to separate the same into a plurality of expansible split packing rings.

1,215,776. BRACELET. JOSEPH CHABOT, North Attleboro, Mass., assignor to Geo. L. Paine Company, North Attleboro, Mass., a Corporation of Rhode Island. Filed Aug. 10, 1916. Serial No. 114,281. (Cl. 59—79.)



1. A bracelet composed of sections pivotally connected and each comprising an open ended box having its inner wall provided with an opening and end notches, a multi-part connecting link slidably disposed in each end of the box and consisting of pivotally connected parts having spring-receiving openings, coiled springs in the part openings, and a back plate closing the box opening and having end tongues engaging in the end notches and extending into the spring-receiving openings of the parts to lock the latter and springs in the box.

2. A bracelet comprising a plurality of sections of box formation having open ends, multi-part connecting links arranged end to end in the boxes, springs exerting an inward force on the links, and a lock plate constituting a backing for each box and provided with end tongues bent over the open ends of the latter to form a securement for the links and springs.

3. A bracelet comprising a series of pivotally connected tubular sections, separable link connections slidable in the opposite ends of each, springs seating against the inner ends of the links, and a back plate for each section having terminal interlocks extending into the open ends of the latter for engaging with the opposite ends of the springs and for guiding the links.

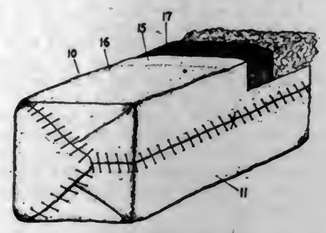
4. A bracelet comprising a series of tubular sections, pivotal multi-part connecting links joining adjacent sections and having a part slidable in the open end of each, a spring arranged in each section for bearing inwardly on the link parts, and a back plate having locking portions to serve as a bearing for the springs of each section and as a lock for the links.

5. A bracelet comprising a series of open sided, open ended sections, pivotal multi-part connecting links having spring seating parts slidable in the open ends of the sections, springs arranged in the seats of the links, and back plates for the sections having portions constituting stops for the springs and links.

[Claim 6 not printed in the Gazette.]

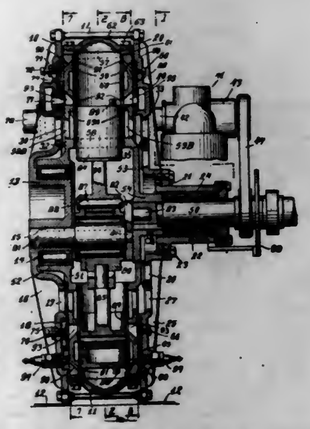
1,215,777. WRAPPING AND BALING FABRIC. MEYER G. COHEN, New York, N. Y. Filed Oct. 28, 1914, Serial No. 868,945. Renewed Dec. 27, 1916. Serial No. 139,183. (Cl. 154—50.)

A baling and wrapping fabric composed of a relatively strong, flexible paper having a coating of varnish on its outer surface to render it water-proof, and a relatively thin cloth pasted to its inner surface, whereby it is water-



proof and is also susceptible of being sewed and used like a coarse cloth.

1,215,778. ROTARY-CYLINDER INTERNAL-COMBUSTION ENGINE. HENRY W. N. COLE, Brooklyn, N. Y. Filed Feb. 11, 1916. Serial No. 77,578. (Cl. 123—44.)



1. In a multi-cylinder rotary internal combustion engine, a rotor frame adapted to hold a radial series of cylinders, a plurality of cylinders arranged to rotate with the frame about a central axis, a shaft eccentrically disposed in relation to said axis, pistons in the cylinders connected with the shaft, the periphery of the rotor frame being split, and resilient means for pressing the divided periphery of the rotor frame together and against the cylinders.

2. In a multi-cylinder rotary internal combustion engine, a rotor frame adapted to hold a radial series of cylinders, said frame having a periphery and an inner ring both provided with a plurality of radial circular holes, a plurality of tubular cylinders therein arranged to rotate with the frame about a central axis, a shaft eccentrically disposed in relation to said axis, pistons in the cylinders connected with the shaft, said rotor frame periphery being split, resilient means for pressing the divided periphery of the rotor frame together and against the cylinders, and cylinder heads affixed to the periphery or the rotor frame on both sides thereof.

3. In a multi-cylinder rotary internal combustion engine, a casing comprising two connected side plates, a rotor frame adapted to hold a radial series of cylinders, a plurality of cylinders in said frame arranged to rotate with the frame about a central axis, a shaft eccentrically disposed in relation to said axis, pistons in the cylinders connected with the shaft, said rotor frame and cylinders being provided with registering ports, and port rings in said side plates at the sides of the rotor frame, said port

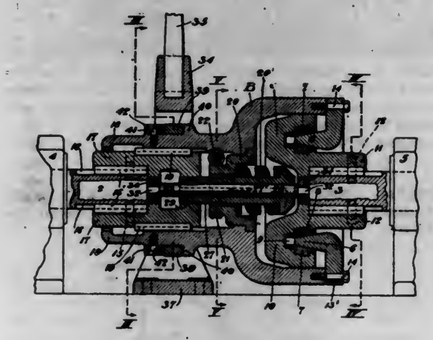
rings being provided with ports adapted to coöperate with the ports in the rotor frame.

4. In a multi-cylinder rotary internal combustion engine, a casing comprising two connected side plates, a rotor frame adapted to hold a radial series of cylinders, a plurality of cylinders in said frame arranged to rotate with the frame about a central axis, a shaft eccentrically disposed in relation to said axis, pistons in the cylinders connected with the shaft, said rotor frame and cylinders being provided with registering ports, a port ring affixed to one of the side plates, another port ring supported by the other side plate, and means for pressing said other port ring against the rotor frame and thereby pressing the rotor frame against the first mentioned port ring, said port rings being provided with ports adapted to coöperate with the ports in the rotor frame.

5. In a multi-cylinder rotary internal combustion engine, a casing comprising two connected side plates, a flat-sided rotor frame adapted to hold a radial series of cylinders, a plurality of tubular cylinders in said frame arranged to rotate with the frame about a central axis, a shaft eccentrically disposed in relation to said axis, pistons in the cylinders connected with the shaft, said rotor frame and cylinders being provided with registering ports, a flat-faced port ring affixed to one of the side plates, another flat-faced port ring supported by the other side plate, and resilient springs for pressing said other port ring against the rotor frame and thereby pressing the rotor frame against the first mentioned port ring, said port rings being provided with ports adapted to coöperate with the ports in the rotor frame.

[Claims 6 to 14 not printed in the Gazette.]

1,215,779. CLUTCH. WILLIAM F. CONKLIN, Tarentum, Pa. Filed Mar. 22, 1916. Serial No. 85,865. (Cl. 192—8.)



1. Clutch mechanism comprising interfitting male and female friction members, a driving member in splined engagement with one of said members, a centrally arranged tightening and loosening stem in one of said members having threaded engagement with said driving member, a cushioning spring engaging said stem at one end, a rotatable barrel in said member providing a bearing for the other end of the spring and in splined engagement with said stem, and means for actuating said barrel.

2. Clutch mechanism comprising interfitting male and female friction members, a driving member in splined engagement with one of said members, a centrally arranged tightening and loosening stem in one of said members having threaded engagement with said driving member, a cushioning spring engaging said stem at one end, a rotatable barrel in said member providing a bearing for the other end of the spring and in splined engagement with said stem, means for actuating said barrel, and means for thrusting said clutch member longitudinally for engagement or disengagement with its co-acting member.

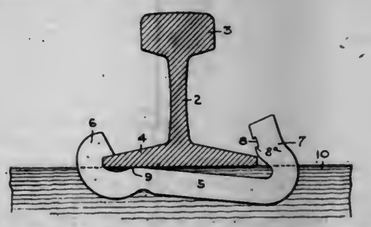
3. Clutch mechanism comprising interfitting male and female friction members, a driving member operatively engaging one of said friction members, a centrally arranged tightening and loosening stem in one of said members having threaded engagement with said driving member, a cushioning spring engaging said stem at one end, a rotatable barrel in said member providing a bearing for the other end of the spring and in splined engagement with said stem, and a shifting yoke and lever adapted to shift said one of said friction members into and out of operative engagement with its co-acting member.

4. In a clutch, a male and a female friction member in operable relation, means for moving one of said members toward and from the other member, means for maintaining driving engagement between said member and a driving shaft, and means within said movable member for providing variable resistance between said member and its co-acting member, provided with an adjusting device extending laterally through to the exterior of one of said friction members.

5. In a clutch, a male and a female friction member in operable relation, means for moving one of said members toward and from the other member, means for maintaining driving engagement between said member and a driving shaft, means within said movable member for providing resilient resistance between said member and its co-acting member, and means for adjusting said resistance provided with an actuating element extending through to the exterior of the movable member.

[Claims 6 and 7 not printed in the Gazette.]

1,215,780. RAIL-ANCHOR. THOMAS D. DALLMEYER, Pittsburgh, Pa. Filed Dec. 28, 1914. Serial No. 879,285. (Cl. 238—4.)



1. A rail-anchor formed of a single piece of spring-metal having inwardly extending ends, one end fitting over the flange at one side of the rail, and the opposite end having a notch normally above the flange and adapted to be forced downwardly to bring said notch into engagement with the flange of the rail.

2. A rail-anchor formed of a single piece of spring-metal having inwardly extending ends, one end fitting over the adjacent flange, the body-portion having a bulge engaging the bottom of the rail adjacent to said end-portion, and the opposite end having a notch normally above its adjacent flange and adapted to be forced downwardly to bring said notch into engagement with the flange of the rail on that side.

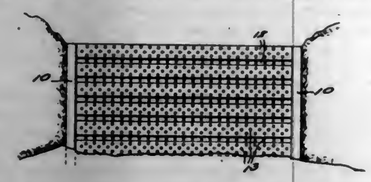
3. A rail anchor formed of a single piece of spring metal having inwardly-extending ends, one end fitting over the flange at one side of the rail, and the opposite end having a shoulder normally above the flange and adapted to be forced downwardly to bring said shoulder into engagement with the lower face of the rail flange.

1,215,781. FISH-STOP. FRANK H. DAVIS, Eugene, Oreg. Filed Aug. 29, 1916. Serial No. 117,557. (Cl. 61—5.)

1. A ditch guard comprising posts provided with set or vertically extending grooves, baffle plates positioned in one set of grooves in superposed relation and provided with openings forming passageways, baffle plates positioned in the second set of grooves in superposed relation and in staggered relation to the first set of baffle plates and provided with openings forming passageways, and legs extending from each baffle plate to engage the next

lower plate and hold the plates of each set in spaced relation.

2. A ditch guard comprising sets of baffle plates, the plates of each set being positioned in superposed relation



and in staggered relation to the plates of the second set, said plates being provided with openings forming passageways and the plates of each set being provided with depending legs engaging the next lower plates to hold the plates in spaced relation.

1,215,782. AUTO-TIRE SIGNAL PRESSURE-GAGE. GEORGE FREDERICK DIAMOND and EDWARD T. RICHARDS, Kingston, N. Y. Filed Aug. 24, 1915. Serial No. 47,111. (Cl. 137—53.)



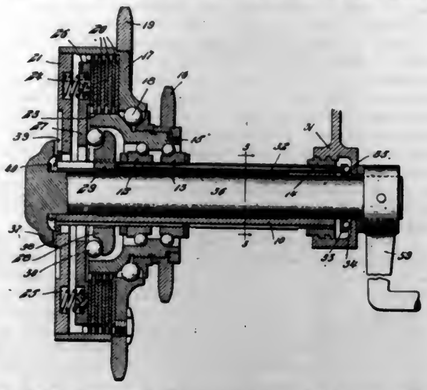
1. An automobile tire signal pressure gage comprising a pipe for attachment to the valve casing of a tire and provided with a valve therein, a branching pipe with an apertured partition therein, a pin valve upon said partition, an apertured valve piston within the branching pipe, a screw fitted in a threaded aperture in one end of the branching pipe, a disk fitted to the end of the screw and a spring interposed between the disk and piston valve, a gage having an angled end which is apertured and in which said screw has swiveled connection, the wall of the branching pipe provided with a guide aperture in which said gage has an adjustable movement.

2. A safety valve comprising a pipe with an apertured partition therein, a pin valve upon said partition, an apertured valve piston within said pipe, a screw fitted in a threaded aperture in one end of the pipe, a disk fitted to the end of the screw and a spring interposed between the disk and piston valve, a gage having an angled end which is apertured and in which said screw has swiveled connection, the wall of the pipe provided with a guide aperture in which said gage has an adjustable movement.

1,215,783. MOTOR-CYCLE. FREDERICK S. ELLETT, Elmira, N. Y. Filed Oct. 25, 1913. Serial No. 797,234. (Cl. 123—185.)

1. In a motor-cycle, the combination of a tubular shaft, independently rotatable driving and driven wheels, means adapted to form a driving connection between said wheels, a rotatable shaft arranged in said tubular shaft, a crank on said rotatable shaft at one end of the tubular shaft, and clutch means at the other end of the tubular shaft for operatively connecting the rotatable shaft to one of said wheels.

2. In a motor-cycle, the combination of a shaft, independently rotatable driving and driven sprocket wheels carried thereby, a friction clutch for coupling said wheels, a manually operable shaft, and clutch means for operatively connecting the latter shaft and one of said wheels.



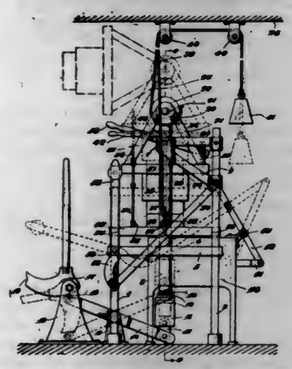
3. In a motor-cycle, the combination of a tubular shaft, independently rotatable driving and driven wheels carried thereby, a friction clutch for coupling said wheels, a manually operable shaft arranged in said tubular shaft, and clutch means for operatively connecting the latter shaft with one of said wheels.

4. In a motor-cycle, the combination of a shaft, independently rotatable driving and driven wheels carried thereby, clutch means for coupling said wheels, a manually operable crank shaft coaxial with the first-mentioned shaft, and automatically uncoupling clutch means for coupling said crank shaft and one of said wheels.

5. In a motor-cycle, the combination of a shaft having a plurality of channels extending longitudinally thereof, independently rotatable driving and driven wheels carried thereby at one end, clutch means for coupling said wheels, an actuating member for the clutch means arranged at the opposite end of said shaft from said wheels, and rods arranged in said channels and operatively connecting said member with the clutch means.

[Claims 6 to 9 not printed in the Gazette.]

1,215,784. DIE-CASTING MACHINE. JOHN T. ENLEY, Philadelphia, Pa. Filed Mar. 22, 1916. Serial No. 85,769. (Cl. 22—57.)



1. In a die casting machine, the combination with a mold comprising two members, means for raising said members while they are together, and means for separating the molds after they have been raised, substantially as described.

2. In a die casting machine, the combination with a two member mold, means for engagement with and operative to fill the mold, means for raising said mold members out of engagement with said filling means, means for moving one mold member vertically relative to the other, and means for swinging one of said mold members laterally when the mold members are separated, substantially as described.

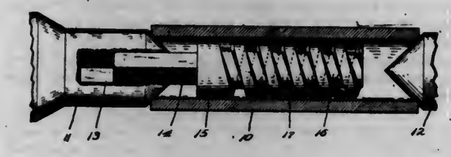
3. In a die casting machine, the combination with a mold comprising two members, means for raising said members while they are together, means for separating the molds after they have been raised, and means for moving one of the mold members laterally relative to the other, substantially as described.

4. In a die casting machine, the combination with a frame, of upper and lower platens, mold members supported by the respective platens, means for simultaneously moving both platens, and means for separating and afterward swinging the upper platen laterally relative to the frame and to the other platen, substantially as described.

5. In a die casting machine, the combination with a frame, a lower platen guided in its movement on the frame, an upper platen, mold members carried by the respective platens, devices normally locking the mold members against independent movement, means for elevating the platens, and means for swinging the upper platen laterally when disconnected from the lower platen, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,215,785. CHUCKING DEVICE FOR ROLLERS. LENNIOUS P. EVERROAD, Columbus, Ind., assignor to Reeves Pulley Company, Columbus, Ind., a Corporation of Indiana. Filed June 24, 1916. Serial No. 105,611. (Cl. 82—40.)



1. In combination, a live center, a dead center, a driving member drivingly connected with said live center and axially slidable relatively thereto, said driving member having thereon a tapered screw thread, and a wire helix of normally uniform size mounted in said screw thread for engaging the inner surface of a tubular roller mounted on said live and dead centers.

2. In combination, a live center, a dead center, a driving member drivingly connected with said live center, said driving member having thereon a tapered screw thread, and a wire helix of normally uniform size mounted in said screw thread for engaging the inner surface of a tubular roller mounted on said live and dead centers.

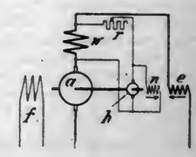
3. In combination, a live center, a dead center, a driving member drivingly connected with said live center and axially slidable relatively thereto, said driving member having thereon a tapered screw thread and a wire helix mounted in said screw thread for engaging the inner surface of a tubular roller mounted on said live and dead centers.

4. In combination, a live center, a dead center, a driving member drivingly connected with said live center, said driving member having thereon a tapered screw thread, and a wire helix mounted in said screw thread for engaging the inner surface of a tubular roller mounted on said live and dead centers.

5. In combination, a live center, a dead center, said live center having a non-circular hole in its end, a driving member having a shank slidably fitting in the hole in said live center and being provided with an exterior tapered screw thread, and a wire helix of normally uniform size mounted in said tapered thread for engaging the inner surface of a tubular roller mounted on said live and dead centers.

[Claims 6 to 8 not printed in the Gazette.]

1,215,786. MEANS FOR PREVENTING SPARKING IN DIRECT-CURRENT MACHINES. ALOIS FAHRMBACHER, Charlottenburg, Germany, assignor to Siemens-Schuckert Werke, G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Oct. 22, 1912. Serial No. 727,131. (Cl. 171—228.)

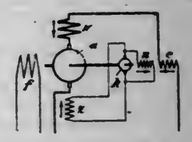


1. In a direct current dynamo electric machine of the character described, the combination of a main dynamo having a commutating winding; an auxiliary dynamo whose potential varies proportionately to the speed of the main dynamo for counteracting said commutating winding at increasing speed of said main dynamo; and voltage varying means for more slowly increasing the voltage of said auxiliary dynamo at relatively high speed and more rapidly increasing the same at relatively low speed, both as a predetermined function of the speed of said auxiliary dynamo in general.

2. In a direct current dynamo electric machine of the character described, the combination of a main dynamo having an armature and a commutating winding; an auxiliary dynamo whose potential varies proportionately to the speed of the main dynamo and connected across said commutating winding for counteracting the same; a main field winding on said auxiliary dynamo energized in dependence on the current generated by said armature; and a self-exciting winding on said auxiliary dynamo connected to oppose the action of said main field winding.

3. In a direct current dynamo electric machine of the character described, the combination of a main dynamo having a commutating winding; an auxiliary dynamo geared to said main dynamo; a main field-winding on said auxiliary dynamo which is connected to be energized in dependence on the current generated by the armature of said main dynamo; a self-exciting winding on said auxiliary dynamo which is connected to oppose the action of the main field-winding thereof; and connections between said auxiliary and said main dynamo for opposing the action of said commutating winding at increasing speed of said main and auxiliary dynamo.

1,215,787. MEANS FOR PREVENTING SPARKING IN DIRECT-CURRENT MACHINES. ALOIS FAHRMBACHER, Berlin-Charlottenburg, Germany, assignor to Siemens Schuckertwerke G. M. B. H., Siemensstadt, near Berlin, Germany, a Corporation of Germany. Original application filed Oct. 22, 1912, Serial No. 727,131. Divided and this application filed Jan. 21, 1915. Serial No. 3,527. (Cl. 171—228.)



1. In a direct-current dynamo electric machine of the character described, the combination of a main dynamo having a commutating winding; an additional winding for counteracting said commutating winding; an auxiliary dynamo coupled with said main dynamo for supplying current to said additional winding; and means for varying the voltage of said auxiliary dynamo in a predetermined manner as a non-linear function of the speed.

2. In a direct-current dynamo electric machine of the character described, the combination of a main dynamo having a commutating winding; an additional winding for counteracting said commutating winding; an auxiliary

dynamo coupled with said main dynamo for supplying current to said additional winding; and means for changing the voltage of said auxiliary dynamo in dependence of its speed more rapidly at relatively low speed and less rapidly at relatively high speed.

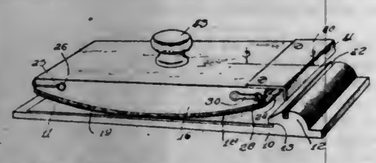
3. In a direct-current dynamo electric machine of the character described, the combination of a main dynamo having a commutating winding; an additional winding for counteracting said commutating winding; an auxiliary dynamo coupled with said main dynamo for supplying current to said additional winding; and means for varying the voltage of said auxiliary dynamo so as to more slowly increase at relatively high speed and so as to more rapidly increase at relatively low speed.

4. In a direct current dynamo electric machine of the character described, the combination of a main dynamo having a commutating winding; an auxiliary dynamo geared to said main dynamo; an additional winding mounted to coöperate with said commutating winding; connections between said auxiliary dynamo and said additional winding for counteracting the effect of said commutating winding with increased speed of said main and said auxiliary dynamo; a main field-winding for said auxiliary dynamo connected to be energized in dependence on the current generated by the armature of said main dynamo; and a further winding on said auxiliary dynamo which is excited from the armature thereof and mounted to oppose the action of the main field-winding thereof.

5. In a direct current dynamo electric machine of the character described, the combination of a main dynamo having a commutating winding; an auxiliary dynamo geared to said main dynamo; an additional winding mounted to coöperate with said commutating winding; connections between said auxiliary dynamo and said additional winding for counteracting the effect of said commutating winding with increasing speed of said main and said auxiliary dynamo; a main field-winding for said auxiliary dynamo connected to be energized in dependence on the current generated by the armature of said main dynamo; and a shunt winding on said auxiliary dynamo connected to oppose the action of the main field-winding thereof.

[Claim 6 not printed in the Gazette.]

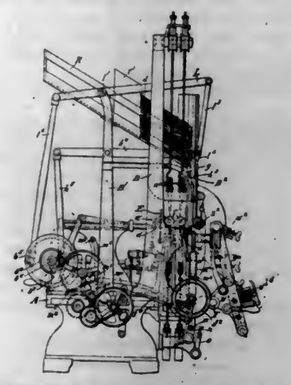
1,215,788. HAND-STAMP. ELISHA N. FALES, Buffalo, N. Y. Filed Feb. 2, 1916. Serial No. 75,632. (Cl. 101—132.)



In a hand stamp, the combination with a stationary supporting member adapted to form a support for a sheet to be printed upon and having a guide for such sheet, of a movable member comprising a solid part having thereon an inking pad, a stencil sheet and means for securing such stencil sheet to such inking pad; and engaging parts on such stationary supporting member and such movable member, such engaging parts being adapted to guide such movable member into contact with the sheet to be printed upon and to become disengaged in the further movement of such movable member.

1,215,789. WARP-DRAWING MACHINE AND MECHANISM FOR MANIPULATING DETACHED HEDDLES THEREIN. MILLARD F. FIELD, Winthrop, and EDGAR F. HATHAWAY and CHARLES D. LANNING, Boston, Mass., assignors to American Warp-Drawing Machine Company, Boston, Mass., a Corporation of Maine. Filed Feb. 10, 1904. Serial No. 192,921. (Cl. 139—94.)

1. In a machine for drawing warp-threads into detached flat heddles, a drawing-in device; a hopper to support the heddles in a compact mass, each face to face with the adjacent one, mechanism to separate the heddles singly therefrom and successively place them with the eye in the path of reciprocation of the drawing-in device, and means to remove the heddles from such position and place them in symmetrical sequence in one or more series after a warp-thread has been drawn into the eye of each.



2. In a machine for drawing warp-threads through the eyes are openings in separate heddles for use in looms, a drawing-in device; a reservoir to hold the heddles in compact series, means to feed them across the reservoir, reciprocating mechanism to engage and successively remove the heddles from the end of the series and transfer each to a position with its eye in the path of reciprocation of the drawing-in device, and means to remove the heddles successively from such position and deposit them in sequence with their respective eyes in linear coincidence.

3. In a warp drawing machine provided with a drawing-in device and means to support a cotton harness, a warp and a reed, mechanism to separate the harness eyes, reed dents and warp threads and position them within the path of reciprocation of the drawing-in device, a reservoir to hold detached heddles, such as drop bars, in a compact series and means to separate the heddles singly from the series and to deposit them progressively in position for the successive drawing-in operations corresponding to the positions of the successive harness eyes through which warps are to be drawn.

4. In a warp-drawing machine, the combination of a warp-drawing-in device, warp-feeding devices, and mechanism for controlling and manipulating detached drop-heddles, all supported upon a traversing carriage, a loom-reed, loom-harnesses and a warp-holding frame, and mechanism to move one or more of the latter three elements independently of the traversing carriage, and in a direction parallel with the movement thereof.

5. In a warp-drawing machine, the combination of a warp-drawing-in device, warp-feeding devices and mechanism for controlling and manipulating detached drop-heddles, all supported upon a traversing carriage, two or more loom-harnesses and a warp-holding frame, and mechanism to move the harnesses and warp-frame, or one or more of them independently of the traversing carriage and in a direction parallel with the movement thereof.

[Claims 6 to 88 not printed in the Gazette.]

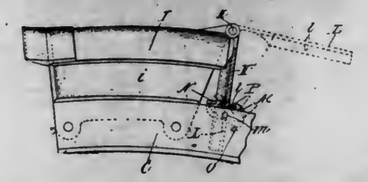
1,215,790. SPRING CHAIR-SEAT. WILLIAM B. FOSTER, Utica, N. Y., assignor to Foster Brothers Manufacturing Company, Utica, N. Y., a Corporation. Filed July 18, 1916. Serial No. 109,881. (Cl. 155—25.)

1. In a spring chair seat, the combination of a rigid chair-seat frame having an opening therein, flat metallic strips arranged in pairs with their outer ends secured to opposite sides of the frame and with their inner ends overlapping one another, an arm on each strip slanting downwardly and inwardly with their inward ends held spaced from the line of the said strips and with the inward ends of the arms of each pair of strips spaced from each other and a coiled spring connected at its opposite ends to the inner ends of said arms and tensioned to yieldingly hold said strips in line.



2. In a spring chair seat, the combination of a rigid chair-seat frame having an opening therein, flat metallic strips arranged in pairs with their outer ends secured to opposite sides of the frame and with their inner ends overlapping one another, an arm on each strip slanting downwardly and inwardly with their inward ends held spaced from their over-hanging strips and with the inward ends of the arms of each pair of strips spaced from each other and a coiled spring connected at its opposite ends to the inner ends of said arms and tensioned to yieldingly hold said strips in line.

1,215,791. WHEEL-EXCAVATOR. JAMES C. FRENCH, Kenosha, Wis., assignor to Frederick C. Austin, Chicago, Ill. Filed Mar. 22, 1915. Serial No. 16,304. (Cl. 37—17.)



1. An excavator comprising a digging bucket, instrumentalities for operating said bucket, and means for causing the bucket to dump its load, said bucket having a hinged gate at the rear end thereof, an element for holding the gate closed, and stationary means for operating said element to unlock the gate, said instrumentalities including a rotating ring, said element being pivoted on said ring, said gate being formed with a slot to receive said ring, and said slot having its inner end provided with means to interlock with said element.

2. An excavator comprising a digging bucket, instrumentalities for operating said bucket, and means for causing the bucket to dump its load, said bucket having a hinged gate at the rear end thereof, an element for holding the gate closed, and stationary means for operating said element to unlock the gate, said element being in the form of a pivoted catch having a lug for engaging said means, and said instrumentalities including a ring having walls spaced apart to accommodate said catch between them.

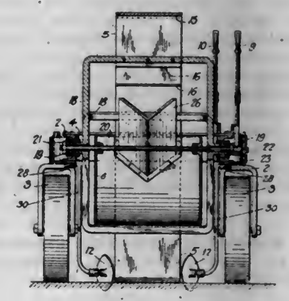
3. An excavator comprising a digging bucket, instrumentalities for operating said bucket, and means for causing the bucket to dump its load, said bucket having a hinged gate at the rear end thereof, an element for holding the gate closed, forming a stop to limit the closing movement of the gate, and stationary means for operating said element to unlock the gate, said element being pivoted between its ends to tilt about a horizontal axis, both ends of said element being shaped to engage said gate, and the hinge for said gate being at the heel of the bucket.

4. An excavator comprising a digging bucket, instrumentalities for operating said bucket, and means for causing the bucket to dump its load, said bucket having a hinged gate at the rear end thereof, an element for holding the gate closed, and stationary means for operating said element to unlock the gate, said bucket having a central vertical wall, and said element being pivoted directly behind said wall.

5. An excavator comprising a digging bucket, instrumentalities for operating said bucket, and means for causing the bucket to dump its load, said bucket having a hinged gate at the rear end thereof, an element for holding the gate closed, and stationary means for operating said element to unlock the gate, a pair of cleaners disposed in position to pass through the bucket, and said element being pivoted in position to pass between said cleaners.

[Claims 6 and 7 not printed in the Gazette.]

1,215,792. SELF-LOADING WHEELER. DANIEL C. FUNCHEON, Denver, and ALVA V. NUTT, Edgewater, Colo. Filed Apr. 14, 1915. Serial No. 21,400. (Cl. 37—34.)



1. In a self-loading wheeler, the combination with a reversible earth-receptacle, of an earth-lifting ground wheel encircling the same, and deflecting means for diverting the contents of the receptacle during its reversal to points of discharge at the ends of the same.

2. In a self-loading vehicle, a frame, an earth lifting ground-wheel having hollow trunnions in bearings on the frame, an earth-receptacle inside said wheel having trunnions within the first-mentioned trunnions, and a lever connected with a trunnion of the receptacle, for reversing its position.

3. In a self-loading vehicle, a frame, a ground wheel having inwardly extending, earth-lifting flights, yokes radiating from axially alined trunnions, connected with said flights, the frame having bearings in which said trunnions are fitted, and a receptacle mounted on the frame within the wheel.

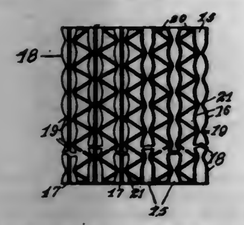
4. In a self-loading vehicle, a frame, an earth-receptacle at the rear end thereof, an earth lifting wheel rotatable on the frame and encircling the receptacle, connected frames movably suspended from the frame at opposite sides of the wheel, excavating devices on said frames, and means for the adjustment of said frames by swinging them about their points of suspension.

5. In a self-loading vehicle, an earth-lifting ground wheel, an earth receptacle mounted within said wheel for movement about an axis coincident with that of the wheel, and deflecting means for diverting the contents of the receptacle during pivotal movement of the same, to a point of discharge outside the rim of the wheel.

1,215,793. RADIATOR. JOHN B. GABRIELSON, Jamestown, N. Y. Filed Sept. 20, 1915. Serial No. 51,607. (Cl. 257—130.)

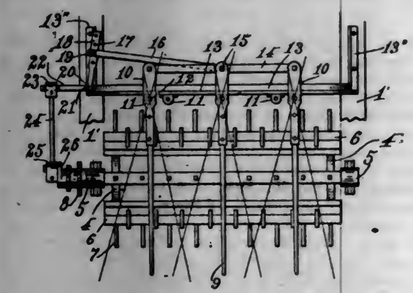
1. In a radiator, a series of connected pairs of plates, each plate being formed with alternating swells and depressions, the respective swells and depressions of the plates of each pair of plates being located opposite to each other and conjointly forming continuous water passages, the depressions on the exterior of each pair of plates being located opposite and in spaced relation to the swells

on the exteriors of the next adjacent plates, and zig-zag plates in the space between adjacent pairs of plates, the terminals of each of the inclined parts of which zig-zag plates seat in the depressions of the adjacent pairs of plates.



2. In a radiator, a series of pairs of plates, each plate being formed with alternating swells and grooves to provide water passages, the grooves of the plates being arranged opposite the swells of the adjacent pairs of plates, and spacing plates extending from groove to groove of adjacent plates whereby to form a series of triangular air passages which alternately face in opposite directions and have open bases each of which latter straddles a single one of the convex faces of the swells of the adjacent pairs of plates, said air passages extending from the convex outer face of one plate of a pair of plates to the groove of the outer face of the adjacent plate of the adjacent pair of plates.

1,215,794. MANURE-DISTRIBUTER. STEPHEN H. GARST, Moline, Ill. Filed Aug. 3, 1914. Serial No. 854,663. (Cl. 111—40.)

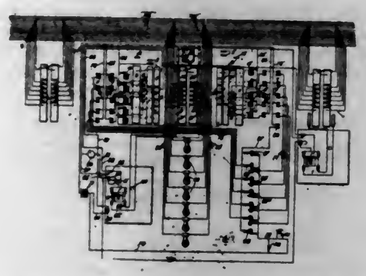


1. In a manure spreader, the combination with a distributing cylinder, and a wagon body at the rear end of which said cylinder is mounted, of a beater support mounted on said wagon body parallel with said cylinder, a series of broad-faced beaters lying diagonally across the upper rearward face of said cylinder, said beaters being pivotally mounted in such position on said support and widely spaced one from the other, a common connection between said beaters whereby they are movable simultaneously and laterally, and means for actuating said beaters simultaneously and laterally during which the manure is spread in a swath substantially wider than the width of the wagon body.

2. In a manure spreader, the combination with a distributing cylinder, and a wagon body in the rear end of which said cylinder is mounted, of a series of broad-faced beaters mounted diagonally across the upper rearward face of said cylinder and widely spaced one from the other, a supporting bar mounted upon said wagon body above said cylinder and in the rear thereof, said beaters having uniformly pivotal connections with said bar, a reciprocating bar to which the upper forward ends of said beaters are pivoted so that said beaters may be moved in unison upon their pivots, an actuating arm by means of which said beaters are given simultaneous and lateral movements whereby the manure is spread in a swath substantially wider than the wagon body, and means interposed between said actuating arm and the axis of the cylinder whereby such movements are imparted to said beaters.

3. In a manure spreader, the combination with a wagon body, and a distributing cylinder mounted in the rear end thereof, of a series of broad-faced beaters mounted diagonally across the upper rearward face of said cylinder and widely spaced one from the other, a yoke mounted upon said wagon body above and forward of said cylinder and to which said beaters are pivoted with their ends projected forwardly of said yoke, a reciprocating bar coupling the ends of said beaters so projected forward of said yoke, an actuating arm connected to said reciprocating bar, an angular lever fulcrumed upon one end of the yoke and to one end of which said arm is connected, a crank on the axle of the distributing cylinder, a connecting rod, a universal connection between said rod and said angular lever, and a universal connection between said rod and said crank whereby said beaters are simultaneously actuated to spread the manure beyond the sides of the wagon body.

1,215,795. ELEVATOR-SIGNAL. ROBERT H. GAYLORD, Pasadena, Cal., assignor to R. H. Gaylord Company, Los Angeles, Cal., a Corporation of California. Filed Aug. 12, 1915. Serial No. 45,093. (Cl. 177—336.)



1. An elevator signaling system comprising a car signal, landing circuit closers, a car operated switch, electric circuit means controlled by said circuit closers and by the car operated switch to operate the car signal as the car approaches a landing at which the circuit closer has been operated, a telephone transmitter in the car, telephone receivers at the landings, fixed contacts connected with said receivers, a switch member operated by the aforesaid car-operated switch and coöperating with said fixed contacts and connected to the said transmitter in the car, to operate the receiver at any landing from said transmitter as the car approaches such landing.

2. An elevator signaling system comprising a car signal, landing circuit closers, a car operated switch comprising separate series of fixed contacts for up and down movement of the car, and movably mounted switch means provided with contacts to coöperate with said up contacts in the up movement of the car and with contacts to cooperate with said down contacts in the down movement of the car, another series of fixed contacts, a movably mounted switch member adapted for operation by the aforesaid switch means and provided with contacts to cooperate with said last named series of contacts in both the up and down movements of the car, and call receiving means at the different landings connected to said last named series of contacts to receive current from the same contacts in both up and down movements of the car.

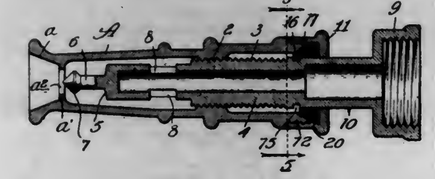
3. An elevator signaling system comprising a car signal, circuit closers for different floors, a car-operated switch comprising separate series of fixed contacts for up and down movement of the car, and a movably mounted switch means provided with contacts for coöperation with the said up contacts in the up movement of the car and with contacts for coöperating with said down contacts in the down movement of the car, electrical connections controlled by said circuit closers and by said contacts of the car operated switch to operate the car-signal as the car approaches a landing for which the circuit closer has been operated, a telephone transmitter in the car, telephone receivers at the landings, a series of fixed contacts connected to said receivers and a movably mounted switch member adapted for operation by the aforesaid switch means and provided with contacts for coöperation with the last named series of contacts in both the up and down movements of the car.

4. In an elevator signaling system, call receiving devices at the landings and a car-operated switch comprising a series of fixed contacts arranged in two rows, opposite contacts in the respective rows being respectively connected to opposite sides of the respective call receiving devices, a movably mounted switch member adapted for operation in opposite directions by the up and down movements of the elevator car, and provided with contacts for coöperation with the said series of contacts in both directions of movement, and signal transmitting means in the car connected to said contacts on said movably mounted switch member.

5. In an elevator signaling system, telephone receivers at the landings and a car-operated switch comprising a series of fixed contacts connected respectively to said receivers, a movably mounted switch member adapted for operation in opposite directions in a single path by the up and down movements of the elevator car and provided with contacts for coöperation with said series of contacts in both directions of movement, and a telephone transmitter in the car connected to said contacts on the movably mounted switch member.

[Claims 6 to 23 not printed in the Gazette.]

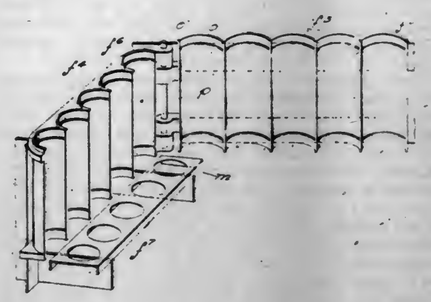
1,215,796. HOSE-NOZZLE. HENRY GIBBS, Chicago, Ill., assignor to W. D. Allen Manufacturing Company, Chicago, Ill., a Corporation. Filed Jan. 2, 1913. Serial No. 739,875. (Cl. 137—82.)



A hose nozzle, comprising a chambered body portion having interior screw threads at a distance from its inner end and exteriorly threaded at its inner end, a screw-threaded hollow spindle within said body portion, said spindle having a cylindrical portion adjacent its inner end and having an annular groove at the outer end of said cylindrical portion, a split spring ring having its ends spaced apart sufficiently to permit it to be forced laterally into said groove, said ring projecting beyond the surface of said cylindrical portion, a loose stop-collar encircling said cylindrical portion and fitting in a recess in the inner end of said body portion, a cap on said cylindrical portion of said spindle in engagement with the exterior screw-threads on said body portion, and a packing ring within said cap and clamped between the same and said stop-collar, substantially as described.

1,215,797. MULTIPLE MOLD FOR TILE-MAKING MACHINES. FRANK GUTTERIDGE, Sarnia, Ontario, Canada. Filed May 15, 1916. Serial No. 97,684. (Cl. 25—127.)

1. A mold consisting of two corresponding separable members, each containing a set of semi-cylindrically-shaped matrices, the matrices of one member registering with those of the other member, and a handle bar at each end of each of said members, in combination with a mold box consisting of two separable parts to contain the mold members, and a pallet for the mold box forming a bottom for the mold.



2. A mold consisting of two corresponding separable members, each containing a set of semi-cylindrically-shaped matrices, the matrices of one member registering with those of the other member, in combination with a mold box consisting of two separable parts to contain the mold members, each part of the mold box having arc-shaped seats for the semi-cylindrically-shaped matrices, and a pallet in the mold box forming a bottom for the mold.

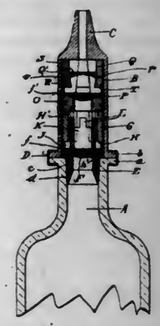
3. A mold comprising a matrix consisting of two corresponding separable members, each containing a set of semi-cylindrically-shaped matrices, the matrices of one member registering with those of the other member, a mold box consisting of two separable parts to contain the mold members therein, and a pallet in the mold box forming a bottom for the matrix.

4. A mold consisting of two corresponding and separable members, each of said members formed with a set of semi-cylindrically-shaped cavities having grooves therein concentric with the cavities, in combination with a mold box consisting of two separable parts to contain the mold members therein, and a pallet in the mold box forming a bottom for the mold.

5. A mold consisting of two corresponding and separable members, each of said members formed with a set of semi-cylindrically-shaped cavities having grooves therein concentric with the cavities, and a handle bar at each end of each of said mold members, in combination with a mold box consisting of two separable parts to contain the matrix, and a pallet in the mold box forming a bottom for the mold.

[Claims 6 to 9 not printed in the Gazette.]

1,215,798. NON-REFILLABLE BOTTLE. GEORGE E. HAGER, Brooklyn, N. Y. Filed May 8, 1916. Serial No. 96,083. (Cl. 215—68.)

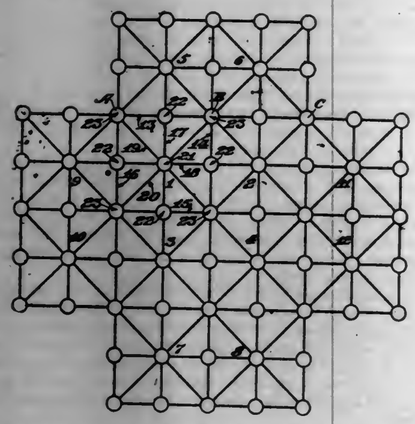


1. In combination with a bottle, a non-refillable stopper construction, comprising inner and outer hollow concave cup-shaped valve seats, the inner seat adapted to fit the neck of the bottle and the outer seat located beyond

the neck of the bottle, each seat having a rim and a shoulder within the rim, separating means arranged between said valve seats, flat disk valves each having a rim and a rounded convex portion coöperating with the valve seats, a movable hollow weight adapted to rest loosely upon the inner valve and means for protecting the outer valve.

2. In combination with a bottle, a non-refillable stopper construction, comprising inner and outer hollow concave cup-shaped valve seats, the inner seat adapted to fit the neck of the bottle and the outer seat located beyond the neck of the bottle, each seat having a rim and a shoulder within the rim, a separating cylinder mounted on the rim of the inner valve seat and having interior longitudinal ribs extending throughout a portion of the length of the cylinder, to permit free play of the valve, flat disk valves, each having a rim and a rounded convex portion coöperating with the valve seats, a hollow weight resting on the inner valve and having prongs at its outer end, and a disk cap comprising a dividing plate or body having legs at each side, said disk cap resting on the rim of the outer valve seat, and affording play for the outer valve.

1,215,799. GAME-BOARD. RICHARD A. HALLOCK, Kansas City, Mo. Filed Oct. 27, 1915. Serial No. 58,229. (Cl. 46—64.)



1. A game-board in the form of a cross, each arm of the cross comprising a multiplicity of adjoining unitary squares, each square being divided by crossed diametrical and diagonal lines, and the body of the cross comprising adjoining like unitary squares, the lines of boundary of said squares and said crossed lines connectedly constituting continuous lines the length and breadth of the board, and the intersections of the respective lines constituting the points from and to which movable pieces are played on the board along said lines.

2. A game-board in the form of a Greek cross, each arm of the cross comprising two adjoining unitary squares, each square being divided by crossed diametrical and diagonal lines, and the central field bounded by said arms comprising four adjoining like unitary squares, the lines of boundary of said squares and said crossed lines connectedly constituting continuous lines the length and breadth of the board, and the intersections of the respective lines constituting the points from and to which movable pieces are played on the board along said lines.

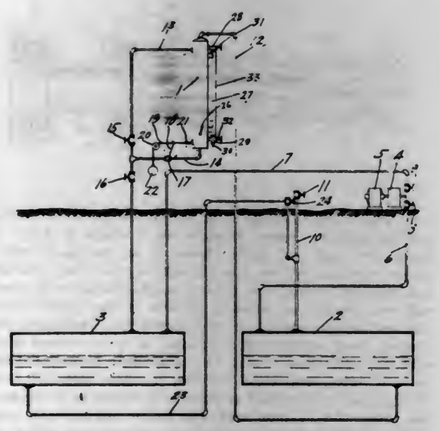
1,215,800. COMBINATION ELECTRIC LOCK-SWITCH. ROBERT O. HAMMOND, Paterson, N. J., assignor to Hammond Safety Auto Lock Co., Paterson, N. J., a Corporation of New Jersey. Filed Jan. 28, 1916. Serial No. 74,774. (Cl. 175—282.)

1. A combination electric lock switch comprising a disk having a series of contact chambers formed therein, a plurality of conducting members mounted in each of said chambers, a disk rotatably mounted in each of said contact chambers, a plurality of contact plates secured to each of said disks and having a plurality of depressions formed therein for engagement with said conducting members, one of said plates being intermediately separated to produce a dummy plate, a series of wires connected with said conducting members, a coil spring coöperating with each of said disks and housed within the integral neck of the same and means visible upon the outer face of the first mentioned disk and upon each of the series of disks as and for the purpose set forth.



2. A combination electric lock switch comprising a disk having a series of contact chambers formed therein, each of said chambers having a series of apertures formed therein for the reception of a plurality of conducting members, a disk mounted in each of said contact chambers, means carried by said disks for engagement with said contact members, a plurality of terminals secured to the first mentioned disk, a lamp contact carried by one of said terminals and in engagement with a lamp carried by the first mentioned disk, a series of wires connected with said conducting members, one of said wires engaging the intermediate portion of another of said terminals, another of said wires in engagement with said lamp and a plurality of wires engaging the outer end of each of said terminals as and for the purpose set forth.

1,215,801. OIL-DISPENSING APPARATUS. JOHN HANCOCK, Minneapolis, Minn. Filed Aug. 13, 1915. Serial No. 45,335. (Cl. 221—100.)



1. The combination with a dispensing tank having an overflow port at its upper portion and a service port at its lower portion, of means for controlling the discharge through the service port, and a sight tube associated with said tank to disclose the successive liquid levels in the tank from the overflow port to the service port.

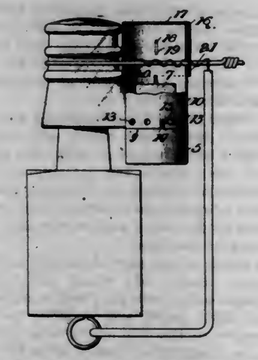
2. The combination with a dispensing tank having an overflow port at its upper portion and a service port at its lower portion, of means for controlling the discharge through the service port, a sight tube associated with said tank to disclose the successive liquid levels in the tank from the overflow port to the service port, and a graduated scale associated with the tube to indicate the amount of liquid between said ports.

3. The combination with a dispensing tank having an overflow port at its upper portion and a service port at the lower portion, of means for controlling the discharge through said service port, means for supplying the liquid to said tank, a sight tube connected to said tank and extended from a point at least as high as said overflow port to a point at least as low as said service port, a scale associated with said sight tube and graduated to indicate the amount of liquid contained in said tank between the overflow and said service ports, an overflow tank receiving from said overflow port, and means for delivering the contents of said overflow tank back into said dispensing tank at will.

4. The combination with a dispensing tank, of a supply pipe for delivering to the top thereof, an overflow pipe leading from said tank at a point near to but below the top thereof, a dispensing tube leading from said tank at a point near to the bottom thereof, a sight tube having its lower end connected to the lower portion of said tank and having its upper end connected to the upper portion of said tank at a point above said overflow pipe, a scale associated with said sight tube and having its zero mark horizontally alined with said overflow pipe, a supply tank located below said dispensing tank and from which said supply tube is extended, an overflow tank located below said dispensing tank and to which said overflow pipe is connected, a valve-equipped pipe connecting the lower portion of said overflow tank to said supply tank, and means for producing air pressure into said supply tank and overflow tank, at will.

5. The combination with a dispensing tank, of a supply pipe for delivering to the top thereof, an overflow pipe leading from said tank at a point near to but below the top thereof, a dispensing tube leading from said tank at a point near to the bottom thereof, a sight tube having its lower end connected to the lower portion of said tank and having its upper end connected to the upper portion of said tank at a point above said overflow pipe, a scale associated with said sight tube and having its zero mark horizontally alined with said overflow pipe, a drain pipe connecting the bottom of said dispensing tank to said overflow pipe, a valve in said drain pipe, and a device under strain to open said valve but having a fuse normally holding said valve closed.

1,215,802. SOLDERING APPLIANCE. JOHN N. HAVEN, Walla Walla, Wash. Filed July 5, 1916. Serial No. 107,698. (Cl. 113—111.)



1. A soldering appliance, comprising a base, a burner carried by the base, a tubular shield carried by the base and surrounding the burner, said shield having a transverse side slot above the burner, and a cap slidably mounted over the top of the shield, and having bottom edge slots extending vertically in alinement with the ends of the aforesaid side slot, and adapted to lap said ends.

2. A soldering appliance, comprising a base, a burner carried by the base, a tubular shield carried by the base and surrounding the burner, said shield having a transverse side slot above the burner, a cap slidably mounted over the top of the shield, and having bottom edge slots extending vertically in alinement with the ends of the aforesaid side slot, and adapted to lap said ends, and guiding means for the cap.

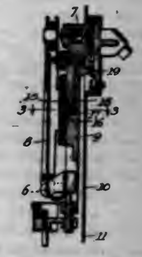
3. A soldering appliance, comprising a base, a burner carried by the base, a tubular shield carried by the base and surrounding the burner, said shield having a transverse side slot above the burner, and a cap slidably mounted over the top of the shield, and having bottom edge slots extending vertically in alinement with the ends of the aforesaid side slot, and adapted to lap said ends, the cap also having vertical guide slots, and the shield having side studs extending into said guide slots.

4. A soldering appliance, comprising a base, a burner carried by the base, a tubular shield carried by the base and surrounding the burner, said shield having a transverse side slot above the burner, and a cap slidably mounted over the top of the shield, and having bottom edge slots extending vertically in alinement with the ends of the aforesaid side slot, and adapted to lap said ends, the top of the cap having an aperture.

5. A soldering appliance comprising a tubular base open at the top and closed at the bottom, said bottom having an aperture, a tubular holder for a heating medium mounted on said bottom over the opening, a tubular shield carried by the base and rising therefrom, said shield having a work-receiving aperture, and a cap closing the top of the shield and having an aperture.

[Claim 6 not printed in the Gazette.]

1,215,803. PRESSURE-RESPONSIVE DEVICE FOR THERMOSTATS. NELS HOFSTAD, Chicago, Ill. Filed Apr. 10, 1916. Serial No. 90,074. (Cl. 236—8.)



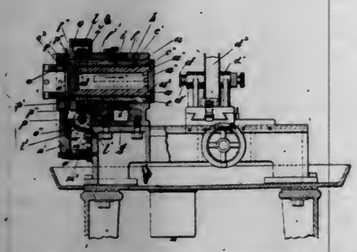
A diaphragm structure comprising a plurality of expansible diaphragms connected together at their peripheries; a connection to a terminal diaphragm; a protecting cap substantially inclosing said diaphragms and movable with the other terminal diaphragm of the series to transmit motion produced thereby, and a cushion disk of relatively soft material within said cap.

1,215,804. THREAD-MILLING MACHINE. ARTHUR PEART HOLDEN and PHILIP MORGAN, Toronto, Ontario, Canada. Filed May 29, 1915. Serial No. 31,307. (Cl. 10—154.)

1. A thread milling machine comprising a set of bearings, an axially-movable cylindrical work holder journaled therein having its outer surface threaded, threaded means engaging with the threaded surface of the work holder for causing its axial movement, a worm wheel mounted on the work holder, means for slidably securing the work holder to the worm wheel, a worm meshing with the worm wheel, journaled at one end in a rockable bearing and at the other in a movable bearing, and a pivoted support for the movable bearing displaced therefrom by the chuck when it has reached the limit of movement in an axial direction.

2. A thread milling machine comprising a set of bearings, a cylindrical work holder journaled therein having its outer surface threaded, a clamp having its inner sur-

face threaded to engage with the threaded surface of the work holder, said clamp consisting of two clamping members located between two of the bearings, and a clamping bolt and nut closing them together, a worm wheel mounted on the work holder, a key entered in a keyway in the worm wheel and work holder for slidably securing the work holder to the worm wheel, a worm meshing with the worm wheel, journaled at one end in a rockable bearing and at the other in a movable bearing, and a pivoted support for the movable bearing displaced therefrom by the chuck when it has reached its limit of movement in an axial direction.



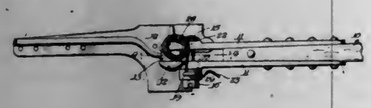
3. A thread milling machine comprising an axially-movable hollow rotatable work holder having an axial bore tapering toward one end, clamping means within the bore to hold the work therein, a gear wheel to which the work holder is splined so that it is rotated by the worm wheel, but is free to move axially through it, the outer surface of the work holder having a feed thread thereon, and means engaging with the feed thread to cause the axial movement of the work holder during its rotation.

4. A thread milling machine comprising a hollow rotatable work holder having an axial bore tapering toward one end, a clamping nut adjustable in the other end of said bore, coöperating with the tapering end to correctly position and securely hold the work within said holder, a bearing in which the work is journaled and through which it is axially movable, a gear wheel splined to the work holder so that as it is rotated the work holder will move axially through it, a feed thread on the external surface of the work holder, and means engaging with the feed thread to cause the axial movement of the work holder as it rotates.

5. A thread milling machine comprising an axially-movable hollow rotatable work holder having an axial bore, clamping means to hold the work therein, a worm wheel splined to the work holder so that the work holder is rotated by it and is free to move axially through it, a worm meshing with the worm wheel, a movable bearing for the worm, and a pivoted support for the movable bearing, displaced therefrom by the work holder when it has reached the limit of movement in an axial direction.

[Claims 6 to 14 not printed in the Gazette.]

1,215,805. PITMAN-JOINT FOR MOWING-MACHINES. HARVEY L. HOPKINS, Chicago, Ill., assignor to John Howard McElroy, Chicago, Ill. Filed Apr. 21, 1913, Serial No. 762,496. Renewed July 12, 1916. Serial No. 108,959. (Cl. 74—17.)

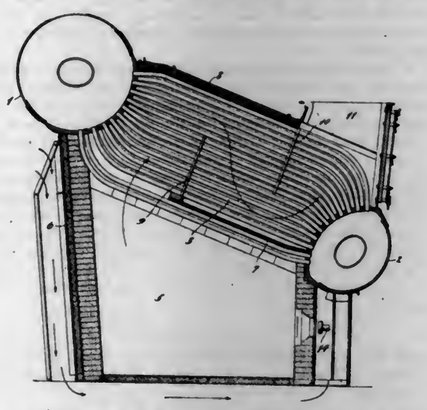


1. In a device of the class described, the combination with a rod and a pair of arms secured thereto provided with opposed bearing faces, of a bearing member between said faces and coöperating therewith to form a joint, a bolt passing through said arms adjacent the bearing faces and held from turning therein, a nut on the bolt, a wrench-arm on the nut, and a spring acting on the arm and tending to turn the nut to tighten the joint.

2. In a device of the class described, the combination with a rod and a pair of arms secured thereto provided with opposed bearing faces, of a bearing member between said faces and coöperating therewith to form a joint, a bolt passing through said arms adjacent the bearing faces and held from turning therein, a nut on the bolt, a wrench-arm on the nut, and a coiled expanding spring secured at one end to the rod member and at the other end to the wrench-arm so that the latter tends to turn to tighten the nut.

3. In a device of the class described, the combination with a rod and a pair of arms secured thereto provided with opposed bearing faces, of a bearing member between said faces and coöperating therewith to form a joint, a bolt passing through said arms adjacent the bearing faces and held from turning therein, a nut on the bolt, a wrench-arm on the nut, and a spring consisting of a loop through which the bolt passes, a portion adapted to engage the crank-arm, and a plurality of coils connecting the loop and the engaging portion and serving to turn the wrench-arm.

1,215,806. WATER-TUBE BOILER. WILLIAM D. HOXIE, Brooklyn, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Mar. 23, 1914. Serial No. 826,546. (Cl. 122—265.)



1. A steam boiler of the class described having a bank of inclined tubes, drums into which said tubes are expanded, said tubes being curved at both ends and straight for the rest of their length and entering the drums radially, and downcomers at the side of the bank and expanded into said drums.

2. A steam boiler of the class described having a bank of inclined tubes, drums into which said tubes are expanded, said tubes being curved at both ends and straight for the rest of their length and entering the drums radially, downcomers at the side of the bank and expanded into said drums, a longitudinal baffle to direct the gases to the uptake ends of the tubes and cross baffles across the straight portions of the tubes.

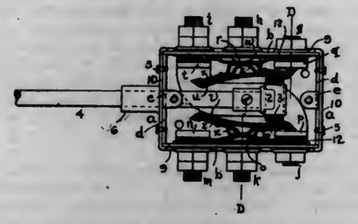
3. A steam boiler of the class described having a bank of inclined tubes, drums into which said tubes are expanded, said tubes being curved at both ends and straight for the rest of their length and entering the drums radially, downcomers at the side of the bank and expanded into said drums, longitudinal baffles extending from said drums, and transverse baffles from the ends of the longitudinal baffles extending across the straight portions of the tubes.

4. A steam boiler of the class described, comprising a transverse mud drum at the front of the setting and above the inlet for fuel, an elevated transverse steam and water drum at the rear of the setting, a bank of rearwardly and upwardly inclined water tubes expanded into the drums and connecting them, said tubes being curved at both ends and straight for the major portion of their length and entering the drums on substantially radial lines, a combustion chamber extending beneath the major portion of the length of the tubes, a horizontal baffle extending rearwardly and upwardly from the mud drum and giving a combustion chamber which enlarges rearwardly, transverse baffles arranged to give the gases up and down passes and an offtake flue over the mud drum and leading from the last up pass of the gases.

5. A steam boiler of the class described having a bank of inclined tubes, drums into which said tubes are expanded, said tubes being curved at both ends and straight for the rest of their length and entering the drums radially, and downcomers located in the side walls of the setting and expanded into said drums having the same general inclination to the horizontal as the generating tubes.

[Claims 6 and 7 not printed in the Gazette.]

1,215,807. ELECTRIC SWITCH. EDWARD S. HUFF, Detroit, Mich., assignor to The Simms Magneto Company, East Orange, N. J., a Corporation of New York. Filed Nov. 14, 1914. Serial No. 872,096. (Cl. 175—282.)



1. In an electric switch, a lever provided with a curved convex portion at one side thereof intermediate its ends, a surface against which said convex portion bears and upon which it is adapted to roll, and means for actuating said lever so as to cause said convex portion to roll on said bearing surface.

2. In an electric switch, a lever provided with a curved convex portion upon one side thereof intermediate its ends, a surface against which said convex portion of the lever bears and upon which it is adapted to roll, and a part adapted to reciprocate longitudinally of said lever and bear against the side thereof opposite to said convex portion to cause said lever to roll upon said bearing surface, said lever being so formed on the side opposite said convex portion that said reciprocating portion shall cause it to roll on said bearing surface.

3. In a switch, a lever formed of strips of conducting material, one of said strips being bent at its center to form a rocker for the purpose described, means for rocking said lever upon said rocker, and means for making different contacts according to the angular position of said lever.

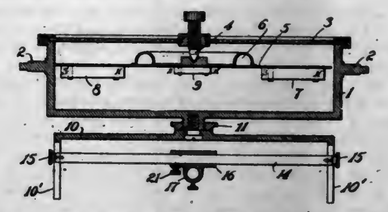
4. In an electric switch, a lever formed of strips, one of said strips being shaped at its center to form a rocker for said lever and another of said strips being bent outward and extending past and adjacent to said rocker, said strip being secured at its outer end to secure said lever in place.

5. In an electric switch, a rocking lever, a strip of resilient material secured at one end to said lever and extending outward therefrom, and means for securing the outer end of said strip to attach said lever.

[Claims 6 to 9 not printed in the Gazette.]

1,215,808. COMPASS. ROBERT HUNTINGTON, South Medford, Mass. Filed Mar. 22, 1912. Serial No. 685,645. (Cl. 33—225.)

1. In combination, a compass box, a dial pivotally mounted therein, a pair of main magnets mounted on said dial at opposite sides thereof, a pair of auxiliary magnets mounted on said dial opposite to each other but not to the main magnets, a mount for a pair of corrective magnets pivotally hung from said compass box, and a corrective magnet adjustable along each end of said mount.



2. In combination, a compass box, a dial pivotally mounted therein, sets of magnets mounted on said dial at opposite sides thereof, auxiliary magnets mounted on said dial opposite to each other but not to the sets of magnets, a mount for a pair of corrective magnets pivotally hung from said compass box, and a corrective magnet adjustable along each end of said mount.

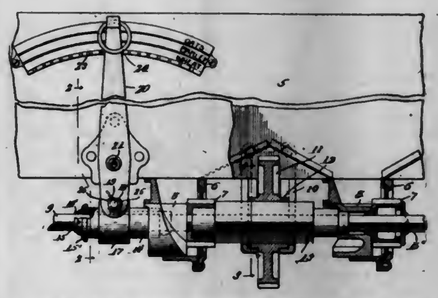
3. In combination, a compass box, a dial pivotally mounted therein, a pair of main magnets mounted on said dial at opposite sides thereof, sets of magnets disposed on opposite sides of each main magnet, auxiliary magnets mounted on said dial opposite to each other but not to the main magnets, a mount for a pair of corrective magnets pivotally hung from said support, and a corrective magnet adjustable along each end of said mount.

4. In combination, a compass box, a dial pivotally arranged therein, a pair of main magnets mounted on said dial at opposite sides thereof, a pair of auxiliary magnets mounted on said dial opposite to each other but not to the main magnets, a frame pivotally hung from said compass box, a rod adjustable in said frame, a slide adjustable along said rod, and a corrective magnet adjustable on each end of said slide.

5. In combination with a compass box providing a mounting for a pivoted compass, a frame, means for supporting said frame in pivotal relation to the pivot of the compass, a rod mounted in said frame for vertical adjustment in the plane of the pivot, a transverse member mounted on said rod and slidable thereon, a magnet adjustably mounted on each end of said transverse member, and means whereby said magnets may be adjusted in lateral relation to said rod.

[Claims 6 to 11 not printed in the Gazette.]

1,215,809. GRAIN-DISTRIBUTER. FREDERICK K. HURNTHAL, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Mar. 2, 1916. Serial No. 81,673. (Cl. 111—18.)



1. In a grain distributer, the combination of a hopper, a feed shaft of non-circular cross-section journaled on said hopper, a seed-cup through which said shaft extends, a seed wheel on said shaft adjustable by endwise movement

of said shaft through a side wall of said seed-cup, and means for rotating said feed shaft comprising a gear, a sleeve member of substantially greater length than the hub of said gear non-rotatably mounted in said gear hub, said sleeve being non-rotatably mounted on said shaft and adjustable endwise therewith, means for shifting said feed shaft endwise, and means confining said gear against sidewise movement when said shaft and sleeve are shifted endwise.

2. In a grain distributer, the combination of a hopper, a feed shaft of polygonal cross-section journaled on said hopper, a seed-cup through which said shaft extends, a seed wheel on said shaft adjustable by endwise movement of said shaft through a side wall of said seed cup, and means for rotating said feed shaft comprising a gear the hub of which has a polygonal bore, a sleeve member of substantially greater length than the hub of said gear slidably fitting in the bore of the latter and non-rotatable on said shaft, means for shifting said feed shaft endwise, and a bracket secured to said hopper and straddling said gear to prevent sidewise movement of the latter under endwise movement of the feed shaft.

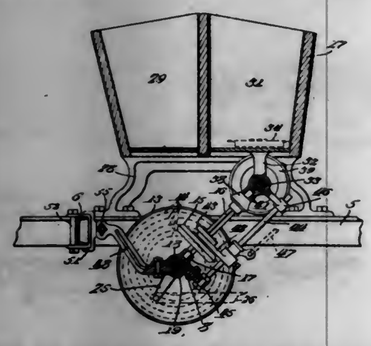
3. In a grain distributer, the combination of a hopper, an endwise movable feed shaft mounted on said hopper, and means for shifting said shaft endwise comprising a sleeve mounted on and rotatable relatively to said shaft and confined against endwise movement on the latter, a collar keyed to said sleeve and having a laterally projecting arm, and a lever pivoted to said hopper and at its lower end articulated to the free end of said arm.

4. In a grain distributer, the combination of a hopper, an endwise movable square feed shaft mounted on said hopper, and means for shifting said shaft endwise comprising a bushing mounted on the shaft, a sleeve mounted on the bushing and confined against endwise movement relatively to the latter and said shaft, a collar keyed to said sleeve and having a laterally projecting arm, and a lever pivoted to said hopper and having a depending arm formed with a laterally reinforcing hole through which the end of said arm extends.

5. In a grain distributer, the combination of a hopper, an endwise movable square feed shaft mounted on said hopper, and means for shifting said shaft endwise comprising a bushing fixed to said shaft, a sleeve rotatably mounted on the bushing and confined against endwise movement thereon, said sleeve carrying a laterally projecting arm, and a lever mounted on the hopper and articulated to said arm whereby to shift said shaft endwise.

[Claim 6 not printed in the Gazette.]

1,215,810. ALINING BEARING FOR GEARING. FREDERICK K. HURXTHAL, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Mar. 2, 1916. Serial No. 81,675. (Cl. 74—58.)



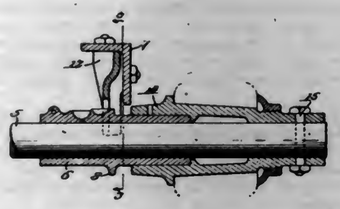
1. The combination of a frame, a driving shaft mounted thereon, a frame part separable from and adapted to be fixedly attached to the frame, driven means mounted on said frame part, bearings on the said driving shaft and said frame part adapted to be alined, a driven shaft mounted in said bearings for driving said driven means, and means for adjusting the bearing on the driving shaft relatively to the frame, whereby to aline the said bearings in case of discrepancy in alinement when said frame and frame part are secured together, and a driving connection between said driving and driven shafts.

2. The combination of two frame sections adapted to be rigidly secured together, one frame section carrying a driving shaft in fixed relation thereto and the other section carrying a driven mechanism and a bearing in fixed relation thereto, a bearing loosely mounted on the driving shaft, a shaft stepped in the latter bearing and being in driving connection with said driven mechanism, a driving connection between said shaft and driving shaft, and a connection between the driving shaft frame section and the bearing thereon for angularly adjusting the same to aline it with the bearing on the other frame section.

3. The combination of a frame, a driving shaft mounted thereon in fixed relation thereto, a frame part, a driven mechanism having a bearing associated therewith mounted on said frame part in fixed relation thereto, said frame part and driven mechanism as an entirety adapted to be fixedly attached to the frame, a bearing on the driving shaft, a shaft journaled in said bearing and being in driving connection with said driven mechanism, a driving connection between this shaft and the driving shaft, and means connecting said bearing on the driven shaft and the frame permitting adjustment of said bearing relatively to the bearing associated with the driven mechanism whereby to aline said bearings when discrepancy in alinement occurs through attachment of the frame part to the frame.

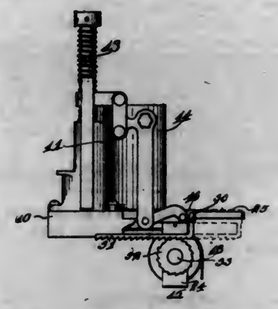
4. The combination of a machine frame, a driving shaft mounted thereon, a bearing mounted on said shaft so as to be capable of angular adjustment thereon, a frame part adapted to be fixedly mounted on the machine frame and carrying driving mechanism and a bearing, a driven shaft mounted in said bearing and adapted to be driven from said driving shaft and to drive said driven mechanism, an arm projecting from said bearing on the driving shaft, a bracket on said machine frame, said bracket and said arm being provided with slots disposed at an angle to each other respectively, and means passing through said slots for adjustably connecting said arm to said bracket.

1,215,811. BEARING FOR GRAIN-DRILLS AND THE LIKE. FREDERICK K. HURXTHAL, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 13, 1916. Serial No. 90,942. (Cl. 64—10.)



The combination of a rotatable shaft, a bearing sleeve in which said shaft is rotatably mounted, the periphery of the outer end of said sleeve being hardened to provide a durable wearing surface and said sleeve being positioned on the shaft remote from the end thereof, a wheel hub shaped at its inner end to rotatably fit the hardened end of said sleeve and shaped at its outer end to snugly fit the projecting end of said shaft, whereby said sleeve is partially supported directly by said hub and partially supported indirectly by said hub through the intermediary of said shaft, and a driving connection between said wheel and said shaft.

1,215,812. BOTTLE-CAPPER. JACOB J. ILLIAN, Milwaukee, Wis. Filed Oct. 13, 1915. Serial No. 55,648. (Cl. 226—5.)



1. In a bottle capping machine, a feed slide for the caps, a reciprocatory plunger for applying the caps, and means operatively connected to the feed slide for feeding a supplementary closure simultaneously with the caps and beneath the same.

2. In a bottle capping machine, a feed slide for the caps, a reciprocatory plunger for applying the caps, and means operatively connected to the feed slide for feeding a supplementary closure simultaneously with the caps and beneath the same, said closure being forced into the bottle mouth with the caps.

3. In a bottle capping machine, a feed slide for the caps, a reciprocatory plunger for applying the caps, a supplementary feed device working beneath the cap feed and feeding a supplementary closure beneath the cap to be applied to the bottle, and an operative connection between the feed slide and the supplementary feed device.

4. In a bottle capping machine, a feed slide for the caps, a reciprocatory plunger for applying the caps, and means for feeding a supplementary closure strip to bring a section thereof beneath the cap to be applied, said section being applied by the plunger with the cap, said feeding means being actuated by the feed slide.

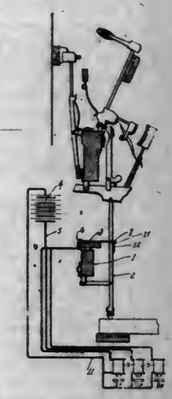
5. In a bottle capping machine, a feed slide for the caps, a reciprocatory plunger for applying the caps, and means for feeding a supplementary closure strip to bring a section thereof beneath the cap to be applied, said section being applied by the plunger with the cap, said feeding means comprising a push plate, a pivoted support for the push plate carried by the feed slide, and means for swinging the support to elevate the push plate on the return stroke.

[Claims 6 to 9 not printed in the Gazette.]

1,215,813. COMBINATION PIANO AND ORGAN PLAYER MECHANISM. RICHARD S. IRVINE, San Francisco, Cal. Filed Sept. 14, 1915. Serial No. 50,605. (Cl. 84—81.)

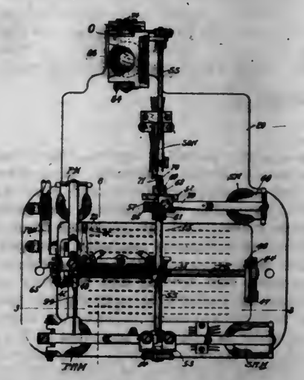
1. The combination of a piano and another musical instrument, the latter having electrically operating connections, such connections including wires spaced apart and held fixed adjacent an abstract of the piano action, the abstract being provided with slots through which a part of the wires project, and a member carried by the abstract and arranged to move into contact with the said wires with a movement of the abstract to bridge the gap between the wires and complete the electrical circuit and cause the other instrument to play simultaneously with the piano.

2. A device of the character described comprising the combination with the abstract of a piano action, of a plurality of wires projecting adjacent said abstract and being separated one from the other, electrically controlled apparatus for operating other musical instruments, a source of electrical energy, such source of electrical energy being connected with one of said first named wires and with said electrically controlled apparatus, the others of said first named wires being connected with said electrically controlled apparatus, a member carried by the abstract and adapted to move into contact with all of said wires with the movement of said abstract to complete a



circuit from said source of electrical energy through said wires to said electrically controlled apparatus, as described.

1,215,814. SWITCH FOR AUTOMATIC TELEPHONE SYSTEMS. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 27, 1910. Serial No. 558,000. (Cl. 179—27.5.)



1. An electrical switching mechanism, comprising passive contacts arranged in straight line rows, a wiper having a contact and adapted to connect with said contacts, a connected rotatable shaft and associated driving mechanism therefor whereby said wiper is moved to select a row, and a second connected rotatable shaft and associated driving mechanism therefor whereby said wiper is moved in a straight line to select a contact in a row.

2. An electrical switching mechanism comprising passive contacts arranged in straight line rows, a wiper having a contact end adapted to connect with said contacts, a connected rotatable shaft and associated driving mechanism therefor whereby said wiper is moved to select a row, a second connected rotatable shaft and associated driving mechanism therefor whereby said wiper is moved in a straigth line to select a contact in a row, and electromagnetic means for restoring said wiper.

3. An electrical switching mechanism comprising passive contacts arranged in straight line rows, a wiper hav-

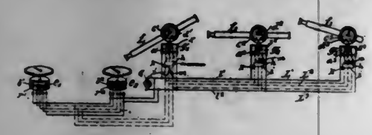
ing a contact end adapted to connect with said contacts, a rotatable shaft, a step-by-step magnet for rotating said shaft to move said wiper to select a row, a second rotatable shaft connected to said wiper, and a second step-by-step magnet for rotating said second shaft to move said wiper in a straight line to select a contact in a row.

4. A selective switch for telephone systems comprising passive contacts arranged in straight line rows, a wiper having a contact end adapted to connect with said contacts, a rotatable shaft, a ratchet wheel associated with said shaft, an electromagnet for operating said ratchet to move said wiper to select a row, a second rotatable shaft connected with said wiper, and an electromagnet for rotating said second shaft to move said wiper in a straight line to select a contact in a row.

5. A selective switch for telephone systems comprising passive contacts arranged in straight line rows, a wiper for coöperating with said contacts, a rotatable shaft, an electromagnet for operating said shaft whereby said wiper is given a primary adjustment to select a row, a release magnet for said shaft, a second rotatable shaft, suitable mechanism connecting said second shaft and wiper, an electromagnet for operating said second shaft and connecting mechanism whereby said wiper is given a so-called straight line secondary adjustment to select a contact in a row, a release magnet for said second shaft and means controlled by said release magnets for restoring their respective associated shafts.

[Claims 6 to 22 not printed in the Gazette.]

1,215,815. ELECTRIC SIGNALING SYSTEM. PAUL KAMINSKI, Spandau, and OTTO SCHNEIDER, Schöneberg, near Berlin, Germany, assignors to Siemens & Halske, A. G., Berlin, Germany, a Corporation of Germany. Filed June 24, 1913. Serial No. 775,495. (Cl. 177—351.)



1. In an electric signaling system, the combination with a common receiving apparatus, of a plurality of senders having any distance from each other and from said receiving apparatus, said receiver and senders having alternating current fields all energized from the same source, and having armatures rotatably arranged in said fields, electric connections between said sending and receiving apparatus, said sending and receiving apparatus being connected in multiple to said electric connections whereby the arithmetical mean value of the angular positions of said sender armatures is indicated on the receiver.

2. In an electric signaling system, the combination with a common receiving apparatus, of a plurality of senders, each having a sending element, said senders adapted to transmit the angular position of their respective sending element, and means comprised in said receiving apparatus for automatically indicating that a sending element is in a wrong position with respect to the others.

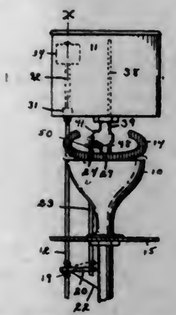
3. In an electric signaling system, the combination with a common receiving apparatus, of a plurality of senders each having a sending element, said senders adapted to transmit the angular position of their respective sending elements, an electric circuit including all said senders and said receiving apparatus, and means comprised in said receiving apparatus for automatically indicating that a sending element is in a wrong position with respect to the others.

4. In an electric signaling system, the combination with a common receiving apparatus, of a plurality of senders each having a sending element, said senders adapted to transmit the angular position of their respective sending elements, an electric circuit including all said senders and said receiving apparatus, means comprised in said receiving apparatus for automatically indicating that a sending element is in a wrong position with respect to the others, and means for rendering ineffective a sender having its sending element in the wrong position.

5. An electric signaling system consisting of a plurality of senders each comprising of a sending element for coarse and a sending element for fine adjustment, a receiving apparatus comprising a plurality of receiving elements connected by separate circuits to said sending elements for coarse adjustment and a receiving element connected by a common circuit to said sending elements for fine adjustment.

[Claim 6 not printed in the Gazette.]

1,215,816. WATER-CLOSET DEVICE. MARTIN J. KELLY, New Britain, Conn. Filed Feb. 25, 1915. Serial No. 10,428. (Cl. 4—28.)



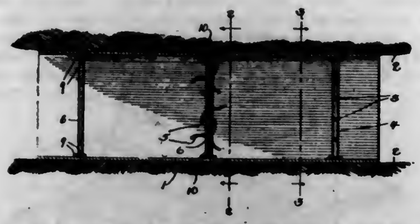
1. In a water closet device, a bowl, a seat, a hinge connecting the said bowl and seat and having a horizontal hinge bar, a spring tending to tilt the said seat, an inlet pipe having a cock controlled by a lever, a flushing pipe having a flushing valve controlled by a lever, a connecting rod interconnecting the said levers, and an operating lever connected by one end to the said connecting rod, having the other end engaged with one face of the said seat and having sliding bearing engagement intermediate the said ends on one side of the said hinge bar.

2. In a water closet device, a bowl, a flushing connection connecting the water tank with the said bowl and having an enlarged portion serving as a valve chamber, the said enlarged portion having a valve seat, a swinging valve for coöperating with the said seat, a closet seat hinged to the said bowl, a spring tending to tilt the said closet seat relatively to the said bowl, means operatively connecting the said closet seat and valve, and the said valve seat being inclined relatively to the axis of the said enlarged portion whereby a limited movement of the said closet seat will serve to fully open the passage through the said valve seat in the direction of the said axis.

3. In combination in a water closet device, a bowl connected to the outlet pipe, a seat, a hinge connecting the said bowl and seat and having a horizontal hinge bar, a spring of bar form fixedly secured by one end, lying across the said hinge bar, and having the other end in bearing engagement with the said seat, a cock in the supply pipe controlled by a lever, a valve in the flushing connection controlled by a lever, a connecting rod interconnecting the said levers, and a lever connected by one end to the said connecting rod, lying across the said hinge bar, and having the other end in bearing engagement with the said seat.

4. In a water closet device comprising a closet seat having a tilting movement and flushing devices operated by the said seat comprising a valve casing having a valve seat and a swinging valve for coöperating therewith, and the said valve seat being inclined at an appreciable angle relatively to the direction of flow of water through the said casing, whereby a full effective opening of the valve in the direction of flow will be effected by a relatively small movement of the said closet seat.

1,215,817. FISH-GUARD. ADAM KIMMERLING, Schleisingerville, Wis. Filed July 5, 1916. Serial No. 107,631. (Cl. 61—5.)



1. In a device of the character described, a trough-like casing open at both ends and adapted to be mounted in an irrigation ditch, and a plurality of guard members rotatably mounted therein and extending transversely of the casing, said members being so relatively disposed as to intermesh when rotating.

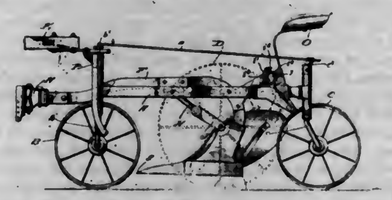
2. In a device of the character described, a trough-like casing open at both ends and adapted to be mounted in an irrigation ditch, and a plurality of guard members rotatably mounted therein and extending transversely of the casing, each of said members being provided with a plurality of radially extending blades, and the said members being so positioned relatively that their blades intermesh when said members are rotating.

3. In a device of the character described, a trough-like casing open at both ends and adapted to be mounted in an irrigation ditch, a plurality of guard members rotatably mounted therein and extending transversely of the casing, each of said members having a plurality of radially disposed arcuate blades, the said members being so relatively disposed that their blades intermesh when the members are rotating.

4. In a device of the character described, the combination of a casing, a plurality of guard members rotatably mounted therein, each of said members having a plurality of arcuate radially disposed blades, the vertical edges of said blades being corrugated, and the said members being so relatively disposed that the corrugated edges of their blades intermesh when they are rotating.

5. In a device of the character described, the combination of a casing, vertical strips secured to the sides of said casing and having their inner edges corrugated, and a plurality of guard members rotatably mounted intermediate the said strips, each of the said guard members having a plurality of radially disposed arcuate blades, and the vertical edges of said blades being corrugated, the said guard members and strips being so relatively disposed that their corrugated edges intermesh when the guard members are rotating.

1,215,818. WHEELED IMPLEMENT. ALVARO S. KROTZ, Janesville, Wis., assignor to The Janesville Machine Company, Janesville, Wis., a Corporation of Wisconsin. Filed June 6, 1914. Serial No. 843,324. (Cl. 97—36.)



1. A wheeled plow having a frame, a beam provided with a plow-bottom rigid therewith, a front bail journaled on the frame to support said beam, devices mounted on the frame to support the rear end of said beam, mechanism for rocking said bail to raise and lower the beam and plow-bottom, and instrumentalities including a hand lever for rocking said bail to vary the working depth and keep the plow level, said devices comprising means for permitting the beam to tilt upward at the rear end thereof, in all positions of said bail, and for preventing the front end of the beam from tilting upward relative to said frame.

2. In a wheeled implement, a frame, front and rear furrow wheels for supporting said frame at a fixed height thereon, a bail on said frame, a plow carried on said bail, a land side wheel for said bail, a rear support for said plow, said support being movably connected with said frame, means for precluding the point of the plow from tilting above the heel while in the ground, said means being carried on said support, mechanism for rocking said bail to raise and lower the plow, and devices on the bail for rocking the same to change the depth, said land side wheel having an offset axle serving by the rocking of said bail to tilt the entire wheeled implement sidewise.

3. In a wheeled implement, a frame, front and rear furrow wheels for supporting said frame at a fixed height thereon, a bail on said frame, a plow carried on said bail, a land side wheel for said bail, a rear support for said plow, said support being movably connected with said frame, means for precluding the point of the plow from tilting above the heel while in the ground, said means being carried on said support, mechanism for rocking said bail to raise and lower the plow, devices on the bail for rocking the same to change the depth, said land side wheel having an off-set axle, and means for adjustably mounting said axle on said bail.

4. A wheeled plow having a frame, a beam provided with a plow-bottom rigid therewith, a front bail journaled on the frame to support said beam, devices mounted on the frame to support the rear end of said beam, mechanism for rocking said bail to raise and lower the beam and plow-bottom, and instrumentalities including a hand lever for rocking said bail to vary the working depth and keep the plow level, said devices comprising means for permitting the beam to tilt upward at the rear end thereof, in all positions of said bail, and for preventing the front end of the beam from tilting upward relative to said frame, having a spring to yieldingly resist said upward tilting of the beam at the rear end thereof.

5. In a wheeled implement, a frame, front and rear furrow wheels for supporting said frame at a fixed height thereon, a bail on said frame, a plow carried on said bail, a land side wheel for said bail, a rear support for said plow, said support being movably connected with said frame, means for precluding the point of the plow from tilting above the heel while in the ground, said means being carried on said support, mechanism for rocking said bail to raise and lower the plow, and devices carried on said bail and arranged for rocking the bail to change the depth.

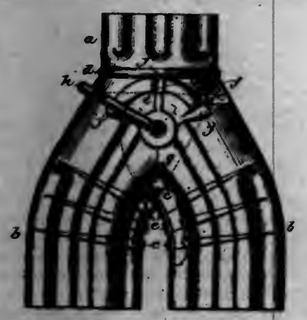
[Claims 6 to 31 not printed in the Gazette.]

1,215,819. CONDUCTOR CUT-OFF. LOUIS KUEHN, Milwaukee, Wis., assignor to Milwaukee Corrugating Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 28, 1907. Serial No. 399,516. (Cl. 137—9.)

1. A conductor cut-off comprising a neck and two sheet metal tubular branches connected with each other and with said neck at their upper portions, each branch being a continuous length of metal free from transverse joints, the upper portions of the branches being deflected gradually inward and upward and lapped one over the other, each branch below the crotch being formed with transverse crimps which bring the branches below the crotch into parallelism one with the other, the edge of one branch adjacent its upper crimp being folded over and engaging the edge of the other branch adjacent its upper crimp to form a closed stiff joint in the crotch, and a reversible valve at the junction of the branches adapted to close either branch, substantially as described.

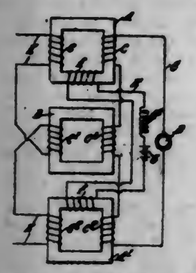
2. A conductor cut-off comprising a neck and two sheet metal tubular branches connected with each other and with said neck at their upper portions, each branch being a continuous length of metal free from transverse joints, the upper portions of the branches being deflected gradually inward and upward and lapped one over the other,

each branch below the crotch being longitudinally corrugated and formed with transverse crimps which bring the branches below the crotch into parallelism one with



the other, the edge of one branch adjacent its upper crimp being folded over and engaging the edge of the other branch adjacent its upper crimp to form a closed stiff joint in the crotch, and a reversible valve at the junction of the branches adapted to close either branch, substantially as described.

1,215,820. FREQUENCY-CONVERSION SYSTEM FOR ELECTRICAL OSCILLATIONS. TSUNETARO KUJIRAI, Hongo, Tokyo, Japan. Filed Mar. 30, 1915. Serial No. 18,065. (Cl. 172—281.)



1. A frequency changing transformer comprising an unpolarized and two polarized transformer elements, the secondary winding of said unpolarized element being connected in opposition to the secondary windings of said polarized elements.

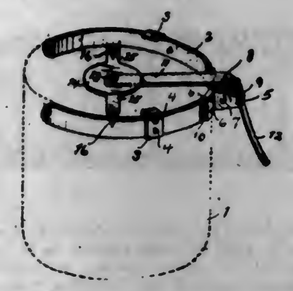
2. A frequency changing transformer comprising an alternator, an unpolarized element and two polarized elements, all three of these elements being excited by said alternator, and the secondary coil of said unpolarized element being connected in opposition to the secondary windings of said polarized elements.

3. A frequency changing transformer comprising an alternator and three transformer elements excited by said alternator, two of said elements being oppositely polarized by a direct current through their primary coils and the secondary coil of the unpolarized element being connected in opposition to the secondary windings of the polarized elements.

4. A frequency system comprising an alternator, three transformer elements excited by said alternator, a circuit including a direct current generator, two of said elements being provided with coils in said circuit, and the three secondary coils of said transformer being connected in series with one coil in opposition to the other two.

5. A frequency changing system comprising an unpolarized and two polarized transformer elements, the secondary winding of said unpolarized element being connected in opposition to the secondary windings of said polarized elements, said secondary circuit being connected to said primary circuit in such manner that the higher frequency oscillations of said secondary circuit are superposed upon said primary circuit.

1,215,821. CONDENSED-MILK-CAN OPENER. JOSEPH LARDER, Youngstown, Ohio. Filed Nov. 27, 1915. Serial No. 63,751. (Cl. 220—67.)



1. In a can opener, the combination of a curved clip, having attached thereto at opposite sides strips projecting upwardly and provided with inturned members, a lever attached to the central portion of the clip, said lever having a puncturing bar provided with a plate-shaped portion at its center attached to the end of said lever whereby the puncturing bar is centrally located within the curved clip, substantially as set forth.

2. In a device for making openings in a can, a curved clip provided with inturned strips attached thereto at opposite sides, a lever pivotally attached to the support arms which are firmly fastened on the outside of the central portion of the clip, said lever carrying a puncturing bar provided with a depending prong at each end of said bar, and a plate portion formed at the middle of said bar.

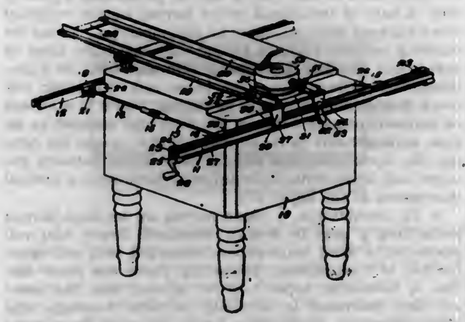
3. In a device of the class described, a curved clip provided with inturned strips attached thereto at opposite sides, a lever attached to the outside of the clip at its central portion, a puncturing bar attached at the end of the horizontal portion of said lever, and centrally located within the clip, said puncturing bar provided with a depending prong at each end of said bar and a plate portion formed at the middle of said bar, and means for holding said puncturing bar against the top of the can when not in operation, substantially as described and for the purpose set forth.

4. A combined can opener and closure comprising a curved support to be placed around a can, tongues on said curved support engaging with the top edge of the can to limit the downward movement of the curved support, a bar pivoted to said curved support, lugs secured to the bar adjacent each end thereof to punch oppositely disposed openings in the can, and a handle secured to said bar for raising it to an inclined position to allow the contents of the can to be poured therefrom.

1,215,822. TRUING DEVICE. FREDERICK LEU, Carmel, N. Y., assignor to Maxmil'an Calm, New York, N. Y. Filed Dec. 21, 1915. Serial No. 68,069. (Cl. 144—2.)

1. In a device of the class described, a frame comprising rails, tie rods for clamping said rails to a block, a turn-buckle for said tie rods, clamps slidably carried by said rails for supporting said tie rods, brackets carried by one of said rails, a screw carried by said brackets, a carriage slidable on said rails, said carriage comprising parallel rails, standards carried by said carriage slidable on said first mentioned rails, a split nut carried by one of said standards for engaging said screw carried by said frame, an annular frame slidable on said carriage, a clamp carried by said annular frame for rigidly attaching said annular frame to said carriage, a motor carried by said annular frame, and a cutter carried by the shaft of said motor.

2. In a device of the class described, a frame comprising spaced rails, tie rods for clamping said rails to a block, a turn-buckle for tightening said tie rods, clamps slidable on said rails supporting the ends of said tie rods, sockets formed in said clamps to receive the ends of said tie rods, thumb screws carried by said clamps for locking said clamps on said rails, guards carried by said clamps for engaging the block to space the tie rods from the block, brackets carried by one of said rails, bearings formed in said brackets, a screw carried by said bearing, a crank carried by said screw, a carriage slidable on said rails, a split nut carried by said carriage engaging said screw, an annular frame slidable on said carriage, a motor carried by said annular frame and a cutter on the shaft of said motor.



3. In device of the class described, a frame comprising rails, tie rods for holding said rails in clamped relation on the block, a turn-buckle for tightening said tie rods, clamps carried by said rails and tie rods, brackets detachably carried by one of said rails, bearings formed in said brackets, a screw carried by said bearings, a crank carried by said screw, a carriage slidable on said rails, said carriage comprising parallel rails, connecting bars at the ends of said parallel rails, a connecting bar slidable on said rails intermediate the end bars, standards carried by one of the end connecting bars and the slidable connecting bar, said standards on said slidable connecting bar having plane bearing faces thereon, the standards carried by the end connecting bar having lugs depending over the supporting rail of the frame, one of said standards supporting a split nut, and a driven cutter slidably carried by said carriage.

4. In a device of the class described, a frame comprising spaced rails, tie rods for clamping said rails to a block, brackets on one of said rails, a screw journaled in said brackets, a crank carried by said screw, a carriage slidable on said rails, an annular frame slidable on said carriage, a clamp carried by said annular frame for locking said annular frame to said carriage, adjusting screws carried by said annular frame for adjusting one side thereof vertically, a motor in said annular frame, a cutter driven by said motor, said cutter comprising a horizontal cutter for cutting the fiber transversely, and vertical cutters for removing the overhang formed by said horizontal cutter.

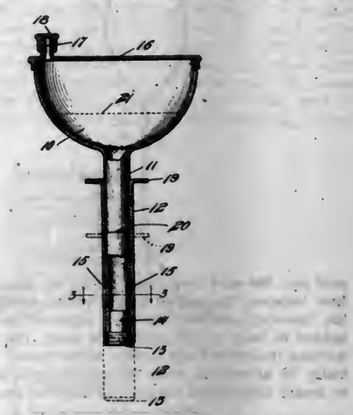
1,215,823. MEDICINE-ADMINISTERING DEVICE. ISABEL M. LEWIS, Washington, D. C. Filed May 9, 1916. Serial No. 96,406. (Cl. 128—28.)

1. A medicine administering device comprising a bowl, an outlet spout leading from said bowl, a sleeve fitting upon said outlet spout, a closure plug for the lower end of said sleeve provided with a reduced inner end portion for fitting into the lower end of said outlet spout, said sleeve being provided with side openings, constituting outlet openings, and a cover for said bowl.

2. A medicine administering device comprising a bowl, an outlet spout leading from said bowl, and a sleeve slidably mounted upon said outlet spout and closed at its lower end and provided with a side opening constituting an outlet opening closed by said spout when the sleeve is in a raised position.

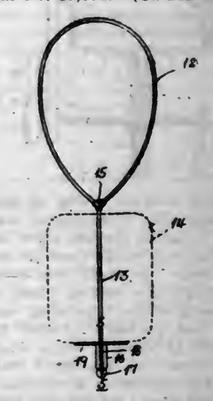
3. A medicine administering device comprising a bowl having an outlet spout, a sleeve slidably mounted upon said bowl and provided with an engaging flange at its upper end, said bowl being closed at its lower end and provided with outlet openings in the sides, and a closure for said bowl.

4. A medicine administering device comprising a bowl, an outlet spout extending beneath said bowl and open at its lower end, an open ended sleeve slidably mounted upon said spout and provided with side openings constituting



outlets, a supporting flange extending from the upper portion of said sleeve, and a closure plug fitting within the lower end of said sleeve against the lower end of said spout and provided with a reduced inner end portion fitting into the spout.

1,215,824. HOLDER FOR ROTARY BALLS OR BOBBINS. FRANK J. LIGHTBODY, Watertown, Mass., assignor to Cambridge Novelty Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Apr. 8, 1916. Serial No. 89,794. (Cl. 242—136.)



A ball holder comprising a bracelet, a ball-piercing bodkin projecting from the bracelet and rigidly attached thereto, the bracelet constituting a handle whereby the bodkin may be forced through a ball, and a point-guarding support detachably secured to the bodkin and adapted to permit rotation and prevent downward movement of the ball.

1,215,825. HOLDER FOR ROTARY BALLS OR BOBBINS. FRANK J. LIGHTBODY, Watertown, Mass., assignor to Cambridge Novelty Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Apr. 8, 1916. Serial No. 89,795. (Cl. 242—136.)

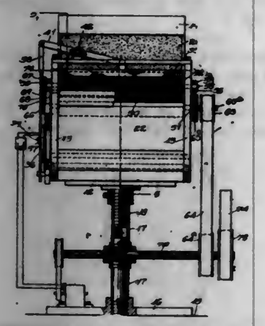
A ball holder comprising a bracelet of substantially elliptical form, having a rigid outwardly projecting loop at one end of its major axis, a bodkin composed of a flat-sided strip of stiff sheet material shorter than the major axis of the loop pointed at one end, and provided at the opposite end with an integral ball-supporting handle-forming enlargement, the pointed end portion of the bod-

kin being provided with an eye, and a swivel loosely connected with said loop and detachably engaged with



said eye, the said loop constituting an immovable connection between the swivel and a predetermined portion of the bracelet whereby another predetermined portion is caused to bear on the operator's wrist, the loop also permitting the swivel and bodkin to be turned back substantially in alinement with the major axis of the bracelet to locate the bodkin within the loop for storage.

1,215,826. AUTOMATIC FEEDER FOR MILLS. HENRY O. LITTLE, Bridgewater, Mass. Filed Nov. 4, 1916. Serial No. 129,490. (Cl. 83—44.)



1. In combination, a chute having an inclined bottom permitting a gravity feed, a horizontal lower feed roll, the upper portion of which projects above said bottom, a horizontal upper feed roll spaced from the lower roll, said rolls extending across the chute and their axes being arranged in a substantially vertical plane, said arrangement and the spacing of the rolls being such that when the rolls are at rest granular material interposed between them assumes an angle of repose tangential to the periphery of the lower roll, the upper roll becoming a barrier, causing an accumulation of material at the upper side of the rolls, and means for rotating said rolls to aid and regulate the gravity feed.

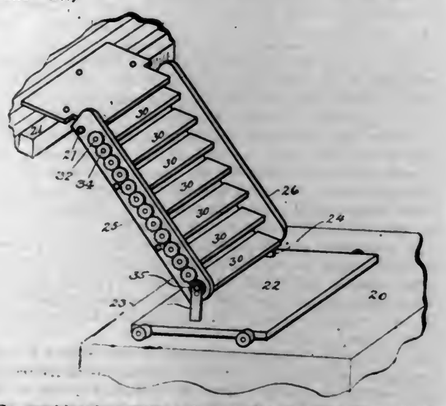
2. In combination, a chute having an inclined bottom permitting a gravity feed, a horizontal lower feed roll journaled in fixed bearings and projecting above said bottom, a horizontal upper feed roll journaled in vertically movable bearings, said rolls extending across the chute and their axes being arranged in a substantially vertical plane, and adjustable upper roll-supporting means, having provisions for maintaining the upper roll spaced at maximum, minimum and intermediate distances from the lower roll, the spacing being such at all times that when the rolls are at rest granular material interposed between them assumes an angle of repose tangential to the periphery of the lower roll, the upper roll becoming a barrier causing an accumulation of material in the chute at the upper side of the rolls, and means for driving the rolls to aid the gravity feed, said feed being regulable by varying the spacing of the rolls, and said driving means being organized to compensate for vertical movements of the upper roll.

3. In combination, a chute having an inclined bottom permitting a gravity feed, a horizontal lower feed roll journaled in fixed bearings, and arranged with the upper portion of its periphery projecting above the chute bottom, a horizontal upper feed roll spaced from the lower roll and journaled in vertically movable bearings, said rolls extending across the chute and their axes being arranged in a substantially vertical plane, said arrangement and the normal spacing of the rolls being such that the rolls when at rest form a barrier preventing a gravity feed, a pair of two-armed levers having slotted weighted arms engaged with the shaft of the upper roll, means for exerting upward yielding pressure on the other arms of said levers to yieldingly support said upper roll at a predetermined distance from the lower roll, the upper roll being displaceable upwardly by foreign bodies in a stream of material passing between the rolls and adapted to return automatically to its normal position, means for driving the lower roll, and driving connections between the upper and lower rolls organized to compensate for vertical movements of the upper roll.

4. In combination, a chute having an inclined bottom permitting a gravity feed, a horizontal lower feed roll journaled in fixed bearings, and arranged with the upper portion of its periphery projecting above the chute bottom, a horizontal upper feed roll spaced from the lower roll and journaled in vertically movable bearings, said rolls extending across the chute and their axes being arranged in a substantially vertical plane, said arrangement and the normal spacing of the rolls being such that the rolls when at rest, form a barrier preventing a gravity feed, a pair of two-armed levers having slotted weighted arms engaged with the shaft of the upper roll, adjustable means for exerting upward yielding pressure on the other arms of said levers to yieldingly support the upper roll normally at various predetermined distances from the lower roll, the upper roll being displaceable upwardly by foreign bodies passing between the rolls and adapted to return automatically to its normal position, means for driving the lower roll, and driving connections between the lower and upper rolls, organized to compensate for vertical movements of the upper roll.

5. In combination, an inclined chute, permitting a gravity feed, a pair of horizontal spaced-apart feed rolls extending across the chute and having their axes parallel and in a vertical plane and adapted to aid and regulate the gravity feed, means for rotating said rolls, a movable gate adapted to close upon the bottom of the chute and obstruct the chute above said rolls, and means for opening and closing said gate.

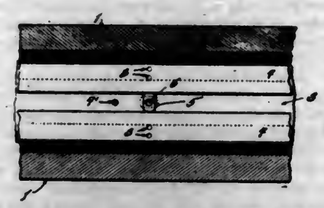
1,215,827. LANDING-STEPS. EDWARD R. LORD, Reading, Mass. Filed Mar. 23, 1916, Serial No. 86,315. Renewed Dec. 18, 1916. Serial No. 137,696. (Cl. 228—16.)



In combination with a dock and a landing float, steps hinged to said dock and slidably supported on said float; said steps consisting of side rails, treads journaled to

rock in said side rails, and means consisting of a train of gearing connecting the journals of the treads for automatically maintaining said treads in horizontal position regardless of the angle of inclination of the side-rails.

1,215,828. MOLD FOR MAKING PNEUMATIC TIRES. NELSON W. MCLEOD, St. Louis, Mo., assignor to American Motors Tire Company, Detroit, Mich., a Corporation of Michigan. Filed May 4, 1916. Serial No. 95,339. (Cl. 18—42.)



1. In a mold for rubber objects having separable edges, a shell within which the object to be molded may be confined, an annular device between which and said shell the separable edges of the object to be molded may be held, means for introducing fluid into the confined object, a barrier within said object adapted to extend from said annular device to the wall of the confined object, and means for holding said barrier against the wall of said object.

2. In a mold for pneumatic tires having separable edges, a shell within which the tire structure to be molded may be confined, an annular device between which and said shell the separable edges of the tire structure may be held, means for introducing fluid into a tire structure confined in said mold, a flexible barrier associated with said annular device and extending therefrom to the inner wall of the confined tire structure, and means for holding said barrier against the wall of said tire structure.

3. In a mold for pneumatic tires having separable edges, a shell within which the tire structure to be molded may be confined, an annular device between which and said shell the separable edges of the tire structure may be held, means for introducing fluid into a tire structure confined in said mold, a flexible barrier associated with said annular device and extending therefrom to the inner wall of the confined tire structure, and means shiftable laterally relative to said annular device for holding said barrier against the wall of said tire structure.

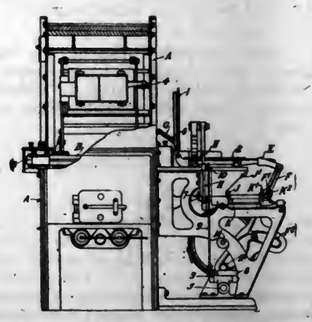
4. In a mold for pneumatic tires having separable edges, a shell within which the tire structure to be molded may be confined, an annular device between which and said shell the separable edges of the tire structure may be held, means for introducing fluid into a tire structure confined in said mold, a flexible barrier associated with said annular device and extending therefrom to the inner wall of the confined tire structure, and a binding ring for holding said barrier against the wall of said tire structure.

5. In a mold for pneumatic tires having separable edges, a shell within which the tire structure to be molded may be confined, an annular device between which and said shell the separable edges of the tire structure may be held, means for introducing fluid into a tire structure confined in said mold, a flexible barrier associated with said annular device and extending therefrom to the inner wall of the confined tire structure, a binding ring encircling said annular device, and means for shifting said binding ring laterally to force said barrier into contact with the wall of the tire structure.

[Claims 6 and 7 not printed in the Gazette.]

1,215,829. APPARATUS FOR USE IN BAKING WAFERS AND THE LIKE. HUGH WATSON MACKENZIE, Leeds, England. Filed June 16, 1915. Serial No. 34,455. (Cl. 107—58.)

1. Apparatus for baking wafers, consisting of an oven, an opening in the oven, carriers within the oven upon which molds each comprising a cover and a base are adapted to be mounted, means for moving the carriers each in a circuit through the heated interior of the oven, means for operating the carriers so that each carrier with its mold at the completion of its circuit is brought opposite the opening, means for removing the mold on the completion of its circuit from its carrier and withdrawing it from the oven, means for opening the mold when withdrawn to permit the removal of its baked contents, means for recharging the mold, and means for closing and reintroducing the mold into the oven and replacing it upon its carrier.



2. Apparatus for baking wafers, consisting of an oven, an opening in the oven, carriers within the oven upon which molds each comprising a cover and a base are adapted to be mounted, means for moving the carriers by successive steps in a circuit through the heated interior of the oven, means for operating the carriers so that on the completion of each step a carrier with its mold completes its circuit and is brought opposite the opening, means for removing the mold on the completion of its circuit from its carrier and withdrawing it from the oven, means for opening the mold when withdrawn to permit the removal of its baked contents, means for recharging the mold, and means for closing and reintroducing the mold into the oven and replacing it upon its carrier.

3. Apparatus for baking wafers, consisting of an oven, an opening in the oven, carriers within the oven upon which molds each comprising a cover and a base are adapted to be mounted, means for moving the carriers each in a circuit through the heated interior of the oven, means for operating the carriers so that each carrier with its mold at the completion of its circuit is brought opposite the opening, means for removing the mold on the completion of its circuit from its carrier and withdrawing it from the oven, means for opening the mold when withdrawn to permit the removal of its baked contents, means for recharging the mold, and means for closing and reintroducing the mold into the oven and replacing it upon its carrier.

4. Apparatus for baking wafers, consisting of an oven, an opening in the oven, carriers within the oven upon which molds each comprising a cover and a base are adapted to be mounted, means for moving the carriers each in a circuit through the heated interior of the oven, means for operating the carriers so that each carrier with its mold at the completion of its circuit is brought opposite the opening, means for removing the mold on the completion of its circuit from its carrier and withdrawing it from the oven, a mechanical device for opening the mold as the withdrawal takes place to permit the removal of its baked contents, means for recharging the mold, means comprising the mechanical device for closing the mold, and means for reintroducing the mold into the oven and replacing it upon its carrier.

5. Apparatus for baking wafers, consisting of an oven, an opening in the oven, carriers within the oven upon which molds each comprising a cover and a base are adapted to be mounted, means for moving the carriers by successive steps in a circuit through the heated interior

of the oven, means for operating the carriers so that on the completion of each step a carrier with its mold completes its circuit and is brought opposite the opening, means for removing the mold on the completion of its circuit from its carrier and withdrawing it from the oven, means for opening the mold when withdrawn to permit the removal of its baked contents, a feeding device comprising a pump and a delivery pipe for recharging the mold, means for operating the pump to deliver a charge of wafer material through the delivery pipe onto the base of the open mold, reintroducing the mold into the oven and replacing it upon its carrier.

[Claims 6 to 17 not printed in the Gazette.]

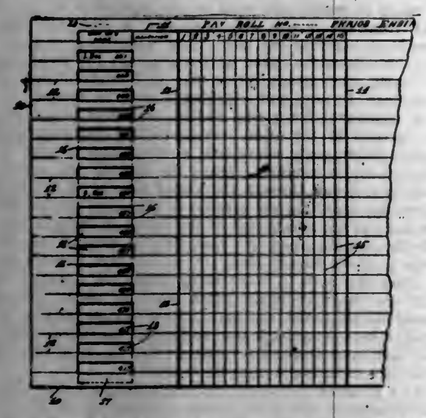
1,215,830. TOOL-HOLDER. JOSEPH F. MARSOLAIS, Framingham, Mass., assignor to Worcester Flexible Tubing Company, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 8, 1916. Serial No. 89,983. (Cl. 29—06.)



1. In a tool holder, the combination of a support having a groove in its top surface adapted to fit the bottom of a tool, a clamping plate located above the same and also having a groove in its bottom surface fitting the top of the tool, said grooves being arranged to hold the tool with its cutting edge higher than its rear edge, and a square tool therefor having cutting edges on its ends, one located on the top and the other on the bottom.

2. In a tool holder for use on a lathe, the combination with a cutting tool rectangular in cross section, of a support having a groove in its upper surface for receiving the tool, a clamping plate having a groove in its lower surface, the combined cross sections of said grooves being of square form, the upper surface of said plate being parallel with the lower surface of the support, the square passage formed by said grooves being tilted over slightly to bring the cutting edge of the tool to position higher than its rear edge.

1,215,831. PAY-ROLL, LEDGER, ACCOUNT OR TIME BOOK SHEET. JOHN W. MARSHALL, Connellsville, Pa., assignor to The Marshall Methods Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 2, 1915. Serial No. 78. (Cl. 11—19.)



1. A pay roll, ledger, account or time book sheet, comprising a flat sheet provided with a series of parallel, horizontally spaced dividing lines extending longitudinally of said sheet from near the upper edge to a point adjacent the lower edge thereof, a series of separated, parallel short slits in a section of said sheet and arranged to pass through the horizontally spaced dividing lines and midway between said dividing lines, said slits adapted to permit a rectangular flat strip to be inserted into and laced through said slits consecutively, so that similar adjacent parallel rectangular sections of said strip are on opposite faces of the sheet and alternate parallel sections of the strip are on the same face of the sheet.

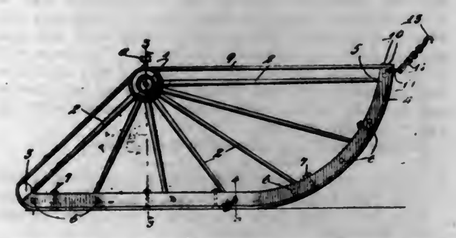
2. A pay roll, ledger, account or time book sheet, comprising a flat sheet provided with a series of parallel horizontal spaced dividing lines extending longitudinally of said sheet from near the upper edge to a point adjacent the lower edge thereof and having reserved thereon a rectangular section for the name of the parties to be entered on said sheet, and printed thereon on the outside of said rectangular section designations as to certain periods and other data for which said sheet is designed in connection with the parties referred to on said sheet, a series of separated, parallel short slits through said sheet in the said rectangular section and passing through the horizontal spaced dividing lines and midway between said dividing lines, and a rectangular strip adapted to pass into and be laced through said slits consecutively, so that similar adjacent parallel rectangular sections of said strip are on opposite faces of the sheet and alternate parallel sections of the strip are on the same face of the sheet.

3. A narrow rectangular strip having a series of similar parallel corrugations at right angles to the length of the strip, said strip being adapted to be inserted and laced through a series of slits consecutively of a pay roll, ledger, account or time book sheet provided with a series of parallel horizontally spaced dividing lines extending longitudinally of said sheet from near the upper edge to a point adjacent the lower edge thereof and said series of slits arranged parallel in a section of the sheet and passing through the horizontally spaced dividing lines and midway between said dividing lines, so that the upper surfaces of the alternate corrugations of the slip are on the same face of the sheet and the adjacent corrugations of the slip are on the opposite faces of the sheet.

4. A pay roll, ledger, account or time sheet, comprising a flat sheet provided with a series of spaced slits in one portion thereof, a strip having oppositely disposed corrugations laced through said slits consecutively in the sheet, and shoulders provided upon the strip, between the said corrugations and engaging the sheet at the edges of the slits, whereby the said strip will be held against displacement from the slits in the said sheet.

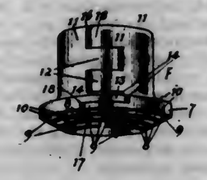
5. A pay roll, ledger, account or time sheet, comprising a sheet, provided with a series of slits, a strip having corrugated portions designed to contain printed matter and laced through the slits consecutively, and shoulders provided upon the strip between the corrugated portions for engagement with the sheet at the edges of the slits, for holding the strip against displacement.

1,215,832. WHEEL-RUNNER FOR WAGONS, BUGGIES, AND AUTOMOBILES. ANDREW MARX, Mount Pleasant, Utah. Filed May 10, 1916. Serial No. 96,697. (Cl. 21—96.)



In a device of the class described, the combination of a hub and a felly, means for connecting said hub and said felly, a set screw adapted to rest upon said hub, a sheet metal brace adapted to come over said hub, said brace being a continuation of the runner, said brace provided with a threaded aperture adapted to register with said hub, whereby when said set screw is turned so as to bind upon said hub it will at the same time tighten the brace and thereby tighten the runner.

1,215,833. ROD-PACKING. FRANK N. MASON, Pittsburgh, and JAMES F. CRAVEN, Crafton Heights, Pa.; said Craven assignor to said Mason. Filed July 25, 1914. Serial No. 853,065. (Cl. 137—116.)

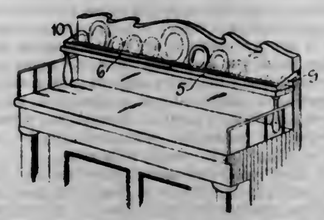


1. In a rod packing, a stuffing-box, a reciprocable rod therein, an anti-friction sleeve around the rod and within the stuffing-box, the sleeve being provided with narrow ribs in contact with the bottom of the stuffing-box, and means for pressing the ribbed end of the sleeve against the bottom of the said stuffing-box whereby the ribs may be adjusted so as to conform to the shape of the bottom of the stuffing-box.

2. In a rod packing, a stuffing-box, a reciprocable rod therein, an anti-friction sleeve around the rod and within the stuffing-box, the sleeve being provided with arc-shaped narrow ribs in contact with the bottom of the stuffing-box, and means for pressing the ribbed end of the sleeve against the bottom of the said stuffing-box whereby the ribs may be adjusted so as to conform to the shape of the bottom of the stuffing-box.

3. In a rod packing, a stuffing-box, a reciprocable rod therein, an anti-friction sleeve around the rod and within the stuffing-box, the sleeve being provided with arc-shaped narrow ribs intersected by transverse ribs in contact with the bottom of the stuffing-box, and means for pressing the ribbed end of the sleeve against the bottom of the said stuffing-box whereby the ribs may be adjusted so as to conform to the shape of the bottom of the stuffing-box.

1,215,834. PLATE-HOLDER. FRANK T. MAY, Avis, Pa. Filed Mar. 2, 1916. Serial No. 81,704. (Cl. 65—65.)



An adjustable plate holder including two relatively adjustable sections each consisting of a single metal plate bent upon itself along one of its longitudinal edges and having its other longitudinal edge angularly bent to provide a flange, each of said plates being provided upon one end with an angularly disposed arm adapted to be pivotally mounted on the side walls of the cupboard above a shelf, the holder sections normally resting upon the shelf and said flanges extending toward the back wall of the cupboard, the plates, when arranged on edge against the back wall of the cupboard, being adapted to rest upon the flanges of the holder sections.

1,215,835. ARTIFICIAL LIMB. MITA MICHAJLOV, New York, N. Y. Filed July 19, 1916. Serial No. 110,250. (Cl. 3—2.)



1. In an artificial limb, the combination with two sections telescopically arranged with the end of one within the end of the other, of straps of metal arranged in grooves in the outer face of the upper member and secured to the lower section, upwardly extending tongues on the straps, plates fastened to the upper section and having downwardly extending tongues arranged in line with the tongues on the straps, coiled cushioning springs engaging said upwardly and downwardly extending tongues, and means to limit the movement of one section within the other.

2. In an artificial limb, the combination with a lower section, of an upper section having its lower end telescopically fitted in the upper end of the lower section and provided with vertical slots therein, metal straps loosely fitted in grooves in the outer face of the upper member and secured at their lower ends to the lower member, a tongue integral with each of said straps and bent to lie in one of the slots in the upper section, opposed lugs secured to the upper section and arranged in line with the tongues on the straps, said lugs also lying in said slots, and coiled springs engaged with said lugs and tongues for cushioning the inward movement of the upper section in the lower section.

3. In an artificial limb, the combination with an ankle section, of a foot section, each having opposed semi-spherical cavities therein, a ball arranged in said cavities, a U-shaped rod passed diametrically through said ball and pivotally connecting the same to the ankle section, and an inverted U-shaped rod passed diametrically through the ball at right angles to the other rod and pivotally connecting said ball to the foot section, whereby the foot and ankle sections are connected together by a universal joint.

4. In an artificial joint, the combination with an ankle section, of a foot section, each having opposed semi-spherical cavities therein, a ball arranged in said cavities, a U-shaped rod passed diametrically through said ball and pivotally connecting the same to the ankle section, and an inverted U-shaped rod passed diametrically through the ball at right angles to the other rod and pivotally connecting said ball to the foot section, whereby the foot and ankle sections are provided with a universal connection, one of said rods being notched to pass the other rod through the center of the ball.

5. In an artificial limb, the combination with an ankle section, of a foot section, each having opposed semi-spherical cavities therein, a ball arranged in said cavities, a U-shaped rod passed diametrically through said ball and pivotally connecting the same to the ankle section, and an inverted U-shaped rod passed through the center of the ball at right angles to the other rod and pivotally connecting said ball to the foot section, whereby the foot and ankle sections are provided with a universal connection, one of said rods being notched to pass the other rod at the center of the ball, and said ball having a cavity

in the center and opening on the surface thereof for permitting the formation of said notch after the rod is passed through the ball.

[Claims 6 to 9 not printed in the Gazette.]

1,215,836. SPARK-PLUG. ARDEN J. MUMMERT, St. Louis, Mo., assignor to McQuay-Norris Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed July 12, 1915. Serial No. 39,359. (Cl. 123—169.)

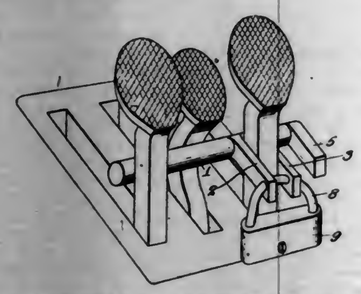


1. In combination with a socket provided with an inner shoulder, a one-piece insulating member or plug inserted into the socket and having a medial portion resting on said shoulder, an inner terminal extending inwardly beyond the shoulder, and an outer terminal projecting outside the socket, said outer terminal being provided with a series of peripheral ribs overhanging the socket and disposed in planes transverse to the axis of the plug.

2. In combination with a socket provided with an inner shoulder, a one-piece insulating member or plug inserted into the socket and having a medial portion resting on said shoulder, an inner terminal extending inwardly beyond the shoulder and an outer portion projecting outside the socket, said outer portion being formed with radiating peripheral ribs overhanging the socket and disposed in planes transverse to the axis of the plug and spaced apart, and proportioned to maintain the temperature of the plug at a temperature sufficiently low to prevent undue expansion and consequent cracking of the plug.

3. In combination with a socket, a one-piece insulating member or plug inserted into the socket, said plug having a ribbed portion projecting outside the socket, the ribs being disposed in planes transverse to the axis of the plug, and overhanging the socket.

1,215,837. AUTOMOBILE-LOCK. EDMUND T. NEEDHAM, San Antonio, Tex. Filed Apr. 15, 1916. Serial No. 91,393. (Cl. 70—90.)

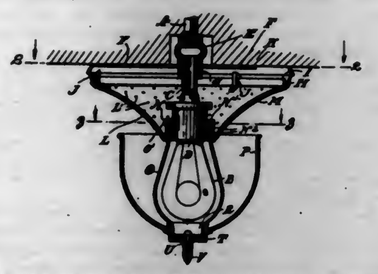


1. In an automobile lock, the combination of a plurality of control pedals extending upwardly through the footboard of the automobile, the central pedal being curved, while said end pedals are straight, a restraining rod comprising a piece of straight cylindrical material interposed between the pedals for contacting with the concaved edge of the central pedal and with the front edges of the end pedals, and a yoke carried by the said rod and embracing one of the end pedals said yoke adapted to receive the shackle of a padlock whereby the displacement of said rod is prevented.

2. In an automobile lock, the combination of a plurality of control pedals extending upwardly through the footboard of the automobile, said central pedal being curved, while said end pedals are straight, a restraining rod interposed between the pedals for contacting with the concave edge of the central pedal and with the front straight edges of the end pedals, a pair of arms extending at right angles from said rod and contacting with the sides of one of the end pedals, said arms provided with apertures at their free ends, and a padlock having its shackle extended through said apertures.

3. In an automobile lock, the combination of a plurality of control pedals extending upwardly through the footboard of the automobile, a rod interposed transversely between said pedals and contacting with the rear edge of said curved pedal and the front edges of said end pedals, whereby each alternate pedal will be disposed at opposite sides of said rod, a yoke embracing one of said end pedals and comprising a pair of arms integrally formed with said rod and extending at right angles therefrom and contacting with the sides of said end pedal, the ends of said arms having apertures for receiving the shackle of a padlock, the curve of said central pedal adapted to retain said rod above said foot-board.

1,215,838. LIGHTING-FIXTURE. HORATIO V. S. NEGUS, Boundbrook borough, N. J. Filed Oct. 20, 1916. Serial No. 126,696. (Cl. 240—78.)



1. In a device of the character described, the combination of a tube constructed to be supported in a substantially vertical position from a ceiling or the like, a lamp supported thereon and electric light service conductors therein, of a ring, members extending inwardly therefrom to a medial supporting point, and a collar at said point threaded on the exterior of said tube, whereby the ring and its said parts are supported and provided with vertical adjustment, the said ring having an inwardly projecting portion, a reflector consisting of an inverted cone-like metal member having a reflective under surface and whose diameter is approximately equal to the internal diameter of the ring, members projecting from the upper edges of said reflector beyond the inner edge of said inwardly projecting portion, constructed and arranged to overlie the same when passed to a position thereabove, whereby the said reflector is removably supported by the said inwardly projecting portion on the said ring.

2. In a device of the character described, the combination of a tube constructed to be supported in a substantially vertical position from a ceiling or the like, a lamp supported thereon and electric light service conductors therein, of a ring, members extending inwardly therefrom to a medial supporting point, and a collar at said point threaded on the exterior of said tube, whereby the ring and its said parts are supported and provided with vertical adjustment, the said ring having an annular inturned portion, a reflector consisting of an inverted cone-like member having an upper metallic layer and an under layer made of plastic material, and whose diameter is approximately equal to the internal diameter of the ring, spring members projecting from the upper edges of said reflector and constructed to be flexed by contact with said inturned portion and to extend beyond and over the same when the said upper edges of the reflector are pressed in contact with the ring, whereby the said reflector is secured to the ring by pressing it against the same and causing the said spring fasteners to engage.

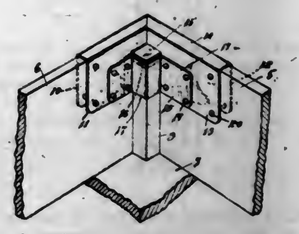
3. In a device of the character described, the combination of a tube constructed to be supported in a substantially vertical position from a ceiling or the like, a lamp supported thereon and electric light service conductors therein, of a ring, members extending inwardly therefrom to a medial supporting point, and a collar at said point threaded on the exterior of said tube, whereby the ring and its said parts are supported and provided with vertical adjustment, the said ring having an annular inturned portion, a reflector consisting of an inverted cone-like member having an upper metallic layer and an under layer made of plastic material, and whose diameter is approximately equal to the internal diameter of the ring, spring members projecting from the upper edges of said reflector and constructed to be flexed by contact with said inturned portion and to extend beyond and over the same when the said upper edges of the reflector are pressed in contact with the ring, whereby the said reflector is secured to the ring by pressing it against the same and causing the said spring fasteners to engage, a collar extending upwardly from the interior of the said reflector, the said reflector being provided with an opening surrounded by the said collar, a portion of the lamp being located in and held against lateral movement by the collar, and a globe surrounding the lamp suspended from said reflector.

4. In a device of the character described, the combination of a tube constructed to be supported in a substantially vertical position from a ceiling or the like, a lamp supported thereon and electric light service conductors therein, of a ring, members extending inwardly therefrom to a medial supporting point, and a collar at said point threaded on the exterior of said tube, whereby the ring and its said parts are supported and provided with vertical adjustment the said ring having an annular inturned portion, a reflector consisting of an inverted cone-like member having an upper metallic layer and an under layer made of plastic material, and whose diameter is approximately equal to the internal diameter of the ring, spring members projecting from the upper edges of said reflector and constructed to be flexed by contact with said inturned portion and to extend beyond and over the same when the said upper edges of the reflector are pressed in contact with the ring, whereby the said reflector is secured to the ring by pressing it against the same and causing the said spring fasteners to engage, a collar extending upwardly from the interior of the said reflector, the said reflector being provided with an opening surrounded by the said collar, a portion of the lamp being located in and held against lateral movement by the collar, spring members adapted to be compressed and passed into the said collar under tension, said collar having recesses at different levels to receive the same, and a globe supported by said spring members.

5. In a device of the character described, the combination of a tube constructed to be supported in a substantially vertical position from a ceiling or the like, a lamp supported thereon and electric light service conductors therein, of a ring, members extending inwardly therefrom to a medial supporting point, and a collar at said point threaded on the exterior of said tube, whereby the ring and its said parts are supported and provided with vertical adjustment, the said ring having an annular inturned portion, a reflector consisting of an inverted cone-like member having an upper metallic layer and an under layer made of plastic material, and whose diameter is approximately equal to the internal diameter of the ring, spring members projecting from the upper edges of said reflector and constructed to be flexed by contact with said inturned portion and to extend beyond and over the same when the said upper edges of the reflector are pressed in contact with the ring, whereby the said reflector is secured to the ring by pressing it against the same and causing the said spring fasteners to engage, a collar extending upwardly from the interior of the said reflector, the said reflector being provided with an opening surrounded by the said collar, a portion of the lamp being located in and held against lateral movement by the collar, spring members adapted to be compressed and passed into the said collar under tension, said collar having recesses to receive the same, and a globe supported by said spring members.

[Claims 6 to 10 not printed in the Gazette.]

1,215,839. BOX-CORNER. JOHN J. NERO, West Hartford, Conn. Filed May 26, 1915. Serial No. 30,539. (Cl. 217—69.)



1. A corner piece for boxes, the latter being composed of ends and sides with posts in the corners thereof, said corner piece including an edge piece resting upon the upper edges of the side and end of the box, downwardly extending plates to rest against the inner surface of said side and end, and a rest outturned from one of said downwardly extending parts to overlie and protect the end of said corner post, and also adapted to underlie a runner on the bottom of a box located above and resting upon said corner piece.

2. A corner piece for boxes, the latter being composed of ends and sides and with posts located in the corners thereof, said corner piece including outer and inner plates constructed to rest against the outer and inner faces of the side and end of a box at the corner thereof, an edge piece overlying the upper edge of said side and end, and a rest outturned from one of the inner plates at a distance from its upper edge in position to overlie and protect the end of said corner post, said rest also being adapted to underlie a runner on a box supported on said corner piece.

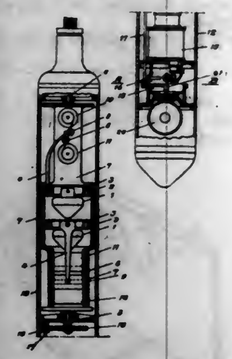
3. A corner piece for boxes, the latter being composed of ends and sides with posts in the corners thereof, said corner piece including a plate secured against the inner surface of the box, and a rest outturned from said plate at a distance from its upper edge to overlie and protect the end of said corner post, said rest being adapted to underlie a runner on the bottom of a box supported upon the upper edge of the box having said corner piece.

4. A corner piece for boxes, the latter being composed of ends and sides having posts located in the corners thereof, said corner piece comprising edge pieces overlying the upper edge of an end and side, inner plates extending downwardly to rest against the inner faces of said side and end, and a rest outturned from one of said downwardly extending plates at a distance from its upper edge to overlie and protect the end of said corner post, said rest being adapted to underlie the end of a runner on a box supported on said corner piece.

5. A corner piece for boxes, the latter being composed of ends and sides with posts located in the corners thereof, said corner piece comprising outer and inner plates resting against the outer and inner faces of one of said sides and ends of the box and with an edge piece joining said plates, and a rest outturned from one of said inner plates at a distance from the upper edge of said corner piece and in position to overlie and protect the end of a corner post, said rest being also adapted to underlie the end of a runner on the bottom of a box supported on said corner piece.

[Claims 6 to 15 not printed in the Gazette.]

1,215,840. DECLINATION-RECORDER FOR BORE-HOLES. FRITZ NEUROTH, Bruckhausen, Hamborn, Germany. Filed Dec. 19, 1914. Serial No. 878,181. (Cl. 234—1.)



1. Apparatus for indicating the declination of bore holes and the like, comprising in combination means for resolving the declination into two components at right angles to each other, means for separately recording said components, and means for maintaining the resolving means in fixed normal position with respect to compass bearing.

2. Apparatus for indicating the declination of bore holes and the like, comprising in combination means for resolving the declination into two components at right angles to each other, means for separately recording said components, means adapted to remain in an assumed normal position with respect to compass bearings, and means governed thereby to effect a compensatory movement of the resolving means upon departure of the resolving means from normal position with respect to compass bearing.

3. Apparatus for indicating the declination of bore holes and the like, comprising in combination an outer casing, a record member suitably mounted therein, means for marking the declination upon said record member, and means for automatically moving said marking means circumferentially to compensate for circumferential movement of the said outer casing.

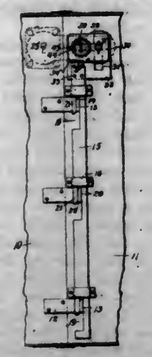
4. An apparatus for measuring the declination of the perpendicular, particularly in drilling holes, comprising an outer casing, an inner record casing independent of said outer casing, a plurality of pendulums, a plurality of Cardan rings connected with said pendulums and a plurality of recording members connected with said Cardan rings.

5. An apparatus for measuring the declination of the perpendicular, particularly in drilling holes, comprising an outer casing, an inner record casing mounted on a point bearing, a plurality of pendulums, a plurality of Cardan rings connected with said pendulums, a plurality of fingers each carrying a writing member at the outer end thereof and at the inner end connected to a Cardan ring, a reel of paper for receiving the markings of said fingers, a motor, a rolling electrical contact automatically connecting up said motor with the source of power, and a transmitting device connecting said motor and the means for determining the declination for maintaining the determining means in normal position with respect to compass bearing.

[Claim 6 not printed in the Gazette.]

1,215,841. TRUNK-LOCK. FREDERICK J. OHMES, Newark, N. J. Filed Sept. 23, 1916. Serial No. 121,737. (Cl. 70—115.)

1. Means for locking two sections of a trunk together comprising fixed locking members on one section, a slidable locking member on the other section, a trunk lock, and a pivot shaft for said lock extending through one of the trunk sections, said pivot shaft serving as a longitudinal guide for the slidable locking member.



2. Means for locking two sections of a trunk together comprising a notched bar on one section and coöperating engaging members on the other section, a trunk lock, a pivot shaft therefor, means whereby rotation of said shaft moves the bar endwise, and means whereby said shaft serves as a guide for the longitudinal movement of said bar.

3. In a device for holding two sections of a trunk together, a slidable locking bar on one section, means adapted for engagement therewith on the other section, a lock, a pivot shaft extending from said lock through a section of the trunk, a plate secured to said locking bar and having a slot wherein the pivot shaft is received, said plate also having a cam slot, and a cam member rotating with said pivot shaft and adapted to enter said cam slot and to cause reciprocation of the locking bar upon rotation of the lock and its pivot shaft.

4. In a device for locking two sections of a trunk together, a longitudinally slidable locking bar, locking members adapted to coact therewith, a plate secured to said locking bar and having one slot therein substantially parallel to said locking bar and another slot at substantially right angles thereto, a lock for the trunk, a pivot shaft for said lock extending through a trunk section and through the first named slot in said plate, a member on said shaft within the trunk and rotating therewith, a cam stud on said member extending into the second slot in said plate, and a ball bearing for mounting said cam stud in said member.

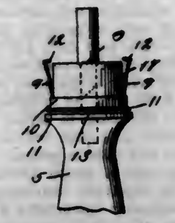
5. In a device for locking two sections of a trunk together, locking means on the interior of the trunk comprising a slidable member, a lock on the exterior of the trunk, a pivot shaft extending through the trunk, and means whereby upon rotation of said shaft said slidable locking member is reciprocated, said means including a member rotating with said shaft and a cam piece mounted thereon upon a ball bearing, and said cam piece having a non-rotatable connection with said slidable locking member.

[Claim 6 not printed in the Gazette.]

1,215,842. TOY FLIER. CHARLES OSBORN, Everett, Wash. Filed Apr. 21, 1916. Serial No. 92,770. (Cl. 244—2.)

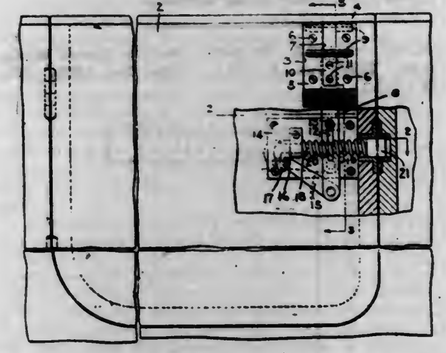
1. The combination with a rotary member and a flier therefor, of spring fingers carried by said rotary member to engage said flier, and a cord adapted to be wound upon said rotary member to hold said fingers engaged with said flier and to be operated to rotate said member, substantially as described.

2. The combination with a rotary member and a flier therefor, of arms carried by said rotary member and springing normally outwardly therefrom, fingers on the ends of said arms adapted to engage with the edges of said flier, and a cord adapted to be wound upon said rotary member to hold said arms with their fingers engaging said flier and to be operated to rotate said rotary member, substantially as described.



3. In a device of the class described, the combination with a flier having an apertured central portion with inclined vanes projecting therefrom, of a stock, a spindle on said stock, a rotary member on said spindle of the same diameter as the width of said central portion, the said central portion being adapted to rest upon said rotary member, spring arms secured at their inner ends to said rotary member at opposite points in the periphery thereof, the said arms springing normally outwardly from said member, inturned fingers on the ends of said arms adapted to engage over the edges of said central portion, and a cord for engagement around said rotary member to force said fingers over said central portion and to operate said rotary member, substantially as described.

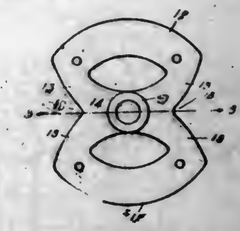
1,215,843. DOOR-LOCK. CHARLES A. PAINTER, Jr., and JAMES P. MCKINNEY, Jr., Pittsburgh, Pa. Filed Nov. 8, 1915. Serial No. 60,283. (Cl. 70—42.)



The combination of a door having a recess formed in its wall adjacent to the upper edge of the door, a guide-plate in said recess having a vertical slot, a T-shaped thumb piece comprising a flangelike cross-piece, and a tail-piece, said tail-piece having a sliding fit with said slot, a vertically-movable strap, said tail-piece resting in engagement with said strap and secured thereto, a bolt, and connections between said bolt and said vertically-movable strap whereby the operator with his hand on the upper edge of the door and the thumb engaging said cross-piece, obtains the purchase for raising said vertically-movable strap to release the bolt.

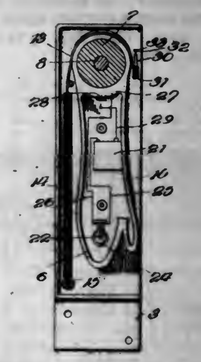
1,215,844. WATER-HEATER. WILLIAM C. PARSONS, Cleveland, Ohio, assignor, by mesne assignments, to The D. R. C. Water Heater Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 18, 1916. Serial No. 98,327. (Cl. 122—216.)

A water heater section comprising a central hub having a partition across the same, pipes 14 extending oppositely from said hub and connected thereto respectively above and below the partition, segmental pipes 12 at the rim, and a pair of branch pipes 13 connecting each of



the pipes 14 and the opposite ends of each of the segmental pipes, said ends and the branch pipes being spaced apart to form outer flues for heat.

1,215,845. AUTOMOBILE-SIGNAL. JAMES K. PAYNE, Santa Barbara, Cal. Filed May 29, 1916. Serial No. 100,667. (Cl. 177—311.)



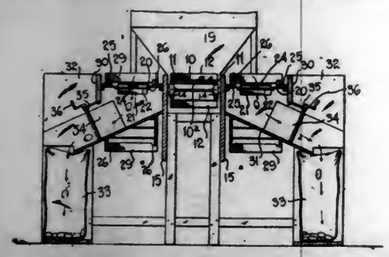
1. In an automobile signal, the combination of a support, a hollow indicator arm pivotally hung on the support, means for operating said arm, a lamp secured within the arm at the free end thereof, means for energizing said lamp mounted within the arm, contact members on the arm connected with the lamp and said energizing means respectively, and a movable coacting contact member mounted on the support lying normally out of the path of the first-mentioned contact members and arranged to be brought into said path.

2. In an automobile signal, the combination of a support, a hollow indicator arm pivotally mounted on the support, means for operating said arm, a lamp secured within the arm at the free end thereof, means mounted within the arm for energizing said lamp, contact plates secured upon an outer side of the arm in spaced relation and connected with the lamp and the said energizing means, respectively, a movable contact plate mounted on the support, means for bringing said movable contact plate into the path of the first-mentioned contact plates, and means for preventing engagement between the several contact plates.

1,215,846. POTATO-GRADER. JAMES PENDLEBURY and JAMES HEATLEY, Blackfoot, Idaho. Filed Mar. 27, 1916. Serial No. 87,048. (Cl. 130—32.)

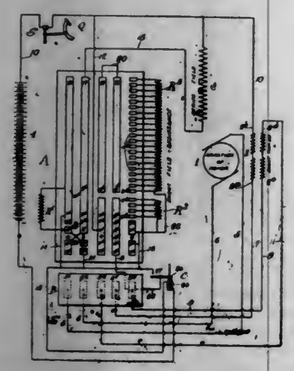
Means for assorting articles by weight including a table provided with a plurality of discharge openings, counterweighted trap doors arranged in said openings, the counterweights on the doors being successively lighter from the forward end to the rear end of the machine, said trap doors being each pivoted on an axis extending transversely of the machine whereby the trap doors move in planes parallel to the length of the machine, and each axis being disposed forward of the rear end of the corresponding

door whereby the rear end of the door will project upward when the forward end of the door is depressed, and a car-



rier traveling over the table and including transverse members adapted to engage the rear end of each door and positively shift it toward its closed position.

1,215,847. REGENERATIVE ELECTRIC-MOTOR SYSTEM AND CONTROLLER THEREFOR. DONALD W. PERIN, Newton, Mass. Filed Jan. 3, 1916. Serial No. 69,802. (Cl. 172—179.)



1. In combination with a motor having an armature and a shunt field, an armature resistance, a shunt field resistance, and a controller comprising a series of fixed contacts connected for rotating the armature in one direction and a series of fixed contacts connected to rotate the armature in reverse direction, and a series of movable contacts all carried by a single control member and moving together as one part, said movable contacts being adapted when the control member is moved in one direction to engage the first series of fixed contacts successively so as first to cut out the armature resistance and then to cut in the shunt field resistance, and when the control member is moved in the opposite direction being adapted to engage the second series of fixed contacts for reversing the armature.

2. In combination with a motor having an armature, a shunt field composed of two groups of coils, and an armature resistance, a controller comprising a series of fixed contacts, and a series of movable contacts, all the latter carried by a single control member and moving together as one part, adapted to coöperate with said fixed contacts, and connections between said controller and said motor, whereby the controller will first connect the two groups of shunt field coils in parallel, then cut out the armature resistance while said coils are still in parallel, and then connect said coils in series.

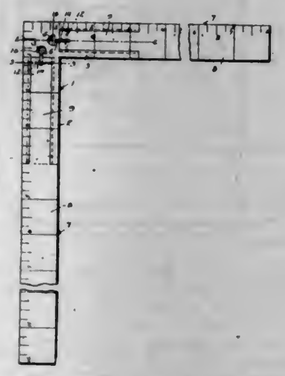
3. In combination with a motor having an armature, a shunt field composed of two groups of coils, and a shunt field resistance, a controller comprising a series of fixed contacts and a series of movable contacts, all the latter carried by a single control member and moving together as one part, adapted to coöperate with said fixed contacts and connections between said controller and said motor whereby the controller will first connect the two groups of shunt field coils in parallel, then cut out the armature resistance while said coils are still in parallel, then cut in field resistance while coils are still in parallel, until the speed of the motor is the same as it would be if the field were in series with no resistance in the field circuit, then connect said coils in series, with no resistance in the field circuit, and then cut in field resistance into circuit with said two coils in series.

4. In combination with a motor having an armature and a shunt field, an armature resistance, a shunt field resistance, and a controller comprising a series of fixed contacts and a series of movable contacts all carried by a single control member and moving together as one part, said movable contacts being adapted to engage the fixed contacts successively so as first to cut out the armature resistance and then to cut in the shunt field resistance, an electric control motor adapted to actuate said control member, a reversing switch adapted to control the current to the control motor and cause the latter to move the control member in either direction, and electrical means for actuating said reversing switch.

5. In combination with a motor, a controller comprising a series of fixed contacts and a series of movable contacts all carried by a single control member and moving together as one part, said movable contacts being adapted to engage the fixed contacts successively, an electric control motor adapted to actuate said control member, a reversing switch adapted to control the current to the control motor and cause the latter to move the control member in either direction, and means automatically to open the control motor circuit when the control member reaches neutral position or either extreme position.

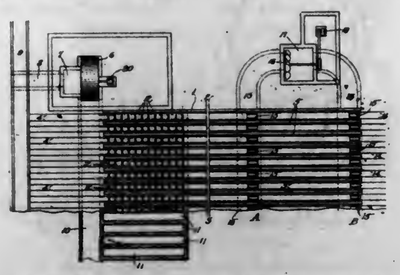
[Claim 6 not printed in the Gazette.]

1,215,848. SQUARE. ERNEST E. PERKINS, Council Bluffs, Iowa. Filed Jan. 9, 1915. Serial No. 1,395. (Cl. 33—114.)



A separable square comprising a body having arms arranged at right angles to one another, each of said arms provided with a dove-tail groove extending longitudinally thereof throughout its entire length, said body provided on its upper face with recesses which communicate with the inner ends of said grooves respectively, and inserts comprising body portions each having a reduced dove-tail extension at one end thereof, said dove-tail extensions adapted to extend into one of the dove-tail grooves of the arms, said extensions each provided with a slot at its end and arranged centrally of the side edges of the extensions, said slots being in alinement respectively with the recesses of the body, and locking members comprising stems, one end of each is pivotally mounted in the slot of one of the extensions, and transverse lugs formed on the free end of each stem, said lugs adapted to fit in the respective recesses of the body holding the inserts against longitudinal movement with relation thereto.

1,215,849. APPARATUS FOR DRYING WARES MADE FROM TENDER CLAY. RALPH O. PERROTT, Bucyrus, Ohio, assignor to American Clay Machinery Company, Chicago, Ill., a Corporation of Ohio. Filed Aug. 14, 1913. Serial No. 784,737. (Cl. 34—46.)



1. An apparatus of the kind described comprising a drying tunnel to receive clay ware, means to apply a relatively high degree of heat through one section of said tunnel, and means to supply a relatively low primary curing heat to the clay ware in another section in advance of said highly heated section, said heat applying means including means to create forced draft through both said sections, and mechanism to regulate the draft and control the heat to each section.

2. An apparatus of the kind described, comprising a plurality of drying tunnels, a source of heat supply common to all of said tunnels at one end, and means at the other end of said tunnels to adjust the heat supply through said tunnels in a predetermined length of each tunnel.

3. An apparatus of the kind described, comprising a plurality of drying tunnels, a source of heat supply common to all of said tunnels at one end, and means at the other end of said tunnels to adjust the heat supply through said tunnels in a predetermined length of each tunnel, in combination with means to create a forced draft for the heat supply, and draft creating means at the other end of the tunnels.

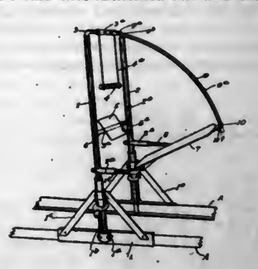
4. An apparatus of the kind described, comprising a plurality of longitudinal drying tunnels, a transverse conduit for heat supply at the exit end of said tunnels, having passages from said conduits to each tunnel intercepted by it, and a plurality of transverse tunnels near the entrance ends of said tunnels having vent openings from each tunnel therein, whereby a preheating zone is provided in each tunnel near the entrance end, means to create a draft therethrough, and means to regulate the draft supply through said preheating zone of each tunnel.

1,215,850. INVALID'S-BED ATTACHMENT. ANNA R. POTTS and JESSE M. CROW, San Diego, Cal. Filed July 15, 1914. Serial No. 851,080. (Cl. 5—41.)

1. In a bed attachment for invalids, the combination of readily attachable and detachable vertical supports, a horizontal bar telescopically mounted in the upper ends of said supports and a back rest adjustably mounted on said supports and said horizontal bar.

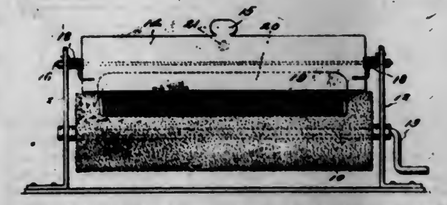
2. In a bed attachment for invalids, the combination of supports adapted to be readily secured to the sides of a bed frame, vertical supports mounted therein, a horizontal bar telescopically mounted in the upper ends of said supports and a back rest adjustably mounted on said supports and said horizontal bar.

3. In a bed attachment for invalids, the combination of readily attachable and detachable vertical supports, a horizontal bar telescopically mounted in the upper ends of said supports, another horizontal bar mounted intermediate the ends of said supports, a back rest pivotally mounted on said last mentioned bar and means connecting



the upper end of said back rest with said first mentioned bar tending to move said back rest to a vertical position when the weight is relieved therefrom.

1,215,851. COMB-CLEANER. ARTHUR L. PRICE, Toronto, Kans. Filed Apr. 14, 1916. Serial No. 91,126. (Cl. 132—17.)



1. A cleaning device comprising standards, a rotary operating element connected with said standards, a clamp pivotally mounted adjacent said operating element and including jaws yieldably held in a closed position, and means yieldably holding said clamp in a position to retain an article held thereby in engagement with said operating element.

2. A cleaning machine of the character described comprising supports, a rod connected with said supports, a clamp pivotally supported by said rod and including jaws yieldably held in a closed position, resilient means engaging said clamp to yieldably hold the same in an operative position, and a cleaning element rotatably mounted beneath said clamp.

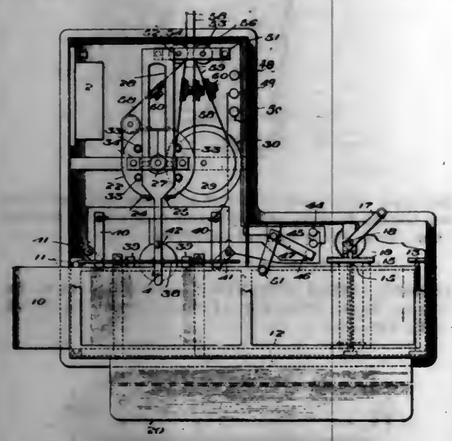
3. A cleaning device comprising supports, an operating element rotatably connected with said supports and positioned between the same, a rod connected with said supports and extending between the same, a clamp comprising jaws pivotally mounted by said rods and extending longitudinally of said operating element, means for releasably holding said jaws in a closed position, and means for yieldably holding said clamp in an operative position with respect to said operating element.

1,215,852. ELECTROMECHANICAL TELAUTOGRAPH. JOE B. RAWLINGS, Memphis, Tenn. Filed May 12, 1916. Serial No. 97,042. (Cl. 33—23.)

1. In a telautograph, duplicate machines, each adapted to serve as a transmitter or receiver, and each comprising the combination with a writing member, of electro-magnetic means for causing it to coöperate with the surface to be written upon, and mechanical means for shifting said writing member to effect writing, and mechanical connections between the writing members of the respective machines whereby they move in unison.

2. In a telautograph, duplicate machines, each adapted to serve as a transmitter or receiver, and each comprising the combination with a writing member, of electrical contacts operated thereby when said writing member is moved into or out of engagement with the surface to be written

upon, electro-magnetic means for causing said writing member to coöperate with the surface to be written upon, circuits including the contacts and electro-magnets, mechanical means for shifting said writing member to effect writing, and mechanical connections between the writing members of the respective machines whereby they move in unison.



3. In a telautograph, duplicate machines, each adapted to serve as a transmitter or receiver, and each comprising the combination with a writing member, of electrical contacts operated thereby when said writing member is moved into or out of engagement with the surface to be written upon, and electro-magnetic means for causing said writing member to coöperate with the surface to be written upon, said contacts being in circuit with said electro-magnetic means.

4. In a telautograph, the combination with a writing member movable in any direction, of electrical contacts, a movable contact plate with which the writing member has a loose relative sliding engagement when moved in one direction and which positively moves the plate and causes it to coöperate with said contacts when said writing member is moved into engagement with the surface to be written upon, and means for shifting the writing member to effect writing.

5. In a telautograph, the combination with a writing member movable in any direction, of electrical contacts, a movable contact plate with which the writing member has a loose relative sliding engagement when moved in one direction and which positively moves the plate and causes it to coöperate with said contacts when said writing member is moved into engagement with the surface to be written upon, means for shifting the writing member to effect writing, and electro-magnetic means for holding the said writing member in engagement with the surface to be written upon, to thereby hold the plate depressed and the contacts engaged.

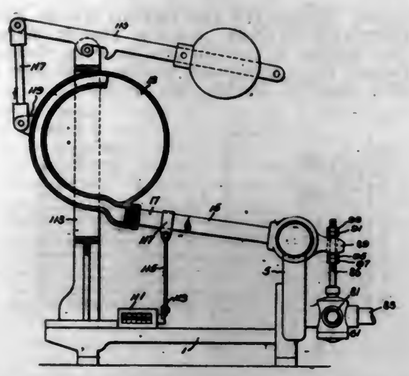
[Claims 6 to 35 not printed in the Gazette.]

1,215,853. TRAP. FRANK O. RAY, Nashua, N. H. Filed Apr. 9, 1915. Serial No. 20,295. (Cl. 137—101.)

1. The combination with a support, of a receiver mounted thereon, an admission valve, a steam valve, a vent valve, a fitting containing all of said valves, and means for automatically operating said valves on movement of said receiver.

2. The combination with a receiver 13, of a support 5 therefor having a water admission duct 55 communicating with said receiver, a steam admission duct 57 separate from said water admission duct communicating with said receiver, a water admission valve for one of said ducts, a steam admission valve for the other duct, a fitting containing both of said valves, and means for automatically operating said valves on movement of said receiver.

3. The combination with a support, of a receiver mounted thereon, a water admission valve, a vent valve, a fitting containing both of said valves, and means for automatically operating said valves on movement of said receiver.

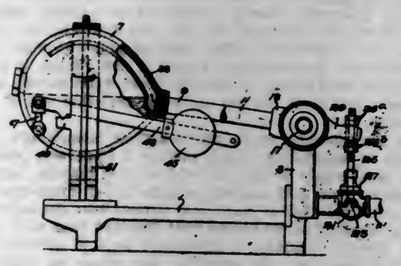


4. The combination with a support of a receiver mounted thereon, a water admission valve, a water discharge valve, a steam admission valve, a fitting containing all of said valves, and means for automatically operating said valves on movement of said receiver.

5. The combination with a support, of a receiver mounted thereon, a water admission valve, a discharge valve, a vent valve, a fitting containing all of said valves, and means for automatically operating said valves on movement of said receiver.

[Claims 6 to 24 not printed in the Gazette.]

1,215,854. TRAP. FRANK O. RAY, Nashua, N. H. Filed Apr. 28, 1915. Serial No. 24,565. (Cl. 137—103.)

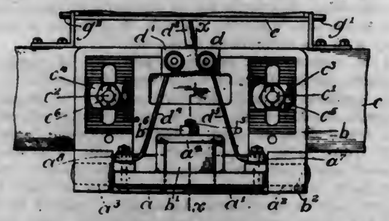


A steam trap comprising a standard 1 having a yoke 3, 5 and an upright 51 provided with a stop, a tilting receiver 7 fulcrumed on said yoke, a pair of short levers connected to opposite sides of said receiver and fulcrumed on said upright at opposite sides of said receiver, said levers having ends projecting toward said yoke, and counterbalance weights mounted on said levers, said weights and levers having provision for preventing undue pounding of said receiver against said stop.

1,215,855. CONTACT-SHOE FOR THIRD-RAIL ELECTRIC CARS. CHARLES F. RAYDURE, West Philadelphia, Pa. Filed Apr. 24, 1916. Serial No. 93,153. (Cl. 191—49.)

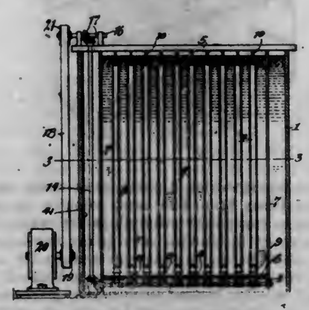
In an electric railway provided with a third rail conductor, a contact shoe for said conductor, comprising a supporting member arranged to be connected to the car truck-beam and having electrical connections, said member having upturned end bearings and a centrally located rectangular-shaped housing for a spring-controlled bolt mounted therein and an oblong flat face overrun contact shoe-member arranged with a centrally located projecting

rectangular-shaped bridge-piece and end pintles, said bridge-piece spanning the housing of said supporting member and the pintles thereof engaging the upturned bearings of said supporting member, the spring-controlled bolt held in the housing of said supporting member extending through the bridge-piece of said contact shoe-member, means detachably applied to said bolt above said bridge-piece to readily increase or decrease the tension of said contact and supporting members in respect to each other, and cables from the electrical connections of said supporting-member with said contact shoe-member, and positioned



by nuts applied to bearings of said overrun contact shoe-member on opposite sides of the bridge-piece thereof, the arrangement being such that said contact shoe-member can be instantly parted from said supporting member without disturbing the same by simply removing the nut of said spring controlled bolt and loosening the nuts from the bearings of said contact shoe-member by which the electrical connections with said supporting-member are held in reliable working condition with said contact shoe-member.

1,215,856. APPARATUS FOR ELECTROPLATING TUBES. NELSON H. RAYMOND, Buffalo, N. Y., assignor to Clifton Manufacturing Company, Jamaica Plain, Mass., a Corporation of New Jersey. Filed Aug. 1, 1914. Serial No. 854,552. (Cl. 204—11.)

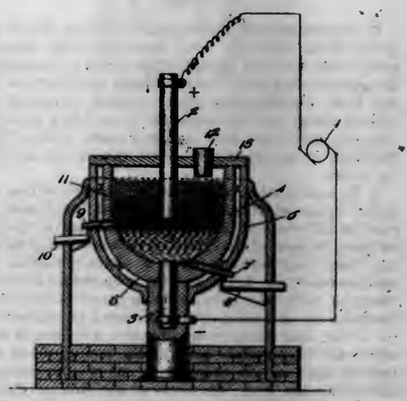


1. An electroplating apparatus comprising a tank adapted to hold an electroplating solution, anodes arranged within said tank, and means for supporting a tube to be plated in said tank and turning the same about its axis comprising a rotatable driving spindle having a conical end adapted to engage with one end of said tube, a rack on which said spindle is journaled, and means for turning said spindle comprising a worm wheel arranged on said spindle, and a worm journaled on said rack and meshing with said worm wheel.

2. An electroplating apparatus comprising a tank adapted to contain an electroplating solution, and means for supporting a tube to be plated in an upright position in said tank and rotating the same about its axis comprising a rack arranged in said tank, a vertical driving spindle journaled on the lower part of said rack and provided at its upper end with a conical stem engaging with the lower end of said tube, a vertical centering pin arranged on the upper part of said rack and entering the upper end of said tube, and means for turning said spindle, comprising a worm wheel arranged on said spindle, a horizontal shaft journaled on the rack and provided with a worm wheel, and an upright shaft journaled on the rack and operatively connected at its lower end with said horizontal shaft.

3. An electroplating apparatus comprising a tank adapted to hold an electroplating solution, anodes arranged in said tank, and means for supporting a tube to be plated in said tank and turning the same about its axis comprising a spindle rotatable about its own axis and having a conical end adapted to engage with an end of said tube, a support on which said spindle is journaled, and means for turning said spindle.

1,215,857. PROCESS OF PRODUCING METALLIC ALLOYS. MICHAEL A. REBERT, York, Pa. Filed Apr. 8, 1914, Serial No. 830,526. Renewed May 23, 1916. Serial No. 99,439. (Cl. 204—63.)



1. The steps in the process of producing metallic alloys which consist in subjecting a compound containing fluorin to a temperature sufficient to melt said compound, and to the action of an electric current to free its fluorin; in adding a compound containing the metal to be alloyed to said molten compound and thereby causing said fluorin to free said metal from its combination; and in permitting the metal thus freed to form a bath suitable for alloying said metal with another metal, substantially as described.

2. The process of producing a metallic alloy which consists in subjecting a compound containing fluorin to a temperature sufficient to melt said compound, and to the action of an electric current to free the fluorin; in adding a compound containing one of the constituents of said alloy to said molten compound and thereby causing said fluorin to free said constituent from its combination; and in causing said constituent to enter into the desired alloy, substantially as described.

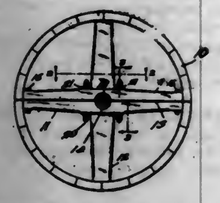
3. The process of producing an alloy of nickel and iron which consists in subjecting a fluorid to a temperature sufficient to melt the same and to the action of an electric current to free the fluorin; in adding a compound of nickel to said fluorid and thereby causing the freed fluorin to act upon said nickel compound to free the nickel; and in causing the nickel thus obtained to come in contact with molten iron, substantially as described.

4. The process of producing a ferro-nickel alloy which consists in subjecting fluorid of calcium and nickeliferous ore containing iron to a temperature sufficient to melt the fluorid and to the action of an electric current to free the fluorin thereby causing the iron and nickel to be reduced and later to become alloyed, substantially as described.

1,215,858. SPLIT-PULLEY CLAMP. MILTON O. REEVES, Columbus, Ind., assignor to Reeves Pulley Company, Columbus, Ind., a Corporation of Indiana. Filed July 22, 1916. Serial No. 110,621. (Cl. 64—18.)

1. In combination, a wood split pulley, the two halves of said pulley being provided with diametral cross bars

which meet on the plane of the split, two series of clamping bolts on opposite sides of the center of such cross bars for clamping them together and upon a shaft, clamping plates against which the heads and the coöperating nuts of said clamping bolts bear, said clamping plates being of greater thickness at an intermediate bolt than at an end bolt of the series.

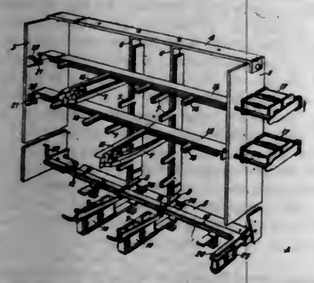


2. In combination, a split pulley, the two halves of said pulley being provided with diametral cross bars which meet on the plane of the split, two series of clamping bolts on opposite sides of the center of such cross bars for clamping them together and upon a shaft, clamping plates against which the heads and the coöperating nuts of said clamping bolts bear, said clamping plates being of greater thickness at an intermediate bolt than at an end bolt of the series.

3. In combination, a split pulley, the two halves of said pulley being provided with diametral cross bars which meet on the plane of the split, two series of clamping bolts on opposite sides of the center of such cross bars for clamping them together and upon a shaft, clamping plates against which the heads and the coöperating nuts of said clamping bolts bear, said clamping plates being of greater thickness at an intermediate bolt than at an end bolt of the series, said plates being provided with bosses through which the intermediate bolts of the series project so that the bolt head and the coöperating nut of each intermediate bolt is farther from the plane of the split of the pulley than are the bolt head and coöperating nut of the next bolt toward the end of the series.

4. In combination, a split pulley, the two halves of said pulley being provided with diametral cross bars which meet on the plane of the split, two series of clamping bolts on opposite sides of the center of such cross bars for clamping them together and upon a shaft, and means for raising the heads and coöperating nuts of intermediate clamping bolts of said series farther from the plane of the split than are the heads and coöperating nuts of the end bolts of said series.

1,215,859. SWITCH MECHANISM. JOHN NEWBERRY REYNOLDS, Greenwich, Conn., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 22, 1916. Serial No. 99,115. (Cl. 179—27.5.)

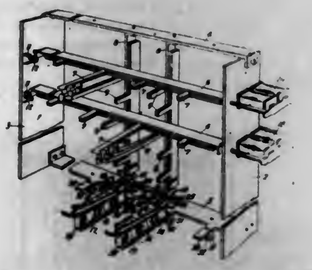


1. In a connecting switch, a plurality of trunk bars, contacts on said trunk bars, a plurality of line bars, contacts on said line bars adapted to engage the contacts on said trunk bars, individual means for displacing each of said trunk bars into position to have its contacts engaged by the contacts of said line bars, and a latching plate common to all of said trunk bars for retaining a trunk bar in displaced position.

2. In a connecting switch, a plurality of trunk bars, contacts on said bars, a plurality of line bars, contacts on said line bars adapted to engage with the contacts on said trunk bars, an individual electromagnet for each trunk bar adapted to move it into position to have its contacts engaged by the contacts of said line bars, a movable latching bar common to all of said trunk bars for latching said trunk bars in displaced position, and an electromagnet for operating said latch bar to release a displaced one of said trunk bars when the contacts thereon are in engagement with the contacts on a line bar.

3. In a connecting switch, a plurality of trunk bars, contacts carried by said trunk bars, a plurality of line bars, contacts on said line bars adapted to engage the contacts on said trunk bars, a latch member on each of said trunk bars, an electromagnet individual to each of said trunk bars, an armature for said electromagnet adapted when said electromagnet is energized to engage said latch member and move said trunk bar into a displaced position, a swinging latch plate common to all of said trunk bars, projections thereon adapted to be engaged by the latch member of a displaced trunk bar, and a releasing magnet for swinging said latch plate to release the latch member of a displaced trunk bar.

1,215,860. TELEPHONE SWITCH MECHANISM. JOHN NEWBERRY REYNOLDS, Greenwich, Conn., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 22, 1916. Serial No. 99,116. (Cl. 179—27.5.)



1. In a switching device, a plurality of trunk bars, contacts on the trunk bars, line bars, contacts on the line bars adapted to engage the contacts on the trunk bars, an individual magnet for moving each of the trunk bars into a displaced position for engagement between the contacts of line and trunk bars, latching means individual to each of said trunk bars for holding them in a displaced position, and an individual release magnet for each of said latching means.

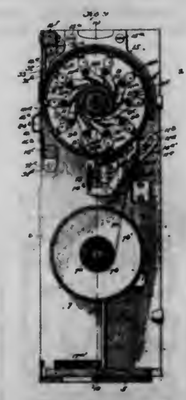
2. In a switching device, a plurality of trunk bars, contacts on the trunk bars, line bars, contacts on the line bars adapted to engage the contacts on the trunk bars, a frame supporting the trunk and line bars, an individual operating electromagnet for moving each of the trunk bars into displaced position for engagement between the contacts of line and trunk bars, latching means for holding each of said trunk bars in displaced position, a magnet individual to each of said trunk bars for causing the release thereof, and means for removably supporting said operating and releasing electromagnets on said frame.

3. In a switching device, a plurality of line bars, contacts on the line bars, trunk bars, contacts on the trunk bars, said trunk bars being adapted to be moved into a displaced position to have their contacts engaged by the contacts on said line bars, an electromagnet for moving each of said trunk bars into a displaced position, a latch for each of said trunk bars, a release magnet for controlling each of said latches, a frame in which said bars are supported, and a removable bracket carried by said frame upon which the operating and release magnets individual to a trunk bar are mounted.

1,215,861. COMPOSITION OF MATTER FOR SEALING PNEUMATIC TUBES. ALLEN J. RHEUBOTTOM, New Albany, Ind. Filed Aug. 14, 1916. Serial No. 114,693. (Cl. 106—23.)

As a new article of manufacture, a composition of matter composed of cameta, caucho ball, and accra flake, substantially as and for the purpose described.

1,215,862. VENDING-MACHINE. CHARLES FRANCIS RICHARDSON, Woonsocket, R. I., assignor, by mesne assignments, to George B. Pitts, trustee, Cleveland, Ohio. Filed Dec. 31, 1910, Serial No. 600,254. Renewed Apr. 3, 1915. Serial No. 19,036. (Cl. 211—8.)



1. The combination of a feed or delivery wheel for a strip of material, a strip engaging member carried by said wheel and extending through the periphery thereof, means for moving said member substantially circumferentially of said wheel, and means for rotating said wheel.

2. The combination of a wheel for delivering a strip of material, said wheel being formed with an opening in its periphery, a device mounted in said opening and movable in opposite directions substantially circumferentially of the wheel for engagement with the strip of material, and means for moving the device in one direction.

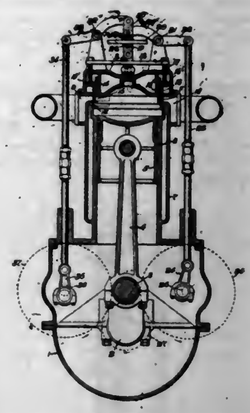
3. The combination of a wheel for delivering a strip of material, said wheel being formed with an opening in its periphery, a device mounted in said opening and movable in opposite directions substantially circumferentially of the wheel for engagement with the strip of material, means for moving the device in one direction, and means for moving the device in the opposite direction.

4. The combination of a wheel for delivering a strip of material, said wheel being formed with an opening in its periphery, a device pivotally mounted on the wheel, the free end of said device being mounted in the opening in the periphery and movable substantially circumferentially of the wheel for engagement with the strip, and means for moving said device on its pivot.

5. In a machine of the class described, the combination of a delivery drum or wheel adapted to feed forwardly a strip of stamps or tickets separated by lines of perforations, spaced perforation finding devices carried by said wheel and extending beyond the periphery thereof and adapted to move in a direction substantially circumferential of the wheel to find the perforations of the strip, and means for operating the said devices successively.

[Claims 6 to 53 not printed in the Gazette.]

1,215,863. INTERNAL-COMBUSTION ENGINE. ANDREW L. RIKER, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed May 16, 1910. Serial No. 561,751. (Cl. 123—75.)

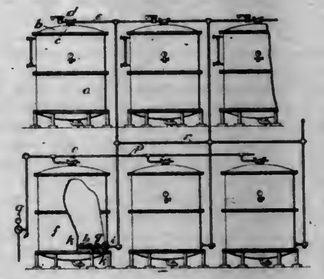


1. An internal combustion engine comprising in combination, a cylinder having admission and exhaust ports, and a piston reciprocable therein, two concentric sleeve valves within the cylinder slidable upon each other and located beyond the limits of piston travel and each provided with an admission and an exhaust port, a cylinder head extending within the inner sleeve valve, and means differentially to operate said valves.

2. A four cycle internal combustion engine comprising in combination a cylinder having admission and exhaust ports, a piston reciprocable therein, two arc-shaped slide valves positioned within the cylinder beyond the limits of piston travel and one within the other and both ported to control the admission and the exhaust, and means to operate said valves to open the admission port during an outward stroke of the piston and to open the exhaust port during an inward stroke of the piston of the same cycle.

3. An internal combustion engine comprising a cylinder, a cylinder head, said cylinder having admission and exhaust ports, independently movable arc-shaped valve plates working between the walls of the cylinder and the cylinder head and beyond the rearward limits of piston travel, and means for moving said valve plates.

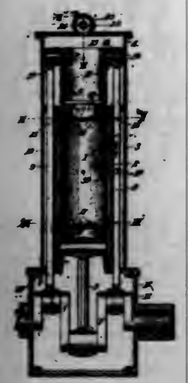
1,215,864. APPARATUS FOR CARBONATING BEER, ALE, AND THE LIKE. OTTO P. RINDELHARDT, London, Ontario, Canada. Filed Oct. 15, 1913. Serial No. 795,255. (Cl. 261—125.)



In an apparatus for carbonating beer, ale, and the like, a distributer comprising an annular ring, a hollow pipe

connection therefor, said ring having passages leading from the bore of the hollow pipe connection to the bore of the ring, clamping members removably secured to the side faces of said ring, and permeable covers contained between the side faces of the ring and the clamping members and forming therewith a distributing chamber into which the carbonic acid gas is discharged through said passages from the bore of the hollow pipe connection.

1,215,865. INTERNAL-COMBUSTION ENGINE. PHILIP E. RISHEL, Washington, D. C., assignor of two-fifths to Solon E. Rose, U. S. Navy; Julia B. Rishel administratrix of said Philip E. Rishel, deceased. Filed Oct. 22, 1910, Serial No. 588,466. Renewed Nov. 16, 1915. Serial No. 61,856. (Cl. 123—51.)



1. In an internal combustion engine, a power cylinder having tangentially directed inlet ports and having two power pistons, a closed compression cylinder for fuel gas coaxial and communicating with said power cylinder and of larger diameter, means for admitting a combustible mixture to the compression cylinder, one of said power pistons having bearing surfaces upon both of said cylinders, a crank-shaft, a central connecting rod operatively connected with one of said pistons, and lateral connecting rods operatively connected with the other of said pistons.

2. In an internal combustion engine, a power cylinder having tangentially directed inlet ports and exhaust ports near opposite ends thereof, a crank-shaft, a power piston in said cylinder operatively connected with said crank-shaft, a closed compression cylinder for fuel gas larger than and communicating with said power cylinder and coaxial therewith, means for admitting a combustible mixture to the compression cylinder, a second power piston having bearing surfaces upon both of said cylinders, and operative connections between said second cylinder and said crank-shaft.

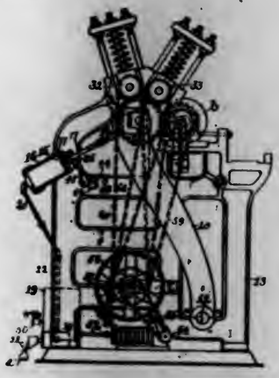
3. In an internal combustion engine, a power cylinder, a closed compression cylinder co-axial with said power cylinder and of larger diameter, means for admitting a combustible mixture to the compression cylinder, a crank-shaft, two power pistons in said power cylinder operatively connected with said crank-shaft, one of said power pistons having a bearing surface in said compression cylinder, inlet ports communicating with said compression cylinder and disposed near one end of the power cylinder and inclined to radii of the cylinder, and exhaust ports near the opposite end of said power cylinder.

4. In an internal combustion engine, a power cylinder having a plurality of inlet and exhaust ports near opposite ends thereof, said inlet ports disposed at an angle to radii of the cylinder, a closed compression cylinder having ports at its lower end and co-axial with said power cylinder and of larger diameter, means for admitting a combustible mixture to the compression cylinder, two power pistons in said power cylinder, one of said pistons having a bearing surface on the compression cylinder, and conduits extending between said compression cylinder ports and said inlet ports.

5. In an internal combustion engine, a power cylinder provided with tangentially directed inlet ports and having two pistons, a closed compression cylinder for fuel gas co-axial with said power cylinder and of larger diameter, means for admitting a combustible mixture to the compression cylinder, means for transferring the mixture when compressed from the compression cylinder to the inlet ports of the power cylinder, one of said power pistons having an annular flange providing a bearing surface in said compression cylinder, a crank shaft, a central connecting rod operatively connected with one of said pistons, and lateral connecting rods secured to the flange of the other piston.

[Claims 6 to 9 not printed in the Gazette.]

1,215,866. LEATHER-WORKING MACHINE. WESLEY C. ROCHE, Beverly, Mass., assignor to The Turner Tanning Machinery Company, Peabody, Mass., a Corporation of Maine. Filed May 2, 1914. Serial No. 836,002. (Cl. 149—16.)



1. In a machine of the character described, in combination, a bed roll, swing arms in which said bed roll is mounted, an operating tool coöperating with said bed roll, a feed roll coöperating with said bed roll, pistons connected with said swing arms, cylinders in which said pistons are moved, a supply for fluid pressure connected with said cylinders to supply the latter with fluid under pressure to move the swing arms and the bed roll into their operative positions, and means to control the supply of fluid pressure to said cylinders, substantially as described.

2. In a machine of the character described, in combination, a work support, swing arms carrying said work support, pistons connected with said swing arms, cylinders in which said pistons are moved, a supply for fluid pressure connected with said cylinders, and means for controlling the supply of fluid to said cylinders.

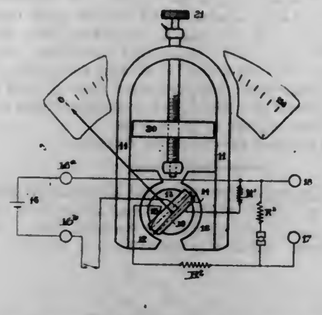
3. In a machine of the character described, in combination, a work support, swing arms carrying said work support, pistons connected with said swing arms, cylinders in which said pistons are moved, a supply for fluid pressure connected with said cylinders, and means for controlling the supply of fluid to said cylinders, and means for admitting air into said cylinders behind the pistons to form air cushions therein.

4. In a machine of the character described, in combination, an operating member, a work-support movable bodily toward and from said operating member, means actuated by fluid pressure to move said work-support toward said operating member and into its operative position and to allow said work-support to respond to inequalities in the thickness of the work while the work-support is in its operative position, and means for feeding the work past said operating member.

5. In a machine of the character described, in combination, a work-supporting member, and an operating member coöperating therewith, one of said members being bodily movable toward the other, fluid-operated means to move said bodily movable member toward said coöperating member and into operative position with relation thereto and to allow said bodily movable member to respond to inequalities in the thickness of the work while said bodily movable member is in its operative position, and means for feeding the work past said operating member.

[Claims 6 to 8 not printed in the Gazette.]

1,215,867. OHMMETER. BURCHARD P. ROMAIN, South Orange, N. J., assignor to Weston Electrical Instrument Company, Newark, N. J., a Corporation of New Jersey. Filed Oct. 3, 1914. Serial No. 864,797. (Cl. 171—95.)



1. An ohmmeter having a movable system comprising two windings, one of which forms part of a branch circuit of definite resistance, the other adapted to be connected in series with the unknown resistance to be measured, resilient means for controlling the position of said movable system, and means for producing a magnetic flux through said windings.

2. An ohmmeter having a movable system comprising two windings, one of which forms part of a branch circuit of definite resistance, the other adapted to be connected in series with the unknown resistance to be measured, said coils being wound and disposed to exactly balance the effects of one another on the movable system when the current divides between them in a certain relation, resilient means for opposing motion of the movable system away from a certain position, and means for producing a magnetic flux through said windings.

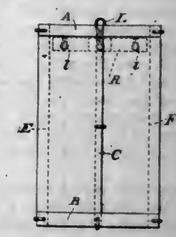
3. An ohmmeter having a movable system comprising two windings, one of which forms part of a branch circuit of definite resistance, the other adapted to be connected in series with the unknown resistance to be measured, means for connecting a battery to cause current to flow through such divided circuit, resilient means for controlling the position of said movable system, and means for producing a magnetic flux through said windings.

4. An ohmmeter having a movable system comprising two windings, one of which forms part of a branch circuit of definite resistance, the other adapted to be connected in series with the unknown resistance to be measured, said coils together producing a zero resultant magnetic torque when the unknown resistance is zero, resilient means for controlling the position of said movable system, and means for producing a magnetic flux through said windings.

5. An ohmmeter having a movable system comprising two windings, one of which forms part of a branch circuit of fixed or definite resistance, the other adapted to be connected in series with the unknown resistance to be measured, resilient means for maintaining the position of said movable system normally poised at zero resistance and yielding to permit the greatest movement thereof when the greatest resistance to be measured is so connected, and means for producing a magnetic flux through said winding.

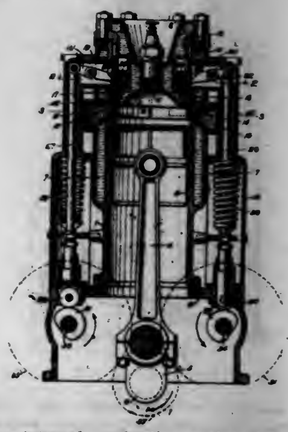
[Claims 6 to 17 not printed in the Gazette.]

1,215,868. CLOTHES-BAG. LEO ROSENFELD, Philadelphia, Pa. Filed Feb. 14, 1916. Serial No. 78,215. (Cl. 229—68.)



A dust and moth proof clothes bag comprising a single rectangular blank of flexible material provided with a plurality of rows of scored lines along which the blank is adapted to be folded to form a completely closed bag having bellows folds at each side, and further provided with a front fold adapted to form an opening the entire length of the bag, top and bottom folds forming openings and capable of varying the length of the bag and removable spring fasteners for maintaining independent closures along the several folds.

1,215,869. INTERNAL-COMBUSTION ENGINE. ADOLPH ROSNER, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed May 1, 1911. Serial No. 624,324. (Cl. 123—75).



1. In an internal combustion engine the combination with a fixed cylinder having a bore of uniform diameter, oppositely disposed admission and exhaust ports at the rear of the working space, a piston, and a pair of independently movable and oppositely disposed non-cylindrical arc-shaped slide valves seated against the interior cylinder walls beyond the rearward limit of piston travel and means for independently moving said valves for opening and closing said ports.

2. In an internal combustion engine, the combination with a cylinder, of a piston, said cylinder having admission and exhaust ports in the explosion chamber, independent slide valve plates arranged to open and close said ports and located beyond the rearward limit of piston travel, said valve plates being exposed to the pressure of

the working cylinder space and means for independently moving said valve plates.

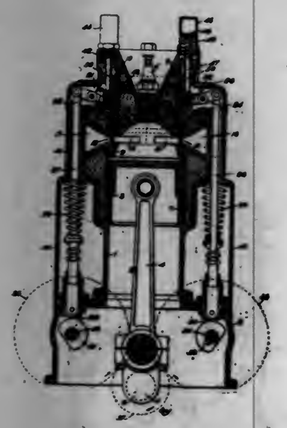
3. In an internal combustion engine, the combination with a cylinder, of a piston, said cylinder having admission and exhaust ports at the rear of the cylinder chamber, independent arc-shaped segmental valve plates arranged to open and close said ports and located beyond the rearward limit of piston travel, said valve plates being exposed to the pressure of the working cylinder space, and means for independently moving said valve plates.

4. In an internal combustion engine, the combination with a cylinder, a piston, said cylinder having a port, a slide valve plate seated upon the wall of said cylinder and controlling said port, said valve being automatically seated by the pressure of the gas contained within the cylinder space, and means for moving said valve plate, said wall having an opening covered by the valve and separate from the port, through which opening the valve moving means passes.

5. An internal combustion engine comprising a cylinder having a water jacketed working space, a water jacketed cylinder head, said cylinder having admission and exhaust ports and independently movable arc-shaped valve plates automatically seated by exposure to the pressure of the gas within the cylinder, said plates working between the walls of the cylinder and the cylinder head and out of the direct path of heat dispersion from the working space to the water jacket.

[Claims 6 to 25 not printed in the Gazette.]

1,215,870. INTERNAL-COMBUSTION ENGINE. ADOLPH ROSNER, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed Oct. 4, 1911. Serial No. 652,776. (Cl. 123—75.)



1. In an internal combustion engine, the combination with a cylinder of a piston, said cylinder having admission and exhaust ports, means for controlling said ports comprising a pair of arc-shaped segmental plates controlling one the admission port and the other the exhaust port, and a cylinder head having a portion projecting into the cylinder and providing space between the head and the cylinder to receive the plates, said head overlapping said plates on opposite sides of said cylinder port.

2. In an internal combustion engine, the combination with a cylinder of a piston, a cylinder head, said cylinder having admission and exhaust ports and said cylinder head having ports in registration with said cylinder ports, means for controlling said ports comprising a pair of arc-shaped, segmental plates controlling one the admission port and the other the exhaust port, and means for moving said plates to open or close said cylinder ports.

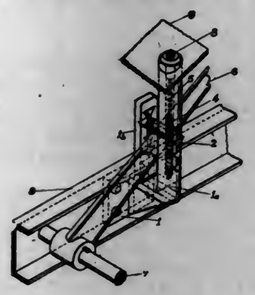
3. In an internal combustion engine, the combination with a cylinder having admission and exhaust ports, a cylinder head, a pair of arc-shaped slide valves working in the space between the head and the cylinder and controlling one the admission port and the other the exhaust port, and having each a portion adapted to be advanced to cover the cylinder port controlled thereby, the forward end of the cylinder head overlapping said valve and fitting the cylinder walls thereat to protect the end of the valve, said cylinder head also having a pair of ports, and means for moving the valve.

4. In an internal combustion engine, the combination with a fixed cylinder, admission and exhaust ports therein, a piston, a pair of arc-shaped, segmental slide valves wholly at the rear of the piston and controlling one the admission port and the other the exhaust port, and a fixed member in engagement with the inner face of said slide valves and providing a wall overlapping said valves on opposite sides of said cylinder ports.

5. In an internal combustion engine, the combination with a fixed cylinder, admission and exhaust ports therein, a piston, a pair of arc-shaped, segmental slide valves wholly at the rear of the piston and controlling one the admission port and the other the exhaust port, and a fixed member in engagement with the inner faces of said slide valves and providing a ported wall overlapping said valves on opposite sides of said cylinder ports.

[Claims 6 to 9 not printed in the Gazette.]

1,215,871. LOCKING DEVICE FOR MOTOR-VEHICLES. WILLIAM W. SABIN, Portland, Oreg., assignor to Norris B. Gregg and J. C. Harralson, Portland, Oreg. Filed Oct. 18, 1916. Serial No. 126,357. (Cl. 70—90.)



1. In a locking device for a motor vehicle, a base member adapted to be attached to the frame thereof, said member having an outwardly projecting member, two upwardly projecting members projecting upward from the top of the outwardly projecting member; in said upwardly projecting members three pairs of oppositely arranged transverse holes; a bolt adapted to slide within and through said transverse holes; a lock attached to the upper end of one of the said upwardly projecting members; an extension stem connected to said lock, on said stem, teeth for imparting transverse rectilinear motion to said bolt, said stem being disposed within said upwardly projecting member; said complete device being disposed in such a position as to encompass and hold when in its locking position in the space between the bolt, the outwardly projecting member, and the upwardly projecting members, the clutch lever of the motor vehicle in its non-working position.

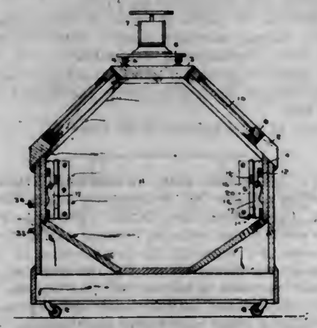
2. In a locking device for a motor vehicle a base member adapted to be attached to the frame thereof, said member having an outwardly projecting member carrying two upwardly projecting members projecting upward from the top of the outwardly projecting member; in said upwardly projecting members three pairs of oppositely arranged transverse holes; a bolt adapted to slide within and through the transverse holes, said bolt having a centrally located longitudinal opening having gear teeth on one side; one of said upwardly projecting members having an axial hole; a lock attached to the upper end of said member, a pinion disposed in said axial hole; said pinion adapted to mesh with the gear teeth on the bolt and impart to said bolt transverse rectilinear motion, and an extension stem connecting said lock and pinion, said complete device disposed in such a position as to encompass and hold when in its locked position in the space between the bolt, the outwardly projecting member and the upwardly projecting members, the clutch lever of the motor vehicle in its non-working position.

1,215,872. SKELETON FRAME FOR ARMORED CONCRETE POSTS OR MASTS. CIPRIANO SALVATIERRA-IRIARTE, Madrid, Spain. Filed July 7, 1913. Serial No. 777,746. (Cl. 72—85.)



A reinforced tapering concrete pole which is an elongated quadrilateral in cross-section and is crossed by triangular openings through its two longer sides in regular series at successive points of its height alternately on opposite sides of a central line, said openings being separated from each other by inclined partitions of reinforced concrete arranged in zigzag order, the skeleton of said pole consisting of two upright series of raised parallel rods, said series tapering upward toward each other, and a series of interposed connecting devices having eyes for the individual rods and supplying the skeletons of said partitions, each of such devices being adapted to engage at each end all the rods of one upright series and to hold in position and brace each series and hold in position and brace each individual rod.

1,215,873. STORE-COUNTER. NICHOLAS JOHN SCHEPIS, Columbia, La. Filed Jan. 20, 1916. Serial No. 73,164. (Cl. 211—11.)

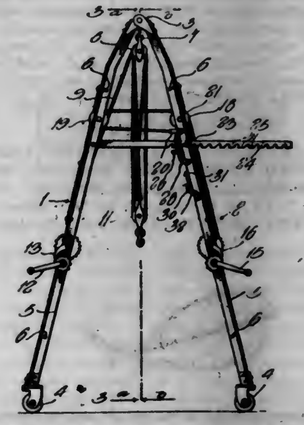


1. The combination with a combined bin structure and counter, of a plurality of partitions designed to be adjusted lengthwise of the interior of the bin structure, a locking bar attached to each side wall of the structure and having notches in its upper edge, a locking mechanism at the side edges of each partition comprising a pair of leaf sections hinged together, one of said sections being vertically movable with respect to the other section, means to attach one of the sections to the partition, and a tongue on the vertically movable section adapted to engage the notches in the locking bar to hold the partition in vertical adjusted position.

2. The combination with a combined bin structure and counter, of a plurality of partitions adapted to be adjusted lengthwise of the interior of the bin structure, locking bars attached to each side wall of the bin structure and having notches in their upper edges, a locking mechanism at each side edge of the partition comprising a pair of leaf sections hinged together, one of said sections being vertically movable with respect to the other section and adapted to be swung transversely out of alinement with said locking bars, means to attach one of said sections to the partition, and tongues formed on the movable section adapted to engage the notches in the locking bars to hold the partitions in vertical adjusted position.

3. The combination with a bin structure and counter, of a plurality of partitions designed to be adjusted lengthwise of the interior of the bin structure, a locking bar attached to each side wall of the structure and having notches in its upper edge, a locking mechanism at the side edges of each partition comprising a pair of leaf sections hinged together, means to attach one of said sections to the partition, and a tongue on the other section adapted to engage the notches in the locking bar to hold the partition in vertical adjusted position.

1,215,874. COMBINED HOIST AND CONVEYER. CHARLES JOHN SCHERRER, Council Bluffs, Iowa. Filed Nov. 16, 1916. Serial No. 131,745. (Cl. 254—145.)



1. A device of the class described comprising a pair of sections hingedly connected together at their upper ends, their lower ends being adapted to be moved toward and away from each other, a latch carried by one of said sections, a catch on the other section to be engaged by said latch, a transverse bar slidable on the last mentioned section, and a lever pivoted to the said last mentioned section and to said bar, whereby to raise said bar to disengage the latch from its catch.

2. A device of the class described comprising a pair of sections hingedly connected together at their upper ends, their lower ends being adapted to be moved toward and away from each other, a pair of latches pivoted at one end to one of said sections, a pair of catches carried by the other section to be engaged by said latches, a transverse bar slidable on the last mentioned section, and a lever pivoted to said last mentioned section and to said bar, said bar simultaneously engaging and raising the

said latches out of engagement with their catches when said lever is actuated.

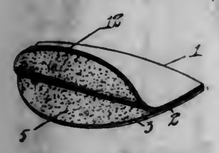
3. A device of the class described comprising a pair of sections hingedly connected together at their upper ends, their lower ends being adapted to be moved toward and away from each other, a rack bar pivoted to one of said sections, a catch to be engaged by the teeth of said rack bar and carried by the other section, an angle metal bar slidable on said last mentioned section for raising and guiding said rack bar, and a lever for operating said angle metal bar.

4. A device of the class described comprising a pair of sections hingedly connected together at their upper ends, their lower ends being adapted to be moved toward and away from each other, a pair of rack bars pivoted at one end to one of said sections, studs projecting from the other section for engagement with the teeth of said rack bars, an angle metal bar slidably disposed on said last mentioned section and having its horizontal flange disposed for engagement with the toothed edge of said rack bars, a lever pivoted to said last mentioned section, and a pivotal connection between said lever and angle metal bar, whereby the latter may simultaneously disengage the rack bars from said studs upon actuation of the lever.

5. A device of the class described comprising a pair of sections each formed of a pair of spaced bars, said sections being hingedly connected together at their upper ends, their lower ends being adapted to be moved toward and away from each other, a pair of rack bars pivoted at one end to the spaced bars of one section, a vertical guide carried by each bar of the other section, studs projecting from said bars of the last mentioned section adjacent said vertical guides, an angle metal bar having one flange disposed horizontally, said flange having its opposite ends cut away, the end portions of the vertical flange of said angle metal bar being slidably disposed in said vertical guides, a lever pivoted to one of the bars of the last mentioned section, a pair of links pivoted together and to the intermediate portion of said lever, the outer ends of said links being spaced apart and secured to the intermediate portions of the vertical flange of the angle metal bar, and means for moving said sections toward each other.

[Claim 6 not printed in the Gazette.]

1,215,875. METHOD OF STIFFENING PARTS OF BOOTS AND SHOES. FRANK SCHWARTZ, Winthrop, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 26, 1915. Serial No. 4,466. (Cl. 12—145.)



1. That improvement in the art of manufacturing boots and shoes which consists in incorporating in the unlasted upper a stiffener blank comprising stiffening material in a solid, broken state so that said blank is normally flexible, said stiffening material being capable of being softened by heat, lasting the upper and then subjecting the lasted upper to a heat sufficient to soften the broken particles of stiffening material.

2. That improvement in the art of manufacturing boots and shoes which consists in incorporating in the unlasted upper a limp stiffener blank comprising a piece of fabric coated with a powdered or granulated stiffening material adapted to be melted by heat, lasting the upper, and then subjecting the lasted upper to a heat sufficient to melt the stiffening material and cause it to permeate the fabric.

3. That improvement in the art of manufacturing boots and shoes which consists in incorporating in the unlasted upper a limp stiffener blank comprising a piece of fabric coated with powdered or granulated shellac, lasting the upper, and then subjecting the lasted upper to a heat sufficient to soften and amalgamate the shellac whereby when said amalgamated shellac hardens a box-toe results.

4. That improvement in the art of manufacturing boots and shoes which consists in incorporating in the unlasted upper a limp stiffener blank comprising a piece of fabric to which a powdered or granulated stiffening material capable of being softened by heat is attached by an adhesive substance, lasting the upper and then subjecting the lasted upper to heat sufficient to soften the stiffening material.

5. That improvement in the art of manufacturing boots and shoes which consists in incorporating in the unlasted upper a stiffener blank which is normally soft and pliable but may be rendered hard by prolonged heat, lasting the upper and then subjecting the lasted upper to heat for a time sufficient first to soften and then to harden the stiffener.

[Claims 6 and 7 not printed in the Gazette.]

1,215,876. TOE OR HEEL STIFFENER. FRANK SCHWARTZ, Winthrop, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Jan. 26, 1915, Serial No. 4,466. Divided and this application filed Apr. 17, 1915. Serial No. 22,116. (Cl. 36—77.)



1. A stiffener for parts of boots and shoes consisting of a suitably shaped blank comprising a piece of fabric coated with separated particles of a stiffening material which is normally hard but may be softened by the application of heat, of a degree insufficient to injure the shoe part.

2. A stiffener for parts of boots and shoes consisting of a suitably shaped blank comprising a piece of fabric, a coating of adhesive substance and a layer of powdered or granulated stiffening material which is normally hard but may be softened by the application of heat, of a degree insufficient to injure the shoe part.

3. A stiffener for parts of boots and shoes consisting of a suitably shaped blank comprising two pieces of fabric and a layer of powdered or granulated stiffening material held between them, said material being capable of being fused by a degree of heat insufficient to injure the shoe part.

4. A stiffener for parts of boots and shoes consisting of a suitably shaped blank comprising a piece of fabric and a stiffening material in solid broken state carried thereby, said material being capable of being fused by a degree of heat insufficient to injure the shoe part.

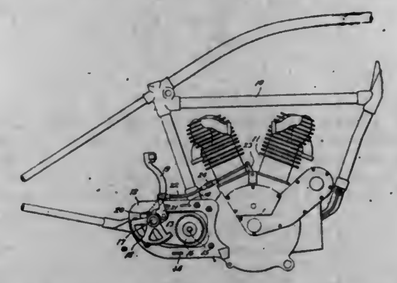
5. A stiffener for parts of boots or shoes consisting of a suitably shaped normally flexible blank comprising a piece of fabric coated with dry particle of a stiffening material which is normally hard but may be softened by the application of heat, of a degree insufficient to injure the shoe part.

[Claims 6 to 9 not printed in the Gazette.]

1,215,877. STARTER FOR INTERNAL-COMBUSTION ENGINES. FRANK W. SCHWINN, Chicago, Ill. Filed Feb. 19, 1916. Serial No. 79,256. (Cl. 123—182.)

1. The combination with an internal combustion engine having means for relieving the compression in the cylinders thereof, of a means for driving the crank shaft of the engine in a forward direction for starting the said engine, and connections between said starting means and the compression relief mechanism for throwing the latter to operative position by initial movement of the former, and for permitting the compression relief mechanism to return to inoperative position during further operative movement of the starting means.

2. In combination with an internal combustion engine having means for relieving the compression in the cylinders thereof, of a starting shaft for mechanically applying power to said engine for starting the same, means for driving said shaft, a cam carried by said shaft, and a cam-follower operatively related to said cam and having connections with said compression relieving means.

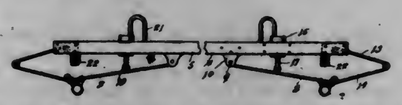


3. The combination with an internal combustion engine having means for relieving the compression in the cylinders thereof, of a rock-shaft adapted to be mechanically connected with the said engine for starting the same, a cam carried by the said rock-shaft, a follower mounted in operative relation to the cam, and connections between the said cam-follower and compression relief means, the parts being arranged to relieve the compression of the engine during the initial part only of the operative movement of the said rock-shaft.

4. The combination with an internal combustion engine having means for relieving the compression in the cylinder thereof, of a shaft connected with the said engine and having a gear thereon, a rock-shaft mounted parallel with said first-named shaft having a sector gear thereon adapted to be moved into and out of engagement with said first-named gear, a lever for applying power to said rock-shaft, a cam carried by said rock-shaft, a follower for said cam, connections between said follower and the said compression relief means, the parts being so arranged that the said compression relief means is actuated during the initial part only of the operative movement of said rock-shaft.

5. The combination with an internal combustion engine having means for relieving the compression in the cylinder thereof, of a shaft connected with the said engine and having a gear thereon, a rock-shaft mounted parallel with said first-named shaft having a sector-gear thereon adapted to be moved into and out of engagement with said first-named gear, a lever for applying power to said rock-shaft, a cam carried by said rock-shaft, a follower for said cam, and connections between said follower and the said compression relief means for operating the latter by movement of said rock-shaft.

1,215,878. VEHICLE-BODY SUPPORT. ALBERT L. SESSIONS, Bristol, Conn. Filed Apr. 15, 1913. Serial No. 761,240. (Cl. 267—8.)



1. In combination with a vehicle frame, an axle lever pivotally attached thereto, a piston rod positioned to oppose movement of said lever in one direction, a piston secured to said rod, a cylinder to contain said piston, a pressure tank, and a connection between said tank and cylinder constructed to receive contents of the cylinder and prevent its flow away from the cylinder toward said tank.

2. In combination with a vehicle frame, an axle lever pivotally attached thereto, a cylinder secured to the frame, a piston located in the cylinder, a piston rod projecting from said piston in position to oppose movement of said axle lever in one direction, a pressure tank, and a connection between said tank and cylinder, said connection being constructed to prevent flow of liquid contents of the cylinder away from it toward said tank.

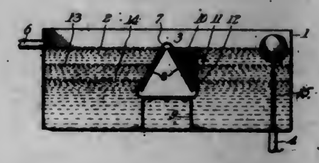
3. In combination with the frame of a vehicle body, an axle lever pivotally attached thereto, a cylinder supported on said frame, a piston located in said cylinder, a piston rod projecting from the piston and positioned to oppose movement of said axle lever in one direction, a pressure tank, and a connection between said cylinder and tank, said connection having a bend located above the top of the cylinder to prevent flow of liquid from the cylinder to said tank.

4. In combination with the frame of a vehicle body, an axle lever pivotally attached thereto, means upon said lever to receive an axle, a cylinder secured to the frame, a piston located in the cylinder, a piston rod projecting from said piston and slidably engaging said axle lever, a pressure tank, and a connection between said tank and said cylinder.

5. In combination with a vehicle frame, an axle lever pivotally attached thereto, a piston rod positioned to oppose movement of said lever in one direction, a piston secured to said rod, a cylinder to contain said piston, a pressure tank, and a connection between said tank and piston, said connection extending upwardly to an extent sufficient to contain the liquid contents of said cylinder and prevent its flow to said tank.

[Claim 6 not printed in the Gazette.]

1,215,879. VAPORIZER. EDSON O. SESSIONS, Chicago, Ill., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 22, 1914. Serial No. 862,892. (Cl. 219—38.)



1. A vaporizer having a heater of substantially triangular cross-section arranged in a body of liquid with the apex of the triangle above the surface of said liquid so that a relatively small amount of liquid is above the sides of the heater, whereby a portion of said liquid may be vaporized without heating the whole body thereof.

2. A vaporizer having a heater of substantially triangular cross-section arranged in a body of liquid with the apex of the triangle above the surface of said liquid whereby the relatively small amount of liquid above the sides of the heater may be vaporized without heating the whole body of liquid and means for regulating the amount of liquid above the sides of the heater.

3. In a vaporizer, a receptacle, a body of liquid therein and an electric heater of substantially triangular cross-section arranged in the receptacle with the apex of the triangle above the surface of the liquid whereby, when heat is applied to the heater, the relatively small amount of liquid above the sides of the heater is vaporized without heating the entire body of liquid.

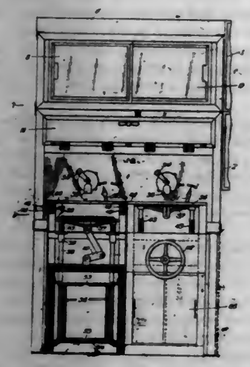
4. A vaporizer having a heater enlarged toward its base, said heater being arranged in a body of liquid with the top thereof above the surface of said liquid so that a relatively small amount of liquid is above the sides of said heater whereby when heat is applied the liquid may be quickly vaporized without heating the whole body thereof.

5. A vaporizer having a heater enlarged toward its base and arranged in a body of liquid with the top of the heater

above the surface of the liquid, whereby a relatively small quantity of liquid is above the sides of the heater and means for regulating the amount of fluid above said sides.

[Claims 6 to 10 not printed in the Gazette.]

1,215,880. PROCESS AND APPARATUS FOR REMOVING ELECTROTYPE-WAX. MICHAEL SHAEN, Washington, D. C. Filed Mar. 1, 1913. Serial No. 751,452. (Cl. 18—1.)



1. The process of removing and treating electrotype wax which consists in melting said wax from electrotype cases in elevated position and permitting the molten wax to flow by gravity to successively lower positions during which it is screened, refined and recast.

2. The process of removing and treating electrotype wax, which consists in heating electrotype cases in a vertical position with the wax surfaces thereof out of contact with the heater whereby the wax melts and flows downwardly from said cases and permitting the molten wax to flow by gravity to successively lower positions during which it is screened, refined, reheated and recast.

3. The process of removing and treating electrotype wax, which consists in melting said wax from electrotype cases, passing the melted wax through screens to refine the same, storing said wax in relatively large quantities, maintaining the wax at a predetermined temperature and removing predetermined quantities of said wax for casting the same on empty electrotype cases.

4. The process of removing and refining electrotype wax which consists in heating the electrotype cases when arranged in vertical planes, whereby molten wax flows downwardly from said cases, screening said molten wax during its downward flow, and storing said wax in relatively large quantities maintained at a predetermined temperature so that quantities of said wax may be removed from said cases from time to time for recasting.

5. The process of removing and refining electrotype wax which consists in heating the electrotype cases when arranged in vertical planes, whereby molten wax flows downwardly from said cases, screening said molten wax during its downward flow, storing said wax in relatively large quantities maintained at a predetermined temperature, and removing said molten wax in predetermined quantities and casting the same onto empty cases.

[Claims 6 to 15 not printed in the Gazette.]

1,215,881. ROTARY PUMP. OTTO SIEMEN, Nonnendamm, near Berlin, Germany, assignor to Siemens-Schuckertwerke, G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Apr. 15, 1913. Serial No. 761,280. (Cl. 103—43.)

1. A rotary liquid pump comprising a casing, an inlet and an outlet therein, a blade wheel within said casing, said inlet being disposed at only one place of said blade wheel, and an additional opening provided at a point of said casing near the bottom of the blade chambers for carrying off the air collecting therein.



2. A rotary liquid pump comprising a casing, an inlet and an outlet therein, a blade wheel within said casing, said inlet being disposed at only one place of said blade wheel, an additional opening provided at a point of said casing near the bottom of the blade chambers for carrying off the air collecting therein, and a valve for temporarily closing said outlet during carrying off said air.

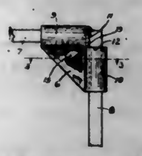
3. A rotary liquid pump comprising a casing, an inlet and an outlet therein, a blade wheel within said casing, said inlet being disposed at only one place of said blade wheel, and an additional opening provided at a point of said casing near the bottom of the blade chambers for carrying off the air collecting therein, said casing being of modified construction so as to produce an additional increase of liquid pressure in a chamber of the blade wheel after passing of said outlet of the pump.

4. A rotary liquid pump comprising a casing, an inlet and an outlet therein, a blade wheel within said casing, said inlet being disposed at only one place of said blade wheel, an additional opening provided at a point of said casing near the bottom of the blade chambers for carrying off the air collecting therein, and a valve for temporarily closing said outlet during carrying off said air, the vertex of said casing being removed from the outlet, thereby forming a wedge-shaped space contracting in the direction of rotation, whereby an additional increase of liquid pressure will be generated in a chamber of said blade wheel after passage of said outlet.

5. A rotary liquid pump comprising a casing, an inlet and an outlet therein, a blade wheel within said casing, said inlet being disposed at only one place of said blade wheel, an additional opening provided at a point of said casing near the bottom of the blade chambers for carrying off the air collecting therein, and an automatic valve inserted in the outlet of said pump for maintaining a certain minimum pressure in said outlet.

[Claims 6 and 7 not printed in the Gazette.]

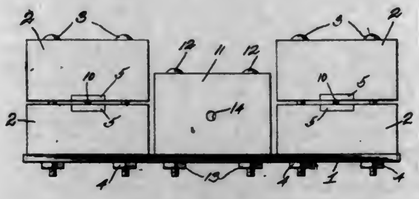
1,215,882. CORNER-FASTENER. CHARLES G. SIMONDS, Milwaukee, Wis., and GEORGE W. DOERR, Chicago, Ill. Filed June 15, 1916. Serial No. 103,705. (Cl. 211—25.)



1. A corner fastening device for holding plates extending at angles to each other comprising a clamp for engaging the plates near their point of joinder, and means for detachably securing said clamp to the plates, said clamp comprising a body portion and plate engaging portions integral with said body portion, said plate engaging portions extending outwardly on opposite sides of the body portion to form an opening for the intersection of the plate.

2. A corner fastening device for holding plates extending at angles to each other comprising a clamp and means for securing said clamp to the edges of the plates at the point of joinder, said clamp comprising hook portions for engaging the edges of the plates and a body portion offset from said hook portions and integral with the same, said hook portions being formed on opposite sides of said body portion to form an opening for the intersection of the plate.

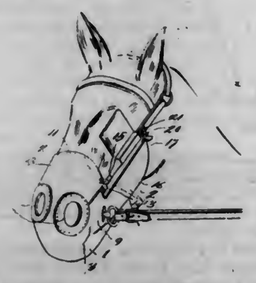
1,215,883. CROSSTREE FOR TELEGRAPH-POLES. JOHN STEWART SIMPSON, Ingomar, Miss. Filed Apr. 16, 1914. Serial No. 832,333. (Cl. 173—314.)



1. A cross arm for electrical conductors comprising superposed blocks bolted on the upper surface of a bar, insulators carried by said blocks, said insulators lying flush with the sides of said supporting blocks, whereby said insulators are prevented from becoming easily broken, and projections formed on the outer faces of said insulators at the central portion thereof whereby said insulators are prevented from moving laterally and longitudinally in said superposed blocks.

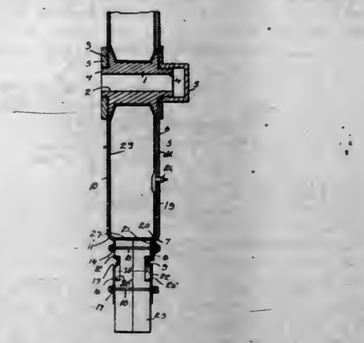
2. A cross arm for electrical conductors comprising superposed blocks bolted on the upper surface of a bar, the inner faces of said superposed blocks having centrally disposed transverse grooves extending from one longitudinal face to the other and having recesses intermediate the ends of the inner walls, substantially rectangular insulators having a centrally disposed projection formed on the outer faces thereof, the longitudinal edges of said projection being beveled downwardly, and a ledge surrounding the projections, said inclined projections being adapted to be seated in said recess, and the ledge in said groove, as and for the purpose specified.

1,215,884. MUZZLE FOR HORSES. ARCHIE SMITH and WILEY FORQUER, Juanita, N. D. Filed May 3, 1916. Serial No. 95,197. (Cl. 54—80.)



A muzzle constructed from a single piece of textile fabric and having integral overlapping parts, and a bag shaped portion shaped to conform with and fit the nose and mouth portion of the head of the animal, said overlapping parts being stitched together to form reinforcing means for the opposite sides of the bag shaped portion, said reinforced sides of the bag shaped portion having bound slits therein for the reception of the opposite ends of the bit, that portion of the bag portion of the muzzle which arches the bridge of the nose having a reinforcing strap provided with loops at its opposite ends for the reception of the side straps of a bridle, said muzzle having an extension fitting the under part of the head of the animal adjacent the neck, and the corners of said extension having loops for the reception of the side straps of the bridle, said bag shaped portion of the muzzle being provided with openings to register with the nasal passages of the animal.

1,215,885. VEHICLE-WHEEL. JOHN ROBERT SMITH, London, England. Filed Oct. 23, 1913. Serial No. 797,935. (Cl. 152—31.)



1. A resilient wheel comprising a hub, circular plates secured to the opposite ends of the hub, a cushion arranged between the plates, a plurality of independently movable tire sections slidably mounted between said plates and engaging the cushion, the adjacent edges of the outer ends of said tire sections being normally engaged to provide a continuous tread surface, and the adjacent side faces of the sections being formed with substantially V-shaped recesses permitting independent movement thereof and providing chambers between the sections, means extending through the chambers and connecting the plates to prevent any circumferential movement of said sections, and means to limit the inward and outward movement of said sections.

2. A resilient wheel comprising a hub, circular plates secured to the opposite ends of the hub, a cushion arranged between the plates, a plurality of independently movable tire sections slidably mounted between said plates and engaging the cushion, the adjacent edges of the outer ends of said tire sections being normally engaged to provide a continuous tread surface, and the adjacent side faces of the sections being formed with substantially V-shaped recesses permitting independent movement thereof and providing chambers, means extending through the chambers and connecting the plates to prevent any circumferential movement of said sections, said tire sections having recesses formed in their side faces adjacent said plates, and inwardly projecting circular beads formed on said plates and extending into said recesses, whereby the inward and outward movement of said tire sections is limited.

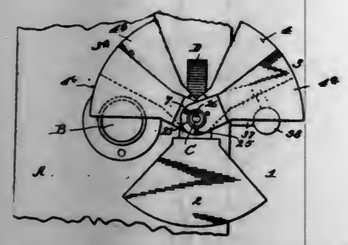
1,215,886. RESILIENT COMPOSITION FOR PRINTERS' ROLLERS. CHARLES EMILE SOHN, London, England, assignor of one-half to Usher-Walker, Limited, London, England. Filed Dec. 23, 1914. Serial No. 878,800. (Cl. 106—5.5.)

1. The herein described process for the production of an infusible resilient composition for printers' rollers, which consists in soaking glue in water until the desired amount has been absorbed, allowing the soaked glue to stand until it is flexible, mixing the soaked glue with glycerin and melting up the mixture, introducing into the mixture a concentrated aqueous solution of hexamethylene-tetramin in about the proportion of between two-tenths per cent. and one per cent. of the glue-glycerin mixture, stirring the mixture thus produced, running it quickly into molds of

the desired shape, and keeping the said molds hot for some time after the mixture has been run into them.

2. The herein described infusible resilient composition of matter for printers' rollers, consisting of soaked glue and glycerin and hexamethylene-tetramin, the quantity of hexamethylene-tetramin being between two-tenths per cent. and one per cent. of the glue-glycerin mixture.

1,215,887. SHUTTER FOR MOVING-PICTURE MACHINES. ARCHIE D. STANDEFORD, Kansas City, Mo. Filed Oct. 3, 1914. Serial No. 864,780. (Cl. 88—19.3.)



1. A shutter adapted to be mounted upon a shaft and having a blade consisting of a plurality of members capable of axial adjustment, an independent hub for each member, each hub having an oblique slot, and means extending into said slots to adjust the hubs axially.

2. A shutter adapted to be mounted upon a shaft and having a blade consisting of a plurality of members capable of axial adjustment, independent hubs for said members having oblique slots extending in different directions, and means extending into said slots to simultaneously adjust the hubs axially.

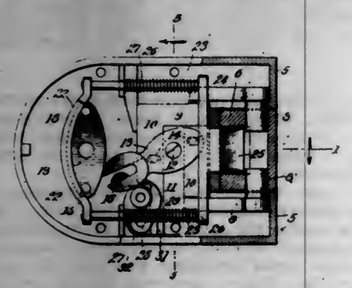
3. A shutter adapted to be mounted upon a shaft and having a blade consisting of a plurality of members capable of axial adjustment, independent hubs for said members having oblique slots, lugs extending into said slots, and means for shifting said lugs to adjust the hubs axially.

4. A shutter adapted to be mounted upon a shaft and having a blade consisting of a plurality of members capable of axial adjustment, independent hubs for said members, a bar having means engaging said hubs to adjust the same axially, and means for actuating said bar.

5. A shutter adapted to be mounted upon a shaft and having a blade consisting of a plurality of members capable of axial adjustment, independent hubs for said members, a bar having means engaging said hubs to adjust the same axially, and a lever for actuating said bar.

[Claims 6 and 7 not printed in the Gazette.]

1,215,888. LOCK. LOUIE STERN, New York, N. Y. Filed Oct. 21, 1916. Serial No. 126,848. (Cl. 70—29.)



1. A lock comprising a case, a pair of inclosed parallel axially slidable shanks, a pair of inwardly directed bolts carried by the shanks and arranged in parallelism therewith, means for simultaneously sliding said shanks in opposite directions and an apertured keeper adapted to be straddled by the case and to be engaged by the bolts.

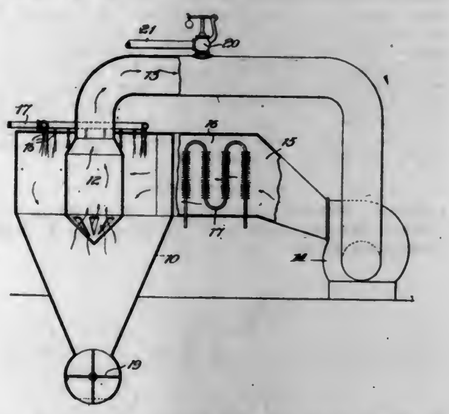
2. A lock comprising a case, a pair of inclosed parallel axially slidable shanks, a pair of inwardly directed bolts carried by the shanks and arranged in parallelism therewith, a lever engaging the shanks, a pivoted arm adapted to operatively engage said lever, and an apertured keeper adapted to be straddled by the case and to be engaged by the bolts.

3. A lock comprising a case, a pair of inclosed parallel axially slidable shanks, a pair of inwardly directed bolts carried by the shanks and arranged in parallelism therewith, a lever engaging the shanks, a pivoted arm adapted to operatively engage said lever, a yoke engaging said arm, a latch carried by the yoke, and an apertured keeper adapted to be straddled by the case and to be engaged by the bolts.

4. A lock comprising a case, a pair of opposed bolts having slidable shanks and inwardly directed free ends, a forked lever operatively connected to said shanks, a pivoted arm having a pin adapted to engage said lever, a yoke engaging said arm, and a latch carried by the yoke.

5. A lock comprising a case, a pair of opposed bolts having slidable shanks, a forked lever operatively connected to said shanks, a catch adapted to lock the forked lever, a cam on one of the bolt-shanks adapted to engage the catch, a pivoted arm adapted to engage the forked lever, a yoke that is engaged by the pivoted arm, and a latch carried by the yoke.

1,215,889. PROCESS AND APPARATUS FOR DESICCATING FLUID SUBSTANCES. RICHARD W. G. STUTZKE, Chicago, Ill., assignor, by mesne assignments, to G. Arthur Buhl, Chicago, Ill. Filed Dec. 28, 1915. Serial No. 69,075. (Cl. 99—5.)



1. The process of evaporating liquids which consists in spraying the liquid into an atmosphere of its own vapor, circulating the said atmosphere and superheating it during its circulation, and venting the evaporated moisture from the circulating system.

2. The process of evaporating liquids which consists in spraying the liquid into an atmosphere of its own vapor under pressure, circulating the said atmosphere and superheating it during its circulation, and venting the evaporated moisture from the circulating system.

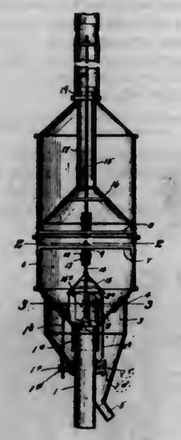
3. The process of desiccating liquids carrying solid substances therein, which consists in spraying the said liquids into a closed chamber, maintaining a circulation from and back to the said chamber, continuously supplying heat to the circulating fluid, venting the evaporated liquids from the circulating system, and collecting the desiccated solids.

4. The process of desiccating liquids carrying solid substances therein, which consists in spraying the said liquids into a collecting chamber, setting up a circulation from and back to the said chamber, continuously supplying heat to the circulating fluid, venting the evaporated liquids from the circulating system at a point removed from the said collecting chamber, and collecting the desiccated solids within the said chamber.

5. The process of desiccating liquids carrying solid substances therein which consists in spraying the said solids into the tangential inflow portion of a cyclone collector, setting up a circulation from the outlet of the said collector back to the said tangential inlet, continuously supplying heat to the circulating fluid, venting the evaporated liquids from the circulating system, and collecting the desiccated solids within the said cyclone collector.

[Claims 6 to 9 not printed in the Gazette.]

1,215,890. DUST-SEPARATOR. HARRY A. THUNEMAN, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 18, 1916. Serial No. 79,057. (Cl. 183—91.)



1. A dust separator comprising a separating chamber, an inlet pipe leading thereinto, curved blades at the upper end of said inlet pipe, and an adjustable cap fitting over said curved blades, and provided with a downwardly extending cone-like projection which in its lowermost position extends down into the blades so as to deflect the air outwardly before it leaves the influence of said blades.

2. A dust separator comprising a separating chamber, an inlet pipe leading thereinto, a flanged cone adjustably mounted on the inner end of said inlet pipe, means for adjusting said cone so as to carry the space between the outer edge of said cone and its coöperating wall, through which space the tailings pass, and means carried by said adjustable cone for imparting a whirling motion to the dust laden air.

3. A dust separator comprising a casing, an inlet pipe leading into the lower portion thereof, a flanged cone section mounted on said inlet pipe whereby the outer edge of said cone section may be adjusted with respect to a wall of said casing with which it coöperates thereby regulating the discharge opening for the tailings, means for adjusting said cone section, a series of blades carried by said adjustable section for imparting a whirling motion to the incoming dust laden air whereby the tailings are forced over the edge of said cone section, and a discharge pipe for the fines, said discharge pipe having a flared lower end extending nearly to the walls of the casing, and means for adjusting said discharge pipe within the casing whereby the size of the expansion chamber formed by the casing may be regulated.

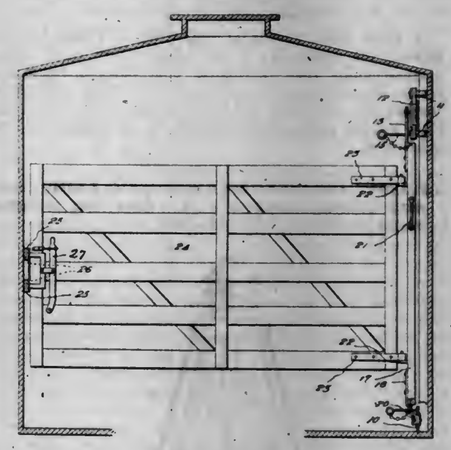
1,215,891. FOOT-SUPPORT. GEORGE A. VROOMAN, Irvington, N. Y. Filed June 14, 1915. Serial No. 33,944. (Cl. 36—71.)

1. In a device of the kind described, a plate shaped to conform to the wearer's foot and having a depression adjacent each end to provide ball and heel seats, the portion of the plate intermediate said depressions being formed to constitute an arch support, a leaf spring disposed longitudinally beneath the plate and having its central portion riveted to the arch supporting portion of the plate, said spring having its extremities resting against the plate adjacent the extremities of the latter and being provided with portions beneath the ball and heel seats bowed away from said seats, a spring section secured on the bottom of the ball portion of the plate and having its ends bowed downwardly to bear against the spring, and a second spring section fixed between the plate and spring at the riveted portions thereof and having its ends bowed downwardly to engage the spring beneath the ball and heel portions of the plate respectively.



2. In a device of the kind described, a plate shaped to conform to the wearer's foot and having a depression adjacent each end to provide ball and heel seats, the portion of the plate intermediate said depressions being formed to constitute an arch support, a leaf spring disposed longitudinally beneath the plate and having its central portion riveted to the arch supporting portion of the plate, said spring having its extremities resting against the plate adjacent the extremities of the latter and being provided with portions beneath the ball and heel seats bowed away from said seats, and spring means between the plate and first spring secured to the plate beneath the ball and arch supporting portions and bearing against the first spring.

1,215,892. SWINGING GATE AND PARTITION. JOSEPH F. WATTS, Jackson, Miss. Filed May 15, 1916. Serial No. 97,601. (Cl. 105—15.)



1. The combination with a freight car, of hanging rails attached to one side wall thereof, a standard carrying wheels for engaging said rails, coöperating means carried by the standard and one of the rails for locking the standard against movement, and a swinging partition or gate carried by said standard.

2. The combination with a freight car, of hanging rails attached to one side wall thereof, a standard carrying wheels for engaging said rails, coöperating means carried by the standard and one of the rails for locking the standard against movement, a swinging partition or gate carried by said standard, and an adjustable sill carried by the opposite side of the car for receiving the free end of the gate or partition.

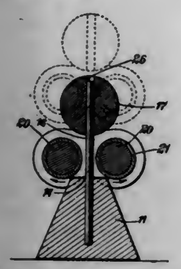
3. The combination with a freight car, of two pairs of spaced rails attached to the inner side of one wall thereof longitudinally of the car, two wheeled hangers, one hanger mounted between each pair of rails, a standard carried by both hangers, and a gate hingedly attached to said standard.

4. The combination with a freight car, of two pairs of spaced rails attached to the inner side of one wall thereof longitudinally of the car, two wheeled hangers, one hanger mounted between each pair of rails, a standard carried by both hangers, a gate hingedly attached to said standard, and coöperative means carried by the standard and one of the rails for holding the standard against sliding movement.

5. The combination with a freight car, of two pairs of spaced rails attached to the inner side of one wall thereof longitudinally of the car, two wheeled hangers, one hanger mounted between each pair of rails, a standard carried by both hangers, a gate hingedly attached to said standard, rails attached to the opposite side of the car, and a sill for coöperating with the free end of the gate mounted upon said rails.

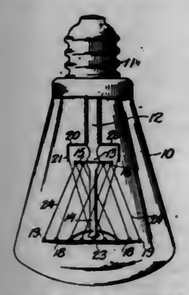
[Claim 6 not printed in the Gazette.]

1,215,893. RAZOR-BLADE SHARPENER. JOHN M. WELCH, Albany, N. Y. Filed Nov. 16, 1916. Serial No. 131,780. (Cl. 51—16.)



A razor blade sharpener consisting of a base, a seat thereon for supporting a two edged safety razor blade, vertical guide rods carried by said base, a removable frame, sharpening rolls carried by the frame, means for turning the rolls, and a handle on the frame above the rolls having perforations adapted to be engaged by the guide rods.

1,215,894. INCANDESCENT ELECTRIC LAMP. SHIGEZO YUYAMA, Brooklyn, N. Y. Filed Apr. 19, 1916. Serial No. 92,079. (Cl. 176—39.)



1. In an electric lamp, the combination with a transparent bulb, of a frame carried by a vertical stem and comprising two lower and upper cross arms, and a filament strung around the frame in a wedge shape and the lower members passing from one cross arm to the other and arranged parallel and horizontal.

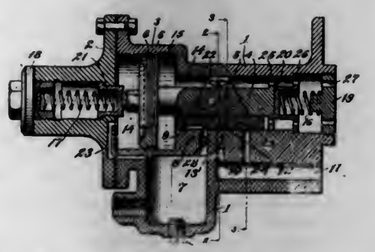
2. In an electric lamp, the combination with a bulb, of an insulated frame comprising lower and upper cross arms, leading-in wires connected with the upper arm, and a filament of a single piece with its ends connected with the upper cross arm and strung around the arms in wedge-shape lines; the lower members being strung horizontally between the lower arms.

3. In an electric lamp, the combination with a bulb having an enlarged lower end, of an insulated frame carrying the leading-in wires, a bar at the lower end of the frame and having lateral extensions, a cross bar above and parallel with the extensions, and a glower filament strung from the extensions and over the cross bar.

4. In an electric lamp, the combination with a bulb having a lower enlarged convex end, of a stem carrying the leading-in wires, a bar at the lower end of the stem and having lateral extensions at each end, a cross bar through the stem above the first bar and parallel with the extensions, and a glower filament attached at its ends to the leading-in wires and wound about the extensions and the cross bar to form a wedge shaped outline with its greatest surface at the bottom.

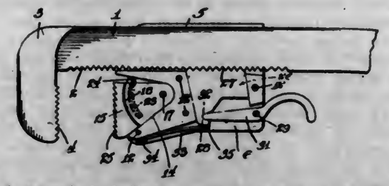
5. In an electric lamp, the combination with a bulb, of an insulating stem carrying the leading-in wires, a cross bar in the stem and having loops, a second bar at the end of the stem, lateral extensions on the latter parallel with and longer than the cross bar, and a glower filament strung around the cross bar and the extensions to form a wedge shaped frame whose base is the largest light giving side.

1,215,895. COMBINED AUTOMATIC AND STRAIGHT-AIR VALVE MECHANISM. JOHN A. ADAMS, Nogales, Ariz., assignor to Adams Air Brake Company, a Corporation of New Mexico. Filed June 9, 1915. Serial No. 33,178. (Cl. 188—15.)



In an air brake system, a combined automatic and straight air valve mechanism for controlling the brakes, comprising a casing provided with a main piston valve chamber, a piston valve disposed in said chamber, packing rings for said piston valve, a feed groove in the wall of the casing around said piston valve when the latter is moved from its normal position by an increase in the normal train brake pipe pressure, a piston rod extending through said piston valve, a passage for establishing communication between said main piston valve chamber and the auxiliary reservoir, a cavity in the lower part of said valve casing connecting with the train brake pipe to receive a supply of compressed air, a passage in the wall of the casing and cylinder cap connecting said cavity with the main piston valve chamber, an exhaust port in the valve casing and means for controlling said exhaust port and establishing communication between the train brake pipe and the brake cylinder for a straight air application of the brakes, said means comprising a slide valve operated by the movement of said piston valve, by increasing or reducing the train brake pipe normal air pressure by the manipulation of the engineer's brake valve, a passage in said slide valve, a port leading from the cavity connecting with the train brake pipe to said slide valve passage, a passage connecting with the brake cylinder, an exhaust passage in the slide valve normally uncovering the exhaust port and adapted to cover the exhaust port when an increase or reduction is made in the train brake pipe pressure, a port connecting said exhaust passage with the passage leading to the brake cylinder, said port being normally open to the exhaust port and adapted to be covered when the slide valve is moved to lap position and is uncovered by the passage in the slide valve connecting with the port leading from the train brake pipe cavity, when the train brake pipe pressure is increased, for a straight air application of the brakes, a port connecting the passage leading to the brake cylinder and auxiliary reservoir air pressure in the piston valve cylinder cavity, said port being normally covered by the slide valve and adapted to be uncovered when a reduction is made in the train brake pipe for an automatic application of the brakes, springs for moving the piston valve to its normal position when the air pressure is equalized on both sides, a port through slide valve to vent auxiliary reservoir excess air pressure to the brake cylinder when a straight air application of the brakes is made, a cap for closing the main piston valve chamber, bushings for limiting the movement of springs and hold the piston valve in its normal position, a plug for closing the spring cavity in the cylinder cap and a backing plug to hold spring in position with a passage for air to the auxiliary reservoir.

1,215,896. WRENCH. ROBERT W. AYLING, West New York, N. J. Filed Oct. 31, 1913. Serial No. 798,555. (Cl. 81—145.)



1. A wrench including a stationary jaw, a shank extending therefrom provided with a plurality of teeth, a housing slidably mounted upon said shank, a block in said housing, a movable jaw associated with the block, a lug arranged within the housing in spaced relation to the block, the opposed faces of the block and the lug slanting with respect to the shank, a pawl slidably mounted in said housing and arranged between and in close relation with the block and lug, a hook formed integral with said pawl at the outer edge thereof, a leaf spring secured to the outer edge of the block and bearing against the outer surface of the curved position of the hook for holding the pawl in engagement with the shank, a lever pivoted in the housing adjacent the lug having one end in engagement with said hook, and the opposite end of said lever being curved to facilitate removal of the pawl from the shank.

2. A wrench including a stationary jaw, a shank extending therefrom and provided with a plurality of teeth upon one edge, a housing adjustably mounted upon said shank and having arcuate recesses in the forward ends of its sides, a block disposed within said housing adjacent the forward end thereof and provided with a V-shaped recess, an inner jaw pivoted in said recess, said inner jaw having an enlarged end provided with arcuate shoulders to coöperate with the arcuate recesses of said housing in guiding and limiting movement of said inner jaw, a guide lug arranged in the rear end of said housing, a pawl slidable in said housing between said block and said lug, said pawl engaging the toothed edge of said shank to lock the inner jaw and housing in adjusted position with respect to said stationary jaw, means for resiliently retaining said pawl in operative position, and means for moving said pawl to inoperative position.

1,215,897. INSULATED RAIL-JOINT. CHARLES E. BALLOU, Roanoke, Va., assignor to Ballou Safety Rail Joint and Nut Company, Roanoke, Va., a Corporation of Delaware. Filed June 15, 1916. Serial No. 103,780. (Cl. 239—5.)

1. An insulated rail joint, comprising fish plates each of a length corresponding to the length of the joint with each fish plate having a longitudinal groove in its outer face, a filler bar adapted to each groove, insulating material between each fish plate and rail and between each filler bar and fish plate, and bolts traversing the filler bars and fish plates and the webs of the rails.



2. An insulated rail joint, comprising fish plates each of a length corresponding to the length of the joint with each fish plate having a longitudinal groove in its outer face, a filler bar adapted to each groove, insulating material between each fish plate and rail and between each filler bar and fish plate, and bolts traversing the filler bars and fish plates and the webs of the rails, each bolt having a nut with an axially extended taper shank and each filler bar where traversed by the end of the bolt to which the nut is applied having a taper hole adapted to receive the taper shank of the nut.

3. An insulated rail joint, comprising fish plates each of a length corresponding to the length of the joint with each fish plate having a longitudinal groove in its outer face, a filler bar adapted to each groove, insulating material between the fish plate and rail and between the filler bar and fish plate, and bolts traversing the filler bars and fish plates and the webs of the rails, each bolt having a nut with an axially extended taper shank and each filler bar where traversed by the end of the bolt to which the nut is applied having a taper hole adapted to receive the taper shank of the nut, and each bolt having the head end of non-circular contour with the filler plate where traversed by the non-rotatable portion of the bolt similarly shaped to prevent rotation of the bolt.

4. A rail joint having fish plates corresponding in length to the joint and of a thickness to extend beyond the outer edges of the treads of the rails, each fish plate having a longitudinal groove in its outer face tapering toward the bottom of the groove and of a length corresponding to the length of the fish plate, filler bars adapted to the grooves in the fish plates and correspondingly tapering in cross-section to the taper of the grooves, the filler bars being individual to the respective rails and separated at their adjacent ends, insulation between the meeting ends of the rails, between the fish plates and the rails, and between the filler bars and the fish plates, and bolts traversing the filler bars, fish plates and the webs of the rails and insulated from the fish plates.

5. A rail joint having fish plates corresponding in length to the joint and of a thickness to extend beyond the outer edges of the treads of the rails, each fish plate having a longitudinal groove in its outer face tapering toward the bottom of the groove and of a length corresponding to the length of the fish plate, filler bars adapted to the grooves in the fish plates and correspondingly tapering in cross-section to the taper of the grooves, the filler bars being individual to the respective rails and separated at their adjacent ends, insulation between the meeting ends of the rails, between the fish plates and the rails and between the filler bars and the fish plates, and bolts traversing the filler bars, fish plates and webs of the rails and insulated from the fish plates, said bolts having head ends of non-rotatable contour with the filler bars where traversed thereby of corresponding shape and the nut receiving ends of the bolts having nuts therefor with taper axially extended shanks and the filler bars where traversed thereby having corresponding taper holes.

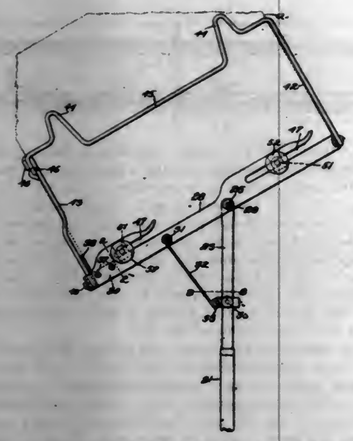
[Claim 6 not printed in the Gazette.]

1,215,898. BOOK-HOLDER. CHARLES H. BARTLETT, Cambridge, Mass. Filed Sept. 15, 1911. Serial No. 649,540. (Cl. 45—82.)

1. A book holder having a base provided with side portions having slots, carriages mounted in said slots and adjustable lengthwise thereof, and clamping jaws carried by said carriages.

2. A book holder comprising a base having side portions provided with slots, carriages slidably adjustable

along said slots and adapted to be retained in position, and book-clamping jaws carried by said carriages.



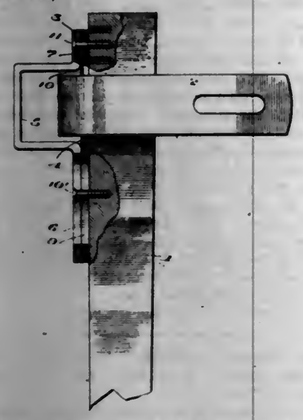
3. A book holder comprising a base having side portions provided with slots, carriages mounted in said slots and adjustable therein, a pair of jaws mounted in each carriage, and a right and left hand screw for adjusting said jaws toward and from each other.

4. The combination with a hollow post, of a sleeve rotatably mounted thereon, said sleeve having a pivot at its upper end, a wire spring mounted on said pivot and having its ends extending into the hollow post to frictionally engage it, and a book holder adjustably mounted upon said sleeve and having means for clamping a book.

5. A device of the character described, comprising an upright post, a book holder supported thereby, and mounted to be swung in a substantially horizontal plane about the axis of said upright or post, said holder having semi disks adjacent to the post, and a spring-pressed pad on the post bearing yieldingly on said semi disks and adapted to retain the holder at various angles relatively to the post.

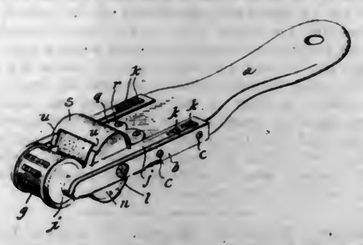
[Claims 6 to 12 not printed in the Gazette.]

1,215,899. PICKER-STICK. PERANIUS BELANGER, Nashua, N. H. Filed Apr. 3, 1916. Serial No. 88,663. (Cl. 139—48.)



A lug-strap holder comprising a metallic body having an intermediate rearwardly-extending loop, an upper apertured portion on said loop, and a lower longitudinally-slotted portion depending from the loop, and a strip of soft metal adapted to be arranged in parallel relation with the upper and lower portions of the body and between the same and a picker stick and having an upper aperture and a lower longitudinal slot and also having a wear surface in front of the body loop.

1,215,900. PRINTING IMPLEMENT. GRAHAM E. BLACK and JAMES WIRT WHEELER, Huntington, W. Va. Filed Apr. 5, 1916. Serial No. 89,108. (Cl. 101—329.)



1. In combination with a handle member, a pair of channel housings affixed to the opposite sides thereof and projecting forwardly therefrom and having their open sides facing inwardly; a pair of journal boxes slidably mounted in these channels at their inner ends and having an inking roller journaled therein; another pair of journal blocks slidably mounted in the channels at the forward ends thereof and carrying a printing roller; a spring in each housing normally pressing the journal blocks apart to thereby hold the printing roller away from the inking roller; and stops for the forward pair of journal blocks.

2. In combination with a handle member, a pair of channels or housings attached thereto, an inking roller journaled at the rear ends of said housings, a pair of slidable journal blocks at the forward ends of the housings, a printing roller journaled in these blocks, springs normally pressing these blocks forwardly to normally keep the printing roller out of contact with the inking roller, and movable stops against which said journal blocks normally abut.

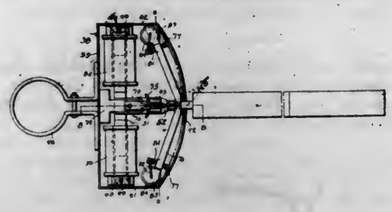
3. In combination with a handle member, a pair of channels or housings attached thereto, an inking roller journaled at the rear ends of said housings, a pair of slidable journal blocks at the forward ends of the housings, a printing roller journaled in these blocks, springs normally pressing these blocks forwardly to normally keep the printing roller out of contact with the inking roller, and movable stops against which said journal blocks normally abut, said stops being carried at the forward ends of long flat springs secured to and fitting against the faces of the housings.

4. The combination of a handle member, a printing roller and an inking roller and means for mounting them on the forward end of the handle, and a housing for the inking roller consisting of disks covering the ends of the inking roller, curved stationary plates covering the rear side of the inking roller, and curved slidable plates mounted on the disks for protecting the front face of the roller, for the purpose set forth.

1,215,901. DIRECTION-INDICATOR. LEVI M. BOWMAN, Tulsa, Okla., assignor of one-half to William A. Smith, Bartlesville, Okla. Filed Jan. 7, 1916. Serial No. 70,857. (Cl. 177—337.)

1. In a direction indicator, a pivoted indicating arrow, solenoids for moving the arrow into either of its indicating positions, electromagnetically released latches holding the arrow in either of its indicating positions, a stationary commutator, a brush carried by the arrow for engagement with the commutator, and conductor plates on the commutator, the conductor plates being in circuit with the solenoids and electromagnets whereby upon the passage of current through the device the circuit will be completed through one of the electromagnets and solenoids to return the arrow to its non-indicating position.

2. In a direction indicator, an indicating arrow, solenoids for moving the arrow into either of its indicating positions, latches for holding the arrow in either of its indicating positions after having been moved into place by the solenoids, electromagnets for controlling said latches, a commutator having a pair of conductor plates secured thereto, a brush for engagement with the commutator, said brush being movable with the arrow, the commutator plates being connected in series with respective latch electromagnets and solenoids whereby upon the passage of current through the device one of the electromagnets and one of the solenoids will be energized to return the arrow to non-indicating position.



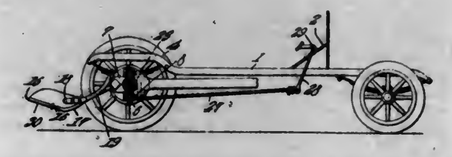
3. In a direction indicator, an indicating arrow, solenoids for moving the arrow into either of its indicating positions, said solenoids being also adapted to return the arrow to non-indicating position, electro-magnetic latches for holding the arrow in either of its indicating positions, means to complete the circuit through one of the latch electromagnets upon the movement of the arm into indicating position and to break the circuit through said electromagnets upon the energization of one of the solenoids to return the arm to non-indicating position.

4. In a direction indicator, a swinging indicating arm, pivoted solenoids, sliding cores for said solenoids, a pivot connecting the adjacent ends of the cores, a lever pivoted to the pivot for controlling the movement of the indicating arm, latches for locking said arm in either of its indicating positions and means controlling the energization of the solenoids and simultaneously controlling the releasing of the latches whereby upon energization of the solenoid, the arm will be free to return to its non-indicating position.

5. In a direction indicator, a housing, an indicating arm pivoted in the housing and extending beyond the same, solenoids pivoted within the housing and having their longitudinal axes normally disposed at right angles to the longitudinal axis of the indicating arm, sliding cores for the solenoids, the adjacent ends of the cores being pivoted together, an operating lever pivoted between the adjacent ends of the cores for controlling the movements of the indicating arm, electromagnetically released latches for holding the arm in either of its indicating positions and a commutator for controlling the energization of the solenoids and the movements of the latches for returning the arm to non-indicating position.

[Claims 6 and 7 not printed in the Gazette.]

1,215,902. ANTISKID-RUDDER FOR AUTOS. ROSWELL C. BRIGHT, Clarence, Mo., assignor of one-half to Albert A. Beals, Clarence, Mo. Filed Nov. 18, 1915. Serial No. 62,179. (Cl. 21—8.)



In a device of the class described, a vehicle embodying a rear axle casing; clamps assembled with the axle casing; pivot elements in the clamps; a rudder, diverging arms attached to the rudder and mounted on the pivot elements, one arm embodying an extension prolonged above the axle casing and extended vertically with respect thereto; a spring surrounding one pivot element, one end of the spring being united with the clamp which carries the said pivot element, and the other end of the spring being engaged with one arm to elevate the rudder; and vehicle carried means under the control of an operator and connected with the extension for depressing the rudder.

1,215,903. MANUFACTURE OF GLYCOLS. BENJAMIN T. BROOKS and IRWIN HUMPHREY, Pittsburgh, Pa., assignors to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Mar. 23, 1916. Serial No. 86,063. (Cl. 23—24.)

1. The method of producing glycols from dichlorinated ethylene hydrocarbons, which comprises subjecting such hydrocarbons to reaction with an alkali formate in the presence of an alcohol; substantially as described.

2. The method of producing glycols from dichlorinated ethylene hydrocarbons, which comprises heating the same under pressure with an alkali formate and an alcohol; substantially as described.

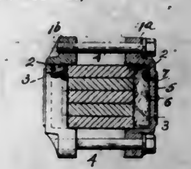
3. The method of producing glycols from dichlorinated ethylene hydrocarbons, which comprises heating the same to a temperature of about 140 to 200° C. and a pressure of 100 to 260 lbs. together with an alkali formate and an alcohol; substantially as described.

4. The method of producing glycols from dichlorinated ethylene hydrocarbons, which comprises subjecting the same to the action of sodium formate and methyl alcohol; substantially as described.

5. The method of producing glycols from dichlorinated ethylene hydrocarbons, which comprises heating the same to a high temperature and pressure in the presence of sodium formate and methyl alcohol; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,215,904. SPRING-LUBRICATOR. WILLIAM H. BROWN, Cleveland, Ohio. Filed Mar. 30, 1914. Serial No. 828,137. (Cl. 184—1.)



1. A lubricating device for that type of spring comprising a plurality of superimposed leaves, consisting of a yielding lubricant-holding pad having capillary capacity and adapted to extend across the joints between the leaves, and means for holding said pad pressed against the edges of said leaves with sufficient pressure to cause the movement of the leaves in use to agitate the fibers of the pad, said means embodying a rigid member bearing against and covering the outer face of the pad, and devices for clamping said rigid member against the spring whereby said rigid member is caused to take up the thrust due to the clamping action and thereby prevent excessive pressure on the pad.

2. In combination with a spring comprising a plurality of superimposed leaves, a lubricating appliance therefor comprising a pair of lubricating-pad-holding parts arranged at opposite sides of the spring in such manner that the pads will bear against the edges of the spring, and holding means for said parts which are common to both parts, whereby each part will form in effect a portion of the holding means of the other part.

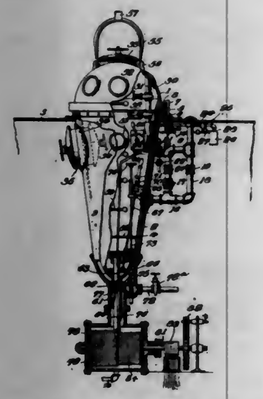
3. In combination with a spring composed of a plurality of superimposed leaves, a lubricating appliance therefor comprising a pair of parts arranged at opposite sides of

the springs, pads held against the edges of the springs by said parts, a holding member connecting the upper ends of the parts extending across the top of the spring and another holding member connecting the lower ends of the parts extending underneath the spring, whereby each of the pad-holding parts forms a portion of the holding means of the other pad-holding part.

4. In combination with a spring composed of a plurality of superimposed leaves, a lubricating appliance composed of a pair of parts arranged at opposite sides of the spring and projecting above and below the same, a lubricating pad held against the edges of the leaves by each part, a rigid holding member extending across the top of the spring and connecting the upper ends of said parts, and another rigid holding member connecting the lower ends of said parts and extending underneath the spring, whereby each pad-holding part forms in effect a portion of the holding means of the other pad-holding part.

5. A lubricating device for that type of spring comprising a plurality of superimposed leaves, consisting of a pair of yielding lubricant-holding pads having capillary capacity and adapted to extend across the joints between the leaves, and means for holding said pads pressed against the opposite edges of said leaves with sufficient pressure to cause a movement of the leaves in use to agitate the fibers of the pad, said means embodying a pair of rigid parts bearing against and covering the outer faces of the respective pads and common devices for clamping said rigid parts against the spring, whereby said rigid parts are caused to take up the thrust due to the clamping action and thereby prevent excessive pressure on the pads, and whereby also each of said parts forms in effect a portion of the fastening means on the other part.

1,215,905. SUBMARINE LIFE-SAVING AND OBSERVATION DEVICE. THOMAS E. BURKE and JOEL R. A. LINDHOLM, Chicago, Ill. Filed Jan. 15, 1916. Serial No. 72,253. (Cl. 114—16.7.)



1. In a submarine device, the combination with a buoy, of a casing in the vessel adapted to receive said buoy, a space being formed intermediate said buoy and casing, a water outlet leading from said space and having a check valve therein, and a valve admitting air to said space.

2. In a submarine device, the combination with a buoy, of a casing in the vessel adapted to receive said buoy, a space being formed intermediate said buoy and casing, an outlet leading from said space and having a valve therein and a governor for said valve, a pivotally mounted receptacle into which said outlet empties, and means operated by said receptacle for controlling said governor.

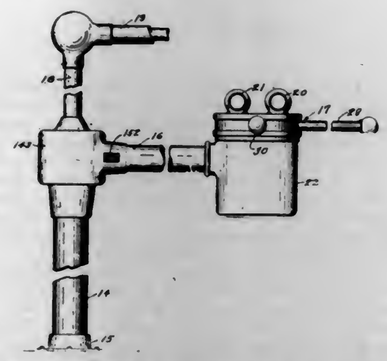
3. In a submarine device, the combination with a casing having a transparent port, of a buoy adapted to be seated in said casing and having a transparent port adapted to register with said former port when said buoy is seated.

4. In a submarine device, the combination with an upright casing having a depending portion, of a buoy adapted to be seated in said casing, said buoy having a hub, a collar keyed to said hub and threaded in said depending portion, and means for rotating said hub to remove it from said casing.

5. In a submarine device, the combination with an upright casing having a depending portion and a roller therein, of a buoy adapted to be seated in said casing and having a hub in threaded engagement with said casing, said buoy having a depending post formed with a spiral surface adapted to engage said roller and turn said hub axially when said buoy is being seated.

[Claim 6 not printed in the Gazette.]

1,215,906. AUTOMATICALLY-CONTROLLED GATE. ROBERT M. CAMPBELL and LAWRENCE S. CAMPBELL, Los Angeles, Cal. Filed Dec. 1, 1915. Serial No. 64,450. (Cl. 39—3.)



1. A gate, comprising in combination two independently movable turnstile arms; means automatically locking the leading and following arms during movement through a predetermined angle; and means to move the leading arm to a position as following arm after movement through said angle.

2. A gate, comprising in combination, a plurality of independently movable turnstile arms; a trailer on each arm, means on each of said trailers to automatically lock one trailer to another; a guide way for said trailers; means on said guide way to lock a trailer thereto; and means for releasing said locked trailer.

3. A gate, comprising in combination two independently movable turnstile arms; a trailer on each arm, means on said trailers to automatically lock a following trailer to a leading trailer; a guide way for said trailers, means on said guide way to lock a trailer thereto; said first named means and said second named means so arranged that locking of the trailers together will unlock the last mentioned trailer from the guide way, means on said guide way to lock the second trailer thereto; and means for releasing said second trailer.

4. A gate, comprising in combination two independently movable turnstile arms; a trailer on each arm, each trailer provided with a nose and a tail, said noses and tails so arranged that the nose and tail of adjacent trailers will automatically lock; a guide way for said trailers, means on said guide way to catch one trailer; a second means on said guide way to catch the second trailer, said noses and tails so arranged that locking of the nose of one trailer with the tail of the adjacent trailer will lift the latter trailer and release it from the first named means; and means for releasing said second trailer from said second means.

5. A gate, comprising in combination two independently movable turnstile arms; a trailer on each arm, each trailer provided with a nose and a tail, said noses and tails so arranged that the nose and tail of adjacent trailers will automatically lock, each tail having an inclined surface, each nose having an inclined surface to cooperate with said first named inclined surfaces for lifting the tail, each of said tails provided with a depending catch; a guide way for said trailers, a recess on said guide way for a catch on one trailer, means on said guide way provided with a shoulder to engage the catch on the second trailer; and means for lifting and releasing the catch on the tail of said second trailer from said shoulder.

[Claims 6 to 37 not printed in the Gazette.]

1,215,907. PASTE FOR STORAGE-BATTERY PLATES. CAMPBELL C. CARPENTER, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed May 18, 1912. Serial No. 698,227. (Cl. 204—29.)

1. A paste for storage batteries consisting solely of a mixture of a heavy and a light oxid of lead.

2. A paste mixture for batteries comprising untreated oxids of lead of different relative weights.

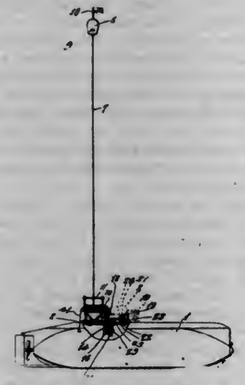
3. A paste for batteries comprising solely lead oxid of normal weight having lead oxid of less relative weight mixed therewith to decrease the weight of the resulting mixture.

4. A mixture adapted to be "formed" as active material for battery plates, consisting solely of oxid of lead weighing approximately 32 grams per cubic inch and oxid of lead weighing approximately 7 grams per cubic inch.

5. A battery plate having active material which has been formed solely from lead oxid of normal weight having lead oxid of less weight mixed therewith to facilitate the penetration of the active material by the electrolyte.

[Claims 6 and 7 not printed in the Gazette.]

1,215,908. MARKER-BUOY. LEWIS A. CARTER and LANCELOT J. RECTOR, Hayden, Ariz. Filed Sept. 8, 1915. Serial No. 49,603. (Cl. 114—16.5.)

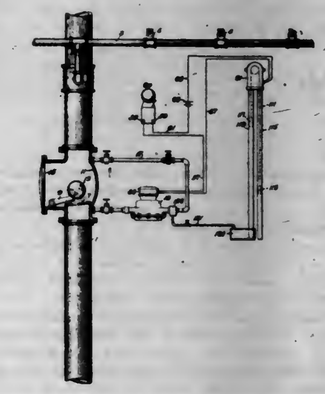


1. In a marker buoy structure, the combination, of rigid circular track carried by the outer surface of the top of a submarine, a platform, flanged wheels carried by said platform and engaging said track for rotatably supporting said platform, guard plates carried by said track and overhanging said wheels, standards carried by said platform, a shaft rotatably carried by said standards, a drum mounted upon said shaft, a cable for winding or unwinding upon said drum, a buoy connected to one end of said cable, and means for regulating the winding or unwinding rotation of said shaft and drum.

2. In a marker buoy structure, the combination, of a rigid circular track carried by the outer surface of the top of a submarine, a platform, flanged wheels carried by said platform and engaging said track for rotatably supporting said platform, guard plates carried by said track and overhanging said wheels, standards carried by said platform, a shaft rotatably carried by said standards, a drum mounted upon said shaft, a cable for winding or unwinding upon said drum, a buoy connected to one end of said cable, means for regulating the winding or unwinding rotation of said shaft and said drum, a pair of brackets carried by the top of the submarine and shaped to receive said buoy, a rod supported beneath said brackets, rings slidably mounted upon said rod, flexible members carried by said rings and adapted for extending around said buoy for holding it upon said brackets, said rod being composed of a pair of pivoted sections, a vertically movable rod connected to one end of one of said pivotal sections and extending inwardly into the submarine, said last named rod adapted for rocking the section to permit the buoyant movement of said buoy to slip said rings off said rod for permitting the buoy to rise.

3. In a marker buoy structure, the combination, of a rigid circular track carried by the outer surface of the top of a submarine, a platform, flanged wheels carried by said platform and engaging said track for rotatably supporting said platform, guard plates carried by said track and overhanging said wheels, standards carried by said platform, a shaft rotatably carried by said standards, a drum mounted upon said shaft, a cable for winding or unwinding upon said drum, a buoy connected to one end of said cable, means for regulating the winding or unwinding rotation of said shaft and said drum, a pair of brackets carried by the top of the submarine and shaped to receive said buoy, a rod supported beneath said brackets, rings slidably mounted upon said rod, flexible members carried by said rings and adapted for extending around said buoy for holding it upon said brackets, said rod being composed of a pair of pivoted sections, a vertically movable rod connected to one end of one of said pivotal sections and extending inwardly into the submarine, said last named rod adapted for rocking the section to permit the buoyant movement of said buoy to slip said rings off said rod for permitting the buoy to rise, said shaft being provided with a hollow end, a socket mounted in said hollow end and constructed of electrical conducting material, an electrical conductor connected to said socket, said conductor connected to said cable and said buoy, a plug for insertion into said socket, an electrical conducting wire extending through said plug and communicating with the interior of the submarine.

1,215,909. SIGNAL FOR FIRE-SPRINKLER SYSTEMS. LEONARD D. CHANDLER, North Abington, Mass. Filed Mar. 22, 1911. Serial No. 616,197. (Cl. 177—382.)



1. An apparatus of the class described, comprising, in combination, a sprinkler system having automatic sprinkler valves therein; a signal; and means for operating the latter on the flow of water out of the system through said valves, said means including a controlling device for pre-

venting operation of the signal when the sprinkler valves are closed on a flow of water away from said valves and another independent controlling device for preventing operation of the signal from increasing pressure in said system.

2. An apparatus of the class described, comprising, in combination, a sprinkler system having automatic sprinkler valves therein; a signal; and means for operating the latter on a flow of water in one direction through the system, said means including a controlling device for preventing operation of the signal on a flow of water in the opposite direction through the system and another independent controlling device for preventing operation of the signal from increasing pressure in the system.

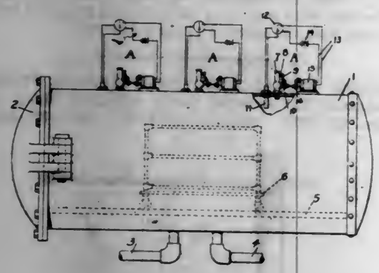
3. An apparatus of the class described, comprising, in combination, a sprinkler system having automatic sprinkler valves therein; a signal; and means for jointly controlling the latter on the discharge of water through the valves, said means including independently operating flow and pressure responsive means continually in communication with the sysatm and responsive to conditions in the system.

4. An apparatus of the class described, comprising, in combination, a sprinkler system having automatic sprinkler valves therein; a signal; and plural means, one continually responsive to pressure in the system and another responsive to flow of water through the system for jointly controlling the operation of the signal.

5. An apparatus of the class described, comprising, in combination, a sprinkler system having automatic sprinkler valves therein; a signal; and means for operating the latter after a predetermined volume of water has been discharged through the valves, said means having provision for preventing operation of the signal from increasing pressure in the system.

[Claims 6 to 35 not printed in the Gazette.]

1,215,910. VULCANIZING APPARATUS. MYRON H. CLARK, Hastings-upon-Hudson, N. Y., assignor to Boston Rubber Shoe Company, a Corporation of Massachusetts. Filed June 4, 1915. Serial No. 32,049. (Cl. 18—6.)



1. In combination with a vulcanizer containing a heated medium, means within said vulcanizer for automatically producing circulation in said medium and controlled by the temperature of the same.

2. In combination with a vulcanizer containing a heated medium, a plurality of means within said vulcanizer for automatically producing circulation in said medium and controlled by the temperature of the same.

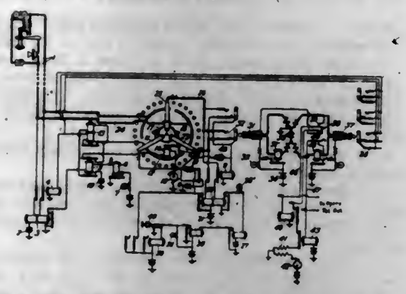
3. In combination with a vulcanizer containing a heated vulcanizing medium, means for producing circulation therein by automatically permitting the escape of that portion of the medium, the temperature of which is below normal.

4. In combination with a vulcanizer containing a heated vulcanizing medium, a plurality of means for producing circulation therein by automatically permitting the escape of that portion of the medium, the temperature of which is below normal.

5. In combination with receptacles containing a heated medium, a plurality of thermo-statically controlled means for automatically providing localized circulation at points where the temperature is below normal.

[Claims 6 and 7 not printed in the Gazette.]

1,215,911. CALL-DISTRIBUTING SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Jan. 11, 1915. Serial No. 1,549. (Cl. 179—27.)



1. In a telephone system, a subscriber's line, trunks, a switch for automatically uniting said line to an idle trunk upon the initiation of a call on said line, connection switches for extending said trunks, a pair of relays to control the release of said first mentioned switch, one of said relays being under the control of the calling subscriber's hook switch and the other said relay being under the control of contacts of said connection switch, and means whereby the operation of the last mentioned relay removes the control from the other said relay.

2. In a telephone system, a subscriber's line, a switch, contacts at said switch forming the terminals of said line, said terminals being normally disconnected from said line, trunks terminating at said switch and extending to a plurality of operators' positions, means actuated by the initiation of a call on said line for operating said switch to connect said line to an idle trunk extending to an idle operator's position, a connection switch at said position for extending said trunk, and means operated upon the connection to said idle trunk for connecting said line to said contacts, said last mentioned means being under the joint control of the calling subscriber's hook switch and said connection switch.

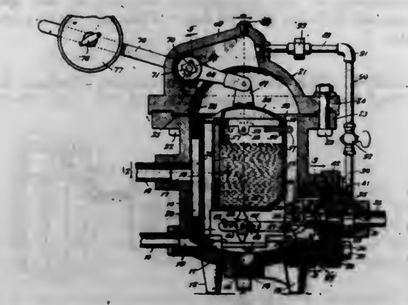
3. In a telephone system, a line, trunks, a switch for automatically joining said line to said trunks upon the establishment of a call upon said line, a connection switch for extending said trunk, a relay having a circuit controlled by said connection switch, a relay for maintaining said line in association with said trunk and a locking circuit for said second relay extending through a front contact thereof and a contact of said first-mentioned relay.

4. In a telephone system, a line, trunks, a switch for automatically joining said line to an idle trunk upon the establishment of a call on said line, a connection switch for extending said trunk, a relay having a circuit controlled by said connection switch, a relay having a circuit controlled through contacts of said automatic switch, a relay for maintaining said line in association with said trunk, and a locking circuit for said last-mentioned relay extending through a front contact thereof and completed through either a contact of said first-mentioned relay or a contact of said second-mentioned relay.

5. In a telephone system, an exchange, a plurality of operators' positions at said exchange, subscribers' lines, switches, distributing trunks extending from said switches to said operators' positions, means for causing one of said switches to automatically connect a calling line to an idle trunk extending to an idle operator's position, a connecting circuit to said position, a connection switch for uniting said circuit to said trunk, means associated with the other end of said connecting circuit for testing a wanted subscriber's line, a tone device and means for associating said tone device with an operator's set when the calling line is tested.

[Claims 6 to 13 not printed in the Gazette.]

1,215,912. STEAM-TRAP. BENTON L. CLOVER, Chicago, Ill. Filed Dec. 7, 1912. Serial No. 735,576. (Cl. 137—103.)



1. In a steam trap, the combination of a closed vessel having an opening in the lower portion of its side wall, a valve supporting member removably held in place at said opening, an inwardly opening valve and an inwardly extending valve-operating arm mounted on said supporting member, a float in said vessel, means mounted at the upper portion of said vessel and connected to said float for counter-balancing the same, and means adjustably connecting said arm and float in vertical direction only, said arm being removable in lateral direction with said valve supporting member, substantially as described.

2. In a steam trap, the combination of a closed vessel having a discharge port at its lower portion, a valve controlling said port, a shifter arm for said valve, a fulcrum block adjustably mounted on said arm, and a float in said vessel having abutments arranged to engage said fulcrum block in its different adjusted positions to open and close said valve, said abutments being spaced apart in vertical direction to permit the lateral insertion and removal of said arm and fulcrum block, substantially as described.

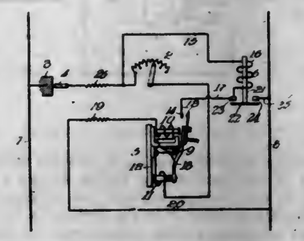
3. In a steam trap, the combination of a closed vessel having an opening in the lower portion of its side wall, a valve-supporting member removably held in place at said opening, an inwardly opening valve and an inwardly extending, horizontal shifter arm for said valve mounted upon said valve support, a counter-balance float suspended in said vessel and having a transverse passage at its lower portion through which said arm extends, and adjustable means interposed between said arm and the upper and lower walls of said passage for operatively connecting said arm and float in outward direction only, said arm being removable in lateral direction from said passage, substantially as described.

4. In a steam trap, the combination of a closed vessel having a discharge port at its lower portion, a valve controlling said port, a horizontally disposed shifter arm for said valve, a fulcrum block adjustably mounted on said arm, and a float suspended in said vessel and having a transverse passage at its lower portion through which said arm and fulcrum block are adapted to be inserted and removed, the upper and lower walls of said passage being arranged to engage said fulcrum block to shift said arm and open and close said valve, substantially as described.

5. In a steam trap, the combination of a closed vessel having an opening in its side wall adjacent its lower end, a valve-supporting member removably secured in place over said opening, a valve mounted on said supporting member and opening inwardly against the pressure in said vessel, a float in said vessel, means connected to the upper end of said float for sustaining the same in position in said vessel, adjustable devices connected to said suspending means for counter-balancing the weight of said float, a shifter arm for said valve mounted on said valve-supporting member and extending inwardly therefrom, and adjustable means for connecting said arm to said float in vertical direction only, substantially as described.

[Claims 6 to 17 not printed in the Gazette]

1,215,913. WELDING-CONTROLLER. LEONARD P. COULTER, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 6, 1915. Serial No. 26,270. (Cl. 219—8.)



1. A welding controller provided with a switch having electromagnetic operating means to hold it open under certain electrical conditions and to close it under other electrical conditions, means controlled by the switch for regulating the current in the welding circuit and means for deënergizing the switch upon closure thereof.

2. A welding controller provided with a switch having electromagnetic operating means to hold it open under certain electrical conditions and to close it under other electrical conditions, means controlled by the switch for regulating the current in the welding circuit and means rendered operative by the closure of the switch for rendering the switch inoperative.

3. A welding controller provided with a switch having electromagnetic operating means in the welding circuit to hold it open under certain electrical conditions and to close it under other electrical conditions, means controlled by the switch for regulating the current in the welding circuit and means for shunting the switch from the welding circuit upon closure thereof.

4. A welding controller provided with a switch having electromagnetic operating means to hold it open under certain electrical conditions and to close it under other electrical conditions, means controlled by the switch for limiting the current in the welding circuit and means rendered operative by the closure of the switch for shunting the switch from the welding circuit.

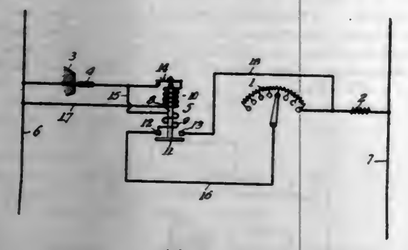
5. A welding controller provided with a switch having electromagnetic operating means to hold it open under certain electrical conditions and to close it under other electrical conditions, means controlled by the switch for regulating the current in the welding circuit and a second electromagnetic switch rendered operative by the closure of the first switch for shunting the first switch from the welding circuit.

[Claims 6 to 22 not printed in the Gazette.]

1,215,914. WELDING-CONTROLLER. LEONARD P. COULTER, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 8, 1915. Serial No. 38,684. (Cl. 219—8.)

1. A welding controller having a resistance in the circuit of the electrodes, a switch having two windings acting cumulatively to close the switch to exclude the resistance when the resistance of the arc has reached a predetermined value, said switch being adapted to automatically reinsert the resistance when the welding circuit is broken.

2. A welding controller having a starting resistance in the circuit of the electrodes, a switch having two windings acting cumulatively to close the switch to exclude the starting resistance when the resistance of the arc has reached a predetermined value, and means operated by closure of the switch for opening the circuit of one of the windings so that the switch will automatically open to reinsert the resistance when the welding circuit is broken.



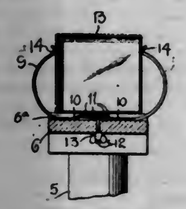
3. A welding controller having a starting resistance in the circuit of the electrodes, a switch having a winding responsive to the voltage between the electrodes and a winding responsive directly to the current in the welding circuit, said windings acting cumulatively on the switch to close it to exclude the starting resistance when the resistance of the arc reaches a predetermined value, and means operated by closure of the switch for opening the circuit of the voltage winding so that the switch automatically opens to reinsert the resistance when the welding circuit is broken.

4. A welding controller having a resistance in the circuit of the electrodes, a switch having two controlling windings one of which is responsive to the voltage between the electrodes and the other of which is responsive to the welding current, and means operated by the closure of the switch for opening the circuit of the voltage winding so that the switch will automatically return to open position to reinsert the resistance when the welding circuit is broken.

5. A welding controller having a resistance in the circuit of the electrodes, a switch having two controlling windings one of which is responsive to the voltage between the electrodes and the other of which is responsive to the welding current, said switch being adapted upon closure thereof to open the circuit of the voltage winding and complete a circuit for the other winding and the electrodes in shunt to the starting resistance.

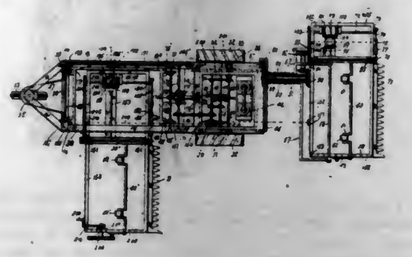
[Claim 6 not printed in the Gazette.]

1,215,915. MAIL-BOX SUPPORT. JOHN H. CRESWELL, Perote, Ala. Filed June 15, 1915. Serial No. 34,258. (Cl. 248—3.)



A mail box support including a post or standard, a horizontally disposed arm vertically adjustable upon said standard, means for securing the arm in its adjusted position, said arm being provided in its upper surface adjacent one end with a transverse groove and with an opening at its transverse center in communication with the groove, spring clamping members engaged at one of their ends in said groove and lapping upon each other, each of said members having a plurality of openings, a vertically disposed bolt loosely disposed through the opening in said arm and disposed through coinciding openings in the clamping members with the head thereof uppermost, a clamping member threaded upon the lower end of the bolt and coacting with the under surface of the arm to secure the spring clamping members in operative relation, and a mail box adapted to be disposed upon the arm over the groove therein, said box being engaged and held in position by the opposed clamping members, the groove of the arm being of a depth less than the combined thicknesses of the overlapping portions of the spring clamping members and the head of the bolt coating therewith.

1,215,916. HARVESTER. OTTO CZÁRÁN, Glendale, N. Y. Filed Mar. 9, 1914. Serial No. 823,601. (Cl. 56—33.)



1. In a harvesting machine, the combination with a main frame, of traction wheels and a steering wheel supporting the same, a harvesting mechanism carried by said frame at the front thereof, a harvesting mechanism attached to the side of said frame, both harvesting mechanisms being connected to the main frame in a manner so as to permit them to turn in any direction to adjust themselves to the inequalities in the ground, and means common to both harvesting mechanisms for lowering or raising the same simultaneously and correspondingly at will in relation to said main frame.

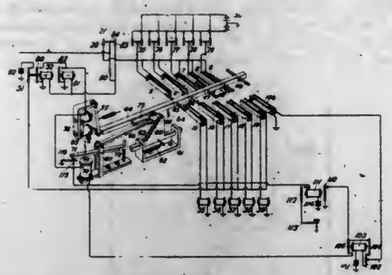
2. In a harvesting machine, the combination with a main frame, of traction wheels and a steering wheel supporting the same, a vertically shiftable auxiliary frame upon the said main frame, a harvesting mechanism disposed upon one of the sides of said main frame and pivoted to said auxiliary frame, a bracket pivoted to said main frame at the front end thereof, arms pivotally attached to said bracket, a second harvesting mechanism pivoted to said arms, and means in engagement with said auxiliary frame and said bracket for simultaneously raising or lowering the same at will in relation to said main frame for the purpose specified.

1,215,917. SELECTING MECHANISM. OSCAR A. DANIELSON, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Oct. 29, 1914. Serial No. 869,333. (Cl. 177—353.)

1. A selecting mechanism comprising a plurality of switches, means for operating said switches, an electromagnet for actuating said means, and movement controlling mechanism coöperating with said electromagnet to cause said means to execute a plurality of zigzag movements, whereby said switches are successively actuated.

2. A selecting mechanism comprising a plurality of switches, means for operating said switches, an electromagnet controlled by said switches for actuating said means, and movement controlling mechanism for coöperating with said electromagnet to cause said means to execute a plurality of zigzag movements to successively operate said switches.

3. A selecting mechanism comprising a plurality of switches, means for operating said switches, electromagnetically actuated apparatus controlled by said switches for actuating said means, movement controlling mechanism for coöperating with said apparatus to cause said means to execute a plurality of reciprocatory movements to successively operate said switches, and a device for restoring said mechanism and said means.

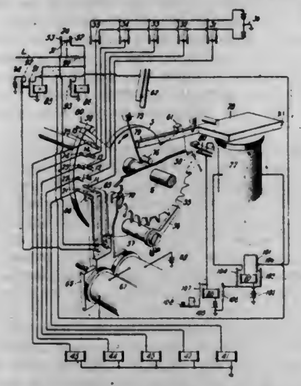


4. A selecting mechanism comprising a plurality of switches, a reciprocating actuator for operating said switches, a stepped member for directing the reciprocatory operation of said actuator to successively actuate said switches, and means controlling said actuator, whereby said switches are successively operated.

5. A selecting mechanism comprising a plurality of switches, a pivoted reciprocating actuator therefor, a stepped member for directing the movement of said actuator, an electromagnet for operating said actuator, a restoring lever for controlling the restoration of said member and actuator, an electromagnet for said lever, and means controlling said electromagnets after a succession of operations of said actuator.

[Claims 6 to 9 not printed in the Gazette.]

1,215,918. SELECTING APPARATUS AND SYSTEM. AMOS FREDERICK DIXON, Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 24, 1915. Serial No. 30,006. (Cl. 177—353.)



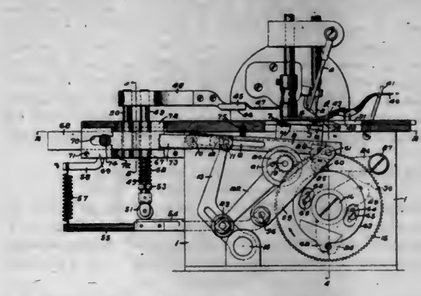
1. A selecting system comprising an electromechanical current-distributing mechanism, a transmission line providing a succession of current impulses, a plurality of distributing switch members carried by said mechanism, a pair of circuit closers associated therewith, and an electromagnet for simultaneously actuating said circuit closers and causing a step-by-step movement of said switch members to distribute current determined by the current impulses from over the line.

2. A selecting system comprising current control means, an electromechanical current-distributing mechanism associated therewith, a plurality of collecting switch members carried by said mechanism, a pair of circuit closers associated with said members, and means for actuating said circuit closers and causing a step-by-step movement of said mechanism whereby said members are brought into engagement with said circuit closers sequentially to form a succession of current impulses.

3. A selecting apparatus comprising electromechanical selecting mechanism, a plurality of circuit contacts associated therewith, means coöperating with said contacts to complete energizing circuits for said mechanism, and an electromechanical device for simultaneously actuating said means and causing a step-by-step movement of said contacts to distribute the effects of a succession of current impulses.

4. A selecting apparatus comprising a plurality of contacts carried by a rotatable member, an escapement wheel associated with said member, a circuit completing member adapted to coöperate with said contacts, an escapement lever coöperating with said wheel, and an electromagnet for simultaneously actuating said circuit completing member and said escapement lever for causing said circuit completing member to successively act upon said contacts.

1,215,919. BORDER-FORMING MECHANISM FOR FABRICS. WILLIAM P. DRUMHELLER, Springfield, Mass., assignor to The William Carter Company, Needham Heights, Mass., a Corporation of Massachusetts. Filed Mar. 9, 1915. Serial No. 13,255. (Cl. 112—24.)



1. Border forming mechanism for fabrics comprising, in combination, means to feed the body fabric, means including a forming finger extending longitudinally in the direction of feed of the body fabric and over and under which the loops forming a looped ornamental border are formed, means to apply a loose tape or ribbon adjacent said forming finger between the looped portion of said border and said fabric, tape or ribbon feeding means movable independently of said body fabric feeding means and positioned directly to engage the applied portion of said tape or ribbon between the loops of said ornamental border, and means so to operate said body fabric feeding means and said tape or ribbon feeding means as to cause the body fabric and the inserted tape or ribbon to move together without puckering.

2. Border forming mechanism comprising in combination, means to feed a body fabric in one direction, means to feed the fabric in the opposite direction, means including a forming finger over and under which the loops are formed to apply a looped ornamental border thereto, means to position a loose tape or ribbon adjacent said forming finger between the looped portion of said border and said body fabric, whereby the positioned tape or ribbon has freedom of movement relative to the body fabric after positioning, and feeding means adapted directly to engage the positioned, loose tape or ribbon and thereby to feed the same.

3. Border forming mechanism for fabrics comprising, in combination, stitch forming mechanism including a sewing needle and a crochet hook, means to feed a body fabric, means including a forming finger located at the stitch forming instrumentalities and extending longitudinally in the direction of feed of the fabric and over and under which the loops forming a looped ornamental border are

formed, means to position a loose tape or ribbon adjacent said forming finger between the looped portion of said border and said body fabric and positively acting tape or ribbon feeding means positioned posteriorly of said stitch forming instrumentalities and movable independently of said body fabric feeding means and adapted directly to engage the applied portion of said tape or ribbon between the loops of said ornamental border, and means so to operate said body fabric feeding means and said tape or ribbon feeding means as to cause the body fabric and the inserted tape or ribbon to move together without puckering.

4. Border forming mechanism for fabrics comprising in combination, means to feed a body fabric intermittently in opposite directions, means to apply a looped ornamental border thereto, means to position a loose tape or ribbon between the looped portion of said border and said body fabric, and means to engage the positioned, loose tape or ribbon at a point beyond the stitching instrumentalities and to impart movement thereto.

5. Border forming mechanism for fabrics comprising, in combination, stitch forming instrumentalities including a sewing needle and a crochet hook, means to feed a body fabric, a forming finger located at said stitch forming instrumentalities and over and under which the loops forming a looped ornamental border are formed in a series of clusters each composed of radiating loops, means to position a loop tape or ribbon adjacent said forming finger between the looped portion of said border and said body fabric, and tape or ribbon feeding means positioned posteriorly of said stitch forming instrumentalities and movable independently of said body fabric feeding means, means to move said feeding means intermittently into engagement with the inserted tape or ribbon, and means so to operate said body fabric feeding means and said tape or ribbon feeding means as to cause the body fabric and the inserted tape or ribbon to move together without puckering.

[Claims 6 to 32 not printed in the Gazette.]

1,215,920. BRACELET-LINK. ALEXANDER EKLUND, Attleboro, Mass., assignor, by mesne assignments, to J. F. Sturdy's Sons Co., a Corporation of Massachusetts. Filed Feb. 9, 1916. Serial No. 77,255. (Cl. 24—239.)



1. In a bracelet, a guide link comprising two spaced apart side members between which another link is adapted to slide, said members being connected together by bridge elements, one of the bridge elements forming a rigid hook, and a spring tongue for closing the mouth of said hook.

2. In a bracelet, a guide link comprising two spaced apart side members between which another link is adapted to slide, said members being connected together by bridge elements, the bridge element on one end forming a rigid hook, and a spring tongue for closing the mouth of said hook, the free end of said spring being guided between said members.

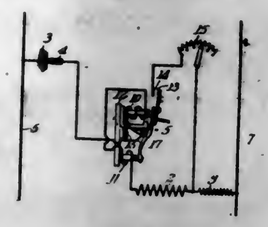
3. In a bracelet, a guide link comprising two spaced apart side members between which another link is adapted to slide, said members being connected together by bridge elements, having fingers formed integral therewith, a hook member on one end of said link, and a spring tongue for closing the mouth of said hook, one end of said tongue being secured to said side members by said fingers.

4. In a bracelet, a guide link comprising two spaced apart side members connected together by bridge elements, a rigid hook member formed integral with one end of said link, and a spring tongue secured at one end to said members, its opposite end being bent to close the mouth of said hook and to enter and be guided in the space between said members.

5. In a bracelet, a guide link comprising two spaced apart members connected by bridge elements, a hook member connected to both side members and formed by folding inwardly both edges of the stock of said members, and a spring tongue for closing the mouth of said hook.

[Claim 6 not printed in the Gazette.]

1,215,921. WELDING-CONTROLLER. CLARENCE T. EVANS, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 6, 1915. Serial No. 26,269. (Cl. 219—8.)



1. A welding controller provided with a starting circuit having a resistance therein, a welding circuit having a resistance therein, a switch having a closing winding and a holding winding connected directly in said starting circuit to hold the switch open when the initial current is high and to close it when the current decreases to a predetermined value to thereby shunt the resistance in the starting circuit and place the switch windings in shunt to the resistance in the welding circuit.

2. A welding controller provided with a starting circuit having a resistance therein, a welding circuit having a resistance therein, a switch having a closing winding and a holding winding connected directly in said starting circuit to hold the switch open when the initial current is high and to close it when the current decreases to a predetermined value to thereby shunt the resistance in the starting circuit and place it and the switch windings in shunt to the resistance in the welding circuit.

3. A welding controller having a resistance in the circuit of the electrodes, a second resistance, a switch responsive to the current in the electrode circuit having electromagnetic operating means to hold it open under certain electrical conditions and to close it under other electrical conditions to place the second resistance in the circuit of the electrodes and connect the switch operating means and the first resistance in shunt to said second resistance.

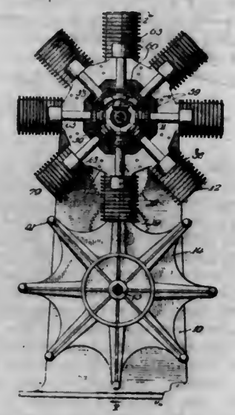
4. A welding controller having a resistance in the circuit of the electrodes, a second resistance, a switch having electromagnetic operating means connected directly in said circuit to hold the switch open under certain electrical conditions and to close it under other electrical conditions to place the second resistance in the circuit of the electrodes and connect the switch operating means and the first resistance in shunt to the second resistance.

5. A welding controller having a resistance in the circuit of the electrodes, a second resistance, a switch having electromagnetic operating means connected directly in said circuit to hold the switch open under certain electrical conditions and to close it under other electrical conditions to place the second resistance in the circuit of the electrodes and connect the switch operating means and the first resistance in shunt thereto, said switch being normally biased to open position so that the first resistance is automatically reinserted when the welding circuit is broken.

[Claims 6 to 12 not printed in the Gazette.]

1,215,922. INTERNAL-COMBUSTION ENGINE. HOWARD H. FASNACHT, Chicago, Ill., assignor of one-half to Alfred L. Day, Chicago, Ill. Filed Jan. 4, 1916. Serial No. 70,151. (Cl. 123—44.)

1. A fluid pressure engine comprising a cylinder, a piston therein, means for mounting said cylinder to rotate about an axis to which said cylinder extends substantially radially, a rotor, means for mounting said rotor to rotate about an axis substantially parallel to said first axis, and means whereby said piston exerts pressure on said rotor to cause said cylinder and rotor to rotate about their respective axes, the distance between said axes being greater than the length of said cylinder, said cylinder in its movement passing between said axes.



2. A fluid pressure engine comprising a plurality of cylinders, pistons for said cylinders, means for mounting said cylinders to rotate about an axis to which said cylinders extend substantially radially, a rotor, means for mounting said rotor to rotate about an axis substantially parallel to said first axis, and means whereby said pistons successively exert pressure on said rotor to cause the cylinders and rotor to rotate about their respective axes, said cylinders in their movement passing between said axes.

3. A fluid pressure engine comprising a cylinder, a piston therein, means for mounting said cylinder to rotate about an axis to which said cylinder extends substantially radially, a rotor, means for mounting said rotor to rotate about an axis substantially parallel to said first axis, and means whereby said piston exerts pressure on said rotor to cause said cylinder and rotor to rotate about their respective axes, said cylinder being open at its outer end and said rotor having a portion for engaging said piston.

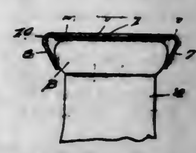
4. A fluid pressure engine comprising a plurality of cylinders, pistons for said cylinders, means for mounting said cylinders to rotate about an axis to which said cylinders extend substantially radially, a rotor, means for mounting said rotor to rotate about an axis substantially parallel to said first axis, and means whereby said pistons successively exert pressure on said rotor to cause the cylinders and rotor to rotate about their respective axes, said cylinders being open at their outer ends and said rotor having portions for successively engaging said pistons.

5. An internal combustion engine comprising a cylinder, means for mounting said cylinder to rotate about an axis to which said cylinder extends substantially radially, a combined compression and power piston operating in the outer part of said cylinder, a combined charging and scavenging piston operating in the inner part of said cylinder, a rotor, and means whereby said power piston exerts pressure on said rotor to cause said cylinder and rotor to rotate about their respective axes.

[Claims 6 to 16 not printed in the Gazette.]

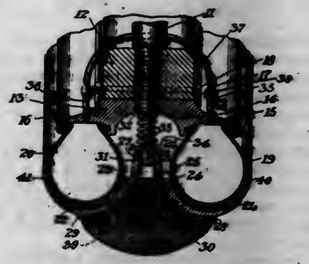
1,215,923. RETAINING DEVICE FOR MILK-BOTTLE CAPS. PHILLIP N. FRETWELL, Memphis, Tenn., assignor of one-half to Leander S. Dunscomb, Little Rock, Ark. Filed Feb. 26, 1916. Serial No. 80,676. (Cl. 215—9.)

The combination with a bottle having an annular bead at the open end thereof, of a cap removably and slidably positioned upon the upper side of the annular bead and overlying the open end of the bottle, a disk overlying and engaging the upper side of the cap and having a diameter exceeding the diameter of the cap, downwardly and inwardly extending straight resilient fingers carried by the periphery of the disk and located at diametrically opposite points and arranged for the major portion of their length in spaced relation with the annular bead so as to



admit of the points of juncture between the fingers and the disk being spaced sufficiently from the annular bead on the bottle to provide manipulating portions, the lower ends of the fingers frictionally engaging the sides of the annular bead, so as to cause tight engagement between the cap and the disk, and a downwardly extending flange carried by the disk.

1,215,924. VEHICLE-WHEEL. GEORGE S. GALLAGHER and GUSTAV SCHADEE, New York, N. Y. Filed Dec. 23, 1915. Serial No. 68,335. (Cl. 152—35.)



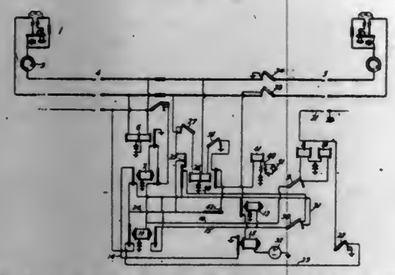
1. In a vehicle wheel and in combination, a fel y, a plurality of pneumatic tubes connected thereto, an outer rim, a solid tread member secured to said outer rim, a plurality of members each adjustable radially in said felly, a plunger extending from each of the adjustable members and terminating in a socket provided therefor in said outer rim and between the pneumatic tubes, and a corresponding number of resilient members each associated with a plunger so that the tension placed thereon is dependent upon the position of the corresponding adjustable member.

2. In a vehicle wheel, and in combination, a felly, a flanged inner rim, means for connecting said felly and rim, a divided outer rim, a pair of pneumatic tubes between the flanges of said inner rim and the parts of said outer rim, a solid tread connected to said outer rim, a pair of spaced circumferential ribs connected to the outer rim between the pneumatic tubes, a plurality of adjusting screws in said felly and inner rim, a plunger connected to each adjusting screw and extending from the same into the annular space between said ribs and being of substantially the same diameter as the width of said space, and resilient devices associated with said plungers and extending between said adjusting screws and said ribs so that the tension thereon is determined by the position of said adjusting screws.

3. In a vehicle wheel and in combination, a felly, a flanged inner rim, means for connecting said felly and rim, a divided outer rim, a pair of pneumatic tubes between the flanges of said inner rim and the parts of said divided outer rim, a solid tread connected to said outer rim, a pair of spaced circumferential ribs connected to the said outer rim between the said pneumatic tubes and extending toward the said inner rim, a plurality of adjusting screws in said flange and inner rim, a plunger connected

to each adjusting screw and extending from the same into the annular space between the said ribs in which the free end of each plunger is movable only in the plane of the wheel, washers set in recesses provided therefor in the edges of said ribs, each washer being provided with an elongated opening through which one of said plungers extends, and a helical spring surrounding each plunger and extending between the corresponding adjusting screw and washer.

1,215,925. TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Aug. 23, 1915. Serial No. 46,891. (Cl. 179—18.)



1. In a telephone exchange system, a plurality of lines, a selector switch for extending a calling to a called line, a relay associated with said selector for testing the busy or idle condition of the called line, and means for supplying current for talking purposes to the called line through a winding of said relay.

2. In a telephone exchange system, a plurality of lines, a selector switch for extending a calling to a called line, a double wound relay for testing the busy or idle condition of a selected called line, and means for supplying current for talking purposes to the called line through the windings of said relay.

3. In a telephone exchange system, a plurality of lines, a selector switch for establishing a connection between a calling and a called line, a relay for testing the busy or idle condition of the called line, said relay controlling the completion of the connection, and means for supplying current for talking purposes to the called line through the winding of said relay if said line has been found idle.

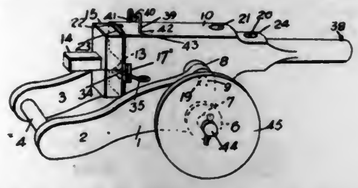
4. In a telephone exchange system, a plurality of lines, a selector switch for extending a calling to a called line, a double wound relay for testing the busy or idle condition of the called line, a restoring magnet for said selector switch, means for sending a characteristic signal to the calling line through a winding of said relay if the called line is busy, the operation of said means and said restoring magnet being controlled by said relay.

5. In a telephone exchange system, a plurality of lines, a selector switch for extending a calling to a called line, a relay adapted to be actuated if the called line is found busy, a restoring magnet for said selector switch, means operative upon the actuation of said relay for sending a characteristic signal to the calling line, and means operative upon the reaction of said relay for closing an actuating circuit for said restoring magnet.

[Claims 6 and 7 not printed in the Gazette.]

1,215,926. TOY GUN. JOHN WARWICK GORDON, St. Catharines, Ontario, Canada. Filed Apr. 3, 1916. Serial No. 88,504. (Cl. 124—13.)

1. In a toy gun, the combination with the barrel body provided with a barrel bore and a vertical orifice extending through the barrel body into the bore intermediately of the length of the same, a spring plunger held in the barrel bore and designed to be withdrawn to a position to the rear of the aforesaid orifice, means for feeding a series of marbles into the barrel bore between the withdrawn end of the plunger and the aforesaid orifice, and a ball freely supported within the orifice and having a spherical peripheral portion projecting downwardly through such orifice into the barrel bore and into contact with the fed marble.



2. In a toy gun, the combination with the barrel body having a barrel bore and an orifice extending vertically through the body into the bore, and a magazine bore extending through the barrel body from the rear thereof into the vertical orifice at its opposite end and adapted to hold a series of marbles, of a spring plunger held within the barrel bore, and means for producing impact upon the rearmost marble in the magazine simultaneously with the forward or firing movement of the spring plunger to carry the foremost marble into the vertical orifice.

3. In a toy gun, the combination with the barrel body having a barrel bore and a forwardly inclined vertical orifice extending vertically through the body into the bore, and a magazine bore extending through the barrel body from the rear thereof into the vertical orifice at its opposite end and adapted to hold a series of marbles, of a spring plunger held within the barrel bore, and means for producing impact upon the rearmost marble in the magazine simultaneously with the forward or firing movement of the spring plunger to carry the foremost marble into the vertical orifice.

4. In a toy gun, the combination with the barrel body having a barrel bore and an orifice extending vertically through the body into the bore, and a magazine bore extending through the barrel body from the rear thereof into the vertical orifice at its opposite end and adapted to hold a series of marbles, of a spring plunger held within the barrel bore, and means for producing impact upon the rearmost marble in the magazine simultaneously with the forward or firing movement of the spring plunger to carry the foremost marble into the vertical orifice, and means located at the rear end of the magazine bore for retaining the marbles therein.

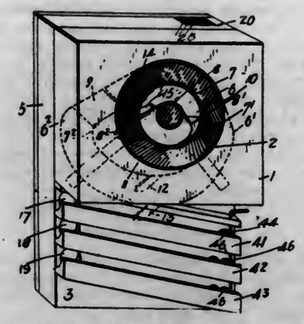
5. In a toy gun, the combination with the barrel body having a barrel bore and an orifice extending vertically through the body into the bore, and a magazine bore extending through the barrel body from the rear thereof into the vertical orifice at its opposite end and adapted to hold a series of marbles, of a spring plunger held within the barrel bore, retaining means located at the rear end of the magazine bore for holding the marbles within the bore and yet allowing the peripheral portion of the rearmost marble to project from the mouth, a cross head carried by the spring operated plunger adapted to be carried against the peripheral portion of the rearmost ball when the plunger is fired.

[Claims 6 to 10 not printed in the Gazette.]

1,215,927. TOY TARGET. JOHN WARWICK GORDON, St. Catharines, Ontario, Canada. Filed Apr. 6, 1916. Serial No. 89,357. (Cl. 124—15.)

1. A toy target comprising a casing having a series of concentric openings formed in the front of the casing corresponding to the concentric openings of the target, of a series of movable indicators, one corresponding to each of the target openings, independent projectile receivers into which the projectiles pass from each of the target openings, and means operated by the weight of the projectiles for moving an indicator to the visible position as a projectile passes from a target opening to the receiver and allowing the indicator to return to its normal or invisible position as the projectile passes into the receiver.

2. In a toy target, a casing provided with a series of concentric openings formed in the front of the casing corresponding to the spaces of the target and a series of discharge openings in the back of the casing, downwardly inclined walls extending from the concentric openings of the casing designed to direct the projectiles passing through the openings downwardly to a corresponding discharge opening, a series of movable indicators, projectile receivers corresponding to each of the concentric openings of the target, mechanism for operating independently each of the indicators by the weight of a projectile as it passes from a discharge opening to the receiver.



3. In a toy target, a casing provided with a series of concentric openings formed in the front of the casing corresponding to the spaces of the target and a series of discharge openings in the back of the casing, downwardly inclined walls extending from the concentric openings of the casing designed to direct the projectiles passing through the openings downwardly to a corresponding discharge opening, deflector plates located in a diagonal position between the aforesaid walls and designed to direct the projectiles downwardly, a series of movable indicators, projectile receivers corresponding to each of the concentric openings of the target, and mechanism for operating independently each of the indicators by the weight of a projectile as it passes from a discharge opening to the receiver.

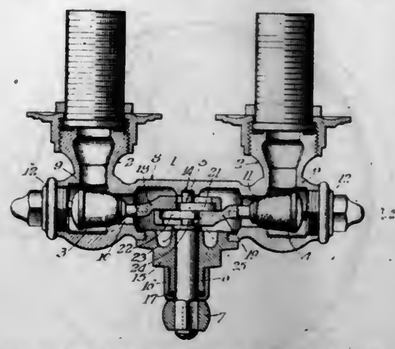
4. In a toy target, a casing provided with a series of concentric openings formed in the front of the casing corresponding to the spaces of the target and a series of discharge openings in the back of the casing, downwardly inclined walls extending from the concentric openings of the casing designed to direct the projectiles passing through the openings downwardly to a corresponding discharge opening, V-shaped projecting portions located between the upper portions of each wall and designed to direct the projectile laterally, a series of movable indicators, projectile receivers corresponding to each of the concentric openings of the target, and mechanism for operating independently each of the indicators by the weight of a projectile as it passes from a discharge opening to the receiver.

5. A toy target comprising a casing having a series of concentric openings in the front wall corresponding to the spaces of the target, a runway corresponding to each of the concentric openings, a stop at the bottom of each runway, means for directing a projectile passing through a concentric opening of the target into a corresponding runway, and a point indicator corresponding to each target opening and operated by the passage of a projectile from a target opening to a corresponding runway.

[Claims 6 to 8 not printed in the Gazette.]

1,215,928. MIXING-VALVE. JOHN GRAVES, Milwaukee, Wis. Filed Oct. 9, 1915. Serial No. 54,983. (Cl. 137—26.)

1. A mixing valve for controlling the admission of fluid from two sources of supply to a common outlet comprising a valve for controlling the flow from each source, a single operating means to positively open one valve to full open position while the other is positively held closed, to positively open the second valve to full open position while the first is positively held fully open, to positively close either of the valves while the other is positively held fully open and to positively close the remaining valve, and a housing inclosing said elements adapted to be attached to standard plumbing connections without alteration thereof.



2. A mixing valve comprising a housing having supply connections adapted to be applied to standard plumbing connections without requiring alteration thereof, the body of said housing being located between said supply connections, a valve for each supply port in the housing and a single operating means to positively and fully open one of said valves while the other is positively held closed, to positively open the second valve to full open position while the first is positively held fully open, to positively close either of the valves while the other is positively held open and to positively close the remaining valve while the other is positively held closed.

3. A mixing valve comprising a housing having two inlet ports and a common outlet, a valve for each inlet port and means controlled by a single handle for positively operating said valves in both opening and closing directions to gradually open one valve to full open position while the other is held closed, to gradually open the second valve to full open position while the first is held fully open, to gradually close either of said valves while the other is held open and to gradually close the other valve.

4. A mixing valve for controlling the admission of fluid from two sources of supply to a common outlet comprising a valve for controlling the flow from each source and means carried by a single shaft to positively open one valve to full open position and positively hold the other closed, to positively open the second valve to full open position while the first is positively held fully open, to positively close either of the valves and at the same time hold the other positively fully open, and to positively close the remaining valve while the other is held positively closed, and a housing inclosing said elements adapted to be attached to standard plumbing connections without requiring alteration thereof.

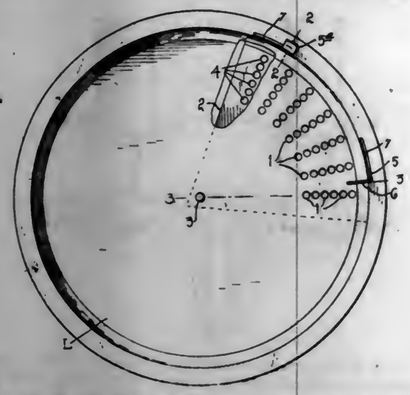
5. A mixing valve comprising a housing having two inlet ports and a common outlet, a valve for each inlet and a cam mechanism controlled by a single handle for positively operating said valves in both opening and closing directions to fully open one of them while the other is held closed, to fully open the second valve while the first is held fully open, and to close either valve while the other is held fully open and to close the other valve.

[Claims 6 to 17 not printed in the Gazette.]

1,215,929. LID. GEORGE JACOB GUTH, Denver Mills, Colo. Filed June 21, 1916. Serial No. 104,953. (Cl. 53—8.)

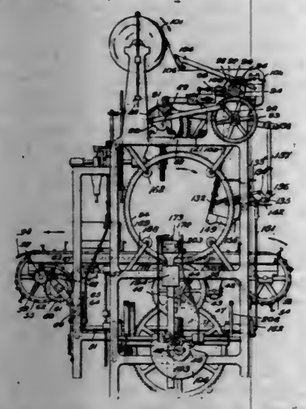
1. In combination with a lid provided with slots adjacent its marginal portion and having a plurality of openings, a sector plate underlying the lid and having its apex portion pivotally engaged with the lid, the opposite end portion of the plate being provided with tongues disposed through the slots of the lid, said plate being provided with openings adapted to register with the openings

of the lid upon movement of the plate in one direction, one of the tongues being vertically disposed throughout its length and provided with an inwardly directed wing, said wing being positioned along a vertical edge of said tongue and at substantially right angles thereto.



2. In combination with a lid provided with slots adjacent its marginal portion and having a plurality of openings, a sector plate underlying the lid and having its apex portion pivotally engaged with the lid, the opposite end portion of the plate being provided with tongues disposed through the slots of the lid, said plate being provided with openings adapted to register with the openings of the lid upon movement of the plate in one direction, one of the tongues being vertically disposed throughout its length and provided with an inwardly directed wing.

1,215,930. WRAPPING-MACHINE. ALBERT J. HADERT, New Rochelle, N. Y. Filed Mar. 19, 1913. Serial No. 755,286. (Cl. 93—2.)



1. In a packaging machine a movable conveyer, a delivery chute, supporting fingers forming an extension of said chute at the delivery end thereof, and carriers on said conveyer having confining fingers adapted to enter the spaces between said supporting fingers on said chute when each carrier is moved past said chute by said conveyer, substantially as described.

2. In a packaging machine a movable conveyer, a delivery chute, supporting fingers at the delivery end thereof forming an extension of said chute and inclining downward toward said conveyer, and carriers on said conveyer provided with lifting blocks, spaced so as to accommodate said fingers, and with confining fingers adapted to enter the spaces between said supporting fingers on said chute when each carrier is moved past said chute by said conveyer, substantially as described.

3. In a packaging machine a movable conveyer, a delivery chute, supporting fingers forming an extension of said chute at the delivery end thereof, and carriers on said conveyer having confining fingers with ends bent backward and downward and mounted resiliently upon the rear thereof and adapted to enter the spaces between said supporting fingers on said chute when each carrier is moved past said chute by said conveyer, substantially as described.

4. In a packaging machine, a movable conveyer, a delivery chute, means for removing articles from said chute to said conveyer, and a movable resistant body over said conveyer near the point of delivery adapted to maintain contact with each article after it is deposited on the conveyer to steady the same, substantially as described.

5. In a packaging machine, a movable conveyer, a delivery chute, means moving with the conveyer for removing articles from the chute to the conveyer, and a steadying device for the article placed over the conveyer, substantially as described.

[Claims 6 to 54 not printed in the Gazette.]

1,215,931. SHIRT. ALBERT C. HAPP, Jr., Columbus, Ohio, assignor of one-half to D. C. Larcomb and M. W. Larcomb, Columbus, Ohio. Filed Dec. 26, 1914. Serial No. 879,092. (Cl. 2—92.)



1. In a shirt, a main body, a neck band secured to said body and designed to overlap and to be buttoned together at the front, a collar band having substantially straight longitudinal edges secured directly by and along its lower edge to the inside of the shirt so that it lies along the inside face of said neck band and so that its upper free edge lies adjacent the upper edge of said neck band, and an outside collar secured to the upper edge of said collar band.

2. In a shirt, a main body, a neck band secured to said body and designed to overlap and to be buttoned together at the front, a collar band having substantially straight longitudinal edges secured along its lower edge to the inside of said shirt along the line of jointure between said neck band and the shirt body in a manner so that it lies along the inside face of said neck band and so that its upper free edge lies adjacent the upper edge of said neck band, and an outside collar secured to the upper edge of said collar band.

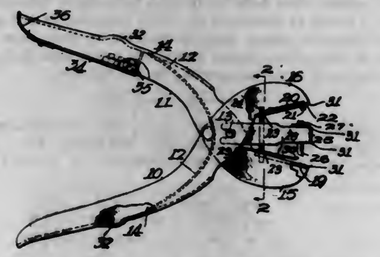
3. In a shirt, a main body, a neck band secured to said body and designed to overlap and to be buttoned together at the front, a collar band shorter in length than said neck band extending from a point on the side portion of the shirt around the back to a corresponding point on the other side of the shirt, said collar band having substantially straight longitudinal edges and being secured along its lower edge to the inside of the shirt along the line of jointure between said neck band and said shirt body in a manner so that it lies along the inside face of said neck band and so that its upper free edge lies adjacent the upper edge of said neck band, and an outside collar secured to the upper edge of said collar band.

4. In a shirt, a main body, a neck band secured to said body and designed to overlap and to be buttoned together at the front, collar support pieces secured to said body along the seam lines of the front of the shirt and along the line of attachment of said neck band and said body, and an outside collar secured to said collar support pieces on a line from the side of the neck to the seam lines at the front of the shirt a distance below the neck band and arranged to lie on the outside or the inside of said body.

5. In a shirt, a main body, a neck band secured to said body and designed to overlap and to be buttoned together at the front, collar support pieces secured to said body along the seam lines of the front of the shirt and along the shoulder seams, and an outside collar secured to said collar support pieces along a line from the side of the neck band to the seam lines of the front of the shirt a distance below the neck band and arranged to lie on the outside or the inside of said body.

[Claims 6 and 7 not printed in the Gazette.]

1,215,932. HAND-TOOL. CARL C. HARRIS and JOHN A. ADELL, Orange, Mass., assignors, by direct and mesne assignments, to Rivets Manufacturing Company, Orange, Mass., a Corporation of Massachusetts. Filed Dec. 7, 1915. Serial No. 65,620. (Cl. 164—121.)



1. In an implement of the class described, the combination of two jaws, one having a die therein and the other having a pilot pin and a member located centrally between said jaws and provided with a punch on one side for coöperating with the said die and with a rivet set on the other side for coöperating with said pilot pin.

2. In an implement of the class described, the combination of two jaws, one having a die therein and the other having a pilot pin and an anvil located between said jaws and provided with a punch on one side for coöperating with the said die and with a rivet set on the other side for coöperating with said pilot pin, said anvil being maintained substantially in central position when said jaws are together.

3. In a hand tool, the combination of two jaws pivoted together, an anvil located substantially half way between them, each jaw and both sides of said anvil having tools thereon, and a pin fixed to said anvil and projecting therefrom into the respective jaws for holding the anvil in position, said anvil being bifurcated at its inner end and having the bifurcation extending over the pivot on which said jaws are pivoted together.

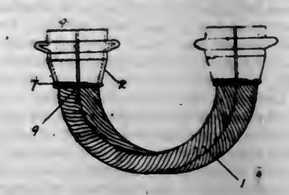
4. In a hand tool, the combination of jaws pivoted together, adapted to swing substantially into contact, having complementary tool parts thereon, and having sharp edges projecting beyond said tool parts, and equidistant therefrom, whereby the opposite edges of an eyelet attached to a sheet can be engaged and pinched by said edges in a direction parallel with the plane of the sheet to multilate it and remove it from the sheet.

5. In a punch, the combination with a pair of members adapted to move together and apart one having a punch thereon and the other a die coöperating therewith, and a spring stripper mounted on the die member and projecting toward the punch, said stripper being bent outwardly toward the punch at its end and terminating at the punch.

[Claims 6 to 10 not printed in the Gazette.]

1,215,933. RAIL-BOND. FRANK O. HARTMAN, Mansfield, Ohio, assignor to The Hartman Electrical Manufacturing Company, Mansfield, Ohio, a Corporation of Ohio. Filed Apr. 17, 1916. Serial No. 91,573. (Cl. 173—278.)

1. An article of manufacture consisting of a rail bond having a sleeve fastened to the end thereof and having external means forming a ledge provided on said sleeve adjacent but not at the end to the end of the bond which is adapted to catch, support and retain the filling metal used in making the weld, so that the area of said filling metal can be enlarged and built in overlapping relation to said sleeve and welded to the end of the bond.



2. A rail bond, adapted for welding to the rail by oxy-acetylene or other gaseous flame process, and consisting of a flexible body portion incased by a sleeve adjacent to its end, said sleeve being provided with an external ledge adapted to catch, retain and support the fused filling metal used in making the weld so that said filling metal can be built up with an enlarged section and welded to the end of the bond in overlapping relation thereto.

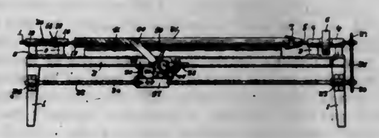
3. In a rail bond adapted for welding to the rail by the oxy-acetylene or other gaseous flame process, and consisting of a flexible body portion incased by a sleeve at the end thereof, external means provided on said sleeve which is adapted to catch, retain and support the fused filling metal used in making the weld during the welding process so that said filling metal can be built up against the surface of the rail in overlapping relation to said sleeve and welded to the end of the bond, and means provided in the sleeve to lock said flexible body portion to said sleeve.

4. In a bond, in combination with a rail, a sleeve having an external hollow ledge, a flared portion and a reduced collar formed on the sleeve contiguous with the ledge, said hollow ledge being adapted to engage the flexible member of the bond when pressure is exerted on the sleeve to kink said flexible member and a filling metal adapted to weld the bond and the rail together as described.

5. In a bond, in combination with a rail, a sleeve having an external hollow ledge, a flared portion, and a reduced collar formed on the sleeve contiguous with the ledge; said hollow ledge being adapted to engage the flexible member of the bond when pressure is exerted on the sleeve to kink the same, a filling metal adapted to be fused and welded to the bond and rail, the ledge also being adapted to catch, support and retain the filling metal when being fused and permit it to form in overlapping relation to the sleeve.

[Claims 6 to 11 not printed in the Gazette.]

1,215,934. CROSS-WRAPPING MACHINE. ORA E. HECKMAN, Akron, Ohio. Filed Mar. 7, 1916. Serial No. 82,640. (Cl. 242—11.)

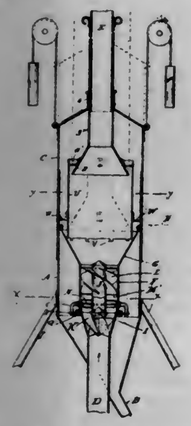


1. In a machine of the character described, a frame, a mandrel rotatably supported upon said frame, a carriage slidably mounted upon said frame, a tape spool carrying frame pivotally mounted upon said carriage, a tape spool mounted within said tape spool carrying frame, a tension device connected to said tape spool, means for rotating said mandrel, a curved tension board located between said mandrel and said tape spool, the tape from said tape spool arranged to pass over said tension board, means for moving said carriage in a path parallel to said mandrel and

means for reversing the direction of said carriage adjacent each extremity of said mandrel, said tape spool carrying frame arranged to be oscillated as the movement of the carriage is reversed.

2. In a machine of the character described, a frame, a mandrel rotatably mounted upon said frame, a carriage slidably mounted upon said frame, a tape spool carrying frame pivotally mounted upon said carriage, a tape spool mounted within said tape spool carrying frame, a tension device connected to said tape spool, means for rotating said mandrel, a tension roller located in the forward extremity of said tape spool carrying frame, a curved tension board provided upon the frame adjacent said mandrel, the tape from said tape spool arranged to pass over said tension board, means for moving said carriage in a path parallel to said mandrel, and means for reversing the direction of movement of said carriage adjacent each extremity of said mandrel, said tape spool carrying frame arranged to be oscillated as the movement of the carriage is reversed.

1,215,935. SEPARATOR. MILTON L. HICKMAN, Rapid City, S. D. Filed Nov. 22, 1915. Serial No. 62,703. (Cl. 183—91.)



1. A separator comprising a casing having an inlet pipe leading into the lower portion thereof and an outlet pipe leading from the upper portion thereof, means for varying the size of the expansion chamber within the casing, a flaring wall located at the upper end of the inlet pipe within the casing, and means located in the path of the entering dust-laden air currents for spreading said currents over the edge of said flaring wall whereby the tailings drop over the outer edge thereof and the "fines" are carried upwardly and outwardly through the outlet pipe.

2. A separator comprising a pair of telescoping drums forming an adjustable expansion chamber, an upwardly extending inlet pipe, a flaring cone on the inner end of said pipe extending nearly to the side walls of the chamber, deflecting means located in the path of the entering air currents adapted to spread said currents outward and upward and over the edge of said cone, whereby the tailings drop between the chamber wall and edge of said cone.

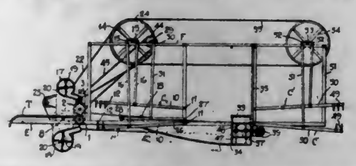
3. A separator comprising walls forming an expansion chamber and having inlet and outlet pipes, a conical core in the inner end of said inlet pipe forming a tapering annular passage whereby the air is gradually compressed as it rises in said passage, a plurality of helical blades located in said passage and extending from said core to the walls of said inlet pipe, and a superior flaring cone located above the upper end of said inlet pipe and extending nearly to the adjacent wall of the expansion chamber, thereby forming a discharge for the tailings.

4. A separator comprising walls forming an expansion chamber and having inlet and outlet pipes, a conical enlargement on the inner end of the inlet pipe, a superior flaring cone located above said enlargement and extending nearly to the adjacent wall of the expansion chamber to provide for a tailings discharge, a cylindrical intermediate portion connecting said enlargement with the upper flaring cone, a conical core having a cylindrical body and conical bottom forming a tapering conical passage within said enlargement and a continuing annular passage within said cylindrical portion, helical blades mounted in said tapering passage, pivoted deflectors mounted in said annular passage, and means to adjust said deflectors.

5. A separator comprising walls forming an expansion chamber and having inlet and outlet pipes, a flaring cone communicating at the bottom with the inlet pipe and at the top forming with the casing wall an annular discharge opening for the tailings, a central core below said flaring cone, a double set of helical blades mounted about said central core with an intermediate space between the sets, a series of deflectors pivotally mounted in said space, and means to adjust their inclination to vary their relation to the helical blades above and below said deflectors.

[Claims 6 to 15 not printed in the Gazette.]

1,215,936. HEMP-BRAKE. JOHN SAM HOLTZCLAW and AMBROS WESLEY HOLTZCLAW, Stanford, Ky. Filed Sept. 13, 1916. Serial No. 119,925. (Cl. 13—6.)



1. A hemp brake including, in combination, coacting rollers between which the hemp is adapted to pass, choppers positioned rearwardly of the rollers, a beater positioned rearwardly of the choppers, and means for creating air blasts to direct the hemp relatively to the choppers and the beater.

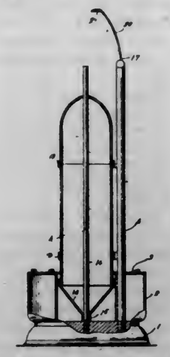
2. A hemp brake including, in combination, coacting rollers between which the hemp is adapted to pass, choppers positioned rearwardly of the rollers, a beater positioned rearwardly of the choppers, and means for causing air blasts to engage the upper and lower surfaces of the hemp to direct the hemp relative to said choppers and beater.

3. A hemp brake including, in combination, coacting rollers between which the hemp is adapted to pass, choppers positioned rearwardly of the rollers, a beater positioned rearwardly of the choppers, and means for causing air blasts to engage the upper and lower surfaces of the hemp to direct the hemp relative to said choppers and beater, the blast coacting with the under surface of the hemp being of greater force than the upper blast.

1,215,937. SODA-STRAW HOLDER. WILFRED J. JANDRON, St. Paul, Minn. Filed Aug. 12, 1915, Serial No. 45,209. Renewed July 18, 1916. Serial No. 110,005. (Cl. 211—8.)

1. A soda straw holder comprising a base, a hollow standard on said base, a spring in said standard, a bracket supported on said spring, a container carried by said bracket and having an opening in its upper end, and a push rod on the base of the container, said push rod being adapted to be projected into the container when the latter is pushed down to project a straw through the opening of the upper end thereof.

2. A soda straw container comprising a holder for the straws, a push rod at the lower end of said holder, the latter having an opening in its upper end, a tube mounted at the side of the holder and provided with a spring, rings surrounding the holder and projecting through a longitudinal slot in the tube, one of said rings having a bracket extending through a slot in said tube and bearing on said spring, a guide rod mounted in the tube, a ring surrounding the straw holder and having a slotted guide ring through which the guide rod extends, said guide rod at its upper end having a cap to cover the opening in the holder and adapted to be removed from said opening when the holder is depressed against the tension of the spring to project a straw.



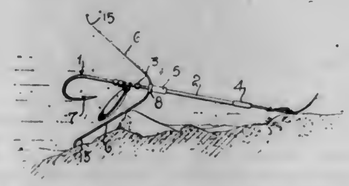
3. A soda straw holder comprising a base, a tube mounted on the base, a push rod mounted on the base, a soda straw container provided with rings having portions extending through a slot in said tube, a spring in the tube, said container having an opening in its upper end to permit a straw to pass through, a cap for said opening, and means for removing the cap as the container is depressed to project a straw.

4. A soda straw container comprising a base, a tube mounted on the base, a push rod mounted on the base, said tube having a slot in one side thereof, rings for supporting a straw container, said rings having shanks extending through the slot in the tube, a spring in the tube for supporting the container, and a cap connected to a guide rod extending into the tube and means for throwing the cap to one side when the container is depressed against the action of the spring.

5. A soda straw holder comprising a container, provided with an opening at its upper end, a removable cap at its upper end, a removable cap at its lower end provided with a nipple through which said push rod extends and means for mounting said straw holder on a spring for normally holding the straw receptacle in its uppermost position, and means for covering the opening in the upper end thereof, normally and for removing the same when the holder is depressed.

[Claims 6 to 9 not printed in the Gazette.]

1,215,938. WEEDLESS FISH-HOOK. JAMES WILLIAM JAY, Philadelphia, Pa. Filed June 17, 1916. Serial No. 104,254. (Cl. 43—7.)



1. A weedless fishhook, comprising in combination a hook having the usual stiff shank, said shank being provided with stops thereon in spaced relation to each other longitudinally on the shank, and a guard embodying a sleeve mounted to freely turn and slide longitudinally upon said shank between said stops, and limited in its longitudinal movement by the latter and a plurality of prongs connected to said sleeve and extending outwardly and downwardly therefrom and of a length to encompass the bill of the hook with their extremities when the guard is in abutting relation to the lowermost stop of the shank.

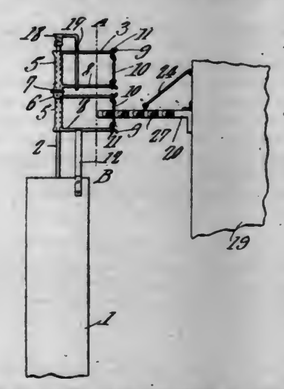
2. A weedless fishhook, comprising in combination a hook having the usual stiff shank, said shank being provided with stops thereon in spaced relation to each other longitudinally of the shank, and a guard embodying a sleeve mounted to freely turn and slide longitudinally upon said shank between said stops and limited in its longitudinal movement by the latter, and a plurality of prongs connected to said sleeve and extending outwardly and downwardly therefrom and of a length to encompass the bill of the hook with their extremities when the guard is in abutting relation to the lowermost stop of the shank, said prongs being disposed in equidistant relation from each other projecting from the sleeve and designed to support the bill of the hook elevated should the hook when cast alight upon a floating object.

3. A weedless fishhook, the shank of which is provided with upper and lower stops in spaced relation to each other, and a guard embodying a sleeve mounted for a freely revoluble and longitudinal movement upon the shank between said stops, said guard being formed at one end with a bead, and wire prongs extending downwardly and outwardly from said sleeve and including cross bars that are clenched in said bead, as and for the purpose set forth.

4. A weedless fishhook including a shank provided with stops arranged in spaced relation to each other, and a guard embodying a sleeve mounted for revoluble and longitudinal sliding movement on said shank between said stops, said sleeve being formed at one end with slits, and a crimped bead intersected by said slits, and prongs extending outwardly and downwardly from said sleeve and through said slits and comprising portions that are clenched in the crimped bead, as and for the purpose set forth.

5. A weedless fishhook, including a shank provided with upper and lower stops disposed in spaced relation to each other, a sleeve mounted for revoluble and longitudinal sliding movement on said shank between said stops, and prongs secured to said sleeve and extending outwardly and downwardly therefrom, the sleeve being provided with blades, for the purpose specified.

1,215,939. TRAIN-ORDER HOLDER. ABRAHAM S. JOHNSON and WILLIAM N. WAIDE, Trent, Wash. Filed Apr. 18, 1916. Serial No. 91,985. (Cl. 258—26.)

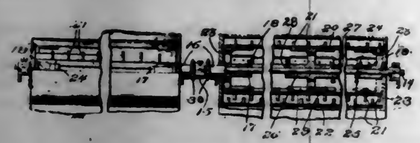


1. In a device of the class described, a vertical standard; a lower holder; means for mounting the lower holder on the standard for horizontal rotation and for downward sliding movement; a support engaging the lower holder against downward sliding movement, the lower holder being rotatable to disengage itself from the support and to permit the lower holder to move downwardly; an

upper holder supported on the lower holder; means for mounting the upper holder on the standard for downward sliding movement when the lower holder moves downwardly; and guiding means engaging the upper holder to deposit the upper holder on the support when the upper and lower holders move downwardly.

2. In a device of the class described, a vertical standard; a lower holder; means for mounting the lower holder on the standard for horizontal rotation and for downward sliding movement; a support engaging the lower holder against downward movement, the lower holder being rotatable to disengage itself from the support and to permit the lower holder to move downwardly; an upper holder supported on the lower holder; means for mounting the upper holder on the standard for horizontal rotation, and for downward sliding movement when the lower holder moves downwardly; and a fork carried by the standard and engaging the upper holder to guide the upper holder onto the support when both holders move downwardly.

1,215,940. THRESHING-CYLINDER. JOHN D. JONES, Walla Walla, Wash. Original application filed Jan. 24, 1913, Serial No. 744,021. Divided and this application filed Feb. 18, 1913, Serial No. 749,097. Renewed Apr. 2, 1914. Serial No. 829,135. (Cl. 130—27.)



1. In a threshing machine, a shaft rigidly mounted, a threshing cylinder mounted to rotate upon the shaft and embodying spaced hubs, and collars abutting the hubs and located upon the shaft within the cylinder.

2. In a threshing machine, a fixed shaft, a threshing cylinder mounted upon the shaft and embodying spaced hubs, a sprocket formed upon one of the hubs exteriorly to the cylinder, and collars adjustably fixed to the shaft and abutting the hubs within the cylinder.

3. In a threshing machine, a fixed shaft, a threshing cylinder having a plurality of hubs spaced apart and mounted to rotate upon the shaft and collars adjustably fixed upon the shaft and abutting the several ends of the hubs.

4. In a threshing machine, a shaft fixedly supported at a plurality of spaced points, a plurality of independent cylinder sections mounted to rotate upon the shaft, and driving means connected independently with the sections adjacent one of the supporting points.

5. In a threshing machine, a shaft fixedly supported intermediate and adjacent its opposite ends, threshing cylinder sections mounted to rotate upon the shaft and upon opposite sides of the intermediate support, and driving means connected with the cylinder sections adjacent the intermediate support.

[Claims 6 to 8 not printed in the Gazette.]

1,215,941. PROCESS FOR RECOVERING RUBBER WASTE. RICHARD F. KINSLEY, East Cleveland, JOHN D. MORRON, Lakewood, and CHARLES R. HAYNES, Cleveland, Ohio, assignors to Mechanical Rubber Company, a Corporation of Ohio. Filed Feb. 1, 1915. Serial No. 5,507. (Cl. 18—52.)

1. The process of recovering rubber waste containing fibrous material, which comprises treatment with acid and then neutralizing the acid with a suitable basic material, leaving within the mass so treated substantially all the added ingredients and the products of their reactions, except an excess of moisture.

2. The process of recovering rubber waste containing fibrous material, which comprises treatment with an acid, neutralizing the acid with a suitable basic material added in excess of the amount required to neutralize the acid, and then mixing therewith a substance which converts said excess of said basic material into a product not deleterious to rubber.

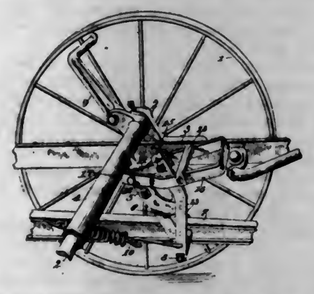
3. The process of recovering rubber waste containing fibrous material, which comprises subjecting the same to the action of an acid, neutralizing the acid with a suitable basic material added in excess of the amount required to neutralize the acid, and then mixing therewith a substance which converts said excess of said basic material into a product not deleterious to rubber, leaving within the mass so treated, substantially all the added ingredients and the products of their reactions, except an excess of moisture.

4. The process of recovering rubber waste containing fibrous material, which comprises disintegrating the fibrous material by treatment with acid, adding a suitable base of an alkaline earth in excess of the amount sufficient to neutralize the acid, and then adding saponifiable oil to be saponified by the excess of said base and to effect devulcanization.

5. The process of recovering rubber waste containing fibrous material, which comprises dividing the waste into small particles, disintegrating the fibrous material by treatment with acid, neutralizing the acid with a suitable base of an alkaline earth, working the resultant solid and liquid components into a homogeneous mass, and then adding a devulcanizing agent and a saponifiable oil.

[Claims 6 and 7 not printed in the Gazette.]

1,215,942. GANG-PLOW. RHINEHART V. KUEN, near Amana, Iowa. Filed Dec. 8, 1916. Serial No. 135,807. (Cl. 97—58.)



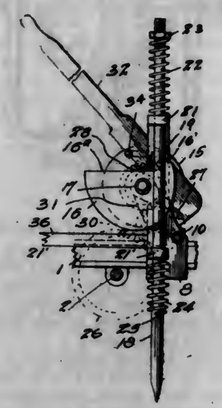
1. In a gang-plow, the combination with the plow-beam lifting apparatus, comprising a lift-lever, an arm coöperating therewith and a link connecting said arm with the plow-beam, of a supporting device, consisting of a toggle, one extremity of which connects pivotally with the plow-beam, and the other with said arm, some distance from the connection of the supporting link therewith, the toggle being adapted to fold back on itself and lock when the plow is fully elevated.

2. Combined with the lifting arm of a gang-plow, a connecting link and a plow-beam attached thereto, a toggle consisting of a long and short link connecting the plow-beam and said arm at some distance from the supporting-link connection, and a spring attached to one of the toggle-links to hold it when folded back upon itself and in locked position.

3. Combined with the lifting arm of a gang-plow, a connected suspending link and a plow-beam attached thereto, of a toggle attached at one of its extremities to the plow-beam and at the other to said arm some distance from the connection of the suspending link, and folding back on itself to locked position when the plow is elevated, and a trip-lever adapted to engage said toggle and disengage it from the locked position.

4. Combined with the lifting arm of a gang-plow, an attached link and a connecting plow-beam, of a toggle connecting at one extremity to said beam and at the other to said arm at some distance from the connection of the suspending link, and folding back to locking position when the beam is elevated, and a swinging trip-lever adapted to trip the locked toggle to release the suspended beam, and when the suspending arm is depressed to engage it rigidly, whereby said trip-lever may serve to force the plows into the ground.

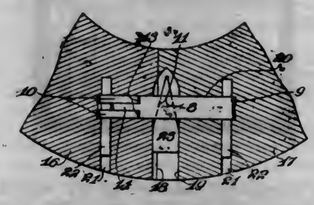
1,215,943. CORN-PLANTER ATTACHMENT. EDWARD O. LAUGEN and SOLVIE S. VATHING, Houston, Minn. Filed Mar. 24, 1916. Serial No. 86,488. (Cl. 111—5.)



1. The combination with a slotted bracket provided with perforated flanges, of a reciprocable bar supported in said flanges, a compressible spring between a fixed part of the bar and one of the flanges, a cam shaft and a disk thereon having a cam face and a plane edge, a guide pin on the bar projecting in the slotted bracket and operatively engaging the cam disk, and means for rotating the cam shaft whereby the reciprocable member is depressed by the compressible spring when the pin is freed from the cam face.

2. The combination in a planter, of a marking device comprising a vertically reciprocable plunger bar, a cam shaft supported on the planter and means for revolving the same, a disk on the shaft having a cam face and a plane edge, means operatively connecting said disk and plunger for lifting the plunger, a shoulder on the disk located between the plane edge and the cam face to impart an initial lift to the plunger, and means for projecting the plunger when freed from the cam face of the disk.

1,215,944. JOINT. PHILIP LEVITT, Chicago, Ill. Filed Aug. 26, 1915, Serial No. 47,528. Renewed Jan. 8, 1917. Serial No. 141,342. (Cl. 20—92.)



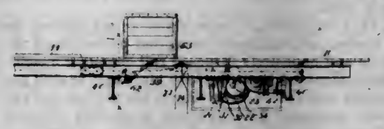
1. A fastening device for joints comprising two members, each of which consists of a plate having at one end a hook the bill of which is divided longitudinally to form two spaced branches, and said bill extending parallel to one side of the plate in spaced relation therewith, the opposite side of the plate at the end opposite the aforesaid end having recesses to receive the hook bill branches of the other plate, and the first-mentioned side of the plate having a transverse shoulder which is opposite the shoulder of the other plate, anchoring pins inside the hooks of the plate, and a wedge adapted to be driven between the shoulders of the plates.

2. The combination of two abutting members having a recess intersecting the joint thereof longitudinally, and a transverse recess across the joint and intersecting the first-mentioned recess; of a fastening device for the joint comprising two interlocking and slidably connected members mounted in the transverse recess, each of said fastening members consisting of a plate having at one end a hook the bill of which is divided longitudinally to form two spaced branches, and said bill extending parallel to one side of the plate in spaced relation therewith, the opposite side of the plate at the end opposite the aforesaid end having recesses to receive the hook bill branches of the other plate, and the first-mentioned side of the plate having a transverse shoulder which is opposite the shoulder of the other plate, said shoulders being spaced, anchoring pins carried by the abutting members and passing through the hooks of the respective plates, and a wedge adapted to be driven along the longitudinal recess into the space between the shoulders to draw the fastening members together.

3. The combination of two abutting members having a recess intersecting the joint thereof longitudinally, and a transverse recess extending across the joint and intersecting the first-mentioned recess; of a fastening device for the joint, said device comprising two interlocking and slidably connected members mounted in the transverse recess and extending across the joint, the outer ends of said members being provided with hooks, and the contiguous portions of the members having opposite shoulders which are spaced, the space between the shoulders being in line with the longitudinal recess, anchoring means for the respective members passing through the hooks thereof, and a wedge adapted to be driven along the longitudinal recess into the space between the shoulders for drawing the members together.

4. A fastening device for joints, comprising two interlocking and slidably connected members extending across the joint and having hooks at their outer ends, and the contiguous portions of the members having opposite shoulders on the same side as the hooks, anchoring means for the respective members passing through the hooks thereof, and a wedge driven between the aforesaid shoulders for drawing the members together.

1,215,945. CONVEYER. PIERRE LORILLARD, Tuxedo Park, N. Y. Filed Apr. 16, 1907, Serial No. 368,462. Renewed July 19, 1916. Serial No. 110,210. (Cl. 193—11.)



1. A conveying apparatus comprising a series of reversible, separately-operated conveying units arranged end to end, means for starting, stopping and reversing said units independently of one another, and means for preventing consecutive units from operating toward each other.

2. A conveying apparatus comprising a series of reversible, separately-operated conveying units arranged end to end, the supporting surfaces of consecutive units being overlapped at their adjacent ends, means for starting, stopping and reversing said units independently of one another, and means for preventing consecutive units from operating toward each other.

3. A conveying apparatus comprising a series of independent, reversible conveying units arranged end to end,

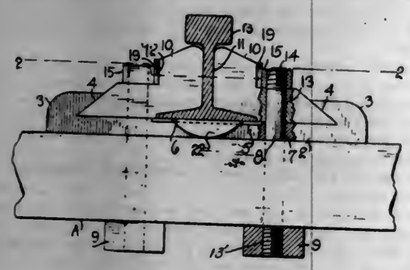
each unit being provided with a reversible electric motor for operating the same, a series of reversing switches for controlling the operation of the respective motors, and means operative with said switches for preventing consecutive units from operating toward each other.

4. A conveying apparatus comprising a series of reversible, separately-operated conveying units arranged end to end, in combination with means operative with the passing of a load onto and off each unit in either direction for starting and stopping the same.

5. A conveying apparatus comprising a series of independent conveying units arranged end to end, each unit being provided with an electric motor for operating the same, and means operative with the passing of a load onto and off each unit for closing and opening the circuit through the corresponding motor.

[Claims 6 to 21 not printed in the Gazette.]

1,215,946. RAIL CHAIR AND JOINT. EUGENE FRANK LOWE, Delevan, N. Y. Filed Nov. 17, 1915. Serial No. 61,963. (Cl. 238—6.)



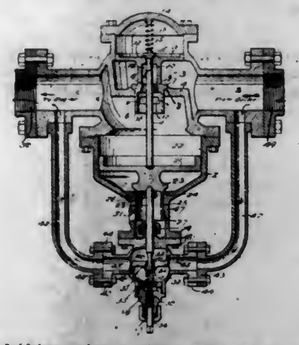
1. In a rail joint, a base plate having overhanging end flanges, a tie upon which the base plate rests, bolts passing upward through the tie and through said base plate, and rail engaging members having openings through which said bolts pass and having their ends inserted beneath the overhanging end flanges of the base plate.

2. In a rail joint, a tie, a base plate resting on the tie and having inwardly extending overhanging flanges, bolts passing upward through the tie and through said base plate and constituting primary fastenings, and rail engaging members mounted upon the base plate, the inner faces of the rail engaging members conforming to and fitting over the base of the rail and against the web thereof, the outer edges of said rail engaging members being beveled and extending beneath the overhanging end flanges of the base plate, said members having openings for the passage of said bolts.

3. In a rail joint, a base plate, a rail resting thereon and having longitudinally elongated perforations through its web, and oppositely disposed rail engaging members detachably mounted upon the base plate and having portions extending upward on each side of the web of the rail, one of said members having studs projecting through the openings in the rail, the studs being less in diameter than the length of the perforations.

4. In a rail joint, a tie, a base plate resting on the tie and having end flanges extending upward and inward, rail engaging members mounted upon the base plate, the inner faces of the rail engaging members adapted to engage the base and the web of a rail, the outer ends of the rail engaging members fitting beneath the overhanging end flanges of the base plate, anchoring plates disposed on the bottom of the tie, and bolts having screw threaded engagement with the anchoring plates and extending upward through the base plate and through said rail engaging members, nuts having screw threaded engagement with the upper ends of the bolts reversely directed to the screw threads on the lower ends of the bolts, and means for locking the nuts on the upper ends of the bolts from rotation.

1,215,947. AUTOMATIC DRIFTING-VALVE FOR LOCOMOTIVES. VINCEN P. MCVOY, Mobile, Ala., assignor of one-half to Joseph M. Walsh, Mobile, Ala. Filed Sept. 22, 1915. Serial No. 51,991. (Cl. 137—53.)



1. In a drifting valve, a piston actuated by vacuum or pressure, and check valves upon opposite sides of, independent of, and both actuated by said piston.

2. In a drifting valve, a piston actuated by vacuum or pressure, and check valves upon opposite sides of, independent of, and both actuated by said piston, said valves having their stems in alinement.

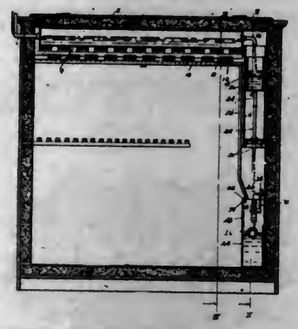
3. In a drifting valve for locomotives, a piston operable in one direction by pressure and in the opposite direction by vacuum, and check valves upon opposite sides of, independent of, and both actuated by said piston.

4. In a drifting valve for locomotives, a piston operable in one direction by pressure and in the opposite direction by vacuum, check valves upon opposite sides of and both controlled by said piston, and a by-pass valve operable by the downward movement of said piston.

5. In a drifting valve for locomotives, a piston movable in one direction by pressure and in the opposite direction by vacuum, a check valve upon one side of the piston operable thereby, a by-pass for the water of condensation, and a valve upon the opposite side of the piston operable thereby and controlling said by-pass.

[Claims 6 to 15 not printed in the Gazette.]

1,215,948. REFRIGERATOR CONSTRUCTION. JOSEPH W. MARSHALL, Kansas City, Mo. Filed Aug. 16, 1915. Serial No. 45,676. (Cl. 62—55.)



1. In a refrigerator construction, the combination of a water storage tank provided with a drip pipe, and a circulating fan wheel located beneath said pipe in position to be actuated by the water dripping therefrom, said wheel being mounted for adjustment about a horizontal axis extending parallel to the axis of the wheel for moving the wheel toward and from the line of flow of said drip water.

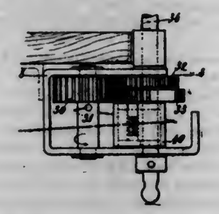
2. In a refrigerator construction, the combination of a water storage tank provided with a drip pipe, and a circulating fan wheel located beneath said pipe in position to be actuated by the water dripping therefrom, said wheel being mounted for adjustment in a horizontal direction parallel to its axis and also about a horizontal axis parallel to the axis of the wheel for varying the position of the wheel with reference to the line of flow of said drip water.

3. In a refrigerator construction, the combination of a water drip pipe, a movable fan wheel support located beneath said pipe, and a circulating fan wheel journaled on said support in position to be actuated by the water dripping from said pipe, said support being adjustably mounted for movement in a horizontal direction parallel to the axis of said wheel for varying the position of the latter with reference to the line of flow of said drip water.

4. In a refrigerator construction, the combination of a water drip pipe, a fan wheel support located beneath said pipe, and a circulating fan wheel journaled on said support in position to be actuated by the water dripping from said pipe, said support being adjustable about a horizontal axis parallel to the axis of said wheel and also in a direction parallel to said axis, for varying the position of the wheel with reference to the line of flow of said drip water.

5. In a refrigerator construction, the combination of a water storage tank provided with a drip pipe arranged to overflow as the water rises above a given level in the tank, a circulating fan wheel mounted in position to be actuated by the water dripping from said pipe, and means acting automatically and intermittently to restore the level of the water in said tank to a line above said drip pipe.

1,215,949. BRAKE DEVICE. LOUIS MAXIME MASSON, Romainville, France. Filed Mar. 14, 1914. Serial No. 824,745. (Cl. 188—54.)

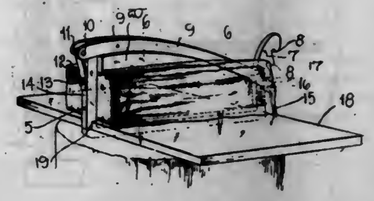


1. In a control device for the automatic adjustment of brakes comprising in combination a driving shaft, a pinion fixed thereto, a driven shaft, brake operating means associated therewith, a pinion with continuous teeth keyed thereon adapted to mesh with the pinion on said driving shaft, a second, mutilated pinion loosely carried on said driven shaft adapted to mesh at times with the pinion on the driving shaft, and coupling means between the mutilated and continuous pinion on said driven shaft adapted to insure a constant amount of play of the brake operating parts during the tightening and releasing operations, respectively.

2. A control device for the automatic adjustment of brakes, comprising in combination a mutilated pinion keyed to a spindle, a pinion with continuous teeth concentric with the mutilated pinion and loose on the said spindle, a third pinion with wide teeth gearing with the two first-mentioned pinions, a spring pawl secured to the pinion with continuous teeth and engaging with a ratchet wheel fixed to the mutilated pinion, brake-actuating means adapted to operate the brake quickly when the mutilated pinion is driven by the pinion with which it gears, means for locking said brake-actuating means when the mutilated pinion ceases to rotate, and means whereby the wear of the brake-actuating means is compensated and whereby a constant clearance is insured when the brake is released.

3. A control device for the automatic adjustment of brakes comprising a driving pinion, a cable drum secured thereto, a continuous tooth pinion and a mutilated pinion concentric with each other and both meshing with the driving pinion, a ratchet and pawl connection between said two concentric pinions, an eccentric drum secured to the mutilated pinion, and a brake actuating cable secured to the cable drum and passing around said eccentric drum.

1,215,950. MEAT-CLAMP. ALBERT J. MARTIN, New Orleans, La. Filed Oct. 14, 1916. Serial No. 125,669. (Cl. 17—14.)



1. A meat clamp including a fixed frame, a laterally yieldable fulcrum secured to said frame, clamping bars pivotally mounted at one of their ends upon said fulcrum, and means carried by the free ends of the clamping bars to co-act with the frame and lock said bars in clamping engagement upon the meat.

2. A meat clamp including a fixed frame bar having vertically disposed end portions, a laterally yieldable fulcrum fixed to one of the end portions of the frame bar, a clamping bar mounted at one of its ends upon said fulcrum, and means connected to the free end of said clamping bar to co-act with the other end of the frame bar and lock the clamping bar in engagement upon the meat.

3. A meat clamp including a frame, a spring plate fixed at one of its ends to the frame, a clamping bar pivotally mounted for swinging movement on the other end of said spring plate, and means carried by the bar to co-act with the frame and lock said bar in clamping engagement upon the meat.

4. A meat clamp including a frame, a spring plate fixed at one of its ends to said frame, spaced clamping bars pivotally mounted at one of their ends upon the free end of said spring plate, and means mounted between the other ends of said bars for locking engagement with means on the frame, said latter means when operated, exerting a longitudinal pull upon the clamping bars and placing said spring plate under tension.

5. A meat clamp including a fixed frame bar having vertically disposed end portions, a clamping bar pivotally supported at one end upon one of the end portions of the frame, means conected to the other end of the clamping bar and adapted to co-act with the other end of the frame and hold said bar in engagement upon the meat, and means yieldably acting to longitudinlly shift the clamping bar and retain said holding means in effective engagement with the frame.

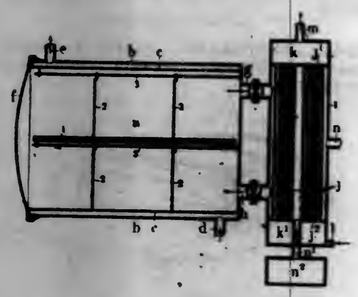
[Claims 6 to 8 not printed in the Gazette.]

1,215,951. DRYING APPARATUS. EDOUARD JEAN MARCEL MARTINI, Paris, France. Filed July 5, 1913. Serial No. 777,461. (Cl. 34—3.)

1. In a drying apparatus, a heated digester, a cooling apparatus connected to said digester, means for creating vacuum in the whole of the digester and of the cooling apparatus, and means for maintaining the cooling apparatus at a temperature inferior to 0° C.

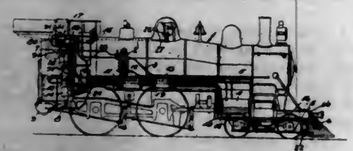
2. In a drying apparatus, a heated digester, a cooling apparatus connected to said digester by two very short branches, one at the upper part, the other at the lower part of the digester and of the cooling apparatus, whereby a continuous circulation of the mixture of air and

vapors is produced, the heated mixture issuing by itself from the digester through the upper branch and flowing into the cooling apparatus, and the air cooled and freed from the vapors by the cooling apparatus returning to the digester through the lower branch, means for maintaining the cooling apparatus at a temperature inferior to 0° C., and means for creating vacuum in the whole of the digester and of the cooling apparatus.



3. In a drying apparatus, a heated digester, a cooling apparatus connected to said digester, and metal plates in the digester dividing the digester into compartments, the said plates having a special coating for promoting the radiation.

1,215,952. AUTOMATIC SAFETY SIGNALING AND BRAKING DEVICE FOR TRAINS. JOHN F. MCCOY, Brooklyn, N. Y.; Mary McCoy administratrix of said John F. McCoy, deceased. Filed Oct. 1, 1914. Serial No. 864,403. (Cl. 246—59.)



1. The combination of a train including a locomotive having a throttle valve, a lever for operating the same, an air brake system for the train including air supply means carried by the locomotive, a pneumatically operated device associated with the air brake system and the throttle lever, an auxiliary train line pipe associated with the air brake system and extending to the pilot of the locomotive an exhaust valve associated with said pipe, and a valve throwing device for the valve adapted to coöperate with a tripping device along a track, said valve throwing device embodying a shaft associated with the valve, engaging members having inclined bifurcated portions, said engaging members being pivotally mounted and operatively connected to the shaft for rotating the same in opposite directions to operate the valve upon engagement of the tripping device with an engaging member when the train is traveling in either direction.

2. An automatic power cut-off and braking device for trains including a controlling valve having a lever, a latch for the lever, a train line pipe supplied with air under pressure, a pneumatically operated device including a piston connected to the lever, a valve associated with the train line pipe and for actuating the same and also including a piston for releasing the latch piston, an auxiliary train line pipe leading from said train line pipe, means for establishing communication between said train line pipe and the auxiliary train line pipe for cutting off the same, a trip valve associated with the auxiliary train line pipe for exhausting the air therefrom, a valve communicating with the auxiliary train line pipe, said first mentioned valve also communicating therewith and adapted upon the reduction of pressure in the auxiliary train line pipe to cause the operation of the piston to move the controlling lever to an inoperative position and permit the escape of air from the train line pipe for applying the brakes.

3. An automatic power cut-off and braking device for trains, comprising the combination with a locomotive having engine cylinders, a throttle valve controlling the supply of steam to the cylinders and a lever for operating said throttle valve, said lever having a latch mechanism; of a train line pipe supplied with air under pressure, a valved exhaust pipe leading therefrom and having an exhaust valve disposed in position to be tripped in passing an obstruction, a cylinder, a pair of pistons working in the cylinder and operatively connected to the lever and latch mechanism respectively, and valves communicating with the cylinder, train line and exhaust pipe for initially releasing the latching mechanism and operating the lever to cut off the throttle valve and permitting the escape of air from the train pipe upon the opening of said exhaust valve to simultaneously apply the brakes.

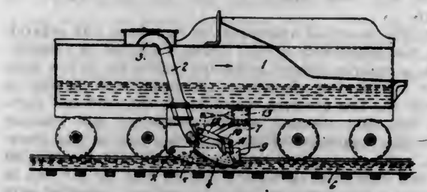
4. An automatic power cut-off and braking device for trains, comprising the combination with a locomotive having engine cylinders, a throttle valve controlling the supply of steam to the cylinders and a lever for operating said throttle valve, said lever having a latch mechanism; of a train line pipe supplied with air under pressure, a valved exhaust pipe leading therefrom and having an exhaust valve disposed in position to be tripped in passing an obstruction, a cylinder, a pair of pistons working in the cylinder and operatively connected to the lever and latch mechanism respectively, valves communicating with the cylinder, train line and exhaust pipe for initially releasing the latching mechanism and operating the lever to cut off the throttle valve and permitting the escape of air from the train pipe upon the opening of said exhaust valve to simultaneously apply the brakes, and means for returning said pistons to their initial positions, said latch mechanism having an operating handle connected thereto to permit disengagement of the latch moving the handle by one of the pistons whereby injury to the operator is prevented.

5. An automatic power cut-off and braking device for trains, comprising the combination with a locomotive having engine cylinders, a throttle valve controlling the supply of steam to the cylinders and a lever for operating said throttle valve, said lever having a latch mechanism; of a train line pipe supplied with air under pressure, a valved exhaust pipe leading therefrom and having an exhaust valve disposed in position to be tripped in passing an obstruction, a cylinder, a pair of pistons working in the cylinder and operatively connected to the lever and latching mechanism respectively, tandem valves having casings associated with the cylinder, said valves being under train line pressure at one end and under exhaust pipe pressure at the other end, means establishing communication between one valve casing behind each of said pistons and adapted upon the exhaust of air by opening of the exhaust valve to permit movement of said valves whereby air under pressure will escape to successively operate said pistons for successively releasing the latch and moving the throttle lever to close the throttle valve, means permitting the exhaust of air from said casing when the valves are in their initial positions, means to return said valves and pistons to their initial positions and means establishing communication between the other valves and the train line pipe to permit the exhaust of air from the train line pipe for applying the brakes upon the shifting of said valves.

[Claim 6 not printed in the Gazette.]

1,215,953. WATER-SUPPLYING DEVICE FOR LOCOMOTIVE-TENDERS. NEAL TRIMBLE MCKEE, Yonkers, N. Y., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 21, 1916. Serial No. 92,801. (Cl. 103—51.)

1. In a water supplying device for locomotive tenders, the combination with a longitudinally extending water trough and a tender carrying a scoop adapted to coöperate with said trough, of a pair of laterally disposed plates, one on each side of the scoop, attached to the tender and extending below the water level in the trough.



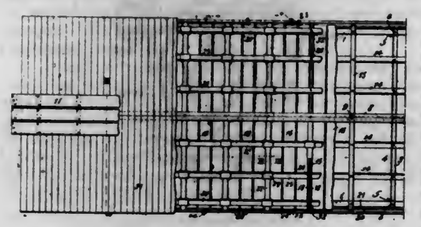
2. In a water supplying device for locomotive tenders, the combination with a longitudinally extending water trough and a tender carrying a scoop adapted to coöperate with said trough, of a pair of laterally disposed plates, one on each side of the scoop, attached to the tender and means for either lifting said plates above or extending them below the water level in the trough at will.

3. In a water supplying device for locomotive tenders, the combination with a longitudinally extending water trough and a tender carrying a scoop adapted to coöperate with said trough, of a pair of laterally disposed fixed plates, one on each side of the scoop, attached to the tender and ending above the water level in the trough, and an extension plate movably attached to the bottom of each aforesaid fixed plate and adapted to be lowered so as to have its lower edge extend below the water level in the trough.

4. In a water supplying device for locomotive tenders, the combination with a longitudinally extending water trough and a tender carrying a scoop adapted to coöperate with said trough, of a pair of laterally disposed fixed plates, one on each side of the scoop, attached to the tender and ending above the water level in the trough, and an extension plate pivotally attached at one end to an end of each fixed plate and adapted to be lowered below or raised above the water level in the trough at will.

5. In a water supplying device for locomotive tenders, the combination with a longitudinally extending water trough and a tender carrying a pivotally attached scoop, of a pair of laterally disposed plates, one on each side of the scoop, fixed to the tender and ending above the water level of the trough, an extension plate movably attached to the bottom of each fixed plate and adapted to be lowered or raised with reference thereto, and means attached to both scoop and extension plates for raising or lowering them simultaneously.

1,215,954. CAR-ROOF. JOHN MCMULLEN, Buffalo, N. Y. Filed Aug. 23, 1915. Serial No. 46,880. (Cl. 108—5.3.)

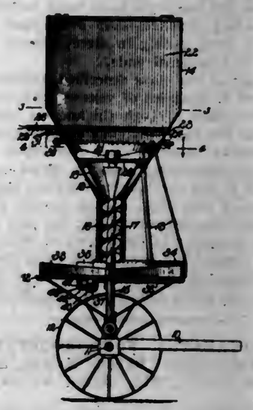


1. In an inside metal car roof, in combination: a roof-supporting frame; flanged metallic seam caps closed at their eaves ends; metallic roof sheets having upstanding flanges at their sides which are engaged within the said caps and retained by their closed ends; super-carlines arranged within the side edges of the roof sheets and within the caps; super-purlins on said super-carlines and included within parts of said seam caps; and an outside board roof inclosing and confining the said caps and super-purlins; substantially as specified.

2. In an inside car roof, in combination: a roof-supporting frame; super-carlines and intersecting super-purlins on the said frame; roof sheets having side flanges engaging the super-carlines; seam caps having side flanges, which are interrupted at the super-purlins, inclosing the side flanges of the roof sheets and the super-carlines and also having elevated portions, where the side flanges are interrupted, inclosing the intersecting portions of the super-purlins; and an outside roof inclosing the seam caps and super-purlins.

3. A combined super-carline and super-purlin sheet metal cap for car roofs adapted to inclose the intersection of said members, the same being bent to form an interrupted top portion and interrupted side flanges adapted to inclose the super-carline, and bent to form an elevated top portion and elevated longitudinal flanges adapted to inclose the super-purlin, the said elevated portions being extended longitudinally beyond the said side flanges.

1,215,955. FERTILIZER-DISTRIBUTER AND PLANTER. LOUIS MEHLBERGER, Easton, Pa. Filed Oct. 6, 1916. Serial No. 124,033. (Cl. 111—38.)



1. A machine of the class described including a hopper, a vertical shaft extending into the hopper, means to turn said shaft, a screen plate in the hopper, an agitating device turning with the shaft above the said screen plate, and means in the hopper above the said agitating device to regulate the discharge of material to the screen plate.

2. In a machine of the class described, a hopper, a table below the hopper adapted to receive material from the latter, a revoluble distributing device above the table, a fixed guard flange extending partially about the table outside of the distributing device, and auxiliary guard flanges slidable relatively to the fixed flange at the ends thereof and movable to project beyond the ends of said fixed flange.

3. In a machine of the class described, a hopper, a table below the hopper adapted to receive material from the latter, a revoluble distributing device above the table, a fixed guard flange extending partially about the table, and auxiliary guard flanges slidable relatively to the fixed flange at the ends thereof and movable to project beyond the ends of the fixed flange; together with means for moving said auxiliary guard flanges, said means consisting of racks on the auxiliary flanges, pinions engaging the racks, and means to turn the pinions.

4. In a machine of the class described, a hopper, a table below the hopper adapted to receive material from the latter, a revoluble distributing device above the table, a fixed guard flange extending partially about the table, and auxiliary guard flanges slidable relatively to the fixed flange at the ends thereof and movable to project beyond

the ends of the fixed flange; together with means to move said auxiliary flanges to project the same beyond the ends of the fixed flange, and idlers positioned to support the projected ends of the said auxiliary flanges.

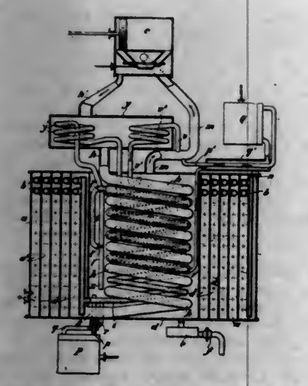
1,215,956. ROUND BOX. CHARLES R. MELDRIM, Cincinnatus, and JOSIAH J. MELDRIM, Truxton, N. Y. Filed May 19, 1916. Serial No. 98,592. (Cl. 217—1.)



1. A round box of the class described, including a body composed of two thicknesses of veneer bent together into round form, the grain of both thicknesses running in a direction around the body, the ends being overlapped, and fasteners extending through said overlapped ends, the said thicknesses lying loosely in direct contact with each other between the fastened ends.

2. A round box of the class described, including a body composed of two thicknesses of veneer bent together into round form, the grain of both thicknesses running in a direction around the body, the ends being overlapped, and fasteners extending through said overlapped ends; the material of said thicknesses being in direct contact and ununited except at the overlapping portions together with a round bottom in said body, a hoop around the body at the bottom, said hoop extending over the said overlapped ends and being composed of two layers of veneer with the grain running around the box, and a cover having a depending rim composed of two thicknesses of veneer both of which have the grain running around the cover.

1,215,957. APPARATUS FOR LIQUEFYING AND SEPARATING GASES. RUDOLF MEWES, Berlin, Germany. Filed Oct. 7, 1915. Serial No. 54,601. (Cl. 62—122.)



1. The described apparatus for liquefying and separating the components of air, which comprises in combination, a counter current device for cooling air of low pressure, a separating chamber, a coil inside said chamber to which the low pressure cooled air is fed, said coil opening into said chamber, a pipe connecting said chamber with the expansion cylinder, a second coil in said chamber, a pipe connecting said second coil with the exhaust of said expansion cylinder, a suction pipe for air rich in oxygen, a high pressure cooled compressor connected with said suction pipe, a third coil in said separating chamber, a force pipe connecting said high pressure compressor with said third coil, and a throttling valve at the end of said third coil, substantially as, and for the purpose, set forth.

2. The described apparatus for liquefying and separating the components of air, which comprises in combination, a counter current device for cooling air of low pressure, a separating chamber, a coil inside said chamber to which the low pressure cooled air is fed, said coil opening into said chamber, a pipe connecting said chamber with the expansion cylinder, a second coil in said chamber, a pipe connecting said second coil with the exhaust of said expansion cylinder, a suction pipe for air rich in oxygen, a high pressure cooled compressor connected with said suction pipe, a third coil in said separating chamber, a force pipe connecting said high pressure compressor with said third coil, a throttling valve at the end of said third coil, a suction pipe for air containing little oxygen, a second high pressure cooled compressor connected with said suction pipe, a fourth coil in said separating chamber, a force pipe connecting said second high pressure compressor with said fourth coil, and a throttling valve at the end of said fourth coil, substantially as, and for the purpose, set forth.

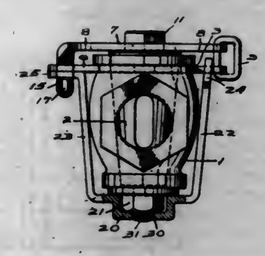
3. The combination with a chamber in which air is liquefied by being led under low pressure through said chamber in counter current to expanded cold air, of a pipe containing high pressure air arranged in counter current to said expanded air and opening out into said chamber, substantially as, and for the purpose, set forth.

4. The combination with a chamber in which air is liquefied by being led under low pressure through said chamber in counter current to expanded cold air, of a pipe containing high pressure air rich in oxygen arranged in counter current to said expanded air and opening out into said chamber, substantially as, and for the purpose, set forth.

5. The combination with a chamber in which air is liquefied by being led under low pressure through said chamber in counter current to expanded cold air, of a pipe containing high pressure air rich in oxygen arranged in counter current to said expanded air and opening out into said chamber, and a pipe containing air comparatively rich in nitrogen arranged in counter current to said expanded air and opening out into said chamber, substantially as, and for the purpose, set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,215,958. VALVE-LOCK. FRANK J. MILLER, Fostoria, Ohio. Filed July 10, 1916. Serial No. 108,370. (Cl. 137—7.)



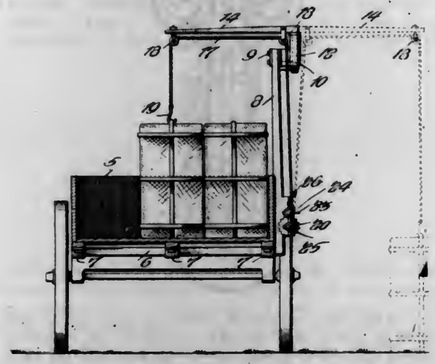
1. In a lock for a valve, a U-bar having a cap for covering the nut located on the stud of the valve, and a bar extending through the valve casing, the cock of the valve, and the U-bar.

2. In a valve lock, the combination of a U-bar having a cap for covering the nut located on the stud of the cock of the valve, a bar extending through the U-bar, the casing and the cock, and means locking the U-bar and the bar together.

3. In a valve lock, the combination of a U-bar having a cap for covering the nut located on the stud of the cock of the valve, a bar extending through the U-bar, the casing and the cock, and means locking the U-bar and the bar together.

4. In a valve lock, the combination of a cap having arms located on each side of the casing, a bar extending through one of the arms, and a plate linked to the bar and surrounding and locking the head of the cock and having an arm extending through the bar and the remaining arm of the cap for locking the parts together.

1,215,959. DERRICK. GUY H. MILLER, Monticello, Me. Filed Mar. 2, 1916. Serial No. 81,655. (Cl. 212—65.)



1. The combination with a vehicle, of a derrick including uprights, means for securing them to a vehicle, a plate secured to the uprights adjacent their upper ends and being provided with a vertically arranged sleeve, a derrick arm having its inner end extending into the sleeve, a toothed wheel carried by the pin beneath the sleeve, means carried by the uprights adapted to coöperate with the toothed wheel in retaining the derrick against rotation at will, sheaves carried by the derrick arm, a cable running through said sheaves and provided with an attaching element at its outer end, and a reeling device carried by the uprights adjacent their lower ends whereby the cable may be reeled and unreeled at will.

2. A derrick including uprights, a vertically arranged journal secured thereto, a derrick arm having a pin extending into the journal and provided at its lower end with a toothed wheel, a plate carried by the uprights and having an arm extending out alongside the toothed wheel and provided with an opening, a rod journaled on the arm and provided at one end with an outwardly extending lever arm and at its opposite end with a finger adapted, when the lever arm is moved into the proper position, to engage with the toothed wheel for retaining the derrick arm against rotation.

3. A derrick including uprights, an arm secured thereto and being provided with a sleeve, said arm being curved, a derrick arm having a pin journaled in the sleeve, sheaves carried by the derrick arm, and a cable running through the sheaves, the sheave adjacent the inner end of the arm being so positioned with respect to the curved arm that the cable will extend through the space defined by the convexity of said curved arm.

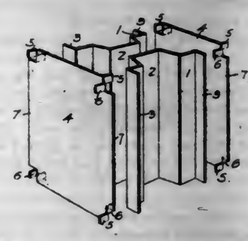
1,215,960. CORN-PLANTER ATTACHMENT. JAMES MOIR and HARVEY P. MCFARLAND, Burlington, Iowa. Filed Jan. 21, 1916. Serial No. 73,456. (Cl. 111—6.)

In a corn planter of the class described, the combination with a main frame, of an extension frame secured to said main frame, a standard interposed between said main frame and said extension frame, an angle lever pivotally secured upon said standard, said angle lever provided with a horizontal extending end and a downwardly inclined end, means for securing said downwardly inclined end to



said extension frame for permitting the swinging of said extension frame upwardly as said angle lever is swung, and means secured to said horizontally extending end for swinging said angle lever to the desired position.

1,215,961. MOLD FOR CASTING POURED-CONCRETE BLOCKS. WILLIAM D. MOORE, Creston, Iowa. Filed July 27, 1916. Serial No. 111,678. (Cl. 25—121.)

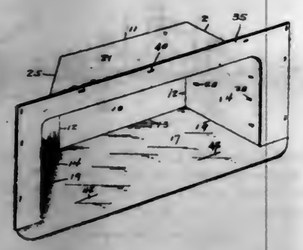


1. A mold for concrete blocks comprising two detached side members, each of said side members having an inwardly projecting central portion extending throughout its height and an outwardly integral right angle projecting flange at each end thereof, and a plate at each end of the mold provided with an integral right angle oppositely disposed extension at the top and bottom of each side, and an intermediate oppositely disposed right angle extension at the top and bottom portion at each side thereof, whereby a top and intermediate extension and a bottom and intermediate extension will contact with the outer edge of the projecting flange of each of the side members.

2. A mold for concrete blocks comprising two detached side members, each of said side members having an inwardly projecting central portion extending throughout its height and an outwardly integral right angle projecting flange at each end thereof, a detached partition plate at each end having an integral right angle oppositely disposed extension at the top and bottom of each side; an intermediate oppositely positioned right angle extension at the top and bottom portion at each side thereof, said top and intermediate extensions being positioned opposite each other in vertical alinement and adapted to contact with the outer edge of the outwardly projecting flange of each of the side members, and said partition plate having a lateral extension formed on each side between and projecting beyond the said right angle extension to form a handle.

3. A mold for concrete blocks comprising two detached side members, each side member having an outwardly projecting flange at each end thereof, and an inwardly projecting central portion extending throughout its height, a partition plate provided with top and bottom and intermediate right angle oppositely disposed integral extensions at each side thereof adapted to contact with the outer edge of the projecting flange of each side member, in combination with a plate having right angle integral flanges at each side thereof adapted to contact with the inner face of the inclined walls of each of the side members, and having an extension projecting beyond the top of the mold to form a handle therefor.

1,215,962. ART-STAGE. SEYMOUR MORRISON and FLORENCE H. FITCH, Indianapolis, Ind. Filed May 6, 1916. Serial No. 95,833. (Cl. 46—40.)



1. An art stage formed of a main portion having at the front thereof lateral and vertical flanges and a proscenium formed of paper board adapted to fit on and envelop said flanges and be held thereby in place.

2. An art stage consisting of a main portion formed of paper board cut and scored so as to form the walls of the stage, the front part of the end and top walls having laterally and upwardly extending flanges, and a proscenium formed of paper board with the top portion having downwardly extending end portions scored longitudinally thereof so that the two parts can be folded against each other, and fasteners for securing the front and back walls of the proscenium together so as to leave a continuous pocket around the inner edge of the proscenium to receive and envelop said flanges on the main portion of the stage and be frictionally held thereon.

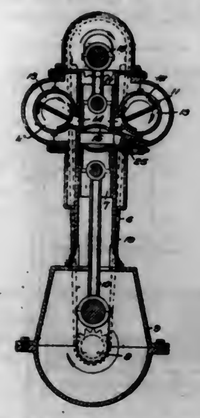
3. An art stage consisting of a main portion formed of paper board cut and scored so as to form the walls of the stage, the front part of the end and top walls having laterally and upwardly extending flanges, and a proscenium formed of paper board with the top portion having downwardly extending end portions scored longitudinally thereof so that the two parts can be folded against each other, and fasteners for securing the front and back walls of the proscenium together so as to leave a continuous pocket around the inner edge of the proscenium to receive and envelop said flanges on the main portion of the stage and be frictionally held thereon, the rear wall of the proscenium being narrower than the front wall thereof.

4. An art stage consisting of a main portion formed of paper board cut and scored so as to form the walls of the stage, the front part of the end and top walls having laterally and upwardly extending flanges, and a proscenium formed of paper board with the top portion having downwardly extending end portions scored longitudinally thereof so that the two parts can be folded against each other, and fasteners for securing the front and back walls of the proscenium together so as to leave a continuous pocket around the inner edge of the proscenium to receive and envelop said flanges on the main portion of the stage and be frictionally held thereon, the main portion of the stage having the bottom thereof made wider than the top portion thereof so that the bottom will project to the front beyond the proscenium.

5. An art stage consisting of a main portion formed of paper board cut and scored so as to form the walls of the stage, the front part of the end and top walls having laterally and upwardly extending flanges, and a proscenium formed of paper board with the top portion having downwardly extending end portions scored longitudinally thereof so that the two parts can be folded against each other, and fasteners for securing the front and back walls of proscenium together so as to leave a continuous pocket around the inner edge of the proscenium to receive and envelop said flanges on the main portion of the stage and be frictionally held thereon, the main portion of the stage having the bottom thereof made wider than the top portion thereof so that the bottom will project to the front beyond the proscenium, said bottom having extensions at each end to furnish a base for the ends of the proscenium.

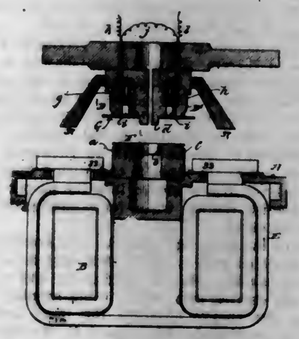
[Claims 6 and 7 not printed in the Gazette.]

1,215,963. ENGINE. HARRY G. MORTIMER, New York, N. Y. Filed June 3, 1915. Serial No. 31,870. (Cl. 123—190.)



In an internal combustion engine, a rotary valve comprising a hollow shell having a plurality of oppositely disposed fuel delivery and combustion gas receiving openings, and walls separating the delivery openings from the receiving openings so that all of the delivery openings interconnect, said shell having peripheral openings forming an inlet to the delivery openings, said valve having end openings forming an outlet for the combustion gas receiving openings.

1,215,964. ELECTRIC WELDING-MACHINE. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 13, 1916. Serial No. 130,996. (Cl. 219—4.)



1. An electric welding machine, comprising two electrodes receiving the objects to be welded between them, and a magnet on one of said electrodes for attracting and holding one of said objects in contact with said electrode.

2. An electric welding machine, comprising two electrodes, one of said electrodes being movable, and a magnet on said movable electrode for attracting and holding one of the objects to be welded in contact with said movable electrode.

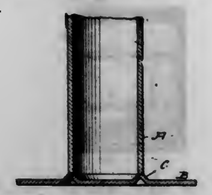
3. An electric welding machine, comprising two electrodes, and an electro-magnet carried by one of said electrodes and having a polar extremity facing said other electrode.

4. An electric welding machine, comprising two electrodes, one of said electrodes having a recess, and an electro-magnet inclosed in said recess and having a core extending through the body of said electrode and terminating at the surface thereof facing the opposite electrode.

5. An electric welding machine, comprising a fixed electrode, a vertically movable electrode above said fixed electrode, and a magnet on said movable electrode for attracting and holding the object to be welded against the bottom surface of said movable electrode.

[Claim 6 not printed in the Gazette.]

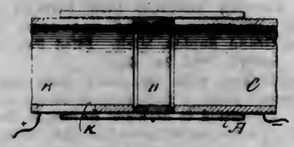
1,215,965. METHOD OF FLANGING THE END OF A METAL TUBE. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,002. (Cl. 219—10.)



1. The method of flanging the end of a tube, which consists in, first, integrally forming on the surface of a flat metal plate, a circular rib of like diameter to the tube; second, placing the butt end of said tube in contact with said rib and electrically welding together said tube and said rib, and, third, making a circular opening in the portion of said plate surrounded by said tube wall.

2. The method of flanging the end of a tube, which consists in, first, integrally forming on the surface of a flat metal plate, a circular rib of like diameter to the tube; second, placing the butt end of said tube in contact with said rib and electrically welding together said tube and said rib; third, making a circular opening in the portion of said plate surrounded by said tube wall, the said opening being of less diameter than the diameter of said tube, and, fourth, removing the circumferential edge of said opening and thereby increasing the diameter of said opening substantially to equal the diameter of the bore of said tube.

1,215,966. MEANS FOR ELECTRICALLY WELDING TUBES IN SLEEVES. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,006. (Cl. 219—6.)



1. A sleeve, a ring secured in said sleeve, and a tube entering said sleeve and butt-welded to said ring.

2. A sleeve, a ring secured in said sleeve, and tubes entering opposite ends of said sleeve and butt-welded to said ring.

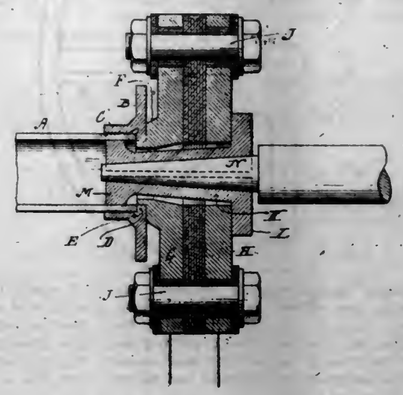
3. A sleeve, rings secured in said sleeve, and tubes entering said sleeve and respectively butt-welded to said rings.

4. A sleeve, a support, a plurality of rings on said support, the said rings and said support fitting within said sleeve, and tubes entering said sleeve and respectively butt-welded to said rings.

5. A sleeve, a ring secured therein and having mutually inclined edges, and tubes entering said sleeve and having correspondingly beveled ends to fit against the inclined edges of said ring; the said tube ends and ring edges being welded together.

[Claim 6 not printed in the Gazette.]

1,215,967. ELECTRICALLY-WELDED TUBE AND FLANGE-PLATE. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,007. (Cl. 219—6.)



1. A tube, a flange plate having an opening registering with the bore of said tube, and a sleeve on said plate receiving said tube; the end of said tube being welded to said flange plate.

2. A tube, and a flange plate having an internally shouldered socket receiving said tube; the end of said tube being welded to the shoulder in said socket.

3. A tube, a flange plate having an opening registering with the bore of said tube, and a circular rib on said plate surrounding said opening; the end of said tube being welded to said rib.

4. A tube, a flange plate having an opening registering with the bore of said tube, and a sleeve on said plate receiving said tube; the end of said tube within said sleeve being welded to said flange plate, and there being an internal circular recess in said flange plate and sleeve surrounding the joint between said tube end and said plate.

5. A tube, a flange plate welded to said tube, and means for locking said tube to said plate by molten metal extruded from the welded joint between said tube and said plate.

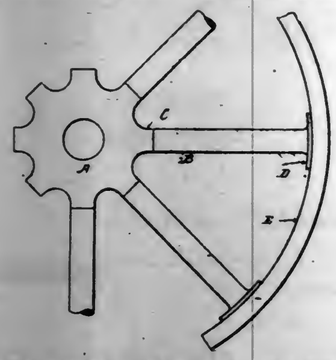
[Claim 6 not printed in the Gazette.]

1,215,968. METHOD OF MAKING SHEET-METAL WHEELS. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 14, 1916. Serial No. 136,858. (Cl. 219—10.)

1. The method of making a sheet metal vehicle wheel, comprising a rim, a hollow hub and tubular spokes, which consists in forming by striking up, pressing or stamping, a plurality of similar hub sections and a plurality of similar half spoke sections, electrically welding together any two sectional hub units to form the hub and pairs of any two sectional spoke units to form the spokes, and electrically welding said spokes to said hub and said rim.

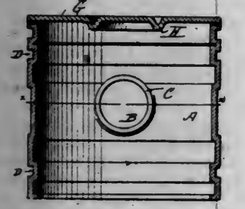
2. The method of making a sheet metal wheel, which consists in producing (1) a sheet metal hub therefor by striking up, pressing or stamping two similar dish-shaped half hub sections, placing said sections concavity to concavity with their meeting edges registering, and electrically welding said edges together; (2) electrically butt-welding to the circumferential periphery of said hub a plurality of tubular sheet metal spokes; (3) electrically welding the outer ends of said spokes to the wheel rim.

3. The method of making a sheet metal wheel, which consists in producing (1) a sheet metal hub therefor by striking up, pressing or stamping two similar dish-shaped aub sections, placing said sections concavity to concavity with their meeting edges registering, and electrically welding said edges together; (2) sheet metal spokes by



striking up, pressing or stamping for each spoke two similar semi-tubular half spoke sections, placing said sections concavity to concavity with their meeting edges registering, and electrically welding said edges together; (3) electrically butt-welding said spokes to the circumferential periphery of said hub and to the wheel rim.

1,215,969. SHEET-METAL PISTON. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 14, 1916. Serial No. 136,861. (Cl. 219—6.)



1. A piston, comprising a hollow cylinder having diametrically opposite circular openings in its wall, and integral in-turned flanges surrounding said openings, a cylinder head, and sleeves respectively united at their outer ends to said flanges and separated at their inner ends: the said cylinder sleeves and head being formed of struck up sheet metal and united by electrically welded joints.

2. A piston, comprising a hollow cylinder having diametrically opposite circular openings in its wall, and integral in-turned flanges surrounding said openings and circumferential grooves on the exterior of said wall, a cylinder head, and sleeves respectively united at their outer ends to said flanges and separated at their inner ends: the said cylinder, sleeves and head being formed of struck up sheet metal and united by electrically welded joints.

3. A cylindrical piston of sheet metal, comprising two semi-cylindrical half sections, each formed by striking up the sheet, the said sections being united at their longitudinal edges, an internal circular rib integrally formed on the concave side of each section, the said ribs surrounding diametrically opposite circular openings in said sections, a cylinder head, and sleeves united at their outer ends to said ribs, the said sleeves being in line and having their inner ends separated: the said sections, sleeves and head being formed of struck up sheet metal and united by electrically welded joints.

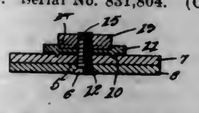
4. The method of making a hollow cylindrical piston of sheet metal, which consists in, first, forming on each of two flat sheets a circular opening and an integral flange surrounding said opening, second, bending each of said sheets to form a semi-cylindrical half section, with said flange on its concave side, third, electrically butt-welding to said flanges, sleeves, each of a length less than the semi-diameter of said piston, fourth, electrically welding together said semi-cylindrical sections at their longitudinal edges, and fifth, electrically welding a head of sheet metal to one end of said piston.

1,215,970. REINFORCED DRUM OR BARREL. ISAAC NAYLOR and HENRY B. RUGGLES, Chicago, Ill., assignors to American Products Company, Portland, Me., a Corporation of Maine. Filed Dec. 26, 1912, Serial No. 738,584. Renewed July 10, 1916. Serial No. 108,447. (Cl. 229—4.)



A container, the walls whereof comprise a sheet of pulpy fibrous material wound upon itself, the layers thereof being united into a homogeneous unit, and reinforcing members incorporated longitudinally and transversely of the container, said members being completely embedded in the walls of the finished container.

1,215,971. NUT-LOCK. JOHN NOLAN, Moline, Ill. Filed Apr. 14, 1914. Serial No. 831,804. (Cl. 151—33.)



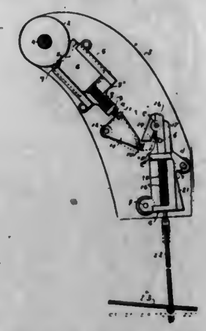
In combination, a bolt, a head at one end of said bolt, a nut fitted upon the bolt, a circular washer positioned upon the bolt in advance of the nut having a flat inner object-engaging face, and a depression in the outer face shaped conformably with and non-rotatably receiving the nut, and spaced parallel ribs formed on the inner face of the nut underlying and parallel with two of the opposed side walls of the depression and the corresponding side faces of the nut.

1,215,972. SAFETY DEVICE FOR POWER PUNCH-PRESSES. MATTHYS NUSBAO and JOHN VAN DEN BOOGAARD, Grand Rapids, Mich. Filed Feb. 28, 1916. Serial No. 81,043. (Cl. 74—46.)

1. In combination with the crank shaft and locking wheel of a punch press, a slide secured to the side of the press frame in position to be made to engage the locking wheel, a spring arranged to force the slide firmly against the locking wheel, a lever pivotally connected with the press frame at one point and with the locking slide at another point, a vertically movable trip connected with the frame in position to be made to engage the free end of the lever to draw the locking slide from contact with the locking wheel and to release the lever and allow the slide to return to the wheel, at each downward movement of the trip, means for drawing said trip downward, and means for forcing said trip upward into normal position.

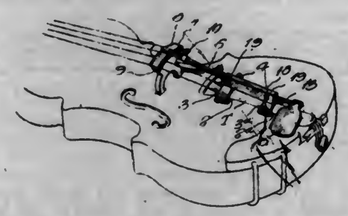
2. In combination with the frame, the crank shaft and the locking wheel of a punch press, a carriageway mounted on the side of the frame, a slide mounted in said carriageway in position to be moved longitudinally to secure and release the locking wheel, means for forcing the slide to hold the locking wheel firmly in place, a lever pivotally

secured to the frame at one point, and pivotally connected with the slide at another point, a trip frame movably mounted on the side of the frame, a longitudinally movable trip slide mounted on the trip frame, a trip pivotally mounted near the upper end of said trip slide in position to engage the end of the lever when moving downward to a given point and then to disengage from the lever allowing the lever to return to normal position, means for drawing the trip slide and trip downward to actuate, and then to release the lever, and means for forcing the trip slide and trip upward past the end of the lever into position to again engage and actuate the lever upon a repeated downward movement of the slide and trip.



3. In combination with the frame, the crank shaft and the locking wheel of a punch press, a longitudinally movable locking slide connected with the side of the frame, means for forcing this slide into position to engage and secure the locking wheel, a lever pivotally connected with the frame and with the slide, a trip slide frame pivotally connected with the press frame at one end to render the other end laterally movable, means for securing the adjustable end firmly in desired position, a longitudinally movable trip slide mounted on the trip frame, a trip pivotally connected with said slide in position to engage and actuate the lever on its downward movement and to slide past the end of the lever on its upward movement, means for forcing and holding the trip slide upward, and means for drawing said lever downward.

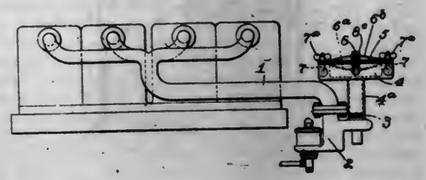
1,215,973. VIOLIN-MUTE OPERATOR. RAFAEL OLMEDO, San Francisco, Cal. Filed Jan. 17, 1916. Serial No. 72,555. (Cl. 84—75.)



1. An attachment of the class described comprising a pair of spaced clamps to be secured on the tail piece of a stringed instrument, a rigid bar connecting said clamps, a pair of parallel ears extending in the same direction from each clamp, a lever fulcrumed between one pair of ears and carrying a head to engage the instrument strings and the bridge, a spring for holding the lever in a position to retain the head out of contact with said strings and bridge, and means for rocking said lever including an element mounted between the other pair of ears.

2. An attachment of the class described comprising an elongated flat bar adapted to underlie the tail piece of a stringed instrument, ears formed integrally with and extending laterally in opposite directions from the ends of said bar, a pair of flat arched clamping bars hinged at one end to the ears at one side of the aforesaid bar and adapted to overlie the aforesaid tail piece, means for securing the other end of the clamping bars to the remaining ears, a pair of parallel ears extending laterally in the same direction from the center of each clamping bar, a lever fulcrumed between one pair of said ears and carrying a head to engage the strings and bridge of the instrument, a spring for normally holding said lever in a position to retain the head out of contact with the strings, and means for rocking the lever including an element mounted between the other pair of ears.

1,215,974. ATTACHMENT FOR INTERNAL-COMBUSTION ENGINES. FREDERICK S. OREM, Baltimore, Md. Filed Mar. 6, 1915. Serial No. 12,583. (Cl. 183—44.)



1. The combination with the carbureter of an internal combustion engine, of an attachment for the air intake of said carbureter comprising a sheet of dust excluding material of such relative area and porosity as to permit the passage of air under the suction produced by the engine when running without unduly affecting the gasolene supply to the carbureter, and of such density as to cause the dust to be intercepted at the outer surface and prevented from penetrating and clogging the pores, whereby said dust is dislodged from said surface by vibration or air currents.

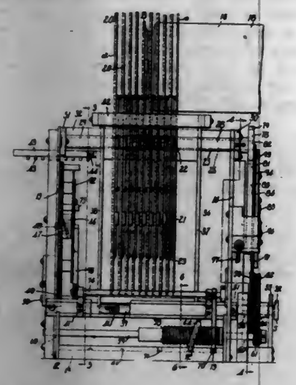
2. The combination with the carbureter of an internal combustion engine, of an attachment for the air intake of said carbureter comprising a sheet of felt sustained by its edges and of such relative area and porosity as to permit the passage of air under the suction produced by the engine when running without unduly affecting the gasolene supply to the carbureter and of such density as to cause the dust to be intercepted at the outer surface and prevented from penetrating and clogging the pores, whereby said dust is dislodged from said surface by vibration or air currents.

1,215,975. PROJECTING APPARATUS. GEORGE L. W. PALMER. Roxbury, Mass. Filed Dec. 10, 1915. Serial No. 66,198. (Cl. 88—27.)

1. A projecting apparatus having, in combination, a lens, instrumentalities for directing luminous rays through said lens, a plurality of parallelly disposed rotatable members arranged transversely of the focal axis of said lens each of said rotatable members being adapted to hold a plurality of transparencies, instrumentalities adapted to move said rotatable members into predetermined positions with respect to the optical center of said lens and instrumentalities constructed and arranged to rotate the rotatable member occupying said predetermined position to successively move the transparencies carried thereby substantially into alinement with the focal axis of said lens and in intercepting relation with respect to said luminous rays.

2. A projecting apparatus having, in combination, a set of lenses having a common focal axis, a carrier arranged to move longitudinally of said focal axis, a plurality of rotatable members mounted on said carrier between the lenses constituting said set, each of said rotatable members being constructed and arranged to hold a plurality of transparencies, instrumentalities adapted to move said carrier longitudinally of said focal axis to successively move said rotatable members into a predetermined.

position with respect to said lenses, and instrumentalities adapted to automatically rotate each of said rotatable members when said members occupy said predetermined position, to move the transparencies carried by said rotatable members substantially into alinement with the focal axis of said lenses.



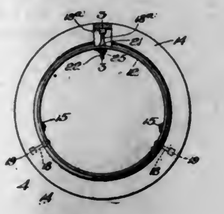
3. A projecting apparatus having, in combination, a condensing lens, a projecting lens, instrumentalities for directing luminous rays through said condensing and projecting lenses, a plurality of rotatable members arranged in parallel relation to each other intermediate of said condensing lens and said projecting lens, each of said rotatable members being provided with a series of apertures disposed about the axis thereof and adapted to substantially aline respectively with the focal axis of said lenses, means for holding transparencies in alinement with the apertures in each of said rotatable members, instrumentalities adapted to move said rotatable members longitudinally of the focal axis of said lenses into a predetermined position with respect to said condensing lens and instrumentalities constructed and arranged to intermittently rotate said rotatable members during their occupancy of said predetermined position.

4. A projecting apparatus having, in combination, a condensing lens, instrumentalities for directing luminous rays through said lens, a series of holders parallelly disposed about a common axis arranged substantially parallel with the focal axis of said lens, a plurality of transparencies disposed about the axis of each of said holders, a stationary support for said holders, a key extending longitudinally of said support adapted to interlock with said holders and to prevent the rotation thereof on said support, said key being interrupted at a predetermined distance from said condensing lens, instrumentalities adapted to move said holders intermittently along said support into a position alining with the interruption in said key and instrumentalities constructed and arranged to intermittently rotate said holders during the alinement thereof with the interruption in said key to move the transparencies carried thereby into intercepting relation with respect to said luminous rays.

5. A projecting apparatus having, in combination, a condensing lens, instrumentalities for directing luminous rays through said lens, a series of holders parallelly disposed to rotate about a common axis, a support for said holders, a key extending longitudinally of said support adapted to interlock with said holders and to prevent the rotation thereof on said support, said key being interrupted at a predetermined distance from said condensing lens, instrumentalities adapted to move said holders intermittently along said support into a position alining with the interruption in said key, instrumentalities constructed and arranged to intermittently rotate said holders during the alinement thereof with the interruption in said key to move the transparencies carried thereby into intercepting relation with respect to said luminous rays, and mechanism constructed and arranged to automatically return all of said holders to their initial positions, with respect to the optical center of said lens.

[Claims 6 to 17 not printed in the Gazette.]

1,215,976. SPARE-TIRE CARRIER. FREDERICK G. PARKER, Portland, Me. Filed Aug. 21, 1916. Serial No. 115,948. (Cl. 224—29.)



1. A spare tire carrier comprising an annular seat for the edges of a tire shoe, having means for engagement with a vehicle body, a series of spaced-apart rest members supported by said seat, and formed to bear on the inner surface of the tread portion of the shoe, said members collectively constituting a radially collapsible rest, and means whereby said rest may be positively maintained in an expanded condition to positively confine the shoe, and contracted and loosened to release the shoe.

2. A spare tire carrier comprising an annular seat for the edges of a tire shoe, having means for engagement with a vehicle body, a series of spaced-apart rest members supported by said seat, and formed to bear on the inner surface of the tread portion of the shoe, said members collectively constituting a radially collapsible rest, and means whereby said rest may be positively maintained in an expanded condition to positively confine the shoe, and contracted and loosened to release the shoe, means being provided for locking the rest in its expanded condition.

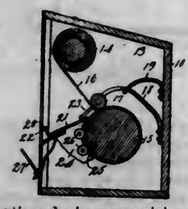
3. A spare tire carrier comprising an annular seat for the edges of a tire shoe, having means for engagement with a vehicle body, a series of spaced-apart rest members supported by said seat, and formed to bear on the inner surface of the tread portion of the shoe, said members collectively constituting a radially collapsible rest, and means whereby said rest may be positively maintained in an expanded condition to positively confine the shoe, and contracted and loosened to release the shoe, said seat being formed to cover the opening between the shoe edges and exclude rain and dirt from the interior of the shoe.

4. A spare tire carrier comprising an annular seat for the edges of a tire shoe, having means for engagement with a vehicle body, and a series of spaced-apart rest members, one of which is displaceable, said members including shanks radiating from said seat and enlargements formed to bear on the inner surface of the tread portion of the shoe, said seat and the shank of the displaceable member being detachably engaged and provided with complemental parts whereby the said shank may be clamped to the seat, and the seat being provided with an aperture permitting the radial longitudinal displacement and partial rotation of said member to collapse the rest formed by the series of members.

5. A spare tire carrier comprising an annular seat for the edges of a tire shoe, a series of spaced-apart rest members, one of which is displaceable, said members including shanks radiating from said seat and enlargements formed to bear on the inner surface of the shoe, the seat being provided with a keyhole slot, and the shank of the displaceable member being provided with a shoulder formed to pass through the larger portion of said slot and overlap the edges of the smaller portion thereof, and with a threaded portion extending through said slot, and a nut engaged with said threaded portion and adapted to clamp said member to the seat, the displaceable member being laterally movable in said slot, and longitudinally movable in the larger portion thereof to collapse the rest formed by the series of members.

[Claims 6 to 9 not printed in the Gazette.]

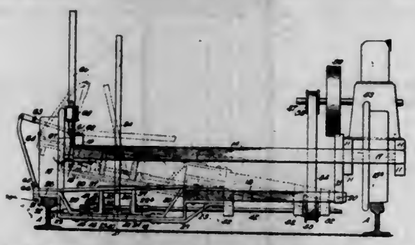
1,215,977. MAIL-SORTING DEVICE. WILLIAM A. PARKER, Lyles, Tenn., assignor of one-fourth to Drewry P. Overbey, Lyles, Tenn. Filed Mar. 14, 1916. Serial No. 84,251. (Cl. 211—36.)



1. A mail sorting device comprising a housing, rollers mounted in one end of the housing, a web secured to said rollers and adapted to be wound from one roller to another, a feed table in front of one of the rollers for the reception of the letters, successively, to guide them into position between the layers of the web as said web is wound from one roller to another, said table receiving the letters successively from between the layers of the web as said web is unwound from the adjacent roller.

2. A mail routing device comprising a pair of rollers having a web secured at its opposite ends to the respective rollers and arranged to be wound from one roller to the other and vice versa, letter supporting means for guiding letters singly between the layers of the web as it is wound on one of the rollers and to receive letters discharged from the web as the web is unwound from the roller, a tension means for the web, and means for rotating the rollers.

1,215,978. POWER BOND-DRILLING MACHINE. JOHN C. PARNELL and CHARLES LOY PARNELL, Montpelier, Ohio. Filed Dec. 20, 1915. Serial No. 67,839. (Cl. 77—8.)



1. A drilling machine of the class described including a carriage, a drill frame disposed transversely beneath the carriage to range transversely of a railway track, said drill frame being pivotally hung at one end on the carriage near one side of the latter to swing vertically, and having its outer free end extending to the opposite side of the carriage to be disposed on the track rail at said opposite side, means on said drill frame to hold and actuate a drill, motor means on the carriage to drive said drill actuating means, and drive connections between the motor means and the drill actuating means.

2. A drilling machine of the class described including a carriage, a drill frame pivotally hung at one end on the carriage to swing vertically to and from the drilling position, a motor on the carriage, drill actuating means on the swinging drill frame, and means to establish and disestablish drive connection between the motor and said drill actuating means by the raising and lowering of the drill frame.

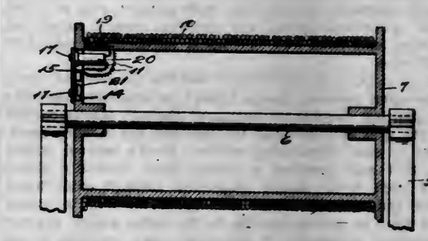
3. A drilling machine of the class described, including a carriage, a drill frame disposed transversely of said carriage beneath the same and pivoted at one end to the carriage near one side of the latter to swing vertically thereon to and from the drilling position, said frame having means rigid therewith at the outer free end thereof, to rest on a rail, drill-holding and actuating means carried by said frame to swing therewith, a motor carriage, drive connections between the motor and the said actuating means and feed means on said frame to advance the drill.

4. A drilling machine of the class described including a carriage, a drill frame disposed transversely beneath the carriage to range transversely of a railway track, said drill frame being pivotally hung at one end on the carriage near one side of the latter to swing vertically, said drill frame being formed at the free end thereof with members rigid therewith to rest upon a rail, a drill head slidable on the said frame, drill-actuating means on the frame, and means to drive said actuating means, said drive means including a motor in fixed position on the carriage and drive connection between the motor and said actuating means.

5. A drilling machine of the class described including a carriage; a drill frame, said drill frame comprising beams pivotally hung at one end on the carriage, and U-shaped drop bars, said drop bars having members at their free ends to receive a rail and rest on the latter, there being members along the sides of the drop bars forming guides for a drill head and braces for the drop bars, said braces including bars bridging the drop bars and connected with the free ends thereof and with the said beams; a drill head slidable between said guide members, and drill holding and actuating means movable to and from the free end of the drill frame, by the movements of the drill head.

[Claims 6 to 10 not printed in the Gazette.]

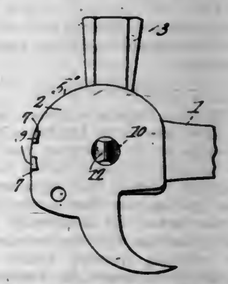
1,215,979. SIGNAL. GEORGE J. PAULY, Frackville, Pa. Filed May 31, 1916. Serial No. 100,960. (Cl. 177—336.)



1. In a signal, a drum having an opening therein, a door closing the opening, a signal arranged in the interior of the drum, and means for operating the signal.

2. In a signal, a drum having an opening therein, a door closing the opening, a source of electrical energy mounted upon the door, an electrical signal also mounted upon the door and in circuit with the electrical energy.

1,215,980. HAMMER. JOHN E. PENDERGAST, Jackson, Mont. Filed May 14, 1913. Serial No. 767,695. (Cl. 145—81.)



In a device of the class described, a tool-head having an opening and provided with opposed superficial notches;

a handle in the opening; and a wedge in the handle, the wedge having opposed, straight, rigid lugs disposed in the plane of the wedge at right angles to the axis of the handle and including parallel end faces of the same area as the cross section of the lugs, the end faces of the lugs lying outwardly beyond the side faces of the head, whereby the end faces of the lugs may be gripped between the jaws of a vise, independently of the head, the lugs being received in the notches to hold the lugs in outstanding relation to the side faces of the head.

1,215,981. RAILROAD-TIE. MATHIAS H. PENTZ, Rockton, Pa. Filed June 22, 1915. Serial No. 35,565. (Cl. 238—5.)



1. A metallic tie including a box-like member, an upper telescoping member, a flange formed along the perimeter of said upper member for limiting contact with the edges of the first said member, blocks secured interiorly of the first said member and provided with cylindrical bores, resilient means seated within said bores in said block and adapted to bear upwardly against said upper member, and means positioned transversely of said upper member at either end thereof for limiting the upward movement of said latter member.

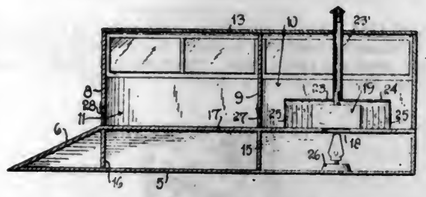
2. The combination in a metallic tie, of a lower box-like member, an upper telescoping member, limiting flanges formed on said upper member, straps secured to said first member and transversely embracing said upper member for limiting movement in that direction, spaced blocks secured interiorly of the first said member and provided with cylindrical bores, and resilient means interposed between said block and said upper member and seated in said bores.

3. A metallic tie including a box-like member, an upper telescoping member, means formed on said upper member for limiting downward movement thereof, means carried by the first said member for limiting the upward movement of said telescoping member, blocks secured within the first said member, a thrust plate vertically alined with each block, means projecting through said thrust plate and operable upon said upper member to adjust said plate in spaced relation to the latter and to prevent horizontal movement of said plate, and resilient means seated in said bores and interposed between said plate and said block.

4. A metallic tie including a box-like base member, removable blocks within said member near the ends thereof each having vertical bores or pockets therein, clamping means bolted to the base member and bearing against the transverse side of said blocks to retain them in place, resilient means supported within said bores and projecting beyond the tops of said blocks, an upper member overlying said base member and slidable therein, an adjustable thrust plate above each block and upon which said resilient means bear and adapted to vary the tension of said means, and straps secured to the box-like member and extending over the upper member for limiting upward movement of the same.

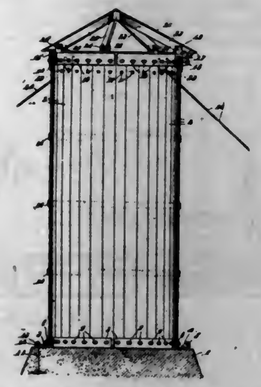
1,215,982. BROODER. EUGENE O. PERRY, Detroit, Mich. Filed Oct. 23, 1916. Serial No. 127,225. (Cl. 119—32.)

1. In an apparatus of the character described, a base section having a top wall, an upper section having brooder and feeding chambers isolated from each other, said top wall of the base section constituting the floor of said chambers, exterior means for detachably holding the upper section in connection with the base section, a rectangular heater centrally arranged within the brooder chamber upon said floor, means for supplying heat to the heater, a hover supported upon the heater in spaced relation thereto, said heater having an outlet flue, and a discharge conduit telescopically engaged upon the outlet flue and having its upper end secured in the top of said upper section.



2. In an apparatus of the character described, a base section having a top wall, an upper section provided with a transverse partition dividing the same into brooder and feeding chambers, doors in said partition wall affording communication between said chambers, means for detachably holding the upper section upon the base section, the top wall of the latter section constituting the floor of said chambers, the floor of the brooder chamber having an opening therein, a heater having inner and outer spaced walls, the bottom of the outer wall being provided with an opening coinciding with the opening in said floor, a flue communicating with the space between said walls at the top of the heater, said bottom section having a door in one of its side walls providing means for the insertion of a lamp beneath the heater, a hover supported in spaced relation to the heater, an outlet pipe permanently connected to the top of said upper chamber and telescopically engaged with said flue, and transparent windows mounted in the top of said upper section to afford access to said chambers.

1,215,983. SILO. LEWIS M. PETERSON, Grove City, Minn. Filed July 3, 1915. Serial No. 37,994. (Cl. 217—4.)

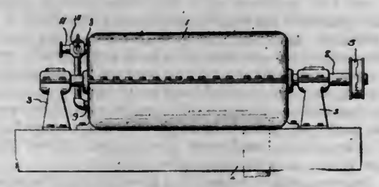


1. A silo comprising a lateral wall formed of vertically extending staves arranged edge to edge in annular formation; an annular reinforcing channel embracing the upper edge of said wall for binding the upper ends of said staves together; a plurality of hoops embracing said wall at intervals; means for fastening said channel member to said staves, said means comprising bolts extending through said staves below the uppermost hoops; and members at the outer ends of said bolts extending upwardly therefrom for connection with said channel member, substantially as described.

2. A silo comprising a lateral wall formed of vertically extending staves arranged edge to edge in annular formation; an annular reinforcing channel embracing the upper edge of said wall for binding the upper ends of said staves together; a plurality of hoops embracing said wall at intervals; means for fastening said channel member to said staves, said means comprising bolts extending through said staves below the uppermost hoop; and members at the outer ends of said bolts pivotally connected therewith and extending upwardly therefrom for connection with said channel member, substantially as described.

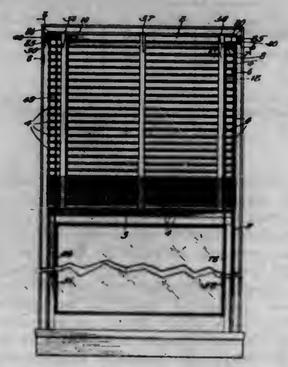
3. A silo comprising a lateral wall formed of vertically extending staves arranged edge to edge in annular formation; an annular reinforcing channel member embracing the upper edge of said wall for binding the upper ends of said staves together; exteriorly positioned loops on said channel member; and guy wires connected with said loops, substantially as described.

1,215,984. REVERSIBLE ROTARY STEAM-ENGINE. ANDREW PHILLIPS, Conemaugh, Pa. Filed Apr. 26, 1916. Serial No. 93,658. (Cl. 253—70.)



A reversible steam engine comprising a casing, a shaft journaled in said casing, a partition located in said casing to form a pair of steam chests, means for admitting steam within either of the chests, a plurality of relatively spaced rotors secured to the shaft, blades attached to the peripheries of the rotors and having concave faces, a plurality of stationary blades having concave faces secured to the wall of the casing between the rotors for deflecting steam from a horizontal path into an angled path with respect to the shaft from one rotor to the adjacent rotor, said stationary blades in one half of the casing being curved in one direction, while the stationary blades of the other half of the casing being curved in the opposite direction, and nozzles carried by the partition for directing steam on the rotors from either chest to drive the rotors in either direction.

1,215,985. VENETIAN BLIND. JOHN PLATE, Chicago, Ill. Filed May 7, 1914. Serial No. 836,895. (Cl. 156—17.)



1. The combination with the top rail of a Venetian blind and the pivotal supports therefor of means for turning or rotating said top rail, a mechanism operable by said turning means for supporting said top rail in one of several positions of rotation, said mechanism operating to release said top rail supporting means at the end of said rail's turning movements.

2. The combination with a Venetian blind, of a supporting top rail mounted for rotary adjusting movements and connected with the slats of the blind to communicate such movements to said slats, a step by step controlling mechanism which prevents return rotation of said rail and an automatic release device which automatically releases said controlling mechanism when said rail reaches the end of its step by step rotations.

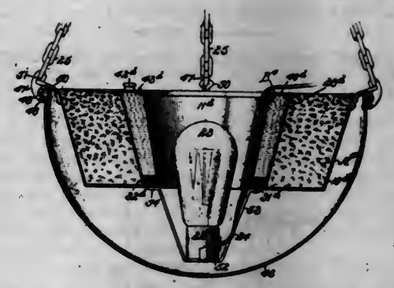
3. The combination with a pivotally supported top rail for a Venetian blind, of means for rotating said rail or support in one direction to tilt the slats of the blind, a step by step checking device which prevents return rotation of said rail, and a releasing device actuated by said checking device to free said top rail to rotate back to starting point of said step by step movement, said releasing device being automatically rendered inoperative at the end of the return rotation of said rail.

4. The combination with a Venetian blind, of a cord for raising or stacking said blind's slats, means automatically gripping said cord to support said slats in raised position, means for releasing the grip of said automatic means, a rotatably mounted top rail, a cord for rotating said rail in one direction to tilt the slats of the blind, a check control mechanism checking return rotation when said rail is rotated by pulling said cord, and a mechanism making said check control temporarily inoperative which is also controlled by pulling said cord.

5. The combination with a Venetian blind including a top rail mounted for oscillatory movement and having said top rail connected therewith the slats of the blind to cause the latter to move with said top rail, of a blind-raising cord and a top rail and slats tilting cord, automatic means for gripping the former cord to support the slats when raised, a releasing cord and mechanism connected therewith for releasing said gripping means, and a mechanism operable by pulling said top rail and slats-tilting cord for controlling the opening and shutting of said slats, or tilting same at various angles.

[Claims 6 to 10 not printed in the Gazette.]

1,215,986. COMBINATION FLOWER-POT AND REFLECTOR. ARTHUR EDWARD POHLMAN, Watertown, Wis. Filed June 26, 1916. Serial No. 105,988. (Cl. 240—2.)



A device of the character described, including an upwardly disposed reflector, an annular flower pot structure surrounding the reflector, and means to support a source of light approximately central of the reflector; together with a glass bowl extending around and beneath the flower pot structure adapted to receive the light rays from the source of light in the reflector.

1,215,987. BUTTON-ATTACHING MACHINE. LORA E. POOLE, Anderson, Ind., assignor to Anderson Button Attaching Machine Company, Anderson, Ind., a Corporation. Filed Nov. 26, 1915. Serial No. 63,587. (Cl. 218—8.)

1. A button attaching machine including a button attaching means, a staple forming block adapted to be operated by said button attaching means, and means remov-

a handle in the opening; and a wedge in the handle, the wedge having opposed, straight, rigid lugs disposed in the plane of the wedge at right angles to the axis of the handle and including parallel end faces of the same area as the cross section of the lugs, the end faces of the lugs lying outwardly beyond the side faces of the head, whereby the end faces of the lugs may be gripped between the jaws of a vise, independently of the head, the lugs being received in the notches to hold the lugs in outstanding relation to the side faces of the head.

1,215,981. RAILROAD-TIE. MATHIAS H. PENTZ, Rockton, Pa. Filed June 22, 1915. Serial No. 35,565. (Cl. 238—5.)



1. A metallic tie including a box-like member, an upper telescoping member, a flange formed along the perimeter of said upper member for limiting contact with the edges of the first said member, blocks secured interiorly of the first said member and provided with cylindrical bores, resilient means seated within said bores in said block and adapted to bear upwardly against said upper member, and means positioned transversely of said upper member at either end thereof for limiting the upward movement of said latter member.

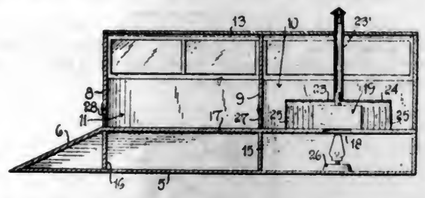
2. The combination in a metallic tie, of a lower box-like member, an upper telescoping member, limiting flanges formed on said upper member, straps secured to said first member and transversely embracing said upper member for limiting movement in that direction, spaced blocks secured interiorly of the first said member and provided with cylindrical bores, and resilient means interposed between said block and said upper member and seated in said bores.

3. A metallic tie including a box-like member, an upper telescoping member, means formed on said upper member for limiting downward movement thereof, means carried by the first said member for limiting the upward movement of said telescoping member, blocks secured within the first said member, a thrust plate vertically alined with each block, means projecting through said thrust plate and operable upon said upper member to adjust said plate in spaced relation to the latter and to prevent horizontal movement of said plate, and resilient means seated in said bores and interposed between said plate and said block.

4. A metallic tie including a box-like base member, removable blocks within said member near the ends thereof each having vertical bores or pockets therein, clamping means bolted to the base member and bearing against the transverse side of said blocks to retain them in place, resilient means supported within said bores and projecting beyond the tops of said blocks, an upper member overlying said base member and slidable therein, an adjustable thrust plate above each block and upon which said resilient means bear and adapted to vary the tension of said means, and straps secured to the box-like member and extending over the upper member for limiting upward movement of the same.

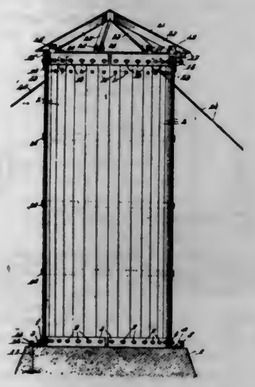
1,215,982. BROODER. EUGENE O. PERRY, Detroit, Mich. Filed Oct. 23, 1916. Serial No. 127,225. (Cl. 119—32.)

1. In an apparatus of the character described, a base section having a top wall, an upper section having brooder and feeding chambers isolated from each other, said top wall of the base section constituting the floor of said chambers, exterior means for detachably holding the upper section in connection with the base section, a rectangular heater centrally arranged within the brooder chamber upon said floor, means for supplying heat to the heater, a hover supported upon the heater in spaced relation thereto, said heater having an outlet flue, and a discharge conduit telescopically engaged upon the outlet flue and having its upper end secured in the top of said upper section.



2. In an apparatus of the character described, a base section having a top wall, an upper section provided with a transverse partition dividing the same into brooder and feeding chambers, doors in said partition wall affording communication between said chambers, means for detachably holding the upper section upon the base section, the top wall of the latter section constituting the floor of said chambers, the floor of the brooder chamber having an opening therein, a heater having inner and outer spaced walls, the bottom of the outer wall being provided with an opening coinciding with the opening in said floor, a flue communicating with the space between said walls at the top of the heater, said bottom section having a door in one of its side walls providing means for the insertion of a lamp beneath the heater, a hover supported in spaced relation to the heater, an outlet pipe permanently connected to the top of said upper chamber and telescopically engaged with said flue, and transparent windows mounted in the top of said upper section to afford access to said chambers.

1,215,983. SILO. LEWIS M. PETERSON, Grove City, Minn. Filed July 3, 1915. Serial No. 37,994. (Cl. 217—4.)

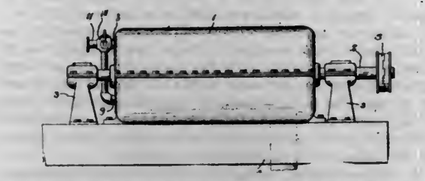


1. A silo comprising a lateral wall formed of vertically extending staves arranged edge to edge in annular formation; an annular reinforcing channel embracing the upper edge of said wall for binding the upper ends of said staves together; a plurality of hoops embracing said wall at intervals; means for fastening said channel member to said staves, said means comprising bolts extending through said staves below the uppermost hoops; and members at the outer ends of said bolts extending upwardly therefrom for connection with said channel member, substantially as described.

2. A silo comprising a lateral wall formed of vertically extending staves arranged edge to edge in annular formation; an annular reinforcing channel embracing the upper edge of said wall for binding the upper ends of said staves together; a plurality of hoops embracing said wall at intervals; means for fastening said channel member to said staves, said means comprising bolts extending through said staves below the uppermost hoop; and members at the outer ends of said bolts pivotally connected therewith and extending upwardly therefrom for connection with said channel member, substantially as described.

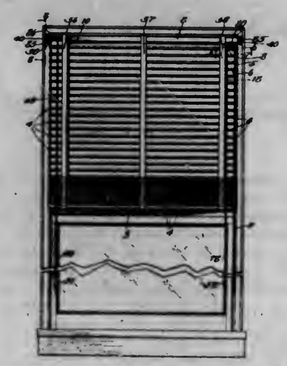
3. A silo comprising a lateral wall formed of vertically extending staves arranged edge to edge in annular formation; an annular reinforcing channel member embracing the upper edge of said wall for binding the upper ends of said staves together; exteriorly positioned loops on said channel member; and guy wires connected with said loops, substantially as described.

1,215,984. REVERSIBLE ROTARY STEAM-ENGINE. ANDREW PHILLIPS, Conemaugh, Pa. Filed Apr. 26, 1916. Serial No. 93,658. (Cl. 253—70.)



A reversible steam engine comprising a casing, a shaft journaled in said casing, a partition located in said casing to form a pair of steam chests, means for admitting steam within either of the chests, a plurality of relatively spaced rotors secured to the shaft, blades attached to the peripheries of the rotors and having concave faces, a plurality of stationary blades having concave faces secured to the wall of the casing between the rotors for deflecting steam from a horizontal path into an angled path with respect to the shaft from one rotor to the adjacent rotor, said stationary blades in one half of the casing being curved in one direction, while the stationary blades of the other half of the casing being curved in the opposite direction, and nozzles carried by the partition for directing steam on the rotors from either chest to drive the rotors in either direction.

1,215,985. VENETIAN BLIND. JOHN PLATE, Chicago, Ill. Filed May 7, 1914. Serial No. 836,895. (Cl. 156—17.)



1. The combination with the top rail of a Venetian blind and the pivotal supports therefor of means for turning or rotating said top rail, a mechanism operable by said turning means for supporting said top rail in one of several positions of rotation, said mechanism operating to release said top rail supporting means at the end of said rail's turning movements.

2. The combination with a Venetian blind, of a supporting top rail mounted for rotary adjusting movements and connected with the slats of the blind to communicate such movements to said slats, a step by step controlling mechanism which prevents return rotation of said rail and an automatic release device which automatically releases said controlling mechanism when said rail reaches the end of its step by step rotations.

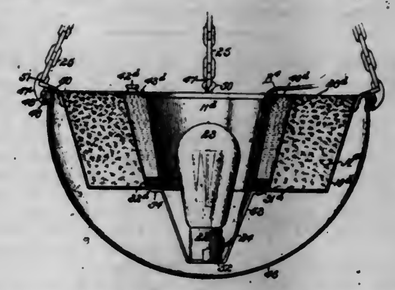
3. The combination with a pivotally supported top rail for a Venetian blind, of means for rotating said rail or support in one direction to tilt the slats of the blind, a step by step checking device which prevents return rotation of said rail, and a releasing device actuated by said checking device to free said top rail to rotate back to starting point of said step by step movement, said releasing device being automatically rendered inoperative at the end of the return rotation of said rail.

4. The combination with a Venetian blind, of a cord for raising or stacking said blind's slats, means automatically gripping said cord to support said slats in raised position, means for releasing the grip of said automatic means, a rotatably mounted top rail, a cord for rotating said rail in one direction to tilt the slats of the blind, a check control mechanism checking return rotation when said rail is rotated by pulling said cord, and a mechanism making said check control temporarily inoperative which is also controlled by pulling said cord.

5. The combination with a Venetian blind including a top rail mounted for oscillatory movement and having said top rail connected therewith the slats of the blind to cause the latter to move with said top rail, of a blind-raising cord and a top rail and slats tilting cord, automatic means for gripping the former cord to support the slats when raised, a releasing cord and mechanism connected therewith for releasing said gripping means, and a mechanism operable by pulling said top rail and slats-tilting cord for controlling the opening and shutting of said slats, or tilting same at various angles.

[Claims 6 to 10 not printed in the Gazette.]

1,215,986. COMBINATION FLOWER-POT AND REFLECTOR. ARTHUR EDWARD POHLMAN, Watertown, Wis. Filed June 26, 1916. Serial No. 105,988. (Cl. 240—2.)

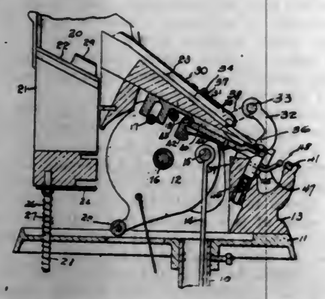


A device of the character described, including an upwardly disposed reflector, an annular flower pot structure surrounding the reflector, and means to support a source of light approximately central of the reflector; together with a glass bowl extending around and beneath the flower pot structure adapted to receive the light rays from the source of light in the reflector.

1,215,987. BUTTON-ATTACHING MACHINE. LORA E. POOLE, Anderson, Ind., assignor to Anderson Button Attaching Machine Company, Anderson, Ind., a Corporation. Filed Nov. 26, 1915. Serial No. 63,587. (Cl. 218—8.)

1. A button attaching machine including a button attaching means, a staple forming block adapted to be operated by said button attaching means, and means remov-

able by said staple forming block for indicating where the button will be attached.



2. A button attaching machine including button attaching means, a staple forming block operated by said button attaching means, an arm secured to said block, and an indicating ball on the end of said arm for indicating where the button will be attached.

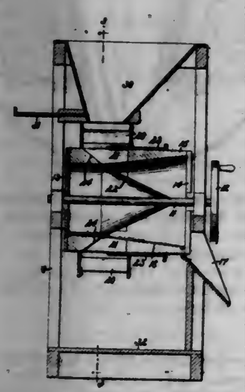
3. A button attaching machine including button attaching means, a staple forming block adapted to be operated by said button attaching means, an arm secured to said block, a staple anvil, and an indicating ball secured on said arm adjacent to said anvil for indicating where the button will be attached.

4. A button attaching machine including a framework, a button race, an operating member, a cut-off ram slidable in said frame, a staple driver, means on said operating member for operating said ram, a staple forming block, means on said ram for forcing said block downwardly, and means operated by said block for indicating where the button will be attached.

5. A button attaching machine including a framework, a button race, an operating member, a cut-off ram slidable in said frame, a staple driver, means on said operating member for operating said ram, a staple forming block, means on said ram for forcing said block downwardly, an arm secured to said block, and an indicating means on said arm for showing the position of the button when attached.

[Claim 6 not printed in the Gazette.]

1,215,988. ORE-SAMPLER. FRANK B. POTT, Leadville, Colo. Filed May 16, 1916. Serial No. 97,855. (Cl. 73—21.)



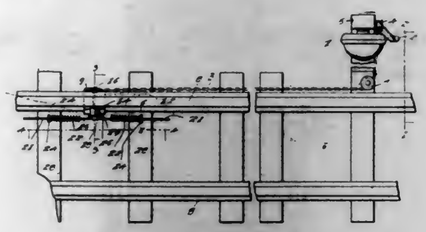
1. An ore sampler, comprising a revoluble drum open at one end and mounted on a horizontal axis, a cone arranged centrally within the said drum and rotatable with the same, the apex end of the cone leading to the open end of the said drum, buckets arranged peripherally on the said drum and opening onto the base end of the said cone, and means for delivering the material to be sampled into the buckets at the time the buckets reach an uppermost position, whereby a portion of the material of each bucket will slide down the cone to the open end of the drum and the portion remaining in the bucket discharged therefrom when the bucket reaches its lowermost position.

2. An ore sampler, comprising a revoluble drum open at one end and mounted on a horizontal axis, a cone arranged centrally within the said drum and rotatable with the same, the apex end of the cone leading to the open end of the said drum, buckets arranged peripherally on the said drum and opening onto the base end of the said cone, gates, one for each bucket, to control the amount of the material passing from the buckets onto the cone, and means for delivering the material to be sampled into the buckets at the time the buckets reach an uppermost position.

3. An ore sampler, comprising a revoluble drum open at one end and mounted on a horizontal axis, a cone arranged centrally within the said drum and rotatable with the same, the apex end of the cone leading to the open end of the said drum, buckets arranged peripherally on the said drum and opening onto the base end of the said cone, slidable gates, one for each bucket, to control the amount of the material passing from the buckets onto the base end of the said cone, a fixed outlet chute at the open end of the said drum, and a feed hopper discharging into the buckets on the latter reaching uppermost position.

4. An ore sampler, comprising a revoluble drum mounted on a horizontal axis open at one end and having a tapering inner surface leading to the said open end, the rim of the drum being provided with openings, a cone arranged centrally within the said drum and rotatable with the same, the apex end of the cone leading to the said open end of the drum and the base end of the said cone being opposite the said rim openings, radially disposed buckets arranged on the peripheral face of the drum and leading to the said rim openings, and means for delivering the material to be sampled successively to the said buckets on the latter reaching an uppermost position.

1,215,989. AUTOMATIC ALARM FOR RAILROAD-CROSSINGS. HENRY A. PRICE and JAMES E. GRANT, Terrell, Tex. Filed Apr. 25, 1916. Serial No. 93,446. (Cl. 246—48.)



1. An automatic alarm for railway crossings including an audible signal having an operating lever, an upright lever fulcrumed at the lower portion, a transverse rock shaft extending beneath one of the rails of a track and having an outer arm arranged to limit the movement of the upright lever toward the signal, and adapted to move the said upright lever away from the said signal to operate the same, means for connecting the upright lever with the operating lever of the signal, an inner arm carried by the rock shaft and arranged in the path of the wheels of a train and means for normally maintaining the inner arm in a central position.

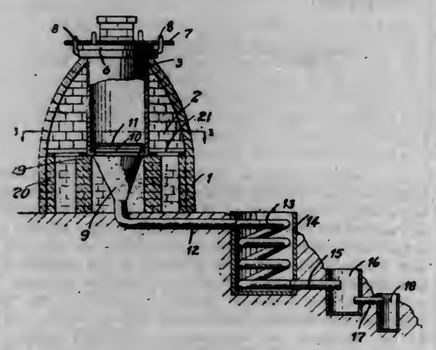
2. An automatic alarm for railroad crossings including a transverse rock shaft designed to be mounted beneath one of the rails of a track and provided with an inner upwardly extending arm projecting into the path of the wheels of a train, guides located in advance and in rear of the said arm, link rods connected with and extending forwardly and rearwardly from the said arm and slidable in the said guides and coiled springs disposed on the said link rods and arranged to urge the inner arm toward a central position, an audible signal, and means for connecting the rock shaft with the audible signal.

3. An automatic alarm for railroad crossings including a transverse rock shaft designed to be mounted beneath one of the rails of a track and provided with an inner upwardly extending arm projecting into the path of the wheels of a train, guides located in advance and in rear of the said arm, link rods connected with and extending forwardly and rearwardly from the said arm and slidable in the said guides and coiled springs disposed on the said link rods and arranged to urge the inner arm toward a central position, an outer upright lever fulcrumed at the lower portion, an outer arm carried by the rock shaft and located in the advance of the upright lever for limiting the forward movement thereof, said outer arm being adapted to swing the upright lever rearwardly, an audible signal, and means for connecting the audible signal with the upright lever.

4. An automatic alarm for railroad crossings including a bearing bracket having rail engaging means and designed to be secured to a rail between the cross ties, spaced pins arranged in pairs and projecting from the cross ties in advance and in rear of the bearing bracket, a transverse rock shaft carried by the bearing bracket and having inner and outer arms, the inner arm being projected into the path of the wheels of a train and provided between its ends with an opening, longitudinally disposed link rods located in advance and in rear of the inner arm of the rock shaft and provided at their adjacent ends with heads having substantially hook-shaped terminal portions engaging in the opening of the inner arm, coiled springs disposed on the link rods and interposed between the heads and the guide pins, an upright lever located at the outer end of and adapted to be actuated by the rock shaft and an audible signal connected with the said lever.

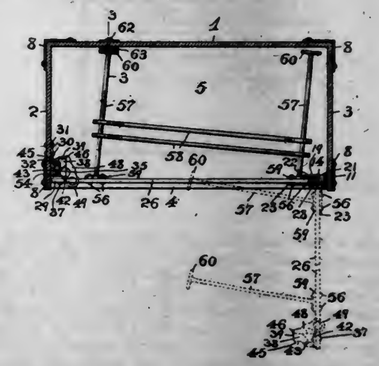
5. An automatic alarm for railroad crossings including a bearing bracket fitted against the lower face of a rail and provided with an inner upwardly extending jaw for engaging the adjacent bottom flange of the rail, said bracket being also provided with depending flanges located at opposite sides of the rail, a fastening device piercing the rail and the bracket and coacting with the said jaw to secure the bracket to the rail, a rock shaft journaled in the depending flanges of the bracket and having inner and outer arms, the inner arm extending into the path of the wheels of a train, a lever arranged to be actuated by the outer arm of the rock shaft and means for connecting the lever with a signal.

1,215,990. APPARATUS FOR DISTILLING WOOD. ALBERT W. QUATTLEBAUM and BEN S. MOONEY, Statesboro, Ga. Filed June 3, 1913. Serial No. 771,548. (Cl. 203—6.)



In a wood distilling apparatus, the combination with a furnace having a cylindrical lower wall portion, and a fuel feeding opening and an opening in its top for the escape of products of combustion, a cylindrical supporting wall within the furnace and spaced from the lower cylindrical wall, a retort including a container seated upon the supporting wall, a grate supported upon the supporting wall and the wall of the furnace, said grate entirely surrounding the container and engaging the lower end thereof, the upper portion of the furnace wall being beehive in shape and provided with an opening in its top disposed between the fuel feeding opening and the opening for the escape of products of combustion and through which the container extends, the side wall of said container engaging the wall of said opening, a circumscribing flange on the upper end of the container disposed outwardly of the furnace and engaging the wall thereof, a removable cover for the container, and a conducting pipe leading from the bottom of the container to the outside of the furnace.

1,215,991. WARDROBE-TRUNK. JOSEPH RAUCHBACH, Newark, N. J., assignor to Rauchbach-Goldsmith Co., a Corporation of New Jersey. Filed June 21, 1916. Serial No. 104,869. (Cl. 190—13.)



1. The combination with a chambered member of a trunk, of a hanger pivotally mounted within said member, said hanger comprising a bracket-bar, supporting arms extending rearwardly from said bar, and means connected with said chambered member with which a supporting arm can be brought into supporting relation to prevent sagging.

2. The combination with a chambered member of a trunk, of a hanger pivotally mounted within said member, said hanger comprising a bracket-bar, supporting arms extending rearwardly from said bar, an eye-member at the free end of one of said supporting arms, and a supporting stud connected with said chambered member with which said eye-member can be brought into supporting registration to prevent sagging.

3. The combination with a chambered member of a trunk, of a hanger pivotally mounted within said member, said hanger comprising a bracket-bar, supporting arms extending rearwardly from said bar, and means connected with said chambered member with which a supporting arm can be brought into supporting relation to prevent sagging, a latch-retaining member connected with said chambered member, and a spring-latch pivotally mounted with relation to said bracket-bar adapted to be sprung into holding engagement with said latch-retaining member, said spring-latch being provided with a fingerpiece for releasing the same from said latch-retaining member.

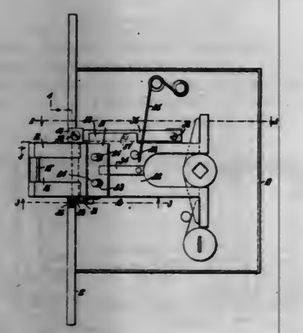
4. The combination with a chambered member of a trunk, of a hanger pivotally mounted within said member, said hanger comprising a bracket-bar, supporting arms extending rearwardly from said bar, an eye-member at the free end of one of said supporting arms, and a supporting stud connected with said chambered member with

which said eye-member can be brought into supporting registration to prevent sagging, a latch-retaining member connected with said chambered member, and a spring-latch pivotally mounted with relation to said bracket-bar adapted to be sprung into holding engagement with said latch-retaining member, said spring-latch being provided with a fingerpiece for releasing the same from said latch-retaining member.

5. The combination with a chambered member of a trunk, of a hanger pivotally mounted within said trunk, said hanger comprising a bracket-bar, and a supporting arm extending rearward at an acute angle from said bar.

[Claims 6 to 12 not printed in the Gazette.]

1,215,992. DOOR-LOCK. HERMAN REIN, New York, N. Y. Filed Mar. 7, 1916. Serial No. 82,599. (Cl. 70—64.)



1. In a door lock, the combination with a casing, of a bolt having a head projectable from the casing and consisting of two relatively movable parts mounted on the same pivot, means tending to project the bolt head from the casing, means carried by said head pivot tending to lock the bolt from movement into the casing, and means carried by another part of the bolt to release the aforesaid locking means preliminary to the unlocking movement of said head.

2. In a door lock, the combination with a casing, of a bolt comprising a head and a shank movable longitudinally independently of each other to a limited distance, the head being projectable beyond the casing and consisting of a plurality of parts movable away from each other around a single pivot, means carried by the head and coöperating directly with the casing to lock the bolt head projected, and means carried by the shank serving to release said locking means during the interval of independent longitudinal movement of the shank with respect to the head.

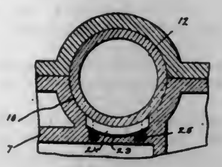
3. In a door lock, the combination of a casing, a bolt slidable therein and comprising a shank and a head, said head comprising a pair of relatively movable parts pivoted on a common pivot, each head part comprising a hook at one end and a tail piece at the other end, said hook and tail piece of each head part lying in a plane at one side of the pivot, and said shank extending into loose coöperation with the head between the tail pieces thereof.

4. The herein described door lock comprising a casing, a slidable bolt projectable beyond the casing, the projecting end of the bolt consisting of a head including a pair of relatively movable parts, each part comprising a hook at one end and a tail piece at the other, said bolt also including a shank having a pin extending at right angles to one end of the shank, said tail pieces having a pair of slots into which the opposite ends of the said shank pin project, and means carried by the bolt and tending to hold it projected beyond the casing.

5. In a door lock, the combination of a casing having a pair of inwardly projecting lugs on opposite sides thereof, a bolt projectable from the casing and including a head consisting of two parts pivoted on the same axis and having at their outer ends a pair of oppositely projecting hooks, a pair of dogs pivoted upon the same pivot as the head parts and coöperating with said lugs to hold the bolt projected, and claw means coöperating with said dogs and connected to a part of the bolt movable independently of the head to release the dogs from the lugs preliminary to the retracting of the bolt head.

[Claim 6 not printed in the Gazette.]

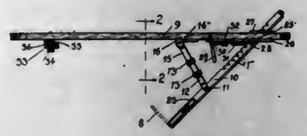
1,215,993. EXPLOSIVE-ENGINE. HARRY J. RIMBACH, Hammond, Ind. Filed May 12, 1916. Serial No. 97,141. (Cl. 123—80.)



1. An explosive engine including a cylinder having a head and a substantially semicircular depression formed in said head, said head having a substantially rectangular port formed in the wall of said depression, and a groove surrounding said port, a valve rotatably mounted in said depression having a port therein adapted to be moved into registration with the first port, a substantially rectangular integral packing strip snugly received in said groove and engaging said valve, coil springs engaging the corners of said packing strip to retain said packing strip in engagement with the valve, and means to prevent the displacement of said springs.

2. An explosive engine including a cylinder having a head and a substantially semicircular depression formed in said head, said head having a substantially rectangular port formed in the wall of said depression, and a groove surrounding said port, a valve rotatably mounted in said depression having a port therein adapted to be moved into registration with the first port, a substantially rectangular integral packing ring snugly received in said groove and engaged with said valve, and coil springs engaging the corners of said packing ring to retain said packing ring in engagement with the valve, the bottom wall of the groove having a series of recesses to snugly receive said springs, whereby said springs are prevented from being displaced.

1,215,994. WINDOW-SCAFFOLD. FREDERICK ROTTI, Elizabethport, N. J. Filed May 28, 1915. Serial No. 30,997. Renewed Dec. 5, 1916. Serial No. 135,271. (Cl. 20—87.)



In a window scaffold comprising a platform provided with apertures forming passageways therein, said passageways being closed at both of their ends, means adjacent one end of the platform for securing it to the window sill, supports pivotally arranged adjacent the opposite end of said platform adapted to be adjusted in the passageways, said supports having a plurality of notches arranged inwardly of and lying in parallel relation to the body plane of said securing means, and slidable means carried by the platform for engagement with said notches to cause one of the ends of said supports to be moved against one of the said ends of the passageways and thereby lock the supports against movement in the passageways.

1,215,995. MANUFACTURE AND COMPOSITION OF BREAD OR THE LIKE. EDWARD SIMS ROWORTH, Matlock Bath, England, assignor of one-third to George Roworth, Matlock Bath, England, and one-third to Frederic Charles Lymn, Matlock, England. Filed May 27, 1916. Serial No. 100,282. (Cl. 99—10.)

1. A gelatinous product for use in bread making containing substantially equal amounts of corn flour and ordinary starch.

2. A gelatinous product for use in bread making containing substantially equal amounts of corn flour and ordinary starch formed into a jelly with a large amount of water.

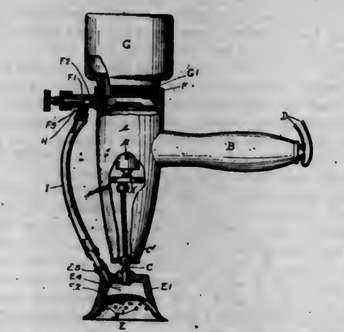
3. A gelatinous product for use in bread-making containing relatively large amounts of corn flour and ordinary starch together with a small quantity of sugar.

4. A gelatinous product for use in bread-making containing relatively large amounts of corn flour and ordinary starch together with a small quantity of arrowroot.

5. A gelatinous product for use in bread-making containing corn flour (5 parts), starch (4½ parts), arrowroot (½ part) and sugar (½ part) in approximately the proportion specified.

[Claims 6 to 11 not printed in the Gazette.]

1,215,996. MASSAGE APPARATUS. SAMUEL H. SCANDLYN, Park City, Tenn. Filed Mar. 17, 1916. Serial No. 84,827. (Cl. 128—16.)



1. In a massage apparatus, the combination of a body, interiorly screw-threaded means on the upper end of said body forming a neck space, an inverted bottle having an exteriorly screw-threaded neck fitted into said space, a vibratory head adapted for the passage of liquid therethrough and located below said body, and flexible means forming a passage from said neck space into said head, substantially as described.

2. In a massage apparatus, the combination of a body, interiorly screw-threaded means on the upper end of said body forming a neck space, an inverted bottle having an exteriorly screw-threaded neck fitted into said space, a nipple communicating with said neck space, a vibratory head adapted for the passage of liquid therethrough and located below said body and bearing a nipple, and a flexible tube having its ends attached to said nipples, substantially as described.

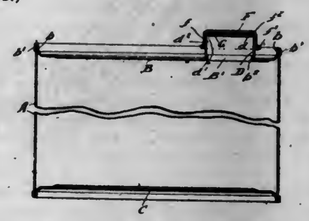
3. In a massage apparatus, the combination of a body, interiorly screw-threaded means on the upper end of said body forming a neck space, an inverted bottle having an exteriorly screw-threaded neck fitted into said space, a valved branch communicating with said neck space, a vibratory head adapted for the passage of liquid therethrough and located below said body, and flexible means forming a passage from said branch to said head, substantially as described.

4. In a massage apparatus, the combination of a body, interiorly screw-threaded means integral with the upper end of said body and forming a neck space, an inverted bottle having an exteriorly screw-threaded neck fitted into said space, a vibratory head adapted for the passage of liquid therethrough and located below said body, and flexible means forming a passage from said neck space into said head, substantially as described.

5. In a massage apparatus, the combination of a body, interiorly screw-threaded means integral with the upper end of said body and forming a neck space, an inverted bottle having an exteriorly screw-threaded neck fitted into said space, a vibratory head adapted for the passage of liquid therethrough and located below said body and bearing a nipple, and a flexible tube having its ends attached to said nipples, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,215,997. POURING-NOZZLE CLOSURE FOR CANS. JOHN E. SCHENCK, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed June 14, 1909. Serial No. 502,076. (Cl. 221—3.)



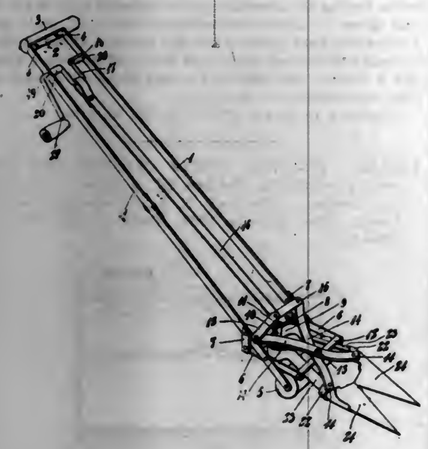
1. A pouring nozzle can having an upstanding stiffened rim at the edge of the top of the body and at the end of the top of the body adjacent said stiffened rim and spaced inwardly therefrom, a pouring nozzle of relatively small diameter extending upwardly from the top of said body and above said stiffened rim a substantial distance, said nozzle having a cylindrical non-tapering exterior friction wall and an inwardly extending flange at the top thereof, a cap for said nozzle having a non-tapering internal friction wall of length sufficient to bring its bottom edge below the upper edge of said stiffened rim, said lower edge being bent back upon itself to stiffen said cap and to provide with said stiffened rim means for engaging an opening tool, and a gasket arranged between the flange on the pouring nozzle and the top of said cap.

2. A pouring nozzle can having an upstanding stiffened rim around the end of the can body, and close to the rim of the top of the body and spaced inwardly therefrom a pouring nozzle of relatively small diameter extending upwardly from the top of said body and above said stiffened rim a substantial distance, said nozzle having a cylindrical non-tapering exterior friction wall and an inwardly extending flange at the top thereof, a cap for said nozzle having a non-tapering internal friction wall of length sufficient to bring its bottom edge below the upper edge of said stiffened rim, said lower edge being bent back upon itself to stiffen said cap and to provide with said stiffened rim means for engaging an opening tool, and a gasket arranged within the friction wall of the cap between the flange on the pouring nozzle and the top of the said cap, the friction wall of the cap at its upper end being extended directly inward to engage above said gasket.

1,215,998. SHEAR HOLDING AND OPERATING DEVICE. FREDRICK H. SCHULTZ, Dayton, Ohio. Filed June 23, 1915. Serial No. 35,972. (Cl. 56—19.)

1. In a device for holding and operating shears having a back, an elongated supporting frame, and shear-operating means comprising levers with crossed parts pivoted together and pivoted to said supporting frame near the middle of the front end of said frame and extending from front to rear and from side to side of said device, links pivotally connected together and each connected to the rear part of a respective lever, means on the front parts

of respective levers to detachably engage with opposite moving side parts of said shears, means to detachably secure the back of the shears to said frame, manipulating means on said frame, and operative connection from said manipulating means to said links where they are pivotally connected together.



2. In a device for holding and operating shears having a back, an elongated supporting frame, and shear-operating means comprising levers with crossed parts pivoted together and pivoted to said supporting frame near the middle of the front end of said frame and extending from front to rear and from side to side of said device, links pivotally connected together and each connected to the rear part of a respective lever, clips pivotally connected to the front parts of respective levers, extending laterally outwardly then downwardly and then inwardly to detachably hook over opposite moving side parts of said shears, means to detachably secure the back of the shears to said frame, manipulating means on said frame, and operative connection from said manipulating means to said links where they are pivotally connected together.

3. In a device for holding and operating shears having a back, an elongated supporting frame, and shear-operating means comprising levers with crossed parts pivoted together and pivoted to said supporting frame near the middle of the front end of said frame and extending from front to rear and from side to side of said device, links pivotally connected together and each connected to the rear part of a respective lever, means on the front parts of respective levers to detachably engage with opposite moving side parts of shears, a cross-bar on said frame to the rear of said clips, a U-shaped clip fixed to said cross-bar near the middle of the device with said parts flanking said cross-bar and adapted to flank the back of said shears, and means to clamp said side parts together to detachably secure the back of the shears to said cross-bar, manipulating means on said frame, and operative connection from said manipulating means to said links where they are pivotally connected together.

4. In a device for holding and operating shears having a back, an elongated supporting frame, and shear-operating means comprising levers with crossed parts pivoted together and pivoted to said supporting frame near the middle of the front end of said frame and extending from front to rear and from side to side of said device, links pivotally connected together and each connected to the rear part of a respective lever, clips pivotally connected to the front parts of respective levers, extending laterally outwardly then downwardly and then inwardly to detachably hook over oppositely moving side parts of said shears, a cross-bar on said frame to the rear of said clips, a U-shaped clip fixed to said cross-bar near the middle of the device with said parts flanking said cross-bar and adapted to flank the back of said shears, and means to clamp said side parts together to detachably secure the back of the shears to said cross-bar, manipulating means on said frame, and operative connection from said manipulating means to said links where they are pivotally connected together.

1,215,999. FUSE DEVICE. EDMUND O. SCHWEITZER, Chicago, Ill. Filed Feb. 20, 1914. Serial No. 819,941. (Cl. 175—273.)



1. A fuse device comprising an exterior fuse-holding casing made of insulating material and non-destructible by the operation of the fuse, a fuse fitting within said casing and lining the interior wall thereof, and filling material on the inner side of said fuse.

2. A fuse device comprising an outside casing provided with apertures and a hollow fuse arranged within said casing and lining the inner wall thereof, said fuse also having apertures, the apertures of said casing being out of register with the apertures in the fuse.

3. A fuse device comprising a tubular insulating casing, a tubular fuse confined therein, said fuse having its ends longitudinally slotted and bent back over the ends of said insulating casing, and metal caps fitted over the ends of said insulating casing and the slotted ends of said fuse.

4. A fuse device comprising a tubular exterior casing made of insulating material having an aperture between its ends and a fuse of substantially the same size as the interior of said casing, said fuse fitting closely within said casing and lining the inner wall thereof.

5. The combination of an exterior hollow casing consisting of a tubular portion made of insulating material and metallic cap members fitted to and closing the ends of said tubular portion, and a tubular fuse arranged within said tubular portion of said casing and lining the interior wall thereof, said fuse extending between and contacting at its ends with said metallic terminal caps, and said intermediate tubular portion being nondestructible by the explosion of the fuse.

[Claims 6 to 13 not printed in the Gazette.]

1,216,000. ELECTRICAL INSULATOR. THOMAS SCULLY, New York, N. Y. Filed Mar. 20, 1915. Serial No. 15,697. (Cl. 173—366.)



1. A strain insulator adapted to receive two interlocking conductors at right angles to each other, said insulator being provided with two barriers following each conductor, and a barrier following substantially the edge of the insulator except at the ends thereof at which the said conductors leave the same.

2. A strain insulator adapted to receive two interlocking conductors at right angles to each other, said insulator being provided with central barriers extending parallel to the said conductors upon either side thereof, and further barriers extending parallel to said first-named barriers at either side thereof and transversely thereto beyond the inner ends of said barriers.

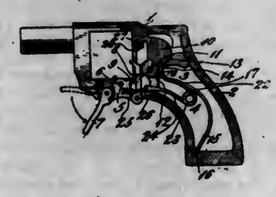
3. A strain insulator adapted to receive two interlocking conductors at right angles to each other, said insulator being provided with two barriers following each conductor and continued around the same, and a barrier following substantially the edge of the insulator except at the ends thereof at which the said conductors leave the same.

4. A strain insulator adapted to receive two interlocking conductors at right angles to each other, said insulator being provided with two barriers following each conductor and continued around the same, and a barrier following substantially the edge of the insulator except at the ends thereof at which the said conductors leave the same, said insulator being further provided with a drain hole between the inner end of each of the central barriers and the corresponding transverse barrier.

5. A strain insulator adapted to receive two interlocking conductors at right angles to each other, said insulator being provided with central barriers extending parallel to the said conductors upon either side thereof, and further barriers extending parallel to said first-named barriers at either side thereof and transversely thereto beyond the inner ends of said barriers, the grooves formed between the said central barriers and the said additional barriers sloping substantially from the middle of the insulator outwardly and inwardly.

[Claims 6 and 7 not printed in the Gazette.]

1,216,001. COMBINED REBOUNDING, MAIN, AND TRIGGER SPRING FOR FIREARMS. REGINALD F. SEDGLEY, Philadelphia, Pa. Filed June 13, 1916. Serial No. 103,868. (Cl. 42—65.)



1. As a new article of manufacture, a spring consisting of an integral piece of spring wire having one end forming an abutment, its other end forming a trigger engaging portion, and having intermediate its ends a rebounding terminal.

2. As a new article of manufacture, a single spring having a coil intermediate its ends, deflected upon itself to form a rebounding terminal, and having one end forming an abutment, and having its other end forming a trigger engaging element.

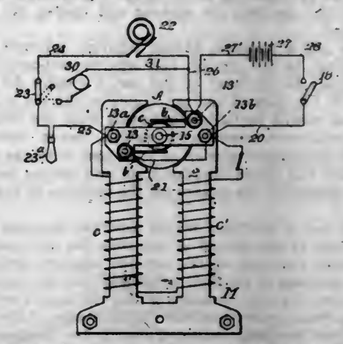
3. In a fire arm, the combination with the housing, the hammer, and the trigger, of a single spring having one end engaging the housing, the other free end engaging the trigger, and an intermediate portion engaging the hammer.

4. In a fire arm, the combination with the housing, the trigger, and a hammer having an inclined face and a recess, of a single spring having one free end abutting against the housing, its other free end engaging the trigger and deflected upon itself to form a terminal normally engaging said inclined face and walls of the recess of the hammer to control its rebound.

5. In a fire arm, the combination with the housing, the trigger having a recess, and the hammer, of a single spring having one end adapted to engage the trigger recess and its other end engaging the housing, said spring intermediate its ends being deflected upon itself to form a terminal engaging the hammer.

[Claims 6 to 8 not printed in the Gazette.]

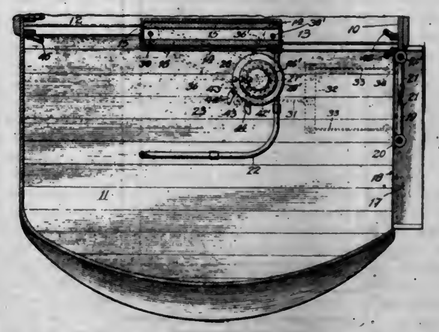
1,216,002. ELECTRIC MOTOR. CHRISTOPHER A. SHEA, Boston, Mass. Filed May 24, 1915. Serial No. 30,079. (Cl. 172—276.)



1. A motor comprising in combination, an armature having a commuted winding, a core of magnetic material of high retentiveness, a magnetizing winding for said core, means for connecting said magnetizing winding in series with said armature winding, and terminals connected with said armature and magnetizing windings whereby an electromotive force may be impressed on either winding alone or on both armature and magnetizing windings in series.

2. A motor comprising in combination, an armature having a commuted winding, a laminated core of magnetic material of high retentiveness, a magnetizing winding for said core, means for connecting said magnetizing winding in series with said armature winding and terminals connected to said armature and magnetizing windings, whereby an electromotive force may be impressed on either winding alone or on both armature and magnetizing winding in series.

1,216,003. STREET-CAR. HARRY M. SLOAN, Chicago, Ill. Filed Oct. 21, 1907. Serial No. 398,517. (Cl. 105—88.)



1. In a car a body, a platform extending across the end of the body, steps extending along one side of the platform, means adjacent the steps dividing the open side into separate entrance and exit openings to the ground, side by side, and both communicating with the steps, a closure for the exit opening, separate exit and entrance openings from the platform to the body of the car, means partially segregating from the balance of the platform a conductor's station located between said separated openings to the body, and means accessible from said conductor's station for opening the closure for the exit to the ground.

2. In a car, a platform having separate entrance and exit openings to the ground and separate entrance and

exit openings to the body of the car, closures for the two openings to the body of the car and an independent closure for the exit opening to the ground, and means operable from the platform for opening and closing the last said closure.

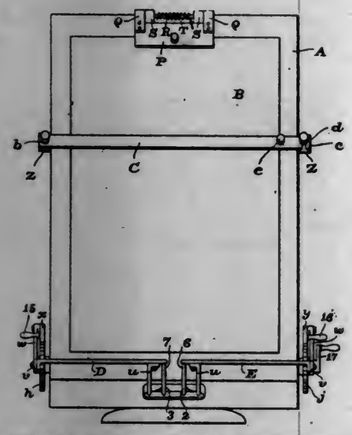
3. In a car, a platform having separate entrance and exit openings to the ground, and separate entrance and exit openings to the body of the car, a closure for the entrance to the body of the car, a closure for the exit to the ground, means partially segregating from the balance of the platform a conductor's station, means operable from said conductor's station to open and close the said exit closure, and means operable from said station to prevent the opening of the closure for the entrance to the car body.

4. In a car, a platform having separate entrance and exit openings to the ground at one side, the exit opening being nearest the body of the car, and separate entrance and exit openings to the body of the car, the exit opening being nearest the side openings of the platform, a railing extending from a point adjacent the inner side of the exit opening from the body rearward and thence transversely toward the entrance opening to the body, and closures for the entrance and exit openings to the body and means operable from the conductor's station to control said closures.

5. In a car, a platform having separate entrance and exit openings to the ground, and separate entrance and exit openings to the body of the car, a railing partially defining from the balance of the platform a conductor's station, closures to the entrance and exit openings to the body of the car, a closure for the exit opening to the ground, and means operable from the conductor's station for opening and closing said several closures.

[Claims 6 to 11 not printed in the Gazette.]

1,216,004. COPY-HOLDER. ALICE F. SMITH, New York, N. Y. Filed May 26, 1914. Serial No. 840,978. (Cl. 120—34.)



1. A copy holder, comprising in combination a table, ratchet wheels having different numbers of teeth mounted at each side of the lower end of said table, and connected to rotate together, sprocket wheels mounted to turn with said ratchet wheels, rollers mounted behind the top of the table, continuously traveling connections passing over the said sprocket wheels and rollers, longitudinal guide rods mounted behind the table, slides movable on said guide rods and connected to the continuously traveling connections, a marker connected to said slides, finger bars arranged in front of the lower end of the table, curved rocking arms connected to the inner ends of the finger bars and levers connected to the outer ends of the finger bars, said rocking arms and levers being pivoted behind the table, pawls coöperating with the ratchet wheels and actuated by said levers, curved retracting levers pivoted behind the table and extending forwardly beneath the finger bars, retracting means for said retracting levers, and a stop for limiting the movement of one of said retracting levers, whereby the predetermined throw of one finger bar is less than that of the other.

2. A copy holder, comprising in combination a table, a transverse rotary main shaft revolubly supported behind the lower end of the table, ratchet wheels having different numbers of teeth secured at the ends of said main shaft, sprocket wheels secured to the main shaft adjacent the ratchet wheels, rollers mounted behind the top of the table, continuously traveling connections passing over the said sprocket wheels and rollers, longitudinal guide rods secured behind the table, slides movable on said guide rods and connected to the continuously traveling connections, a marker extending across the table and operatively connected to said slides, finger bars extending transversely across the front of the lower end of the table, curved rocking arms loosely pivoted at the inner ends to the main shaft and connected at the outer ends to the finger bars, levers loosely pivoted at the inner ends on the main shaft adjacent the ratchet wheels, and connected at the outer ends to the finger bars, pawls actuated by said levers and adapted to coöperate with the ratchet wheels, curved retracting levers pivoted behind the table and having the outer ends bearing underneath the finger bars, retracting springs connected to said retracting levers, and a stop for limiting the movement of one of said retracting levers, whereby the predetermined throw of one finger bar is less than that of the other.

3. A copy holder, comprising in combination a stand, a table supported by said stand for holding the copy, said table having rearwardly extending side and end walls, a transverse rotary main shaft revolubly supported at the lower end of the table and having its ends extending outwardly beyond the side walls, ratchet wheels having different numbers of teeth secured to the outwardly extending ends of the rotary main shaft, sprocket wheels secured to the main shaft within the side walls of the table, a transverse auxiliary rotary shaft mounted at the top of the table beneath the end wall, flanged rollers secured to said auxiliary shaft, continuously traveling connections passing over the said sprocket wheels and flanged rollers, longitudinal guide rods secured to the end walls of the table at top and bottom within the side walls, the side walls being provided with longitudinal slots adjacent the guide rods, slides movable on said guide rods and connected to the continuously traveling connections, connecting pieces carried by the slides and extending outwardly through the slots in the side walls of the table, blocks carried by said connecting pieces, a marker extending across the table and connected to said blocks, finger bars extending transversely across the front of the lower end of the table, curved rocking arms extending through the lower end wall of the table, loosely pivoted on the main rotary shaft and connected to the inner meeting ends of the finger bars, bell crank levers loosely pivoted on the main shaft adjacent the ratchet wheels and having their longer arms connected to the outer ends of the finger bars, pawls carried by the shorter arms of the said bell crank levers and adapted to coöperate with the respective ratchet wheels, curved retracting levers pivoted within the table and extending through the lower end wall, the outer ends of said retracting levers bearing underneath the finger bars, retracting springs connected to the inner upwardly extending ends of said retracting levers, and a stop for limiting the movement of one of said retracting levers, whereby the predetermined throw of one finger bar is less than that of the other.

1,216,005. BOTTLE-STOPPER. THOMAS C. SPELLING, New York, N. Y. Filed Sept. 23, 1916. Serial No. 121,710. (Cl. 215—53.)

1. A bottle closure comprising in combination a bottle neck having an end and a side opening, a stopper in each opening, and a retaining pin insertible through said side opening through the stopper therein and into the stopper in the end opening.

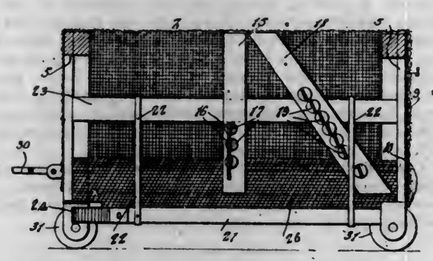
2. A bottle closure comprising in combination a bottle neck having an end opening and a side opening, a channel formed in the inner wall communicating with said side opening, a stopper in said side, and another in the end opening, and a retaining pin insertible in said side opening through the stopper therein into the stopper in the end opening.



3. A bottle closure comprising in combination a bottle neck, having an end opening and a side opening, stoppers in said side and end openings, a retaining pin comprising a pin insertible through said side opening, a clip carried by said pin flexibly supported to permit deflection of said clip upon withdrawal of said pin, and said clip mutilating said stopper in the side opening upon withdrawal of said retaining pin.

4. In a bottle closure, a bottle neck having a side opening of elliptical cross section, a stopper therein, a retaining pin insertible through said opening and stopper and a plate of elliptical outline insertible through the mouth of said opening and rotatable on said retaining pin to dispose its great diameter across the mean diameter of said opening.

1,216,006. BOLL-WEEVIL EXTERMINATOR. JAMES K. STALLINGS, Pigeon Creek, Ala. Filed Sept. 16, 1916. Serial No. 120,474. (Cl. 43—1.)



1. In a boll weevil exterminator, a supporting structure, a screen mounted about the top, sides and front end of said supporting structure, a liquid retaining pan carried by said supporting structure, means positioned within said supporting structure for knocking insects from plants into said pans, a wire apron attached to the back of said pan and extending upwardly therefrom, a fabric covering mounted over the rear end of said supporting structure and provided with a slit for permitting the cover to pass over plants, and weights attached to the edges of said slit.

2. In a boll weevil exterminator, an inclosed supporting structure, means carried within said supporting structure for shaking plants for shaking insects therefrom, means for receiving the insects carried within said supporting structure, a fabric covering mounted over the rear end of said supporting structure and provided with a slit for permitting the cover to pass over plants, and weights attached to the edges of said slit.

3. In a boll weevil exterminator, a supporting structure, a screen mounted about the top, sides and front end of said supporting structure, a pair of liquid retaining pans carried by said supporting structure and having their inner facing edges spaced for permitting the pans to travel upon opposite sides of a row of plants, and a plurality of resilient knocker bars carried by said supporting structure and projecting inwardly toward the center of the same striking plants and knocking insects therefrom within said pan, wire aprons attached to the back of said pans and extending upwardly therefrom for preventing the knockers from knocking insects over the pan, a pair of guides attached to the front end of said supporting frame and to said pans for guiding the plants between the pans, a fabric covering mounted over the rear end of said supporting structure, said covering provided with a slit for permitting the cover to pass over the plants, and weights attached to the edges of said slits.

1,216,007. POWER-ACTUATED ENGRAVING-TOOL. WALTER EDWIN STEPHENSON, Roosevelt, N. Y. Filed Apr. 22, 1916. Serial No. 92,877. (Cl. 201—7.)



1. In a power-actuated engraving tool, a housing having a shape to be easily accommodated in the hollow of the hand, said housing having a T-shaped recess in the bottom thereof disposed in the longitudinal axis of the housing, said housing having a transverse slot therein disposed obliquely to the bottom and to the longitudinal axis of the housing, said T-shaped recess entering the slot, a burin holder in the T-shaped recess, a disk in the slot having a smooth undulated surface, springs in the recess maintaining the holder against the undulated surface of the disk, a shaft for driving the disk and substantially normal to the slot whereby said shaft is at an angle to the longitudinal axis of the vertical and horizontal planes, said housing having a slotted extension forming a guide for a burin, means carried by the burin holder and operable through the housing for coupling or uncoupling the burin, and a bottom cover for said housing.

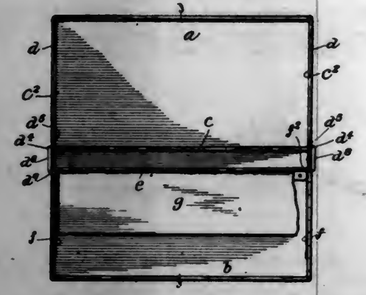
2. In a power-actuated engraving tool, a housing shaped to be easily accommodated in the hollow of the hand, said housing having a T-shaped recess in the bottom thereof disposed in the longitudinal axis of the housing, a burin holder mounted to slide in the T-shaped recess, said burin holder having a reduced portion forming shoulders in the shouldered part of the recess, springs in the recess for engaging the shoulders of the burin holder, said housing having a transverse lot disposed obliquely to the bottom and longitudinal axis of the housing, a disk in said slot having a smooth undulated surface, said burin holder having a tooth engaging the undulated surface of the disk, a shaft for rotating the disk extending out of the housing, said shaft being at an angle to the longitudinal axis of the vertical and horizontal planes, a slotted extension from the housing forming a guide for the burin and a thumb rest for guiding the tool, a cover for the housing, and a spring-actuated plunger in the housing projecting through the burin holder and operable from the top of the housing for coupling the burin to the holder.

3. In a power-actuated engraving tool, a housing shaped to be easily accommodated in the hollow of the hand, a burin holder mounted to slide in the housing, a spring-actuated plunger in the housing projecting into the burin holder for coupling a burin to the holder, said plunger having a portion thereof projecting through the top of the housing whereby it may be operated to uncouple the burin from the holder, and revoluble means associated with the housing for reciprocaitng the burin holder.

1,216,008. COOKING DEVICE. CHARLES H. STONEBRIDGE, New York, N. Y. Filed Sept. 7, 1916. Serial No. 118,842. (Cl. 126—274.)

1. A cooking device of the class described, composed of top and bottom members hinged together at the back, end

portions hinged to the top and bottom members and consisting of separate triangular parts hinged together centrally of said end portions, and a food support hinged to the bottom at a predetermined point below or in front of the hinge of the top and bottom at the back, the parts of the device being adapted to be folded together, in which operation the end portions fold inwardly, and means whereby the downward movement of the support will collapse the parts of the device and the upward movement thereof expand the same.



2. A cooking device of the class described, comprising top and bottom parts hinged together at the back, triangular end portions hinged to the ends of the top and bottom parts, said triangular end portions being composed of separate triangular parts hinged together, a food support hinged to the bottom forwardly of the hinge of the top and bottom and below the hinges of the separate parts of the end portions when the parts of the device are in position for use, and means whereby the downward movement of the food support will collapse the parts of the device and the upward movement thereof expand the same, and means for holding the food support in position for use.

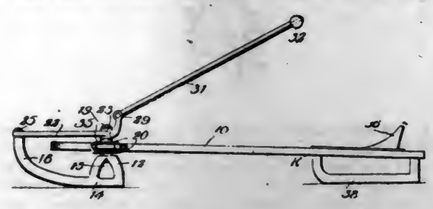
3. A cooking device of the class described, comprising top and bottom parts hinged together at the back, triangular end portions hinged to the ends of the top and bottom parts, said triangular end portions being composed of separate triangular parts hinged together, a food support hinged to the bottom forwardly of the hinge of the top and bottom and below the hinges of the separate parts of the end portions when the parts of the device are in position for use, and means whereby the downward movement of the food support will collapse the parts of the device and the upward movement thereof expand the same, and means for holding the food support in position for use, said food support being also provided at its front edge with a pivoted baffle plate adapted to be adjusted into position both above and below said food support when the parts of the device are in position for use.

4. A cooking device of the class described, comprising top and bottom parts hinged together at the back, end portions hinged to the top and bottom parts and consisting of separate triangular parts hinged together, a food support hinged to the bottom part forwardly of the hinge which connects the top and bottom parts, guide devices connected with the inner sides of the bottom parts of the end portions of the device and operating to move the same in connection with the end portions of the food support, means for holding the food support in a horizontal position for use, and leg and brace devices connected with the end portions of the cooking device for holding it in position for use when the separate parts thereof are expanded.

5. A cooking device of the class described, composed of top and bottom members hinged together at the back, end portions hinged to the top and bottom members and consisting of separate triangular parts hinged together centrally of said end portions, a food support hinged to the bottom at a predetermined point below or in front of the hinge of the top and bottom at the back, and a baffle plate pivoted to the front edge portion of the food support and adapted to be adjusted into different positions.

[Claims 6 to 10 not printed in the Gazette.]

1,216,009. BOB-SLED. KARN TAKEMI, New York, N. Y. Filed Sept. 18, 1916. Serial No. 120,678. (Cl. 21—94.)



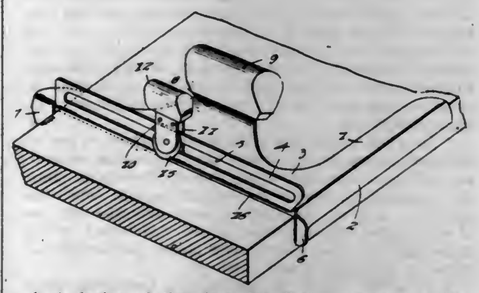
1. In a bob-sled, the combination of a body having a stationary runner section on one end thereof, a guiding runner section on the opposite end, the latter being swiveled under the front end of the body, and a brace arm arranged on the top surface of the body connecting the forward end of the guiding runner to strengthen the same.

2. The combination with a body having runners, of a steering runner having a front and rear transom, said transoms being in relatively different planes, the rear transom being located beneath said body and pivotally associated therewith, and a brace arm extending forwardly on the top of said body from said pivot to the forward transom.

3. In a bob-sled, the combination of a body having runners, a steering runner therefor including a body having forward and rear transoms, the rear transom being lower than the forward transom and arranged beneath said body, a pivot pin for said rear transom, said pivot pin extending upwardly through the body, a brace arm mounted on said pivot pin and connected with the forward transom, an extension upstanding on said brace arm, and a handle for steering said front runner pivotally, associated with said upstanding extension.

4. A bob-sled, including a sled runner formed from a single sheet of metal having sides, an end transom, a forward transom, the forward transom being higher than the rear transom for a purpose specified.

1,216,010. MARKER-GAGE AND SQUARE. HANS TALLAKSON, Sisseton, S. D. Filed June 2, 1916. Serial No. 101,290. (Cl. 33—33.)



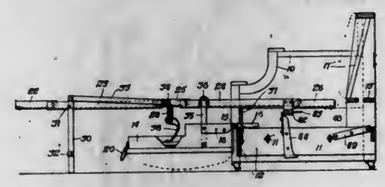
1. A device of the class described comprising a flat oblong body, a flange on one edge of the body and extending downwardly at right angles with relation thereto, an arm at one end of the body, a flange on one edge of the arm, the last named flange extending upwardly at right angles with relation to the body and in a direction opposite to the first mentioned flange, the last named flange having a longitudinal slot formed therein, a U-shaped

frame adapted to straddle the upturned flange, a handle secured to the bight portion of the frame, rollers journaled in the frame adjacent the handle and adapted to bear on the outer edge of the last named flange, a rotary marker pivoted in the frame and adapted to project below the lower edge of the last named flange, and ears on opposite ends of the arm.

2. A device of the class described comprising a flat oblong body, a flange formed at one end of the body and extending downwardly in a plane at right angles to the body, an arm at one end of the body disposed at right angles to the flange, a flange extending upwardly from the arm, a carriage slidable on the last named flange, a marker on the carriage and a handle on the arm.

3. A device of the class described comprising a flat oblong body, a downturned flange formed at one edge of the body, an ear formed at one end of the flange, an arm at one end of the body projecting at right angles with relation to the flange, an ear at the free end of the arm, said ear coöperating with the ear on the flange, an upturned flange formed along one edge of the arm, a marker slidable along the upturned flange, a handle for manipulating the marker and a handle formed on the arm.

1,216,011. FOLDING DAVENPORT OR COUCH. MAURICE TAUBER, Chicago, Ill. Filed Nov. 29, 1915. Serial No. 63,927. (Cl. 5—51.)



1. A folding couch or the like having, in combination, a supporting framework, a seat hinged at its forward edge thereto, a collapsible bed structure comprising two long sections, a short section pivoted to the adjacent ends thereof, and a short inner section pivoted to the inner long section, a pair of brackets fixed to and projecting from the bottom of the seat and pivoted to the outer end of the inner long section, another pair of brackets upon which the latter section is arranged to bear at a point inwardly from the first mentioned brackets, coöperating stop members on the framework and the inner portion of the latter section adapted to secure the section, means for supporting the inner corners of the short inner section in said framework, a pair of legs pivoted to the outer long section and adapted to bear against the floor for supporting the latter section, and a pair of links pivotally connecting said legs to the intermediate short section.

2. A folding couch or the like having, in combination, a supporting framework, a seat mounted therein for swinging movement about its forward edge into an inverted position in front of the frame work, a folding bed structure including two long sections, an intermediate short section pivoted thereto, and an inner short section pivoted to the inner long section, means for supporting said inner short section in the framework, means pivotally supporting the inner long section from the seat, additional supports near the forward end of the framework upon which the inner long section is arranged to bear, coöperating stop portions on the framework and the inner portion of the inner long section respectively arranged to secure the latter, and means for supporting the outer long section.

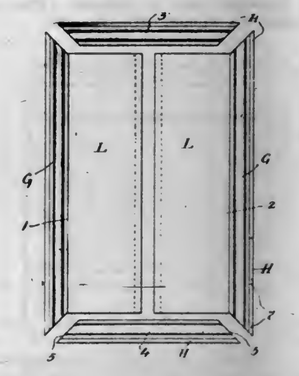
3. A folding couch or the like having, in combination, a supporting framework, a seat hinged at its forward edge thereto, a bed structure including two long sections and a short section pivotally connecting them, the structure when extended being arranged with the inner long section positioned across the vertical plane of the seat axis, a pair of brackets fixed to and projecting from the bottom of the seat, in which brackets the outer end of the inner long section is pivoted, another pair of brackets positioned inwardly from the first brackets and adjacent to the seat axis and adapted to support the midportion of the inner long section, coöperating parts on the framework and the inner end of the inner long section for securing the latter, and legs pivoted to the outer long section and adapted to rest on the floor.

4. A folding couch or the like having, in combination, a supporting framework, a seat mounted therein for swinging movement about its forward edge into an inverted position in front of the framework, a folding bed structure including two long sections and an intermediate short section pivoted thereto, a pair of brackets fixed to and projecting from the bottom of the seat in which brackets the inner long section is pivotally mounted near its outer end, another pair of brackets positioned inwardly from the first mentioned brackets, and adapted to have the midportion of the inner long section bear thereon, coöperating parts on the framework and the inner end of the inner long section for maintaining the latter, and legs adapted to rest on the floor and support the outer section.

5. A folding couch or the like having, in combination, a supporting framework, a seat mounted therein for swinging movement about its forward edge into an inverted position in front of the framework, a folding bed structure including two long sections, and an intermediate short section pivoted therebetween, a pair of brackets fixed to and projecting from the bottom of said seat in which brackets the inner long section is pivotally supported, additional supporting means positioned rearwardly from said brackets and adapted to support the inner long section, coöperating parts on the framework and the inner end of said inner long section arranged to secure the latter, and legs pivoted to the outer long section and adapted to rest upon the floor.

[Claims 6 to 20 not printed in the Gazette.]

1,216,012. BILL-BOARD AND THE LIKE. CHARLES H. TAYLOR and CHARLES F. MELVILLE, New York, N. Y., assignors, by direct and mesne assignments, to Criterion Advertising Company, Inc., a Corporation of New York. Filed Mar. 21, 1914. Serial No. 826,241. (Cl. 40—136.)



1. A bill board or the like comprising a base portion formed of a pair of members seamed together along one edge, each of said members having a molding portion formed integrally therewith on the opposite edge, and separately formed molding pieces extending between said mentioned molding portions to complete a marginal molding about said base portion, said separately formed molding pieces being arranged to bridge the seam.

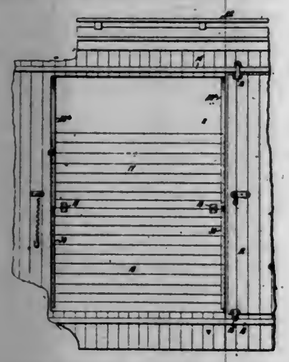
2. A bill board or the like comprising a pair of separately formed members, each of said members being shaped at one edge thereof to form a marginal molding for said bill board, each of said members comprising relatively flat portions extending toward each other for forming the base of the bill board, said relatively flat portions being seamed together at their adjacent edges to form a stiffening rib for said base portion, and marginal molding pieces at opposite ends of the billboard between which said stiffening rib extends.

3. A bill board or the like, comprising a plurality of members each having flat portions to comprise the base of the bill board, at least some of said members being bent to form molding portions along one edge thereof, and other molding portions extending between said first mentioned molding portions to complete a continuous molding for the bill board, said last mentioned molding portions bridging the flat portions of said plurality of members and being engaged therewith so as to reinforce and stiffen the base formed of said flat portions.

4. A bill board or the like, comprising a plurality of members each having flat portions to comprise the base of the bill board, at least some of said members being bent to form molding portions along one edge thereof, and other molding portions extending between said first mentioned molding portions to complete a continuous molding for the bill board, said last mentioned molding portions bridging the flat portions of said plurality of members and being engaged therewith so as to reinforce and stiffen the base formed of said flat portions, the adjacent edges of the flat portions of said plurality of members being connected together to form a reinforcing rib extending between and connecting said last mentioned molding portions and serving to reinforce the base of the bill board.

5. In combination, a bill board, and supporting means therefor by means of which said board is suspended upon the surface of a wall or the like, said bill board comprising a molding part extending forwardly of the plane of the board and having upper and lower marginal edges connected by a flexible intermediate portion, one of the marginal edges of said molding terminating forwardly of the plane of the board, and said supporting means being adapted to engage said last mentioned marginal edge.

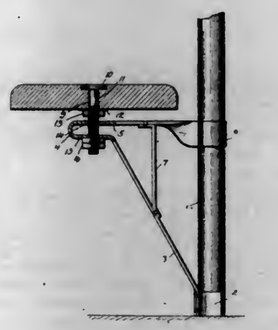
1,216,013. GRAIN-CAR DOOR. NERI TERRY, Hardisty, Alberta, Canada, assignor of one-half to John G. Schuler, Hardisty, Alberta, Canada. Filed Apr. 18, 1916. Serial No. 91,998. (Cl. 20—32.)



1. The combination of a freight car having a door opening, members on the car at each side of the door opening forming guideways extending upwardly beneath the roof of the car, a door movable in said guideways, said door being composed of upper and lower sections, the lower section being hinged to the upper section to swing outwardly, the members forming the guideways constituting stops at the lower ends of said guide-ways, and the said guide-ways at the said stops being in the form of restricted throats, said throats being positioned adjacent to the position of the hinge connection between the door sections when the door is in the lowered position, members on the door adapted to engage and be arrested by said stops, displaceable door retainers on the door at each side of the doorway below the said guide-ways, and means to displace said retainers to permit the lower door section to swing on its hinges.

2. The combination with a freight car having a door opening and guide ways at the sides of said opening at the interior of the car and extending upwardly beneath the car roof, of a door movable in said guides and composed of upper and lower sections, the lower sections being hinged to the upper section to swing outwardly through the door opening when the door is in the opened position, co-acting means on the door and in said guide ways to arrest the downward movement of the door when said door is in position for the lower section to swing outwardly, and displaceable retainers on the car at the sides of the door opening below the guideways and complementary thereto to guide the lower door section and prevent movement thereof on its hinges until the said retainers are displaced.

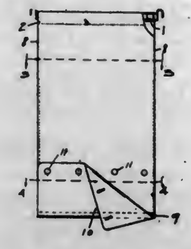
1,216,014. MILKING-STOOL. LLOYD E. THRUNE, Coon Valley, Wis. Filed Dec. 28, 1914. Serial No. 879,374. (Cl. 155—22.)



A milking stool comprising a bracket formed of flat sheet metal bent intermediate its ends to provide a pair of spaced superposed horizontally extending supporting arms, the outer end of the upper arm being twisted at right angles and defining a hook, the lower arm being inclined downwardly, and outwardly adjacent its connected portion and having its extreme lower end arranged in a vertical plane, a substantially U-shaped supporting member secured by its web to the vertical portion of the lower arm and adapted to coöperate with the hook of the upper arm for removably supporting the bracket to a post, said horizontally extending portions of each of the arms provided with alined screw threaded openings, a screw threaded shank, a seat rotatably mounted about the head of said shank, the lower threaded portion of the shank adjustably fitted in the openings of the arms, means carried by the shank to hold the seat at a spaced distance from the arms and means to hold the shank in various adjusted positions within the openings of the arms of the bracket.

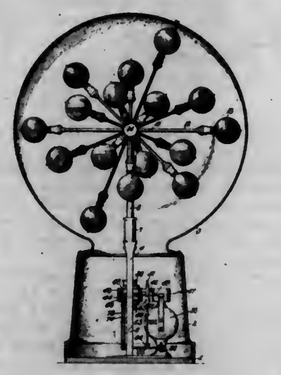
1,216,015. LAUNDRY-BAG. NIMROD B. TICHENOR, Indianapolis, Ind. Filed Apr. 10, 1916. Serial No. 90,166. (Cl. 150—1.)

A laundry bag made of flexible material closed at its upper end and provided at such upper end with a rigid member extending transversely thereof adapted to hold the bag in substantially flat condition, said bag having a side slit near its upper end and below said rigid member and providing an entrance opening and being open at its lower end, and a flap forming a continuation of the bag



and adapted to close said lower end and means for releasably fastening said flap to the body of the bag.

1,216,016. ELECTRIC DISPLAY DEVICE. CHARLES TREGONING, New York, N. Y. Filed Aug. 7, 1916. Serial No. 113,596. (Cl. 240—9.)



1. A display device of the character described, comprising a plurality of wheels, a horizontally arranged support for said wheels, a rotatable supporting standard for said horizontal support, a tubular shaft surrounding said supporting standard, means for connecting said tubular shaft with said horizontal support whereby the horizontal support is rotated in such direction as to rotate said wheels in a vertical plane, a power or driving wheel for said tubular shaft and said rotatable support, a transmission wheel for transmitting power to said driving wheels, means for shifting said transmission wheel from one driving wheel to the other whereby the driving wheel will be alternately operated part of the time and part of the time will be operated simultaneously, and means for driving said transmission wheel.

2. A display device comprising a pair of rotatable wheels, a shaft rigidly connected to both of said wheels so that the wheels will rotate together in the same direction, a tubular shaft, beveled gears connecting said tubular shaft with said first mentioned shaft so that when the tubular shaft is rotated said wheels will be rotated in a vertical plane, an inner tubular shaft arranged in the first mentioned shaft formed with a bracket at the upper end for supporting the first mentioned shaft, a pair of rotatable driving wheels connected to said tubular shafts whereby when the inner tubular shaft is rotated said wheels will be moved in a horizontal plane and when the outer tubular shaft is rotated said wheels will be operated in a vertical plane, a power wheel arranged to frictionally engage said driving wheels, said power wheel being of less width than the driving wheels, means for gradually moving the power wheel transversely of said driving wheels so as to shift the power from one wheel to the other and thereby cause the tubular shaft to rotate at different times in a certain sequence, means for checking the rotation of the particular driving wheel not engaged by the power wheel, and means for transmitting power to said power wheel.

3. A display device comprising a pair of wheels, lamps on said wheels, means for supplying said lamps with current, a horizontal shaft connected with said wheels, a vertical support for said shaft, said support acting as an inner tubular shaft, an outer tubular shaft surrounding said inner tubular shaft, beveled gears connecting said outer tubular shaft with said horizontal shaft, a driving wheel connected to said inner shaft, a driving wheel connected to said outer shaft, said driving wheels being arranged adjacent each other and with their outer faces parallel, a power wheel provided with a frictional surface, means for moving said power wheel transversely of said driving wheels whereby said driving wheels will be operated independently at different times and also together part of the time, means for holding said power wheel in contact with the respective driving wheels, and a power member for actuating said power wheel.

4. A display device comprising a pair of wheels carrying electric lamps, means for supplying said wheels with current, driving supporting means for said wheels, said driving supporting means including an inner tubular shaft and an outer tubular shaft, said outer tubular shaft normally acting to rotate said wheels in a vertical plane and said inner tubular shaft normally acting to rotate said wheels in a horizontal plane, a driving wheel connected to each of said shafts, said driving wheels being arranged adjacent each other, a transversely movable power wheel acting on said driving wheels, said power wheel being of less width than either of said driving wheels whereby the driving wheels will be moved in a certain sequence according to the movement of the power wheel, a brake for stopping the movement of said driving wheels when the power wheel is disengaged therefrom, and means for actuating said power wheel and also the brakes.

5. A display device comprising a pair of rotatable lamp carrying wheels, means for supplying current to the lamps on said wheels, a rotatable tubular shaft for supporting said wheels, an outer tubular shaft, means for connecting said outer tubular shaft with said wheels so as to rotate said wheels in a vertical plane, a pair of power wheels connected to said supporting shaft and said outer shaft respectively, means for driving at different times said power wheels so that said lamp wheels will be rotated in vertical and horizontal planes, a brake shoe for each of said driving wheels, levers for applying said brake shoes, a cam acting on each of said levers, said cams being formed with cutaway portions for releasing the levers, said cams being set so that the levers will be released when the driving wheels are being operated, and means for operating said cams in timed relationship to the movement of said driving wheels.

[Claims 6 to 9 not printed in the Gazette.]

1,216,017. FILING DEVICE. SILAS EDGAR TROUT, Philadelphia, Pa. Filed Aug. 20, 1913. Serial No. 785,810. (Cl. 129—16.)

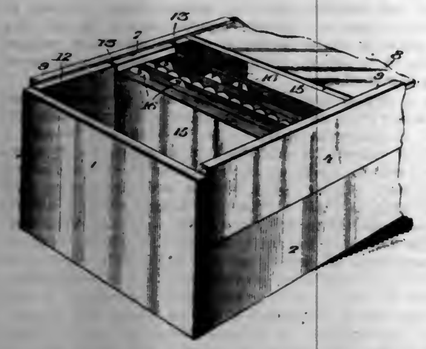
1. A filing device comprising spacer-element supports adapted to embrace a portion of the walls of a receptacle; and spacer-elements carried by said supports.

2. A filing device comprising spacer-element supports adapted to be removably mounted on a receptacle; and a cover retaining instrumentality on each of said supports.

3. A filing device comprising spacer-element supports adapted to be removably mounted on a receptacle; spacer-elements carried by said supports; and a cover retaining instrumentality on each of said supports.

4. A filing device comprising spacer-element supports including clips to be mounted on the sides of a receptacle; and spacer-elements carried by said supports.

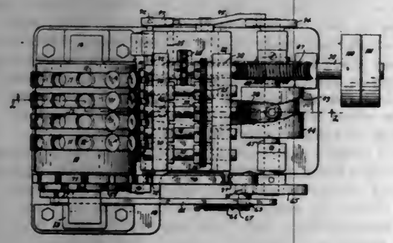
5. A filing device comprising spacer-element supports including clip members to be mounted on the sides of a



receptacle; and a cover retaining instrumentality on each of said supports.

[Claims 6 to 20 not printed in the Gazette.]

1,216,018. MILLING-MACHINE. GEORGE T. TRUNDLE, Jr., Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 26, 1915. Serial No. 47,390. (Cl. 90—15.)



1. In a milling machine, the combination of means for carrying a set of objects to be milled, a set of cutters extending respectively between adjacent objects, and means for shifting one of said sets relatively to the other set to enable the same cutter to act on adjacent sides of adjacent objects.

2. In a milling machine, the combination of a plurality of rotary cutters, a device adapted to hold a series of objects in a row, means for moving said device to position different objects in the row successively between the cutters, means for causing a relative shifting between the work and the set of cutters first in one direction and then back and continued in the opposite direction to enable milling first on one side of an object and then on the opposite side of the same object.

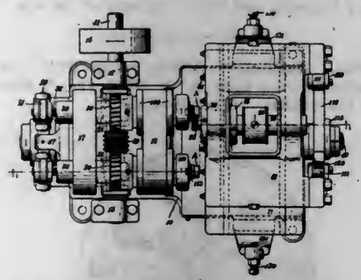
3. In a milling machine, the combination, with means for holding the work, of a plurality of milling cutters respectively on opposite sides of the work, parallel rotatable spindles for the cutters, means for bodily shifting the set of spindles transversely of their axes without changing their mutual relation and while they are rotating to enable milling first on one side of the work and then on the opposite side, and means for moving the work transversely of the plane in which the axes of the cutter spindles lie.

4. The combination, with a rotary drum adapted to hold a plurality of circumferential rows of articles to be milled, a cutter adapted to extend between articles of adjacent rows, and means for effecting a transverse movement between the articles and cutter to cause the same cutter to act first against one side of one article and then against the adjacent side of the adjacent article.

5. The combination of a holder having means for carrying a plurality of sets of articles to be milled, a set of cutters projecting respectively into the spaces between the sets of articles, means for moving the holder relative to the cutters in one direction to present a new set of articles to the cutters and move away the completed set, means for rotating the cutters, and automatic means for periodically shifting the set of cutters bodily toward and from the work.

[Claims 6 to 27 not printed in the Gazette.]

1,216,019. THREAD-MILLING MACHINE. GEORGE T. TRUNDLE, Jr., Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 11, 1915. Serial No. 55,161. (Cl. 10—154.)



1. In a thread milling machine, the combination of a plurality of rotatable chucks, a rotatable cutter, and means for moving the cutter into engagement with stock carried by one chuck and longitudinally of the axis of such stock, and thereafter into engagement with stock in another chuck and longitudinally of its axis.

2. In a thread milling machine, the combination of a plurality of rotatable chucks, the axes of which are stationary, a rotatable cutter adapted to cut a plurality of threads at one time, means for moving the cutter into engagement with stock carried by one chuck and then lengthwise of the axis of said stock while eccentric thereto, and then moving it into engagement with stock carried by another chuck and lengthwise of its axis while eccentric thereto.

3. The combination of a pair of rotatable chucks, a rotatable cutter, and means for giving the cutter a four-way movement to cause it to successively engage the stock in the two chucks and travel along the same eccentrically of the axis thereof.

4. The combination of a pair of parallel rotatable chucks, a rotatable cutter, the axis of which is parallel with the chucks and intermediate thereof, means for rotating the chucks and cutter in the same direction, and means for giving the cutter a movement to cause oppositely positioned portions thereof to alternately engage the stock in the two chucks and travel along the same in the same direction.

5. The combination with a pair of rotatable chucks, of a rotatable cutter extending between the stock carried by the two chucks, means for giving said cutter a four-way movement, two portions of said movement being parallel with the axes of the chucks and the other two portions being transverse and diagonal, these latter paths thus crossing each other between the axes of the chucks.

[Claims 6 to 34 not printed in the Gazette.]

1,216,020. SEMAPHORE-SIGNAL DEVICE. RALPH P. TUTTLE, New York, N. Y. Filed Apr. 26, 1913. Serial No. 763,705. (Cl. 246—15.)

1. A railway signal device, having in combination, a spectacle casting, a blade, a piece B from which said blade is slidably supported, and independent means for connecting said supporting piece with a spectacle casting.



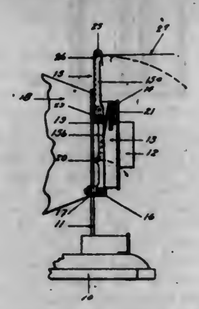
2. A railway signal device, having in combination a spectacle casting, a blade, a piece B from which said blade is slidably supported, means for connecting said supporting piece with said spectacle casting, and independent means for connecting the blade with said spectacle casting.

3. In a railway signal device, the combination of a spectacle casting, a supporting piece carried thereby, a blade, and means for removably supporting the blade from said piece, said means comprising a part carried by the blade and engaging the end portion of said piece, and another part also carried by the blade and engaging with a part carried by the supporting piece.

4. In a railway signal device, the combination of a spectacle casting, a supporting piece carried thereby, a blade, and means for removably supporting the blade from said piece, said means comprising a part carried by the blade and engaging the end portion of said piece, and two other parts also carried by the blade and engaging with a part carried by the supporting piece.

5. A railway signal device comprising a spectacle, a supporting piece secured thereto, a substantially flat signal blade, a strap carried by the blade and engaging the end portion of the supporting piece and clips also secured to the blade and engaging with the supporting piece whereby the blade is removably supported from the said piece.

1,216,021. CAMERA-OPERATING DEVICE. GEORGE T. TWINTING, Pasadena, Cal. Filed Feb. 16, 1916. Serial No. 78,587. (Cl. 95—53.)



1. In combination with a camera having an actuating lever, an operating mechanism therefor embodying an operating lever pivoted at one end upon the camera, means at the other end of the lever for attaching a pull thread or the like, and a connecting link connecting directly between the lever at a point near its pivotal point and the actuating lever of the camera, said actuating lever having an aperture therethrough, and there being a hook upon the end of the connecting link hooking loosely through said aperture, so that the actuating lever may move independently of the connection link.

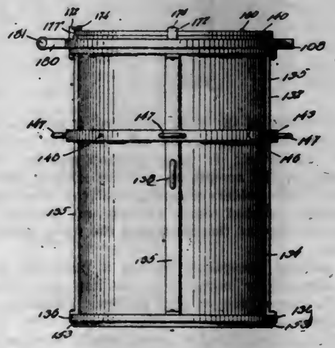
2. In combination with a camera having an actuating lever, an operating mechanism therefor embodying an operating lever pivoted at one end upon the camera, means at the other end of the lever for attaching a pull thread or the like, and a connecting link connecting directly between the lever at a point near its pivotal point and the actuating lever of the camera, said actuating lever having an aperture therethrough and there being a hook upon the end of the connecting link hooking loosely through said aperture so that the actuating lever may move independently of the connecting link, said operating lever being composed of two parts, and a joint between the two parts of the operating lever allowing the upper of said parts to fold on the lower of said parts.

3. In combination with a camera of the class described having a downwardly movable actuating lever, a vertical operating lever pivoted at its lower end to the camera, means at the upper end of the lever for attaching a pull thread or the like, and a connecting link connecting between the operating lever at a point near its pivotal mounting and the actuating lever of the camera, said operating lever being composed of two parts, and a joint between the two parts of the operating lever allowing the upper of said parts to fold upon the lower of said parts.

4. In combination with a camera of the class described, a vertical operating lever pivoted at one end to the camera so as to be movable longitudinally forwardly on the camera, connecting means between said lever and the actuating lever of the camera, and said operating lever being composed of two parts, with a joint between the two parts allowing one of said parts to fold upon the other.

5. In combination with a camera having an actuating lever, an operating mechanism therefor embodying an operating lever pivoted at one end upon the camera, means at the other end of the lever for attaching a pull thread or the like, and a connecting link connecting between the lever at a point near its pivot and the actuating lever of the camera, said connecting link being provided with means allowing the free independent movement of the actuating lever.

1,216,022. ASH AND GARBAGE, DUSTLESS, AND ODORLESS BARREL. ROBERT W. VAIL, New York, N. Y., assignor of one-half to Clifford W. Hartridge, New York, N. Y. Filed Feb. 12, 1915. Serial No. 7,911. (Cl. 220—115.)



1. A garbage barrel having a reinforcing brace attached to its base and having a reinforcing ring between opposite portions of which the brace member extends, the ring having a beveled portion, and a rolling support for the barrel rotatably engaging the outer portion of the barrel to permit of readily rolling the barrel.

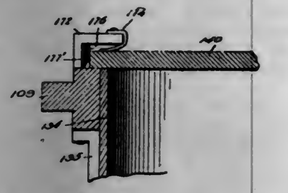
2. A garbage barrel having an upper reinforcing ring, a bottom reinforcing ring, oppositely arranged cart-engaging members for engaging the barrel to the cart, longitudinal brace members alined with the cart engaging members and extending from the upper to the bottom reinforcing ring, and a transverse brace member alined with the longitudinal brace members and secured to the bottom of the barrel, for the purposes described.

3. The combination with a garbage receptacle having oppositely arranged means for supporting the receptacle in elevated position, of an internal brace member alined therewith reinforcing the sides and bottom of the inner portion of the receptacle, reinforcing rings positioned at the upper and bottom portions of the receptacle, oppositely arranged vertical reinforcing members extending between and attached to the aforesaid rings, and a bottom brace member in alinement with opposite vertical brace members, for the purposes described.

4. A garbage barrel having an upper reinforcing ring, a bottom reinforcing ring, the bottom ring having a beveled portion for contact with the ground when the barrel is being rolled, a plurality of oppositely arranged vertical braces extending between and affixed to the horizontal reinforcing rings, oppositely arranged cart-engaging means at one end of the barrel for raising it to elevated position, the vertical braces and the barrel raising means being alined, and bottom bracing means affixed to the bottom reinforcing ring at opposite portions thereof and alined with opposite vertical brace members, whereby to substantially reinforce the barrel.

5. In combination with a barrel, a reinforcing upper ring having an annular outwardly projecting portion spaced below the upper edge of the barrel, an annular portion in alinement with the upper edge of the barrel to provide a support for the cover, and an annular downwardly projecting portion to which a plurality of brace members are secured, oppositely arranged cart-engaging means on the upper ring for raising the barrel from the ground, and oppositely arranged brace members alined therewith to reinforce the barrel, for the purposes set forth.

1,216,023. COVER-FASTENING MEANS FOR A GARBAGE-RECEPTACLE. ROBERT W. VAIL, New York, N. Y. Original application filed Feb. 12, 1915, Serial No. 7,911. Divided and this application filed June 29, 1916. Serial No. 106,664. (Cl. 220—115.)



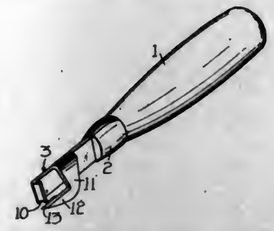
1. In a device of the class described, a garbage receptacle, a reinforcing upper ring affixed to the garbage receptacle and having its upper portion parallel with the upper edge of the receptacle, a cover slidably mountable thereover, cover holders engaging over the cover and having interiorly beveled edges, whereby any garbage caught between the edge of the cover and the cover holders will be severed.

2. A garbage receptacle having a plurality of cover holders adapted to engage over the top of a cover and having sharpened interior edge portions positioned to contact against the peripheral edge of the cover to sever obstructing garbage, and a cover slidably mountable over the receptacle and under the aforesaid cover holding members, substantially as set forth.

3. In a device of the class described, a barrel, an annular reinforcing ring having its upper edge parallel with the upper edge of the barrel, a cover slidably mountable thereover, means secured to the reinforcing ring projecting over the cover member, said means having upright sharpened edge portions adapted to contact against the peripheral edge of the cover when in place, springs on the cover holding means, and removable means for fastening the cover in closed position over the receptacle, substantially as shown.

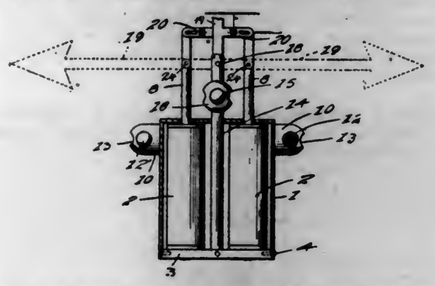
1,216,024. CAN-OPENER. CHRISTOPHER W. VAN LUVEN, New York Mills, N. Y. Filed Dec. 27, 1913. Serial No. 809,093. (Cl. 30—3.)

A can opener formed of a single piece of material including a flat body reduced at one end forming a tang adapted to be inserted in a handle, an extension formed on the opposite end of said body, a bearing member formed on the extension and arranged at right angles to the body, a tapered extension formed on the upper edge of said body, said extension extending outwardly therefrom at a point below said body, an annular extension formed on the end of the downwardly extending member and its upper edge forming a cutting edge, said annular extension arranged parallel with said body and extending in the direction of and located below the lower longitudi-



nal edge of the body and its points terminating under the bearing member, said bearing member adapted to engage the peripheral edge of the can and force the can top into engagement with the cutting edge of the annular extension.

1,216,025. DIRECTION-INDICATOR FOR AUTOMOBILES. JOHN E. WARMAN, Riverside, Cal. Filed May 28, 1915. Serial No. 30,988. (Cl. 177—337.)

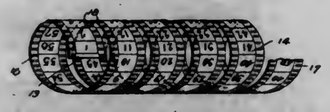


1. A direction indicator comprising a casing having a removable bottom, a standard arranged centrally in said casing and its upper end projecting through and beyond the top wall of the same, solenoid coils arranged in said casing on opposite sides of said standard, removable plugs fitted in the bottom wall of the casing and extending into the solenoid coils, tubes fitted in said solenoid coils, coil springs arranged in said tubes their lower ends arranged around the inner ends of the removable plugs, solenoid cores mounted in said tubes their inner ends resting upon the upper ends of the springs, direction indicating arms connected at their lower ends to said standard, and provided with laterally extending branch arms, links connected to the upper ends of the solenoid cores, their free ends being connected to the outer ends of the branch arms of the direction indicating arms, and an electric circuit for energizing said solenoid coils to move the indicating arms to indicating position.

2. A direction indicator comprising a casing having a removable bottom, a standard secured at its lower end to the bottom centrally thereof, the upper end projecting through the top wall and beyond the same, solenoid coils arranged in said casing on opposite sides of said standard, removable plugs fitted through the bottom up into said solenoid coils and having their inner ends reduced, tubes arranged in said solenoid coils around the reduced ends of the plugs, solenoid cores slidably mounted in said tubes, coil springs arranged in said tubes, their lower ends arranged around the reduced end of the plugs, and their upper ends receiving the inner ends of the solenoid cores, indicating arms having their lower ends pivotally mounted in the upper end of the standard, laterally projecting branch arms secured to the indicating arms intermediate their ends, links connected at one end to the ends of the laterally projecting branch arms, the lower end of the links being connected to the upper ends of the solenoid cores, and an electrical circuit for energizing said solenoid coils to move the indicating arms to indicating position.

3. A direction indicator comprising a casing having a removable bottom, a standard secured at its lower end to said bottom centrally thereof, its upper end projecting through the top wall of said casing beyond the same, solenoid coils arranged in said casing on opposite sides of said standard, tubes arranged in said solenoid coils, removable plugs fitted in the bottom of the casing their upper ends being reduced and fitted in the tubes of the solenoid coils, coil springs mounted in said tubes and their lower ends arranged around the reduced ends of the plugs, solenoid cores mounted in the tubes, their lower ends resting upon the upper ends of the coil springs, electric lights carried by said casing and standard, a casing for each light, direction indicating arms pivotally connected at their lower ends to the upper end of the standard, said direction indicating arms provided with branch arms intermediate their ends extending laterally therefrom in opposite directions, links connected at their lower ends to the upper ends of the solenoid cores, and at their upper ends to the outer ends of the branch arms of the direction indicating arms, and an electric circuit for energizing said solenoid coils to move the indicating arms to indicating position.

1,216,026. METHOD OF PRODUCING KINETOGRAPHIC FILMS. HARTWELL W. WEBB, Cresskill, N. J. Filed Jan. 17, 1914, Serial No. 812,796. Renewed Jan. 6, 1917. Serial No. 141,055. (Cl. 88—19.5.)



1. The herein described process of producing printed kinematographic films and the like which consists in, first, taking on a continuous strip a row of negative pictures representing successive phases of motion of an object, second, cutting this strip into sections and placing the latter side by side so that the first picture of each row represents the phase of motion following the one represented by the last picture of the preceding row, third, producing from the negative so arranged a printing plate, fourth, making an impression from the said printing plate upon a sheet, fifth, folding the sheet into cylindrical form and joining the overlapping transverse edges in a manner that the pictures are caused to run in succession and in a helical line, and, finally, forming by a cut running in a helical line a band from said sheet.

2. The herein described process of producing printed kinematographic films and the like which consists in, first, taking on a continuous strip a row of negative pictures representing successive phases of motion of an object, second, cutting this strip into sections and placing the latter side by side so that the first picture of each row represents the phase of motion following the one represented by the last picture of the preceding row, third, producing from the negative so arranged a printing plate, fourth, making an impression from the said printing plate upon a sheet, fifth, folding the sheet into cylindrical form and joining the overlapping transverse edges in a manner that the pictures are caused to run in succession and in a helical line, and, finally, forming by a cut running in a helical line a band from said sheet.

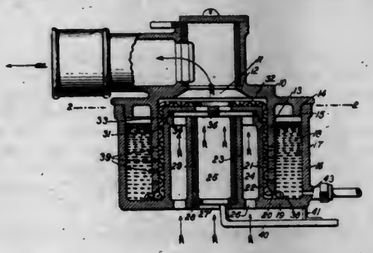
3. The herein described process of producing printed kinematographic films and the like which consists in, first, taking on a continuous strip a row of negatives representing successive phases of motion of an abject, second, cutting this strip into sections and placing the latter side by side so that the first picture of each row represents the phase of motion following the one represented by the last picture of the preceding row, third, producing from the negative so arranged a printing plate making mirror-image impressions of the phases of motion of the object, fourth, making an impression from the said printing plate upon a sheet, fifth, folding the sheet into a cylindrical form and joining its overlapping transverse edges in a manner that the pictures are caused to run in succession and in a helical line, and, finally, forming by a cut running in a helical line a band from said sheet.

4. The herein described process of producing printed kinematographic films and the like which consists in, first, taking on a continuous strip a row of negatives representing successive phases of motion of an object, second, cutting this strip into sections and placing the latter side by side so that the first picture of each row represents the phase of motion following the one represented by the last picture of the preceding row, third, producing from the negative so arranged a printing plate making mirror-image impressions of the phases of motion of the object, fourth, making an impression from the said printing plate upon a sheet, fifth, folding the sheet into a cylindrical form and joining its overlapping transverse edges in a manner that the pictures are caused to run in succession and in a helical line, and, finally, separating the sheet along the slits to form a band.

5. The herein described process of producing printed kinematographic films and the like which consists in, first, producing on a continuous strip a row of pictures representing successive phases of motion of an object, second, cutting this strip into sections and placing the latter side by side so that the first picture of each row represents the phase of motion following the one represented by the last picture of the preceding row, third, producing from the sheet so obtained a printing plate, fourth, making an impression from the said printing plate upon a sheet, fifth, folding the last-named sheet into cylindrical form and joining the overlapping transverse edges in a manner that the pictures are caused to run in succession and in a helical line, and, finally, forming by a cut running in a helical line a band from said sheet.

[Claim 6 not printed in the Gazette.]

1,216,027. CARBURETER. HUGO C. WELL, New York, N. Y. Filed Jan. 11, 1916. Serial No. 71,482. (Cl. 261—46.)



1. In a carbureter, a casing with two passages, one disposed at a greater distance from the center than the other, a valve member disposed across the two passages and provided with two valve openings, one at each passage, the valve openings being disposed in different radial planes, a rotatable valve member disposed against the first valve member and having a radially extending valve opening for uncovering one valve opening in the first valve member as the other valve opening in the first valve member is closed by the second valve member beyond its valve opening and means to supply one of the passages with a hydrocarbon.

2. In a carbureter, a casing having two concentric passages, a valve member disposed across the passages and provided with two concentric sets of valve openings, one set of valve openings being disposed at a greater distance from the center, and being staggered relatively to the other

set of valve openings, a rotatable valve member disposed against the first valve member and having radially extending valve openings for opening one set of valve openings while closing the other set of valve openings in the first valve member, and means to supply one of the passages with a hydrocarbon.

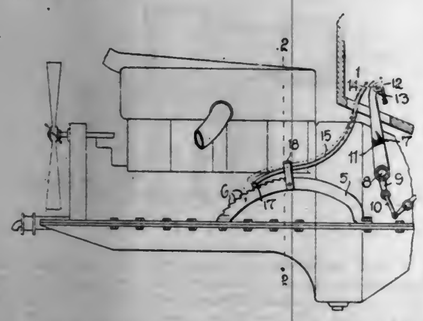
3. In a carbureter, a casing having two concentric passages, a valve member disposed across the passages and provided with two concentric sets of valve openings, one set of valve openings being disposed at a greater distance from the center, and being staggered relatively to the other set of valve openings, a rotatable valve member disposed against the first valve member and having radially extending valve openings for opening one set of valve openings while closing the other set of valve openings in the first valve member, means to rotate the second mentioned valve member relatively to the first valve member, and means to supply one of the passages with a hydrocarbon.

4. In a carbureter, a casing having two concentric passages, a valve member having two concentric sets of valve openings, one set of valve openings being disposed at a greater distance from the center and being staggered relatively to the other, a rotatable valve member disposed between the first valve member and the surface of the casing at the two passages therein, a tube secured to the rotatable valve member and extending in the inner passage in the casing, means to rotate the tube, and means to supply one of the passages with a hydrocarbon.

5. In a carbureter, a casing with an outlet passage, a valve member disposed across the passage and provided with two valve openings disposed in different radial planes and leading to the outlet passage, there being two inlet passages in the casing leading one to each valve opening, a rotatable valve member disposed against the first valve member and having a radially extending valve opening for uncovering one valve opening in the first valve member as the other valve opening in the first valve member is closed by the second valve member beyond its valve opening, and means to supply one of the inlet passages with a hydrocarbon.

[Claims 6 to 17 not printed in the Gazette.]

1,216,028. CLUTCH-PEDAL. JACKSON H. WELSH, Hazelton, W. Va. Filed July 8, 1916. Serial No. 108,148. (Cl. 74—81.)

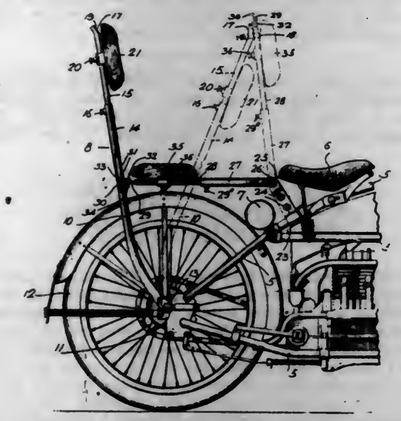


1. The combination of a rack bar, a pedal bar fulcrumed at one end, a foot plate oscillatably mounted upon the other end of the pedal bar, a longitudinally curved rod fixed at one of its ends to said foot plate above and adjacent to the fulcrum of said foot plate, said rod being longitudinally movable over the rack bar and having a terminal tooth for engagement with the teeth of said bar, said rod being moved to an inoperative position by pressure on one end of the foot plate, and means on the rack bar for limiting the latter movement of said rod.

2. The combination of a rack bar, a pedal bar fulcrumed at one end, a foot plate oscillatably mounted upon the other end of the pedal bar, a rod rigidly connected at one of its ends to said foot plate and provided with means on its other end for locking engagement with the teeth of the rack bar, said rod being moved with respect to the rack bar to an inoperative position by pressure upon one end of the foot plate, and a guide for said rod fixed upon the rack bar and acting as a stop to limit the movement of said rod to an inoperative position.

3. The combination of a rack bar provided with spaced teeth upon its upper edge, a clutch shifting pedal bar fulcrumed at one of its ends, a foot plate oscillatably mounted upon the other end of said pedal bar, a rod having an offset end fixed to said foot plate and provided with a curved portion extending over the upper edge of the rack bar, said rod having a lug on its free end for engagement with the rack teeth, said rod being adapted to be lifted and the lug disengaged from the rack teeth by pressure upon one end of the foot plate, and a guide loop through which said rod is movable in the actuation of the pedal bar, said loop limiting the upward movement of the rod to an inoperative position.

1,216,029. CONVERTIBLE SEAT AND BACK-REST. HERBERT C. WHITAKER, Philadelphia, Pa. Filed Sept. 28, 1914. Serial No. 863,981. (Cl. 208—24.)



1. A support pivotally connected to a motorcycle and having a hook at its free end, a seat mounted on said support, in combination with an upright adapted to be attached to the rear portion of the frame of a motorcycle, said upright having openings into which said hook is inserted for positive connection between the support and the upright.

2. A support pivotally connected to a motorcycle, a seat mounted on said support, in combination with an upright pivotally attached to the rear portion of the frame of a motorcycle, said upright holding seat and support in operative position, a hook on the support connecting said support and upright, said hook being capable of holding the upright and support in different positions.

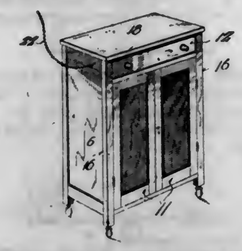
3. The combination of a support pivotally connected to a motorcycle, said support turning about its pivot to assume substantially horizontal or vertical positions and an upright pivotally connected to the motorcycle and means whereby said upright is adjustably connected with said support to hold the same in either of said positions.

4. The combination of a support pivotally connected to a motorcycle, said support turning about its pivot to assume substantially horizontal or vertical positions and an upright pivotally connected to the motorcycle and means whereby said upright is detachably connected with said support to hold the same in either of said positions.

5. The combination of an upright, pivotally mounted on a bicycle frame and a standard pivotally connected to said frame at a point forward of said upright, a back-rest mounted on said standard, the free ends of said upright and standard being adjustably connected to hold said standard in a back supporting position.

[Claims 6 to 17 not printed in the Gazette.]

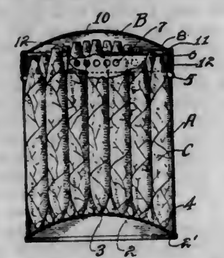
1,216,030. CONVERTIBLE COOKING-CABINET. LORAN A. WIGGINS, Milwaukee, Wis. Filed Dec. 16, 1915. Serial No. 67,114. (Cl. 45—16.)



1. A cabinet including an upper compartment comprising front and rear and side walls and a bottom, a stove disposed in the rear portion of the compartment whereby a space is formed between said stove and the front wall, a cover for the compartment hinged to the rear wall and a shelf member extending laterally from the inner face of the cover and adapted to lie between the stove and the front wall of the compartment upon folding the cover, whereby the stove is held against movement forwardly in the compartment.

2. A cabinet including an upper compartment including side walls having inwardly directed front portions, a metallic sheathing on the bottom and walls of the compartment, the ends of the sheathing adjacent said inward front portions of the side walls being directed inwardly to form grooves therewith, a front wall panel for the compartment, and a sheathing plate on the panel having its edges extending beyond the ends of the panel to slidably engage in the grooves, and a cover for the compartment.

1,216,031. CIGAR-PACKAGE. JOSIAH T. WILCOX, Westfield, N. J., assignor to The Tin Decorating Company of Baltimore, Baltimore, Md., a Corporation of New Jersey. Filed Nov. 5, 1915. Serial No. 59,750. (Cl. 131—11.)



1. As a means for packaging cigars to permit ready removal of the cigars without damage, a container for the cigars having a bottom for projecting the outer ends of certain of the cigars beyond the outer ends of certain other of the cigars, and a cover constructed to accommodate the projecting ends of the cigars, said bottom and cover having complemental configurations, whereby a plurality of similar containers may be positioned in axially-alined superposed relation.

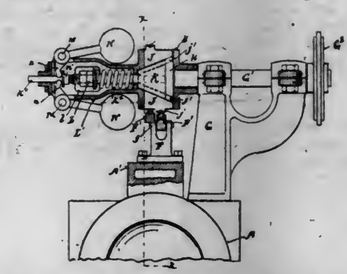
2. As a means for packaging cigars to permit ready removal of the cigars without damage, a container for the cigars having a concave bottom for projecting the outer ends of certain of the cigars beyond the outer ends of certain other of the cigars, and a cover having a convex top wall adapted to accommodate the projecting ends of the cigars, said bottom and cover having complemental configurations, whereby a plurality of similar containers may be positioned in axially-alined superposed relation.

3. Means for packaging cigars with facilities for ventilation comprising a container having ventilating perforations formed adjacent its upper end and a cover having a flange provided with ventilating perforations adapted to be brought selectively into registration with the perforations of the container.

4. Means for packaging cigars with facilities for ventilation comprising a container having the upper portion of its wall constituting a flange, said flange having a series of ventilating perforations formed therein, and a cover having a perforated flange adapted to fit against the flange of the container, the perforations in the cover flange being adapted to be selectively brought into registration with the perforations of the container to regulate the admission of air to the container.

5. As a means for packaging cigars with facilities for ventilation and ready removal of the cigars individually without damage, a metallic container having a concave bottom upon which the lower ends of the cigars rest, the upper ends of the cigars being arranged in pyramidal form, said container having ventilating openings formed in the upper portion thereof, and a cover adapted to accommodate the outer pyramided ends of the cigars, said cover having a flange provided with perforations adapted to be selectively registered with the perforations of the container.

1,216,032. VALVE-GEAR FOR STEAM-ENGINES. WILLIAM M. WILKIN, Erie, Pa. Filed May 6, 1916. Serial No. 95,969. (Cl. 74—89.)

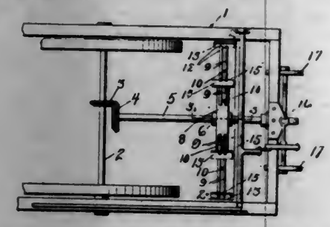


1. The combination in an engine valve gear, of a valve stem, spring mechanism to force said valve stem in one direction, a lever to move said valve stem in opposition to said spring mechanism, a shaft supported adjacent to said lever, means to rotate said shaft in unison with the engine crank shaft, a cylinder secured thereon having a slot therethrough, an axially slidable wedge therein having under-cut grooves in its inclined sides thereof, a radially slidable cam block in said slot having ribs to fit said under-cut grooves in said wedge, a cam on said block adapted to engage and actuate said valve operating lever, a stem secured to said wedge, spring mechanism adapted to act between said cylinder and said stem to force said stem and wedge in one direction, and centrifugal mechanism to move said stem and wedge in opposition to said spring mechanism, substantially as set forth.

2. The combination in a steam engine of a cylinder, a valve stem at each end thereof, spring mechanism associated with each of said valve stems to force the same in one direction, a lever engaging each of said valve stems and fulcrumed on said engine cylinder to move said valve stems in opposition to said spring mechanism, an upright bracket secured upon said engine cylinder, a shaft journaled therein, means to cause said shaft to rotate in unison with the engine crank-shaft, a cylinder secured on said shaft, having a slot therethrough, an axially slidable wedge in said slot, having under-cut grooves in the inclined edges thereof, radially slidable cam blocks in said slot having ribs thereon to fit said

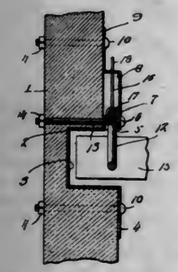
under-cut grooves in said wedge and adapted to prevent said blocks from separating from said wedge, a cam on each of said blocks offset with relation to each other and adapted to alternately engage and actuate said valve operating levers, a stem secured to said wedge, a nut on said stem, a spring on said stem between the slotted cylinder and said nut, and adapted to force said stem and wedge in one direction, and centrifugal mechanism supported by said slotted cylinder adapted to move said stem and wedge in opposition to said spring, substantially as described.

1,216,033. CHOPPING-WHEEL. LESLIE T. WILKINS, Laurel, Mont. Filed Jan. 5, 1916. Serial No. 70,448. (Cl. 97—61.)



A chopping wheel comprising a hub, spokes radiating from the hub, blades carried by said spokes, a rim supported by the spokes, a plurality of pairs of arms, the arms of each pair being laterally spaced, and having their inner ends connected to the rim, and their outer ends beveled, said beveled outer ends being provided with integral threaded bolts, nuts engaged on the bolts to hold the adjacent surfaces of the blades flush against the beveled ends of the arms, and in angular relation to the arms.

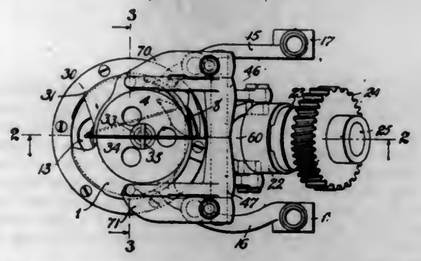
1,216,034. GATE-LATCH. REUBEN M. WILLIAMS, Malad City, Idaho. Filed Aug. 4, 1916. Serial No. 113,133. (Cl. 70—28.)



1. A gate latch including a casing formed from a single piece of sheet metal bent to provide a recess adapted for receiving part of a gate and bent in an opposite direction to provide the outer wall of a latch mechanism receiving recess, an engaging flange struck out from the upper wall of the first mentioned recess for establishing communication between the recesses, latching rings supported between the outer wall of the last mentioned recess and the engaging flange and adapted to engage the projection of a gate, independent means for lifting either of the rings, the movement of the rings being guided by the engaging flange and the outer wall of the last mentioned recess, and means for securing the casing in position.

2. A gate latch comprising a casing formed from a single piece of sheet metal bent to provide a transverse recess and further bent in an opposite direction to provide another transverse recess, an engaging flange struck out from the upper wall of the first mentioned recess for providing a slot to consequently establish communication between the recesses, a pair of locking rings, common means passing through the last mentioned recess and the engaging flange for mounting the rings and adapted to anchor the casing to a gate post or frame, the rings being adapted to automatically engage a projection of a gate or door, rods slidably mounted in the upper wall of the last mentioned recess and connected to the rings whereby the rings may be raised out of engagement with the gate projection, flanges extending at right angles from the front walls of the recess, and means for anchoring the flanges in position.

1,216,035. LOCK-STITCH SEWING-MACHINE. WILLIAM WILSON, Boston, Mass., assignor to Campbell Bosworth Machinery Company, Portland, Me., a Corporation of Maine. Filed July 10, 1913. Serial No. 778,326. (Cl. 112—38.)



1. A lock stitch sewing machine having, in combination, a bobbin case, a rotary hook for casting a loop of needle thread about the bobbin case, and means engaging the thread in proximity to the hook and moving the thread substantially normal to the plane of rotation of the hook for lifting the thread out of the hook after the loop has passed its position of maximum distention in traveling about the bobbin case.

2. A lock stitch sewing machine having, in combination, a bobbin case, a rotary hook for casting a loop of needle thread about the bobbin case, and a stationary cast-off projection engaging the thread in proximity to the hook for lifting the thread out of the hook after the loop has passed its position of maximum distention in traveling about the bobbin case.

3. A lock stitch sewing machine having, in combination, a stationary bobbin case, a rotary hook for casting a loop of needle thread about the bobbin case, said bobbin case having a cast-off projection for lifting the thread out of the hook after the loop has passed its position of maximum distention in traveling about the bobbin case.

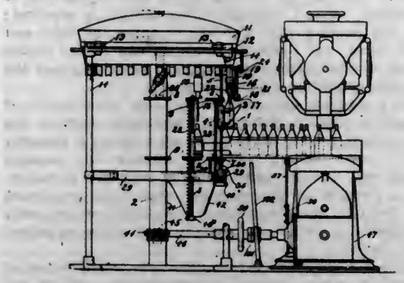
4. A lock stitch sewing machine having, in combination, a bobbin case, a rotary hook for casting a loop of thread about the bobbin case having a thread-receiving groove with an undercut recess in one of its sides in which the thread is held as the loop is carried around the bobbin case by the hook, and means for lifting the thread out of the undercut recess after the loop has passed its position of maximum distention in traveling about the bobbin case.

5. A lock stitch sewing machine having, in combination, a stationary bobbin case, a rotary hook for casting a loop of needle thread about the bobbin case having a thread-receiving groove with an undercut recess in one of its sides in which the thread is held as the loop is carried around the bobbin case by the hook, said bobbin case having a cast-off projection for lifting the thread out of the undercut recess after the loop has passed its position of maximum distention in traveling about the bobbin case.

[Claims 6 to 8 not printed in the Gazette.]

1,216,036. BOTTLE FILLING AND CAPPING MACHINE. ERASTUS E. WINKLEY, Lynn, Mass. Filed Feb. 16, 1914. Serial No. 818,970. (Cl. 226—28.)

1. A filling and capping machine, having, in combination, mechanism for filling bottles, mechanism for capping the filled bottles, and means for stopping the filling and capping mechanisms under an overload, said means permitting the capping mechanism to continue to operate for an interval after the stopping of the filling mechanism, substantially as described.



2. A filling and capping machine, having, in combination, mechanism for filling bottles, mechanism for capping the filled bottles, a two part shaft having one part connected to the filling mechanism and the other part connected to the capping mechanism, and a clutch for connecting the parts of the shaft constructed and arranged to connect the parts of the shaft only in a predetermined position in which the shaft will operate the filling and capping mechanisms in timed relation, substantially as described.

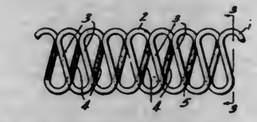
3. A filling and capping machine, having, in combination, mechanism for filling bottles, mechanism for capping the filled bottles, a driving member therefor, a connection between the member and the filling mechanism comprising a coupling the parts of which are constructed to be disconnected under an overload, and means for throwing out the capping mechanism by the movement of one of the parts of the coupling after it is disconnected from the other part, substantially as described.

4. A filling and capping machine having, in combination, filling-means; capping-means; and driving-mechanism normally connecting and actuating both said means in timed relation, the driving-mechanism being constructed and arranged to yield, upon the occurrences of an overload in the filling-means, and thereupon automatically to discontinue driving both of said means, and also to disconnect them from each other so that they may come independently to rest.

5. A filling and capping machine having, in combination, filling-means; capping-means; driving-mechanism connected with the capping-means for actuating the latter; and yielding connections, between the driving-mechanism and the filling-means, for actuating the latter, said connections being constructed and arranged to yield, upon the occurrence of an overload in the filling-means, during the continued actuation of the capping-means.

[Claim 6 not printed in the Gazette.]

1,216,037. GARMENT-STAY. FREDERICK W. WINTER, Pittsburgh, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed Feb. 13, 1915. Serial No. 7,949. (Cl. 2—76.)



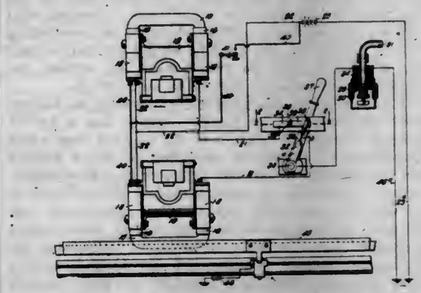
1. A garment stay, comprising wire bent back and forth from edge to edge of the stay to form a series of loops or eyes lying along the edge of the stay and connected by transverse portions or crossings, some of said transverse portions or crossings being bent or deflected out of the general plane of the stay into substantially arched relation thereto, and others lying in the plane of the stay.

2. A garment stay, comprising wire bent back and forth from edge to edge of the stay to form a series of loops or eyes lying along the edges of the stay and connected by two groups of alternately disposed transverse portions or crossings, the crossings of one group being bent or deflected out of the general plane of the stay and into substantially arched relation thereto, and the crossings of the other group lying in another plane.

3. A garment stay, comprising wire bent back and forth from edge to edge of the stay to form a series of loops or eyes lying along the edges of the stay and connected by two groups of alternately disposed transverse portions or crossings, all of the crossings of one group being bent out of the general plane of the stay away from the same face thereof, and crossings of the other group lying substantially in the plane of the stay.

4. A garment stay, comprising wire bent back and forth from edge to edge of the stay to form a series of loops or eyes lying along the edges of the stay and connected by transverse portions or crossings, said loops or eyes being tilted out of the general plane of the stay and adjacent loops or eyes along each edge of the stay overlapping each other, the loops or eyes along opposite edges of the stay being tilted in opposite directions, and some of said crossings being bent or deflected out of the general plane of the stay away from the same face thereof.

1,216,038. RAILWAY-TRAFFIC-CONTROL APPARATUS. BENJAMIN F. WOODING, Montclair, N. J., assignor to Wooding Railway Warning Device Company, Denver, Colo., a Corporation of Arizona. Filed Nov. 24, 1915. Serial No. 63,146. (Cl. 246—58.)



1. An apparatus as characterized comprising electroactive closure means for normally restraining an expansive fluid supply, said means embodying an electric supply; a closed normal circuit therefor; an exposed switch member extending to near the roadbed and operable therefrom for opening said normal circuit; a permission circuit embodying said electric supply and said closure means, said circuit being closed by said switch member in correspondence with the opening of said normal circuit whereby said closure means is optionally maintained active by relatively independent circuits successively actuating said means; a plurality of devices permanently mounted on the roadbed for moving said switch member, all of said devices adapted to move said switch member equally, said devices being individually characterized by different lineal switch-moving portions; and a fugitive connection incorporated in said permission circuit and operable by said switch member for completing said permission circuit, said fugitive connection being adapted to break the connection if moved in excess of a designed rate of speed.

2. An apparatus as characterized comprising electroactive closure means for normally restraining an expansive fluid supply, said means embodying a closed normal circuit; an exposed switch member extending to near the roadbed and operable therefrom for opening said normal circuit; a normally inactive signal circuit embodying an independent electric source and said closure means, said

signal circuit being closed by said switch member in correspondence with the opening of said normal circuit, whereby said closure means is maintained active by relatively independent circuits successively; a plurality of devices permanently mounted on the roadbed for moving said switch member, each of said devices adapted to move said switch member equally, and individually characterized by varying lineally the switch-moving portion thereof; a permission circuit embodying said closure means and the electric supply thereof; a fugitive connection incorporated in said permission circuit and operable by said switch member for completing said permission circuit, said fugitive connection being adapted to open said permission circuit if moved in excess of a predetermined rate of speed; and means for varying the inertia of said fugitive member.

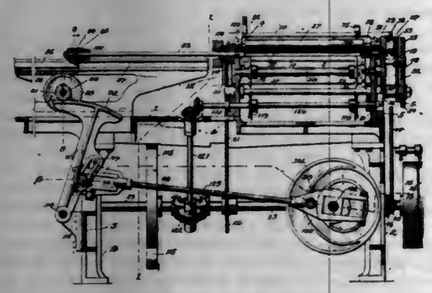
3. In combination, an electrically actuated air-brake control apparatus embodying an exposed rocking switch for normally closing the operating circuit of said apparatus; and a plurality of roadbed devices adapted for rocking said switch when the same is moving past said devices, said devices being individually differentiated to rock said switch at different rates of speed when said switch is traveling at a constant rate of speed.

4. An apparatus as characterized comprising an electromechanically operated valve for closing the outlet of the train pipe of a pneumatic brake system of a moving member; a switch carried by said member and extended in juxtaposed relation to the roadbed over which said member travels; a plurality of track devices fixedly disposed on said roadbed over which said moving member travels for operating said switch; a plurality of operating circuits each embodying said valve and said switch; a plurality of electric supply sources, each connected with one of said circuits, one of said sources being carried by the moving member and the other electrically connected with said track; and manually controlled means for completing the circuit embodying the electric supply carried by said moving member during the period when the normal circuit embodying the same is opened by said switch.

5. An apparatus as characterized comprising an electro-actuated closure valve, an electric supply, and a switch extended in juxtaposed relation to the roadbed over which the apparatus is moved for operation by track devices thereon; a plurality of circuits incorporating said supply, said valve, and switch; a fugitive contact incorporated in one of said circuits, said contact being operatively connected with for movement by said switch, said contact being adapted for engaging a terminal for completing the circuit in which it is incorporated and to pass beyond and out of contact with said terminal when too rapidly moved.

[Claim 6 not printed in the Gazette.]

1,216,039. MACHINE FOR COATING TUBES. GEORGE R. WYMAN and ANDREW E. CURRIER, East Walpole, Mass. Filed Jan. 14, 1916. Serial No. 72,131. (Cl. 91—50.)



1. In a machine for coating tubes, the combination of a normally non-rotating mandrel; means for moving the same into and out of a tube to be coated; means for causing rotation of the mandrel as the same is positioned within the tube; and means for applying coating material to the exterior of the tube while it is supported by the mandrel.

2. In a machine for coating tubes, the combination of tube-feeding means; tube-supporting means; a mandrel; means for causing said mandrel to enter the tube and raise it from said supporting means; and means acting in timed relation with said mandrel to exteriorly coat the tube while supported on the mandrel.

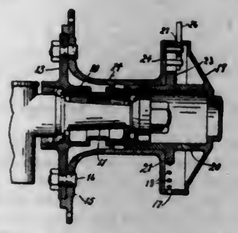
3. In a machine for coating tubes, the combination of tube-feeding means; means to temporarily support the tubes as they are fed thereto one at a time; a mandrel normally non-rotating; means for causing said mandrel to enter and lift the tube from the support; means to effect a rotation of the mandrel when fully positioned within the tube; and means acting in timed relation with said mandrel to exteriorly coat the tube while supported on the mandrel.

4. In a machine for coating tubes, the combination of tube-feeding means; means to temporarily support the tubes as they are fed thereto, one at a time; a mandrel; means for advancing and withdrawing the same into and from the tube; means for causing the mandrel to rotate when fully positioned within the tube; a coating roller; and means for bringing said roller into operative position with the tube supported by the mandrel.

5. In a machine for coating tubes, the combination of a temporary support for the tube to be coated; a mandrel normally non-rotating; means for advancing and withdrawing the same into and from the tube and upon the entrance of the mandrel to cause a lifting of the tube from the support; means for rotating the mandrel when fully positioned within the tube; and means for coating the tube while supported on the mandrel.

[Claims 6 to 15 not printed in the Gazette.]

1,216,040. WHEEL-HUB. CHARLES E. ZARTH, Aurora, Ill. Filed May 22, 1916. Serial No. 99,071. (Cl. 21—31.)



1. A wheel hub comprising, in combination, an axle-receiving sleeve, a casing fitting on and non-rotatable with reference to the sleeve and having its outer end enlarged, a cap for covering the outer end of the casing and being in threaded engagement with the sleeve, a spring latch mounted within the enlarged end of the casing and engageable with the cap, and a lever projecting through the periphery of the enlarged end of the casing for controlling the latch.

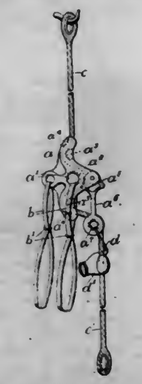
2. A wheel hub comprising, in combination, an axle-receiving sleeve, a casing fitting on and non-rotatable with reference to the sleeve and having its outer end enlarged, a cap for covering the outer end of the casing and being in threaded engagement with the sleeve, a spring latch mounted within the enlarged end of the casing and engageable with the cap, and a lever projecting through the periphery of the enlarged end of the casing for controlling the latch and having a shoulder for holding the latch in released position.

3. A wheel hub comprising, in combination, an axle-receiving sleeve, a casing fitting on and non-rotatable with reference to the sleeve and having its outer end enlarged, a cap for covering the outer end of the casing and being in threaded engagement with the sleeve, a spring latch mounted within the enlarged end of the casing and a lever having at its inner end a cam face adapted to tilt the latch out of engagement with the cap and a shoulder for holding the latch in disengaged position.

4. A wheel hub comprising, in combination, an axle-receiving sleeve, a casing fitting on and non-rotatable with reference to the sleeve and having its outer end enlarged, a cap for covering the outer end of the casing and being in threaded engagement with the sleeve, and having a radially toothed flange, a spring pawl engageable with the flange teeth, and a lever pivoted within the casing and projecting through its periphery and being engageable with the latch for moving it away from the teeth.

5. In a vehicle hub, in combination, an axle-receiving sleeve, a casing removably fitting on the sleeve and interlocked therewith against relative rotative movement, a cap covering the end of the casing and interlocking with the sleeve by a rotative movement, a latch for preventing relative movement of the cap and casing and mounted on one of said parts, and a radially projecting lever for actuating the latch.

1,216,041. FIRE-ESCAPE. SAMUEL ABRAMSON, Philadelphia, Pa. Original application filed June 8, 1916, Serial No. 102,411. Divided and this application filed Aug. 5, 1916. Serial No. 113,248. (Cl. 227—29.)



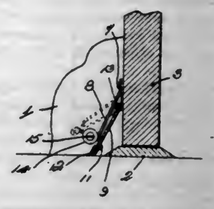
1. A fire-escape comprising a casting having an internal curved formation for a rope to seat therein, and a pivotal clutch member arranged opposite said formation and carrying a suspended glove or mitt to permit of safely gripping said rope, substantially as and for the purposes described.

2. A fire-escape, comprising a casting having an internal curved formation for a rope to travel therein and a pivotal clutch member arranged opposite said formation and carrying an eye-bar over which said rope travels and said bar carrying a suspended glove or mitt to permit of the safe gripping of said rope, substantially as and for the purposes described.

3. A fire-escape, comprising a casting, having eyes for body slip-loops, a grooved formation arranged internally of said casting for a rope to engage and travel, friction guide surfaces located above and below said formation for said rope to respectively engage, a clutch member pivoted to said casting and carrying a movable glove or mitt to permit of the safe gripping of said rope in descent, substantially as and for the purposes described.

1,216,042. WEATHER-STRIP. AMOS ACKLEY, Camden, N. J. Filed Sept. 28, 1914. Serial No. 863,892. (Cl. 20—67.)

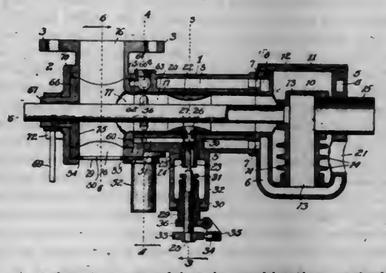
1. The combination with a door frame, a door, and a stop secured to the frame, of a weather strip hinged to the door, and a spring connected to the door and weather strip for holding the weather strip elevated when the door is opened and positioned for engagement with the stop when the door is closed, the engagement of the spring with the stop depressing the weather strip, and said spring acting as a buffer between the stop and the weather strip.



2. The combination with a door frame, a door, and a stop secured to the frame, of a weather strip hinged to the door, and provided near its free edge with an opening, and a leaf spring secured at one end to the door and having its free end positioned in said opening, said spring holding the weather strip elevated when the door is opened and positioned for engagement with the stop when the door is closed, the engagement of the spring with the stop depressing the weather strip, and said spring acting as a buffer between the stop and the weather strip.

3. The combination with a door frame, a door, and a stop secured to the frame, of a weather strip hinged to the door and provided near its free edge with an opening, and a leaf spring secured at one end to the door and having its free end bent downwardly and forwardly and positioned in said opening, said spring holding the weather strip elevated when the door is opened and positioned for engagement with the stop when the door is closed, the engagement of the spring with the stop depressing the weather strip, and said spring acting as a buffer between the stop and the weather strip.

1,216,043. CARBURETER. GUSTAV A. F. AHLBERG, Pittsburgh, Pa. Filed Sept. 11, 1915. Serial No. 50,196. (Cl. 261—12.)



1. A carbureter, comprising, in combination, carbureting and mixing chambers, a source of liquid fuel supply, alternative means, initial and main, for admitting liquid fuel to said mixing and carbureting chambers respectively, means for initially heating fuel passed through said initial fuel supply means, means for initially heating said carbureting chamber, means for admitting air in conjunction with said fuel admission, and an oscillatable valve interposed between said carbureting and mixing chambers, said valve having separate passages, one of which is closed when the other is open, one serving when open, to admit fuel and air directly to said mixing chamber from said initial fuel supply means, and the other as a direct connection between said carbureting and mixing chambers.

2. A carbureter, comprising a carbureting chamber, a mixing chamber having an outlet leading to a motor, a separate conduit leading from said carbureting chamber to a normally closed opening in immediate communication

with said outlet, an initial fuel jet leading to said conduit, means for admitting air to said carbureting chamber, a main fuel jet in communication with said carbureting chamber, a source of liquid fuel supply in communication with said jets, means for heating the carbureter casing and initial jet, and an oscillatable valve located between said carbureting and mixing chambers, said valve having alternately effective passages therein, one of which is closed when the other is open, one being arranged to communicate with said normally closed opening in communication with said initial jet, and the other with said carbureting and mixing chambers.

3. A carbureter, comprising, in combination, a casing having therein a carbureting chamber, means for admitting air thereto, a source of fuel supply in communication therewith, a mixing-chamber, an oscillatable valve having two openings therethrough, said openings being so positioned that one may be closed when the other is open, one forming when open an enlarged passage between said carbureting and mixing chambers, and the other forming when open a relatively restricted passage between said mixing chamber and a conduit in communication with said carbureting chamber, an initial fuel jet having open communication in said carbureting chamber with said conduit, a fuel reservoir in communication with said jet, means for heating said reservoir and means for reversing said valve whereby it may be adjusted in one position to start the motor and in another to continue its operation.

4. A carbureter, comprising, in combination, a carbureting chamber, a mixing-chamber having an outlet leading to a motor, a separate conduit leading to a normally closed opening in immediate communication with said outlet, an initial fuel jet leading to said conduit, means for admitting air to said carbureting chamber, a main fuel jet in communication with said carbureting chamber, a source of liquid fuel supply in communication with said jets, means for heating the casing and said initial jet, an oscillatable valve located between said carbureting and mixing chambers, said valve having passages therein, one of which is closed when the other is open, one passage being arranged to communicate with said normally closed opening in communication with said initial fuel jet and the other with said carbureting and mixing chambers and the atmosphere, and a valve for controlling the volume of atmospheric air admitted to said last named opening.

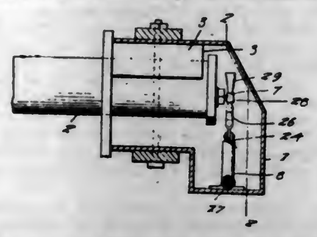
5. A carbureter, having a carbureting-chamber, a mixing chamber, said mixing chamber having an outlet adapted to lead to a motor, a separate conduit leading to a normally closed discharge port, an initial fuel jet leading to said conduit, means for admitting air to said conduit and carbureting chamber, a main fuel jet in communication with said carbureting chamber, a source of liquid fuel supply in communication with said jets, means for heating said carbureter and the liquid fuel passing through said initial jet, and a three-way oscillatable valve interposed between said carbureting and mixing chambers, said valve being adapted when in one position to open communication between said normally closed discharge port and said mixing chamber, and when in the other position to open full communication between said carbureting and mixing chambers and between the atmosphere and said mixing chamber.

[Claims 6 to 12 not printed in the Gazette.]

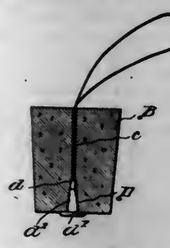
1,216,044. CAR-AXLE LUBRICATOR. JOSEPH ALEXANDER, Yeagertown, Pa. Filed June 20, 1916. Serial No. 104,690. (Cl. 64—24.)

1. The combination with a journal box, a bearing brass within the journal box, a pump operative within the journal box, a pipe leading from the pump to the journal brass and a piston operable within the pump, of a crank pin on the end of a car axle, a lubricating funnel carried by said crank pin and a branch pipe leading from the first mentioned pipe to a point directly above the funnel.

2. The combination with a journal box, a journal brass within the box, said brass being provided with lubricant distributing grooves in its under face, an axle bearing in said brass, a crank pin carried by the axle, a pump within the journal box, a piston within the pump, a distributing pipe leading from the piston to the journal brass and adapted to conduct lubricant through the journal brass, a funnel rotatably mounted on the crank pin, a barrel carried by the funnel, a connecting rod connected to the barrel and to the piston whereby upon rotation of the axle the pump will be actuated and a branch pipe leading from the distributing pipe and having its outlet end disposed directly over the center of the axle to distribute lubricant into the funnel and thereby lubricate the crank pin.



1,216,045. STOPPER FOR BOTTLES OR THE LIKE. JAMES ALLEN, Washington, D. C. Filed May 6, 1916. Serial No. 95,935. (Cl. 215—53.)



1. In a pulling attachment for corks, the combination with a doubled string passed through the cork and forming a loop beneath the lower end thereof, of a plug having its body portion in the form of a truncated cone, terminating at its smaller end in a hook adapted to engage said string and being provided at its larger end with an annular shoulder adapted to engage the bottom of the cork, said plug being forced, while in engagement with said string, through the lower part of the opening in said cork formed by the passage of said string, and serving both as a liquid and gas-tight closure for said opening and as an abutment for said string when the cork is pulled, substantially as described.

2. In a pulling attachment for corks, the combination with a doubled string passed through the cork and forming a loop beneath the lower end thereof, of a tapered plug provided with a shoulder at its larger end and having means at its inner and smaller end for engaging said string, said plug being provided on those parts exposed to the action of the contents of the bottle with a layer of vitreous material, said plug being forced, while in engagement with said string, through the lower part of the opening in said cork formed by the passage of said string, and serving both as a liquid and gas-tight closure for said opening and as an abutment for said string when the cork is pulled, substantially as described.

1,216,046. LYMPH-GLAND EXTRACT AND METHOD OF MAKING SAME. ROBERT A. ARCHIBALD, Oakland, Cal. Filed Apr. 6, 1916. Serial No. 89,446. (Cl. 167—7.)

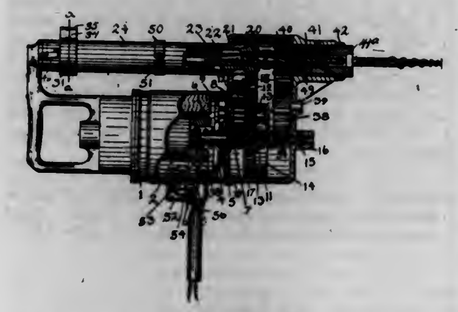
1. An extract, in soluble form, neutral in reaction, which is obtained from the liberated protoplasm of digested normal lymph gland cells in permanent solution and possessing the characteristics when injected parenterally of stimulating the production of a leucocytosis and increasing the activity of the individual leucocytes particularly

the lymphocytes or mononuclear type of leucocytes and stimulating the production of blood platelets and increasing their activity.

2. The method of preparing lymph gland extract which consists of grinding up normal lymph glands of healthy animals, adding distilled water to the resultant pulp, adding a preservative, heating the mixture to destroy any antiferments it may contain, incubating the mixture to facilitate digestion or lysis, adding an acid solution to precipitate the solid and semi-solid proteins to facilitate filtering and obtain a watery clear fluid.

3. The method of preparing lymph gland extract which consists of grinding up normal lymph glands from healthy animals, adding distilled water, five volumes of water to one volume of lymph gland pulp, making the mixture 0.3 per cent. trikresol as a preservative, exposing the mixture to a temperature of 58° centigrade to destroy any antiferments it may contain, incubating the mixture to facilitate autodigestion or lysis, making the mixture 0.07 per cent. acetic acid to precipitate the solid and semi-solid proteins and facilitate filtering, to remove cellular debris and proteins not in solution, adding a preservative thereto to bring the percentage of trikresol up to 0.5 per cent., neutralizing its acidity with normal sodium hydrate solution, filtering and ampuling and sterilizing the water clear fluid at a temperature of 58° centigrade for an hour.

1,216,047. POWER-DRIVEN TOOL. FRANK J. BACKSCHEIDER, Cincinnati, Ohio. Filed Apr. 7, 1913. Serial No. 759,268. (Cl. 77—6.)



1. A device of the character specified comprising a casing, a tool spindle longitudinally adjustable in said casing, means for the actuation of said spindle, a handle slidably mounted on said casing and arranged to adjust said spindle, and means whereby, upon the turning of said handle said spindle will be locked in position when properly adjusted.

2. A device of the character specified comprising a casing, a tool spindle longitudinally adjustable in said casing, a bearing for said spindle, said bearing being slidably mounted in said casing for the adjustment of said spindle, means for the actuation of said spindle, a handle slidably mounted on said casing and arranged to slide said bearing therein, and means whereby, upon the turning of said handle said bearing and spindle will be locked in position when properly adjusted.

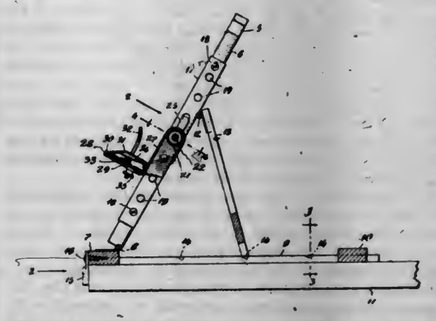
3. A device of the character specified comprising an adjustable tool spindle, means for the actuation of said spindle, a casing for said spindle, said casing being provided with a straight slot, a tubular shutter in said casing, said shutter having a spiral slot, and means attached to said spindle and extending through the slots in said shutter and said casing, whereby said spindle may be moved longitudinally in said casing and said shutter may be rotated to close the slot in said casing.

4. A device of the character specified comprising an adjustable tool spindle, means for the actuation of said spindle, a casing for said spindle, said casing being provided with a straight slot, a tubular shutter in said casing, said shutter having a spiral slot, means attached to said spindle and extending through the slots in said shutter and said casing, whereby said spindle may be moved longitudinally in said casing and said shutter may be rotated to close the slot in said casing, and means in said casing whereby a tool mounted in said tool spindle may be automatically dislodged.

5. A device of the character specified comprising a casing, two tool spindles mounted in said casing, one of said spindles being mounted in the end of said casing and the other spindle being arranged to operate in an opening through the center of said first spindle, a gear mounted on said second spindle for the actuation thereof, and a sleeve on said gear around said second spindle and extending into said first spindle to prevent the access of chips into said casing.

[Claims 6 to 9 not printed in the Gazette.]

1,216,048. BOOK-REST. EDWARD H. BANCROFT, Brooklyn, N. Y. Filed Feb. 25, 1916. Serial No. 80,324. (Cl. 45—80.)



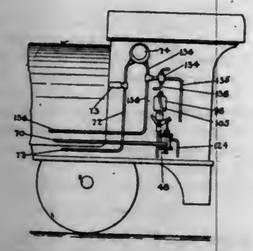
1. In a device of the character specified, in combination, a base, a frame pivotally attached to the base, means upon the two upright sides of the frame for supporting a book-carrying member and in alinement with each other, a book-carrying member slidable upon the frame, said book-carrying member carrying spring pressed means for maintaining it upon the supporting means upon the frame and for releasing it therefrom, allowing slidable movement thereof, said member being maintained upon the frame when the spring is in normal position, a member upon the book-carrying member for retaining a superimposed book in open position, and a member for maintaining the frame at any desired angle of position with respect to the base.

2. In a device of the character specified, in combination, a base, a frame pivotally attached to the base, holes within the two upright sides of the frame and in alinement with each other, a book-carrying member within the frame and slidable therein, said book-carrying member carrying pins capable of movable placement within the holes of the frame to maintain the book-carrying member at any desired position therein, and spring means for placing the pins within said holes and allowing their removal therefrom, said pins being maintained within the holes when the spring is in its normal condition, said book-carrying member carrying a member for retaining a superimposed book in open position, and a member for maintaining the frame at any desired angle of position with respect to the base.

1,216,049. AUTOMATIC SAFETY-CONTROLLER FOR PERMANENT-WAY LOCOMOTIVES AND THE LIKE. FRANKLIN GEORGE BARNES, Wynnum South, near Brisbane, Queensland, Australia, assignor to Barnes Train Stop Company, Limited, Brisbane, Australia. Filed Sept. 29, 1914. Serial No. 864,056. (Cl. 246—59.)

1. In an automatic safety controller for locomotives, the combination with an erectable flexible-topped obstruction member located along a trackway and presenting a soft

metal face to receive recording impressions, of a brake mechanism including a main brake valve, an exhaust valve associated with said brake pipe and a striking arm associated with said valve and adapted to engage and impress on said soft metal face a record to identify the locomotive.



2. In an automatic safety controller for locomotives, the combination with a pair of erectable flexible warning obstructions located one on either side of the center of the trackway, said obstructions having detachably connected thereto a soft metal plate, of brake appliances carried by the locomotive and including a main air pipe, an exhaust valve normally closing said pipe and a lever arm associated with the valve and adapted to open the same upon contact of the lever arm with the said soft metal plate of either of the obstructions, whereby an identifying impression will be made on said soft metal plate to indicate a locomotive striking the obstruction.

3. In apparatus of the type described, the combination of a pair of obstacles located along the trackway on opposite sides of the center of the track, means to elevate the obstructions into striking position when desired, brake appliance carried by the locomotive and including a main air line, an exhaust valve normally closing said air line, a pair of striking arms associated with said exhaust valve, and means to selectively cause either of said arms to open said valve while the other arm remains inactive depending upon the direction of movement of the locomotive.

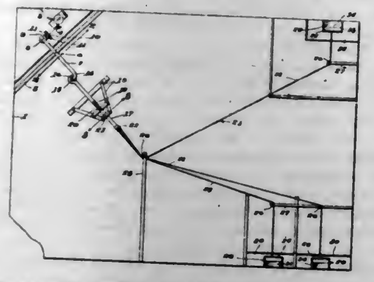
4. In apparatus of the character set forth, the combination of a pair of track obstructions associated with the switch or signal mechanism on opposite sides of the center of the track, brake mechanism carried by the locomotive and including an exhaust valve normally closing the brake air line, a pair of striking arms associated with said valve and adapted to engage the respective obstructions, and means made operative from the locomotive depending upon the direction of movement thereof to cause only the striking arm on the left side of the locomotive considered in the direction of motion to be effective.

5. In a safety appliance for locomotives, the combination of an air pressure pipe, an exhaust valve normally closing the same, said valve including a movable member, a rod coöperating with said movable member and having ratchet teeth, a pawl coöperating with said ratchet teeth to hold the rod and valve member in position to hold the valve open, means to actuate the rod when a danger point is passed, an audible signal adapted to be sounded by the air as it passes through said exhaust valve, and fluid pressure means under the control of the engineer to reset the devices by releasing the pawl from said ratchet, said means including an air line pipe, a manually controlled three-way cock therein and a piston operated from said air line pipe and engaging the pawl.

[Claims 6 to 20 not printed in the Gazette.]

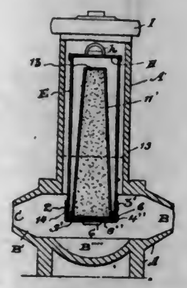
1,216,050. STOCK-FEEDING APPARATUS. FREDIE E. BASS, Newsome, Tex., assignor of one-half to K. H. Cooper, Scroggins, Tex. Filed Nov. 8, 1916. Serial No. 130,150. (Cl. 161—10.)

1. In a stock feeding apparatus, the combination, of feed boxes, pivoted sides for said feed boxes, means for normally holding said pivoted sides in closed position including a slidable lever, a pivoted lever for engagement with said slidable lever and holding it against sliding movement, a spring, means for normally holding said spring under tension, means for operating said last named means at predetermined times for releasing said spring, said pivoted lever being in the path of said spring whereby when said spring tensioning means is released, the spring will strike said pivoted lever and move it out of engagement with said slidable lever.



2. In a stock feeding apparatus, the combination, of feed boxes, pivoted sides for said feed boxes, means for normally holding said pivoted sides in closed position including a slidable lever, a pivoted lever for engagement with said slidable lever and holding it against sliding movement, a spring, means for normally holding said spring under tension, means for operating said last named means at predetermined times for releasing said spring, said pivoted lever being in the path of said spring whereby when said spring tensioning means is released, the spring will strike said pivoted lever and move it out of engagement with said slidable lever, a supporting structure for said slidable lever, said slidable lever being provided with a longitudinally extending slot, a pin seated in said slot for limiting the slidable movement of said slidable lever.

1,216,051. FERTILIZER-DISTRIBUTER. WILLIAM BRAYBROOKE BAYLEY, Toronto, Ontario, Canada. Filed June 27, 1914. Serial No. 847,744. (Cl. 137—14.)



1. An apparatus of the class described comprising a receptacle composed of an upper chamber freely communicating with a mixing chamber therebelow, said mixing chamber provided below said upper chamber with a mixing basin, and being further provided with ingress and egress openings, removable means for closing the top of said upper chamber; a fertilizer receptacle having imperforate walls supported within said upper chamber and spaced apart therefrom so as to form an air chamber in said upper chamber, air-tight above the level to which water rises therein to allow for the production of an air-cushion in said upper chamber, and having a permanently sealed upper end to permit the receptacle to retain air to form an auxiliary air-cushion, and an open lower end, which lower end extends down into said mixing chamber, and a perforated regulator removably supported over the lowed end of said fertilizer receptacle.

2. An apparatus of the class described comprising a receptacle composed of an upper chamber freely communicating with a mixing chamber therebelow, said mixing chamber provided below said upper chamber with a mixing basin, and further provided with ingress and egress openings; removable means for closing the top of said upper chamber; a fertilizer receptacle having imperforate walls supported within said upper chamber and spaced apart therefrom so as to form an air chamber within said upper chamber, air-tight above the level to which water rises therein to allow for the production of an air-cushion, and having a permanently sealed upper end, to permit the receptacle to retain air to form an auxiliary air-cushion, and an open threaded lower end, which lower end extends down into said mixing chamber; a perforated regulator for the lower end of said fertilizer receptacle; a retaining cap provided with a threaded flange designed to engage with the threaded lower end of said receptacle, and further provided with a horizontal flange which clamps said perforated regulator in place.

3. An apparatus of the class described comprising a receptacle composed of an upper chamber freely communicating with a mixing chamber therebelow, said mixing chamber provided below said upper chamber with a mixing basin, and further provided with ingress and egress openings; removable means for closing the top of said upper chamber; a receptacle having imperforate walls supported within said upper chamber and spaced apart therefrom so as to form an air chamber in said chamber, air-tight above the level to which water rises therein to allow for the production of an air-cushion in said upper chamber, and having a permanently sealed upper end, to permit the receptacle to retain air to form an auxiliary air-cushion, and an open lower end which lower end extends down into said mixing chamber; a fertilizer receptacle mounted within said first receptacle and provided with an open upper end, and means controlling the escape of fertilizer through the lower end of said receptacle.

4. An apparatus of the class described comprising a receptacle composed of an upper chamber freely communicating with a mixing chamber therebelow, said mixing chamber provided below said upper chamber with a mixing basin, and further provided with ingress and egress openings, a receptacle having imperforate walls supported within said upper chamber, and spaced apart therefrom so as to form an air chamber in said upper chamber, air-tight above the level to which water rises therein to allow for the production of an air cushion in said upper chamber, and having a permanently sealed upper end, to permit the receptacle to retain air to form an auxiliary air-cushion, and an open lower end, which lower end extends down into said mixing chamber; a fertilizer receptacle in the form of a truncated cone mounted within said first receptacle and provided, to cover its upper smaller end, with a perforated member secured thereto; means carried by the lower end of said fertilizer receptacle designed to engage against the lower edge of said first receptacle; a perforated regulator for the lower end of said fertilizer receptacle, and means whereby said perforated regulator and said fertilizer receptacle are held in position.

1,216,052. PROCESS OF MAKING ARTIFICIAL CREAM. HERMAN C. BECKMAN and GEORGE E. DICK, Chicago, Ill. Filed Aug. 7, 1911. Serial No. 642,723. (Cl. 99—11.)

1. The process of making artificial cream which consists in preparing a mixture of a fat base, a milk base, pasteurizing and emulsifying the whole, and adding a binding ingredient.

2. The process of making artificial cream which consists in preparing a mixture of fat and sugar dissolved in milk, heating and agitating the same, pasteurizing and emulsifying the whole, and adding a thickening ingredient.

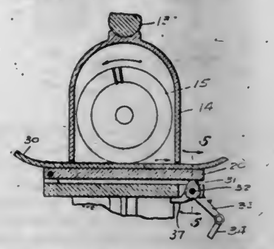
3. The process of making artificial cream which consists in preparing a mixture of beef fat and sweetened milk, heating and agitating the same, adding one or more ingredients of natural cream, pasteurizing and emulsifying the whole, and then adding a thickening ingredient.

4. The process of making artificial cream which consists in preparing a mixture of an oleaginous substance and a milk base, pasteurizing and emulsifying the same and adding starch.

5. The process of making artificial cream which consists in preparing a mixture of a fat base, a milk base, lecithin, pasteurizing and emulsifying the whole, and adding starch.

[Claims 6 to 8 not printed in the Gazette.]

1,216,053. MACHINE FOR MAKING LEATHER OF UNIFORM THICKNESS. HARRY A. BELL, Indianapolis, Ind., assignor to Hide, Leather & Belting Company, Indianapolis, Ind., a Corporation. Filed Nov. 26, 1915. Serial No. 63,581. (Cl. 149—12.)



1. A machine for making leather of a uniform thickness including a rotary scraper, a table for holding the leather in position to be treated by the scraper, a table support adjustable toward and away from the rotary scraper, means for elevating and lowering said table, and means for predetermining the position of said table support and table with reference to the rotary scraper.

2. A machine for making leather of uniform thickness including a rotary scraper, a table for holding the leather in position to be treated by the scraper, a table support adjustable toward and away from said scraper, means for elevating said table, and means for determining the distance between the scraper and the table and table support when the latter is elevated.

3. A machine for making leather of uniform thickness including a rotary scraper, a table for holding the leather in position to be treated by the scraper, a table support adjustable toward and away from said scraper, a shaft on said table supporting means, cams secured on the shaft for engaging and elevating the means for actuating said shaft, means for limiting the movement of the cams when the table is in its highest position, and means for predetermining the distance between the scraper and table and table support when the latter is elevated.

4. A machine for making leather of a uniform thickness including a rotary scraper, a table for holding the leather in position to be treated by the scraper, a table support adjustable toward and away from the rotary scraper, and to which said table is pivoted at one end thereof, means for elevating and lowering the other end of the table, and means for predetermining the position of said table support and table with reference to the rotary scraper.

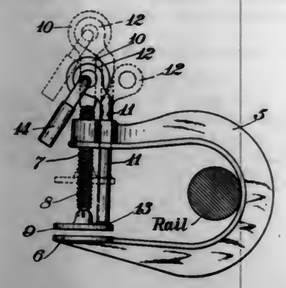
5. A machine for making leather of a uniform thickness including a rotary scraper, a table for holding the leather in position to be treated by the scraper, a table support to which the table is pivoted at one end thereof, a cam for elevating the free end of said table, and means for limiting the movement of said cam when the table has reached its highest limit of movement.

[Claims 6 and 7 not printed in the Gazette.]

1,216,054. LOCK FOR USE IN AUTOMOBILES. DELLNO BERGER, Madison township, Franklin county, Ohio. Filed May 12, 1915. Serial No. 27,684. (Cl. 45—13.)

1. In a lock, the combination, of a frame having a clamping member, a threaded shank adjustable axially in said frame and having a clamping member to coöperate with the first mentioned clamping member, and a rod en-

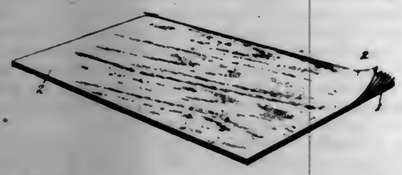
gaging said frame and sliding thereon in a direction parallel to the axis of the screw, said threaded shank and sliding member constructed to receive means for locking them together and thereby prevent the rotation of the threaded shank.



2. In a lock, the combination of a frame having a clamping member, a movable coöperating clamping member including a shank threaded into and adjustable axially in the frame and a member slidingly engaging the frame, said threaded member and sliding member each provided with an eye to receive means for locking the threaded and sliding members together and thereby prevent the turning of the threaded member.

3. In a lock, the combination of a frame having a clamping member, a movable coöperating clamping member including a shank threaded into and adjustable axially in the frame, and a member slidingly and rotatably engaging the frame, said threaded and sliding members each having an eye to receive means for locking them together and thereby prevent the turning of the threaded member.

1,216,055. PROCESS OF MAKING PAPER-BOARD. CHARLES S. BIRD and GEORGE R. WYMAN, Walpole, Mass.; said Wyman assignor to said Bird. Original application filed July 5, 1912, Serial No. 707,835. Divided and this application filed July 11, 1913. Serial No. 778,514. (Cl. 154—40.)

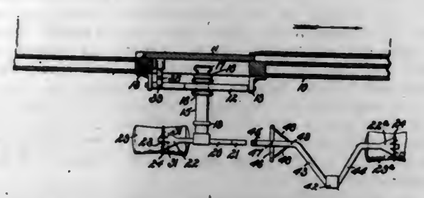


1. The process of producing a substantially rigid, nonwarping paper-board, which consists in securing a plurality of plies of paper together with an adhesive and likewise charging the fibers of the stock with water in a quantity sufficient to cause the fibers to appreciably swell and to so remain; and finally waterproofing the outer faces of the board while the moisture is still contained therein and thereby imprisoning the moisture.

2. The process of producing a substantially rigid, nonwarping paper-board, which consists in securing a plurality of plies of paper together with an adhesive containing or carrying moisture over that necessary to render the adhesive effective and in a quantity sufficient to dampen and swell the fibers of the plies; and thereafter, while the moisture is still contained in the swollen fibers, treating the exterior of the board with a waterproofing compound and thereby imprisoning the moisture.

3. The process of producing a substantially rigid, nonwarping paper-board, which consists in pressing and securing together a plurality of plies of paper, the fibers of which are damped and swelled; and finally, while the moisture is still contained in the swollen fibers, coating the exterior faces of the board with a waterproofing compound and thereby imprisoning the moisture and maintaining the fibers in their swollen condition.

1,216,056. MAIL-BAG-DELIVERING APPARATUS. JOHN CARLYLE BLANTON and DOUGLAS JOHNSON SEXTON, Freeman, W. Va. Filed June 3, 1916. Serial No. 101,623. (Cl. 258—9.)



1. In a mail bag-delivering apparatus, a mail bag-supporting arm, and a ring adapted to suspend a mail bag, said ring having approximately vertical members at the sides and a transverse bar joining the said members, and the said supporting arm having a cross arm, one end of which presents, at the sides thereof, laterally projecting members adapted to detachably receive the vertical members of the ring, and an intermediate member forming a rest to detachably receive the transverse bar of the ring.

2. In a mail bag-delivering apparatus, a mail bag-supporting arm, a cross arm thereon presenting a centrally disposed terminal constituting a rest and diverging members at the sides of the central members and formed with vertical notches, a ring, means to suspend a mail bag from said ring at the bottom, said ring presenting vertical members at the sides engageable in said notches, and a cross bar connecting said vertical members and adapted to seat on said rest, and means on the said cross arm yieldingly engaging the cross bar of the ring.

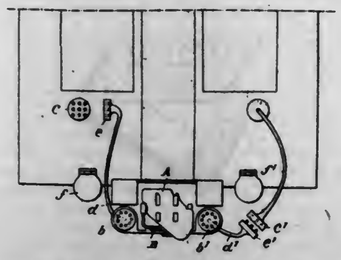
3. In a mail bag-delivering apparatus, a mail bag-supporting arm, a cross arm thereon presenting a centrally disposed terminal constituting a rest and diverging members at the sides of the central members and formed with vertical notches, a ring, means to suspend a mail bag from said ring at the bottom, said ring presenting vertical members at the sides engageable in said notches, and a cross bar connecting said vertical members and adapted to seat on said rest, a retainer on the said cross arm yieldingly engaging the cross bar of the ring, the said retainer being pivoted on the said central terminal of the cross arm and having a fork formation presenting arms disposed at the sides of said terminal, and a retractile spring connected with the retainer below the pivot and with the said cross arm.

4. A mail bag-delivering apparatus including a mail bag-supporting arm having a central seat for a mail bag-suspending device, and having members at the sides of said seat; together with suspending means adapted to carry a mail bag, the suspending means including an element adapted to rest on said seat, and presenting members at the sides of said element adapted to detachably engage the members at the sides of the seat.

1,216,057. ELECTRICAL COUPLING DEVICE FOR RAILWAY AND OTHER VEHICLES. LOUIS BOIRAULT, Paris, France. Original application filed July 25, 1913. Serial No. 781,213. Divided and this application filed Jan. 21, 1914. Serial No. 813,416. (Cl. 173—324.)

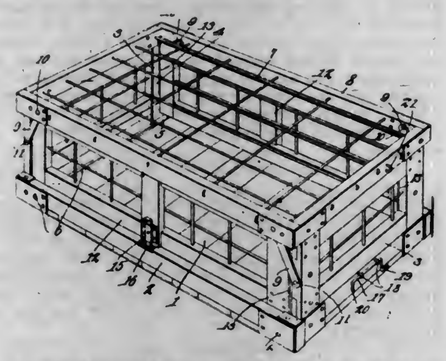
1. In an electric railway vehicle, the combination of hand connectors secured to the body of the vehicle and adapted to be engaged by connectors on another vehicle, a vehicle coupling apparatus, automatic connectors secured to the sides of such coupling apparatus, hand connectors adapted to be coupled with the said hand connectors secured to the body of the vehicle, and cables connecting such hand connectors with the said automatic connectors.

2. In an electric railway vehicle, hand connectors, one secured to the vehicle and the other to a cable secured to the vehicle, a coupling device carrying electric conductors



and adapted to be automatically coupled with similar connectors on another vehicle, and hand connectors connected with the connectors of the coupling device and adapted to be coupled with the first named connectors.

1,216,058. COLLAPSIBLE CARRYING-CRATE. THOMAS B. BOMAR, Fort Worth, Tex. Filed Nov. 15, 1915. Serial No. 61,647. (Cl. 217—47.)

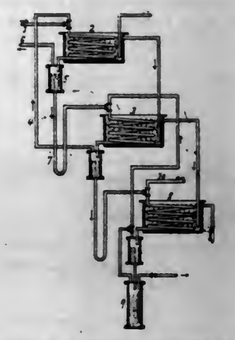


A collapsible crate embodying a bottom having an upwardly projecting marginal rim, ends seatable upon the end portions of said rim, downwardly projecting portions carried by the inner surfaces of the ends hinged to the bottom so that the ends can swing within said rim, a top embodying a rim whose end portions are seatable upon said ends when they are swung upwardly, links having their upper ends pivoted to the inner surfaces of the side members of said rim of the top spaced from the ends of the top, the lower ends of said links being pivoted to the upright edges of the ends between the upper and lower edges thereof, and sides hinged within the rim of the top to swing against the top within its rim, the sides being swingable downwardly between the ends, the rim of the top being seatable on the rim of the bottom when the crate is collapsed.

1,216,059. ABSORBING AMMONIA AND APPARATUS THEREFOR. CARL BOSCH, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed July 7, 1913. Serial No. 777,739. (Cl. 23—21.)

1. The process of absorbing ammonia from gas mixtures under pressure by introducing the absorbing liquid and treating the gas mixture with it in a series of tubes in such a way that, as regards the series as a whole, the gases and absorbent move in opposite directions, while in each unit of the series they move in the same direction.

2. The process of absorbing ammonia from gas mixtures under pressure by introducing the absorbing liquid and allowing it to flow from above below through a plurality of coils situated one above the other and passing the gases in the same direction as the absorbing liquid through each individual coil, but through the coils as a whole from below above, so that the gases which are richest in ammonia meet that absorbing liquid which is richest in ammonia.



3. The process of absorbing ammonia from gas mixtures under pressure by introducing the absorbing liquid and allowing it to flow from above below through a plurality of coils situated one above the other and passing the gases in the same direction as the absorbing liquid through each individual coil, but through the coils as a whole from below above, so that the gases which are richest in ammonia meet that absorbing liquid which is richest in ammonia, and subjecting each coil to a cooling action by surrounding it with a cooling liquid.

4. Apparatus for absorbing ammonia from gases containing it under pressure, comprising a plurality of coils situated one above the other, means for introducing the absorbing liquid and means for allowing the said absorbing liquid to flow through the coils in succession from above to below, and means for passing the gases through each individual coil from above downward, but through the series of coils in the direction from below upward.

5. Apparatus for absorbing ammonia from gases containing it comprising a plurality of coils situated one above the other, means for introducing the absorbing liquid and means for allowing the said absorbing liquid to flow through the coils in succession from above downward, and means for passing the gases through each individual coil from above downward, but through the series of coils in the direction from below upward, and means for subjecting the coils to a cooling action.

[Claims 6 and 7 not printed in the Gazette.]

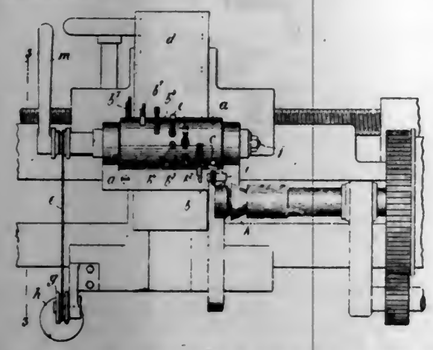
1,216,060. SCREW-CUTTING LATHE. FRANCIS VERNON BREEDEN, Birmingham, England. Filed Aug. 29, 1916. Serial No. 117,476. (Cl. 82—5.)

1. In a screw-cutting lathe, a rotatable tool holder; a series of tools carried thereby and spaced apart both longitudinally and angularly, the distance between successive tools being approximately equal to the length of the thread to be cut; and operating means for said holder.

2. In a screw-cutting lathe, a rotatable tool holder; a traveling slide rest whereon the holder is mounted; a series of tools carried by said holder and spaced apart both longitudinally and angularly; a support for the tool in action; and automatic means for partially rotating said holder when the active tool is carried beyond said support by the travel of said slide rest, so as to bring the next tool into position for operation.

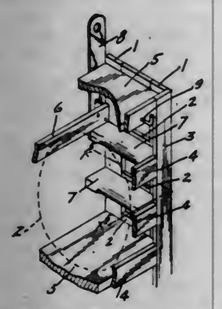
3. In a screw-cutting lathe, a rotatable tool holder; a series of tools carried thereby and spaced apart both longitudinally and angularly, the distance between successive tools being approximately equal to the length of the thread to be cut, and the cutting point of each tool being at a slightly greater distance from the axis of the holder than that of the immediately-preceding tool; and operating means for said holder.

4. In a screw-cutting lathe, a rotatable tool holder; a traveling slide rest whereon the holder is mounted; a series of tools carried by said holder and spaced apart both longitudinally and angularly, the distance between successive tools being approximately equal to the length of the thread to be cut; a support for the tool in action; and automatic means for partially rotating said holder when the active tool is carried beyond said support by the travel of said slide rest, so as to bring the next tool into position for operation.



5. In a screw-cutting lathe, a rotatable tool holder; a traveling slide rest whereon the holder is mounted; a series of tools carried by said holder and spaced apart both longitudinally and angularly, the distance between successive tools being approximately equal to the length of the thread to be cut, and the cutting point of each tool being at a slightly greater distance from the axis of the holder than that of the immediately-preceding tool; a support for the tool in action; and automatic means for partially rotating said holder when the active tool is carried beyond said support by the travel of said slide rest, so as to bring the next tool into position for operation.

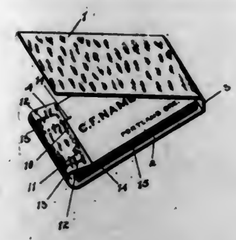
1,216,061. PLATE-RACK. GILBERT O. BREKKE, Plaza, N. D. Filed Mar. 20, 1916. Serial No. 85,357. (Cl. 65—65.)



1. A plate rack having its front made up of stiles and rails, said rails being arranged in groups, a shelf supported by the stiles in the plane of the lower rail of each group, said lower rails affording plate stops at the outer longitudinal edges of the shelves, and plate spacing blocks secured to the sides of the rack.

2. A plate rack having an open back, and having its side and front made up of stiles and rails, said rails being arranged in groups, a shelf supported by the stiles in the plane of the lower rail of each group, said lower rails, at the front of the rack, affording plate stops at the outer longitudinal edges of the shelves, rails at the back of the rack affording plate rests, and plate spacing blocks secured to the sides of the rack.

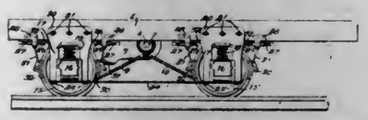
1,216,062. LOOSE-LEAF HOLDER. CARL F. BRENNE, EMIL G. JURGENS, and DENVER C. DUDLEY, Portland, Oreg. Filed Apr. 26, 1916. Serial No. 93,730. (Cl. 129—37.)



1. A loose leaf holder comprising a single piece of material folded to produce a cover, a back, an end portion therebetween, and a flap upon that end of said back opposite said end portion, said flap being turned toward said end portion and substantially parallel to said back; a piece of material secured to the inner surface of said back and having a portion thereof unattached to said back to form a pocket between said material and said back adjacent said flap; a piece of material secured to the inner surface of said flap and having a portion thereof unattached to said flap to form a pocket between said material and said flap adjacent said back; and a spring having one portion thereof adapted to be inserted into one of said pockets, and another portion thereof adapted to be inserted into the other of said pockets, thereby causing said flap to fold over upon said back with the transverse edge of said flap in juxtaposition to the inner surface of said back.

2. In a loose leaf holder, a back; an end secured thereto; a cover secured to said end; a flap secured to said back opposite said end, and adapted to fold over upon said back substantially parallel thereto and toward said end; said back and said flap each having formed therein a pocket; and a spring comprising a loop portion disposed intermediate said flap and said back, an extension within the pocket upon said flap, and an extension within the pocket upon said back, and adapted to hold said flap in folded position.

1,216,063. RAILWAY-TRUCK AND DRIVE THEREFOR. WILLIAM H. BUCKINGHAM, San Francisco, and HAROLD S. JOHNSON, Mill Valley, Cal., assignors to Hercules Motor Patents Inc., San Francisco, Cal., a Corporation of California. Filed Mar. 4, 1916. Serial No. 82,129. (Cl. 105—217.)



1. A driving truck for railway cars comprising a frame, a pair of oppositely disposed pedestals adjustably mounted thereon, means for adjusting said pedestals longitudinally of said frame, resilient cushions interposed between said pedestals and said frame, a supporting and driving axle carried by said pedestals, rail-running wheels fixed to said axle, driving means mounted upon said frame, and power transmitting devices between said driving means and said axle.

2. In a railway car truck, a frame, a pair of oppositely disposed axle carrying pedestals mounted thereon, resilient cushions interposed between said pedestals and said frame, and means for shifting said pedestals longitudinally of said frame.

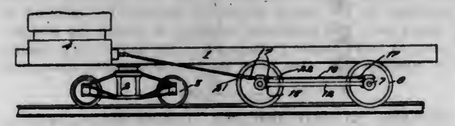
3. In a railway car truck, a frame, a pair of oppositely disposed axle carrying pedestals shiftably mounted thereon, a bracket fixed to said frame on each side of each pedestal, and adjusting means carried by said brackets for shifting said pedestals longitudinally of said frame.

4. In a railway car truck, a frame, a pair of oppositely disposed pedestals mounted thereon, an axle provided with rail-running wheels carried by said pedestals, a bracket fixed to said frame on each side of each pedestal, a brake shoe pivotally suspended from each bracket and adapted to engage one of said rail-running wheels, and adjusting means carried by said brake-supporting brackets for shifting said pedestals longitudinally of said frame.

5. A driving truck for railway cars comprising a frame, driving means carried thereby, a pair of oppositely disposed pedestals mounted thereon, an axle provided with rail-running wheels carried by said pedestals, a bracket fixed to said frame on each side of each pedestal, a brake shoe pivotally suspended from each bracket and adapted to engage one of said rail-running wheels, adjusting means carried by said brake-supporting brackets for shifting said pedestals longitudinally of said frame, and a power transmitting connection between said driving means and said axle.

[Claims 6 to 8 not printed in the Gazette.]

1,216,064. WORM-DRIVE FOR RAILWAY-CAR TRUCKS. WILLIAM H. BUCKINGHAM, Mount Tamalpias, and HAROLD S. JOHNSON, Mill Valley, Cal., assignors to Hercules Motor Patents Inc., San Francisco, Cal., a Corporation of California. Filed Aug. 21, 1916. Serial No. 116,014. (Cl. 105—227.)



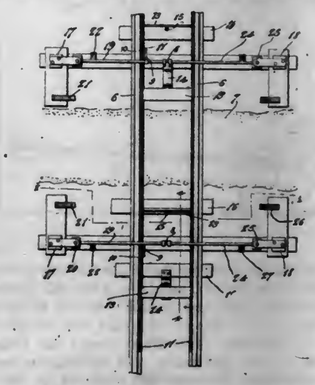
1. A driving truck for railway cars comprising a frame, a pair of oppositely disposed pedestals mounted thereon, a pair of solid axles provided with rail running wheels and a worm driving gear carried by said axles, a housing inclosing each of said worm driving gears, a torsion rod pivotally connecting said housings, a worm driving pinion rotatably mounted in each of said housings and coöperating with the respective worm gear therein, and a shaft connecting said worm driving pinions, whereby the same will be caused to rotate in unison.

2. A driving truck for railway cars comprising a frame a pair of oppositely disposed pedestals mounted thereon, solid axles provided with rail running wheels and a worm driving gear carried by said axles, a housing inclosing each of said worm driving gears, means for preventing the rotation of the housing with their respective axles, a worm driving pinion rotatably mounted in each of said housings for coöperating with the respective worm gear therein, and a shaft connecting said worm driving pinions whereby the same will operate in unison.

3. A driving truck for railway cars comprising a frame, a source of power carried thereby, a pair of oppositely disposed pedestals mounted thereon, solid axles provided with rail running wheels and a worm driving gear carried by each axle, a housing inclosing each of said worm driving gears, a torsion rod for pivotally connecting each of said housings to prevent the rotation thereof, a worm driving pinion rotatably mounted in each of said housings for coöperating with the respective worm gear therein, a shaft connecting said worm pinions to cause the same to rotate in unison, and a connection from said source of power, and one of said worm driving pinions.

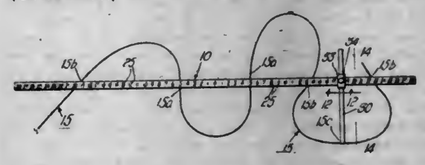
1,216,065. RAILWAY-GATE. JOHN R. BURRESS and WORLEY W. BURNES, Wills Point, Tex. Filed Oct. 19, 1915. Serial No. 56,761. (Cl. 269—9.)

In combination with the tracks and supporting ties of a railway, of a pair of gates hingedly supported laterally of said tracks, means for limiting the opening and closing movement of said gates, a pair of train operated bars arranged adjacent said tracks, transverse members connecting said bars adjacent and intermediate their ends, spring means secured to the ties and engaging several of the transverse connecting members for normally retaining the bars in elevated position, a flexible member connecting another of the transverse connecting members with a tie



for limiting the upward movement of said bars, shafts arranged transversely of said tracks, crank arms rigidly secured to said shafts and movably supporting said bars, and means connecting said shafts with said gates, whereby when said bars are depressed, said gates are moved to closed position.

1,216,066. CURVE-SCRIBER. JOSEPH A. BUTTRESS, Los Angeles, Cal. Filed Apr. 17, 1916. Serial No. 91,622. (Cl. 33—177.)



1. A curve scriber embodying a bar having transverse notches across its underface extending up into the bar, and a flexible strip adapted to fit into the notches.

2. A curve scriber embodying a bar having transverse evenly spaced notches across the under face extending up into the bar on one face, and a flexible strip adapted to fit into the notches.

3. A curve scriber embodying a channel-shaped bar having spaced notches in its side flanges, said notches being wider on one face of the flanges than on the other, and a flexible strip adapted to enter the notches.

4. A curve scriber embodying a channel-shaped bar having spaced notches in its side flanges, the flanges between the spaced notches being concaved so as to form them wider on one face of the flanges than on the other, and a flexible strip adapted to enter the notches.

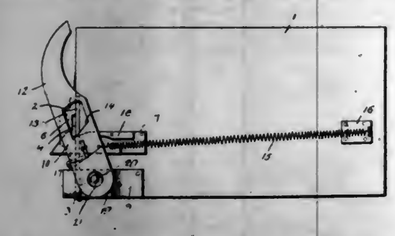
5. A curve scriber embodying a channel-shaped bar having spaced notches in its side flanges, the notches in one flange being arranged in definite opposite relation to the notches in the other flange, and a flexible strip adapted to fit into the notches.

[Claims 6 to 17 not printed in the Gazette.]

1,216,067. DOOR-OPERATING MECHANISM FOR MAIL-BOXES. WILLIAM S. CALCOTE, Wellington, Tex. Filed June 13, 1916. Serial No. 103,492. (Cl. 232—45.)

1. The combination with a receptacle having a door, of a keeper carried by the receptacle, a latch bar pivoted to the door having one end adapted to be operatively engaged by the keeper for normally holding the door closed, the

said end of the latch bar having its terminal projecting beyond the keeper, a lever pivoted to the receptacle and having an opening therein for receiving the extended terminal of the mentioned end of the latch bar, and means for moving the mentioned end of the latch bar from engagement with the keeper when the lever is moved in one direction so as to permit opening of the door.



2. The combination with a receptacle having a door, of a keeper carried by the receptacle, a latch bar pivoted to the door and having one end thereof adapted to be operatively engaged by the keeper, the said end of the latch bar having its terminal projecting beyond the keeper, a lever pivoted to the receptacle and having an opening therein for receiving the extended terminal of the latch bar, means for moving the mentioned terminal of the latch bar within the opening in the lever when the lever is moved in one direction so as to disengage the latch bar from the keeper so as to permit opening of the door, and means for returning the door and lever to normal position.

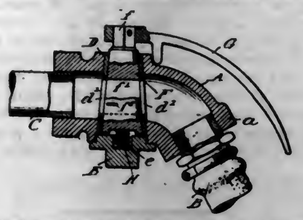
3. The combination with a receptacle having a door therein, of a keeper mounted on the receptacle, a latch bar pivoted to the door and adapted to have one end thereof operatively engaged by the keeper, the terminal of the mentioned end of the latch bar being extended beyond the keeper, a lever pivoted to the receptacle and having an opening therein for the reception of the extended terminal of the mentioned end of the latch bar, the lower wall of the opening being inclined and providing a rest for the terminal of the mentioned end of the latch bar when the lever is in normal position, the said inclined wall being adapted to move the mentioned end of the lever upwardly in the opening when the lever is moved in one direction so as to release the latch bar from the keeper to admit opening of the door.

4. The combination with a receptacle having a door therein, of a keeper mounted on the receptacle, a latch bar pivoted to the door and having one end adapted to be operatively engaged by the keeper when the door is closed, a lever pivoted to the receptacle and operatively engaging the latch bar for moving the latch bar from engagement with the keeper when the lever is moved in one direction, so as to admit of the door being opened, means for returning the lever and door to normal position when the lever is released, and means for limiting the movement of the lever upon return of the same to normal position.

5. In a receptacle having a door and an operating lever for the door, a plate mounted on the receptacle and having one end extended beyond the receptacle and reduced, the outer side of the extended end being beveled, means carried by the lever for engaging the beveled side of the reduced end of the plate during movement of the lever in door opening direction so as to effect lateral movement of the lever and adapted to be engaged beneath the reduced end of the plate when the lever reaches the end of its movement in a door opening direction so as to hold the lever against movement when the door is opened.

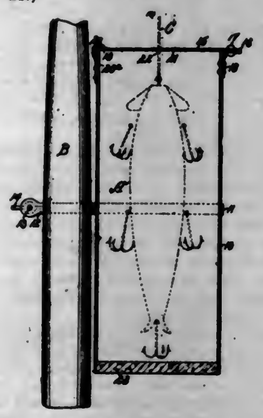
1,216,068. ANGLE-COCK VALVE. ROY ALEXANDER CALDWELL, Los Angeles, Cal. Filed Mar. 12, 1914, Serial No. 824,197. Renewed Nov. 28, 1916. Serial No. 133,985. (Cl. 137—7.)

In an angle cock, the combination with a tubular body having diametrically opposing apertures, a valve sleeve having its ends extended into the diametrically opposing apertures of the body, said sleeve and said apertures being correspondingly tapered, a closing cap threaded into the enlarged opening of the casing and provided with an inner central socket, a plug disposed within the sleeve and also tapered to correspond to the taper thereof, said plug and said sleeve having slotted transverse openings of substantially smaller dimensions than the bore of the body and adapted to register to establish communication between the ends of the body and said body and said sleeve having laterally extending bleed openings adjacent to one



of the said slotted openings of the sleeve, a spring seated in the cavity of the closing cap and bearing against the enlarged end of the valve plug in order to snugly seat the same within the sleeve, the said valve plug having a horizontally slotted recess in its peripheral surface between opposite ends of the plug opening to lap the inner ends of the bleed openings with one of the said adjacent slotted openings of the sleeve when the main valve opening is turned to a non-registered position in which its slot extends at right angles to the axis of the body, and a handle for turning the valve plug, all for the purpose described.

1,216,069. MINNOW-HOLDER. HORACE DAVID CAMMACK, Crossett, Ark., assignor of one-half to Frank S. Cannon, Crossett, Ark. Filed June 7, 1916. Serial No. 102,182. (Cl. 43—28.)



1. As a new article of manufacture, a bait holder comprising an elongated cylindrical container provided with means for securing it to a fishing rod, said container having an open upper end and provided with a cover for said end, said cover being in the form of a disk pivoted to swing horizontally and having a slot extending out through its edge, the outer end of the slot being flared and the inner end curved outwardly in the direction of the side through which it extends, and terminating approximately at the center of the cover, and fastening means for the cover.

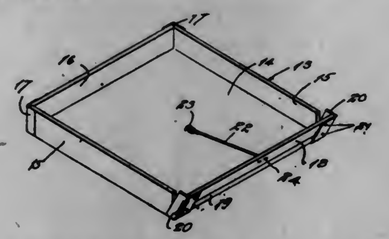
2. As a new article of manufacture, a bait holder comprising an elongated cylindrical container having a cork bottom and provided with a cover in the form of a disk and pivoted to swing horizontally and having a slot extending out through its edge, the outer end of the slot being flared and the inner end curved outwardly in the direction of the side through which it extends, and terminating approximately at the center of the cover, the container being provided with means for securing it to a fishing rod and with means for locking the cover closed.

1,216,070. CRAYON-HOLDER. OSCAR G. CARLSON, Mill City, Oreg., assignor of one-half to Gilbert M. Sprague, Mill City, Oreg. Filed June 13, 1916. Serial No. 103,429. (Cl. 120—13.)



The combination with a tubular casing adapted to contain a crayon stick, of a spring-pressed follower in the casing coacting with the stick, a resilient clamp ring secured in the casing and encircling the stick and having clutch fingers to engage and retain the stick, and a handle on the ring protruding through an opening in the casing, whereby the ring may be depressed to release the clutch fingers.

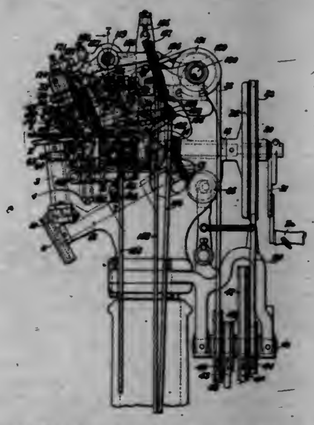
1,216,071. HAT-BOX. ALFRED H. CARSTENSEN, Milwaukee, Wis. Filed Aug. 9, 1916. Serial No. 114,027. (Cl. 229—44.)



1. A hat box including a bottom wall, side walls and a rear wall secured to the bottom wall, a front wall hingedly secured to the forward end of the bottom wall, means carried by the opposite vertical side edges of the front wall and engaging the outer faces of the side walls for preventing lateral movement of the front wall with relation thereto, said front wall provided in its upper end centrally of its side edges with a slot, a cover, said cover having a front wall, said front wall being hingedly secured to the cover, and an elastic band carried by the cover and its front wall and resting in the slot of the front wall of the box for normally holding the cover in a closed position and upon the box.

2. A hat box including a bottom wall, side walls and a rear wall secured to the bottom wall, a front wall hingedly secured to the forward edge of the bottom wall, angle members secured to the opposite vertical side edges of the front wall, their opposite ends extending in the direction of the rear wall and engaging the outer faces of the side walls to limit the lateral movement of the front wall with relation thereto, said front wall provided with a slot centrally of its side edges thereof, a cover, said cover having a top wall, a rear wall and side walls secured to the top wall, a hinged front wall secured to the forward edge of the top wall, angle members secured to the front wall and engaging the outer faces of the side walls limiting the lateral movement of the front wall, and an elastic band secured centrally to the top and to the front wall for normally holding the same in against the side walls of said cover, and adapted to rest in the slot formed in the front wall of the box and prevent accidental displacement of said front wall.

1,216,072. MACHINE FOR OPERATING UPON SHOE-SOLES. FRANK CHATEAUNEUF, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 26, 1913. Serial No. 769,879. (Cl. 12—27.)



1. A machine for shouldering the edges of shoe soles having, in combination, means for feeding and guiding the sole, two shouldering knives for operating along different portions of the sole edge, knife carriers and mechanism connected therewith for normally presenting one knife in position to operate upon the edge of the sole, and means for withdrawing the first knife and for presenting the second knife in position to operate upon the edge of the sole.

2. A machine for shouldering the edges of shoe soles having, in combination, means for feeding and guiding the sole, two shouldering knives for operating along different portions of the sole edge, knife carriers and mechanism connected therewith including a spring for normally presenting one knife in position to operate on the edge of the sole, and a treadle for moving the knife carriers against the force of the spring to withdraw the first knife and present the second knife in position to operate upon the edge of the sole.

3. A machine for shouldering the edges of shoe soles having, in combination, means for feeding and guiding the sole, two shouldering knives for operating along different portions of the sole edge, mounted to bodily reciprocate along inclined paths which intersect at or near the edge of the sole being shouldered, and means for withdrawing one knife from the edge of the sole and advancing the other knife into position to operate upon the edge of the sole.

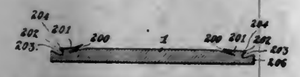
4. A machine for shouldering the edges of shoe soles having, in combination, means for feeding and guiding the sole, two rotary shouldering knives for operating along different portions of the sole edge, knife carrying slides

for supporting the shouldering knives to bodily reciprocate along inclined paths which intersect at or near the edge of the sole being shouldered, and means for retracting one knife carrying slide and simultaneously advancing the other knife carrying slide so as to present the shouldering knives singly and alternately in position to operate upon the edge of the sole.

5. A machine for shouldering the edges of shoes soles having, in combination, means for feeding and guiding the sole, two rotary shouldering knives for operating along different portions of the sole edge, rotary spindles for supporting the knives, driving pulleys mounted on the spindles, carriers in which the spindles are journaled, means for retracting one carrier and simultaneously advancing the other carrier, a driving belt running over the pulleys, and pulley wheels for guiding the belt to the knife spindle pulleys so that the increased length of the belt required by the advancing spindle pulley is given up by the retracting spindle pulley.

[Claims 6 to 22 not printed in the Gazette.]

1,216,073. TURN-SHOE SOLE. FRANK CHATEAUNEUF, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed May 26, 1913, Serial No. 769,879. Divided and this application filed July 25, 1914. Serial No. 853,156. (Cl. 36—22.)



1. A turn shoe sole having an inwardly-opening stitch-receiving channel cut in the flesh side of the sole, a channel flap, an outwardly facing shoulder cut in the flesh side of the sole and having at its base an undercut groove opposite the bottom of the channel for receiving the inseam, the upper part of the shoulder forming a tongue overhanging the groove, when the channel flap lies adjacent the part of the sole from which it was cut, and a feather forming the margin of the sole having its upper face flat and extending outwardly from the base of the shoulder in a direction inclined to the plane of the sole.

2. A turn shoe sole having an inwardly-opening, stitch-receiving channel cut in the flesh side of the sole, a channel flap, an outwardly facing shoulder against which the upper is sewed cut in the flesh side of the sole and having an undercut base opposite the bottom of the channel when the channel flap lies adjacent the part of the sole from which it was cut, and a feather forming the margin of the sole having its upper face extending outwardly from the undercut base of the shoulder in a direction inclined to the plane of the sole..

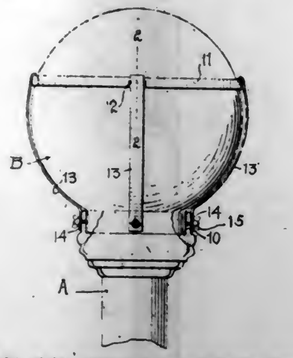
3. A turn shoe sole having an inwardly-opening, stitch-receiving channel cut in the flesh side of the sole, an outwardly facing shoulder against which the upper is sewed cut in the flesh side of the sole and having an undercut base opposite the bottom of the channel, and a feather forming the margin of the sole having its upper face extending outwardly from the undercut base of the shoulder in a direction inclined away from the grain side of the sole to form a thick edge or margin on the sole.

4. A turn shoe sole having an inwardly-opening, stitch-receiving channel, an outwardly facing shoulder against which the upper is sewed cut in the flesh side of the sole and having an undercut base opposite the bottom of the channel, and a feather forming the margin of the sole having its upper face extending outwardly from the undercut base of the shoulder in a direction inclined away from the grain side of the sole along the fore part and in a direction inclined toward the grain side of the sole along the shank to form a thick edge or margin along the fore part and a thin beveled edge or margin along the shank.

5. A turn shoe sole having an inwardly-opening stitch-receiving channel cut in the flesh side of the sole, an outwardly-facing shoulder against which the upper is sewed cut in the flesh side of the sole and having a stitch-receiving groove formed at its base by cutting into the leather opposite the bottom of the channel, and a feather extending beyond the shoulder to form the margin of the sole, the upper surface of said feather being inclined in one direction along a part of the sole, and being inclined in another direction along another part of the sole.

[Claims 6 and 7 not printed in the Gazette.]

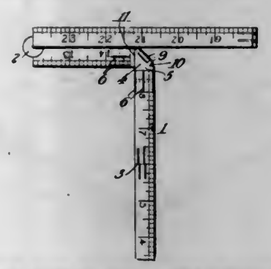
1,216,074. PROTECTOR FOR LIGHT-GLOBES. HENRY H. CHOTEAU, Topeka, Kans., assignor of one-fourth to Frank R. Wilson, one-fourth to Laura Wilson, and one-fourth to Ogeal Smith, Topeka, Kans. Filed July 22, 1916. Serial No. 110,737. (Cl. 240—102.)



1. A light globe protector comprising a circular band having a diameter less than the greatest diameter of the globe to which it is to be applied and having a plurality of strips extending downward from it and provided with screws, said strip being hinged to the band.

2. The combination with a support having a socket, and a lamp globe fitting in said socket, of a protector for the globe comprising a circular band less in diameter than the greatest diameter of the globe, and engaging the upper portion of the globe, and strips hinged to and extending downward from the band conforming to the curvature of the globe and detachably connected to the socket.

1,216,075. FOLDING RULE. JOHN FRANK CLUGSTONE, Williamsport, Pa. Filed Dec. 30, 1912. Serial No. 739,278. (Cl. 33—105.)



1. A folding hinge for rule sections consisting of a pair of oblong members jointed on a line diagonal to their length, each of said members having the thickness of the rule sections but having a cut-away portion of less thickness than the thickness of the rule sections, said cut-away portions having interengaging eyes lying within the dimensions of the rule sections, and means for pivoting the eyes so as to form the diagonal joint of the hinge.

2. A folding hinge for rule sections, consisting of a pair of oblong members jointed on a line diagonal to their length, each of said members having the thickness of the rule sections and including a tongue of less thickness than the thickness of the rule sections and a shouldered portion adjacent said tongue, the tongues of said members being

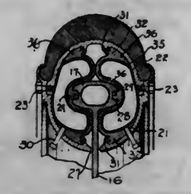
provided with interengaging eyes lying within the dimensions of said shouldered portions, said tongues also lying in superposed relation in the folded condition of the joint and thereby positioning corresponding sides of the rule sections in the same plane, and means for pivoting the eyes so as to form the diagonal joint of the hinge.

3. A folding hinge for rule sections consisting of a pair of oblong members jointed on a line diagonal to their length, each of said members having the thickness of the rule sections and including a tongue of less thickness than the thickness of the rule sections and a shouldered portion adjacent to said tongue, the tongues of said members being provided with interengaging eyes, said tongues lying in superposed relation in the folded condition of the joint and thereby positioning corresponding sides of the rule sections in the same plane, and a fastening pin arranged in the eyes of the tongues and forming a pivot for the same, the diagonally-opposite corners of said shouldered portions being recessed in alinement with the angular disposition of said eyes to permit the application of said fastening pin to said eyes.

4. A folding rule, comprising a plurality of sections, and a miter joint arranged in one of said sections and formed of a pair of members the contiguous portions of which are joined on a line diagonal to their length, the members of said joint being cut away to provide shoulders for abutting against the opposite section when the rule is folded at the miter joint.

5. A folding rule, comprising in combination, intermediate sections joined by a center joint, and sections carried by each of said intermediate sections, and a miter joint carried by one of said intermediate sections to fold into a thickness equaling the thickness of the sections and to throw the end section carried thereby over and into contact with the second intermediate section to form a cross-like structure having four right angles.

1,216,076. VEHICLE-WHEEL. HENRY B. COATS, Veedersburg, Ind. Filed Oct. 10, 1914. Serial No. 866,104. (Cl. 152—35.)



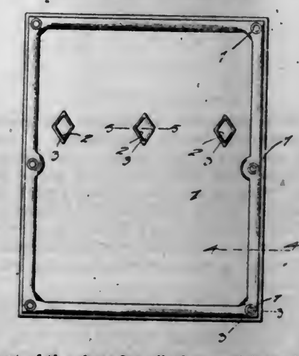
1. A vehicle wheel having a hollow annular rim, a hub, an annular member connected with the hub portion and extending within said rim, and pneumatic means for mounting said hub supporting member in said rim, said pneumatic means consisting of a pair of annular air cushions substantially semi-circular in cross section and located in said rim on opposite sides of said hub supporting member so as to envelop the same.

2. A vehicle wheel having a tubular rim with a series of slots in the inner periphery thereof, a hub-supporting annular rim-like member within said rim substantially elliptical in cross section, a hub, bars extending therefrom through said slots to said hub-supporting member, and a pair of annular pneumatic cushions in said rim portion, one on each lateral side of said hub-supporting member and the inner and outer portions of said cushions meeting and engaging each other near the inner and outer peripheries of said hub-supporting member so as to envelop the same, substantially as set forth.

3. A vehicle wheel having a tubular rim with a series of slots in the inner periphery thereof, a hub-supporting annular rim-like member located within said rim substantially elliptical in cross section, a hub with spokes extending therefrom through said slots to said hub-supporting member, and a pair of annular pneumatic cushions in said rim portion, one on each lateral side of said hub-supporting member and secured to the side of said member at intervals and so arranged, as to envelop the outer and inner peripheries of said hub supporting member.

4. A vehicle wheel having a hollow tubular rim formed of a plurality of separable annular sections having inwardly extending annular flanges, a hub, an annular member connected with the hub portion and extending within said rim, pneumatic means for mounting said hub supporting member in said rim, said pneumatic means consisting of a pair of annular air cushions substantially semi-circular in cross section and located in said rim so as to engage each other and coöperate substantially to envelop said hub supporting member, and a protecting member between each air cushion and said hub supporting member and having beads along the external and internal peripheries thereof fitting in said flanges in the rim.

1,216,077. AUTOMOBILE-MAT. EMANUEL ARCH COHEN and CYRUS C. COLYER, Pittsburgh, Pa. Filed Mar. 14, 1916. Serial No. 84,216. (Cl. 21—90.)



1. A mat of the class described comprising a body formed of rubber, said body having a plurality of pedal receiving apertures therein, beads reinforcing the walls of the apertures, beads formed around the edges of the mat on opposite sides thereof to reinforce the same, said last named beads having apertures therein for the reception of attaching bolts by which the device is secured in place in the motor vehicle, and reinforcing strips extending through the last named beads and formed on the edge of the mat.

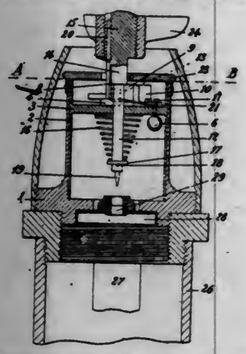
2. A mat of the class described comprising a rectangular rubber body, said body having a plurality of pedal receiving apertures therein, beads reinforcing the walls of the apertures, beads extending around the periphery of the mat, the last named beads having apertures therein for the reception of bolts so that the same may be securely attached to the upper face of the floor board of a motor vehicle, and reinforcing strips extending through the beads at the edges of the mat reinforcing the same when the attaching means is placed therein.

1,216,078. PERCUSSION MECHANISM FOR EXPLOSIVE PROJECTILES. EDWARD WILLIAM COLEMAN, London, England. Filed Aug. 21, 1916. Serial No. 160,137. (Cl. 102—39.)

1. A safety percussion mechanism for explosive projectiles, comprising in its construction a striking pin adapted to fire the igniting charge, a device adapted to lock the striking pin in its cocked position, a ball-weight adapted to move relatively to the shell-body in consequence of its inertia, when the projectile is stopped by a resisting body, and a flexible member connecting the ball-weight with the said locking device and adapted to set the latter in motion, so as to release the striking pin, substantially as described.

2. A safety percussion mechanism for explosive projectiles, comprising in its construction a device adapted to retain the striking pin in its cocked position, a safety

device adapted to secure the said retaining device in its locking position and to be set out of action, when the projectile is launched, a ball-weight adapted to move relatively to the shell-body in consequence of its inertia, when the projectile is stopped by a resisting body, and a flexible member connecting the ball-weight with the said retaining device, so as to release the striking pin, when the ball-weight is set in motion, substantially as described.



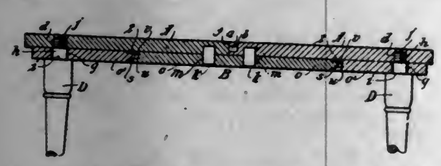
3. A safety percussion mechanism for explosive projectiles, comprising in its construction a striking pin adapted to fire the igniting charge, a sear spring and sear adapted to lock the firing pin in its cocked position, a crank-lever carrying the sear, a ball-weight adapted to move relatively to the shell-body in consequence of the impact of the projectile, and a flexible member connecting the ball-weight with the crank lever and adapted to set the latter in motion, so as to release the firing pin, substantially as described.

4. A safety percussion mechanism for explosive projectiles, comprising in its construction a striking pin adapted to fire the igniting charge, a device adapted to lock the striking pin in its cocked position, a ball-weight adapted to move relatively to the shell-body in consequence of its inertia, when the projectile strikes a resisting body, a cup-like support for the ball-weight, and a flexible member connecting the ball-weight with the said locking device and adapted to set the latter in motion for releasing the striking pin, substantially as described.

5. In a percussion mechanism for explosive projectiles having a firing pin movable in the axis of the projectile, the combination of a firing pin with a sear forming part of a lever movable in a plane at right angles to the axis of the projectile, a vane-body mounted on a prolongation of the firing pin by a screw-thread, and a locking pin fixed at one end to the sear lever and extending outward from the same parallel to the axis, the said prolongation having in its circumference an axial recess adapted to receive the said locking pin, substantially as described.

[Claim 6 not printed in the Gazette.]

1,216,079. KNOCKDOWN TABLE. HERBERT C. COOK, Springfield, Mass. Filed Apr. 14, 1916. Serial No. 91,072. (Cl. 45—48.)



1. A knock down table, consisting of two edgewise matching table top sections having downwardly opening threaded sockets at their outer corner portions, cleats to extend across the adjoining edges of the sections, in contact with the under surfaces of the latter, and having holes through their end portions to register with said threaded sockets, each cleat being formed in three sections having both tongue-and-groove, and dowel-and-socket engagements at their adjoined and matched ends, and each intermediate cleat section having detachable interlocking engagements with the table top sections, and leg members having, at their upper ends, axially extended stems of reduced diameter, the extremities of which are threaded for engagement in the sockets and having shoulders, at a distance from the ends of the stems for clamping engagement against the cleats.

2. A knock down table, consisting of two edgewise adjoined table top sections, having matching dowel-and-socket engagements and provided with downwardly opening threaded sockets at their outer corner portions, cleats to extend across the adjoining edges of the sections, in contact with the under surfaces of the latter, and having holes at their end portions to register with said threaded sockets, each cleat being formed in three sections having both tongue-and-groove, and dowel-and-socket engagements at their adjoined and matched ends, and each intermediate cleat section having detachable interlocking engagements with the table top sections, and leg members having, at their upper ends, axial stems of reduced diameter, the extremities of which are threaded for engagement in the sockets and having shoulders, at a distance from the ends of the stems for clamping engagement against the cleats.

3. A knock down table, consisting of two edgewise matching table-top sections having downwardly opening threaded sockets at their outer corner portions, cleats to extend across the adjoining edges of the sections, in contact with the under surfaces of the latter, having detachable socket and dowel engagements with the table top sections, and having holes through their end portions to register with said threaded sockets, and leg members having, at their upper ends, axial stems of reduced diameter, the extremities of which are threaded for engagement in the sockets and having shoulders, at a distance from the ends of the stems for clamping engagement against the cleats.

1,216,080. CURRENT-MOTOR. CLARENCE C. COOKE, Howard, Pa. Filed Feb. 15, 1916. Serial No. 78,411. (Cl. 170—89.)



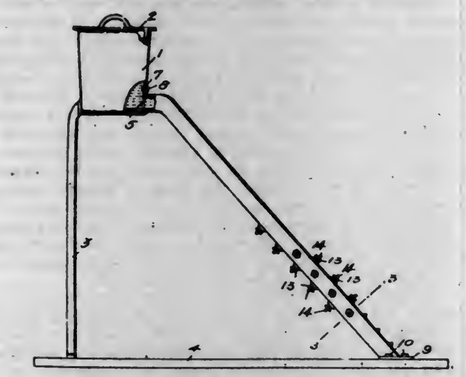
1. A current motor including a longitudinal dam consisting of a wall parallel to, and spaced from, the bank of a stream and extending above the normal water level thereof, a transverse wall connecting the upper end of the said longitudinal wall with the bank of the stream and having an opening below the normal water level and adjacent the angle between the walls, a wing extending angularly in an upstream direction substantially from the angle between said longitudinal and transverse walls for the deflection of current into the opening of the latter wall, a sluiceway formed in connection with the longitudinal wall with its upper end adjacent the opening of the transverse wall to receive current therefrom, and having its lower end terminating above high water mark, and an endless impulse member operating within and mounted in connection with said sluiceway.

2. A current motor including a longitudinal dam consisting of a wall parallel to, and spaced from, the bank of a stream and extending above the normal water level thereof, a transverse wall connecting the upper end of the said longitudinal wall with the bank of the stream and having an opening below the normal water level and adjacent the angle between the walls, a wing extending angularly in an upstream direction substantially from the angle between said longitudinal and transverse walls for the deflection of current into the opening of the latter wall, a sluiceway formed in connection with the longitudinal wall with its upper end adjacent the opening of the transverse wall to receive current therefrom and having its lower end terminating above high water mark, the said vertical and transverse walls extending substantially above the normal water level of the stream and the said wing terminating at its upper end substantially below the normal water level of the stream, and an endless power member mounted in connection with the said longitudinal wall and operating within the said sluiceway.

3. In a current motor of the type described, an endless power member including a plurality of buckets open at one side and having at their opposite sides nozzles projecting away from the same and establishing communication between opposite sides of the buckets.

4. In a current motor of the type described, an endless flexible power member having outstanding buckets each of which is open at one side and provided at its opposite side with a funnel-shaped extension, the aperture of which communicates with the interior of the bucket, for the purpose described.

1,216,081. HOG-OILER. CHARLES ALFRED COX, Quincy, Ill., assignor to Moorman Manufacturing Company, Quincy, Ill., a Corporation of Illinois. Filed July 20, 1916. Serial No. 110,363. (Cl. 119—157.)

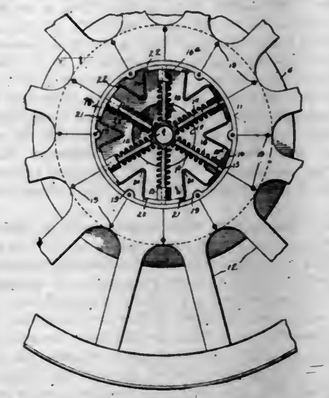


A hog oiler comprising a reservoir, means for supporting the same, said reservoir having an opening in one wall and an inclined casing having one end open and connected with the opening of the reservoir, said casing being approximately square in cross section and having a series of ports in each face, a valve casing threaded into each port, a valve coöperating with the inner end of each casing and having a stem extending through the casing and fitting the same closely and provided with longitudinally extending grooves, and a spring normally holding each valve closed and within the casing.

1,216,082. SPRING-WHEEL. WILLIAM E. CRAWFORD, Devils Lake, N. D. Filed Sept. 24, 1915. Serial No. 52,447. (Cl. 152—45.)

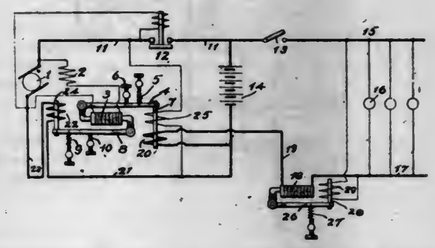
1. A spring wheel including a hub, a pair of spaced plates movable relatively to said hub, spokes radiating from said plates, a ring secured between said plates, arms radiating from such hub, sockets slidably receiving the outer terminals of said arms, shoes carried by the outer terminals of said sockets and engaged with the inner surface of said ring, springs interposed between said hub and said ring for normally retaining the latter in spaced relation to said hub, internal enlargements formed in said ring constituting stops for limiting the sliding movement of said shoes, and a plurality of springs interposed between and connecting the adjacent ends of the shoes to normally retain the latter in uniformly spaced relation.

2. A spring wheel including a hub, a pair of spaced plates movable relatively to said hub, spokes radiating from said plates, a ring secured between said plates, arms radiating from said hub, sockets slidably receiving the outer terminals of said arms, shoes carried by the outer terminals of said sockets slidably engaged with the inner surface of said ring, internal enlargements formed in said ring constituting stops for said shoes, springs interposed between the hub and said ring for normally retaining the



latter in concentrically spaced relation to said hub, said shoes having their opposed side edges recessed, and substantially V-shaped leaf springs having outwardly directed ends engaged in said recesses for normally retaining said shoes in uniformly spaced relation.

1,216,083. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Sept. 27, 1911. Serial No. 651,494. (Cl. 171—313.)



1. The combination with a generator, a main circuit, and a translation circuit, of a regulator for the generator comprising a resistance medium in the field thereof; means for operating the regulator responsive to current fluctuations and comprising a pivotally mounted lever in coöperation with said medium; means for operating the regulator responsive to voltage fluctuations comprising an independent pivotally mounted lever coöperating with said medium; and means for modifying the voltage regulation of the generator affected by current in the translation circuit.

2. The combination with a generator, a main circuit, and a translation circuit, of a regulator for the generator comprising a resistance medium; means for operating the regulator responsive to current fluctuations and including a lever operating upon one end of said medium; means for operating the regulator responsive to voltage fluctuations and including a lever upon the opposite end of said medium; and means for modifying the voltage regulation of the generator affected by current in the translation circuit.

3. The combination with a generator, a main circuit, and a translation circuit, of a regulator for the generator

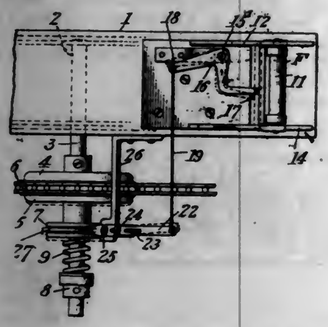
comprising a compressible resistance medium; means for varying the resistance of said medium responsive to current fluctuations and including a lever coöperating with one end thereof; means for varying the resistance of said medium responsive to voltage fluctuations and including a lever coöperating with the opposite end of said medium; and means for modifying the voltage regulation of the generator affected by current in the translation circuit.

4. The combination with a generator, a main circuit, and a translation circuit, of a regulator for the generator comprising a resistance medium in the field thereof; means for operating the regulator responsive to current fluctuations and comprising a pivotally mounted lever in coöperation with said medium; means for operating the regulator responsive to voltage fluctuations comprising an independent pivotally mounted lever coöperating with said medium; and means responsive to voltage fluctuations across the translation circuit for affecting the current in said circuit and thereby affecting the voltage responsive means.

5. The combination with a generator, a main circuit, and a translation circuit, of a regulator for the generator comprising a resistance medium in the field thereof; means for operating the regulator responsive to current fluctuations and comprising a pivotally mounted lever in coöperation with said medium; means for operating the regulator responsive to voltage fluctuations comprising an independent pivotally mounted lever coöperating with said medium; a resistance medium in the translation circuit coöperating with the voltage responsive means; and voltage operated means for controlling said translation circuit resistance medium.

[Claim 6 not printed in the Gazette.]

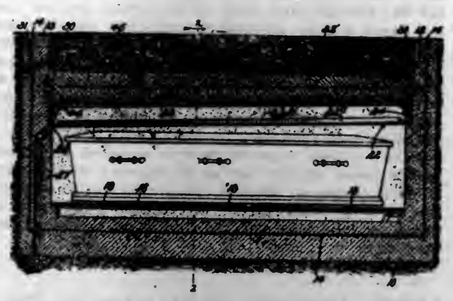
1,216,084. TENSION-REGULATOR. JOHN A. DAHLBERG, Brooklyn, N. Y. Filed Sept. 20, 1915. Serial No. 51,561. (Cl. 242—75.)



1. In automatic tension mechanism, the combination with a magazine, film spool and spool shaft, of a friction plate fixed on said shaft, another friction plate splined on the shaft for end movement, a drive sprocket free on the shaft between said plates, a clutch spring for the movable plate, a film tension device comprising a roller engaging the film so as to maintain a bend therein under constant pressure, a movable mounting for the roller, a bell crank actuated by the roller, a lever engaging the movable friction plate and a link connecting the lever with said bell crank.

2. In an automatic tension mechanism, the combination with a magazine, spool shaft and a film winding spool rigidly mounted on the shaft, of a disk rigidly mounted on said shaft, another disk slidably mounted on the shaft, a continuously driven member loosely mounted on the shaft between said disks for driving the spool shaft, a bracket mounted on the side of said magazine, a lever pivotally connected intermediate its ends to said bracket and connected at its lower end to said sliding disk, a roller slidably mounted on said magazine for maintaining a bend under constant pressure in the film, a bell crank mounted on said magazine for forcing said roller toward the film, a link connecting the bell-crank to the upper end of the lever, and a coil spring mounted on said shaft for forcing the slidable disk toward the continuously driven member.

1,216,085. MEMORIAL BURIAL-VAULT. ISAAC S. DAULEY, Oneonta, N. Y. Filed July 3, 1916. Serial No. 107,315. (Cl. 72—7.)



1. The herein described memorial burial vault adapted to be placed beneath the surface of the earth, the same comprising integral bottom, side and end walls of reinforced concrete providing a casket receptacle in its lower portion, means spanning the vault intermediate of its top and bottom and serving to exclude water from the casket compartment and providing for a center filling of earth for the growth of vegetation within the top of the vault.

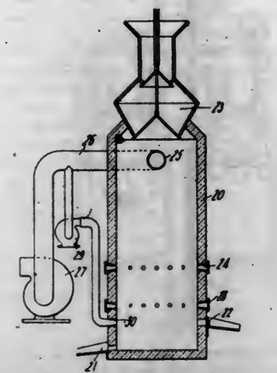
2. In a burial vault of the character set forth, a water and frost proof integral bottom, side and end wall structure having a ledge extending entirely around the inner surface thereof between the bottom and the top, means supported upon and above said ledge to exclude surface water or the like from the interior of the lower portion of the vault, said water excluding means constituting a support for a mass of earth within the upper portion of the vault for the growth of vegetation on substantially the level of the surface of the surrounding earth.

3. The herein described burial vault comprising a solid water and frost proof integral structure including a bottom and side and end walls, a ledge extending entirely around the bottom of the compartment formed by said side and end walls, a perforated casket rest supported upon said ledge, a plurality of cross strips connected to the upper surface of said casket rest, and means spaced upwardly from the casket rest to exclude all extraneous water from the compartment in which the casket rest is located, said water excluding means constituting a support for a superposed mass of earth within the upper portion of the integral structure.

4. In a memorial burial vault, the combination with a rigid integral concrete structure including a bottom and side and end walls, of a detachable metallic gutter extending around the inner vault space and supported upon the side and end walls, said gutter including an upwardly extending inner flange and a vault cover above the gutter and having its rim supported adjacent the side and end walls upon the gutter structure, said gutter being inclined toward one end of the vault and provided with a drainage outlet for the water received from within the gutter.

5. In a concrete burial vault, the combination with the integral side and end walls providing a casket compartment and having a ledge extending around the side and end walls forming the boundary for the casket compartment, of a metal gutter supported upon said ledge, one portion of the gutter extending inwardly from the ledge and thence upwardly forming a flange and a vault cover resting upon the gutter and supported through the gutter upon said ledge, said cover serving to direct extraneous water into the gutter preventing its entry into the casket compartment, and means coöperating with the gutter to drain the water received thereby to the outside of the vault.

1,216,086. METHOD OF TREATING METALS AND OTHER MATERIALS BY HEAT. JEAN H. L. DE BATS, Zelienople, Pa., assignor of one-third to Alfred G. Zehner, Zelienople, Pa., and one-third to Tensard De Wolf, Pittsburgh, Pa. Continuation of application Serial No. 735,059, filed Dec. 5, 1912. This application filed Mar. 19, 1914, Serial No. 825,834. Renewed July 11, 1916. Serial No. 108,723. (Cl. 263—1.)



1. The method of treating metal or metal bearing substances by heat, consisting in placing the substance and solid fuel in a closed chamber, withdrawing the products of combustion from said chamber mechanically by suction, admitting air to the fuel in said chamber, and regulating the volume and velocity of the air supply independently in a manner to maintain a lower pressure within said chamber than externally and to control the rate of combustion and the resulting temperature.

2. The method of treating metal or metal bearing substances by heat, consisting in placing the substance and solid fuel in a closed chamber, withdrawing the products of combustion from said chamber mechanically by suction, admitting air to the fuel in said chamber, restricting the air supply in a manner to control its volume, and regulating the suction in a manner to control the velocity of the air supply, and thereby regulating the rate of combustion and the temperature in said chamber.

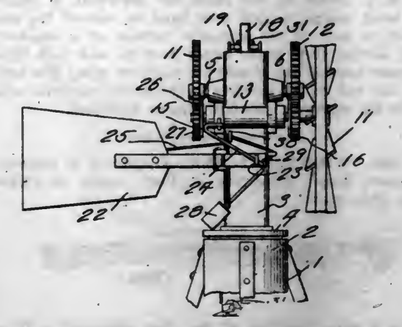
3. The method of treating metal or metal bearing substances by heat, consisting in placing the substance and solid fuel in a closed chamber having the space therein maintained under partial vacuum created mechanically by suction, admitting air into said chamber, restricting the air supply in a manner to maintain the pressure within said chamber lower than the external air pressure, and withdrawing the products of combustion from said chamber by suction.

4. The method of treating metal, consisting in placing the same in a crucible surrounded by a mass of ignited solid fuel in a closed chamber having the space therein under partial vacuum created by suction and having a regulable bottom air inlet, admitting into the bottom of said chamber only substantially the proper amount of air for complete combustion of the fuel, and withdrawing the products of combustion from the chamber by suction, thereby burning the fuel substantially completely in the zone containing the metal and conserving the heat and confining it to said zone to thus melt the metal in said crucible.

5. The method of treating metal, consisting in embedding the same in a mass of ignited solid fuel in a closed chamber having the space therein under partial vacuum created by suction and having a regulable bottom air inlet, admitting into the bottom of said chamber under pressure above the pressure therein only substantially the proper amount of air to effect complete combustion of the fuel, allowing the air to thoroughly diffuse and distribute around the lower stratum of the fuel, and withdrawing the products of combustion from the chamber by suction, thereby burning the fuel in the zone containing the metal and conserving the heat and confining it to said zone.

[Claim 6 not printed in the Gazette.]

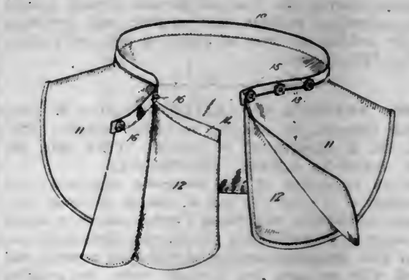
1,216,087. OPERATING DEVICE FOR WINDMILLS. WILLIAM H. DE LYLE, Albuquerque, N. Mex. Filed Mar. 22, 1915. Serial No. 16,172. (Cl. 74—27.)



1. In a windmill, a frame having tracks thereon, a pair of alined shafts mounted in said frame and having their ends terminating in spaced relation, notched disks secured to the adjacent ends of said shafts, a reciprocating rod movable between said disks and having pins thereon for engaging the notches in the same, the ends of certain of the pins engaging said tracks to guide the remaining pins into said notches, and spring actuated means for urging the rod toward the centers of the disks during its upward movement.

2. In a wind mill, a frame having tracks, shafts mounted in said frame adjacent each other, notched disks carried by said shafts, a reciprocating element movable between said disks and having track engaging members thereon for engaging the notches in said disks, certain of said members being adapted to engage the tracks on said frame to guide the remaining members into said notches, and means for urging said reciprocating element toward the centers of said disks during certain portions of the reciprocations thereof.

1,216,088. HAIR-CUT BIB. SABINO DE VINCO, Mount Vernon, N. Y. Filed Sept. 25, 1915. Serial No. 52,724. (Cl. 2—54.)



1. In a device of the character described, a neck band, means to connect the ends of said neck band, a pair of bib members carried by said neck band and extending approximately the entire length thereof, the upper edge of one of said bib members being free from said neck band adjacent one end to fit between the opposite ends of said bib members when the ends of said neck band are connected.

2. In a device of the character described, an elastic neck band, a pair of bib members having their upper edges fixed to said neck band, said bib members being con-

structed for interlocking engagement at their ends, and means to connect the ends of said neck band.

3. In a device of the character described, a flexible neck band, means to connect the ends of said neck band and a pair of bib members having their upper marginal edges fixed to said neck band and extending approximately the entire length thereof, the ends of said bib members being adapted for interlocking engagement.

4. In a device of the character described, a flexible neck band, clasps on said neck band to connect the ends thereof, a pair of bib members formed of a washable fabric having their upper edges fixed to said neck band, the upper edge of one of said bib members being free adjacent one end to be received between the opposite ends of said bib members, substantially as described.

1,216,089. WIRE-STRETCHER. LAURENCE B. DEVOLLD, Emmett, Kans. Filed Nov. 17, 1915. Serial No. 61,950. (Cl. 254—65.)



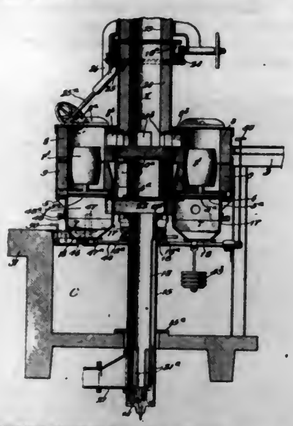
1. In a wire stretcher of the class described, a frame having a longitudinally extending recess, post engaging means formed integrally with the said frame, a block slidable in said recess, pulleys carried by said block, wire holding means on the block, a plurality of pulleys carried by said frame at one end of said longitudinally extending recess and a power transmitting element trained over said pulleys and having a free end portion, a locking arm having a gripping portion for engagement with said flexible element, the free extremity of said arm having engagement with the free end portion of said flexible element whereby upon a pull on said end portion laterally of the frame, the gripping portion of said locking arm is forced against the power transmitting element to hold said element against movement.

2. A wire stretcher including a frame, post engaging means integrally formed upon said frame, a block slidably mounted upon said frame, and having a plurality of pulleys therein, pulley wheels mounted at one end of said frame, wire gripping means mounted upon said block, a flexible power transmitting device trained over the pulleys, and having a free end portion, a guiding clutch member mounted upon the frame, a lock lever pivotally mounted adjacent one end of the frame and having a gripping portion for engagement with said flexible transmitting element, the opposite end of said lock lever having an opening formed therein, the free end portion of said flexible member extending through said opening and providing means for locking the lever by a pull on said end portion laterally of the frame.

1,216,090. FURNACE APPARATUS. WILLIAM W. DOOLITTLE, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 31, 1914. Serial No. 828,496. (Cl. 263—13.)

1. In an apparatus of the character described; the combination of a crucible; and a tiltable sectional container device therefor comprising a base member in which the crucible is seated, and a top member detachably associated with the upper surface of said base member and provided with an open top through which the pouring spout of the crucible extends, the device having its pouring front face beveled or inclined in a direction toward the pouring spout of the crucible, substantially as and for the purpose set forth.

2. In an apparatus of the character described, the combination of a tiltable pouring container, a crucible located therein to have its upper portion extend upwardly beyond the top edge of the container, and means for retaining the crucible in position during the pouring operation comprising a crucible retaining member positioned on the top edge of the container in operative relation with the said upwardly extending portion of the crucible, said member being open at the top and through which opening the lip of the crucible projects, substantially as and for the purpose specified.



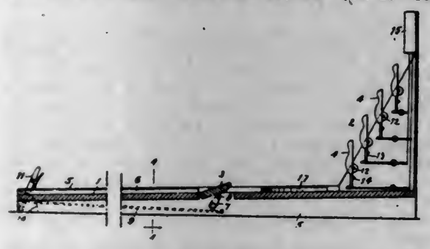
3. In furnace apparatus, the combination with a crucible, of a pouring container therefor, and a retaining member mounted on the container and having a beveled face inclining in a direction toward the lip of the crucible.

4. In an apparatus of the character described, the combination with a crucible, of a sectional furnace therefor comprising a tiltable lower section in which the crucible is positioned and a removable upper cover section seated on the lower section during the heating of the crucible, said lower section constituting a pouring container for the crucible and provided with an inclined pouring face, and a retaining member for the crucible designed to take the place of the upper sections during the pouring operation, said retaining member having a pouring opening located above the inclined pouring face of the said lower section and below the lip of the crucible.

5. The combination with a crucible, of a tiltable pouring container therefor having an inwardly inclined front face terminating below the top edge of the crucible, and a cope member adapted to seat on the container about the upper portion of the crucible and provided with an inclined face passing below the lip of the crucible and forming an extension of the inclined face of the container.

[Claims 6 to 27 not printed in the Gazette.]

1,216,091. GAME. HENRY DORBER, Brooklyn, N. Y. Filed Nov. 2, 1915. Serial No. 59,173. (Cl. 46—59.)



1. A game apparatus comprising a runboard having an adjustable transverse ball-deflecting section, and means for causing said section to assume various inclined positions.

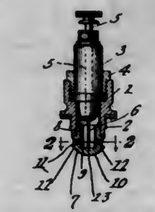
2. A game apparatus comprising an alley or runboard having a transverse ball-deflecting section hinged thereto, one or more adjusting devices connected to said section, and means for engaging said devices to hold the section in various inclined positions.

3. A game apparatus comprising a runboard having a section hinged thereto, a bell-crank lever engaging said section, an operating rod extending to the front of said runboard and operable to cause the section to assume various inclined positions, and fastening means for said operating rod.

4. The combination of a runboard, a frame at one end of said board supporting a plurality of pivoted objects, said runboard having a transversely extending pivoted section in front of said frame, and means for adjusting said section to various inclined positions.

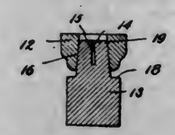
5. A game apparatus comprising a runboard having elevated lateral edges extending from the front of the board to a point adjacent the rear of the same, an adjustable section between said elevated edges and in advance of the rear ends thereof, a pair of longitudinal strips or guides between said elevated edges extending from the front of the board to said section, and a diagonal guide to the rear of said section extending from a point adjacent the rear end of one of said elevated lateral edges to a point adjacent one side of said section.

1,216,092. SPARK-PLUG. HENRY A. DORTCH, Des Moines, Iowa. Filed Feb. 2, 1916. Serial No. 75,828. (Cl. 123—169.)



A cup-shaped spark plug protector whose mouth portion is reduced for engaging within one end of the shell of a spark plug, said protector being adapted to inclose the central electrode of the spark plug and having a closed bottom, the walls of the protector having two diametrically opposite openings adjacent the bottom thereof, and a diametrical pin carried by the walls of the protector adjacent the bottom thereof below and at right angles with the axis of said openings and providing an electrode coöperable with the central electrode of the spark plug.

1,216,093. REMOVABLE DRIVE-CALK FOR HORSE-SHOES. PHILLIP DOYLE, Somerville, Mass. Filed



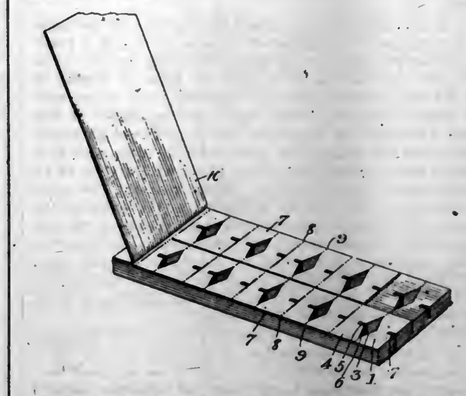
May 15, 1916. Serial No. 97,567. (Cl. 168—31.)

The combination with a horseshoe having an upwardly tapering socket, of a calk having an upwardly tapering shank, said socket and shank being circular in cross section, said shank having a transverse slit extending from its smaller end partially toward the larger end, said larger end being solid, whereby the solid larger end of the shank will be wedged in the larger end of the socket and prevented from working loose by the expansion of the slitted smaller end of the shank against the interior of the smaller end of the socket.

1,216,094. GOLF-TEE. CHARLES G. DUGANNE, Denver, Colo. Filed May 16, 1916. Serial No. 97,770. (Cl. 46—4.)

1. A tee for golf balls, comprising sections of cardboard or the like connected together with their edges in cross-like form, the top edges being so constructed and arranged as to afford a stable support for a ball.

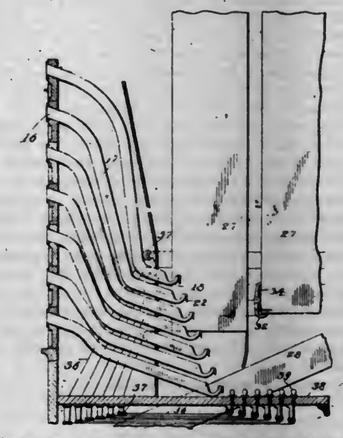
2. A tee for golf balls, comprising substantially homologous sections of flat material arranged on edge and connected at their middles by interlocking slots to form a cross, the top edges being formed to afford a suitable support for a ball.



3. Blanks for golf ball tees, comprising strips of cardboard or the like, divided by weakening lines into substantially homologous rectangles, provided with slots adapted to interlock at their mid sections, corresponding edges of said rectangles being formed to constitute a support for a ball.

4. Blanks for golf ball tees, comprising strips of cardboard and the like, arranged in book form, each strip being divided by weakening lines into substantially homologous rectangles, provided with slots adapted to interlock at their mid sections, corresponding edges of said rectangles being formed to constitute a support for a ball.

1,216,095. APPARATUS FOR DISPENSING PACKAGES. ROBERT B. DULA, Tarrytown, N. Y. Filed Apr. 5, 1915. Serial No. 19,141. (Cl. 211—8.)



1. In an apparatus for dispensing articles in packages to purchasers, in combination, means, including a panel for displaying under cover specimens of the articles to be sold, coin slots in the panel near the point of display of the different articles with corresponding price marks near the slots, a plurality of magazines for the different packages, located at the rear of the panel, means for guiding the coin from the coin slots to a central station and to a delivery point within view of an operator at the central station, means for indicating to the operator adjacent the point of delivery of the coin the same price which is in-

dicated at the corresponding coin slot, means for indicating to the operator which magazines correspond to the different coin slots, and means for controlling from the central station the delivery of the packages from the magazines to a point accessible from the front of the panel.

2. In an apparatus for dispensing articles in packages to purchasers, in combination, means, including a panel for displaying under cover specimens of the articles to be sold, coin slots at the panel near the point of display of the different articles with corresponding price marks near the slots indicating prices which are multiples of five cents, a plurality of magazines for the different packages, coin chutes for guiding the coins from the coin slots to a delivery point at the rear of the panel within view of an operator at a central station, means adjacent the point of delivery of the coin for indicating to the operator the same price which is indicated to the purchaser at the corresponding coin slot, means for indicating to the operator which magazines correspond to the different coin slots, and means for controlling from the central station the delivery of the packages from the magazines to a point accessible from the front of the panel.

3. In an apparatus for dispensing articles in packages to purchasers, in combination, a plurality of coin slots corresponding to the different articles to be sold and having corresponding price marks near the coin slots indicating prices equal to the denominational value of different coins, a plurality of magazines for the different packages at the rear of the panel, coin chutes for guiding the coins from the coin slots to a delivery point within view of an operator at a central station at the rear of the panel, means adjacent to the delivery point of the coin for indicating to the operator the same price which is indicated to the purchaser at the corresponding coin slot, means for indicating to the operator which magazines correspond to the different coin slots, and means for controlling from the central station the delivery of the packages from the magazines at the rear of the panel to a point accessible from the front of such panel.

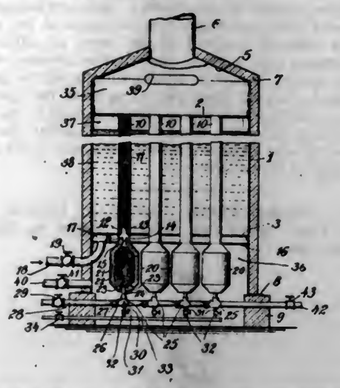
4. The method of selling articles in packages, which consists in making a display in view of a prospective purchaser to indicate that the articles are offered for sale, providing coin slots near the points of display of the different articles with their corresponding price marks near the slots, providing a plurality of magazines for the different packages, guiding the coins from the coin slots to a delivery point within view of an operator at a central station, indicating at a point near a delivery point to the operator the same price which is indicated to the purchaser at the corresponding coin slot, also indicating to the operator which magazines correspond to the different coin slots, and manually controlling from the central station the delivery of the packages from the magazines.

5. In an apparatus for dispensing articles in packages to purchasers, in combination, means, including a panel for making a display indicating that a plurality of articles are offered for sale for indicated prices corresponding to the articles, a plurality of magazines for the different packages at one side of the panel, means for supporting a coin near the operator's position, and means operable from the operator's position for delivering to the purchaser an article from any of said magazines to the opposite side of the panel.

[Claims 6 and 7 not printed in the Gazette.]

1,216,096. APPARATUS FOR BURNING LIQUID FUEL. CARLETON ELLIS, Montclair, N. J., assignor to Radiant Heating Limited, Armley, Leeds, England, a Corporation of Great Britain. Filed Apr. 22, 1912, Serial No. 692,288. Renewed July 11, 1916. Serial No. 108,722. (Cl. 158—1.)

1. Apparatus for burning liquid fuel comprising a gas forming chamber containing a filling of granular refractory material, means for injecting liquid fuel and a limited supply of combustion supporter into the filling of refractory material in said chamber to effect partial combustion of the fuel within the chamber and to maintain a vaporizing temperature therein, a combustion bed formed of granular refractory material, a restricted passage leading from the gas forming chamber to the combustion bed, means for supplying air to mix with the gases from the gas forming chamber in proportions to form an explosive gaseous mixture and to cause the explosive gaseous mixture thus formed to enter the combustion bed at a high velocity, and means for controlling the amount of gas burned in the combustion bed by controlling the amount of fuel fed to the gas forming chamber.



2. Apparatus for burning liquid fuel comprising a gas forming chamber containing a filling of granular refractory material, means for injecting liquid fuel and a limited supply of combustion supporter into the filling of refractory material in said chamber to effect partial combustion of the fuel within the chamber and to maintain a vaporizing temperature therein, a porous and permeable combustion bed of refractory material, a restricted passage leading from the gas forming chamber to the combustion bed, means for supplying air to mix with the gases from the gas forming chamber in proportions to form an explosive gaseous mixture and to cause the explosive gaseous mixture thus formed to enter the combustion bed at a high velocity, and means for controlling the amount of gas burned in the combustion bed by controlling the amount of fuel fed to the gas forming chamber.

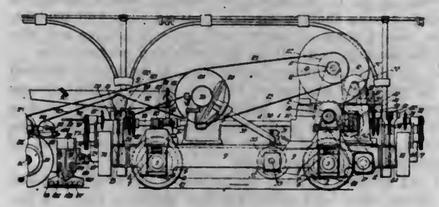
3. Apparatus for burning liquid fuel comprising a gas forming chamber containing a filling of granular refractory material, means for injecting liquid fuel and a limited supply of combustion supporter into the filling of refractory material in said chamber to effect partial combustion of the fuel within the chamber and to maintain a vaporizing temperature therein, means for supplying gaseous fuel for preliminarily heating the refractory material in said chamber, a porous and permeable combustion bed of refractory material, a restricted passage leading from the gas forming chamber to the combustion bed, means for supplying air to mix with the gases from the gas forming chamber in proportions to form an explosive gaseous mixture and to cause the explosive gaseous mixture thus formed to enter the combustion bed at a high velocity, and means for controlling the amount of gas burned in the combustion bed by controlling the amount of fuel fed to the gas forming chamber.

4. An apparatus for burning liquid fuel comprising a gas forming chamber containing refractory material, means for injecting liquid fuel and a limited supply of combustion supporter into said chamber to effect partial combustion of the fuel within the chamber and to maintain a vaporizing temperature therein, a consuming device for maintaining continuous and localized combustion of an explosive gaseous mixture, an outlet leading from said chamber directly to the consuming device, and means for supplying air to mix with the gases passing through said outlet to form an explosive gaseous mixture moving at a high velocity.

5. Apparatus for burning liquid fuel, comprising a plurality of gas forming chambers containing a porous and permeable filling of refractory material, means for injecting liquid fuel and a limited supply of combustion supporter into the filling of refractory material in each of said chambers to effect partial combustion of the fuel within the chamber and to maintain a vaporizing temperature therein, a plurality of consuming devices each formed to maintain localized and continuous combustion of an explosive gaseous mixture, a restricted passage leading from each gas forming chamber directly to one of the consuming devices, means for supplying air under pressure to mix with the gas passing through each said passage in proportions to form an explosive gaseous mixture, and means for controlling the amount of gas burned in the consuming devices by controlling the amount of fuel fed to the gas forming chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,216,097. MACHINE FOR DRESSING RAILS. JOSEPH W. EUNSON, Brunswick, Victoria, Australia, assignor to Woods-Gilbert Rail Planer Company, Limited, Melbourne, Australia. Filed Jan. 11, 1916. Serial No. 71,597. (Cl. 90—12.)



1. Improvements in machines for dressing rails, consisting in a platform and a longitudinally divided carriage pivotally connected to said platform, and a tool holder carried by each divided portion of the carriage.

2. Improvements in machines for dressing rails, consisting in a platform, a pair of crossed diagonal links universally coupled at one end to the said platform, a longitudinally divided carriage universally coupled to the other end of said links, and a tool holder carried by each divided portion of the carriage.

3. Improvements in machines for dressing rails, consisting in a platform supported upon the rails, a carriage supported upon the rails and pivotally connected to the platform, means for lifting the carriage bodily from the rails without disconnection from the platform, and tool holders carried by the carriage.

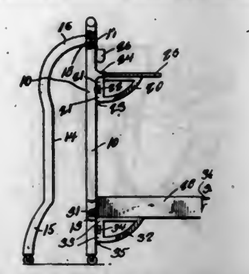
4. Improvements in machines for dressing rails, consisting in a platform, a cantaliver intermediately pivoted to said platform, a longitudinally divided carriage universally coupled to the platform, couplings extending between the cantaliver and the carriage, and a tool holder mounted on each divided portion of the carriage.

5. Improvements in machines for dressing rails, consisting in a platform, a pair of crossed diagonal links universally coupled to the platform, a longitudinally divided carriage universally coupled to the links, a cantaliver intermediately pivoted to the platform, couplings disposed between the cantaliver and the carriage, means for operating the cantaliver, and a tool holder mounted on each divided portion of the carriage.

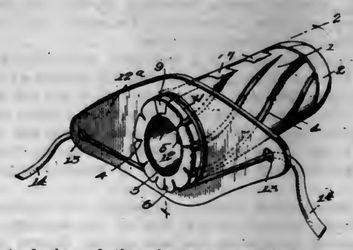
[Claims 6 to 28 not printed in the Gazette.]

1,216,098. FOLDING WASHSTAND. OCIE D. EWELL, Bellevue, Tex. Filed Nov. 22, 1915. Serial No. 62,828. (Cl. 45—38.)

A wash stand comprising in combination, a pair of spaced uprights, transverse rods connecting said uprights and forming therewith a frame, a pair of braces secured to the uprights at their upper ends and curving backwardly and downwardly to form a pair of rear legs, a shelf pivoted across the uprights near their upper ends, a pair of brackets hinged to swing horizontally below the shelf to support the latter, a drawer casing pivoted between the standards and adapted to be swung therebetween with its lower face in a plane common with the fronts of the uprights, a pair of inwardly and horizontally swinging brackets to support the drawer casing, said drawer casing lying to the rear of the shelf when both are in folded position and means for locking the drawer casing in folded position.



1,216,099. SURGICAL DEVICE. JAMES STANLEY FALCK, Washington, D. C. Filed Aug. 12, 1916. Serial No. 114,615. (Cl. 128—28.)



1. A device of the character specified, comprising a semi-rigid, elastic, split sleeve, having an external longitudinally extending weakening groove opposite the split, and means at the split for connecting the edges thereof, the sleeve tapering externally and a holding shield of flexible material having an opening through which the small end of the sleeve may pass and of less diameter than the large end, the shield having openings at opposite sides of the sleeve for engagement by a securing tape, the sleeve having an annular external groove at the large end for engagement by a turn of the tape.

2. A device of the character specified, comprising a semi-rigid, elastic, split sleeve, having an external longitudinally extending weakening groove opposite the split, and means at the split for connecting the edges thereof, the sleeve tapering externally and a holding shield of flexible material having an opening through which the small end of the sleeve may pass and of less diameter than the large end, the shield having openings at opposite sides of the sleeve for engagement by a securing tape.

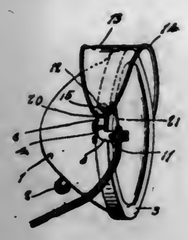
3. A device of the character specified, comprising a semi-rigid, elastic, split sleeve, having an external longitudinally extending weakening groove opposite the split, and means at the split for connecting the edges thereof, and the sleeve having internal recesses or pockets intermediate its ends and on opposite sides of the groove for the purpose specified.

4. A device of the character specified, comprising a sleeve grooved annularly near its butt end, a shield on said sleeve in advance of the said groove and a fastening tape in said groove and engaged with said shield as set forth.

5. A device of the character specified, comprising a semi-rigid, elastic, split sleeve, having internal pockets for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,216,100. HEADLIGHT-DIMMER. LEO A. FEUCHTER, Ironton, Ohio. Filed Sept. 8, 1916. Serial No. 119,067. (Cl. 240—45.6.)



1. The combination with a headlight, a bracket fixed against movement on one side of the headlight, a shield pivoted at one end to the bracket and its opposite end to the headlight, and a flexible operating means supported by the bracket and attached to the shield for moving the same into an operative or inoperative position.

2. The combination with a headlight, a bracket supported at one side of the headlight, a shield pivotally secured to the bracket and headlight, a clamp at the forward end of the bracket, a flexible tube carried by the clamp, and operating means extending through the flexible tube and connected to the shield for moving the same into operative or inoperative position.

3. The combination with a headlight, a bracket supported by the headlight, a shield pivotally secured at one end to the headlight and its opposite end to the bracket, a clamp at the forward end of the bracket, a flexible tube carried by the clamp, an operating wire having one end connected to the shield and its opposite end having means for moving the shield into operative or inoperative position.

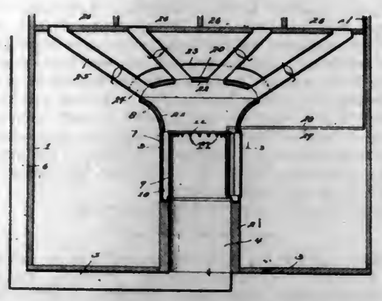
4. The combination with a headlight, an L-shaped bracket rigidly secured to one side of the headlight, a shield pivotally secured to one arm of the bracket and its opposite end to the headlight, a clamp at the forward end of the free arm of the bracket, a flexible tube having one end supported by the clamp, an attaching plate, a lever pivotally secured to the attaching plate, a clamp block carried by the plate, the free end of the tube being supported by the clamp block, and an operating wire having one end connected to the shield and extending through the tube and having its free end secured to the lever for moving the shield into operative or inoperative position.

5. The combination with a headlight, an L-shaped bracket supported by the headlight, a shield pivotally secured at one end to the bracket and its opposite end to the headlight, at diagrammatically opposite points, from its connection with the bracket, a clamp at the forward end of the bracket, an attaching plate, a lever pivotally secured to the attaching plate, a clamp block carried by the attaching plate, a flexible tube having one end secured to the clamp block, and its opposite end secured to the forward end of the bracket, a wire having one end connected to the shield and extending through the flexible tube and secured to the lever whereby upon movement of the lever the shield will be moved into operative or inoperative position.

1,216,101. ELECTRIC HOUSE-HEATING FURNACE. AUGUST C. FINGERLE, Modesto, Cal. Filed Aug. 4, 1916. Serial No. 113,149. (Cl. 219—34.)

1. An electric furnace of the character described comprising a chamber for the passage of air to be heated, air-heating means embodying a plate composed of heat-radiating material arranged at the top of said chamber and having on its under side electric heating means for generating and radiating heat downwardly to heat the air in said chamber, and a dome arranged above said plate to receive and distribute the heated air from said chamber.

2. An electric furnace comprising a chamber for the passage of air to be heated, air-heating means embodying a plate having bobbins projecting downwardly from its under side and electric heating coils wound on said bobbins, and means for receiving the heated air.



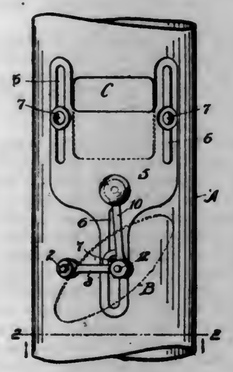
3. An electric furnace comprising a chamber for the passage of air to be heated, air-heating means embodying a plate having thereon electric heating coils and perforations, and a chamber above said plate to receive and distribute the heated air from said coils and perforations.

4. An electric furnace comprising a chamber composed of spaced inner and outer annular shells, heating means arranged in the upper portion of said chamber, and a chamber to receive and distribute heated air from the heating means, said latter chamber being composed of spaced inner and outer shells.

5. An electric furnace comprising a chamber composed of spaced inner and outer annular shells, a plate in the upper portion of said chamber supporting air-heating means, and doors in the inner and outer shells providing means for the removal of said plate.

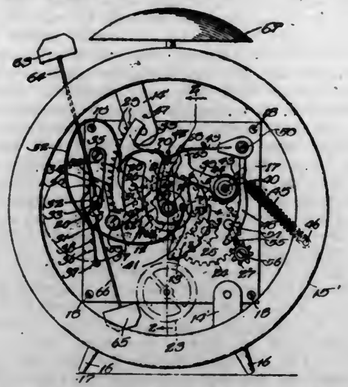
[Claim 6 not printed in the Gazette.]

1,216,102. DAMPER. OMAR J. FRANCIS, Reading, Pa. Filed Jan. 13, 1916. Serial No. 71,814. (Cl. 126—293.)



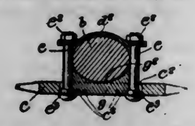
In combination with a cylindrical stove pipe having an interior rotatable damper plate with a diametrically arranged pivot axle, and a wall opening located above and to one side of said axle; a damper plate for said opening longitudinally slidable on the pipe and provided with a pivot post, a flexible crank arm exteriorly fixed to said pivot axle, and a flexible link connecting the free end of said crank arm to said pivot post; said link being arranged to swing in a plane out of parallel with the plane in which said crank arm swings and said pivoted parts being placed under tension whereby the sliding damper is retained in adjusted position.

1,216,103. HOUR-STRIKING TIME MECHANISM. GUSTAF F. FRIBERG, Chicago, Ill. Filed May 18, 1916. Serial No. 98,293. (Cl. 58—8.)



The combination with a time keeping mechanism, of a pendulum balanced hour-striking hammer and pallets, a toothed segment to engage said pallets, means for bringing the latter into and out of engagement with the teeth of said segment, means for automatically adjusting by the clock movement the position of said segment, or to escape a given number of teeth, and a tension device tending to swing said segment in one direction.

1,216,104. ANTISKIDDING ATTACHMENT FOR WHEELS. LUDWIG FRIEDRICH, New York, N. Y. Filed Jan. 19, 1916. Serial No. 72,927. (Cl. 24—243.)



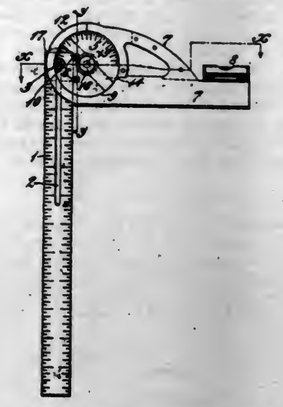
1. An attaching device, comprising a yoke member and a plate member, said yoke member being provided with a longitudinal slot, bolts passed through said slot and said plate member for drawing the yoke and plate together, and said longitudinal slot being provided adjacent to the ends thereof and in the top and bottom walls thereof with a plurality of notches or recesses in which said bolts fit and by means of which the rotation of said bolts is prevented.

2. An attaching device, comprising a yoke member and a plate member, said yoke member being provided with a longitudinal slot, bolts passed through said slot and said plate member for drawing the yoke and plate together, said longitudinal slot being provided adjacent to the ends thereof and in the top and bottom walls thereof with a plurality of notches or recesses in which said bolts fit and by means of which the rotation of said bolts is prevented, and a block placed in said longitudinal slot and held therein by said bolts for preventing the movement of said yoke on the article to which said attaching device is secured.

1,216,105. PLUMB, LEVEL, AND SQUARE. JOSEPH E. GAGNON, Philadelphia, and JOHN A. HAWTHORNE, Jr., Chester, Pa., assignors of one-third to Alfred S. Orchard, Philadelphia, Pa. Filed July 22, 1916. Serial No. 110,662. (Cl. 33—116.)

1. A blade, a stock, a circular member on said blade, the head of said stock being rotatively mounted on said member, a central connection for said blade and member, and a stop on said blade adapted to engage a wall of said head to limit the rotation of said stock.

2. A blade, a stock, a circular member on said blade, the head of said stock being rotatively mounted on said member, a central connection for said stock and member, a threaded member extended axially through said circular member, and means on said circular member and blade adapted to connect the latter member and blade.



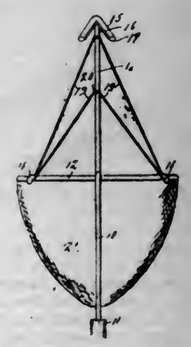
3. A blade, a stock, a circular member on said blade, the head of said stock being rotatively mounted on said member, a central connection for said stock and member, a threaded member extended axially through said circular member, means on said circular member and blade adapted to connect the latter member and blade, and means for tightening said threaded member.

4. A blade having a longitudinally-extending slot therein, a stock, a circular member on said blade, the head of said stock being rotatively mounted on said circular member, a central connection for said blade, and a threaded member adapted to pass through said slot and engage with the walls thereof to enter said circular member eccentrically in an opening therein, and means for tightening said threaded member in position.

5. A blade having a longitudinally-extending slot therein, a stock, a circular member on said blade, the head of said stock being rotatively mounted on said circular member, a central connection for said blade, a threaded member adapted to pass through said slot and engage with the walls thereof and to enter said circular member eccentrically, and a lip on said member adapted to engage the edge of said blade opposite to said threaded member thereby connecting said blade and circular member.

[Claims 6 and 7 not printed in the Gazette.]

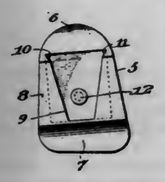
1,216,106. FRUIT-GATHERER. RUTH C. GIFFORD, North East, Md. Filed Mar. 28, 1916. Serial No. 87,355. (Cl. 56—99.)



A fruit gatherer comprising a V-shaped frame, a pole connected to and supporting the frame, a horizontal ring

secured to the arms of the frame, one of said arms extending above the ring and provided with circumferential grooves, the said extension arm having its upper end inclined downwardly over the ring, said inclined portion being bifurcated to provide a V-shaped opening for the reception of fruit stems and having the opposed walls thereof sharpened, said ring being bent in a plurality of points to form shoulders, braces consisting of single lengths of wire having their intermediate portions wound around the circumferential grooves in the extension of the arm of the V-shaped frame and their ends secured to the said shoulders on opposite sides of the said ring to prevent slipping of the said brace wires, and a receiving bag mounted in the V-shaped frame and secured to the horizontal ring.

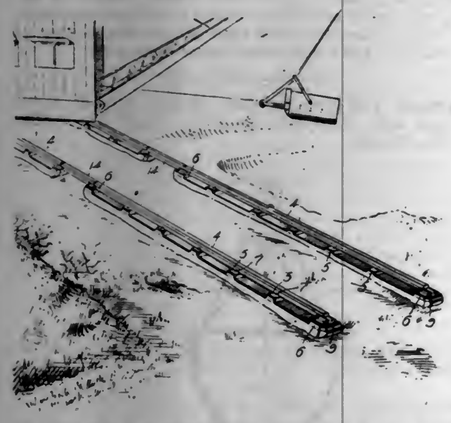
1,216,107. ARTIFICIAL TOOTH. THOMAS F. GLENN, Ardmore, Pa., assignor to The S. S. White Dental Manufacturing Company, a Corporation of Pennsylvania. Original application filed Mar. 17, 1915, Serial No. 14,886, (now Patent No. 1,170,630.) Divided and this application filed Feb. 7, 1916. Serial No. 76,576. (Cl. 32—9.)



1. A tooth adapted for vulcanite work, having a projection extending from its lingual face embraced upon three sides laterally and incisively by shoulders, two of which are undercut and broaden toward the incisive end.

2. A tooth adapted for vulcanite work, having in its lingual face a recess forming independent pockets which deepen laterally toward the incisive end and whose lingual walls form laterally disposed undercut shoulders.

1,216,108. TRACK FOR LAND-DREDGES. FRED GODDARD, Parma, Mo. Filed Dec. 2, 1916. Serial No. 134,578. (Cl. 104—45.)



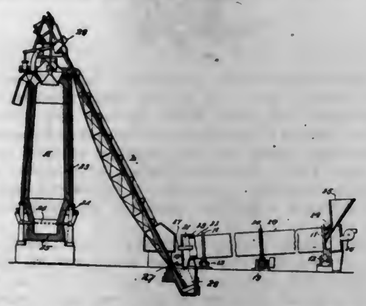
1. A track of the character specified, consisting of sections, each section being a stringer of channel material and arranged with its channel downward, and having transverse ties on its upper face, a rail laid upon each stringer upon the ties and secured to the intermediate ties, a channel-shaped coupling plate at each end of each stringer, the ends of the rails being held by the plates and being spaced from the outer ends of the plates, a tie rail for connecting the stringers, each tie rail engaging at its ends coupling plates of adjacent sections, bolts for connecting the rails and the tie rails to the coupling plates, each stringer being composed of three similar portions, of greater width than thickness, the central portion being arranged with its wide dimension horizontal and the lateral portions with their wide dimensions vertical.

2. A track of the character specified, consisting of sections, each section being a stringer of channel material and arranged with its channel downward, and having transverse ties on its upper face, a rail laid upon each stringer upon the ties and secured to the intermediate ties, a coupling plate at each end of each stringer, the ends of the rails being held by the plates and being spaced from the outer ends of the plates, a tie rail for connecting the stringers, each tie rail engaging at its ends coupling plates of adjacent sections, and bolts for connecting the rails and the tie rails to the coupling plate.

3. A track of the character specified, consisting of sections, each section being a stringer of channel material and arranged with its channel downward, and having transverse ties on its upper face, a rail laid upon each stringer upon the ties and secured to the intermediate ties, a coupling plate at each end of each stringer, the ends of the rails being held by the plates and being spaced from the outer ends of the plates, and a tie rail for connecting the stringers, each tie rail being held at its ends by the coupling plates of adjacent sections.

4. A track of the character specified, consisting of sections, a rail laid upon each section, the ends of the rails being spaced from the ends of the sections, tie rails for connecting the sections, and means at each end of each section for connecting the tie rails with the rails of the sections.

1,216,109. PROCESS OF TREATING IRON ORES. EDWARD F. GOLTRA, St. Louis, Mo. Filed Apr. 26, 1910. Serial No. 557,709. (Cl. 75—14.)



1. The process of treating iron ores, comprising heating the ore and its gangue at a temperature and for a period sufficient to drive off the moisture, and to render the gangue easily separable from the ore, tumbling the ore and its gangue to loosen the gangue from the ore, subjecting the ore and its gangue to a strong blast which removes the gangue from the ore, and subjecting the concentrated ore, so prepared, to heat and reducing gases, to reduce the ore to the metallic state.

2. The process of treating iron ores containing gangue, moisture and volatile matter, comprising calcining the ore and its gangue at a temperature and for a period sufficient to drive off the moisture and volatile matter, and to render the gangue easily separable from the ore, tumbling the ore and its gangue to loosen the gangue from the ore, subjecting the ore and its gangue to a strong blast which removes the gangue from the ore, and subjecting the concentrated ore, so prepared, to heat and reducing gases, to reduce the ore to the metallic state.

3. The process of treating iron ores containing moist clay, etc., as a gangue, comprising heating the ore and its gangue at a temperature and for a period sufficient to drive off the moisture, and to render the gangue easily separable from the ore, tumbling the ore and its gangue to shake loose the gangue from the ore, and to pulverize the gangue by said tumbling action, subjecting the ore and gangue to a strong blast, which sweeps, cleans and removes the gangue from the ore, and subjecting the concentrated ore, so prepared, to heat and reducing gases, to reduce the ore to the metallic state.

4. The process of treating iron ores containing clay, etc., as a gangue and containing moisture and volatile matter, comprising calcining the ore and its gangue at a temperature and for a period sufficient to drive off the moisture and volatile matter, and to render the gangue easily separable from the ore, tumbling the ore and its gangue to shake loose the gangue from the ore, and to pulverize the gangue by said tumbling action, subjecting the ore and gangue to a strong blast which sweeps, cleans and removes the gangue from the ore, and subjecting the concentrated ore, so prepared, to heat and reducing gases, to reduce the ore to the metallic state.

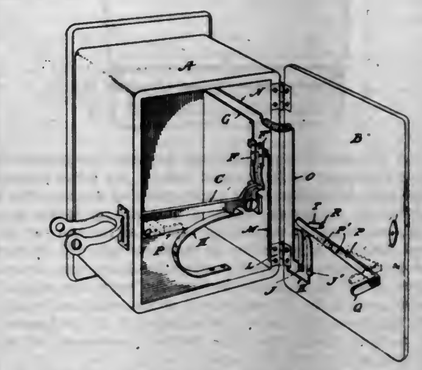
1,216,110. SECURING DEVICE FOR MILK-BOTTLES. PAUL GOODROW, Olympia, Wash. Filed June 8, 1916. Serial No. 102,566. (Cl. 232—42.)

In a device for sustaining a milk bottle from the lintel of a door, a sheet metal body having edges downwardly and inwardly turned to engage the outwardly beaded edge of a milk bottle to sustain the same, a spring leaf tongue stamped from said body to project downwardly between the downwardly turned edges and extending in a direction toward the door and adapted to engage the cover disk of a bottle to prevent withdrawal of the bottle in a direction away from the door, means for securing said body in place, said downwardly extending edges being of a length whereby the upper edge of the bottle will lie in close proximity to said body, all being arranged substantially as shown and for the purposes stated.

1,216,111. SWITCH MECHANISM FOR TELEPHONE SYSTEMS. LUTHER J. GORSUCH, East Pleasant Plains, Iowa. Filed May 9, 1916. Serial No. 96,341. (Cl. 179—164.)

1. In a device of the nature described, the combination with a pair of electric terminals constituting part of a local telephone transmitter circuit, and a receiver-supporting arm for connecting the two said terminals, of a second pair of terminals adapted to be connected in circuit with the first described pair of terminals and said local transmitter circuit, a switch lever adapted to be carried into engagement with said second pair of terminals for closing the circuit therethrough, said lever including an extension to engage said receiver-supporting arm, and means to move the lever manually into engagement with said second pair of terminals.

2. In a device of the nature of described, the combination with a pair of electric terminals constituting part of a local telephone transmitter circuit, and a receiver-supporting arm for connecting the two said terminals, of a second pair of terminals adapted to be connected in circuit with the first described pair of terminals and said local transmitter circuit, a switch lever adapted to engage said second pair of terminals for closing the circuit therethrough, said lever including at one side of its fulcrum an extension to engage said arm, and means to move the lever manually into engagement with said terminals, said arm when depressed adapted to engage and automatically remove said switch lever from said second pair of terminals.

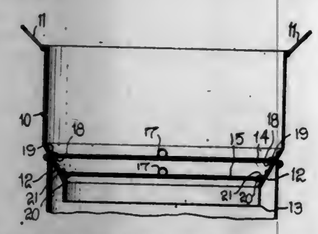


3. In a device of the nature described, the combination with a pair of terminals constituting part of a local transmitter circuit including a battery, an arm adapted in one of its positions to electrically connect said terminals, of a second pair of terminals connected electrically with the first said pair of terminals and the said transmitter circuit, a switch lever adapted to engage both said second terminals for connecting one electrically with the other, means for manually operating the switch lever in one direction to connect said terminals, said switch lever including an extension adapted to be engaged by the described arm and automatically operated by the said arm in moving to its other position to remove said switch lever from the said second pair of terminals.

4. In a device of the nature described, the combination with an inclosure including a pair of terminals therein constituting part of a local transmitter circuit, an arm therein adapted in one of its extreme positions to engage and electrically connect said terminals, of a second pair of terminals connected electrically with said first pair of terminals and the said transmitter circuit, and likewise contained within said inclosure, a switch lever within said inclosure adapted to have two positions and in one of its positions arranged to electrically connect said second pair of terminals and having an extension in the path of movement of the said arm and adapted to be engaged and moved by the said arm when that member moves to its other extreme position whereby to disengage the switch lever from the described terminals, means extending outside the inclosure in position to be manually operated, the same including an extension within the inclosure to engage the arm and move it in but one direction.

5. In a device of the nature described, the combination with an inclosure, a pair of terminals constituting part of a local transmitter circuit, and an arm actuated from outside the inclosure and adapted in one of its extreme positions to electrically connect the said terminals, of a second pair of terminals mounted on the inner side of the door and electrically connected with the first described pair of terminals and said transmitter circuit, a switch lever pivoted on the inner side of the door in position to electrically connect the said second terminals, said switch lever including an extension in the path of the described arm and adapted to be operated automatically by the same in moving to one of its extreme positions, and means extending outside of the inclosure and carrying a part at its end within said inclosure to engage and move said switch lever into engagement with said second pair of terminals.

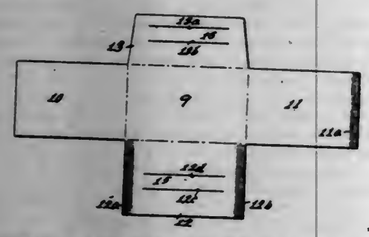
1,216,112. STRAINER FOR LIQUIDS. DERK GREVEN, Henning, Minn. Filed Nov. 8, 1916. Serial No. 130,236. (Cl. 210—16.)



1. A strainer of the character described comprising a hollow body open at its top and bottom, the lower portion of the body being gradually contracted and formed with a downwardly extending flange, a plurality of ledges projecting out from the contracted portion of the body at different heights, a plurality of strainers adapted to rest upon said ledges and extend across the body, and pivoted latches mounted upon the wall of the body and adapted to engage over the circumferences of the strainers to hold them in place, said latches being movable to an inoperative position permitting the vertical movement of the strainers with which the latches engage.

2. A strainer of the character described comprising a hollow body open at its top and bottom, the lower portion of the body being gradually contracted or tapered, a plurality of ledges projecting out from the contracted portion of the body, a strainer adapted to rest upon said ledges and extend across the body, and angular latches pivoted upon the inclined wall of the body and when turned down adapted to engage over the circumference of the strainer to hold it in place and against said ledges, the latches when turned to release the strainer being displaced sufficiently to permit the removal of the strainer.

1,216,113. ENVELOP. ALBERT GUSTAVE GROETZINGER, Pocatello, Idaho. Filed Sept. 23, 1916. Serial No. 121,757. (Cl. 229—73.)

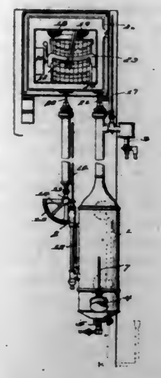


1. The combination with an envelop having registering slits formed in its bottom and top flaps to form superposed ribbons, of a sealing strip passed beneath said ribbons around said envelop and having its ends sealed together.

2. An envelop having two of its flaps each provided with two spaced slits, the slits of one flap registering with the slits of the other flap when the said flaps are folded one upon the other, and a sealing strip having one end gummed, said strip being passed through the slits beneath the portions of the flaps between the said slits and the ends overlapped.

1,216,114. RECORDING - CALORIMETER. WALTER KENDRICK HARRINGTON, Andover, N. J., assignor to The American Meter Company, New York, N. Y., a Corporation of New York. Filed Nov. 10, 1914. Serial No. 871,390. (Cl. 234—11.)

1. A recording calorimeter comprising, in combination with a heater for burning the combustible to be tested and having an inlet and an outlet for a liquid to be heated therein, of means for recording respectively the temperature of the liquid entering and the temperature of the liquid discharging from the heater.



2. A recording calorimeter comprising, in combination with a heater for burning the combustible to be tested and having an inlet and an outlet for a liquid to be heated therein, of means for recording individually upon the same graduated sheet the temperatures of the liquid entering and discharging from the heater respectively.

3. A recording calorimeter comprising, in combination with a heater for burning the combustible to be tested and having an inlet and an outlet for a liquid to be heated therein, of a pair of recording thermometers connected respectively to the inlet and the outlet of the heater, and means coöperative with each thermometer for producing upon the same graduated sheet individual records of the temperature of the liquid entering and of the liquid discharging from the heater respectively.

4. A recorder for calorimeters having a heater for burning the combustible to be tested and having an inlet and an outlet for a liquid to be heated therein comprising means for recording, individually, the temperature of the liquid entering the heater and the temperature of the liquid discharging from the heater, and means for checking the accuracy of the records so made.

5. A recorder for calorimeters having a heater for burning the combustible to be tested and having an inlet and an outlet for the liquid to be heated comprising a pair of recording thermometers connected, respectively, to the inlet and outlet of the heater, a graduated record sheet, means operative by the thermometer connected to the inlet of the heater for recording on the record sheet the temperature of the liquid entering the heater, means operative by the thermometer connected to the outlet of the heater for recording on the same record sheet the temperature of the liquid discharging from the heater, and indicators on the respective thermometers for checking the accuracy of the temperatures recorded by the respective thermometers.

[Claim 6 not printed in the Gazette.]

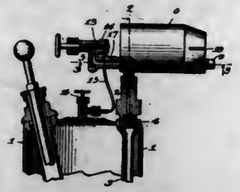
1,216,115. KEROSENE-TORCH. ARTHUR E. HAUCK, Brooklyn, N. Y. Filed Aug. 15, 1914, Serial No. 856,919. Renewed Jan. 6, 1917. Serial No. 141,057. (Cl. 158—33.)

1. In a device of the class described, a burner with a slotted and coned end at the flame edge of said burner.

2. In a device of the class described, a burner tube having a bottom wall with passages therein running to a common opening, and a screw-plug closing said opening.

3. In a device of the class described, a burner tube, passages in the bottom wall of said burner running to a common opening, and a removable wire resting in said passages.

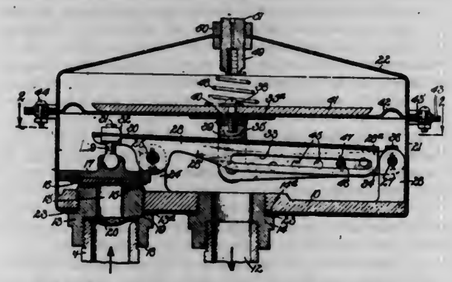
4. In a device of the class described, converging passages running to a common opening, a removable wire resting in said passages removable through said opening and means for closing said opening.



5. In a device of the class described, a burner with converging passages therein, and a screw-plug with a wire attached thereto, said wire extending into said passages, whereby fuel passing through said passages is forced against the walls of the passages.

[Claim 6 not printed in the Gazette.]

1,216,116. FLUID-PRESSURE GOVERNOR. HAROLD A. HAYWARD, New York, N. Y. Filed Sept. 22, 1916. Serial No. 121,607. (Cl. 50—26.)



1. In a fluid pressure governor, a casing provided with an inlet and an outlet, a valve for the inlet, a pivotally mounted lever connected with said valve, a diaphragm, a link pivoted to the casing at one end and extending thence along said lever, pivotal connections between the other end of the link and the diaphragm, one of said pivoted members having a longitudinal slot and the other having a series of holes extending along said slot, and a pivot member extending through said slot and in one of said holes to variably connect the link and lever together.

2. In a fluid pressure governor, the combination of a casing provided with an inlet and an outlet along the same side, a rigid base fitted within said casing side and having threaded openings registering with the respective casing openings, inlet and outlet spuds extending into the respective pairs of registering openings, locking the casing and base together, one of said spuds constituting a valve seat, a valve coöperating with said seat, said base having a plurality of standards projecting therefrom within the casing, primary and secondary lever members pivoted to said standards and lying one along the other between the standards, one of said lever members having a slot and the other having a series of holes arranged along the slot, a pivot member adapted to extend through the slot and in one of said holes to pivotally connect the lever members together, means connecting one of said lever members to the valve, and automatically actuated means connected to the other lever member to actuate the valve.

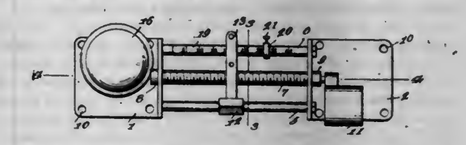
3. In a fluid pressure governor, a comparatively light sheet metal casing having a flat bottom provided with inlet and outlet openings in the same plane, a stiff base member having a flat bottom fitted squarely against the inner surface of the casing bottom and having inlet and outlet openings registering with the casing openings, a pair of pipe connections fitted in said registering openings and serving to constitute through said base the means for supporting the entire governor, one of said connections constituting a valve seat, a valve within the casing coöperating with said valve seat and serving to control the inflow of fluid into the casing, a pair of approximately parallel lever members within the casing and pivotally connected to remote portions of said base, means to pivotally connect one of said lever members to said valve, automatic fluid actuated means connected to the other lever member, and means pivotally connecting said lever members together whereby the action of the automatic means will be transmitted to the valve.

4. In a fluid pressure governor, a sheet metal casing having inlet and outlet openings in its bottom, a rigid base fitted against the inner surface of said bottom and having threaded openings registering respectively with said casing openings, a pair of shouldered spuds screwed into the respective pairs of registering openings and serving to lock the casing and base together with tight joints, one of said spuds serving as a valve seat, a valve coöperating with said seat to control the flow of fluid into the casing, a plurality of standards extending upwardly from opposite end portions of the base and having parallel pivot holes at their upper ends, a pair of approximately parallel lever members lying one along the other above the base and pivoted respectively at their opposite ends in said pivot holes, one lever member overlapping the other, means connecting one lever member to the valve, automatic fluid actuated means connected to the other lever member, and adjustable means to pivotally connect the overlapping portions of the lever members whereby the action of the automatic means is variably transmitted through the lever members to the valve.

5. In a fluid pressure governor, a casing provided with an inlet and an outlet, a valve for the inlet, a pivotally mounted lever connected with said valve, said lever having a slot arranged therein longitudinally, a diaphragm, a hanger connected with said diaphragm, a link pivotally connected with said hanger, means for pivotally connecting the free end of said link to said casing, and a member extending through the said slot and adjustably connected with said link, whereby the amount of movement transmitted from said link to said lever may be varied.

[Claims 6 to 10 not printed in the Gazette.]

1,216,117. REVOLUTION - COUNTER. WILFRID P. HEATH, St. Paul, Minn. Filed Aug. 14, 1914. Serial No. 856,833. (Cl. 235—124.)

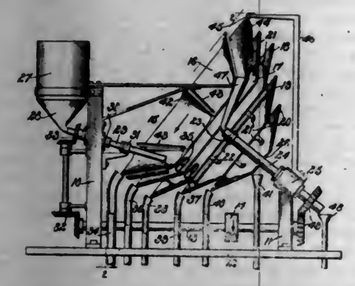


1. A revolution counter comprising a pair of brackets to be secured in a fixed relation on the revolving part, a screw-threaded shaft mounted to have turning movement in said brackets, means to transmit a complete turn to the shaft upon each complete revolution of said revolving part, a gage rod having a scale thereon arranged parallel with the screw-threaded shaft and marked off in designations corresponding to the number of threads in various lengths of the shaft, a gage member, provided with a screw-threaded portion to mesh with the threads of said shaft, and means to be engaged over the gage rod to hold the gage member in indicating relation with respect to the markings on the gage rod and to also hold the screw-threaded portion thereof in proper mesh with the threads of the shaft.

2. A revolution counter comprising a pair of brackets to be secured in a fixed relation on the revolving part, a screw-threaded shaft mounted in said brackets to be held against endwise movement and to be capable of turning movement, means to cause turning of the shaft as the revolving part is turned, a gage rod mounted between said bracket members to extend parallel with the threaded

shaft, a gage member provided with a screw-threaded portion to mesh with the threads of said shaft mounted to be capable of traveling movement along the extent of the screw-threaded shaft, a spring member connected with the gage member to be fitted over the gage rod to hold the gage member in indicating relation with respect to the markings on the gage rod and to maintain the screw-threaded portion thereof in mesh with the screw threads of the shaft, and an adjustable member mounted on the gage rod to be moved and set at predetermined markings thereon to permit quick and repeated adjustment of the gage member to count a predetermined number of revolutions of the screw-threaded shaft.

1,216,118. ORE-SEPARATOR. GEORGE HERING, Larchmont, N. Y. Filed July 6, 1916. Serial No. 107,731. (Cl. 233—18.)



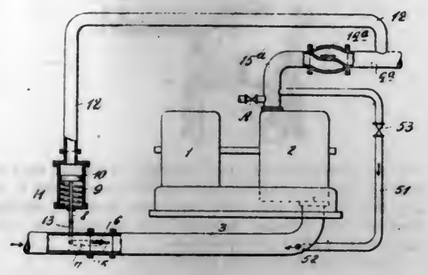
1. The herein described ore separator comprising in combination a drum including a series of coaxial cone members, means to connect the several cone members each to each and maintain them in a definite relation to one another, a central rotating supporting shaft for the drum inclined at an acute angle to the horizontal whereby the portions of the cone members at different points are differently inclined to the vertical, means to deliver material to be separated upon one of the cone members at its lower portion, and means to rotate the drum so as to cause the coarser particles of the material received upon each cone member to be separated and delivered outwardly, while the finer particles are delivered inwardly upon the next succeeding cone member for further subdivisions.

2. In an ore separator, the combination of a main frame, power devices journaled in said frame, a shaft journaled in the frame at an acute angle to the horizontal, means to rotate the inclined shaft from the power devices, and a separating drum secured to and rotated at low speed from said inclined shaft, said drum including a plurality of frusto-conical members of the same diameter but having sides at different inclinations.

3. The herein described drum for an ore separator comprising a series of frusto-conical members arranged coaxially, certain of said members having bases of equal diameter and central openings of equal diameter but having different inclinations.

4. The herein described drum for ore separators comprising a series of hollow truncated cones arranged coaxially, a central hollow shaft whose axis coincides with the axis of the drum, cone members, power means acting through the hollow shaft to rotate the drum at a low speed, means to deliver material to be separated upon one of the cone members whence the largest particles are delivered outwardly and the remaining particles delivered inwardly toward the next cone members for further subdivisions, a series of receivers to receive the material from the lower portions of the several cone members, a receiver at the upper portion of the drum to receive material from the top of the drum and deliver the same downwardly through the hollow shaft, and means carried by the first cone member to cause certain portions of the material to be carried up to be delivered into the last mentioned receiver.

1,216,119. ROTARY COMPRESSOR AND THE METHOD OF OPERATING IT. ADOLF HINZ, Frankfort-on-the-Main, Germany, assignor to Pokorny & Wittekind Maschinenbau-Aktiengesellschaft, Frankfort-on-the-Main, Germany, a Corporation of Germany. Filed July 21, 1911. Serial No. 639,741. (Cl. 230—24.)



1. The method of operating compressors, and particularly rotary compressors, which consists in disconnecting the compressor from the delivery conduit when owing to reduced consumption the pressure in said conduit rises above the allowable minimum pressure, reducing the pressure at the suction end during the time of such disconnection, so as to diminish the power required to run the compressor at such time, and reëstablishing the connection between the compressor and the delivery conduit after the pressure in said conduit has fallen to a predetermined point.

2. The method of operating compressors, and particularly rotary compressors, which consists in utilizing the increase of pressure which occurs at the delivery end of the compressor owing to reduced consumption, to reduce the pressure at the suction end and in consequence of such reduction to interrupt automatically the connection from the compressor to the place of consumption.

3. The method of operating compressors, and particularly rotary compressors, in the event of an irregular consumption, which consists in reducing the pressure at the suction end gradually until the critical output is attained and then further reducing such pressure to the point corresponding to the idle running of the compressor and at the same time interrupting the connection between the compressor and the place of consumption.

4. The method of operating compressors, and particularly rotary compressors comprising a plurality of sections or stages, which consists in disconnecting the compressor from the place of consumption when owing to reduced consumption the pressure rises at such place, reducing the suction pressure in a portion of the compressor during the time of disconnection, and reëstablishing the connection between the compressor and the place of consumption after the pressure at the place of consumption has fallen to a predetermined point, the other portion of the compressor continuing to operate regularly.

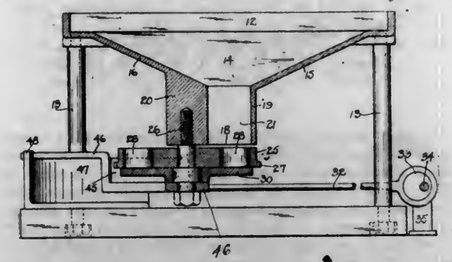
5. In connection with a rotary compressor, a check valve arranged in the delivery conduit, a throttle located in the suction conduit, and means whereby the throttle is placed under the influence, on the one hand, of the pressure prevailing in said delivery conduit, and on the other hand, of an opposing force which is smaller in the closed position of the throttle than in its open position.

[Claims 6 to 9 not printed in the Gazette.]

1,216,120. FEEDING DEVICE. JAMES I. HOLCOMB, Indianapolis, Ind. Filed May 18, 1914. Serial No. 839,298. (Cl. 221—108.)

1. A feeding device including a hopper with a reduced outlet, a rotatable wheel mounted horizontally below said hopper with pocket holes therethrough arranged to register with the outlet from the hopper, an oscillatory plate beneath said wheel, and means for adjusting said oscillating plate and holding it in adjusted position.

2. A feeding device including a hopper with a reduced outlet, a rotatable wheel mounted horizontally below said hopper with pocket holes therethrough arranged to register with the outlet from the hopper, an oscillatory plate beneath said wheel, and means for causing a step by step advance movement of said wheel and an oscillatory movement of said plate.



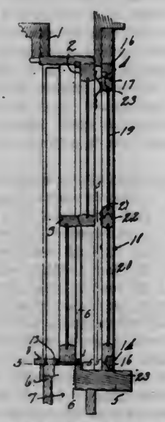
3. A feeding device including a hopper with a reduced outlet, a rotatable wheel mounted horizontally below said hopper with pocket holes therethrough arranged to register with the outlet from the hopper, an oscillatory plate beneath said wheel, means for giving said plate an oscillatory movement, and means carried by said plate for giving the wheel a step by step forward movement.

4. A feeding device including a hopper with a reduced outlet, a rotatable wheel mounted horizontally below said hopper with pocket holes therethrough arranged to register with the outlet from the hopper, the periphery of said wheel being provided with ratchet teeth, a plate beneath said wheel, means for oscillating said plate, an arm extending radially from said plate beyond said wheel, and a spring pawl on said arm for engaging the ratchet teeth on said wheel for causing a step by step movement of the wheel.

5. A feeding device including a hopper with a reduced outlet, a rotatable wheel mounted horizontally below said hopper with pocket holes therethrough arranged to register with the outlet from the hopper, an oscillatory plate beneath said wheel, means for giving said plate an oscillatory movement, means carried by said plate for giving the wheel a step by step forward movement, and means for varying the extent of each actuation of said wheel.

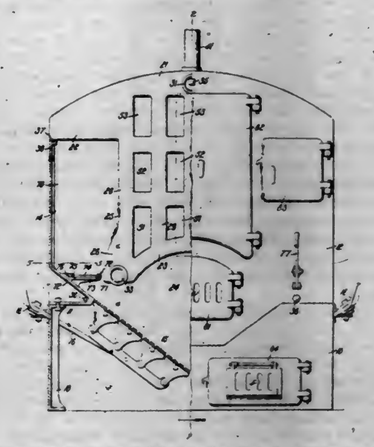
[Claims 6 to 8 not printed in the Gazette.]

1,216,121. STORM-WINDOW. JOSEPH P. HOLZEM and VINCENT J. HOLZEM, Elk River, Minn. Filed Apr. 27, 1916. Serial No. 94,042. (Cl. 20—55.)



In combination with a window frame and its sashes, a supplemental frame carried thereby, a storm window consisting of upper and lower hingedly connected sashes, latches carried by the first named frame for holding the lower sash of the storm window in engagement with the supplemental frame, and springs carried by the side rails of the upper sash for yieldably engaging the upper sash of the storm window to hold the same in engagement with the supplemental frame, said upper sash of the storm window being adapted to swing inwardly when the upper sash of the window is in its lowered position.

1,216,122. HEATER. CHARLES WILLIAM HOPES, Glens Falls, N. Y. Filed Feb. 25, 1916. Serial No. 80,413. (Cl. 122—212.)



1. A heater, comprising a base, a grate supported by the said base, sides erected on the said base, and a plurality of connected heating sections having their upper ends extended sidewise and resting on the upper edges of the said sides to suspend the heating sections between the sides, the bottoms of the sections being arched and forming with the said grate a combustion chamber, the heating sections having top, bottom and side chambers, vertical chambers connecting the top and bottom chambers, transverse chambers connecting the side chambers, the said transverse chambers of adjacent sections having their upper corners in contact and spaced apart at their lower portions, the said heater having longitudinal passages communicating with each other and formed between the transverse chambers and between the latter and the top and bottom chambers, the bottom chambers of adjacent sections being spaced apart for the passage of the products of combustion from the combustion chamber to the lowermost passage.

2. A heater, comprising a base having inwardly extending flanges at its upper end, a grate supported by the said base, sides erected on the flanges of said base, and a plurality of connected heating sections having their upper ends extended sidewise and resting on the upper edges of the said sides to suspend the heating sections between the sides, the bottoms of the sections extending above the said grate to form with the latter a combustion chamber, the said sides forming with the outer sides of the sections two magazines for the storage of the fuel, the lower portions of the sides being provided with downwardly and inwardly inclined flanges, the bottoms of the magazines being integral with the said flanges of the sides, and each being in the form of a horizontal apertured shelf extending at its inner end adjacent the outer side of the heating section.

3. A heater provided with hollow heating sections disposed vertically and arranged one alongside the other in a longitudinal direction, each section having a hollow top chamber, an arched bottom chamber, and side chambers terminating in hollow legs connected with the sides of the

bottom chamber, slip joints connecting the top chambers of adjacent sections with each other, and slip joints connecting the legs of adjacent sections with each other, each heating section having transverse chambers connecting the side chambers with each other, and vertical chambers connecting the top chamber with the arched bottom chamber, the bottom chambers of adjacent heating sections being spaced from each other, and the transverse chambers being approximately trapezoidal in cross section with the upper corners of adjacent heating sections in contact, the said heater having longitudinal passages formed between the transverse chambers and between the latter and the top and bottom chambers, the said passages communicating with each other.

4. A heater provided with connected hollow heating sections disposed vertically and arranged one in front of the other, each section having a hollow top chamber, an arched bottom chamber and side chambers connected with the sides of the bottom chamber, transverse chambers connecting the side chambers with each other, vertical chambers connecting the top chamber with the arched bottom chamber, the tops of the transverse chambers of adjacent heating sections being in contact with each other and the sides of said chambers diverging, the said heater having longitudinal passages formed by the heating sections and communicating at their ends with each other, the bottom chambers of adjacent heating sections being spaced apart, the spaces communicating with the lowermost passage, the said heater having a hollow front and a hollow back communicating respectively with the front and rear heating sections.

5. A heater, comprising a base, a grate supported by the said base, sides supported on the base, a hollow front and a hollow back also supported on the base, a plurality of connected hollow heating sections arranged above the grate and within the space formed by the front, the back and the sides, each heating section having a top chamber, a bottom chamber, side chambers connected with the top and bottom chambers, vertical chambers intermediate the side chambers and connecting the top and bottom chambers, and transverse chambers connecting the side chambers and intersecting the vertical chambers, the tops of the transverse chambers of adjacent sections being in contact, and the adjacent sides of said chambers diverging, the bottoms of the heating sections extending above the grate to form with the latter a combustion chamber, the said heating sections communicating with each other at the top and bottom and the front and rear heating sections communicating respectively with the hollow front and the hollow back of the heater, the heater having longitudinal passages formed by the connected heating sections and arranged in tiers, the said passages extending between the transverse chambers and between the latter and the top and bottom chambers and communicating with each other at the rear and front ends alternately, the lower portions of adjacent heater sections being spaced from each other, and the lower portions of the front and rear heating sections being spaced respectively from the front and back of the heater to permit the products of combustion to pass from the combustion chamber to the lowermost passages, the uppermost passages communicating with an opening in the back of the heater, an inlet pipe for the liquid to be heated connected with the lower part of the hollow back of the heater, and pipes leading from the top of the front and rear heating sections.

[Claims 6 and 7 not printed in the Gazette.]

1,216,123. WEEDING-MACHINE. GEORGE EDWARD HOWE, Salt Lake City, Utah. Filed Mar. 3, 1916. Serial No. 81,891. (Cl. 97—40.)

1. In a weeding machine, the combination of a frame including beams, spacing blocks interposed between said beams, shoulders on said spacing blocks above and below said beams for engaging therewith, upper and lower bearings on said spacing blocks, a spindle journaled through said lower bearings, hangers pivotally mounted on said spindle, cutting elements carried by said hangers, a rock shaft journaled in the upper bearings, cranks on said rock shaft, links connected between said cranks and hangers and means for operating said rock shaft to raise, lower and adjust the height of said cutting elements, substantially as described.



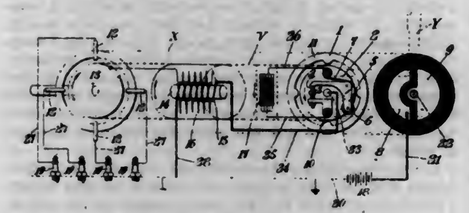
2. In a weeding machine, the combination of a frame including oppositely disposed beams, spacing blocks interposed between said beams, upper and lower bearings on said spacing blocks, a spindle journaled through said lower bearings, hangers hingedly mounted on said spindle, cutting elements carried by said hangers, a rock shaft journaled in said upper hangers, means for actuating said rock shaft, cranks on said rock shaft, and adjustable links connected between said cranks and hangers for adjusting, raising and lowering said cutting elements, said links including threaded rods connected respectively to the cranks and hangers, and turnbuckles coupling said rods, substantially as described.

3. In a weeding machine, the combination of a frame including beams, spacing blocks interposed between said beams, shoulders on said spacing blocks above and below said beams for engaging therewith, fastening means passing through said beams and spacing blocks, upper and lower bearings on said spacing blocks, a spindle journaled through said lower bearings, hangers pivotally mounted on said spindle, cutting elements carried by said hangers, a rock shaft journaled in said upper bearing, cranks on said rock shaft, adjustable links connected between said cranks and hangers for raising, lowering and adjusting said cutting elements, said links comprising threaded rods connected respectively to said cranks and hangers, and turnbuckles for adjustably coupling said rods, and means for actuating said rock shaft and securing same in adjusted position, substantially as described.

4. In a weeding machine, the combination of a frame including a diagonally disposed member composed of a pair of channel beams assembled together with their flanges outward, a series of spaced blocks interposed between said channel beams, fastening means passing through said beams and blocks, upper and lower oppositely disposed shoulders on said spacing blocks engaging above and below said beams, upper and lower bearings on said spacing blocks, a spindle journaled through said lower bearings, hangers pivotally depending from said spindle, cutting elements supported from said hangers, a rock shaft journaled in said upper bearings, cranks on said rock shaft, links connected between said cranks and hangers, a bevel pinion on said rock shaft, a stub shaft disposed angularly to said rock shaft, a bevel pinion on said stub shaft meshing with said first-named bevel pinion, a lever connected to oscillate said stub shaft, means associated with said lever for securing same in adjusted position, substantially as described.

5. In a weeding machine, the combination of a triangular frame including a base member disposed diagonally to the line of travel and composed of a pair of channel beams, spacing blocks interposed between said beams, fastening means passing through said beams and blocks, shoulders on said blocks for abutting against the upper and lower flanges of said beams, upper and lower bearings on said blocks, a spindle journaled in said lower bearings, hangers pivotally depending from said spindle, cutters carrier by said hangers, a rock shaft journaled in said upper bearings, means for actuating said rock shaft, cranks on said rock shaft, adjustable links interposed between said cranks and hangers, braces connected between the base and other members of said frame, wheels supporting said frame, a rearward extension formed by a continuation of said channel beams, a bearing clamped between said channel beams forming the rearward extension, and a rear wheel supported from said bearing, substantially as described.

1,216,124. SELF-CONTAINED HIGH-TENSION BATTERY IGNITION-UNIT SYSTEM. FRANCIS R. HOYT, East Orange, N. J., assignor to The Simms Magneto Company, East Orange, N. J., a Corporation of New York. Filed Apr. 25, 1916. Serial No. 93,870. (Cl. 123—148.)



1. In a high tension battery ignition system, in which a battery constitutes the sole source of electrical energy, a self-contained unit comprising a periodic interrupter, a communicator and a distributer, each having rotatable and non-rotatable parts, an induction coil and condenser, said parts being arranged in close relation and electrically connected, the rotatable parts of the unit being associated in fixed relation for joint rotation, and the non-rotatable parts of the unit being associated in fixed relation with each other.

2. In a high tension battery ignition system, the combination with a battery constituting the sole source of electrical energy in the system of internal combustion engines, a self-contained unit comprising a periodic interrupter, a commutator and a distributer, each having rotatable and non-rotatable parts, said rotatable parts constituting one group of elements and being associated in fixed relation for joint rotation, said non-rotatable parts constituting another group and being associated in fixed relation with each other, an induction coil associated in fixed relation with the elements of one of said groups, and a condenser associated in fixed relation with one of said groups.

3. In a high tension battery ignition system, the combination with a battery constituting the sole source of electrical energy in the system of a self-contained unit comprising a periodic interrupter, a commutator and a distributer, each having rotatable and non-rotatable parts, an induction coil and condenser, said parts being arranged in close relation and electrically connected, the rotatable parts of the unit being associated in fixed relation for joint rotation, and the non-rotatable parts of the unit being associated in fixed relation with each other, said induction coil being associated with and rotating with the rotary parts.

4. In a high tension battery ignition system, the combination with a battery constituting the sole source of electrical energy in the system of a self-contained unit comprising a periodic interrupter, a commutator and a distributer, each having rotatable and non-rotatable parts, an induction coil and condenser, said parts being arranged in close relation and electrically connected, the rotatable parts of the unit being associated in fixed relation for joint rotation and the non-rotatable parts of the unit being associated in fixed relation with each other, the said induction coil and the condenser being associated in fixed relation with said rotary parts and rotating therewith.

5. In a high tension battery ignition system, a self-contained unit comprising a periodic interrupter, a commutator and a distributer, each having rotatable and non-rotatable parts, an induction coil and condenser, said parts being arranged in close relation and electrically connected, the rotatable parts of the unit being associated in fixed relation for join rotation, and the non-rotatable parts of the unit being associated in fixed relation with each other, the non-rotatable part of the periodic interrupter being capable of oscillation about the axis of the rotary parts to advance and retard the spark.

[Claims 6 to 8 not printed in the Gazette.]

1,216,125. SELF-CONTAINED HIGH-TENSION BATTERY IGNITION UNIT. FRANCIS R. HOYT, East Orange, N. J., assignor to The Simms Magneto Company, East Orange, N. J., a Corporation of New York. Filed Apr. 28, 1916. Serial No. 94,100. (Cl. 123—168.)



1. A self-contained high tension battery ignition unit comprising among its members a casing member and a separate member, said members being capable of relative rotary movement with respect to each other, an induction coil and condenser within said casing member and secured to one of said members, a periodic interrupter, a commutator for reversing the direction of the current through the contacts of the interrupter, and a distributer within said casing member provided each with rotary parts secured to one of said members, and non-rotary parts secured to the other of said members, said devices within said casing being electrically connected and provided with exterior means for connecting a battery and spark plugs therewith in operative relation.

2. A self-contained high tension battery ignition unit comprising among its members a casing member and a separate member, said members being capable of relative rotary movement with respect to each other, an induction coil and condenser within said casing member and secured to one of said members, a periodic interrupter, a commutator for reversing the direction of the current through the contacts of the interrupter, and a distributer within said casing member provided each with rotary parts secured to one of said members, and non-rotary parts secured to the other of said members, said devices within said casing being electrically connected and provided with exterior means for connecting a battery and spark plugs therewith in operative relation, means for rotating one of said members, and means for oscillating the other of said members concentrically with the axis of rotation of the rotary member.

3. A self-contained high tension battery ignition unit comprising among its members an inclosing casing, a rotatable member within said casing, an induction coil and a condenser secured to and rotatable with said rotatable member, a periodic interrupter and a distributer within said casing, each having a rotatable part connected with said rotatable member and a coöperating part connected with said casing, the rotary part of the periodic interrupter being provided with separable contacts, electrical connections between said contacts and the condenser, carried by said rotatable member, and means for driving said rotatable member.

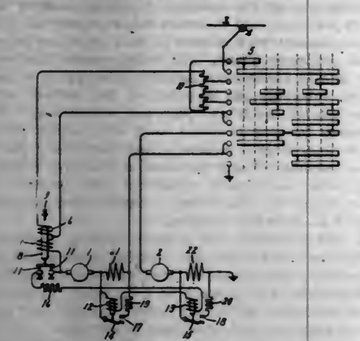
4. A self-contained high tension battery ignition unit comprising among its members an inclosing casing, a ro-

tatable member within said casing, an induction coil and a condenser secured to and rotatable with said rotatable member, a periodic interrupter and a distributer within said casing, each having a rotatable part connected with said rotatable member, and a coöperating part connected with said casing, the parts carried by the casing being held in fixed relation with each other and with the casing, the rotary part of the periodic interrupter being provided with separable contacts, electrical connections between said contacts and the condenser, carried by said rotatable member, means for driving said rotatable member, means for rotatably supporting said casing and its connected parts, and means for oscillating said casing and all the parts connected therewith about the axis of said rotatable member.

5. A self-contained high tension battery ignition unit comprising among its members an inclosing casing, a rotatable member within said casing, an induction coil and condenser secured to said rotatable member, a periodic interrupter and a distributer within said casing, each having a rotatable part connected with said rotatable member, and a coöperating part connected with said casing, a commutator for periodically reversing the direction of current through the contacts of the interrupter, located within the casing, and provided with rotatable parts connetced with said rotatable member, and non-rotatable parts connected with said casing, and means for driving said rotatable member.

[Claims 6 to 14 not printed in the Gazette.]

1,216,126. MOTOR-CONTROL SYSTEM. WILLIAM P. JACKSON, Oakland, Cal., assignor to General Electric Company, a Corporation of New York. Filed Mar. 7, 1916. Serial No. 82,590. (Cl. 172—179.)



1. The combination in a motor control system of a motor having a series field, a source of current for said motor, a starting resistance for said motor, means for connecting the starting resistance in series with said motor and for cutting the same out of circuit, means for reducing the field strength of said motor, means responsive to the current in the motor circuit for operatively connecting the field reducing means in shunt to the motor armature when the current in the motor circuit falls to a predetermined value, and means responsive to the current through the starting resistance for preventing the connection of the field reducing means in shunt to the motor armature until the starting resistance has been cut out of circuit.

2. The combination in a motor control system of a motor having a series of field, a source of current for said motor, a starting resistance for said motor, means for connecting the starting resistance in series with said motor and for cutting the same out of circuit, a switch responsive to the current in the motor circuit, a second switch having a magnetizing coil which is connected in shunt to the armature of said motor when the first switch is operated by reason of the current in the motor circuit falling to a predetermined value, means controlled by the second switch and put into operation when the voltage across the armature of said motor exceeds a predetermined value, for reducing the ampere turns in the series field and a magnetizing coil responsive to current in the starting resistance for preventing the first switch from operating until the starting resistance has been cut out of circuit.

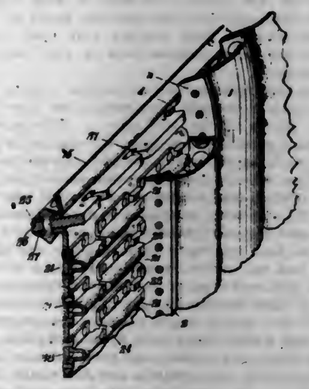
3. The combination in a motor control system of a motor having a series field, a source of current for said motor, a starting resistance for said motor, means for connecting the starting resistance in series with said motor and for cutting the same out of circuit, a switch responsive to current in the motor circuit, a second switch having a magnetizing coil which is connected in shunt to the armature of said motor when the first switch operates by reason of the current in the motor circuit falling to a predetermined value, means controlled by the operation of the second switch for reducing the ampere turns in the series field, and means for preventing the first switch from operating until the starting resistance has been cut out of circuit.

4. The combination in a motor control system of a motor having a series field, a source of current for said motor, a starting resistance for said motor, means for connecting the starting resistance in series with said motor and for cutting the same out of circuit, means responsive to the voltage across the armature of said motor for reducing the ampere turns in the series field, means responsive to the current in the motor circuit for connecting the first mentioned means in shunt to the motor armature when the current in the motor circuit falls to a predetermined value, and means for preventing the operation of the second mentioned means until the starting resistance has been cut out of circuit.

5. The combination in a motor control system of a plurality of motors having series fields, a source of current for said motors, a starting resistance for said motors, means for connecting the starting resistance in series with said motors and for cutting the same out of circuit, means responsive to the voltage across the armature of one of said motors for reducing the ampere turns in the series fields of both motors when the voltage exceeds a predetermined value, a switch responsive to the current in the circuit of one of said motors for connecting said field reducing means in shunt to the armature of one of said motors when the current in the motor circuit falls to a perdetermined value and means responsive to current in the starting resistance for preventing the switch from operating until the starting resistance has been cut out of circuit.

[Claim 6 not printed in the Gazette.]

1,216,127. REMOVABLE FIRE-BOX. HENRY W. JACOBS, Topeka, Kans. Filed Apr. 25, 1913. Serial No. 763,502. (Cl. 122—58.)



1. In a fire-box construction the combination of a fire-box and a wrapper sheet curved in the upper portion thereof made up of a plurality of sections comprising a crown panel and side panels, the lower ends of the side panels being located at the two lower ends of said curved portion, and the fire-box and wrapper sheet having means adapted to be engaged by movement transversely of the fire-box.

2. In a fire-box construction the combination of a fire-box and a wrapper sheet curved in the upper portion thereof made up of a plurality of sections comprising a crown panel, the edges of which are higher than the top of the crown of the fire-box and side panels, the lower ends of the side panels being located at the two lower ends of said curved portion, and the fire-box and wrapper sheet having means adapted to be engaged by movement transversely of the fire-box.

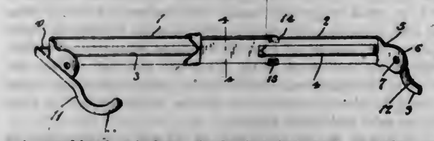
3. In a fire-box construction the combination of a fire-box and a wrapper sheet curved in the upper portion thereof made up of a plurality of sections comprising a crown panel and a plurality of side panels, the lower ends of the side panels being located at the two lower ends of said curved portion, and the fire-box and wrapper sheet having means adapted to be engaged by movement transversely of the fire-box.

4. In a fire-box construction the combination of a fire-box and a wrapper sheet, curved in the upper portion thereof made up of a plurality of sections comprising a crown panel, the edges of which are higher than the top of the crown of the fire-box and a plurality of side panels, the lower ends of the side panels being located at the two lower ends of said curved portion, and the fire-box and wrapper sheet having means adapted to be engaged by movement transversely of the fire-box.

5. In a fire-box construction the combination of a fire-box and a wrapper sheet made up of a plurality of sections, the fire-box and wrapper sheet having interlocking projections and recesses adapted to be engaged by a movement of the wrapper sheet parallel to and transversely of the fire-box.

[Claims 6 to 21 not printed in the Gazette.]

1,216,128. SHADE AND CURTAIN BRACKET. ELMER H. JENKINS, Cambridge, Ohio. Filed Sept. 1, 1916. Serial No. 118,070. (Cl. 156—23.)



A combined window shade bracket and curtain pole support comprising a pair of adjustably connected members formed of a single blank of metal, the outer end of each of said members bent at right angles thereto to define shade supporting brackets, the body of each member provided with longitudinally extending slots defining tongues, which tongues are bent outwardly and parallel with the bodies and extending beyond the outer side of the bracket, the extreme ends of the tongues being parallel with the bracket and their extreme ends terminating beyond the front edge of the brackets and curved downwardly and upwardly constituting a curtain pole support, said curtain pole support being spaced from the side faces of the brackets so as to permit the curtain pole to be placed upon or removed from the pole support without interfering with the shade bracket or member.

1,216,129. LEVELING INSTRUMENT. GUSTAV A. JENNING, East St. Louis, Ill. Filed Aug. 11, 1913. Serial No. 784,159. (Cl. 33—209.)

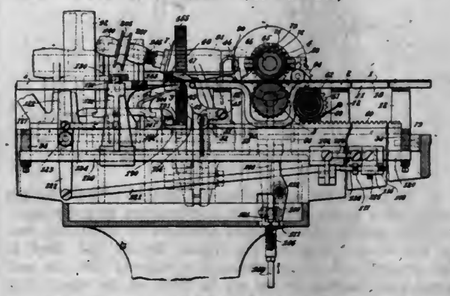
1. In a leveling instrument of the class described, a tubular element comprising telescoped sections, means for relatively moving the sections, a sight glass in the one section, a flexible container in open communication with the sight glass, a second tubular element of like structure with the first mentioned tubular element, a tubular means for connecting said elements, and an air vent for one of said tubular elements above said sight glass and flexible container.



2. In a leveling apparatus an instrument comprising a tubular body, a sight glass in said body, an open topped flexible sack in said tubular body in communication with the sight glass, a second instrument of like characteristics and a flexible tube for intercommunicatively associating the two instruments for the purposes stated.

3. In a leveling instrument, a container for a level indicating body of fluid, a trap in communication with said container, an air inlet for said trap, and means located at the discharge end of said inlet for preventing the accumulation of fluid.

1,216,130. MACHINE FOR PREPARING INSOLES FOR REINFORCING. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 23, 1913. Serial No. 763,011. (Cl. 12—20.)



1. A machine for preparing insoles for reinforcing having, in combination, a work table upon which the reinforcing fabric and insole are stuck together, means engaging the portion of the fabric to be cut off for pulling the fabric and delivering it to the work table, and a knife for cutting off the pulled out length of fabric.

2. A machine for preparing insoles for reinforcing having, in combination, a work table upon which the reinforcing fabric and insole are stuck together, means engaging the portion of the fabric to be cut off for pulling out the fabric and delivering it to the work table including mechanism acting automatically to stop the movement of the fabric after a predetermined length has been pulled out, and a knife for cutting off the pulled out length of fabric.

3. A machine for preparing insoles for reinforcing having, in combination, a work table upon which the reinforcing fabric and insole are stuck together, means for pulling out a predetermined length of fabric and deliver-

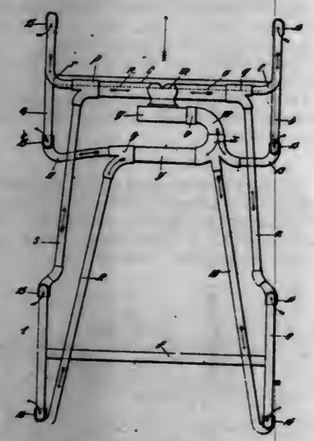
ing it to the work table, means for varying the length of fabric pulled out, and a knife for cutting off the pulled out length of fabric.

4. A machine for preparing insoles for reinforcing having, in combination, a work table upon which the reinforcing fabric and insole are stuck together, means for determining the position of an insole upon the table, means for pulling out the fabric and delivering it to the work table in a definite relation to the positioning means, a knife for cutting off the pulled out length of fabric, and means acting automatically to cause the knife to cut off the fabric after a predetermined length has been pulled out.

5. A machine for preparing insoles for reinforcing having, in combination, a work table upon which the reinforcing fabric and insole are stuck together, means for determining the position of an insole upon the table, and means for pulling out a predetermined length of a fabric and delivering it to the work table including mechanism for seizing the free end of the fabric and pulling it over the work table.

[Claims 6 to 27 not printed in the Gazette.]

1,216,131. MEANS FOR PREVENTING THE RAISING OF DUST BY MOTOR-VEHICLES. BENJAMIN JONES and PHILLIP JOHN REES, Gwaun-Cae-Gurwen, Wales. Filed Apr. 6, 1916. Serial No. 89,379. (Cl. 21—90.)

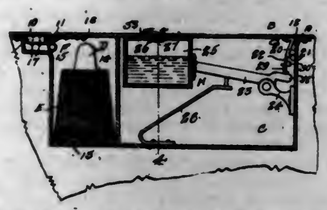


1. In means for preventing the raising of dust by the wheels of a motor vehicle, the combination with a vehicle, of pipes having mouth pieces arranged in front and rear of the wheels adjacent the treads thereof and close to the ground, and an air apparatus connected with the said pipes and drawing in the air in front of the wheels and delivering it to the rear of the wheels.

2. Means for preventing the raising of dust by the wheels of motor vehicles, said means comprising the combination with a motor vehicle of a fan casing mounted on said vehicle, a fan in said casing, an air inlet to, and an air outlet from said fan casing, pipes connecting said inlet with mouth-pieces, said mouth-pieces being arranged in front of the road wheels of the vehicle, and pipes connecting said outlet with mouth-pieces, said second-named mouth-pieces being arranged in rear of the road wheels of the vehicle, said first-named and said second-named mouth-pieces being disposed adjacent the peripheries of the corresponding wheels and close to the ground.

3. Means for preventing the raising of dust by the wheels of motor vehicles, said means comprising the combination with a motor vehicle of a fan casing mounted on said vehicle, a fan in said casing, means for driving said fan, an air inlet to, and an air outlet from, said fan casing, junction pieces and flexible pipes connecting said inlet with inlet mouth-pieces, and junction pieces and flexible pipes connecting said outlet with outlet mouth-pieces, said inlet mouth-pieces being arranged in front of, and said outlet mouth-pieces being arranged in rear of, the road wheels of the vehicle, said inlet and outlet mouth-pieces being disposed adjacent the peripheries of the corresponding wheels and close to the ground and having lateral wings adapted to extend on either side of the peripheral portions of said wheels, substantially as set forth.

1,216,132. DEVICE FOR THE RECOVERY OF TORPEDOES. JAMES J. JOYCE, Annapolis, Md. Filed Aug. 22, 1916. Serial No. 116,282. (Cl. 9—9.)



1. A device for the recovery of torpedoes comprising in combination with a movable shell section thereof, a device normally tending to force said shell section from the torpedo, means for releasably retaining said shell section in fluid-tight engagement with the shell of the torpedo, a receptacle in said torpedo closable by said shell section, a bucy and cable in said receptacle, said cable secured to said buoy and the torpedo, and means within said receptacle operated by the weight of a predetermined quantity of water, deriving its source of water from the exterior of the torpedo for releasing said shell section retaining means after a predetermined quantity of water is in operative relation to said hydraulic means.

2. A device for the recovery of torpedoes comprising in combination with a movable shell section thereof, means for releasably retaining said shell section in fluid-tight engagement with the shell of the torpedo, a receptacle in said torpedo closable by said shell section, a buoy and cable in said receptacle, said cable secured to said buoy and the torpedo, and means within said receptacle operated by the weight of a predetermined quantity of water, deriving its source of water from the exterior of the torpedo for releasing said shell-section retaining means after a predetermined quantity of water is in operative relation to said hydraulic means.

3. A device for the recovery of torpedoes comprising in combination with a movable shell section thereof provided with a small port permitting flow ingress of a small quantity of liquid to within the torpedo, a device normally tending to force said shell section from the torpedo, means for releasably retaining said shell section in fluid-tight engagement with the shell of the torpedo, a receptacle in said torpedo closable by said shell section, a buoy and cable in said receptacle, said cable secured to said buoy and the torpedo, a movable tank within said receptacle normally open to the said port in said shell section, means for yieldably retaining said tank in a raised position, but counteracted by said tank when containing a quantity of liquid of predetermined weight, so as to permit the tank to move downwardly, and a device actuated by downward movement of said tank to release said shell-section retaining means.

4. A device for the recovery of torpedoes comprising in combination with a movable shell section thereof provided with a small port permitting ingress of a small quantity of liquid to within the torpedo, a device normally tending to force said shell section from the torpedo, means for releasably retaining said shell section in fluid-tight engagement with the shell of the torpedo, a receptacle in said torpedo closable by said shell section, a buoy and cable in said receptacle, said cable secured to said buoy and the torpedo, a lever in said receptacle, a tank carried by said lever normally open to the said port of said shell section, means for yieldably retaining said tank in a raised position, but counteracted by said tank when containing a quantity of liquid so as to permit the tank to move downwardly, and an adjustable dog carried by said lever and adapted to release said shell-section retaining means when said tank moves downwardly.

5. A device for the recovery of torpedoes comprising in combination with a movable shell section thereof provided with a small port permitting ingress of a small quantity of liquid to within the torpedo, a device normally tending to force said shell section from the torpedo, means for releasably retaining the said shell section in fluid-tight engagement with the shell of the torpedo, a receptacle in said torpedo closable by said shell section, a buoy and cable in said receptacle, said cable secured to said buoy and the torpedo, a movable tank within said receptacle provided with a perforation in its top open to said port of said shell section, means for yieldably retaining said tank in a raised position with its top in intimate contact with said shell section about said perforation, but counteracted by said tank when containing a quantity of liquid, so as to permit the tank to move downwardly, and a device actuated by downward movement of said tank to release said shell-section retaining means.

[Claim 6 not printed in the Gazette.]

1,216,133. APPARATUS FOR DETERMINING POINTS IN SPACE BY MEANS OF PERSPECTIVE VIEWS. GUSTAV KAMMERER, Vienna, Austria-Hungary. Filed May 21, 1914. Serial No. 840,068. (Cl. 33—174.)



Apparatus for determining points in space from perspective images thereof comprising supports for the images, at least two links or guide bars, means for supporting such links or guide bars whereby each is movable about a point in space, said links representing projection rays of identical points on the images, a drawing or modeling pin, a frame connecting said pin to the links, pointers or gages carried by the said links, and parallel motion means guiding said pointers or gages and connecting them to the drawing or modeling pin whereby setting of said pointers at identical points on the images adjusts said drawing or modeling pin to the corresponding point on the model.

1,216,134. GREEN VAT DYES AND PROCESS OF MAKING THEM. MICHAEL KARDOS, Charlottenburg, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed June 30, 1913. Serial No. 776,541. (Cl. 8—1.)

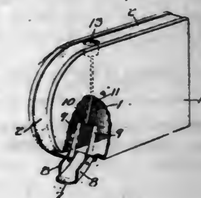
1. The new vat coloring matters of the anthracene series obtainable by melting anthracene-1.9-dicarboxylic acid imids with caustic alkali, which new coloring matters are soluble, in alkaline hydrosulfite solution giving red solutions and which dye cotton beautiful full green shades of excellent fastness.

2. The new vat coloring matter of the anthracene series obtainable by melting anthracene-1.9-dicarboxylic acid imid with caustic alkali, which new coloring matter is soluble in alkaline hydrosulfite solution yielding a cherry red vat which colors cotton red-violet shades, which shades, on exposure to air, become a beautiful full green.

3. The process of producing vat coloring matters of the anthracene series by first treating an aceanthrene quinone oxim body with an acid and then subjecting the product to the action of an alkaline melt.

4. In the process of producing vat coloring matters of the anthracene series, the step which consists in subjecting anthracene-1.9-dicarboxylic acid imid to the action of a caustic alkaline melt.

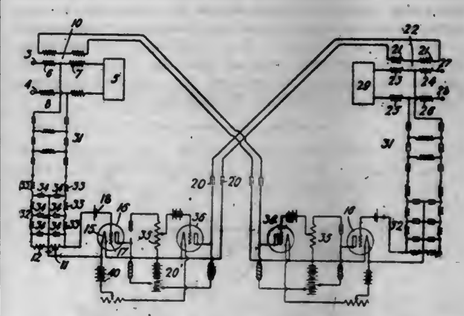
1,216,135. TOBACCO-BOX. MELVILLE I. KEIM, Chicago, Ill. Filed Dec. 11, 1915. Serial No. 66,312. (Cl. 221—11.)



1. A tobacco box having parallel sides and a bottom provided with a discharge opening, a delivery spout hinged at one end of said opening, and a yoke having side arms attached to said spout and located at a distance apart approximately equal to the full width of the spout, said side arms being connected at the top by a cross bar, and means connected to said cross bar for operating it and the spout.

2. A tobacco box having parallel sides and a bottom provided with a discharge opening, a delivery spout hinged at one end of said opening, said spout having upstanding wings at the sides, parallel side bars pivoted to said wings and passing up into the box, a cross bar connecting said side arms at the top, said cross bar being located a short distance above the spout, whereby a free passage through the spout is formed and yet the contents of the box may be agitated, and a push rod passing through the top of the box whereby the spout may be swung about its hinge.

1,216,136. TRANSMISSION-CIRCUIT. BURTON W. KENDALL, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed June 5, 1916. Serial No. 101,751. (Cl. 179—170.)



1. In a telephone repeating system, a telephone line, a bridge across said line comprising a resistance and a capacity in multiple, and a telephone repeater in shunt of a portion of said bridge.

2. In a telephone repeating system, a pair of line conductors, a capacity bridge and a resistance bridge between said line conductors, and a telephone repeater having one terminal connected to the middle points of said bridges and another terminal connected to one of said line conductors.

3. In a telephone repeating system, a telephone line, a bridge across said line comprising a resistance and a capacity in multiple, and a vacuum tube repeater having its cathode connected to the middle point of said bridge and its input electrode connected to one terminal of said bridge.

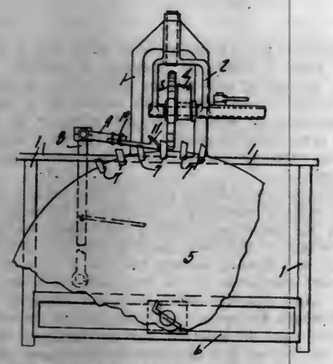
4. In a telephone repeating system, a telephone line, a bridge across said line comprising a capacity and resistance in multiple, a vacuum tube repeater, and a connec-

tion between the middle point of said bridge and the cathode of said repeater.

5. In a telephone repeating system, a telephone line, a capacity bridge and a resistance bridge across said line, a vacuum tube repeater, and a connection between the middle points of said bridges and the cathode of said repeater.

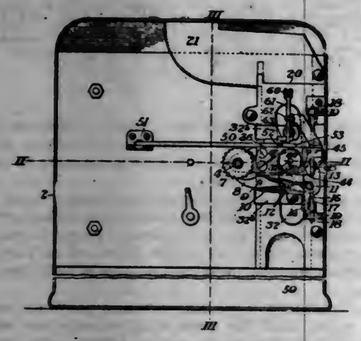
[Claims 6 to 10 not printed in the Gazette.]

1,216,137. SAW-FILING MACHINE. MYRON E. KENNEY, Sauk, Wash. Filed Oct. 26, 1915. Serial No. 57,907. (Cl. 76—77.)



In a saw filing machine for filing radial insert teeth, the combination of an abrasive wheel which files the radial face of a saw tooth, a feed and holding means, whereby the saw is advanced and the tooth is held against the abrasive wheel; said means including a reciprocating holder feed finger, feed finger means removably attached to said holder, the said finger means including a segmental tip integral with a stem and whose lower end projects slightly below the underside of said stem and which curves upward and backward with respect to said stem and which is offset with respect to said stem, whereby the forward end of said tip holds the tooth against the abrasive wheel and the concaved side may ride freely over the back of the adjacent teeth.

1,216,138. COMBINATION CLOCK AND HOME SAVINGS-BANK. EDWARD A. KLAGES, Crafton, Pa. Filed Aug. 4, 1915. Serial No. 43,503. (Cl. 194—17.)



1. The combination with the winding mechanism of a clock, of a locking device therefor, a coin receptacle, a coin chute having a coin stop therein, means whereby the presence of a coin on said stop effects a release of said lock, means for ejecting the coin after the clock is rewound, said means comprising a device operated by the winding movement of the winding mechanism, and means controlled by the winding mechanism to close the coin chute before the completion of the winding of the clock, substantially as described.

2. The combination with the winding mechanism of a clock, of a locking device therefor, a coin receptacle, a coin chute having a coin stop therein, means whereby the presence of a coin on said stop effects a release of said lock, means for ejecting the coin after the clock is rewound, and a coin guard for preventing the removal of a coin after it has been inserted and operating connections between said guard and the winding mechanism of the clock, substantially as described.

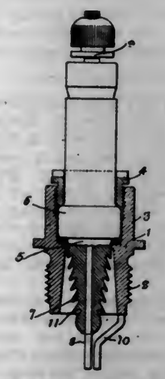
3. The combination with a clock having a winding mechanism, a locking device for said mechanism, a coin receptacle, a coin chute or passage arranged to deliver coins into the receptacle, a calipering device for the coins, means for retaining the calipering device in one of its two extreme positions, and means controlled by a coin for preventing the calipering device moving to one of its extreme positions for releasing said lock, substantially as described.

4. The combination with a clock having a winding mechanism, of a lock therefor, a coin receptacle, a coin chute or passage arranged to deliver coins into the said receptacle, said chute or passage having a plurality of coin arresting means for arresting coins of different sizes, and devices whereby the presence of a proper sized coin in any one or more of the arresting means will cause the release of said lock, substantially as described.

5. The combination with a clock having a winding mechanism, of a lock therefor, a coin receptacle, a coin chute or passage arranged to deliver coins into the said receptacle, said chute or passage having a plurality of coin arresting means, and devices whereby the presence of a proper sized coin in any one or more of the arresting means will cause the release of said lock, said devices comprising a calipering member having a plurality of calipering portions adjacent to the different coin arresting means, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,216,139. SPARK-PLUG FOR INTERNAL-COMBUSTION ENGINES. MELROSE G. KOPP, Dayton, Ohio, assignor to McCormick Manufacturing Company, Dayton, Ohio. Filed July 21, 1915. Serial No. 41,065. (Cl. 123—169.)



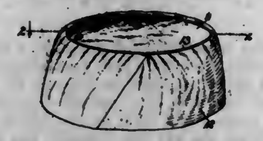
1. A core of insulating material for a spark plug comprising a body portion tapered toward that end thereof at which the spark is formed, and provided on the tapered portion thereof with the plurality of circumferential projections of substantially equal width, each projection having its circumferential edge of such thickness that it will be so heated by the explosions produced by the sparks from said spark plug as to cause any conductive matter which may have been deposited thereon to be consumed.

2. A core of insulating material for a spark plug, comprising a tapered body portion provided with a plurality of circumferential projections spaced apart and extending obliquely to the axis of the core and toward the smaller end of the core, that projection nearest the smaller end of the core having the shortest diameter and the edge of each successive projection extending beyond the edge of the preceding projection, said edges being of such thickness that they will be so heated by the explosions produced by the sparks from said plug as to cause any conductive matter which may have been deposited thereon to be consumed.

3. A core of insulating material for a spark plug, comprising a body portion having at one end an electrode and provided with a plurality of circumferential projections, spaced apart and each decreasing in thickness from said body portion toward the edge of the projection, that projection nearest said electrode having the shortest diameter, and each successive projection having a diameter greater than the diameter of the preceding projection.

4. In a spark plug, a supporting casing having its inner end open, a core of insulating material mounted within said casing, and an electrode carried by said core near the open end of said casing, said core having a series of circumferential projections arranged within said casing, spaced apart and interposed between said electrode and said casing and each provided with an edge adapted to be so heated by the explosions produced by the sparks from said plug as to cause any conductive matter deposited thereon to be consumed, the edge of each successive projection following the projection nearest the inner end of said core extending laterally beyond the edge of the preceding projection.

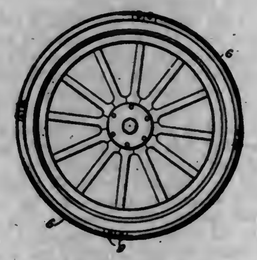
1,216,140. LINING FOR HATS. ALFRED KURTZ, Brooklyn, N. Y. Filed June 29, 1916. Serial No. 106,594. (Cl. 2—113.)



1. A hat lining comprising a crown piece; a side piece; an uncovered cord exposed between said crown piece and side piece; and means for securing said crown piece, side piece and cord together for forming an ornate seam between said crown piece and side piece.

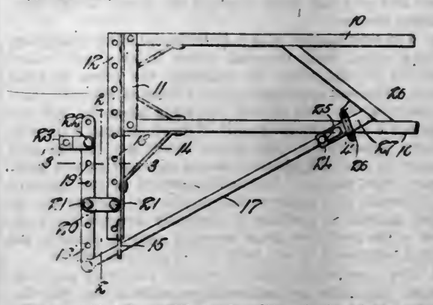
2. A hat lining comprising a crown piece; a side piece; an uncovered cord exposed between said crown piece and side piece; and means for securing said crown piece, side piece and cord together for forming an ornate seam between said crown piece and side piece, said means embodying a single row of stitching passing through said crown piece, side piece and cord.

1,216,141. TIRE-PROTECTOR. ANDREW T. LANEY, Clinton, Mo. Filed Sept. 24, 1915. Serial No. 52,517. (Cl. 152—17.)



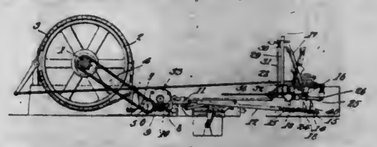
A tire-protector comprising a plurality of arcuate sections shaped to conform to and to cover the tread and a portion of the sides of a tire, and couplings lapped by and joining the abutting portions of the sections, each section having near each end a series of transversely-disposed openings and each coupling having adjacent to each of its ends a series of similarly-disposed hooks arranged to engage through said openings, the hooks of each series extending away from the adjacent end of the coupling and in a direction opposite to pull of a section thereon, and both sections where lapping a coupling being of reduced thickness on the inside.

1,216,142. GANG-PLOW HITCH. HARVEY O. LANTZER, Aurora, Nebr. Filed Oct. 2, 1916. Serial No. 123,366. (Cl. 97—4.)



The combination with a plurality of plow beams; of a cross bar secured to the forward ends of said beams and projecting laterally from one side thereof, an equalizing lever, there being correspondingly spaced openings in the cross bar and lever, links extending between said cross bar and lever, pivot bolts connecting said links to selected openings in the cross bar and lever, a bar having its front end pivotally connected to the outer end of said lever, a clevis at the inner end of said lever, a collar slidably mounted on one of said beams and slidably receiving the rear end of said last bar, a wedge interposed between said collar and beam and a set screw carried by the collar and positioned to clamp the last bar, the beam and the wedge together.

1,216,143. STOP MECHANISM FOR MINE-HOISTS. DANIEL F. LEPLEY, Connellsville, Pa. Filed Dec. 3, 1914. Serial No. 875,353. (Cl. 74—46.)



1. The combination with drums for winding cage supporting cables, a lever, and means operated by the lever for bringing the drums to a stop, of means operating in timed relation with the drums for shifting the lever automatically to active or drum stopping position when a cage approaches a predetermined limit of its movement, and means under the control of a person at a low level of the cage, and independent of the operator, for instantly advancing the actuation of the lever into position to slow down and stop the drum ahead of the normal automatic movement of the lever by said first mentioned means.

2. The combination with a drum for winding a cage supporting cable, drum rotating means, a lever, and means operated by the lever for stopping the drum rotating means, of means operating in timed relation with the drum for shifting the lever automatically to stop the drum when the cage approaches a predetermined limit of its movement, and means under the control of a person at a low level of the cage, said means being independent of the operator, for instantly advancing the actuation of said

lever into position to slow down and stop the drum ahead of the normal automatic movement of the lever by the lever shifting means.

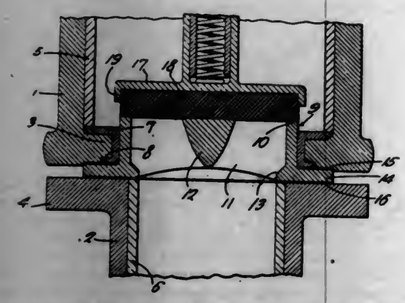
3. The combination with a drum for winding a cage supporting cable, drum rotating means, a lever, and means operated by the lever to stop the drum rotating means, of means operating in timed relation with the drum for shifting the lever to stop the drum when the cage approaches a predetermined limit of its movement, a member movably connected to the lever, means for supporting said member in inactive position, and means actuated by a person at a lower level of the cage and independently of the operator, for releasing said member thereby to instantly advance the actuation of the lever into position to slow down and stop the drum through the action of the lever shifting means.

4. The combination with a drum for winding a cage supporting cable, drum rotating means, a lever, and means operated by the lever for stopping the drum rotating means, of means operating in timed relation with the drum for shifting the lever to stop the drum when the cage approaches a predetermined limit of its movement, a member slidably connected to the lever, means for locking said member in elevated position, means operated from a point remote from the lever and independently of the operator for releasing said member, and means for shifting the released member to position to instantly advance the actuation of the lever into drum stopping position ahead of the normal movement of the lever by its shifting means.

5. The combination with a drum for winding a cage supporting cable, a lever, and means operated by the lever for stopping the rotation of said drum when the cage reaches a predetermined position, of a rack, speed reducing means operating with the drum for actuating the rack, means operated by the rack for gradually shifting the lever to position to stop the drum during the movement of the cage to a limit of its movement, a member movably mounted adjacent the lever, means for locking said member in one position, and means operated at a point remote from the lever for releasing said member to position the member upon the rack actuated means, thereby to advance the actuation of the lever by said means.

[Claims 6 to 8 not printed in the Gazette.]

1,216,144. VALVE-SEAT FOR MINE-PUMPING CONDUITS. DANIEL F. LEPLEY, Connellsville, Pa. Filed Apr. 27, 1916. Serial No. 93,938. (Cl. 103—66.)



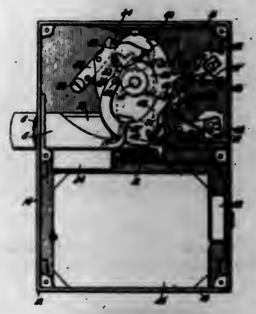
1. A valve seat for mine pumping conduits constructed of Babbitt metal or equivalent material and comprising a ring having a spider therein and a lower outturned flange.

2. A valve seat for mine pumping conduits constructed of Babbitt metal or equivalent material and comprising a ring having a spider therein, a lower outturned flange and a lower inturned lip.

3. In a structure of the character described, the combination with the upper and lower sections of a mine pumping conduit and linings for said sections, of a valve seat constructed of Babbitt metal or equivalent material supported by the lower section and having a spider therein and a lower outturned flange clamped between said sections, and a valve seatable upon said seat, said seat being supported by the lower section and having a portion overlapping the lining thereof.

4. In a structure of the character described, the combination of upper and lower sections of a mine pumping conduit, linings for said sections, a valve seat constructed of Babbitt metal or equivalent material embodying a ring having a spider therein, a lower outturned flange clamped between said sections and a lower inturned lip overlapping the upper end of the lining of the lower section, the internal diameter of the lower section being practically the same as that of said ring, whereby said ring is supported firmly by said lower section, and a valve seatable upon said seat within the upper section.

1,216,145. COIN-CONTROLLED LOCK. ALBERT F. LESLER, New York, N. Y. Filed Mar. 27, 1916. Serial No. 86,901. (Cl. 194—65.)



1. In a device of the character described, a bolt, an arm adapted to retract said bolt, a knob for operating said arm for retracting the bolt, a shaft having lugs for connecting said knob with said arm, coin controlled means engaging said lugs for holding said shaft against operation until a coin of the proper size has been inserted, and a key operated member connected with said arm for operating the arm independently of said knob so as to retract said bolt.

2. In a lock of the character described, a bolt, an arm for retracting the same, a knob connected with said arm for operating the arm, a second knob arranged on the opposite side of the lock to the first mentioned knob, an arm connected with said second mentioned knob for retracting said bolt independent of said first mentioned arm, a catch for normally holding said second mentioned arm against operation, a release lever for releasing said catch, and a coin controlled mechanism for actuating said lever.

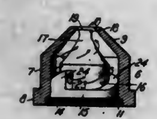
3. In a lock of the character described, a bolt, an arm for retracting said bolt, a catch for normally holding said arm against movement, a hand operated member for operating said arm when released, a lever for actuating said catch for releasing said catch, and means controlled by the coin adapted to actuate said lever.

4. In a lock of the character described, a bolt, an arm for retracting said bolt, a manually operated member for operating said arm, said arm being formed with a notch, a pivotally mounted catch having a projection normally fitting in said notch and thereby preventing the arm from being moved, a lever arranged to engage and force said catch to such a position that the lug thereon will be out of said notch so that said arm may operate, and a coin controlled mechanism for actuating said lever.

5. In a lock of the character described, a bolt provided with a lug, a lever adapted to engage said lug for retracting the bolt, a key operated pin connected with said lever so as to actuate the same, a coin controlled mechanism connected with said lever for actuating the same, and a manually operated member for actuating the coin controlled mechanism after a coin has been placed therein whereby the bolt may be retracted either by a key or by said manually operated member after the insertion of a coin.

[Claims 6 to 15 not printed in the Gazette.]

1,216,146. NOZZLE. ADOLPH W. LISSAUER, New York, N. Y. Filed Jan. 27, 1916. Serial No. 74,681. (Cl. 137—86.)



1. A spray nozzle comprising a housing formed of a tubular portion surmounted by a tapering dome terminating in an axial orifice, and a distributer detachably secured to the tubular portion and forming therewith an annular space, said distributer having a pair of diametrically opposite inclined planes extending from the distributer to the housing and located within the annular space, said distributer having an axial inlet and diametrically opposite passages establishing communication between the inlet and the annular space, said passages being in a plane at right angles to the axis of the distributer and entering the annular space below the high end of the inclined planes, said distributer having a tapering portion spaced from the tapering dome.

2. A spray nozzle comprising a housing formed of a tubular portion surmounted by a tapering dome terminating in an axial orifice, and a distributer detachably secured to the tubular portion and forming therewith an annular space, said distributer having a tapering portion coöperating with the tapering dome, said tapering portion terminating in a flare spaced from the orifice and coaxial therewith, said distributer having an axially located inlet and passages for directing the flow from the axis to the walls of the housing in a plane at right angles to the axis of the distributer, said distributer having means in the annular space for giving to the flow a spiral direction toward the tapering portion and dome.

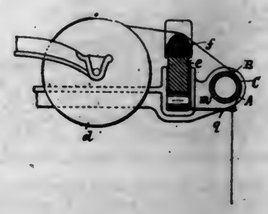
3. A spray nozzle comprising a housing having a tapering dome terminating in a sharp-edged orifice, and a distributer in the housing having a tapering portion spaced from the tapering dome of the housing, said tapering portion terminating in a flare having a flat surface spaced from the tapering orifice and of substantially the same diameter as the orifice, said housing and distributer having means for forming a spiral flow of liquid toward said tapering portion and dome.

4. A spray nozzle comprising a housing having a tubular portion surmounted by a tapering dome terminating in a sharp-edged orifice, and a distributer detachably secured to the tubular portion of the housing and forming therewith an annular space, said distributer having a tapered portion spaced from the tapered dome so that the distance between the two tapers decreases toward the orifice, said tapering portion terminating with a flare having a flat surface spaced from the orifice of the dome coaxial there with and of substantially the same diameter, said nozzle having an axial inlet and passages for directing the flow from the inlet to the annular space, said housing and distributer having means within the annular space adapted to coöperate with the passages to give to the flow of liquid a spiral movement toward the orifice in the dome.

5. A spray nozzle comprising a housing formed of a tubular portion surmounted by a tapering dome terminating in an axial, sharp-edged orifice, and a distributer detachably secured to the tubular portion and forming therewith an annular space, said distributer having a tapering portion spaced from the taper of the dome so that the distance between the tapers decreases as the orifice is approached, said tapering portion of the distributer terminating with a flare having a flat surface spaced from the sharp-edged orifice of the housing and of substantially the same diameter as said orifice, said distributer having a pair of diametrically opposite inclined planes extending across the annular space, said distributer having an axial inlet and diametrically opposite passages establishing communication between the inlet and annular space, said passages being in a plane at right angles to the axis of the distributer and entering the annular space below the high end of the inclined planes and at as small an angle as possible with the surface of the tubular portion of the housing.

[Claim 6 not printed in the Gazette.]

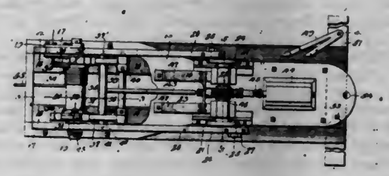
1,216,147. MEANS FOR WRAPPING STRANDS AROUND EACH OTHER. EMORY J. LIPPS, Fountain Hill borough, Pa. Filed Oct. 17, 1916. Serial No. 126,115. (Cl. 28—34.)



1. In combination, with means to draw the strands lengthwise, a wrap-producing member having a pair of spaced surface-portions bearing each against the strands and extending smooth in a direction transverse of the line of draft on the strands, and means to effect relative movement as between said member and strands crosswise of the draft line, the space between said surface-portions being substantially coincident with the crown of the wrapping formed in the strands.

2. In combination, with means to draw the strands lengthwise, a wrap-producing bar extending in a direction transverse of the line of draft on the strands and being in contact therewith and having a longitudinal groove, and means to effect relative movement as between said bar and strands, said groove being substantially coincident with the crown of the wrapping formed in the strands.

1,216,148. STUMP-PULLER. IRA G. LONGWELL, Woodburn, Oreg. Filed July 5, 1916. Serial No. 107,653. (Cl. 254—186.)



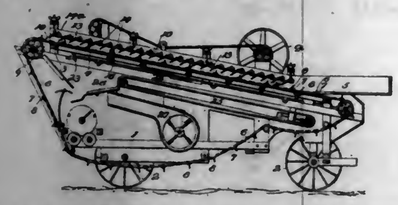
1. In a device of the class described, a pair of runners, a bed plate mounted on said runners and having forwardly extending arms with upstanding flanges, said bed plate being also provided with upstanding flanges intermediate its front and rear ends, a shaft supported on the first mentioned flanges, a drum on said shaft, said drum being accommodated between the forwardly extending arms, a driving shaft supported on the last mentioned flanges, a motor mounted on the bed plate, and means for transmitting motion from the motor to the driving shaft and from the driving shaft to the drum carrying shaft.

2. In a machine of the class described, a pair of runners having notches at their rearward ends, a bracket connected with one of the runners and extending laterally and rearwardly with respect thereto, a cross bar supported in the notches of the runners and extending ma-

terially beyond the sides of the runners, and a pivot member connecting the cross bar with the bracket.

3. In a machine of the class described, a pair of runners having notches at their rearward ends, a bracket connected with one of the runners and extending laterally and rearwardly with respect thereto, a cross bar supported in the notches of the runners and extending materially beyond the sides of the runners, a pivot member connecting the cross bar with the bracket, and a fastening member whereby the cross bar may be secured against swinging movement about the axis of the pivot member.

1,216,149. PEANUT-PICKER. JOSEPH HENRY MACLEARY and SIDNEY OVID LYNN, Suffolk, Va. Filed Aug. 21, 1915. Serial No. 46,682. (Cl. 130—30.)



1. In a machine for picking nuts from vines, a picking table, a conveyer in operative relation to said table, means for holding the vines on said table, a longitudinally reciprocating frame beneath said table, and a series of picking combs on said frame, each of said combs having a double working edge.

2. In a machine for picking nuts from vines, a picking table, a conveyer in operative relation to said table, means for holding the vines on said table, a longitudinally reciprocating frame beneath said table, and a series of transversely arranged double edged picking combs on said frame.

3. In a machine for picking nuts from vines, a picking table for said vines, spring fingers for holding the vines to said table, a conveyer in operative relation to said table, a longitudinally reciprocating frame, and a series of spaced apart picking members subjacent said table and supported by said frame, said members having teeth along their longitudinal edges.

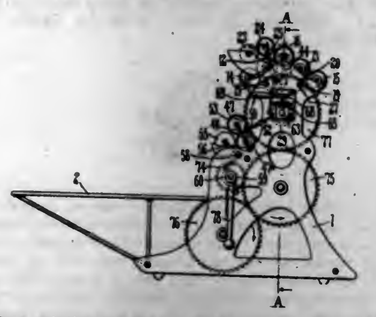
4. In a machine for picking nuts from vines, a stationary picking screen, a conveyer in operative relation to said screen, spring fingers for holding the vines against said screen, a longitudinally movable frame of less length than said screen, transversely arranged spaced apart double edged picking combs on said frame, and means for moving said frame to cause said combs to travel in overlapping paths.

5. In a machine for picking nuts from vines, a stationary picking screen, a conveyer in operative relation to said screen, spring fingers for holding the vines against said screen, a series of picking combs beneath said screen, each of said combs having a double working edge, a longitudinally movable frame on which said combs are mounted, bearings for said frame, and means for reciprocating the latter.

[Claim 6 not printed in the Gazette.]

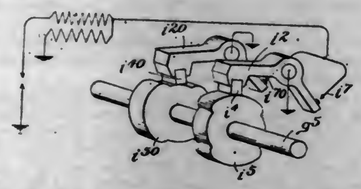
1,216,150. PRINTING-MACHINE. JOHN G. MARK, New York, N. Y. Filed Apr. 18, 1914. Serial No. 832,955. (Cl. 101—100.)

1. In a printing machine, a main frame, a supplemental frame vertically slidable in said main frame, a form cylinder slidable in the main frame, a plate thereon having ink receptive characters and an ink resisting field surrounding said characters, a dampening device, an inking mechanism carried by said supplemental frame, an impression cylinder, a transfer cylinder, interposed between said form and impression cylinders, arranged to receive an impression from the said plate of the ink receptive characters, and means for throwing the form cylinder and supplemental frame into and out of operation, said means comprising a pin having a screw threaded engagement with the main frame, and connected to said form cylinder, a handle secured to said pin for rotating it, and an abutment on said handle adapted to engage said supplemental frame for raising or lowering the same.



2. In a printing machine, a main frame, a supplemental frame vertically slidable in said main frame, a form cylinder slidable in the main frame, a plate thereon having receptive characters and an ink resisting field surrounding said characters, a dampening device, an inking mechanism carried by said supplemental frame, an impression cylinder, a transfer cylinder, interposed between said form and impression cylinders, arranged to receive an impression from the said plate of the ink receptive characters, and a manually controlled means for throwing the form cylinder and supplemental frame into and out of operation, said means comprising a pin having a screw threaded engagement with the main frame and connected to said form cylinder, a handle secured to said pin for rotating it, and an abutment on said handle adapted to engage said supplemental frame for raising or lowering the same.

1,216,151. INTERRUPTER MECHANISM FOR IGNITION-DYNAMOS. CHARLES THOMAS MASON, Sumter, S. C., assignor, by mesne assignments, to Spiltdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed June 30, 1915. Serial No. 37,130. (Cl. 123—167.)



1. The method of controlling discharges at a relatively high frequency in a current generating coil, consisting in effecting a joint control through a plurality of pairs of contacts operating individually and independently to produce a discharge, said contacts being operated in succession whereby the time interval between any two control operations of a single pair of contacts is equal to the time interval between discharges in the generating coil multiplied by the number of pairs of contacts.

2. The method of controlling discharges at a relatively high frequency in a current generating coil, consisting in effecting a joint control through a plurality of pairs of contacts arranged in multiple, operating said contacts in succession, and closing and opening a pair of contacts while the other contacts are open.

3. In an ignition system, a current generating coil, and devices for causing discharges at a relatively high frequency in the current generating coil, said devices including a plurality of pairs of contacts, and means for operating said contacts in succession, said means being timed so as to open and close a pair of contacts while the other contacts are open whereby each pair of contacts individually and independently control the discharge.

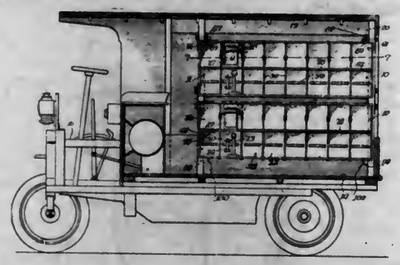
4. In an ignition system, a dynamo having a generating coil, a rotor adapted to produce a determinate number of E. M. F. changes in the coil for each rotation thereof, a discharge circuit connected to said coil, and a governing device consisting of an interrupter having a plurality of pairs of contacts, and means for operating said pairs of contacts in succession and for closing and opening a pair of contacts while the other contacts are open whereby each pair of contacts individually and independently controls the discharge.

5. In an ignition system, a dynamo having a generating coil and a rotor adapted to produce a determinate number of E. M. F. changes in the coil for each rotation, a discharge circuit connected to said coil, and a governing device consisting of an interrupter having a plurality of pairs of contacts, each pair of contacts adapted to completely control the discharge and the two pairs acting in alternation, and means driven with the rotor to actuate said pairs of contacts alternately.

[Claims 6 to 11 not printed in the Gazette.]

1,216,152. [WITHDRAWN.]

1,216,153. TELEPHONE-CARRIER. JAMES AUGUSTUS MCKNIGHT, Jeffersonville, Ind. Filed Nov. 15, 1915. Serial No. 61,727. (Cl. 21—7.)



1. Means for transporting telephone sets comprising, in combination with a vehicle body provided with upright posts, upper and lower cases supported on said posts at each side of the body by supporting means which permit detachment of the cases from said posts, each case comprising upper and lower compartments, means in one of the compartments for separately and removably sustaining telephones complete with their receivers and means in the other compartment for separately and removably supporting a series of battery boxes, whereby a series of telephone sets may be carried in a detached case or may be separately removed from the case.

2. Means for transporting telephone sets comprising, in combination with a vehicle body, upper and lower cases supported at each side of the body by supporting means which permit detachment of the cases from said body, a shelf in each case dividing it into upper and lower compartments, means associated with the shelf in the upper compartment to detachably and separately support a plurality of battery boxes therein and a series of clamps in the lower compartment to receive and removably support a plurality of telephone stands complete with their receivers.

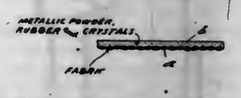
3. Means for transporting telephone sets comprising, in combination with a vehicle body, cases arranged at the sides of the body, supporting devices on the body, hooks on the cases to engage said supporting devices to removably support the cases thereon, fittings attached to the cases at the sides of the same opposite the hooks to hold the cases against the body and adapted to be released to permit the cases to swing inwardly about their supporting hooks and telephone set receiving compartments in the cases, with means to separately and removably support the telephone sets in the cases.

4. Means for transporting telephone sets comprising, in combination with a vehicle body provided at its sides with upright posts, and upper and lower cases at each side of the vehicle body, the upper cases being provided at their upper sides, and the lower cases provided at their lower sides, with supporting hooks, fixed suspension brackets on the body to engage said hooks, fittings attached to the lower sides of the upper cases and to the upper sides of the lower cases, with means to detachably engage them with said posts to normally hold the cases against the posts, but permitting them to swing toward the center of the body, and means to separately and removably support telephone sets in said cases.

5. Means for transporting telephone sets comprising, in combination with a vehicle body provided at its sides with upright posts, and upper and lower cases at each side of the vehicle body, the upper cases being provided at their upper sides and the lower cases provided at their lower sides with supporting hooks, fixed suspension brackets on the body to engage said hooks, slotted hooked fittings attached to the lower sides of the upper cases and upper sides of the lower cases, bolts extending through the posts and slotted fittings, nuts screwed to said bolts and means to separately and removably support telephone sets in said cases.

[Claims 6 to 18 not printed in the Gazette.]

1,216,154. SCREEN FOR MOVING AND OTHER PROJECTED PICTURES. ERNEST GEORGE MEADWAY, London, England, assignor to The British Patent Surbrite Company Limited, London, England. Filed Mar. 4, 1915. Serial No. 12,089. (Cl. 88—24.)



1. A screen of the character described, comprising a backing of suitable material and a reflective coating on a surface thereof, said coating consisting of reflecting metallic powder, rubber and a crystalline substance, the latter being such as is capable of reflecting light and will dissolve in and recrystallize from a volatile solvent containing rubber in solution and employed with respect to the other components in such proportion that on recrystallizing the crystals will cover practically the whole of the surface.

2. A screen of the character described, comprising a backing of suitable material and a reflective coating on a surface thereof, said coating consisting of nickel powder, india-rubber and naphthalene crystals, the latter being with respect to the other components of such proportion that they cover practically the whole of the surface.

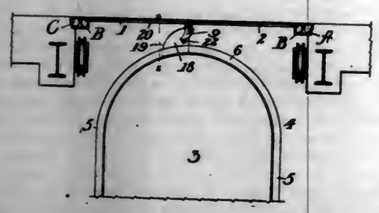
3. A screen of the character described, comprising a backing of suitable material and a reflective coating on a surface thereof, said coating consisting of nickel powder, india-rubber and naphthalene crystals in substantially the proportions stated.

1,216,155. HATCH-OPENING MECHANISM. STURGES F. MEEK, Brooklyn, N. Y. Filed Oct. 5, 1915. Serial No. 54,253. (Cl. 187—62.)

1. The combination with companion movable doors, of a keeper carried by one of said doors, a gravitationally influenced latch normally engaging the keeper and provided with a curved surface, and a releasing device operating over said surface to effect adjustments of the latch relatively to the keeper.

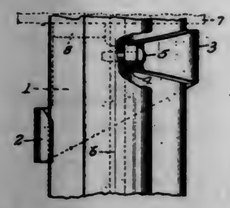
2. The combination with companion movable doors, of a keeper carried by one of said doors, a gravitationally influenced latch normally engaging the keeper and provided with a curved surface, and a releasing device operating over said surface to effect adjustments of the

latch relatively to the keeper, and means for moving the doors successively with movement of the latch.



3. The combination with companion movable doors, of a keeper carried by one of said doors, a gravitationally influenced latch normally engaging the keeper and provided with a curved surface, a releasing device operating over said surface to effect adjustments of the latch relatively to the keeper, and means for moving the doors successively to movement of the latch, whereby the door provided with the latch will open ahead of the door provided with the keeper and the door provided with the keeper will close ahead of the door provided with the latch.

1,216,156. ANTICREEPER. PHILIP W. MOORE, Evanston, Ill., assignor to The P. & M. Co., Chicago, Ill., a Corporation of Illinois. Filed June 16, 1916. Serial No. 103,971. (Cl. 238—4.)



1. An anti-creeper comprising a member beneath the rail base, an integral jaw thereon fitting one side of the rail base and carrying a locking pin, and a tie abutting extension on said member located toward the other side of said rail base to cause said anchor to skew.

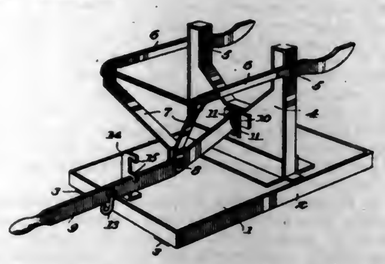
2. An anti-creeper comprising a member beneath the rail base, an integral jaw thereon fitting one side of the rail base and carrying a locking pin, a tie abutting extension on said member located toward the other side of said rail base to cause said anchor to skew, and a second jaw on said member on the side adjacent to said tie-abutting flange, said jaws increasing their grip on the rail base when said anchor skews.

3. An anti-creeper comprising a member which extends beneath the rail base from one side to the other, a jaw at each end thereof, a downwardly extending projection on said member near one of said jaws, the other of said jaws having an opening and means passing through said opening and through an alined opening in the rail to aid in securing said anchor in position.

4. A rail anchor comprising means for gripping opposite sides of the rail base, a tie-abutting flange arranged at one side of the central axis of the rail to cause said anchor to skew, and means on said anchor passing through an opening in said rail to positively lock the rail anchor thereto.

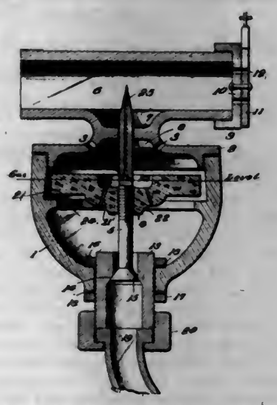
5. A rail anchor comprising a base member, means at opposite sides thereof engaging the sides of the rail base, an extension on one of said means arranged adjacent to the vertical web of the rail, fastening means coöperating with said extension and said web to secure the anchor to the rail, and a tie-abutting flange on said base member on the side thereof opposite said extension.

1,216,157. LIFTING-JACK. LEONARD MORTIMER, Boston, Mass. Filed Nov. 15, 1916. Serial No. 131,526. (Cl. 254—131.)



In a lifting jack for the purpose set forth, a flat base, shoes upon the underface of the base, a standard secured to the upper face of the base and being bifurcated from the upper edge thereof, a trunnion upon each of the sides of the standard, arms having offset ends pivotally connected with the trunnions, angular link members pivotally connected to the inner ends of the arm, a lever pivoted to the standard and pivotally connected with the links, and an upright member upon the standard having hooks adapted to engage with the lever to lock the lever thereto.

1,216,158. CARBURETER. RICHARD CARR NORMAN, Jr., Grayton, Md. Filed July 6, 1915. Serial No. 38,146. (Cl. 261—70.)



1. In a carbureter, a body having a fuel inlet, a valve for closing the fuel inlet and having a duct formed in its upper portion and having the lower end of the duct opening laterally through a side of the valve, and a float mounted upon the valve below the receiving end of the duct formed therein.

2. In a carbureter, a body having a fuel inlet, a valve for closing the fuel inlet and having a duct formed in its upper portion and having the lower end of the duct opening laterally through a side of the valve, and a float mounted upon the valve below the receiving end of the duct formed therein, said float having a depression in its upper side with its bottom in a lower plane than the receiving end of the duct.

3. In a carbureter, a body having a fuel inlet, a valve for closing the fuel inlet having a duct in its upper portion terminating at its lower end in a plurality of branches which extend downward and outward through the sides of the valve, and a float mounted upon the valve and having a depression in its upper side surrounding the valve and receiving the lower end of the branches of the said duct.

4. In a carbureter, a body having a fuel inlet, a valve for controlling the fuel inlet and formed in its upper portion with a duct terminating at its lower end in a plurality of outwardly opening branches, a float mounted upon the valve and having a depression in its upper side receiving the lower ends of the branches of the duct, and means for supplying jets of air to the upper portion of the carbureter body.

5. In a carbureter, a body having a fuel inlet in its lower portion, and a plurality of air inlets in its upper portion, a valve for controlling the fuel inlet and provided with a duct in its upper portion terminating at its lower end in a plurality of outwardly opening branches, and a float mounted upon the valve and having a depression in its upper side receiving the lower ends of the branches of the said duct.

[Claims 6 to 10 not printed in the Gazette.]

1,216,159. KNOCKDOWN TOOTH-BRUSH. RALEIGH RAYMOND OLDHAM, Laurel, Wash. Filed June 30, 1916. Serial No. 106,895. (Cl. 15—39.)



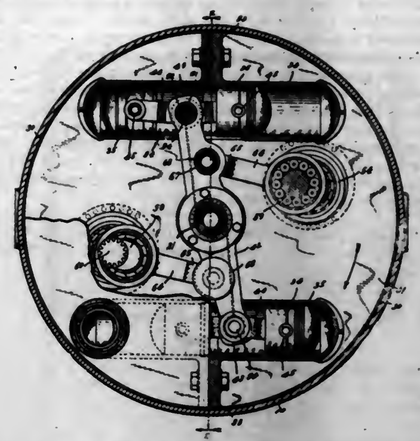
1. A knock down tooth brush including a head, a hollow stem projecting from the head and having a slit in one side thereof, a handle, a socket at one end of the handle, and a longitudinal flange projecting within the socket, the stem of the brush head being adapted to telescope within the socket of the handle and the longitudinal flange of the socket being received within the slit of the stem to hold the parts against relative rotation.

2. A knock down tooth brush including a head, a hollow stem projecting from the head and having a slit in one side thereof, a handle, a socket at one end of the handle, a longitudinal flange projecting within the socket, a spring tongue at one end of the flange, the extremity of the tongue projecting beyond the socket so that the tongue can be easily flexed, the stem of the brush head being adapted to telescope within the socket of the handle and the longitudinal flange of the socket being received within the slit of the stem, and means upon the stem for interlocking with the resilient tongue to lock the members together.

3. A knock down tooth brush including a head, a hollow stem projecting from the head and having a slit in one side thereof, a handle, a socket at one end of the handle, said socket having a slit in one side thereof and the handle being flattened at the base of the socket, a longitudinal flange projecting within the socket from one of the edges of the slit in the side thereof, a spring tongue arranged at the rear end of the flange and projecting through the base of the socket and over the handle so that it can be readily flexed by the fingers, the stem of the brush head being adapted to telescope within the socket of the handle and the longitudinal flange of the socket being received within the slit of the stem, and a projection upon one of the edges of the slit in the stem for obtaining an interlocking engagement with the resilient tongue to lock the two members together.

1,216,160. INTERNAL-COMBUSTION ENGINE. ARTHUR J. PAIGE, Indianapolis, Ind. Filed July 5, 1913. Serial No. 777,446. (Cl. 123—43.)

1. In an engine, the combination of a shaft, a cylinder-body carried by said shaft and provided with cylinders, each of the cylinders of the cylinder-body being ported in its side for the induction and eduction of motive fluid, pistons mounted in the cylinders of said cylinder-body, one or more crank shafts journaled in the cylinder-body and each provided with a gear, intermediate driving connections between the pistons and the crank shafts, a casing inclosing the cylinder-body and having laterally presented inlet and exhaust ports for successive registry with the cylinder ports, a gear carried by the casing member, and intermediate connections between said last named gear and the crank shaft gear.



2. In an engine, a shaft and a casing associated for relative rotation, said casing having an annular ported working face concentric with the shaft, a cylinder-body carried by said shaft and carrying a plurality of cylinders, said cylinder-body having a working face coöperating with the ported face of the casing and ported into the cylinders, said cylinder body comprising members mating on planes substantially parallel to the shaft and at an angle to the axes of the cylinders, pistons mounted in the cylinders, a lever connected with one or more pistons, a crank shaft journaled in the cylinder body, a gear carried by the casing, intermediate rolling connections between said gear and the crank shaft, and connections between the lever and crank shaft.

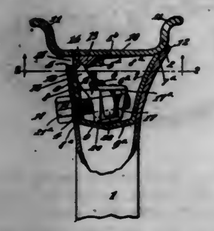
3. In an engine, a shaft and a casing associated for relative rotation, said casing having an annular ported working face concentric with the shaft and in a plane at an angle to the axis of the shaft, a cylinder-body carried by said shaft and carrying a plurality of cylinders, said cylinder-body having a working face coöperating with the ported face of the casing and ported into the cylinders, pistons mounted in the cylinders, a lever connected with one or more pistons, a crank shaft journaled in the cylinder body, a gear carried by the casing, intermediate rolling connections between said gear and the crank shaft, and connections between the lever and crank shaft.

4. In an engine, a shaft and casing associated for relative rotation, said casing having an annular ported working face concentric to the shaft, a cylinder-body carried by said shaft, said cylinder-body comprising a pair of mating members each comprising two segmental plates extending around the axis of the shaft and an intermediate plate in a plane substantially parallel with said axis and mating with a corresponding plate of the other member, cylinders carried by the cylinder-body and each having one end opening through the intermediate plate and being ported through one of the segmental plates to successively register with the ports of the casing, pistons mounted in said cylinders, one or more crank shafts journaled in the cylinder-body, a gear carried by the casing, intermediate connections between the pistons and the crank shafts, and intermediate connections between the crank shafts and the gear.

5. In an engine, a shaft and casing associated for relative rotation, said casing having an annular ported working face concentric to the shaft, a cylinder-body carried by said shaft, said cylinder-body comprising a pair of mating members each comprising two segmental plates extending around the axis of the shaft and an intermediate plate in a plane substantially parallel with said axis and mating with a corresponding plate of the other

member, cylinders carried by the cylinder-body and each having one end opening through the intermediate plate and being ported through one of the segmental plates to successively register with the ports of the casing, pistons mounted in said cylinders, one or more crank shafts journaled in the cylinder-body, a gear carried by the casing, a lever journaled upon the shaft, connections between the ends of this lever and the pistons, and a connection between each crank shaft and the lever, said connection comprising a pitman having a yoked end straddling the lever, a pin projected through the lever and said yoked end, and bushings sleeved over said pin and into the yoked end of the pitman, said bushings at their ends engaging the inner faces of the segmental plates.

1,216,161. VEHICLE-WHEEL. ORREL A. PARKER, Cleveland, Ohio. Filed May 21, 1915. Serial No. 29,690. (Cl. 21—69.)



1. In a vehicle wheel, the combination of a plurality of spokes each having a hollow outer end and a support within such end, each spoke having at one side of such outer end an arm or seat coöperating with a corresponding seating portion of a rim, a movable member one portion whereof is adapted to move along the support thereby to project another portion thereof into engagement with the oppositely located seating portion of such rim, and means for so adjusting said member.

2. In a vehicle wheel, the combination of a plurality of spokes each having a hollow outer end and an inclined support within such end, each spoke having at one side of such outer end an arm or seat coöperating with a corresponding seating portion of a rim, a movable member one portion whereof is adapted to move along the support thereby to project another portion thereof into engagement with the oppositely located seating portion of such rim, and adjusting means for said member extending into said spoke end and operatively connected with said member.

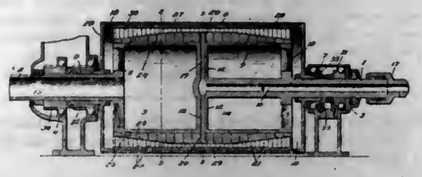
3. In a vehicle wheel, the combination of a plurality of spokes each having a hollow metallic outer end and an inclined support therewithin, one side of the spoke-end being provided with an arm or seat adapted to coöperate with one of the lateral seating portions of a demountable rim, a movable member within each spoke-end, one end of said member being adapted to move along the inclined support and the opposite end being adapted by such movement to be projected into operative relation to the opposite lateral seating portion of such rim, confining means within such spoke end adapted to engage an intermediate portion of such member, and adjusting means operatively connected with said member and extending through such spoke end.

4. In a vehicle wheel the combination of a plurality of spokes each having a hollow metallic outer end and a support therewithin, one side of the spoke end being provided with an arm or seat adapted to coöperate with one of the lateral seating portions of a demountable rim, a movable member within each spoke end, one end of said member being adapted to move along the inclined support and the opposite end being adapted by such movement to be projected into operative relation to the opposite lateral seating portion of such rim, means loosely confining said member within such spoke end, and adjusting means operatively connected with said member.

5. A clamping device for one side of a demountable rim comprising a hollow spoke end having a lateral wall and a support within such spoke end, a clamping member loosely mounted in such spoke end and adapted to bear with one portion against the support and with another portion against such lateral wall and, by its movement along the support, to have another portion thrust beyond the spoke end, and means for so moving said member.

[Claims 6 to 25 not printed in the Gazette.]

1,216,162. TURBINE-ENGINE. MILFORD A. PRATT, Lebanon, Ind. Filed Mar. 21, 1916. Serial No. 85,679. (Cl. 253—62.)



1. An elastic fluid turbine including inner and outer rotors provided with coöperating vanes, the inner rotor consisting of a hollow body forming an exhaust chamber communicating with the spaces between the vanes, and means for supplying a motive fluid to act upon the vanes.

2. An elastic fluid turbine including inner and outer rotors provided with coöperating vanes, an inner rotor consisting of a hollow body forming an exhaust chamber, communicating with the spaces between the vanes, propeller blades upon said inner rotor forming a suction and discharge vane to promote the discharge of the exhaust, and means for supplying a motive fluid to act upon the vanes.

3. An elastic fluid turbine including inner and outer concentrically mounted rotors provided with coöperating vanes, the inner rotor consisting of a hollow body forming an exhaust chamber and arranged to provide exhaust passages at the ends of the outer rotor communicating therewith and with the spaces between the vanes, means extending through said inner rotor for supplying a motive fluid to the vanes, and means communicating with the exhaust chamber of said rotor for the discharge of the exhaust therefrom.

4. An elastic fluid turbine including a casing, a rotor arranged within the casing and comprising a hollow body forming an internal exhaust chamber and having spokes extending to the center of its periphery and provided with fluid supply ducts, said rotor being of less length than the casing to provide expansion spaces at the ends of the casing in communication with said expansion chamber, and vanes upon the peripheral surfaces of the casing and rotor.

5. An elastic fluid turbine including a main shaft having hollow admission and exhaust sections, a casing having hollow shaft portions mounted to turn upon the said sections of the main shaft, a rotor arranged within the casing and comprising a hollow body forming an internal exhaust chamber and having spokes extending to the center of its periphery and provided with fluid supply ducts communicating with the bore of the admission section of the shaft, said rotor being of less length than the casing to provide expansion spaces at the ends of the casing in communication with said expansion chamber, and said chamber being in communication with the exhaust section of the shaft, and vanes upon the peripheral surfaces of the casing and rotor.

[Claim 6 not printed in the Gazette.]

1,216,163. CAST-OFF. GEORGE E. PRENTICE, New Britain, Conn., assignor to The G. E. Prentice Manufacturing Company, New Britain, Conn., a Corporation. Filed Feb. 5, 1915, Serial No. 6,317. Renewed July 29, 1916. Serial No. 112,162. (Cl. 241—18.)

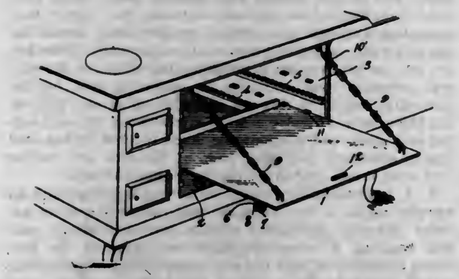
1. In a cast-off comprising a single piece of sheet material doubled back on itself to form a cord eye at the apex and a pair of opposed arms, the said arms having keyhole slots approximately in registration, and one of the said arms having a flange in the form of a turned edge extending along the border of the larger portion of its keyhole slot and projecting through the corresponding portion of the keyhole slot of the other arm suitably to serve as a lining therefor.



2. In a cast-off comprising a piece of sheet material doubled back upon itself to form a cord eye at the lower apex portion and a pair of upwardly directed, parallel arms that serve as front and rear supporting arms, the said arms having keyhole openings in registration to receive a stud, and the said front arm having the border edges turned rearwardly suitably to inclose the said rear arm and to serve as a housing therefor.

3. In a cast-off comprising a piece of sheet material doubled back upon itself to form a cord eye at the lower apex portion and a pair of upwardly directed, parallel arms that serve as front and rear supporting arms, the said arms having key-hole openings in registration to receive a stud, and the said front arm having the border edges turned rearwardly suitably to inclose the said rear arm to serve as a housing therefor, and a lug on the said border edge extending inwardly across the rear face of the said rear arm.

1,216,164. OVEN-SHELF. HARRIET REDDIN, Attleboro, Mass. Filed June 16, 1916. Serial No. 104,026. (Cl. 126—339.)

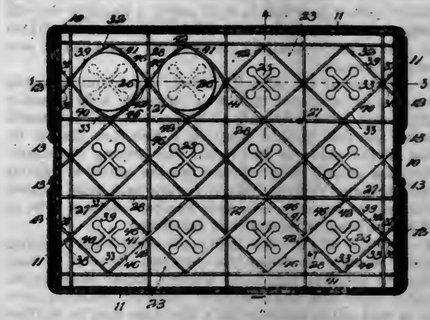


The combination with an oven, ledges secured to the sides thereof, and having transversely grooved upper surfaces, of a shelf, rollers mounted on the underside thereof to engage the ledges, said rollers having transversely grooved peripheral surfaces, guide lugs projecting from the oven and overlying and bearing upon the shelf to prevent tilting of the latter when projected beyond the oven, chains connected to the forward edge of the shelf, and hooks secured to a fixed part of the oven and adapted to removably receive different parts of the chain.

1,216,165. SHIPPING-RECEPTACLE. JOHN M. RICHENS, Jacksonville, Fla. Filed Dec. 31, 1915. Serial No. 69,641. (Cl. 217—32.)

1. In a shipping receptacle, division members formed into a plurality of pockets to receive the articles to be shipped and having clefts in their walls intermediate the pockets, and a plurality of cushion members disposed obliquely to the walls of the pockets having clefts coacting with the clefts of said division members and provided with upwardly opening recesses in their upper edges.

2. In a shipping receptacle, an inclosing casing including side walls and top and bottom members, a plurality of division members within the casing and formed into a plurality of pockets to receive the articles to be shipped, and a plurality of cushion members within the pockets disposed diagonally of the walls of the pockets and at opposite sides of the articles therein and each having an upwardly opening recess in its upper edge.

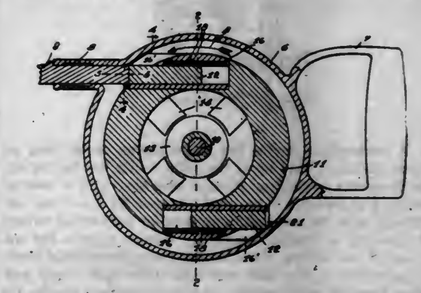


3. In a shipping receptacle, an inclosing casing including side walls and top and bottom members, a plurality of division members within the casing and formed into a plurality of pockets to receive the articles to be shipped, a plurality of cushion members within the pockets at opposite sides of the articles therein and each having an upwardly opening recess in the upper edge, and a plurality of guard members of yieldable material having intersecting clefts and bearing against the ends of the articles within the pockets.

4. In a shipping receptacle, division members formed into a plurality of pockets to receive the articles to be shipped and having clefts in their walls intermediate the pockets, and a plurality of cushion members disposed obliquely to the walls of the pockets and having clefts coacting with the said division members, the inner terminals of the cushion-members engaging the inner faces of the division members.

5. In a shipping receptacle, an inclosing casing including side walls and top and bottom members, plates bearing respectively against the inner faces of said top and bottom members, said top and bottom members having ventilating perforations formed therethrough and the edges of the perforations bent inwardly to lock the members together, spacing ribs carried by said plates, guard members of yieldable material bearing respectively upon said ribs, and a plurality of division members within the casing and formed into a plurality of pockets to receive the articles to be shipped and bearing between the guard members.

1,216,166. ROTARY HAMMER. NELSON P. RIDGWAY, Tacoma, Wash. Filed Oct. 18, 1915. Serial No. 56,633. (Cl. 78—34.)



1. A device of the class described comprising a casing, a body member mounted therein and having tangential guideways, a tool provided in said casing and hammer elements slidably mounted in said guideways said hammer elements being adapted to be held outward by centrifugal

force into a position to strike a blow on said tool when said body member is rotated.

2. A device of the class described, comprising a rotatable body member, a guide associated with said body member, rollers provided in said guide, a hammer element movable longitudinally in said guide and means associated with said guide for limiting the outward movement of said hammer element.

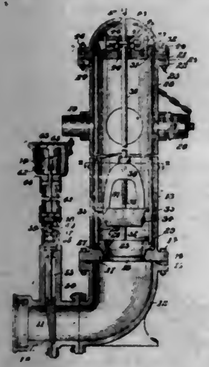
3. A device of the class described, comprising a casing having a tool mounted therein, a rotatable body member, a guide associated with said body member, and a hammer element movable in said guide in a direction that is inclined to the plane of the radial line joining the center of rotation of said body member and the center of gravity of said hammer element, whereby when said body member is rotated in one direction said hammer element will be held at the limit of its outward movement.

4. A device of the class described comprising a casing, a body member mounted for rotation therein, a tool, means for rotating said body member, guide members associated with said body member, hammer elements movable in said guide members in a direction that is inclined to the direction of the radial lines joining the center of rotation of said body member and the centers of gravity of said hammer elements whereby when said body member is rotated said hammer elements will be moved outwardly, and means for limiting the movement of said hammer elements within said guides.

5. A hammer of the class described, comprising a casing, a body member mounted for rotation within said casing, a tool holding extension on said casing, a tool slidable in said tool holding extension, and adapted to project an end within close proximity of said body member, guides tangentially associated with said body member, and hammer elements slidably mounted within said guides and adapted to deliver a succession of blows on the end of said tool when said body member is rotated.

[Claim 6 not printed in the Gazette.]

1,216,167. WATER-PLUG. EDWARD C. RIEBSAME, Williamsport, Pa., assignor of one-half to Lewis C. Smith, Williamsport, Pa. Filed Dec. 12, 1916. Serial No. 136,459. (Cl. 137—13.)



1. A controlling device for water mains comprising an upright casing, a base upon the said casing having an annular inwardly projecting portion provided with a central opening, a removable valve seat adapted for frictional engagement with the said annular portion projecting within said opening, a coping detachably mounted upon the upper end of the casing, rods having their lower ends swivelly connected to the said seat and their upper ends projecting through said coping, and reciprocating means for the said rods connected between the upper ends of the latter and the said coping.

2. A controlling device for water mains comprising an upright casing, a base upon the said casing having an annular inwardly projecting portion provided with a central opening, a removable valve seat adapted for frictional engagement with the said annular portion projecting within said opening, a coping detachably mounted upon the upper end of the casing, rods having their lower ends swivelly connected to the said seat and their upper ends projecting through said coping, reciprocating means for the said rods connected between the upper ends of the latter and the said coping, a valve for the said seat slidably arranged upon the said rods, an upright stem operatively threaded to the said valve, and journaling means for the said stem carried by the said coping.

3. A controlling device for water mains comprising an upright casing, a base upon the said casing having an annular inwardly projecting portion provided with a central opening, a removable valve seat adapted for frictional engagement with the said annular portion projecting within said opening, a coping detachably mounted upon the upper end of the casing, rods having their lower ends swivelly connected to the said seat and their upper ends projecting through said coping, reciprocating means for the said rods connected between the upper ends of the latter and the said coping, a valve adapted for positioning within the said seat, lateral projections carried by said valve slidably journaled upon said rods, a yoke carried by said valve, an operating stem for said valve threaded to the said yoke and having its upper end centrally journaled in the said coping, a collar fixed upon said stem above the coping, and a plate fixedly arranged above said collar having the said stem freely projecting therethrough.

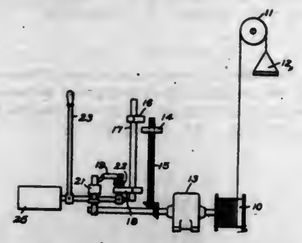
4. A controlling device for water mains comprising an upright casing, a base upon the said casing having an annular inwardly projecting portion provided with a central opening, a removable valve seat adapted for frictional engagement with the said annular portion projecting within said opening, a coping detachably mounted upon the upper end of the casing, rods having their lower ends swivelly connected to the said seat and their upper ends projecting through said coping, reciprocating means for the said rods connected between the upper ends of the latter and the said coping, a reciprocating valve for the said seat arranged upon said rods, an operating stem for the said valve journaled through the said coping and projecting thereabove, swiveled connections between the said coping and stem, and a removable dome carried by the said coping overlying the upper ends of the rods and having said stem freely projecting centrally therethrough.

5. A controlling device for water mains comprising an upright casing, a base upon the said casing having an annular inwardly projecting portion provided with a central opening, a removable valve seat adapted for frictional engagement with the said annular portion projecting within said opening, a coping detachably mounted upon the upper end of the casing, rods having their lower ends swivelly connected to the said seat and their upper ends projecting through said coping, reciprocating means for the said rods connected between the upper ends of the latter and the said coping, a reciprocating valve for the said seat, the said seat and adjacent portion of the base having communicating drip openings therethrough, a normally closed valve for said openings pivoted upon the said seat, and actuating means for said drip valve normally projecting within the closing path of movement of the main valve whereby the drip passages are open when the main valve is closed upon its seat.

1,216,168. SAFETY DEVICE FOR HOISTS. LUDWIG RIEFSTAHL, Vienna, Austria-Hungary, assignor to General Electric Company, a Corporation of New York. Filed July 20, 1915. Serial No. 40,856. (Cl. 74—46.)

1. In combination with a hoist or the like, an electric motor for operating the same, a controller for said motor, a stopping device operated at predetermined positions of the hoist cage and means whereby the operation of the stopping device is varied in accordance with the position of the controller.

2. In combination with a hoist or the like, a manual controller therefor, a stopping device operated at predetermined positions of the hoist cage, and means whereby the operation of stopping the hoist is varied in accordance with the position of the controller.



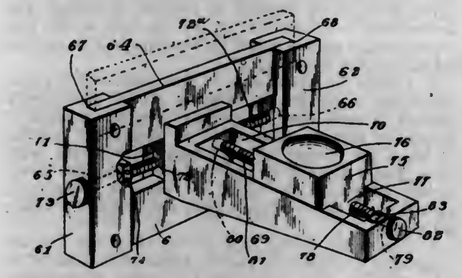
3. In combination with a hoist or the like, a manual controller therefor, a safety brake for stopping the same operated at predetermined positions of the cage, and means whereby the operation of said brake is varied in accordance with the position of the controller.

4. In combination with a hoist or the like, an electric motor for operating the same, a controller for said motor, a safety brake operated at predetermined positions of the hoist cage, and means whereby the point of application of the brake with reference to the stopping point is varied in accordance with the position of the controller.

5. In combination with a hoist or the like, an electric motor for operating the same, a controller for said motor, a safety brake, a depth indicator for operating the brake at a predetermined position of the hoist cage, and means whereby the point at which the depth indicator operates the brake is varied in accordance with the position of the controller.

[Claims 6 and 7 not printed in the Gazette.]

1,216,169. SWING-GATE HINGE. JAMES KING ROCHESTER, Renfrew, Ontario, Canada. Filed Apr. 27, 1914. Serial No. 834,814. (Cl. 16—112.)



1. A hinge comprising a supporting member, a bracket provided with a recessed end embracing and slidably engaging with the said supporting member, a socketed block provided with a recessed upper face slidably mounted in the bracket, and means for moving the said socketed block to and from the supporting member.

2. A hinge comprising a supporting member provided with movable transverse members, a bracket having a recessed end slidably mounted in the supporting member and embracing the transverse members thereof, a longitudinally extending screw mounted in the supporting member and making threaded engagement with the bracket, a socketed block slidably mounted in the bracket, and a screw disposed at substantially right angles to the first said screw operatively mounted in the bracket and making threaded engagement with the said socketed block.

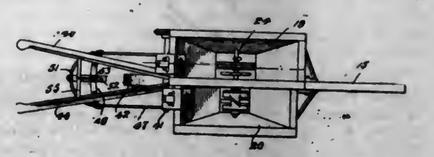
1,216,170. LIGHTNING-ROD CONNECTOR. WILLIAM F. RUSSELL, Bourbon, Ind. Filed Aug. 3, 1916. Serial No. 112,973. (Cl. 173—81.)

A device of the class described formed from a single strip of metal having a substantially rectangular-shaped flat T head with transversely extending alining kerfs beneath the head projecting inwardly from opposite sides of the strip, said strip being bent to form a rod with its end adjacent the head being tapered, the extremity of said tapered end of the rod being flattened and curved to



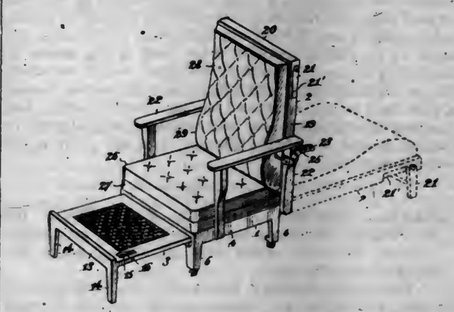
form a sleeve disposed at right angles to the said rod, the head in said strip having its opposite ends curved around the tapering portion of the rod and overlapping, and the extremities of said ends being bent back upon themselves and adapted to interlock.

1,216,171. SEED-PLANTER. ACE SANFORD, Dadeville, Ala. Filed May 24, 1915. Serial No. 30,179. (Cl. 111—32.)



In a machine of the class described, including a beam, a furrow opener and seed depositing means, a covering device comprising an elongated yoke, the limbs of which have inturned arms pivoted on opposite side faces of the beam, a second yoke pivotally connected with the first named yoke and having limbs terminating in coverers, an arcuate arm connected with the bridge piece of the first named yoke, and means for adjustably connecting the second yoke with said arcuate arm.

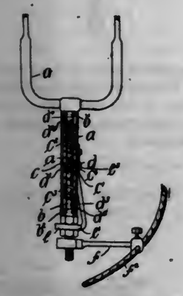
1,216,172. CONVERTIBLE CHAIR. LAJOS O. SCHULZ, Harrison, N. Y. Filed May 20, 1916. Serial No. 98,891. (Cl. 155—6.)



A convertible chair, comprising, a main section, the said section including a main bottom and a supplemental bottom, a sliding section freely movable between said

main bottom and the supplemental bottom, means between the sections for limiting the outward movement of the sliding section, supporting legs on the main section, supporting legs on the sliding section, a swinging section, means for adjusting the swinging section angularly of the main section, said adjusting means being separable from the swinging section to permit the latter to be moved to a horizontal position, folding legs carried by the swinging section and depending therefrom when said section is in a horizontal position, means to normally hold the sliding section against casual sliding, the legs of the sliding section being slightly shorter than the legs of the main section, and a plurality of cushions adapted to be respectively arranged upon the described sections of the structure.

1,216,173. SWIVEL HEAD-LAMP FOR MOTOR-CARS. EDWARD WORSTER SHAW, Kalgoorlie, Western Australia, Australia. Filed Sept. 18, 1915. Serial No. 51,420. (Cl. 240—62.)



1. In dirigible head-lamps for vehicles, comprising a tubular standard secured to the vehicle, a shaft disposed in said standard, cone-shaped bearings in said shaft and adapted to engage with the ends of said hollow standard for rotatably securing the shaft in position relative to the standard, one of said bearings being removable and adjustable on said shaft, a lamp bracket carried by one end of said shaft and rotatable therewith, spring means disposed in said standard and surrounding said shaft for rotating the same to its normal position when said spring means is tensioned, and means connected to the other end of the shaft for turning the latter and tensioning said spring means.

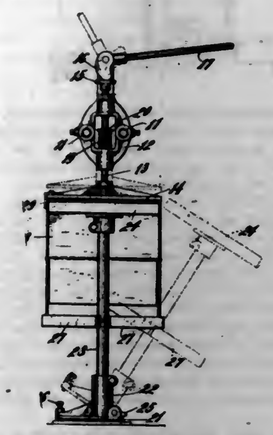
2. A dirigible head-lamp for vehicles, comprising a tubular standard secured to the vehicle, a shaft disposed in said standard, cone-shaped bearings on said shaft and adapted to engage with the ends of said hollow standard for rotatably securing the shaft in position relative to the standard, one of said bearings being removable and adjustable on said shaft, a lamp bracket carried by one end of said shaft and rotatable therewith, spring means within said standard and surrounding said shaft for rotating the same to its normal position when said spring means is tensioned, means connected to the other end of the shaft for turning the latter and tensioning said spring means, a disk rigid on said shaft and having a notch therein, and a spring detent secured to said standard and adapted to engage in said notch to yieldingly hold the shaft in its normal position.

1,216,174. PROCESS FOR THE PRODUCTION OF TOLUENE. WINFIELD BURROWS SIFTON, Westminster, London, England. Filed July 20, 1915. Serial No. 40,953. (Cl. 23—24.)

1. The herein described process for the production of toluene, consisting in passing methyl chlorid through benzene heated in the presence of anhydrous aluminium chlorid and a catalytic agent to a temperature between 45° to 55° C.

2. The herein described process for the production of toluene, consisting in passing methyl chlorid through benzene heated in the presence of anhydrous aluminium chlorid and iron turnings to a temperature between 45° to 55° C.

1,216,175. PRESS. FROST V. SIMPSON, Milwaukee, Wis., assignor to Kieckhefer Box Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed June 29, 1914. Serial No. 847,819. (Cl. 93—36.)



1. A press for sealing flaps of fiber boxes and the like, comprising a cam operated plunger, a swinging platen therebeneath adapted to move from an operative position in which it coöperates with the plunger to an inoperative position in which the plunger will not interfere with the boxes being placed thereon or removed therefrom, and downwardly extending lugs at the rear and at one side of the plunger against which the box flaps may be squared before lowering the plunger.

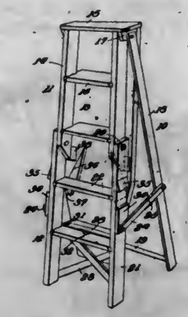
2. A press for sealing flaps of fiber boxes and the like, comprising a plunger, a swinging platen therebeneath adapted to move from an operative position in which it coöperates with the plunger to an inoperative position in which the plunger will not interfere with the boxes being placed thereon or removed therefrom, and downwardly extending lugs along one edge of the plunger against which the box flaps may be forced before lowering the plunger.

3. A press for sealing flaps of fiber boxes and the like, comprising a plunger, a platen therebeneath adapted to move from an operative position in which it coöperates with the plunger to an inoperative position in which the plunger will not interfere with the boxes being placed thereon or removed therefrom, and downwardly extending lugs along one edge of the plunger against which the box flaps may be forced before lowering the plunger.

1,216,176. COMBINED IRONING-TABLE AND STEP-LADDER. COVERT R. SMITH, Freeport, Ohio. Filed Aug. 5, 1915. Serial No. 43,807. (Cl. 228—32.)

1. A combined step ladder and ironing table including upper and lower forward frame members pivotally connected, a rear frame member pivotally connected at its upper end to the upper end of the upper forward frame member, hinged braces pivotally connecting the forward and rear frame members, and an ironing board rigidly secured to one of the forward frame members and detachably secured to the other forward frame member near the free end of the latter to hold the forward frame members in alinement.

2. A combined step ladder and ironing table including an upper forward frame member, a lower forward frame member pivoted to the upper frame member, a rear frame member pivoted to the upper frame member, hinged braces connecting the lower frame member and rear frame member, an ironing board secured to the upper frame member, locking means for detachably securing the ironing board to the lower frame member, the proportioning of the frame members being such that the upper end of the lower frame member may, upon release of the ironing board therefrom, be swung between the sides of the rear frame member to bring the upper frame member and ironing board into a horizontal position.



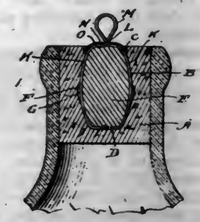
3. A combined step ladder and ironing table including an upper forward frame member, a lower forward frame member pivoted to the upper frame member, a rear frame member pivoted to the upper frame member, hinged braces connecting the lower frame member and rear frame member, an ironing board secured to the upper frame member, locking means for detachably securing the ironing board to the lower frame member, the proportioning of the frame members being such that the upper end of the lower frame member may, upon release of the ironing board therefrom, be swung between the sides of the rear frame member to bring the upper frame member and ironing board into a horizontal position, and means for locking the parts in such position.

4. A combined step ladder and ironing table including an upper forward frame member, a lower forward frame member pivoted to the upper frame member, a rear frame member pivoted to the upper frame member, hinged braces connecting the lower frame member and rear frame member, an ironing board secured to the upper frame member, locking means for detachably securing the ironing board to the lower frame member, the proportioning of the frame members being such that the upper end of the lower frame member may, upon release of the ironing board therefrom, be swung between the sides of the rear frame member to bring the upper frame member and ironing board into a horizontal position, and spaced locking blocks carried by the lower frame member and adapted to seat the sides of the rear frame member to lock the frame members in such position.

5. A combined step ladder and ironing table including an upper forward frame member, a lower forward frame member pivoted to the upper frame member, a rear frame member pivoted to the upper frame member, hinged braces connecting the lower frame member and rear frame member, an ironing board secured to the upper frame member, locking means for detachably securing the ironing board to the lower frame member, the proportioning of the frame members being such that the upper end of the lower frame member may, upon release of the ironing board therefrom, be swung between the sides of the rear frame member to bring the upper frame member and ironing board into a horizontal position, spaced locking blocks carried by the lower frame member and adapted to seat the sides of the rear frame member to lock the frame members in such position, and means for springing the sides of the rear frame member apart to free them from the locking blocks.

[Claim 6 not printed in the Gazette.]

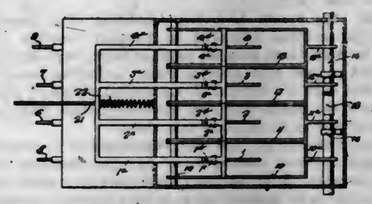
1,216,177. STOPPER. THOMAS C. SPELLING, New York, N. Y. Filed July 18, 1916. Serial No. 109,923. (Cl. 215—53.)



1. In a stopper of the class described, the combination of a shell of pliable material, shaped to form a side wall and bottom, a solid and rigid core insertible in said well, said core having an enlarged central portion to have a binding engagement in said shell, said core having channels formed in said enlarged portion thereof, and a binder filling the interstices between said core and shell distributed uniformly while in a plastic state.

2. An article of the class described comprising a stopper of pliable material having an enlarged well formed therein, leaving a relatively thin side wall and bottom, a solid core insertible into said well, said core having an enlarged central portion forming tapering ends, said enlarged central portion being of greater cross sectional area than the normal cross sectional area of said well to cause said core to have a binding engagement when placed in said well, an encircling shoulder formed on said enlarged portion of said core, having its flat face upwardly disposed, so that compression of the stopper upon insertion into the neck of a bottle will compress the substance of the stopper over said shoulder to anchor said core in said well, said enlarged central portion of said core having channels formed in the opposite sides thereof, a wire encircling said core in said channels having its upper end formed into a pulling ring, said wire being fastened over the upper end of said core, a cap about said wire, over said core having its edges within the upper end of said well, and a binding agent and buffer between said core and the wall of said well, lodged in said channels in the sides of the enlarged portions of the said core and between said core and the wall of said well distributed uniformly in the interstices formed by said core and in said shell.

1,216,178. GEAR-SHIFT. EDWARD R. SPRINGER, Princeton, Ill. Filed Aug. 2, 1916. Serial No. 112,796. (Cl. 74—58.)



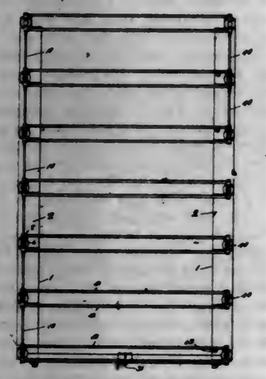
1. In combination with a plurality of shift levers, a controlling element for each shift lever, a selecting element to control the movement of any one of the controlling elements to operating position, common operating means for the shift levers including devices to engage the several shift levers, said devices being severally controlled by said controlling elements, and means to actuate the shift lever operating element.

2. In combination with a plurality of shift levers, a controlling element for each shift lever, a selecting element to control the movement of any one of the controlling elements to operating position, common operating means for the shift levers including devices to engage the

several shift levers, said devices being severally controlled by said controlling elements, a clutch lever to impart shift lever engaging movement to the shift lever operating element, and a spring to impart shift lever operating movement to said shift lever operating element when the clutch lever is released.

3. In combination with a plurality of shift levers, a controlling element for each shift lever, a selecting element to control the movement of any one of the controlling elements to operating position, common operating means for the shift levers including devices to engage the several shift levers, said devices being severally controlled by said controlling elements, a clutch lever to impart shift lever engaging movement to the shift lever operating element, and a spring to impart shift lever operating movement to said shift lever operating element when the clutch lever is released, said shift lever operating element having means to move the shift levers to initial position when said shift lever operating element is moved to shift lever engaging position.

1,216,179. PASSENGER-STILE FOR RAILWAYS. LOWELL H. STEARNS, Fitchburg, Mass. Filed Aug. 7, 1914. Serial No. 855,694. (Cl. 269—2.)



1. The stile herein described consisting of a plurality of upright-sections arranged in parallel relation with spaces between them forming passage-ways, bars arranged to extend across said passage-ways, oscillating heads to which said bars are connected, an oscillating shaft, means connecting said heads with said shaft, and means to oscillate said shaft.

2. The stile herein described consisting of a plurality of upright-sections arranged in parallel relation with spaces between them forming passage-ways, bars arranged to extend across said passage-ways, oscillating heads to which said bars are connected, an oscillating shaft, means to connect the heads with and disconnect them from said shaft, and means to oscillate said shaft.

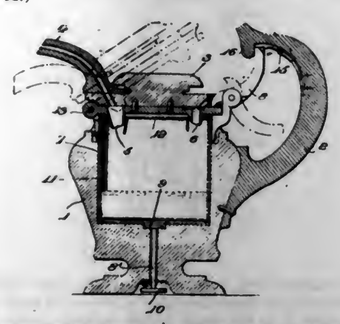
3. The stile herein described consisting of a plurality of upright-sections arranged in parallel relation with spaces between them forming passage-ways, gates connected with said sections at each end thereof, arranged for opening and closing the ends of the passage-ways and operating-means for said gates, the operating means to which all of the gates at one end of the passage-ways are connected being arranged for simultaneous operation, and a clutch-means for connecting the gates at the other ends of the passage-ways with said operating-means.

4. The stile herein described consisting of a plurality of upright-sections arranged in parallel relation with spaces between them forming passage-ways, gates connected with said sections at each end thereof, arranged for opening and closing the ends of the passage-ways, operating-means for said gates, and means arranged to move simultaneously the gates at one end of each passage-way in one direction, and the gates at the other ends of the passage-ways in the opposite direction.

5. The stile herein described consisting of a plurality of upright-sections arranged in parallel relation with spaces between them forming passage-ways, gates connected with said sections at each end thereof, arranged for opening and closing the ends of the passage-ways, operating-means for said gates, and means to disconnect some of the gates from their operating-means.

[Claims 6 to 10 not printed in the Gazette.]

1,216,180. MILK-PITCHER. MAX H. STUEWE, Los Angeles, Cal. Filed Oct. 28, 1915. Serial No. 58,450. (Cl. 65—61.)



1. A receptacle adapted to receive a can or package containing a liquid product, a punch for forming an opening in the can, a punch carrying member, and a lever fulcrumed on the receptacle and adapted to engage over the punch carrying member and exert a pressure thereon to force the punch into the can or package.

2. A receptacle adapted to receive a can or package containing a liquid product, a punch disposed to penetrate the can, a punch carrying member hingedly supported at one end, and a lever fulcrumed on the receptacle and having one end disposed to engage over the opposite end of the punch carrying member to exert a pressure thereon to cause the punch to penetrate the can.

3. A receptacle adapted to receive a can or package containing a liquid product, a handle on the receptacle, a punch for forming an opening in the can, a punch carrying member, and a lever mounted on the receptacle and adapted to engage over the punch carrying member and having its outer end arranged to engage and be held to the handle.

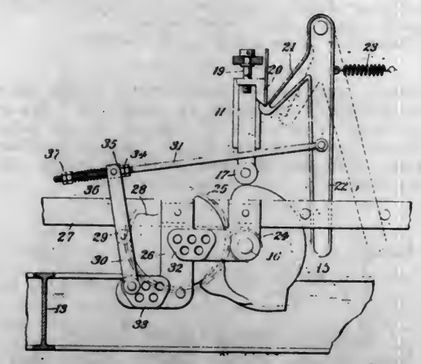
4. A receptacle adapted to receive a can or package containing a liquid product, a handle mounted on the receptacle and spaced therefrom at its upper end, a member having hinged connection with the receptacle and provided with a punch to form an opening in the can or package, and a lever having hinged connection with the receptacle and adapted to engage over the punch carrying member and to be connected with the free end of the handle.

5. A receptacle adapted to receive a can or package containing a liquid product, a cover hinged to the receptacle and provided with spaced punches for forming vent and grain openings in the can, a lever fulcrumed on the receptacle and having one end arranged to engage over the cover, and means engaging the opposite end of the lever for holding it in a set position.

[Claim 6 not printed in the Gazette.]

1,216,181. MACHINE FOR PRINTING OIL-CLOTH AND THE LIKE. JAMES FLEMING STURROCK, Newark, N. J., assignor to The Nairn Linoleum Company, Kearney, N. J., a Corporation of New Jersey. Filed Feb. 26, 1916. Serial No. 80,608. (Cl. 101—88.)

1. In a printing machine for the purpose described, the combination of a printing block, means for raising and lowering the same periodically, means to hold the printing block in raised position, mechanism for operating the last-named means, and means including a variable speed driving means for enabling said mechanism to be operated once in a plurality of periods as desired.



2. In a printing machine for the purpose described, the combination of a printing block; means, including a cam, to raise and lower the printing block periodically; means to hold the printing block in raised or inoperative position; and mechanism, including a cam, for operating the last named means and permitting the speed of the second-named cam to be varied relatively to the speed of the first, whereby the printing block may be held in raised or inoperative position during such number of periods or cycles as may be desired.

3. In a printing machine for the purpose described, the combination of a printing block; means to raise and lower the same periodically; means, including a cam, to hold the printing block in raised or inoperative position; and driving mechanism for the cam, enabling the speed thereof to be varied whereby the printing block can be held in raised or inoperative position during such number of periods or cycles as may be desired.

4. In a printing machine for the purpose described, the combination of a printing block; means to raise and lower the same; means to hold the printing block in raised or inoperative position; mechanism, including a cam, to actuate the last named means intermittently; gearing connecting the cam with the block raising and lowering means to drive the cam in harmony with the latter; and means permitting change of gearing to vary the speed of the cam.

5. In a printing machine of the kind described, the combination of a printing block; means, including an actuating shaft, to raise and lower the printing block; a movable detent to hold the printing block in raised position; a cam to actuate the detent; gearing connecting the cam with said shaft to drive the cam in harmony with the block raising and lowering means; and bearings for the gearing, permitting change of gear-ratio to vary the speed of the cam.

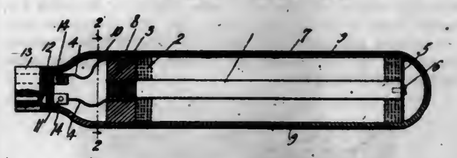
[Claims 6 and 7 not printed in the Gazette.]

1,216,182. CLEANING-POWDER. JAMES F. SULLIVAN, Camden, N. J., assignor to Sullivan Manufacturing Co., Camden, N. J., a Corporation of New Jersey. Filed Mar. 29, 1915. Serial No. 17,685. (Cl. 134—7.)

1. A cleaning powder or the like, comprising a mixture of zinc oxid and zinc stearate in which the zinc oxid is materially in excess of the zinc stearate.

2. A cleaning powder or the like, comprising a mixture of zinc oxid and zinc stearate in the proportions, approximately, of nine parts zinc oxid to one part zinc stearate.

1,216,183. ELECTROTHERAPEUTIC REJUVENATOR. CHARLES M. SWINGLE, Cleveland, Ohio. Filed Sept. 18, 1916. Serial No. 120,799. (Cl. 174—89.)



1. An electro-therapeutic rejuvenator embodying an electrical heating coil, and a member adjacent to said coil to be heated thereby and having superficial medicament holding recesses.

2. An electro-therapeutic rejuvenator embodying a shell having superficial medicament holding recesses, and an electrical heating coil inclosed therein.

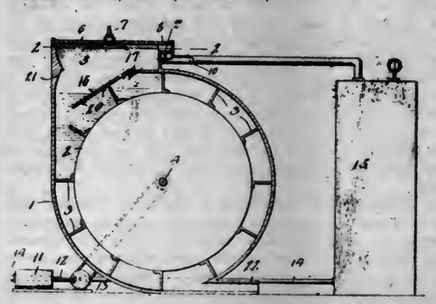
3. An electro-therapeutic rejuvenator embodying a core, an electrical heating coil mounted thereon, members attached to the ends of the core with the coil between them, and a shell slipped over said coil having superficial medicament holding recesses and having an open end attached to one of said members.

4. An electro-therapeutic rejuvenator embodying a core, an electrical heating coil mounted thereon, members attached to the ends of the core with the coil between them, a shell slipped over said coil having superficial medicament holding recesses and having an open end attached to one of said members, the other end of said shell being closed, and the terminals of the coil extending through said member.

5. An electro-therapeutic rejuvenator embodying a core, an electrical heating coil mounted thereon, a member upon said core at one end of said coil, the terminals of the coil extending through said member, and a shell slipped over said coil having superficial medicament holding recesses and having an open end attached to said member.

[Claims 6 and 7 not printed in the Gazette.]

1,216,184. ROTARY INTERNAL-COMBUSTION ENGINE. SHELBY P. TIERNEY, Metcalf, Ariz. Filed Jan. 22, 1916. Serial No. 73,709. (Cl. 123—9.)

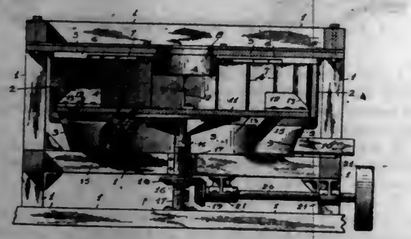


A rotary internal combustion engine embodying, in combination, a rotor provided with blades on its periphery, a stationary rotor casing, an explosion chamber arranged to discharge into the rotor casing tangentially of the rotor, a hinged valve separating the rotor casing from the explosion chamber, a valve stem bearing a fixed relation to said valve and extending through a wall of the explosion chamber, an ignition circuit-closing arm fast on said valve stem, a circuit contact in the path of said arm, and means for holding said valve closed with a predetermined pressure.

1,216,185. QUARTZ-MILL. HART H. TOBENER, San Francisco, Cal. Filed Jan. 17, 1916. Serial No. 73,251. (Cl. 83—46.)

1. A quartz mill comprising a cylindrical chamber having a series of vertically disposed internal projections

therein; impelling means rotatably mounted within the chamber and adapted to project quartz and the like against the internal projections; an annular trough arranged below the chamber to receive broken particles of quartz impelled from the impelling means; and means directly connected and rotatable with said impelling means arranged to remove the quartz from the trough and return the same to the impelling means.



2. A quartz mill comprising a cylindrical chamber having a series of vertically disposed internal projections therein; a table rotatably mounted within the chamber and adapted to impel quartz and the like against the internal projections; a trough arranged below the table and the chamber to receive broken pieces of quartz and the like; and means secured to the table and arranged to return the quartz from the trough to the table.

3. A quartz mill comprising a cylindrical chamber having a series of vertically disposed internal projections therein; a table rotatably mounted within the chamber and adapted to impel quartz and the like by means of centrifugal force, against the internal projections; a trough arranged below the table and the chamber to receive broken quartz; means secured to the table and adapted to return the broken quartz from the trough to the table; and means secured to the table and adapted to impart a further velocity to the quartz and thereby assist in impelling the same against the internal projections.

4. A quartz mill comprising a cylindrical chamber having a series of vertically disposed internal projections therein; a table rotatably mounted within the chamber and adapted to impel quartz and the like against the internal projections; a series of vanes secured to the surface of the table and near the periphery thereof and adapted to engage and further increase the velocity of the quartz; an annular trough arranged below the table and the chamber; a screened outlet in the trough arranged to carry slimes therefrom; and means secured to the table and adapted to return the material from the trough to the table and further impel said material against the projections.

5. A quartz mill comprising a cylindrical chamber having a series of vertically disposed internal projections therein; a table rotatably mounted within the chamber and having apertures therein and adapted to receive quartz and similar material and to impel the same by means of centrifugal force, against the internal projections thereby breaking said material by impact; an annular trough arranged below the table and the chamber to receive broken pieces of quartz; and inclined scoops secured to the table below the apertures therein and arranged to return the material from the trough to the said table.

[Claims 6 and 7 not printed in the Gazette.]

1,216,186. ROAD OR ROADWAY. ROBERT FULTON TOMPKINS, New York, N. Y., assignor to The Binder Company, a Corporation of New Jersey. Filed Aug. 11, 1913. Serial No. 784,122. (Cl. 106—30.)

1. A road or roadway comprising a base or body and a cohering or binding composition comprising a hygroscopic glucosid.

2. A road or roadway comprising a base or body and a cohering or binding composition comprising a glucosid and a tannin.

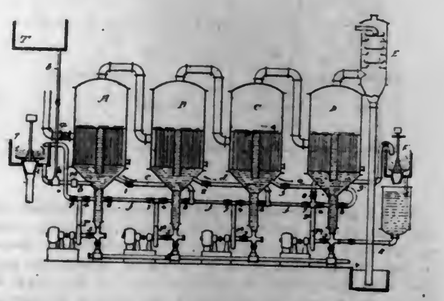
3. A road or roadway comprising a base or body and a cohering or binding composition comprising an aromatic glucosid and a tannin.

4. A road or roadway comprising a base or body and a cohering or binding composition comprising a hygroscopic glucosid, a tannin and a soluble silicate.

5. A road or roadway comprising a base or body and a cohering or binding composition comprising an aromatic glucosid, a tannin and a soluble silicate.

[Claims 6 to 22 not printed in the Gazette.]

1,216,187. PROCESS OF RECOVERING SALTS FROM ADMIXTURES THEREOF IN SOLUTION. EDWARD N. TRUMP, Syracuse, N. Y., assignor to The Solvay Process Company, Solvay, N. Y., a Corporation of New York. Filed Mar. 24, 1916. Serial No. 86,394. (Cl. 127—16.)



1. The process of separately recovering salts from admixtures thereof in solution, which consists in concentrating the solution in a multiple effect evaporator, transferring the solution from the effect of highest temperature through the several effects to the effect of lowest temperature and transferring the precipitated salts through the several effects to the effect of highest temperature whereby the more soluble salt is dissolved, and removing the salts at the opposite ends of the series of effects.

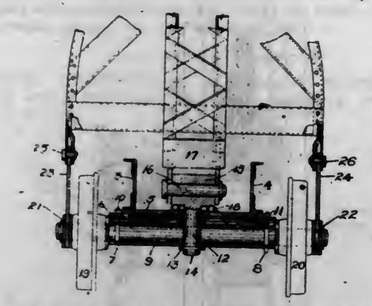
2. The process of separately recovering salts from admixtures thereof in solution which consists in concentrating the solution in a multiple effect evaporator, transferring the solution through the several effects in one direction and transferring the precipitated salts through the several effects in the opposite direction, whereby the more soluble salt is dissolved, and removing the precipitated salts separately at the opposite ends of the series of effects.

3. The process of separately recovering salts from admixtures thereof in solution which consists in evaporating the solution in a multiple effect evaporator, transferring the solution through the several effects from the effect of highest temperature to the effect of lowest temperature, transferring the precipitated salts through the several effects in the opposite direction, washing the salts in solution of progressively higher temperature and thereby dissolving the more soluble salt, removing the less soluble salt from the effect of highest temperature and returning the mother liquor to the effects and periodically removing the more soluble salt from the effect of lowest temperature while its solution concentration is such that it will not precipitate in the effect of highest temperature.

1,216,188. DERRICK-CAR. CHARLES VOLKMANN, Chicago, Ill. Filed Mar. 20, 1914. Serial No. 825,978. (Cl. 212—59.)

1. A derrick car having front and rear trucks, a plurality of horizontal metal plates secured directly to the axles of the front truck, a pivot which passes through the center of said plates, a plate intermediate the fixed plates and the head of the pivot, built-up girders secured to said plate, a mast formed of metal the ends of which are secured to the ends of the axles, hinges in the sides of said mast, a boom secured to said pivot, hoisting tackle secured to the top of the mast and the end of the boom, and stiff legs one end of which is detachably secured to the top of the mast and the other end, pivotally secured to the girders adjacent the rear trucks.

are secured to the ends of the axles, hinges in the sides of said mast, a boom secured to said pivot, and hoisting tackle secured to the top of the mast and the end of the boom.



2. A derrick car having front and rear trucks, a plurality of horizontal metal plates secured directly to the axles of the front truck, a pivot which passes through the center of said plates, a plate intermediate the fixed plates and the head of the pivot, built-up girders secured to said plate, a mast formed of metal the ends of which are secured to the ends of the axles, hinges in the sides of said mast, a boom secured to said pivot, hoisting tackle secured to the top of the mast and the end of the boom, and stiff legs one end of which is detachably secured to the top of the mast and the other end, pivotally secured to the girders adjacent the rear trucks.

3. A derrick car having front and rear trucks, a plurality of horizontal metal plates secured directly to the axles of the front truck, a pivot which passes through the center of said plates, a plate intermediate the fixed plates and the head of the pivot, built-up girders secured to said plate, a mast formed of metal the ends of which are secured to the end of the axles, hinges in the sides of said mast, a boom secured to said pivot, hoisting tackle secured to the top of the mast and the end of the boom, stiff legs one end of which is detachably secured to the top of the mast and the other end pivotally secured to the girders adjacent the rear trucks, and power driven means to operate said tackle.

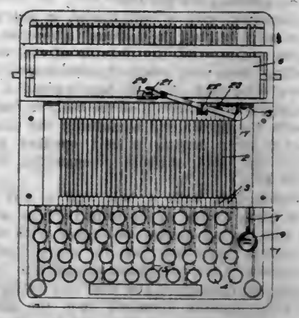
4. A derrick car having front and rear trucks, a plurality of horizontal metal plates secured directly to the axles of the front truck, a pivot which passes through the center of said plates, a plate intermediate the fixed plates and the head of the pivot, an anti-friction bearing intermediate the said plate and the head of the pivot, built-up girders secured to said plate and to the rear truck, a mast formed of metal the ends of which are secured to the ends of the axles, hinges in the sides of said mast, a boom secured to said pivot, hoisting tackles secured to the top of the mast and the end of the boom, and power driven means to operate said tackle.

5. A derrick car having front and rear trucks, a plurality of horizontal metal plates secured directly to the axles of the front truck, a pivot which passes through the center of said plates, a plate intermediate the fixed plates and the head of the pivot, built-up girders secured to said plate, yokes secured to the ends of the axles having upwardly extending projections, an inverted U-shaped mast the ends of which are pivotally secured to said projections, stiff legs one end of which is pivotally secured to the girders adjacent the rear truck, a boom secured to said pivot, hoisting tackles secured to the top of the mast and the end of the boom, and power driven means to operate said tackle.

[Claims 6 to 8 not printed in the Gazette.]

1,216,189. UNDERSCORING ATTACHMENT FOR TYPE-WRITERS. HAROLD F. WADE, Opportunity, Wash. Filed Oct. 2, 1915. Serial No. 53,807. (Cl. 197—113.)

1. An underscoring attachment for typewriters comprising means to be operated independently of and to be operated simultaneously with the remaining type characters of the machine by receiving operating impulses therefrom to produce underscore characters.



2. An underscoring attachment for typewriters comprising an underscoring type character with means to bring the character independently into operation, and means to hold said underscoring character in a position to receive operating impulses from the printing blow of the remaining type characters to print upon actuation of the remaining type characters.

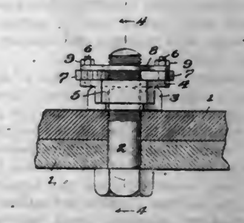
3. An underscoring attachment for typewriters comprising an underscoring type character with means to bring the character independently into operation, means to hold said underscoring character in a position to be struck by the remaining type characters upon movement of the same to a printing position and to print upon actuation of the remaining type characters, and means to release said holding means to allow the underscoring character to return to the inoperative position.

4. An underscoring attachment for typewriters of standard design comprising an additional character carrying bar, an underscoring character mounted on said bar, and means for operating said bar to bring the character to a position to be printed independently of the remaining type characters and also to be simultaneously actuated with and to be printed upon actuation of the remaining type bars.

5. An underscoring attachment for typewriters of standard design comprising an additional character carrying bar, an underscoring character mounted on said bar, means for operating said bar to bring the character to a position to be printed upon actuation of the remaining type bars, and means to retain the underscoring character in the proper operative position to be struck and moved by the remaining type characters as the same are brought to a printing relation to print simultaneously with the printing of the type characters carried by the type bars actuated.

[Claims 6 to 10 not printed in the Gazette.]

1,216,190. NUT-LOCK. THEODORE WANG, Ormond, Fla. Filed May 19, 1916. Serial No. 98,627. (Cl. 151—29.)



1. The combination with a bolt and a nut threaded thereon, of a plate having an opening to receive the bolt and flanges to engage with the sides of the nut, pivots extending from the plate, a cam-shaped dog for each of

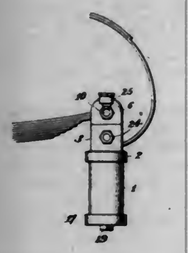
the pivots, each of said dogs having a toothed face to engage with the threads of the bolt, and an outer plate connecting the pivots and sustaining the dogs thereon and having an opening for the bolt.

2. In combination with a bolt having a nut threaded thereon, of a plate having an opening to receive the bolt and flanges to engage with the threads of the nut, pivot studs extending from the plate, a cam-shaped dog for each of the pivots, each of said dogs having a toothed face to engage with the threads of the bolt, an outer plate connected with the pivots and sustaining the dogs thereon, said outer plate having a bolt opening which is threaded and the said threads co-engaging with the threads of the bolt.

3. The combination with a bolt and a nut screwed thereon, of a plate having an opening through which the bolt passes and having flanges to engage with the sides of the nut, pivots extending from the plate, toothed dog members journaled upon the pivots adapted to be swung to engage with the threads of the bolt, and an outer plate having a central opening arranged upon the pivots and contacting with the dogs for holding the dogs in engaging position.

4. The combination with a bolt and a nut screwed thereon, of a plate having an opening to receive the bolt and being provided with flanges to engage with the sides of the nut, pivots extending from the plate, a cam-shaped toothed dog upon each of the pivots to engage with the threads of the bolts, an outer plate having an inner serrated face connected with the pivots, means upon said pivots for compressing the plate against the dogs, and said plate having a central threaded bolt opening which co-engages with the threads of the bolt.

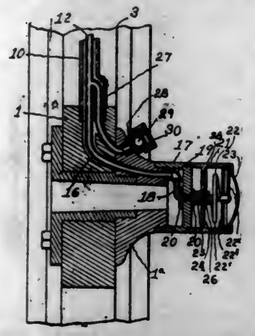
1,216,191. SHOCK-ABSORBER. CHARLES WEILAND, New York, N. Y. Filed May 23, 1916. Serial No. 99,388. (Cl. 267—19.)



1. A shock absorber embodying a cap having an upstanding lug, a second cap superimposed upon said lug, a U-shaped hanger having the bight portion thereof held within said second cap and the branches thereof slidable through the first named cap and its lug, a follower adjustable longitudinally of said branches, a runner slidable on said branches and formed with openings, through which said branches extend, a spring interposed between said follower and said runner, and a spring tensioning bolt passing through said follower and having a threaded engagement with said runner.

2. A shock absorber, comprising a pair of casings each having a lug and a cap movable relatively thereto, means connecting the cap of one casing with the cap of the other casing, means connecting the lug of one casing with the lug of the other casing, U-shaped hangers passing through said lugs and caps and over said first means, runners embracing and slidably mounted upon the branches of said hangers within the casings, followers located within the casings and adjustably mounted upon the branches of said hangers, springs interposed between the followers and said runners, and adjusting bolts passing into the casings and having a threaded engagement with said runners.

1,216,192. PRESSURE-GAGE AUTOMOBILE-WHEEL. JOSEPH JACOB WEINANDT, Ayr, N. D. Filed July 6, 1916. Serial No. 107,809. (Cl. 152—12.)



1. In combination with an automobile wheel and a pneumatic tire, said tire being provided with the usual inflation valve, a hub cap applied to the wheel, an air pressure gage permanently mounted upon the hub cap, an air pipe leading to the pressure gage, means for detachably connecting the air pipe to the tire valve and unseating the tire valve, and a telescoping tubular casing inclosing the air pipe and extending radially from the hub to the rim of the wheel.

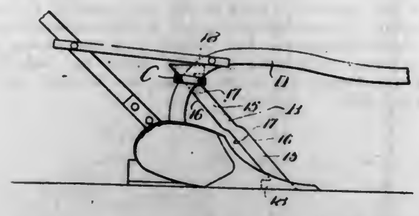
2. In combination with an automobile wheel and a pneumatic tire, said tire being provided with the usual inflation valve, a hub cap applied to the wheel, a pipe extending centrally through the hub cap and projecting therefrom, an air pipe leading from the inner end of the said pipe to the tire valve, means for detachably connecting the air pipe to the tire valve, a removable gage casing fitted upon the end of the hub cap and formed with a nipple which operatively engages the extremity of the pipe projecting centrally from the hub cap when the gage casing is fitted in position, and an air pressure gage mounted upon the gage casing.

3. In combination with an automobile wheel and pneumatic tire, said tire being provided with the usual inflation valve and the wheel having a hub plate, a hub cap fitted upon the hub plate, a pipe extending centrally through the hub cap, an air pipe leading from the said pipe to the tire valve casing, means for detachably connecting the air pipe to the tire valve casing and unseating the tire valve, an inflation pipe communicating with the air pipe and opening through the hub plate, a check valve for the inflation pipe, a gage casing fitted upon the end of the hub cap and formed with a nipple which operatively engages the extremity of the pipe extending from the center of the hub cap, and an air pressure gage mounted upon the gage casing.

4. In combination with an automobile wheel and pneumatic tire, said tire being provided with the usual inflation valve, and the hub having a hub plate, a hub cap applied to the hub plate, a pipe extending centrally through the end of the hub cap, an air pipe leading from the said pipe to the tire valve casing, means for detachably connecting the air pipe to the tire valve casing and unseating the tire valve, a gage casing fitted upon the end of the hub cap and formed with a nipple which operatively engages the extremity of the pipe projecting centrally from the hub cap, an air pressure gage mounted within the gage casing, an inflation pipe communicating with the air pipe and opening through the hub plate, a check valve for the inflation pipe, and a telescoping tubular casing inclosing the air pipe and extending radially from the hub to the rim of the wheel.

5. In combination with an automobile wheel and pneumatic tire, said tire being provided with the usual inflation valve and rim nut, a hub cap, an air pressure gage upon the hub cap, an air pipe leading from the air pressure gage of the hub cap to the tire valve casing, means for detachably connecting the air pipe to the tire valve casing and unseating the tire valve, and a tubular casing inclosing the air pipe and valve casing, said tubular casing being formed in telescoping members and the inner member being secured to the hub, while the outer member detachably engages the rim nut.

1,216,193. PLOW-COLTER. CHARLES N. WHITE, Bisbee, Ariz. Filed Aug. 25, 1916. Serial No. 116,900. (Cl. 97—6.)

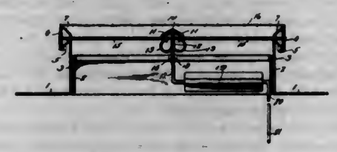


1. A colter consisting of a bar having two opposite cutting edges extending from the middle portion to the ends thereof, said bar having brackets extending at acute angles to the backs of the respective cutting members.

2. A colter consisting of a bar having two opposite cutting edges extending from the middle portion to the ends thereof, said bar having brackets extending at acute angles to the backs of the respective cutting members, and said arms being disposed in parallel relation to each other.

3. A double, reversible colter consisting of a bar having opposite cutting edges extending from the middle portion to the ends thereof, said cutting edges being offset from the body of the bar, and angularly disposed brackets at the ends of said bar, said brackets being disposed at acute angles to the backs of the respective cutting members, and said brackets being apertured for the reception of fastening means.

1,216,194. SKYLIGHT AND VENTILATING MEANS FOR HOG-HOUSES. CHARLES O. WHITNELL, Kingsley, Iowa. Filed May 13, 1916. Serial No. 97,369. (Cl. 108—16.)



1. A skylight comprising a frame having an upright wall on which is a downwardly and outwardly and upwardly extending portion forming an exterior trough, transparent means extending above said trough, and a guard of reticulated material supported on said upwardly extending portion and above the transparent means and having an edge portion that is carried downwardly outside the trough and inwardly under the trough, whereby the guard is secured of itself on the frame.

2. A skylight comprising a sheet-metal frame having side walls and an end wall on the upper edges of which are outwardly and downwardly extending trough-like portions, and also having portions extending upwardly from the outer walls of the trough-like portions and holding portions extending inwardly and downwardly from said upwardly extending portions, transparent means supported on the frame and extending under the holding portions and into the trough-like portions, and a guard of reticulated material supported on said holding portions of the frame and extending downwardly outside the trough-like portions and bent inwardly under said portions.

3. A skylight comprising a frame having an upright wall on which is a downwardly and outwardly and upwardly extending portion forming an exterior trough and also having the upwardly extending portion carried above the trough and equipped with an inwardly and downwardly extending holding portion and forming a bight apertured to support a guard, transparent means extending under the holding portions and above the trough, and a guard of reticulated material supported on said bight of the upwardly extending portion and held by said trough.

1,216,195. TOY. GEORGE H. WILLIAMSON, Jersey City, N. J. Filed May 2, 1916. Serial No. 94,956. (Cl. 21—183.)

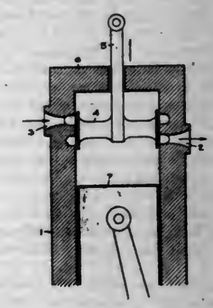


1. A convertible toy vehicle, comprising, a structure including a platform, a set of reach bars, surface engaging devices adapted to be detachably connected with said reach bars to create one type of vehicle, the said reach bars being capable of utilization to provide handles for another converted type of vehicle, and an interchangeable pole having detachable connection with said structure.

2. A convertible toy vehicle, comprising, a structure including a platform, a pole for detachable and interchangeable connection with the residue of the structure, a pair of reach bars for detachable and interchangeable connection with the residue of the structure, surface engaging devices having detachable and interchangeable connection with either the pole or the reach bars, to produce distinctive vehicles.

3. A convertible toy vehicle, comprising, a structure including a platform, a set of reach bars detachably connected therewith, a pole detachably and interchangeably connective in the structure, surface engaging devices detachably and interchangeably connective with said structure, the said pole serving as a handle in one type of vehicle, and adapted to be connected with said reach bars in another type of vehicle, wherein any of the surface engaging devices may be correlated with said handle.

1,216,196. VALVE-GEAR FOR INTERNAL-COMBUSTION ENGINES. OTTO WINKLER, Cöpenick, and RUDOLF URTEL, Nieder-Schöneweide, Germany, assignors to General Electric Company, a Corporation of New York. Filed Mar. 13, 1912. Serial No. 683,476. (Cl. 123—75.)



1. The combination with an internal combustion engine, of a valve located inside the cylinder thereof and controlling both the inlet and outlet ports, and means for operating said valve both positively and by the unbalanced fluid pressures on the valve including a part extending out through the end of the cylinder toward which the valve

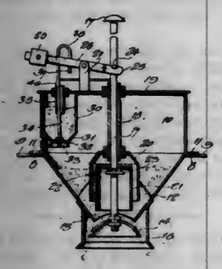
moves to open the outlet port and away from which end it moves to open the inlet port.

2. The combination with an internal combustion engine, of a valve located inside the cylinder thereof and controlling both the inlet and outlet ports, and a valve stem passing through the head of the cylinder and exposed to atmospheric pressure, said valve being adapted to open the outlet port when moving toward the head of the cylinder and the inlet port when moving in the reverse direction, so that it will be operated in part by the unbalanced fluid pressures on said valve stem inside and outside said cylinder.

3. The combination with an internal combustion engine, of a valve located inside the cylinder thereof and controlling both the inlet and outlet ports, the outlet port being opened when the valve moves outwardly toward the head of the cylinder, and a valve stem passing through said head and exposed to atmospheric pressure.

4. The combination with the cylinder of an internal combustion engine, of valve means controlling its outlet and inlet ports exposed to the pressure within the cylinder and to atmospheric pressure over equal otherwise unbalanced areas, said valve moving in one direction to open the outlet port and in another direction to open the inlet port, and means for positively operating the valve, the direction of movement of the valve when opening the outlet port being that in which the pressure within the cylinder tends to move it.

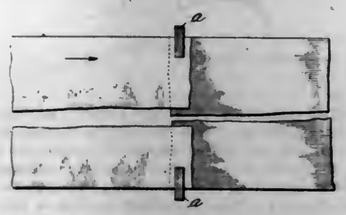
1,216,197. ACETYLENE-GAS GENERATOR. HARRY M. WISE, Richmond, Va., assignor to Wise Acetylene Gas Machine Company, Incorporated. Filed June 15, 1916. Serial No. 103,767. (Cl. 48—38.)



1. In an acetylene gas generator, the combination of a tank, a vertically movable bell telescopically engaged therewith, a carbid holder arranged to discharge into said tank, a valve controlling the discharge of said holder having a stem positioned for engagement by said bell on the lowering thereof, a weighted lever for lifting said stem to close said valve, said lever having a longitudinally extending slot therein, and an arm projecting laterally therefrom, an auxiliary carbid container arranged to discharge into said holder having a valve for controlling the discharge thereof, a stem carried by said valve extending loosely through the slot in said lever, coöperating means on said stem and holder for retaining said valve normally in closed position, said lever arm being adapted to engage said stem on the abnormal lowering of said bell and thereby disengage said stem from said holder to release the valve, and means for limiting the opening movement of said valve.

2. In an acetylene gas generator, the combination of a tank, a gas bell vertically movable relatively thereto, a carbid holder arranged to discharge into said tank, a valve controlling the discharge of said holder having a stem positioned for engagement by said bell on the lowering thereof, a weighted lever for lifting said stem to close said valve, an auxiliary carbid container arranged to discharge into said holder and having a valve for controlling the discharge therefrom, a stem carried by said valve and extending upwardly adjacent said lever, a sleeve surrounding said stem and of larger diameter than said stem, a stop on said stem positioned to engage the upper end of the sleeve to hold the valve closed, means on said lever for engaging and laterally moving the valve stem of the auxiliary container valve to disengage said stop from said sleeve on the abnormal lowering of the bell, whereby the valve is opened, and means for limiting the opening movement of the valve.

1,216,198. METHOD OF IDENTIFYING PASTED PRODUCTS. HENRY A. WISE WOOD, New York, N. Y., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed June 18, 1914, Serial No. 845,879. Renewed July 19, 1916. Serial No. 110,212. (Cl. 101—220.)



1. The method of identifying pasted products, which consists in attaching a marker to a web near the point at which it is pasted to another web in position to project beyond the edge thereof, whereby it will remain on the product and will project therefrom.

2. The method of identifying pasted printed products, which consists in pasting a small piece of sheet material of a contrasting color to a web near the end adjacent to the longitudinal edge thereof.

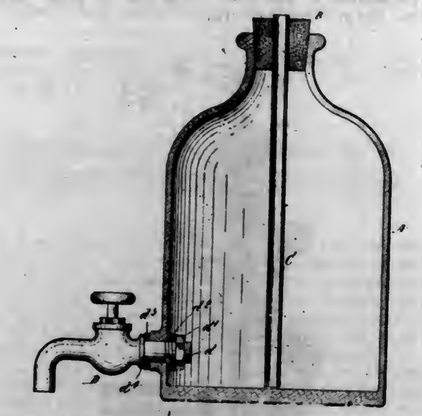
3. The method of identifying pasted printed products, which consists in pasting two small pieces of sheet material to a web opposite each other near the pasted end in position to project beyond both edges.

4. The method of identifying pasted newspapers, which consists in pasting a small piece of sheet material to the forward end of a new web on each edge thereof where it will project over the longitudinal edge, said piece being of a color contrasting with the color of the web, then slitting the web, printing it, and folding it to form newspapers, whereby said pieces of sheet material will adhere to a paper and project from a bunch of papers so produced and be readily observable.

5. As an article of manufacture, a web having the end of another web secured thereto and provided with a marker of contrasting material secured to each side near its longitudinal edge and projecting beyond said edge, near the point at which the webs are secured together.

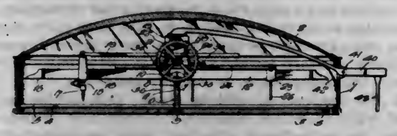
1,216,199. DISPENSER FOR LIQUIDS. ERNEST S. BARKER, Brookline, Mass., assignor to United Drug Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 21, 1911. Serial No. 650,582. (Cl. 221—1.)

A dispenser comprising a stationary tank of greater depth than horizontal diameter provided with a draw-off located in the lower part of its side and having an intake communicating with the interior of the tank at a point above the bottom thereof so as to be above sediment accumulated upon said bottom, said tank having a filling opening in its top, a closure for said filling opening, and an air tube passing through said closure having an open upper end and a lower end communicating with the interior of said tank adjacent the center of the bottom thereof and below the level of the intake of said draw-off, whereby air discharged from the bottom of said tube serves to stir up sediment on said bottom, thence passes upwardly on all sides of said tube to agitate all parts of



the contents of said tank, and in passing said intake serves to clear the same of sediment.

1,216,200. RECORDING-COMPASS. BURTIS WILLIAM BENBOW, Eureka, Cal. Filed May 11, 1916. Serial No. 96,899. (Cl. 234—26.)



1. A recording compass comprising a fixed dial, a compass needle movable thereover, a marking device mounted on said needle for recording a course on the dial, and means for intermittently moving said marking device along the needle.

2. A recording compass comprising a fixed dial, a compass needle movable thereover, a marking device mounted on said needle and normally spaced above the dial, and intermittently operated means for causing said needle to lower and moving the marking device along the same.

3. A recording compass comprising a fixed dial, a compass needle movable thereover, a marking device mounted on said needle and normally spaced above the dial, means for intermittently lowering said needle to engage the marking device with the dial, and means for moving said marking device along the needle when lowered.

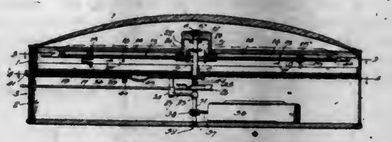
4. A recording compass comprising a dial, a compass needle movable thereover, a marking device mounted on said needle, means for depressing said needle intermittently, and means for moving said marking device along said needle including an operating member adapted to come into contact with and be operated by a fixed part when said needle is depressed.

5. A recording compass comprising a dial, a compass needle movable thereover, a marking device mounted on said needle, means for depressing said needle intermittently, and means for moving said marking device along said needle including an operating pin adapted to come into contact with and be operated by a fixed part when said needle is depressed.

[Claims 6 to 22 not printed in the Gazette.]

1,216,201. RECORDING-COMPASS. BURTIS WILLIAM BENBOW, Eureka, Cal. Filed July 20, 1916. Serial No. 110,361. (Cl. 234—26.)

1. In a recording compass, the combination of a dial, a compass needle movable over said dial, a staff upon which said needle is mounted, a movable member having means which serves alternately to permit the staff to lower and to then return said staff to its normal position, said staff resting on said member and a marking device carried by the needle to be brought into contact with the dial when said needle is lowered.



2. In a recording compass, the combination of a dial, a compass needle movable over said dial, a staff upon which said needle is mounted, a movable member having means which serves alternately to permit the staff to lower and to then return said staff to its normal position, a marking device carried by the needle to be brought into contact with the dial when said needle is lowered, means operable upon rotation of the staff for moving said marking device along the needle, and coacting means on said staff and movable member for rotating the former when lowered.

3. In a recording compass, the combination of a dial, a compass needle movable over said dial, a staff upon which said needle is mounted, a movable member having means which serves alternately to permit the staff to lower and to then return said staff to its normal position, a marking device carried by the needle to be brought into contact with the dial when said needle is lowered, means operable upon rotation of the staff for moving said marking device along the needle, a pinion on said staff, and one or more driving teeth on said movable member for engagement with said pinion to rotate the staff when lowered.

4. In a recording compass, the combination of a dial, a compass needle movable over said dial, a staff upon which said needle is mounted, a movable member having means which serves alternately to permit the staff to lower and to then return said staff to its normal position, a marking device carried by the needle to be brought into contact with the dial when said needle is lowered, means operable upon rotation of the staff for moving said marking device along the needle, a pinion on said staff, means on the movable member for rotating said pinion in either direction when the staff is lowered, and means for shifting said member to throw either rotating means into operation.

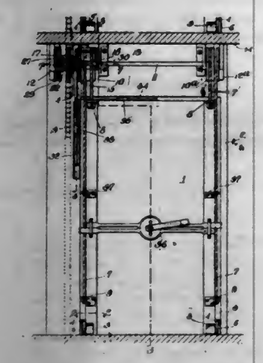
5. In a recording compass, the combination of a dial, a compass needle movable over said dial, a staff upon which said needle is mounted, a rotary member mounted on a vertical axis and having means which serves to raise the staff at intervals and to then release said staff to permit it to lower, a marking device carried by said needle to be brought into contact with the dial when said needle is lowered, means operable upon rotation of the staff for moving said marking device along the needle, and coacting means on the staff and rotary member for rotating said staff when lowered.

[Claims 6 to 9 not printed in the Gazette.]

1,216,202. SLIDE-UP TURNOVER DOOR. FRED W. BOUGHTON, Boston, Mass. Filed Feb. 5, 1915. Serial No. 6,341. (Cl. 20—19.)

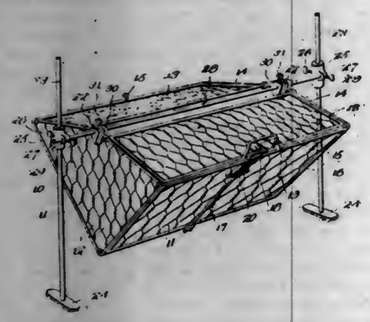
In combination, a slide-up turn-over door; a frame therefor; a rotary shaft horizontally disposed above and forwardly of the frame; one or more double grooved spools fixedly mounted on said rotary shaft; a cable of approximately the width of the grooves attached to each spool and to the door at or near the top thereof and wound upon itself in one of said grooves in one direction, when the door is closed or lowered; another cable attached to each spool and to said door at or near the bottom thereof

and wound upon itself in the other of said grooves in the opposite direction, when the door is opened or raised;



and means for rotatably reciprocating the shaft, thereby raising and lowering the door.

1,216,203. POULTRY-FEEDER. JOHN F. BOWER, Williamsport, Pa. Filed June 9, 1916. Serial No. 102,764. (Cl. 119—60.)



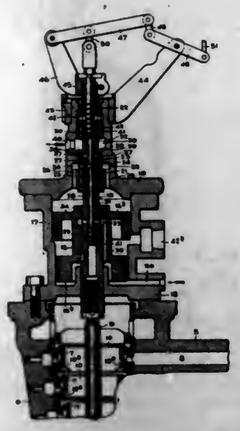
1. A poultry feeder comprising a receptacle including a frame, and foraminated side and end walls providing substantially oblong pick openings, a closure for the receptacle, and loops rising from the end walls thereof for the purpose described.

2. A poultry feeder comprising a substantially trangular-shaped receptacle including a frame, and foraminated side and end walls providing enlarged pick openings, a closure for the receptacle, one of said side walls being hinged at its upper edge to said frame, and means for locking said side wall in closed position.

3. In a poultry feeder, a pair of spaced standards, a transverse rod connecting the standards and movable longitudinally thereof, means for holding the rod in adjusted position, a receptacle swingingly mounted upon the rod and having enlarged pick openings, a closure for the receptacle, and means for holding the latter fixed relatively to the rod.

4. In a poultry feeder, a pair of spaced standards, sleeves slidably mounted on the standards, means for holding the sleeves fixed in adjusted position, apertured lugs projecting from the sleeves, a transverse rod supported by the lugs and connecting said standards, a receptacle swingingly mounted upon the rod and having enlarged pick openings, a closure for the receptacle, and means for holding the latter fixed relatively to said rod.

1,216,204. VALVE-GEAR. ALFRED A. BROOKS, West Medford, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 29, 1916. Serial No. 75,161. (Cl. 137—144.)



1. The combination with an elastic fluid turbine having a plurality of valves which are successively opened and closed for regulating it, of a fluid motor for operating the valves, and a pilot valve mechanism for controlling the admission of actuating fluid to it, said pilot valve mechanism being arranged to cause the motor to move an amount sufficient to either completely open or completely close one of the regulating valves at each actuation.

2. The combination with an elastic fluid turbine having a plurality of valves which are successively opened and closed for regulating it, of a fluid motor for operating the valves, and a pilot valve mechanism for controlling the admission of actuating fluid to it, said pilot valve mechanism having a sliding sleeve which is connected to move with the fluid motor and has a plurality of spaced ports therein, a valve which controls said ports, and a stem connected to the valve; and means for moving said stem.

3. The combination with a regulating valve mechanism of a fluid actuated motor for moving it predetermined amounts, and a pilot valve mechanism controlling said motor comprising a sleeve which moves with the regulating valve mechanism and has spaced ports therein, a valve which controls said ports, a stem for the valve, and means for moving the stem comprising a lever connected therewith and pivoted on the sleeve.

4. The combination with a regulating valve mechanism, of a fluid motor for moving it predetermined amounts, and a pilot valve mechanism controlling said motor comprising a casing, a sleeve in the casing which is connected to the moving element of the fluid motor and has spaced ports therein through which actuating fluid may be admitted to or permitted to escape from the fluid motor, a valve controlling said ports, a stem connected to the valve, a lever to which the stem is connected, said lever being pivoted on the sleeve, and means for moving the lever.

5. The combination with an elastic fluid turbine, of a plurality of valves which are successively opened and closed for controlling the admission of motive fluid thereto, a fluid actuated motor having its movable element connected to the valves, and a pilot valve mechanism for regulating the admission of actuating fluid to the motor to cause it to move predetermined distances to successively open and close said controlling valves, said pilot valve mechanism comprising a casing having a port therein connected with the fluid motor, a sliding sleeve in the casing which moves with the controlling valves and has a plurality of spaced ports adapted to successively register with the port in said sleeve, a valve for controlling the ports in the sleeve, a stem connected thereto, a lever to which the stem is connected, said lever being pivoted on the sleeve, and means responsive to the load on the turbine for moving said lever.

[Claims 6 to 9 not printed in the Gazette.]

1,216,205. RAILWAY-JOINT. BARNEY R. BROWN, Heber Springs, Ark. Filed Feb. 7, 1916. Serial No. 76,660. (Cl. 239—6.)



1. A combined railway chair and support for the confronting ends of rails comprising a base adapted to span at least four cross ties and provided with an upstanding web engaging portion of a length equal to approximately the distance between two cross ties, the opposite ends of the web engaging portions being inclined downwardly and gradually merged into the base at the ends thereof.

2. A combined railway chair and support for the confronting ends of rails comprising a base having inwardly extending flanges extending the entire length thereof and conforming to and adapted to bear against the base flanges of the rails, the inwardly extending flanges of the base being extended upwardly on opposite sides of the center of the base to form web engaging portions and the opposite ends of the web engaging portions being inclined downwardly and gradually merged into the base.

3. The combination with a plurality of cross ties and rails supported thereon, of a combined chair and support embracing the rails at the junction thereof and comprising a base adapted to span at least four of the cross ties and provided with a flange engaging portion and an upstanding web engaging portion, the web engaging portion being of a length equal to approximately the distance between two of the cross ties and the opposite ends of the web engaging portions being inclined downwardly and gradually merged into the base.

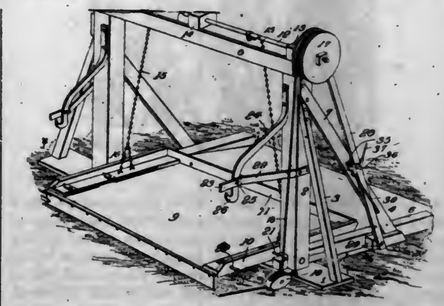
4. The combination with a plurality of cross ties and rails resting thereon, of a combined chair and support spanning the rails at the junction thereof and including a base having inwardly extending flange engaging portions and upstanding web engaging portions, the opposite ends of the web engaging portions being inclined downwardly and gradually merged into the base, there being transverse wedge-shaped recesses formed in the base, and correspondingly shaped locking keys seated in said recesses and adapted to bear against the bases of the rails.

5. A combined rail chair and support for the confronting ends of rails comprising a base portion having oppositely disposed longitudinally extending attaching flanges and provided with inwardly extending flange engaging members extending the entire length of the base and upstanding web engaging members extending for a portion of the length of the base, the opposite ends of the web engaging portions being inclined downwardly and gradually merged into the base at the ends thereof.

1,216,206. LOADING APPARATUS. LEWIS F. BROWN, Hammond, Nebr. Filed Oct. 4, 1915. Serial No. 54,016. (Cl. 214—12.)

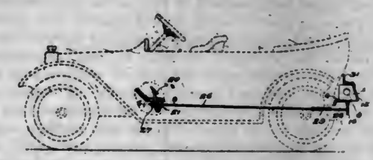
1. A loader of the class described comprising a frame, a dumping platform arranged within the frame, suspension means for the platform operable to elevate and lower the same, an abutment upon the frame, a hook member located in juxtaposition to the abutment, an element upon the platform arranged to engage with said abutment on the upward movement of the platform whereby to effect tilting of the same and adapted to subsequently rest in the said hook member whereby to assist the suspension means in supporting the platform in dumping position, and means for automatically disengaging the said element from the said hook member to permit return of the platform to the horizontal position and downward movement of the same.

2. A loader comprising a dumping platform, suspension means for the platform operable to elevate and lower the same, an abutment, a pendent hook member located in juxta-position to the abutment, an element upon the platform arranged to engage with said abutment whereby to cause tilting of the platform and adapted to rest in said hook member whereby to assist the suspension means in supporting the platform in dumping position, a fixed member, and an abutment projecting from the platform and arranged to ride against the fixed member in the lowering movement of the platform whereby to so displace the platform as to disengage the first-mentioned element from the hook member.



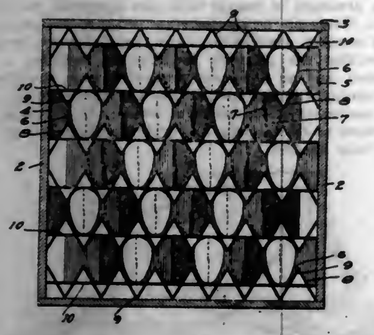
3. In a loader of the class described, a frame having spaced uprights, a dumping platform arranged within the frame, suspension means for the platform operable to raise and lower the same, an abutment projecting from the frame, a hook member depending from the abutment near the end thereof, a pin upon the platform arranged to engage against said abutment on upward movement of the platform whereby to cause tilting movement of the platform and upon further upward movement of the platform to ride under the abutment to the hook member, and an abutment pin projecting from the platform and arranged to ride against one of the said uprights in the movement of the platform whereby to hold the first-mentioned pin clear of the said hook member.

1,216,207. SIGNALING DEVICE FOR VEHICLES. GARRETT BURGESS, Detroit, Mich. Filed Jan. 24, 1916. Serial No. 73,938. (Cl. 40—61.)



A signal device for vehicles comprising a lamp box having one side open, a transparent wall in the open side, a source of light for the box, a bar rotatably mounted on the top of the box adjacent the open side, a door hingedly connected to said bar and normally positioned over the side, a rearwardly projecting arm on one of the hinges of the door at one end of the box, a bracket secured to the bottom of the box, said bracket having one arm projecting downwardly flush with one end of the box, an operating lever fulcrumed intermediate its ends on said arm, the upper end of said lever being disposed adjacent said end of the box, a stop to limit the movement of the lever, a pair of additional levers fulcrumed on said end of the box and connected by a link, a short length link connecting the free end of one of the last mentioned levers with the arm on the hinge, and a long link connecting the free end of the other lever with the upper end of the operating lever, whereby the limited movement of the operating lever will be increased to raise and lower the door.

1,216,208. EGG-BOX. ALLAN C. BUSSEY, Minneapolis, Minn. Filed Feb. 17, 1913, Serial No. 748,897. Renewed July 6, 1916. Serial No. 107,873. (Cl. 217—27.)



1. An egg filler comprising a series of parallel plates, a second series of parallel plates intersecting the plates of said first series to form egg pockets, said plates having notches in their upper and lower edges intermediate to the points of intersection of said parallel plates, and plates having corrugated surfaces between which said intersecting plates are arranged, the corrugations fitting within the recesses of said intersecting plates and forming lateral supports for the upper and lower ends of the eggs in said pockets.

2. An egg filler comprising a series of parallel plates, a second series of parallel plates intersecting said first named series and forming therewith a series of egg pockets, said plates having V-shaped recesses in their upper and lower edges midway, substantially, between the points of intersection of said plates, and plates adapted to bear flatwise on the upper and lower edges of said intersecting plates and having corrugations, V-shaped in cross section, to fit into the recesses of said intersecting plates and form converging walls on both sides of the eggs in said pockets, said corrugations bracing and supporting the walls of said pockets against lateral pressure.

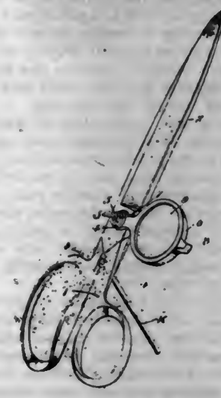
3. An egg filler comprising a series of parallel plates, a second series of parallel plates intersecting said first named series and forming therewith a series of egg pockets, said plates having V-shaped recesses in their upper and lower edges intermediate to the points of intersection of said plates, a plate closing the bottoms of said pockets and having corrugations, V-shaped in cross section, thereon to enter the V-shaped recesses in said intersecting plates, a plate resting upon the top of said pockets and having similar V-shaped corrugations on its upper and under surfaces, the corrugations of its under surface fitting the recesses in the upper walls of said pockets, and a second set of intersecting plates resting upon said last named corrugated plate and having recesses in the lower walls of its pockets to receive the corrugations of the upper surface of said last named plate, the upper corrugations being offset or staggered with respect to the lower corrugations of the said last named plate, whereby the pockets of the lower series will be offset with respect to the pockets of the upper series, the corrugations of said last named plate forming a yielding wall between the eggs in said offset pockets.

4. An egg filler comprising a series of sections placed one upon another, each section being provided with a series of egg pockets, division plates interposed between said sections, said plates comprising a flat member having a series of transverse, parallel slits therein and a member creased and folded transversely and having a series of slits intermediate to said folds to receive the edge of said flat member and thereby form a series of corrugations alternating on the upper and under surfaces of said flat members, the walls of said pockets having recesses therein to receive said corrugations, said corrugations lapping by the ends of the eggs in said pockets and supporting them in an upright position, the alternate arrangement of said corrugations offsetting the pockets of adjoining sections from the top to the bottom of said filler.

5. An egg filler comprising a series of sections placed one upon another and each having a series of egg pockets therein, division plates interposed between said sections and each composed of a flat member and a second member creased and folded transversely and interlocking with said flat member to form a series of corrugations alternately arranged on the upper and under surfaces of said flat member, said corrugations projecting into the pockets of adjoining sections and adapted to lap by the ends of the eggs therein, the alternate arrangement of said corrugations offsetting the pockets of adjoining sections and the point of intersection of said folded member with said flat member being disposed between the offset pockets of adjoining sections.

[Claims 6 to 9 not printed in the Gazette.]

1,216,209. MAGNIFYING ATTACHMENT FOR SCISSORS. FRANCIS HENRY CALLAHAN, New Haven, Conn. Filed Mar. 21, 1916. Serial No. 85,693. (Cl. 88—1.)

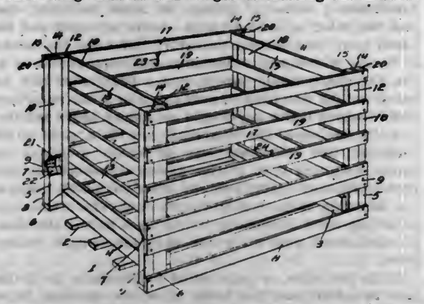


The combination with a pair of scissors having blades connected by a pivot and handles spaced laterally at the rear of said pivot; of a lens-carrying frame mounted on said pivot to swing laterally relative to said scissors in a plane parallel with the path of swinging movement of said blades, and a prop pivoted at one end to the inner end of one of said handles on the inner face thereof and adapted to swing between said handles when in closed inoperative position, said prop being mounted to swing in a plane at an angle to the path of swinging movement of said blades to form a lens supporting tripod in connection with said blades when the scissors are open and the prop swung outward.

1,216,210. FOLDING CRATE. HALL CHRISTIAN CAMPBELL, Mifflinburg, Pa. Filed Oct. 30, 1914. Serial No. 869,472. (Cl. 217—47.)

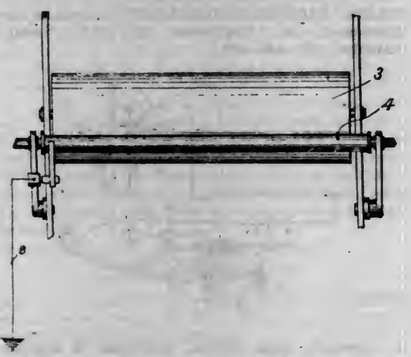
A folding crate comprising a bottom, side and end members, said bottom being provided at the corners with vertical standards, said standards having vertical rabbets on their inner sides, and the inner corners of the standards being beveled inwardly and downwardly, each of said end members being provided with a pair of vertical bars, one of said bars being of greater height than the other of said bars, each of the bars of said end members being provided at their outer sides with rabbets providing vertical flanges adapted to fit in the rabbets of said standards, each of said side members having vertical end bars provided at their inner corners with rabbets in which the vertical

flanges of the end members engage, the lower ends of said end bars being mitered and hinges connecting the mitered



ends of said end bars with the inwardly and downwardly beveled inner corners of said standards, and means for holding the side and end members in collapsed position.

1,216,211. ART OF DISCHARGING SHEETS FROM A PRINTING-PRESS SUBSTANTIALLY FREE FROM ELECTRICITY. MICHAEL CLINTON, Philadelphia, Pa., assignor of one-fourth to Penn Printing House, one-fourth to Harry Miller, Delaware county, and one-fourth to William E. Cunningham, Philadelphia, Pa. Filed Jan. 27, 1915. Serial No. 4,969. (Cl. 125—264.)

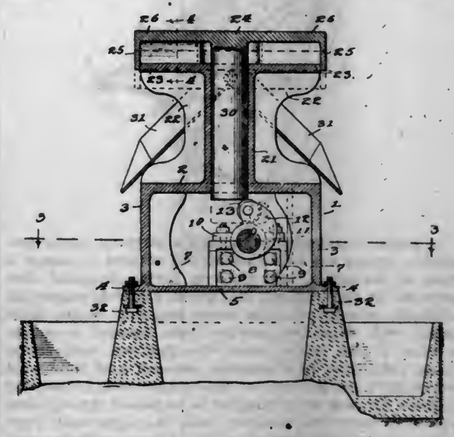


The art of removing static electricity from sheets of paper which consists in passing the sheets in contact with an electrically grounded conductor heated to a heat exceeding summer heat, and bringing substantially the entire surface of the sheet into contact with the conductor, whereby the moisture produced in the air in immediate contact with the paper and the conductor, lessens greatly the resistance to the passage of the electricity from points on the paper minutely separated from the conductor.

1,216,212. CASTINGS SHAKING AND JOLTING MACHINE. VINCENT J. CONCES, Sr., East Chicago, Ind. Filed July 28, 1916. Serial No. 111,917. (Cl. 22—1.)

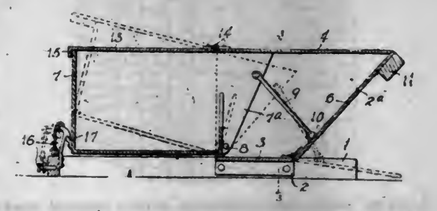
1. In a machine of the class described, a body having a hollow standard provided with radially arranged guide arms, a table having a depending shaking and jarring bar arranged for vertical movement in the standard and also having radially arranged arms coacting with those of the standard to guide the table, the table being further provided with openings between said arms, and means to lift and drop the shaking bar and thereby impart vertical shaking and jarring movement to said bar and said table.

2. In a machine of the class described, a body having a hollow standard and also having radially arranged braces and radially arranged guide arms at the upper ends of said braces, a table having a dependent shaking and jarring bar arranged for vertical movement in the standard and also having hollow guide arms coacting with those of the standard to vertically guide the table, and openings between said hollow guide arms, chutes arranged on opposite sides of the standard and below the table and means to lift and drop the shaking bar and thereby impart vertical shaking and jarring movement to said bar and said table.



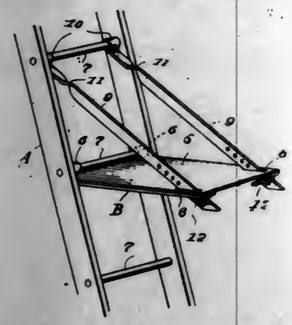
3. In a machine of the class described, a body having a hollow standard and radially arranged guide arms at the upper end of the standard, a table having depending side flanges engaging over the outer ends of said guide arms, the table being further provided with hollow guide arms engaging those of the standard and with openings between said hollow guide arms and said side flanges, and being also provided with a depending shaking and jarring bar arranged for vertical movement in the standard, and means to lift and drop the shaking bar and thereby impart vertical shaking and jarring movement to said bar and said table.

1,216,213. TRAP-NEST. FRANK W. CONGER, Hogan, Mont. Filed Aug. 22, 1916. Serial No. 116,219. (Cl. 119—49.)



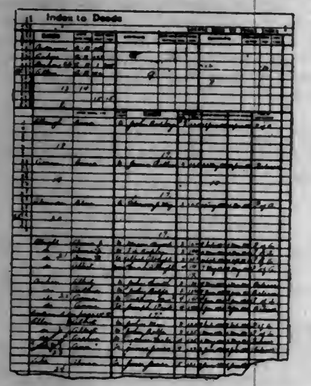
A trap nest including a base, fixed sides extending upwardly from the base, a bottom plate connecting the sides, a sliding cover plate removably applied to the upper edges of the fixed sides, an upwardly swinging trap door hingedly connected to the forward edge of the bottom plate, a tilting nest box provided at the sides thereof with forward extensions which are received between the rear ends of the fixed sides, the lower portions of the forward extensions being pivotally connected to the fixed sides, an arm projecting from the trap door, a link connecting the arm and one of the forward side extensions of the nest box, whereby the trap door is swung into a closed position when the nest box is tilted by the weight of a hen, and a swinging cover plate resting loosely upon the top of the nest box and hingedly connected to the rear edge of the before mentioned sliding cover plate.

1,216,214. STEP-LADDER ATTACHMENT. WALTER JAMES CONNELL, Dorchester, Mass. Filed May 23, 1916. Serial No. 99,410. (Cl. 20—85.)



A ladder attachment embodying a platform, hooks projecting beyond one edge thereof and adapted to engage a rung of the ladder, said platform having elongated slots adjacent its edge opposite said hooks, a pair of supporting elements constructed from strap iron and having their upper ends formed to provide hooks adapted to engage a rung of the ladder above the platform, said straps being twisted to pass edgewise through said slots, said straps having a plurality of spaced apertures, a fastening element for each strap adapted to be passed through said apertures below the platform, and the upper and lower edges of each strap being arranged to engage the opposed end walls of the slot through which it is passed, to relieve the fastening elements of undue strain.

1,216,215. INDEX. CHARLES M. COTT, Columbus, Ohio. Filed June 25, 1914. Serial No. 847,861. (Cl. 11—7.)



1. In an index, the combination with a page, of means for dividing said page into two divisions, means for dividing one of said divisions into a plurality of spaces, and means for subdividing said spaces so that said division comprises a series of groups of spaces of a predetermied limited capacity for the reception of names, the other of said divisions bearing matter adapting it to constitute an index for names overrunning said groups of spaces.

2. The combination with a page horizontally ruled to form an upper and lower division, of additional ruling dividing one of said divisions into a series of groups of spaces of a predetermined limited capacity, and ruling and indicia arranged within the other of said divisions adapting it to constitute an index for the names overrunning said groups of spaces.

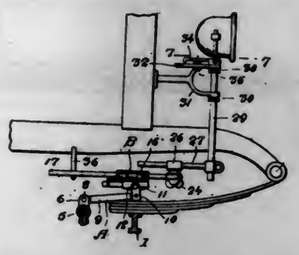
3. An indexing unit, devoted to letters of the alphabet and comprising a primary index, a page divided by ruling into two divisions, one of said divisions being further subdivided by ruling and bearing suitable indicia to constitute a series of groups of name receiving spaces, and the other of said divisions being so ruled and designated as to constitute a secondary index for the reception of names of frequent occurrence and such names as overrun the mixed group spaces, and a page ruled and designated for the reception of surname and given name groups and to which latter pages said secondary index relates.

4. In an index, the combination with a page ruled to comprise two divisions, one of which divisions bears matter adapting it to receive names alphabetically falling thereto as they occur, and the other of which bears matter adapting it to constitute an index for those names occurring most frequently in the first named division, of an additional page to which said last named index relates.

5. In an index, a page ruled horizontally to divide it into two divisions, the lower of which divisions is ruled to divide it into a series of groups of spaces of a predetermined limited capacity bearing matter adapting them for the reception of names alphabetically falling thereto as they occur, and the other of which bears matter adapting it to constitute an index for those names occurring most frequently in the first named division, the name receiving portions of the index lying in vertical alinement with the said groups of spaces, whereby the names in the index and the names in said groups of spaces are brought into vertical alinement with each other.

[Claims 6 to 14 not printed in the Gazette.]

1,216,216. DIRIGIBLE HEADLIGHT. CHARLES N. COX, Brockman, Cal. Filed Sept. 20, 1916. Serial No. 121,268. (Cl. 240—62.)



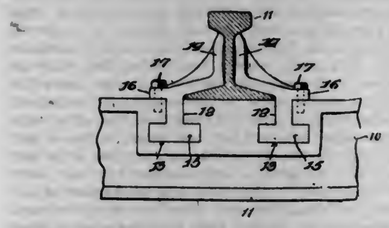
1. Automatic lamp control, embodying in combination with a lamp and lamp supporting post adapted to turn on a substantially vertical axis, and the knuckle arm connecting rod of a motor vehicle, a primary motion transmitting member connected with and carried by said connecting rod and mounted to oscillate on a substantially horizontal axis, a secondary motion transmitting member, a guide bracket for the last named member having a pivotal connection with the primary motion transmitting member, a lamp turning arm projecting from said lamp post and a jointed connection between said secondary motion transmitting member and the lamp turning arm, said guide bracket having a universal connection with the primary motion transmitting member.

2. Automatic lamp control, embodying in combination with a lamp and lamp supporting post adapted to turn on a substantially vertical axis, and the knuckle arm connecting rod of a motor vehicle, a primary motion transmitting member connected with and carried by said connecting rod and mounted to oscillate on a substantially horizontal axis, a secondary motion transmitting member, a guide bracket for the last named member having a pivotal connection with the primary motion transmitting member, a lamp turning arm projecting from said lamp post and a jointed connection between said secondary motion transmitting member and the lamp turning arm, said guide bracket having a universal connection with the primary motion transmitting member, and means for yieldingly sustaining said guide bracket in a certain relation to the primary motion transmitting member.

3. Automatic lamp control, embodying in combination with a lamp and lamp supporting post adapted to turn on a substantially vertical axis, and the knuckle arm connecting rod of a motor vehicle, a primary motion transmitting member connected with and carried by said connecting rod and mounted to oscillate on a substantially horizontal axis, a secondary motion transmitting member, a guide bracket for the last named member having a pivotal connection with the primary motion transmitting member, a lamp turning arm projecting from said lamp post and a jointed connection between said secondary motion transmitting member and the lamp turning arm, the connecting means between the secondary motion transmitting member and the lamp turning arm embodying a connecting device which is adjustable on the lamp turning arm toward and away from the axis of the lamp supporting post.

[Claims 6 and 7 not printed in the Gazette.]

1,216,217. RAILROAD-TIE AND RAIL-FASTENER. ARTHUR DAVIS, Duquesne, Pa. Filed June 13, 1916. Serial No. 103,467. (Cl. 238—5.)



In a device of the class described, a railway tie formed of a vertical intermediate web and upper and lower lateral flanges and with transverse upwardly opening recesses spaced apart in the upper flange and in the adjacent portion of the web, the face of the upper flange between the recesses forming a rail seat, the recesses extending the full width of the tie and enlarged laterally at their lower ends and the material of the tie between the recesses increased in thickness to reinforce the rail seat, rail braces adapted to bear against opposite sides of the rail and each having a projection directed from the outer end and corresponding in shape to the recess and engaging in the same, and holding devices operating respectively through the braces and into the tie.

1,216,218. PISTON. ARCHIBALD B. EDDOWES, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 24, 1916. Serial No. 116,653. (Cl. 74—85.)

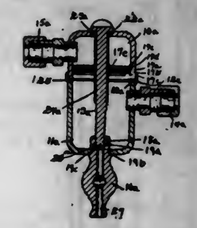


1. The combination in a piston, of a center having an annular flange at one edge and having an annular groove at the opposite edge; a bull ring mounted on the piston and having an annular groove alining with the groove in the center; and a locking ring adapted to both grooves.

2. The combination in a piston, of a center having an annular flange at one edge and having an annular groove at the opposite edge; a bull ring mounted on the piston and having an annular groove alining with the groove in the center; a locking ring adapted to both grooves; and means for securing the locking ring to the center.

3. The combination in a piston, of a center having an annular flange at one edge and having a diagonal, annular groove at the opposite edge; a bull ring recessed at one edge to receive the annular flange of the center and beveled on a line with the inclined groove; and a locking ring adapted to the groove and extending against the beveled portion of the bull ring, securing the bull ring firmly to the center.

1,216,219. GASOLENE-WATER SEPARATOR. ALBERT D. ELSTER, Meriden, Conn. Filed Aug. 26, 1915. Serial No. 47,525. (Cl. 210—16.)

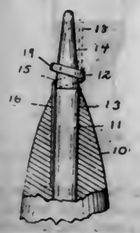


1. A gasolene-water separator comprising a structure of globular form and composed of two members having edges in abutment, one of the said members having an inlet connection and the other an outlet connection, a purging cock connected to the lower of the said members, a boss in the form of an upwardly projecting member that extends upwardly from the lower inner wall of the said lower member having radial holes flush with the said wall and connecting with the said cock, and having a threaded hole in the upper end, a screw extending through the upper wall of the said upper member and engaged with the said screw threaded hole, and packing material positioned between the head of the said screw and the said upper wall.

2. In a gasolene-water separator comprising a globular structure composed of two members held together by an axial screw, one of the said members having an inlet

connection and the other an outlet connection, the said screw passing through the upper of the said members, being engaged by the head portion with the said upper member, and being engaged by the threaded lower end with a boss positioned internally in the said lower member, a pet-cock having a screw threaded neck on the upper end engaged with the said lower member, and the said boss being in the form of an upward extension of the said neck.

1,216,220. FISHING-FLOAT. ALBERT DANIEL ELSTER, Meriden, Conn. Filed Mar. 18, 1916. Serial No. 85,019. (Cl. 43—4.)



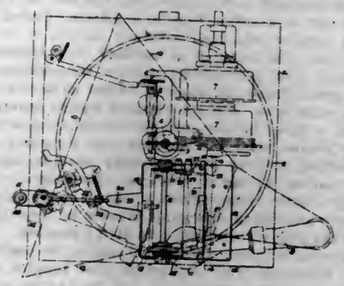
A fishing float comprising a float structure composed of a cork body having a longitudinal bore of circular cross-section, a core having a body portion fitting in and positioned in the said bore, and end portions projecting beyond the said cork body, and a line clip, the said clip being formed of sheet material and comprising a collar fitting around the said end portion of the core, and a supporting stem for extending longitudinally in the said bore between the said cork body and core, the said stem being of appreciable length and substantial width, and having a sharp point at the tip end, whereby the said stem is suitable to be entered into holding position by forcing material of the said cork body away from the said core.

1,216,221. SHOCK-ABSORBER FOR VEHICLES. AXEL G. ERICKSON and EDWARD B. HENRY, Bandon, Oreg. Filed May 24, 1916. Serial No. 99,583. (Cl. 21—105.)



In a shock absorber, the combination of a liquid containing cylinder formed in the inner wall thereof with longitudinally extending grooves, each groove having the greatest transferring capacity at a point nearer one end of the cylinder than the other and the portions at each side of said widest point tapering in opposite directions toward the ends of the cylinder, heads closing the ends of said cylinder, a piston rod operating through one head of the cylinder, a piston fast on said rod and movable back and forth lengthwise of said cylinder, said piston being formed with a plurality of ports extending therethrough from one face to the other, valves carried by the opposite faces of said piston controlling said ports and movable in opposite directions, and stops adjustable in relation to the opposite faces of the piston for regulating the amplitude of movement of said valves in relation to the piston.

1,216,222. SPEED-REGULATING DEVICE FOR TALKING-MACHINES. JÖRGEN F. H. FECHTENBURG, Philadelphia, Pa. Filed Aug. 3, 1916. Serial No. 112,982. (Cl. 74—45.)



1. The combination in a talking machine, of a turn table; a horn; a sound box having a stylus carried thereby; a roller bearing upon the turn table; means for causing the roller to move with the horn, and means for regulating the speed of the roller so that the surface speed of the disk carried by the turn table at the stylus will be the same throughout the length of the record.

2. The combination in a talking machine, of a turn table; a reproducer; a roller bearing against the turn table; means for driving the roller at a given speed, and means for moving the roller in unison with the movement of the reproducer.

3. The combination in a talking machine, of a turn table; means for holding the turn table against vertical movement; a tone arm, sound box and stylus located above the turn table; a frame located under the table; a roller carried by the frame and bearing against the under side of the turn table; means for driving the roller at a given speed, and means for moving the roller under the turn table in unison with the movement of the stylus across the table.

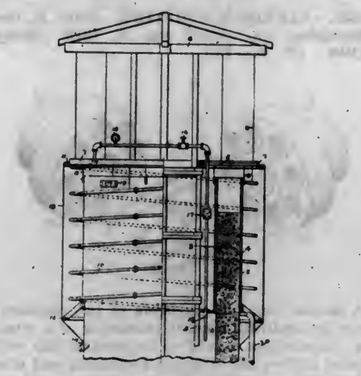
4. The combination in a talking machine, of a turn table; a tone arm, sound box and stylus; a frame; a roller carried by the frame and bearing against the under side of the turn table; means for driving the roller at a given speed; and means for moving the roller under the turn table in unison with the movement of the stylus.

5. The combination in a talking machine, of a turn table; a tone arm; a sound box and stylus; a frame pivotally mounted on the under side of the turn table and having a roller; a shaft; a roller mounted on the shaft and arranged to bear on the under side of the turn table; a governor for regulating the speed of the roller, and means connecting the frame with the tone arm so that the two will travel in unison toward and from the center of rotation of the turn table, the roller and its governor regulating the speed of the turn table.

[Claims 6 to 8 not printed in the Gazette.]

1,216,223. CHIMNEY-BUILDING ACCESSORIES. WILLIAM B. FULTON, Middletown, Ohio. Filed Dec. 6, 1916. Serial No. 135,514. (Cl. 25—124.)

1. Chimney-building accessories comprising, rigging supported over a concrete chimney under construction, a mold-part supported by such rigging with its base in contact with a completed portion of the work and adapted to define the exterior form of the chimney, a mold-part similarly supported and adapted to define the interior form of the chimney, a curtain supported from said rigging and surrounding the exterior mold-part but at a distance outwardly therefrom, a helical coil of pipe surrounding the exterior mold-part within the space between it and the curtain, and a steam-supply pipe leading up within the interior of the chimney and connected with the coil, combined substantially as set forth.

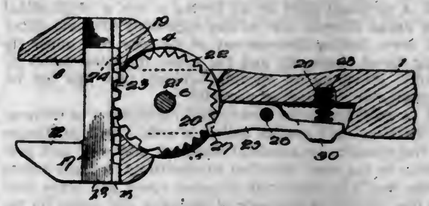


2. Chimney-building accessories comprising, rigging supported over a concrete chimney under construction, a mold-part supported by such rigging with its base in contact with a completed portion of the work and adapted to define the exterior form of the chimney, a mold-part similarly supported and adapted to define the interior form of the chimney, a curtain supported from said rigging and surrounding the exterior mold-part but at distance outwardly therefrom, means for flooring the annular space within the curtain, a helical coil of pipe surrounding the exterior mold-part within the space between it and the curtain, and a steam-supply pipe leading up within the interior of the chimney and connected with the coil, combined substantially as set forth.

3. Chimney-building accessories comprising, rigging supported over a concrete chimney under construction, a mold-part supported by such rigging with its base in contact with a completed portion of the work and adapted to define the exterior form of the chimney, a mold-part similarly supported and to define the interior form of the chimney, a curtain supported from said rigging and surrounding the exterior mold-part but at a distance outwardly therefrom, means securing the base of the curtain in inward position so as to close the base of the space between the curtain and the exterior mold-part, a helical coil of pipe surrounding the exterior mold-part within the space between it and the curtain, and a steam-supply-pipe leading up within the interior of the chimney and connected with the coil, combined substantially as set forth.

4. Chimney-building accessories comprising, rigging supported over a concrete chimney under construction, a mold-part supported by such rigging with its base in contact with a completed portion of the work and adapted to define the exterior form of the chimney, a mold-part similarly supported and adapted to define the interior form of the chimney, a flexible curtain supported from said rigging and surrounding the exterior mold-part but at a distance outwardly therefrom and gathered inwardly at its base into contact with the completed work below the exterior mold-part, a girdle securing the base of the curtain against the completed work, a helical coil of pipe surrounding the exterior mold-part within the space between it and the curtain, and a steam-supply-pipe leading up within the interior of the chimney and connected with the coil, combined substantially as set forth.

1,216,224. WRENCH. JESSE S. FURGERSON, GEORGE W. DAVIS, and WILLIAM W. FURGERSON, Deport, Tex. Filed June 6, 1916. Serial No. 101,979. (Cl. 81—127.)



1. In a wrench of the class described, a stock, a relatively fixed jaw mounted upon the stock, a movable jaw slidably carried by the relatively fixed jaw, a rack upon the movable jaw, a ratchet head rotatably mounted and having a series of teeth coacting with the said rack, the said ratchet head being provided with a second series of teeth, and a pawl carried by the stock and coacting with the last mentioned series of teeth upon the ratchet head.

2. In a wrench of the class described, a stock, a relatively fixed jaw mounted upon the stock, a movable jaw slidably carried by the relatively fixed jaw, a rack upon the movable jaw, a ratchet head rotatably mounted and having a series of teeth coacting with the said rack, the said ratchet head being provided with a second series of teeth, a pawl carried by the stock and coacting with the last mentioned series of teeth upon the ratchet head, and means for limiting the sliding movement of the movable jaw away from the relatively fixed jaw.

3. In a wrench of the class described, a stock, a relatively fixed jaw mounted upon the stock, a movable jaw slidably carried by the relatively fixed jaw, a rack upon the movable jaw, a ratchet head rotatably mounted and having a series of teeth coacting with the said rack, the said ratchet head being provided with a second series of teeth, and a pawl carried by the stock and coacting with the last mentioned series of teeth upon the ratchet head, the relatively fixed and movable jaws having slidably coacting surface portions each provided with a series of relatively shallow teeth.

4. In a wrench of the class described, jaws slidably connected for relative adjustment, a rotatable member carried by one of the jaws and coacting with the other jaw to move the same toward and from the first-mentioned jaw when the said member is rotated in one direction or the other, a stock pivotally connected with one of the said jaws, and means upon the stock for coöperation with the said rotatable member.

1,216,225. HORIZONTAL SHEETING. JOHN B. GOLDSBOROUGH, Croton, N. Y. Filed Apr. 26, 1915. Serial No. 24,123. (Cl. 61—16.)



1. A sheet lining for excavations composed of superposed sections laid horizontally, the webs of said sections being disposed vertically against the bank, and having a pair of oppositely projecting flanges formed in said webs providing openings for inspection and insertion of material, the upper flange bordering said opening projecting outwardly and the lower flange inwardly.

2. A sheet lining for excavations composed of sections laid horizontally, each section having a web disposed vertically against the bank, and longitudinal flanges on each edge of the web projecting in the same direction, and

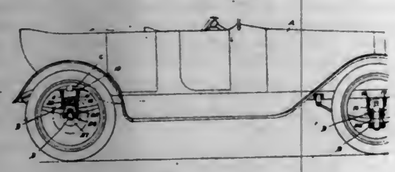
oppositely projecting flaring lips being formed in the web providing openings for inspection and reception of material.

3. A sectional sheet lining having a web, a longitudinal edge flange thereon, and having oppositely disposed upper and lower flaring lips cut out of its body, the upper lip being flared outwardly and the lower lip being flared inwardly, providing an opening between said lips for inspection and reception of material.

4. A sheet lining for excavations constructed in horizontal sections, each section having a web, a pair of flanges on the opposite longitudinal edges of said web, and projecting in the same direction substantially at right angles to the web, and oppositely disposed upper and lower flaring lips cut out of the body of said web, the upper lip being flared outwardly and the lower lip being flared inwardly, providing an opening between said lips for inspection and reception of material, and connections between adjacent sections in the same horizontal row.

5. A sheet lining for excavations constructed in horizontal sections, each section having a web, a pair of flanges on the opposite longitudinal edges of said web, and projecting in the same direction substantially at right angles to the web, and oppositely disposed upper and lower flaring lips cut out of the body of said web, the upper lip being flared outwardly and the lower lip being flared inwardly, providing an opening between said lips for inspection and reception of material, connections between adjacent sections in the same horizontal row, and adjacent horizontal rows being connected vertically.

1,216,226. SHOCK-ABSORBER. EARL C. GRAY, St. Charles, Mo. Filed Feb. 7, 1916. Serial No. 76,793. (Cl. 21—105.)

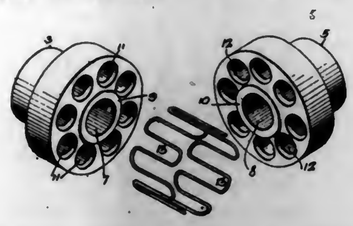


1. A shock absorber comprising a pair of swinging members adapted for detachable connection with the side beam of a truck frame, a spreader element adapted to be connected to the axle of the truck frame, rollers carried by the swinging members and engageable with the spreader element, resilient means connected with the swinging members to hold the rollers in positive engagement with the spreader element and also for tensioning the said swinging members, and buffers arranged on the spreader element in the path of movement of the resilient means to increase the tension thereof when engaged thereby.

2. A shock absorber comprising a pair of swinging members adapted for detachable connection with the side beam of a truck frame, a spreader element adapted to be connected to the axle of the truck frame, rollers carried by the swinging members and engageable with the spreader element, resilient means connected with the swinging members to hold the rollers in positive engagement with the spreader element and also for tensioning the said swinging members, buffers arranged on the spreader element in the path of movement of the resilient means to increase the tension thereof when engaged thereby, and means for securely fastening the spreader element on the axles.

3. A shock absorber comprising a pair of swinging members adapted for detachable connection with the side beam of a truck frame, a spreader element adapted to be connected to the axle of the truck frame, rollers carried by the swinging members and engageable with the spreader element, resilient means connected with the swinging members to hold the rollers in positive engagement with the spreader element and also for tensioning the said swinging members, buffers arranged on the spreader element in the path of movement of the resilient means to increase the tension thereof when engaged thereby, means for securely fastening the spreader element on the axles, convergent upper and lower beveled edges on the spreader element and having channels, and convexed peripheries formed on the rollers corresponding to the channels.

1,216,227. FLEXIBLE COUPLING. JOHN R. GRUNDY, Philadelphia, Pa. Filed Aug. 9, 1916. Serial No. 113,946. (Cl. 64—13.)



1. A flexible coupling consisting of two members; and a power transmitting element consisting of a wire band having convolutions formed to lie substantially within a cylindrical surface and alternately engaging said members.

2. A flexible coupling consisting of two members each having a series of holes therein; and a wire band having convolutions lying substantially within a cylindrical surface and alternately extending into the holes of said members.

3. The combination of a corrugated length of rod material and two members alternately engaged by the corrugations of said length.

4. A coupling consisting of two members each provided with a circular series of holes, the holes in one series being staggered relatively to the holes of the other; with a power transmitting element consisting of a series of laterally flexible members having circularly curved end portions and relatively straight body portions of which said end portions alternately enter the holes of said two members for flexibly connecting the same.

5. A coupling consisting of two members each provided with a circular series of holes, the holes of one series being staggered relatively to the holes of the other; with a power transmitting element alternately entering the holes of said two members and consisting of a series of wire corrugations extending in lines substantially parallel to the axis of revolution of said members.

[Claims 6 to 13 not printed in the Gazette.]

1,216,228. CINCH-GRIP. EDWIN A. GAUSHUS, Midas, Nev. Filed Dec. 31, 1915. Serial No. 69,605. (Cl. 54—46.)

1. In a grip of the class described, a member comprising spaced side bars, a tubular cross bar connecting the side bars at their upper ends, the said side bars being provided at their lower ends with attaching means, and a member including spaced side bars, a cross bar connecting the last mentioned side bars at their upper ends and rotatably fitting within the said tubular cross bar, the side bars of the second mentioned member having their upper end portions curved in the direction of the first mentioned member, the members being provided with cooperating gripping jaws, and a strap permanently connected at one end about the tubular cross bar and arranged to be engaged between the said jaws.

2. In a grip of the class described, a member comprising spaced side bars, a tubular cross bar connecting the said bars at their upper ends, the said side bars being provided at their lower ends with attaching means, and a member including spaced side bars, a cross bar connecting the last mentioned side bars at their upper ends and rotatably fitting within the said tubular cross bar, the side bars of the second mentioned member having their upper end portions curved in the direction of the first mentioned member, the members being provided with cooperating gripping jaws, a cross bar connecting the side bars of the first mentioned member below the first mentioned cross bar, a cross bar connecting the side bars of the second mentioned member below its first mentioned cross bar, the last mentioned cross bar being located above the third mentioned cross bar, and a strap connected permanently with the said tubular cross bar and designed for engagement respectively beneath and against the third and last mentioned cross bars and to be gripped by the said jaws.



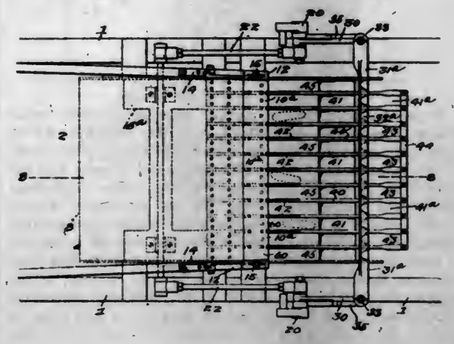
3. In a grip of the class described, hingedly connected members, each including spaced side bars, a cross bar extending between the side bars of one member, a cross bar extending between the side bars of the other member, the last mentioned cross bar being laterally offset with relation to the first mentioned cross bar and also with relation to the hinged connection between the said members, and the said last mentioned cross bar being located nearer the hinged connection than the first mentioned cross bar, a strap looped about the said cross bars and engaging the same and so arranged that when tensioned will exert lateral stress in an inward direction against the last mentioned cross bar and thereby serve to swing said members together, and clamping jaws carried by the members and arranged to grip the said strap when the members are so swung.

1,216,229. VACUUM-CLEANER. BERTIE R. HALL, Outlook, Saskatchewan, Canada. Filed Nov. 29, 1915. Serial No. 64,192. (Cl. 15—60.)



The herein described construction of vacuum cleaners including a nozzle having a pipe connected therewith and said pipe having its end provided with a head in the shape of a flat disk, a fan casing surrounding the disk and spaced therefrom, radially disposed arms secured to the edge of the fan casing and connected with the pipe, a fan within the casing, a handle supported by the casing, said casing and pipe adapted to receive the opposite ends of a dirt bag, and operating mechanism upon the handle for the fan.

1,216,230. FEEDING DEVICE FOR CAKE-COATING MACHINES. PEMBROKE D. HARTON, Philadelphia, Pa.; Mary J. Harton executrix of said Pembroke D. Harton, deceased. Filed May 14, 1914. Serial No. 838,512. (Cl. 91—2.)



1. In a cake coating machine, the combination of a cake receiving trough, a discharge edge therefor pivotally connected therewith, a feed table, a sliding board interposed between the bottom of said receiving trough and the feed table, means for reciprocating said board, and fingers disposed in parallel relation and forming cake guiding means carried by and projecting forwardly of the discharge edge of said receiving trough.

2. In a cake coating machine, the combination of a cake receiving trough, a discharge edge therefor pivotally connected therewith, a feed table, a sliding board interposed between the bottom of said receiving trough and the feed table, means for reciprocating said board, cake guiding means carried by the discharge edge of said receiving trough, and separate pusher members carried by the sliding board and reciprocable between said guides.

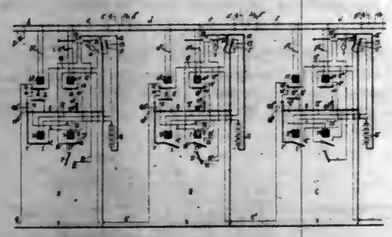
3. In a cake coating machine, the combination of a cake receiving trough, a discharge edge therefor pivotally connected therewith, a feed table, a sliding board interposed between the bottom of said receiving trough and the feed table, a pusher member mounted for movement in advance of the sliding board, a pair of operating levers, means for driving the same, oppositely disposed connections between said levers and the sliding board and pusher member whereby the latter may be moved in unison, and forwardly projecting fingers forming cake guiding means carried by the discharge edge of said receiving trough.

4. In a cake coating machine, the combination of a cake receiving trough, a discharge edge therefor pivotally connected therewith, a feed table, a sliding board interposed between the bottom of said receiving trough and the feed table, a pusher member mounted for movement in advance of the push board, a pair of operating levers, means for driving the same, oppositely disposed connections between said levers and the push board and pusher member whereby the latter may be moved in unison, cake guiding means carried by the discharge edge of said receiving trough, and separate pusher members carried by the sliding board and reciprocable between said guides.

5. In a cake coating machine, the combination of a cake receiving trough, a discharge edge therefor, a feed table, a sliding board interposed between the bottom of said receiving trough and the feed table, means for reciprocating said board, and arms carried by the discharge edge of said receiving trough, said arms forming guideways.

[Claims 6 to 15 not printed in the Gazette.]

1,216,231. SIGNALING SYSTEM. ROBERT J. HEWETT, Westfield, N. J. Filed Mar. 27, 1915. Serial No. 17,314. (Cl. 246—30.)



1. In a three-position normal danger electric signal system, the combination of two signals, each adapted to take a plurality of positions, a two-wire signal circuit containing two magnets for controlling said signals and arranged to have its resistance varied, means dependent upon track conditions for varying the resistance of said circuit, one of said magnets having polarized and neutral armatures, a circuit controlled by the neutral armature of said polarized magnet for moving a signal to one position and means controlled by one of said signals for reversing current in said signal circuit, whereby the polarized armature of said polarized magnet is actuated to close a circuit to move the next signal in rear to its extreme clearing position.

2. In a normal danger electric signal system, the combination of a trackway divided into sections, a plurality of signals guarding said sections and each adapted to be moved to the 45° and 90° positions, a two-wire circuit containing two magnets for controlling two of said signals, one of said magnets having a high and a low resistance winding and adapted to close the circuit for operating its signal to the 45° position, said magnet also having a polarized armature, means dependent upon track conditions for short-circuiting the high resistance winding of said magnet, thereby increasing the current in said circuit and operating the signal next in advance to the 45° position and means operated by said second signal for reversing the current in said circuit to cause the polarized armature to close the circuit for operating said first signal to the 90° position.

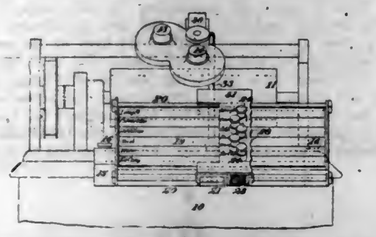
3. In a three-position normal danger electric signaling system, a plurality of signals, a two-wire circuit connecting adjacent signals and arranged to have its resistance varied, means dependent upon track conditions for varying the resistance of said circuit, a polar neutral relay in said circuit, a circuit controlled by the neutral armature of said relay for moving said signal to one position and a circuit controlled by the polarized armature of said relay for moving said signal to a second position and means operated by the next signal in advance for controlling said polarized armature over said two-wire circuit.

4. In a three-position normal danger signaling system, a plurality of signals united by a two-wire circuit, a polar neutral relay with high and low resistance windings in said circuit, means dependent upon track conditions for controlling the resistance in said circuit, signal operating means dependent upon the strength of current in said circuit and means under the control of the next signal in advance for controlling the direction of current flow in said circuit.

5. In a three-position normal danger signaling system, a plurality of signals, a two-wire circuit connecting adjacent signals, a polar neutral relay in said circuit at a given signal, said relay having two coils of unequal resistance, a second relay in said circuit at the next signal in advance, a track relay, and a contact controlled by said track relay short-circuiting one coil of the polar neutral relay whereby said second relay is energized to close a similar circuit two blocks ahead of said track relay.

[Claims 6 to 13 not printed in the Gazette.]

1,216,232. ANNOTATOR FOR COMMERCIAL PHONOGRAPHS. MARTHA L. HUNTER and ALBERT B. CHURCH, San Francisco, Cal. Filed Sept. 15, 1915. Serial No. 50,780. (Cl. 274—17.)



1. The combination with a commercial phonograph having a rotatable element and a traveling element, of a memo sheet holder, mechanical means for marking instructions upon a sheet within said holder when dictating, regarding the matters contained in the phonograph record, and a yoke embracing a projection on the traveling element and connected rigidly with the marking means for moving the latter across the sheet in said holder.

2. The combination with a commercial phonograph, having a rotatable element and a traveling element, of a memo sheet holder, and a marking device movable with the traveling element of the phonograph and traversing the sheet in the holder, whereby the dictator may mark upon said sheet a variety of instructions pertaining to the phonograph record, said marking device comprising an upwardly and forwardly inclined plate at the front of the phonograph and a series of depressible printing keys thereon arranged in staggered relation for compactness.

3. In combination with a commercial phonograph having a rotatable element and a traveling element, a holder detachably connected to the box thereof, a tray removably received in said holder and adapted to receive a pad of memo sheets, and a marking device comprising a plate and a series of printing keys thereon, said plate being connected with the traveling element of said phonograph and slidably mounted on said holder to move across said sheets, whereby the operator may imprint upon the exposed sheet various instructions applying to the matters contained in the record of said phonograph.

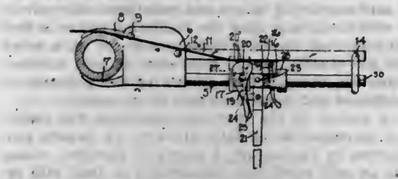
4. In combination with a commercial phonograph having a rotatable element and a traveling element, a holder detachably connected to the box thereof and adapted to receive a memo sheet, rods extending across said holder, and a marking device slidable on said rods and connected to the traveling element of the phonograph, said marking device being provided with means whereby the operator may imprint upon the sheet various instructions applying to the matters contained in the phonograph record.

5. In combination with a commercial phonograph having a rotatable element and a traveling element, a holder attached thereto, a tray in said holder adapted to receive a memo sheet, rods extending across said holder, a plate slidable on said rods, sleeve connections between said plate and rods, a connection between said plate and the traveling element, a series of depressible marking keys on said plate, whereby the operator may imprint various instructions on the sheet applying to the matters contained in the phonograph record, and an endless inking ribbon running over said sleeves and encompassing said tray to coact with the marking keys.

[Claim 6 not printed in the Gazette.]

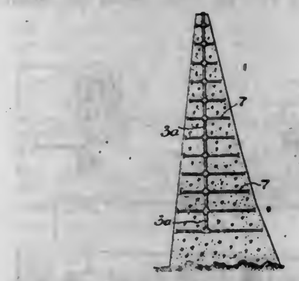
1,216,233. WIRE-STRETCHER. WALTER W. IDLE, Urbana, Ohio. Filed Mar. 4, 1916. Serial No. 82,199. (Cl. 254—72.)

1. A wire stretcher including a supporting rod and means for clamping the rod to a fence post, a slide member mounted on the rod having parallel portions disposed on opposite sides of the rod and integrally connected at their ends, an operating lever pivotally mounted between the parallel portions of the slide member, rings engaged upon the rod on relatively opposite sides of the lever and adapted to frictionally engage said rod, links pivotally connected to the rings and to said lever upon relatively opposite sides of its pivot, and wire clamping means carried by the slide member.



2. A wire stretcher including a supporting rod provided with means for clamping the same to a fence post, a slide member on said rod having parallel portions extending longitudinally on opposite sides of the rod, an operating lever pivotally mounted between the parallel portions of the slide member, rings engaged upon the rod on relatively opposite sides of the lever and at approximately equal distances therefrom, links connecting the rings to the lever on relatively opposite sides of its pivot, a spring disposed between one of the rings and the lever and a second spring disposed between the other lever and one end of the slide member, said springs yieldingly holding the rings in frictional engagement with the rod, and wire clamping means on one end of said slide member.

1,216,234. DAM CONSTRUCTION. LARS R. JORGENSEN, South Berkeley, Cal. Filed Dec. 27, 1915. Serial No. 68,679. (Cl. 61—24.)

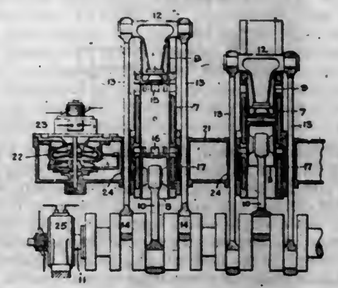


1. A dam body having grout pipes inserted in the contraction joints and distributed over the whole section, the ends of these pipes preferably flattened to form a slot and the sides of the pipes provided with short longitudinal slots at spaced intervals, these permanent pipes having movable pipes of smaller diameter inserted, the space between the two pipes being made tight at the lower end of the movable pipe by means of a packing, and said lower end of the movable pipe serving as a discharge for the grout into the large pipe and the upper end being connected to a grout pump.

2. A dam body having one or more vertical or nearly vertical unperforated pipes inserted in line with the contraction joint and a system of approximately horizontal pipes branching off from these vertical pipes, said branch pipes being provided with short slots at intervals in line with the contraction joints, and their ends being preferably flattened to also form a slot in line with the joint.

3. A dam body having one or more approximately vertical pipes inserted in line with the contraction joint and a system of horizontal, or nearly horizontal, pipes branching off from these vertical pipes, said branch pipes being provided with short slots at intervals in line with the contraction joints, and their ends being flattened to also form a slot in line with the joint, said vertical pipes having inserted movable pipes of smaller diameter, the space between the two pipes being made tight at the lower end of the movable pipe by means of a packing, and the lower end of the movable pipe serving as a discharge for the grout into the larger pipe, the upper end of the movable pipe being connected to a grout pump.

1,216,235. SCAVENGING-PUMP FOR INTERNAL-COMBUSTION ENGINES. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 3, 1914. Serial No. 860,028. (Cl. 123—52.)



1. The combination with a multicylinder high compression internal combustion engine, of an electrically driven scavenging pump, a generator driven by the engine for supplying current to drive the pump, and means for limiting the number of cylinders to be charged with air on starting the engine.

2. The combination with a multicylinder high compression internal combustion engine, of a scavenging pump, a motor for driving it, a generator driven by the engine, a storage battery in circuit with the generator and the motor, and means for limiting the number of cylinders to be charged with air on starting the engine.

3. The combination with a multicylinder high compression internal combustion engine, of a centrifugal air pump, a motor for driving it, a generator driven by the engine, a storage battery in circuit with the generator and motor, and means for limiting the number of cylinders taking air at starting.

4. The combination with a multicylinder high compression internal combustion engine, of a centrifugal air pump, and means for varying the number of cylinders connected to said pump.

5. The combination with a multicylinder high compression internal combustion engine, of an electrically driven centrifugal air pump, a generator driven by the engine, and means for varying the number of cylinders connected to said pump.

[Claims 6 to 12 not printed in the Gazette.]

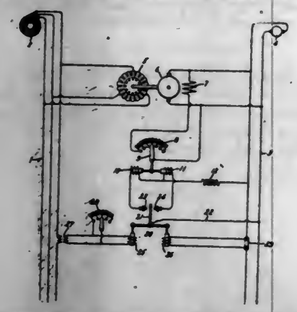
1,216,236. REGULATOR. HARRY A. LAYCOCK, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 27, 1913. Serial No. 797,614. (Cl. 171—312.)

1. In combination, an alternating current system, a direct current system, means for effecting an inter-change of energy between the two systems in either direction, and a single means controlled by the ratio of the loads on the two systems to control the direction of interchange of energy.

2. In combination, an alternating current system, a direct current system, means for effecting an interchange of energy in either direction between the two systems including a magnetic field, and a single means controlled by the ratio of the loads on the two systems to control the field of said first named means.

3. An alternating current circuit and its source, a direct current circuit and its source, rotary transforming apparatus for transferring energy between the circuits, means for exciting said transforming apparatus and a single

means controlled by the currents in said circuits to control the excitation of said transforming apparatus.

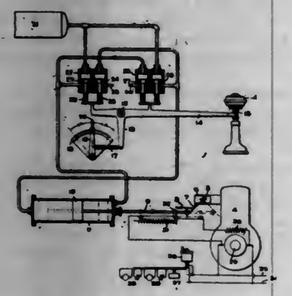


4. An alternating current circuit and its source, a direct current circuit and its source, rotary transforming apparatus for transferring energy between the circuits, a field winding for exciting said apparatus, a resistance in series therewith, and a single means controlled by the currents in said circuits to add resistance to or subtract resistance from the circuit of the field winding of said apparatus.

5. In combination, an alternating current system, a direct current system, a reversible motor generator set comprising an alternating current element and a direct current element connected between said systems, a field winding for one of said elements, a resistance in series therewith, and solenoids responsive to changes in current in the respective systems controlling said resistance.

[Claims 6 to 8 not printed in the Gazette.]

1,216,237. CONTROLLING MEANS FOR ENGINE-GENERATOR-DRIVEN VEHICLES. HERMANN LEMP, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed June 24, 1914. Serial No. 847,135. (Cl. 171—315.)



1. In a system of the character described, the combination of an engine, an electric generator driven thereby, means for regulating the supply of fuel to the engine, a field resistance for the generator, and a common means for controlling both the regulating means and the resistance, said common means comprising a movable member which acts on said regulating means and resistance successively so that with increase in load the regulating means is first operated and then the field resistance is cut in.

2. In a system of the character described, the combination of an engine, an electric generator driven thereby, means for regulating the supply of fuel to the engine, a field resistance for the generator and a common means for controlling both the regulating means and the resistance, said common means comprising a movable member which acts on said regulating means and resistance successively so that with increase in load the regulating means is first operated and then the field resistance is cut in, and a speed governor for controlling the movements of said member.

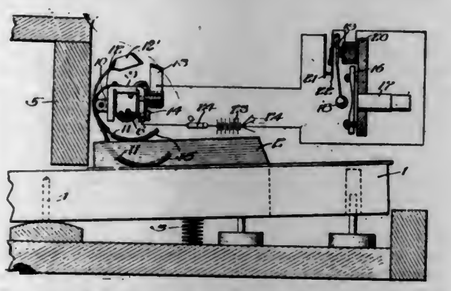
3. In a system of the character described, the combination of an engine, an electric generator driven thereby, means for regulating the supply of fuel to the engine, a field resistance for the generator, and a common means for controlling both the regulating means and the resistance, said common means comprising a movable member which acts on said regulating means and resistance successively so that with increase in load the regulating means is first operated and then the field resistance is cut in, a speed governor for controlling the movement of said member, and means for changing the setting of the governor to obtain different and constant speeds of the engine.

4. In a system of the character described, the combination of an engine, a regulator therefor, an electric generator driven by the engine, a regulator therefor, means that acts on said regulators successively so that with increase in load the first named regulator is actuated prior to the second, a speed governor that controls the action of the means, an auxiliary spring for the governor, and a hand lever for changing the tension of the spring.

5. In a system for controlling a motor car wherein an engine drives a generator which in turn supplies current to the car motors, the combination with the engine, the generator, and the motor, of means for automatically controlling the engine and generator to maintain the engine at a constant predetermined speed, and two controllers, one of which regulates the motor connections, and the other of which regulates said means to set it for different engine speeds.

[Claims 6 to 8 not printed in the Gazette.]

1,216,238. SWITCHING MECHANISM. FREDERICK B. LITTLE, Chicago, Ill., assignor, by mesne assignments, to J. C. Deagan Musical Bells, Chicago, Ill., a Corporation of Illinois. Filed Feb. 25, 1916. Serial No. 80,827. (Cl. 200—27.)



1. Switching mechanism including a conduit for electrical conductors that are connected therewith; mounting frames separably connected with the conduit; stationary contacts carried by the frames; and contacts pivotally mounted upon the frames and complemental to the stationary contacts.

2. Switching mechanism including a conduit for electrical conductors that are connected therewith; mounting frames separably connected with the conduit; stationary contacts carried by the frames; and contacts pivotally mounted upon the frames and complemental to the stationary contacts, the conduit having formations for engaging the frames to prevent movement of the frames longitudinally of the conduit.

3. Switching mechanism including a conduit for electrical conductors that are connected therewith; mounting frames separably connected with the conduit; stationary contacts carried by the frames; contacts pivotally mounted upon the frames and complemental to the stationary contacts; and securing means for separably securing the frames and conduit together.

4. Switching mechanism including a conduit for electrical conductors that are connected therewith; mounting frames separably connected with the conduit; stationary contacts carried by the frames; contacts pivotally mounted upon the frames and complemental to the stationary contacts, the conduit having formations for engaging the frames to prevent movement of the frames longitudinally of the conduit; and securing means for separably securing the frames and conduit together.

5. Switching mechanism including a conduit for electrical conductors that are connected therewith; U-shaped mounting frames separably connected with the conduit that is received between the sides of the U-shaped frames; stationary contacts carried by the frames; and contacts pivotally mounted upon the frames and complemental to the stationary contacts.

[Claims 6 to 9 not printed in the Gazette.]

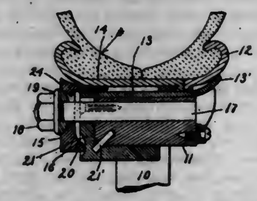
1,216,239. SHOE-SHINING APPARATUS. CARL LOVELL, Osceola, Iowa. Filed Mar. 15, 1916. Serial No. 84,431. (Cl. 15—46.)



1. In a device for the purpose set forth, the combination, of a conducting pipe having branch extensions which are perforated and a valve for the pipe in the extensions thereof, a flanged holder receiving the perforated branch members of the pipe, a brush removably connected with the holder and having depressions to receive the branch pipes, said brush being provided with channels communicating with the said depressions and with apertures between the bristles of the brush and the said channels.

2. In a shoe shining device, a liquid blacking pipe having its end provided with angular pipe extensions which are perforated upon one of their faces and having a valve at the juncture of the said branch extensions, a holder member receiving the branch ends of the pipe, a brush having transverse depressions adapted to be removably connected to the holder and the said depressions to receive the perforated branch pipes, said brush having perforations leading from the lower walls of its depressions, its head channeled and the said channels communicating with the said perforations, and the brush being further provided with ports disposed between the bristles of the said brush and the said channels.

1,216,240. DEMOUNTABLE RIM. FREDERICK LOWE, Cambridge, Mass. Filed May 29, 1915. Serial No. 31,271. (Cl. 152—21.)



1. A mount for demountable rims, comprising a plate fixed on the felly of the wheel and bearing on the side and inside thereof; a lever fulcrumed thereon at a point inside of the inmost extent of the side of the felly; means drawing said lever toward the felly; and a wedge adapted to be drawn by the lever between the felly and the rim.

2. A mount for demountable rims, comprising a plate fixed on the side of the felly, and having a spur integral therewith and projecting obliquely into the felly in a direction from the inner toward the outer sides thereof; a lever fulcrumed on said plate; means drawing the lever toward the side of the felly, and a wedge pressed thereby between the felly and rim.

3. A mount for demountable rims, comprising a plate fixed on the felly of a wheel, and bearing on the side and inside thereof, and having a spur projecting obliquely into the felly; a lever fulcrumed on the plate at a point inside of the inmost extent of the side of the felly; means drawing said lever toward the felly; and a wedge pressed between the felly and rim by the lever.

4. A mount for demountable rims, comprising a lever fulcrumed beside the felly, a wedge held by the lever at its outermost end, and means acting on the lever between said fulcrum and wedge to draw it toward the felly, and thus draw the wedge in between the felly and rim; the wedge being so acute that it normally finds bearing on one side against the rim and on the other side against the wheel over the cylindrical face of the felly; and so that the static friction approximately balances the ejecting component of pressure between rim and felly.

5. A mount for demountable rims, comprising a lever fulcrumed at one of its ends near the inner edge of the felly; said lever being at its other end formed integrally into a concavo-convex wedge having its concave side of flatter curvature than the adjacent side of the rim and adapted to be inserted between the felly and the rim; combined with a bolt piercing the felly and engaging the middle part of the lever.

[Claims 6 and 7 not printed in the Gazette.]

1,216,241. SASH-LOCK. FRED F. MALSBURY, Cincinnati, Ohio. Filed Oct. 11, 1916. Serial No. 125,083. (Cl. 16—58.)

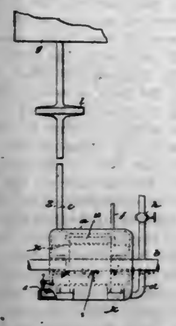


1. In a device for the purpose set forth, the combination of a locking bar, a latch member secured at its lower end and having its upper end constructed to engage the locking bar, a headed pin inserted through the latch member and secured in rear of the same, a spring coiled around said pin between the head thereof and the latch member to hold the said member normally in engagement with the locking bar, and means for releasing the latch member from its engagement with the locking bar.

2. The combination of a locking bar, a latch member consisting of a resilient plate secured at its lower end and having its upper end constructed to engage the locking bar, means for holding said upper end of the latch member normally in engagement with the locking bar, and a T-shaped releasing member having its head disposed to rock in rear of the latch member and bearing against the same and its stem projecting beyond the said member.

3. The combination of a locking bar, a latch member secured at its lower end and having its upper end constructed to engage the locking bar, means for holding the latch member normally in engagement with the locking bar, a T-shaped releasing member having its head disposed in rear of and bearing against the latch member and its stem projecting forwardly beyond the latch member, a holding pin disposed below the latch member, and a flexible operating device suspended from the releasing member and adapted to engage said holding pin.

1,216,242. ELECTRIC MOTOR. WILLIAM RICHARD MACDONALD, London, England. Filed Dec. 15, 1911. Serial No. 665,890. (Cl. 172—36.)



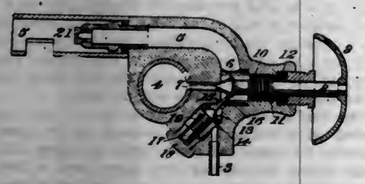
1. In combination, an electric motor, an inclosed casing therefor provided with an outlet near the bottom, a water inlet and means connected therewith adapted to be connected to a water-supply for the purpose of cooling the motor, and an air inlet adapted to admit compressed air for the purpose of expelling the water through said outlet at will, whereby the motor may be enveloped in water or in air at the will of the operator.

2. In combination, an electric motor, an inclosed casing therefor, a water inlet and means connected therewith adapted to be connected to a water-supply for the purpose of cooling the motor, an outlet adjacent the bottom of the casing provided with a valve adapted to operate under maintained pressure, and an air inlet adapted to admit compressed air for the purpose of expelling the water through said outlet at will, whereby the motor may be enveloped in water or in air at the will of the operator.

3. A method of operating an incased electric motor, consisting in admitting compressed air to the casing of said motor during the starting period, cutting off said supply of compressed air and admitting substantially pure water into contact with the windings of said motor during the running.

4. A method of operating an incased electric motor, consisting in admitting compressed air to the casing of the motor during the starting period, and admitting substantially pure water into contact with the windings of the motor during normal running.

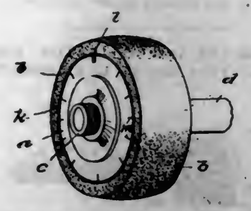
1,216,243. MULTIPLE-CONTROL VALVE. LUCIEN A. MARSH, San Francisco, Cal. Filed Oct. 25, 1915. Serial No. 57,774. (Cl. 137—26.)



1. In a valve mechanism, a main passage, a second passage leading therefrom, a spring seated valve arranged for closing the second passage, and a manually operable valve having a conical valve seating face for closing the main passage and on which the spring seated valve is adapted to directly engage for being unseated by said valve seating face and upon movement of the manual valve to closed position.

2. A valve mechanism consisting of a casing, a main valve and a secondary valve contained in the casing, said casing having a main supply passage, a branch passage leading therefrom controlled by the main valve and a second branch passage leading from the main passage and controlled by the secondary valve, the two branch passages arranged at an angle to each other, the secondary valve having an extension contacting with the face of the main valve, and a coöperating spring tending to seat the secondary valve, so that operation of the main valve operates the second valve.

1,216,244. POLISHING-ROLL. ALEXANDER MCDOWELL, Lynn, Mass.; Ida R. McDowell, administratrix of Alexander McDowell, deceased, assignor to Valentine H. McDowell, Lynn, Mass. Filed Apr. 3, 1913. Serial No. 758,725. (Cl. 51—1.)



1. A polishing roll comprising an elastic body having a discontinuous peripheral portion, a separate covering surrounding such peripheral portion and means for compressing the central part of said body axially whereby to produce a radial outward pressure upon the covering.

2. A polishing roll comprising a rigid hub, an elastic yielding body surrounding said hub of continuous structure at its inner part and discontinuous at its exterior, a covering of material suitable for polishing surrounding said body and compression heads mounted on the hub on each side of the body movable axially toward and from one another, whereby to produce radial pressure of the body against the covering.

3. A polishing roll comprising a body portion of rubber or substantially equivalent yielding and elastic material formed with its peripheral part interrupted and discontinuous, a hub contained centrally in said body portion, heads mounted on said hub at opposite ends of the body portion, means for forcing one of said heads toward the other against the body portion, whereby to distort and force the peripheral portion thereof outwardly, and a covering band surrounding and filled by the body portion.

4. A polishing roll comprising a hub, a generally cylindrical body portion of rubber, on said hub, a covering consisting of a layer of felt and a lining band of inextensible fabric surrounding the elastic body, said band having a seam with inturned edges interlocked with the body, and compression heads mounted on the hub at opposite ends of the roll adapted to be forced together to compress the elastic body axially and thereby expand its peripheral portion radially, such peripheral portion being discontinuous, whereby the expansive pressure is evenly distributed.

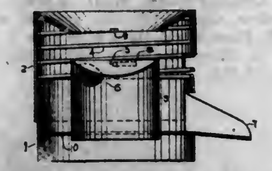
5. A polishing roll comprising a generally cylindrical body of elastic material having inclined or diagonal cuts in its periphery, a hub in the axis of said body, heads mounted on said hub at opposite ends of the body, antifriction washers between the heads and the body, a nut threaded upon the hub engaging one of said heads and operable to adjust the latter toward the other head, and a polishing covering layer surrounding the elastic body.

[Claims 6 to 8 not printed in the Gazette.]

1,216,245. EGG-SEPARATOR. HELGI NORMAN, Winslow, Wash., assignor of one-half to Harvey Creswell Nugent. Filed Oct. 12, 1915. Serial No. 55,443. (Cl. 65—12.)

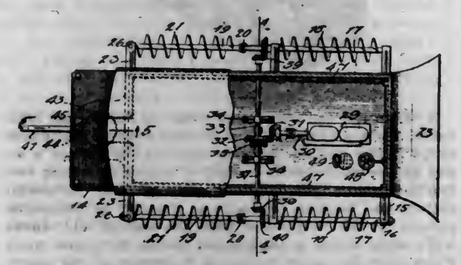
In a structure of the character described a base comprising a cylindrical body containing within and near its lower edge a horizontal partition, part of which extending through an opening in the wall of the cylindrical body, forms an overhanging lip or spout, together with a vertical

tube, centrally located within the base, the lower portion extending through the horizontal partition and forming a passage way, a cap, the upper part of which is a funnel, said cap having its body conforming to the outside of the base, and adapted to move in a reciprocating manner, a spiral compression spring, supported by the rim of the base and in turn supporting the cap, the funnel top of the cap performing the function of a receiver, and the lower edge when in motion, and passing the mouth of the vertical tube, acting as a cutter, a receptacle, of a cup



shaped character, designed to turn within the mouth of the vertical tube, around its horizontal axis by means of projecting arms or cranks, fastened to the receptacle and working through holes near the rim of the vertical tube, the cranks when acted upon by the descending cup imparting a rotary movement to the receptacle, turning it from a horizontal to a vertical position, and a counterweight of a suitable size fastened in such a manner as to return it to a horizontal position.

1,216,246. VEHICLE. CHARLES ROGGASCH, Ainsworth, Nebr.; Auguste Roggasch administratrix of Charles Roggasch, deceased. Filed May 6, 1916. Serial No. 95,849. (Cl. 115—1.)

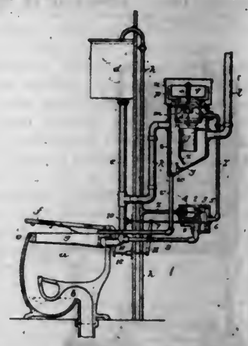


1. A vehicle of the character described, comprising a body portion having a flat bottom, runners extending longitudinally of said bottom, substantially U-shaped brackets carried by the forward end of said body portion and having bearings at their free extremities, forward propelling devices having their front ends mounted in said bearings, hangers extending laterally from the body portion adjacent the rear end thereof, vertically movable rods mounted in said hangers and having bearings at their lower ends, springs interposed between said bearings and said hangers for yieldingly supporting said rods in position, rear propelling devices having their rear ends mounted in the bearings of said movable rods, universal joints connecting the front ends of said rear propelling devices with the rear ends of said forward propelling devices, gears carried by certain of said propelling devices, a driven shaft extending transversely of said body portion and having gears at its extremity meshing with the first-named gears, and means mounted in the body portion for driving said driven shaft.

2. A vehicle of the character described, comprising a body portion having a flat bottom, runners extending longitudinally of said bottom, substantially U-shaped brackets carried by the forward end of said body portion and having bearings at their free extremities, forward propelling devices having their front ends mounted in said bearings, hangers extending laterally from the body portion adjacent the rear end thereof, vertically movable rods mounted in said hangers and having bearings at their lower ends, springs interposed between said bearings and said hangers for yieldingly supporting said rods in position, rear propelling devices having their rear ends mounted in the bearings of said movable rods, universal joints connecting the front ends of said rear propelling devices with the rear ends of said forward propelling devices, and means mounted interiorly of said body portion and connected to certain of said propelling devices for operating the same.

3. A vehicle comprising a body portion having a flat bottom, a platform extending rearwardly from the rear end of said body portion, a bracket also extending from the rear end of said body portion, a pivot bolt mounted in said bracket, a rudder secured to said bolt, a gear also carried by said bolt between said bracket and said platform, another gear meshing with the first-named gear, a flexible element having its extremities connected to the second-named gear, and a steering wheel connected to said flexible element for operating the same to oscillate said gears whereby the rudder is swung about its pivot.

1,216,247. VENTILATING APPARATUS. CHARLES E. SHADALL, Milwaukee, Wis., assignor, by direct and mesne assignments, to Shadall Manufacturing Company, Wauwatosa, Wis., a Corporation of Wisconsin. Filed July 5, 1912. Serial No. 707,657. (Cl. 230—13.)



1. In ventilating apparatus the combination of a water chamber having a jet orifice in the lower part and an opening and valve seat in the upper part, a float receptacle above and communicating with said chamber through said opening, an upwardly closing valve fitted to said seat, a float in said receptacle connected with said valve, a spreader connected with said valve and extending axially downward therefrom into said jet orifice, and a valve controlled water supply connection with said chamber.

2. In ventilating apparatus the combination of a water chamber having a jet orifice in the lower part and an opening and valve seat in the upper part thereof, a float receptacle located above said chamber and communicating therewith through said opening, a normally open and upwardly closing valve fitting said seat, a float in said receptacle connected through said opening with the valve, a spreader pivotally connected with said valve and extending downwardly therefrom into the jet orifice in which it is self-centering, and a valve controlled water supply connection with said chamber.

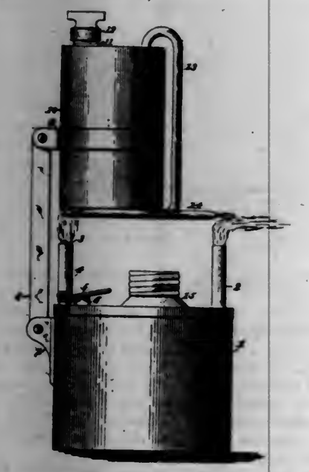
3. In ventilating apparatus the combination of an aspirator casing having a mixing tube or passage, air inlet and outlet connections communicating with opposite ends of said tube or passage and a separate water discharge connection below said air connections, a water chamber having a jet orifice in alinement with the mixing tube and a spreader, one of which is movable axially relative to the other into working position of restricted flow by water admitted to said chamber and returns automatically to its normal position of unrestricted flow, and a valve controlled water supply connection with said chamber.

4. In ventilating apparatus the combination of an aspirator casing having an air entraining passage, air inlet and outlet connections communicating with opposite ends of said passage, and a separate water discharge connection below said air connections; a water chamber having a jet orifice in alinement with said air entraining passage and a self-centering spreader one of which is axially movable relative to the other into its working position of restricted flow by water admitted to said chamber, and is automatically returnable to its normal position of unrestricted flow; and a valve controlled water supply connection with said chamber.

5. In ventilating apparatus the combination of an aspirator casing provided with a mixing tube or passage and having an air outlet connection and a common air inlet and water outlet connection communicating with opposite ends of said mixing tube, and a water sealed outlet between the air inlet and the air outlet compartments of the casing, a water chamber having a jet orifice in alinement with said mixing tube, and a spreader, one of which is movable axially relative to the other into working position by water admitted to said chamber, and a valve controlled water supply connection with said chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,216,248. HYDROCARBON-BURNER. LAWRENCE W. SWEM, West Liberty, Iowa, assignor to E. L. Webb & Co., West Liberty, Iowa. Filed July 12, 1915. Serial No. 39,507. (Cl. 158—27.6.)



1. In a burner for liquid hydro-carbons, the combination of a lamp font provided with a service flame nozzle, a reservoir to hold liquid and the gas generated by heat therein, a gas-tube leading from the upper portion of the reservoir to its bottom, and forming a coil thereunder, with a laterally extending outlet, and means connecting with the lamp font for heating said second vessel and its gas-tube.

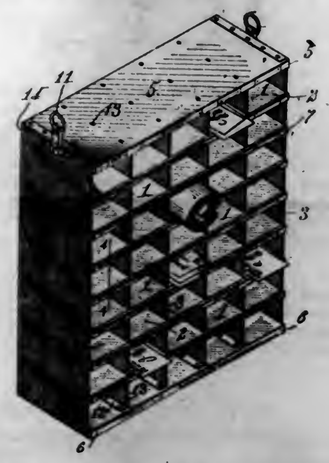
2. In a burner for liquid hydro-carbons, the combination of a lamp font provided with two flame nozzles, a standard adjustably attached to said font, a reservoir having a gas-tube outlet to supply blast to one of the lamp flames, and a support for said reservoir adjustably connecting with the standard, and mounted over one of the lamp flames.

3. In a burner for liquid hydro-carbons, the combination of a lamp font provided with two flame nozzles, a standard hinged to said font, a reservoir having a gas outlet to supply blast to one of the lamp flames, a compression clip therefor hinged to the standard, the reservoir being mounted over one of the lamp flames, and means for regulating said reservoir-heating flame.

1,216,249. TIRE-FILLING COMPOSITION. CLARENCE C. TURNER, Portland, Oreg., assignor to John A. Schmidtke, Portland, Oreg. Filed Apr. 26, 1916. Serial No. 93,771. (Cl. 106—23.)

A tire filler comprising the following ingredients in proportions substantially as set forth: China wood oil 72%; chlorid of sulfur 8%; oxid of magnesium 7%; comminuted cork 13%.

1,216,250. COLLAPSIBLE MAIL-RACK. HARRY L. BITTLE, West Alexandria, Ohio, assignor of one-third to John F. Plander, one-third to Orange V. Frits, and one-third to Harry L. Bittle. Filed Mar. 10, 1916. Serial No. 83,213. (Cl. 211—36.)

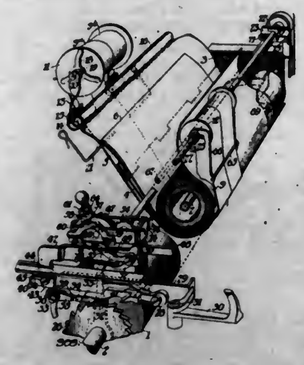


A collapsible mail rack comprising top and bottom horizontal walls, a plurality of horizontal shelves, continuous strips rigidly uniting the front edges of the shelves, a series of continuous walls formed of canvas extending vertically between the adjacent ends of said horizontal shelves and forming therewith a plurality of collapsible pockets for the reception of mail, the ends of said canvas walls being united to the top and bottom horizontal walls which form the outer horizontal inclosures of the uppermost and lowermost tiers of shelves, the two outermost vertical canvas walls being united to the outer edges of the outermost horizontal shelves and the top and bottom horizontal walls, a continuous canvas wall forming the back closure of the entire series of pockets, and a series of horizontal rods extending across said continuous canvas wall and uniting the same to the rear edges of the horizontal shelves, substantially as specified.

1,216,251. TYPE-WRITING MACHINE. CLARENCE H. BROWN, Chicago, Ill., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 9, 1914. Serial No. 817,473. (Cl. 197—132.)

1. In a typewriting machine, the combination with a platen frame and a platen journaled therein, of a shaft located over the platen, a spool on said shaft to receive a tally strip extending around the platen and upward to said spool, and a swinging guide depending from said shaft and holding the tally strip against the platen along the printing line.

2. In a typewriting machine, the combination with a platen frame and a platen journaled therein, of a shaft located over the platen, a spool on said shaft to receive a tally strip extending around the platen and upward to said spool, and a swinging guide depending from said shaft and holding the tally strip against the platen along the printing line, said guide mounted to swing upwardly over the said shaft and rearwardly to a position behind said shaft.



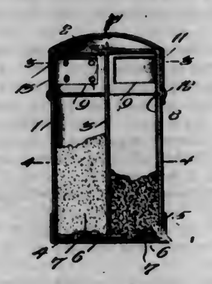
3. In a typewriting machine, the combination with a rotary platen, of a receiving spool for a tally strip, and a guiding frame for said strip comprising a plate forming a backing against which the strip may be held to permit erasures.

4. In a typewriting machine, the combination, with a rotary platen; of a shaft located over the platen; a spool on said shaft to receive a tally strip extending around the platen and upward to said spool; and a guiding frame for said strip depending from said shaft and holding said strip against the platen along the printing line, said frame comprising a plate forming a backing against which the strip may be held to permit erasures.

5. In a typewriting machine, the combination, with a rotary platen; of a shaft located over the platen; a spool on said shaft to receive a tally strip extending around the platen and upward to said spool; and a swinging guide depending from said shaft and holding the tally strip against the platen along the printing line, said guide mounted to swing upwardly over the said shaft and rearwardly to a position therebehind and comprising a plate forming a backing against which the strip may be held to permit erasures.

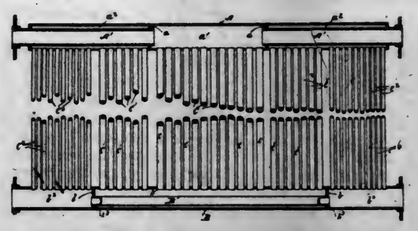
[Claims 6 to 13 not printed in the Gazette.]

1,216,252. CONDIMENT-HOLDER. PETER L. FERGUSON, Ogden, Utah. Filed Apr. 10, 1916. Serial No. 90,125. (Cl. 65—45.)



A condiment holder comprising a casing having a transverse partition dividing the casing into two compartments, said casing having a lateral discharge opening at each side of its top and at opposite sides of the partition, a cup-shaped cover mounted on the top of the casing for closing the openings and rotatably connected with the casing at the edge of the cover and having series of perforations for each opening and adapted to register in alternation with the openings when the cover is turned, and means for limiting the rotating movement of the cover on the holder.

1,216,253. STEAM-SUPERHEATER. EDWARD A. GEOGHEGAN, New York, N. Y., WILLIAM B. MAYO, Hamilton, Ohio, and CHARLES S. TURNER, Highland Park, Mich. Filed Sept. 18, 1916. Serial No. 120,781. (Cl. 122—476.)



1. A superheater header comprising substantially a tubular member and adapted to have superheater tubes secured in the wall thereof, transverse walls within said header dividing the interior thereof into a plurality of chambers, and a steam intake pipe longitudinally located within said header and communicating with the inner of said chambers, substantially as described.

2. A superheater header comprising substantially a tubular member having closed ends and adapted to have superheater tubes secured in the wall thereof, transverse walls within said tubular member dividing the interior thereof into a plurality of chambers, a steam intake pipe longitudinally located within said tubular member nonslidably secured in one of the end walls of said header and slidably passing through the transverse walls between the inner and outer chamber, substantially as set forth.

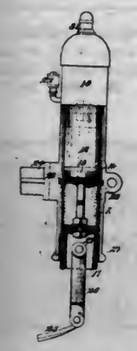
3. In a superheater, a header, division walls therein dividing the interior thereof into a plurality of chambers, intake pipes leading through said walls and outer chamber into each end of the middle chamber therein, another header, division walls therein in staggered relation to the division walls in the first named header and forming a middle chamber therein, and a series of groups of tubes connecting the several chambers in one header with the chambers in the other header, whereby steam introduced into the middle chamber in the first header will pass successively through all of the header chambers at each side of said middle chambers, substantially as set forth.

4. In a superheater, a header, division walls therein dividing the interior thereof into a plurality of chambers, and a tube therein connecting the outer chamber at one end of said header, with the outer chamber at the opposite end thereof, substantially as set forth.

1,216,254. AIR-SPRING. LUCIEN R. GRUSS, San Francisco, Cal., assignor to Pneumatic Cushion Co., San Francisco, Cal., a Corporation of California. Filed Sept. 6, 1916. Serial No. 118,627. (Cl. 267—49.)

1. In an air spring comprising in combination telescoping cylinders closed at their outer ends and inclosing a space, a solid piston carried by the lower cylinder and working inside the upper cylinder and dividing said space into two chambers which are out of communication with each other except for such leakage as may take place around the piston packing, a body of oil contained in the cylinders of such quantity as to fill the lower chamber and to submerge the piston packing when the two cylinders are telescoped to their innermost limits, an annular packing carried by the inner cylinder and overhanging the lower end of the latter and in sliding contact with the outer cylinder and submerged in the liquid in the lower chamber and adapted to prevent leakage from the cylinders, the upper chamber forming a compression and

cushioning chamber and the lower chamber acting on the extension of the cylinders to create a vacuum in the lower chamber to counteract the expansive action of the air spring.



2. In an air spring comprising in combination telescoping cylinders closed at their outer ends and inclosing a space, a solid piston carried by the lower cylinder and working inside the upper cylinder and dividing said space into two chambers which are out of communication with each other except for such leakage as may take place around the piston packing, a body of oil contained in the cylinders of such quantity as to fill the lower chamber and to submerge the piston packing when the two cylinders are telescoped to their innermost limits, an annular packing carried by the inner cylinder and overhanging the lower end of the latter and in sliding contact with the outer cylinder and submerged in the liquid in the lower chamber and adapted to prevent leakage from the cylinders, the upper chamber forming a compression and cushioning chamber and the lower chamber acting on the extension of the cylinders to create a vacuum in the lower chamber to counteract the expansive action of the air spring, and a dash pot connected with the piston and co-acting with the part on the cylinder in which the piston slides to check recoil.

3. In an air spring comprising telescoping inner upper, and lower outer, cylinders closed at their outer ends and inclosing a space, a piston working in the upper cylinder carried by the lower cylinder, and dividing said space into an upper chamber for compressible fluid and a lower chamber for incompressible fluid, a packing for the sliding joint between the cylinders, a ring on the lower end of the inner cylinder for retaining said packing in place and forming also a stop coöperating with the piston to limit the separating movement of said cylinders, and means forming a dash-pot between the piston and ring for restraining outward movement of the cylinders when they approach their limit of separation.

4. In an air spring comprising telescoping cylinders closed at their outer ends and inclosing a space, a piston working in the upper cylinder carried by the lower cylinder, a packing for the sliding joint between the cylinders, a dash pot with which the piston co-acts to check recoil, said dash pot being below the piston and coöperating with said packing means.

5. In an air spring, the combination of telescoping cylinders closed at their outer ends and inclosing a space, a piston carried by the lower cylinder and working inside the upper cylinder dividing said space into two chambers which are out of communication with each other except for such leakage as may take place around the piston packing, a body of oil contained within the cylinders of such quantity that when the cylinders are telescoped to their innermost limits the lower chamber is filled with oil, and the piston packing in the upper chamber is submerged to form an oil seal leaving an air cushion space above the oil in the upper cylinder, and a packed sliding joint between the cylinders, the upper chamber forming a compression and cushioning chamber, and the lower chamber acting on the extension of the cylinders to create a vacuum in the lower chamber to counteract the expansive action of the air spring.

[Claim 6 not printed in the Gazette.]

1,216,255. REEL. VICTOR ADELNOR CEDERBORG, Drumright, Okla. Filed Dec. 4, 1915. Serial No. 65,015. (Cl. 242—85.)



1. In a reel, a frame formed of a pair of standards each standard being composed of a pair of angle irons spaced apart to leave an opening, a bearing plate coöperating with each standard, a spool rod extending transversely of the frame and being supported at its ends by the bearing plates, said ends projecting through the aforesaid openings, gear and rack devices coöperative with the bearing plate and standard for elevating the bearing plate, pawl and ratchet devices associated with the bearing plate for holding the bearing plate to its degree of elevation, tail nuts on the spool rod for engaging the spool and a crank arm on the spool rod for turning the rod.

2. In a reel, a frame composed of end standards having pedestals at the bottom, each of said pedestals being composed of ground bars and braces, ground beams between the pedestals adapted to hold the standards in spaced relationship, brace bars between the standards near the bottom, each of the aforesaid standards being composed of a pair of spaced angle irons, cap plates at the top of each standard, guide bars fulcrumed on each of the ground bars of the pedestals, a rod disposed between the upper ends of the guide bars, a threader roller mounted on the rod, chains between the guide bars and the cap plates, and a spool rod adjustably and rotatably mounted on the frame.

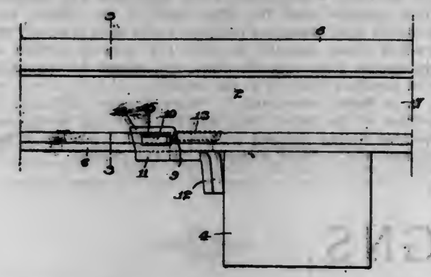
3. In a reel, a frame formed of a pair of standards each standard being composed of a pair of angle irons spaced apart to leave a vertical opening, a bearing plate slidably engaged with each standard and mounted on the outside thereof, a spool rod disposed transversely of the frame and having its ends supported in the bearing plates, said ends projecting through the adjacent opening in the adjacent standard, a rack mounted on each standard, a gear on each bearing plate coöperating with the rack, said gear devices being independently operatable, and pawl and ratchet devices on each bearing plate for holding the gear to its position with relationship to its coöperating rack.

4. In a reel, the combination with the standard consisting of a pair of vertically disposed angle irons, said irons being spaced apart to leave an opening; a rack mounted on one of the angle irons, a bearing plate slidably mounted on the standard, a spool rod supported at one end by the bearing plate the end of the spool rod being projected through the opening between the angle irons, a gear on the bearing plate in engagement with the rack, pinion and gear devices for rotating the aforesaid rack engaging gear, a crank for turning the pinion, and pawl and ratchet devices associated with the pinion and gear supports for holding them at different positions.

5. In a reel, the combination with the standard having opposed angle irons spaced apart to leave an opening; a bearing plate slidably mounted on a part of the exterior surface of the opposed angle irons, a shaft mounted in the bearing plate, one end thereof extending through the opening to the interior of the opposed angle irons, a gear mounted in the aforesaid end of the shaft, a rack mounted on one of the adjacent angle irons for coöperation with the gear, another gear mounted on the opposite end of the shaft, a second shaft mounted in the bearing plate, said shaft having a squared end, a pinion on the shaft being in mesh with the adjacent gear on the aforesaid shaft, a ratchet mounted on one of the shafts, and a coöperating pawl mounted on the opposing shaft.

[Claim 6 not printed in the Gazette.]

1,216,256. ANTICREEPER FOR RAILROAD-RAILS. DAVID F. VAUGHAN, Riverton, N. J. Filed Sept. 21, 1916. Serial No. 121,845. (Cl. 238—4.)



1. An anticreeper for railroad rails comprising a spring bar adapted to extend beneath a rail base and having a jaw on one end thereof adapted to engage one side of a rail base and an upwardly extending arm on the other end thereof adapted to engage the other side of said rail base, said bar in its normal condition having its end portion provided with the arm inclined downwardly in spaced relation to the rail base and adapted to be sprung upwardly toward the same when its jaw is engaged with one side of the rail base, and a locking member adapted to be inserted between a part of said arm and the top of the adjacent side of the rail base and to thereby draw said inclined end portion up toward the rail base and place the bar under tension.

2. An anticreeper for railroad rails comprising a spring bar adapted to extend beneath a rail base and having a jaw on one end thereof and an upwardly extending arm on the other end thereof and having a tie abutment formed thereon, said bar in its normal condition having its end portion provided with the arm inclined downwardly in spaced relation to the rail base and adapted to be sprung upwardly toward the same when its jaw is engaged with one side of the rail base, and a locking member adapted to be inserted between a part of said arm and the top of the adjacent side of the rail base and to thereby hold the inclined portion of the bar in an upwardly sprung position.

3. An anticreeper for railroad rails comprising a bar adapted to extend beneath a rail base and having a jaw on one end thereof and an upwardly extending arm on the other end thereof, said bar in its normal condition having a twist formed therein causing one side of the end portion provided with the arm to be inclined downwardly in spaced relation to the rail base when its jaw is engaged with one side thereof, and a locking member adapted to be inserted between a part of said arm and the top of the adjacent side of the rail base and to thereby draw said inclined end portion up toward the rail base and place the bar under tension.

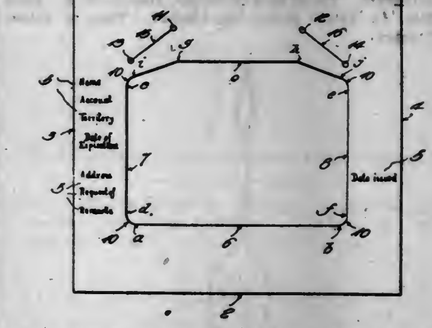
4. An anticreeper for railroad rails comprising a bar adapted to extend beneath a rail base and having a jaw on one end thereof and an upwardly extending arm on the other end thereof, said bar in its normal condition having a twist formed therein causing one side of the end portion provided with the arm to be inclined downwardly in spaced relation to the rail base when its jaw is engaged with one side thereof, and a wedge shaped locking member adapted to be inserted between a part of said arm and the top of the adjacent side of the rail base and to thereby draw said inclined end portion up toward the rail base and place the bar under tension.

5. An anticreeper for railroad rails comprising a bar adapted to extend beneath a rail base and having a jaw on one end thereof and an upwardly extending arm on the other end thereof, said bar in its normal condition having its end portion provided with the arm inclined downwardly in spaced relation to the rail base when its jaw is engaged with one side thereof, and said arm being provided with an opening having an upper wall which is inclined downwardly and longitudinally with respect to the adjacent side of the rail base, and a locking member adapted to be inserted between said wall and the top of the adjacent side of the rail base and to thereby draw said inclined end portion up toward the rail base and place the bar under tension, said member having a beveled portion adapted to coöperate with said arm and the rail base and permit only the proper insertion of said member.

[Claims 6 to 15 not printed in the Gazette.]

REISSUES.

14,258. ANNUAL OR TERM PASS, FRANK, OR FORM HOLDER AND WRITING-FRAME. ERNEST L. SMITH, Salt Lake City, Utah. Filed Dec. 7, 1916. Serial No. 135,698. Original No. 1,198,590, dated Sept. 19, 1916, Serial No. 18,756, filed Apr. 2, 1915. (Cl. 11—19.)



1. A form holder comprising a flexible sheet having an opening therein with obliquely disposed longitudinally spaced form-receiving slits arranged thereabove and terminating at their ends in apertures, said slits being inclined forwardly and toward each other, the walls of said slits normally contacting to form gripping elements for a form to be supported thereby, the apertures at the ends of said slits being designed to facilitate the insertion of the form to be supported, the distance between the inner remote ends of said slits corresponding to the width of the form to be inserted and held therein.

2. The combination with a form to be supported, of a holder therefor comprising a flexible sheet of larger size than said form and having an opening therein of greater width than the width of the form to be supported, said sheet having longitudinally spaced obliquely disposed form-receiving slits arranged above the opening therein and converging toward the adjacent edge of said

sheet, the walls of said slits normally contacting to form gripping elements for said form, said slits being spaced from the lower edge of said opening a distance greater than the width of said form, whereby when the form is engaged with the holder, a space is provided between its lower edge and the lower edge of the opening in the holder to provide a writing space below the form, said holder having indicia disposed thereon outside the opening therein forming guides for the matter to be written on the form and on a blank disposed below the opening in said holder.

14,259. SKATE. WILLIAM CONRON, Danville, Ill., assignor to Conron-McNeal Company, of Kokomo, a Corporation of Indiana. Filed Nov. 15, 1916. Serial No. 131,391. Original No. 1,054,508, dated Feb. 25, 1913, Serial No. 688,974, filed Apr. 6, 1912. (Cl. 46—50.)



1. A skate comprising a runner, a foot rest thereon, and means for slidingly adjustably securing the foot rest to the runner at various positions lengthwise of the latter, including a lateral enlargement at the upper edge of the runner and clamping means carried by the foot rest and adapted to engage around the upper edge of the runner and beneath said enlargement.

2. A skate comprising a runner, a foot rest thereon, and means for slidingly adjustably securing the foot rest to the runner at various positions lengthwise of the latter, including lateral enlargements extending a substantial distance along the upper edges of the runner at opposite sides thereof, and clamping means carried by the rest and adapted to engage around the upper edge of the runner and beneath said enlargements.

3. A skate comprising a runner, heel and sole plates, entirely disconnected from each other, and one at least of which has a slidable adjustable connection with the runner.

4. A skate comprising a recessed runner, heel and soleplates, and a support for one of said plates provided with inwardly-projecting, elongated cleats fitted to the recess in the runner, and means for tightening up and clamping these cleats in the recess whereby the support may be adjusted along the runner and secured in its adjusted position.

5. A skate comprising a recessed runner, heel and soleplates entirely disconnected from each other, one of which is adjustable, and a support for said adjustable plate comprising two members having elongated shoulders thereon and provided with flanges which rest upon and embrace from opposite sides the upper edge of the runner, and provided with elongated portions which have inwardly extending cleats adapted to enter the recessed portion of the runner from opposite sides, and means for clamping said members securely to the runner.

6. A skate comprising a runner, clamps embracing a portion of the latter from opposite sides and having adjustable sliding clamped connection with a portion of the runner, and a plate supported by the clamps.

DESIGNS.

50,288. HANDLE FOR A SPOON OR ANALOGOUS UTENSIL. GROSVENOR N. ALLEN, Oneida, N. Y. Filed Nov. 11, 1916. Serial No. 130,911. Term of patent 7 years.



The ornamental design for a handle for a spoon or analogous utensil as shown.

50,289. BADGE OR INSIGNIA. JOSEPH T. BAILEY, Philadelphia, Pa. Filed Dec. 22, 1916. Serial No. 138,507. Term of patent 14 years.



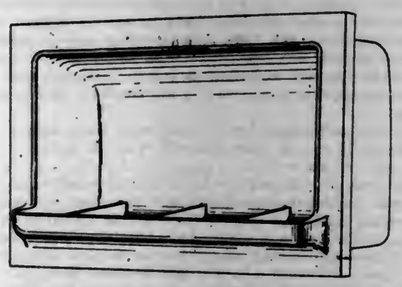
The ornamental design for a badge or insignia, as shown.

50,290. BADGE OR INSIGNIA. JOSEPH T. BAILEY, Philadelphia, Pa. Filed Dec. 22, 1916. Serial No. 138,508. Term of patent 14 years.



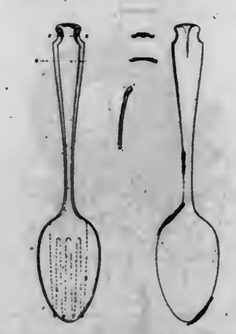
The ornamental design for a badge or insignia as shown.

50,291. WALL-RECEPTACLE FOR SOAP AND OTHER TOILET ARTICLES. STEPHEN D. BAKER, New York, N. Y. Filed Nov. 25, 1916. Serial No. 133,500. Term of patent 14 years.



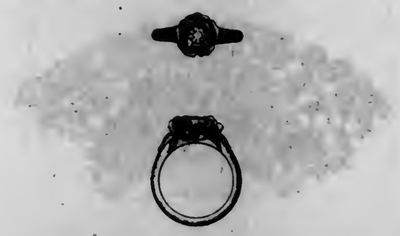
The ornamental design for a wall receptacle for soap and other toilet articles, substantially as shown.

50,292. HANDLE FOR A SPOON, FORK, OR SIMILAR ARTICLE. GEORGE E. BALL, Stratford, Conn., assignor to Whiting Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Dec. 6, 1916. Serial No. 135,499. Term of patent 14 years.



The ornamental design for a handle for a spoon, fork or similar article, as shown.

50,293. RING. CHARLES A. BICKFORD, Chicago, Ill. Filed Oct. 11, 1916. Serial No. 125,124. Term of patent 3½ years.



The ornamental design for a ring as shown.

50,294. DOLL. ALICE CASSIDY, Hubbard, Oreg. Filed Mar. 7, 1916. Serial No. 82,747. Term of patent 3½ years.



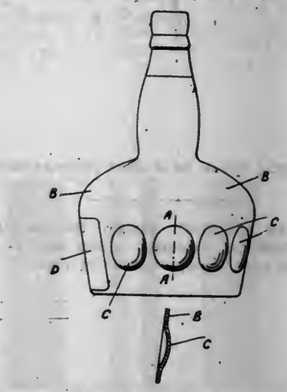
The ornamental design for a doll, as shown.

50,295. METALLIC BARREL. JOHN W. DARLEY, Jr., Baltimore, Md., assignor to The Universal Steel Package Co., a Corporation of Delaware. Filed Oct. 21, 1915. Serial No. 57,200. Term of patent 14 years.



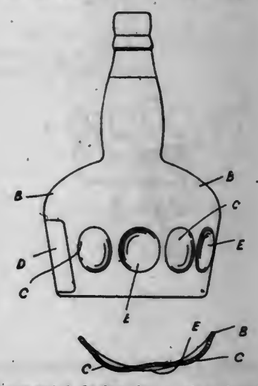
The ornamental design for a metallic barrel as shown.

50,296. GLASS BOTTLE. RUPERT GEORGE DAWSON, Overdale, Dunblane, Scotland. Filed Nov. 11, 1915. Serial No. 60,984. Term of patent 3½ years.



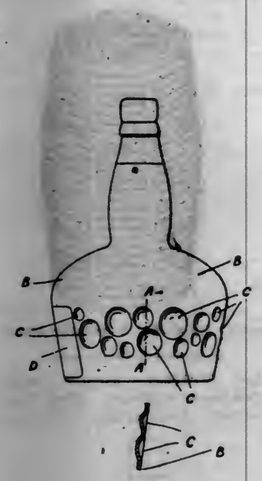
The ornamental design for a glass bottle as shown.

50,297. GLASS BOTTLE. RUPERT GEORGE DAWSON, Overdale, Dunblane, Scotland. Filed Nov. 11, 1915. Serial No. 60,985. Term of patent 3½ years.



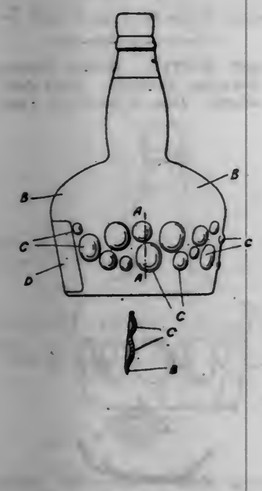
The ornamental design for a glass bottle as shown.

50,298. GLASS BOTTLE. RUPERT GEORGE DAWSON, Overdale, Dunblane, Scotland. Filed Nov. 11, 1915. Serial No. 60,986. Term of patent 3½ years.



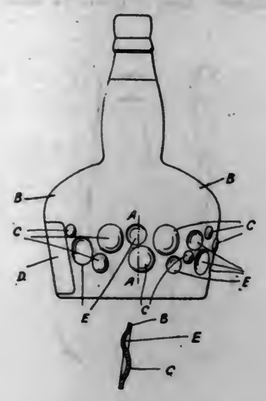
The ornamental design for a glass bottle as shown.

50,299. GLASS BOTTLE. RUPERT GEORGE DAWSON, Overdale, Dunblane, Scotland. Filed Nov. 11, 1915. Serial No. 60,987. Term of patent 3½ years.



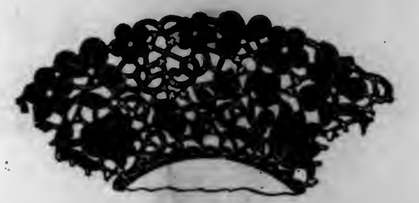
The ornamental design for a glass bottle as shown.

50,300. GLASS BOTTLE. RUPERT GEORGE DAWSON, Overdale, Dunblane, Scotland. Filed Nov. 15, 1915. Serial No. 61,722. Term of patent 3½ years.



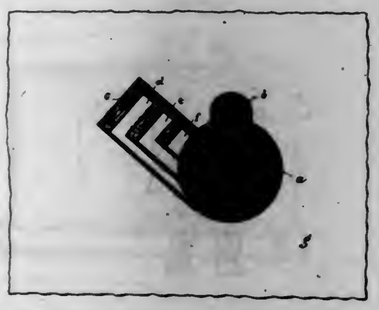
The ornamental design for a glass bottle as shown.

50,301. LACE PAPER. CHARLES W. HAMILTON, Milwaukee, Wis. Filed Nov. 9, 1916. Serial No. 130,485. Term of patent 14 years.



The ornamental design for lace paper, as shown.

50,302. TEXTILE FABRIC. EUGENE IRVING HANSON, New Rochelle, N. Y., assignor to H. R. Mallinson & Co., New York, N. Y., a Firm composed of Hiram Royal Mallinson and E. Irving Hanson. Filed Sept. 23, 1916. Serial No. 121,884. Term of patent 3½ years.



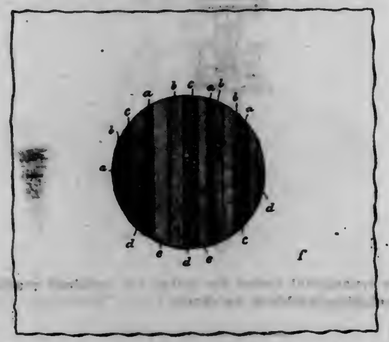
The design for a textile fabric as shown and described.

50,303. TEXTILE FABRIC. EUGENE IRVING HANSON, New Rochelle, N. Y., assignor to H. R. Mallinson & Co., New York, N. Y., a Firm composed of Hiram Royal Mallinson and E. Irving Hanson. Filed Sept. 23, 1916. Serial No. 121,885. Term of patent 3½ years.



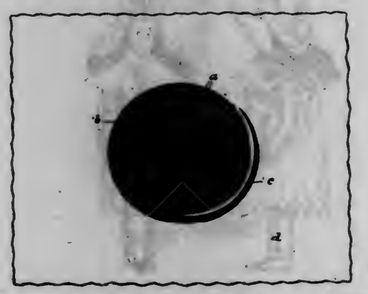
The design for a textile fabric as shown and described.

50,304. TEXTILE FABRIC. EUGENE IRVING HANSON, New Rochelle, N. Y., assignor to H. R. Mallinson & Co., New York, N. Y., a Firm composed of Hiram Royal Mallinson and E. Irving Hanson. Filed Sept. 23, 1916. Serial No. 121,886. Term of patent 3½ years.



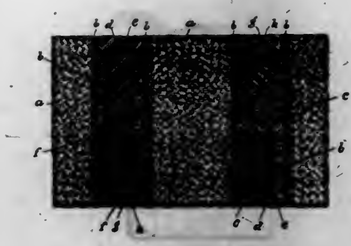
The design for a textile fabric as shown and described.

50,305. TEXTILE FABRIC. EUGENE IRVING HANSON, New Rochelle, N. Y., assignor to H. R. Mallinson & Co., New York, N. Y., a Firm composed of Hiram Royal Mallinson and E. Irving Hanson. Filed Sept. 23, 1916. Serial No. 121,887. Term of patent 3½ years.



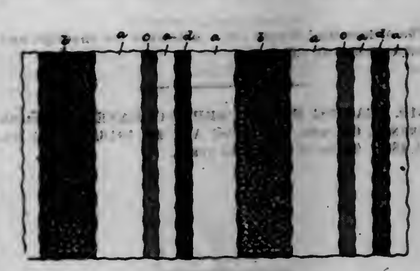
The design for a textile fabric as shown and described.

50,306. TEXTILE FABRIC. EUGENE IRVING HANSON, New Rochelle, N. Y., assignor to H. R. Mallinson & Co., New York, N. Y., a Firm composed of Hiram Royal Mallinson and E. Irving Hanson. Filed Sept. 23, 1916. Serial No. 121,888. Term of patent 3½ years.



The design for a textile fabric as shown and described.

50,307. TEXTILE FABRIC. EUGENE IRVING HANSON, New Rochelle, N. Y., assignor to H. R. Mallinson & Co., New York, N. Y., a Firm composed of Hiram Royal Mallinson and E. Irving Hanson. Filed Sept. 23, 1916. Serial No. 121,889. Term of patent 3½ years.



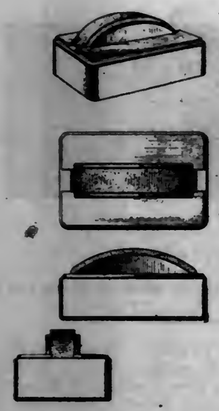
The design for a textile fabric as shown and described.

50,308. BROOM ATTACHMENT. IDA M. JENKINS, Prineville, Oreg. Filed Oct. 6, 1916. Serial No. 124,195. Term of patent 14 years.



The ornamental design for a broom attachment, as shown.

50,309. MOISTENER FOR ENVELOPS AND OTHER ARTICLES. CHARLES F. KIMPTON, Brooklyn, N. Y., assignor to Ruth H. Kimpton, Brooklyn, N. Y. Filed Nov. 6, 1916. Serial No. 129,896. Term of patent 7 years.



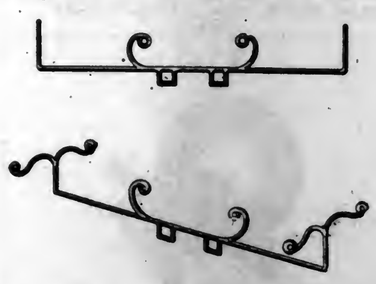
The ornamental design for a moistener for envelops and other articles, as shown.

50,310. CASING FOR A CARPET-CLEANER. EDWARD KRANTZ, Chicago, Ill. Filed Apr. 15, 1916. Serial No. 91,488. Term of patent 3½ years.



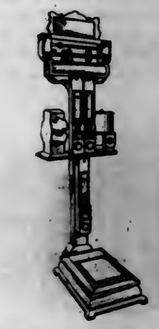
The ornamental design for a casing for a carpet cleaner substantially as shown.

50,311. REGISTER-CORD HANGER. FREDERICK T. LAWTON, North Easton, Mass. Filed Nov. 1, 1916. Serial No. 129,024. Term of patent 14 years.



The ornamental design for a register cord hanger, as shown.

50,312. CASING FOR COMBINED VENDING AND WEIGHING MACHINES. CHARLES E. MCADOW, Jersey City, N. J. Filed Nov. 14, 1916. Serial No. 131,350. Term of patent 7 years.



The ornamental design for casing for combined vending and weighing machines, as shown.

50,313. DOLL. MARY E. D. MCCONNELL, New York, N. Y. Filed Dec. 16, 1916. Serial No. 137,464. Term of patent 7 years.



The ornamental design for a doll, as shown.

50,314. GIRL DOLL. AMELIA MORSE, New York, N. Y. Filed Nov. 22, 1916. Serial No. 132,911. Term of patent 7 years.



The ornamental design for a girl doll, as shown.

50,315. BOY DOLL. AMELIA MORSE, New York, N. Y. Filed Nov. 22, 1916. Serial No. 132,912. Term of patent 7 years.



The ornamental design for a boy doll, as shown.

50,316. FIGURE TOY. AMELIA MORSE, New York, N. Y. Filed Dec. 5, 1916. Serial No. 135,275. Term of patent 7 years.



The ornamental design for a figure toy, as shown.

50,317. FIGURE TOY. AMELIA MORSE, New York, N. Y. Filed Dec. 5, 1916. Serial No. 135,276. Term of patent 7 years.



The ornamental design for a figure toy, as shown.

50,318. FIGURE TOY. AMELIA MORSE, New York, N. Y. Filed Dec. 5, 1916. Serial No. 135,277. Term of patent 7 years.



The ornamental design for a figure toy, as shown.

50,319. FIGURE TOY. AMELIA MORSE, New York, N. Y. Filed Dec. 9, 1916. Serial No. 136,104. Term of patent 7 years.



The ornamental design for a figure toy, as shown.

50,320. FIGURE TOY. AMELIA MORSE, New York, N. Y. Filed Dec. 9, 1916. Serial No. 136,105. Term of patent 7 years.



The ornamental design for a figure toy as shown.

50,321. SPOON, FORK, AND THE LIKE. HARRY B. O'BRIEN, Sag Harbor, N. Y., assignor to Joseph Fahys & Company, New York, N. Y., a Corporation of New York. Filed Nov. 18, 1916. Serial No. 132,224. Term of patent 7 years.



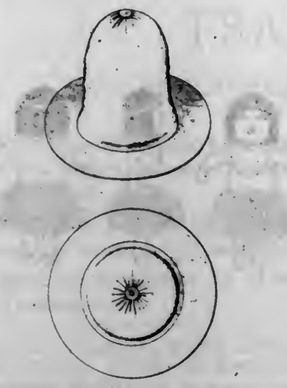
The ornamental design for a spoon, fork and the like, as shown.

50,322. BATHING-CAP. HENRY F. SAMSTAG, New York, N. Y. Filed Dec. 6, 1916. Serial No. 135,490. Term of patent 3½ years.



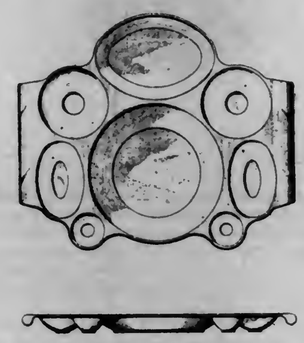
The ornamental design for a bathing cap as shown.

50,323. BATHING-CAP. HENRY F. SAMSTAG, New York, N. Y. Filed Dec. 6, 1916. Serial No. 135,491. Term of patent 3½ years.



The ornamental design for a bathing cap as shown.

50,324. PLATE. GEORGE L. SCHUPP, Dennison, Ohio. Filed Dec. 12, 1916. Serial No. 136,574. Term of patent 14 years.



The ornamental design for a plate as shown.

50,325. EMBROIDERED LACE. HENRY SCHWARBER, Weehawken, N. J., assignor to Inflexible Co., West New York, N. J. Filed Nov. 16, 1916. Serial No. 131,803. Term of patent 3½ years.



The ornamental design for embroidered lace substantially as shown.

50,326. EMBROIDERED LACE. HENRY SCHWARBER, Weehawken, N. J., assignor to Inflexible Co., West New York, N. J. Filed Nov. 16, 1916. Serial No. 131,804. Term of patent 3½ years.



The ornamental design for embroidered lace substantially as shown.

50,327. BANK. JAMES J. STIVERS, New York, N. Y. Filed Aug. 7, 1916. Serial No. 113,670. Term of patent 7 years.



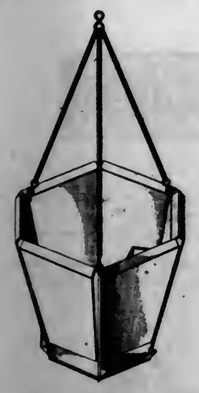
The ornamental design for a bank, as shown.

50,328. CABINET. MERTON WALRATH, Little Falls, N. Y. Filed Oct. 20, 1916. Serial No. 126,803. Term of patent 14 years.



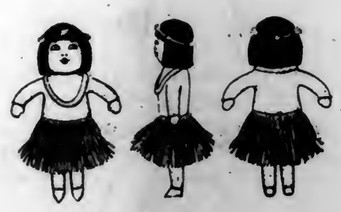
The ornamental design for a cabinet, as shown.

50,329. HANGING VASE. SAMUEL T. WHITE, Davenport, Iowa. Filed Aug. 19. 1916. Serial No. 115,906. Term of patent 7 years.



The ornamental design for a hanging vase, as shown.

50,330. HAWAIIAN DOLL. ELIZABETH EUNICE MERRILL, Los Angeles, Cal. Filed Dec. 18, 1916. Serial No. 137,728. Term of patent 7 years.



The ornamental design for a Hawaiian doll as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 13, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 81,229. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MCCLELLAND WARD CO., Decatur, Ill. Filed Sept. 12, 1914.



Particular description of goods.—Coffee, Flavoring Extracts for Foods, Spices, Canned Fruits and Vegetables, Canned Fish, Cereal Breakfast Foods, Jellies, Jams, Fruit Preserves, Apple-Butter, Olive-Oil, Pickles, Catsup, Canned Dried Beef, and Vinegar.

Claims use since May 1, 1914.

Ser. No. 82,107. (CLASS 39. CLOTHING.) UNION SPECIAL MACHINE COMPANY, Chicago, Ill. Filed Oct. 23, 1914.



Particular description of goods.—Underwear and Sweaters.

Claims use since about Sept. 15, 1914.

Ser. No. 88,464. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JEAN I. LEIST, Brooklyn, N. Y. Filed Aug. 6, 1915.



The trade-mark consists of the fanciful shield or design shown in the accompanying drawing.

Particular description of goods.—A Shoe-Dressing.

Claims use since June 2, 1915.

Ser. No. 90,791. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) GAS APPLIANCE COMPANY, INC., Philadelphia, Pa. Filed Nov. 20, 1915.



Particular description of goods.—Heating Apparatus for Household Water-Heaters, for Japanning and Baking Ovens, for Lead-Hardening Pots, for Linotype-Machines, for Monotype-Machines, for Muffle-Furnaces, for Glass-Leers, and for Melting-Furnaces, All of Which Derive Their Heat from Gas, Oil, or Vapor Which Flows Through Pipes to the Burner or Furnace of the Said Several Apparatus Stated.

Claims use since Nov. 13, 1915.

Ser. No. 91,193. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ACME PACKING CO., Chicago, Ill. Filed Dec. 6, 1915.

Red Crown

Particular description of goods.—Canned Meats, Sausage, and Meat Products—Namely, Sliced Meats, Veal Loaf, Hash, Meat Products with Cereal, Chilli-Con-Carne, Deviled Meats, Corned Beef, Roasted Meats, Tongue, Sausage, Mince-Meat, and Tripe.
Claims use since Jan. 20, 1915.

Ser. No. 91,366. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAROLD P. CURTIS, San Jose, Cal. Filed Dec. 10, 1915.

TREE TO-THEE

Particular description of goods.—Fruit—Namely, Dried Fruits Such as Prunes.
Claims use since prior to Oct. 12, 1914.

Ser. No. 91,768. (CLASS 37. PAPER AND STATIONERY.) DAVID HYAMS, New York, N. Y. Filed Dec. 27, 1915.

WUNDRGRAPH

Particular description of goods.—Duplicators—Namely, an Apparatus for Producing Facsimiles of Manuscripts, Type-Writing, and the Like.
Claims use since Nov. 15, 1915.

Ser. No. 92,443. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. F. HATHAWAY & SONS, Cambridge, Mass. Filed Jan. 27, 1916.



No claim being made to the words "Vitamine" or "Bread" apart from the mark shown in the drawing.
Particular description of goods.—Bread.
Claims use since Dec. 11, 1915.

Ser. No. 92,903. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) TRIANGLE FILM CORPORATION, Richmond, Va., and New York, N. Y. Filed Feb. 16, 1916.



Particular description of goods.—Motion-Picture Films.
Claims use since Nov. 1, 1915.

Ser. No. 93,087. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE WALLACE MAXWELL CO., Seattle, Wash. Filed Feb. 24, 1916.

KLEEKLEEN

Said trade-mark consists of the word "KleeKleen," which word in the trade-mark as used and as shown in the accompanying drawing is arranged about an arc of a circle with the vertical portions of the letters in substantially radial positions.
Particular description of goods.—A Cleansing Compound. This Cleansing Compound is a Detergent Paste and is Used for Cleaning Any and All Articles and Surfaces upon Which Such Goods are Usually Employed, Including Therein Cleaning Hands and as a Laundry-Bleach.
Claims use since Feb. 11, 1916.

Ser. No. 93,143. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) BENJAMIN F. KLEIN, Cleveland, Ohio. Filed Feb. 28, 1916.

KAYLINE

Particular description of goods.—Electric-Lighting Fixtures and Parts for Said Lighting-Fixtures Consisting of Shower-Pans, Canopies, Socket-Covers, Bracket-Backs, Arms, Hangers, Chains, Bobeches, Switches, Crowfoots.
Claims use since Oct. 25, 1915.

Ser. No. 93,624. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BAIN PEANUT CO. INC., Wakefield, Va. Filed Mar. 18, 1916.

SUPERB

Particular description of goods.—Peanuts.
Claims use since 1897.

Ser. No. 94,449. (CLASS 33. GLASSWARE.) THE LEGALITE CORPORATION, Boston, Mass. Filed Apr. 15, 1916.

LEGALITE

Particular description of goods.—Lenses for Headlights.
Claims use since Dec. 14, 1915.

Ser. No. 94,515. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) SCHMELZER ARMS CO., Kansas City, Mo. Filed Apr. 18, 1916. Under ten-year proviso.



Particular description of goods.—Fishing-Reels, Fishing-Rods, Creels, Fishing-Hooks, Fishing-Nets, Swimming-Belts, Targets, Decoys, Traps, Shell-Bags, Game-Carriers, Hammocks, Basket-Balls, Volley-Balls, Base-Balls, Indoor Base-Balls, Base-Ball Chest-Protectors, Bats, Base-Ball Gloves and Mitts, Hand-Balls, Tennis-Balls, Foot-Balls, Golf-Balls, Golf-Clubs, Tees, Markers, Gold-Bags, Throwing-Hammers, Discus, Putting-Shot, Vaulting-Standards, Wrestling-Mats, Boxing-Gloves, Striking-Bags, Foils, Masks, Indian Clubs, Elastic Exercisers, Calisthenic Wands, Parallel Bars, Horizontal Bars, Vaulting-Bars, Vaulting-Horses, Vaulting-Bucks, Jumping-Boards, Spring-Boards, Rowing-Machines, Suspended Rings, Climbing-Poles, Trapeze, Playground-Slides, Roller-Skates, Ice-Skates, Toy Wagons, Sleds, Toy Automobiles, Dolls, Doll-Trunks, Doll-Houses, Doll-Shoes, Toy Desk Sets, Toy Furniture, Toy Jewelry, Swings, Rocking-Horses, Toy Soldier Sets, Toy Locomotives and Cars, Toy Banks, Building-Blocks, Board and Card Games, Parlor Games, Trick Boxes and Devices, Toy Books, Painting-Books, Toy Paint Sets, Toy Musical Instruments, Toy Machinery, Masks, Toy Picture-Machines, and Toy Aeroplanes.
Claims use since the year 1891.

Ser. No. 94,560. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WEIDEMAN CO., Cleveland, Ohio. Filed Apr. 19, 1916.



Particular description of goods.—Canned Fruits, Canned Vegetables, Bread, Cakes, Coffee, Tea, Table-Syrup, Candies, Nuts, Cooking-Chocolate, Pickles, Fruit Preserves and Jellies.
Claims use since Apr. 1, 1915.

Ser. No. 95,395. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE INDIA-RUBBER GUTTA PERCHA & TELEGRAPH WORKS COMPANY LIMITED, London, England. Filed May 24, 1916.

SILVER KING

Particular description of goods.—Golf-Balls.
Claims use since February, 1910.

Ser. No. 95,569. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) WILCOX, CRITTENDEN & CO. INC., Middletown, Conn. Filed May 31, 1916.



Particular description of goods.—Marine Hardware—Namely, Anchor Cat-Hooks, Anchor-Davits, Anchor-Keys, Anchor Roll-Sheaves, Anchor-Shackles, Anchor Trip-Hooks, Anchor Warp-Leaders, Attachment Spray-Hood Rod, Autoboat-Steerers, Autocurtain-Fasteners, Awning-Cleats, Awning-Clips, Awning-Couplings, Babbitt Fair-Leaders; Balls, Topmast; Bands, Boom; Bands, Canoe, Stem and Stern; Bands, Gaff; Bands, Gooseneck; Bands, Mast; Bearings, Stern; Belaying-Pins, Bilge-Pumps; Two-Head; Blocks; Blocks, Brass Yacht; Blocks, Centerboard; Blocks, Cheek-Halyard; Blocks, Main-Sheet; Blocks on Plate, Boat-Cleats, Boat-Davits, Boat-Nails, Boat Snap-Hooks, Boat Tie-Chains, Bobstay-Shackles; Bonnet-Hooks, Cape Ann; Boom-Bands, Boom-Travelers, Bow-Chocks; Bow-Plates, Combination; Bow-Shackles, Bows, Braces; Rudder, Cape Cod; Braces, Rudder, Strap; Braces, Rudder, Screw; Bracket-Steerers, Bridge-Deck Steerers; Bridles, Yacht; Bull's-Eyes or Lizards; Bull's-Eyes, Floor; Buoy-Rods, Cabin-Door Hinges, Can-Hooks, Cargo-Hooks, Carpet-Knobs, Centerboard-Blocks, Centerboard-Rods, Centerboard-Windlass, Chain Deck-Pipes, Chain-Plates with Deadeye, Chain-Steerers; Chains, Boat-Tie; Chain-Mooring; Chains, Topsail-Sheet; Cheek Halyard-Blocks; Chimneys, Deck; Chocks, Bow; Chocks, Closed; Chocks, Combination; Chocks, Double Head; Chocks, Roller; Chocks, Skene; Chocks, Straight; Clasps, Mast; Cleats, Boat; Cleats, Davit; Cleats, Main-Sheet; Cleats, Ship and Navy; Cleats, Shoulder; Cleats, Transverse; Cleats, Wire-Stay; Clews, Heart; Clews, Link; Clews, Ring; Clews, Ship; Clews, Spectacle; Clips, Tiller-Rope; Combs and Knives, Tiller; Control-Cranks, Cuddy-Door Hinges, Curtain Fasteners, Curtain-Toggles, Davit-Cleats; Davits, Anchor and Boats; Deadeyes, Deck-Chimneys, Deck Halyard-Blocks, Deck-Hooks, Deck-Irons, Deck-Lights; Deck-Pipes, Chain

and Rope; Deck-Plates, Deck-Plugs, Deck and Ice-Box Ventilators, Drum-Steerers, Ereful-Whistle, Fair-Leaders, Fast-Hook; Fasteners, Curtain; Fids, Cringle and Hand; Floor Bull's-Eyes, Mast-Hoop; Gaff-Bands, Adjustable; Gaff-Topsail-Sheet Hooks, Glass Deck-Lights, Gooseneck-Bands, Rudder, Guides; Gypsy, Windlasses; Hand-Fids, Hand-Rails; Hanks, Jib; Heart-Clews; Hinges, Cuddy-Door; Hinges, Port; Hood-Ventilators; Hooks, Anchor Cat; Hooks, Deck; Hooks, Gaff-Topsail Sheet; Hooks, Jib Snap; Hooks, Mooring; Hooks, Pennant; Hoops, Mast; Hurdy-Gurdy, Ice-Box Ventilators, Improved Brass Deck-Light, Intake-Scoop Strainers, Deck; Irons, Jib-Boom Travelers, Jib-Hanks, Jib-Heads, Jib-Rings, Jib Snap-Hooks; Anchor-Warp; Chain-Leaders, Fair; Leaders, Swivel; Leaders, Wheel-Rope; Lights, Deck; Lights, Glass Deck; Lights, Port; Lizards, Iron-Strapped; Lizards or Bull's-Eyes, Main-Sheet Cleats, Manhole-Plates, Marlinespikes; Marlinespikes, Sailmakers'; Marlinespikes, Wire Rope; Mast-Bands, Mast-Clasps, Mast-Hoop Forelocks, Mast-Hoops, Mast-Plates, Mast-Slides, Mast-Withes, Mooring-Chains, Mooring-Hooks, Oar-Locks, Old-Style Folding Anchors, Parrel-Trucks, Pennant-Hooks; Pins, Belaying; Pins, Thole; Pipes, Chain and Rope Deck; Plates, Deck, Round and Square; Plates, Deck, Keyless; Plates, Deck, for Ventilators; Plates, Lock-Deck; Plates, Manhole; Plates, Mast; Plates, Step; Plugs, Deck; Port-Hinges, Port-Lights; Posts, Stanchion; Pumps, Bilge; Quadrants, Skylight; Quadrants, Tiller; Rails, Hand; Rail Ends; Raisers, Skylight; Ridge-Pole Bands; Riding-Bitts, Two-Head; Rigger-Screws; Rings, Jib; Tong; Rivets, Boat; Rollers, Trawl; Rope-Deck Pipes; Rowlocks, Acme; Rowlocks, Adirondack; Rowlocks, Blackburn; Rowlocks, Boston Patent; Rowlocks, Columbian; Rowlocks, Connecticut River; Rowlocks, Davis; Rowlocks, Gillingskiff; Rowlocks, Light Socket; Rowlocks, Milwaukee; Rowlocks, North River; Rowlocks, Outrigger; Rowlocks, Patent Swivel; Rowlocks, Patent Swivel; Rowlocks, Pin and Fancy Plate; Rowlocks, Pin and Side Plate; Rowlocks, Pin and Socket Plate; Rowlocks, Ribbed; Rowlocks, Round; Rowlocks, Sealing; Rowlocks, Seine-Boat; Rowlocks, Self-Adjusting; Rowlocks, Side Plate; Rowlocks, St. Lawrence; Rowlocks, Vancouver; Rowlocks, Victoria; Rudder-Braces, Cape Cod; Rudder-Braces, Screw; Rudder Gudgeons, Rudder-Yokes, Rudders, Scroll Ends; Shackles, Anchor; Shackles, Bobstay; Shackles, Bow; Sheaves, Anchor-Roll; Wire Rope, Sheet-Chains, Ship-Cleats, Ship-Clews, Ship-Spikes, Side Lights; Skags, Rudder; Skene-Chocks, Skylight-Hinges, Skylight-Quadrants, Skylight-Raisers; Slides, Mast; Spray-Hood Attachment, Spray-Hood Socket, Steamboat-Wheels, Steering-Levers, Steering-Wheels, Stem and Stern Bands, Stern-Bearings, Sticking-Tommies, Stockless Anchors, Strap Rudder-Braces; Thimbles, Brass Sail; Thimbles, Sail; Tiller-Rope Guides, Tiller-Rope Leaders, Tiller-Quadrants, Topmast-Balls, Topmast-Trucks, Trawl-Anchors, Trawl-Buoy Swivels, Trawl-Rollers, Trawl-Splicers; Trip-Hooks, Anchor; Under-Water Exhausts, Ventilator-Deck Plates; Ventilators, Hood; Ventilators, Ice-Box; Warp-Leaders, Anchor; Wheels, Steering; Withes, Mast; Yacht-Blocks; Yokes, Rudder; Hood-Ventilators, Improved Round Brass Deck-Light, Locked Deck-Plate.

Claims use since Apr. 1, 1911.

Ser. No. 95,707. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LANGE CANNING CO., Eau Claire, Wis. Filed June 8, 1916.

TRUAX

Particular description of goods.—Canned Vegetables and Sauer-Kraut.

Claims use since July 11, 1891.

Ser. No. 95,815. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUDOLF ELSINGER, Cincinnati, Ohio, assignor to Mothers Macaroni Company, Minneapolis, Minn., a Corporation. Filed June 12, 1916.

MOTHER'S

Particular description of goods.—Noodles.

Claims use since about Oct. 1, 1896.

Ser. No. 95,928. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE APEX ELECTRICAL MANUFACTURING COMPANY, Cleveland, Ohio. Filed June 17, 1916.



Particular description of goods.—Electric Suction-Cleaners.

Claims use since Oct. 30, 1915.

Ser. No. 95,984. (CLASS 39. CLOTHING.) LEON THOMAS, Paris, France. Filed June 19, 1916.

"Augthos"

Particular description of goods.—Corsets, Corset-Girdles, and Corset-Covers of Both Knitted and Textile Materials.

Claims use since Mar. 22, 1908.

Ser. No. 96,201. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRAZAR & COMPANY, New York, N. Y. Filed June 28, 1916.



Particular description of goods.—Manganese Salts.

Claims use since on or about Jan. 1, 1916.

Ser. No. 96,591. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MCKESSON & ROBBINS, New York, N. Y. Filed July 15, 1916.

Aluria

Particular description of goods.—Perfumery, Talcum Powder, and Sachets, Sachet-Powders.

Claims use since Apr. 5, 1915.

Ser. No. 97,616. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) EDGAR A. CONROY, Wilkes-Barre, Pa., assignor to Perma-Loc Manufacturing Company. Filed Aug. 25, 1916.

PERMA-LOC

Particular description of goods.—Non-Adhesive Patches for the Inner Tubes of Automobile-Tires.

Claims use since Apr. 1, 1916.

Ser. No. 97,834. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) F. R. BLAIR & CO., INC., New York, N. Y. Filed Sept. 7, 1916.

FLEXITE

Particular description of goods.—Flexible Rubber and Composition Disks for Use as a Universal-Joint Member.

Claims use since Aug. 14, 1916.

Ser. No. 97,893. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BENTLEY & TWOHEY SILK CO., New York, N. Y. Filed Sept. 11, 1916.

"Crepe Margrette"

No claim being made to the exclusive use of the word "Crepe."

Particular description of goods.—Silk Piece Goods.

Claims use since June 16, 1916.

Ser. No. 98,081. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE ELECTRO METAL PRODUCTS CO., Cleveland, Ohio. Filed Sept. 19, 1916.

Canadium

Particular description of goods.—A Precious-Metal Alloy.

Claims use since Apr. 1, 1916.

Ser. No. 98,159. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BRIDGE & SOUTER CO. INC., Canastota, N. Y. Filed Sept. 22, 1916.

SKY-HIGH



Particular description of goods.—Domestic Onions, in Their Natural State, without Tops.

Claims use since Sept. 10, 1916.

Ser. No. 98,354. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) L. FRANK & SON CO., Milwaukee, Wis. Filed Oct. 2, 1916.

National

Particular description of goods.—Canned Beef, Canned Pork, Canned Lamb, Canned Veal, Canned Fowl and Poultry, and a Combination of Any Two or More of the Same.

Claims use since Sept. 27, 1916.

Ser. No. 98,356. (CLASS 17. TOBACCO PRODUCTS.) WILLIAM F. HEILIGER, San Francisco, Cal. Filed Oct. 2, 1916.

Recall

Particular description of goods.—Cigars, Cigarettes, Pipe-Tobacco, Flake Cigarette-Tobacco, Chewing-Tobacco, Tobacco Cuttings.

Claims use on or about Sept. 18, 1911.

Ser. No. 98,382. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CELLULOID STARCH COMPANY, New York, N. Y., and New Haven, Conn. Filed Oct. 3, 1916.

MAID'S FAVORITE



The trade-mark comprising the representation of a housemaid outlined in blue, with a red and white striped skirt, on a red disk background inclosed in a thin white band surrounded by blue, no claim being made to the words "Maid's Favorite" apart from the picture shown in the drawing.

Particular description of goods.—Scouring-Powder.

Claims use since Sept. 19, 1916.

Ser. No. 98,711. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) WINFIELD C. WOOD, Minneapolis, Minn. Filed Oct. 16, 1916.



No claim is made to the pictorial representation of the automobile-wheel apart from the mark shown in the drawing.

Particular description of goods.—Non-Adhesive Patches for Repairing Inner Tubes and Tire-Casings and other Rubber Goods.

Claims use since May 1, 1915.

Ser. No. 98,712. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SHER-A-COCA COMPANY OF PITTSBURGH, Pittsburgh, Pa. Filed Oct. 16, 1916.



No claim is made to the word "Coca" apart from the mark shown in the drawing.

Particular description of goods.—A Soft Drink of a Pungent Refreshing Nature.

Claims use since May 19, 1915.

Ser. No. 98,791. (CLASS 12. CONSTRUCTION MATERIALS.) SCHUMACHER WALL BOARD COMPANY, Phoenix, Ariz., and Los Angeles, Cal. Filed Oct. 20, 1916.



No claim is made to the following matter: "Schumacher Wall Board Co." and "Los Angeles, Cal."

Particular description of goods.—Plaster-Board, Wall-Board, and Composition Board.

Claims use since Aug. 23, 1914.

Ser. No. 98,843. (CLASS 37. PAPER AND STATIONERY.) PAPER MILLS SPECIALTY CO., INC., Chicago, Ill. Filed Oct. 23, 1916.



Particular description of goods.—Toilet-Paper, Tissue-Paper, Paper Towels, Wax or Waxed Paper, Paper Napkins, and Paper Doilies.

Claims use since April, 1916.

Ser. No. 98,861. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MAGIC MIST, INCORPORATED, New York, N. Y. Filed Oct. 24, 1916.

MAGIC

Particular description of goods.—Atomizing-Dispensers for Liquid Oil for Polishing.

Claims use since Jan. 1, 1913.

Ser. No. 98,869. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ANHEUSER-BUSCH BREWING ASSOCIATION, St. Louis, Mo. Filed Oct. 25, 1916.



Particular description of goods.—A Non-Intoxicating Cereal Beverage.

Claims use since Apr. 25, 1916.

Ser. No. 98,874. (CLASS 39. CLOTHING.) MICHAEL COOPER, New York, N. Y. Filed Oct. 25, 1916.



No claim is made to the exclusive right to the word "Cooper's" apart from the mark shown in the drawing.

Particular description of goods.—Bath-Robes, House-Dresses, Kimonos, Negligées, and Bathing-Suits.

Claims use since the 1st of June, 1916.

Ser. No. 98,891. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE RELIABLE AUTO HEATER COMPANY, Cleveland, Ohio. Filed Oct. 25, 1916.



The lining appearing upon the drawing is merely used for the purpose of shading. No claim is made to the words "Auto Heater."

Particular description of goods.—Automobile-Heaters Utilizing the Exhaust from Explosion-Engines.

Claims use since Dec. 2, 1915.

Ser. No. 99,087. (CLASS 12. CONSTRUCTION MATERIALS.) THE HIGH GRADE MANUFACTURING COMPANY, Cleveland, Ohio. Filed Nov. 2, 1916.

GILSO

Particular description of goods.—A Cement or Composition Generally Applied as a Coating for Renewing Roofs and for the Protection of Surfaces Exposed to Weather Elements.

Claims use since Sept. 1, 1914.

Ser. No. 99,124. (CLASS 15. OILS AND GREASES.) W. D. KIBLER CO., Indianapolis, Ind. Filed Nov. 6, 1916.

Kibler's
All Round Oil



No claim being made to the words "Kibler's All Round Oil" apart from the mark shown in the drawing.

Particular description of goods.—Lubricating-Oil.

Claims use since Aug. 1, 1916.

Ser. No. 99,142. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ADDIS & EPPSTEIN, INC., New York, N. Y. Filed Nov. 7, 1916.



The trade-mark comprising the words "Eppis Good." No claim being made to the exclusive use of the word "Good" apart from the mark as shown in the drawing.

Particular description of goods.—Canned Fish.

Claims use since Oct. 1, 1916.

Ser. No. 99,183. (CLASS 38. PRINTS AND PUBLICATIONS.) AMERICAN FARMING PUBLISHING COMPANY, Chicago, Ill. Filed Nov. 9, 1916.

American Farming

Particular description of goods.—A Monthly Magazine.

Claims use since May, 1914.

Ser. No. 99,218. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) RICHMOND WATERPROOF PRODUCTS CO., Port Richmond, N. Y. Filed Nov. 10, 1916.

MONARCH



Particular description of goods.—Sweeping Compounds.

Claims use since March, 1916.

Ser. No. 99,255. (CLASS 38. PRINTS AND PUBLICATIONS.) THE RUDDER PUBLISHING CO., New York, N. Y. Filed Nov. 11, 1916.

THE RUDDER

Particular description of goods.—Magazines Issued Monthly.

Claims use since May 1, 1890.

Ser. No. 99,274. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) HOWE MANUFACTURING COMPANY, Chicago, Ill. Filed Nov. 13, 1916.

Searchlight

The lining shown in the drawing is intended to represent only shading. No claim is made to the exclusive use of the name "Howe" nor to the word "Searchlight" apart from their association or combination with the trade-mark shown in the accompanying drawing.

Particular description of goods.—Electric Lamps.

Claims use since on or about Apr. 15, 1916.

Ser. No. 99,333. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BURKE & JAMES, INC., Chicago, Ill. Filed Nov. 17, 1916.

FREDOL

Particular description of goods.—A Photographic Negative and Paper Developing Compound.

Claims use since Aug. 1, 1916.

Ser. No. 99,412. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LAUDERBACH-BARBER CO., Philipsburg, Pa. Filed Nov. 20, 1916.

GREAT WESTRN

Particular description of goods.—Wheat-Flour.

Claims use since 1904.

Ser. No. 99,460. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BEAU-SITE COMPANY, New York, N. Y. Filed Nov. 22, 1916.



No claim is made to the exclusive use of the words "Butter" and "The Better Butter" apart from the mark shown in the drawing.

Particular description of goods.—Butter.

Claims use since Oct. 6, 1916.

Ser. No. 99,471. (CLASS 48. MALT EXTRACTS AND LIQUORS.) POPEL-GILLER CO., Warsaw, Ill. Filed Nov. 22, 1916.



Particular description of goods.—A Non-Alcoholic Malt Beverage.

Claims use since April, 1916.

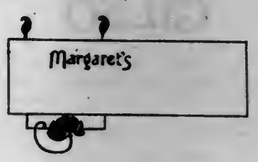
Ser. No. 99,508. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OKANOGAN GROWERS UNION, Okanogan, Wash. Filed Nov. 23, 1916.

Red Winner

Particular description of goods.—Fresh Apples in Boxes.

Claims use since June 15, 1916.

Ser. No. 99,537. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARGARET DYER, Collinsville, Conn. Filed Nov. 25, 1916.



Particular description of goods.—Cake, Potato Chips, Doughnuts, and Salted Nuts.

Claims use since October, 1912.

Ser. No. 99,594. (CLASS 17. TOBACCO PRODUCTS.) TESTA CIGAR CO., San Francisco, Cal. Filed Nov. 27, 1916.

El Cerrido

Particular description of goods.—Cigars, Cigarettes, and Smoking-Tobacco.

Claims use since Mar. 24, 1916.

Ser. No. 99,606. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RED RIVER MILLING CO., Fergus Falls, Minn. Filed Nov. 28, 1916.



Particular description of goods.—Wheat-Flour.

Claims use since on or about November, 1913.

Ser. No. 99,640. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) AMERICAN ADVERTISING ASSOCIATION, St. Louis, Mo. Filed Nov. 29, 1916.



No claim being made to the word "American Advertising Association" apart from the mark shown in the drawing.

Particular description of goods.—Electric Signs.

Claims use since Oct. 1, 1916.

Ser. No. 99,644. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA-PACIFIC FISHERIES, Portland, Oreg. Filed Dec. 1, 1916. Under ten-year proviso.

VICTOR

Particular description of goods.—Canned Salmon.

Claims use since the year 1890.

Ser. No. 99,660. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MURPHY OIL COMPANY, East Whittier, Cal. Filed Dec. 1, 1916.

PARAGON

Particular description of goods.—Oranges, Lemons, and Grape-Fruit.

Claims use since Sept. 1, 1916.

Ser. No. 99,675. (CLASS 17. TOBACCO PRODUCTS.) JOSEPH G. DILL, INC., Richmond, Va. Filed Dec. 2, 1916. Under ten-year proviso.

DILL'S

Particular description of goods.—Chewing-Tobacco in Plug and other Forms and Smoking-Tobacco.

Claims use since 1905 and before the corporation since 1848.

Ser. No. 99,704. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ENID MILLING COMPANY, Enid, Okla. Filed Dec. 4, 1916.

WIRTHMOR

Particular description of goods.—Wheat-Flour.

Claims use since Nov. 16, 1916.

Ser. No. 99,705. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ENID MILLING COMPANY, Enid, Okla. Filed Dec. 4, 1916.

MAJORITY

Particular description of goods.—Wheat-Flour.

Claims use since Nov. 16, 1916.

Ser. No. 99,721. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WADSWORTH, HOWLAND & CO., INCORPORATED, Boston, Mass. Filed Dec. 4, 1916.

DIXIE

Particular description of goods.—Colors in Oil, Colors in Japan, Varnishes, Pastes, and Ready-Mixed Paints, Stains, Paint-Oils, and Coatings in the Nature of Paints.
Claims use since Nov. 14, 1916.

Ser. No. 99,722. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WADSWORTH, HOWLAND & CO., INCORPORATED, Boston, Mass. Filed Dec. 4, 1916.

DIXIELITE

Particular description of goods.—Flat and Enamel Paints and Coatings in the Nature of Paints.
Claims use since Nov. 9, 1916.

Ser. No. 99,764. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL HARVESTER CORPORATION, Chicago, Ill. Filed Dec. 7, 1916.

INTERNATIONAL

Particular description of goods.—Fluid-Pressure Engines and Parts Thereof.
Claims use since June, 1916.

Ser. No. 99,790. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GRYPHON RUBBER AND TIRE CORPORATION, New York, N. Y. Filed Dec. 8, 1916.

GRYPHON

Particular description of goods.—Rubber Tires.
Claims use since Nov. 4, 1916.

Ser. No. 99,802. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BARLEY FOODS CO., Morgantown, W. Va. Filed Dec. 9, 1916.



Particular description of goods.—Specially-Prepared Barley.
Claims use since Oct. 1, 1914.

Ser. No. 99,804. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BARLEY FOODS CO., Morgantown, W. Va. Filed Dec. 9, 1916.

PRESCO

Particular description of goods.—Buckwheat-Flour.
Claims use since Nov. 4, 1915.

Ser. No. 99,805. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BARLEY FOODS CO., Morgantown, W. Va. Filed Dec. 9, 1916.



Particular description of goods.—Specially-Prepared Barley and Pearl-Barley.
Claims use since Mar. 15, 1911.

Ser. No. 99,817. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KAKARAKIS BROTHERS, Chicago, Ill. Filed Dec. 9, 1916.



No claim being made to the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—Olive-Oil.
Claims use since Oct. 25, 1916.

Ser. No. 99,818. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) M. D. KNOWLTON COMPANY, Rochester, N. Y. Filed Dec. 9, 1916.



Particular description of goods.—Machinery for Handling and Treating Paper and Fiber Board—Namely, Scoring, Cornering, Mitering, Sheeting, Slitting, Cutting, Bending, Staying, Ending, Creasing, Slotting, Folding, Covering, Trimming, Labeling, Gumming, Gluing, Tubing, Waterproofing, Coating, Rewinding, Skiving, Corrugating, and Forming Machines.
Claims use since as early as the year 1892.

Ser. No. 99,842. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) DAWSON SPRINGS COMPANY, INC., Portland, Me., and Dawson Springs, Ky. Filed Dec. 11, 1916.

Tollo Water

No claim being made to the words "Concentrated Water" and "Trade Mark" apart from the mark shown in the drawing.
Particular description of goods.—Mineral Water, Concentrated.
Claims use since Nov. 1, 1914.

Ser. No. 99,854. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) PHILIP S. MALICKSON, Philadelphia, Pa. Filed Dec. 11, 1916.

MALCO

Particular description of goods.—Rubber Pneumatic Automobile-Tires for Pleasure-Cars.
Claims use since Dec. 1, 1916.

Ser. No. 99,865. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) WILBUR & CANNON, Syracuse, N. Y. Filed Dec. 11, 1916.

WIL-CAN

Particular description of goods.—Carbonizing-Boxes.
Claims use since Oct. 1, 1915.

Ser. No. 99,881. (CLASS 39. CLOTHING.) LOUIS SPITZ, Paterson, N. J. Filed Dec. 12, 1916.

Militant

Particular description of goods.—Ladies' Leather Shoes.
Claims use since September, 1914.

Ser. No. 99,883. (CLASS 6. CHEMICALS, MEDICINES, and PHARMACEUTICAL PREPARATIONS.) HENRY THOMAS TOMPSITT, St. Kilda, near Melbourne, Victoria, Australia. Filed Dec. 12, 1916. Under ten-year proviso.



Particular description of goods.—An Insect-Destroying Powder.
Claims use since about the 20th day of November, 1881.

Ser. No. 99,890. (CLASS 37. PAPER AND STATIONERY.) THE GENERAL ECLIPSE COMPANY, Danielson, Conn. Filed Dec. 13, 1916.

ECLIPSE

Particular description of goods.—Ink-Wells.
Claims use since May 5, 1910.

Ser. No. 99,895. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. S. LAMEDIN, Peru, Kans. Filed Dec. 18, 1916.

I.G.O.

Particular description of goods.—An Ointment for Skin Eruptions.
Claims use since September, 1915.

Ser. No. 99,922. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE BEAVER COMPANY, Buffalo, N. Y. Filed Dec. 14, 1916.

Cabinette

Particular description of goods.—Folding and Combination Screens Made of Wood, Fiber, and Similar Materials.
Claims use since the 20th day of October, 1916.

Ser. No. 99,946. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) READE MANUFACTURING CO., Hoboken, N. J. Filed Dec. 14, 1916.

SALVAREX

Particular description of goods.—A Medicinal Salve for the Treatment of Burns, Scalds, Cuts, Bruises, Lameness, and Wounds.
Claims use since 1901.

Ser. No. 99,959. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HEZEL MILLING COMPANY, East St. Louis, Ill. Filed Dec. 15, 1916.



The picture being fanciful.
Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since July 15, 1911.

Ser. No. 99,960. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HEZEL MILLING COMPANY, East St. Louis, Ill. Filed Dec. 15, 1916.



Particular description of goods.—Wheat-Flour.
Claims use since Sept. 15, 1916.

Ser. No. 99,966. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 15, 1916.

DORIS

Particular description of goods.—Biscuit.
Claims use since as early as May 23, 1916.

Ser. No. 99,967. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 15, 1916.

NATIONAL BISCUIT COMPANY

Particular description of goods.—Biscuit, Bread, Sugar Wafers, and Candy.
Claims use since as early as Feb. 3, 1898.

Ser. No. 99,976. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN WADE & SONS, Memphis, Tenn. Filed Dec. 15, 1916.

OLD JACK



Particular description of goods.—Stock Foods.
Claims use since Feb. 22, 1916.

Ser. No. 99,997. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) H. BOKER & CO. INC., New York, N. Y. Filed Dec. 18, 1916.

RED SEAL

Particular description of goods.—Electric Lamps.
Claims use since about Oct. 1, 1916.

Ser. No. 100,008. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PETER HAUPT, New Athens, Ill. Filed Dec. 18, 1916.

Rose Buds

Particular description of goods.—Wheat-Flour.
Claims use since August, 1889.

Ser. No. 100,014. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo. Filed Dec. 18, 1916.

SYLVET

Consisting of the word "Sylvet."
Particular description of goods.—Cakes.
Claims use since about Nov. 1, 1916.

Ser. No. 100,024. (CLASS 37. PAPER AND STATIONERY.) RADBRIDGE COMPANY, INC., New York, N. Y. Filed Dec. 18, 1916.

Pirate Bridge

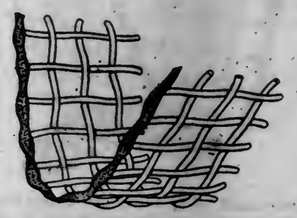
No claim being made to the word "Bridge."
Particular description of goods.—Score-Pads.
Claims use since the 8th day of December, 1916.

Ser. No. 100,043. (CLASS 38. PRINTS AND PUBLICATIONS.) MARKETS PUBLISHING CORPORATION, New York, N. Y. Filed Dec. 19, 1916.

MARKETS

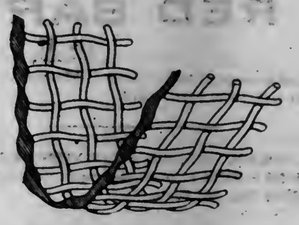
Comprising the word "Markets."
Particular description of goods.—A Weekly Publication.
Claims use since May 6, 1916.

Ser. No. 100,045. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) REYNOLDS WIRE CO., Dixon, Ill. Filed Dec. 19, 1916.



The trade-mark being a narrow wholly-yellow marginal stripe including the exposed surfaces of the longitudinal and transverse wires forming the selvage, extending onto both surfaces and around the edge of the fabric, the representation of a fabric not being claimed.
Particular description of goods.—Wire Screen-Cloth.
Claims use since December, 1915.

Ser. No. 100,046. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) REYNOLDS WIRE CO., Dixon, Ill. Filed Dec. 19, 1916.



The trade-mark being a narrow wholly-green marginal stripe including the exposed surfaces of the longitudinal and transverse wires forming the selvage, extending onto both surfaces and around the edge of the fabric, the representation of a fabric not being claimed.
Particular description of goods.—Wire Screen-Cloth.
Claims use since December, 1915.

Ser. No. 100,047. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) REYNOLDS WIRE CO., Dixon, Ill. Filed Dec. 19, 1916.



The trade-mark being a narrow wholly-white marginal stripe including the exposed surfaces of the longitudinal and transverse wires forming the selvage, extending onto both surfaces and around the edge of the fabric, the representation of a fabric not being claimed.

Particular description of goods.—Wire Screen-Cloth.
Claims use since December, 1915.

Ser. No. 100,048. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) REYNOLDS WIRE CO., Dixon, Ill. Filed Dec. 19, 1916.



The trade-mark being a narrow wholly-blue marginal stripe including the exposed surfaces of the longitudinal and transverse wires forming the selvage, extending onto both surfaces and around the edge of the fabric, the representation of a fabric not being claimed.

Particular description of goods.—Wire Screen-Cloth.
Claims use since December, 1915.

Ser. No. 100,057. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. S. HOFFMAN COMPANY, Chicago, Ill. Filed Dec. 20, 1916.

RED BAR

Particular description of goods.—Cheese.
Claims use since April, 1912.

Ser. No. 100,058. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. S. HOFFMAN COMPANY, Chicago, Ill. Filed Dec. 20, 1916.

TOMINI

Particular description of goods.—Cheese.
Claims use since April, 1912.

Ser. No. 100,059. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. S. HOFFMAN COMPANY, Chicago, Ill. Filed Dec. 20, 1916.

TUMA

Particular description of goods.—Cheese.
Claims use since April, 1912.

Ser. No. 100,074. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo. Filed Dec. 20, 1916.

BRAVO

Particular description of goods.—Roasted Coffee.
Claims use since about Nov. 28, 1916.

Ser. No. 100,076. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BUCKEYE COTTON OIL COMPANY, Cincinnati, Ohio. Filed Dec. 21, 1916.

Animo

Particular description of goods.—A Dairy, Stock, Cattle, and Farm-Animal Food.
Claims use since Dec. 15, 1916.

Ser. No. 100,101. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARPLE BROS., Philadelphia, Pa. Filed Dec. 22, 1916.

OLD COLONY

Particular description of goods.—Salted Nuts.
Claims use since about Oct. 30, 1916.

Ser. No. 100,102. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PRANGE MILLING COMPANY, New Douglas, Ill. Filed Dec. 22, 1916.

SURPLUS

Particular description of goods.—Wheat-Flour.
Claims use since Oct. 17, 1916.

Ser. No. 100,166. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HALE COMPANY, San Francisco, Cal. Filed Dec. 26, 1916.

HALCO

Particular description of goods.—Canned Crabs.
Claims use since August, 1912.

Ser. No. 100,167. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HALE COMPANY, San Francisco, Cal. Filed Dec. 26, 1916.

OCEAN CLIFF

Particular description of goods.—Canned Crabs.
Claims use since July 13, 1913.

Ser. No. 100,223. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) PACIFIC EXTRACT CO., Fresno, Cal. Filed Dec. 28, 1916.

Bravo!

Particular description of goods.—A Non-Alcoholic Carbonated Beverage Sold as a Soft Drink and Syrup for Making the Same.
Claims use since Dec. 20, 1916.

Ser. No. 100,269. (CLASS 88. PRINTS AND PUBLICATIONS.) J. ROSENBAUM GRAIN COMPANY, Chicago, Ill. Filed Dec. 30, 1916.

Rosenbaum Review

Particular description of goods.—A Weekly Periodical.
Claims use since Dec. 16, 1916.

Ser. No. 100,271. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUSSELL-MILLER MILLING CO., Minneapolis, Minn. Filed Dec. 30, 1916.

OCCIDENT

Particular description of goods.—Wheat Feed.
Claims use since Jan. 1, 1891.

Ser. No. 100,272. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUSSELL-MILLER MILLING CO., Minneapolis, Minn. Filed Dec. 30, 1916.

PRODUCER

Particular description of goods.—Wheat-Flour.
Claims use since the 21st day of August, 1908.

Ser. No. 100,273. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUSSELL-MILLER MILLING CO., Minneapolis, Minn. Filed Dec. 30, 1916.

SWEET LOAF

Particular description of goods.—Wheat-Flour.
Claims use since the 15th day of December, 1914.

Ser. No. 100,274. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUSSELL-MILLER MILLING CO., Minneapolis, Minn. Filed Dec. 30, 1916.

Valkyr

Particular description of goods.—Wheat-Flour.
Claims use since the 3d day of May, 1912.

Ser. No. 100,291. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRANT BROTHERS CO., Marion, Ind. Filed Jan. 2, 1917.

G·B

Particular description of goods.—Dressed Poultry.
Claims use since on or about the 1st of January, 1910.

Ser. No. 100,293. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAS. A. KRAUSE MILLING CO., Greenfield, Wis. Filed Jan. 2, 1917.

PUL-MOR

Particular description of goods.—Stock Feed Composed Wholly or Mainly of Grains and Seeds or Mixtures Thereof.
Claims use since about Sept. 15, 1916.

Ser. No. 100,295. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE LARABEE FLOUR MILLS CORPORATION, Hutchinson, Kans. Filed Jan. 2, 1917.

DON·Q

Particular description of goods.—Wheat-Flour.
Claims use since Nov. 7, 1916.

Ser. No. 100,298. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM R. MOORHOUSE, Pittsburgh, Pa. Filed Jan. 2, 1917.

WILLIAM PENN

Particular description of goods.—Coffee.
Claims use since Feb. 5, 1916.

Ser. No. 100,311. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. RAUH & SONS FERTILIZING COMPANY, Indianapolis, Ind. Filed Jan. 2, 1917.

ERAS CO

Particular description of goods.—A Stock and Poultry Food Comprising the Bones and Flesh of Animals, Cooked, Sterilized, and Compressed Into a Hard Dry Cake and Then Ground Fine for a Stock Food and Coarser for a Poultry Food.
Claims use since Nov. 1, 1916.

Ser. No. 100,312. (CLASS 42. KNITTED, NETTED AND TEXTILE FABRICS.) RICHMOND LACE WORKS, Alton, R. I. Filed Jan. 2, 1917.



The picture being fanciful. Applicant hereby declares that it makes no claim to any of the reading-matter on the drawing apart from the mark shown in the drawing.
Particular description of goods.—Lace.
Claims use since Dec. 14, 1916.

Ser. No. 100,314. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUSSELL-MILLER MILLING CO., Minneapolis, Minn. Filed Jan. 2, 1917.

VESPER

Particular description of goods.—Wheat-Flour.
Claims use since the 3d day of December, 1904.

Ser. No. 100,369. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GOWAN-LENNING-BROWN CO., Duluth, Minn. Filed Jan. 5, 1917.

REVELATION

Particular description of goods.—Coffee, Tea, Flavoring Extracts for Foods, Spices, and Rolled Oats.
Claims use since Dec. 27, 1916.

Ser. No. 100,395. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GOODELL & COMPANY, New York, N. Y. Filed Jan. 6, 1917.

DURATEX

Particular description of goods.—Handkerchiefs.
Claims use since Sept. 1, 1914.

Ser. No. 100,406. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SUSSMAN, WORMSER & CO., San Francisco, Cal. Filed Jan. 6, 1917.

18 KARAT

Particular description of goods.—Canned Peaches, Canned Pears, Canned Apricots, Canned Cherries, Canned Green Gage Plums, Canned Egg-Plums, Canned Salmon, Canned String-Beans, Canned Peas, Canned Corn, Canned Tomatoes, Canned Asparagus, Canned Pumpkin, Canned Rhubarb, Canned Squash, Canned Gooseberries, Canned Grapes, Canned Loganberries, Canned Raspberries, Canned Pineapple, Canned Apples, Canned Blackberries, Canned Blueberries, and Canned Tomato Purée.
Claims use since 1912.

Ser. No. 100,417. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ARTFILM STUDIOS, Cleveland, Ohio. Filed Jan. 8, 1917.

AFS

Particular description of goods.—Positive and Negative Picture-Films.
Claims use since Dec. 29, 1916.

Ser. No. 100,445. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) R. S. MUELLER & Co., Cleveland, Ohio. Filed Jan. 8, 1917.

UNIVERSAL

Particular description of goods.—Electrical Test-Clips.
Claims use since Feb. 19, 1910.

Ser. No. 100,454. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Jan. 8, 1917.

There Was a Time

Particular description of goods.—Newspaper-Sections.
Claims use since Oct. 30, 1916.

Ser. No. 100,455. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Jan. 8, 1917.

Let the Wedding Bells Ring Out

Particular description of goods.—Newspaper-Sections.
Claims use since Sept. 26, 1916.

Ser. No. 100,456. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Jan. 8, 1917.

An Embarrassing Moment

Particular description of goods.—Newspaper-Sections.
Claims use since Oct. 30, 1916.

Ser. No. 100,461. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me. Filed Jan. 8, 1917.

TuSoK

Particular description of goods.—Woolen Goods in the Piece.
Claims use since Nov. 3, 1916.

Ser. No. 100,462. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me. Filed Jan. 8, 1917.

W
BUK
L

Particular description of goods.—Woolen Goods in the Piece.
Claims use since Dec. 6, 1916.

Ser. No. 100,506. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE WEILAPHONE, INC., New York, N. Y. Filed Jan. 9, 1917.

The Weilaphone

Particular description of goods.—Devices for Telephones.
Claims use since July 20, 1916.

Ser. No. 100,525. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y. Filed Jan. 10, 1917.

PÉCO

Particular description of goods.—Velvets and Plushes in the Piece.
Claims use since about Nov. 15, 1916.

Ser. No. 100,588. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) LOUISE A. PAGE, Slaterville Springs, N. Y. Filed Jan. 13, 1917.

FLINTROCK

Particular description of goods.—Mineral Water.
Claims use since Dec. 26, 1916.

Ser. No. 100,619. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FEATHERSTON PRODUCTS COMPANY, Portland, Oreg. Filed Jan. 15, 1917.

40-60

Particular description of goods.—Loganberry Beverage.
Claims use since July 15, 1916.

Ser. No. 100,628. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NEUSS, HESSLEIN & Co., New York, N. Y. Filed Jan. 15, 1917.



Particular description of goods.—Woven Cotton Piece Goods.
Claims use since July, 1907.

Ser. No. 100,649. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) EFFICIENCY MOTOR-DEVICE CORPORATION, Omaha, Nebr. Filed Jan. 16, 1917.

EM-DE-CO

Particular description of goods.—Spark-Plugs.
Claims use since Dec. 1, 1916.

TRADE-MARK REGISTRATIONS GRANTED

FEBRUARY 13, 1917.

115,429. BEESWAX. AMERICAN SUGAR COMPANY, LTD., Honolulu and county of Maui, Territory of Hawaii.
Filed October 23, 1916. Serial No. 98,821. PUBLISHED DECEMBER 12, 1916.

115,430. COTTON PIECE GOODS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.
Filed November 6, 1916. Serial No. 99,110. PUBLISHED DECEMBER 12, 1916.

115,431. RUBBER BOOTS AND SHOES. THE BEACON FALLS RUBBER SHOE COMPANY, Beacon Falls, Conn.
Filed November 12, 1915. Serial No. 90,592. PUBLISHED DECEMBER 12, 1916.

115,432. BOOKS AND CIRCULARS. BENZIGER BROTHERS, New York, N. Y.
Filed June 30, 1916. Serial No. 96,245. PUBLISHED DECEMBER 5, 1916.

115,433. HAIR-OIL. WILLIAM BASS, Memphis, Tenn.
Filed September 13, 1916. Serial No. 97,968. PUBLISHED DECEMBER 12, 1916.

115,434. FACE-POWDER AND ROUGE. A. BOURJOIS & Co., INC., New York, N. Y.
Filed October 2, 1916. Serial No. 98,348. PUBLISHED DECEMBER 12, 1916.

115,435. FACE-POWDER AND ROUGE. A. BOURJOIS & Co., INC., New York, N. Y.
Filed October 18, 1916. Serial No. 98,744. PUBLISHED DECEMBER 12, 1916.

115,436. POWDERED LYE. BROOKMAN MANUFACTURING COMPANY, Chicago, Ill.
Filed October 16, 1916. Serial No. 98,679. PUBLISHED DECEMBER 12, 1916.

115,437. JACKETS AND VESTS. WM. W. BROWN, Worcester, Mass.
Filed August 31, 1916. Serial No. 97,726. PUBLISHED DECEMBER 12, 1916.

115,438. GINGHAMS. DELGADO MILLS, Wilmington, N. C.
Filed May 22, 1916. Serial No. 95,327. PUBLISHED DECEMBER 12, 1916.

115,439. WOOLEN GOODS IN THE PIECE. DETMER WOOLEN CO., New York, N. Y.
Filed March 31, 1916. Serial No. 94,008. PUBLISHED DECEMBER 12, 1916.

115,440. ARTIFICIAL FLOWERS, BRIDAL WREATHS, BOUQUETS, AND FLOWER TRIMMINGS. DORROS BROS., New York, N. Y.
Filed May 29, 1915. Serial No. 86,987. PUBLISHED DECEMBER 5, 1916.

115,441. WORK-SHIRTS, NEGLIGÉE SHIRTS, AND UNDERSHIRTS, OVERALLS, JUMPERS, AND ROMPERS. EDSON MOORE & COMPANY, Detroit, Mich.
Filed August 17, 1916. Serial No. 97,406. PUBLISHED DECEMBER 12, 1916.

115,442. HAIR-TONIC. THE EXTIRPO SPECIALTY CO., Barre, Vt.
Filed October 31, 1916. Serial No. 98,996. PUBLISHED DECEMBER 12, 1916.

115,443. COMPOUND MIXTURE OF FRUIT FORMING A PASTE HAVING LAXATIVE PROPERTIES. FRUITONE COMPANY, INC., New York, N. Y.
Filed October 25, 1916. Serial No. 98,877. PUBLISHED DECEMBER 12, 1916.

115,444. TABLETS FOR USE BY DENTISTS IN THE TREATMENT OF TEETH. JOSEPH A. GARDNER, Memphis, Tenn.
Filed October 14, 1916. Serial No. 98,650. PUBLISHED DECEMBER 12, 1916.

115,445. SUSPENDERS. THE GLUCKAUF COMPANY INC., New York, N. Y.
Filed October 17, 1916. Serial No. 98,729. PUBLISHED DECEMBER 5, 1916.

115,446. SUSPENDERS. THE GLUCKAUF COMPANY INC., New York, N. Y.
Filed October 17, 1916. Serial No. 98,730. PUBLISHED DECEMBER 5, 1916.

115,447. HAIR-TONIC. CHARLES GREEN, New York, N. Y.
Filed October 24, 1916. Serial No. 98,859. PUBLISHED DECEMBER 12, 1916.

115,448. BIBS AND COCKS OR FAUCETS. THE HAYDENVILLE COMPANY, Haydenville, Mass.
Filed November 3, 1916. Serial No. 99,063. PUBLISHED DECEMBER 5, 1916.

115,449. POMPONS. MAX HERMAN, New York, N. Y.
Filed October 25, 1916. Serial No. 98,882. PUBLISHED DECEMBER 5, 1916.

115,450. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. RICHARD HUDNUT, New York, N. Y.
Filed November 1, 1916. Serial No. 99,024. PUBLISHED DECEMBER 12, 1916.

115,451. MEN'S, YOUTHS', BOYS', AND CHILDREN'S OUTER SUITS AND OVERCOATS. H. KUHN & SONS (INC.), New York, N. Y., assignor to Ferdinand Kuhn & Co. Inc., New York, N. Y., a Corporation of New York.
Filed September 22, 1915. Serial No. 89,382. PUBLISHED DECEMBER 12, 1916.

115,452. LEATHER SHOES. LANGE & JANKE MFG. CO., Milwaukee, Wis.
Filed September 3, 1914. Serial No. 80,970. PUBLISHED DECEMBER 12, 1916.

115,453. TOOTH-CLEANING PREPARATIONS. ARTHUR A. LIBBY, Boston, Mass.
Filed August 23, 1916. Serial No. 97,582. PUBLISHED DECEMBER 12, 1916.

115,454. REMEDY FOR HEREDITARY AND ACQUIRED SYPHILIS AND ALL CONDITIONS ARISING FROM SAID DISEASE. WILLIAM BERNARD LINGO, Atlanta, Ga.
Filed May 24, 1916. Serial No. 95,401. PUBLISHED SEPTEMBER 5, 1916.

115,455. INTERNAL TREATMENT FOR ANY INFLAMED CONDITION OF THE THROAT OR MOUTH. HOWARD E. LONG, Cleveland, Ohio.
Filed October 31, 1916. Serial No. 99,010. PUBLISHED DECEMBER 12, 1916.

115,456. MEDICINES OR PREPARATIONS INTENDED AS REMEDIES FOR CERTAIN NAMED COMPLAINTS AND DISORDERS. THE DR. J. H. McLEAN MEDICINE CO., St. Louis, Mo.
Filed October 23, 1916. Serial No. 98,838. PUBLISHED DECEMBER 12, 1916.

115,457. REMEDY FOR CERTAIN NAMED AILMENTS AND ALL SKIN DISEASES. WILLIAM A. MINICK, Glasgow, Ky.
Filed October 24, 1916. Serial No. 98,863. PUBLISHED DECEMBER 12, 1916.

115,458. CHILL-TONIC. MOLO MEDICINE CO., Chattanooga, Tenn.
Filed November 1, 1916. Serial No. 99,029. PUBLISHED DECEMBER 12, 1916.

115,459. WATERPROOF CLOTHING. NEW YORK MACKINTOSH CLOTHING COMPANY, New York, N. Y.
Filed October 12, 1916. Serial No. 98,607. PUBLISHED DECEMBER 12, 1916.

115,460. REMEDY FOR RHEUMATISM. GEORGE NIKOLOW, New York, N. Y.
Filed October 25, 1916. Serial No. 98,887. PUBLISHED DECEMBER 12, 1916.

115,461. CANDY-CORN AND MARSHMALLOW-BISCUIT. ORIENTAL CANDY COMPANY, Chicago, Ill.
Filed March 27, 1915. Serial No. 85,487. PUBLISHED MAY 23, 1916.

115,462. COMPOUND FOR USE AS A LUBRICANT IN INTERNAL-COMBUSTION-ENGINE CYLINDERS AND AS A CARBON-FORMING PREVENTIVE. CHARLES E. PADEN, Denver, Colo.
Filed October 30, 1916. Serial No. 98,986. PUBLISHED DECEMBER 12, 1916.

115,463. TALCUM POWDER. ABE PLOUGH, Memphis, Tenn.
Filed February 15, 1916. Serial No. 92,875. PUBLISHED APRIL 11, 1916.

115,464. BREATH-TABLETS. THE REESE COMPANY, Chicago, Ill.
Filed October 26, 1916. Serial No. 98,912. PUBLISHED DECEMBER 12, 1916.

115,465. HEELS FOR SHOES. ROCHESTER HEEL COMPANY, Rochester, N. Y.
Filed July 21, 1916. Serial No. 96,732. PUBLISHED DECEMBER 12, 1916.

115,466. SCARFS FOR PERSONAL WEAR. A. S. ROSENTHAL COMPANY, New York, N. Y.
Filed September 26, 1916. Serial No. 98,286. PUBLISHED DECEMBER 12, 1916.

115,467. BABY OR INFANT SHOES MADE OF SOFT LEATHER OR CLOTH. THE SWAN SHOE COMPANY, Baltimore, Md.
Filed September 14, 1916. Serial No. 97,992. PUBLISHED DECEMBER 12, 1916.

115,468. EVAPORATED MILK. VALECIA EVAPORATED MILK COMPANY, Madison, Wis.
Filed October 27, 1916. Serial No. 98,934. PUBLISHED DECEMBER 5, 1916.

115,469. SNAP-FASTENERS OF ALL KINDS. WALDES & CO., Prague-Wrschowitz, Austria-Hungary.
Filed October 28, 1916. Serial No. 98,967. PUBLISHED DECEMBER 5, 1916.

115,470. FACE-LOTIONS. THE J. B. WILLIAMS COMPANY, Glastonbury, Conn.
Filed September 27, 1916. Serial No. 98,279. PUBLISHED DECEMBER 12, 1916.

115,471. PREPARATION FOR THE TREATMENT OF CHOLERA IN HOGS AND CHICKENS. WINDFIELD PARKER SNYDER, Great Falls, Mont.
Filed October 12, 1916. Serial No. 98,618. PUBLISHED DECEMBER 12, 1916.

TRADE-MARK REGISTRATIONS RENEWED.

14,371. MUSTARD. WILLIAM JOHN BELLVILLE, London, England, trading as Keen, Robinson & Bellville; Keen, Robinson & Company, Limited, London, England, a Corporation of Great Britain, assignee.
Registered May 10, 1887. Renewed May 10, 1917.

14,530. CUTLERY AND EDGE-TOOLS. W. BINGHAM & Co., Cleveland, Ohio; The W. Bingham Co., successors.
Registered June 21, 1887. Renewed June 21, 1917.

TRADE-MARK REGISTRATIONS CANCELED.

55,407. SEWING-MACHINE OIL. GEORGE THOMPSON ROBIE, Chicago, Ill.
Registered August 14, 1906. Canceled January 31, 1917.

77,002. FILMS FOR KINETOSCOPES. H. KUHN, Boston, Mass.
Registered March 1, 1910. Canceled January 31, 1917.

85,941. LEATHER BOOT-TOPS. PIONEER SHOE & RUBBER COMPANY, Minneapolis, Minn.
Registered March 24, 1914. Canceled January 31, 1917.

96,110. TOMATO PASTE WITH BASIL. CRISAFULLI BROS., New York, N. Y.
Registered April 7, 1914. Canceled January 31, 1917.

LABELS

REGISTERED FEBRUARY 13, 1917.

19,866.—*Title:* "AD-EL-ITE DOUBLE LUSTRE PAINT." (For Paint.) ADAMS & ELTING COMPANY, Chicago, Ill. Filed December 1, 1916.

19,867.—*Title:* "AD-EL-ITE MOTOR CARBON REMOVER." (For a Carbon-Remover.) ADAMS & ELTING COMPANY, Chicago, Ill. Filed December 11, 1916.

19,868.—*Title:* "SIGARI ITALIANI." (For Cigars.) ALPINO CIGAR CO., New York, N. Y. Filed April 4, 1916.

19,869.—*Title:* "'TWO QUART' BRAND." (For Whisky.) AMERICAN PURE FOOD COMPANY, Catlettsburg, Ky. Filed December 16, 1916.

19,870.—*Title:* "THE CLEANEST HAND IN TOWN." (For Hand Soap Powder.) ALFRED F. R. ANDERSON, New York, N. Y. Filed January 13, 1917.

19,871.—*Title:* "UNIT HAND SOAP POWDER." (For Hand Soap Powder.) ALFRED F. R. ANDERSON, New York, N. Y. Filed January 18, 1917.

19,872.—*Title:* "BREAKFAST BARLEY." (For Specially-Prepared Barley.) BARLEY FOODS CO., Morgantown, W. Va. Filed December 9, 1916.

19,873.—*Title:* "PEARL BARLEY." (For Pearl-Barley.) BARLEY FOODS CO., Morgantown, W. Va. Filed December 9, 1916.

19,874.—*Title:* "OLD STRING WHISKEY." (For Whisky.) J. A. BOKEL COMPANY, Baltimore, Md. Filed December 19, 1916.

19,875.—*Title:* "EXCELLO BRAND, GRAND PRIZE GUATEMALA COFFEE." (For Coffee.) IRA M. CASKEL, San Francisco, Cal. Filed July 1, 1916.

19,876.—*Title:* "YAKO." (For Beer.) THE CLEVELAND HOME BREWING CO., Cleveland, Ohio. Filed January 22, 1916.

19,877.—*Title:* "THE CORDO-HYDE LACE." (For Shoe-Laces.) CORDO-HYDE COMPANY, Brockton, Mass. Filed January 20, 1917.

19,878.—*Title:* "AUTOTOX TABLETS." (For a Medicinal Preparation.) M. F. DEEHAN, Boston, Mass., assignor to M. F. Deehan, Boston, Mass. Filed October 22, 1913.

19,879.—*Title:* "NO SPOT." (For a Cleaning Fluid.) JOHN ALLEN EICHOLTZ, Gettysburg, Pa. Filed January 11, 1917.

19,880.—*Title:* "EMERSON RECORD." (For Phonograph-Record Disks.) EMERSON PHONOGRAPH COMPANY, INC., New York, N. Y. Filed January 16, 1917.

19,881.—*Title:* "EMERSON RECORD." (For Phonograph-Record Disks.) EMERSON PHONOGRAPH COMPANY, INC., New York, N. Y. Filed January 16, 1917.

19,882.—*Title:* "SISTER SUSIE." (For Human-Hair Nets.) THE B. FRANKEL COMPANY, New York, N. Y. Filed December 5, 1916.

19,883.—*Title:* "BABY MIDGET HOSE SUPPORTER." (For Hose-Supporters.) GEORGE FROST COMPANY, Boston, Mass. Filed December 15, 1916.

19,884.—*Title:* "PEP." (For Smoking-Tobacco.) GEORGE GUND, Cleveland, Ohio. Filed January 19, 1917.

19,885.—*Title:* GARAGE VITAGAS." (For a Chemical Compound for Use in Gasolene.) THE HOWARD-VAUGHAN CO., Niagara Falls, N. Y. Filed November 25, 1916.

19,886.—*Title:* "AMERICAN HUNYADI SPLIT." (For a Cathartic Water.) HUNYADI SPLIT CORPORATION, Wilmington, Del., and New York, N. Y. Filed January 17, 1917.

19,887.—*Title:* "PHONOGRAPH STOVE POLISH, IT TALKS FOR ITSELF." (For a Powder Stove-Polish.) CHESSER LORTIE, Brooklyn, N. Y. Filed January 16, 1917.

19,888.—*Title:* "MURPHY RANCH ONE STAR." (For Lemons.) MURPHY OIL COMPANY, Whittier, Cal. Filed June 5, 1916.

19,889.—*Title:* "PEPPERMINT PEPSOGUM PURE RINGS OF PEPSIN GUM." (For Chewing-Gum.) QUALITE PRODUCTS COMPANY, INC., New York, N. Y. Filed November 25, 1916.

19,890.—*Title:* "RIDGWAYS TEA." (For Packages of Ridgways Tea.) RIDGWAYS INCORPORATED, New York, N. Y., and Chicago, Ill. Filed December 19, 1916.

19,891.—*Title:* "RIDGWAYS TEA." (For Packages of Ridgways Tea.) RIDGWAYS INCORPORATED, New York, N. Y., and Chicago, Ill. Filed December 19, 1916.

19,892.—*Title:* "KING KUHL KLOTHES." (For Clothing.) J. SCHOENEMAN, Baltimore, Md. Filed August 25, 1916.

19,893.—*Title:* "SNELL'S IMPERIAL FLOUR." (For Flour.) THE SNELL MILL AND GRAIN CO., Clay Center, Kans. Filed December 16, 1916.

19,894.—*Title:* "TARPLEY'S WHITE MIXTURE." (For Tarpley's White Mixture.) E. J. TARPLEY, Dublin, Ga. Filed March 23, 1916.

19,895.—*Title:* "KU-RALL." (For an Ointment.) JOHN W. TAYLOR, Jr., Nashville, Tenn. Filed October 2, 1916.

19,896.—*Title:* "CREAM-O-LASSES." (For Candy-Boxes.) D. M. TREE, Kansas City, Mo. Filed January 20, 1917.

19,897.—*Title:* "THE OAK BRAND." (For Hats.) UNITED HAT STORES, INC., Philadelphia, Pa. Filed December 16, 1916.

19,898.—*Title:* "LECITHINOL." (For a Medicinal Preparation.) UNITED STATES APOTHECARIES ASSOCIATION, Newark, N. J. Filed November 7, 1916.

19,899.—*Title:* "THYMO-BORALINE." (For a Medicinal Preparation.) UNITED STATES APOTHECARIES ASSOCIATION, Newark, N. J. Filed November 7, 1916.

19,900.—*Title:* "SWANSON'S SWHEAT-BREAD." (For Bread.) WORCESTER BAKING COMPANY, Worcester, Mass. Filed November 15, 1916.

PRINTS

REGISTERED FEBRUARY 13, 1917.

4,617.—*Title:* "THE FLEUR DE LYS." (For a Decorative Shoe Emblem.) SAMUEL H. CRAGG, New York, N. Y. Filed January 9, 1917.

4,618.—*Title:* "THE ECLIPSE INTERCHANGEABLE COUNTERBORE CO., INC." (For Boring-Tools.) ECLIPSE INTERCHANGEABLE COUNTERBORE CO. INC., Detroit, Mich. Filed November 27, 1916.

4,619.—*Title:* "NEW SOUTH PURE SUGAR CANE SYRUP." (For Cane-Syrup.) NEW ORLEANS COFFEE CO. LTD., New Orleans, La. Filed December 2, 1916.

4,620.—*Title:* "HICKORY MAPLE SYRUP." (For Maple-Syrup.) NEW ORLEANS COFFEE CO. LTD., New Orleans, La. Filed December 2, 1916.

REPORT

OF THE

COMMISSIONER OF PATENTS

TO CONGRESS

FOR THE YEAR ENDED DECEMBER 31, 1916.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1917.

To the Senate and House of Representatives:

In compliance with section 494 of the Revised Statutes I have the honor to submit the following report of the business of the Patent Office for the year ended December 31, 1916:

RECEIPTS.

Detailed statement of all moneys received for patents, for copies of records or drawings, or from any source whatever.

Applications:		
Cash received	$2,004,640.51	
Cash refunded	7,632.84	
Net cash	1,997,007.67	
Certificates of deposit	61,675.00	
Total cash and certificates		2,058,682.67
Copies:		
Cash received	228,027.84	
Cash refunded	3,611.69	
Net cash	224,416.15	
Certificates of deposit	1,058.30	
Total cash and certificates		225,474.45
Recording assignments:		
Cash received	33,439.93	
Cash refunded	1,682.68	
Net cash	31,757.25	
Certificates of deposit	166.00	
Total cash and certificates		31,923.25
Registration of prints and labels:		
Cash received	8,411.00	
Cash refunded	563.00	
No cash	7,848.00	
Certificates of deposit	36.00	
Total cash and certificates		7,884.00
Court costs:		
Cash received	5.00	
Cash refunded		
Net cash	5.00	
Certificates of deposit		
Total cash and certificates		5.00
Aggregates.		
Cash received	2,274,524.28	
Cash refunded	13,490.21	
Net cash	2,261,034.07	
Certificates of deposit	62,935.30	
Total cash and certificates	2,323,969.37	
Receipts from sale of Official Gazette and other publications through Government Printing Office	19,571.57	
Grand total	2,343,540.94	

EXPENDITURES.

Amounts expended under the several appropriations from January 1 to December 31, 1916.

Salaries	$1,339,570.63
Scientific library	2,306.22
International Union for Protection of Industrial Property	750.00
Stationery	11,681.60
Postage on foreign matter	950.40
Furniture, carpets, ice, telephones, washing towels, and sundries	23,645.86
Photolithographing:	
Current issue	54,272.61
Reproductions	54,390.77
Photographic copies	4,209.42
Photostat supplies	4,577.03
Foreign patents	16,830.40
Printing and binding:	
Official Gazette, with indexes	167,634.39
Specifications	416,323.18
Miscellaneous	17,658.33
Defending suits	567.07
Total	2,115,367.91

RECEIPTS AND EXPENDITURES.

Receipts from all sources	$2,343,540.94
Expenditures	2,115,367.91
Surplus	228,173.03

Surplus earnings of the Patent Office, deposited in the Treasury of the United States.

Amount of total net surplus in Treasury, January 1, 1916	$7,785,506.48
Net surplus for the year 1916	228,173.03
Total net surplus, December 31, 1916	8,013,679.51

SUMMARY OF THE BUSINESS OF THE PATENT OFFICE.

Applications for patents for inventions	68,075
Applications for patents for designs	2,684
Applications for reissues of patents	274
Total	71,033
Applications for registration of trade-marks	8,628
Applications for registration of labels	939
Applications for registration of prints	469
Disclaimers filed	32
Appeals on the merits	1,991
Notices of opposition	337
Total	12,396
Patents issued, excluding designs	43,970
Design patents issued	1,759
Patents reissued	198
Total	45,927
Trade-marks registered	6,791
Labels registered	804
Prints registered	482
Total	8,087
Patents expired during the year	23,296
Applications forfeited for nonpayment of final fees	11,174
Applications allowed	19,835
Trade-mark applications passed for publication	6,804

PATENTS ISSUED.

Patents issued to citizens of the United States, with the ratio of population to each patent granted.

States.	Patents and designs.	One to every—	States.	Patents and designs.	One to every—
Alabama	220	9,719	North Carolina	218	10,121
Arizona	104	1,965	North Dakota	164	3,518
Arkansas	155	10,158	Ohio	2,993	1,593
California	2,120	1,122	Oklahoma	330	5,022
Colorado	454	1,760	Oregon	424	1,587
Connecticut	1,112	1,002	Pennsylvania	3,862	1,985
Delaware	80	2,529	Rhode Island	320	1,096
Florida	184	4,082	South Carolina	125	12,123
Georgia	221	11,806	South Dakota	188	3,108
Idaho	104	3,131	Tennessee	240	9,108
Illinois	4,601	1,225	Texas	699	5,574
Indiana	992	2,723	Utah	137	2,725
Iowa	880	2,528	Vermont	98	3,632
Kansas	473	3,575	Virginia	335	6,154
Kentucky	307	7,459	Washington	790	1,464
Louisiana	234	7,078	West Virginia	315	5,876
Maine	163	4,554	Wisconsin	1,076	2,171
Maryland	388	3,339	Wyoming	66	3,211
Massachusetts	2,044	1,275			
Michigan	1,528	1,839	Alaska	4	16,089
Minnesota	716	2,899	Canal Zone	5	.....
Mississippi	111	16,190	District of Columbia	339	977
Missouri	1,238	8,618	Hawaii	32	6,492
Montana	191	1,999	Philippine Islands	6	1,272,671
Nebraska	331	3,129	Porto Rico	7	169,025
Nevada	49	1,671	United States Army	9	.....
New Hampshire	137	3,143	United States Navy	9	.....
New Jersey	2,227	1,139	United States Revenue Cutter Service	1	.....
New York	6,998	1,302			
New Mexico	56	5,845	Total	[1]41,869	.....

[1] Not including 198 reissues and 93 patents withdrawn.

Patents granted to residents of foreign countries.

Algeria	1	Cuba	14	Mexico	22	Spain	10
Argentina	9	Denmark	40	Netherlands	44	Sweden	114
Austria-Hungary	81	England	975	New South Wales	41	Switzerland	132
Belgium	45	Finland	1	New Zealand	35	Tasmania	2
Bermuda	1	France	309	Nicaragua	2	Transvaal	6
Brazil	6	Germany	847	Norway	50	Tunis	3
British Guiana	1	Greece	1	Peru	2	Uruguay	2
British India	1	Guatemala	1	Poland	1	Victoria	46
Bulgaria	1	Honduras	1	Portugal	1	Wales	13
Canada	677	India	4	Queensland	5	West Australia	8
China	6	Ireland	15	Russia	28		
Chile	1	Italy	83	Scotland	51	Total	3,767
Colombia	1	Japan	14	South Africa	2		
Costa Rica	1	Luxemburg	3	South Australia	5		

The following tables present a comparative statement of the business of the Patent Office since the enactment of the statute of 1836 and exhibit in detail the business of the office during the last calendar year:

Comparative statement of the business of the office from 1837 to 1916, inclusive.

Year.	Applications.[1]	Caveats filed.[2]	Patents and reissues.	Cash received.	Cash expended.	Surplus.
1837	.....	.....	435	$29,289.08	$33,506.98	.....
1838	.....	.....	520	42,123.54	37,338.92	$4,784.62
1839	.....	.....	425	38,019.97	34,543.51	3,476.46
1840	765	228	473	38,056.51	39,020.67	.....
1842	847	312	495	40,413.01	52,666.87	.....
1843	761	291	517	36,505.63	31,241.43	5,264.20
1844	819	315	519	35,315.81	30,776.96	4,538.85
1845	1,045	380	497	42,509.26	36,344.53	6,164.73
1846	1,246	452	503	51,076.14	39,395.65	11,680.49
1847	1,272	448	638	50,264.16	46,158.71	4,105.45
1848	1,531	533	569	63,111.19	41,878.35	21,232.84
1849	1,628	607	653	67,576.69	58,905.84	8,670.85
1850	1,955	595	1,077	80,752.78	77,716.44	3,036.34
1851	2,193	602	993	86,927.05	80,100.95	6,826.10
1852	2,258	760	872	95,738.61	86,916.93	8,821.68
1853	2,639	996	1,019	112,056.34	95,916.91	16,139.43
1854	2,673	901	961	121,527.45	132,869.83	.....
1855	3,324	868	1,844	163,789.84	167,146.32	.....
1856	4,435	906	2,013	216,459.35	179,540.33	36,919.02
1857	4,960	1,024	2,505	192,588.02	199,931.02	.....
1858	4,771	1,010	2,896	196,132.01	211,582.09	.....
1859	5,364	943	3,710	203,716.16	193,193.74	10,522.42
1860	6,225	1,079	4,538	245,942.15	210,278.41	35,663.74
1861	7,653	1,084	4,819	256,352.59	252,820.80	3,531.79
1862	4,643	700	3,340	137,354.44	221,491.91	.....
1863	5,038	824	3,521	215,754.99	182,810.39	32,944.06
1864	6,014	787	4,170	195,563.29	189,414.14	6,179.15
1865	6,972	1,063	5,020	240,919.98	229,868.00	11,051.98
1866	10,664	1,932	6,616	348,791.84	274,199.34	74,592.50
1867	15,269	2,723	9,450	498,665.38	361,724.28	136,941.10
	21,276	3,597	13,015	646,581.92	639,263.32	7,318.60

Comparative statement of the business of the Office from 1837 to 1916, inclusive—Continued.

Year.	Applications.[1]	Caveats filed.[2]	Patents and reissues.	Cash received.	Cash expended.	Surplus.
1868	20,445	2,705	13,378	$681,565.86	$628,679.77	$52,886.09
1869	19,271	3,624	13,986	693,145.81	486,430.74	206,715.07
1870	19,171	3,273	13,321	669,456.76	557,147.19	112,309.57
1871	19,472	3,366	13,033	678,716.46	562,091.64	116,624.82
1872	18,246	3,090	13,590	699,726.39	665,595.00	34,131.39
1873	20,414	3,248	12,864	703,191.77	691,178.98	12,012.79
1874	21,602	3,181	13,599	738,278.17	679,288.41	58,989.76
1875	21,638	3,094	14,837	743,453.36	721,657.71	21,795.65
1876	21,425	2,697	15,595	757,987.65	652,542.60	105,445.05
1877	20,308	2,809	14,187	732,342.95	613,152.62	119,190.33
1878	20,260	2,755	13,444	725,375.55	593,082.89	132,292.66
1879	20,059	2,620	13,213	703,931.47	529,638.97	174,292.50
1880	23,012	2,490	13,947	749,685.32	538,865.17	210,820.15
1881	26,060	2,406	16,584	853,665.89	605,173.28	248,492.61
1882	31,522	2,553	19,267	1,009,219.45	683,867.67	325,351.78
1883	34,576	2,741	22,383	1,146,240.00	675,234.86	471,005.14
1884	35,600	2,582	20,413	1,075,798.80	970,579.76	105,219.04
1885	35,717	2,552	24,233	1,188,089.15	1,024,378.85	163,710.30
1886	35,968	2,513	22,506	1,154,551.40	992,503.45	162,047.95
1887	35,613	2,622	21,477	1,144,509.60	994,472.22	150,037.38
1888	35,797	2,251	20,506	1,118,516.10	973,108.78	145,407.32
1889	40,575	2,481	24,158	1,281,728.05	1,052,955.96	228,772.09
1890	41,048	2,311	26,292	1,340,372.66	1,099,297.74	241,074.92
1891	40,552	2,408	23,244	1,271,285.78	1,139,713.35	131,572.43
1892	40,753	2,290	23,559	1,286,331.88	1,110,739.24	175,592.64
1893	38,473	2,247	23,769	1,242,871.64	1,141,038.45	101,833.19
1894	38,439	2,286	20,867	1,187,439.58	1,100,047.12	87,392.46
1895	40,680	2,415	22,057	1,245,246.93	1,106,389.49	138,857.44
1896	43,982	2,271	23,373	1,324,059.83	1,113,413.71	210,646.12
1897	47,905	2,176	23,794	1,375,641.72	1,122,843.13	252,798.59
1898	35,842	1,659	22,267	1,137,734.48	1,136,196.20	1,538.28
1899	41,443	1,716	25,527	1,325,457.03	1,211,783.73	113,673.30
1900	41,980	1,731	26,499	1,350,828.53	1,260,019.62	90,808.91
1901	46,449	1,842	27,373	1,449,398.16	1,297,385.64	152,012.52
1902	49,641	1,851	27,886	1,552,859.08	1,393,345.54	159,513.54
1903	50,213	1,771	31,699	1,642,201.81	1,448,645.81	193,556.00
1904	52,143	1,808	30,934	1,657,326.53	1,476,000.38	181,326.15
1905	54,971	1,896	30,399	1,806,758.14	1,479,633.22	327,124.92
1906	56,482	1,885	31,965	1,790,921.38	1,554,891.20	236,030.18
1907	58,762	1,967	36,620	1,910,618.14	1,631,458.36	279,159.78
1908	61,475	2,110	33,682	1,896,847.67	1,712,303.42	184,544.26
1909	65,839	1,948	37,421	2,042,828.14	1,955,151.14	87,677.00
1910	64,629	970	35,930	2,025,536.69	2,005,711.94	19,824.75
1911	69,121	.....	34,084	2,019,388.03	1,953,689.91	65,698.12
1912	70,976	.....	37,731	2,118,158.30	2,022,096.21	96,062.19
1913	70,367	.....	35,788	2,084,417.79	1,947,383.28	137,034.51
1914	70,404	.....	41,850	2,251,892.82	2,000,770.12	251,122.70
1915	70,069	.....	44,934	2,290,773.47	2,053,442.15	239,331.32
1916	71,033	.....	45,927	2,343,540.94	2,115,367.91	228,173.03

[1] Including patents, designs, and reissues.

[2] Caveat law repealed June 25, 1910.

Statement showing the number of the first patent, design patent, and reissued patent, and the number of the first certificate of registration of a trade-mark, label, and print issued in each calendar year since July 28, 1836, when the present series of numbers of letters patent commenced.

[The number of patents granted prior to the commencement of this series of numbering (July 28, 1836) was 9,957.]

Calendar year.	Number of first patent and certificate issued in each calendar year.					
	Patents.	Designs.	Reissues.	Trade-marks.	Labels.	Prints.
1836 (July 28)	1	.....	.....	.....	.....	.....
1837	110	.....	.....	.....	.....	.....
1838	546	.....	1	.....	.....	.....
1839	1,001	.....	7	.....	.....	.....
1840	1,465	.....	20	.....	.....	.....
1841	1,923	.....	30	.....	.....	.....
1842	2,413	.....	36	.....	.....	.....
1843	2,901	1	49	.....	.....	.....
1844	3,395	15	60	.....	.....	.....
1845	3,873	27	67	.....	.....	.....
1846	4,348	44	78	.....	.....	.....
1847	4,914	103	91	.....	.....	.....
1848	5,409	163	105	.....	.....	.....
1849	5,993	209	128	.....	.....	.....
1850	6,981	258	158	.....	.....	.....
1851	7,865	341	184	.....	.....	.....
1852	8,622	431	209	.....	.....	.....
1853	9,512	540	229	.....	.....	.....
1854	10,358	626	258	.....	.....	.....
1855	12,117	683	296	.....	.....	.....
1856	14,009	753	337	.....	.....	.....
1857	16,324	860	420	.....	.....	.....
1858	19,010	973	517	.....	.....	.....
1859	22,477	1,075	643	.....	.....	.....
1860	26,642	1,183	674	.....	.....	.....
1861	31,005	1,366	1,106	.....	.....	.....
1862	34,045	1,508	1,253	.....	.....	.....
1863	37,266	1,703	1,369	.....	.....	.....

Statement showing the number of the first patent, design patent, and reissue patent, etc.—Continued.

Calendar year.	Number of first patent and certificate issued in each calendar year.					
	Patents.	Designs.	Reissues.	Trade-marks.	Labels.	Prints.
1864	41,047	1,879	1,506			
1865	45,685	2,018	1,844			
1866	51,784	2,239	2,140			
1867	60,658	2,533	2,490			
1868	72,959	2,858	2,830			
1869	85,503	3,304	3,250			
1870	98,460	3,810	3,784	1		
1871	110,617	4,547	4,223	122		
1872	122,304	5,453	4,987	608		
1873	134,504	6,336	5,216	1,099		
1874	146,120	7,062	5,717	1,591	1	
1875	158,350	7,969	6,200	2,150	233	
1876	171,641	8,884	6,831	3,263	465	
1877	185,813	9,686	7,452	4,247	937	
1878	198,733	10,385	8,020	5,463	1,329	
1879	211,078	10,975	8,529	6,916	1,821	
1880	223,211	11,567	9,017	7,790	2,176	
1881	236,137	12,062	9,523	8,139	2,379	
1882	251,685	12,647	9,994	8,973	2,581	
1883	269,820	13,508	10,265	9,920	2,885	
1884	291,016	14,528	10,432	10,822	3,791	
1885	310,163	15,678	10,548	11,843	4,304	
1886	333,494	16,451	10,677	12,910	4,695	
1887	355,291	17,046	10,793	13,939	5,073	
1888	375,720	17,995	10,892	15,072	5,453	
1889	395,305	18,830	10,978	16,131	5,780	
1890	418,065	19,553	11,053	17,360	6,099	
1891	443,987	20,439	11,137	18,775	6,403	
1892	466,315	21,275	11,217	20,537	6,540	
1893	488,976	22,092	11,298	22,274	None.	1
1894	511,744	22,994	11,397	23,951	None.	3
1895	531,619	23,922	11,461	25,757	None.	7
1896	552,502	25,077	11,520	27,586	6,546	10
1897	574,309	26,482	11,581	29,399	6,547	42
1898	596,467	28,113	11,646	31,070	6,561	58
1899	616,871	29,916	11,706	32,308	6,761	93
1900	640,167	32,055	11,798	33,957	7,272	193
1901	664,327	33,813	11,879	35,678	8,009	296
1902	690,385	35,547	11,960	37,606	8,557	445
1903	717,521	36,187	12,070	39,612	9,654	603
1904	745,567	36,723	12,189	41,798	10,644	873
1905	778,834	37,280	12,299	43,956	11,758	1,170
1906	808,618	37,766	12,428	48,446	12,585	1,529
1907	839,799	38,391	11,646	31,070	6,561	58
1908	875,679	38,980	11,706	32,308	6,761	93
1909	908,436	39,737	11,798	33,957	7,272	193
1910	945,010	40,424	11,879	35,678	8,009	296
1911	980,178	41,063	11,960	37,606	8,557	445
1912	1,013,095	42,073	12,070	39,612	9,654	603
1913	1,049,326	43,415	12,189	41,798	10,644	873
1914	1,083,267	45,098	12,299	43,956	11,758	1,170
1915	1,123,212	46,813	12,428	48,446	12,585	1,529
1916	1,166,419	48,358	12,587	59,014	13,397	1,874
			12,738	66,992	13,964	2,139
			12,906	72,083	14,582	2,409
			13,066	76,267	15,074	2,557
			13,189	80,506	15,444	2,677
			13,346	84,711	16,103	2,925
			13,504	89,731	16,736	3,168
			13,668	94,796	17,444	3,438
			13,858	101,613	18,163	3,796
			14,040	107,875	18,966	4,167

First print registered Mar. 7, 1882.

Statement showing the total number of patents, design patents, and reissued patents, and the total number of certificates of registration of trade-marks, labels, and prints issued in each calendar year since July 23, 1836, when the present series of numbers of letters patent commenced.

[The number of patents granted prior to the commencement of this series of numbering (July 28, 1836) was 9,957.]

Calendar year.	Number of patents and certificates of registration issued during each calendar year.							
	Patents.	Designs.	Reissues.	Total patents.	Trade-marks.	Labels.	Prints.	Total certificates.
1836 (July 28)	109							
1837	436							
1838	515		6					
1839	404		13					
1840	458		10					
1841	490		6					
1842	488		13					
1843	494	14	11	519				
1844	478	12	7	497				
1845	475	17	11	503				
1846	566	59	13	638				
1847	495	60	14	569				
1848	584	46	23	653				
1849	988	49	30	1,067				
1850	884	83	26	993				
1851	757	90	25	872				
1852	890	109	20	1,019				
1853	846	86	29	961				
1854	1,759	57	28	1,844				
1855	1,892	70	51	2,013				
1856	2,315	107	83	2,505				

Statement showing the total number of patents, design patents, and reissued patents, etc.—Continued.

Calendar year.	Number of patents and certificates of registration issued during each calendar year.							
	Patents.	Designs.	Reissues.	Total patents.	Trade-marks.	Labels.	Prints.	Total certificates.
1857	2,686	113	97	2,896				
1858	3,467	102	126	3,695				
1859	4,165	108	231	4,504				
1860	4,363	183	232	4,778				
1861	3,040	142	147	3,329				
1862	3,221	195	116	3,532				
1863	3,781	176	227	4,184				
1864	4,638	139	248	5,025				
1865	6,099	221	296	6,616				
1866	8,874	294	290	9,458				
1867	12,201	325	400	13,026				
1868	12,544	446	420	13,410				
1869	12,957	506	534	13,997				
1870	12,157	737	439	13,333	121			121
1871	11,687	905	464	13,056	486			486
1872	12,200	884	529	13,613	491			491
1873	11,616	747	501	12,864	492			492
1874	12,230	886	483	13,599	559	232		791
1875	13,291	915	631	14,837	1,138	232		1,370
1876	14,172	802	621	15,595	959	472		1,431
1877	12,920	699	568	14,187	1,216	392		1,608
1878	12,345	590	509	13,444	1,455	492		1,947
1879	12,133	592	488	13,213	872	355		1,227
1880	12,926	515	506	13,947	349	203		552
1881	15,548	565	471	16,584	534	202		1,036
1882	18,135	861	271	19,267	947	304		1,251
1883	21,196	1,020	167	22,383	902	906		1,808
1884	19,147	1,150	116	20,413	1,021	513		1,534
1885	23,231	778	120	24,233	1,067	391		1,458
1886	21,797	595	116	22,508	1,029	378		1,407
1887	20,429	949	99	21,477	1,133	380		1,513
1888	19,585	835	86	20,506	1,080	827		1,386
1889	23,360	723	75	24,158	1,229	319		1,548
1890	25,322	886	84	26,292	1,415	304		1,719
1891	22,328	836	80	23,244	1,762	137		1,899
1892	22,661	817	81	23,559	1,737	1 6		1,743
1893	22,768	902	99	23,769	1,677	None.	2	1,679
1894	19,875	928	64	20,857	1,806	None.	4	1,810
1895	20,883	1,115	59	22,057	1,829	None.	3	1,832
1896	21,867	1,445	61	23,373	1,813	1	32	1,846
1897	22,098	1,631	65	23,794	1,671	14	16	1,701
1898	20,404	1,803	60	22,267	1,238	200	35	1,473
1899	23,296	2,139	92	25,527	1,649	511	100	2,260
1900	24,660	1,758	81	26,499	1,721	737	93	2,551
1901	25,558	1,734	81	27,373	1,928	878	159	2,965
1902	27,136	640	110	27,886	2,006	767	158	2,931
1903	31,046	536	117	31,699	2,186	990	270	3,446
1904	30,267	557	110	30,934	2,158	1,114	297	3,569
1905	29,784	486	129	30,399	4,490	830	359	5,679
1906	31,181	625	159	31,965	10,568	709	656	11,933
1907	35,880	580	151	36,620	7,878	667	315	8,860
1908	32,757	757	168	33,682	5,191	618	220	6,029
1909	36,574	687	160	37,421	4,184	492	148	4,824
1910	35,168	630	123	35,930	4,239	370	120	4,729
1911	32,917	1,010	157	34,084	4,205	659	248	5,112
1912	36,231	1,342	188	37,731	5,020	633	243	5,896
1913	33,941	1,683	164	35,788	5,065	708	280	6,053
1914	39,945	1,715	190	41,850	6,817	719	338	7,874
1915	43,207	1,545	182	44,934	6,262	803	371	7,436
1916	43,970	1,759	198	45,927	6,791	864	432	8,087

[1] Registration of labels practically suspended May 27, 1891, under decision of the United States Supreme Court in *Higgins et al.* v. *Keuffel et al.* (55 O. G., 1139) with the registration No. 6,545, June 14, 1892. Resumed June 9, 1896, with the registration of No. 6,546.

Expenditures for photolithographic and photographic work since 1912–13.

Fiscal year.	Contractor.	Price per page. Current issue.	Reproduction of exhausted copies, etc.	Photographic copies.	Total.
1912–13	Columbia Planograph Co.	[1] $0.63 [2] .50			$140,000
	Sackett & Wilhelms Co.		[3] $0.52 [4] .60		
	F. W. Ernst			[5] $0.09 [6] .10	
1913–14	Columbia Planograph Co.	[1] .57½ [2] .45			140,000
	Sackett & Wilhelms Co.		[4] .57 [3] .47		
	Leet Bros.			[5] .078 [6] .078	
1914–15	Norris Peters Co.	[1] .64 [2] .50			140,000
	A. J. Imgram		[3] .40½ [4] .50		
	Commercial Photo. Co.			[5] .064 [6] .067	
	Leet Bros.				
	Webb & Bocorselski		[3] .42		
1915–16	Columbia Planograph Co.	[1] .61.45 [2] .49			140,000
	The Norris Peters Co.				
	A. J. Imgram		[3] .39 [4] .49		
	Commercial Photo. Co.			[5] .056 [6] .06	
	Webb & Bocorselski		[3] .40		
1916–17	Norris Peters Co.	[1] .76 [2] .60			[9] 140,000
	Sackett & Wilhelms Co.		[4] .57 [3] .42½		
	F. W. Ernst			[5] .07 [6] .06	
	C. J. Ernst		[3] .35		

[1] For 100 thin, 2 thick, and 1 bond copies.
[2] For 50 thin, 2 thick, and 1 bond copies of trade-marks and designs.
[3] For 50 copies each, mechanical and design patents and trade-marks.
[4] For 100 copies each, mechanical and design patents and trade-marks.
[5] Size, 8 by 12½ inches.
[6] Size, 10 by 15 inches.
[7] For 50 thin, 2 thick, and 1 bond copies of designs.
[8] For 2 copies of drawings of foreign patents.
[9] Estimated.

Number of patents issued by the United States to December 31, 1916, and by foreign countries to December 31, 1915.

Countries.	To 1870, inclusive.	1871 to 1915.	Total.
Argentina [1]	83	13,799	13,882
Australia		16,955	16,955
Austria-Hungary	15,350	67,583	82,933
Austria		89,392	89,392
Bahamas [1]		2	2
Barbados		154	154
Belgium [2]	35,044	242,267	277,311
Bolivia	42	65	107
Brasil	185	9,416	9,601
British Guiana	32	94	126
British Honduras	1	19	20
Canada	4,081	166,199	170,280
Ceylon [1]	58	829	887
Chile	266	2,850	3,116
Colombia [1]		1,077	1,077
Congo Free State [1]		294	294
Costa Rica [1]		74	74
Cuba		2,205	2,205
Denmark	464	27,972	28,436
Ecuador		10	10
Fiji Islands [2]		47	47
Finland	112	5,505	5,620
France	103,934	404,514	508,448
Germany	9,996	296,514	306,510
Great Britain	53,408	450,440	503,848
Guatemala		57	57
Hawaii		148	148
Hongkong		246	246
Hungary		64,088	64,088
India	445	13,557	14,002
Italy and Sardinia	4,723	129,428	134,151
Jamaica	22	256	278
Japan		28,722	28,722
Leeward Islands		29	29
Liberia		2	2
Luxemburg		10,587	10,587
Malta [2]		106	106
Mauritius [2]	113	311	424
Mexico	22	13,199	13,221
Netherlands	4,535	1,025	5,560
Newfoundland [1]	40	495	535
New South Wales	236	11,740	11,976
New Zealand	109	17,371	17,480
Norway	737	27,529	28,266
Paraguay [1]		102	102
Peru [1]		160	160
Portugal	245	8,776	9,021
Queensland	67	6,368	6,435
Russia [1]	1,464	30,844	32,308
St. Helena [1]		4	4
South African Republics		1,262	1,262
South Australia	123	6,221	6,344
Spain [1]		54,390	54,390
Straits Settlements		350	350
Sweden	1,629	41,588	43,217
Switzerland		72,275	72,275
Tasmania	43	2,426	2,469
Trinidad [1]	6	262	268
Tunis [1]		1,099	1,099
Turkey [1]		2,560	2,560
Union South Africa		4,187	4,187
Uruguay [1]		455	455
Venezuela		306	306
Victoria	822	12,463	13,285
West Australia		3,524	3,524
Total foreign	236,437	2,366,777	2,605,214
United States	120,575	1,055,802	1,176,375
Total to 1870	359,010		
Total, 1871–1915		3,422,579	3,781,589
United States, 1916			43,970
Grand total, including 1916, United States			3,825,559

[1] Information for 1915 lacking or incomplete.
[2] Estimated; no report received since before 1914.

Number of applications pending December 31, 1916.

Year of filing.	Applications filed.	Including all divisional applications and continuations not in issue or forfeited. Dec. 31, 1916.	15 years or longer.	10 years or longer.	5 years or longer.	2 years or longer.
Prior to 1902		15	15			
In 1902	48,320	7				
1903	49,289	8				
1904	51,168	28				
1905	54,034	40				
1906	55,471	43		141		
1907	57,679	60				
1908	60,142	73				
1909	64,408	138				
1910	63,293	328				
1911	67,370	865			1,614	
1912	68,908	2,191				
1913	68,117	5,711				
1914	67,774	12,577				22,093
1915	67,138	25,081				
1916	68,075	50,339				
Total		97,463				
In issue		19,835				
Forfeited		15,260				
Grand total		117,298				
Applications in interference and on appeal included in above table		2,613	4	60	384	1,368

Comparison of pending applications by years.

	December 31, 1914.		December 31, 1915.		December 31, 1916.	
Cases filed prior to	1900	37	1901	29	1902	15
Cases filed in	1900	13	1901	6	1902	7
Do	1901	17	1902	14	1903	8
Do	1902	29	1903	16	1904	28
Do	1903	60	1904	45	1905	40
Do	1904	83	1905	73	1906	43
Do	1905	141	1906	125	1907	60
Do	1906	249	1907	188	1908	73
Do	1907	454	1908	265	1909	138
Do	1908	790	1909	529	1910	328
Do	1909	1,748	1910	1,356	1911	865
Do	1910	3,710	1911	2,916	1912	2,191
Do	1911	7,498	1912	6,961	1913	5,711
Do	1912	15,203	1913	13,648	1914	12,577
Do	1913	28,867	1914	26,978	1915	25,031
Do	1914	50,947	1915	49,483	1916	50,339
Total		109,846		102,632		97,463

Attention is invited to the following comparisons:

Number of applications pending fifteen years or longer:
- January 1, 1912 — 59
- January 15, 1914 — 84
- June 30, 1914 — 52
- December 31, 1914 — 37
- December 31, 1915 — 29
- December 31, 1916 — 15

Number of applications pending ten years or longer:
- January 1, 1912 — 289
- June 30, 1914 — 241
- December 31, 1914 — 239
- December 31, 1915 — 183
- December 31, 1916 — 141

Number of applications pending eight years or longer:
- June 1, 1914 — 799
- December 31, 1914 — 629
- December 31, 1915 — 419
- December 31, 1916 — 283

Number of applications pending five years or longer:
- January 1, 1912 — 4,296
- June 30, 1914 — 4,231
- December 31, 1914 — 3,621
- December 31, 1915 — 2,646
- December 31, 1916 — 1,614

Number of applications pending two years or longer:
- June 30, 1914 — 31,677
- December 31, 1914 — 30,032
- December 31, 1915 — 26,171
- December 31, 1916 — 22,093

Total number pending not in issue or forfeited:
- January 1, 1912 — 108,126
- June 30, 1914 — 116,832
- December 31, 1914 — 109,846
- December 31, 1915 — 102,632
- December 31, 1916 — 97,463

Number of applications in issue:
- January 1, 1912 — 11,804
- June 30, 1914 — 22,628
- December 31, 1914 — 22,613
- December 31, 1915 — 22,449
- December 31, 1916 — 19,835

Total number pending, not including forfeited applications:
- January 1, 1912 — 119,930
- June 30, 1914 — 139,455
- December 31, 1914 — 132,459
- December 31, 1915 — 125,081
- December 31, 1916 — 117,298

Allowances and publications.

	1914.	1915.	1916.
Patents	56,489	54,944	63,114
Reissues	172	169	185
Designs	1,612	1,569	1,698
Trade-marks	7,493	5,691	6,308
Labels	728	810	909
Prints	327	371	394
Total	66,771	63,554	62,598

Patents and certificates issued.

	1914.	1915.	1916.
Patents	39,945	43,207	43,970
Reissues	190	182	196
Designs	1,715	1,545	1,789
Trade-marks	6,817	6,262	6,791
Labels	719	803	564
Prints	338	371	432
Total	49,724	52,370	54,014

OTHER DETAILS OF BUSINESS.

During the year a total of 71,033 applications for patents, reissues of patents, and designs and 174,984 amendments in pending applications for patent were filed. This is an increase of 964 in the number of applications and a decrease of 12,382 in the number of amendments filed.

The fees received by mail and express amounted to $1,433,041.26, and the fees paid by hand to the Financial Clerk amounted to $923,989.89. The num

ber of letters indexed and filed, constituting the general correspondence of the Office, was 288,798, an increase of 3,696 over the work of the year 1915. In addition to this 45,400 letters of inquiry were returned with circulars of information answering the questions propounded. There were received 12,749 pieces of registered mail and 3,858 express parcels.

During the year 1,661 applications previously allowed and forfeited for non-payment of the final fee within the time prescribed by section 4885, Revised Statutes, were renewed. The number of applications abandoned by reason of failure to prosecute was 19,016, and 8,965 applications previously allowed and forfeited were abandoned on account of failure to renew. The total number of cases abandoned was 27,981.

In the Drafting Division 1,129 drawings were made for inventors, who paid $4,179 therefor, and 7,176 drawings, previously filed, were corrected at the request of the inventors, for which the Office received $6,453. Eight tracings were made, at a cost of $24.00. A total of $10,656.00 was received as fees for work by the Drafting Division. In addition to this 28 drawings of the value of $180.00 were made for the use of the Office and 6,503 drawings were corrected in minor particulars without charge to inventors.

In the Assignment Division 29,197 deeds, transferring title to patents, etc., containing 13,428,950 words and averaging 461 words per deed, were recorded, for which the Office received $48,721.25, an increase of $218.95 over the amount received for the same purpose in 1915. In addition to this the Assignment Division prepared 1,442 abstracts of title and 2,809 briefs, for which fees amounting to $1,800.60 were paid. The total earnings of the Assignment Division were $50,521.85.

Type-written copies of records to the extent of 30,704,900 words were furnished, and other copies containing 3,040,000 words, made by outsiders, were compared and certified by the Office. For the whole of this work the Office received $33,744.90. For the certificates attached to such of these copies as were certified the Office received $1,314.50. A total of $35,059.40 was received, as against $31,055.40 received for similar work last year. For certified printed copies of patents, trade-marks, prints, and labels and photographic copies of drawings the Office received $3,565.20.

Inventors and attorneys were furnished with 53,845 photographic copies of drawings, 8 x 12½, at fifteen cents each, and 5,107 photographic copies of drawings, 10 x 15, at twenty-five cents each; also 43,342 small-sized photostat copies at fifteen cents each and 36,893 large-sized photostat copies at twenty-five cents each. The amounts received for these photographic and photostat copies were $9,353.50 and $15,749.55, respectively. In addition 5,972 photographic copies and 7,681 photostat copies were made for Office use and 727 photostat copies for use of other departments were made without charge. The expenditures during the year on account of supplies for the photostat-machine were $4,194.83.

Printed copies of the specifications and drawings of patents to the number of 2,697,010 were sold at five cents each, bringing to this Office on this account $134,850.50. For 682,390 copies furnished to libraries $925 was received. The total received from the sale of copies was $135,775.50. Copies to the number of 1,280,247 were shipped to foreign governments, and 179,945 were drawn for Office use. The total number of printed copies of patents distributed during the year was 5,002,498.

CONDITION OF THE WORK IN THE OFFICE.

If the business of the Office be considered with reference to the average time of pendency of applications, the showing as to promptness is satisfactory. The average time that applications upon which patents are granted are in the Office is only twenty-one months, and ninety-seven per cent. of all applications are disposed of within five years. About one patent in twenty-six is issued after having been in the Office five years or longer; but, since only about one patent in one hundred ever becomes the basis of a decree, the policy of speeding up prosecution should be pressed. As conditions now are, important patents are frequently unduly delayed. The proper way to handle the business is to require prosecution of all applications as rapidly as is reasonably possible. The plan of assigning this particular duty to one of the Law Examiners has been continued. In applications which have been pending more than three years all proposed amendments must be submitted to him before they are entered.

The total decrease in the number of applications pending in the examining divisions or on appeal (omitting allowed and forfeited applications) is 5,170. It thus appears that the Office completed its examination of about seven and one-half per cent. more applications than it received during the year. This does not indicate that the corps is unnecessarily large. It is in pursuance of a definite policy to require prompt prosecution by applicants and their attorneys. This has brought up for final disposition many applications where heretofore dilatory proceedings have been resorted to. The method by which the Office can force the prosecution of applications is to hold the applicant strictly to the rule requiring complete response to each Office action. If the response filed within a period of one year from the date of the Office action is not complete, the Office may hold the application abandoned for lack of proper prosecution.

Now that the amendment work is substantially up to date risk of having an application held abandoned for lack of proper prosecution can be entirely avoided by filing amendments six weeks or two months in advance of the expiration of the year. If the proposed amendment is not a complete response, the applicant will be notified, so that the response may be completed within the year. It is not the intention to suggest that the filing of amendments be delayed, but to urge that they be not delayed in any case to so near the end of the year that correction of the defects cannot be made within the statutory period of one year.

When the Supreme Court began the reformation of the practice respecting reissues with the decision in *Miller* v. *The Brass Co.*, it had to deal with an abuse quite analogous to that of delayed applications in the Office. One result of the line of decisions in which they corrected these abuses was that a smaller number of reissue applications were filed and that the applications were more carefully scrutinized by the Patent Office. Down to 1882 there had been granted 250,000 patents and 10,000 reissues, or about 1 in 25. From 1882 to 1916 there were granted 900,000 patents and less than 4,000 reissues, or about 1 in 225.

It will be found from the foregoing tables that when the Office began to reform the conditions respecting old cases there were about 4,300 which had been on file five years or longer. It will be seen that they have been reduced to less than 1,700. I believe that during the coming year this number will be reduced by another thousand and the evil be substantially eliminated.

The reform in the treatment of applications in the Office to prevent long delay is believed to be as extensive and as important as the reform effected by the Supreme Court respecting reissue patents. It is, in fact, an application of the spirit of the decision in *Miller* v. *The Brass Co.* in dealing with another development of the same evil tendency which the Court there combatted.

The total number of applications pending before the Office, including applications in all stages short of abandonment, on January 1, 1917, was 3,876 less than the total number pending on January 1, 1916.

On January 29, 1917, there were awaiting action by the Office 18,274 applications. This is larger than at the beginning of the year 1916. The work should be brought up to date and kept there, for when the Office is behind it is working at a disadvantage both to itself and to the public; but every effort to increase the force has met only with a refusal.

REISSUE APPLICATIONS AND AFFIDAVITS UNDER RULE 75.

Since May 18, 1916, oaths forming part of applications for reissue and affidavits filed under the provisions of Rule 75 for the purpose of carrying the applicant's date of invention back of a cited reference have been referred to and passed upon by a Law Examiner.

The reissue applications have been reviewed, not alone to determine whether they were formally correct but also whether they were sufficient to make out a *prima facie* case for reissue under the statute, particularly as to the existence of the statutory prerequisites of inoperativeness or invalidity of the patent and "inadvertence, accident, or mistake." The showing on the latter point especially has had to be considered in the light of the record made by the applicant in the prosecution of his original application, because a showing sufficient under some circumstances may lose its force in view of evidence in the record indicating, for instance, that the supposed insufficiency of the patent resulted from the deliberate act of the applicant rather than inadvertence, accident, or mistake.

The showing has been found deficient in over half of the cases filed, (estimated.) Frequently the defects are formal or of a character which may be cured by a supplemental or substitute oath, and these have been filed in a large percentage of cases where original oaths have been disapproved. The most frequent fault in the oath has been found to be a failure to state clearly the real purpose of the reissue—that is, to point out exactly the supposed defects of the patent to be cured.

During the four years preceding 1916 the number of reissue patents granted was over ninety-six per cent. of the number of applications for reissue. During the year 1916 the number of reissue patents granted was only seventy-two per cent. of the number of applications for reissue. This decrease in proportion is due in large part to a more thorough and uniform application of the rules relating to reissue.

The number of applications for reissue filed during 1916 was 274. This exceeds those for any preceding year. During the ten years before 1916 it averaged 181.

As to the affidavits under Rule 75, it became clear at once from the character of the affidavits submitted and the arguments presented by counsel that the practice under this rule had been very different in the various divisions of the Office. The essentials of affidavits under Rule 75 are set forth in a harmonious line of Commissioner's decisions reaching back thirty-five years. (*Ex parte Gasser*, 1880; *ex parte Saunders*, 1883; *ex parte Donovan*, 1890; *ex parte McElroy*, 1909.) In passing upon the affidavits referred under this order it has been the purpose to enforce the rulings in these decisions as to essential requirements, but with an eye to the substance of the matter rather than a strict adherence to form or manner of statement.

PATENT INTERFERENCES.

During the year the practice of having all prospective interferences between applicants for patents submitted to one of the Law Examiners has been continued. A total of 1,823 interference proposals were reviewed by the Law Examiner assigned to this task. Of these 924, or fifty-one per cent., were approved as submitted, 583, or twenty-nine per cent., were approved after modification, and 369, or twenty per cent., were disapproved. Twelve hundred and eighty-six new interferences were declared, and in 168 existing interferences new parties were added. In 344 of the interferences orders to show cause were issued to all junior parties. But for the mandamus granted by the Court of Appeals of the District of Columbia in the case of *U. S., ex rel. Fowler Car Co.*, v. *Commissioner of Patents* the number of interferences actually declared would have been reduced by several hundred. The amount of labor involved, both for the Office and litigants, in disposing of several hundred interferences in which no

question of priority of invention is involved is very great and several hundred applicants are denied their patents when they demand them and are harassed and put to expense at the instance of applicants who presumably have no right to the invention in controversy. The Fowler case has been taken up by the Supreme Court of the United States on a writ of certiorari and is to be argued there, it is hoped, at an early date.

During the year there has also been continued the policy of having a single Law Examiner pass upon all motions to dissolve interferences and all motions or recommendations to amend under provision of Rules 109 and 128. Two hundred and forty-one motions for dissolution were heard and disposed of, of which 57 were granted entirely, 44 granted in part, and 138 were denied; also, 100 motions to amend were disposed of, of which 25 were granted entirely, 22 granted in part, and 39 were denied. In 18 interferences references were considered under the provisions of Rule 128, and 10 interferences were dissolved. Certain other motions were considered and decisions made, bringing the total number of decisions by the Law Examiner up to 379.

REQUIREMENT OF DIVISION.

During the year the practice of having all requirements of division referred to a Law Examiner before being made final was continued. A total of 793 applications were passed upon. Of these 529 were approved wholly or in part and 363 were disapproved. There was a steady decrease in the percentage of disapprovals as the year went on, indicating that the result sought—uniformity of practice—is being approximated in the different divisions.

In addition to applications in which formal memorandum was written many applications were informally considered prior to first requirement. In a number of applications it has been found necessary to withhold approval until action on forms or merits. Frequently disclosures and claims are found in such condition that it is not possible to draw clear lines, and action on the form and sometimes on merits has been found to be the most speedy and satisfactory manner of preparing the way for a clear line of division or to avoid division.

The disapprovals have been largely of requirements of division, not properly founded, between process and product and combination and subcombination in machines or in compositions.

Where the process and product are mutually dependent, as where the process is the necessary and obvious way of making the product or where the process can produce nothing else and the product be made in no other practical way, no reason for division exists. Division in such cases might result in an effectual extension of the monopoly when the patents are not concurrent and in commercial disadvantages flowing from separate ownership of related patents.

When the claims of an application to process and product are not clearly distinct in terms, as where, for example, the process claims are defined in part by terms of structure or product claims by steps taken in making the product, division is not a proper remedy; action upon the merits should be given. Division in some such cases may be required ultimately if the claims, when cast in correct form, present two distinct subjects-matter.

Where, however, the product and process claims present different inventive ideas and the product may be made by other processes known at the time, it is clear that no mutually-dependent relation exists and there is no reason for joining the product with any particular one of the various processes usable to produce it. Division in such cases will ordinarily be approved, particularly where the process is capable of making other products and the product claimed is one of a known class or type of developed products.

The questions arising with relation to division between combination and subcombinations are many and often difficult to determine. The subcombination to be divisible must be capable of use apart from the combination and in other relations and be of a class of devices which has acquired a distinct position of its own in the art as the subject of separate manufacture or invention. This situation is frequently well evidenced by separate Office classification and fields of search for the two. The subcombination may be a simple element, as a gear, or a complex organization, as a governor, conveyer, or transfer mechanism. In all cases there should be two distinct inventive ideas embodied in mechanism, and it is not believed that in enforcing division the Office can disregard the real character of the invention. Many elements, as governors, coincontrolled operations, clutches, and gages, are usually or necessarily attached to a machine. An invention may lie in one of these devices and be capable of application to many machines; but it is illustrated with a preferred machine. The naming of the illustrated machine or its broad or conventional statement as an element of a claim (in a case where the invention or improvement is obviously or apparently in the element alone and where also claims are directed to the element alone) may raise a question of the form of claims, but should not in the preliminary treatment induce a requirement of division, since division should not be required except where the Office has formed the opinion that there are two real inventions. Division is not the proper remedy for claims improperly drawn but in fact based on one invention.

The principles governing joinder of combination and subcombination claims to compositions of matter are clearly set forth in *ex parte Hentz* (1884, C. D., 6) and are the same as those governing other classes of inventions. As there stated, a composition may contain a certain number of ingredients forming a complete compound, although a lesser number of ingredients may contain the basic and essential part of the invention and contribute most largely to produce the result. The mere fact that one claim names three elements or ingredients and another two or four elements or ingredients is not

sufficient reason to require division. The further questions are to be determined whether the claims are to compositions having the same character and purpose, operating in substantially the same manner, and whether the subcombinations are useful in other relations and have a distinct status in the arts.

Division is a requirement with regard to which the Commissioner has a wide discretion. The Office can take care of searches and classification by cross-referencing, and where hardship to applicants may result or apparent injustice be done benefit of doubt should be given to applicants and requirements which may cause injustice be waived.

The effect of reference to a Law Examiner of second requirements of division it has been hoped would be to reduce to some extent the first requirements by eliminating trivial requirements and requirements unwarranted by the practice and not sustainable on reference, since, obviously, requirements should not be made at all unless they are well founded in the fixed policy of the Office. This expectation has to some extent been realized. There were first requirements of division made in 1915 in 6,393 cases, or 1 in 11.13 new cases acted on, and in 1916 in 5,662 cases, or 1 in 12.01 cases acted on, a reduction from 8.98 to 8.33 per cent.

The Examiners' reports show a wide difference in the number of requirements of division in the first instance in the several examining divisions in proportion to the total number of cases handled and also a divergence in the proportion of those sent up for approval compared with those made. Divergence to a considerable degree is to be expected on account of the widely variant character and complexity of applications in different divisions; but it is believed to be larger than should be the case. During the coming year efforts will be directed to the reduction of first requirements to a more uniform basis.

The policy of requiring submission of requirements of division to a single Law Examiner has been amply justified.

The judicial work of the Office as distinguished from the clerical work of handling the applications is conducted under the direction of forty-three Primary Examiners. Each one must study those arts wherein applications are assigned to him for examination, so that he may be able to form an intelligent judgment as to whether the assistant has properly cited the art bearing on applications as they are filed and so that he may apply the prior art intelligently in determining questions of patentability.

No one should interfere with this work of the Examiner excepting as his conclusions may be reviewed on appeal.

There arise, however, throughout the Office a great variety of questions respecting which the practice of the Office should be uniform, and such questions should be submitted to some one person in order that they may be passed on in accordance with a definite theory and not according to the individual opinions of forty-three different Primary Examiners. It is physically impossible for the Commissioner to do this work, and frequently the decisions arrived at must be reviewed on appeal or petition. Therefore he could not properly direct a decision in the first instance.

The Law Examiners are engaged in supervisory work regarding the inception of interferences, the dissolution of interferences, the prevention of delay in the prosecution of applications, requirements of division, practice in reissuing applications, and as to affidavits under Rule 75. Each one of these subjects requires substantially the entire time of one man. There are other lines of work which can be established with great advantage if the number of Law Examiners can be increased. I have asked for two additional Law Examiners, which have so far been denied me.

CLASSIFICATION.

During the year 1916 nine classes, comprising 1,186 subclasses and containing approximately 28,700 patents, have been revised, fully defined, and published as additional revised classes. Fifty-eight new subclasses have been established in classes previously existing. An estimate based on a count of patents issued in one month indicates that 20,500 patents issued in 1916 were in revised classes. Hence about 49,000 patents went into defined classes last year. Making allowance for classes revised but awaiting preparation for publication and those in process of being revised, it is estimated that 625,000 patents are in defined classes. The total number of classes is now 264, of which 139 are revised and defined and 125 undefined.

In eight of the forty-three examining divisions all classes are defined, in thirteen divisions half or more, in twelve divisions one or more, (less than half,) and in ten divisions none. Thirty-five examining divisions are therefore working with one or more undefined classes or classes subdivided according to the varied notions under which those classes have grown.

At the rate of progress made last year, as shown by classes published, it would take about twenty-five years to complete the reclassification.

Twenty men are at the present time engaged in classifying. Fourteen of these work wholly within the rooms of the Classification Division. Three spend most of their time reclassifying within examining divisions. Two divide their time between examining work and reclassifying. One spends a part of the time in consultation concerning classification work in examining divisions and the rest within the Classification Division. One man's entire time is given to settling the assignment of pending applications the classification of which is in dispute between Examiners. The best method is believed to be to place one classifier or more in each examining division where there is an unrevised class. These men should have practical knowledge of the subjects comprised in these classes and be required to give their entire time and attention to reclassification, under the supervision of a small group of skilled classifiers whose duty it would be

to coördinate results on parallel or otherwise related subjects. A point has now been reached where the broad groups of the useful arts can be seen, into one or another of which all of the varied species will fall. A considerable force of classifiers, if available, could be organized to work within the broad groups, each group under the supervision of a classifier of experience. It is true there would be difficulties due to the constant use of the copies in the examining-rooms for purposes of examination and annoyance to Examiners because of changing disposition of patents cited in their correspondence; but experience in two divisions has shown this method of procedure practicable where the examining force coöperates willingly. Details of procedure would have to be worked out and an increased clerical force provided to take care of the increased output. If one classifier could be placed in each of the thirty-five divisions having unrevised matter, as suggested, the present rate of progress would complete the work in about nine years, and if fifty additional men could be assigned in about six years.

When it is said that the work can be completed in a certain number of years, it is meant that the entire field now occupied by the useful arts may be subdivided and defined. It is believed, however, that the work of classifying must be a continuing one. Classification is a process of induction from known instances. We are now trying to deal in a brief period with all knowledge applied to the useful arts by the human race up to this time, hoping also that we may anticipate by our divisions what is to come in the future. Present knowledge of the useful arts with which we deal is mainly comprised in United States patents bound in volumes of dictionary size covering 1,630 running feet of shelving. Each patent specification is, in greater or less degree, stiff reading-matter that requires strained attention merely for the full comprehension and knowledge of its generic and specific unity and of the several parts which may of themselves be other unities related to thousands of other patents. A first assortment of the arts made from a knowledge of a part of the patents is sure to be imperfect in the light of the knowledge available from a study of all of the patents.

There is, moreover, the question of abstracting and classifying disclosure of the industrial and scientific periodicals, which can be done effectively only by persons having the knowledge or instinct acquired by mechanical or Patent Office training to select the new and useful and discard the stale and useless.

The public search-room of the Patent Office is the greatest library of the useful arts extant, and its facilities for keeping its collection and serving the public are meager and unsanitary. Far less money is expended on it than on any other large library. It is crowded every working-day. It is hoped that relief may be had when the Interior Department gets possession of the building now in process of erection.

TRADE-MARK DIVISION.

The Trade-Mark Division of designs and trade-marks examines applications for patents for designs, applications for registration of trade-marks, and applications for registration of prints and labels. The work in this division has steadily increased. As the reference-files constantly grow larger and the number of applications filed is constantly increasing, the force provided is unable to keep pace with the work and is gradually falling farther and farther behind. This is bad both for the Office and for the commercial public. Applicants are compelled to wait for long periods of time before the first action can be made by the Office, and after response to the Office action is made by the applicant the congestion of the work necessitates another delay on the part of the Office.

I have asked Congress to provide one additional First Assistant and four Second Assistant Examiners for the Trade-Mark Division, so that the important work gradually piling up in the division may be properly disposed of within a reasonable time after its receipt; but I have not succeeded in obtaining any relief, and I therefore must repeat the request.

PAPERS PREPARED BY THE EXAMINING CORPS.

Beginning in the summer of 1914 the corps has been assembled in weekly sessions during the fall and winter months to hear papers prepared by members of the corps in exposition of the law of patents.

All but five of the forty-three divisions have produced papers, and the total number of papers will run close to seventy. The point has been reached where it is difficult to select new subjects for treatment.

These papers have been and are being printed at the expense of the examining corps and such attorneys as have subscribed. The edition started at 500, but has been increased to meet the demand and is now 800.

In addition to the papers read by the corps we have had addresses by Messrs. Melville Church, of the Washington bar; Frederick P. Fish, of the Boston bar; the late J. Nota McGill, of the Washington bar, and Hon. Arthur C. Dennison, United States circuit judge, sixth circuit.

This Office is the experimental station of the patent system. Everything in the way of growth or advance in the law either originates here or must be applied in its early development in granting or refusing patents. The ready response which the corps has made to the call for papers is greatly appreciated as indicating that it is awake to its duty to study the law and to keep abreast with any development therein.

SCIENTIFIC LIBRARY.

The collection of books, periodicals, and foreign patents in the library of the Patent Office is of immeasurable value to the examining corps, inventors, manufacturers, and attorneys, but, owing to the small force available for reclassifying, indexing, and assembling the material at hand, we have not succeeded in putting it in condition for ready reference. The Library contains more than seventy-five thousand volumes of scientific works and more than two million foreign patents. There should be in charge of a library of the importance and value of the Patent Office Library a librarian of wide experience and special training. It is believed that he should be familiar with the art of making searches and should be selected from the examining corps. The present salary, $2,000, is less than the salary of a Second Assistant Examiner. Any member of the corps appointed to the place will seek to be promoted out of it. In order to avoid this difficulty and to keep a well-trained man in the position, the salary of the Librarian should be increased to that of a Principal Examiner, $2,700 a year.

We have in the Library a complete set of German patents not at present available for use, but which would be of great value if bound according to the classification of the German Patent Office. They would fill 2,100 large volumes. The estimate of the Public Printer for binding these patents is about twenty thousand dollars. I have not been able to have this work done with the funds provided for binding. I ask that a special appropriation be made for this purpose.

THE PATENT OFFICE BUILDING.

The crowded condition existing in this Office, which has frequently been called to the attention of Congress, is steadily growing worse. The patent copies kept for sale, to the number of about forty-seven millions, are scattered all over the building. As they are stacked upon wooden shelves and are exposed, the danger of fire is very serious.

The new building for the use of the Department of the Interior now being erected will be ready for occupancy during the year. The removal of the offices of the Secretary of the Interior from the Patent Office building and of the General Land Office from the building now occupied by it to the new building will enable the Patent Office to expand, and thus have relief from the congested conditions, which in some parts of the Office have become almost unendurable.

RULES—ATTORNEYS.

By the act passed April 27, 1916, it is made unlawful for any attorney practising before any of the departments of the Government to use the name of any officer of the Government in advertising his business. This act was passed pursuant to a recommendation in my last annual report and has been made effective, so far as the Patent Office has been concerned, by an amendment to Rule 22 of the Rules of Practice, promulgated May 10, 1916, and effective since July 27 last.

LEGISLATION.

In my last report I made suggestions concerning payment and refundment of fees, a provision for the issuance of *subpœna duces tecum* in interference cases, a provision to require clerks of courts to file in this Office decrees in patent cases, and regulating the recording and certifying of assignments. All of these matters have been presented in a properly drawn bill, and therefore they are not repeated.

EXCHANGE OF PATENT COPIES WITH CANADA.

A joint resolution of Congress, approved January 14, 1915, authorized an exchange of copies of patents with the Canadian Patent Office. Copies of all patents issued since October, 1913, and in addition 88,700 consecutive numbers have been forwarded to the Canadian Patent Office during the past year.

PERSONNEL.

The number of interferences which must be passed upon by the Examiner of Interferences is so large that it is impossible for him personally to examine the records submitted. I therefore ask Congress to provide for a Second Examiner of Interferences, so that the work may be divided, one Examiner taking the contested cases in trade-marks and the other those involving inventions. I also ask an addition of one First Assistant Examiner and four Second Assistant Examiners in Trade-Marks and Designs and that twenty-five First Assistant Examiners and twenty-five Second Assistant Examiners be added to the corps to carry on the work of classification.

The conditions in the Office respecting the examining corps have been steadily growing worse relatively to the amount of work which the Office has to do during the last quarter of a century.

In point of training the showing is excellent. Eighty-five per cent. of the Examiners and Assistant Examiners are graduates of colleges or technical schools. Forty-three per cent. are members of the bar, and more than eleven per cent. in addition have had a thorough course of study in law and more than twenty per cent. in addition are studying law, so that seventy-five per cent. are either trained in law or are in course of training.

But the comparison of the size of the examining corps in the year 1890 with the present time and of the extent of the searches at these two dates presents a deplorable situation.

In 1890 there were 189 members of the examining corps, of whom 30 were Examiners. The Assistant Examiners (who make the searches) numbered 159. Each Assistant had to report on 251 applications per year.

In 1916 the corps numbered 367, of whom 43 were Examiners and 324 Assistant Examiners. Each Assistant must report on 210 applications per year.

The extent of the field of search is fairly represented by the United States patents granted and the available foreign patents. In 1890 there were 443,000 United States patents and 635,000 available foreign patents, making a total of 1,078,000. At the close of 1916 there were more than 1,210,000 United States patents and 1,690,000 available foreign patents, totaling 2,900,000.

From these figures it will appear that the number of applications to be passed upon by each Assistant has been reduced since 1890 by seventeen per cent. The number of available patents through which search must be made is now two hundred and forty

per cent. of what it was in 1890. The force relative to the work which it has to do is therefore less than fifty per cent. to-day what it was in 1890.

In order that such a situation may be met at all it is absolutely essential that the best method of classification should be adopted, the classification completed and kept up to date. Yet when I laid all of these facts before Congress and pointed out, as indicated in an earlier section of this report, that at the present rate of reclassification now going on it could not be completed under twenty-five years I succeeded in obtaining no relief whatsoever. Every recommendation that I made during the past year has been refused.

I can attribute this indifference of the Congress respecting my suggestions only to lack of information as to the situation, and I therefore submit for the consideration of the Congress the following facts:

This Office deals with all of the effort of the world in every field of industry to advance the useful arts. What great interests are involved, not merely of private but of public concern, may be illustrated by a few examples relating to the field of conservation of fuel.

The Commonwealth Edison Co., of Chicago, reports that it has effected a reduction in coal consumption from nearly seven pounds per kilowatt-hour to 2.7 pounds per kilowatt-hour within the last ten years. With this and other economies the cost to the consumer per kilowatt-hour was reduced in 1915 to one-sixth the cost of 1905, and the company in 1912, with a consumption of 1,103,230 tons of coal, produced an amount of electricity which on the basis of the apparatus of 1902 would have required the consumption of 2,650,000 tons.

The Seventy-fourth street station of the Interborough Rapid Transit Co., of New York city, has recently introduced improvements which it is reported have caused a drop of coal consumption from two and one-half pounds per kilowatt-hour to one and one-half pounds per kilowatt-hour.

It is estimated that the new steam plant of the Buffalo General Electric Co. at Tonawanda, N. Y., will generate electricity from coal more cheaply than can be done from the waters of Niagara Falls.

These great economies are due in large measure to the modern automatic stoker and regulator, to furnace construction, to forced draft, to coal-handling machinery, and other inventions.

What has gone on in this particular field has been going on in almost all of the fields of industry known in 1890 and in many which have been discovered since that date.

New arts have been discovered, such as wireless telegraphy, telephony, and control of torpedoes, search-lights and gun-pointing, vacuum-cleaning, X-ray apparatus, liquefaction of air to produce oxygen and nitrogen for commercial use, flying-machines, the moving picture, and mercury-vapor lamps.

Advances have been made of enormous importance in chemical methods and materials, such as catalytic materials used in the manufacture of sulfuric acid and ammonia and in the hydrogenation of organic substances; hydrogenization of oils, whereby new products are obtained from cotton-seed oil; the discovery of cellulose esters; almost innumerable coal-tar products useful in pharmacy, dyeing, and photography; gas manufacture, such as acetylene gas; evaporation and drying of milk; gasolene manufacture; fixation of atmospheric nitrogen, with resultant production of synthetic ammonia and nitric acid; rapid vulcanizing, glass-making, manufacture of synthetic resins, recovery of potash from silicates for the manufacture of fertilizers.

By way of illustration I will cite certain facts relating to bread-making, reported to me by the Mellon Institute. For a period of some five years an industrial fellowship has been maintained there in which trained scientists have devoted their time to the study of methods of bread-making, with the object of producing better bread. Certain of the processes developed have been patented and put into operation on a large scale, and it is found that they not only produce better bread but effect great economies. Better nourishment of the yeast has reduced the amount required in raising the bread and maturing the dough, with consequent lessening of the amount of flour and sugar which is used up by the yeast and converted into carbon dioxid and alcohol. The saving of these and other economies to those employing the novel processes are estimated to amount to over one million dollars per annum. This estimate is based upon the present high scale of prices, but on any scale of prices would be enormous.

The economy is illustrated in another way, as follows: The average flour production for the State of Kansas is about twenty million barrels, or, roughly, four billion pounds. The saving of flour effected is about two per cent., which would amount to 80,000,000 pounds, or 400,000 barrels, annually on the production of this one State.

In the field of electrical engineering there has come the electric heater, the electric elevator, the supplanting of cable street-railways by electric street-railways, the electrification of long steam-railway lines, train control, storage-battery developments, polyphase and high-voltage systems of electric transmission, electrodynamic phase-transformers, long-distance transmission in telephones, and the development of the automatic switchboard.

I personally know of two patents in the electrical field, both about to expire, each of which shortly after it was granted was sold for a large sum. Neither has been the subject of litigation, yet neither could at any time since the purchase have been bought for many times the sum paid for it.

In the field of farming implements there have come the tractor-engines, apparatus for digging irrigation and drainage canals, beet-harvesters, corn and cotton planters, deep-soil disk plows, cleaning and manipulation of cotton and wool fiber, and other great advances.

But what is true of these arts is true of innumerable others, such as spinning, weaving, manufacture of steel, reinforced concrete for bridges and the like,

the steel-frame building, stoneworking machinery, coal-mining machinery, and oil-drilling machinery.

The automobile has been almost wholly developed since 1890, and there have been vast advances in the construction of internal-combustion engines, water-purification methods and filters, fire-extinguishers, match-making, basket and barrel making machines, electrical welding, calcium-carbid making, sound-reproducing machines, flotation processes of concentrating ores, flour making and refining, shoe-making machinery.

In fact, the list might be extended almost indefinitely, and the prospect is that as great or greater advances and discoveries will be made in the immediate future.

All of this vast development comes before the Office to be passed on, not by a group of men with time to study and keep abreast of what is being done, but by men whose entire effort is devoted merely to the task of keeping up with the enormous flood of applications which they must pass on, and the mistakes and oversights, of which under the circumstances there are inevitably many, cause enormous disturbance of business.

Our admirable system of granting patents on examination was established primarily to safeguard the public interest by the avoidance of unwarrantable grants. It was originated by this Government eighty years ago. At that time the system, both in this country and abroad, was to make grants on registration.

Since we adopted our present system in 1836 it has been adopted by other enlightened industrial nations.

The Congress by withholding adequate appropriations to this Office is, in effect, transforming our system into the old system of granting patents on registration, while at the same time the safeguards of a registration system necessary to the public interest are not provided.

After a most careful study of the conditions in the Office during the past three years I feel no doubt that it would pay the public, without regard to the fees collected, if the amount spent on the Office were doubled.

PROTECTION OF DESIGNS.

Since my last annual report there has been introduced in Congress House Bill 17290, which was reported favorably by the Committee on Patents of the House in Report No. 1125 after extensive public hearings. The same bill was introduced in the Senate, Senate No. 6925, and it is now under consideration by the Committee on Patents of the Senate, which has also had public hearings. In this situation I have thought it proper to express my views respecting this bill.

Our present Designs Act requires that a design to be patented shall be the product of invention. In many fields of designing differences which any designer would recognize as creating a new design are so slight that it is difficult to say they involve invention. A design is more exactly the work of an author, as "author" has been construed by the Supreme Court in sustaining copyrights on photographs, statuary, and the like. The change proposed is radical, but is believed to be based on sound principles.

The general scheme of the bill is in line with the statutes of leading foreign countries for the protection of designers and of manufacturers who employ designers.

The offense committed by an infringer according to the theory of this bill is copying, as is made clear by section 14.

Most of the objections which have been urged against the bill and which have not been removed by amendment thereof seem to me to be based on failure to appreciate the fact that what the bill prohibits is copying registered designs. For example, where the alleged infringer has developed the design independently and is therefore not a copyist this would not result in a decree for the registrant under this bill.

An objection raised to the provision permitting registration of designs in series should be noted.

It has been objected that under the provisions of this bill 100 designs could be registered for one year, at the end of which time one design could be registered for full term provided in section 10 and the other ninety-nine are registered for one year for a fee of one dollar, and so in indefinitely. Since no examination is provided for, I think that this criticism is in accordance with the terms of the bill. I do not, however, regard it as objectionable, for the reason that before any registrant can obtain benefit from his registration against the public he must register or commercially show or publish the design which he seeks to enforce, and he may then hold only a copyist thereof.

Another objection that has been urged is that these series registrations are secret; but to this objection I think the same answer applies—namely, that a registrant can bring an action against any member of the public only after he has reregistered the particular design upon which he is proceeding or has otherwise commercially shown or published it, and then only against a copyist thereof.

Under the bill no secret registration will constitute an anticipation of a subsequent original design by another.

For these reasons no harm is seen which can result to the public by reason of the secrecy of the series designs.

On the other hand, to throw open to the public all of the designs a designer or manufacturer may develop, out of which he hopes to select certain designs to try out for public exploitation, would be to place his entire development at the disposal of any one who desired to follow him instead of evolving original designs.

The International Copyright Act has operated to diminish the use by publishers in this country of translations of foreign literary productions and has increased greatly and conserved our market for the output of our authors. It is my general belief that the passage of this act would in like manner operate

powerfully to improve the designing industry in this country.

The belief entertained by many people that one country can benefit by refusing protection to inventors and authors, and thereby acquire without cost the creative product of the rest of the world, has not been justified by experience. It is a matter of rather recent history that Switzerland and Holland, after trying the policy of refusing all patents for years upon this theory, have concluded to abandon it and have enacted patent statutes.

I believe that the bill under discussion is sound in its general features and should be enacted into law.

I have suggested a few amendments to the Chairmen of the Committees on Patents. I have not suggested the omission of the proviso beginning page 1, line 13, and ending page 2, line 4, that the rights be limited to citizens of the United States or of foreign countries granting reciprocal rights, because I believe that the bill would, if this proviso were omitted, meet with opposition not now directed against it; but this proviso is out of accord with our general policy as to patents, and I see no sufficient reason for so limiting protection in the field of designs.

APPLICATIONS FILED BY ATTORNEYS.

Under date of September 15, 1914, I wrote to a firm of attorneys practising before the Office a letter, subsequently published in the *Scientific American* of September 26, 1914, (p. 246,) as follows:

I am accepting two applications filed by you as attorneys to-day, wherein the inventor's name to the petition and specification is signed by you as attorneys and the oath is made by a member of your firm. The time for filing these applications expires under the convention to-morrow. Therefore, in filing these applications in the form in which you have presented them, you are doing all that you can to save your client's rights, and in permitting them to be filed and giving them a serial number and date of filing of to-day I am doing all I can with the same end in view. If this should not prove to be effective the loss must be attributed to the troubled conditions of Europe and not laid at your door or that of the Office.

It will be necessary before patents are granted that applications be filed, executed by the inventor himself, as provided in section 4888. Whether the applications to be filed can be tied to the applications which you are filing to-day under the provisions of section 4887 is, of course, a matter which only a court of last resort can determine. *Ex parte Tropenas* (90 O. G., 749) to the contrary notwithstanding, I think it a possible construction of section 4887 that its requirements may be satisfied by the filing of applications executed by an attorney.

I hope however in case there are a number of applications executed by attorneys that Congress may be induced to validate patents granted or to be granted upon proceedings indicated above.

Pursuant to this letter there have been filed in this Office 370 applications signed by attorneys. In 214 of these applications substituted papers signed by the inventor have since been received. From among these 214 applications 74 patents have been granted, as follows: Patents Nos. 1,125,794, 1,128,972*, 1,128,973*, 1,136,521, 1,140,137, 1,140,296, 1,142,222, 1,144,192*, 1,144,905, 1,148,420, 1,150,414, 1,150,682, 1,151,928, 1,153,774, 1,158,821, 1,154,933, 1,156,295, 1,158,269, 1,159,264, 1,160,268, 1,161,147, 1,161,161, 1,161,254, 1,161,723, 1,161,744, 1,161,866, 1,162,226, 1,162,496, 1,165,128, 1,167,341*, 1,168,748, 1,169,514, 1,169,652, 1,172,270, 1,172,407, 1,174,772*, 1,176,589, 1,179,412, 1,180,100, 1,180,784, 1,180,785, 1,181,863, 1,182,366, 1,182,863*, 1,186,159, 1,187,504, 1,188,922, 1,190,021, 1,190,022, 1,190,328, 1,190,659, 1,191,271, 1,191,272, 1,192,936, 1,193,109, 1,193,303, 1,193,548, 1,194,289, 1,194,312, 1,196,417, 1,199,781, 1,201,763, 1,202,608, 1,204,353, 1,205,007, 1,205,197*, 1,206,266*, 1,208,405, 1,211,399, 1,211,361*, 1,211,970, 1,212,062, 1,213,082, and 1,214,354.

In addition to these patents three applications which have been allowed and the fees paid therein will result in patents on February 6 and one application on February 20. Eleven other applications have reached the stage of allowance where they await only the payment of the final fee before the patent will be granted, and three applications have become forfeited.

In the foregoing list the patents which are starred, nine in number, were granted upon applications wherein the completed papers, properly executed by the applicants, were filed more than twenty-one months after the filing of a foreign application. Whether the foreign patent had been granted at the date of the granting of the patent in this country has not been ascertained, owing to failure to receive copies of foreign patents.

These applications were accepted in good faith under conditions which were beyond control, and it is recommended that Congress validate the patents granted and to be granted.

It is believed that respecting the sixty-five patents contained in the foregoing list where completed papers were filed within twenty-one months of the date of the foreign application the act of August 17, 1916, has been effective to validate them.

Respectfully submitted.

THOMAS EWING,
Commissioner of Patents.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Adams patent, No. 923,235, for a joint for a metal bedstead, *Held* void for lack of patentable novelty and invention. *Adams* v. *Boston Store*, 237 Fed. Rep., 371.

(U. S. C. C. A.) The Akers patent, No. 772,309, for auxiliary steering mechanism for vessels, *Held* valid, but not infringed. *Akers Steering Gear Co.* v. *Great Lakes Engineering Works*, 237 Fed. Rep., 359.

(U. S. C. C. A.) The Hanger patent, No. 764,051, and the Hanger and Thomas patent, No. 792,703, each for an improvement in garden hand-plows, *Held* not infringed. *Leader Plow Co.* v. *Bridgewater Plow Co.*, 237 Fed. Rep., 376.

(U. S. D. C.) The Lanston patent, No. 878,408, for manufacture of cellular boards, *Held* not anticipated, valid, and infringed. *Corrugated Paper Patents Co.* v. *Paper Working Mach. Co., of New York*, 237 Fed. Rep., 380.

(U. S. C. C. A.) The Plym patent, No. 852,450, for store-front construction, *Held* valid and infringed. *Toledo Plate & Window Glass Co.* v. *Kaucneer Mfg. Co.*, 237 Fed. Rep., 364.

(U. S. D. C.) The Shipman patent, No. 783,902, of February 28, 1905, and reissued patent, No. 13,903, of April 20, 1915, for a carbureter, *Held* limited to a device where the closing movement of the valve was retarded by a dash-pot and as limited not infringed by defendant. *Shipman* v. *Frank*, 237 Fed. Rep., 395.

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 30, 1917.

Wm. Schutte & Co., their assigns or legal representatives, take notice:

A cancelation proceeding has been instituted by this office upon the application of Abraham A. Malouf, of 146 S. W. Temple street, Salt Lake City, Utah, to effect the cancelation of the trade-mark registration of Wm. Schutte & Co., of Barmen, Rhenish Prussia, Germany, registered January 6, 1885, No. 11,848, and the notice of such proceeding sent by registered mail to said Wm. Schutte & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Wm. Schutte & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 1, 1917.

The Bell Hosiery Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Rice-Stix Dry Goods Company, 1000 Washington avenue, St. Louis, Mo., for registration of a trade-mark and trade-mark registered November 24, 1908, No. 71,425, to The Bell Hosiery Company, 2333–45 North Mascher street, Philadelphia, Pa., and a notice of such declaration sent by registered mail to said The Bell Hosiery Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Bell Hosiery Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 25, 1917.

Albert Manley Stockwell, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Burnham-Munger-Root Dry Goods Co., of Eighth and Broadway, Kansas City, Mo., and the application of The Greenwald & Reich Co., of 1321 West Sixth street, Cleveland, Ohio, for registration of a trade-mark and trade-mark registered June 26, 1894, No. 24,913, to Albert Manley Stockwell, of Leominster, Mass., and a notice of such declaration sent by registered mail to said Albert Manley Stockwell at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Albert Manley Stockwell, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 25, 1917.

M. Ballin & Sons, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Bittner, Hunsicker & Co., of 23–25 North Seventh street, Allentown, Pa., for registration of a trade-mark and trade-mark registered May 31, 1898, No. 31,608, to M. Ballin & Sons, of 102 Franklin street, New York, N. Y., and a notice of such declaration sent by registered mail to said M. Ballin & Sons at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said M. Ballin & Sons, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 23, 1917.

Joseph P. R. James, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Standard Oil Company, of Richmond, Cal., for registration of a trade-mark and trade-mark registered December 5, 1899, No. 33,861, to Joseph P. R. James, of Clinton, Iowa, and a notice of such declaration sent by registered mail to said Joseph P. R. James at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph P. R. James, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

F. W. H. CLAY, *Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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ISSUE OF FEBRUARY 20, 1917.

Patents	873—No.	1,216,257 to No.	1,217,129, inclusive.
Designs	42—No.	80,331 to No.	80,372, inclusive.
Trade-Marks	97—No.	115,472 to No.	115,568, inclusive.
Labels	20—No.	19,901 to No.	19,920, inclusive.
Prints	8—No.	4,621 to No.	4,628, inclusive.
Reissues	4—No.	14,260 to No.	14,263, inclusive.
Total	1044		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	.....	North Carolina	2	.....
Arizona	.....	.....	North Dakota	5	.....
Arkansas	3	.....	Ohio	54	9
California	47	4	Oklahoma	6	.....
Colorado	7	.....	Oregon	5	1
Connecticut	25	2	Pennsylvania	68	8
Delaware	.....	.....	Rhode Island	8	2
Florida	4	.....	South Carolina	2	.....
Georgia	3	.....	South Dakota	4	.....
Idaho	8	.....	Tennessee	10	.....
Illinois	101	14	Texas	12	2
Indiana	24	2	Utah	2	.....
Iowa	11	2	Vermont	1	1
Kansas	12	1	Virginia	7	2
Kentucky	9	.....	Washington	15	.....
Louisiana	6	.....	West Virginia	4	1
Maine	7	.....	Wisconsin	22	5
Maryland	9	5	Wyoming	2	1
Massachusetts	51	5			
Michigan	25	5	Alaska, District of	.....	.....
Minnesota	20	2	Canal Zone	.....	.....
Mississippi	2	.....	District of Columbia	5	.....
Missouri	23	6	Hawaii Territory	1	.....
Montana	4	1	Philippine Islands	.....	1
Nebraska	3	1	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	2	.....	U. S. Navy	1	.....
New Jersey	35	7			
New Mexico	.....	.....	Total to residents of the United States	831	123
New York	147	33			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	1	.....	Natal	.....	.....
Austria-Hungary	5	1	Netherlands	5	.....
Belgium	1	.....	New South Wales	1	.....
British India	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	1	.....
Canada	15	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	3	.....
Cuba	.....	.....	Scotland	2	.....
Denmark	1	.....	South Australia	.....	.....
England	19	.....	Spain	.....	.....
Finland	.....	.....	Sweden	4	.....
France	7	.....	Switzerland	5	1
Germany	11	.....	Transvaal	.....	.....
Guatemala	.....	.....	Victoria	.....	.....
India	.....	.....	Wales	.....	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	4	.....			
Japan	1	.....	Total to residents of foreign countries	83	2
Mexico	.....	.....			

Notice—Assistant Examiner Examination.

The Civil Service Commission has announced an open competitive examination for the position of Assistant Examiner in the Patent Office on March 14, 15, and 16, 1917. Qualified persons are urged to enter this examination. Entrance salary, $1,500 per annum.

Application blanks and information as to where the examination will be held may be obtained from the Civil Service Commission, Washington, D. C.

Disclaimers.

1,135,130.—*Thomas E. Murray*, New York, N. Y. PROTECTIVE SWITCH-BOX. Patent dated April 13, 1915.

Disclaimer filed February 12, 1917, by the patentee.

Enters this disclaimer—

"To said claim 8, which claim is as follows, to wit:

"A protective connection box divided into two compartments, a switch inclosed in one of said compartments, a door affording access to the other compartment only, exposed means carried by said door for manually opening and closing the same, and mechanism actuated by said door for controlling said switch to open circuit coincidently with the opening of said door."

1,150,992.—*William C. Buhles*, Alameda, Cal. CLOSING-MACHINE. Patent dated August 24, 1915. Disclaimer filed February 7, 1917, by the assignee, the *Aluminum Seal Company*.

Enters this disclaimer—

"To that part of the claim in said specification which is in the following words, to wit:

"Claims numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 21, 32, and 33 of the said Letters Patent as issued."

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 16, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 12	Dec. 8	321
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Sept. 5	Dec. 26	556
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Jan. 9	Jan. 13	85
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Nov. 16	Jan. 25	249
167	5. Bookbinding; Harvesters; Jewelry; Music	Nov. 2	Jan. 6	279
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Oct. 19	Jan. 3	292
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Oct. 2	Nov. 24	650
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Aug. 1	Dec. 1	1117
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Aug. 17	Jan. 5	531
235	10. Carriages and Wagons; Spring Devices	Aug. 28	Jan. 17	885
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 18	Feb. 3	77
222	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Nov. 13	Feb. 2	553
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Oct. 26	Jan. 17	513
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Oct. 27	Dec. 22	295
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Jan. 19	Feb. 2	201
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Oct. 2	Jan. 8	615
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Nov. 14	Jan. 4	207
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Dec. 27	Jan. 3	209
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Aug. 22	Nov. 1	443
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 24	Jan. 31	159
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Nov. 6	Jan. 12	304
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Sept. 12	Dec. 2	496
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Sept. 5	July 25	360
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Oct. 7	Jan. 2	353
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 8	Jan. 22	140
106	26. Electricity, Generation; Motive Power	June 1	Dec. 4	620
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 25	Jan. 17	242
65	28. Internal-Combustion Engines	Sept. 15	Nov. 18	518
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Oct. 2	Dec. 9	352
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 18	Jan. 25	393
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Sept. 23	Dec. 11	287
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	July 10	Jan. 22	806
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building-Structures; Paving.	Oct. 3	Jan. 9	347
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Aug. 21	Dec. 1	300
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Sept. 13	Jan. 27	643
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Oct. 18	Jan. 24	691
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	June 28	Dec. 20	808
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Jan. 27	Jan. 29	122
221	39. Water Distribution	Sept. 18	Dec. 29	328
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Oct. 31	Jan. 18	526
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Oct. 20	Jan. 4	438
344	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	July 29	Jan. 4	300
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 20	Nov. 21	126

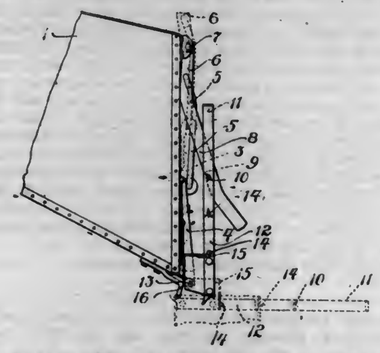
Oldest new case, June 1; oldest amended, July 25.
Total number of applications awaiting action 17,945

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 2	Feb. 1	763
	Designs	Dec. 11	Jan. 22	355
	Labels and Prints	Feb. 3	Feb. 6	90

PATENTS

GRANTED FEBRUARY 20, 1917.

1,216,257. BAG-FILLING MECHANISM. EMIL F. ANDERSON, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Sept. 25, 1915. Serial No. 52,695. (Cl. 83—26.)



1. In a bag filling mechanism, a reservoir having an outlet, outlet opening and closing mechanism including an operating lever, and a bag holder pivotally supported beneath said outlet engageable with said lever when in inoperative position and movable into operative position upon manipulation of said lever.

2. In a bag filling mechanism, a reservoir having an outlet, outlet opening and closing mechanism including an operating lever, and a bag holder pivotally supported beneath said outlet engageable with said lever when in inoperative position and movable into operative position upon manipulation of said lever and prior to the opening of said outlet.

3. In a bag filling mechanism, a reservoir having an outlet, outlet opening and closing mechanism including a pivoted operating lever having a notch therein, and a bag holder pivoted on said reservoir beneath said outlet and having a portion at one side of its pivot engageable with the notch in said lever when said bag holder is raised to inoperative position.

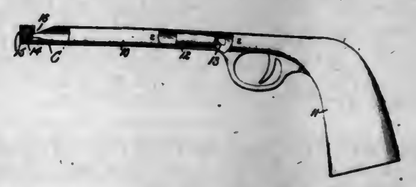
4. In a bag filling mechanism, a reservoir having an opening therein, sliding door mechanism for said opening, a lifting lever for said mechanism pivoted to said reservoir above said door and operatively connected to the latter, a bag holder pivoted to said reservoir beneath said door, and means whereby said bag holder may be locked in inoperative position by said lifting lever.

5. In a bag filling mechanism, a reservoir having an outlet therein, outlet opening and closing means including a lever pivoted on said reservoir above said outlet, said lever having a notch in one end thereof, and a bag holding member pivoted to said reservoir beneath said outlet having a laterally extending handle member engageable with said notch when said bag holding member is raised to vertical position.

[Claims 6 and 7 not printed in the Gazette.]

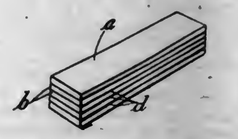
1,216,258. TOY CAP-PISTOL. JOHN ANDERSEN, Brooklyn, N. Y. Filed June 13, 1916. Serial No. 103,481. (Cl. 42—54.)

The herein described toy percussion cap pistol, the same comprising an integral barrel and butt handle formed of sheet metal, an anvil secured in the muzzle end of the barrel by means of inwardly bent portions of the metal, said barrel being provided at its upper portion with an opening just back of the anvil, the metal of the barrel



at the breech portion being bent inwardly from opposite sides forming an abutment perpendicular to the axis of the barrel, and a hammer slidable freely in the barrel between the abutment and the anvil.

1,216,259. PACKAGING OF SEPARATELY-WRAPPED ARTICLES IN A PACKAGE. HARRY Y. ARMSTRONG, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed Oct. 13, 1913. Serial No. 794,863. (Cl. 206—46.)



1. A package of the character described, comprising a plurality of thin, flat units each consisting of a wrapped article, said units being stacked with their flat faces in contact with each other, and adhesive material between the contiguous faces of said units covering only a relatively small part of each of said faces and serving to secure the units together to form a package.

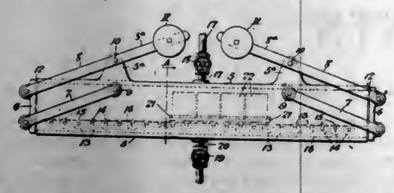
2. A gum package of the character described, comprising a plurality of thin flat units each consisting of a stick of gum inclosed in a wrapper, said units being stacked with their flat faces in contact with each other, and relatively thin strips of adhesive material between the contiguous faces of said units covering only a relatively small part of each of said faces and serving to secure the units together to form a package.

1,216,260. VACUUM-BOX FOR FRUIT-CANNING. LEWIS E. ARNOLD, Honolulu, Hawaii. Filed Aug. 5, 1914. Serial No. 855,316. (Cl. 99—8.)

1. A vacuum-box for fruit canning comprising, a long rectangular shaped box, a door for each end, a plurality of rollers arranged transversely and removably over the bottom of the box and upon which trays bearing open top filled cans may be rolled into and out of said box, means for producing a vacuum within the box, and means for breaking this vacuum, substantially as described.

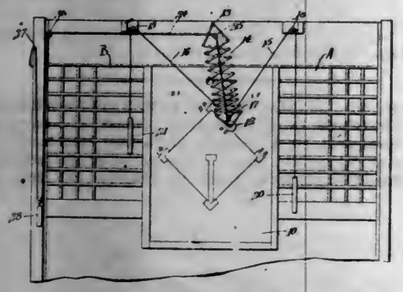
2. A vacuum-box for fruit canning comprising, a long rectangular shaped box, a door for each end hingeably supported between the outer ends of arms pivoted to the box, two bars provided with notches and placed longi-

tudinally within the box, rollers adapted to turn in said notches, and means for producing and for breaking a vacuum within the box, substantially as described.



3. A vacuum-box for fruit canning comprising, a long rectangular shaped box, a door for each end hinged between the outer ends of arms pivoted to the box, two bars provided with notches, rollers adapted to turn trunnioned in said notches, means for producing and for breaking a vacuum within the box, and means for counterweighting said doors, substantially as described.

1,216,261. GAME-EXHIBITING DEVICE. WILLIAM G. ASHLEY, New Bedford, Mass. Filed Nov. 17, 1915. Serial No. 62,042. (Cl. 235—1.)



1. In an apparatus for exhibiting the progress of games and sports, the combination of an upright exhibition board having on its front and rear sides registering representations of a game field, an object comprising magnetic material, said object being a replica of the movable member of the game represented and being movable over the game field on the front of the board in any direction and to any point thereon to illustrate the progress of the game, and magnetic means movable in any direction and to any point over the game field on the rear of said board and adapted to control the movements of said object in accordance with the actual movements of the movable member of the game represented.

2. In an apparatus for exhibiting the progress of games and sports, the combination with an upright member having on its front surface a representation of a game field, an object of magnetic material representing a member used in the game, said object being movable over said field on the front of said upright member in the progress of the game, an electro-magnet at the rear side of said upright member for controlling the movements of said object, said object being free to move horizontally and vertically to any position on the front of said upright member and being only subject to the influence of the force of said magnet and gravity, and conductors for leading the current to said electro-magnet.

3. In an apparatus for exhibiting the progress of games and sports, the combination of an upright member having on its front surface a representation of a game field, an object of magnetic material representing a device used in the game, said object being movable over the front of said field to represent the progress of the game, said member also having on its rear surface a representation of a game field corresponding to the one on the front surface and reversed with respect thereto, and magnetic means at the rear of said member for controlling the movements of said object and adapted to cause said object to move at different speeds and in different directions.

4. In an apparatus for exhibiting the progress of a base ball game, the combination with a rigid upright plate having on its front and rear sides unobstructed surfaces provided with corresponding and registering representations of base ball fields, a ball comprising magnetic material and representing a base ball, said ball being movable over the base ball field on the front of said plate, and a magnet movable over the base ball field on the rear of said plate and adapted to control the movements of the ball on the opposite side of said plate and move the same freely to any position on the base ball field illustrated, to represent the successive movements of the ball in the progress of the actual game which is illustrated.

5. In an apparatus for exhibiting the progress of a base ball game, the combination with a rigid upright plate having on its front and rear surfaces corresponding and registering representations of base ball fields, a ball comprising magnetic material and representing a base ball, said ball being movable over the base ball field on the front of said plate, an electromagnet movable over the base ball field on the rear of said plate and adapted to control the movements of the ball on the opposite side of said plate to represent the successive movements of the ball in the progress of the actual game which is illustrated, and means for sustaining said magnet in any desired position to thereby sustain the ball at any desired point on the base ball field illustrated.

[Claims 6 to 9 not printed in the Gazette.]

1,216,262. GARMENT-FASTENER. CHRISTOPHER F. BACKMYER, Chicago, Ill. Filed Oct. 15, 1915. Serial No. 55,991. (Cl. 24—224.)



1. In a garment fastener, an eye member thereof comprising a single sheet metallic blank and a projecting tongue extending therefrom, there being a shorter tongue extending from the opposite side of said blank, both of said tongues being bent back under said blank with the said shorter tongue preventing downward movement of said first named tongue, there being an opening through said blank above said first named tongue.

2. In a garment fastener, an eye member therefor comprising a single sheet metallic blank having an opening therethrough and a tongue extending from one margin of said blank, a shorter tongue extending from the opposite margin of said blank, both of said tongues being bent back under said blank, with said shorter tongue supporting the free end of said first named tongue, said first named tongue having a depression in the upper face thereof beneath said opening in said blank.

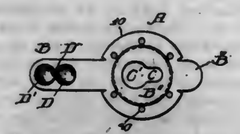
3. In a garment fastener, an eye member therefor comprising a single sheet metallic blank having an opening therethrough and a tongue extending from one margin of said blank, a shorter tongue extending from the opposite margin of said blank, both of said tongues being bent back under said blank, with said shorter tongue supporting the free end of said first named tongue, said first named tongue having a depression in the upper face thereof beneath said opening in said blank.

4. In a garment fastener, an eye member therefor comprising a single sheet metallic blank possessed of oppositely extending tongues bent back under said blank, with one of said tongues adapted to support the other of said tongues, there being an opening through said blank.

5. In a garment fastener, an eye member therefor comprising a single sheet metallic blank possessed of oppositely extending tongues bent back under said blank toward each other, with one of said tongues adapted to support the other of said tongues, there being an opening through said blank, and in one of said tongues a transverse, conical, depression, said depression being underneath the opening in the blank.

[Claim 6 not printed in the Gazette.]

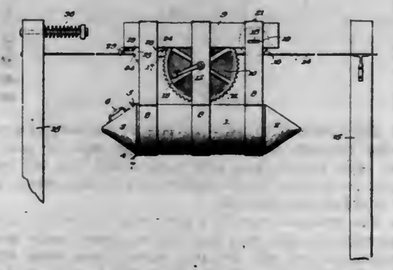
1,216,263. GARMENT-FASTENER. CHRISTOPHER F. BACKMYER, Chicago, Ill. Filed Oct. 15, 1915. Serial No. 55,992. (Cl. 24—224.)



1. An eye-member for a garment or similar fastener, comprising a circular disk, said disk having its marginal edges underturned, there being in said disk an annular, raised, flat, portion, there being in said flat portion a slot, said slot terminating in an enlarged opening, and a member underneath said circular disk, said member having a depression in its face directly below said enlarged opening, and a further depression adjacent to the first-named depression, directly below said slot, there being a bridge-wall between the two depressions, said member being resilient.

2. An article of the class described comprising a disk like member having a slot terminating in an enlarged opening, and a tongue integrally formed with said member, bent back under said member, and having the free end of said tongue supported by said member, said tongue having a depression in its upper face directly below said enlarged opening and another depression in its upper face directly under said slot, and a bridge wall between said depressions.

1,216,264. MAIL-DELIVERING APPARATUS. HUGH BACON, Jonesboro, Tenn. Filed June 9, 1916. Serial No. 102,749. (Cl. 104—146.)



The combination with a track, a carrier mounted for travel thereon, a spring operated driving gear mounted on the carrier, track engaging means mounted on the carrier, a pinion having fixed relation with one of the wheels, a reverse pinion in mesh with the first mentioned pinion, pivotally supported arms in which the respective pinions are mounted on opposite sides of the pivot, a lever mounted on the pivot, and connections between said lever and arms on the respective sides of the pivot to operate the arm sections in reverse directions to move either pinion into engagement with the spring operated driving gear.

1,216,265. INSULATING COMPOSITION. LEO H. BAEKELAND, Yonkers, N. Y., assignor to General Bakelite Company, New York, N. Y., a Corporation of New York. Filed Oct. 17, 1913. Serial No. 795,779. (Cl. 106—22.)

1. An electrical insulating composition comprising an initial phenolic condensation product capable of transformation by simple heating into an infusible body, and a solvent therefor, said solvent being of the hydro-carbon type, and characterized by its high insulating value, its immiscibility with water, and its capability of dissolving the said initial condensation product after the same has been substantially freed from uncombined phenols.

2. An electrical insulating composition comprising an initial phenolic condensation product capable of transformation by simple heating into an infusible body, and a chlorinated-hydrocarbon solvent therefor, said solvent characterized by its high insulating value, its immiscibility with water, and its capability of dissolving the said initial condensation product after the same has been substantially freed from uncombined phenols.

3. An electrical insulating composition comprising an initial phenolic condensation product capable of transformation by simple heating into an infusible body, and a solvent therefor, containing neutral oil.

4. A composition comprising an amorphous product resulting from the reaction of phenols and anhydro-formaldehyde-anilin, said product being free from uncombined formaldehyde and capable of transformation by simple heating into an infusible body and an organic solvent therefor.

5. A composition comprising an amorphous product resulting from the reaction of phenols and anhydro-formaldehyde-anilin and an organic solvent therefor, said solvent being of the hydro-carbon type, and characterized by its high insulating value, its immiscibility with water, and its capability of dissolving the said initial condensation product, after the same has been substantially freed from uncombined phenols.

[Claims 6 to 10 not printed in the Gazette.]

1,216,266. INSULATING COMPOSITION. LEO H. BAEKELAND, Yonkers, N. Y., assignor to General Bakelite Company, New York, N. Y., a Corporation of New York. Original application filed Oct. 17, 1913, Serial No. 795,779. Divided and this application filed Jan. 26, 1915. Serial No. 4,554. (Cl. 106—22.)

1. An electrical insulating composition comprising an initial phenolic condensation product capable of transformation by simple heating into an infusible body, and a chlorinated-hydrocarbon solvent therefor, said solvent characterized by its high insulating value, its immiscibility with water, and its capability of dissolving the said initial condensation product after the same has been substantially freed from uncombined phenols.

2. An electrical insulating composition comprising an initial phenolic condensation product capable of transformation by simple heating into an infusible body, and a chlorinated-hydrocarbon solvent therefor, said solvent characterized by its high insulating value, its immiscibility with water, and its capability of dissolving the said initial condensation product after the same has been substantially freed from uncombined phenols, and having a boiling-point not exceeding that of water.

3. A composition comprising an initial phenolic condensation prduct capable of transformation by simple heating into an infusible body, and symmetrical dichlorethane.

4. A composition comprising a reaction product of phenols and anhydro-formaldehyde-anilin and a chlorinated-hydrocarbon solvent therefor.

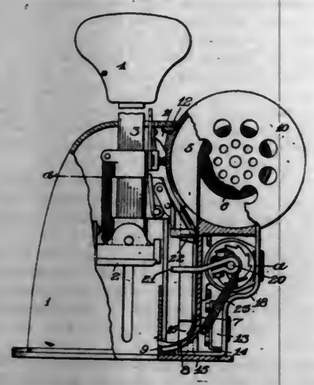
5. A composition comprising a reaction product of phenols and anhydro-formaldehyde-anilin, transformable by simple heating into an infusible body, and a chlorinated-hydrocarbon solvent therefor.

[Claims 6 to 8 not printed in the Gazette.]

1,216,267. COUNTER MECHANISM FOR STAMP-AFFIXERS. WESLEY JOSEPH BALKWILL, Rochester, N. Y., assignor to Multipost Company, Rochester, N. Y., a Corporation of New York. Filed May 1, 1913. Serial No. 764,014. (Cl. 216—11.)

1. The combination with a stamp affixer mechanism comprising a movable affixing member, and a detachable stamp container, interchangeable with other like elements, of a counter mechanism carried upon said stamp container

and arranged to be operated by the movement of said affixing member in one direction, when said container is in operative position on the stamp affixer mechanism.

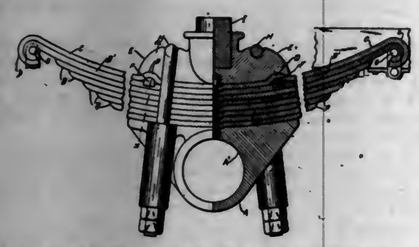


2. The combination with a stamp affixer comprising a frame and a reciprocating affixing member, of a plurality of elements interchangeable one with another and each adapted to be applied to said frame and to contain different stamps, and a counter mechanism on each of said elements, for keeping tally of the number of stamps ejected therefrom, having an actuating portion adapted to be moved by the operation of the affixing member, when said element is applied to the frame.

3. The combination with a stamp affixer comprising stamp feeding mechanism and a movable affixing member, of a plurality of stamp containers each adapted to cooperate separately with the affixer and to contain stamps of different denominations and a counter carried by each container and means for operating said counters arranged on the affixer and coöperating with them when their respective containers are applied to said affixer.

4. The combination with a stamp affixer having a movable member and a detachable stamp case, of a counter mounted on the case for recording the number of stamps discharged therefrom having an operating member and means carried by the movable member of the affixer for actuating said operating member.

1,216,268. VEHICLE-SPRING. PETER J. F. BATENBURG, Clintonville, Wis., assignor to Four Wheel Drive Auto Company, Clintonville, Wis., a Corporation of Wisconsin. Filed Aug. 21, 1915. Serial No. 46,613. (Cl. 267—34.)



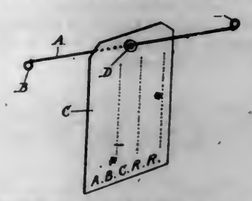
1. A spring leaf, provided with frame engaging and supporting members at its respective ends, and having projections on one face thereof, at points between said ends and the central portion, in combination with a clamping member, suitably socketed to receive said projections and clamping stirrups engaging the clamping member between said projections and the central portion of the spring.

2. The combination, with a set of ordinary spring leaves, arranged in a superposed series, of an upper leaf, provided with upwardly projecting bends on each side of its center, which form transverse ribs on its upper surface and transverse grooves on its lower surface, a key pin extending through each of said transverse grooves between said leaf and the upper leaf of the series below, and means for clamping the spring leaves between upper and lower clamping members, the upper of said members being recessed to receive the ribs formed in the upper leaf, substantially as described.

3. The combination, with a set of ordinary spring leaves, arranged in a superposed series, of an upper leaf, provided with upwardly projecting bends on each side of its center, which form transverse ribs on its upper surface and transverse grooves on its lower surface, a key pin extending through each of said transverse grooves between said leaf and the upper leaf of the series below, said key pin having downwardly projecting extremities engaging the edge margins of the leaf upon which it rests, and means for clamping the spring leaves between upper and lower clamping members, the upper of said members being recessed to receive the ribs formed in the upper leaf.

4. The combination with a set of ordinary spring leaves arranged in a superposed series, of an upper leaf, provided with upwardly projecting bends on each side of its center, a centrally disposed bolt securing the leaves together, and upper and lower clamping members adapted to bind said leaves, the upper of said members having transverse grooves adapted to receive the ribs on the upper leaf and the lower of said members being bored to receive the axle.

1,216,269. COMBINED WIRE TIE AND TAG. ADELMER M. BATES, Chicago, Ill., assignor to Bates Valve Bag Company, Chicago, Ill., a Corporation of West Virginia. Original application filed July 16, 1914, Serial No. 851,286. Divided and this application filed Nov. 26, 1915. Serial No. 63,359. (Cl. 40—2.)



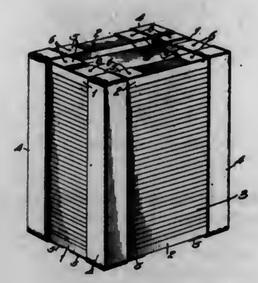
1. The combination with a perforate tag body of a wire passing through said perforation, the ends of said tie being each larger than said perforation, the tag being free to move along the tie limited only by its contact with the enlarged ends thereof.

2. The combination with a perforate tag body of a wire tie passing through said perforation, closed loops formed on either end of said tie, said closed loops being larger than said perforation, the tag being free to move back and forth along the tie limited only by its contact with the loops.

1,216,270. CRATE. MATHIAS B. BECKER, Chicago, Ill. Filed Aug. 30, 1915. Serial No. 48,141. (Cl. 206—60.)

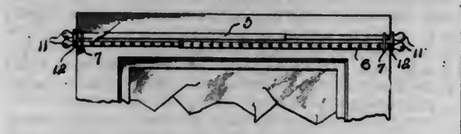
1. A crate of the character set forth comprising upper and lower end members adapted to be held against approach toward each other by interposed substantially incompressible crate contents, and metallic corner-strips adapted to receive the corners of the crate contents and end-members and having end-flanges overlapping upon and secured to the end members, the length of the corner members between upper and lower end flanges being determined by the height of the crate contents plus the thickness of the end members.

2. A crate for substantially incompressible merchandise comprising end frames each composed of a plurality of loosely abutting strips of wood or the like, and ductile metallic angle-strips having their flanges severed from each other at the end portions of said strips and bent to overlap each other and each to project beyond the farthest removed side edge of the other, the said projecting end portions of the flanges secured to the strips of wood or the like of the end frames between the ends of said strips, the abutting portions of the latter being covered by the overlapped portions of the bent end portions of said flanges and being held by the latter against separation, the merchandise disposed between the end frames serving to maintain the same against approach toward each other and the body portions of said angle strips preventing relative separating movement thereof and protecting the corners of the contents of the crate.



3. A crate of the character set forth comprising substantially rectangular end frames each composed of four mitered strips of wood or the like abutting loosely against each other at their ends, and metallic angle corner-strips connecting the end frames with each other, each of said corner strips equipped at its ends with overlapped tongues secured at their free ends to abutting strips of the end-frames between the ends of said strips for preventing separation of the abutting ends of said strips and securing the respective end frames to said corner-strips and upon the crate contents.

1,216,271. CURTAIN-SUPPORT. BERTHA M. BEHL, Rochester, Ill. Filed Aug. 11, 1915. Serial No. 44,983. (Cl. 156—23.)



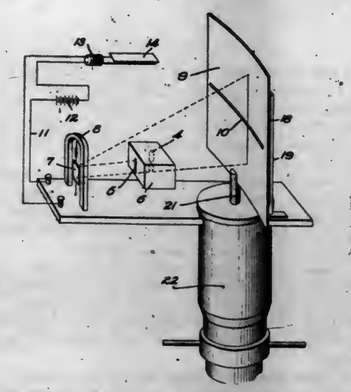
1. A curtain support including a member arranged when in one position to permit sliding of a curtain thereon and when in a second position to prevent sliding adjustment of said curtain, and means to hold said member in either of said positions.

2. A curtain support having reversible curtain supporting faces, one face permitting the ready slipping and adjustment of the curtain, the other face being provided with curtain engaging devices arranged to hold the curtain permanently in proper adjustment, and brackets supporting said curtain support in positions to bring said faces selectively into engagement with a curtain.

3. A duplicate curtain pole consisting of a pair of permanently spaced and portable rods, and means to hold said rods in rigid spaced relation, one of said rods being smooth for slidable movement of the curtain therealong and the other rod being roughened to prevent sliding movement of the curtain therealong.

4. A curtain support comprising a pair of rods held in spaced relation, one being smooth to permit of the ready adjustment of a curtain thereon, the other having means to engage and hold the curtain when supported thereon, and brackets for the rods providing means for the support of the rods to permit of the adjustment of the curtain on the smooth rod and for the reversal of said rods to bring the rod provided with curtain engaging means into position to support the curtain.

1,216,272. RECORDER. CHARLES W. BERRY, West Somerville, Mass. Filed Sept. 15, 1910. Serial No. 582,151. (Cl. 234—6.)



1. A device for recording variations in the conditions of a fluid comprising a recording element, means for holding a recording surface and means for producing two mutually perpendicular displacements between the said element and surface, one following fluctuations in the temperature and the other following fluctuations in the volume of said fluid.

2. In a temperature indicator the combination with a source of light of means for holding a sensitized surface, an oscillating reflector, an opaque screen for said surface containing a slot in a plane normal to the axis of rotation of the reflector, electrical devices for imparting to the mirror a deflection such that the displacement of the reflected ray of light upon the sensitized surface is proportionate to the temperature producing such deflection, and means for producing a relative displacement between the screen and the sensitized surface normal to the first displacement and proportional to the volume of the fluid substance undergoing said temperature fluctuations.

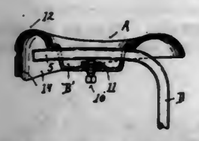
3. In an electrical temperature indicator the combination with an optical recorder responsive to temperature fluctuations, said recorder having a movement deviating from a ratio of constant proportionality to the temperature, of a recording surface having a suitable predetermined shape to render the total displacement of the light ray on the said surface proportional to the change of temperature.

4. In an electrical temperature indicator the combination with an optical recorder responsive to temperature fluctuations, of a recording surface, said recorder having means for applying a recording ray to said surface and the latter having a suitable predetermined shape to render the total displacement of the light ray on the said surface proportional to the change of temperature, and means for producing a mutually perpendicular relative displacement between the point of application of the recording ray and the surface proportional to variations in some other property of the fluid.

5. In an electrical temperature indicator the combination with an optical recorder responsive to temperature fluctuations, of a recording surface, said recorder having means for applying a recording ray thereto and said surface having a suitable predetermined shape to render the total displacement of the light ray on the said surface proportional to the change of temperature, and means for producing a mutually perpendicular relative displacement between the point of application of the recording ray and the surface proportional to the volume of the fluid.

[Claims 6 to 8 not printed in the Gazette.]

1,216,273. VEHICLE-SADDLE. LEO A. BRIGEL, Cheviot, Ohio. Filed May 12, 1915. Serial No. 27,686. (Cl. 208—15.)



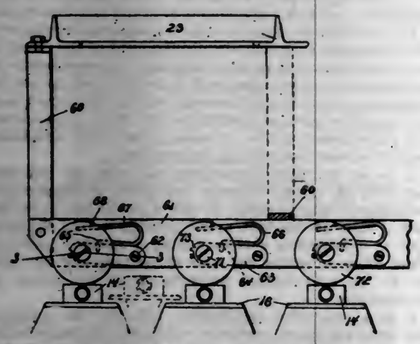
1. A one piece sheet metal saddle comprising a seat, a horn, a depending marginal apron, a centrally located depressed portion perforated at opposite ends to receive a substantially horizontal section of a saddle post, and means to rigidly clamp a saddle post to said depressed portion of the saddle.

2. A vehicle saddle having a seat, a horn, and a centrally located depressed portion provided with perforations at opposite ends to receive and be guided upon a substantially horizontal section of a seat post, said saddle being formed from sheet metal in one piece.

3. A sheet metal vehicle saddle having a seat, a horn, a centrally located depressed portion provided with perforations at opposite ends to receive and be guided upon a saddle post, a depending marginal apron, and means to rigidly secure a saddle post to said depressed portion of the saddle.

4. A sheet metal vehicle saddle having a seat, a horn, a centrally located depressed portion provided with perforations at opposite ends thereof to receive a saddle post and guide the saddle thereon, a depending marginal apron, and a bolt and nut to rigidly secure said saddle to a saddle post passing through said perforations and depressed portion of the saddle.

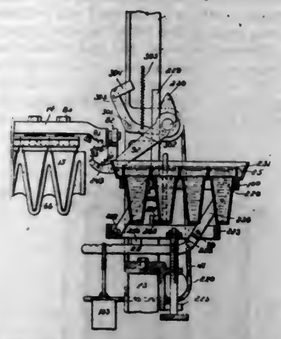
1,216,274. PASTRY-MAKING MACHINE. FREDERICK A. BRUCKMAN, Portland, Oreg. Filed June 2, 1916. Serial No. 101,273. (Cl. 107—58.)



1. In a machine of the character stated, the combination with the rotatable carrier, the molds and the core bars carried thereby; of a core bar presser for pressing said bars on the molds, said presser comprising a supporting bar, a lever pivoted to said supporting bar, a presser roller carried by said lever, a spring for forcing said lever down and a stop for limiting the downward movement of said lever, substantially as shown and described.

2. The combination with the intermittently movable molds and core bars therefor; of a bar located above the molds in the direction of travel, a series of yieldably supported core bar pressers mounted on said bar and adapted to engage said core bars as the same are moved beneath the pressers, to force the cores into the molds, said core bars being free to lift when between adjacent pressers of the series, said yieldably supported core bar pressers comprising levers pivoted to said bar, springs for forcing said levers to the pressing position, stops for limiting the movements of said levers, and presser rollers carried by said levers.

1,216,275. PASTRY-MAKING MACHINE. FREDERICK A. BRUCKMAN, Portland, Oreg. Filed June 8, 1916. Serial No. 102,560. (Cl. 107—58.)



1. In a machine of the class described, the combination with the counterbalanced batter receptacle, an oscillatable dipping arm shaft, an arm that extends from the batter receptacle to adjacent to said shaft and the batter receptacle raising cam on said shaft; of means for holding the batter receptacle raised for a predetermined interval after said cam disengages said arm on its return movement.

2. In a machine of the class described, the combination with the counterbalanced batter receptacle, an oscillatable dipping arm shaft, an arm that extends from the batter receptacle to adjacent to said shaft and the batter receptacle raising cam on said shaft; of means for holding the batter receptacle raised for a predetermined interval after said cam disengages said arm on its return movement, said last named means comprising a lever having gripping fingers for engaging said batter receptacle moving arm—to hold said receptacle elevated and an auxiliary cam on said rock shaft for actuating said holding lever.

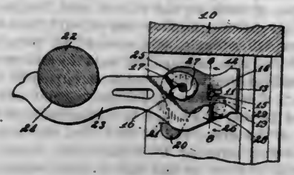
3. In a machine of the class described, bodily movable molding devices adapted to be moved from one position to another, said molding devices including molds and cores therefor, a core bar carrying said cores, a dipping tank, means for transferring said cores from the molds into the dipping tank and restoring said cores again to said molds, said means including an oscillatable shaft and a dipping arm, means for raising said dipping tank to meet the cores while being dipped, means for counterbalancing the weight of said tank, and other means for holding said tank raised against the action of said counterbalancing means during a predetermined part of the time of the dipping act.

4. In a machine of the class described, bodily movable molding devices adapted to be moved from one position to another, said molding devices including molds and cores therefor, a core bar carrying said cores, a dipping tank, means for transferring said cores from the molds into the dipping tank and restoring said cores again to said molds, said means including an oscillatable shaft and a dipping arm, means for raising said dipping tank to meet the cores while being dipped, means for counterbalancing the weight of said tank, other means for holding said tank raised against the action of said counterbalancing means during a predetermined part of the time of the dipping act, said last named means comprising a member projecting from the dipping tank, and a gripping device for engaging said member, and means for bringing said gripping device into and out of action.

5. In a machine of the class described, the combination with the counterbalanced dipping tank and the core dipping mechanism which includes the oscillatable shaft and an arm mounted thereon to engage the core carrier, means operated by said oscillatable shaft for raising said dipping tank as said cores are dipped into the same, and other means for holding said tank raised after said oscillatable shaft has discontinued its function of raising said tank, substantially as shown and for the purposes described.

[Claim 6 not printed in the Gazette.]

1,216,276. CURTAIN-POLE AND SHADE-ROLLER SUPPORT. JOSEPH F. BRUEDERLY, Lancaster, Pa., assignor of one-half to John H. Hook, Lancaster, Pa. Filed May 4, 1914, Serial No. 836,171. Renewed July 17, 1916. Serial No. 109,810. (Cl. 156—23.)



1. In combination with a shade roller bracket and a shade roller, of a curtain pole bracket removably supported by said shade roller bracket and shade roller, the inner end of which curtain pole bracket is provided with two attaching members, one of which is adapted to hook over the pintle of the shade roller and suspend the curtain pole bracket, and the other to bear upward against the lower edge of the shade roller bracket.

2. In combination with a shade roller bracket and a shade roller, of a curtain pole bracket removably supported by said shade roller bracket and shade roller, the inner end of which curtain-pole bracket is provided with two projecting attaching members lying in different planes, one of which in the form of a hook engages the pintle of the shade roller, and the other member provided with a step to bear upward against the shade roller bracket, and hold the curtain-pole bracket in fixed position.

3. In combination with a shade roller bracket, and a shade roller, of a curtain pole bracket removably supported by said shade roller bracket and shade roller, the inner end of which curtain-pole bracket is provided with two attaching members projecting therefrom in different planes and one above the other, one of which members being in the form of a hook to engage the pintle of the shade roller, and the other to bear upwardly against the lower edge of the shade roller bracket, one of said members lying substantially in the plane of the curtain pole bracket, the other member being bent laterally beyond the plane of the bracket to insure engagement with the supporting parts.

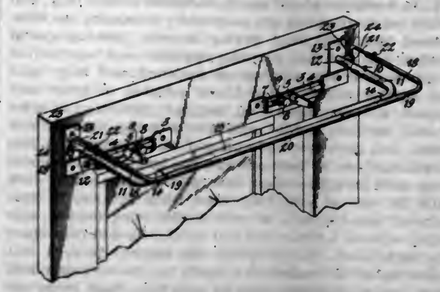
4. In combination with a shade roller bracket, and a shade roller mounted thereon, of a curtain pole bracket the inner end of which is provided with two attaching members projecting therefrom to engage the pintle of the shade roller and the lower edge of the shade roller bracket, one of said members lying substantially in the plane of the curtain pole bracket, the other member being bent laterally beyond the plane of said bracket to insure engagement with the supporting parts, and an adjustable pole seat on the outer end of the bracket.

5. In combination with a shade roller, and a shade roller bracket having a bearing for the pintle of said shade roller and two shoulders on the edge thereof equidistant from said bearing and at right angles to each other, of a curtain pole bracket provided with two attaching members on its inner end, one of which has a recess therein to engage said pintle and the other formed with a step to bear upon either of said shoulders.

[Claims 6 to 14 not printed in the Gazette.]

1,216,277. WINDOW SHADE AND CURTAIN SUPPORT. MATTHEW J. BRUNNER, Buffalo, N. Y., assignor of one-half to John E. Hunter, Buffalo, N. Y. Filed Mar. 17, 1916. Serial No. 84,843. (Cl. 156—23.)

The combination of base-plates adapted to be fastened to a window-frame, bracket-rods extending forwardly from said plates, each of said rods having a portion adjacent to the base-plate provided with a vertical perforation, a curtain-pole having side-arms mounted on said bracket-rods, and a lambrequin-pole arranged above and extending beyond said curtain-pole, said lambrequin-pole



having side arms provided with vertical members which engage the perforations of said bracket-rods.

1,216,278. RIM FOR VEHICLE-WHEELS. RICHARD S. BRYANT, Cleveland, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 25, 1912. Serial No. 693,080. (Cl. 152—21.)



1. In a vehicle wheel, in combination, a felly band having a plurality of spaced, laterally-opening notches, the sides whereof are substantially radial, a demountable rim adapted to embrace said felly band and having spaced blocks upon its internal surface adapted to enter said notches, said felly band having a valve-stem-receiving-aperture located substantially midway between adjacent notches and said rim having a valve-stem-receiving-aperture similarly located with respect to adjacent blocks, the sides of the blocks adjacent to said aperture being cut away so as to permit said blocks to be inserted into their notches simultaneously with the insertion of the valve stem into the felly aperture, the remaining rim blocks having their sides adjacent to said aperture inclined so as to permit the blocks to be inserted into their respective notches by a swinging movement about the apertured side of said felly band.

2. In a vehicle wheel, the combination with a felly, and a felly band embracing the same, said felly band having laterally opening spaced notches and inclined portions opposite said notches, of a demountable rim adapted to surround said felly band and having spaced wedge blocks adapted to enter said notches and seat upon said inclined portions, the sides of said notches and of said blocks being substantially radial, and the outer ends of said blocks being of a size substantially to fill said notches, the length of said blocks being such that their outer ends will be substantially flush with the side of said felly band when the rim is fully mounted and the ends of said blocks being formed with radial notches, a transverse bolt carried by said felly opposite each notch, and a radial clip secured

to each bolt and adapted to engage the notch in the corresponding block.

3. In a vehicle wheel, the combination with a felly, and a felly band embracing the same and overhanging the sides thereof, said felly band having laterally opening spaced notches and inclined portions opposite said notches, of a demountable rim adapted to surround said felly band and having spaced wedge blocks adapted to enter said notches and seat upon said inclined portions, the sides of said notches and of said blocks being substantially radial, and the outer ends of said blocks being of a size substantially to fill said notches, the length of said blocks being such that their outer ends will be substantially flush with the side of said felly band when the rim is fully mounted and the ends of said blocks being formed with radial notches, a transverse bolt carried by said felly opposite each notch, and a radial clip secured to each bolt and adapted to engage the notch in the corresponding block, the overhanging edge of said felly band being cut away adjacent to said bolt for the reception of said clip.

4. In a vehicle wheel, the combination with a felly band having outwardly turned lateral flanges, one of said flanges being formed with circumferentially spaced notches, of inclined portions on said band registering with such notches, a demountable rim adapted to surround said felly band and having wedge blocks adapted to enter such notches and seat upon said inclined portions, and laterally facing abutments on said rim and band adapted to inter-engage when the former is fully seated on the latter, said wedge blocks being adapted in such seated position of said rim to engage the sides of such notches.

5. In a vehicle wheel, the combination with a felly band having a plurality of circumferentially spaced laterally inclined portions and a valve-stem-receiving aperture located between two adjacent inclined portions, a demountable rim adapted to surround said felly band and having wedge blocks adapted to seat upon such inclined portions, and an aperture adapted to register with the aperture in said felly band, means adapted to clamp said rim in seated position on said felly band, and means substantially diametrically opposite from such apertures, adapted to positively withdraw the adjacent portion of said rim laterally from said felly band.

[Claims 6 to 8 not printed in the Gazette.]

1,216,279. RIM FOR VEHICLE-WHEELS. RICHARD S. BAYANT, Cleveland, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 2, 1913. Serial No. 787,784. (Cl. 152—21.)



1. The combination with a transversely split tire-supporting rim; of a tongue projecting beyond one end of said rim and having a recess; a projection on the other end of said rim adapted to engage such recess when said rim-ends are in alinement; and means adapted to force said rim-ends thus into alinement, said means including a link pivotally connected with said first-named rim-end, a second link similarly connected to said first link and therewith forming a toggle, and an abutment on the other rim-end adapted to coöperate with said second link.

2. The combination with a transversely split tire-supporting rim; of a tongue projecting beyond one end of said rim and having a recess; a projection on the other end of said rim adapted to engage such recess when said rim-ends are in alinement; and means adapted to force said rim-ends thus into alinement, said means including a link pivoted to the end of said tongue, a second link pivoted to said first link and therewith forming a toggle, and an abutment on the other rim-end adapted to coöperate with said second link.

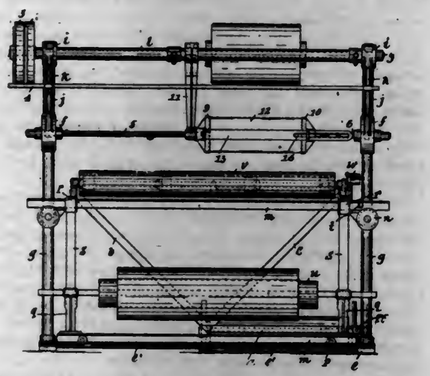
3. The combination with a transversely split tire-supporting rim; of a tongue projecting beyond one end of said rim and having a recess; two longitudinally spaced projections on the other end of said rim, the first of said projections being adapted to engage the recess in said tongue; a link pivoted to the end of said tongue; and a second link pivoted to the free end of said first link and forming therewith a toggle, said second link being adapted to abut with its free end against said second projection.

4. The combination with a transversely split tire-supporting rim; of a tongue projecting beyond one end of said rim and having a recess; two longitudinally spaced projections on the other end of said rim, the first of said projections being adapted to engage the recess in said tongue; a link pivoted to the end of said tongue; and a second link pivoted to the free end of said first link and forming therewith a toggle, said second link being adapted to abut with its free end against said second projection, the pivotal axis of said toggle lying between the opposed faces of said projections.

5. The combination with a transversely split tire-supporting rim; of means adapted to forcefully expand said rim so as to bring the ends thereof into alinement; and under-cut devices carried by the ends of said rim, said devices being normally out of engagement but being adapted upon release of said expanding means to inter-engage and prevent collapsing of such rim prior to deflation of the tire.

[Claims 6 to 18 not printed in the Gazette.]

1,216,280. CLOTH FOLDING AND WINDING MACHINE. CAY BUHL, Paterson, N. J., assignor to National Textile Machine Company, North Paterson, N. J., a Corporation of New Jersey. Filed Mar. 12, 1915. Serial No. 13,850. (Cl. 26—13.)



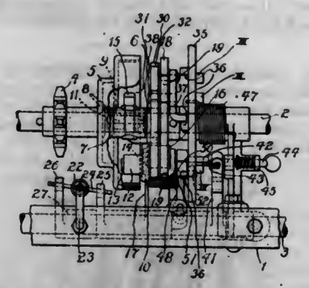
1. In combination, a frame, a folding device consisting of a plurality of bars arranged in angular relation to each other and in an upright plane and means to guide the cloth in an upright plane to and then around the angle formed by said bars and then back in another upright plane substantially parallel with the first plane, said folding device and means being movable one relatively to the other horizontally and parallel with said planes.

2. In combination, a frame, an upright carriage movable horizontally in said frame, a folding device consisting of a plurality of bars arranged in angular relation to each other and in an upright plane, a cloth beam and a guide roller arranged in the carriage at one side of and parallel with the folding device and the latter above the former, the cloth being adapted to extend from the cloth beam over the roller, then downward and around the folding device and then upward in an upright plane, and means above the folding device on which to wind the folded cloth.

3. In combination, a folding device consisting of a plurality of bars arranged in angular relation to each other, a frame in which said folding device is arranged, means to guide the cloth being folded including a carriage movable in the frame transversely of the folding device, rotary means in the frame on which to wind up the folded cloth having its axis parallel with the plane of the folding device, and a guide arm fixed in the frame and projecting in a plane substantially parallel with the folded cloth between the layers and up to the fold thereof.

4. In combination, with folding means, rotary means on which to wind the longitudinally folded material, said rotary means being spaced from the folding means, and supporting means for said folding means and rotary means, a guide arm fixed in the supporting means and projecting in a plane substantially parallel with the folded material between the layers and up to the fold thereof.

1,216,281. CLUTCH MECHANISM FOR CORN-PLANTERS. EDWARD W. BURGESS, Chicago, Ill., assignor to International Harvester Corporation, a Corporation of New Jersey. Filed Aug. 23, 1915. Serial No. 46,962. (Cl. 111—5.)



1. A clutch mechanism including, in combination, a shaft, a constantly rotatable clutch element journaled upon said shaft, a second clutch member secured to said shaft, an interlocking clutch element carried by said second clutch member and adapted to intermittently engage with said constantly rotatable member, a movable clutch tripping element, means for controlling a movement of said tripping element in one direction, said means including a controlling element vibratable about the axis of said shaft, means for connecting it with said interlocking element, and means for regulating the degree of vibration of said controlling element.

2. A clutch mechanism including, in combination, a shaft, a constantly rotatable clutch element journaled upon said shaft, a second clutch member secured to said shaft, an interlocking clutch element carried by said second clutch member and adapted to intermittently engage with said constantly rotatable member, a movable clutch tripping element, means for controlling a movement of said tripping element in one direction, said means including a disk journaled upon said shaft, means for operatively connecting said disk with said interlocking element in a manner to rotate with said shaft, a controlling element vibratable about the axis of said shaft, means for connecting it with said interlocking element, and means for regulating the degree of vibration of said controlling element.

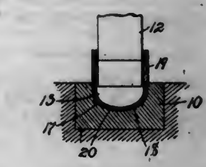
3. A clutch mechanism including, in combination, a shaft, a constantly rotatable clutch element journaled upon said shaft, a second clutch member secured to said shaft, an interlocking clutch element carried by said second clutch member and adapted to intermittently engage with said constantly rotatable clutch element, a vibratable clutch tripping arm, means for controlling a movement of said arm, said means including a disk journaled upon said shaft, means for operatively connecting said disk with said interlocking element in a manner to rotate with said shaft, means for rotating said disk in an opposite direction, and a wiper cam carried by said disk and adapted to engage with said tripping arm.

4. A clutch mechanism including, in combination, a shaft, a constantly rotatable clutch element journaled upon said shaft, a second clutch member secured to said shaft, a pawl carried by said second clutch member and adapted to intermittently engage with said constantly rotatable clutch element, a vibratable clutch tripping arm adapted to engage said pawl, a laterally fixed pawl controlling member vibratable about the axis of said shaft, pivotally connected with said pawl and coacting with said tripping arm, a vibratable disk carried by said shaft and adapted to engage with said clutch tripping arm in a manner to suspend a movement thereof in one direction, said disk having a wiper cam upon its periphery operative to release said arm.

5. A clutch mechanism including, in combination, a shaft, a constantly rotatable clutch element journaled upon said shaft, a second clutch member secured to said shaft, a pawl carried by said second clutch member and adapted to intermittently engage with said constantly rotatable clutch element, a vibratable clutch tripping arm adapted to engage said pawl, a laterally fixed pawl controlling member vibratable about the axis of said shaft, pivotally connected with said pawl and coacting with said tripping arm, a disk carried by said shaft vibratable about the axis thereof and adapted to engage with said clutch tripping arm in a manner suspending a movement thereof in one direction, means for controlling the degree of angular vibration of said disk, and a wiper cam carried by said disk and operative to release said arm.

[Claims 6 to 13 not printed in the Gazette.]

1,216,282. METHOD OF WORKING COPPER. FRED S. CARVER, Newark, N. J., and WILLIAM H. HARMAN, Lansdowne, Pa. Filed Sept. 21, 1916. Serial No. 121,448. (Cl. 207—10.)



1. The process of working copper which includes introducing into a substantially cup-shaped die, a heated copper block of substantially the same shape as the die and fitting closely in the lower part thereof and extruding the copper from the die in the form of a tube.

2. The method of working copper which includes introducing a heated copper block into a die in which the block fits substantially closely against the sides and bottom of the die and extruding the copper to form a tube by means of a punch having a lesser diameter than the diameter of the die and of the copper block fitting therein.

3. The method of working copper which includes introducing a heated copper block into a die provided with substantially cylindrical sides and a rounded bottom in the lower portion of which die the block fits closely, and extruding the copper to form a firmly coherent tube with a closed end by means of a punch having a lesser diameter than the diameter of the die and block.

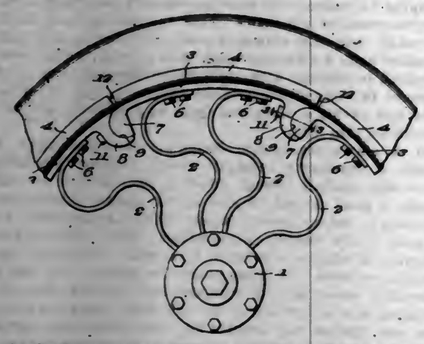
4. The process of working copper, which includes introducing into a die having its bottom walls merging gradually into its side walls, a heated copper block of substantially the same shape as the die and fitting substantially closely into the lower part thereof, and extruding the copper from the die to form a strong coherent tube whose outer diameter is substantially the diameter of the die.

5. The process of making copper rifling bands, which includes introducing into a substantially cup-shaped die, a heated copper block of substantially the same shape as

the die and fitting in the lower part thereof, extruding the copper from the die in the form of a tube, drawing the tube thus formed, and cutting it into rings.

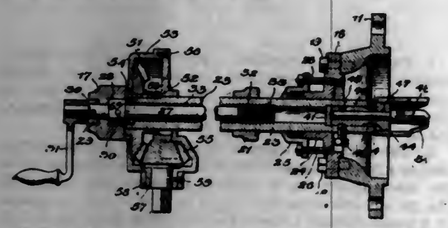
[Claims 6 to 8 not printed in the Gazette.]

1,216,283. WHEEL. WALLACE W. CASH, Peru, Ind. Filed Feb. 12, 1915. Serial No. 7,792. (Cl. 152—30.)



A wheel comprising a felly constructed of a plurality of sections, radially extending lugs on opposite ends of said sections and circumferentially projected, certain of said lugs having a concaved confronting face provided with a centrally located elongated slot, the other of said lugs having their confronting faces formed on the arc of a circle and adapted to enter and contact with the concaved faces of the former mentioned lugs, a screw carried by the latter mentioned lugs and extending through the slot of the other of said lugs and adapted to travel therein in all relative radial movements of the sections, and further preventing any relative lateral movements of the sections, a hub, and spring spokes connecting the hub and felly sections.

1,216,284. TAPPING-MACHINE. ARTHUR W. CASH, Decatur, Ill., assignor to H. Mueller Mfg. Co., Decatur, Ill., a Corporation of Illinois. Filed June 25, 1915. Serial No. 35,815. (Cl. 77—42.)



1. In a tapping machine, the combination with a frame, a cutter-shaft, and means associated with the shaft for causing the longitudinal movement of the same, of driving means for rotating said shaft and movable therewith, said driving means comprising a gear fixed to the shaft, a driving gear meshing with said fixed gear, and a casing inclosing said gears movable with said shaft and guided in its movement by said frame.

2. In a tapping machine, the combination with a cutter-shaft, a frame having side-bars or standards, and a feed-screw associated with said cutter-shaft for causing the longitudinal movement of the same, of driving means upon said cutter-shaft and movable therewith, and a casing about said driving means having apertured eyes through which said side-bars or standards pass whereby said casing is guided.

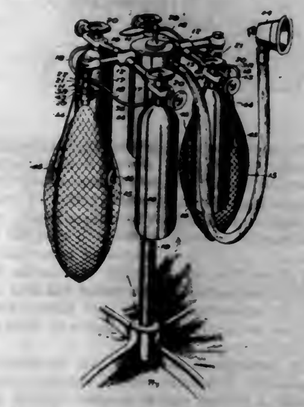
3. In a tapping machine, the combination with a frame, a cutter-shaft having upon its end a cutter, and means associated with the cutter-shaft for advancing or withdrawing the cutter to and from the main, of driving means carried by said shaft and movable therewith, said driving means comprising a gear fixed to the shaft and a driving gear meshing with said fixed gear, a handle for rotating said driving gear, and a casing for inclosing said gears, said casing being adapted to form a receptacle for a suitable lubricant for said driving means.

4. In a tapping machine, a frame comprising a feed-screw yoke, a cast-iron body, and a pair of standards connecting said yoke and said body, a cutter shaft passing through said cast-iron body and having a cutter upon its end, a feed-screw passing through said feed-screw yoke and having its inner end in threaded engagement with the outer end of said cutter shaft, driving means secured upon the outer end of said cutter-shaft, and a casing inclosing said driving means and embracing said side-bars.

5. In a tapping machine, a frame, a hollow cutter-shaft having notches in its inner end, means for rotating said cutter-shaft, means for causing the longitudinal movement of said cutter-shaft, and an arbor having a central bore for the reception of a pilot drill and having a screw-threaded portion adapted to engage the complemental screw-threaded portion of a cutter, said arbor also having lugs corresponding in shape to the notches in the inner ends of said cutter-shaft and adapted to engage therein.

[Claims 6 to 11 not printed in the Gazette.]

1,216,285. REGULATOR FOR ANESTHETIC APPARATUS. ARTHUR W. CASH, Decatur, Ill., assignor to H. Mueller Manufacturing Co., Decatur, Ill., a Corporation of Illinois. Filed Aug. 12, 1915. Serial No. 45,182. (Cl. 230—25.)



1. Pressure regulating means comprising relatively movable members having fluid passages therethrough, a valve to control flow through said passages, and automatic means to move said members relative to each other to govern the range of movement of said valve.

2. Pressure regulating means comprising relatively movable members having fluid passages therethrough, a yielding connection between said members, a valve to control flow through said passages, and automatic means to move said members relative to each other to govern the range of movement of said valve.

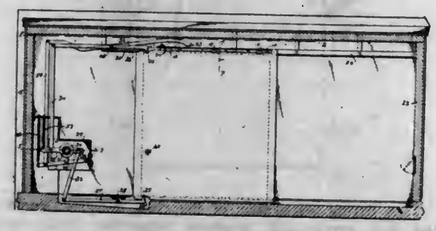
3. Pressure regulating means comprising relatively movable members having fluid passages therethrough, a yielding diaphragm connecting said members, a valve to control flow through said passages, and automatic means to move said members relative to each other to govern the range of movement of said valve.

4. Pressure regulating means comprising relatively movable members having fluid passages therethrough, a valve to control flow through said passages, and levers carried by one of said members to effect the relative movement of said members and govern the range of movement of said valve.

5. Pressure regulating means comprising a fixed member having fluid passages therethrough, a movable member having fluid passages therethrough connected with said fixed member, a valve to control flow through said passages, and lever mechanism carried by one of said members to effect a relative movement of said members to govern the range of movement of said valve.

[Claims 6 to 26 not printed in the Gazette.]

1,216,286. SLIDING-DOOR FASTENER. JOHN F. CAWL, Buffalo, N. Y. Filed June 13, 1916. Serial No. 103,420. (Cl. 70—102.)



1. In a construction of the character set forth, the combination with a door casing, of a door slidably mounted within said casing, said door being formed with a notch in the upper and in the lower edge, pivotally mounted lock levers, within said casing, engaging each of the notches in said door, and lock-controlling means, within said casing, governing the positions and operation of said levers.

2. In a construction of the character set forth, the combination with a door casing, of a door slidably mounted within said casing, said door being formed with a notch in the upper and in the lower edge, pivotally mounted lock levers, within said casing, engaging each of the notches in said door, lock-controlling means, within said casing, connected with said lock levers, a trip lever pivotally mounted within said casing and near one of said lock levers, means for keeping said lock levers in their open positions, and means carried by said door and engageable with said trip lever for resetting said lock levers.

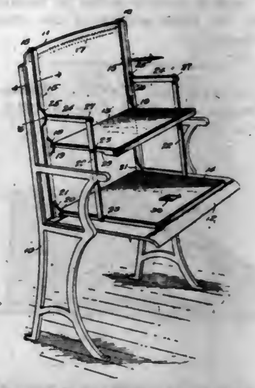
3. In a construction of the character set forth, the combination with a door casing, of a door slidably mounted within said casing, said door being formed with a notch in the upper and in the lower edge, pivotally mounted lock levers, within said casing, engaging each of the notches in said door, lock-controlling means, within said casing, connected with said lock levers, said lock-controlling means comprising, a lock lever formed with a central aperture in its forward end and a reduced aperture in its rear end, a lock stud slidably mounted within the apertures, a stud key for preventing the rotation of said lock member, and an operating key engageable with the aperture in the forward end of said lock member, whereby said lock member is released when said operating key is inserted in the last mentioned aperture.

1,216,287. CHAIR ATTACHMENT. EDMUND CORBIN, Chicago, Ill. Filed Mar. 17, 1916. Serial No. 84,842. (Cl. 155—26.)

1. An auxiliary seat attachment for chairs, comprising a support having means for attachment to the chair, and a pivoted seat and a pivoted foot rest carried by the support and foldable flush with each other against the back of the chair.

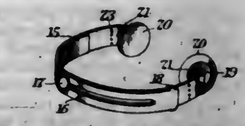
2. An auxiliary seat attachment for chairs, comprising a support having means for attachment to the chair, and a pivoted seat and a pivoted foot rest carried by the support and foldable on each other and against the back of the chair, the seat having a bottom recess to accommodate the folded foot rest.

3. An auxiliary seat attachment for chairs having a foldable seat, comprising a pivoted seat and a pivoted



foot rest, foldable flush with each other against the back of the chair, and means for supporting the attachment on the chair back of the pivot of the seat of the latter.

1,216,288. SOCK-SUPPORTER. HOPETON A. DAVIS, Chicago, Ill. Filed Apr. 24, 1916. Serial No. 93,312. (Cl. 241—6.)



1. A sock supporter comprising two overlapping resilient strips slidably connected together, said strips being provided at the ends thereof with suction cups and with sock engaging and retaining prongs.

2. A sock supporter comprising two overlapping slidably connected curved resilient strips having terminal heads, suction cups mounted on said heads, and sock engaging prongs adjacent to the same.

1,216,289. THREAD-UNWINDER. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 5, 1916. Serial No. 95,555. (Cl. 242—128.)



A spool-unwinder comprising a rotary shield-member constructed of a wire blank having its body portion formed into a ring with continuous outer rim and extending in-

wardly to the center of curvature of said ring and then axially downward to afford a stem, and a holder or support provided with a bearing socket to receive said stem and to sustain the same axially of the compound coils of a mass of thread.

1,216,290. EXCAVATOR-TOOTH. NORMAN MURRAY DICKSON, Chicago, Ill. Filed June 16, 1916. Serial No. 104,102. (Cl. 37—16.)



1. An excavator tooth comprising a point having equal divergent arms equipped with inwardly extending projections at their free ends, and a base provided with a projection adapted to enter and fill the space between said arms and provided with edge recesses adapted to receive said projections for preventing relative longitudinal movement of said parts, said tooth reversible on said base far alternately presenting opposite edges of said tooth to wear.

2. An excavator tooth comprising a point having equal divergent arms equipped with inwardly extending projections at their free ends, and a base provided with a projection adapted to enter and fill the space between said arms and provided with edge recesses adapted to receive said projections for preventing relative longitudinal movement of said parts, said tooth reversible on said base for alternately presenting opposite edges of said tooth to wear, said projection on said base extending at an angle to the longitudinal axis thereof, whereby the wearing edge of the tooth is disposed flush with one edge of the base.

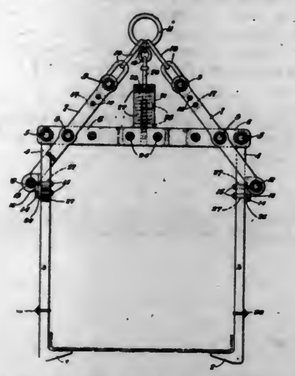
3. An excavator tooth comprising a point having equal divergent arms equipped with inwardly extending projections at their free ends, and a base provided with a projection adapted to enter and fill the space between said arms and provided with edge recesses adapted to receive said projections for preventing relative longitudinal movement of said parts, a wall of each of said recesses overhanging and engaging the free ends of the arms of said tooth for preventing spreading of the same.

4. An excavator tooth comprising a point having equal divergent arms equipped with inwardly extending projections at their free ends, and a base provided with a projection adapted to enter and fill the space between said arms and provided with edge recesses adapted to receive said projections for preventing relative longitudinal movement of said parts, said tooth reversible on said base for alternately presenting opposite edges of said tooth to wear, and a key engaging in openings in said arms and an opening in said projection of said base for preventing relative lateral movement of said parts.

5. An excavator tooth comprising a point having equal divergent arms equipped with inwardly extending projections at their free ends, and a base provided with a projection adapted to enter and fill the space between said arms and provided with edge recesses adapted to receive said projections for preventing relative longitudinal movement of said parts, said tooth reversible on said base for alternately presenting opposite edges of said tooth to wear, and a key engaging in openings in said arms and an opening in said projection of said base for preventing relative lateral movement of said parts, a wall of each of said recesses overhanging and engaging the free ends of the arms of said tooth for preventing spreading of the same.

[Claims 6 and 7 not printed in the Gazette.]

1,216,291. LIFTING MECHANISM FOR ANNEALING-BOXES. AUGUST P. DIESCHER, Pittsburgh, Pa. Filed May 31, 1916. Serial No. 100,965. (Cl. 57—9.)



1. A lifting mechanism of the class described consisting of a horizontally arranged supporting frame, load carrying arms pivoted to the opposite end portions of said frame and having inwardly extended shoes and locking abutments, lifting arms pivoted on said frame inwardly of said pivotal attachments having lower terminals extending downwardly beyond and coöperable with said abutments and upper terminals provided with flexible connections, and means engaging said connections for attachment to a centrally arranged lifting element.

2. In combination, a transverse frame having at its end portions pivotally attached load carrying hook arms, a locking abutment extending outwardly from each of said arms, a centrally arranged carrying link, and arms pivoted to said frame having at their upper ends flexible connections with said link and at their lower ends a transverse roller adapted to engage said abutment.

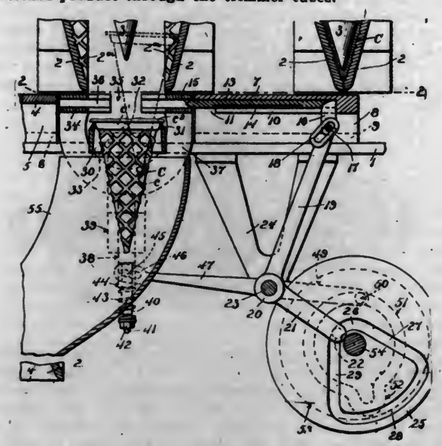
3. In combination, a transverse frame having at its end portions pivotally attached load carrying hook arms, a locking abutment extending outwardly from each of said arms, a centrally arranged carrying link, and arms pivoted to said frame having at their upper ends flexible connections with said link and overbalancing counterweights, and at their lower ends a transverse roller adapted to engage said abutment upon exertion of lifting strain and to be thrown outwardly in disengagement therefrom upon release of such strain.

4. In combination, a transverse frame having at its end portions pivotally attached load carrying hook arms, a locking abutment extending outwardly from each of said arms, a centrally arranged carrying link, arms pivoted to said frame having at their upper ends flexible connections with said link and at their lower ends a transverse roller adapted to engage said abutment, a spring housing and spring mounted centrally of the supporting frame, and a stem connected to the carrying link and engaging said spring adapted to be drawn down thereby upon release of lifting strain.

1,216,292. TRIMMING MECHANISM FOR PASTRY-MAKING MACHINES. ALBERT E. DIETERICH, Washington, D. C., assignor to Frederick A. Bruckman, Portland, Oreg. Filed Oct. 17, 1916. Serial No. 126,095. (Cl. 107—58.)

1. In combination with the molding devices, of trimmer tubes located beneath the same at the extraction station to directly receive the cones as they are released from the molds, a pusher frame, a push plate, camming devices for actuating the pusher frame and camming devices for introducing said push plate into and withdrawing the same from said pusher frame.

2. In combination with the molding devices, of trimmer tubes located beneath the same and adapted to receive the molded product from the molding devices, a pusher frame, a push plate, camming devices for bringing the push plate into operative engagement with the pusher frame and reciprocating the pusher frame to push the molded product through the trimmer tubes.



3. In combination with the molding devices, of a trimmer tube located beneath the same at the extraction station to receive the molded product released from the molding devices, a push plate, means for projecting said push plate between said molding devices and said trimmer tubes, and means for moving said push plate toward said trimmer tubes to force the molded product through the same.

4. In combination with the separable female mold sections and cores therefor and the mold-actuating-cone-extracting mechanism, of a relatively fixed trimmer tube located at the extraction station in close proximity to the bottom of the molds to directly receive the molded product as it is released from the molds, and devices for forcing the molded product through the tube.

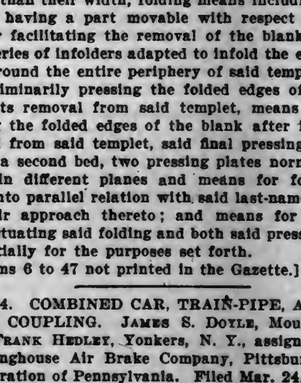
5. In combination with the separable female mold sections and cores therefor and the mold-actuating-cone-extracting mechanism, of a relatively fixed trimmer tube located at the extraction station in close proximity to the bottom of the molds to directly receive the molded product as it is released from the molds, and a pusher for forcing the molded product through the trimmer tube.

[Claims 6 to 20 not printed in the Gazette.]

1,216,293. FOLDING-MACHINE. GARRY J. DORMANDY, Troy, N. Y. Filed Dec. 4, 1911. Serial No. 663,810. (Cl. 223—55.)

1. In a machine for folding and pressing the folded edges of blanks of textile material, folding means including a bed, a templet and infolders adapted to infold the entire periphery of the blank; means for pressing the folded edges of the blank after it has been removed from said folding means, said pressing means including a second bed, two pressing plates normally maintained in different planes and means for forcing said plates into parallel relation with said last-named bed during their approach thereto; and means for simultaneously actuating said folding and said pressing means, substantially for the purposes set forth.

2. In a machine for folding and pressing the folded edges of blanks of textile material, folding means including a bed, a templet and infolders adapted to infold the entire periphery of the blank; means for preliminarily pressing the folded edges of the blank before its removal from said templet; means for finally pressing the folded edges of the blank after it has been removed from said templet, said final pressing means including a second bed, two pressing plates normally maintained in different planes and means for forcing said plates into parallel relation with said last-named bed during their approach thereto; and means for simultaneously actuating said folding and said pressing means, substantially for the purposes set forth.



3. In a machine for folding and pressing the folded edges of blanks of textile material the length of which is greater than their width, folding means including a bed, a templet and a series of infolders adapted to infold the entire periphery of the blank; means for preliminarily pressing the folded edges of the blank during its contact with said bed; means for finally pressing the folded edges of the blank after it has been removed from said folding means, said final pressing means including a second bed, two pressing plates normally maintained in different planes and means for forcing said plates into parallel relation with said last-named bed during their approach thereto; and means for simultaneously actuating said folding and both said pressing means, substantially for the purposes set forth.

4. In a machine for folding and pressing the folded edges of blanks of textile material, folding means including a bed, a templet movable toward and from said bed and infolders; means for preliminarily pressing the folded edges of the blank before its removal from said templet; means for finally pressing the folded edges of the blank after it has been removed from said templet, said final pressing means including a second bed, two pressing plates normally maintained in different planes and means for forcing said plates into parallel relation with said last-named bed during their approach thereto; and means for simultaneously actuating said folding and both said pressing means, substantially for the purposes set forth.

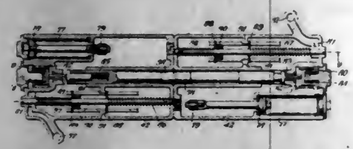
5. In a machine for folding and pressing the folded edges of blanks of textile material the length of which is greater than their width, folding means including a bed, a templet having a part movable with respect to another part for facilitating the removal of the blank therefrom and a series of infolders adapted to infold the edges of the blank around the entire periphery of said templet; means for preliminarily pressing the folded edges of the blank before its removal from said templet, means for finally pressing the folded edges of the blank after it has been removed from said templet, said final pressing means including a second bed, two pressing plates normally maintained in different planes and means for forcing said plates into parallel relation with said last-named bed during their approach thereto; and means for simultaneously actuating said folding and both said pressing means, substantially for the purposes set forth.

[Claims 6 to 47 not printed in the Gazette.]

1,216,294. COMBINED CAR, TRAIN-PIPE, AND ELECTRIC COUPLING. JAMES S. DOYLE, Mount Vernon, and FRANK HEDLEY, Yonkers, N. Y., assignors to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 24, 1913. Serial No. 756,469. (Cl. 173—332.)

1. In a car coupling, the combination with a casing containing a plurality of fixed contact fingers connected

to the respective electric train line circuits, of a longitudinally reciprocating slide having corresponding contacts, and means operating automatically upon the coming together of the counterpart couplers of adjacent cars to project one of the slides and electrically connect the corresponding fixed contact fingers of the counterpart couplers.



2. In a coupling for electric train line circuits, the combination with a casing containing a plurality of contact fingers connected to the respective circuits, of a longitudinally movable slide carrying corresponding contact bars, and means operated automatically by the coming together of the counterpart couplers of adjacent cars to project one of the slides outward and bridge the space between the sets of contact fingers of the counterpart couplers.

3. In a coupling for electric train line circuits, the combination with a casing containing a plurality of contact fingers connected to the respective circuits, arranged horizontally, of a longitudinally movable slide carrying two sets of corresponding contact bars cross connected upon opposite sides of the center line, and means operated automatically by the coming together of the counterpart couplers of adjacent cars to project one of the slides forward to its coupled position with one set of contact bars engaging each set of fingers of the counterpart couplers.

4. In a coupling for electric train line circuits, the combination with a casing containing a plurality of contact fingers connected to the respective circuits, of a longitudinally movable slide having some contact bars for connecting certain fingers of the one coupler together in its normal position and other contact bars for connecting certain other fingers with corresponding fingers of a counterpart coupler in its outer position, and means operated automatically by the coming together of the couplers of adjacent cars for projecting said slide to its outer position.

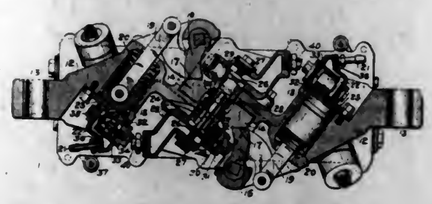
5. In a coupling for electric train line circuits, the combination with a casing adapted to be supported at the end of a car, and containing a plurality of contact fingers for said circuits, a longitudinally movable slide carrying corresponding contact bars and means for holding the same in a normal intermediate position when the cars are separated, of means operating automatically upon the coming together of the counterpart couplers of adjacent cars to project one of the slides against the slide of the other counterpart coupler, and to connect the corresponding contact fingers of said couplers.

[Claims 6 to 19 not printed in the Gazette.]

1,216,295. COMBINED CAR AND TRAIN-PIPE COUPLING. JAMES S. DOYLE, Mount Vernon, and FRANK HEDLEY, Yonkers, N. Y., assignors to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Original application filed Mar. 24, 1913, Serial No. 756,469. Divided and this application filed June 23, 1915. Serial No. 35,792. (Cl. 213—40.)

1. In a car coupling, the combination with a coupler head having a train pipe passage and an opening adapted to register with a corresponding opening in a counterpart coupling, and an automatic valve mounted in said passage and having a stem extending through said opening, of a detent for preventing the closing of said valve, a piston connected to said detent and normally balanced as to train pipe pressure upon its opposite sides, and means for venting the fluid from the rear of said piston for withdrawing said detent.

2. In a car coupling, the combination with a coupler head having a train pipe passage and an opening adapted to register with a corresponding opening in a counterpart coupling, and an automatic valve mounted in said passage and having a stem extending through said opening, of a detent for preventing the closing of said valve, a piston, subject to train pipe pressure, connected to said detent and having means for permitting the pressure to equalize upon the opposite end of said piston, and a vent valve for controlling the release of fluid from the rear of said piston.

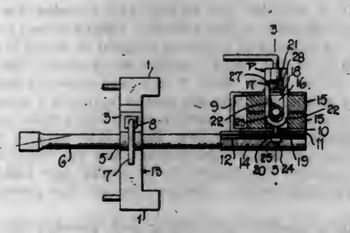


3. In a car coupling, the combination with a coupler head having a train pipe passage and an opening adapted to register with a corresponding opening in a counterpart coupling, and an automatic valve mounted in said passage and having a stem extending through said opening, of a detent for preventing the closing of said valve, a piston, subject to train pipe pressure, connected to said detent and having means for permitting the pressure to equalize upon the opposite end of said piston, a vent valve for controlling the release of fluid from the rear of said piston, and another piston for actuating said vent valve.

4. In a car coupling, the combination with a coupler head having a train pipe passage and an opening adapted to register with a corresponding opening in a counterpart coupling, and an automatic valve mounted in said passage and having a stem extending through said opening, of a detent for preventing the closing of said valve, and fluid pressure means actuated by pressure within the train pipe passage for withdrawing said detent when the couplers are released.

5. In a car coupling, the combination with a coupler head having a train pipe passage and an opening adapted to register with a corresponding opening in a counterpart coupling, and an automatic valve mounted in said passage, of a detent for preventing the closing of said valve, a movable lock for clamping the counterpart couplers together, and fluid pressure actuated mechanism for withdrawing the said detent and for releasing the lock.

1,216,296. DEVICE FOR HOLDING FLEXIBLE SPOUTS. CARL E. DUNHAM, Baker, N. D. Filed July 29, 1916. Serial No. 112,092. (Cl. 248—30.)



1. A device for adjustably holding a flexible spout comprising a bracket provided with attaching means, an elongated arm, means for adjustably securing the arm to the bracket, a supporting member, a split barrel carried by the member and adapted to receive an end portion of the arm whereby said member may be adjusted around the arm, a pivot member carried by the first named member and capable of endwise movement, said pivot member being provided with means coacting with the barrel for adjusting the same into clamping relation relative to the arm, means for imparting endwise movement to the pivot member, clamping disks carried by the pivot member, and an elongated spout engaging member disposed between the disks and adapted to be clampingly engaged thereby upon endwise movement of the pivot member in one direction.

2. A device for adjustably holding a flexible spout comprising a bracket provided with attaching means, an elongated arm, means for adjustably securing the arm to the bracket, a supporting member, a split barrel carried by the member and adapted to receive an end portion of the arm whereby said member may be adjusted around the arm, a pivot member carried by the first named member and capable of endwise movement, said pivot member being provided with means coacting with the barrel for adjusting the same into clamping relation relative to the arm, means for imparting endwise movement to the pivot member, clamping disks carried by the pivot member, and an elongated spout engaging member disposed between the disks and adapted to be clampingly engaged thereby upon endwise movement of the pivot member in one direction, the intermediate portion of the pivot member being looped and between which the elongated spout engaging member is directed.

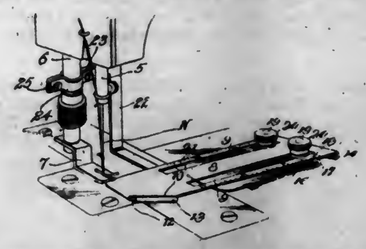
3. A device for adjustably supporting a flexible spout comprising an arm provided with attaching means, a U-shaped member rotatably engaged with the arm, a pivot member rotatably supported by the U-shaped member, said pivot member having its intermediate portion looped and provided with an extension, said extension being provided with means coacting with the clamping means of the U-shaped member for causing said clamping means to operatively engage the supporting arm, clamping disks having their opposed faces provided with radial grooves extending entirely thereacross and adapted to register, said disks being also provided with slots adapted to register and arranged at right angles to the grooves and through which the pivot member is directed, the opposite end of the pivot member being provided with a threaded opening, and a member disposed through and operatively engaged with said threaded opening of the pivot member and coacting with the adjacent side of the U-shaped member for imparting movement to the pivot member in one direction.

1,216,297. WHIP-SOCKET. BENJAMIN F. ERWIN, Fairfax, Mo. Filed Oct. 9, 1915. Serial No. 55,015. (Cl. 21—180.)



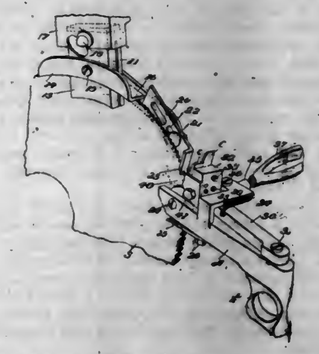
In a whip socket, the combination with a body having semicircular members therein and a catch for connecting the semicircular members, of means for releasing the catch, said means for comprising a rod passing through the body, a cam formed on the inner end of the rod, a plate secured to the opposite end of the rod and having openings therein, a casing secured to the body and engaging the outer face of the plate, and means engaging the openings in the plate for rotating the same.

1,216,298. HEMMING ATTACHMENT FOR SEWING-MACHINES. DANIEL JAY ENSIGN, North Adams, Mass. Filed Feb. 7, 1916. Serial No. 76,794. (Cl. 270—86.)



A hem turning attachment for sewing machines including a relatively fixed, graduated gage plate provided with an angular flange on one end to rest upon the bed of a machine, the other end of the plate being reversely bent and disposed in parallel relation to the body of the plate, said latter end of the plate and the contiguous body portion of the plate having their corresponding longitudinal edges obliquely inclined and the returned end portion of the plate being provided with an upwardly and outwardly turned bead on its inclined edge, a hem turning plate disposed in spaced parallel relation beneath the gage plate and provided upon one end with a flange against which the edge of the material engages and by which the same is turned to form the hem, and adjustable means on the flange of the hem turning plate to co-act with said gage plate and clamp said flange against the under side thereof.

1,216,299. GIN-SAW GUMMER. JESSE GILBERTH FALLS, Memphis, Tenn. Filed Feb. 24, 1914. Serial No. 820,688. (Cl. 76—30.)

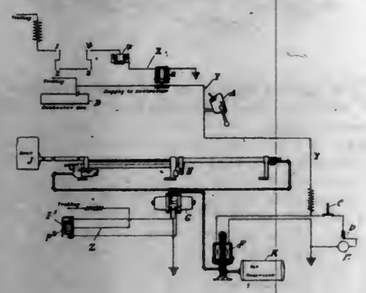


1. In a gin-saw gummer the combination of a support, an arm fixedly mounted on said support and disposed transversely thereof and spaced therefrom, an arm pivotally mounted on the support and movable within said space, said pivoted arm provided with a head having a groove formed therein widened at its base, a saw-tooth cutter located in said groove, a pair of set screws on the head engaging with said cutter adapted for adjusting the same to cut at different widths, a cutter guide located in the groove adjacent said cutter, set screws on the head engaging with said cutter guide for adjusting the same, a clamping plate, secured to the head and engaging with the outer edge of said cutter guide, a lever for actuating the cutter carrying arm mounted on said fixed arm, a retraction spring for the cutter connected to said cutter carrying arm and said fixed arm, and means for mounting the support on a saw, substantially as set forth.

2. In a gin-saw gummer the combination of an arm, a saw-tooth cutter mounted on said arm, means for operat-

ing said cutter, a member adjustably mounted on the arm, a member secured to said adjustable member and spaced therefrom to receive the saw, and a curved plate pivotally mounted on one of said members provided with laterally projecting wings adapted to rest upon the teeth of the saw and support the arm, substantially as set forth.

1,216,300. CAR-DOOR CONTROL. THOMAS FARMER, Jr., New York, N. Y., assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Feb. 13, 1913. Serial No. 748,122. (Cl. 246—61.)



1. The combination with a door, of a motor for operating the same, a source of fluid pressure, means controlling the passage of said fluid pressure from said source to said motor, an electro-magnetic device controlling the passage of said fluid pressure to said controlling means, a circuit for operating said controlling device, said circuit having contacts therein to close the circuit when the door is closed, a manual controller for said circuit, a second circuit for operating said electromagnetic device, and means operating in conjunction with said manual controller for opening either circuit when the other circuit is closed.

2. The combination with a door, of a motor for operating the same, a source of fluid pressure, means controlling the passage of said fluid pressure from said source to said motor, an electro-magnetic device controlling the passage of said fluid pressure to said controlling means, a circuit for operating said controlling device, a second circuit for operating said controlling device, and means operated by the closing of the first circuit for simultaneously opening the second circuit.

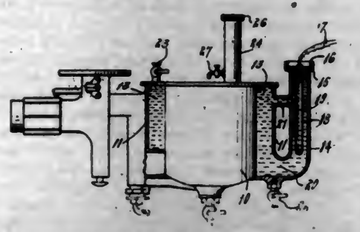
3. The combination with a door, of a motor for operating the same, a source of fluid pressure, means controlling the passage of said fluid pressure from said source to said motor, an electro-magnetic device controlling the passage of said fluid pressure to said controlling means, a circuit for operating said controlling device, a second circuit for operating said electro-magnetic controlling device, and an interlock operated by the first circuit and controlling the second circuit.

4. The combination with a door, of a motor for operating the same, a source of fluid pressure, means controlling the passage of said fluid pressure from said source to said motor, an electro-magnetic device controlling the passage of said fluid pressure to said controlling means, a circuit for operating said controlling device, said circuit having contacts therein to close the circuit when the door is closed, a second circuit for operating said electro-magnetic controlling device, and means operated by the closing of the first circuit for simultaneously opening the second circuit.

5. The combination with a car door of an operating motor therefor, a controlling magnet for said motor, a source of current supply for said magnet containing a contact operated by the door, an alternative source of supply therefor consisting of the car motor acting as a generator and means for shifting the magnet from one source of supply to the other.

[Claims 6 to 9 not printed in the Gazette.]

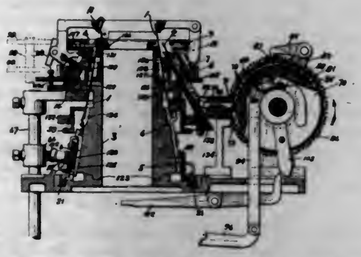
1,216,301. HEATING DEVICE FOR WATER-JACKETED CARBURETERS. ROY A. FISK, Amboy, Minn. Filed June 1, 1916. Serial No. 101,134. (Cl. 219—38.)



1. The combination with a carbureter having a float chamber; of a water jacket surrounding the float chamber, a heating chamber having its lower end connected to the lower end of the water jacket, a heating element in the heating chamber and a tubular connection between the upper parts of the water jacket and heating chamber.

2. The combination with a carbureter having a float chamber; of a water jacket surrounding the float chamber, a heating chamber having its lower end connected to the lower end of the water jacket, a heating element in the heating chamber consisting of a tube extending into the chamber and having a closed lower end, and a resistance coil in said tube, and a tubular connection between the upper parts of the water jacket and heating chamber.

1,216,302. KNITTING-MACHINE. EMIL J. FRANCK, Philadelphia, Pa. Filed Feb. 16, 1912. Serial No. 678,038. (Cl. 66—23.)



1. A circular knitting machine having in combination a circular needle head and a needle bed of the form of a part of a circle, each equipped with a set of needles all of which are inclined in the same direction and those of one set being disposed at an acute angle in respect to those of the other set, and means for operating all the needles through loop forming strokes of the same length whereby each needle pulls its own loop only and chafing of yarn is avoided and an even fabric is made with the result that high speed of operation is attained.

2. In a knitting machine the combination of a needle head tapering outwardly toward its base, a needle bed inclined outwardly from the needle head toward the base thereof and extending part way around the head, needles arranged around the needle head and in the needle bed with their hooks turned in the same direction, and means at the base of the head and at the base of the bed for operating all said needles through loop forming strokes of the same length whereby each needle pulls its own loop only and chafing of yarn is avoided and an even fabric is made with the result that high speed of operation is attained.

3. In a circular knitting machine the combination of a circular group of needles inclined to separate their butts, a second group of needles arranged in a part circle and inclined to separate their butts and disposed at an acute angle with the first-mentioned needles, and means accommodated by the space due to the separation of the needles and adapted to operate all the needles through loop forming strokes of the same length whereby each needle pulls its own loop only and chafing of yarn is avoided and an even fabric is made with the result that high speed of operation is attained.

4. In a circular knitting machine the combination of two sets of latch needles arranged at an acute angle in respect to each other and whereof one extends part way around the machine, means including web-holders for knitting a seamless tubular plain web of varying diameter on said needles, and means for causing some of said needles to first make short loop pulling strokes in respect to the web-holders and thereafter full loop pulling strokes, in respect to the web-holders and for throwing each of these loops off separately substantially as described.

5. In a circular knitting machine having a circular group of latch needles and having extra latch needles inclined in respect to each other and means for knitting a seamless tubular plain web upon said needles, the combination of means for throwing the extra needles into action and causing them to first make short loop pulling strokes and then make full loop pulling strokes and for throwing the long and short loops off separately.

[Claims 6 to 13 not printed in the Gazette.]

1,216,303. TESTING AND INDICATING PAPER AND PROCESS OF MAKING THE SAME. ALLAN A. FREEMAN, New York, N. Y. Filed Dec. 9, 1915. Serial No. 66,024. (Cl. 23—3.)

1. As a new article of manufacture, a permanent testing and indicating material, unaffected by the atmosphere, comprising a dry absorbent innocuous body impregnated with a dye stuff of the triphenylmethane group.

2. As a new article of manufacture, a permanent testing and indicating material, unaffected by the atmosphere, comprising a dry absorbent innocuous body impregnated with a dye stuff of the triphenylmethane group, from which the color has been discharged.

3. As a new article of manufacture, a permanent testing and indicating paper comprising dry paper impregnated with a dye stuff composed of malachite green crystals.

4. As a new article of manufacture, a permanent testing and indicating paper comprising dry paper impregnated with a dye stuff composed of malachite green crystals, and a sufficient amount of alkali to discharge the color thereof.

5. The herein described process of making a permanent testing and indicating material which will be unaffected by the atmosphere, which consists in treating a solution of a dye stuff of the triphenylmethane group with an alkali in sufficient quantity to discharge the color therefrom impregnating dry innocuous absorbent material with the colorless material and drying the absorbent material.

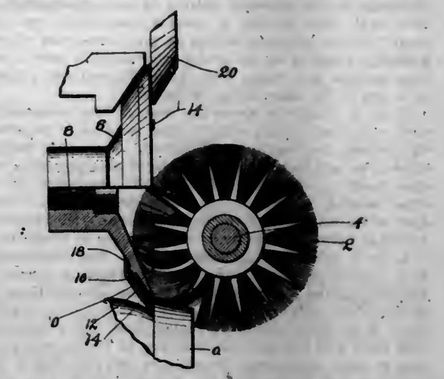
[Claims 6 and 7 not printed in the Gazette.]

1,216,304. BLACKING-MACHINE. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 21, 1916. Serial No. 104,927. (Cl. 12—31.)

1. In a machine of the class described, the combination of a rotatable brush having bristles projecting in oblique relation to its axis for applying blacking to the upper surface of that portion of a shoe which projects below the rand crease, and means for protecting the upper of the shoe from contact with said brush.

2. In a machine of the class described, the combination of a rotatable rand crease guide, and a brush rotatable with said guide and having bristles projecting in oblique relation to the axis of the guide for applying blacking to the upper surface of that portion of a shoe which projects below the rand crease.

3. In a machine of the class described, the combination of a rotatable rand crease guide having a flaring portion shaped for engagement on one side with the upper of a shoe above the rand crease, and a brush carried by said guide on the opposite side of said upper engaging portion for applying blacking to the upper surface of that portion of the shoe which projects below the rand crease.

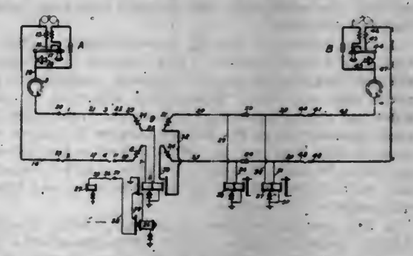


4. In a machine of the class described, the combination of a rotatable rand crease guide having inner and outer concentric portions arranged to provide a space between them, and means secured to the guide between said inner and outer portions in position to apply blacking to the upper surface of that portion of a shoe which projects below the rand crease.

5. In a machine of the class described, the combination of a rotatable rand crease guide of substantially frusto-conical shape having inner and outer concentric portions with their edges in substantially the same plane at the larger end of the guide, and a brush mounted between the two portions of said guide and projecting in position to engage the upper surface of the projecting bottom portion of a shoe upon the rotation of said guide in the rand crease.

[Claims 6 to 11 not printed in the Gazette.]

1,216,305. AUTOMATIC TELEPHONE SYSTEM. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 10, 1915. Serial No. 27,052. (Cl. 179—18.)



1. In a telephone exchange system, the combination with a pair of line conductors, a connecting circuit in sections, a repeating coil uniting said sections inductively, and means for connecting said line conductors with said connecting circuit, of a stepping relay, a metallic circuit including said line conductors, said relay and the repeater windings in the incoming section of said connecting circuit, said relay having a contact included in the outgoing section of said connecting circuit, means for operating said relay in accordance with the digits of the called number, and automatic switches adapted to be set by the impulses so produced.

2. In a telephone exchange system, the combination with a pair of line conductors, a connecting circuit in sections, a repeating coil uniting said sections inductively, and means for connecting said line conductors with said con-

necting circuit, of a stepping relay, a metallic circuit including said line conductors, said relay and the repeater windings in the incoming section of said connecting circuit, said relay having a contact controlling the continuity of the outgoing section of said connecting circuit, a sender adapted to interrupt said metallic circuit and thus operate said relay, and automatic switches adapted to be set by the impulses so produced.

3. In a telephone exchange system, the combination with a talking circuit divided into sections, a repeating coil uniting said sections inductively, of a relay bridged across the middle point of one side of said repeating coil and having a contact controlling the continuity of the other section, means for operating said relay in accordance with the digits of the called number, and automatic switches adapted to be set by the impulses so produced.

4. In a telephone exchange system, the combination with a pair of line conductors, a connecting circuit in sections, means for inductively uniting said sections including feed coils and a source of current, of a stepping relay, a metallic circuit including said line conductors, said relay and the feed coil windings in the incoming section of said connecting circuit, said relay having a contact included in the outgoing section of said connecting circuit, means for operating said relay in accordance with the digits of the called number, and automatic switches adapted to be set by the impulses so produced.

1,216,306. PROCESS OF PRODUCING FERROPHOSPHORUS FROM NELSONITE. JOHN JEFFERSON GRAY, Jr., Rockdale, Tenn. Filed June 26, 1916. Serial No. 106,006. (Cl. 75—45.)

1. The process of making ferro-phosphorus from nelsonite in a blast furnace which consists in providing a suitable charge of carbon and nelsonite ore containing iron oxid, phosphatic constituents and titanium oxid; adding suitable fluxing material sufficient for the unsatisfied phosphatic constituents, but insufficient for the titanium oxid present; and maintaining in the furnace a reducing atmosphere, substantially as described.

2. The process of making ferro-phosphorus from nelsonite in a blast furnace which consists in providing a suitable charge of carbon and nelsonite containing tricalcium phosphate and iron oxid; fluxing said nelsonite by adding suitable quantities of silica and phosphatic material; so regulating the temperatures that a maximum of iron oxid will suffer indirect reduction, and a maximum of tricalcium phosphate will suffer direct reduction, substantially as described.

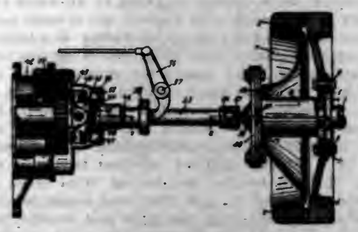
3. The process of making ferro-phosphorus from nelsonite in a blast furnace which consists in providing a suitable charge of carbon and nelsonite containing a phosphate and iron oxid; fluxing said nelsonite by adding silica and a phosphatic ore; providing a substantially constant temperature in the furnace adapted to cause a maximum of said iron oxid to suffer indirect reduction and a maximum of said phosphate to suffer a direct reduction; and maintaining a reducing atmosphere in said furnace, substantially as described.

4. The process of preventing the trouble known as "dirty hearth" while making ferro-phosphorus from nelsonite ore in a blast furnace which consists in providing a charge of containing carbon and nelsonite ore containing tricalcium phosphate and iron oxid; adding phosphatic material and silica in excess; fluxing and smelting said charge and immediately following said charge by a charge of iron ore, basic material and coke, substantially as described.

5. The process of making ferro-phosphorus from nelsonite in a blast furnace which consists in providing a suitable charge of carbon and nelsonite ore containing tricalcium phosphate, iron oxid, titanium oxid, and aluminum oxid; fluxing the constituents of said nelsonite, except its titanium oxid by adding a quantity of silica which when combined with the aluminum oxid present will be sufficient to balance the other acids and bases present; and maintaining a reducing atmosphere throughout the furnace, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,216,307. TRANSMISSION MECHANISM. JAMES GUTHRIE, Jackson, Mich., assignor to Briscoe Motor Co., Inc., Jackson, Mich. Original application filed July 17, 1915, Serial No. 40,403. Divided and this application filed Mar. 1, 1916. Serial No. 81,495. (Cl. 64—30.)



1. The combination of a driving shaft, a driven shaft, a driving clutch member on said driving shaft, a coacting driven clutch member provided with a hub, a pair of ball bearings disposed within said hub, the outer ball bearing being supported axially by said shaft and the inner by said hub, a coiled spring arranged on said driving shaft between said bearings and acting to engage the clutch, a universal joint comprising a pair of cross members secured to said driven shaft and driven clutch member and an annular resilient intermediate member secured to the arms of said cross members, a lost motion clutch shifting connection from said driven shaft to said driven clutch member, a transmission shaft, a universal joint connection from said driven shaft to said transmission shaft comprising a joint member having a socket in which said driven shaft is disposed for longitudinal movement, and means for shifting said driven shaft.

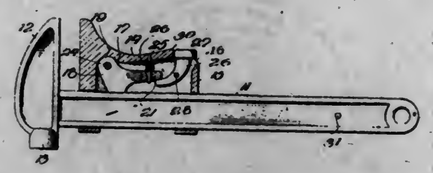
2. The combination of a driving shaft, a driven shaft, a driving clutch member on said driving shaft, a coacting driven clutch member provided with a hub, a pair of ball bearings disposed within said hub, the outer ball bearing being supported axially by said shaft and the inner by said hub, a coiled spring arranged on said driving shaft between said bearings and acting to engage the clutch, a universal joint connection for said driven shaft to said driven clutch member, a lost motion clutch shifting connection from said driven shaft to said driven clutch member, a transmission shaft, a universal joint connection from said driven shaft to said transmission shaft comprising a joint member having a socket in which said driven shaft is disposed for longitudinal movement, and means for shifting said driven shaft.

3. The combination of a driven shaft, a driving clutch member, a coacting driven clutch member, a universal joint connection for said driven clutch member and driven shaft, a lost motion clutch shifting connection from said driven shaft to said driven clutch member, a transmission shaft, a universal joint connection from said driven shaft to said transmission shaft comprising a joint member having a socket in which said driven shaft is disposed for longitudinal movement, and means for shifting said driven shaft.

4. The combination of a driven shaft, a driving clutch member, a coacting driven clutch member, a universal joint connection for said driven clutch member and driven shaft, a lost motion clutch shifting connection from said driven shaft to said driven clutch member, a transmission shaft, and a universal joint connection from said driven shaft to said transmission shaft, there being a slip connection between the said driven shaft and joint permitting the longitudinal movement of said driven shaft for disengaging and engaging said clutch.

5. The combination of a driven shaft, a driving clutch member, a coacting driven clutch member, a universal joint connection from said driven clutch member and driven shaft, said driven shaft having a lost motion clutch shifting connection to said driven clutch member, a transmission shaft, and a driving connection from said driven shaft to said transmission shaft including a universal joint and means permitting longitudinal movement of said driven shaft for engaging and disengaging said clutch.

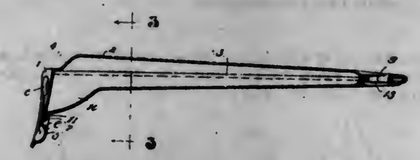
1,216,308. WRENCH. JAMES W. HAMLETT, Port Lavaca, Tex. Filed Dec. 7, 1915. Serial No. 65,534. (Cl. 81—139.)



1. A wrench including a shank provided with a fixed jaw, a movable jaw adjustable upon the shank to coact with the fixed jaw, the movable jaw being formed with a concave seat, and a pawl loosely pivoted to the movable jaw and provided with a head having a convex portion confronting said seat, the head of the pawl being movable to engage the shank in a plane upon one side of said pivot whereby pressure upon the movable jaw tending to urge it away from the fixed jaw will act to rock the pawl upon its pivot to a position with the pawl wedged between the shank and the movable jaw with the head of the pawl engaging the shank and with the convex portion thereof abutting said seat.

2. A wrench including a shank having a fixed jaw, a movable jaw adjustable upon the shank, and a pawl having a head loosely pivoted to the movable jaw and movable to engage the said shank for holding the movable jaw at adjustment with the head of the pawl wedged between the shank and the movable jaw and engaging at its respective extremities therewith.

1,216,309. HANDLE. GEORGE L. HARRISON, East Cleveland, Ohio, assignor to The Cleveland Metal Products Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 28, 1915. Serial No. 24,884. (Cl. 53—8.)

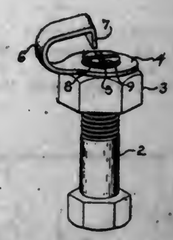


1. A handle comprising a supporting plate that is provided with a series of perforations, the material of the plate being depressed about the perforations and beaded therebetween, a tongue extending laterally from the supporting plate, and a member applied to the underneath side of the tongue and having a portion which bears against the supporting plate.

2. A handle comprising a supporting plate that is substantially triangular in shape, the plate having a perforation in each of its corners and having the material surrounding said perforations depressed, a tongue extending laterally from one edge of the plate, the plate having beads which extend from the vicinity of the edge to which the tongue is connected to the corner that is opposed to such edge, and a member applied to the underneath side of the tongue, and having a portion which engages the supporting plate.

3. A handle comprising a substantially triangular supporting plate that has a perforation in each of its corners, the material surrounding the perforations being depressed, the plate having beads that extend substantially parallel to two of its sides and between certain of the foregoing depressed portions, a tongue formed integral with and extending at substantially right angles from the other side of the supporting plate, and a member that is applied to the underneath side of the tongue and having a portion that engages the supporting plate at a point spaced below the plane of the tongue.

1,216,310. LOCK-WASHER. HUBERT C. HART, Unionville, Conn. Filed Sept. 30, 1916. Serial No. 122,982. (Cl. 151—28.)

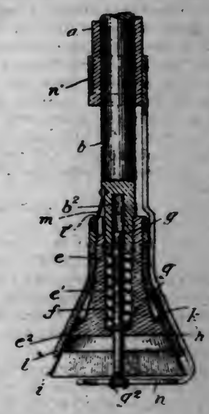


1. A lock washer comprising an annular body having a threaded hole and provided with a U-shaped bendable arm extending radially therefrom, the free branch of the arm having an inwardly extending tooth at approximately right angles thereto.

2. The combination of a bolt, a nut on the bolt, a washer between the nut and the tip end of the bolt, the washer having a threaded connection with the bolt and having a U-shaped bendable arm, the free branch of which is provided with an inwardly extending tooth, the tip portion of the bolt being slotted to receive the tooth.

3. The combination of a bolt, a nut on the bolt, a washer in threaded engagement with the bolt between the nut and the tip portion of the bolt, said washer having a U-shaped bendable arm, the free branch of which is provided with an inwardly extending tooth at practically right angles thereto, said tip portion having transverse notches into one of which said tooth is adapted to be projected.

1,216,311. DENTAL BRUSH. HENRY T. HARTMAN, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,047. (Cl. 15—37.)

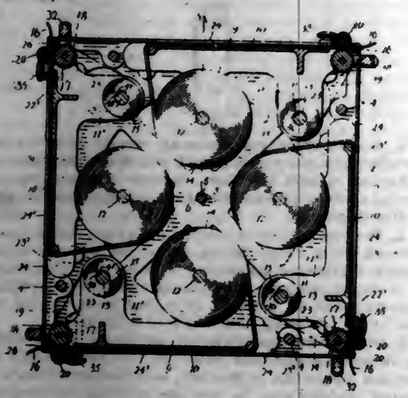


1. A rotary dental brush including a rotatable shaft, gearing to impart rotation to the shaft manually, a rotary brush carried on the end of the shaft, a circular clamp threaded on the end of the shaft and movable axially into and out of engagement with the brush to lock it releasably in position and a plunger mounted yieldingly in the end of the shaft to engage the teeth and serve as a rest for the brush.

2. A rotary dental brush including a rotatable shaft, a conical section threaded on its end, gearing to impart rotation to the shaft manually, an annular shoulder formed adjacent the end of the conical section, a circular brush disposed about the conical section and engaged with the shoulder, a conical sleeve threaded on the conical section and movable into and out of engagement with the brush

for clamping it releasably in position, and a spring latch engaged operatively with the conical sleeve for holding it against axial movement.

1,216,312. AUTOGRAPHIC REGISTER. ANDREW HELDRICH, Philadelphia, Pa., assignor to Multiplex Sales Register Company, Louisville, Ky., a Corporation of Kentucky. Filed Jan. 7, 1916. Serial No. 70,838. (Cl. 11—36.)



1. In an autographic register, an open-top hollow casing, an inner frame detachably fitting in said casing and having a platform plate located at the top of the casing, a paper supply rod, a record spindle, a carbon supply rod, a carbon spindle carried by said frame and removable therewith and a cover plate detachably connected to the casing and overlying and having an opening therein to expose said platform plate.

2. In an autographic register, an open-top hollow casing, an inner frame detachably fitting in said casing and having a platform plate located at the top of the casing, a paper supply rod, a record spindle, a carbon supply rod and a carbon spindle carried by said frame and removable therewith, a supply roll mounted upon the paper supply rod, the paper sheets therefrom passing longitudinally over the platform plate and the lower sheet thence passing inwardly to the record spindle, and a supply roll mounted upon the carbon supply rod and the carbon therefrom passing transversely over the platform plate to the carbon spindle.

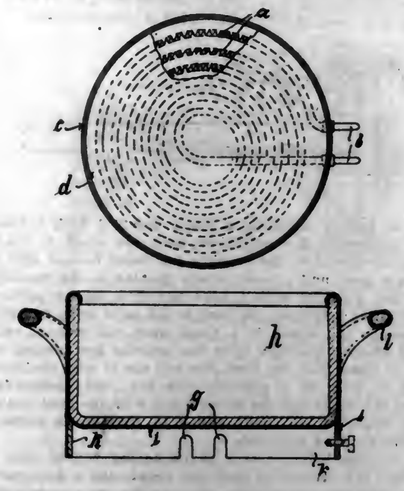
3. In an autographic register, an open-top hollow casing, an inner frame detachably fitting in said casing and having a platform plate located at the top of the casing, a paper supply rod and a record spindle carried by said frame, a feed roller and a pressure device located above said feed roller and coöperating therewith, also carried by said frame and a cover plate detachably connected to the casing and overlying and having an opening therein to expose said platform plate.

4. In an autographic register, an open-top hollow casing, an inner frame detachably fitting in said casing and having a platform plate located at the top of the casing, a paper supply rod and a record spindle carried by said frame, and a feed roller carrying an annular series of pointed teeth, and a soft rubber pressure device located above and coöperating with said feed roller, also carried by said frame, said pressure device having recesses therein formed by said teeth.

5. In an autographic register, an open-top hollow casing, an inner frame detachably fitting in said casing and having a platform plate located at the top of the casing, a paper supply rod and a record spindle carried by said frame, and a feed roller carrying an annular series of pointed teeth, and a soft rubber pressure roller located above and coöperating with said feed roller, also carried by said frame, said roller having an annular series of recesses therein formed by said teeth.

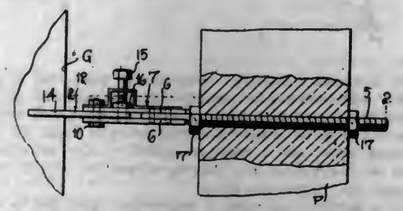
[Claims 6 to 15 not printed in the Gazette.]

1,216,313. ELECTRIC HEATER. LEO HELLER, Teplitz, Austria-Hungary. Filed Dec. 10, 1915. Serial No. 66,163. (Cl. 219—44.)



An electrical cooking apparatus of the character described, comprising a cooking utensil and an electric heating device provided respectively with heat transmitting surfaces, said cooking utensil being provided with a conductive outer covering, a recessed metal ring at the bottom of said utensil uniformly connected thereto by said conductive covering, and wires insulated from said ring and vessel and passing through the recesses in said ring, resistance wires embedded in an insulating mass at the bottom of said utensil, said wires being adapted to conductively connect the resistance wires to a source of energy, substantially as described.

1,216,314. GATE-LATCH. WILLIARD GLENN HENKLE, Garrison, Iowa. Filed July 29, 1916. Serial No. 112,118. (Cl. 70—28.)



1. A locking device for gates including spaced parallel plates, means for mounting said plates upon a gate post, a bifurcated locking plate pivotally mounted between said spaced plates and adapted to receive the end bar of a gate, gravity movable retaining means removably mounted upon said spaced plates and normally co-acting with said locking plate to hold the same against pivotal movement, and means for positively limiting the upward movement of said latter means to a position above the plane of said locking plate to permit of the pivotal movement of the latter and the opening of the gate.

2. A locking device for gates including spaced, parallel plates, means for mounting said plates upon a gate post, a locking plate pivotally mounted between said spaced plates to operatively engage the end bar of a gate, a transversely disposed channel plate secured upon one of the spaced plates, said spaced plates having coinciding openings therein, a bolt vertically movable through said openings, said locking plate being recessed to receive the end of the bolt in the normal position thereof, whereby said plate is held against pivotal movement, and a stop nut on said bolt to limit its upward movement to a position out of operative engagement with the locking plate, whereby the gate may be swung to an open position.

3. A locking device for gates including spaced, parallel plates, means rigidly fixed to said plates and spacing the same adjustably mounted in the gate post, a bifurcated locking plate pivotally mounted between said spaced plates to receive the end bar of the gate, a transverse channel plate secured upon one of said spaced plates, said spaced plates and the channel plate having spaced coinciding openings therein, bolts vertically movable through said openings moving by gravity to their normal positions in operative engagement with the locking plate to hold the same against turning movement, and means on said bolts to limit their upward movement to an inoperative position, whereby said locking plate may be moved with respect to the spaced plates and the gate moved to an open position.

1,216,315. TRIMMING DEVICE FOR RUBBER-CLOTH AND THE LIKE. ORA E. HECKMAN, Akron, Ohio. Filed Feb. 21, 1916. Serial No. 79,506. (Cl. 164—47.)



1. In a machine of the character described, a frame, a table mounted in said frame, a die slidably mounted in said frame adjacent one extremity of said table, a cutting knife coöperating with said die and an inclined plate carried by said die and arranged to slide upon the upper surface of said table.

2. In a machine of the character described, a frame, a table mounted in said frame adjacent one end thereof, a block slidably mounted in said frame adjacent one end of said table, a die mounted upon said block, a cutting knife mounted upon said block and coöperating with said die, and an inclined plate carried by said block and arranged to slide upon the upper surface of said table.

3. In a machine of the character described, a frame, a table mounted in said frame adjacent one end thereof, a block slidably mounted in said frame, a die mounted upon said block, a cutting knife mounted upon said block and coöperating with said die, and removable filler blocks located in said frame between said table and said slidable block.

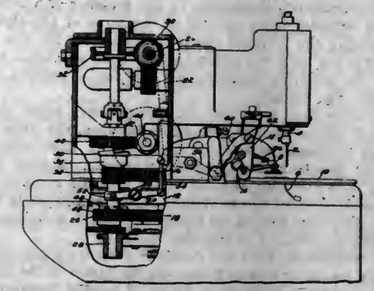
4. In a machine of the character described, a frame, a table mounted in said frame, adjacent one end thereof, a block slidably mounted in said frame, a die mounted upon said block, a cutting knife mounted upon said block and coöperating with said die, filler blocks located in said frame between said table and said slidable block and an inclined plate carried by said slidable block and arranged to slide upon the upper surface of said filler blocks.

1,216,316. BUTTONHOLE-SEWING MACHINE. GEORGE S. HILL, Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 26, 1915, Serial No. 10,699. Renewed Jan. 11, 1917. Serial No. 141,913. (Cl. 112—4.)

1. A buttonhole sewing machine, having, in combination, stitch forming mechanism, a work clamp, a feed cam, mechanism for actuating the feed cam, means mounted on the work clamp for throwing the actuating mechanism out of action when the clamp is in its initial position, and a manually operated trip for rendering said means inactive in starting the machine.

2. A buttonhole sewing machine, having, in combination, stitch forming mechanism, a work clamp, a feed cam, mechanism for actuating the feed cam, a shifter for throwing the actuating mechanism into and out of action, an arm on the clamp for operating the shifter to throw out the actuating mechanism when the clamp comes into initial position, and a manually operated trip for retaining the arm in active position.

3. A buttonhole sewing machine, having, in combination, stitch forming mechanism, a work clamp, a feed cam, mechanism for actuating the feed cam, a shifter for throwing the actuating mechanism into and out of action, an arm on the clamp for operating the shifter to throw out the actuating mechanism when the clamp comes into initial position, a manually operated latch for retaining the arm in active position, and means for resetting the arm and latch during the travel of the clamp.

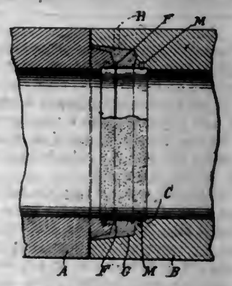


4. A buttonhole sewing machine, having, in combination, stitch forming mechanism, a work clamp, a feed cam, mechanism for actuating the feed cam, a shifter for throwing the actuating mechanism into and out of action, an arm on the clamp for operating the shifter to throw out the actuating mechanism when the clamp comes into initial position, a manually operated latch for retaining the arm in active position, and a stationary pin for engaging the arm to reset the arm and latch during the travel of the clamp.

5. A buttonhole sewing machine, having, in combination, stitch forming mechanism, a work clamp, a feed cam, mechanism for actuating the feed cam, means mounted on the work clamp for throwing the actuating mechanism out of action when the clamp is in initial position, a manually operated trip for rendering said means inactive in starting the machine, and a cam for controlling the actuating mechanism during the travel of the clamp.

[Claims 6 to 12 not printed in the Gazette.]

1,216,317. JOINT FOR CONCRETE PIPES. ALLAN M. HIRSH, Montclair, and THOMAS L. MCLENON, East Orange, N. J.; said McLenon assignor of one-half of the whole right to Lock Joint Pipe Company, Ampere, N. J., a Corporation of New Jersey. Filed Feb. 5, 1916. Serial No. 76,279. (Cl. 72—51.)



1. A water-tight joint for concrete pressure pipes, comprising a cement filled or luted space between the sections of said pipe, and a cylinder of sheet metal with a crimp or fold therein to render it longitudinally expansible, the said cylinder being united to shoulders on the abutting sections over the line of union, with the crimp therein lying against one of the abutting pipe surfaces and embedded in the cement filler.

2. A water tight joint for concrete pressure pipes, comprising a cement filled or luted space between the sections, a cylinder of sheet metal expansible longitudinally secured to shoulders in the abutting surfaces of the joint which form a recess in the ends of said sections and a filling of finely sifted neat cement applied in such recess over the sheet metal cylinder, whereby the latter is embedded in the cement forming the joint.

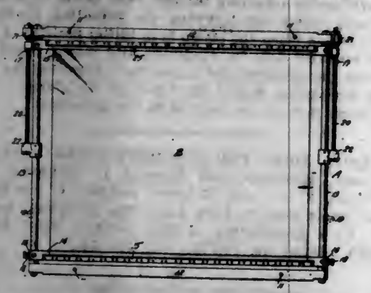
3. A water-tight joint for concrete pressure pipes, comprising a recess or widened space in the joint between abutting sections and containing a sealing filler of plastic material such as cement, and a cylinder of sheet metal made longitudinally expansible by the presence of a crimp, the said cylinder being secured to the faces of the shoulders forming the widened space and spanning the line of union of pipes with the crimp therein lying against a surface of the abutting sections and a filling of cement applied over the cylinder.

4. A water-tight joint for concrete pressure pipes, comprising a recess or widened space between the ends of abutting sections, formed by shoulders at said ends, a filling of plastic material, such as cement, between the ends of said abutting sections and a crimped cylinder of sheet metal secured to the shoulders and embedded in the cement filler and having its crimp in contact with one of the abutting surfaces of the pipe sections.

5. A watertight joint for concrete pressure pipes, comprising a recess or widened space at the inside of the joint between abutting sections, a filling of cement therefor, a depression formed by cutting away the inside edges of the two sections, a cylinder of sheet metal longitudinally expansible in said depression and united to the edges of the sections and a filling of finely sifted neat cement applied in the depression and over the sheet metal cylinder.

[Claims 6 to 10 not printed in the Gazette.]

1,216,318. PHOTOGRAPHIC-PRINTING APPARATUS. WILLIAM C. HUEBNER, Buffalo, N. Y., assignor to Huebner-Bleistein Patents Company, Buffalo, N. Y. Filed Apr. 29, 1915. Serial No. 24,726. (Cl. 95—69.)



1. A portable holder for a printing plate having a sensitized surface, said holder comprising an open frame, and means carried by the frame for securing and stretching the sensitized plate thereon, whereby said holder is adapted to be placed in and removed from a photographic printing apparatus with the sensitized plate in place thereon, provision being made for placing said holder in a predetermined position in the apparatus.

2. A portable holder for a printing plate having a sensitized surface, said holder comprising an open frame, and substantially parallel bars mounted on said frame and provided with means for securing the sensitized plate thereto, one of said bars being adjustable on the frame toward and from the other bar, said holder being adapted to be placed in and removed from a photographic printing apparatus with the sensitized plate in place thereon.

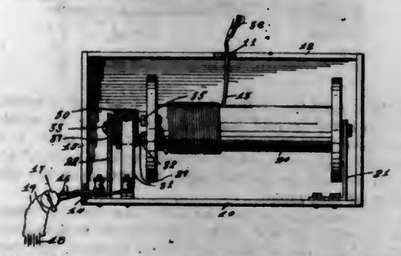
3. The combination with a supporting frame, of a portable holder for a printing plate having a sensitized surface, said holder comprising an open frame, and means carried thereby for securing and tightening the sensitized plate thereon, whereby the holder with the sensitized plate in place thereon is adapted to be placed on and removed from said supporting frame, and coöperating parts on said supporting frame and plate holder for holding the latter in a predetermined position on the face of said supporting frame.

4. The combination with a supporting frame, of a portable holder for a printing plate having a sensitized surface, said holder comprising an open frame, and means carried thereby for securing and tightening the sensitized plate thereon, whereby the holder with the sensitized plate in place thereon is adapted to be placed on and removed from said supporting frame, and studs projecting from one of said frames and adapted to enter holes in the other frame for holding the plate holder in a predetermined position on the supporting frame.

5. A holder for a printing plate comprising an open frame substantially parallel securing bars mounted on said frame and provided with means for securing the printing plate thereto, guide blocks to which one of said bars is pivoted at its ends and which are slidably mounted on said frame for adjusting said bar toward and from said other bar, and means for securing said adjustable bar in adjusted positions.

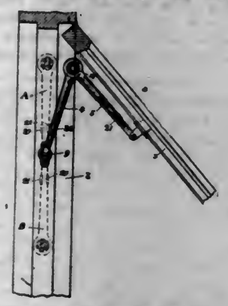
[Claims 6 to 8 not printed in the Gazette.]

1,216,319. REEL FOR ELECTRIC CONDUCTORS. HARRY R. HULING, Schuylkill Haven, Pa. Filed Sept. 15, 1913. Serial No. 789,929. (Cl. 173—367.)



In a reel for an electric conductor, the combination with a housing, a plurality of bearings, said reel rotatably carried by said bearings, a contact pivot pin carried by one of said bearings and extending into one end of said reel and forming a support for one end of said reel, a feed wire, an auxiliary wire, said feed wire connected at one end with said contact pin, a contact collar formed upon one end of said reel by said auxiliary wire, a contact strip engaging said collar, and means carried by said reel for causing the automatic return of said reel to normal position.

1,216,320. CASEMENT-WINDOW ADJUSTER. JOSEPH GEORGE HUOT, Montreal, Quebec, Canada. Filed Apr. 22, 1916. Serial No. 92,814. (Cl. 16—22.)

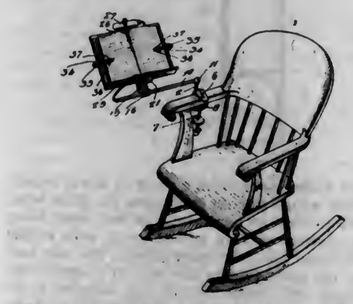


1. A casement window adjuster comprising a pair of companion arms, means for pivotally connecting one end of said arms together the adjacent faces of said arms having annular grooves formed therein, resistance members arranged within said grooves, and resistance plates arranged upon the outer faces of said arms around said pivotal connection.

2. A casement window adjuster comprising a pair of companion arms, a pivoted connection between one end of said arms, annular plates arranged concentric with said pivoted connection and resting adjacent to the inner faces of said arms, a ring interposed between said plates, and a plurality of superimposed plates arranged upon the outer faces of said arms and concentric with said pivoted connection.

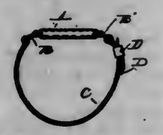
3. The combination with a window casing and a window sash pivotally mounted therein, an arm pivotally and detachably connected to the window casing adjacent its medial portion, a companion arm pivotally connected at one end to the window sash, means for frictionally connecting the inner ends of the arms together, a lug projecting from one edge of the companion arm and adapted to engage over the other arm when the window sash is closed within the window casing, the other arm having a depending lug projecting from one edge thereof at the opposite side of said arm to which the lug is projected from the companion arm and this lug is adapted to engage over the companion arm when the window sash is closed, the pivoted connections between said arms and the window casing and window sash respectively adapted to lie concentric when the window sash is closed whereby when said arms are swung upon the pivoted connections to the window casing and window sash respectively so as to lie at a straight angle from their normal position when the window sash is closed the arms will be locked together and the window sash held against opening.

1,216,321. ADJUSTABLE RACK. WILLIAM O. INAMI, Los Angeles, Cal. Filed Mar. 31, 1915. Serial No. 18,268. (Cl. 45—82.)



A rack of the character described comprising an article supporting frame, a vertical rod, means to vertically adjustably and rotatably support said rod, means to secure said last named means to a chair, a supporting rod connected with said rod and extending at right angles thereto, a plate slidable on said rod and extending upwardly therefrom and having rack teeth on one face thereof, means to slidably connect the frame with the plate, and a spring catch carried by said frame and engaging said rack teeth, said spring catch being bowed outwardly intermediate its ends.

1,216,322. WRIST-WATCH BRACELET. WILLIAM R. KALES, Detroit, Mich. Filed Apr. 7, 1916. Serial No. 89,586. (Cl. 224—4.)

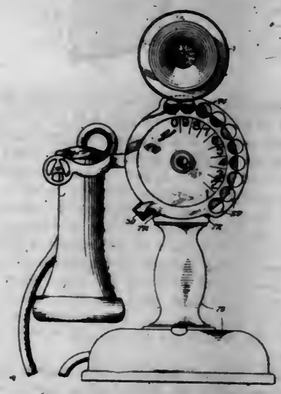


1. The combination with a wrist-watch having strap engaging loops or rings upon opposite sides thereof, of a securing strap therefor having a loop adjacent one end engaging one of the rings of said watch, and a keeper maintaining said loop closed and a buckle engaging said end, the length of the strap being sufficient to permit passing the same through the other ring of said watch to form a loop permitting insertion of the hand therethrough and to permit a return-bending of the strap around said loop to engage the buckle.

2. The combination with a wrist-watch having strap engaging loops or rings upon opposite sides thereof, of a securing strap therefor having a closed loop adjacent one end thereof for engaging one of the rings of said watch, and a buckle engaging said end, the length of the strap being sufficient to permit passing of the same through the other ring of said watch to form a loop permitting insertion of the hand therethrough and to permit a return-bending of the strap around said loop to engage the buckle.

3. The combination with a wrist-watch having strap engaging loops or rings upon opposite sides thereof, of a securing strap therefor having a closed loop adjacent one end thereof for engaging one of the rings of said watch, and a fastening device engaging said end, the length of the strap being sufficient to permit passing through the other ring of said watch to form a loop permitting insertion of the hand therethrough and to permit a return-bending of the strap around said loop to engage said fastening device.

1,216,323. TELEPHONE-SUBSCRIBER'S CALLING MECHANISM. ALEXANDER E. KEITH, Hinsdale, Ill., assignor, by mesne assignments, to Automatic Electric Company, a Corporation of Illinois. Filed Aug. 7, 1907. Serial No. 387,441. (Cl. 179—90.)



1. In a telephone system, a subscriber's calling mechanism for an automatic system comprising a ratchet wheel provided with teeth made of insulating material, a spring normally resting upon said wheel and holding the same against backward rotation, a circuit-controlling contact intermittently engaged by said spring when the ratchet wheel is rotated, and means for variably rotating said wheel in accordance with the digits of the called number.

2. In a telephone system, a subscriber's calling mechanism for an automatic system comprising a ratchet wheel provided with teeth made of insulating material, a spring normally resting upon said wheel and holding the same against backward rotation, a circuit-controlling contact intermittently engaged by said spring when the ratchet wheel is rotated, a dial rotatable in a forward and back manner, means for variably limiting the rotation of the dial in accordance with the digits of the called number, and means for rotating the ratchet wheel while the dial is returning to normal position.

3. In a telephone system, a subscriber's calling mechanism comprising an impulse wheel for transmitting the so-called vertical impulses, a pawl wheel provided with

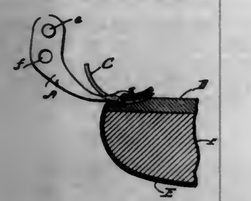
means for engaging and rotating the said impulse wheel, means operated by the pawl wheel for transmitting a preliminary impulse ahead of the said vertical impulses, and adapted also to transmit a so-called rotary impulse by the backward or return rotation of said pawl wheel.

4. In a telephone system, a subscriber's calling mechanism comprising one wheel for transmitting the so-called preliminary impulse and the final rotary impulse, and another and separate wheel for transmitting the intermediate or so-called vertical impulses.

5. In a telephone system, a subscriber's calling mechanism comprising an impulse wheel for transmitting the so-called vertical impulses, a pawl wheel provided with means for engaging and rotating the said impulse wheel, means operated by the pawl wheel for transmitting a preliminary impulse ahead of the said vertical impulses, and adapted also to transmit a so-called rotary impulse by the backward or return rotation of said pawl wheel, and a dial rotatable in a forward and back manner and adapted by its backward or return rotation to operate the said vertical impulse wheel.

[Claims 6 to 12 not printed in the Gazette.]

1,216,324. PRESSER-FOOT FOR SHOE-SEWING MACHINES. JOHN A. KELLY, Philadelphia, Pa. Filed Nov. 3, 1913. Serial No. 798,799. (Cl. 112—20.)



1. In a shoe sewing machine, the combination with a last adapted to carry a shouldered sole and an upper, and stitch-forming means, of a presser foot provided with two members, one of which is positioned for contact with a marginal portion of the upper so as to apply pressure thereto for forcing said upper into the recess of the sole and against the perpendicular face of the shoulder thereon, the other member of said presser foot being positioned for contact with that part of the upper which overlaps the sole, whereby the presser foot acts directly upon the upper and the sole for drawing the upper into close contact with the shouldered part of said sole during the stitch forming operation and the position of the needle relatively to the shouldered part of the sole is determined with accuracy.

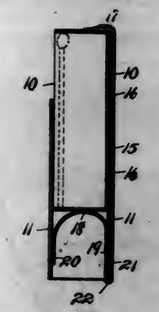
2. In a shoe sewing machine, the combination with a last adapted to carry an upper and a sole the marginal portion of which is recessed to produce a marginal flange and a shoulder, of a presser foot provided with two members one of which is longer than the other and is provided with a toepiece, said short member of the presser foot being positioned to enter the angle formed by the flange and shoulder of the sole so as to apply pressure to said upper for folding said upper into the recess and against the shoulder of the sole, and the other longer member of said presser foot being positioned for the toepiece to contact with the upper and press the latter upon the face of the sole, whereby the presser foot coöperates directly with the upper so as to draw it tightly relatively to the flanged and marginal portion of the sole and the position of the needle relatively to the shouldered sole is determined with accuracy.

3. A presser foot for shoe sewing machines the operative end of which is bifurcated to form two members unitary with said presser foot and said members being separated from each other by an intervening needle-throat, one of said members extending beyond the other member and said longer member being provided with a toe piece and with a pressure shoulder, said toe piece and the pressure shoulder of said longer member extending above the operative end of the shorter member.

4. A presser foot the operative end of which is provided with a plurality of members unitary with said presser foot and separated relatively to each other by an intervening needle-throat, one of said members being provided with a pressure shoulder and with a toe piece, said pressure shoulder being positioned substantially in the plane of the operative face on the other of said members and said toe piece extending forwardly with respect to the upper portion of said pressure shoulder, said toe piece being so related to the pressure shoulder that the contact of the pressure shoulder and the operative face of one member with an upper to force the latter into the angle of an insole brings said toe piece into position for pressing the marginal portion of said upper into contact with the top surface of the insole.

5. A presser foot the operative end of which is provided with two members unitary with said presser foot, one of said members being provided with a pressure shoulder and with a toe piece the latter extending beyond said pressure shoulder, and the operative face of the other of said members being positioned rearwardly of said toe piece of the first named member.

1,216,325. MATCH-BOX HOLDER. EDWARD B. KING, Irvington, N. J. Filed Apr. 7, 1916. Serial No. 89,669. (Cl. 206—31.)



A match box holder comprising a sheet of metal formed into a wall plate with a smooth front face, the plate being bent at the top to form an abutment, the wall plate being formed at the bottom into an arched anvil, said arched part having its front and rear walls smooth, the rear wall lying close to the plate to grip the wall of a match box casing, the front wall being smooth and adapted to be pressed toward the rear wall when a match box is in place.

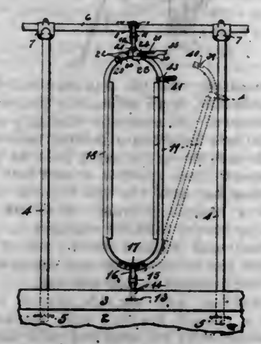
1,216,326. STRAIGHT-BACK CORSET. SARA KINSCELLA, Bridgeport, Conn. Filed Sept. 14, 1916. Serial No. 120,121. (Cl. 2—73.)



1. In a corset of the class described, the combination with a body portion, of a strap arranged upon the inside of the back at the waist line and having its two ends secured to the inside walls of the corset at distant points and its intermediate portion free.

2. In a corset of the class described, the combination with a body portion, of a strap arranged upon the inside and on the waist line having its two ends secured to the inside walls of the corset and its intermediate portion free, said strap being of a shorter length than the portion of the corset lying in its rear and between the points of attachment of the strap.

1,216,327. LOCKING-HEAD FOR STANCHIONS. ALFRED W. KNUTSON, Galesburg, Ill., assignor to Rowe Manufacturing Co., Galesburg, Ill., a Corporation of Illinois. Filed July 8, 1916. Serial No. 108,211. (Cl. 119—150.)



1. The combination with coacting stanchion-arms, of a slotted head secured to one of them, and opposed locking-handles pivoted in said head, the other arm adapted to be held in closed position by said handles and the handles serving to guide the last recited arm into the slot in said head.

2. The combination with coacting stanchion-arms, of a head secured to one of the them, and a pair of coacting locking members pivoted in said head, each member having a handle portion adapted to guide one of the stanchion-arms into the head.

3. In combination, a head having a channel, a stanchion-arm to which said head is secured, a movable stanchion-arm one end of which is adapted to pass into said channel, and a pair of divergent stanchion-arm guiding handles pivotally connected with said head, operating through a slot therein, crossing said channel, and each adapted to engage and lock the movable stanchion arm in said head.

4. In combination, a head having a channel and a flared mouth, and having also a transverse slot, a stanchion-arm to which it is secured, a movable stanchion-arm one end of which is adapted to pass into said channel, and a pair of locking handles pivoted in said head, operating in said head, crossing said channel and both engaging the movable-arm, said flared mouth and both of said handles acting as guides for directing the movable arm into said channel.

5. In combination, a slotted head, a stanchion-arm to which the head is secured, a movable stanchion-arm adapted to pass into the slot in said head, and oppositely arranged locking elements for holding the last recited arm in engagement with said head, each locking element including a portion adapted to guide said movable arm into said head.

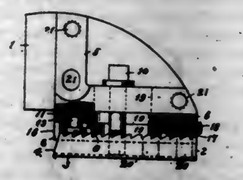
[Claims 6 to 17 not printed in the Gazette.]

1,216,328. CHASER AND MOUNTING THEREFOR. VICTOR R. KOONTZ, Waynesboro, Pa. Filed May 21, 1915, Serial No. 29,529. Renewed Jan. 3, 1917. Serial No. 140,469. (Cl. 10—104.)

1. A chaser having cutting teeth on one face and having a plurality of threaded holes longitudinally arranged on its opposite face.

2. A chaser having cutting teeth on one face, a plurality of transversely disposed teeth on its opposite face, said teeth comprising abrupt and inclined faces, and a longitudinal row of threaded bores on said opposite face.

3. The combination of a chaser having teeth along one side and an element associated therewith, said chaser and said element having interchangeable and interengaging portions, said element being slidably mounted.

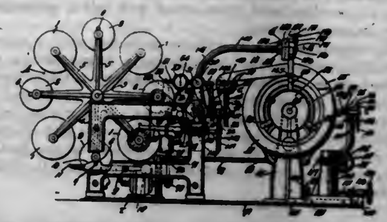


4. A chaser block having a pair of longitudinal slots and having transversely disposed teeth on one of its faces.

5. A trough shaped holder having an aperture and a longitudinally extending slot and carrying an adjusting screw adjacent one end.

[Claims 6 and 7 not printed in the Gazette.]

1,216,329. TIRE-SHOE-MAKING MACHINE. FRANKLIN W. KREMER, Carlstadt, N. J. Filed Aug. 9, 1912. Serial No. 714,289. (Cl. 154—10.)



1. A tire shoe making machine having a core, yieldingly mounted means for stretching the longitudinal median portion of the tire fabric without stretching the edges thereof, and a registering device connected with and operated by said yieldingly mounted means for indicating the position thereof.

2. A tire shoe making machine having a core, a tension mechanism and yieldingly mounted means for stretching the longitudinal median portions of the tire fabric relatively to the margins thereof.

3. A tire shoe making machine having a core, a tension mechanism and yieldingly mounted means for stretching the longitudinal median portions of the tire fabric relatively to the margins thereof, and a gage for said stretching means.

4. A tire shoe making machine comprising a fabric holder, a tension device, yieldingly mounted shaping rollers, one of which rollers includes means for stretching the longitudinal center of the fabric independently of the margins thereof, a gage connected with said shaping rollers, and a power-driven core.

5. A tire shoe making machine having a reel provided with alternately arranged fabric and liner holders, the fabric from each fabric holder being passed around the adjacent liner holder, a tension device to receive the fabric as it leaves the liner holder, means for stretching the longitudinal median portions of the fabric as it leaves the tension mechanism without stretching the edge portions thereof, and a movable core to receive said stretched fabric.

[Claims 6 to 10 not printed in the Gazette.]

1,216,330. RECEPTACLE. AXEL E. KROSENO, Brooklyn, N. Y. Filed July 12, 1916. Serial No. 108,862. (Cl. 220—115.)

1. In combination, a receptacle provided with a mouth or opening, exterior and interior seats formed along the marginal edges of said opening, a main cover hinged to said receptacle and engaging said exterior seats, a secondary closure hinged to said main cover and adapted to

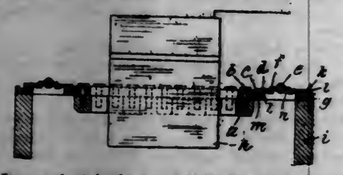
engage said interior seats, and resilient means jointly urging the seating engagement of said main cover and said secondary closure.



2. In combination, a receptacle provided with a mouth or opening, exterior and interior seats formed along the marginal edges of said opening, a main cover hinged to said receptacle and adapted to close on said exterior seats and open back upon the rear wall of said receptacle, a secondary closure resiliently hinged to said main cover and adapted to yieldingly close upon said interior seats and open inwardly in folded relation with said main cover, and means for holding said main cover and folded secondary closure in open position.

3. In combination, a receptacle provided with a mouth or opening, exterior and interior seats formed along the marginal edges of said opening and disposed respectively in outwardly converging planes, a main cover hinged to said receptacle and adapted to close on said exterior seats, a secondary closure hinged to said main cover and adapted to close on said interior seats, and resilient means jointly holding said main cover and secondary closure in closed position.

1,216,331. CHANGEABLE VAULT STRUCTURE FOR ELECTRIC MELTING-FURNACES. BERNHARD CHRISTIAN KVÆRNØ, Haugesund, Norway. Filed Nov. 10, 1916. Serial No. 130,560. (Cl. 204—64.)



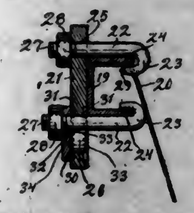
1. In an electric furnace, independently removable surroundings of refractory material for respective sections of the entire set of electrodes, removable supporting beams positioned above each surrounding, and means for suspending each surrounding from the said beams.

2. In an electric furnace having an opening in a part thereof for the introduction of charge-working tools, closing means for the said opening comprising a movable member having a tool-receiving aperture adapted to be brought into registration with the said furnace opening.

3. In an electric furnace having an opening in a part thereof for the introduction of charge-working tools which is provided with a spheroidal socket, closing means for the said opening comprising a ball fitting rotatably within the said socket and having a tool-receiving aperture adapted to be brought into registration with the said furnace opening.

1,216,332. AUTOMOBILE-BUMPER. FRIEDRICH LEDERER, Milwaukee, Wis., assignor of one-half to Benjamin D. Zimmermann, Chicago, Ill. Filed Oct. 26, 1916. Serial No. 127,781. (Cl. 213—39.)

1. The combination, with the side bars and front mud apron of an automobile, of an automobile bumper having bumper brackets, and means for clamping each of said brackets to the side bar including a clamping member having a part extending through the mud apron, said part adapted to pierce the mud apron during the attachment of the brackets to said side bar.



2. The combination, with the side bars and front mud apron of an automobile, of an automobile bumper provided with bumper brackets, and means for clamping said brackets to said side bars including a pointed hooked member for engaging the side bar and piercing the mud apron during the attachment of the brackets to said side bar.

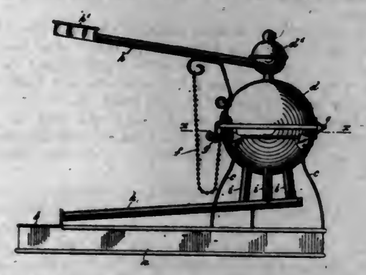
3. The combination, with the side channel bars of an automobile, of a bumper provided with brackets, and means comprising hooked bolts for engaging the flanges of said bars to clamp said brackets thereto, one of said bolts having a pointed end to pierce the mud apron during the attachment of the brackets to said side bar.

4. The combination, with the side channel bars of an automobile, of a bumper provided with brackets, means comprising hooked bolts for engaging said side bars to secure the brackets thereto, one of said bolts having a pointed end to pierce the mud apron during the attachment of the brackets to said side bar, and means for adjusting one of said bolts with respect to the other to permit said brackets to be attached to side bars of varying curvatures.

5. The combination, with the side bars of an automobile, of a bumper provided with brackets, upper and lower clamping members for securing said brackets to said side bar, a circular lock plate adjustably secured to said bracket, said lower clamping member being relatively fixedly secured to said lock plate for adjustment with respect to said upper clamping member.

[Claim 6 not printed in the Gazette.]

1,216,333. APPARATUS FOR PLAYING GAMES. WALTER COLLIS LOWTHER, East Molesey, England. Filed Mar. 27, 1916. Serial No. 86,929. (Cl. 46—61.)



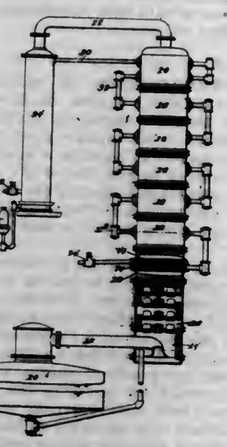
1. In a game apparatus the combination of a base having a plurality of pockets, a hollow member supported by the base, a plurality of inclined chutes communicating respectively at one end with the pockets and at their other end with the interior of the hollow member, and a single inclined chute supported from the hollow member and communicating with the interior of the latter above the points of communication between the member and the chutes which deliver to the pockets.

2. In a game apparatus the combination of a base having a plurality of pockets, a hollow member supported by the base, a plurality of inclined chutes communicating respectively at one end with the pockets and at their other ends with the interior of the hollow member, means for delivering objects into the hollow member above the points of communication between the member and the chutes, and means for changing the course of objects passing through the hollow member under the influence of gravity.

3. In a game apparatus the combination of a base having a plurality of pockets, a hollow member supported by the base, a plurality of inclined chutes communicating respectively at one end with the pocket and at their other ends with the interior of the hollow member, means for delivering objects into the hollow member above the points of communication between the member and the chutes, and a deflector swingingly suspended within the hollow member for changing the course of objects passing through the hollow member under the influence of gravity.

4. In a game apparatus the combination of a base having a plurality of pockets, a hollow member supported by the base, a plurality of inclined sheets communicating respectively at one end with the pockets and at their other ends with the interior of the hollow member means for delivering objects into the hollow member above the points of communication between the member and the chutes, a downwardly tapering tubular member swingingly suspended within the hollow member, and a conical deflector supported within the tapering tubular member and positioned to be engaged by objects during their passage through the hollow member under the influence of gravity to deflect said objects against the tubular member to swing the latter and thus change the course of said objects.

1,216,334. METHOD OF AND APPARATUS FOR FRACTIONAL DISTILLATION. WALTER E. LUMMUS, Lynn, Mass. Filed Apr. 6, 1916. Serial No. 89,272. (Cl. 195—13.)



1. The method of obtaining selective condensation in a distilling apparatus of the column type comprising, vaporizing a solution mixture, passing the vapors successively through a series of reflux condensing chambers, circulating a cooling medium in a stream through the condensing chambers in the path of the vapors, and controlling the area and length of the stream in the chambers so that the rate of absorption of heat by the medium will give a substantially constant temperature difference between the cooling medium and the vapors throughout all the chambers regardless of the volume of vapors being distilled.

2. The method of obtaining selective condensation in a distilling apparatus of the column type comprising, vaporizing a solution mixture, passing the vapors successively through a series of reflux condensing chambers, conducting condensing medium in a stream through the condensing chambers, and varying the length of path and the area of the stream of the condensing medium differently in the different chambers so that the temperature difference between the medium and the vapor in the chambers is approximately constant.

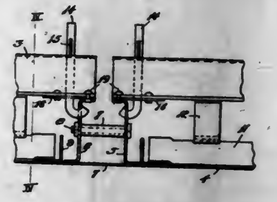
3. The method of obtaining selective condensation in a distilling apparatus of the column type comprising, vaporizing a solution mixture, passing the vapors successively through a series of reflux condensing chambers, circulating condensing medium in a stream through the condensing chambers, and controlling the area, length and velocity of the stream in the chambers to provide a relatively constant temperature difference between the water and the vapors in all of the chambers.

4. The method of obtaining a condensation in a distilling apparatus of the column type comprising, vaporizing a solution mixture, passing the vapors successively through a series of reflux condensing chambers, circulating a cooling medium in a stream through the condensing chambers, and controlling the cross-sectional area of the stream the length of path of the stream the rate of flow of the stream and regulating the velocity of flow of the vapors in the chambers so that the rate of absorption of heat by the medium will result in a substantial temperature difference between the cooling medium and the vapors in all of the chambers, to obtain a full condensing effect in each chamber.

5. The method of obtaining a selective condensation in a distilling apparatus of the column type comprising, vaporizing a solution mixture, passing the vapor successively through a series of reflux condensing chambers, conducting a cooling medium in a stream through the condensing chambers, and controlling the cross-sectional area of the stream, the distribution of the stream, the velocity of the vapors and extent of cooling surface in contact with the vapors, to maintain a substantial temperature difference between the cooling medium and the vapors in all of the chambers.

[Claims 6 to 11 not printed in the Gazette.]

1,216,335. WALL-FORM. CHARLES D. MCARTHUR, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, a Corporation of New Jersey. Filed June 9, 1916. Serial No. 102,606. (Cl. 25—131.)



1. In combination in a wall form, a plurality of main frame members adapted to engage the concrete of the wall formed, transverse frame members extending between the said main frame members and detachably secured thereto, transverse supporting members interposed between the transverse frame members and detachably secured to the main frame members, and lagging plates lying between the main frame members with their transverse edges lying beneath and releasably held by the said transverse frame members and transverse supporting members respectively, and arranged so that when the transverse supporting members are removed, the lagging plates are each released at one edge and may be pulled from beneath the transverse frame members above their other edges.

2. In combination in a wall form, a plurality of spaced upright girders adapted to engage the concrete of the wall formed, transverse frames extending between the said girders and detachably secured thereto, transverse bars lying between the said frames and detachably secured to the girders, and lagging plates lying between the girders and having their horizontal edges lying beneath and releasably held by said transverse frames and transverse bars respectively, and arranged so that when the transverse bars are removed, the lagging plates are each

released at one edge and may be pulled from beneath the transverse frames.

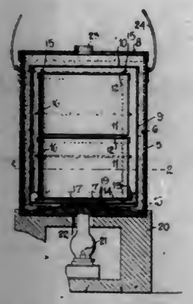
3. In combination in a wall form, a plurality of main frame members adapted to engage the concrete of the wall formed, transverse frame members extending between more than two of the said main frame members and detachably secured thereto, transverse supporting members located between the transverse frame members, and extending only from one main frame member to the next one and detachably secured at their ends to said main frame member, and lagging plates lying between the main frame members with their transverse edges lying beneath and releasably held by the said transverse frame members and transverse supporting members respectively, and arranged so that when the transverse supporting members are removed, the lagging plates are each released at one edge and may be pulled from beneath the transverse frame members above their other edges.

4. In combination in a wall form, a plurality of spaced upright girders adapted to engage the concrete of the wall formed, transverse members extending between the girders and secured releasably to the outer faces thereof, and lagging plates lying between the girders and having their horizontal edges lying beneath and releasably held by said transverse members and arranged so that when a transverse member is removed the edges of the lagging plates held thereby may be moved outward and laterally releasing the other edges of the lagging plates from the other transverse members.

5. In combination in a wall form, a pair of spaced upright girders adapted to contact with the concrete of the wall to be formed, transverse beams clamped releasably against the outer faces of the girders, lagging plates extending from girder to girder and from beam to beam and provided with outwardly projecting flanges at their upper and lower edges, and means projecting inwardly from the beams and engaging said flanges.

[Claims 6 to 10 not printed in the Gazette.]

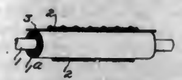
1,216,336. STEAM-COOKER. JOHN MCBRIDE, Chillicothe, Mo. Filed May 10, 1916. Serial No. 96,652. (Cl. 126—20.)



1. In a steam cooker, an outlet jacket having an opening in its base, a closure for the upper end of said jacket being provided with a draft opening, a heating chamber adapted to contain water, a circular, radially convex supporting member adapted to be arranged in the jacket beneath the heating chamber to support the latter in spaced relation above said opening, a cooking vessel adapted to be removably arranged within said heating chamber, and heating means mounted beneath the opening in the base wall of the jacket.

2. In a cooking apparatus, an outer jacket having insulated side and base walls, said base wall being provided with a central opening, a closure for the upper end of said jacket having a draft opening therein, a heating chamber adapted to contain water, a closure for the upper open end of said chamber, food containers adapted to be arranged within said chamber, a wire grate having a circular marginal wire and a plurality of curved, radially disposed intersecting wires, said grate being adapted to be arranged within said jacket to support the heating chamber in spaced relation above the base wall of the jacket, in combination with a base upon which said jacket is adapted to be arranged, and a heating means mounted in the base beneath the opening in the base wall of said jacket.

1,216,337. ELECTRIC CONDUCTOR. ALFRED H. MCCULLOCH and CAROLINE D. MCCULLOCH, Boston, Mass. Filed Dec. 2, 1912. Serial No. 734,494. (Cl. 173—264.)



1. The herein described spirally-wound covering, with all the turns or coils in a layer wrapped or wound in the same direction, and having combined with the spiral turns or coils comprising such layer a solitary line of binding for such turns or coils.

2. The herein described spirally-wound covering with all the turns or coils in a layer wrapped or wound in the same direction, and having combined with the spiral turns or coils comprising such layer, a solitary line of binding consisting of a longitudinal thread or threads engaging with successive turns or coils.

3. The herein described spirally-wound covering, with all the turns or coils in a layer wrapped or wound in the same direction, and having combined with the spiral turns or coils constituting the said layer a marker consisting of a longitudinal thread or the like engaged with the said turns or coils and constituting the chief longitudinal binding therefor.

1,216,338. PREPARATION OF DULL-FINISH COATING MATERIALS. RALPH H. MCKEE, Orono, Me. Filed Mar. 13, 1916. Serial No. 83,972. (Cl. 134—58.)

1. The method of converting a glossy-finish coating material into a dull-finish material consisting essentially of minute particles of varying size of like chemical constitution, which consists in subjecting the former to the action of a liquid having a limited solvent effect thereon, and continuing the action until the said conversion is completed.

2. The method of preparing a dull-finish coating material from inferior grades of barium sulfate, which consists in subjecting the latter to the action of a liquid having a limited solvent effect thereon, and continuing the action until the conversion is completed.

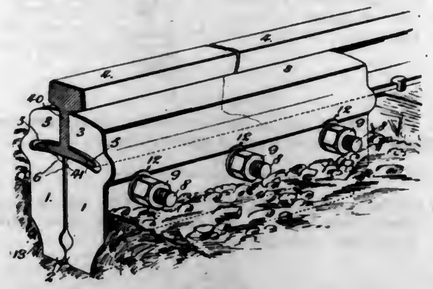
3. The method of preparing a dull-finish coating material from inferior grades of barium sulfate, which consists in subjecting the latter to the action of concentrated sulfuric acid until conversion is effected.

4. The method of preparing a dull-finish coating material from inferior grades of barium sulfate, which consists in subjecting the latter to the action of concentrated sulfuric acid until conversion is effected, then diluting the acid solution and recovering the converted product.

5. The method of preparing a dull-finish coating material from inferior grades of barium sulfate, which consists in subjecting the latter to the action of concentrated sulfuric acid until conversion is effected, then gradually diluting the acid solution and recovering the converted product.

1,216,339. RAIL BRACE OR CLAMP. JOHN LEO MCNEIL, DUNCAN B. MCDONALD, and AUGUSTINE MCDONALD, Birch Grove, Nova Scotia, Canada. Filed Aug. 21, 1916. Serial No. 116,105. (Cl. 239—10.)

1. An emergency rail clamp for broken or split rails, comprising a pair of like shaped coöperating members including base portions adapted to underlie the rail and rest on the road bed, the said members having portions for extending over the rail base flanges and for engaging the web of the rail and clamping the rail web only, the lowermost ends of the base portions having inwardly projected contacting ribs that serve as a fulcrum bearing between the opposing members each of the said members having a horizontal recess extending the full length thereof to loosely receive the rail flanges, the base of said recesses forming a chair for the rail base, means located below and out of contact with the rail for moving the heads of the opposing members to a clamping engagement with the rail web.



2. An emergency rail clamp for broken or split rails, comprising a pair of like shaped coöperating members including base portions adapted to underlie the rail and rest on the road bed, the said members having portions for extending over the rail base flanges and for engaging the web of the rail and clamping the rail web only, the lowermost ends of the base portions having inwardly projected contacting ribs that serve as a fulcrum bearing between the opposing members each of the said members having a horizontal recess extending the full length thereof to loosely receive the rail flanges, the base of said recesses forming a chair for the rail base, means located below and out of contact with the rail for moving the heads of the opposing members to a clamping engagement with the rail web, the bearing points of the rail on the two opposing members being such that the stress of the passing load on the rail is so transmitted to the opposing members whereby to effect a maximum clamping action of the head portions of the said members on the rail web without effecting the means that primarily hold the said head portions to their rail web clamping position.

3. An emergency rail clamp for broken or split rails, that comprises a rail chair consisting of two coöperating opposing members including base portions for resting on the road bed and extending lengthwise of the rail, the said base portions being normally spaced apart and having portions on their adjacent lower faces that form horizontally extended contacts, the upper ends of the said members having horizontal recesses for loosely extending over the base flanges of the rail, and having head portions for clamping against the web of the rail, the base of the opposing recesses forming the seat for the rail, the said members having alining bolt apertures at points below the rail base, draw bolts coöperating with the said opposing members for effecting a primary contact of the head portions on the rail web, the bearing on the coöperative combined chair and clamp members being such relatively to the contacting lower ends of the said members, whereby to increase the clamping characteristics of the said heads when the load is on the rail.

4. An emergency rail clamp for broken or split rails, that comprises a rail chair consisting of two coöperating opposing members including base portions for resting on the road bed and extending lengthwise of the rail, the said base portions being normally spaced apart and having portions on their adjacent lower faces that form horizontally extended contacts, the upper ends of the said members having horizontal recesses for loosely extending over the base flanges of the rail, and having head portions for clamping against the web of the rail, the base of the opposing recesses forming the seat for the rail, the said members having alining bolt apertures at points below the rail base, draw bolts coöperating with the said opposing members for effecting a primary contact of the head portions on the rail web, the bearing on the coöperative combined chair and clamp members being such relatively to the contacting lower ends of the said memers whereby to increase the clamping characteristics of the said heads when the load is on the rail, the said bolts being loosely fitted in the bolt apertures whereby the load strain on the chair is transmitted direct to the said clamping head on the broken web and the bolts thereby relieved of load stress.

5. As a new article, an emergency clamp for bracing broken or split rails comprising two coöperating members of like contour, each including a base portion adapted to rest in the road bed under the broken rail, a head portion having a clamp face for engaging the web of the rail, said head portion having recesses for loosely receiving the base flanges of the rail, each of the base portions of the said members being provided with a horizontally extended rib on its inner face, each of the said members having a bolt aperture below the rail receiving recess, bolts and nuts for coöperating with the said apertures, the said apertures being of slightly larger diameter than that of the bolt, the said portions of the rail flange receiving recesses forming chair-like bearings for the rail, all being arranged substantially as shown and for the purposes described.

[Claim 6 not printed in the Gazette.]

1,216,340. PORTABLE VENEER-TRIMMER. CARL LAWRENCE MATTISON, Beloit, Wis., assignor to C. Mattison Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed Nov. 2, 1914. Serial No. 869,743. (Cl. 143—43.)

1. A portable veneer trimming tool comprising a support or gage adapted to rest against the face of the work to stabilize the tool, a saw carried by said support in position to lie approximately parallel with and very close to the said face of the work when the support or gage is in engagement therewith, and means for driving said saw.

2. A device of the character described comprising a lower or base section constituting a support or gage, an upper section adjustably mounted on the lower section and constituting the casing of a motor, the motor having a drive shaft, and a circular saw rigidly fixed to said shaft and adapted to lie close to the plane of the lower edge of said support or gage.

3. In a tool for trimming off the projecting edge of veneer, a hollow base having an arcuate lower edge arranged to engage the face of an article of furniture above which the veneer edge projects, a motor supported by said base, and a circular rotary saw inclosed by said base and operatively connected to said motor, the saw occupying a position parallel with and close to the said face of the article of furniture when said base is in engagement therewith.

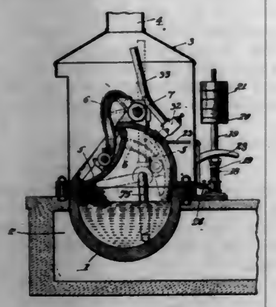
4. A device of the character described comprising a motor, a hollow base threaded upon said motor and having a cut away portion, and a rotary circular saw opera-

tively connected to the motor and inclosed by said base and adapted to project through said cut away portion, the saw occupying a plane parallel with and close to the face of an object with which said base is in engagement.

5. A device of the character described comprising a hollow base having an arcuate lower edge adapted to rest upon the work and having a cut away portion, a motor comprising a casing threaded into said base and comprising a shaft, and a rotary circular saw rigidly fixed on the lower end of said shaft and projecting through the cut away portion of said base, said saw lying in approximately the same plane as the said arcuate lower edge of the base.

[Claim 6 not printed in the Gazette.]

1,216,341. CASTING-POT. GRENVILLE MELLEN, East Orange, N. J. Filed June 29, 1914. Serial No. 848,012. (Cl. 22—69.)



1. In a casting machine, the combination of a melting-pot, a closure therefor, a pump, a valve controlled conduit connecting the pump to the melting-pot, and means connected and arranged to coincidently operate the closure and the pump.

2. In a casting-machine, the combination with a melting-pot, a discharge pipe therefrom, of a pumping device comprising a piston and a weighted piston rod, a valve-controlled conduit connecting the discharge of the pump and melting-pot, and means for operating the pumping device.

3. In a casting-machine, the combination with a melting-pot, a discharge pipe therefrom and a closure therefor, of a pumping device comprising a piston and a weighted piston rod, a valve-controlled conduit connecting the pump and melting-pot, and means connected and arranged to coincidently operate the closure and the pump.

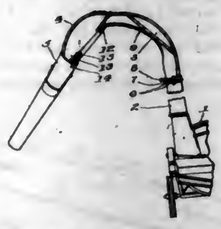
4. In a casting-machine, the combination with a pot, of a movable closure therefor, a discharge pipe rotatably mounted in said pot and means connected and arranged to simultaneously operate the closure and discharge pipe.

5. In a casting-machine, the combination with a pot, a movable closure therefor, and means for introducing fluid into the melting-pot, of a discharge pipe rotatably mounted in said pot, and means connected and arranged to simultaneously operate the closure and discharge pipe.

[Claims 6 to 21 not printed in the Gazette.]

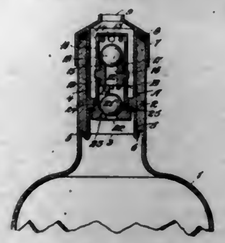
1,216,342. ENSILAGE-CUTTER DISTRIBUTER. GEORGE M. MERWIN, Berwyn, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Sept. 5, 1913. Serial No. 788,219. (Cl. 193—21.)

In a distributing mechanism, a delivery pipe having a curved upper end provided with an open throat, an inclosed distributer freely movable about a pivot on the delivery end of said pipe, said distributer being of arcuate conformation and having a chord-like bottom disposed in



a single plane, and a delivery section operatively connected to the delivery end of said distributer.

1,216,343. NON-REFILLABLE BOTTLE. FRANK ADAM MERTZ, New York, N. Y. Filed May 16, 1916. Serial No. 97,826. (Cl. 215—68.)



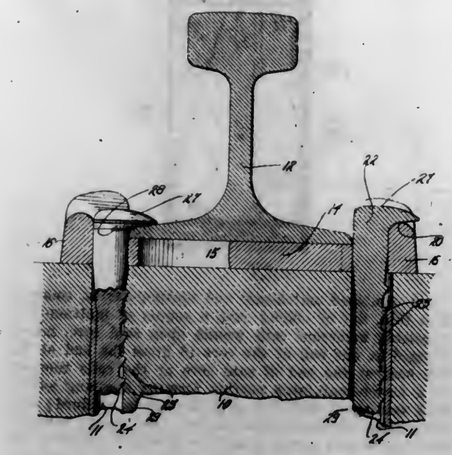
1. The combination of a bottle neck having an internal shoulder, a device for preventing refilling, said device comprising an outer section in the form of a sleeve provided with spring anchoring members on the inner end to interlock with the shoulder of the bottle neck and having an external hood on the outer end for engaging around the bottle neck, and an inner section screwed into the outer section, and said inner section consisting of two chambered members and a coupling threaded into the members, and ball valves in the chambered members, the inner chambered member having a port, the coupling having a passage, and the upper chambered member having ports in its side.

2. The combination of a bottle neck having an internal shoulder, with a device for preventing refilling, said device comprising an outer section fitting in the bottle neck and having spring members for engaging the shoulder to retain the device in place, and an inner section composed of two chambered members and a coupling uniting the members, a valve seat on the upper end of the coupling, a valve seat in the bottom of the inner chambered member, a passage in the coupling, a port in the bottom of the inner member, a ball valve in each chambered member, ports in the side wall of the upper chambered member, there being an annular space between the inner and outer section and above the point where the inner section is fastened in the outer section, and lugs on the bottom of the coupling for preventing the ball in the lower chambered member from closing the passage in the coupling.

1,216,344. RAIL-FASTENING. JOSEPH H. MILLER, Sterlington, N. Y. Filed Dec. 20, 1915. Serial No. 67,840. (Cl. 238—2.)

1. The combination with a rail tie having openings formed therein, of a chair to be positioned on the tie to support a rail, said chair provided with openings to register with said tie openings, spikes to be positioned in the registering openings, and means carried by said chair to receive the heads of said spikes and normally retain the same in position to permit positioning of the rail on said chair or removal therefrom, substantially as described.

2. The combination with a rail supporting means, having openings formed therein, of a chair to be arranged on said supporting means to engage with the rail, said chair having openings to register with said first-mentioned openings, enlargements formed on said chair at each side of the base flange of the rail, spikes to be positioned through said openings, and said enlargements being dished out to normally receive the head portions of said spikes and retain the same out of engagement with the rail, as and for the purpose specified.



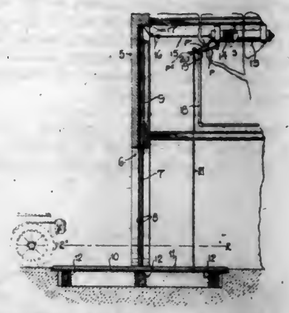
3. The combination with a rail tie having openings formed therein, of a chair to be positioned on said tie to support a rail, enlargements formed on said chair at each side of the base flange of the rail, said enlargements being provided with through openings to register with said tie openings, spikes to be driven into said openings, said enlargements being dished out adjacent each of said second-mentioned openings to initially receive the head portion of said spikes, stopping shoulders formed on said enlargements to limit the desired movement of the spikes, and each of the said enlargements having channels to facilitate the engagement of a tool with the heads of the spikes, as and for the purpose specified.

4. In a device of the character described, the combination with a rail tie having openings formed therein and a chair arranged on said tie to support the rail having openings to register with said tie openings, of spikes to be arranged in said openings, said spikes being cut away a portion of their length so as to provide a shank extending eccentrically to the remaining portion, an insert to be positioned in each of said tie openings to engage with portions of said spikes upon their initial insertion in the tie, ribs being formed on the shank of said spikes opposite said cut-away portions whereby when said spikes are given a half turn said ribs will be brought into biting engagement with said tie, as and for the purpose specified.

5. The combination with a rail tie provided with an opening, of a spike of a diameter slightly less than the diameter of said opening, said spike having a portion of its shank cut away to form a length extending eccentrically to the remaining portion thereof, an insert, substantially semicircular in cross section to be arranged in said opening, said insert being engaged by ribs on said spike upon its initial insertion into said opening, said ribs having biting edges formed on the eccentric portion of said spike opposite the cut away portion, whereby upon the turning of said spike, said ribs will be brought into biting engagement with said tie to securely retain the spike against removal, as and for the purpose specified.

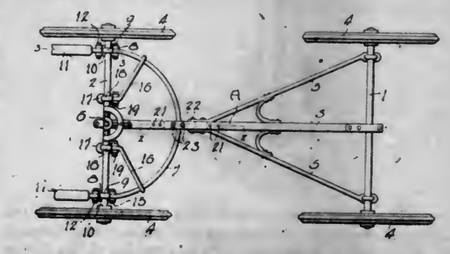
[Claims 6 to 9 not printed in the Gazette.]

1,216,345. VEHICLE-CONTROLLED DOOR-OPERATING MECHANISM. JOSEPH M. MIRAU, Crosby, Minn. Filed Jan. 5, 1916. Serial No. 70,500. (Cl. 268—8.)



The combination with a structure having a door opening and vertical guides at the opposite sides of said opening, a door vertically slidable in said guides, of a spring supported platform extending substantially the entire width of the door beneath the same and in opposite directions therefrom, a compressed air cylinder mounted above the door when the latter is in open position, a piston to reciprocate in said cylinder, a cable connecting one end of the piston to the upper edge of the door, a spring in the cylinder acting to move the cylinder in one direction, an air supply pipe connected to the cylinder, a rotary three-way valve in said supply pipe having an arm connected thereto, and a rod operatively connected at open end to the platform and extending vertically upward therefrom and having its other end connected to the valve arm whereby the valve is actuated when the platform is depressed under the weight of a vehicle and communication established between the supply pipe and the cylinder, whereby the piston is moved to elevate the door to its open position, said valve being operated upon the return of the platform to its normal position to open communication between the cylinder and the atmosphere and exhaust the air from the cylinder, whereby the door is permitted to move by gravity to its closed position, the piston in the cylinder co-acting with the spring to cushion the latter movement of the door.

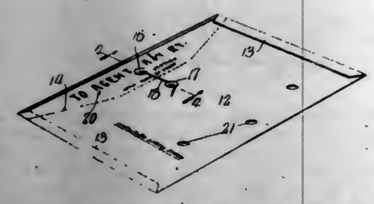
1,216,346. BUGGY-AXLE BRACE. WILLIAM T. MOONEY, Bottineau, N. D. Filed Nov. 13, 1915. Serial No. 61,369. (Cl. 21—39.)



1. In a device of the character described the combination with the running gear of a buggy or the like, of a rod bent into the shape of a semicircle having the king bolt as its center and having its opposite ends connected to the front axle, the intermediate portion thereof slidably engaging the reach, rollers carried by the reach and arranged upon opposite sides of the said rod so as to guide the movements of said rod over the reach as the front axle turns about the king bolt, the said rollers being inclined rearwardly so as to allow a slight rearward movement of the rod caused by the cramping of the running gear and yielding means for resisting the rearward movement of the rod.

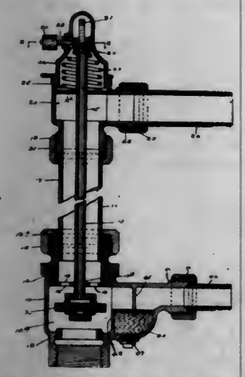
2. In combination with the running gear of a buggy or the like, a semicircular shaped rod having the king bolt as its center, the intermediate portion of said rod slidably engaging the reach, and rollers carried by the reach and arranged upon opposite sides of said rod to prevent undue cramping of the running gear and injury to the king bolt, the said rollers being inclined rearwardly to allow a slight rearward movement of the rod caused by the usual incidental cramping of the running gear.

1,216,347. RETURN-ENVELOP. EUGENE A. MURPHY, EDWARD Z. LEWIS, and WALTER V. WILSON, Chicago, Ill. Filed Oct. 9, 1916. Serial No. 124,497. (Cl. 229—73.)



A return envelop comprising an envelop body having front and rear walls and an opening at one edge, a flap connected to said rear wall and adapted to fold down upon the front wall or to be inserted into said opening between said front and rear walls, a string fastener and a string attached to the outer face of said flap, means providing a reinforced hole in said front wall at a point coinciding with the position of the string fastener on said flap when in a folded position and a second string fastener upon the front wall of the envelop in a position below said flap when the same is in its folded position.

1,216,348. STEAM VALVE AND FITTING FOR HEATING SYSTEMS. EDWARD H. MURPHY, Chicago, Ill. Filed Oct. 31, 1914. Serial No. 869,537. (Cl. 237—73.)

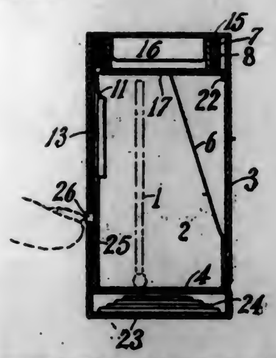


1. An integral fitting formed with a passageway for the supply of steam to a radiator, and a passageway through which the water of condensation is returned to the steam supply pipe, the second named passageway being provided with a water seal, and a valve in the fitting for governing the flow of steam and water of condensation therethrough.

2. An integral fitting formed with a longitudinal passageway for the supply of steam to the radiator, and a lateral passageway through which the water of condensation is returned to the steam supply pipe, the lateral passageway being provided with a water seal, and a valve in the fitting for governing the flow of steam and water of condensation therethrough.

3. An integral fitting formed with a longitudinal passageway for the supply of steam to a radiator, and a lateral passageway through which the water of condensation is returned to the steam supply pipe, the lateral passageway being provided with a water seal, a valve seat in said fitting at the steam entrance thereto, and a valve in said fitting adapted to seat on said seat for governing the flow of steam and water of condensation therethrough.

1,216,349. MATCH-IGNITING DEVICE. JACOB E. NEAHR, New York, N. Y. Filed Feb. 15, 1915. Serial No. 8,129. (Cl. 206—20.)



1. A combined match-safe and ignition-device, comprising a thin, flat or oblong core, a supply of ignition-strip comprising numerous coils wound upon said core, means arranged at one end of the core to press the end of the strip against the end of said core or the coils thereon, and a match-containing portion forming a casing within which said spool with the strip thereon is confined; said casing being oblong in cross-section; and means movable relatively to said casing being provided for rendering the matches accessible and for exposing the spool of ignition strip to permit the striking of a match upon either side thereof.

2. The combination of an open-ended tube or casing flattened so that it is oblong in cross-section; a flattened match-box fitting within said casing and having one of its narrow sides open, and movable relatively to said casing to render the matches accessible; and a flattened spool or core mounted upon the upper end of said match-box within said casing and having a supply of igniting material coiled therearound; said spool having a top flange which normally closes said casing.

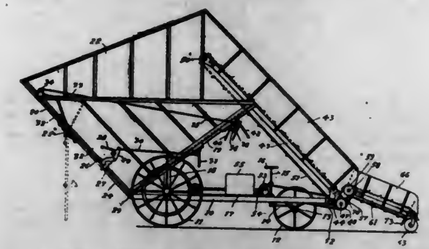
3. A combination match-safe and igniter, comprising a tubular casing, a match-ignition device confined within one end portion of the casing and movable out from the casing to expose the match-ignition device for use, and a match-containing box also confined within said casing and also movable out from the casing to afford access to the matches, said match-igniting device comprising a central support, a flange supported wholly by said central support and normally forming a cover for said casing; said central support rising from said box; a supply of ignition strip forming numerous coils entirely wound upon said central support or core; and a releasable clip for the end of the strip.

4. A combination match-safe and igniter, comprising a flattened tubular casing, a flattened match-box confined within said casing and conforming thereto and having an opening for matches, and movable out from said casing to expose said opening, a central support rising from said box, a flange supported wholly by said central support and normally forming a cover for said casing, a coil of ignition strip comprising numerous layers wound upon said central support or core; said central support being flattened to form a flat core or reel which is about parallel with the flat or wide sides of the casing and box; and a clip for the free end of the strip.

5. The combination of a flattened tubular casing, a flattened match-box telescoped within said casing and having a normally closed match-opening, a flattened support or core erected upon said match-box and arranged within said casing about parallel with the flattened sides of the match-box and casing, a match-igniting strip supply coiled upon said core and presenting two opposite long sides for match-striking surfaces, and means to secure the free end of the strip.

[Claims 6 to 10 not printed in the Gazette.]

1,216,350. TRAVELING SHOCK-GATHERER. BENJAMIN H. NELSON, St. Thomas, Minn. Filed Jan. 8, 1915. Serial No. 1,088. (Cl. 214—2.)



1. A shock loader having a substantially horizontal main frame, traction wheels near the rear and steering wheels near the front of said frame, a container having side walls and diverging, upwardly-extending front and rear walls, the apex of said container being adjacent the axis of the traction wheels, a door in the rear wall of said container, a conveyer extending from the upper, forward portion of the container to the front portion of the main frame, pick-up means to deposit shocks on said conveyer, and power means on the main frame underneath said container and conveyer to propel the machine and drive the conveyer and pick-up means.

2. A shock loader having a substantially horizontal main frame, traction wheels near the rear and steering wheels near the front of said frame, a container having diverging, upwardly-extending front and rear walls and diverging, upwardly-extending side walls, the apex of said container being adjacent the axis of the traction wheels, a door in the rear wall of said container, a conveyer extending from the upper, forward portion of the container to the front portion of the main frame, the discharge point of said conveyer being some distance back of the front edge of said container, pick-up means to deposit shocks on said conveyer, and power means on the main frame underneath said container and conveyer to propel the machine and drive the conveyer and pick-up means.

3. A shock loader having a substantially horizontal main frame, traction wheels near the rear and steering wheels near the front of said frame, a container having side walls and diverging, upwardly-extending front and rear walls, the apex of said container being adjacent the axis of the traction wheels, a door hinged at its upper edge in the rear wall of said container, a conveyer extending from the upper, forward portion of the container to the front portion of the main frame, forwardly-extending pick-up means to deposit shocks on said conveyer, and power means on the main frame underneath said container and conveyer to propel the machine and drive the conveyer and pick-up means, an operator's platform at one side of the main frame and controlling means adjacent thereto for the various instrumentalities.

1,216,351. LOCK FOR MOTOR-VEHICLES. DANIEL J. NUTT, Kansas City, Mo., assignor of one-half to James E. Crosby, Kansas City, Mo. Filed Jan. 19, 1916. Serial No. 72,931. (Cl. 70—90.)

1. A lock for motor vehicles, comprising a steering post, a rotatable rod extending through said post, a clutch member fixed on the rod, a clutch member slidable on the rod and adapted for coöperation with the first named clutch member, means for holding said sliding clutch member to prevent rotation of the rod when said member is in coöperative relation with the fixed clutch member, means extending to the exterior of the post for actuating said sliding member, and a lock for said actuating means.

2. In a lock for motor vehicles, the combination with a steering post, of a rod extending through and rotatably mounted in said post, a clutch member fixed on the rod, a clutch member slidably mounted on the rod, yielding means for urging the sliding clutch member toward its mate, a positioning member fixed to said sliding member and extending to the exterior of the post, a lock for said positioning member and means for holding said sliding clutch member against rotation on the post.



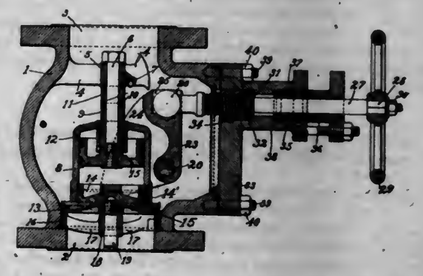
3. In a lock for motor vehicles, the combination with a steering post and rod, of fixed and sliding clutch members on said rod, one of the clutch members being revoluble and the other non-revoluble on the rod, a spring for urging the sliding member toward its mate, a positioning member attached to the sliding clutch member and extending to the exterior of the post, and a lock comprising a bolt adapted for movement to engagement by the positioning member to prevent the return of the sliding clutch member.

4. The combination with a steering post, of a casing on said post having a squared channel therein, a sleeve fixed on the post and having a clutch end, a squared block slidably mounted in the squared channel and having a clutch face adapted for coöperative engagement with the face on said sleeve, means for positioning said sliding clutch member, and a bolt for engaging said member to hold the same in selected position.

5. The combination with a steering post, of a housing inclosing said post and having a squared channel therein, a clutch face fixed on the post, a clutch member slidably mounted in said channel and having a clutch face adapted for coöperation with the fixed face, a spring for urging the sliding member in one direction, a positioning member for moving the sliding member against the tension of its spring, and a lock comprising a bolt for holding engagement with the sliding member when the latter is in selected position.

[Claims 6 to 8 not printed in the Gazette.]

1,216,352. STOP AND CHECK VALVE. OLAF E. OLSON, Chicago, Ill., assignor to The Edward Steam Specialty Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 21, 1912. Serial No. 726,883. (Cl. 137—4.)



1. In a stop and check valve, the combination of a casing, a check valve disposed within said casing, dash-pot

mechanism connected with said valve, and a manually operable bell crank lever inside of the casing for positively holding said valve in closed position.

2. In a stop and check valve, the combination of a casing, a check valve within the casing, dash-pot mechanism connected with said valve, and manually-operated mechanism for engaging said valve at two diametrically-opposite points to positively close said valve.

1,216,353. MECHANICAL TOY. SAME PATERNO, Milford, Mass. Filed Feb. 1, 1916. Serial No. 75,585. (Cl. 46—27.)



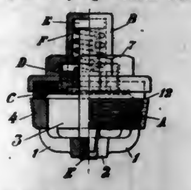
1. A toy comprising a rotatable shaft, said shaft comprising a plurality of complementary demountable sections, object-bearing means demountably carried by and rotatable with one of said sections, a sleeve demountably positioned on one of said sections and revoluble independently thereof, object-bearing means demountably carried on said sleeve and rotatable therewith, and means for rotating said sleeves and said sectional shaft in opposite directions.

2. A toy comprising a base, an upwardly projecting frame, a rotatable shaft, said shaft comprising a plurality of complementary demountable sections, object-bearing means demountably carried by and rotatable with one of said sections, a sleeve demountably positioned on one of said sections and revoluble independently thereof, object-bearing means demountably carried on said sleeve and rotatable therewith, said sectional shaft resting in a bearing on the base, an upper bearing demountably held by said frame-work, and means for rotating said sleeve and said sectional shaft in opposite directions.

3. A toy comprising a base, an upwardly projecting frame, a rotatable shaft, said shaft comprising a plurality of complementary demountable sections, object-bearing means demountably carried by and rotatable with one of said sections, a sleeve demountably positioned on one of said sections and revoluble independently thereof, object-bearing means demountably carried on said sleeve and rotatable therewith, a bearing on the base in which the shaft end rests, a member apertured to form an upper bearing for said sectional shaft, a plurality of bars demountably engaging said bearing member, said bars being secured to said frame whereby said upper bearing is supported, and means for rotating said sleeve and said sectional shaft in opposite directions.

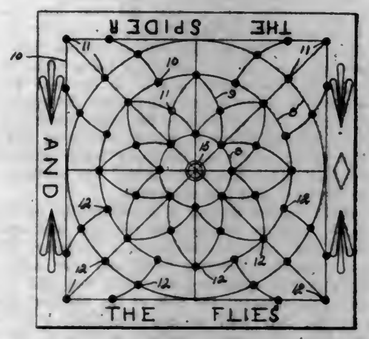
1,216,354. PUMP-VALVE. GEORGE W. W. PERKINS, Chicago, Ill. Filed Mar. 19, 1915. Serial No. 15,653. (Cl. 103—66.)

A valve comprising an annular externally threaded portion having a smooth unobstructed bore of substantially uniform diameter therethrough and having an annular seating portion the diameter of which is greater than the diameter of said bore, a spider having a hub portion entirely below the lower edge of said annular portion and having legs extending downwardly from the lower edge of said annular portion and thence inwardly to said hub portion, no portion of the legs lying within said annular portion, a smooth valve guard fixedly secured to said hub portion and extending upwardly through said bore that portion of the guard, lying within said annular portion



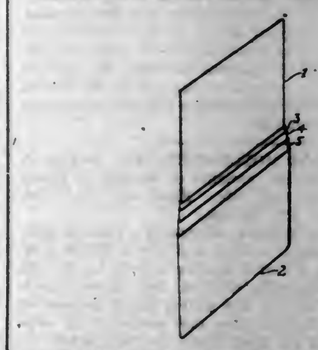
being of substantially uniform cross section throughout its length, and a valve gate held in place by said guard and slidable therein having an annular portion for engaging said valve seat.

1,216,355. GAME-BOARD AND ACCESSORIES. ANDREW L. PERSYN, Newport, Wash. Filed Nov. 24, 1914. Serial No. 873,796. (Cl. 46—64.)



A game board having a rectangular outline on the face thereof, a plurality of concentric circles on the face of the board within the rectangular outline, curved lines intersecting the circles, spots at the intersection of the curved lines with the circles, said spots being of contrasting colors on opposite sides of the board, a plurality of smaller checkers and a larger checker, said checkers representing the objects to be used in the game, substantially as set forth.

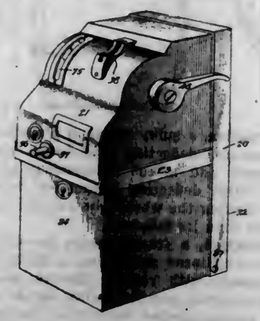
1,216,356. PROTECTOR OF FABRICS AGAINST MOTHS AND THE LIKE, AND A METHOD OF MAKING THE SAME. PAUL PICK, Chicago, Ill. Filed Aug. 18, 1916. Serial No. 115,660. (Cl. 99—1.)



1. As an article of manufacture, a cardboard provided on all sides with a coating of a hardened mixture of dinitronaphthalene and phenol, the mixture covering a portion of the cardboard only and mechanically combined therewith.

2. As an article of manufacture, a cardboard provided on all sides with a coating of a hardened mixture of dinitronaphthalene and phenol.

1,216,357. TELEPHONE PAY-STATION. CHARLES E. PRATT, Chicago, Ill. Original application filed Oct. 25, 1912, Serial No. 727,662. Divided and this application filed May 4, 1914. Serial No. 836,212. (Cl. 161—1.)



1. The combination of clock mechanism, an oscillatory arm connected with the power shaft of said mechanism, and means, operating, when actuated, to engage said arm and rock the latter to wind up said mechanism and thereafter disengage from said arm to release said mechanism for operation.

2. The combination of clock mechanism, clock-winding means, releasable means for preventing said clock-winding means from being returned to normal position, and means actuated by said clock mechanism for releasing said releasable means to permit said clock-winding means to be returned to normal position.

3. The combination of clock mechanism, spring-returnable clock-winding means, means for releasably locking said clock-winding means against return movement, and means actuated by said clock mechanism for releasing said locking means to permit said clock-winding means to be returned to normal position.

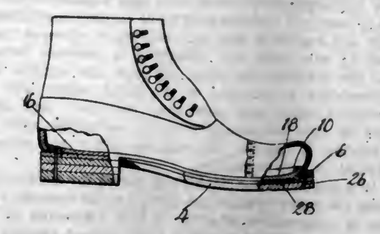
4. The combination of clock mechanism, clock-winding means, means for returning said clock-winding means to normal position, means for releasably locking said clock-winding means against return movement, and means actuated by said clock mechanism for releasing said locking means to permit said clock-winding means to return to normal position.

5. The combination of clock mechanism, clock-winding means, means for returning said clock-winding means to normal position, an electric circuit-controlling device operated by said clock-winding means, and means actuated by said clock mechanism for releasably holding said clock-winding means in a position to which it is moved in the clock-winding operation.

[Claims 6 to 12 not printed in the Gazette.]

1,216,358. SHOE. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed May 21, 1913, Serial No. 768,975. Patent No. 1,159,084, dated Nov. 2, 1915. Divided and this application filed Sept. 15, 1914. Serial No. 861,822. (Cl. 36—16.)

1. A shoe, comprising in combination an upper, an insole having an extension edge, an integral welt, a shoulder shaped to lie within and support the upper upon the inside of the shoe and an integral tongue over which the heel end of the upper is lasted in, an outsole, and fastenings securing together said welt, upper, insole and outsole, said upper being outturned upon the extension edge of said insole and said integral welt overlying the outturned portion of said upper.

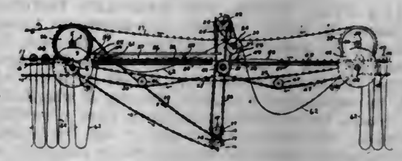


2. A shoe comprising an upper, an insole having an extension edge and an integral welt, and having within said extension edge an undercut shoulder shaped to lie within and support the upper on the inside of the shoe, said upper having an outturned margin lying upon said extension edge of the insole, fastenings securing said upper permanently to said insole, said fastenings being located in the angle of the upper and under the overhanging shoulder of the insole, and an outsole secured to said welt, upper and insole.

3. A stitch-down shoe comprising an upper, an insole having an extension edge and an upper supporting shoulder within said extension edge undercut to provide a crease or groove between said shoulder and said extension edge, said upper being outturned upon said extension edge of said insole, staples permanently securing said upper to said insole in said crease or groove, said staples being inserted through the angle of the upper and through the insole and clenched upon the bottom face of the insole, a welt laid upon said outturned portion of the upper, and an outsole secured to said welt, upper and extension edge of the insole.

4. A stitch-down shoe comprising an insole having an extension edge and an integral welt and having within said extension edge a shoulder shaped to lie within and support the upper upon the inside of the shoe, an upper having its heel end lasted in over a portion of the heel end of the insole, said upper being outturned upon the extension edge of said insole, staples permanently securing said upper to said insole, said staples being inserted through the upper in the angle formed by outturning and through the insole and being clenched upon the bottom face of the insole, an outsole, and fastenings securing together the integral welt, the outturned upper, extension edge of said insole and said outsole.

1,216,359. PAPER-DRYING MACHINERY. GEORGE E. PRESTON, IRVIN G. PALMER, and OSCAR S. WINESBURG, Elkhart, Ind. Filed July 24, 1916. Serial No. 110,852. (Cl. 34—20.)



1. In a paper drying machine, a device for mechanically shifting the paper comprising, primary and secondary conveyers in coöperative relation; a lath supported by said primary conveyer and adapted to be moved thereby and deposited upon said secondary conveyer; paper carried by said lath and extending in advance thereof; means for drawing the paper forward and causing it to sag downward in advance of the point where said lath is delivered upon said secondary conveyer; and means carried by said secondary conveyer actuating said lath and moving it

against the sagging paper and carrying it forward therewith.

2. In a paper drying machine, a device for mechanically shifting the paper comprising, primary and secondary conveyers in coöperative relation; a lath supported by said primary conveyer and adapted to be intermittently moved thereby and deposited upon said secondary conveyer; paper carried by said lath and extending in advance thereof; means for drawing the paper forward and causing it to sag downward in advance of the point where said lath is delivered upon said secondary conveyer; and means carried by said secondary conveyer actuating said lath and moving it against the sagging paper and carrying it forward in loop formation.

3. In a paper drying machine, a device for mechanically shifting the paper comprising, primary and secondary conveyers in coöperative relation; a lath supported by said primary conveyer and adapted to be moved thereby and deposited upon said secondary conveyer; paper carried by said lath and extending in advance thereof; means for drawing the paper forward at a velocity greater than the speed of the lath when the latter is being actuated within the primary conveyer limits and causing it to sag downward in advance of the point where said lath is delivered upon said secondary conveyer; and means actuating said lath on said secondary conveyer and moving it against the sagging paper and carrying it forward therewith in loop formation.

4. In a paper drying machine, a device for mechanically shifting the paper comprising primary and secondary conveyers in coöperative relation; a lath supported by said primary conveyer and adapted to be moved thereby and delivered upon said secondary conveyer; paper carried by said lath and connected with paper draft means whereby said paper is drawn forward and caused to sag downward in advance of the point where said lath is delivered upon said secondary conveyer; means for temporarily retarding the movement of said lath upon said secondary conveyer after delivery thereon; and means actuating said lath on said secondary conveyer and moving it against the sagging paper and carrying it forward in loop formation.

5. In a paper drying machine, a device for mechanically shifting the paper comprising, primary and secondary conveyers in coöperative relation; a lath supported by said primary conveyer and adapted to be intermittently moved thereby and delivered upon said secondary conveyer; paper carried by said lath and connected with paper draft means whereby said paper is drawn forward and caused to sag downward in advance of the point where said lath is delivered upon said secondary conveyer; means for temporarily retarding the movement of said lath upon said secondary conveyer after delivery thereon; and means actuating said lath on said secondary conveyer and moving it against the sagging paper and carrying it forward in loop formation.

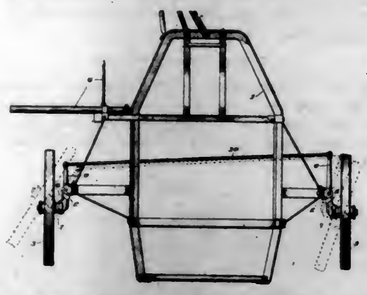
[Claims 6 to 11 not printed in the Gazette.]

1,216,360. TRUCK FOR WHEELED VEHICLES. CLEMMA R. RANEY, Chicago, and ROBERT C. LIVESAY, Moline, Ill., assignors to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 6, 1913. Serial No. 740,482. (Cl. 21—141.)

1. In combination, a frame, a plurality of wheels therefor, means for deflecting said frame from a rectilinear movement, and means independent of said frame and of said deflecting means moving said wheels angularly with respect to each other upon deviation of said frame from a rectilinear movement.

2. In combination, a frame, a plurality of wheels therefor, means movable about a pivot for deflecting said frame from a rectilinear movement, and means independent of said frame deflecting means for deflecting said wheels upon the deflection of said frame and deflecting the wheel adjacent the turn through a greater angle than its fellow.

3. In combination, a frame, a plurality of wheels therefor, means for drawing said frame and deflecting it from a rectilinear movement, and means independent of said frame and of said frame deflecting means for deflecting said wheels and deflecting the wheel adjacent the turn through a greater angle than its fellow.

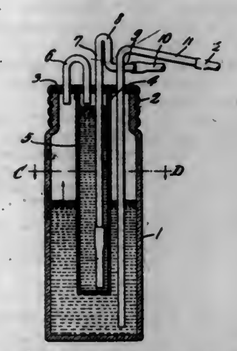


4. In combination, a sulky frame, a plurality of wheels therefor, means for deflecting said frame from a rectilinear movement, and means independent of the frame and of said frame deflecting means for deflecting said wheels and deflecting the wheel adjacent the turn through a greater angle than its fellow.

5. In combination, a frame, means for deflecting said frame from a rectilinear movement, a plurality of axles angularly movable with respect thereto about vertical axes, said axles being provided with shanks of different lengths, and means pivoted directly to the ends of said shanks connecting said ends.

[Claims 6 to 15 not printed in the Gazette.]

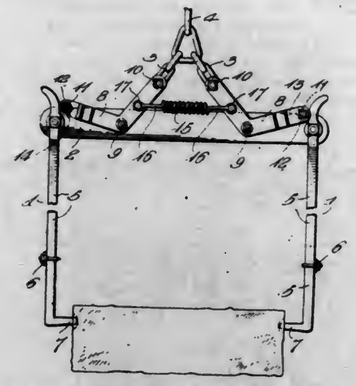
1,216,361. MEDICINE-INJECTING APPARATUS. MORTIMER S. REYNOLDS, Yates Center, Kans. Filed Feb. 11, 1916. Serial No. 77,698. (Cl. 128—25.)



Apparatus of the class described, including an outer transparent graduated container, a closure removably mounted thereon, said closure having a central socket portion depending therefrom, an inner transparent graduated receptacle detachably engaging the walls of the socket portion and suspended therefrom concentrically within the outer container, said closure constituting means for sealing both containers, a pipe connection between the upper portions of the two containers, a valved steam vent carried by the closure and in communication with the interior of the outer container, an outlet tube extending through the closure from a point adjacent the bottom of the inner container, and an air inlet tube extending through the closure and opening into the outer container adjacent the bottom thereof.

1,216,362. CARRYING-HOOK. RICHARD RICHARDS and HOMER P. MARLEY, New Castle, Pa. Filed June 5, 1916. Serial No. 101,795. (Cl. 57—9.)

1. In a device of the class described, a hanger bar, a pair of gripping members, said bar having seats therein adjacent said members, swinging arms, and contact members carried by said arms, said arms being movable to dispose said contact members in said seats to engage one end of the gripping members to prevent the same from moving apart.



2. In a device of the class described, a hanger bar, a pair of gripping levers, said bar having seats therein adjacent said levers, lifting means, bell crank levers connected at one end with said lifting means, contact members carried by the opposite ends of said bell crank levers, said levers being movable by said lifting means to dispose said contact members in said seats, whereby to engage one end of the gripping levers to prevent the same from moving apart.

3. In a device of the class described, a hanger bar, a pair of gripping levers, said bar having seats therein adjacent said levers, lifting means, bell crank levers connected at one end with said lifting means, contact members carried by said bell crank levers, said levers being movable by the weight of the article carried thereby to dispose said contact members in said seats, whereby to engage one end of the gripping levers to prevent the same from moving apart, and spring means for holding said contact members normally out of said seats.

4. In a device of the class described, a hanger bar, a pair of gripping levers, said bar having seats therein adjacent said levers, lifting means, bell crank levers connected at one end with said lifting means, contact members carried by said bell crank levers, said levers being movable by the weight of the article carried thereby to dispose said contact members in said seats, whereby to engage one end of the gripping levers to prevent the same from moving apart, and a helical spring having arms extending from opposite ends thereof, said arms being connected to the adjacent ends of the bell crank levers to normally hold said contact members out of said seats.

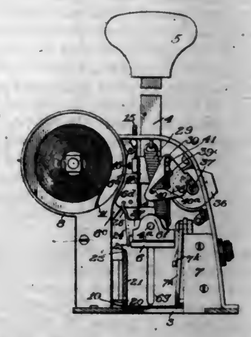
5. Lifting mechanism for the purpose described comprising a transverse supporting frame, load carrying arms pivoted thereto, and arms pivoted to the frame having holding portions engaging the carrying arms, means connecting them with a centrally arranged lifting element, and means for positively relaxing said connecting means.

[Claim 6 not printed in the Gazette.]

1,216,363. STAMP-AFFIXER. JOHN E. RICHMOND, WESLEY JOSEPH BALKWILL, and WILLIAM F. SCHWEIGER, Rochester, N. Y., assignors to Multipost Company, Rochester, N. Y., a Corporation of New York. Filed May 1, 1913. Serial No. 764,964. (Cl. 216—28.)

1. In a stamp affixer, the combination with a reciprocatory movable affixing member, a stationary cutter and means for feeding a stamp strip thereover, of a knife carried bodily on the affixing member and movable thereon, and means for adjusting it on said member into coöperative engagement with the cutter at a predetermined point in the movement of said member.

2. In a stamp affixer, the combination with a movable affixer, a stationary cutter and movable feeding devices for projecting a stamp strip over said cutter, of a knife loosely carried by the affixer and means coöperating therewith and positioned to adjust the knife on the affixer into operative engagement with the cutter relatively to the feeding movement of the stamp strip.



3. In a stamp affixer, the combination with a movable affixer, a stationary cutter and a shearing blade carried on the affixer and normally occupying an inoperative position, of means for feeding a stamp strip over said cutter and coöperating portions arranged respectively on the shear and a stationary part of the machine for moving said shear independently of the affixer into engagement with the cutter upon the downward movement of said affixer.

4. A stamp affixer comprising means for feeding a strip of stamps successively and an affixer, a shear movable transversely on the affixer and means for automatically positioning it in cutting position upon the downward movement of the affixer.

5. In a stamp affixer the combination with a reciprocatory affixing member, means for successively projecting a stamp strip and a stamp cutter, of a coöperating shear mounted on the affixing member and capable of limited transverse and rotary movement and means automatically operated upon movement of the member into affixing position to adjust said shear into cutting position relatively to said cutter.

[Claims 6 to 10 not printed in the Gazette.]

1,216,364. CUMULATIVE ARTILLERY-PROJECTILE. PETER ROGER, Milford, Mass. Filed Apr. 1, 1916. Serial No. 88,284. (Cl. 102—29.)



1. In a cumulative artillery projectile, an assembled outer casing, a shrapnel charge of perforated shots incased in the front end of the projectile and said perforations filled with lyddite, thermit for generating intense

heat expelling charges and means to ignite simultaneously the expelling charges to expel and radiate the shots and the thermit.

2. In a cumulative artillery projectile, an assembled outer casing, a shrapnel charge of perforated shots incased in the front end of the projectile and said perforations filled with explosive matter, a canister for thermit therein with a concentric tube filled with inflammable matter, said thermit generating high temperature, expelling charges and means to ignite simultaneously the expelling charges to expel the shots and the thermit.

3. In a cumulative artillery projectile, an assembled outer casing, a shrapnel charge of perforated shots incased in the front end of the projectile, a canister for thermit therein with a concentric tube filled with inflammable matter, a second shrapnel charge of perforated balls between the outer casing and the canister, said perforations being filled with explosive matter, said thermit generating high temperature, expelling charges and means to ignite simultaneously the expelling charges to expel and radiate the shrapnel charges and the thermit.

4. In a cumulative artillery projectile, an assembled outer casing, a shrapnel charge of perforated shots incased in the front end of the projectile, a canister for thermit therein with a concentric tube filled with inflammable matter, a second shrapnel charge of perforated balls between the outer casing and the canister, said perforations being filled with explosive matter, a concussion hammer set between the shots in the front end shrapnel charge and the fulminate priming beneath, said thermit generating high temperature, expelling charges and means to ignite simultaneously the expelling charges to expel and radiate the shrapnel charges and the thermit.

5. In a cumulative artillery projectile, an assembled outer casing, a shrapnel charge of perforated shots incased in the front end of the projectile, a canister for thermit therein with a concentric tube filled with inflammable matter, a second shrapnel charge of perforated balls between the outer casing and the canister, said perforations being filled with explosive matter, a concussion hammer set between the shots in the front end shrapnel charge and the fulminate priming beneath, a series of concatenated casings for the expelling charges set thereupon and beneath the canister and in the rear end of the projectile, said thermit generating intense heat, and means to ignite simultaneously the expelling charges to expel and radiate the shrapnel charges and the thermit.

[Claims 6 to 8 not printed in the Gazette.]

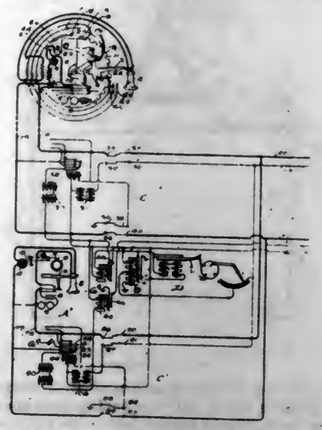
1,216,365. AUTOMATIC TELEPHONE SYSTEM. CLARENCE E. ROGERS, Oakland, Cal., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 12, 1913. Serial No. 806,281. (Cl. 179—18.)

1. In a telephone system, a subscriber's line provided with means for transmitting impulses over two sides of the line in series, a second subscriber's line provided with means for transmitting impulses over two sides of said line with ground return, a trunk line, and means by which either of said subscribers may obtain connection with said trunk and extend a connection thereover.

2. In a telephone system, a trunk line, a subscriber's line provided with means for transmitting one character of impulses over said line, a second subscriber's line provided with means for transmitting a different character of impulses, means by which a connection can be established from either of said lines with said trunk, and means for then extending the connection from said trunk controlled by either of said types of impulses.

3. In a telephone system, a trunk line, a selector switch in which said trunk terminates, a repeating mechanism in said trunk, a plurality of subscribers' lines adapted to be connected with said trunk, and means for bringing said repeating mechanism into operation only when certain of said subscribers seize said trunk.

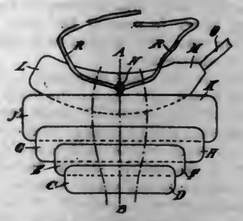
4. In a telephone system, a trunk line, an automatic switch connected with said trunk, a plurality of subscribers' lines, means for extending a connection from said lines to said trunk, means for transmitting impulses from certain of said subscribers' lines over said trunk to said switch, a repeating mechanism in said trunk, and means whereby said repeating mechanism repeats impulses received from other of said subscribers' lines to said automatic switch.



5. In a telephone system, a trunk line, a repeater in said trunk, means for transmitting impulses of two characters to said trunk, means whereby impulses of one character pass directly through said trunk, and means whereby impulses of the other character will be repeated over said trunk by said repeater.

[Claims 6 to 98 not printed in the Gazette.]

1,216,366. PUTTEE. HENRY ROTTENBURG, Cambridge, England. Filed Nov. 10, 1916. Serial No. 130,605. (Cl. 36—2.)



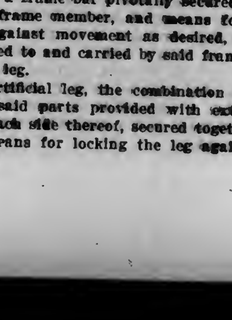
1. A puttee consisting of a number of strips of flexible material arranged successively to overlap one another along their edges, means securing said strips together in the middle parts thereof where they overlap, in such a manner as to leave the ends of the strips free to be lapped around the leg successively in overlapping positions, and means for securing the strips in the successively overlapped positions when applied to the leg.

2. A puttee consisting of a number of strips of flexible material arranged successively to overlap one another along their edges, means securing said strips together in the middle parts thereof where they overlap, in such a manner as to leave the ends of the strips free to be lapped around the leg successively in overlapping positions, and means for securing the uppermost strip with its ends overlapping around the leg, whereby also the succession of strips each with its end overlapped by the last is held closed around the leg.

3. A puttee consisting of a number of strips of flexible material arranged successively to overlap one another along their edges, means securing said strips together in the middle parts thereof where they overlap, in such a manner as to leave the ends of the strips free to be lapped around the leg successively in overlapping positions, a plurality of hooks applied to the respective strips on their outer faces near to the ends thereof, and means for lacing the strips together around the said hooks.

4. A puttee consisting of a number of strips of flexible material arranged successively to overlap one another along their edges, means securing said strips together in the middle parts thereof where they overlap, in such a manner as to leave the ends of the strips free to be lapped around the leg successively in overlapping positions, a tape adapted to bind the uppermost overlapped strip around the leg, and means for lacing together the overlapped ends of the strips when applied to the leg.

1,216,367. ARTIFICIAL LEG. JAMES F. ROWLEY, Chicago, Ill. Filed July 16, 1915. Serial No. 40,215. (Cl. 3—3.)



1. In a preparatory leg of the kind described and in combination, an adjustable socket member, a supporting frame therefor comprising a foot part provided with a pair of frame members arranged one on each side thereof and connected at the back, said socket member detachably carried by said connection, a bar for each frame member pivotally secured thereto, a socket permanently carried by said bars and means for locking said parts against pivotal movement.

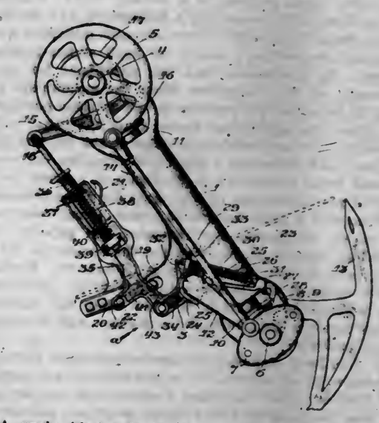
2. In a preparatory leg of the kind described and in combination, an adjustable socket member, a supporting frame therefor comprising a foot part provided with a pair of frame members arranged one on each side thereof, and a section frame member pivotally secured to each frame member, a bar connecting one part of said frame bars adjacent their upper ends and outwardly curved toward the rear, a second socket member permanently secured to and carried by said frame bars, means for locking said parts against pivotal movement, and means for detachably securing and supporting said first socket member in place with the curved bar.

3. In a preparatory leg of the kind described and in combination, a socket member, a leg for carrying said socket member, comprising a base, a pair of frame members extending upwardly therefrom on the sides, a rearwardly curved brace member secured to and connecting said frame members near the upper ends thereof, a connecting strap extending between said frame members at the front, said socket members provided with hooks arranged to detachably engage said curved brace member on the top edge thereof, and with means for detachably anchoring the lower end, a brace extending from said curved member to the base, and a frame bar pivotally secured to the upper end of each frame member, and means for locking the frame bars against movement as desired, and a socket member secured to and carried by said frame members at the top of the leg.

4. In an artificial leg, the combination of upper and lower parts, said parts provided with extending frame members on each side thereof, secured together to form a knee joint, means for locking the leg against flexing, a rearwardly curved bar connecting said frame members, an adjustable socket member arranged to be secured on the leg stump, means supporting the socket member within said leg, and means for detachably securing the lower end in place.

5. In an artificial leg of the kind described and in combination, a frame comprising a foot part having an upwardly extending frame part on each side, a bar connecting said frame parts and rearwardly outwardly curved, bracing means for said curved bar at the back intermediate its ends, a strap extending between said frame parts at the front of the leg, a socket permanently carried by the frame at the upper ends of said parts, a second socket provided with lacing means at the front, and with hooks at the rear arranged to detachably engage the upper edge of said curved bar on opposite sides of said brace.

1,216,368. GRAIN-BINDER. FRANK A. RYTHER, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Apr. 7, 1916. Serial No. 89,682. (Cl. 56—126.)



1. A grain binder including, in combination, a power transmission gear mechanism including a clutch, a needle shaft, a clutch tripping arm, and automatically operative means for moving said arm axially and bodily toward or from said clutch.

2. In a grain binder, power transmission gear mechanism including a clutch, a needle shaft, a clutch tripping arm journaled on said shaft, means on said shaft for controlling the movement of said arm, a compressor trip shaft, and an operative connection between said shaft and trip.

3. In a grain binder, power transmission gear mechanism including a clutch, a needle shaft, a cam rotatable therewith, a clutch controlling member carried on said shaft and engageable with said cam, a compressor trip shaft, a crank on said controlling member, and a pivotal connection between said crank and said trip.

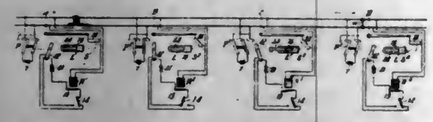
4. A grain binder including, in combination, a power transmission gear mechanism including a clutch, a rocking needle shaft, means operatively connecting said needle shaft with said power transmission gear mechanism, an eccentric collar secured to said needle shaft, and a clutch tripping arm journaled on said eccentric collar whereby said arm is moved axially and bodily toward or from said clutch when said needle shaft is rocked.

5. A grain binder including, in combination, a binder frame, a power transmission gear mechanism, a rocking needle shaft journaled on said frame and operatively connected with said power transmission gear mechanism, an eccentric collar secured to said needle shaft, a clutch mechanism forming part of said power transmission gear mechanism and including a clutch pawl, and a pawl engaging arm journaled upon said eccentric collar whereby

said arm is moved axially and bodily toward or from said pawl when said needle shaft is rocked, said arm engaging with a fixed part of said frame in a manner limiting an axial movement thereof in one direction.

[Claim 6 not printed in the Gazette.]

1,216,369. RAILWAY SIGNALING. JOHN E. SAUNDERS, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Sept. 12, 1914. Serial No. 861,376. (Cl. 246—34.)



1. A railway signaling system comprising a plurality of successive block sections of a railway track; signals for the sections each comprising a semaphore, and an operating mechanism capable of two extreme positions and an intermediate position; means for each signal interposed between the mechanism and the semaphore for causing movement of the semaphore when the mechanism moves from its intermediate position to one extreme position but not when the mechanism moves from the other extreme position to the intermediate position, track circuits for the sections each including a source of signaling current and a track relay responsive to reversals of current for controlling the mechanism of the signal for the corresponding section, and a pole-changer for each signal operated by the signal mechanism for reversing the polarity of the signaling current in the relay for the section in the rear, each pole-changer being reversed when the mechanism moves between the last-mentioned extreme position and the intermediate position but not when the mechanism moves between the intermediate position and the other extreme position.

2. A railway signaling system comprising a plurality of successive block sections of a railway track; signals for the sections each comprising a semaphore, and an operating arm adapted for two extreme positions and an intermediate position; means for each signal interposed between the operating arm and the semaphore for causing movement of the semaphore when the arm moves from its intermediate position to one extreme position but not when the arm moves from the other extreme position to the intermediate position, track circuits for the sections each including a source of current and a track relay responsive to reversals of current, means for each signal controlled by the corresponding track relay for controlling the operating arm of the signal, and a pole-changer for each signal operated by the operating arm for reversing the polarity of the signaling current in the relay for the section in the rear, each pole changer being reversed when the operating arm moves between the last-mentioned extreme position and the intermediate position but not when the arm moves between the intermediate position and the other extreme position.

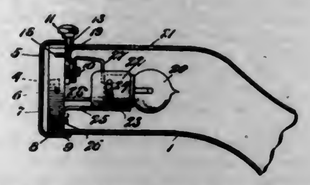
3. A railway signaling system comprising a plurality of successive block sections of a railway track, signals for the sections each comprising a semaphore adapted for caution and clear positions and an operating mechanism capable of two extreme positions and an intermediate position, means for each signal interposed between the mechanism and the semaphore for causing movement of the semaphore from caution to clear position when the mechanism moves from its intermediate position to one extreme position but for permitting movement of the mechanism from its other extreme position to its intermediate position independently of the semaphore; track circuits for the sections each including a source of signaling current, and a track relay responsive to reversals of current for controlling the mechanism of the signal for the corresponding section; and a pole-changer for each signal operated by the signal mechanism for reversing the polarity of the signaling current in the relay for the section in the rear, each pole-changer being reversed when the mechanism moves between its last-mentioned extreme position and its intermediate position but not when the mechanism moves between the intermediate position and the other extreme position.

4. A signaling system comprising a plurality of successive block sections, track circuits for the sections each including a source of current and a relay responsive to reversals of such current; signals for the sections controlled by said relays and each comprising a semaphore, an operating mechanism and means interposed between the semaphore and the mechanism for permitting a partial operation of the mechanism without causing movement of the semaphore but for causing movement of the semaphore during the remainder of the operation of the mechanism; and means controlled by each signal mechanism and operating to reverse the polarity of the track circuit in the rear while the mechanism is performing the first-mentioned partial operation.

5. A signaling system comprising a plurality of successive block sections, track circuits for the sections each including a source of current and a relay responsive to reversals of such current; signals for the sections controlled by said relays and each comprising a semaphore, an operating mechanism and means interposed between the semaphore and the mechanism for causing operation of the semaphore during a part only of the operation of the mechanism; and means controlled by the mechanism of each signal for reversing the polarity of the track circuit in the rear during the remainder of the operation of the mechanism.

[Claim 6 not printed in the Gazette.]

1,216,370. TELLTALE AND SWITCH FOR REAR SIGNAL-LIGHTS FOR AUTOMOBILES. WENDELIN P. SENO, Chicago, Ill. Filed Dec. 24, 1915. Serial No. 68,573. (Cl. 175—282.)



1. A switch for the signal-lights of automobiles and the like, the same comprising a housing consisting of a tubular body-portion open at one end and a closure for said end, said housing having a sight-opening, a plug within the housing and removable from the open end of the same when the closure has been removed, a movable switch carried by the plug and removable therewith and having its handle projecting through and beyond a slot in the housing, electrical contacts carried by the plug and arranged in the path of the movable switch and each adapted to be in circuit with a signal-light, a tell-tale lamp carried by and removable with the plug and adapted to be in circuit with each of the signal-lights, and a connection between said tell-tale lamp and the switch.

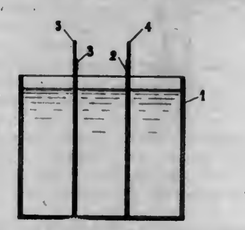
2. A switch for the signal-lights of automobiles and the like, the same comprising a tubular housing provided with means for attaching it to the steering-post of an automobile or other object and with a sight-opening, a plug removably mounted in the housing, a switch-lever mounted to oscillate upon the plug and having its operating handle projecting through and beyond a slot formed in the housing, electrical contacts located on the plug at opposite sides of the switch-lever and in the path thereof and each adapted to be in circuit with a rear signal-light, a tell-tale lamp located on the plug adjacent the sight-opening of the housing and adapted to be in circuit with each of the signal-lights, a connection between the tell-tale lamp and the switch-lever, and a removable cap or closure for the tubular housing.

3. A switch for the signal-lights of automobiles and the like, the same comprising a tubular housing having a sight-opening and means for attaching to the steering-post of an automobile or other object, an insulating plug removably mounted within the tubular housing, means for securing the same temporarily in position therein, a removable cap for the end of the housing, means for temporarily locking the same, a signal-light operating switch carried by the plug, and a tell-tale lamp in circuit with the switch and signal-lights and carried by the plug, whereby the switch and tell-tale lamp may be simultaneously removed with the plug from the housing.

4. A switch for the signal-lights of automobiles and the like, the same comprising a tubular housing having a sight-opening, a removable cap or cover and means for locking the same in position on the end of the housing, an insulating plug removably secured in the housing, an oscillatory switch pivoted on the plug and having its operating-handle extending through and beyond a slot formed in the housing, opposite electrical contacts secured to the plug at opposite sides of and in the path of the switch and each adapted to be in circuit with a signal-light, an intermediate standard secured to the plug, a socket carried by the standard, a tell-tale lamp within the socket adjacent the sight-opening of the housing, an electrical conducting-arm extending from the pivot of the switch and terminating in contact with one of the contacts of the tell-tale lamp, and a similar arm contacting with the remaining contact of said lamp and connected to the base of the intermediate standard and adapted to be in circuit with each of the signal-lights.

5. A switch for the signal-lights of automobiles and the like, the same comprising a housing having a sight-opening, an insulating plug seated in the housing, an oscillatory switch-lever pivoted on the plug and having its operating-handle extending through and beyond a slot formed in the housing, electrical contacts secured to the plug at opposite sides of and in the path of the switch-lever, each of said contacts being adapted to be in circuit with a signal-light, an intermediate standard secured to the plug, a socket carried by the standard, a tell-tale lamp within the socket and adjacent the sight-opening of the housing, an electrical conducting arm extending from the switch to one of the contacts of the tell-tale lamp, and a similar arm leading to the remaining contact of the lamp, said latter arm being mounted on the plug and adapted to be in circuit with each of said signal-lights.

1,216,371. PROCESS FOR THE MANUFACTURE OF HYDROXID OF ALUMINIUM. BOTHO SCHWERIN, Frankfort-on-the-Main, Germany, assignor to Elektro-Osmose Aktiengesellschaft (Graf Schwerin Gesellschaft), Frankfort-on-the-Main, Germany, a Corporation. Filed May 13, 1915. Serial No. 27,917. (Cl. 204—1.)



1. A process for the manufacture of hydroxid of aluminium from aluminate of alkali consisting in precipitating the aluminium hydroxid with acid and subjecting the resulting aluminium hydroxid, and associated impurities, to the action of an electric current between diaphragms which permit the passage of soluble inorganic electrolytes.

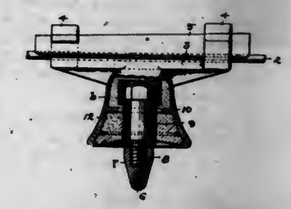
2. A process for the manufacture of hydroxid of aluminium from aluminate of alkali consisting in precipitating the aluminium hydroxid with acid and subjecting the resulting aluminium hydroxid, and associated impurities, to the action of an electric current between diaphragms consisting of viscose.

3. A process for the manufacture of aluminium hydroxid from aluminate of alkali consisting in precipitating the aluminium hydroxid with acid, treating the mass containing the precipitate in a centrifuge, and subjecting the centrifugated material between diaphragms to the action of an electric current.

4. A process for the manufacture of hydroxid of aluminium from aluminate of alkali consisting in passing acid-forming gases into said aluminate to precipitate the aluminium hydroxid and subjecting the resulting aluminium hydroxid, and associated impurities, to the action of an electric current between diaphragms.

5. A process for the manufacture of hydroxid of aluminium from aluminate of alkali consisting in precipitating the aluminium hydroxid with acid formed by acid forming gases, treating the mass containing the precipitate in a centrifuge, and subjecting the centrifugated material between diaphragms to the action of an electric current.

1,216,372. TROLLEY-HANGER. JAMES SCOTT, Cleveland, Ohio. Filed May 20, 1916. Serial No. 98,728. (Cl. 191—42.)



1. A hanger for trolley wires having a straight top bar provided with a channel from end to end in the top thereof to engage a span wire therein and provided with substantially L-shaped keepers at its ends overhanging said channel from opposite sides and adapted to receive a single wedge engaged in both keepers, the said keepers being constructed to confine said wedge laterally and the said wedge having the full length of said bar.

2. A hanger for trolley wires having a straight top bar provided with a channel lengthwise in its top for a wire and a suspensory portion at the bottom thereof at right angles to said top portion constructed to fasten a trolley wire therein, the said bar having hook-shaped keepers at its ends overhanging said channel from opposite sides and a wedge engaged in said keepers having a channel in its bottom over the channel in said bar.

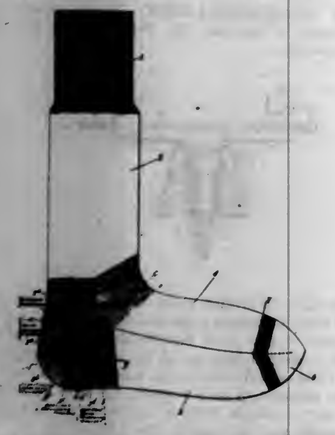
1,216,373. RAIL-JOINT. ALDRED W. SLATER, Youngstown, Ohio. Filed May 13, 1913. Serial No. 767,473. (Cl. 239—6.)



1. A rail joint including rail ends having their terminals contacting, in combination with a joining member comprising a base rest adapted to receive the bases of the rail ends, resilient longitudinal portions integrally formed with the longitudinal edges of the base rest and curved to fit over the edges of the rail base and inclined upwardly to form angularly extending members resiliently engaged with the top surfaces of the rail base and having their free marginal edges disposed in close proximity to the point at which the web of the rail joins the base thereof thus preventing contact with the rail web or rail head whereby the resilient action will be exerted upon the rail base exclusively.

2. A rail joint including, in combination with a pair of rails, of an elongated metallic strip adapted to provide a base rest for the meeting ends of said rails, said strip having longitudinal portions thereof bent inwardly and upwardly to form angularly extending members, upon opposite sides of the rail web, said angularly extending members being inclined resiliently toward the base of the strip, said members being forced outward against their own resilient action by the base flange of said rail when said structure is inserted thereon, whereby they are adapted to be flexed into secure engagement with the upper faces of the base flange of said rails when inserted thereupon, said members terminating at the juncture of the rail web with said base flange to permit of full resilient action being exerted upon the upper surface of the base flange.

1,216,374. SEAMLESS-FASHIONED STOCKING AND PROCESS OF KNITTING AND FASHIONING THE SAME. WILLIAM E. SMITH, Milltown, N. J., assignor to Kilbourn Manufacturing Corporation, New Brunswick, N. J., a Corporation of New Jersey. Filed Mar. 9, 1914. Serial No. 823,361. (Cl. 66—4.)



1. The herein described process of knitting and fashioning a seamless stocking which consists in the knitting of the heel by reciprocating knitting with a plurality of main narrowing courses and a plurality of main widening courses, the widest courses of the heel being at the commencement of the narrowing courses and completion of the widening courses and extending approximately half way around the tube and knitting a plurality of additional consecutive inserted reciprocating courses of varying lengths at one point only between adjacent courses of the widened fabric formed by said main widening courses to make the bottom portion of the foot substantially a size longer than the corresponding top portion to fashion the stocking to the foot.

2. The herein described process of knitting and fashioning a seamless stocking which consists in knitting the heel by reciprocating knitting with a plurality of main narrowing courses and a plurality of main widening courses, the widest courses of the heel being at the commencement of the narrowing courses and completion of the widening courses, and extending approximately half way around the tube, and knitting a plurality of additional consecutive narrowing courses, at one point only, between two of said main widening courses, the widest of said additional courses being of less length than the widest main courses, and the narrowest of said additional courses being of substantially the same length as the narrowest main narrowing course, to make the bottom portion of the foot of the stocking substantially a size longer than the top portion, to fashion the stocking to the foot.

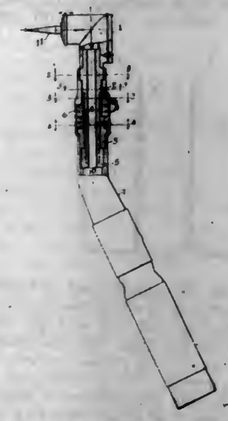
3. The herein described process of knitting and fashioning a seamless stocking, which consists in knitting the heel by reciprocating knitting with a plurality of main narrowing courses and a plurality of main widening courses, the widest courses of the heel being at the commencement of the narrowing courses and completion of the widening courses, and extending approximately half way around the tube, and knitting a plurality of additional consecutive narrowing courses at one point only between two of said main widening courses, the widest of said additional narrowing courses being of substantially the same length as the adjacent main widening course, and the narrowest of said additional courses being of substantially the same length as the narrowest of said main narrowing courses, to make the bottom of the foot of the stocking substantially a size longer than the top portions of the foot to fashion the stocking to the foot.

4. The herein described process of knitting and fashioning a seamless stocking, which consists in knitting the leg portion as a tubular fabric, knitting the heel by reciprocating work by first knitting a plurality of main narrowing courses, the widest of which is approximately half of the length of the courses of the tubular fabric, then knitting a plurality of main widening courses, then knitting a plurality of additional narrowing courses, and then knitting a plurality of widening courses to complete the heel, then knitting the foot as a tubular fabric and then knitting the toe pocket, whereby a segmental additional portion of fabric is inserted in the portion of the heel adjacent to the sole of the stocking to make the bottom portion of the foot substantially a size longer than the corresponding top portion of the foot, to fashion the stocking to the foot.

5. The herein described process of knitting and fashioning a seamless stocking, which consists in knitting the leg portion as a tubular fabric, knitting the heel by reciprocating work, by first knitting a plurality of main narrowing courses, the widest of which is approximately half of the length of the last course of the leg, then knitting a smaller number of widening courses, then knitting a plurality of additional narrowing courses, and then knitting a course of substantially the same length as the last previous main widening course and following it with a plurality of main widening courses to complete the heel, then knitting the foot as a tubular fabric and then knitting the toe pocket, whereby a segmental additional portion of fabric is inserted in the heel adjacent to the exterior point thereof to make the bottom of the foot substantially a size longer than the corresponding top portion of the foot to fashion the stocking to the foot.

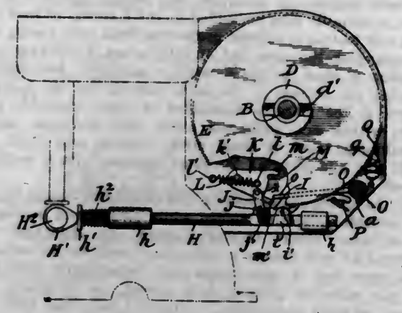
[Claims 6 to 14 not printed in the Gazette.]

1,216,375. ATTACHMENT TO DENTAL ENGINES. ALEXANDER STAD, New York, N. Y. Filed Aug. 5, 1916. Serial No. 113,276. (Cl. 32—11.)



A handpiece for dental engines provided with, (a) a hollow shaft having a square section to which the head is secured and which receives the driving shaft of the instrument, (b) a jacket having a square section receiving the said hollow shaft in which the latter may be rotated, and which is attached to a bent body, (c) a sleeve having an internal square section sliding over the square sections of the said hollow shaft and jacket, thus releasing or locking the said parts, (d) a nut screwed on the end of the hollow shaft to hold the said hollow shaft in the said jacket, (e) a helical spring holding the said sleeve in position to lock the said hollow shaft and jacket together, so that the accidental unlocking of the said parts, will be impossible, all substantially as described.

1,216,376. STARTING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. FREDERICK W. TEVES, New York, N. Y., assignor of one-half to Margaret E. Green, New York, N. Y. Filed Mar. 20, 1914. Serial No. 825,981. (Cl. 123—187.)



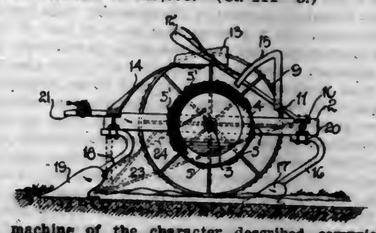
1. In a starting mechanism for combustion engines, the combination with a spring shaft and a motor spring, of a winding ratchet, a pawl for rotating said ratchet, a tumbler pivoted independently of the pawl, means whereby the movement of the tumbler controls the relation of the pawl to the ratchet, and a two armed member one arm of which contacts with the spring and the other arm of which coöperates with the tumbler for shifting the pawl relative to the ratchet.

2. In a starting mechanism for combustion engines, the combination with a motor spring, of a sliding and rotating part coöperating with the spring, a winding ratchet on said sliding and rotating part, means for imparting sliding movement to said part, a feed pawl engaging said ratchet, a tumbler operatively connected with said feed pawl, and a yoke controllable by the motor spring, said yoke coöperating with said tumbler for shifting the pawl relative to said ratchet.

3. In a starting mechanism for combustion engines, the combination with a spring shaft and a motor spring, of a winding ratchet, a clutch connecting said winding ratchet with said shaft, a feed pawl, a tumbler linked to said pawl, said tumbler being pivoted independently of the pawl, a spring for retaining the tumbler in adjusted positions, and a two-armed member one of which arms cooperates with the tumbler and the other with the motor spring.

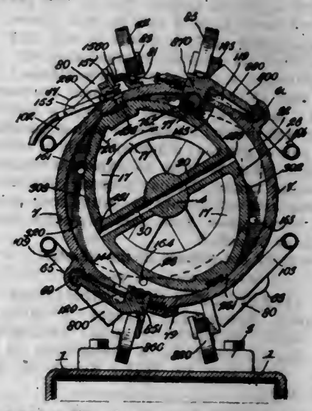
4. In a starting mechanism for combustion engines, the combination with a shaft, of a sleeve slidable thereon, a spring for imparting rotative movement to the sleeve, a clutch between the sleeve and the shaft, a lever for shifting the sleeve with respect to the clutch, a winding ratchet, a clutch between the winding ratchet and the sleeve, said clutches being controllable by the shifting movement of the sleeve, means for imparting rotative movement to the winding member for placing the spring under tension, and a train of gears connecting the spring shaft with the motor to be operated, one of said gears being clutch controlled.

1,216,377. COMBINED PLANTER AND CULTIVATOR. ALTA LEE THOMAS, Weiser, Idaho. Filed June 10, 1916. Serial No. 102,998. (Cl. 111—3.)



A machine of the character described comprising a frame consisting of oppositely disposed longitudinal members and forward and rear beams connecting said members, the rearmost beam being rotatably connected to the members, an axle passing through the frame, traction wheels mounted thereon, a seed planting device mounted upon and rotatable with the axle, a seat support mounted upon the forward beam and extending upward and rearward to a point approximately above the axle, downwardly and forwardly extending standards mounted upon the rear beam and rotatable therewith and carrying furrow closers, a lever mounted upon the rear beam and extending toward the seat, and means for holding the lever in any adjusted position, said standards being longitudinally adjustable upon the rear beam.

1,216,378. ROTARY ENGINE. LEO B. THOMAS, Port Chester, N. Y. Filed Jan. 18, 1916. Serial No. 72,777. (Cl. 123—15.)



1. In a gas engine the combination of a stator, a rotor having a plurality of ribs provided with recesses; packing material carried by said ribs on each side of said recesses; crescent shaped cut-away portions forming elliptical pistons between said ribs; and stationary rings associated with the interior of said stator and fitting said recesses, each of said stationary rings being provided with a pair of diametrically disposed ports, and each rib being provided with a pair of diametrically disposed ports on each side of its corresponding ring adapted to register simultaneously at predetermined times with said first named ports, substantially as described.

2. In a gas engine the combination of a stator; a rotor having a plurality of annular ribs provided with annular recesses; stationary rings provided with diametrically disposed passages fitting said recesses; each of said ribs also provided with ports on each side of each ring adapted to simultaneously register with said passages at predetermined intervals; said rotor provided with angularly displaced pairs of crescent shaped cutaway portions located between said ribs to form angularly displaced elliptical pistons; and a pair of pivotally mounted abut-

ments adapted to fit each piston and pair of cutaway portions, substantially as described.

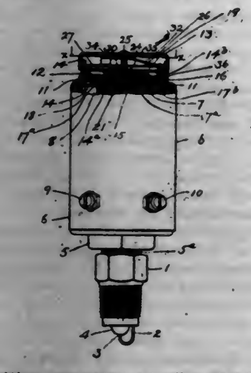
3. In a gas engine the combination of a stator; a rotor having a plurality of annular ribs provided with annular recesses; and with a packing ring on each side of each recess; stationary rings provided with diametrically disposed passages fitting said recesses; said ribs also provided with ports on each side of said rings, adapted to simultaneously register with said diametrically disposed passages at predetermined intervals; said rotor provided with angularly displaced pairs of crescent shaped cutaway portions located between said ribs to form angularly displaced elliptical pistons; means to admit fuel to some of said cutaway portions; means for exhausting burnt gases from the other cutaway portions; and a pair of pivoted abutments for each piston, substantially as described.

4. In a gas engine the combination of a stator provided with orifices; a rotor having a plurality of angularly displaced elliptical pistons; said rotor provided with packing rings and an annular recess between each pair of pistons; a pair of pivoted abutments for each piston passing through said orifices and normally contacting with opposite sides of said pistons; spring controlled levers governing said abutments in pairs; stationary rings coacting with said stator and located in each annular recess between each pair of pistons, the parts forming a pair of elliptical chambers associated with each piston and pair of abutments; and means comprising diametrically disposed passages through said rings and ports through said ribs for permitting gas at predetermined times to flow from one pair of chambers to an adjacent pair of chambers, substantially as described.

5. In a gas engine the combination of a stator; a rotor provided with a pair of annular ribs having annular recesses; a stationary packing ring in each recess; a passage at diametrically opposite points in said ring; a pair of ports in each rib adapted to simultaneously register with each passage; a pair of angularly disposed pistons rigid with said rotor; a pair of pivoted abutments for each piston; the parts adapted to form a compression chamber for each piston; a duplicate pair of annular ribs; a duplicate pair of pistons; a duplicate pair of abutments; said duplicate parts forming an explosion chamber for each of said last named pistons; a spring controlled lever for governing said abutments in pairs; and means for exhausting burnt gases from said explosion chambers, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,216,379. VIBRATOR FOR INDUCTION-COILS. HENRY C. THOMSON, Boston, and HAROLD N. MICHAELSEN, Canton, Mass., assignors, by mesne assignments, to Samson Electric Company, a Corporation of Massachusetts. Filed Feb. 10, 1914. Serial No. 817,756. (Cl. 175—357.)



1. In ignition apparatus, a coil-containing casing having an open-ended recess formed therein, an induction coil located in said recess, a projecting edge carried upon said casing, and surrounding the open-end of said recess, an integrally distinct vibrator comprising a vibrator inclosing member engaging said projecting edge in a moisture proof relation, said vibrator inclosing member having its end adjacent the casing sealed against moisture, and having the parts of the vibrator assembled in operative relation outside said sealed end.

2. In ignition apparatus, a coil-containing casing having an open-ended recess formed therein, an induction coil located in said recess, a projecting member set into the casing around the open end of said recess, an integrally distinct vibrator comprising a vibrator inclosing member engaging said projecting member in a moisture proof relation, said vibrator inclosing member having its end adjacent the casing sealed against moisture and having the parts of the vibrator assembled in operative relation outside said sealed end.

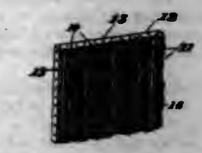
3. In ignition apparatus, a coil containing casing formed of solidified plastic material having an open-ended recess formed therein, an induction coil located within said recess, a metallic ring embedded in the material of said casing and having a portion projecting from said casing and surrounding the open end of said recess, a vibrator comprising a shell provided with a partition hermetically sealing the bottom of the same and having the movable parts of the vibrator assembled in their operative relation within said shell and above said partition, and a continuous band of fused metal uniting said shell and said ring and securing the same together with a moisture proof joint.

4. In ignition apparatus, a coil-containing casing formed of solidified material molded while plastic and having an open-ended recess formed therein, an induction coil located in said recess, a cylindrical member surrounding the open end of said recess and permanently embedded in the material forming said casing, an integrally distinct vibrator comprising a vibrator inclosing shell engaging said cylindrical member in a moisture proof relation, said vibrator inclosing member having a partition wall sealing the lower end of the same and having the parts of the vibrator assembled in operative relation in the upper portion thereof.

5. In ignition apparatus, a coil-containing casing having an open-ended recess formed therein, an induction coil located in said recess and provided with a core, a cylindrical member secured to the casing around the open end of said recess, an integrally distinct vibrator comprising a vibrator inclosing shell engaging said cylindrical member in a moisture proof relation, said vibrator inclosing member having a partition sealing the lower end of the same and having the parts of the vibrator operatively assembled therein on the outer side of said partition in a position to be actuated by the magnetization of said core.

[Claims 6 to 13 not printed in the Gazette.]

1,216,380. EXHIBITION-SCREEN FOR PROJECTING-MACHINES. JOHN F. ROBERT TROMGER, Brooklyn, N. Y. Filed Dec. 24, 1913. Serial No. 808,545. (Cl. 88—24.)



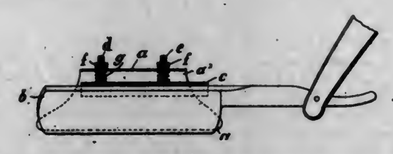
1. An exhibition screen for projecting machines consisting of a sheet of translucent flexible, moldable nonfibrous fireproof material, said sheet having continuous vertical corrugations formed on one face thereof, to supplement the light diffusing properties of the material.

2. An exhibition screen for projecting machines consisting of a body of translucent, flexible, moldable nonfibrous fireproof material, and strands embedded within said body to strengthen the same, said strands being of minute thickness compared with that of the body, said screen being adapted to be rolled into a roll of comparatively small radius for purposes of storage or transportation.

3. An exhibition screen for projecting machines consisting of a body of translucent, flexible, moldable nonfibrous fireproof material having vertical corrugations on the outer surface thereof, and a coarse net-work of fibrous strands embedded within the body to strengthen the same, the thickness of said strands being minute compared with that of the body.

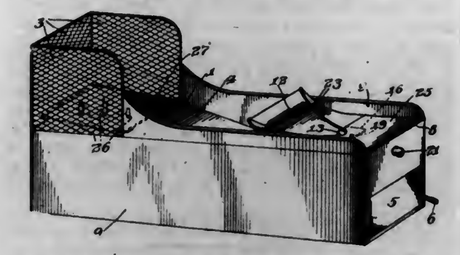
4. An exhibition screen for projecting machines consisting of a sheet of translucent flexible moldable nonfibrous fireproof material of substantial thickness, there being corrugations formed upon one face thereof whereby the screen is rendered alternately thick at the corrugations and thin at the grooves, said corrugations supplementing the light diffusing properties of the material, said screen being adapted to be rolled into a roll of comparatively small radius for storage or transportation.

1,216,381. RAZOR. THOMAS WATSON, Kilmarnock, Scotland. Filed May 18, 1915. Serial No. 28,879. (Cl. 30—12.)



An attachment for razors comprising a guard having resilient arms adapted to substantially cover the side faces of a razor blade, the upper edge of said guard being spaced from the upper edge of said razor blade, a gripping member comprising a sheet of resilient material having arms adapted to grasp the upper edge of the razor blade, screw threaded members extending through the gripping member and extending through openings in the guard member, a coiled spring housing each of the screw threaded members and engaging the gripping member for holding the gripping member and guard member in spaced relation with each other, means on one end of the screw threaded means for tensioning the springs whereby the guard member is adjusted with relation to the cutting edge of the razor blade.

1,216,382. GAME. JOHN T. WENYON, Philadelphia, Pa., assignor of one-half to Daniel J. Gorman, Philadelphia, Pa. Filed May 12, 1916. Serial No. 97,052. (Cl. 46—50.)



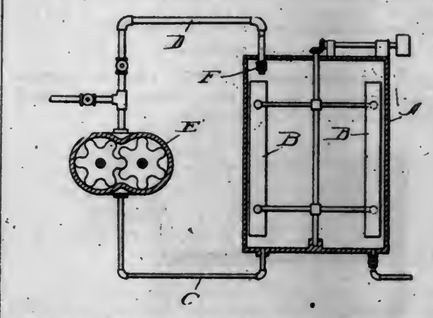
1. A device, comprising a ring projecting mechanism, a screen, and a coin-released mechanism adapted to permit the manual elevation of said screen to return by gravity a ring projected thereupon by said mechanism.

2. A device, comprising a manually-released spring-operated ring projecting mechanism, a series of upright pins, a pivoted screen surrounding said pins, and a manually operated coin-released mechanism adapted to permit the elevation of said screen to release a ring projected by said first mechanism upon said pins and to permit said ring to move therefrom by gravity.

3. A device, comprising a platform, a series of pins or spikes, a screen surrounding said pins and pivotally mounted to tilt upwardly to release a ring from said pins and permit said ring to move therefrom by gravity, and manually operated means to tilt said screen.

4. A device, comprising a receptacle for a ring, resilient means to actuate the same, means to manually set the former into operation, the whole comprising a projecting device adapted to shoot a ring, an upwardly curved platform to alter the course of said ring, a pivotally mounted screen, through which normally project pins, and adapted to be tilted to free a ring from said pins, and coin-released manually-operated means to tilt said screen to return said ring to an operator.

1,216,383. GUM SOLUTION FOR USE IN ICE-CREAM AND PROCESS OF MAKING THE SAME. WALTER A. WEST, Elkhorn, Wis. Filed Oct. 20, 1916. Serial No. 126,680. (Cl. 99—11.)



1. A mucilaginous liquid solution of Karai Gond and milk.

2. A mucilaginous liquid solution of Karai Gond and a liquid which is non-reactive with respect to milk.

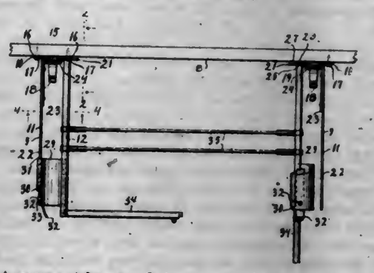
3. A mucilaginous liquid solution of wet-ground Karai Gond or gum tragacanth in a liquid which is non-reactive with respect to milk.

4. A mucilaginous liquid solution of wet-ground Karai Gond or gum tragacanth in normally sweet milk.

5. The process of dissolving gum in water or milk which consists in alternately stirring the gum into the liquid and forcing the partially dissolved mixture through means adapted for cutting the gum particles.

[Claims 6 to 9 not printed in the Gazette.]

1,216,384. GARMENT-HANGER FIXTURE. GEORGE HENRY WHEARY, Racine, Wis. Filed Oct. 24, 1914. Serial No. 868,409. (Cl. 211—16.)



1. A garment hanger fixture, comprising a bracket member adapted to be connected to a support, a track holder removably connected to said bracket, and a garment hanger track removably connected to the holder.

2. A garment hanger fixture, comprising a bracket member adapted to be connected to a support, a track holder removably connected to said bracket, and a garment hanger track revolubly removably connected to said holder.

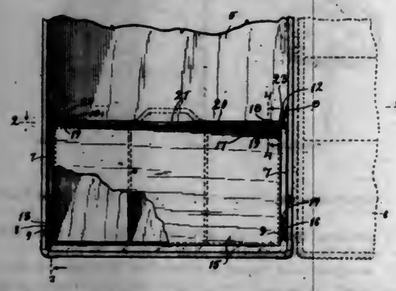
3. A garment hanger fixture, comprising a bracket member adapted to be connected to a support, a track holder laterally engaging said bracket, and a garment hanger track revolubly removably connected to said holder.

4. A garment hanger fixture, comprising a bracket adapted to be connected to a support and having an elongated eyed portion, a track holder having an attaching portion which extends through the eye of the eyed portion, and a garment hanger track removably connected to the attachang portion and to another portion of the holding member.

5. A garment hanger fixture, comprising a bracket adapted to be connected to a support and having an elongated eyed portion and a garment hook portion, a track holder having an angularly projecting attaching portion which extends through the eye of the eyed portion, and a garment hanger track revolubly removably connected to the attaching portion of the holder and to another portion thereof.

[Claims 6 to 16 not printed in the Gazette.]

1,216,385. SHOE-BOX-RETAINING MEANS. GEORGE HENRY WHEARY, Racine, Wis. Filed July 21, 1915. Serial No. 41,051. (Cl. 190—13.)



1. In a retaining means, the combination with a casing, slotted members connected to opposite sides of the casing, the slots of two of the opposite members being straight slots, and the slots of the other two opposite members having their outer portions narrow and their inner ends wide, a box, receptacle or the like, within the casing, said box or the like having studs projecting from opposite sides thereof, said studs adapted to removably engage the straight slots, and a rod turnably mounted upon one side of the box or the like, the opposite ends of said rod being narrower in one direction than in the other, and said rod, when turned in one direction, adapted to permit the narrow widths of the ends thereof to pass through the narrow portions of the other slots and seat themselves in the wide portions of said slots, and when so seated and the rod is turned in the opposite direction, to have the wide portions of their ends intercept the lower ends of the narrow portions of the slots.

2. In a retaining means, the combination of a casing, slotted members connected to opposite sides of the casing, the slots of two of the opposite members being straight slots, and the slots of the two other opposite members having their outer portions narrow and their inner ends wide, a box, receptacle or the like within the casing, said box or the like having studs projecting from opposite sides thereof, said studs adapted to removably engage the straight slots, and a rod turnably mounted upon one side of the box or the like, said rod provided intermediate of its ends with a projecting handle, and the opposite ends of said rod being narrower in one direction than in the other, said rod, when its handle is occupying one position, presenting the narrow widths of the ends thereof in position to pass through the narrow portions of the other slots, and seat themselves in the wide portions of said slots, and when so seated and the rod is turned and the handle thereof is brought to a reversed normal position, the wide portions of the ends of said rod are brought to a position to intercept the lower ends of the narrow portions of the slots.

3. In a retaining means, the combination of a casing, slotted members connected to opposite sides of the casing, the slots of two of the opposite members being straight slots, and the slots of the other two opposite members having their outer portions narrow and their inner ends wide, a box, receptacle or the like within the casing, said box or the like having studs projecting from opposite sides thereof, said studs adapted to removably engage the straight slots, and said box, receptacle or the like provided on another of its sides with a bearing, the bearing being provided with an elongated slot, and a rod turnably mounted in the bearing, and provided with a pin projecting into the elongated slot of the bearing, the opposite ends of said rod being narrower in one direction than in the other, and said rod when turned in one direction, adapted to permit the narrow widths of the ends thereof to pass through the narrow portions of the other slots and seat themselves in the wide portions of said slots, and when so heated and the rod is rotated in the opposite direction, to have the wide portions of their ends intercept the lower end of the narrow portions of the slots.

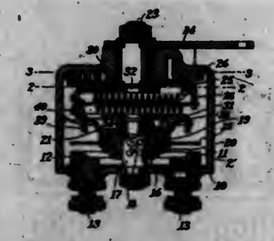
4. In a retaining means, the combination of a casing, slotted members connected to opposite sides of the casing, the slots in two of the opposite members being straight slots, and the slots of two of the other opposite members having their outer portions narrow and their inner ends wide, one wall of all of said slots being higher than the other wall thereof, a box, receptacle or the like within the casing, said box or the like having studs projecting from opposite sides thereof, said studs adapted to removably engage the straight slots, and a rod turnably mounted upon one side of the box, or the like, the opposite ends of said rod being narrower in one direction than in the other, and said rod, when turned in one direction, adapted to permit the narrow widths of the ends thereof to pass through the narrow portions of the other slots and seat themselves in the wide portions of said slots, and when so seated and the rod is turned in the opposite direction, to have the wide portions of their ends intercept the lower ends of the narrow portions of the slots.

5. In a retaining means, the combination of a casing, vertical rods secured to the inner faces of opposite sides of the casing, each rod provided at opposite ends with outstanding portions, each lower outstanding portion provided wtih an open-ended vertical slot, and each upper outstanding portion provided with an open-ended vertical slot, the upper portion of each of the latter slots being narrower than the inner end thereof, a box receptacle or the like, within the casing, said box or the like having studs projecting from opposite sides thereof, said studs adapted to removably engage the straight slots, and a rod turnably mounted upon one side of the box or the like, the opposite ends of said rod being narrower in one direction than in the other, and said rod, when turned in one direction, adapted to permit the narrow widths of the ends thereof to pass through the narrow portions of the other slots and seat themselves in the wide portions of said slots, and when so seated and the rod is turned in the opposite direction, to have the wide portions of their ends intercept the lower ends of the narrow portions of the slots.

[Claims 6 to 9 not printed in the Gazette.]

1,216,386. ELECTRIC SWITCH. ANTHONY F. WILLIAMS and EDWARD A. HALBLEIB, Rochester, N. Y., assignors to North East Electric Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 22, 1915. Serial No. 23,236. Renewed Jan. 9, 1917. Serial No. 141,496. (Cl. 175—287.)

1. An electric switch having, in combination, an actuating-member; means for imparting a helical movement to the actuating-member; a contact-member carried by the actuating-member and having a contact-surface normal to the axis of movement of the actuating-member; and a fixed contact-member having a contact-surface parallel with that of the movable contact-member, the movable contact-member being rotatable with respect to the actuating-member.



2. An electric switch having, in combination, a plurality of fixed concentric contact-members having contact-faces lying in a common surface; a movable contact-member coaxial with said surface and having a contact-face complementary to those of the fixed contact-members; and actuating-means, connected with the middle-portion of the movable contact-member, for moving it axially toward and from the fixed contact-members, the movable contact-member being rotatable axially with respect to said actuating-means.

3. An electric switch having, in combination, a fixed contact-member; a movable contact-member; actuating-mechanism, for the movable contact-member, comprising two parts having helical connections arranged to cause the movable contact-member to move toward and from the fixed contact-member in consequence of relative rotation of said parts; and means for producing such relative rotation suddenly to cause a snap-action of the movable contact-member.

4. An electric switch having, in combination, a fixed contact-member; a movable contact-member; actuating-mechanism for the movable contact-member comprising a fixed part and a movable part having helical connections, the movable contact-member being connected with said movable part by connections permitting relative rotation of said part and said contact-member; and means for rotating said movable part on said fixed part.

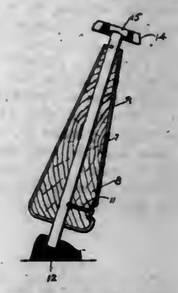
5. An electric switch having, in combination, a fixed contact-member; a movable contact-member; a rotatable member for actuating the movable contact-member; and means, for imparting rapid partial rotations, in opposite directions, to said rotatable member, comprising a spring connected eccentrically to the rotatable member, and a manually-operable part connected to the spring and movable to swing the spring to opposite sides of the rotatable member.

[Claims 6 and 7 not printed in the Gazette.]

1,216,387. EDGE-TOOL SHARPENER. WILLIAM E. WINTER, New Britain, Conn., assignor of one-fourth to Fred S. Fletcher, Forestville, Conn., and one-half to The Fletcher-Terry Company, Forestville, Conn., a Corporation of Connecticut. Filed Aug. 11, 1916. Serial No. 114,326. (Cl. 51—7.)

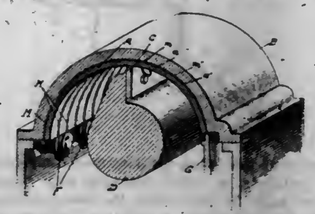
1. A machine of the class described comprising an upright provided with a laterally extending base, an approximately conical grinding member at one side of and at an angle to the upright, said grinding member having shaft means projecting from the ends thereof, one of the shaft means being supported by said base, the upright having means to support the other shaft means, and means carried by the upright for rotating said grinding member.

2. A machine of the class described comprising an upright provided with a base having an oblique socket, an approximately conical grinding member, a shaft extending entirely through the grinding member and projecting from the ends thereof, one projecting portion being disposed in said socket, the upright having a bearing to receive the other projecting end of the shaft, a pinion rotative with



the shaft, and a manually operable gear supported by the upright and in mesh with said pinion.

1,216,388. METHOD OF SHAVING STEREOTYPE PRINTING-PLATES. HENRY A. WISE WOOD, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed May 20, 1915. Serial No. 29,319. (Cl. 29—21.)



1. The method of preserving the various heights of a printing plate during the process of shaving the back thereof, which consists in interposing between the printing side oft he plate and the surface against which it rests during shaving, a backer which fits substantially in the depressions and projections on the printing face of the plate, and shaving the back side of the plate while held in that condition.

2. The method of shaving a printing plate, which consists in applying to the printing surface thereof a duplicate of the matrix on which it is cast, forcing the plate with said duplicate against a surface having the same general shape as the plate, and shaving the rear side of the plate while held in that condition.

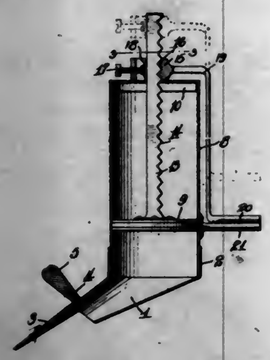
3. The method of shaving a semi-cylindrical stereotype printing plate, which consists in applying to it a matrix on the type face thereof, said matrix fitting the type surface oft he plate, moving the plate and matrix into a curved shaving arch having a smooth semi-cylindrical inner surface, pressing the plate with the matrix thereon against said arch, and shaving the surfaces of the finishing strips on the back of the plate while the plate is held in the arch.

1,216,389. BRICK-POINTER. LEWIS W. WOLF, Racine, Ohio, assignor of one-half to Irvin M. Rhodes, Racine, Ohio. Filed Apr. 14, 1916. Serial No. 91,127. (Cl. 72—138.)

1. A device of the character described comprising a container having a spout mounted at one end, the said spout being extended at an angle from the container, straps provided on opposite sides of the said spout, a pointing tool, arms carried by the tool and embracing the said spout, the ends of the arms being engaged by the said straps, and a fastening element engaging the said spout and the said tool including a hand grip disposed at right angles to the said tool.

2. A device of the character described comprising a container having a spout mounted at one end, the said

spout being provided with a socket for receiving the end of the said container, a piston and a piston rod arranged within the container and adapted to be moved for ejecting the contents of the container through the said spout, the said spout being extended at an angle from the container and provided with straps on opposite sides, a pointing tool, arms carried by the pointing tool and adapted to be embraced by the said straps for removably attaching the said pointing tool to the spout, the large end of the said pointing tool embracing a portion of the end of the said spout, the said spout and the said pointing tool having apertures adapted to aline for receiving a fastening screw, and a hand grip extending at right angles to the said pointing tool and fastened to the said fastening screw.

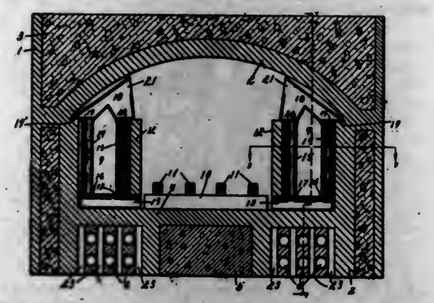


3. A device of the character described comprising a cylindrical container, a socket provided with a spout disposed at an angle to the socket, the said container being mounted in the said socket, a pointing tool carried by the said spout, a piston and a piston rod slidably associated with the said container, the piston rod having one end projected through the closed end of the said container, a yoke embracing the said projected end of the piston rod, both the piston rod and the yoke being provided with complementary serrations adapted to intermittently engage an adjusting screw carried by the said yoke, the interior end of the said screw having a spring clamp mounted thereon and contacting with the said piston rod, operating handles including a stationary handle rigidly fixed to the said container adjacent the said socket, and a movable handle having one end rigidly attached to the said yoke and provided with a vertical intermediate portion adapted to lie parallel with the said container and having its free end provided with a right angularly extending hand grip for coöperating with the said fixed member for imparting movement to the said piston.

1,216,390. KILN CONSTRUCTION. CARL H. ZWERMANN, Kalamazoo, Mich. Filed Dec. 4, 1916. Serial No. 134,988. (Cl. 25—146.)

1. In a kiln structure, the combination of the outer and inner walls suitably insulated, suitable central supports for the ware with a central kiln chamber therefor, partial partition walls separating the combustion chamber at each side, lateral flues comprising a tubular base portion with flanged apertures on the upper side and with spacing lugs on the lateral sides theerof, upright tubular flues connecting to said base portion disposed in the flanged openings, a flue cap with flanged openings for the upper ends of said upright tubular flues and extending beyond the same, and ledges formed on the inner walls for supporting the flue caps, coacting substantially as described for the purpose specified.

2. In a kiln structure, the combination of the outer and inner walls suitably insulated, suitable central supports for the ware with a central kiln chamber therefor, partial partition walls separating the combustion chamber at each side, lateral flues comprising a tubular base portion with flanged apertures on the upper side, upright tubular flues connecting to said base portion disposed in the flanged openings, and a flue cap with flanged openings for the upper ends of said upright tubular flues, coacting substantially as described for the purpose specified.



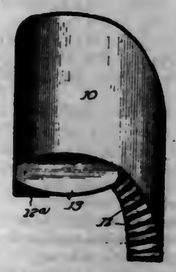
3. In a kiln structure, the combination of the outer and inner walls suitably insulated, suitable central supports for the ware with a central kiln chamber therefor, partial partition walls separating the combustion chamber at each side, lateral flues comprising a tubular base portion with spacing lugs on the lateral sides thereof, upright tubular flues connecting to said base portion, and a flue cap with flanged openings for the upper ends of said upright tubular flues, coacting substantially as described for the purpose specified.

4. In a kiln structure, the combination of the outer and inner walls suitably insulated, suitable central supports for the ware with a central kiln chamber therefor, partial partition walls separating the combustion chamber at each side, lateral flues comprising a tubular base portion, upright tubular flues connecting to said base portion, and a flue cap with flanged openings for the upper ends of said upright tubular flues, coacting substantially as described for the purpose specified.

5. In a kiln structure, the combination of the walls suitably insulated, suitable central supports for the ware with a central kiln chamber therefor, partial partition walls separating the combustion chamber at each side, lateral flues comprising a tubular base portion projecting under said partial walls with upright tubular flues connecting to said base portion, a flue cap with flanged openings for the upper ends of said upright tubular flues and extending beyond the same, and internal ledges formed on the walls for supporting the flue caps, coacting as described.

[Claims 6 and 7 not printed in the Gazette.]

1,216,391. LINER FOR ICE-CREAM CANS, PAILS, AND OTHER CONTAINERS. HARRY S. ALLEN, Pontiac, Ill. Filed July 17, 1914. Serial No. 851,632. (Cl. 229—21.)

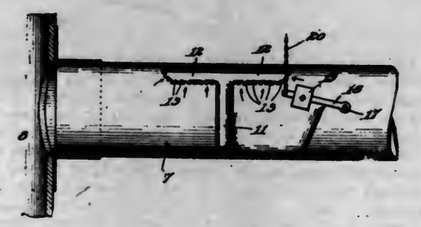


1. A liner for ice cream cans and the like comprising a substantially rectangular body portion having an imperforate bottom portion formed integrally with the body portion and joined thereto along one of its longitudinal edges,

and protective means for the joint between the imperforate bottom and the body portion when the liner is formed to its set-up condition comprising a plurality of tongues formed integrally with the body portion of the liner along the entire longitudinal edge thereof to which the circular bottom portion is joined, each tongue being adapted to overlap its adjacent tongue whereby to form a substantially tight joint between the bottom portion and the body portion and presenting a smooth surface on the interior of the liner.

2. The combination with a can or vessel of rigid material adapted to contain food products and the like, of a removable liner formed from a relatively thin flexible material comprising a substantially rectangular sheet of paper having a plurality of tongues or projections formed integrally along one longitudinal edge thereof, and an imperforate bottom portion formed also integrally with said body portion along the same longitudinal edge of the body portion as the said tongues or projections, said bottom portion being integrally joined to the body portion along the line of the base of said tongues or projections, there being a plurality of said tongues or projections adjacent the base of the bottom portion shortened to coincide with the intersecting circumference of the bottom portion, but of sufficient length that when the body of the liner is formed into a substantially cylindrical form to line the interior of the can or vessel, all of said tongues or projections including those shortened as described, may be folded to right angular positions and will overlap each other and underlie and close the joint between the bottom portion and the vertical wall of the liner substantially around the entire periphery of the bottom portion.

1,216,392. CARBON-CONSUMER FOR BOILERS AND THE LIKE. JOHN S. ANDREWS, Gary, Ind. Filed May 6, 1915. Serial No. 26,253. (Cl. 110—58.)

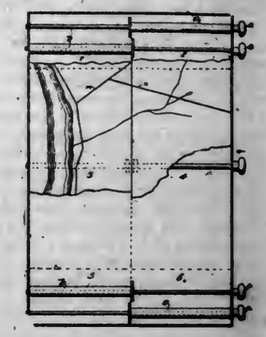


1. A horizontal smoke pipe in combination with a hollow fitting arranged transversely in the lower portion thereof, said fitting being perforated on the side toward the approaching smoke and gases, means for conducting air in contact with the outer surface of said pipe to heat the same and discharge it into said fitting, a damper hingedly connected to said fitting and means for operating said damper, substantially as described.

2. The combination with a substantially horizontally extending smoke pipe, of an air supplying chamber secured to the exterior of said smoke pipe and in contact with the outer wall thereof throughout substantially the length of said chamber, said chamber comprising a substantially vertical portion and a substantially horizontal portion, the latter being provided on its under face and adjacent the pipe with air inlet openings and the lower end of said vertical portion communicating with the interior of said smoke pipe, substantially as described.

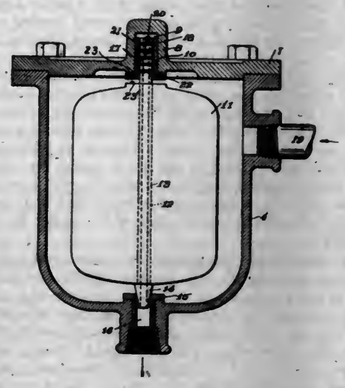
3. The combination with a substantially horizontally extending smoke pipe, of a hollow fitting arranged in the lower portion thereof, said fitting being provided with air discharge openings on the side toward the approach of the smoke and with air entry openings at its ends communicating through the walls of said smoke pipe with the exterior thereof; air supplying chambers secured to the exterior of said smoke pipe, said chamber being substantially in T-form, the cross arms of the T being provided with openings on their lower sides to admit air and the stem of the T communicating with the corresponding end opening in said fitting; a damper pivotally connected with the top of said fitting and operating in said smoke pipe; a shaft extending through said smoke pipe; an arm on said shaft within said smoke pipe and operatively connected with said damper; a weighted arm on the shaft on the outer side of said smoke pipe; and an adjustable chain secured to the free end of said weighted arm, substantially as described.

1,216,393. MAP-HOLDING AND READING APPARATUS. FRIEDRICH AUGUST ANTONI, Cologne, Germany, assignor to Resopan-Gesellschaft M. B. H., Cologne, Germany. Filed Aug. 8, 1916. Serial No. 113,826. (Cl. 40—86.)



A map-holding and reading apparatus, comprising a plurality of pairs of rollers for supporting map sections in the form of bands, said rollers being arranged with the different pairs in different parallel planes, and each pair adapted to be shifted endwise from right to left, or vice versa, independently of the other pair.

1,216,394. STEAM-TRAP. CHARLES HENRY ATKINS, Springfield, Mass. Filed Apr. 22, 1916. Serial No. 93,034. (Cl. 137—113.)



1. A device of the class described, comprising in combination, an inclosing casing, a sealed float therein, a stem and a valve secured to the opposite ends of the float, and in alinement with each other, a pipe etxending through the float and connecting said stem and valve to provide a communicating opening with said stem and valve, the stem being located in a bearing that is slightly larger than the stem, the lower end of the bearing having

an annular groove and a transverse groove in the lower end or face thereof extending from the outer edge of the bearing to the recess in the bearing, a pipe connected to the interior of the inclosing casing for introducing steam into said casing, said pipe being connected with the interior of a drying cylinder or roll, whereby when steam under pressure is turned on to the drying cylinder the confined air can readily escape from the cylinder through the pipe to the interior of the casing of the trap and then past the stem to and through the pipe which communicates with the stem and the valve, and whereby when the confined air has been expelled from the casing the water of condensation will seal the passageway between the stem and the bearing and cause the float to be lifted by the water of condensation in the casing and so escape past the valve to the discharge pipe, all constructed and arranged for the purpose described.

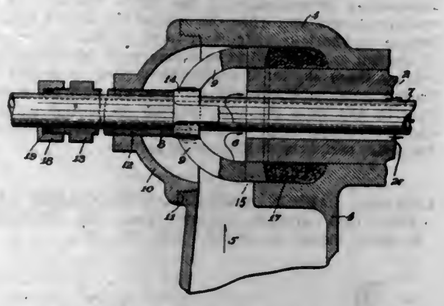
2. The herein described trap comprising an outer casing, or shell, having a discharge opening in the lower end of the casing, a cover plate formed with an integral recessed projection, a bearing in the recessed portion, a float within the casing, a valve on the lower end of the float for closing the discharge opening, the interior of said casing being free from obstruction or partitions of any kind, means for guiding the float to permit free upward and downward movements, said means comprising an extension on the float for entering the openings and recess in the shell and cover plate, respectively, the bearing having laterally arranged grooves communicating with the recessed bearing, the extension entering the opening in the cover plate being of less diameter than the opening in the cover plate and formed with grooves on said extensions to permit air but not water to pass along said extension, the upper end of the float having a flat surface for engaging the lower end of the bearing when the float is elevated, said extensions having a communicating passageway from one to the other which leads through the float to allow air to pass from the interior of the casing to the discharge opening, and after the air has escaped from the casing and steam is admitted thereto, the grooves on the upper extension serving as a liquid seal to the passage through the float, whereby the float will be elevated by the water of condensation in the casing to raise the valve from and uncover the lower opening in the casing to permit the water of condensation to escape therefrom, and whereby the air in the casing can escape when the float is elevated and engages the lower end of the bearing.

3. A trap comprising an outer shell, having a pipe connection for introducing air or steam and having openings in its upper and lower portions, a closed float in the casing, a tube located within the float and having portions extending beyond its upper and lower ends, and located in said openings, the lower extending portion serving as a valve for the opening in the lower portion of the casing and the upper extension being of less diameter than the upper opening, having grooves therein to permit air to pass along said extension but not a liquid, the lower end of the upper opening having a groove therein to permit air to pass into the upper opening when the float is raised into contact with the lower end of the upper opening, as described.

4. A steam trap comprising an outer casing having a discharge opening at the bottom and a recessed cover plate, a float, a valve on the float to close the discharge opening, a grooved extension on the float located in the recess of the cover plate and of less diameter than the recess, the lower edge of the recessed opening having a groove to permit air to enter the recess when the float is elevated in contact with the lower edge of the recessed opening, said float having a communicating passage between the valve and the grooved extension to allow air to escape from the casing when the valve is closed, the grooved extension serving to seal the passage when steam is allowed to enter the casing, as described.

5. A device of the kind described, comprising in combination with an inclosing casing having an inlet opening in the side through which steam is allowed to enter the casing and a discharge opening in the bottom, a float in said casing, a cap for closing the upper end of the casing and formed with a recessed projection, a bearing or lining in the recess of the projection and formed with an annular groove at its lower end and transverse grooves extending from the edge of the flange to the annular groove, said float having its upper end finished to contact with the lower end of the grooved flanged bearing, projections on the upper and lower ends of the float for entering the bearing in said projection and the discharge opening in the lower end of the casing for the purpose of guiding the vertical movements of the float, the lower projection serving as a valve for the discharge opening, a pipe extending through the float for forming a communication between the projections, said grooves serving to permit the air confined in the casing to escape therefrom to and through the float should the float be in an elevated position when the steam is turned on, as described.

1,216,395. HOLLOW-BOLT CONSTRUCTION. CHARLES HENRY ATKINS, Springfield, Mass. Filed Apr. 22, 1916. Serial No. 93,035. (Cl. 137—84.)



1. In a device of the kind described, a bearing box, a hollow shaft therein for supporting a drying cylinder, a pipe of less diameter than the interior diameter of said shaft and extending through the bearing box into the drying cylinder, a cap having a threaded connection with the bearing box and a threaded opening in the cap, said hollow bolt engaging the threaded opening of the cap and through which bolt the outer end of the steam outlet pipe passes, a spider, a packing ring connected thereto and located at the inner end of the hollow bolt and through which the steam outlet pipe passes, said bolt serving the purpose for engaging the spider and for forcing the packing ring against packing material as the said bolt is screwed into the cap and against the spider of said ring, said material being located in an annular packing receiving chamber between the hollow shaft and the bearing box, whereby when the hollow bolt is rotated in the concentric opening the packing material may be forced inward by the packing ring.

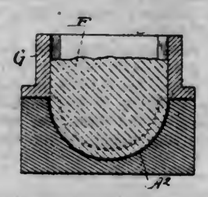
2. In a device of the kind described, the combination with a drying cylinder, a discharge pipe extending into and near the lower side of the cylinder, a hollow bearing box, a hollow shaft for supporting said cylinder and through which the pipe passes to provide an annular space around said pipe to permit the entrance of a heating medium, as steam, a hollow bolt having threads on its external surface, for engaging a threaded opening in the hollow bearing box, a packing ring adapted to be engaged by said bolt for forcing the ring inward and a stuffing box on the end of the hollow bolt to prevent the escape of steam from the bearing box.

3. A device of the kind described comprising, in combination, a bearing box having an annular space to contain packing material, a hollow externally threaded bolt secured to the box by means of threads in a cap on the box, a steam pipe passing through the bolt, a stuffing box on the end of the bolt, a packing ring on the pipe comprising a ring portion, a hub, an arm connecting the hub and ring portion and adapted to be engaged by the inner end of the bolt for forcing said ring portion inward toward the box as the bolt is rotated in said cap for the purpose of moving the packing material into said annular space between the shaft in the box and said box, as described.

4. The combination in a structure of the kind described with a hollow bearing box for admitting a heating medium thereto, of a hollow shaft for supporting a drying cylinder to permit the heating medium to enter the cylinder, a pipe of less diameter than the shaft and passing through the shaft, a cap secured to said box and having a threaded opening, a hollow bolt surrounding a portion of the pipe for supporting the same, and means operated by the bolt for forcing the packing material between the shaft and the box.

5. In a device of the kind described, the combination with a metal drying cylinder and a hollow bearing box, of a hollow shaft secured to the drying cylinder and mounted in said box, there being an annular space between the inner end of said shaft and said box for placing packing material of a compressible nature therein, a cap having screw threads on its inner end for closing the outer end of said box, the cap having a threaded opening extending axially through the same to receive an externally threaded elongated hollow bolt structure, a steam outlet pipe passing through the hollow shaft and hollow bolt, a ring located in the annular space in which the packing material is located, the ring being connected to a hub through which the steam outlet pipe passes, arms for integrally connecting the ring and hub, the inner end of the said bolt engaging the outer end of the hub, a squared portion on the outer end of said bolt for the purpose of rotating the bolt for forcing the ring against the packing material, a stuffing box on the outer end of the hollow bolt, all constructed and arranged as and for the purpose described.

1,216,396. METHOD OF FORMING BILGE-BARRELS. HENRY W. AVERY and WALLACE S. JUDD, Cleveland, Ohio. Filed July 27, 1912. Serial No. 711,800. (Cl. 113—51.)

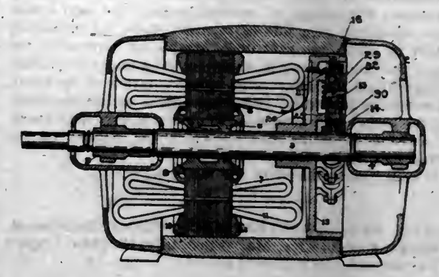


1. The method of forming a half section of a bilge barrel from a flat sheet of metal, which consists in drawing the main portion of the sheet into substantially semi-cylindrical formation and simultaneously imparting a bilge to portions of the sheet along the side edges by one operation, and by a subsequent operation drawing the bilge in the intermediate portion.

2. The method of forming a section of a bilge barrel from a flat sheet of metal, which consists in holding the sheet along two opposite edges and by one operation drawing a bilge in the portions adjacent said edges, and then in holding the sheet along the other two opposite edges and by a second operation drawing a bilge in the portion between the bilge portions formed by the first operation.

3. The method of forming a bilge-barrel half-section from a flat sheet of metal, which consists in holding the sheet along its longitudinal edges, and in one operation drawing the sheet in substantially semi-cylindrical shape and simultaneously imparting a bilge to the portions adjacent the longitudinal edges, and then holding the sheet along its end edges, and by a subsequent operation drawing a bilge in the portion between the first-mentioned bilge portions.

1,216,397. INDUCTION-MOTOR. BENJAMIN F. BAILEY, Ann Arbor, Mich., and JOHN MARTIN BARR, ORLO S. MOSE, and L. GUY LONG, Indianapolis, Ind., assignors to Fairbanks-Morse Electrical Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed Feb. 15, 1913. Serial No. 748,582. (Cl. 172—120.)



1. In an induction motor, the combination of a rotor, a resistance in circuit with the motor for automatically regulating the supply of current thereto, the said resistance being supported by the rotor and consisting of a body of material made up of separate units in contact with each other, the electric resistance of which varies with the degree of pressure applied to said body of material, an insulating support for holding the said resistance, adjustable means for initially compressing the material of the resistance to a desired degree, means for causing further compression thereof through the action of centrifugal force due to the rotation of the rotor, and means for preventing the operation of centrifugal force to cause said compression until a predetermined degree of speed has been attained by the rotor.

2. In an induction motor, the combination of a rotor, a resistance in circuit with the motor for automatically regulating the supply of current thereto, the resistance consisting of superposed pieces of material, an insulating holder or support for the said resistance carried by the rotor, an insulated contactor in circuit with the line that supplies the motor bearing upon one end of the said resistance, the other end of the resistance being in electric contact with the said holder, the said contactor and holder being movable relative to each other whereby the resistance may be subject to varying degrees of compression, means for moving one of these parts through the action of centrifugal force due to the rotation of the rotor, to automatically compress the resistance material when the motor is in operation, and means for positively moving the other part to cause a predetermined initial degree of compression of the resistance.

3. In an induction motor, the combination of a rotor, a resistance in circuit with the motor for automatically regulating the supply of current thereto, the said resistance consisting of a body of material made up of separate units in contact with each other, the electric resistance of which varies with the degree of pressure applied to said body of material, an insulating support for holding the said resistance, carried by the rotor, means for causing a compression of the resistance through the action of centrifugal force due to the rotation of the rotor, and a spring opposing the operation of the said means, and preventing them becoming effective until a predetermined speed of the rotor has been attained.

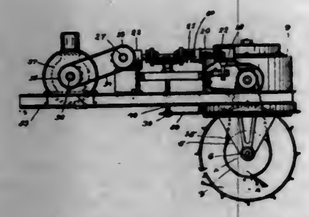
4. In an induction motor, the combination of a rotor, a resistance in circuit with the motor for automatically regulating the supply of current thereto, the said resistance consisting of a body of material made up of separate units in contact with each other, the electric resistance of which varies with the degree of pressure applied to the said body of material, an insulating holder in which the said resistance is placed, carried by the rotor and free to move outward under the action of centrifugal force generated by the rotation of the rotor, thereby caus-

ing compression of the resistance it contains, a spring bearing upon the said holder opposing the outward movement thereof until a predetermined speed of the rotor has been attained, and means for adjusting the tension of the spring.

5. In an induction motor, the combination of a rotor, a resistance in circuit with the motor for automatically regulating the supply of current thereto, the said resistance consisting of a pile of separate disks, an insulating holder in which the said disks are placed carried by the rotor, the holder being movable outward under the action of centrifugal force generated by the rotation of the rotor, whereby the resistance is compressed, a spring surrounding the holder and opposing the outward movement thereof, and an adjusting nut by which the tension of the spring may be varied at will.

[Claim 6 not printed in the Gazette.]

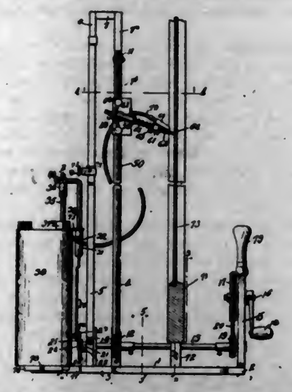
1,216,398. TRACTION MECHANISM. CHARLES M. BAKER, Kansas City, Mo. Filed July 15, 1914. Serial No. 851,118. (Cl. 21—114.)



1. In traction mechanism, a frame, a housing secured to and rising above said frame, a journal bearing in said housing, a shaft journaled in said bearing and disposed longitudinally of said frame, a beveled pinion on said shaft within said housing, means to revolve said shaft in opposite directions, a vertically disposed shaft journaled in said housing, a double faced beveled gear journaled on said shaft, the teeth of the upper face of said vertically disposed double faced beveled gear meshing with said pinion, a pair of arms projecting downwardly from said vertically disposed shaft, journal bearings carried by said arms, a horizontal shaft journaled in said journal bearings, a gear rigidly mounted on said horizontal shaft and meshing with the teeth on the lower side of said double faced beveled gear, a sprocket wheel rigidly mounted on said horizontal shaft, a horizontal shaft journaled in said arms below said journal bearings, a traction and steering wheel on said last mentioned shaft, a sprocket wheel encircling said last mentioned shaft and rigidly connecting to said traction and steering wheel, a sprocket chain connecting said sprocket wheels, and means connecting to said arms and supporting said frame.

2. In traction mechanism, a frame, a housing secured to and rising above said frame, a journal bearing in said housing, a shaft journaled in said bearing and disposed longitudinally of said frame, a beveled pinion on said shaft within said housing, means to revolve said shaft in opposite directions, a vertically disposed shaft journaled in said housing, a double faced beveled gear journaled on said vertically disposed shaft, the teeth of the upper face of said double faced beveled gear meshing with said pinion, a pair of arms projecting downwardly from said vertically disposed shaft, journal bearings carried by said arms, a horizontal shaft journaled in said journal bearings, a gear rigidly mounted on said horizontal shaft and meshing with the teeth on the lower side of said double faced beveled gear, a shaft revolubly mounted in said arms below said journal bearings, a traction and steering wheel on said last mentioned shaft, means revolubly connecting said horizontal shafts, and means connecting to said arms and supporting one end of said frame.

1,216,399. WINDOW-CLEANING MACHINE. JOSEPH BARON, Rockaway Beach, N. Y., assignor of one-half to Harry Lutrin, Arverne, N. Y. Filed June 10, 1916. Serial No. 103,013. (Cl. 15—53.)

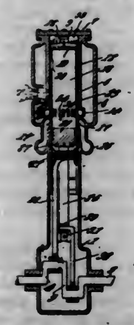


1. In a window washing machine, the combination of a slidable carriage, a resiliently and rockably mounted squeegee carried by said carriage, a spraying device mounted above and carried by said squeegee, a source of supply of liquid, pumping means connected to said source of liquid supply and spraying device, and means for moving said carriage in either direction and for operating the said pumping means during the travel of the carriage in one direction.

2. In a window washing machine, the combination of a slidable carriage, a slidably and rockably mounted squeegee carried by said carriage, adjustable resilient means for holding the squeegee away from the carriage, a spraying device mounted above and carried by the squeegee, a source of supply of liquid, pumping means connected to said source of liquid supply and spraying device, and means for moving said carriage in either direction and for operating the said pumping means during the travel of the carriage in one direction.

3. In a window washing machine, the combination of a slidable carriage, a squeegee rockably mounted in said carriage, resilient means for holding the squeegee in operative position, a spraying device mounted above and carried by the squeegee, and means for moving the carriage and for supplying liquid to the spraying device under pressure.

1,216,400. INTERNAL-COMBUSTION MOTOR. ROLLO ROBIN BELL, Los Banos, Cal. Filed Sept. 21, 1915. Serial No. 51,851. (Cl. 123—50.)



1. In an internal combustion engine, a cylinder; an outer piston working in the cylinder; an inner piston working in the outer piston, the space between the heads

of the pistons constituting an explosion chamber, and the space between the head of the outer piston and the cylinder head constituting a compression chamber, the cylinder having a pocket and being provided with an exhaust outlet, the outer piston being provided with a port at times establishing a communication between the pocket, the exhaust outlet and the explosion chamber, the adjacent faces of the outer piston and the cylinder being provided with communicating channels establishing a communication between the compression chamber and the pocket.

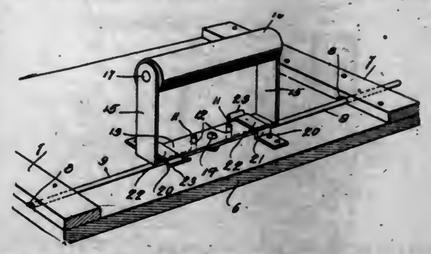
2. In internal combustion engine, a cylinder; an outer piston working in the cylinder; an inner piston working in the outer piston; the space between the end of the outer piston and the cylinder constituting a compression chamber, and the space between the ends of the pistons constituting an explosion chamber; the cylinder having a pocket and an exhaust outlet, the outer piston having a port, the cylinder and the outer piston having passages establishing communication between the compression chamber and the pocket when the port is out of registration with the pocket, the outer piston being movable to dispose the port in registration with the pocket and the exhaust outlet, the pocket being shaped to project the charge into the explosion chamber to effect a scouring thereof, the outer piston being movable to dispose the port in full registration with the pocket and out of registration with the exhaust port; and means for connecting the pistons for simultaneous movement in opposite directions.

3. In an internal combustion engine, a cylinder; an outer piston mounted to reciprocate in the cylinder; an inner piston mounted to reciprocate in the outer piston, the space between the end of the outer piston and the head of the cylinder constituting a compression chamber, the space between the ends of the pistons constituting an explosion chamber; means for connecting the pistons for simultaneous movement in opposite directions; the cylinder having an exhaust outlet and being provided with a lateral inlet pocket, the cylinder being provided in its inner face with a longitudinal passage opening into the compression chamber, the outer piston being provided in its outer face with a longitudinal passage and having a port; the longitudinal passages coacting to establish communication between the compression chamber and the pocket when the port is out of registration with the pocket, the outer piston being movable to dispose the port into registration with both the pocket and the exhaust outlet and the pocket being shaped to project the charge into the explosion chamber to effect a scouring thereof, and the piston being movable to dispose the port into full registration with the pocket and out of registration with the exhaust outlet.

4. In an internal combustion engine, a cylinder provided with a circumscribing pocket, the lower wall of which is upwardly inclined to form a deflector, the cylinder having an exhaust port; an outer piston working in the cylinder; an inner piston working in the outer piston, the space between the heads of the pistons constituting an explosion chamber, the space between the head of the outer piston and the head of the cylinder constituting a compression chamber, the outer piston having a port which at times coöperates with the deflector portion of the pocket, and at times communicates with the exhaust port, the adjacent faces of the outer piston and the cylinder being provided with communicating channels permitting a transfer of fuel from the compression chamber to the explosion chamber by way of the pocket.

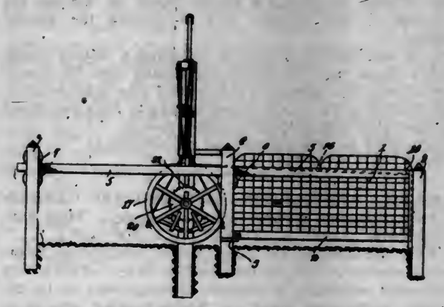
1,216,401. LOCK FOR EGG-CRATE TOPS. MARTIN S. BENNETT, Minneapolis, Kans. Filed June 5, 1916. Serial No. 101,808. (Cl. 70—81.)

In combination, a receptacle cover, a sheet metal strip bent into U-shape and pivoted centrally between its ends to said cover, said strip having openings spaced in opposite directions from its pivot, a pair of oppositely extending horizontal locking bolts resting slidably on the cover and having their inner ends received beneath said strip and bent upwardly into the openings thereof to pivotally connect said bar and bolts, a hand hold extending between the ends of said strip for turning the same to project and retract the bolts and for carrying the cover



and receptacle to which it is attached, and a pair of spring fingers secured to said cover and adapted to overlie the horizontal portion of said strip to prevent accidental turning thereof from its normal position and to prevent upward bending of said portion on opposite sides of the pivot.

1,216,402. GATE AND OPERATING MECHANISM FOR THE SAME. WILLIAM BERGIN, Lewistown, Mont. Filed July 21, 1916. Serial No. 110,568. (Cl. 39—70.)



A gate and operating mechanism comprising a plurality of supporting posts, guide rollers mounted upon said posts, a gate member adapted to ride upon said guide rollers to open and closed position, means carried by one of said posts to receive the forward edge of the gate member when the latter is in closed position, a cable carried by said gate member, a drum, said cable being engaged around said drum, a pawl and ratchet mechanism for rotating said drum in either direction, means extended to either side of the gate member to operate either pawl, and supporting means for the last-mentioned means.

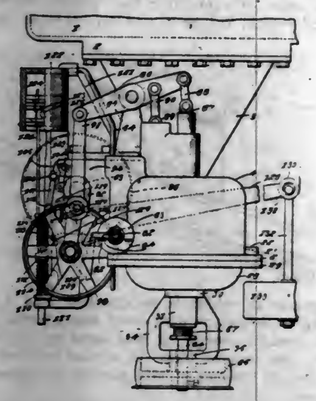
1,216,403. FUEL-MIXER. GEORGE A. BERTSCH, Providence, R. I. Filed May 5, 1916. Serial No. 95,626. (Cl. 123—23.)

1. A fuel mixing apparatus comprising a mixing chamber provided with an outlet port, a liquid fuel receptacle discharging into the chamber, a solid fuel receptacle discharging into the chamber, an agitator in the chamber, and means controlling the outlet port.

2. A fuel mixing apparatus comprising a mixing chamber having an outlet port, a liquid fuel receptacle discharging into said chamber, a solid fuel receptacle discharging into said chamber, an agitator in said chamber, means controlling the outlet port and means controlling the admission of the liquid and solid fuels.

3. A fuel mixing apparatus comprising a mixing chamber having an outlet port, a liquid fuel receptacle discharging into said chamber, a solid fuel receptacle discharging into said chamber, an agitator in said chamber,

means controlling the outlet port and means for automatically controlling the admission of the liquid and solid fuels.



4. A fuel mixing apparatus comprising a mixing chamber having a fuel outlet, a liquid fuel receptacle discharging into said chamber, a solid fuel outlet discharging into said chamber, a water jacket surrounding the chamber and adapted to contain a heated liquid for heating the contents of the chamber and facilitating the mixing thereof.

5. A fuel mixing apparatus including a mixing chamber, a liquid fuel receptacle discharging into the chamber, a solid fuel receptacle discharging into said chamber, an agitator in the chamber and means to keep the liquid in the liquid fuel receptacle under pressure.

[Claims 6 to 24 not printed in the Gazette.]

1,216,404. SELF-IGNITING ELECTRIC-ARC CANDLE. JEAN BILLITER, Vienna, Austria-Hungary. Filed Jan. 28, 1914. Serial No. 815,065. (Cl. 176—109.)

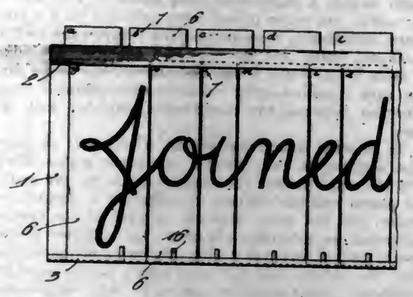
1. A self-igniting arc lamp candle comprising juxtaposed electrodes and an intermediate layer between said electrodes consisting of 20–60% titanium oxid or its described equivalents being the bridge-forming substance, 20–80% fluorspar or the described equivalents being the carrying substance, 25–50% solution preferably adhesive solution of titanium oxalate or the described equivalents being the binding substance and 2–20% graphite or the described equivalents.

2. The herein described composition of matter for forming the intermediate layer of a self-igniting electric arc light candle consisting of fluorspar 100 g., titanium acid anhydrid 100 g., boric acid 8 g., binding substance 100 g., graphite 30 g. substantially as described.

1,216,405. WRITING-CHART. CLARENCE ELLIS BIRCH, Lawrence, Kans. Filed Aug. 3, 1916. Serial No. 112,963. (Cl. 35—8.)

1. A writing chart comprising a plurality of interchangeable reversible sections, each section having a script letter on its opposite sides, the initial and final strokes of said letters terminating at the opposite side edges of the sections, the terminals of the letters on one side of each section being disposed in a single transverse line, and the terminals of the letters on the opposite side being disposed in spaced transverse lines whereby the sections may be arranged to exhibit different expressions in script.

2. A reversible section for a writing chart having a script letter on each of its opposite sides, the initial and final strokes of said letters terminating at the opposite side edges of the section, the terminals of the letter on one side of the section disposed in a single transverse line, the terminals of the letter on the opposite side of said section disposed in spaced transverse lines, and one terminal of said last letter positioned on the same transverse plane as the terminals of the opposite letter.



3. A writing chart comprising a plurality of interchangeable reversible sections, each section having a script letter on its opposite sides, the initial and final strokes of said letters terminating at the opposite side edges of the sections, the terminals of the letters on one side of each section being disposed in a single transverse line, the transverse terminal line in certain sections being spaced from the transverse line of the remaining sections on said sides, and the terminals of each letter on the opposite sides of said sections being disposed in spaced transverse lines.

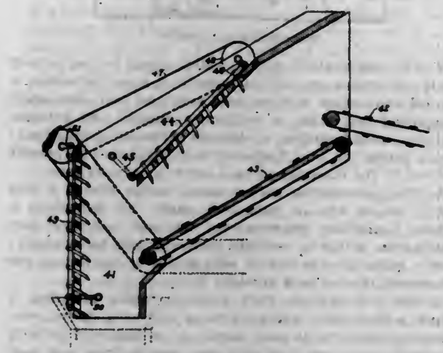
1,216,406. ELECTRICAL RECEPTACLE FOR CONDUIT OUTLET-BOXES. CARL H. BISSELL, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 27, 1910. Serial No. 599,354. (Cl. 173—329.)



1. An electrical appliance comprising a base member having a flat face, a pair of segmental peripheral projections extending in advance of said face and disposed on opposite sides of the base, and a second pair of peripheral projections located between the segmental projections and being of less height than the same and having their side edges converging toward the free ends of said projections forming gradually widening wire spaces between the edges of the two pairs of projections, terminals mounted on the face of the base and having binding devices in line with the spaces between the two pairs of projections, a cover having a part extending between the first-mentioned pair of projections to a point near the free ends of the second pair of projections, and a flange opposed to the end edges of the first pair of projections and coacting therewith to clamp a support for the appliance, terminals secured to the inner face of the cover member, and means for electrically and mechanically connecting the latter terminals to the terminals on the base, substantially as and for the purpose described.

2. An electrical appliance comprising a base member having a flat face, a pair of segmental peripheral projections extending in advance of said face and disposed on opposite sides of the base, tenons extending lengthwise of the inner faces of the projections and projecting inwardly from said faces, and a second pair of peripheral projections located between, and spaced apart from, the first-mentioned projections and being of less height than the same and having their side edges diverging from the side edges of the first-mentioned projections toward the free ends of said projections and forming between the first-mentioned projections and the second projections, wire-receiving spaces opening through the periphery of the base and increasing in width toward the free ends of the projections, terminals mounted on the face of the base and having binding devices in line with the wire-receiving spaces between the projections, a cover having a part extending between the first-mentioned pair of projections to a point near the free ends of the second pair of projections, and having lengthwise grooves in its periphery to receive the tenons, and a flange opposed to the end edges of the first pair of projections and coacting therewith to clamp a support for the appliance, terminals secured to the inner face of the cover, and means for electrically and mechanically connecting the latter terminals to the terminals on the base, substantially as and for the purpose specified.

1,216,407. FEEDING ATTACHMENT FOR BALING-PRESSES. JESSE M. BONDURANT, Figsboro, Va. Original application filed Aug. 14, 1915, Serial No. 45,605. Divided and this application filed Apr. 1, 1916. Serial No. 88,319. (Cl. 100—25.)



In combination with a power-driven baling press, a feeder having an inclined receiving leg and a vertical delivery leg, a drag along the bottom of the said receiving leg having continuous movement longitudinally thereof, a series of rakes disposed longitudinally of the said receiving leg along the top thereof, the said rakes having a reciprocating and vibratory movement longitudinally of the said leg, a series of vertically-disposed rakes along the rear of the said delivery leg, said rakes having reciprocating and vibratory movement longitudinally of the said leg and means for actuating the said drag and the said rakes from the power of the said baling press.

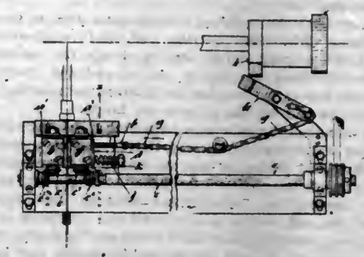
1,216,408. AUXILIARY INNER FIRE-TUBE FOR STEAM-BOILERS. WALTER S. BRIDGES, Chicago, Ill. Filed Sept. 7, 1915. Serial No. 49,259. (Cl. 137—100.)



1. An auxiliary inner tube for boiler fire tubes extending throughout the entire length of the latter, and rotatably mounted therein, said inner tube having outstanding flanges extending throughout its entire length, and being in contact with the inner surface of the fire tube, whereby the inner tube is spaced from said surface.

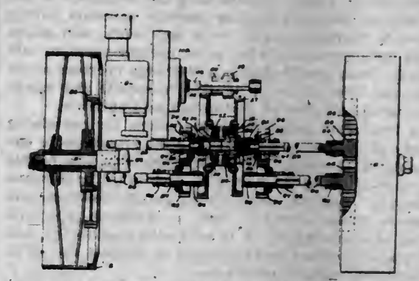
2. An auxiliary inner tube for boiler fire tubes extending throughout the entire length of the latter, said inner tube having outstanding flanges extending throughout its entire length, whereby the inner tube is spaced from the inner surface of the fire tube, the inner tube being rotatable in the fire tube and the outer edges of the flanges being in contact throughout their entire length with the inner surface of the fire tube to serve as scrapers.

1,216,409. MACHINE FOR MAKING HAT-BRIM WIRES. ALFRED BROWN, Denton, near Manchester, England. Filed Nov. 18, 1914. Serial No. 872,786. (Cl. 51—12.)



In a machine for making hat-brim wires and the like, in combination, two rotary cutter disks, a spindle for each disk, a bearing block for each spindle, a stationary base plate upon which one of said blocks is relatively fixed and the other of said blocks is slidably mounted at a slight distance apart and between which a wire to be marked passes, shaft bearings on the said plate, and a shaft supported in such bearings at right angles to the disk-carrying spindles, a bevel wheel on each disk-carrying spindle, further bevel wheels, one of which is fast on and rotates with the said shaft and meshes with the bevel wheel on the disk-carrying spindle of the fixed block, and the other of which bevel wheels is slidably keyed upon the said shaft and meshes with the bevel wheel on the disk-carrying spindle of the sliding block, a forked plate on the sliding block engaging the slidable bevel wheel, a spring for moving the sliding block toward the fixed block, and means for moving and holding the sliding block away from the fixed block and periodically releasing the sliding block, and a spring for moving the slidable block when released toward the fixed block to allow the disks to approach and mark the wires, as set forth.

1,216,410. TRANSMISSION-GEARING. CHARLES S. BROWN, Syracuse, N. Y. Filed May 18, 1914. Serial No. 839,348. (Cl. 21—114.)



1. The transmission of a vehicle having a pair of traction wheels; of a transmission gearing comprising a driving element, a pair of shafts connected respectively to the traction wheels, a pair of reversing shafts connected respectively to the traction wheels, means for connecting and disconnecting any one of the shafts and the driving element and for connecting the driving shaft actuating one traction wheel, and the reversing shaft actuating the other traction wheel, substantially as and for the purpose specified.

2. A transmission gearing comprising a driving element including a differential gearing, driven shafts, means for connecting and disconnecting either driven shaft and opposite gears of the differential independently of the other driven shaft, and means for locking the differential, substantially as and for the purpose described.

3. A transmission gearing comprising a driving element including a differential gearing, driven shafts, means for

connecting and disconnecting the driven shafts and opposite gears of the differentipl gearing, and means for locking the differential gearing, substantially as and for the purpose specified.

4. A transmission gearing comprising a driving element including a differential gearing and shaft sections actuated by the gearing, driven shafts, means for connecting and disconnecting the driven shafts and the shaft sections, and means for locking the differential gearing, substantially as and for the purpose set forth.

5. A transmission gearing comprising a driving element including a differential gearing, driven shafts, means for connecting and disconnecting the driven shafts and opposite gears of the differential gearing, reversing shafts, power transmitting connections between the opposite gears of the differential gearing and the reversing shafts, means for connecting and disconnecting the power transmitting connections and the reversing shafts, and means for locking the differential gearing, substantially as and for the purpose described.

[Claims 6 to 13 not printed in the Gazette.]

1,216,411. LUBRICATOR. WILLIAM H. BROWN, Cleveland, Ohio. Filed Dec. 2, 1916. Serial No. 134,706. (Cl. 184—1.)



1. A lubricator comprising a receptacle for containing a supply of oil, and means for attaching the receptacle to one of a pair of relatively moving machine elements having surfaces in frictional contact with each other, said means holding the receptacle always in an upright position, said receptacle being provided with a discharge aperture above the normal level of the oil in said receptacle.

2. A lubricator comprising a receptacle for containing a supply of oil, means for attaching the receptacle to one of a pair of relatively moving machine elements having surfaces in frictional contact with each other, said means holding the receptacle always in an upright position, said receptacle being provided with a discharge aperture above the normal level of the oil in said receptacle and means for regulating the flow of oil through said aperture.

3. A lubricator comprising a receptacle for containing a supply of oil, means for attaching the receptacle to one of a pair of relatively moving machine elements having surfaces in frictional contact with each other, said means holding the receptacle always in an upright position, said receptacle being provided with a discharge aperture, adapted to discharge oil on to said attaching means, and said attaching means being adapted to conduct the oil to said frictional contact surfaces.

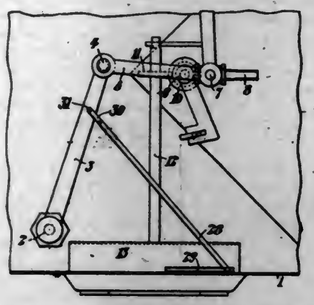
4. In a spring oiler for multi-ply leaf springs, a metal clip adapted to be self secured to the top leaf of the spring, and an oil receptacle secured thereto, said receptacle being provided with an oil discharge aperture above the normal level of the oil in the receptacle.

5. In a spring oiler for multi-ply leaf-springs, a metal clip adapted to be self secured to the top leaf of the spring, an oil receptacle secured thereto, said receptacle being provided with an oil discharge aperture, and means for regulating the flow of oil through said aperture.

[Claims 6 to 16 not printed in the Gazette.]

1,216,412. METER. WILLIAM LAIRD BROWN, Lansdowne, Pa. Filed Dec. 31, 1913. Serial No. 809,727. (Cl. 116—31.)

1. The combination with a meter casing having a scale including a straight series of graduations; of an indicator arranged to traverse said scale; an operating mechanism arranged to reciprocate said scale indicator; a universal pivotal joint between said indicator and said operating mechanism; and a guide including a slot engaging said indicator.



2. The combination with a meter casing having a rock shaft; of an arm on said rock shaft; a scale indicator; a pivotal connection between said arm and scale indicator, permitting the latter to oscillate vertically and horizontally; a scale including a straight series of graduations; and a guide for said indicator restricting the movement thereof to the direction of said series of graduations.

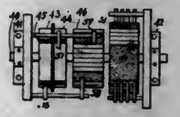
3. The combination with a meter casing having a rock shaft; of an arm on said rock shaft; an indicator; a pivotal connection between said arm and indicator, permitting the latter to oscillate vertically and horizontally; and a guide for the end of said indicator restricting the movement thereof to a straight line.

4. The combination with a meter casing including a crank, a rock shaft, and an arm on said rock shaft operatively connected with said crank; of an indicator directly pivotally connected with said arm, remote from said rock shaft; and a guide for the end of said indicator restricting the movement thereof to a straight line, including a frame having a slot in which the end of said indicator remote from said pivotal connection is arranged to reciprocate.

5. The combination with a meter casing including a crank, a rock shaft, and an arm on said rock shaft operatively connected with said crank; of an indicator directly pivotally connected with said arm, remote from said rock shaft; and a guide for the end of said indicator restricting the movement thereof to a straight line.

[Claims 6 to 9 not printed in the Gazette.]

1,216,413. CURRENT-CONVERTING DEVICE. ARTHUR R. BULLOCK, Cleveland, Ohio. Filed July 28, 1913. Serial No. 781,510. (Cl. 175—364.)



1. In a current converting device, the combination with a group of insulated conducting elements, means for electrically connecting said elements with a circuit, a second group with insulated conducting elements, means for electrically connecting said second group of conducting elements with another circuit, the electrically coöperating conducting elements in each group being connected, both of the above mentioned means for connecting the said conducting elements with the said circuits being arranged to substantially simultaneously break the circuits through the said conducting elements.

2. In a current converting device, the combination with a group of insulated conducting elements, brushes bearing upon said elements whereby the elements are connected with a circuit, a second group of insulated conducting elements, a set of brushes bearing upon said second set of conducting elements by which said elements are connected with a second circuit, the electrically coöperating conducting elements of the two groups being electrically connected, the brushes being arranged to substantially simultaneously break the circuits through the said conducting elements.

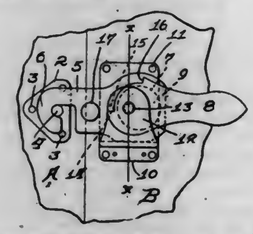
3. In a current converting device, the combination with a plurality of collector elements, each collector element being formed with a plurality of strips which are insulated from each other, the strips of each collector element being electrically connected with the other strips of its particular collector element, a group of insulated conducting segments being electrically connected, means for electrically connecting the collector elements with a circuit, means for electrically connecting the conducting segments with a second circuit, both of said means being arranged to substantially simultaneously break the circuits through the collector elements and the groups of the conducting segments.

4. In a current converting device, the combination with a plurality of collector elements, each collector element comprising a plurality of conducting strips which are insulated from each other, a group of insulated conducting segments electrically coöperating, the segments and collector elements being electrically connected, brushes bearing upon the collector elements and connected with a circuit, other brushes bearing upon the conducting segments and connected with a second circuit, the brushes being arranged to substantially simultaneously break the circuits through the strips and segments.

5. In a current converting device, the combination with a plurality of collector elements, each of said elements comprising a plurality of insulated conducting strips arranged in annular alinement, the strips in each collector element being electrically connected, a plurality of sets of conducting segments, the conducting segments in each set being directly electrically connected with electrically coöperating segments in other sets, said segments also being electrically connected with electrically coöperating strips of the collector elements, brushes coöperating with the said collector elements, and brushes coöperating with each of the other sets of segments, the brushes in one set being arranged to remain in contact with its segments, when the brushes upon the other set of segments have ceased to contact with said segments, the brushes upon the first set of segments and the brushes upon the collector elements being arranged to disengage with the strips and segments substantially simultaneously.

[Claims 6 and 7 not printed in the Gazette.]

1,216,414. SLIDING-DOOR FASTENER. EDWARD P. CALKINS, St. Paul, Minn. Filed Nov. 24, 1915. Serial No. 63,211. (Cl. 70—102.)



1. A fastener comprising, in combination with two parts to be locked together, a keeper stud secured to one of said parts, and a locking member secured to the other of said parts, said member consisting of a latch member having a hook adapted to engage said stud and a lever having a cam connection with said latch member adapted to move said latch into partially unlocked position with respect to said stud, and a button secured to said latch member by which said latch is moved into completely unlocked position.

2. A fastener comprising, in combination with two parts to be locked together, a keeper stud secured to one of said parts, and a locking member secured to the other of said parts, said member consisting of a latch member having a hook adapted to engage said stud and a lever having a cam connection with said latch, said lever being adapted for movement in one direction to move said latch into partially unlocked position and in an opposite direction to move the latch into fully locked position with respect to said stud, and a button secured to said latch member by which the latch may be entirely removed from said stud when the latch is in partially unlocked position.

3. A fastener comprising, in combination with two parts to be locked together, a keeper stud secured to one of said parts and a locking member secured to the other of said parts, said member consisting of a latch member provided with a pin and having a bayonet hook adapted to engage said stud and a lever having a cam connection with said latch member adapted to move said latch in position to be partially released from said stud, and a button secured to said latch member by which said latch may be completely released from said stud, said lever having a shoulder adapted to engage said pin to return said latch into position to be locked about said stud.

1,216,415. PUMPING DEVICE. ROBERT J. CARTMELL, Soap Lake, Wash., assignor of one-half to John W. Kahle, Seattle, Wash. Filed Apr. 24, 1916. Serial No. 93,084. (Cl. 103—62.)



1. A pump operating mechanism comprising a pump rod guided to reciprocate in a fixed path, an actuating member for said rod comprising a yoke frame having opposite, inwardly facing racks, a rotating pinion adapted to be engaged with either rack, means for laterally shifting the yoke to engage its racks alternately with the pinion, and a means connecting said yoke with the pump rod permitting a lateral shifting of the point of connection to correspond with the lateral shifting of the yoke.

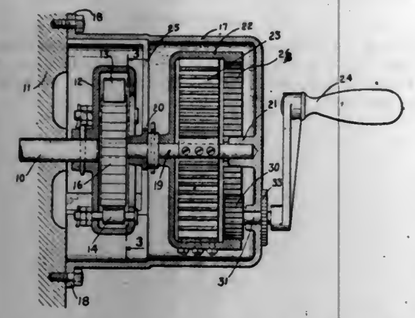
2. A pump operating mechanism comprising a pump rod guided to reciprocate in a fixed path, an actuating member for said rod comprising a yoke frame having opposite inwardly facing racks, a rotating pinion adapted to be engaged with either rack, means for laterally shifting the yoke to engage its racks alternately with the pinion, and a means connecting said yoke with the pump rod comprising a transversely extending slot in one and a pin in the other, whereby a transverse shifting of the point of connection is secured.

3. A pump operating mechanism comprising a pump rod guided to reciprocate in a fixed path, an actuating member for said rod comprising a yoke frame having opposite inwardly facing racks, a rotating pinion adapted to be engaged with either rack, means for laterally shifting the yoke to engage its racks alternately with the pinion and a means connecting said yoke with the pump rod com-

prising a pin on the pump rod and a slot in the yoke, the slot in the yoke being inclined slightly from a perpendicular to the axis of reciprocation in a direction that the tendency for lateral movement due to the angle corresponds with the lateral movement given the yoke when reversed.

4. The combination with a driving pinion, a yoke having opposite inwardly facing racks adapted to be alternately engaged with the pinion, a driven member reciprocating in a fixed path, means acting upon the yoke adjacent the pinion to shift it laterally from engagement with the other, the driven member having a pin and the yoke having a transversely extending slot receiving the pin, and a spring pinced to engage the yoke to laterally shift it as it reaches the lowermost point of its travel.

1,216,416. HAND STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. HARRY B. CHALMERS, Schenectady, N. Y. Filed July 5, 1913. Serial No. 777,896. (Cl. 123—185.)

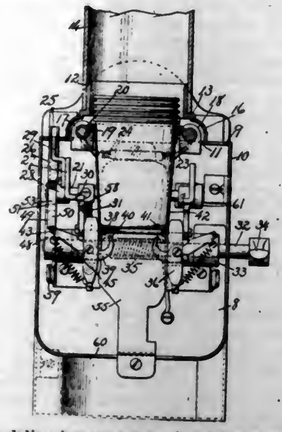


1. A starter for internal combustion engine comprising a housing adapted to be secured to the engine frame, a starter shaft rotatively mounted in the housing in substantial alinement with the engine shaft, a ratchet on the starter shaft, a pawl carrier adapted to be secured to the engine shaft having one or more pawls coöperating with said ratchet and adapted to be released centrifugally, a spring in the housing secured to the starter shaft at one end, a rotatable gear in the housing secured to the spring at its opposite end, and a cranking handle outside the housing operatively connected to the spring winding gear only.

2. In combination with an engine shaft, a pawl carrier secured thereto, pawls pivotally supported by the carrier, an auxiliary shaft coaxial with the engine shaft, a ratchet secured to the auxiliary shaft adapted to coöperate with the pawls, a spring housing rotatably mounted on the auxiliary shaft, a spiral spring secured at one end to the housing and at the other end to the auxiliary shaft, a gear wheel affixed to the housing, an actuating lever, and an interposed pinion meshing with the gear wheel whereby the turning of the lever is adapted to put the spring under tension said pawls being adapted to be automatically released when the engine speed exceeds a predetermined value.

3. In combination with an engine shaft, a pawl carrier secured thereto, an auxiliary shaft coaxial with the engine shaft, a ratchet secured to the auxiliary shaft, pawls pivotally supported by the carrier, arranged to coöperate with the ratchet and adapted to be automatically released therefrom when the engine speed exceeds a predetermined value, a spring housing rotatably mounted on the auxiliary shaft, a spiral spring secured at one end to the housing and at the other end to the auxiliary shaft, a gear wheel affixed to the housing, an actuating lever, an interposed pinion meshing with the gear wheel, and a pawl and ratchet for preventing a reverse movement of the lever whereby the turning of the lever is adapted to put the spring under tension.

1,216,417. APPARATUS FOR REGULATING THE DELIVERY OF DRINKING-CUPS. HENRY B. COOLEY, Kensington, Conn., assignor to The American Paper Goods Company, Montclair, N. J., a Corporation of New Jersey. Filed May 6, 1914. Serial No. 836,676. (Cl. 211—8.)



1. A cup delivering apparatus including means for supporting a stack of cups in an upright position, gripping jaws to seize the bottom of the bottom cup in the stack, means for moving the gripping jaws to separate the bottom cup from the stack while it is held against downward movement, and means for operating the gripping jaws to release said bottom cup.

2. A cup delivering apparatus including means for supporting a stack of cups in an upright position, gripping jaws to seize the bottom of the bottom cup of the stack, means for moving the gripping jaws to separate the bottom cup from the stack, means for operating the gripping jaws to release said bottom cup, and means for retaining the stack in place during the removal of the bottom cup therefrom.

3. A cup delivering apparatus including means for supporting a stack of cups each having a bead around its bottom, means for gripping the bead of the bottom cup in the stack, means for moving the gripping means to separate the bottom cup from the stack, and means for operating the gripping means to release said bottom cup.

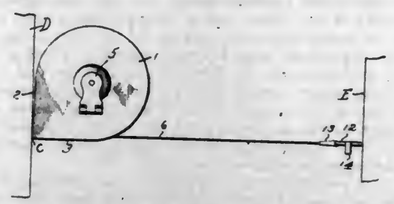
4. A cup delivering apparatus including means for supporting a stack of cups at the bottom thereof, means for gripping the bottom of the bottom cup in the stack, means for operating the gripping means to separate the bottom cup from the stack, means for operating the gripping means to release said bottom cup, and means for retaining the stack in place during the removal of the bottom cup.

5. A cup delivering apparatus including means at the bottom of a stack of cups upon which said stack is supported, means for gripping the bottom of a cup, means for moving said gripping means to separate the bottom cup from the stack, means for operating the gripping means to release the bottom cup, and means to engage the upper edges of the cups to retain the stack in position during the removal of the bottom cup therefrom.

[Claims 6 to 25 not printed in the Gazette.]

1,216,418. TAPE-MEASURE. CHARLES W. CROGAN, Bangor, Me. Filed Feb. 6, 1915. Serial No. 6,565. (Cl. 33—138.)

1. In a measuring device, the combination of a circular casing having a right-angular shoulder formed with a removable portion forming a measuring point when in one position and a closure when reversed, the peripheral wall of said casing having a plurality of openings therein, a tape wound in said body and passed through said openings to expose a portion of the tape to view, thence passing out through another opening to coöperate with said shoulder, an indicator mark on said casing between said openings, and a plurality of rollers in the casing over which the tape is trained to relieve friction.

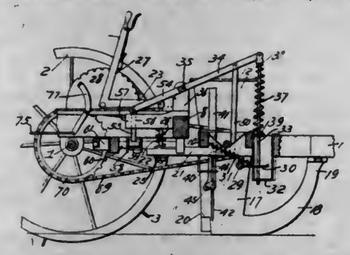


2. In a measuring device, the combination of a circular casing having a right-angular shoulder, a tape wound in said casing, the peripheral wall of the casing having a plurality of openings through which the tape passes, to expose a portion of the tape to view, thence passing out through another opening to coöperate with said shoulder, a removable member in the right-angular shoulder of said casing forming in one position a measuring stop and in a reversed position a closure for the casing, and a slidably mounted hook member carried by the free end of the tape.

3. In a measuring device, the combination of a circular casing having a right-angular shoulder formed with a removable guide, the peripheral wall of said casing having a plurality of openings, an indicating mark thereon between two of said openings, a tape wound in said body and passed through said openings to expose a portion of the tape to register with the indicating mark and having its end extending from the casing to coöperate with said shoulder, and a plurality of rollers in the casing over which the tape is trained to relieve friction.

4. In a measuring device, the combination of a turbinate shaped casing having a removable member at the apex thereof forming a stop when in one position and a closure when reversed, the peripheral wall of the casing having a plurality of openings therein, a tape wound in said casing and passing through said openings to expose a portion of the tape, the free end of said tape extending from said casing to coöperate with said apex.

1,216,419. COMBINED PLANTER AND FERTILIZER-DISTRIBUTER. ROBERT E. DIAL, Atherton, Ind., assignor of one-half to Joseph C. Stark, Atherton, Ind. Filed June 10, 1916. Serial No. 102,907. (Cl. 111—6.)

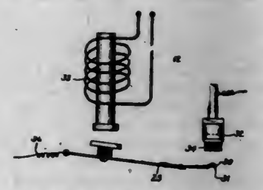


1. In a machine of the class described, the combination with a valve controlling rock shaft and a revoluble dropper shaft, of a drive member revolubly mounted on the dropper shaft, a clutch member coöperating therewith and feathered on said shaft, coöperating means upon the rock shaft and clutch member for holding said clutch member disengaged from the drive member, an intermittently revoluble shaft, a cam carried thereby, a member shiftable by the cam, and means operated by said shiftable member for momentarily actuating the rock shaft.

2. In a machine of the class described, the combination with a valve controlling rock shaft and a revoluble dropper shaft, of a drive member revolubly mounted on the dropper shaft, a clutch member coöperating therewith and feathered on said shaft, coöperating means upon the rock shaft and clutch member for holding said clutch member disengaged from the drive member, an intermittently revoluble shaft, a cam carried thereby, a hanger shiftable by the cam, and means operated by the hanger for momentarily actuating the rock shaft, said means including a fork upon the rock shaft, a hanger, a connection between the two hangers, and yieldingly held means upon one of the hangers for engaging the fork.

3. In a machine of the class described, the combination with a revoluble dropper shaft, a drive member mounted for rotation thereon, and a clutch member feathered on said shaft for coupling the drive member thereto, said clutch member being yieldingly held, of an outstanding projection upon said clutch member, a valve actuating rock shaft, a shifting finger upon said shaft and normally projecting into the path of the projection to shift the clutch member out of engagement with the drive member, a shaft, a cam thereon, means operated by the supporting wheels of the machine for intermittently actuating said shaft, a plunger upon the cam and shiftable thereby, and means operated by the plunger for actuating the rock shaft to release the clutch member.

1,216,420. RELAY. FRANK L. DODGSON, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Dec. 1, 1914. Serial No. 875,017. (Cl. 175—281.)



1. In a relay, in combination: a refractory relatively high resistance conductive button; a metallic ribbon located on the face of said button; a contact arm having a plurality of fingers, the end of one of said fingers lying in a plane different from that of the other fingers; a pivot for said contact arm, said pivot, button and contact arm being so positioned that when the relay is deënergized one of the contact fingers is nearer to the button than one of the other contact fingers is to the metallic ribbon.

2. In a relay, a controlling coil, and contacts the closing and opening of which is controlled by said coil, one of said contacts having a contact face partly of metal and partly of refractory conductive material and the other of said contacts having contacting portions of metal respectively spaced from said portions of the other contact by different distances when in open position and the metal to metal engaging parts having the greater separation in open position.

3. In a relay, a controlling coil, and contacts the closing and opening of which is controlled by said coil, one of said contacts having a contact face partly of metal and partly of refractory conductive material and the other of said contacts having a plurality of metal fingers respectively spaced from said portions of the other contact by different distances when in open position and the metal to metal engaging parts having the greater separation in open position.

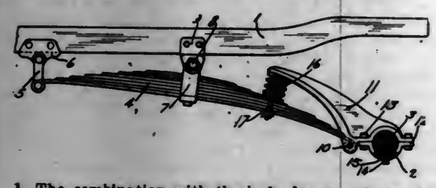
4. In a relay, a controlling coil, and contacts the closing and opening of which is controlled by said coil, one of said contacts having a contact face partly of metal and partly of refractory conductive material and the other of said contacts having a plurality of metal fingers integral with each other and respectively spaced from said portions of the other contact by different distances when in open position.

5. In a relay, a controlling coil, and contacts the closing and opening of which is controlled by said coil, one of said contacts comprising a block having a contact face

partly of refractory conductive material and partly of metal and the other of said contacts having metal contacting fingers adapted to engage respectively with said two face portions, the finger engaging the metal face portion being spaced therefrom by a greater distance than the finger engaging the face portion of refractory material when the parts are in open position.

[Claims 6 to 11 not printed in the Gazette.]

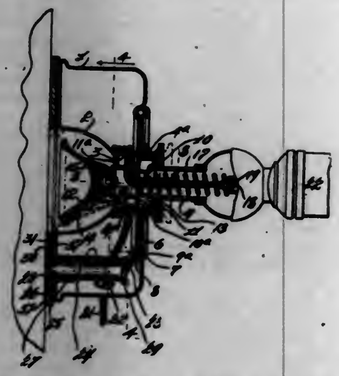
1,216,421. SHOCK-ABSORBER FOR CANTALIVER-SPRINGS. EMIL R. DRAVES, Richmond, Ind. Filed Jan. 5, 1916. Serial No. 70,412. (Cl. 267—19.)



1. The combination with the body frame and rear axle structure of a vehicle, of a cantaliver spring anchored to said frame with its free end projecting rearward, a lever connected to the rear end of said spring and the said rear axle structure, constituting a connection between said spring and rear axle structure and mounted for oscillatory movements in the plane of said spring and at a right angle to the axis of said rear axle structure, and an auxiliary shock absorbing spring yieldingly pressing said lever and coöperating with said cantaliver spring in the load carrying and shock absorbing actions.

2. The combination with the body frame and rear axle structure of a vehicle, of a cantaliver spring anchored to said frame with its free end projecting rearward, a lever connected to the rear end of said spring and the said rear axle structure, constituting a connection between said spring and rear axle structure and mounted for oscillatory movements in the plane of said spring and at a right angle to the axis of said rear axle structure, the free end of said lever overlying said cantaliver spring and a coiled auxiliary spring compressed between the front end of said lever and the rear intermediate portion of said cantaliver spring.

1,216,422. PORTABLE ELECTRIC LAMP. WILLIAM P. DUNHAM, Los Angeles, Cal. Filed Apr. 21, 1914. Serial No. 833,340. (Cl. 240—81.)



1. A portable lamp having a casing, a winding barrel for conductors carried thereby, a suction cup and a tube, a lamp socket carried thereby, said tube and suction cup sliding in the casing.

2. A portable lamp having a casing, a winding barrel for conductors carried thereby, a suction cup and a tube, a lamp socket carried thereby, said tube and suction cup sliding in the casing, and a spring normally holding the suction cup out of operative position.

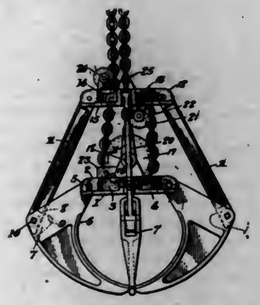
3. A portable lamp having a casing, a winding barrel for conductors carried thereby, a suction cup and a tube, a lamp socket carried thereby, said tube and suction cup sliding in the casing, and a movable base at the bottom of the casing having an opening for the suction cup.

4. A portable lamp having a casing, a winding barrel for conductors carried thereby, a suction cup and a tube, a lamp socket carried thereby, said tube and suction cup sliding in the casing, a movable base at the bottom of the casing having an opening for the suction cup, said movable base extending across the bottom of the casing conforming to the shape of the casing.

5. A portable lamp comprising a casing having an open face, a rotatable plate covering said open face and a winding barrel carried by the plate, in combination with a lamp carrying tube slidably mounted within the barrel and a suction cup carried thereby.

[Claims 6 to 25 not printed in the Gazette.]

1,216,423. ROCK-GRAB. THOMAS L. DUROCHER, Sault Ste. Marie, Mich. Filed Oct. 16, 1916. Serial No. 125,818. (Cl. 57—9.)



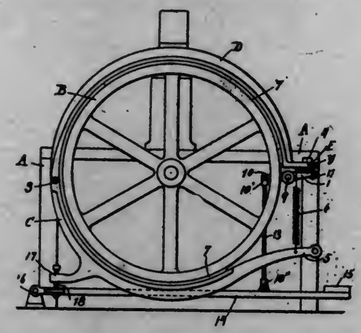
1. In a rock grab, the combination with a head, of a plurality of grab arms carried thereby, and closing arms positively connected with and pivoted to the grab arms and constructed and arranged to limit the movement of the latter in both directions by direct contact therewith.

2. In a rock grab, the combination with a head, of a plurality of grab arms pivoted thereon, a second head, means for varying the distance between the heads, and closing arms pivoted to the last-mentioned head and to the grab arms, the said grab arms having shoulders thereon arranged to engage the inner faces of the closing arms to limit the movement of the grab arms in one direction and having shoulders arranged to engage noses on the ends of the closing arms to limit the movement of the grab arms in the other direction.

1,216,424. MACHINE-BRAKE. WILLIAM E. EDWARDS, Lestershire, N. Y. Filed Oct. 15, 1915. Serial No. 56,033. (Cl. 74—13.)

1. In a brake mechanism, the combination of an upper and a lower substantially semicircular brake shoe adapted to embrace a revolving part, said shoes being pivotally connected together at one end of each and resiliently connected at their other ends to normally maintain said shoes in applied position, a spring sustained treadle, a rocking lever for actuating one of said shoes, connecting means between said lever and the treadle for rocking said lever when the treadle is depressed, and other means between the treadle and the second brake shoe for actuating the latter, simultaneously with the first shoe to release the mechanism.

2. In a brake mechanism, the combination with a revoluble part, of an upper brake shoe, and a lower brake shoe embracing said revoluble part, said shoes being pivotally connected together at one end of each and resiliently connected at their other ends, to normally maintain said shoes in applied position about said revoluble part, one of said shoes having a radially projecting finger on its resiliently connecting end, a treadle, a spring sus-



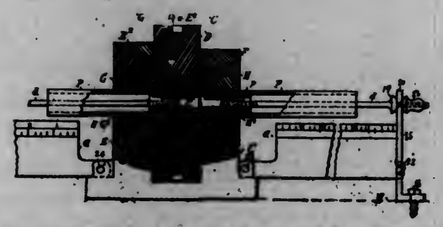
taining said treadle, a rocking lever adapted to engage said finger, a connection between said treadle and said lever for raising one of said shoes through said finger when the treadle is depressed, and an independent connection between the treadle and the other shoe for releasing the same simultaneously with the first shoe.

1,216,425. INFLATABLE TOY. MOSES H. EISEMAN, Chicago, Ill. Filed May 7, 1915. Serial No. 26,548. (Cl. 46—37.)



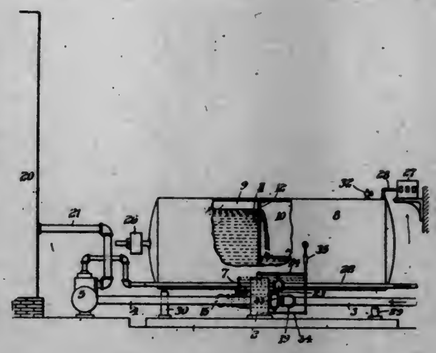
A toy comprising an elongated oblong casing formed of fabric or like flexible, inelastic material, and a substantially spherical inflatable balloon supported within said casing, said balloon being formed of thin rubber and adapted, when inflated, to distend said oblong casing and conform to the elongated shape thereof, substantially as described.

1,216,426. PIPE-CUTTER. FREDERIC WM. ERICKSON, New York, N. Y. Filed Aug. 3, 1916. Serial No. 113,015. (Cl. 164—40.)



In a pipe cutter, two dies secured firmly in supports, each die having a pipe receiving bore, one of the dies being held eccentrically in a rotatable tubular member and adapted to rotate therewith, the other die being immovable, a ratchet and pawl, the cutting ends or faces of the dies being in proximity to each other, and two mandrels adapted to be spaced within a pipe to be cut with their inner or meeting ends in line with the cutting faces of the dies.

1,216,427. COMBINED RECEIVING-TANK AND PUMP-GOVERNOR. FREDERICK C. FARNSWORTH, Brooklyn, N. Y. Filed Mar. 23, 1915. Serial No. 16,505. (Cl. 73—178.)



1. In a device of the character stated, the combination of a tank mounted to tilt, a discharge pipe from said tank, a pump having its suction end connected to said discharge pipe, a steam supply pipe for said pump, a valve in said steam pipe, and means operated by said tank for controlling the operation of said valve whereby the operation of said pump is controlled.

2. In a device of the character stated, the combination of a tank mounted to tilt and adapted to be tilted to discharging position by the weight of collected water, means to counterweight said tank in normal or receiving position, a discharge pipe from said tank, a pump having its suction end connected to said discharge pipe, a steam supply pipe for said pump, and means intermittently operated in accordance with conditions within said tank for controlling the supply of steam to said pump.

3. In a device of the character stated, the combination of a tank mounted to tilt, a water supply pipe connected to said tank, a valve in said water supply pipe, a discharge pipe connected to said tank, a pump having its suction end connected to said discharge pipe, a steam supply pipe for said pump, a valve in said steam pipe, and means operated by said tank for alternately opening and closing both of said valves, one being open while the other is closed and vice versa, whereby measured quantities of water are intermittently removed from said tank by said pump.

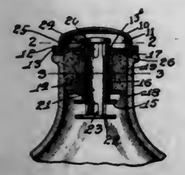
4. In a device of the character stated, the combination of a tank suitably mounted to tilt, said tank divided into two compartments and providing an overflow opening from one compartment to the other, a water supply pipe having communication with one of said compartments, a water discharge pipe having communication with the other compartment, a pump having its suction end connected to said discharge pipe, a steam supply pipe connected to said pump, and means operated by the tank for respectively controlling the feeding of water through said supply pipe and steam to said pump.

5. In a device of the character stated, the combination of a tank suitably mounted to tilt, said tank divided into two compartments and providing an overflow opening from one compartment to the other, a water supply pipe having communication with one of said compartments, a water discharge pipe having communication with the other compartment, a pump having its suction end connected to said discharge pipe, a steam supply pipe connected to said pump, and means operated by the tank for alternately closing said supply pipe and opening said

steam pipe and vice versa, whereby the action of said pump is automatically and intermittently controlled.

[Claims 6 to 11 not printed in the Gazette.]

1,216,428. ANTIREFILLING BOTTLE-STOPPER. MORRIS S. FINKELSTEIN, New York, N. Y. Filed Dec. 2, 1914. Serial No. 875,089. (Cl. 215—66.)



1. An anti-refilling stopper for bottles, comprising a movable head adapted to cover the mouth of the bottle, a sleeve depending from said head and movable therewith, an outer sleeve surrounding said depending sleeve and adapted to be permanently affixed to the neck of the bottle, and a reciprocating valve within the depending sleeve for opening and closing the interior of the bottle to the atmosphere, said valve being provided with a baffle plate at the interior end thereof whereby the valve is forced upon its seat when it is attempted to direct a stream of liquid within the bottle to refill the same, said head and valve being adapted by their own weight to uncover the mouth of the bottle and expose the interior thereof to the atmosphere when the bottle is tilted.

2. An anti-refilling stopper for bottles, comprising a hollow head having discharge openings and adapted to cover the mouth of the bottle, a sleeve depending from said head and communicating therewith, an outer sleeve loosely surrounding said depending sleeve and adapted to be permanently affixed to the neck of the bottle, and a double headed valve adapted to reciprocate within the depending sleeve to open and close communication between the interior of the bottle and the head, the bottom head forming a baffle plate for causing the upper head to close the discharge opening in the first mentioned sleeve.

3. An anti-refilling stopper for bottles, comprising a hollow head having discharge openings and adapted to cover the mouth of the bottle, a sleeve depending from said head and communicating therewith, said openings being sealed when the head is resting upon said mouth, an outer sleeve loosely surrounding said depending sleeve and adapted to be permanently affixed to the neck of the bottle, a double headed valve adapted to reciprocate within the depending sleeve to open and close communication between the interior of the bottle and the head, the bottom head forming a baffle plate for causing the upper head to close the discharge opening in the first mentioned sleeve and means for restricting the longitudinal movement of the depending sleeve within the outer sleeve.

4. An anti-refilling stopper for bottles, comprising a head adapted to cover the mouth of the bottle, a sleeve depending from said head, an outer sleeve movably mounted upon said depending sleeve and adapted to be permanently affixed to the neck of the bottle, a valve adapted to reciprocate within the depending sleeve for opening and closing the interior of the bottle to the atmosphere, and means for preventing rotation of the head in either direction when the latter is seated upon the mouth of the bottle.

5. An anti-refilling stopper for bottles, comprising a head having a chamber, said chamber having discharge openings, a sleeve depending from said chamber and communicating therewith, an outer sleeve movably mounted upon said depending sleeve and adapted to be permanently affixed to the neck of the bottle, and projections upstanding from the outer sleeve to register with the discharge openings whereby the head is prevented from rotating when the latter is resting upon the mouth of the bottle and the chamber is sealed from the atmosphere.

[Claims 6 to 10 not printed in the Gazette.]

1,216,429. REFILLABLE INDICATING-FUSE. GEORGE W. FISKE, Akron, Ohio. Filed Feb. 2, 1915. Serial No. 5,730. (Cl. 175—273.)



1. A safety fuse, including a receptacle having an intermediate portion formed of insulating material, end portions thereon, circuit terminals within said receptacle, a fuse element connected with said circuit terminals, one of said terminals being mounted for sliding movement, said slidable circuit terminal having means thereon extending exteriorly of the casing to facilitate the movement of the same and to indicate when the fuse is blown, an opening arranged in said intermediate portion, and a rotatable casing member arranged about said intermediate portion having an opening arranged in one side thereof adapted to be moved into register with the opening in the intermediate portion, for the purpose as set forth.

2. A safety fuse, including a receptacle, end portions in communication with the adjacent terminals of an electrical circuit, a fuse within said receptacle and connected with said circuit terminals, means for drawing the ends of said fuse apart when the same has been blown, and an element for connecting one end of said fuse to said means, said element comprising a substantially T-shaped link having the lateral extremities, thereof supported within slots arranged in said receptacle.

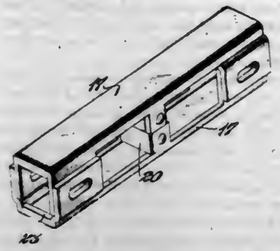
3. A safety fuse, including a receptacle having an intermediate portion formed of insulating material, end portions in communication with the adjacent terminals of an electrical circuit, a fuse within said receptacle and connected with said circuit terminals, means for drawing the ends of said fuse apart when the same has been blown, an element for connecting one end of said fuse to said means, said element comprising a substantially T-shaped link having the lateral extremities thereof supported within slots arranged in said receptacle, an opening arranged in one side of said receptacle, and a rotary casing member associated with said receptacle having an opening arranged in one side thereof, adapted to register with the opening in said receptacle for the purpose as set forth.

4. A safety fuse, including a receptacle, circuit terminals within said receptacle, a fuse within the receptacle and connected with said circuit terminals, one of the terminals being mounted for sliding movement in slots arranged in said receptacle, and means upon said slidable circuit terminal extending exteriorly of the receptacle to facilitate movement of the same and to indicate when the fuse is blown.

1,216,430. DRAW-BAR YOKE. WILLIAM D. FORSYTH, Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y., a Corporation of New York. Original application filed July 6, 1915, Serial No. 38,249. Divided and this application filed May 26, 1916. Serial No. 100,002. (Cl. 29—167.)

1. A blank for one-half of a draw bar yoke composed of two interchangeable halves, said blank having two oppositely disposed tongues, one on each side of its middle, said tongues extending lengthwise of the blank and in opposite directions whereby they may be bent across the blank and the end of one secured to the base of the other.

2. A blank for one-half of a draw bar yoke composed of two interchangeable halves, said blank having end wings adapted to be bent up to form side walls, and two oppositely disposed tongues, one on each side of its middle, said tongues extending lengthwise of the blank and in opposite directions whereby they may be bent across the blank and the end of one secured to the base of the other, said tongues being about one-half as wide as the height of said end walls.



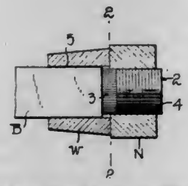
3. A blank for a draw bar yoke comprising a middle portion having oppositely disposed wings at its ends, each pair of oppositely disposed wings having parallel slots at equal distances from the center line of the blank.

4. A blank for a draw bar yoke comprising a middle portion having oppositely disposed wings at its ends, each pair of oppositely disposed wings having parallel slots at equal distances from the center line of the blank, the slots of one pair of wings being spaced farther from the center line of the blank than the slots of the corresponding pair of wings at the other end of the blank.

5. The process of making draw bar yokes which includes forming two similar blanks, one for the top of the yoke and one for the bottom of the yoke, each of said blanks comprising a middle portion having oppositely disposed perforated wings at its ends, bending up said wings along parallel lines such that one pair of wings has sufficient space between them to straddle the other pair of wings of the other blank, inverting one blank and fitting its wings over the wings of the under blank at one end and between the wings of the under blank at the opposite end, and pinning said blanks together by means extending through the perforations of said wings.

[Claim 6 not printed in the Gazette.]

1,216,431. NUT-LOCK. WALTER W. FRAZIER, Philipp, Miss. Filed Oct. 14, 1916. Serial No. 125,690. (Cl. 151—2.)

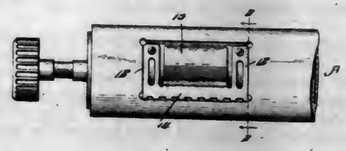


1. In combination with a bolt provided with a threaded portion and with an annular series of ribs adjacent the inner end of the threaded portion, said ribs being disposed longitudinally of the bolt, and a nut engageable with the threaded portion of the bolt and adapted to cut through the ribs.

2. In combination with a bolt provided with a threaded portion and with an annular series of ribs adjacent the inner end of the threaded portion, said ribs being disposed longitudinally of the bolt, a nut engageable with the threaded portion of the bolt and adapted to cut through the ribs, the portion of the bolt inwardly of the ribs being angular in cross section, and a washer provided with an angular opening through which the angular portion of the bolt is directed, the outer face of said washer being adapted to frictionally contact with the inner face of the nut.

3. In combination with a bolt provided with a threaded portion and with an annular series of ribs adjacent the inner end of the threaded portion, said ribs being disposed longitudinally of the bolt, a nut engageable with the threaded portion of the bolt and adapted to cut through the ribs, the portion of the bolt inwardly of the ribs being angular in cross section, and a washer provided with an angular opening through which the angular portion of the bolt is directed, the outer face of said washer being adapted to frictionally contact with the inner face of the nut, said washer being tapered inwardly.

1,216,432. CARD-HOLDER FOR TYPE-WRITING MACHINES. CARL GABRIELSON, Syracuse, N. Y., assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed May 23, 1914. Serial No. 840,594. (Cl. 197—136.)

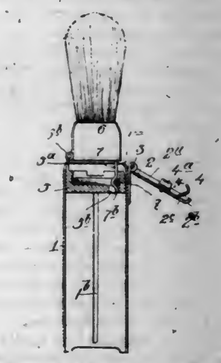


1. The combination with a typewriter platen having a recess in its cylindrical surface, of an integral spring sheet metal card holding device located in the recess and comprising a continuous marginal portion having on one edge alternate card stops and grippers and projecting from its other edge two attaching ears and an intermediate lever portion separated from the ears, the extremities of the ears being attached to the platen and the lever being provided with a fulcrum which is independent of the ears.

2. A card holder for attachment to a typewriter platen comprising an integral spring sheet metal plate having ears at its ends for attachment to the platen, an intermediate lever portion having a rib to serve as a fulcrum, and a continuous margin connecting the ears and the lever portion and serving when free to clamp the forward edge of a card or label against the platen.

3. A card holder for attachment to a typewriter platen comprising an integral spring sheet metal plate having ears at its ends for attachment to the platen, an intermediate lever portion having a rib to serve as a fulcrum, and a continuous margin connecting the ears and the lever portion and serving when free to clamp the forward edge of a card or label against the platen, the marginal portion of the plate having a plurality of tongues bent inward to form stops.

1,216,433. SHAVING-BRUSH. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, New York, N. Y., a Corporation of New York. Filed Apr. 27, 1912, Serial No. 693,617. Renewed July 6, 1916. Serial No. 107,874. (Cl. 15—38.)



1. A device of the character described comprising a handle, a head mounted to slide therein, a brush pivotally

connected with said head, and means to maintain the brush in operating position.

2. A device of the character described comprising a handle, a head slidably mounted therein, a brush having its butt pivotally connected at one side to one side of said head to swing downwardly outside of said handle, and means to movably retain the brush upon said head.

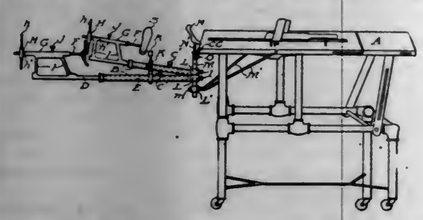
3. A device of the character described comprising a handle, a head slidably mounted therein, a brush having its butt pivotally connected with said head, and a catch for releasably holding the said butt upon said head.

4. A device of the character described comprising a handle, a head slidable therein, a brush butt pivotally connected with said head, a spring-finger connected with said butt, and an abutment on said head to coact with said finger.

5. A device of the character described comprising a handle, a head slidable therein, a brush having its butt pivotally connected at one side of said head, a spring finger connected with the butt at the side opposite the hinge, and an abutment on the head to coact with said finger to retain the brush in operating position upon the head.

[Claims 6 to 12 not printed in the Gazette.]

1,216,434. ORTHOPEDIC AND FRACTURE-EXTENSION DEVICE. CHARLES G. GEIGER, St. Joseph, Mo. Filed Feb. 23, 1916. Serial No. 79,812. (Cl. 128—52.)



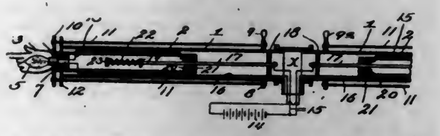
1. The combination with an operating table, of extension arms and an upright tube giving support to said extension arms, a female tube, a male tube adapted to be telescoped into said female tube, extension rods and tubes through which said rods pass, set screws adapted to travel in grooves in said tubes to prevent the extension rods from turning, and the nuts and handles on said extension rods.

2. The combination with an operating table, of extension arms and an upright tube giving support to said extension arms, a female tube, a male tube adapted to be telescoped into said female tube, extension rods and tubes through which said rods pass, set screws adapted to travel in grooves in said tubes to prevent the extension rods from turning, and the nuts and handles on said extension rods, the frames welded to the male tubes and to the tubes through which the extension rods pass, adjustable supports for an arm or leg fastened to said female tubes and thumb nuts to regulate the length of the supports, lugs on the inner ends of said female supports and set screws to fasten said lugs to the supporting tube, and rods fastened to the lower lug and to the sides of an operating table.

3. The combination with an operating table, of extension arms and an upright tube giving support to said extension arms, a female tube, a male tube adapted to be telescoped into said female tube, extension rods and tubes through which said rods pass, set screws adapted to travel in grooves in said tubes to prevent the extension rods from turning, and the nuts and handles on said extension rods, the frames welded to the male tubes and to the tubes through which the extension rods pass, adjustable supports for an arm or leg fastened to said female tubes and thumb nuts to regulate the length of the supports, lugs on the inner ends of said female supports and set screws to fasten said lugs to the supporting tube, and rods fastened to the lower lug and to the sides of an operating table, a support for the head and shoulders of a person being operated upon and lugs on said support, a rod bent at right angles and welded to said support, a steel support to hold the body when extension is made on the person's arm, and suitable means to fasten the supports together.

4. The combination with an operating table, of extension arms and an upright tube giving support to said extension arms, a female tube, a male tube adapted to be telescoped into said female tube, extension rods and tubes through which said rods pass, set screws adapted to travel in grooves in said tubes to prevent the extension rods from turning, and the nuts and handles on said extension rods, the frames welded to the male tubes and to the tubes through which the extension rods pass, adjustable supports for an arm or leg fastened to said female tubes and thumb nuts to regulate the length of the supports, lugs on the inner ends of said female supports and set screws to fasten said lugs to the supporting tube, and rods fastened to the lower lug and to the sides of an operating table, a saddle and a rod welded to said saddle, and suitable means to fasten the supports together, foot supports and slotted plates engaging with the grooves in the inner ends of the extension rods, said plates being welded to said foot supports, and supports for the hand when extension is made on a person's arm.

1,216,435. TRAFFIC-INDICATOR FOR AUTOMOBILES. JOHN M. GILLIES and ANDREW MOYNIHAN, Salem, N. Y. Filed Jan. 5, 1916. Serial No. 70,440. (Cl. 177—311.)



1. A traffic indicator comprising, an outer tubular member, an inner tubular member slidably mounted in the outer member, an electrically illuminated indicator carried by the inner member, means for projecting and retracting the inner member, an electric circuit to said indicator, a circuit controller interposed in said circuit including a contact carried on said inner tubular member, and a substantially stationary contact within the latter adapted to be engaged by the first mentioned contact, when said inner tubular member is in its projected position.

2. A traffic indicator comprising, an outer tubular member, an inner tubular member slidably mounted in the outer member, an electrically illuminated indicator carried by the inner member, means for projecting and retracting the inner member, an electric circuit to said indicator, a circuit controller interposed in said circuit including a contact carried on said inner tubular member, a substantially stationary contact within the latter adapted to be engaged by the first mentioned contact when said inner tubular member is in its projected position, and yielding means for cushioning the engagement of said contacts.

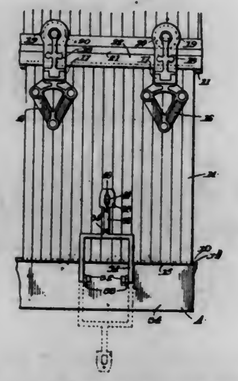
3. A traffic indicator comprising, a tubular casing, an inner tubular member slidably mounted in said casing, means for sliding said member, a guide rod secured in said casing and extended into said tubular member, means insulating said rod from said casing and tubular member, a contact provided on the extended end of said rod, a contact provided on said member to engage with said first mentioned contact when said member is projected, an electric-circuit connected to said rod and the contact on said tubular member, and a lamp mounted on said member and in said circuit.

4. A traffic indicator comprising, a tubular casing, an inner tubular member slidably mounted in said casing, means for moving said member and to project it from one end of said casing, a rod extending longitudinally in said casing and having one end extended into said tubular member, said rod being stationarily secured in said casing adjacent the other end thereof and insulated therefrom, a contact provided on the end of the rod extending in said tubular member, an insulating block secured in said tubular member and through which said rod extends, a contact secured to said block and adapted to engage the contact on said rod when said member is projected, an electric circuit connected to said rod and the contact of said tubular member, and a lamp mounted on said member and in said circuit.

5. A traffic indicator comprising a tubular casing, an inner tubular member slidably mounted in said casing, means for moving said member and to project it from one end of said casing, a rod extending longitudinally in said casing having one end extending into said tubular member, said rod being stationarily secured in said casing adjacent the other end thereof and insulated therefrom, a contact yieldingly mounted on the end of rod extending in said tubular member, an insulating block secured in said tubular member and through which said rod extends, a contact secured to said block and adapted to engage the contact on said rod when said member is projected, an electric circuit connected to said rod and the contact of said tubular member, and a lamp mounted on said member and in said circuit.

[Claims 6 to 8 not printed in the Gazette.]

1,216,436. CAR-DOOR. GEORGE HENRY GILLINGHAM, Kentville, Nova Scotia, Canada. Filed Mar. 23, 1916. Serial No. 86,296. (Cl. 20—24.)



A railway car including door closing means including a lever having a shank, a tapered head on the shank, a U shaped extension on said shank, angular projections on the legs of the U shaped portions, inturned lateral extensions on the ends of said legs, and straps on the car for pivotally holding said lateral extensions, said means adapted to close the car door when in upright position and to serve as a step when in downward position.

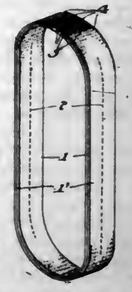
1,216,437. BELT. GEORGE WALKER GILMER, Jr., Philadelphia, Pa., assignor to L. H. Gilmer Company, Philadelphia, Pa., a Corporation of New Jersey. Filed May 6, 1916. Serial No. 95,756. (Cl. 74—63.)

1. A belt comprising a single piece of webbing wound to provide a laminated portion and having feathered ends separated by an intermediate part of the webbing and means for securing said part and ends together.

2. A belt comprising a laminated loop of webbing having overlapping ends of warp threads from which the weft threads have been removed and means for securing said ends to an intermediate part of the loop of said webbing.

3. A belt comprising a section of webbing wound to provide a loop having several plies and overlapping raveled warp ends of reduced cross section sewed to an intermediate part of the webbing.

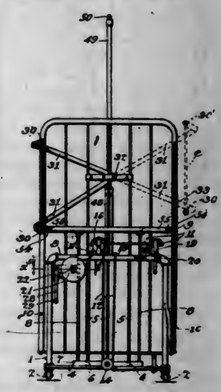
4. A belt comprising a section of webbing wound to provide a loop having several plies connected by longitudinal stitching and feathered warp ends sewed to an intermediate part of the webbing.



5. A belt comprising a section of webbing wound to provide a loop having several plies with reduced overlapping warp ends from which the weft has been removed and stitching including seams across said warp ends for securing them to an intermediate part of the webbing.

[Claim 6 not printed in the Gazette.]

1,216,438. DEVICE FOR THE CARE OF INFANTS. KATRINA VAN R. GINN, Del Mar, Cal. Filed Dec. 16, 1915. Serial No. 67,163. (Cl. 5—58.)



1. A device of the character described comprising telescoping frames, a bottom for one of said frames, and means to raise and lower the frame having the bottom, said frames being open in front beneath said bottom and the space within said frames beneath said bottom being unobstructed so that the device can be arranged to straddle the attendant's lap.

2. A device of the character described comprising relatively adjustable telescoping frames, a bottom for one of said frames, said frames being open in front beneath said bottom and the space within said frames beneath said bottom being unobstructed so that the device can be arranged to straddle the attendant's lap.

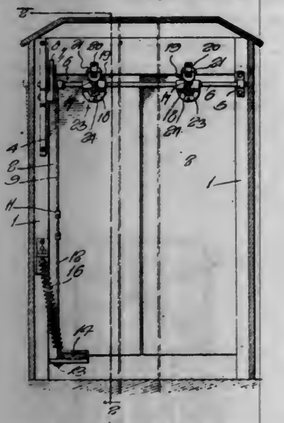
3. A device of the character described comprising telescoping supporting and container frames, a bottom for the container frame, perforated slide members at the ends of the container frame passing through the perforations of the slide members, pulleys on the slide members respectively, other pulleys mounted on the supporting frame, a drum mounted on the supporting frame, still other pulleys mounted on the supporting frame rearward of said second pulleys, cables fastened to the supporting frame and passing to said first pulleys and thence passing to said second pulleys, one of said cables passing from its second pulley to the drum and the other cable passing from its second pulley to one of the rear pulleys and

thence to the other rear pulley and thence to the other of said second pulleys and thence to the drum, and means to turn the drum to wind and unwind the cables.

4. A device of the character described comprising a frame having a bottom, one side of said frame having arms pivoted at the ends of the frame to form a gate, and stops projecting rearward from said frame, the pivots of said gate being eccentric to the transverse dimension of the frame to bring said gate rearward of the other side of the frame when said gate is in open position resting on said stops.

5. A device of the character described comprising a frame open at its front side, a second frame having a bottom midway of its vertical dimension and open at its front side beneath said bottom, the front side of said second frame above said bottom forming a gate designed to swing upward over the top of said second frame to open, and means to hold the second frame with its bottom at various heights relative to the first frame.

1,216,439. DOOR-OPERATING MECHANISM. JOSEPH W. GOTOBED and ROSCOE F. FORWARD, Villisca, Iowa. Filed Mar. 27, 1916. Serial No. 87,076. (Cl. 268—9.)



1. The combination with a swinging door, of an operating arm therefor mounted on an axis lying parallel to the door and at right angles to the door axis, said arm normally extending away from the door, a block swiveled on the free end of said arm, a link pivoted at one end to said block on an axis extending transversely of said arm and link, the other end of said link being offset laterally and connected universally to the door, and means for swinging said arm.

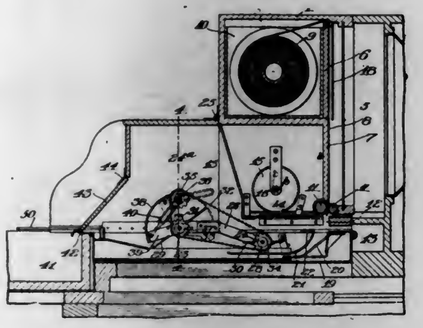
2. The combination with a swinging door, of an operating arm therefor mounted on an axis lying parallel to the door and at right angles to the door axis, said arm normally extending away from the door, a block swiveled on the free end of said arm, a link pivoted at one end to said block on an axis extending transversely of said arm and link, the other end of said link being offset laterally and having a ball thereon, a socket secured to the door and receiving said ball therein, and means for swinging said arm.

3. A door operating mechanism of the class described comprising an operating arm and means for swinging said arm, a block swiveled on the free end of said arm, a link pivoted at one end to said block on an axis extending transversely of the arm and link, and a universal joint carried by the other end of said link for attachment to the door.

4. The combination with a door frame and a pair of swinging doors for closing the same, of a rock shaft extending parallel to the frame in spaced relation with the inner side thereof and disposed at right angles to the axes of the doors, a pair of arms secured to said shaft, a pair of links loosely connected at one end to the free ends of said arms and universally connected at their other ends to the doors, a bearing and a bearing bracket for supporting the opposite ends of the rock shaft, a pinion secured on said rock shaft adjacent said bearing bracket, an operating segment pivoted to said bracket and meshing with said pinion, a rod pivoted at an eccentric point to said segment, and means for operating said rod.

5. In combination, a rock shaft adapted to be disposed parallel with the inner side of the door frame and at right angles to the axes of a pair of doors hinged to said frame, a pair of rigid arms projecting in the same direction from said shaft, a pair of links connected loosely at one end with the free ends of said arms and having universal joints on their other ends for connecting them with the doors, a bearing and a bearing bracket for supporting the opposite ends of the rock shaft, a pinion secured on said shaft adjacent said bracket, an operating segment pivoted to said bracket and meshing with said pinion, an operating rod pivoted at an eccentric point to said segment, and means for operating said rod.

1,216,440. PHOTOGRAPHIC DEVELOPING APPARATUS. JOHN S. GREENE, Rochester, N. Y., assignor to Commercial Camera Company, Rochester, N. Y., a Corporation of Rhode Island. Filed Sept. 3, 1915. Serial No. 48,763. (Cl. 95—13.)



1. In a photographic developing machine, the combination with a liquid container adapted to receive the exposed sheets, of a rotary device adapted to intermittently engage the sheets in the container and advance them through the container and to also act as an agitator for the liquid.

2. In a photographic developing machine, the combination with a liquid container adapted to receive the exposed sheets, of a rotary device having flexible arms adapted to intermittently engage the sheets in the container and advance them through the container and to project below the level of the liquid in the container.

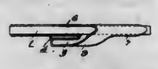
3. In a photographic developing machine, the combination with a container adapted to receive the exposed sheets, of a flexible arm arranged to engage the sheets below the level of liquid in the container and advance them through the container by surface contact and means for operating the arm.

4. In a photographic developing machine, the combination with a container adapted to receive the exposed sheets, of a flexible, movable arm traveling in a path enabling it to brush the bottom of the container and adapted to advance the sheets through the latter by surface contact.

5. In a photographic developing machine, the combination with a container adapted to receive the exposed sheets and means for introducing the latter edgewise therein at one end, of a flexible arm arranged to engage the sheets and advance them through the container toward the other end by surface contact and means for operating the arm.

[Claims 6 to 12 not printed in the Gazette.]

1,216,441. PROCESS OF MAKING BUTTON-SHOE UPPERS. JACOB GROSS, Brooklyn, N. Y. Filed Oct. 27, 1915. Serial No. 58,117. (Cl. 12—142.)



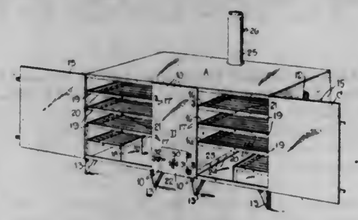
1. The process of making shoe uppers which consists in stretching a blank of material to form the vertical curvature of the front of the upper, stretching a fullness on one side, then slitting the blank at the fullness so as to form a button fly.

2. The process of making shoe uppers which consists in stretching a blank of material, stretching a fullness on one side of the blank, then slitting the blank at the fullness, so as to form a button fly.

3. The process of making shoe uppers which consists in stretching a blank of material to form the vertical curvature of the front of the upper, stretching a fullness on one side, such fullness forming an overlap, then slitting the blank at the fullness to form a button fly, and then straightening out and trimming the overlap so as to form a small quarter.

4. The process of making shoe uppers which consists in stretching a blank of material, stretching a fullness on one side of the blank, such fullness forming an overlap, then slitting the blank at the overlap and then straightening out and trimming the overlap to form a small quarter.

1,216,442. FRUIT-DRIER. BERTHA R. HALEY, Wellston, Okla. Filed May 17, 1916. Serial No. 98,173. (Cl. 34—39.)

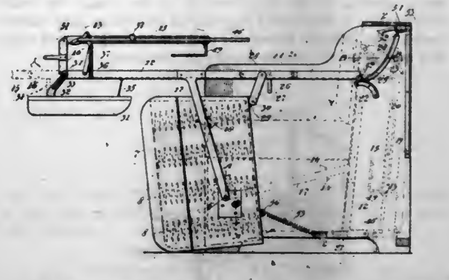


1. A fruit drier comprising a casing provided with doors and ventilators, a furnace including a jacket positioned within the casing, removable trays positioned at opposite sides of the furnace, a flue in communication with the furnace, and a casing substantially in the form of an inverted U secured to the furnace at opposite sides of the flue, said flue passing through the intermediate portion of the casing, said last named casing serving as a means to protect the contents of the trays from the heat of the flue.

2. A fruit drier comprising a rectangular casing including doors positioned upon one side, a plurality of ventilators in each end of the casing, a plurality of frames secured to the casing, removable fruit trays adapted to be positioned on the frames, a furnace including a jacket and provided with a removable grate, a flue for the furnace, and means to protect the contents of the trays from the heat of the flue.

1,216,443. CONVERTIBLE FURNITURE. WILLIAM E. HANN, Chicago, Ill., assignor to Pullman Couch Company, Chicago, Ill., a Corporation of Illinois. Filed July 22, 1915. Serial No. 41,251. (Cl. 5—50.)

1. A device of the class described, comprising a frame including ends and connecting means therefor, a rotatable seat disposed between said ends and demountably attached thereto, a foldable sectional bed bottom disposed normally behind said seat and extensible forwardly above said seat in bed position, supporting means for said bed bottom mounted turnably on said frame, and means connecting said seat and said supporting means for rotating the same, said seat being shaped and positioned so as to coöperate with said supporting means through said connecting means for supporting said bed bottom when in its bed position.



2. In a device of the class described, a frame including ends and connecting means therefor, a seat disposed between said ends and pivotally mounted thereto, said seat having a deep frame and being provided with large upholstering springs, a foldable sectional bed bottom including a plurality of sections disposed normally behind said seat in substantially upright position, and supporting means for swinging said bed bottom forwardly from its position behind the seat, said seat and supporting means being coturnable about fixed axes respectively for rotating said seat to an edgewise position.

3. In a device of the class described, a frame including ends and connecting means therefor, a seat disposed between said ends and pivotally mounted thereon for rotating forward on edge to its bed position, in combination with a foldable sectional bed bottom disposed normally behind said seat with its long sections in a substantially upright position, and means supporting said bed bottom for swinging the same together with said seat forwardly to bring said long sections in a substantially horizontal position above the upturned rear edge of said seat.

4. In a device of the class described, a frame including ends and connecting means therefor, a seat disposed between said ends and pivotally mounted thereon for rotating forward to its bed position, in combination with a foldable sectional bed botton disposed normally behind said seat, supporting means for said bed bottom having sliding operative connection with said seat for swinging said bed bottom forwardly when said seat is turned forward on its pivot, and means adapted to urge the seat to swing forward.

5. In a device of the class described, a frame including ends and connecting means therefor, a seat disposed between and rotatably mounted on said ends, a foldable sectional bed bottom disposed normally behind said seat, supporting arms for said bed bottom pivoted to said ends at a point above the pivoted mounting of said seat, and connecting means between said arms and seat for swinging said bed bottom forwardly when said seat is turned forward on its pivot.

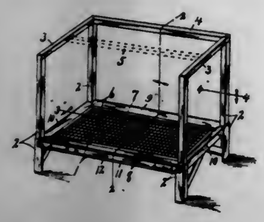
[Claims 6 to 18 not printed in the Gazette.]

1,216,444. HALL-RACK. FRANK J. HANNOLD, Syracuse, N. Y. Filed June 8, 1916. Serial No. 102,448. (Cl. 45—33.)

1. In a hall rack, a substantially horizontal deck comprising a rectangular sheet metal frame composed of channel bars secured together end to end with their channeled sides facing inwardly, the top walls of said bars being inclined downwardly and inwardly from their outer edges, and a woven wire body extending across the opening in the frame and having its marginal edges secured to the top walls of said bars, in combination with supporting posts secured to the four corners of the frame.

2. In a hall rack, a substantially horizontal deck comprising a rectangular sheet metal frame composed of channel bars secured together end to end with their channeled sides facing inwardly, the top walls of said bars being in-

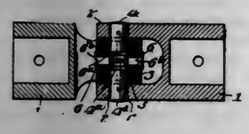
clined downwardly and inwardly from their outer edges, and a woven wire body extending across the opening in the frame and having its marginal edges secured to the top walls of said bars, in combination with supporting posts secured to the four corners of the frame, the front bar having a lengthwise opening in the front side thereof and a tray slidable forwardly and rearwardly in said opening and upon the lower flanges of the bars.



3. A hall rack comprising in combination a substantially horizontal rectangular frame composed of sheet metal channel bars secured together end to end with their channeled sides facing inwardly, the upper walls of the bars being inclined downwardly and inwardly from their outer edges, the front bar having a lengthwise opening in its front side, a tray slidable in said opening along and upon the lower walls of the bars and beneath the top walls thereof, a woven wire body having its marginal edges secured to said top walls, and supporting posts secured to the four corners of the frame and extending some distance above said frame.

4. A hall rack comprising in combination a substantially horizontal rectangular frame composed of sheet metal channel bars secured together end to end with their channeled sides facing inwardly, the upper walls of the bars being inclined downwardly and inwardly from their outer edges, the front bar having a lengthwise opening in its front side, a tray slidable in said opening along and upon the lower walls of the bars and beneath the top walls thereof, a woven wire body having its marginal edges secured to said top walls and supporting posts secured to the four corners of the frame and extending some distance above said frame, and sheet metal channel bars fitted upon and secured to the upper ends of the posts for connecting the same.

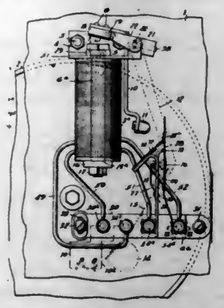
1,216,445. UNIVERSAL JOINT. ARTHUR M. HARRINGTON and ROBERT F. SCOTT, Philadelphia, Pa., assignors to Edwin Harrington, Son & Co., Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 16, 1914. Serial No. 861,931. (Cl. 74—19.)



1. The combination of transversely disposed yokes, channeled pintles journaled in the furcations of said yokes, the inner ends of said pintles being beveled and provided with notches, and a stud having an edge engaged in said notches and a channel communicating with the channels of said pintles.

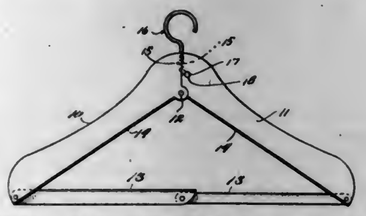
2. The combination of transversely disposed yokes, a block disposed within said yokes, channeled pintles extending through the bifurcations of said yokes into said block, the inner ends of said pintles being beveled and provided with notches, and a stud in said block having an edge engaged in said notches and a channel communicating with the channels of said pintles.

1,216,446. ELECTROMAGNETIC APPARATUS. CLINTON O. HARRINGTON, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Mar. 9, 1915. Serial No. 13,250. (Cl. 177—7.)



In combination, a base, a relatively stiff supporting member mounted thereon, a contact finger mounted on said member, a second contact finger mounted on said base and biased to make contact with the first-mentioned contact finger, a contact tip removably attached to said second contact finger, a second contact tip in the shape of a stud the shank of which is adapted to reciprocate in a hole through said supporting member, a spring for holding said stud in said hole so that said stud is easily replaceable, said tips forming a shunt contact for the contact fingers, which shunt contact remains closed an interval of time after the contact fingers have broken contact.

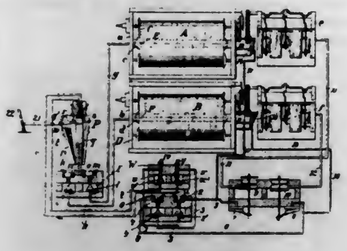
1,216,447. GARMENT-HANGER. LEO W. HARRIS, Burke, Idaho. Filed June 25, 1914. Serial No. 847,251. (Cl. 211—13.)



A garment hanger comprising a pair of channeled sections pivotally connected together and having straight inner faces adapted to lie together when the sections are folded, the abutting portions of the pivoted ends of the sections formed with transverse walls having coöperating longitudinal grooves, the inner end of one of the sections being formed with an opening and a recess inwardly of the wall and arranged in transverse alinement, the transverse wall of said end having an opening formed in the inner end of the groove thereof, and a hook member provided with a shank movable in the wall opening and having an offset and transversely extending angular portion one end of which is movably disposed in the said opening and the other end of the said portion engaged in the said recess, said sections being arranged to be swung to clamp the shank of the hook member within the grooves, the groove of the other wall receiving the shank of the hook when the sections are folded.

1,216,448. PLURAL-NOTE-SHEET MECHANISM. GUSTAV KARL HENNIG, Böhlitz Ehrenberg, near Leipzig, Germany, assignor to the Firm of Ludwig Hupfeld, A.-G. Böhlitz Ehrenberg near Leipzig, Germany. Filed Sept. 24, 1913. Serial No. 791,543. (Cl. 84—161.)

1. In a pneumatically operated musical instrument, the combination with a pair of music sheets having synchronizing perforations, and unperforated solo control portions; of mechanism for actuating the music sheets under the control of both sheets whereby the unperforated portion of one sheet while playing its solo part will cause the other sheet to remain stationary.



2. In a pneumatically operated musical instrument the combination with a plurality of note sheets having perforate and imperforate control portions arranged in longitudinal rows, said perforated portions having regularly spaced perforations and the imperforate portions varying in length, of pneumatic sheet tracking mechanisms for said note sheets, and a pneumatic mechanism under the control of said perforations and controlling said tracking mechanism.

3. In a pneumatically operated musical instrument the combination with a plurality of note sheets, said note sheets each having a single row of side hole control perforations regularly spaced, and one or more of said sheets having imperforate portions in said row in accordance with the length of the solo part of said sheet, of a pneumatic device under the control of the perforations in all of the sheets, and a tracking mechanism for each sheet controlled by said device.

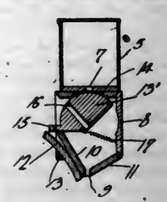
4. In a pneumatically operated musical instrument, trackers, a registration means in each tracker, a plurality of note sheets having perforated and unperforated portions in position to pass over said means, said perforated portions having regularly spaced perforations, a double pneumatic controlled by the perforations in said note sheets maintained inoperative when the latter travel synchronously and operated when said sheets do not travel synchronously, a pneumatic mechanism for operating each note sheet, and a single actuating member controlled by the double pneumatic for controlling the operation of said operating mechanism.

5. In a pneumatically operated musical instrument, trackers, a registration means in each tracker, a plurality of note sheets having perforated and unperforated portions in position to pass over said means, said perforated portions having regularly spaced perforations, a double pneumatic controlled by the perforations in said note sheets maintained inoperative when the latter travel synchronously and operated when said sheets do not travel synchronously, a pneumatic mechanism for operating each note sheet, a valve for controlling the operation of each pneumatic mechanism, and a single valve-actuating member carried by the double pneumatic.

[Claim 6 not printed in the Gazette.]

1,216,449. PLANTER. CHARLIE R. HODGE, CLAUD E. GRAHAM, and ROBERT C. WOODARD, Taft, Tenn. Filed July 17, 1916. Serial No. 109,721. (Cl. 111—6.)

A planting attachment for cultivators, comprising a seed box having an outlet opening in the bottom thereof, a boot depending from the seed box and having an outlet in the bottom thereof and an opening in one wall, a segmental block pivotally mounted within the boot and normally closing the outlet opening in the seed box, a radial arm extending from the block and normally resting upon one wall of the boot, said block having a passage extending therethrough, means engaging the arm for shifting the block to bring the passage into register with the outlet opening of the seed box, and yielding means within the boot and connected to the boot and block for shifting



the arm, when raised, quickly into contact with one wall of the boot to jolt the block and the contents of the passage therein.

1,216,450. ELECTRIC BATTERY. MAJOR E. HOLMES, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Original application filed Nov. 21, 1912, Serial No. 732,615. Divided and this application filed July 23, 1913. Serial No. 780,674. (Cl. 204—38.)

1. In a dry cell, a positive electrode, a negative electrode and a depolarizer consisting of precipitated manganese peroxid calcined to approximately 300 degrees C.

2. In a dry cell, a positive electrode, a negative electrode and a depolarizer consisting of artificial manganese peroxid calcined above 200 degrees C.

3. In a dry cell, a positive electrode, a negative electrode and a depolarizer consisting of manganese peroxid precipitated from a hot solution of potassium permanganate.

4. In a dry cell, a positive electrode, a negative electrode, and a depolarizer consisting of manganese peroxid precipitated from a manganous salt solution by means of potassium permanganate.

5. In a dry cell, a positive electrode, a negative electrode, and a depolarizer consisting of manganese peroxid precipitated from a solution of manganous chlorid by means of potassium permanganate maintained at approximately 100° C.

[Claim 6 not printed in the Gazette.]

1,216,451. BATTERY-DEPOLARIZER. MAJOR E. HOLMES, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Nov. 22, 1913. Serial No. 802,541. (Cl. 204—38.)

1. In a dry cell, positive and negative electrodes and a depolarizer consisting of a neutral manganite.

2. In a dry cell, positive and negative electrodes and a mix containing a plurality of neutral manganites as depolarizer.

1,216,452. PROCESS FOR THE PRODUCTION OF SODIUM BISULFITE. THOMAS WILLIAM STAINER HUTCHINS, LUKE HARGREAVES, and ALFRED CHARLES DUNNINGHAM, Middlewich, England. Filed Aug. 16, 1916. Serial No. 115,302. (Cl. 23—13.)

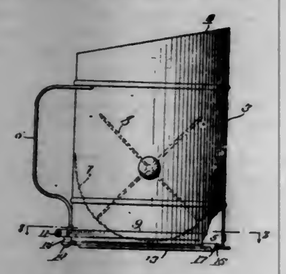
1. The herein described process for the manufacture of sodium bisulfite consisting in subjecting a closely packed stationary charge of sodium carbonate, at least in part hydrated, to gaseous sulfur dioxid to convert a portion directly into bisulfite with the liberation of carbon dioxid; subjecting the remaining portion of the charge first to the action of the evolved carbon dioxid to convert it into a bicarbonate of marked porosity and then to the action of sulfur dioxid to convert said bicarbonate into bisulfite in the desired form, the evolved carbon dioxid proceeding through the charge in advance of the sulfur dioxid.

2. The herein described process for the manufacture of sodium bisulfite consisting in subjecting a minor portion of a charge of sodium carbonate, at least in part hy-

drated to provide equimolecular proportions of carbonate and combined water, to gaseous sulfur dioxid to convert said minor portion directly into bisulfite with the liberation of carbon dioxid; subjecting the remaining portion of the charge first to the action of evolved carbon dioxid to convert it into a bi-carbonate of marked porosity and then to the action of sulfur dioxid to convert said bicarbonate into bisulfite in the desired form.

3. The process for the manufacture of sodium bisulfite wherein sodium carbonate at least in part hydrated to provide equimolecular proportions of carbonate and combined water, is subjected to the action of gaseous sulfur dioxid so that after the initial direct conversion of a portion of the carbonate into bisulfite with the liberation of carbon dioxid, the remaining portion of the carbonate is subjected to a double reaction consisting of the conversion of the carbonate into bicarbonate by the previously liberated carbon dioxid and the subsequent conversion of the bicarbonate to bisulfite by the sulfur dioxid, the finished product having the nitrogen and carbon dioxid issuing from the treated materials passed therethrough to drive off any sulfur dioxid occluded in the bisulfite, as set forth.

1,216,453. SIEVE. WALTER F. IHRKE, Rockford, Ill. Filed May 23, 1916. Serial No. 99,440. (Cl. 220—62.)



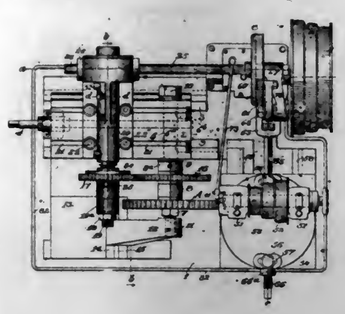
1. An attachment for the delivery end of a sieve comprising a split band embracing the lower end of a sieve and provided with means for drawing the ends of the band together to securely clamp the same to the sieve, a closure covering the opening of the delivery end and being pivotally mounted on said band member so as to be capable of swinging sidewise on its pivot into and out of closing position, and means for interlockingly engaging the closure to the sieve when the closure is moved to closing position.

2. An attachment for the delivery end of a sieve comprising a substantially imperforate closure or cap adapted to close the delivery end of the sieve, and means detachably mounted on the sieve and to which said closure is pivotally secured on an axis parallel with the longitudinal axis of the sieve so that the closure may be swung sidewise in a plane transverse to said axis into and out of closing position, the closure being shaped to provide a portion yieldingly engageable with the end of the sieve upon movement of the closure to closing position so as to yieldingly secure the closure in such position.

1,216,454. GEAR-TOOTH-ROUNDING MACHINE. ARTHUR H. INGLE and ALPHONSE J. GOSSELIN, Rochester, N. Y., assignors, by mesne assignments, to Ingle Corporation, Monroe county, N. Y., a Corporation of New York. Filed July 5, 1912. Serial No. 707,721. (Cl. 90—15.)

1. In a gear tooth rounding machine, the combination with a rotary tool and means for reciprocating it, of means for rotatably supporting a work piece in front of the tool, a drive gear operatively connected with said supporting means and located in front of the work piece for imparting rotary movement thereto, a shaft supporting said drive gear and a support therefor adjustable toward and from both the work piece and tool.

2. In a gear tooth rounding machine, the combination with means for rotatably supporting a work piece, a tool located at one side thereof and means for reciprocating it, of a drive gear operatively connected with said supporting means and positioned at the opposite side of the work piece, a shaft rotating the drive gear operatively connected to the tool reciprocating means, and a support for the drive gear shaft movable toward and from both the work piece and tool.



3. In a gear tooth rounding or chamfering machine, the combination with a tool, means for supporting a work piece or gear in coöperative relation with the tool, and means for reciprocating one of said parts relatively to the other, of a carriage adjustable relatively to the tool, a shaft on said carriage, a gear wheel on the shaft for driving the gear to be operated on by the tool, a worm wheel on said shaft, a worm carried by the carriage and cooperating with the worm wheel, and a shaft supported independently of the carriage and having the work turning therewith and adjustable longitudinally thereof.

4. In a gear tooth rounding or chamfering machine, the combination with a tool, means for rotatably supporting a work piece or gear in coöperative relation with the tool, and means for reciprocating one of said parts relatively to the other, of a carriage adjustable relatively to the tool, a shaft on said carriage, a gear wheel on the shaft for driving the gear to be operated upon by the tool, a worm wheel on said shaft, a worm on the carriage coöperating with the worm wheel, a shaft supported independently of the carriage and having the worm turning therewith and adjustable longitudinally thereof, and eccentric sleeve bearings in which the shaft of the carriage turns.

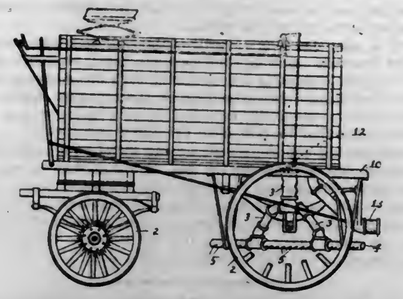
5. In a gear tooth rounding or chamfering machine, the combination with a rotary tool, and means for reciprocating said tool transversely of its axis of rotation, of a carriage adjustable in the direction parallel to the axis of rotation of the tool, means for rotatably supporting a work piece or gear on the carriage in a position to be operated upon by the tool, a drive gear for rotating the work piece supported by said carriage, and adjustable thereon relatively to the work supporting means.

[Claims 6 to 11 not printed in the Gazette.]

1,216,455. STREET-FLUSHING MACHINE. WILLIAM C. INGRAM, Grand Rapids, Mich. Filed Dec. 3, 1915. Serial No. 64,793. (Cl. 137—63.)

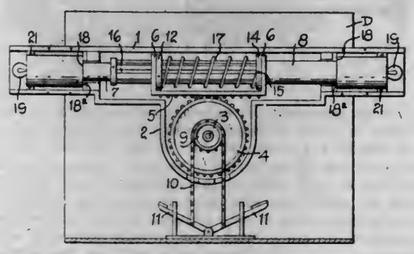
1. In a machine of the character described, a discharge pipe of uniform cross section throughout its length and having vents through its wall, the portions of the pipe's inner surface nearer the vents and on opposite sides thereof gradually and uniformly converging in the pipe's cross-sectional direction more closely to parallelism than portions of such inner surface more remote from the vents whereby the passage to the vents is gradually contracted.

2. In a machine of the character described, a discharge pipe having vents through its wall, the portions of the pipe's inner surface nearer the vents and on opposite sides thereof gradually and uniformly converging in the pipe's cross-sectional direction more closely to parallelism than portions of such inner surface more remote from the vents, whereby the passage to the vents is gradually contracted, the pipe being horizontally disposed, and the



vents being elongated in cross section and arranged parallel with each other and inclined from the horizontal direction of the pipe.

1,216,456. INDICATOR. MERRILL LEE JAMES, San Francisco, Cal. Filed Aug. 21, 1915. Serial No. 46,691. (Cl. 74—27.)



1. A device of the character described comprising a tubular member, members disposed therein and capable of endwise movement, the adjacent extremities of said members being in overlying relation, a collar carried by each of said members, an expansible member interposed between said collars for normally maintaining the members substantially confined within the tubular member, and means for imparting outward movement to said members.

2. A device of the character described comprising a tubular member, members disposed therein and capable of endwise movement, the adjacent extremities of said members being in overlying relation, a collar carried by each of said members, an expansible member interposed between said collars for normally maintaining the members substantially confined within the tubular member, an additional member mounted for reciprocatory movement within the tubular member engageable with the stops of the second named members, and means for reciprocating said last named member.

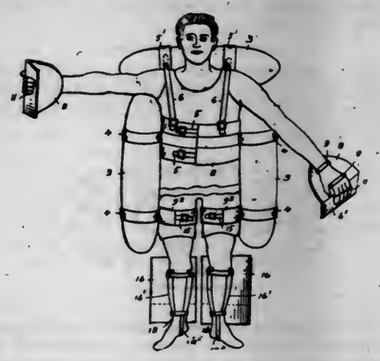
3. A device of the character described comprising members capable of endwise movement, the adjacent extremities of said members being in overlying relation, a collar carried by each of said members, an expansible member interposed between said collars for normally maintaining the members at the limit of their inward relative movement, and means for imparting outward movement to said members.

4. A device of the character described comprising members capable of endwise movement, the adjacent extremities of said members being in overlying relation, a collar carried by each of said members, an expansible member interposed between said collars for normally maintaining the members at the limit of their inward movement, an elongated member provided with upstanding yokes embracing the first named members and coacting with the collars for limiting the movement of the members under the influence of the expansible member, and means coacting with the elongated member for moving the same in either direction.

5. A device of the character described comprising members capable of endwise movement, the adjacent extremities of said members being in overlying relation, a collar carried by each of said members, an expansible member interposed between said collars for normally maintaining the members at the limit of their inward movement, an elongated member provided with upstanding yokes embracing the first named members and coacting with the collars for limiting the movement of the members under the influence of the expansible member, said elongated member constituting a rack, a gear in mesh therewith, and means for rotating the gear in either direction.

[Claim 6 not printed in the Gazette.]

1,216,457. SWIMMING DEVICE. MARTIN JELALIAN, Cranston, R. I. Filed July 8, 1916. Serial No. 108,213. (Cl. 9—17.)

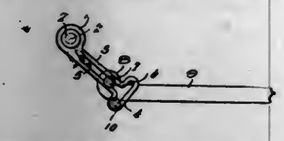


1. In a device of the character described, a buoyant swimming structure, said structure composed of a support provided with straps for securing to the abdominal part of the swimmer; an air-containing bag carried upon each side of said support and having a main integral strap within and near to the upper and lower ends thereof; strap connections extending from said upper end main integral straps to said support and attached thereto; similar strap connections extending also from the lower end main straps and attached to a support that is carried upon the upper portion of the leg part of the swimmer and provided with straps for securing thereto.

2. In a device of the character described a swimming structure, said structure composed of three supports adapted to be detachably secured to the abdominal and the upper leg parts of the swimmer; air containers carried by said supports and provided with straps for attaching to the latter; an air-containing bag secured upon the shoulders of the swimmer and provided with main integral straps within and near each end thereof; attaching straps having one of their ends secured to said main straps and the other ends attached to the upper portion of the abdominal support; an inflating tube connection composed of three parts extending centrally from the rear of said support into each of said bags, and suitable valve connections within each of the same to normally retain the air therein.

3. In a swimming device, a body support comprising an abdominal strap and a pair of leg straps, a pair of lateral buoyant members connected at their upper ends to said abdominal strap and at their lower ends to said leg straps, and a buoyant shoulder-member connected to said abdominal strap.

1,216,458. ADJUSTABLE HANGER FOR SPRINGS. THOMAS BRACEY JENKINS, Sumter, S. C. Filed Oct. 26, 1916. Serial No. 127,876. (Cl. 267—37.)

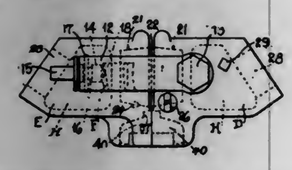


1. A hanger for springs comprising, a connector head, and an arm connected to said head and provided with means for adjusting the hanger for radius, length, and drop.

2. A hanger for springs, comprising a connector head, a bifurcated arm carried by said head, said arm being provided with slots, and means engaging said arm through said slots for adjustably securing a spring to the hnger.

3. A hanger for springs, comprising a connector head, a bifurcated arm secured to the head, an enlarged portion at the free end of each prong of the bifurcated arm, means engaging the arm for securing a spring thereto, and means engaging the enlarged portions for adjusting the hang of the spring.

1,216,459. PIPE-COUPLING. WILLIAM A. JOHNSTON, Aurora, Ill., assignor of one-half to William Queenan, Aurora, Ill. Filed Apr. 24, 1916. Serial No. 93,206. (Cl. 137—89.)



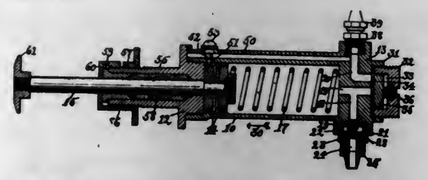
1. A pipe coupling comprising mating members having port openings, each of said members being provided with a laterally projecting lug provided with an engaging surface including a rib extending at right angles thereto, a horizontally pivotally mounted locking arm having recesses formed therein near the outer end, a removably secured bolt positioned in the end of the arm, the end of the bolt being formed to frictionally engage with the surface of the lug, said arm when so positioned, contacting with contiguous sides of each of the members which lie in the same plane, and interlocking members consisting of a projecting hooked lug adjacent a recess formed below the port opening so that when said lugs are positioned in their respective coöperating recesses, longitudinal movement of the mating members is restricted, and also to form a hinged connection between the members when coupling and uncoupling.

2. A pipe coupling comprising mating members having port openings, each of said members being provided with a laterally extending lug provided with an engaging surface including a rib extending at right angles thereto, a horizontally pivotally mounted locking arm having recesses formed therein near the outer end thereof to receive the lug and rib of the second member, a removably secured bolt secured in the end of the arm, the end of the bolt being formed to frictionally engage with the surface of the lug, said arm when so positioned contacting with contiguous sides of each of the members which lie in the same plane.

3. A pipe coupling comprising mating members having port openings, each of said members being provided with a laterally projecting lug provided with an engaging surface and including a rib extending at right angles thereto, a horizontally pivotally mounted locking arm having recesses formed therein near the outer end to receive the lug and rib of the second member, a bolt threaded through the outer end portion of the arm and adapted to frictionally engage with the surface of the lug, a portion of said bolt intermediate its length being reduced, and a retaining member disposed through the arm and positioned within the reduced portion of the bolt whereby the bolt is held against removal and is afforded a limited movement in either direction.

4. A pipe coupling comprising mating members having port openings, each of said members being provided with a laterally extending lug provided with an engaging surface including a rib extending at right angles thereto, a horizontally pivotally mounted locking arm having recesses mounted therein near the outer end thereof to receive the lug and rib of the second member, a removably secured bolt secured in the end of the arm, the end of the bolt being formed to frictionally engage with the surface of the lug, said arm when so positioned contacting with contiguous sides of each of the members which lie in the same plane, and means for limiting the pivotal movement of the locking arm in either direction.

1,216,460. PRIMING APPARATUS. FREDERICK O. KILGORE, Somerville, Mass., assignor to Spray Primer Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 26, 1915. Serial No. 4,535. (Cl. 103—75.)



1. In an apparatus of the character described, in combination, a pump cylinder provided at one end with a head and with a valve chamber on the opposite side of said head, the latter having a passage leading from the rear face of said head to the outside of said cylinder, means for connecting said chamber with said cylinder, a piston reciprocating in said cylinder, a valve coöperating with the rear face of said head to close and open said passage and movable toward said head on the suction stroke of said piston, and means for positively moving said valve into its closed position on said suction stroke.

2. In an apparatus of the character described, in combination, a pump cylinder provided at its opposite ends with heads, one of which is provided with a liquid inlet and with a liquid outlet for said cylinder, valves for controlling said liquid inlet and outlet, a passage extended longitudinally of said cylinder and connecting said liquid outlet with the cylinder near its opposite end, a piston in said cylinder, and a spring to move said piston in its cylinder.

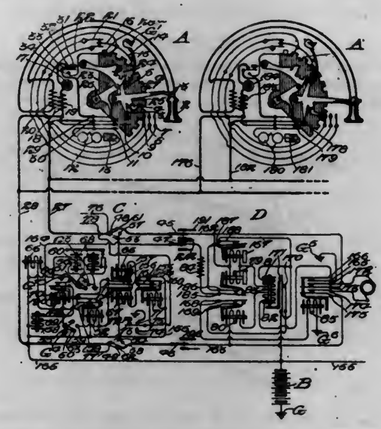
3. In an apparatus of the character described, in combination, a pump cylinder having heads, one of which is provided with valve containing chambers connected with one end of the said cylinder, valves in said chambers, means for connecting one of said chambers with a supply for liquid gasolene, means for connecting the other of said chambers with a motor to be primed a passage connecting the valve chamber leading to the motor with the cylinder near the opposite end of the latter, a valve in said passage, a piston in said cylinder having its piston rod extended through the other head of the cylinder, and a spring to move the piston away from the head provided with the valve containing chambers.

4. In an apparatus of the character described, in combination, a pump cylinder provided with a head, a valve chamber attached to said head, a fluid passage extended through said head to connect the said valve chamber with said cylinder, a fluid outlet passage in said head leading from said valve chamber, a valve in said chamber controlling communication between said passages, a fluid inlet passage in said head leading to said cylinder, a valve in said passage, a piston in said cylinder, and a spring to move said piston on its suction stroke.

5. In an apparatus of the character described, in combination, a pump cylinder provided with a head, a valve chamber attached to said head, a fluid passage extended through said head to connect the said valve chamber with said cylinder, a fluid outlet passage in said head leading from said valve chamber, a valve in said chamber controlling communication between said passages, a fluid inlet for said cylinder, a valve controlling said fluid inlet, and a piston in said cylinder.

[Claims 6 to 10 not printed in the Gazette.]

1,216,461. TELEPHONE RING-BACK OR REVERTING-CALL SYSTEM. GEORGE E. KIMBALL, Rochester, Pa., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed June 23, 1909. Serial No. 503,816. (Cl. 179—17.)



1. In a telephone system, suitable switches, release mechanism therefor, a trunk-release circuit, a talking circuit, a plurality of differently timed slow-acting relays controlling said release circuit, and a circuit for said relays in part coincident with both sides of said talking circuit in series.

2. In a telephone system, suitable switches, release mechanism therefor, a trunk-release circuit, a talking circuit, a pair of differently timed slow-acting relays controlling normally closed and normally open switch points in said release circuit, and a circuit for energizing said relays in multiple, said energizing circuit being in part coincident with both sides of the talking circuit in series.

3. In a telephone system, suitable switches, release mechanism therefor, a trunk-release circuit, a plurality of differently timed relays controlling said release circuit, a talking circuit, and connections whereby both of said relays are energized over the two sides of the talking circuits in series.

4. In a telephone system, a line circuit, suitable switches, release mechanism therefor, a trunk-release circuit, a plurality of differently timed relays controlling said release circuit, the quicker of said relays when energized serving to open said release circuit, which relay is energized over the two sides of the line circuit in series, whereby the opening of the line circuit causes said relay to close the release circuit before the same is opened by the deënergizing of the other or slower of said relays.

5. In a telephone system, a line, a plurality of substations thereon, a ring-back apparatus, and means for extending connection from said line to said apparatus, the said apparatus comprising means responsive to the opening of the line for releasing the connection, consisting of two differently timed relays, a release circuit having a switch point closed by the deënergizing of the quicker of said relays, a switch point opened by the deënergizing of the slower of said relays, and a circuit for energizing the said quicker relay over the two sides of the line in series.

[Claims 6 to 25 not printed in the Gazette.]

1,216,462. MANUFACTURE OF CELLULOSE DERIVATIVES. JOSEPH KOETSCHET, Lyon, and MAX THEUMANN, St. Fons, France, assignors to Societe Chimique Des Usines Du Rhone (Anciennement Gilliard, P. Monnet et Cartier), Paris, France. Filed June 19, 1915. Serial No. 35,071. (Cl. 23—24.)

1. Process for the manufacture of cellulose derivatives by the action of anhydrids of the fatty series, with a catalyzer, upon cellulose or its derivatives, said process being characterized in that the reaction is performed in presence of trioxymethylene or formaldehyde.

2. Process for the manufacture of a cellulose derivative, comprising subjecting cellulose or a cellulose derivative to treatment with an anhydrid of the fatty acid series in presence of sulfuric acid and of trioxymethylene.

3. Process for the manufacture of a cellulose derivative, comprising subjecting cellulose or a cellulose derivative to a preliminary treatment with an acid of the fatty acid series and an anhydrid of the fatty acid series in presence of a catalyzer and trioxymethylene and subjecting the resulting mass to esterification with a further quantity of anhydrid of the fatty acid series.

4. Process for the manufacture of a cellulose derivative, comprising subjecting cellulose or a cellulose derivative to a preliminary treatment with an acid of the fatty acid series and an anhydrid of the fatty acid series in presence of formaldehyde and a catalyzer, and subjecting the resulting mass to esterification with a further quantity of anhydrid of the fatty acid series.

5. Process for the manufacture of a cellulose derivative, comprising subjecting cellulose or a cellulose derivative to treatment with acetic acid and acetic anhydrid in presence of trioxymethylene and a catalyzer.

[Claims 6 to 11 not printed in the Gazette.]

1,216,463. SPRING-LINK. FRANÇOIS LACAMBRA, Bayonne, France. Filed Aug. 8, 1916. Serial No. 113,783. (Cl. 73—15.)

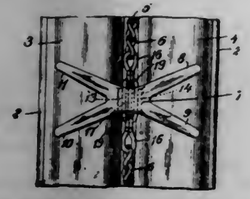


1. In a spring link formed by two parallel metal rods surrounded by a spiral spring, the combination of two juxtaposed rectilineal cylindrical rods each having throughout its length a flat surface against which they bear and over which they slide one against the other; of a circular plate fixed eccentrically and invariably to one of the ends of each of the said rods and having a notch extending from the flat surface of the rod on which it is fixed up to the extreme edge of the said plate, the said notch having in section the form of the other rod which is intended to slide freely through it; of a hook formed at the end of said rod, opposite that furnished with a notched plate causing the rod to fold toward its flat surface so that the point of the hook comes opposite the non-notched part of the plate of the other rod when the rods are superposed and of a spiral spring which comes concentrically to the two superposed rods and very near to their curvilineal periphery the coils or windings of which extend over the whole distance existing between the plates which are at the one end of each of the two rods.

2. In a spring link formed by two parallel metal rods surrounded by a spiral spring, the combination of two juxtaposed rectilineal cylindrical rods each having throughout its length a flat surface along against which they bear and over which they slide one against the other; of a plate, formed with a notch fixed eccentrically to one a plate, formed with a notch fixed eccentrically to one of the ends of one of the said rods and having opposite the said notch, in which the other rod is lodged and slides, an ex-

tension which is provided with a scale extending parallel to the said rod throughout its length; a rod in which a hole is drilled through which the said scale freely runs; of a scale extending parallel to and at a slight distance from the juxtaposed rods and receiving, starting from the arm in which it slides an india-rubber ring and a runner capable of sliding freely on the said scale opposite the graduations thereof; of a hook formed at the end of each rod, opposite that furnished with a notched plate causing the rod to fold toward its flattened surface so that the point of the hook comes opposite the non-notched part of the other rod when the rods are superposed; and of a spiral spring which comes concentrically to the two superposed rods and very near to their curvilineal periphery, the coils or windings of which extend over the whole distance existing between the plates which are at the one end of each of the two rods.

1,216,464. DUAL-TIRE GRIP. WALTER B. LASHAR, Bridgport, Conn., assignor to American Chain Company, Incorporated, Bridgeport, Conn., a Corporation of New York. Filed May 14, 1913. Serial No. 767,530. (Cl. 152—2.)



1. The tire grip adapted for use on wheels provided with dual resilient solid type tires, comprising a series of about a dozen integral metallic grip units having substantially flat working faces, each unit being formed with a body provided with inwardly projecting holding lugs, a securing link having its central portion gripped by said holding lugs and having inwardly bent securing ends, said grip unit having four diagonally arranged arms extending laterally from said body and on both sides thereof and about fifty degrees apart on each side, said arms being of gradually decreasing width and thickness away from said body, and flexible connector chains provided with doubled connector hooks engaging the ends of said securing links to connect said grip units and adapted to extend within the annular recess in the tire to maintain said units in substantial alinement.

2. The tire grip adapted for use on wheels provided with dual resilient solid type tires, comprising a series of integral metallic grip units having substantially flat working faces, each unit being formed with a body provided with inwardly projecting holding lugs, a securing link gripped by said holding lugs, said grip unit having four diagonally arranged arms extending laterally from said body on both sides thereof, said arms being of gradually decreasing thickness away from said body, and connector chains engaging the ends of said securing links to connect said grip units and adapted to extend within the annular recess in the tire to maintain said units in substantial alinement.

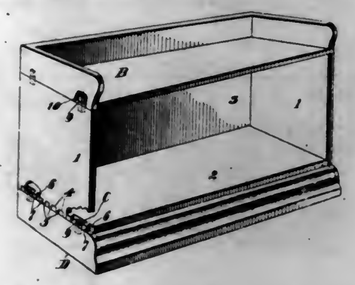
3. The tire grip adapted for use on wheels provided with dual resilient solid type tires comprising a series of integral metallic grip units having substantially flat working faces, each unit being formed with a body and a connected securing member, said grip unit having four diagonally arranged arms extending laterally from said body on both sides thereof and about fifty degrees apart on each side, said arms being of gradually decreasing width and thickness away from said body, and flexible connectors engaging said securing members to connect said grip units and adapted to extend within the annular recess in the tire to maintain said units in substantial alinement.

4. The tire grip adapted for use on wheels provided with dual resilient solid type tires, comprising a series of metallic grip units, each formed with a body and a connected securing member, said grip unit having four diagonally arranged arms extending laterally from said body on both sides thereof, said arms being of gradually decreasing thickness away from said body, and connectors engaging said securing members to connect said grip units and adapted to extend within the annular recess in the tire to maintain said units in substantial alinement.

5. The tire grip adapted for use on wheels provided with dual resilient solid type tires, comprising a series of metallic grip units having substantially flat working faces, each unit being formed with a body and a plurality of diagonally arranged arms extending laterally from said body on both sides thereof, said arms being of decreasing thickness away from said body, and chain connectors to connect said grip units and adapted to extend within the annular recess in the tire to maintain said units in substantial alinement.

[Claims 6 to 9 not printed in the Gazette.]

1,216,465. KNOCKDOWN BOOKCASE. ERNEST C. LAWTON, Mohawk, N. Y. Filed June 1, 1912. Serial No. 700,935. (Cl. 45—78.)



1. In a knock-down bookcase, the combination of base, top and book sections, each book section consisting of end, back, and shelf members, the end and shelf members provided with grooves and tenons, the tenons of the end member adapted to fit the ends of the shelf member, and the tenons of the shelf member adapted to fit the grooves of the end members, one of said members having a tenon omitted therefrom, thereby forming a cavity by the groove of the other member and the space formed by omitting said tenon, and a pin carried by the end member of an adjacent section adapted to enter said cavity for holding the sections together.

2. A knock down book section comprising a shelf, and end members having grooves and tenons formed thereon, and positioned to interlock for holding the shelf and end members assembled, a tenon at each end of the shelf member being removed for forming a cavity, said end members having sockets formed therein, and pins received in the sockets adapted to enter the cavities of the adjacent section for holding the two sections alined and fastening the end members together.

1,216,466. ASSEMBLING-MACHINE. JOSEPH LEDWINKA, Philadelphia, Pa., assignor to Edward G. Budd Manufacturing Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 14, 1915. Serial No. 21,226. (Cl. 219—4.)

1. An assembling machine comprising a form to receive the members constituting a complete article and hold them in final assembled position, and means to weld the members together to produce the complete article.

2. An assembling machine for automobile bodies comprising a form to receive and hold all of the members of a complete automobile body, and means to weld said members together to produce the complete body.

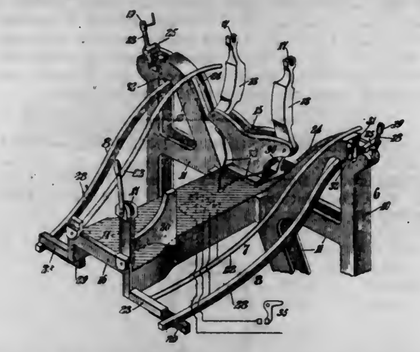
3. An assembling machine comprising a form to receive and hold all of the members of a complete article, and means to weld said members together to produce the complete article.

4. An assembling machine comprising a form to receive the members constituting a complete article and hold them in final assembled position, and means to weld said members together comprising a stationary electrode adapted to contact with said members along the joints between the same and a movable electrode adapted to engage the joints between the members to complete a circuit therethrough to unite said members into the complete article.

5. An assembling machine comprising a form to receive the members constituting a complete article and hold them in final assembled position, a stationary electrode adapted to contact with said members along the joints between the same, and a plurality of independently movable electrodes adapted to engage the members at any point along the joints whereby different parts of said members may be welded together at the same time.

[Claims 6 to 32 not printed in the Gazette.]

1,216,467. ASSEMBLING-MACHINE. JOSEPH LEDWINKA, Philadelphia, Pa., assignor to Edward G. Budd Manufacturing Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 6, 1915. Serial No. 26,225. (Cl. 219—4.)



1. A machine for assembling metal articles, comprising means to receive the members constituting the article and position and support them in assembled relation, a relatively stationary electrode adapted to contact the members along the joints to be welded, a second relatively stationary electrode supported along said joints but spaced away therefrom, and means for completing a circuit between said electrodes through said members at any point along the joints between the same, whereby said members may be readily welded together while supported in assembled position.

2. A machine for assembling metal articles, comprising means to receive the members constituting the article and position and support them in assembled relation, a relatively stationary electrode adapted to contact the members along the joints to be welded, a second relatively stationary electrode supported along said joints but spaced away therefrom, and means for completing circuits between said electrodes and through said members at a plurality of points along the joints between the same at the same time whereby the members may be readily welded together while supported in assembled relation.

3. A machine for assembling metal articles, comprising means to receive the members constituting the article and position and support them in assembled relation, an electrode adapted to contact the members along the joints to be welded, a second electrode supported along said joints but spaced away therefrom, and a plurality of independent connectors each adapted to complete a circuit between said electrodes and through said members at any point along the joints between said members, whereby said members may be welded together at any two or more different points at the same time.

4. A machine for assembling metal articles, comprising means to receive the members constituting the article and position and support them in assembled relation, a relatively stationary electrode adapted to contact one side of the joints between said members, a second relatively stationary electrode along the opposite side of said joints and spaced away therefrom, and movable means for completing the circuit between said electrodes and through said members at any point along the joints between said members to weld the members together.

5. A machine for assembling metal articles, comprising means to receive the members constituting the article and position and support them in assembled relation, a relatively stationary electrode adapted to contact one side of the joints between said members, a second relatively stationary electrode along the opposite side of said joints and spaced away therefrom in substantially parallel relation to the first electrode, and a plurality of connectors by which circuits may be completed between said electrodes through said members at any two or more points along said joints at the same time.

[Claims 6 to 17 not printed in the Gazette.]

1,216,468. BOOK-MARKER CLIP. JOHN ALDEN LEE, Oelwein, Iowa. Filed Apr. 2, 1915. Serial No. 18,638. (Cl. 40—23.)



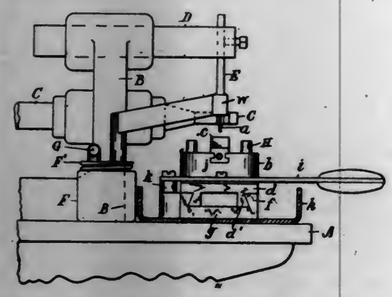
A book marker clip, comprising a single piece of spring material bent at substantially its center to form substantially a semi-circular portion, the ends of said material being again folded upon themselves to form clamping jaws, one of said jaws being longer than the other, the material at the ends of said jaws being extended upon the opposite side of the semi-circular portion, said opposite ends forming finger pieces for manipulating said clamping jaws and being provided with reinforcing ribs which afford recesses to receive indicating characters therein.

1,216,469. AUTOMATIC PRONG-CUTTING MACHINE. LOUIS LEHR, Bayonne, N. J., assignor to Meyerowitz Manufacturing Company, Inc., New York, N. Y., a Corporation of New York. Filed Feb. 21, 1916. Serial No. 79,554. (Cl. 90—18.)

1. A device for cutting jewel mountings, consisting of a base with means for fastening it adjustably and removably upon the table of a milling machine, a slide movable upon the base, a carrier mounted rotatably upon the slide, a vise upon the carrier to hold the mounting, a revolving cutter sustained above the vise, means actuated by the slide for partially rotating the carrier at each reciprocation, and a hand-lever connecting the base with the slide to move the slide during the cutting of the mounting and to retract it for rotating the carrier.

2. A device for cutting jewel mountings, consisting of a base-plate with parallel guides at the edges, a slide hav-

ing ribs fitted to such guides with open space between such ribs and the slide and base-plate, a carrier mounted rotatably upon the slide with means for supporting the mounting thereon and having a shank fitted rotatably in the slide and extended into the space between the ribs, a series of turning-pins projected into such space from such shank, and a pawl pivoted to the base in the said space and adapted to engage the pins successively and partially rotate the carrier when the slide is reciprocated upon the base.



3. The combination, with a cutter-head having a rotating spindle and a brace-bar projected therefrom, of a cutter carried by the spindle, means for supporting and moving a mounting beneath the cutter to form prongs upon such mounting, a hood supported adjustably upon the brace-bar and arranged to encircle and clear the cutter, a reservoir connected to the hood, and a suction-pipe connected to the reservoir and to means for exhausting the air in such reservoir.

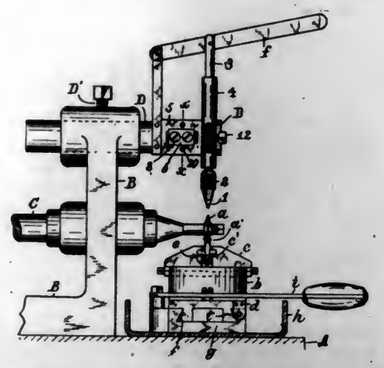
4. The combination, with a milling machine having a work-table and a cutter-head having a rotating spindle projected therefrom with a brace-bar projected adjustably from the cutter-head above the spindle, of a cutter carried by the spindle, means fitted to the table for supporting and moving a mounting beneath the cutter to form prongs upon such mounting, a hood embracing the cutter and having a rod secured adjustably to the brace-bar, a reservoir having a screw-cap connected by a suction-tube to the head, and a suction-pipe connected also with the cap to exhaust the reservoir and the hood.

5. In a machine for cutting jewel mountings, and having a revolving cutter, a slide reciprocable beneath the cutter, and a carrier rotatable upon the slide with a vise to hold the mounting and provided with gage-bores adjacent to the vise, a gage for use with such carrier and vise and having posts fitted removably to such bores, and having a head attached to the said posts and provided with a gage-plug held detachably upon the head, and adapted to enter the mounting and center it in the vise when the posts are fitted to the said bores.

1,216,470. SETTING-GAGE FOR PRONG-CUTTING MACHINES. LOUIS LEHR, Bayonne, N. J., assignor to Meyerowitz Manufacturing Company, Inc., New York, N. Y., a Corporation of New York. Filed May 4, 1916. Serial No. 95,392. (Cl. 90—11.)

1. The combination, with an arbor-head having an arbor and cutter, of a rotatable carrier having a ring-holder, means for manually reciprocating the carrier and holder to and from the cutter, a setting gage movable vertically over the holder when retracted from the cutter, and means for adjusting the gage laterally to place the same in the same vertical plane with the cutter, whereby to center the ring mounting in the holder relatively to the cutter.

2. The combination, with an arbor-head having an arbor and cutter, of a rotatable carrier having a ring-holder, means for manually reciprocating the carrier and holder to and from the cutter, an arm extended from the arbor-head over the ring holder and an adjustable setting gage carried by the arm and movable to center of the ring mounting in the holder when it is retracted from the cutter.



3. The combination, with an arbor-head having an arbor and cutter, of a rotatable carrier having a ring-holder, means for manually reciprocating the carrier and holder to and from the cutter, an arm extended from the arbor-head over the ring-holder, a block mounted adjustably upon the arm, a carriage adjustable longitudinally upon the block, a spindle-guide upon the carriage with a spindle movable vertically in the same and carrying a setting gage, a spring to raise the spindle, and a lever to depress the same.

4. The combination, with an arbor-head having an arbor and cutter, of a rotatable carrier having a ring-holder, means for manually reciprocating the carrier and holder to and from the cutter, an arm extended from the arbor-head over the ring-holder, a block mounted adjustably upon the arm, a carriage adjustable longitudinally upon the block, set-screws and bolts for adjusting the block and carriage laterally upon the arm, a set-screw for adjusting the carriage longitudinally upon the block, and a spindle-guide upon the carriage with a spindle movable vertically in the same and carrying a setting gage.

5. The combination, with means for prong cutting a finger ring mounting, of a carriage having a spindle-guide mounted thereon, a gage-spindle movable vertically in the guide and having a chuck adapted to removably hold diverse setting gages, and means for adjusting the carriage to center the gage over the ring mounting.

1,216,471. FINGER-RING WITH INTERCHANGEABLE SIGNET-TOP. LOUIS LEHR, Bayonne, N. J., assignor to Meyerowitz Manufacturing Company, Inc., New York, N. Y., a Corporation of New York. Filed May 4, 1916. Serial No. 95,393. (Cl. 63—15.)

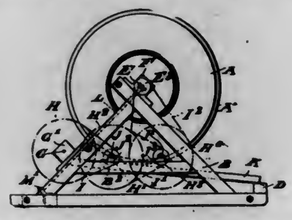


1. A finger ring for receiving any one of a series of similar signet tops, the ring having an aperture extended through the same and a seat within the aperture, a signet top fitted to the said seat and provided with a shank, a perforated bridge secured in the aperture to receive the said shank, said signet top being permanently secured upon the seat by the said shank and bridge.

2. A finger ring for receiving interchangeable signet tops, the ring having a head with an aperture through the same, and a dished bridge secured in the aperture forming a seat, a signet-top fitted to the said seat and provided with an expansible shank, the bridge being provided with a perforation to receive the expansible shank and retain the signet-top permanently upon the seat when the end of the shank is expanded below the bridge.

3. A finger ring for receiving any one of a series of similar signet-tops, and having a head with an aperture through the same, a dished bridge secured in the aperture with its edge below the upper margin of the head to form a seat, said bridge having a perforation to receive a shank, and a signet-top fitted to the seat and having a shank with an expansible end extended through the said perforation and expanded below the bridge to retain the signet-top permanently on the seat.

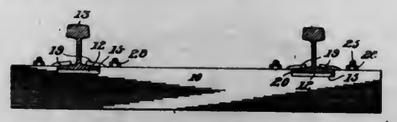
1,216,472. APPARATUS FOR ACTUATING A ROLLING PROJECTILE. GEORGE G. LEMONS, London, England. Filed July 27, 1916. Serial No. 111,749. (Cl. 89—1.)



1. An apparatus for actuating a rolling projectile comprising in combination means for normally supporting a projectile with its axis of rotation horizontal, means for rotating said projectile at a high velocity, and means for releasing said supporting means at the required time.

2. An apparatus for actuating a rolling projectile comprising in combination a pair of spaced horizontal coaxial spindles for supporting the projectile and imparting rotary motion thereto, means for rotating said spindles to impart a high velocity to the projectile, and means for withdrawing said spindles from the projectile after it has attained the desired peripheral speed.

1,216,473. METALLIC TIE AND RAIL-FASTENER. JOSEPH S. LENCKI, Chicago, Ill. Filed Sept. 14, 1916. Serial No. 120,120. (Cl. 238—5.)

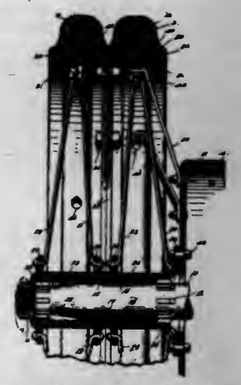


1. A metallic railway tie consisting of a channel-shaped member having oppositely-arranged cut-away portions in the upper opposite edges thereof, transverse partitions within the said channel member spaced from the opposite ends of the said cut-away portions, mounting posts oppositely arranged in spaced relations with the outer faces of the said partitions, and hold-fast retaining housings mounted upon the bottom of the said member adjacent the opposite faces of the said partition.

2. A device of the class described comprising a tie of channel shape, transverse spaced partitions arranged between the sides thereof forming sinks therebetween, resilient rail-cushioning blocks arranged within the said sinks, the opposite sides of the said tie having cut-away portions extending beneath the upper faces of the said blocks, posts integrally formed with the opposite sides of the said tie at opposite sides of the said pairs of partitions arranged with notches in their upper ends, rail-engaging plates seated within the said notches and having fingers overlying the said partitions and blocks when operatively arranged, anchoring housings arranged adjacent the said partitions, and locking bolts for the said plates non-rotatably arranged upright within the said housings.

3. A metallic railway tie and rail fastener comprising a channel-shaped tie having receiving portions adjacent its opposite ends and having its opposite sides cut-away adjacent the said receiving portions, blocks arranged within the said receiving portions, rails positioned upon the said blocks transversely of the said tie within the said cut-away portions, resilient locking plates upon the said tie having spaced fingers overlying the base flanges of the said rails, housings carried by the bottom of the said tie beneath the said plates, locking bolts non-rotatably arranged upright in the said housings projecting through the said plates, and tensioned lock nuts upon the said bolts above the said plates.

1,216,474. TWIN WHEEL. THOMAS J. LINDSAY, Indianapolis, Ind. Filed May 18, 1916. Serial No. 98,238. (Cl. 21—69.)



1. A twin wire wheel, comprising a pair of hub sections, a pair of rim sections, wire spokes interconnecting the hub sections with the respective rim sections, thus forming two separable wheel sections, said rim sections at their remote ends having outwardly projecting flanges, a tire mounted on said rim sections and between said outwardly projecting flanges, and means for fastening said wheel sections together so as to clamp said tire between said outwardly projecting flanges.

2. A twin wheel, comprising a pair of hub sections, a pair of rim sections, means interconnecting each hub section to the corresponding rim section and having two parts which extend from hub section to rim section at oppositely oblique angles to the wheel axis, thus forming two separable completely self-supporting wheel sections each braced against thrust in both directions, said rim sections at their remote ends having outwardly projecting flanges, a tire mounted on said rim sections and between said outwardly projecting flanges, and means for fastening said wheel sections together so as to clamp said tire between said outwardly projecting flanges.

3. A twin wire wheel, comprising a pair of hub sections, a pair of rim sections, wire spokes interconnecting the hub sections with the respective rim sections, thus forming two separable wheel sections, said rim sections at their remote ends having outwardly projecting flanges, a tire mounted on said rim sections and between said outwardly projecting flanges, said rim sections at their adjacent ends having inwardly projecting flanges, and bolts for fastening together said inwardly projecting flanges to clamp said tire between said outwardly projecting flanges.

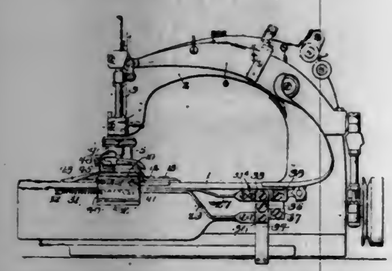
4. A twin wheel, comprising a pair of hub sections, a pair of rim sections, means interconnecting each hub section to the corresponding rim section and having two parts which extend from hub section to rim section at oppositely oblique angles to the wheel axis, thus forming two separable completely self-supporting wheel sections each braced against thrust in both directions, said rim sections at their remote ends having outwardly projecting flanges, a tire mounted on said rim sections and between said outwardly projecting flanges, said rim sections at

their adjacent ends having inwardly projecting flanges, and bolts for fastening together said inwardly projecting flanges to clamp said tire between said outwardly projecting flanges.

5. A twin wheel, comprising a pair of hub sections, a pair of rim sections, means interconnecting each hub section to the corresponding rim section and having two parts which extend from hub section to rim section at oppositely oblique angles to the wheel axis, thus forming two separable completely self-supporting wheel sections each braced against thrust in both directions, said rim sections at their remote ends having outwardly projecting flanges, a tire mounted on said rim sections and between said outwardly projecting flanges, means for fastening said wheel sections together so as to clamp said tire between said outwardly projecting flanges, and a central supporting member, said central supporting member and a hub section having interfitting portions to prevent relative turning.

[Claims 6 to 48 not printed in the Gazette.]

1,216,475. FOLDER. CHARLES A. LOOMIS, Cincinnati, Ohio, assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 2, 1914. Serial No. 875,111. (Cl. 270—35.)



1. The combination with stitch forming mechanism, including spaced needles, and a feeding mechanism, of a folder having means for guiding and folding the opposite edges of a strip and directing the said opposite edges to the respective needles, and means whereby said folder may be contracted within the limit of the needles for simultaneously withdrawing said folded edges from the range of the needles without stopping the stitching mechanism.

2. The combination with stitch forming mechanism, including spaced needles and a feeding m chanism, of a folder having means for guiding and folding the opposite edges of a strip and directing the said folded edges to the respective needles, means whereby said folder may be contracted within the limits of the needles for simultaneously withdrawing said folded edges from the range of the needles without stopping the stitching mechanism, and means for automatically returning said folder to its normal condition whereby the edges are directed within the range of the needles.

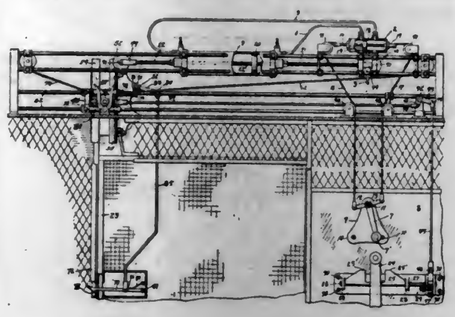
3. A folder including in combination two sections cooperating to direct a strip of fabric and fold the opposite edges thereof, and means whereby said sections may be simultaneously moved toward and from each other at the will of the operator without stopping the stitching mechanism.

4. A folder including in combination two sections cooperating to direct a strip of fabric and fold the opposite edges thereof, means for simultaneously moving the said sections toward each other at the will of the operator, and a spring for returning said sections to normal position when released by the operator.

5. A folder including in combination two sections cooperating to guide and fold the opposite edges of a strip, means for pivotally supporting said sections adjacent the receiving ends thereof, and means for moving said sections at the delivering end thereof simultaneously toward and from each other for varying the width of the folded strip at the will of the operator without stopping the stitching mechanism.

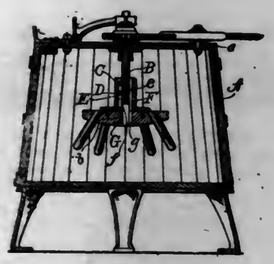
[Claims 6 to 19 not printed in the Gazette.]

1,216,476. ELEVATOR SYSTEM. EMMETT S. MILLER, Peoria, Ill. Filed Jan. 15, 1912. Serial No. 671,194. (Cl. 187—52.)



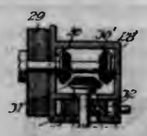
In an elevator system of the class described, the combination of an elevator shaft, an elevator car suspended in said shaft, an elevator door located at a landing of said shaft, means for automatically locking the elevator door in its closed position, air actuated means carried by the car, a latch opening member and a bracket carried by the door, a pin operable by said air actuated means adapted to engage the latch opening member to open the door and to engage the bracket to close the door, a stop and means engageable with said stop arranged to withdraw the pin from the path of the bracket and the latch member.

1,216,477. DETACHABLE AGITATOR FOR WASHING-MACHINES. LLOYD A. MILLIKEN, Lansing, Mich. Filed July 26, 1915. Serial No. 41,970. (Cl. 259—122.)



In a washing machine, the combination with a cover having a revoluble spindle provided with spaced lugs, of an agitator having a body portion provided with an axial opening and a longitudinal groove in the wall of said opening extending through the said opening, the said groove being open at both ends, a sleeve attached to the upper surface of the body of the agitator and having a central opening and an open-ended internal groove extending lengthwise through the said opening and registering with the said central opening and groove of the body, the said sleeve having also an internal longitudinal groove with closed ends formed in said central opening and horizontal passages connecting the said grooves, whereby the said lugs may be caused to engage either the said closed or open groove of the sleeve, and whereby the said agitator may be removed and reversed.

1,216,478. DRIVING MECHANISM FOR WASHING-MACHINE WRINGERS. GEORGE H. MYRICK, Chicago, Ill., assignor to Capital Electric Company, Chicago, Ill., a Corporation of Illinois. Original application filed Jan. 23, 1915, Serial No. 3,871. Patent No. 1,186,025, dated June 6, 1916. Divided and this application filed May 8, 1916. Serial No. 96,023. (Cl. 74—58.)



1. A forward and reverse driving gearing of the class described comprising a driven shaft having a pair of spaced bevel gears thereon, a driving shaft loosely journaled at one end and at its other end provided with a bevel gear arranged to engage either of said spaced bevel gears, or, to lie in a neutral position between them, a block journalling that end of the driving shaft adjacent said spaced bevel gears, a housing affording a chamber in which said block may reciprocate, a channel in said block, a shaft journaled in said housing having a reduced eccentric portion lying in said channel and a handle for rotating said last mentioned shaft whereby to reciprocate said block and shift the driving shaft gear into and out of mesh with its coöperating spaced bevel gears.

2. A forward and reverse driving mechanism of the class described comprising two shafts with parallel axes, one of which is to be driven from the other, a connecting shaft disposed at right angles to the other two shafts and extending between them, a gear upon one of said parallel shafts, a pinion on said connecting shaft meshing with said gear, a loose bearing for said connecting shaft adjacent said pinion, a pair of spaced bevel gears on the other of said parallel shafts, a pinion on the connecting shaft adjacent said spaced bevel gears adapted to mesh with either of the latter or to lie in a neutrad position between them, a shiftable block in which that end of the connecting shaft adjacent said spaced bevel gears is journaled, a casing affording a chamber in which said block may reciprocate, a channel in said block, a shaft journaled in said casing, said shaft having a reduced eccentric portion disposed in said channel and a handle for rotating said shaft to move the adjacent connecting shaft gear into and out of mesh with its coöperating spaced bevel gears.

3. A forward and reverse driving gearing of the class described comprising a driven shaft, a pair of spaced bevel gears on the driven shaft, a driving shaft disposed at an angle to the driven shaft, a bevel gear on the driving shaft adapted to mesh with either of said spaced bevel gears or to lie in a neutral position between them, a block in which that end of the driving shaft adjacent said bevel gears is journaled, a housing affording a chamber in which said block may reciprocate, a manually operated device for shifting said block within said chamber and a comparatively loose bearing for the other end of said driving shaft.

1,216,479. ARTICLE OF JEWELRY. JOHN NEUMANN, Chicago, Ill. Filed Mar. 3, 1916. Serial No. 81,794. (Cl. 63—32.)



1. A gem comprising a portion only of one of the shells of a bivalve, provided with a pearl integrally and inseparably joined thereto and projecting from the surface of the shell and substantially within its marginal contour, whereby the portion of the shell acts as a base for the pearl and as a means for attachment to an article of jewelry.

2. A gem comprising a portion only of one of the shells of bivalve provided with a pearl integrally and inseparably joined thereto and projecting from the surface of the shell and substantially within its marginal contour, whereby the portion of the shell acts as a base for the pearl and as a means for attachment to an article of jewelry, in combination with an article of jewelry adapted to receive said gem, and provided for that purpose, with a seat for the gem and means protruding from the seat adapted to clasp the edges of said portion of the shell.

3. A gem comprising a pearl integrally and inseparably joined to one of the shells of a bivalve and projecting from the surface of the shell and substantially within its marginal contour, the marginal portions of the shell being cut away to leave only a relatively narrow flange of shell about said pearl whereby said flange acts as a base for the pearl and as a means for attachment to an article of jewelry.

1,216,480. TELEPHONE. KATHERINE NICHOLS, Cincinnati, Ohio. Filed Apr. 19, 1915. Serial No. 22,266. (Cl. 179—147.)



1. A device of the nature disclosed comprising two receivers and a transmitter supported by a single fitting, a stud secured to said fitting, a support for said stud, means within said support for completing the signal circuit of the telephone system functioned by the removal of the stud from the support.

2. A device of the nature disclosed comprising a hollow fitting, a transmitter secured thereto, arms radiating from said fitting, a pair of receivers, spring arms intermediate the receivers and the radiating arms, a stud secured to the fitting, a support apertured to receive the stud, and means within the support for controlling the signal circuit of the telephone system.

3. A device of the nature disclosed comprising a T-coupling, a transmitter secured thereto, arms radiating from said coupling, a pair of receivers, yielding means intermediate the receivers and the arms for definitely positioning said receivers relative to the transverse plane of the transmitter, and to automatically urge them toward the axial line of the transmitter.

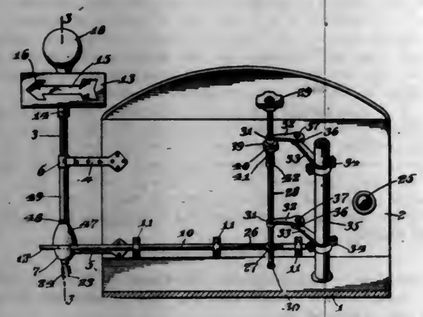
4. A device of the class described comprising a base member, a transmitter and a pair of relatively opposite receivers combined as a unit, and as a unit having a stem forming a handle therefor and alternatively a support adapted to be engaged in a socket in said base member.

5. A device of the nature disclosed comprising a base member, a pair of receivers and a transmitter combined as a unit, the transmitter as a base having arms connecting therewith at opposite sides and extending therebeyond in lines parallel with an axial line through the transmitter, and a stem projecting axially from said base

in a direction opposite to said arms, providing alternatively a handle for the unit and a coupling for engaging with said base member.

[Claim 6 not printed in the Gazette.]

1,216,481. SIGNALING DEVICE FOR AUTOMOBILES. HARVEY P. NOBLE, Philadelphia, Pa. Filed Apr. 30, 1915. Serial No. 24,869. (Cl. 177—311.)



1. The combination with a vehicle, of a signal, a shaft supporting said signal, a rotatable rod, means operatively connecting said rod and shaft, a bearing for said rod, including a member surrounding said rod, a second member slidably keyed to said rod, said member having interengaging ribs and grooves, a collar on said rod, an expansion spring on the rod bearing between the collar and said latter member, and means for turning said rod, substantially as described.

2. The combination with a vehicle, of a signal, a shaft supporting said signal, a rotatable rod, means operatively connecting said rod and shaft, a supporting post, adjustable arms secured to said post, one of said arms forming a bearing for said rod and including a disk, a second disk slidably keyed to said rod, said disks having interengaging ribs and grooves, a member secured to said rod, an expansion spring bearing between said member and the latter-mentioned disk, and means for turning said rod, substantially as described.

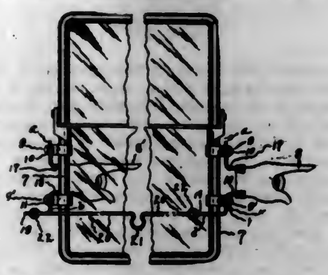
3. The combination with a vehicle, of a signal, a shaft supporting said signal, a rotatable rod, means operatively connecting said rod and shaft, a supporting post, adjustable arms secured to said post, one of said arms forming a bearing for said rod and including a disk, a second disk on said rod and including a screw, said rod having a keyway therein, said screw acting as a key and having its inner end projecting into said keyway, said disks having interengaging ribs and grooves, a collar on said rod, an expansion spring on the rod bearing between the collar and said latter disk, and means for turning said rod, substantially as described.

4. The combination with a vehicle, of a supporting block having a recess therein, a vertical shaft supported in the block and having a signal thereon, a pinion on the shaft located in the recess, a cup forming a casing on the shaft and covering the pinion, a horizontal rack bar projecting through the recess in the block and meshing with the pinion, a steering post, arms clamped to the steering post, other arms adjustably and pivotally secured to the first-mentioned arms and having bearings at their free ends, a rod in said bearings, a pinion on the rod meshing with the rack bar, and a hand wheel on the rod, substantially as described.

5. The combination with a vehicle, of supports thereon projecting at one side of the vehicle, a vertical shaft mounted in the supports, a signal on the upper end of the shaft, a pinion on the shaft, a bar movable at right angles to the shaft and having a rack thereon engaging the pinion, a second rack on the bar, a rod located at an angle to the bar and having a pinion thereon engaging the rack, a steering post, arms clamped to the steering post, bearings supporting rod, arms on the bearings pivotally and adjustably secured to the first-mentioned arms, a hand wheel on the end of the rod, a disk secured to one of said bearings, a second disk movable on one of the rods, said disks having web and recess engaging faces, and a spring holding the disks together, substantially as described.

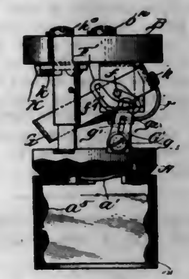
[Claims 6 to 9 not printed in the Gazette.]

1,216,482. INDICATING ATTACHMENT FOR VEHICLES. CORNELIUS P. O'BRIEN, Omaha, Nebr. Filed Aug. 3, 1915. Serial No. 43,493. (Cl. 116—31.)



An indicating attachment for vehicles, comprising, in combination with a pair of standards, a horizontal bolt on each standard, a second horizontal bolt on each standard disposed below and in the vertical plane of the first named bolt, each second bolt being provided with an aperture and having a recess in its upper side opening on one of its ends into said aperture, and provided with second recesses on its upper side disposed substantially at right angles to the first named recess and opening on said aperture, a pair of indices each being provided with an angular arm having a pivotal connection with a first named bolt and provided with a secondary angular arm disposed in the aperture of a second bolt, and a bar connecting the ends of the secondary arms, said bar being movable for causing simultaneous swinging movements of the indices, a part of each secondary arm moving into engagement with a recess of a second bolt.

1,216,483. MECHANICAL MOVEMENT. HERMAN G. PAPE, New York, N. Y., assignor to Ralph A. Schoenberg, New York, N. Y. Filed Apr. 17, 1916. Serial No. 91,789. (Cl. 74—14.)



1. A mechanical movement comprising a pivoted driven member extending on both sides of its pivot; a driving member to engage said driven member alternately at opposite sides of the pivot of said driven member; and positive means separate from the driven member acting to move said driving member away from its central position to accomplish such alternate engagement.

2. A mechanical movement comprising a pivoted driven member; a pivoted driving member to engage directly said driven member, the pivot of said driving member being movable; and a spring to shift said driving member from its central position so that it will engage said driven member alternately at opposite sides of the pivot of said driven member.

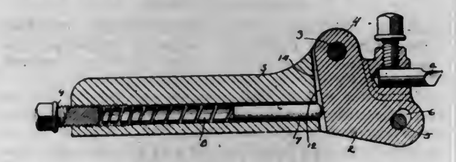
3. A mechanical movement comprising a pivoted driven member; a pivoted driving member to engage said driven member alternately at opposite sides of the pivot of said driven member, the pivot of said driving member being movable; and a spring to swing said driving member on its pivot away from its central position.

4. A mechanical movement comprising a pivoted driven member; a bodily movable driving member to engage said driven member alternately at opposite sides of the pivot of said driven member; and a spring actuated by the driven member to shift said driving member to accomplish such alternate engagement.

5. A mechanical movement comprising a pivoted driven member; a pivoted driving member to engage said driven member alternately at opposite sides of the pivot of said driven member, the pivot of said driving member being movable; and a spring actuated by the driven member to swing said driving member on its pivot.

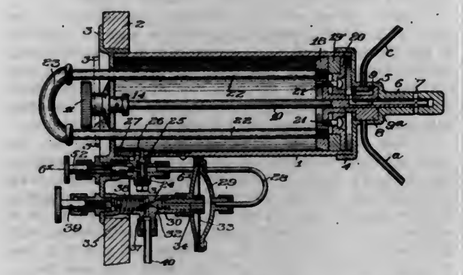
[Claims 6 to 13 not printed in the Gazette.]

1,216,484. HOLDER FOR THREADING-TOOLS. WILLIAM PARKER, East Cleveland, Ohio. Filed Aug. 14, 1915. Serial No. 45,527. (Cl. 29—96.)



A tool holder having a shank with a longitudinal bore through the same and a head with a recess open to said bore, a tool support pivoted in said recess and adapted to tilt within limits therein and inclosed at both sides by the walls of the recess, a thrust sustaining bolt in said bore bearing against said support below its pivot and a single flat spirally wound cumulative spring behind said bolt having coils of uniformly increasing width from end to end and adapted to exert increased resistance as back pressure through said bolt increases.

1,216,485. COMPRESSED-GAS CONTROLLING AND IGNITING MECHANISM FOR AUTOMOBILES. CHARLES J. PEMBROKE, Rochester, N. Y. Filed Aug. 2, 1912. Serial No. 712,934. (Cl. 123—180.)



1. In a starting apparatus for multi-cylinder engines, the combination with a measuring chamber having a plurality of cylinder outlets, a piston therein and a source of supply of explosive gas under pressure, of a pressure regulator through which given quantities of said gas are admitted to the chamber, a rotatable and longitudinally movable valve head controlling the cylinder outlets, which is movable outwardly to open them when the piston is retracted and inwardly to close them when said piston is moved inwardly.

2. The combination with a measuring cylinder provided with a plurality of outlets and a piston therein, of a valve head controlling the outlets operated by the piston at the extremes of its movement in opposite directions, and means for rotating the valve head to open a particular one of the several outlets when said head is is one position of adjustment.

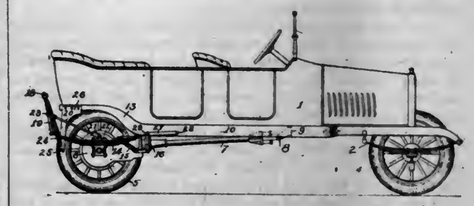
3. The combination with a measuring cylinder, having a plurality of outlets, and means for expelling its contents, of a valve head controlling said outlets capable of rotary movement to select a particular outlet and of reciprocatory movement to open and close it.

4. The combination with a gas engine having a plurality of cylinders provided with pistons and means for indicating the position of the one on the firing stroke, of a starting apparatus, comprising a measuring chamber having a plurality of outlets leading to the engine cylinders, and a valve head coöperating with said outlets and arranged to open and close them in pairs and adapted to be adjusted when the engine is at rest, to open communication with the cylinders in which the pistons are on the firing and compression strokes.

5. In a starting apparatus for explosive motors the combination with a measuring cylinder, valve controlled outlets therein adapted to be connected to the several cylinders of an engine, and a source of fluid pressure supply leading to the measuring cylinder of an automatic pressure regulator interposed between said source and cylinder, a valve in the supply pipe and a normally closed valve between said regulator and cylinder, a piston in the latter and means operated by the piston for opening said valve.

[Claims 6 to 9 not printed in the Gazette.]

1,216,486. VEHICLE. CHARLES J. PEMBROKE, Rochester, N. Y. Filed July 3, 1916. Serial No. 107,218. (Cl. 267—19.)



1. In a vehicle, the combination with a frame, forward supporting wheels connected thereto, rear supporting wheels having a connecting axle member and an extension projecting forwardly therefrom and pivoted to the frame, of springs mounted on the axle and extending forwardly and rearwardly therefrom and stabilizing connections between their forward ends and said connecting member, a suspension bar carried by the rear ends of the springs and means yieldingly supporting the frame on said bar.

2. In a vehicle, the combination with a frame, forward wheels supporting it, other wheels located beneath the rear of the frame and means connecting said wheels and also yieldingly holding them in place beneath the frame, of leaf springs held in horizontal position on said connecting means having ends extending in rear of the vehicle frame, a bridge piece mounted on the ends of said springs and other springs carried by the bridge piece and supporting the vehicle frame.

3. In a vehicle, the combination with a frame, a pair of forward wheels thereon, rear wheels at the other end of the frame and a member axially connecting the rear wheels together and connecting them to the frame, of leaf springs mounted on said connecting member at the sides of the frame, a suspension bar extending across the width of the frame and carried by said springs and other springs carried by said bar and supporting the vehicle frame.

4. In a vehicle, the combination with a frame, forward wheels thereon, rear wheels adapted to drive the vehicle

and a driving member axially connecting the wheels and attached to the frame at a point in advance of the rear wheels, of two sets of springs interposed between said driving member and frame, one set being leaf springs connected only to the driving member, the other set being a plurality of coil springs supported on the first mentioned springs and connected only to the frame.

5. In a vehicle, the combination with a frame, forward wheels thereon, rear wheels and a driving frame piece axially connecting the rear wheels and attached to the vehicle frame, of horizontally disposed springs supported on the driving frame piece, a bridge piece carried by said springs and coil springs suspended therefrom and attached to the vehicle frame.

[Claims 6 to 11 not printed in the Gazette.]

1,216,487. KNIFE-BAR FOR BEATING-ENGINES. EMIL A. PETERSON, Appleton, Wis. Filed Oct. 13, 1915. Serial No. 55,604. (Cl. 92—22.)



1. A knife far for a beating engine, consisting of a base portion formed of an elongated bar of steel having a working edge portion formed of an elongated bar of bronze welded to the bar of steel.

2. A two part knife bar for a beating engine, consisting of an elongated strip of material formed of ferrous and non-ferrous strips of metal welded together longitudinally of their lengths, the non-ferrous strip of metal having an extension which partly covers and is welded to one side portion of the ferrous strip of metal.

3. A two part knife bar for a beating engine, consisting of an elongated strip of material formed of bronze and steel strips of metal welded together longitudinally of their lengths, the steel strip having recessed side portions and the bronz strip having side extensions which enter the side recesses of the steel strip and are welded to said steel strip.

4. A knife bar for a beating engine, consisting of a base portion formed of an elongated strip of steel having a medial portion of greater thickness than its opposite side edge portions and a working edge portion formed of a strip of bronze of less width than the base welded throughout its length to one of the side edges of the base portion.

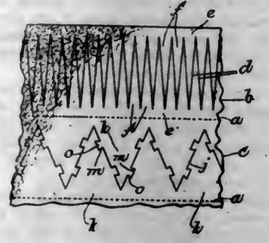
5. A knife bar for a beating engine, consisting of a base portion formed of an elongated strip of steel having one flat side and the other side being of angular form transversely, the thickest portion of the strip being medially of its width, and a strip of bronze of less width than the base portion welded edgewise to one side edge of the base portion to form a working edge portion.

1,216,488. POLISHING PAD OR DEVICE. ALLEN E. PFEIFFER, Norwood, Mass. Filed June 12, 1916. Serial No. 103,082. (Cl. 51—1.)

1. A pad of the nature described comprising a series of radial members united by a substantially continuous margin.

2. A pad of the nature described comprising a disk having a peripheral substantially continuous margin and members tapering inward from said margin and constituting the central portion of said disk.

3. A pad of the nature described comprising a disk wound from a strip of material having a continuous edge and an irregular edge, said continuous edge constituting the periphery of said pad.

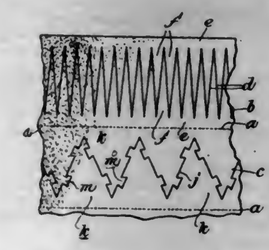


4. A pad of the nature described comprising a disk constituted by a single coil of material and having a substantially continuous margin and a closed center.

5. A pad of the nature described comprising a disk having a center constituted by fitted members and a substantially continuous margin.

[Claim 6 not printed in the Gazette.]

1,216,489. METHOD OF MANUFACTURING POLISHING PADS OR DEVICES. ALLEN E. PFEIFFER, Norwood, Mass. Filed Oct. 30, 1916. Serial No. 128,586. (Cl. 51—1.)



1. That method of manufacturing approximately circular pads which consists in taking a strip of material of less diameter than the proposed pad, dividing said strip longitudinally thereof into two similar parts having continuous margins and members projecting from said margins, and arranging said parts to constitute disks.

2. That method of manufacturing approximately circular pads which consists in taking a strip of material of less diameter than the proposed pad, dividing said strip longitudinally thereof into two similar parts having continuous margins and tapering members projecting from said parts, and arranging said members in radial relation with said margin constituting the periphery of said pad.

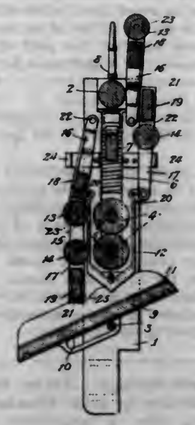
3. That method of manufacturing approximately circular pads which consists in taking a strip of material of less diameter than the proposed pad, dividing said strip longitudinally thereof into two similar parts having continuous margins and tapering members projecting from said parts, arranging said members in radial relation with said margin constituting the periphery of said pad, and reducing material raised above the surface of said pad in such operation to said surface.

4. That method of manufacturing pads which consists in taking a strip of material continuous along one margin, and shaping and consolidating portions of said strip to constitute a disk having substantially flat faces.

5. That method of manufacturing pads which consists in taking a strip of material continuous along one margin, and having members projecting from said margin and bringing said members into related position to constitute a substantially flat disk.

[Claim 6 not printed in the Gazette.]

1,216,490. CLOTHES-WRINGER. HENRY PLETSCH, Chicago, Ill., assignor to Judd Laundry Machine Company, Chicago, Ill., a Corporation of Delaware. Filed Mar. 31, 1913. Serial No. 757,935. (Cl. 68—32.)



1. In a clothes wringer, the combination with the frame and the wringer rolls mounted thereon, of a pair of safety guards movably mounted on said frame to shift into and out of operative position on one side of and above and below the bite of said rolls, one of said guards, in operative position, being free to move from the other.

2. In a clothes wringer, the combination with the frame and the wringer rolls mounted thereon, of upper and lower safety guard rolls movably mounted on the frame and arranged to shift into and out of operative position on one side of said wringer rolls, said upper safety guard roll, in operative position, being free to yield and move from said lower guard roll.

3. In a clothes wringer, the combination with the frame and the wringer rolls mounted thereon, of upper and lower safety guards pivotally mounted on said frame to swing into and out of operative position on one side of and above and below the bite of said wringer rolls, one of said guards being free to move from the other guard to increase the gap between the same, and a catch for holding said guards in inoperative position.

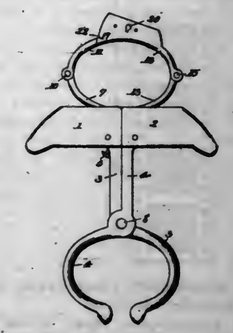
4. In a clothes wringer, the combination with the frame and the wringer rolls mounted thereon, upper and lower pairs of arms pivotally mounted at their upper ends at the sides of said frame, upper and lower safety guards carried respectively by said pairs of arms and arranged to swing therewith into and out of operative position on one side of and above and below the bite of said wringer rolls, one of said guards being free to move from the other.

5. In a clothes wringer, the combination with the frame and the wringer rolls mounted thereon, upper and lower pairs of arms pivotally mounted at their upper ends at the sides of said frame, upper and lower safety guards carried respectively by said pairs of arms and arranged to swing therewith into and out of operative position on one side of and above and below the bite of said wringer rolls, said arms having stop lugs for limiting the movement of said guards toward said wringer rolls and a catch for holding said guards in raised, inoperative position.

[Claims 6 to 9 not printed in the Gazette.]

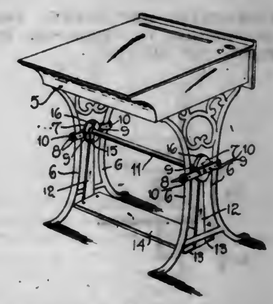
1,216,491. HANDCUFFS. GEORGE W. PRATT, Oakland, Cal. Filed Dec. 21, 1914. Serial No. 878,421. (Cl. 70—24.)

In policemen's nippers the combination with a divided stock, the halves of which are pivoted together and provided with a divided hollow handle and transverse pivots; of end-links and connections for forming a supplementary cuff adapted to be folded into the hollow handle, a pinion and a pawl, one of the end-links provided with teeth capable of engagement with teeth of said pinion, the teeth of which also engage with said pawl which permits the pinion to rotate in one direction only; said pinion and pawl being inclosed in a housing on another end-link; of



other links connecting the end-links with said transverse pivots within the hollow handle, a latch and a push-pin adapted to raise the hooked end of the latch which holds the divided stock together when the links are folded, substantially as set forth.

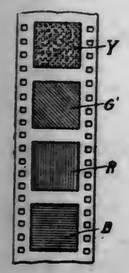
1,216,492. FOOT-REST FOR SCHOOL-DESKS. JOHN L. PRATT, Detroit, Tex. Filed May 27, 1916. Serial No. 100,280. (Cl. 155—9.)



1. The combination with a desk including end frames, of a bearing on each of said end frames, a horizontal rod journaled at its ends in said bearings, hangers mounted upon the ends of said rod, a foot board fixed to the free ends of said hangers, each of said bearings being provided on its inner face with stop shoulders to limit the swinging movement of the hangers and the foot board to a pendant position or to an elevated inoperative position.

2. The combination with a school desk including end frames, of bearing disks, means for clamping the bearing disks upon the respective end frames, a horizontal rod journaled at its ends in the bearing disks, each of said disks being provided upon its inner face with a radially disposed stop shoulder in vertical alinement with the bearing opening of the disk and also with the second stop shoulder above the bearing opening and at one side thereof, hangers fixed at one of their ends to said rod, a foot rest secured to the other ends of the hangers, the movement of the hangers in one direction being limited by the first named shoulders on the bearing disks when the foot is in its proper raised position, and the last named shoulders limiting the swinging movement of the hangers in an opposite direction when the foot rest is elevated to an inoperative position.

1,216,493. FILM OR THE LIKE FOR COLOR PHOTOGRAPHY. CHARLES RALEIGH, Jersey City, N. J., and WILLIAM V. D. KELLEY, Brooklyn, N. Y., assignors to Prisma Incorporated, a Corporation of Virginia. Original application filed Oct. 7, 1914, Serial No. 865,431. Divided and this application filed Apr. 13, 1916. Serial No. 90,832. (Cl. 88—19.5.)



1. A composite photographic image having a color selective value and non-selective values.

2. A composite photographic image having overlying selective and non-selective color value impressions.

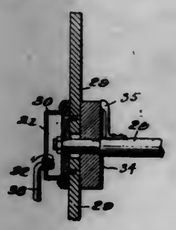
3. A photographic image composed of a selective color value intensified by values corresponding to substantially white.

4. A photographic image composed of a selective color value uniformly intensified by values corresponding to substantially white.

5. A composite photographic image comprising a color value impression and an isochromatic impression.

[Claims 6 to 10 not printed in the Gazette.]

1,216,494. CAN-WASHING MACHINERY. ERNEST F. RASSMAN, Charlottesville, Va. Filed Sept. 30, 1916. Serial No. 123,063. (Cl. 141—7.)



1. In an apparatus of the class described, the combination of a support over which the article to be acted upon is movable, means for supplying a fluid medium to the article situated adjacent the support, said means including a valve, and a valve operating mechanism comprising a wheel having a series of projections that extend successively into the path of the article as it moves along said support.

2. In an apparatus of the class described, the combination of a support over which the article to be acted upon is movable, means for supplying a fluid medium to the article situated adjacent the support, said means including a valve, and a valve operating mechanism comprising a wheel having a series of projections that extend successively into the path of the article as it moves along said support, said extensions being spaced apart for successive engagement by the exterior and interior of the can member.

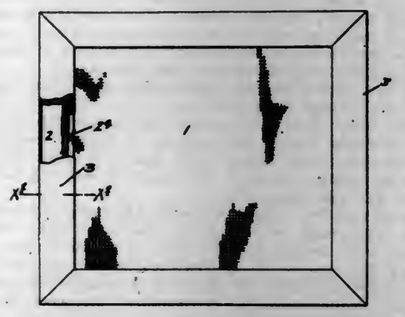
3. In an apparatus of the class described, the combination of a support over which the article to be acted upon is movable, means for supplying a fluid medium to the article situated adjacent the support, said means including a valve, and a valve operating mechanism comprising a wheel having a series of projections that extend successively into the path of the article as it moves along said support, said wheel having a Z-shaped slot, and a rod having a slot-engaging portion and connected with the valve.

4. In a machine of the class described, a support over which the article to be acted upon is movable, means for subjecting the article to the action of an aqueous fluid, a drier having a nozzle adjacent the path of said article as it moves along, means for supplying a heating medium to the drier, a motor operated blower for causing a flow of air through the drier, and means for controlling the operation of said blower situated in position to be actuated by an article on the support in its movement thereover.

5. In a machine of the class described, a support over which the article to be acted upon is movable, means for subjecting the article to the action of an aqueous fluid, a drier having a nozzle adjacent the path of said article as it moves along, means for causing a flow of air through said drier, means for controlling the means for causing a flow of air through the drier, and means for actuating said controlling means lying in position to be actuated by an article on the support in its movement thereover.

[Claim 6 not printed in the Gazette.]

1,216,495. WINDOW-SCREEN. FRANK REESE, Minneapolis, Minn., assignor to Reese Manufacturing Company, Minneapolis, Minn., a Corporation of Minnesota. Filed May 6, 1916. Serial No. 95,750. (Cl. 156—14.)

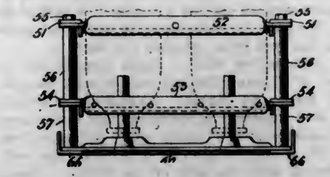


1. The combination with two rigid and complete rectangular metal frames having integral laterally projecting clamping flanges telescoped, one into the other with but slight clearance, said frames having approximately parallel outstanding flanges forming the sides of the complete frame, of a wire cloth or screen proper, having its marginal portion bent and clamped between the telescoped flanges of the two frames, the said two frames being separable as entireties.

2. The combination with two rigid and complete rectangular metal frames having integral laterally projecting clamping flanges telescoped, one into the other with but slight clearance, said frames having approximately parallel outstanding flanges forming the sides of the complete frame, of a wire cloth or screen proper, having its marginal portion bent and clamped between the telescoped flanges of the two frames, the said two frames being separable as entireties, and metallic fastening devices passed through the telescoped clamping flanges of said frames and through the laterally bent edge portions of said screen and holding the said three elements against separation.

3. The combination with two rigid complete rectangular metal frames that are L-shaped in cross section and having their integral laterally projecting clamping flanges telescoped, one into the other with slight clearance, the parallel outstanding flanges of said frames affording open channels, of a wire cloth or screen proper having its marginal portion bent and clamped between the telescoped flanges of said frames, the said two frames being separable as entireties.

1,216,496. BOTTLE-WASHING MACHINE. ALBERT JOSIAH RICE, Buffalo, N. Y., assignor to Rice & Adams, a Copartnership consisting of Albert J. Rice and Charles S. Adams, Buffalo, N. Y. Filed Nov. 9, 1907, Serial No. 401,453. Renewed Oct. 7, 1916. Serial No. 124,429. (Cl. 141—7.)



1. An apparatus for cleaning bottles and the like, comprising a trough, pipes in said trough having a series of jet orifices, a trackway over said trough, and a box or crate adapted to hold the bottles in inverted position and to pass along said trackway over the trough, said box or crate having a series of jet nozzles or tubes extending into the bottles and adapted to register with the jet orifices in said pipes.

2. An apparatus for cleaning bottles and the like, comprising a trough, pipes in said trough having a series of jet orifices, a trackway over said trough, a box or crate adapted to hold the bottles in inverted position and to pass along said trackway over the trough, said box or crate having a series of jet nozzles or tubes extending into the bottles and adapted to register with the jet orifices in said pipes, and means for intermittently moving said boxes or crates along said trackway.

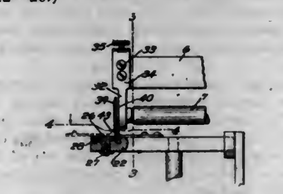
3. A crate for bottle washing machines, comprising a frame, cross bars to separate and support the bottles, and jet nozzles within the frame positioned to project into the bottles supported on said cross-bars.

4. A crate for bottle washing machines, comprising a frame, cross bars to separate and support the bottles, and jet nozzles carried by cross bars, below the bottles, said nozzles loosely entering the bottles to permit the washing fluid to escape freely.

5. A crate for bottle washing machines, comprising a skeleton frame, cross bars to separate and support the bottles, cross bars in the lower portion of said frame at a distance to clear the bottle mouths, and jet nozzles carried by said lower bars to enter the bottle mouths.

[Claims 6 to 8 not printed in the Gazette.]

1,216,497. MACHINE FOR TRIMMING THE CANVAS OF REINFORCED INSOLES. THEOBALD RINGENBACH, Rosedale, Ky. Filed Feb. 21, 1916. Serial No. 79,538. (Cl. 12—20.)



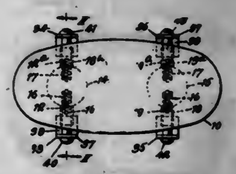
1. In a machine of the class described, a feed wheel and a cutting knife held in relatively fixed position, with the bearing edge of the feed wheel and the cutting edge of the knife in substantially the same vertical plane, and an upwardly spring-pressed non-rotatable table block upon which the insoles are fed, the table block provided with a flat roller disk mounted idly thereon to rotate freely and easily, parallel with the top surface of the block, and a guide plate mounted on the block to guide the insole to the knife.

2. In a machine of the class described, a feed wheel and a cutting knife held in relatively fixed position, with the bearing edge of the feed wheel and the cutting edge of the knife in substantially the same vertical plane in close proximity to each other, and an upwardly spring-pressed non-rotatable table block upon which the insoles are fed, the table block provided with a flat roller disk mounted idly thereon to rotate freely and easily parallel with the top surface of the block on an axis in the same vertical plane with the axis of the feed wheel, and a guide plate mounted on the block to guide the insole to the knife.

3. In a machine of the class described, a feed wheel and a cutting knife held in relatively fixed position, with the bearing edge of the feed wheel and the cutting edge of the knife in substantially the same vertical plane in close proximity to each other, and an upwardly spring-pressed non-rotatable, table block upon which the insoles are fed, the table block provided with a flat roller disk mounted idly thereon to rotate freely and easily parallel with the top surface of the block on an axis in the same vertical plane with the axis of the feed wheel, and a guide plate mounted on the block to guide the insole to the knife, with the guiding edge in close proximity to the periphery of the disk.

4. In a machine of the class described, a feed wheel and a cutting knife held in relatively fixed position, a table upon which insoles are fed, the table provided with a flat roller disk mounted idly thereon to rotate freely and easily, parallel with the top surface of the table, and a guide plate mounted on the table to guide the insole to the knife.

1,216,498. PEDAL-PAD. GEORGE H. RIVES, New York, N. Y. Filed June 21, 1916. Serial No. 105,001. (Cl. 74—81.)



1. In a device of the character described, a pad adapted to be applied on a pedal, having a pair of alined recesses extending from opposite parts of the edge of the pad and terminating in spaced relation centrally of the pad, a rigid retaining element embedded in the pad between its recesses, a plurality of adjustable clips for releasably engaging the brake pedal to removably hold the pad thereon, and means in the recesses of the pad, engaging the retaining element and engaging the clips for releasably holding the clips against accidental movement.

2. In a device of the character described, a pad adapted to be applied on a pedal, having a plurality of pairs of spaced alined recesses extending from spaced parts of the edge of the pad and terminating in spaced relation centrally of the pad, a rigid retaining element embedded in the pad between its recesses, a plurality of adjustable clips for releasably engaging the brake pedal to removably hold the pad thereon, and means in the recesses of the pad, adjustably engaging the retaining element and engaging the clips for releasably holding the clips against accidental movement.

3. In a device of the character described, a pad adapted to be applied on a pedal, having a pair of alined recesses extending from opposite parts of the edge of the pad and terminating in spaced relation centrally of the pad, a rigid retaining element embedded in the pad between its recesses, a tubular member in each recess of the pad, a plurality of clips for releasably engaging the brake pedal to removably hold the pad thereon, and locking elements in the tubular members adjustably engaging the retaining

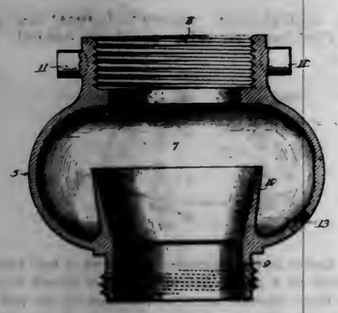
element and engaging the clips for holding the clips against accidental movement.

4. In a device of the character described, a pad adapted to be applied on a pedal having a plurality of pairs of spaced alined recesses extending from spaced parts of the edge of the pad and terminating in spaced relation centrally of the pad, a rigid retaining element embedded in the pad between its recesses, a tubular member in each recess of the pad, a plurality of adjustable clips for releasably engaging the brake pedal to removably hold the pad thereon, and locking elements in the tubular members adjustably engaging the retaining element and engaging the clips for holding the clips against accidental movement to the pedal.

5. In a device of the character described, a pad adapted to be applied on a pedal, having a pair of alined recesses extending from opposite parts of the edge of the pad and terminating in spaced relation centrally of the pad, a plate embedded in the pad between its recesses, having threaded recesses each communicating with each of the recesses of the pad, a plurality of clips for releasably engaging the brake pedal to removably hold the pad thereon, and a plurality of locking bolts one adjustable in each of the recesses of the pad as well as in the respective communicating recess of the plate for holding the clips against accidental movement.

[Claim 6 not printed in the Gazette.]

1,216,499. DRIP CONNECTION FOR FIRE-COCKS, HYDRANTS, AND THE LIKE. ANTON J. ROEFFS, Batavia, Ill., assignor to U. S. Wind Engine & Pump Co., Batavia, Ill., a Corporation of Illinois. Filed Apr. 1, 1913. Serial No. 758,128. (Cl. 137—31.)



1. The combination with a stand pipe valve and a hose, of a connecting member located between said valve and hose, said member comprising a tubular connection with the valve, a tubular connection with the hose, the axes of said tubular connection being non-vertical and substantially in alinement, said member comprising also a drip collecting chamber constructed to receive the drip from the valve and to prevent it from entering the hose, and located to one side of the tubular connections.

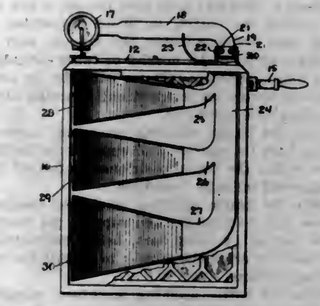
2. The combination with a stand pipe valve and a hose, of a straight-way fitting interposed between said valve and hose, said fitting comprising a tubular connection with the valve, a tubular connection with the hose, the axes of said tubular connections being non-vertical and substantially in alinement, said fitting comprising also a drip collecting chamber constructed to receive the drip from the valve and to prevent it from entering the hose, and located to one side of the tubular connections, said fitting being provided with a tubular member extending from and in alinement with said second tubular connection and forming a wall of said chamber, the capacity of said last tubular member being at least equal to the capacity of the tubular connections.

3. The combination with a stand pipe valve and a hose, of a straight-way fitting interposed between said valve and hose, said fitting comprising a tubular connection with the valve, a tubular connection with the hose, the axes of said tubular connection being inclined and substantially in alinement, said fitting comprising also a drip collecting chamber constructed to receive the drip from the valve and to prevent it from entering the hose, and located to one side of the tubular connections.

4. The combination with a stand pipe having a port and a hose, of a connecting member located between said port and hose and having connections therewith, said hose connection being positioned to receive water under pressure from said port but out of line of gravity drip from the port, said member having a chamber in line of gravity drip from the port for collecting the drip, and means for preventing the drip from entering the hose.

5. The combination with a stand pipe having a port and a hose, of a connecting member located between said port and hose and having connections therewith, a funnel in said member surrounding said hose connection and positioned to receive water under pressure from said port but out of line of gravity drip from the port, said funnel forming with the wall of the fitting a chamber in line of gravity drip from the port for collecting drip water from the port.

1,216,500. MULTIPLE-HORN PHONOGRAPH. JULIUS ROEVER, New York, N. Y., assignor to Roever Patent Company, New York, N. Y., a Corporation of New York. Filed July 12, 1915, Serial No. 39,245. Renewed July 14, 1916. Serial No. 109,404. (Cl. 274—2.)

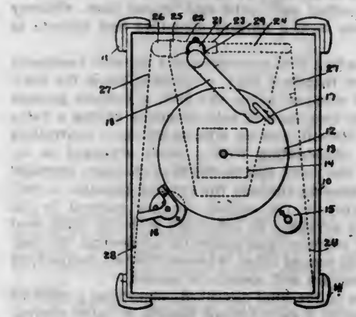


1. A phonograph comprising a casing having a vertical partition forming two chambers, one being located in the front part of the casing, a record table above one chamber, a motor below said table to drive the same, said motor being located in the back chamber of the casing, a tone arm arranged over the front chamber and adapted to swing over the record table, a vertically arranged hollow member at one end of the front chamber having a connection with the tone arm, and a plurality of horns in the front chamber spaced apart from each other and vertically arranged the horns each having a free open connection with the said vertical member the connections being of different sizes.

2. A phonograph comprising a casing, a vertically arranged hollow member contained wholly within the casing, a series of horns vertically spaced apart and connected with the hollow member through openings of different sizes, reproducing mechanism at the top of the casing, and a tone arm connecting the reproducing mechanism with said hollow member.

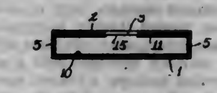
3. A phonograph comprising a casing, a vertically arranged hollow member contained wholly within the casing, a series of horns vertically spaced apart and connected with the hollow member through openings of different sizes, reproducing mechanism at the top of the casing, a tone arm connecting the reproducing mechanism with said hollow member, and a universal joint connection between the tone arm and said hollow member.

1,216,501. DIVIDED-HORN PHONOGRAPH. JULIUS ROEVER, New York, N. Y., assignor to Roever Patent Company, New York, N. Y., a Corporation of New York. Filed July 12, 1915, Serial No. 39,246. Renewed July 14, 1916. Serial No. 109,403. (Cl. 274—2.)



A phonograph comprising a relatively short case or cabinet having a rotating disk table at the top and driving means therefor below the disk table, a vertically and horizontally swinging tone arm above the disk table, a reproducer on the tone arm, a depending neck for the tone arm having a horizontally turning joint thereon, a generally horizontal member at the lower end of the neck having openings of different sizes therein, and a horn lying beneath the disk table and its driving means, said horn having divided members provided with jointed connections with the aforesaid horizontal member of the tone arm.

1,216,502. RECEPTACLE. MARGARET N. ROSS, Auburndale, Mass. Filed Feb. 19, 1915. Serial No. 9,219. (Cl. 206—41.)

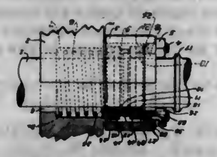


1. The combination with a box having a vertically slotted front and a movable top, of a lining comprising a slotted front, a bottom, a back and a frontal lining designed to fit between the box front and the lining front.

2. The combination with a box having a vertically slotted front and a movable top, of a lining comprising a slotted front, a bottom, a back, a top member and a frontal lining, the front, bottom and back being integral, and the top member and frontal lining being integral.

3. The combination with a box having a vertically slotted front and a movable top, of a lining comprising a slotted front, a bottom, a back and a frontal linging, the slot in the lining front being spaced from the bottom.

1,216,503. METALLIC PACKING. HENRY H. ROYER, Roanoke, Va., assignor of one-half to Richard P. Royer, Roanoke, Va. Filed Jan. 8, 1916. Serial No. 70,923. (Cl. 137—116.)



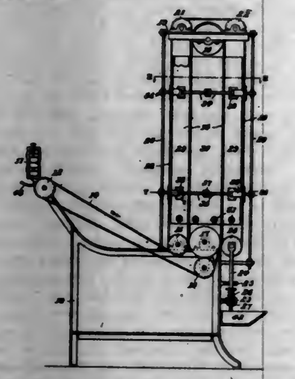
1. A metallic packing for steam piston rods or the like, comprising in combination, a steam vessel, a pierced head for the same, a piston rod passing through the said pierced head, a counterbored cavity in the exterior face of the said head, the same being concentric with and of slightly greater diameter than the said pierced head, a gland detachably secured to the outer face of the said head forming a steam-tight joint, the said gland being pierced concentric with the hole in the said head to accommodate the said piston rod and having a concentric counterbored portion in its inner face of larger diameter than the counterbore in the said head and forming with the same a two-part, connected, steam cavity, a vibrating ring encircling the said piston rod and having a flat, end face which cooperates with the bottom of the counterbore in the said gland to form a flat steam joint, a follower ring of larger diameter than the counterbore in the said head encircling the said piston rod and positioned along the same in spaced relationship with the said vibrating ring and having its inner face formed to overlap and abut the outer face of the said head when the piston rod and the said follower retreat, a composite, sectional, metallic packing ring, formed of a yieldable metal, encircling the said piston rod and adapted to be compressed radially against the same by the steam pressure and being disposed longitudinally of the rod in the space between the said vibrating and follower rings, the said rings being so formed and assembled around the piston rod as to form a steam abutment longitudinally of the piston rod whereby the internal steam pressure will force in turn the follower ring outwardly against the packing ring, the packing ring against the vibrating ring, and the vibrating ring against the flat face joint, the assembled vibrating ring, packing and follower ring being of less length longitudinally of the rod than the length of the outer portion of the said two-part steam cavity and being contained entirely within the said outer portion thereof, and a coil spring encircling the said piston rod within the counterbored portion of the said head and reacting longitudinally against the bottom of the counterbore at one end and against the follower ring at the opposite end, the said spring being of less diameter for its full length than the counterbore in the said head, the vibrating ring and follower ring each being formed of L-shaped half-ring sections with complementary complete rings of rectangular shape and each being positioned so that one of the flat legs of the L bears against the adjacent side of the said metallic packing ring, the other flat leg of each ring being turned toward the said piston rod.

2. A metallic packing for steam piston rods or the like, comprising in combination, a steam vessel, a pierced head for the same, a piston rod passing through the said pierced head, a gland detachably secured to the outer face of the said head forming a steam-tight joint, the said gland being pierced concentric with the hole in the said head to accommodate the said piston rod and having a concentric counterbored portion in its inner face, the bottom of the said counterbore terminating in a flat shoulder, a vibrating ring encircling the said piston rod and having a flat, end face which coöperates with the flat bottom of the counterbore in the said gland to form a flat, steam joint, a follower ring encircling the said piston rod and positioned along the same in spaced relationship with the said vibrating ring, a composite, sectional, metallic packing ring formed of a yieldable metal encircling the said piston rod and adapted to be compressed radially against the same by the steam pressure and being disposed longitudinally of the rod in the space between the said vibrating and follower rings, the said rings being so formed and assembled around the piston rod as to form a steam abutment longitudinally of the piston rod whereby the internal steam pressure will force in turn the follower ring, the packing ring and the vibrating ring outwardly against the said flat shoulder of the counterbore, an annular groove in the flat face of the bottom of the said counterbore, the said groove being adapted to be covered by the adjacent face of the said vibrating ring, and a passageway extending from the said groove to the exterior of the said gland.

1,216,504. DRIER. FRANCIS M. SCHAEFER, Chicago, Ill. Filed Feb. 26, 1916. Serial No. 80,654. (Cl. 34—12.)

1. In a drier, a supporting frame, upper and lower drums supported by said frame, two endless belts dispo ed

to travel over said drums, spaced vertically disposed drying boxes forming passes therebetween through which said belts pass in their travel, the belts while in the passes contacting with each other to form carriers for articles between them, and adjusting means carried by the frame and engaging the boxes for varying the width of the passes between the boxes.



2. In a drier, a supporting frame, a central and a pair of side drying boxes supported above said frame, the side boxes being spaced from the central box to provide vertical passes therebetween, drums mounted at the upper and lower ends of said boxes, and a pair of belts traveling over said drums and through said passes, the belts while in the passes contacting with each other to form carriers for articles between them.

3. In a drier, a supporting frame, a driving drum and a plurality of lower drums carried by said frame, a top frame, upper drums journaled in said top frame in vertical planes coincident with the lower drums, a pair of endless belts passing over said drums and traveling in face contact between the upper and lower drums, a central stationary and two adjustable side heating boxes arranged between the upper and lower drums and spaced to form passes through which the belts are carried in their travel, and means for adjusting the side boxes to vary the width of the passes.

1,216,505. LUBRICATING DEVICE. RUSSELL P. SCHUYLER, Chicago, Ill. Filed Jan. 19, 1916. Serial No. 72,996. (Cl. 184—76.)



1. A lubricating device comprising a suitable receptacle, having formed therein a duct, a chamber below the duct, and a second chamber below the first, with a reduced passage connecting the two, each of said chambers having a valve seat formed therein, and means for controlling the passage of fluid through the duct, in combination with a valve coöperating with the valve seat in the first chamber, provided with a stem passing through the reduced passage, a conical part located in the second chamber adjustably secured to the valve, a valve arranged to coöperate with the valve seat in the second chamber, and means for connecting the conical part with said second part, whereby the two valves form a unitary structure and operate in unison.

2. A lubricating device comprising a suitable receptacle having formed therein a duct, a chamber below the duct, and a second chamber below the first, a reduced passage connecting the two, each of said chambers having a valve seat formed therein, and an adjustable valve controlling the duct, in combination with a valve arranged to cooperate with the valve seat in the first chamber, provided with a stem passing through the reduced passage, a conical part located in the second chamber secured to the valve, a valve arranged to coöperate with the valve seat in the second chamber, and means for connecting the conical part to said second valve, whereby the two valves form a unitary structure and operate in unison.

3. A device of the kind described comprising a suitable receptacle having a duct formed therein, a valve controlling the duct, a detachable part provided with a chamber arranged below the duct, a second chamber arranged below the first, with a reduced passage connecting the two, each of said chambers having a valve seat formed therein, in combination with a valve having a seat arranged to cooperate with the valve seat in the first chamber, a stem passing through the reduced passage, a conical part located in said second chamber and connected to the stem, a valve arranged to coöperate with the valve seat in the second chamber, means for connecting the conical part and the second valve, whereby the two operate in unison, and means for preventing a partial vacuum in the receptacle as the lubricant is withdrawn.

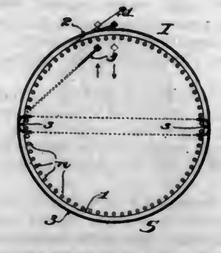
4. A device of the kind described comprising a suitable receptacle, having a duct formed therein, a valve controlling the duct, a downwardly extending part provided with two chambers, one arranged below the other, the two being connected by a reduced passage, each of said chambers having a valve seat formed therein, in combination with a valve having a seat arranged to coöperate with the valve seat in the upper chamber, provided with a stem passing through the connecting passage, a conical part located in the lower chamber and connected to the stem, a valve arranged to coöperate with the valve seat in the lower chamber, means for connecting the conical part to said lower valve, whereby the two valves operate in unison, and means for regulating the passage of air by the lower valve to the receptacle to prevent a partial vacuum therein as the lubricant is withdrawn.

5. A device of the kind described, comprising a suitable receptacle having a duct formed therein, an adjustable valve for controlling the duct, a downwardly extending part provided with two chambers, one arranged below the other, each having valve seats formed therein, and a passage connecting the two chambers, in combination with a valve arranged to coöperate with the valve seat in the upper chamber, provided with a stem passing through said passage, a conical part located within the lower chamber and adjustably secured to the stem, said conical part being provided with one or more openings therethrough extending from the upper face thereof to a point downward therefrom, a valve arranged to coöperate with the valve seat in the lower chamber, means for connecting the conical part to said lower valve, and means for regulating the vaporization of the lubricant after it has passed the last named valve.

[Claims 6 to 12 not printed in the Gazette.]

1,216,506. KNIT FABRIC AND METHOD OF KNITTING THE SAME. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Sept. 26, 1914. Serial No. 863,751. (Cl. 66—4.)

1. A stocking having a seamless tubular foot portion comprising continuous courses of a base yarn and having short runs of yarn interknit therewith at the upper and lower parts thereof.



2. A stocking having a seamless tubular foot portion of a continuous base yarn and having short runs of yarns differing from each other in quality or kind interknit therewith in each course at the upper and lower parts thereof.

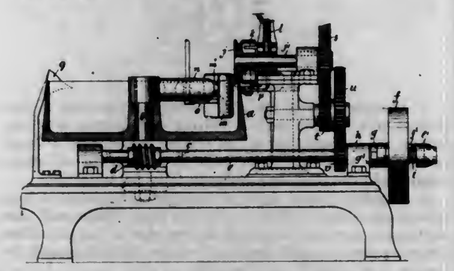
3. A stocking having a seamless tubular foot portion comprising continuous courses of a base yarn, and having short runs of different kinds of yarn interknit therewith in complementary parts of the fabric in each course, said short runs in one of said parts lying in plating relation to said base yarn.

4. A seamless stocking having a multiple yarn leg and instep, the instep fabric comprising a base yarn continuous throughout the foot, and short runs of another yarn, and having a sole comprising said base yarn and short runs of another yarn interknit therewith, said short runs of yarn being interknit together at their proximate ends.

5. A stocking having a seamless tubular foot-portion comprising parts joined by longitudinal sutures at certain needle wales, said sutures containing loops of a yarn continuous throughout said foot portion.

[Claims 6 to 24 not printed in the Gazette.]

1,216,507. COLLAR IRONING AND SHAPING MACHINE. ALBERT CONWAY SMITH and FRANCIS HAROLD SMITH, Hinckley, England. Filed July 3, 1914. Serial No. 848,901. (Cl. 68—9.)



1. In an ironing and shaping machine for turn-down collars, a collar-supporting member having a creasing edge adapted to be straddled by the collar in a folded condition, an ironing member having crease-ironing surfaces adapted to contact with the crease of a collar mounted on the supporting member, one of the said members being movable with respect to the other, and means for bending any collar tab which projects past the creasing edge of the supporting member laterally when in close proximity to the ironing member to avoid the crease-ironing surfaces of the latter without disturbing the position of the collar as a whole.

2. In an ironing and shaping machine for turn-down collars, a collar-supporting member having a creasing edge adapted to be straddled by the collar in a folded condition, an ironing member having crease-ironing surfaces adapted to contact with the crease of a collar mounted on the supporting member, one of the said members being movable with respect to the other, and a tab-bending member extending obliquely across the creasing edge of the supporting member in advance of the said ironing member and being mounted in fixed relation to the latter.

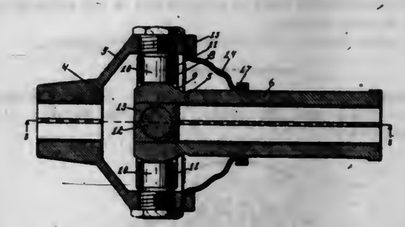
3. In an ironing and shaping machine for turn-down collars, a collar-supporting member having a creasing edge adapted to be straddled by the collar in a folded condition, an ironing member having crease-ironing surfaces adapted to contact with the crease of the collar mounted on the supporting member, one of the said members being movable with respect to the other, the ironing member also having a guard flange projecting inwardly past the creasing edge of the supporting member at one side of the same, and a tab-bending member extending obliquely across the creasing edge of the supporting member immediately in advance of the ironing member and being mounted in fixed relation to the latter, the end of the tab-bending member which is nearer to the ironing member being disposed substantially flush with the side of the guard flange of the latter opposite to the creasing edge of the supporting member.

4. In an ironing and shaping machine for turn-down collars, a rotatable collar-supporting mandrel having an annular creasing edge adapted to be straddled by the collar in a folded condition and with its inner fold disposed on the inside of the mandrel to support the collar crease throughout its entire length, an ironing member having crease-ironing surfaces adapted to contact with the crease of a collar mounted on the mandrel, and a shaping member mounted stationarily within the mandrel in rear of the crease-ironing member for contact with the inner fold of the collar as it leaves the latter.

5. In an ironing and shaping machine for turn-down collars, a rotatable collar-supporting mandrel having an annular creasing edge adapted to be straddled by the collar in a folded condition and with its inner fold disposed on the inside of the mandrel to support the collar crease throughout its entire length, an ironing member having crease-ironing surfaces adapted to contact with the crease of the collar mounted on the mandrel, a shaping member mounted stationarily within the mandrel in rear of the crease-ironing member for contact with the inner fold of the collar as it leaves the latter, and a holding member mounted outside the creasing edge of the mandrel and radially opposite to the shaping member for contact with the outer fold of the collar.

[Claims 6 to 8 not printed in the Gazette.]

1,216,508. UNIVERSAL JOINT. HENRY E. SPADE, Richmond, Mich., assignor, by mesne assignments, to Arvac Manufacturing Co., Chicago, Ill. Filed Sept. 20, 1915. Serial No. 51,598. (Cl. 74—19.)



1. In a universal joint, the combination of male and female shaft members, the female shaft member having a part internally cylindrical, the male member having a spherically curved head, a spherically curved annular journal member, said journal member being adapted to oscillate within said cylindrical part of said female member, said male member being adapted to oscillate within said journal member, said parts having a working fit each within the other, journals for said journal member threaded into said female member from the outside, a journal pin for said male member disposed through said journal member and said male member head at right angles to the journals of said journal member, and a flexible casing

member secured at one end to said female member and at the other to the shank of said male member.

2. In a universal joint, the combination of male and female shaft members, the female shaft member constituting a casing member and having a part internally cylindrical, the male member having a spherically curved head, a spherically curved annular journal member, said journal member being adapted to oscillate within said cylindrical part of said female member, said male member being adapted to oscillate within said journal member, said parts having a working fit each within the other, journals for said journal member threaded into said female member from the outside, and a journal pin for said male member disposed through said journal member and said male member head at right angles to the journals of said journal member.

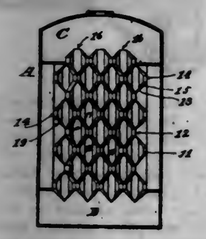
3. In a universal joint, the combination of male and female shaft members, the female shaft member constituting a casing member and having a part internally cylindrical, the male member having a spherically curved head, said members being adapted to receive the shafts to be coupled, a spherically curved annular journal member, said journal member being adapted to oscillate within said cylindrical part of said female member, said male member being adapted to oscillate within said journal member, said parts having a working fit each within the other, journals for said journal member threaded into said female member from the outside, a journal pin for said male member disposed through said journal member and said male member head at right angles to the journals of said journal member, and a block in the head of said male member through which its said journal pin is disposed.

4. In a universal joint, the combination of male and female shaft members, the female member constituting an integral casing member, an annular member journaled within said female member to oscillate therein, said male member having a head disposed within said annular member to oscillate therein, journals for said annular member threaded into said female member from the outside, a journal pin for said male member disposed through said annular member and said male member head at right angles to the journals of said annular member, and a flexible casing member secured at one end to said female member and at the other to the shank of said male member.

5. In a universal joint, the combination of male and female shaft members, the female member being integral, an annular member disposed within said female member to oscillate therein, said male member having a head disposed within said annular member to oscillate therein, journals for said annular member threaded into said female member from the outside, and a journal pin for said male member disposed through said annular member and said male member head at right angles to the journals of said annular member.

[Claims 6 and 7 not printed in the Gazette.]

1,216,509. RADIATOR. CHARLES F. SPERY, Chicago, Ill. Filed Apr. 28, 1916. Serial No. 94,102. (Cl. 257—130.)



1. A radiator, including a plurality of duplicate units, there being zig-zag, substantially vertical, water passages between adjacent units, said units having vertical water grooves intersecting said zig-zag passages.

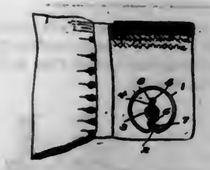
2. A radiator, including a plurality of duplicate units, there being zig-zag, substantially vertical, water passages between adjacent units, water grooves formed in said units, said water grooves intersecting said passages, said units having a plurality of through-flowing air passages, said air passages being alternately contracted and enlarged.

3. A radiator, including a plurality of duplicate units, there being zig-zag, substantially vertical, water passages between adjacent units, said units having continuously interrupted vertical water grooves intersecting said passages and outletting into the respective portions of said passages.

4. A radiator, including a plurality of duplicate units, there being substantially vertical zig-zag water passages between adjacent units, said units having water grooves intersecting said passages, said water grooves outletting into the respective portions of said passages, said units having a plurality of through-flowing air passages, said passages being intermittently contracted by the walls of said water grooves.

5. A radiator, including a plurality of vertically disposed duplicate, nested together, units, each of said units comprising a plurality of tubular protuberances, a plurality of depressed portions connecting said protuberances, projections along the marginal edges of said protuberances merging into said depressed portions; said projections of adjacent units nesting into said depressed portions, there being formed between said adjacent units, by said projections, substantially vertical, zig-zag water passages, there being in adjacent faces of said protuberances vertical water grooves intersecting and outletting into said water passages.

1,216,510. GUARD FOR CUFF-BUTTONS. ROBERT H. STEVENS, Newark, N. J. Filed Aug. 16, 1916. Serial No. 115,196. (Cl. 24—90.5.)



1. A safety guard for cuff buttons comprising a base formed of a loop of wire, a floating loop within said base having an entrance for a cuff button shank, and a finger carried by said guard for locking a cuff button shank within said floating loop, substantially as described.

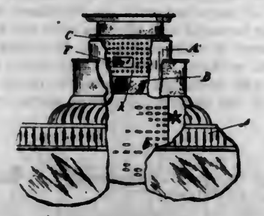
2. A safety guard for cuff buttons comprising a base formed of a loop of wire, a floating loop within said base having an entrance for a cuff button shank, and a locking finger carried by said floating loop for guarding said entrance, substantially as described.

3. A safety guard for cuff buttons comprising a base formed of a circular piece of wire, a floating loop within said base and concentric therewith, said loop having an entrance for a cuff button shank, and retaining finger carried by said loop and adjacent one side thereof for guarding said shank entrance, substantially as described.

4. A safety guard for cuff buttons formed from a single piece of wire, said guard having a circular base, a floating loop within said base having means for holding a cuff button shank, one side of said loop being extended to form a locking finger for guarding the entrance to said floating loop, substantially as described.

5. A safety guard for cuff buttons formed from a single piece of wire, said guard having a circular base, a floating loop within said base having an entrance for a cuff button shank, and resilient finger adjacent one side of said loop and carried thereby for locking therein said cuff button shank, the ends of the wire being provided with protecting curls, substantially as described.

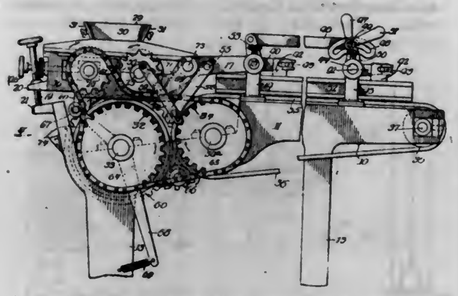
1,216,511. METALLIC-CROWN WICK. BURTON STEWART, St. Joseph, Mo. Filed Oct. 25, 1916. Serial No. 127,683. (Cl. 67—70.)



1. The combination with an oil stove and a circular wick therefor, of a circular perforated metallic crown seated on the top edge of said wick said crown being provided on the inner side thereof with a plurality of V shape fingers, spaced apart, to hold said wick in rigid engagement against the outer side of said crown, the outer side of said crown being provided with a plurality of horizontal slots, spaced apart, to permit said wick to be readily ignited.

2. In a device of the kind described, a perforated aluminum alloy crown seated on the top edge of a lamp wick, V shape fingers on the inner side of said crown turned vertically downward to hold the wick in rigid position in the crown, and horizontal incuts, spaced apart, in the outer side of the crown to facilitate lighting of the lamp.

1,216,512. DOUGH-MOLDING MACHINE. FRANK STREICH, Joliet, Ill., assignor to The Union Wrapping Machine Company, Joliet, Ill., a Corporation of Illinois. Filed Mar. 20, 1916. Serial No. 85,239. (Cl. 107—9.)



1. A dough molding machine, comprising a rotatory roll, and a belted pulley adjacent thereto, and rotating in the same direction, there being a crotch therebetween, in which dough is curled, a kneading plate adjacent the crotch, and means for oscillating said kneading plate into pressing contact with the dough.

2. A dough molding machine, comprising a rotatory roll and a belted pulley adjacent thereto, and rotating in the same direction, there being a crotch therebetween, in which the dough is curled, an oscillating kneading plate adjacent said crotch extending over said belted pulley and forming a pressure plate under which the curled dough is rolled, and means for oscillating said kneading plate.

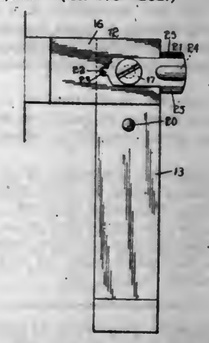
3. A dough molding machine, comprising two rotating dough curling members, traveling in the same direction and having a crotch therebetween; in which the dough is curled, and an oscillatory dough kneading plate adjacent said crotch arranged to knead the dough against one of the rotating members.

4. A dough molding machine, comprising a feed roll, a sheeting roll rotating in the opposite direction, a belted pulley adjacent the sheeting roll and rotating in the same direction, there being a crotch therebetween, a dough kneading plate adjacent the crotch, and operative connections between the feed roll and dough kneading plate for oscillating the same, and thereby knead the dough against the belted pulley.

5. A dough molding machine, comprising a rotary roll, a belted pulley adjacent thereto and rotating in the same direction, there being a crotch therebetween, in which the dough is curled, and an oscillatory kneading plate at the crotch, between which plate and the belted pulley, the dough is rolled.

[Claims 6 to 8 not printed in the Gazette.]

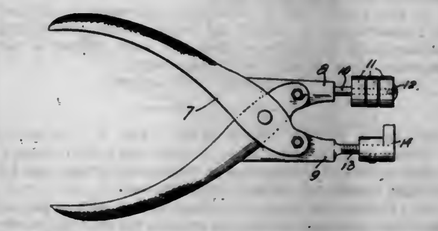
1,216,513. KNIFE-BLADE SWITCH. ALEXANDER K. SUTHERLAND, Plainville, Conn., assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn., a Corporation of Connecticut. Filed Nov. 26, 1915. Serial No. 63,376. (Cl. 175—282.)



1. In a switch of the character described, a holding piece, a blade pivoted to the holding piece and provided with a pin, and a spring keeper secured to the holding piece and having at its outer end a groove adapted to receive and yieldingly engage the pin and at its edges inclines against which the pin acts to spring the keeper backward until the pin reaches said groove.

2. In a knife blade switch, a holding piece having a hole, a blade pivoted to the holding piece and provided with a pin, and a keeper removably secured to the holding piece and having at its inner end a lug engaging the hole, at its outer end a groove adapted to receive the pin and at its edges inclines adapted to be engaged by the pin to spring the keeper backward until the pin engages the groove.

1,216,514. DENTAL PLIERS. SAMUEL J. SYMMONS, Oakland, Cal. Filed Aug. 10, 1916. Serial No. 114,160. (Cl. 32—10.)



1. In a dental instrument, shanks having means for their manipulation, a spindle on one of the shanks, rollers mounted to rotate on the said shank, a threaded extension on the opposite shank, a jaw having a cavity or recess adapted to coact with the rollers, and means for holding the jaw at different positions of adjustment.

2. In a dental instrument, shanks having means for their manipulation, a spindle on one of the shanks, rollers mounted to rotate on the said spindle, an extension on the opposite shank, a jaw having a cavity or recess adapted to coact with the rollers, and means for holding the jaw at different positions of adjustment.

3. In a dental instrument, shanks having means for their manipulation, a spindle extending at an angle to the shank, rollers mounted on the said spindle, and extension standing at an angle to the opposite shank, and a jaw adjustably secured on said extension.

1,216,515. MANUFACTURING CONDENSATION PRODUCTS FROM PHENOL, FORMALDEHYDE, AND THE LIKE. KONSTANTIN TARASSOFF, Moscow, Russia. Filed Feb. 21, 1914. Serial No. 820,304. (Cl. 106—22.)

1. A process for the production of a composition of matter comprising causing to react together a phenol, formaldehyde and a sulfo compound possessing emulsifying properties.

2. A process for the production of a composition of matter comprising causing to react together a phenol, an active methylene group containing compound and a mixture of sulfo compounds possessing emulsifying properties.

3. A process for the production of a composition of matter comprising causing to react together a phenol, an active methylene group containing compound and a sulfonated fat.

4. A process for the production of a composition of matter comprising causing to react together a phenol, formaldehyde and a sulfonated fatty oil.

5. A process for the production of a composition of matter comprising causing to react together a phenol, formaldehyde, a sulfonated fatty oil and sulfo-acids obtained by sulfonating mineral oils.

1,216,516. PROCESS FOR THE MANUFACTURE OF HARD COMPOSITIONS OF MATTER FROM ALDEHYDES AND PHENOLS. KONSTANTIN TARASSOFF, Moscow, Russia. Filed May 7, 1914. Serial No. 836,956. (Cl. 106—22.)

1. The herein described process which comprises condensing a mixture of formaldehyde, a phenol and organic bodies containing substantially no aldehyde, phenol or sulfo groups in the presence of an organic sulfo product.

2. The process which comprises condensing a mixture of formaldehyde, a phenol and organic bodies containing substantially no aldehyde, phenol or sulfo groups in the presence of a sulfo product derived from a fat.

3. The process which comprises condensing a mixture of formaldehyde, a phenol and organic bodies containing substantially no aldehyde, phenol or sulfo groups in the presence of organic sulfo acids.

4. The process which comprises condensing a mixture of formaldehyde, a phenol and organic bodies containing substantially no aldehyde, phenol or sulfo groups in the presence of a sulfo fatty acid.

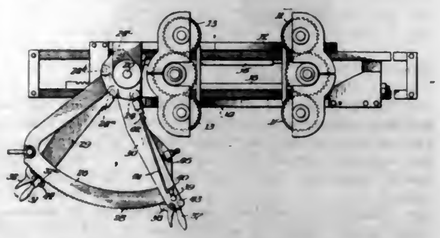
5. The process which comprises condensing a mixture of formaldehyde, a phenol and organic bodies containing substantially no alhehyde, phenol or sulfo groups in the presence of an aromatic sulfo fatty acid.

[Claims 6 to 16 not printed in the Gazette.]

1,216,517. LEVER SET-WORKS. IRA M. THURLOW, Beloit, Wis., assignor to P. B. Yates Machine Company, Beloit, Wis., a Corporation of Wisconsin. Filed June 14, 1915. Serial No. 34,064. (Cl. 143—4.)

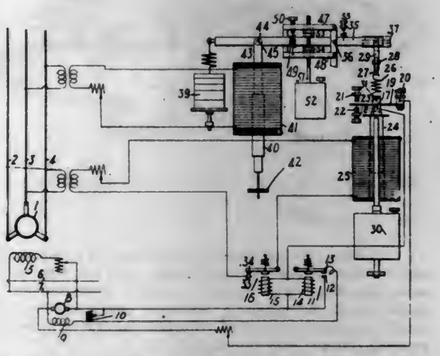
1. In resaw set works, the combination with a pair of feed rolls arranged on the two sides of the saw line, a carriage for each roll movable along ways transversely of the saw line, racks connected with the carriages, toothed pinions coaxially mounted and meshing with the racks, a hub member secured to each pinion and providing spaced radially opening sockets, a lever pivoted about the axis of each pinion and including a releasable catch adapted to engage one of the sockets, a toothed sector traversed by each of the levers, a latch carried by each lever and adapted to engage the teeth of its sector, and a pin carried by one of the levers and adapted to snap into a recess formed in the other lever whereby to couple the levers at will to effect self centering adjustment.

2. In resaw set works, the combination with a pair of feed rolls arranged on the two sides of the saw line, a carriage for each roll movable along ways transversely of the saw line, racks connected with the carriages, toothed pinions coaxially mounted and meshing with the racks, a hub member secured to each pinion and providing spaced radially opening sockets, a lever pivoted about the axis of each pinion and including a releasable catch adapted to engage one of the sockets, a toothed sector traversed by



each of the levers, a latch carried by each lever and adapted to engage the teeth of its sector, and a pin carried by one of the levers and adapted to snap into a recess formed in the other lever whereby to couple the levers at will to effect self-centering adjustment, means carried by one of the latches and overlying the recess when engaged with its sector whereby to prevent the entrance of the pin and engaged by the pin when inserted to hold the latch out of engagement with its sector.

1,216,518. ELECTRICAL REGULATOR. ALLEN A. TIRRILL, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 5, 1915. Serial No. 565. (Cl. 171—229.)



An electrical regulator comprising coöperating contact members, a lever for actuating one of said members, an electromagnet for actuating the lever, members engaging opposite sides of the lever, a resilient connection between said members, and a retarding device actuated by said members.

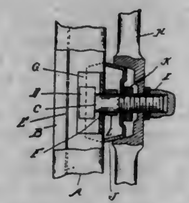
1,216,519. CLOTHES-POUNDER. ALBERT TROY and ERNEST M. LEONNIG, Kellogg, Idaho; said Leonnig assignor of one-fourth of the full right to Paul Salmina, Kellogg, Idaho. Filed Sept. 26, 1916. Serial No. 122,206. (Cl. 68—5.)

1. A clothes pounder comprising similar conical bodies, one occupying a position within the other, the outer one having means on its outer surface for holding a napkin and a tubular extension at its apex and the inner one having an extension at its apex extending into the tubular extension of the outer one and means for moving back and forth the extension of one conical body within the tubular extension of the other to change the relative positions of said conical bodies.



2. A clothes pounder comprising similar conical bodies, one occupying a position within the other, the outer one having a row of outwardly extending teeth at its base and a tubular extension at its apex and the inner one having an extension at its apex extending into the tubular extension of the outer one and means for moving back and forth the extension of one conical body within the tubular extension of the other to change the relative positions of said conical bodies.

1,216,520. PIVOT CONSTRUCTION. WILLIAM C. VAN DRESSER, Detroit, Mich., assignor to Rands Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 4, 1915. Serial No. 48,940. (Cl. 21—148.)



1. In a pivot construction, the combination with two relatively adjustable members, one of which is tubular, of a headed pivot pin having its head resting within said tubular member and having its shank engaged with the other member, an aperture being formed in the tubular member opposite the head to permit the introduction of the same thereinto.

2. The combination with a frame formed of channel tubing, of a pin having a head at its inner end insertible through an entrance slot in the channel portion of the tubing, said pin projecting outward through an aperture in the opposite side of the tubing.

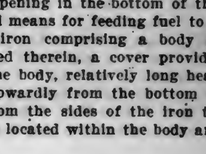
3. The combination of a frame formed of channel tubing provided with an elongated entrance slot in the channel portion thereof and an aperture on the opposite side of the tube, and a pin having a head at its inner end insertible through said entrance slot, said pin projecting outward through the aperture in the opposite side of said tube and being retained from rotation by said head.

4. The combination with a tubular frame having an aperture on one side thereof and an elongated entrance slot upon the opposite side, of a headed pin insertible through said entrance slot and projecting outward through the aperture in the opposite side of the tube, and a reinforcement for said tube within the same and embracing the head of said pin.

5. The combination with a tubular frame having an aperture on one side thereof and an elongated entrance slot upon the opposite side, of a segmental reinforcement insertible within said tube and apertured for registration with said first-mentioned aperture, and a pin having a head insertible through said entrance slot, said pin projecting outward through said registering apertures and the head portion thereof being embraced by said segmental reinforcement.

[Claims 6 to 9 not printed in the Gazette.]

1,216,521. PISTON OR LIKE PACKING. EDOUARD ALEXIS VIVINUS, Tonbridge, England. Filed Sept. 18, 1915. Serial No. 51,493. (Cl. 121—108.)

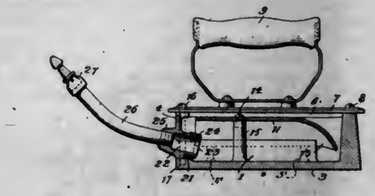


1. In a packing arrangement, the combination of a piston having a tapered recess around the closed end thereof, a groove extending inward from such tapered recess, flat rings fitting into said groove and free to expand and contract therein, and inclined flanges on said rings adapted when the rings are contracted to fit in the tapered recess, substantially as described.

2. In a packing arrangement the combination of flanged packing rings lying one inside the other, with their flanges played at an obtuse angle, a piston having a recess with one of its walls parallel with said flanges and a deep groove extending inward from the bottom of said recess to receive the flat portions of the packing rings and allow them to expand and contract freely, substantially as described.

3. In a metallic packing arrangement, the combination of a piston having a tapered recess and groove at one end thereof, flat rings fitting freely in said groove and flanges on said rings inclined to correspond to the taper of the recess, said rings and flanges being both free to expand and contract, and one ring breaking joint with the other, substantially as described.

1,216,522. SAD-IRON. FREDERICK D. VOLLMER, Moline, Ill. Filed May 1, 1916. Serial No. 94,811. (Cl. 158—23.1.)



1. A sad iron comprising a body of triangular formation, a door having cutout air feeding openings in its sides and top edge hinged to said body, a burner carried by the door and being disposed in an inclined position for directing the products of combustion upon the bottom of the iron, a movable locking device carried by the iron and engaging said door for locking the same in a closed position, a stop for limiting the inward movement of the door, an air feeding opening in the bottom of the iron underlying the door, and means for feeding fuel to the burner.

2. A sad iron comprising a body portion having a burner located therein, a cover provided with a handle secured to the body, relatively long heat conducting ribs projecting upwardly from the bottom of the iron, webs extending from the sides of the iron to said ribs, a deflecting plate located within the body and having a down-

wardly extending flange projecting below the upper edge of the heat conducting ribs and resting upon the connecting webs, the said downwardly projecting flange of the connecting plate being spaced laterally from the ribs to provide passages for directing the heat waves upon the bottom of the iron at each side thereof, substantially as described.

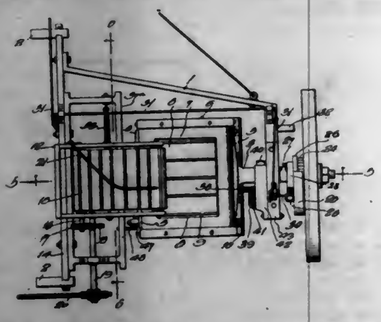
3. A sad iron comprising a body portion, having a gas burner located therein, a cover provided with a handle secured to said body, the wall of the body at its upper edge having cutout portions therein providing air passages, relatively long spaced conducting ribs of segmental formation projecting upwardly from the body, webs disposed near each end of said ribs and projecting from the side of the body to said ribs, a deflecting plate positioned within the body and spaced from the cover to provide an air passage therebetween, the said deflector plate having a downwardly extending flange projecting entirely thereround, save at the rear end of the plate, and extending to a point below the upper edge of the heat conducting ribs and resting on the connecting ribs, the said flange of the deflector plate being spaced laterally from the ribs to provide air passages for directing the heat rays upon the bottom of the iron substantially as described.

4. A sad iron comprising a body portion having a fuel burner therein, a cover provided with a handle secured to the body, heat conducting ribs projecting upwardly from the bottom of the body, a deflecting plate located within the body and having a downwardly extending flange projecting to a point below the upper edge of the heat conducting ribs and laterally spaced therefrom, the said downwardly projecting flange of the deflecting member providing with the heat conducting ribs, passages for directing the products of combustion upon the bottom of the iron.

5. A sad iron comprising a body portion and a burner, a cover for said body, heat conducting means within said body, a deflecting means disposed within the body and having a downwardly extending portion projecting to a point slightly below the upper portion of the heat conducting means and spaced laterally therefrom providing with the heat conducting means passages for directing the products of combustion upon the bottom of the iron at each side thereof.

[Claim 6 not printed in the Gazette.]

1,216,523. SHOCK-FORMING MACHINE. ARTHUR E. WARNER, Vermillion, Kans. Filed Apr. 3, 1916. Serial No. 88,595. (Cl. 56—121.)



1. A grain shocking machine comprising a receiver for bundles of grain from a harvester, a journal extending from one side of said receiver and disposed transversely of the line of draft of the machine, a ground wheel mounted rotatably on said journal, and means for establishing a driving connection between said wheel and journal to tilt the receiver to discharge its load.

2. A grain shocking machine comprising a receiver for bundles of grain from a harvester, a journal extending from one side of said receiver and disposed transversely of the line of draft of the machine, a ground wheel mounted rotatably on said journal, a clutch member driven by the wheel, a second clutch member carried by the journal and adapted to be engaged with said driven member to establish a driving connection between said wheel and journal in order to tilt the receiver to discharge its load, and a cast-off device for disengaging the two clutch members after discharging the load.

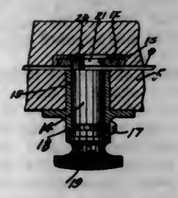
3. A grain shocking machine comprising a receiver for bundles of grain from a harvester, a journal extending from one side of said receiver and disposed transversely of the line of draft of the machine, a ground wheel mounted rotatably on said journal, a clutch member driven by the wheel, a second clutch member carried by the journal and adapted to be engaged with said driven member to establish a driving connection between said wheel and journal in order to tilt the receiver to discharge its load, a cast-off device carried by the journal for disengaging the two clutch members after discharging of said load, and a stop with which said cast-off device is brought into contact when said journal is rotated, said stop serving to operate said device.

4. A grain shocking machine comprising a receiver for bundles of grain from a harvester, a journal extending from one side of said receiver and disposed transversely of the line of draft of the machine a ground wheel mounted rotatably on said journal, a toothed wheel driven by said ground wheel, a dog carried by the journal for engagement with said toothed wheel to allow the ground wheel to rotate the journal and tilt the receiver to discharge the load of the latter, a movable member mounted on the journal to normally hold the dog in inactive position, means for shifting said member to release the dog, and a stop for engagement by said member when the journal is rotated a predetermined amount, said stop serving to return said member to its normal position, thereby returning the dog to inactive position.

5. A grain shocking machine comprising a receiver for bundles of grain from a harvester, a journal extending from one side of said receiver and disposed transversely of the line of draft of the machine, a ground wheel mounted rotatably on said journal, a toothed wheel driven by said ground wheel, a dog carried by the journal for engagement with said toothed wheel to allow the ground wheel to rotate the journal and tilt the receiver to discharge the load of the latter, a lever mounted on the journal and having a stop shoulder for normally retaining said dog in inactive position, means for rocking said lever to displace said shoulder to allow the dog to engage the toothed wheel, and a stop for engagement by said lever after the journal has rotated a predetermined amount, said stop serving to again move the shoulder to normal position, thereby disengaging the dog from the toothed wheel.

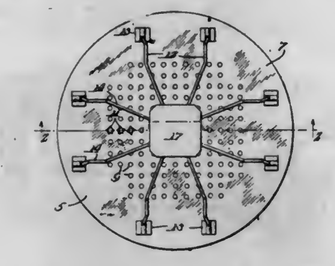
[Claims 6 to 12 not printed in the Gazette.]

1,216,524. CASEMENT-WINDOW LOCK AND JOINT-STRIP. ANDREW G. WASS, Minneapolis, Minn. Filed Mar. 20, 1916. Serial No. 85,230. (Cl. 20—68.)



The combination with a window sash having a slot in the lower rail thereof and a transverse recess communicating with said slot, of a channel-plate guide located within the recess in said rail and having its channel opening into the slot, a combined lock and joint strip movable in said slot, a sliding plate extending from said strip and operable in the channel of said guide plate, and an operating shaft extending into the aforementioned rail and having a cam connection with the sliding plate and having, also, its inner end extending through the channel of said channel-plate guide and into said plate.

1,216,525. TOASTER. CYRENIUS O. WEAVER, Rockford, Ill. Filed July 28, 1915. Serial No. 42,411. (Cl. 53—5.)



1. A toaster comprising a base, pairs of wire members pivotally mounted at their ends on marginal portions of the base and spaced apart quarteringly thereon, so that the pairs cross above the center portion of the base, each pair of members being arched at their center portion forming a support for holding slices of bread, and being shaped at their intersecting arched portions so as to detachably engage one with the other and sustain the members in bread supporting position and permitting the members to be disengaged and folded adjacent to the base.

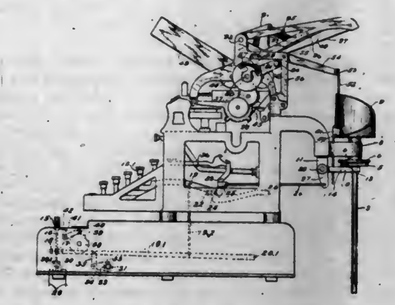
2. A toaster comprising a base, toast supports constructed of wire sections crossed at the center of the base and pivotally mounted at their ends thereon, the wire sections being shaped to form oppositely disposed rests adapted to receive slices of bread inclined upwardly and inwardly, the base being constructed to permit heated air to pass upwardly therethrough to toast the bread positioned on said supports, and means for detachably retaining the crossed center portions of the wire sections in fixed relation and permitting the sections to be folded into close proximity to the base.

3. In a toaster, the combination of a base, toast supports comprising arched metallic strips arranged in upright position to cross at their arched portions and pivoted at their ends to the base so as to be foldable into close proximity thereto, said supports being shaped to carry slices of bread in upright position on opposite sides of their crossed portions inclined toward the same and being yieldably engageable at their said crossed portions whereby the supports are sustained in upright bread-supporting position and may be detached and moved to said lowered position.

4. In a toaster, the combination of a base, a plurality of pairs of toast supports, each pair consisting of arched members parallelly arranged and pivotally mounted at their ends on the base and constructed to carry a slice of bread on opposite sides of and inclined toward the center of the supports, the said pairs of supports being arranged to cross substantially at right angles and to engage one with the other when in upright position so as to be held in such position.

5. A toaster comprising a base, toast supports in the form of wire sections pivoted at their ends to the base and shaped to provide upwardly converging toast supports and a comparatively flat top portion joining the toast-supporting portions, said supports being arranged so that their top portions cross and are engageable one with another to hold the supports in upright position, and a cap or deflector plate pivotally mounted on one of the supports and adapted when the supports are folded into lowered position to lie in close proximity to the base.

1,216,526. PAPER-FFEDING ATTACHMENT FOR ACCOUNTING AND RECORDING MACHINES. JOHN F. WEEDON, Wilmette, Ill. Filed Jan. 13, 1916. Serial No. 71,863. (Cl. 235—58.)



1. In a machine of the class described, the combination with accounting and recording mechanism, of a paper feeding device coöperating with said recording mechanism, means for driving said paper feeding device, said means being dependent for operativity on the setting of said accounting device.

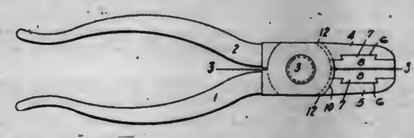
2. In a machine of the class described, the combination with recording mechanism suitably arranged for recording numerical calculations, of a paper feeding device cooperating with said recording mechanism, means for driving said paper feeding device, and connections between said recording mechanism and said paper feeding device controlling the operation of the paper feeding device when calculations are entered to feed paper only upon the correct entry of a calculation.

3. In a machine of the class described, the combination with accounting and recording mechanisms, of a paper feeding device coöperating with said recording mechanism, means for driving said paper feeding device, said means being arranged to automatically become operative after a predetermined cycle of operations of said mechanisms.

4. In a machine of the class described, the combination of recording mechanism, accounting mechanism, common operating devices for said mechanisms, a paper feeding device coöperating with said recording mechanism, said accounting mechanism being provided with means for permitting the operation of said paper feeding device only when the accounting mechanism is in cleared condition.

5. In a machine of the class described, the combination of recording mechanism, accounting mechanism, a paper feeding device, a motor for driving said paper feeding device, a circuit for said motor, and means controlled by said accounting mechanism for maintaining said circuit in open condition except when said accounting mechanism is in cleared condition.

1,216,527. PLIERS. GEORGE B. WELDON and FRANK B. RAMBO, Pittsburgh, Pa. Filed June 12, 1916. Serial No. 103,178. (Cl. 81—47.)



1. In a device of the character described, a jaw end having a dovetailed groove in the face thereof extending across said face and adapted to receive an undercut projection on a removable jaw face, whereby the removable jaw face may be positioned therein by sliding it laterally into place, and a flange on the other jaw member outside the dovetailed groove for holding the removable face in position.

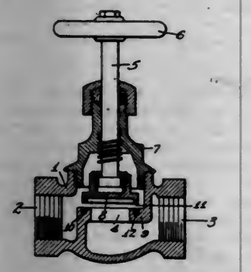
2. In a device of the character described, a jaw end, a dovetailed groove extending across the face of said jaw end and adapted to have an undercut projection on the removable jaw face positioned therein by lateral movement of the jaw face, and a groove in the knuckle face at the base of the jaw end for receiving a projection on the end of the removable face to lock the removable face in position.

3. In a pair of pliers, a pair of pivoted members having jaw ends, a dovetailed groove extending across the face of each jaw end and adapted to receive an undercut projection on a removable jaw face, a flange on the knuckle portion of each member, the two flanges forming between them a groove, and a cut-away portion at the end of each flange adapted upon full opening of the jaw ends to admit of the passage by lateral movement of a projection on the end of each of the removable faces into the groove between the flanges, the flanges acting to prevent the removal of the jaw faces in any other position of the jaws.

4. A pair of pliers comprising a pair of pivoted members having jaw ends, a dovetailed groove in each jaw end extending laterally across the face thereof, a groove in the knuckle portions of the pivoted members, and a removable jaw face having an undercut projection cooperating with the dovetailed groove in the jaw end and having an end projection coöperating with the groove in the knuckle portions.

5. A pair of pliers comprising a pair of pivoted members having jaw ends, a dovetailed groove in each jaw end extending transversely across the face thereof, a flange along the edge of each knuckle portion and forming a groove therebetween, said flanges terminating at such point that when the pliers are fully open an opening is provided at each side of the pliers, a removable face on each jaw end having an undercut projection coöperating with its dovetailed groove and an end projection cooperating with the groove between the flanges on the knuckle portions to be thereby locked in place.

1,216,528. VALVE. WILLIAM WICKERT, Jr., Chicago, Ill. Filed Oct. 3, 1914. Serial No. 864,723. (Cl. 137—4.)



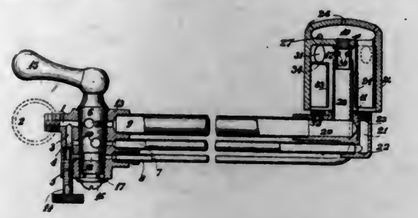
1. A valve comprising a casing having an inlet and an outlet, a controlled opening connecting said inlet and outlet, two engaging parts by which said opening is controlled, one of said parts provided with a groove and the other provided with a projection opposite said groove, a soft asbestos packing in said groove containing a liquid repellent, said projection engaging said soft packing when the valve is closed.

2. A valve comprising a casing, two engaging parts within said casing, one movable and one fixed for controlling the flow of liquid through the valve, one of said engaging parts provided with a groove, a soft liquid repellent packing having a body of solid material in said groove, and an annular projection on the other part adapted to engage said packing.

3. A valve comprising a casing having an inlet and an outlet, a movable part for controlling the passage of material through said valve, an opposed part toward and from which said movable part moves, one of said parts provided with a groove, an oil repellent pressure resisting packing in said groove, the other part engaging the said packing when the valve is closed.

4. A valve comprising a casing having an inlet and outlet, a movable part for controlling the passage of material through said valve, an opposed part toward and from which said movable part moves in opening and closing the valve, one of said parts provided with a groove, an oil repellent packing in said groove consisting of asbestos, fish-glue and glycerin, the other part engaging the said packing when the valve is closed.

1,216,529. GAS-BURNER. LEWIS T. WILCOX, Peekskill, N. Y. Filed Aug. 18, 1914. Serial No. 857,310. (Cl. 158—115.)



1. In a device of the character described, the combination of a burner, a gas supply conduit, a tube communicating with said burner, a valve forming a communication between said tube and said conduit, a plurality of other tubes also communicating with the said conduit through the said valve and having orifices adjacent to the burner, and the said valve provided with means located and arranged to establish communication between the conduit and a plurality of said tubes separately and simultaneously, said burner comprising a frame or casing having orifices therein, communicating with said tubes.

2. In a device of the character described, the combination of a burner, a gas supply conduit, a tube communicating with said burner, a valve forming a communication between said tube and said conduit, a plurality of other tubes also communicating with the said conduit through the said valve and having orifices adjacent to the burner, and the said valve provided with means located and arranged to establish communication between the conduit and a plurality of said tubes separately and simultaneously, a mixer, one of said other tubes having an additional vent for the discharge of gas into the said mixer, and the said mixer having a discharge opening for supplying mixed gas and air in the vicinity of the orifices of said other tubes.

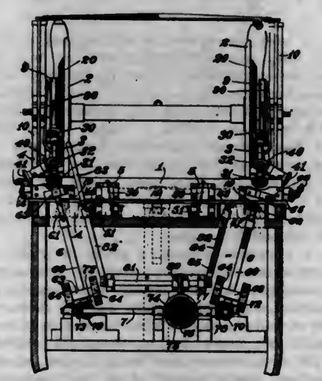
3. In a device of the character described, the combination of a burner, a gas supply conduit, a tube communicating with said burner, a valve forming a communication between said tube and said conduit, a plurality of other tubes also communicating with the said conduit through the said valve and having orifices adjacent to the burner, and the said valve provided with means located and arranged to establish communication between the conduit and a plurality of said tubes separately and simultaneously, said valve having other means located and arranged to maintain communication between one tube and the gas supply conduit while communication with the other tubes is closed and also while each and both of them are open.

4. In a device of the character described, the combination of a burner, a gas supply conduit, a tube communicating with said burner, a valve forming a communication between said tube and said conduit, a plurality of other tubes also communicating with the said conduit through the said valve and having orifices adjacent to the burner, and the said valve provided with means located and arranged to establish communication between the conduit and a plurality of said tubes separately and simultaneously, and a shield adjacent to the orifices of the said other tubes having openings therein to permit the lateral egress of flame therefrom and in close proximity to the said burner.

5. In a device of the character described, the combination of a burner, a gas supply conduit, a tube communicating with said burner, a valve forming a communication between said tube and said conduit, a plurality of other tubes also communicating with the said conduit through the said valve and having orifices adjacent to the burner, and the said valve provided with means located and arranged to establish communication between the conduit and a plurality of said tubes separately and simultaneously, and a plurality of other burners located adjacent to the first named burner, one of the said other tubes having vents located and arranged to discharge gas in the direction of the said burners.

[Claims 6 to 18 not printed in the Gazette.]

1,216,530. PURSE-NET-HAULING MACHINE. CHARLES A. WILLIAMS, Seattle, Wash. Filed Oct. 14, 1916. Serial No. 125,573. (Cl. 254—137.)



1. A net hauling apparatus comprising a drum, a turntable supporting said drum, a fixedly positioned driving shaft adjacent the edge of the drum and a plurality of driving means for said drum mounted on the turntable to interchangeably engage with said driving shaft as the turntable is shifted to different positions.

2. A net hauling apparatus comprising a drum, a turntable supporting said drum, a fixedly positioned driving shaft adjacent the edge of the drum, driving shafts for the drum mounted on the turntable and extending, each to a different position about its edge and adapted to be individually connected with said first named driving shaft as the turntable is turned to different positions.

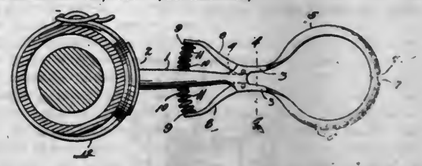
3. A net hauling apparatus comprising a drum, a turntable supporting said drum, bevel gears secured to each end of said drum, a plurality of stub shafts carried by said turn-table and terminating at each end in bevel gears, the gear at one end of each shaft meshing with the gear at an end of the drum, a fixedly positioned driving shaft and a gear at one end of said shaft adapted to engage the second gears upon said stub shafts.

4. A net hauling apparatus comprising a drum, a turntable supporting said drum, bevel gears secured to each end of said drum, a plurality of stub shafts carried by said turn-table, a gear upon one end of each of said stub shafts meshing with a gear at an end of the drum, and means for driving said drum through any one of said stub shafts from a fixed point without the turn-table.

5. A net hauling apparatus comprising a drum, a turntable supporting the drum, a bevel gear and shaft drive for each end of the drum carried by and extending to the edge of the turntable, a fixedly positioned driving shaft having an adjustable upper end and a bevel gear thereon adapted to be engaged with the bevel gear of either of the shafts carried by the turntable.

[Claims 6 to 11 not printed in the Gazette.]

1,216,531. WATCH-HOLDER FOR AUTOMOBILES. AARON H. WOLF, Myerstown, Pa. Filed Mar. 23, 1916. Serial No. 86,173. (Cl. 224—4.)



A watch holder of the class described comprising an arm, means carried by the arm for detachably engaging a support, the forward end of said arm having furcations carried thereby, said furcations being provided with slots, a pair of jaws adapted to clamp a watch, said jaws having their inner ends provided with arms, said arms being pivotally mounted in the slots, and springs located on opposite sides of the first named arm and having their inner ends engaged therewith and their outer ends engaged with the inner ends of the second named arms.

1,216,532. LOOSE-LEAF BINDER. ISAAC WOLF, Millwall, London, England. Filed Apr. 5, 1916. Serial No. 89,025. (Cl. 129—13.)



1. A loose leaf binder comprising a pair of clamping bars, means for normally retaining said clamping bars in contact with one another, a plurality of filing posts carried by said clamping bars, and means for displacing said clamping bars relatively to said filing posts to a limited extent.

2. A loose leaf binder comprising a pair of clamping bars, means for normally retaining said clamping bars in contact with one another, a plurality of filing posts carried by said clamping bars, strengthening means carried by said clamping bars, and means for displacing said clamping bars to a limited extent relatively to said filing posts and said strengthening means.

3. A loose leaf binder comprising clamping bars, means for normally holding said clamping bars in contact, a plurality of filing posts, a plurality of strengthening posts, and means for displacing said clamping bars to a limited extent relatively to said filing posts and said strengthening posts.

4. A loose leaf binder comprising clamping bars, means for normally retaining said clamping bars in contact, filing posts composed of parts capable of endwise movement relatively to one another and to said clamping bars, and means for displacing said clamping bars to a limited extent relatively to said filing posts.

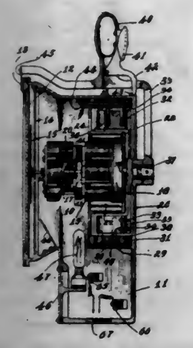
5. A filing post for a loose-leaf binder consisting of a plurality of stock sections assembled end to end and slidable with relation to each other so that each section may be displaced relatively to the remaining sections.

[Claims 6 to 12 not printed in the Gazette.]

1,216,533. ELECTRICAL TELEGRAPH AND INDICATOR SYSTEM. FRANK W. WOOD, Brooklyn, N. Y., assignor to Charles Cory & Son, Inc., New York, N. Y., a Corporation of New York. Filed June 24, 1915. Serial No. 36,022. (Cl. 177—337.)

1. A combined electrical order transmitting and receiving instrument, comprising, in combination, an indicating member for indicating an order received by the instrument, electro-magnetic means for controlling said indicating member by a receiving circuit, a hand-operated contact device for closing transmitting circuits to transmit

an order from the instrument, and a plurality of contacts coöperating therewith and disposed in a substantially circumferential arrangement substantially surrounding said electro-magnetic means.



2. A combined electrical order transmitting and receiving instrument, comprising, in combination, an indicating member rotatably mounted for indicating an order received by the instrument, electro-magnetic means for controlling said indicating member by a receiving circuit, a hand-operated contact device for closing transmitting circuits to transmit orders from the instrument, a plurality of contacts coöperating therewith and disposed in a substantially circumferential arrangement substantially surrounding said electro-magnetic means, a hand-operated indicating member moving when said hand-operated contact device is moved, and a common signal dial coöperating with both said indicator members.

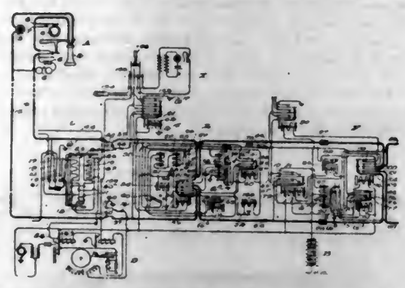
3. A combined electrical order transmitting and receiving instrument comprising, in combination, a case, a rotatable indicating member for indicating a signal received by the instrument, electro-magnetic means within said case to be connected in a receiving circuit for controlling said indicating member electrically from a point outside of the case, a hand-operated contact device rotatably mounted within the case for closing transmitting circuits leading from the instrument to transmit an order from the instrument, and a plurality of contact segments within said case coöperating therewith and disposed in a substantially concentric arrangement around said electro-magnetic means.

4. A combined electrical order transmitting and receiving instrument comprising, in combination, a case, a rotatable indicating member for indicating a signal received by the instrument, electro-magnetic means within said case to be connected in a receiving circuit for controlling said indicating member electrically from a point outside of the case, a hand-operated contact device rotatably mounted within the case for closing transmitting circuits leading from the instrument to transmit an order from the instrument, a plurality of contact segments within said case coöperating therewith and disposed in a substantially concentric arrangement around said electro-magnetic means, an indicating dial, said indicating member having a pointer coöperating with said dial, and a hand-operated pointer moved when said contact device moves and coöperating with said dial.

5. A combined electrical order transmitting and receiving instrument comprising, in combination, a case, a hand-operated contact device rotatably mounted within said case, a substantially cylindrical wall having a plurality of insulated contact segments coöperating with said hand-operated contact device to close transmitting circuits for transmitting an order from the instrument, a rotatable indicating member, and electromagnetic means surrounded by said wall for actuating said indicating member by a receiving circuit from a point remote from the cause.

[Claims 6 to 14 not printed in the Gazette.]

1,216,534. AUTOMATIC TELEPHONE SYSTEM. GEORGE A. YANOCHOWSKI, Chicago, Ill., and HARRY E. HERSHEY, Whitewater, Kans., assignors to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 28, 1913. Serial No. 803,526. (Cl. 179—27.)



1. In a telephone system, a calling and a called subscriber's line, means including selector and connector switches for establishing connection between said lines, and means for signaling an operator if said selector strikes an open trunk, or said connector strikes an open line.

2. In a telephone system, a calling and a called subscriber's line, means including trunk lines, selector switches, repeaters and connectors for establishing connection between said lines, and means for signaling an operator if said selector strikes a trunk which is open on either side of said repeater, or if said connector strikes a called line which is open.

3. In a telephone system, a group of trunk lines, an automatic switch adapted to connect with any one of said trunks, each of said trunks comprising a plurality of conductors, a ground normally adapted to be connected with one of said conductors when connection is established with said trunk, means for removing said ground in case any of the conductors of said trunk is open, an operator's position, and means controlled by the removal of said ground for signaling said operator.

4. In a telephone system, a group of trunk lines, an automatic switch adapted to connect with any one of said trunks, each of said trunks comprising a plurality of conductors, a ground normally adapted to be connected with one of said conductors when connection is established with said trunk, means for removing said ground in case any of the conductors of said trunk is open, an operator's position, a relay associated with said operator's position, energizing circuits for said relay, a short-circuit for said relay including said ground connection, whereby when said ground connection is removed said relay is energized, and an operator's signal controlled by the energization of said relay.

5. In a telephone system, a line, an automatic switch adapted to establish connection with said line, an operator's position, a relay associated with said position, means for energizing said relay when said switch strikes a line which is open, an operator's signal controlled by said relay, and means by which the operator may then establish connection with said switch.

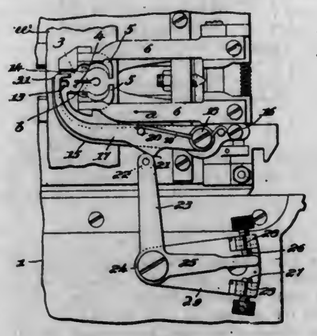
[Claims 6 to 93 not printed in the Gazette.]

1,216,535. BUTTON. JOHN F. ZAK, Chicago, Ill. Filed Oct. 25, 1916. Serial No. 127,603. (Cl. 24—104.)



The combination with a button having a bifurcated shank the end portions of which are transversely grooved; of a disk having a radial edge recess and a slot enlarged at one end and in alinement with the recess, said recess and slot receiving respectively the branches of the button shank, and their edges seating in the grooves thereof, a cap hinged to the disk and adapted to seat on the outer face thereof over the ends of the shank branches, said cap having an inturned edge, a ring housed under said edge, a portion of the edge being recessed to expose the ring, and a hinge knuckle on the disk and engageable by the exposed portion of the ring.

1,216,536. SEWING-MACHINE. FRANK ZALESKI, Somerville, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Dec. 20, 1915, Serial No. 67,695. Renewed Jan. 9, 1917. Serial No. 141,497. (Cl. 112—33.)



1. In a buttonhole sewing machine, the combination with stitch-forming mechanism including a reciprocating eye-pointed needle, of work-holding means, means to give the work-holding means a work-feeding movement while the edge stitches on the buttonhole are being formed and an additional movement after the stitching on the buttonhole is completed to carry the work into buttonhole-cutting position, and means situated above the work and rendered operative by such additional movement to cut the needle thread.

2. In a buttonhole sewing machine, the combination with stitch-forming mechanism including a reciprocating eye-pointed needle, of work-holding means, means to give the work-holding means a work-feeding movement while the edge stitches on the buttonhole are being formed and an additional movement after the stitching on the buttonhole is completed to carry the work into buttonhole-cutting position, and means situated above the work and rendered operative by such additional movement to cut the needle thread and clamp the severed end thereof.

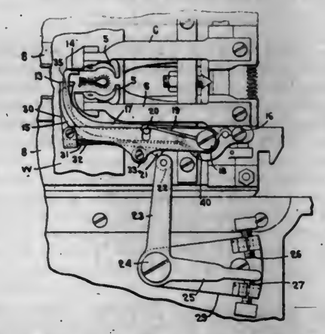
3. In a buttonhole sewing machine, the combination with stitch-forming mechanism including a reciprocating eye-pointed needle, of work-holding means, means to give the work-holding means a work-feeding movement while the edge stitches on the buttonhole are being formed and an additional movement after the stitching on the buttonhole is completed to carry the work into buttonhole-cutting position, and means situated above the work and rendered operative by such additional movement to clamp the needle thread, said means operating to release the thread after the stitching operation has been commenced on the next succeeding buttonhole.

4. In a buttonhole sewing machine, the combination with stitch-forming mechanism including a reciprocating eye-pointed needle, of work-holding means, means to give the work-holding means a work-feeding movement while the edge stitches on the buttonhole are being formed and an additional movement after the stitching on the buttonhole is completed to carry the work into buttonhole-cutting position, and means situated above the work and rendered operative by such additional movement to cut the needle thread and clamp the severed end thereof, said means operating to release the thread after the stitching operation has been commenced on the next succeeding buttonhole.

5. In a buttonhole sewing machine, the combination with stitch-forming mechanism including a reciprocating eye-pointed needle, of work-holding means, means to move the work-holding means thereby to carry the work from buttonhole-cutting to stitching position, and then to give the work a work-feeding movement, and then to return the work to buttonhole-cutting position, a pair of thread-clamping jaws carried by the work-holding means, and means rendered operative by or through the movement of the work-holding means to cause said jaws to clamp the needle thread while the work is moving from buttonhole-stitching to buttonhole-cutting position, and to release the needle thread after the stitching operation has been commenced on the next buttonhole.

[Claims 6 to 12 not printed in the Gazette.]

1,216,537. THREAD CUTTER AND CLAMP FOR SEWING-MACHINES. FRANK ZALESKI, Somerville, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Jan. 8, 1916. Serial No. 71,080. (Cl. 112—33.)



1. In a sewing machine, the combination with stitch-forming mechanism, of work-clamping means, said stitch-forming mechanism and work-clamping means having a movement relative to each other during a predetermined cycle of operations including a stitching operation, a thread clamp carried by said work-clamping means above the work, a cutter separate from the thread clamp, and means rendered operative by such relative movement to cause the thread clamp to clamp the thread at the end of the stitching operation and then to actuate the cutter to cut the thread.

2. In a sewing machine, the combination with stitch-forming mechanism, of work-clamping means, said stitch-forming mechanism and work-clamping means having a relative movement during a predetermined cycle of operations including a stitching operation, a pair of thread-clamping jaws carried by the work-clamping means above the work, a thread cutter separate from said jaws, and means rendered operative by such relative movement to cause the thread-clamping jaws to clamp the thread at the end of the stitching operation and subsequently to actuate the cutter to cut the clamped thread.

3. In a sewing machine, the combination with stitch-forming mechanism, of work-clamping means, said stitch-forming mechanism and work-clamping means having a movement relative to each other during a predetermined cycle of operations including a stitching operation, two movable elements, one adapted to clamp and the other to cut the needle thread above the work held in the work-clamping means and means to actuate said elements successively at the end of the stitching operation whereby the thread will be first clamped and then cut.

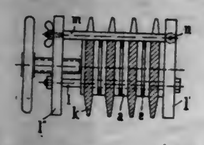
4. In a buttonhole sewing machine, the combination with stitch-forming mechanism including a reciprocating eye-pointed needle, of work-clamping means, means to give the work-clamping means a work-feeding movement while the edge stitches on a buttonhole are being formed

and an additional movement after the stitching on a buttonhole is completed to carry the work into button-hole-cutting position, a thread-clamping device carried by the work-clamping means above the work, a thread-cutting device independent of the thread-clamping device, and an actuating device rendered operative by the movement of the work-clamping means to cause the thread clamp to clamp the thread at the end of the stitching operation and subsequently to actuate the cutter to cut the thread.

5. In a buttonhole sewing machine, the combination with a frame carrying stitch-forming mechanism, of work-clamping means, means to move the work-clamping means on the frame thereby to move the work carried thereby from stitching to buttonhole-cutting position, a fixed and a movable thread-clamping jaw mounted on the work-clamping means above the work held in the work-clamping means, a thread cutter independent from said jaws and also mounted on said work-clamping means, and an actuator carried by said frame and operating during said movement of the work-clamping means to cause the thread-clamping jaws to clamp the thread and subsequently to actuate the cutter to cut the clamped thread.

[Claims 6 to 12 not printed in the Gazette.]

1,216,538. MEANS FOR PRODUCING ELECTRICAL OSCILLATIONS. GEORG GRAF ARCO and RAGNAR HÅKAN RENDAHL, Berlin, Germany, assignors to Gesellschaft Für Drahtlose Telegraphie, M. B. H., Berlin, Germany. Filed Mar. 18, 1909. Serial No. 484,217. Renewed Jan. 8, 1917. Serial No. 141,338. (Cl. 250—38.)



1. In an arrangement for producing slightly damped electrical oscillations by the shock excitation method, a short, quenched spark gap, comprising a plurality of electrodes, the active faces of said electrodes being composed of a good heat conducting metal, having a co-efficient of heat conduction at least equal to that of gold.

2. In an arrangement for producing slightly damped electrical oscillations by the shock excitation method, a short, quenched spark gap, comprising a plurality of parallel electrodes, the active faces of said electrodes being composed of a good heat conducting metal, having a co-efficient of heat conduction at least equal to that of gold.

3. In an arrangement for producing slightly damped electrical oscillations by the shock excitation method, a short, quenched spark gap, comprising a plurality of plates forming the electrodes of the gap, the active faces of said plates being composed of a good heat conducting metal, having a coefficient of heat conduction at least equal to that of gold.

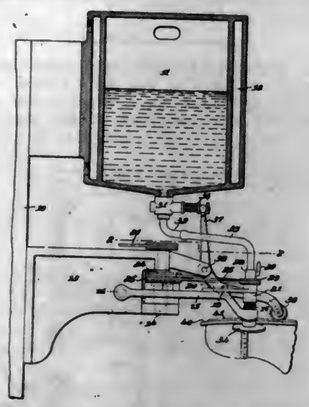
4. In an arrangement for producing slightly damped electrical oscillations by the shock excitation method, a short, quenched spark gap, comprising a plurality of electrodes, the active faces of said electrodes being composed of silver.

5. In an arrangement for producing slightly damped electrical oscillations by the shock excitation method, a short, quenched spark gap, comprising a plurality of parallel electrodes, the active faces of said electrodes being composed of silver.

[Claims 6 to 34 not printed in the Gazette.]

1,216,539. MACHINE FOR CEMENTING BOOTS AND SHOES. WINTHROP D. BAKER, Abington, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Mar. 22, 1916. Serial No. 86,314. (Cl. 91—39.)

1. In a device of the class described, a plurality of revoluble fluid distributers the axes of which are arranged perpendicularly to the work to be operated upon; carriers for said distributers adapted to be swung toward or from each other; means to rotate said distributers; means to swing said distributers toward each other; and means governed by the work to separate said distributers.



2. In a device of the class described, a plurality of fluid distributing devices; yieldingly mounted supports therefor; and guide members adapted to contact with the work to control the position of said distributing devices.

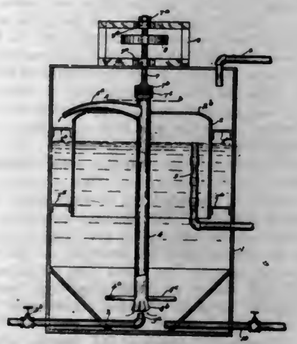
3. In a device of the class described, a plurality of movable arms; fluid distributers revolubly and adjustably mounted thereon; means to supply said distributers with cementitious material; and guide members adjacent said distributers.

4. In a device of the class described, a plurality of yieldingly mounted carriers; fluid distributers revolubly, adjustably and detachably mounted thereon; shiftable guide members adjacent said distributers; a container; flexible conduits connecting said distributers and container; a valve in said container; and a lever adapted to contact with the work and operate said valve.

5. In a device of the class described, pivotally mounted arms; fluid distributers mounted at the ends thereof; guide disks mounted on said arms adjacent to said distributers and adapted to contact with the work and follow the contour thereof during the progress of the work.

[Claims 6 to 11 not printed in the Gazette.]

1,216,540. FLUID-AGITATOR. LOUIS J. BANKS, ANDRE D. ANDERSON, and EDWIN S. LOVELL LOVELL, National City, Cal. Filed July 17, 1915. Serial No. 40,515. (Cl. 210—5.)

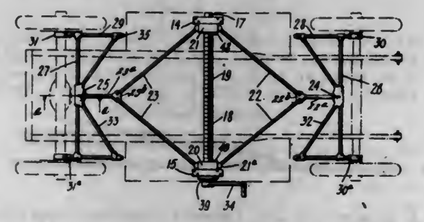


1. In a centrifugal agitator, the combination of a receptacle, an annular partition of smaller diameter placed centrally therein, a centrifugal pump suspended centrally therein and adapted to revolve, comprising a pipe with a lateral hollow arm extending to near the outer portion of said receptacle.

2. In a centrifugal agitator, the combination of a receptacle, an annular partition of smaller diameter placed centrally therein, a centrifugal pump suspended centrally therein and adapted to revolve, comprising a pipe with a lateral hollow arm extending to near the outer portion of said receptacle and means for priming said pump consisting of a water pipe for conducting water to the lower end of said first mentioned pipe.

3. In a centrifugal agitator, the combination of a receptacle, an annular partition of smaller diameter placed centrally therein, a centrifugal pump suspended centrally therein and adapted to revolve, comprising a pipe with a lateral hollow arm extending to near the outer portion of said receptacle, means for priming said pump consisting of a water pipe for forcing water to the lower end of said first mentioned pipe, means for filling said receptacle, means for decanting therefrom and means for emptying said receptacle.

1,216,541. LIFTING DEVICE. CHARLES J. BARRENPOHL, New York, N. Y. Filed Feb. 1, 1916. Serial No. 75,493. (Cl. 254—89.)

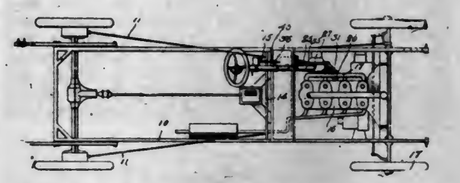


1. A lifting device embodying lifting elements connected to the axles of a vehicle and means for imparting a rotary motion to said lifting elements to raise the vehicle from contact with its supporting surface, said means embodying a screw, a plurality of members actuated thereby to move in opposite directions transversely of the vehicle and means of connection between said elements and said members, said actuating means applying power to said elements in a direction longitudinally of the vehicle.

2. A lifting device comprising lifting elements supported from the axles of a vehicle and means for simultaneously moving all of said elements in a downward direction to raise the vehicle out of contact with the supporting surface and in the opposite direction to lower the vehicle to its position on the supporting surface and return said lifting elements to their normal position of rest, said means embodying a screw supported by said vehicle transversely thereof, a plurality of members actuated thereby and movable in opposite directions on said screw and means of connection between said members and said lifting elements, whereby upon the rotation of said screw, the movement of said members transversely of the vehicle will impart power to said connected means in a direction longitudinally of the vehicle to impart a rotary motion to said lifting elements.

1,216,542. VACUUM-OPERATED BRAKE MECHANISM. ROBERT F. BERKEBILE, Kantner, Pa. Filed Nov. 2, 1916. Serial No. 129,189. (Cl. 188—6.)

1. In a brake mechanism, the combination with the intake manifold and the carbureter of an internal combustion engine, of a brake cylinder, a valve casing communicating at one side with the cylinder and adapted to be interposed between the manifold and the carbureter for connecting the same together, said casing having an air vent in said side, and a valve arranged in said side of the casing normally out of line with the charge passage therein and adapted to control the exhaust of air from the cylinder and the admission of air thereto through said vent.



2. In a vacuum-controlled brake mechanism, a cylinder open to the atmosphere at one end and closed at its opposite end, a valve casing having an exhaust port therein adapted to be connected to a suction-creating device, and having an air-receiving passage therein open to the atmosphere, separate pipes connecting the exhaust port and the air inlet passage to the closed end of said cylinder, and controlling means mounted in said casing adapted to alternately open and close the exhaust port and the air inlet passage to vary the degree of suction in said closed end of the cylinder.

3. In a brake mechanism including a cylinder, the combination with an intake manifold of an explosive engine, of a valve casing formed upon the lower end of the manifold, a bottom plate adapted for engagement over the outlet side of a carbureter and adapted to fit against said valve casing, a cylinder exhaust connection in one side of said valve casing, a valve in said casing between the cylinder exhaust connection and the manifold for controlling the suction in the manifold from said cylinder connection, and means for regulating said valve for varying the degree of suction in said cylinder connection.

4. In a brake mechanism, the combination of an intake manifold of an internal combustion engine, a valve casing adapted to be fitted to said manifold, said valve casing having exhaust and air inlet ports, and a single valve in said casing arranged to control communication between the casing and the manifold, and between said air inlet port and the atmosphere, said valve being adapted to simultaneously control the suction and the admission of air through said casing.

5. In a brake mechanism, the combination with the manifold and a carbureter of an internal combustion engine, of a valve casing adapted to be fitted to said manifold and forming a connection between the same and the carbureter and communicating at one side therewith, said casing being provided in its opposite side with an exhaust port, a valve pivoted in said opposite side of said casing adapted to normally cover said port and provided with a closure part seated in one side of the casing and adapted to move into the same when said port is uncovered to communicate the exhaust port with the manifold, said casing having an air inlet passage, and means carried by said valve for controlling the passage of air through the casing.

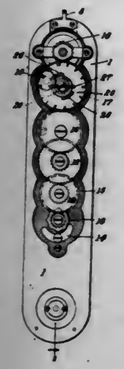
[Claims 6 and 7 not printed in the Gazette.]

1,216,543. CAMERA. CARL BORNMANN and EZRA C. CLARK, Binghamton, N. Y., assignors to Ansco Company, Binghamton, N. Y., a Corporation of New York. Filed July 29, 1916. Serial No. 111,981. (Cl. 242—71.)

1. A film roll camera having a take-up spool, a center for the spool, a motor located within the body of the camera box and in rear of the path of the film, means whereby the spool may be rotated both by the motor and by devices independent thereof, gearing upon the spool center actuated by the motor and also by said independent devices and an indicator operated by said gearing.

2. A film roll camera having a power driven take-up spool, means whereby the spool may be rotated in one direction independently of the power mechanism, a motor located within the body of the camera, an indicator actuated by the rotation of the spindle of the take-up spool, and means whereby the dial plate of the indicator may be adjusted independently of the rest of the mechanism.

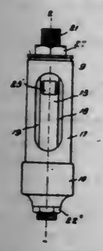
3. A film roll camera having a motor located in rear of the path of the film and entirely within the body of the camera box and which positively rotates the take-up spool in one direction, means to stop and start the motor at predetermined times, an indicator observable from the exterior of the camera, means independent of the motor whereby the spindle of the take-up spool may be rotated, and gearing so connecting the indicator with the said spindle that the indicator will be operated by the rotation of the spindle.



4. A film roll camera having a power driven take-up spool, a winding spindle for the spool, two gears, one fast and the other loose upon the winding spindle, an axis parallel with the spindle and two gears upon it, one of which engages with the loose gear on the spindle and the other with the fast gear on the spindle.

5. A film roll camera having a power driven take-up spool, a winding spindle for the spool, two gears, one fast and the other loose upon the winding spindle, an axis parallel with the spindle, two gears upon the axis, one of which engages with the loose gear on the spindle and the other with the fast gear on the spindle, an indicator plate carried by the gear which engages with the fast gear on the spindle, and means whereby the dial plate may be adjusted relative to the other mechanism.

1,216,544. GAGE. ARTHUR J. BROWN, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Aug. 23, 1911. Serial No. 645,503. (Cl. 73—54.)



1. A gage adapted to be placed in communication with a receptacle and to indicate at all times the level of fluid in said receptacle, including an inlet member having a recessed portion, an overflow member adjustable in and with respect to said inlet member, a sight glass, and means supported in the recess of said inlet member to support said sight glass.

2. In combination, a receptacle, a gage adapted to indicate the level of fluid in said receptacle, said gage being connected with said receptacle and being adapted to freely communicate therewith at all times, and a device adjustable within said gage to determine the level at which fluid may overflow from said gage.

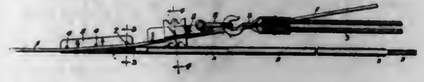
3. An indicating device adapted to be placed in communication with a fluid-containing receptacle and to indicate any working fluid level therein, comprising a body portion adapted to contain fluid to a level corresponding to any normal level of fluid in said receptacle, and an overflow device operatively connected to the body portion and adjustable relatively thereto, the body portion being provided with means permitting the ascertaining of the level of the fluid within the device.

4. In a gage, a hollow member provided with an inlet portion, a tubular element supported at one end in said hollow member, an overflow member extending through said first member and adjustable relatively thereto and extending into said tubular element, and means engaging said overflow member for closing the other end of the tubular element.

5. In combination with a fluid containing receptacle, a gage for indicating any working level of fluid in said receptacle, said gage including a hollow element adapted to contain fluid to the same level as that of the fluid in said receptacle and having an inlet opening, and a member opening into said hollow member and adjustable relatively thereto to determine the level at which fluid within said element may overflow.

[Claims 6 to 9 not printed in the Gazette.]

1,216,545. WIRE-CONNECTOR. JOSEPH E. BURGESS, St. Louis, Mo., assignor to United Railways Company of St. Louis, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 21, 1916. Serial No. 92,618. (Cl. 173—263.)



1. A device of the character described comprising brackets, means for removably connecting the brackets to the wire, a connector between the brackets adapted to place the two parts of the broken wire in circuit with each other, and an element for supporting the device in connection with the adjacent separate wire stretching mechanism.

2. A device of the character described comprising two brackets, means for removably connecting the brackets to adjacent portions of the broken wire, a connector between the brackets comprising two relatively long telescoping parts in connection with said brackets respectively, adapted to place the two parts of the broken wire in circuit with each other, two diverging arms in connection with one of said parts adapted to receive the adjacent wire stretching mechanism between them, and an element for holding the wire stretching mechanism between said arms.

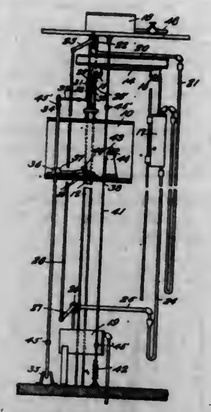
3. A device of the character described comprising two brackets of duplicate construction each composed of a base having its upper surface inclined downwardly and outwardly, whereby the under surfaces of the brackets are normally in alinement with the under surfaces of the wires resting thereon, and flanges rising from the base and adapted to receive the wire between them; means for securing the flanges to the wire, and a connector between said brackets comprising two relatively long telescoping parts connected to said brackets respectively, adapted to place the two parts of the broken wire in circuit with each other.

4. A device of the character described comprising two brackets, releasable devices for supporting the brackets in connection with adjacent portions of a broken wire, an expansible connection between said brackets adapted to serve as an electric conductor between the adjacent portions of the wire, and an element for supporting the device in connection with adjacent separate wire stretching mechanism.

5. A device of the character described comprising two brackets, releasable means for supporting the brackets in connection with adjacent portions of a broken wire, an expansible connection between said brackets adapted to serve as an electric conductor between the adjacent portions of the broken wire and to transmit power for driving a car, and means for supporting the device in connection with adjacent wire stretching mechanism.

[Claims 6 to 8 not printed in the Gazette.]

1,216,546. WATER-BALANCED ELEVATOR. LOYD J. CALDWELL, Wilson, Idaho. Filed June 1, 1916. Serial No. 101,135. (Cl. 187—15.)



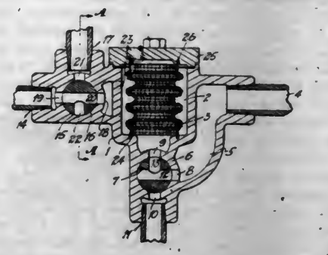
1. The combination with an elevator car; of a tank connected to the car to form a counterweight therefor, a supply pipe connected to the tank, a draw off pipe connected to the tank, vertically alined valves in said pipes, and a rod connecting the valves and passing through the car, a cable passing vertically through the car and having fixed ends, means within the car to cause the car to travel along the cable when said car is counterbalanced.

2. The combination with an elevator car; of a tank connected to the car to form a counterweight therefor, a supply pipe connected to the tank, a draw off pipe connected to the tank, vertically alined valves in said pipes, a rod connecting the valves and passing through the car, a cable passing vertically through the car and having fixed ends, a drum rotatably mounted in the car around which said cable is wound, and a crank for the drum operable by the elevator attendant to cause travel of the car on the cable.

3. In combination, an elevator car, a counterweight therefor, a cable connecting and supporting the car and counterweight, a cable grip adapted to engage said cable, a rod passing through the car and arranged to operate the grip upon movement, a gripping device fixed to the car and adapted to engage the rod to move the latter as the car moves, and operating means for the rod gripping device mounted within the car.

1,216,547. SELF-CLEANING STRAINER FOR LIQUIDS. GEORGE W. COLLIN, Bridgeport, Conn. Filed Mar. 21, 1916. Serial No. 85,563. (Cl. 210—16.)

1. A strainer such as described, comprising a strainer body having within it a generally cylindrical strainer chamber with an inlet duct formed in the strainer body and entering such strainer chamber from one end of said chamber, said strainer body having also a blow off duct formed in the strainer body and adapted for communication with the strainer chamber through said inlet duct, said strainer body having also an outlet duct formed in it and communicating with said strainer chamber through the side thereof, said strainer body having also a cleaning fluid duct adapted to discharge into said strainer chamber, and having a splitter in the path of such discharge, whereby cleaning fluid entering said strainer chamber is diverted laterally; in combination with a generally cylindrical hollow screen member located longitudinally in said strainer chamber and seated at its ends in the ends of said chamber, whereby fluid to be screened enters the screen through one end and passes out through the side thereof, and whereby cleaning fluid enters the screen through the side and passes out through one end thereof; and in combination with valve means controlling the inlet duct and blow off duct and the outlet duct and cleaning fluid duct.



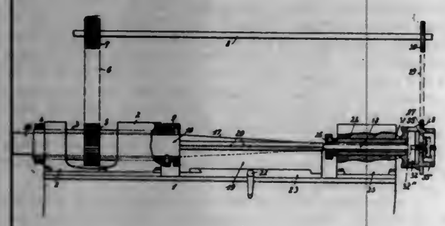
2. A strainer such as described, comprising a strainer body having, as a separable part of it, a removable plate, said body having within it a generally cylindrical strainer chamber, one end of which is normally closed by said plate, said body having an inlet duct formed in it and which enters such strainer chamber from the end of that chamber opposite said plate, said strainer body having also a blow-off duct formed in it and adapted for communication with the strainer chamber through said inlet duct, said strainer body having also an outlet duct formed in it and communicating with said strainer chamber through the side thereof, said strainer body having also a cleaning fluid duct adapted to discharge into said strainer chamber, and having a splitter in the path of such discharge whereby cleaning fluid entering such strainer chamber is diverted laterally; in combination with a generally cylindrical hollow screen member located longitudinally in said strainer chamber and seated at one end in an end wall of said strainer chamber surrounding the mouth of the inlet duct, and seated at the other end in the said removable plate, whereby the strainer body is held in place within said strainer chamber, and whereby fluid to be screened enters the screen through one end and passes out through the side thereof, and whereby cleaning fluid enters the screen through the side and passes out through one end thereof: and in combination with valve means controlling the inlet duct and blow-off duct and the outlet duct and cleaning fluid duct.

3. A strainer such as described comprising a strainer body having within it a generally cylindrical strainer chamber with an inlet duct formed in the strainer body and entering such strainer chamber from one end of said chamber, said strainer body having also a blow-off duct formed in the strainer body and adapted for communication with the strainer chambers through said inlet duct, said strainer body having also an outlet duct formed in it and communicating with said strainer chamber through the side thereof, and provided near its communication with said strainer chamber with a splitter arranged to divert fluid flowing through the outlet duct into said strainer chamber to the sides of said strainer chamber, said strainer body having also a cleaning fluid duct adapted for the discharge of cleaning fluid through said outlet duct into said strainer chamber; in combination with a generally cylindrical hollow screen member located longitudinally in said strainer chamber and seated at its ends in the ends of said chamber; and in combination with a three-way valve at the intersection of the outlet duct and cleaning fluid duct, and arranged to permit flow outwardly through the outward duct or, alternatively, inwardly through the cleaning fluid duct and outlet duct past the splitter, and in further combination with valve means controlling the inlet duct and blow-off duct.

4. A strainer such as described, comprising a strainer body having within it a strainer chamber and a hollow screen member within that chamber and spaced away from the walls thereof, said strainer body having service inlet and outlet connections, one of which connects with the interior of such screen member, and the other of which connects with the space in said strainer chamber surrounding said screen member, butterfly valves for closing and opening at will said inlet and outlet connections, valve operating means for one or both of said valves comprising an operating lever hinged to its corresponding valve and adapted to engage lugs provided on the strainer body at positions corresponding to the closed and open position of the corresponding valve, said strainer body having also a cleaning fluid-connection and a blow-off connection, the former of which connects with the space to which the service outlet connects, and the latter of which connects with the space to which the service inlet connects.

5. A strainer such as described, comprising a strainer body having within it a strainer chamber and a hollow screen member within that chamber and spaced away from the walls thereof, said strainer body having service inlet and outlet connections, the former of which connects with the interior of such screen member, and the latter of which connects with the space in said strainer chamber surrounding that screen member, said strainer body further having a cleaning fluid connection leading to the space in said strainer chamber surrounding said screen member and having also a splitter located at the inlet of said cleaning fluid to the sides of such screen member, said strainer body having also a blow-off connection and valve means controlling the flow through such service inlet connection and blow-off connection, and through such service outlet connection and cleaning fluid inlet connection.

1,216,548. MACHINE FOR THE PRODUCTION OF IRON TURNINGS. EDOUARD COTTARD, Nezel, France, assignor to Société E. Cottard & Cie., Nezel, France. Filed June 22, 1914. Serial No. 846,461. (Cl. 29—4.5.)



1. A machine for making iron turnings from a bar, comprising a number of cutting tools arranged along the bar and movable toward and away from the bar, means for rotating said bar and means for feeding the bar longitudinally by forming a thread along the bar in the part which has been acted upon by the tools, substantially as described and for the purpose set forth.

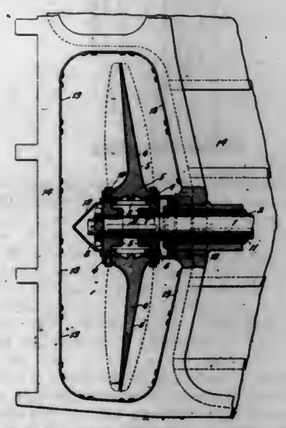
2. A machine for making iron turnings from a bar, comprising a number of cutting tools arranged along the bar and movable toward and away from the bar, means for rotating said bar, a die adapted to form a thread along the bar in the part which has been acted upon by the tools and a nut engaging the threads formed to feed the bar forward, substantially as described and for the purpose set forth.

3. In a machine for making iron turnings, tools for cutting iron turnings from a bar, means for rotating said bar, a die adapted to form a thread along the bar in the part which has been acted upon by the tools, a nut engaging the threads thus formed to feed the bar, a casing carrying the die and the nut, and means for rotating said casing in the same direction as the bar at a lower speed, substantially as described and for the purpose set forth.

4. In a machine for making iron turnings, tools for cutting iron turnings from a bar, means for rotating said bar, a die adapted to form a thread along the bar in the part which has been acted upon by the tools, a nut engaging the threads thus formed to feed the bar, a casing carrying the die and the nut, means for rotating said casing in the same direction as the bar at a lower speed, a hollow shaft secured to the casing, a headstock for supporting said shaft and rollers mounted on the hollow shaft for supporting the bar, substantially as described and for the purpose set forth.

5. In a machine for making iron turnings, tools for cutting iron turnings from a bar, a hollow shaft through which the bar extends, means for rotating said shaft, blocks sliding radially in said shaft, rollers mounted on said blocks and adapted to impart to the bar a rotary movement, a nut screwed upon the shaft and engaging with said radial blocks, and means for feeding the bar longitudinally by forming a thread thereon, substantially as described and for the purpose set forth.

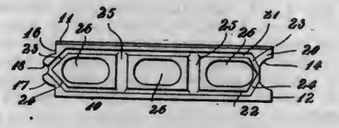
1,216,549. SHIP-PROPELLER. MATTHEWS E. DAVIS, New York, N. Y. Filed June 16, 1916. Serial No. 103,916. (Cl. 115—34.)



The combination of an iron or steel hull, with a steel propeller shaft having a fixed sleeve insulated from the hull; a propeller keyed to and also clamped endwise in place on the shaft; and a gasket between the opposed walls of the sleeve and propeller hub; the propeller comprising an iron or steel propeller-shaped core and a copper-containing metal coating on its surfaces, and the hull being provided with removable zinc plates adjacent the propeller; the copper-containing metal coating resisting pitting and preventing pitting of the coated propeller core and of the portion of the shaft in the propeller hub bore; and the zinc plates in proximity to the propeller protecting the hull against electrolytic action; and the gasket excluding water from access to the shaft at the joint between the opposed walls of said sleeve and propeller hub; and the said metallic coating increasing the strength of the blades cross-sectionally.

1,216,550. BUILDING-BLOCK. ANTON DE CICILIANI, New York, N. Y. Filed Feb. 9, 1916. Serial No. 77,162. (Cl. 72—38.)

In a building block having at one end a single projecting rib, extending its full height, and a corresponding channel in the other end of a recess formed in the extreme outer part of said rib, said block having straight surfaces at its upper and lower sides, a pair of longitudinal recesses formed in the top and bottom of said blocks, each recess extending contiguously along the side edges, converging recesses jointed at their outer ends with said longitudinal recesses, the point of convergence being in register with the ends of said rib recess, transverse recesses extending at intervals between said longitudinal



recesses, and openings formed through said block between said converging recesses and the next adjacent transverse recess and also between pairs of said transverse recesses, all substantially as shown and described.

1,216,551. STAY-BOLT FOR BOILERS. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Nov. 30, 1914. Serial No. 874,823. (Cl. 85—1.5.)



1. As a new article of manufacture, a stay bolt, the shank of which is slotted all the way through adjacent one end, and provided with a plurality of slots extending part way through adjacent the other end.

2. As a new article of manufacture, a stay bolt consisting of a shank and two integral heads, the shank being slotted all the way through near the inner head and provided with a plurality of slots adjacent the outer head, the said slots at the two ends of the shank overlapping at the center.

3. As a new article of manufacture, a stay bolt consisting of a shank and two integral heads, the shank being slotted all the way through adjacent the inner head and provided with a plurality of slots extending part way through, adjacent the outer head.

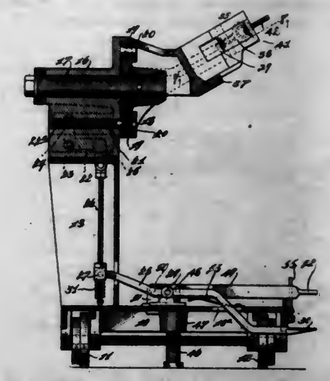
4. As a new article of manufacture, a stay bolt consisting of a shank and two integral heads, the shank being slotted all the way through adjacent the inner head and provided with a plurality of slots part way through adjacent the outer head, all of said slots extending lengthwise the shank, and the latter being twisted.

1,216,552. TRUCK OR STAND USED IN ASSEMBLING MOTORS. JOHN F. DODGE, Detroit, and HORACE E. DODGE, Grosse Pointe, Mich., assignors to Dodge Brothers, Detroit, Mich., a Corporation of Michigan. Filed Aug. 31, 1915. Serial No. 48,189. (Cl. 29—89.)

1. In a device of the class described, the combination of a support, means on said support having a formed seat in which an object may be engaged, said engaging means being rotatable into any desired position around a substantially horizontal axis, said formed seat being inclined to said horizontal axis, and the horizontality of said axis being maintained in all rotated positions of said engaging means, means on said engaging means for clamping such object in said seat, and means for setting said engaging means in the desired rotated position.

2. In a device of the class described, the combination of a support, means bearing substantially vertically on said support and having a formed seat in which an object may be engaged and clamped, a substantially horizontal swivel connection between said support and said engaging means, said formed seat being inclined to said swivel connection, means on said engaging means for clamping such object in said seat, said engaging means being rotatable on said swivel connection, and means for setting said engaging means in rotated position.

3. In a device of the class described, the combination of a support, an embracing yoke having a seat extending from between the arms of said yoke along the adjacent surfaces of said arms, for receiving and engaging a cylinder casting of a motor, said seat having the approximate contour of such a casting, and said yoke being swiveled on said support, means having a limited movement relatively to said seat of said yoke for clamping such casting thereto while seated therein, whereby said casting may be seated upon the bottom of said seat and be engaged, at the opposite sides, by said arms and clamping means, and means for setting said yoke in a rotated position.

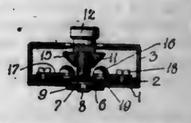


4. In a device of the class described, the combination of a support, an embracing yoke having a seat extending from between the arms of said yoke along the adjacent surfaces of said arms, for receiving and engaging an object to be supported, said seat having the approximate contour of the object to be held, and said yoke being swiveled on said support and inclined to its swivel, said swivel being substantially horizontal, means movable relatively to said seat of said yoke for clamping such object thereto while seated therein, said yoke being rotatable on its said swivel for one complete rotation with such object supported thereon, and means for setting said yoke in a rotated position.

5. In a device of the class described, the combination of a support provided with a yoke having a seat extending from between the arms of said yoke along the adjacent surfaces of said arms, for receiving and embracing an object, said seat having the approximate contour of the object to be held, clamps extending longitudinally of and pivoted at their inner ends to the respective arms of said yoke and movable relatively to said seat, said clamps facing and operable toward each other and normally guarded within parts of said arms, and set screws carried by said arms for operating said clamps as stated to grip such object.

[Claims 6 to 22 not printed in the Gazette.]

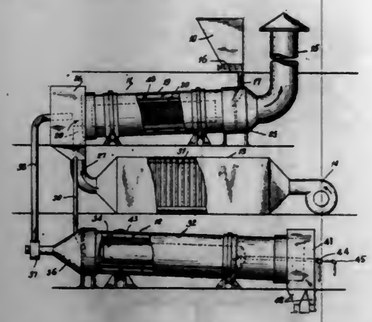
1,216,553. PUSH-BUTTON. HALLEY C. DOLAN, Detroit, Mich., assignor of one-half to Malcolm J. McLeod, Detroit, Mich. Filed Apr. 26, 1915. Serial No. 24,113. (Cl. 200—27.)



A coiled spring circuit closer comprising a base plate, a disk of insulation on said base plate of less diameter than said base plate, a casing seated on the edge of said base plate around said disk, contacts on said disk within said casing adapted to be included in electric circuits, a coiled spring within said casing having the lowermost convolu-

tions thereof in said disk of insulation and connected to said base plate and adapted for a circuit including either of said contacts, an inverted conical shaped contact member supported by the uppermost convolutions of said spring adapted to be brought into contact with either of said contacts by tilting the upper portion of said coiled spring, and a button carried by said contact member and protruding out of said casing to facilitate tilting said spring.

1,216,554. PROCESS OF GRANULATING AND DRYING SUGAR. GODFREY ENGEL, Brooklyn, N. Y. Filed Nov. 10, 1915. Serial No. 60,647. (Cl. 34—24.)



1. The process of drying sugar that consists in disseminating wet sugar in an air passage, disseminating nearly dried sugar in a second air passage and passing air through the second passage and thence through the first passage with the addition of fresh air, whereby the dry sugar dust from the second passage is intercepted by the moist sugar in the first passage.

2. The process of drying sugar that consists in disseminating wet sugar in an air passage, disseminating the partially dried sugar in a second air passage and passing a relatively small volume of cool air through the second passage and thence through the first passage with the addition of a large volume of warm air, whereby the dry sugar dust from the second passage is intercepted by the moist sugar in the first passage.

3. The process of drying sugar that consists in feeding wet sugar through an air passage, disseminating the sugar as it is fed therethrough, feeding nearly dried sugar through a second passage disseminating the sugar as it is fed, passing a relatively small body of cool air through the second passage in a direction opposite to the direction in which the sugar is fed and passing the air from the second passage through the first passage in the opposite direction from that in which the sugar is fed with addition to such air of a large volume of warm air, whereby the dry sugar dust from the second passage is intercepted by the moist sugar in the first passage.

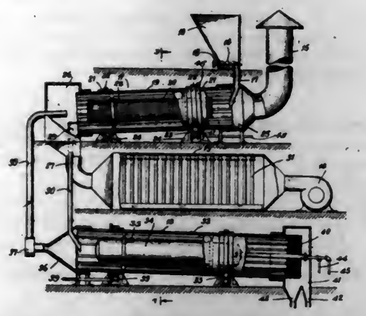
1,216,555. APPARATUS FOR GRANULATING AND DRYING SUGAR. GODFREY ENGEL, Brooklyn, N. Y. Filed Nov. 10, 1915. Serial No. 60,648. (Cl. 34—6.)

1. A drying and granulating apparatus comprising a rotatable cylinder, having an inclined axis, a cylindrical screen within the rotatable cylinder, means for supplying material to be dried and granulated to the upper end of the rotatable cylinder, and means for providing a blast of air through the rotatable cylinder from its lower to its upper end.

2. A granulator comprising a rotatable cylinder having means for continuously carrying the material to be treated upward and permitting it to fall within the cylinder, and a screen within the cylinder adapted to break up the material as it falls.

3. A granulator comprising a rotatable cylinder having an inclined axis and having means for carrying the material to be granulated upward and permitting it to fall within the cylinder, and a coaxial cylindrical screen within the rotatable cylinder adapted to break up the material as it falls.

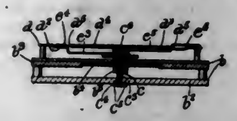
4. A drying and granulating apparatus comprising a rotatable cylinder, having an inclined axis, a wire screen within the rotatable cylinder, means for supplying material to be dried and granulated to the upper end of the rotatable cylinder, and means for providing a blast of warm air through the rotatable cylinder from its lower to its upper end.



5. A drying and granulating apparatus comprising a rotatable cylinder, means for breaking up the moist material to be granulated as it continuously falls within the cylinder, means for forcing warm air through the cylinder, a second granulating means adapted to receive the material as it is discharged from the cylinder, means for forcing a relatively small blast of air through the second granulating means and thence through the cylinder with the warm blast.

[Claims 6 to 22 not printed in the Gazette.]

1,216,556. DIAL FOR WATCHES AND THE LIKE. ANDREW E. FAIELLA, Jersey City, N. J. Filed July 13, 1916. Serial No. 109,161. (Cl. 58—126.)



1. In a time piece, a central dial member having a smooth unobstructed upper surface upon which a photograph or the like may be mounted, an outer dial member spaced away from the central member and provided with numerals and lines designating minutes and hours, and a minute hand and hour hand mounted in the rear of said central member and extending through the space between the members to coöperate with the outer dial member.

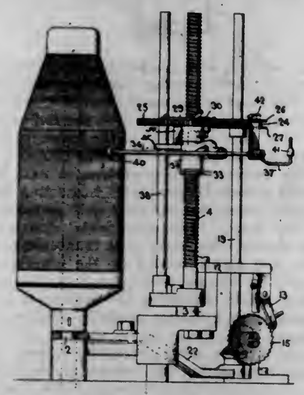
2. In a time piece, a central dial member having a smooth unobstructed upper surface upon which a photograph or the like may be mounted, an outer dial member supported by the pillar plate of the time piece and spaced away from the central member, said outer member being provided with numerals and lines designating minutes and hours, and a minute hand and hour hand mounted in the rear of said central member and extending through the space between the members to coöperate with the outer dial member.

3. In a time piece, a central dial member supported by the central structure of the time piece and having a smooth unobstructed upper surface upon which a photograph or the like may be mounted, an outer dial member supported by the pillar plate of the time piece and provided with numerals and lines designating minutes and hours, said outer member being spaced away from the central member, and a minute hand and hour hand mounted in the rear of the central member and extending through the space to coöperate with the outer dial member.

4. In a device of the class described, a central dial member mounted in front of the minute and hour hands of a watch whereby said dial member may serve as an ornament supporting means, and an outer dial member provided with numerals and lines designating minutes and hours between which and said central dial member is an annular space through which said minute and hour hands operate.

5. A time piece comprising a case, plate members mounted therein, a main central tubular arbor mounted in said plate members, a pin extending through said arbor and having one end projecting beyond the same, a central dial member supported by the projecting end of said pin and having a smooth unobstructed upper surface upon which a photograph or the like may be mounted, an outer dial member supported by one of said plates and provided wtih numerals and lines designating minutes and hours, said outer member being spaced away from the central member, and a minute hand and hour hand mounted upon said arbor rearwardly of the central dial member and extending through the space between the central and outer member to coöperate with the outer dial member.

1,216,557. AUTOMATIC STOP FOR WINDING-MACHINES. RAYMOND FISHER, Philadelphia, Pa., assignor to Jacob K. Altemus, Philadelphia, Pa. Filed Feb. 18, 1916. Serial No. 79,066. (Cl. 242—29.)



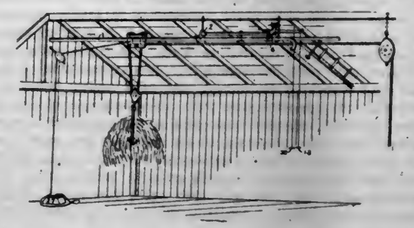
1. In a yarn winding machine, a builder screw, a driving gear, a nut-gear mounted thereon, a pivotally mounted arm carried by the nut-gear, a yarn guide on the arm and movable toward and from the spindle, and means movable with said arm to engage and disengage the nut-gear from driving connection with the driving gear.

2. In a yarn winding machine, a winding spindle, a pair of parallel members, one of said members being threaded, a nut mounted on the threaded member, an arm pivotally mounted on one of said members and being carried with the nut, a yarn guide on said arm and being movable by the yarn toward the spindle, a driving device, and a gear on said arm in constant driving connection with said nut and in driving connection with said device only when the yarn guide is moved by the yarn in the direction of the spindle.

3. In a yarn winding machine, a winding spindle, a rod, a builder screw rod parallel therewith, a nut-gear on the builder screw rod, means for operating said nut-gear, a yarn guide arm carried by the nut-gear and pivotally mounted, the pivotal axis thereof being coincident with the axis of the builder screw rod, said arm having stop portions residing on opposite sides of the first mentioned rod and spaced apart a distance greater than the diameter of the said rod, a gear carried by said arm and in mesh with the nut-gear, and a driving gear on the arm movable into and out of driving relation with said operating means for the nut-gear.

4. In a winding machine, a rod, means thereon adapted to progress therealong, a swinging arm carried by said means, a driving gear, a gear on said arm in driving connection with said first means and movable with said arm into and out of mesh with said driving gear, means on said arm whereby the tension of the yarn will swing said arm in one direction to hold said gears enmeshed, the relation of said gears being such that upon release of the arm due to breakage of the yarn the drive gear will force the arm gear out of mesh therewith.

1,216,558. HAY-DISTRIBUTING APPARATUS. PERCY LLOYD FORBES, West Middlesex, Pa. Filed Oct. 25, 1916. Serial No. 127,598. (Cl. 104—180.)



1. An improvement in hay-distributing apparatus, having, the combination of curved inclined tracks at either side of straight horizontal track, and a friction rail attached thereto, which insures uniformity in rate of descent of a loaded car.

2. An improvement in hay-distributing apparatus, having the combination of curved inclined tracks, a friction rail attached thereto, and means for returning unburdened car along the curved inclined tracks to the main horizontal track, accomplished by a counterweight cooperating with counterweight pulleys, substantially as described.

3. The combination, in an improvement in hay-distributing apparatus, of curved inclined side tracks, a friction rail attached thereto, and a switch for directing a car from the horizontal track to the side tracks, the switch being provided with a locking device which firmly joins said switch to any selected track, and operated by means of ropes which render the switch slidably adjustable to any track desired.

1,216,559. SWITCH-LOCK FOR MOTOR-VEHICLES. GUSTAV FRANK, Jefferson, Tex., assignor of one-half to Martin J. Whelan, Jefferson, Tex. Filed Oct. 1, 1913. Serial No. 792,856. (Cl. 175—282.)



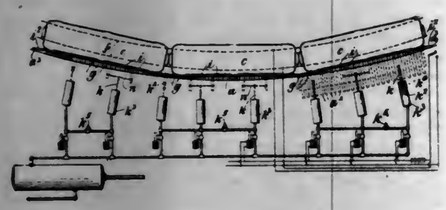
1. In a device of the class described, a plate, a conductor clip adjacent said plate and being insulated therefrom, the said plate and clip being the terminals of an electric circuit, a rotatable member on said plate, a tumbler rotatably mounted on said rotatable member, an exten-

sion carried by said rotatable member and adapted to engage said tumbler to move the latter into or out of contact with said clip, a block arranged for sliding movement adjacent said plate opposite said clip in the path traversed by said tumbler, and means for rotating said rotatable member, substantially as described.

2. In a device of the class described, a rotatable member, a clip adjacent and insulated from said rotatable member, the said rotatable member and clip being the terminals of an electric circuit, a tumbler electrically connected with said rotatable member and adapted when moved in one direction to contact with said clip, an indicating block mounted for sliding movement adjacent said rotatable member remote from said clip in the path traversed by said tumbler, and adapted to be depressed by the latter, means for normally maintaining said block extended, and means for rotating said rotatable member, substantially as described.

3. In a device of the class described, a casing, a lock bolt rotatably mounted in said casing, a plate on said bolt, a projection on said plate, a member rotatably mounted on said bolt and adapted to be engaged by said projection when said bolt is rotated to form a positive connection between said bolt and tumbler, a clip at one side of said bolt and insulated therefrom, the said casing being provided at the opposite side with an opening, a block slidably mounted adjacent said opening and adapted to move across the same, the said block lying in the path traversed by said tumbler, a spring for normally maintaining said block extended, a switch on said casing, wires connecting said clip and said bolt with the poles of said switch, and a key for rotating said bolt, substantially as described.

1,216,560. SAFETY APPLIANCE FOR RAILWAY-PLATFORMS. RAPHAEL C. GALLINANT, Ridgefield Park, N. J. Filed Mar. 6, 1916. Serial No. 82,342. (Cl. 104—17.)



1. A guard platform for railway platforms formed of a series of grate bars, each engaged pivotally at its outer end to a single transverse frame member which bears against the car when the guard platform is extended.

2. The combination with a station platform of a guard platform comprising a series of bars mounted slidably on the station platform, and a frame member adapted to bear against the car when the guard platform is extended and pivotally engaged with each of said bars.

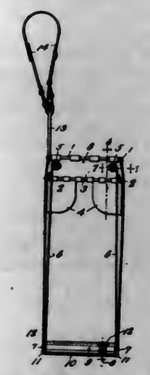
3. The combination with a station platform of a sectional guard platform mounted slidably thereon, the several sections being connected together, and each comprising a series of bars, and a frame member adapted to bear against the car when the guard platform is extended and pivotally engaged with each of the bars of the section.

4. The combination with a station platform of a sectional guard platform mounted movably thereon, the several sections being connected together and each comprising a series of bars and a frame member adapted to bear against the car when the guard platform is extended and pivotally engaged with each of the bars, means to throw the several sections forward simultaneously but to varying extents determined by contact with a relatively fixed stop at varying distances, and yielding means to move the several sections in the opposite direction.

5. The combination with a station platform of a guard platform comprising a series of bars mounted slidably on the station platform, means carried by the station platform to guide the bars in their travel and a frame member adapted to bear against the car when the guard platform is extended and pivotally engaged with each of said bars.

[Claims 6 to 9 not printed in the Gazette.]

1,216,561. FRUIT-PICKER'S SACK. RALPH U. GAVETTE, Grand Junction, Colo. Filed Apr. 27, 1916. Serial No. 94,041. (Cl. 150—2.)



1. A fruit picker's sack comprising upper frames and a lower frame, a fabric covering connecting the uppermost frame and the lower frame, spring rollers associated with the upper frames, straps windable on the rollers and having their lower ends connected to the lower frame, and a bottom hingedly connected to the lower frame.

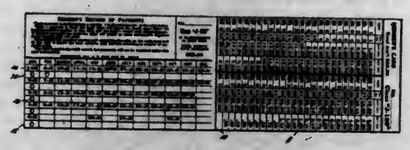
2. A fruit picker's sack comprising a pair of upper frames and a bottom frame, plates connecting the upper frames, spring rollers having their ends journaled in the plates, straps having their upper ends windable on the rollers and having their lower ends connected to the bottom frame, stop plates carried by the lowermost upper frame to limit the upward movement of the bottom frame, a covering of fabric connecting the uppermost frame and bottom frame, and a bottom hingedly connected to the bottom frame.

3. A fruit picker's sack comprising a pair of upper frames, plates connecting the frames, spring rollers supported by the plates, depending stop plates supported by the lowermost frame, a bottom frame, straps windable on the rollers and having their lower ends fixed to the bottom frame, a fabric covering connecting the uppermost frame and the bottom frame, said stop plates serving to limit the upward movement of the bottom frame and preventing the fabric covering from coming in contact with the rollers.

4. A fruit picker's sack comprising a frame, spring actuated rollers associated with the frame, a bottom frame, a fabric covering connecting the first and second named frames, straps having their upper ends secured to the rollers and windable thereon, the lower ends of said straps being connected to the bottom frame, and a bottom hingedly connected to the bottom frame.

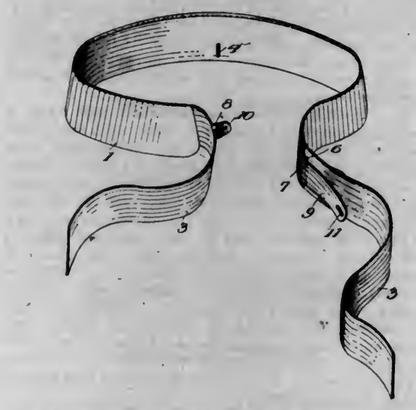
1,216,562. SAVINGS-BANK RECORD. ALFRED M. GLOSSBRENNER, Indianapolis, Ind., assignor to Levey Bros. & Company, Indianapolis, Ind., a Corporation of Indiana. Filed Feb. 7, 1916. Serial No. 76,550. (Cl. 11—19.)

A bank deposit record, comprising a pair of coöperating cards which may be coördinately, one for the bank and one for the depositor, each of which has upon its face a series of divisions corresponding to the calendar months and registrable by superposition, said divisions upon the depositor's card carrying in spaced relationship data relative to successive time periods and also having portions adjacent each datum blank as regards such data, and the bank's card having in its monthly divisions successive blank portions offset relative to the blank portions of the



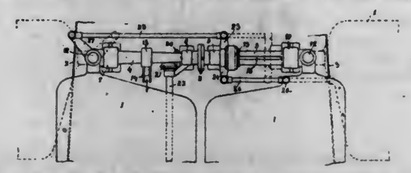
first-mentioned card when the two cards are registered, whereby the two cards may be registered and simultaneously punched, the punchings being thereby formed in a blank space of the depositor's card and adjacent a corresponding blank space of the bank's card.

1,216,563. COMBINED REVERSIBLE COLLAR AND NECKTIE. PATRICK F. HANLEY, New York, N. Y. Filed Sept. 14, 1916. Serial No. 120,035. (Cl. 2—70.)



In a combined collar and necktie, the combination of a collar section having projecting tongues arranged to be buttoned to the front collar button, and a necktie section having slits arranged to permit the tongue on the collar section to project therethrough when the collar is reversed.

1,216,564. APPARATUS FOR MOVING DIVING-RUDDERS OF SUBMARINES. MARLEY FOTHERINGHAM HAY and CORNELIUS EKAMA, The Hague, Netherlands. Filed Sept. 10, 1915. Serial No. 50,010. (Cl. 114—16.)



1. Operating mechanism for the diving rudders of submarines comprising a shaft located transversely with respect to the hull of the boat and adapted to be controlled from the interior thereof, a diving rudder pivotally mounted at each end of the said shaft and in such a way that the pivotal axis is perpendicular to that of the shaft, means for turning the said rudders upon their pivots for the purposes set forth.

2. Operating mechanism for the diving rudders of submarines comprising a shaft located transversely with respect to the hull of the boat and adapted to be controlled from the interior thereof, a diving rudder pivotally mounted at each end of the said shaft and in such a way that the pivotal axis is perpendicular to that of the shaft, means for turning the said rudders upon their pivots, and slotted openings in the superstructure of the boat so located and arranged that the said diving rudders can pass through said openings into a space formed for their reception above the hull of the boat or be protruded and brought into the operating position when required substantially as described.

3. Operating mechanism for the diving rudders of submarines comprising a shaft located transversely with respect to the hull of the boat and adapted to be controlled from the interior thereof, a diving rudder pivotally mounted at each end of the said shaft and in such a way that the pivotal axis is perpendicular to that of the shaft, means for turning the said rudders about their pivots, such means consisting of a part adapted to be moved from the interior of the boat the said part controlling by its motion link mechanism for bringing the rudders into their extreme positions substantially as described.

4. Operating mechanism for the diving rudders of submarines, comprising a shaft located transversely with respect to the hull of the boat and adapted to be controlled from the interior thereof, a diving rudder pivotally mounted at each end of the said shaft and in such a way that the pivotal axis is perpendicular to that of the shaft, means for turning the said rudders about their pivots, such means consisting of a sleeve slidable, but not rotatable upon, the shaft, links attached to projecting arms in connection with the said sleeve, one of such links being pivoted to one of the rudders and the other being pivoted to an arm controlling the movements of the other rudder, a threaded spindle rotatable from the interior of the boat, a nut traveling upon such spindle, and a slip ring connecting the said nut to the sliding sleeve, all substantially as described.

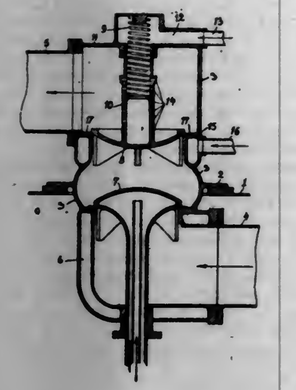
5. Operating mechanism for the diving rudders of submarines, comprising a shaft formed in two portions, connected together by a coupling, the said shaft being mounted in bearings upon and located transversely with respect to the hull of the boat and being adapted to be controlled from the interior thereof, a diving rudder pivotally mounted at each end of the said shaft, slotted openings in the superstructure of the boat, so located and arranged that the said rudders can pass through such openings into a space formed for their reception above the hull of the boat, or be protruded and brought into the active position, and means for bringing the said rudders into the two extreme positions, such means consisting of a sleeve slidable, but not rotatable upon, the shaft, links attached to projecting arms in connection with the said sleeve, one of such links being pivoted to an arm controlling the movements of the other rudder, a threaded spindle rotatable through bevel gearing from the interior of the boat, a nut traveling upon such spindle, and a slip ring connecting the said nut to the sliding sleeve all substantially as described.

[Claim 6 not printed in the Gazette.]

1,216,565. SILENCER FOR COMBUSTION-ENGINES OF SUBMARINES. MARLEY FOTHERINGHAM HAY and FERDINAND GUHRAUER, The Hague, Netherlands. Filed Sept. 10, 1915. Serial No. 50,070. (Cl. 123—194.)

1. An exhaust silencer for the combustion engines of submarines, comprising in combination a valve, located in the exhaust pipe, a seat upon which said valve is adapted to normally rest, a spring adapted to retain the valve in seated position, but being sufficiently weak to allow the unseating of the valve due to the pressure of the exhaust gases during the exhaust stroke, said valve being formed with a hollow spindle, means for supplying water to the interior of said hollow spindle, such spindle being formed with perforations extending through the walls thereof and opening into the space above the valve.

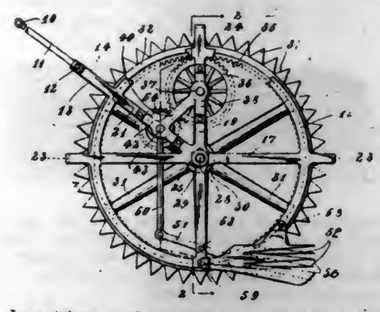
2. An exhaust silencer for the combustion engines of submarines comprising a valve located in the exhaust pipe, adapted to open through the pressure of the exhaust gases during the exhaust stroke, a hollow spindle to said valve, means for supplying water to the interior of said hollow spindle, perforations passing through the walls of said spindle and opening into the space above the valve, a passage formed in the casing below the valve seating, means for connecting the said passage with a supply of water, perforations opening from the said passage into the space above the valve, and in such a way that the jets issuing from the last mentioned perforations meet the jets issuing from the perforations in the hollow spindle of the valve.



3. An exhaust silencer for the combustion engines of submarines, comprising a valve chamber located in the exhaust pipe, a valve adapted to open through the pressure of the exhaust gases during the exhaust stroke, said valve being kept normally upon its seating in said chamber by a weak spring, a hollow spindle to said valve and having an open end, perforations formed through the wall of said spindle, and opening into the space in the valve chamber above the valve, another chamber formed at the top of the valve chamber, an opening between the said chambers, the open end of the hollow valve spindle being adapted to project therethrough, means for supplying water to the interior of the chamber containing the open end of the spindle, the water being adapted to be sprayed out through the perforations formed in the wall of said spindle, said spindle being adapted to be reciprocated within the upper chamber, whereby it acts as a pump to force the water contained in the said chamber through the perforations causing the jets of water to be projected with greater intensity at the instant of the passing of the exhaust gases.

4. An exhaust silencer for the combustion engines of submarines, comprising a valve chamber located in the exhaust pipe, a valve adapted to open through the pressure of the exhaust gases during the exhaust stroke, said valve being kept normally upon its seating in said chamber by a weak spring a hollow spindle to said valve, perforations passing through the wall of said spindle and opening into the space in the valve chamber above the valve, another chamber at the top of the valve chamber, an opening between the said chambers through which the open end of the hollow valve spindle works, means for supplying water to the interior of the chamber containing the open end of the spindle, a passage formed in the casing below the valve seating, means for connecting the said passage with a supply of water and perforations opening from the said passage into the space in the valve chamber above the valve, in such a way that the jets issuing from these last mentioned perforations meet the jets issuing from the perforations in the hollow spindle of the valve at an angle, substantially as described.

1,216,566. LAWN-TRIMMER. FRIEDRICH HEINE, White Plains, N. Y. Filed Dec. 20, 1915. Serial No. 67,746. (Cl. 56—19.)



1. In a trimmer, the combination with a rigid frame, a spurred wheel upon which said frame is revolubly mounted, and a propelling means for said frame, of a pair of shears, each having a plurality of cutting blades one being fixed to said frame and the other movable, said shears being at one side of said frame, and extending normally horizontal to and above the path of said wheel, means for operating said movable shear coöperatively with said fixed shear, said means being operatively combined with said wheel and means for maintaining said shears in operative contact.

2. In a trimmer, the combination with a rigid frame, a propelling means therefor, a wheel upon which said frame is revolubly mounted, and means for causing said wheel to positively rotate as it is advanced, of a pair of shears, each having a plurality of cutting blades one being affixed to said frame laterally and in advance thereof, the other shear being movable relative thereto, an arm on said movable shear, an internal gear formed with said wheel, a pinion driven thereby, a shaft on which said pinion is mounted, an eccentric having a toothed hub revoluble on said shaft, operative connections between said eccentric and said shear arm, a toothed collar slidably combined with said pinion adapted to operatively engage said toothed hub when said frame is moved forward and to become released from engagement when said frame moves rearward, and means to maintain the teeth of said element normally in engagement.

1,216,567. LINE-GAGE FOR TYPE-WRITING MACHINES. EDWARD B. HESS, Brooklyn, N. Y., assignor to Royal Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 29, 1915. Serial No. 24,675. Renewed Jan. 12, 1917. Serial No. 142,119. (Cl. 197—187.)



1. Line-gage devices for a typewriting machine comprising a short fixed line gage located at the printing point and a supplemental line gage located adjacent one end of the platen mounted to move with the platen under the line of print and adjustable in its mounting toward and from the end of the platen and relatively to the fixed gage.

2. Line gage devices for a typewriting machine, comprising a short fixed line gage located at the printing point and a supplemental line gage located adjacent one end of the platen mounted to move with the platen below the line of print and adjustable in its mounting vertically with reference to the line of print and horizontally toward and from the end of the platen.

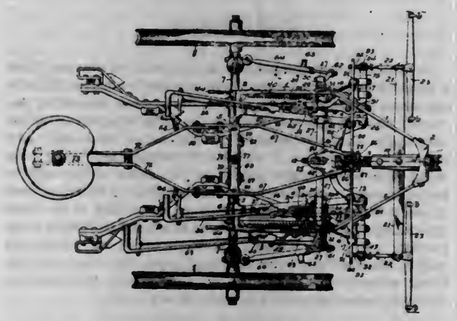
3. Line gage devices for a typewriting machine, comprising a short fixed line gage located at the printing point and a supplemental line gage mounted beneath the line of print and located adjacent one end of the platen and comprising a part mounted for adjustment toward and from the end of the platen, a part vertically adjustable relatively to the line of print, and a third part movable transversely toward and from the platen.

4. The combination of a platen, its carriage, a rod beneath the platen forming part of the carriage frame, a bracket attached to said rod, a vertically adjustable plate mounted on said bracket and a line gage plate hinged to said vertically adjustable plate.

5. The combination of the platen, its carriage, the paper feed rolls, a rod beneath the platen in the carriage frame supporting said paper feed rolls, a cam shaft for raising and lowering said rolls, a bracket supported by said rod and having a part engaging said cam shaft, and a line gage attached to said bracket.

[Claim 6 not printed in the Gazette.]

1,216,568. CULTIVATOR. EDWARD M. HEILMAN, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Dec. 16, 1915. Serial No. 67,231. (Cl. 97—35.)



1. The combination with the frame of a wheeled cultivator, including an arch axle, and a cultivator gang, of a shaft mounted on the frame, a lever and a toothed segment therefor, both loosely mounted on said shaft, a connection between said lever and cultivator gang, a balancing lever secured to said shaft, arms on said shaft, and connections between said arms and the arch axle.

2. The combination with a wheeled frame, and a cultivator gang, of a transverse shaft mounted on the frame, a lever having a hub loose on said shaft, a toothed segment for said lever having a hub loosely mounted on the hub of the lever, and a connection between said lever and the cultivator gang.

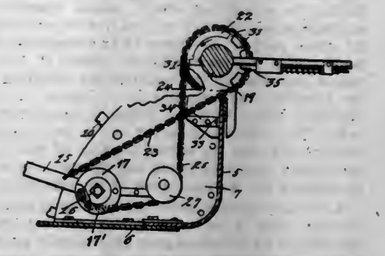
3. The combination with a wheeled frame, a cultivator gang, and a shaft mounted transversely on the frame, of a lever and a segment therefor both loose with relation to said shaft, a connection between said lever and the cultivator gang, and adjustable connections between said segment and shaft.

4. The combination with a wheeled frame, and a cultivator gang, of a transverse shaft, a lever and a toothed segment therefor, both loose with relation to said shaft, an arm on the shaft, a link pivotally connected with the segment, and provided with an abutment, means for adjusting the relation of said link to the arm on the shaft, a spring on said link between the abutment thereon and said arm, and a connection between said lever and the cultivator gang.

5. The combination with a wheeled frame, and a cultivator gang, of a transverse shaft, a lever and a segment therefor, both loose with relation to said shaft, a connection between said lever and the cultivator gang, an arm secured to said shaft, a link pivotally connected with said segment and movable with relation to said arm, a spring on said link between its connection with the segment and said arm, and adjusting means for securing said link to the arm and for controlling the relative movements of said link and arm.

[Claims 6 to 12 not printed in the Gazette.]

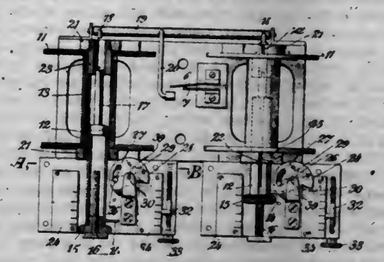
1,216,569. LOADING AND DUMPING MECHANISM FOR SCRAPERS. DAVID F. HILDEBRAND and JOHN E. JOHNSON, Zillah, Wash. Filed Apr. 30, 1915. Serial No. 24,964. (Cl. 37—40.)



1. In a scraper, the combination with a scraper body and draft means pivotally connected thereto, of a rotatable shaft carried by the body, flexible members oppositely wound on the shaft and connected with the draft means, and a ratchet lever for rotating the said shaft to vary the relative angle of the scraper with respect to the ground.

2. A scraper comprising a body portion, draft means including attaching arms pivoted to the sides of the body, a rotatable shaft mounted on the body, drums carried by the shaft, pulleys mounted on the sides of the body, flexible members connected to said drum and wound in opposite directions thereon, certain of the flexible members being connected to the attaching arms forwardly of their pivots, while the other flexible members are trained around the said pulleys and connected to the attaching arms, and a ratchet lever for rotating the said shaft to raise or lower the scraper with respect to the ground.

1,216,570. ELECTROMAGNETIC TIME-RETARDING RELAY. KARL HÖHN, Zurich, Switzerland. Filed June 16, 1915. Serial No. 34,445. (Cl. 175—270.)



1. In an electromagnetic time retarding relay, the combination with a releasing device and actuating means therefor, of an electromagnet, an armature attracted initially with a free stroke by the latter, means arranged laterally of the armature and engaged by the latter at the end of its free stroke to retard the movement of the armature, said retarding means adapted to be set directly in motion by the kinetic energy acquired by the armature during its unhindered stroke, means whereby a sudden unretarded movement of the armature is permitted through its whole path of movement at an exceed-

ingly high overload, means controlled by the armature for operating the means for actuating the releasing device, and means to prepare the retarding means for a new, complete time-retarding period before the armature is moved on its returning movement wholly back into its initial position of rest.

2. In an electromagnetic time retarding relay, the combination with a releasing device and actuating means therefor, of an electromagnet, an armature attracted initially with a free stroke by the latter, means arranged sidewise of the armature and engaged by the latter at the end of its free stroke to retard the movement of the armature, said retarding means adapted to be set directly in motion by the kinetic energy acquired by the armature during its unhindered stroke, means whereby a sudden unretarded movement of the armature is permitted through its whole path of movement at an exceedingly high overload, means for regulating the stroke of the armature, means controlled by the armature for operating the means for actuating the releasing device, means to prepare the retarding means for a new, complete time-retarding period before the armature is moved on its returning movement wholly back into its initial position of rest, and means operatively connected to the last mentioned means adapted to regulate the working speed of the retarding device.

3. In an electromagnetic time retarding relay, the combination with a releasing device and actuating means therefor, of an electromagnet, an armature movable in the latter and attracted initially with a free stroke, a lateral projection on the armature, a shaft, a ratchet wheel fixed on this shaft, a train of toothed wheels, one of the latter being loose on said shaft, a pawl on this loose wheel adapted to engage with said ratchet wheel, means usually operatively connected to said shaft and adapted to be acted upon by said projection of the armature for the purpose of setting said shaft in motion by the kinetic energy acquired by the armature during its unhindered stroke, so that the movement of the latter is retarded during its further path of movement, means actuated by the train of toothed wheels for limiting the speed of the wheels, means to return said shaft and said means usually operatively connected therewith, back into the initial position of rest before the armature is moved on its returning movement wholly back into its initial position of rest, and means operatively connected to these returning means adapted to regulate the working speed of said train of toothed wheels.

4. In an electromagnetic time retarding relay, the combination with a releasing device and actuating means therefor, of an electromagnet, an armature movable in the latter and attracted initially with a free stroke, a lateral projection on the armature, a shaft, a ratchet wheel fixed on the latter, a train of toothed wheels, one of the latter being loose on said shaft, a pawl on the loose wheel adapted to engage with said ratchet wheel, means usually operatively connected to said shaft and adapted to be acted upon by said projection of the armature for the purpose of setting said shaft in motion by the kinetic energy acquired by the armature during its unhindered stroke, so that the movement of the latter is retarded during its further path of movement, means actuated by the train of toothed wheels for limiting the speed of the wheels, means whereby a sudden unretarded movement of the armature is permitted through its whole path of movement at an exceedingly high overload, means controlled by the armature for operating the means for actuating the releasing device, means to return said shaft and said means usually operatively connected therewith back into the initial position of rest before the armature is moved on its returning movement wholly back into its initial position of rest, and means operatively connected to these returning means adapted to regulate the working speed of said train of toothed wheels.

5. In an electromagnetic time retarding relay, the combination with a releasing device and actuating means therefor, of an electromagnet, an armature movable in the latter and attracted initially with a free stroke, an adjustable support for the armature to vary the stroke thereof, a lateral projection on the armature, a shaft, a ratchet wheel fixed on the latter, a train of toothed wheels, one of the latter being loose on said shaft, a pawl on the loose wheel adapted to engage with said ratchet wheel, means usually connected to said shaft and adapted to be acted upon by said projection of the armature for the purpose of setting said shaft in motion by the kinetic energy acquired by the armature during its unhindered stroke, so that the movement of the latter is retarded during its further path of movement, means actuated by the train of toothed wheels for limiting the speed of these wheels, means whereby a sudden unretarded movement of the armature is permitted through its whole path of movement at an exceedingly high overload, a pin carried by the armature for operating the means for actuating the releasing device, means to return said shaft and said means usually operatively connected therewith back into the initial position of rest before the armature is moved on its returning movement wholly back into its initial position of rest, and means operatively connected to these returning means adapted to regulate the working speed of said train of toothed wheels.

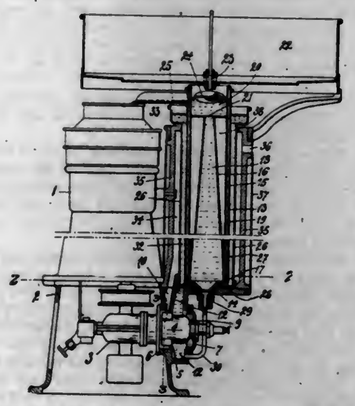
[Claims 6 and 7 not printed in the Gazette.]

1,216,571. SEPARABLE FASTENER. PAUL HUDOWICZ, New York, N. Y. Filed Apr. 19, 1915. Serial No. 22,311. (Cl. 24—228.)



A shoe fastener comprising an eye member formed from a single strand of wire and bent to provide spaced attaching arms arranged in a direct line, arms extending inwardly to a point intermediate the attaching eyes, thence outwardly at right angles to said arms, upwardly and inwardly to provide a reëntrant spring loop, said loop being disposed at right angles to the arms of the attaching eyes, and a hook member formed from a single strand of wire and bent to provide spaced attaching eyes, arms extending from said eyes and bent inwardly to form a neck portion and then outwardly to provide an elongated spring loop in line with the said arms, the neck portion being adapted to yieldingly engage within the said reentrant spring loop for the purpose set forth.

1,216,572. MOTOR-DRIVEN CREAM-SEPARATOR. CARL ALRIK HULT and OSCAR WALFRID HULT, Stockholm, Sweden. Filed Feb. 18, 1916. Serial No. 79,047. (Cl. 257—74.)



1. The combination of a centrifugal liquid separator, an internal combustion engine, actuating the drum of the separator, and a combined milk heating and liquid cooling apparatus comprising separate chambers for the milk and for the liquid to be cooled the latter communicating with the cooling jacket of the said engine, substantially as described and for the purpose set forth.

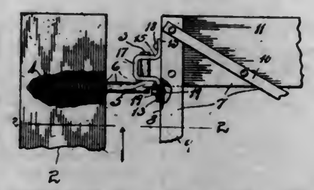
2. The combination of a centrifugal liquid separator, an internal combustion engine, means connecting the shaft of the engine with the drum of the separator, and a combined milk heating and liquid cooling apparatus, comprising substantially concentric chambers for the milk, for the liquid to be cooled, communicating with the cooling jacket of the engine, and for the exhaust gases of the engine, substantially as described and for the purpose set forth.

3. The combination of a centrifugal liquid separator, an internal combustion engine, means connecting the shaft of the engine with the drum of the separator, a combined milk heating and liquid cooling apparatus, comprising substantially concentric chambers for the milk, for the liquid to be cooled, communicating with the cooling jacket of the engine, and for the exhaust gases of the engine, a channel provided in the chamber for the liquid to be cooled, extending from the top part of the cooling jacket to the top of the chamber, and a passage connecting the bottom part of the said chamber with the bottom part of the cooling jacket, substantially as described and for the purpose set forth.

4. The combination of a centrifugal liquid separator, an internal combustion engine, means connecting the shaft of the engine with the drum of the separator, and a combined milk heating and liquid cooling apparatus, comprising substantially concentric chambers for the milk, for the liquid to be cooled, communicating with the cooling jacket of the engine, and for the exhaust gases of the engine, an insulating chamber located between a central part of the milk chamber and an outer part of the same, and an insulating chamber located outside the apparatus, substantially as described and for the purpose set forth.

5. The combination of a centrifugal liquid separator, an internal combustion engine, means connecting the shaft of the engine with the drum of the said separator, a chamber, which is provided in the frame of the separator, and into which the cylinder of the engine extends, tightening against the said frame and forming together with the wall of the chamber the cooling jacket of the engine, and a combined milk heating and liquid cooling apparatus comprising separate chambers for the milk and for the liquid to be cooled, the latter communicating with the said cooling jacket, substantially as described and for the purpose set forth.

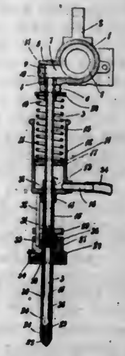
1,216,573. HINGE. PERRY C. JAMES, Sciota, Ill., assignor to George C. Bayne, Bushnell, Ill. Filed July 10, 1916. Serial No. 108,360. (Cl. 16—49.)



1. In combination, a pintle-receiving loop including spaced cheeks and ears, a swinging body, means for fixing the upper ear to said body, a cone-shaped element for fixing the lower ear to said body, said element arranged a slight distance below the lower one of said cheeks, and a gate-bolt including a pintle adapted to engage both of said cheeks and including also an oblong foot having a projecting heel lying normally between said cone-shaped element and the lower cheek.

2. In combination, a pintle-receiving loop including spaced cheeks and ears, a swinging body, means for securing the ears to said body, said means arranged a slight distance below the lower one of said cheeks and projecting in rear thereof, and a gate sustaining element including a pintle adapted to engage both of said cheeks and including also a foot having a projecting portion lying normally between said securing means and the lower cheek.

1,216,574. FILLING APPARATUS. KARL KIEFER, Cincinnati, Ohio. Filed July 9, 1914. Serial No. 850,050. (Cl. 226—12.)



1. In filling apparatus, an inner tube, and means to supply liquid thereto, said inner tube having a lateral outlet near one end, an outer tube surrounding the inner tube, a seat on the end of the inner tube for the end of the outer tube, said outer tube being adapted to be moved up from the seat and uncover the lateral outlet of the inner tube, said inner tube for part of its length being of materially less dimension than the interior of the outer tube, forming an annular vent and overflow passage, but said inner tube being enlarged for such a distance from the end having the lateral outlet that the outer tube, in rising to uncover the lateral outlet, does not uncover the enlarged part of the inner tube, and this enlarged part fitting the interior of the outer tube so as to form a guide therefor, and said inner and outer tube having a space between them through which communication is formed from the open lower end of the outer tube to the annular space therein around the inner tube when the outer tube is raised from its seat and uncovers the lateral opening in the inner tube.

2. In filling apparatus, an inner tube, and means to supply liquid thereto, said inner tube having a lateral outlet near one end, an outer tube surrounding the inner tube, a seat on the end of the inner tube for the end of the outer tube, said outer tube being adapted to be moved up from the seat and uncover the lateral outlet of the inner tube, said inner tube for part of its length being of materially less dimension than the interior of the outer tube, forming an annular vent and overflow passage, but said inner tube being enlarged for such a distance from the end having the lateral outlet that the outer tube, in rising to uncover the lateral outlet, does not uncover the enlarged part of the inner tube, this enlarged part fitting the interior of the outer tube so as to form a guide therefor, and said inner tube having a groove formed in its side and extending from its portion of lesser dimension along this enlargement to such distance that this groove forms communication from the lower open end of the outer tube into the annular space therein around the inner tube when said outer tube is raised from its seat and uncovers the lateral opening in the inner tube.

3. In filling apparatus, an inner tube, a reservoir in which the inner tube is fixed and with the interior of which it communicates, an outer tube surrounding the inner tube, opening and closing means and guiding means for the tubes near their lower ends, a guide bar fixed in the reservoir parallel to said tubes, a cup in which the

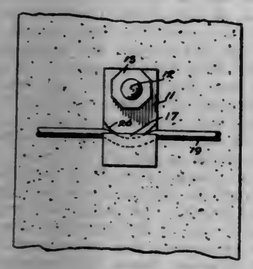
outer tube is fixed and into the interior of which its upper end opens, said cup having an outlet, means on the cup engaging with the guide bar, whereby the cup may slide along the guide bar, a helical spring surrounding the inner tube above the upper end of the outer tube and alined with said tubes and with its lower end inside the cup, means held in the cup and receiving the lower end of the spring, and means around the inner tube near its junction with the reservoir receiving the upper end of the spring, and said means receiving the ends of the spring maintaining its alinement with said tubes.

4. In filling apparatus, an inner tube, a reservoir in which the inner tube is fixed and with the interior of which it communicates, an outer tube surrounding the inner tube, opening and closing means and guiding means for the tubes near their lower ends, a guide bar fixed in the reservoir parallel to said tubes, a cup in which the outer tube is fixed and into the interior of which its upper end opens, said cup having an outlet, means on the cup engaging with the guide bar, whereby the cup may slide along the guide bar, a helical spring surrounding the inner tube above the upper end of the outer tube and alined with said tubes and with its lower end inside the cup, means held in the cup and receiving the lower end of the spring, means around the inner tube near its junction with the reservoir receiving the upper end of the spring, and said means receiving the ends of the spring maintaining its alinement with said tubes, the space in the bottom of the cup below the supporting means for the lower end of the spring forming an over-flow space, and said outer tube extending above the bottom of the cup and forming an annular receptacle around it inside said over-flow space, with which the outlet from the cup communicates.

5. In filling apparatus, an inner tube, and means to supply liquid thereto, said inner tube having a lateral outlet near one end, an outer tube surrounding the inner tube, said tubes being capable of relative movement so that the outer tube covers and uncovers said lateral outlet, a shank on the end of the inner tube, a tip on the shank with a shoulder presented toward the inner tube around the shank, and an elastic washer slipped over the tip onto the shank and extending radially past the lower end of the inner tube and forming a seat for the lower end of the outer tube when said outer tube covers said outlet, said tip being of a dimension permitting it to slide through said outer tube.

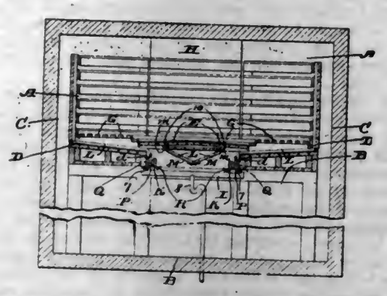
[Claims 6 and 7 not printed in the Gazette.]

1,216,575. WIRE-CLAMP. FRANK M. KLEINE, Duluth, Minn. Filed July 15, 1915. Serial No. 40,100. (Cl. 24—134.)



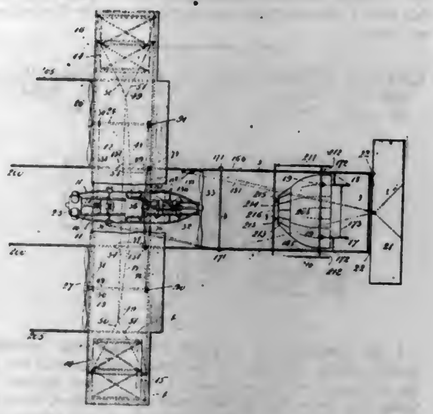
A clamp comprising a body portion, a flange extending outwardly from the lower portion of said body portion and constituting a stationary jaw having a longitudinally curved upper gripping face having transversely extending gripping teeth, a movable jaw pivotally connected with the body portion above the stationary jaw and provided with a curved free end face conforming to the curvature of the gripping face of the stationary jaw and provided with transversely extending gripping teeth, and a threaded stem extending from the body portion opposite the free end of the movable jaw when the movable jaw is in an operative position.

1,216,576. REFRIGERATOR. ADOLPH S. KLEIN, Cleveland, Ohio. Filed Apr. 10, 1916. Serial No. 90,079. (Cl. 62—47.)



In a refrigerator, an ice-chamber, a provision-chamber below the ice-chamber, passageways for conducting air from the upper ends of the outer portions of the provision-chamber to the upper portion of the ice-chamber, means for conducting off water dripping from the ice-chamber, means at opposite sides respectively of the upper end of the central portion of the provision-chamber for supporting provisions, passageways arranged to conduct cold air from the ice-chamber and discharging at said provision-supporting means into the provision-chamber, and two laterally and downwardly facing deflectors arranged between the discharging ends of the last-mentioned passageways and converging downwardly and being hinged at their upper longitudinal edges and arranged to swing laterally in a vertical plane upon being rendered free to swing and detachably connected together at their lower longitudinal edges.

1,216,577. FLYING-MACHINE. JAMES S. LANG, Boston, Mass. Filed Aug. 23, 1912. Serial No. 716,571. (Cl. 244—29.)



1. In a flying machine, the combination with a movable plane, of an operator's seat, means of connection between the operator's seat and said plane, means for loosely supporting said seat to have movement in reverse directions for controlling said plane, a device adapted and arranged to the end that it may automatically move said seat in a direction dependent upon and commensurate with the displaced position of said machine, and means whereby said seat may be thrown by the operator into engagement with said device or out of engagement therewith as occasion may require.

2. In a flying machine, the combination with a movable plane of an operator's seat, means of connection between said seat and said plane, means for supporting said seat to have movement in reverse directions, a gyroscopic device and frame carrying the same, means for pivotally supporting the same, and means of connection running from the frame of said device to said seat whereby the position of said seat may become changed in a direction dependent upon and commensurate with the turned position of said machine, said connecting means comprising in part mechanism by which the operator may throw said seat into or out of engagement with said gyroscopic device as occasion may require.

3. In a flying machine, the combination with the body thereof, of an operator's seat, means for loosely supporting said seat to have movement in reverse directions, a gyroscopic device and frame carrying the same, means for loosely supporting said device and frame to assume a normal dependent position, a tackle connecting with said frame and comprising separate connections running in reverse directions to said seat whereby the position thereof may become changed dependent upon the turned position of the machine, the said tackle comprising in part sets of pulleys around which said connections are adapted to run.

4. In a flying machine, an operator's seat and means for loosely supporting the same to have movement in reverse directions, said seat having sides and a back connection, a post pivotally connecting with said seat, and forming a portion of the back thereof, said post being adapted and arranged also to the end that it may be thrown into and out of engagement with said back connection, substantially as and for the purposes set forth.

5. In a machine of the character specified, the combination with an engine of means for pivotally mounting the same, a gear driven by said engine, an ultimate driven object, duplicate sets of transmission comprising in part gears having a constant engagement with said driven gear on opposite sides thereof to be driven thereby in reverse directions, said sets of transmission comprising also in part other gears concentric with the driven gears of said respective sets of gears, and means whereby a clutch engagement may be effected between the respective gears of said sets of gears upon the admission of fluid pressure between the same, means for mounting the gears of said respective sets of gears, and means for controlling the admission of fluid pressure to said respective sets of gears, or one or the other thereof dependent upon the position of said machine.

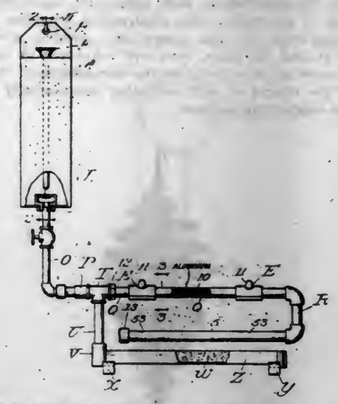
[Claims 6 and 7 not printed in the Gazette.]

1,216,578. APPARATUS FOR GENERATING AND BURNING HYDROCARBON-VAPORS. JAMES IRBIE LEARY, Chicago, Ill., assignor, by direct and mesne assignments, of one-third to E. H. Doud and one-third to George Lewis Hogan, Chicago, Ill. Filed July 3, 1916. Serial No. 107,354. (Cl. 158—36.)

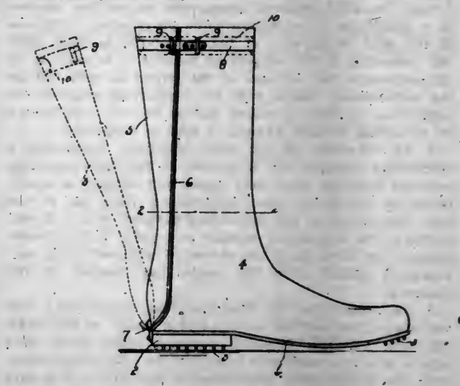
1. In a hydrocarbon generator, the combination with a generating chamber and means for heating the same, of a mass of aluminum within the generating chamber and arranged to come in contact with liquid and vapor passing through the retort, and means for supplying a vaporizable hydrocarbon to the retort, and means for supplying a hydro-oxygen cleaning solution to said retort.

2. A vapor generator comprising a vaporizing device with passages having walls of aluminum, said walls being reinforced by a generator wall of conductive material, whereby when heated the aluminum cannot sag.

3. A fuel reservoir provided with an outlet in its lower portion, a downward extending tube within such fuel reservoir, the upper end of such tube terminating above the fuel level of such reservoir and its lower end terminating directly over such fuel outlet, an intervening screen between the lower end of such tube and the outlet of such reservoir, and a generating chamber connected with such reservoir outlet at one end and having orifices in its other portions beyond the point of generation, substantially as and for the purpose described.



1,216,579. BOOT OR SHOE. JOSEPH LEMIEUX, Montreal, Quebec, Canada. Filed Oct. 26, 1916. Serial No. 127,758. (Cl. 36—1.)



A metallic shoe of the character described comprising a metallic sole, a metallic upper connected thereto, said upper comprising a front and a rear section, said front section having its rear end open, said rear section adapted to close the rear open end of the front section, means for pivotally connecting the lower end of the rear section to the shoe, means for connecting the upper end of the sections together, vertical straps secured to the rear edges of the front section, the edges of the rear section adapted to rest between said straps and the front section, and a cushion arranged within the upper ends of said sections for the purpose set forth.

1,216,580. CHRISTMAS-TREE ORNAMENT. DANIEL LEVI, New York, N. Y. Filed Nov. 2, 1916. Serial No. 129,113. (Cl. 41—10.)

1. An ornament of the kind described, comprising a supporting member or axis and a strand of flat light-reflecting material disposed along said supporting member in a multitude of successive coils, progressing, from one to the next, lengthwise of the supporting member, each coil connected to the supporting member at a point in its circumference, the surfaces of the strand of each coil being substantially alined with the supporting member.

2. An ornament of the kind described, comprising a supporting member or axis and a strand of flat light-reflecting material disposed about said supporting member in a multitude of successive coils, progressing, from one to the next, lengthwise of the supporting member and also spirally around the same, each coil connected to the supporting member at a point in its circumference, the surfaces of the strand of each coil being substantially alined with the supporting member.



3. An ornament of the kind described, comprising a supporting member or axis and a strand of flat light-reflecting material disposed along said supporting member in a multitude of successive coils, progressing, from one to the next, lengthwise of the supporting member, each coil connected to the supporting member at a point in its circumference, the surfaces of the strand of each coil being substantially alined with the supporting member, the supporting member extending beyond the coils and having an attaching portion whereby it may be suspended.

4. An ornament of the kind described, comprising a supporting member and a strand of flat light-reflecting material disposed about said supporting member in a multitude of successive coils, progressing, from one to the next, lengthwise of the supporting member, each coil connected to the supporting member at a point in its circumference, the surfaces of the strand of each coil being substantially alined with the supporting member of the ornament.

5. An ornament of the kind described, comprising a central supporting member or axis and a strand of flat light-reflecting material disposed symmentrically about said central axis in a multitude of successive coils, progressing, from one to the next, lengthwise of the central axis and also spirally around the same, each coil connected to the axis at a point in its circumference, the surfaces of the strand of each coil being substantially alined with the central axis of the ornament, certain of the successive coils being of progressively different diameter.

[Claims 6 to 10 not printed in the Gazette.]

1,216,581. PROCESS OF MAKING ACETYL-CELLULOSE PLASTICS. WILLIAM G. LINDSAY, Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 27, 1911. Serial No. 662,747. (Cl. 106—40.)

1. The process of making acetyl cellulose plastic masses which comprises incorporating an acetone-soluble acetyl cellulose with tetrachlorethyl acetanilid in the presence of a small proportion of ethyl alcohol and heating.

2. The process of making acetyl cellulose plastic masses which comprises incorporating an acetone-soluble acetyl cellulose with a chlorinated alkyl acetanilid in the presence of a small proportion of ethyl alcohol, and heating, said chlorinated alkyl acetanilid when melted being a solvent for acetyl cellulose and when in the presence of ethyl alcohol being a non-solvent for acetyl cellulose at room temperature.

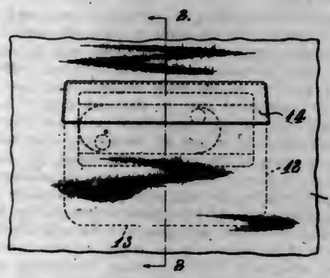
3. The process of making acetyl cellulose plastic masses which comprises incorporating an acetone-soluble acetyl cellulose with tetrachlorethyl acetanilid in the presence of a small proportion of ethyl alcohol and heating, the proportion of the alcohol being about 1 to 1½ times the acetanilid ingredient.

4. The process of making acetyl cellulose plastic masses which comprises incorporating an acetone-soluble acetyl cellulose with a chlorinated alkyl acetanilid in the presence of a small proportion of ethyl alcohol, and heating, said chlorinated alkyl acetanilid when melted being a solvent for acetyl cellulose and when in the presence of ethyl alcohol being a non-solvent for acetyl cellulose at room temperature, the proportion of the alcohol being about 1 to 1½ times the acetanilid ingredient.

5. The process of making acetyl cellulose plastic masses which comprises incorporating an acetone-soluble acetyl cellulose with tetrachlorethyl acetanilid in the presence of a small proportion of ethyl alcohol and heating, the proportion of the alcohol being about 1 to 1½ times the acetanilid ingredient, and the latter being less than one-half the acetyl cellulose ingredient.

[Claims 6 and 7 not printed in the Gazette.]

1,216,582. POCKET-LOCK. SIMON LITWIN, Chicago, Ill. Filed Dec. 6, 1916. Serial No. 135,340. (Cl. 2—151.)



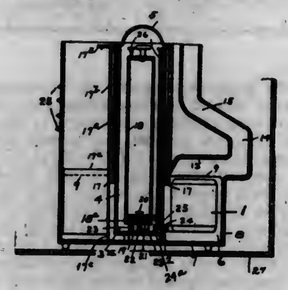
1. In a safety pocket, the combination with a plate secured to the interior wall on one side of the pocket, catch bolts extending outwardly from said plate, said bolts having enlarged heads, an oppositely disposed plate casing attached to the other wall of the pocket, a slide movable therein, means formed with said slide engageable with said bolts, means for normally pressing said slide into engagement with said bolts, and means for manually retracting said slide.

2. In a safety pocket, the combination with a thin flexible plate engaged in the interior of the pocket on one side thereof, studs projecting inwardly from said plate, said studs having enlarged heads, a casing secured oppositely to said plate on the other side of said pocket, said casing having apertures registering with said stud, a slide movable in said casing, means for manually operating said slide, means formed with said slide engageable with said studs, means for normally pressing said slide into engagement with said studs, and means tending to open said pocket when said slide is retracted from said studs.

1,216,583. TANK-HEATER. RICHARD LORD, Cedar Rapids, Iowa. Filed Feb. 12, 1916. Serial No. 77,874. (Cl. 126—360.)

1. In a tank heater, the combination of a lamp; a lamp support off-set from the lamp; a heater body comprising an entrance passage; a support passage having a vertically extending connection with the entrance passage; and an off-set from the entrance passage into which the lamp may be moved from the entrance passage whereby the lamp may be introduced into the heater through the entrance passage while supported by the lamp support in the support passage and moved into the off-set from the entrance passage.

2. In a tank heater, the combination of a lamp; a lamp support off-set from the lamp, said support forming a means of supply for the lamp; a heater body comprising an entrance passage; a support passage having a vertically extending connection with the entrance passage; and an off-set from the entrance passage into which the lamp may be moved from the entrance passage whereby the lamp may be introduced into the heater through the entrance passage while supported by the lamp support in the support passage and moved into the off-set from the entrance passage.



3. In a tank heater, the combination of a lamp; a reservoir off-set from the lamp; a supply connection between the lamp and the reservoir; a heater body comprising an entrance passage; a reservoir passage into which the reservoir may be introduced; a slot between the reservoir passage and the entrance passage through which the supply connection may be passed; and an off-set from the entrance passage into which the lamp may be moved.

4. In a tank heater, the combination of a lamp; a reservoir off-set from the lamp; a supply connection between the lamp and the reservoir; a heater body comprising an entrance passage; a reservoir passage into which the reservoir may be introduced; a slot between the reservoir passage and the entrance passage through which the supply connection may be passed; an off-set from the entrance passage into which the lamp may be moved; and an inverted supply tank in the reservoir, said tank leaving an air space between the walls of the tank and the reservoir.

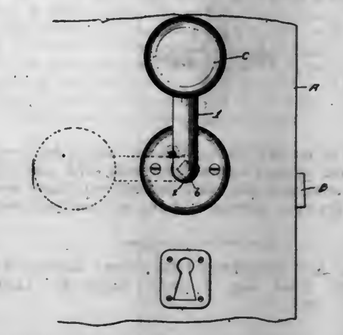
5. In a tank heater, the combination of a lamp; a reservoir off-set from the lamp and extending to the lamp level; a connection between the lamp and the reservoir; a heater body comprising an entrance passage through which the lamp may be introduced; an off-set from the passage in which the lamp may be moved, the top of the off-set forming a heating plate for the lamp; and a reservoir connection forming a support for the lamp.

[Claims 6 to 17 not printed in the Gazette.]

1,216,584. ATTACHMENT FOR DOOR-LATCHES. WILLIAM L. MAST, Arthur, Ill. Filed Mar. 25, 1916. Serial No. 86,643. (Cl. 70—42.)

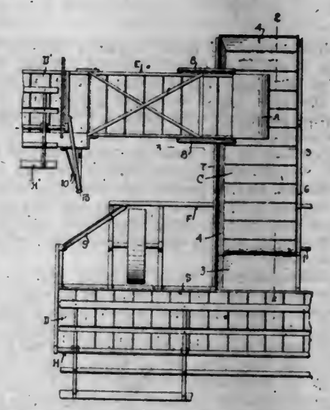
1. The combination with a door and a latch for the door having an ordinary operating rod, of an operating crank provided with angularly disposed oppositely extending end portions, one of said end portions provided with a square socket for receiving said operating rod and having a fastener receiving opening formed in its side communicating with the interior of said socket, the opposite end portion of said crank provided with a reduced square stem of a size equal to the size of the square socket in the first mentioned end portion, and a knob mounted upon the square stem, the said square stem and said square operating rod being of similar formation whereby said knob may be interchanged from said operating rod and mounted upon said stem.

2. The combination with a door and a latch for the door having an ordinary square operating rod, of an operating crank adapted to have its ends interchangeably connected with said operating rod, right-angularly disposed and oppositely extending end portions formed on said crank, one of said end portions being provided with a square socket the opposite of said end portions provided with a square stem, each of said end portions provided with a fastener receiving aperture, a knob adapt-



ed to be detachably mounted on said stem or on said operating rod, the main portion of said operating crank adapted to be disposed upwardly at right angles from said operating rod, the attaching portion of said knob adapted to be received either by the end of said stem or the end of said operating rod.

1,216,585. HEADER. JOHN C. F. MCCAULEY, Fowler, Kans. Filed Aug. 7, 1916. Serial No. 113,572. (Cl. 56—33.)



In combination, a header including a grain platform, a draper carried by the platform and traveling in a path at right angles to the direction of travel of the header, a conveyer carried by the header rearwardly of the draper and discharging upon the draper substantially midway the length of the draper, said conveyer being extended throughout its length in substantially the same general direction as the direction of travel of the header, and a second header operated independently of the first named header and provided with a header elevator discharging upon the conveyer of the first named header.

1,216,586. NUT-LOCK. KENNETH MCLEOD, Seattle, Wash. Filed Jan. 13, 1916. Serial No. 71,938. (Cl. 151—15.)

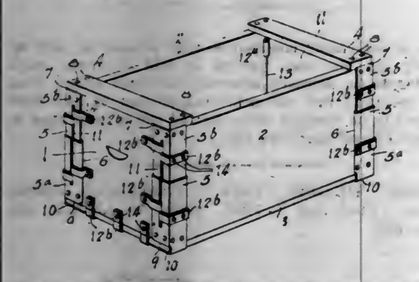
A nut lock comprising the combination with a threaded stud, of a ball bearing member mounted thereon and pro-

vided with oppositely extended radial slots in its upper face, a flexible washer slidably mounted upon said stud and provided with a U-shaped incision in its body portion, the material within said incision being bent at an angle to the body of said washer and engaged in one of



said slots of the ball bearing member, means for preventing rotation of said washer upon said stud, and a nut threaded upon said stud and engaged with said washer to clamp the same between said nut and said ball bearing member.

1,216,587. BOX CONSTRUCTION. JOHN MELSON, Windsor, Cal. Filed Aug. 2, 1916. Serial No. 112,636. (Cl. 217—69.)



1. A reinforcement for boxes, including doubled strips having the looped ends thereof inserted through corner joints of the box, and anchor means within the box for engaging the said looped ends, the outer ends of the doubled strips providing arms which are bent in opposite directions around the corner of the box.

2. A reinforcement for boxes, including doubled strips having the looped ends thereof inserted through corner joints of the box, and an anchor wire extending along the corner of the box on the interior thereof and engaging the said looped ends of the strips, the outer ends of the doubled strips being bent in opposite directions around the corner of the box.

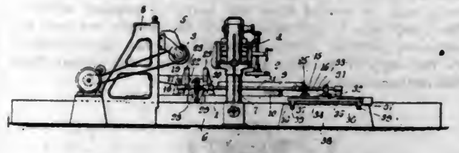
3. A reinforcement for boxes, including doubled strips having the looped ends thereof inserted through corner joints of the box, and an anchor wire extending along the corner of the box on the interior thereof for engaging the said looped ends of the strips, the outer ends of the doubled strips being slit longitudinally to provide arms, each of which is of two thicknesses of material, said arms being bent in opposite directions around the corner of the box.

4. A reinforcement for boxes, including an angular corner stay having a slit in one of the flanges thereof, doubled strips inserted through the slit of the corner stay and having the looped ends thereof extending through the corner joint of the box, and anchor means within the box for engaging the said looped ends of the strips, the outer ends of the doubled strips providing arms which are bent in opposite directions around the corner of the box.

5. A reinforcement for boxes, including an angular corner stay having a slit in one of the flanges thereof, doubled strips inserted through the slit of the corner stay and having the looped ends thereof extending through the corner joint of the box, and an anchor wire extending along the corner of the box on the interior thereof and engaging the said looped ends of the strips, the outer ends of the doubled strips providing arms which are bent in opposite directions around the corner of the box.

[Claims 6 to 9 not printed in the Gazette.]

1,216,588. SHAPING MECHANISM FOR PLANING-MACHINES. WILLARD F. MEYERS, Long Island City, and MORRIS SIMONS, New York, N. Y. Filed Aug. 24, 1915. Serial No. 47,031. (Cl. 51—12.)



1. A shaping mechanism having, in combination, an oscillatable work support, a reciprocative slide for oscillating the work support slidable transverse to the axis of oscillation of the work support and having thereon a straight slideway transverse to the path of its sliding movement, a connecting member forming a pivotal connection to the work support and slidable along the transverse slideway on the slide, an operating member forming a straight inclined guideway for reciprocating the slide, and means for mounting the work support and operating member for relative bodily straight line movement at an angle to the guideway formed by the operating member and transverse to the axis of oscillation of the work support.

2. A shaping mechanism having, in combination, an oscillatable work support having a wrist pin, a reciprocative slide for oscillating the work support slidable transverse to the axis of oscillation of the work support and having a transverse slideway engaging with the wrist pin to oscillate the work support, an operating member forming a straight inclined guideway for reciprocating the slide, and means for mounting the work support and operating member for relative bodily straight line movement at an angle to the guideway formed by the operating member and transverse to the axis of oscillation of the work support.

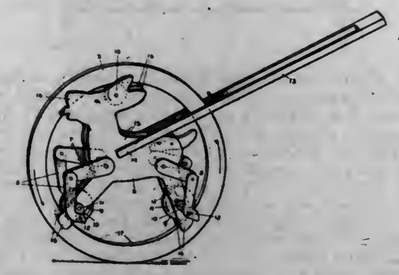
3. A shaping mechanism having, in combination, an oscillatable work support having a wrist pin rigidly projecting therefrom, a reciprocative slide for oscillating the work support slidable transverse to the axis of oscillation of the work support and having thereon a straight slideway transverse to the path of its sliding movement, a sliding block guided by the slideway and forming a pivotal bearing for the wrist pin, an operating member forming a straight inclined guideway for reciprocating the slide, and means for mounting the work support and operating member for relative bodily straight line movement at an angle to the guideway formed by the operating member and transverse to the axis of oscillation of the work support.

4. A shaping mechanism for a planer having a bed and a tool carrier relatively movable along straight lines parallel with the surface of the bed, such mechanism comprising an oscillatable work support pivoted on the bed, a reciprocative slide for oscillating the work support slidable on the bed transverse to the axis of the work support and having thereon ways transverse to its path of sliding movement, a connecting member forming a pivot on the work support and having a sliding relation on the transverse ways of the slide, and operating connections for imparting sliding movement at a uniform rate to the slide as compared with and by reason of the relative straight line movement of the tool carrier and planer bed.

5. A shaping mechanism for a planer having a bed and a tool carrier relatively movable along straight lines parallel with the surface of the bed, such mechanism comprising an oscillatable work support pivoted on the bed, a reciprocative slide for oscillating the work support slidable on the bed transverse to the axis of the work support and having thereon ways transverse to its path of sliding movement, a connecting member forming a pivot on the work support and having a sliding relation on the transverse ways of the slide, and operating connections for imparting sliding movement at a uniform rate to the slide as compared with and by reason of the relative straight line movement of the tool carrier and planer bed.

[Claims 6 to 23 not printed in the Gazette.]

1,216,589. TOY. WALTER MEYNER, New York, N. Y. Filed June 26, 1916. Serial No. 105,858. (Cl. 46—45.)



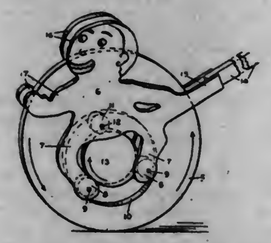
1. A trundle toy comprising in combination, a handle for propelling the toy, a figure within the hoop engaged by said handle and provided with a pivoted section and an eccentrically journaled roller mounted on said pivoted section and bearing on the inner periphery of the hoop.

2. A trundle toy comprising a hoop, a member within said hoop having spaced apart sides provided with portions embracing the edges of the hoop, a roller journaled between said spaced apart sides and bearing on the inner periphery of the hoop and a movable figure device operated by said roller.

3. A toy comprising a hoop, a movable figure associated with said hoop and a roller engaged with said figure and engaging the trackway provided by the inner periphery of the hoop, said trackway, figure and roller bearing an eccentric relation to each other whereby in the rotation of the hoop to impart a rocking motion to the figure.

4. A toy comprising a hoop, a movable figure associated with said hoop and a roller engaged with said figure and engaging the trackway provided by the inner periphery of the hoop, said trackway, figure and roller bearing an eccentric relation to each other whereby in the rotation of the hoop to impart a rocking motion to the figure and a handle connected with the figure for propelling the hoop.

1,216,590. TOY. WALTER MEYNER, New York, N. Y. Original application filed June 26, 1916, Serial No. 105,858. Divided and this application filed Oct. 2, 1916. Serial No. 123,254. (Cl. 46—45.)



1. A trundle toy comprising a hoop having an eccentric track on the inner periphery thereof, rollers bearing on said track and a figure supported by said rollers.

2. A trundle toy comprising a hoop having an eccentric track on the inner periphery thereof, eccentrically journaled rollers bearing on said track and a figure supported by said rollers.

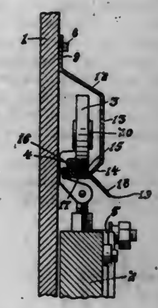
3. A trundle toy comprising a hoop having an eccentric track, a roller riding on said track and a figure supported by said roller.

4. A trundle toy comprising a hoop having an eccentric track, a roller riding on said track, a figure supported by said roller and a handle connected with said figure.

5. A trundle toy comprising a hoop having an eccentric track on the inner periphery thereof, a figure device supported on said eccentric inner track and a figure device supported on the outer periphery of the hoop.

[Claims 6 to 8 not printed in the Gazette.]

1,216,591. TRACK FOR SLIDING DOORS. D D MILLER, Canton, Ohio. Filed Dec. 27, 1915. Serial No. 68,631. (Cl. 16—7.)



1. A track formed of end-abutting sheet metal sections provided at their lower portions with outwardly projecting declined drip flanges having apertures adjacent their abutting ends and a bracket adapted to be attached at its upper end to a fixed support for the track and to extend downwardly therefrom over the outside of said sections and provided at its lower end with fingers extended through said apertures and underlying and supporting said drip flanges.

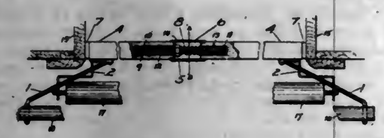
2. A track formed from a single sheet of metal and comprising an upper, vertical, attaching portion, an outwardly extending, declined shelter portion at the lower edge of said attaching portion, a vertical front portion depending from the lower edge of said shelter portion, an inwardly and downwardly extending return portion at the lower edge of said front portion, an inwardly extending, upper, horizontal track portion at the inner edge of said return portion, a double, folded, vertical retaining flange at the inner edge of said upper track portion, a lower, horizontal track portion immediately underlying said upper track portion, and a declined drip flange extending outwardly and downwardly from the outer edge of said lower track portion.

3. In a sheet metal track of the character described, a track portion adapted for the reception of door hanger heels and formed of upper and lower contiguous, integral members arranged in horizontal planes, and a retaining flange at the edge thereof formed of the folded edge of said two members bent into vertical position.

4. A track for sliding doors made of end-abutting sheet metal sections and a joint bracket for the same adapted to over-lie the joint between two of said sections and having integral, spaced, bendable members separately engaging the respective ends of said two sections, whereby the said sections may be brought into alinement by the bending of said members, substantially as described.

5. For a sectional track of the character described, a joint bracket adapted to over-lie the joint at the abutting ends of two sections and provided with a malleable, bifurcated end, each member thereof being adapted for engagement with one of said sections, whereby said sections may be alined by the bending of said members.

1,216,592. NAILLESS COMBINATION WINDOW SHADE AND CURTAIN HANGER. FRANK EDWARD MOES, Detroit, Mich. Filed July 20, 1916. Serial No. 110,326. (Cl. 156—23.)



A fixture of the type described, comprising longitudinally alining members with a gap therebetween, sleeves mounted in the confronting ends of said members, an adjustable screw in one of said sleeves having a smooth end extending into the other of said sleeves, a spring encircling said screw between the ends of said members and adapted to hold said members separated, a shiftable sleeve slidable on said members and adapted to close the gap therebetween, curtain shade roller brackets carried by the lower faces of said members, curtain shade roller brackets carried by side faces of said members, and curtain pole bracket arms carried by side faces of said members.

1,216,593. CYANID-GAS FUMIGATING APPARATUS. PETER FRANCIS MURPHY, New Orleans, La. Filed Apr. 27, 1916. Serial No. 93,908. (Cl. 23—1.)

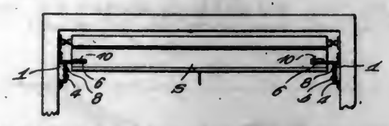


1. In gas generating apparatus, a mixing chamber provided in its top with an opening, a tube connected with the upper end of the mixing chamber and arranged in proximity to the opening, means located within the lower end of said tube to cover and uncover the opening, and a removable cap carried by the upper end of the tube.

2. In gas generating apparatus, a mixing chamber, an opening formed within its upper end, a ring carried by the upper end of the mixing chamber and surrounding the opening, a tube connected with said ring, a butter-fly valve located within said tube and adapted to completely close the same, a crank carried by the butter-fly valve, a latch to hold the crank in the vertical position, a latch to hold the crank in the horizontal position, a detachable cap having screw-threaded engagement with the tube, and a take-off pipe carried by the cap.

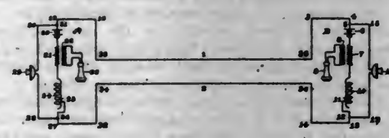
3. In gas generating apparatus, a mixing chamber, a drain pipe connected with the lower end of said chamber, an opening formed in the upper end of the mixing chamber, a ring secured to the top of the mixing chamber and completely surrounding the opening, packing arranged between the ring and the top of the mixing chamber, a tube located above the mixing chamber and having screw-threaded engagement within the ring, a transverse shaft arranged near the lower end of the tube, stuffing boxes receiving the shaft, a butter-fly valve carried by the shaft, a crank formed upon one end of the shaft to turn the butter-fly valve, means to hold the crank against improper movement, a cap having screw-threaded engagement with the upper end of the tube, and a take-off pipe carried by the cap.

1,216,594. WINDOW-SHADE GUIDE. WILLIAM M. MURRAY, Canajoharie, N. Y. Filed Apr. 10, 1916. Serial No. 90,144. (Cl. 156—26.)



In a device of the class described, a bracket having a vertically disposed flat face and means for securing said bracket to a support, a flat strip of metal bent at right angles at a point substantially midway its length to form vertical and horizontal flat arms, the vertical flat arm having a pivot opening near its lower end, a pin fixed in said vertical flat arm at a point near the pivot opening, the horizontal flat arm being slit centrally from its free end to a point near the vertical arm, the material on the edges of the slit being bent upwardly and outwardly to form curved flanges, the vertically disposed face of the bracket having a pivot opening near its lower end and an arcuate slot spaced from and concentric with said pivot opening, a bolt extending through the aforesaid pivot openings to pivotally connect the bracket and vertical flat arm, and a pin in the vertical arm extending through and guided in the aforesaid arcuate slot.

1,216,595. TRANSMISSION OF ELECTRICAL IMPULSES OVER CIRCUITS OF HIGH ELECTROSTATIC CAPACITY. GIUSEPPE MUSSO, Vado, Italy. Filed Mar. 14, 1914. Serial No. 824,680. (Cl. 179—1.)



1. A telephone circuit consisting of a main line connecting two home circuits, means for maintaining an electric charge on said main line adapted to satisfy the electrostatic capacity of said line sufficiently to reduce the distortion and retardation affecting the transmission of electrical impulses, the said home circuits also including a source of electro-motive force, the primary of an induction coil, the secondary of which contains a telephone receiver, a source of inductance and a telephone transmitter connected in series, the said transmitter being connected in shunt with said line, said source of inductance having a predetermined self-inductance and output adapted to produce tertiary impulses having characteristics opposite to those which would normally be impressed upon said impulses by the characteristics of said main line, the said home circuits being arranged and adapted for generating the aforesaid tertiary impulses and transmitting the same along said main line superimposed on said electric charge and detecting or receiving them at the distant end of the line.

2. A telephone circuit consisting of a main line connecting two home circuits, means for maintaining an electric charge on said main line adapted to satisfy the electrostatic capacity of said line sufficiently to reduce the distortion and retardation affecting the transmission of electrical impulses, the said home circuits also including a source of electro-motive force, the primary of an induction coil, the secondary of which contains a telephone receiver, a source of inductance and a telephone transmitter connected in series, the line being connected thereto through condensers and said transmitter being connected in shunt therewith, said source of inductance having a predetermined self-inductance and output adapted to produce tertiary impulses having characteristics opposite to those which would normally be impressed upon said impulses by the characteristics of said main line, the said home circuits being arranged and adapted for generating tertiary impulses as herein set forth and transmitting the same along said main line superimposed on said electric charge and detecting or receiving them at the distant end of the line.

3. The herein described system for the transmission of electrical impulses, consisting of a home circuit containing a telephone transmitter, a source of electro-motive force, the primary of an induction coil, the secondary of which includes a telephone receiver, a solenoid of predetermined self-inductance which is so proportioned as to balance or neutralize the electrostatic capacity of the main line and of predetermined output and intensity sufficient for overcoming the ohmic resistance of the main line upon which said impulses are impressed, said main line being connected with said home circuit in shunt with said telephone transmitter.

4. The herein described system for the transmission of electrical impulses, consisting of a home circuit containing a telephone transmitter, a source of electro-motive force, the primary of an induction coil, the secondary of which includes a telephone receiver, a solenoid of predetermined self-inductance which is so proportioned as to balance or neutralize the electrostatic capacity of the main line and of predetermined output and intensity sufficient for overcoming the ohmic resistance of the main line upon which said impulses are impressed, said main line being connected through condensers with said home circuit in shunt with said telephone transmitter, means for maintaining an electric charge on the main line from an independent source of electro-motive force, the current from which is passed through impedance coils to prevent short-circuiting the line with respect to the said working impulse.

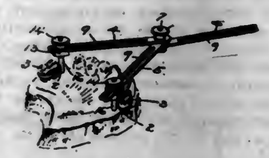
5. A telephone circuit consisting of a main line connecting two home circuits, means for maintaining an electric charge on said main line adapted to act as a transmitting medium and to satisfy the electrostatic capacity of said main line sufficiently to reduce the distortion and retardation otherwise affecting the transmission of electrical impulses, the said home circuits each containing a telephone transmitter, a source of electro-motive force, the primary of an induction coil, the secondary of which includes a telephone receiver and a source of inductance connected in series, the said source of inductance consisting of an inductance coil of predetermined self-inductance and output adapted to produce electro-magnetic impulses having characteristics opposite to those which would normally be impressed upon them by the characteristics of said main line, the said line being connected in shunt with the said telephone transmitter, the said home circuits being arranged and adapted for generating the said electro-magnetic impulses and transmitting the same along said main line by superimposition on said electric charge, thereby causing the transmission to take place by the propagation of a disturbance in said charge as an elastic medium, and receiving or detecting them at the distant end of the line.

[Claim 6 not printed in the Gazette.]

1,216,596. PARALLELING INSTRUMENT. CHOTOKU NISHI, San Francisco, Cal. Filed Mar. 27, 1916. Serial No. 86,947. (Cl. 32—10.)

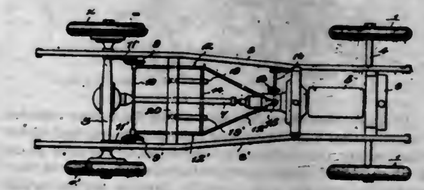
1. An instrument for paralleling dental structures comprising a plurality of slotted arms, a pivot fixed at one end of said arms about which the arms are angularly adjustable and instrumentalities extending through said slots and adjustable longitudinally thereof and means for clamping the instrumentalities in adjusted position.

2. An instrument for paralleling dental structures comprising a plurality of slotted arms provided at their ends with apertures spaced from said slots, a pivot extending through said apertures, means on the pivot for clamping the arms together in angularly adjusted positions, clamps



engaging said arms and arranged to be adjusted longitudinally thereof and parallel instrumentalities secured to said clamps and extending through said slots.

1,216,597. ANTISKIDDING AND BRAKING DEVICE FOR AUTOMOBILES. THOMAS O'DOWD, Warren, Ohio. Filed Oct. 20, 1916. Serial No. 126,672. (Cl. 21—8.)



Means for retaining the rear wheels of a vehicle in its line of travel, comprising a plurality of disks in vertical planes parallel to the planes of said wheels, in combination with a subsidiary axle therefor; a supporting frame for said axle pivoted in front of it; springs to normally hold said axle and disks off from the road; bars connecting said axle's ends and the fulcrum of an operating lever; a lever and a lever lock, for the purpose set forth and as shown and described.

1,216,598. HOLDING MEANS FOR HOUSINGS. HERMAN G. PAPE, New York, N. Y., assignor to Ralph A. Schoenberg, New York, N. Y. Filed June 23, 1916. Serial No. 105,512. (Cl. 173—362.)



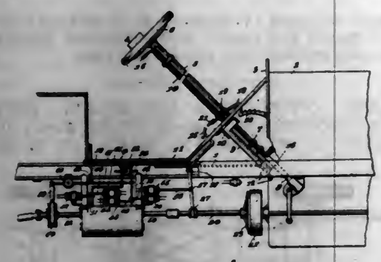
1. A device of the character described comprising a housing member having two openings in its wall, which wall extends from one of said openings to the other; and a holding member having two legs to enter said openings and having a body portion projecting from said wall to a substantial extent and engaging said wall at substantially all points between said openings.

2. A device of the character described comprising a housing member having two openings and a holding member having an elongated body extending crosswise of the axis of said housing member and having two legs in said openings, said body engaging said housing member at substantially all points between said openings.

1,216,599. TRANSMISSION-GEARING-CONTROL MECHANISM. VIRGIL W. PARKER, Laddonia, Mo. Filed Feb. 18, 1914. Serial No. 819,506. (Cl. 74—58.)

1. The combination with the speed gear changing mechanism and the clutch mechanism for motor vehicles, of a

plurality of speed gear shifters, an electromagnetic device for controlling the shifters to position them at neutral, electromagnetic devices for controlling the shifters to position them for changing speed, electromagnetic devices for controlling operation of the clutch mechanism, circuits including a source of current and operatively connected with the respective magnetic devices, and switch devices having a plurality of contacts for closing the circuit appertaining to the neutral position of one shifter before closing the circuit appertaining to the speed change position of the other, as and for the purpose set forth.



2. In speed gear changing mechanism for motor vehicles, the combination with the speed changing gears, and clutch mechanism for controlling the operation of the said gears, of a plurality of speed gear shifters, a plurality of electromagnetic devices, and electric circuits within which the electromagnetic devices are arranged, the said devices being connected to the shifters and to the clutch mechanism to operate when the circuits are closed, first the shifters to position the speed gears at neutral, next the clutch mechanism, and finally the shifters to change speed.

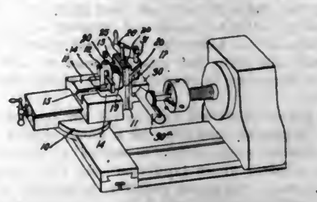
3. In a motor vehicle, the combination with the clutch mechanism, the speed gear changing mechanism, and a brake mechanism for the speed gear shaft, of a plurality of electromagnetic devices, speed gear shifters, said electromagnetic devices being actuatable to control the brake mechanism, movement of the speed gear shifters, and the clutch mechanism, a plurality of electrical circuits within which the electromagnetic devices appertaining to the speed gear shifters and the clutch mechanism are arranged, a circuit within which the electromagnetic device appertaining to the brake mechanism is arranged, a switch device operable to close respectively the circuit appertaining to the electromagnetic device for shifting the speed gears into neutral, the circuit appertaining to the electromagnetic device for actuating the clutch mechanism, and finally the electromagnetic device appertaining the means for shifting the gears to change speed, and a switch device actuatable first to shift the speed gears into neutral and second to actuate the brake mechanism, as and for the purpose set forth.

4. In a motor vehicle, the combination with the speed gear change mechanism, gear shifters, and brake mechanism to control rotation of the speed gear shaft, of an electromagnetic device, a bodily movable arm having connection with said brake mechanism and said electromagnetic device, and circuits including a source of current and a switch device, the switch device being operable to close the circuit appertaining to the neutral position of the shifters before closing the circuit appertaining to the operation of the brake mechanism, as and for the purpose set forth.

5. In a motor vehicle, the combination with the speed gear changing mechanism, the speed gear shifters, and the clutch mechanism, of a plurality of electromagnetic devices, circuits including a source of current and operatively connected with the respective electromagnetic devices, and switch devices operable to close the circuit appertaining to the neutral position of the shifters before closing the circuit appertaining to the actuation of the clutch, and to close the circuit appertaining to the actuation of the clutch before closing the circuit appertaining to speed change position of the shifters.

[Claims 6 to 11 not printed in the Gazette.]

1,216,600. MILLING ATTACHMENT FOR LATHES. JAMES H. PASCHALL, Long Beach, Cal., assignor of one-half to Frank P. Cleary, Long Beach, Cal. Filed Mar. 29, 1915. Serial No. 17,710. (Cl. 90—11.)

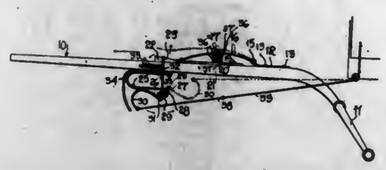


1. In combination, a base member having a pair of spaced horizontally projecting prongs and marginal spaced ribs angularly extending therefrom adapted for removable attachment to a lathe carriage with the said prongs and ribs in contact therewith, a vertical flat surface directly on said member at right angles to the axis of the lathe to which it is attached, a way member pivotally attached to said base member to be swingingly adjustable thereon about said pivot and parallel to said vertical face, slot and bolt connection between the base member and the way member for holding the way member in any desired position, one of the bolts of said connections extending between the said ribs, vertical ways directly on said way member, a work holding member slidable on said ways, means to move said work holding member on said ways, and a work clamp directly mounted on said sliding member adapted to hold a shaft or the like at right angles to said ways and parallel to said vertical face on the base member.

2. A device of the character described consisting of a base member having a pair of spaced horizontally projecting prongs adapted for removable attachment to a lathe carriage by means of its tool post, a vertical flat surface directly on said base member at right angles to the lathe to which it is attached, a way member pivotally attached centrally directly to said base member against its said vertical face to be swingingly adjustable about said pivot in the plane of said face, slot and bolt connections between the base and way members above and below said prongs for holding the way member in any desired position about its said pivot, projecting marginal ribs upon said body below the said prongs and attached thereto, vertical ways directly on said way member on a face opposite its face engaging said flat vertical face of the base member, a work holding slider mounted directly on said vertical ways, means extending centrally within a recess within said way member to move said work holding slider thereon, and work holding means on said slider consisting of a clamp member integral with and projecting from the slider on its face opposite the engagement of said slider with said vertical ways, said clamp member having a V-shaped notch extending horizontally at right angles to said vertical ways, and another clamp member movable on said slider to and from the first mentioned clamp member, said last mentioned clamp member also having a V-shaped notch extending horizontally at right angles to said vertical ways and opposite the notch in said first mentioned clamp member.

1,216,601. HORSE-DETACHER. IRL L. PENSE, Bonesteel, S. D. Filed May 13, 1916. Serial No. 97,355. (Cl. 21—75.)

1. The combination with a tongue, of a plate attached to the upper face of the tongue and formed with a concave socket at its middle and with upwardly extending flanges at its forward end and with an upwardly extending stud between said flanges, a member hingedly connected at its rear end to the tongue, arching over said plate and formed with a concave socket in alinement with the socket in the plate and also formed with a perforation for the reception of said stud, an evener bar having spherical trunnions normally disposed in said sockets, a U-shaped locking member, an eccentrically pivoted member operatively mounted upon the under face of the tongue and connected to said U-shaped locking member and having an operating extension, said eccentric when turned into one position, drawing the locking member downward to thereby hold the perforated extremity of the hinge member in engagement with the stud, and manually operable means for rotating said eccentric to raise said locking member to thereby free the hinge member and the evener bar.

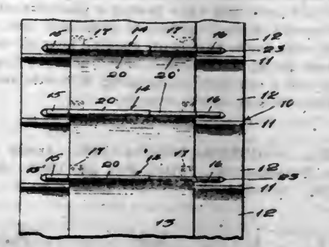


2. In a horse detaching device the combination with a tongue, a plate disposed upon the upper face of the tongue and having a concave socket and having upwardly extending lateral flanges at its forward end and an upwardly extending stud between the flanges, the flanges being notched, a member hinged at its rear end to the tongue and arching over said plate and being formed intermediate its ends with a socket corresponding to the socket in the plate and at its free end with a perforation for the said stud, an evener bar having spherical trunnions normally disposed in said socket, a U-shaped spring mounted upon the under face of the tongue, a clip pivotally mounted upon said spring and having studs projecting laterally from it and eccentric to its pivotal axis, said clip having a handle portion, a U-shaped bail having its ends connected to said studs on the clip and normally disposed in the notches of said flanges, springs urging the U-shaped bail toward the forward end of the tongue, and means attached to said handle portion of the clip whereby it may be rotated against the force of the first-named spring to lift the yoke and thereby release the hinge member.

3. The combination with a tongue, of a plate attached to the upper face of the tongue and having an upwardly extending stud at its forward end, a member hingedly connected at its rear end to the tongue, arching over said plate and formed with a perforation for the reception of the stud, an evener bar, the evener bar and the stud plates being formed with coacting sockets and spheroidal trunnions, a U-shaped locking member embracing the tongue and arching over the forward end of the hinged member and the forward end of the plate, a spring urging the U-shaped locking member forward, means disposed below the tongue for drawing the locking member downward to thereby hold the hinged member in engagement with the stud, and manually operable means for releasing said locking means to thereby free the hinged member and permit the evener bar to be withdrawn.

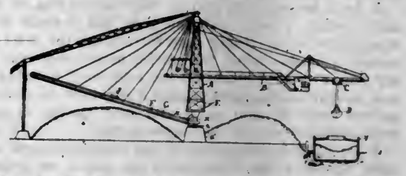
4. The combination with a tongue, of a plate attached to the upper face of the tongue, a member hingedly connected at its rear end to the tongue and arching over said plate, the hinged member and the plate being formed one with a stud and the other with a perforation engaging the stud, an evener bar disposed between the hinged member and the plate, the hinged member and said plate and the evener bar being formed with coacting sockets and trunnions, a U-shaped locking member embracing the tongue and normally extending over the free end of the hinged member, a U-shaped spring mounted upon the under face of the tongue, an eccentric mounted upon the end of the spring and to which the locking member is pivotally connected, said eccentric having a forwardly and downwardly projecting arm, a spring connected to the upper end of the locking member to urge it forward when it is released from its locking engagement, and means engaging the arm on the eccentric for manually releasing said eccentric to thereby permit it to be shifted upward by the first named spring and forward by the second named spring.

1,216,602. DEVICE FOR HOLDING CARPETS. FRANK J. PETRUSHA, Ironwood, Mich. Filed Sept. 7, 1915. Serial No. 49,236. (Cl. 16—26.)



A stair-way carpet holding device, comprising a pair of L-shaped brackets adapted to fit in the corner between the horizontal and vertical portions of the step and carrying outwardly projecting sleeves rigidly secured thereto, the sleeves being arranged wholly at one end of the brackets whereby the sleeves will be positioned adjacent the edges of the carpet when the brackets are arranged therebeneath; a cap closing the outer end of one sleeve; a rod to be arranged upon the carpet between the sleeves and provided at one end with a reduced projection to enter the corresponding sleeve, and having a recess formed in its opposite end; and a pin adapted for insertion through the other sleeve and being longer than the sleeve so that its inner end extends into the recess of the rod to lock the rod in place, said pin having a cap at its outer end which is identical with the first named cap; substantially as described.

1,216,603. COAL HANDLING AND STORING APPARATUS. JAMES B. PHILLIPS, Portland, Me. Filed May 21, 1914. Serial No. 839,031. (Cl. 214—4.)



1. In a hoisting apparatus, the combination of a base, a mast pivoted directly thereto, a boom pivoted to said mast having a conveyer, said boom being pivoted to swing horizontally, a second boom mounted on the mast above the first mentioned boom and adapted to swing horizontally with the rotation of the mast and means on said boom for conveying material to said first-mentioned conveyer.

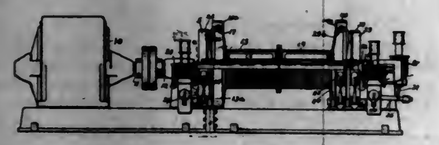
2. In an apparatus of the character described, the combination of a mast, a boom embracing said mast and arranged to rotate thereon, a stationary gear adjacent to the foot of said mast, and a pinion carried by said boom engaging said gear, a rotating gear on the lower end of said mast below said stationary gear and means for operating said rotating gear to turn the mast.

3. In an apparatus of the character described, a base, a mast including a hopper rigidly connected thereto and journaled on the base, the hopper having ports therein, a boom pivoted on the mast below the hopper and a spout rotatably mounted on the hopper to register interchangeably with the ports of the hopper to discharge material from the hopper.

4. In an apparatus of the character described, the combination of a mast, a boom pivoted on the foot of the mast, a conveyer on said boom, a hopper on said mast having ports therein, a sleeve surrounding said hopper and arranged to rotate thereon and a discharge spout connected with said sleeve and adapted to register with one or the other of said ports to discharge material onto said conveyer.

5. In an apparatus of the character described, including a pivoted mast having a cylindrical hub at its lower end, a hopper having a conical base secured to the upper end of said hub, said base having a plurality of ports, a conical sleeve fitting outside of said base and rotatable thereon, said sleeve having an opening adapted to register with said ports, a discharge spout connected with said opening and a conveyer coöperating with said spout to receive the contents of the hopper.

1,216,604. HOISTING MECHANISM. JAMES B. PHILLIPS, Portland, Me. Filed Feb. 26, 1916. Serial No. 80,738. (Cl. 214—3.)



1. In a hoisting apparatus, the combination of a clam shell bucket, a main hoisting rope therefor, means for applying power to said hoisting rope, a closing rope for said bucket, power means and a frictional device for constantly applying the same to the closing rope, the friction thus applied being sufficient to close the loaded bucket but insufficient to lift it.

2. In a hoisting apparatus, the combination of a clam shell bucket, a main hoisting rope and a main hoisting drum therefor, a closing rope for closing the jaws of the bucket, a closing drum therefor, power means for applying power to said closing drum and said main hoisting drum and mechanism for maintaining a constant frictional connection between said power means and the closing drum less than sufficient to hoist the loaded bucket.

3. In a hoisting apparatus, the combination of a clam shell bucket, a main hoisting rope and a main hoisting drum therefor, a closing rope for closing the jaws of the bucket, a closing drum therefor, a power shaft for applying power to said closing drum and main hoisting drum and mechanism for maintaining a constant frictional connection between said shaft and said closing drum, less than sufficient to lift the loaded bucket.

4. In a hoisting apparatus, the combination of a clam shell bucket, a main hoisting rope and a main hoisting drum, a closing drum therefor, power means for applying power to said closing drum and main hoisting drum and mechanism for maintaining a constant frictional connection between said power means and said closing drum sufficient to close the bucket in the mass of material being hoisted but not sufficient to lift the bucket when loaded.

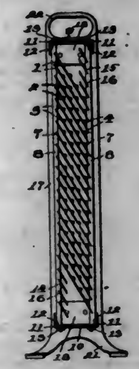
5. In a hoisting apparatus, the combination of a clam shell bucket, a main hoisting rope and a main hoisting drum therefor, a closing rope for closing the jaws of said bucket, a closing drum therefor, an electric motor for applying power to said drums and means for maintaining constant frictional connection between said motor and said closing drum, less than necessary to hoist the bucket when loaded.

[Claims 6 to 10 not printed in the Gazette.]

1,216,605. ELECTRIC HEATER. JOSEPH PORZEL, Buffalo, N. Y. Filed May 14, 1915. Serial No. 28,041. (Cl. 219—34.)

1. An electrical heater comprising a plurality of inclined plates arranged in a vertical tier and separated from each other by intervening inclined air passages and each plate having an extended radiating surface, means for electrically heating said plates, and means for supporting said plates comprising upright supporting bars arranged on opposite longitudinal sides of said tier and provided on their opposing sides with recesses which receive the longitudinal edges of said plates.

2. An electrical heater comprising a plurality of inclined plates arranged in a vertical tier and separated from each other by intervening inclined air passages and each plate having an extended radiating surface, means for electrically heating said plates, and means for supporting said plates comprising an upright supporting bar arranged on opposite longitudinal sides of said tier and engaging with opposite longitudinal edges of said plates, and upper and lower heads connected with the upper and lower ends of said bars.



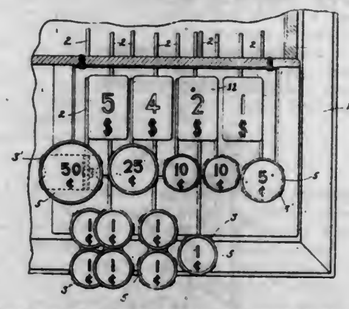
3. An electrical heater comprising a plurality of inclined plates arranged in a vertical tier and separated from each other by intervening inclined air passages and each plate having an extended radiating surface, means for electrically heating said plates, and means for supporting said plates comprising upright supporting bars arranged on opposite longitudinal sides of said tier and engaging with opposite longitudinal edges of said plates, upper and lower heads connected with the upper and lower ends of said bars, and upright standards connected with opposite ends of said heads.

4. An electrical heater comprising a plurality of inclined plates arranged in a vertical tier and separated from each other by intervening inclined air passages and each plate having an extended radiating surface, means for electrically heating said plates, and means for supporting said plates comprising upright supporting bars arranged on opposite longitudinal sides of said tier and engaging with opposite longitudinal edges of said plates, upper and lower heads connected with the upper and lower ends of said bars, upright standards connected with opposite ends of said heads and each provided with an opening in its side, and panels arranged on the inner sides of standards across the openings thereof.

5. An electrical heater comprising a plurality of inclined plates arranged in a vertical tier and separated from each other by intervening inclined air passages and each plate having an extended radiating surface, means for electrically heating said plates, and means for supporting said plates comprising upright supporting bars arranged on opposite longitudinal sides of said tier and engaging with opposite longitudinal edges of said plates, upper and lower heads connected with the upper and lower ends of said bars, and upright standards connected with opposite ends of said heads and each provided at its lower end with supporting legs and at its upper end with a handle.

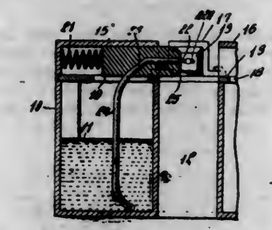
1,216,606. COIN-EJECTING MACHINE. THOMAS IRVING POTTER, Portland, Oreg., assignor to Coin Machine Manufacturing Company, Portland, Oreg., a Corporation of Oregon. Filed Aug. 11, 1914. Serial No. 856,260. (Cl. 133—5.)

1. In a coin ejecting machine, the combination with levers controlling the ejection of coins, of finger pieces through which said levers are manipulated formedsby coins corresponding to the coins ejected by the manipulation of said levers, and clips having coin embracing lugs for retaining the coins constituting the finger pieces in position.



2. In a coin ejecting machine, the combination with levers controlling the ejection of coins, sectional clips mounted on said levers and having upwardly projecting lugs, screws for securing the sections of said clips together and coins constituting finger pieces embraced by said lugs, said coins corresponding to the coins ejected by the manipulation of the levers on which the finger piece coins are mounted.

1,216,607. ELEVATOR-GUIDE LUBRICATOR. JAMES I. PRIMM, Tampa, Fla. Filed Oct. 3, 1916. Serial No. 123,486. (Cl. 184—22.)



1. An elevator guide lubricator comprising an oil reservoir, a brush having a flat surface adapted to run over a surface of the guide, said brush being constructed with a depression in said flat surface forming a closed oil chamber, an oil conduit connected with said chamber, and a wick fitted in said conduit terminating near the oil chamber, the other end of said wick extending into the oil reservoir.

2. An elevator guide lubricator comprising an oil reservoir, a brush having a flat surface adapted to run over a surface of the guide, said brush being constructed with a transverse depression in said flat surface forming a closed oil chamber, an oil conduit connected with said chamber, a wick fitted in said conduit terminating near the oil chamber, the other end of said wick extending into the oil reservoir, and a spring acting upon said brush to press said flat surface thereof against the guide surface.

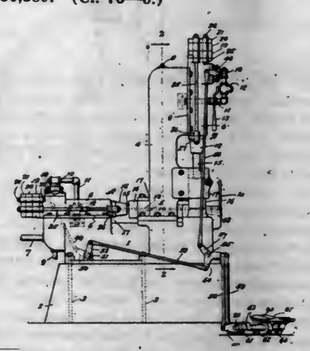
3. An elevator guide lubricator comprising a hollow casing forming an oil reservoir, a brush guide thereon, a brush slidably supported in said guide, the outer end of said brush having a flat surface parallel with a surface of the guide and being formed with a transverse recess forming a closed oil chamber, an oil conduit extending from said oil chamber through the brush to the lower surface thereof, a wick in said conduit terminating near the oil chamber with its other end extending into the oil reservoir, and a spring for pressing the flat end of the brush against the surface of the guide.

4. An elevator guide lubricator comprising a hollow casing forming an oil reservoir, a cover plate therefor, a brush guide thereon, a brush slidably supported in said guide, the outer end of said brush having a flat surface parallel with a surface of the guide and being formed with a transverse recess forming a closed oil chamber, an oil conduit extending from said oil chamber through the brush to the lower surface thereof, a wick in said conduit terminating near the oil chamber with its other end extending into the oil chamber, a slot formed in said cover plate to allow for the passage of said wick and for the movement of the brush in its guide, and a spring for pressing the flat end of the brush against the surface of the guide.

5. An elevator guide lubricator comprising a hollow casing forming an oil reservoir, said casing being constructed with a vertical recess to allow an elevator guide to pass through it, brush guides thereon on different sides of said recess, a brush slidably supported in each guide, the outer end of said brushes having flat surfaces parallel with adjacent surfaces of the guides and being formed with recesses forming closed oil chambers, an oil conduit extending from each of said oil chambers through its brush to the lower surface thereof, wicks in said conduits terminating near the oil chambers with their other ends extending into the oil reservoir, and springs for pressing the flat ends of said brushes against the surfaces of the guides.

[Claim 6 not printed in the Gazette.]

1,216,608. POWER-HAMMER MECHANISM. SAMUEL V. RAWLINGS, Calumet, Mich. Filed Feb. 24, 1913. Serial No. 750,389. (Cl. 76—5.)



1. In power hammer mechanism, the combination of a hollow frame forming a supply reservoir for motive fluid, a hammer operating motor cylinder mounted on said frame and connected to the supply reservoir therein, and controlling valve mechanism for said motor cylinder.

2. In power hammer mechahism for drill shaping machines, the combination of a frame comprising connected horizontal and vertical sections having communicating chambers formed therein and constituting a supply reservoir for fluid under pressure, horizontally and vertically acting hammers having motor cylinders secured respectively to the outer end of said horizontal frame section and the upper end of said vertical section, said cylinders communicating with said reservoir, and controlling valves interposed in the communications between said reservoir and said cylinders.

3. In power hammer mechanism, the combination of a hollow cast metal frame forming a supply reservoir for motive fluid, a hammer operating motor cylinder mounted on said frame, supply and blow-off pipes connected to said reservoir, a pipe connecting the reservoir of said frame to said cylinder, and a controlling valve interposed in said pipe.

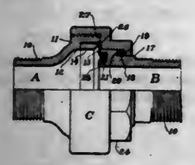
4. In power hammer mechanism for drill shaping machines, the combination of a frame comprising a longitudinal base section having an anvil portion at its forward end, an upright frame section mounted on and secured to the forward end of said base section, said base and upright sections having communicating chambers formed therein and constituting a supply reservoir for compressed air, supply and blow-off pipes communicating with said reservoir, horizontally and vertically acting hammers having motor cylinders mounted on and secured respectively to

the rear end of said base section and the upper end of said upright section, said cylinders communicating with said reservoir, separate starting and stopping valves interposed in said communications and controlling shifter mechanism for said starting and stopping valves.

5. In power hammer mechanism, the combination with horizontally and vertically acting hammers having motor cylinders, and automatically acting distributing valves for said cylinders, of separate starting and stopping valves for said cylinders operable independently of said distributing valves, each of said starting and stopping valves having a central idle position, and mechanical controlling devices for simultaneously and positively shifting said starting and stopping valves, one to starting position and the other to its extreme idle position.

[Claims 6 to 13 not printed in the Gazette.]

1,216,609. PIPE-COUPLING. JOSEPH V. ROBINSON, Chevy Chase, Md. Filed May 8, 1913. Serial No. 766,417. (Cl. 137—34.)



1. A pipe coupling, comprising two detachably connected coupling members, each of said members having an annular recess in its end contiguous to the other coupling member, and a metallic gasket having a cylindrical portion secured in one of said recesses, and an annular bead opposite the other recess.

2. A pipe coupling, comprising two detachably connected coupling members, each of said members having an annular recess in its end contiguous to the other coupling member, and a metallic gasket having a cylindrical portion secured in one of said recesses, and an annular bead opposite the other recess, said latter recess having a packing adapted to form a seat for said bead.

3. A pipe coupling comprising two coupling members, a clamping ring having threaded engagement with one of said members, an annular lubricating packing between said ring and the other member, a flexible metallic gasket securely connected to one of said members and having an annular portion seated against the other member, said packing and gasket permitting one member to turn relatively to the other while maintaining a tight joint between the members.

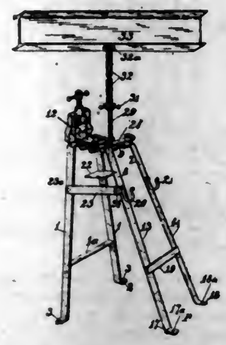
4. A pipe coupling comprising two coupling members, a clamping ring having threaded engagement with one of said members, an annular lubricating packing between said ring and the other member, a flexible metallic gasket securely connected to one of said members and having an annular portion, that overlaps the end of the other member, the latter having an annular packing seated in its end against which said gasket seats, said coupling members being free to turn relatively and said flexible gasket being normally pressed against the packing in the opposing member by the fluid within the coupling.

5. In a pipe coupling a hollow coupling member having an enlarged end provided with an annular internal recess, in combination with an annular sheet metal gasket having a cylindrical portion and a face portion, the opening in the latter being of less diameter than the cylindrical portion, the cylindrical portion of said gasket being seated in said recess, and a clamping ring seated in said recess within said cylindrical portion.

[Claims 6 and 7 not printed in the Gazette.]

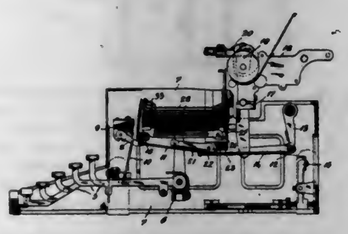
1,216,610. PORTABLE WORK-BENCH. HARRY ROSENBAUM, New York, N. Y. Filed July 20, 1916. Serial No. 110,378. (Cl. 81—41.)

1. In a work-bench, a support, a table-top, formed with a threaded aperture, a brace comprising a screw, fitting at one end in said aperture to be adjustable up and down in said table-top and an extension on said screw, to thrust against the ceiling of the work-room.



2. In a portable work bench, comprising a table-top and a vise, a bar formed with a threaded aperture supported a distance above said table-top to leave a free passage for material clamped in said vise between said table-top and said aperture, a screw in threaded engagement with said aperture and an extension adjustable on said screw to thrust against the ceiling of the work room.

1,216,611. MACHINE FOR TESTING THE ADJUSTMENT OF TYPE OF TYPE-WRITING MACHINES. FRANK E. RUPP, Hartford, Conn., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Nov. 27, 1915. Serial No. 63,706. (Cl. 197—1.)



1. A machine for testing the adjustment of type of typewriting machines comprising key levers and a platen and adapted to hold a set of unconnected type bars and provided with a series of devices connected to the key levers for individually actuating the type bars.

2. A machine for testing the adjustment of typewriting machines, comprising key levers, a platen, a fixed type bar segment, type bars carried by the segment, and a series of devices connected and operated by the key levers and each of which is adapted to engage and operate a type bar.

3. A machine for testing the adjustment of type of typewriting machines comprising key levers and a platen and adapted to hold a type bar segment to which is attached a set of unconnected type bars and provided with pivoted fingers connected to the key levers and arranged to throw the type bars into printing position when the key levers are manipulated.

4. A machine for testing the adjustment of type of typewriting machines comprising key levers, a segment, fingers pivoted at one end to the segment, connection between the key levers and fingers, and a platen, in combination with a detachable type bar segment and type bars pivoted thereto, said type bars being in the range of movement of the fingers so as to be actuated thereby as the key levers are depressed.

5. A machine for testing the adjustment of type of typewriting machines comprising key levers, a segment, fingers pivoted at one end to the segment, connection between the key levers and fingers, and a platen, in combination with a detachable type bar segment, having its axis common with the finger segment and type bars pivoted thereto, said type bars being in radial lines with the fingers, substantially as described.

[Claim 6 not printed in the Gazette.]

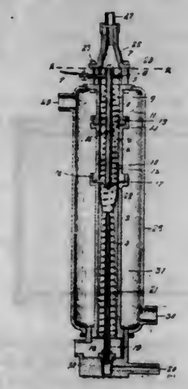
1,216,612. PRODUCING SOLUBLE TANNING AGENTS. OTTO SCHMIDT, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed July 2, 1914. Serial No. 848,664. (Cl. 149—5.)

1. The process of converting difficultly soluble or insufficiently soluble tanning extracts into more soluble compounds by treating such difficultly soluble or insufficiently soluble extracts with an aromatic sulfonic acid of an amorphous character, which is free from phenol, quinone and quinone-imid groups, is soluble in water and is capable of precipitating glue or gelatin from solutions thereof.

2. The process of converting difficultly soluble or insufficiently soluble tanning extracts into more soluble compounds by treating such difficultly soluble or insufficiently soluble extracts with a soluble condensation product of naphthalene, formaldehyde and sulfuric acid, which product is free from hydroxyl groups, and contains at least one sulfonic acid group.

3. The process of converting difficultly soluble or insufficiently soluble tanning extracts into more soluble compounds by treating such difficultly soluble or insufficiently soluble extracts with the product obtainable from 10 parts of naphthalene, 10 parts of sulfuric acid, and 4.3 parts of 30 per cent. formaldehyde, which product is soluble in water, contains at least one sulfonic acid group, and is free from hydroxyl groups.

1,216,613. THERMO-ELECTRIC CARBURETER. CARL F. SCHULZ, Brooklyn, N. Y. Filed Feb. 24, 1913, Serial No. 750,210. Renewed Jan. 5, 1917. Serial No. 140,844. (Cl. 48—103.)



1. In a carbureter, the combination with an air inlet, of an oil nozzle disposed therein, and a thermo-electric coil surrounding the said nozzle and extending beyond the discharge end thereof.

2. In a carbureter, the combination with an air inlet, of an oil nozzle disposed therein, and a thermo-electric coil disposed in the air passage space of the said inlet and surrounding the said nozzle and extending beyond the discharge end thereof, for heating the air and the oil prior to their introduction and for further heating the same thereafter.

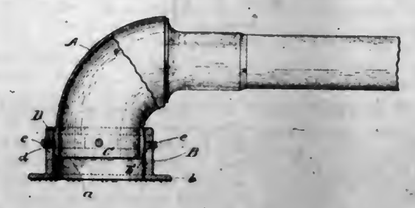
3. The combination with a substantially cylindrical mixing chamber having at its ends an inlet and an outlet, respectively, and a series of conical spiral resistance wires disposed therein.

4. The combination with a substantially cylindrical mixing chamber having at its ends an inlet and an outlet respectively, and a series of conical spiral resistance wires located therein with their smaller ends disposed toward the direction of gas flow.

5. The combination with a substantially cylindrical mixing chamber, annular in cross-section, having at its ends an inlet and outlet respectively, and a series of conical spiral resistance wires located therein with their smaller ends disposed toward the direction of gas flow, each of said spirals having a maximum and a minimum diameter corresponding to the maximum and the minimum diameter of the mixing chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,216,614. TONE-ARM SUPPORT FOR TALKING-MACHINES. LOUIS K. SCOTFORD, Chicago, Ill. Filed July 15, 1916. Serial No. 109,489. (Cl. 274—23.)



1. In a talking machine the combination with a tone arm, of a fixed tubular support within which the supported end of the tone arm projects, trunnions projecting from diametrically opposite sides of the supported end of the tone arm, a shoulder within said support on which the trunnions rest, and a keeper ring rotatably fitting within the upper end of said support and having recesses at diametrically opposite points surrounding said trunnions.

2. In a talking machine the combination with a tone arm, of a fixed tubular support, into which the supported end of the tone arm projects, trunnions projecting from diametrically opposite sides of the supported end of the tone arm, a shoulder within said support on which said trunnions rest, a keeper ring rotatably fitting within the upper end of said support and having notches at diametrically opposite points in its lower edge surrounding said trunnions, and projections extending inwardly from said support above the shoulder thereon engaging a groove in the outer surface of said ring.

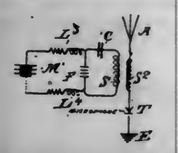
3. In a talking machine the combination with a tone arm, of a fixed tubular support, into which the supported end of the tone arm projects, trunnions projecting from diametrically opposite sides of the supported end of the tone arm, a shoulder within said support on which said trunnions rest, a keeper ring rotatably fitting within the upper end of said support and having notches at diametrically opposite points in its lower edge surrounding said trunnions, and adjustable screws projecting through said support above the shoulder thereon engaging a circular groove in the outer surface of said ring.

4. In a talking machine the combination with a tone arm, of a fixed tubular support into which the supported end of the tone arm projects, the upper end of said support being reduced in diameter interiorly to form a shoulder, trunnions projecting from diametrically opposite sides of the supported end of the tone arm resting upon said shoulder, and a keeper ring rotatably fitting within the reduced upper end of said support and engaging the shoulder therein, said ring having notches at diametrically op-

posite points in its lower edge loosely surrounding said trunnions.

5. In a talking machine the combination with a tone arm, of a tubular support into which the supported end of the tone arm projects, trunnions projecting from diametrically opposite sides of the end of the tone arm, a shoulder within said support upon which said trunnions rest, a keeper ring rotatably fitting within the upper end of said support and having notches at diametrically opposite points in its lower edge loosely surrounding said trunnions, said keeper ring having a circular groove in its outer periphery intersected by said notches, and projections extending from said support into said groove to limit the rotation of the tone arm by intersecting the path of said trunnions.

1,216,615. APPARATUS FOR PRODUCING POWERFUL ELECTRICAL OSCILLATIONS. GEORGE SEIBT, New York, N. Y., assignor, by mesne assignments, to Atlantic Communication Company, a Corporation of New York. Filed Dec. 27, 1909. Serial No. 534,978. (Cl. 250—6.)



1. In an apparatus for developing powerful electrical oscillations comprising coupled primary and secondary oscillating circuits, a coupling between said circuits sufficiently strong and adjusted to cause a rapid decrease of the oscillations in the primary circuit and to produce substantially zero value of current amplitude in the primary circuit at the end of the first beat of the oscillations in the primary circuit and a short spark gap in the primary circuit formed to rapidly dissipate the heat generated therein, whereby the spark is quenched and the primary circuit opened at the end of the first beat and useful, powerful, slowly damped free oscillations are produced in the secondary oscillating circuit and the two coupled oscillations practically disappear.

2. In an apparatus for developing powerful electrical oscillations comprising coupled primary and secondary oscillating circuits, means for opening the primary oscillating circuit so quickly that thereby useful, powerful and slowly damped free oscillations in the secondary oscillating circuit are produced and the two coupled oscillations are of no practical effect, comprising a coupling between said circuits sufficiently strong and adjusted to cause a rapid decrease of the oscillations in the primary circuit and to produce substantially zero value of current amplitude in the primary circuit and a short spark gap in the primary circuit formed to rapidly dissipate the heat developed therein.

3. In an apparatus for developing powerful electrical oscillations comprising coupled primary and secondary oscillating circuits, means for opening the primary oscillating circuit so quickly that thereby useful, powerful and slowly damped free oscillations in the secondary oscillating circuit are produced and the two coupled oscillations are of no practical effect, comprising a coupling between said circuits sufficiently strong and adjusted to cause a rapid decrease of the oscillations in the primary circuit and to produce substantially zero value of current amplitude in the primary circuit and a short spark gap having electrodes of high thermal conductivity in the primary circuit formed to rapidly dissipate the heat developed therein.

4. In an apparatus for developing powerful electrical oscillations comprising coupled primary and secondary oscillating circuits, means for opening the primary oscillating circuit so quickly that thereby useful, powerful and slowly damped free oscillations in the secondary oscillating circuit are produced and the two coupled oscillations are of no practical effect, comprising a coupling between said circuits sufficiently strong and adjusted to cause a rapid decrease of the oscillations in the primary circuit and to produce substantially zero value of current amplitude in the primary circuit and a short spark gap having metal electrodes of extended surface and high thermal conductivity in the primary circuit formed to rapidly dissipate the heat developed therein.

5. In an apparatus for developing powerful electrical oscillations comprising coupled primary and secondary oscillating circuits, a coupling between said circuits sufficiently strong and adjusted to cause a rapid decrease of the oscillations in the primary circuit and to produce substantially zero value of current amplitude in the primary circuit at the end of the first beat of the oscillations in the primary circuit and a short air-tight spark gap in the primary circuit formed to rapidly dissipate the heat generated therein, whereby the spark is quenched and the primary circuit opened at the end of the first beat and useful, powerful, slowly damped free oscillations are produced in the secondary oscillating circuit and the two coupled oscillations practically disappear.

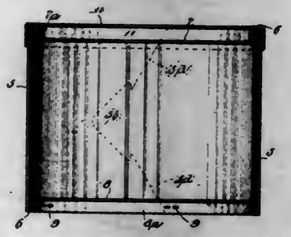
[Claims 6 to 33 not printed in the Gazette.]

1,216,616. HOOK-SUPPORT. JOHN A. SHERMAN, Worcester, Mass. Filed June 4, 1915. Serial No. 32,202. (Cl. 248—22.)



The device above described comprising an attaching portion and a hook portion, said portions lying in substantial parallel planes, and a shoulder connecting said portions, said hook portion being provided with a tongue pointing in the opposite direction from the point of said hook.

1,216,617. CONTAINER. CHARLES W. SHEVLIN, Chicago, Ill., assignor to Climax Container Company, Chicago, Ill., a Corporation of Delaware. Filed June 28, 1913. Serial No. 776,202. Renewed July 3, 1916. Serial No. 107,465. (Cl. 229—12.)



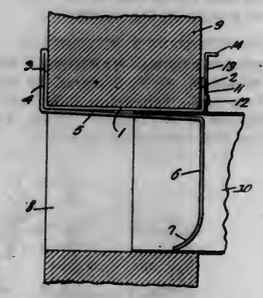
1. A cylindrical container comprising a blank of fibrous material, one end of which said blank is formed into a spear head, a transverse slot being provided in said blank to receive said spear head to form a circular wall or casing for said container, the remainder of said blank being impregnated with an impervious solidifying substance and disposed inside of said casing so as to contact therewith and adhere thereto by reason of the solidification of said substance.

2. A cylindrical container comprising a blank of fibrous material, one end of which said blank is formed into a spear head, a transverse slot being provided in said blank to receive said spear head to form a circular wall or casing for said container, the remainder of said blank being impregnated with wax and disposed inside of said casing so as to contact therewith and adhere thereto by reason of the solidification of said wax.

3. A cylindrical container comprising a casing formed of a blank of fibrous material, one end of which said blank is formed into a spear head, a transverse slot being provided in said blank to receive said spear head to form said casing, and a fibrous lining for said casing being impregnated with an impervious solidifying substance and disposed inside of said casing so as to contact therewith and adhere thereto by reason of the solidification of said substance.

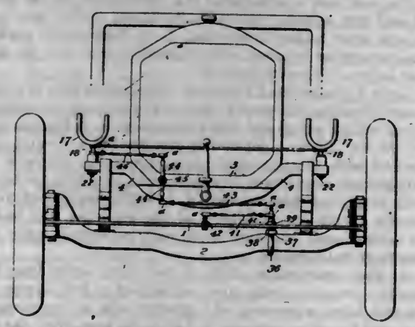
4. A cylindrical container comprising a casing formed of a blank of fibrous material, the edges of said blank being tapered from the broadest part thereof to the shoulders of said spear head so that said tapered edges will be disposed spirally upon the outside of the finished container, a transverse slot being provided in said blank to receive said spear head to form said casing, and a fibrous lining for said casing being impregnated with wax and disposed inside said casing so as to contact therewith and adhere thereto by reason of the solidification of said wax.

1,216,618. STOVEPIPE-HOLDER. JOHN W. SLIEMERS, St. Joseph, Tenn. Filed Oct. 28, 1916. Serial No. 128,215. (Cl. 126—318.)



A stove pipe holder adapted to fit in a chimney opening and to fit the exterior of a stove pipe, said holder having an angularly extending portion at its outer end and a tongue extending at an angle therefrom outwardly to project within the stove pipe, and a cam pivoted to said portion to bear against the exterior of the pipe, said tongue limiting the indenting of the pipe by said cam.

1,216,619. HEADLIGHT-ADJUSTER FOR VEHICLES. PEMBROKE NESBIT SQUIRES, Tekamah, Nebr. Filed June 27, 1916. Serial No. 106,228. (Cl. 240—62.)



1. In a motor vehicle, the combination with a steering apparatus, including a connecting rod between the wheels, a front axle and rotatable lamp supports mounted on the vehicle, of a rock arm pivotally mounted intermediate its ends upon the axle to one side of the center thereof and having at one end an operative connection with the connecting rod midway of the ends of the latter, an auxiliary rock arm connected to the body of the vehicle, an arm connecting the other end of the first mentioned rock arm with one end of the auxiliary rock arm, a connecting arm pivotally connected at opposite ends to the lamp supports, and a rod secured at one end to one of the lamp supports and pivotally connected at its opposite end to the other end of the auxiliary rock arm.

2. In a motor vehicle, the combination of rotatable lamp supports, steering mechanism including a connecting rod, a rock arm mounted upon the axle, a yieldable connection between one end of said rock arm and said connecting rod, substantially midway between the ends of the latter, operative yieldable connection between the opposite end of said rock arm and one of said lamp supports, and operative connection between the respective lamp supports whereby the latter are simultaneously adjusted through the medium of said connecting rod.

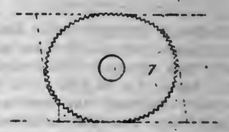
3. In an attachment for motor vehicles having steering mechanism including a connecting rod and rotatable lamp supports, the combination of a rock arm pivotally supported intermediate its ends, a rod projecting from one end of the rock arm and connected at its opposite end to said connecting rod at the center thereof, an auxiliary rock arm, operative connection between one end of the auxiliary rock arm and the lamp supports, whereby to oscillate the same and operative connection between the opposite end of said rock arm and the free end of the first mentioned rock arm.

4. An attachment for motor vehicles having steering mechanism including a connecting rod, comprising rotatable lamp supports, operative connection between the lamp supports whereby rotatable movement of one results in rotatable movement of the other, and means for rotating one of said lamp supports including a suitably supported rock arm, an arm connected to one end of the rock arm and at the opposite end to the connecting rod midway between the ends of the latter, and leverage connection between the opposite end of said rock arm and one of said lamp supports.

5. In a motor vehicle, the combination of lamp brackets, supports for the latter, the brackets being mounted for rotatable movement relative to the supports, anti-friction bearings interposed between the brackets and said supports, connection between the brackets, whereby they are simultaneously rotated, and means for rotating the brackets including a vertically disposed rock arm mounted on the frame of the vehicle, an arm yieldably connected at one end to the upper end of said rock arm and yieldably connected at its opposite end to the lamp bracket, a connecting bar between the respective lamp brackets, an operative connection between the opposite end of the rock arm and the steering mechanism.

[Claims 6 to 11 not printed in the Gazette.]

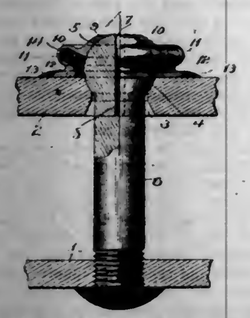
1,216,620. LOCK-WASHER FOR NUTS. BENJAMIN E. D. STAFFORD and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed Feb. 18, 1916. Serial No. 79,125. (Cl. 151—35.)



1. A lock washer having an opening through the same, and an elliptical roller having a roughened face and mounted in said opening, the shortest diameter of said roller being slightly greater than the thickness of the washer so as to project beyond both faces of the washer when the roller is in its normal unlocking position.

2. A lock washer having an opening through the same and diagonally disposed stops on the end walls of said opening and an elliptical roller mounted in said opening and adapted to be limited in its turning movement by contact with said stops, the shortest diameter of said roller being slightly greater than the thickness of the washer so as to project beyond both faces of the washer when the roller is in its normal unlocking position.

1,216,621. STAY-BOLT STRUCTURE. BENJAMIN E. D. STAFFORD and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed Feb. 29, 1916. Serial No. 81,260. (Cl. 85—1.5.)



1. In a stay bolt structure, a yielding cap having a member against which the outer portion of the rounded head of a bolt may seat, said cap having a part to be seated against the outer face of the outer boiler sheet and adapted to be secured thereto.

2. In a stay bolt structure, the combination with a boiler sheet, of a yielding cap having a member to engage an outer end portion of the rounded head of a stay bolt, and having a base portion to rest against the outer face of said boiler sheet, said base portion of the cap being welded to the boiler sheet.

3. In a stay bolt structure, a yielding cap comprising an annular structure of spring metal having a part to engage the end portion of the rounded head of a stay bolt and having a base portion adapted to be welded to an outer boiler sheet, said cap having a chamber to contain lubricating packing.

4. In a stay bolt structure, the combination with an outer boiler sheet having a bearing therein, and a stay bolt having a rounded head to engage said bearing, said stay bolt also having a tell-tale hole, of a yielding cap comprising an annular structure having a part bearing against the outer end of the bolt head and exposing the tell-tale hole in the latter, said cap structure also having a part welded to the outer face of the outer boiler sheet.

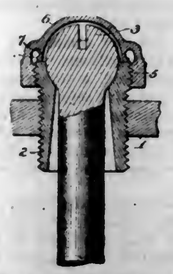
5. In a stay bolt structure, a yielding cap comprising an intermediate bowed portion, a member projecting from one end of said bowed portion and adapted to engage the outer end of the head of a stay bolt, and a base member adapted to lie flat against the outer face of the outer boiler sheet and to be welded thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,216,622. STAY-BOLT STRUCTURE. BENJAMIN E. D. STAFFORD and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed Feb. 29, 1916. Serial No. 81,263. (Cl. 85—1.5.)

1. In a stay bolt structure, the combination with a bearing sleeve and a cap removably attached to the exterior thereof and extending over the end of the sleeve, of a yielding member carried by one of said parts and engaging the other part.

2. In a stay bolt structure, the combination with a bearing sleeve having an exteriorly threaded part, and a cap to screw on the threaded part of the sleeve, of a yielding member carried by one of said parts and engaging the other part near the threaded connection of said parts with each other.



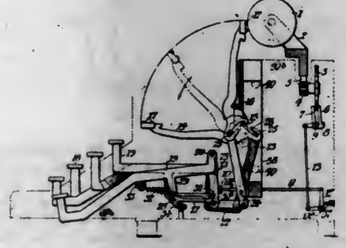
3. In a stay bolt structure, the combination of a bearing sleeve and a cap engaging the same, both of said parts provided with interposed yielding members.

4. In a stay bolt structure, the combination with a bearing sleeve, and a stay bolt having a bearing therein, of a cap provided with yielding means engaging said sleeve and also engaging the head of the bolt.

5. In a stay bolt structure, the combination with a bearing sleeve, a stay bolt provided with a head having a bearing in said sleeve, of a yielding cap connected with said sleeve and having yielding bearings against the sleeve and against the head of the stay bolt.

[Claim 6 not printed in the Gazette.]

1,216,623. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor, by mesne assignments, to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 3, 1913. Serial No. 798,798. (Cl. 197—29.)



1. In a front-strike typewriting machine, the combination with a type-bar, of a vertically-disposed lever pivoted intermediate its ends and connected at its upper end to the type-bar for swinging the latter upwardly and rearwardly to the platen, a horizontally-disposed key pivoted at its rear end, a depending arm fulcrumed on the pivot of said key, a link connecting the lower end of said arm to said lever below its fulcrum, a trip forming an operating connection between said depending arm and the key, and means to operate the trip.

2. In a typewriting machine, the combination of a key lever extending forwardly from its pivot and comprising a key having an up and down movement, a depending arm on the key lever, a depending arm having a pivotal connection with the key lever pivot, a type-bar operated by said pivoted arm, a trip forming a rigid connection between said arms and having mainly a bodily movement rearwardly during the depression of the key lever, and means to actuate said trip and break said connection when the key lever is depressed.

3. The combination with a key lever extending forwardly from its pivot, and comprising a key having an up and down movement, of a pivoted arm, a trip connecting said key lever and arm to swing the arm when the key is depressed, a sub-lever, a link connecting the sub-lever and said arm, said arm and sub-lever having mainly a forward and rearward movement at the points of connection with the link, a type-bar operated by said sub-lever, and means to actuate the trip to release said arm from the key lever when the type-bar is near the printing point and thereby permit the type-bar to return in advance of the return of the key lever.

4. The combination of a horizontally-disposed key lever extending forward from its pivot and comprising a key having an up and down movement, said lever having a depending projection thereon, a depending arm pivoted to the fulcrum of the key lever, a trip connected to said projection and having a releasable connection with said arm beneath its pivot to swing said arm, said arm and trip at their point of connection having mainly a rearward movement as the key is depressed, a type-bar, a sub-lever arranged to actuate the type-bar, a link between the sub-lever and said arm and arranged to thrust the sub-lever rearwardly at its point of connection therewith when the key lever is depressed, and means to release said trip.

5. The combination of a key lever comprising a key having mainly an up and down movement, a pivot rod for said lever, an arm pivoted on said rod, a trip pivoted on the key lever and having a releasable connection with said arm at a point beneath said rod, said arm having mainly a backward and forward movement at its point of connection with the trip, a sub-lever, a link arranged to transmit said movement of said arm to the sub-lever, and a type-bar operatively connected to said sub-lever.

[Claims 6 to 37 not printed in the Gazette.]

1,216,624. APPARATUS FOR DISPENSING BUTTER PATTIES. BENNETT D. STRAIGHT, Rochester, N. Y., assignor, by mesne assignments, to Butter Serving Machine Company, Inc., Rochester, N. Y., a Corporation of New York. Original application filed Mar. 22, 1915, Serial No. 16,053. Divided and this application filed June 8, 1915. Serial No. 32,980. (Cl. 31—65.)



1. A dispensing apparatus comprising a container having a discharge opening, means for expelling the contents of the container and a cutter for severing the expelled portions, of a support located relatively to said opening and beneath it, a holder for plates movable in a path located over the support to successively position different plates relatively to the support and means for releasing the plates on said holder and delivering them to the support.

2. A dispensing apparatus, comprising a container having a discharge opening, means for expelling the contents of the container and a cutter for severing the expelled portions, of a plate support located beneath said opening, an escapement mechanism, a holder movable over said mechanism and adapted to receive plates in a plurality of positions and transport them successively into an operative position in which they are retained by said escapement and means for operating the latter to release the plates.

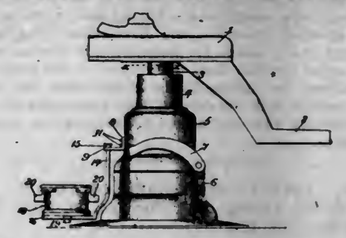
3. A dispensing apparatus comprising a container having a discharge opening, means for expelling the contents of the container and a cutter for severing the expelled portions, of a plate support located beneath said opening, a holder adapted to receive plates in a plurality of different locations thereon and movably mounted to successively place each plate at a discharge point relatively to said support and means for delivering each of such plates to the support.

4. A dispensing apparatus comprising a container having a discharge opening, means for expelling the contents of the container and a cutter for severing the expelled portions, of a support located relatively to said opening and beneath it, a holder comprising a plurality of magazines, each adapted to contain a plurality of plates and movably mounted to locate said magazines successively in discharging position relatively to said support and mechanism controlling the delivery of plates successively from a magazine in discharging position to the support.

5. In a butter dispensing apparatus the combination with a butter magazine, a plate magazine, mechanism for removing successive plates therefrom, and a casing inclosing both magazines and adapted to contain a cooling medium, of a delivery chamber contiguous to said casing and adapted to be placed in communication with the butter magazine, an ejector therein, operating means connected to the ejector and the plate mechanism and serving to deliver successive apportionments of butter upon successively fed plates at a predetermined position.

[Claims 6 to 21 not printed in the Gazette.]

1,216,625. CONTROLLER-SUPPORT FOR DENTAL CHAIRS. SAMUEL D. STROHM, Philadelphia, Pa. Filed Nov. 8, 1913. Serial No. 799,940. (Cl. 155—26.)



1. The combination with a dental chair having a rotatable base portion, of a support for the controller of a dental engine which is independent of the chair, consisting of a depending arm secured to the revolving portion of the chair and provided with means for supporting said controller near the floor.

2. The combination with a dental chair having a rotatable base portion, of a shelf supported near the floor by a depending arm, secured to said revolving portion to support the controller of a dental engine which is independent of the chair.

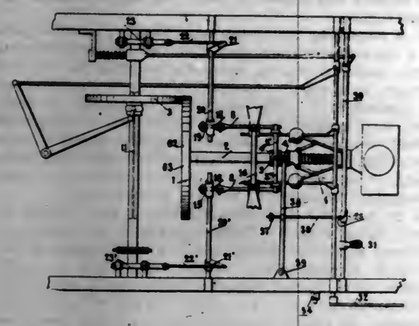
3. The combination with a chair having a rotatable base portion, of a bracket attached to said base portion, said bracket having a slotted horizontal plate, a depending arm having its upper end extending through the slot in said plate, a nut on said arm to secure it in position in the said slotted plate, and a horizontally disposed plate carried by said depending arm and adapted to hold a controller.

4. The combination with a chair having a rotatable base portion mounted on a stationary base portion, of a bracket secured to the rotatable base portion and comprising a vertical foot and a horizontal plate, a depending arm adjustably attached to the horizontal plate of said bracket, said depending arm having a slotted plate at its lower end, a controller adjustably mounted on said slotted plate and a bolt carried by the controller and adapted to secure the controller to the slotted plate.

1,216,626. AUTOMATIC CHANGE-SPEED DEVICE. MATHURIN TARRISSE, Suresnes, France. Filed Apr. 29, 1912. Serial No. 694,023. (Cl. 74—26.)

1. Apparatus for the transmission of motion by means of friction disks, comprising a motor, a driving disk, a

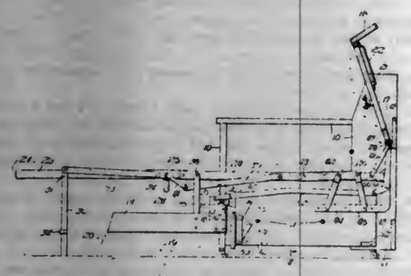
driven disk, and means automatically controlled by the variation of speed of the motor for displacing into a parallel position the axis of one of the said disks with regard to the axis of the other.



2. Apparatus for the transmission of motion by means of friction disks, comprising a driving disk, a driven disk, means for automatically displacing the axis of one of said disks with regard to the axis of the other, means for driving the driving disk, and means for returning the axis of the displaceable disk to the most favorable position for normal operation.

3. Apparatus for the transmission of motion by means of friction disks, comprising a driving disk, a driven disk, a shaft pivotally mounted, said driven disk being mounted on said shaft, means for automatically displacing the axis of one of the said disks with regard to the axis of the other, means for automatically maintaining the driven disk in contact with the driving disk, and means for driving the driving disk, and means for varying the direction of the drive.

1,216,627. FOLDING DAVENPORT OR COUCH. MAURICE TAUBER, Chicago, Ill. Filed Jan. 20, 1915. Serial No. 3,193. (Cl. 5—51.)



1. A folding davenport having, in combination, a support, a seat hinged near its forward edge thereto, a collapsible bed-forming structure comprising an outer section, a central section connected to the outer section, and a short inner section connected at one end to the central section and having a link connection with the lower end of the back, a pair of brackets fixed on the seat and pivoted to the central section, another pair of brackets fixed on the seat and arranged to have the central section rest thereon, supporting legs for the outer section, and means suitably connecting the inner portion of the central section to the support.

2. A folding davenport having, in combination, a pivoted seat, a back mounted for approximately vertical movement, and a collapsible bed-forming structure, said structure and said back being independently connected to said seat for operation by the latter.

3. A folding davenport having, in combination, a supporting frame, a hinged seat, a collapsible bed-forming structure connected to said seat for operation thereby, and a back independently connected to the seat for approximately vertical movement by the seat out of the way of said bed-forming structure.

4. A folding davenport having, in combination, a supporting frame, a seat hinged near its forward edge to said frame, a back slidably connected to said frame, a pair of levers pivoted in the frame and connected to the lower end of said back, and a pair of links connecting said levers to said seat, whereby the swinging movement of the latter will raise and lower said back.

5. A folding davenport having, in combination, a supporting frame, a seat hinged at its forward edge to said frame, a back, the upper portion of which is slidably connected to said frame, a pair of bell-crank levers pivoted in the frame and having their longer arms pivoted to the lower end of said back, and a pair of horizontal links connecting the shorter arms of the bell-cranks to said seat.

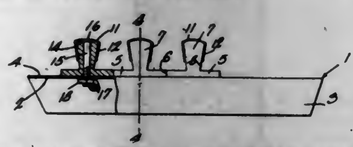
[Claims 6 to 26 not printed in the Gazette.]

1,216,628. BIT. JOSEPH J. TEASCK, Virginia, Minn. Filed Aug. 21, 1915. Serial No. 46,663. (Cl. 255—69.)



A bit fashioned from a bar having opposed fins and opposed ridges disposed at right angles to the fins, the ridges being of rectangular cross section and being of small lateral extent compared with the fins, the bar being twisted to form a central body, to transform the fins into spiral flanges, and to transform the ridges into ribbon-like ribs reinforcing the body, the flanges projecting outwardly beyond the ribs, the edges of the ribs coöperating with the flanges to form spiral grooves which aid in retracting the loosened material adjacent the body.

1,216,629. SCREEN FOR FRUIT-GRADING MACHINES. DAMON R. THROOP, Davis, Cal. Filed Nov. 8, 1916. Serial No. 130,190. (Cl. 130—32.)



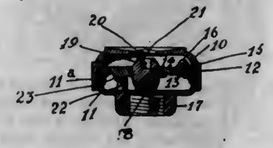
1. In a screen for fruit grading machines, longitudinal members; plates superposed on said members and having their ends in abutment, the plates having upstanding lugs provided with downwardly converging side faces, the lugs and the plates having openings therethrough, there being enlarged recesses in the lugs at the upper ends of the openings; transverse channels supported on the lugs and including downwardly converging flanges engaging the downwardly converging faces of the lugs, the transverse channels being provided in their tops with depending burs engaged in the recesses; bolts passing through the openings and through the longitudinal members and having heads fitting in the burs; and nuts mounted on the bolts and coacting with the under faces of the longitudinal members.

2. In a screen for fruit grading machines, longitudinal members; plates superposed on the longitudinal members and having their ends in abutment, the plates having upstanding lugs, the lugs and the plates having openings therethrough, there being enlarged recesses in the lugs at the upper ends of the openings; transverse channels supported on the lugs and including depending flanges engaging the side faces of the lugs, the transverse channels being provided in their tops with burs engaged in the recesses; and securing devices engaging the longitudinal members and located in the openings, the securing devices including heads fitting in the burs.

3. In a screen for fruit grading machines, longitudinal members; lugs mounted on the longitudinal members and provided with downwardly converging side faces; transverse channels supported on the lugs and including downwardly converging flanges engaging the downwardly converging faces of the lugs; and securing devices connecting the longitudinal members and the transverse channels, the securing devices passing through the lugs.

4. In a screen for fruit grading machines, longitudinal members; lugs mounted on the longitudinal members and provided with openings, the lugs having enlarged recesses at the upper ends of the openings; transverse channels supported on the lugs and provided with burs engaged in the recesses; and securing devices passing through the openings and engaging the longitudinal members, the securing devices having heads fitting in the burs.

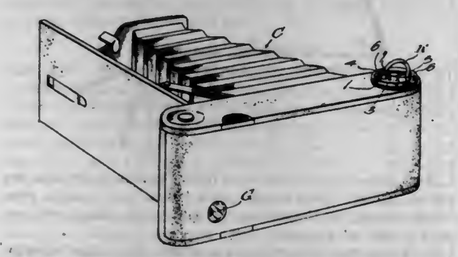
1,216,630. LAWN-SPRINKLER. JAMES A. TUTHILL, Los Angeles, Cal. Filed Nov. 6, 1916. Serial No. 129,676. (Cl. 137—86.)



1. A lawn sprinkler comprising a casing consisting of an upper and a lower member detachably connected, said upper member having an outlet port, and said lower member having an inlet port and a threaded boss; a division plate having one or more inclined ports or channels and a screw-threaded opening therein; and a screw-threaded regulating plug mounted in said opening and being adapted to close either the inlet or the outlet port.

2. A lawn sprinkler comprising a casing composed of parts detachably connected, one of said parts having an inlet port and the other part having an outlet port therein; a division plate dividing said casing into an inlet chamber and a spray chamber, said plate having one or more inclined ports or channels and a central screw-threaded opening therein; and a screw-threaded plug mounted in said central screw-threaded opening and having a socket therein and being adapted to close the inlet or the outlet port.

1,216,631. INDICATOR FOR CAMERAS. CHARLES VOIGT, Sheboygan, Wis. Filed May 13, 1916. Serial No. 97,277. (Cl. 116—49.)

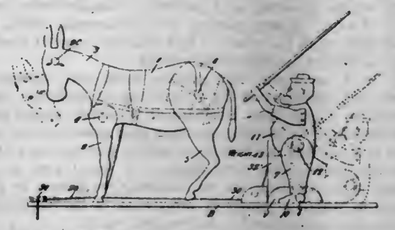


1. An indicator for application to cameras for accurately determining the amount to advance the film after each exposure, said indicator comprising a sheet metal attaching ring to be secured to the camera around the film winding key thereof, said ring having its inner edge bent laterally to form a flange having claws on its outer edge, and an indicating ring rotatably surrounding said flange, said claws being bent over said indicating ring to prevent removal thereof, said indicating ring having indicating characters thereon and being adapted to be set before the first exposure of the film to dispose said characters in predetermined relation with the key, whereby all subsequent adjustments of the film may be accurately made.

2. An indicator for application to cameras for accurately determining the amount to advance the film after each exposure, said indicator comprising a flat sheet metal ring to be secured to the camera around the film winding key thereof, said ring having its inner edge bent outwardly to form a flange, and an indicating ring rotatably surrounding said flange and held against removal therefrom, said indicating ring having exposure indicating characters thereon and being adapted to be set before the film is adjusted for each succeeding exposure.

3. The combination with a camera having a film winding key; of an indicating ring surrounding said key and rotatable manually independently thereof, said ring having thereon indicating characters and being adapted to be set before the film is adjusted for each succeeding exposure to dispose said characters in predetermined relation with the key.

1,216,632. FIGURE TOY OR AMUSEMENT DEVICE. CLAYTON A. WALKER and ERNEST A. SCHNEIDER, Fairhaven, Conn. Filed Mar. 11, 1916. Serial No. 83,592. (Cl. 46—40.)



1. An amusement device embodying a figure representing an animal, said figure having a pivoted rear leg, means tending to swing the leg rearwardly and also having a pivoted neck tending to swing downwardly, means for latching said leg and neck in normal position, a target connected to the latching means for releasing it and a second figure arranged to be knocked down when said leg is swung rearwardly.

2. An amusement device embodying a figure representing an animal having a body, a rear leg pivoted thereto, means tending to swing the leg rearwardly, a neck pivoted to the body tending to swing downwardly, a latch for holding the neck in normal position and operatively connected to the neck to release the same, a target carried by the neck and connected to the first mentioned latch to release it, and a second figure arranged to be knocked down when said leg swings rearwardly.

3. An amusement device embodying a figure representing an animal, said figure having a pivoted rear leg, means tending to swing the leg rearwardly, means for latching said leg in normal position, a target connected to the latching means for releasing it when the target is struck, and a second figure representing a man, the second figure having a pivotally mounted leg normally in upright position and adapted to swing downwardly, and said second figure having a body pivoted to said leg and weighted to remain in upright position, the second figure being arranged to be knocked down when said leg of the first mentioned figure swings rearwardly.

1,216,633. X-RAY TABLE. JULIUS B. WANTZ, Chicago, Ill., assignor to Victor Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 15, 1915. Serial No. 2,481. (Cl. 250—34.)



1. In a combined fluoroscopic and radiographic X-ray table, the combination of a table-top of material transparent to X-rays, and members of material opaque to X-rays relatively movable toward each other for radiographic work and relatively movable away from each other to enlarge the transparent field of the table-top, for fluoroscopic work.

2. In a table for radiographic work and fluoroscopic work, the combination of a table-top of material transparent to X-rays, and plates of material opaque to X-rays movable to a position on the table in which they oppose portions only of the table-top and render a comparatively small area of said top transparent for radiographic work, and to a position in which a relatively large area of the table-top is rendered transparent for fluoroscopic work.

3. In a table for radiographic work and fluoroscopic work, the combination of a table-top of material transparent to X-rays, and plates of material opaque to X-rays movable to a position in which they oppose portions only of the table-top and render a comparatively small area of said top transparent for radiographic work, and removable from the table to free said table-top of obstruction to X-rays for fluoroscopic work.

4. In a table for radiographic work and fluoroscopic work, the combination of a table-top of material transparent to X-rays, and members of material opaque to X-rays mounted on the table beneath said table-top and movable to a position in which they oppose portions only of the table-top and render a comparatively small area of said table-top transparent for radiographic work, and to a position in which a relatively large area of the table-top is rendered transparent for fluoroscopic work.

5. In a table for radiographic work and fluoroscopic work, the combination of a table-top of material transparent to X-rays, and members of material opaque to X-rays movable on the table longitudinally of the latter to a position in which they oppose portions only of the table-top and render a comparatively small area of said top transparent for radiographic work, and to a position in which a relatively large area of the table-top is rendered transparent for fluoroscopic work.

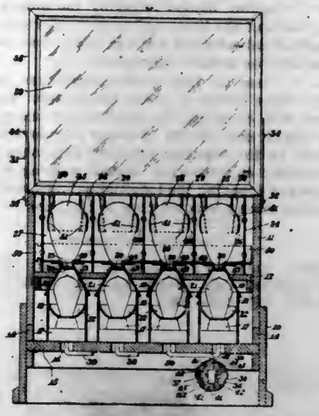
[Claims 6 to 26 not printed in the Gazette.]

1,216,634. EGG-TESTER. JOHN B. WARREN, Bolton, Mass., assignor to Broadfield Poultry Farm, Inc., Bolton, Mass., a Corporation of Massachusetts. Filed May 26, 1916, Serial No. 100,710. Renewed Jan. 8, 1917. Serial No. 141,341. (Cl. 99—6.)

1. In an egg tester, a receptacle; a plurality of lamps therein; an opaque casing for each lamp provided with a small opening; a lens in said opening; means for positioning a plurality of eggs above said lenses; and means for successively lighting said lamps.

2. In an egg tester, a receptacle; a plurality of lamps therein; an opaque casing for each lamp provided with a small opening; a lens in said opening; means for positioning a plurality of eggs above said lenses; and a movable member adapted in its movement to successively light said lamps.

3. In an egg tester, a receptacle; a plurality of lamps therein; an opaque casing inclosing each lamp and provided at its top with a small opening; a lens in said opening; means for concentrating the rays of each lamp on a lens; a tubular member extending through said receptacle; a plurality of pairs of contacts in said tube, each pair being electrically connected to the poles of a lamp; a member movable through said tube and provided with a pair of spring members adapted to engage each pair of contacts; and means for supplying an electric current to said spring members.



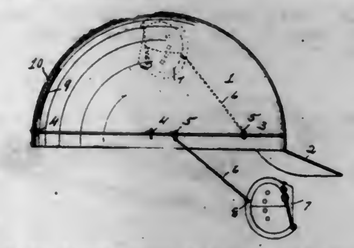
4. In an egg tester, a receptacle; a plurality of lamps therein; an opaque casing inclosing each lamp and provided at its top with a small opening; a lens in said opening; means for concentrating the rays of each lamp on a lens; a tubular member extending through said receptacle; a plurality of pairs of contacts in said tube, each pair being electrically connected to the poles of a lamp; a member movable through said tube and provided with a pair of spring members adapted to engage each pair of contacts; means for supplying an electric current to said spring members; and means for preventing said movable member from rotating relatively to said tubular member.

5. In an egg tester, a plurality of lamps; means for positioning an egg above each lamp; and means for successively lighting said lamps and illuminating the interior of said eggs.

[Claims 6 to 12 not printed in the Gazette.]

1,216,635. CAP. EARNEST WASHINGTON, Faribault, Minn. Filed Aug. 14, 1916. Serial No. 114,766. (Cl. 2—149.)

1. A cap, a ring secured within the same beneath the crown, members slidable upon said ring, and goggles carried by said members.



2. A cap, a ring secured within the same beneath the crown, rings slidable upon said rings, and flexible ligaments carried by the last-named rings and adapted to support a pair of glasses.

3. A cap provided with an annular ring, rings slidably engaging the same and flexible ligaments carried by said slidable rings, and goggles carried by said ligaments and movable outside the hat for use, and into position within the crown of the hat when not in use.

1,216,636. WATCH-CRYSTAL. FREDERICK WEHINGER, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed Sept. 22, 1916. Serial No. 121,575. (Cl. 58—91.)



1. A watch-crystal having a circumferential retaining-groove formed in the center of its edge.

2. A non-breakable watch crystal having a circumferential retaining-groove formed in the center of its edge and flanked on either side by bevels.

1,216,637. ART OF PRODUCING LACE EFFECTS. HENRY WEIL, New York, N. Y. Filed Feb. 19, 1916. Serial No. 79,299. (Cl. 2—147.)

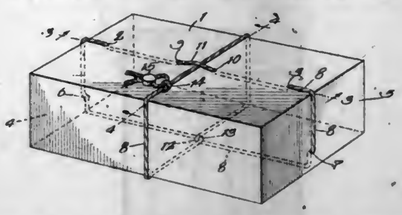


1. The art or method of producing lace insertion effects which consists in providing upon a piece of material a background representing an opening cut therein and adapted to be embroidered over from margin to margin and in different directions, so as to produce inclosed areas, placing upon said background a design for lace effect, said design and background being of contrasting colors adapted to give the appearance of a lace insertion in an opening in said piece of material, and providing a margin to the background for a substantial distance laterally of a contrasting color from the background proper.

2. An article of manufacture comprising a piece of material having upon a portion thereof a background representing an opening cut therein, a design for lace effects upon said background, said design and background being of contrasting colors adapted to give the appearance of a lace insertion in an opening in said piece of material, the margin to the background for a substantial distance laterally being of a contrasting color from the background proper and the background adapted to be embroidered over from margin to margin and in different directions, so as to produce inclosed areas.

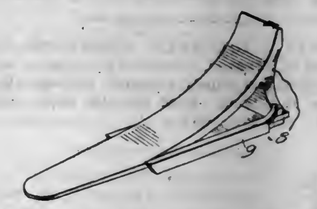
1,216,638. PACKAGE. HARVEY H. WELLS, Chicago, Ill. Filed July 10, 1916. Serial No. 108,366. (Cl. 229—46.)

The combination with a box formed of telescoping body and cover portions, there being an opening in the top of the cover adjacent each of two opposite sides of the cover and two other and collocated openings between the aforesaid openings, said sides of the box cover also being provided with openings; of a string passing over the corners of the box cover that are formed by the cover top and the aforesaid cover sides, this string being threaded through all the aforesaid openings and being continued through the two collocated openings to form a loop in the portion of the string between these openings and upon the exterior of the cover top, the string being continued downwardly from the aforesaid cover sides and over the exterior of the bottom of the box body, the parts of the string extending from each of these cover sides being crossed to form loops having interengaging bights, the ends of the string being continued across the bottom of the box body and over the remaining two sides of the box cover and across the top of the box cover transversely to the direction in which the string is threaded through the top of the box cover, the string passing also through the aforesaid loop that is



formed in the string between the aforesaid collocated openings, the ends of the string being fastened together, the aforesaid interengaging bights in the loops of the string beneath the bottom of the box body and the loop in the string between the collocated openings in the top of the box cover coöperating to prevent the portion of the string that passes around the box through this loop from being slipped off the box.

1,216,639. RAILWAY APPLIANCE. CHRISTOPHER E. WENRICH, Harrisburg, Pa. Filed Apr. 3, 1916, Serial No. 88,567. Renewed Nov. 25, 1916. Serial No. 133,485. (Cl. 104—230.)



1. In a chock, a body having a recess in its under surface, flanges extending downwardly from the sides of the said body, said flanges having shoulders thereon, an abrading plate slidable longitudinally of the said shoulders in the recess of the body, and spacing strips interposed between the shoe and the said shoulders whereby the said shoe is adjustably held in the body.

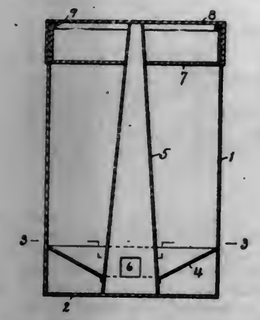
2. In a chock, a body having a recess in its under surface, flanges extending downwardly from the sides of the said body, said flanges having shoulders thereon, an abrading plate slidable longitudinally of the said shoulders in the recess of the body, and a packing strip interposed between the wall of the recess and the said abrading material.

1,216,640. DISPENSER. WILLIAM P. WILLIAMSON, Ludlow, Mass. Filed Nov. 27, 1915. Serial No. 63,888. (Cl. 221—98.)

1. A dispenser comprising a container having a bottom, an internal perforated spout seated on the bottom of said container, a substantially funnel-shaped false-bottom surrounding and attached to said spout below the perforated part thereof and extending from the latter to the side walls of said container, whereby the contents of the container is prevented from entering the space between said bottom of the container and said false-bottom and whereby the contents can all be dispensed through said spout, and a closure for said container surrounding said spout at the end that is most remote from said false-bottom.

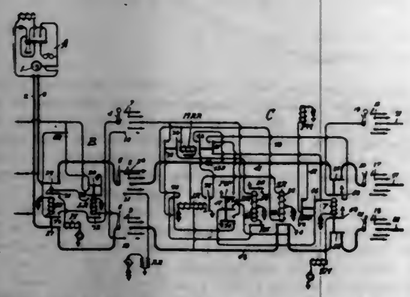
2. The combination, in a dispenser, with a container closed at one end and open at the other end, of a tapering,

open-ended, and perforated spout adapted to rest on the closed end of said container, a substantially funnel-shaped member secured to said spout below the perforated part thereof, and when in place extending from said spout to the side walls of said container and forming a false-bottom therefor, said spout and its attached member or false-bottom being removable, an inverted interior perforated cover fitting within the open end of said container around



said spout, to hold the latter in place and serve as a closure for the container outside of said spout, said cover being provided with means to facilitate the removal thereof from the container, and an exterior imperforate cover fitting the outside of the container over said open end and said inverted cover and closing the adjacent end of said spout, said exterior cover being independent of said first-mentioned cover and removable from the container.

1,216,641. AUTOMATIC TELEPHONE SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 19, 1913. Serial No. 749,324. (Cl. 179—18.)



1. A metallic-line control circuit for automatic switches comprising an impulse relay, a two conductor operating circuit for said relay and having a call transmitter connected in circuit, means for rapidly operating the impulse relay by said call transmitter for transmitting primary impulses, a differential release relay operated responsive to said impulse relay to attract its armature, a locking circuit for said release relay effective upon its operation, and a neutralizing winding for said release relay effective to cause a retraction of its armature only responsive to an extended deënergization of the impulse relay.

2. A metallic-line control circuit for automatic switches comprising an impulse relay, a two-conductor operating circuit for said relay having a call transmitter connected therewith, means for rapidly operating the impulse relay responsive to said call transmitter for transmitting primary impulses, a differential release relay having an initial operating winding responsive to the initial energization of the impulse relay to attract its armature, means for holding said armature attracted during the primary operations of the impulse relay, and a neutralizing winding for said release relay effective to cause a retraction of its armature only responsive to an extended deënergization of the impulse relay.

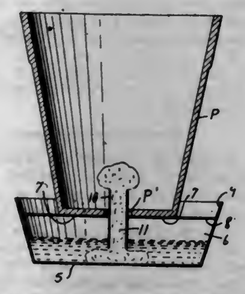
3. A metallic-line control circuit for automatic switches comprising a bridged impulse relay, a metallic operating circuit therefor, a call transmitter in said metallic circuit for operating said impulse relay to transmit primary impulses, a differential release relay having an initial operating winding closed upon the initial energization of the impulse relay, a locking circuit including said winding for holding the release relay operated during the primary operations of the impulse relay, a neutralizing winding for said release relay adapted to be included in an energizing circuit responsive to each primary operation of the impulse relay but not effective to cause a retraction of the armature of the release relay during such primary operations, said neutralizing circuit being rendered effective upon a release or extended period of deënergization of the impulse relay to cause a restoration of the armature of the release relay.

4. A metallic-line control circuit for automatic switches comprising an impulse relay, a two-conductor operating circuit therefor, a call transmitter connected in said circuit, a differential release relay having one of its windings closed responsive to operation of the impulse relay, means for closing a locking circuit through said relay to hold it operated during the primary operations of said impulse relay by the called transmitter, a neutralizing winding for said release relay included in an energizing circuit responsive to each primary operation of the impulse relay but not effective to cause a retraction of the armature of the release relay during such primary operations, said neutralizing circuit being rendered effective to cause a restoration of the armature of the release relay only upon a release deënergization of the impulse relay.

5. A metallic-line control circuit for two dimension automatic switches comprising an impulse relay, a two conductor operating circuit for said relay having a call transmitter connected therewith, means for rapidly operating the impulse relay responsive to said call transmitter for transmitting the primary impulses, a differential secondary relay operated over one of its windings to attract its armature responsive to the first primary operation of the impulse relay, and a neutralizing winding for said secondary relay effective upon cessation of the primary operations of the impulse relay to cause a secondary circuit change following the primary impulses.

[Claims 6 to 23 not printed in the Gazette.]

1,216,642. IRRIGATING DEVICE FOR PLANTS. ROY WHITE, Lamar, Colo. Filed Feb. 2, 1916. Serial No. 75,796. (Cl. 47—19.)



An irrigating device for plants including a pot supporting base having a water chamber and supply openings in the top wall thereof adapted to be closed by a pot arranged upon said base, a vertical tube centrally fixed in the top wall of the base extending above and below the same, the upper end portion of the tube extending through an opening in the bottom wall of the pot and the lower

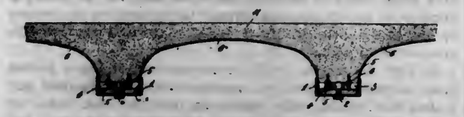
end thereof being spaced from the bottom wall of said chamber, the annular body wall of said support projecting above the top wall thereof to provide an annular guard flange whereby water collecting upon the surface of the top wall is retained thereon, and a length of absorbent material extending through said tube and into the water chamber and above the upper end of the tube into the pot.

1,216,643. COMPOSITION FOR POLISHING IRON. MATAICHI YASUDA, Koishigawa, Tokio, Japan. Filed Mar. 14, 1914. Serial No. 824,782. (Cl. 204—7.)

1. A composition of matter for cleaning and polishing iron, which comprises a salt of a strong acid and a weak base, an uncoated finely divided metal having a greater ionizing tendency thereon than iron, and an abrasive powder, said composition having the said ingredients thereof in intimate contact and capable of reacting freely with each other and with the iron rust and adapted upon the addition of moisture to remove rust from iron with which it is placed in contact, said composition being free from any metal capable of being deposited on the iron by the action of the said finely divided metal.

2. A composition of matter for cleaning and polishing iron, which comprises three parts by weight of dehydrated alum, two parts by weight of finely-divided uncoated metallic aluminum, and five parts by weight of powdered crystalline silica, said composition having the ingredients thereof in intimate contact and capable of reacting freely with each other and with the iron rust and adapted upon the addition of moisture to remove rust from iron with which it is placed in contact, such composition being free from any metal capable of being deposited on the iron by the action of the said finely divided metal.

1,216,644. APPARATUS FOR CONSTRUCTING CONCRETE FLOORS. NILS FREDERICK AMBURSEN, Brookline, Mass. Filed May 31, 1916. Serial No. 100,787. (Cl. 25—131.5.)

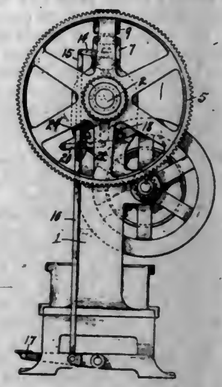


1. Apparatus for constructing concrete floors comprising spaced channels having upwardly extending flanges, means for temporarily supporting the same, metallic arch-plates each having its ends resting on the webs of a pair of adjacent channels, and means for clamping the adjacent ends of each pair of arch-plates to the flanges of a channel.

2. Apparatus for constructing concrete floors comprising spaced channels, means for temporarily supporting the same, metallic arch-plates each having its ends resting on a pair of adjacent channels, clamping members arranged transversely of said channels and located between the flanges thereof, the ends of said arch-plates being between said flanges and the ends of said clamping members, and bolts passing through apertures in the webs of said channels and having threaded engagement with said clamping members.

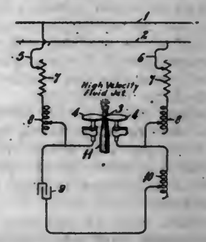
1,216,645. SAFETY MEANS FOR POWER-PRESSES. BURTON C. AMES, Toledo, Ohio. Filed Jan. 14, 1916. Serial No. 72,075. (Cl. 74—46.)

1. In combination, a shaft, drive means for said shaft normally disengaged therefrom, a part mounted on and rotatable with the shaft and having a stop shoulder, a pin for coacting with the stop shoulder of said part to prevent a turning of said shaft, a lever connected to said pin and normally standing in position to retain the pin in stop engagement with said part, a clutch member feathered on said shaft for movements into and out of engagement with said drive means, means for controlling the clutch engaging and releasing movements of said clutch member, and connection between said control means and lever operable to effect a release of said pin from stop engagement with said part when the control means is moved to release the clutch member.



2. In combination, a shaft, drive means for said shaft and normally disengaged therefrom, a clutch collar feathered to said shaft and normally operable to engage said drive means, clutch collar engaging means operable to release the clutch collar to permit its engagement with said drive means and to impart a releasing movement to said collar at a predetermined point in a rotation thereof, control means for said clutch engaging means, a lever having pin and slot connection with said control means whereby a releasing movement of said control means will move the lever from normal position and permit it to remain out of normal position when the control means is returned to its normal position, means normally retaining said lever in one position of its movement, and means carried by said lever and operable to engage a part of said clutch collar and stop the rotation thereof when at a predetermined point in its rotation.

1,216,646. METHOD OF PRODUCING HIGH-FREQUENCY OSCILLATORY CURRENTS. JAMES C. ARMOR, Ingram, Pa. Filed Oct. 14, 1911. Serial No. 654,741. (Cl. 250—37.)



1. The method of producing oscillating currents of high frequency by passing a current through a circuit containing a gap, subjecting said gap to the effect of an insulating medium moving between the electrodes thereof to vary the resistance of the path at such speed as to prevent oscillation, and inducing in a second and coupled circuit an oscillating current by the influence of said high frequency intermittent discharges, substantially as described.

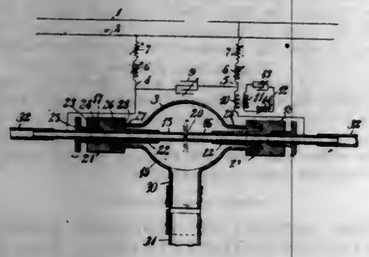
2. The method of producing regularly spaced intermittent non-oscillatory electric currents of high frequency which comprises passing a current through a circuit across a gap between two electrodes and positively interrupting said gap by mechanically moving an insulating medium between the electrodes, with sufficient rapidity to make the electric discharges dead-beat, or uni-directional.

3. The method of producing non-oscillatory high frequency intermittent currents by passing a current through a circuit containing a gap causing discharges across the gap, subjecting the gap to the effect of a moving insulating medium having such velocity as to prevent oscillation and regulating the frequency of discharge in part by varying the velocity of the medium between the electrodes.

4. The method of producing high frequency oscillatory currents by induction from another circuit, by exciting that other circuit with direct current adapted to jump a gap therein, subjecting said gap to the effect of an insulating medium moving therethrough at such speed as to prevent oscillation, and regulating the frequency of such intermittent discharges in part by varying the velocity of the medium, substantially as described.

5. The method of producing high frequency oscillatory currents by induction from another circuit by creating high frequency uni-directional non-oscillating discharges in that other circuit, including the step of in part governing the rate of discharge between two electrodes in said primary circuit by subjecting them to the influence of a moving stream of insulating medium, whereby the path of discharge is always longer than the direct distance between the electrodes and will depend for its length upon the velocity of said insulating medium therethrough.

1,216,647. MEANS FOR PRODUCING HIGH-FREQUENCY OSCILLATORY CURRENTS. JAMES C. ARMOR, Brooklyn, N. Y. Filed Nov. 23, 1911. Serial No. 661,886. (Cl. 250—38.)



1. In apparatus for producing oscillatory currents, the combination with an induction circuit, a coupled primary or exciting circuit and an exciting source, of a discharge gap in said exciting circuit provided with means for subjecting the electrodes thereof to a moving insulating medium with a velocity and direction adapted to prevent oscillation of the discharge therethrough.

2. The combination with a circuit having a discharge gap, of means for moving an insulating medium between the electrodes of the gap with a velocity and direction adapted to prevent oscillation at the gap, whereby to cause unidirectional discharges at high frequency, substantially as described.

3. The combination with an induction circuit, an interrupted circuit coupled with said induction circuit and a source of energy, of a discharge gap in said interrupted circuit comprising a plurality of alined hollow electrodes, and means for passing through said electrodes and through the annular gap formed by them of an insulating medium at high velocity adapted to prevent oscillation in the gap.

4. In apparatus for producing high frequency oscillatory currents, a pair of axially alined hollow electrodes spaced apart to form a narrow annular gap between the adjacent edges thereof, and means for projecting a stream of insulating fluid radially across said gap.

5. In apparatus for producing high frequency oscillatory currents, the combination with a source of energy and an induction circuit, of a coupled interrupted circuit having a discharge gap comprising a pair of open-ended hollow electrodes spaced apart to form an annular gap, and means for effecting a discharge of insulating fluid outwardly across said gap whereby to prevent oscillation therein.

[Claims 6 to 9 not printed in the Gazette.]

1,216,648. ERASER DEVICE. JOHN AULD, Chicago, Ill. Filed Sept. 21, 1914. Serial No. 862,740. (Cl. 120—36.)



1. In an erasing device, the combination with an erasing member comprising an eraser and a supporting frame therefor, of a brush member having a pivot bar clamped between said eraser and supporting frame to be free to be swung to positions at angles with the eraser.

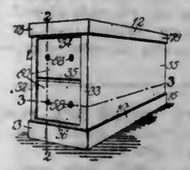
2. In an erasing device, the combination of an eraser, supporting side plates therefor, one of said plates having a channel in its inside, and a brush member having a pivot bar for detachably engaging in said channel between said plate and eraser and adapted to be swung into positions at angles with the eraser.

3. In an eraser device, the combination with a flat eraser member, of a brush holder pivoted thereto to swing into positions at angles with the plane of the eraser member, and a brush supported by said brush holder.

4. The combination with an eraser comprising a rubber disk, side plates at opposite sides of the disk and means for holding said plates against the disk sides, a detachable frame inserted between one of said plates and the disk, said plate being grooved in its inner side for receiving a portion of the frame, said frame being held to the eraser by its engagement in the grooved plate and the friction of the rubber disk.

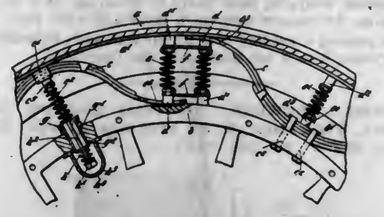
5. The combination with an eraser comprising a rubber disk, central side plates at opposite sides of the disk and means for holding said plates against the disk sides, of a detachable supporting frame constructed of wire and inserted at one end between one of said plates and the disk, said plate being grooved in its inner side for receiving the wire of the frame, said frame being held to the eraser by its engagement with the grooved plate and the friction of the rubber disk, and bristles secured to the outer end of said wire frame to form a brush.

1,216,649. COMBINED MOLD AND FACE-PLATE FOR CONCRETE. GUSTAV BENISCH, Brooklyn, N. Y. Filed Feb. 6, 1914. Serial No. 816,909. (Cl. 72—7.)



In a catacomb, the combination of a combined mold and face plate shaped to form the uprights of a catacomb proper, and a concrete catacomb proper having its exposed front edges molded and set to the combined metal mold and face plate and permanently joined therewith by such setting, whereby a hermetical seal is formed between the concrete and metal mold or face plate, the complete front surface of the exposed front edges of the catacomb proper being covered by the combined metal mold and face plate in full faced surface contact therewith.

1,216,650. SPRING-WHEEL FOR VEHICLES. JOSIAH SAMUEL GIST BILLETT, Teddington, England. Filed June 6, 1916. Serial No. 101,891. (Cl. 152—37.)

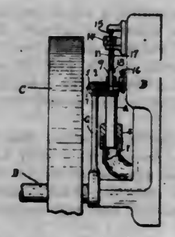


1. A spring wheel comprising in combination an outer rim, an inner rim, springs of bow form between said rims, adjacent springs being in reverse position, projections on the said rims, slots in the end parts of said springs engaged with said projections and coiled springs between said rims and connected to said projections.

2. A spring wheel comprising in combination, an outer rim, an inner rim, springs of bow form between said rims, adjacent springs being in reverse position, projections on the said rims, slots in the end parts of said springs engaged with said projections, coiled springs between said rims and connected to said projections, rods articulately connected to the middles of the bow springs secured to the outer rim, passages in the inner rim through which said rods project, coiled springs around said rods and between the said bow springs and the inner rim and coiled springs around said rods between the inner surface of the inner rim and the ends of the said rods.

3. A spring wheel comprising in combination an outer rim, an inner rim, springs of bow form arranged between said rims, adjacent springs being in reverse position and each spring being secured at its middle to one rim and its ends bearing on the other rim, projections on said rims, slots in the end parts of said springs engaged with said projections, a coiled spring arranged between the outer rim and the middle of each bow spring secured to the inner rim, a rod connected to the middle of each bow spring secured to the outer rim, passages in the inner rim through which said rods project, coiled springs around said rods and between the inner rim and the middles of the bow springs to which said rods are connected, coiled springs between the inner side of said inner rim and the inner ends of said rods and a radially disposed coiled spring near each end of each bow spring connected at one end to one of said projections and at the other end to the opposite rim.

1,216,651. ELECTRICAL MAKE-AND-BREAK TRIPPING MECHANISM FOR TWO OR FOUR CYCLE GAS-ENGINES. MATTHEW H. BORLAND, Seekonk, Mass. Filed Mar. 15, 1916. Serial No. 84,389. (Cl. 123—164.)



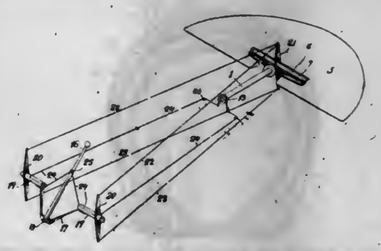
1. In an ignition apparatus for gas engines, a water circulating pump having a plunger, a transverse chamber in said plunger, a trip block slidably mounted in said chamber, a spring for projecting the trip block outwardly from said chamber, a stop pin to limit the extent of outward movement of said trip block, an air vent communicating with one end of said chamber, to permit escape of air upon retraction of said trip block, an adjustable timer pin in the path of the projected end of said trip block, an igniter mechanism operated by said trip block and common means for operating said pump plunger and moving the trip block past the end of the timer pin.

2. In an ignition apparatus for gas engines, a trip block having a circular body, having a transverse bore therethrough, a shoulder or lip at one end adapted to engage a stop pin, a stop pin inserted crosswise in said chamber, and engaging the said shoulder of the said trip block, an igniter pin operating perpendicularly, and dropping through a bore of said trip block at moment of ignition.

3. A tripping mechanism for igniters comprising the plunger head of a water circulating pump, of a slidable trip block operating longitudinally in the horizontal chamber of the plunger head of the water circulating pump, means to operate said trip block longitudinally, consisting of a spiral spring inserted horizontally in said chamber and abutting one end of said trip block thereby creating a slidable outward movement of trip block, means to operate said trip block inwardly in said chamber, consisting of a timer secured to the cylinder head of engine, said timer abutting one end of said trip block, and operating said trip block alternately with said spiral spring.

4. In an igniter operating means for internal combustion engines, in combination, the plunger of a pump, an igniter mechanism, a trip block mounted in said plunger, adapted to operate said igniter mechanism, stationary means for reciprocating said trip block, and common means for operating said pump plunger and moving said trip block into coöperative relation with said stationary means.

1,216,652. AEROPLANE. ANTONIO BORRÁS and FERNANDO IRIARTE, Buenos Aires, Argentina. Filed Apr. 8, 1916. Serial No. 89,758. (Cl. 244—29.)

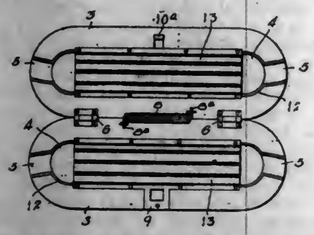


1. In an aeroplane, a yoke rotatably carried by the aeroplane body, a rod rotatably journaled in the yoke and extending beyond the same at each end, a rudder mounted on said rod, a lever fixedly mounted on the rod and a common operating means for controlling the movement of said yoke and rod either simultaneously or dissimultaneously.

2. In an aeroplane, a rudder suspended to be free to move up and down and to be tipped sidewise in either direction, a control lever, a strap to which said lever is pivoted, a pair of rotatable trunnions to which the ends of said strap are fixed, auxiliary levers fixedly mounted on the trunnions, an auxiliary lever carried by the rudder, connections between said auxiliary levers on the trunnions and the auxiliary lever on the rudder and an additional connection for sidewise tipping between the control lever and the rudder.

3. In an aeroplane, a yoke rotatably carried by the aeroplane body, a rod rotatably journaled in the yoke and extending beyond the same at each end, a rudder mounted on said rod, an auxiliary lever fixedly mounted on the rod, a control lever and connections actuated by the movement of the control lever to move the yoke and the auxiliary lever either simultaneously or dissimultaneously.

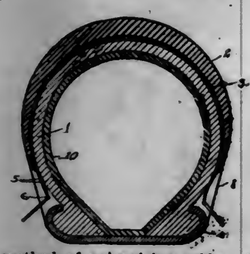
1,216,653. CLASP-HOLDER FOR IRONS. LOUIS JOS. BRUNS, Algiers, La. Filed Oct. 21, 1916. Serial No. 126,933. (Cl. 68—27.)



1. A clasp holder for flat iron handles, including a pair of complemental halves hingedly connected at one of their edges and correspondingly recessed on their inner faces to receive the flat iron handle, corrugated spring plates within the recesses for positively gripping the flat iron handle, and latch means for locking the two complemental halves in a closed position.

2. A clasp holder for flat iron handles, including a pair of complemental halves hingedly connected at one of their edges and correspondingly recessed in their inner faces to receive the enlarged hand hold of a flat iron handle, reduced necks being provided at the ends of the recesses for receiving the reduced portions of the flat iron handle, corrugated spring plates extending around the bases of the recesses for positively gripping the flat iron handle, and latch means for locking the two complemental halves in a closed position.

1,216,654. METHOD OF VULCANIZING RUBBER. WILBUR B. BURKE, Cleveland, Ohio, assignor to The Burke Process Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 16, 1916. Serial No. 78,572. (Cl. 18—53.)



1. In a method of vulcanizing rubber, the steps which consist in forming an electric heating element in contact with a layer of fresh rubber, placing such layer and such element in contact with the parts to be vulcanized together, and then passing a heating current through such heating element.

2. In a method of vulcanizing rubber, the steps which consist in forming an electric heating element in contact with a relatively thin layer of fresh rubber, placing such layer between the parts to be vulcanized, pressing such parts into close contact with such layer, and then passing a heating current through such element.

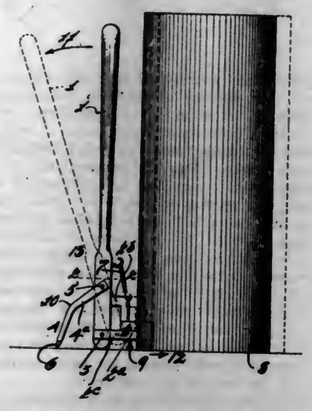
3. In a method of vulcanizing rubber, the steps which consist in forming an electric heating element in contact with a relatively thin layer of fresh rubber, placing such layer between the parts to be vulcanized, wrapping such three parts to maintain the same in close contact with each other, and then passing a heating current through said element.

4. In a method of vulcanizing rubber, the steps which consist in forming heating elements on and in contact with both faces of a layer of fresh rubber, placing such formed layer and elements between the parts to be combined, and then passing a heating current through such elements.

5. In a method of vulcanizing rubber, the steps which consist in forming heating elements on and in contact with both faces of a layer of fresh rubber, placing such formed elements and said layer between the parts to be combined, wrapping such parts to maintain such heating elements in contact with such layer and such parts and then passing a heating current through such elements.

[Claims 6 to 9 not printed in the Gazette.]

1,216,655. CROWBAR. ALEXANDER HAMILTON CAMPBELL, White Plains, N. Y. Filed Aug. 3, 1915. Serial No. 43,377. (Cl. 254—113.)



1. A crow-bar consisting of a handle, a shoe pivotally secured thereto and extending therefrom, a downwardly projecting stud carried by said shoe adapted to keep said shoe off the surface, and an independent fulcrum frame pivotally secured to said handle.

2. A crow bar consisting of a handle having a rounded lower end to contact with the ground, a shoe pivotally secured to said handle adjacent the rounded end thereof, means to keep said shoe out of contact with the ground, and a fulcrum also pivoted to said handle intermediate said shoe and the upper end of said handle, said fulcrum extending outwardly from said handle.

3. A crow bar consisting of a handle, the lower end of which contacts with the ground, a shoe pivotally secured to said handle adjacent the lower end, and means to keep said shoe out of contact with the ground when said crow bar is in use.

1,216,656. TALKING-MACHINE. FRANK L. CAPPS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed June 17, 1915. Serial No. 34,721. (Cl. 181—27.)

1. In a talking machine, a sound conduit adapted to be connected with the sound-box of said machine and provided with a bend whereby sound waves traveling therethrough are deflected, and a pad of sound-suppressing material applied to a wall of the conduit and opposed to the direction of travel of the sound waves prior to their deflection.

2. In a talking machine, a sound conduit adapted to be connected with the sound-box of said machine and provided with a surface adapted to deflect the major portion of the sound waves traveling through said conduit, and a pad of sound-suppressing material applied to said deflecting surface.

3. In a talking machine, a sonnd conduit adapted to be connected with the sound-box of said machine, a curved portion in said conduit, and a pad of sound-suppressing material associated with said conduit at the inner concave surface of said conduit.

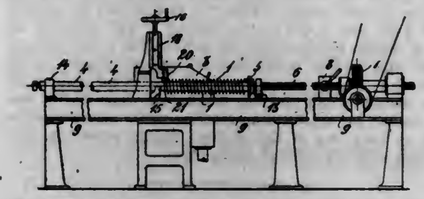
4. In a talking machine, a gradually enlarging sound conduit adapted to be connected with the sound-box of said machine, substantially all the inner surface or surfaces of said conduit being bare, a curved portion in said conduit, and a pad of sound-suppressing material associated with said conduit at the inner concave surface of said conduit.



5. In a talking machine, a gradually enlarging sound conduit adapted to be connected with the sound-box of said machine, a curved portion in said conduit, and a pad of felting material having a shape conforming to the curve of the conduit and located at the inner concave surface of said conduit.

[Claims 6 to 17 not printed in the Gazette.]

1,216,657. APPARATUS FOR PRODUCING RIBBED PIPES, TUBES, OR THE LIKE. OLOF VALFRID CARDELL, Eskilstuna, Sweden. Filed Feb. 12, 1916. Serial No. 77,939. (Cl. 29—84.)



1. Apparatus for producing ribbed pipes, tubes and the like by feeding a wrought iron rib material through an oven for heating it to a rotating pipe, comprising means for continuously winding the rib material in successive spirals around the tube including means for continuously advancing the rotating tube in its longitudinal direction in combination with a chuck rotating with the pipe and provided with means for fastening one end of the rib, together with a guiding device for the rib provided with a plate on one side of the rib and rolls on the other side, the rolls and the side of the plate facing the rib having a shape that answers to the shape of the rib which is thicker at the edge facing the pipe than at the outer edge.

2. Apparatus for producing ribbed pipes, tubes and the like by feeding a wrought iron rib material through an oven for heating it to a rotating pipe, comprising means for continuously winding the rib material in successive spirals around the tube including means for continuously advancing the rotating tube in its longitudinal direction in combination with a chuck rotating with the pipe and provided with means for fastening one end of the rib, together with a guiding device for the rib provided with plates on one side of the rib and rolls on the other side, the rolls and the plates being movable in a direction toward and from the center of the pipe.

3. Apparatus for producing ribbed pipes, tubes and the like by feeding a metallic rib material through an oven for heating it to a rotating pipe, comprising means for continuously winding the rib material in successive spirals around the tube, including means for continuously advancing the rotating tube in its longitudinal direction in combination with a chuck rotating with the pipe and provided with means for fastening one end of the rib, and a guiding device for the rib.

4. Apparatus for producing ribbed pipes, tubes and the like by feeding a metallic rib material through an oven for heating it to a rotating pipe, comprising means for continuously winding the rib material in successive spirals around the tube, including means for continuously advancing the rotating tube in its longitudinal direction in combination with a chuck, at one end of said pipe and rotating therewith, and provided with a clamp for gripping one end of the rib, and a guiding device for the rib.

5. Apparatus for producing ribbed pipes, tubes and the like by feeding a metallic rib material through an oven for heating it to a rotating pipe, comprising means for continuously winding the rib material in successive spirals around the tube, including means for continuously advancing the rotating tube in its longitudinal direction in combination with a chuck rotating with the pipe and provided with means for fastening one end of the rib, and a guiding device for the rib, comprising a plate at one side of the rib and rolls at the other side, said rolls and the side of the plate facing the rib, having a shape corresponding to the cross section of the rib.

1,216,658. ELECTROMAGNETIC VALVE. LEGENDRE CINQ-MARS, San Francisco, Cal., assignor to Conservative Heating Company, San Francisco, Cal., a Corporation. Filed Jan. 24, 1916. Serial No. 74,008. (Cl. 137—4.)

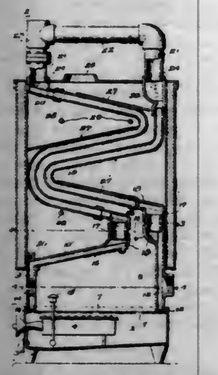


In a device of the character described, the combination of an upright tubular casing having its upper end enlarged in diameter, the opposite sides of said casing below its enlarged upper portion being also enlarged to form rectangularly-shaped guides, the wall of said guides being of greater thickness than that of said enlarged upper portion, said wall at the upper end of each guide being reduced in thickness to coincide with that of the latter to form shoulders, a solenoid mounted in said enlarged upper portion, a valve arranged in the lower end of said casing, a magnetic core slidable vertically in said solenoid and actuated by the same, said core being operatively connected with said valve, and spring-pressed plungers carried by said core, said plungers being projected into said guides and adapted to engage said shoulders when said valve is open, whereby to retain it in such position.

1,216,659. WATER-HEATER. LEGENDRE CINQ-MARS, San Francisco, Cal., assignor to Conservative Heating Company, San Francisco, Cal., a Corporation. Filed Oct. 12, 1916. Serial No. 125,262. (Cl. 122—23.)

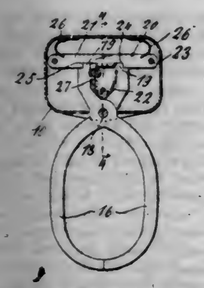
1. A water heater comprising a hollow base having an open upper side, a burner in said base, a water heating

box mounted on said base and having an open bottom, said box having hollow side and top walls and the latter having a heat outlet opening therethrough, a water inlet into the hollow walls, a water outlet therefrom at one edge of said heat outlet, zig-zag water heating pipes rising from said water outlet, and a casing around said pipes having a heat outlet.



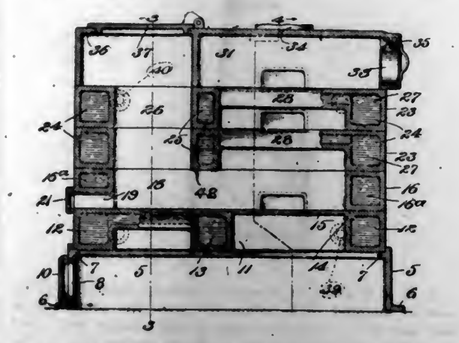
2. A water heater comprising a hollow base having an open upper side provided with angular flanges along two of its edges, a burner in said base, a water heating box received between said angular flanges and spaced therefrom sufficiently to permit moisture to pass from the exterior of said box into said base, said box having hollow side and top walls and an open bottom, said top wall having a heat outlet formed therethrough and having a hot water outlet adjacent said heat outlet, while the side walls are provided with a cold water inlet, zig-zag heating pipes rising from said hot water outlet, a casing surrounding said pipes and likewise surrounding the upper portion of the aforesaid water heating box, said box and casing being secured together but spaced sufficiently to permit moisture to pass between the two, and a plurality of opposed inclined heat checking plates in the casing to prevent the direct discharge of heat therethrough and to collect moisture dripping from the heating pipes, the lower edges of said plates being spaced from the casing sufficiently to permit the discharge of such moisture.

1,216,660. BICYCLE-LOCK. LOUIS P. CONWAY, Sawtelle, Cal. Filed Sept. 11, 1915. Serial No. 50,131. (Cl. 70—90.)



A lock comprising a casing, a pair of shackles pivoted in the casing and projecting therefrom, the inner ends of the shackles having lugs, opposite pivoted tumblers in the casing extending across the inner ends of the shackles, said tumblers having edge recesses facing said ends of the shackles and adapted to receive the lugs of the respective shackles, and one of the tumblers having its free end resting on the corresponding end of the other tumbler, a spring mounted between the inner ends of the shackles and engageable therewith to spread their outer ends, and a key engageable with the last-mentioned tumbler to swing the same and the other tumbler on their pivots.

1,216,661. BOILER-FURNACE. JOHN F. CUNNINGHAM, Springfield, Mo. Filed July 29, 1915. Serial No. 42,658. (Cl. 122—214.)



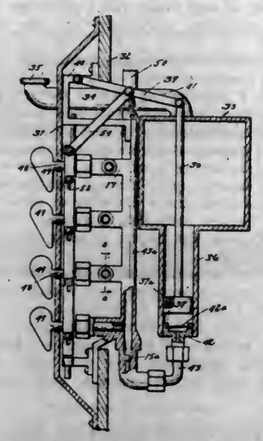
A boiler furnace comprising in combination, an integral base unit, having means for access thereinto, a grate section having integral water holding bodies forming grate bars, a plate for partially closing communication between the base section and the grate section, a combustion chamber section having an integral water holding body and means for access thereinto, a combined fuel magazine and tubular boiler section having integral water holding bodies, forming a fuel magazine over the grate bars at one end of the section, and water tubes at the other end of the section around which the productions of combustion pass, and a top section having a wall dividing the space therein substantially the same as the combined magazine and tubular boiler section, integral means for attaching a furnace pipe thereto and means for gaining access thereinto, said sections having the water bodies having means for establishing relative water communication and at least two of the sections having means for connection with service and drain pipes.

1,216,662. LIGHTING SYSTEM. JOEL BENJ. DALBEY, Nevada, Iowa, assignor of one-half to Jay A. King, Nevada, Iowa. Filed Mar. 16, 1915. Serial No. 14,880. (Cl. 67—41.)

1. In a device of the class described, the combination of a lamp with a fixture for a lighting system, means on said fixture for controlling the flow of fuel to the lamp, a generator on said lamp, means on the fixtures for controlling the fuel flow to the generator, means on said fixture for causing a spark at said generator, and automatic means on the lamp for controlling the fuel supply thereto according to the heat of the lamp.

2. In a device of the class described, the combination of a series of lamps having generators and burners and a fuel supply tube, with a fixture, means on said fixture for selectively controlling the flow of fuel from said tube to said lamps, means controlled from said fixture for selectively supplying fuel in predetermined quantities to any of said generators, and means controlled from said fixture for selectively lighting the fuel at the generator of any lamp.

3. In a device of the class described, the combination of a series of lamps having generators, and burners, and a fuel supply tube, with a fixture, means on said fixture for selectively controlling the flow of fuel from said tube to said lamps, means controlled from said fixture for selectively supplying fuel in predetermined quantities to any of said generators, and means controlled from said fixture for selectively lighting the fuel at the generator of any lamp, the parts being so arranged that no lighting means can be operated at any lamp, till the generator fuel supplying means for said lamp has been actuated.

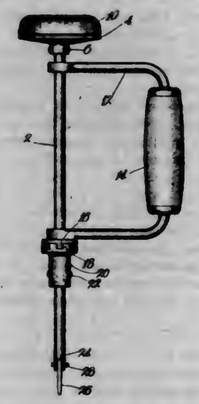


4. In a device of the class described, a series of lamps, adapted to burn gasolene or the like, a fixture adapted to be suitably located, a means for measuring fuel in predetermined amounts, means on said fixture for selectively controlling the flow of generating fluid to said lights, means controlled from said fixture for selectively lighting the generating fluid at the different lamps, and additional means on said fixture for controlling the flow of fuel to said lamps from said first means.

5. In a device of the class described, a lamp having a burner, a generating device comprising a plurality of noninflammable devices arranged in vertical succession adapted to receive and absorb fuel, said device being so located that when said fuel is burned proper parts of the lamp will be heated.

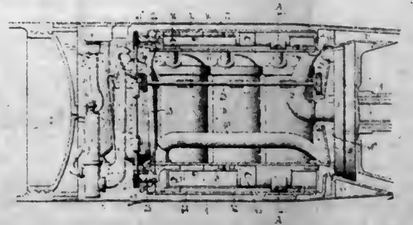
[Claims 6 to 9 not printed in the Gazette.]

1,216,663. HAND-TOOL. BEN B. DE MASTERS, Kansas City, Mo. Filed Nov. 20, 1913. Serial No. 802,076. (Cl. 51—4.)



In a hand tool for grinding valves, an unbroken cylindrical post, a disk secured thereon at one end and a bit secured to the other end, a pressure block journaled on one extremity of the post and bearing against the upper face of the disk, a sleeve provided with upwardly-projecting teeth, secured rigidly on the post, and a yoke pivoted on and projecting radially from the post between the said sleeve and disk and provided with depending teeth for engagement with the teeth of the said sleeve; said yoke being adapted for slidable movement upward on the post to withdraw the yoke teeth from engagement with the teeth of the sleeve.

1,216,664. DRIVING MECHANISM FOR SELF-PROPELLED BODIES. FRANK W. DODD, Brooklyn, N. Y. Filed Mar. 21, 1913. Serial No. 755,905. (Cl. 60—3.)



1. An automobile torpedo and a driving mechanism therefor comprising an engine arranged to be driven by the water in which the torpedo is immersed or on which it floats, and fluid pressure means operated by expansion of gas derived from a source or reservoir kept at continuous pressure for forcing the water through the engine, the water after passing through the engine being exhausted into the surrounding water in a rearward direction.

2. An automobile torpedo and a driving mechanism therefor comprising a turbine engine arranged to be driven by the water in which the torpedo is immersed or on which it floats, and fluid pressure means operated by expansion of gas derived from a source or reservoir kept at continuous pressure for forcing the water through the engine, the water after passing through the engine being exhausted into the surrounding water in a rearward direction.

3. An automobile torpedo and a driving mechanism therefor comprising an engine, a container arranged to receive the water in which the torpedo is immersed or on which it floats, and pressure fluid means operated by expansion of gas derived from a source or reservoir kept at continuous pressure for forcing the water from the container through the engine, the water after passing through the engine being exhausted into the surrounding water in a rearward direction.

4. An automobile torpedo and a driving mechanism therefor comprising a turbine engine, a container arranged to receive the water in which the torpedo is immersed or on which it floats, and pressure fluid means operated by expansion of gas derived from a source or reservoir kept at continuous pressure for forcing the water from the container through the engine, the water after passing through the engine being exhausted into the surrounding water in a rearward direction.

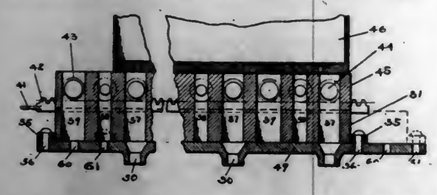
5. An automobile torpedo and a driving mechanism therefor comprising an engine, a plurality of containers arranged to receive the water in which the torpedo is immersed or on which it floats, and fluid pressure means operated by expansion of gas derived from a source or reservoir kept at continuous pressure for forcing the water from the containers through the engine, the water after passing through the engine being exhausted into the surrounding water in a rearward direction.

[Claims 6 to 30 not printed in the Gazette.]

1,216,665. DEPOSITOR. PATSY DONOFRIO, Portland, Oreg., assignor to Perfection Cone Mfg. Co., Portland, Oreg., a Corporation of Oregon. Filed May 31, 1916. Serial No. 100,958. (Cl. 107—28.)

1. A dough depositor comprising a reservoir to contain dough having a plurality of symmetrically disposed ports

in the bottom thereof; a valve adapted to coact with said ports, and having therein a plurality of series of ports, the ports in each of said series being symmetrically disposed correspondingly to said ports in the bottom of said reservoir, and the ports in each of said series being of a size varying from that of the ports in each of the other series; means to shift the valve so that any series of ports therein may coact with the ports in the bottom of said reservoir; and means for reciprocating said valve so that the ports in one of said series therein may periodically open and close the ports in the bottom of said reservoir.



2. A dough depositor comprising a reservoir having a plurality of symmetrically disposed ports therein; a valve having a plural series of receptacles therein, the receptacles in each of said series being symmetrically disposed correspondingly to said ports, and the receptacles in each of said series being of a size varying from those in each of the other series; means for setting the valve so that the receptacles in any one of said series may be filled with dough from said reservoir; and operable means for periodically filling said receptacles from said reservoir.

1,216,666. BRUSH. OTTO H. DORSCH, Brooklyn, N. Y. Filed Apr. 29, 1916. Serial No. 94,327. (Cl. 141—7.)



1. An improved bottle brush comprising an elongated flexible stem portion provided with a longitudinal passage therethrough, a plurality of arms at the end of said stem normally inclined outwardly from said stem, provided on the inner surfaces thereof with grooves formed continuous with the said passage of the stem, said arms adapted to be pressed into contacting relation, said grooves adapted to maintain an uninterrupted passage continuous with said passage of the stem, and a plurality of relatively long fingers extending outwardly from the sides of said stem.

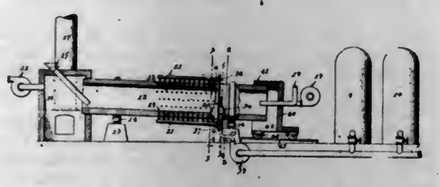
2. An improved bottle brush comprising an elongated flexible stem portion provided with a longitudinal passage therethrough, a plurality of arms at the end of said stem normally inclined outwardly from said stem, provided on the inner surfaces thereof with grooves formed continuous with the said passage of the stem, said arms adapted to be pressed into contacting relation, said grooves adapted to maintain an uninterrupted passage continuous with said passage of the stem, and a plurality of equal length relatively long fingers extending outwardly from the sides of said stem, said fingers being supported at the rear faces by reinforcing ribs, and unsupported at the front faces.

3. An improved bottle brush, comprising an elongated flexible stem portion provided with a longitudinal passage therethrough, a plurality of arms at the end of said stem normally inclined outwardly from said stem, provided on the inner surfaces thereof with grooves formed continuous with the said passage of the stem, said arms adapted to be pressed into contacting relation, said grooves adapted to maintain an uninterrupted passage, continuous with said passage of the stem, outwardly extending leaves at the upper end of said arms, and a plurality of relatively long fingers extending outwardly from the sides of said stem.

4. An improved bottle brush, comprising an elongated flexible stem portion provided with a longitudinal passage therethrough, a plurality of arms at the end of said stem normally inclined outwardly from said stem, provided on the inner surfaces thereof with grooves formed continuous with the said passage of the stem, said arms adapted to be pressed into contacting relation, said grooves adapted to maintain an uninterrupted passage, continuous with said passage of the stem, and a plurality of equal length relatively long fingers extending outwardly from opposite sides of said stem, the fingers at each side being in the same vertical plane.

5. An improved bottle brush, comprising an elongated flexible stem portion provided with a longitudinal passage therethrough, a plurality of flexible arms at the end of said stem adapted to be moved outwardly by centrifugal force, and a plurality of equal length relatively long fingers extending outwardly from said stem, said fingers being in the same vertical plane as said arms.

1,216,667. PROCESS OF TREATING ORES. GEORGE F. DOWNS, Buffalo, N. Y. Filed Dec. 7, 1914. Serial No. 875,810. (Cl. 266—20.)



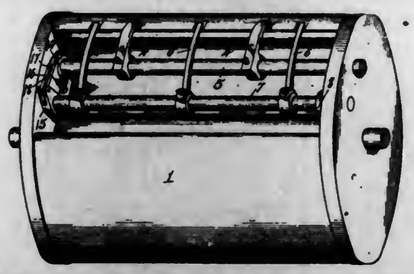
1. The process of treating ores comprising advancing the material to be treated within a converting chamber toward and through a twyer zone by two movements, namely, an advance movement longitudinally of the converter chamber and a tumbling movement substantially at right angles to said longitudinal movement; applying heat to said mass from gases moved longitudinally within said chamber and in reverse direction to said advance movement to progressively heat and produce conversion in said constantly-moving and tumbling mass; and twyer-blasting the mass while so advancing and tumbling to produce violent agitation, breaking-up, and final completion of the desired chemical change.

2. The herein described process of treating ores which consists of continuously advancing the ore in a furnace chamber in definite quantities, causing movement or tumbling of the ore at the same time on lines substantially at right angles to the line of advance, subjecting the ore thus under advancing and tumbling movement to progressive heating from gases traveling in reverse longitudinal direction, advancing the ore into a twyer area and there subjecting the same, in addition to the two movements above mentioned to twyer blasts of air or other fluid to produce violent radial agitation to cause complete chemical reaction between the ore and such blast.

1,216,668. SHOO-FLY FOR PRINTING-PRESSES. MICHAEL ANDREW DROITCOUR, Delphos, Ohio. Filed Jan. 6, 1916. Serial No. 70,668. (Cl. 101—29.)

1. In combination, sheet-gripping means, shoo-fly means, and means having connection with and operated by sheet releasing movements of said gripping means to impart predetermined movements to said shoo-fly means.

2. The combination with the rocker-shaft of a sheet gripping mechanism, of shoo-fly means having a rocker-shaft and shoo-fly fingers projecting therefrom, and means having connection with and operated by initial sheet releasing rocker movements of said first rocker-shaft to impart predetermined rocking movements to said shoo-fly rocker-shaft.



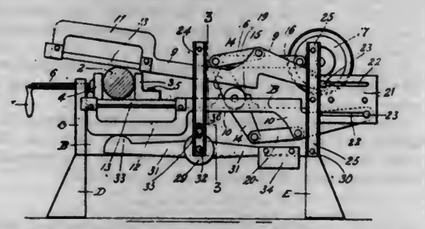
3. The combination with sheet-gripper means of a printing press, said means having a rocker part, of shoo-fly means having a shoo-fly finger rocker-shaft, an arm projecting from said rocker-shaft, and a trip-finger connecting said arm and rocker part and operable to impart predetermined rocking movements to said rocker-shaft when said rocker part is rocked.

4. In a printing press, an impression cylinder, a pair of rocker-shafts carried by said cylinder, one having sheet gripping fingers and the other shoo-fly fingers projecting therefrom, and means connecting said shafts and operable to impart predetermined rocking movements to one when the other has predetermined rocking movements.

5. In combination, a cylinder, a sheet-gripper mechanism carried thereby and having a rocker-shaft, shoo-fly means carried by the cylinder and having a rocker-shaft, and means connecting the rocker-shafts of said mechanism and shoo-fly means and automatically operable to communicate predetermined rocking movements to the shoo-fly means when the gripper mechanism shaft is rocked and to release the connection between said rocker-shafts when the rocker-shaft of the shoo-fly means has been rocked a predetermined extent.

[Claims 6 and 7 not printed in the Gazette.]

1,216,669. HACKSAW-MACHINE. JOB DUDLEY, Hamilton, Ontario, Canada. Filed May 18, 1916. Serial No. 98,371. (Cl. 29—73.)



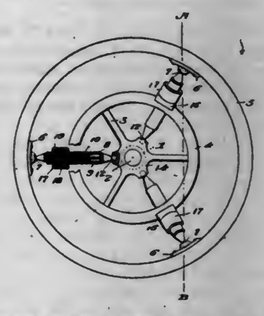
1. In a hacksaw machine of the character described, a table, a rear projecting member secured to said table and provided with parallel horizontal slots, horizontally disposed saw-blade arms adapted to reciprocally oscillate in one vertical plane, means on the rear ends of said arms adapted to engage with said slots, and means on said table to oscillate said arms, substantially, and for the purpose specified.

2. In a hacksaw machine of the character described, a frame, a horizontally disposed saw-blade arm adapted to oscillate in said frame and to operate downward by means of its own weight, a similar saw-blade arm adapted to reciprocally oscillate with the aforesaid arm and to operate upwardly in the same vertical plane therewith, means for oscillating said arms, a balance lever fulcrumed to the frame, a counter weight secured to one end of said lever, an integral rounded portion on the opposite end of said lever and tensioned against the upwardly acting saw-blade arm, and means for automatically locking said lever when the machine is not operating.

3. In a hacksaw machine of the character described, the combination of a frame and table, vertically disposed guide arms rigidly secured to said frame, horizontal saw-blade arms adapted to reciprocally oscillate in one vertical plane and between said guide arms, a rear projecting member secured to said table and provided with parallel horizontal slots, means on the rear ends of said saw-blade arms adapted to engage with said slots, and means on said table to oscillate said arms, substantially, and for the purpose specified.

4. In a hacksaw machine of the character described, the combination of a frame and table, vertically disposed, front, and lateral guides rigidly secured to said frame in alinement, horizontal saw-blade arms adapted to reciprocally oscillate in one vertical plane determined by said guides, a rear projecting member secured to said table and provided with horizontal slots, means on the rear ends of said saw-blade arms adapted to engage with said slots, means on the table to oscillate said arms, and a balance lever fulcrumed to the frame and tensioned upwardly against the upwardly acting arm, substantially as set forth.

1,216,670. STEERING-WHEEL. ARTHUR S. DYSART, U. S. Navy. Filed June 5, 1916. Serial No. 101,759. (Cl. 74—33.)



1. A foldable steering wheel adapted to be tilted from normal to folded position, and vice versa, having a center section, a rim or hand-wheel portion, and a plurality of spokes comprising telescopic sections whose ends are jointed to the center section and to the rim which permit tilting of the wheel.

2. A foldable steering wheel adapted to be tilted from normal to folded position, and vice versa, having a center section, a rim or hand-wheel portion, and a plurality of spokes comprising telescopic sections whose ends are jointed to the center section and to the rim which permit tilting of the wheel, and spring means for relatively extending or expanding the telescopic sections of the respective spokes.

3. A foldable steering wheel adapted to be tilted from normal to folded position, and vice versa, having a center section, a rim or hand-wheel portion, and a plurality of spokes comprising telescopic sections whose ends are jointed to the center section and to the rim which permit tilting of the wheel, and means for holding the steering wheel rigid when in normal position.

4. A foldable steering wheel adapted to be tilted from normal to folded position, and vice versa, having a center section, a rim or hand-wheel portion, and a plurality of spokes comprising telescopic sections whose ends are jointed to the center section and to the rim which permit tilting of the wheel, spring means for relatively extending or expanding the telescopic sections of the respective spokes, and means for holding the steering wheel rigid when in normal position.

5. The combination with a center or steering-shaft-attaching section of a steering wheel, of a steering rim or

hand-wheel portion thereof, spokes comprising telescopic sections which are respectively jointed to the center section and the steering rim section, and means for engaging the spokes with the center section.

[Claims 6 to 8 not printed in the Gazette.]

1,216,671. PROCESS FOR TREATING COFFEE. FRANCIS R. EDEN, Montclair, N. J. Filed Oct. 30, 1915. Serial No. 58,796. (Cl. 99—11.)

1. The described process for treatment of green coffee beans consisting in extracting the caffein therefrom by immersion in water at a temperature at which caffein is readily soluble, driving off the water from the beans, and roasting them while moist.

2. The step in the described process consisting in roasting decaffeinated coffee beans while moist.

3. The described process for treatment of green coffee beans consisting in roasting the beans from which the caffein has been withdrawn by the extractive action of water while moist.

4. The process of treatment of green coffee beans consisting in moistening said beans and roasting while moist.

5. The method of increasing the empy-reumatic oil of coffee beans consisting in impregnating the cells of the green bean with moisture, vaporizing said moisture, and roasting whereby the essential oil is driven out by the expanding vapor.

[Claim 6 not printed in the Gazette.]

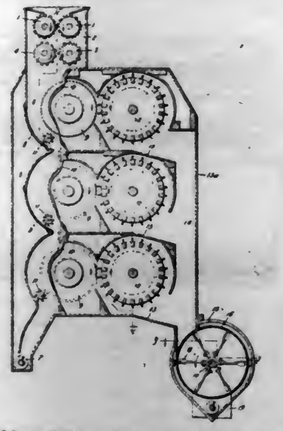
1,216,672. FINGER-MEASURING DEVICE FOR RINGS. JACOB EISEN, New York, N. Y., assignor to Goldsmith, Stern & Co., a Firm composed of August Goldsmith, Mortimer C. Foster, Nathan B. Stern, and Arthur Simons, New York, N. Y. Filed June 16, 1916. Serial No. 103,923. (Cl. 33—179.)



A device of the class described comprising a flat frame having a slot extending longitudinally thereof, a band extending transversely of the frame, a strip of flexible material on said frame having one of its ends secured to the band, said strip being curled to form a loop and its other end slidable under said band and secured to an indicator slidably mounted in said slot and a scale of measurements on the frame at one side of said slot.

1,216,673. SEPARATOR FOR SEED-COTTON. JOE N. ELLENBURG, McKinney, Tex., assignor of one-fifth to Joe F. Dulaney, one-fifth to Jim Thompson, one-fifth to George Thompson, and one-fifth to William T. Hartman, McKinney, Tex. Filed Apr. 22, 1915. Serial No. 23,013. (Cl. 13—9.)

1. In a machine of the character described, a plurality of superposed hulling mechanisms, a continuous passageway divided into two channels whereof one conducts the hully cotton to successive hulling mechanisms and whereof the other receives the loose dirt from the cotton, the partition dividing said passageway comprising alternate solid and screen sections, and a plurality of picker rolls arranged in the channel for the cotton and adjacent to a screen section of said partition.



2. In a machine of the character described, a plurality of superposed hulling mechanisms, a continuous passageway divided into two channels whereof one conducts the hully cotton to successive hulling mechanisms and whereof the other receives the loose dirt from the cotton, the partition dividing said passageway comprising alternate solid and screen sections, and a plurality of picker rolls arranged in the channel for the cotton and each adjacent to a screen section of said partition in combination with a flue common to all the huller mechanisms and arranged to receive the cotton discharged from said huller mechanisms.

1,216,674. MANUFACTURE OF MARGARIN. KNUD ERSLEV, Nijmegen, Netherlands. Filed Nov. 13, 1916. Serial No. 130,999. (Cl. 99—13.)

1. In the manufacture of margarin, the addition of an earth alkali salt of a saturated, unoxidized, aliphatic acid, for the purpose of preserving the buttery aroma of the margarin.

2. In the manufacture of margarin, the addition of an earth alkali salt of a saturated, unoxidized, aliphatic acid, in amount not less than one tenth of one per cent. relatively to the fat, for the purpose of preserving the buttery aroma of the margarin.

3. In the manufacture of margarin, the addition of an earth alkali acetate, for the purpose of preserving the buttery aroma of the margarin.

4. In the manufacture of margarin, the addition of an earth alkali acetate, in amount not less than one tenth of one per cent. relatively to the fat, for the purpose of preserving the buttery aroma of the margarin.

1,216,675. MANUFACTURE OF MARGARIN. KNUD ERSLEV, Nijmegen, Netherlands. Filed Nov. 13, 1916. Serial No. 131,000. (Cl. 99—13.)

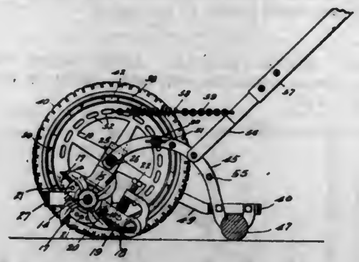
1. In the manufacture of margarin, the addition of an earth alkali salt of a saturated aliphatic oxy acid for the purpose of preserving the buttery aroma of the margarin.

2. In the manufacture of margarin, the addition of an earth alkali salt of a saturated aliphatic oxy acid, in amount not less than one tenth of one per cent. relatively to the fat, for the purpose of preserving the buttery aroma of the margarin.

3. In the manufacture of margarin, the addition of magnesium lactate for the purpose of preserving the buttery aroma of the margarin.

4. In the manufacture of margarin, the addition of magnesium lactate, in amount not less than one tenth of one per cent. relatively to the fat, for the purpose of preserving the buttery aroma of the margarin.

1,216,676. LAWN-MOWER. HERBERT J. FARMER, Richmond, Ind. Filed May 29, 1916. Serial No. 100,447. (Cl. 56—19.)



1. In a lawn mower, a drive wheel comprising a sheet metal web having a peripheral annular flange, a rim channel riveted to said flange, a rubber tire mounted on said rim channel, and an internal gear mounted within said peripheral flange and coöperating with the heads of the rivets which hold the rim channel in place to lock the gear and web against relative turning, in combination with a cutting element having a pinion meshing with said internal gear and an end plate which coöperates with said sheet metal web to hold the internal gear in proper locking relationship to said rivets.

2. In a lawn mower, a drive wheel comprising a sheet metal web having a peripheral annular flange, a rim riveted to said flange, and an internal gear mounted within said peripheral flange and coöperating with the heads of the rivets which hold the rim in place to lock the gear and web against relative turning, in combination with a cutting element having a pinion meshing with said internal gar and an end plate which coöperates with said sheet metal web to hold the internal gear in proper locking relationship to said rivets.

3. In a lawn mower, a drive wheel comprising a sheet metal web having a peripheral annular flange and provided with projections, and an internal gear mounted within said annular flange and provided with portions which coöperate with said projections to lock the web and gear against relative turning, in combination with a cutting element having a pinion meshing with said internal gear and an end plate which coöperates with said sheet metal web to hold the internal gear in proper locking relationship to said projections.

4. In a lawn mower, the combination of a pair of drive wheels, a roller, a frame joining the drive wheels and roller, cutting blades, an operating handle, and means for pivotally attaching said handle to said frame at different points.

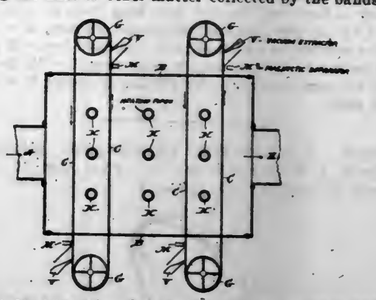
5. In a lawn mower, the combination of a pair of drive wheels, a roller, a frame joining the roller and drive wheels, an operating handle, said frame and handle being provided with coöperating parts by which the handle can be pivotally attached to the frame at different points between the axis of the drive wheels and the axis of the roller, and a cutting element mounted in said frame and adjustable around the axis of the drive wheel.

[Claims 6 to 15 not printed in the Gazette.]

1,216,677. APPARATUS FOR PURIFYING BLAST-FURNACE GASES. MARTIN ERNEST FEILMANN, DONALD BAGLEY, and ARTHUR HERBERT SMITH, London, England. Filed May 1, 1914. Serial No. 835,761. (Cl. 75—30.)

1. In an apparatus for purifying blast furnace gas or other similar gases, the combination of a closed casing having inlet and outlet openings for the gases passing to and from said casing, traveling bands or tapes moving within the casing for collecting dust or other matter from said gases, and means coöperating with the bands outside the casing for removing such collected matter.

2. In an apparatus for purifying blast furnace gas or other similar gases, the combination of a closed casing having inlet and outlet openings for the gases passing to and from said casing, traveling bands or tapes entering said casing through slots in the side thereof, said bands or tapes moving within the casing in a direction approximately at right angles to the flow of gases passing through said casing, and means outside the casing for removing the dust or other matter collected by the bands.



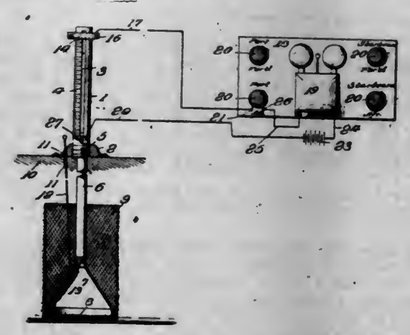
3. In an apparatus for purifying blast furnace gas or other similar gases, the combination of a closed casing having inlet and outlet openings for the gases passing to and from said casing, traveling bands or tapes entering said casing through slots in the side thereof, said bands or tapes moving within the casing in a direction approximately at right angles to the flow of gases passing through said casing, and a vacuum extractor located outside the casing and coöperating with the bands for removing the dust collected thereby.

4. In an apparatus for purifying blast furnace gas or other similar gases, the combination of a closed casing having inlet and outlet openings for the gases passing to and from said casing, traveling bands or tapes entering said casing through slots in the side thereof, said bands or tapes moving within the casing in a direction approximately at right angles to the flow of gases passing through said casing, a vacuum extractor located outside the casing and coöperating with the bands for removing the dust collected thereby, and a magnetic separator for extracting metallic particles from the collecting bands prior to the operation of the vacuum apparatus.

5. In an apparatus for purifying blast furnace gas or other similar gases, the combination of a closed casing having inlet and outlet openings for the gases passing to and from said casing, said casing having slots in its side walls, an endless band passing through said slots and traveling in a direction at right angles to the direction of flow of the gases through the casing, rollers or pulleys journaled outside the said casing over which the bands are adapted to travel for actuating the same, and means for removing the dust or other matter collected by said bands.

[Claim 6 not printed in the Gazette.]

1,216,678. BILGE-WATER ALARM. CHARLES R. FORD, Paducah, Ky. Filed Sept. 22, 1915. Serial No. 51,966. (Cl. 200—34.)

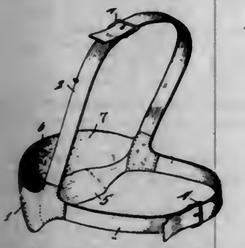


1. In an apparatus for the purpose set forth, the combination of a post, an indicator bar playing in the post, a

float carried by said indicator bar, and a lifter secured to the float and extending upwardly therefrom adjacent the indicator bar.

2. The combination of an indicator post, a collar secured about and insulated from the post and forming a contact member, a float, an indicator bar rising from the float and guided by the post, an indicator finger forming a contact member carried by and insulated from said bar and playing over the post to be carried into contact with the collar on the post, and means for guiding the finger in a rectilinear path.

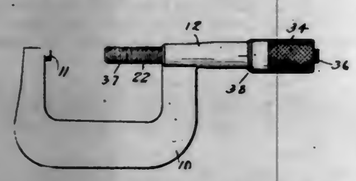
1,216,679. DEVICE FOR PREVENTING SNORING. GEORGE A. FOSTER, Chicago, Ill. Filed Aug. 13, 1915. Serial No. 45,280. (Cl. 128—3.)



1. In a device for preventing snoring, the combination of textile means encircling the chin and covering the mouth of the wearer, an imperforate rubber lining on the mouth covering portion only of said means to firmly hold the lips in closed position, and adjustable straps for securing the device in operative position.

2. In a device for preventing snoring, the combination of a textile chin bandage, a textile mouth bandage, an imperforate rubber lining on said mouth bandage to firmly hold the lips of the wearer in closed position, adjustable straps for holding said bandage in operative position, and loops on said mouth bandage to receive the straps of said chin bandage whereby adjustment of the latter is permitted in one direction with respect to the former.

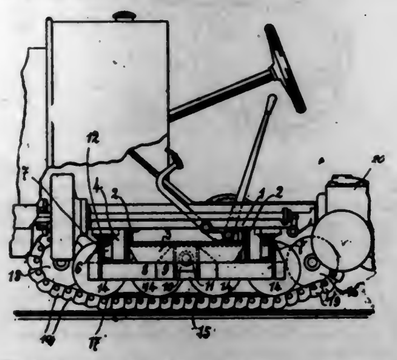
1,216,680. MICROMETER-CALIPER. ANTONIO FRANSOSI, Providence, R. I., assignor of one-half to George A. Sheltra, Providence, R. I. Filed July 19, 1916. Serial No. 110,255. (Cl. 33—164.)



1. A micrometer caliper comprising a frame, a barrel portion connected to said frame, a sleeve fitted in said barrel and provided with a longitudinal keyway, a feed bar slidable endwise in said sleeve, and provided with a key engaging said keyway, a feed screw for operating said bar, said screw member being provided with an enlarged shouldered portion for determining the position of said sleeve in the barrel, a wear take up lock nut for securing said screw to said sleeve against a relative endwise motion, and an operating handle secured to said screw.

2. A micrometer caliper comprising a frame, a barrel portion carried thereon, a sleeve fitted in said barrel and provided with a pair of longitudinal slots and an enlarged shouldered portion for determining the position of the sleeve in the barrel, a feed bar slidable endwise in said sleeve, and provided with a pair of keys engaging said slots, a feed screw for operating said bar, said screw member being provided with an enlarged portion shouldered in said sleeve, a take up lock nut for securing said screw to said sleeve against a relative endwise motion, and an operating handle secured to said screw and bearing on said enlarged shouldered portion on said sleeve.

1,216,681. MOTOR-VEHICLE. JULES GOBIET, Valentigney, France. Filed May 17, 1915. Serial No. 28,608. (Cl. 21—114.)



1. In a motor driven agricultural vehicle, a principal chassis carrying the motor and the various transmission and driving parts in combination with an auxiliary chassis, vertically sliding universal joint means between said two chassis which do not allow of relative longitudinal or lateral displacement, and flexible supports by which one chassis is carried by the other.

2. In a motor driven agricultural vehicle, a principal chassis carrying the motor and the various transmission and driving parts, the cross members being provided with vertical guides and sliding blocks, in combination with an auxiliary chassis, pivots on the cross member of same, vertical guides on the longitudinal members, sliding blocks in the said vertical guides, two subsidiary longitudinal members arranged parallel to and fixed below the longitudinal members of principal chassis, pivots on said members engaging the sliding blocks on the longitudinal members, and spiral springs arranged vertically between the two chassis.

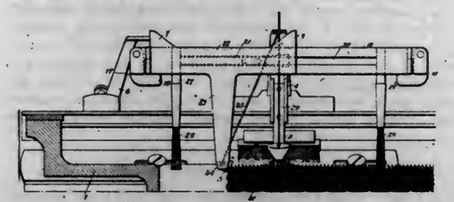
3. In a motor driven agricultural vehicle, a principal chassis carrying the motor and the various transmission and driving parts in combination with an auxiliary chassis, vertically sliding universal joint means between said two chassis which do not allow of relative longitudinal or lateral displacement; flexible supports by which one chassis is carried by the other, pins arranged on each side of the auxiliary frame in parallel or horizontal lines, rollers on said pins and endless driving chains upon the lower side of which the said rollers run while the upper side is supported by the said rollers.

4. In a motor driven agricultural vehicle, a principal chassis carrying the motor and the various transmission and driving parts in combination with an auxiliary chassis, vertically sliding universal joint means between said two chassis which do not allow of relative longitudinal or lateral displacement; flexible supports by which one chassis is carried by the other, pins arranged on each side of the auxiliary frame in parallel or horizontal lines, rollers on said pins, endless driving chains upon the lower side of which the said rollers run while the upper side is supported by the said rollers, and a sprocket wheel carried by the principal chassis for driving the endless chains.

5. In a motor driven agricultural vehicle, a principal chassis carrying the motor and the various transmission and driving parts in combination with an auxiliary chassis, vertically sliding universal joint means between said two chassis which do not allow of relative longitudinal or lateral displacement; flexible supports by which one chassis is carried by the other, pins arranged on each side of the

auxiliary frame in parallel or horizontal lines, rollers on said pins, endless driving chains upon the lower side of which the said rollers run while the upper side is supported by the said rollers, a sprocket wheel carried by the principal chassis for driving the endless chains, pulleys carried by the principal chassis and regulating devices connected therewith for the purpose of keeping the driving chains suitably tight.

1,216,682. KNITTING-MACHINE. HERMAN GOLDNER, New York, N. Y. Filed Dec. 23, 1913. Serial No. 808,367. (Cl. 66—12.)



1. The combination with a knitting machine, of a thread guide carriage, a support mounted thereon, an auxiliary guide mounted on said support and adapted for laying a loose yarn in the knit fabric and brushes mounted on said support to brush the edge of the knitted fabric in a direction parallel to said loose yarn preceding and following the laying in of said loose yarn.

2. The combination with a knitting machine, of a thread guide carriage, a support mounted thereon, a removable track bar carried by said support, means for removably securing the track bar to said support, a reciprocating auxiliary guide slidable on said track bar and adapted to lay a loose yarn in the knit fabric substantially as described and brushes depending from each end of said track bar support to brush the upper edge of the knitted fabric in a direction parallel to said loose yarn.

3. The combination with a knitting machine, of a thread guide carriage, a support mounted thereon, a removable track bar carried by said support, means for removably securing the track bar to said support, a reciprocating auxiliary guide slidable on said track bar and adapted to lay a loose yarn in the knit fabric and vertically disposed brushes mounted on said support and arranged to precede and follow said auxiliary guide and brush the edge of the knitted fabric substantially as described.

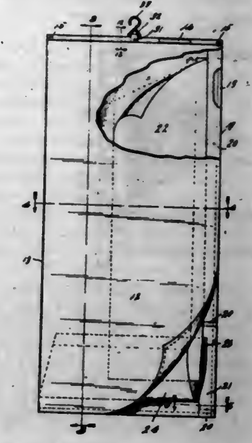
4. The combination with a knitting machine, of a thread guide carriage, a support thereon, a removable track bar on said support, an auxiliary guide member mounted to reciprocate on said track bar and adapted to lay a loose yarn in the knit fabric and a spring latch finger mounted on said auxiliary guide member and adapted to coöperate with notches in said track bar to hold said auxiliary guide at either end of the track bar substantially as described.

1,216,683. METHOD OF IMPLANTING ARTIFICIAL DENTURE-ROOTS. EDWIN J. GREENFIELD, Wichita, Kans. Filed Sept. 13, 1912. Serial No. 720,218. (Cl. 32—7.)



In prosthetic dentistry, that method of artificial denture implantation which consists in forming in the maxilla or mandible bones a pillar and a surrounding cavity and fitting to the said pillar and in the cavity an intersticed denture root and allowing the bone to knit through the interstices of the root.

1,216,684. GARMENT-PROTECTOR. THOMAS HANS, Anderson, Ind., assignor to Mid-West Box Company, Anderson, Ind., a Corporation of Indiana. Filed Aug. 9, 1915. Serial No. 44,409. (Cl. 206—7.)



1. A garment bag consisting of a main body sheet doubled longitudinally and closed at its upper end, a fold-defining stiffening member carried by said body sheet along one of its longitudinal free edges, and fold-retaining members embedded in the body sheet adjacent and transversely to a longitudinal free edge of the body sheet.

2. A garment bag consisting of a main body sheet doubled longitudinally, a fold-defining stiffening member carried by said body sheet along one of its longitudinal free edges, and fold-retaining members embedded in the body sheet adjacent and transversely to a longitudinal free edge of the body sheet.

3. A garment bag comprising a main paper body of two superposed portions, the upper edges of which are permanently closed together by doubling, a stiffening member laid between the portions of the main body at its upper edge between the doubled portions, a loop arranged between the portions of the main body at its upper end, an external hanging member, and fastening means embracing the upper edge of the main body and permanently connecting the external hanging member and the loop.

4. A garment bag comprising a main paper body of two superposed portions, the upper edges of which are permanently closed together, a stiffening member laid between the portions of the main body at its upper edge, a loop arranged between the portions of the main body at its upper end, an external hanging member, and fastening means embracing the upper edge of the main body and permanently connecting the external hanging member and the loop.

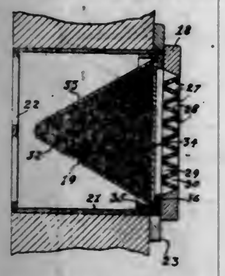
5. A garment bag having a main body of paper comprising two superposed portions, said body being permanently closed at one longitudinal edge, and at the top and bottom, a loop arranged between the portions of the main body at the top, an external hanging member, connections between the external hanging member and the loop of such character that the top has no opening therethrough, and a flap carried by one portion of the main body and having its free edge extended inwardly between the two portions of the main body.

[Claims 6 to 14 not printed in the Gazette.]

1,216,685. VENTILATING APPARATUS. JOSEPH W. HARDING, Brooklyn, N. Y. Filed Aug. 5, 1914. Serial No. 855,108. (Cl. 98—27.)

1. A ventilator for buildings comprising a plurality of slats arranged in zig-zag relation to each other, so as to form a structure having V-shaped air-receiving recesses

on opposite sides thereof, said slats having apertures therein connecting a plurality of recesses on the outside of the structure with a recess on the inside thereof, whereby the air passing through the slats will combine within the inner recesses and intermingle without creating draft.

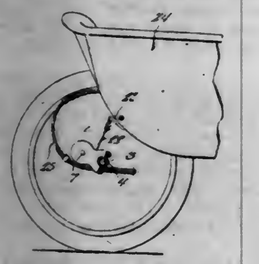


2. A ventilator comprising a plurality of slats arranged in zig-zag relation to each other and set rigidly relatively to each other so as to form a structure having V-shaped, air receiving recesses on opposite sides thereof, said slats having apertures therein connecting a plurality of recesses on the outside of the structure with a recess on the inside thereof, whereby the air passing through the slats will combine with the inner recesses and intermingle without creating draft.

3. A ventilator comprising a supporting frame; a supplemental frame hinged to the supporting frame, said supplemental frame having a plurality of slats arranged in zig-zag relation to each other so as to form a structure having V-shaped, air receiving recesses on opposite sides thereof, said slats having apertures therein connecting a plurality of recesses on the outside of the structure with a recess on the inside thereof, whereby the air passing through the slats will combine within the inner recesses and intermingle without creating draft.

4. A ventilator comprising a plurality of slats arranged in zig-zag relation and each of said slats having apertures extending therethrough at an angle to the surface of the slats, the apertures in one of the slats being arranged respectively opposite the apertures in an adjacent slat, the zig-zagged relation of the slats forming recesses into which air enters on one side of the ventilator and the arrangement of the apertures causing streams of air to intermingle and destroy each other within the recesses on the other side of the ventilator.

1,216,686. SHOCK-ABSORBER. WILLIAM S. HARLEY, Milwaukee, Wis., assignor to The Harley-Davidson Motor Co., Milwaukee, Wis. Filed Aug. 24, 1915. Serial No. 47,037. (Cl. 21—105.)

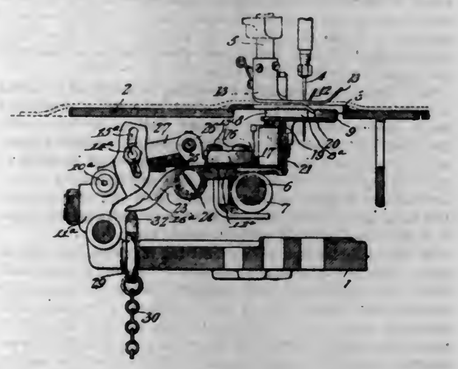


1. A shock absorber comprising a plate, means for attaching the plate to an axle of a vehicle, a spindle projecting from the plate, a sleeve loose on the spindle, a housing loose on the sleeve, frictional braking plates fast on the sleeve for retarding rotary movement of the housing in one direction, a spring connection between the housing and the plate, and a strap connection between the housing and the body of a vehicle.

2. A shock absorber comprising a plate, means for attaching the plate to a vehicle member, a spindle projecting from the plate, a sleeve loose on the spindle and carrying a ratchet wheel, a housing loose on the sleeve, a pawl carried by the plate and engaging the ratchet wheel, a spring coiled about the sleeve and having its ends connected to the plate and housing, braking means fast on the sleeve and frictionally engaging the housing, and a strap connection between the housing and a vehicle member movable relative to the first vehicle member.

3. A shock absorber comprising a body plate, means for attaching the plate to a vehicle member, a spindle projecting from the plate, a housing including an annular wall portion coactig with the said plate and a side wall portion having a hub journaled on the spindle, friction plates splined on the spindle and engageable with the side wall of the housing, spring washers on the spindle and engaging said friction plates, a spring connecting the body plate and housing and a strap connection between the housing and a second vehicle member movable relative to the first member.

1,216,687. SEWING-MACHINE. JOHN HAYES, Amsterdam, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 7, 1910. Serial No. 585,790. (Cl. 112—8.)



1. A fabric-feeding mechanism for sewing machines, including a main feed device, an auxiliary feed device carried thereby with means for imparting to the latter differential movement with respect to the former, and means under the control of the operator for moving said auxiliary device from operative to inoperative position while the machine is in operation.

2. A fabric feeding mechanism for sewing machines, comprising a main feed bar and feed dog carried thereby, an auxiliary feed bar, and means for reciprocating both feed bars, a feed dog vertically movable on the auxiliary feed bar, and means under the control of the operator for moving said feed dog from operative to inoperative position without stopping or retarding the action of the machine.

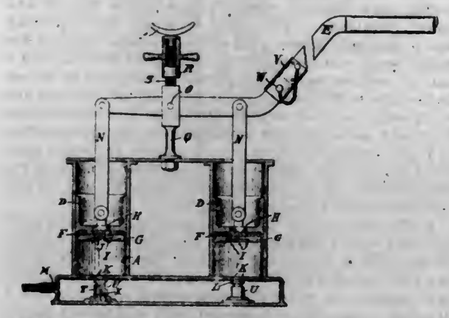
3. A fabric feeding mechanism for sewing machines, comprising a main feed bar and feed dog carried thereby, an auxiliary feed dog bar and a feed dog, spring-supported thereon in normally operative position, and means under the control of the operator for moving said feed dog from operative to inoperative position, without stopping or retarding the action of the machine.

4. A fabric feeding mechanism for sewing machines, comprising feeding devices and means for moving them differentially, one of said feeding devices including a carrier, a feed dog thereon, said feed dog being vertically movable on its carrier and normally held in position to effectively engage the fabric, means under the control of the operator to impart said vertical movement thereto, to withdraw it from effective engagement with the fabric without varying its stroke and without stopping or retarding the action of the machine.

5. A fabric feeding mechanism for sewing machines, comprising feeding devices and means for moving them differentially, one of said feeding devices including a vertically movable feed dog with a spring for keeping it normally raised, and means under the control of the operator to lower it against the pressure of the spring without stopping or retarding the action of the machine.

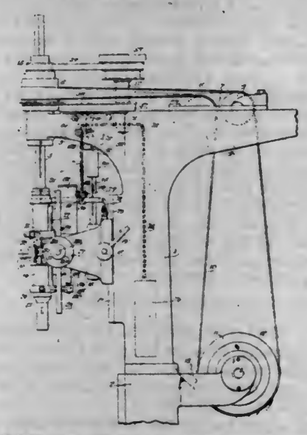
[Claims 6 to 15 not printed in the Gazette.]

1,216,688. TIRE-INFLATING PUMP. JOSEPH HEELEY, Wigan, England. Filed Apr. 13, 1915. Serial No. 21,014. (Cl. 230—27.)



In a portable tire inflating pump, the combination with two compression cylinders open at the top, a casing which serves the double purpose of an air receiver and base plate upon which the said cylinders are mounted, and a working piston in each cylinder, of a standard supported between the cylinders at the top, a hand rocking lever pivoted to the top of the standard, connecting rods coupling the rocking lever to the pistons at diametrically opposite sides to the pivot, and a lifting jack fitted to the top of the standard substantially as described.

1,216,689. FEED MECHANISM FOR DRILLING-MACHINES. JOHN G. HEX, Cincinnati, Ohio, assignor to Cincinnati Pulley Machinery Company, Cincinnati, Ohio, a Corporation. Filed July 13, 1914. Serial No. 850,751. (Cl. 77—33.)



1. In a drilling machine, the combination with the drill spindle, spindle-sleeve and guiding head therefor, of power-operated feed mechanism mounted on said head for effecting the working strokes of said spindle, a controlling clutch for said feed mechanism, a shifter for said clutch and trips on said sleeve for actuating said clutch shifter at the ends of working and return strokes of the spindle, one of said trips being adjustable to vary the working stroke of the spindle, and the other trip being shiftable into and out of working position, substantially as described.

2. In a drilling machine, the combination with the drill spindle, supporting sleeve therefor and the feed shaft geared to said sleeve, of drive gearing for said shaft, a clutch for throwing said gearing into and out of operation, a shifter for said clutch, an upper stop-collar adjustably mounted on said sleeve, a trip pin for said clutch shifter adjustably threaded through said stop-collar, a lower stop-collar on said sleeve, and a trip pin for said clutch shifter adjustable into and out of operative position on said lower stop-collar substantially as described.

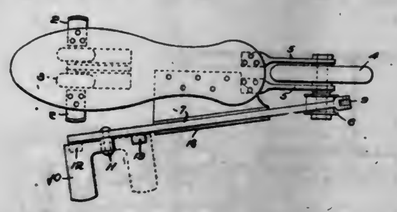
3. In a drilling machine, the combination with a frame, of a guiding head on said frame, a drill-supporting sleeve vertically guided in said head, a drill spindle rotatably mounted in said sleeve, a horizontal feed shaft journaled in said guiding head, a rack on said supporting sleeve, a pinion on said feed shaft engaging said rack, a drive gear loosely mounted on said feed shaft, a clutch on said shaft for connecting said drive gear thereto, a clutch shifter mounted on said guiding head adjacent said sleeve and trips adjustably mounted on said sleeve for actuating said clutch shifter at the ends of the working and return strokes of said sleeve, substantially as described.

4. In a drilling machine, the combination with a frame, of a vertically movable support on said frame, a drill spindle rotatably mounted in said support, a feed shaft geared to said support, drive gearing for said shaft, a clutch for throwing said gearing into and out of operation, adjustable trips connected to said spindle support for shifting said clutch into and out of operation at the ends of the return and working strokes of said support and said spindle, a counter-balance for effecting the return stroke of said support and said spindle and a dashpot controlling the speed of the return movement of said parts, substantially as described.

5. In a drilling machine, the combination with a frame, of a vertically shiftable support on said frame, a drill spindle rotatably mounted in said support, a feed shaft journaled in said frame and geared to said support, drive gearing for said shaft, a clutch for throwing said gearing into and out of operation, adjustable trips connected to said spindle support for shifting said clutch at the ends of the working and return strokes of said support and said spindle, an operating handle loosely mounted on said feed shaft, and means for connecting and disconnecting said handle and said feed shaft, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

1,216,690. ROLLER-SKATE. FREDERICK WM. HILL, Boston, Mass. Filed June 21, 1916. Serial No. 105,034. (Cl. 46—51.)



1. A power skate comprising in combination foot-supporting means, and skate-driving means whereby the skate may be driven by application of power through the other foot.

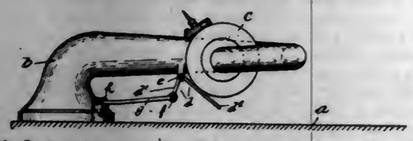
2. A power skate comprising foot-supporting means resting upon wheels and driving means for positively rotating one or more of said wheels and including a lever adapted to be operated by the other foot of the wearer.

3. A power skate comprising foot-supporting means and skate-driving mechanism provided with means for changing the purchase or power leverage with which the driving mechanism is operated.

4. In a power skate, foot-supporting means, skate-driving means including a jointed lever constructed to permit the user to change the distance between the point at which the power is applied and the fulcrum of the lever.

5. A power skate comprising in combination the foot rest 1, the driving wheel 4, the lever 7 connected thereto and fulcrumed on said foot support whereby the skate may be driven by the up-and-down motion of the lever 7.

1,216,691. TALKING-MACHINE ATTACHMENT. WILLIAM M. HILLIARD, Haverhill, Mass. Filed Sept. 29, 1916. Serial No. 122,791. (Cl. 274—14.)

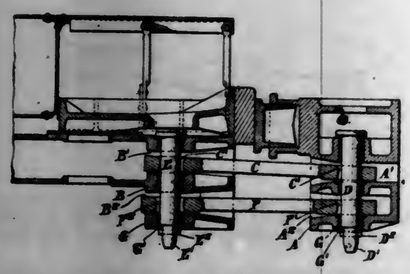


1. In a talking machine, the combination of a sound-box arm mounted to swing horizontally to and from its initial position, a sound box mounted on said arm to swing vertically and to pass the vertical when moved from its operative to its inoperative position, and means, actuated by the gravity of the sound box as it moves to its inoperative position, to swing said arm to its initial position.

2. In a talking machine, the combination of a sound-box arm mounted to swing horizontally to and from its initial position, a sound box mounted on said arm to swing vertically and to pass the vertical when moved from its operative to its inoperative position, a link stationarily pivoted at one end in a position eccentric to the axis of said arm, a lever pivoted on said arm and arranged to engage the opposite end of said link and to be engaged by the sound box when moved past the vertical to its inoperative position, to apply its gravity action therethrough to the pivot of said link and cause swinging movement of said arm to its initial position.

3. In a talking machine, the combination of a support, a sound-box arm mounted thereon to swing horizontally to and from its initial position, a sound box mounted on said arm to swing vertically and to pass the vertical when moved from its operative to its inoperative position, an angular-shaped lever pivotally mounted on said arm, and having one of its arms connected to said support in a position eccentric to the axis of said sound-box arm and the other of its arms arranged to be engaged by the sound box as it moves downwardly to its inoperative position and to be swung by the weight of the sound box to actuate the sound-box arm toward its initial position.

1,216,692. RAILWAY-VEHICLE COUPLING. HARRY A. HOKE, Altoona, Pa. Filed Sept. 7, 1916. Serial No. 118,797. (Cl. 213—42.)



1. The combination with two railway vehicles to be connected, of a draw bar pivotally connected at its ends thereto, and a supplemental safety connection also pivotally connected at its ends thereto, with the axis of its pivotal connection to each vehicle substantially coincident with the axis of the pivotal connection of the draw bar to said vehicle, the parts being so relatively arranged that the draw bar connection, so long as it is operative, forms the load transmitting connection between said vehicles.

2. The combination with two railway vehicles to be connected, of a draw bar, draw bar pins pivotally connecting the ends of the draw bar to said vehicles, and a supplemental safety connection connected by said draw bar pins to said vehicles with provision for lost motion whereby said draw bar forms the load transmitting connection between said vehicles so long as the latter are operatively connected by said draw bar.

3. The combination with two railway vehicles to be connected, each provided with a vertical draw bar pin and upper, intermediate and lower apertured parts through which said pin passes and which provides bearings for upper, lower and intermediate portions of the pin, and a pair of coupling parts each pivotally connected at its opposite ends to the two draw bar pins, one of said coupling parts being received between the upper and intermediate apertured parts and the other between the intermediate and lower apertured parts of each vehicle, the lower apertured part of each vehicle having provisions engaging the lower portion of the corresponding draw bar pin to prevent downward movement of the pin.

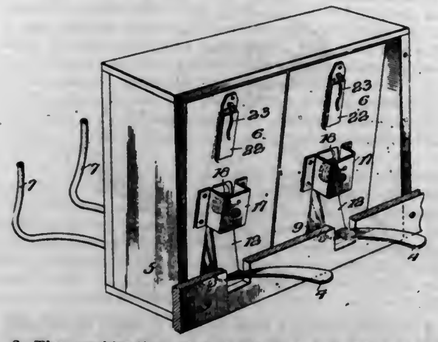
4. The combination with an engine having a foot plate provided with a drawbar pocket and beneath the drawbar pocket with a pocket for receiving the end of a safety bar and formed with alined passages through the walls of said pockets for a drawbar pin, and a tender having a drawbar pocket member formed with a drawbar pocket proper and beneath the latter with a pocket to receive the end of a safety bar, and formed also with alined passages through the walls of said pockets for a drawbar pin, of a drawbar having its ends received in the drawbar pockets of said foot plate and member and having apertures in its ends to receive the drawbar pins, and a safety bar having its ends received in the lower pockets of said foot plate and drawbar pocket member, and having apertures in its ends to receive said drawbar pins, and drawbar pins mounted in said passages and passing through said apertures, the apertures in said bars being so relatively arranged as to prevent the safety bar from being put under tension so long as the drawbar forms an operative connection between the engine and tender.

5. The combination with an engine having a foot plate provided with a drawbar pocket and beneath the drawbar pocket with a pocket for receiving the end of a safety bar and formed with alined passages through the walls of said pockets for a drawbar pin, and a tender having a drawbar pocket member formed with a drawbar pocket proper and beneath the latter with a pocket to receive the end of a safety bar, and formed also with alined passages through the walls of said pockets for a drawbar pin, of a drawbar having its ends received in the drawbar pockets of said foot plate and member and having apertures in its ends to receive the drawbar pins, and a safety bar having its ends received in the lower pockets of said foot plate and drawbar pocket member, and having apertures in its ends to receive said drawbar pins, and drawbar pins mounted in said passages and passing through said apertures, and means for retaining the lower portions of the drawbar pins in case of rupture of upper portions of said pins.

1,216,693. BELLOWS FOR PNEUMATIC LEAF-TURNERS. JARRET C. HOLCOM, Sulphur Springs, Tex. Original application filed Sept. 22, 1915, Serial No. 51,916. Divided and this application filed Jan. 26, 1916. Serial No. 74,382. (Cl. 230—2.)

1. In an apparatus for the purpose set forth, the combination of a bellows, a support for the same, a pedal pivoted upon the bellows and connected therewith to actuate the same, and means acting on the pedal to yieldably hold the bellows in a collapsed condition.

2. In a leaf turning apparatus, the combination of a support, a bellows mounted therein, a pedal, yieldable connections between the pedal and the bellows, and means on the support and bearing on the pedal to yieldably hold the bellows in a collapsed condition.



3. The combination of a support, a bellows mounted therein, a pedal mounted within the support and projecting through the same and provided with an upstanding arm bearing upon the bellows, a bracket secured upon the bellows, a coil spring fitted within said bracket and bearing upon the upstanding portion of the pedal, and a spring secured to the support and bearing upon said bracket.

1,216,694. GRAVITY-RAILWAY DEVICE. CHARLES FRANCIS JENKINS, Washington, D. C. Filed Dec. 16, 1914. Serial No. 877,591. (Cl. 104—113.)



1. The method of transporting loaded cars from a higher to a lower level and returning unloaded cars, which consists in providing a descending railway for loaded cars, an ascending railway for returning cars, a storage battery, a trolley circuit following the descending and ascending railways and including the battery, a series of independent trolley cars each provided with a motor generator in said circuit, and allowing the loaded cars to descend while their motor generators are in unbroken circuit through the battery; whereby energy developed by the descending loaded cars may be used to return cars to the high point without extraneous power, whether or not cars are at the moment descending.

2. In gravity railway devices, the combination with a track loop through points of maximum and minimum elevation, of a storage battery, an electrical conductor following the loop, unconnected with extraneous source of power, and forming a circuit through the battery, and a series of car units each provided with an automatic motor generator and unconnected with its companions and each normally in the electric circuit; whereby cars are caused to ascend when desired, solely by energy developed by descending cars.

1,216,695. METHOD OF TAKING MOVING PICTURES. ROBERT JOHN, New York, N. Y. Filed Feb. 2, 1915. Serial No. 5,605. (Cl. 88—16.)

1. In a method of making moving pictures, the steps which comprise treating a surface having an impression thereon to render said impression invisible to the camera but visible to the eye, tracing the lines of said impression and simultaneously rendering the lines visible to the camera, and taking successive photographs of the surface during the tracing movements.

2. In a method of making moving pictures, the steps which comprise utilizing a surface having an impression thereon visible to the camera, treating said surface to render said impression invisible to the camera but visible to the eye, tracing the lines of the impression on said surface while simultaneously rendering them visible to the camera, and taking successive photographs of the surface during the tracing movements.



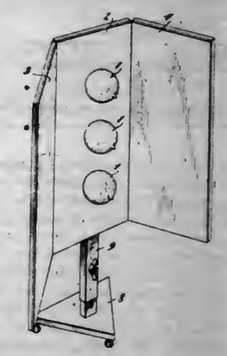
3. In a method of making moving pictures, the steps which comprise utilizing a surface having an impression thereon visible to the camera, chemically treating said surface to render said impression invisible to the camera, but visible to the eye, tracing the lines of the impression on said surface with a chemical solution to render them visible to the camera, and taking successive photographs of the surface during the tracing movements.

4. In a method of making moving pictures, the steps which comprise subjecting a photographic print of any desired subject to a treatment to render the lines thereof invisible to the camera but visible to the eye, tracing the lines of the image on said print and simultaneously rendering the lines visible to the camera, and taking successive photographs of the print during the tracing movements.

5. In a method of making moving pictures, the steps which comprise bleaching a photographic print of any desired subject to render the image thereon invisible to a camera but visible to the eye, tracing the lines of the image and simultaneously redeveloping them, and taking successive photographs of the print during the tracing movements.

[Claims 6 to 8 not printed in the Gazette.]

1,216,696. PHOTOGRAPHIC LIGHTING. ROBERT JOHN, New York, N. Y., assignor, by mesne assignments, to Iconochrome Company of America, Inc., a Corporation of New York. Filed Apr. 26, 1915. Serial No. 24,034. (Cl. 240—1.)



1. An apparatus for producing a light for illuminating objects during a photographic process, comprising an illuminant having rays present in determinable amounts and of different actinic activities, a portion of the transmitted light from said illuminant striking the object to be photographed, and means for reflecting from said illuminant selected rays and for projecting them upon the object to be photographed so that they combine with the rays of transmitted light, said reflected light consisting only of such rays from the illuminant as will cause the different rays in the combined transmitted and reflected light to be present in amounts substantially inversely proportional to their respective actinic activities.

2. An apparatus for producing a light for illuminating objects during photographic processes, comprising an

illuminant composed of different color rays present in determinable amounts and having different actinic activities, a portion of the light transmitted from said illuminant striking the object to be photographed, and a reflector associated with said illuminant for reflecting selected color rays from said illuminant upon the object to be photographed, said reflector having a colored surface which absorbs such of the color rays from the illuminant as will cause the different color rays in the combined transmitted and reflected light to be present in amounts substantially inversely proportional to their respective actinic activities.

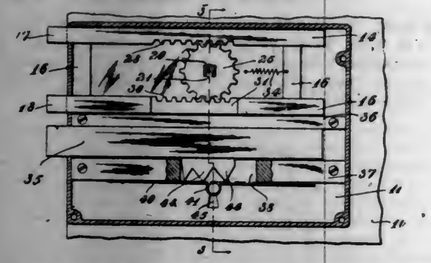
3. An apparatus for producing a light for illuminating objects for photographic processes, comprising an illuminant, having a portion of the transmitted light composed of blue, red and green rays striking the object to be photographed, and means for absorbing the blue rays and for reflecting upon the object a part of the green rays and all of the red rays from another portion of the light from said illuminant.

4. An apparatus for producing a light for illuminating objects during photographic processes, comprising a nitrogen lamp, as a source of illumination, and a color reflector therefor having a surface of a color in which yellow and red predominate, yellow being present in a marked excess to that of red.

5. An apparatus for producing a light for illuminating objects during photographic processes, comprising an illuminant, means for varying the intensity thereof, and a color reflector associated with said illuminant, said reflector having a reflecting surface capable of absorbing the actinic rays from the illuminant which have a strong action upon a light-sensitive medium and of reflecting the actinic rays which have a weak action upon such medium.

[Claims 6 to 13 not printed in the Gazette.]

1,216,697. LOCK. WASYL KAMIANCZYN, Duquesne, and ILKO WASYLOW, Wendel, Pa. Filed July 26, 1916. Serial No. 111,335. (Cl. 70—42.)



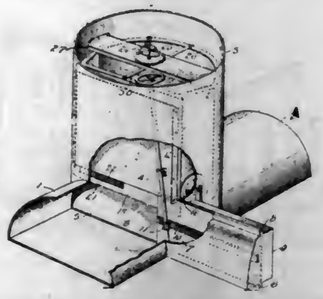
1. In a lock of the type described, a pair of sliding bolts having rack teeth upon their adjacent surfaces, one of said bolts being recessed along said teeth, a pinion normally engaging both of said racks, means for moving said pinion laterally into the mentioned recess and means for rotating said pinion whereby said bolts may be actuated.

2. In a lock of the type described, the combination with a casing, a pair of slide bolts having rigid engaging elements therebetween, one of said bolts being recessed centrally, racks formed on the inner face of said bolts, a pinion normally engaging said racks, a knob operable from the exterior of the door, a bar fixed in said knob whereby rotary motion may be communicated to said pinion, and means for moving said pinion laterally into or out of engagement with the rack on the recessed bolt.

1,216,698. AUTOMATIC HEAD-GATE. KARL F. KEELER, Provo, Utah, assignor to Keeler Automatic Headgate Company, Provo, Utah, a Corporation of Utah. Filed Apr. 5, 1916. Serial No. 89,012. (Cl. 61—46.)

1. In a headgate, the combination of a water box having a headgate attached thereto, and suspending means supported at a single point and attached to said box approximately in line with the center of gravity thereof.

2. In a headgate, the combination of a water box having a headgate attached thereto and provided with a receiving opening at the side, a stationary support, a single spring mounted upon said support, and suspending means connected at one end to said spring and at the other end to said water box, approximately in alinement with the center of gravity of the latter.



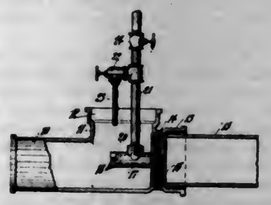
3. In combination, a fluid conduit, a casing rising therefrom, a water box vertically movable in said casing, said box having a headgate attached thereto and a receiving opening in the side, and a coiled spring having its axis approximately in alinement with the center of gravity of said water box and its attached headgate, one end of said spring being fastened to said casing, and connections between the water box and the opposite end of the spring.

4. In a headgate, a stationary support, a single spiral spring seated upon said support, and a headgate suspended from said spring, the point of attachment of the gate to the spring being in alinement, vertically with the center of gravity of the gate.

5. In combination, a conduit having a casing rising therefrom, a water box vertically movable in said casing, said box having a headgate attached thereto and a receiving opening in the side, a single spring seated upon said casing, said spring being in the form of a pyramidal spiral with its larger end fastened to said casing, and a connecting rod attached to the smaller end of the spring and attached to the water box, said rod being coincident with a vertical line fastened to the center of gravity of the water box and its attached headgate.

[Claims 6 to 15 not printed in the Gazette.]

1,216,699. TESTING DEVICE FOR WATER SYSTEMS. EDWARD KENNEDY, New York, N. Y. Filed Mar. 22, 1916. Serial No. 85,778. (Cl. 137—77.)



1. An improved plumbing fitting, comprising an upright pipe portion, a pipe portion extending horizontally therefrom in one direction, and having the bottom interior surface thereof extending in a straight uninterrupted line to the outlet end thereof, and a pipe portion extending horizontally therefrom in another direction and at a higher lever than said first mentioned horizontal pipe portion.

2. An improved plumbing fitting, comprising an upright pipe portion, a pipe portion extending beneath said upright pipe portion and horizontally therefrom in one direction, and a pipe portion extending horizontally from said first mentioned horizontal pipe portion, and in another direction from said upright pipe portion, the bottom interior surface of said first mentioned horizontal pipe portion extending in a straight uninterrupted line to the outlet end thereof.

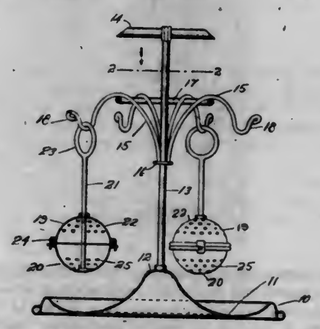
3. In a testing device, the combination of a horizontal T-fitting, comprising an upright pipe portion, a pipe portion extending horizontally therefrom in one direction, and having the bottom interior surface thereof extending in a straight uninterrupted line to the outlet end thereof, and a pipe portion extending horizontally therefrom in another direction, and at a higher level than said first mentioned horizontal pipe portion, and testing means adapted to be inserted into said last mentioned horizontal pipe portion through said upright portion, said last mentioned horizontal pipe portion adapted to receive adjacent lengths of pipe of equal diameter to said first mentioned horizontal pipe portion.

4. In a testing fitting, the combination of a horizontal T-fitting, comprising an upright pipe portion, a pipe portion extending beneath said upright pipe portion and horizontally therefrom in one direction, and a pipe portion extending horizontally from said first mentioned horizontal pipe portion and at a higher level than said first mentioned pipe portion, a screw threaded portion in said last mentioned pipe portion, the bottom interior surface of said first mentioned horizontal pipe portion extending in a straight uninterrupted line to the outlet end thereof, testing means adapted to be inserted into said last mentioned horizontal pipe portion through said upright portion, and to be engaged with said screw threaded portion, said last mentioned pipe portion adapted to receive an adjacent length of pipe, and a permanent ring having a screw threaded exterior and a smooth interior surface, and adapted to be engaged with said screw threads of said last mentioned pipe portion upon removal of said testing means therefrom, and adapted to form a continuously smooth interior surface with the interior surface of said adjacent length of pipe.

5. In a testing device, the combination of a horizontal T-fitting, comprising an upright pipe portion, a pipe portion extending beneath said upright pipe portion and horizontally therefrom in one direction, and a pipe portion extending horizontally from said first mentioned horizontal pipe portion and at a higher level than said first mentioned pipe portion, the bottom interior surface of said first mentioned horizontal pipe portion extending in a straight uninterrupted line to the outlet end thereof, testing means adapted to be inserted into said last mentioned horizontal pipe portion through said upright portion, and comprising a bushing, a horizontal pipe portion extending outwardly therefrom, closed at its outer end and provided with tapping means intermediately said bushing and said closed end.

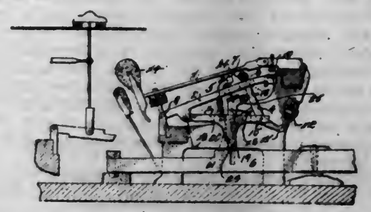
[Claims 6 and 7 not printed in the Gazette.]

1,216,700. TEA-BALL TREE. WILLIAM F. KILKENNY, Providence, R. I., assignor to Strathmore Company, Providence, R. I., a Corporation of Rhode Island. Filed Aug. 10, 1914. Serial No. 856,111. (Cl. 65—53.)



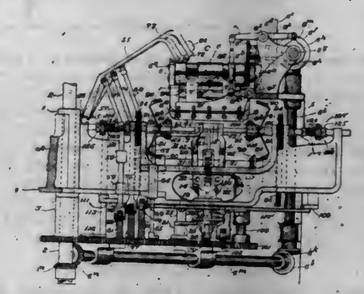
In a tea ball supporting device, a base shaped to form a drip trough, an upright rod secured to said base and provided at its upper end with a handle, and a plurality of arms having their inner ends arranged about said rod and secured thereto, said arms radiating from said rod, and terminating in hooks for supporting tea balls directly above said trough, whereby drippings therefrom will be collected in said trough, said trough being provided with a central upstanding tapering boss to deflect drippings into the trough.

1,216,701. GRAND-PIANO ACTION. CARL KNOCH, New York, N. Y. Filed May 31, 1916. Serial No. 100,933. (Cl. 84—26.)



A grand-piano-action which includes hammer-actuating mechanism comprising a rail, a repetition lever pivoted thereto, a support underneath the lever and pivoted to the latter and having a downward projection located to rest on the capstan screw of the key and a spring between said lever and support bearing directly against both these parts and tending to separate them.

1,216,702. WRAPPING-MACHINE. EUSTACE R. KNOTT, Sharon, Mass. Filed Oct. 27, 1911. Serial No. 657,060. (Cl. 93—5.)



1. In a wrapping machine, the combination with wrapper-supply and article-supply stations, and a traveling carrier having a receiver which passes said stations and receives therefrom a wrapper and an article to be inwrapped therein, of means for bending said wrapper about said article, wrapper-end twisting devices traveling with said carrier and means producing relative rotation between the associated article and wrapper and the said wrapper-end twisting devices to thereby secure the wrapper in closed condition about the article.

2. In a wrapping machine, the combination with wrapper-supply and article-supply stations, and a traveling carrier having a receiver which passes said stations and receives therefrom a wrapper and an article, of means for bending said wrapper about said article, and means by which the opposite projecting wrapper-ends are twisted while the inwrapped article is being carried along by the movement of the carrier.

3. In a wrapping machine, the combination with wrapper-supply and article-supply stations, and a traveling carrier having a receiver which passes said stations and receives therefrom a wrapper and an article, of means for infolding said wrapper about said article, and twisters traveling with the carrier and by which the opposite projecting wrapper-ends are twisted while the inwrapped

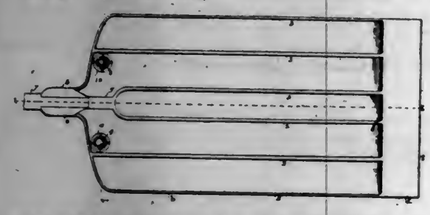
article is being carried along by the movement of the carrier.

4. In a wrapping machine, the combination with wrapper-supply and article-supply stations, and a traveling carrier having a receiver which passes said stations and receives therefrom a wrapper and an article to be inwrapped therein, of devices for bending the wrapper into U-shape about the article and causing one side-portion thereof to overlie the other, and means by which the projecting wrapper-ends are twisted while the inwrapped article is being carried along by the movement of the carrier.

5. In a wrapping machine, the combination with wrapper supply and article-supply stations, and a traveling carrier having a receiver which receives from said stations a wrapper and an article to be inwrapped therein, of devices for bending the wrapper into U-shape about the article and causing one side-portion thereof to overlie the other, and twisters traveling with the carrier and by which the projecting wrapper-ends are twisted while the inwrapped article is being carried along by the movement of the carrier.

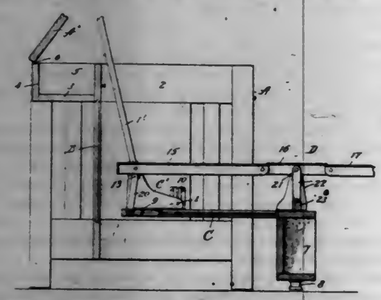
[Claims 6 to 45 not printed in the Gazette.]

1,216,703. BAKER'S PEEL. GEORGE J. KRAUSHAAR, Cleveland, Ohio. Filed Sept. 8, 1913. Serial No. 788,497. (Cl. 107—67.)



As a new article of manufacture, a baker's peel having a blade cast in a single piece of metal and provided with a flat top from end to end and a spider formation at its rear and bottom constructed to affix a handle thereto and having a series of longitudinally disposed ribs at intervals between its sides tapered from the rear toward its front and the front portion of the peel flat on both sides in advance of said ribs, and said blade having sockets at its rear and sides and caster balls in said sockets projecting beneath said ribs and adapted to provide a universal movement for said blade over the surface of the oven.

1,216,704. TABLE-BED. PETER E. KROEHLER, Naperville, Ill. Original application filed Oct. 18, 1913, Serial No. 795,875. Divided and this application filed Jan. 31, 1914. Serial No. 815,750. (Cl. 5—17.)



1. The combination with a table having a movable top, of a bed-housing disposed beneath said top and having a downwardly swinging-section, a folding-bed carried by said swinging-section and comprising a plurality of foldably related bed-sections and connections between the swinging housing-section and table-top, serving to automatically actuate the table-top.

2. The combination with a table having a frame and a movable top, of a bed-housing disposed beneath said top and having a swinging-section connected with the table-frame some distance above the lower end of the swinging-section, links connecting the lower end of the swinging-section with the table-top, and a folding-bed carried by said swinging-section and comprising a plurality of foldably related bed-sections.

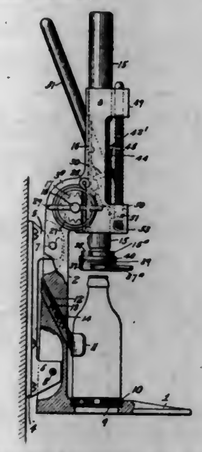
3. The combination with a table having a movable top, of a bed-housing disposed beneath said top and comprising a stationary rear panel and a swinging front panel, and a folding-bed mounted directly on the inner surface of said swinging panel and comprising a plurality of foldably related bed-sections.

4. The combination with a table having a frame and a movable top, of a bed-housing disposed beneath said top and having a swinging-section connected above its lower end with the ends of the table-frame, and a folding-bed comprising a rear main-section movably mounted on the swinging housing-section, a rear spacing section pivotally mounted on the upper portion of the swinging housing-section and connected with the rear main-section, another main-section pivotally connected with said spacing section, and folding legs connected with said second-named main section.

5. The combination with a table provided with a top, of a housing-section disposed beneath said top and adapted to swing from a standing position to a substantially horizontal position, and a folding-bed comprising a rear main-section movable on said swinging housing-section, a rear spacing-section pivotally mounted on the upper portion of said housing-section, an intermediate main-section pivotally connected with said spacing-section, folding legs connected with said intermediate main-section, an outer spacing-section foldably connected with the intermediate main-section, an outer main-section pivotally connected with the front spacing-section, and legs foldably connected with the outer main-section.

[Claims 6 to 8 not printed in the Gazette.]

1,216,705. CAPPING APPARATUS. CONSTANT J. KRYZANOWSKY, Baltimore, Md., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Jan. 8, 1915. Serial No. 1,083. (Cl. 113—2.)



1. In a bottle-capping machine, the combination, with a capping plunger, and means for reciprocating said plunger, of a presser-foot arranged to engage a crown to retain it on a bottle, a ratchet-bar, and a pawl-lever connected to the presser-foot and having a pawl arranged to engage the ratchet-bar.

2. In a bottle-capping machine, the combination with a capping-plunger, and means for reciprocating said plunger, of a presser-foot arranged to engage a crown to retain it on a bottle, a ratchet-bar, a pawl-lever connected to the presser-foot and having a pawl arranged to engage the ratchet-bar, and a spring normally tending to press the pawl toward the ratchet-bar.

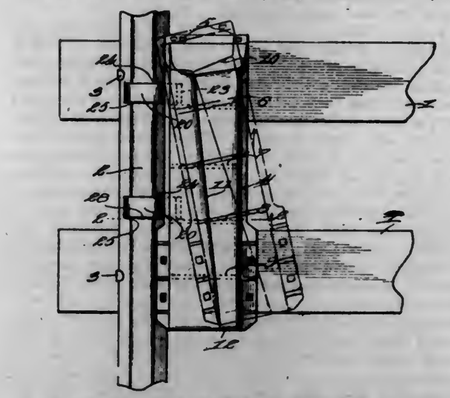
3. In a bottle-capping machine, the combination with a capping-plunger and means for reciprocating the plunger, of a presser-foot arranged to engage a crown to retain it on a bottle, a ratchet-bar, a pawl-lever connected to the presser-foot and provided with a pawl arranged to engage the ratchet-bar, an abutment device movable with the plunger and arranged to move the pawl away from the ratchet-bar, and a spring arranged to press the pawl toward the ratchet-bar.

4. In a capping machine, the combination, with a hollow plunger having an opening, and means for reciprocating said plunger, of a presser-foot arranged to engage a crown to retain it on a bottle, a ratchet-bar outside the plunger, and a pawl-lever within the plunger and connected to the presser-foot, said pawl-lever having a pawl extending through the opening in the plunger and arranged to engage the ratchet-bar.

5. In a capping machine, the combination, with a hollow plunger having an opening, means for reciprocating said plunger, and a ratchet-bar stationary with relation to the plunger, of a guide device carried by said plunger, a presser-foot arranged to engage a crown to retain it on a bottle, and a pawl-lever within the plunger and connected to said presser-foot, said pawl-lever being guided by said guide device, said pawl-lever having a pawl extending through the opening in the plunger and arranged to engage the ratchet-bar.

[Claims 6 to 18 not printed in the Gazette.]

1,216,706. RERAILING-FROG HOLDER. MATHEW THOMAS LARKIN, Spokane, Wash. Filed Apr. 13, 1916. Serial No. 90,987. (Cl. 104—163.)



1. In combination, a railway rail, a rerailing frog, and a plurality of unitary means connected with said rail and frog in a manner capable of holding the latter in re-railing relation to said rail independently of any engagement of said frog with the road bed or with said rail, substantially as described.

2. In combination, a railway rail, a rerailing frog, having angularly disposed portions, and a plurality of unitary means grippingly engaging said rail and abuttingly engaging said angularly disposed portions of said frog in a manner capable of holding the latter in substantially parallel relation to the rail independently of any engagement of said frog with the road bed or with the rail, substantially as described.

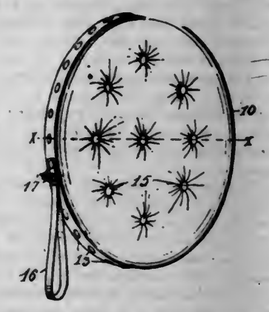
3. In combination, a railway rail, a rerailing frog, and a unitary integral device grippingly engaging said rail and abuttingly engaging said frog for holding the latter in angular relation with the rail without the necessity of any engagement of said frog with the road bed, substantially as described.

4. In combination, a railway rail, a rerailing frog, and independent unitary devices grippingly engaging said rail and abuttingly engaging said frog in a manner capable of positively holding the latter in substantially parallel relation with the rail independently of any engagement of said frog with the road bed or with said rail, substantially as described.

5. In combination, a railway rail, a rerailing frog having sets of angularly disposed portions, and unitary devices grippingly engaging said rail and each of said devices engaging a set of said angularly disposed portions of said frog for positively holding the latter in substantially parallel relation with said rail without the necessity of any engagement of said frog with the road bed or with said rail, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

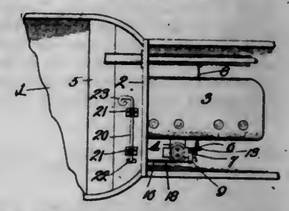
1,216,707. COMBINATION CANOE BACK-REST ANL LIFE-PRESERVER. CLAUDE N. LAWSON, Celoron, N. Y. Filed Sept. 14, 1916. Serial No. 120,071. (Cl. 9—12.)



1. A combination back-rest and life preserver comprising a wooden hoop, a waterproof covering for both sides of said wooden hoop, said hoop filled with buoyant or floatable material and upholstering on both sides, substantially as and for the purpose specified.

2. A combination back-rest and life preserver comprising a round wooden hoop, a water-proof covering for both sides of said wooden hoop, said hoop filled centrally with cork and upholstering on both sides, and a looped strap attached to the periphery of said hoop to receive the arm of the occupant of the canoe therethrough.

1,216,708. FOOT-CONTROL ACCELERATOR FOR MOTOR-CARS. GEORGE W. LORD, Excelsior Springs, Mo. Filed Mar. 17, 1916. Serial No. 85,206. (Cl. 74—81.)



1. The combination in a motor car, of a carbureter, a transversely extending rod having a bent end adjacent the carbureter and adapted for hand actuation, a bell-crank lever pivotally mounted on the carbureter about coincidentally with the axis of the throttle, and provided with a flange having a slot loosely receiving said rod inward of the bent end thereof, a spring for holding said rod pressed yieldingly against said flange at the rear end of the slot therein, foot-actuated means for rocking said

bell-crank lever to cause it to open the throttle and slide on said rod without imparting endwise movement to the same, and yielding means to return the bell-crank lever to close the throttle.

2. The combination in a motor car, of a carbureter, a hand-actuated transversely extending rod having a bent end adjacent the carbureter, a bell-crank lever pivoted on the carbureter and connected to operate the throttle thereof and provided with a flange having a slot loosely engaging the said rod inward of the bent end thereof, yielding means for holding said rod at the rear end of the slot of said flange, a slide rod pivoted to the bell-crank lever to rock the same, a foot-lever bearing a sliding relation to said rod, a spring for returning the foot-lever to its original position after each operation thereof, means whereby actuation of the foot-lever by foot pressure shall advance the said slidable rod pivoted to the bell-crank, and a spring for returning said slidable rod to operative relation with the foot-lever after said rod has been advanced through the operation of the bell-crank lever by the transversely extending rod.

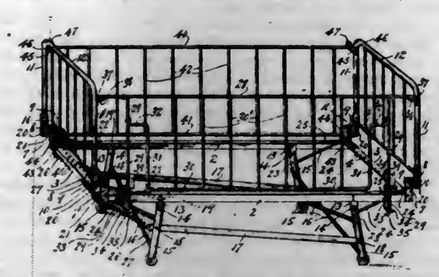
3. The combination in a motor car of a carbureter having a throttle, a crank arm for the throttle, a hand controlled rod having a bent end, a lever pivoted coincidentally with the crank arm and provided with an arm secured to the said crank arm and with a flange having a slot slidingly receiving said rod adjacent the bent end thereof so that when the rod is moved in the proper direction said end shall operate said lever to effect the opening of the throttle, a spring for holding said rod pressed against one end of said slot, foot-operated means for operating said lever to open the throttle, and yielding means to effect the closing of the throttle after the same has been opened.

4. The combination in a motor car, of a carbureter having a throttle, a crank arm for the throttle, a hand controlled rod having a bent end, a lever pivoted coincidentally with the crank arm and provided with an arm secured to said crank arm and with a flange having a slot slidingly receiving said rod adjacent the bent end thereof so that when the rod is moved in the proper direction said end shall operate said lever to effect the opening of the throttle, a spring for holding said rod pressed against the inner end of said slot to prevent rattling of the rod on said flange when the car is in motion, a rod pivoted at its front end to said bell crank lever, a spring for holding said bell crank lever with the throttle closed and the rod retracted, a collar upon the rod, a rock shaft mounted in the car and provided with a crank arm to impart forward pressure on said collar, and with a foot lever whereby the rock shaft may be operated to impart such pressure on the collar, and a spring to return the rock shaft to normal position when the pressure upon the foot lever is removed.

5. The combination in a motor car of a carbureter having a throttle, a transversely extending rod to be operated by hand manipulation, a bell crank lever pivoted about coincidentally with and adapted to operate the throttle, and provided with a horizontal opening loosely receiving said rod, a spring to hold the said rod pressed laterally against the bell-crank lever at the rear side of the said opening, and foot operated means for operating the bell-crank lever to operate the throttle without imparting longitudinal movement to said transverse rod.

1,216,709. FOLDING CRIB OR BED. MORRIS LOWY, New York, N. Y. Filed June 18, 1915. Serial No. 34,814. (Cl. 5—38.)

1. In a folding crib or bed, a horizontal main frame for the support of springs and a mattress, upwardly extending fulcrum posts at each corner of said main frame, end sections pivoted to and between laterally opposite fulcrum posts, said end sections being provided at each lower end with a downwardly extending lever-arm, leg-members pivoted to said main frame so as to extend beneath the same, one set or pair of laterally opposite leg-members each having an upwardly extending lever-arm extending above its pivot point, a pair of link-members interconnecting the upwardly extending lever-arms of said pair of leg-members with the lever-arms of the adjacent end-section, and a second pair of link-members interconnecting the lever-arms of said opposite end section with the remaining pair of laterally opposite leg-members at points beneath the pivot points of the latter.



2. In a folding crib or bed, a horizontal main frame for the support of springs and a mattress, upwardly extending fulcrum posts at each corner of said main frame, end sections pivoted to and between laterally opposite fulcrum posts, said end sections being provided at each lower end with a downwardly extending lever-arm, leg-members pivoted to said main frame so as to extend beneath the same, one set or pair of laterally opposite leg-members each having an upwardly extending lever-arm extending above its pivot point, a pair of link-members interconnecting the upwardly extending lever-arms of said pair of leg-members with the lever-arms of the adjacent end-section, a second pair of link-members interconnecting the lever-arms of said opposite end section with the remaining pair of laterally opposite leg-members at points beneath the pivot points of the latter, connecting-rods interconnecting and pivoted to longitudinally opposite leg-members, and coiled pull-springs connected between one end of said main frame and said connecting-rods.

3. In a folding crib, a horizontal main frame for the support of springs and a mattress, upwardly extending fulcrum posts at each corner of said main frame, end sections pivoted to and between laterally opposite fulcrum posts, said end sections being provided at each lower end with a downwardly extending lever-arm, leg-members pivoted to said main frame so as to extend beneath the same, one set or pair of laterally opposite leg-members each having an upwardly extending lever-arm extending above its pivot point, a pair of link-members interconnecting the upwardly extending lever-arms of said pair of leg-members with the lever-arms of the adjacent end-section, a second pair of link-members interconnecting the lever-arms of said opposite end section with the remaining pair of laterally opposite leg-members at points beneath the pivot points of the latter, connecting-rods interconnecting and pivoted to longitudinally opposite leg-members, coiled pull-springs connected between one end of said main frame and said connecting-rods, side sections in pivotal connection with said main frame, and means for connecting said side sections to and between said end sections when said crib is opened or unfolded.

4. The combination with a main frame having interconnected foldable end sections and foldable leg-members pivoted to said main frame so as to operate simultaneously, of a side or guard section comprising a top-rail, a pair of downwardly extending vertical rails, and a grill-work supported by said top and vertical rails, guide-members in which said vertical rails are slidably supported, each vertical rail having a hinge-joint whereby said side or guard section may be folded as well as moved vertically, coupling-lugs connected with said end-sections, and means connected with the ends of said top-rail adapted to engage said coupling-lugs.

5. The combination with a main frame having interconnected foldable end sections and foldable leg-members pivoted to said main frame so as to operate simultaneously, of a side or guard section comprising a top-rail, a pair of downwardly extending vertical rails, and a grill-work supported by said top and vertical rails, guide-members in which said vertical rails are slidably supported, each vertical rail having a hinge-joint whereby said side or guard section may be folded as well as moved vertically, coupling-lugs connected with said end-sections, means connected with the ends of said top-rail adapted to engage said coupling-lugs, and stop-members connected with said guide-members adapted to engage said vertical rails above their hinge-joints to limit the folding movement thereof to an inward direction.

[Claim 6 not printed in the Gazette.]

1,216,710. PINE-INCENSE AND PROCESS OF MAKING SAME. LOUIS LUCAS, Jamestown, N. Y. Filed Oct. 13, 1916. Serial No. 125,382. (Cl. 44—1.)

1. A pine incense comprising finely divided sifted needles of the *Pinaceæ*, powdered charcoal, and a combustible sealing element.

2. An incense comprising a needle flour of the *Pinaceæ* combined with powdered charcoal.

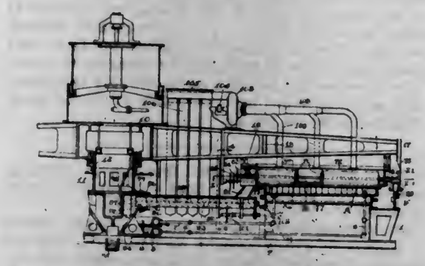
3. An incense comprising, in its entirety, a flour made from the dried needles of the *Pinaceæ*, a combustible element commingled therewith, and a combustible sealing element uniting the two.

4. The process of making incense from coniferous trees which comprises grinding and sifting the dried needles from coniferous trees to form needle flour, and mixing powdered charcoal with said needle flour in the desired portions to render it combustible.

5. The process of making pine incense which comprises drying the needles of the *Pinaceæ*, grinding and sifting the dried needles to form needle flour, mixing powdered charcoal with said needle flour to render it combustible, and mixing said mixed needle flour and charcoal with a combustible sealing element to retain the aromatic strength of said flour.

[Claims 6 to 11 not printed in the Gazette.]

1,216,711. MECHANISM FOR REMOVING TREATED MATERIALS FROM DRIERS AND THE LIKE. WILLIAM R. MACKLIND, Cleveland, Ohio. Original application filed Aug. 10, 1912, Serial No. 714,323. Divided and this application filed Oct. 2, 1913. Serial No. 793,050. (Cl. 214—10.)



1. In mechanism of the class described, the combination of an annular table; a hopper substantially centrally disposed with respect thereto; means movable in a circular path over said table and adapted to remove therefrom a layer of dried material; and conveying means connected with said first named means so as to travel therewith and extending radially inward from said table so as to convey such removed material to said hopper as fast as removed from said table.

2. In mechanism of the class described, the combination of an annular table; a hopper substantially centrally disposed with respect thereto; means movable in a circular path over said table, said means being adapted to loosen a layer of dried material on said table and to remove the same to the inner edge of the latter; and conveying means connected with said first named means so as to travel therewith and extending radially inward from said table so as to convey such material from the inner edge thereof to said hopper as fast as removed from said table.

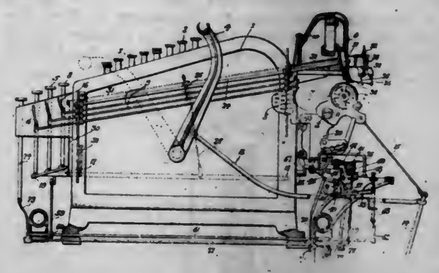
3. In mechanism of the class described, the combination of an annular table; a hopper substantially centrally disposed with respect thereto; means supported so as to be movable in a circular path over said table and adapted to remove therefrom a layer of material, said means comprising a radially disposed brush and a scraper following the same, both adapted to contact with said table; and conveying means connected with said scraper so as to travel therewith and extending radially inward from said table to said hopper so as to convey such material from said table to said hopper as fast as removed.

4. In mechanism of the class described, the combination of an annular table; a hopper substantially centrally disposed with respect thereto; means supported so as to be movable in a circular path over said table and adapted to remove therefrom a layer of material, said means comprising a radially disposed brush and a scraper following the same, both adapted to contact with said table; a conveyer extending lengthwise of said scraper and adapted to convey material received on the latter to the inner edge of said table; and another conveyer connected to travel with said scraper and extending from the inner edge of said table to said hopper, said last named conveyer being adapted to receive the material from said first conveyer and transfer the same to said hopper as fast as removed.

5. In mechanism of the class described, the combination of an annular table; means supported so as to be movable in a circular path over said table and adapted to remove therefrom a layer of material, said means comprising a plurality of radially disposed scrapers following one after the other; a conveyer extending lengthwise of each of said scrapers and adapted to convey material received on the latter to the inner edge of said table; and another radially disposed conveyer connected to travel with said scrapers and adapted to receive such material therefrom, said last named conveyer extending toward the central axis of said table.

[Claims 6 to 22 not printed in the Gazette.]

1,216,712. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FRED F. MAIN, Chicago, Ill., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Sept. 15, 1911. Serial No. 649,501. (Cl. 235—60.)



1. The combination with a computing machine, of a typewriting machine, said machines having a platen common to both, a combined jump and step-by-step escapement for said platen enabling the proper positioning of said platen to coöperate with both said typewriting machine and said computing machine; said platen being movable from a position coöperating with said typewriting machine to a position coöperating with said computing machine, and means for concomitantly actuating said computing machine and shifting said platen into coöperation therewith.

2. The combination with a computing machine, of a typewriting machine, a platen common to both of said

machines, each of said machines having a printing mechanism coöperating with said common platen in the same zone but approaching said platen from different directions, a step-by-step movement mechanism for bringing any portion of said platen in the printing zone for the typewriting machine, and a jump movement mechanism for bringing any portion of said platen in the printing zone of said computing machine.

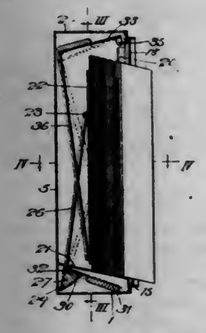
3. The combination with a computing machine of a typewriting machine, a platen common in both of said machines, each of said machines having a printing mechanism coöperating with said common platen in the same zone but approaching said platen from different directions, a step-by-step movement mechanism for bringing any portion of said platen in the printing zone for the typewriting machine, a jump movement mechanism for bringing any portion of said platen in the printing zone of said computing machine, and means for selectively facing said platen to receive an imprint from either said computing machine or said typewriting machine.

4. The combination with a typewriting machine, of a computing machine, said typewriting machine and said computing machine having a common platen, a general operator for said computing machine, a link connected to be operated by said general operator at the operation of said computing machine, a bail operated by said link, said platen having a traveling movement relative to said computing machine and said typewriting machine, and a link connected to said platen and said bail so as to shift said platen between engagement with said typewriting machine and said computing machine, said last-mentioned link having a sliding connection with said bail so as to be capable of shifting said platen for any position thereof.

5. The combination with an adding machine, of typewriting mechanism located to the rear of said adding machine, a platen coöperating with both said typewriting mechanism and said adding machine, keys for actuating said typewriting mechanism located in front of said adding machine, a stepped plate universal to all of said keys to be actuated thereby, said stepped plate underlying said keys at the front of said adding machine, an escapement for said platen arranged to move said platen step by step, and extraneous connections between said universal plate and said escapement extending from the front of said adding machine to the rear thereof enabling the operation of said escapement by any of said keys.

[Claims 6 to 10 not printed in the Gazette.]

1,216,713. SHEET-DELIVERY RECEPTACLE. MOSES M. MARCUSS, New York, N. Y., assignor to West Disinfecting Company, New York, N. Y., a Corporation of New York. Filed June 20, 1916. Serial No. 104,782. (Cl. 211—29.)



1. A sheet delivery receptacle having a delivery slot through its front, a support pivoted in the receptacle, a weight hinged to said support, a follower carried by the support, and means engaging the follower for pressing the sheets toward the slot.

2. A sheet delivery receptacle having a delivery slot through its front, a support pivoted in the receptacle, a weight hinged to said support, a follower carried by the support, and a lever engaging the follower for pressing the sheets toward the slot.

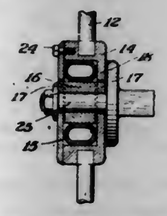
3. A sheet delivery receptacle having a delivery slot through its front, a support pivoted in the receptacle, a weight hinged to said support, a follower carried by the support, and a lever having a depending arm engaging the follower for pressing the sheets toward the slot.

4. A sheet delivery receptacle having a delivery slot through its front, a support pivoted in the receptacle, a weight hinged to said support, a follower carried by the support, and a weighted lever having a depending arm engaging the follower for pressing the sheets toward the slot.

5. A sheet delivery receptacle having a delivery slot through its front, a follower, a support for the follower pivoted in the receptacle, a weight hinged to the support in position to be relieved of its effect on the follower when the number of sheets is diminished to a predetermined amount and means engaging the follower for pressing the sheets toward the slot.

[Claim 6 not printed in the Gazette.]

1,216,714. PNEUMATIC WHEEL. JOHN W. MARTIN, Pittsburgh, Pa. Filed Jan. 21, 1915. Serial No. 3,477. (Cl. 152—42.)



In a resilient hub construction, the combination with an axle having a flange thereon, of a sleeve mounted on said axle, said sleeve having each end thereof formed with a plurality of recesses, a dish-shaped wheel base having, at its center, projections for entering the recesses at the end of said sleeve adjacent said flange, a face plate removably secured to said wheel base, said face plate having, at its center, projections for entering the recesses at the other end of said sleeve, a pneumatic cushion inclosed in said wheel base and engaging between the latter and said sleeve and means on said axle for engaging the outer part of said sleeve and said face plate, whereby said flange and said engaging means prevent movement of said wheel base longitudinally on the axle.

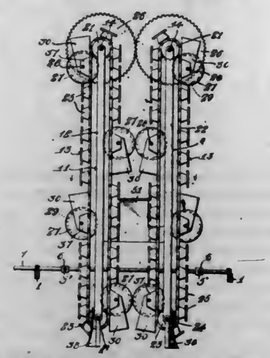
1,216,715. BEET-HARVESTER. THOMAS P. MCCABE, Maywood, Ill. Filed Feb. 2, 1916. Serial No. 75,737. (Cl. 55—9.)

1. In a beet harvester, opposed endless elements mounted to operate in a substantially vertical plane, opposed friction rollers carried by said elements for rotation in opposite directions and for engagement with the beet top during the advancement of the machine, and a means to rotate said rollers.

2. In a beet harvester, opposed endless elements, means to drive said elements, rollers carried by the respective elements for movement simultaneously into engagement with the beet to be extracted, a means to rotate said rollers during movement of said elements, and a means positioned forwardly of said elements to direct the beet therebetween.

3. In a beet harvester, opposed endless elements mounted to operate in parallelism, a plurality of rotatable friction rollers carried by each element, the mentioned rollers being adapted for simultaneous engagement with the beet to be extracted during advancement of the machine, and a means to operatively rotate said friction rollers.

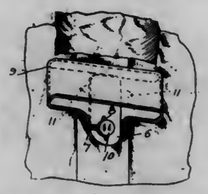
4. In a beet harvester, extracting mechanism comprising opposed endless elements mounted to operate in a substantially vertical plane, a friction roller carried by each element, the mentioned rollers being mounted in a manner permitting of rotation while traveling, a means to rotate the rollers while traveling, the rollers being adapted for engagement with the beet to be extracted simultaneously and at opposite sides thereof, and a means to direct the beet to and between the rollers.



5. In a beet harvester, extracting mechanism comprising a vertically movable vertical frame, opposed endless elements mounted to operate longitudinally of said frame, a plurality of friction rollers carried by each element, the rollers being adapted for movement simultaneously into engagement with the beets to be extracted, a means to oppositely rotate the co-acting rollers during travel, and a means to direct the beet onto and between said rollers.

[Claims 6 to 13 not printed in the Gazette.]

1,216,716. ARTICLE-HOLDER. FREDERICK B. MEYER, Baltimore, Md., assignor of one-half to John F. Ritterpusch, Baltimore, Md. Filed July 3, 1915. Serial No. 37,909. (Cl. 24—3.)

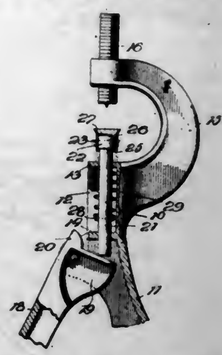


1. An article holder formed of flexible material including a flat body, and lateral extensions at the ends of said body and projecting in the same direction from one longitudinal edge thereof, said extensions having recesses formed in the inner edges and extending in parallel relation to the longitudinal axis of the body.

2. An article holder formed of flexible material including a flat body, and lateral extensions at the ends of the said body and projecting in the same direction from one longitudinal edge thereof, said extensions having vertical recesses formed in the edges thereof and also having horizontal recesses communicating at their inner ends with the vertical recesses and their outer ends extending through the vertical edges of the extensions.

1,216,717. RIVETING-TOOL. WALTER R. MILLER, Bellville, Ohio. Filed Nov. 23, 1915. Serial No. 63,063. (Cl. 218—19.)

1. A device of the character described including a stock provided with an anvil, a plunger shiftable upon the stock to coöperate with the anvil, an operating lever for the plunger, and a holder carried by the plunger for movement longitudinally thereon, the said holder being provided with a cylindrical wall split to form a plurality of yieldable gripping tongues adapted to engage a fastening.



2. A device of the character described including a stock provided with an anvil, a plunger shiftable upon the stock to coöperate with the anvil, an operating lever for the plunger, and a rivet holder normally surrounding one end of the plunger to coöperate therewith and provided with a frusto-conical outer end terminating at its inner extremity in a shoulder projecting inwardly over the said end of the plunger, the frusto-conical outer end of the rivet holder being adapted to direct the head of a rivet toward the said end of the plunger to engage beneath the said shoulder.

3. A device of the character described including a stock provided with sides, a web connecting the said sides, an anvil carried by the stock, a plunger shiftable upon the stock to coöperate with the anvil, an operating lever for the plunger swingingly mounted upon the stock, and a longitudinally extending stop lug carried by the inner extremity of said lever and adapted to engage said web for limiting the lever in its outward swinging movement away from the stock with the plunger disposed in spaced relation to the anvil.

4. A device of the character described including a stock provided with an anvil, a plunger shiftable upon the stock to coöperate with the anvil, means for shifting the plunger, and a fastening holder carried by the plunger and provided with a laterally deflected portion at its outer extremity adapted to direct a fastening to seat against the plunger.

5. A device of the character described including a stock provided with an anvil, a plunger shiftable upon the stock to coöperate with the anvil, means for shifting the plunger, and a fastening holder carried by the plunger and provided with a cup shaped outer extremity adapted to direct a fastening to seat against the plunger.

[Claims 6 to 9 not printed in the Gazette.]

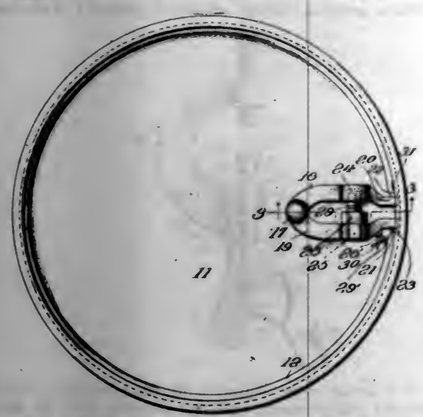
1,216,718. REMOVABLE HEAD FOR BARRELS. GEORGE EUGENE MITTINGER, Youngstown, Ohio, assignor of fifteen-sixteenths to Pressed Steel Products Company, Sharon, Pa., a Corporation of Ohio. Filed Oct. 18, 1915. Serial No. 56,482. (Cl. 220—60.)

1. The combination with a barrel, of a head supported thereby, an open band locking the head in the barrel, and means carried by the barrel head and engaging the free ends of the band for expanding it.

2. The combination with a barrel, of a head supported thereby, an open band locking the head in the barrel and means carried by the barrel head and frictionally engaging the free ends of the band for expanding it.

3. The combination with a barrel having an inwardly extending supporting flange, a head supported by said flange, the barrel having a circular groove on its inside above the flange, an open band sprung within said groove, and means carried by the barrel head engaging the free ends of the bands for forcing them apart for causing the

band to more tightly engage the head and locking it upon the flange.

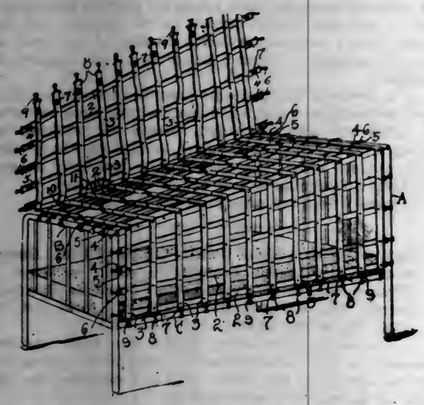


4. The combination with a barrel having a head supporting flange, a head carried by the flange, the barrel having a semi-circular groove upon its inner face above the flange, an open band of a thickness greater than the diameter of the groove and adapted to be sprung into said groove and engaging the upper face of the head and forcing it down upon the flange, and means carried and mounted independent of the band or hoop for forcing the free ends of the hoop or band apart, for the purpose described.

5. The combination with a barrel having an inwardly extending flange adjacent its upper end, the head supported by the flange, a band or hoop adapted to lock the head on the flange and means carried by the barrel head and frictionally engaging the hoop or band for expanding the said hoop or band for the purpose described.

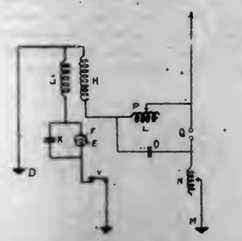
[Claims 6 to 15 not printed in the Gazette.]

1,216,719. DETAINING ATTACHMENT FOR BEDS. MARGARET M. MORRILL, Santa Barbara, Cal. Filed June 28, 1915. Serial No. 36,842. (Cl. 5—41.)



A restraining harness for beds formed of two longitudinal sections, each of said sections comprising flexible longitudinal bands and flexible transverse bands, the longitudinal bands being provided at both ends with means whereby they may be connected to the foot and head rails of a bed, the lateral ends of the second named bands being formed with means whereby they may be connected to the longitudinal rails of a bed, the inner ends of the transverse bands of both sections being provided with means whereby they may be detachably connected to each other.

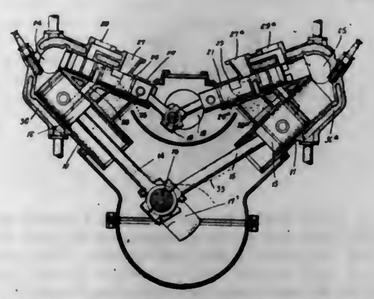
1,216,720. WIRELESS-TELEGRAPH TRANSMITTER OF THE PORTABLE TYPE. MARION ALVIN MULBONY, Randwick, near Sydney, New South Wales, Australia. Filed July 23, 1915. Serial No. 41,449. (Cl. 250—36.)



1. A short distance wireless telegraph transmitter consisting of a high frequency rotary transformer of the inductor type designed to secure regulation by magnetic leakage, in combination with an automatic circuit breaker and a sending key in the primary circuit thereof; an oscillating exciting circuit charged by the secondary circuit of said transformer; and a tuned aerial circuit energized by said exciting circuit.

2. A short distance wireless telegraph transmitter, comprising a rotary transformer of the inductor type with means in its primary circuit for interrupting flow of current therein and means associated electrically with its secondary circuit for radiating wave energy therefrom, said transformer consisting of fixed primary and secondary coils designed to permit magnetic leakage and thereby effect regulation, and located between two flux changing armatures of high permeability mounted in crossed planes on a rotary shaft in the field of permanent magnets located at either side of said coils, and a circuit breaker on said shaft in parallel with a condenser in the primary circuit.

1,216,721. INTERNAL-COMBUSTION ENGINE. ALDEN E. OSBORN, New York, N. Y. Filed Sept. 10, 1915. Serial No. 49,912. (Cl. 123—55.)



1. An internal combustion engine comprising a crank-shaft, a pair of cylinders at an angle to each other, pistons operating in the cylinders and eccentrically connected with said crank-shaft at a common axis of eccentricity, a valve for each of said cylinders, a valve-operating shaft within the angle of the cylinders, said valve-operating shaft having an eccentric thereon, means for connecting the valve-operating shaft to turn at one-half the speed of the crank-shaft, operating means for said valves comprising pivotal connections, a connecting rod between each of said pivotal connections and a common point on said eccentric, and means for guiding the motion of said pivotal connections at an angle to each other and each at an angle to the axis of its respective cylinder, to thereby obtain the proper relative time of movement of both of the valves from said common eccentric.

2. An internal combustion engine comprising a crank-shaft, a pair of cylinders at an angle of substantially 90 degrees to each other, pistons operating in the cylinder and eccentrically connected with said crank-shaft at a common axis of eccentricity, a valve for each of said cylinders, a valve-operating shaft within the angle of the cylinders, said valve-operating shaft having an eccentric thereon, means for connecting the valve-operating shaft to turn at one-half the speed of the crank-shaft, operating means for said valves comprising pivotal connections, a connecting rod between each of said pivotal connections and a common point of said eccentric, and means for guiding the motion of said pivotal connections at an angle of substantially 135 degrees to each other, to thereby obtain the proper relative time of movement of the valves from said eccentric.

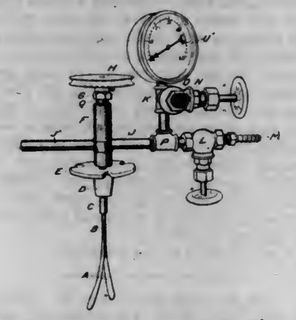
3. An internal combustion engine comprising a crank shaft, a pair of cylinders at an angle to each other, pistons operating in the cylinders and eccentrically connected with said crank shaft at a common axis of eccentricity, a valve for each of said cylinders, a valve operating shaft, means for connecting the valve operating shaft to turn at one-half the speed of the crank shaft, operating means for said valves comprising pivotal connections, connecting rods between said pivotal connections and a common point of eccentricity of said valve operating shaft, and means for guiding the motions of said pivotal connections at an angle to each other and each at an angle to the axis of its respective cylinder to thereby obtain the proper relative time of movement of both of said valves from said common eccentric.

4. An internal combustion engine comprising a pair of engine cylinders having their axes at an angle to each other, pistons operating in the cylinders, a crank-shaft having a single wrist pin to which both pistons are operatively connected, valve cylinders each at an angle to the engine cylinder with which it coöperates, a valve crank shaft operatively connected to the engine shaft and piston valves in the valve cylinders eccentrically connected to the valve crank shaft at a common axis of eccentricity.

5. An internal combustion engine comprising a pair of engine cylinders having their axes at an angle to each other, pistons operating in the cylinders, a crank-shaft having a single wrist pin to which both pistons are operatively connected, valve cylinders each at an angle to the engine cylinder with which it coöperates, piston valves each at an angle to the cylinder with which it is associated, a valve crank shaft connected to operate at one-half the speed of the crank shaft and having a single wrist pin to which the valves are connected at a common axis of eccentricity.

[Claims 6 to 8 not printed in the Gazette.]

1,216,722. APPARATUS FOR IMPREGNATING LIQUIDS WITH GAS. HARRISON E. PATTEN, Silver Spring, Md. Filed July 29, 1915. Serial No. 42,664. (Cl. 261—85.) (Dedicated to the public.)

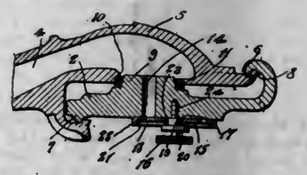


1. An apparatus for impregnating liquids with gas, comprising a pipe for supplying and exhausting gas, a stopper, and a stuffing box carried by said pipe, a rotary shaft passing through the stuffing box and pipe, a stirrer carried by the shaft, and means for clamping the stopper in the mouth of a receptacle.

2. An apparatus for impregnating liquids with gas, comprising a pipe for supplying and exhausting gas, a stopper and stuffing box carried by the pipe, a rotary shaft passing through the stuffing box and pipe, a stirrer carried by the shaft, valves for controlling the entry and escape of gas, means for rotating such shaft, and means for clamping the stopper in the mouth of a receptacle.

3. An apparatus for impregnating liquids with gas, comprising a stirrer, stopper, a gas-tight stuffing box and a sleeve, a rotary shaft carrying said stirrer and operating in said stuffing box and sleeve, a pulley for rotating said shaft, a pipe for supplying and exhausting gas, provided with valves, means for controlling the entry and escape of gas, and means for clamping said stopper to a container.

1,216,723. AIR-TESTER FOR AIR-BRAKE SYSTEMS. WILLIAM W. PEARCE, Birmingham, Ala. Filed June 23, 1916. Serial No. 105,467. (Cl. 137—77.)



1. An air testing device for air brake systems including a body provided at one end with an arm and having a hook at its other end to coact with the engaging portions of an ordinary air brake coupler head, said body being provided with a nipple to extend into the lateral opening of a coupler head, and having an opening extending through the nipple and communicating with the coupler head, and a movable member mounted on the said body and provided with a plurality of orifices of different sizes adapted to be brought into communication with the opening of the said body.

2. A testing device for air brake systems including a body having a circular nipple or enlargement adapted to fit in the lateral opening of an air brake coupler head and provided with an opening to communicate with the same, said body being provided at opposite ends with means for engaging and interlocking it with the air brake coupler head, a rotary diaphragm or member provided with a plurality of orifices of different sizes adapted to be brought into register or communication with the opening of the body and means for pivoting the diaphragm or member and for securing the same in its adjustment.

3. An air testing device for air brake systems including a body provided at one of its faces with an annular boss and having a tapered nipple projecting from the boss, said body being also provided with an opening at the nipple and having an inner substantially straight longitudinal arm and provided at the outer end with a hook shaped arm, a disk provided with a central opening and having a plurality of eccentric orifices of different sizes adapted to be carried into register with the opening of the body by a rotary movement of the disk and a screw passing through the central opening of the disk and threaded into the body and provided with a bearing portion for the disk and means for exteriorly engaging the latter.

1,216,724. ELECTRIC HAND-MIRROR. JOHN A. PETRIE, New Haven, Conn. Filed Jan. 7, 1916. Serial No. 70,773. (Cl. 240—4.)

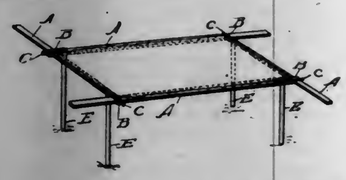
1. In an electric hand mirror, the combination with a mirror-back having a tubular handle located in line with it and formed in the front face of its upper end with a recess, of a mirror-plate mounted in the said mirror-back, in which it is positioned with its lower edge entirely above the said recess, and incandescent electric lamp located in the said recess, a reflecting surface located back of the

said lamp, a removable battery located in the said tubular handle, and means for closing a circuit through the said lamp and battery, the said lamp being positioned in the recess so as to be protected and so that its rays will not shine directly into the said mirror.



2. In an electric hand-mirror, the combination with a mirror-back having a tubular handle located in line with it and formed in the front face of its upper end with a recess, of a mirror-plate mounted in the said mirror-back in which it is positioned with its lower edge entirely above the said recess, a reflector located in the said recess, an incandescent lamp located in the said recess in which it is tilted forward, a battery in the said handle, and means for closing the circuit through the said lamp and battery, the said lamp being positioned in the said recess so as to be protected and so that its rays will not shine directly into the said mirror.

1,216,725. CURTAIN-STRETCHER. MARCUS PHILLIPS, Chicago, Ill. Filed Mar. 15, 1915. Serial No. 14,320. (Cl. 45—24.)

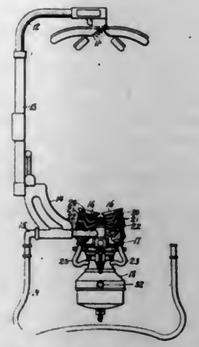


1. A curtain stretcher comprising bars, each having one end provided with a metal loop through which the other end of the adjacent cross-bar can be thrust, and means for clamping such cross-bar in said loop comprising a clamp screw loosely inserted through the end of the loop; a non-circular nut on said screw inside the loop, and a spring shoe secured to the loop and extending between the end of the screw and the edge of the bar to be clamped therein, said shoe being formed to engage also the non-circular edge of the nut.

2. A curtain stretcher comprising bars each having one end provided with a flat metal loop through which the other end of the adjacent cross-bar can be thrust to form a rectangular frame, and means for clamping said cross-bar in such loop comprising a clamp screw loosely inserted through the end of the loop; a non-circular nut on said screw within the loop and dimensioned to be engaged by the opposing walls of said loop and thereby stopped against rotation, and a spring shoe disposed between the end of said clamp screw and the member to be clamped, and having portions bent to extend past those sides of the nut facing the open sides of the loop for positioning the nut independently of the clamp screw.

3. In a curtain stretcher comprising frame bars each having at one end a metal loop for the insertion of an adjacent cross-bar in the same plane with the bar having the loop, the loop fitting comprising flat portions extending over the top and bottom surfaces of the bar for securement thereto, said portions having vertically registered apertures; a leg member having a threaded bore in one end and an attaching screw extending through the said apertures of the loop fitting and into said threaded bore of the leg for removably securing the upper end of the latter against the flat under side of the loop fitting.

1,216,726. COMBINED MILKING AND SEPARATING MACHINE AND OPERATING MEANS THEREFOR. PEDER JENSEN PIRUPS-HVARRE, Copenhagen, Denmark. Filed Apr. 2, 1913. Serial No. 758,427. (Cl. 31—70.)



1. The combination, with a milking machine; of a separating machine and means whereby the milking machine and separating machine may be suspended from the body of the animal operated on.

2. Means for suspending a milking machine and separating machine from the body of an animal comprising a yoke adapted to rest upon the back of the animal, a bent arm extending from the yoke and having a downward extension, an attaching bracket secured to the extension and an air supply pipe-fitting supported in the bracket and from which a milking machine may be suspended.

3. Means for simultaneously operating a milking machine and a separating machine comprising a shaft, a gear wheel mounted on said shaft, a milking machine pulsator valve mounted to rotate on said shaft, driving means between said gear wheel and said pulsator valve, a centrifugal separator mounted on said shaft, and means for rotating the shaft.

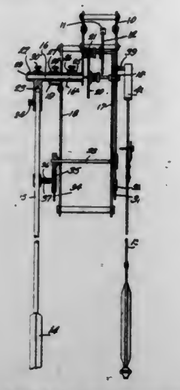
4. Means for simultaneously operating a milking machine and a separating machine comprising a shaft, a gear wheel mounted on said shaft, a milking machine pulsator valve mounted to rotate on said shaft, reducing gearing between the gear wheel and the milking machine pulsator valve, an inclosing shell for the gear wheel, reducing gearing and pulsator valve, and means for rotating the shaft.

5. Means for simultaneously operating a milking machine and a separating machine comprising a shaft, a gear wheel mounted on said shaft, an inner rotatable shell, reducing gearing between the gear wheel and said inner shell, a milking machine pulsator valve mounted to rotate on said shaft and supporting the inner shell, an outer shell for inclosing said inner shell and pulsator valve and means for rotating the shaft.

[Claim 6 not printed in the Gazette.]

1,216,727. SELF-LEVELING CLOCK. JOHN ALBERT PIXLER, Benkelman, Nebr. Filed Sept. 21, 1916. Serial No. 121,488. (Cl. 58—134.)

1. A leveling appliance for pendulum clocks having an escapement carrying yoke fulcrumed coaxially with the time wheel from which the escapement wheel receives motion, a weight suspended from the clock frame, and connections between the weight and said yoke, for positioning the latter to preserve a fixed relation between the escapement and the pendulum.



2. A leveling appliance for pendulum clocks having an escapement carrying yoke fulcrumed coaxially with the time wheel from which the escapement wheel receives motion, and a yoke positioning weight suspended from the spindle of the yoke.

3. A leveling appliance for pendulum clocks having an escapement carrying yoke fulcrumed coaxially with the time wheel from which the escapement wheel receives motion, a yoke positioning weight having its stem fulcrumed coaxially with the yoke, a rocking element having a rack and gear connection with the yoke at a point remote from its fulcrum, and means for communicating motion from the weight stem to said spindle.

4. A leveling appliance for pendulum clocks having an escapement carrying yoke fulcrumed coaxially with the time wheel from which the escapement wheel receives motion, a yoke positioning weight having its stem fulcrumed coaxially with the yoke, a rocking element having a rack and gear connection with the yoke at a point remote from its fulcrum, and a swiveled slide carried by the weight stem engaging an arm of said rocking element.

5. A leveling appliance for pendulum clocks having an escapement carrying yoke fulcrumed coaxially with the time wheel from which the escapement wheel receives motion, a yoke positioning weight having its stem fulcrumed coaxially with the yoke, a rocking spindle having a segmental gear meshing with a segmental rack carried by the yoke concentric with its fulcrum, and a sleeve swiveled upon the weight stem and having sliding engagement with an arm of said rocking spindle.

[Claim 6 not printed in the Gazette.]

1,216,728. METHOD OF PRODUCING INSOLUBLE CONDENSATION PRODUCTS AND PRODUCT THEREOF. FRITZ POLLAK, Berlin, Germany. Filed Sept. 14, 1910. Serial No. 581,988. (Cl. 106—22.)

1. The process herein described of producing compact, opaque, insoluble, infusible, white to yellowish-colored condensation products of phenols and formaldehyde, which consists in reacting on a body of the phenolic series with more than an equi-molecular quantity of the formaldehyde in the presence of so small a quantity of acid that whitish, intermediate products are first formed, and then rendering these white, intermediate products insoluble.

2. A method of producing homogeneous white to yellowish opaque insoluble and ivory-like products from phenol and formaldehyde in the presence of an acid, which consists in causing concentrated formaldehyde to react upon a dissolved phenol in the presence of said acid, the quantity of said acid being insufficient to start said reaction when said formaldehyde is diluted to form a 40% solution, said substances being maintained at a temperature below 100° C. until said reaction has taken place, whereby a fusible and soluble intermediate product is formed, and then changing said soluble and fusible intermediate product to an insoluble and infusible product, as described.

3. A method of producing homogeneous white to yellowish opaque insoluble and ivory-like products from phenol and formaldehyde in the presence of an acid, which consists in making a solution having a temperature below 100° C., said solution consisting of a mixture of phenol and of 40% formaldehyde and said acid, the quantity of said acid being insufficient to start the reaction between the phenol and the formaldehyde, concentrating said solution at a temperature below 100° C. until reaction sets in, whereby a soluble and fusible intermediate product is obtained, and then converting said soluble and fusible intermediate product into an infusible and insoluble product.

4. In the art of producing homogeneous white to yellowish opaque insoluble and ivory-like products from phenol and formaldehyde in the presence of an acid, that step in the art which consists in causing the formaldehyde and phenol to react at a temperature below 100° C. in the presence of an acid, the quantity of said acid being so small that a white soluble, fusible product is formed.

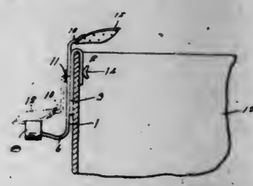
5. The process herein described of producing articles of compact, insoluble condensation products of phenols and formaldehyde, which consists in reacting on a body of the phenolic series with more than an equi-molecular quantity of formaldehyde in the presence of so small a quantity of acid so that soluble, white, intermediate products are first formed, isolating said soluble, white, intermediate products, forming articles with the said products, and rendering them insoluble by the influence of heat.

[Claim 6 not printed in the Gazette.]

1,216,729. PROCESS OF FIREPROOFING FIBROUS MATERIALS. ROBERT E. PRINCE, Madison, Wis., dedicated, by mesne assignments, to the Government of the United States and to the People of the United States. Filed Nov. 25, 1916. Serial No. 133,475. (Cl. 99—12.) (Dedicated to the public.)

A process of fire-proofing fibrous material consisting in saturating the fibrous material with a solution of a soluble compound of boric oxid, then drying the material, and then subjecting the dried material to a second saturation with a soluble salt of lead.

1,216,730. GRAIN-TANK SEAT. WALTER P. QUIGGLE, Baker, Minn. Filed July 17, 1915. Serial No. 40,471. (Cl. 21—42.)

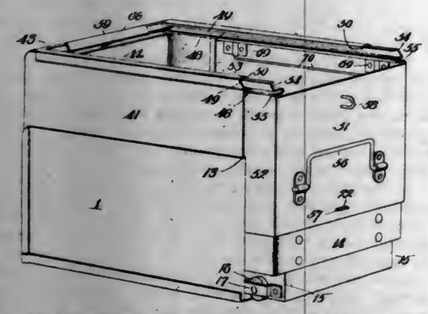


1. A device of the class described including a hanger consisting of a vertical bar provided at its upper end with a hook for engaging a body or receptacle at the upper edge thereof, an L-shaped section having one of its arms arranged vertically and secured to the front face of the lower portion of the vertical bar, a foot rest carried by the said section, and a seat having an approximately L-shaped support or standard having one of its arms arranged vertically and hinged to the vertical arm of the said L-shaped section and fitting against the front face of the upper portion of the said vertical bar, said seat and support or standard being adapted to swing downward beyond and entirely clear of the top of the bracket.

2. A device of the class described including a hanger or bracket provided at its upper end with a hook for engaging over the upper edge of a body or receptacle, a seat

having a standard or support hinged to the bracket below the top thereof so as to swing downwardly entirely clear of the top of the bracket, a forwardly extending arm connected with the lower portion of the said bracket, a whip socket, and a foot rest consisting of a transversely disposed bar secured to and extending from opposite sides of the arm and having an upturned terminal forming a guard and a support for the whip socket which is secured to the said upturned terminal.

1,216,731. ACCOUNT-REGISTER. SAMUEL M. RATNER, Kansas City, Mo. Filed Jan. 8, 1916. Serial No. 71,104. (Cl. 45—2.)



1. An account register, comprising a casing consisting of a pair of longitudinally adjustable base members fitting one within the other, a pair of longitudinally adjustable upper members fitting one within the other, the upper members being vertically adjustable respectively on the lower members, and means for automatically securing the upper members at their upper limit of vertical adjustment.

2. An account register, comprising a casing consisting of a pair of longitudinally adjustable base members fitting one within the other, a pair of longitudinally adjustable upper members fitting one within the other, the upper members being vertically adjustable respectively of the lower members, and a pair of spring actuated catches within the casing and respectively adapted for automatically securing said upper members at the upper limit of their adjustment.

3. An account register comprising a casing consisting of a base member embodying a bottom and side and rear walls, an upper member fitting snugly in and vertically adjustable on said base member and comprising side and end walls and provided at the upper margins of its side walls with inwardly projecting ribs and inwardly opening grooves, a lower member fitting within the first-named members and longitudinally adjustable with respect thereto and comprising a bottom and side and front walls, an upper member vertically adjustable on and longitudinally movable with the last-named base member and also fitting snugly within the first-named pair of members and provided at its upper side margins with outwardly opening grooves receiving the said inwardly projecting ribs, and ribs engaging said inwardly opening grooves.

4. An account register, comprising a casing consisting of a base member embodying a bottom and side and rear walls, an upper member fitting snugly in and vertically adjustable on said base member and comprising side and end walls and provided at the upper margins of its side walls with inwardly projecting ribs and inwardly opening grooves, a lower member fitting within the first-named members and longitudinally adjustable with respect thereto and comprising a bottom and side and front walls, an upper member vertically adjustable on and longitudinally movable with the last-named base member and also fitting snugly within the first-named pair of members and provided at its upper side margins with outwardly opening grooves receiving the said inwardly projecting ribs, ribs engaging said inwardly opening grooves, said last-named ribs having grooves at their inner sides forming continuations of the grooves of the first-named vertically adjustable member, and a flexible cover or roll top for longitudinal adjustment in said grooves and continuations thereof.

5. An account register comprising a base member consisting of a bottom, back wall, and side walls provided with rearwardly facing grooves at their front ends; said base member having a transverse partition to provide a small rear chamber and a large front chamber, an upper member vertically adjustable in the base member and provided with a transverse portion slidably engaging the partition of the base member and dividing the upper member into a small rear chamber forming an extension of the first named rear chamber and a large front chamber forming an extension of the first named front chamber, a base member longitudinally adjustable in the first named base member and the vertically adjustable member thereon, a vertically adjustable member longitudinally movable with the second base member and fitting in the first-named base member and the member vertically adjustable thereon and interlocked as regards vertical movement with the first-named vertically adjustable member; said vertically adjustable members having opposite longitudinal grooves facing inwardly and communicating at their rear ends with the upper end of the rear chamber of the first-named vertically adjustable member, and a flexible cover or roll top engaging said opposite grooves and extending down through the rear chamber of said vertically adjustable member and into the corresponding chamber of the first-named base member and adapted when in retracted position to fold like a fan upon the bottom of said rear chamber of the first-named base member, said cover or roll top being adapted to unfold when it is drawn forwardly in said grooves.

[Claims 6 and 7 not printed in the Gazette.]

1,216,732. FOUNTAIN-PEN. JAMES M. REED, Brooklyn, N. Y., assignor to Eagle Pencil Company, New York, N. Y. Filed Dec. 6, 1916. Serial No. 135,458. (Cl. 120—46.)



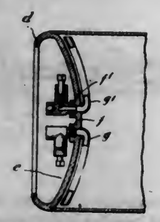
1. In a self-filling fountain pen the combination with the pen barrel of a presser movement consisting of a plug formed with an internal slot extending lengthwise of and through it from end to end and detachably secured to the rear end of the pen barrel, and a presser-mechanism-proper comprising a pivoted lever of the first order detachably mounted on and carried by the plug, a presser bar connected to its front end, and its rear end protruding through the slot in the plug to provide an operating handle, the plug and presser-mechanism-proper being removable as a whole from the pen barrel, and the presser-mechanism-proper being removable as a whole from the plug, substantially as and for the purposes hereinbefore set forth.

2. In a self-filling fountain pen the combination with the pen barrel of a presser movement comprising a plug detachably applied to the end of the pen barrel and formed with an internal slot extending lengthwise of and through it from end to end; a base plate detachably applied to and fitting in a recess formed in the exterior of the part of the plug which enters the pen barrel and provided with projections which interlock with corresponding portions of said recess, said base plate being held in position between the contiguous faces of the pen barrel and plug when the latter is inserted in the pen barrel; a lever of the first order pivoted to said base plate; a presser bar connected to the front end of said lever, and the rear end of said lever extending through and beyond the slotted plug to furnish an operating handle, substantially as and for the purposes hereinbefore set forth.

3. The combination with the pen barrel and the longitudinally slotted plug removably fitted to said pen barrel and provided with a dished rear end, of an operating lever of the first order mounted on said plug and formed in two parts—a front arm which carries the presser bar, and a rear arm separate from the front arm and projecting through the slotted plug to provide an operating handle; and a sleeve secured to and extending lengthwise of the lever at or near its pivotal point in which said rear arm is mounted and can slide, between limits provided by projections on said rear arm, whereby the operative length of said arm can be lengthened and shortened as desired, substantially as and for the purposes hereinbefore set forth.

4. In a self-filling fountain pen, the combination with a tubular pen handle having a dished rear end, a nozzle, a collapsible ink bag and a presser bar interposed between the ink bag and handle; of an operating lever extending within and lengthwise of the handle and pivoted between its two ends in the rear portion of the handle and consisting of two separate parts, a front arm which carries the presser bar, and a rear arm which projects through a cross slot in the dished rear end of the pen handle to provide an operating handle for the lever; a sliding connection between the two arms of the lever to permit the rear arm of the lever to have lengthwise sliding movement, whereby the operative length of said arm can be lengthened and shortened as desired, and the exposed end of said arm when shortened contained within the compass of the recess in the dished end of the pen handle; and means for limiting the sliding movement of said arm, substantially as and for the purposes hereinbefore set forth.

1,216,733. METHOD OF MAKING METAL CONTAINERS. CHARLES L. ROWLAND, Carbondale, Pa., assignor to American Welding Company, Carbondale, Pa., a Corporation of Pennsylvania. Filed May 11, 1915. Serial No. 27,401. (Cl. 29—148.)



1. The method of making a metal container, which consists in first forming a cylindrical body, then inserting within the body a flanged head, then integrally welding in stages the flange of the head with the adjacent end of the cylindrical body, and then crimping the parts so welded.

2. The method of making a metal container, which consists in first forming a cylindrical body, then inserting within the body a flanged head, then integrally welding in stages the flange of the head with the adjacent end of the cylindrical body, and then bending the head into a concavo convex form.

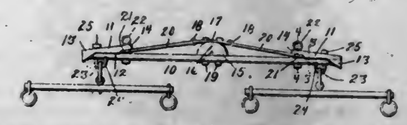
3. The method of making a metal container, which consists in first forming a cylindrical body, then inserting within the body a flanged head, then integrally welding in stages the flange of the head with the adjacent end of the cylindrical body, then crimping the parts so welded, and then bending the body of the head into a concavo convex form.

4. The method of making a metal container, which consists in first forming a cylindrical body, then inserting within the body at each end a flanged head, then integrally welding in stages the flanges of the head with the adjacent ends of the cylindrical body, and then forcing the heads outward by internal pressure.

5. The method of making a metal container, consisting in first forming a cylindrical body, then inserting within the body flanged heads, the flanges of which extend outwardly and laterally from the body of the heads, integrally connecting the body and heads by welding in stages the adjacent parts of the body and flanges of the heads and in attaching to the inside of one of the heads filling and discharge pipes before both of the heads are welded to the body.

[Claims 6 and 7 not printed in the Gazette.]

1,216,734. FOUR-HORSE EVENER. EDWARD W. SAYERS, Bogue, Kans. Filed June 1, 1916. Serial No. 101,100. (Cl. 21—78.)



In a device of the kind described, an evener bar, an end member on each end of the bar, each of said end members having a seat for said bar terminating in a socket fitting the respective terminal portion of the bar, a strut extending rearwardly of the center of the bar, a truss member having eyes at its ends located between the inner ends of the end members and the adjacent portions of the bar, the center of the truss being engaged on the strut, bolts passing through the end members, eyes and bar, J-bolts having their shank extending revolubly through the end members and bar and having their bills forked to engage over the bar, and nuts on said shanks to hold the J-bolts in adjusted position.

1,216,735. BUTTON-PROTECTOR. CARL D. SCHEFFER and JOSEPH ZIMMERMAN, Dayton, Ohio. Filed May 15, 1916. Serial No. 97,754. (Cl. 24—90.)



1. A protector for the buttons of garments while the latter are being cleaned or renovated, comprising a flexible hood for the button, an extensible edge portion on said hood adapted to be readily slipped over the button head and contracted beneath it, and resilient means secured to said edge portion to give rigidity thereto.

2. A protector for the buttons of garments while the latter are being cleaned or renovated, comprising a flexible hood for the button, large and loose above the head of the latter, an extensible edge portion on said hood adapted to be readily slipped over the button head and contracted beneath it, and a resilient element united to said edge portion to give rigidity thereto.

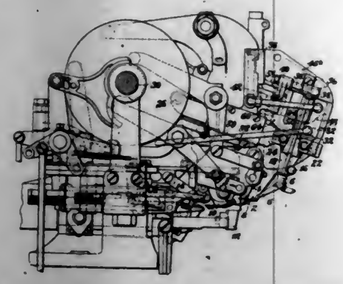
3. A protector for the buttons of garments while the latter are being cleaned or renovated, comprising a flexible hood for the button, large and loose above the head of the latter, an extensible edge portion on said hood adapted to be readily slipped over the button head and contracted beneath it, and a circumferential coil spring united to said edge portion to give rigidity thereto.

4. A protector for the buttons of garments while the latter are being cleaned or renovated, comprising a flexible hood for the button, an extensible edge portion on said hood adapted to be readily slipped over the button head and contracted beneath it, a coil spring adapted to fit said edge portion in its contracted position, and beads secured to said edge portion for insertion between the coils of said spring to firmly unite the latter to the hood.

1,216,736. WAX-THREAD SEWING-MACHINE. THOMAS H. SEELY, Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 18, 1915. Serial No. 15,225. (Cl. 112—28.)

1. A wax thread sewing machine, having, in combination, stitch-forming devices including a curved hook needle,

a looper, looper supporting and actuating mechanism comprising a series of moving parts and a fixed looper heater mounted in guides and having a continuous yielding heat conducting contact with one of the moving parts.



2. A wax thread sewing machine, having, in combination, stitch-forming devices including a curved hook needle, a looper, a looper actuating slide, devices for supporting the looper mounted on the slide to reciprocate therewith, comprising a pivoted looper lever and a looper heater mounted in guides and having a continuous yielding heat conducting contact with one of said looper supporting devices.

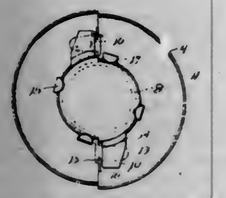
3. A wax thread sewing machine having, in combination, stitch forming devices, including a curved hook needle and a looper, a looper carrier, a looper heater having a heat conducting contact with the looper carrier and a spring to maintain the heater in close contact with the looper carrier.

4. A wax thread sewing machine having, in combination, stitch forming devices, including a curved hook needle and a looper, a looper lever, a looper heater arranged to bear upon the hub of the looper lever and a spring to maintain the heater in close contact with the hub of the looper lever.

5. A wax thread sewing machine having, in combination, stitch forming devices, including a curved hook needle and a looper, a looper lever having a cylindrical surface formed on its hub, a looper heater mounted in guides on the frame and having a cylindrical surface arranged to engage the cylindrical surface on the hub of the looper lever and a spring for maintaining the heating device in contact with the hub of the looper lever.

[Claims 6 to 10 not printed in the Gazette.]

1,216,737. CEILING-PLATE. ALBERT L. SESSIONS, Bristol, Conn. Filed Apr. 26, 1912. Serial No. 693,500. (Cl. 126—317.)



1. A ceiling plate including two sections arranged to encircle a pipe, each of the sections having a flap overturned from its inner edge near its end, a stud projecting from the end of each section at a point opposite the bend of said flap, and a projecting tongue from the end of each section near its inner edge positioned to pass between the curved overturned edge of the flap and said stud.

2. A ceiling plate including two sections of semicircular form arranged to encircle a pipe, said sections having flaps bent in opposite directions from opposite inner edges near the ends thereof, said flaps extending toward the outer edge of each section, and a tongue projecting from the end of each section near the inner edge thereof in position to pass underneath said overturned flaps and limit relative lateral movement of said sections by engagement with the bent edges of said flaps.

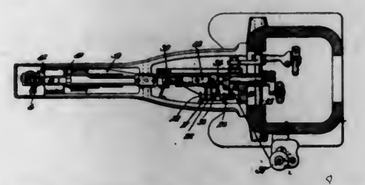
3. A ceiling plate including two sections arranged to encircle a pipe one of the sections having an overturned flap forming a recess, a tongue on the opposite section arranged to pass into said recess and having a locking notch, and a stud upon the opposite section arranged to engage said notch to hold the sections in locked engagement.

4. A ceiling plate including two sections arranged to encircle a pipe, one of the sections having an overturned resilient flap forming a recess, a tongue on the opposite section arranged to pass into said recess, said tongue having a locking notch, a locking stud arranged to engage said notch, and means upon the sections to resiliently hold the parts in locked engagement.

5. A ceiling plate including two sections arranged to encircle a pipe, one of the sections having an overturned flap forming a recess, a tongue upon the other section located to pass into said recess, said tongue having a locking slot, a locking stud upon the opposite section arranged to engage the locking slot, and a spring finger positioned upon the sections to oppose movement of the sections to disengage said stud from said slot.

[Claims 6 to 10 not printed in the Gazette.]

1,216,738. LOOPER-THREAD CONTROLLER. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 5, 1910. Serial No. 590,916. (Cl. 112—26.)



1. A thread controller including in combination, thread guides, a take-up member comprising an overhanging arm having a thread engaging cam projecting from its inner face which takes up and releases thread during each oscillation of the take-up member.

2. A thread controller including in combination, thread guides, a pivoted take up member comprising an overhanging arm, having a concentric surface on its under face whereby the thread is retained in proper relation to the take-up member, and a cam surface for engaging the thread.

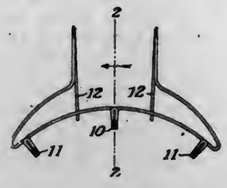
3. A thread controller including in combination, thread guides, a pivoted take-up member comprising an overhanging arm, the outer face of which is substantially concentric whereby it may operate in a small space and the inner face of which has a projecting cam thread engaging surface.

4. A thread controller for sewing machines, comprising a shank adapted to be attached to an oscillating member, and an overhanging arm, said overhanging arm having a concentric outer surface whereby it may operate in a small space, and a cam projecting thread engaging surface on its inner face.

5. A thread controller comprising a shank adapted to be attached to an oscillating member, and an overhanging arm, said overhanging arm having a concentric outer surface whereby it may operate in a small space, and a concentric inner surface at its free end whereby the thread is retained in proper relation to the take-up member, and a projecting inner surface for engaging the thread.

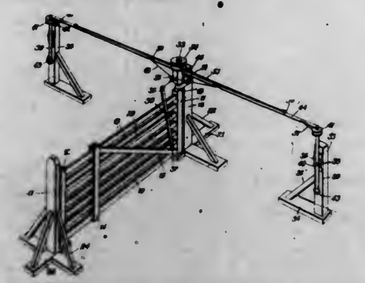
[Claims 6 to 17 not printed in the Gazette.]

1,216,739. FLOW-PIPE HOLDER FOR FOUNTAIN-SYRINGES. WILLIAM HENRY SIMMONS, Annandale, N. Y. Filed Sept. 25, 1916. Serial No. 121,986. (Cl. 248—31.)



A device for the purpose described, composed of a piece of wire bent centrally to form a forwardly extending middle hook 10, the wire extending laterally and downwardly from the middle hook in arcuate form and bent to form forwardly extending end or side hooks 11, thence upwardly and toward the center, and upwardly, rearwardly and downwardly to form laterally spaced hangers or hooks 12.

1,216,740. AUTOMATIC GATE-OPENER. CHARLES H. SIMPSON, Louisville, Ky. Filed July 13, 1916. Serial No. 109,077. (Cl. 39—34.)



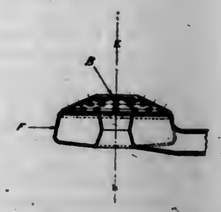
1. In a gate mechanism, the combination with a swingingly mounted gate, a latch for securing the gate in closed position, and a swingingly mounted latch lever for releasing the latch, of a hand lever pivoted intermediate its length, operative connection between the hand lever and gate whereby swinging of the hand lever will swing the gate if the latch is released, a sleeve inclosing the lever and free to turn upon it, and operative connection between the sleeve and latch lever whereby turning of the sleeve will actuate the latch lever to release the latch.

2. A gate construction including gate posts, a gate swingingly mounted between the posts and including a hinge stile, a latch carried by the gate, a keeper carried by one of the posts and engageable by the latch, a latch lever swingingly mounted upon the gate and operatively connected to the latch, a drum having fixed connection with the hinge stile whereby turning of the drum will turn the gate, levers swingingly mounted in spaced relation at opposite sides of the gate, means coöperating between the levers and drum whereby swinging of either lever will swing the gate if the latch is released, and means carried by the levers and operable to release the latch, said means including sleeves encircling the levers and free for limited turning movement thereabout, drums mounted upon the sleeves, and flexible elements connected to the latch lever and operatively connected to the drums.

3. A gate construction including gate posts, a gate having a hinge stile whereby it is swingingly supported by one of the posts, a latch for securing the gate, normally against movement, a latch lever carried by the gate and operatively connected to the latch, a drum fixed to the hinge stile whereby turning of the drum will cause swinging of the gate, hand levers pivotally supported at opposite sides of the hinged end of the gate and in spaced relation thereto, a drag link pivotally connected at its ends to corresponding ends of the hand levers and having its intermediate portion slidably supported by the post by which the gate is supported, a flexible element passed about the drum and connected at its ends to opposite end portions of the link whereby reciprocation of the link through swinging of a hand lever will swing the gate, and means carried by the hand levers for operating the latch lever.

4. A gate construction including gate posts, a gate having a hinge stile whereby it is swingingly supported by one of the posts, a latch carried by the gate, a keeper carried by the other post and engageable by the latch, a latch lever carried by the gate and operatively connected to the latch, a drum fixed to the hinge stile whereby turning of the drum will cause swinging of the gate, hand levers pivotally supported at opposite sides of the hinged end of the gate and in spaced relation thereto, a drag link pivotally connected to corresponding ends of the hand levers, a flexible element passed about the drum and connected at its ends to opposite end portions of the link whereby reciprocation of the link through swinging of the levers will swing the gate, and means carried by the levers for operating the latch lever, said means including sleeves mounted for limited turning movement about the levers, drums fixed to the sleeves, and flexible elements connected at their ends to the sleeve drums and at their other ends to the latch lever.

1,216,741. GAS-BURNER DEFLECTOR. DURWARD M. SMITH, Clarendon, Va. Filed June 16, 1916. Serial No. 104,093. (Cl. 158—113.)



1. A deflector for gas burners comprising a dome-shaped cap open at the base and having slots at its edge to seat on the burner, and a bridge within the top of the cap, to diffuse the flame, said bridge having a central deflecting portion and arms extending to the cap, the sides of the cap flaring toward the base and perforated.

2. A deflector for gas burners comprising a dome-shaped cap open at the base and having long and short slots at its edge to seat on the burner and allow for variations in burner structure, and a bridge within the top of the cap to diffuse the flame, said bridge having a central deflecting portion and arms extending to the cap, the sides of the cap flaring toward the base and perforated.

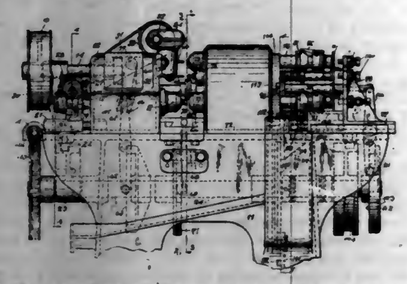
1,216,742. MACHINE FOR MAKING CASTELLATED NUTS. SYDNEY SMITH, Detroit, Mich. Filed May 7, 1914. Serial No. 836,923. (Cl. 29—38.)

1. In a machine of the character described, the combination with a rotatable chuck adapted to grip a bar of stock during a forming operation and means for releasing said chuck; of a second chuck adapted to be moved toward and from the first named chuck and to grip the formed end of the bar and feed the bar through said first named chuck.

2. In a machine of the character described, the combination with a rotatable chuck adapted to grip a bar of stock during a forming operation and means for releasing said chuck; of a second chuck alined with said first-named member and adapted to be moved toward and from the first-named chuck and to grip the formed end of the bar and feed the bar through the first named chuck.

3. In a machine of the character described, the combination with a rotatable chuck adapted to grip a bar of stock during a forming operation and means for releasing said chuck; of a second chuck alined with said first-named

chuck and adapted to be moved toward and from the first-named chuck and to grip the formed end of the bar and feed the bar through said first named chuck; and means adapted to operate said second chuck.

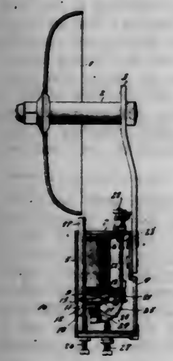


4. In a machine of the character described, the combination with a rotatable chuck adapted to grip a bar of stock during a forming operation and means for releasing said chuck; of a second chuck alined with said first-named chuck and adapted to be moved toward and from the first named chuck and to grip the formed end of the bar and feed the bar through the first named chuck, said second chuck being normally spaced from the bar; and means adapted to advance said second chuck toward the bar and operate the same.

5. In a machine of the character described, the combination with a rotatable chuck adapted to detachably engage a bar of stock during a forming operation and means for releasing the chuck; of a second chuck alined with said first-named chuck and adapted to be moved toward and from the first named chuck and to detachably engage the formed end of the bar of stock and feed the bar of stock through the first named chuck; and means adapted to advance said second chuck toward the bar of stock and to operate the same.

[Claims 6 to 80 not printed in the Gazette.]

1,216,743. ELECTRIC BELL. WILLIAM J. SMITH, New York, N. Y., assignor to Edwards & Company, a Corporation of New York. Filed Mar. 13, 1913. Serial No. 753,919. (Cl. 177—7.)



1. An electromagnetic bell comprising an armature, a resilient plate attached thereto, a hammer connected with said plate, the inertia of the hammer moving the spring-plate away from the armature to permit the hammer to strike the bell when the armature is moved to its attracted position, said plate having at least one arm which engages with the core of the electromagnet when the armature is in its attracted position to prevent the same from sticking, said arm being resilient to aid the spring-plate to return to its normal position against the armature.

2. An electric bell comprising a casing, a gong carried by said casing, an electro-magnet in said casing, an armature for said electro-magnet, a spring exerting its tension to draw said armature away from the core of the electro-magnet, a reciprocatory hammer having one end thereof projecting through an opening in said casing, the walls of said opening forming a bearing for said hammer, an adjustable stop for limiting the rearward travel of said hammer, an interrupter comprising a stationary contact, means for adjusting the position of said contact, a movable member carried by said armature, a plate mounted on said armature, a connection between said plate and said hammer, and said plate having a part of non-magnetic materil interposed between the core of the electro-magnet and its armature.

3. An electric bell comprising a casing, a gong carried by said casing, an electro-magnet in said casing, an armature for said electro-magnet, a spring exerting its tension to draw said armature away from the core of the electro-magnet, means for adjusting the tension of said spring, a reciprocatory hammer having one end thereof projecting through an opening in said casing, the walls of said opening forming a bearing for said hammer, an adjustable stop for limiting the rearward travel of said hammer, an interrupter comprising a stationary contact, means for adjusting the position of said contact, a movable member carried by said armature, a plate mounted on said armature, a connection between said plate and said hammer, and said plate having a part of non-magnetic material interposed between the core of the electro-magnet and its armature.

4. An electric bell comprising a casing, a gong carried by said casing, an electro-magnet in said casing, an armature for said electro-magnet, a spring exerting its tension to draw said armature away from the core of the electro-magnet, a reciprocatory hammer having one end thereof projecting through an opening in said casing, the walls of said opening forming a bearing for said hammer, an adjustable stop for limiting the rearward travel of said hammer, an interrupter comprising a stationary contact, means for adjusting the position of said contact, a movable member carried by said armature, a plate mounted on said armature, a connection between said plate and hammer, said connection comprising a pin passing through said hammer and lugs on said plate bent around the ends of said pin, and said plate having a part of non-magnetic material interposed between the core of the electro-magnet and its armature.

1,216,744. OIL-GAGE. CHARLES A. STAPLETON and OTHA P. BURCHFIEL, Anthony, Kans. Filed June 29, 1915. Serial No. 37,093. (Cl. 73—82.)



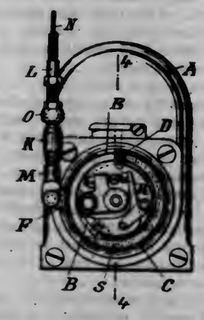
1. The combination with a vessel containing a lubricant and including a dreg chamber, of a float chamber adapted to be connected to the dreg chamber and to the vessel above the lubricant therein and affording fluid communication between the interior of the float chamber and the vessel, and a stand pipe continuing the dreg chamber connection and projecting into the vessel above the dreg chamber.

2. In combination with a vessel containing a lubricant, of a float chamber, means connecting the upper portion of the float chamber with the vessel at a point above the predetermined level of the lubricant therein, other means connecting the lower portion of the float chamber with the lowest point of the vessel and embodying a straight stand pipe projecting upward into the vessel to a point above the level of the usual accumulation of residue, a float disposed in the float chamber and movable therein by the change of level of the lubricant in the vessel, and an indicator disposed to be under observation at all times and having connection with the said float to be actuated thereby.

3. Means for designating the level of oil in a vessel containing a lubricant comprising a float chamber, connecting means between the upper portion of the float chamber and the vessel, a tube connected with the lower portion of the float chamber, a hollow head in the length of the tube and provided with a stand pipe projecting through the lower portion of the vessel and extending upward therein for a short distance, coupling means for connecting the hollow head to the vessel, a float disposed within the float chamber, and an indicator connected with the float and adapted to be actuated thereby.

4. The combination with a liquid receiving vessel, of a float chamber having fluid communication therewith and extending above the normal level of the liquid within the vessel, and a stand pipe projecting through the plane of the bottom wall of the vessel and having fluid communication with the lower extremity of said float chamber with the free end of said pipe presented upwardly within the vessel.

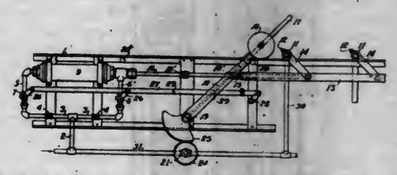
1,216,745. ADJUSTING MECHANISM. HEINRICH STARKER, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed Aug. 29, 1912. Serial No. 717,669. (Cl. 64—30.)



1. In a device of the kind described, the combination with a support and an angularly adjustable device on the support, of adjusting mechanism for the device operable from a distant point and including a wire-like flexible metallic actuator attached at one end to said device, and a housing for the actuator to protect the actuator against dust and rust, said housing including an abutment on said support, a flexible sheath above the abutment, and a flexible universally resilient sheath between the abutment and the device, the housing being closed dust-tight between the device and a point beyond the abutment, and the actuator being lengthwisely movable relatively to the housing; substantially as described.

2. In a device of the kind described, the combination with a support and an angularly adjustable device on the support, of adjusting mechanism for the device operable from a distant point and including a pivoted abutment on the device and a wire-like flexible metallic actuator attached at one end to said pivoted abutment, and a housing for the actuator to protect the actuator against dust and rust, said housing including a fixed abutment on said support, a flexible sheath above the fixed abutment, and a flexible universally resilient sheath between the fixed abutment and the pivoted abutment, the housing being closed dust-tight between the pivoted abutment and a point beyond the fixed abutment, and the actuator being lengthwisely movable relatively to the housing; substantially as described.

1,216,746. SPRAYING APPARATUS. ROY N. STEWART, Dorchester, Mass. Filed Mar. 22, 1913. Serial No. 756,091. (Cl. 137—66.)



1. In an apparatus of the class described, a fluid supply, an operating element actuated thereby, a fluid delivery, a connection between said operating element and said delivery effective to impart to the latter an oscillatory movement, a variable control for said supply, and a connection between said variable control and said first named connection for varying said control during said oscillatory movement to proportion the volume of fluid supplied according to the position of said delivery relative to the area to be covered.

2. In an apparatus of the class described, a fluid supply, an operating element actuated thereby, a fluid delivery including a plurality of sprinkling devices, a connection between said operating element and said sprinkling devices effective to impart to the latter an oscillatory movement, a variable control for said supply, and a connection between said variable control and said first named connection for varying said control during said oscillatory movement to proportion the volume of fluid supplied according to the position of said delivery relative to the area to be covered.

3. In an apparatus of the class described, a fluid supply, an operating element actuated thereby, a fluid delivery, a reciprocable shaft operatively connecting said operating element and said delivery and effective to impart to the latter an oscillatory movement, a variable control for said supply, and a rock shaft operatively connected with said reciprocable shaft and said control for varying said control during said oscillatory movement.

4. In an apparatus of the class described a fluid supply, an operating element actuated thereby, a fluid delivery operatively connected with said operating element for oscillatory movement in a plane other than the horizontal, and a variable control for said delivery operated thereby and effective to regulate the volume of fluid supplied to said delivery proportionately to variation of its angle of elevation relative to the area to be covered.

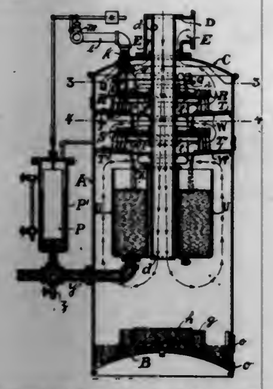
5. In an apparatus of the class described a fluid supply, an operating element actuated thereby, a fluid delivery including a plurality of sprinkling devices operatively connected with said operating element for oscillatory movement, a variable control for said delivery, and a lever operatively connecting said control and said delivery effective to regulate the fluid supplied to said delivery proportionately to its relative transverse speed.

[Claims 6 to 14 not printed in the Gazette.]

1,216,747. FEED-WATER HEATER. JAMES M. TAGGART, Port Washington, N. Y. Filed Aug. 12, 1914. Serial No. 856,506. (Cl. 261—10.)

1. A feed water heater adapted to produce a balanced flow of steam and water in opposite directions throughout the interior of said feed water heater, the said feed water heater comprising an outer shell provided with a water supply and with a steam inlet extending substan-

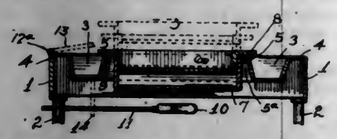
tially concentrically within said shell to a point substantially below the top of said shell, an outlet for steam at the top of said shell substantially concentric to said steam inlet, and a plurality of alternating water pans and baffles concentric to said vessel and arranged with steam passages each of which are of uniform area around within said shell whereby there is produced a balanced flow of steam and water in opposite directions through all parts of said shell.



2. The combination in a feed water heater of a closed shell provided with an inlet for water at the top thereof and with an outlet for steam at the top of said shell, a steam inlet pipe entering into said shell to a point considerably below the top of said shell, a container for water at the lower end of said pipe, a plurality of trays at different levels along the course of said pipe and a plurality of baffles between said trays, said trays and baffles being adapted to direct the water into said container, whereby the steam ascends from the lower end of said pipe to said steam outlet around said trays and baffles through falling water.

3. A feed water heater comprising in combination; a closed shell adapted to resist high pressures and provided with a water inlet at the upper part and with a steam outlet at the upper part of said shell, a steam inlet pipe descending through the interior of said shell to a point considerably below the top of said shell and said steam outlet, a water container around the lower part of said pipe, having a discharge out through said shell, a distributing trough adapted to receive the water from said water inlet, a plurality of pans below said trough, and a plurality of baffles between the said pans, said baffles being staggered with respect to said pans, said pans and baffles being adapted to impart a zig-zag course to the steam ascending from the lower end of said steam inlet pipe to said steam outlet through streams of descending water.

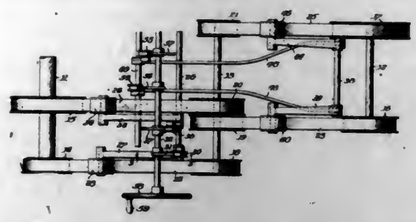
1,216,748. PHOTOGRAPHIC-PRINT-TONING APPARATUS. PAUL M. TAYLOR, Norfolk, Va. Filed Jan. 10, 1916. Serial No. 71,279. (Cl. 95—89.)



1. A device of the class described comprising an open bottom stand having a trough or gutter around the inner portion thereof, said gutter adapted to receive a pan or pans for suspending the same within the said stand.

2. A device of the class described comprising an open bottom outer stand having a tapered walled gutter or trough around the inner portion thereof, a set of telescoping or nesting removable pans or receptacles having flanges thereon adapted to be suspended within and inclosed by said gutter or trough, and cover means for said stand and the pans.

1,216,749. VARIABLE-SPEED DRIVE. IRA M. THURLOW, Beloit, Wis., assignor to P. B. Yates Machine Company, Beloit, Wis., a Corporation of Wisconsin. Filed June 14, 1915. Serial No. 34,063. (Cl. 74—21.)



1. The combination with a drive shaft, a driven shaft, a countershaft, a plurality of pulleys of dissimilar size on each of the drive and driven shafts, pulleys of dissimilar size on the countershaft and equal in number to the aggregate number carried by the drive and driven shafts, and belts connecting the pulleys of the countershaft with those of the drive and driven shafts in pairs, of a tightener for each of the belts, and unitary means to bring any two of the tighteners into operation upon belts leading to and from the countershaft.

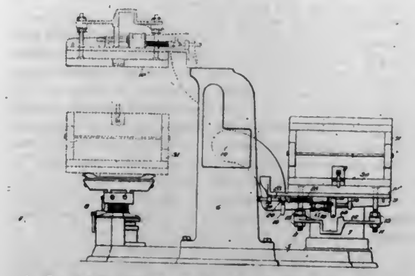
2. The combination with a drive shaft, a driven shaft, a countershaft, a plurality of pulleys of dissimilar size on each of the drive and driven shafts, pulleys of dissimilar size on the countershaft and equal in number to the aggregate number carried by the drive and driven shafts, and belts connecting the pulleys of the countershaft with those of the drive and driven shafts in pairs, of a tightener for each of the belts, and unitary means to render all the tighteners save one inactive and to bring any two of the tighteners into operation upon belts leading to and from the countershaft.

3. The combination with a drive shaft, a driven shaft, a countershaft, a plurality of pulleys of dissimilar size on each of the drive and driven shafts, pulleys of dissimilar size on the countershaft and equal in number to the aggregate number carried by the drive and driven shafts, and belts connecting the pulleys of the countershaft with those of the drive and driven shafts in pairs, of a tightener for each of the belts, another shaft and means carried by the latter shaft and arranged in different angular adjustments of the shaft to act on the belt tighteners to render effective any two of the belts leading to and from the countershaft.

4. The combination with a drive shaft, a driven shaft, a countershaft, a plurality of pulleys of dissimilar size on each of the drive and driven shafts, pulleys of dissimilar size on the countershaft and equal in number to the aggregate number carried by the drive and driven shafts, and belts connecting the pulleys of the countershaft with those of the drive and driven shafts in pairs, of a tightener for each of the belts, another shaft and cams carried by the latter shaft and arranged in different angular positions of the shaft to act on the belt tighteners to render effective any two of the belts leading to and from the countershaft.

5. The combination with a drive shaft, a driven shaft, a countershaft, a plurality of pulleys of dissimilar size on each of the drive and driven shafts, pulleys of dissimilar size on the countershaft and equal in number to the aggregate number carried by the drive and driven shafts, and belts connecting the pulleys of the countershaft with those of the drive and driven shafts in pairs, of a tightener for each of the belts, another shaft and cams carried by the latter shaft and arranged in different angular adjustments of the shaft to act on the belt tighteners to render effective any two of the belts leading to and from the countershaft.

1,216,750. SAND-MOLDING APPARATUS. HENRY TSCHERNING, Freeport, Ill., assignor to Arcade Manufacturing Company, Freeport, Ill., a Corporation of Illinois. Filed Oct. 6, 1916. Serial No. 124,030. (Cl. 22—33.)



1. In sand jarring machines for molding, the combination with a suitably mounted rock-over frame, of a normally horizontal pattern-supporting device secured to said frame by a series of vertical rods or bolts initially allowing free limited separation of the connected parts, a fluid pressure device for acting upon the bolts simultaneously to bind the pattern supporting device rigidly to the frame, and means whereby the weight of the frame and its load holds said fluid pressure device out of action while the parts are in position for jarring.

2. In sand molding apparatus, the combination with jarring mechanism, of a rigid standard and a sand jarring device alongside the standard, a pattern plate and flask carrying frame pivoted to the standard to swing the plate and flask to and from position upon the jarring device, pneumatically operated means for locking said plate and frame rigidly together, and a gravity actuated member carried by the frame and holding said means out of action only while the frame is in jarring position.

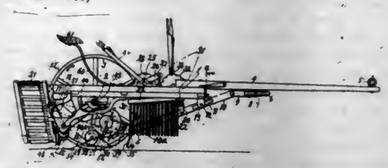
3. In sand molding apparatus, the combination with a jarring mechanism and a standard alongside the same, of a rock-over frame adapted to swing a pattern support and flask to and from position upon said jarring mechanism, pneumatic means for rigidly locking together the frame and pattern support, a movable member controlling said means, mounted upon said frame in position to be pressed against said standard by the weight of the frame when in jarring position and by consequent displacement to hold said means out of action, and a spring for restoring the displaced member to initial position.

4. In sand molding apparatus, the combination with a rock-over frame, of a pattern and flask supporting member tied to the frame by a series of bolts primarily allowing free limited separation of the frame and member, devices carried by the frame for applying wedge-like force to said bolts to draw said member rigidly against the frame, means for applying pneumatic actuating power to said devices, and means whereby gravity prevents the action of said power while the flask is in jarring position.

5. The combination with sand jarring devices and a standard alongside the same, of a rockover frame provided with a flask support and adapted to carry a flask to and from the jarring devices, a series of vertical rods passing downward from said support through a portion of said frame, a bar connecting the lower portions of two of said rods and having an upper inclined surface, a block adapted to be pushed along said surface, a fluid pressure cylinder mounted on said frame and arranged to force said block along said surface while holding it against lateral displacement thereby for binding said support rigidly to said frame, and means whereby the block is kept from said surface while the parts are in position for jarring.

[Claims 6 to 8 not printed in the Gazette.]

1,216,751. STONE-PICKER. JOSEPH J. VOGEL, Springfield, Minn. Filed July 20, 1916. Serial No. 110,384. (Cl. 55—17.)



1. In a stone gathering and removing machine, the combination of a pair of ground wheels and axle in same, a main frame mounted on the axle and having means for engaging and drawing it on said wheels, a forwardly inclined endless main conveyer having a frame pivoted at its rear end to swing up and down with the front end, a shovel carried by said front end, a short endless conveyer mounted in said frame above the shovel and arranged to move the stones rearwardly over the shovel, a pair of rearwardly converging rake bars carried by the main frame and having teeth by which to remove the stones from plowed land and gather them in front of the shovel, a clutch controlled operative connection between said elevators and the axle; means for raising, lowering and holding said shovel at the desired elevations, means for raising, lowering and holding the rake at the desired elevation.

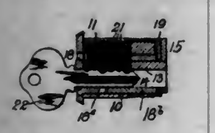
2. In a stone gathering and removing machine, the combination of a pair of ground wheels and axle in same, a main frame mounted on the axle and having means for engaging and drawing it on said wheels, a forwardly inclined endless main conveyer having a frame, pivoted at its rear end to swing up and down with the front end, a shovel carried by said front end, a short endless conveyer mounted in said frame above the shovel and arranged to move the stones rearwardly over the shovel, a pair of rearwardly converging rake bars carried by the main frame and having teeth by which to remove the stones from plowed land and gather them in front of the shovel, a clutch controlled operative connection between said elevators and the axle; means for raising, lowering and holding said shovel at the desired elevation, means for raising, lowering and holding the rake at the desired elevation, and a transversely inclined conveyer in rear of the main conveyer and operatively connected with the axle, for disposing of the stones beyond the side of the machine.

3. In a stone gathering and removing machine, the combination of a pair of ground wheels and axle in same, a main frame mounted on the axle and having means for engaging and drawing it on said wheels, a forwardly inclined endless main conveyer having a frame, pivoted at its rear end to swing up and down with the front end, a shovel carried by said front end, a short endless conveyer mounted in said frame above the shovel and arranged to move the stones rearwardly over the shovel, a pair of rearwardly converging rake bars carried by the main frame and having teeth by which to remove the stones from plowed land and gather them in front of the shovel, a clutch controlled operative connection between said elevators and the axle; means for raising, lowering and holding said shovel at the desired elevations, means for raising, lowering and holding the rake at the desired elevations, said means for drawing the machine comprising draft appliances, a rearwardly inclined draw bar connecting the draft appliance with the pivoted frame holding the shovel, said draw-bar having a slot, a pivot inserted through the slot and fixed in the main frame, and the means for raising and lowering the shovel being attached to said draw bar rearward of said pivot.

1,216,752. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Jan. 7, 1916. Serial No. 70,789. (Cl. 70—93.)

1. In a cylinder lock, the combination of a casing, a key plug rotatable therein, a roll-back fixed to the rear end of the key plug, a sleeve section surrounding the key plug

at the rear part thereof, a rollback fixed to said sleeve section in front of said first rollback, a second sleeve section surrounding the key plug in front of the first sleeve section, a group of pin tumblers coöperating with the key plug, first sleeve section and casing, a second group of pin tumblers coöperating with the key plug, second sleeve section and casing, a change key to operate the key plug individually and thereby actuate its rollback individually, a master key to operate the key plug and the front or second sleeve section so that the key plug rollback is rotated individually, a display key to rotate the key plug and the rear sleeve section so that both rollbacks are rotated together, and an emergency key to rotate the front sleeve section as well as the rear key section, key plug and both rollbacks; substantially as described.



2. In a cylinder lock, the combination of a casing, a key plug rotatable therein, a pair of sleeve sections, a rollback fixed to the key plug, a rollback fixed to one of said sleeve sections, a pin tumbler coöperating with the key plug, casing and one of said sleeve sections, a second pin tumbler coöperating with the key plug, casing and the other sleeve section, two keys bitted to rotate said key plug rollback individually, one of said keys operative on the key plug alone, and the other on the key plug and one of said sleeves, and two keys to operate both of said rollbacks together, one of said keys bitted to rotate the rollback-carrying sleeve section, and the other bitted to rotate both of said rollback sections as well as the key plug; substantially as described.

1,216,753. WINDOW. FREDERICK PICKERING WALKER, Braintree, England, assignor to The Crittall Manufacturing Company, Limited, Manor Works, Braintree, England. Filed Aug. 12, 1916. Serial No. 114,645. (Cl. 20—43.)

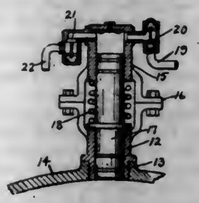


1. The combination with a window frame having vertical channels in the jambs, of a sash having sash bars provided with pivots sliding in said channels, and two weather strips fixed to each sash bar one above and the other below the pivot and one of which is on the outside of the sash while the other is on the inside thereof; all of said strips being in contact with the jambs when the window is closed.

2. The combination with a window frame having vertical channels in the jambs, of a sash having sash bars provided with pivots sliding in said channels, and two weather strips fixed to each sash bar one above and the other below the pivot and one of which is on the outside of the sash while the other is on the inside thereof, all of said strips being in contact with the jambs when the window is closed, means for holding the sash in closed position, and devices placed under tension when the sash is closed for turning the sash on its pivots as soon as the sash is released from the holding means.

3. The combination with a window frame having vertical channels in the jambs, of a sash having sash bars provided with pivots sliding in said channels, two weather strips fixed to each sash bar one above and the other below the pivot and one of which is on the outside of the sash while the other is on the inside thereof, all of said strips being in contact with the jambs when the window is closed, and springs associated with the pivots of the sash which are placed under tension when the sash is closed and which serve to turn the sash slightly on its pivots to withdraw the weather strips of the sash from the jambs and to thus facilitate the raising and lowering of the sash.

1,216,754. PUMPING APPARATUS. LUTHER H. WATTLES, Providence, R. I., assignor, by mesne assignments, to Frank W. Smith, Warren, R. I. Filed Dec. 29, 1913. Serial No. 809,191. (Cl. 103—67.)

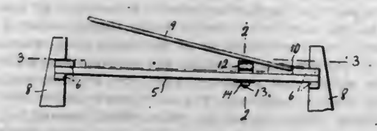


1. The combination with an internal combustion engine cylinder, of a pump cylinder communicating with the interior thereof, an independent compression cylinder supported by said pump cylinder and in spaced relation thereto, means for separately uniting said cylinders, a piston having its ends working in the pump cylinder and compression cylinder respectively, and a spring interposed between the spaced ends of cylinders for returning the piston to normal position when the pressure within the engine cylinder is reduced, and means for limiting the movement of the piston under the action of said spring.

2. The combination with an internal combustion engine cylinder, of a pump cylinder communicating with the interior thereof, an independent compression cylinder supported by said pump cylinder and in spaced relation thereto, means for separably uniting said cylinders, a piston having its ends working in the pump cylinder and compression cylinder respectively, said piston having an abutment flange, a spring interposed between the inner end of the compression cylinder and said abutment flange for returning the piston to normal position when the pressure within the engine cylinder is reduced, said abutment flange coöperating with the outer end of the pump cylinder to limit movement of the piston under the action of said spring.

3. The combination with an internal combustion engine cylinder, a pump cylinder communicating with the interior thereof and provided with a bracket, an independent compression cylinder provided with a bracket complemental to the bracket of said pump cylinder, means for separably uniting said brackets, a piston having its ends working in the pump cylinder and compression cylinder respectively, a spring interposed between the cylinders and said brackets for returning the piston to normal position when the pressure within the engine cylinder is reduced, and means for limiting the movement of the piston under the action of said spring.

1,216,755. SEAT-BOARD FOR VEHICLES. OSCAR C. WHITTEN, Star City, Ark. Filed Feb. 5, 1916. Serial No. 76,408. (Cl. 267—8.)

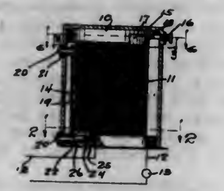


1. A seat for vehicles including a base, a seat board proper hinged at one of its ends upon said base, and a leaf spring interposed between the seat board and the base and longitudinally adjustable with respect thereto.

2. A seat for vehicles including a base, a seat board proper hingedly mounted at one of its ends upon said base, a transversely disposed convoluted leaf spring interposed between the seat board and said base, and means for adjusting said leaf spring longitudinally upon the base.

3. A seat for vehicles including a base, a seat board proper hingedly mounted upon the base at one of its ends, said base being provided with a longitudinal slot adjacent to the hinged end of the seat board, a transversely disposed convoluted leaf spring arranged between the seat board and the base, and a bolt extending through one end of said leaf spring and longitudinally adjustable in said slot.

1,216,756. DIMMER FOR ELECTRIC LAMPS. IRA C. WILLIAMS and CHARLES F. WILLIAMS, Albany, Ind.; said Ira C. Williams assignor to Carey W. Derrickson, Indianapolis, Ind. Filed June 12, 1916. Serial No. 103,248. (Cl. 219—56.)



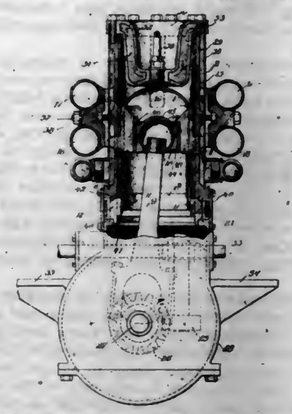
1. A rheostat including a resistance wire formed in a coil, a spool, a ridge on the surface of said spool about which said coil passes, a bar connected to said resistance wire, a contact brush secured within said spool for making contact with said bar, and means for engaging and making contact with the raised portion of said coil for cutting in and out said resistance.

2. A rheostat including a resistance wire formed in a coil, a spool, a ridge on the surface of said spool about which said coil passes, a housing adapted to inclose said spool, a contact bar secured to said housing and adapted to make contact with said coil as it engages said ridge for cutting in and out said resistance, a bar connected to said resistance wire passing circumferentially around the lower portion of said housing, and a contact brush secured within said spool for making contact with said last mentioned bar.

1,216,757. VALVE MECHANISM FOR EXPLOSIVE-ENGINES. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed July 1, 1913. Serial No. 776,787. (Cl. 123—45.)

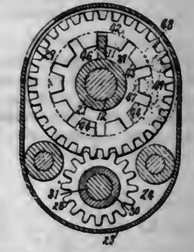
1. The combination with an engine cylinder having suitable ports and a piston working in said cylinder, of a longitudinally divided sleeve embracing the piston and having its meeting margins which overlap the piston provided, respectively, with recesses and corresponding projections to fit in said recesses, for preventing leakage along the joint between the two margins.

2. The combination with a thin walled hollow piston having at intervals ribs projecting inwardly from said walls, of a socket bearing held by said ribs at some distance from all said walls, and a piston rod provided with a ball held in said bearing; whereby all the thin walls



are in direct free communication with the space below the open end of the piston.

1,216,758. COMPUTING-MACHINE. WALTER WRIGHT, New York, N. Y., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Aug. 3, 1911. Serial No. 642,183. (Cl. 235—139.)



1. The combination of a series of computing wheels, a master wheel, provision being made for relative movement in axial direction between the master wheel and computing wheels, tens-carrying devices to engage said computing wheels, gears on the computing wheels to mesh with said tens-carrying devices, said gears and said computing wheels being relatively rotatable, and rotatable devices to couple the computing wheels to their associated gears respectively; said coupling devices being disposed to the left of said master wheel and associated therewith in respect to said relative movements in axial direction.

2. The combination of a series of computing wheels, a master wheel, provision being made for relative movement in axial direction between the master wheel and computing wheels, Geneva lock pinions to engage said computing wheels, each of the latter having a mutilated gear to coöperate with the Geneva-lock pinion, tens-carrying pinions connected to said Geneva-lock pinions, gears associated with the computing wheels to mesh with said tens-carrying pinions, said gears and said computing wheels being relatively rotatable, and means for alining each computing wheel and its associated gear below the master wheel, said alining means acting through the computing wheel in engagement with the master wheel.

3. The combination of a series of computing wheels, a master wheel, provision being made for relative movement in axial direction between the master wheel and computing wheels, pinions to engage said computing wheels, each of the latter having means to coöperate with the pinion, tens-carrying pinions connected to said pinions,

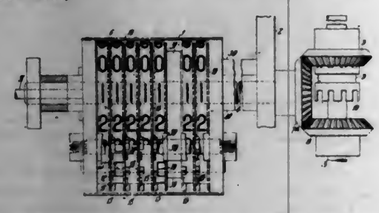
gears associated with the computing wheels to mesh with said tens-carrying pinions, said gears and said computing wheels being relatively rotatable, and rotatable devices to couple the computing wheels to their associated gears respectively.

4. The combination of a series of computing wheels having internal teeth or notches, an internal master wheel to engage said teeth or notches, provision being made for relative movement in axial direction between the master wheel and the computing wheels, tens-carrying devices to engage said computing wheels, gears associated with the computing wheels to mesh with said tens-carrying devices, said gears having internal teeth or notches registering with those on said computing wheels, said gears and said computing wheels being relatively rotatable, and rotatable internal devices to engage said teeth or notches to couple the computing wheels to their associated gears respectively.

5. The combination of a series of computing wheels having internal teeth or notches, gears one associated with each computing wheel, said gears having internal teeth or notches registering with those of said computing wheels, an internal master wheel to engage the teeth or notches in said computing wheels only to thereby rotate said computing wheels relatively to said gears, provision being made for relative movement in axial direction between the master wheel and the computing wheels, tens carrying devices inclusive of Geneva-lock pinions to engage said computing wheels and be locked thereby and cooperate with the gears associated therewith, and means to aline computing wheels and gears of lower orders than the gear and wheel engaged by the master wheel, said alining means acting through the medium of said Geneva-lock pinions to aline the gear associated with the computing wheel engaged at the time by the master wheel.

[Claims 6 to 23 not printed in the Gazette.]

1,216,759. COMPUTING-MACHINE. WALTER WRIGHT, New York, N. Y., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed July 25, 1912, Serial No. 711,396. Renewed July 7, 1916. Serial No. 108,764. (Cl. 235—139.)



1. In a computing machine, the combination with computing wheels, and a carry-over mechanism for holding each computing wheel locked from the computing wheel below, of detents for reducing the spiral effect of said computing wheels occasioned by lost motion in the carry-over mechanism, said detents being less than half as numerous as computing wheels.

2. In a computing machine, the combination with computing wheels, and carry-over wheels constantly in mesh therewith, of detents on certain of said carry-over wheels for breaking the spiral train in said computing wheels occasioned by lost motion in the carry-over wheels, said detents being less than half as numerous as carry-over wheels.

3. The combination with a computing wheel, of a carry-over wheel forming a Geneva lock therewith, a hub on said carry-over wheel, a depression in said hub, a spring detent working in said hub, and an adjoining carry-over wheel practically held alined by a detent on a computing wheel of lower denomination.

4. In a computing machine, the combination with computing wheels and a master wheel for turning said computing wheels *seriatim*, of a carry-over device for each computing wheel above the units wheel, means for controlling said carry-over device from the computing wheel below, and detaining means holding certain of said carry-over devices to keep their computing wheels alined; the spiral effect upon the computing wheels, occasioned by lost motion in the carry-over device, being thereby broken at a plurality of denominations of the computing wheels.

5. In a computing machine, the combination with computing wheels and a master wheel for turning said computing wheels *seriatim*, of a carry-over device for each computing wheel above the units wheel, means for controlling said carry-over device from the computing wheel below, detaining means holding certain of said carry-over devices to keep their computing wheels alined; and a partition between two of said computing wheels for preventing the master wheel from turning when between said computing wheels so that said master wheel may pass unobstructedly from said partition into either of said computing wheels on each side thereof and vice versa.

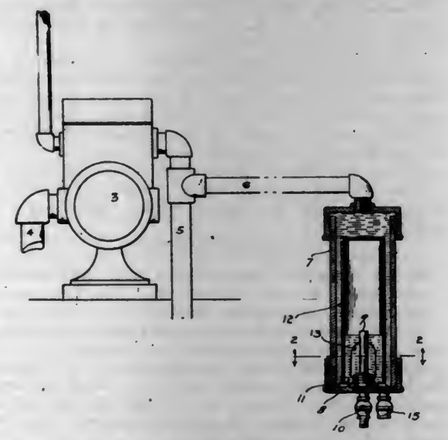
[Claims 6 to 15 not printed in the Gazette.]

1,216,760. COPPER COMPOUNDS OF ORTHOOXYAZO DYESTUFFS AND A PROCESS OF MAKING SAME. BERTHOLD WUTH, BERTRAM MAYER, CARL JAGERSPACHER, and EUGEN ANDERWERT, Basel, Switzerland, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Aug. 3, 1915. Serial No. 43,413. (Cl. 8—1.)

1. The herein described process for the manufacture of new copper compounds of orthooxyazo dyestuffs, soluble in water, consisting in acting with a copper compound on orthooxyazo dyestuffs sensible to copper in the presence of a solvent.

2. As new products the described new copper compounds of orthooxyazo dyestuffs, which are soluble in water, from which the copper cannot be precipitated with sodium carbonate, soda lye and ammonia and which constitute powders of metallic luster dissolving in water to clear deep colored solutions, which do not change on addition of soda lye or of sodium carbonate and from which animal fibers as wool, silk and leather, further straw and wood-bast are dyed, according to the methods used for acid dyestuffs, various tints showing without any further treatment a very good fastness to washing and to light.

1,216,761. WATER-SUBMERGED AIR-CHAMBER FOR WATER-PIPES. HOWARD H. YORK, Logansport, Ind. Filed Apr. 27, 1916. Serial No. 93,988. (Cl. 137—71.)

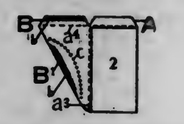


1. The combination with a pipe containing water under pressure, of a closed tank, a second pipe connecting the interior of the first pipe with the interior of the tank and filling the closed tank with water, a second tank within the first tank air tight except at openings through its lower portion, a stand pipe terminating at one end outside of the first tank and at its other end within the second tank above the highest opening in the second tank, said second tank containing air which is subjected to the direct pressure of the water in the tanks, the water of the first tank entirely surrounding the second tank, with a larger volume at the place of its water supply to regulate the temperature in the second tank.

2. The combination with a pipe containing water under pressure, of a closed tank, a second pipe connecting the interior of the first pipe with the interior of the tank and filling the closed tank with water, a second tank within the first tank air tight except at openings through its lower portion, a stand pipe terminating at one end outside of the first tank and at its other end within the second tank above the highest opening in the second tank, said second tank containing air which is subjected to the direct pressure of the water in the tanks, the water of the first tank entirely surrounding the second tank, with a larger volume at the place of its water supply to regulate the temperature in the second tank, and means for regulating the amount of air in the second tank.

3. The combination with a water service pipe, of a closed water tank having its interior in communication with the interior of the service pipe, an air tank submerged in the water of the first tank and connecting with the latter at is lower portion, a stand pipe terminating at one end outside of the water tank and at its other end within the air tank above the highest opening thereto and a cock to open and close the stand pipe.

1,216,762. COMBINED SAFETY LETTER-SHEET AND ENVELOP. HENRY W. ZEMKE, Milwaukee, Wis. Filed Apr. 4, 1911. Serial No. 618,906. (Cl. 120—74.)



The combination and arrangement, in a letter-sheet and envelop, having a plurality of folding sections, one of the sections having an end flap; and a combined end and side flap provided with a row of perforations and an adhesive coating extended along limited inner surface areas; said sections being indented at intervals, to fold said combined flap inwardly, so as to permanently unite the inner faces of said end flaps, thereby providing an envelop having one side and end open, to fold the adjacent sections in or out, for the purpose as specified.

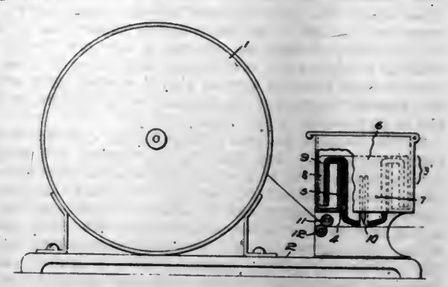
1,216,763. STRIP-SERVING DEVICE. FREDERICK S. ANABLE, Brookline, Mass., assignor to National Binding Machine Company, Boston, Mass., a Corporation of Maine. Original application filed Aug. 19, 1908, Serial No. 449,320. Divided and this application filed June 23, 1915. Serial No. 35,930. (Cl. 91—14.5.)

1. A strip serving device comprising a strip support, a moistener, a stationary severing device housed by the moistener, and means operated by strip pressure to bring the strip into severing relation with said severing device.

2. A strip serving device comprising a strip support and a moistener mounted for movement toward and from the service path of the strip, and a severing blade arranged within the area of the moistener.

3. A strip serving device comprising a strip support, a severing blade above the service path of the strip, and a moistener guarding said severing blade.

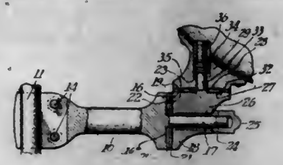
4. A strip serving device comprising a strip support, a stationary severing blade above the path of the strip, and a movable moistener above the service path of the strip adapted to house said blade during the moistening action but to expose said blade upon the application of strip pressure.



5. A strip serving device comprising a strip support, a severing blade, and a movable, gravity-impelled moistener mounted above the service path of the strip.

[Claims 6 to 12 not printed in the Gazette.]

1,216,764. LAMP-BRACKET. CARL E. ANDERSON, Chicago, Ill., assignor to Charles H. Foster, Chicago, Ill. Filed Feb. 23, 1915. Serial No. 10,036. (Cl. 240—57.)



1. The combination with a lamp, of a supporting bracket therefor, a pin extending outwardly from said bracket, a sleeve embracing said pin and having a nut on the outer end thereof, an intermediate member having a bearing on said sleeve and engaged by said nut, a thumb nut on the end of said pin to engage said nut, a pin associated with said intermediate member on which a lamp supporting member is pivoted, said intermediate member having frictional connection with said bracket and said lamp supporting member.

2. The combination with a lamp, of a supporting bracket therefor having a circular end face and a pin extending outwardly from the center thereof, said face having a slightly depressed portion about said pin, an intermediate member journaled on said pin and having a circular face with a slightly depressed portion about the center thereof, friction disks secured against said depressed faces to be in mutual contact, a pin associated with said intermediate member, and a lamp supporting member pivoted on said pin and having a frictional connection with said intermediate member.

3. The combination with a lamp having a casing, of a fitting secured to said lamp casing having a bearing opening therein, the axis of which lies in an axial plane of the casing, a member having a pin extending therefrom through said opening and forming a journal for said fitting, said member having an abutment with which said fitting frictionally engages, said member having a bearing opening therethrough the axis of which is substantially perpendicular to the axis of the pin, a second member having a pin extending through the opening in said first member forming a journal for said second member, said second member being provided with an abutment with which said first member frictionally engages, and being provided with means for securing it to a support.

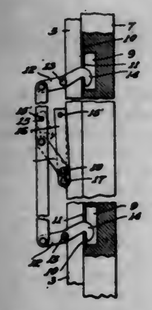
4. The combination with a lamp having a casing, of a fitting secured to said lamp casing having a bearing opening therein, the axis of which lies in an axial plane of the casing, a member having a pin extending therefrom through said opening and forming a journal for said fitting, said member having an abutment with which said fitting frictionally engages, a spring surrounding

said pin and bearing on said fitting to force it against said abutment, said member having a bearing opening therethrough the axis of which is substantially perpendicular to the axis of the pin, a second member having a pin extending through the opening in said first member forming a journal for said second member, said second member being provided with an abutment with which said first member frictionally engages and being provided with means for securing it to a support.

5. The combination with a lamp having a casing, of a fitting secured to said lamp casing having a bearing opening therein, the axis of which lies in an axial plane of the casing, a member having a pin extending therefrom through said opening and forming a journal for said fitting, said member having an abutment with which said fitting frictionally engages, a spring surrounding said pin and bearing on said fitting to force it against said abutment, said member having a bearing opening therethrough the axis of which is substantially perpendicular to the axis of the pin, a second member having a pin extending through the opening in said first member forming a journal for said second member, said second member being provided with an abutment with which said first member frictionally engages and being provided with means for securing it to a support, and means for holding said spring on said pin accessible from within said casing.

[Claim 6 not printed in the Gazette.]

1,216,765. DOOR-LOCK. CARL M. ANDERSON, Havana, N. D. Filed Sept. 7, 1916. Serial No. 118,827. (Cl. 70—102.)

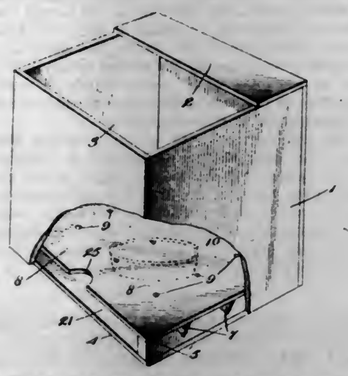


1. The combination, with a door post, of a door, latches mounted on said door and having hooked ends for engaging with said post for locking the door in its closed position, said hooked ends also operating to draw said door against said post to clamp them together, a bar pivotally connected with the corresponding ends of said latches, an operating lever mounted on said door and a link connecting said operating lever with said bar, the movement of said lever reciprocating said bar to release or lock said latches.

2. The combination, with a door post, of a sliding door, latches pivoted at points intermediate to their ends on said door near one edge thereof and having means for drawing said door against said post and locking them together, a bar connecting the ends of said latches, and operating lever mounted on said door and a link connecting said operating lever near its pivot with said bar, the oscillation of said operating lever in one direction shifting the pivot of said link on said lever to one side of the pivot of said operating lever for moving said locking latches to their locking position, and the movement of said operating lever in the opposite direction retracting said locking latches from their locking position.

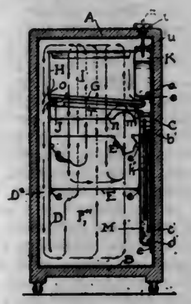
3. The combination, with a door post having recesses therein and slotted plates fitting over said recesses, of a door mounted to slide past said post, latches pivoted at points intermediate to their ends on said door near one edge thereof and upon a level substantially with said recesses, said latches having hooked ends for entering the slots in said plates and drawing said door against the face of said plate, a bar having its ends connected with the outer portions of said latches, an operating lever pivoted on said door and a link connecting said operating lever near its pivot with said bar at a point adjacent the middle portion thereof, said latches operating in a substantially vertical plane and the rocking of said lever in one direction withdrawing the hooked ends of said latches from engagement with said plates and the movement of said lever in the opposite direction rocking said latches to thrust the hooked ends thereof through said slotted plates.

1,216,766. DISINFECTING-NEST. OLIVER B. ANDREWS, Chattanooga, Tenn. Filed Dec. 4, 1916. Serial No. 134,953. (Cl. 119—45.)



In a disinfecting nest the combination of a main body portion provided with a bottom, a disinfectant receptacle adapted to rest on said bottom; means for holding said receptacle on said bottom; a false bottom provided with a cutaway portion to facilitate its ready removal and replacement and with a plurality of disinfectant conducting openings; a pair of strips provided with disinfectant conducting openings adapted to hold said false bottom at a predetermined distance above said disinfectant receptacle, said false bottom and said strips being of dimensions less than the interior of the main body portion of the nest to provide a disinfectant conducting annular space around the exterior of said false bottom communicating with the openings in said strips; and a strip on the top to partially close the entrance to said nest, substantially as described.

1,216,767. REFRIGERATOR OR ICE-CHEST. HENRY AUERBACH, Albany, N. Y. Filed Oct. 22, 1913. Serial No. 796,726. (Cl. 62—55.)



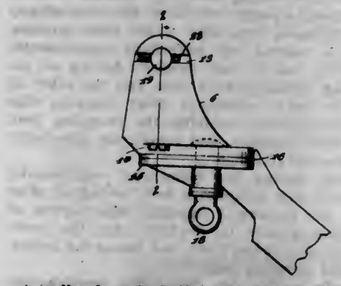
1. A refrigerator comprising a receptacle a cooling tank M arranged upright near one wall of the receptacle and removable therefrom, a wall D detachably secured in

spaced relation to one of the receptacle walls to form an air flue, a shelf E and rear wall E', supported by said tank and said wall D, a member C having a trap and adapted to be partly inserted into said tank and to close the top thereof, and removable ice supporting means supported upon said partition D and said member C and inclining downwardly toward the latter.

2. A refrigerator comprising a receptacle, a cooling tank M arranged upright near one wall of the receptacle and removable therefrom, a wall D detachably secured in spaced relation to one of the receptacle walls to form an air flue, a removable, horizontal shelf E extending between said tank and said wall D to divide the receptacle into compartments and a rear wall E' extending upwardly from said shelf E and spaced from a wall of the receptacle to form an air flue.

3. A refrigerator comprising a receptacle, a cooling tank M arranged upright near one wall of the receptacle and means for draining the water from the ice compartment into said tank, a removable shelf E dividing said receptacle into compartments, a wall D spaced from one wall of the receptacle to form an air flue coextensive with the compartments divided by said shelf E, a vertical wall E' extending upwardly from said shelf E and spaced from another wall of said receptacle to form an air flue, means above said shelf E dividing off an ice compartment and an upwardly extending wall H spaced from the same wall of the receptacle as the wall E' to form an air flue open at the top of the ice compartment.

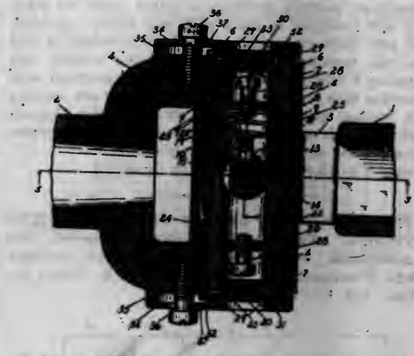
1,216,768. LUBRICATING-AXLE. GEORGE L. BIRCH, Wilton, Ky. Filed Oct. 1, 1913. Serial No. 792,837. (Cl. 64—27.)



A trolley harp including a substantially U-shaped body, one of the arms of said body being enlarged transversely and provided with a longitudinally extending lubricant chamber, an axle having its ends journaled through the arms of said body and arranged to project to each side thereof, said axle provided with a centrally arranged longitudinally extending compartment terminating short of the ends thereof, said axle being passed through said lubricant chamber, and provided with an aperture communicating with said compartment and with said chamber, said axle being further provided with an egress opening to communicate with said compartment substantially intermediate its ends whereby the lubricant may be supplied to the trolley wheel, the arms of said body portion provided with receiving grooves adjacent the ends of said axle, cotter pins to be passed through the ends of said axle beyond the outer faces of said arms to lie in said grooves whereby said axle will be held against turning movement, said axle being removable from either side of said arms, and a force feed member to be removably mounted in said lubricant chamber to force the lubricant to said compartment by way of said first mentioned aperture, as and for the purpose specified.

1,216,769. UNIVERSAL JOINT. MAURICE E. BLOOD, Kalamazoo, Mich., assignor to Mary L. Blood, Kalamazoo, Mich. Filed May 17, 1916. Serial No. 98,071. (Cl. 74—19.)

1. The combination of shaft members having arms provided with journal pin bearing openings, journal bushings shouldered and externally threaded at their inner ends disposed in said bearing openings with their shoulders engaging the inner sides of the arms, a journal member provided with journal pin openings disposed at right angles to each other, the diameter of one of said openings exceeding that of the other, said journal member being provided with bearing plate seats about said openings, bearing plates disposed in said seats to coact with the inner ends of said bushings, packing members threaded upon the inner ends of said bushings to coact with said journal member, journal pins disposed in said journal pin openings of said journal pin member, the larger pin being tubular and constituting a lubricant chamber and being provided with a transverse hole registering with the smaller pin opening of said journal member, the smaller pin being disposed through said hole and provided with lubricant chambers, there being lubricant passages in said journal pins opening to said bushings, and closures for said lubricant chambers comprising caps and fibrous plugs disposed to cover said lubricant passages.



2. The combination of shaft members having arms provided with journal pin bearing openings, journal bushings shouldered at their inner ends disposed in said bearing openings with their shoulders engaging the inner sides of the arms, a journal member provided with journal pin openings disposed at right angles to each other, the diameter of one of said openings exceeding that of the other, journal pins disposed in said journal pin openings of said journal pin member, the larger pin being tubular and constituting a lubricant chamber and being provided with a transverse hole registering with the smaller pin opening of said journal member, the smaller pin being disposed through said hole and provided with lubricant chambers, there being lubricant passages in said journal pins opening to said bushings, and closures for said lubricant chambers comprising caps and fibrous plugs disposed to cover said lubricant passages.

3. The combination of shaft members having arms provided with journal pin bearing openings, journal bushings shouldered and externally threaded at their inner ends disposed in said bearing openings with their shoulders engaging the inner sides of the arms, a journal member provided with journal pin openings disposed at right angles to each other, the diameter of one of said openings exceeding that of the other, said journal member being provided with bearing plate seats about said openings, bearing plates disposed in said seats to coact with the inner ends of said bushings, packing members threaded upon the inner ends of said bushings to coact with said journal member, journal pins disposed in said journal pin openings of said journal pin member, the larger pin being tubular and constituting a lubricant chamber and being provided with a transverse hole registering with the smaller pin opening of said journal member; the smaller pin being disposed through said hole and provided with lubricant chambers, and closures for said lubricant chambers.

4. The combination of shaft members having arms provided with journal pin bearing openings, journal bushings

shouldered at their inner ends disposed in said bearing openings with their shoulders engaging the inner sides of the arms, a journal member provided with journal pin openings disposed at right angles to each other, the diameter of one of said openings exceeding that of the other, journal pins disposed in said journal pin openings of said journal pin member, the larger pin being tubular and constituting a lubricant chamber and being provided with a transverse hole registering with the smaller pin opening of said journal member, the smaller pin being disposed through said hole and provided with lubricant chambers, and closures for said lubricant chambers.

5. The combination of shaft members provided with journal pin bearing openings, journal bushings disposed in said bearing openings, a journal member provided with journal pin openings disposed at right angles to each other, the diameter of one of said openings exceeding that of the other, said journal member being provided with bearing plate seats about said openings, bearing plates disposed in said seats to coact with the inner ends of said bushings, packing members mounted upon the inner ends of said bushings to coact with said journal member, journal pins disposed in said journal pin openings of said journal pin member, the larger pin being tubular and constituting a lubricant chamber and being provided with a transverse hole registering with the smaller pin opening of said journal member, the smaller pin being disposed through said hole and provided with lubricant chambers, and closures for said lubricant chambers.

[Claims 6 to 18 not printed in the Gazette.]

1,216,770. MANIFOLD DEVICE FOR ADDRESSING ENVELOPS. FRANCIS P. BONHAM, deceased, San Francisco, Cal., by Frances Georgia Bonham, administratrix, Woodland, Cal. Filed May 5, 1915. Serial No. 26,124. (Cl. 11—23.)



1. In a device of the class described the combination of a supporting sheet coated on one side with transfer material, and a strip prepared with transfer material said strip being attached on the uncoated side of said sheet and having a portion thereof separable from said sheet so that an envelop may be slipped between the strip and sheet into such a position as to receive only the address printed on a letter head superposed on said strip.

2. In a device of the class described the combination of a supporting sheet coated on one side with transfer material and a strip prepared with transfer material, said strip being attached at one end on the uncoated side of said sheet near the top edge of said sheet and having a portion thereof separable from the sheet so that an envelop may be slipped between the strip and sheet into such a position as to receive only the address printed on a letter head superposed on said strip.

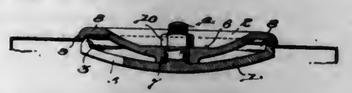
3. In a device of the class described the combination of a supporting sheet coated on one side only with transfer material, and a strip prepared with transfer material overlapping a portion of the uncoated side of said sheet, said strip being of such size and so attached to said sheet that an envelop may be slipped between the strip and sheet into such a position as to receive from said transfer material of the strip only the address printed on a letter head superposed on said strip.

4. In a device of the class described the combination of a supporting sheet coated on one side with transfer material, a strip prepared with transfer material overlapping a portion of the uncoated side of said sheet and having a part of its lower edge cut away, the strip being so attached to said sheet that an envelop may be slipped between the strip and sheet into such a position as to receive only the address printed on a letter head superposed on said strip, said cut-away part being provided to prevent the impression of the salutation on the envelop.

5. In a device of the class described the combination of a supporting sheet and a strip prepared with transfer material superposed on a portion of said sheet near the upper end thereof, a part of said strip being cut away at the lower left edge thereof, and means whereby said strip is so attached to said sheet near the upper edge thereof that an envelop registered along the upper edge and the upper left edge of the sheet may be positioned between the strip and sheet so as to receive only the address printed on a letter head superposed on said strip, the cut-away part of said strip serving to prevent a transfer of the impression of the salutation of the letter head.

[Claims 6 to 8 not printed in the Gazette.]

1,216,771. DRUM-CAP. LEVIS M. BOOTH, Plainfield, N. J. Filed Mar. 7, 1916. Serial No. 82,726. (Cl. 220—124.)



1. A receptacle sealing cap comprising complemental clamping members, one of said members having an upstanding peripheral clamping bead edge, and the other of said members having a peripheral groove for telescopically receiving said clamping bead edge of the other member.

2. A receptacle sealing cap comprising complemental clamping members, one of said members having an annular upstanding clamping bead edge and the other of said members having a continuous offset clamping edge portion for telescopically receiving the clamping bead flange of the other member, and means for detachably holding said members together.

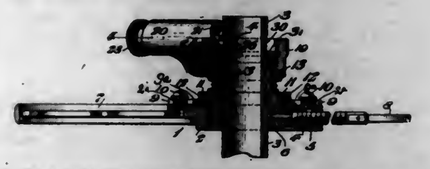
3. A receptacle sealing cap comprising complemental clamping members each including a body having an offset clamping edge, the peripheral clamping edge portion of one member telescopically interlocking with the corresponding edge portion of the other, and means for detachably holding said members together.

4. A receptacle sealing cap comprising complemental clamping members each including a body having a flanged peripheral edge portion, the peripheral edge portion of one member telescopically interlocking with the edge portion of the other, one of said members having a radially disposed laterally opening clearance slot, and means for detachably holding said members together.

5. A receptacle sealing cap comprising an anchor disk having a clearance slot, an upstanding annular flange formed at the edge thereof, and a cover disk having an annular projecting bead flange providing a joint shoulder for said annular flange on the anchor disk, and means for clamping the disks together.

[Claim 6 not printed in the Gazette.]

1,216,772. TUBE CUTTING AND THREADING TOOL. CHARLES F. BOTTO, Philadelphia, Pa. Filed Sept. 20, 1916. Serial No. 121,138. (Cl. 10—110.)



1. In a tube threading and severing device a primary cylinder and an auxiliary cylinder movable thereon, said cylinder having engaging screw threads, a two part reversible cutter on said auxiliary cylinder, and means on the device adapting said auxiliary cylinder to be rotated with said primary cylinder for severing purposes, or independently thereof for threading purposes.

2. In a tube threading and severing device, a primary cylinder, a support therefor, means for interlocking and disengaging said cylinder from said support, an auxiliary cylinder movably fitted on said primary cylinder, a two part reversible cutting member, and a carrier on said auxiliary cylinder for said cutter.

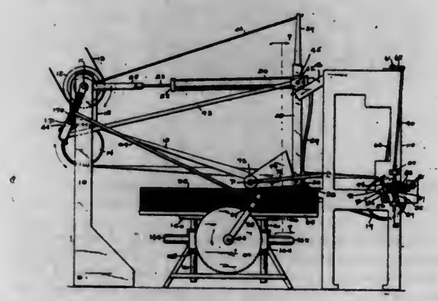
3. In a tube threading and severing device, a primary rotatable cylinder, a support therefor, a member on said support adapted to engage said cylinder, and interlock it with said support and to disengage it from said cylinder to release the latter from said support and a reversibly mounted cutter.

4. In a tube threading and severing device, a primary rotatable cylinder, a support therefor, a member which is guided on said support and adapted to engage said cylinder, and means on said member and support adapted to hold said member free of said primary cylinder and a reversibly mounted cutter.

5. In a tube threading and severing device, a rotatable cylinder, a cutter, a movable carrier for said cutter, a boss on said cylinder containing said carrier, and means on said carrier and boss for operating said carrier in opposite directions, said cutter having cutting and severing cutting edges and being reversibly mounted on said carrier.

[Claims 6 to 12 not printed in the Gazette.]

1,216,773. SHEET-FEEDING MACHINE. EARL T. CAMPBELL, Elwood, Ind. Filed July 24, 1916. Serial No. 110,940. (Cl. 113—113.)



1. A sheet feeding machine including a suction head, a suction frame for carrying said head in position to engage and move a sheet, suction means carried by said frame and in communication with the suction head and stationary means with which said suction means is connected arranged so that the movement of the suction frame causes the operation thereof.

2. A sheet feeding machine including a suction head, a suction frame for carrying said head in position to engage and move a sheet, a suction pump carried by said frame and in communication with the suction head, and stationary means with which said pump is connected arranged so that the movement of the suction frame causes the operation of the pump.

3. A sheet feeding machine including a suction head, a frame for carrying said head so as to engage and move a sheet, a suction pump carried by said frame and operated by the movement thereof in communication with the suction head, a crank shaft, and means driven by said shaft for causing the movement of said suction frame.

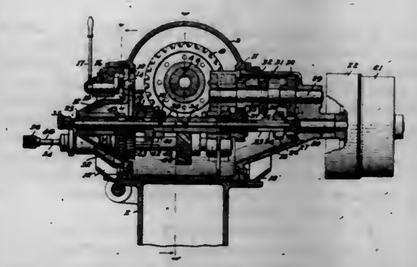
4. A sheet feeding machine including a suction head, a frame for carrying said head so as to engage and move a sheet, a pump cylinder mounted in said suction frame in communication with the suction head, a piston in said cylinder adapted to be held in a relatively fixed position, a crank shaft, and means driven by said shaft for causing the movement of said suction frame.

5. A sheet feeding machine including a suction head, a frame for carrying said head so as to engage and move a sheet, a pump cylinder mounted in said suction frame in communication with the suction head, a piston in said cylinder adapted to be held in a relatively fixed position, a crank shaft, and means driven by said shaft for causing the movement of said suction frame, said pump cylinder being provided with an opening near the limit of the forward movement of said suction frame for admission of air into the pump to cause the suction head to release the sheet.

[Claims 6 to 17 not printed in the Gazette.]

1,216,774. [WITHDRAWN.]

1,216,775. VARIABLE-SPEED GEARING. CONRAD M. CONRADSON, Madison, Wis. Filed May 8, 1916. Serial No. 96,073. (Cl. 74—36.)



1. The combination, with a spindle, and gears for low and high speed work secured thereon, of oscillating driving gears having a common axis of oscillation and mounted to mesh respectively and alternately with said spindle gears and means for varying the speed of said driving gears.

2. The combination, with a spindle and gears for low and high speed work secured thereon, of oscillating driving gears having a common axis of oscillation at right angles substantially to the axis of said spindle, said spindle gears being mounted to mesh respectively and alternately with said driving gears and means for varying the speed of said driving gears.

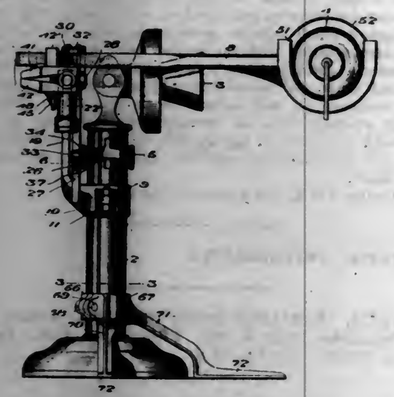
3. The combination, with a spindle and gears for low and high speed work secured thereon, of a rocking carrier having its axis at right angles substantially to the axis of said spindle, and driving gears mounted in said carrier to mesh respectively and alternately with said spindle gear and independent variable driving connections for said driving gears.

4. A variable speed gearing comprising a spindle, a pair of worm wheels thereon, and a pair of driving worms mounted to mesh respectively and alternately with said wheels, the speed ratio of one wheel to its worm being different from the speed ratio of the other wheel and its worm, whereby a difference in spindle speed may be obtained through the alternate engagement of said spindle worm wheels with said worms.

5. A variable speed gearing comprising a spindle, a pair of worm wheels thereon, a rocking carrier, and a pair of driving worms mounted in said carrier to mesh respectively and alternately with said wheels, the speed ratio of one wheel to its worm being different from the speed ratio of the other wheel to its worm, whereby a difference in spindle speed may be obtained through the alternate engagement of said spindle worm wheels with said worms.

[Claims 6 to 25 not printed in the Gazette.]

1,216,776. TELEPHONE ATTACHMENT. JOHN J. CONVERY, New York, N. Y. Filed July 25, 1916. Serial No. 111,245. (Cl. 179—147.)



1. A receiver-supporting and hook-operating attachment for telephones, comprising a support adapted to be operatively associated with a telephone, an extension-arm disposed on the support, a mounting disposed on the extension-arm and comprising co-acting clamping-members, an eye having a stem passing through the clamping-members, a receiver-supporting member mounted in said eye, means for effecting pressure between the clamping-members, the eye, and the extension-arm, and trigger-mechanism disposed on the arm and adapted normally to engage a hook on the telephone.

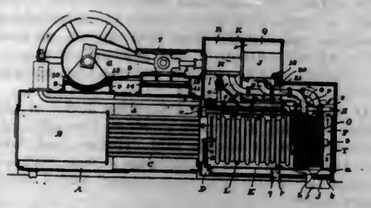
2. A receiver-supporting and hook-operating attachment for telephones, comprising a supporting-bracket adapted to be operatively associated with the telephone, an angulated extension-arm disposed on the bracket, a receiver-supporting member mounted on the angulated arm, a trigger mechanism disposed on the arm and adapted normally to engage a hook on the telephone, and means for adjustably supporting the member on the angulated arm and comprising co-acting clamping-members and an eye having a stem passing therethrough and adapted to embrace a portion of the receiver-supporting member and be pressed into engagement therewith.

3. A receiver-supporting and hook-operating attachment for telephones, comprising a supporting bracket adapted to be operatively associated with the telephone, an angulated extension-arm disposed on the bracket and adjustable horizontally and vertically with relation to said telephone, a receiver-supporting member mounted on the arm, means for locking the member to the arm comprising co-acting clamping-members adapted to embrace a portion of the arm, and an eye adapted to embrace a portion of the receiver-supporting member and having a stem passing through the clamping members, and trigger-mechanism disposed on the arm and adapted normally to engage a hook on the telephone.

1,216,777. ENGINE. GEORGE S. COOPER, Salem, Ohio. Original application filed Mar. 11, 1913, Serial No. 753,545. Divided and this application filed July 13, 1914. Serial No. 850,572. (Cl. 121—105.)

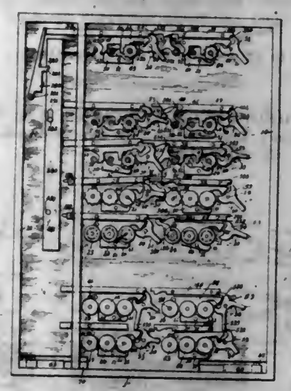
1. In an engine, the combination with a horizontal boiler, of saddles mounted thereon forming main and auxiliary bearings, an engine having a portion of its bed fixedly supported on the main bearing saddle and having the main body portion of its bed free to slide upon the auxiliary bearing saddle, the engine and its bed being arranged over the boiler, a frame independent of the boiler for supporting the engine cylinders, and provision affording relative longitudinal play between the cylinders and said independent support.

2. In an engine, the combination with a horizontal boiler, of saddles mounted thereon forming main and auxiliary bearings, an engine having a substantially Y-shaped bed, the legs of said bed being fixedly supported upon said main bearing saddle, and the main body portion of the bed



being free to slide upon the auxiliary bearing saddle, the engine and its bed being arranged over the boiler, a frame independent of the boiler for supporting the engine cylinders, and provision affording relative longitudinal play between the cylinders and said independent support.

1,216,778. VOTING-MACHINE. EDWIN B. CUMMINGS, Indianapolis, Ind. Filed Aug. 28, 1913. Serial No. 787,117. (Cl. 235—54.)



1. A voting machine including a register, a sliding pawl normally out of position to actuate the register and having a projection near one end, a voting key operated lever with two arms, one arm so arranged that when the lever is moved in one direction it will set the sliding pawl in position to actuate the register, and the other arm engaging the projection of said pawl, so that a return movement of the lever will lift and return the pawl to normal position without actuating the register.

2. A voting machine including a register, sliding-pawl for actuating the same which is normally out of actuating position, and which has a projection near one end, means for giving the pawl its register actuating movement after the pawl has been set in register actuating position, and the voting key operated by the lever provided with two arms, one arm arranged to move the pawl when the lever is operated to a register actuating position, and the other arm engaging said projection of the pawl, so that a return movement of said lever, before the register has been actuated will return the pawl to its normal position without actuating the register.

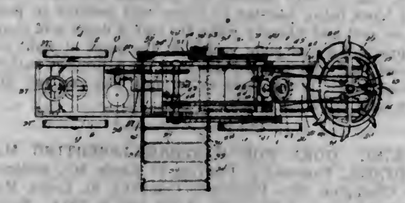
3. A voting machine including a plurality of registers, a sliding pawl for actuating each register, each sliding pawl being normally out of register actuating position, a voting key operated lever having a plurality of arms, one arm adapted to move said pawl when said lever is operated into a register actuating position, and the other arm when the lever is returned adapted to return said pawl to its normal position without actuating its register, and means operated by one of said operating levers for returning a previously operated lever, and thus returning the pawl of the latter to normal position without actuating its register.

4. A voting machine including a plurality of registers, a sliding pawl for each register normally out of register actuating position, a voting key operated lever with two arms, one arm adapted when the lever is operated to move its pawl into register actuating position, and the other arm when the lever is returned, adapted to return the pawl to normal position without operating the lever, a sliding bar moved by each lever when operated, and a pivoted arm actuated by said sliding pawl for returning a previously operated lever.

5. A voting machine including a series of registers, a sliding pawl for each register which is normally out of registering position, a voting key operated lever with two arms, one arm adapted, when operated to move each pawl to a register actuating position, and when returned, to return said pawl to its normal position without actuating the register, and a sliding bar actuated by each lever when it is operated, the series of sliding bars abutting against each other, and a pivoted arm in position to be actuated by said sliding pawl, whereby the lever, last operated in the series will be returned, and any previously operated pawl in the series will be returned to its normal position without actuating its register.

[Claims 6 to 15 not printed in the Gazette.]

1,216,779. GRADER OR EXCAVATING-MACHINE. WILLIAM J. DANKEL, Villa Grove, and CLARENCE E. VAN PELT, Salem, Ill. Filed Mar. 12, 1913. Serial No. 753,715. (Cl. 37—29.)



1. An excavating machine comprising a truck, a framework movably mounted thereon and means for tilting the same laterally, an excavator wheel rotatably mounted upon one end of said framework and comprising a plurality of shovels and a soil sliding rotary ring, a conveyer adapted to receive soil when slid off the said ring, and driving means for simultaneously rotating the said excavator wheel, moving the truck and actuating the conveyer.

2. An excavating machine comprising a truck, a framework movably mounted thereon and means for tilting the same laterally, an excavator wheel rotatably mounted upon one end of said framework and comprising a plurality of shovels and a soil sliding rotary ring, a conveyer adapted to receive the soil when slid off the said ring, and a second conveyer positioned to receive the soil from the first conveyer and to deliver the same laterally of the truck, and driving means for simultaneously rotating the said excavator wheel, moving the truck and actuating the conveyers.

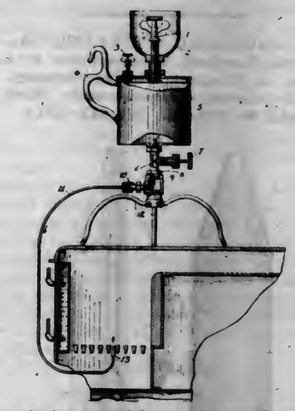
3. An excavating machine comprising a truck, a framework movably mounted thereon and means for tilting the same laterally, an excavator wheel rotatably mounted upon one end of said framework and comprising a plurality of shovels and a soil sliding rotary ring, a conveyer adapted to receive the soil when slid off the said ring and a second conveyer positioned to receive the soil from the first conveyer and to deliver the same laterally of the truck at a height above the framework of the truck.

4. In an excavator, a soil moving member comprising a wheel, the axis thereof being oblique to the horizontal; bolts depending from the said wheel near its periphery; a substantially flat ring supported by the lower ends of the bolts; and a plurality of digging members mounted upon the said bolts intermediate of the said wheel and ring.

5. In an excavator, a soil moving member comprising a wheel, the axis thereof being oblique to the horizontal; bolts depending from the said wheel near its periphery; a substantially flat ring supported by the lower ends of the bolts; a plurality of digging members, the said digging members being adjustable as to their projection beyond the periphery of the said ring, mounted upon the said bolts intermediate of the said wheel and ring.

[Claims 6 and 7 not printed in the Gazette.]

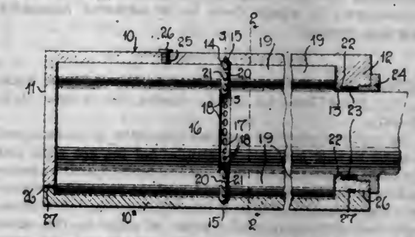
1,216,780. FIRE-STARTER. WILLIAM DANIEL DAVIS, Nashville, Ark. Filed Feb. 23, 1916. Serial No. 80,030. (Cl. 158—10.)



1. A fire starter comprising an oil supply tank, a combination funnel and filler-plug attached to the tank, said tank provided with an air vent, a valve controlling said vent, a combination handle and hook secured to the tank, a rigid feed pipe connected to the tank, a stand secured to the rigid feed pipe, a spraying nozzle, a flexible hollow wire connecting the spraying nozzle to the rigid feed pipe, said rigid feed pipe equipped with a feed valve, and a gage plug in the feed pipe, substantially as described.

2. A fire starter comprising an oil supply tank, a combination funnel and filler-plug attached to the tank, said tank provided with an air vent, a valve controlling said vent, a combination handle and hook secured to the tank, a rigid feed pipe connected to the tank, a stand secured to the rigid feed pipe, a spraying nozzle, a flexible hollow wire connecting the spraying nozzle to the rigid feed pipe, said rigid feed pipe equipped with a feed valve, and a gage plug in the feed pipe, said stand consisting of a body and three curved legs screwed into the body in triangular position, substantially as described.

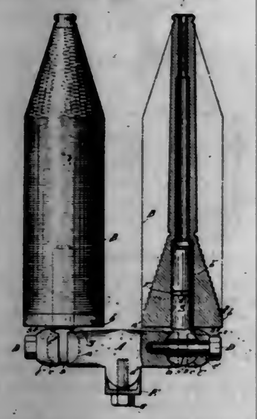
1,216,781. JOURNAL-BEARING. GEORGE W. DENTON, Laporte, Ind. Filed Feb. 25, 1916. Serial No. 80,502. (Cl. 64—60.)



The combination with a journal having a transversely concave peripheral groove and a journal box having its

inside face concentric to the journal and formed with a corresponding transversely concave groove, of bearing rollers disposed between the journal and box and having rolling engagement therewith, each roller having a transversely convex peripheral flange fitting loosely in the grooves of the journal and box and preventing longitudinal movement of the roller, each of said flanges being formed with uniformly spaced relatively shallow peripheral convex protuberances less than the width of the flange and the grooves in the journal box and journal being formed with uniformly spaced concave pockets less than the extreme width of the corresponding groove adapted to receive said protuberances on the flange, the rollers being uniformly spaced from each other and held in this spaced relation by the engagement of the protuberances with said pockets.

1,216,782. ADJUSTABLE SUPPLY-HOLDER. ERNEST A. DE WOLF, Mansfield, Mass., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 24, 1914. Serial No. 868,466. (Cl. 242—131.)



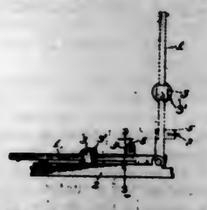
1. A unitary holder for the cop-spindles of textile apparatus comprising a cross-arm adapted for attachment to a creel-member or other like support and formed with sockets at its extremities, cop-spindles having spherical ends adapted to fit the sockets in said arm, socketed caps fitted to the spherical ends of the spindles, and bolts extending through the caps and screwed into the ends of the arm to clamp the parts together to provide for angular adjustment of the spindles.

2. In a supply-holder for creels or the like, the combination with a creel-member formed of channel-iron, of a cross-arm formed with a rounded lug adapted to fit the trough of the channel-iron, a bolt extending through the channel-iron and screwed into the lug on the cross-arm, spindles for receiving the supply-cops or bobbins, and universal-joints for mounting said spindles at the ends of the cross-arms to adapt them to be adjusted angularly in relation thereto.

1,216,783. RIFLE-SIGHT. JOHN A. DIETZ, New York, N. Y. Filed Jan. 13, 1915. Serial No. 1,909. (Cl. 33—47.)

1. In a rifle sight the combination with a folding leaf rear sight having a battle sight adapted for use with full load at full distance on a full sized target, of a sight member adapted for use with reduced load, at reduced distance on a proportionally reduced target, the relations therebetween being such that the point of sight is the same and means for securing said sight member to the rear leaf sight as a substitute for said battle sight.

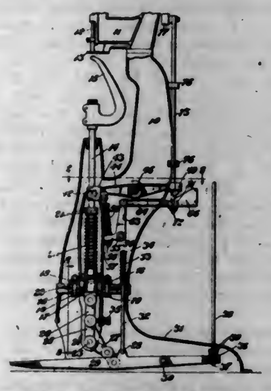
2. In a rifle sight the combination with a folding leaf rear sight having a battle sight, of a removable member provided with a sight notch adapted for use with reduced load, and means for securing said member to said folding leaf, said member being adapted, when the folding leaf is down, to serve as a substitute for the battle sight, the relative proportions being such that the point of sight for reduced load and reduced distance on a proportionally reduced target is the same as for full load and full distance on a full sized target.



3. In a rifle sight the combination with a folding leaf rear sight having a battle sight adapted for use with full load at full distance on a full sized target, of a sight member adapted for use with a reduced load, at reduced distance on a proportionally reduced target, the relations therebetween being such that the point of sight is the same and arms for said sight member adapted to secure said sight member to the rear leaf sight as a substitute for said battle sight.

4. The combination with a folding leaf rear rifle sight provided with an open slide and a sight block slidable thereon, of a removable member provided with a sight notch, lugs on said member for engaging said slide, said sight block being adapted to clamp said member in position on said leaf whereby when the leaf is down said member provides a rear sight such that the point of sight for reduced load and reduced distance on a proportionately reduced target is the same as for full load and full distance on a full sized target.

1,216,784. HORN FOR FASTENER-INSERTING MACHINES. STEPHEN A. DOBYNS, St. Louis, Mo., assignor to Champion Shoe Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 6, 1914. Serial No. 829,853. (Cl. 1—41.)



1. In a machine of the class described, a longitudinally movable work support, a longitudinally movable actuator, a block arranged for adjustment along one of said parts and operatively connected with the other of said parts for movement thereby, a wedge member mounted behind said block for movement with that part along which the block moves, said member being adjustably movable perpendicularly to the line of movement of said block, and operative connections for adjusting said member to compensate for movements of the block under variations in the thickness of the work, thus to maintain uniformity of movement of the support by said actuator.

2. In a machine of the class described, a longitudinally movable work support, a longitudinally movable actuator, a block arranged for adjustment along said actuator and operatively connected with said support for movement thereby, a wedge member mounted for movement with said actuator behind said block, said member being adapted for coöperation with said block and being adjustably movable perpendicularly to the line of movement of the latter, and operative connections for adjusting said member to compensate for movements of the block under variations in the thickness of the work, thus to maintain uniformity of movement of the support by said actuator.

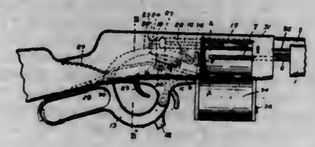
3. In a machine of the class described, a longitudinally movable work support, a longitudinally movable actuator therefor, a block and a wedge member associated with one of said parts and having coöperating engaging faces, said block being adjustable along said part and said member being movable with said part behind said block and having an adjusting movement perpendicularly to the line of movement of the latter, and operative connections controlled by the movements of said support and actuator for moving said block along said wedge supporting part and for adjusting said wedge member to accord with such movement of the block, to compensate for variations in the thickness of the work and maintain uniformity of movement of the support by the actuator.

4. In a machine of the class described, a longitudinally movable work support, a longitudinally movable actuator therefor, a block and a wedge member associated with one of said parts and having coöperating toothed engaging faces, said block being adjustable along said part and said member being movable with said part behind said block and having an adjusting movement perpendicularly to the line of movement of the latter, and operative connections controlled by the movements of said support and actuator for moving said block along said wedge supporting part and for adjusting said member to accord with such movement of the block, to compensate for variations in the thickness of the work and maintain uniformity of movement of the support by the actuator.

5. In a machine of the class described, a longitudinally movable work support, a longitudinally movable actuator therefor, a block and a wedge member associated with one of said parts and having coöperating engaging faces, said block being adjustable along said part and said member being movable with said part behind said block and having an adjusting movement perpendicularly to the line of movement of the latter, and operative connections controlled by the movements of said support and actuator for moving said block along said wedge supporting part and for adjusting said member to accord with such movement of the block, to compensate for variations in the thickness of the work and maintain uniformity of movement of the support by the actuator, said connections including a spring constructed and arranged to permit an independent movement of said support and actuator.

[Claims 6 to 8 not printed in the Gazette.]

1,216,785. RIFLE. WILFRID DORÉ, St. Stanislas des Deux Rivières, Champlain, Quebec, Canada. Filed Sept. 30, 1916. Serial No. 123,087. (Cl. 42—19.)



1. A magazine rifle comprising a barrel, a fore-end slidably connected thereto, a stock connected to said barrel and provided with a magazine chamber, a rod carried by said fore-end and extending into said magazine chamber, a magazine revolubly mounted on said rod, means for actuating said magazine, loading means, and firing means.

2. A magazine rifle comprising a barrel, a fore-end slidably connected thereto, a stock connected to said barrel and provided with a magazine chamber, a rod carried by said fore-end and extending into said magazine chamber, a magazine revolubly mounted on said rod, means for actuating said magazine, loading means, and means for locking said loading means, and firing means.

3. A magazine rifle comprising a barrel, a fore-end slidably connected thereto, a stock connected to said barrel, and provided with a magazine chamber, a rod carried by said fore-end and extending into said magazine chamber, a magazine revolubly mounted on said rod, means for actuating said magazine, a reciprocable loading plunger, means for reciprocating the same, ejecting means carried by said plunger, and firing means carried by said plunger.

4. A magazine rifle comprising a barrel, a fore-end slidably connected thereto, a stock connected to said barrel and provided with a magazine chamber, a spring actuated wall plate hinged to said stock, a rod carried by said fore-end and extending into said magazine chamber, a locking pin carried by said fore-end, and adapted to secure said plate in position, a magazine revolubly mounted on said rod, means for actuating said magazine, loading means, and firing means.

5. A magazine rifle comprising a barrel, a fore-end slidably connected thereto, a stock connected to said barrel and provided with a magazine chamber, a rod carried by said fore-end and extending into said magazine chamber, a magazine revolubly mounted on said rod, means for actuating said magazine, a reciprocable loading plunger, means for actuating the same, a spring-actuated firing pin carried by said plunger, and provided with an arm, a plate adapted to engage said arm, and means for disengaging said plate from said arm.

[Claim 6 not printed in the Gazette.]

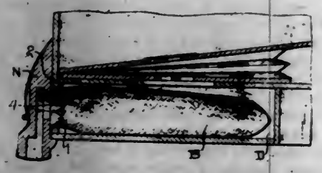
1,216,786. LIQUID FILLING AND GAGING DEVICE. DWIGHT A. EAKEN, Lodi, Ohio, assignor of one-half to H. M. Myers, Lodi, Ohio. Filed Mar. 22, 1916. Serial No. 85,808. (Cl. 226—14.)



1. A liquid filling and gaging device, comprising a portable container provided with fluid conduit and air vent pipes communicating with opposite interior portions thereof and projecting from one side thereof in close proximity and adapted to be inserted into the mouth of the receptacle to be filled, said fluid conduit pipe being provided with a graduated scale and being adapted to form a support and rest on a fixed portion within said receptacle and said air vent pipe being longitudinally adjustable relative to said conduit pipe and forming an adjustable gaging pipe automatically stopping the flow of air into and liquid from said container when the liquid discharged into the receptacle being filled reaches the tip of said air vent and liquid gaging pipe.

2. A liquid filling and gaging device, comprising a container provided with liquid conduit and air vent pipes projecting from one end in close parallel relation to each other for insertion in the opening of the vessel to be filled and communicating with the opposite interior portions of said container, said conduit pipe forming a support for said container to rest on a fixed member within said vessel to be filled and said air vent pipe being adjustable and having its tip spaced from the end of said conduit pipe forming an adjustable gage adapted to cut off the flow of liquid from said conduit pipe and into the receptacle to be filled when the discharged liquid reaches a depth corresponding to the projecting end of said air vent pipe.

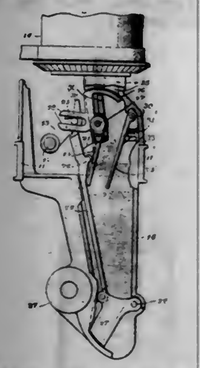
1,216,787. DUST-BAG. ANNA M. ECKENROD, Altoona, Pa. Filed Oct. 18, 1916. Serial No. 126,386. (Cl. 183—37.)



1. A dust bag for vacuum cleaners provided with perforations at a predetermined point inwardly of its open end, the remaining points of the bag being imperforate.

2. A dust bag for vacuum cleaners provided with a transversely disposed series of perforations at a predetermined point inwardly of its open end, the remaining portions of the bag being imperforate.

1,216,788. CORN-PLANTER. ERNST E. ENGLUND, Moline, Ill., assignor to D. M. Sechler Implement & Carriage Company, Moline, Ill., a Corporation of Illinois. Filed Nov. 15, 1916. Serial No. 131,531. (Cl. 111—6.)



1. In a corn-planter, the combination with a hollow shank having openings at its upper and lower ends for admitting and discharging grains, of valves for controlling such openings, means comprising a bar for connecting said valves so that they will move simultaneously, a pivoted arm in the rear of said bar, said bar and arm being in constant engagement with each other, a plate in the rear of said arm with which said arm is adapted to be forced in contact to form a trap for grain falling from the upper valve, and means for moving said bar and said upper and lower valves and forcing said arm against said plate.

2. In a corn-planter, the combination with a hollow shank having openings at its upper and lower ends for admitting and discharging grains, of valves for controlling such openings, means comprising a bar for connecting said valves so that they will move simultaneously, a pivoted arm in the rear of said bar, said bar and arm having parts that are normally loosely interengaged with each other, a plate in the rear of said arm with which said arm is adapted to be forced in contact to form a trap for grain falling from the upper valve, and means for moving said bar and said upper and lower valves and forcing said arm against said plate.

3. In a corn-planter, the combination with a hollow shank having openings at its upper and lower ends for admitting and discharging grains, of valves for controlling such openings, means comprising a bar for connecting said valves so that they will move simultaneously, a pivoted arm in the rear of said bar, a cam-shaped projection on one of such last-named parts with which the other part engages so that upon the downward movement of the bar such arm will be forced back, a plate in the rear of said arm with which said arm is adapted to be forced in contact to form a trap for grain falling from the upper valve, and means for moving said bar and said upper and lower valves and forcing said arm against said plate.

4. In a corn-planter, the combination with a hollow shank having openings at its upper and lower ends for admitting and discharging grains, of valves for controlling such openings, means comprising a bar for connecting said valves so that they will move simultaneously, a pivoted arm in the rear of said bar, a cam-shaped projection on one of such last-named parts with which the other part engages so that upon the downward movement of the bar such arm will be forced back, a spring-pressed plate in the rear of said arm with which said arm is adapted to be forced in contact to form a trap for grain falling from the upper valve, and means for moving said bar and said upper and lower valves and forcing said arm against said plate.

5. In a corn-planter, the combination with a hollow shank having openings at its upper and lower ends for admitting and discharging grains, of valves for controlling such openings, means comprising a bar for connecting said valves so that they will move simultaneously, a pivoted arm in the rear of said bar, the face of said arm adjacent to the bar being provided with a cam surface and a lug that projects toward said bar, and said bar having means for engaging such cam surface to cause a rearward movement of the arm when the bar is moved downward and for engaging such lug to cause a forward movement of the arm on the upward movement of the bar, a plate in the rear of said arm with which said arm is adapted to be forced in contact to form a trap for grain falling from the upper valve, and means for moving said bar and said upper and lower valves and forcing said arm against said plate.

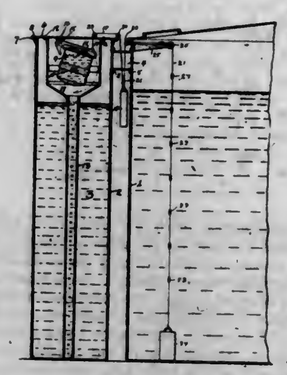
[Claims 6 and 7 not printed in the Gazette.]

1,216,789. APPARATUS FOR EXTINGUISHING FIRES. JAMES B. ERWIN and ORLANDO R. ERWIN, Milwaukee, Wis. Filed Nov. 5, 1915, Serial No. 59,734. Renewed Jan. 8, 1917. Serial No. 141,348. (Cl. 169—11.)

1. The combination with a foam generating tank adapted to contain a suitable liquid solution, means including a receptacle for storing and discharging an acid into said solution, said acid storing and discharging means being located above the solution in said generating tank, a perforated spray pipe connected at its upper end to said acid discharging means, and extending from thence downwardly into the solution in said generating tank, whereby when said acid is released it will be injected simultaneously at different elevations and different points into said solution.

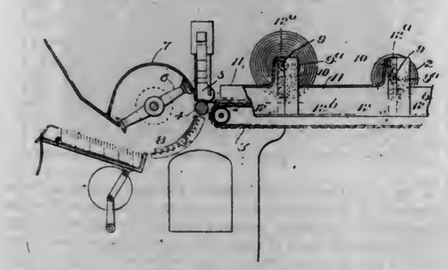
2. The combination with a foam generating tank adapted to contain a suitable liquid solution, means located in said solution for injecting a second liquid simultaneously at different points and at different elevations into said solution, said injecting means for the second liquid being connected to a source of supply exterior to the solution in said generating tank.

3. The combination with a foam generating tank adapted to contain a suitable liquid solution, means located above the solution including a receptacle for storing and discharging an acid into said solution, a perforated spray pipe connected at its upper end to said acid discharging means, and extending from thence downwardly into the solution in said generating tank, whereby when said acid is released it will be injected by gravity simultaneously at different elevations and different points into said solution.



4. The combination with a foam generator provided with a discharge spout for foam, said generator being adapted to receive a suitable liquid solution, means located in said generator for injecting a second liquid simultaneously at different points and different elevations therein together with means for forcibly supplying said second liquid to said injecting means.

1,216,790. LAP-ROD RETAINER FOR PICKERS, CARDING-ENGINES, &c. VERNON C. FAUNCE, Bondsville, Mass. Filed Apr. 6, 1916. Serial No. 89,255. (Cl. 19—9.)



1. The combination with a support upon which the periphery of a wound lap rests, and a guide for one end of a lap-rod located adjacent the position of one end of the lap-roll, restraining the lap-roll from forward displacement and permitting vertical movement of the lap-rod as the diameter of the wound lap varies, of a lap-rod retainer outside said guide, adjacent thereto, and in line with the corresponding end of the lap-rod, whereby endwise movement of the lap-rod outward is limited without interference with said vertical movement of the lap-rod.

2. The combination with a lap-rod support at the feeding end of a picker or other machine to which fibrous material is fed in lap-form, said feeding end having at one side thereof a guide for one end of a lap-rod extended through a supply roll of lap, said guide adapted to restrain the lap-roll from forward displacement but permitting vertical movement of the lap-rod as the diameter of the wound lap varies, of a lap-rod retainer outside said guide, in line with the corresponding end of the lap-rod, whereby endwise movement of the lap-rod in the direction of such retainer is limited without interference with said vertical movement of the lap-rod.

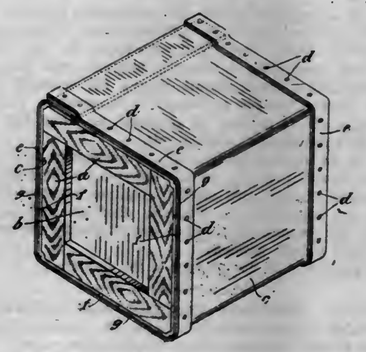
3. The combination with a lap-roll support and a guide for one end of a lap-rod, located adjacent the position of one end of a wound lap-roll, said guide adapted to restrain the lap-roll from forward displacement but permitting vertical movement of the lap-rod as the diameter of the wound lap varies, of a lap-rod retainer outside said guide, adjacent thereto, and in line with the corresponding end of a lap-rod engaging said guide, whereby endwise movement of the lap-rod outward is limited without interference with said vertical movement of the lap-rod, and a lap-rod having a head or collar adapted to engage said guide to limit thereby endwise movement of the lap-rod in the opposite direction.

4. The combination with a lap-roll support at the feeding end of a picker or other machine to which fibrous material is fed in lap-form, and a guide for one end of a lap-rod extended through a supply roll of lap, said guide adapted to restrain the lap-roll from forward displacement but permitting vertical movement of the lap-rod as the diameter of the wound lap varies, of a lap-rod retainer outside said guide, in line with the corresponding end of the lap-rod, whereby endwise movement of the lap-rod in the direction of such retainer is limited, and a lap-rod having a head or collar adapted to engage said guide to limit thereby endwise movement of the lap-rod in the opposite direction.

5. The combination with a guide or bearing for one end of a lap-rod, said guide or bearing located adjacent the position of one end of a wound lap-roll, of a lap-rod retainer outside said guide or bearing, adjacent thereto, and in line with the corresponding end of a lap-rod engaging said guide or bearing, whereby endwise movement of the lap-rod outward is limited, and a guide whereby as a lap-roll is advanced horizontally into working position the said end of the lap-rod is directed into position at one side of the retainer.

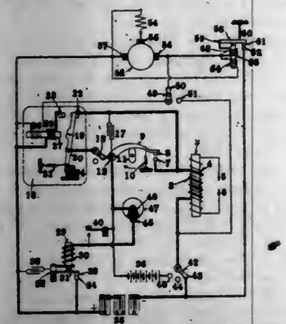
[Claims 6 and 7 not printed in the Gazette.]

1,216,791. MANUFACTURE OF BOXES AND SIMILAR RECEPTACLES. WILLIAM GRANT FISKE, Purfleet, England, assignor to Thames Paper Company Limited, Purfleet, England. Filed Aug. 26, 1915. Serial No. 47,409. (Cl. 217—66.)



A receptacle comprising rigid end members, a cardboard member extending about the peripheries of said end members to form the body of the receptacle, reinforcing means comprising individual strips of paper extending continuously along the marginal edges of said member and secured thereto by means of an adhesive so as to be carried by said member, and a layer of reinforcing fabric secured in surface engagement with each of said strips of paper, and nails or the like passing through said fabric layers, paper strips and cardboard member and into said end members whereby the cardboard member and end members are secured together to form the receptacle.

1,216,792. IGNITION SYSTEM. VALÈRE ALFRED FYNN, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 13, 1914. Serial No. 831,453. (Cl. 123—148.)



1. In an ignition system for combustion engines, a secondary ignition circuit, an exciting coil for energizing said secondary circuit, two circuit breakers for the exciting coil, one comprising a vibratile element, and means operating to continuously maintain one or the other of said circuit breakers in electrically inoperative condition.

2. In an ignition system for combustion engines, a secondary ignition circuit, an exciting coil for energizing said secondary circuit, a source of current for the exciting coil, two circuit breakers for the said coil, one comprising a vibratile element and each connected to the source of current, and a single switch coöperating with both circuit breakers and adapted to render either circuit breaker electrically operative or inoperative.

3. In an ignition system for combustion engines, a secondary ignition circuit, an exciting coil for energizing said secondary circuit, two circuit breakers for the exciting coil, one comprising a vibratile element, a single switch adapted to coöperate with both circuit breakers and to render either electrically operative or inoperative, and means dependent on the speed of the engine for operating said switch to render the vibratile circuit breaker inoperative.

4. In an ignition system for combustion engines, a secondary ignition circuit, an exciting coil for energizing said secondary circuit, two circuit breakers for the exciting coil, one comprising a vibratile element, and means for maintaining a shunt circuit around the contacts of the other circuit breaker to render it inoperative while the vibratile circuit breaker is operative to make and break current through the exciting coil.

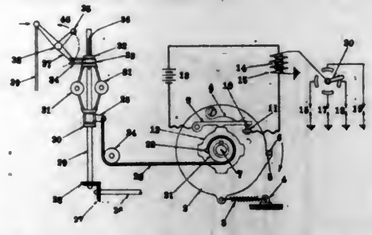
5. In an ignition system for combustion engines, a secondary ignition circuit, an exciting coil for energizing said secondary circuit, two circuit breakers for the exciting coil, one comprising a vibratile element, and a single switch for establishing a shunt circuit around the contacts of either circuit breaker.

Claims 6 to 13 not printed in the Gazette.]

1,216,793. IGNITION-CONTROLLING APPARATUS. VALÈRE ALFRED FYNN, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 11, 1915. Serial No. 50,140. (Cl. 123—117.)

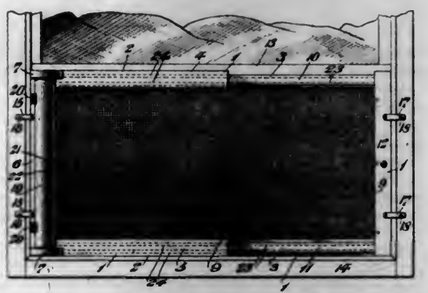
1. The combination with an internal combustion engine, of a fuel controlling lever, a timer provided with a movable member for varying the time of occurrence of the ignition sparks, and a centrifugal device driven by the engine and having two parts whose relative position changes in response to speed variation, one of said parts being connected to the fuel controlling lever and the other to the movable member of the timer.

2. The combination with an internal combustion engine, of means for varying the time of ignition, fuel valve controlling means, a shaft driven by the engine, two sleeves slidingly mounted on said shaft, a centrifugal device connecting and adapted to vary the distance between the said sleeves, means connecting one of said sleeves to the fuel valve controlling means, and means connecting the other sleeve to the means for varying the time of ignition.



3. The combination with an internal combustion engine, of means for varying the time of ignition, fuel valve controlling means, a shaft driven by the engine, two sleeves slidingly mounted on said shaft, a centrifugal device connecting and adapted to vary the distance between the said sleeves, means connecting one of said sleeves to the fuel valve controlling means, said means being adapted to produce motion of said sleeves in non-proportional relation to the movement of the fuel valve, and means connecting the other sleeve to the means for varying the time of ignition.

1,216,794. WINDOW-SCREEN. ADRIAN ST. C. GARMAN, Philadelphia, Pa. Filed Apr. 1, 1916. Serial No. 88,242. (Cl. 156—39.)

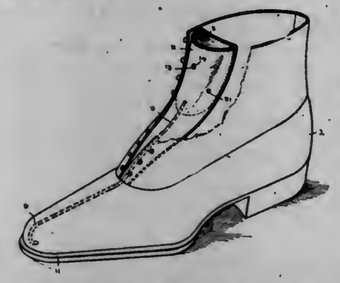


1. In a horizontally-adjustable window screen, a frame composed of laterally-movable sections fitted to each other telescopically relatively to the width of the window frame, the vertical side bars of the sections and the adjacent side stiles of the window frame being provided on the exterior thereof with devices for securing the screen frame to said stiles on the outer faces of the latter, one of the side bars having therein a vertically-arranged channel, a vertically arranged spring roller in said channel, a horizontally adjustable screen which is connected with said roller and the side bar of the opposite section of the frame, and horizontally-extending brackets forming the bearing for said roller connected with the bar at the top and bottom of said channel.

2. In a horizontally adjustable window screen, a frame composed of laterally-movable sections fitted to each other telescopically relatively to the width of the window frame, latches and pins respectively on the vertical side bars of the sections and the adjacent side stiles of the window frame on the exterior thereof for securing the screen frame to said stiles on the outer faces of the latter, one of the side bars having therein a vertically-arranged channel, a vertically-arranged spring roller in said channel, a horizontally adjustable screen which is connected with said roller and the side bar of the opposite section of the frame, and horizontally-extending brackets forming the bearing for said roller connected with the bar at the top and bottom of said channel.

3. In a horizontally adjustable window screen, a frame composed of laterally movable sections fitted to each other telescopically relative to the width of the window frame, the vertical side bars of the sections and the adjacent side stiles of the window frame being provided on the exterior thereof with devices for securing the screen frame to the stiles on the outer faces of the latter, one of the side bars having therein a vertically arranged channel, a vertically arranged spring roller in said channel, a horizontally adjustable screen connected with said roller and the side bar of the opposite section of the frame, horizontally extending brackets forming the bearings for said roller connected with the top and bottom frame members of the adjacent section at the ends of said channel, and a channel-like cap hinged to the vertical side bar of one of said frames to inclose said roller.

1,216,795. VENTILATING DEVICE. BENJAMIN GAUSE, Cincinnati, Ohio. Filed May 3, 1916. Serial No. 95,108. (Cl. 36—3.)



1. The combination with a shoe, of a bellows positioned in the shoe, and having valves adapted to control the admission and expulsion of air into and from the bellows, said bellows being adapted to be operated to force air into the shoe by the movement of that portion of the leg above the ankle.

2. The combination with a shoe, of a valved bellows positioned therein and extending above the level of the ankle and in position to be operated to force air into the shoe by the relative movement of the foot and the leg above the ankle.

3. The combination with a shoe, of a bellows attached to the upper portion of the shoe and positioned to receive pressure of the leg of the wearer of the shoe to operate the bellows, a valve at the upper and lower ends of the bellows adapted to control the admission and expulsion of air into and from the bellows, and means to convey air from the bellows to the interior of the lower portion of the shoe.

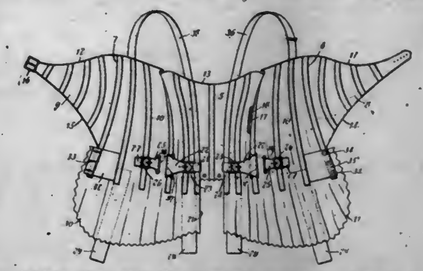
4. A means for forcing air into a shoe, comprising a bellows, a plate within said bellows, a spring tongue adapted to normally hold the bellows in extended position, valves in said bellows, and a flexible tube connected with the bellows adapted to convey air to various parts of the shoe.

5. A bellows for forcing air into a shoe for ventilating the same, comprising a plate, a spring tongue having one of its ends secured to the plate, a covering for the plate and tongue, valves adapted to control the admission and expulsion of air from the bellows, and a tube for conveying the air from the bellows to parts of the shoe.

[Claims 6 and 7 not printed in the Gazette.]

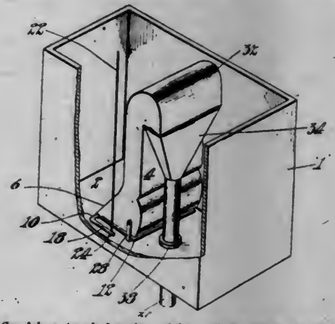
1,216,796. CORSET. WILLIAM GERSHNOIRTZ, Boston, Mass. Filed Sept. 26, 1916. Serial No. 122,302. (Cl. 2—73.)

A one piece corset comprising a central portion adapted to encircle the body, an extension piece on each of the opposite sides of said central portion adapted to extend partly around the body in opposite directions, means to fasten the free ends of said extension pieces together at the waist line, a tongue piece attached to each side of the corset below the waist line adapted to extend a portion of the distance across the front of said corset, means to fasten the free ends of said tongue pieces to the body portion of said corset at the front thereof, another tongue piece attached at each side of the corset below the waist



line intersecting said first named tongue piece and arranged to pass through a slot in the body portion of said corset and extend along the inside surface of said corset and thence pass through a second slot to the outside of said corset, and means to fasten the free ends of said last named tongue pieces to the body portion of said corset at the back thereof.

1,216,797. FLUSHING DEVICE. HENRY H. GOVE, Biddeford, Me. Filed Mar. 12, 1910, Serial No. 548,846. Renewed July 21, 1915. Serial No. 41,190. (Cl. 4—5.)



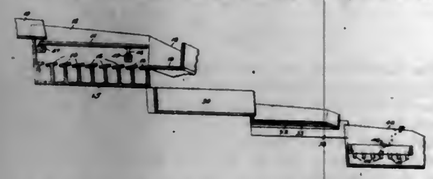
1. A flushing tank having, in combination, a siphon having a straight portion and a flaring portion in its short leg, a vane pivoted at one side of said flaring portion with its free end arranged to swing in the lower part of the straight portion, and an arm whereby the vane may be turned about its pivot to start the action of the siphon, the end of said vane extending obliquely into the straight portion of the short leg during the action of the siphon whereby it may receive a reseating impulse at the end of the action of the siphon.

2. In a flushing tank, the combination of the tank proper, a siphon mounted within the tank and having a funnel-shaped portion, a discharge pipe communicating with said funnel-shaped portion, means for raising water to start the siphon into action, and a plurality of receptacles mounted on opposite sides of said discharge pipe, each having an inlet opening communicating with said funnel-shaped portion and an outlet opening communicating with said discharge pipe, said inlet opening being of larger area than said outlet opening, substantially as described.

3. In apparatus of the class described, the combination with a tank, of a siphon within the tank having its long leg extending downwardly from the tank, a housing having an outlet opening into the short leg of the siphon, said housing constituting a portion of the short leg and having a curved wall and an inclined straight wall, said walls

diverging downwardly from the outlet, the bottom of said housing constituting an inlet, a charging vane fulcrumed within the housing at the lower end of the inclined wall, said curved wall being concentric with the axis of the vane, and means for swinging the vane within the housing to charge the siphon and open the inlet of the housing, said vane being movable past the upper end of the curved wall to a position where its end portion will project into the descending column of the short leg to form a water receiving pocket at the side toward the straight wall of the housing to effect a reseating of the vane at the end of the action of the siphon, and a water passage between its other side and the curved wall.

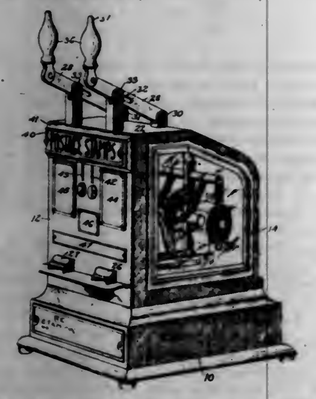
1,216,798. CONCENTRATOR. JOSEPH B. GREEN, Seattle, Wash., assignor to G. A. Henkel, Arlington, Oreg. Filed Jan. 26, 1916. Serial No. 74,322. (Cl. 83—89.)



1. In an ore concentrator including a sluice, the combination with longitudinally-extending grizzly bars, of a plurality of transversely extending riffle bars mounted upon the sluice bottom beneath and spaced from the grizzly bars, said riffle bars being T-shaped in cross-section and being in successively lower horizontal planes with the upper faces declined rearwardly.

2. In an ore concentrator including a sluice, the combination with longitudinally-extending grizzly bars, of transversely extending riffle bars mounted on the sluice bottom and having flat upper faces and positioned beneath and spaced from the grizzly bars, the grizzly bars and upper faces of the riffle bars being arranged at acute angles with the riffle bars reversely inclined whereby the forward progress of material through the concentrator is retarded.

1,216,799. STAMP-VENDING MACHINE. ALFRED HALL, Painesville, Ohio. Filed Oct. 9, 1913. Serial No. 794,201. (Cl. 211—33.)



1. In a stamp vending machine, the combination of a casing, a reciprocating plunger within the casing, a support for a roll of stamps, a normally horizontal feed table pivoted at the forward end, guides on either side of the feed table, a knife at the forward end of the feed table, a movable wedge supporting the rear end of the feed table, a knife carried by the plunger coöperating with the knife at the end of the feed table, a series of fingers adapted to engage the perforations of the stamps, a carriage carrying said fingers, a lever having a cam surface pivoted to the casing and connected to the carriage, and means carried by the plunger engaging said cam surface.

2. In a device of the character described, the combination of a support for a roll of stamps, a feed table, guides on either side of the feed table, a reciprocating carriage supported by said guides, fingers individually pivoted to the carriage adapted to engage the perforations of the stamps, separate movable means on the carriage preventing a forward movement of the stamps with relation to the carriage, a plunger, and mechanism connecting the plunger and the carriage whereby it is reciprocated.

3. In a device of the character described, the combination of a support for a roll of stamps, a feed table, a reciprocating carriage, a reciprocating plunger, connections between the plunger and the carriage whereby the stamps are moved forwardly when the plunger is operated, means for severing a stamp from the roll at the end of the stroke of the plunger, means on the carriage engaging the stamps to prevent them being drawn forwardly past the carriage, and means for releasing said means at the end of the stroke of the carriage.

4. In a device of the character described, the combination of a support for a roll of stamps, a feed table, guides on either side of the feed table, a reciprocating carriage supported by said guides, fingers pivoted to the carriage adapted to engage the perforations of the stamps, a dog pivoted to the carriage adapted to slide freely across the stamps on the forward movement but preventing a forward movement of the stamps with relation to the carriage, means for raising said dog when the carriage is in its forward position, means for bringing it again to active position when the carriage is moved to its rearward position, a plunger, and mechanism connecting the plunger and the carriage whereby it is reciprocated.

5. In a device of the character described, the combination of a support for a roll of stamps, a feed table, guides on either side of the feed table, a reciprocating carriage supported by said guides, fingers carried by the carriage and adapted to engage the perforations of the stamps to feed them across said table, a plate resting on the stamps above the table and having a slotted portion admitting the ends of the fingers, a spring having tongues adapted to press downwardly on said plate at either side of said opening, a plunger, and means whereby the movement of the plunger reciprocates the carriage.

[Claims 6 to 14 not printed in the Gazette.]

1,216,800. MAILING-ENVELOP. WILLIAM H. HART, Jr., Philadelphia, Pa. Filed Apr. 7, 1916. Serial No. 89,526. (Cl. 229—77.)



1. In an envelop of the character stated, a body having a slit in its rear wall, and its closing flap provided with transversely-extending parallel crease lines thereon forming a fold between the same, said lines serving as separate hinges for said fold, and an overturning tongue extending from said fold at the lower crease line thereon, said fold being adapted to be placed on a portion of said tongue, and said fold and said portion to enter together the envelop through said slit, the remaining portion of said tongue being pendant from said fold on the exterior of the back of the envelop and free of said back as a finger piece.

2. In an envelop of the character stated, a body having a slit in its rear wall and its closing flap provided with transversely-extending parallel crease lines thereon forming a fold between said lines, a lever-like tongue secured partly to the terminal portion of said flap and extending in part from said flap at the lower crease line of the latter adapting said tongue to turn upwardly on said lower crease line, and said fold to lie on the adjacent portion of said tongue adapting the upper portion of said tongue and the said fold to enter together the envelop through said slit limited by the upper crease line of the flap, and adapting the lower portion of said tongue to be placed on the exterior of the rear wall of the body free therefrom as a finger piece.

1,216,801. PORTABLE EXTENSION LAMP-CORD ADJUSTER. MARION H. HARTER, Canby, Minn., assignor, by direct and mesne assignments, to Handy Manufacturing Company, Minneapolis, Minn., a Corporation. Filed July 24, 1916. Serial No. 110,909. (Cl. 248—10.)



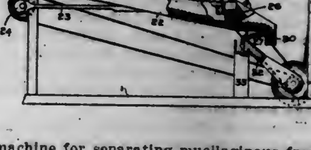
1. The combination, with a frame, of a drum provided with differential spools mounted in said frame, a spring for automatically rotating said drum in one direction, means for locking said spool in any desired position, an electric lamp cord wound upon both spools, the portion of the cord that is wound upon the larger spool being provided at its end with an electric lamp, and the cord that is wound upon the other spool being connected to a source of electric current, and means for taking up the slack of the cord that is unwound from the smaller spool, substantially as described.

2. The combination, with a frame, of a drum mounted in said frame and provided with differential spools, a spring arranged to rotate said drum in one direction, means for locking the drum in any desired position, an electric lamp cord wound upon both spools of said drum, one end of said cord being provided with an electric lamp, and a pair of blocks provided with pulleys, around and between which the free end of said cord extends, substantially as described.

1,216,802. PROJECTILE-FUSE. WILFORD JUDSON HAWKINS, Montclair, N. J. Filed June 2, 1916. Serial No. 101,280. (Cl. 102—39.)

1. In a projectile fuse, the combination with a fuse body, of a plunger within the body, and a single member in interlocked engagement with said plunger for holding said plunger in unarmed position until projectile acceleration ceases.

2. In a projectile fuse, the combination with a fuse body, of a plunger within the body, and a single member carried by and in interlocked engagement with said plunger for positively holding said plunger in unarmed position until projectile acceleration ceases.



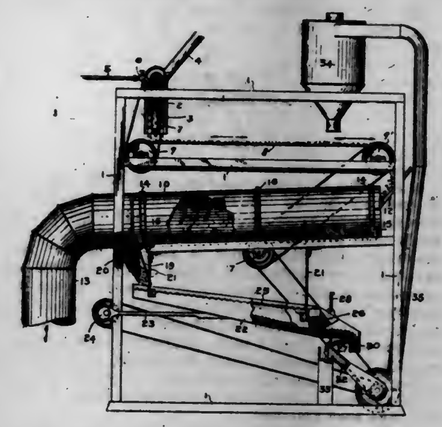
3. In a projectile fuse, the combination with a fuse body, of a spring retained plunger within the body, and a single member in interlocked engagement with said plunger for positively holding said plunger in unarmed position until projectile acceleration ceases.

4. In a projectile fuse, the combination with a fuse body, of a cylindrical spring retained plunger within the body, and a single member carried concentrically by and in interlocked engagement with said plunger for positively holding said plunger in unarmed position until projectile acceleration ceases.

5. In a projectile fuse, the combination with a fuse body, of a cylindrical plunger within the body, and a split sleeve surrounding and in interlocked engagement with said plunger for positively holding said plunger in unarmed position until projectile acceleration ceases.

[Claims 6 to 20 not printed in the Gazette.]

1,216,803. SEED-CLEANING MACHINE. SHIRL HERR, Crawfordsville, Ind., assignor to Crawfordsville Seed Company, Crawfordsville, Ind., a Firm composed of Abner H. Flanigan and Shirl Herr, Crawfordsville, Ind. Filed July 10, 1916. Serial No. 108,490. (Cl. 130—18.)



1. In a machine for separating mucilaginous from non-mucilaginous coated seeds, means for moistening said seeds, means for subjecting them to the moisture until the coats of the mucilaginous seeds become adhesive, means for adding a material to which the adhesive seeds will adhere, means for tumbling and mixing said last material with the moistened seeds, means for drying the mixture in hot air, and means for separating said last material with its adhering seeds from the other seeds.

2. In a machine for separating mucilaginous from non-mucilaginous coated seeds, means for moistening said seeds until the coats of the mucilaginous ones are adhesive, means for adding a material to which the adhesive seeds will adhere, means for tumbling said last material and moistened seeds together in a current of hot air, and means for separating said last material with its adhering seeds from the other seeds.

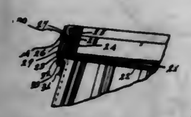
3. In a machine for separating mucilaginous from non-mucilaginous coated seeds, means for moistening said seeds until the coats of the mucilaginous ones are adhesive, means for adding a material to which the adhesive seeds will adhere, means for mixing said last material with the moistened seeds, means comprising a rotating tube for drying the mixture in hot air, and means for separating said last material with its adhering seeds from the other seeds including a vibrator which arranges the masses in strata according to size and gravity, and means for separating the strata.

4. In a machine for separating mucilaginous from non-mucilaginous coated seeds, means for moistening said seeds until the coats of the mucilaginous ones are adhesive, means for adding a material to which the adhesive ones will adhere, means for tumbling said last material and the moistened seeds together in a current of hot air, and means for separating said last material with its adhering seeds from the other seeds including a vibrator which arranges the masses in strata according to size and gravity, and means for separating the strata.

5. In a machine for separating mucilaginous from non-mucilaginous coated seeds, means for wetting the seeds comprising a tube to which the seeds and water are supplied, said tube having inside projections, and a brush rotating in said tube and beating the seeds against the projections in combination with means for mixing a material with the wet seeds to which the adhesive ones will adhere, means for drying the mixture and means for separating the non-mucilaginous seeds from the rest of the mixture.

[Claims 6 to 8 not printed in the Gazette.]

1,216,804. BARREL. GEORGE E. HERRMANN, Morristown, and BENJAMIN W. TUCKER, South Orange, N. J.; said Tucker assignor to said Herrmann. Filed Feb. 12, 1912. Serial No. 676,963. (Cl. 220—64.)



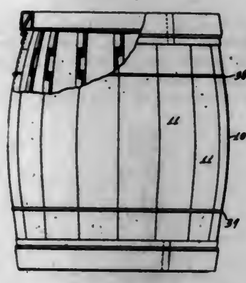
1. A barrel or other container, comprising a plurality of members having flanges lengthwise thereof to provide shoulders, heads resting against said shoulders, said heads being provided with an annular bead and with an outwardly projecting flange, a ring of heavier metal adapted to rest against the beaded portion of each head and provided with an annular groove about the same, said members being provided with depressed portions forming ribs transversely thereof and adapted to enter the grooved portions of the rings, a split compression band having an annular ribbed portion fitting the grooved portion of the members, and tightening means for compressing the band about the ends of the staves to lock and hold the members, ring, and head together.

2. A barrel or other container, comprising a plurality of members, a head supported within said members, said members being grooved to form an annular rib when assembled, and a grooved annular member interposed between the ends of the members and the head, the grooved portion thereof adapted to receive said annular rib and means for binding the parts together.

3. A barrel or other container, comprising a plurality of staves having transversely extending ribs, a head located within said staves, said head being provided with an annular bead and with an outwardly projecting flange, a ring of heavier metal adapted to rest against the beaded portion of the head and provided with an annular groove about the same adapted to receive the ribs of the staves, and a split compression band having an annular ribbed portion fitting the grooved portion of the ribs of the staves.

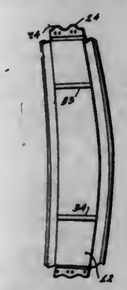
4. A barrel or other container, comprising a plurality of members having flanges lengthwise thereof to provide shoulders, heads resting against said shoulders, said heads being each provided with an annular bead and with an outwardly projecting flange, a ring of heavier metal adapted to rest against the beaded portion of the head and provided with an annular groove about the same, said members being provided with a depressed portion forming a rib transversely thereof and adapted to enter the grooved portions of the annular rings, and a split compression band having an annular ribbed portion fitting the grooved portion of the members.

1,216,805. BARREL. GEORGE E. HERRMANN, Morristown, and BENJAMIN W. TUCKER, South Orange, N. J. Filed Feb. 16, 1912. Serial No. 677,899. (Cl. 220—4.)



A barrel or other container, comprising a plurality of members provided with unbroken flanges having alternately arranged and spaced projecting and grooved interlocking portions extending transversely of the flanges, said projecting and grooved portions being larger at the outer edge of the flanges than at the other.

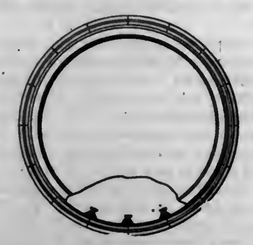
1,216,806. BARREL. GEORGE E. HERRMANN, Morristown, and BENJAMIN W. TUCKER, South Orange, N. J. Filed Feb. 16, 1912. Serial No. 677,900. (Cl. 220—4.)



1. A barrel or other container, having a plurality of bilged members provided with overlapping and depressed portions lengthwise thereof and forming ribs and grooves adjacent to their edges, the rib being on one edge of each member and the groove on the other edge thereof, the rib portion of one member being adapted to enter the groove of the next adjacent member, whereby when assembled the outer surface of the barrel will be flush and free of any projecting parts.

2. A metallic barrel comprising a plurality of curved and centrally enlarged staves, each having integral grooved and ribbed portions extending the greater part of the length thereof and forming shoulders, the ribbed portion being on one edge of each stave and the grooved portion on the other edge thereof, the said ribbed and grooved portions extending inwardly from the body adjacent to the edges thereof, heads engaging said shoulders, and means for holding the heads and members together.

1,216,807. BARREL. GEORGE E. HERRMANN, Morristown, and BENJAMIN W. TUCKER, South Orange, N. J. Filed Feb. 17, 1912. Serial No. 678,343. (Cl. 220—4.)



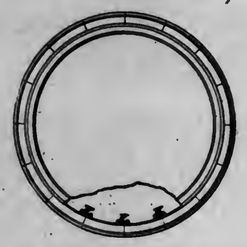
1. A barrel or other container having its body comprising a plurality of members each having flanges extending inwardly lengthwise thereof and along its edges for the greater part of its length, said flanges having parts thereof forming rib and groove portions to lock the flanges together, and spaced interlocking portions located on the flanges and formed therefrom.

2. A barrel or other container having its body comprising a plurality of members each having flanges extending inwardly lengthwise thereof and along its edges for the greater part of its length, said flanges having parts thereof forming rib and groove portions to lock the flanges together, and with oppositely extending spaced interlocking portions located on the flanges and formed therefrom.

3. A barrel or other container having its body comprising a plurality of detachable members each having flanges extending inwardly lengthwise thereof and along its edges for the greater part of its length, said flanges being provided with portions formed therefrom to lock the flanges together against relative movement lengthwise thereof, and with interlocking portions also formed therefrom to prevent relative movement transversely of the other locking means.

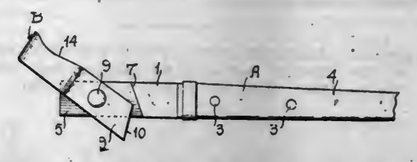
4. A barrel or other container having its body comprising a plurality of detachable members each having flanges extending inwardly lengthwise thereof and along its edges for the greater part of its length, said flanges being provided with rib and groove portions to lock the flanges together, and angular spaced interlocking flanges located on the flanges.

1,216,808. BARREL. GEORGE E. HERRMANN, Morristown, and BENJAMIN W. TUCKER, South Orange, N. J. Filed Feb. 17, 1912. Serial No. 678,344. (Cl. 220—4.)



A barrel or other container, comprising a plurality of members having flanges extending inwardly therefrom at their edges and for the greater part of their length, said flanges being provided with rib and groove connections throughout their entire length, and elongated integral bracing projecting portions located at the base of the flanges adjacent thereto and engaging a part of the same to prevent the flanges from opening under strain, heads located within the body at the ends thereof and resting against the flanges and means for holding the members and heads together.

1,216,809. WIRE-STRETCHER. LEWIS A. HIGHHOUSE, Honesdale, Pa. Filed Nov. 11, 1916. Serial No. 130,853. (Cl. 254—80.)

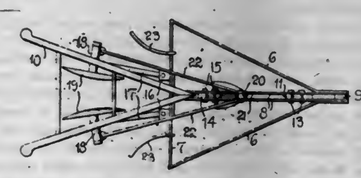


1. A wire stretcher comprising an elongated member provided at one end with a longitudinally disposed extension affording shoulders at opposite sides of said extension, a second member substantially U-shaped in form and disposed at opposite sides of the extension and pivotally engaged therewith, the free ends of said second member coacting with the shoulders of the first member to afford clamping means, the portion of the second member in advance of the extension having its opposite sides offset outwardly, corresponding edges of the offset portions of the second member being disposed on a predetermined inwardly directed curvature.

2. A wire stretcher comprising an elongated member provided at one end with a longitudinally disposed extension affording shoulders at opposite sides of said extension, a second member substantially U-shaped in form and disposed at opposite sides of the extension and pivotally engaged therewith, the free ends of said second member coacting with the shoulders of the first member to afford clamping means, the portion of the second member in advance of the extension having its opposite sides offset outwardly, the free ends of the second member and the shoulders of the first named member being disposed on predetermined corresponding inclines, the outer margins of said shoulders being defined by forwardly directed flanges.

3. A wire stretcher comprising an elongated member provided at one end with a longitudinally disposed extension affording shoulders at opposite sides of said extension, a second member comprising an elongated strip of flat material substantially U-shaped in form and disposed at opposite sides of the extension and pivotally engaged therewith, the free ends of said second member coacting with the shoulders of the first named member to afford clamping means, the free ends of the second member and the shoulders of the first member being disposed on predetermined corresponding inclines whereby the movement of the second member about its pivot in one direction is limited, the portion of the second member in advance of the extension having its opposite sides offset outwardly, the edges of the offset portions of the second member adjacent the eye points of the shoulders of the first named member being disposed on a predetermined inwardly directed curvature, the outer margins of the shoulders of the first named member being defined by forwardly directed flanges positioned beyond the outer faces of the adjacent portions of the sides of the second named member.

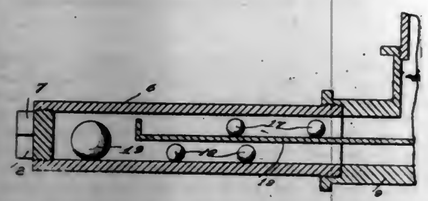
1,216,810. CULTIVATOR. JESSE G. HODGES, Osceola, Mo. Filed Oct. 28, 1916. Serial No. 128,269. (Cl. 97—37.)



In a cultivator, a frame, a cutting disk mounted in the forward end of the frame, a shovel mounted in the frame rearwardly of the cutting disk, means for vertically adjusting the shovel, spaced cultivating disks mounted upon

the rear end of the frame, manually operable means for adjustably spacing the disks, and rearwardly and laterally curved fender rods fixed to the frame at the outer sides of the respective disks.

1,216,811. LIQUID-HEATING ATTACHMENT FOR FURNACES. EDWARD I. INGLES, Indianapolis, Ind. Filed May 24, 1916. Serial No. 99,569. (Cl. 122—20.)



1. A liquid heating attachment for furnaces including a tubular body having a connector at one end thereof, an extension carried by said connector, a removable partition arranged longitudinally in the tubular body and short of the length of said body, a plurality of disturbing members carried above and below the partition and in said tubular body, means formed on the end of said partition to limit the movement of the disturbing member above the partition, a relatively large disturbing member mounted in the end of the body portion for a purpose specified.

2. A liquid heating attachment for furnaces, including a tubular body having a connector at one end thereof, an extension carried by said connector, said extension being connected to inlet and outlet supply pipes, a removable partition diametrically arranged in the said body, right-angularly bent fingers formed on one end of said partition, the outer free end of the partition being up-turned to snugly fit the connector, and a plurality of disturbing members carried above and below the partition in said tubular body for a purpose specified.

1,216,812. COPPER COMPOUNDS OF ORTHOOXYAZO DYESTUFFS AND A PROCESS OF MAKING SAME. CARL JAGERSPACHER and BERTHOLD WUTH, Basel, Switzerland, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Oct. 7, 1915. Serial No. 54,503. (Cl. 8—1.)

1. The described process for the manufacture of new copper compounds of orthooxyazo dyestuffs, soluble in water, consisting in acting with copper compounds in a watery medium on the orthooxyazo dyestuffs derived from a betacetonaldehyde derivative in which an alkyl-, alkyloxy- or alphylamino group is substituted for the aldehydic hydrogen.

2. The described process for the manufacture of new copper compounds of orthooxyazo dyestuffs, soluble in water, consisting in acting with copper compounds in a watery medium on the orthooxyazo dyestuffs resulting from the combination of an orthodiazophenol derivative with a betacetonaldehyde derivative in which an alkyl-alkyloxy- or alphylamino group is substituted for the aldehydic hydrogen.

3. As new products the described new copper compounds of orthooxyazo dyestuffs, which are soluble in water, from which the copper cannot be precipitated with sodium carbonate, soda lye and ammonia, and which constitute yellow to brown powders dissolving in concentrated sulfuric acid to yellow to red-orange solutions, and in water to yellow to brown solutions which do not change on addition of sodium carbonate or soda lye, and from which the animal fibers, as wool, silk and leather, straw and wood-bast are dyed, according to the methods used for acid dyestuffs, greenish-yellow to orange-brown tints showing without any further treatment a very good fastness to washing and to light.

1,216,813. METAL COMPOUNDS OF ORTHOOXYAZO DYESTUFFS AND A PROCESS OF MAKING SAME. CARL JAGERSPACHER, Basel, Switzerland, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Dec. 31, 1915. Serial No. 69,651. (Cl. 8—1.)

1. The described process for the manufacture of new metal compounds of orthooxyazo dyestuffs, consisting in treating with metal compounds the orthooxyazo dyestuffs resulting from the combination of orthooxydiazo bodies with pyrazolone-derivatives of the benzene or the naphthalene series hydroxylated in the aryl nucleus, in order to transform the said orthooxyazo dyestuffs into products containing a metal and soluble in water.

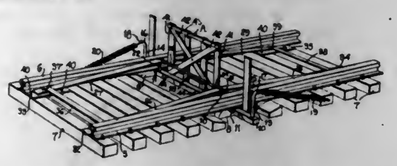
2. The described process for the manufacture of new copper compounds of orthooxyazo dyestuffs consisting in treating with copper compounds the orthooxyazo dyestuffs resulting from the combination of orthooxydiazo bodies with pyrazolone derivates of the benzene or the naphthalene series hydroxylated in the aryl nucleus, in order to convert the said orthooxyazo dyestuffs into products containing copper and soluble in water.

3. The described process for the manufacture of new copper compounds of orthooxyazo dyestuffs consisting in combining orthooxydiazo bodies with pyrazolone derivates of the benzene or the naphthalene series hydroxylated in the aryl nucleus in presence of copper compounds, in order to obtain compounds of orthooxyazo dyestuffs containing copper and soluble in water.

4. As new products, the described metal compounds of orthooxyazo dyestuffs, constituting in a dry state yellow to red powders, dissolving in concentrated sulfuric acid to deep colored solutions and in water to yellow to red colored solutions from which animal fibers are dyed yellow to brown and orange to red tints fast to light washing and alkali and becoming also fast to fulling and potting by cromating them subsequently.

5. As new articles of manufacture, the described new copper compounds of orthooxyazo dyestuffs, constituting in dry state yellow to red powders, dissolving in concentrated sulfuric acid to deep colored solutions and in water to yellow to red solutions dyeing animal fibers yellow, brown and orange to red tints fast to light, washing and alkali and becoming also fast to fulling and potting by chromating them subsequently.

1,216,814. CATTLE-GUARD. ALVIS JOCHUM, Crab Orchard, Ill., assignor of one-half to Fred West, Crab Orchard, Ill. Filed May 17, 1916. Serial No. 98,171. (Cl. 269—9.)

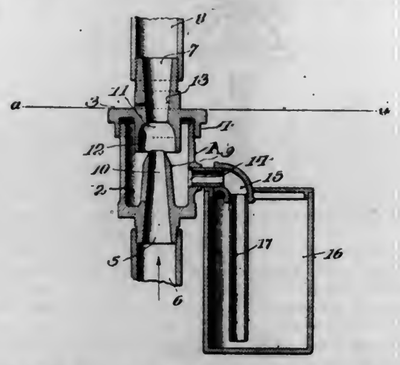


A cattle guard comprising a hingedly mounted barrier, a shaft secured to the lower end of the barrier, arms formed at the ends of the shaft, resilient elements operatively connected to the arms serving to maintain the barrier in a normal vertical position, a U-shaped member connected by the legs to the shaft, the transverse portion being secured to the barrier, the outer ends of this portion forming pintles, a plurality of hinged wheel operated actuating members coöperating with the pintles, and a plurality of wear plates for the ends of said latter members.

1,216,815. DRAIN FOR WATER SYSTEMS. WILLIAM KELLY, Memphis, Tenn., assignor of forty-nine one-hundredths to Charles M. Warner, Memphis, Tenn. Filed Jan. 2, 1914. Serial No. 809,916. (Cl. 137—13.)

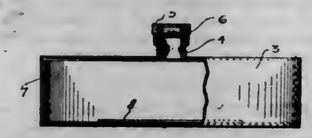
A drain device for pipe-lines of hydrants or the like comprising a receptacle interposed in said pipe-line below

the freezing line and provided with a vacuum chamber, a conical nozzle formed integrally with said receptacle in communication with said pipe-line and connecting said receptacle on one side and projecting into the vacuum chamber, a cap screw-threaded on said receptacle and formed with a nozzle section extending in opposite directions, one part of said nozzle extending above the cap and formed with a discharge orifice of increasing diameter from its connection with the cap to its discharge outlet, and the other part of said nozzle extending within the



cap and formed with a conical orifice extending downwardly and partially inclosing said nozzle, a drain receptacle located adjacent the first named receptacle, and a drain pipe connected to communicate with said vacuum chamber and extending to a point adjacent the bottom of said drain receptacle, whereby the water drained from said pipe-line above the freezing line when said hydrant is out of use is siphoned back into the pipe-line when the hydrant is again brought into use, substantially as set forth.

1,216,816. CHEMICAL HEATER. CLARA A. B. KINCAID, Indianapolis, Ind. Filed July 28, 1916. Serial No. 111,842. (Cl. 126—263.)

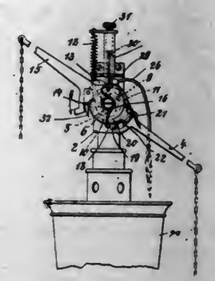


1. In a chemical heater, a copper box having a single opening, means for regulating the supply of air through said opening into the box, a zinc lining in said box, and an agent in the box acting with said metals for creating chemical activity.

2. In a chemical heater, a copper box having a single opening, an externally threaded tube into which said opening discharges, a cap screwing on said tube having a hole in its wall opened and closed to atmosphere by screwing the cap out or in, a zinc cup in said box, a copper member in said cup and a chemical agent in the receptacle thus formed which produces heat by chemical activity upon the admission of air to the interior of said receptacle.

1,216,817. AUTOMATIC LIGHTER FOR GAS-BURNERS. HANS KLEINSCHMIDT, Wilmersdorf, Germany, and ADOLF HALPERN and EMIL POSPISCHIL, Vienna, Austria, assignors to the Firm of Gas-Zünder Gesellschaft M. B. H., Berlin, Germany. Filed Sept. 6, 1912. Serial No. 719,014. (Cl. 67—20.1.)

1. In an automatic lighter for gas burners and the like comprising a main duct for the burner, an auxiliary burner, an auxiliary duct for said auxiliary burner, means for controlling said main duct and said auxiliary duct, an igniting device consisting of a pyrophorous body and a friction body coacting with said pyrophorous body, common means for operating said controlling means and said igniting device, means for automatically returning said operating means to its initial position, and means for closing only said auxiliary duct during the full return movement of said operating means.



2. In an automatic lighter for gas burners and the like comprising a main duct for the burner, an auxiliary burner, an auxiliary duct for said auxiliary burner, a valve controlling said main duct and said auxiliary duct, an igniting device close to the auxiliary burner consisting of a pyrophorous body and a friction body coacting with said pyrophorous body, means for simultaneously operating said valve and said igniting device, means for automatically returning said operating means to its initial position of rest and means for closing only said auxiliary duct during the full return movement of said operating means.

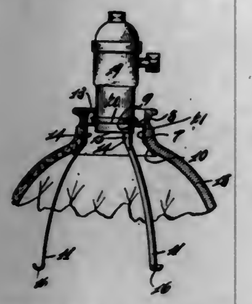
3. In an automatic lighter for gas burners and the like comprising a main duct for the burner, an auxiliary burner, an auxiliary duct for said auxiliary burner, a valve simultaneously controlling said main duct and said auxiliary duct, an igniting device close to the auxiliary burner consisting of a pyrophorous body and a friction wheel coacting with said body, a lever for simultaneously operating said valve and said igniting device, a spring acting on said lever and having the tendency of returning it to its initial position when released, said lever being coupled to said valve in such a manner as to move it only after having traveled a certain amount of its throw.

4. In an automatic lighter for gas burners and the like comprising a main duct for the burner, an auxiliary burner, an auxiliary duct for said auxiliary burner, a valve controlling said main duct and said auxiliary duct, an igniting device consisting of a pyrophorous body and a friction wheel coacting with said body, a lever for simultaneously operating said valve and said igniting device, a spring acting on said lever and having the tendency of returning it to its initial position when released, said lever being coupled with said valve by means of a dog adapted to strike against two abutments connected to said valve, said abutments being at such a distance from each other, that the valve will be moved by said lever when the latter is returning into its position of rest, only so far as to close the auxiliary duct.

5. In an automatic lighter for gas burners and the like comprising a main duct for the burner, an auxiliary burner, an auxiliary duct for said auxiliary burner, a valve controlling said main duct and said auxiliary duct, an igniting device close to the auxiliary burner consisting of a pyrophorous body and a friction wheel coacting with said body, a lever for simultaneously operating said valve and said igniting device, a spring acting on said lever and having the tendency to return it to its initial position when released, said lever having the same axis as said valve, a recess provided in a disk connected to said valve and a dog secured to said lever and engaging said recess, the width of said dog being substantially smaller than the width of said recess.

[Claims 6 to 27 not printed in the Gazette.]

1,216,818. LAMP-SHADE HOLDER. MAX KOSSMANN, Brooklyn, N. Y. Filed Sept. 18, 1916. Serial No. 120,679. (Cl. 240—111.)



1. In combination with a lamp shade and a shade holder provided with a central aperture, a yieldable clamp carried by said holder and a lamp socket provided with an annular bead and adapted to enter said opening and be engaged by said clamp catching over said bead, the shade being supported by said holder and the neck of the shade preventing by contact with the clamp the outward yielding of the latter and the consequent disengagement of said clamp and holder from the socket.

2. A shade holder comprising a cylindrical vertical body having openings in its vertical wall, in combination with a clamp connected to said holder and having yielding clamping elements, located in said openings which elements engage the lamp socket in their innermost position and are arranged to work through said holder, and a shade adapted to prevent, by its contact with the said clamping elements, the outward movement of the latter through the holder for disengagement from said socket.

3. A shade holder comprising a hollow cylindrical vertical body portion, an inturned flange carried thereby at one end thereof and provided with a central aperture, an outwardly directed angularly disposed flange carried by said cylindrical portion at the opposite end thereof, arranged to support a shade, said body portion and inturned flange being provided with a plurality of communicating slots, and a yieldable clamping element located in each slot and movable inward and outward through said slot and means for preventing the outward movement of said elements to disengage the said holder from said socket while the shade is in position for use.

4. A shade holder comprising a plurality of yieldable fingers, the upper end of each finger being turned inwardly to form projections, the lower end of each finger being provided with a retaining means for a depending shield distinct from the shade, and a frame secured to said fingers intermediate their ends.

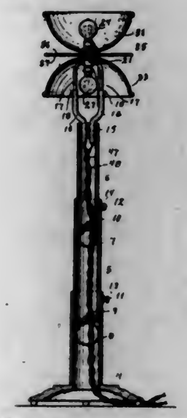
5. In combination with a shade having a cylindrical hollow neck, a holder therefor consisting of a frame arranged to loosely fit within said neck, means carried by the frame to support said shade, a plurality of yieldable clamping elements carried by said frame and arranged to engage a lamp socket, the neck of said shade being adapted by external contact with said clamping elements to maintain said clamping elements in contact with the lamp socket when said shade rests upon the supports therefor.

[Claim 6 not printed in the Gazette.]

1,216,819. LIGHTING-FIXTURE. FERDINAND C. KRUEGER, Milwaukee, Wis. Filed June 14, 1916. Serial No. 103,599. (Cl. 240—81.)

1. A lighting fixture comprising a support, a fitting mounted thereon, vertically disposed lamps secured at the opposite ends of said fitting, a translucid reflector for each lamp, a metallic reflector disposed between said translucid reflectors, and means for detachably securing said reflectors upon said fitting.

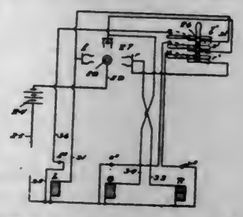
2. A lighting fixture comprising a pair of oppositely disposed lamps, translucid reflectors for each of said lamps, an opaque reflector disposed between said translucid reflectors, and supporting means including tubular telescoping sections, and springs secured to the ends of the inner telescoping sections and bearing upon the inner sides of the outer telescoping sections to hold said sections in adjusted position.



3. A lighting fixture comprising an extensible support, a fitting mounted thereon, vertically disposed electric lamps secured at the opposite ends of said fitting, translucid glass reflectors for each lamp mounted on said fitting, and an opaque disk having upper and lower reflecting surfaces mounted on said fitting between said glass reflectors.

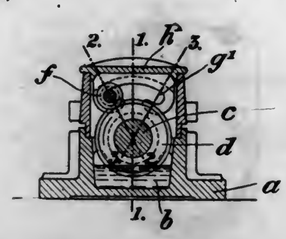
4. A lighting fixture including a fitting having an outer shouldered portion and a threaded end, vertically disposed lamps secured at the opposite ends of said fitting, glass reflectors for each of said lamps having centrally disposed apertures through which said fitting passes, a metal reflector having a centrally disposed aperture through which said fitting passes, said reflectors being mounted on said fitting between said shouldered portion and said threaded end, cushioning means interposed between said reflectors and fitting, and a collar fitting onto the threaded end of the fitting for securing said reflectors and cushioning means between it and said shouldered portion.

1,216,820. ELECTRIC SIGNAL. THEODORE P. LANCASTER, Boston, and JAMES L. STRUTHERS, Lynn, Mass. Filed Apr. 29, 1914. Serial No. 835,205. (Cl. 177—337.)



In a signaling device, a plurality of magnets and armatures therefor, a signal operated mechanically by the armature of each magnet, independent circuits for each magnet, a switch having a contact member connected with each circuit, a plurality of lamps corresponding in number with the magnets and having independent circuits, each lamp circuit having permanent connection with one of the aforesaid contact members of the switch, and a device having a plurality of contact members each connected with a separate lamp circuit and arranged to simultaneously disconnect all of the lamp circuits from the contact members first mentioned.

1,216,821. SELF-LUBRICATING BEARING FOR SHAFTS. WILLIAM HENRY LINDSAY, Johnstone, Scotland. Filed Mar. 8, 1916. Serial No. 82,890. (Cl. 64—32.)



1. The combination with a shaft of a self lubricating bearing therefor, said bearing comprising, shaft supporting means, a receptacle for lubricant, lubricant carrying means revoluble with the shaft and dipping into the receptacle, and means for arresting lubricant rollable on said revoluble means and occupying a position other than vertical to the center of the shaft.

2. The combination with a shaft of a self lubricating bearing therefor, said bearing comprising, shaft supporting means, a receptacle for lubricant, lubricant carrying means revoluble with the shaft and dipping into the receptacle, means for arresting lubricant rollable on said revoluble means and movable by the revoluble means to a position at one side or other of a vertical plane through the axis of the shaft according to the direction of revolution of said shaft.

3. The combination with a shaft of a self lubricating bearing therefor, said bearing comprising, shaft supporting means, a receptacle for lubricant, lubricant carrying means revoluble with the shaft and dipping into the receptacle, means for arresting lubricant rollable on said revoluble means and occupying a position other than vertical to the center of the shaft and guiding and supporting means for said rollable means.

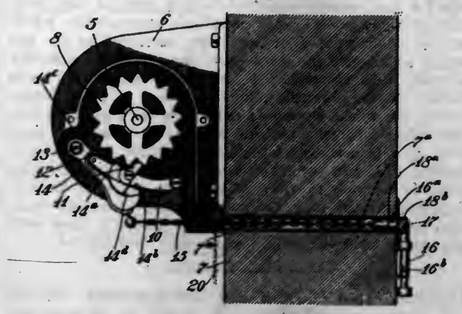
4. The combination with a shaft of a self lubricating bearing therefor, said bearing comprising, shaft supporting means, a receptacle for lubricant in connection therewith, a collar revoluble with the shaft and dipping into the receptacle, a roller bearing on the periphery of the collar and movable by the latter to a position at one side or other of a vertical plane through the axis of the shaft according to the direction of the revolution of said shaft.

5. The combination with a shaft of a self lubricating bearing therefor, said bearing comprising, shaft supporting means, a receptacle for lubricant in connection therewith, a collar revoluble with the shaft and dipping into the receptacle, a roller bearing on the periphery of the collar and movable by the latter to a position at one side or other of a vertical plane through the axis of the shaft according to the direction of the revolution of said shaft and guiding and supporting means for the roller.

[Claims 6 to 21 not printed in the Gazette.]

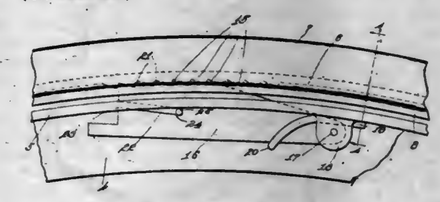
1,216,822. LOCKING AND RELEASING DEVICE FOR FIRE-SHUTTERS. EDWARD H. MCCLOUD, Columbus, Ohio, assignor to The Kinnear Manufacturing Company, Columbus, Ohio, a Corporation of West Virginia. Filed Apr. 3, 1912. Serial No. 688,163. (Cl. 189—58.)

A locking and releasing means for a fire shutter roller provided with a ratchet, comprising in combination, a lever pivoted near the ratchet, a gravity pawl pivoted on said lever to normally engage said ratchet to permit rotation of the ratchet in one direction and prevent rotation in the other direction, a second lever pivoted to swing under the first mentioned lever, the end of said first mentioned lever adapted to normally rest at its end upon the second mentioned lever near the pivot of the latter, a device connected with the second mentioned lever to actuate the same to raise and lower the first mentioned lever to engage and disengage the pawl from the ratchet, and means whereby said second mentioned lever may be



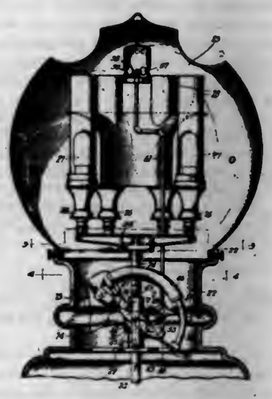
held in raised position to hold the pawl normally engaged with the ratchet, substantially as described.

1,216,823. DEMOUNTABLE RIM. RODERICK MCCLURE, Gilman, Mont. Filed Oct. 12, 1915. Serial No. 55,411. (Cl. 152—21.)



In a vehicle wheel, wheel and tire rims, means for wedging said rims in anchored relation with respect to each other, a rack on one of said rims, a pawl on the other rim for engagement with said rack, said pawl having a slot therein provided with an open end which is normally closed by one of said rims when said pawl is in a locking position, and means held in said slot by such rim when the pawl is locked for unlocking said pawl, substantially as described.

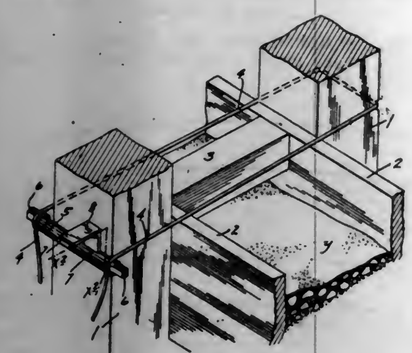
1,216,824. GAS-LIGHTING APPARATUS. HARRY H. MCCOLLUM, Crystal Lake, Ill. Filed Oct. 19, 1915. Serial No. 56,659. (Cl. 67—16.)



An apparatus of the character described comprising a main valve casing; a gas supply pipe connected to the

lower part thereof; a pipe connected to the upper part thereof; a star shaped casing connected to said upper pipe; a gas burner connected to each arm of said star-shaped casing, each burner carrying a substantially transparent chimney; a pilot-light pipe connected to the gas supply pipe below the main valve and extending upwardly between said chimneys; a shield perforated for each burner carried by said pilot-light pipe; a pilot burner within the shield having an orifice for each main burner, registering with the perforations in the shield; a main valve in said main-valve casing; means for automatically opening the main valve and temporarily opening the pilot valve to increase the flow of gas from the pilot burners to ignite the gas from the main burners above the chimneys and a spring to subsequently partially close said pilot valve after the main burners have been lighted.

1,216,825. CLAMP FOR CONCRETE-FORMS. FRANK G. MCMILLAN and HOWARD O. MCMILLAN, Minneapolis, Minn. Filed Apr. 19, 1916. Serial No. 92,286. (Cl. 254—161.)



1. In a clamp of the kind described, a spindle having an exposed intermediate portion capable of being directly rolled against a support, perforated at its intermediate portion to form key seats and provided with pronged ends upon which the ends of a wire may be simultaneously wound and from which the wound coils are adapted to be removed laterally, in combination with a key insertible into said key seats to lock said spindle against the tension of the streached wire.

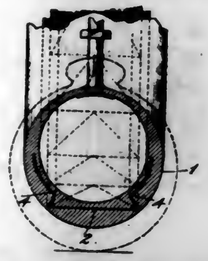
2. In a clamp of the kind described, a spindle having pronged ends adapted to receive and coil the ends of a tension wire, said spindle having in its body diametrical slots at an angle to each other, and an angular key insertible into either of the slots of said spindle with its projecting arm turned either toward or from the post or body engaged by said spindle.

3. A clamp of the kind described comprising a spindle having pronged ends adapted to receive and coil the ends of a tension wire and having in its body diametrical slots at an angle to each other, and an angular key having relatively long and short arms, either of which is insertible into either of the slots of said spindle with the other arm turned either toward or from the post or body engaged by said spindle.

1,216,826. TIRE. JOHN A. MCTAGGART, Philadelphia, Pa. Filed Aug. 8, 1916. Serial No. 113,698. (Cl. 152—18.)

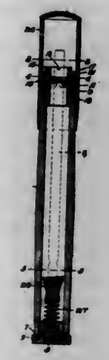
1. An inflatable tube provided with an internal armor composed of separate sections of mesh or gauze-like material of triangular form placed side by side, and end to end, in the circumferential direction of said tube and embedded in the material thereof.

2. An inflatable tube having therein an armor composed of separate sections of mesh or gauze-like material of triangular form placed side by side and end to end in the circumferential directions of the tube and each yieldable independently of the other and angularly bent reticulated



plates embedded in said tube, the terminals of said sections and plates approaching each other and terminating adjacent each other.

1,216,827. THERMOMETER-CASE. JOHN MACGREGOR, Roslindale, Mass. Filed May 9, 1914. Serial No. 837,584. (Cl. 73—52.)

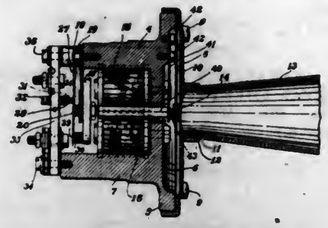


1. A thermometer case comprising a tube 1 for receiving sterilizing liquid, a head 13 having a counterbore therein and a portion threaded into said tube, a valve diaphragm 9 seated in said counterbore, a washer 17 on said diaphragm, a ring 15 threaded in said counterbore to press said washer and diaphragm toward the seat of the latter, and a cap 25 fitted on said tube inclosing said head.

2. A thermometer case comprising a tube 1 for receiving sterilizing liquid, a head 13 having a valve diaphragm 9 secured therein, a cap 3 having a portion threaded into said tube containing a socket, and a coil spring 27 to receive the thermometer and having its lower end seated and secured in said socket.

1,216,828. AUTOMOBILE-HORN. RAY H. MANSON, Elyria, Ohio, assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed Sept. 29, 1913. Serial No. 792,257. (Cl. 177—7.)

1. In an automobile horn, the combination of a frame, a sound producing diaphragm supported from the frame, electromagnets for supplying energy to operate the diaphragm, an armature for said magnets, a spring connecting the armature to the frame, means to attach the armature to the spring applied at the center of the armature, an electric switch controlling the circuit of the magnets governed by the armature, an anvil on the diaphragm, a stem connected at one end to the center of the armature for transmitting the motion of the armature to he diaphragm and vibrating the same, and a spring supported from the frame connected at one end to the other end of the stem for directing the same.



2. In an automobile horn, the combination of a sonorous diaphragm, a frame, a member adapted to be reciprocated to strike the diaphragm to cause it to sound signals, an armature for reciprocating said member to which the member is connected at one end, a leaf spring connected at one end to the other end of the reciprocating member, said leaf spring being connected at its other end to the frame and adapted to direct the reciprocating member when the same is reciprocated, a spring for connecting the armature to the frame connected to the center of the armature, four electromagnets for operating the armature, one acting on each corner of the armature when said magnets are energized and a switch controlling the circuit of the magnets governed by the armature.

3. In an automobile horn, the combination of a frame, a diaphragm chamber formed in said frame, a sonorous diaphragm in said frame and an electromagnet chamber in said frame, an elecromagnet in said chamber, an armature for said magnet, a stem connected to said armature through which the armature operates the diaphragm, a pair of leaf springs connected to the frame, one of said springs being in the magnet chamber and the other of said springs being in the diaphragm chamber, and a switch having contacts in the circuit of the magnet controlled by the armature.

4. In an automobile horn, the combination of a frame, a diaphragm chamber formed in said frame, a sonorous diaphragm in said frame, a magnet chamber formed in the frame, a magnet in said chamber, an armature controlled by said magnet for actuating the diaphragm, a leaf spring in the magnet chamber supported from the frame and connected to the armature, a second leaf spring in the diaphragm chamber, a rod connecting said second spring to the armature and a switch having contacts in the circuit of the magnet controlled by said magnet.

5. In an automobile horn, the combination of a frame, a pair of chambers formed in said frame, a sonorous diaphragm mounted in one of said chambers, a magnet in said frame, a switch for said magnet in the other of said chambers controlled by said magnet, a pair of leaf springs supported from the frame, one of said leaf springs being in each of said chambers, an armature for causing the actuation of the diaphragm controlled by said magnet and connected to one of said springs and a stem connecting the other of said springs to said armature.

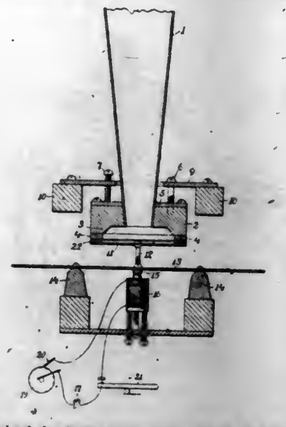
[Claim 6 not printed in the Gazette.]

1,216,829. ELECTRIC MUSICAL INSTRUMENT. HARRY S. MARTIN, Boston, Mass., assignor to Choralcelo Company, a Corporation of Maine. Filed Apr. 29, 1916. Serial No. 94,466. (Cl. 177—7.)

1. A musical instrument comprising a sonorous chamber having a mouth surrounded by a yielding material, and a vibrating body striking said yielding material.

2. A musical instrument comprising a sonorous chamber having a mouth surrounded by a yielding material, and a vibrating body striking said yielding material throughout the entire circle about the mouth.

3. A musical instrument comprising a sonorous chamber having a mouth surrounded by a yielding material, and a vibrating body striking said yielding material throughout the entire circle about the mouth, the rate of vibration of said body bearing a musical relationship to the pitch of said chamber.

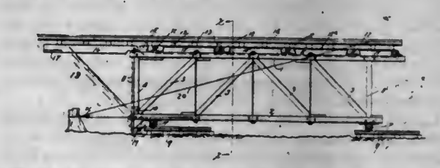


4. A musical instrument comprising a sonorous chamber having a circular mouth, and a vibrating disk parallel with the plane of said mouth, one having a yielding ring attached thereto adapted to be struck when the disk is vibrating.

5. A musical instrument comprising a sonorous chamber having a circular mouth surrounded with a ring of yielding material, a thin disk equal in diameter to the exterior of said ring, a ring of yielding material attached to the peripheral portion of said ring, and means for vibrating said disk to cause said rings to strike, the rate of vibration bearing some musical relationship to the pitch of said chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,216,830. MOVABLE FILLING-BRIDGE. FRANK W. MAY, Seattle, Wash. Filed Aug. 14, 1916. Serial No. 114,714. (Cl. 104—45.)

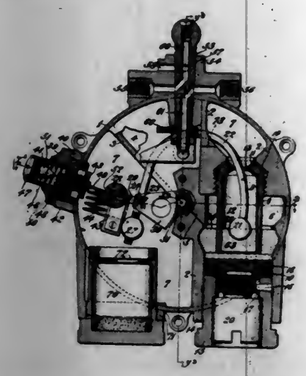


1. In a continuous filling making device, the combination of a movable bridge, a bulk head secured transversely to the rear end of said bridge, whereby the earth pressure of the fill against the said bulk head will push forward the said bridge.

2. In a device of the class described, the combination of a movable bridge, track supporting connection between the rear end of said bridge and earth embankment fill, a stationary track resting continuously upon the said fill, the track supporting connection and the said bridge, bulk head means mounted upon the rear end of said bridge, whereby the pressure of a newly made fill against the bulk head will shove forward the movable bridge.

3. In a continuous fill making device, the combination of a movable bridge, a bulk head secured transversely to the rear end of said bridge, whereby the earth pressure of the fill against the said bulk head will push forward the said bridge, revolving track supporting means maintained upon the top of said bridge, pivotally mounted dump stringers one end of each of which is secured to the said bridge and the other end of which rests upon the completed fill, and track supporting means, whereby dump cars may be run out upon the bridge and dumped behind the said bulk head.

1,216,831. GAGE. WILLIAM MELAS, Ridley Park, Pa., assignor, by direct and mesne assignments, to David Townsend, Philadelphia, Pa. Filed Oct. 30, 1914. Serial No. 869,369. (Cl. 73—31.)



1. In a device of the character stated, a casing formed with a gage chamber, a fluid therein, an open-ended sleeve carried by said casing and extending into the fluid to form a float chamber and to provide a pressure surface on the fluid in each chamber, a float suitably immersed in the fluid in said float chamber, means for adjusting the immersion of said float to provide a constant displacement thereof for any working position and for any given fluid means suitably controlled for admitting different pressures upon said fluid surfaces, means for indicating the position of said float, and means for adjusting the fluid level in said chambers.

2. In a device of the character stated, a casing formed with a gage chamber, a fluid therein, an open-ended sleeve carried by said casing and extending into the fluid to form a float chamber and to provide a pressure surface on the fluid in each chamber, a float suitably immersed in the fluid in said float chamber, means to vary the center of gravity of said float for adjusting the immersion of said float to provide a constant displacement thereof for any working position and for any given fluid, means for admitting different pressures upon said fluid surfaces, means for indicating the position of said float, and means for adjusting, from the exterior of the gage, the fluid level in said chambers.

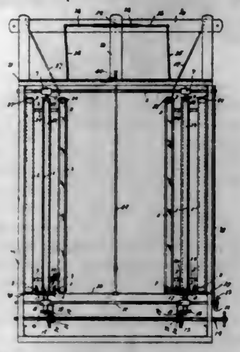
3. In a device of the character stated, a casing formed with a gage chamber, a fluid therein, an open-ended sleeve carried by said casing and extending into the fluid to form a float chamber and to provide a pressure surface on the fluid in each chamber, a balanced float suitably immersed in said fluid, means for adjusting the center of gravity of the float system both vertically and laterally, means for admitting the different pressures upon said fluid surfaces, and means for indicating the position of said float.

4. In a device of the character stated, a casing formed with a gage chamber, a fluid therein, an open-ended sleeve carried by said casing and extending into the fluid to form a float chamber and to provide a pressure surface on the fluid in each chamber, a float in said float chamber, a seat formed at the upper portion of said float chamber and with which said float is adapted to contact in the proper position thereof to prevent improper escape of the fluid from the top of said float chamber, means for admitting different pressures upon said fluid surfaces, and means for indicating the position of said float.

5. In a device of the character stated, a casing formed with a gage chamber, a fluid therein, an open-ended sleeve carried by said casing and extending into the fluid to form a float chamber and to provide a pressure surface on the fluid in each chamber, a pivotally mounted float suitably immersed in the fluid in said float chamber, means for admitting the different pressures upon said fluid surfaces, means for indicating the position of said float, and means for compensating for the movement of the float in an arc to provide equal indicating divisions for equal increments of pressure.

[Claims 6 to 19 not printed in the Gazette.]

1,216,832. APPARATUS FOR CONVEYING AND PILING METAL SHEETS. GEORGE E. MELOWN, McKeesport, Pa. Filed May 16, 1916. Serial No. 97,782. (Cl. 214—6.)



1. In a device for conveying and piling metal sheets, comprising a frame, sheet conveying means rotatably mounted on said frame, a driving mechanism for operating said conveying means and a tripping device actuated by contact with the sheet upon said conveying means for depositing said sheet after the conveying operation.

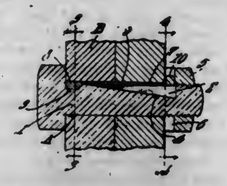
2. In a device for conveying and piling metal sheets, comprising a frame, a pair of conveyers each consisting of a plurality of belts and pulleys disposed at right angles with respect to each other and rotatably mounted upon said frame, and means for tripping said conveyers at a predetermined point for evenly stacking sheets delivered by said conveyers.

3. In a device for conveying and piling metal sheets, comprising a frame, a pair of conveyers each consisting of a plurality of belts and pulleys disposed at right angles with respect to each other and rotatably mounted on said frame, driving mechanism for operating said conveyers, a tripping device actuated by contact with the sheet upon said conveyers permitting said conveyers to make a one-quarter turn for depositing said sheets and means for automatically holding said conveyers in operative position after the tripping and depositing operations.

4. In a device for conveying and piling sheet metal, comprising a frame, a pair of conveyers each consisting of a plurality of belts and pulleys disposed at right angles with respect to each other and rotatably mounted on said frame, driving mechanism for operating said conveyers, a tripping mechanism actuated by contact with the sheet upon said conveyers permitting said conveyers to rotate one quarter turn for depositing said sheets and means attached to said frame for shifting said conveyers so same will squarely receive said sheets as they emerge from the rolls, substantially as described and set forth.

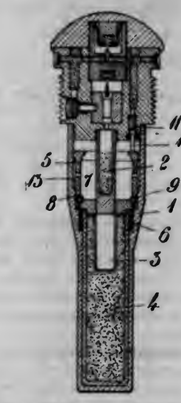
5. In a device for conveying and piling metal sheets comprising a frame provided with adjustable legs for elevating or lowering said frame, a pair of conveyers each consisting of a plurality of belts and pulleys disposed at right angles with respect to each other and rotatably mounted on said frame, a driving mechanism for operating said conveyers, a tripping device, actuated by contact with the sheet upon said conveyers and including catches, which when released permit said conveyers to rotate a one quarter turn and deposit said sheet, means for automatically holding said conveyers after the depositing operation, and means attached to the rear of said frame for shifting said conveyers for alining the sheet thereon, substantially as described and set forth.

1,216,833. NUT-LOCK. LUTHER W. MITCHELL, Abanda, Ala. Filed Mar. 18, 1916. Serial No. 85,105. (Cl. 151—9.)



A bolt having a longitudinal groove provided at one end with a recess, said groove being shallow adjacent to said recess and increasing in depth from said recess to its other end, and a flat spring disposed within said groove and having a lug at one end seated in said recess, the other end of the spring being free and having an outstanding portion to engage grooves of a nut threaded upon the bolt.

1,216,834. SHELL-FUSE. KARL HUGO MORÉN, Bofors, Sweden. Filed July 18, 1916. Serial No. 109,964. (Cl. 102—39.)

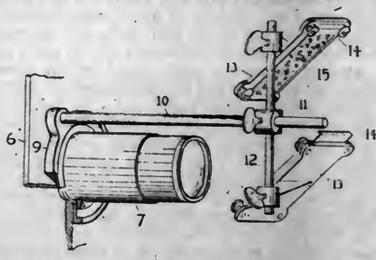


In a fuse for shells, a hollow body, a detonating charge container slidably disposed within said body and provided with a cover having a beveled forward edge, a safety member having a longitudinal passage large enough to receive said container, disposed forwardly of said container, a spring tending to force said container into said passage, balls disposed between said member and the beveled edge of the container and bearing against the inner surface of the fuse body to prevent movement of the container, the said fuse body being provided with a recess to receive said balls on forward motion of the safety member, means for retaining said safety member in safe position, and means for releasing said safety member as the shell is fired.

1,216,835. PROJECTION APPARATUS. LEWIS G. MORRIS, Newport, R. I. Filed Feb. 16, 1916. Serial No. 78,592. (Cl. 88—24.)

1. The combination of a source of light, and an image projection apparatus including an opaque color selective metallic mirror interposed in the path of all of the light passing through the projection apparatus, whereby a golden mellow tone is imparted to all of the light which would otherwise appear white in the projected image, substantially as described.

2. The combination of a source of light, and an image projection apparatus including a pair of adjacent opaque parallel color selective metallic surface mirrors interposed in the path of all of the light passing through the projection apparatus, whereby a golden mellow tone is imparted to all of the light which would otherwise appear white in the projected image, substantially as described.

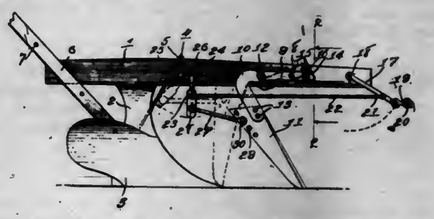


3. The combination of a source of light, an image projection apparatus, and an opaque color selective metallic surface mirror directly in front of the projection apparatus in the path of all of the beam from the projection apparatus, whereby a golden mellow tone is imparted to all of the light which would otherwise appear white in the projected image, substantially as described.

4. The combination of a source of light, an image projection apparatus, and a pair of adjacent opaque parallel color selective metallic surface mirrors directly in front of the projection apparatus in the path of all of the beam from the projection apparatus, whereby a golden mellow tone is imparted to all of the light which would otherwise appear white in the projected image, substantially as described.

5. The combination of a source of light, an image projection apparatus, a mirror holder comprising a ring adapted to be clamped to the apparatus by the flange of the projection lens and carrying a rod parallel with the axis of the ring, mirror supporting plates carried by the rod, and mirrors carried by the plates one of which is an opaque color selective metallic surface mirror interposed in the path of all of the light passing through the projection apparatus, whereby a golden mellow tone is imparted to all of the light which would otherwise appear white in the projected image, substantially as described.

1,216,836. PLOW. FRANK MUNSEY, Persia, Tenn. Filed Sept. 23, 1914. Serial No. 863,167. (Cl. 97—6.)



1. A colter including a head and a bit, means for adjustably mounting the head, and draft actuating means adjustably connected to the bit for allowing the bit to move rearwardly when it engages a rigid object in the ground.

2. A colter including a head and a bit, means for adjustably mounting the head, movably and adjustably mounted draft actuating means associated with the bit for allowing the bit to move rearwardly when it engages a rigid object in the ground.

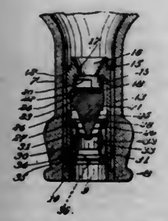
3. A colter including a head and a bit, means for adjustably mounting the head, a movably mounted clevis positioned in advance of the bit, a movably and adjustably mounted clevis positioned in the rear of the bit, a rod pivotally connected at its respective extremities to the clevis, and a link pivotally connected to the rear clevis and adjustably and pivotally connected to the bit, substantially as described and for the purpose set forth.

4. A colter including a head and a bit, means for adjustably and pivotally mounting the head, draft actuating

means including pivotally mounted clevises, a rod having its respective extremities pivotally connected to the clevices to permit of the clevises to move simultaneously, a link pivotally connected to the rear clevis and adjustably associated with the bit to permit the bit to move rearwardly when it engages a rigid object in the ground, substantially as described and for the purpose set forth.

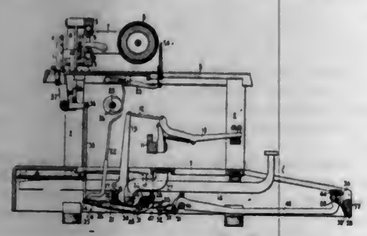
5. A colter including head plates and a bit rigidly connected therebetween, pivotally and adjustably mounted supporting plates, means for pivotally connecting the head plates to the rear ends of the supporting plates, draft actuating means including pivotally mounted clevises, a connected rod arranged between the two clevises to cause them to move simultaneously, a link pivotally connected to the rear clevis and pivotally and adjustably connected to the bit to allow the bit to move rearwardly when it engages a rigid object in the ground, and the rear clevis being adjustable to vary the pitch of the bit to the ground, substantially as described and for the purpose set forth.

1,216,837. NON-REFILLABLE BOTTLE. SOLOMON NARUNSKY, Baltimore, Md. Filed Jan. 21, 1915, Serial No. 3,439. Renewed Dec. 13, 1916. Serial No. 136,814. (Cl. 215—62.)



The combination with a bottle neck, of a shell in said neck said shell having a central passage at its inner end with an annular recess at the outer end of said passage; a disk valve normally in the annular recess; ribs on the inside of the shell at the outer side of the annular recess; a valve having exterior recesses to receive the ribs in the shell said valve having an outwardly-projecting tapered plug; a movable ring around the tapered plug; a retaining ring in the shell near the outer end thereof and a movable baffle in the shell between the end of the tapered plug and the retaining ring.

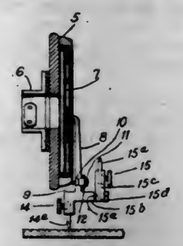
1,216,838. TYPE-WRITING MACHINE. WESLEY N. ONDERDONK, Syracuse, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed May 3, 1915. Serial No. 25,464. (Cl. 197—183.)



1. The combination with a main frame including a transverse front bar, of a space bar, a stop secured to and depending from the under side of said space bar and having its contact surface extending downward at a forward inclination, and a coöperating stop on said transverse frame bar having its stop surface facing backward at a downward inclination whereby on the upstroke of said space bar the movable stop engages the stationary stop at an inclination to the path of said movable stop so as to arrest said space bar without rebound.

2. The combination with a main frame and a depressible space bar, of a stationary stop on the main frame facing backward at a downward inclination, and a coöperating stop secured to the under side of said space bar and consisting of a dependent, resilient arm extending downward at a forward inclination into position to contact with said stationary stop and having its stop surface facing forward at an upward inclination whereby on the return or upstroke of said space bar the movable stop engages the stationary stop at an inclination to the path of said movable stop so as to arrest said space bar without rebound.

1,216,839. CONVERTIBLE SOUND-BOX. RICHARD JAMES PRETTIE, Jamaica, N. Y., assignor to The Aeolian Company, a Corporation of Connecticut. Filed May 4, 1915. Serial No. 25,741. (Cl. 274—28.)



1. A sound box comprising a diaphragm, a stylus bar and two stylus holding means on said bar arranged respectively to play vertical and lateral wave sound records without substantially changing the angular relation of the diaphragm to the record, the stylus holding means being adjustable so that either may play without interference from the other.

2. A sound box comprising a diaphragm, a stylus bar and two stylus holding means on said bar arranged respectively to play vertical and lateral wave sound records without substantially changing the angular relation of the diaphragm to the record, one stylus holding means being longer than the other and being adjustable into and out of playing position.

3. A sound box comprising a diaphragm, a stylus bar and two stylus holding means on said bar arranged respectively to play vertical and lateral wave sound records without substantially changing the angular relation of the diaphragm to the record, one stylus holding means being pivotable into and out of a playing position wherein the record engaging extremity of its stylus is below that of the other stylus holding means.

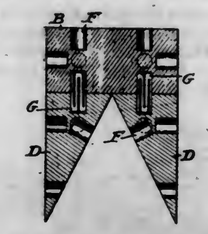
4. A sound box comprising a diaphragm, a stylus bar and two stylus holding means on said bar arranged respectively to play vertical and lateral wave sound records without substantially changing the angular relation of the diaphragm to the record, one stylus holding means being adjustable into and out of a playing position wherein the record engaging extremity of its stylus is below that of the other stylus holding means.

5. A sound box comprising a diaphragm, a stylus bar and two stylus holding means on said bar arranged respectively to play vertical and lateral wave sound records without substantially changing the angular relation of the diaphragm to the record, one stylus holding means being adjustable into and out of playing position wherein the record engaging extremity of its stylus is below that of the other stylus holding means, and means for locking said adjustable stylus holding means in its playing position.

[Claims 6 to 11 not printed in the Gazette.]

1,216,840. TOY BUILDING-BLOCK. JOSEPH H. RAMSEY, VICTOR C. HUNTINGTON, and CHARLES M. HYATT, Albany, N. Y., assignors to The Embossing Company, Albany, N. Y., a Corporation of New York. Filed Oct. 29, 1915. Serial No. 58,529. (Cl. 46—35.)

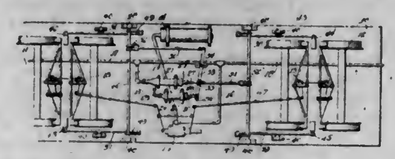
1. A set of toy building blocks comprising a plurality of blocks having cylindrical sockets perpendicular to the faces of the blocks, and a plurality of radially yielding, resilient dowels adapted to fit snugly the sockets in the blocks to hold the latter together, each consisting of a short cylindrical pin of resilient material having longitudinal slots at an angle to each other extending from the ends inwardly past the center of the pin.



2. A dowel for the purpose described, comprising a short cylinder of resilient material, having longitudinal slots at an angle to each other extending inwardly from the ends past the center of the cylinder.

3. A dowel for the purpose described, comprising a short cylinder of maple wood, having a plurality of longitudinal slots at an angle to each other extending inwardly from the ends past the center of the cylinder.

1,216,841. AIR-BRAKE-OPERATING MECHANISM. WILLIAM C. RENSHAW, Mannington, W. Va. Filed Apr. 3, 1915. Serial No. 18,927. (Cl. 188—2.)



1. The combination with an air-brake system of an exhaust device comprising a plurality of cylinders, one of said cylinders communicating with said air-brake system and the second cylinder communicating with said first mentioned cylinder, pistons slidably mounted in said cylinders and controlling the passage of air through the same, actuating means connected with said pistons, and means for yieldably holding said pistons in a normal position.

2. The combination with an air-brake system of an exhausting device including a plurality of communicating cylinders, one of said cylinders communicating with the air brake system, means for controlling the passage of air through said cylinders, means for yieldably holding said controlling means in a set position, operating means connected with said controlling means, and actuating means for said operating means moved to an operative position by engagement with the right of way over which a train passes.

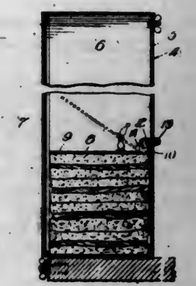
3. The combination with an air-brake system of exhausting means including a cylinder communicating with said system, a second cylinder communicating with said first mentioned cylinder, pistons in said cylinders, means connected with said pistons for initially moving said pistons to permit air from said system to enter the cylinders and move said pistons longitudinally in said cylinders, and resilient means in said first mentioned cylinder for yieldably holding the piston thereof in a closed position and serving as means for returning the piston to a closed position after the air in said system has become exhausted.

4. The combination with an air-brake system of exhausting means including controlling pistons, piston rods extending from said pistons, a lever having one end portion connected with said pistons, rocker shafts, links pivotally connected with said rocker shafts, one of said links being connected with one of said piston rods and the other of said links being pivotally connected with said lever, arms carried by said rocker shafts and pivotally connected with said links, tappets, levers having their outer end portions connected with said tappets, and arms carried by said rocker shafts and connected with the inner end portions of said levers.

5. An air-brake system exhausting mechanism including cylinders, pistons slidably mounted in said cylinders, piston rods extending from said pistons through said cylinders, an actuating lever connected with said piston rods, rocker shafts, links pivotally connected with said rocker shafts and with said lever, pivotally mounted levers, arms extending from said rocker shafts and pivotally connected with the inner end portions of said levers, and tappets connected with the outer end portions of said pivotally mounted levers.

[Claims 6 and 7 not printed in the Gazette.]

1,216,842. RECEPTACLE FOR SANDWICHES OR THE LIKE. JAMES G. RHODES, Chicago, Ill. Filed Nov. 29, 1915. Serial No. 64,053. (Cl. 217—64.)



1. In a receptacle for sandwiches or the like, the combination of a casing, a cover located within the casing and adapted to rest upon the top of the commodity placed therein, a member having sliding engagement with one wall of the casing and a pivotal connection between said member and cover, substantially as described.

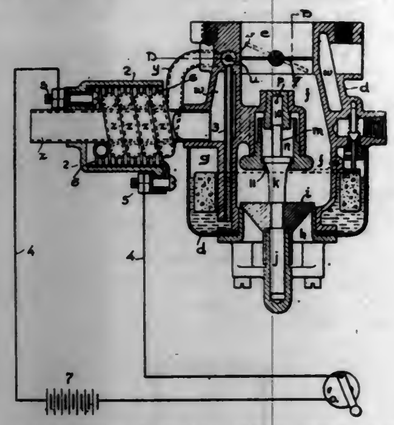
2. In a receptacle for sandwiches or the like, the combination of a casing, a cover located within the casing and adapted to rest upon the top of the commodity placed therein, a rail constituting a portion of one wall of the casing, a member slidably mounted upon said rail, and a pivotal connection between said member and cover, substantially as described.

3. In a receptacle for sandwiches or the like, the combination of a casing, a cover located within the casing and adapted to rest upon the top of the commodity placed therein, one wall of said casing being formed with companion slots to provide an intermediate rail, a roller traveling along the surface of said rail, a mounting for the roller, and a pivotal connection between said mounting and cover, substantially as described.

4. In a receptacle for sandwiches or the like, the combination of a casing, a cover located within the casing and adapted to rest upon the top of the commodity placed therein, one wall of said casing being formed with companion slots to provide an intermediate rail, a roller traveling along the surface of said rail, a U-shaped member embracing said rail and acting as a carrier for said roller, and a pivotal connection between the U-shaped member and cover, substantially as described.

5. In a receptacle for sandwiches or the like, the combination of a casing, a cover located within the casing and adapted to rest upon the top of the commodity placed therein, a member having a sliding engagement with a wall of the casing, a pivotal connection between said member and cover, and said cover when moved to horizontal position canting said member with respect to the wall upon which it slides, to hold the cover against sliding movement within the casing, substantially as described.

1,216,843. CARBURETER. EUGENE C. RICHARD, Flint, Mich. Filed Mar. 19, 1913. Serial No. 755,310. (Cl. 261—41.)



1. In a carbureter, a main air passage, means for supplying liquid fuel thereto, a throttle valve in said main passage, an auxiliary air passage communicating with the atmosphere and opening through a wall of the main passage adjacent to said valve, said valve being so located and constructed that it shall leave said opening slightly exposed to the suction of the engine when said valve is approximately closed but shall interpose itself between the engine and said opening when said valve is open to a greater extent, a delivery nozzle for liquid fuel opening into said auxiliary air passage whereby a rich mixture for idling speeds and easy starting is supplied.

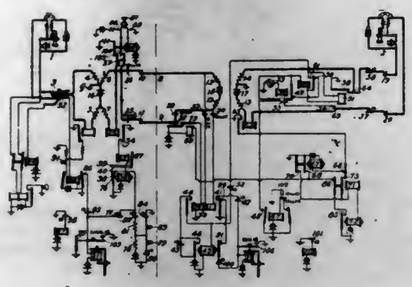
2. In a carbureter, a main air passage, a second air passage opening into said main passage, a delivery nozzle for liquid fuel opening into said second passage, a throttle valve in the main passage, a third air passage communicating to the atmosphere and opening through a wall of the main passage, adjacent to said valve, said valve being so located and constructed that it shall have said opening slightly exposed to the suction of the engine when said valve is approximately closed, but shall interpose itself between the engine and said opening when said valve is opened to a greater extent so that the three air passages shall be subject to approximately the same suction, a delivery nozzle for liquid fuel opening into said third air passage for the purpose of supplying a rich mixture for idling speeds and easy starting.

3. In a carbureter having a main air passage therethrough, an automatic lift valve for controlling the entrance to said passage, a second air passage opening into the first named passage in line with and in a direction opposite to the entrance to the first named passage, a delivery nozzle for liquid fuel opening into the second passage, and a means adapted to be operated by the lift of said valve for varying the opening from the second air passage.

4. In a carbureter, a main air passage extending therethrough, a second air passage extending into said main passage and opening toward the entrance to said main passage, an automatic lift valve adapted to be operated by the suction of the engine adapted to control the entrance to the main air passage, an extension having a varying cross section extending from said valve into the opening from said second air passage and a delivery nozzle for liquid fuel opening into said second passage, substantially as and for the purpose described.

5. In a carbureter, a main air passage, extending therethrough, a second air passage extending into said main passage and opening toward the entrance to said main passage, an automatic lift valve adapted to be operated by the suction of the engine adapted to control the entrance to the main passage, an extension having a varying cross section extending from said valve into the opening from said second passage and a delivery nozzle for liquid fuel opening into said second passage, said extension being provided with a prolongation extending into a cavity in the wall of said second passage, said nozzle opening into said cavity.

1,216,844. ELECTRICAL CONTROLLING SYSTEM. JOHN G. ROBERTS, Dobbs Ferry, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Dec. 8, 1914. Serial No. 876,083. (Cl. 179—27.)



1. In a telephone exchange system, a trunk line forming a combined telephonic link and a controlling circuit, means for producing momentary current changes of like character in said circuit, a signaling device to be controlled over said circuit, and means responsive upon successive current changes for alternately displaying and effacing said signal.

2. In a telephone exchange system, the combination with a trunk and a line circuit inductively united, of a supervisory signal, a switch for opening and closing the line circuit, means responsive upon both closing and opening the line circuit for producing momentary current changes of like character in the trunk circuit, and means responsive upon successive current changes for alternately displaying and effacing said supervisory signal.

3. In a telephone exchange system, the combination with a trunk and a line circuit inductively united, of a supervisory signal, a switch for opening and closing the line circuit, means for producing momentary current changes of like character in the trunk circuit responsive upon both closing and opening of the line circuit by said switch, and means responsive to the different current changes for effacing and displaying respectively said supervisory signal.

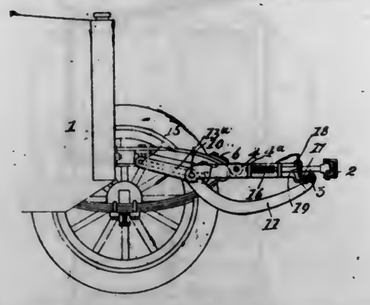
4. In a telephone exchange system, the combination with a trunk and a line circuit inductively united, of a supervisory signal, a switch for opening and closing the line circuit, means for producing momentary current changes in the trunk circuit responsive upon both closing and opening of the line circuit, said current changes being of like character but differing in duration, and means responsive to the different current changes for effacing and displaying respectively said supervisory signal.

5. In a telephone exchange system, the combination with a trunk and a line circuit inductively united, of a supervisory signal, a switch for opening and closing the line circuit, means for producing momentary current changes of short and of longer duration in the trunk circuit upon the closing and opening respectively of the line circuit, and means responsive to such current changes for controlling said supervisory signal.

[Claims 6 to 9 not printed in the Gazette.]

1,216,845. AUTOMATIC FENDER FOR MOTOR-VEHICLES. AUGUST A. ROTH, Baltimore, Md., assignor to Safety-First Appliances Company, Baltimore, Md., a Corporation of Delaware. Filed Apr. 26, 1916. Serial No. 93,634. (Cl. 105—130.)

1. In combination with a motor vehicle, a fender frame member mounted on a fixed pivot, said frame member having bifurcations, a buffer, buffer rods and latches carried by said frame member, curved arms, also constituting frame members, mounted in the bifurcations of said frame member, a lip carried by said arms, slotted members affixed to the vehicle, and pins connected with said arms and adapted to slide in said slots, whereby said curved arms, placed in engagement with said spring latches, may be disengaged therefrom by the impact of a body with the buffer, thus allowing the fender to fall by gravity.



2. In combination with a motor vehicle, a fender frame mounted on a fixed pivot, said frame member having bifurcations, a buffer, buffer rods, and latches carried by said frame member, curved arms, also constituting fender members, mounted in the bifurcations of said frame member, a lip carried by said arms, slotted members affixed to the vehicle, pins connected with said arms and adapted to slide in said slots, fender members mounted upon the aforesaid pivot, and rollers carried by said fender members adapted to run upon said curved arms, whereby the latter, placed in engagement with said spring latches, may be disengaged therefrom by the impact of a body with the buffer, thus allowing the fender to fall by gravity.

3. In combination with a motor vehicle, a fender frame mounted on a fixed pivot, said frame having bifurcations, a buffer, buffer rods, and latches carried by said frame member, curved arms, also constituting fender members, mounted in the bifurcations of said frame member, a lip carried by said arms, slotted members affixed to the vehicle, pins connected with said arms and adapted to slide in said slots, means under the control of the operator whereby said arms may be placed in engagement with said spring latches, and means also within his control whereby the engaged parts may be detached, and folded or collapsed.

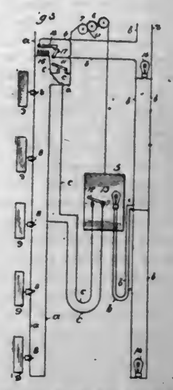
1,216,846. INTERLOCKING CONTROL SYSTEM FOR ELEVATORS. HAROLD ROWNTREE, Kenilworth, Ill. Filed Apr. 8, 1914. Serial No. 830,406. (Cl. 187—31.)

1. The combination with an elevator car, its hoisting motor, and an interlocking control circuit therefor, of means to render the interlocking control circuit inoperative and to independently operate the motor, a signal device made operative when the interlocking control circuit is rendered inoperative, and means to lock the signal device, when operated, in an operative condition.

2. The combination with an elevator car, its hoisting motor, and an interlocking door controlled control circuit therefor, of an auxiliary control circuit for the motor, a switch to control the same, and a signal device made operative when said switch is closed, and means to lock the signal device, when operated, in an operative condition.

3. The combination with an elevator car, its hoisting motor, and an interlocking door controlled control circuit therefor, a signal device made operative when said switch is closed, and means to lock said signal device in operation.

4. The combination with an elevator car, its hoisting motor and an interlocking door controlled control circuit therefor, of an auxiliary control circuit for the motor, a signal circuit and a switch to close the auxiliary and signal circuits and to open the interlocking control circuit and means to lock the signal circuit when closed, in its closed condition.



5. The combination with an elevator car, its hoisting motor and an interlocking door controlled control circuit therefor, of an auxiliary control circuit for the motor, a relay device therein, a switch to close said circuit and to open said interlocking circuit, and a signal device controlled by said relay and means for locking said signal device, when operated by said relay in operative condition.

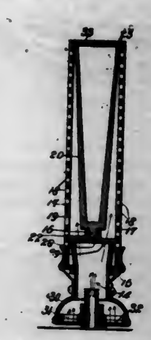
[Claim 6 not printed in the Gazette.]

1,216,847. FIXING IRON MORDANTS ON TEXTILE FIBERS. PETER SCHMID, Basel, Switzerland. Filed May 23, 1916. Serial No. 99,463. (Cl. 8—13.)

1. An improved process for fixing the iron mordants on textile fibers, in which the fixing bath employed contains the oily water resulting from boiling silk worm chrysalides with water.

2. An improved process for fixing the iron mordants on textile fibers, in which the fixing bath employed contains the oily water resulting from boiling with water silk wastes containing silkworm chrysalides.

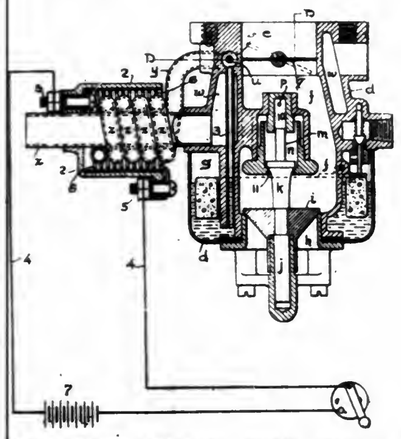
1,216,848. HEATER. GUSTAVE F. SCHMIDT, Chicago, Ill. Filed Apr. 22, 1914. Serial No. 833,673. (Cl. 126—86.)



1. In a heater, a heating element comprising an outer perforated shell of refractory material, a Bunsen burner projecting into said shell and an inner refractory body located within said shell and of frusto-conical form with its end of lesser diameter adjacent to the burner, said outer perforated shell being subjected to the direct action of the flame.

2. In a heater of the class described, a heating element comprising a burner, an outer shell of refractory material carried by said burner to inclose the burner flame and a hollow inner refractory body of frusto-conical form and

1,216,843. CARBURETER. EUGENE C. RICHARD, Flint, Mich. Filed Mar. 19, 1913. Serial No. 755,310. (Cl. 261—41.)



1. In a carbureter, a main air passage, means for supplying liquid fuel thereto, a throttle valve in said main passage, an auxiliary air passage communicating with the atmosphere and opening through a wall of the main passage adjacent to said valve, said valve being so located and constructed that it shall leave said opening slightly exposed to the suction of the engine when said valve is approximately closed but shall interpose itself between the engine and said opening when said valve is open to a greater extent, a delivery nozzle for liquid fuel opening into said auxiliary air passage whereby a rich mixture for idling speeds and easy starting is supplied.

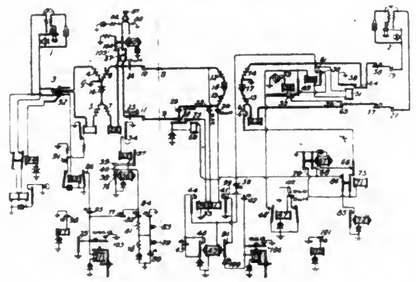
2. In a carbureter, a main air passage, a second air passage opening into said main passage, a delivery nozzle for liquid fuel opening into said second passage, a throttle valve in the main passage, a third air passage communicating to the atmosphere and opening through a wall of the main passage, adjacent to said valve, said valve being so located and constructed that it shall have said opening slightly exposed to the suction of the engine when said valve is approximately closed, but shall interpose itself between the engine and said opening when said valve is opened to a greater extent so that the three air passages shall be subject to approximately the same suction, a delivery nozzle for liquid fuel opening into said third air passage for the purpose of supplying a rich mixture for idling speeds and easy starting.

3. In a carbureter having a main air passage therethrough, an automatic lift valve for controlling the entrance to said passage, a second air passage opening into the first named passage in line with and in a direction opposite to the entrance to the first named passage, a delivery nozzle for liquid fuel opening into the second passage, and a means adapted to be operated by the lift of said valve for varying the opening from the second air passage.

4. In a carbureter, a main air passage extending therethrough, a second air passage extending into said main passage and opening toward the entrance to said main passage, an automatic lift valve adapted to be operated by the suction of the engine adapted to control the entrance to the main air passage, an extension having a varying cross section extending from said valve into the opening from said second air passage and a delivery nozzle for liquid fuel opening into said second passage, substantially as and for the purpose described.

5. In a carbureter, a main air passage, extending therethrough, a second air passage extending into said main passage and opening toward the entrance to said main passage, an automatic lift valve adapted to be operated by the suction of the engine adapted to control the entrance to the main passage, an extension having a varying cross section extending from said valve into the opening from said second passage and a delivery nozzle for liquid fuel opening into said second passage, said extension being provided with a prolongation extending into a cavity in the wall of said second passage, said nozzle opening into said cavity.

1,216,844. ELECTRICAL CONTROLLING SYSTEM. JOHN G. ROBERTS, Dobbs Ferry, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Dec. 8, 1914. Serial No. 876,083. (Cl. 179—27.)



1. In a telephone exchange system, a trunk line forming a combined telephonic link and a controlling circuit, means for producing momentary current changes of like character in said circuit, a signaling device to be controlled over said circuit, and means responsive upon successive current changes for alternately displaying and effacing said signal.

2. In a telephone exchange system, the combination with a trunk and a line circuit inductively united, of a supervisory signal, a switch for opening and closing the line circuit, means responsive upon both closing and opening the line circuit for producing momentary current changes of like character in the trunk circuit, and means responsive upon successive current changes for alternately displaying and effacing said supervisory signal.

3. In a telephone exchange system, the combination with a trunk and a line circuit inductively united, of a supervisory signal, a switch for opening and closing the line circuit, means for producing momentary current changes of like character in the trunk circuit responsive upon both closing and opening of the line circuit by said switch, and means responsive to the different current changes for effacing and displaying respectively said supervisory signal.

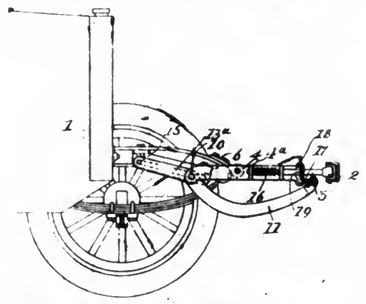
4. In a telephone exchange system, the combination with a trunk and a line circuit inductively united, of a supervisory signal, a switch for opening and closing the line circuit, means for producing momentary current changes in the trunk circuit responsive upon both closing and opening of the line circuit, said current changes being of like character but differing in duration, and means responsive to the different current changes for effacing and displaying respectively said supervisory signal.

5. In a telephone exchange system, the combination with a trunk and a line circuit inductively united, of a supervisory signal, a switch for opening and closing the line circuit, means for producing momentary current changes of short and of longer duration in the trunk circuit upon the closing and opening respectively of the line circuit, and means responsive to such current changes for controlling said supervisory signal.

[Claims 6 to 9 not printed in the Gazette.]

1,216,845. AUTOMATIC FENDER FOR MOTOR-VEHICLES. AUGUST A. ROTH, Baltimore, Md., assignor to Safety-First Appliances Company, Baltimore, Md., a Corporation of Delaware. Filed Apr. 26, 1916. Serial No. 93,634. (Cl. 105—130.)

1. In combination with a motor vehicle, a fender frame member mounted on a fixed pivot, said frame member having bifurcations, a buffer, buffer rods and latches carried by said frame member, curved arms, also constituting fender members, mounted in the bifurcations of said frame member, a lip carried by said arms, slotted members affixed to the vehicle, and pins connected with said arms and adapted to slide in said slots, whereby said curved arms, placed in engagement with said spring latches, may be disengaged therefrom by the impact of a body with the buffer, thus allowing the fender to fall by gravity.



2. In combination with a motor vehicle, a fender frame mounted on a fixed pivot, said frame member having bifurcations, a buffer, buffer rods, and latches carried by said frame member, curved arms, also constituting fender members, mounted in the bifurcations of said frame member, a lip carried by said arms, slotted members affixed to the vehicle, pins connected with said arms and adapted to slide in said slots, fender members mounted upon the aforesaid pivot, and rollers carried by said fender members adapted to run upon said curved arms, whereby the latter, placed in engagement with said spring latches, may be disengaged therefrom by the impact of a body with the buffer, thus allowing the fender to fall by gravity.

3. In combination with a motor vehicle, a fender frame mounted on a fixed pivot, said frame having bifurcations, a buffer, buffer rods, and latches carried by said frame member, curved arms, also constituting fender members, mounted in the bifurcations of said frame member, a lip carried by said arms, slotted members affixed to the vehicle, pins connected with said arms and adapted to slide in said slots, means under the control of the operator whereby said arms may be placed in engagement with said spring latches, and means also within his control whereby the engaged parts may be detached, and folded or collapsed.

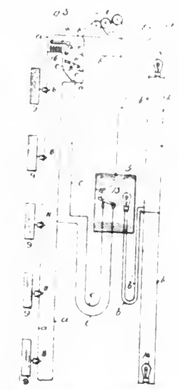
1,216,846. INTERLOCKING CONTROL SYSTEM FOR ELEVATORS. HAROLD ROWNTREE, Kenilworth, Ill. Filed Apr. 8, 1914. Serial No. 830,406. (Cl. 187—31.)

1. The combination with an elevator car, its hoisting motor, and an interlocking control circuit therefor, of means to render the interlocking control circuit inoperative and to independently operate the motor, a signal device made operative when the interlocking control circuit is rendered inoperative, and means to lock the signal device, when operated, in an operative condition.

2. The combination with an elevator car, its hoisting motor, and an interlocking door controlled control circuit therefor, of an auxiliary control circuit for the motor, a switch to control the same, and a signal device made operative when said switch is closed, and means to lock the signal device, when operated, in an operative condition.

3. The combination with an elevator car, its hoisting motor, and an interlocking door controlled control circuit therefor, a signal device made operative when said switch is closed, and means to lock said signal device in operation.

4. The combination with an elevator car, its hoisting motor and an interlocking door controlled control circuit therefor, of an auxiliary control circuit for the motor, a signal circuit and a switch to close the auxiliary and signal circuits and to open the interlocking control circuit and means to lock the signal circuit when closed, in its closed condition.



5. The combination with an elevator car, its hoisting motor and an interlocking door controlled control circuit therefor, of an auxiliary control circuit for the motor, a relay device therein, a switch to close said circuit and to open said interlocking circuit, and a signal device controlled by said relay and means for locking said signal device, when operated by said relay in operative condition.

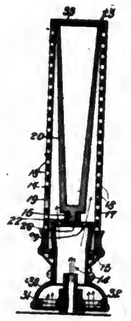
[Claim 6 not printed in the Gazette.]

1,216,847. FIXING IRON MORDANTS ON TEXTILE FIBERS. PETER SCHMID, Basel, Switzerland. Filed May 23, 1916. Serial No. 99,463. (Cl. 8—13.)

1. An improved process for fixing the iron mordants on textile fibers, in which the fixing bath employed contains the oily water resulting from boiling silk worm chrysalides with water.

2. An improved process for fixing the iron mordants on textile fibers, in which the fixing bath employed contains the oily water resulting from boiling with water silk wastes containing silkworm chrysalides.

1,216,848. HEATER. GUSTAVE F. SCHMIDT, Chicago, Ill. Filed Apr. 22, 1914. Serial No. 833,673. (Cl. 126—86.)



1. In a heater, a heating element comprising an outer perforated shell of refractory material, a Bunsen burner projecting into said shell and an inner refractory body located within said shell and of frusto-conical form with its end of lesser diameter adjacent to the burner, said outer perforated shell being subjected to the direct action of the flame.

2. In a heater of the class described, a heating element comprising a burner, an outer shell of refractory material carried by said burner to inclose the burner flame and a hollow inner refractory body of frusto-conical form and

located with its end of lesser diameter adjacent to the burner, said inner body having its walls of diminishing thickness from the end of lesser diameter toward the end of greater diameter substantially as shown and described.

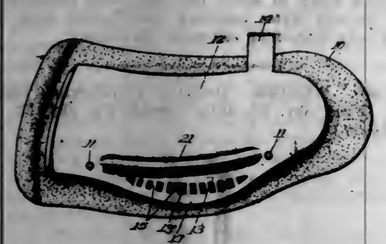
3. In a heater, a heating element comprising a burner, a refractory outer shell into which one end of said burner projects, a refractory inner shell of substantially conical form with its end of lesser diameter located adjacent to the burner and its end of greater diameter conforming closely to the internal diameter of said outer shell but spaced slightly therefrom, spacing lugs for holding said inner shell spaced from said outer shell, said outer shell having perforations and enveloping the burner flame.

4. In a heater, a heating element comprising a burner, a base carried by the burner, an outer perforated cylindrical body carried by said base and into which the lower end of said burner projects, an inner imperforated refractory body of substantially conical form located within said outer body with its end of lesser diameter adjacent to said burner, means for connecting said end to said burner for supporting purposes, the end of greater diameter of said inner body forming a substantial closure for the upper end of said cylindrical body, but spaced slightly from the walls thereof whereby to confine the burner flame to the space between said bodies and cause said inner body to become incandescent.

5. In a heater of the class described, a burner including a mixing chamber in which the air and gas is admitted, said burner having a head provided with a circular series of perforations through which the gaseous mixture passes, a central lug projecting from said head and aperture, an outer shell of refractory material carried by the said burner and into which said burner head projects, and an inner refractory body located within said outer shell and having a lug held in said recess of said burner head lug to be supported thereby.

[Claims 6 to 13 not printed in the Gazette.]

1,216,849. ARCH-SUPPORT. WILLIAM M. SCHOLL, Chicago, Ill. Filed June 23, 1916. Serial No. 105,341. (Cl. 36—71.)



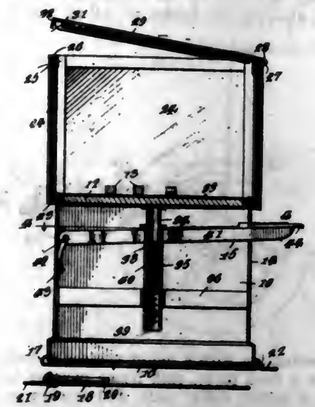
1. An arch support, having a plate provided with a wing to coact with the inner side of the arch of the human foot, said wing having an uninterrupted rim portion and an apertured zone between the rim and body of the wing, the last said zone including transversely arranged posts integrally connecting the body of the wing and rim.

2. An arch support having a plate provided with a side wing portion having a rim extending longitudinally of said plate, and integral transverse posts connecting said rim with the body of the wing, said posts affording a zone decreasing in strength from the ends of the rim toward its middle.

3. An arch support having a plate provided with a side wing portion having a rim extending longitudinally of said plate, and integral transverse posts connecting said rim with the body of the wing, said posts affording a zone decreasing in strength from the ends of the rim toward its middle and said rim increasing in width from its ends toward its middle.

4. The combination in an arch support plate, a body portion 12, wing portion 13 having apertures 13', separating posts 15 that connect to the body of the wing, an uninterrupted rim 17, a reinforcing rib 21 and an upturned side extension 14—14' combined and arranged substantially as described.

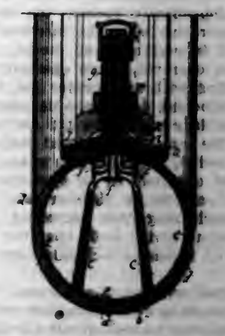
1,216,850. GAME APPARATUS. ALBERT A. SCHRADER, Cape Girardeau, Mo. Filed Aug. 11, 1915. Serial No. 44,969. (Cl. 46—56.)



1. A game apparatus of the type described comprising a casing forming a base, a compartment above the casing having transparent walls and a transparent cover, a strip at the top of said casing and surrounding the same having an upwardly open channel to receive panes of glass that form the sides of the receptacle, a folded strip extending over the upper edge of said glass panes, and an open frame containing a glass panel pivoted to one side of the receptacle and adapted to frictionally engage the opposite side, a platform at the junction of said casing and receptacle, and means within the casing for imparting vertical movement to said platform.

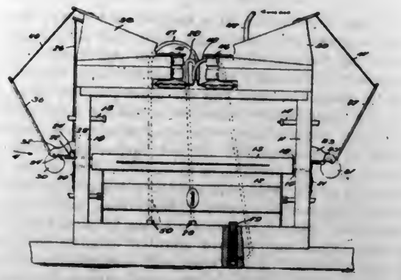
2. A game apparatus of the type described comprising a closed casing forming the base thereof made of pressed sheet metal, a strip of sheet metal of S shape cross section mounted upon the top of said casing and extending around the several sides, transparent panels supported at their lower edges by said strip and connected at their vertical edges to form a closed receptacle, a closure for said receptacle comprising a frame and a transparent panel, a platform at the junction of said casing and said receptacle, and means for imparting vertical movement to said platform inclosed within said casing and projecting outwardly through a slot in the sides thereof.

1,216,851. PNEUMATIC TIRE. OTTO SCHUTZ, New York, N. Y. Filed Oct. 6, 1914. Serial No. 865,268. (Cl. 152—22.)



A pneumatic tire comprising a tubular slitted casing, a pair of relatively spaced annular partitions located within the casing and each attached at one edge to the inner side of the tread portion of the casing, said partitions being inclined in the direction of each other and extending from the tread portion in the direction of the rim portion of the casing and having their other edges free and spaced from the inner side of said rim portion, said partitions dividing the casing into three chambers, a tube located in each chamber and extending beyond the free edges of the partitions, and means to permit the tubes to be inflated, said means being connected to the tubes at a point in spaced relation to the free edges of the partitions, so as to prevent injuring said means by the partitions on the compression of the tube.

1,216,852. TRANSPOSER. JOHN JOSEPH SCHWAB, New York, N. Y. Filed May 23, 1916. Serial No. 99,454. (Cl. 84—161.)



1. The combination with a music box embodying a winding roll and supporting cheek-plates, of a tracker bar mounted between the cheek-plates and longitudinally slidable, means for yieldingly holding the tracker bar in normal position, means to move the tracker bar in either direction from normal, means to latch the tracker bar in such acquired position, and manually operable means for releasing the latch.

2. The combination with a music box embodying a winding roll and supporting cheek-plates, of a tracker bar supported between and slidable relative to the cheek-plates, means to hold the tracker bar normally yieldingly centered relative to the cheek-plates, pneumatic means for moving the tracker bar in either direction from normal, means to latch the tracker bar in either such acquired positions, and manually controlled pneumatic means for releasing the latch.

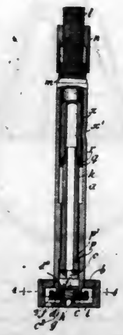
3. The combination with a music box embodying a winding roll and supporting cheek-plates, of a tracker bar supported between and slidable relative to the cheek-plates, means to hold the tracker bar normally yieldingly centered relative to the cheek-plates, pneumatic means for moving the tracker bar in such acquired position, pneumatic means for releasing the latch, manual valves, and conduits leading from the several pneumatics to the manual valves.

4. The combination with a music box embodying a winding roll and supporting cheek-plates, of a tracker bar supported between and slidable relative to the cheek-plates, means to hold the tracker bar normally yieldingly centered relative to the cheek-plates, rods carried by the tracker bar extending through and beyond the remote surfaces of the cheek-plates, cams positioned to bear against the ends of the rods, a pneumatic connected with each of the cams adapted separately to actuate the cam to move the tracker bar in either direction, a latch adapted to maintain the tracker bar in such acquired position, a pneumatic connected with the latch, manual valves, and conduits connecting the several pneumatics with their respective valves.

5. The combination with a music box embodying a winding roll and supporting cheek-plates, of a tracker bar located between and slidable relative to the cheek-plates, rods carried by the tracker bar and extending beyond the remote sides of the cheek-plates, eccentrics journaled to bear peripherally upon the ends of the rods and to move the tracker bar in either direction, and notches formed in each of the eccentrics positioned to be engaged by the rods when the tracker bar is moved by the opposite eccentric.

[Claim 6 not printed in the Gazette.]

1,216,853. TIRE-VALVE. MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, and JULIUS VOLCKHAUSEN, Weehawken, N. J. Filed Sept. 8, 1911. Serial No. 648,359. (Cl. 152—12.)



In a tire valve or the like, the combination of a valve shell, a valve proper carried by said shell, an inflating tube separate from said valve proper and movable in said shell, and a packing for making a tight joint between said inflating tube and said shell, said tube being made in two parts and adapted to clamp said packing between said parts.

1,216,854. WATERING-TROUGH. CHARLES F. SCOTT, Memphis, Tex. Filed Nov. 3, 1916. Serial No. 129,302. (Cl. 119—80.)

1. In a device of the character substantially as described, a trough, means located within said trough adapted to maintain a determined liquid level therein, drinking pockets extending inwardly from the side walls of said trough and accessible therethrough, and a removable cover for said trough supported by said pockets.

2. In a device of the character substantially as described, a trough, drinking pockets extending inwardly from the side walls thereof and a removable closure for said trough resting upon and supported by said pockets.

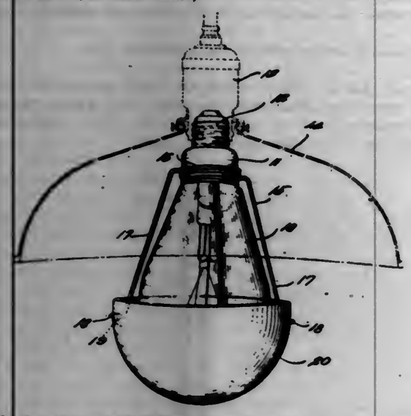
3. A device of the character substantially as described, comprising a trough provided with drinking pockets and a removable closure supported by said pockets.

4. A device of the character substantially as described, comprising a trough provided with inwardly extending drinking pockets and a closure supported by said drinking pockets.

5. A device of the character substantially as described, comprising a trough having openings through the side walls thereof, drinking pockets formed at said openings and extending inwardly therefrom, and a closure resting upon and supported by said pockets.

[Claims 6 to 15 not printed in the Gazette.]

1,216,855. EYE-SHIELD DIFFUSER. JOHN F. SCOTT, Indianapolis, Ind. Filed Mar. 22, 1915. Serial No. 15,041. (Cl. 240—115.)



1. An eye shield diffuser, comprising a support having a clamping portion for mounting on the base of an electric incandescent bulb and one or more downwardly projecting portions, said mounting being separate from the lamp socket, and an inverted dome-shaped member of translucent glass hung free from the lower ends of said downwardly projecting portion or portions and inclosing the lower end of the lamp bulb upon which said holder is mounted.

2. An eye shield diffuser, comprising a support having a clamping portion for mounting on an electric incandescent bulb and one or more downwardly projecting portions, said mounting being separate from the lamp socket, and an inverted dome-shaped member of translucent glass hung free by points at its upper edge or rim from the lower ends of said downwardly projecting portion or portions and inclosing but being spaced from the lower end of the lamp bulb upon which said holder is mounted.

3. An eye shield, comprising a support having a clamping portion for mounting on the base of an electric incandescent bulb and one or more downwardly projecting portions, said mounting being separate from the lamp socket, and an inverted dome-shaped member hung free from the lower ends of said downwardly projecting portion or portions and inclosing the lower end of the lamp bulb upon which said holder is mounted.

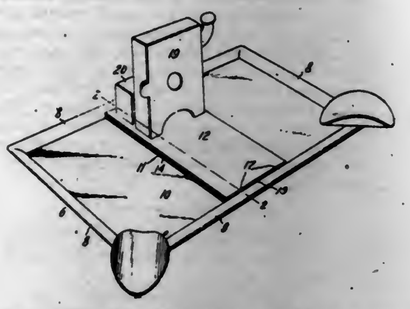
4. An eye shield, comprising a support having a clamping portion for mounting on an electric incandescent bulb and one or more downwardly projecting portions, said mounting being separate from the lamp socket, and an inverted dome-shaped member hung free by points at its upper edge or rim from the lower ends of said downwardly projecting portion or portions and inclosing but being spaced from the lower end of the lamp bulb upon which said holder is mounted.

5. An eye shield diffuser, comprising a wire holder having a helical coil portion for fitting upon the base of an incandescent lamp and a pair of downwardly projecting fingers with bent ends, and an inverted dome-shaped member of translucent material having holes for receiving the bent ends of said fingers, said dome-shaped member surrounding the lower end of the lamp bulb upon which said holder is mounted.

[Claims 6 and 7 not printed in the Gazette.]

1,216,856. TRAY. JOHN M. SECORD, Buffalo, N. Y. Filed Feb. 4, 1915. Serial No. 6,059. (Cl. 131—51.)

1. The combination of a tray having a bottom portion surrounded by rim walls, a card or the like located in the tray on said bottom portion, a removable holder which bridges said tray over said card and has a tongue at one end thereof entering a hole in one of the rim walls of the tray, and frictional holding means comprising projections formed on the opposite rim wall of the tray adapted to abut against the other end of the holder below the upper surface thereof for releasably securing the holder in place in the tray.

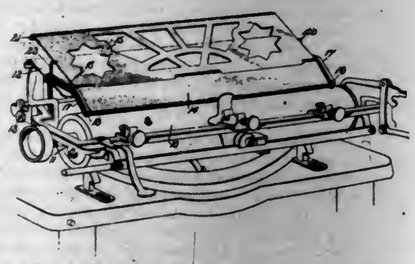


2. The combination of a tray, a card fitting within the tray, a glass plate over said card, and a bridge comprising a top portion and downturned rim flanges extending therefrom detachably secured within said tray and serving to retain the card and the glass plate in place and to act as a support for a smoker's appliance mounted thereon.

3. The combination of a tray having rim walls provided at opposite sides thereof respectively with a projection and an opening, a removable card fitting within the tray, and a bridge comprising a top portion and downturned rim flanges extending therefrom, said bridge being detachably secured within said tray by means of a tongue formed at one end thereof adapted to enter said opening in the rim wall of the tray and a depression formed at the opposite end of the bridge with which the projection in the rim wall of the tray engages and serving to retain the card in place and to act as a support for a smoker's appliance mounted thereon.

4. In an advertising novelty, the combination of a tray, a card fitted removably within the tray, and a detachable holder comprising a central portion and downturned rim flanges extending therefrom having tongues at one end of said rim flanges adapted to enter openings in one of the rim walls of the tray and having comparatively shallow depressions formed in its other end adapted to be engaged by corresponding projections on the adjacent wall of the tray.

1,216,857. PAPER-FENDER FOR TYPE-WRITING MACHINES. BYRON A. SHAMMO, New York, N. Y. Continuation in part of application Serial No. 54,416, filed Oct. 6, 1915. This application filed July 8, 1916. Serial No. 108,092. (Cl. 197—127.)



1. In a typewriting machine, the combination with a frame, a platen journaled therein and means to guide the paper to and around the platen, of a fender to receive the paper as it leaves the platen and deliver it well upwardly and rearwardly, said fender comprising a plate, bracket means to support the plate upon the rim, one portion at least of the fender being movable around its line of support, and anti-friction means for preventing a too great degree of contact between said movable portion and the platen.

2. The combination with a typewriting machine frame, a platen journaled therein and means to guide the paper

to and around the platen, of a fender to receive the paper as it leaves the platen and deliver it well upwardly and rearwardly, anti-friction supports for the front portion of the fender upon the platen, and connections between the fender supports and the frame providing for the adjustment of said anti-friction means forwardly and rearwardly.

3. The combination with a typewriting machine including a frame, a platen journaled therein and means to guide the paper to and around the platen, of a fender to receive the paper as it leaves the platen and deliver it well upwardly and rearwardly, said fender comprising a main panel, a pivot rod to which the panel is connected and around which the panel is adapted to swing to provide free access to the platen, and supporting means for adjustably connecting the pivot rod to the frame to vary the relative position of the front receiving edge of the fender panel with respect to the platen.

4. In a paper fender for typewriting machines, the combination of a pair of standards, means to secure the standards in place, a pair of arms pivoted to the upper ends of the standards, a pivot rod extending from one arm to the other, a pair of fender panels pivoted upon said rod, one of said panels being movable in one direction around said rod while the panels are both movable with the arms in the other direction around the arm pivots, and means to limit the swinging movement of said panel around said rod.

5. In a paper fender for typewriting machines, the combination of a pair of parallel arms, pivotal supports for the rear ends of the arms, a pair of fender panels hinged together upon an axis in front of and parallel to the axis of said arm pivots, one of said panels being movable upwardly and forwardly around its axis, and adjustable means to limit the rearward movement of said swinging panel.

[Claim 6 not printed in the Gazette.]

1,216,858. NUT-LOCK. WILLIAM E. SHARP, Chicago, Ill., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Filed July 20, 1914. Serial No. 852,008. (Cl. 151—21.)

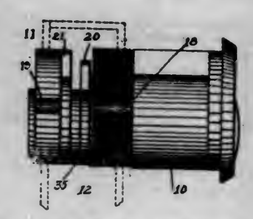


1. A nut lock comprising a plate of suitable metal, having a bolt hole formed therein with its wall adapted to engage a coöperating bolt thread, and having the plate completely severed from the bolt hole to the exterior wall of the plate at a single point, with the walls of said severed part adapted to normally contact with each other, and with the contiguous ends of the threaded portion next the bolt hole transversely slotted to provide a spaced opening between the ends of the thread, whereby the said plate may be sprung upon a coöperating bolt slightly larger than the bolt hole, and will resiliently lock on the bolt, the corners of the slotted opening tending to impinge upon and bite into the bolt.

2. A bolt and nut lock therefor, comprising a threaded bolt, in combination with a nut lock formed from a suitable plate, having a bolt hole formed therein slightly smaller than the diameter of the bolt, the wall of the bolt hole adapted to engage the bolt thread, the said plate being completely severed from the bolt hole to the exterior wall thereof at a single point, with the contiguous ends of the threaded portion next the bolt hole transversely slotted to space the ends of the thread from one another, whereby the lock may be sprung upon the bolt, substantially as described.

1,216,859. LOCK. JOHN H. SHAW, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Nov. 28, 1914. Serial No. 874,514. (Cl. 70—93.)

1. In a cylinder lock, the combination of a casing, a key plug rotatable therein, a short sleeve surrounding the key plug, a rollback fixed to the key plug, a second rollback fixed to said sleeve, a plurality of pin tumblers adapted to lock said key plug to the casing, a single pin tumbler adapted to lock said sleeve to the casing, a key to operate all of said tumblers so as to rotate both rollbacks, and a key operative on the tumblers which lock the key plug to the casing, but inoperative on the sleeve-controlling tumbler, whereby the key plug rollback is rotated individually by said second key; substantially as described.



2. A cylinder lock having a plurality of rollbacks intermediate of the ends of said lock; one of said rollbacks rotatable independently of the other, substantially as described.

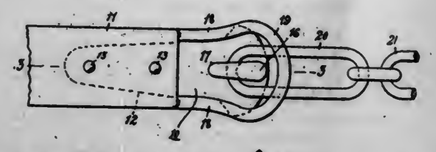
3. In a cylinder lock, the combination of a casing, a key plug rotatable therein, a short sleeve surrounding the key plug at the rear end of the cylinder lock, a rollback fixed to the key plug, a rollback fixed to the sleeve, a group of pin tumblers to lock the key plug to the casing, a single pin tumbler to lock the sleeve to the casing, a short key operative on the tumblers of said group but inoperative on said single pin tumbler, to release the key plug and rotate the rollback individually, and a longer key operative on all of said tumblers to release both the key plug and sleeve from the casing and rotate both rollbacks simultaneously; substantially as described.

4. In a cylinder lock, the combination of a casing, a key plug rotatable therein, a short sleeve surrounding the key plug at the rear end of the lock, a single pin tumbler at the rear end of said lock coöperating with the key plug, sleeve and casing and normally in a position to release the key plug but to lock the sleeve to the casing, a second pin tumbler normally locking the key plug to the casing, a rollback fixed to the sleeve, a rollback fixed to the key plug, a key to operate said second pin tumbler individually and thereby rotate the key plug rollback individually, and a second key bitted to actuate both of said pin tumblers to release both the key plug and sleeve from the casing, so that both of said rollbacks may be actuated simultaneously; substantially as described.

5. The combination of a case of the mortise type, a pin tumbler cylinder lock extending completely through said case, and a plurality of rollbacks carried by said cylinder lock within the case and intermediate of the ends of said cylinder lock; said roll backs disposed at different points in the length of said cylinder lock, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

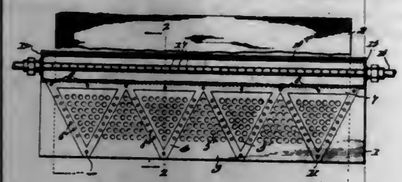
1,216,860. TRACE-HOOK. OSCAR SHEARER, Colfax, Wash. Filed May 2, 1916. Serial No. 94,924. (Cl. 24—231.)



A device of the class described comprising a body including spaced sides connected by a transverse loop extending in advance of the sides, and a hooked stud carried by said body with the body portion of the stud extending above the upper line of the loop and of the

spaced sides, and with the open end of the stud intermediate the sides and below the upper line of the side portions and the loop.

1,216,861. SUCTION-BOX. NAPOLEON SHOREY and FRANCIS P. FLYNN, Woodland, Me. Filed June 7, 1916. Serial No. 102,318. (Cl. 92—51.)



1. A suction box including a top, and reinforces secured to said top, substantially as described.

2. The combination with a conveyer, of a suction box having a top, and reinforces set flush in said top, substantially as described.

3. The combination with a metallic conveyer, of a suction box having a perforated wooden top, and metal reinforces mounted flush in said top for receiving the wire conveyer, substantially as described.

4. The combination with a conveyer, of a suction box having a perforated top over which said conveyer is arranged to travel, and means for supplying a lubricant to the conveyer, substantially as described.

5. The combination with a conveyer, of a suction box having a perforated top for receiving said conveyer, and means for spraying a lubricant onto the under side of said conveyer, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,216,862. ELECTRIC PENCIL. AMADA E. SICKLES, Corle, Okla. Filed May 14, 1915. Serial No. 28,105. (Cl. 240—8.4.)

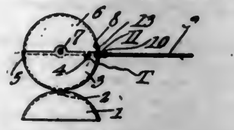


In a device of the class described, a tubular shell forming a casing, an end closure for one end of said casing, a double contact lamp bulb fitted in the opposite end of the casing, a relatively long conductor connected to one contact of the lamp, a relatively short conductor connected to the opposite contact of the lamp, the casing being provided with an aperture in the side thereof adjacent the base of the lamp bulb, a spring secured to the inner side of the casing, a thumb piece on the free end of the spring extending through the aperture, a bridging contact carried by the spring, a battery fitted within the casing, a contact carried by the battery for engaging the relatively long contact on the lamp bulb, a contact carried by the battery for aligning with the relatively short contact, the last mentioned contacts being adapted to be bridged by the contact on the thumb piece, a pencil tube extending longitudinally through the casing and through the lamp bulb and a pencil lead extending beyond the end of the pencil tube which is positioned within the lamp bulb.

1,216,863. CROCHET-THREAD HOLDER. ALMOR OLIN SIMMONDS, St. Louis, Mo. Filed Feb. 23, 1916. Serial No. 80,045. (Cl. 242—146.)

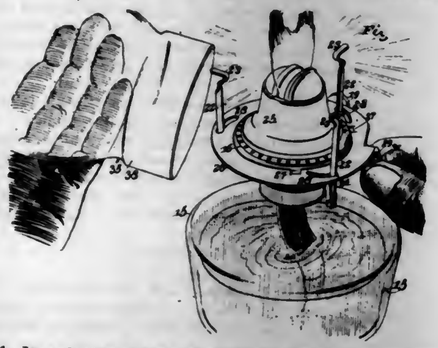
1. In a device of the character described including a casing having a recess formed therein; a cover pivotally secured to the said casing; means for locking the cover in its open and closed positions; a hanger, a clip adapted to attach the hanger to the said casing; a reversible base adapted to support the casing and adapted when reversed to conform to the contour of the said casing.

2. In a device of the character described including a casing having a detent extending therefrom; a cover pivotally secured to the said casing and having an indentation formed therein and adapted to coöperate with the said detent to lock the cover in its open position; means



adapted to coöperate with the said indentation for locking the cover in its closed position; a reversible base detachably secured to the said casing; and means for supporting the casing when the base has been moved to its reversed position.

1,216,864. CHIMNEY-HOLDING ATTACHMENT FOR LAMPS. WILLIAM H. SLOAN, Winston-Salem, N. C. Filed Nov. 24, 1916. Serial No. 133,142. (Cl. 240—99.)



1. In a device of the character described, the combination with a lamp burner having a flat annular rim provided with radial slots in its outer peripheral portion, at spaced points therearound, of brackets depending from the under surface of the said rim, chimney clasping arms pivoted at their lower ends to the said brackets and upstanding through the said radial slots, an adjusting ring rotatable upon the rim of the burner, having curved eccentric slots at spaced points therearound, through which the clasping arms extend, said adjusting ring having a depending finger piece, a finger piece secured to and depending from the burner rim and opposing the finger-piece of the adjusting ring, and a U-shaped spring projecting inwardly below the rim of the burner and engaging the said finger-pieces to normally prevent rotary movement of the adjusting ring.

2. In a device of the character described, the combination with a lamp burner having a flat annular rim provided with radial slots in its outer peripheral portion at spaced points therearound, of brackets depending from the under surface of the said rim, chimney clasping arms pivoted at their lower ends to the said brackets and upstanding through the said radial slots, an adjusting ring rotatable upon the rim of the burner, having curved eccentric slots at spaced points therearound through which the clasping arms extend, said adjusting ring having a depending finger-piece, a finger piece secured to and depending from the burner rim and opposing the finger-piece of the adjusting ring, a U-shaped spring projecting inwardly below the rim of the burner and engaging the said finger-pieces to normally prevent rotary movement of the adjusting ring, said adjusting ring having its inner peripheral edge provided with depending bent lugs extending along the lower surface of the burner rim to prevent vertical displacement of the said adjusting ring.

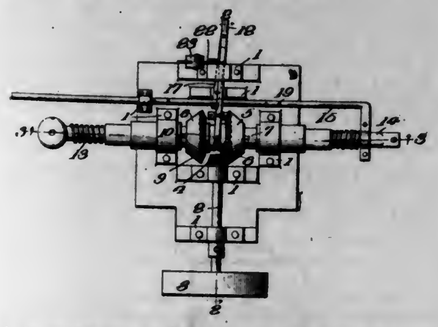
3. In a device of the character described, the combination with a lamp burner having a projecting rim provided with radial guide slots, of chimney-clasping arms projecting vertically through the said guide slots and pivoted at their lower ends to the burner beneath the rim, an annularly shiftable adjusting ring disposed and movable on the burner rim and provided with curved eccentric slots through which the said clasping arms also extend, said adjusting ring and said burner rim having opposing fingerpieces by means of which the former may be shifted with respect to the latter, and a spring engaging the said fingerpieces to normally hold the adjusting ring against shifting movement.

4. In a device of the character described, the combination with a lamp burner having a projecting rim provided with radial guide slots, of chimney clasping arms projecting vertically through the said guide slots and pivoted at their lower ends to the burner beneath the rim, an annularly shiftable adjusting ring disposed and movable on the burner rim and provided with curved eccentric slots through which the said clasping arms also extend, said adjusting ring and said burner rim having opposing fingerpieces by means of which the former may be shifted with respect to the latter, and a spring engaging the said fingerpieces to normally hold the adjusting ring against shifting movement, said adjusting ring having means engaging the burner rim to hold the same thereon, against vertical displacement.

5. In a device of the character described, the combination with a lamp burner having a projecting rim provided with radial guide slots, of chimney engaging arms extending vertically through the guide slots and pivoted at their lower ends to the burner, and means for simultaneously shifting the upper portions of the clasping arms radially toward and away from the center of the burner, said means including an annularly shiftable ring disposed and movable on the burner rim and provided with curved eccentric slots through which the clasping arms also extend.

[Claims 6 and 7 not printed in the Gazette.]

1,216,865. MECHANISM FOR TRANSMITTING POWER. FRANKLIN D. SMITH, Deadwood, S. D. Filed Dec. 31, 1915. Serial No. 69,586. (Cl. 74—50.)



1. In mechanism of the character set forth, the combination of a driven shaft, a continuously rotating driving shaft, operative connections between the driving and driven shafts, a reciprocating member actuated by the driven shaft, a reversing bar carried by the reciprocating member, and having a free portion extending parallel with the reciprocating member in spaced relation thereto, a reversing lever having one end disposed to be actuated by the free portion of the reversing bar, and a second lever having one end pivoted to the outer end of the first-mentioned lever and its opposite end arranged to shift the operative connection between the driving and driven shafts.

2. In mechanism of the character set forth, the combination of a driven shaft, a continuously rotating driving shaft, operative connections between the driving and driven shafts, a reciprocating member actuated by the driven shaft, a reversing bar carried by the reciprocating member and provided with a longitudinal slot, a reversing lever having one end playing in said slot, yieldable members carried by the reversing bar and bearing against the opposite sides of the reversing lever, and a second lever having one end pivoted to the free end of the first-mentioned lever and its opposite end arranged to shift the operative connections between the driving and driven shafts.

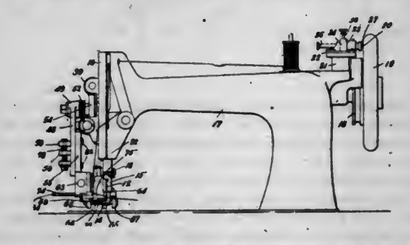
3. In mechanism of the character set forth, the combination of a driven shaft, a continuously rotating driving shaft, operative connections between the driving and driven shafts, a reciprocating member actuated by the driven shaft, a reversing bar carried by the reciprocating member, a reversing lever having one end disposed to be actuated by the reversing bar, a second lever having one end pivoted to the outer end of the first-mentioned lever and its opposite end arranged to shift the operative connections between the driving and driven shafts, and means for accelerating the movement of the second lever.

4. In a mechanism of the character set forth, the combination of a driven shaft, oppositely disposed gears on said shaft, a continuously rotating shaft disposed between the said gears, a reciprocating member actuated by said driven shaft, a reversing bar carried by said reciprocating member, a primary reversing lever having one end loosely engaged by the reversing bar, a secondary reversing lever fulcrumed between its ends and having its inner end connected with the gears on the hollow shaft and its outer end pivoted to the outer end of the first-mentioned reversing lever, and means whereby the movement of the reversing bar will actuate the primary lever.

5. In a mechanism of the character set forth, the combination of a driven shaft, a reciprocating member actuated by said shaft, oppositely disposed gears mounted on said shaft, a continuously rotating driving shaft disposed between said gears and equipped to mesh with either of the same, a reversing bar carried by the reciprocating member and having a longitudinal slot, a primary reversing lever having its inner end fitted loosely in said slot, springs disposed within the reversing bar, and a secondary reversing lever pivoted near its outer end to the outer end of the primary reversing lever and having its inner end connected with the gears on the driven shaft.

[Claim 6 not printed in the Gazette.]

1,216,866. THREADING ATTACHMENT FOR SEWING-MACHINES. JAMES H. SMITH, Boston, Mass., assignor of one-half to James M. Nelson, East Boston, Mass. Filed Apr. 2, 1915. Serial No. 18,720. (Cl. 112—18.)



1. A needle threader for sewing machine needles, said threader comprising two members pivotally connected, one of said members being provided with means for pivotally connecting it with one side of the arm of a sewing machine whereby it can be swung to an elevated position alongside of the arm, the other member having an adjustable thread guide.

2. A needle threader for sewing machine needles, said threader comprising two members pivotally connected, one of said members being provided with means for pivotally connecting it with one side of the arm of a sewing machine whereby it can be swung to an elevated position alongside of the arm, the other member having a vertically and laterally adjustable thread guide.

3. A needle threader for sewing machine needles, said threader comprising two members pivotally connected, one of said members being provided with means for pivotally

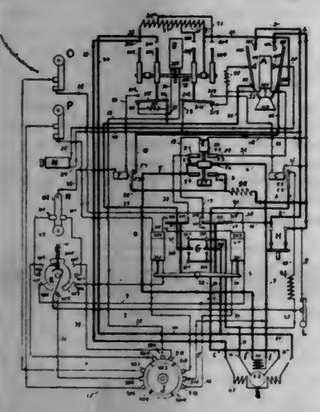
connecting it with one side of the arm of a sewing machine whereby it can be swung to an elevated position alongside of the arm, the other member having an adjustable thread guide, the pivotal connections of the members being constructed to compensate for wear.

4. A needle threader for sewing machine needles, said threader comprising two members pivotally connected, one of said members being provided with means for pivotally connecting it with one side of the arm of a sewing machine whereby it can be swung to an elevated position alongside of the arm, the other member having an adjustable thread guide, an adjustable stop being provided for insuring the proper location of the thread guide relatively to the eye of the needle.

5. A needle threader for sewing machine needles, said threader comprising two members pivotally connected, one of said members being provided with means for pivotally connecting it with one side of the arm of a sewing machine whereby it can be swung to an elevated position alongside of the arm, the other member having a thread guide and provided with a screw and coöperating means for adjusting the guide relatively to the member which carries said guide.

[Claims 6 to 14 not printed in the Gazette.]

1,216,867. CONTROL OF CURRENT TO LARGE INDUCTANCES. JOHN C. SMITH, Louisville, Ky. Filed Oct. 14, 1912. Serial No. 725,652. (Cl. 175—294.)



1. The method of controlling current to an inductance, comprising a closed circuit across the terminals of the inductance, the admission of current thereto through a resistance while said circuit is closed, opening the closed circuit and then short-circuiting the resistance.

2. The method of controlling current to an inductance by inserting a resistance in the circuit thereto, closing a circuit across the terminals thereof and then cutting off current thereto.

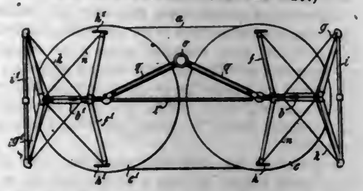
3. In combination with an inductance, and a source of electric current therefor, a normally closed circuit across the terminals of the inductance, means for giving current to said inductance through a resistance, and means for opening said closed circuit and short circuiting said resistance.

4. In combination with an inductance, and a source of electric current therefor, an initially closed circuit across the terminals of the inductance, means for giving current to the inductance with said closed circuit in parallel therewith, and means for short circuiting the resistance.

5. In combination with an inductance, and a source of current therefor, means for inserting a resistance in the circuit thereto closing a circuit across the terminals thereof, and then opening the line circuit.

[Claims 6 to 9 not printed in the Gazette.]

1,216,868. LAUNCHING OF BOATS FROM SHIPS. JOHN C. SNELLING, Wandsworth, London, England. Filed June 23, 1915. Serial No. 35,827. (Cl. 212—47.)

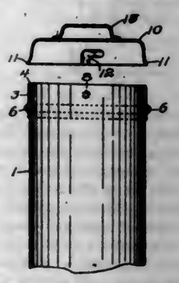


1. In the launching of boats from ships, the combination with a turn-table, of an inclined derrick arm provided with splayed terminal portions forming upper and lower yokes, the lower yoke being mounted on the turntable at diametrically opposite points and the upper yoke being provided with a connecting end brace, shackles arranged at the ends of the brace, a pair of boat whips suspended from the shackles, a bridle extending through the shackles, and a topping lift connected with the bridle.

2. In the launching of boats from ships the combination with a platform, a pair of turntables surmounting the platform, inclined derrick arms mounted on the turntables and located opposite each other, a mast mounted on the platform beyond the coincident planes of the centers of the turntables, inclined auxiliary jibs connected at their lower ends with the mast and terminating at their upper ends above the centers of the turntables, a brace connecting the upper ends of the jibs with each other, diverging braces connecting the upper ends of the jibs with the mast and topping lifts connected with the jibs and the derrick arms.

3. In the launching of boats from ships, the combination with a platform, of a pair of turntables surmounting the platform, inclined derrick arms provided at their upper and lower ends with yokes, the lower yokes being mounted upon the turntables and the upper yokes having connecting braces, a mast common to both derrick arms and mounted upon the platform between the turntables and beyond the plane which intersects the centers of the turntables, inclined diverging jibs extending from the mast to points above the center of the turntables, braces connecting the upper ends of the jibs with each other and with the mast, bridles supported by the connecting braces of the said upper yokes, boat whips arranged in pairs and carried by one set of bridles, and topping lifts connected with the other set of bridles and the jibs.

1,216,869. RECEPTACLE. JAMES J. SNIGO, Pittsburgh, Pa. Filed July 6, 1915, Serial No. 38,310. Renewed Oct. 18, 1916. Serial No. 126,460. (Cl. 220—75.)



1. A receptacle comprising a body portion having the marginal part throughout at one end bent outwardly to surround and snugly engage said body portion thereby providing an integral reinforcing collar for said end, said collar having inherent means near its free edge to form a peripheral rib for said body portion, said collar having a pair of diametrically opposed countersunk openings, and a pair of cover attaching elements extending through said openings and projecting outwardly from said collar and provided with heads tapped in said openings, said heads opposing said body portion.

2. A receptacle comprising a body portion having the marginal part throughout at one end bent outwardly to surround and snugly engage said body portion thereby providing an integral reinforcing collar for said end, said collar having inherent means near its free edge to form a peripheral rib for said body portion, said collar having a pair of diametrically opposed countersunk openings, and a pair of cover attaching elements extending through said openings and projecting outwardly from said collar and provided with heads tapped in said openings, said heads opposing said body portion, and said rib being substantially semi-circular in cross section.

1,216,870. ANTISKIDDING DEVICE FOR PNEUMATIC TIRES. JAMES J. SNIGO, Pittsburgh, Pa. Filed Feb. 2, 1916. Serial No. 75,647. (Cl. 152—16.)



1. An anti-skidding device comprising an annulus formed of a series of anti-skidding members, a series of coupling members, said coupling members alternately disposed with respect to said anti-skidding members, said anti-skidding members provided with hollow anti-skidding elements, said coupling members having L-shaped wings extending into said anti-skidding elements, and means extending through said elements and wings for detachably connecting said anti-skidding and coupling members together.

2. An anti-skidding device comprising an annulus formed of a series of anti-skidding members, a series of coupling members, said coupling members alternately disposed with respect to said anti-skidding members, said anti-skidding members provided with hollow anti-skidding elements, said coupling members having L-shaped wings extending into said anti-skidding elements, and means extending through said elements and wings for detachably connecting said anti-skidding and coupling members together, and means connected to certain of said anti-skidding members for attaching the annulus upon the tread of a wheel.

3. An anti-skidding device for tires comprising an annulus consisting of a series of anti-skidding members provided with anti-skidding elements and further having openings in the bottom thereof, a series of coupling members alternately disposed with respect to said anti-skidding members and each provided with a pair of oppositely disposed L-shaped wings extending into opposed anti-skidding elements, and means extending through said wings and anti-skidding elements for detachably connecting the anti-skidding members and coupling members together.

4. An anti-skidding device for tires comprising an annulus consisting of a series of anti-skidding members provided with anti-skidding elements and further having openings in the bottom thereof, a series of coupling members alternately disposed with respect to said anti-skidding members and each provided with a pair of oppositely disposed L-shaped wings extending into opposed anti-skidding elements, and means extending through said wings and anti-skidding elements for detachably connecting the anti-skidding members and coupling members together, and means for attaching said annulus upon a tire.

5. An anti-skidding device for tires comprising an annulus formed of anti-skidding members and coupling members, the coupling members being alternately disposed with respect to the anti-skidding members, said anti-skidding members having anti-skidding elements, said coupling members having wings extending up into the anti-skidding elements, and means for connecting said wings and anti-skidding elements together.

[Claims 6 and 7 not printed in the Gazette.]

1,216,871. LOCKING DEVICE FOR STEERING-WHEELS. PERRY E. SNYDER, Angola, Ind. Filed July 26, 1916. Serial No. 111,451. (Cl. 70—90.)



1. In means of the class described, the combination with a vehicle steering member and support therefor, of a locking member engageable with said steering member, a casing for said locking member, means in said casing for holding the locking member in position for engagement with the steering member, and means interlocking the casing on the support and operable by the locking member to release the casing from the support.

2. In means of the class described, the combination with a vehicle steering member and support therefor, of a locking member engageable with said steering member, means for holding said locking member in engagement with the steering member, a clamping device coöperating with the steering member and support, and means interlocking with said clamping member for holding the latter on said support and operable by the locking member to effect displacement of the clamping member from the support.

3. In means of the class described, the combination with a vehicle steering member and support therefor, of a locking member engageable with the steering member, a casing therefor, means in said casing for holding the locking member in and out of engagement with the steering member, means for sustaining said casing upon the steering member support, and a locking element carried by said casing and interlocking the latter with the sustaining means.

4. In means of the class described, the combination with a vehicle steering member and support therefor, of a locking member engageable with the steering member, a casing therefor, means in said casing for holding the locking member in and out of engagement with the steering member, means for sustaining said casing upon the steering member support, and a locking element carried by said casing and interlocking the latter with the sustaining means, said locking element being arranged in the path of movement of the first mentioned locking member for operation thereby to effect displacement of the casing from the sustaining means.

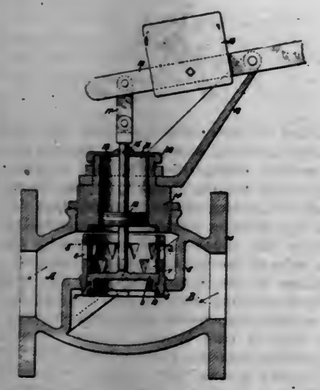
5. In means of the class described, the combination with a vehicle steering member and support therefor, of a locking member engageable with the steering member, a casing in which said locking member is mounted, a clamp encircling the steering member support and having interlocking engagement with the casing, a locking bolt at one end of the casing engageable with the locking member to hold it projected from the casing, and a second locking bolt in said casing coöperating with the clamping member for holding the casing in locking engagement therewith, said second locking bolt being operable by the locking member first-mentioned to disengage the same.

[Claims 6 to 8 not printed in the Gazette.]

1,216,872. REDUCING-VALVE. CHARLES NEVILLE SOWDEN, Toronto, Ontario, Canada. Filed June 24, 1916. Serial No. 105,571. (Cl. 50—34.)

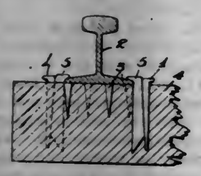
1. A reducing valve comprising in combination a valve casing having a partition wall, an apertured sleeve threaded into the partition wall so that the apertures are wholly on one side of the partition, a piston valve in the sleeve controlling the communication between the two sides of the partition wall, said sleeve having a shoulder forming an additional seat for said valve at the closed position, a valve head having a cylindrical chamber in communication with the valve casing on one side of the partition and also with the atmosphere, and a piston in the chamber separating the communication of the chamber with

the casing from that of the chamber with the atmosphere, said piston being in rigid connection with said piston valve to participate in all the movements of said piston valve.



2. A reducing valve comprising in combination a valve casing having a partition wall presenting a threaded bore, an apertured sleeve threaded into the bore of the partition so that the apertures are wholly on one side of the partition, a piston valve in the sleeve controlling the communication between the two sides of the partition, said sleeve having a shoulder forming an additional seat for said valve at its closing position, a valve head having a cylindrical chamber in communication with the valve casing on one side of the partition and also with the atmosphere, a piston in said chamber separating the communication of the chamber with the casing from that of the chamber with the atmosphere, said piston being of smaller diameter than the piston valve and in rigid connection therewith to participate in the movement of the valve, and an adjustable weight associated with the piston for varying the pressure thereupon substantially as and for the purpose set forth.

1,216,873. REINFORCED RAILROAD-TIE. ANDREW STARR, Chicago, Ill. Filed May 21, 1914. Serial No. 839,934. (Cl. 238—4.)



1. A reinforcing element for a railway tie, adapted to be inserted in the tie in position to support the rail, and consisting of a wedge-shaped nail tapered throughout the extent of its insertion in the tie.

2. A reinforcing element for a railway tie, adapted to be inserted in the tie in position to support the rail, and consisting of a wedge-shaped nail of quadrangular cross-section having two opposing sides which converge throughout the extent of their insertion in the tie.

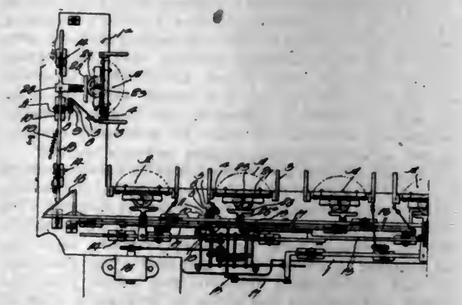
3. The combination of a railway tie, a tie plate lodged thereon having at its upper side an abutment adapted to engage the edge of the rail flange and having recesses extending upwardly from its lower surface, and a multiplicity of reinforcing nails inserted upstanding in the tie at the rail seat and adapted to sustain endwise the rail load, the upper ends of such nails extending into the respective recesses of the tie plate throughout the extent of such recesses, whereby the nails serve both to receive the rail load and to restrain the tie plate against lateral shifting.

4. The combination of a railway tie, a multiplicity of reinforcing elements embedded upstanding in the material of the tie within the area to be covered by the rail, and a tie-plate having apertures to register with said reinforcing elements respectively, said elements extending through the apertures of the tie-plate to the top plane thereof for contact with the rail flange, and he upper side if the tie-plate having an abutment adapted to engage the edge of such rail flange.

5. The combination of a railway tie, a multiplicity of reinforcing elements embedded upstanding in the material at the rail seat of the tie, a plurality of said elements having their upper ends substantially flush with the tie surface, and the remainder of said elements projecting slightly above said surface, and a tie plate lodged on the tie over said reinforcing elements, said tie plate having grooves extending transversely of the tie and positioned to engage the said projecting elements and having an abutment on its upper side positioned to engage the edge of the rail flange.

[Claims 6 to 11 not printed in the Gazette.]

1,216,874. MOTION-FIGURE. WILLIAM STEPHENS, East Liverpool, Ohio. Filed Mar. 30, 1916. Serial No. 87,834. (Cl. 46—40.)



1. In a mechanical reproduction of the class described, a figure representing a human being, said figure having a movable head, a reciprocating member in rear of said figure, said member having thereon rack teeth, a gear in mesh with said teeth, an upright rock shaft to which said gear is secured, and a yielding connection between said rock shaft and the aforesaid head.

2. In a mechanical reproduction of the class described, a figure representing a human being, said figure having a movable arm, a reciprocating member in rear of said figure, said member having rack teeth, an upstanding rack bar, gear means for imparting vertical motion to said rack bar from the aforesaid reciprocating member, and an inclined link extending from said rack bar to the arm.

3. In a mechanical reproduction of the class described, a series of figures, another figure extending at an angle thereto, all of said figures representing human beings, reciprocating members in rear of both series for imparting likelike movements thereto, means for reciprocating one member, and means for imparting the motion of said one member to the other.

4. In a mechanical reproduction of the class described, a series of figures, another figure extending at an angle thereto, all of said figures representing human beings, reciprocating members in rear of both series for imparting lifelike movements thereto, means for reciprocating one member, and a cam for transferring this movement to the other member.

5. A mechanical reproduction of the class described comprising a base, a plurality of figures hinged thereto for forward bowing, a plurality of horizontal reciprocating bars in rear of said figures, vertical rock shafts upon which the heads of the figures are carried, an arm extending rearwardly from one of said rock shafts, a second arm secured to one of the reciprocating bars and having a slotted portion, the aforesaid arm having a projection

received in the slots of this portion whereby as the last-mentioned bar reciprocates, the head will be turned even though the figure be tilted forwardly, and separable connections between the other reciprocating bars and the other figures for turning the rock shafts of the latter until said figures are tilted forwardly.

1,216,875. TORCH. LUDWIG STETTNER, Oakland, Cal., assignor to Great Western Cutting and Welding Company, San Francisco, Cal., a Corporation of California. Filed Sept. 20, 1916. Serial No. 121,152. (Cl. 158—27.4.)

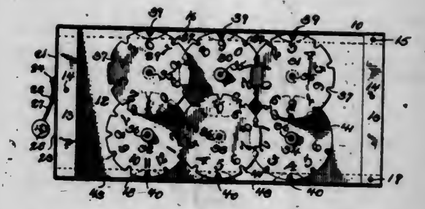


1. In apparatus of the character described, a housing provided with oxygen and acetylene gas ports, a valve movably mounted within the housing to control the passage of the oxygen and acetylene gas through their ports, a tubular boss carried by the housing and having an opening communicating with the oxygen ports, a nozzle having one end extending into the opening and provided with a longitudial inner oxygen port to communicate with the first-named oxygen port and forming with the tubular boss an annular acetylene gas chamber having communication with the acetylene gas port and provided with acetylene gas ports having communication with the acetylene gas chamber and arranged exteriorly of the longitudinal inner oxygen port, a mixing chamber receiving the forward end of the nozzle and in communication with the oxygen and acetylene gas ports thereof, a conduit connected with the mixing chamber, and a burner tip connected with the conduit.

2. In apparatus of the character described, a housing provided with oxygen and acetylene gas ports, a valve movably mounted within the housing to control the passage of the oxygen and acetylene gas through their ports, a tubular boss carried by the housing and having an opening in communication with the oxygen port, a nozzle having one end extending into the opening and provided with an inner longitudinal oxygen port communicating with the first-named oxygen port, said nozzle forming with the tubulas boss an annular acetylene gas chamber having communication with the acetylene gas port, said nozzle being provided with a plurality of acetylene gas ports surrounding the oxygen port thereof and communicating with the acetylene gas chamber, said nozzle being further provided near its forward end and forwardly of its acetylene gas ports with a deflector, a mixing chamber receiving the forward end of the nozzle and having communication with the oxygen and acetylene gas ports thereof, a conduit connected with the mixing chamber, and a burner tip connected with the conduit.

3. In apparatus of the character described, a housing provided with oxygen and acetelene gas ports, a valve movably mounted within the housing to control the passage of the oxygen and acetylene gas through their ports, a tubular boss carried by the housing and provided with an opening in communication with the oxygen port, a nozzle having one end extending into the opening, provided with an inner longitudinal oxygen port in communication with the first-named oxygen port, forming with the tubular boss an annular acetylene gas chamber having communication with the acetylene gas port, provided with a plurality of acetylene gas ports surrounding the oxygen port thereof and communicating with the annular acetylene gas chamber, and provided near its forward end and forwardly of its acetylene gas ports with a deflector, a tube having a tapered bore increasing in diameter forwardly and provided with an enlarged tubular head having a tapered end wall for its ore, the tubular head being connected with the nozzle and forming therewith a mixing chamber, a coupling receiving the tubular head and boss and serving to connect them, a conduit connected with the tube, and a burner tip carried by the conduit.

1,216,876. INDICATOR. ARTHUR L. STEVENS, Roseville, Cal. Filed Apr. 17, 1916. Serial No. 91,711. (Cl. 40—70.)



1. In an indicating device, the combination with a thin casing, having opposite narrow sides hinged thereto at one end, and securing means at the other end, a row of sight openings being formed in one broad face of said casing near each of said hinged sides, of two rows of number wheels rotatably mounted in said casing, and means on said hinged sides to lock when closed said number wheels against rotation.

2. In an indicator, the combination with a casing having a top and bottom hinged thereto, of two rows of number wheels rotatably mounted therein, each wheel having a notched periphery and a circular row of numbers on its face, and means on said top and bottom to engage when closed a notch on each wheel and prevent rotation thereto.

3. In an indicator, the combination with a casing having a top and bottom hinged thereto, a row of sight openings in one side near the top and a similar row of openings near the bottom, of two rows of number wheels rotatably mounted in said casing, each wheel having a notched periphery and a circular row of numbers on its face, a number on each wheel being visible through said openings, and means on said top and bottom to engage when closed a notch in each wheel to prevent rotation thereof.

4. In an indicator, the combination with a casing having a top and bottom hinged thereto at one end and having means on their other ends to hold them closed by means of a seal, of two rows of number wheels rotatably mounted in said casing, each wheel having a notched periphery and a circular row of numbers on its face, and means on said top and bottom to engage when closed a notch on each wheel to prevent rotation thereof.

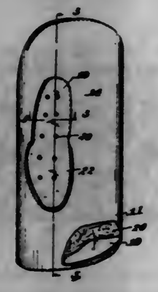
5. In an indicator, the combination with a casing, having a top and bottom hinged thereto at one end, a finger on the opposite ends of said top and bottom, said fingers adapted to overlap and provide with means for connecting the same to hold the top and bottom closed, of two rows of number wheels rotatably mounted in said casing, each wheel having a notched periphery and a circular row of numbers on its face, and independently rotatable when the top and bottom are open, and a plurality of lugs on said top and bottom to engage when closed a notch in each of said wheels to prevent rotation thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,216,877. MITTEN. ARCHIBALD J. STEWART and HARRY N. STEWART, Los Angeles, Cal. Filed Nov. 16, 1915. Serial No. 61,760. (Cl. 2—102.)

1. A mitten, comprising a palm portion, a flap struck from said palm portion adapted to form the inner face of a thumb receiving member, said palm portion formed with cutaway portions at the juncture of the edges of the flap, and a sheet of heat insulating material forming a backing for said palm portion and flap.

2. A mitten, comprising a palm portion, a flap struck from said palm portion adapted to form the inner face of a thumb receiving member, said palm portion formed with cutaway portions at the juncture of the edges of the flap, and a sheet of heat insulating material forming a backing for said palm portion and flap, and a blank affixed to the edges of the flap to form the back portion of the thumb receiving member.



3. In a mitten, a substantially rectangular blank having a U-shaped cut terminating in perforations and forming a flap adapted to be folded on the face of the blank to form the inner wall of a thumb piece, a lining blank corresponding to the first named blank stitched to the latter at its edges, and a sheet of heat insulating material interposed between said blanks.

4. A mitten comprising a pair of corresponding blanks having U-shaped cuts terminating in perforations and forming flaps adjacent one edge of the blanks, said blanks stitched together on their edges and along the edges of the flaps, a sheet of heat insulating material interposed between said blanks and extending between the flap portions thereof, a blank stitched to the marginal edges of the cut in the aforesaid blanks and to the edges of the flap to form the back of a thumb receiving member, and means for fastening the blanks on the hand.

5. A mitten, comprising a pair of corresponding blanks having U-shaped cuts terminating in perforations and forming flaps, said blanks stitched together on their edges, a sheet of heat insulating material interposed between said blanks and extending between the flap portions thereof, a blank stitched to the marginal edges of the cut in the aforesaid blanks and to the edges of the flap to form the back of a thumb receiving member, said first named blanks being folded along their longitudinal edges to form side members, and fasteners connecting the adjacent edges of the folds for attaching the mitten to the hand.

[Claim 6 not printed in the Gazette.]

1,216,878. INVALID'S SWING. JOSEPHINE STORMO, Garretson, S. D. Filed Apr. 29, 1916. Serial No. 94,304. (Cl. 155—44.)

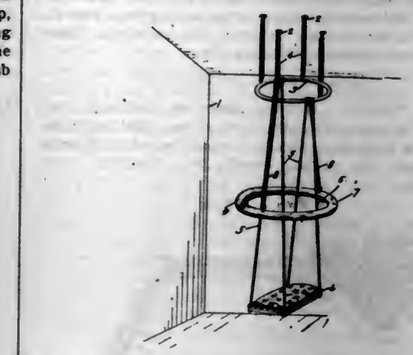
1. An invalid's swing comprising independent cable supported seat and hoop-like neck rest, the cables for the seat extending through the neck rest.

2. The combination with an overhead support, of a hoop, coiled springs suspending the hoop from the overhead support, a seat and a neck rest, and cables independently suspending the seat and neck rest from the hoop.

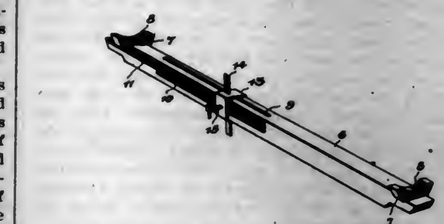
3. The combination with an overhead support, of a hoop, coiled springs suspending the hoop from the overhead support, a seat, cables suspending the seat from the hoop, and a neck rest suspended from the hoop.

4. The combination with an overhead support, of a hoop, coiled springs suspending the hoop from the overhead support, a seat, cables suspending the seat from the hoop, a neck rest, and cables suspending the neck rest from the hoop.

5. The combination with an overhead support, of a hoop, coiled springs suspending the hoop from the overhead support, a seat, cables suspending the seat from the hoop, a padded hoop affording a neck rest, and cables suspending the padded hoop from the first noted hoop.



1,216,879. GAGE. FRANCESCO STUPPILLO, Watertown, N. Y. Filed May 20, 1916. Serial No. 98,710. (Cl. 33—169.)



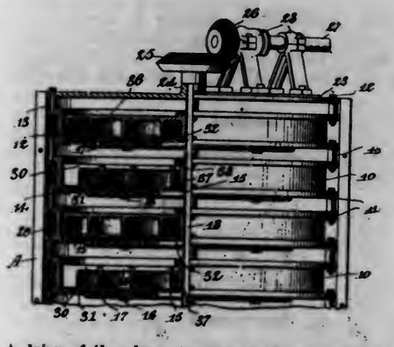
1. A gage comprising a bar formed with a slot extending therethrough from one face to the opposite face and with another slot opening into the first mentioned slot and to another face of the bar, a slide movable longitudinally on said bar, an adjustable indicator-bar carried by said slide and extending through said first-mentioned slot, and a screw carried by said slide and extending into said second-mentioned slot and arranged to engage said indicator-bar and to hold both that bar and said slide in adjusted positions.

2. A gage comprising a bar formed with a slot extending therethrough from one face to the opposite face and with another slot opening into the first-mentioned slot and to another face of the bar, a contact-seat at each end of said bar, a slide movable longitudinally on said bar, an adjustable indicator-bar carried by said slide and extending through said first-mentioned slot, and a screw carried by said slide and extending into said second-mentioned slot and arranged to engage said indicator-bar and to hold both that bar and said slide in adjusted positions.

1,216,880. DRYING-MACHINE. JOHN F. SULLENBERGER, Columbus, Ga. Filed May 6, 1916. Serial No. 95,848. (Cl. 34—23.)

1. A drier of the character described comprising a plurality of rings having internal and external flanges, spacers arranged between the outer flanges adjacent each other for disposing the rings in superposed relation to one another, means for fastening the flanges and spacers together, pans supported upon the internal flanges in the respective rings and having openings centrally and peripherally in alternate relation, means beneath each pan for heating the same, and feeders arranged to travel over the pan for advancing materials to the openings therein.

2. A drier of the character described comprising a plurality of rings having internal and external flanges, spacers arranged between the outer flanges adjacent each other for disposing the rings in superposed relation to one another, means for fastening the flanges and spacers together, pans supported upon the internal flanges in the respective rings and having openings centrally and peripherally in alternate relation, means beneath each pan for heating the same, and feeders arranged to travel over the pan for advancing material to the openings therein, and a casing concentrically of the rings.



3. A drier of the character described comprising a plurality of rings having internal and external flanges, spacers arranged between the outer flanges adjacent each other for disposing the rings in superposed relation to one another, means for fastening the flanges and spacers together, pans supported upon the internal flanges in the respective rings and having openings centrally and peripherally in alternate relation, means beneath each pan for heating the same, feeders arranged to travel over the pan for advancing materials to the openings therein, a casing concentrically of the rings, and means for rotating the feeders simultaneously with each other.

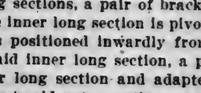
4. A drier of the character described comprising a plurality of rings having internal and external flanges, spacers arranged between the outer flanges adjacent each other for disposing the rings in superposed relation to one another, means for fastening the flanges and spacers together, pans supported upon the internal flanges in the respective rings and having openings centrally and peripherally in alternate relation, means beneath each pan for heating the same, feeders arranged to travel over the pan for advancing materials to the openings therein, a casing concentrically of the rings, means for rotating the feeders simultaneously with each other, each feeder being in the form of a spiral, and deflector wings at intervals throughout the length of the spiral.

5. A drier of the character described comprising a plurality of rings having internal and external flanges, spacers arranged between the outer flanges adjacent each other for disposing the rings in superposed relation to one another, means for fastening the flanges and spacers together, pans supported upon the internal flanges in the respective rings and having openings centrally and peripherally in alternate relation, means beneath each pan for heating the same, feeders arranged to travel over the pan for advancing materials to the openings therein, a casing concentrically of the rings, means for rotating the feeders simultaneously with each other, each feeder being in the form of a spiral, deflector wings at intervals throughout the length of the spiral, and means for supplying a heating fluid to the first named means.

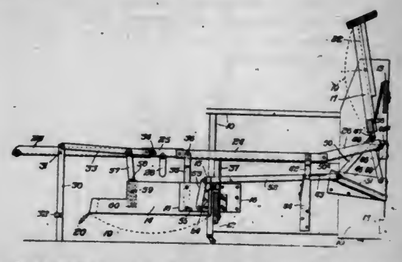
[Claim 6 not printed in the Gazette.]

1,216,881. BUCKLE. JOHN HOWARD TABLER, Lanham, Md. Filed June 22, 1916. Serial No. 105,181. (Cl. 24—169.)

A buckle comprising opposite side pieces with straight lower horizontal edges, a rear cross-bar extending between the side pieces a short distance above the lower edges thereof for the attachment of a strap to the buckle above said lower edges, a front cross-bar between the side pieces and located with its lower edge on a horizontal plane approximating the axis of the rear cross-bar, said front cross-bar having a flattened inner side to provide an increased friction surface and an engaging-edge at the lower end thereof, an intermediate cross-bar between the side pieces at a higher horizontal plane than the front cross-bar and located a short distance from the latter, and a lifting tongue projecting from the front of the buckle on a plane with the front cross-bar.



1,216,882. FOLDING DAVENPORT OR COUCH. MAURICE TAUBER, Chicago, Ill. Filed June 30, 1915. Serial No. 37,143. (Cl. 5—51.)



1. In a folding couch, the combination of a main framework, a seat pivotally connected at its forward edge to said framework, a bed structure comprising two long sections and a connecting short section, a pair of brackets fixed on the seat and in which the inner one of said long bed sections is pivotally supported, and links operatively connecting the outer one of said bed sections to the seat.

2. In a folding couch, the combination of a main framework, a seat pivotally connected at its forward edge to said framework, two relatively long bed sections, a short section connecting the two, the inner long section being pivotally mounted on the seat, a pair of legs pivoted to the outer section for supporting the latter, a pair of links pivotally connecting said legs to the short section for folding and unfolding the legs, and a pair of links connecting the last mentioned links to the seat, whereby the outer bed section and the seat are arranged for folding movement together.

3. In a folding couch, the combination of a framework, a seat pivotally connected at its forward edge to said framework, two long bed sections, a short section connecting said two long sections, a pair of brackets fixed on the seat in which the inner long section is pivotally supported, additional means positioned inwardly from said brackets for supporting said inner long section, a pair of legs pivoted to the outer long section and adapted to rest upon the floor to support said outer section, a pair of links connecting said legs to the short section for folding and unfolding the legs, another pair of links each having one end pivoted to one of the first links and having a slot in its other end, a pair of brackets against which the latter ends of the links are arranged to abut to assist in supporting the said structure, and a pair of studs fixed in the seat and lying in the slots in said links.

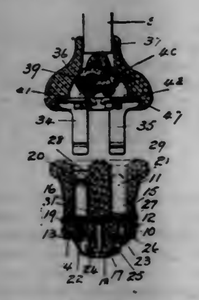
4. A folding couch having, in combination, a main framework, a seat pivotally connected at its forward edge to said framework, a collapsible bed structure comprising a plurality of sections pivotally connected together, a pair of pivoted links operatively connecting the outermost bed section to the seat, a pair of brackets rigid with the seat in which the forward end of one of the inner bed sections is pivotally supported, a fulcrum on the framework for

supporting said inner section at a point rearwardly of said brackets, and means rearwardly of said fulcrum for limiting upward tilting movement of the rear end of said inner section.

5. In a folding couch, the combination of a main framework, a seat pivotally connected at its forward edge to said framework, a pair of brackets projecting from the bottom of the seat, a pair of stops and a pair of pins fixed to the seat at a point farther distant from its pivotal center than said brackets, a pair of links each having a slot in one end receiving said pins and adapted to abut against said stops, a folding bed structure comprising two long sections and an intermediate short section pivoted together, the outer long section being connected to the ends of said links whereby movement of either the section or the seat will operate the other, the inner long section being pivoted in said brackets, and additional supporting means for said inner section.

[Claims 6 to 13 not printed in the Gazette.]

1,216,883. DETACHABLE ATTACHMENT-PLUG. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 17, 1914. Serial No. 851,536. (Cl. 173—343.)



1. A detachable attachment plug having a body portion having external and internal contacts and comprising at its entering end an insulating button carrying said contacts and at its outer end a thumb piece of insulating material internally recessed to receive said internal contacts and externally recessed to receive an offset portion of one of said external contacts whereby said parts are held in assembled position.

2. A detachable attachment plug having a body portion comprising at its entering end a button of insulating material and at its outer end a peripherally recessed and internally chambered thumb piece of insulating material, a screw-shell carried by said button and spun into said peripheral recess in the thumb piece to hold the latter in assembled position, a center contact carried by said button and internal contacts carried by said button, said internal contacts being electrically connected to said center contact and screw shell respectively and projecting into said chambered thumb piece.

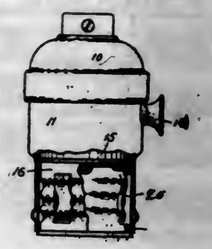
3. A detachable attachment plug having a body portion comprising a button at the entering end of the plug, and a thumb piece at the outer end of the plug, coöperating projection and recess on the adjacent faces of said parts to definitely locate the same with relation to each other, and to prevent relative swiveling, together with a screw shell carried by said button and engaging said thumb piece to hold the parts assembled.

4. A detachable attachment plug having a body portion comprising a button at the entering end of the plug, and a thumb piece at the outer end of the plug, coöperating rib and recess on the adjacent faces of said parts to prevent relative swiveling, said rib and recess extending only partially across the said adjacent faces to insure the correct positioning of said parts with relation to each other, and a screw shell carried by said button and engaging said thumb piece to hold the parts assembled.

5. A detachable attachment plug having a body portion comprising at its entering end a button of insulating material carrying external and internal contacts, and at its outer end a thumb piece of insulating material having chambers to receive said internal contacts, each of said chambers having at least one flat abutment wall against which the free ends of said internal contacts normally press, together with a detachable cap having blades adapted to enter said chambers in contact with said flat walls.

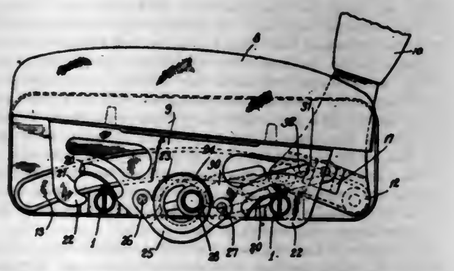
[Claims 6 to 8 not printed in the Gazette.]

1,216,884. LAMP-GRIP. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 25, 1914. Serial No. 858,540. (Cl. 173—358.)



A lamp receptacle comprising a screw shell side contact of the Edison type, and an independent lamp grip device lying within said screw shell and having a base resting against the base of the screw shell and spring arm means extending outward toward the lamp receiving end of the receptacle to grip an inserted lamp base, substantially as described.

1,216,885. CAR-SEAT. CLARENCE L. THOMPSON, Port Washington, N. Y., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Sept. 15, 1915. Serial No. 50,722. (Cl. 155—2.)



1. In a car-seat, the combination of a pair of cross-rails and supports for the same, a reversible back, supporting standards therefor, a seat, rockers supporting said seat and mounted for oscillatory movement on said rails, said rockers each having a circular opening therethrough with a semi-circular upper flange, a curved bearing strap pivoted at one end to the rocker and adapted to be secured to the rocker at its opposite end to form the lower bearing for said opening, said rockers having curved lower bearing surfaces contacting said rails, a rock-shaft parallel to said rails, extending eccentrically through the openings in said rockers, rings secured on said shaft mounted for rotation within said openings, between said upper flanges and straps, and connections between said standard and said rock-shaft such that reversal of said back oscillates said shaft, and thereby moves said rockers over said rails to reverse the seating angle of the seat, substantially as set forth.

2. In a car-seat, the combination of a seat-cushion, having a vertical slot in the frame thereof, rockers supporting the same, a back-supporting standard, movable past said seat cushion, and connections between said standard and rockers for operating the latter as the back is reversed, comprising a lever mounted in a vertical plane beneath said cushion, connected to operate said rockers and connected to said standard by a pin and slot connection, the pin of which extends under said seat-cushion, said lever being movable in said slot in the seat-cushion frame, substantially as set forth.

3. In a car-seat, the combination of cross-rails, a support therefor, an end-plate carried by said cross-rails, provided with a track, a reversible back, an end standard therefor extending closely adjacent to said end-plate and having bearing means movably supported on said track, a seat-cushion extending lengthwise into close proximity to said standard, rockers supporting said seat-cushion, supported on said rails, and connections between said standard and rockers for operating the latter as the back is reversed, comprising a pin secured to said standard extending under said seat, lengthwise thereof, a lever pivotally connected to said pin, underneath said cushion, and means operated by said lever for rocking said rockers as the back is reversed, substantially as set forth.

4. In a car-seat, the combination of cross-rails, a seat-cushion, rockers supporting the same, resting on said rails, a back-supporting standard, movable past said seat-cushion and having a pivot-pin thereon extending under said seat-cushion, means for moving said rockers, including a shaft parallel to said rails, and means for rocking said shaft comprising a lever secured to said shaft and having a slideway thereon, and a lever slidably mounted in said slideway and having a slot therein, in which said pivot-pin is mounted, substantially as set forth.

5. In a car-seat, the combination of a seat-cushion, having a vertical slot in the frame thereof, rockers supporting the same, a back-supporting standard, movable past said seat-cushion and having a pivot-pin thereon extending under said seat-cushion, a rock-shaft, means for moving said rockers as said shaft oscillates, and means for rocking said rock-shaft, comprising a lever connected to said shaft and pivot-pin, and movable in said slot in the seat-cushion frame, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,216,886. GAS-PLIERS. WILLIAM S. THOMSON, Plantsville, Conn., assignor to The H. D. Smith & Company, Plantsville, Conn. Filed Nov. 1, 1913. Serial No. 798,665. (Cl. 81—83.)



A pair of pliers composed of a pair of pivotally connected members, the said members comprising each a handle at one end, a flattened and enlarged body portion connected to one end of the said handle, a shank portion extending downwardly and slightly outwardly from the said body portion, and a jaw extending outwardly from the outer end of the said shank portion, the said body portions being superimposed one on the other, and pivotally connected, the opposed edges of the said shanks being adapted to meet along the medial plane when the members are in the closed position, and the lower of the said members having a shank extension in the form of a protuberance on the upper side for building up the shank portion of the said lower member to correspond substantially in size and form with the shank portion of the upper of the said members.

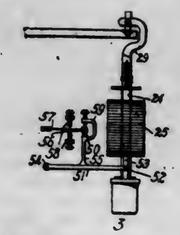
1,216,887. INDUCTIVE WIRELESS-TELEPHONE SYSTEM FOR RAILROADS AND THE LIKE. THOR GUSTAF THÖRNBLAD, KARL HJALMAR WARFVINGE, and VICTOR GABRIEL WERNER, Stockholm, Sweden. Filed June 6, 1914. Serial No. 843,362. (Cl. 179—82.)

In an inductive wireless telephone system for railroads, the combination of a circuit on the train comprising a strong-current microphone, a receiver, and a source of electrical energy, and a stationary circuit formed by telegraph or telephone wires along the railroad track used for the ordinary telegraph and telephone traffic and comprising a strong-current microphone, a receiver, and



a source of electrical energy, said circuits being in inductive relation to each other, substantially as and for the purpose set forth.

1,216,888. ELECTRICAL REGULATOR. ALLEN A. TIRRILL, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1914. Serial No. 822,134. (Cl. 171—229.)



1. An electrical regulator comprising coöperating contact members, a lever, means for actuating the lever, a frame pivotally suspended from the lever, means for guiding the movements of said frame, and an electromaguet carried by said frame for actuating one of said contact members.

2. An electrical regulator comprising coöperating contact members, a lever, means for actuating the lever, and an electromagnet for actuating one of said contact members the said electromagnet being pivotally suspended from the lever.

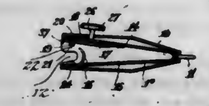
3. An electrical regulator comprising coöperating contact members, a lever, means for actuating the lever, an electromagnet for actuating one of said contact members, and a universal joint connecting said electromagnet to said lever.

4. An electrical regulator comprising coöperating contact members, an electromagnetic actuator for one of the members, means for guiding the movements of said actuator, a lever from which the said actuator is pivotally suspended, and means for actuating the said lever.

5. An electrical regulator comprising coöperating contact members, an electromagnetic actuator for one of the members, a lever from which the said actuator is suspended, means for actuating the said lever, and a universal joint operatively connecting the said actuator to said lever.

[Claims 6 to 10 not printed in the Gazette.]

1,216,889. ENVELOP-OPENER. FLOYD F. TODD, Forest City, Pa. Filed Feb. 7, 1916. Serial No. 76,748. (Cl. 120—36.)



1. An envelop opener comprising a resilient frame forming yieldable jaws, guides on one of said jaws, a knife carrying slide removably mounted on the other jaw, a knife removably mounted in the slide and having a tip exposed for the cutting of an envelop when inserted be-

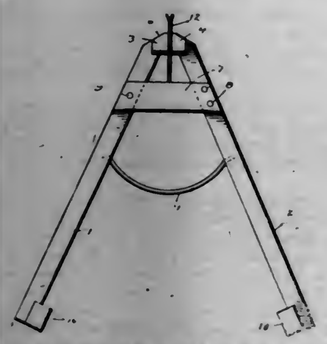
tween the jaws and the latter are compressed, a bearing coöperating with the tip of the knife and formed on one of said jaws, and a rib on the knife carrying slide to permit the convenient removal thereof from the jaws.

2. An envelop opener comprising a resilient frame forming yieldable jaws, guides on one of said jaws, a knife carrying slide removably mounted on the other jaw, a knife removably mounted on the slide and having a tip exposed for the cutting of an envelop when inserted between the jaws and the latter are compressed, a bearing coöperating with the tip of the knife and formed on one of said jaws, a rib on the knife carrying slide to permit the convenient removal thereof from the jaws, and a casing for the frame.

3. An envelop opener comprising a resilient frame forming yieldable jaws, guides on one of said jaws, a knife carrying slide removably mounted on the other jaw, a knife removably mounted in the slide and having a tip exposed for the cutting of an envelop when inserted between the jaws and the latter are compressed, a bearing coöperating with the tip of the knife and formed on one of said jaws, a rib on the knife carrying slide to permit the convenient removal thereof from the jaws, a casing for the frame, and means engaged with one jaw and extended without the casing for moving said jaw toward the other jaw to bring the tip of the knife into cooperative relation to the bearing.

4. An envelop opener comprising a resilient frame forming yieldable jaws, guides on one of said jaws for limiting the movement of both jaws toward each other and also limiting the insertion of an envelop between said jaws, a knife carrying slide removably mounted on the other jaw, and a knife removably mounted in the slide and having a tip exposed for the cutting of an envelop when inserted between the jaws and the latter are compressed.

1,216,890. SAW-CLAMP. FRANK L. TRAVIS, Brighton, Mich. Filed May 26, 1916. Serial No. 100,145. (Cl. 76—78.)

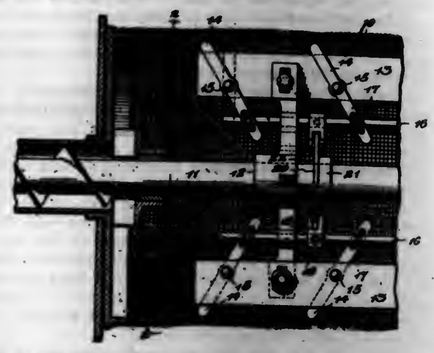


A saw clamp comprising a pair of standards, clamping members secured to the upper ends of said standards, a pair of upwardly inclined connecting members secured to one of the standards and pivoted to the other standard to support one standard with one end above the corresponding end of the other standard when said standards extend parallel with each other for moving the clamping members apart, and a curved spring connected to the standards for moving the clamping members together to clamp a saw blade and simultaneously moving the connecting members into a horizontal plane.

1,216,891. BEATER-BLADE FOR CENTRIFUGAL DRESSERS. JULIUS J. TERTZ, Owensboro, Ky., assignor to The Anglo-American Mill Company, Owensboro, Ky., a Corporation of Kentucky. Filed July 8, 1916. Serial No. 108,116. (Cl. 83—39.)

1. A beater for centrifugal dressers having a plurality of agitating fingers pivotally mounted on a blade thereof.

2. A beater for centrifugal dressers having a plurality of agitating fingers pivotally mounted on a blade thereof, and means for adjusting said fingers.



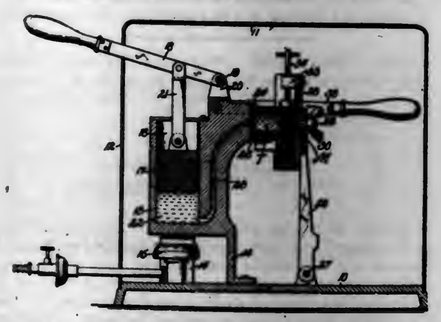
3. A beater for centrifugal dressers having a plurality of agitating fingers pivotally mounted on a blade thereof, and means for simultaneously adjusting said fingers.

4. A beater for centrifugal dressers having a plurality of agitating fingers pivotally mounted on the blades thereof, and means for simultaneously adjusting the fingers on all of said beater blades.

5. A beater for centrifugal dressers having a plurality of agitating fingers pivotally mounted on a beater blade, adjustable means connecting the inner ends of said fingers, and means for locking said finger connecting means in any position of adjustment.

[Claims 6 to 13 not printed in the Gazette.]

1,216,892. TYPE-CASTING APPARATUS. CHARLES VASICA, Long Island City, N. Y. Filed Sept. 12, 1916. Serial No. 119,653. (Cl. 199—81.)



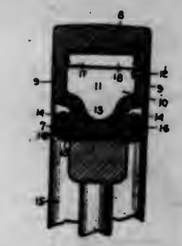
1. In type casting apparatus, a melting pot having a delivery passageway leading through the body thereof, means to force molten metal therethrough, a face plate having a restricted mouth constituting the end of the passageway, a platen, means to clamp form devices on the platen for coöperation with the face of the face plate around said mouth, and means to support the platen and form devices in position to receive the metal delivered through the passageway, said supporting devices including pivot means having an axis perpendicular to the face plate and providing for the rotation of the platen around said axis and the shearing off of the formed metal from the face plate.

2. In a device of the character set forth, the combination with a melting pot having a discharge passageway for the molten metal and means to discharge the molten metal therethrough, of a bracket mounted to swing around horizontal axis, a plate swiveled to the end of the bracket for rotation around an axis perpendicular to the axis of the bracket, form devices carried by the plate and adapted to be brought thereby into registry with the end

of the passageway to receive the molten metal, and means to lock the bracket and devices carried thereby in receiving position.

3. In a device of the character set forth, the combination with a melting pot and means to deliver molten metal therefrom, of a bracket having laterally projecting cross arms, a plate secured to the bracket adjacent said arms, said plate having rigid flanges secured to two adjacent edges thereof at right angles to each other and to the plate, said plate also having along its remaining two edges longitudinal slots, clamping means adjustable along said slots and movable toward the opposite flanges, form devices clamped between the clamping device and flanges and movable with the plate and bracket into position to receive the molten metal, and a locking ball coöperating with said arms to hold the bracket and form devices in fixed position.

1,216,893. VEHICLE-TIRE. MATTHEW VIERENGEL, Brooklyn, N. Y. Filed Apr. 14, 1916. Serial No. 91,042. (Cl. 152—22.)



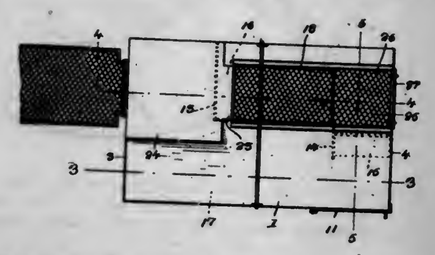
1. The combination of a tire comprising integrally formed tread, base flange, side walls, and transverse partitions, said partitions being spaced at intervals for forming air-holding chambers; means for independently inflating each of said chambers; and means for preventing leakage from said chambers, said means comprising a non-puncturable device disposed in said chambers adjacent the outer walls thereof.

2. The combination of a tire comprising integrally formed tread, base flange, side walls, and transverse partitions, said partitions being spaced at intervals for forming air-holding chambers; means for independently inflating each of said chambers; and means for preventing leakage from said chambers, said means embodying a plurality of non-puncturable plates, one of said plates being inserted in each of said chambers adjacent said tread, said plates being directly acted upon by the air in said chambers.

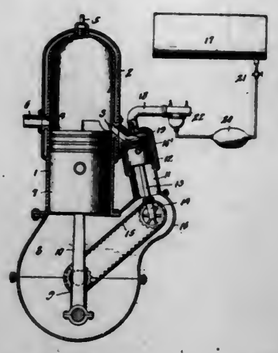
3. The combination of a tire comprising integrally formed tread, base flange, side walls, and transverse partitions, said partitions being spaced at intervals for forming air-holding chambers; means for independently inflating each of said chambers; and means for preventing leakage from said chambers, said means embodying a plurality of non-puncturable plates, one of said plates being inserted in each of said chambers adjacent said tread, said plates being directly acted upon by the air in said chambers and being each provided with inturned sides, said sides being disposed in parallel relation to and in contact with said partitions, and at opposite sides thereof for reinforcing the same.

1,216,894. TRAP. NICK WALLACE, Magnolia, Minn. Filed Apr. 26, 1915. Serial No. 23,949. (Cl. 43—24.)

In a device of the kind described, in combination a sheet metal box having a top wall; said top wall being cut away between its ends to provide a slot forming a passage for a platform, the longitudinal edges of the slot being bent down in parallel relation within said box to provide flanges, a flat sheet shaped to provide a cover for said slot and consisting of a front portion and a rear portion longer and narrower than the front portion, the front portion of the cover being heavier than the rear portion and normally contacting with said top wall to cause the rear portion thereof to close said slot, a rod connecting said parallel flanges at one end, a pair of lugs carried by said platform in back of its front portion, said lugs being fulcrumed upon said rod, so that the rear portion of said platform may swing in said slot, and a second rod connected to said flanges below and in advance of the first rod against which the platform rests when in tilted position.



1,216,895. INTERNAL-COMBUSTION ENGINE. LEO T. WALLEN, Newark, N. J. Filed Feb. 9, 1916. Serial No. 77,205. (Cl. 123—65.)

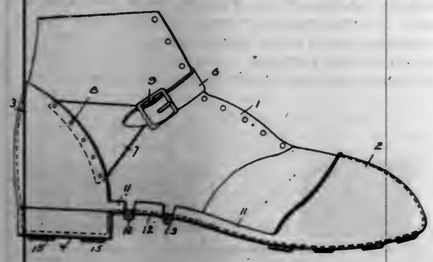


The combination with a submarine boat, of an internal combustion engine mounted within the hull thereof, and having intake and exhaust ports, a charging and compressing cylinder communicating with the intake port of said engine, a compressed air reservoir, a valve controlled and regulated conduit leading from said reservoir to the charging and compressing cylinder, a carbureter in said conduit, and a pressure-equalizing bag in communication with said conduit between the reservoir and carbureter, an exhaust pipe leading from the exhaust port of the engine, a suction fan to which said exhaust pipe leads, and an underwater exhaust pipe leading from said suction fan through the hull of the boat.

1,216,896. METAL SHOE. JAMES L. G. WEBB, Goodells, Mich., assignor of one-half to Albert Bailey, Goodells, Mich. Filed Mar. 26, 1915. Serial No. 17,203. (Cl. 36—63.)

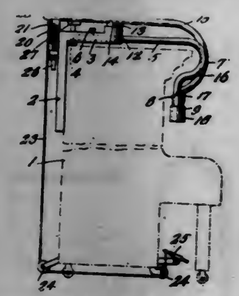
A metallic overshoe comprising an arch plate section having the ends thereof converged toward one side, a heel plate section having an extension on the breast portion thereof, and a sole plate section, upwardly extending flanges formed on the edges of said sections, the upwardly extending flanges on the ends of the arch plate being slit, thus forming tongues, said tongues being rolled, the flanges formed on the inner end of the breast por-

tion of the heel section and the inner end of the sole plate section being slit and rolled, pins connecting the



rolled tongue portion of said breast plate on the heel section, arch plate section and said sole plate section, and means for securing the overshoe to the foot of the wearer.

1,216,897. MUSIC-LEAF TURNER. ROBERT L. WEED, Stamford, Conn. Filed Mar. 28, 1916. Serial No. 87,337. (Cl. 84—135.)

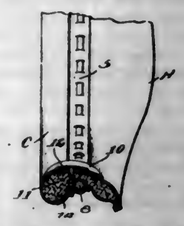


1. In a music leaf turner, a plate adapted to be connected to the back of the piano, said plate having a triangular plate supported by its upper end, an arm adjustably connected to the triangular plate, a spindle carried by the arm, a leaf carrying rod rotatably supported by the spindle, a leaf clamp carried by the rod, a turning arm pivotally supported by the triangular plate, means carried by the last named arm for rotatably and slidably engaging said rod, a bar pivotally connected to the first named plate, means carried by the bar for holding the turning arm in its operative position, and means for actuating the bar to release the turning arm.

2. In a music leaf turner, a plate adapted to be secured to the back of a piano, a triangular plate supported by said plate and overhanging the piano, an arm having its rear end detachably connected to the triangular plate and having its forward end provided with a spindle, a sleeve rotatably supported by the spindle, a leaf carrying rod carried by the sleeve, a leaf engaging clamp carried by the rod, a sleeve carried by the triangular plate, a cylinder rotatably engaged in the sleeve, a turning arm engaged with the cylinder and having its forward end provided with a tube, means for slidably and rotatably connecting the tube to the rod, a spring connecting the rear end of the leaf turning arm and the right hand side of the piano, a bar pivotally connected to the first named plate and having a notch carried thereby for engaging the rear end of the turning arm to hold the same in its operative position, and means for swinging said bar to disengage the leaf turning arm, whereby the tube will swing the rod to turn a leaf.

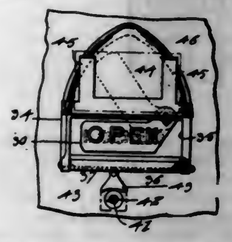
1,216,898. HORSE-COLLAR PROTECTOR. FRANK H. WELCH, Altus, Okla. Filed Sept. 15, 1915. Serial No. 50,844. (Cl. 54—19.)

The combination with a horse collar having a yoke casement exteriorly thereof and a spring yoke therein, of an attachment comprising a flexible wearing section disposed against the inner face of the closed end of the collar, a rigid wearing plate superimposed upon the section and having a central aperture, a bolt member passed through the aperture, and also through the collar and having its head flush with the exposed surface of the wearing plate,



a clip adjustably engaged on the bolt member and acting against the body of the collar and the said yoke casement to hold the wearing section and plate in position relative to each other and also to the collar, and spurs bent from the wearing plate and engageable in the flexible section to prevent the turning thereof.

1,216,899. INDICATING DOOR-LOCK. NICK WEYER, Lewiston, Minn. Filed Mar. 28, 1916. Serial No. 87,290. (Cl. 40—66.)

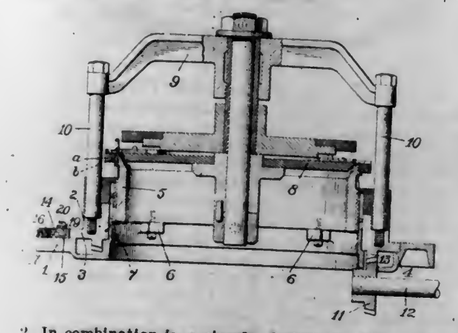


1. A signal indicating latch including a sliding bolt provided with a recess in its side face, said recess being tapered and forming opposite walls presenting an inclined face, an operating lever pivoted intermediate of its ends above the bolt and having a weighted upper operating arm and a lower actuating arm adapted to engage the bolt in the recess thereof at the said inclined face to actuate the bolt, the weighted arm being adapted to maintain the bolt either in an extended or retracted position, an exterior casing having an aperture and a pivotally mounted signal or indicating arm arranged to swing to and from the aperture of the casing and actuated by the said lever.

2. A signal indicating latch including a sliding bolt provided at one of its faces with an upwardly tapered recess presenting oppositely inclined walls, said bolt being also provided at one of its longitudinal edges with teeth, a shaft extending through the door, a pinion mounted on the inner end of the shaft and meshing with the said bolt, an operating lever fulcrumed intermediate of its ends at the inner face of the door and above the said bolt and having an upper weighted operating arm and a lower actuating arm extending into the recess of the bolt and adapted to engage the inclined walls thereof to actuate the bolt, the weighted arm being adapted to maintain the bolt in either its extended or retracted position, and a pivotally mounted signal or indicating arm actuated by the said lever.

1,216,900. CIRCULAR-KNITTING MACHINE. FRANK B. WILDMAN, Norristown, Pa. Filed Apr. 29, 1914. Serial No. 835,290. (Cl. 66—22.)

1. In a dogless rib knitting machine, and in combination, a needle cylinder and dial, cylinder and dial needles, said needle cylinder having a radially grooved portion out beyond the circle of cylinder needles to receive the dial needles when advanced for holding the dial and cylinder relatively fixed, cams for the cylinder needles and cams for the dial needles, the said dial cams projecting all the dial needles and in succession to the same extent to knit with the cylinder needles in forming the rib fabric, each dial needle, when fully advanced, remaining both in the groove of the dial and in the groove of the cylinder, substantially as described.



2. In combination in a circular knitting machine, a cylinder and dial, needles, said cylinder having a radially grooved portion to receive the advanced dial needles which thereby act to hold the dial in fixed relation to the cylinder, a revolving cam ring, a yoke supported thereon, a dial post supported in the yoke, a fixed base ring within which the revolving cam ring rotates, a gear for driving the cam ring, and centering means to compensate for the thrust of the driving gear and to hold the dial against tipping in relation to the cylinder, and thereby maintain registration of the radial grooves of the cylinder and dial, said centering means comprising a block or blocks forming the bearing between the revolving cam ring and the fixed ring, and means for adjustably holding said block or blocks, substantially as described.

3. In combination in a circular rib dogless knitting machine, vertical cylinder needles and horizontal dial needles, a cylinder and dial in which the said needles slide, the cylinder having grooves out beyond the plane in which the cylinder needles move to receive the needles of the dial when projected therefrom, thus maintaining a relatively fixed axial position of said cylinder and dial, and an adjustable device on the base ring for centering the dial with the cylinder.

4. In combination in a circular rib dogless knitting machine, a cylinder and dial, cylinder and dial needles, said cylinder having a portion provided with radial grooves to receive the dial needles, and cam means for projecting said dial needles into the radial grooves of the cylinder for holding the dial in fixed axial relation to the cylinder, and adjustable means to center the dial with the cylinder, substantially as described.

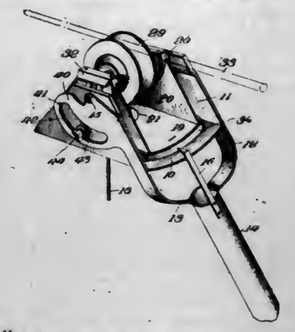
5. In a dogless knitting machine, a cylinder and dial, cylinder and dial needles, a ring surrounding the cylinder and grooved radially to receive the dial needles, and cam means for projecting the dial needles into the grooves of the ring to thereby hold the dial in fixed axial relation to the cylinder and adjustable means to center the dial with the cylinder, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,216,901. TROLLEY-HEAD. ALFONZO L. WILLIAMS, Los Angeles, Cal. Filed Dec. 14, 1915. Serial No. 66,767. (Cl. 64—70.)

1. A trolley head including a fork, a yoke swingingly mounted thereon, means associated with the yoke and fork for controlling the swinging movement of the yoke upon the fork, and a trolley wheel operatively supported by the yoke.

2. A trolley head including a fork, a yoke swingingly mounted thereon, means engaging the fork and having frictional contact with the yoke for controlling the swinging movement of the yoke upon the fork, and a trolley wheel operatively supported by the yoke.



3. A trolley head including a fork, a yoke swingingly mounted thereon, a rack carried by one arm of the fork, a toothed wheel carried by the yoke and engaging said rack, means for urging the said wheel into frictional engagement with the yoke for controlling the swinging movement of the yoke upon the fork, and a trolley wheel operatively supported upon the yoke.

4. A trolley head including a fork, a yoke swingingly mounted thereon, a carriage rotatable upon the yoke and provided with an arm, yieldable means bearing against opposite sides of said arm and normally holding the carriage against rotation upon the yoke, and a trolley wheel mounted upon the carriage.

5. A trolley head including a fork, a yoke carried thereby, a housing supported by the yoke, a carriage rotatable upon the yoke and provided with an arm shiftable longitudinally of the said housing, yieldable means disposed within the said housing to bear against opposite sides of said arm for normally holding the carriage against rotation upon the yoke, and a trolley wheel mounted upon the carriage.

[Claims 6 and 7 not printed in the Gazette.]

1,216,902. MANURE-LOADER. WILLIAM WILLIAMS, Smith, Nev. Filed Aug. 30, 1915. Serial No. 48,034. (Cl. 193—1.)



1. A wagon loading means comprising the following elements in combination; a front axle having truck wheels, a framing including side beams fulcrumed at their front ends to the axle, whereby the rear end may be relatively raised, truck wheels for the rear end of said frame and means connecting said wheels with said frame for raising and lowering the said frame, a combined rotary rake and ground wheel journaled on the said side beams and located between such beams, a transversely extended elevator mechanism mounted at its lower end on the frame and in advance of the rotary rake, means for deflecting the material picked up by the rotary rake on to the lower end of the said elevator and power transmission that joins with the rake and the elevator for imparting motion to the said elevator.

2. In a wagon loader, a wheeled frame, a combined rotary rake and ground wheel journaled on the said frame, means for raising and lowering the rear end of the frame for lifting the rotary rake out of the ground and for bringing it into a traction engagement with the ground, a conveyer transversely mounted on the frame in ad-

vance of the rotary rake, and a fixedly held grid for cooperating with the teeth of the rotary rake to clear the said rake teeth and deflect the material onto the conveyer, and power transmission connections that join the conveyer and the rotary rake.

3. In a wagon loader, the combination of a wheeled frame, means for raising and lowering the rear end of the frame, a combined rotary rake and ground wheel journaled on the said frame, and adapted when the frame is lowered to move into a traction engagement with the ground, a rear cross member that forms a guard for holding the loads lifted by the rotary rake from sliding off the rake teeth as the said loads are lifted, a conveyer located transversely of the machine and in advance of the rotary rake, power transmission connections that join the conveyer and the rotary rake, directly with means in cooperative connection with the conveyer and the rotary rake for combing the teeth of the rotary rake, as the material is being moved toward the conveyer.

4. In a wagon loader of the character described; a frame including side beams, front and rear truck wheels, an elevator that extends across the front end of the frame, a combined rotary rake and ground wheel journaled between the said side beams and to the rear of the elevator that conveys the material rearwardly, upwardly and then forwardly on to the elevator, and power transmission mechanism driven by the ground wheel and in direct connection with the elevator for driving said elevator.

5. In a wagon loader of the character described; a frame including side beams, front and rear truck wheels, an elevator that extends across the front end of the frame, a combined rotary rake and ground wheel journaled between the said side beams and to the rear of the elevator that conveys the material rearwardly, upwardly and then forwardly on to the elevator, and power transmission mechanism driven by the ground wheel and in direct connection with the elevator for driving said elevator, means adapted to be manipulated by an operator riding on the machine for connecting said rear truck wheels with said side beams and for elevating the rear end of the frame to lift the said ground wheel from off the ground.

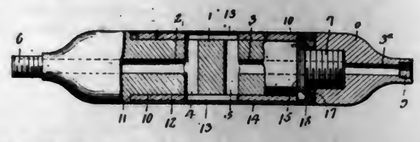
[Claim 6 not printed in the Gazette.]

1,216,903. ANTI-RAIL-SPREADER. WILLIAM G. WILSON, West New Brighton, and NESTOR L. JONES, Mariners Harbor, N. Y. Filed Aug. 25, 1916. Serial No. 116,929. (Cl. 238—5.)



An anti-rail spreader comprising two mating plates of an equal thickness throughout and each of said plates at its upper edge and adjacent its ends being formed with lugs, the lugs upon the respective plates adapted to cooperate with the lugs adjacent thereto to engage with the rail, the outer rail engaging lug of each of the plates being received in the fishing space of the rail which it engages whereby the upper edge of the said lug will underlie the head of the referred to rail, one of the said plates having angular ends whereby to receive the straight ends of the other plate, and means comprising clamping bolts passing through both of the plates and serving to confine the hook-shaped lugs in operative position upon the rails and also to hold the angular ends of one of the plates against separating from the vertically straight ends of the other plate.

1,216,904. SAFETY-THROTTLE FOR PNEUMATIC TOOLS. OLLI C. WINFIELD and CLAUDE F. HAYWOOD, Boone, Iowa. Filed Feb. 23, 1916. Serial No. 80,000. (Cl. 136—11.)



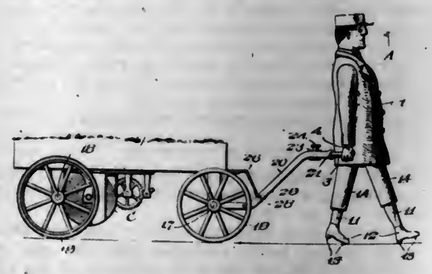
In a device of the class described, a member having a reduced cylindrical portion and also provided with spaced bores for connection respectively to a source of motive fluid and to a tool or machine and radial ports leading from said bores, said member also having a threaded nipple at one end, a sleeve valve mounted for partial rotation on the reduced cylindrical portion of said member and having a channel adapted to connect said ports, said sleeve also having a ring at one end spaced from the shoulder formed around the opposing end of said member by said threaded nipple, a spring in said space and connected at one end to said member and at the other end to said ring, said spring serving to normally turn the sleeve valve to closed position, and an end member screwed on the threaded nipple, bearing against the outer end of the sleeve valve and its ring and having a bore forming an extension of one of the bores of said member.

1,216,905. HAT-PIN GUARD. JAMES WOOD, Binghamton, N. Y. Filed May 12, 1913. Serial No. 767,120. (Cl. 24—155.)



A hat pin point protector comprising a tubular casing member closed at one end, and a point engaging and holding element within the casing, said element being a single spring of flat cross-section and substantially U-shaped formation, each member thereof having similar crimped portions contacting with each other for a portion of their length and forming a plurality of sets of gripping jaws, the set of jaws nearest the open end of the casing being of lesser gripping area than the other set, and said spring being arranged in the casing whereby the bowed portions thereof between the jaws directly contact therewith, and a pin guide fitted in the open end of the casing and limiting the elongation of the spring to thereby transmit greater gripping force to said jaws thereof.

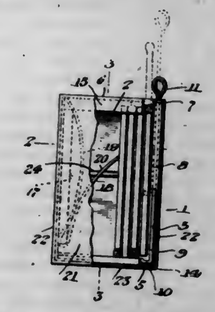
1,216,906. AMBULATORY TOY. THOMAS D. WOOLSON, Buffalo, N. Y. Filed Jan. 8, 1916. Serial No. 71,032. (Cl. 46—45.)



1. An ambulatory figure, comprising a body, a crank shaft therein, leg guiding members having a pivotal connection only with the body at a point above and in rear of a vertical line passing through the center of the crank shaft, and legs connected to and directed by said crank shaft and having a sliding engagement only with said leg guiding members.

2. An ambulatory figure, comprising a body, a crank shaft therein, leg guiding members having a pivotal connection only with the body at a point above and in rear of a vertical line passing through the center of the crank shaft, legs connected to and directed by said crank shaft and having a sliding engagement only with said leg guiding members, arms extending from the body of said figure, an arcuate bar connecting said arms, a motor truck for actuating siad figure, thills extending from the truck to said arcuate bar, and means for adjusting the latter longitudinally in relation to the thills.

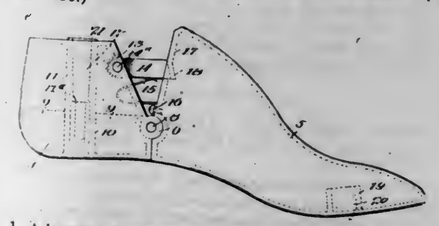
1,216,907. MATCH-BOX. ENOCH W. WORDEN, Flint, Mich. Filed July 25, 1916. Serial No. 111,293. (Cl. 206—27.)



1. A match box comprising a body having a side, end walls, a top wall and a bottom wall, one of said end walls being provided with an inturned flange spaced therefrom and coacting therewith to form a guide, said flange terminating short of the bottom, said top wall having an opening at said guide, an ejector movable in the guide and held between said end wall and said inturned flange and provided at the lower end with a follower, and said bottom having a spacer serving to hold the lower ends of matches in the body above the level of the follower, and a cover on the open side of the body, slidable thereon and provided with inturned flanges engaging the end walls and said side of the body.

2. A match box comprising a side, end walls, a bottom wall and a top wall, said top wall having an inturned flange spaced from said side so that the ends of matches may be arranged between said side and said inturned flange, said side having a transverse bead projecting from the inner surface thereof to prevent the matches from crossing and to compensate for the enlarged heads thereof, and an ejector in one side of the box.

1,216,908. SHOE-LAST. LEVI D. YORK, Portsmouth, Ohio. Filed May 19, 1913. Serial No. 768,502. (Cl. 12—136.)



1. A last provided with a heel section having a tubular core serving as a bearing, said heel section also being provided with a strengthening web running longitudinally of the heel section and formed integrally therewith, and with a strengthening web running transversely of the heel section and formed integrally therewith, said webs terminating at and being formed integrally with said tubular core.

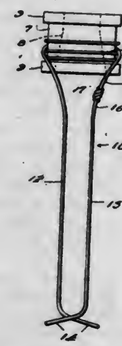
2. A last including a hollow metallic heel section having webs lying in intersecting planes and having a tubular member arranged at the point of intersection of the planes and being integrally formed with the webs.

3. A last including a metallic heel section having a tubular core and having a plurality of webs radiating from the core and formed integrally therewith and with the heel section.

4. A last including a heel section having a tubular core and having a plurality of strengthening webs formed integrally with the heel section and bracing the core.

5. A last including a hollow heel having a tubular core extending between opposite walls of the heel and formed integrally therewith, and means within the heel for bracing the core.

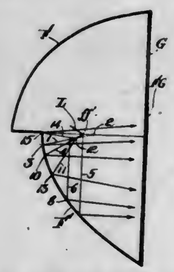
1,216,909. BROOM-BRACE. LEE ZEIGER, Melbourne, Iowa. Filed Oct. 5, 1916. Serial No. 123,857. (Cl. 15—23.)



1. A broom bridle or brace including a handle receiving spool and two resilient clamping members made from a single strand of wire and having the intermediate portions thereof coiled about the spool to act as a holding means and also imparting resiliency to the members.

2. A broom bridle or brace including a spool, and a broom head engaging member made from a single strand of wire and including a plurality of coils surrounding the spool and two broom head embracing bails the lower ends of which are adapted to be crossed and terminating upon opposite sides of the head of the portion adjacent to the spool, the coils imparting resiliency to the bails and cause them to grip the broom head.

1,216,910. PROJECTION APPARATUS. ADELBERT AMES, Jr., Tewksbury, Mass. Filed June 6, 1916. Serial No. 102,085. (Cl. 240—41.)



1. Light projection apparatus comprising a reflector, and a light source having at least two substantial dimensions, the reflector being shaped and positioned with relation to the light source to reflect in and below a horizontal

direction a concentrated beam of light sharply defined on its upper side and to project substantially no light upwardly.

2. Light projection apparatus comprising a reflector adapted to reflect in and below a horizontal direction, a concentrated beam of light sharply defined on its upper side, and a light source having a portion vertically displaced with relation to a horizontal plane through the focus of the reflector and positioned with relation to the focus so that substantially no light is reflected upwardly.

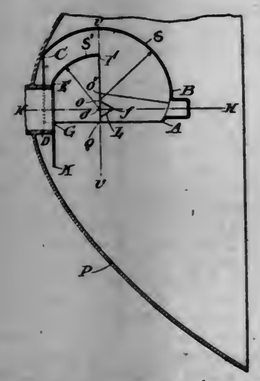
3. Light projection apparatus comprising a reflector adapted to project a concentrated beam of light in and below a horizontal direction, a light source having a substantial vertical dimension and positioned with relation to the focus of the reflector so as to reflect in and below a horizontal direction substantially all rays of light radiating relatively obliquely to a horizontal plane passing through the light source, and means adjacent said horizontal plane for preventing substantially all rays of light radiating either parallel with or relatively acutely to said horizontal plane from being reflected upwardly, whereby a concentrated beam of light may be projected substantially horizontally without producing upward glare.

4. Light projection apparatus comprising a reflector having substantially a contour formed by the revolution of a conic section, a light source positioned with relation to the focus of the reflector so as to reflect in and below a horizontal direction substantially all rays of light radiating from the source other than those rays radiating approximately horizontally, and means adjacent a horizontal plane passing through the light source for preventing substantially all rays radiating approximately horizontally from being reflected upwardly, whereby a concentrated beam of light may be projected substantially horizontally without reflecting substantially any light upwardly.

5. Light projection apparatus comprising a reflector having substantially a contour formed by the revolution of a conic section and arranged to reflect a concentrated beam of light in and below a horizontal direction, a light source positioned with relation to the focus of the reflector so as to reflect substantially no light upwardly except in the region of a horizontal plane through the light source, and means adjacent said horizontal plane for preventing substantially all light radiating in horizontal and nearly horizontal directions from being reflected upwardly, whereby a concentrated beam of light may be projected substantially horizontally without reflecting substantially any light upwardly.

[Claims 6 to 29 not printed in the Gazette.]

1,216,911. PROJECTION APPARATUS. ADELBERT AMES, Jr., Tewksbury, Mass. Filed June 6, 1916. Serial No. 102,086. (Cl. 240—41.)



1. Light projection apparatus comprising a reflector, a light source having a portion vertically displaced with relation to a horizontal plane through the focus of the reflector, being shaped and positioned to reflect in and below a horizontal direction, as a concentrated beam of light sharply defined on its upper side, substantially all light radiating downwardly from the source, and a deflector above the source for deflecting to the reflector light radiating upwardly from the source in such manner that the deflected light is reflected in and below a horizontal direction and that none of the deflected light is reflected upwardly.

2. Light projection apparatus comprising a light source having at least two substantial dimensions, a reflector shaped to reflect a concentrated beam of light in and below a horizontal direction and positioned with respect to the light source to reflect in and below a horizontal direction substantially all light radiating downwardly from the source, and a deflector above the source for deflecting to the reflector light radiating upwardly from the source in such manner that the deflected light is reflected in and below a horizontal direction, substantially none of the deflected light being reflected upwardly, whereby a concentrated beam of light sharply defined on its upper side may be projected substantially horizontally.

3. Light projection apparatus comprising a light source having at least one substantial dimension, a reflector shaped and positioned with relation to the light source to reflect light directly incident thereto as a concentrated beam in and below a horizontal direction and to reflect substantially no light above a horizontal direction, and a deflector for deflecting light to the reflector in such manner that the deflected light is reflected in and below a horizontal direction and that substantially none of the deflected light is reflected upwardly, whereby a concentrated beam of light sharply defined on its upper side may be projected substantially horizontally.

4. A light projection apparatus comprising a substantially paraboloidal reflector, a light source having a portion vertically displaced with relation to a horizontal plane containing the axis of the reflector, and being so positioned with respect to the focus of the reflector as to project a beam of light in and below a horizontal direction and a deflector so shaped and so positioned with respect to the light source and focus of the reflector as to deflect light to the reflector in such manner as to be reflected in and below a horizontal direction without deflecting substantially any light in such manner as to be reflected upwardly, whereby near, distant and intermediate portions of a roadway may be illuminated without producing upward glare.

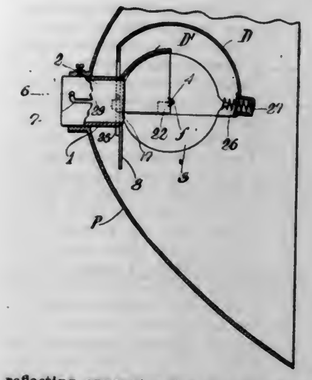
5. Light projection apparatus comprising a substantially paraboloidal reflector positioned at least in part below a horizontal plane containing the axis thereof, a light source in the region of the focus of said reflector parts of which are displaced from said plane, and the light source being so positioned with respect to the said reflector as to reflect a beam in and below a horizontal direction without reflecting substantially any light upwardly, a substantially spherical deflector positioned above said horizontal plane to reflect light to said reflector, and means for deflecting the light which radiates approximately horizontally from said displaced parts of the source to the reflecting surface at such an angle as to be projected in or below a horizontal direction.

[Claims 6 to 33 not printed in the Gazette.]

1,216,912. REFLECTOR. ADELBERT AMES, Jr., Tewksbury, Mass. Filed Sept. 30, 1916. Serial No. 122,969. (Cl. 240—48.6.)

1. In reflecting apparatus for a lamp having a ferrule adapted to fit in a socket, the combination of a shade, and a divided supporting member for the shade, the supporting member being arranged to receive the ferrule of the lamp between the two parts thereof.

2. In reflecting apparatus for a lamp having a ferrule adapted to fit in a socket, the combination of a reflector, and means for supporting the reflector on the ferrule between the lamp and the socket, the supporting means being constructed and arranged so as yieldingly to grip the ferrule on opposite sides.



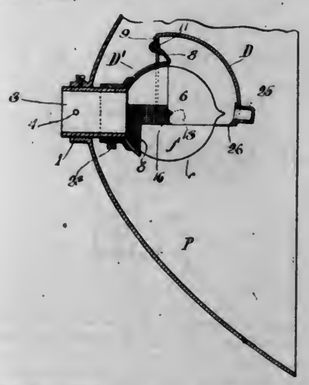
3. In reflecting apparatus for a lamp having a ferrule adapted to fit in a socket, the combination of a reflector, and a divided member for supporting the reflector on the ferrule between the lamp and the socket, the divided member being constructed and arranged to receive the ferrule between the two parts thereof and to grip the ferrule between the two parts by virtue of its elasticity.

4. In reflecting apparatus for a lamp, the combination of a reflector having elasticity, and a divided supporting member connected to the reflector, the reflector and supporting member being constructed and arranged to receive the ferrule between the two parts of the supporting member and to grip the ferrule between the two parts by virtue of the elasticity of the reflector.

5. In reflecting apparatus for a lamp having a ferrule adapted to fit in a socket, the combination of a concave shade, and a supporting member therefor, the supporting member being constructed and arranged to be mounted on the ferrule of the lamp between the lamp and the socket and detachably to engage the shade.

[Claims 6 to 25 not printed in the Gazette.]

1,216,913. REFLECTOR. ADELBERT AMES, Jr., Tewksbury, Mass. Filed Sept. 30, 1916. Serial No. 123,035. (Cl. 240—48.6.)



1. Light reflecting apparatus comprising a concave reflector partially surrounding the light source, means for pivotally supporting the reflector, and means including stops to control the pivotal movement of the reflector and maintain it in position with respect to the light source.

2. Light reflecting apparatus comprising a substantially spherical reflector surrounding the light source in the region above and in front of horizontal and vertical transverse planes through the light source, respectively, and means substantially in said vertical plane pivotally to support the reflector.

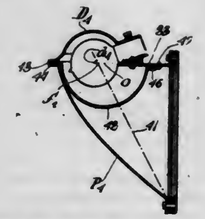
3. Light reflecting apparatus comprising a concave reflector partially surrounding the light source, a smaller concave reflector partially surrounding the light source, means for supporting the smaller reflector, and means for pivotally connecting the first reflector to the smaller reflector.

4. Light reflecting apparatus for an incandescent lamp comprising a supporting member at least partially surrounding the lamp ferrule and extending forwardly thereof, a concave reflector surrounding a portion of the lamp bulb, and means to pivotally support the reflector on said member forwardly of the said ferrule.

5. Reflecting apparatus for an incandescent lamp comprising a reflector surrounding the rear upper portion of the lamp bulb, the reflector having a member at least in part surrounding the lamp ferrule for supporting the reflector, a second reflector surrounding the forward upper portion of the lamp bulb, and means for pivotally mounting the second reflector on the first reflector.

[Claims 6 to 11 not printed in the Gazette.]

1,216,914. PROJECTION APPARATUS. ADELBERT AMES, Jr., Tewksbury, Mass. Filed Sept. 30, 1916. Serial No. 123,175. (Cl. 240—41.)



1. Projection apparatus comprising a concave reflector adapted to project a concentrated beam of light along its axis and a light source having at least two substantial dimensions, a part of the light source being positioned in the focus of the reflector and the other parts of the source being disposed with relation to the focus so that substantially all light incident to the reflector strikes the reflector as if coming from points axially displaced in one direction from the focus and so that a concentrated beam of light sharply and regularly defined on its upper side is projected horizontally.

2. Projection apparatus comprising a reflecting surface having substantially a contour generated by half a revolution of a conic section, the reflecting surface being positioned on one side of a horizontal plane containing its axis in such manner that light emanating from its focus will be projected substantially horizontally, and a light source having at least two substantial dimensions, the light source being positioned with one part thereof in the focus of the reflecting surface, and the light source being positioned substantially wholly above said plane in such manner that substantially no light will be reflected upwardly.

3. Projection apparatus comprising a substantially hemi-paraboloidal reflecting surface positioned below a horizontal plane containing its axis, and a light source having at least two substantial dimensions, a part of the light source being positioned in the focus of the reflecting surface and the other parts being positioned above said horizontal plane and behind a transverse plane containing the line adjoining the focus with the lowermost central point of the reflecting surface, whereby a concentrated beam of light may be reflected in and below a horizontal direction without reflecting substantially any light upwardly.

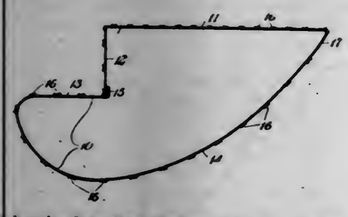
4. Projection apparatus comprising a concave reflector adapted to project a concentrated beam of light along its axis, a light source a part of which is positioned in the

focus of the reflecting surface and the other parts of which are so disposed with relation to the focus that light therefrom strikes the reflector as if coming from points axially displaced in one direction from the focus and so that said concentrated beam of light is sharply and regularly defined on its upper side, and adjusting means whereby the light source may be placed and maintained in the said position.

5. Projection apparatus comprising a substantially hemi paraboloidal reflecting surface positioned below a horizontal plane containing its axis, a light source having at least two substantial dimensions, a part of the light source being positioned in the focus of the reflecting surface and the other parts being positioned above said horizontal plane and behind a vertical transverse plane so as to reflect a concentrated beam of light in and below a horizontal direction without reflecting substantially any light upwardly, and means whereby the light source may be adjusted along the axis of the reflecting surface.

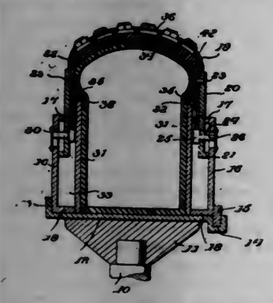
[Claims 6 to 28 not printed in the Gazette.]

1,216,915. PLASTER-RASP. PAUL ANDERSEN, Freeport, N. Y. Filed Jan. 31, 1914, Serial No. 815,665. Renewed July 15, 1916. Serial No. 109,569. (Cl. 72—137.)



The herein described plaster rasp comprising a hollow body formed from sheet metal bent so as to provide a curved surface of oval form in cross section, a broad flat surface connected to the portion of the curved surface having the larger radius by an acute angle, and two other plane surfaces between the opposite edge of the broad flat surface and that portion of the curved surface having the shorter radius, said last two plane surfaces projecting inwardly toward the curved surface forming an angle and the surfaces all having abrading points, certain of which points project from the surfaces along the angles formed by meeting surfaces, substantially as set forth.

1,216,916. DETACHABLE TIRE. PETER W. ANDERSON and JOSEPH T. KENNELLY, Rawlins, Wyo. Filed Oct. 14, 1914. Serial No. 866,664. (Cl. 152—13.)



1. The combination with a wheel rim having an upstanding flange formed thereon and provided with a locking ring, of side members mounted upon the rim and disposed for engagement between said flange and locking ring, protecting plates arranged to confront the inner faces of said members, a shoe including side portions movable between the side members and the protecting plates, and means operatively connecting the side portions of the shoe and said side members.

2. A tire including side members, protecting plates inwardly spaced from the side members and each operatively engaging at one margin thereof with the said members, a shoe including side portions movable between the side members and the protecting plates with the said plates engaging the inner faces of the side portions of the shoe, and means operatively connecting the side portions of the shoe and said members.

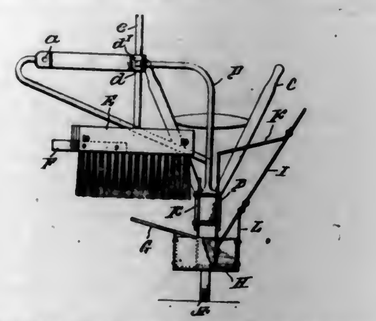
3. A tire including side members having marginal inner and outer flanges formed thereon, protecting plates inwardly spaced with respect to said side members and provided with outer marginal flanges with the inner margins of said plates engaging the inner marginal flanges of said side members, a shoe including side portions having outer marginal flanges engaging the inner faces of said side members with the outer marginal flanges of the side members and of the plates engaging opposite side faces of the side portions of the shoe, and means operatively connecting said side members and the side portions of the shoe.

4. A tire including side members having inner and outer marginal flanges formed thereon with the inner flanges of greater length than the outer flanges, protecting plates inwardly spaced with respect to said side members and having outer marginal flanges formed thereon with the inner margins of said plates engaging the inner marginal flanges of said side members, a shoe including side portions received between the said side members and the protecting plates and provided with outer marginal flanges engaging the inner faces of said side members with the outer marginal flanges of the side members and of the plates engaging opposite side faces of the side portions of the shoe, and means operatively connecting said side members and the side portions of the shoe.

5. A tire including side members provided with flanges, protecting plates inwardly spaced with respect to the side members by the said flanges to provide annular recesses between the protecting plates and the said members, a shoe including side portions movable within said recesses, and means operatively connecting the side portions of the shoe and said side members.

[Claims 6 to 10 not printed in the Gazette.]

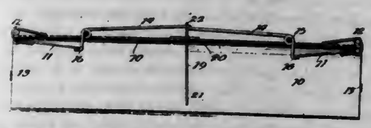
1,216,917. BOLL-WEEVIL DESTROYER. JAMES T. ANDREW, Montgomery, Ala. Filed June 15, 1916. Serial No. 103,816. (Cl. 43—1.)



1. A boll weevil destroyer attachment for agricultural implements provided with draft beams, comprising a frame to be secured to the draft beam of the implement and projecting upwardly and laterally therefrom, a brush adjustably connected to said frame, a curved arm projecting outwardly from said brush and adapted to guide the cotton stalks inwardly toward said brush, a pan carried by the draft beam, and inclined guide plates adapted to receive solid objects brushed off or shaken from the cotton plants, and to guide same into said pan, substantially as described.

2. A boll weevil destroyer attachment for agriculaural implements provided with draft beams, comprising a frame to be secured to the draft beam of the implement, and projecting upwardly and laterally therefrom, said frame being provided with a plurality of clamp sockets, a brush, having a handle, adjustably connected to one of said clamp sockets in said frame, a curved arm projecting outwardly from said brush and adapted to guide the cotton stalks inwardly toward said brush, a pan carried by the draft beam, and inclined guide plates adapted to receive solid objects brushed off or shaken from the cotton plants and to guide same into said pan, substantially as described.

1,216,918. MOLE-TRAP. LOUIS ARMBRUSTER, East Auburn, Cal. Filed Aug. 10, 1916. Serial No. 114,259. (Cl. 43—19.)



1. A device of the character described including a body open at its ends, stop lugs projecting into the open ends of the body, doors mounted to swing into the body and normally urged to engage said stop lugs for closing the body, a pivotally mounted trigger arranged intermediate the ends of the body, and trip levers pivotally mounted upon the body with their outer extremities projecting into the body and provided with hooks for engagement with the free ends of said doors and with the inner extremities of the said levers projecting toward said trigger to cooperate therewith for holding the doors open.

2. A trap including a body, doors normally arranged to close the body, trip levers engaged at their outer ends with the free extremities of the doors with the inner extremity of one of said levers engaged with the inner extremity of the other, and a trigger coöperating with the inner extremity of one of the levers for retaining both of the levers to hold the doors open.

3. A trap of the character described including a body, inwardly swinging doors normally arranged to close the open ends of the body, trip levers projecting into the body in the rear of said doors for engagement with the free extremities thereof, and a trigger mounted between the doors for engagement with the inner extremities of said levers to hold the doors open.

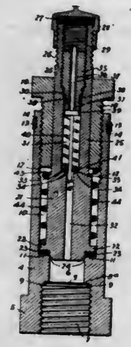
4. A trap including a body, inwardly swinging doors normally arranged to close the body, trip levers mounted for engagement with the free extremities of the doors, and a trigger mounted in transversely offset relation with respect to the mounting of the said levers with one of the levers engaged with the trigger and with the other of the levers engaged with said first mentioned levers for holding the doors open.

5. A trap including a body, inwardly swinging doors normally arranged to close the body, trip levers mounted for engagement with the free extremities of said doors, a trigger mounted in transversely offset relation to said trip levers with the inner extremities of the said levers offset to extend toward the trigger and with one of the said levers engaged with the trigger, and a laterally directed lug carried by the inner extremity of the other of said levers and engaged with said first mentioned lever with the trigger acting upon the levers to hold the doors open.

[Claim 6 not printed in the Gazette.]

1,216,919. SAFETY-VALVE. HERVEY BOWES ASHELMAN and JOHN SANDFORD JOHNSON, Fargo, N. D. Filed Jan. 23, 1914, Serial No. 813,890. Renewed Jan. 13, 1917. Serial No. 142,322. (Cl. 137—53.)

1. In a safety valve, the combination of a barrel having one end internally threaded, valve mechanism carried thereby, a spring for normally maintaining said valve mechanism in a predetermined position, a bushing exteriorly threaded and screwing into the barrel, said bushing engaging said spring for the purpose of conferring different degrees of tension upon said spring, said bushing being provided with grooves extending across the threads thereof, a spring ring carried by said barrel, and a locking pin carried by said spring ring for fitting into some one of said grooves, in order to lock said bushing relatively to said barrel.



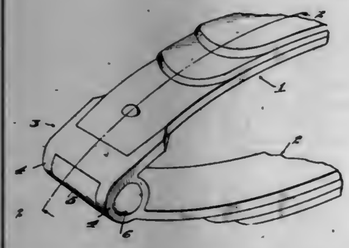
2. In a safety valve, the combination of a barrel having one end internally threaded and provided with a valve seat, a sleeve extending into said barrel and provided with a valve for engaging said valve seat, means for admitting air through said sleeve and for preventing retrogression of said air through said sleeve, a spring for normally holding said valve against said seat, a bushing exteriorly threaded and screwing into the barrel, said bushing engaging said spring for placing said spring under different degrees of tension in order to control the sensitiveness of said valve relatively to said valve seat, said bushing being provided with grooves extending across the threads thereof, a spring ring carried by said barrel and provided with a locking pin extending through the wall of said barrel and formed to fit into any of said grooves, and indicating mechanism for disclosing when any one of said grooves is in registry with said locking pin.

3. In a safety valve, a barrel having its upper end internally threaded and provided with a valve seat adjacent its lower end, a bushing exteriorly threaded and screwing into the barrel, said bushing having longitudinal grooves extending across its threads, a spring ring surrounding the barrel and having a pin projecting through the barrel into one of the grooves of the bushing, a sleeve in the barrel and having its lower end forming a valve normally engaging the valve seat of the barrel, said sleeve having an exterior bead at its lower end and having its upper end reduced and extending through the bushing, a spring surrounding the sleeve between the bead and the inner end of the bushing, a second sleeve adjustably secured in the upper reduced end of the first sleeve and having its inner end forming a valve seat, and a spring pressed valve in the reduced end of the first sleeve and seating on the valve seat at the inner end of the second sleeve.

1,216,920. REMOVABLE SPRING-HEAD. HERBERT ATHONS and FRED M. ATHONS, Los Angeles, Cal. Filed Apr. 15, 1916. Serial No. 91,478. (Cl. 267—36.)

1. The combination of a master leaf spring, a spring head provided with a recess open at the top and one end, all the sides of said recess being dove-tailed, the sides of said spring being beveled to fit the dove-tailed sides of said recess, the end of said spring being adapted to be introduced into said recess through the open end thereof, to fit snugly against the bottom and the sides of said recess, said spring and said head being each provided with a hole adapted to register with each other when the spring is in said recess, and a rivet passing through said holes and holding the spring against longitudinal movement in relation to said head.

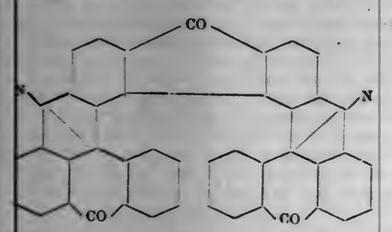
2. The combination of a master leaf spring, a spring head provided with a recess open at the top and one end, all the sides of said recess being dove-tailed, the sides of said spring being beveled to fit the dove-tailed sides of said recess, the end of said spring being adapted to be introduced into said recess through the open end thereof and to fit snugly against the bottom and sides of said recess and to form a flush joint with the upper face of said head, and means preventing longitudinal movement of said spring in relation to said head.



3. The combination of a master leaf spring, a spring head provided with a recess open at the top and one end, said recess being tapered, having its greatest width at the open end, all the sides of said recess being dove-tailed, the sides of said spring being tapered and beveled to fit said recess and the dove-tailed sides thereof, the end of said spring being adapted to be introduced into said recess through the open end thereof to fit snugly against the bottom and the sides of said recess, and to form a flush joint with the upper face of said head, and means holding said spring against longitudinal movement in relation to said head.

1,216,921. YELLOWISH-BROWN VAT DYE. OSCAR BALLY and HUGO WOLFF, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Original application filed Dec. 9, 1911, Serial No. 664,865. Divided and this application filed Jan. 23, 1915. Serial No. 4,030. (Cl. 8—1.)

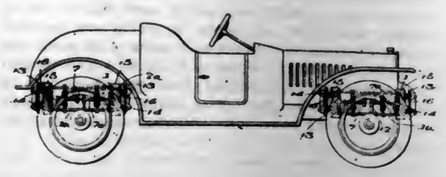
The new coloring matter of the anthracene series which can be obtained by heating with sulfuric acid the condensation product from dibrom-fluorenone and 1-amino-anthraquinone, which new coloring matter probably possesses a constitution corresponding to the formula



and which consists, when dry, of a brown powder which yields a red-brown solution in concentrated sulfuric acid and a brown solution in 23% fuming sulfuric acid, which yields a red-brown vat in alkali hydrosulfite solution and from this vat colors cotton red-brown shades which, upon washing and drying, become very fast yellowish brown.

1,216,922. VEHICLE-SPRING. JOHN H. BANKA and JOHN WHALEN, Battle Creek, Mich. Filed Oct. 9, 1916. Serial No. 124,654. (Cl. 267—9.)

1. A spring comprising a frame, a pair of oscillatory levers mounted therein, springs interposed between the levers and opposite sides of the frame at opposite sides of the fulcrums of the levers, the said levers being respectively adapted to be connected to a member to be supported and the support.



2. A spring comprising a retaining frame, a pair of oscillatory levers mounted therein, springs at opposite sides of the fulcrums of the levers and interposed between the opposite sides of the levers and the opposite sides of the frame, the said levers being respectively adapted to be connected to the member to be supported and a support.

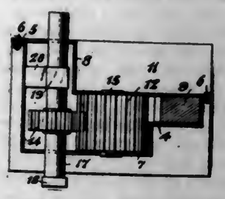
3. In a vehicle spring the combination of a frame, an oscillatory lever mounted therein, springs arranged between opposite sides of said lever and opposite sides of the frame at opposite sides of the fulcrum of the lever.

4. In a vehicle spring the combination of a frame, an oscillatory lever mounted therein, springs arranged at opposite sides of the fulcrum of the lever and between opposite sides of said lever and the opposite sides of the frame, and means connecting the free end of said lever with an object to be supported.

5. In a vehicle spring the combination of a frame, a pair of oscillatory levers mounted therein, springs arranged at opposite sides of the fulcrums of the levers and between said levers and the sides of the frame, and means connecting the free ends of said levers respectively with an object to be supported and with the support, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,216,923. AUTOMOBILE-JACK. BRADFORD T. BARTON and WILLIAM M. NOLIN, Colorado Springs, Colo. Filed Sept. 6, 1916. Serial No. 118,756. (Cl. 254—97.)



1. An automobile jack comprising a rack bar for engaging and lifting the automobile, gearing for moving the rack bar, and an actuating lock bolt engaging the gearing and rotatable for actuating the gearing, said lock bolt being movable in the direction of its length and together with the jack having coacting means for locking the lock bolt on longitudinal movement of the latter.

2. An automobile jack provided with reciprocable and rotatable jack mechanism, and actuating means for the rotatable mechanism comprising a rotatably and longitudinally movable lock bolt constantly connected to the rotatable mechanism, and a fixed keeper on the jack in coactive relation to a part of the lock bolt for holding the latter against rotation in one position and permitting rotation of the lock bolt in other positions of the latter.

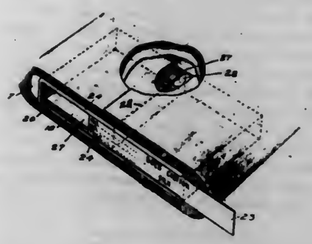
3. An automatic jack comprising a suitable casing, a rack bar movable therein, gearing for driving the rack bar and including an elongated gear wheel and another gear wheel meshing therewith and movable longitudinally of the first-named gear wheel, a shaft carrying the second-named gear wheel and movable longitudinally to cause movements of the gear wheel with it, and coacting locking devices on the shaft and on the casing and movable into and out of locking relation by longitudinal movements of the shaft.

4. A lifting jack for automobiles and other purposes comprising a suitable casing, a rack bar constituting the lifting member of the jack, a train of gearing engaging the rack bar and including an elongated gear wheel and another gear wheel movable lengthwise of the first-named gear wheel, a longitudinally movable shaft carrying the second-named gear wheel for rotating it and moving it bodily lengthwise of the first-named gear wheel, said shaft having a non-circular part, and a non-circular member fast to the casing of the jack in the path of a non-circular member on the shaft for mutual engagement and disengagement on the lengthwise movement of the shaft.

5. A lifting jack for automobiles and other purposes comprising a suitable casing, a rack bar constituting the lifting member of the jack, a train of gearing engaging the rack bar and including an elongated gear wheel and another gear wheel movable lengthwise of the first-named gear wheel, a longitudinally movable shaft carrying the second-named gear wheel for rotating it and moving it bodily lengthwise of the first-named gear wheel, said shaft having a non-circular part, and a non-circular member fast to the casing of the jack in the path of a non-circular member on the shaft for mutual engagement and disengagement on the lengthwise movement of the shaft, said shaft also having an end exposed outside of the casing for the application of a manipulating tool.

[Claim 6 not printed in the Gazette.]

1,216,924. FABRIC-BOLT BOARD. CLIFTON KINSLEY BAUMANN, New York, N. Y. Filed Mar. 26, 1915. Serial No. 17,135. (Cl. 206—50.)



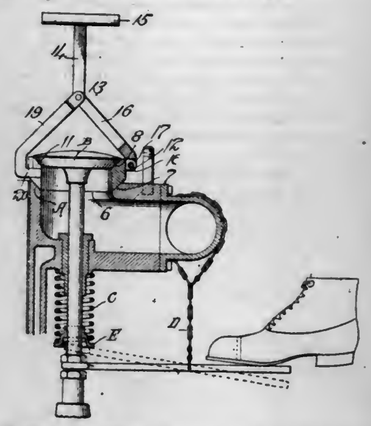
A fabric bolt board comprising a flattened cylinder; a plurality of outwardly-opening boxes rigidly connected with said cylinder; a card-holding frame surrounding the openings of said boxes and forming entrances therefor, said frame having overturned edges; and a plurality of cards for closing said entrances.

1,216,925. GAS-ENGINE-VALVE GRINDER. ANDREW C. BEAGLE, Berwick, Pa. Filed May 11, 1916. Serial No. 96,847. (Cl. 51—4.)

1. A valve grinding tool comprising a body portion provided with a passage therethrough and having a valve receiving face at one side surrounding the passage and a valve seat engaging face at the opposite side surrounding the passage, the two faces being formed to substantially conform to each other.

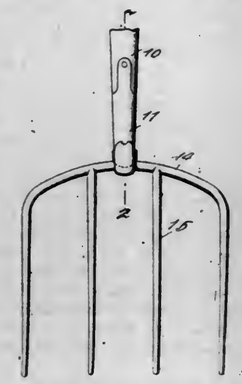
2. A valve grinding tool comprising a member having a passage formed therethrough and having a split communicating with the passage and opening through the outer face of the member, said member having a valve receiving surface formed at one side and surrounding the passage and having a valve seat engaging surface at the opposite side surrounding the passage.

3. A valve grinding tool comprising a member having a passage formed therethrough and having a split communicating with the passage and opening through the outer face of the member, said member having a valve receiving surface formed at one side and surrounding the passage and having a valve seat engaging surface at the opposite side surrounding the passage and a handle pivoted to the member at one side and including an arm arranged for engagement in the opening.



4. A valve grinding tool comprising a grinding member provided with a stem receiving passage therethrough, and having a split communicating with the stem receiving passage and opening through the outer face of the member, and a handle pivoted to the member and including an arm arranged for engagement in the split.

1,216,926. PITCHFORK. ELMER L. BELL, Hoxie, Kans. Filed Mar. 1, 1916, Serial No. 81,370. Renewed Jan. 10, 1917. Serial No. 141,692. (Cl. 55—2.)

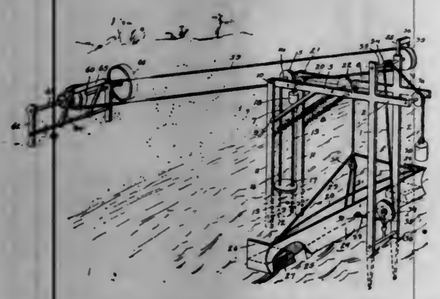


1. The combination with a pitchfork having a ferrule at one end of the handle portion thereof, of a retaining device of substantially U-shaped formation having an intermediate portion adapted to engage the shank of the pitchfork, and resilient arms extending from said intermediate portion and having inner concaved surfaces for conforming to the contour of and engaging said ferrule, each of said arms being provided adjacent the free end thereof with a transverse shoulder for engaging over the end of the ferrule.

2. The combination with a pitchfork having a ferrule at one end of the handle portion thereof, of a retaining device of substantially U-shaped formation having an intermediate portion adapted to engage the shank of the pitchfork, and resilient arms extending from said intermediate portion and having inner concaved surfaces for conforming to the contour of and engaging said ferrule, each of said arms being provided adjacent the free end thereof with a transverse shoulder for engaging over the end of the ferrule, the extremities of said arms being notched.

3. The combination with a pitchfork having a ferrule at one end of the handle portion thereof; of a retaining device having an intermediate portion adapted to engage the shank of the pitchfork, said intermediate portion being provided with an opening for receiving one of the tines of said fork, and resilient arms extending from said intermediate portion and having inner concaved surfaces conforming to the contour of and engaging said ferrule, each said arms being provided adjacent the free end thereof with a transverse shoulder for engaging over the end of the ferrule.

1,216,927. WAVE-MOTOR. RICHARD A. BEMIS, San Bernardino, Cal. Filed May 21, 1915. Serial No. 29,595. (Cl. 253—8.)



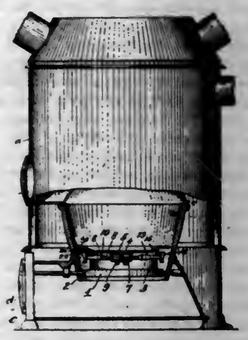
A wave motor comprising a pair of standards, horizontal arms at the upper ends of the standards extending forwardly and rearwardly therefrom in spaced parallel relation, pivoted legs connected to the rear ends of the arms and extending downwardly, brackets on the arms and extending rearwardly and downwardly from a point intermediate their ends, shoulders at the rear ends of the brackets, said brackets being adapted to limit the forward movement of the legs with relation to the whole and springs on the arms and connected to the legs to pull said legs against the shoulders and yet allow the lower ends thereof to move away from the standards, a float between the standards and legs, pulleys pivoted between the lower ends of the legs and between the upper ends of the legs, a flexible member running over said pulleys, a float attached to one run of the flexible member, a weight attached to the opposite run of the flexible member, a second flexible member connected to the weight, a pulley supporting the last mentioned flexible member near the forward ends of the arms and a plate attached to the opposite end of the last mentioned flexible member and adapted to rest on the surface of the water, the weight, float and pulley structures being adapted to hold the plate in proper position.

1,216,928. FURNACE. HORATIO S. BENNETT, Cleveland, Ohio. Filed Oct. 24, 1910. Serial No. 588,725. (Cl. 126—116.)

1. In a furnace, a fire pot, a striker plate extending within the fire pot to a point near the interior wall thereof, and a burner structure having burner orifices located to project the flames against the fire pot and against the edge of the striker plate to prevent air from passing between the edge of the striker plate and the fire pot without coming in contact with a flame.

2. In a furnace, a fire pot, a striker plate mounted therein and having its edge terminating at a point near the fire pot, and a burner structure having burner orifices for projecting their flames against the edge of the striker plate and thence through the space between the edge of the striker plate and the fire pot.

3. In a furnace, a circular fire pot, a striker plate having its periphery extending to a point near the fire pot, a burner comprising a plurality of sections each having a burner head with a group of burner orifices for projecting flames against the underside and near the periphery of the striker plate and another group of burner orifices for projecting flames directly against the fire pot.

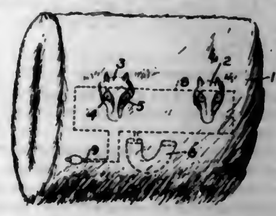


4. In a furnace, a fire pot, a burner supported near its bottom and comprising a plurality of burner sections each having a horizontally disposed group of discharge orifices for directing the flame against the fire pot and a group of discharge orifices directing the flame upwardly, and a striker plate above the burner and having its periphery extending near the fire pot above the last named burner orifices, said orifices producing a substantially continuous flame around the entire burner.

5. In a furnace, a fire pot, a burner supported near the bottom of the fire pot and comprising a plurality of burner sections each having a head provided with a horizontally disposed group of discharge orifices for directing the flame against the fire pot, and a group of discharge orifices directing the flame upwardly, a striker plate above the burner and having its periphery near the fire pot above the last named orifices, said orifices producing a substantially continuous flame around the entire burner, and a downwardly extending flange carried by the striker plate and supported upon the burner adjacent the burner heads.

[Claim 6 not printed in the Gazette.]

1,216,929. MUFF AND SIMILAR ARTICLE. ISIDOR BERLINER and LOUIS WEITZMAN, Toronto, Ontario, Canada. Filed May 19, 1916. Serial No. 98,618. (Cl. 240—8.4.)

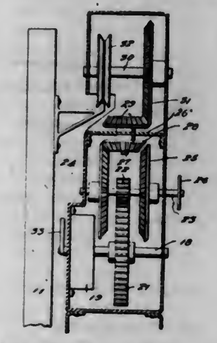


In a muff or like garment, a pocket formed inside the muff at the bottom, ornamental heads carried by the front of the muff having the usual eye sockets, incandescent bulbs secured within the eye sockets, a curved battery cell fitting within the pocket so as to conform to the bottom of the muff, a circuit opening and closing switch, and an electric circuit connecting the eyes, battery and switch together.

1,216,930. MAIL-CARRIER. WILLIAM D. BERRY, Florence, Ala. Filed Apr. 11, 1916. Serial No. 90,332. (Cl. 104—146.)

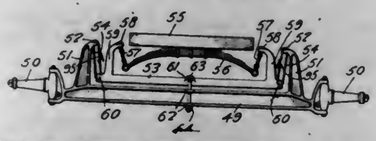
In a mail carrying device, an elevated cable track, a mail receptacle, a hanger structure connected to the upper

surface of the receptacle, a horizontal shaft rotatably mounted in the sides of the structure, a spring motor for rotating the shaft, a large gear carried by the shaft, a traction wheel shaft journaled in the sides of the structure adjacent the top, a traction wheel carried by the shaft and mounted on the cable track, a bevel gear carried by the traction shaft, a horizontal bridge bar in the structure, a vertical and rotatably mounted stub shaft journaled in the bar, beveled pinions carried upon the respective ends of the stub shaft, one of the pinions being arranged in mesh



with the beveled gear, a horizontal shaft slidably and rotatably mounted in the sides of the structure between the drive shaft and the stub shaft, a pinion carried by the sliding shaft and meshing at all times with the large gear, opposed beveled gears carried by the sliding shaft and arranged in proximity to the other beveled gear on the stub shaft, and a handle carried by the projecting end of the sliding shaft whereby to place either of the beveled gears in mesh with the adjacent beveled pinion to consequently cause the device to move in either direction on the track.

1,216,931. DEVICE FOR CONTROLLING SHOCK. CHARLES B. BILLINGHURST, Pierre, S. D. Filed June 21, 1915. Serial No. 35,269. (Cl. 267—27.)



1. In a motor vehicle, the combination with the axles and the body, said axles having uprights or standards near their ends, and flexible hangers of non-elastic material connected with the standards, and metallic springs connected to the body and arranged between the body and the hangers and connecting the hangers to the body, and means for connecting the springs to the hangers.

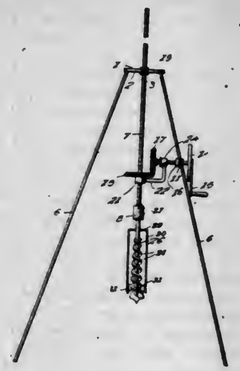
2. In a motor vehicle, the combination with the axles and the body, bolsters arranged above the axles and connected therewith, said bolsters having upwardly extending standards, springs arranged between the body and the bolsters, and hangers connecting the springs to the standards, said hangers being of flexible non-elastic material.

3. In a motor vehicle, the combination with the axles and the body, said axles having uprights or standards near their ends, and flexible hangers of non-elastic material connected with the standards, and metallic springs connected to the body and arranged between the body and the hangers and connecting the hangers to the body, means for connecting the springs to the hangers, and means in connection with the mounting of the hangers for permitting the effective length of the hangers to be varied.

4. In a motor vehicle, the combination with the axles and the body, bolsters arranged above the axles and said bolsters having upwardly extending standards, and springs arranged between the body and the bolsters, hangers connecting the springs to the standards, said hangers being of flexible non-elastic material, and means in connection with the mounting of the hangers for permitting the effective length of the hangers to be varied.

5. In a motor vehicle, the combination with the axles and the body, of bolsters arranged above the axles, said bolsters and axles having upwardly extending standards, springs arranged beneath the body, hangers of non-elastic flexible material connecting the springs to the standards on the bolsters, flexible non-elastic hangers connecting the bolsters and the standards to the axles, said hangers sustaining the springs and the bolster, and means in connection with the hangers permitting the effective length thereof to be varied.

1,216,932. POST-HOLE DRILL. LEE A. BLUE, Lyra, Tex. Filed June 19, 1915. Serial No. 35,136. (Cl. 255—19.)



1. The combination with a drill and means to operate the drill, of a sheath carried by the drill to receive the loose earth and means carried by the sheath to lift the earth upon the withdrawal of the bit.

2. A post hole drill of the character described including a frame, legs supporting the frame, a drill bar threaded in the frame, means to turn the drill bar to cause the same to move upwardly or downwardly within the frame, a drill bit carried by the drill bar and a sheath at the lower end of the drill bit.

3. The combination with a frame, legs supporting the frame, a drill bar rotatable within the frame, said drill bar being threaded and having a slot extending throughout its entire length, a pinion mounted to slide on the drill bar, a lug extending into the slot whereby when the pinion is rotated the drill bar will be moved, and means to rotate the pinion, of a drill bit at the lower end of the drill bar and a sheath surrounding the drill bit to lift the earth simultaneously with the removal of the drill bit from the post hole.

1,216,933. HYDROGENIZATION AND DEHYDROGENIZATION OF CARBON COMPOUNDS. CARL BOSCH, ALWIN MITTASCH, and CHRISTIAN SCHNEIDER, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed June 4, 1914. Serial No. 842,957. (Cl. 23—28.)

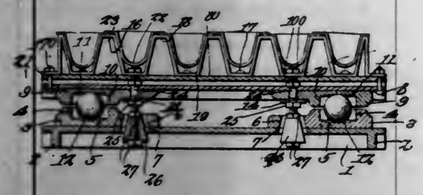
1. A catalytic agent for use in the hydrogenization and dehydrogenization of compounds containing carbon, comprising an intimate mixture of a common metal acting as a catalyzer for the said reactions and a compound containing fluorin.

2. A catalytic agent for use in the hydrogenization and dehydrogenization of compounds containing carbon, comprising an intimate mixture of a metal of the iron group and a compound containing fluorin.

3. A catalytic agent for use in the hydrogenization and dehydrogenization of compounds containing carbon, comprising an intimate mixture of nickel and a compound containing fluorin.

4. A catalytic agent for use in the hydrogenization and dehydrogenization of compounds containing carbon, comprising an intimate mixture of nickel and a silico-fluorid.

1,216,934. MOLDING APPARATUS FOR FENCE-POSTS. DAVID W. BOWE, Toledo, Ohio. Filed June 21, 1916. Serial No. 105,012. (Cl. 25—41.)



1. In a device of the class described, a base; a frame disposed above the base; a concrete mold carried by the frame; rolling members interposed between the base and the frame; and interengaging elements on the base and the frame coöperating to limit the movement of the frame with respect to the base and to impart a jar to the mold.

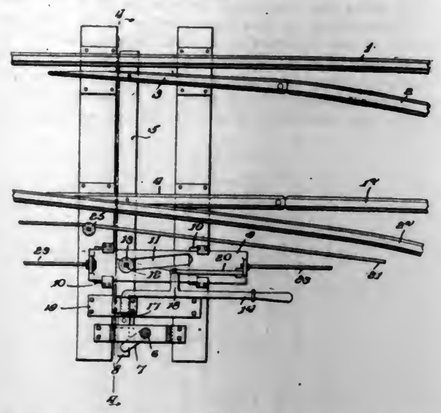
2. In a device of the class described, coöperating elements comprising a base and a frame disposed above the base; a concrete mold carried by the frame; rolling members interposed between the base and the frame; a stem depending from one of said coöperating elements; the other of said coöperating elements being provided with a conical recess into which the stem projects; a cone adapted to coöperate with the recess to limit the movement of the frame with respect to the base; the cone being adjustable longitudinally of the stem; and means for holding the cone in adjusted position longitudinally of the stem.

3. In a device of the class described, a frame made up of spaced members; braces connecting said spaced members; securing elements uniting the braces with said spaced members; cones mounted on the securing elements for adjustment longitudinally thereof; and means for holding the cones in adjusted positions longitudinally of the securing elements, the base being provided with recesses in which the cones have limited movement; and rolling elements interposed between the base and the frame, the cones coöperating with the recesses to limit the movement of the frame with respect to the base on the rolling elements; and a concrete mold carried by the frame.

4. In a device of the class described, a base; a frame disposed above the base; a concrete mold carried by the frame; rolling elements interposed between the base and the frame; a stem projecting from the frame; a stop member adjustable longitudinally of the stem; and means for holding the stop member in adjusted positions longitudinally of the stem; the base having an opening in which the stop member is received, the stop member and said opening being tapered relative to each other, whereby when the stop member is moved longitudinally of the stem, the movement of the frame with respect to the base will be adjusted.

5. In a device of the class described, a base; a frame made up of spaced members; braces connecting the spaced members; mold holders on said spaced members; a concrete mold supported by the mold holders; securing elements uniting the mold holders and the braces with said spaced members; stop members movable longitudinally of the securing elements; and means for holding the stop members in adjusted positions longitudinally of the securing elements; the base having openings in which the stop members are received, the stop members and the recesses being relatively tapered, whereby when the stop members are moved longitudinally of the securing elements, the movement of the frame with respect to the base will be adjusted; and rolling elements interposed between the base and the frame.

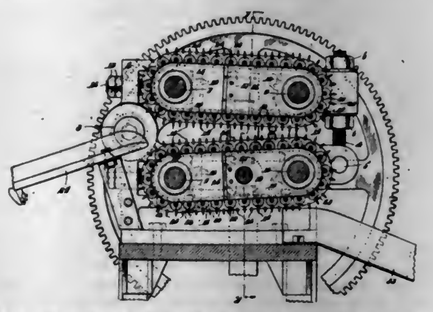
1,216,935. SWITCH-OPERATING MECHANISM. NEWTON K. BOWMAN, North Lawrence, Ohio. Filed Aug. 20, 1915. Serial No. 46,531. (Cl. 104—24.)



1. In railway switch operating mechanism, a switch point connecting bar, a rectilinearly movable switch operating member formed with a longitudinally inclined slot, and a flanged roller mounted upon the said bar and engaging the said inclined slot and having its flange overlapping the edge portions of the member bordering upon the inclined slot thereof.

2. In railway switch operating mechanism, a fixed guide member, a plate longitudinally shiftable therein and provided with a slot inclined with relation to the longitudinal axis of the plate, a switch point connecting bridle bar, a member mounted upon the said bridle bar and working in said slot, operating levers mounted at points remote from the switch points, operative connection between each of said levers and the adjacent end of the said plate, an operating lever pivotally mounted adjacent the said plate, and a link pivoted to the said lever and detachably connected to the said plate.

1,216,936. CONFECTIONERY-MACHINE. EMIL J. BRACH, Chicago, Ill. Filed Jan. 18, 1916. Serial No. 72,698. (Cl. 107—20.)



1. A machine of the class described comprising a supporting frame; rollers journaled in said frame and adjustable toward and from each other; two endless flexible elements mounted on said rollers each comprising two spaced endless chains and a plurality of parallel members extending between and connecting said chains, each parallel member being provided with a flat surface at each end thereof; longitudinally adjustable guides connected with said rollers and movable therewith in the adjustment of said rollers toward and from each other, said flat surfaces of said parallel members engaging against said guides; and cutter blades carried by said parallel members, substantially as described.

2. A machine of the class described comprising a supporting frame; rollers journaled in said frame and adjustable toward and from each other; two endless flexible elements mounted on said rollers each comprising two spaced endless chains and a plurality of parallel members extending between and connecting said chains, each parallel member being provided with a flat surface at each end thereof; sectional longitudinally adjustable guides connected with said rollers and movable therewith in the adjustment of said rollers toward and from each other, said flat surfaces of said parallel members engaging with said guides; and cutter blades carried by said parallel members, substantially as described.

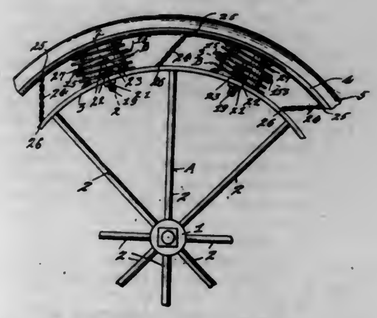
3. A machine of the class described comprising a supporting frame; rollers journaled in said frame and adjustable toward and from each other; two endless flexible elements mounted on said rollers each comprising two spaced endless chains and a plurality of parallel members extending between and connecting said chains, each parallel member being provided with a flat surface at each end thereof; longitudinally adjustable guides connected with said rollers and movable therewith in the adjustment of said rollers toward and from each other, each of said guides comprising a plurality of overlapping loosely connected sections, said flat surfaces of said parallel members engaging with said guides; and cutter blades carried by said parallel members, substantially as described.

4. A machine of the class described comprising a supporting frame; rollers journaled in said frame and adjustable toward and from each other; two endless flexible elements mounted on said rollers each comprising two spaced endless chains and a plurality of parallel members extending between and connecting said chains, each parallel member being provided with a flat surface at each end thereof; longitudinally adjustable guides connected with said rollers and movable therewith in the adjustment of said rollers toward and from each other, each of said guides comprising a plurality of sections having adjacent ends in loosely overlapped dovetailed connection, said flat surfaces of said parallel members engaging against said guides; and cutter blades carried by said parallel members, substantially as described.

5. A machine of the class described comprising a supporting frame; rollers journaled in said frame; two endless flexible elements mounted on said rollers each comprising two spaced endless chains and a plurality of parallel members extending between and connected to said chains; cutter blades carried by and projecting from said parallel members; and means adapted for engagement with said blades for preventing relative rotary movement of said parallel members, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,216,937. VEHICLE-WHEEL. PATRICK F. BRODERICK and JACOB H. HARTER, Bridgeport, Conn. Filed June 9, 1915. Serial No. 33,133. (Cl. 152—32.)

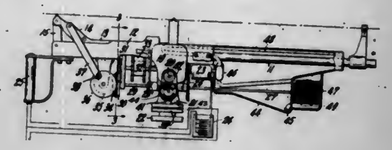


1. In a vehicle wheel, a pair of concentric rims, a plunger member attached to one of said rims, a tubular member connected with the other rim and adapted to slidingly receive the plunger member, a resilient member interposed between the plunger and the bottom of the tubular member, a sectional casing surrounding the tubular member and connected therewith, and means for fastening the sectional casing to one of the rims.

2. In a vehicle wheel, a pair of spaced concentric rims, a plunger member fastened to one of said rims, a tubular member in which said plunger lies, a resilient element interposed between the plunger and the tubular member, a sectional casing surrounding the tubular member, a tongue at one end of each section of the casing adapted to slidingly interlock with a groove in the bottom of the tubular member, and a bolt projecting from the bottom of the sectional casing, and extending through one of said rims for fastening the casing to the rim.

3. In a wheel, the combination with an inner rim and an outer rim concentric therewith, of a cylindrical plunger fastened to the outer rim, a tubular cylinder in which the plunger telescopes, a coil spring interposed between the plunger and the end of the cylinder, laterally extending projections carried by the cylinder, a two-part casing surrounding the cylinder and having apertures through which the projections of the cylinder pass, a dove-tail tongue at the bottom of each part of the casing adapted to interlock in a dove-tail groove formed in the bottom of the cylinder, a split bolt section depending from the bottom of each part of the casing, the sections of the split bolt when united being adapted to extend through an opening formed in the casing end, a nut threaded onto the united bolt, and a relatively large coil spring interposed between the outer rim and the inner rim and surrounding the casing and the parts inclosed thereby.

1,216,938. MACHINE-GUN. ALEXANDER M. BROTHERSTON, Moncton, New Brunswick, Canada, assignor of one-half to Holmes A. Frank, Millarton, New Brunswick, Canada. Filed Jan. 31, 1916. Serial No. 75,375. (Cl. 89—11.)



1. In a gun, a table, a pivotally mounted gun support thereon, an internally toothed link connected with said table, a pinion carried by the gun support, and means for operating said pinion to oscillate the gun.

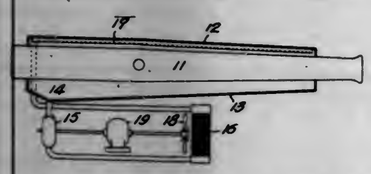
2. In a gun, a revoluble yoke, a cradle trunnioned in said yoke, means connected with the yoke for oscillating the gun in a predetermined plane, driving mechanism for said oscillating means carried on the cradle, and a gear connecting the driving means and oscillating means concentric with the cradle trunnions.

3. In a gun, a shaft, a crank driven by said shaft at the same speed as itself, a breech block, operative connection between the breech block and crank, a cartridge feed drum, a drive gear therefor, a one-toothed gear mounted on the shaft holding said drum gear against revolution except during open breech position.

4. In a gun, a breech mechanism, a cartridge feed mechanism, a common drive shaft for said mechanisms, a mechanical cooling mechanism, a motor direct connected to said cooling mechanism, and a clutch connection between the motor and said breech and feed mechanism drive shaft.

5. In a gun, a motor, a mechanical cooling mechanism direct connected to the motor, breech operating and cartridge feeding mechanisms releasably connected to the motor, and a gun oscillating mechanism releasably connected to the motor independent of the breech operating and cartridge feeding mechanisms.

1,216,939. METHOD OF AND APPARATUS FOR COOLING GUN-BARRELS. ALEXANDER M. BROTHERSTON, Moncton, New Brunswick, Canada, assignor of one-half to Holmes A. Frank, Millarton, New Brunswick, Canada. Filed Feb. 3, 1916. Serial No. 76,063. (Cl. 89—1.)

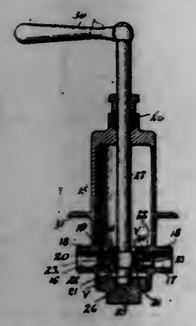


1. A method of cooling gun barrels which consists in discharging a spray of cooling liquid over the barrel in a closed chamber, collecting the vapor resulting and condensing same to a liquid, and passing the liquid through a radiator to cool same for re-use.

2. A means of cooling gun barrels, comprising a liquid containing reservoir inclosing the barrel, a radiator, a spray pipe arranged to direct liquid over the barrel, and means for drawing the liquid through the radiator and forcing the same through the spray pipe.

3. A means for cooling gun barrels, comprising a reservoir for cooling liquid inclosing the barrel, a pipe arranged to direct sprays of liquid on substantially the entire length of the gun barrel, a radiator, an inlet for said radiator at the bottom of the reservoir, a liquid circulating means, a connection between the radiator and spray pipe including the circulating means, a fan arranged to force air through the radiator, and means for driving the liquid circulating means and fan.

1,216,940. WATER-COCK. ARTHUR W. BURNEY, Lewiston, Idaho. Filed May 8, 1915. Serial No. 26,827. (Cl. 137—26.)

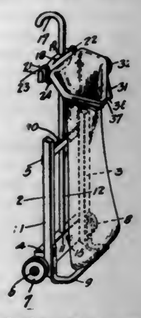


1. In a faucet of the character described, a cylindrical mixing chamber provided with diametrically opposed inlet ports disposed in axial alinement, said ports surrounded by outwardly extending screw threaded flanges and by inwardly extending flanges, the latter forming valve seats, said cylindrical chamber being open at its lower end, valves seated on the inwardly extending flanges and having guide portions guided within said flanges, an axial stem extending through the top of the casing and having a handle, said stem provided with an eccentric disk constantly engaging the two valves, said valves being maintained by fluid pressure in engagement with the disk, and a closure for the lower end of the casing affording a step for the axial stem and permitting access to the valves.

2. In a faucet of the character described, a cylindrical mixing chamber provided with diametrically opposed inlet ports disposed in axial alinement, said ports surrounded by outwardly extending screw threaded flanges and by inwardly extending flanges, the latter forming valve seats, said cylindrical chamber being open at its lower end, valves seated on the inwardly extending flanges and having guide portions guided within said flanges, an axial stem extending through the top of the casing and having a handle, said stem provided with an eccentric disk constantly engaging the two valves, said valves being maintained by fluid pressure in engagement with the disk, and a closure for the lower end of the casing affording a step for the axial stem and permitting access to the valves, said mixing chamber being provided with a valved outlet arranged in a plane above that of the outwardly extending screw threaded flanges which constitute water inlets.

3. In a faucet of the character described, a cylindrical mixing chamber provided with diametrically opposed inlet ports disposed in axial alinement, said ports surrounded by outwardly extending screw threaded flanges and by inwardly extending flanges, the latter forming valve seats, said cylindrical chamber being open at its lower end, valves seated on the inwardly extending flanges and having guide portions guided within said flanges, an axial stem extending through the top of the casing and having a handle, said stem provided with an eccentric disk constantly engaging the two valves, said valves being maintained by fluid pressure in engagement with the disk, and a closure for the lower end of the casing affording a step for the axial stem and permitting access to the valves, said mixing chamber being provided with a valved outlet arranged in a plane above that of the outwardly extending screw threaded flanges which constitute water inlets, the stem of the outlet valve being provided with a handle, and said handle and the handle of the axial stem in the mixing chamber being located in different horizontal planes.

1,216,941. BAG-HOLDER. WILLIAM WATSON CAMP, Stratford, Ontario, Canada. Filed Nov. 1, 1916. Serial No. 128,965. (Cl. 83—26.)

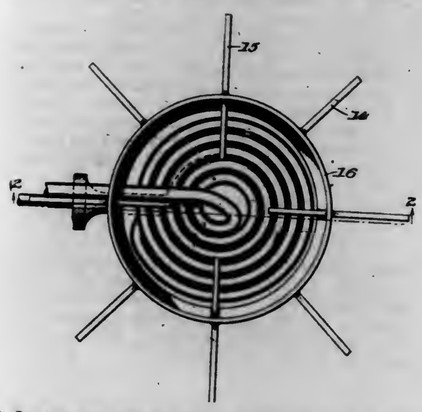


1. In a device of the class described, a bag mouth stretcher comprising a bar having forwardly and outwardly inclined ends and around the upper edge of which the rear portion of the bag mouth is folded, and a spring finger carried by one of the aforesaid inclined arms and having a down-turned outer end designed to be sprung rearwardly into position within the bag mouth.

2. In a device of the class described, a bag mouth stretcher comprising a bar having forwardly and outwardly inclined ends around the upper edge of which the rear portion of the bag mouth is folded, resilient means for stretching the forward portion of the bag mouth, and means for taking up any superfluous slack in the bag mouth and comprising a right angled bracket having a turned over upper end supported upon one of the inclined arms, a split pin journaled therein into the split of which the bag edge is designed to be inserted, means for turning the pin, and means for holding the pin in any position to which it is turned.

1,216,942. WATER-HEATER. AXEL S. CARLSON, Los Angeles, Cal. Filed Apr. 26, 1916. Serial No. 93,762. (Cl. 126—53.)

1. In a water heater, the combination with a burner, of a grate imposed over said burner, a removable plate adapted to rest upon said grate, a housing adapted to inclose said burner and extend beneath the grate, a water circulating coil disposed within the housing and beneath the grate, means for maintaining a circulation of air throughout said housing, and means whereby the heating coil will be directly and indirectly heated by the burner.



2. In a water heater, the combination with a heater burner, of a water circulating coil disposed concentric with said burner, a grate member mounted over the water circulating coil, a housing inclosing said circulating coil, said housing being formed integral with said grate member, an annular rim formed around the upper marginal edge of said housing and adapted to terminate a distance above the grate member, a baffle plate adjustably secured beneath said housing and concentric with the burner, and means whereby the heat acting against the bottom surface of a utensil disposed upon said grate will be reflected and drawn downwardly between the convolutions of the water circulating coil.

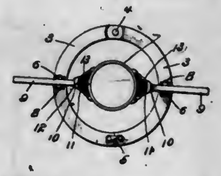
3. A water heater, comprising a water circulating coil formed with a series of convolutions of tubing continuously arranged in superimposed strata, a heat burner mounted within the central opening of the lower convolution of said coil, a series of grate members disposed over said coil, a cylindrical housing extending downwardly from said grate members and partially inclosing said coil, a baffle plate adjustably mounted over the lower open end of the housing and having a central opening adapted to register with the heat burner, means for supplying the burner with sufficient air for combustion of the gas within the burner, and means whereby the heat thrown off from said burner will be reflected and drawn downwardly in the event that a utensil is disposed upon said grate members.

4. In a water heater, the combination with a stove having a top plate, a burner opening formed through said plate, a grate member adapted to be positioned over said opening, said member comprising a series of radially extending grate bars, a cylindrical housing member extending downwardly from said grate bars, an annular flared rim formed integral with the housing member and the grate bars and having its upper marginal edge terminating upon a plane above the grate bars, a helically wound water circulating coil disposed beneath said grate bars and within the housing, a heat burner disposed adjacent the lower end of said coil, the convolutions of the coil being so arranged as to lie substantially out of the path of travel of the flame from the burner, an adjustable baffle plate secured upon the housing and substantially inclosing the lower open end of said housing, a central opening within said plate adapted to register with the heat burner, means for insuring a complete circulation of air through the water coil when the burner is in operation and a utensil is positioned upon the grate members, and means whereby the water coil will be directly and indirectly heated by the heat provided by the heat burner.

5. In a water heater, the combination with a burner, of a grate imposed thereover, a water circulating coil interposed between said burner and grate, a coil housing secured around the coil and beneath the grate, and a baffle plate secured beneath the coil housing in a manner to cause the heat and flame from the burner to circulate through the coil and out at the lower end of the housing.

[Claims 6 and 7 not printed in the Gazette.]

1,216,943. PIPE OR ROD GRIP. JAMES A. CHAMPIE, Eden, Tex. Filed Jan. 4, 1916. Serial No. 70,262. (Cl. 24—243.)



In a device for the purpose set forth, a ring member providing a base, said base comprising two sections which are pivotally secured, means for connecting the meeting ends of the sections, each of said sections, approximately centrally between its pivot and its free end having upturned ears, a clamp pivoted to said ears, each of said clamps including a handle member having one of its ends offset to provide an elongated head which has its outer face concaved and stepped longitudinally to provide a plurality of engaging faces, each of said faces being serrated, and each of said faces being successively reduced in width.

1,216,944. SAFETY-RAZOR. SAMUEL WATSON CHARLES, Palo Alto, Cal. Filed Nov. 30, 1914. Serial No. 874,684. (Cl. 30—12.)



1. In a razor, the combination with a handle, of a razor blade member and a guard member, and a pivotal connection between the blade and guard members and the handle, said pivotal connection permitting the removal of one member while pivotally retaining the other member.

2. In a razor, the combination with a handle comprising separable sections, of a pivot connecting the sections, a blade member, and a guard member mounted on the pivot between the handle sections, one of said members being removable from the pivot when the handle sections are separated.

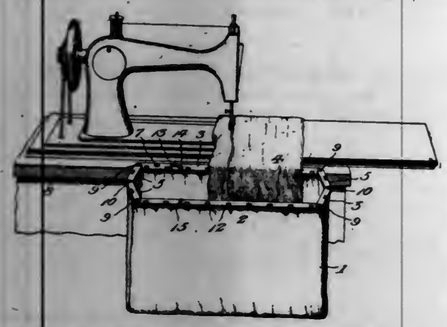
3. In a razor, the combination with a handle comprising separable sections, of a pivot connecting the sections and having a shoulder, a guard mounted on the pivot between one handle section and the shoulder, and a blade mounted on the pivot between the guard and the other handle section.

4. In a razor, the combination with a handle comprising separable sections, of a pivot connecting the sections and having a shoulder, a guard mounted on the pivot between one of the handle sections and the shoulder and retained thereby, a device detachably securing the other handle section to the pivot, and a blade mounted on the pivot between the guard and the other handle section and removable from said pivot when said latter handle section is disengaged therefrom.

1,216,945. SEWING-MACHINE FOLDING DROP-POCKET. LISSA E. CHRISTIE, Oskaloosa, Iowa. Filed Mar. 31, 1916. Serial No. 88,067. (Cl. 45—75.)

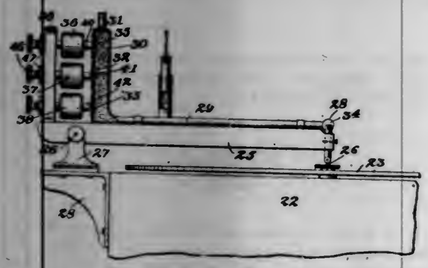
A folding drop pocket made of flexible material and provided at the mouth with a frame comprising a pair of bars and pairs of links pivotally connected together and to

the bars, said bars and links being attached to and extending around the pocket at the mouth, one of said bars also serving for the attachment of the pocket or bag to the top or table of a sewing machine and said links being



arranged to extend outwardly from the bars when the frame is closed and enabling the bars to come directly in contact with each other, and means to secure the bars together and thereby lock the frame in closed position.

1,216,946. ACOUSTIC MULTIPLIER. EDWARD E. CLEMENT, Washington, D. C. Filed Mar. 16, 1912. Serial No. 684,365. (Cl. 179—123.)



1. An acoustic transformer for telephone transmitters comprising an inclosure, a body of fluid therein, an initial vibrator connected to the inclosure and having a relatively small superficial area exposed to said fluid, and a telephone transmitter with a secondary vibrator connected to the inclosure and having a relatively large superficial area exposed to the fluid therein, whereby initial vibrations of determinate amplitude and power will be impressed upon the transmitter with reduced amplitude and increased carrying power.

2. A telephone transmitter comprising a casing, a single primary vibrator having a fixed determinate area, a plurality of telephone transmitter elements each having a secondary vibrator of an area the same as or greater than that of the primary vibrator, exposed through an opening in the wall of the casing, and liquid filling the casing and adapted to transmit vibrations from the primary vibrator to all of said secondary vibrators and transmitter elements equally and undiminished.

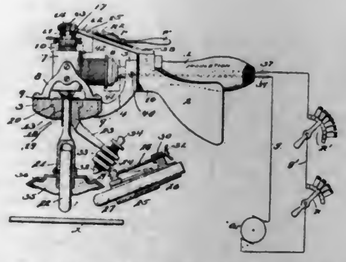
3. A reproducer for an acoustic instrument having a record surface carrying a variable trace corresponding to a series of sound waves, comprising an initial vibrator adapted to be vibrated by said trace on said surface, a secondary vibrator, and a fluid interposed between and connecting said vibrators, said secondary vibrator having a relatively larger area exposed to the fluid than the initial vibrator.

4. An acoustic transformer for graphophones comprising a hollow arm having a primary vibrator of determinate area at one end, and secondary vibrating means having individual area or areas equal to or greater than the area of the primary vibrator at the other end, together with a body of liquid in the arm connecting the two, an element adapted to be controlled by a sound record and itself controlling the primary vibrator, and electrical sound projecting or transmitting means connected to and controlled by the secondary vibrating means.

5. An acoustic transformer comprising a casing containing a body of fluid, and a set of primary and secondary vibrators set into the walls thereof for the transmission and reception of sound vibrations to and from said body of fluid, there being a larger number of secondary vibrators than of the other, and each of said secondary vibrators having an area exposed to the fluid equal to or greater than the exposed area of the primary vibrator or vibrators.

[Claims 6 to 12 not printed in the Gazette.]

1,216,947. METHOD OF ELECTRIC-ARC WELDING, HEATING, AND METAL-WORKING, AND APPARATUS THEREFOR. CHARLES L. COFFIN, Parks, Ga., assignor to Electric Metal Working Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 5, 1916. Serial No. 89,128. (Cl. 219—14.)



1. The method of electric arc welding, heating and metal working, consisting in subjecting the material to the heating effect of an electric arc while such material is not in circuit with the arc and while the arc is in close proximity to the material, and moving the arc and one electrode together with a moving magnetic field, in relation to the other electrode.

2. The method of electric arc welding, heating and metal working by subjecting the material to the heating effect of an electric are while such material is not in circuit with the arc, which consists in maintaining an electric arc between two electrodes while the latter arc in close proximity to such material, and moving one of the electrodes with relation to the other electrode whereby the arc acquires a line of travel with relation to the material and simultaneously subjecting the moving arc to a magnetic field, which field is movable with the arc.

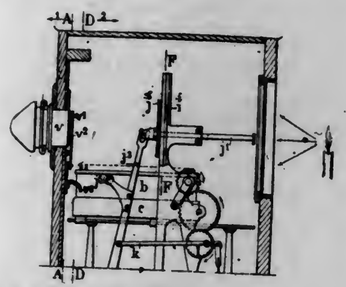
3. The method of electric arc welding, heating and metal working by subjecting the material to the heating effect of an electric arc while such material is not in circuit with the arc as an electrode of the arc, which consists in providing an arc between two electrodes in proximity to the material, and moving the arc and one electrode simultaneously with relation to the other electrode and the material and in unison with a moving magnetic field.

4. The method of electric arc welding, heating and metal working by subjecting the material to the heating effect of an electric arc, which consists in maintaining an electric arc between two electrodes in proximity to such material, and giving the arc a line of travel simultaneously with relation to the material and one electrode, by moving the other electrode with relation to the first electrode and the material and subjecing said arc to a magnetic field moving synchronously therewith.

5. The method of electric arc welding, heating and metal working by subjecting the material to the heating effect of an electric arc, which consists in providing an arc between two electrodes in proximity to the material, and moving the arc and one electrode, simultaneously with relation to the other electrode, in a moving field of uniform magnetic intensity.

[Claims 6 to 31 not printed in the Gazette.]

1,216,948. STEREOSCOPIC DEVICE OR THE LIKE. LOUIS JOSEPH EMMANUEL COLARDEAU and JULES RICHARD, Paris, France. Filed Nov. 29, 1912. Serial No. 734,138. (Cl. 88—29.)

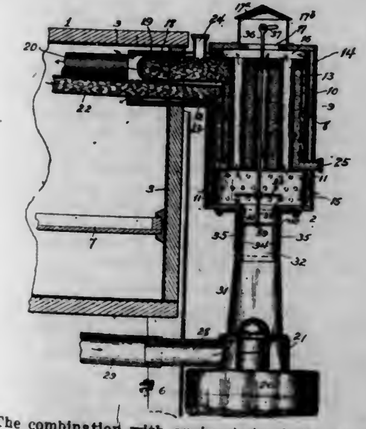


1. In a stereoscopic device of the kind described, eye pieces, a translucent shutter, and reciprocating view advancing means adapted to actuate said shutter to bring same into and out of the path between the eye pieces and the views.

2. In a stereoscopic device of the kind described, eye pieces, a translucent shutter normally positioned in a path between said eye pieces and the views, projections on said shutter, reciprocating view advancing means adapted at a determined moment to engage said projections to shift said shutter out of said path, and means to return said shutter to its former position upon the disengagement of the view advancing means from said projecting means.

3. In a stereoscopic device of the kind described, eye pieces, a movable shutter provided with translucent windows, a heel piece on said shutter, parallel links pivotally connected with said shutter, reciprocating view advancing means, a roller on said view advancing means adapted to engage said heel piece and to shift the shutter out of the path between the eye pieces and the views, and spring means to return said shutter into said path upon the disengagement of said roller from said heel piece.

1,216,949. INCUBATOR. THOMAS M. COLLIER, Shawnee, Okla. Filed Feb. 10, 1916. Serial No. 77,486. (Cl. 237—4.)



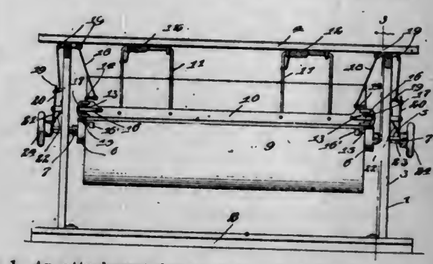
1. The combination with an incubator body, water circulating pipes therein, an external boiler communicating with said pipes, a casing inclosing said boiler and providing a chamber below the boiler and also a chamber above the boiler open to the atmosphere, and a heater for the boiler, of a flue connecting the lower chamber with the heater, a damper in said lower chamber for the upper end of said flue, lateral dampers for the flue, and operating means carrying the first mentioned damper and connected with the lateral dampers, whereby when the first-mentioned damper moves toward closed position, the lateral dampers will move toward open position, and vice versa.

2. The combination with an incubator body, water circulating pipes therein, a boiler communicating with said pipes, and a heater for the boiler, of a flue between the heater and the boiler, said flue having lateral openings, a damper between the flue and boiler, hinged dampers for said lateral flue openings, a rod depending from the first-mentioned damper and having a loop, arms projecting from the flue dampers and passing through said loop and means connected with the first-mentioned damper for operating all of said dampers simultaneously, whereby when the first-mentioned damper moves toward closed position, the lateral dampers will move toward open position, and vice versa.

3. The combination with an incubator body, water circulating pipes therein, a boiler communicating with said pipes, and a heater for the boiler, of a flue between the heater and the boiler and having lateral openings, a damper for said flue located between said flue and the boiler, lateral hinged dampers for said flue located between the first-mentioned damper and the heater for opening and closing said lateral openings, means connecting the first-mentioned damper with the lateral dampers, whereby the latter will be opened when the first-mentioned damper moves toward closed position, and means connected with said first-mentioned damper for automatically operating all of said dampers simultaneously.

4. The combination with an incubator body, water circulating pipes therein, and an external boiler communicating with said pipes, of a shell encircling the boiler and forming upper and lower chambers, and a chamber surrounding the boiler, said upper chamber being open to the atmosphere, an outer shell encircling the first-mentioned shell and forming an air chamber communicating with the incubator body, said outer shell having air inlets, a burner, a flue connecting the burner with said lower chamber and means located in said lower chamber for closing and opening the upper end of said flue.

1,216,950. ATTACHMENT FOR PAPER CUTTERS OR KNIVES. CLARENCE D. CONNER, Tupelo, Miss. Filed May 24, 1916. Serial No. 99,582. (Cl. 211—32.)



1. An attachment for a paper cutting knife, a shoe, a crank shaft rotatably mounted upon the knife and supporting the shoe for movements toward and away from the paper, resilient means coöperating with the crank portion of the shaft for resiliently holding said shoe in either of its two positions, and means for giving movements to said shaft.

2. An attachment for a knife of the class described comprising a crank shaft rotatably mounted on the knife, a shoe connected to one end of said shaft for movements under the knife edge toward and away from the paper,

means for giving movements to said shaft, and resilient means coöperating with the crank portion of the shaft for holding said shoe in either of its two positions.

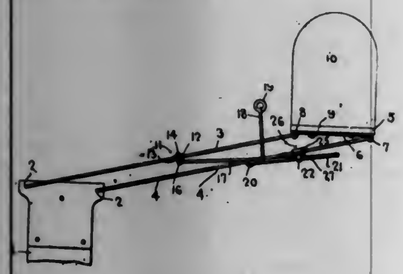
3. In combination a frame, a shaft journaled therein and supporting a roll of paper, a knife, a shaft mounted on the knife and having one end disposed to press against the roll directly below the knife, and means for normally holding said end out of engagement with the roll.

4. In combination a frame, a shaft journaled therein and supporting a roll of paper, a knife, a shaft mounted on the knife and having one end disposed to press against the roll directly below the knife, and means having a portion arranged exteriorly of the frame whereby said end may be manually moved out of engagement with the roll.

5. In combination a frame, a shaft journaled therein and supporting a roll of paper, a knife, a shaft mounted on the knife and having one end disposed to press against the roll directly below the knife, a flexible element having one end connected to said shaft, a spring pressed lever connected to the other end of said element, and means for simultaneously giving movement to said lever and the roll.

[Claims 6 and 7 not printed in the Gazette.]

1,216,951. MAIL-BOX SUPPORT. JESSE T. CONRAD, Winston-Salem, N. C. Filed Oct. 23, 1915. Serial No. 57,140. (Cl. 248—19.)



1. In a mail box support, the combination with a standard, of a frame pivoted to said standard and provided with a support for the box, said support being pivotally connected with the frame, an element carried by the frame, adapted to lock the frame against upward movement, said element being adapted to release the lock by swinging movement in one direction of the frame, and upon the reverse movement of the frame automatically to reset the lock, and permit the frame and support carried thereby, to be shifted upon the standard.

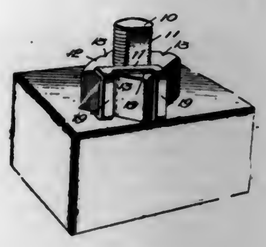
2. In a mail box support, in combination, a suitable standard, two arms pivotally secured to the standard, at opposite sides thereof, the arms being spaced apart from each other, a platform pivotally connected to the ends of the arms farthest from the standard, a link pivotally connected to one arm and a link pivotally connected to the other arm, said links being pivotedly connected with each other at a point intermediate of their pivotal points on the arms, and means operating upon the central pivotal point to rock the links to permit the arms and parts carried thereby, to be moved from normal to abnormal position, means for limiting the movement of the arms in normal position, and means for limiting the movement of the arms in abnormal position.

3. In a mail box support, in combination, a standard, of two arms pivoted to the standard and spaced apart from each other, a platform pivotally connected to the arms farthest from the standard, an adjustable clamp carried by one arm, and a pivoted lug carried by the other arm, a link connected with the clamp, and another link connected with the pivoted lug, the links being pivotally connected at a point intermediate of their pivotal points in the clamp and lug, of an arm carried by the link pivoted to the clamp, said arm being provided with means adapted to engage the second link to prevent upward movement of the arm, except when force to shift the arms is applied to the arm carried by the first mentioned link.

4. A mail box support comprising a standard, a platform, pairs of rods pivotally connecting the parts, and means for locking the rods against movement embodying two interlinked arms connected for swinging movement with the rods and arranged, when in alinement, to maintain the latter in rigid relation to each other, and when in angular disposition to permit the arms to swing.

5. A mail box support comprising a standard, a platform, pairs of rods pivotally connecting the parts, and means for locking the rods against movement embodying two interlinked arms connected for swinging movement with the rods and arranged, when in alinement, to maintain the latter in rigid relation to each other, and when in angular disposition to permit the arms to swing, one of the arms being provided with an extension constituting a releasing member.

1,216,952. NUT-LOCK. CLYDE L. CRAIG, Washington Court-House, Ohio. Filed Apr. 26, 1916. Serial No. 93,673. (Cl. 151—3.)



1. The combination with a bolt having a flat face and a nut threaded thereon, of a washer having an aperture slot at one side to receive the bolt and having a projecting extension of open framelike form, bendable into engagement with either the flat face or a corner of the nut, and the opening of which extension is of a length greater than the thickness of the nut.

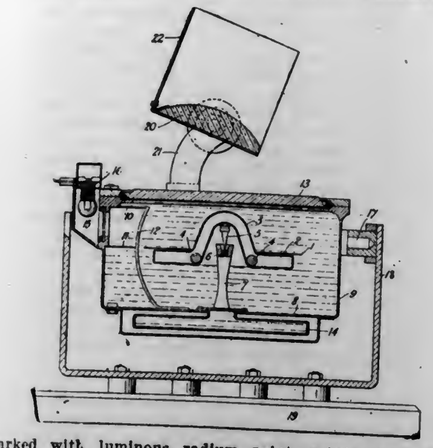
2. The combination with a bolt having a flat face and a nut threaded thereon, of a washer having an aperture slot at one side to receive the bolt and split to clampingly engage bolts of different diameters, said washer having an integral open framelike extension bendable to engage the nut irrespective of the angular position of the latter with relation to the bolt.

3. The combination with a bolt and a nut threaded thereon, having side faces provided with transverse grooves paralleling the edges between said side faces, of a washer having an aperture to receive the bolt in non-rotatable relation and having an extension bendable into engagement with the faces of the nut, provided with an opening to receive the corners of the nut and side strips engageable within the said grooves of the nut.

4. The combination with a bolt and a nut threaded thereon, of a washer having an aperture to receive the bolt in non-rotatable relation and split to clampingly engage bolts of different diameters, said washer having an integral open framelike extension at one side opposite the split portion thereof and bendable to engage the flat faces and receive the corners of the said nuts.

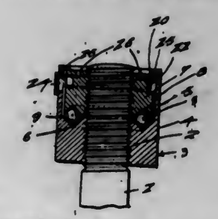
1,216,953. MAGNETIC COMPASS. FRANK OSBORNE CREAGH-OSBORNE, Horsell, Woking, and ARTHUR JOSEPH HUGHES, London, England. Filed June 22, 1915. Serial No. 35,630. (Cl. 33—223.)

In a liquid magnetic compass the combination with needles, of a hollow float, having a dome-shaped central portion, carrying said needles and provided with a pivot pin projecting downward in said float, a support for said pivot pin carried by the compass bowl, a compass card carried by said float and having the divisions and figures



marked with luminous radium paint, substantially as described.

1,216,954. LOCK-NUT. GEORGE E. CROWLEY, Bath, S. C., assignor of one-half to M. W. Perry, Bath, S. C. Filed July 25, 1916. Serial No. 111,235. (Cl. 151—15.)



1. A nut formed of a pair of sections having alined bolt-receiving bores, a hollow extension formed on one of the sections and engaging over the other section and provided with a slot, the said last-mentioned section of the nut having a groove therein communicating with the slot in the extension, means carried by the inner surface of the extension and located adjacent one end of the slot, a pin projecting from the inner wall of the groove in the last-mentioned section of the bolt and extending through the slot in the extension, and a spring positioned within the groove in the last-mentioned section of the nut and having its respective opposite ends engaging the means on the extension and the finger on the last-mentioned section of the nut, for the purpose specified.

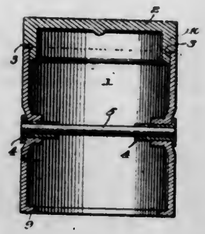
2. A nut formed of a pair of sections each having alined bolt-receiving bores therein and having their opposed faces provided with registering grooves to provide a race, bearing balls positioned within the race, and means associated with the sections for exerting oppositely directed rotative forces thereon, for the purpose specified.

3. In combination, a bolt, a nut fitted thereon, and including two sections, means normally exerting oppositely directed rotative forces on the sections for locking the latter on the bolt, one of the sections having a circumferential slot, a pin carried by the other section movable in said slot, and a spring bolt guard covering the said slot and having a depression therein adapted to receive said pin to lock the sections in released position.

4. In combination, a bolt, a nut associated with the bolt and formed of sections having alined bolt-receiving bores, means for rotating one nut section with relation to the other to effect the locking of the nut upon the bolt, and means for limiting the longitudinal movement of one section with respect to the other section.

5. In combination, a bolt, a nut associated with the bolt and formed of sections having alined bolt-receiving bores, means for rotating one section with relation to the other to effect the locking of the nut upon the bolt, and anti-friction bearing elements located between the nut sections.

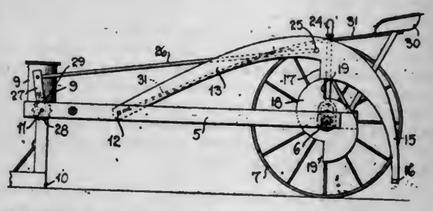
1,216,955. PISTON. GEORGE W. DAGGETT, North Girard, Pa. Filed July 29, 1915. Serial No. 42,591. (Cl. 74—85.)



1. An engine piston comprising a drop forged head having an annular flange formed with an annular rabbet in the outer face thereof, a tubular apron having one edge welded in said rabbet, and also having diametrically opposite points thereof compressed inwardly to form apertured offsets, and headed bushings inserted through said offsets and welded therein with the heads thereof lying flush with the outer surface of the apron.

2. An engine piston comprising a drop forged head having an annular flange formed with an annular rabbet in the outer face thereof, a tubular apron having one edge welded in said rabbet and having its opposite edge flanged inwardly, and also having diametrically opposite points thereof compressed inwardly to form apertured offsets, and headed bushings inserted through said offsets and welded therein with the heads thereof lying flush with the outer surface of the apron.

1,216,956. CAM MECHANISM. GRANVIL F. DALLAS, Coryton, Tenn. Filed May 27, 1916. Serial No. 100,308. (Cl. 74—1.)



A device of the character described including an arm fulcrumed at one end, the other end of said arm having a curved lower edge provided with an angular shoulder therein, and a rotary cam element arranged beneath the arm and constituting the sole means of support for the free end thereof, the periphery of said cam co-acting with the curved lower edge of the arm, and said cam being provided with radially disposed shoulders corresponding to the shoulder in the lower edge of the arm whereby an intermittent, sudden downward gravity movement of the arm occurs in the rotation of the cam.

1,216,957. BOLT AND NUT LOCK. ARTHUR DAMBOISE, Millinocket, Me. Filed Feb. 27, 1914. Serial No. 821,492. (Cl. 151—12.)

The hereindescribed bolt and nut lock comprising a bolt provided with a groove, a nut provided in its inner face with a recess opening at one side out through the bore of the nut, a shoulder extending into the recess from one of the end walls thereof in spaced relation to the bottom

means for giving movements to said shaft, and resilient means coöperating with the crank portion of the shaft for holding said shoe in either of its two positions.

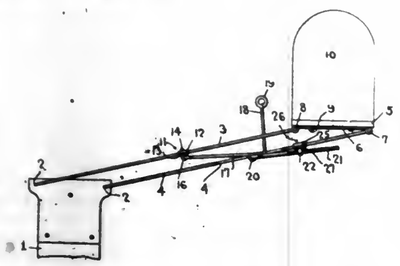
3. In combination a frame, a shaft journaled therein and supporting a roll of paper, a knife, a shaft mounted on the knife and having one end disposed to press against the roll directly below the knife, and means for normally holding said end out of engagement with the roll.

4. In combination a frame, a shaft journaled therein and supporting a roll of paper, a knife, a shaft mounted on the knife and having one end disposed to press against the roll directly below the knife, and means having a portion arranged exteriorly of the frame whereby said end may be manually moved out of engagement with the roll.

5. In combination a frame, a shaft journaled therein and supporting a roll of paper, a knife, a shaft mounted on the knife and having one end disposed to press against the roll directly below the knife, a flexible element having one end connected to said shaft, a spring pressed lever connected to the other end of said element, and means for simultaneously giving movement to said lever and the roll.

[Claims 6 and 7 not printed in the Gazette.]

1,216,951. MAIL-BOX SUPPORT. JESSE T. CONRAD, Winston-Salem, N. C. Filed Oct. 23, 1915. Serial No. 57,540. (Cl. 248—19.)



1. In a mail box support, the combination with a standard, of a frame pivoted to said standard and provided with a support for the box, said support being pivotally connected with the frame, an element carried by the frame, adapted to lock the frame against upward movement, said element being adapted to release the lock by swinging movement in one direction of the frame, and upon the reverse movement of the frame automatically to reset the lock, and permit the frame and support carried thereby, to be shifted upon the standard.

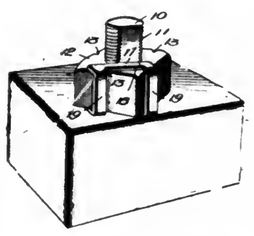
2. In a mail box support, in combination, a suitable standard, two arms pivotally secured to the standard, at opposite sides thereof, the arms being spaced apart from each other, a platform pivotally connected to the ends of the arm farthest from the standard, a link pivotally connected to one arm and a link pivotally connected to the other arm, said links being pivotedly connected with each other at a point intermediate of their pivotal points on the arms, and means operating upon the central pivotal point to rock the links to permit the arms and parts carried thereby, to be moved from normal to abnormal position, means for limiting the movement of the arms in normal position, and means for limiting the movement of the arms in abnormal position.

3. In a mail box support, in combination, a standard, of two arms pivoted to the standard and spaced apart from each other, a platform pivotally connected to the arms farthest from the standard, an adjustable clamp carried by one arm, and a pivoted lug carried by the other arm, a link connected with the clamp, and another link connected with the pivoted lug, the links being pivotally connected at a point intermediate of their pivotal points in the clamp and lug, of an arm carried by the link pivoted to the clamp, said arm being provided with means adapted to engage the second link to prevent upward movement of the arm, except when force to shift the arms is applied to the arm carried by the first mentioned link.

4. A mail box support comprising a standard, a platform, pairs of rods pivotally connecting the parts, and means for locking the rods against movement embodying two interlinked arms connected for swinging movement with the rods and arranged, when in alinement, to maintain the latter in rigid relation to each other, and when in angular disposition to permit the arms to swing.

5. A mail box support comprising a standard, a platform, pairs of rods pivotally connecting the parts, and means for locking the rods against movement embodying two interlinked arms connected for swinging movement with the rods and arranged, when in alinement, to maintain the latter in rigid relation to each other, and when in angular disposition to permit the arms to swing, one of the arms being provided with an extension constituting a releasing member.

1,216,952. NUT-LOCK. CLYDE L. CRAIG, Washington Court-House, Ohio. Filed Apr. 26, 1916. Serial No. 93,673. (Cl. 151—3.)



1. The combination with a bolt having a flat face and a nut threaded thereon, of a washer having an aperture slot at one side to receive the bolt and having a projecting extension of open framelike form, bendable into engagement with either the flat face or a corner of the nut, and the opening of which extension is of a length greater than the thickness of the nut.

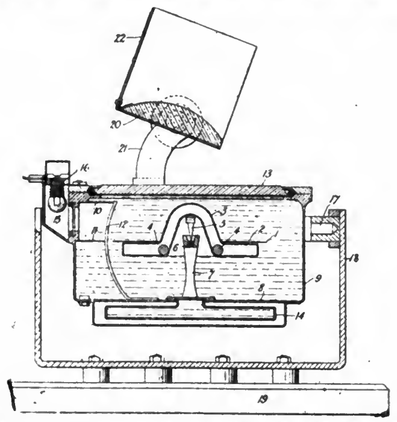
2. The combination with a bolt having a flat face and a nut threaded thereon, of a washer having an aperture slot at one side to receive the bolt and split to clampingly engage bolts of different diameters, said washer having an integral open framelike extension bendable to engage the nut irrespective of the angular position of the latter with relation to the bolt.

3. The combination with a bolt and a nut threaded thereon, having side faces provided with transverse grooves paralleling the edges between said side faces, of a washer having an aperture to receive the bolt in non-rotatable relation and having an extension bendable into engagement with the faces of the nut, provided with an opening to receive the corners of the nut and side strips engageable within the said grooves of the nut.

4. The combination with a bolt and a nut threaded thereon, of a washer having an aperture to receive the bolt in non-rotatable relation and split to clampingly engage bolts of different diameters, said washer having an integral open framelike extension at one side opposite the split portion thereof and bendable to engage the flat faces and receive the corners of the said nuts.

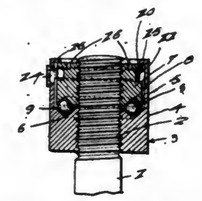
1,216,953. MAGNETIC COMPASS. FRANK OSBORNE CREAGH-OSBORNE, Horsell, Woking, and ARTHUR JOSEPH HUGHES, London, England. Filed June 22, 1915. Serial No. 35,630. (Cl. 33—223.)

In a liquid magnetic compass the combination with needles, of a hollow float, having a dome-shaped central portion, carrying said needles and provided with a pivot pin projecting downward in said float, a support for said pivot pin carried by the compass bowl, a compass card carried by said float and having the divisions and figures



marked with luminous radium paint, substantially as described.

1,216,954. LOCK-NUT. GEORGE E. CROWLEY, Bath, S. C., assignor of one-half to M. W. Perry, Bath, S. C. Filed July 25, 1916. Serial No. 111,235. (Cl. 151—15.)



1. A nut formed of a pair of sections having alined bolt-receiving bores, a hollow extension formed on one of the sections and engaging over the other section and provided with a slot, the said last-mentioned section of the nut having a groove therein communicating with the slot in the extension, means carried by the inner surface of the extension and located adjacent one end of the slot, a pin projecting from the inner wall of the groove in the last-mentioned section of the bolt and extending through the slot in the extension, and a spring positioned within the groove in the last-mentioned section of the nut and having its respective opposite ends engaging the means on the extension and the finger on the last-mentioned section of the nut, for the purpose specified.

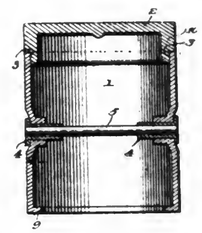
2. A nut formed of a pair of sections each having alined bolt-receiving bores therein and having their opposed faces provided with registering grooves to provide a race, bearing balls positioned within the race, and means associated with the sections for exerting oppositely directed rotative forces thereon, for the purpose specified.

3. In combination, a bolt, a nut fitted thereon, and including two sections, means normally exerting oppositely directed rotative forces on the sections for locking the latter on the bolt, one of the sections having a circumferential slot, a pin carried by the other section movable in said slot, and a spring bolt guard covering the said slot and having a depression therein adapted to receive said pin to lock the sections in released position.

4. In combination, a bolt, a nut associated with the bolt and formed of sections having alined bolt-receiving bores, means for rotating one nut section with relation to the other to effect the locking of the nut upon the bolt, and means for limiting the longitudinal movement of one section with respect to the other section.

5. In combination, a bolt, a nut associated with the bolt and formed of sections having alined bolt-receiving bores, means for rotating one section with relation to the other to effect the locking of the nut upon the bolt, and anti-friction bearing elements located between the nut sections.

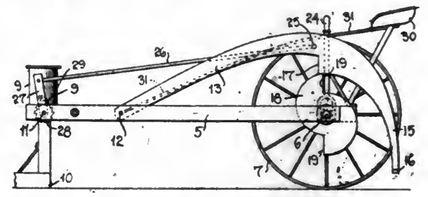
1,216,955. PISTON. GEORGE W. DAGGETT, North Girard, Pa. Filed July 29, 1915. Serial No. 42,591. (Cl. 74—85.)



1. An engine piston comprising a drop forged head having an annular flange formed with an annular rabbet in the outer face thereof, a tubular apron having one edge welded in said rabbet, and also having diametrically opposite points thereof compressed inwardly to form apertured offsets, and headed bushings inserted through said offsets and welded therein with the heads thereof lying flush with the outer surface of the apron.

2. An engine piston comprising a drop forged head having an annular flange formed with an annular rabbet in the outer face thereof, a tubular apron having one edge welded in said rabbet and having its opposite edge flanged inwardly, and also having diametrically opposite points thereof compressed inwardly to form apertured offsets, and headed bushings inserted through said offsets and welded therein with the heads thereof lying flush with the outer surface of the apron..

1,216,956. CAM MECHANISM. GRANVIL F. DALLAS, Coryton, Tenn. Filed May 27, 1916. Serial No. 100,308. (Cl. 74—1.)

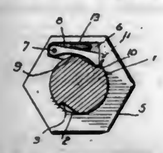


A device of the character described including an arm fulcrumed at one end, the other end of said arm having a curved lower edge provided with an angular shoulder therein, and a rotary cam element arranged beneath the arm and constituting the sole means of support for the free end thereof, the periphery of said cam co-acting with the curved lower edge of the arm, and said cam being provided with radially disposed shoulders corresponding to the shoulder in the lower edge of the arm whereby an intermittent, sudden downward gravity movement of the arm occurs in the rotation of the cam.

1,216,957. BOLT AND NUT LOCK. ARTHUR DAMBOISE, Millinocket, Me. Filed Feb. 27, 1914. Serial No. 821,492. (Cl. 151—12.)

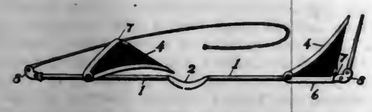
The hereindescribed bolt and nut lock comprising a bolt provided with a groove, a nut provided in its inner face with a recess opening at one side out through the bore of the nut, a shoulder extending into the recess from one of the end walls thereof in spaced relation to the bottom

wall thereby forming a pocket, a pawl pivoted at one end in said recess near the other end wall thereof, a nose on the free end of the pawl for engagement with said groove, a projection on the free end of the pawl extending beyond



the nose and located in said pocket, one wall of said pocket holding the pawl against said bottom wall and preventing the outward movement thereof, and a spring engaging said pawl.

1,216,958. EYE-PROTECTOR. GEORGE H. DAY, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Sept. 20, 1915. Serial No. 51,637. (Cl. 2—149.)



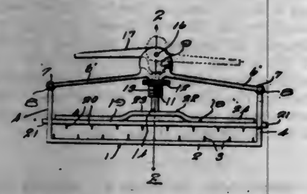
1. An eye protector comprising a central bridging member and a pair of narrow lens receiving frame members, pins projecting outwardly from said frame members in the plane of the lenses, and shield members pivotally mounted on said pins in the plane of the lenses and fitting around the lens embracing rims when in open position.

2. In an eye protector, the combination with a bridging member, of a pair of lens receiving rims of substantially the thickness of the lenses to be received therein, lenses fitting within the rims, pivot members extending outwardly from the rims in the plane of the lenses, and shield members pivoted on the pivots and overlying and interlocking with the lens encircling rims when in open position.

3. The combination of a lens frame, a shield, and pivoting means for said shield placed upon the frame, the inner curvature of the shield being eccentrically set in relation to the curvature of the outer edge of the frame.

4. A lens frame, a shield, and pivoting means for said shield placed upon the frame, the inner curvature of the shield being eccentrically set in relation to the curvature of the outer edge of the frame upon said pivoting means, and said shield having a slot formed at a point midway on the outer edge of the shield to enable it to spread and lock in engagement with the frame.

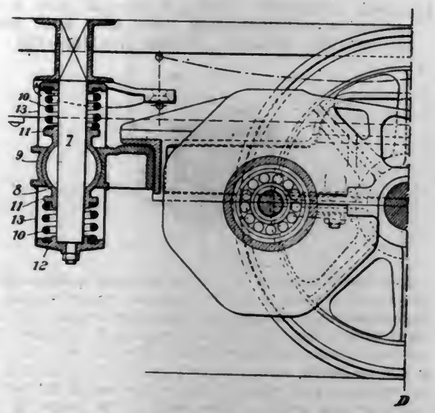
1,216,959. BELT-CLAMP. LEWIS E. DE CAMP, Kane, Pa. Filed Dec. 15, 1915. Serial No. 67,002. (Cl. 24—243.)



1. A clamp comprising a stationary jaw member provided with arms at opposite ends, a movable jaw member slidable between the arms, a bowed spring on the upper side of the movable jaw member, a plunger for engaging the bowed portion of said spring, a cam for engaging the upper end of the plunger to force the lower end thereof against the spring to move the movable jaw member toward the stationary jaw member and supporting means for said cam hingedly connected to the arms of the stationary jaw member.

2. A belt clamp comprising a relatively stationary jaw member, arms formed integrally with and rising vertically from the opposite ends of the stationary jaw member, said arms having slots arranged centrally therein, hinge barrels formed on the upper edges of said arms, a movable jaw member located between the arms of said stationary member, said movable jaw provided with tongues at opposite ends thereof, said tongues slidably mounted in the slots of the arms of the stationary jaw member, which slots prevent any lateral movement of the tongues of the movable member with relation to the stationary member, a bow spring arranged on the upper face of said movable member, a plunger for engaging the bowed portion of the spring, a cam operating against the upper end of the plunger forcing the movable member toward the stationary jaw member, and supporting means pivotally connected to the cam at one end and their opposite ends hingedly secured to the hinge barrels on the arms for hingedly supporting the cam above the movable member.

1,216,960. SYSTEM OF SUSPENSION FOR TRAMWAY AND RAILWAY CARS. CÉLESTIN DELMEZ, Antwerp, Belgium. Filed Feb. 10, 1914, Serial No. 817,847. Renewed Aug. 7, 1916. Serial No. 113,617. (Cl. 105—241.)



1. In combination, a car frame, beams secured to the underside of said car frame, a post depending from one of the beams, a bracket slidably mounted on the post and provided with a socket, a second bracket secured to another of the beams and formed with a socket, rods provided with semi-spherical elements which are seated in the sockets in the brackets, means for resiliently mounting the semi-spherical elements, leaf springs pivotally connected to the rods, the leaf springs having a semi-spherical element on their bottoms, a motor frame having an extension formed with a semi-spherical bearing, a sleeve slidably mounted on the depending post and provided with a circular enlargement which fits in the semi-spherical bearing on the motor frame, springs engaging each end of the sleeve, the semi-spherical elements on the leaf springs being supported on the motor frame, bearings carried by the motor frame, and an axle and wheels mounted in said latter bearings.

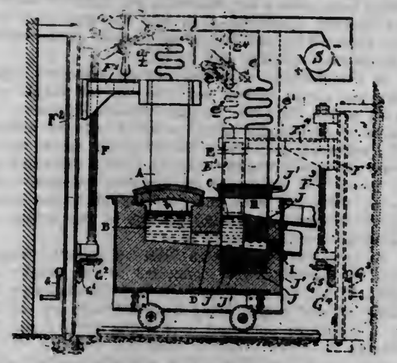
2. In combination, a car frame, a motor frame located under the car frame, said motor frame having an extension formed with a semi-spherical bearing, a post depending from the car frame, a sleeve slidably mounted on the post and provided with a spherical enlargement which fits in the semi-spherical bearing in the sleeve, springs mounted on the post to engage each end of the sleeve, bearings on the motor frame, an axle and wheels mounted in the latter bearings, leaf springs above the motor frame, the leaf springs having semi-spherical elements on their bottoms and which are supported on the motor frame, and means for yieldingly mounting the ends of the leaf springs on the car frame.

3. In combination, a car frame, a motor frame located under the car frame, said motor frame having an extension formed with a semi-spherical bearing, a post depending from the car frame, a sleeve slidably mounted on the post and provided with a spherical enlargement which fits in the semi-spherical bearing in the sleeve, springs mounted on the post to engage each end of the sleeve, bearings on the motor frame, an axle and wheels mounted in the latter bearings, leaf springs above the motor frame, the leaf spring having semi-spherical elements on their bottoms and which are supported on the motor frame, brackets supported by the car frame each bracket having a semi-spherical socket, rods formed with slots at their ends and extending through the brackets, trunnions extending from the ends of the leaf springs and passing through the slots in the rods, semi-spherical elements slidably mounted on the rods and engaging in the semi-spherical sockets in the brackets, springs on the rods and bearing against the semi-spherical elements, and means for adjusting the tension of said springs.

4. In combination, a car frame, a motor frame having a central extension, means for resiliently mounting the extension on the car frame, said means including means to permit spherical and circumferential movement of the motor frame, bearings rigid with the motor frame, an axle mounted in the bearings, traction wheels on the axle, leaf springs having semi-spherical elements which are supported on the motor frame, and means for resiliently securing the ends of the leaf springs to the car frame.

5. In combination, a car frame, a motor frame having a central extension, means for resiliently mounting the extension on the car frame, said means including means to permit of spherical and circumferential movement of the motor frame, bearings rigid with the motor frame, an axle mounted in the bearings, traction wheels on the axle, leaf springs having semi-spherical elements which are supported on the motor frames, brake shoes mounted on the motor frame to engage with the traction wheels, and means for operating the brake shoes.

1,216,961. ELECTRIC FURNACE. HECTOR DE NOLLY, St. Chamond, France, assignor to Société Electro-Métallurgique De St. Béron, Lyon, France. Filed Jan. 31, 1914. Serial No. 815,802. (Cl. 204—64.)



1. In an electric furnace for the fusion of metals, the combination of a hearth of large section forming the lower part of a fusion chamber, a fore-hearth of smaller section than that of said hearth, conduits connecting, below the surface of the fused metal, the bottom of said hearth with the bottom of said fore-hearth, so that the scoria which forms in the hearth cannot pass into the fore-hearth which is electrically connected with the negative pole of the source of electricity, an outlet conduit from said fore-hearth the sill of which is above the normal level of the surface of the fused metal in the furnace and allowing the metal of the fore-hearth to flow out when the level of the said metal is higher than the sill of the said outlet conduit, means allowing the furnace to be completely emptied when it is desired to stop its working, two vertically movable electrodes in said fusion chamber covering almost entirely the surface of the metal contained in said hearth, a switch for connecting one of said electrodes to either or other of the poles of the source of electricity, the other electrode being connected with the positive pole of the said source of electricity and means whereby either one or other of the electrodes may be forced down into or removed from the metal contained in said hearth.

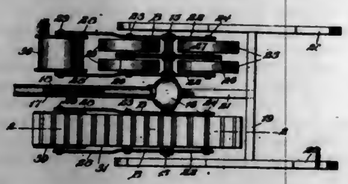
2. In an electric furnace for the fusion of metals, the combination of a hearth of large section forming the lower part of a fusion chamber, a fore-hearth of smaller section than that of said hearth, conduits connecting, below the surface of the fused metal, the bottom of said hearth with the bottom of said fore-hearth, so that the scoria which forms in the hearth cannot pass into the fore-hearth which is electrically connected with the negative pole of the source of electricity, an outlet conduit from said fore-hearth the sill of which is above the normal level of the surface of the fused metal in the furnace and allowing the metal of the fore-hearth to flow out when the level of the said metal is higher than the sill of the said outlet conduit, means allowing the furnace to be completely emptied when it is desired to stop its working, two vertically movable electrodes in said fusion chamber covering almost entirely the surface of the metal contained in said hearth, a switch for connecting one of said electrodes to either one or other of the poles of the source of electricity, the other electrode being connected with the positive pole of the said source of electricity, means whereby either one or other of the electrodes may be forced down into or removed from the metal contained in said hearth, and a lining of fireproof material and conductive of electricity arranged in said fore-hearth and electrically connected with the negative pole of the source of electricity.

3. In an electric furnace for the fusion of metals, the combination of a hearth of large section forming the lower part of a fusion chamber, a fore-hearth of smaller section than that of said hearth, conduits connecting, below the surface of the fused metal, the bottom of said hearth with the bottom of said fore-hearth, so that the scoria which forms in the hearth cannot pass into the fore-hearth which is electrically connected with the negative pole of the source of electricity, an outlet conduit from said fore-hearth the sill of which is above the normal level of the surface of the fused metal in the furnace and allowing the metal of the fore-hearth to flow out when the level of the said metal is higher than the sill of the said outlet conduit, means allowing the furnace to be completely emptied when it is desired to stop its working, two vertically movable electrodes in said fusion chamber covering almost entirely the surface of the metal contained in said hearth, a switch for connecting one of said electrodes to either one or other of the poles of the source of electricity, the other electrode being connected with the positive pole of the said source of electricity, means whereby either one or other of the electrodes may be forced down into or removed from the metal contained in said hearth, a lining of fire-proof material and conductive of electricity arranged in said fore-hearth and a vertically displaceable pendant electrode forming the electric connection of said fore-hearth with the negative pole of the source of electricity, the lower end of said pendant electrode being brought almost into contact with the surface of the fused metal contained in said fore-hearth.

1,216,962. PROPULSION DEVICE FOR MOTOR-SLEDS. REGINALD J. DESMARAIS, Faribault, Minn. Filed May 16, 1916. Serial No. 97,911. (Cl. 21—47.)

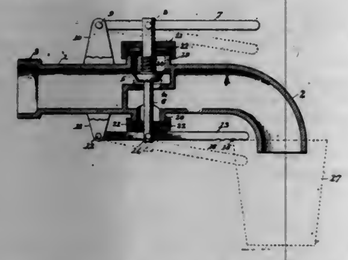
In a device of the class described, a runner frame including runners and a cross bar with which the runners

are connected, a live shaft, means for driving the live shaft including a differential contained within a housing and a main driven shaft, a leaf spring connecting the housing with the runner frame, rocking frames mounted on the live shaft between the housing and the runners,



wheel carrying shafts supported by the rocking frames, means for transmitting motion to the wheel carrying shafts from the live shaft, and endless belts trained over the wheels of the respective rocking frames and having earth engaging blocks connected therewith.

1,216,963. WATER-FAUCET. ARTHUR B. DODD, Camden, N. J. Filed Feb. 25, 1916. Serial No. 80,503. (Cl. 137—4.)



The combination with a tubular faucet body having upwardly and downwardly extending posts and upwardly and downwardly extending tubular bosses, of a valve seat within said tubular body, a valve coöperating therewith, a single valve stem extending on both sides of the valve body through said upwardly and downwardly extending tubular bosses and projecting beyond the latter, a manually operable lever connected with the upper post and the upper extremity of said valve stem, and a second valve operating lever connected with the lower post and with the lower extremity of said valve stem, and a single valve closing spring encircling the valve stem and operating to simultaneously return both of said levers to their normal positions.

1,216,964. MARKING DEVICE FOR ROPES. MILO C. DODGE, Plymouth, Mass., assignor to Plymouth Cordage Company, Plymouth, Mass., a Corporation of Massachusetts. Filed Oct. 7, 1915. Serial No. 54,645. (Cl. 40—2.)



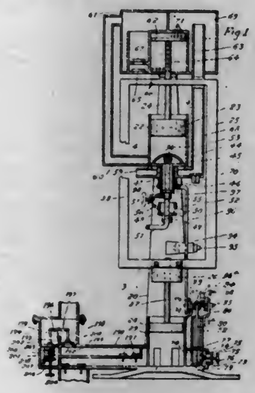
1. Means associating information with a rope comprising a flat strip of flexible material bearing legible marks, twisted and incorporated in the rope, and capable of being untwisted when freed, thereby rendering its marks accessible for reading.

2. Means associating information with a rope comprising a flat strip of flexible material, additional to the regular rope structure, bearing legible marks upon one side, twisted and incorporated in the rope structure, the twist being of such a degree of pitch and tightness that the marked side is fully wrapped in the inside of the twisted strip, its marks being thereby protected and preserved and being accessible for reading when the strip has been freed and untwisted.

3. Means associating information with a rope comprising a strip of material extending close to the center through a strand of the rope, bearing legible marks, twisted upon itself, surrounded and protected by the material of the rope, and capable of being freed and untwisted to disclose said marks.

4. A means for identifying rope of twine or the products thereof, consisting of a strip of paper or like flexible material bearing identification marks and twisted and incorporated in the rope or twine as a strand thereof, said twisted strip being capable of being unwound so as to reveal the identification marks placed thereon.

1,216,965. INTERNAL-COMBUSTION ENGINE. KENNEDY DOUGAN, Minneapolis, Minn. Filed Oct. 2, 1911. Serial No. 652,379. (Cl. 123—2.)



1. In combination, a weight and an explosive engine having the piston thereof connected to the weight and adapted to lift the same through variable distances, the cylinder of said engine being provided with an exhaust port and a charging port, means for delivering an explosive mixture under pressure connected with said charging port, and means actuated by and during the descent of the weight for successively opening said ports.

2. In combination, a weight and an explosive engine having the piston thereof connected to the weight and adapted to lift the same through variable distances, the cylinder of said engine being provided with an exhaust port, a scavenger port and a charging port, means for delivering air under pressure connected with the scavenger port, means for delivering an explosive mixture under pressure connected with the charging port, and means actuated through and during descent of the weight for successively opening said ports.

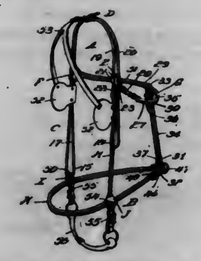
3. In combination, a weight and an explosive engine having the piston thereof connected to the weight and adapted to lift the same through variable distances, the cylinder of said engine being provided with an exhaust port, a scavenger port and a charging port, means for delivering air under pressure connected with the scavenger port, means for delivering an explosive mixture under pressure connected with the charging port, means actuated through and during descent of the weight for successively opening said ports, and means for retarding action of said opening means at the moment of opening the charging port to permit completion of exhaust and scavengering before admission of explosive mixture.

4. In combination, a weight and an explosive engine having the piston thereof connected to the weight and adapted to lift the same through variable distances, the cylinder of said engine being provided with an exhaust port, a scavenger port and a charging port, means for delivering air under pressure connected with the scavenger port, means for delivering an explosive mixture under pressure connected with the charging port, an oscillating closure, and means actuated through and during descent of the weight to oscillate said closure.

5. In combination, a weight and an explosive engine having the piston thereof connected to the weight and adapted to lift the same through variable distances, the cylinder of said engine being provided with an exhaust port and with a charging port, means operative in conjunction with the engine piston for compressing an explosive mixture having connection with said charging port, and means actuated by and during the descent of the weight for successively opening and closing said ports in relatively timed order to effect exhaust and charging of the engine cylinder during each return stroke of the piston.

[Claims 6 to 29 not printed in the Gazette.]

1,216,966. COMBINED HALTER AND BRIDLE. ARTHUR DREW, Buffalo, Wyo. Filed Apr. 3, 1916. Serial No. 88,550. (Cl. 54—24.)



1. A halter composed of two pieces of rope, one piece being folded to produce a cheek piece having a loop at its lower end, a crown having a looped extension, a throat latch having a loop, and a looped shank depending from the throat latch; the other piece being folded to produce a cheek piece having a loop at its upper end, and a nose band, the latter including two coils of rope, clamp members whereby the cheek pieces are connected with the nose band at opposite sides thereof, a clamp plate on the first mentioned rope at the intersection of the portions of said rope constituting the cheek piece, the throat latch and the crown, and a clamp plate by means of which the loop of the cheek piece formed by the last mentioned rope is connected adjustably with the looped extension of the crown, said looped extension being provided with a clamp ring to retain it in adjusted position, the looped shank depending from the throat latch having a guide ring through which a looped portion of the nose band is guided.

2. A halter composed of two pieces of rope, one piece being folded to produce a cheek piece having a loop at its lower end, a crown having a looped extension, a throat latch having a loop, and a looped shank depending from the throat latch; the other piece being folded to produce a cheek piece having a loop at its upper end, and a nose band, the latter including two coils of rope, clamp members whereby the cheek pieces are connected with the nose band at opposite sides thereof, a clamp plate on the first mentioned rope at the intersection of the portions of said rope constituting the cheek piece, the throat latch and the crown, and a clamp plate by means of which the loop of the cheek piece formed by the last mentioned rope is connected adjustably with the looped extension of the crown, said looped extension being provided with a clamp ring to retain it in adjusted position, the loop of the throat latch having a snap hook connected therewith, and the clamp plate connecting the loop of the cheek formed by the last mentioned rope with the looped extension of the crown formed by the first mentioned rope having an eye for engagement with said snap hook.

3. A halter composed of two pieces of rope, one piece being folded to produce a cheek piece having a loop at its lower end, a crown having a looped extension, a throat latch having a loop, and a looped shank depending from the throat latch; the other piece being folded to produce a cheek piece having a loop at its upper end, and a nose band, the latter including two coils of rope, clamp members whereby the cheek pieces are connected with the nose band at opposite sides thereof, a clamp plate on the first mentioned rope at the intersection of the portions of said rope constituting the cheek piece, the throat latch and the crown, and a clamp plate by means of which the loop of the cheek piece formed by the last mentioned rope is connected adjustably with the looped extension of the crown, said looped extension being provided with a clamp ring to retain it in adjusted position, the looped shank depending from the throat latch having a guide ring through which a looped portion of the nose band is guided, and said looped portion of the nose band having a tie ring to prevent the withdrawal thereof through the guide ring and for the attachment of a tie rope.

4. A halter composed of two pieces of rope, one piece being folded to produce a cheek piece having a loop at its lower end, a crown having a looped extension, a throat latch having a loop, and a looped shank depending from the throat latch; the other piece being folded to produce a cheek piece having a loop at its upper end, and a nose band, the latter including two coils of rope, clamp members whereby the cheek pieces are connected with the nose band at opposite sides thereof, a clamp plate on the first mentioned rope at the intersection of the portions of said rope constituting the cheek piece, the throat latch, and the crown, and a clamp plate by means of which the loop of the cheek piece formed by the last mentioned rope is connected adjustably with the looped extension of the crown, said looped extension being provided with a clamp ring to retain it in adjusted position, the looped shank depending from the throat latch having a guide ring through which a looped portion of the nose band is guided, and said looped portion of the nose band having a tie ring to prevent the withdrawal thereof through the guide ring and for the attachment of a tie rope.

5. A rope halter including a crown formed of an elongated looped rope portion, a cheek piece formed of a looped rope portion, a clamp plate having a sleeve engaging the loop of the cheek piece, and additional substantially parallel sleeves through which the side portions of the loop constituting the crown are guided, the portion of the loop projecting beyond said sleeves being provided with a clamp ring adjustable thereon to prevent the withdrawal of said portions through the sleeves.

1,216,967. FILM-CLASP. JOHN R. DUNAVANT, Jet, Okla. Filed Dec. 13, 1916. Serial No. 136,806. (Cl. 242—74.)



1. The combination with a reel comprising a hub, and two heads, one of which is provided with a slot transverse to its diameter and just outside the line of the hub, and a hook on this head and on the same diameter farther remote from the axis than the slot; of a pintle secured to the outer face of the reel along the length of said slot, an element of L-shape having eyes at its angle revolubly

mounted on said pintle, its inner arm constituting a tongue adapted to lie on the hub when its outer arm lies against the reel head and may be engaged with said hook, and a spring throwing the tongue normally off the hub and the other arm of said element outward.

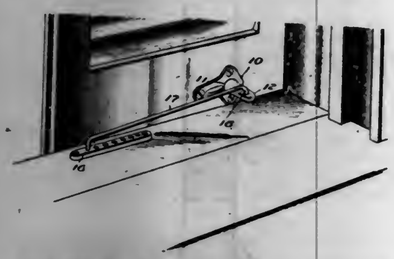
2. The combination with a reel comprising a hub, and two heads, one of which is provided with a slot transverse to its diameter and just outside the line of the hub; of a pintle secured to said head and overlying the slot, an L-shaped element pivotally mounted at its angle on said pintle with its inner end constituting a tongue adapted to lie on the hub when its outer arm lies against the reel head, means for throwing the tongue normally off the hub, and means for resisting said throwing means.

3. The combination with a film reel comprising a hub and two heads, one of which is provided with an opening outside the line of the hub; of an L-shaped element pivoted at its angle in said opening, its inner arm constituting an arm adapted to lie on the hub and its outer arm constituting a handle, a spring throwing the tongue normally off the hub, and a hook on the reel head with which the arm may be manually engaged to hold the tongue against the hub.

4. The combination with a film reel comprising a hub and two heads, one of which is provided with an opening outside the line of the hub, and a pintle overlying said opening; of an L-shaped element having at its angle a pair of loops revolubly mounted on said pintle, its inner arm constituting a tongue adapted to lie on the hub when its outer arm lies against the reel head, and a spring coiled on the pintle between said loops with one end engaging the reel and the other engaging the element for holding the latter normally at one extreme of its movement.

5. The combination with a film reel comprising a hub and two heads, one of which has a slot transverse to its diameter outside the line of the hub, loops struck up from said head at the extremities of the slot, and a pintle overlying the slot with its ends secured in said loops; of an element of stiff wire bent near one end into a transverse loop, extending thence into a coil, thence into a tongue, thence into a second coil spaced from the first, and thence into an arm projecting through the loop and having a handle at its extremity, the coils being revolubly mounted on said pintle within said slot; and a spring coiled on the pintle between the coils with one end engaging the reel and the other engaging said loop to turn the element normally to one extreme position, for the purpose set forth.

1,216,968. SHUTTER-BOWER. HARRY EBERT, Frederick, Md. Filed July 26, 1915. Serial No. 42,008. (Cl. 16—22.)



1. In a device of the class described, a supporting-plate having a post-receiving aperture and a recess encircling said aperture, a reversible rod-supporting post mounted to swivel in said aperture and having a base engaging said recess, interengaging means on said plate and post to limit the swiveling movement of said post in either of its positions, and a bowling rod pivotally mounted on said post.

2. In a device of the class described, a supporting-plate having a post-receiving aperture and a recess encircling said aperture, a reversible rod-supporting post having a enthced base mounted to swivel in said aperture with said base seated in said recess, a lug on said plate to engage a recess in the base of said post to limit the swiveling movement of said post, and a bowing rod pivotally mounted on said post.

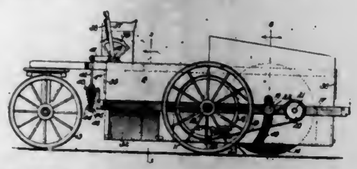
3. In a device of the class described, a supporting-plate having a post receiving aperture and a recess encircling said aperture, a reversible rod-supporting post mounted to swivel in said aperture and having a base seating in said recess, opposed notches on base of said post, a lug on said plate to engage one or the other of said notches and limit the swiveling movement of said post, and a bowing rod pivotally mounted on said post.

4. In a device of the class described, a supporting-plate having a post-receiving aperture, a rod-supporting post having a flanged base mounted to swivel in said aperture, an offset rib on said plate to give swiveling clearance to said flanged base, and a bowing rod pivotally mounted on said post.

5. In a dev'ce of the class described, a supporting plate having a post-receiving aperture therein, and a reversible rod supporting post having a flange thereon, said post adapted to be inserted in the aperture from the underside of the supporting plate and held against removal by said flange.

[Claims 6 and 7 not printed in the Gazette.]

1,216,969. STREET-SWEEPER. MARMADUKE EDWARDS, Halesite, N. Y. Filed Sept. 8, 1916. Serial No. 119,011. (Cl. 15—17.)



A sweeper including a body, a frame having side bars pivotally slung between the ends thereof on the body for vertical rocking movement and having a cross bar joining the said side bars at the front of the body, a rotary sweeper brush carried by said frame rearward of the pivotal center thereof, a rock bar on the body at the front, a lever on said rock bar, depending rods hung on the said rock bar near each side of the front of the body and adapted to be raised or lowered with the rocking of said rock bar by the lever, brackets on said cross bar of the frame through which brackets the said rods are vertically movable, means on the depending rods above said brackets adapted to engage the latter upon a downward movement of the rods to depress the cross bar and the front end of the frame and coil springs on the rods below the said brackets, said springs abutting at the upper ends against the under sides of the brackets, and exerting their pressure at the lower ends on the said rods.

1,216,970. HAIR-PIN. WILLIAM T. EDWARDS, San Diego, Cal. Filed Oct. 23, 1916. Serial No. 127,266. (Cl. 132—22.)

1. A hair pin made from a single piece of wire, the opposite ends of which constitute prongs and the bight portion of which is bent to form a central prong then bent to form outwardly divergent portions which lie at an acute angle to the median line of the hair pin, then bent inwardly to form shoulders that lie at an obtuse angle to the median line of the hair pin and are then continued to the first named prongs, that portion of the hair pin at the juncture of the divergent portions and the shoulders lying in spaced relation to the first named prongs and all of the portions of the hair pin lying in substantially the same transverse plane.

2. A hair pin made from a single piece of wire, the opposite ends of which constitute prongs and the bight portion of which is bent to form a central prong then bent to form outwardly divergent portions which lie at an acute angle to the median line of the hair pin, then bent inwardly to form shoulders that lie at an obtuse angle to the median line of the hair pin and are then continued to the first named prongs, said first named prongs comprising outwardly bent portions which conform to the outline of the divergent portions and the shoulders and lie in spaced relation thereto, all of the portions of the hair pin lying in substantially the same transverse plane.

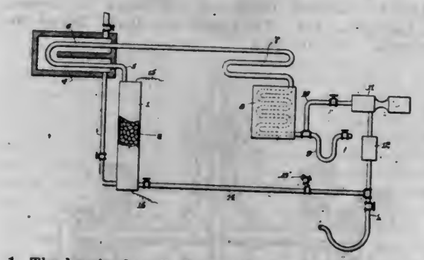


3. A hair pin made from a single piece of wire and bent at its bight portion to form a central prong, then bent to form outwardly divergent portions which lie at an acute angle to the median line of the hair pin, then bent inwardly to form shoulders that lie at an obtuse angle to the median line of the hair pin, then bent to twisted formation and then bent outwardly and downwardly to form side prongs, all of the portions of the hair pin lying in substantially the same transverse plane.

4. A hair pin made of a single piece of wire and bent at its bight portion to form a central prong, then bent to form outwardly divergent portions which lie at an acute angle to the median line of the hair pin, then bent inwardly to form shoulders that lie at an obtuse angle to the median line of the hair pin, then bent to twisted formation and then bent outwardly and downwardly to form side prongs, said side prongs comprising bent portions which conform to the outline of the divergent portions and the shoulders, all of the portions of the hair pin lying in substantially the same transverse plane.

5. A hair pin made of a single piece of wire and bent to form side prongs and a central prong, said side prongs and said central prong being bent to such shape as to constitute receiving passages, constricted passages above said receiving passages and abrupt shoulders at the upper ends of the constricted passages, all of the portions of the hair pin lying in substantially the same transverse plane.

1,216,971. TREATING OILS, &c. CARLETON ELLIS, Montclair, N. J. Filed June 3, 1913. Serial No. 771,435. (Cl. 196—26.)



1. The herein described process of making gasolene-like material which consists in subjecting decomposition products of petroleum oil heavier than gasolene and containing mist forming bodies in the presence of added gaseous decomposition products of petroleum oil heavier than gasolene to compression whereby mist forming bodies are condensed.

2. The herein described process of making gasolene-like material which consists in subjecting decomposition products of petroleum oil heavier than gasolene and containing mist forming bodies in the presence of added gaseous decomposition products of petroleum oil heavier than gasolene to the cooling action of a condenser and to compression whereby mist forming bodies are condensed.

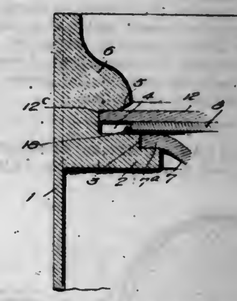
3. The herein described process of making gasolene-like material which consists in subjecting a petroleum oil heavier than gasolene in the presence of added gaseous decomposition products of petroleum oil heavier than gasolene to a decomposing temperature and compressing the resulting products and separating the thus condensed portion from the uncondensed portion.

4. The herein described process of making gasolene-like material which consists in subjecting a petroleum oil heavier than gasolene in the presence of added petroleum gaseous decomposition products to a decomposing temperature, cooling and compressing the resulting products and separating the thus condensed portion from the uncondensed portion.

5. The process of making gasolene and the like which comprises heating an oil heavier than gasolene, as for instance kerosene, to a decomposing temperature in passing the products of decomposition through a condenser and in separating the liquid portion from the gas, in compressing the gas and removing further liquefiable products, and in adding a quantity of the gas to the raw material entering the zone of heat decomposition.

[Claim 6 not printed in the Gazette.]

1,216,972. BARREL-HEAD. HARTLEY ELLIS, Cleveland, Ohio. Filed June 18, 1915. Serial No. 34,832. (Cl. 220—124.)



1. The combination with a barrel body, of a ring secured to the inner side of the body near one end, said ring having a flange provided with a shoulder, a closure, the face of the closure engaging the flange and the edge of the closure engaging the shoulder on the flange, an annular gasket disposed for bridging the joint between the shoulder and the edge of the closure, and a locking member arranged to engage a portion of the ring for clamping the gasket.

2. The combination with a barrel body, of a ring secured to the inner side of said body at one end thereof, said ring being provided with an inwardly extending flange having a shoulder and a groove adjacent to said shoulder, a closure arranged to engage the flange, the edge of the closure abutting the shoulder, an annular gasket covering the joint between the shoulder and the edge of the closure, and a locking plate having a portion arranged to enter said groove, a portion of said locking plate being arranged to bear on said gasket.

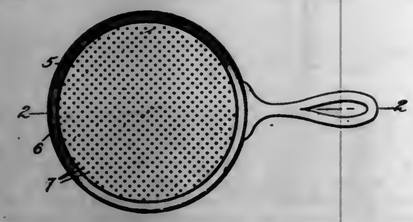
3. The combination with a barrel body, of a ring secured to the inner side of said body at one end thereof, said ring being provided with an inwardly extending flange having a shoulder and a groove adjacent to said shoulder, one wall of the groove being beveled, a closure engaging the flange, the edge of the closure abutting the shoulder, an annular gasket overlapping the abutting portion of the closure of the shoulder, and a locking device having a

movable portion adapted to enter the groove and to engage the beveled wall thereof for clamping the gasket in position.

4. The combination with a barrel body, of a ring secured to the inner side of the body at one end thereof, said ring being provided with an inwardly extending flange having an upper bearing surface, a concave closure having a laterally bent peripheral portion arranged to engage said bearing surface, said flange being provided with a shoulder in engagement with the edge of said closure and having a groove adjacent to said shoulder, the opposite wall of the groove having a beveled portion at the outer edge of the groove, an annular gasket overlapping the abutting portions of the closure of the shoulder, and a locking device arranged to bear against said annular gasket and having movable locking members provided with beveled end portions arranged to engage the beveled walls of said groove in the initial movement of the locking members, thereby forcing the locking device toward said gasket.

5. The combination with a barrel body, of a ring secured to the inner side of the body at one end thereof, said ring being provided with an inwardly extending flange having an upper bearing surface, a concave closure having a laterally bent peripheral portion arranged to engage said bearing surface, said flange being provided with a shoulder in engagement with the edge of said closure and having a groove adjacent to said shoulder, a portion of said groove having parallel walls, one of the walls of the groove having a beveled portion at the outer edge of the groove, an annular gasket overlapping the abutting portions of the closure at the shoulder, a locking device arranged to bear against said annular gasket and having movable locking members provided with beveled end portions arranged to engage the beveled walls of said groove in the initial movement of the locking members, thereby forcing the locking device toward said gasket, the further movement of said locking members beyond the beveled wall of the groove causing the engagement of the locking members with the parallel walls of the groove, thereby positively locking the parts in position.

1,216,973. FRYING-PAN. GOTTLIEB EPPRECHT, Allentown, Pa. Filed Jan. 6, 1916. Serial No. 70,667. (Cl. 53—7.)



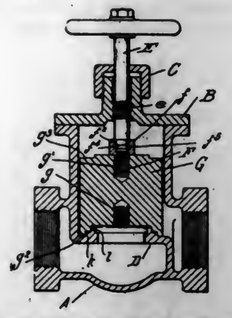
1. A frying pan or the like provided with a multitude of closely arranged minute depressions in the frying surface serving as wells for fats to insure an adequate supply and even distribution over the entire frying surface.

2. A frying pan or the like, provided with a multitude of minute depressions arranged in a suitable design in the frying surface, and serving as reservoirs for fat.

3. A frying pan or the like, provided with a multitude of minute depressions closely arranged in the frying surface and forming bosses beneath said surface, said depressions serving as reservoirs for fat.

1,216,974. VALVE. EMANUEL FISHER, Providence, R. I. Original application filed Aug. 28, 1912, Serial No. 717,455. Divided and this application filed June 29, 1915. Serial No. 36,932. (Cl. 137—4.)

1. In a device of the type set forth, the combination of a valve seat comprising a series of concentric external steps, and a cylindrical valve comprising a flat operating end face provided integrally with a series of concentric cavities adapted to severally embrace the steps with the concentric faces of said steps and cavities in engagement with each other.



2. In a device of the type set forth, the combination of a valve seat comprising a plurality of concentric internal steps, a cylindrical valve provided with an operating end face, and integral concentric steps upon said face adapted to register with the first mentioned steps with the concentric faces of the steps of said valve and seat in contact with each other.

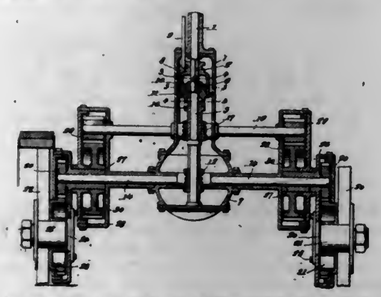
3. In a device of the type set forth, the combination of a valve seat comprising concentric external and internal steps, a reversible cylindrical valve comprising integral flat operating end faces, one of said faces being provided with cavities adapted to embrace the external steps, and a step on the other face adapted to register with one of the internal steps.

4. As a new article of manufacture, a cylindrical valve provided with integral end operating faces, one of said faces being provided integrally with concentric cavities of different diameters, and a step upon the other face, said faces being also provided with threaded recesses, said valve being reversible whereby either end may be used with a stepped valve seat.

5. In a device of the type set forth, the combination of a valve casing, a valve seat in the casing comprising concentric steps, a reversibly mounted cylindrical valve slidably mounted in the casing, one end of said valve being provided with a cavity adapted to coöperate with one step, and a step upon the other end of the valve adapted to engage another step, the opposite faces of said valve being provided with threaded apertures and a valve stem removably engageable with either of said apertures.

[Claims 6 to 9 not printed in the Gazette.]

1,216,975. MOTOR-VEHICLE. WILLIAM L. FODREA, Arkadelphia, Ark. Filed July 14, 1914. Serial No. 850,965. (Cl. 21—90.)



1. In a motor vehicle, propelling mechanism including the combination of driving wheels, an axle eccentrically mounted relatively to the driving wheels a driving connection between the axle and supporting wheels to drive the said wheels, and means for producing orbital movement of the axle and connection relative to the drive wheels, said means contacting with the ground to advance the vehicle.

2. In a propelling means for vehicles, supporting and driving wheels therefor, a power means connected with said driving wheels, a means movable in the path of a circle and into and out of engagement with the ground to advance the machine, and a connection between said last mentioned means and the power means.

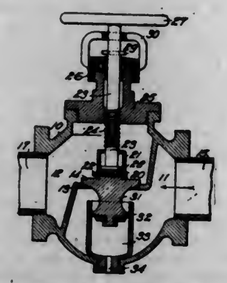
3. In a vehicle, supporting and driving wheels therefor, a power means, a connection between said power means and said wheels, a means movable bodily in the path of a circle and intermittently into and out of engagement with the ground to propel the machine, a connection between said last mentioned means and said power means, and a clutch means associated with said power means for the purpose specified.

4. In a vehicle, supporting and driving wheels therefor, a power means, a connection between said power means and said wheels, a means movable bodily in the path of a circle and into and out of engagement with the ground to propel the vehicle, said last mentioned means forming a part of the connection between said power means and said wheels, a connection between said power means and the bodily movable means, and a single clutch operable to control operation of both the wheel driving means and the bodily movable means, substantially as described.

5. In a vehicle, the combination with the supporting and driving means and the power means therefor, of an auxiliary propelling means bodily movable in the path of a circle and into and out of engagement with the ground, and a means to drive said auxiliary means through the agency of said power means.

[Claims 6 to 11 not printed in the Gazette.]

1,216,976. COMBINED STOP-VALVE, AUTOMATIC LIMITED-PRESSURE VALVE, AND FULL-PRESSURE SUPPLY-VALVE. THOMAS BURTON FORD, Brooklyn, N. Y. Filed Sept. 23, 1915. Serial No. 52,173. (Cl. 137—4.)



1. A combined stop valve, automatic limited pressure valve and full pressure supply valve, comprising a valve body provided with an inlet, an outlet and a valve seat intermediate the said inlet and outlet, a valve adapted to be seated on the said valve seat and provided with a pressure reduction means for producing an effective operating area for the said valve, a valve stem, manually controlled means for moving the said valve stem in the direction of its length, lost motion connection between the said valve and the valve stem, and a removable limiting means on the said valve stem to limit the movement of the valve for a limited pressure position or to allow the valve to be moved into full pressure position.

2. A combined stop valve, automatic limited pressure valve and full pressure supply valve, comprising a valve body provided with an inlet, an outlet and a valve seat intermediate the said inlet and outlet, a valve adapted to be seated on the said valve seat and provided with a pressure reduction means for producing an effective operating area for the said valve, a valve stem under the control of an operator and slidably engaged by the said valve, the said valve stem normally holding the said valve to its seat, and removably limiting means connected with the said valve stem to allow partly automatic opening of the valve for a limited pressure supply when the said means are in one position, and to allow full opening of the valve for a full pressure supply when the said means are in another position.

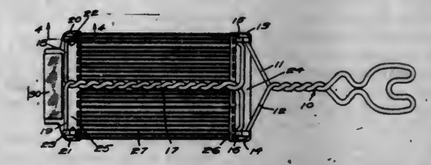
3. A combined stop valve, automatic limited pressure valve and full pressure supply valve, comprising a valve body provided with an inlet, an outlet and a valve seat intermediate the said inlet and outlet, a valve adapted to be seated on the said valve seat and provided with a pressure reduction means for producing an effective operating area for the said valve, a valve stem under the control of an operator and slidably engaged by the said valve, the valve stem normally holding the said valve to its seat, the said valve stem being movable in the direction of its length, a fixed part on the said valve body, and a removable member on the said valve stem and adapted to abut against the said fixed part to limit the movement given to the said stem by an operator, the said member when removed allowing the stem and with it the said valve to be moved to full open position.

4. A combined stop valve, automatic limited pressure valve and full pressure supply valve, comprising a valve body provided with an inlet, an outlet and a valve seat intermediate the said inlet and outlet, a valve adapted to be seated on the said seat, a pressure reduction means for the said valve and under the influence of atmospheric pressure, and exterior mechanical limiting means for limiting the travel of the valve to allow the said pressure reduction means to automatically retain a ratio pressure.

5. A combined stop valve, automatic limited pressure valve and full pressure supply valve, comprising a valve body provided with an inlet, an outlet and a valve seat intermediate the said inlet and outlet, a valve adapted to be seated on the said seat, a pressure reduction means for the said valve and under the influence of atmospheric pressure, and exterior mechanical limiting means for limiting the travel of the valve to allow the said pressure reduction means to automatically retain a ratio pressure, the said mechanical limiting means having a member removable at the will of an operator to allow moving the valve into full open position.

[Claims 6 and 7 not printed in the Gazette.]

1,216,977. COMB-CLEANER. ANNIE FOSTER, Venice, Cal. Filed Aug. 28, 1916. Serial No. 117,312. (Cl. 132—17.)

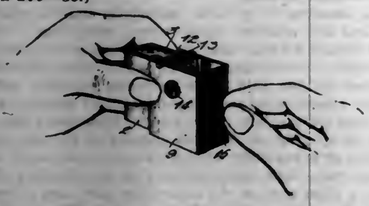


1. A comb cleaner, comprising a frame, a pair of oppositely disposed frame plates secured at the opposite ends thereof and having a series of equi-distant perforations formed the length thereof, outwardly extending brush receiving members formed integral with one of said plates, a brush detachably mounted between said members and a continuous fibrous cleaning element adapted to be strung through the perforations and from one plate to the other in a manner to provide a series of parallel cleaning strands.

2. A comb cleaner, comprising a frame formed of wire to provide a handle, a bridge portion and mounting legs, a pair of frame plates secured at opposite ends of said bridge portion to said legs and formed with a series of perforations throughout their length, a continuous fibrous cleaning element adapted to be strung through the perforations and from one plate to the other in a manner

to form parallel cleaning strands, a pair of outwardly extending brush receiving members formed integral with one of the frame plates and a brush adapted to be detachably mounted between said members.

1,216,978. MATCH-BOX. EMLEN A. FRANKLIN, Fort Morgan, Colo. Filed Jan. 29, 1916. Serial No. 75,105. (Cl. 206—35.)



1. A match box carrier comprising a holder consisting of an end wall, side walls, and a base partially closing the bottom of the said holder, the central portion of the ends of the side walls at the open end of the holder being inwardly bent to form retaining lips, and the remaining portion of the said ends of the side walls being outwardly bent to form stops, a cover for the said holder consisting of an end wall, side walls, and a base, the ends of the side walls at the open end of the cover being inwardly bent to form stops, a retaining band extending across the open top of the said cover, the said cover having an elongated slot in its end wall, and an aperture adapted to extend over the top of the bowl of a pipe in one of the side walls, the said cover fitting over the said holder with its end wall adjacent the open end of the holder, and its sides lying over the sides of the holder, the said cover being adapted to slide upon the said holder, and being limited in its outward movement by the stops upon the same engaging the outwardly bent stops upon the said holder.

2. A match box carrier comprising a holder consisting of an end wall, side walls, and a base partially closing the bottom of the said holder, retaining means upon the said side walls for holding a match box within the said holder, a cover for the said holder sliding upon the same, and adapted when in its extended position to form a wind shield as and for the purpose specified.

3. A device of the character specified, comprising a holder having an open end, portions of the said open end being inwardly bent to form retaining lips, portions of the said open end being outwardly bent to form stops, a cover for the said holder having an open end and adapted to slide thereon, the said open end having lips adapted to coact with the above mentioned stops to limit the outward movement of the said cover.

4. A match box carrier comprising a holder having a base partially closing the bottom of the said holder, a cover open at its top, adapted to slide upon the said holder, and a retaining band extending across the open top of the said cover, as and for the purpose specified.

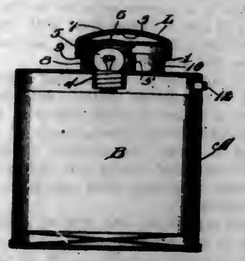
5. The combination with a match holder of a sliding cover therefor forming a wind shield in its extended portion, the said cover having an opening in its side adapted to extend over the top of the bowl of a pipe, and a slot in its end so positioned that a match inserted therein will be above the said opening.

[Claims 6 to 9 not printed in the Gazette.]

1,216,979. COMBINED FLASH-LIGHT AND TOILET ARTICLE. ADOLPH FREED, Highwood, Mont. Filed Aug. 16, 1916. Serial No. 115,323. (Cl. 240—8.4.)

1. In a flash light, the combination with a casing, a source of light therein, and a lamp carried by the casing and connected with said source; of a ring carried by the casing and inclosing the lamp, and means rotatably mounted around the ring for causing the lamp to project its rays of light upon an object at the end of the casing only, or upon an object at the side of the casing only, at the will of the operator.

2. In a flash light, the combination with a casing, and an outwardly facing mirror panel carried by one side wall thereof; of a source of electricity within the casing, a fixed bulb connected therewith, a ring inclosing the bulb and fixed in one end wall of the casing, and means for causing the bulb to project its light beams from the ring upon an object squarely in front of said mirror, or in another direction at will.



3. In a flash light, the combination with a casing, and an outwardly facing mirror panel carried by one side wall thereof; of a source of electricity within the casing, a fixed bulb connected therewith, a ring inclosing the bulb and fixed in one end wall of the casing, the ring having axial and radial openings for the passage of light from the bulb, and means for selectively closing these openings, for the purpose set forth.

4. In a flash light, the combination with a casing, and an outwardly facing mirror panel carried by one side wall thereof; of a source of electricity within the casing, a fixed bulb connected therewith, a ring on the end wall of the casing inclosing said bulb and opening longitudinally in line with the casing and also laterally toward that side of the casing which carries the mirror, and an element movably mounted on the ring for selectively uncovering either opening and covering the other, for the purpose set forth.

5. In a flash light, the combination with a casing containing a battery, a socket carried on one wall of the casing, and a bulb within the socket connected with said battery; of a ring mounted on said wall around the bulb and containing an opening off-center to the ring but coaxial with the bulb, and a shutter rotatably mounted around the ring and having an off-center opening adapted to be thrown into register with that of the ring, or out of such register selectively at will.

[Claim 6 not printed in the Gazette.]

1,216,980. PIGMENT AND METHOD OF PREPARING THE SAME. HENRY A. GARDNER, Washington, D. C. Filed July 14, 1916. Serial No. 109,312. (Cl. 134—58.)

1. A new composition of matter, comprising an organic vehicle and a pigment, said pigment containing a substantial proportion of an insoluble compound of zirconium.

2. As an new composition of matter, a paint-pigment comprising zirconium oxid and a base pigment having a lower refractive index than zirconium oxid.

3. As a new composition of matter, a paint-pigment containing a substantial proportion of an insoluble precipitated compound of zirconium.

4. The method of preparing a pigment containing zirconium, which consists in precipitating an insoluble compound of zirconium in presence of a base pigment the hiding power of which is inferior to that of zirconium oxid.

5. The method of preparing a pigment containing zirconium, which consists in precipitating an insoluble compound of zirconium in presence of a base pigment the refractive index of which is less than that of zirconium oxid.

1,216,981. PIGMENT AND METHOD OF PREPARING THE SAME. HENRY A. GARDNER, Washington, D. C. Filed Oct. 26, 1916. Serial No. 127,923. (Cl. 134—58.)

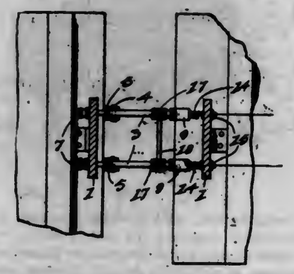
1. A new composition of matter, comprising an organic vehicle and a pigment, said pigment containing a substantial proportion of an insoluble compound of beryllium.

2. As a new composition of matter, a paint-pigment comprising beryllium oxid and a base pigment.

3. As a new composition of matter, a paint-pigment containing a substantial proportion of an insoluble precipitated compound of beryllium.

4. The method of preparing a pigment containing beryllium, which consists in precipitating an insoluble compound of beryllium in presence of a base pigment.

1,216,982. RAILWAY-SIGNAL. ALBERT ERNEST GAUTHIER, Bay City, Mich. Filed Jan. 6, 1915. Serial No. , 824. (Cl. 246—28.)



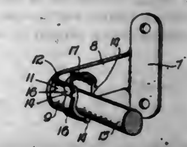
1. In a railway signal, the combination with the cars of a train, of a signaling means to be carried by the locomotive of the train, supporting plates depending from the ends of the cars, circuit closing members carried by the supporting plates at the ends of the cars of the train, each of the circuit closing members comprising contact clips, pivoted contact bars supported above the contact clips, and adapted to engage said clips by the force of gravity when released, and means to releasably hold the bars in a horizontal position to be released when the cars are uncoupled, an electrical connection between said bars, clips and the supporting means.

2. The combination with the cars of a train having a signal carried in the locomotive of the train, of an electrical circuit, and supporting plates carried by and depending from the opposite ends of the cars, brackets arranged on some of said plates, bars pivotally mounted in said brackets, spring clips carried by other of said plates and adapted to receive the free ends of the bars therein for holding the same in horizontal position, said plates, brackets and spring clips being in said electrical circuit, contact plate clips carried by said plates and positioned below the brackets and in direct alinement therewith, said contact plate clips being in the said electrical circuit and adapted to receive the ends of the bars, when said cars are uncoupled, for closing said circuit.

3. The combination with the cars of a train of an electrical circuit a signal carried in the locomotive of the train, said signal being in said electrical circuit, and means carried by the cars of the train to operate the signaling means should any one of the cars become uncoupled, said means comprising brackets, pivoted contact bars pivotally secured to said brackets, contact clips arranged below and in direct alinement with said brackets, means for holding the bars out of contact with the clips when the cars are coupled and adapted to release said bars whereby they may drop into engagement with the clips and close the circuit, and means carried by said bars for preventing the bars on the rear end of the rear car of the train from contacting with the clips.

1,216,983. CURTAIN-ROD. JULIUS GOLDBERG, Chicago, Ill. Filed Apr. 29, 1916. Serial No. 94,472. (Cl. 156—22.)

1. In a support for a curtain rod or the like, the combination of a member adapted for attachment to a suitable support, an open socket outwardly extending therefrom, and an encircling clip slidably mounted on the socket and of less width than the socket, and adapted to be retracted to permit the insertion of the end of the rod and advanced to overlie the end, substantially as described.



2. In a support for a curtain rod or the like, the combination of a member adapted for attachment to a suitable support, an open socket outwardly extending therefrom, and an encircling clip slidably mounted on the socket and of less width than the socket, and adapted to be retracted to permit the insertion of the end of the rod and advanced to overlie the end, and having a portion of the clip which bridges the open side of the socket incut and upturned to reduce the width of this portion of the clip, and to furnish a finger piece or flange adapted to facilitate the manipulation of the clip, substantially as described.

3. In a support for a curtain rod or the like, the combination of a member adapted for attachment to a suitable support, an open socket outwardly extending therefrom, an encircling clip slidably mounted on the socket and of less width than the socket, and adapted to be retracted to permit the insertion of the end of the rod and advanced to overlie the end, and a stop member formed on the outer edge of the socket to restrict the sliding movements of the clip, substantially as described.

4. In a support for a curtain rod or the like, the combination of a member adapted for attachment to a suitable support, an open socket outwardly extending therefrom, an encircling clip slidably mounted on the socket and of less width than the socket, and adapted to be retracted to permit the insertion of the end of the rod and advanced to overlie the end, and having a portion of the clip which bridges the open side of the socket incut and upturned to reduce the width of this portion of the clip, and to furnish a finger piece or flange adapted to facilitate the manipulation of the clip, and a stop member formed on the outer edge of the socket to restrict the sliding movements of the clip, substantially as described.

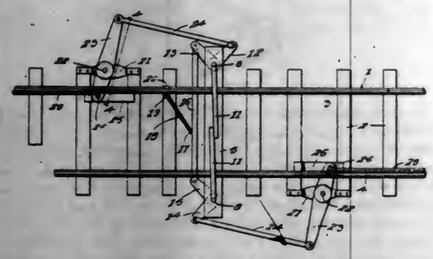
5. In a support for a curtain rod or the like, the combination of a member adapted for attachment to a suitable support, a U-shaped socket secured thereto and outwardly extending therefrom, and being open on the upper side to receive the end of a rod, and having its side walls below the upper edges inwardly bent to afford a throat of less diameter than the space between the upper edges, and a loop-shaped clip slidably mounted on the socket portion and of less width than the socket, and formed to closely embrace the walls of the socket and slidable thereon to permit the insertion of the end of the rod when retracted, and to prevent displacement of the rod when advanced, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,216,984. DOOR. BERT GOOCH, Johnston City, Ill., assignor of one-half to John F. H. Dearborn, Johnston City, Ill. Filed Oct. 20, 1915. Serial No. 56,950. (Cl. 269—7.)

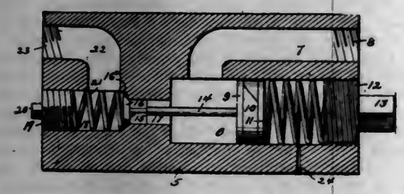
1. The combination with a pair of mine doors mounted on vertical pivots, arms extending outwardly from the pivots, a link connecting the arms whereby the doors are moved simultaneously, arms extending at right angles from the first mentioned arms, links pivoted to the free ends of the last mentioned arms, levers pivoted beside the track of a mine railroad, the outer ends of said levers being pivotally connected to the last mentioned links, guides having the inner ends of said levers slidable thereover, the inner ends of said levers having slots formed therein and pairs of rail sections pivoted together at one end and having their opposite ends extended into the slots in the lever and a stationary pivot for the opposite ends of said rail sections.

2. In a mine door opening mechanism, a pair of levers pivoted adjacent the track of a mine railway, the outer ends of said levers being connected to the doors, a pair of jointed rail sections connected to the inner end of each lever, said sections being hinged at their ends and



adapted to bow upwardly, a pivotal connection connecting the forward end of said rail sections to the lever, an adjustable pivot connecting the rear ends of the levers to the track and a compression spring for forcing the levers upwardly to move the same off from a dead center when the doors are to be returned to closed position.

1,216,985. REDUCING-VALVE. DOUGLAS B. GREEN, Anna, Ill., assignor of one-third to Edward Sanders and one-third to Leo Sanders, San Diego, Cal. Filed Oct. 23, 1916. Serial No. 127,284. (Cl. 50—35.)

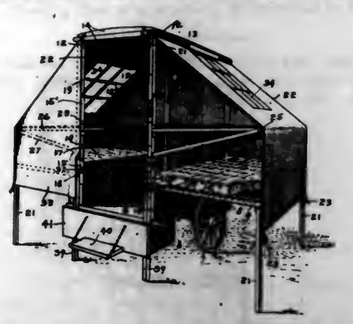


A reducing valve comprising an integral block bored to form a chamber which opens at one end of the block but terminates short of the other end of the block, a plug threaded into the outer end of said chamber, a piston mounted in said chamber, a spring bearing between the piston and the plug, an extension carried by the piston, a second chamber opening at the opposite end of the block and extending part way therethrough and terminating short of the first named chamber, a passage in longitudinal alinement with both of said chambers and establishing communication therebetween, a valve seat formed at the junction of said passage and the last named chamber, a spider carried by said valve and guided in the channel and arranged to be engaged by the extension of the piston, a plug threaded in the outer end of the last named channel, a spring bearing between the plug and the valve and branches leading from each of said chambers to the corresponding end of the block.

1,216,986. TRAILER-CAMP. EDWARD H. HABIG, Indianapolis, Ind. Filed June 15, 1916. Serial No. 103,787. (Cl. 21—7.)

1. The combination, with a trailer having a bed, of a rigid canopy-deck covering the bed, standards securing the deck to the bed, said standards being transversely divided hinged sections adjustable in length to raise and lower the deck, spring sleeping beds one side of each of which is supported by the trailer-bed, legs supporting the other sides, and tent curtains secured to the deck and extending over the sleeping beds and secured to the legs below the bed.

2. The combination, with a trailer having a bed, of a rigid canopy-deck covering the bed, standards securing the deck to the bed, said standards being in adjustable jointed members to vary the lengths of the standards and raise and lower the deck, spring sleeping beds one side of each of which is supported by the trailer-bed, legs supporting the other sides, tent curtains secured to the deck and extending over the sleeping beds and secured to the legs of the bed and purlins supported from the standards, over which said tent curtains are stretched.



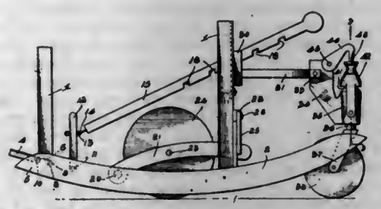
3. The combination, with a trailer having a bed, of a rigid canopy-deck covering the bed, standards in a plurality of transversely divided members hinged together at their joints and securing the deck to the bed, sleeping beds outside of the trailer-bed, legs partly supporting the sleeping beds, and tent curtains secured to the deck and extending over the sleeping beds and secured to the legs of the latter.

4. The combination, with a trailer having a bed, of a canopy-deck covering the bed, standards connecting the bed with the deck said standards being in sections hinged together for folding to vary the height of the deck, means to make the joints rigid, sleeping beds supported laterally outside of and in part by the trailer bed, legs also supporting the sleeping beds, and tent curtains secured to the deck and extending over the sleeping beds and secured to the legs of the latter.

5. The combination, with a trailer bed, of a canopy covering the bed, and standards connecting the bed with the canopy, said standards being in four transversely divided sections each, so hinged together at the joints that the two middle sections will fold together to shorten the standards and lower the canopy, and means to make the joints rigid when not broken.

[Claims 6 to 12 not printed in the Gazette.]

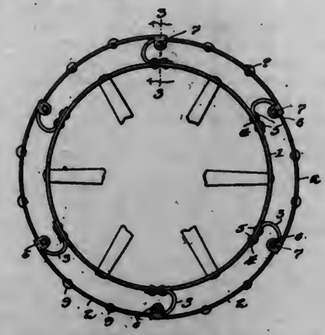
1,216,987. INVALID'S CHAIR. DANA G. HADLEY, West Newbury, Mass. Filed Mar. 5, 1915. Serial No. 12,351. (Cl. 155—11.)



In a chair structure, a chair body including supporting legs, rockers carried by said legs, arms pivotally connected to said rockers, supporting wheels carried by said arms, means for holding said arms against pivotal movement for positioning said wheels to relieve said rockers of the weight of said body, a pair of braces connected to certain of said supporting legs, a bracket carried by said braces and having a bearing formed thereon, a shank slidably and rotatably carried by said bearings, a shank lock pivotally connected to said bearings and adapted to engage the upper end of said shank for holding it against

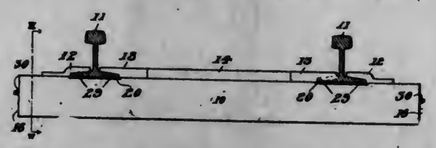
upward movement, and a keeper pivotally carried by said bracket for engagement with said shank lock for holding said shank lock in a locking position.

1,216,988. RESILIENT TIRE. WILLIAM HEROLD HANCOCK, Excel, Ala. Filed Aug. 9, 1916. Serial No. 114,079. (Cl. 152—8.)



A tire comprising an endless base band, a tread member normally concentric with said band and comprising a plurality of arcuate sections arranged in spaced relation to the band and overlapping and slidingly related to each other, each tread section having one end portion thereof recurved in the form of a hook and fixedly secured to the base band, each tread section being further provided at its free end with inwardly extending ears which ride against the side edges of the adjoining and overlapping tread section, and a bolt connecting said ears and extending under the adjoining tread section in proximity to the recurved hook-shaped portion thereof, whereby the expansive movement of the tread member is limited by said bolt coming in contact with said recurved hook-shaped portion of the adjoining tread section.

1,216,989. RAIL TIE AND FASTENER. IVAN HANKOVICH and WINKO HANKOVICH, East Chicago, Ind. Filed Oct. 19, 1916. Serial No. 126,579. (Cl. 238—5.)



1. A device of the class described comprising a rail tie of channel formation including side walls, end walls and a bottom wall, the inner faces of the side walls being upwardly and inwardly inclined from the bottom wall, the central portions of the inclined faces of the side walls being vertically disposed with notches formed therein, rail supporting blocks having angularly disposed side walls received in said channel tie through the central portion thereof and moved to a position whereby the inclined side walls thereof engage the inclined inner faces of the tie walls, enlarged heads carried by the rail supporting blocks, said blocks being cut away on their opposed faces adjacent said heads, dove-tail sockets formed in the upper sides of said cut away portions, cushion blocks received in said dove-tail sockets, rail engaging flanges carried by said blocks, a screw passing through each end wall of said tie adapted to engage the outer faces of the outwardly positioned blocks, a rod having threaded engagement with one of said inwardly positioned blocks and a loose engagement with the other one of said inwardly positioned blocks, a rectangular portion formed on said rod adjacent said vertical side walls, said notches to permit movement of a wrench applied to said portion and a spacing cover seated on said tie between the inner rail supporting blocks, means for securing the same thereon and arms depending from said spacing plate adapted to straddle the rectangular portion of said rod to prevent rotary movement thereof whereby the rail supporting blocks are held in adjusted positions.

2. A device of the class described comprising a rail tie of channel formation including side walls, end walls and a bottom wall, the inner faces of the side walls being upwardly and inwardly inclined from the bottom wall, the central portions of the inclined faces of the side walls being vertically disposed with notches formed therein; rail supporting blocks having angularly disposed side walls received in said channel tie through the central portion thereof and moved to a position whereby the inclined side walls thereof engage the inclined inner faces of the tie walls, enlarged heads carried by the rail supporting blocks, said blocks being cut away on their opposed faces adjacent said heads, dove-tail sockets formed in the upper sides of said cut away portions, cushion blocks received in said dove-tail sockets, rail engaging flanges carried by the blocks, a screw passing through each end wall of said tie adapted to engage the outer faces of the outwardly positioned blocks, a rod having threaded engagement with one of said inwardly positioned blocks and a loose engagement with the other one of said inwardly positioned blocks, a rectangular portion formed on said rod adjacent said vertical side walls, said notches to permit movement of a wrench applied to sand portion and a spacing cover seated on said tie between the inner rail supporting blocks, means for securing the same thereon and arms depending from said spacing plate adapted to straddle the rectangular portion of said rod to prevent rotary movement thereof whereby the rail supporting blocks are held in adjusted positions, and rails positioned on said cushion blocks beneath the flanges carried by the supporting blocks, the upper edges of the side walls of the tie being cut away whereby the rails are slightly spaced therefrom.

3. A rail tie and support comprising a tie member of channel formation, the opposed inner walls of the tie being inclined inwardly and upwardly, the central portion of the inner faces of the walls of the tie being vertical, rail supporting blocks having side walls angularly disposed and adapted for reception in said channel tie through the central portion thereof and subsequently moved to cause the side walls thereof to engage the inclined inner faces of the side walls of the tie, independent adjusting means for the outwardly positioned rail supporting blocks, a single element for simultaneously adjusting the inwardly positioned blocks and means engaging the single element to hold the same in adjusted position.

4. A device of the class described comprising a channel tie, rail supporting blocks slidably mounted therein and interlocked therewith, rails supported on said blocks, independent adjusting means for the outwardly positioned blocks, a single element for simultaneously adjusting the inwardly positioned blocks, and means associated with the single element for holding the same in adjusted position.

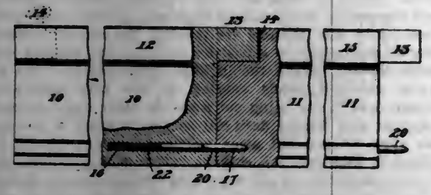
5. A device of the class described comprising a channel tie, sliding blocks interlocked therewith, cushion means carried by said blocks for supporting a rail in spaced relation to said tie, independent adjusting means for the outwardly positioned blocks and means for simultaneously adjusting the inwardly positioned blocks.

[Claims 6 to 8 not printed in the Gazette.]

1,216,990. RAIL-JOINT. IVAN HANKOVICH and WINKO HANKOVICH, East Chicago, Ind. Filed Oct. 19, 1916. Serial No. 126,580. (Cl. 239—8.)

1. A rail joint including complementally formed rail ends, the end of one rail having a dove-tail tongue projection at the tread thereof, a longitudinal socket formed adjacent the base thereof, the said rail having a longitudinally extending slot communicating with said socket

over a portion of its length, an angular extension formed at one end of said slot, a spring mounted in said socket, a pin mounted in said socket against the tension of said spring, a handle extending through said slot and engaging said pin, the other rail end having a dove-tail socket formed in the tread portion thereof adapted for reception of the dove-tail tongue and a socket formed adjacent the base thereof adapted for the reception of the sliding pin, the said handle adapted to be moved into the angular extension of said slot to prevent accidental displacement thereof.



2. A rail joint including complementally formed rail ends, one rail end having a tongue projection at the tread thereof and a spring pressed pin at the base thereof and the other rail having a seat for the reception of said tongue and a socket for the reception of said pin and cooperating means carried by the pin and pin carrying rail to prevent accidental retraction of the pin.

1,216,991. HOSE-SUPPORTER. CHARLES J. HAUSEN, New York, N. Y. Filed Mar. 2, 1916. Serial No. 81,658. (Cl. 241—1.)



1. A hose supporter comprising a flexible supporting member, obliquely disposed means for movably attaching the ends of said member to a corset or like garment at the front and rear of the garment, a loop flexibly secured to the garment at its hips in an oblique position and slidably engaged by the said supporting member to form front and rear depending portions, clasps adapted to engage the hose, loops pivotally mounted on said clasps and slidably engaging said depending portions of the flexible supporting members.

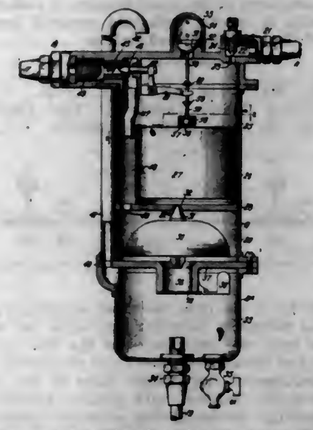
2. A hose supporter comprising a flexible supporting web, means for movably attaching the front and rear ends of the same to a corset or like garment at the front and rear of the garment, a segmental loop flexibly secured to the garment at the hips in an oblique position and slidably engaged by the said supporting member to form front and rear depending portions, and clasps adapted to engage the hose, said clasps having a segmental loop provided with rounded sides and pivotally secured to the clasps, said loops slidably engaging said depending portions of the flexible supporting member.

3. A hose supporter comprising a flexible supporting member including front and rear angular pendent portions, and a clasp for engaging the hose and slidably engaging the pendent portions at their apices said clasps including a segmental open loop pivotally secured to the clasp and having rounded sides.

4. A hose supporter comprising an elastic band and a corset or like garment, separate means for movably attaching the ends of the band to the corset or like garment at the front and rear of the corset, said attaching means being secured to the corset or like garment at points adjacent a vertical plane defining the vertical median line of the garment, said attaching means being oppositely inclined to permit the band to converge downwardly and lie smooth in converging position and allow the band to slide easily, a segmental loop attached to the garment at the hip portion and inclined forwardly and upwardly the middle portion of said band slidably engaging said hip loop and forming two pendent V-shaped portions, and clasps adapted to engage the hose and having a sliding connection with the said pendent band portions at the apices thereof.

5. A hose supporter comprising an elastic band for attachment to a corset or like garment, separate means for movably attaching the ends of the band to the garment at its front and rear, said means flexibly attached to the front and rear of the garment at points adjacent a vertical plane defining the vertical median line of the garment and consisting of a pair of oppositely inclined segmental loops whereby the end portions of the band are permitted to converge downwardly and lie smooth in converging position, a segmental loop flexibly connected to the garment at its hip portion and substantially midway between the front and rear segmental loops, said hip loop being inclined forwardly and upwardly and receiving and guiding the band to form front and rear pendent V-shaped members, and clasps slidably carried at the apices of the V-shaped members.

1,216,992. VACUUM-OPERATED LIQUID-FUEL-FEEDING DEVICE. EDGAR R. HAWLEY, Salt Lake City, Utah. Filed Feb. 25, 1916. Serial No. 80,551. (Cl. 158—36.)



1. An apparatus of the class described including a reservoir, in the bottom thereof, a fuel-receiving chamber at the top of the feeding device, a second fuel-receiving chamber beneath the first chamber between the same and the reservoir, there being an opening from the upper chamber to the intermediate chamber and an opening from the intermediate chamber to the reservoir, means to connect the reservoir with a carbureter to deliver fuel to the latter, means to connect the upper receiving chamber with a fuel supply, said upper chamber having an air inlet, continuously acting suction-producing means communicating with the upper chamber and tending to produce a vacuum in the feeding device, a valve controlling the opening between the intermediate chamber and the reservoir and subject to a vacuum in the feeding device, a float-operated valve in the intermediate chamber controlling the opening leading to said chamber from the upper chamber, a float in the upper chamber, and a valve operated by said float and controlling the said air inlet.

2. An apparatus of the class described including a reservoir, means to connect said reservoir with a carbureter to deliver fuel to the latter, a fuel-receiving float chamber above the reservoir, a fuel-receiving float chamber above the first chamber, said feeding device having a fuel inlet, the first chamber having an opening for the flow thereto of fuel, the said chambers communicating so that fuel after filling the first receiving chamber will rise in the float chamber above, continuously acting means tending to draw in the fuel from the said supply, means to intermittently cause the cessation of the fuel delivery, a float in the upper chamber controlling said last-mentioned means, a float in the second chamber, and a valve controlled by said second float and controlling communication from the upper float chamber to the said first chamber.

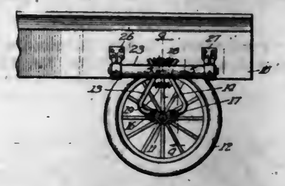
3. An apparatus of the class described including a reservoir, means to connect the reservoir with a carbureter to deliver fuel to the latter, a fuel-receiving chamber above the reservoir and having an outlet in the bottom thereof, means to establish communication between the said outlet and the reservoir, a fuel-receiving float chamber in said first chamber, a float in the float chamber, means to produce a vacuum in the said chambers, an air inlet leading to the first chamber, a valve controlling said air inlet and operated by the rising and falling of the float to admit air and break the vacuum for permitting fuel to flow to the reservoir, and means independent of the outlet in the bottom of the first chamber to discharge the fuel from the float chamber and permit the float to fall after the level of the fuel has lowered in the first-mentioned chamber.

4. An apparatus of the class described including a reservoir, means to connect said reservoir with a carbureter to deliver fuel to the latter, a fuel-receiving chamber above the reservoir, the bottom of the said chamber having an outlet, means to establish communication between said outlet and the reservoir, a float chamber within the first mentioned chamber and in communication with said chamber at a point considerably above the bottom of the float chamber, the bottom of the said float chamber having an outlet means to establish communication between the last-mentioned outlet and the reservoir, means controlling the outlet of fuel from the float chamber and adapted to hold the fuel in the float chamber until the fuel has lowered in the first chamber, suction-producing means to create a vacuum in the said chambers, an air inlet, a float in the float chamber, and a valve operated by the said float and controlling said air inlet.

5. An apparatus of the class described, including a reservoir subject interiorly to atmospheric pressure, means to connect said reservoir with a carbureter to deliver fuel to the latter, a fuel-receiving float chamber above the reservoir, a fuel-receiving cup above the said chamber, a fuel-supply means delivering to said feeding device, the said chamber having an opening for the flow thereto of fuel delivered from said supply, the said chamber and cup communicating so that fuel after filling the said first chamber will rise and overflow into the said cup at the top, means for retaining the liquid in the said cup until the liquid surrounding the cup and in said chamber has been drawn off to a certain level, means for allowing the liquid to flow from the said cup, continuously acting means tending to draw the fuel from said supply, valve means to intermittently cut off the fuel delivery, a float in the said cup attached to and controlling the said valve means, a float in the said chamber and a valve controlled by the last mentioned float, said valve controlling outlet from the cup to said chamber.

1,216,993. SPRING-SUPPORT AND SHOCK-ABSORBER FOR VEHICLE-BODIES. MILTON J. HELMER, Chicago, Ill., assignor of one-half to Sam L. Stone, Chicago, Ill. Filed Oct. 20, 1916. Serial No. 126,777. (Cl. 21—105.)

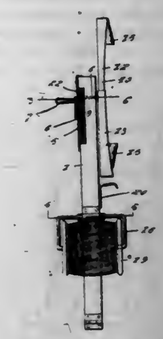
1. In a device of the character described the combination with a body and running gear of a vehicle, of two laterally movable, opposed cam levers, carried by one member thereof; springs holding them normally separated, and opposed springs carried by the other member, having parts bearing on the cam levers in the respective valleys thereof.



2. In a device of the character described the combination with a body and running gear of a vehicle, of two pivoted opposed cam levers, each lever having an upwardly inclined and a downwardly inclined part, carried by one of the vehicle members; springs holding the levers normally separated and opposed springs carried by the other member of the vehicle, having parts bearing on the cam levers between said inclined portions.

3. In a device of the character described the combination with a body and running gear of a vehicle, of two pivoted V-shaped cam levers with their apices in substantially the same horizontal plane, the inclined portions extending outwardly, carried by one vehicle member; a cylinder containing opposed compression coil springs each having a part bearing upon the respective cam levers tending to force them together, said cylinder being slotted near its center part to provide guides for the cam levers and other springs tending to force said cam levers apart.

1,216,994. SHUTTLE-WINDER. WILLIAM HENDRY, Tacoma, Wash. Filed May 12, 1916. Serial No. 97,097. (Cl. 242—52.)

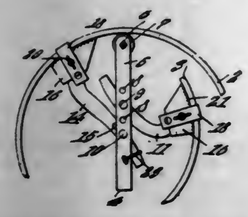


1. In a tatting shuttle winder structure, a body, a gear rotatably carried by said body, a shaft extending through said body, a pinion mounted upon said shaft and meshing with said gear, a shuttle carrying member carried by said shaft and including a body, and a pair of telescoping casings mounted upon said body, said casings being provided with outstruck portions for forming pockets for receiving the ends of a shuttle, a spool holder pivotally connected to said body, and a thread guard carried by said body for guiding the thread from a spool mounted upon said spool holder to a shuttle carried by said shuttle carrying structure.

2. In a tatting shuttle winder structure, a body, a gear rotatably carried by said body, a shaft extending through said body, a pinion mounted upon said shaft and meshing with said gear, a shuttle carrying member carried by said shaft and including a body, and a pair of telescoping casings mounted upon said body, said casings being provided with outstruck portions for forming pockets for receiving the ends of a shuttle, a spool holder pivotally connected to said body, and a thread guard carried by said body for guiding the thread from a spool mounted upon said spool holder to a shuttle carried by said shuttle carrying struc-

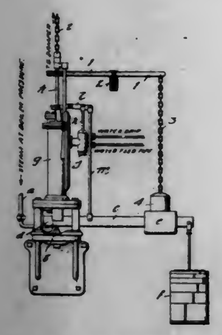
ture, said body being provided with a shuttle receiving pocket extending upwardly from its lower end, and a hinged cover normally forming a closure for said pocket.

1,216,995. TIRE-TOOL. LUDIA H. HODGES, Silverton, Tex. Filed Jan. 22, 1916. Serial No. 73,691. (Cl. 157—1.)



In a device for manipulating a divided rim, a lever; a pair of links pivoted to the lever and extended in opposite directions therefrom; rim-grips at the outer ends of the links; a rim-engaging anti-friction element journaled on the outer end of the lever; the links being pivoted to the lever at appreciable distances from the ends of the lever, whereby the inner end of the lever will form a handle, and whereby the outer end of the lever will form an arm of substantial length adapted to ride along one end of a rim to hold the same outwardly while the other end of the rim is being drawn inwardly, and when the links are disposed at acute angles to the lever; and a latch mechanism connecting the lever with one link to hold the arm in rim-supporting position.

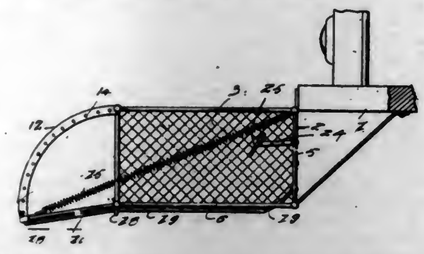
1,216,996. AUTOMATIC DAMPER-REGULATOR. WILLIAM T. HOGG, Danville, Va., assignor of one-fourth to Harrison R. Fitzgerald and one-fourth to George W. Robertson, Danville, Va. Filed May 17, 1916. Serial No. 98,062. (Cl. 236—8.)



The combination with an automatic hydraulic damper-regulator for steam plants, the same having a weighted lever operated by steam pressure, of an auxiliary attachment comprising a pivoted lever operatively connected at one end with the piston rod of the water regulator, and having suspended from its other end a weight which is hung in line with the said weighted lever, so that when the latter is raised by steam pressure the auxiliary weight is added to the normal weight of the main lever.

1,216,997. CAR-FENDER. ROY L. HUSTON, Carterville, Mo., assignor of one-half to Charles T. Clark, Carterville, Mo. Filed Nov. 28, 1916. Serial No. 133,869. (Cl. 105—127.)

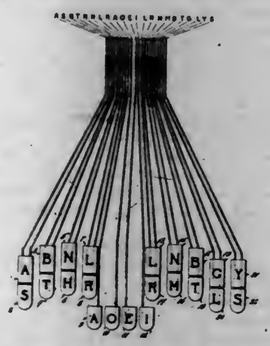
1. A fender comprising a substantially box like structure having a hinged front wall, springs normally urging said front wall upwardly to closed position, a trip mechanism for holding said wall in open position, means to release the trip mechanism, means to lock the wall in closed position when moved upwardly, and a bumper board adapted to be engaged by an object when the same falls into the fender for releasing the trip means.



2. A fender comprising a box like structure adapted to be attached to the forward end of a vehicle, a hinged panel closing the forward end of the box like structure, a rocking lever at the rear end of the box like structure, an arm extending forwardly from the lever into the box like structure, a bumper board at the forward end of the arm, a trip bar extending beneath the box like structure and having its rear end connected to the lower end of the rocking lever, a hook at the forward end of the trip bar adapted to engage the front panel to hold the same in lowermost position, springs to urge the panel to closed position and means to hold the panel in closed position after the trip bar has been operated to release said panel.

3. A fender comprising a box like structure adapted to be attached to the forward end of a vehicle, a hinged panel closing the forward end of the box like structure, a rocking lever at the rear end of the box like structure, an arm extending forwardly from the lever into the box like structure, a bumper board at the forward end of the arm, a trip bar extending beneath the box like structure and having its rear end connected to the lower end of the rocking lever, a hook at the forward end of the trip bar adapted to engage the front panel to hold the same in lowermost position, springs to urge the panel to closed position and means to hold the panel in closed position after the trip bar has been operated to release said panel, arcuate bars extending forwardly and downwardly from the upper forward corners of the box like structure, said arcuate bars being provided with apertures and latches carried by the forward panel for engaging in the apertures of the arcuate bars to lock the panel in its uppermost position after the trip bar has been released.

1,216,998. SHORTHAND-MACHINE. WARD S. IRELAND, Owensboro, Ky. Filed June 28, 1915. Serial No. 36,669. (Cl. 197—100.)



1. In a shorthand machine, a keyboard, comprising a plurality of keys having character designations and arranged in such sequence that a beginning vowel may be written in the same stroke with the stem of the word.

2. In a shorthand machine, a keyboard, comprising a plurality of keys having character designations and arranged in such sequence that an ending vowel may be written in the same stroke with the stem of the word.

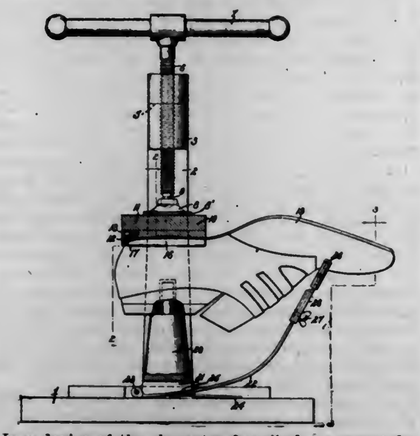
3. In a shorthand machine a keyboard comprising a plurality of keys having character designations arranged in such sequence that both a beginning and an ending vowel may be written in the same stroke with the stem of the word.

4. In a shorthand machine a keyboard comprising a plurality of keys having character designations arranged in such sequence that a beginning vowel and a prefix may be written in the same stroke with the stem of the word.

5. In a shorthand machine a keyboard comprising a plurality of keys having character designations and arranged in such sequence that a suffix and an ending vowel may be written in the same stroke with the stem of a word.

[Claims 6 to 38 not printed in the Gazette.]

1,216,999. DIE AND PRESS FOR ATTACHING WOOD HEELS. MORRIS ISAACSON, Brooklyn, N. Y. Filed 23, 1916. Serial No. 99,273. (Cl. 12—1.)



1. In a device of the character described, a support for the heel end of a shoe, a die constructed and arranged to engage and shape the heel seat portion of the shoe on said support, and a pressing member for forcing said die against said heel seat portion so as to shape a heel seat thereon.

2. In a device of the character described, a support for the heel portion of a shoe, a die constructed and arranged to engage and shape the heel seat portion of the shoe on said support, and a rotatable pressing member for forcing said die against said heel seat portion so as to shape a heel seat thereon.

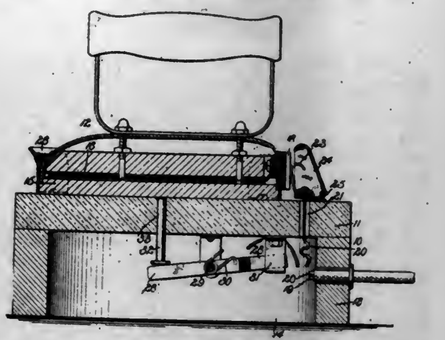
3. In a device of the character described, a support for the heel portion of a shoe, a resilient member for supporting and guiding the toe of the shoe arranged on said support, a die constructed and arranged to engage and shape the heel seat portion of the shoe on said support, a rotatable pressing member for forcing said die against said heel seat portion so as to shape the heel seat thereon, and means for holding said pressing member in proper position for acting on said die.

4. In a device of the character described, a support for the heel portion of a shoe, a resilient supporting member for the toe of the shoe, a die, and means for forcing said die against the heel portion of said shoe so as to shape a heel seat thereon, said die operating substantially opposite said support.

5. In a device of the character described, a support for the heel portion of a shoe, a base for holding said support against lateral movement, an upright extending from said base, a transverse bar extending from said upright, a traveling member associated with said upright, said traveling member acting as a presser member, and a die constructed and arranged to engage and shape the heel seat portion of the shoe on said support interposed between said traveling member and the heel portion of said shoe whereby when said traveling member is moved in one direction the die will press said heel portion so as to shape a heel seat thereon.

[Claims 6 to 10 not printed in the Gazette.]

1,217,000. STATIONARY ELECTRIC-IRON HEATER. ABRAHAM S. ISERSON, New York, N. Y. Filed Sept. 9, 1916. Serial No. 119,247. (Cl. 219—23.)



1. The herein described electric iron support comprising a stationary base to directly receive and support the iron, a pair of feed wires extending into and upwardly through the base, a pair of contacts for the respective wires, a guard extending over said contacts to protect the operator, said contacts being secured to the guard, and flexible means connecting the guard and the contacts to the support base.

2. The herein described electric iron support comprising a stationary base, a pair of feed wires extending upwardly through the base adjacent one end thereof, a pair of contacts connected to the ends of the wires, a guard extending beneath and over the contacts, the contacts being rigidly secured to the lower portion of the guard, a fixed guard at the other end of the base, and resilient hinge means connecting the first mentioned guard to the base providing for a slight variation in distance between the two guards according to the various lengths of irons used in connection with the support.

3. In an electric iron support, the combination of a rigid base having a flat horizontal upper surface upon which an iron is adapted to be placed by direct downward movement, a fixed guard for one end of the iron, a resiliently supported guard for the other end of the iron, a pair of contacts fixed to one of said guards, a pair of circuit wires leading to said contacts, a movable switch below the horizontal supporting base, means acting upon the switch tending to break the circuit through said wires, and a vertically reciprocating pin movable through the central portion of the base and depressible by the weight of the iron when the iron is lowered into supported position to move the switch to closed position.

4. The herein described electric iron support comprising a stationary base, a pair of spring contacts carried by the base, feed wires leading through the base to said spring contacts, and a switch within the base below the supporting surface thereof serving to make or break the current through said feed wires.

5. The combination with a pressing iron having electric heating coils therein and two exposed terminals for the coils, of a stationary support to receive and hold the iron during the heating operation, a pair of contacts carried by the support and adapted to engage said terminals respectively, feed wires leading through said support to the contacts, a switch serving to complete the circuit through said wires automatically when the iron is put in place upon the support, and means to throw out said switch when the iron is lifted.

1,217,001. VEHICLE LIFTING-JACK. MORLEY P. JACKLINE, Atchison, Kans. Filed Sept. 13, 1916. Serial No. 119,906. (Cl. 254—86.)



1. In a vehicle lifting jack, the combination with twin clamping members each having a semi-circular shoulder and a bridge piece, of a removable shoe having a semi-circular top portion constructed to movably fit the shoulders of the said clamping members, the ends of the said semi-circular top portion of the said shoe passing movably between the said shoulders and bridge pieces of the clamping members, and means for releasably holding the said shoe in a raised position.

2. In a vehicle lifting jack, the combination with two clamping members, each of the said members comprising two curved sides connected by a bridge piece, means for securing the said curved sides of different members together, the curved sides having each a curved shoulder passing under the said bridge piece leaving a space between the shoulder and bridge piece, and a movable shoe having a curved top portion constructed to fit the said shoulders and to pass movably through the said spaces between the shoulders and bridge pieces, the said top portion of the shoe being held in engagement with the said shoulders by said bridge pieces.

3. In a vehicle jack, the combination with two clamping members, each of the said members comprising two curved sides connected by a bridge piece, means for securing the said curved sides of different members together, one of the said members having set screws located externally adjacent to the said curved sides of the member for additionally securing the members to an axle, the curved sides having each a curved shoulder passing under the bridge piece leaving a space between the shoulder and the bridge piece, and a movable shoe having a curved top portion provided with upwardly projecting ends constructed to pass movably through the said spaces between the shoulders and bridge pieces, the said top portion of the shoe being held in engagement with said shoulders by said bridge pieces.

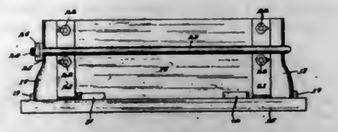
4. In a vehicle jack, the combination with an axle, clamping members for engaging the axle, each comprising two curved sides connected by a bridge piece, means for securing the said curved sides of different members together, the curved sides having each a curved shoulder passing under the bridge piece and leaving a space between the shoulder and the bridge piece, and a movable shoe constructed at the top to engage the said curved shoulders, and one of the said bridge pieces being arranged to limit the rearward movement of the body of the said shoe with respect to the said axle.

1,217,002. BINDING FOR SHOE-TOPS. OTTO JAEGER, Glendale, N. Y., assignor to Peerless Silk Mills, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 9, 1915. Serial No. 65,932. (Cl. 139—9.)



A binding for shoe tops having fine silk warp threads on one edge portion and coarse cotton warp threads on the opposite edge portion lying contiguous to the silk warp threads, and cotton weft threads common to both warp threads.

1,217,003. CONCRETE-FORM. JOHN L. JANISCH, Chicago, Ill. Filed Sept. 24, 1915. Serial No. 52,444. (Cl. 25—130.)



1. A concrete mold comprising an outer form consisting of removable side members joined together at the corners; slides on the outer sides of said members arranged to cover said joints; a collapsible core for said outer form consisting of removable side members joined together at the corners by inwardly movable corner members; and means on the inside of said core arranged to lock said corner members temporarily against such inward movement, substantially as described.

2. A concrete mold comprising an outer form consisting of removable side members joined together at the corners by a stepped joint; slides on the outer sides of said side members arranged to cover said joints; a clamping member arranged to bind said side members together; a collapsible core for said outer form consisting of removable side members joined together at the corners by inwardly movable corner members; and means on the inside of said core arranged to lock said corner members temporarily against such inward movement, substantially as described.

3. A concrete mold comprising an outer form consisting of removable side members joined together at the corners by a stepped joint; slides on the outer sides of said side members arranged to cover said joints; a clamping member arranged to bind said side members together; a collapsible core for said outer form consisting of removable side members joined together at the corners by inwardly movable corner members; and slides on the inner sides of said side members of said core arranged to lock said corner members temporarily against such inward movement, substantially as described.

4. A concrete mold comprising an outer form consisting of removable side members joined together at the corners by a stepped joint; slides on the outer sides of said side members arranged to cover said joints; a clamping member arranged to bind said side members together; a collapsible core for said outer form consisting of removable side members joined together at the corners by inwardly movable stepped corner members; and means on the inside of said core arranged to lock said corner members temporarily against such inward movement, substantially as described.

5. A concrete mold comprising an outer form consisting of removable side members joined together at the corners by a stepped joint; slides on the outer sides of said side members arranged to cover said joints; a clamping member arranged to bind said side members together; a collapsible core for said outer form consisting of removable side members joined together at the corners by inwardly movable stepped corner members; and slides on the inner sides of said side members of said core arranged to lock said corner members temporarily against such inward movement, substantially as described.

[Claim 6 not printed in the Gazette.]

1,217,004. SAW-CLAMP. ADAM D. JOHNSON, Garrett, Pa. Filed Apr. 26, 1916. Serial No. 93,686. (Cl. 76—78.)

1. A clamp of the class described comprising a fixed jaw, a relatively movable jaw carried by the fixed jaw and capable of adjustment, means for controlling the adjustments of said movable jaw, and an angular shaped slotted bracket adjustably associated with said fixed jaw for the purpose described.

2. A clamp of the class described comprising a support, a fixed jaw mounted thereon and capable of adjustment with respect thereto, a second jaw pivotally mounted on the first jaw and disposed in confronting relation thereto, a crank shaft journaled on said second jaw, and a connection between said shaft and fixed jaw for moving said second jaw respectively into and out of gripping relation with the fixed jaw upon reverse movements of said shaft.

3. A clamp of the class described comprising a support, a fixed jaw mounted thereon and capable of adjustment with respect thereto, a movable jaw, means carried by the fixed jaw for pivotally supporting said movable jaw in confronting relation thereto, said means being adjustable to vary the distance between said jaws, a crank shaft journaled on said movable jaw, a connection between said shaft and fixed jaw for operating the movable jaw when the shaft is rotated, said connection being adjustable to vary the distance between said jaws proportionate with the adjustment of said means.



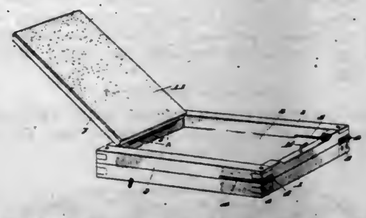
4. A clamp of the class described comprising a support, a fixed jaw mounted thereon and capable of adjustment with respect thereto, a movable jaw pivotally mounted on the fixed jaw and disposed in confronting relation thereto, a yoke member supported upon the fixed jaw, a crank shaft journaled upon said movable jaw, and a pivoted link connection between the yoke and said shaft, and means for rotating the shaft to operate said movable jaw.

5. A clamp of the class described comprising a support, a fixed jaw mounted thereon and capable of adjustment with respect thereto, a movable jaw pivotally mounted upon the fixed jaw and disposed in confronting relation thereto, a plurality of yoke members adjustably associated with the fixed jaw, a crank shaft journaled upon said movable jaw, pivoted link connections between the shaft and said yokes, certain of said links having enlarged central openings and longitudinally disposed slots, to permit said links to be removably associated with the crank portions of the shaft, and means for rotating the shaft to operate said movable jaw.

1,217,005. PHOTOGRAPHIC-PRINTING FRAME. EMIL JOHNSON, Chicago, Ill., assignor of one-half to Judson D. McCarthy, Chicago, Ill. Filed May 8, 1916. Serial No. 95,994. (Cl. 95—77.)

1. A photographic printing device comprising a frame member having an exposure opening; a transparent plate arranged over said opening; a second frame member hingedly connected with said first mentioned frame member and having an opening corresponding with said exposure opening; and a clamping member hingedly secured to said first mentioned frame member and positioned in the opening therein, substantially as described.

2. A photographic printing device comprising a frame member having an exposure opening; a transparent plate arranged over said opening; a second frame member arranged over said first mentioned frame member having an opening corresponding with said exposure opening; a yielding hinge connection between said frame members; and a clamping member arranged in said opening in said second mentioned frame member, substantially as described.



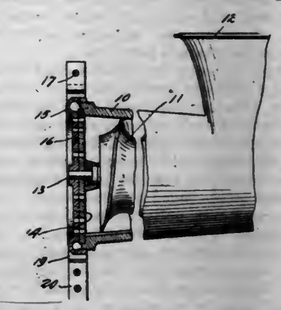
3. A photographic printing device comprising a frame member having an exposure opening; a transparent plate arranged over said opening; a second frame member arranged over said first mentioned frame member and having an opening corresponding with said exposure opening; a yielding hinge connection between corresponding ends of said frame members; resilient connecting means engaging with the opposite ends of said frame members; and a clamping member arranged in said opening in said second mentioned frame member, substantially as described.

4. A photographic printing device comprising a frame member having an exposure opening; a second frame member arranged over said first mentioned frame member and having an opening corresponding with said exposure opening; hinges connecting said frame members each of said hinges comprising two leaves one of which is rigidly connected with one of said frame members, the other of said leaves being resilient and comparatively long and connected adjacent its outer end with the other of said frame members, substantially as described.

5. A photographic printing device comprising a frame member having an exposure opening; a second frame member arranged over said first mentioned frame member and having an opening corresponding with said exposure opening; hinges connecting corresponding ends of said frame members each of said hinges comprising two leaves one of which is rigidly connected with one of said frame members, the other of said leaves being resilient and comparatively long and connected adjacent its outer end with the other of said frame members; and a spring clip yieldingly connecting the opposite ends of said frame members, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

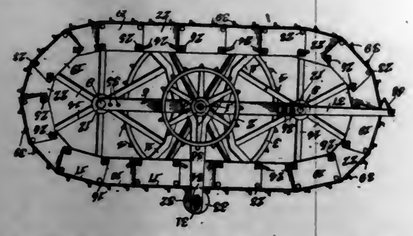
1,217,006. MEAT-GRINDING ATTACHMENT. WALTER R. JOHNSTON and JOHN A. SCHLOTTERBECK, Hillsdale, N. J. Filed May 12, 1915. Serial No. 27,676. (Cl. 17—20.)



An attachment for food choppers of the type embodying a rotary perforated disk, and a relatively stationary disk threaded on the discharge end of the hopper to frictionally engage the rotary disk when the chopper is in operation, said attachment consisting of a pair of substan-

tially semicircular members corresponding ends of which are extended in parallel relation, means connecting said extended ends, a handle carried by the members, and clamping screws threaded in the members, said members being arranged to encircle the stationary disk and said screws being movable to clamp said disk whereby rotation of the handle will serve to move the disk on its threads into and out of frictional engagement with the rotary disk.

1,217,007. CATERPILLAR-TREAD FOR VEHICLES. GEORGE W. JORY, Marysville, Cal. Filed Sept. 13, 1915. Serial No. 50,417. (Cl. 21—114.)



1. A caterpillar tread for vehicles comprising an endless tread belt, supporting wheels for the belt spaced apart in the direction of the length of the belt and each composed of two axially spaced rims, an intermediately located wheel having its rim entering between the rims of the first-named wheels, and connecting bars for the axial portions of all the wheels on both sides thereof, the axial portion of the intermediate wheel constituting the sole part of the caterpillar tread connected to the vehicle.

2. A caterpillar tread for vehicles comprising an endless tread belt with an endless series of sockets along its longitudinal center line, and said belt being made up of a series of connected tread plates, end wheels spaced apart in the direction of the length of the belt and each composed of two rims axially spaced apart and of polygonal contour to engage the tread plates on opposite sides of the longitudinal center line thereof, and an intermediately located sprocket wheel having teeth for engaging the sockets in the belt and having a peripheral portion entering between the axially spaced peripheral portions of the end wheels, the intermediate wheel constituting the sole part of the caterpillar tread connected to the vehicle.

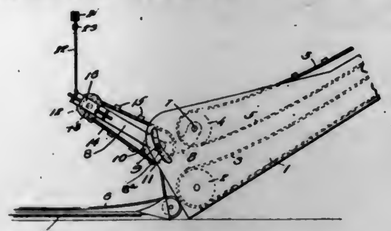
3. In a caterpillar tread for vehicles, an endless tread belt comprising a series of double and single walled channel members in alternation pivoted together adjacent to the tread portion of the belt and with the single walls telescoping between the double walls of the neighboring channel members, the single walls being provided with slots curved on axes coinciding with the pivot connections and the double walls being joined by connections traversing the slots and serving to unite the portions of the side walls of the channel members remote from the tread portions of the channel members.

4. In a caterpillar tread for vehicles, an endless tread belt comprising a series of double and single walled channel members in alternation pivoted together adjacent to the tread portion of the belt and with the single walls telescoping between the double walls of the neighboring channel members, the single walls being provided with slots curved on axes coinciding with the pivot connections and the double walls being joined by connections traversing the slots and serving to unite the portions of the side walls of the channel members remote from the tread portions of the channel members, the last-named connections having means for varying the effective lengths of the slots, whereby the tread portion of the belt may move in a straight path or may be caused to move in a curved path.

5. A caterpillar tread for vehicles comprising an endless tread belt composed of a connected series of units each of channel form with alternate units having double-walled sides and the other units having single-walled sides telescoping in the double-walled sides, carrying wheels for the belt spaced apart in the direction of travel and each composed of wheel members spaced apart axially and engaging the belt elements on opposite sides of the longitudinal center line of the belt, and an intermediately located wheel constituting a backing member for the runs of the belt extending between the carrying wheels and entering between the axially spaced wheel elements of the first named wheel, the last named wheel being provided with peripheral sprocket teeth and the belt elements having sprocket members engaged by the sprocket teeth and located in the longitudinal center line of the belt.

[Claims 6 to 11 not printed in the Gazette.]

1,217,008. FORCE-FEED FOR HARVESTER-HEADERS. ADAM KAMMERS, Roxboro, Wash. Filed July 28, 1915. Serial No. 42,395. (Cl. 56—89.)



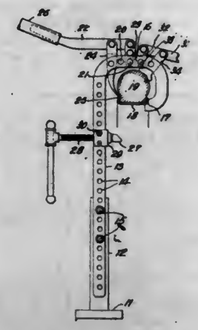
1. A harvester comprising a frame, a header spout pivotally connected with said frame and arranged to be swung vertically; said spout having side plates in which are arcuate slots, upper and lower endless carriers in said spout, an endless carrier constructed and arranged to deliver grain to the mouth of the header spout, vertically-disposed side plates pivotally connected with the spout and arranged between the side plates thereof and having long lateral bearings disposed in the arcuate slots of said side plates, an endless carrier mounted in the second-named side plates and having transverse slats, lower and upper shafts complementary to said endless carrier, the lower shaft being journaled in said lateral bearings, a driving connection intermediate one of the endless carriers of the header spout and said lower shaft, a vertically-movable arm adjustably fixed to the harvester frame and overhanging the second-named side plates, and means connecting said side plates with said arm.

2. A harvester comprising a frame, cutting apparatus, a header spout pivotally connected with said frame, upper and lower endless carriers in said spout, an endless carrier arranged in rear of the cutting apparatus of the harvester and disposed in a plane below that of the space between the lower portions of the carriers in the spout, a suitably-supported endless carrier arranged above the carrier in rear of the cutting apparatus and pivotally connected with and extending upwardly and inwardly from the mouth of the spout, and means for driving said carriers.

3. A harvester comprising a frame, cutting apparatus, a header spout pivotally connected with said frame, upper and lower endless carriers in said spout, an endless carrier arranged in rear of the cutting apparatus of the harvester and disposed in a plane below that of the space between the lower portions of the carriers in the spout, an endless carrier arranged above the carrier in rear of the cutting apparatus and pivotally connected with and extending upwardly and inwardly from the mouth of the spout, a vertically-movable arm adjustably fixed to the harvester frame and overhanging the last-named endless carrier, and means connecting said carrier with said arm.

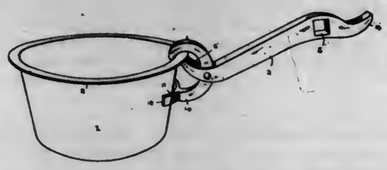
1,217,009. TIRE REMOVING AND APPLYING DEVICE. GEORGE L. KAVANAGH, Montreal, Quebec, Canada. Filed May 20, 1915. Serial No. 29,327. (Cl. 157—6.)

1. A tire tool comprising a stand adapted to rest on the ground, an adjustable head for said stand embracing the tire and engaging the wheel, a tire bead compressing and raising element pivotally mounted in the head, and a tire bead compressing and depressing element pivotally mounted in the head independent of said raising element.



2. In a device of the class described, a stand and support for tire tools comprising a base, a column thereon, a pair of similar flat members adjustably supported on said column, the upper portion of said members being bent forwardly, then downwardly, then inwardly to embrace the tire, said members being offset in their forwardly bent portions and provided with a recess on their inward extremities to receive the rim of the wheel.

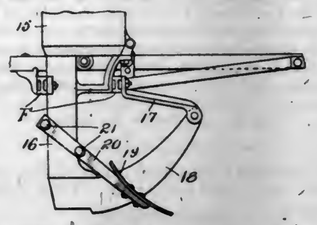
1,217,010. DETACHABLE HANDLE FOR COOKING UTENSILS. WILLIAM B. KENNEDY, Warm River, Idaho. Filed Aug. 7, 1915. Serial No. 44,248. (Cl. 65—32.)



A handle for utensils comprising a shank having one of its ends bifurcated to form arms, said arms being curved upwardly and pointed at their free ends, a curved substantially G-shaped gripping jaw pivotally mounted between said arms, said ends of the gripping jaw projecting a distance beyond the ends of said arms, the upper end of the gripping jaw being given a more abrupt downward trend at its terminus than the curvature of the remainder of said jaw, whereby the ends of said arms will coact with said abruptly bent end to grip and retain an object therebetween, an extension integral with the lower end of the gripping jaw and at right angles to the swinging movement of the jaw, said extension being flat in cross section and curved from end to end, the ends of said extension being an equal distance on opposite sides of the jaw, the curvature of the extension being adapted to be more acute than the curvature of the utensil with which it is engaged whereby the ends of the extension only will engage the utensil.

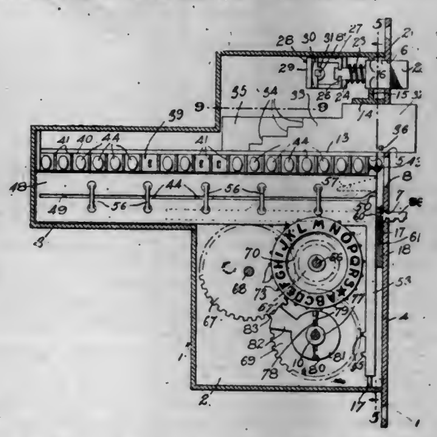
1,217,011. CORN-PLANTER. CHARLES H. KESSLER, Harrisonville, Mo. Filed June 9, 1916. Serial No. 102,761. (Cl. 111—6.)

A runner frame, a seed tube carried thereby, a runner consisting of a flat blade connected with the seed tube and extending upwardly and forwardly with respect thereto, standards supported adjacent to the two side faces of the seed tube and extending downwardly and forwardly adjacent to and spaced from the side faces of the runner, earth engaging blades carried by the standards in engagement with the side faces of the runner, and clamp bolts extending through the standards in front and in rear of



the seed tube to clamp said standards securely on the tube with the inner edges of the blades in engagement with the side faces of the runner.

1,217,012. LOCK. EUGENE KIES, Chicago, Ill. Filed Feb. 20, 1915. Serial No. 2,723. (Cl. 70—18.)



1. In a lock of the class described, a lock bolt, a lock block for holding said bolt against inward movement, a carriage for lifting said block out of engagement with the bolt, movable stop blocks carried by the carriage, means to move the stop blocks and stop blocks stationary within the lock to prevent the carriage from being moved unless the movable stop blocks are properly set.

2. In a combination lock, a lock bolt, a lock block for holding the bolt in locked position, a carriage for moving said lock block out of engagement with the bolt to permit the bolt to be operated, a plurality of movable stop blocks carried by the carriage and adjustable longitudinally thereof, a stop block carrier and a plurality of stationary stop blocks carried by said carrier and adapted to engage the movable stop blocks to prevent the movement of the carriage unless the proper combination is set up.

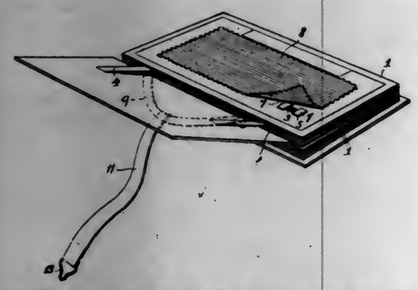
3. In a combination lock, a lock bolt, a lock block, for holding the bolt in locked position, a carriage for moving the block out of engagement with the bolt, movable stop blocks carried by the carriage, a carrier slidable in the lock, stop blocks carried by the carrier, the movable stop blocks in the carriage being removed from the carrier and placed in the carriage, thus leaving blank spaces in the carrier and means to adjust the stop blocks carried by the carriage to aline with the blank spaces in the carrier whereby the carriage may be moved upwardly to release the bolt.

4. In a combination lock, a lock bolt, a lock block holding the bolt in locked position, a carriage for moving the block, combination means to lock the carriage, a gear train to move the carriage when the proper combination is set up, and a second gear train to move the bolt.

5. In a combination lock, a lock bolt, a lock block holding the bolt in locked position, a plurality of relatively stationary stop blocks within the lock, a carriage adapted to engage the lock block to move said block out of engagement with the bolt, stop blocks carried by the carriage and adapted to engage the relatively stationary stop blocks unless moved to the proper combination and a gear train for controlling the setting up of the combination and a second gear train controlling the movement of the bolt.

[Claims 6 to 15 not printed in the Gazette.]

1,217,013. DISPLAY DEVICE. TROY KILLINGSWORTH, Ash Grove, Mo. Filed Dec. 4, 1915. Serial No. 65,136. (Cl. 129—42.)

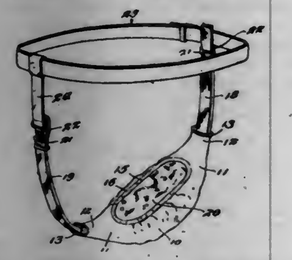


1. A display device of the class described comprising a series of cards and tapes connecting the cards together and attached to each card at points spaced from one edge thereof, said tapes forming loops of such length as to be tightly stretched over said edges of the cards when the latter are arranged to form a pack or book.

2. A display device of the class described comprising a series of cards and tapes provided with loops attached to the cards at points spaced from one edge thereof said tapes connecting the cards together.

3. A display device of the class described comprising a series of cards, each having openings at points spaced from one edge thereof, tapes doubled to form loops, the bights of which are passed through said openings, and keys engaging the bights of said tape loops and bearing on said cards and detachably securing the cards to the tape loops.

1,217,014. SANITARY BANDAGE. EDWARD A. KNIERIEM, New York, N. Y.; George P. Hotaling executor of Edward Knieriem, deceased. Filed July 29, 1915. Serial No. 42,613. (Cl. 128—5.)



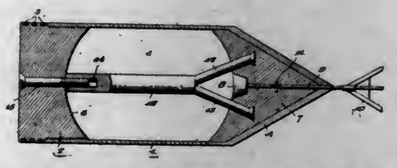
A sanitary bandage of the class described, comprising a water-proof elastic pouch of a general crescent shape, said pouch having an elongated opening therein along the general line of said pouch, said opening having a beaded edge, a reinforcing band in said beaded edge, the ends of said pouch tapering into tubular passages having open ends, the edges of said pouch about said openings being beaded, reinforcing rings therein, an absorbent pad insertible in and exposed through said elongated opening, said pad being of a length to permit its being gathered for insertion into said pouch, reduced extensions from said pad forming shoulders of the ends of said pad, said extensions passing through the tubular extensions of said pouch, the shoulders formed by said pad lodging in the tapering ends of the pouch, and said pad and the extensions therefrom stretching said pouch when applied to cause the elasticity of said pouch to fit said pad to the body of a wearer and to afford the necessary extension of said pad for free movements of the body.

1,217,015. PRIMING DEVICE. EARL A. KNOWER, Packwaukee, Wis. Filed June 9, 1916. Serial No. 102,735. (Cl. 123—187.5.)



A priming device for multiple cylinder internal combustion engines, comprising a casing extending lengthwise of the battery of cylinders above the same and formed with outlet pipes in communication with the engine cylinders, said casing being also formed with a distributing passage extending longitudinally of the top of said casing and having ports leading into said casing and out of vertical alinement with the outlet pipes, said distributing passage being in communication with a source of supply for the priming agent, a plunger movable longitudinally within said casing provided with a stem and formed with a plurality of measuring chambers adapted to move into and out of registry with the said ports and also into and out of registry with the said pipes, means for operating said plunger including a spring, and a partition in said casing having a guide opening for the plunger stem and forming a separate spring housing compartment.

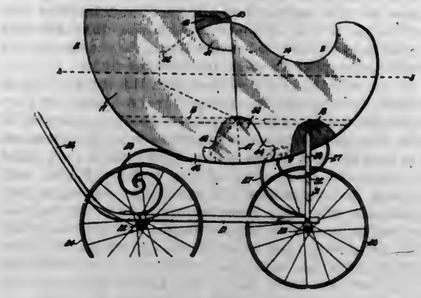
1,217,016. TORPEDO. LOUIS J. KRIVOHLANY, Mason City, Iowa. Filed Feb. 18, 1916. Serial No. 79,216. (Cl. 102—29.)



A torpedo comprising a shell, a magazine within said shell, a cap for exploding the contents of said magazine, an impact rod having one end bearing against said cap and the other end projecting through said shell, a filler surrounding that portion of the rod within the shell, a bar extending longitudinally of the magazine, a connection between one end of said bar and the butt end of the shell, and legs integral with the other end of the bar and diverging outwardly from each other and having the outer ends thereof embedded in said filler and acting to reinforce the shell to prevent the collapsing thereof.

1,217,017. COMBINATION SLEEPER-CARRIAGE AND GO-CART. NATHAN J. KROLL, Brooklyn, N. Y. Filed Mar. 7, 1916. Serial No. 82,717. (Cl. 21—83.)

1. A baby carriage of the type described, comprising a running gear, a body made in front and rear sections hinged together and of which the rear section is fixed on the running gear and the front section is adjustable to a forwardly and downwardly inclined position in use, and a foldable connection between the running gear and the said front body section to support the latter in an extended position, the said body in either of its two positions being closed at the bottom ends and sides.



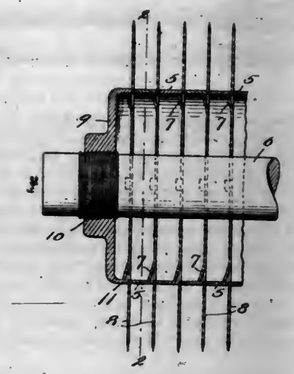
2. A baby carriage of the type described, comprising a running gear, a body made in front and rear sections hinged together and of which the rear section is fixed on the running gear and provided in its sides with recesses, the said front section having its sides extended in a rearward direction and engaging the said recesses, and a foldable connection between the running gear and the said front body section to support the latter in an extended position, the said body in either of its two positions being closed at the bottom ends and sides.

3. A baby carriage of the type described, provided with a body comprising a front section and a rear section, the sections having bottoms hinged together permitting of adjustment of the front section to a forwardly and downwardly inclined position, the rear section having a back and sides, of which the sides are provided above the bottom with recesses open at the front edge of the sides, and the said front section having a front and sides, of which the sides are provided above the bottom with rearward extensions projecting into the said recesses, and movable therein when the front section is adjusted.

4. A baby carriage of the type described, provided with a body comprising a front section and a rear section, the sections having bottoms hinged together, the rear section having a back and sides, of which the sides are provided above the bottom with recesses open at the front edge of the sides, and the said front section having a front and sides of which the sides are provided above the bottom with rearward extensions engaging the said recesses, the said sides of the rear section being provided with downward extensions extending below the bottom of the rear section, and the front edges of the said downward extensions being inclined downwardly and rearwardly, the said sides of the front section having downward extensions extending below the bottom of the front section, the rear edges of the said downward extensions of the front section being adapted to abut against the said front inclined edges of the downward extensions of the rear section.

5. A baby carriage of the type described, provided with a body comprising a front section and a rear section, the sections having bottoms hinged together, the rear section having a back and sides of which the sides are provided above the bottom with recesses open at the front edge of the sides, and the said front section having a front and sides of which the sides are provided above the bottom with rearward extensions engaging the said recesses, the said sides of the rear section being provided with downward extensions extending below the bottom of the rear section and the front edges of the said downward extensions being inclined downwardly and rearwardly, the said sides of the front section having downward extensions extending below the bottom of the front section, the rear edges of the said downward extensions of the front section being adapted to abut against the said front inclined edges of the downward extensions of the rear section, and covering plates fixed on the downward extensions of the rear section, and projecting forwardly to cover the rear edges of the downward extensions of the front section whether the latter is in extended or dropped position.

1,217,018. SPACING DEVICE FOR GIN-SAWS. SMITH F. KRUPP, Atlanta, Ga. Filed Mar. 31, 1916. Serial No. 88,061. (Cl. 13—14.)



1. Gin saws having carrying means rotatable therewith and supporting means solely held thereby, combined with ring spacers between the saws and engaging the said saws around the supporting means and located outwardly and free of engaging relation to the carrying means, and also located at a considerable distance inwardly from the bases of the teeth of the saws.

2. Gin saws and supporting means held thereby, a shaft on which the saws are directly mounted, the supporting means being at a distance outwardly from the points of mounting of the saws on the shaft and held solely by and between the saws, and ring spacers having opposite edges engaging the saws and surrounding and bearing upon the supporting means in concentric relation to and free of the shaft and at a considerable distance inwardly from the bases of the saw teeth.

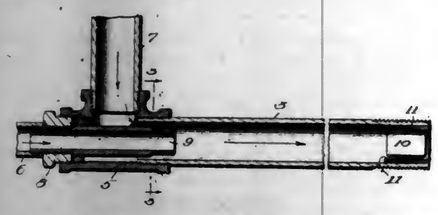
3. Gin saws having a shaft with which inner portions thereof directly engage and supporting means held solely by and between the saws, said supporting means having a bearing exposure at points between the inner shaft engaging portions and teeth of the saws, and band ring spacers surrounding and engaging the outer portions of the supporting means in concentric relation to the shaft and inclosing the spaces between the saws at a considerable distance inwardly from the teeth of the saws to the said shaft.

4. Gin saws, a shaft with which the saws directly engage, and ring spacers interposed between the saws and having opposite edge portions thereof directly bearing upon the side portions of adjacent saws and closing the spaces between the saws from the points of location of the spacers inwardly to the shaft, the ring spacers being held solely by the saws and clear of engagement with relation to the shaft, the ring spacers being maintained in fixed applied positions solely by means held by the saws and providing bearings between the latter for the spacers.

5. Gin saws, a shaft with which the saws directly engage, ring spacers interposed between and having opposite side edges engaging the adjacent sides of the saws and fully closing the spaces between the saws, the ring spacers being free of contact with any part of the shaft and having clear spaces between the same and the shaft and also provided with outer smooth surfaces of an unbroken character, the ring spacers being maintained in positions against inward and outward movement relatively to the shaft by means held solely by and between the saws and located between the latter.

[Claims 6 to 8 not printed in the Gazette.]

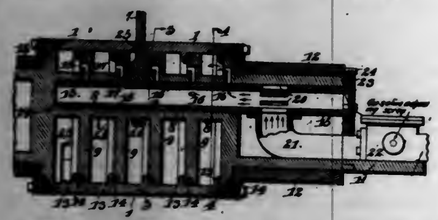
1,217,019. OIL-BURNER. BENJAMIN JOHN LATSHAW, Burkburnett, Tex. Filed Apr. 28, 1916. Serial No. 94,192. (Cl. 158—75.)



1. An oil burner comprising a mixing and delivery pipe adapted to open at one end into the furnace and having at the other end a T, a fluid fuel supply pipe connected with the lateral branch of the T, a steam pipe connected with the other end of the T in alinement with the mixing pipe, and having a delivery nozzle detachably connected therewith and extending through the T and into the mixing pipe, said mixing pipe being of comparatively great length, to provide for a comparatively long travel of the steam and oil in intimate contact, and a spray head in the delivery end of the mixing pipe, said spray head being a split ring having oppositely arranged thickened portions making the bore of the head approximately square in cross section.

2. An oil burner comprising a mixing and delivery pipe adapted to open at one end into a furnace, and having connected with the other end a steam supply pipe, and having a lateral branch forming a fluid fuel supply pipe, the steam pipe having a delivery nozzle extending beyond the lateral branch, said mixing pipe being of comparatively great length to provide for a relatively long travel of the steam and fuel in intimate contact, and a spray head in the delivery end of the mixing pipe and comprising a split ring having oppositely thickened portions.

1,217,020. INTERNAL-COMBUSTION ENGINE. LOUIS VINSON LAURENTS, Lake Arthur, La., assignor of one-fourth to Fred E. Heinen, Kansas City, Mo., and one-fourth to William C. Heinen, Lake Arthur, La. Filed Jan. 18, 1916. Serial No. 72,727. (Cl. 123—44.)



1. In an internal combustion engine, the combination of the cylinders and the crank case, said case having slots in communication with the cylinders and crank case, a crank body located in the crank case and having a plurality of gas chambers, crank pins on the crank body, pistons located in the cylinders, connecting rods joining the pistons and the respective crank pins the connecting rods passing through the crank case slots, means for admitting gas to the gas chambers, and means for transferring the gas from the chamber to the cylinder above the piston.

2. In an internal combustion engine, the combination of a crank case having a bore circular in cross section, a plurality of ribs depending internally from the bore of the crank case, a crank body located in the bore of the case and having a plurality of division plates spaced apart to form gas chambers between them, the plates being adapted to contact with the ribs, crank pins joining the division plates, bearing members extending from each end of the crank body and having bearing on the crank case, and means for admitting gas to the gas chambers.

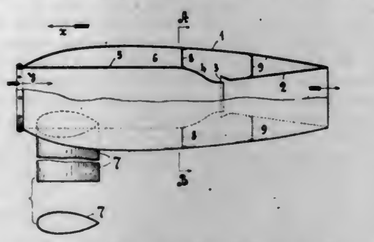
3. In an internal combustion engine, the combination of the crank case having a circular bore, a crank body located in the crank case and consisting of a plurality of circular division plates spaced apart to form gas chambers, crank pins joining adjacent ones of the division plates, said pins being in longitudinal alinement and having a bore therethrough, means coöperating with the crank pin bore for admitting gas to the respective gas chambers, and means for rendering the gas chambers gas-tight.

4. In an internal combustion engine, the combination of the crank case having a circular bore, a crank body located in the crank case and consisting of a plurality of circular division plates spaced apart to form gas chambers each of said division plates having a port and a duct, crank pins joining adjacent ones of the division plates, said pins being in longitudinal alinement and having a bore therethrough, said bore communicating with the ducts, a hollow valve located in the crank pin bore and normally closing the ducts, said valve having openings for intermittent registration with the ducts, means for rendering the chambers gas-tight, means for admitting gas to the valve and means for intermittently turning the valve.

5. In an internal combustion engine, the combination of the crank case having a circular bore and pins at one end, a circular crank body fitted into said bore the body consisting of a plurality of division plates spaced apart to form gas chambers between them each of the said plates having a duct and a port, crank pins joining adjacent ones of the division plates, said pins being in longitudinal alinement and having a bore therethrough said bore communicating with the ducts, a hollow valve located in the crank pin bore, said valve having an annular series of gas inlet slots and an opening for each one of the ducts in the division plates, said openings being in "staggered" relationship, a star wheel secured to the end of the valve adjacent to the pins on the crank case, said pins being adapted to strike the points of the star wheel and turn the valve intermittently.

[Claims 6 to 9 not printed in the Gazette.]

1,217,021. SILENCER FOR INTERNAL-COMBUSTION ENGINES. ALEXIS LEBEDEFF, Petrograd, Russia. Filed Feb. 15, 1916. Serial No. 78,474. (Cl. 121—116.)



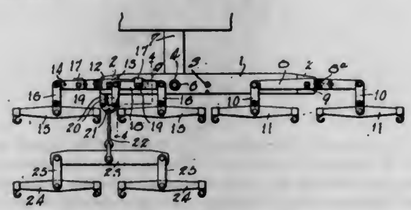
1. A silencer for internal combustion engines, comprising an outer metallic shell, a large inner pipe tightly connected to the front end of the said shell and having a successively contracted rear end, a truncated cone tightly fixed at its large end to the rear end of the said shell and encircling with its narrower front end the rear end of the said pipe so as to form a circular slot, and means for eccentrically introducing into the free annular space formed by the said shell, pipe and cone, the hot exhaust gases, substantially as described and illustrated by drawings.

2. A silencer for internal combustion engines, comprising an outer metallic shell, a large inner pipe tightly connected to the front end of the said shell and having a successively contracted rear end, a truncated cone tightly fixed at its large end to the rear end of the said shell and encircling with its narrower front end the rear end of the said pipe so as to form a circular slot, and means for eccentrically introducing into the free annular space formed by the said shell, pipe and cone, the hot exhaust gases.

3. A silencer for internal combustion engines, comprising an outer metallic shell having tapered ends, a large inner pipe tightly connected to the front end of the said shell and having a successively contracted rear end, a truncated cone tightly fixed at its large end to the rear end of the said shell and encircling with its narrower front end the rear end of the said pipe so as to form a circular slot, and means for eccentrically introducing into the free annular space formed by the said shell, pipe and cone, the hot exhaust gases.

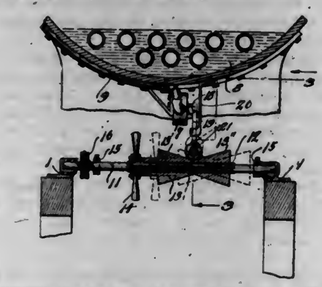
4. A silencer for internal combustion engines comprising an outer metallic shell eccentrically mounted upon the end of a tube feeding the hot exhaust gases, a large inner pipe tightly connected to the front end of the said shell and having a successively contracted rear end, a truncated cone tightly fixed at its large end to the rear end of the said shell and encircling with its narrower front end the rear end of the said pipe so as to form a circular slot, and means for eccentrically introducing into the free annular space formed by the said shell, pipe and cone, the hot exhaust gases.

1,217,022. COMBINATION-EVENER. JACOB G. LEHMANN, Merrill, Iowa. Filed June 16, 1916. Serial No. 103,992. (Cl. 21—76.)



A draft equalizer including a main lever, end levers pivotally mounted upon the extremities of the main lever, one of the end levers being provided upon each arm thereof with a laterally projecting returned arm, a short lever pivotally mounted between each of said laterally projecting returned arms and the end lever carrying the same, swingletrees connected to the ends of the opposite end lever, a clevis bar operatively connected to the inner ends of the short levers, swingletrees connected to the outer ends of the short levers, a doubletree connected to the clevis bar, and swingletrees at the ends of the said doubletree.

1,217,023. DRIFTING-VALVE MECHANISM. HENRY P. LETART, Alburg, Vt. Filed Mar. 13, 1916. Serial No. 83,892. (Cl. 137—140.)



1. Drifting valve mechanism of the class described comprising a valve operating member, a shaft, means for rotating the shaft, a fan mounted on said shaft for rotation therewith but freely shiftable longitudinally thereof, and means intermediate the valve member and the fan for actuating the former on shifting movement of said fan.

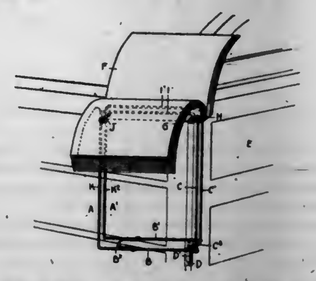
2. Drifting valve mechanism of the class described comprising a valve operating member, a shaft, means for rotating the shaft, a fan mounted on said shaft for rotation therewith but freely shiftable longitudinally thereof, and a cam member on the shaft fixed in relation to the fan for actuating the valve member on shifting movement of the fan.

3. Drifting valve mechanism of the class described comprising a valve operating member, a shaft, means for rotating said shaft, a fan mounted on said shaft for rotation therewith but freely shiftable longitudinally of said shaft, and means also shiftable on said shaft with which said valve member contacts at an intermediate point for actuating the valve member upon shifting movement thereof in either direction of movement with respect to the said valve member.

4. Drifting valve mechanism of the class described comprising a valve operating member, a support, a fan mounted on said support and shiftable transversely of the valve operating member, a cam member operatively connected to said fan and provided with oppositely arranged cam surfaces, and means for rotating said fan to cause shifting movement of the cam member and actuation of the valve operating member in either direction of movement of said cam member.

5. Drifting valve mechanism of the class described comprising a valve operating member, a cam member coöperating therewith, a shaft for said cam member, a pressure operated device mounted on the said shaft and connected to the cam member for actuating the latter to operate the valve member, and adjustable stop means on said shaft for limiting movement of the cam member.

1,217,024. BOOK-HOLDER. MONROE LE VISO, New York, N. Y. Filed Feb. 19, 1915. Serial No. 9,274. (Cl. 45—82.)



1. A bookholder, comprising a bracket adapted to be secured to a support, an upright frame mounted to swing on the said bracket, a pivot held on the upper rear corner of the frame and adapted to extend transversely through the back of a book to hold the latter in the frame, and a rest held on the front of the frame a distance below the top thereof to close the frame and to form a support for the book when the latter is swung upward into position for use.

2. A bookholder, comprising a frame having side pieces, the bottom connections connecting the side frames with each other at the bottom, a transverse pivot connecting the side frames with each other at the upper rear corner, and a bar pivoted on the front of one of the side pieces near the upper end thereof and adapted to engage the other side piece to connect the side pieces with each other at the front and to form a rest for the back of the book at the time the book is in position for use.

3. A bookholder comprising a frame having side pieces, bottom connections connecting the side pieces with each other at the bottom, one of the bottom connections being intermediate the ends of the side pieces and the other bottom connection being provided with a pivot pin, a transverse pivot connecting the side pieces with each other at the upper rear corner, a bar pivoted on the front of one of the side pieces near the upper end thereof and adapted to engage the other side piece to connect the side pieces with each other at the front and to form a rest for the

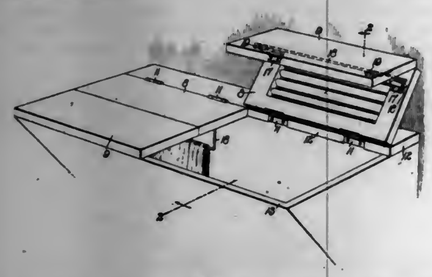
back of the book at the time the book is in position for use, and a bracket adapted to be attached to a suitable support and engaged by the said pivot pin.

4. A bookholder provided with a frame formed of two rectangular side pieces made of wire, and an approximately U-shaped crosspiece rigidly attached at its ends to the bottom bars of the side pieces intermediate their ends, the said crosspiece extending in the plane of the said bottom bars and being capable of being bent to space the said side frames nearer together or farther apart according to the thickness of the book to be held between the said side pieces.

5. A bookholder provided with a frame having two rectangular side pieces made of wire and between which the book is to be held, a bent connecting bar connecting the bottom bars of the side pieces with each other intermediate the front and back, a pivot pin having upwardly extending and sidewise diverging bars connected with the said bottom bars at the rear end thereof, and a pivot connecting the rear upper corners of the side pieces with each other.

[Claims 6 to 12 not printed in the Gazette.]

1,217,025. WASHTUB-COVER. JULIUS I. LEVETT, New York, N. Y. Filed Nov. 1, 1916. Serial No. 128,854. (Cl. 68—31.)



1. A wash tub cover comprising a plurality of elongated pivotally-connected cover sections; and a loop bracket pivotally mounted on one of said sections for supporting the other of said sections for service as a shelf.

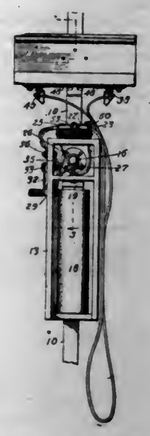
2. A wash tub cover comprising a plurality of elongated pivotally-connected cover sections; a loop bracket pivotally mounted on one of said sections for supporting the other of said sections for service as a shelf; and a plurality of bracket members mounted on said other section for engagement by said loop bracket.

1,217,026. TESTING APPARATUS FOR FLASH-LIGHTS. GEORGE ALBERT LEY, Chicago, Ill. Filed Aug. 27, 1915. Serial No. 47,668. (Cl. 67—31.)

1. The combination with a flashlight apparatus; of a testing device therefor including a casing having a partition for dividing the same into compartments, a lamp in one of said compartments and connected to a source of current in the other compartment, a fuse also connected to said source of current, stationary and movable contact members mounted on said casing, and a pneumatically operated means having a portion interposed between said contact members and operated for closing the circuit produced by said source of current, through said lamp and fuse.

2. In a flashlight apparatus, a flash powder holder having an opening therein, contact members carried by said holder and having portions thereof extending on either side of said opening, an insulating element interposed between said contact members and said holder, and also having an opening adapted to register with the opening in said holder, and a fuse adapted to be mounted between said contact members and said insulating element whereby the flash powder will pass through said registering openings and be ignited by contact with said fuse.

3. The combination with a flashlight apparatus; of a testing device therefor, including a casing having compartments, a lamp in one of said compartments and connected to a source of current in the other compartment, a fuse also connected to said source of current, stationary and movable contact members mounted on said casing, and means including an expansible element for operating said contact members to close the circuit produced by said source of current.



4. In a flashlight apparatus, a flash powder holder having an opening therein, an insulating element associated with said holder and also having an opening registering with the first named opening, contact members carried by said holder, and a fuse mounted between said contact members and said insulating element whereby to ignite the powder passing through said registering openings.

1,217,027. FILM AND PROCESS OF PRODUCING SAME. LEON LILIENFELD, Vienna, Austria-Hungary. Original application filed Mar. 14, 1913, Serial No. 754,333. Divided and this application filed Oct. 20, 1913. Serial No. 796,248. (Cl. 106—40.)

1. A film containing an ether of cellulose, in admixture with a material capable of increasing the suppleness thereof.

2. A film containing an ether of cellulose, in admixture with tricresyl phosphate.

3. A method of making a transparent flexible film, which comprises adding a substance capable of imparting suppleness, and a cellulose ether, to a common solvent, and spreading the solution thereby produced, on a suitable surface, allowing the solution to dry, and separating the film from the said surface.

4. A method of making a transparent flexible film, which comprises adding a substance capable of imparting suppleness, and a cellulose ether, to a common solvent, said solvent comprising a plurality of liquids mixed together, and spreading the solution thereby produced, on a suitable surface, allowing the solution to dry, and separating the film from the said surface.

5. The process of making films which comprises dissolving a cellulose ether in a solvent, spreading the solution thereby produced upon a suitable surface, allowing the solution to dry and separating the film from said surface.

[Claims 6 to 9 not printed in the Gazette.]

1,217,028. MANUFACTURE OF ARTIFICIAL TEXTILE MATERIAL AND PROCESS OF PRODUCING SAME. LEON LILIENFELD, Vienna, Austria-Hungary. Filed Oct. 20, 1913. Serial No. 796,249. (Cl. 106—40.)

1. An artificial filament containing as an essential thereof, an ether of a cellulosic substance in admixture with a material capable of increasing the suppleness thereof.

2. An artificial filament containing as an essential constituent thereof, an ether of cellulose in admixture with an ester of a phenol.

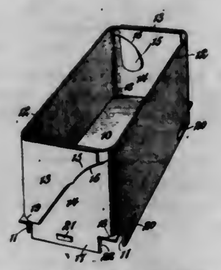
3. An artificial filament, characterized by containing an ether of a cellulosic substance in which at least one of the hydroxyl-hydrogens of the cellulose molecule is replaced by an alkyl radical, substantially as described.

4. An artificial filament, containing as ingredients thereof an ether of cellulose and a phosphoric acid ester of a phenol.

5. Artificial silk composed of a material containing an alkyl ether of cellulose which is practically insoluble in water, but soluble in some organic solvents, together with a substance capable of increasing the suppleness thereof.

[Claim 6 not printed in the Gazette.]

1,217,029. BERRY-BOX. CHARLES H. LONG, Oklahoma, Okla., assignor of two-fifths to William L. Maupin, Oklahoma, Okla. Filed Apr. 24, 1916. Serial No. 93,188. (Cl. 229—16.)



1. A box formed of a single piece and comprising a bottom section and two connected side sections, said side sections constituting when folded, the sides and ends of the box, means for connecting the side sections to the bottom section so as to provide a depending flange along the sides of the box and also at the ends, said flanges being made of a double thickness of material and elevating the bottom of the box above a supporting surface.

2. A box comprising a blank having a bottom section, side sections of greater length than the bottom section; and neck portions joining the side sections to the bottom section, the side sections when raised providing box sides, the neck portions projecting downwardly to provide supporting flanges for the box to elevate the bottom section, and the ends of the side sections being turned inwardly toward and secured to each other to hold the sides in position and to provide end walls for the box.

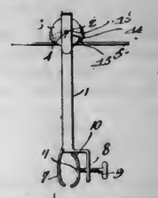
3. A box comprising a blank having a bottom section, a pair of side sections of greater length than the bottom section, and a neck portion connecting each side section to the adjacent lateral edge of the bottom section, said neck portions being folded and extended below the plane of the bottom section and in the planes of the respective side sections to support the sides of the box, the side sections being raised to provide sides for the box, the free ends of said side sections being turned inwardly toward and secured to each other to provide end walls for the box.

4. A box comprising a blank having a bottom section, a pair of side sections of greater length than the bottom section, a neck portion connecting each side section to the adjacent lateral edge of the bottom section, said neck portions being adapted to be folded below the plane of the bottom section and to extend in the planes of the respective side sections, means for securing the neck portions to the side sections in their folded positions, the side sections being raised to provide sides for the box, and to project the neck portions downwardly to support the sides of the box, the free ends of said side sections being provided with flaps adapted to be turned inwardly toward and secured to each other to provide end walls for the box, one flap at each end of the box having an extension which provides supporting flanges for the ends of the box when set up.

5. A box comprising a one-piece blank having a rectangular bottom section, neck portions extending from the lateral edges thereof and shorter than the same, a side section upon the outer edge of said neck portion and being of greater length than the bottom section to provide flaps on the opposite ends of each side section, one of said flaps having a slit therein and an inwardly projecting extension and the opposite flap having an inwardly extending tongue, said flaps being arranged in opposed pairs at the ends of the blank, said neck portions being adapted to be folded beneath the bottom section, and said side sections being adapted to be swung upwardly to extend the folds downwardly to support said bottom section in elevated position, means for securing the neck portions to the side sections in their folded positions, the flaps on the opposite ends of said side sections being adapted to be turned inwardly over the corners of said bottom section and overlapped, with the tongue of one flap engaging in the slit of the opposed flap, to provide end walls for the box, and extensions provided on one flap at each end of the box said extensions when the box is set up constituting supporting flanges for the ends of the box and also a shoulder for supporting the extended ends of the bottom section.

[Claim 6 not printed in the Gazette.]

1,217,030. BASKET-CARRIER. SARAH BERTHA LONG, Burley, Idaho. Filed Sept. 27, 1916. Serial No. 122,565. (Cl. 104—146.)



A carrier of the class described comprising a hanger, a grooved supporting wheel mounted at the upper end of the hanger, a cross bar at the lower end of the hanger and having fixed jaws and also having downwardly extending arms opposite said fixed jaws, clamping screws mounted in threaded openings in said arms and movable clamping jaws swivelly connected to said screws and movable thereby toward and from the fixed jaws.

1,217,031. LAUNDRY-CONTAINER. WILLIAM A. J. LOWE, Bristol, Tenn., assignor of one-half to George W. Overstreet, Bristol, Tenn. Filed Feb. 7, 1916. Serial No. 76,760. (Cl. 229—87.)

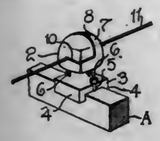


1. A container comprising a bottom disk of relatively rigid material, a body of relatively flimsy material secured to the edge portion of the disk and completely surrounding the same, an expansible ring fitting in the said body and resting loosely at its lower edge upon the edge portion of the said bottom disk and means mounted on the body for holding the ring in a contracted condition.

2. A container comprising a bottom disk of relatively rigid material, a body of relatively flimsy material se-

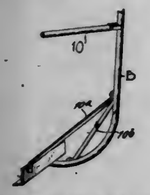
cured to the edge portion of the disk and completely surrounding the same, an expansible ring fitting in the body and resting loosely at its lower edge upon the upper surface of the bottom disk, and a strip fixed at one end to the body and adapted to be passed transversely across the ring and transversely of the disk and secured at its free end to the fixed end.

1,217,032. INSULATOR FOR ELECTRIC WIRES. CODY LYON, Emmett, Idaho. Filed Aug. 11, 1915. Serial No. 44,935. (Cl. 173—316.)



An insulator for electric wires comprising a base and a head, the head having a vertically disposed transverse entrance slot and oppositely disposed horizontal slots in staggered relation to each other, the horizontal slots overlapping each other and intersecting the vertical slot, the base having laterally disposed flanges adapted to embrace the cross arm of a telegraph pole, the side walls of the base between said flanges being formed with vertical grooves for engagement with fastening devices.

1,217,033. BUFFER. JOHN C. F. MCCAULEY, Fowler, Kans. Original application filed Aug. 7, 1916, Serial No. 113,572. Divided and this application filed Oct. 28, 1916. Serial No. 128,350. (Cl. 213—3.)

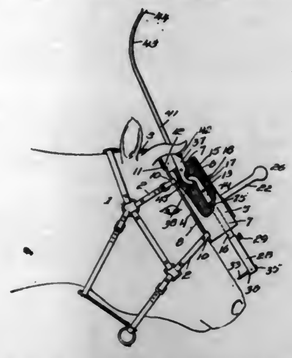


In combination with a portable body, a bumper carried thereby and consisting of an upwardly disposed rod having its lower end portion arranged on a predetermined curvature, a brace rod interposed between the upper portion of the bumper and the body, a brace rod interposed between the bumper at a point adjacent the upper part of its curved portion and the body, and a brace rod interposed between the lower portion of the bumper and a portion of the bumper above but in close proximity to the curved portion thereof.

1,217,034. RESTRAINING DEVICE. FRANK MCDANIELS, Harlem, Mont. Filed June 1, 1916. Serial No. 101,178. (Cl. 119—142.)

1. In a device of the class described, the combination with a head stall, of a plate connected therewith and provided with a channel forming a housing, a rod received in said housing for a portion of its length and pivotally connected therewith, a sleeve connected with said rod exteriorly of the housing and provided with a piercing pin, a push bar having an end received within said housing and pivotally connected with the rod, a lever pivotally connected with the housing between its ends and having a curved head engageable with an end on said rod, means for holding the end on the rod in engagement with the head on the lever, an arm hingedly connected with the lever, and means for holding said arm in extended position.

2. In a device of the class described, the combination with a head stall, of a plate connected therewith and provided with a channel forming a housing extending longitudinally thereof, a lever pivotally connected with the housing and having a curved end forming a head, an arm mounted to turn on said lever and normally held in extended position, a rod pivotally connected with the housing and having a curved end engaged with the head on



the lever, a push bar pivotally connected with said rod and extending beyond the housing, a sleeve adjustably mounted on the rod, and a piercing pin adjustably mounted in the sleeve.

1,217,035. DEVICE FOR FITTING EYEGLASS-LENSES. ERNEST L. MCDOWELL, Arkansas City, Kans. Filed Mar. 13, 1916. Serial No. 83,850. (Cl. 88—47.)



1. In a lens fitting appliance, the combination with a mounting of the screw connection type, of an imitation lens adapted to be attached to and detached from the mounting without withdrawing the screw therefrom, said lens having a slot or slots in its edge, and means to yieldingly engage the screw of the mounting.

2. In a lens fitting appliance, the combination with a mounting of the screw connection type, of an imitation lens adapted to be attached to and detached from the mounting without removing the screw of the mounting, said lens having an opening adapted to register with the pupil of the eye and a slot or slots in its edge permitting the changing of the relation between said opening and the pupil of the eye to ascertain the pupillary distance.

3. In a lens fitting appliance, the combination with a mounting of the screw connection type, of an imitation lens adapted to be attached to and detached from the mounting without removing the screw of the mounting, said lens having means to yieldingly engage the screw of the mounting and an opening adapted to register with the pupil of the eye to ascertain the pupillary distance.

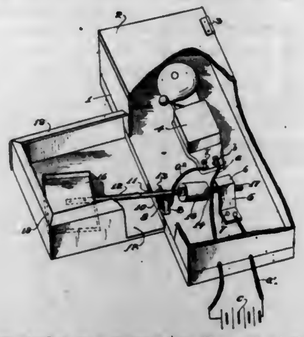
4. In a lens fitting appliance, the combination with a mounting of the screw connection type, of an imitation lens adapted to be attached to and detached from the mounting without withdrawing the screw and having means to yieldingly engage the screw of the mounting.

5. In a lens fitting appliance, the combination with a mounting, of an imitation lens capable of ready attachment and detachment therefrom and having means to yieldingly engage the attaching means of the mounting.

1,217,036. RAIN-SIGNAL. EDWIN J. MCMANUS, Cazenovia, N. Y., assignor of one-half to Edward T. Walters, Cazenovia, N. Y. Filed Aug. 6, 1915. Serial No. 44,029. (Cl. 200—35.)

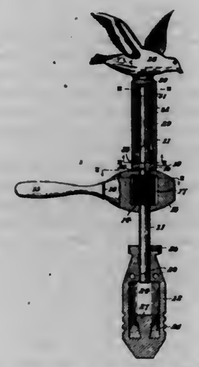
In a circuit, an elongated casing having a hinged top, a lateral extension on said casing having an open top, and

communicating with the casing, a lever pivoted in said casing having one end thereof extending into said lateral



extension, and a pan secured on the end of the lever and disposed beneath said open top of said lateral extension for the purpose specified.

1,217,037. WHIRLING TOY. JOHN MANKOS, Palmerton, Pa. Filed Sept. 2, 1916. Serial No. 118,262. (Cl. 46—14.)



1. A toy comprising a mount, a shaft adapted for vertical positioning journaled through the said mount, revolving means for the said shaft, means for insuring the vertical position of the shaft, an ornamental figure, and a supporting tube for the said figure reciprocatingly mounted upon said shaft.

2. A toy comprising a mount having a head with a chamber therein, and a side perforation communicating with the said chamber, a shaft transversely journaled through the said head and extending through the said chamber, an operating cord extending through the said perforation and operatively attached to the said shaft within the said chamber, an annular shoulder upon the said shaft above the said head, anti-friction members between the said shoulder and head, a speed regulator adjustably mounted upon one end of the said shaft, and an ornamental member mounted for longitudinal movement upon its opposite end.

3. A toy comprising a mount having a head with a chamber therein, and a side perforation communicating with the said chamber, a shaft transversely journaled through the said head and extending through the said chamber, an operating cord extending through the said perforation and operatively attached to the said shaft within the said chamber, an annular shoulder upon the said shaft above the said head, anti-friction members between the said shoulder and head, an elongated weight having a chamber therein longitudinally adjustably arranged upon the lower end of the said shaft and having air openings therethrough, a centrally arranged block within the said weight chamber, mercury arranged within the said chamber surrounding the said block, and an ornamental figure reciprocatingly mounted upon the other end of the said shaft.

4. A toy comprising a mount having a head with a chamber therein, and a side perforation communicating with the said chamber, a shaft transversely journaled through the said head and extending through the said chamber, an operating cord extending through the said perforation and operatively attached to the said shaft within the said chamber, an annular shoulder upon the said shaft above the said head, anti-friction members between the said shoulder and head, a weight upon one end of the said shaft, a transverse bar carried by the other end of the said shaft, rollers upon the opposite ends of the said bar, a tube freely mounted upon the said shaft provided with spiral grooves upon its inner surface within which the said rollers are positioned, and an ornamental figure carried by the said tube.

5. A toy comprising a mount having a head with a chamber therein, and a side perforation communicating with the said chamber, a shaft transversely journaled through the said head and extending through the said chamber, an operating cord extending through the said perforation and operatively attached to the said shaft within the said chamber, an annular shoulder upon the said shaft above the said head, anti-friction members between the said shoulder and head, an elongated weight having a chamber therein longitudinally adjustably arranged upon the lower end of the said shaft and having air openings therethrough, a centrally arranged block within the said weight chamber, mercury arranged within the said chamber surrounding the said block, a transverse bar carried by the other end of the said shaft, rollers upon the opposite ends of the said bar, a tube freely mounted upon the said shaft provided with spiral grooves upon its inner surface within which the said rollers are positioned, and an ornamental figure carried by the said tube.

1,217,038. FRUIT-STAND. MOSE MARKS, Berkeley, Cal. Filed Oct. 16, 1915. Serial No. 56,244. (Cl. 211—14.)

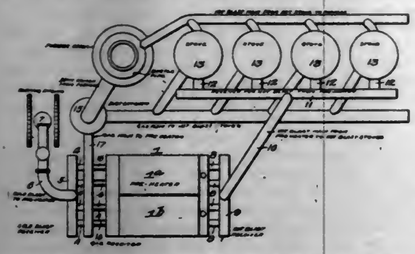


1. In a stand for fruits and vegetables, a frame including corner posts, and side bars and end bars connecting said posts; and a foraminous basket U-shaped in cross section, and supported on said frame, said basket including U-shaped frame members in the basket at the ends beneath the end bars of the main frame, a U-shaped frame member in the basket between the ends, a foraminous partition secured to the last-mentioned U-shaped frame member, and a top cross bar at said partition and connecting the upper ends of the said last-mentioned U-shaped member.

2. A stand for fruits and vegetables, comprising a frame having corner posts, side bars and end bars con-

necting the corner posts, and a U-shaped foraminous basket directly secured to the said side bars and end bars, the said side bars and end bars forming the top frame for the basket, the basket including U-shaped frame members at the ends and secured to and depending from the said end bars of the top frame.

1,217,039. PREHEATING OF AIR FOR HOT-BLAST STOVES OF BLAST-FURNACES. EDWARD E. MARSHALL, Philadelphia, Pa. Filed Apr. 4, 1916. Serial No. 88,855. (Cl. 263—19.)



1. The combination with a blast furnace and hot blast stoves employed therewith, of a pre-heating device for air, means for delivering heated air from said pre-heating device to said hot blast stoves, a connection between the furnace and the pre-heater for the passage of waste gas direct to said pre-heating device, burners for the latter discharging into said pre-heater, a conduit connecting the hot blast stoves with the blast furnace, and valves controlling the passage of air to and from said hot blast stoves.

2. The combination with a blast furnace and hot blast stoves employed therewith, of a pre-heating device for air, a blower for supplying air to the pre-heater and for delivering heated air from said pre-heating device to said hot blast stoves, a connection between the furnace and the pre-heater for the passage of waste gas direct to said pre-heating device, burners for the latter discharging into said pre-heater, a conduit connecting the hot blast stoves with the blast furnace, and valves controlling the passage of air to and from said hot blast stoves.

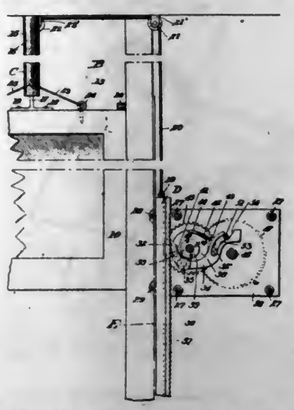
3. The combination with a blast furnace and hot blast stoves employed therewith, of an air pre-heater, a connection between the furnace and the pre-heater for the passage of waste gas direct to said pre-heater, connections between the furnace and the hot blast stoves for delivering waste gas thereto independently of such delivery to the pre-heater, burners mounted in the pre-heater for the combustion of the waste gas delivered thereto from the blast furnace; said burners discharging their flame into the chambers of the pre-heater, means for delivering heated air from said pre-heater to the hot blast stoves including pressure means, a conduit connecting the hot blast stoves with the blast furnace, and valves controlling the passage of the heated air to and from said hot blast stoves.

4. The combination, with a smelting furnace and hot blast stoves therefor, of a pre-heater in which air is heated by the waste gases direct from the furnace, said pre-heater being located between the hot blast stoves and the furnace, a plurality of air conductors in said pre-heater, and valves controlling the inlet and discharge of air to and from said pre-heater.

5. The combination, with a smelting furnace and hot blast stoves therefor, of a pre-heater in which air is heated by the waste gases from the furnace, said pre-heater being located between the hot blast stoves and the furnace, a plurality of air conductors in said pre-heater, valves controlling the inlet and discharge of air to and from said pre-heater, and a blower for delivering air to the pre-heater and continuously discharging the air heated therein to the hot blast stoves.

[Claims 6 to 12 not printed in the Gazette.]

1,217,040. WINDOW-OPERATING DEVICE. JAMES L. MARTIN, Crowell, Tex. Filed Mar. 28, 1916. Serial No. 87,260. (Cl. 268—4.)



1. In a window operating device, a frame, a window sash slidable in the frame, a weight to slide the sash, means to prevent accidental movement of the weight in one direction, a swingingly mounted handle, and connections between the handle and the weight, whereby upon movement of the handle within certain limits the weight is moved in one direction to permit movement of the window sash and whereby, when the handle is moved within certain other limits, said holding means is released to permit the weight to move in the opposite direction and thereby move the window sash in a direction opposite to its aforesaid movement.

2. In a window operating device, a frame, a window sash vertically slidable in the frame, a weight operatively connected to the window sash, a swingingly mounted handle disposed normally in a vertical plane, and connections between the handle and the weight whereby movements of the handle between its normal and vertical position and the limit of its swing in one direction will permit movement of the weight to raise the window to any desired extent and whereby upon movement of the handle between its normal vertical position and the opposite limit of its swing will permit the weight to move in the opposite direction to lower the window to any desired extent.

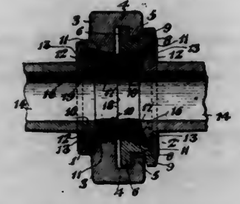
3. In a window operating device, a frame, a window sash vertically slidable in the frame, a weight vertically slidable and operatively connected to the window sash, means for holding the weight against accidental downward movement, a swingingly mounted handle disposed normally in a vertical plane, and connections between the handle and the weight, whereby quick backward and forward movement of the handle between its normal position and the limit of its swing in one direction, will release said holding means, and effect a step by step downward movement of the weight to raise the window step by step and whereby a quick backward and forward movement of the handle between its normal vertical position and the opposite limit of its swing will effect a step by step upward movement of the weight and thereby permit the window to lower step by step.

4. In a window operating device, a frame, a window sash vertically slidable in the frame, a weight vertically slidable in the frame and operatively connected to the window sash whereby the window sash is raised and lowered according to the direction of movement of the weight, a trip arm to hold the weight against accidental downward movement, and means, including a handle, operable to raise the weight to lower the sash, said handle being operable to simultaneously release said trip arm from holding engagement with the weight and to actuate said weight raising means to permit downward movement of the weight to raise the window.

5. In a window operating device, a frame, a window sash vertically slidable in the frame, a weight vertically slidable in the frame and operatively connected to the window sash whereby the window sash is raised and lowered, according to the direction of movement of the weight, means to hold the weight and thereby prevent downward movement of the weight, and means operable to raise the weight to lower the sash, and including a pawl and ratchet mechanism to simultaneously release said holding means and said weight releasing means to lower the weight and raise the window.

[Claims 6 to 15 not printed in the Gazette.]

1,217,041. COUPLING FOR HOSE AND PIPES. RANDOLPH N. MARTZ, Frederick, Md. Filed Apr. 7, 1916. Serial No. 89,730. (Cl. 137—28.)



1. A hose or pipe coupling comprising two interlocking heads each with a passage therethrough internally expanded to form a seat flaring from the meeting faces of the two heads toward the other end, the passage terminating at a flange directed toward the longitudinal axis of the coupling, a tubular swivel member having a flange at one end adapted to seat in the head against the flange thereof, and a gasket for each head expanding from one end to the other in conformity with the flaring seat in the head, said gasket having the larger end dished to bear against the flange of the swivel tube, and the other end shaped to engage the corresponding end of the matching gasket, the gaskets being each of a length to project beyond the respective meeting faces of the heads for the compression of the gaskets against the flanges of the swivel tubes and against the flaring walls of the seats when the heads are locked together.

2. A pipe coupling comprising two interlocking heads with fluid conducting passages therethrough each expanding within the head from the meeting faces of the heads to provide a flaring seat, a tubular swivel member for each head having an outwardly directed flange within the head and located at the larger end of the flaring seat, and a packing gasket having a flaring outer wall adapted to the seat in the respective head with the larger end of the gasket dished to bear against the flanged end of the swiveled tube.

3. A hose or pipe coupling having interlocking heads with means for the attachment of the ends of hose or pipe thereto, each head having a unitary seat flaring from the meeting faces of the heads toward the other ends thereof, and flaring gaskets adapted to the flaring seats and each of a length to project beyond the meeting faces of the heads for engagement and compression by the interlocking of the heads, and each head having locking members and studs associated with certain of the locking members to be in the path of movement of the companion locking members of the other head to resist movements of the heads relative one to the other in the direction of the longitudinal axis of the coupling.

4. A hose or pipe coupling having interlocking heads with seats therein and packing gaskets adapted to the seats, each gasket comprising a ring flaring from one end toward the other with the end face of the smaller end of the ring plane and the end face of the larger end of the ring dished and the seats in the heads where engaged by the flaring portion of the ring and by the dished end being correspondingly shaped to the parts of the gasket engaging them.

1,217,042. MONOAZO DYES. CARL MENSCHING, Birkenhead, England, assignor to William Edward Mounsey, Liverpool, England. Filed Jan. 29, 1916. Serial No. 75,072. (Cl. 8—1.)

1. The manufacture of coloring matters, being azo dyes containing the azo group and an amino group in the ortho position to one another, by combining diazotized picramic acid and an unsulfonated amino derivative of naphthalene.

2. The manufacture of coloring matters by combining diazotized picramic acid and beta-naphthylamin.

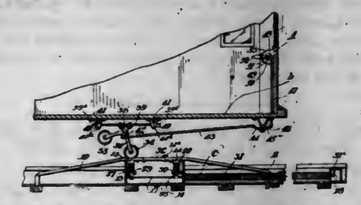
3. The manufacture of coloring matters by running a solution of diazotized picramic acid into a solution of beta-naphthylamin and hydrochloric acid, then adding sodium acetate solution and stirring and then adding sodium carbonate and collecting the coloring matter.

4. As new articles of manufacture, coloring matters, being azo dyes containing the azo group and an amino group in the ortho position to one another, produced from diazotized picramic acid and an unsulfonated amino derivative of naphthalene.

5. As new articles of manufacture, coloring matters produced by combining diazotized picramic acid and beta-naphthylamin.

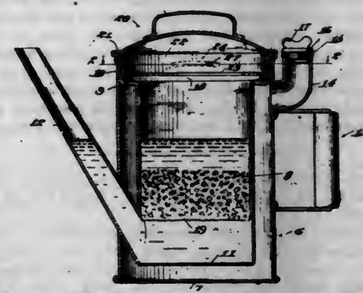
[Claim 6 not printed in the Gazette.]

1,217,043. SWITCH. MAGLOIRE METHOT, Ottawa, Ontario, Canada. Filed May 15, 1916. Serial No. 97,733. (Cl. 104—24.)



A device of the class described comprising a casing having a corrugated top provided with angularly disposed ends, plungers slidably mounted in the casing, a longitudinally extending shaft, cranks extending from diametrically opposite sides of the shaft and operatively connected to the lower end of the plungers, a crank on the end of the shaft having a slotted arm, an offset link operatively connected to a rail switch, a link pivotally attached to the offset link and adjustably attached to the said slotted arm, and means for depressing the said plunger.

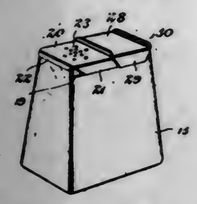
1,217,044. COFFEE-MAKER. SAMUEL L. MEYERS, Oceanpark, Cal., assignor to Sam Meyers & Company, Los Angeles, Cal., a Corporation of California. Filed Jan. 11, 1916. Serial No. 71,448. (Cl. 53—3.)



In a coffee utensil, an inner wall, a horizontal shoulder on the upper end thereof, a vertical flange on the outer edge of said shoulder, an outer wall connecting with said flange, encircling the inner wall in spaced relation thereto, a ring adapted to seat on the shoulder, a sack carried

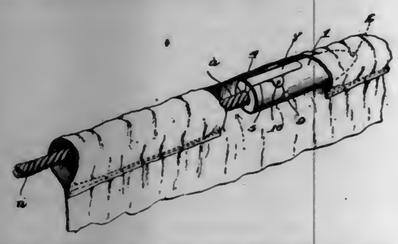
by said ring, a cover having a downwardly extending flange, and a pair of pins on diametrically opposite sides of said flange adapted to engage inclined channels formed on the inner wall of the first-named flange to hold the cover in place and at the same time clamp the ring on the shoulder.

1,217,045. CONDIMENT-HOLDER. WILLIAM M. MILLER, Azusa, Cal. Filed Nov. 2, 1915. Serial No. 59,254. (Cl. 65—45.)



A condiment holder comprising a receptacle of substantially rectangular cross section, said receptacle having a partition extending from the top to the bottom thereof, and said receptacle being provided with longitudinal grooves near the upper end thereof, in combination with a sifting top having side flanges bent into the longitudinal grooves to produce a dovetail construction, and an obstructing member having flanges slidably engaging the dovetail flanges of the sifting top, whereby said obstructing member may be adjusted to entirely obstruct one compartment and also to partly obstruct the two compartments of the receptacle.

1,217,046. BODKIN. LENA BEE MITCHELL, New Orleans, La. Filed Dec. 18, 1915. Serial No. 67,650. (Cl. 223—38.)

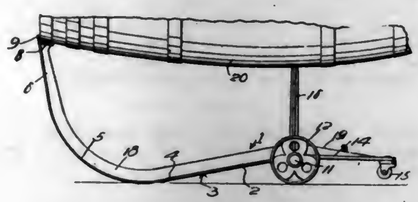


The herein described bodkin for threading a cable cord through goods casings and comprising a hollow cylindrical body pointed at the front end, having a longitudinal segmental opening in one side extending to the rear end, and said body also having an inturned flange at the rear end; a segmental clamping jaw arranged to close in said opening and pivotally mounted, the pivot being arranged at a point intermediate the ends of said jaw, said jaw also having an inturned flange at the rear end, said flanges of the body and jaw having cord engaging prongs at their inner edges, and a spring to normally close said jaw.

1,217,047. BARREL-HOIST. THOMAS L. MORRIS, Huntington, W. Va. Filed Apr. 14, 1916. Serial No. 91,161. (Cl. 248—17.)

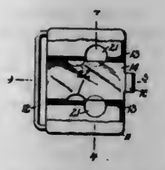
1. A device of the class described comprising a cross bar; standards fixed to and rising from the cross bar; wheels at the ends of the cross bar; and a body projecting rearwardly from the cross bar, the body being curved and broadened to form a rocker, the rocker being prolonged upwardly to form a barrel support coöperating with the standards.

2. A device of the class described including a cruciform frame comprising a body, a cross bar, and an extension projecting forwardly from the cross bar in alinement with the body, the rear end of the body being curved to fashion a rocker, and the rocker being upwardly extended to form a barrel rest; standards fixed to and rising from the cross bar and coöperating with the barrel rest; a caster carried by the extension of the frame; and wheels at the ends of



the cross bar, the wheels and the point of juncture between the body and the rocker affording a three point support when the caster is elevated above the plane defined by said three points.

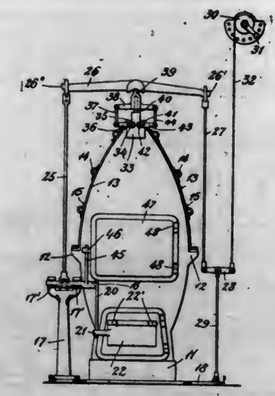
1,217,048. BRACELET-LOCK. EDMUND R. NEBELING, New York, N. Y. Filed Oct. 24, 1916. Serial No. 127,415. (Cl. 24—211.)



1. In a lock of the class described, a socket in the shape of a shallow casing, a slide in said casing presenting a lip at one edge thereof whereby the slide may be manipulated in said socket, means limiting the movement of the slide in the socket, said casing having an opening and said slide having a circular notch adapted to register with said opening in a predetermined position of said slide, and a plate having a stud for engaging the aperture of the socket, said stud being notched to clear the way for the movement of the slide in the socket whereby said plate may be locked to the socket, said socket having yielding means for engaging the slide to offer a greater resistance to the movement of the slide in the socket, said socket and slide having coöperating means influenced by the yielding means of the socket to offer a greater frictional resistance to the slide when the same is fully engaged in the socket.

2. In a lock of the class described, a socket in the shape of a shallow casing, parallelly-spaced guiding strips in said socket, a slide in the socket guided by the strips, said socket having a pair of spaced openings, each of said openings severing a guiding strip, said slide having a notch at each of its longitudinal edges adapted to register with a corresponding opening in the socket, means limiting the movement of the slide in the socket whereby the notches may be brought into register or out of register with the openings of the socket, said slide having a groove, said socket having a projection engaging the groove, said projection normally forcing said slide against the top of the socket, said socket having the top thereof yielding to increase the resistance to displacement of the slide in the socket, said groove in the slide having a depression at one end thereof adapted to be engaged by the projection under the action of the yielding top and thereby further increase resistance to the displacement of said slide in the socket, and a plate having spaced studs adapted to engage the apertures in the socket, each of said studs having a notch for clearing the slide whereby said slide may be moved while the studs are engaged in the openings of the socket, thereby locking the plate to the socket.

1,217,049. THERMOSTATIC CONTROLLER FOR HEATING APPARATUS. HUGH D. O'NEALL, Canal Dover, Ohio. Filed Feb. 1, 1915. Serial No. 5,522. (Cl. 236—5.)



1. The combination with a heater having a draft opening and a closure therefor, of expansion members having longitudinal contact with the outer surface of the shell of the heater and adapted to be expanded by the heat of said shell, and means for connecting said expansion members with said closure to operate the latter, said means including means for equalizing the motion of the expansion members.

2. A heater having a draft opening, a hinged closure member therefor, a controlling member having one free end and with its opposite end secured to a wall of said heater, the intermediate portions of said controlling member snugly contacting with said wall and adapted to be expanded longitudinally by heat radiated from said heater irrespective of the expansion of the latter, means for rigidly securing one end of said controlling member to said heater wall, and means for connecting the opposite end thereof with said closure for moving the latter to its open or closed position in response to changes in the length of said controlling member due solely to the changes in temperature of said heater.

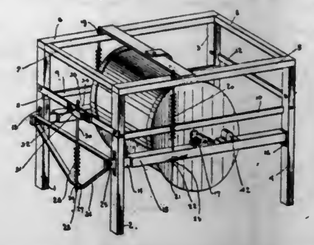
3. A heater having a draft opening, a hinged closure therefor, a controlling member having one free end and with its opposite end secured to a wall of said heater, the intermediate portions thereof snugly contacting with said wall and adapted to be expanded longitudinally by heat radiated from said heater irrespective of the expansion of the latter, means for rigidly securing one end of said member to said heater wall, means for connecting the opposite end thereof with said closure member for moving the latter to its open or closed position relative to changes in length of said member due solely to the changes in temperature in said heater and means interposed between said controlling member and said closure member for magnifying the movement of the free end of said controlling member.

4. The combination with a heater having a draft opening and a closure therefor, of a band iron having one end thereof secured to the heater shell and having a longitudinal surface contact therewith, a lever fulcrumed near one end thereof and operatively connected near its central portion with the free end of said band, means for connecting the free end of said lever with and for operating said closure, and means for magnifying the movement of the free end of the expansion member to produce a corresponding increase in the movement of said lever.

5. The combination with a heater having a fire door and an ash door, of an expansible band secured with one end to the heater shell, a lever, means for connecting the free end of said band with and for moving said lever, and means for connecting one end of said lever with said doors, respectively, to first close the ash door and subsequently opening the fire door during and by the movement of the free end of the expansion member under the influence of heat.

[Claims 6 and 7 not printed in the Gazette.]

1,217,050. WEIGHING-MACHINE FOR GRAIN. SAMUEL B. ORR, Circleville, Ohio. Filed Feb. 19, 1915, Serial No. 9,400. Renewed Jan. 4, 1917. Serial No. 140,651. (Cl. 73—182.)



1. A weighing machine comprising a normally locked weighing drum having a plurality of pockets for the reception of the material to be weighed, a revoluble shaft fixed to said drum, spring controlled levers having one end hinged and further having bearings for said shaft and capable of being shifted when the weight of the material supplied to a pocket exceeds a predetermined amount thereby releasing the drum to permit the same to revolve by gravity to dump the material from said pocket, and means for limiting the revolving movement of the drum at each operation to position an empty pocket to be filled.

2. A weighing machine comprising a normally locked weighing drum having a plurality of pockets for the reception of the material to be weighed, a revoluble shaft fixed to said drum, spring controlled levers having one end hinged and further having bearings for said shaft and capable of being shifted when the weight of the material supplied to a pocket exceeds a pre-determined amount thereby releasing the drum to permit the same to revolve by gravity to dump the material from said pocket, and means for limiting the revolving movement of the drum at each operation to position an empty pocket to be filled, a spring controlled means for said levers at the other end thereof, and means for adjusting said spring controlled means.

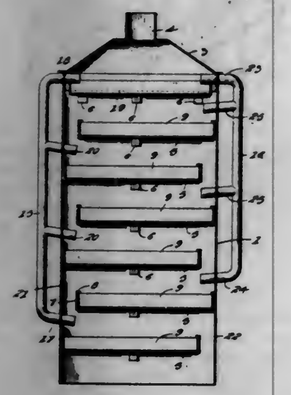
3. A weighing machine comprising a supporting frame, a pair of supporting levers each having one end hinged to said frame and its other end projecting from the frame, a resilient element for controlling the projecting ends of said levers, resilient elements connected to said frame and to said levers and associating with the other resilient element for normally maintaining said levers closed at their hinged connections, a revoluble drum supported by said levers and provided with pockets for the reception of the material to be weighed, said levers capable of being shifted when the weight of the material supplied to a pocket exceeds a predetermined amount thereby overcoming said resilient elements and permitting of the drum to be revolved to enable the material in said pocket to be dumped, and means for limiting the revolving movement of the drum causing thereby a pocket to be held in position to be supplied with the material to be weighed.

4. A weighing machine comprising a revoluble spring controlled weighing mechanism including a drum carried by hinged supports and provided with pockets for the reception of the material to be weighed and capable of being shifted by gravity when the material supplied to a pocket exceeds a pre-determined amount, means for arresting the revolving movement of the drum causing thereby the positioning of a pocket for the reception of material to be weighed, a supporting frame to which said supports are hinged, and said means for arresting the revolving movement of the drum being carried by the drum and said frame.

5. A weighing machine comprising a revoluble spring controlled weighing mechanism including a drum carried by hinged supports and provided with pockets for the reception of the material to be weighed, the spring controlled elements of said mechanism being adjustable and conected with said supports, said drum automatically revolved by gravity when the material supplied to a pocket exceeds a pre-determined weight, and means for arresting the revolving movement of the drum to position an empty pocket to be filled.

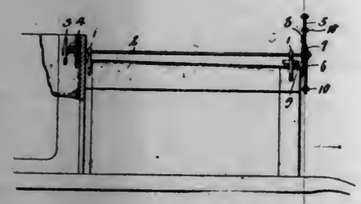
[Claims 6 to 8 not printed in the Gazette.]

1,217,051. DRIER. WILLIAM F. PAGE, Youngstown, Ohio. Filed Nov. 24, 1914. Serial No. 873,773. (Cl. 71—8.)



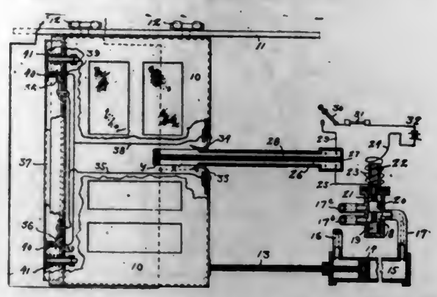
In an excrement drier, the combination, with a fire box, of a casing mounted upon said fire box, a plurality of pans removably carried by said casing and disposed in staggered relation to each other, a top pan positioned centrally within the casing adjacent the top of the same, an outlet stack carried by the top of said casing, a pair of pipes supported exteriorly of said casing, transversely extending pipes connected to said first named pipes and extending into said casing, said transversely extending pipes having their inner receiving ends positioned above said pans, said exteriorly positioned pipes having their upper delivery ends extending into said casing above said top pan for delivering the vaporized liquid product of the excrement into the top of the casing for revaporizing any condensed part thereof and for passage out of said stack.

1,217,052. AUTOMOBILE-INDICATOR. JOHN G. PANNEBAKER, Penbrook, Pa. Filed Feb. 8, 1916. Serial No. 77,055. (Cl. 116—31.)



An indicator comprising a bearing, a plate fixed with relation to the bearing and having radially disposed corrugations, a shaft journaled in the bearing and plate, an arrow mounted upon the shaft and bearing against said plate, a second plate fixed to the arrow and having a series of radially disposed corrugations which engage the first mentioned corrugations at the opposite side of the first mentioned plate from that side at which the said arrow is located.

1,217,053. SAFETY MECHANISM FOR POWER-OPERATED DOORS. HAROLD F. PARISH, Brooklyn, N. Y., assignor to Grinden Art Metal Company, Brooklyn, N. Y., a Corporation of New York. Filed June 9, 1914. Serial No. 844,053. (Cl. 268—8.)



1. The combination with a door of means for closing the door, electrically controlled means for halting the door in its closing travel and means operated by the impact of the door against an obstruction during only the latter portion of its closing movement for completing the controlling circuit.

2. The combination with a door of means for closing the door, electrically controlled means for halting the door in its closing travel, a pair of contacts in the controlling circuit, one of said contacts being carried by the door and the other being stationary with relation thereto, said contacts being automatically closed only during the approach of the door to its jamb, together with a pair of normally open contacts also in the controlling circuit and means operated by the impact of the door against an obstruction on its closing movement for completing the circuit through said normally open contacts.

3. The combination with a door of means for closing the door, electrically controlled means for rendering said closing means inoperative and means operated by the impact of the door against an obstruction during only the latter portion of its closing movement for completing the controlling circuit.

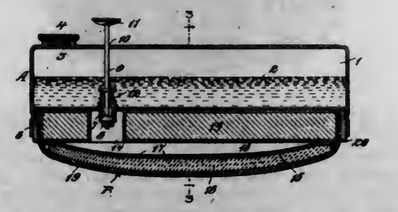
4. The combination with a door of means for closing the door, electrically controlled means for rendering said closing means inoperative and means operated by the impact of the door against an obstruction during only the latter portion of its closing movement for completing the controlling circuit.

5. The combination with a sliding door of means for closing the door, and electrically controlled means for rendering said closing means inoperative, said door halting means comprising a stationary contact in the controlling circuit, a coöperating contact carried by the door and reciprocating therewith, said contacts automatically closing during only the latter portion of the closing travel of the door, a pair of normally open contacts also in said circuit and a yieldable buffer at the edge of said door and means operated by the displacement of said buffer with relation to said door for closing said normally open contacts.

[Claims 6 to 11 not printed in the Gazette.]

1,217,054. CLEANING DEVICE. JOHN HENERY PEARMAN, Lisbon, N. H. Filed June 17, 1916. Serial No. 104,224. (Cl. 15—51.)

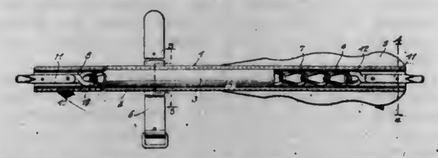
1. A cleaning device comprising a body section formed with a chamber and having a peripheral depending flange, a discharge port in the bottom of the chamber adjacent one end, a valve controlling said port and having means at the top of the body for actuating the valve, in combination with a removable rubbing section formed of a body shaped to enter within the socket defined by the said flange of the body section, a distributing chamber extending along the bottom of the said body and provided with perforations in its bottom, there being an opening in the body through which fluid from the said port passes into the chamber, a pad disposed in contact with the under surface of the perforated bottom of the chamber, a cloth extending under and covering the pad, and the edges of the cloth being disposed around the periphery of the body, and a band binding the edges of the cloth removably to the said body and forming means for frictionally engaging the internal surface of the flange of the body section to removably hold the rubbing section on the latter.



2. A cleaning device of the class described comprising a structure having a storage chamber for cleaning fluid and a distributing chamber, a valve controlling communication between the chambers, the bottom of the distributing chamber being convex on its under side and formed with distributed apertures through which cleaning fluid feeds, and an absorbent rubbing pad covering the perforated bottom of the distributing chamber, said valve being located close to one end of the device, whereby the cleaning fluid can be discharged into one end of the distributing chamber to moisten only one end of the pad by holding the device inclined with the valved portion lowermost.

3. In a device of the class described. the combination of a holding section in the form of a body provided with a chamber and having a depending marginal flange to form a recess or socket, a port in the bottom of the chamber, a valve normally closing the port, a stem on the valve extending out of the top of the chamber and adapted to be actuated by a finger of the hand grasping the holding section, with a rubber section comprising a back having an opening through which fluid passes from the port, and a plate secured to the under side of the back and forming therewith a shallow distributing chamber, said plate being dished downwardly both longitudinally and transversely and having distributed apertures, an absorbent rubbing pad covering the under side of the plate, a fabric piece under the pad and having its edges turned up around the back, and a band clamping the edges of the fabric piece to the back, said band fitting in the socket or recess of the body section.

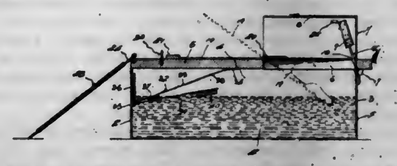
1,217,055. HARNESS-TRACE. OTTO J. PEICKERT and EMIL E. PEICKERT, Stevens Point, Wis. Filed Nov. 17, 1916. Serial No. 131,839. (Cl. 54—52.)



1. A harness trace consisting of a heavy flat leather inner wall with a longitudinally extending flexible pocket on its outer face, said pocket being U-shaped in cross section, a heavy twisted chain housed in said pocket, clips having eyes secured to said chain, and having flat superposed shanks, the eyes in said clips being twisted at an angle conforming to the angle of the twist of the chain links, and overclips secured to the shanks of the chain-connected clips.

2. A harness trace consisting of a heavy flat leather inner wall with a longitudinally extending flexible pocket on its outer face, said pocket being U-shaped in cross section, a heavy twisted chain housed in said pocket, clips having eyes secured to opposite ends of said chain, and having flat superposed shanks, the eyes being twisted at an angle of substantially 35° relative to said shanks, and overclips secured to said shanks.

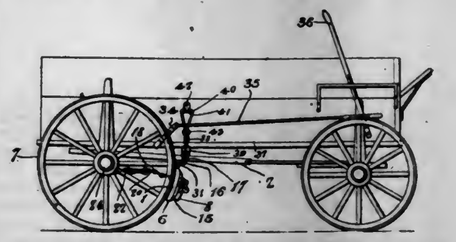
1,217,056. TRAP. BYRON PICKERING, Kissimmee, Fla. Filed Feb. 11, 1916. Serial No. 77,686. (Cl. 43—24.)



1. In a trap structure, a liquid retaining receptacle, a trap door, a bait retainer, means operatively connected to said bait retainer for controlling the operation of said trap door, a drowner positioned within said liquid retaining receptacle and including a resilient plate having one edge connected to the inner surface of one end of said retaining receptacle, and a float attached to the under surface of the free edge of said drowner for normally holding the free edge of the drowner above the upper surface of the liquid within the tank.

2. In a trap structure, a liquid retaining receptacle, a trap door, a bait retainer, means operatively connected to said bait retainer for controlling the operation of said trap door, a drowner structure positioned within said liquid retaining receptacle and including a plate constructed of foraminous material having one edge attached to the inner surface of one end of said retaining receptacle, a float attached to the under surface of the outer free end of said foraminous plate, a formainous guard attached to the inner surface of the end of said receptacle and extending upwardly above said drowner and having its upper end attached to the inner surface of the top of said receptacle.

1,217,057. VEHICLE-BRAKE. BYRON PICKERING, Kissimmee, Fla. Filed May 19, 1916. Serial No. 98,590. (Cl. 21—8.)



1. A brake of the class described including a transverse roller, links supporting the roller and eccentrically pivoted to the same to permit independent rotary movement of the roller during the oscillation of the links, brake shoes pivoted to the roller and means for partially rotating the roller and for causing a simultaneous rearward movement of the same.

2. A vehicle brake including a transverse roller, links supporting the roller and pivotally connected thereto at the back thereof eccentrically of the same to permit the roller to rotate independently of the swinging movement of the links, brake shoes pivotally connected to the ends of the roller eccentrically of the same at points spaced from

the pivots of the links and means for partially rotating the roller and for causing a simultaneous rearward movement of the same.

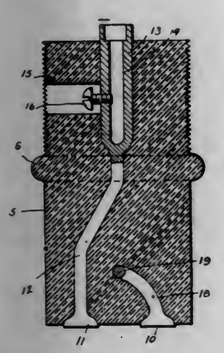
3. A vehicle brake of the class described including a transverse shaft or roller, pivots projecting from the ends of the shaft or roller and extending into the same and arranged eccentrically, brake shoes mounted on the said pivots, transverse fastening devices piercing the shaft or roller and the inner portions of the pivots and supporting links secured to the shaft or roller by the said fastening devices.

4. A vehicle brake of the class described including a transverse roller having eccentrically arranged pivots, brake shoes pivoted intermediate of their ends to the roller by the said pivots and provided with lower weighted portions, supporting links pivotally connected with the roller eccentrically thereof at points spaced from the pivots of the brake shoes and permitting the roller to rotate during the oscillation of the links and means for partially rotating the roller and for causing a simultaneous rearward movement of the same.

5. A vehicle brake of the class described including a transverse roller, supporting links eccentrically pivoted to the roller and the back of the same and permitting the roller to rotate independently of the links during the swinging movement thereof, brake shoes eccentrically pivoted to the ends of the roller, a flexible connection wound around the roller and means for operating the flexible connection to rotate the roller and cause a simultaneous rearward movement of the same.

[Claims 6 to 8 not printed in the Gazette.]

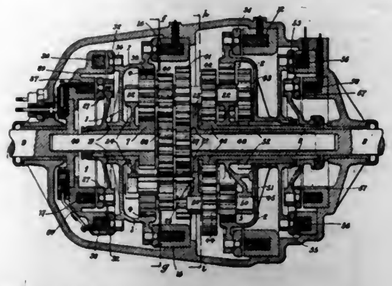
1,217,058. ELECTRIC-LAMP CONNECTOR. ERNEST A. POHL, Georgetown, Ohio. Filed Feb. 4, 1916. Serial No. 76,192. (Cl. 173—328.)



In an electric lamp connector, a plug including a body, a socket secured in one end of said plug, means for securing a wire in said socket, an electrical contact secured in the opposite end of said body, an angular shank electrically connecting said socket with said contact, a second contact, an anchoring pin arranged diametrically within said plug and projecting laterally of the latter and a lateral extension on said pin electrically connected with the second mentioned contact.

1,217,059. VARIABLE-SPEED GEARING. GEORGE POLLARD, Piccadilly, London, England, assignor to Menco-Elma Syndicate Limited, London, England. Filed Aug. 18, 1915. Serial No. 46,179. (Cl. 74—34.)

1. In a variable speed changing gear of the epicyclic spur wheel and pinion type, a driving member, a driven member, a carrier rigid with the driven member and freely supported with relation to the driving member, planet pinions mounted on said carrier, means for driving said planet pinions from the driving member, controlling gears operatively associated with the planet pinions and electromagnetic means for selectively operating said controlling gears, for the purpose described.



2. In a variable speed changing gear of the epicyclic spur wheel and pinion type, a driving member, a driven member, a carrier rigid with the driven member and freely supported with relation to the driving member, planet pinions mounted on said carrier, means for driving said planet pinions from the driving member, internal gears operatively associated with the planet pinions and electromagnetic means for selectively operating said internal gears, for the purpose described.

3. In a variable speed changing gear of the epicyclic spur wheel and pinion type, a driving member, a driven member, a carrier rigid with the driven member and freely supported with relation to the driving member, planet pinions mounted on said carrier, means for driving said planet pinions from the driving member, internal controlling gears operatively associated with the planet pinions, and means for mechanically clutching together certain of said internal controlling gears to effect a driving connection between the driving and driven members.

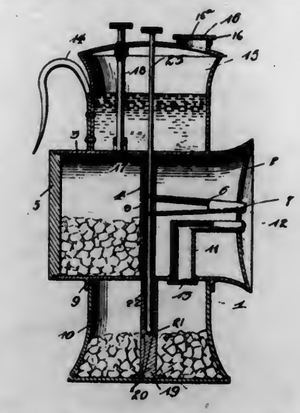
4. In a variable speed changing gear of the epicyclic spur wheel and pinion type, a driving member, a driven member, a carrier rigid with the driven member and freely supported with relation to the driving member, planet pinions mounted on said carrier, means for driving said planet pinions from the driving member, internal controlling gears operatively associated with the planet pinions, coöperating interlocking elements on certain of said controlling gears and electromagnetic means for moving said gears into interlocking engagement to effect a driving connection between the driving and driven members.

5. In a variable speed changing gear of the epicyclic spur wheel and pinion type, a driving member, a driven member, a carrier rigid with the driven member but freely supported with relation to the driving member, planet pinions mounted on said carrier, and means engaging said planet pinions to control the rotation of said carrier and thus the speed of drive through said carrier to the driven member.

[Claims 6 to 11 not printed in the Gazette.]

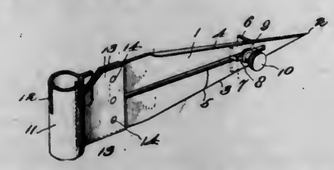
1,217,060. ACETYLENE-LAMP. JOSEPH POTTS, Harrisburg, Ill. Filed Aug. 2, 1915, Serial No. 43,256. Renewed Dec. 19, 1916. Serial No. 137,874. (Cl. 48—23.)

An acetylene gas generator comprising a horizontal transverse body portion provided with a central partition separating said body portion into a rear generating chamber and a front dead air chamber, a reflector forming the front wall of the dead air chamber, a closure at the rear of said body portion for said generating chamber, a water reservoir upon the top of said body portion and having a port communicating with said generating chamber, a second generating chamber detachably connected with the bottom of the body portion, a water supply tube leading thereto through the dead air chamber from said water reservoir, valves controlling communication between the water reservoir and the respective generating chambers, and burner tubes communicating with the generating



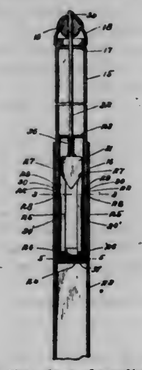
chambers and extending through the dead air chamber and reflector.

1,217,061. NEEDLE-THREADER. MONTIEVILLE POWELL, South Lebanon, Ohio. Filed Apr. 13, 1915. Serial No. 21,099. (Cl. 223—36.)



A needle threader comprising a tube, said tube provided with an elongated slot therein, parallel members spaced apart at their outer ends and formed integrally with the tube, and oppositely disposed from the elongated slot, said parallel members provided on their upper edges with downwardly and inwardly directed slots, a hook formed on said parallel members and extending across and adjacent the ends of said downwardly and inwardly directed slots and adapted to receive the eye of a needle.

1,217,062. POST-HOLE AUGER. RICHARD C. POWERS, Aiktow, Saskatchewan, Canada. Filed Apr. 3, 1916. Serial No. 88,687. (Cl. 255—30.)

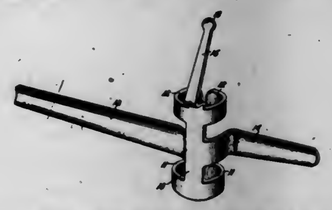


1. A device of the class described comprising a lower tubular member of non-circular cross section, an upper tubular member telescoping therein, spring actuated jaws supported in the lower end of the upper member and having laterally extending pins adapted to be projected through the walls of the lower member, said walls being provided with rows of apertures for engagement with said pins, and means for forcing the spring actuated jaws against the tension of their actuating springs.

2. In a device of the class described, a tubular member having opposite side walls provided with rows of apertures, a second tubular member telescoping and nonrevoluble with respect to the first mentioned member, a rectangular frame mounted in the lower end of the second tubular member, a block mounted in the lower end of the rectangular frame, jaws pivoted on said block and having beveled end faces and laterally extending pins extending through the walls of the rectangular frame and the tubular member in the direction of the apertures in the side walls of the first mentioned tubular member, flat actuating springs whereby the jaws are actuated to retract the laterally extending fingers with respect to the apertures in the side walls of the first mentioned tubular member, a wedge-shaped plunger carried by the second tubular member, a spring whereby said plunger is projected in the direction of the beveled faces of the jaws, means for retracting the plunger against the tension of its actuating spring, and a transverse fastening member whereby the rectangular frame, the jaw carrying block and the jaw actuating springs are assembled with the second mentioned tubular member.

3. In a device of the class described, a lower tubular member of rectangular cross section carrying an auger head at its lower end, the side walls of said tubular member being provided with series of perforations, an upper tubular member of non-circular cross section slidably engaging the lower tubular member, a handle bar at the upper end of the upper tubular member, a lever fulcrumed on the handle bar and having a loop surrounding the same, a rectangular frame mounted in the lower end of the upper tubular member, said frame and member having registering apertures, spring actuated jaws supported at the lower end of the rectangular frame, said jaws having pins that project through the registering apertures and said jaws being provided with opposed bevel faces, a wedge-shaped plunger slidable in the upper portion of the rectangular frame and engaging the beveled faces of the jaws, a spring interposed between the plunger and the upper end portion of the rectangular frame, and a stem extending through the spring and the upper end portion of the rectangular frame, said stem being connected at one end with the plunger and at the other end with the lever fulcrumed on the handle bar.

1,217,063. CALLIGRAPHIC DEVICE. JOHN MICHAEL REARDON, Chico, Cal., and EMIL BERNHARDT BERGESON, Everett, Wash. Filed May 9, 1916. Serial No. 96,413. (Cl. 120—107.)



A device of the class described, comprising a body having means for attachment to a writing implement, and oppositely disposed thumb and finger engaging members extended at substantially right angles to the axis of said pen engaging means, said thumb and finger engaging members being out of alinement, one above and one below the axis of the pen engaging means, whereby the thumb of a user will be held inwardly of the fingers in its natural position for writing.

1,217,064. AUTOMOBILE-HEATER. JOHN J. REDKEY, Pueblo, Colo. Filed July 25, 1916. Serial No. 111,254. (Cl. 257—241.)

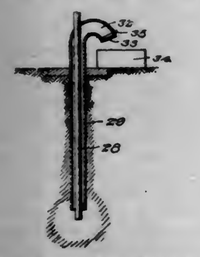
The combination with an exhaust pipe of an engine, of relatively spaced and externally screwthreaded collars

mounted on the exhaust pipe, substantially funnel shaped heads mounted on the exhaust pipe and having their restricted portions threaded to the collars, set screws threaded to the heads and engaging the exhaust pipe to prevent the collars and heads from moving on the exhaust pipe,



a pair of cylindrical casings carried by the heads and surrounding the exhaust pipe to form a heating chamber, said casings being relatively spaced on the heads to form a dead air chamber, means for admitting air to the heating chamber, and an outlet pipe connected to the heads for receiving heated air from the heating chamber.

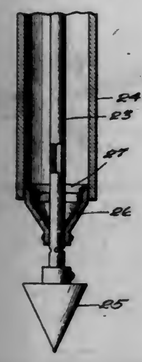
1,217,065. METHOD OF MINING SULFUR AND OTHER MINERALS. HAMPTON P. RHODES, Shreveport, La. Filed Feb. 18, 1916. Serial No. 79,134. (Cl. 83—78.)



1. The method of mining minerals consisting of first injecting hot water into the mine, secondly, injecting hot air to vaporize the water, and third, injecting additional air to raise the loosened minerals.

2. The method of mining sulfur consisting of first injecting hot water into the mine to loosen the strata, secondly, injecting hot air into the mine to vaporize the water to further loosen the strata, and third injecting additional hot air to raise the loosened minerals.

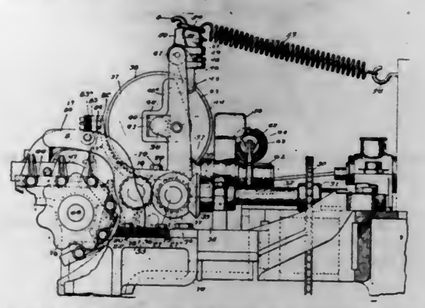
1,217,066. MINING APPARATUS. HAMPTON P. RHODES, Shreveport, La. Filed May 25, 1916. Serial No. 99,817. (Cl. 166—18.)



1. The combination with a well casing, of a fluid conducting pipe extending within the same, and a hollow frusto-conical receptacle mounted on the pipe and having its upper edge beveled, the beveled edge contacting with the interior of the well casing, said pipe serving to close the lower end of the frusto-conical receptacle.

2. The combination with a well casing, of a pipe extending within the same, and a receptacle secured to the pipe having a beveled upper edge, the beveled upper edge contacting with the interior of the well casing to cause any material that adheres to the well casing to fall within the receptacle.

1,217,067. SPINNING-MACHINE. GEORGE L. RICE, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Continuation of application Serial No. 844,783, filed June 12, 1914. Abandoned May 31, 1916. This application filed May 27, 1916. Serial No. 100,288. (Cl. 118—38.)



1. In a twine spinning machine, the combination of a nipper, means for positively feeding to said nipper a sliver of the proper size to produce twine of the desired tensile strength, means for pulling said sliver through the nipper and twisting it into twine after it passes through the nipper, and smoothing dies on the delivery side of the nipper for smoothing and polishing the twine as it is being twisted.

2. In a twine spinning machine, the combination of a source of fiber supply, a nipper, means for drawing fiber from said source of supply and reducing it to the proper size sliver to produce twine of the desired tensile strength and for feeding the sliver positively to the nipper, and means for pulling the sliver through the nipper and twisting it to form twine.

3. In a twine spinning machine, the combination of a nipper, means for positively feeding to said nipper at a definite rate of speed a sliver of proper size to produce twine of the desired tensile strength, and means for pulling the sliver through the nipper at substantially the same rate of speed as it is fed to the nipper and twisting it to form twine after it passes through the nipper.

4. In a twine spinning machine, the combination of a nipper, means for positively feeding to said nipper at a definite rate of speed a sliver of proper size to produce twine of the desired tensile strength, means for pulling the sliver through the nipper at substantially the same rate of speed as it is fed to the nipper and twisting it to form twine after it passes through the nipper, and means for adjusting the relative speed of said feeding and pulling means.

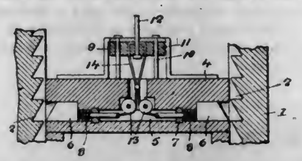
5. In a twine spinning machine, the combination of a nipper, means for positively feeding to said nipper a sliver of fiber of the proper size to produce twine of a desired tensile strength, and means for pulling the sliver through the nipper and twisting it into twine after it passes through the nipper.

[Claim 6 not printed in the Gazette.]

1,217,068. AUTOMATIC SAFETY DEVICE FOR ELEVATORS. PETER ROTH, New Salem, N. D. Filed Apr. 25, 1916. Serial No. 93,428. (Cl. 187—84.)

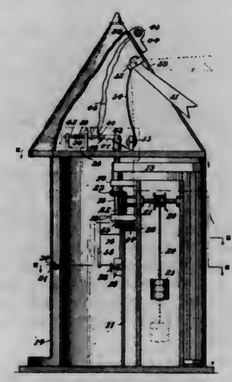
In combination with guides having inwardly disposed teeth, an elevator movably mounted between the guides

and having a beam, said beam being channeled longitudinally, spring pressed pawls movably mounted in the channel, a yoke mounted upon the beam, bolts passing transversely through the yoke and connected with the beam, a block slidably mounted upon the bolts and located within



the yoke and limited in its sliding movement by the yoke and beam, pulleys journaled in the channel below the upper surface of the beam, cables attached to the block and trained under the pulleys and connected with the pawls and a hoisting cable connected with the block.

1,217,069. SAFETY AND SIGNAL APPARATUS FOR FIRE-ALARM BOXES. MICHAEL RUGEL, Milwaukee, Wis. Filed July 5, 1916. Serial No. 107,621. (Cl. 177—379.)



1. An alarm box safety mechanism comprising a cage, a swinging closure door therefor, a fire alarm box within the said cage, a door for the said box, a bolt adapted for retaining the cage door in its open position, manually operable releasing means for the said bolt within the said cage, releasing means for the said box door, and tripping connections between the said releasing means and cage door whereby the said box door is released during the closing movement of the cage door.

2. A fire alarm device comprising a cage, a swinging closure door therefor, an alarm box arranged within the cage, automatic closing means for the said door, automatic opening means for the said box simultaneously operable therewith, and a signal arm and electric lamp automatically operated simultaneously with the closing of the cage door.

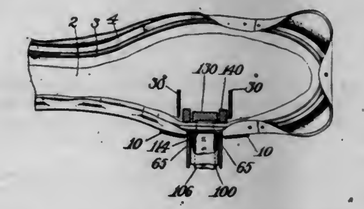
3. A device of the class described comprising in combination with a cage having an entrance opening therein, a shaft vertically journaled through the roof of the said cage, a closure door for the said opening swingingly suspended from the said shaft, weight operated closing means for the said door operatively connected to the said shaft, manually operable means for retaining the door in opened position, and an alarm box arranged within the said cage.

4. A device of the class described comprising in combination with a cage having an entrance opening therein, a shaft vertically journaled through the roof of the said cage, a closure door for the said opening swingingly suspended from the said shaft, weight operated closing means for the said door operatively connected to the said shaft, manually operable means for retaining the door in opened position, an alarm box within the said cage, a normally closed door for the said box, releasing means for the said box door, and tripping connections for the said releasing means carried by the said shaft whereby the said box door is automatically released during the closing of the cage door.

5. A device of the class described comprising in combination with a cage having an entrance opening therein, a shaft vertically journaled through the roof of the said cage, a closure door for the said opening swingingly suspended from the said shaft, weight operated closing means for the said door operatively connected to the said shaft, manually operable means for retaining the door in opened position, an alarm box within the said cage, a normally closed door for the said box, releasing means for the said box door, tripping connections for the said releasing means carried by the said shaft whereby the said box door is automatically released during the closing of the cage door, a signal arm and lamp member carried by the said cage, a normally open electric switch for the said lamp member, releasing means for the said switch, and operating means for the said arm automatically operated upon the revolution of the said shaft during the closing of the cage door.

[Claims 6 to 8 not printed in the Gazette.]

1,217,070. METHOD OF LASTING. ARTHUR L. RUSSELL, Hyde Park, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 5, 1910, Serial No. 585,431. Divided and this application filed May 26, 1915. Serial No. 30,661. (Cl. 12—145.)



1. That improvement in methods of making shoes which consists in progressively lasting the shoe by successive operations applied to adjacent parts of the upper one after another, each of which operations comprises stretching two laterally adjacent portions of an upper up the side of a last and while continuously holding said portions under tension fastening the more moderately tensioned portion of upper located between said portions and then allowing the more highly tensioned portions of the upper to react.

2. That improvement in methods of making shoes which comprises tensioning the upper at two laterally adjacent points, pressing into lasted position and, while continuing the pressure fastening the more moderately tensioned portion of upper between said points, and then permitting the upper to react at the more highly tensioned points and repeating the operation on successive portions of the shoe to last and fasten the shoe progressively.

3. That improvement in methods of making welt shoes which comprises drawing the upper up the side and over the edge of an inverted last at two laterally adjacent points and uninterruptedly holding the upper under tension at said points while forcing into lasted relation to the channel lip of an innersole and there fastening the more moderately tensioned portion of the upper located between said points, then allowing the upper to react, and repeating the operation on successive portions of the shoe to last and fasten the shoe progressively.

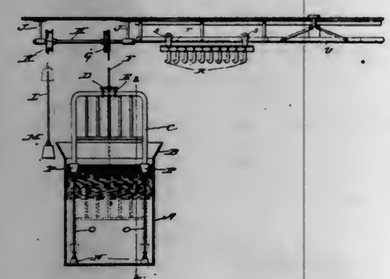
4. That improvement in methods of making welt shoes which comprises tensioning an upper at two laterally adjacent points at a time, forcing the portion of upper between said two points into the angle of union between the lip and feather of an innersole and uniting it to said lip by inserting through the upper and said lip an individual

permanent fastening that will not interfere with the operation of the welter needle or with the inseam trimming operation, repeating the operation on successive portions of the shoe to last and fasten the shoe progressively, and subsequently attaching a welt to the upper and innersole by stitching.

5. That improvement in methods of making welt shoes which comprises working an upper over a last at two laterally adjacent points, pressing the upper and the channel lip of the innersole into close contact with each other between said two points, permanently uniting the upper and lip while in this relation by inserting therethrough and clenching a staple of fine wire, and then uniting the welt, upper and innersole with stitches.

[Claims 6 to 14 not printed in the Gazette.]

1,217,071. PAINTING APPARATUS. CHARLES RUST, Yonkers, N. Y. Filed Apr. 29, 1916. Serial No. 94,414. (Cl. 91—46.)



1. A painting apparatus, consisting of a paint container, means for lowering hollow bed sections into said container and elevating said sections therefrom, and means in said container to prevent the entrance of paint to the interior of said bed sections.

2. A painting apparatus, consisting of a paint container, means for lowering hollow bed sections into said container and elevating said sections therefrom, and buoyant means in said container to prevent the entrance of paint to the interior of said bed sections.

3. A painting apparatus, consisting of a paint container, counter balance means for lowering and raising hollow bed sections, floats in said container to act as stoppers to close the hollow posts of said bed sections, and means for anchoring said floats.

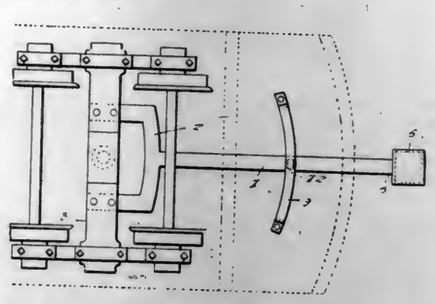
4. A painting apparatus, consisting of a paint container, means for lowering hollow bed sections into said container and elevating said sections therefrom, and floats in said container having a reduced portion adapted to fit in and close the ends of the hollow posts of said bed sections.

5. A painting apparatus, consisting of a paint container, means for lowering hollow bed sections into said container and elevating said sections therefrom, and floats in said container having a reduced portion adapted to fit in and close the ends of the hollow posts of said bed sections, said lowering and raising means consisting of a counter shaft disposed above said container, a pair of pulleys mounted thereon, and a counter balance secured to one pulley and a bed section engaging hook secured to the other, substantially as described.

1,217,072. SELF-TURNING LIGHT FOR ROLLING-STOCK. REUBEN H. SALTORS, Ensley, Ala. Filed July 28, 1916. Serial No. 111,870. (Cl. 240—62.)

1. In combination, a car having trucks thereon, of a horizontal arm secured to the trucks and having its outer end bent to form a vertical arm, and a headlight carried by the vertical arm and adapted to be swung in the arc of a circle when the trucks are turned by a curve in a track.

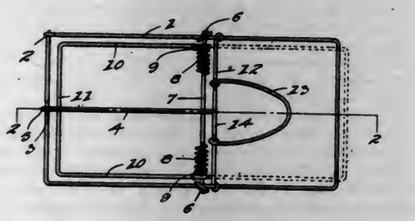
2. In combination, a car having trucks thereon, of a horizontal arm, a substantially U-shaped member formed on one end of the horizontal arm and disposed in a horizontal plane therewith and bolted to the truck, said horizontal arm having its other end bent at right angles to form a vertically extending arm, and a headlight carried by the vertical arm adapted to be swung in the arc of a circle when the trucks of the car are turned to illuminate a curve.



3. In combination, a car having trucks thereon, a horizontal arm secured to the truck, said arm being bent at right angles to form a vertically extending arm, a support carried by the vertical arm, a headlight resting within the support, clamps carried by the headlight for securing the headlight to the vertical arm, and means for supporting the forward end of the horizontal arm to the forward end of the car.

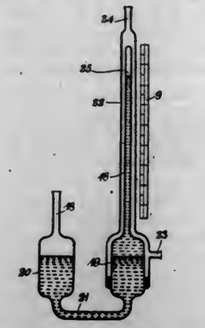
4. In combination, a car having trucks thereon, of a horizontal arm secured to the truck, said arm being bent at right angles to form a vertical arm, a headlight secured to the vertical arm, a pair of vertical arms secured to the under face of the forward end of the car and depending upon each side of the horizontal arm, an arcuate-shaped track carried by the pair of relatively spaced arms, and a roller secured to the horizontal arm and resting upon the arcuate-shaped track to support the forward end of the horizontal arm.

1,217,073. WIRE-BASE MOUSE-TRAP. CHARLES A. SAMPSON, Radcliffe, Iowa. Filed Jan. 15, 1915. Serial No. 2,398. (Cl. 43—21.)



A trap comprising a rectangular frame constructed from a single length of wire, the side members of the frame being bent to form oppositely disposed loops, one of the end members of said frame being offset upwardly to form a trigger bearing, a trigger pivoted on said bearing, a transverse rod rigidly secured in said loops, a substantially U-shaped jaw having its ends pivoted to the rod adjacent each end, coil springs secured to the rod and to the arm portions of the jaw, a rod pivoted to the frame adjacent the first mentioned rod and having an substantially U-shaped offset portion to receive the free end of the trigger for holding the jaw against the tension of the springs, and a substantially U-shaped bait holder having its ends bent about the arm portion of the offset portion to rock the offset portion when pressure is applied thereon to free the jaw.

1,217,074. GAGE FOR INDICATING THE EFFICIENCY OF A STEAM-CONDENSER. ARTHUR EDWIN LEIGH SCANES, Manchester, England. Filed Dec. 5, 1913. Serial No. 804,915. (Cl. 73—31.)



1. The combination with a steam condenser, of a sealed tube containing water and having its open end connected with the vacuum space of the steam condenser, and means for maintaining the water in said tube at a temperature equal to that of the water in the condenser, said tube being shaped whereby it is adapted to maintain a vapor or vacuum space that may be separated by a liquid seal from the rest of the tube.

2. In an efficiency indicating gage of the character described, the combination with a tube having one end sealed and exhausted of air and containing water and the other end open and adapted to be connected with the vacuum space of a steam condenser, said tube being shaped whereby it is adapted to maintain a vacuum or vapor space and also a mercury column serving as a liquid seal to separate the water in the sealed end of said tube from the open end thereof and means for maintaining the water in the sealed end of the tube at a temperature determined by the condenser.

3. In an efficiency indicating gage of the character described, the combination with a tube having one end sealed and exhausted of air and containing water and the other end open, of means for connecting the open end of said tube with the vacuum space of a steam condenser and a container in which said tube is immersed and through which the water from the steam condenser is caused to flow, said tube being shaped whereby it is adapted to maintain a vapor or vacuum space that may be separated by a liquid seal from the rest of the tube.

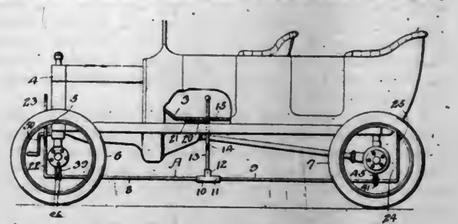
4. The combination with a steam condenser of a sealed U-shaped tube containing water and having its open end connected with the vacuum space of the condenser and a jacket surrounding said tube through which the discharged circulating water from the condenser is caused to pass.

5. In an efficiency indicating gage of the character described, the combination with a tube having one end sealed and exhausted of air and containing water and the other end open and adapted to be connected with the vacuum space of a steam condenser, of a container surrounding said tube through which the condensed steam from the steam condenser is caused to flow, said tube being shaped whereby it is adapted to maintain a vapor or vacuum space that may be separated by a liquid seal from the rest of the tube.

[Claims 6 to 11 not printed in the Gazette.]

1,217,075. DIRECTIONAL SIGNAL. JOSEPH J. SCHLAEGER, Jr., St. Paul, Minn. Filed Feb. 11, 1916. Serial No. 77,660. (Cl. 116—31.)

In a directional signal, the combination with a motor vehicle, of a sectional rock shaft extending longitudinally of the chassis and beneath the vehicle body and the front and rear axles, hangers for said shaft fastened to the front and rear axles, each embodying a plurality of bearing members in spaced relation to each other, a stop collar on said shaft between two adjacently located bearing members, arms rising from the front and rear extremities of said shaft and located respectively in front of the front axle and behind the rear axle, a semaphore carried by



each arm, an operating lever extending through the vehicle floor and offset between its ends to clear the drive shaft, a tubular T-coupling receiving and fixedly connecting the adjacent extremities of the rock shaft and the operating lever, and a rack for holding said lever in any one of several positions.

1,217,076. SAFETY-PAPER. ERNEST EMIL SCHMIDT, Covington, Ky. Filed Jan. 26, 1916. Serial No. 74,500. (Cl. 92—40.)

1. Paper impregnated with ox-gall.

2. Paper impregnated with ox-gall, and an agent adapted to combine with commercial writing ink in rendering matter written with such ink indelible.

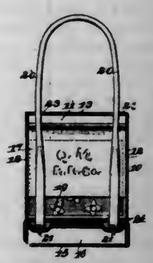
3. Paper impregnated with ferro-cyanid and ox-gall.

4. Paper impregnated with ox-gall and magnesium sulfate.

5. Safety paper impregnated with a solution of ferro-cyanid of potassium or its specified equivalent, ox gall, and magnesium sulfate.

[Claims 6 and 7 not printed in the Gazette.]

1,217,077. CAR-SEAL. PAMPHILUS SCHMITZ, San Francisco, Cal. Filed June 14, 1916. Serial No. 103,667 (Cl. 70—97.)



1. A seal comprising a body portion formed from a single piece of material bent to provide a main casing, an auxiliary casing and a closure in said main casing, an identification strip having one end secured in said main casing and inclosed therein by said closure, a locking device mounted in said auxiliary casing, and a shackle member extending through said main casing and locked in position by said locking device for retaining said closure in closing position.

2. A seal comprising a body portion formed from a single piece of material bent to provide a main casing, an auxiliary casing and a closure in said main casing, an identification strip having one end secured in said main casing and inclosed therein by said closure, a locking device mounted in said auxiliary casing, and means automatically locked in position by the insertion thereof into the locking device for retaining said closure in closing position.

3. A seal comprising a main casing, an identification strip secured therein, a closure for said strip forming a

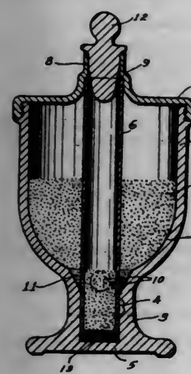
portion of said casing, a locking device associated with said main casing, and a shackle member engaging said closure and locked by said locking device to retain said closure in closing position.

4. A seal comprising a main casing, an identification strip secured therein, a closure for said strip, a locking device associated with said main casing, a shackle member extending through said casing and locked by said locking device to retain said closure in closing position, and an auxiliary casing at one end of said main casing for inclosing said locking device.

5. A seal comprising a casing, an identification strip having one end secured therein, a closure for said strip forming a portion of said casing, and means extending into one end of said casing and projecting through the other end thereof and engaging said closure for retaining the same in closing position.

[Claims 6 to 11 not printed in the Gazette.]

1,217,078. SUGAR-BOWL OR THE LIKE. FRANK SCHREIDT, Mansfield, Ohio. Filed July 12, 1915. Serial No. 39,233. (Cl. 221—98.)



1. A sugar bowl formed to receive and removably support a tube, a tube fitting in said supporting portion of the bowl, said tube being formed at an appropriate point in its length with an aperture, the inner surface of the bowl immediately adjacent the aperture of the tube inclining upwardly and outwardly, the lower edge of said inclined surface being coincident approximately with the outer surface of the tube and with the lower edge of the aperture.

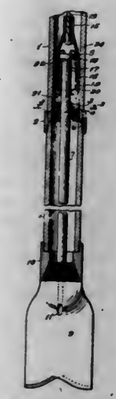
2. A sugar bowl centrally formed in the lower portion to receive and support a tube, a tube fitted in said supporting portion of the bowl, said tube being formed with an aperture, the inner surface of the bowl throughout a length corresponding in height to the diameter of the aperture inclining upwardly and outwardly from a line in coincidence with the tube at the lower edge of the aperture.

3. A sugar bowl centrally formed in the lower portion to receive and support a tube, a tube fitting in said supporting portion of the bowl, said tube being formed with an aperture, the inner surface of the bowl throughout a length corresponding in height to the diameter of the aperture inclining upwardly and outwardly from a line in coincidence with the tube at the lower edge of the aperture, and a longitudinally adjustable closure for that end of the tube fitting within the bowl supporting portion, whereby the receiving length of the tube below the aperture may be varied at will.

4. An article of manufacture comprising a bowl having an inclined inner surface and a well which is chamfered at the top, a tubular member supported in the well and provided with perforations coincident with the chamfered portion, a cap for the bowl provided with a central aperture to receive the free end of the tubular member.

5. An article of manufacture comprising a bowl having an inclined inner surface and a well which is chamfered at the top, a tubular member supported in the well and provided with perforations coincident with the chamfered portion, a cap for the bowl provided with a central aperture to receive the free end of the tubular member, and an adjustable insert fitted to the inner surface of said tubular member to provide means of regulating the quantity of granular substance discharged therefrom, as described.

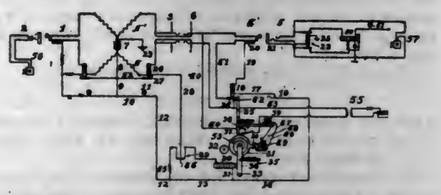
1,217,079. SAFETY ROTARY WELL-BORING TOOL. COLAN F. WHITTIER and MERICOS H. WHITTIER, Los Angeles, Cal. Filed Aug. 24, 1915. Serial No. 47,130. (Cl. 255—28.)



1. A hollow stock, a socket, a line attached to the socket and extending through the stock; a tool adapted for connection to the stock; a connection adapted to be connected to the tool and extending into the socket; means to retain the connection in the socket; said socket being adapted for rotary and longitudinal movement relative to the connection and said connection having longitudinal movement relative to the stock to allow the tool to be separated from the stock a sufficient distance to allow the connection to be engaged by a tool to hold the same to allow the tool to be connected to and disconnected from such connection; and means to prevent relative rotation of the socket and connection when the tool is suspended from the socket by the connection.

2. A hollow stock, a socket loose in the stock, a line attached to the sockets and extending through the stock and beyond; a tool screwed to the lower end of the stock, a connecting rod loosely swiveled to the socket and attached to the tool; and a stop below the socket.

1,217,080. TELEPHONE-EXCHANGE APPARATUS. FRANK W. ADSIT, Minneapolis, Minn., assignor to Adsit General Electric Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Mar. 17, 1915. Serial No. 15,114. (Cl. 179—73.)



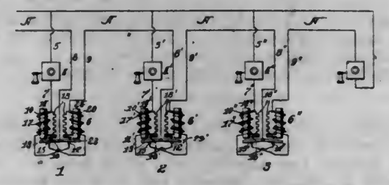
1. Telephone exchange apparatus comprising a line circuit, a subscriber's set, a cord circuit in the central station, adapted to coöperate with said line circuit, and means associated with said cord circuit, adapted to open the connection between said cord circuit and said line circuit at the end of a predetermined period.

2. In a telephone system, the combination of a cord circuit having an answering side and a calling side, a line circuit, timing mechanism having rotatable means controlled by the calling side of said cord circuit and means in the timing means for shutting off said timing means at the end of a predetermined period.

3. In a telephone system, the combination of a cord circuit having an answering side and a calling side, a line circuit, timing mechanism having rotatable means controlled by the calling side of said cord circuit and means in the timing means for shutting off said timing means at the end of a predetermined period and a tone circuit including a contact closable by said timing means just prior to the shutting off of said timing means.

4. In a telephone system, the combination of a line circuit, a cord circuit having an answering side and a calling side, timing mechanism, electromagnetic starting means for said timing mechanism controllable by the electrical condition of the calling side of said cord circuit, a contact closable by said timing mechanism at the end of a predetermined period, a contact in the talking circuit of said cord circuit, electromagnetic means for opening said contact and mechanical means for preventing the operation of said electromagnetic means prior to the expiration of a certain predetermined period.

1,217,081. TELEPHONE LOCKOUT SYSTEM. FRANK W. ADSIT, Minneapolis, Minn. Filed May 17, 1915. Serial No. 28,632. (Cl. 179—32.)



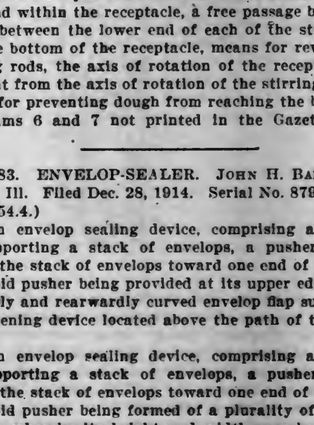
1. In a telephone lock-out system, the combination of a pair of line wires adapted to be connected to a common-battery exchange, two subscribers' stations associated with said pairs of line wires, means associated with one of said stations to disconnect the other of said stations when the first of said stations is being used, and a second means associated with said means to render it inoperative when said stations are both actuated with no battery on said pair of line wires.

2. In a telephone lock-out system, the combination of a line circuit adapted to be connected with a common-battery exchange, two subscribers' stations connected with said line circuit, a lock-out mechanism connected with said line circuit and said stations and adapted to disconnect either of said stations when the other station is actuated, and means in said lock-out mechanism adapted to connect both of said stations to said line circuit when battery is applied to said line circuit after both of said stations have been actuated.

1,217,082. DOUGH-MIXING MACHINE. JOSEPH P. BACHMAN, Newark, N. J. Filed Apr. 28, 1915. Serial No. 24,484. (Cl. 259—85.)

1. In a mixing machine, in combination, a revoluble centrally unobstructed receptacle, means for revolving said receptacle, a plurality of concentric heads, mixing elements depending from said heads, means for revolving said heads, the axis of rotation of the receptacle being different from the axis of rotation of the heads.

2. In a mixing machine, in combination, a revoluble centrally unobstructed receptacle, means for revolving said receptacle, a series of stirring elements revoluble within the receptacle, a stirring element concentric to and revoluble within the series of stirring elements, means for revolving said stirring elements, the axis of rotation of the receptacle being different from the axis of rotation of the stirring elements.



3. In a mixing machine, in combination, a revoluble centrally unobstructed receptacle, means for revolving said receptacle, a series of stirring elements revoluble within the receptacle, a stirring element revoluble in opposite direction to and within said series of stirring elements, means for revolving the stirring elements, the axis of the receptacle being different from the axis of rotation of the stirring elements.

4. In a dough mixing machine, in combination, a revoluble centrally unobstructed receptacle, means for revolving said receptacle, a series of stirring rods revoluble within the receptacle, a stirring rod revoluble in counterdirection to and within the cycle of revolution of the series of stirring rods and within the receptacle, a free passage being maintained between the lower end of each stirring rod and the bottom of the receptacle, means for revolving the stirring rods, the axis of rotation of the receptacle being different from the axis of rotation of the stirring rods.

5. In a dough mixing machine, in combination, a revoluble platform, means for revolving said platform, a centrally unobstructed receptacle removably attached to said platform, a series of stirring rods revoluble within the receptacle, a stirring rod revoluble in counterdirection to and within the cycle of revolution of the series of stirring rods and within the receptacle, a free passage being maintained between the lower end of each of the stirring rods and the bottom of the receptacle, means for revolving the stirring rods, the axis of rotation of the receptacle being different from the axis of rotation of the stirring rods, and means for preventing dough from reaching the bearings.

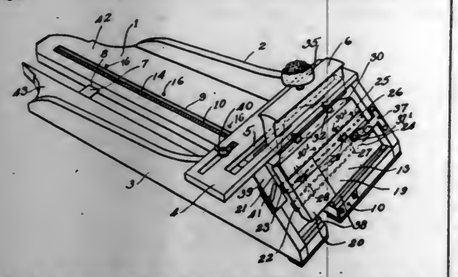
[Claims 6 and 7 not printed in the Gazette.]

1,217,083. ENVELOP-SEALER. JOHN H. BARROW, Chicago, Ill. Filed Dec. 28, 1914. Serial No. 879,283. (Cl. 91—54.4.)

1. An envelop sealing device, comprising a magazine for supporting a stack of envelops, a pusher normally urging the stack of envelops toward one end of said magazine, said pusher being provided at its upper edge with an upwardly and rearwardly curved envelop flap support, and a moistening device located above the path of the envelop flaps.

2. An envelop sealing device, comprising a magazine for supporting a stack of envelops, a pusher normally urging the stack of envelops toward one end of said magazine, said pusher being formed of a plurality of extensible sections whereby its height and width may be regulated, said pusher being provided at its upper edge with an upwardly and rearwardly curved envelop flap support, and

a moistening device located above the path of the envelop flaps.

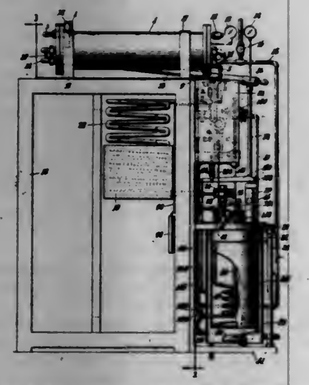


3. An envelop sealing device comprising a magazine for envelops, a spring-pressed pusher for urging envelops toward one end of said magazine, a stop for limiting the movement of envelops under the action of said pusher and suitably located to engage the foremost envelop in the magazine at one side of its center in order that the opposite side of such envelop will be bent outward slightly, a device for causing the envelop to turn slightly in its own plane when withdrawn in the direction of such plane, and a moistener adjacent to the path of said flaps.

4. An envelop sealing device comprising a magazine for envelops, a pusher for urging envelops toward one end of said magazine, a member having a surface inclined to the direction of movement of the pusher in position to be engaged by advancing envelops to shift them edgewise transversely to their movement under the action of said pusher, and a moistener adjacent to the path of said flaps.

5. An envelop sealing device comprising a magazine for envelops, a rearwardly inclined pusher adapted to urge envelops toward one end of said magazine, a stop for limiting the movement of envelops under the action of said pusher, a curved separator ledge adapted to shift evelops relatively in their own planes when moved forward under the action of said pusher, and a moistener adjacent to the path of said flaps.

1,217,084. REFRIGERATING-MACHINE. GEORGE P. CARROLL, Hartford, Conn. Filed Jan. 18, 1915. Serial No. 2,865. (Cl. 62—5.)



1. In an absorption refrigerating apparatus, in combination, a still, means for heating said still, means for cooling said still in alternate cycles, means responsive to a change in conditions in the still for automatically discontinuing the heating of said still, and means responsive to a change in conditions in the still for automatically discontinuing the cooling of said still.

2. In an absorption refrigerating apparatus, in combination, a still, means for heating said still, means for cooling said still after each heating thereof, means automatically terminating the heating of said still when the absorbent therein has been reduced to a predetermined state of weakness, and means automatically terminating the cooling of said still when the absorbent therein has reached a predetermined state of saturation.

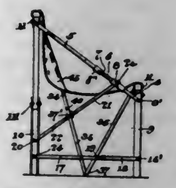
3. In an absorption refrigerating appartus, in combination, a still, means for heating said still, means for cooling said still after each heating thereof, means automatically terminating the heating of said still when the absorbent therein has been reduced to a predetermined state of weakness, means automatically terminating the cooling of said still when the absorbent therein has reached a predetermined state of saturation, and means automatically operative to start the operation of said heating means after such state of saturation has been reached.

4. In an absorption refrigerating apparatus, in combination, a still, a condenser, an evaporator, means for connecting said elements to form a circuit from the still through the condenser and evaporator back to the still, means for heating said still, means for cooling said still, means responsive to a change in conditions in said circuit to control said heating means, and means responsive to a change in conditions in said circuit for controlling the cooling means for said still.

5. In combination, a condenser, an evaporator, a still adapted to contain an absorbent, means for connecting said elements to form a circuit from said still through the condenser and evaporator back to said still, means for preventing a back flow of refrigerant from the condenser into said still and from said still into said evaporator, mechanism adapted to regulate the expansion of refrigerant from said condenser into said evaporator and its absorption in said still, means for heating said still, means for cooling said still, means responsive to a change in conditions in said circuit for controlling said heating means, and means responsive to a change in conditions in said circuit for controlling said cooling means.

[Claims 6 to 71 not printed in the Gazette.]

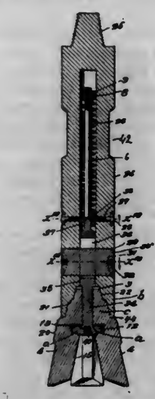
1,217,085. COMBINATION FOLDING COT AND SEAT. CHARLES W. CLOUGH, ALFRED N. CLOUGH, and WILLIAM O. SPRING, Los Angeles, Cal. Filed June 21, 1915, Serial No. 35,289. Renewed Dec. 2, 1916. Serial No. 134,742. (Cl. 5—5.)



1. In combination, telescoping side rails, front and rear legs pivoted to the side rails respectively, the rear legs being extensible and having holes therein, end rails having shiftably connected sections, and pivoted to the legs and provided intermediate of their ends with hinge joints and each provided with two holes, folding end braces pivoted at one of their ends to the legs and provided with studs, the studs of the braces of the front and rear legs engaging the holes in the end rails when the end rails are fully extended and the legs are contracted and the studs of the braces of the front legs engaging the holes in the rear legs and the studs of the braces of the rear legs engaging holes in the end rails when the end rails are contracted and the legs are extended, means to hold the legs against folding, means to hold the end rails against folding, and a cover detachably fastened to the side rails.

2. In combination, side rails and end rails connected together to form a frame, said side rails having holes in their sides and upper faces, legs at the corners of the frame, a cover having flat strips in sections at its side margins, the sections of the strips at one end having holes therein, studs projecting from the other sections of said strips into the holes in the sides of the side rails, and standards provided with hooks at their lower ends detachably engaging the holes in the upper faces of the side rails, said standards having studs at their upper ends to engage the holes in the strips.

1,217,086. UNDERREAMER. WILLIAM L. DUNN, Piru, Cal., assignor to Dunn Manufacturing Company, Oxnard, Cal., a Corporation of California. Filed Jan. 23, 1911. Serial No. 604,261. (Cl. 255—75.)



1. A reciprocating under-reamer provided with more than two cutters the blades of which are adapted and arranged to move radially relative to the axis of the underreamer and in divergent relatively angular paths substantially as and for the purpose set forth, and a body provided in its lower end with a seat; said cutters projecting below said body and having shanks that nest in the seat when the tool is expanded.

2. A reciprocating under-reamer provided in its lower end with a seat and with more than two cutters having shanks in the seat and having blades that project down from the body and are radially movable in divergent relatively angular paths, and that practically nest with each other when retracted substantially as and for the purpose set forth.

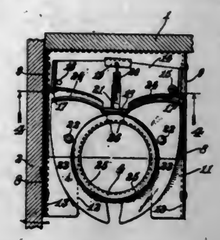
3. The reciprocating under-reamer set forth provided with four cutters having blades forming the lower end of the tool and adapted to practically nest together when retracted for the purpose of maximizing the cutting area when expanded, said cutters being radially movable in divergent relatively angular paths.

4. The combination with a body having a longitudinal bore, an end seat and a transverse slot; of a slotted mandrel in the bore; cutters pivoted to the mandrel and having shanks in the seat; a key in the slots of the body and mandrel to limit the movement of the mandrel, and means to yieldingly hold the mandrel to seat the cutters in the seat.

5. A reciprocating under-reamer provided with more than two cutters in pivotal relation with each other, that form the lower end of the tool, the blades thereof being capable of practically nesting together when the tool is collapsed.

1,217,087. BOTTLE-HOLDER. EDMUND G. GEORGE, Springfield, Ill., assignor of one-half to Leslie Hall Simpson, Glenarm, Ill. Filed Oct. 15, 1915. Serial No. 56,028. (Cl. 232—42.)

1. A bottle holder having a chamber and adapted for attachment to the casing at either side of a door, said holder comprising a pair of coöperating bottle engaging jaws movable automatically to engaging position when a bottle is placed in the holder, a reversible latching bolt housed within the chamber and automatically operable for locking said jaws in bottle engaging position, and means constructed and arranged whereby the door, when closed, renders said latching bolt inaccessible for operation to release the jaws.



2. A bottle holder adapted for attachment to a door casing and comprising a pair of movable bottle engaging jaws mounted for free unrestricted relative movement and having inner terminal portions disposed to be struck by the bottle for moving the jaws freely into engagement with a bottle when placed in the holder, means for automatically locking said jaws in bottle engaging position, and means whereby the door, when closed, renders said locking means inaccessible for operation to release the jaws.

3. A bottle holder comprising a frame, a pair of coöperating bottle engaging jaws, a pivoted locking bolt adapted for engaging said jaws to lock them in bottle holding position, and means for pivoting said bolt at either end adapting the holder for attachment to the casing at either side of a door.

4. A bottle holder comprising a frame, a pair of coöperating bottle engaging jaws, a pivoted locking bolt adapted for engaging said jaws to lock them in bottle holding position, the ends of said bolt being accessible for operation respectively at opposite sides of said frame, and means for pivoting said bolt at either end adapting the holder for attachment to the casing at either side of a door.

5. A bottle holder comprising a frame, a pair of coöperating bottle engaging jaws, a pivoted locking bolt adapted for engaging said jaws to lock them in bottle holding position, and a single pivoting bolt adapted to engage one end or the other of the locking bolt for reversibly pivoting the same and adapting the free end of the locking bolt for manipulation in operating said bolt to release the jaws.

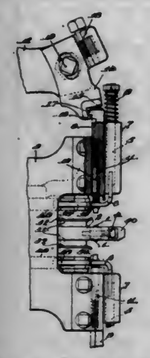
[Claims 6 to 8 not printed in the Gazette.]

1,217,088. MACHINE FOR SETTING FASTENERS. GEORGE GODDU, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 27, 1905. Serial No. 271,426. (Cl. 218—17.)

1. A hook-setting machine, having, in combination, reversely arranged up-setting dies, reversely arranged dies coöperating with the upsetting dies to set hooks in two sheets of material having their surfaces oppositely disposed, raceways for delivering hooks to each of the hook setting dies, and means coöperating with each of the raceways to engage the outer surface of a hook and feed it to setting position between each up-setting die and its coöperating die.

2. A hook-setting machine, having, in combination, reversely arranged up-setting dies, reversely arranged dies coöperating with the up-setting dies to set hooks in two sheets of material having their surfaces oppositely disposed, raceways having flanges to enter the space between the head and barrel of the hooks leading to the dies, and means for transferring a hook from each raceway flange to setting position between each up-setting die and its coöperating die by a movement in continuation of the direction of movement of the hook as it leaves the flange.

3. A hook-setting machine, having, in combination, oppositely disposed up-setting dies, oppositely disposed dies coöperating with the up-setting dies to set hooks in two layers of material, means for feeding a hook to the required position between each upsetting die and its coöperating die, and means for moving the up-setting dies to feed the work.

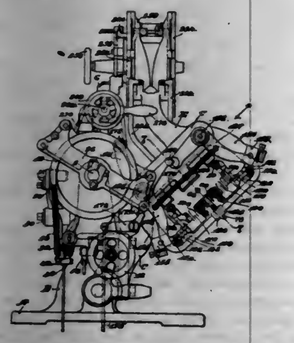


4. A hook-setting machine, having, in combination, oppositely disposed up-setting dies, oppositely disposed dies coöperating with the up-setting dies to set hooks in two layers of material, means for feeding a hook to the required position between each upsetting die and its cooperating die, means for moving the up-setting dies to feed the work and remove the hooks from the coöperating dies, and means for holding the hooks in engagement with the up-setting dies during their feeding movement.

5. A hook-setting machine, having, in combination, oppositely disposed up-setting dies, oppositely disposed hook-setting plungers coöperating therewith to set hooks in two layers of material, means for feeding a hook to each hook-setting plunger, actuating plungers for the hook-setting plungers arranged to force the hook-setting plungers toward the up-setting dies, spring-pressed pins carried by the actuating plungers and arranged to bear upon the hooks, and means for moving the up-setting dies and actuating plungers to feed the work and remove the hooks from the hook-setting plungers.

[Claims 6 to 59 not printed in the Gazette.]

1,217,089. MACHINE FOR INSERTING FASTENERS. GEORGE GODDU, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 23, 1909. Serial No. 503,781. (Cl. 218—17.)



1. A duplex lacing hook setting machine, having, in combination, a pair of oppositely disposed hook setting dies, a pair of oppositely disposed punch blocks adjacent said dies, lacing hook sets coöperating with said dies. punches coöperating with said blocks, means to deliver hooks in pairs to the sets, means to operate the punches and operating means thereafter simultaneously to set the hooks in the holes made in the stock by the punches.

2. A duplex lacing setting machine, having, in combination, a die holder sustaining a punch block and a setting die in each face, a punch arranged opposite each block, a set arranged opposite each die, means to deliver hooks to the sets, means to operate the punches simultaneously to perforate the stock, means to bring said perforations and the sets and setting dies in alinement, and means to operate the sets simultaneously to set hooks in said perforations.

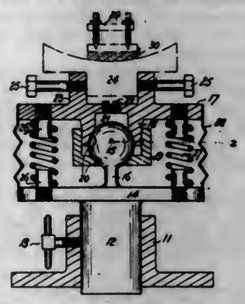
3. A duplex lacing hook setting machine, having, in combination, a plurality of punches, a plurality of setting devices, a plurality of gages to guide the edges of the lacing slit of an upper, means to operate the punches simultaneously to perforate the two opposite sides of an upper, means to place the setting devices in the positions previously occupied by the punches, raceways for delivering hooks to each of the setting devices, means coöperating with each of the raceways to engage the outer surface of a hook and feed it to setting position, and means to thereafter operate said devices to set hooks simultaneously in the perforations made by the punches.

4. A duplex lacing hook setting machine, having, in combination, pairs of oppositely disposed bunch blocks and setting dies, pairs of punches and sets coöperating with said pairs of blocks and dies respectively, a guide plate for the work, work clamps on opposite sides thereof, means to operate the punches simultaneously to perforate the two sides of an upper while held from movement by said clamps, and means to shift the setting devices with lacing hooks held on the sets to the positions previously occupied by the perforating devices preparatory to setting the hooks while the work is still held from movement.

5. A duplex lacing hook setting machine, having, in combination, a die holder arranged to receive an upper with its two sides resting upon the opposite faces of the holder, dies secured in said holder, two oppositely disposed punches coöperating with said die holder for perforating the two sides of the upper, means for feeding hooks to setting position, and oppositely disposed hook setting devices also coöperating with said die holder for setting hooks in said perforations.

[Claims 6 to 55 not printed in the Gazette.]

1,217,090. LENS-GRINDING MACHINE. HENRY O. GOWLLAND, Montreal, Quebec, Canada, assignor to National Trust Company, Limited, (in trust.) Filed Oct. 9, 1915. Serial No. 55,025. (Cl. 51—3.)

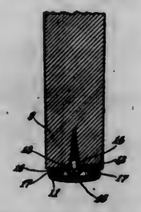


1. In a device of the class described, a tool holder having a depending socket, a plate supporting pedestal, a ball carried by said plate upon which said socket is adapted to rest, and springs carried near the periphery of said plate adapted to yieldingly support the peripheral portion of said tool holder.

2. In a device of the class described, a tool holder, a plate supporting pedestal, a rockable connection and yieldable spring supporting said holder from said plate, and a bellows between said holder and said plate.

3. In a device of the character described, an adjustable rigidly mounted pedestal, a tool holder, a ball and socket joint connecting the pedestal and tool holder, springs arranged in uniform compression between the pedestal and tool holder, and disposed equidistant from the center of connection, studs on the pedestal and tool holder maintaining said springs in position, and a flexible casing connected between the pedestal and tool holder.

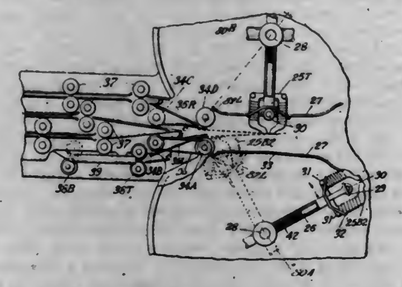
1,217,091. FURNITURE-TIP. FREDERICK HACHMANN, St. Louis, Mo., assignor of one-fourth to James B. Hollis and one-fourth to Fred C. Schoenthaler, St. Louis, Mo. Filed Mar. 13, 1915. Serial No. 14,270. (Cl. 155—33.)



1. A furniture glide comprising a cupped pressed metal base adapted for attachment to the leg of an article of furniture, and a pressed metal head designed to coöperate with said base to form the active floor engaging surface of said glide, said base and head being relatively yieldable transversely and constructed and arranged to form a downturned flange and a lug adapted to snap into cooperative interlocking engagement with said flange for detachably securing the head on the base and permitting ready disengagement of the head at will.

2. A furniture glide comprising a shankless, cupped pressed metal base having a downturned flange and adapted for attachment to the leg of an article of furniture by means of an extraneous fastener, and a pressed metal head yieldable relative to said base and having means constructed and arranged to snap into detachable interlocking frictional engagement with said flange for permitting ready disengagement of said head at will, said head forming the active floor engaging surface of the glide.

1,217,092. MAIL-SORTING, POSTMARKING, AND STAMP-CANCELING DEVICE. EMIL G. HOPP, Seattle, Wash. Filed Feb. 11, 1914. Serial No. 818,172. (Cl. 101—81.)



1. In a mail sorting device, a mail sorting mechanism adapted to receive mail pieces, rollers adapted to advance said mail pieces in an upright position, said mail pieces being provided with metallically treated stamps, a plurality of magnets, an electric circuit connecting said magnets, said metallically treated stamps on said mail pieces adapted to close said electric circuit to said magnets independently and predetermine the selective magnet to which said circuit is closed by the location of said stamps, a plurality of gates, each respectively provided with an armature for actuating said gates by the attraction of said magnets, thereby predetermining the guide-way into which said mail pieces enter.

2. In a mail sorting device, a mail sorting mechanism adapted to receive mail pieces, rollers adapted to advance said mail pieces in an upright position, said mail pieces being provided with metallically treated stamps, a plurality of magnets, an electric circuit connecting said magnets, said metallically treated stamps on said mail pieces adapted to close said electric circuit across two points on an open circuit to said magnets and predetermine selective magnets to which said circuit is closed by the location of said stamps, a plurality of gates, armatures connecting said gates and controlling the movement thereof by the attraction of said magnets, thereby predetermining the guide-way into which said mail pieces enter.

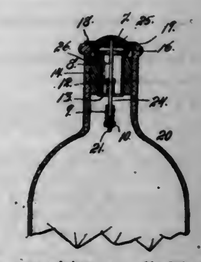
3. In a mail sorting device, a mail sorting mechanism adapted to receive mail pieces, rollers adapted to advance said mail pieces in an upright position, said mail pieces being provided with metallically treated stamps, a plurality of magnets, an electric circuit connecting said magnets, said metallically treated stamps on said mail pieces adapted to close said electric circuit across metallic rings connected to said magnets and predetermine the selective magnet to which said circuit is closed by the location of said stamps, a plurality of gates, armatures connecting said gates and controlling the movement thereof by the attraction of said magnets, thereby predetermining the guide-way into which said mail pieces enter.

4. In a mail sorting device, a mail sorting mechanism adapted to receive mail pieces, rollers adapted to advance said mail pieces to guide ways in an upright position, said mail pieces being provided with metallically treated stamps, a plurality of electro-magnets, an electric circuit connecting said electro-magnets, said metallically treated stamps on said mail pieces adapted to close one circuit only to said electro-magnets in passing, a plurality of gates, armatures connecting said gates and so disposed as to control the movement thereof by the attraction of said electro-magnets as and in the manner set forth.

5. In a mail sorting device, a sorting mechanism comprising a series of speed rollers adapted to keep the mail pieces in transit in guide-ways at a graduated speed, means of conducting the mail pieces of two guide-ways directly to their respective canceling dies, means of turning the mail pieces of two guide-ways and transposing them into the companion guide-ways of the mail pieces unturned to travel uniformly with the mail pieces in transit therein to the respective canceling dies.

[Claim 6 not printed in the Gazette.]

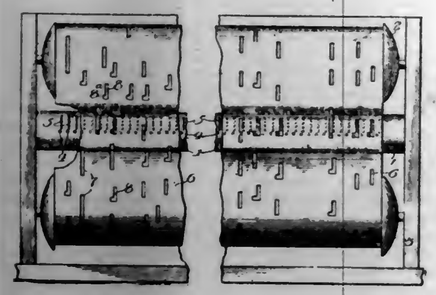
1,217,093. AUTOMATIC BOTTLE-STOPPER. JAMES MARTIN HOWLETT, Denver, Colo. Filed May 14, 1915. Serial No. 27,966. (Cl. 215—55.)



A stopper comprising a cylindrical shell adapted to enter the neck of a bottle, a sleeve composed of yieldable material surrounding said shell and adapted to fit the bottle neck, the upper portion of said shell being formed with an outwardly curved portion terminating in a circumferential flange adapted to engage the upper extremity of the bottle neck, said portion providing a valve seat, a centrally located guide member supported near the inner end of said shell, a valve adapted to coöperate with said valve seat, a valve stem therefor extending through

said guide member inwardly beyond said shell, said valve stem carrying thereon an adjustable sleeve adapted to cooperate with said guide member to regulate the distance which the valve will move off its seat when the bottle is tilted or placed in an inverted position.

1,217,094. PERFORATED SHEET. PAUL B. KLUGH, Chicago, Ill, assignor to The Cable Company, Chicago, Ill., a Corporation of Illinois. Original application filed Aug. 23, 1910, Serial No. 578,579. Divided and this application filed Oct. 10, 1911. Serial No. 653,815. (Cl. 84—162.)



1. A perforated sheet for the purposes set forth, having straight perforations, and also having other perforations each of which consists of a plurality of longitudinally extending slots laterally displaced with reference to one another, and connected together end to end.

2. A perforated sheet for the purposes set forth, having straight perforations, and also having other perforations each of which consists of a plurality of longitudinally extending slots laterally displaced with reference to one another, and connected together end to end, said longitudinally extending laterally displaced slots of said last mentioned perforations being for the same note.

3. A perforated sheet for the purposes set forth, having two sets of perforations, one consisting of straight slots and the other consisting of two laterally displaced slots connected substantially end to end, and having their forward edges separated longitudinally with reference to the longitudinal displacement of the instrumentalities or devices with which the perforated sheet is to cooperate.

4. A perforated sheet of the character specified, having perforations consisting of elongated slots having a plurality of side projections for the same notes as the respective slots.

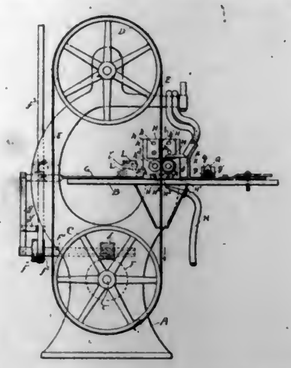
5. A perforated sheet having perforations of zigzag character.

[Claims 6 to 9 not printed in the Gazette.]

1,217,095. BAND-SAW RECLAIMER. NIC KRUMP, Chicago, Ill. Filed Mar. 27, 1916. Serial No. 87,002. (Cl. 76—25.)

1. Means to continuously move a band saw, in combination with means to protect the body of said band saw from a flame, means to direct a flame on to the teeth of said band saw to anneal said teeth, means to set the teeth of said band saw, means to present said teeth to said setting means, and said setting means adapted to oppositely set the previous set of some of said teeth, means to size said set of said teeth, and means to temper said teeth after the same are set.

2. Means to continuously move a band saw, in combination with means to protect the body of said band saw from a flame, means to direct a flame on to the teeth of said band saw to anneal said teeth, means to set the teeth of said band saw, said setting means comprising a toothed wheel loosely mounted on a shaft in a movable block and adapted to successively engage the teeth of said saw, means to force said toothed wheel on to said annealed teeth, means to present said teeth to said setting means, said presenting means comprising rollers between which said band saw moves and one of said rollers provided with a shoulder adapted to come in contact with the back edge of said band saw, and said setting means adapted to oppositely set the previous set of some of said teeth, means to size said set of said teeth and means to temper said teeth after the setting thereof and before the same are cooled.

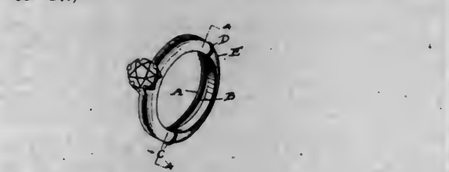


3. In a band saw reclaiming machine, a frame, wheels adapted to carry a band saw rotatably mounted in said frame, means to turn one of said wheels, a table on said frame, spaced blocks attached to said table to form a runway between said blocks, means to limit the depth of said runway to expose the teeth of a band saw therein, means to direct a flame on to said exposed teeth, shafts rigidly and non-rotatably secured in a predetermined position relative to said table, rollers rotatably mounted on said shafts, one of said rollers provided with a shoulder adapted to fit against the back edge of a band saw between said rollers a movable block provided with apertures adapted to fit said shafts of said rollers and to move thereon, a setting wheel loosely mounted on a shaft in said block, additional spaced blocks positioned adjacent to said table, to form a sizing runway, and means to direct a flow of liquid against said teeth.

4. In a band saw reclaiming machine, a frame, wheels adapted to carry a band saw thereon rotatably mounted in said frame, means to turn one of said wheels a band saw provided with a predetermined number of teeth on a given length thereof, a table on said frame, spaced blocks attached to said table to form a runway between said blocks, means to limit the depth of said runway to expose the teeth of a band saw therein, means to direct a flame on to said exposed teeth, shafts rigidly and non-rotatably secured in a predetermined position relative to said table, rollers rotatably mounted on said shafts, one of said rollers provided with a shoulder adapted to fit against the back edge of a band saw between said rollers, a movable block provided with apertures adapted to fit said shafts of said rollers and to move thereon, a setting wheel, comprising teeth alternately provided with oppositely inclined operating faces, a predetermined number of said teeth on a given length of said pitch line, not corresponding with the number of teeth on a corresponding length of said saw, loosely mounted on a shaft in said block, additional spaced blocks positioned adjacent to said table to form a sizing runway and means to direct a flow of liquid against said teeth.

5. In a band saw reclaiming machine, a frame, wheels rotatably mounted in said frame, said wheels adapted to carry a band saw thereon, means to turn one of said wheels, a table on said frame, spaced blocks attached to said table and adapted to permit said band saw to move in the space between said blocks, means to direct a flame on to the teeth of said band saw adjacent to said spaced blocks, shafts, rollers spaced and rotatably mounted on said shafts, one of said rollers provided with a shoulder adapted to fit against the back of said band saw, a movable block provided with apertures adapted to loosely fit said shafts of said rollers, means to control the position of said block, a toothed wheel loosely mounted on a shaft in said block, additional spaced blocks positioned so that said teeth move between them to size the set thereof, and means to direct a flow of liquid against said teeth, after the same are sized.

1,217,096. SPRING SUSPENSION. RALPH E. LAYMAN, New York, N. Y., assignor to Lowy Patent Corporation, New York, N. Y., a Corporation of New York. Filed Sept. 11, 1916. Serial No. 119,466. (Cl. 267—22.)



1. In an automobile chassis, the combination of a front axle, a front spring, a frame, and a shock absorber connecting the frame and the spring in the rear of the axle, the frame and the spring being relatively offset to support the shock absorber in operative position.

2. In an automobile chassis, the combination of a front axle, a front spring, a frame having a portion in rear of the axle offset to extend out of vertical alinement with the spring, and a shock absorber connected to the spring and extending upward past and being connected to the offset portion of the frame.

3. In an automoolie chassis, the combination of a front axle, a front spring, a frame having a portion in rear of the axle offset to extend out of vertical alinement with the spring, and a shock absorber comprising relatively movable sections one of which is connected to and extends above the offset portion of the frame, and the other of which is connected to the rear end of the spring.

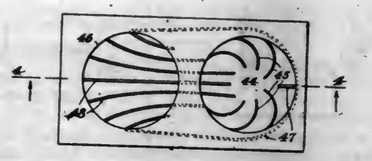
4. In an automobile chassis, the combination of a front axle, a front spring, a frame, and a shock absorber including an outer casing fixed to the frame, a sliding piston in the casing bearing against the rear wall of the casing throughout, the front wall of the casing being cut away and receiving the rear end of said front spring, and means connecting said spring to said piston.

5. In an automobile chassis, the combination of a front axle, a front spring, a frame having a portion in rear of the front axle offset to extend out of vertical alinement with the spring, and a telescopic air spring having an outer casing secured to the offset portion of the frame and at its front wall cut away to receive the rear end of said front spring, a piston in the casing bearing throughout against the rear wall of the casing, and means connecting said front spring to said piston.

1,217,097. FINGER-RING GUARD. MILTON LEVIN, New York, N. Y., assignor to Lion Safety Pin Clutch Company, Inc., New York, N. Y., a Corporation of New York. Filed Nov. 26, 1912. Serial No. 733,630. (Cl. 63—17.)

A finger ring guard consisting of an endless spring wire with parallel branches bent so as to form a curve, the convex portion of which is adapted to face the lower portion of the ring when the guard is attached thereto.

1,217,098. COMBINATION SOLID AND LIQUID FUEL RANGE. ALBERT J. LINDEMANN, Milwaukee, Wis. Filed Dec. 31, 1915. Serial No. 69,530. (Cl. 126—36.)



1. A device of the character described, comprising a stove frame, a fire-pot for solid fuel therein, a liquid fuel burner mounted on the said frame at a point removed from said fire-pot, the said frame having an upper portion extending over the said liquid fuel burner and an opening over the said burner in said extending portion, said frame also provided with another opening arranged to receive heat from either heat source and in substantially the same horizontal plane as the first named opening and spaced therefrom, and a heat conduit extending from the second mentioned opening to a point above said burner, and means for imparting to heat rising from said burner concentric movement and directing it toward said second mentioned opening.

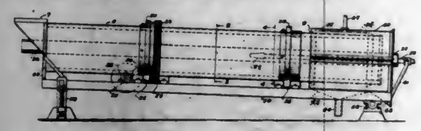
2. The combination of a stove frame, a liquid fuel burner mounted thereon, said frame having an upper portion extending over the said burner and an opening over said burner, said upper portion also having another opening laterally removed from the opening over the burner and a heat conduit extending from the liquid opening to a point in proximity to the other opening, concentrically disposed members between the burner and the opening above the burner and a shield partly surrounding said opening, but open on the side to which the said heat conduit leads.

3. The combination of a stove casing, a pot for solid fuel fire therein, a liquid fuel burner mounted above the frame at one side thereof and out of vertical line with said fire-pot, and a vertical shield extending from the top of the casing to said burner isolating said liquid fuel burner constructed and located to intercept radiation from the heat of said pot, a flame regulating member connected with said liquid fuel burner and said shield having an opening through which said member extends toward the space above the stove frame, whereby it may be operated from the exterior of said shield.

4. In a device of the character described, the combination of a liquid fuel reservoir, a plurality of burners in communication therewith and located at different levels, liquid fuel regulators for maintaining the level of liquid fuel in the said burners, an oven mounted above the burner at the upper level communicating therewith and extending beyond the same, said oven having openings for the admission of heat from the said burner and the escape thereof, and an inclined deflector adjacent to the said burner and between it and the oven, constructed and arranged to direct heat from the burner laterally and in the direction of the openings for the admission of heat to the oven, the said deflector having openings therein out of vertical line with the burner.

5. The combination of a stove casing, a pot for solid fuel fire therein, a liquid fuel burner mounted above the frame at one side thereof and out of vertical line with said fire-pot, and a vertical shield extending from the top of the casing to said burner isolating said liquid fuel burner constructed and located to intercept radiation from the heat of said pot, a flame regulating member connected with said liquid fuel burner and said shield having an opening through which said member extends toward the space above the stove frame, whereby it may be operated from the exterior of said shield, a plurality of brackets mounted on said casing, an oven supported thereon above the burner and an elevated shelf also supported on said brackets, said shelf, oven and brackets extending over a portion of said stove casing.

1,217,099. CHILLI-ROASTER. GEORGE E. LYNCH, Los Angeles, Cal., assignor to Royal Packing Company, Los Angeles, Cal., a Corporation of California. Filed May 1, 1916. Serial No. 94,832. (Cl. 146—14.)



1. A roaster, comprising a rotatable roasting shell, a perforate extension fixed to said shell, a heater disposed longitudinally in said roasting shell, and a spray disposed adjacent said perforate extension for spraying the roasted material.

2. A roaster, comprising a rotatable tubular roasting shell, a perforate tubular extension fixed to said shell, a heater tube extending through said roasting shell, a spray disposed adjacent said perforate extension for spraying the material roasted, and means for rotating said shell.

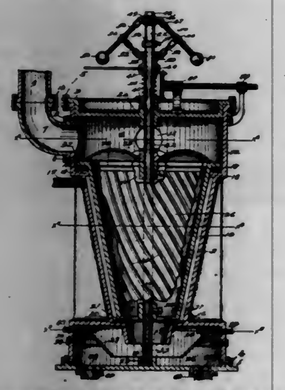
3. A roaster, comprising a rotatable tubular roasting shell inclined to the horizontal and having inwardly extending fingers on the interior of said shell, a perforate extension fixed to said shell, a heater disposed in said roasting shell, and a spray disposed at said perforate extension for spraying the roasted material.

4. A roaster, comprising a rotatable tubular roasting shell inclined to the horizontal and having inwardly extending fingers on the interior of said shell, a perforate tubular extension fixed to said shell, a heater tube extending through said roasting shell, a spray disposed above said perforate extension for spraying the roasted material, and means for rotating said shell.

5. A roaster, comprising a rotatable tubular roasting shell inclined to the horizontal and having inwardly extending fingers on the interior of said shell, a tubular screened extension fixed to said shell, a heating pipe supported axially of said shell, a spray disposed adjacent said extension, a stationary hood mounted over said spray and embracing said extension, and a discharge hopper secured to said hood.

[Claim 6 not printed in the Gazette.]

1,217,100. CONDENSING AND VACUUM DRAFT MECHANISM FOR FURNACES. FREDERICK L. MCGAHAN, Los Angeles, Cal. Filed Apr. 9, 1914. Serial No. 830,617. (Cl. 261—10.)



1. A condensing mechanism for a furnace comprising a gas chamber, a centrifugal externally helically vaned water spreading means below said chamber, and means for the discharge of the water therefrom.

2. In a device of the character described, the combination of a condenser adapted to be connected with a furnace and having a gas chamber adapted to receive the gases therefrom; means for separating the heavier elements from said gases and treating them with water; and means for discharging said gases from said chamber for further treatment.

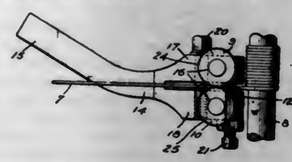
3. In apparatus of the character described, a casing provided near one end with a gas receiving chamber and having a condensing chamber disposed near the gas receiving chamber, a gas supply conduit leading into the gas receiving chamber, a rotatable water spreading element arranged within the condensing chamber, means to supply water into the condensing chamber to impinge against the rotatable water spreading element to drive it, and centrifugally operated means driven by the rotatable water spreading element and serving to automatically regulate the supply of water.

4. In apparatus of the character described, a casing provided with a gas receiving chamber and having a condensing chamber disposed near the gas receiving chamber, a gas supply conduit leading into the gas receiving chamber, a rotatable tubular water spreading element arranged within the condensing chamber and provided upon its exterior with vanes, means to supply water into the condensing chamber to impinge against the rotatable water spreading element to drive it, and a rotatable fan arranged in the gas receiving chamber and near the upper end of the tubular water spreading element, and rotatable therewith.

5. In apparatus of the character described, a casing provided near one end with a gas receiving chamber and having a condensing chamber disposed near the gas receiving chamber, a shell secured to the opposite end of the casing and having an apertured partition for dividing the same into communicating vacuum and water chambers, outlet means connected with the water chamber, a rotatable tubular water spreading element arranged within the condensing chamber, means for introducing water into the condensing chamber to impinge against the rotatable tubular water spreading element for driving it, a gas supply conduit connected with the gas receiving chamber, and a suction conduit connected with the gas supply conduit and with the vacuum chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,217,101. PROCESS OF BENDING TUBING. JOSEPH MERRITT, Hartford, and WILLIAM A. SAWYER, West Hartford, Conn., assignors, by direct and mesne assignments, to The Hartford Lock Ring Company, Hartford, Conn., a Corporation of Connecticut. Filed Aug. 12, 1911. Serial No. 643,663. (Cl. 153—67.)



1. In processes of bending tubing, the herein described method of compensating for the tendency to deform the tube in the bending operation, which consists in shaping the tube with a counter deformation of its cross section in advance of and in the general direction of the intended bending operation, and then bending it in the said direction.

2. In processes of bending tubing, the method of counteracting the tendency to flatten the tube while bending it longitudinally, which consists in shaping the tube with a counter flattening of the tube substantially at right angles with the direction in which the bending tends to flatten it, and then bending the tube longitudinally in the general direction of the said counter flattening.

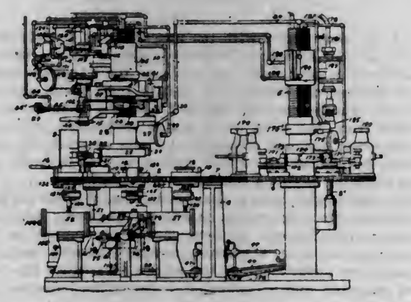
3. In processes of producing a bent tube having a circular cross-section, the method of compensating for the described flattening of the tube, due to bending it longitudinally, which consists in forming a tube with elliptical cross-section and then bending the tube longitudinally in a direction lengthwise of the ellipse.

4. The process of producing a bent tube of a desired cross-section, which consists in bending a tube of more elliptical section longitudinally of the tube and lengthwise of the said more elliptical section.

5. The process of producing a bent tube of a desired cross-section, which consists in providing a tube having a cross-section more extended in one direction than the desired cross-section, and bending it longitudinally of the tube and in the general direction of the said more extended cross-section.

[Claims 6 to 20 not printed in the Gazette.]

1,217,102. GLASS-FORMING MACHINE. FRANK O'NEILL, Toledo, Ohio. Filed Aug. 6, 1914. Serial No. 855,362. (Cl. 49—9.)



1. In a glass forming machine, the combination of a sectional mold adapted to open and close, a rotatable carrier for presenting the mold successively to charging, forming and discharging positions, means for intermittently rotating the carrier, forming mechanism, an oscillating cam device movable independently of the carrier and adapted to hold the mold closed at the charging and forming positions, and means for oscillating the cam in reverse directions for first opening and then closing the mold after it passes from forming position.

2. In a glass forming machine, the combination of a sectional mold adapted to open and close, a rotatable carrier adapted to present the mold successively to charging, forming and discharging positions, a reversely movable device having sliding connection with the mold and common to the mold in the different positions thereof and adapted to hold it closed at the charging and forming positions, means operatively connecting the mold with said device when the mold is moved from forming position for opening the same when said device is moved in one direction and for closing the mold when said device is moved in an opposite direction, and means for reversely moving said device.

3. In a glass forming machine, the combination of a series of sectional molds adapted to open and close, a rotatable carrier adapted to present the molds successively to charging, forming and discharging positions, a reversely movable device common to the molds in the different positions thereof and adapted to hold them closed in the charging and forming positions, means operatively connecting the molds when at the discharging position with said device for opening them when said device is moved in one direction and for closing them when the device is moved in an opposite direction, manually controlled means for moving said device in a direction to open the molds for the discharging position, and automatically operating means for moving said device in a reverse direction to close the molds.

4. In a glass forming machine, the combination of sectional molds adapted to open and close, a rotatable carrier for moving the molds successively to charging, forming and discharging positions, means for intermittently rotating the carrier, forming mechanism, a cam device movable concentrically with but independently of the carrier and common to the several molds for holding them closed at the charging and forming positions, means providing an interlocking connection at the discharging position between each mold and a cam face of the cam device whereby when the latter is moved in one direction the mold is opened and whereby the mold is closed when the cam device is moved in an opposite direction, and means for moving the cam device in reverse directions.

5. In a machine for producing glass bottles, the combination of horizontally rotatable blank and blow mold carriers arranged side by side, blank molds on the blank mold carrier and blow molds on the blow mold carrier with each blank mold adapted to coöperate with a blow mold during a blank transferring operation, forming mechanisms adapted to coöperate with the molds, the carriers spaced apart to separate the blank and blow molds sufficiently to provide room at the side of the machine for manually transferring a blank from a blank mold to the appropriate blow mold, and gearing meshing with teeth on the spaced carriers for causing them to move in unison.

[Claims 6 to 23 not printed in the Gazette.]

1,217,103. VENDING-MACHINE. CHARLES E. OSMUN, San Francisco, Cal. Filed Apr. 15, 1912. Serial No. 690,891. (Cl. 194—2.)



1. In a check controlled apparatus, a supporting plate, a rotatable box pivotally secured to said plate, a lid on said box, a latch in said box for locking said lid and stationary means within the box for holding a coin in the path of the latch when the box is rotated whereby said lid is released.

2. In a check controlled apparatus, a supporting plate, a rotatable box pivoted to said plate, a lid on said box, a latch in said box for locking said lid, an article extruder in said box, normally retained by said lid and stationary means within said box for holding a coin in the path of the latch whereby when the box is rotated about its pivot the latch engages the coin and is swung thereby to release said lid.

3. In a check controlled apparatus, a supporting plate, a rotatable box pivoted to said plate, a lid on said box, a latch in said box for normally locking said lid, a stationary disk in said box provided with a notch for receiving a coin and holding it in the path of the latch whereby upon rotation of the box the latch is swung to release said lid.

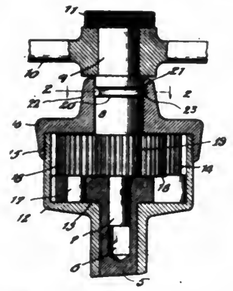
4. In a check controlled apparatus, the combination of a rotatable box, a lid on said box provided with a notch, a swinging latch in said box adapted to engage and lock said lid in closed position and stationary means to hold a coin in the path of the latch whereby upon rotation of the box the latch engages the coin and is swung thereby into alinement with said notch.

5. In a check controlled apparatus, the combination of a rotatable box, a stationary disk within said box provided with a coin receiving notch, a pivoted lid on said box provided with a projecting posterior portion and a latch

in said box engaging said posterior portion to lock said lid, said latch engaging a coin in said notch to release said lid upon rotation of the box.

[Claims 6 to 8 not printed in the Gazette.]

1,217,104. MOTOR-VEHICLE STEERING-GEARING. IRA D. PERRY, Chicago, Ill. Filed Dec. 7, 1916. Serial No. 135,611. (Cl. 74—34.)



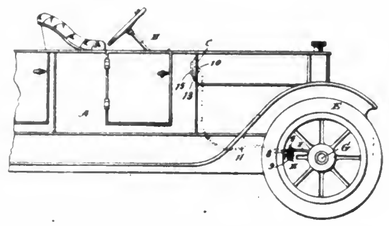
1. In a steering mechanism for vehicles, a steering post, a housing at the upper end thereof provided with a closure cap, a stud shaft entering the housing through a bore in the cap and carrying at its upper outer end a steering wheel and at its lower inner end a pinion, a planetary gearing within the housing of which said pinion forms a part, said stud shaft with its pinion and steering wheel being capable of an upward or endwise movement to thereby enable the pinion to be disengaged from the remainder of the gearing, and a device in addition to the housing cap for movably holding the stud shaft and pinion in operative position.

2. In a steering mechanism for vehicles, a steering post, a housing at the upper end thereof provided with a closure cap, a stud shaft entering the housing through a bore in the cap and carrying at its upper outer end a steering wheel and at its lower inner end a pinion, a planetary gearing within the housing of which said pinion forms a part, said stud shaft with its pinion and steering wheel being capable of an upward or endwise movement to thereby enable the pinion to be disengaged from the remainder of the gearing, and a device in addition to the housing cap for movably holding the stud shaft and pinion in operative position, said pinion having a diameter less than that of the bore of the cap to enable the pinion to be lifted up through the bore.

3. In a steering mechanism for vehicles, a steering post, a housing at the upper end thereof provided with a closure cap, a stud shaft entering the housing through a bore in the cap and carrying at its upper outer end a steering wheel and at its lower inner end a pinion, a planetary gearing within the housing of which said pinion forms a part, said stud shaft with its pinion and steering wheel being capable of an upward or endwise movement to thereby enable the pinion to be disengaged from the remainder of the gearing, and a device in addition to the housing cap for movably holding the stud shaft and pinion in operative position, said pinion having a diameter less than that of the bore of the cap to enable the pinion to be lifted up through the bore, the stud shaft being smaller in diameter than said bore and being provided with a bushing fitting the bore and the shaft and adapted to be removed with the shaft.

1,217,105. STEERING-WHEEL INDICATOR. GEORGE S. RODD, Houghton, Mich. Filed Sept. 15, 1915. Serial No. 50,856. (Cl. 116—31.)

1. In a motor vehicle, the combination with the forward wheels thereof, means for adjusting the same, an indicator, means for operating the indicator upon the adjustment of the wheels, said means comprising a flexible shaft, an arm, means for supporting the arm independently of the steering wheel adjusting means, and a projection mounted to move with the wheels transversely of the machine.



2. In combination with the forward axle, knuckle members pivoted at the ends thereof, wheels on the knuckle members, a connecting bar between the knuckles, means for moving the knuckles to change the angular position of the wheels, an arm, means for fixedly supporting the same from the axle, a projection associated with said connecting bar and engaging the arm to shift the same when the wheels are moved transversely of the axle, and an indicator having a connection with said arm.

3. In a motor vehicle, the combination with the forward axle and steering wheels, means for angularly adjusting the steering wheels, an arm, means for supporting the same on the axle, a movable member operable upon the transverse adjustment of the wheels to operate the arm, an indicator, and a connection between the indicator and the arm.

4. The combination with the forward axle of a motor vehicle, of an arm attached thereto, a slotted arm rotatably supported on the said other arm, knuckle members on the axle, wheels on the knuckles, a connecting bar between the knuckles, a steering mechanism for operating the knuckles to angularly adjust the wheels, projecting means on the connecting bar engaging the slotted arm, an indicator, and operating means between the indicator and the slotted arm.

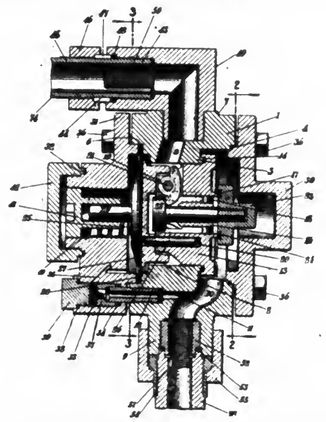
5. The combination with a vehicle axle, of steering wheels pivotally attached thereto, an indicator, and means for operating said indicator upon a transverse movement of the wheels comprising a depending member supported upon the axle for a swinging movement and having a connection with the indicator, and means carried by the steering mechanism for engaging and shifting said member upon a transverse movement of the wheels.

[Claims 6 to 13 not printed in the Gazette.]

1,217,106. CHECK-VALVE MECHANISM. FRANK N. ROEHRICH, Jersey City, N. J., assignor to George P. Carroll, Bridgeport, Conn. Filed May 12, 1913. Serial No. 767,036. (Cl. 137—32.)

1. In combination a chamber structure having an inlet, an outlet and a valve seat between them, a diaphragm in axial alinement with said seat and forming one wall of said structure on the inlet side of the seat, a valve for closing said seat, means operating on an inward movement of said diaphragm to close said valve but on an outward movement thereof permitting fluid under pressure from said inlet to open the valves and means permitting a pressure of fluid in said inlet, slightly in excess of the pressure of fluid in said outlet, to force said diaphragm outward but in the absence of such excess forcing the diaphragm inward.

2. In combination a chamber structure having an inlet, an outlet and a valve seat between them, a diaphragm in axial alinement with said seat and forming one wall of said structure on the inlet side of the seat, a valve for closing said seat, means operating on an inward movement of said diaphragm to close said valve but on an outward movement thereof permitting fluid under pressure from said inlet to open the valve, a device tending to close said valve, and a cover casing inclosing said diaphragm at its edge and having a passage connecting said outlet with the space outside of the diaphragm.



3. In combination a chamber structure having an inlet, an outlet and a valve seat between them, a diaphragm in axial alinement with said seat and forming one wall of said structure on the inlet side of the seat, a valve for closing said seat, means operating on an inward movement of said diaphragm to close said valve but on an outward movement thereof permitting fluid under pressure from said inlet to open the valve, a cover casing inclosing said diaphragm at its edge and having a passage connecting said outlet with the space outside of the diaphragm, and a spring device in said casing tending to move said diaphragm inward.

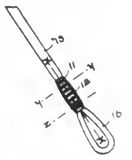
4. In combination a chamber structure having an inlet, an outlet and a valve seat between them, a diaphragm forming one wall of said structure on the inlet side of said seat, a valve for closing said seat and having a stem extending through the seat with a head toward said inlet, a plurality of centrally pivoted levers having their inner ends adjacent to the side of said head toward said seat, a motor member adjacent to the central part of said diaphragm and also adjacent to the outer ends of said levers, a device tending to close said valve, and a cover casing inclosing said diaphragm at its edge and having a passage connecting said outlet with the space outside of the diaphragm.

5. In combination a chamber structure having an inlet, an outlet and a valve seat between them, a diaphragm forming one wall of said structure on the inlet side of said seat, a valve for closing said seat and having a stem extending through the seat with a head toward said inlet, a plurality of centrally pivoted levers having their inner ends adjacent to the side of said head toward said seat, a motor member adjacent to the central part of said diaphragm and also adjacent to the outer ends of said levers, a cover casing inclosing said diaphragm at its edge and having a passage connecting said outlet with the space outside of the diaphragm, and a spring device in said casing tending to move said diaphragm inward.

[Claims 6 to 9 not printed in the Gazette.]

1,217,107. BINDER FOR CORD ENDS. GEORGE E. PRENTICE, New Britain, Conn., assignor to The G. E. Prentice Manufacturing Company, New Britain, Conn., a Corporation. Filed Oct. 2, 1913. Serial No. 792,947. (Cl. 241—15.)

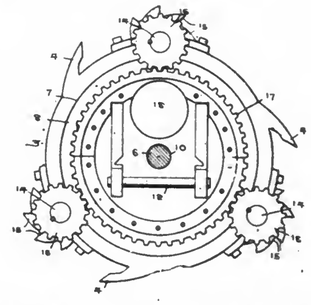
1. A binder and cord end combination comprising a binder of generally tubular form and cords having their ends entered within the two end portions thereof, the said cords being of appreciable thickness and having a circular form of cross-section, the front wall of the said binder having a plurality of transversely extending and rearwardly directed V-shaped ribs embedded in the said cord ends, having at the rear opposed and longitudinally extending edges which are adjacent and embedded forwardly into the material of the said cord ends so as to form a relatively large and generally V-shaped longitudinal corrugation, a plurality of teeth on each of the said edges, the said teeth being curled over and directed generally outwardly relatively to the said longitudinally extending edges and embedded in the material of the said cord ends, and the said teeth on one edge being in alternate relation to the teeth on the other edge, whereby the said teeth will effect a wavy distortion of the material of the said cord ends.



2. A binder and cord end combination comprising a binder of sheet material bent into generally tubular form and cords having their ends extending within the said binder, the said cords being of appreciable thickness and having a circular form of cross-section, and the said binder being so formed as to effect a connection with the said cord ends by a distortion of the material of the said cord ends from the front rearwardly, from the rear forwardly, and from the middle of the rear generally laterally and outwardly comprising transversely extending V-shaped indentations in the front wall, opposed longitudinally directed edge portions at the rear directed forwardly in approximately V-shape, and teeth on the said opposed edges that are directed laterally and outwardly relatively thereto.

3. A binder and cord end connection comprising a binder of sheet material and a cord end connected thereto by a connection involving a distortion of the material of the said cord end within the said binder in three general directions, consisting of a plurality of transverse rib-like formations on the front face, a longitudinally extending V-shaped corrugation at the rear face, and an internal, wave-like relative displacement of the material whereby different parts of the said material are forced away from the central longitudinal line and toward opposite sides.

1,217,108. ROTARY CUTTER. JESSE LEWIS MEGATHLIN, Miami, Fla., assignor of one-fourth to J. W. Cook, one-fourth to J. A. Pegg, and one-fourth to J. A. Waldeck. Filed Apr. 11, 1916. Serial No. 90,479. (Cl. 37—47.)



1. In a rotary cutter, the combination with a cutter head having cutting blades, and means to rotate the cutter head, of a plurality of rotatable shafts extending parallel to the cutting blades and journaled on the cutter head, a plurality of cutting disks attached to each shaft,

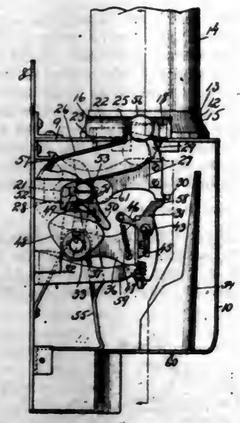
and means to rotate said shafts at a greater speed than that of the cutter head.

2. A rotary cutter comprising the combination with a rotary cutter head, a plurality of cutting blades attached to said head, and a drive shaft to which the cutter head is attached, of a plurality of shafts rotatably attached to the cutter head, a plurality of cutting disks attached to each of said latter shafts, and means to rotate the shafts carrying the cutting disks in at a greater rate of speed and in the same direction as the cutter head.

3. A rotary cutter comprising the combination with a cutter head formed of a pair of ring sections, and cutting blades connecting said ring sections, of a plurality of shafts rotatably mounted on said ring sections, a plurality of cutting disks carried by each shaft, and means to cause said shafts and cutting disks to rotate in the same direction as the rotation of the cutter head when said cutter head is rotated.

4. A cutting device comprising the combination with a shaft, a frame structure on said shaft, a collar carried by the frame structure, and a cog wheel on said collar, of a cutter head having a seat in one end for the reception of the collar, said cutter head being fixed to the shaft, a plurality of shafts rotatably mounted on the cutter head, a plurality of cutting disks carried by each of said latter shafts, and gears attached to said latter shafts and meshing with said cog wheel adapted to rotate said latter shafts when the cutter head is rotated.

1,217,109. APPARATUS FOR REGULATING THE DELIVERY OF DRINKING-CUPS. HENRY B. COOLEY, Kensington, Conn., assignor to The American Paper Goods Company, Montclair, N. J., a Corporation of New Jersey. Original application filed May 6, 1914, Serial No. 836,676. Divided and this application filed Oct. 13, 1915. Serial No. 55,611. (Cl. 194—48.)



1. A cup delivering apparatus including a movably mounted member with means for operating it, an arm secured to said member, a grip finger pivotally mounted on said arm, means for moving said finger in one direction to grasp the lower edge of the bottom cup in the stack, means for moving said finger to release the cup, means for holding the finger in its releasing position, and means for supporting the stack of cups while the bottom cup is being removed therefrom.

2. A cup delivering apparatus including a movably mounted member with means for operating it, an arm secured to said member, a finger pivotally mounted in said arm to grip the lower edge of the bottom cup in a stack, means for forcing the finger in one direction to grip a cup, means for moving it in the opposite direction to release the cup, means for holding it in its releasing position, and means for disengaging said holding means.

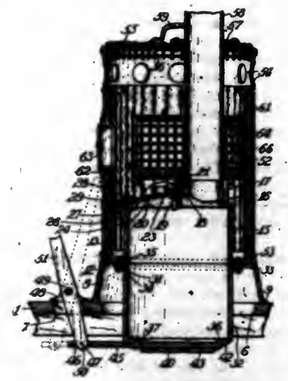
3. A cup delivering apparatus including a movably mounted member with means for operating it, an arm secured to said member, a finger pivotally mounted in said arm to grip the lower edge of the bottom cup in a stack, a spring connected with the finger to hold it in gripped engagement with said cup, means for moving the finger in the opposite direction against the force of the spring to release the cup, means for holding the finger in its released position, and means for disengaging said holding means from said finger.

4. A cup delivering apparatus including a movably mounted member with means for operating it, an arm projecting from said member, a grip finger pivotally mounted on said arm to grasp the lower edge of the bottom cup in a stack, means to move said finger in one direction to grip said cup, means to move said finger in the opposite direction to release the cup, means for holding the finger in one of said positions, and an arm located in the path of movement of said finger to move it in one of said directions.

5. A cup delivering apparatus including a movably mounted member, an arm projecting from said member, a finger pivotally mounted on said arm to grip the bottom edge of the bottom cup in a stack, a spring for forcing said finger in one direction, means for holding the finger in opposition to the force of said spring, means for releasing the finger from said holding means, and an arm located in the path of movement of said finger to move it against the force of said spring.

[Claims 6 to 29 not printed in the Gazette.]

1,217,110. VEHICLE-HEATER. WILLIAM H. MILLER, Crawfordsville, Ind., assignor to Miller Vehicle Heater Company, Crawfordsville, Ind., a Corporation of Indiana. Filed Jan. 5, 1916. Serial No. 70,366. (Cl. 237—21.)



1. A heater including an annular base having an inwardly-extending apertured annular ledge, a furnace connected to the ledge and extending upward and also downward therefrom, the lower portion of the furnace being provided with a fire-grate, the top portion of the furnace having a draft-opening, a hollow cylindrical radiator secured to the outer portion of the base and extending about the upper portion of the furnace and upward beyond the plane of the top thereof, a guard connected to the top portion of the radiator, and a draft pipe connected with the draft-opening of the furnace top and extending through the guard.

2. A heater including a base comprising an annular side wall having an inwardly-extending apertured ledge on its upper portion, a furnace connected to the ledge and extending upward and also downward therefrom, the top portion of the furnace being provided with a door and a draft-opening, a fire-grate in the lower portion of the furnace, a hollow cylindrical radiator secured upon the outer portion of the base and extending about the upper portion of the furnace and upward beyond the plane of the top thereof, a reticulate guard connected to the top portion of the radiator and having an aperture therein above the said draft-opening, and a draft pipe extending through said aperture and connected with said draft-opening.

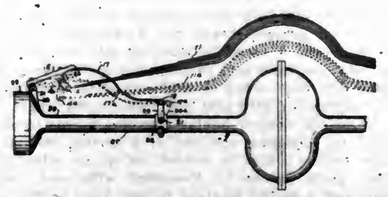
3. A heater including a base comprising a side wall having an inwardly-extending apertured ledge on its upper portion, a furnace connected to the ledge and extending upward and also downward therefrom, the lower portion of the furnace being beyond the plane of the bottom of the side wall and provided with a fire-grate, the top portion of the furnace being provided with a door and a draft-opening, a hollow cylindrical radiator secured to the outer portion of the base and extending about the upper portion of the furnace and upward beyond the plane of the top thereof, the upper portion of the radiator having apertures therein, a guard connected to the top portion of the radiator and covering the furnace, and a draft-pipe connected with said draft-opening and extending through the guard.

4. A heater including an annular base having an inwardly-extending apertured ledge, a furnace connected to the ledge and extending upward and also downward therefrom, the lower portion of the furnace being beyond the plane of the bottom of the base and provided with a fire-grate, the top portion of the furnace being provided with a door, a hollow cylindrical radiator secured upon the outer portion of the base and extending about the upper portion of the furnace and upward beyond the plane of the top thereof, the upper portion of the radiator having apertures therein, and a reticulate guard connected to the top portion of the radiator and covering the furnace.

5. In a heater, the combination of an annular base having an inwardly-extending apertured ledge, a hollow cylindrical radiator supported upon the outer portion of the base, the wall of the radiator having two apertures each provided with a guard and having also a door between the apertures, a reticulate guard connected with the top portion of the wall, a furnace connected to the ledge and extending upward and also downward therefrom, the top portion of the furnace having a horizontally arranged door hinged thereto, and a fire-grate mounted in the lower portion of the furnace.

[Claims 6 to 10 not printed in the Gazette.]

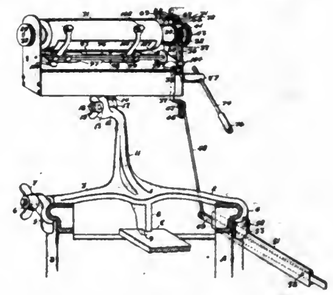
1,217,111. SPRING SUSPENSION. CLARK ROBINSON and HERMAN PERSON, Hillyard, Wash., assignors to Duplex Shock-Absorber Co., Spokane, Wash., a Corporation. Filed Oct. 31, 1916. Serial No. 128,779. (Cl. 267—27.)



1. A vehicle spring suspension comprising a leaf spring, supports near the ends of the spring, blocks pivoted to the supports, a pair of springs each having one end rigidly secured to one of said blocks and extending inwardly toward the center of the leaf spring and having the other or inner ends pivotally secured to arms pivotally connected to the vehicle axle or axle casing and a suspended pivoted connection of said leaf spring to said block between said pair of springs.

2. A vehicle spring suspension comprising a leaf spring, supports near the ends of the spring, blocks pivoted to the supports, a pair of springs each having one end rigidly secured to one of said blocks and extending inwardly toward the center of the leaf spring and having the other or inner ends secured to a support that will permit of endwise movement of said springs, links pivotally suspended from said blocks to which the ends of the leaf spring are pivotally connected and ledges extending downwardly from the said blocks in front of and in close proximity to said links.

1,217,112. COPY-HOLDER FOR TYPE-WRITING MACHINES. WILLIS E. GIBSON, Oakland, Cal. Filed Mar. 25, 1914. Serial No. 827,056. (Cl. 120—32.)



1. In a typewriter copyholder, in combination with a typewriting machine, a support for the copyholder upon the typewriting machine, having a central portion resting upon the rear of the frame of the typewriting machine, hooks engaging the rear posts of the machine, one of said hooks being adjustable, and means for clamping said hooks to said posts.

2. In a typewriter copyholder, in combination with a typewriting machine, a supporting means, means whereby the supporting means is detachably secured to the rear of the frame of the typewriting machine, a copy feed roller supported upon said supporting means, a train of operative mechanism for manually advancing said copy feed roller, the power end of said train extending adjacent to the typewriting keys, a casing for a portion of said train, and means for detachably supporting it on a side rail of the frame of the typewriting machine.

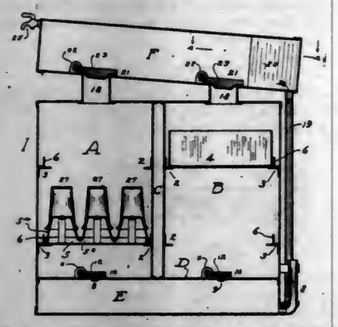
3. In a typewriter copyholder, in combination with a typewriting machine, a supporting means, means whereby the supporting means is detachably secured to the rear of the frame of the typewriting machine, a copy feed roller supported upon said supporting means, a train of operative mechanism for manually advancing said copy feed roller, and extending outside of, and adjacent to, a side rail of the typewriting machine, and means for detachably supporting it on said machine.

4. In a typewriter copyholder, in combination with a typewriting machine, a supporting means, means whereby the supporting means is detachably secured to the rear of the frame of the typewriting machine, a copy feed roller supported upon said supporting means, a train of operative mechanism for manually advancing said copy feed roller, and extending outside of, and adjacent to, the side rail of a typewriting machine, and a support for the front portion of said train, having a hook arranged to hook over said side rail.

5. In a typewriter copy holder, in combination with a typewriting machine, a supporting means, means whereby the supporting means is detachably secured to the rear of the frame of the typewriting machine, a copy feed roller supported upon said supporting means, a train of operative mechanism for manually advancing said copy feed roller, said train comprising a lever extending to the front of the machine at one side thereof, an operating key for said lever, a casing for said lever and in which the lever is pivoted, one end of said casing having a part resting upon the adjacent side rail of the typewriting machine, and the end thereof being detachably connected to said supporting means.

[Claim 6 not printed in the Gazette.]

1,217,113. STERILIZER. JOHN C. DARNALL, Staunton, Va. Filed Apr. 23, 1915. Serial No. 23,514. (Cl. 167—3.)



1. In a sterilizer for drinking-glasses and the like, the combination with a steam sterilizing chamber arranged to receive the articles to be sterilized and provided with a closure for the introduction and removal of such articles, of a condensing chamber located above said sterilizing chamber and communicating therewith by an enlarged conduit, and a valve to control said conduit, said condensing chamber being of a capacity such that when the valve is opened it will receive and condense substantially all of the steam in said sterilizing chamber, whereby the closure may be opened to permit access to the contained articles without discharge of steam therefrom.

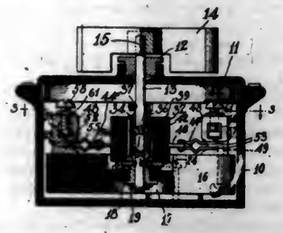
2. In a sterilizer for drinking-glasses and the like, the combination with a steam sterilizing chamber arranged to receive the articles to be sterilized and provided with a closure for the introduction and removal of such articles, of a steam condensing chamber located above said sterilizing chamber and communicating therewith by an enlarged conduit, a valve to control said conduit, said condensing chamber being of a capacity such that when the valve is opened it will receive and condense substantially all of the steam in said sterilizing chamber, whereby the closure may be opened to permit access to the contained articles without discharge of steam therefrom, a steam generating chamber located below the level of the condensing chamber, and a conduit leading from the condensing chamber to the generating chamber and adapted to convey condensation from the condensing chamber to the generating chamber.

3. In a sterilizer, the combination with a chamber arranged to receive the articles to be sterilized and provided with closures permitting free access to the interior of the chamber, means for supplying sterilizing vapor to said chamber and means provided to receive said sterilizing vapor preliminary to the opening of the closure whereby said chamber may be opened freely without the objectionable discharge of sterilizing vapor through said closures.

4. In a sterilizer, the combination with a steam sterilizing chamber arranged to receive the articles to be sterilized and provided with a closure for the introduction and removal of such articles, of a condensing chamber communicating with the sterilizing chamber; a valve to control said communicating means; a steam generator; a valve to control the admission of steam from the generator into the sterilizing chamber, so arranged and connected up that when the valve controlling the entrance of steam is closed and the valve controlling the emission of steam to the condensing chamber is open, the steam in the sterilizing chamber will be discharged into the condensing chamber, whereby the closure may be opened to permit access to the contained articles without discharge of steam therethrough.

1,217,114. ELECTRIC SWITCH. JOSEPH STANSBURY JONES, New York, N. Y. Filed Sept. 23, 1915. Serial No. 52,169. (Cl. 175—290.)

1. In a switch, a unitary contact-carrying member adapted to be rotated, said member comprising conductive contact parts disposed on spaced-apart planes intersecting the axis of the member, and a body of insulation in which each of said contact parts is secured, said body insulating the parts one from another and being molded about the parts to lock them against movement relative to the body and to each other, whereby said parts may be held to rotate in unison without the presence of metallic members intersecting the planes of such parts within the body.



2. In a switch and in combination, a unitary contact-carrying member adapted to be rotated, said member including a conductive contact part, and a part operative in the member-moving operation, means coöperating with said last named part to effect the rotation of said member, said rotary member having a body of insulation molded to unite said parts in the unitary structure and to form a lock therefor to prevent relative movement between the parts and such body, whereby said parts will be fixedly positioned within the unit without the presence of metallic members intersecting the several planes of such parts within the body, and fixed contacts coöperating with the conductive contact part.

3. In a rotary snap-switch, in combination, a rotary switch member having a conductive part and having another part formed of metal to facilitate the rotation of said rotary switch member, means coöperating with said last named part to effect the rotation of said rotary switch member, said rotary member having a body of insulation molded about said conductive part and holding the same fixed in the insulation, said other part disposed at the end of said body having projections molded into said body to retain the same in said body and having means projecting outwardly to enable said body to be rotated, and fixed contacts coöperating with said conductive part.

4. In a rotary snap-switch, in combination, a rotary switch member having a conductive contact part, said rotary member having a body of insulation molded about said conductive part to hold the same in place, a cam rack disposed at the end of said body having projections about which said body is molded and operating to retain said rack fixed in said body, a cam guided on said cam rack, an eccentric for actuating said cam, a cam-plate coöperating with said cam, a stem for rotating said eccentric to release said cam from said cam-plate, a spring for normally holding said cam locked on said cam-plate, and fixed contacts coöperating with said conductive contact part.

5. A switch member having engaging means in one end thereof for engaging one end of a spring, said member further having a bore to receive the spring, with a longitudinal guide groove in alinement with said engaging means, and a spring received in said bore having an extension adapted to be guided by said guide groove into engagement with said engaging means when the spring is placed in position.

[Claims 6 and 7 not printed in the Gazette.]

1,217,115. PHENOLIC CONDENSATION PRODUCT AND PROCESS OF MAKING SAME. LEO H. BAEKELAND, Yonkers, and AUGUST H. GOTTHELF, Hastings-upon-Hudson, N. Y. Filed Oct. 17, 1913. Serial No. 795,780. (Cl. 106—22.)

1. The process of preparing phenolic condensation products which consists in heating a fusible phenolic condensation product with a reactive methylene compound, which does not in the reaction, yield a readily-volatile byproduct.

2. The process of preparing phenolic condensation products which consists in heating a fusible phenolic condensation product with a sufficient proportion of a reactive methylene compound, which does not in the reaction yield a readily-volatile byproduct, and thereby producing an infusible final product.

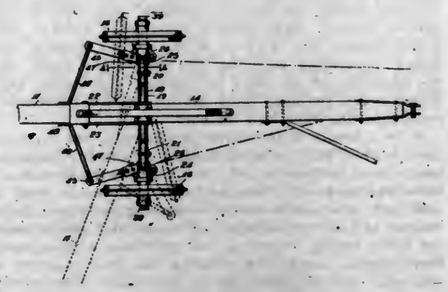
3. The process of preparing phenolic condensation products which consists in heating a fusible phenolic condensation product with anhydro-formaldehyde-anilin.

4. The process of preparing phenolic condensation products which consists in heating a fusible phenolic condensation product with a sufficient proportion of anhydro-formaldehyde-anilin, and thereby producing an infusible final product.

5. The process of preparing phenolic condensation products which consists in heating a fusible phenolic resin with a reactive methylene compound, which does not in the reaction yield a readily-volatile byproduct.

[Claims 6 to 15 not printed in the Gazette.]

1,217,116. FORE-TRUCK FOR HARVESTERS AND THE LIKE. ERNEST C. SMITH, Hoosick Falls, N. Y., assignor to Walter A. Wood Mowing & Reaping Machine Co., Hoosick Falls, N. Y., a Corporation of New York. Filed Sept. 20, 1916. Serial No. 121,169. (Cl. 21—139.)



1. A fore truck for harvesters and the like comprising, in combination, a rigid arch adapted at its crown for stationary connection with the stub tongue of the harvester, wheel brackets swingingly mounted upon the ends of the arch, a transverse brace connecting the ends of the arch below the wheel brackets, an inclined longitudinal brace extending upwardly from the said transverse brace and adapted at its upper end for connection with the stub tongue of the harvester in front of the point of attachment thereto of the arch, a pole having swiveled connection with said inclined brace, and steering connections between the pole and the wheel brackets.

2. In a fore truck for harvesters and the like, in combination, a rigid truck frame comprising a transverse arch adapted at its crown for stationary connection with the stub tongue of the harvester, a transverse brace connecting the ends of the arch and an inclined longitudinal brace extending upwardly from the transverse brace and adapted at its upper end for connection with the stub tongue of the harvester at a distance from the point of attachment thereto of the arch, wheel brackets swingingly mounted upon the ends of the frame arch above the transverse brace, a pole having swiveled connection with the truck frame, and steering connections between the pole and the wheel brackets.

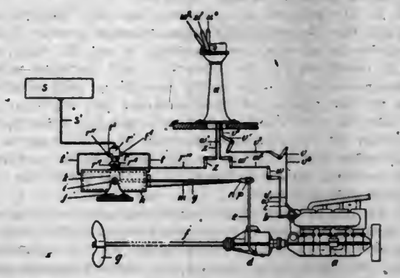
3. In a fore truck for harvesters and the like, in combination, a rigid truck frame comprising a transverse arch adapted at its crown for stationary connection with the stub tongue of the harvester and having at each side an intermediate horizontal portion, a transverse brace connecting the ends of the arch, upright braces connecting the transverse brace with the intermediate horizontal portions of the arch and an inclined longitudinal brace extending upwardly from the transverse brace and adapted at its upper end for connection with the stub tongue of the harvester at a distance from the point of attachment thereto of the arch, wheel brackets swingingly mounted upon the ends of the frame arch above the transverse brace, a pole having swiveled connection with the truck frame and steering connections between the pole and the wheel brackets.

4. A fore truck for harvesters and the like comprising, in combination, a rigid arch adapted at its crown for stationary connection with the stub tongue of the harvester, wheel brackets swingingly mounted upon the ends of the arch, a transverse brace connecting the ends of the arch below the wheel brackets, a pair of inclined parallel braces extending upwardly from the transverse brace for connection at their upper ends with the stub tongue of the harvester at opposite sides of the same and at a distance from the point of attachment thereto of the arch, a transverse bolt rigidly connecting the two inclined braces, a pole having swiveled connection with the said bolt and steering connections between the pole and the wheel brackets.

5. A fore truck for harvesters and the like, comprising, in combination, a rigid truck frame having an upright round rod at each side, a pair of telescopically united stub axles and tubular brackets, each stub axle being longer than the corresponding bracket and each stub axle and bracket being formed with registering vertical apertures through both of which one of the said upright round rods of the truck frame is extended to prevent relative end-wise displacement of the stub axle and bracket and provide a swinging support for the axle and bracket upon the corresponding side of the truck frame, and a carrying wheel mounted upon the projecting portion of each of the said stub axles.

[Claim 6 not printed in the Gazette.]

1,217,117. FLUID-ACTUATED MEANS FOR CONTROLLING AN ENGINE. WILLIAM H. CURTIS, Portland, Oreg. Filed Aug. 26, 1914. Serial No. 858,753. (Cl. 121—13.)

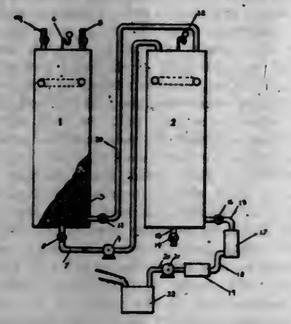


1. The combination with a device controlled by a lever, of fluid actuated means for operating such lever substantially as described, comprising a cylinder a fluid actuated piston operating therein, said cylinder being provided with inlet and outlet ports, valves controlling the ports, means for operating the valves, such means including a rockable arm, a floating link connected at one end to the extremity of such arm, manually controlled operating means, connected to said floating link, a rod extending from the piston, the outer end of which rod is connected with said control lever of the device, such connection being adapted to permit some movement in either direction without correspondingly moving said control lever, and a rod pivotally connecting the other end of said floating link with said piston rod.

2. The combination with a device controlled by a lever, of fluid actuated means for operating such lever substantially as described, comprising a cylinder a fluid actuated piston operating therein, said cylinder being pivotally supported at its sides, and provided with inlet and outlet ports, valves controlling the ports, means for operating the valves, such means including a cam shaft, a rockable arm fixed thereon, a floating link connected at one end to the extremity of such arm, manually controlled operating

means, connected to said floating link, a rod extending from the piston, the outer end of which rod is connected with said control lever of the device, and a rod pivotally connecting the other end of said floating link with said piston rod.

1,217,118. PROCESS OF HYDROGENATION. CARLETON ELLIS, Montclair, N. J. Filed Mar. 29, 1912, Serial No. 686,988. Renewed Sept. 11, 1916. Serial No. 119,408. (Cl. 87—12.)



1. In the process of hydrogenating oily material and the like the step which comprises developing a finely divided catalyzer in a body of non-aqueous menstruum in liquid condition and in contacting said material with a hydrogen-containing gas in the presence of said catalyzer.

2. In the process of hydrogenating oily material and the like the step which comprises developing a finely divided catalyzer in an oily body in a liquid condition and in contacting said material with a hydrogen-containing gas in the presence of said catalyzer.

3. In the process of hydrogenating oily material and the like the step which comprises forming a finely divided catalyzer by thermal decomposition in an oily body in a liquid condition and in contacting said material with a hydrogen-containing gas in the presence of said catalyzer.

4. In the process of hydrogenating oily material and the like the step which comprises forming a finely-divided catalyzer by thermal decomposition of a non-volatile decomposable nickel body in an oily body and in contacting said material with a hydrogen-containing gas in the presence of said catalyzer.

5. In the process of hydrogenating oily material and the like the step which comprises forming a finely-divided catalyzer by thermal decomposition of a decomposable nickel salt in an oily body and in contacting said material with a hydrogen-containing gas in the presence of said catalyzer.

[Claims 6 to 34 not printed in the Gazette.]

1,217,119. CUTTING-TORCH. JOHN HARRIS, Cleveland, Ohio, assignor to Carbo-Hydrogen Company of America, Pittsburgh, Pa., a Corporation of Delaware. Filed Dec. 17, 1914. Serial No. 877,649. (Cl. 158—27.4.)



1. In a burner of the character described, the combination of a head comprising a shell having a chamber in its front or discharge portion, a central bore at the rear of said chamber and a bore or passageway communicating with said chamber in front of said central bore, a tip comprising an inner tubular member the rear end whereof coöperates with said central bore and a nozzle member surrounding and connected to the front or discharge portion of said tubular member, there being a passageway between said nozzle member and the bore of the tubular member, and means for connecting said tip to said head with the passageway in the nozzle member thereof communicating and coöperating with said chamber and with the inner tubular member thereof in operative relation to said central bore.

2. In a burner of the character described, the combination of a head having a centrally arranged bore, a seat in front of said bore, a chamber in front of said seat, a supply connection leading to said chamber, a removable tip comprising an inner tubular member the rear end whereof coöperates with said seat, a nozzle member surrounding the front portion of said tubular member and connected thereto, there being a passageway between said nozzle member and the bore of the tubular member, the nozzle member and the front end of the head having a telescopic connection, means for packing the joint at said connection, and coöperating means carried by the rear end of the tubular member and the seat for securing said member, and thereby the tip, to the head.

3. In a burner of the character described, the combination, with a head having a centrally arranged bore, an internally threaded seat in front of said bore, and a chamber in front of said seat, of a removable tip comprising an inner tubular member the rear end whereof is threaded for application to said seat and a nozzle member surrounding the front portion of said member and secured thereto, there being a passageway between said nozzle member and the bore of the tubular member, and means coöperating with the rear end of the nozzle and the front end of the head for forming a gas tight joint therebetween, the head being provided with a passageway communicating with said chamber.

4. In a burner of the character described, the combination, with a body or shell having a centrally arranged bore, a seat in front of said bore, and gas supply connections leading to said bore and to a chamber in front of said seat, of a removable tip comprising an inner tubular member and an outer nozzle, said nozzle and tubular member being rigidly connected and providing a passageway therebetween, means for securing the inner member in said seat with the rear end of the nozzle telescopically fitting the front end of the shell, and a packing gland surrounding said nozzle and connected to the front end of the shell.

5. In a burner of the character described, the combination of an inner tubular member having an outwardly projecting body at its discharge or delivery end, said body being provided with slots extending inwardly from the outer surface thereof and converging longitudinally toward the central portion of said member, said slots being rectangular in cross section, a nozzle surrounding said tubular member and engaging the outwardly projecting body and closing the outer ends of said slots, and gas supply connections communicating with the nozzle and with the inner tubular member.

[Claims 6 to 14 not printed in the Gazette.]

1,217,120. ONE-MAN TOP. GEORGE H. HIGGINS, Cortland, N. Y., assignor to Cortland Carriage Goods Co., Cortland, N. Y., a Corporation of New York. Filed Feb. 14, 1916. Serial No. 78,192. (Cl. 21—62.)



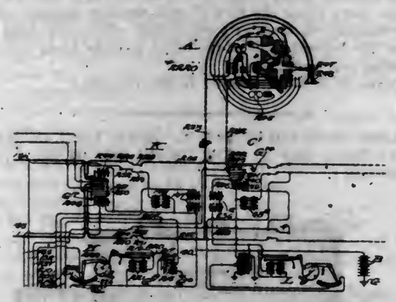
1. In a folding top for vehicles, a main arm, a toggle socket having its rear section hinged to said main arm, a front auxiliary bow socket hinged to the rear section of the toggle socket, a rear auxiliary bow hinged to the main arm, a link connecting the front auxiliary bow socket to the front section of the toggle, a tie-piece connecting the main arm to the front auxiliary bow socket, said tie-piece provided with a crank arm, and a link connecting said crank arm to the rear auxiliary bow socket.

2. In a folding top for vehicles, main arms, toggle sockets hinged to the main arms, front auxiliary bow sockets hinged to the rear sections of the toggle sockets, tie-pieces connecting the upper ends of the main arms to points on the front auxiliary bow sockets below their centers, and links connecting the front toggle sections to points on the front auxiliary bow sockets above their centers, a rear auxiliary bow socket, said tie-pieces provided with projecting lever arms, and links connecting said lever arms to said rear auxiliary bow sockets.

3. In a folding top for vehicles, main arms, toggle sockets hinged to the main arms, front auxiliary bow sockets hinged to the rear sections of the toggle sockets, tie-pieces connecting the upper ends of the main arms to points on the front auxiliary bow sockets below their centers and links connecting the front toggle sections to points on the front auxiliary bow sockets above their centers, a rear auxiliary bow socket, and means connected to the tie pieces and actuated by moving the main arm to extended position for rocking said tie-pieces about their pivots on the main arms to move the toggle bow sockets and the front auxiliary bow sockets toward extended position.

4. In a folding top for vehicles, a main arm, a toggle socket having its rear section hinged to said main arm intermediate the length of said arm, a front auxiliary bow socket hinged to the rear section of the toggle socket, a rear auxiliary bow socket, a tie-piece pivotally connecting the front auxiliary bow socket and said main arm above the pivot of the rear section of the toggle socket, said tie-piece provided with a crank arm, and a link connecting said crank arm to the rear auxiliary bow socket.

1,217,121. TELEPHONE-EXCHANGE SYSTEM. ALEXANDER E. KEITH, Chicago, Ill., assignor, by mesne assignments, to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 14, 1907. Serial No. 373,649. (Cl. 179—18.)



1. In a telephone system, a selector, a trunk line leading from said selector, a couple of line switches allotted to said trunk line, the first line switch operable directly from said trunk line, a connector switch adapted to be seized by said first line switch, the said connector switch adapted to be operated after being seized by said first line switch whereby a circuit connection may be completed to the second line switch and to the subscriber's line allotted to said second line switch, means whereby said second line switch is automatically operated to connect the trunk line directly to the subscriber's line and to at the same time cause the automatic release of the connector and said first line switch.

2. In a telephone system, a subscriber's substation, a line allotted thereto, switching means individual to said line comprising two line switches, a trip magnet adapted to be operated when a call originates in said substation, and another trip magnet adapted to be operated when the said substation is called.

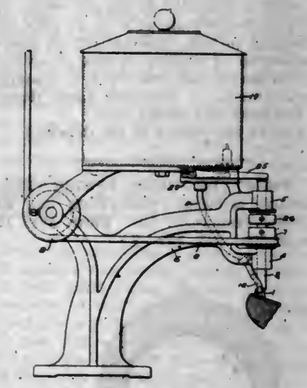
3. In a telephone system, a subscriber's substation, a line allotted thereto, switching means individual to said line comprising two line switches, a trip magnet adapted to be operated when a call originates in said substation, a trip magnet adapted to be operated when the said substation is called, a release magnet for restoring the first one of said line switches when the first mentioned trip magnet operates, and another release magnet for restoring the second line switch when the second mentioned trip magnet operates, said release magnets being always operated by the calling subscriber.

4. In a telephone system, a substation, a line alloted thereto, switching mechanism individual to said line comprising two release magnets, one for use when the line is called and the other for use when the line calls.

5. In a telephone system, groups of trunk lines, a substation, a line allotted thereto, switching mechanism individual to said line comprising a couple of magnets, one for use when the line is called and the other for use when the line calls for closing the subscriber's line with one of the trunk lines of either one of two groups of trunk lines.

[Claims 6 to 93 not printed in the Gazette.]

1,217,122. MACHINE FOR OPERATING ON SHOE-SOLES. FRED N. LA CHAPELLE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 19 1913. Serial No. 762,175. (Cl. 12—1.)



1. A machine for operating upon the insoles of shoes, having, in combination, a lip lifting tool, means for discharging liquid upon the outer face of the insole along the channel lip in advance of the tool, and means for discharging liquid within the channel after the lip is lifted by the tool.

2. A machine for operating upon shoe soles, having, in combination, a movable lip lifting tool, means for operating the tool to lift the lip, and means to moisten the lip before it is acted upon by the tool.

3. A machine for operating upon shoe soles, having, in combination, a lip lifting tool arranged to enter the channel of the sole and lift the lip from the sole, a moistening device comprising a source of liquid supply, a pipe leading therefrom, a valve for controlling the supply of liquid through the pipe, means arranged for operation by movement of the work when the tool is in engagement with the work for opening the valve, and means for closing the valve when the work is moved to disengage it from the tool.

4. A machine for operating on shoe soles, having, in combination, a lip lifting tool arranged to enter the channel of the sole and lift the lip from the sole, a moistening device comprising a source of liquid supply, a pipe leading therefrom, a valve for controlling the flow of liquid through the pipe, means operated by the pressure of the work against the tool for opening the valve, and means for closing the valve as the work is moved to disengage it from the tool.

5. A machine for operating on shoe soles, having, in combination, a rotary lip lifting tool, a shaft upon which the tool is mounted arranged for axial movement, a moistening device comprising a source of liquid supply, a valve for controlling the discharge of liquid therefrom upon the work, and means operated by the axial movement of the shaft for opening and closing the valve.

[Claims 6 to 18 not printed in the Gazette.]

1,217,123. ARTIFICIAL LEATHER AND COMPOSITION USED IN THE MANUFACTURE THEREOF. LEON LILIENFELD, Vienna, Austria-Hungary. Filed Dec. 11, 1912. Serial No. 736,222. (Cl. 106—37.)

1. A permanently soft and flexible composition of matter, viscous at ordinary temperature, containing nitrocellulose, a colloiding agent therefor and a phenol ester.

2. A permanently soft and flexible composition of matter, viscous at ordinary temperature, containing nitrocellulose, a colloiding agent therefor and a plurality of phenol esters.

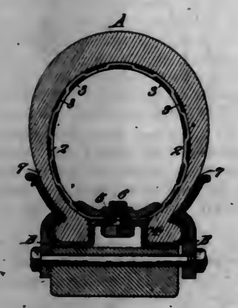
3. A composition of matter for the manufacture of artificial leather and the like, containing a colloided cellulose ester mass and a phenol ester which remains liquid at a temperature of 0° C. in admixture with a solvent common to both, substantially as described.

4. A composition of matter for the manufacture of artificial leather and the like, containing a colloided cellulose ester mass, and a plurality of phenol esters which remain liquid at a temperature of 0° C. in admixture with a solvent common to both, substantially as described.

5. A composition of matter, viscous at ordinary temperature, permanently soft and flexible, containing 100 parts of nitrocellulose, a colloiding agent therefor, and from 50 to 200 parts of a phenol ester.

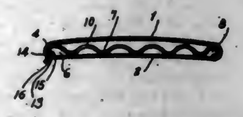
[Claims 6 to 15 not printed in the Gazette.]

1,217,124. PUNCTURE-PROOF SPRING-TIRE. WILLIAM MCCALL, MICHAEL O'SULLIVAN, and ELVIN C. MCCALL, San Francisco, Cal. Filed Apr. 12, 1916. Serial No. 90,606. (Cl. 152—8.)



In a puncture proof spring tire, a rim having a centrally disposed, peripheral raised table, an outer casing seating on the rim at opposite sides of the table, a resilient inner lining composed of interwoven longitudinal and transverse metal bands, the transverse bands extending approximately at right angles to the longitudinal bands and having their ends free and projecting beyond the latter, said free ends of the transverse bands being arranged on the rim table in spaced and opposing relation with each other, spaced bent plates having depressed edge seats engaging over the outer of said longitudinal bands and provided with face portions between the seats for engaging with and clamping the free ends of the transverse bands onto the rim table, a bolt for each plate projecting upwardly through the rim table and between the spaced free ends of the transverse bands and having threaded engagement with its plate, and means for clamping the casing against the side walls of the rim table.

1,217,125. LINGERIE-CLASP. ELIAS PALTEA, Providence, R. I. Filed Jan. 22, 1915. Serial No. 3,678. (Cl. 24—259.)



1. An article of manufacture comprising a clasp having two members joined at one end for relative movement, the opposite end of one member being turned back upon itself and lying between said members and providing gripping means when the said clasp is closed, said clasp being provided with means for holding it closed.

2. An article of manufacture, comprising a clasp having two members joined at one end for relative movement, the opposite end of one member being turned back upon itself and lying between said members, and said turned back portion being corrugated and having perforations to provide gripping means when said clasp is closed.

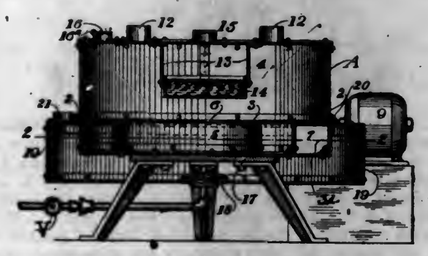
3. A lingerie clasp comprising two resilient members joined at one end by a curved resilient part, the opposite end of one member being looped over and having a corrugated portion lying along the face of said member opposite said other member, to form gripping means when said clasp is closed, said clasp being provided with means for fixing the opposite end of said other member relatively to said loop.

4. A lingerie clasp, comprising two resilient members joined at one end for relative movement, the opposite end of one member being looped over and having a corrugated portion lying along the face of said member opposite said other member, to form gripping means when said clasp is closed, the said corrugated portion ending in a loop, said coil being positioned between said members, adjacent the point at which said members are joined.

5. A lingerie clasp, comprising two resilient members joined at one end for relative movement, the opposite end of one member being looped over and having a corrugated portion lying along the face of said member opposite said other member, to form gripping means when said clasp is closed, the opposite end of the other member being curved to spring over said loop.

[Claims 6 to 8 not printed in the Gazette.]

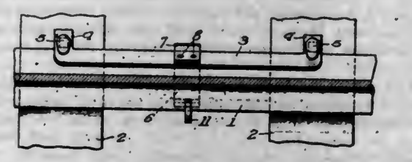
1,217,126. HOT-AIR FURNACE. ROMEO POZZI, Oakland, Cal. Filed May 1, 1916. Serial No. 94,690. (Cl. 126—116.)



1. A hot air furnace including a cylindrical casing having a top and a bottom, a plate in the casing dividing same into an upper and a lower chamber, said casing having a peripheral opening of the same height as the depth of the lower chamber and one side of the casing adjacent one side of said opening being tangentially extended thereboyond, a strip seated on the casing bottom and arranged at its outer end to lie parallel to said extension of the casing side and abutting the wall formed by the opposite side of the opening and having its major portion disposed within the casing and extending parallel to the casing sides and terminating in a free end which lies opposite to the major portion of the strip, said plate being seated on top of the strip and abutting the casing sides and having a central opening, an outlet in the casing above the plate, a burner beneath the casing, said casing bottom being extended between the outer end of the strip and the extension of the casing side, and a hood secured exteriorly of the casing and having a depending flange formed with an opening through which the casing extension, the outer end of the strip and said extension of the bottom of the casing project.

2. A hot air furnace including a cylindrical casing having a top and a bottom, a plate in the casing dividing same into an upper and a lower chamber, said casing having a peripheral opening of the same height as the depth of the lower chamber and one side of the casing adjacent one side of said opening being tangentially extended therebeyond, a strip seated on the casing bottom and arranged at its outer end to lie parallel to said extension of the casing side and abutting the wall formed by the opposite side of the opening and having its major portion disposed within the casing and extending parallel to the casing sides and terminating in a free end which lies opposite to the major portion of the strip, said plate being seated on top of the strip and abutting the casing sides, and having a central opening, an outlet in the casing above the plate, and a burner beneath the casing.

1,217,127. TWO-WAY ANTICREEPER. FREDERICK A. PRESTON, Highland Park, Ill., assignor to The P. & M. Co., Chicago, Ill., a Corporation of Illinois. Filed Feb. 19, 1916. Serial No. 79,311. (Cl. 238—4.)



1. An anti-creeper comprising means in direct engagement with a rail base for gripping opposite sides thereof, and means arranged between part of said rail gripping means and the rail for distributing the creeping thrust over a plurality of ties.

2. An anti-creeper comprising a transverse member beneath the rail base having a jaw at one end thereof in frictional engagement with said rail base and a longitudinal member arranged between part of said jaw and said rail base and extending to an adjacent tie.

3. An anti-creeper comprising a transverse bar beneath the rail base, a longitudinal bar on top of the rail base, said transverse bar being bent over and secured to said longitudinal bar and means for maintaining said parts in position on the rail.

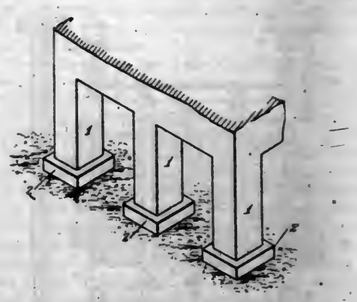
4. An anti-creeper comprising a transverse element having a rail gripping jaw at one end and having a downward projection at the other end, a clip for holding said other end against the rail base in frictional engagement therewith, and a longitudinal member secured to a plurality of adjacent ties and coöperating with said transverse element to transmit the creeping thrust to said ties.

5. An anti-creeper comprising a transverse bar beneath the rail base having one end bent around to form a jaw and having the other end bent downwardly and provided with a notch, and a metal clip coöperating with said notch and bearing against the top of the rail base to hold the anti-creeper in frictional engagement with the rail.

[Claims 6 and 7 not printed in the Gazette.]

1,217,128. METHOD OF PROVIDING SUBSTRUCTURES FOR STRUCTURES. LAZARUS WHITE, New York, N. Y. Filed Mar. 10, 1916. Serial No. 83,210. (Cl. 72—77.)

1. The method of providing a substructure for structures which comprises setting a footing, loading it with a temporary load, maintaining it under such temporary load until settling of the footing ceases, and then exchanging the temporary load for a permanent load, the footing being maintained under load during the exchange.



2. The method of providing a substructure for structures which comprises setting a footing, loading it with a known temporary load, maintaining it under such temporary load until settling of the footing ceases, and then exchanging the temporary load for a permanent load, the footing being maintained under load during the exchange.

3. The method of providing a substructure for structures, which comprises setting a footing, loading it with a temporary load, maintaining it under such temporary load until settling of the footing ceases, exchanging the temporary load for a permanent load, and during such exchange maintaining the footing under a load not greater than said temporary load.

4. The method of providing a substructure for structures, which comprises setting a footing, loading it with a temporary load, maintaining it under such temporary load until settling of the footing ceases, exchanging the temporary load for a permanent load, and during such exchange maintaining the footing under a load not greater than said temporary load, and not less than said permanent load.

5. The method of providing a substructure for structures, which comprises setting a footing, loading it with a temporary load, maintaining it under such temporary load until settling of the footing ceases, exchanging the temporary load for a permanent load, less than the temporary load, and during such exchange maintaining the footing under a load not greater than said temporary load, and not less than said permanent load.

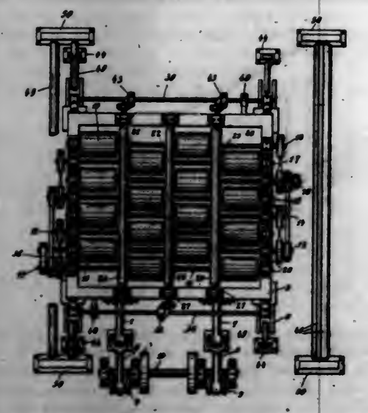
[Claims 6 to 13 not printed in the Gazette.]

1,217,129. MACHINE FOR RAISING NAP ON FABRICS. JULES REGOUT, Jr., Maastricht, Netherlands. Filed Apr. 24, 1915. Serial No. 23,632. (Cl. 26—19.)

1. A machine for raising nap on fabrics, comprising means for guiding the fabric to be operated on through the machine, a traveling carriage, means for imparting a to and fro motion to this carriage, a plurality of raising rollers mounted in the carriage, motors attached to the carriage frame for rotating the raising rollers, these rollers being arranged partly in the direction of the traverse of the fabric and partly transversely of the traverse, and one set of rollers being adjustable in height with relation to the other rollers.

2. A machine for raising nap on fabrics, comprising means for guiding the fabric to be operated on through the machine, a traveling carriage, a power driven crank shaft connected to the carriage by suitable rods and imparting a to and fro motion to the carriage transversely of the traverse of the fabric, a plurality of raising rollers mounted in bearings fastened to the carriage, motors attached to the carriage frame for rotating the raising rollers, these rollers forming two different groups, the rollers of one of these groups being arranged in the direction of the traverse of the fabric and the rollers of the other group transversely thereof, the bearings for the latter rollers being adjustable in height so as to allow these roll-

ers to be raised and lowered with relation to the other rollers.



3. A machine for raising nap on fabrics, comprising guiding rollers for the fabric rotatably mounted in suitable standards at two sides of the machine and partly adjustable in height, a traveling carriage being movable to and fro transversely of the traverse of the fabric, a plurality of raising rollers rotatably mounted in bearings fastened to the carriage, motors attached to the carriage for driving the raising rollers, these rollers forming two groups, the rollers of one group being arranged in staggered relation to one another and having their axes in the direction of the traverse of the fabric and the rollers of the other group being arranged transversely thereof in the spaces left between the several rows formed by the former rollers, and the rollers lying transversely of the traverse of the fabric being journaled in bearings adjustable in height, so as to allow these rollers to be raised and lowered with relation to the other rollers.

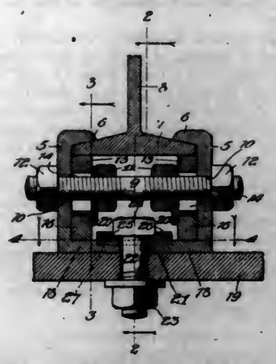
4. A machine for raising nap on fabrics, comprising guiding rollers for passing the fabric through the machine, a traveling carriage being movable to and fro transversely of the traverse of the fabric, a plurality of raising rollers mounted in bearings fastened to the carriage and forming two groups, the raising rollers of one of these groups being arranged in the direction of the traverse of the fabric and the rollers of the other group being arranged transversely thereof, the bearings for the raising rollers of said latter group consisting of two parts, the upper part comprising the brasses and cap-piece and being guided in vertical direction on extensions of the lower part forming the base, both parts being connected with one another by means of a screw bolt, provided at its ends with right handed and left handed thread respectively so as to cause the upper part of the bearing to be raised or lowered together with the raising roller journaled therein, when rotated in one direction or the other.

REISSUES.

14,260. SUSPENSION-CLAMP. CHARLES W. DIETRICH, Chicago, Ill. Filed Dec. 26, 1916. Serial No. 139,027. Original No. 1,203,187, dated Oct. 31, 1916, Serial No. 91,328, filed Apr. 15, 1916. (Cl. 248—32.)

1. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended, means connecting said members together, and wedge-shaped members spaced from said projections and adjustable for varying the distance between them and said projections.

2. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended and projections beneath said first-named projections, means connecting said members together, and wedge-shaped members bearing against said last-named projections and adjustable for varying the distance between them and said first-named projections.



3. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended, a bar connecting said members together, and wedge-shaped members spaced from said projections and through which said bar extends, and adjustable for varying the distance between them and said projections.

4. A clamp of the character described, comprising a pair of members having projections on their upper ends for engagement with the support from which the clamp is to be suspended and projections beneath said first-named projections, means connecting said members together, and pairs of wedge-shaped blocks bearing against said last-named projections with the blocks of each pair adjustable relative to each other for varying the distance between them and said first-named projections.

5. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended and projections beneath said first-named projections, a bar connecting said members together, and pairs of wedge-shaped blocks with said bar extending through one block of each pair, certain of said blocks bearing against said last-named projections and adjustable relative to the others of said blocks for varying the distance between them and said first-named projections.

6. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended and projections beneath said first-named projections, a bar for connecting said members together, said bar passing through said members and carrying means for clamping said members together, blocks surrounding said bar adjacent each of said members and having inclined surfaces, and movable toward and away from said first-named projections, and other blocks bearing against said last-named projections and having inclined surfaces adapted to coöperate with the inclined surfaces of the first-referred to blocks.

7. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended and projections beneath said first-named projections, a bar passing through said members and carrying means for clamping said members together, blocks surrounding said bar adjacent each of said members and having inclined surfaces and movable toward and away from said first-named projections, other blocks bearing against said said last-named projections and having inclined surfaces adapted to coöperate with the inclined surfaces of the first-referred to blocks, and means for preventing displacement of said blocks.

8. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended and projections beneath said first-named projections, a bar passing through said members and carrying means for clamping said members together, blocks surrounding said bar adjacent each of said members and having inclined surfaces and movable toward and away from said first-named projections, other blocks bearing against said last-named projections and having inclined surfaces adapted to coöperate with the inclined surfaces of the first-referred to blocks, washers on said bar positioned against the inner sides of said blocks, and means for holding said washers in position.

9. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended, means connecting said members together, vertically-adjustable blocks located adjacent the inner surfaces of said members, and means adjustable in a plane at an angle to the planes through which said blocks are adjustable, for holding said blocks in different positions of vertical adjustment.

10. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended, means connecting said members together, blocks located adjacent the inner sides of said members and adjustable vertically toward and away from said projections and having their lower edges inclined and provided with serrations, and other blocks having their upper surfaces inclined and serrated and opposing the inclined surfaces of said first-named blocks and adjustable transversely of the planes in which said first-named blocks are adjustable, for holding the latter in adjusted position.

11. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended and flanges at their lower edges, means connecting said members together, a block resting on said last-named projections and containing an angular recess, means for holding said block against turning, and a bolt extending through said block and between said last-named projections and extending at its head into said recess, for the purpose set forth.

12. In a clamp of the character described, the combination of a pair of members having projections adapted to overlappingly engage the support from which the clamp is to be supported, members located below said projections for receiving between them and said projections, the edges of the base of said support, said last-named members and said first-named members being relatively lineally adjustable by relative movement lengthwise of each other to vary the distance between said projections and said last-named members, and means for holding said members in lineally adjusted position.

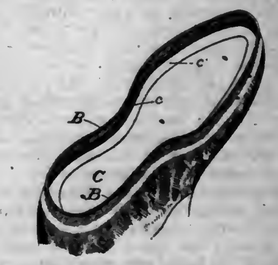
13. In a clamp of the character described, the combination of a pair of members having projections adapted to overlappingly engage the support from which the clamp is to be supported, members located below said projections for receiving between them and said projections, the edges of the base of said support, said last-named members and said first-named members being relatively lineally adjustable by relative movement lengthwise of each other to vary the distance between said projections and said last-named members, means for holding said members in lineally adjusted position, and means for holding said members together.

14. In a clamp of the character described, the combination of a pair of members having projections adapted to overlappingly engage the support from which the clamp is to be supported, members located below said projections for receiving between them and said projections, the edges of the base of said support, said last-named members and said first-named members being relatively lineally adjustable by relative movement lengthwise of each other to vary the distance between said projections and said last-named members, and a bolt-device extending through openings in said first and second-named members, the openings in certain of said members being elongated to permit of said lineal adjustment.

15. In a clamp of the character described, the combination of a pair of members having projections adapted to overlappingly engage the support from which the clamp is to be supported, members located below said projections for receiving between them and said projections, the edges of the base of said support, said last-named members and said first-named members being relatively lineally adjustable by relative movement lengthwise of each other to vary the distance between said projections and said last-named members, a bolt-device extending through openings in said first and second-named members, the openings in certain of said members being elongated to permit of said lineal adjustment, and means for holding said members in lineally adjusted position.

16. A clamp of the character described, comprising a pair of members having projections at their upper ends for engagement with the support from which the clamp is to be suspended, means connecting said members together, members located below said projections for receiving between them and said projections, the edges of the base of said support, said last-named members and said first-named members being relatively lineally adjustable by relative movement lengthwise of each other to vary the distance between said projections and said last-named members, and wedge-means for varying the adjustment of said members.

14,261. PROCESS OF MAKING SHOES. JOHN A. KELLY, Braintree, Mass., assignor, by direct and mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 16, 1916. Serial No. 126,046. Original No. 1,128,608, dated Feb. 16, 1915, Serial No. 847,179, filed June 25, 1914. (Cl. 12—145.)



1. In the art of making shoes, the improvement which consists in providing an insole with an upstanding lip, and simultaneously side lasting the upper and stapling the upper to said upstanding lip of the insole by engaging the free edge of the upper upon its outer side above the insole by laterally separated pulling means and engaging the upper upon its inner side by means located between the pulling means and coöperating therewith to effect a firm pulling of the upper and its lining over the edge of the insole commencing before the insertion of the staple and continuing during the clenching of the staple.

2. The process herein described of making shoes which consists in providing an insole with an upstanding rib, attaching said insole to a last, drawing the upper around the last, and stapling the edge portion of the upper to the upstanding rib of the insole and simultaneously therewith side lasting the upper by drawing it at a point located at one lateral side of the point for insertion of the staple fastener by frictionally engaging the free edge of the upper upon its outer side above the insole only and pulling it inwardly over the rib of the insole while inserting the

staple through the upper end rib in a plane between the pulling means and the underlying face of the insole.

3. The process herein described of making shoes which consists in providing an insole with an upstanding rib, attaching said insole to a last, pulling-over an upper relative to the last, and directly thereafter stapling the upper to the upstanding rib of the insole and simultaneously with said stapling operation side lasting the upper by pulling it inwardly over the top of the rib of the insole at points positioned on opposite sides of the point of insertion of the staple fastener.

4. The process herein described of making shoes, which consists in providing an insole with an upstanding rib, attaching said insole to a last, pulling-over an upper relative to the last, and directly thereafter stapling the upper to the upstanding rib of the insole and simultaneously with said stapling operation side lasting the upper by pulling the free edge of said upper at two points over the last and the insole, the points of application of the strain being on the margin of the upper wholly above the insole and located at opposite sides of the staple fastener and the direction of the pull being inwardly from the edge of the insole.

5. That improvement in methods of making shoes which comprises stretching two laterally adjacent portions of an upper inwardly over the top of the channel rib of a welt shoe insole and inserting a staple substantially parallel with the tread face of the insole to fasten the portion of upper located between said portions, and repeating the operation on successive portions of the shoe to side last and fasten the shoe progressively.

6. That improvement in methods of making shoes which comprises tensioning the upper inwardly over the top of the upstanding channel rib of a welt shoe insole at two laterally adjacent points and pressing into lasted relation to the upstanding outer face of the rib and then fastening thereto the portion of upper between said points by inserting a staple through the upper and lip substantially perpendicular to said face of the rib, and repeating the operation on successive portions of the shoe to side last and fasten the shoe progressively.

7. That improvement in methods of making welt shoes which comprises tensioning an upper inwardly over the top face of the rib of an insole at two laterally adjacent points at a time, forcing the portion of upper between said two points into the angle of union between the rib and feather of the insole and uniting it to said rib by inserting through the upper and said rib an individual permanent fastening that will not interfere with the operation of the welter needle or with the inseam trimming operation, and repeating the operation on successive portions of the shoe to last and fasten the shoe progressively.

8. That improvement in methods of making welt shoes which comprises pulling an upper over the top face of the channel rib of the insole at two laterally adjacent points while pressing the upper and the outer face of the channel rib of the insole into close contact with each other between said two points, permanently uniting the upper and rib while pressed in such close contact with each other by inserting therethrough and clenching a staple of fine wire, and then uniting a welt to the upper and insole with stitches.

9. That improvement in methods of making shoes which comprises working successive portions of an upper over a last and securing the upper by repeated operations each of which repeated operations consists in tensioning the upper inwardly across the channel rib of the insole at two laterally adjacent points simultaneously and inserting a fastening between said points through the upper and the rib of the insole in a direction transverse to the rib.

10. That improvement in methods of making welt shoes which comprises pulling a portion of the upper over the top of an upstanding channel rib of an insole on a last, pressing a laterally adjacent portion of the upper and the outer face of the upstanding channel rib of the insole into close contact with each other, permanently uniting the upper and rib while in this relation by inserting therethrough and clenching a staple of fine wire, repeating the operation to last and fasten successive portions of the shoe progressively, and thereafter uniting the insole rib, the upper and a welt with stitches.

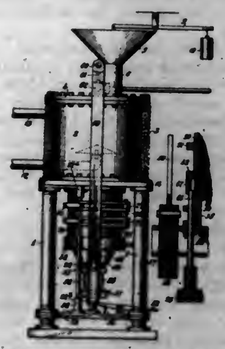
11. That improvement in methods of making shoes which consists in engaging the free edge of an upper and wedging the upper and its lining between an anvil on the inner side and prongs projecting forwardly from the face of a throat plate on the outer side of the upper so that the upper is drawn around the last during the relative movement of the anvil and throat plate into position for insertion of a staple and, substantially simultaneously with the completion of said relative movement, inserting a staple from the throat plate and clenching it against the anvil.

12. That improvement in methods of side lasting shoes which consists in engaging a shoe bottom in the inside channel of the insole and through the engaging means moving the shoe sidewise to bring the edge of the upper into drawing engagement with a lasting instrumentality shaped and arranged relatively to pull the edge of the upper inwardly across the outside channel rib or shoulder of the insole, and then fastening the upper to the outer face of the channel rib.

13. A method for use in the manufacture of shoes comprising pulling an upper by its free edge over a ribbed insole on a last by repeated operations, and as it is overworked driving through a laterally adjacent section of the upper and transversely through the rib of the insole a separate fastening and clenching the fastening.

14,262. MACHINE FOR MOLDING AND DRYING PULP.

JULIAN H. RIVERS, Trenton, N. J., assignor, by mesne assignments, to Universal Fibre Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 30, 1915. Serial No. 64,345. Original No. 1,161,160, dated Nov. 23, 1915, Serial No. 582,735, filed Sept. 19, 1910. (Cl. 92—57.)



1. In a machine of the character described, a tank arranged to contain the materials to be compacted, a mold, an incasement around said mold, deflector plates between said mold and said incasement, an inlet passage from said tank into said mold, and an outlet passage from said incasement, substantially as specified.

2. In a machine of the character described, a tank arranged to contain the materials to be compacted, a mold, an incasement around said mold, deflector plates between said mold and said incasement, an inlet passage for admitting materials to be compacted from said tank into said mold, an outlet passage from said incasement, and a valve controlling said outlet passage, substantially as specified.

3. In a machine of the character described, a tank for receiving the materials to be compacted, a mold, an incasement around said mold, deflector plates between said mold and said incasement and out of contact with said mold, a passage for delivering materials from said tank into said mold, a hopper communicating with said incasement, an outlet passage from said hopper, and a valve controlling said outlet, substantially as specified.

4. In a machine of the character described, a tank, a mold, links supported by said tank, and a lever operable effectively to cause said links to move said mold to operative adjustment, substantially as described.

5. In a machine of the character described, the combination with a tank, a mold, and links supporting said mold, of a lever for operating said links, and means operated by said lever for locking said mold, substantially as described.

6. In a machine of the character described, a mold, an incasement around said mold, and a deflector located between said mold and said incasement, substantially as described.

7. In a machine of the character described, a tank, a frame, a mold supported by said frame, links supporting said frame, and a lever operable to move said frame and mold effectively to engage said mold with said tank, substantially as described.

8. In a machine of the character described, a tank, a frame, a mold supported by said frame, devices supporting said frame and mold whereby said mold will be held in engagement with said tank, means for operating said supporting devices to permit said mold to become disengaged from said tank, and means for disengaging said mold from said frame, substantially as described.

9. In a machine of the character described, a tank, a mold, a passage from said tank into said mold, a supply pipe leading into said tank, a pressure supply pipe leading into said tank, an incasement around said mold, and outlet passages communicating with the interior of said incasement, substantially as described.

10. In a machine of the character described, a mold, an incasement around said mold, deflector plates between said mold and incasement, a supply passage opening into said mold, and outlet passages from said incasement of smaller capacity than said supply passage, substantially as described.

11. In a machine of the character described, a tank, a frame, a mold supported by said frame, means for holding said mold in engagement with said tank, means for permitting said mold and said frame to move away from said tank, and means for disengaging said mold from its frame, substantially as described.

12. In a machine of the character described, a tank arranged to receive the materials to be compacted, a mold outside of said tank, a passage for delivering materials from said tank into said mold, an incasement inclosing said mold, discharge passages leading from said incasement, a hopper supporting said mold and incasement and arranged to receive materials discharged therefrom, means for moving said hopper to adjust said mold in operative or in inoperative position, a discharge outlet from said hopper, and means for varying the speed of discharge through said outlet, substantially as specified.

13. In a machine of the character described, a tank arranged to receive the materials to be compacted, a mold outside of said tank, a shaft mounted in bearings on said tank, links, a rod connecting said links, elements attached to said shaft and pivoted to said rod, a support for said mold carried by said links, a lever for operating said links to raise and lower said mold and a passage from said tank into said mold, substantially as specified.

14. In a machine of the character described, a tank arranged to receive materials to be compacted, a mold, a series of pivoted parts supporting said mold, means for locking said mold in closed adjustment, links supporting said mold, means for operating said links to move said mold into position to receive materials from said tank, and a passage for delivering materials from said tank into said mold, substantially as specified.

15. In a machine of the character described, a mold, a series of hinged sections forming an incasement around said mold, deflectors located between said sections and said mold, and means for locking said sections to hold the mold closed, substantially as specified.

16. In a machine of the character described, a mold, a series of hinged parts constituting an incasement around said mold, means for locking said incasement in closed adjustment, deflectors located between said mold and said incasement, and a valve controlled outlet from said mold, substantially as specified.

17. In a machine of the character described, a tank arranged to contain materials to be compacted, a mold top attached to said tank, a frame, a mold side wall supported by said frame, links supporting said frame, a lever operable to move said frame and mold side wall effectively to engage said mold side wall against said mold top, and a passage for delivering the materials from said tank into said mold, substantially as specified.

18. In a machine of the character described, a tank arranged to contain the materials to be compacted, a frame, an annular mold supported by said frame, an incasement inclosing said mold, links supporting said frame, an outlet from said mold, means for controlling said outlet, and a lever operable to move said frame and mold effectively to engage said mold with said tank, substantially as specified.

19. In a machine of the character described, a tank arranged to receive the materials to be compacted, an annular mold, an incasement, inclosing said mold, links supporting said mold, a passage from said tank extending downwardly into said annular mold, a hopper arranged to receive the material discharged from said mold, an outlet from said hopper, a valve controlling said outlet, means for opening said valve, and means for operating said links to disengage said mold from said tank, substantially as specified.

20. In a machine of the character described, a tank arranged to receive the material to be compacted, an annular mold, a continuous passage from said tank into said mold, means for admitting fluid pressure into said tank and mold, and means for moving said mold away from said tank, substantially as specified.

21. In a machine of the character described, a tank arranged to receive the material to be compacted, an annular series of mold sections, an incasement for the mold formed by said sections, releasable connections holding said incasement closed, means for locking said mold and incasement in position to receive materials from said tank, and a continuous passage leading from said tank into said mold, substantially as specified.

22. In a machine of the character described, a tank arranged to receive the material to be compacted, a support, an annular series of mold sections carried by said support, an incasement for the mold formed by said sections, releasable connections for holding said incasement and mold closed, means for locking said incasement and mold in position to receive materials from said tank, a passage extending into said mold from said tank, and a lever operable to release said mold and incasement, substantially as specified.

23. In a machine of the character described, a tank arranged to receive the material to be compacted, a series of mold wall-sections, an incasement for inclosing the mold formed by said wall-sections, means for locking said mold and incasement in position to receive materials from said tank, a lever for releasing said mold and incasement, a discharge outlet from said mold and incasement, and means for varying the speed of flow through said outlet, substantially as specified.

24. In a machine of the character described, a tank arranged to receive the material to be compacted, a heating jacket inclosing said tank, a support, a series of mold wall-sections carried by said support, an incasement for inclosing the mold formed by said wall-sections, releasable means for holding said incasement closed, means for locking said mold and incasement in position to receive materials from said tank, a passage leading from said tank into said mold, a discharge outlet from said mold and incasement, and means for regulating the quantity of discharge through said outlet, substantially as specified.

25. In a machine of the character described, a tank arranged to receive the materials to be compacted, a mold arranged below said tank, a diaphragm partition between said tank and said mold, a passage for delivering material from said tank to said mold, an incasement inclosing said mold, discharge passages leading from said incasement, and a chamber arranged below said mold and said incasement for receiving the materials discharged therefrom, substantially as specified.

26. In a machine of the character described, a tank arranged to receive materials to be compacted, a flexible closure for one end of said tank comprising a pair of clamping plates and a flexible sheet arranged to seal one end of the tank, a mold arranged below said tank, a passage from said tank to said mold supported by said closure, and discharge passages leading from said mold, substantially as specified.

27. In a machine of the character described, a tank for receiving materials to be compacted, a mold supported below said tank, a flexible partition between said mold and said tank, and a passage through said partition, substantially as specified.

28. In a machine of the character described, a container wall and top, a bottom for the container, a support on which said bottom is movable with respect to said container wall, means preventing leakage of the materials between said wall and said movable bottom, a mold below said bottom, means for supporting said mold against said bottom, and a passage through said bottom for discharging materials into said mold, substantially as described.

29. In a machine of the character described, a container comprising a wall, a bottom, means for supporting said bottom whereby said bottom is movable with respect to said wall, means preventing leakage of the materials between said wall and said movable bottom, a mold, and a passage leading from said container into said mold through said movable bottom, substantially as described.

30. In a machine of the character described, the combination with a container and a mold, of a movable partition between said container and said mold, means for supporting said partition whereby movement thereof with respect to said container is permitted, and a passage through said movable partition from said mold, substantially as described.

31. In a machine of the character described, the combination with a container, and a mold section supported by said container, of mold walls, a movable support on which said mold walls are mounted, means for moving said mold walls to and from said mold section, and a passage for conducting materials from said container into the mold, substantially as described.

32. In a machine of the character described, a tank arranged to receive the materials to be compacted, a mold supported below said tank, a flexible partition with passage therethrough between said tank and said mold, which flexible partition has an area greater than the area of said mold, producing a differential pressure, said pressure causing increased tightness of joints with increase of pressure.

33. In a machine of the character described, a container, side and end walls forming a jointed mold to withstand internal pressure, a passage for admitting pressure from said container into said mold, and means whereby pressure in said container increases tightness of the joints between certain of said walls of said mold.

34. In a machine of the character described, a tank arranged to receive materials to be compacted, a movable bottom wall for said tank, a mold supported below said tank, a passage for conducting materials and the pressing fluid from said tank into said mold, a top for said mold supported by said bottom wall, and means whereby increase of pressure in said tank will increase the tightness of the joint between the top of said mold and the remaining portions thereof.

35. In a machine of the character described, a tank arranged to receive the materials to be compacted, a movable bottom wall for said tank, a top mold wall supported by said bottom wall, a mold supported below said tank, means for supporting said mold against said top mold wall, a passage through said bottom of said tank and through said top mold wall for conducting the materials and the pressure from said tank into said mold, and a passage for admitting pressure into said tank.

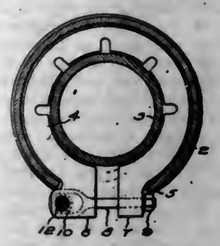
36. In a machine of the character described, a tank arranged to receive the materials to be compacted, means for admitting pressure into said tank to force the materials therefrom, a mold supported below said tank for receiving the materials forced from said tank, a movable partition between said tank and said mold having a passage for admitting the materials from said tank to said mold, and a support upon which said movable partition is joined with increased tightness in proportion to the increase of pressure within said tank.

37. In an apparatus of the kind described, a hollow mold comprising relatively movable jointed portions, means for admitting fluid pressure into said mold, said pressure exerting a force tending to separate the jointed portions, and means for applying a greater force upon the exterior of said mold, whereby the internal pressure is over-balanced and the jointed portions are maintained forced together.

38. In an apparatus of the kind described, a hollow mold comprising relatively movable jointed portions, means for admitting fluid under pressure into said mold, said pressure exerting a force tending to separate the jointed portions, and means for applying by said fluid under pressure a greater force upon the exterior of said mold, whereby an increase of said pressure increases the force by which said jointed portions are held together.

39. In an apparatus of the kind described, a hollow mold comprising relatively movable jointed portions, means for admitting fluid under pressure into said mold, said pressure exerting a force tending to separate the jointed portions, a chamber in communication with said mold and having a wall movable relatively to the other walls thereof, said movable wall being connected with one of said mold portions, means for admitting said fluid under pressure into said chamber to force the jointed mold portions together, the force thus applied being greater than the internal force tending to move the jointed mold portions apart.

14,263. CLAMPING MECHANISM. WILLARD T. SEARS, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 12, 1916. Serial No. 119,771. Original No. 1,185,839, dated June 6, 1916, Serial No. 860,183, filed Sept. 4, 1914. (Cl. 74—18.)



1. The combination of a clamping device, means always movable in the same direction, for causing the setting of the clamping device during one part of said movement and for causing the unsetting of the clamping device during another part of said movement, and a solenoid acting against said means to impart thereto said successive movements.

2. The combination of a base, a column extending into and rotative with respect to said base, a clamping device for the column, in said base, means supported by the base, always movable in the same direction, for causing the setting of the clamping device during one part of the movement of said means and for causing the unsetting of the clamping device during another part of said movement, and a solenoid on said column for successively operating said means on successive energizations of said solenoid.

3. The combination of a clamping device, a rotary cam element always movable in the same direction, means for transferring the effect of the cam element to the clamping device, the active portion of the cam element being shaped to cause through said means the setting of the clamping device on a forward half turn of the cam element and to cause the unsetting of the clamping device on the remaining half turn of said cam element, and a solenoid for imparting on successive energizations thereof successive half turns to said cam element.

4. The combination of a rotary shaft, a gear member loose on said shaft, means for oppositely rotating the gear member, means for imparting to said shaft a half turn on the forward movement of said gear member and for preventing movement of the shaft on return movement of said gear member, a cam connected with said shaft, a clamping device, and means actuated by the cam for causing the setting of said clamping device on forward movement of the cam and for unsetting the clamping device on a second forward movement of the cam in the same direction.

5. The combination of a clamping device, rotary means always movable in the same direction, for causing the setting of the clamping device during one half of the rotary movement and for causing the unsetting of the clamping device during the other half of said rotary movement, and a solenoid acting against said means to impart intermittently thereto said movements.

6. The combination of a rotary shaft, a pinion loose on said shaft, a solenoid, the core of which is provided with teeth in mesh with said pinion, said solenoid when energized being adapted through said toothed gear to forwardly rotate the pinion, means for oppositely rotating said pinion, means for imparting to said shaft a half turn on the forward movement of the pinion and for preventing movement of the shaft on return movement of said pinion, a cam connected with said shaft, a clamping device, and means actuated by the cam for causing the setting of the clamping device on forward movement of the cam and for unsetting the clamping device on a second forward movement of the cam in the same direction.

7. The combination of a rotary column, a clamping device for said column, a solenoid, and means actuated by said solenoid, and always movable in the same direction, for causing the setting of the clamping device during one part of the movement of said means, and for causing the unsetting of the clamping device during another part of the movement of said means.

8. The combination with the base and the column rotatably mounted thereon, of a clamp adapted to lock the column against rotative movement, a device for setting and releasing the clamp, and a controlling means for the said device mechanically independent thereof and adapted upon movement to cause the clamp to be set and upon a subsequent similar movement to cause the clamp to be released.

9. The combination with the base and the column rotatably mounted thereon, of a clamp adapted to lock the column against rotative movement, a device for setting and releasing the clamp, a controlling means for the said device having an operative and an inoperative position, and means whereby a movement of the said controlling means from inoperative to operative position causes the clamp to be set and whereby a subsequent similar movement from inoperative to operative position causes the clamp to be released.

10. The combination with the base and the column rotatably mounted thereon, of a clamp adapted to lock the column against relative movement, an operating device for the clamp adapted at one actuation to apply power to set the clamp and at the next similar actuation to apply power to release it, and a controlling means for effecting the actuation of the operating device.

11. The combination with the base and the column rotatably mounted thereon, of a clamp adapted to lock the column against rotative movement, a solenoid for operating the clamp, means whereby the solenoid upon successive energizations alternately sets and releases the clamp, and a manually operable switch remote from the solenoid and serving when closed to cause the energization thereof.

12. The combination of a clamp, an operating element for the clamp, means for reciprocating the said element through a fixed cycle, and means whereby the said element sets the clamp at one movement and releases it at a subsequent movement in the same direction.

13. The combination of a clamp, an operating element for the clamp, means for reciprocating the said element through a fixed cycle, and means whereby the said element alternately sets and releases the clamp at successive movements in the same direction.

14. The combination of a clamp, a reciprocable operating element for the clamp movable in one direction upon the application of power and automatically movable in the other direction upon being released, and means whereby the said element sets the clamp at one power stroke and releases it at another power stroke in the same direction.

15. The combination of a clamp, electromagnetic operating means for the clamp, and means for energizing the electromagnetic means to cause it to apply power to cause the setting of the clamp and then apply power to cause the release thereof.

16. The combination of a clamp, a solenoid having a core movable in one direction upon the energization of the solenoid and automatically movable in the other direction upon the deënergization thereof, and means whereby the said core alternately sets and releases the clamp upon successive movements in the first said direction.

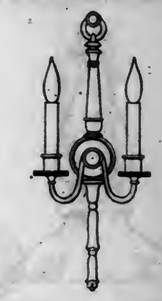
DESIGNS.

50,331. ELECTRIC-LIGHT FIXTURE. GEORGE R. AINSWORTH, Great Neck, N. Y. Filed Oct. 6, 1916. Serial No. 124,199. Term of patent 3½ years.



The ornamental design for an electric light fixture as shown and described.

50,332. ELECTRIC-LIGHT FIXTURE. GEORGE R. AINSWORTH, Great Neck, N. Y. Filed Oct. 6, 1916. Serial No. 124,200. Term of patent 3½ years.



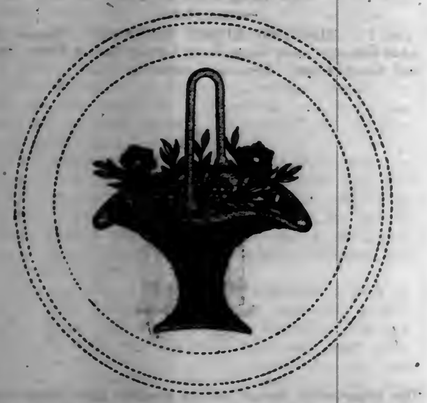
The ornamental design for an electric light fixture as shown and described.

50,333. ELECTRIC-LIGHT FIXTURE. GEORGE R. AINSWORTH, Great Neck, N. Y. Filed Oct. 6, 1916. Serial No. 124,201. Term of patent 3½ years.



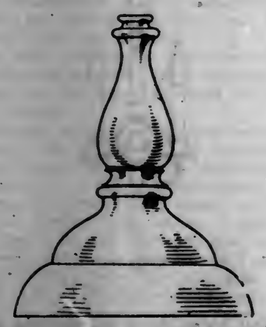
The ornamental design for an electric light fixture as shown and described.

50,334. GLASS ARTICLE. FRED L. ANDREWS, Beaver, Pa., assignor to H. C. Fry Glass Company, Rochester, Pa., a Corporation of Pennsylvania. Filed Aug. 2, 1916. Serial No. 112,858. Term of patent 14 years.



The ornamental design for a glass article, substantially as shown and described.

50,335. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Nov. 27, 1916. Serial No. 133,795. Term of patent 7 years.



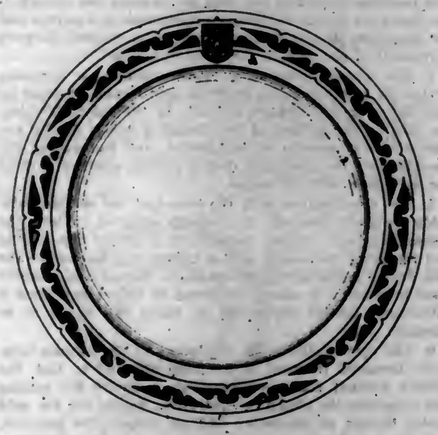
The ornamental design for a lighting fixture, as shown.

50,336. GLASS ARTICLE. EDGAR MOTT BOTTOMS, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Dec. 15, 1916. Serial No. 137,271. Term of patent 14 years.



The ornamental design for a glass article, substantially as shown and described.

50,337. PLATE OR SIMILAR ARTICLE. HAROLD H. BROWN, Indianapolis, Ind., assignor to University of Chicago, Chicago, Ill., a Corporation of Illinois. Filed Sept. 18, 1916. Serial No. 120,897. Term of patent 14 years.



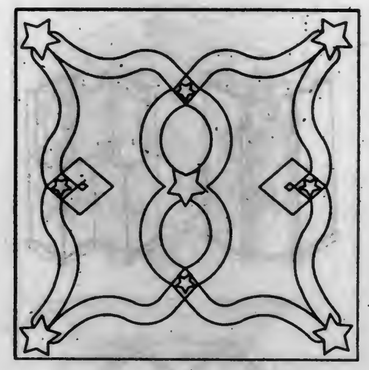
The ornamental design for a plate or similar article as shown.

50,338. MAGNETO-BRACKET. WILLIAM HUGHES BUTTERFIELD, Stechford, Birmingham, England. Filed Aug. 24, 1914. Serial No. 858,372. Term of patent 14 years.



The ornamental design for a magneto bracket, as shown.

50,339. GAME-BOARD. MAUD G. CLARK, New York, N. Y. Filed Nov. 17, 1916. Serial No. 131,967. Term of patent 3½ years.



The ornamental design for a game board, as shown.

50,340. TOY. ATHERTON D. CONVERSE, Winchendon, Mass. Filed Feb. 11, 1916. Serial No. 78,061. Term of patent 14 years.



The ornamental design for a toy, as shown.

50,341. BOTTLE. EDWARD EPSTEIN, Louisville, Ky., assignor to Hilmar Ehrmann, Louisville, Ky. Filed Oct. 4, 1916. Serial No. 123,776. Term of patent 14 years.



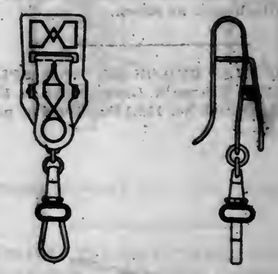
The ornamental design for a bottle as shown.

50,342. PLATE OR SIMILAR ARTICLE. ROBERT ERLBACH, Brooklyn, N. Y., assignor to The Palm Brothers Company, New York, N. Y. Filed Dec. 15, 1916. Serial No. 137,270. Term of patent 3½ years.



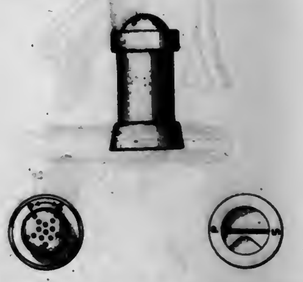
The ornamental design for a plate or similar article, as shown.

50,343. CLASP FOR WATCH-FOBS. WILLARD C. FISK, Seattle, Wash., assignor to Charles E. Borton and Edward L. Perkins, King county, Wash. Filed Nov. 13, 1916. Serial No. 131,151. Term of patent 3½ years.



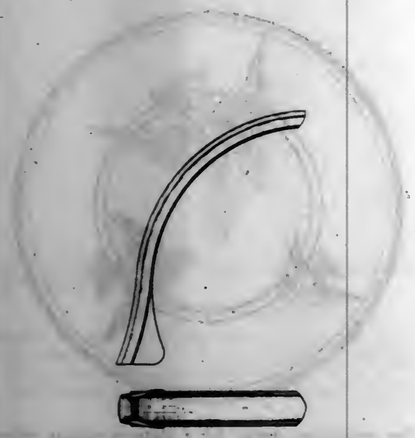
The design for a clasp for watch fobs as shown.

50,344. COMBINATION SALT AND PEPPER CELLAR. CHACE D. GILMORE, Highland Park, Mich. Filed Dec. 6, 1916. Serial No. 136,500. Term of patent 14 years.



The ornamental design for a combination salt and pepper cellar, substantially as shown.

50,345. CURVED DROP-SIDE MUD-GUARD AND SPLASHER ATTACHMENT. WALTER R. GREEN, Chicago, Ill. Filed Sept. 8, 1916. Serial No. 119,117. Term of patent 14 years.



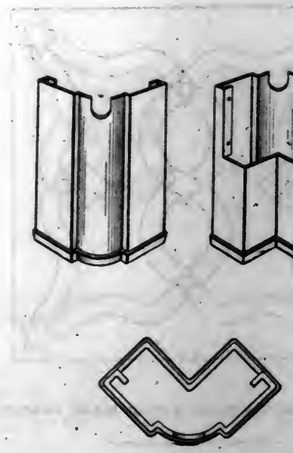
The ornamental design of a curved drop side mud guard and splasher attachment, as shown.

50,346. DROP-SIDE MUD-GUARD AND SPLASHER ATTACHMENT. WALTER R. GREEN, Chicago, Ill. Filed Sept. 8, 1916. Serial No. 119,118. Term of patent 14 years.



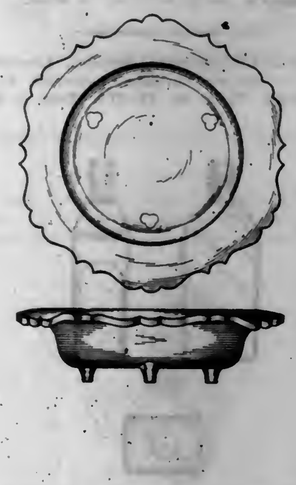
The ornamental design of a drop side mud guard and splasher attachment, as shown.

50,347. BILLIARD-TABLE LEG. FRANK P. GRODE, Kansas City, Mo. Filed Dec. 10, 1916. Serial No. 137,465. Term of patent 7 years.



The ornamental design for a billiard table leg, as shown.

50,348. GLASS ARTICLE. REUBEN HALEY, Beaver, Pa., assignor to The United States Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 2, 1916. Serial No. 134,776. Term of patent 7 years.



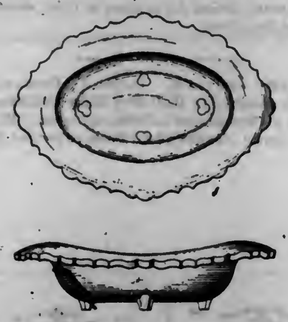
The ornamental design for a glass article, substantially as shown.

50,349. GLASS ARTICLE. REUBEN HALEY, Beaver, Pa., assignor to The United States Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 2, 1916. Serial No. 134,777. Term of patent 7 years.



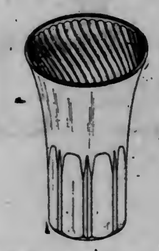
The ornamental design for a glass article, substantially as shown and described.

50,350. GLASS ARTICLE. REUBEN HALEY, Beaver, Pa., assignor to The United States Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 2, 1916. Serial No. 134,778. Term of patent 7 years.



The ornamental design for a glass article, substantially as shown.

50,351. GLASS VESSEL. THOMAS CLARENCE HEISEY, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio, a Copartnership. Filed Sept. 24, 1912. Serial No. 722,129. Term of patent 14 years.



The ornamental design for a glass vessel substantially as shown.

50,352. AUTOMOBILE-TIRE. ROBERT HOMER KEATON, San Francisco, Cal. Filed Nov. 15, 1916. Serial No. 131,594. Term of patent 14 years.



The ornamental design for an automobile tire, as shown.

50,353. FEED-THROUGH SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 8, 1916. Serial No. 130,277. Term of patent 14 years.



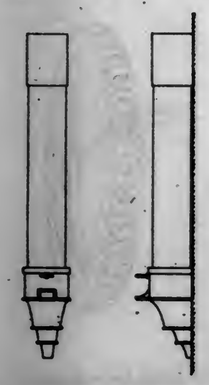
The ornamental design for a feed through switch, as shown.

50,354. PISTOL. CHARLES F. LEFEVER, Plymouth, Mich., assignor to Daisy Manufacturing Company, Plymouth, Mich., a Corporation of Michigan. Filed Sept. 30, 1915. Serial No. 53,468. Term of patent 14 years.



The ornamental design for a pistol, substantially as shown.

50,355. AUTOMATIC SALESMAN FOR CIGARETTES. FRIEDRICH MORITZ ALEXANDER NEUBERT, Dresden, Germany. Filed May 12, 1916. Serial No. 97,204. Term of patent 14 years.



The ornamental design for an automatic salesman for cigarettes as shown.

50,356. ELECTRIC SIGN. MORTIMER NORDEN, New York, N. Y., assignor to Joseph Norden, New York, N. Y. Filed Dec. 21, 1916. Serial No. 138,267. Term of patent 7 years.



The ornamental design for an electric sign, as shown.

50,357. GLASS ARTICLE. DAVID F. PROVANCE, New Castle, Pa., assignor to H. C. Fry Glass Company, Rochester, Pa., a Corporation of Pennsylvania. Filed Dec. 21, 1916. Serial No. 138,262. Term of patent 14 years.



The ornamental design for a glass article, substantially as shown and described.

50,358. GLASS ARTICLE. DAVID F. PROVANCE, New Castle, Pa., assignor to H. C. Fry Glass Company, Rochester, Pa., a Corporation of Pennsylvania. Filed Dec. 21, 1916. Serial No. 138,263. Term of patent 3½ years.



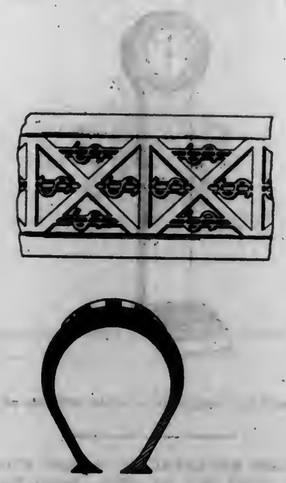
The ornamental design for a glass article, substantially as shown and described.

50,359. GLASS ARTICLE. DAVID F. PROVANCE, New Castle, Pa., assignor to H. C. Fry Glass Company, Rochester, Pa., a Corporation of Pennsylvania. Filed Dec. 21, 1916. Serial No. 138,264. Term of patent 3½ years.



The ornamental design for a glass article, substantially as shown and described.

50,360. AUTOMOBILE-TIRE. CHARLES B. REYNOLDS, Sawtelle, Cal. Filed Jan. 13, 1917. Serial No. 142,329. Term of patent 3½ years.



The ornamental design for an automobile tire, as shown.

50,361. AUTOMOBILE-TIRE. WILLIAM A. ROBBINS, Glen Ridge, N. J. Filed Dec. 21, 1916. Serial No. 138,268. Term of patent 14 years.



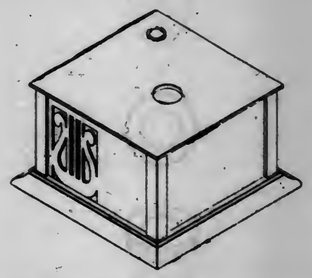
The ornamental design for an automobile tire, as shown.

50,362. CORD HOLDER AND CUTTER. JACOB N. SCHRAMM, Buffalo, N. Y. Filed Feb. 23, 1916. Serial No. 80,077. Term of patent 14 years.



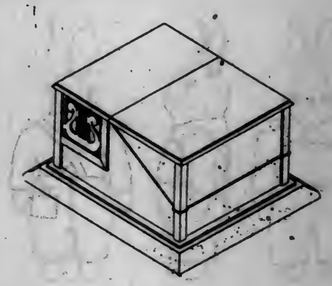
The ornamental design for a cord holder and cutter, as shown.

50,363. PHONOGRAPH-CABINET. HORACE SHEBLE, Philadelphia, Pa., assignor to Domestic Talking Machine Corporation, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 3, 1916. Serial No. 88,728. Term of patent 7 years.



The ornamental design for a phonograph cabinet substantially as shown.

50,364. PHONOGRAPH-CABINET. HORACE SHEBLE, Philadelphia, Pa., assignor to Domestic Talking Machine Corporation, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 4, 1916. Serial No. 88,949. Term of patent 7 years.



The ornamental design for a phonograph cabinet, as shown.

50,365. GLASS ARTICLE. CHARLES L. SULLIVAN, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Dec. 15, 1916. Serial No. 137,273. Term of patent 3½ years.



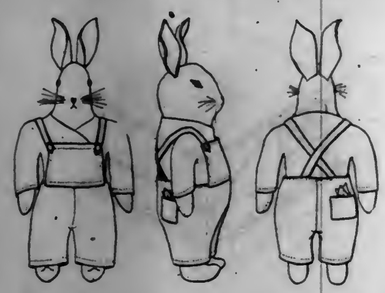
The ornamental design for a glass article, substantially as shown and described.

50,366. FUSE-PLUG CAP. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 25, 1912. Serial No. 733,535. Term of patent 14 years.



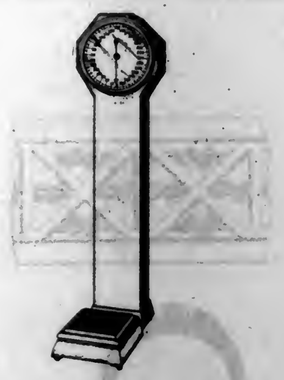
The ornamental design for a fuse plug cap, as shown.

50,367. TOY RABBIT. NANNIE STEPHEN TOLIVER, Columbus, Tex. Filed Dec. 21, 1916. Serial No. 138,265. Term of patent 7 years.



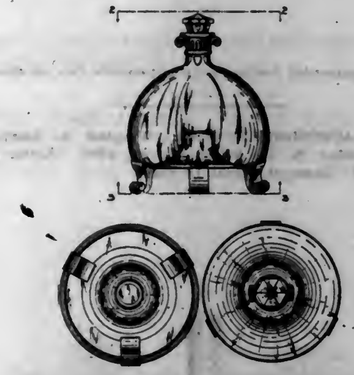
The ornamental design for toy rabbit, as shown.

50,368. SCALE-CABINET. JOHN B. WATLING, Chicago, Ill. Filed Feb. 8, 1916. Serial No. 77,014. Term of patent 14 years.



The ornamental design for a scale cabinet, as shown.

50,369. GLASS RECEPTACLE. ANDREW WICZIAN, Chicago, Ill. Filed Nov. 13, 1916. Serial No. 131,158. Term of patent 7 years.



The ornamental design for a glass receptacle, as shown.

50,370. TOY CANNON. LACEY Y. WILLIAMS, Toledo, Ohio. Filed May 17, 1916. Serial No. 98,230. Term of patent 7 years.



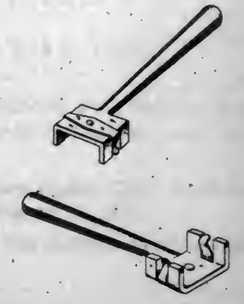
The ornamental design for a toy cannon, substantially as shown.

50,371. POISON-MARKER. ANNIE M. WILSON, Aldan, Pa. Filed Feb. 7, 1916. Serial No. 76,870. Term of patent 7 years.



The ornamental design for a poison marker, as shown.

50,372. WRENCH. JOSIAH P. WORTHINGTON, Steamboat Springs, Colo. Filed Mar. 10, 1915. Serial No. 13,544. Term of patent 14 years.



The ornamental design for a wrench, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 20, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 77,009. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VETTE & ZUNCKER, Chicago, Ill. Filed Mar. 27, 1914.



The word "Brand" is hereby disclaimed as constituting any part of the trade-mark as shown.

Particular description of goods.—Canned Vienna-Style Sausage, Canned Southern-Style Hash, Canned Roast Beef, Canned Corned Beef, Lunch-Tongue, Hamburger Steak and Onions, Sausage, Corned-Beef Hash, and Tripe with Milk, Hams, Bacon, and Lard.

Claims use since Jan. 6, 1914.

Ser. No. 90,702. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALEXANDER HORLICK, Milwaukee, Wis. Filed Nov. 17, 1915.

OATINE

Particular description of goods.—A Beverage-Forming Food Product Made from Milk and Oats and in the Form of Readily-Soluble Powder or Tablets.

Claims use since about Sept. 1, 1915.

Ser. No. 91,216. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAILEY-UDELL COMPANY INCORPORATED, Brockport, N. Y. Filed Dec. 6, 1915.

Mello Magic

Comprising the words "Mello Magic."

Particular description of goods.—Canned Fruits in Tins and Glass Jars and Canned Vegetables in Tins and Glass Jars.

Claims use since July 1, 1915.

Ser. No. 91,645. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LUNDBORG COMPANY, New York, N. Y. Filed Dec. 21, 1915.

Ladysize

"Ladysize."

Particular description of goods.—Perfumes in Bottles and other Containers; Toilet Waters in Bottles; Toilet Creams in Bottles, Jars, and other Containers, and Powders, Perfumed or Otherwise, for Toilet Purposes, in Bottles and other Containers.

Claims use since the 29th day of March, 1915.

Ser. No. 91,785. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EDGAR ROBERTS MANUFACTURING COMPANY, St. Louis, Mo. Filed Dec. 27, 1915.

COCONOS

Particular description of goods.—Cakes of Soap Made in Part by the Use of Cochin or Cocoanut Oil.

Claims use since Dec. 15, 1915.

Ser. No. 92,026. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) HERMAN SCHEUER & SONS, New York, N. Y. Filed Jan. 8, 1916.

N. E.

Particular description of goods.—Letter-Cases, Wallets, and Pocket-Books.

Claims use since on or about Oct. 15, 1915.

Ser. No. 92,631. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) BERT SEWELL & Co., Kansas City, Mo. Filed Feb. 4, 1916.

PHYSICIAN SPECIAL

No claim being made to the exclusive right to the use of the words "Physician Special" apart from the panel in the mark shown on the drawing.

Particular description of goods.—Clinical Thermometers.

Claims use since Jan. 1, 1912.

Ser. No. 94,066. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) J. P. EUSTIS MANUFACTURING COMPANY, Boston, Mass. Filed Apr. 3, 1916.

The Brasscrafters

Particular description of goods.—Bath-Tub Seats, Shelf-Rails, Shelf-Brackets, and Robe and Spray Hooks.

Claims use since July, 1901.

Ser. No. 95,723. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC PEA PACKING COMPANY, Eau Claire and Chetek, Wis., and Oakdale, Cal. Filed June 8, 1916. Under ten-year proviso.

Pacific



Particular description of goods.—Canned Fruits and Canned Vegetables.

Claims use since Aug. 10, 1889.

Ser. No. 96,651. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MOTOR-LIFE MANUFACTURING & SALES CORP., Horicon, N. Y. Filed July 18, 1916.

MOTOR-LIFE

No claim is made to the words "Trade Reg. Mark" and "Makes Gasoline Better" apart from the other features disclosed.

Particular description of goods.—A Preparation for Thinning Gasolene and Rendering the Crude Oil Which Low-Gravity Gasolene Contains Combustible.

Claims use since Apr. 1, 1916.

Ser. No. 96,702. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) PAUL A. SEIDEL, Seattle, Wash. Filed July 20, 1916.

SAL-NEP ROOF PAINT PAUL A SEIDEL

The applicant wishes to disclaim the words "Roof Paint" and "Paul A. Seidel" as a part of his trade-mark.

Particular description of goods.—Liquid Paints.

Claims use since May 10, 1916.

Ser. No. 96,872. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LEATHERS BROTHERS COMPANY, Howard, Pa., and Wilmington, Del. Filed July 26, 1916.

GASSAVE

Applicant makes no claim herein to the word "Gassave" apart from the mark shown in the drawing.

Particular description of goods.—An Air-Regulating Attachment for Engines.

Claims use since May 13, 1916.

Ser. No. 96,956. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE HILL-SMITH METAL GOODS COMPANY, Boston, Mass. Filed July 29, 1916.

H-S

Particular description of goods.—Repair Parts for Automobiles Connected with the Engine Structure and for Wrenches, Reamers, and Valve Grinding and Refacing Tools.

Claims use since about Jan. 1, 1915.

Ser. No. 97,028. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MANUFACTURING CHEMISTS' AGENCY, Philadelphia, Pa. Filed Aug. 1, 1916.

SEXTETTE

Particular description of goods.—A Shaving-Lotion for Use After Shaving.

Claims use since Apr. 1, 1916.

Ser. No. 97,614. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BEE BEE CONFECTION COMPANY, Dayton, Ohio. Filed Aug. 25, 1916.

TOKO

Particular description of goods.—Chewing-Gum.

Claims use since about the 15th day of January, 1911.

Ser. No. 97,774. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SWAN-MYERS CO., Indianapolis, Ind. Filed Sept. 2, 1916.



Comprising a green panel outlined in white, upon which are represented two swimming swans in white.

Particular description of goods.—Bacterial Vaccins.

Claims use since July 8, 1915.

Ser. No. 97,815. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AKTIEN-GESELLSCHAFT FÜR AUTOGENE ALUMINIUM-SCHWEISSUNG, Zurich, Switzerland. Filed Sept. 6, 1916.



Particular description of goods.—Fluxes for Autogenously Welding Aluminium and Aluminium Alloys.

Claims use since May 13, 1916.

Ser. No. 97,833. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BLANKE-WENNEKER CANDY COMPANY, St. Louis, Mo. Filed Sept. 7, 1916.

MODERN WEAPON

Particular description of goods.—Candy.

Claims use since on or about the 1st day of August, 1916.

Ser. No. 97,983. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) CHASE ELECTRIC COMPANY, Chicago, Ill. Filed Sept. 14, 1916.

MOVALITE

Particular description of goods.—Electric Window-Lighting and Electric Signs.

Claims use since Sept. 1, 1916.

Ser. No. 97,987. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) GRIP NUT COMPANY, Chicago, Ill., and South Whitley, Ind. Filed Sept. 14, 1916.



Particular description of goods.—Nuts, Bolts, and Metal Washers.

Claims use since Feb. 1, 1916.

Ser. No. 98,599. (CLASS 12. CONSTRUCTION MATERIALS.) H. A. LANDWEHR, Los Angeles, Cal. Filed Oct. 12, 1916.

Marbelite

Particular description of goods.—Reinforced Lighting-Standards, Telephone and Telegraph Poles; Piling; Concrete Brick; Concrete Blocks; Roofing-Tiles; and Floor-Tiles.

Claims use since June 1, 1914.

Ser. No. 98,626. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CRUSELLAS Y CA., Habana, Cuba. Filed Oct. 13, 1916.



No claim is made for the words "Crusellas" and "Habana" apart from the mark shown.

Particular description of goods.—Lotions for the Face and Scalp, Perfumes, and Toilet Waters.

Claims use since 1905.

Ser. No. 98,685. (CLASS 15. OILS AND GREASES.) DURKEE-ATWOOD CO., Minneapolis, Minn. Filed Oct. 16, 1916.

Rie Nie

Particular description of goods.—Fine-Parts-Lubricating Oil; Flake Graphite—a Preparation Mixed with Oil or Grease for Lubricating Purposes; Powdered Graphite—a Preparation Mixed with Oil or Grease for Lubricating Purposes; Chain-Lubricant; Lubricating-Grease; Motor-Oil; Gear-Oil, and Spring-Lubricant Compound.

Claims use since the 11th day of December, 1911.

Ser. No. 98,686. (CLASS 5. ADHESIVES.) DURKEE-ATWOOD CO., Minneapolis, Minn. Filed Oct. 16, 1916.

Rie Nie

Particular description of goods.—Rubber Filler and Cement, Patching-Cement, Vulcanizing-Cement, Soldering-Paste, and Auto-Patch.

Claims use since the 11th day of December, 1911.

Ser. No. 98,776. (CLASS 15. OILS AND GREASES.) THE TOPEKA OIL COMPANY, Topeka, Kans. Filed Oct. 19, 1916.

Toco

Particular description of goods.—Illuminating, Lubricating, and Fuel Oils.

Claims use since Jan. 1, 1914.

Ser. No. 98,798. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ATLAS CRUCIBLE STEEL COMPANY, Dunkirk, N. Y. Filed Oct. 21, 1916.

ACSCO

The letters "A C S C O."

Particular description of goods.—Tool-Steels.

Claims use since Jan. 1, 1917.

Ser. No. 98,827. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CULMER CHEMICAL COMPANY, Independence, Kans. Filed Oct. 23, 1916.

VIGORINE

Particular description of goods.—A Preparation to Increase the Vaporization and Intensify Gasolene, Kerosene, Distillates, or Any other Fuel Used in Internal-Combustion Motors or Engines and Prevent the Formation of Carbon Deposits in Motors and Engines.

Claims use since Oct. 1, 1916.

Ser. No. 99,084. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRENCH & BEAN CO., St. Johnsbury, Vt. Filed Nov. 4, 1916.



No claim is made to the word "Flour" apart from the mark illustrated in the drawing.

Particular description of goods.—Wheat-Flour.

Claims use since Aug. 12, 1913.

Ser. No. 99,086. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HOWARD-VAUGHAN CO., Niagara Falls, N. Y. Filed Nov. 4, 1916.

VITAGAS

Particular description of goods.—A Chemical Compound for Use in Gasolene for Internal-Combustion Engines.

Claims use since about Mar. 15, 1916.

Ser. No. 99,125. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MOTOR-LIFE MANUFACTURING CO., Memphis, Tenn. Filed Nov. 6, 1916.

MOTORLIFE
TRADE MARK

The words "Trade-Mark" being disclaimed.

Particular description of goods.—A Preparation for Increasing the Efficiency of Gasolene and for Removing and Preventing the Deposit of Carbon.

Claims use since February, 1916.

Ser. No. 99,146. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH COLT, Bakersfield, Cal. Filed Nov. 7, 1916.



No claim being made to the words "Non-Acid," "Colt's Mole Remover," and "Antiseptic."

Particular description of goods.—A Non-Acid Antiseptic Liquid Compound for the Removal of Moles, Warts, Blotches, and Anything Upon or Protruding from the Skin Not Covered by Normal Skin.

Claims use since Jan. 1, 1913.

Ser. No. 99,180. (CLASS 39. CLOTHING.) BRITTON WEST AND CHARLES R. COOPER, a Firm, Chicago, Ill. Filed Nov. 8, 1916.

TRIPLITE

Particular description of goods.—Insoles.

Claims use since about Oct. 24, 1916.

Ser. No. 99,188. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAMUEL GOLDBERG, Detroit, Mich. Filed Nov. 9, 1916.

COMMON SENSE

Particular description of goods.—Poultry Feed Known as Egg Mash, Composed of Finely-Ground Grain of Various Kinds, Scratch-Feed Consisting of Whole and Cracked Grains of Various Kinds, Little-Chick Feed Consisting of Finely-Cracked Grains of Various Kinds, Pigeon Feed Consisting of a Mixture of Different Kinds of Grain Suitable for Pigeons, and Poultry Feed Consisting of a Mixture of Different Kinds of Grain.

Claims use since Aug. 10, 1913.

Ser. No. 99,279. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MARY M. MASON, Chicago, Ill. Filed Nov. 13, 1916.

Once-Upon-a-Time

Particular description of goods.—Dolls; Marionettes; Scenery, Stage Settings, Drops, Screens, Curtains for Toy Theaters; Toy Furniture; Toy Houses; Toy Clothing; Toy Dresses; Toy Costumes; Toy Theaters; Toy Figures; and Puppets.

Claims use since Jan. 1, 1916.

Ser. No. 99,292. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) DAVID S. BEYER, Boston, Mass. Filed Nov. 14, 1916.

MIDGET
Safti-Kit

No claim is made to the exclusive use of the word "Kit" apart from the mark shown in the drawing.

Particular description of goods.—First-Aid or Emergency cases.

Claims use since Nov. 7, 1916.

Ser. No. 99,317. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOS. L. WILLIAMS, Chicago, Ill. Filed Nov. 15, 1916.

Lash-Brow-ine

Particular description of goods.—A Preparation for Stimulating the Growth of Eyebrows and Eyelashes.
Claims use since December, 1915.

Ser. No. 99,323. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY CLINTON EVANS, Alton, Ill. Filed Nov. 16, 1916.

BOILER KOTE
SHIELDS

No claim is made to the word "Boiler" *per se* as a technical trade-mark.
Particular description of goods.—A Boiler Preparation—a Preparation in the Form of a Liquid to be Mixed with Warm Water and Then Fed Through the Injector of the Boiler to Produce a Glazing or Enameling of the Interior Surface of a Boiler, and Thereby Prevent Corrosion and the Accumulation of Scale.
Claims use since Apr. 10, 1916.

Ser. No. 99,347. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) JOHN GRIESHAMER, Jacksonville, Fla. Filed Nov. 17, 1916.

"Slick"--O

Particular description of goods.—A Liquid Polish for Polishing Auto-Bodies, Carriage-Bodies, Furniture, and other Like Objects.
Claims use since Oct. 1, 1916.

Ser. No. 99,402. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRIED & REINEMAN PACKING COMPANY, Pittsburgh, Pa. Filed Nov. 20, 1916.

USE FORT PITT BRAND
LARD HAMS BACON SAUSAGES
FRIED & REINEMAN PACKING CO.
PITTSBURGH PA
TRADE MARK

No claim is made for the words "Use, Brand, Lard, Hams, Bacon, and Sausages, Trade Mark, Fried & Reineman Packing Co., Pittsburgh, Pa.," apart from the mark shown in the drawing.
Particular description of goods.—Ham, Bacon, Lard, Bologna, Sausage, Dry Salt Meats, Pickled Meats, and Fresh Pork.
Claims use since Nov. 2, 1916.

Ser. No. 99,417. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SYME, EAGLE & CO., Chicago, Ill. Filed Nov. 20, 1916.

SUB-SEA

No claim is made to the word "Sea" except in connection with the other features of the mark. The applicant's trade-mark consists of the hyphenated word "Sub-Sea."
Particular description of goods.—Canned Salmon and Canned Sardines.
Claims use since Nov. 1, 1916.

Ser. No. 99,454. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE AUTOYER CO., Oakville, Conn. Filed Nov. 22, 1916.

SO-E-Z

Particular description of goods.—Snap-Fasteners.
Claims use since Nov. 13, 1916.

Ser. No. 99,547. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) JAMES HEMISTON MANUFACTURING COMPANY, New York, N. Y. Filed Nov. 25, 1916.

HERMASTIC

Particular description of goods.—Paints, Ready Mixed.
Claims use since September, 1916.

Ser. No. 99,581. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PERKINS BROTHERS, Bay City, Mich. Filed Nov. 27, 1916.

JERSEY BRAND

Perkins Brothers disclaim any right to the word or the use of the word "Brand" as a part of said trade-mark.
Particular description of goods.—Peanut-Butter.
Claims use since Jan. 1, 1915.

Ser. No. 99,603. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALEXANDER LERMAN, Philadelphia, Pa. Filed Nov. 28, 1916.

KRACKER-JAK
A.S.
PURE WHITE
RYE FLOUR

Consisting of the word "Kracker-Jack" and the design shown, the exclusive use of the words "Pure White" and "Rye Flour" being disclaimed.
Particular description of goods.—Rye-Flour.
Claims use since on or about Sept. 1, 1916.

Ser. No. 99,616. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM H. M. ALBERTSON, New York, N. Y. Filed Nov. 29, 1916.

WILLIAM H.M. ALBERTSON
METROPOLIS
BRAND
COFFEE
97 WATER ST. NEW YORK

No claim is made to the words "Brand," "Coffee," or "97 Water St., New York" or to the name "William H. M. Albertson."
Particular description of goods.—Coffee.
Claims use since Aug. 1, 1916.

Ser. No. 99,650. (CLASS 43. THREAD AND YARN.) CAMPBELL, METZGER & JACOBSON, New York, N. Y. Filed Dec. 1, 1916.

STIELBIED

Particular description of goods.—Embroidery-Tinsel, Embroidery-Floss, Embroidery-Silk, Embroidery-Cord, and Embroidery-Rope.
Claims use since Nov. 1, 1916.

Ser. No. 99,666. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GINEVRA MIGLIACCIO, New York, N. Y. Filed Dec. 1, 1916.

Herbamint

The trade-mark comprising the words "Herbamint, The Flavor is Different" upon a blue ground surrounded by a yellow border, no claim being made to the exclusive use of the phrase "The Flavor is Different" apart from the mark as shown in the drawing.
Particular description of goods.—Candy.
Claims use since about Sept. 16, 1916.

Ser. No. 99,685. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PATTERSON DRUG CO., Lynchburg, Va. Filed Dec. 2, 1916.

STAN-PAT

Particular description of goods.—An Injection and Capsules for the Treatment of Gonorrhea.
Claims use since December, 1913.

Ser. No. 99,710. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE A. J. HULL MEDICINE CO., Findlay, Ohio. Filed Dec. 4, 1916. Under ten-year proviso.

HULL'S
SUPERLATIVE
COMPOUND

Particular description of goods.—A Compound for the Following Diseases: Liver and Kidney, Sick and Nervous Headache, Dyspepsia, Nervous Prostration, Epileptic Fits, Paralysis, Scrofula, Jaundice, Impure Blood, Constipation, Loss of Appetite, Colds, and Fever.
Claims use since the summer of 1894.

Ser. No. 99,717. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MILLER CHEMICALS, INC., Bloomfield, N. J., and New York, N. Y. Filed Dec. 4, 1916.



Particular description of goods.—A Liquid Chemical to be Added to Gasolene to Increase Combustion and Eliminate Carbon.
Claims use since Nov. 1, 1916.

Ser. No. 99,724. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CANTRELL AND DAWSON, Guymon, Okla. Filed Dec. 5, 1916.

SESAME

Particular description of goods.—A Tonic for the Sexual Organs.
Claims use since about the 14th day of September, 1916.

Ser. No. 99,753. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NICKOLAOS ZARPAS, Monessen, Pa. Filed Dec. 6, 1916.



The trade-mark consisting of the portrait of the applicant.
Particular description of goods.—Psoriasis; Tetter, Scald-Head, Milk-Blotch, Ringworm, Eczema, Leucodermia, Rheumatism, Itch, Pimples, Hives, Chapped Hands, Dandruff, Chilblains, Colds, Piles, Burns, Chapped Skin, Rheumatical and Arthritical Swelling, Stiffness of the Joints and Muscles, Barber's Itch, Chafing, Lice of the Body, Chronic or Simple Coughs, and for a Medicinal Tonic.
Claims use since September, 1916.

Ser. No. 99,826. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) TRION TOY COMPANY, INC., Brooklyn, N. Y. Filed Dec. 9, 1916.



Particular description of goods.—Dolls and the Heads, Bodies, and Limbs Thereof.
Claims use since Mar. 25, 1916.

Ser. No. 99,839. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CONTINENTAL RUBBER WORKS, Erie, Pa. Filed Dec. 11, 1916.

BRIGADIER

Particular description of goods.—Rubber Pneumatic Tires.
Claims use since June 12, 1916.

Ser. No. 99,878. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) C. H. STUART & CO., Newark, N. Y. Filed Dec. 12, 1916.

ALADDIN
OIL

Comprising the words "Aladdin Oil," no claim being made to the exclusive use of the word "Oil" apart from the mark as shown in the drawing.
Particular description of goods.—A Medicine for the Treatment of Colds, Coughs, Sore Throat, Lameness of the Chest, Irritation of the Bronchial Tubes, Lame Back, Rheumatism, Neuralgia, Colic and Stomach-Ache, Dyspepsia, Bruises, Lameness, Stiff Joints, Ivy-Poisoning, Chilblains, Dizziness, and Headache.
Claims use since May 23, 1916.

Ser. No. 99,884. (CLASS 15. OILS AND GREASES.) AUGUSTUS CRANE BUZBY, Philadelphia, Pa. Filed Dec. 13, 1916.

KEYSTONE
BUZBY

The exclusive use of the name "Buzby" is claimed only in connection with the word "Keystone."
Particular description of goods.—Lubricants Consisting of Oils and Greases.
Claims use since November, 1916.

Ser. No. 99,887. (CLASS 43. THREAD AND YARN.) J. AND J. BALDWIN AND PARTNERS, LIMITED, Halifax, England. Filed Dec. 13, 1916.



Particular description of goods.—Yarns of Wool, Worsted, or Hair.
Claims use since September, 1914.

Ser. No. 99,898. (CLASS 38. PRINTS AND PUBLICATIONS.) JOHN F. MURRAY, New York, N. Y. Filed Dec. 13, 1916.

The Adman

Particular description of goods.—Periodicals Issued Monthly.
Claims use since the 1st of September, 1915.

Ser. No. 99,920. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE BEAVER COMPANY, Buffalo, N. Y. Filed Dec. 14, 1916.

Valetiere

Particular description of goods.—Folding and Combination Screens and Racks Made of Wood, Fiber, and Similar Materials.
Claims use since the 20th day of October, 1916.

Ser. No. 99,921. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE BEAVER COMPANY, Buffalo, N. Y. Filed Dec. 14, 1916.

Bevetiere

Particular description of goods.—Folding and Combination Screens and Racks Made of Wood, Fiber, and Similar Materials.
Claims use since the 20th day of October, 1916.

Ser. No. 99,924. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE BEAVER COMPANY, Buffalo, N. Y. Filed Dec. 14, 1916.

Libretto

Particular description of goods.—Folding and Combination Screens and Racks Made of Wood, Fiber, and Similar Materials.
Claims use since the 20th day of October, 1916.

Ser. No. 99,935. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. BYRON FAULK, Monroeville, Ala. Filed Dec. 14, 1916.

White Lily



Particular description of goods.—A Preparation for the Treatment of Dropsy and Diseases of the Kidneys.
Claims use since Sept. 7, 1916.

Ser. No. 100,007. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GORDON TIRE & RUBBER CO., Canton, Ohio. Filed Dec. 18, 1916.

ROADBEATER

Particular description of goods.—Rubber Tires.
Claims use since Nov. 23, 1916.

Ser. No. 100,010. (CLASS 39. CLOTHING.) GOODELL & COMPANY, New York, N. Y. Filed Dec. 18, 1916.

DURATEX

Particular description of goods.—Dress, Negligée, Outing, and Work Shirts, Pajamas, Night-Shirts, Neckties, Cravats, Scarfs, Neckcloths, Underwear, and Hosiery.
Claims use since Sept. 1, 1914.

Ser. No. 100,017. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW ORLEANS COFFEE CO. LTD., New Orleans, La. Filed Dec. 18, 1916.



Particular description of goods.—Rice.
Claims use since Mar. 14, 1916.

Ser. No. 100,071. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SPIELMAN ELECTRIC CO., New York, N. Y. Filed Dec. 20, 1916.



Particular description of goods.—Telephones, Electric Cigar-Lighters, Electric Lamps.
Claims use since Sept. 1, 1913.

Ser. No. 100,086. (CLASS 37. PAPER AND STATIONERY.) CUSHMAN & DENISON M'F'G CO., New York, N. Y. Filed Dec. 22, 1916.

"ADAIRACK"

Particular description of goods.—Pen-Racks.
Claims use since Jan. 4, 1902.

Ser. No. 100,090. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FOSTER & MUTTON, Lynchburg, Va. Filed Dec. 22, 1916.

HERB-U-LENT

Particular description of goods.—Liquid Medicine for Indigestion, &c.
Claims use since Dec. 1, 1916.

Ser. No. 100,096. (CLASS 39. CLOTHING.) HANOVER RUBBER COMPANY, Hanover, Mass. Filed Dec. 22, 1916.



No claim is made to the words "Safety Heel," the representation of a heel, or the six circles, except in association with the mark as shown.
Particular description of goods.—Rubber Heels.
Claims use since the 15th day of August, 1916.

Ser. No. 100,099. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) A. C. LAWRENCE LEATHER CO., Boston, Mass. Filed Dec. 22, 1916.

CHEVRITA

Said mark consisting of the word "Chevrita."
Particular description of goods.—Leather.
Claims use since Jan. 30, 1912.

Ser. No. 100,103. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FLORENCE REDMOND, New York, N. Y. Filed Dec. 22, 1916.

Golden Masque

Particular description of goods.—Face-Creams.
Claims use since Dec. 11, 1916.

Ser. No. 100,137. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) L. F. WANNER CO., INC., New York, N. Y. Filed Dec. 22, 1916.



Particular description of goods.—Knitted Fabrics in the Piece.
Claims use since Oct. 23, 1913.

Ser. No. 100,144. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Dec. 23, 1916.

SASCHA



The portrait being that of Paul F. Andersen.
Particular description of goods.—A Hair-Tonic.
Claims use since 1911.

Ser. No. 100,150. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE AMERICAN RUBBER AND TIRE COMPANY, Akron, Ohio. Filed Dec. 26, 1916.



Particular description of goods.—Elastic Vehicle-Tires.
Claims use since on or about the 1st day of December, 1916.

Ser. No. 100,168. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) HARLEY-DAVIDSON MOTOR CO., Milwaukee, Wis. Filed Dec. 26, 1916.



No claim being made to the name "Harley-Davidson" apart from the mark shown in the drawing.
Particular description of goods.—Bicycles.
Claims use since Nov. 9, 1916.

Ser. No. 100,174. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE MIHALOVITCH BROTHERS COMPANY, Cincinnati, Ohio. Filed Dec. 26, 1916.

ZANOL

Particular description of goods.—Artificial Orangeade, Wild-Cherry-Cider Extract, Apple-Cider Extract, Crab-Apple Extract, Peach-Cider Extract, Orange-Cider Extract, Apricot-Cider Extract, Grape-Cider Extracts, Vinola, Ambrosia, Frutana, Tutti-Frutti, Lemonade-Powder, Sunshine and Morning Dew, All Soft Drinks.
Claims use since 1906.

Ser. No. 100,179. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) NATIONAL FRUIT JUICE COMPANY, La Fayette, Ind. Filed Dec. 26, 1916.



Particular description of goods.—Apple-Juice.
Claims use since June 5, 1915.

Ser. No. 100,182. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) STEIN BROTHERS, Chicago, Ill. Filed Dec. 26, 1916. Under ten-year proviso.



Old Age

Particular description of goods.—Whisky.
Claims use since the year 1883.

Ser. No. 100,197. (CLASS 37. PAPER AND STATIONERY.) CROWN WILLAMETTE PAPER COMPANY, San Francisco, Cal. Filed Dec. 27, 1916.

BALBOA

Particular description of goods.—Wrapping-Paper.
Claims use since Apr. 24, 1911.

Ser. No. 100,198. (CLASS 37. PAPER AND STATIONERY.) CROWN WILLAMETTE PAPER COMPANY, San Francisco, Cal. Filed Dec. 27, 1916.

BESSMER

Particular description of goods.—Wrapping-Paper.
Claims use since May 1, 1911.

Ser. No. 100,200. (CLASS 37. PAPER AND STATIONERY.) CROWN WILLAMETTE PAPER COMPANY, San Francisco, Cal. Filed Dec. 27, 1916.

SPARTAN

Particular description of goods.—Wrapping-Paper.
Claims use since Apr. 5, 1911.

Ser. No. 100,209. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RIGO-TONE CHEMICAL CO., Petersburg, Va. Filed Dec. 27, 1916.

Rigo-Tone

Particular description of goods.—Medicinal Tonics.
Claims use since on or about the 1st day of August, 1916.

Ser. No. 100,214. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEORGE BORGFELDT & CO., New York, N. Y. Filed Dec. 28, 1916.



SWAN

Particular description of goods.—Handkerchiefs.
Claims use since Dec. 26, 1916.

Ser. No. 100,216. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HAGER, CLARK & CO., New York, N. Y. Filed Dec. 28, 1916.



Particular description of goods.—Woolen Piece Goods.
Claims use since Dec. 1, 1916.

Ser. No. 100,233. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARZILLAI L. COLE, St. Louis, Mo. Filed Dec. 29, 1916.

HYOS-COLE

Particular description of goods.—A Remedy for Diseases and Disorders of the Uterus.
Claims use since Aug. 9, 1916.

Ser. No. 100,281. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COMMERCIAL IMPORTING CO., Seattle, Wash. Filed Jan. 2, 1917.

DREADNAUGHT

Particular description of goods.—Baking-Powder.
Claims use since Oct. 18, 1916.

Ser. No. 100,300. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATIONAL PAPER PRODUCTS COMPANY, San Francisco, Cal. Filed Jan. 2, 1917.

ZELLEROL

Particular description of goods.—A Disinfectant.
Claims use since Oct. 9, 1915.

Ser. No. 100,302. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATIONAL PAPER PRODUCTS COMPANY, San Francisco, Cal. Filed Jan. 2, 1917.

ZELCOL

Particular description of goods.—An Insecticide.
Claims use since Nov. 23, 1916.

Ser. No. 100,304. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATIONAL PAPER PRODUCTS COMPANY, San Francisco, Cal. Filed Jan. 2, 1917.

ZELCO

Particular description of goods.—Stock-Dip, Insecticides, Germicides, and Disinfectants.
Claims use since July 6, 1916.

Ser. No. 100,323. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) SOUTHERN HARDWARE & BICYCLE COMPANY, Jacksonville, Fla. Filed Jan. 2, 1917.

SHEBICO

Particular description of goods.—Rubber Tires.
Claims use since about Aug. 15, 1916.

Ser. No. 100,335. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) NICOLAI DOOR MANUFACTURING CO., Portland, Oreg. Filed Jan. 3, 1917.

PARAGON

Particular description of goods.—Portable Houses.
Claims use since Nov. 15, 1916.

Ser. No. 100,361. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JAMES L. TAYLOR MFG. CO., Poughkeepsie, N. Y. Filed Jan. 4, 1917. Under ten-year proviso.

The Taylor

Particular description of goods.—Wrenches, Clamps, and Clamp-Carriers.
Claims use since 1892.

See. No. 100,366. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE CHARLES H. BROWN PAINT CO., Brooklyn, N. Y. Filed Jan. 5, 1917.



Particular description of goods.—Paste Paints.
Claims use since about Dec. 1, 1916.

Ser. No. 100,367. (CLASS 15. OILS AND GREASES.) AUGUSTUS CRANE BUZBY, Philadelphia, Pa. Filed Jan. 5, 1917. Under ten-year proviso.



The exclusive use of "Philadelphia, U. S. A." apart from the mark shown in the drawing is disclaimed.
Particular description of goods.—Lubricants Consisting of Oils and Greases.
Claims use since prior to the year 1895.

Ser. No. 100,368. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LYDIA GARDNER, Joplin, Mo. Filed Jan. 5, 1917.



Particular description of goods.—Lip-Reducing Lotion.
Claims use since July, 1916.

Ser. No. 100,378. (CLASS 37. PAPER AND STATIONERY.) WEST VIRGINIA PULP & PAPER CO., New York, N. Y. Filed Jan. 5, 1917.

Ideal

Particular description of goods.—Coated Lithographic Paper.
Claims use since 1906.

Ser. No. 100,379. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES F. PATERSON, St. Paul, Minn. Filed Jan. 5, 1917.

THERMIUM

Particular description of goods.—An Antifreezing Liquid for Automobile-Radiators and Plumbing-Fixtures.
Claims use since Dec. 26, 1916.

Ser. No. 100,380. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PREMIER BRONZE POWDER CO., Cleveland, Ohio. Filed Jan. 5, 1917.

LUXRITE

Particular description of goods.—Bronzing Liquids, Enamels, and Bronze Powders.
Claims use since Oct. 28, 1916.

Ser. No. 100,381. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARTHUR M. SAMSON, New Orleans, La. Filed Jan. 5, 1917.



Particular description of goods.—A Remedy for the Treatment of Ingrowing Nails.
Claims use since Dec. 1, 1916.

Ser. No. 100,399. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MERGENTHALER LINOTYPE COMPANY, New York, N. Y. Filed Jan. 6, 1917.

BENEDICTINE

Particular description of goods.—Matrices.
Claims use since the 16th day of November, 1915.

Ser. No. 100,407. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE THERMOGENE CO., LIMITED, Haywards Heath, England. Filed Jan. 6, 1917.

GENOTHERM

Particular description of goods.—Medicated Wadding.
Claims use since Aug. 16, 1916.

Ser. No. 100,415. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES ALLEN, St. Louis, Mo. Filed Jan. 8, 1917.

DIGESTOIDS

Particular description of goods.—Medicinal Remedies for Certain Diseases, Such as Indigestion, Dyspepsia, and Constipation.
Claims use since in or about the year 1901.

Ser. No. 100,431. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE KADOOLIATOR PEOPLE, INC., Terre Haute, Ind. Filed Jan. 8, 1917.

KADOOLIATOR

Particular description of goods.—Toy Cycles.
Claims use since Dec. 15, 1916.

Ser. No. 100,433. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BENJAMIN KIND, Baltimore, Md. Filed Jan. 8, 1917.

B&K

Particular description of goods.—A Remedy for Rheumatism, in Powder Form.
Claims use since Sept. 1, 1915.

Ser. No. 100,448. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PITINO BROTHERS & COMPANY, Los Angeles, Cal. Filed Jan. 8, 1917.

ORAGE

Particular description of goods.—Medicine for the Treatment of Stomach Troubles, Bright's Disease of the Kidneys, Impoverishment of the Blood, Dyspepsia, and Heartburn.
Claims use since Dec. 23, 1916.

Ser. No. 100,471. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE BROWN INSTRUMENT COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917. Under ten-year proviso.

BROWN

Particular description of goods.—Pyrometers, Tachometers, Operation-Recorders, Thermometers, Pressure-Gages, Vacuum-Gages, Voltmeters, Ammeters, and Wattmeters.
Claims use since the year 1869 or clearly prior thereto.

Ser. No. 100,492. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBERT J. ESTES, Coalgate, Okla. Filed Jan. 9, 1917.

LOYAL

Comprising the word "Loyal."
Particular description of goods.—Liver-Tonic for the Treatment of Biliousness, Constipation, Indigestion, and Sour Stomach.
Claims use since Dec. 21, 1916.

Ser. No. 100,497. (CLASS 12. CONSTRUCTION MATERIALS.) THE LONG-BELL LUMBER COMPANY, Kansas City, Mo. Filed Jan. 9, 1917.

LONG BELL

Particular description of goods.—Finished and Unfinished Lumber—Namely, Ties, Timbers, Boards, and Planks.
Claims use since Sept. 1, 1916.

Ser. No. 100,509. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & CO., INC., New York, N. Y. Filed Jan. 10, 1917.

LA SÉDUISANTE

Particular description of goods.—Toilet Powder.
Claims use for more than twenty years.

Ser. No. 100,521. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AVILA J. LE FAIVRE, Clayton, N. Y. Filed Jan. 10, 1917.

THASMATOL

Particular description of goods.—Medicine for the Treatment of Asthma and Bronchial Trouble.
Claims use since Dec. 20, 1916.

Ser. No. 100,526. (CLASS 39. CLOTHING.) THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y. Filed Jan. 10, 1917.

Péco

Particular description of goods.—Women's, Children's, and Infants' Coats, Cloaks, Wraps, Capes, Dresses, Waists, and Skirts.
Claims use since about Nov. 15, 1916.

Ser. No. 100,538. (CLASS 38. PRINTS AND PUBLICATIONS.) ELEANOR SCHORER, New York, N. Y. Filed Jan. 11, 1917.

Cousin Eleanor

Particular description of goods.—Newspaper Articles, Magazine Articles, a Magazine-Section Published Periodically.
Claims use since May 1, 1916.

Ser. No. 100,553. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANTZ, BUCHANAN & CO. INC., Camden, N. J. Filed Jan. 12, 1917.



Particular description of goods.—A Cleaner, Deodorant, Germicide, and Insecticide.
Claims use since about Dec. 18, 1916.

Ser. No. 100,557. (CLASS 47. WINES.) JOSEPH PREVER, New York, N. Y. Filed Jan. 12, 1917.



Comprising the words "Deux Bonnets" and the representation of two caps.

Particular description of goods.—A Medicinal Wine Containing Quinin.

Claims use since Jan. 8, 1917.

Ser. No. 100,604. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN ROAD MACHINERY COMPANY, INC., Kennett Square, Pa. Filed Jan. 15, 1917.

JUMBO.

Particular description of goods.—Road-Making Machines.

Claims use since about Apr. 5, 1912.

Ser. No. 100,621. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) W. R. GRACE & CO., New York, N. Y. Filed Jan. 15, 1917.

VENCEDOR

Particular description of goods.—Linseed-Oil and Ready-Mixed Paints.

Claims use since Jan. 1, 1916.

Ser. No. 100,636. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SPRINGFIELD GRINDING CO., Springfield, Mass. Filed Jan. 15, 1917.

MAXF

Particular description of goods.—Grinding-Wheels.

Claims use since on or about Dec. 10, 1915.

Ser. No. 100,639. (CLASS 37. PAPER AND STATIONERY.) WHITING PAPER COMPANY, Holyoke, Mass. Filed Jan. 15, 1917.

MUTUAL

Particular description of goods.—Writing-Papers.

Claims use since on or about May 21, 1913.

Ser. No. 100,687. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE TEBBETTS & GARLAND STORE, Chicago, Ill. Filed Jan. 17, 1917.

STOP & SHOP

Particular description of goods.—Soaps, Washing-Powders, Cleansers, and Metal-Polish.

Claims use since Sept. 15, 1913.

Ser. No. 100,689. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE TEBBETTS & GARLAND STORE, Chicago, Ill. Filed Jan. 17, 1917.

STOP & SHOP

Particular description of goods.—Brandy, Blended Whisky and Straight Whisky, Cocktails, Cordials, Rum, Gin, and Vermuth.

Claims use since Sept. 15, 1913.

Ser. No. 100,730. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WORTHINGTON PUMP AND MACHINERY CORPORATION, New York, N. Y. Filed Jan. 18, 1917.

INGECO

Particular description of goods.—Internal-Combustion Engines.

Claims use since about the month of December, 1911.

Ser. No. 100,782. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill. Filed Jan. 20, 1917.

KIROPEDIC

Particular description of goods.—Arch-Supports.

Claims use since Jan. 2, 1917.

Ser. No. 100,783. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill. Filed Jan. 20, 1917.

PRACTIPEDIC

Particular description of goods.—Arch-Supports.

Claims use since Dec. 1, 1916.

Ser. No. 100,798. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) EAST ST. LOUIS-NEW ATHENS BREWING CO., New Athens, Ill. Filed Jan. 22, 1917.

Jiffy

Particular description of goods.—A Cereal Beverage.

Claims use since Dec. 11, 1916.

Ser. No. 100,804. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERSTATE ENGINE & TRACTOR COMPANY, Waterloo, Iowa. Filed Jan. 22, 1917.

PLOW BOY

Particular description of goods.—Tractors.

Claims use since on or about May 1, 1916.

Ser. No. 100,896. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) H. R. MALLINSON & CO., New York, N. Y. Filed Jan. 24, 1917.

Shadow Lawn

Particular description of goods.—Parasols.

Claims use since Dec. 6, 1916.

Ser. No. 100,970. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa. Filed Jan. 26, 1917.

COLLEGE

Particular description of goods.—Lawn-Mowers.

Claims use since about Nov. 1, 1910.

Ser. No. 100,971. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa. Filed Jan. 26, 1917.

UNIVERSITY

Particular description of goods.—Lawn-Mowers.

Claims use since about Nov. 1, 1910.

Ser. No. 100,973. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa. Filed Jan. 26, 1917.

INDEPENDENCE

Particular description of goods.—Lawn-Mowers.

Claims use since about Nov. 1, 1914.

Ser. No. 100,974. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa. Filed Jan. 26, 1917.

OVERBROOK

No claim being made for the term "Overbrook" apart from the mark shown in the drawing.

Particular description of goods.—Lawn-Mowers.

Claims use since about Nov. 1, 1914.

TRADE-MARK REGISTRATIONS GRANTED

FEBRUARY 20, 1917.

115,472. NON-ALCOHOLIC BEVERAGES SOLD AS SOFT DRINKS AND SYRUPS USED IN THE MAKING THEREOF. SIMEON C. ALLEN, Rochester, N. Y.
Filed November 23, 1916. Serial No. 99,496. PUBLISHED DECEMBER 19, 1916.

115,473. METAL-POLISHES. THE ALUMINOX CO., Kansas City, Mo.
Filed October 11, 1915. Serial No. 89,781. PUBLISHED DECEMBER 12, 1916.

115,474. CORK COMPOSITION FOR GASKETS AND WASHERS. ARMSTRONG CORK COMPANY, Pittsburgh, Pa.
Filed October 27, 1916. Serial No. 98,915. PUBLISHED DECEMBER 19, 1916.

115,475. CERTAIN NAMED CHEMICALS AND PHARMACEUTICAL PREPARATIONS. ASEPTIC PRODUCTS COMPANY, Long Island City, N. Y.
Filed October 2, 1916. Serial No. 98,398. PUBLISHED DECEMBER 19, 1916.

115,476. REMEDY FOR DIPHTHERIA AND SORE THROAT. COLUMBUS P. ASHBURN, Bristol, Va.
Filed November 6, 1916. Serial No. 99,111. PUBLISHED DECEMBER 19, 1916.

115,477. PREPARATION FOR CLEANING WINDOWS. THOMAS S. BALLARD, Grand Island, Nebr.
Filed August 14, 1916. Serial No. 97,325. PUBLISHED DECEMBER 12, 1916.

115,478. REMEDY IN LIQUID FORM FOR CERTAIN NAMED DISEASES AND AFFECTIONS. B. D. G. LINIMENT CO., Meriden, Conn.
Filed October 30, 1916. Serial No. 98,968. PUBLISHED DECEMBER 19, 1916.

115,479. WALL-BOARD. THE BEAVER BOARD COMPANIES, Buffalo, N. Y.
Filed November 4, 1916. Serial No. 99,080. PUBLISHED DECEMBER 12, 1916.

115,480. EXPANDED METAL. THE BERGER MANUFACTURING COMPANY, Canton, Ohio.
Filed November 8, 1916. Serial No. 99,161. PUBLISHED DECEMBER 12, 1916.

115,481. SHOE-STRETCHERS. ALEXANDER E. BLOCK, St. Louis, Mo.
Filed October 25, 1916. Serial No. 98,873. PUBLISHED DECEMBER 19, 1916.

115,482. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. GEORGE BORGFELDT & CO., New York, N. Y.
Filed August 5, 1916. Serial No. 97,111. PUBLISHED DECEMBER 19, 1916.

115,483. GAMES. MILTON BRADLEY CO., Springfield, Mass.
Filed October 16, 1916. Serial No. 98,713. PUBLISHED DECEMBER 5, 1916.

115,484. BOOTS AND SHOES. DONALD J. CAMERON, Syracuse, N. Y.
Filed August 12, 1914. Serial No. 80,483. PUBLISHED NOVEMBER 9, 1915.

115,485. BOOTS AND SHOES, EITHER OF LEATHER OR OF LEATHER AND FABRIC. DONALD J. CAMERON, Syracuse, N. Y.
Filed August 12, 1914. Serial No. 80,484. PUBLISHED NOVEMBER 9, 1915.

115,486. PAPER BAGS. CAPITAL PAPER COMPANY, Indianapolis, Ind.
Filed October 27, 1916. Serial No. 98,920. PUBLISHED DECEMBER 12, 1916.

115,487. CERTAIN INSTRUMENTS AND PARTS THEREOF USED FOR CUTTING AND WELDING PURPOSES. CARBO-HYDROGEN COMPANY OF AMERICA, Pittsburgh, Pa.
Filed May 25, 1916. Serial No. 95,413. PUBLISHED DECEMBER 12, 1916.

115,488. COTTON PIECE GOODS. RAFAEL DEL CASTILLO & COMPANY, New York, N. Y.
Filed July 7, 1916. Serial No. 96,401. PUBLISHED DECEMBER 19, 1916.

115,489. WRAPPING-PAPER, WRITING-PAPER, PRINTING-PAPER, AND TOILET-PAPER. THE CENTRAL-TOPEKA PAPER CO., Topeka, Kans.
Filed February 19, 1916. Serial No. 92,970. PUBLISHED DECEMBER 12, 1916.

115,490. SALVE FOR CUTS, BRUISES, LACERATIONS, AND SKIN AND MUSCULAR INJURIES. MAGDALENA CHEJLAVÁ, Chicago, Ill.
Filed October 16, 1916. Serial No. 98,681. PUBLISHED DECEMBER 19, 1916.

115,491. GROUND LIME. CHEMICAL LIME & SAND COMPANY, Huntington, W. Va., and Lawton, Ky.
Filed November 4, 1916. Serial No. 99,083. PUBLISHED DECEMBER 19, 1916.

115,492. ATTACHMENTS FOR PHONOGRAPHS AND LIKE ARTICLES. COMPRESSED METAL COMPANY, New York, N. Y.
Filed November 23, 1915. Serial No. 90,869. PUBLISHED DECEMBER 12, 1916.

115,493. CHILDREN'S GARMENT-SUPPORTERS AND HOSE-SUPPORTERS. CROWN SUSPENDER COMPANY, New York, N. Y.
Filed August 19, 1916. Serial No. 97,444. PUBLISHED DECEMBER 12, 1916.

115,494. CERTAIN NAMED FURNITURE. DELTOX GRASS RUG COMPANY, Oshkosh, Wis.
Filed September 8, 1914. Serial No. 81,038. PUBLISHED DECEMBER 12, 1916.

115,495. STOVE-POLISH. JOHN DIAMOND & SONS, Philadelphia, Pa.
Filed February 5, 1916. Serial No. 92,663. PUBLISHED DECEMBER 12, 1916.

115,496. WIRE AND METALLIC STRIPS HIGHLY RESISTANT TO HEAT AND OF LOW ELECTRICAL CONDUCTIVITY. DRIVER HARRIS WIRE COMPANY, Harrison, N. J.
Filed October 30, 1916. Serial No. 98,974. PUBLISHED DECEMBER 12, 1916.

115,497. DUPLICATING-MACHINES OR MULTICOPYING-MACHINES. DUPLICATOR MANUFACTURING COMPANY, Chicago, Ill.
Filed September 23, 1916. Serial No. 98,185. PUBLISHED DECEMBER 12, 1916.

115,498. POLISHING MATERIALS FOR AUTOMOBILES, FURNITURE, PIANOS, FLOORS, AND WOODWORKING GENERALLY. THE FEIL MANUFACTURING COMPANY, Cleveland, Ohio.
Filed September 5, 1916. Serial No. 97,789. PUBLISHED DECEMBER 12, 1916.

115,499. DRESS, WORK, AND NEGLIGÉE SHIRTS AND MEN'S ATHLETIC UNDERWEAR OF TEXTILE MATERIAL. JOSEPH FELS COMPANY, Chicago, Ill.
Filed October 12, 1916. Serial No. 98,592. PUBLISHED DECEMBER 19, 1916.

115,500. CERTAIN NAMED ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES. FORD MOTOR COMPANY, Highland Park, Mich.
Filed May 28, 1915. Serial No. 86,955. PUBLISHED DECEMBER 12, 1916.

115,501. BENZALDEHYDE. FRIES & FRIES, Cincinnati, Ohio.
Filed November 3, 1916. Serial No. 99,062. PUBLISHED DECEMBER 12, 1916.

115,502. CERTAIN NAMED MEDICINES AND PHARMACEUTICAL PREPARATIONS. DERRICK F. FRYER, Santa Rosa, Cal.
Filed June 20, 1916. Serial No. 95,997. PUBLISHED DECEMBER 19, 1916.

115,503. SHOE-POLISHES. FULTON SHOE POLISH CO. INC., New York, N. Y., assignor to W. R. Grace & Company, New York, N. Y., a Corporation of Connecticut.
Filed September 23, 1916. Serial No. 98,186. PUBLISHED DECEMBER 12, 1916.

115,504. CERTAIN NAMED GLASSWARE. GENERAL ELECTRIC COMPANY, Schenectady, N. Y.
Filed November 24, 1915. Serial No. 90,901. PUBLISHED DECEMBER 12, 1916.

115,505. MONTHLY HOUSE-ORGAN PERIODICALS. THE GENERAL FIREPROOFING COMPANY, Youngstown, Ohio.
Filed September 28, 1916. Serial No. 98,291. PUBLISHED DECEMBER 12, 1916.

115,506. SPARKLING WINES. GIUSEPPE GRASSO, New York, N. Y.
Filed November 15, 1916. Serial No. 99,310. PUBLISHED DECEMBER 12, 1916.

115,507. SHOE-LEATHER SUBSTITUTE. THE GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn.
Filed June 17, 1916. Serial No. 95,941. PUBLISHED DECEMBER 12, 1916.

115,508. LAUNDRY-WASHING MACHINE. GRINNELL WASHING MACHINE COMPANY, Grinnell, Iowa.
Filed October 7, 1916. Serial No. 98,509. PUBLISHED DECEMBER 19, 1916.

115,509. SHOCK-ABSORBERS. THE H. & D. COMPANY, Goodland, Ind.
Filed October 16, 1916. Serial No. 98,695. PUBLISHED DECEMBER 19, 1916.

115,510. POLISH FOR FURNITURE, AUTOMOBILES, WOODWORK OF ALL KINDS, AND ALL VARNISHED SURFACES. THE E. W. HAYDEN CO., Toledo, Ohio.
Filed October 6, 1916. Serial No. 98,466. PUBLISHED DECEMBER 12, 1916.

115,511. PUMPS AND WRENCHES. THE HILL PUMP VALVE COMPANY, Chicago, Ill.
Filed November 29, 1915. Serial No. 91,005. PUBLISHED DECEMBER 12, 1916.

115,512. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed October 25, 1916. Serial No. 98,881. PUBLISHED DECEMBER 12, 1916.

115,513. FIRE-KINDLERS. HOBO MANUFACTURING CO., Voth, Tex.
Filed October 10, 1916. Serial No. 98,540. PUBLISHED DECEMBER 12, 1916.

115,514. MONTHLY PERIODICALS. THE HOLT MANUFACTURING COMPANY, Stockton, Cal.
Filed August 15, 1916. Serial No. 97,348. PUBLISHED DECEMBER 12, 1916.

115,515. CLOCKS AND WATCHES. J. & J. SALES COMPANY, St. Louis, Mo.
Filed September 7, 1916. Serial No. 97,844. PUBLISHED DECEMBER 12, 1916.

115,516. CERTAIN NAMED HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS. THE EDWARD KATZINGER COMPANY, Chicago, Ill.
Filed May 9, 1914. Serial No. 78,169. PUBLISHED DECEMBER 12, 1916.

115,517. PIANO AND FURNITURE POLISH AND AUTOMOBILE-BODY POLISH. KEMOSHYNE MANUFACTURING COMPANY INC., Rochester, N. Y.
Filed July 12, 1916. Serial No. 96,524. PUBLISHED DECEMBER 19, 1916.

115,518. WATCHES, WATCHCASES, WATCH-MOVEMENTS, AND PARTS THEREOF. THE KEYSTONE WATCH CASE COMPANY, Philadelphia, Pa.
Filed September 30, 1916. Serial No. 98,335. PUBLISHED DECEMBER 12, 1916.

115,519. WATCHES, WATCHCASES, WATCH-MOVEMENTS, AND PARTS THEREOF. THE KEYSTONE WATCH CASE COMPANY, Philadelphia, Pa.
Filed September 30, 1916. Serial No. 98,337. PUBLISHED DECEMBER 12, 1916.

115,520. WATCHES, WATCHCASES, WATCH-MOVEMENTS, AND PARTS THEREOF. THE KEYSTONE WATCH CASE COMPANY, Philadelphia, Pa.
Filed September 30, 1916. Serial No. 98,338. PUBLISHED DECEMBER 12, 1916.

115,521. PASTE FOR CLEANSING HANDS, FABRICS, POTS AND PANS, AND FOR LAUNDRY AND BATHING. KIL-GRECE COMPANY, St. Paul, Minn.
Filed June 28, 1916. Serial No. 96,207. PUBLISHED DECEMBER 12, 1916.

115,522. CRUSHED GRANITIZED STONE USED AS AN AGGREGATE AND AS A FINISH IN CONCRETE AND CEMENT CONSTRUCTION. GEORGE G. KIRTLEY, Van Horn, Tex.
Filed October 28, 1916. Serial No. 98,948. PUBLISHED DECEMBER 12, 1916.

115,523. LEATHER BOOTS AND SHOES. LUND-MAULDIN COMPANY, St. Louis, Mo.
Filed March 17, 1916. Serial No. 93,605. PUBLISHED JULY 11, 1916.

115,524. CORNETS, TROMBONES, ALTOS, TENORS, MELOPHONES, BARITONES, BASSES, SAXOPHONES, FRENCH HORNS. LYON & HEALY, Chicago, Ill.
Filed September 30, 1915. Serial No. 89,547. PUBLISHED DECEMBER 12, 1916.

115,525. BLEACHING AND CLEANING COMPOUNDS. CHARLES MCADAM CO., Chicago, Ill.
Filed November 8, 1916. Serial No. 99,172. PUBLISHED DECEMBER 19, 1916.

115,526. CANDY COUGH-DROPS. MCDOWELL, PYLE & CO., INC., Baltimore, Md.
Filed October 26, 1916. Serial No. 98,907. PUBLISHED DECEMBER 12, 1916.

115,527. CERTAIN RECEPTACLES HAVING ELECTRIC ATTACHMENTS. MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J., and New York, N. Y.
Filed October 5, 1916. Serial No. 98,441. PUBLISHED DECEMBER 12, 1916.

115,528. PHONOGRAPHS. JAMES MANOIL COMPANY, INC., New York, N. Y.
Filed October 30, 1916. Serial No. 98,984. PUBLISHED DECEMBER 12, 1916.

115,529. RUBBER PEDAL-COVERS. MATTSON RUBBER COMPANY, Lodi, N. J.
Filed August 23, 1916. Serial No. 97,587. PUBLISHED DECEMBER 12, 1916.

115,530. BLANK BOOKS AND WRITING-PAPER. NATIONAL BLANK BOOK CO., Holyoke, Mass.
Filed September 11, 1916. Serial No. 97,919. PUBLISHED DECEMBER 12, 1916.

115,531. AUTOMOBILE TIRE CASINGS AND TIRE TUBES COMPOSED OF RUBBER. THE NATIONAL TIRE & RUBBER COMPANY, East Palestine, Ohio.
Filed October 12, 1916. Serial No. 98,602. PUBLISHED DECEMBER 12, 1916.

115,532. PUNCTURE-PROOF SOLUTION. JOHN N. NEAL, Coldwater, Mich.
Filed September 23, 1916. Serial No. 98,193. PUBLISHED DECEMBER 12, 1916.

115,533. WATCHMEN'S WHISTLES. WM. R. NOE & SONS, New York, N. Y.
Filed October 12, 1916. Serial No. 98,603. PUBLISHED DECEMBER 12, 1916.

115,534. CERTAIN NAMED GAMES, TOYS, AND SPORTING GOODS. CORNELIUS J. O'RIELY, Los Angeles, Cal.
Filed October 16, 1916. Serial No. 98,704. PUBLISHED DECEMBER 12, 1916.

115,535. CHILD'S DRESSING-CHAIR. VANCE C. PALMER, Sioux City, Iowa.
Filed November 3, 1916. Serial No. 99,068. PUBLISHED DECEMBER 12, 1916.

115,536. CERTAIN NAMED GLASSWARE. PASSOW & SONS, Chicago, Ill.
Filed August 6, 1914. Serial No. 80,370. PUBLISHED NOVEMBER 17, 1914.

115,537. CHEMICAL APPARATUS USED AS A GAME OR TOY. THE PORTER CHEMICAL COMPANY, Hagerstown, Md.
Filed November 10, 1916. Serial No. 99,216. PUBLISHED DECEMBER 19, 1916.

115,538. FIRE-BRICK CEMENT. QUIGLEY FURNACE SPECIALTIES CO., INCORPORATED, New York, N. Y.
Filed November 11, 1916. Serial No. 99,254. PUBLISHED DECEMBER 12, 1916.

115,539. TANKS, AND TANKS FOR HOT WATER, COMMONLY KNOWN AS STAND OR RANGE BOILERS. RIVERSIDE BOILER WORKS, INC., Cambridgeport, Mass.
Filed August 10, 1916. Serial No. 97,257. PUBLISHED DECEMBER 19, 1916.

115,540. CLEANSERS FOR THE REMOVAL OF CARBON. ROSENTHAL MANUFACTURING COMPANY, West Allis and Milwaukee, Wis.
Filed November 9, 1916. Serial No. 99,200. PUBLISHED DECEMBER 19, 1916.

115,541. TOILET-PAPER. SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y.
Filed November 11, 1916. Serial No. 99,260. PUBLISHED DECEMBER 12, 1916.

115,542. TECHNICAL COMPENDIUM OF THE SILK INDUSTRY COMPILED, COLLATED, AND EDITED TWICE A YEAR. THE SILK GUIDE, INC., New York, N. Y.
Filed May 11, 1916. Serial No. 95,085. PUBLISHED DECEMBER 12, 1916.

115,543. BURNING-LAMPS. SILVER & CO., Brooklyn, N. Y.
Filed October 12, 1916. Serial No 98,610. PUBLISHED DECEMBER 12, 1916.

115,544. WATERPROOFING COMPOSITION FOR WOOD, CONCRETE, BRICK, STONE MASONRY, AND OTHER SURFACES. GEORGE L. SIMONDS, Chicago, Ill., assignor to Vulcan Fuel Economy Company, a Corporation of Illinois.
Filed September 22, 1916. Serial No. 98,170. PUBLISHED DECEMBER 12, 1916.

115,545. COMBINED BOTTLE-STOPPERS AND DROPPERS. THEODORE J. SNYDER, Chicago, Ill.
Filed September 27, 1916. Serial No. 98,274. PUBLISHED DECEMBER 19, 1916.

115,546. CERTAIN NAMED PHARMACEUTICAL PRODUCT. SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland.
Filed August 30, 1916. Serial No. 97,720. PUBLISHED DECEMBER 19, 1916.

115,547. CERTAIN NAMED MEN'S, BOYS', AND CHILDREN'S CLOTHING. HENRY SONNEBORN & CO. INC., Baltimore, Md.
Filed May 29, 1915. Serial No. 87,000. PUBLISHED DECEMBER 5, 1916.

115,548. ELECTRIC SPARK-PLUGS. SPLITDORF ELECTRICAL COMPANY, Newark, N. J.
Filed September 19, 1916. Serial No. 98,103. PUBLISHED DECEMBER 12, 1916.

115,549. FRUIT-TREES, FRUIT-PLANTS, AND HARDY ORNAMENTALS. STARK BRO'S NURSERIES & ORCHARDS CO., Louisiana, Mo.
Filed February 21, 1916. Serial No. 93,030. PUBLISHED DECEMBER 19, 1916.

115,550. SPECTACLES. THE STENOPAIC OPTICAL CO., New York, N. Y.
Filed October 12, 1916. Serial No. 98,609. PUBLISHED DECEMBER 12, 1916.

115,551. HAIR GROWERS AND TONICS. GUSTAV A. STRAHLKE, Alton, Ill.
Filed November 2, 1916. Serial No. 99,048. PUBLISHED DECEMBER 19, 1916.

115,552. PARTS SIMULATING PARTS OF ANIMALS, FOR USE AS EDUCATIONAL TOYS. ALVIN H. SWEET, Los Angeles, Cal.
Filed July 5, 1916. Serial No. 96,337. PUBLISHED DECEMBER 12, 1916.

115,553. FURNITURE-POLISH. RONALD VIVIAN TAYLOR, New York, N. Y.
Filed October 23, 1916. Serial No. 98,851. PUBLISHED DECEMBER 12, 1916.

115,554. PREPARATION FOR THE KIDNEYS. SAMUEL THOMAS, Lebanon, Oreg.
Filed November 4, 1916. Serial No. 99,099. PUBLISHED DECEMBER 19, 1916.

115,555. WHISKY. THE TIVOLI MERCANTILE CO., Cheyenne, Wyo.
Filed October 14, 1916. Serial No. 98,672. PUBLISHED DECEMBER 12, 1916.

115,556. FINGER-RINGS. THE TRAUB MANUFACTURING COMPANY, Detroit, Mich.
Filed October 12, 1916. Serial No. 98,612. PUBLISHED DECEMBER 12, 1916.

115,557. OVERLAYS, SHEET-RUBBER, AND RUBBER FABRIC. THE TYPOLITH COMPANY, Battle Creek, Mich.
Filed September 15, 1916. Serial No. 98,017. PUBLISHED DECEMBER 19, 1916.

115,558. APPARATUS AND MACHINERY USED IN CONNECTION WITH RAILWAY SIGNALING AND INTERLOCKING SYSTEMS. THE UNION SWITCH & SIGNAL COMPANY, Swissvale, Pa.
Filed December 8, 1914. Serial No. 83,167. PUBLISHED DECEMBER 19, 1916.

115,559. PHOTOGRAPHIC DEVELOPERS. UNITED DYESTUFF AND PHOTOCHEMICAL CO., INC., Brooklyn, N. Y.
Filed November 7, 1916. Serial No. 99,155. PUBLISHED DECEMBER 19, 1916.

115,560. PORTLAND CEMENT. UNIVERSAL PORTLAND CEMENT COMPANY, Chicago, Ill.
Filed October 19, 1916. Serial No. 98,778. PUBLISHED DECEMBER 12, 1916.

115,561. MARBLE-DUST, HYDRATED LIME, AND OTHER LIME. VERMONT MARBLE COMPANY, Proctor, Vt.
Filed August 16, 1916. Serial No. 97,365. PUBLISHED DECEMBER 12, 1916.

115,562. DENTAL PASTE, ALMOND-CREAM, AND COLD-CREAM. ARMIN WALD, New York, N. Y.
Filed February 24, 1916. Serial No. 93,084. PUBLISHED APRIL 11, 1916.

115,563. CIGARETTE-PAPERS. WALDES & Co., Prague-Wrschowitz, Austria-Hungary.
Filed October 28, 1916. Serial No. 98,950. PUBLISHED DECEMBER 19, 1916.

115,564. DRY COLORS FOR PAINTERS' USE. E. M. & F. WALDO, New York, N. Y.
Filed October 27, 1916. Serial No. 98,935. PUBLISHED DECEMBER 12, 1916.

115,565. VEHICLES FOR USE IN TOWING AUTOMOBILES AND THE LIKE. WEAVER MANUFACTURING COMPANY, Springfield, Ill.
Filed January 24, 1916. Serial No. 92,380. PUBLISHED DECEMBER 12, 1916.

115,566. GEAR-SHIFT FOR MACHINE PARTS. WENZELL SPECIALTY COMPANY, Philadelphia, Pa.
Filed April 14, 1916. Serial No. 94,441. PUBLISHED DECEMBER 19, 1916.

115,567. TOILET-PAPER. WORTENDYKE MANUFACTURING COMPANY, Richmond, Va.
Filed June 13, 1916. Serial No. 95,854. PUBLISHED AUGUST 15, 1916.

115,568. SHAVING-BRUSHES. LOUIS D. CORIELL, Baltimore, Md.
Filed January 27, 1916. Serial No. 92,433. PUBLISHED DECEMBER 12, 1916.

TRADE-MARK REGISTRATIONS RENEWED.

14,118. WHITE CASTILE SOAP. STALLMAN & FULTON, New York, N. Y.; Lever Brothers Company, a Corporation of Maine, assignee.
Registered March 1, 1887. Renewed March 1, 1917.

LABELS

REGISTERED FEBRUARY 20, 1917.

19,901.—*Title:* "EVER-READY SAFETY RAZOR." (For Safety-Razors.) AMERICAN SAFETY RAZOR CO. INC., Brooklyn, N. Y. Filed December 2, 1916.

19,902.—*Title:* "NEBLINE." (For a Cuticle-Salve.) N. E. BERRY, Buffalo, N. Y. Filed December 20, 1916.

19,903.—*Title:* "DENTOLA." (For a Dentifrice.) AUGUST J. CLAPHAM, New York, N. Y. Filed January 26, 1917.

19,904.—*Title:* "BIRCHWOOD." (For Coffee.) THE COPPS Co., Stevens Point, Wis. Filed January 23, 1917.

19,905.—*Title:* "CLICQUOT DRY GIN." (For Dry Gin.) THE EDDY AND FISHER Co., Providence, R. I. Filed January 8, 1917.

19,906.—*Title:* "MONTANA SPORT." (For Cigars.) CHARLES GARNIER, Livingston, Mont. Filed January 29, 1917.

19,907.—*Title:* "HAZELOCH." (For a Liquid Herb Remedy.) HAZELOCH MEDICINE COMPANY, Providence, R. I. Filed January 6, 1917.

19,908.—*Title:* "SWEET SPEARMINT." (For Chewing-Gum.) THE HELMET COMPANY, Cincinnati, Ohio. Filed January 26, 1917.

19,909.—*Title:* "HIKER." (For Canvas Rubber-Sole Shoes.) HOOD RUBBER Co., Watertown, Mass. Filed December 23, 1916.

19,910.—*Title:* "GOLDEN GLOW ORANGE MARMALADE." (For Marmalade.) LAWRENCE & HARRISON Co., Baltimore, Md. Filed January 30, 1917.

19,911.—*Title:* "AGUINALDO." (For Cigars.) MANILA COMMERCIAL COMPANY, Manila, Philippine Islands, and New York, N. Y. Filed January 25, 1917.

19,912.—*Title:* "LEAK-PROOF PISTON RING." (For Piston-Rings.) MCQUAY-MORRIS MFG. Co., St. Louis, Mo. Filed October 30, 1916.

19,913.—*Title:* "OLD CURTIS WHISKEY." (For Whisky.) I. MICHELSON & BROTHERS, Cincinnati, Ohio. Filed January 27, 1917.

19,914.—*Title:* "HAY'S EAU DE QUININE TONIC." (For a Hair-Tonic.) PHILO HAY SPECIALTIES Co., Newark, N. J. Filed January 27, 1917.

19,915.—*Title:* "SULPHO-SAGE." (For a Compound for Coloring Gray and Faded Hair, to Assist in Removing Dandruff, as a Corrective of Itching Scalp, and as a Dressing for the Hair.) PHILO HAY SPECIALTIES Co., Newark, N. J. Filed January 31, 1917.

19,916.—*Title:* "HAY'S COCOANUT OIL SHAMPOO." (For a Hair-Shampoo.) PHILO HAY SPECIALTIES Co., Newark, N. J. Filed January 31, 1917.

19,917.—*Title:* "NATURE'S BLOOD AND CELL-FOOD." (For a Medicinal Preparation.) LYDIA POHLAND, Milwaukee, Wis. Filed January 29, 1917.

19,918.—*Title:* "SHREDDED WHOLE WHEAT." (For Shredded Whole Wheat.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed February 2, 1917.

19,919.—*Title:* "COLLIER'S." (For Cigars.) LEONARD J. STADEKER, Chicago, Ill. Filed January 26, 1917.

19,920.—*Title:* "AGATE FLOOR." (For Varnishes.) WADSWORTH, HOWLAND & Co., INCORPORATED, Boston, Mass. Filed September 7, 1916.

PRINTS

REGISTERED FEBRUARY 20, 1917.

4,621.—*Title:* "B. V. D. MEN'S UNION SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed February 2, 1917.

4,622.—*Title:* "B. V. D. 1917 MEN'S TWO PIECE SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed February 2, 1917.

4,623.—*Title:* "B. V. D. MEN'S UNION SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed February 2, 1917.

4,624.—*Title:* "B. V. D. MEN'S TWO PIECE SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed February 2, 1917.

4,625.—*Title:* "COOKING MAMA'S BREAKFAST." (For Wheat Breakfast Food.) CREAM OF WHEAT Co., Minneapolis, Minn. Filed January 23, 1917.

4,626.—*Title:* "FOURSOME." (For Automobiles.) KING MOTOR CAR COMPANY, Detroit, Mich. Filed December 22, 1916.

4,627.—*Title:* "FAMILY CAMBRIC." (For Cambric.) MEYER SMOLOWITZ, New York, N. Y. Filed August 5, 1916.

4,628.—*Title:* "THE NEW WAY." (For Type-Writing Instruction-Manuals, Shorthand Instruction-Manuals, Business-Letter-Writing Manuals, Bookkeeping Instruction-Manuals, and Commercial-Law Books.) THE TULLOSS SCHOOL COMPANY, Springfield, Ohio. Filed December 18, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

LIVINGSTON *v.* THOMPSON.

Decided December 4, 1916.

INTERFERENCE — PRIORITY — CONCURRENT DECISIONS BY OFFICE—BURDEN UPON APPELLANT.

Where the appellant is not only the junior party, but has three concurrent decisions by the Patent Office tribunals against him, he has a heavy burden and must clearly establish his case to prevail.

Mr. A. D. Kenyon for the appellant.

Mr. Nathan Heard and *Mr. F. A. Tennant* for the appellee.

SIDDONS, *J.*:

This is an appeal from a decision of the Assistant Commissioner of Patents, affirming a decision of the Examiners-in-Chief of the Patent Office, affirming a decision of the Examiner of Interferences, awarding priority of invention to the appellee of the device which is the subject-matter of the controversy. The decision appealed from was made in an interference proceeding, in which the appellant is the junior party and the appellee the senior.

The invention is described in the declaration of interferences as follows:

Count 1. In a pin ticket having a plurality of round-pointed double-shank pins formed of a single piece of wire, the wire between said pins engaging with the ticket to form a support therefor, the shank of said pins passing through the ticket and the free ends of the wire being bent to engage with both surfaces of the ticket to hold the pins in engagement therewith.

Count 2. In a pin ticket having a plurality of round-pointed double-shank pins formed of a single piece of wire, the wire between said pins being bent so as to engage with the upper and under sides of the ticket, the shanks of said pins passing through the ticket and the free ends of said wire engaging with both sides of the ticket to hold the pins in connection therewith.

The appellee's application for Letters Patent on the invention claimed by him was filed on April 7, 1913, and that of the appellant on July 29, 1913. The invention, no matter by whom made, is conceded to be a development of the device covered by Letters Patent issued to one J. Bayer, Jr., under date of April 16, 1912.

The controversy presented by the record turns upon the question who first invented the improvement to the Bayer device. The appellant claims as the date of his conception of the invention October 5, 1912, and the date of his reduction thereof to practice as of December 21, 1912. The appellee claims the summer of 1912 as the date of his conception of the invention, and that he made samples of the invention in August, 1912, and exhibited them to the head machinist of the Kimball Company, with which he was connected, during the latter part of that month, or early in September, with instructions to design attachments which could be incorporated in the machines used by the Kimball Company in order to produce the pin-ticket in question.

It is a pure question of fact between the contending parties as to which of them first invented the device. The Examiner of Interferences, after a full consideration of the evidence, awarded priority of invention to the appellee. Upon appeal from that decision to the Examiners-in-Chief, the decision was affirmed, and this last decision again affirmed on appeal by the Assistant Commissioner of Patents, from whose decision this appeal was taken. The situation in which the appellant finds himself is similar to that of the appellant in the case of *Swihart* v. *Mauldin*, (19 App. D. C., 570, 573,) where Mr. Justice Morris, speaking for the court, uses this language with respect to the appellant in that case:

The appellant comes here, not only as the junior applicant required to establish his case by a preponderance of evidence, but also with three concurrent decisions of the tribunals of the Patent Office against him, a fact which imposes upon him a still greater burden of proof in this court, as we have repeatedly held.

A careful examination of the testimony in the case makes it clear that the appellant has not met the burden of proof upon him, nor established his case by the preponderance of evidence required, while, on the other hand, the evidence entirely satisfies us that the appellee made the invention and reduced it to practice some weeks before the appellant claims to have done so.

No useful purpose will be served by a review or analysis of the testimony, and we therefore refrain from doing so.

The decision of the Assistant Commissioner of Patents is affirmed.

Affirmed.

Supreme Court of the United States.

ADAMSON *v.* GILLILAND.

Decided January 8, 1917.

1. PATENTS—INFRINGEMENT—ORIGINALITY — SIMILARITY IN THE DEVICES.

Where defendant alleged that he produced the device independently prior to the invention by plaintiff, but it appeared that defendant's device was an exact replica of plaintiff's, including features which plaintiff considered important to the operation, but which defendant claimed were placed there to be used as a talking-point to deceive the public, *Held* that it surpasses belief that the similarity arose by chance.

2. SAME—SAME—SAME.

Where there was evidence that one device was copied from the other and plaintiff had made public his device, while defendant had not, and no other channel of information between the two appeared to exist, *Held* that the plaintiff must be regarded as the originator of the device.

3. SAME—CREDIBILITY OF WITNESSES AND CONFLICTING TESTIMONY—TRIAL COURT FOLLOWED.

Where the finding of the master or judge who saw the witness turns upon the credibility of witness or upon conflicting testimony, it must be treated as unassailable so far as there is any testimony consistent therewith.

Mr. Percy B. Hills for Adamson.

Mr. James A. Carr for Gilliland.

Mr. Justice HOLMES delivered the opinion of the Court.

This is a suit brought by the petitioner for the infringement of a patent for a vulcanizing device—

including a vulcanizing member constructed to retain a combustible fluid upon and in contact with its upper surface, the lower surface of the vulcanizing member being adapted to be applied to the material to be vulcanized.

In other words the upper side of the upper of two sheets of metal, between which, when heated, the material is to be vulcanized, is fashioned as a cup in which gasolene can be burned to heat it. The specific character of the machine has made of it a valuable success. The respondent admitted making and selling devices like the plaintiff's, but alleged and testified that he made them first. In a previous suit by the plaintiff the plaintiff and the present defendant testified and District Judge Geiger gave the plaintiff a decree. In this case again the district judge in his turn saw the defendant and heard additional evidence, but, after criticizing it said that his own judgment was that the new testimony would not have changed Judge Geiger's opinion, and while professing to follow that opinion according to the usage of district judges in such matters, evidently, to our mind, signified that he agreed with Judge Geiger, although in terms only following what had been done. The circuit court of appeals treated the action of the district judge as a mere yielding to the authority of the former decision and reversed the decree upon the evidence as it stood in print.

We are unable to agree with the circuit court of appeals. There is no question that the plaintiff did not copy the defendant, that he put his invention into the market in November, 1911, and that the defendant did not put out his vulcanizer until February or March of the following year; but the defendant says that on August 7, 1911, twelve days before the plaintiff made the drawing that depicted his invention, he had had castings made that are substantially identical with the plaintiff's device and identical in particulars that the plaintiff's patent made material, but that the defendant declared to answer no useful end. The plaintiff's cup had pins projecting from the bottom arranged in circles around a central one, which his specification described as serving to conduct the heat of the flame downward into the vulcanizing-plate and the combustible fluid. The defendant's original casting showed pins of similar arrangement. He explained that the similarity was accidental, that the pins were of no use, but that—

we expected to tell the poor unsuspecting public that they conducted the heat * * * to the bottom of the vulcanizer,

"which is a false statement." It needs no emphasis to point out the improbability that the defendant at nearly the same time as the plaintiff should have hit by accident upon the same configuration in striking particulars that he regarded as immaterial, and, merely to deceive the public, have invented the same by no means obvious explanation that was offered seriously by the plaintiff but that the defendant regarded as false. The improbability is intensified by a further coincidence also explained by the defendant as accident. The lugs by which the cup was to be fastened to the lower surface happened to face in opposite directions in the plaintiff's device, although later they were made to face the same way. The defendant's also faced in opposite directions. It surpasses the power of belief that a man who testified that there was nothing in the invention, that it was merely arranging to fasten a ladle to a board, should have come by pure chance to make so exact a replica of the plaintiff's specific form. Inspection of the two castings shows more clearly than can words that one must have been a copy of the other. The plaintiff and defendant lived far apart. Adamson had no chance to copy Gilliland. On the other hand, after Adamson's vulcanizers were made public Gilliland could copy them. The man who made the castings shows that the resemblance was even more complete than we have stated by reason of the presence of a base-plate, although Gilliland denies that he had one at that time.

There is no doubt that the defendant had castings made. The essential question is the time when they first were made. We shall not discuss the evidence of those concerned in the making beyond recurring to the impression that the witnesses made upon the district judge and mentioning that a tray-ticket relied upon as fixing that date appears to have been open to grave suspicion from its character, marking, and other details. Considering that a patent has been granted to the plaintiff the case is preëminently one for the application of the practical rule that so far as the finding of the master or judge who saw the witnesses—

depends upon conflicting testimony or upon the credibility of witnesses, or so far as there is any testimony consistent with the finding, it must be treated as unassailable. (*Davis v. Schwartz*, 155 U. S., 631, 636.)

The reasons for requiring the defendant to prove his case beyond a reasonable doubt are stated in the case of *The Barbed Wire Patent, Washburn & Moen Manufacturing Co.* v. *The Beat 'Em All Barbed Wire Co.*, (143 U. S., 275, 284.) Upon these considerations and a review of the evidence we are of opinion that the decree must be reversed.

Decree reversed.

ADJUDICATED PATENTS.

(U. S. D. C.) The Baldwin patent, No. 1,009,011, for a starting device for gas-engines, *Held* not anticipated, valid, and infringed. *Crone* v. *John J. Gibson Co.*, 237 Fed. Rep., 637.

(U. S. D. C.) The Creveling patent, No. 747,686, for a system of electrical distribution as applied to axle-driven car-lighting apparatus, *Held* not infringed. *Safety Car Heating & Lighting Co.* v. *United States Light & Heat Corp.*, 237 Fed. Rep., 646.

(U. S. D. C.) The Greenway patent, No. 1,099,699, for a process of ore concentration, *Held* void for lack of invention. *Minerals Separation* v. *Miami Copper Co.*, 237 Fed. Rep., 609.

(U. S. D. C.) The Johnston patent, No. 1,044,533, for forms for openings in buildings, *Held* valid and infringed. *Johnston* v. *Davenport Brick & Tile Co.*, 237 Fed. Rep., 668.

(U. S. D. C.) The Mayer patent, No. 1,043,021, for a machine for coating paper, *Held* not anticipated, valid, and infringed. *Mayer* v. *Mutschler*, 237 Fed. Rep., 654.

(U. S. D. C.) The McElroy patents, Nos. 720,605 and 803,533, for systems of electrical distribution as applied to car-lighting, *Held* not infringed. *Safety Car Heating & Lighting Co.* v. *United States Light & Heat Corp.*, 237 Fed. Rep., 646.

(U. S. C. C. A.) The McKennan and Helander patent, No. 806,700, for links for conveyers, *Held* void for lack of invention. *American Casting Mach. Co.* v. *Pittsburgh Coal Washer Co.*, 237 Fed. Rep., 590.

(U. S. C. C. A.) The Mitchell and Gunn patent, No. 806,556, for a belt-stapling tool, construed and *Held* infringed. *Clipper Belt Lacer Co.* v. *E-W Co.*, 237 Fed. Rep., 602.

(U. S. C. C. A.) The Scott patent, No. 788,334, for an apparatus for casting metal, *Held* void on the ground that the patentee had caused the invention to be patented in a foreign country more than seven months prior to his application for the United States patent. *American Casting Mach. Co.* v. *Pittsburgh Coal Washer Co.*, 237 Fed. Rep., 590.

(U. S. D. C.) The Sulman, Ricard, and Ballot patent, No. 835,120, for a process of ore concentration, *Held* not anticipated and infringed as to claims 1 and 12 and claim 9 *Held* void as too indefinite. *Minerals Separation* v. *Miami Copper Co.*, 237 Fed. Rep., 609.

(U. S. D. C.) The Sulman, Greenway, and Higgins patent, No. 962,678, for a process of ore concentration, *Held* valid and infringed. *Minerals Separation* v. *Miami Copper Co.*, 237 Fed. Rep., 609.

(U. S. D. C.) The White patent, No. 770,488, for a printing-machine, *Held* void for lack of invention. *Hall Printing Press Co.* v. *George Mann & Co.*, 237 Fed. Rep., 662.

Changes in Classification.

(ORDER NO. 2,305.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, February 3, 1917.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 120, Stationery, (Division XXXVIII,) change the title of subclass 74, Letter-sheets and postal cards, to read—

74. Postal cards or packets,

abolish the existing definition, and establish in lieu thereof the following definition:

74. POSTAL CARDS OR PACKETS. Cards peculiarly adapted to be transmitted through the mails, either flat or folded, unless the invention lies in so forming the card as to provide means for holding it folded; also, packets comprising a mailing-sheet and inclosures. Generally the mailing-sheet bears advertising matter and the inclosure is a return-card.

Note.—Compare class 229, Paper Receptacles, subclass 92.1, Wrappers, Letter-sheets, and the subclasses indented thereunder.

In class 229, Paper Receptacles, (Division XL,) change the titles of subclasses 69, Envelops, Coin, and 72, Envelops, Pocket, to read, respectively,

Envelops—
69. Series,
72. Compartment,

abolish the existing definitions, and establish in lieu thereof the following definitions:

69. ENVELOPS, SERIES. Two or more envelops so connected together as to permit their being separated without opening the pockets.

Note.—Compare this class, subclass 72.

72. ENVELOPS, COMPARTMENT. Envelops having more than one pocket, but not so formed as to avoid any liability of opening the pockets if an attempt is made to separate them. The envelop may be made from one blank or more than one blank, and it is not essential that all the pockets have closing means.

Note.—Compare this class, subclass 69.

The patents formerly contained in subclass 69 have been placed in class 229, Paper Receptacles, subclasses 72, Envelops, Compartment; 87.5, Wrappers, Pocketed, and 92.9, Coin-cards, herein established, and in subclass 8.5, Boxes, Savings, and various other subclasses in the same class, and the patents now contained in subclass 69 have been taken for the most part from class 229, Paper Receptacles, subclasses 56, Bags, Compartment; 68, Envelops, and 72, Envelops, Compartment. Some of the patents formerly contained in subclass 72 have been placed in class 229, Paper Receptacles, subclasses 69, Envelops, Series, and 87.5, Wrappers, Pocketed, herein established, and in various other subclasses of the same class.

In same class, establish the following subclasses and definitions:

Wrappers—
87.5. Pocketed,
92.1. Letter-sheets—
92.3. Display,
Closures—
92.5. Fasteners,
92.7. Flap,
92.9. **Coin-cards.**

87.5. WRAPPERS, POCKETED. Wrapping sheets and cards having pockets which may be formed either by an attachment or by folding a portion of the blank to form a pocket separated from the main inclosed space.

92.1. WRAPPERS, LETTER-SHEETS. Wrapping-sheets designed to receive a written or printed communication and then to be folded into a form generally resembling the conventional envelop.

Note.—Devices which when folded form flat open-ended tubes are included, but not mere single-folded cards, unless some special fastening means is formed in the blank.

92.3. WRAPPERS, LETTER-SHEETS, DISPLAY. Having an opening or transparent panel, so that the address of the communication forms the address of the folded packet.

92.5. WRAPPERS, LETTER-SHEETS, CLOSURES, FASTENERS. Having special fastening means for securing the folded packet.

92.7. WRAPPERS, LETTER-SHEETS, CLOSURES, FLAP. Having flaps, generally resembling those of the conventional envelop, for securing the folded packet by means of an adhesive.

92.9. COIN-CARDS. Devices to receive coins and analogous articles for transmission through the mails and prevent them from moving in the package while in transit.

Search this class, subclasses 72 and 87.5, for envelops and wrappers having compartments and pockets which may be used for receiving coins.

The patents contained in subclasses 92.1, 92.3, 92.5, and 92.7, above, have been taken from class 120, Stationery, subclass 74, Letter-sheets and postal cards; those contained in subclass 92.9 have been taken from class 229, Paper Receptacles, subclass 69, Envelops, Coin, and those in subclass 87.5 have been taken from class 120, Stationery, subclass 74, Letter-sheets and postal cards, and class 229, Paper Receptacles, subclasses 69, Envelops, Coin, and 72, Envelops, Pocket, and subclass 87, Wrappers.

In same class, subclass 8.5, Boxes, Savings, abolish the existing definition and establish in lieu thereof the following definition:

8.5. BOXES, SAVINGS. Boxes and other receptacles of paper having a slit to receive coins and special means to hinder their being withdrawn through the opening.

Search Class—
232—DEPOSIT AND COLLECTION RECEPTACLES, appropriate subclasses.

THOMAS EWING,
Commissioner.

Officials of the Patent Office.

The following, being a list of the present officials of the Patent Office, is published for the convenience of those concerned. It is the purpose to publish notice of changes occurring from time to time hereafter:

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Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 30, 1917.

Wm. Schutte & Co., their assigns or legal representatives, take notice:

A cancelation proceeding has been instituted by this Office upon the application of Abraham A. Malouf, of 146 S. W. Temple street, Salt Lake City, Utah, to effect the cancelation of the trade-mark registration of Wm. Schutte & Co., of Barmen, Rhenish Prussia, Germany, registered January 6, 1885, No. 11,848, and the notice of such proceeding sent by registered mail to said Wm. Schutte & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Wm. Schutte & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 1, 1917.

The Bell Hosiery Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Rice-Stix Dry Goods Company, 1000 Washington avenue, St. Louis, Mo., for registration of a trade-mark and trade-mark registered November 24, 1908, No. 71,425, to The Bell Hosiery Company, 2333-45 North Mascher street, Philadelphia, Pa., and a notice of such declaration sent by registered mail to said The Bell Hosiery Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Bell Hosiery Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 235—No. 4. TUESDAY, FEBRUARY 27, 1917. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Trade-Marks	145	No. 115,569 to No. 115,713,	inclusive.
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Reissues	2	No. 14,284 to No. 14,285,	inclusive.
Total	980		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	7	.....	North Carolina	4	.....
Arizona	4	.....	North Dakota	7	.....
Arkansas	6	.....	Ohio	51	10
California	28	7	Oklahoma	7	.....
Colorado	14	1	Oregon	6	1
Connecticut	21	4	Pennsylvania	74	7
Delaware	.....	3	Rhode Island	11	.....
Florida	3	1	South Carolina	3	.....
Georgia	6	.....	South Dakota	3	.....
Idaho	2	.....	Tennessee	8	1
Illinois	67	24	Texas	13	3
Indiana	19	4	Utah	2	.....
Iowa	17	.....	Vermont	1	.....
Kansas	7	.....	Virginia	5	.....
Kentucky	5	3	Washington	10	.....
Louisiana	4	1	West Virginia	9	.....
Maine	2	1	Wisconsin	17	2
Maryland	12	2	Wyoming	.....	.....
Massachusetts	38	15			
Michigan	26	4	Alaska, District of	.....	.....
Minnesota	16	3	Canal Zone	1	.....
Mississippi	.....	1	District of Columbia	5	1
Missouri	16	4	Hawaii Territory	1	.....
Montana	7	.....	Philippine Islands	.....	.....
Nebraska	6	1	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	2	1	U. S. Navy	1	.....
New Jersey	34	10			
New Mexico	1	.....	Total to residents of the United States.	742	171
New York	124	56			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	1	.....	Netherlands	.....	.....
Belgium	.....	.....	New South Wales	1	.....
British India	.....	.....	New Zealand	1	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	13	2	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	1	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	.....	.....
England	17	2	Spain	1	.....
Finland	.....	.....	Sweden	4	.....
France	6	.....	Switzerland	2	.....
Germany	9	.....	Transvaal	.....	.....
Guatemala	.....	.....	Victoria	1	.....
India	.....	.....	Wales	.....	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	2	.....			
Japan	.....	.....	Total to residents of foreign countries	60	4
Mexico	.....	.....			

Notice—Assistant Examiner Examination.

The Civil Service Commission has announced an open competitive examination for the position of Assistant Examiner in the Patent Office on March 14, 15, and 16, 1917. Qualified persons are urged to enter this examination. Entrance salary, $1,500 per annum.

Application blanks and information as to where the examination will be held may be obtained from the Civil Service Commission, Washington, D. C.

Disclaimer.

916,812.—*August Weber, Sr., August Weber, Jr.,* and *John Weber,* Schenectady, N. Y. ELECTRIC-LAMP SOCKET. Patent dated March 30, 1909. Disclaimer filed February 19, 1917, by the assignee, *Weber Electric Company.*

Enters this disclaimer—

"To that part of the claim in said specification which is in the following words, to wit:

"2. In a device of the class described and in combination, a pair of interlocking, tubular sheet-metal members, one adapted to telescopically receive the other, having mutually abutting cut-metal edges on the respective members to prevent a telescopic movement of separation of one member from the other when interlocked; and having other interengaging means for preventing a relative rotative movement of the interlocked members."

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 23, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 21	Dec. 14	315
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Sept. 5	Dec. 26	552
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Feb. 8	Jan. 13	96
234	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Nov. 18	Feb. 1	262
167	5. Bookbinding; Harvesters; Jewelry; Music	Nov. 2	Jan. 6	273
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Oct. 30	Jan. 4	289
812	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Oct. 2	Nov. 24	682
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Aug. 2	Dec. 26	1103
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Aug. 21	Feb. 3	557
235	10. Carriages and Wagons; Spring Devices	Sept. 7	Jan. 19	873
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 26	Feb. 8	73
324	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Nov. 13	Feb. 7	576
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 4	Jan. 24	526
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Oct. 27	Dec. 22	302
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Jan. 24	Feb. 9	197
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Oct. 11	Jan. 8	610
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Dec. 1	Jan. 11	218
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Jan. 17	Jan. 13	204
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Aug. 22	Nov. 3	443
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 1	Feb. 1	182
182	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Nov. 6	Jan. 13	296
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Sept. 30	Dec. 29	500
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Sept. 5	July 25	361
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Nov. 4	Jan. 5	353
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 20	Jan. 22	140
105	26. Electricity, Generation; Motive Power	June 1	Dec. 4	617
375	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 16	Jan. 22	245
60	28. Internal-Combustion Engines	Oct. 21	Nov. 18	521
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Oct. 7	Dec. 9	350
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 18	Feb. 5	410
173	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Soft.	Oct. 7	Dec. 20	283
378	32. Carbonating Beverages; Dispensing Beverages; Dispensing: Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	July 12	Jan. 22	929
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Oct. 4	Jan. 16	346
104	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Aug. 25	Dec. 1	227
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Sept. 13	Feb. 3	642
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Oct. 21	Feb. 5	680
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	July 11	Dec. 27	793
278	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Jan. 29	Jan. 30	120
221	39. Water Distribution	Aug. 22	Jan. 16	335
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Oct. 31	Jan. 18	514
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Oct. 31	Jan. 5	426
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	July 31	Jan. 12	338
362	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 20	Nov. 21	126

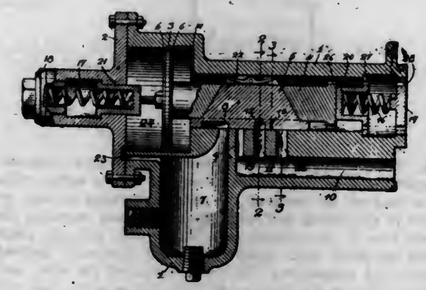
Oldest new case, June 1; oldest amended, July 25.
Total number of applications awaiting action..... 13,084

168	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 2	Feb. 10	775
	Designs	Dec. 19	Jan. 23	404
	Labels and Prints	Feb. 3	Feb. 7	114

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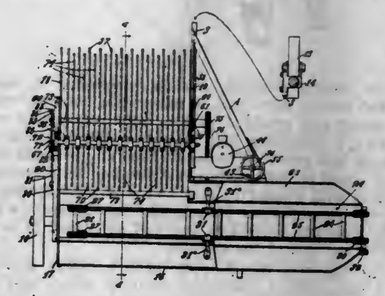
GRANTED FEBRUARY 27, 1917.

1,217,130. COMBINED AUTOMATIC AND STRAIGHT AIR VALVE MECHANISM. JOHN A. ADAMS, Nogales, Ariz., assignor, by mesne assignments, to Adams Air Brake Company, a Corporation of New Mexico. Filed Mar. 8, 1915. Serial No. 12,758. (Cl. 188—15.)



In an air brake system, a combined automatic and straight air valve mechanism for controlling the brakes, comprising a casing provided with a main piston valve chamber, a piston valve disposed in said chamber, packing rings for said piston valve, a piston valve rod extending through said piston valve, a passage for establishing communication between said main piston valve chamber and the auxiliary reservoir, a feed groove in the wall of the casing around said piston valve when the latter is moved from its normal position by an increase in the normal train brake pipe pressure, a cavity in the lower part of said valve casing to receive a supply of compressed air, a passage in the wall of the casing connecting said cavity with the main piston valve chamber, a passage connecting said cavity with the ports leading to the brake cylinder and means for establishing communication between the auxiliary reservoir and the brake cylinder, said means comprising a slide valve operated by the movement of said piston valve by increasing or reducing the train brake pipe air pressure by the manipulation of the engineer's brake valve, a port connecting the brake cylinder with the auxiliary reservoir air pressure normally covered and adapted to be uncovered when a reduction in the train brake pipe is made for an automatic application of the brakes and means for controlling the exhaust port and establishing communication between the train line cavity and the passage connecting with the brake cylinder for a straight air application of the brakes, said means comprising a slide valve, a passage in said slide valve, a port connecting passage leading from the brake cylinder to said slide valve, said port being normally covered and adapted to be uncovered by the movement of the piston valve when the train brake pipe normal pressure is increased for a straight air application of the brakes, an exhaust port through the slide valve connecting the passage leading from the brake cylinder to the atmosphere normally uncovered and adapted to be covered by the movement of the piston valve, by either increasing or reducing the normal train brake pipe air pressure to make an automatic or straight air application of the brakes, springs for moving the piston valve to its normal position when the air pressure is equalized on both sides, a port through slide valve to vent auxiliary reservoir pressure to brake cylinder when a straight air application of the brakes is made, a cap for closing the main piston valve chamber, bushings for limiting the movement of springs and holding the piston valve in its normal position, a plug for closing the spring cavity in the cylinder cap and a backing plug to hold spring in position with passage for air to the auxiliary reservoir.

1,217,131. GATHERING AND LOADING MACHINE. GUSTAV ANDERSON and HENRY P. HOFSTRAND, St. Louis Park, Minn. Filed Mar. 2, 1916. Serial No. 81,720. (Cl. 56—61.)



1. In a machine of the character described, a rotary elevator having a shaft and a set of arms, a stripper having arms movable between the aforesaid arms to strip the material therefrom which is raised by the elevator, means for rotating the elevator, and means for oscillating the stripper so that its arms are swung to and from said shaft.

2. In a machine of the character described, a conveyer device, a rotary elevator having a shaft and a set of arms, and an oscillatory stripper having a set of arms to work between the aforesaid arms and move to and from said shaft for stripping the material from the elevator and forcing it into the conveyer device.

3. In a machine of the character described, a conveyer device, a rotary elevator having a shaft and a set of arms, an oscillatory stripper having a set of arms movable between the aforesaid arms, means for actuating the elevator and conveyer device, and means for oscillating the stripper whereby its arms move to and from said shaft to strip the material from the first mentioned arms and forces the material into the conveyer device.

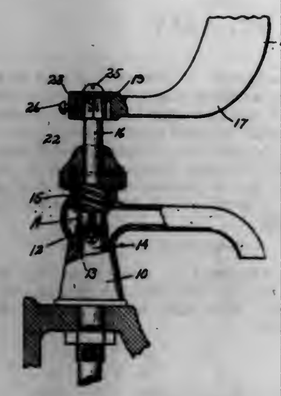
4. In a machine of the character described, a gathering rake having curved teeth, a rotary elevator coöperating with the rake and having a shaft and a set of arms, and an oscillatory stripper having a set of arms movable between the aforesaid arms to and from said shaft to strip the material therefrom.

5. In a machine of the character described, a conveyer device, a gathering rake in rear thereof having curved teeth, a rotary elevator coöperating with the rake and having a shaft and a set of arms, and an oscillatory stripper

having a set of arms movable between the aforesaid arms to and from said shaft for stripping the material therefrom and forcing it into the conveyer device.

[Claims 6 to 19 not printed in the Gazette.]

1,217,132. FAUCET. WILLIAM AMOS, Providence, R. I. Filed Jan. 6, 1915. Serial No. 866. (Cl. 137—4.)



1. An improvement in faucets comprising a casing provided with a valve seat, a valve stem working within said casing and provided with a valve coöperating with said seat, a removable hub carried by the upper end of said stem and rotatable therewith, and an operating lever having a boss inclosing said removable hub and adjustable angularly with respect to said hub, said lever having an outwardly extended flat plate, projecting upwardly a substantial distance above said hub and positioned to be engaged by the arm of the operator.

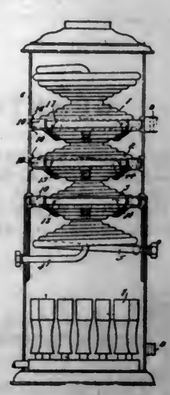
2. An improved faucet, comprising a casing provided with a valve seat, a valve stem working within said casing and provided with a valve coöperating with said seat, a hub removably attached to said stem and rotatable therewith, said hub being provided with peripheral serrations, a lever provided with a boss having a socket to receive said hub, said socket being closed at one end, a fastening device extending through the closed end of the boss to detachably connect said boss and stem, said lever having an outwardly extended flat plate projecting upwardly a substantial distance above said hub and positioned to be engaged by the arm of the operator, and a radially disposed set screw carried by said boss and positioned to selectively engage the peripheral serrations of said hub.

1,217,133. WATER-HEATER. CHARLES A. BACKSTROM, Crafton, Pa., assignor to Pittsburg Water Heater Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 24, 1915. Serial No. 36,012. (Cl. 122—250.)

1. The combination with a casing and a water container comprising a vertical series of sets of double spiral coils, of a support for each of the sets comprising a ring secured to the casing and open on one side and engaging the lower side of the central turn of the coil.

2. The combination with a casing and a water container comprising a vertical series of sets of double spiral coils, of a support for each of the sets comprising a ring secured to the casing and open on one side and engaging the lower side of the central turn of the coil, the said rings being provided with downwardly and inwardly inclined fingers for supporting the lower turns of the sets.

3. The combination with a casing and a water container comprising a vertical series of sets of double spiral coils, of a support for each of the sets comprising a ring secured to the casing and open on one side and engaging the lower side of the central turn of the coil, and means for securing the coils against upward movement with respect to the rings.



4. The combination with a casing and a water container comprising a vertical series of sets of double spiral coils, of a support for each of the sets comprising a ring secured to the casing and open on one side and engaging the lower side of the central turn of the coil, the said rings being provided with downwardly and inwardly inclined fingers for supporting the lower turns of the sets, and means between the fingers and coils for securing the coils against upward movement with respect to the fingers.

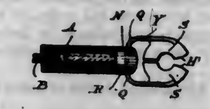
5. The combination with a casing having lugs cast in pairs on its opposite sides and a water container comprising a vertical series of sets of double spiral coils, of a series of supports for the sets comprising rings open at their fronts and fitting between the said pairs of lugs, and means for securing the rings against movement laterally from between the said pairs of lugs, the rings being formed to engage and support the larger turns of the said coils.

1,217,134. PROCESS OF CURING MEATS. HARRY D. BAUMGARDNER, Frederick, Md. Filed July 11, 1913. Serial No. 778,479. (Cl. 99—1.)

The process of curing meat which consists in preparing a brine by mixing, for approximately every 100 pounds of meat, about seven pounds of coarse salt, two pounds of brown sugar, and two ounces of saltpeter, adding to these ingredients four gallons of soft water, then boiling the mixture and stirring during the boiling until all the solids are dissolved, skimming off the waste products rising to the surface and after the whole is thoroughly mixed and in solution, allowing it to cool; pouring the cooled brine thus formed over the meat (approximately one houndred pounds) and allowing the meat to remain in the brine for a period of about five weeks, then removing and curing the meat by smoking, substantially as set forth.

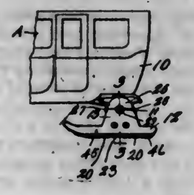
1,217,135. FASTENING-CLIP FOR WIRE-TERMINALS. CHARLES W. BECK, Detroit, Mich., assignor to The Beck-Frost Corp., a Corporation of Michigan. Filed July 5, 1912, Serial No. 707,655. Renewed Aug. 12, 1916. Serial No. 114,627. (Cl. 173—269.)

1. A fastening clip, comprising an attaching section, a resilient U-shaped bracket connected to said attaching section provided with jaw members at the outer ends of the arms of said bracket, said jaw members extending transversely of the planes of said arms and having their opposing edges angularly inclined toward one another, with those portions of their opposing edges next within said inclined portions partially surrounding an included rounded space.



2. The combination of an attaching section, a U-shaped bracket having a base thereof connected to the attaching section, said bracket projecting outwardly from the attaching section, and jaw members carried by and extending inwardly from said arms having coöperating bearing portions on their opposed edges, there being an entrance opening leading from the forward ends of said jaws to the bearing portions, and the arms of said bracket being resilient and adapted to move said jaws toward one another.

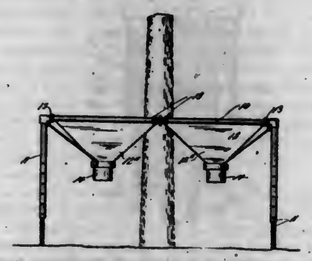
1,217,136. RUNNER ATTACHMENT. THOMAS A. BEARD, Escanaba, Mich. Filed June 5, 1916. Serial No. 101,809. (Cl. 21—47.)



1. A runner attachment for motor propelled vehicles, comprising a body provided with a longitudinal channel, a propelling worm rotatably mounted in the channel and projecting therebelow, a sprocket on said worm, a housing supported upon the upper face of the body and communicating with the channel, a drive wheel journaled in the housing for application to the drive axle of the vehicle, guide rollers mounted in the housing between said wheel and sprocket, and a chain trained around said wheel and sprocket and directed between the rollers.

2. A runner attachment for motor propelled vehicles, comprising a body provided with a channel having alined bearings in its end walls, a shaft journaled in the bearings, spaced propelling worms keyed to the shaft and projecting beyond the channel, a sprocket loose on the shaft and interposed between said worms, locking means between the sprocket and said worms, and drive means associated with the sprocket to rotate the worms.

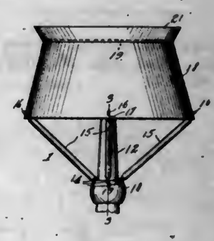
1,217,137. FRUIT-HAMPER. FREDERICK F. BEHRENS, Springfield, Ohio. Filed July 16, 1915. Serial No. 40,218. (Cl. 56—99.)



A fruit hamper comprising a frame, a canvas stretched across and secured thereto, an auxiliary canvas superimposed and spaced away from said first mentioned canvas and flared to cover the central portion of said first mentioned canvas, said first mentioned canvas providing a plurality of hoppers, means for securing said frame to the trunk of a tree, said means comprising a chain circumferentially disposed about the trunk of said tree, means for connecting the ends of said chain, blocks laced upon said chain having inwardly protruding spurs and extending eyelets, means connecting said eyelets with the frame, and means for spacing the mouths of said hoppers from the frame consisting of links connecting said mouths with the frame and chain respectively.

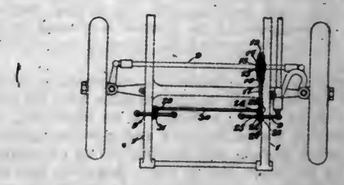
1,217,138. [WITHDRAWN.]

1,217,139. PORTABLE STOVE. LAURA A. BERGEN, San Francisco, Cal. Filed May 5, 1916. Serial No. 95,657. (Cl. 126—249.)



A portable stove comprising a hollow globular member open at the upper and lower sides and provided at its upper side with a series of openings adjacent the first-mentioned opening in its upper side, arms having eyes at their lower ends engaged in said openings, and means to hold the arms releasably in upwardly extending spread position and to support a vessel, said means comprising a frusto-conical annulus having openings adjacent its lower edge, the free ends of the arms being bent upwardly to form shoulders against which said annulus rests and then outwardly to form engaging means to enter said openings in the annulus.

1,217,140. DIRIGIBLE HEADLIGHT. DAVID BITTNER, Jr., St. Louis, Mo. Filed Oct. 30, 1916. Serial No. 128,465. (Cl. 240—62.)



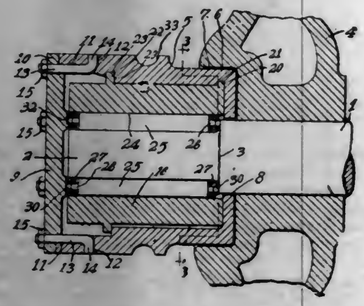
1. A dirigible headlight mechanism including a tubular lamp-bearing, a lamp-support rotarily seated on said bearing, said support having a clutch-recess, a shaft extending longitudinally through the lamp-bearing, means for connecting the shaft at one end with the steering mechanism of a vehicle, and a clutch-member on the shaft at its other end, said clutch-member being adapted for engagement with the clutch-recess of the lamp-support.

2. A dirigible headlight mechanism including a tubular lamp-bearing, a lamp-support rotarily seated on said bearing, said support having a clutch-recess in alinement with the bore of the tubular bearing, a shaft extending

longitudinally through the lamp-bearing, means for connecting the shaft at one end with the steering mechanism of a vehicle, a clutch-member on the other end of the shaft adapted for releasable engagement with said clutch-recess, and means on the shaft for actuating the same to engage and disengage the clutch-member with and from the clutch-recess.

3. A dirigible headlight mechanism including a tubular lamp-bearing, a lamp-support rotarily seated on said bearing, said support having a bore and clutch-recess alining with the bore of said bearing, a shaft extending at its upper end longitudinally through the bearing and the bore and clutch-recess of said support, means for connecting the shaft at its lower end with the steering mechanism of a vehicle, a clutch-member on the shaft adapted for releasable engagement with said clutch-recess, and means on the upper end of the shaft for actuating the shaft to engage and disengage the clutch-member with and from the clutch-recess, said last-named means including a cam-member rotarily movable on the shaft, and pins on the shaft for coöperating with the cam-member.

1,217,141. JOURNAL-BEARING. GEORGE FRED BLUME, Richmond, Ind. Filed Aug. 25, 1916. Serial No. 116,880. (Cl. 64—62.)



1. A journal bearing construction embodying a journal box, and a journal bearing therein, said box and bearing having coöperating upwardly converging sides whereby the bearing in its upward movement within the box fits tightly therein.

2. A journal bearing construction embodying a journal box, and a journal bearing therein, said box and bearing having coöperating upwardly converging sides whereby the bearing in its upward movement within the box fits tightly therein, said bearing and box having portions adapted to interengage by an upward movement of the bearing in the box to prevent the outward movement of the bearing.

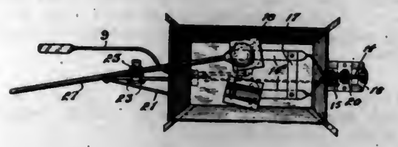
3. A journal bearing construction embodying a journal box, having an outwardly facing shoulder near its outer end and an upper groove adjacent to its inner end, and a journal bearing within said box and movable upwardly and downwardly therein, said bearing having an upstanding flange at its inner end to move upwardly into said groove, and having an outstanding flange in its outer end to seat against said shoulder.

4. A journal bearing construction embodying a journal box having an outwardly facing shoulder near its outer end and an upper groove adjacent to its inner end, and a journal bearing within said box and movable upwardly and downwardly therein, said bearing having an upstanding flange at its inner end to move upwardly into said groove, and having an outstanding flange in its outer end to seat against said shoulder, said box and bearing having upwardly converging sides whereby the bearing fits tightly within the box when it is moved upwardly to bring the first mentioned flange into said groove.

5. A journal bearing construction embodying a journal box, a journal bearing in said box, an axle having a reduced journal projecting into said bearing and providing a shoulder, anti-frictional rollers between said journal and bearing and adapted to take up the outward thrust of said axle from said shoulder, and means for transmitting the end thrust from the outer ends of said rollers to the journal box.

[Claims 6 to 10 not printed in the Gazette.]

1,217,142. GLASS-BLOCKING MACHINE. AUGUST HENRY BOSSON, Charleroi, Pa., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 9, 1913. Serial No. 772,514. (Cl. 49—15.)



1. A glass blocking apparatus comprising in combination a tank, a block supporting arm pivotally supported therefrom and normally yieldingly held in raised position, a treadle, and lever mechanism connecting the treadle and the arm whereby said arm may be lowered into the tank.

2. A glass blocking apparatus comprising in combination a tank, a bracket secured thereto, a block supporting arm, pivoted at one end to said bracket, a spring bearing against said bracket and said spring normally holding the arm in raised position, a treadle and a connection from the treadle to said arm.

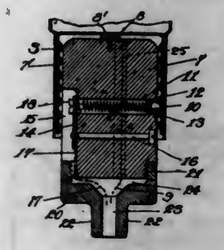
3. A glass blocking apparatus comprising a pair of blocks, a blow-pipe support arranged adjacent thereto and providing a universal mounting for a blow-pipe, and a blow-pipe removably supported in said support.

4. A glass blocking apparatus comprising in combination a block, a supporting arm therefor movably mounted, means for moving said arm, a blow-pipe support provided with means for adjusting it toward and away from the said block and mounted for rotary movement about a vertical axis and for vertical movement.

5. A glass blocking apparatus comprising in combination a tank, a block supporting arm pivotally supported on one end of said tank, a blow pipe support mounted on the other end of said tank, and means for moving said arm operable from the said last end of the tank.

[Claim 6 not printed in the Gazette.]

1,217,143. CONNECTING-PLUG. AUGUST BOUCHERY, Brooklyn, N. Y. Filed Apr. 3, 1915. Serial No. 18,874. (Cl. 173—360.)



1. A plug comprising a block of insulating material, a contact movably carried within said block having a portion to project through an opening in the side of the

block, yielding means within the block to yieldingly force the contact through the opening, and means carried by the block to retain the yielding means in the block and coöperate therewith to complete the circuit, substantially as and for the purpose specified.

2. A plug comprising a block of insulating material, a contact movably carried within the block, a portion of which contact is adapted to project through an opening in the side of the block, means within the block to yieldingly force the contact through the opening, and means within the outer contour of the block to which a current conductor is adapted to be connected to retain the yielding means in the block and coöperate therewith to complete the circuit, substantially as and for the purpose specified.

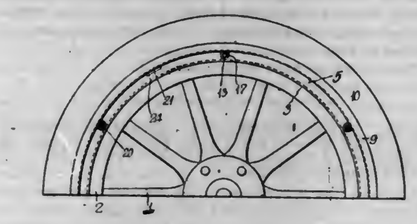
3. A plug comprising a block of insulating material having an aperture extending transversely therethrough, and a contact movably carried in said aperture to constitute the means to retain the plug in the socket.

4. A plug comprising a block of insulating material having an aperture extending transversely therethrough, a contact element carried at one end of said block, and a contact yieldingly mounted in the aperture, substantially as and for the purpose specified.

5. A plug comprising a block of insulating material having an aperture extending transversely therethrough, a contact element carried at one end of the block, a contact movably mounted in the aperture adapted to have a portion to project beyond the side of the block, and yielding means within said aperture to coöperate with the contact, substantially as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,217,144. DEMOUNTABLE RIM. HAROLD J. BRADT, Royal Oak, Mich. Filed Apr. 12, 1916. Serial No. 90,767. (Cl. 152—21.)



1. In a vehicle wheel, a channel rim having flanges, a demountable rim adapted to fit on said rim flanges, said demountable rim having an annular raised portion, rotatable locking members journaled in the flanges of said channel rim and adapted to extend into the raised portion of said demountable rim, and means at the outer ends of said locking members limiting the rotative movement of said members.

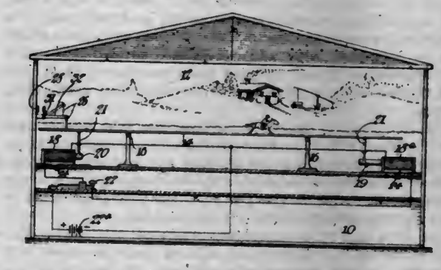
2. In a vehicle wheel, a channel rim having flanges, a demountable rim adapted to fit on said rim flanges, said demountable rim having an annular raised portion, rotatable members journaled in the flanges of said channel rim and adapted to extend into the raised portion of said demountable rim, means at the outer ends of said locking members limiting the rotative movement of said members, and means carried by said demountable rim extending into the flanges of said channel rim adapted to prevent circumferential movement of said demountable rim relative to said channel rim.

3. In a vehicle wheel, a channel rim having side flanges, a demountable rim adapted to fit on said rim flanges and formed with an annular raised portion providing annular shoulders, rotatable locking members in said channel rim adapted to extend into the raised portion of said demountable rim and engage the annular shoulders thereof, said members having flat facets adapted to be placed in a plane with the edges of the flanges of said channel rim to permit of said demountable rim being laterally moved, and means carried by said demountable rim and engaging in the flanges of said channel rim adapted to prevent circumferential movement of said demountable rim relative to said channel rim.

4. In a vehicle wheel, a channel rim, a demountable rim on said channel rim having raised portions, and rotatable members in said channel rim adapted to extend into the raised portion of said demountable rim, said rotatable members having shoulders at the outer ends thereof to impinge against said demountable rim and limit the rotation of said members in said demountable rim.

5. In a vehicle wheel, a fixed rim, a demountable rim thereon having annular shoulders, and members in said fixed rim adapted to have the ends thereof engage the shoulders of said demountable rim to prevent lateral displacement of said demountable rim relative to said fixed rim, said members having flat facets adapted to confront said demountable rim and permit of said channel rim being moved on said fixed rim.

1,217,145. RACE-GAME APPARATUS. PETER K. BRENNER, New York, N. Y. Filed May 13, 1916. Serial No. 97,234. (Cl. 46—56.)



1. In a race game apparatus, the combination of a support, a table thereon free to be actuated in opposite directions, a racing object on said table, operating means, including an electrical circuit and a solenoid in said circuit, for actuating said table to move said object relative to said table, and means for closing and opening said circuit to energize and deënergize said solenoid.

2. In a race game apparatus, the combination of a support, a table thereon free to move on a horizontal plane in opposite directions, a racing object on said table, operating means, including an electrical circuit and a solenoid in said circuit, for actuating said table, and means for varying the velocity of movement of the table in one direction and thereby move the racing object relative to the table.

3. A race game apparatus, comprising, in combination, a plurality of racing tables for individual players, means for supporting said tables in position to be moved in opposite directions, racing objects on said tables adapted to be moved relative to the table by reverse non-uniform movements of the latter, means, including a solenoid, for actuating said tables to cause such relative movement of said objects, and means controlled by the respective players adapted to govern and control such relative movement.

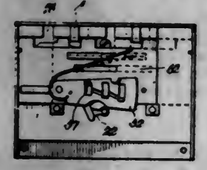
4. A race game apparatus, comprising, in combination, a plurality of racing tables for individual players, means for supporting said tables in position to be moved in opposite directions, racing objects on said tables to be moved relative to the tables by reverse non-uniform movements of the latter, means, including a solenoid, for actuating said tables, and means controlled by the respective players adapted to govern and control said actuating means and thereby govern and control the relative movement of said objects on said tables.

5. A race game apparatus, comprising, in combination, a plurality of racing tables for individual players, means for

supporting said tables in position to be moved in opposite directions, racing objects on said tables to be moved relative to the tables by reverse non-uniform movements of the latter, means, including a solenoid, for actuating said tables, and means controlled by the respective players adapted to govern and control the movements of the respective tables and thereby govern and control the relative movement of said racing objects on said tables.

[Claims 6 to 14 not printed in the Gazette.]

1,217,146. TRUNK-LOCK. MATTHEW BURDA, Chicago, Ill. Filed May 31, 1916. Serial No. 100,778. (Cl. 70—27.)



1. In a lock of the character described, the combination of a casing and a bolt-carrying sliding plate adapted to be received therewithin, means carried upon said plate adapted to coöperate with and be engaged by the key, and a spring-controlled bolt adapted to be unlocked by the action of the key and to be locked by the action of said sliding plate.

2. In a lock of the character described, the combination of a casing, a bolt-carrying sliding plate provided with recesses, which recesses are adapted successively to receive the key thereby to actuate said bolt-carrying plate, a pivoted member also carrying a bolt, and means actuated by the key for operating said pivoted member.

3. In a lock of the character described, the combination of a casing, a bolt-carrying sliding plate provided with recesses, which recesses are adapted successively to receive the key, thereby to actuate said bolt-carrying plate, a pivoted member also carrying a bolt, and means actuated by the key for operating said pivoted member, said sliding plate and said pivoted bolt being actuatable independently of each other.

4. In a lock of the character described, the combination of a casing, a bolt-carrying sliding plate, a casing within which said plate is received, there being openings in said sliding plate into which the means to be locked are adapted to pass, a pivoted member also coöperating with the means to be locked, means independent of said sliding plate adapted to permit the movement of said pivoted member in one direction, and means actuated by the plate adapted to cause the movement of the pivoted member in the opposite direction.

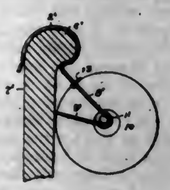
5. In a lock of the character described, the combination of a casing, a bolt-carrying sliding plate adapted to be received therewithin, said plate being adapted to be actuated by the key, a bolt mounted in the casing, and means intermediate said last-mentioned bolt and said plate whereby said last-mentioned bolt is moved in one direction by said plate, and means actuated by the key adapted to move said last-mentioned bolt in the opposite direction.

[Claims 6 to 13 not printed in the Gazette.]

1,217,147. BATH-TUB ATTACHMENT. FRED W. BURWELL, East Cleveland, Ohio. Filed Mar. 18, 1916. Serial No. 85,044. (Cl. 211—31.)

1. An attachment for bath tubs, comprising an arched frame to seat upon the bath tub rim having inturned projecting portions to engage the bottom edge of said rim and embodying downwardly-extending leg portions and laterally-projecting foot portions combined with a spindle to support a roll of paper at the side of said tub.

2. An attachment for bath tubs, comprising an open frame having hook portions to engage the bath tub rim and pendent portions and an axial support for a roll of paper, in combination with a paper severing plate slidably engaged with said pendent portions.



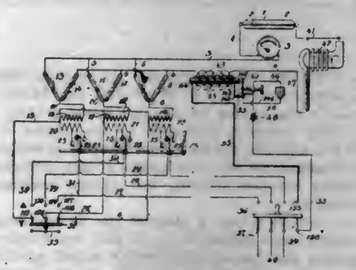
3. An attachment for bath tubs, comprising a wire frame having a curved upper portion to engage the bath tub rim and parallel leg and rest portions and an axial member to support a roll of paper at the side of the tub, in combination with a paper severing plate having notched and deflected ends slidably engaged with said leg portions and adapted to prevent tilting of said plate in severing the paper.

4. A new article of manufacture adapted to support a paper roll on a bath tub and consisting of a wire frame having two legs with a cross connection at one end and bent into rounded hook shape at said connected end to seat upon the rim of a tub and the free ends of said legs bent at substantially right angles to provide a support for the spindle of a paper roll, the said legs having shoulders at the termination of said hook shape portions.

5. An attachment adapted to support a roll of toilet paper on a bath tub consisting of a wire frame curved at its top into approximately hook shape to seat upon the rim of the tub and having legs provided with laterally extending braces at the ends thereof, in combination with a roll supporting spindle seated on said legs in the angle at the base of said braces.

[Claim 6 not printed in the Gazette.]

1,217,148. X-RAY APPARATUS. EUGENE W. CALDWELL, New York, N. Y. Filed July 15, 1911. Serial No. 638,628. (Cl. 250—34.)



1. In X-ray apparatus, three-phase transformers, an operating switch to simultaneously connect the primaries of said transformers to a three-phase supply circuit, a working circuit comprising an X-ray tube, a series of Villard type valve tubes connecting each of said transformer secondaries to each side of said working circuit to deliver superimposed rectified impulses thereto, said working circuit comprising a starting and equalizing coil tending to equalize the normal working current passing therethrough, a magnetic core coöperating with said equalizing coil; a starting circuit comprising a starting primary and contacts connected to said core in series with said starting primary and contacts connected to said operating switch to send intermittent high potential impulses through said working circuit until the normal working current passes therethrough and holds open said magnetic break.

2. In X-ray apparatus, three-phase transformers, an operating switch to simultaneously connect the primaries of said transformers to a three-phase supply circuit, a working circuit comprising a high potential vacuum tube, a series of vacuum valve tubes connecting each of said transformer secondaries to each side of said working circuit to deliver superimposed rectified impulses thereto, said working circuit comprising a starting and equalizing coil tending to equalize the normal working current passing therethrough, a magnetic core coöperating with said equalizing coil; a starting circuit comprising a starting primary coöperating with said core to energize the same, a source of potential, a magnetic break operated by said core in series with said starting primary and contacts connected to said operating switch to send intermittent high potential impulses through said working circuit until the normal working current passes therethrough and holds open said magnetic break; an ammeter in said working circuit and a luminous oscilloscope in said working circuit and coöperating with said ammeter to illuminate the same.

3. An X-ray apparatus, three-phase transformers, a working circuit comprising an X-ray tube, a series of Villard type self-regulating valve tubes connecting each of said transformer secondaries to each side of said working circuit to deliver superimposed rectified impulses thereto, said working circuit comprising an equalizing coil tending to equalize the normal working current passing therethrough and a magnetic core coöperating with said equalizing coil.

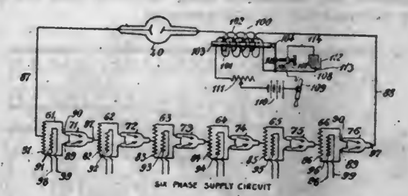
4. In X-ray apparatus, three-phase transformers, a working circuit comprising an X-ray tube, one or more Villard type valve tubes connecting each of said transformer secondaries to each side of said working circuit to deliver superimposed rectified impulses thereto, said working circuit comprising an equalizing coil tending to equalize the normal working current passing therethrough and a magnetic core coöperating with said equalizing coil.

5. In X-ray apparatus, polyphase transformers, an operating switch to simultaneously connect the primaries of said transformers to a polyphase supply circuit, a working circuit comprising an X-ray tube, a series of Villard type valve tubes connecting each of said transformer secondaries to each side of said working circuit to deliver superimposed rectified impulses thereto, said working circuit comprising a starting and equalizing coil tending to equalize the normal working current passing therethrough, a magnetic core coöperating with said equalizing coil; a starting circuit comprising a starting primary coöperating with said core to energize the same, a source of potential, a magnetic break operated by said core in series with said starting primary and contacts connected to said operating switch to send intermittent high potential impulses through said working circuit until the normal working current passes therethrough and holds open said magnetic break; an ammeter in said working circuit and a luminous oscilloscope in said working circuit and coöperating with said ammeter to illuminate the same.

[Claims 6 to 19 not printed in the Gazette.]

1,217,149. X-RAY APPARATUS. EUGENE W. CALDWELL. New York, N. Y. Filed May 18, 1914. Serial No. 839,230. (Cl. 250—34.)

1. In X-ray apparatus, a working circuit comprising an X-ray tube and four high potential polyphase alternating current units each having three-phase windings connected together at a mid point and having ends one-twelfth phase out of phase with the ends of the other units, self-regulating vacuum valve tubes interposed in the working circuit between each of said units and each having a cathode terminal connected to the mid-point of the succeeding point and having three separated anode terminals each connected to one of the ends of the preceding unit to superimpose in said working circuit the rectified polyphase impulses from each of said units connected in series and an equalizing inductance connected in series with said working circuit.



2. In X-ray apparatus, a working circuit comprising an X-ray tube and four high potential polyphase alternating currents units each having three three-phase windings connected having ends one-twelfth phase out of phase with the ends of the other units, vacuum valve tubes interposed in the working circuit between each of said units and each having a cathode terminal connected to the mid-point of the succeeding unit and having three separated anode terminals each connected to one of the ends of the preceding unit to superimpose in said working circuit the rectified polyphase impulses from each of said units connected in series and an equalizing inductance connected in series with said working circuit.

3. In X-ray apparatus, a working circuit comprising an X-ray tube and a plurality of high potential polyphase alternating current units each having three-phase windings having ends out of phase with the ends of the other units, vacuum valve tubes interposed in the working circuit between each of said units to superimpose in said working circuit the rectified polyphase impulses from each of said units connected in series and an equalizing inductance connected in series with said working circuit.

4. In X-ray electrical apparatus, a working circuit comprising an X-ray tube and a plurality of high potential polyphase alternating current units each having a plurality of polyphase windings connected together at a mid point and having ends out of phase with the ends of the other units, self-regulating vacuum valve tubes interposed in the working circuit between each of said units and each having a cathode terminal connected to the mid-point of the succeeding unit and having separated anode terminals each connected to one of the ends of the preceding unit to superimpose in said working circuit the rectified polyphase impulses from each of said units connected in series and an equalizing inductance connected in series with said working circuit.

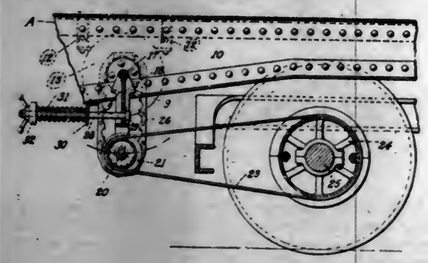
5. In X-ray apparatus, a working circuit comprising an X-ray tube and an inductance current equalizer and a series of more than three interchangeable polyphase alternating current high potential transformer units each having a plurality of polyphase secondary windings each of which are in different phase connected in series in said working circuit, a series of self-regulating vacuum valve tubes in circuit between each of said secondary windings and each having its cathode connection connected to an intermediate point of the succeeding winding and having its separated anode terminals connected to the ends of the preceding winding to superimpose the polyphase current impulses from each of said units.

[Claims 6 to 17 not printed in the Gazette.]

1,217,150. POWER-TRANSMISSION SYSTEM. EDMUND D. CAMPBELL, St. Louis, Mo. Filed July 28, 1916. Serial No. 111,963. (Cl. 105—238.)

1. In a power transmission system for railway cars, the combination comprising a generator fixed to the car body, a driving pulley fixed to a rotating truck axle, and a swinging power transmission mechanism operatively suspended independently of said pulley and generator.

2. In a power transmission system for railway cars comprising a generator fixed to the car body and a swiveling axle pulley, and swinging unitary transmission mechanism between and connected with said axle pulley and generator, said mechanism being supported from the car body independently of said generator.



3. In a power transmission system for railway cars, a generator fixed to the body of the car, a unitary power transmission member supported from the car body independently of said generator but axially alined therewith and adapted to swing concentrically about the same, and an axle pulley, and means carried by said swinging transmission member operatively connected with said axle pulley and the generator.

4. In a power transmission system for railway cars including a generator fixed to the car body and an axle pulley, an independent unitary power transmitting member operatively suspended from the car body and adapted to yield to the movements of said axle pulley.

5. In a power transmitting system for railway cars including a generator fixed to the car body and arrsnged transversely of the car, an independently suspended unitary power transmitting member operatively connected to said generator, an axle pulley, and means connecting the transmitting member with the axle pulley, said unitary power transmitting member being adapted to yield to the movements of said axle pulley.

[Claims 6 to 8 not printed in the Gazette.]

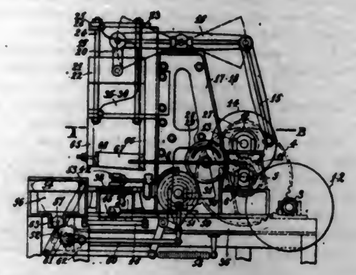
1,217,151. ARRANGEMENT FOR IMPROVING THE WORKING OF EIGHT-CYLINDER TWO-CYCLE INTERNAL-COMBUSTION ENGINES. GEORGES EUGÈNE CANHAC, St.-Denis, France, assignor to Societe Anonyme Des Etablissements Delaunay Belleville, St.-Denis, France. Filed Mar. 30, 1916. Serial No. 87,775. (Cl. 123—52.)



1. A two-stroke cycle engine of the Diesel type, consisting of eight working cylinders, two scavenging air compressors and two blast air compressors, the cylinders being grouped so that four of the working cylinders are located adjacent to a compressor cylinder and the other four are located at a distance from a compressor not exceeding the width of a cylinder.

2. A two-stroke cycle engine of the Diesel type, consisting of eight working cylinders, two scavenging air compressors, two blast air compressors, a piston in each of the cylinders and in each of the compressors, a crank-shaft and a piston-rod connected to each piston and to the shaft, the eight driving cranks being set at 45° from one another and the four compressor cranks being set in a plane that bisects one of the dihedral angles of 45° formed by the planes containing the driving cranks, the cranks of the two scavenging air compressors being opposite to one another and also those of the blast air compressors, the odd driving cranks being set at 22° 30′ or 112° 30′ before or behind the crank of the first scavenging air compressor, and each even driving crank being opposite to the immediately preceding odd crank.

1,217,152. APPARATUS FOR SPLITTING SLATE BLOCKS. ALBERT CHAUVIN, Paris, France. Filed Apr. 15, 1914. Serial No. 832,089. (Cl. 125—5.)



1. A machine for splitting slate blocks with continuous pressure comprising: Splitting tools, a balanced arm device and means for actuating the same to transmit a continuous pressure to the splitting tools, movable jaws, a cam device and controlling means therefor to press and release the jaws and for centering and holding the blocks in position; movable table arrangements and means for actuating the same and move the tables toward each other to carry the block during the splitting operation and to move them apart after the splitting operation to drop the splitted parts; a block feeding device for bringing the blocks one by one under the tools and means for actuating the said device; means for fixing, adjusting and guiding the tools and actuating device therefor; a gripping device for guiding the points of the blades into the stones, said gripping device comprising jaws which are movable apart as the thickness of the blades increases, and means for operating the said device, substantially as above described and shown and for the purpose set forth.

2. In a machine for splitting slate blocks the combination with splitting tools of mechanism for imparting a continuous pressure thereto, means for automatically feeding the blocks to the splitting tools, movable tables supporting the blocks, and means for retracting the tables from underneath the splitted blocks whereby they are allowed to drop, said means including cam controlled mechanism for removing the block supporting tables at the conclusion of the splitting operation, substantially as above described and shown and for the purpose set forth.

3. In a machine for splitting slate blocks the combination with splitting tools of a slide carrying the tools, a balanced arm actuating said slide, mechanism for operating said balanced arm; movable jaws for holding and centering the blocks in position, cams controlling the movement of the holding jaws, movable tables supporting the blocks and means for retracting the tables from underneath the splitted blocks whereby they are allowed to drop, said means including cams controlling the movement of the supporting tables, an automatic feeding device, and means for transmitting motion to the various parts, substantially as above described and shown and for the purpose set forth.

4. In a machine for splitting slate blocks the combination with splitting tools of a slide carrying the tools, a balanced arm actuating said slide, mechanism for operating said balanced arm movable jaws for holding and centering the blocks in position, cams controlling the movement of the holding jaws, movable tables supporting the blocks and means for retracting the tables from underneath the splitted blocks whereby they are allowed to drop, said means including cams controlling the movement of the supporting tables, a device for holding the splitting tools at the commencement of and during their penetration into the stone, cams controlling said device an automatic feeding device, and means for transmitting motion to the various parts, substantially as above described and shown and for the purpose set forth.

5. In a machine for splitting slate blocks the combination with splitting tools of mechanism for imparting a continuous pressure thereto, means for automatically feeding the blocks to the splitting tools, movable tables for supporting the blocks during the splitting operation and dropping the splitted parts after the splitting operation, cam controlled jaws for holding and centering the blocks and cam controlled mechanism for removing the block supporting tables at the conclusion of the splitting operation.

[Claims 6 and 7 not printed in the Gazette.]

1,217,153. WELT-INSOLE FOR SHOES. WILLIAM E. CLAYTON, Portsmouth, Ohio. Filed Jan. 27, 1916. Serial No. 74,626. (Cl. 36—22.)

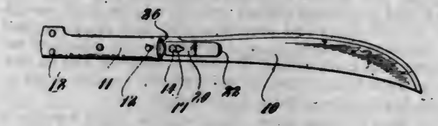


1. A welt insole comprising a comparatively thick layer of canvas having a portion of its edges channeled to form a flap, said flap being bent away from the edge.

2. An all-canvas welt insole composed of three layers only, the intermediate layer being relatively thick and having a portion of its edges channeled, to form a flap, said flap being bent away from the edge, and one layer of the canvas made to adhere to and inclose the flap thus formed on both sides.

3. A welt insole comprising three layers, the intermediate layer being of relatively thick canvas, and having a portion of its edges channeled, to form a flap, said flap being bent away from the edge, a thin layer of material cemented thereto and forming a cover, and a layer of canvas made to adhere to and inclose the flap on both of its sides.

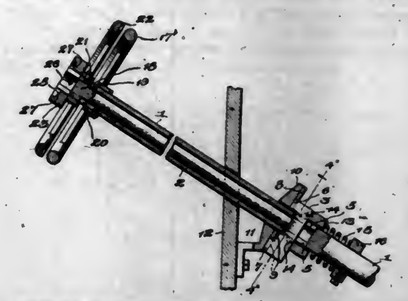
1,217,154. CORN-KNIFE. ORLANDO L. COLVIN, Zanesville, Ohio. Filed Dec. 6, 1916. Serial No. 135,349. (Cl. 30—9.)



1. In a knife, the combination with a blade and handle thereof, of a stud affixed in said blade adjacent to said handle, said stud having flat sides below its head, a clip having an opening engageable with said stud, and recesses extending longitudinally therefrom, a spring in said handle adapted to press said clip outwardly, and means whereby said clip may be reversed.

2. In a knife of the class described, the combination with a flat blade and handle elements attached upon either side thereof at one end, of a stud fixed in said blade, said projection having flattened sides and a round end, a spring clip having a plate portion engageable with said stud, a spring element engaged with said handle adapted to press against said clip, and means permitting said clip to be rotated.

1,217,155. STEERING MECHANISM FOR MOTOR-VEHICLES. JOSEPH B. COMPTON, Buchanan, Ky., assignor of one-half to F. T. D. Wallace, Jr., Louisa, Ky Filed Apr. 27, 1916. Serial No. 94,026. (Cl. 74—89.)



1. Steering mechanism for motor vehicles, comprising a tubular steering post rotatable on its longitudinal axis and provided with a transverse opening passing through it, a steering wheel fast to said post, a fixed ratchet, a pawl adapted to engage with said ratchet, said pawl extending through said opening in said post and adapted to move longitudinally thereof, a spring exerting a pressure on said pawl tending to force it into engagement with said ratchet to lock said post against rotation, a rod extending into said post and movable longitudinally thereof to force said pawl out of engagement with said ratchet, and an auxiliary steering wheel fast to said rod.

2. Steering mechanism for motor vehicles, comprising a tubular steering post rotatable on its longitudinal axis and provided with a transverse opening passing through it, a fixed ratchet, a pawl adapted to engage with said ratchet teeth, said pawl extending through said opening in said post and adapted to move longitudinally thereof, a spring exerting a pressure on said pawl tending to force it into engagement with said ratchet to lock said post against rotation, a rod extending into said post and movable longitudinally thereof to force said pawl out of engagement with said ratchet, means fast to said rod for manipulating the same, and a lock operable on said rod to lock said pawl out of engagement with said ratchet.

3. Steering mechanism for motor vehicles, comprising a tubular steering post rotatable on its longitudinal axis, a rod inserted therein and adapted to move longitudinally thereof, and means movable longitudinally of the steering post and under the control of said rod for locking said steering post against rotation on its longitudinal axis.

4. Steering mechanism for motor vehicles, comprising a tubular steering post rotatable on its longitudinal axis, a steering wheel fast to said post, a rod inserted therein and adapted to move longitudinally thereof, means movable longitudinally of the steering post and under the control of said rod for locking said steering post against rotation on its longitudinal axis, and an auxiliary steering wheel on said rod.

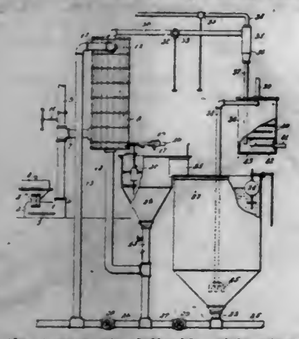
5. Steering mechanism for motor vehicles, comprising a tubular steering post rotatable on its longitudinal axis, a stationary locking member, a locking member connected to said post movable longitudinall thereof and adapted to engage the said stationary member to lock said post against rotation, and a rod inserted in said post and movable longitudinally thereof to disengage said movable locking member from said fixed locking member.

[Claim 6 not printed in the Gazette.]

1,217,156. MUTUAL TREATMENT OF LIQUIDS AND GASES. FRANK E. COOMBS, Au Sable Forks, N. Y. Filed Apr. 15, 1913. Serial No. 761,287. (Cl. 127—1.)

1. In the treatment of liquids with mixed gases containing gases reactive with such liquid, the process which comprises drawing such a gas through or over such a

liquid by the suction of a fluid driven ejector, removing the fluid beyond the ejector and passing the residual gases while still under pressure through a body of such a liquid.



2. In the treatment of liquids with mixed gases, the process which comprises drawing such a gas through or over such a liquid by the suction of a steam driven ejector, removing the steam beyond the ejector and passing the residual compressed gases through a body of such a liquid.

3. In the treatment of liquids with sulfur dioxid, the process which comprises drawing fumes comprising such dioxid through or over such a liquid by the suction of a steam driven ejector, removing the steam beyond the ejector and passing the residual compressed gases through a body of such a liquid.

4. The process of sulfuring saccharine liquids which comprises drawing fumes comprising sulfur dioxid through such a liquid by means of a steam ejector, condensing out steam from the compressed gaseous mixture discharged from the ejector, and introducing the resultant gaseous mixture, substantially free of moisture and still under pressure, into a previously sulfured saccharine liquid to effect agitation and homogeneous composition thereof.

5. The process of treating liquids with gases which comprises drawing a treating gas through or in contact with a liquid with the aid of a fluid-actuated ejector device, and varying the volume of gas thus drawn through the liquid by varying the quantity of a fluid supplied to the suction side of the ejector device at a point intermediate said liquid and said device.

[Claim 6 not printed in the Gazette.]

1,217,157. RUBBER COMPOSITION AND PROCESS OF MAKING THE SAME. MICHAEL F. COUGHLIN, Boston, Mass., assignor to American Gum Products Company, Covington, Va., a Corporation of Virginia. Filed Oct. 21, 1916. Serial No. 126,893. (Cl. 106—23.)

1. A rubber composition comprising rubber and sulfite waste liquor solids.

2. A rubber composition comprising rubber, dry sulfite waste liquor solids and a composition of blown petroleum and asphalt.

3. The process of making rubber compositions which comprises working together rubber and a dry sulfite waste liquor preparation.

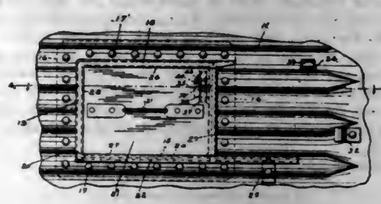
4. The process of making rubber compositions which comprises working together rubber, a dry sulfite waste liquor preparation and other body-giving materials.

5. The process of making rubber compositions which comprises working together rubber, a dry sulfite waste liquor preparation, a composition of blown petroleum and asphalt, and other body-giving components.

[Claims 6 to 8 not printed in the Gazette.]

1,217,158. FASTENER FOR CAR-DOORS. LAWRENCE W. DAUGHENBAUGH, Chicago, Ill., assignor to Walter P. Murphy, Chicago, Ill. Filed Aug. 25, 1913. Serial No. 786,458. (Cl. 70—102.)

In an end door for railway cars, the combination with a door frame provided with a door opening, of guide-ways secured to said frame, a door slidably mounted in said guide-ways and provided on its inner surface with a recess adjacent its rearward edge, a gravity operated dog pivoted within the car to the rearward side of said frame so as not to be accessible from outside of the car when the said door is closed and adapted to drop into its operative posi-



tion in said recess when the door is moved to its closed position, and to drop into the path of movement of the door when the door is opened, said guide-ways being formed to permit the door to slide rearwardly of the dog, and means for positively locking said dog in its operative position.

1,217,159. ROLLER-TRUCK. MAX ALFRED DEMUTH, Spokane, Wash. Filed Jan. 3, 1916. Serial No. 70,009. (Cl. 101—71.)



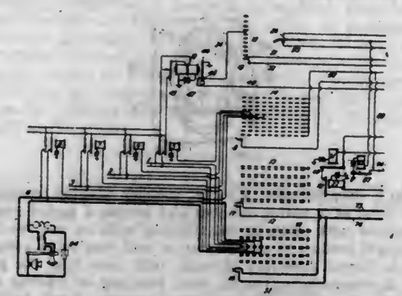
1. In a printing press roller truck, a roller bearing, a sleeve locked on said bearing and provided with peripheral and endwise truck holding portions and having a threaded extension, a roller truck mounted on said sleeve and in endwise engagement with one of the portions of said sleeve and projecting over said threaded extension, and a lock nut threaded on said extension and interiorly engaging said truck and provided with a flange engaging the remaining end of said truck to lock the latter in position, substantially as described.

2. In a printing press roller truck, a roller bearing, a sleeve locked on said bearing and provided with a peripheral truck holding portion and an endwise truck holding portion and having a threaded extension projecting from said first mentioned holding portion, a roller truck mounted on said sleeve and projecting over said extension, and a lock nut threaded on said extension and interiorly engaging said truck to lock the same in position, and an endwise truck holding portion engaging the remaining end of said truck, substantially as described.

3. In a printing press roller truck, a roller bearing, a sleeve locked on said bearing and provided with a peripheral truck holding portion and an endwise truck holding portion, a roller truck reversibly mounted on said sleeve, a nut for locking said truck on said sleeve, and means for engaging the end of said roller truck against endwise movement, substantially as described.

1,217,160. AUTOMATIC TELEPHONE-LINE-FINDER SYSTEM. BERT G. DUNHAM, Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 11, 1915. Serial No. 13,625. (Cl. 179—18.)

1. In a telephone testing system, lines to be tested in succession, test terminals for said lines, a primary test relay, a secondary test relay operable under the control of the primary test relay, and means for actuating said primary test relay to disconnect said secondary test relay, preliminary to the test by said relays of each line.



2. In a telephone testing system, lines to be tested in succession, test terminals for said lines, primary test relay, a secondary test relay operable under the control of the primary test relay, means for actuating said primary test relay to disconnect said secondary test relay preliminary to the test by said relays of each line, and means for keeping said primary test relay actuated during the testing of the connected lines.

3. In a telephone testing system, the combination with lines to be tested in succession, a line terminal and a local circuit terminal for each line, primary and secondary testing devices for the local and line circuit terminals respectively, the operative condition of said secondary testing device being controlled by said primary testing device, and means for actuating said primary testing device to disconnect said secondary testing devices, preliminary to the test of each line by said devices.

4. In a telephone testing system, the combination with lines to be tested in succession, a line terminal and a local circuit terminal for each line, primary and secondary testing devices for the local and line circuit terminals respectively, the operative condition of said secondary testing device being controlled by said primary testing device, means for actuating said primary testing device to disconnect said secondary testing device preliminary to the test of each line by said devices, and means coöperating with the local circuit terminals for keeping said secondary testing device disconnected during the testing of connected lines.

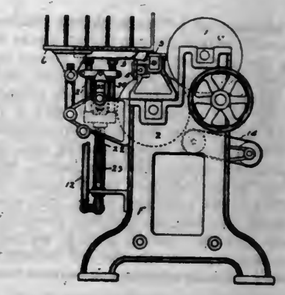
5. In a telephone system, lines, a step-by-step line finder, a stepping magnet therefor, two test relays one to test the idle and the other the calling condition of lines, means operating intermittently for actuating simultaneously said stepping magnet and one of said test relays, and means controlled by said relays jointly for identifying a calling line.

[Claim 6 not printed in the Gazette.]

1,217,161. PNEUMATIC PRESS-FEEDING MEANS. JAMES DUVALL, Camas, Wash. Filed Mar. 16, 1916. Serial No. 84,547. (Cl. 271—32.)

1. In a pneumatic feed for presses of the type described, with an adjustable feed rack which holds vertical stack of material and allows the bottom unit to be drawn downwardly therefrom, a suction box directly underneath said rack so proportioned that it will engage both the front and the back portions of the under surface of the bottom unit, withdrawing same from the rack in a substantially horizontal plane free from contact with any superimposed unit, means for imparting an up and down movement to the suction box and means for controlling the suction at predetermined intervals.

2. In a pneumatic feed for presses of the type described, with an adjustable feed rack which holds vertically stacked material and allows the bottom unit to be drawn downwardly therefrom, a suction box underneath said rack so proportioned that it will engage both the front and the back portions of the under surface of the bottom unit withdrawing same from the rack in substantially a horizontal plane free from contact with any superimposed unit, a hollow, longitudinally slotted feeder roll which is in contact with the impression roll and which engages the entire forward edge of the bottom unit, means for moving the suction box up and down and means for controlling the suction at predetermined intervals.



3. In a pneumatic feed for presses of the type described, with an adjustable feed rack which holds vertically stacked material and allows the bottom unit to be drawn downwardly therefrom, a suction box underneath said rack so proportioned that it will engage both the front and the back portions of the under surface of the bottom unit withdrawing same from the rack in substantially a horizontal plane free from contact with any superimposed unit, a hollow, longitudinally slotted feeder roll which is in contact with the impression roll and which engages the entire forward edge of the bottom unit, an idler feed roll in contact with the slotted feed roll, means for moving the suction box up and down and means for controlling the suction at predetermined intervals.

4. In a pneumatic feed for presses of the type described, with an adjustable feed rack which holds vertically stacked material and allows the bottom unit to be drawn downwardly therefrom, a suction box underneath said rack so proportioned that it will engage both the front and the back portions of the under surface of the bottom unit withdrawing same from the rack in substantially a horizontal plane free from contact with any superimposed unit, cam actuated means to reciprocate the suction element up and down and cam actuated means for controlling the suction at predetermined intervals in relation to the reciprocating movement of the suction element.

5. In a pneumatic feed for presses of the type described, with an adjustable feed rack which holds vertically stacked material and allows the bottom unit to be drawn downwardly therefrom, a suction box underneath said rack so proportioned that it will engage both the front and the back portions of the under surface of the bottom unit, vertical suction pipes leading from the suction box, a header with a central chamber which receives the lower ends of the vertical suction pipes, a central vertical suction pipe connected with the bottom of this chamber in the header, an outer pipe which incloses the lower part of this vertical suction pipe, an inner vertical suction pipe concentric with said vertical suction pipe from the header, two vertical guide arms attached to the suction pipes leading from the suction box, a cross-bar attached to the lower end of said guide arms, a small roller at each end of the cross-bar, a vertical extension rod affixed to the lower end of each guide arm, an open coil spring on each rod, cams to engage respectively the rollers on the cross bar, an air valve on the main suction pipe, a cam to engage the lever of the air valve at predetermined intervals, a hollow, longitudinally slotted feed roll in contact with the impression roll and an idler feed roll in contact with the slotted roll.

[Claims 6 to 8 not printed in the Gazette.]

1,217,162. SUBCALIBER-BARREL. GUY F. EGBERT, Pasco, Wash. Filed July 25, 1916. Serial No. 111,178. (Cl. 42—77.)



1. The combination of a breech-loading gun, an auxiliary barrel mounted within the gun barrel, means for firing a cartridge in the auxiliary barrel, and means for transverse adjustment of the said auxiliary barrel, said means consisting of tapered and toothed members mounted upon a portion of the said auxiliary barrel, and a retaining member for the said tapered and toothed members.

2. The combination of a breech-loading gun, an auxiliary barrel mounted within the gun barrel, means for firing a cartridge in the auxiliary barrel, means for transverse adjustment of the auxiliary barrel, said means consisting of tapered and toothed members mounted upon a portion of said auxiliary barrel, facings secured to the outer faces of said tapered and toothed members, and a retaining member for said tapered and toothed members.

1,217,163. CABLE-GRIP. HUGH F. ELLARD, Missoula, Mont. Filed July 8, 1915. Serial No. 38,831. (Cl. 104—130.)



1. In a cable grip, a bar having a jaw, a lever carrying a jaw and fulcrumed on said bar, a second lever fulcrumed on said bar, and means for adjustably connecting said levers.

2. In a cable grip, a bar having a jaw, a lever carrying a jaw and fulcrumed on said bar, a second lever fulcrumed on said bar, a link connecting said levers, and means for adjusting said link to regulate the movement of the jaw carrying lever.

3. In a cable grip, a bar having a jaw, a lever carrying a jaw and fulcrumed on said bar, a second lever fulcrumed on said bar, a link connecting said levers, and means for adjusting said link to regulate the movement of the jaw carrying lever, said link comprising a threaded sleeve fulcrumed to one of said levers and a threaded post fulcrumed to the other of said levers and received by said sleeve.

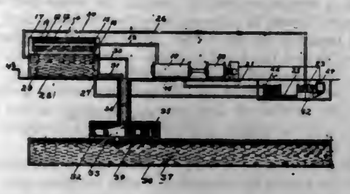
4. In a cable grip, a bar having a jaw at one end and formed with a channel or recess at its other end, a lever fulcrumed on said bar and having a jaw, an operating lever, and a link connecting said levers, said operating lever being adapted to be received by said channel or recess when the grip is closed.

1,217,164. SNAP-FASTENER. MARIE S. FEDERMAN, New York, N. Y. Filed Feb. 7, 1916. Serial No. 76,534. (Cl. 24—218.)



In a snap fastener, a socket member adapted to receive the head of a button member and having a socket pocket provided with slots, in combination with an endless ring of slight resiliency, any portion of said ring being adapted to be forced inwardly through said slots into the path of movement of a button head entering or leaving said pocket, the inwardly projecting portions being held in position by the slight resiliency of the ring and adapted to yield sufficiently to the inward pressure of a head, though tending to obstruct its withdrawal.

1,217,165. POWER PLANT. REGINALD A. FESSENDEN, Brant Rock, Mass. Filed Mar. 8, 1909. Serial No. 481,973. (Cl. 60—2.)



1. The method of obtaining energy from solar radiation which consists in heating a working liquid, by means of solar radiation, to a temperature lower than the boiling point of the said working liquid at atmospheric pressure; transforming all of said heated working fluid into vapor at a pressure less than that of the atmosphere; and causing said vapor, to act directly, at a pressure less than atmospheric, upon the moving element of a low pressure heat engine.

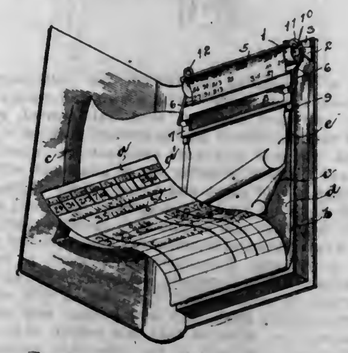
2. Apparatus for utilizing for power production by radiation all changes of temperature of a working fluid between initial temperature and boiling point produced by radiation, comprising a reservoir of working fluid, said reservoir being provided with a transparent cover containing an iron salt, in combination with a motor connected to be operated by the vapor of said fluid, and a vacuum cooling chamber for condensing said vapor.

3. Apparatus for obtaining power from radiation, comprising a reservoir, a working fluid contained therein and exposed to the action of radiation, means for protecting said fluid from loss of heat by convection, a low-pressure heat engine, connections to operate the same by the vapor of said fluid, a lower reservoir, an upper storage reservoir, a pump operated by said low-pressure heat engine for pumping water from said lower into said upper storage reservoir, and means for condensing said working fluid vapor by means of the water so transferred between said upper and lower reservoirs.

4. Apparatus for obtaining power by radiation, comprising a reservoir, a working fluid contained therein and exposed to the action of radiation, a low-pressure heat engine, connections to operate the same by the vapor of said fluid, a lower reservoir, an upper storage reservoir a pump operated by said low-pressure heat engine for pumping water from said lower into said upper storage reservoir, and means for condensing said working fluid vapor by means of the water so transferred between said upper and lower reservoirs.

5. Apparatus for utilizing for power production by radiation all changes of temperature of a working fluid between initial temperature and boiling point produced by radiation, comprising a reservoir, a working fluid contained therein and exposed to the action of radiation, means for protecting said fluid against loss of heat by convection, a low-pressure turbine, connections to operate said turbine by the vapor of said fluid, a pump operated by said low pressure turbine for pumping water, and means for utilizing said water for condensing the vapor of said working fluid.

1,217,166. MANIFOLDING SALES-BOOK. EDGAR C. FISHER, Dayton, Ohio. Filed Nov. 23, 1914. Serial No. 873,596. (Cl. 11—23.)



1. In a manifolding sales book, a holder for a plurality of sales slips, a roller journaled in fixed relation with the sales slip holder, an oscillatory frame normally overlying the sales slips within the holder, and interconnecting means between the frame and roller whereby said frame is adapted by its swinging movement necessarily to afford access to said sales slips to actuate the roller to advance a record strip.

2. In a manifolding sales book, a holder for a plurality of sales slips, a roller journaled in fixed relation with the sales slip holder, adapted by its rotation to advance a record strip, a swinging frame journaled concentric with the roller, and means to actuate the roller by the oscillation of the frame.

3. In a manifolding sales book, a holder for a plurality of sales slips, a roller adapted by its rotation to advance a record strip, a base in which the roller is journaled, means for detachably engaging the base with the sales slip holder, and an oscillating actuating member adapted to actuate said roller to wind said strip thereon.

4. In a manifolding sales book, a holder for sales slips, a movable member overlying said sales slips, a roller adapted by its rotation to advance a record strip, a detachable base in which the roller is journaled supported on the said holder, and means to actuate said roller by the movement of said movable member.

5. In a manifolding sales book, a holder for a plurality of sales slips, a recessed base member detachably engaging the edge of the holder, a roller carried by said base and a manually operated oscillatory member mounted on said base for actuating the roller to advance a record strip substantially as specified.

[Claims 6 to 17 not printed in the Gazette.]

1,217,167. GALOSH. JOHN WILLIAM GANNON, Broadway, Mangaweka, New Zealand. Filed Dec. 11, 1916. Serial No. 136,227. (Cl. 36—58.5.)

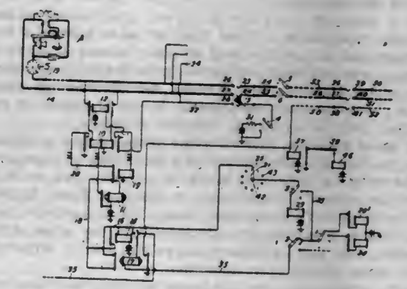
1. A galosh having a tab extending from the top portion of the upper at the back thereof, a strap secured to said tab and adapted to encircle the ankle of the wearer, and additional means for attaching said strap to the upper of the galosh.



2. A galosh having a tongue extending from the top portion of the upper a tab extension at the back of the galosh projecting from its top edge, in combination with a strap adapted to encircle the wearer's ankle and to be fastened respectively to the front tongue and the rear tab, substantially as specified.

3. A galosh having a tongue extension from the top edge of its upper and a strap adapted to encircle the wearer's ankle extending from such tongue and provided with means for its attachment to the back of the galosh, substantially as specified.

1,217,168. TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1916. Serial No. 73,218. (Cl. 179—18.)

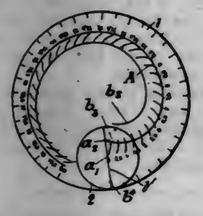


1. In a telephone exchange system, the combination with a calling telephone line, a line and a cut-off relay therefor, automatic finder switches, driving circuits therefor, multiple talking and test terminals for said line in said finder switches, said cut-off relay being connected to said test terminals through a normal contact of said line relay, means for closing the driving circuit of one of said finders upon the initiation of a call, means for preventing the operation of the cut-off relay of non-calling lines during the movement of said finder, a stop relay, said line relay being adapted when energized to disconnect the cut-off relay from said test terminals and connect thereto said stop relay, a circuit adapted to energize said stop relay closed by said finder in arriving upon the calling line terminal, said stop relay thereupon opening the finder-driving circuit.

2. In a telephone exchange system, the combination with a calling telephone line, a line and a cut-off relay therefor, automatic finder switches, driving circuits for said finders, multiple talking terminals and a test terminal for said line in said switches, said cut-off relay being connected to the free pole of battery on the one side and to said test terminals on the other through a normal contact of said line relay, means for closing the driving circuit of one of said finders upon the energization of said line relay, a stop relay for said finders connected to the opposite pole of said battery from that to which the cut-off relay is connected, said line relay being adapted when energized upon the initiation of a call to disconnect said

cut-off relay from said test terminals and connect thereto said stop relay, said test terminals being adapted to be connected to either said free pole of battery or to said opposite pole of battery according to whether said finder is hunting or busy.

1,217,169. TELESCOPE-SIGHT FOR AIRSHIPS AND FLYING-MACHINES. OSKAR GRAUHEDING, Dusseldorf, Germany, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed Mar. 12, 1915. Serial No. 14,008. (Cl. 33—46.)



1. A telescope sight for air ships, flying machines and the like comprising a fixed disk or plate having a line thereon, and a movable disk or plate having a series of curves corresponding to different flying heights and velocities of the machine.

2. A telescope sight for air ships, flying machines and the like comprising a fixed disk or plate having a line thereon, and a movable disk or plate having a series of curves corresponding to different flying heights and velocities of the machine, and a curve, the distance of which from the zero point corresponds in all positions of the movable disk to a constant distance of flight.

3. In a telescope sight for air ships, flying machines and the like the combination of a fixed disk or plate provided with an indicating mark, a movable disk or plate carrying curves corresponding to different flying heights and velocities of the machine, means for moving the movable disk to bring one of said curves into the range of the marking line and additional means for exactly adjusting such curve relatively to that line.

4. In a telescope sight for air ships, flying machines and the like the combination of a fixed disk or plate provided with a line, a movable disk or plate carrying curves corresponding to different flying heights and velocities of the machine, means for moving the movable disk to bring one of said curves into the range of the marking line, and a stop watch and intermediate gears connecting the clock work of the watch with the movable disk or plate.

5. In a telescope sight for air ships, flying machines and the like the combination of a fixed disk or plate provided with a marking line, a movable disk or plate carrying curves corresponding to different flying heights and velocities of the machine, and a curve, the distance of which from the zero point corresponds in all positions of the movable disk to a constant distance of flight, means for moving the movable disk to bring said curves into the range of the marking line, a stop watch, and intermediate gears connecting the clock work of the watch with the movable disk or plate.

1,217,170. COIN-TESTING ATTACHMENT FOR COIN-CONTROLLED MECHANISMS. ALBERT D. GROVER, New York, N. Y., assignor to Autosales Gum & Chocolate Company, a Corporation of New York. Filed May 29, 1914. Serial No. 841,742. (Cl. 194—101.)

1. In a coin-testing attachment for coin-controlled mechanisms, a swinging frame-work or support, a magnet fixedly mounted on said support, a coin-chute having a section carried by said support, the poles of said magnet being substantially flush with said section, said support being normally so balanced that said section is in alinement with the fixed wall of the coin-chute, whereby a downward push on a magnetic disk adhering to the poles of the magnet overbalances said support and swings the section and the disk out of alinement with the coin-chute, and a stop outside of the coin-chute for positively arresting downward movement of the magnetic disk when said section is in operated position.



2. In a coin-testing attachment for coin-controlled mechanisms, a coin-chute having a swinging section normally in alinement with the fixed wall thereof, means whereby the insertion of and downward push on a magnetic disk into said coin-chute automatically causes said section and the disk to swing out of alinement with the coin-passage in said chute, and a stop outside of the coin-chute for positively arresting downward movement of the magnetic disk when said section is in operated position.

3. In a coin-testing attachment for coin-controlled mechanisms, a swinging frame-work or support, a magnet fixedly mounted on said support, a coin-chute having a section carried by said support, the poles of said magnet being substantially flush with said section, said support being normally so balanced that said section is in alinement with the fixed wall of the coin-chute, whereby a downward push on a magnetic disk adhering to the poles of the magnet overbalances said support and swings the section and the disk out of alinement with the coin-chute, and a stop outside of the coin-chute for positively arresting downward movement of the magnetic disk when said section is in operated position, said stop being arranged to engage said section for limiting the swinging movement of said support.

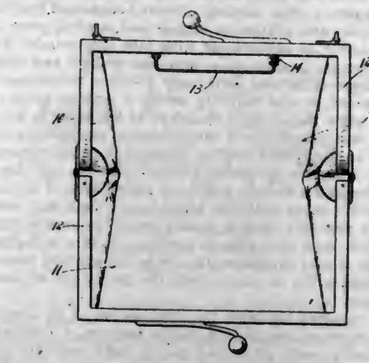
4. In a coin-testing attachment for coin-controlled mechanisms, a coin-chute having a swinging section normally in alinement with the fixed wall thereof, means whereby the insertion of and downward push on a magnetic disk into said coin-chute automatically causes said section and the disk to swing out of alinement with the coin passage in said chute, and a stop outside of the coin-chute for positively arresting downward movement of the magnetic disk when said section is in operated position, said stop being arranged to engage said section for limiting the swinging movement thereof.

5. In a coin-testing attachment for coin-controlled mechanisms, a swinging frame-work or support, a magnet fixedly mounted on said support, a coin-chute having a section carried by said support, the poles of said magnet being substantially flush with said section, said support being normally so balanced that said section is in alinement with the fixed wall of the coin-chute, whereby a downward push on a magnetic disk adhering to the poles of the magnet overbalances said support and swings the section and the disk out of alinement with the coin-chute, and a stop carried by said coin-chute on the outside thereof below said swinging section for positively arresting downward movement of the magnetic disk when said section is in operated position.

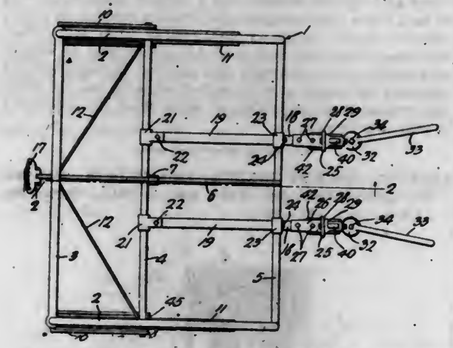
[Claims 6 to 15 not printed in the Gazette.]

1,217,171. ATTACHMENT FOR LADIES' PURSES. ELIZABETH HAINES, Johnstown, Pa. Filed Mar. 30, 1915. Serial No. 18,148. (Cl. 150—29.)

The combination with a purse including a mouth formed of hingedly connected sections each of which embodies a rigid frame, of a curved bar disposed on the inner side of one of said sections and having one end secured directly to the frame and its other end free, and means for detachably securing the free end of the bar to the related sections.



1,217,172. CULTIVATOR. HENRY A. HARRIS, Attoyac, Tex. Filed Oct. 19, 1915. Serial No. 56,753. (Cl. 97—35.)



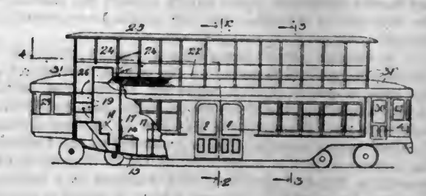
A cultivator embodying a frame having a cross piece between its forward and rear portions and another cross piece at its rear portion, caster wheels pivotally connected with the front corners of the frame and movable under the side portions thereof, the rear portion of the frame being curved downwardly in rear of said wheels, the rear cross piece being lower than the first mentioned cross piece, a pair of longitudinal beams below the rear cross piece and having their forward terminals curved upwardly and extending to the first mentioned cross piece, and clips carried by said beams and slidably engaging said cross pieces.

1,217,173. COMBINED TIE-GUARD AND COLLAR-BUTTON. MOSES L. HAWKS, New York, N. Y. Filed Oct. 18, 1916. Serial No. 126,359. (Cl. 24—62.)



A collar attachment made in one piece comprising a guard for a necktie, a spacer for the collar and a button for securing the attachment together with the collar to the neck-band of a shirt, said button being formed and consisting of a part of the single strip of thin bendable material struck out and bent in upon itself so as to form the head and shank portions thereof, said button extending from the opposite side from that on which the guard portions are formed and intermediate the ends of the attachment device.

1,217,174. DOUBLE-DECK CAR. FRANK HEDLEY, Yonkers, and JAMES S. DOYLE, Mount Vernon, N. Y. Filed June 28, 1912. Serial No. 706,320. (Cl. 105—199.)



1. A car having an upper and a lower deck, the lower deck portion having a side entry way and a centrally disposed concourse extending longitudinally of the car, and a stairway located at the end of the concourse and having branches delivering to opposite sides of the upper deck.

2. A car having an upper and a lower deck, the lower deck having a center side entrance and a stepless concourse extending longitudinally of the car therefrom, said entrance having a floor level within a single stepping distance from the street level, and a stairway located at the end of the concourse and leading to the upper deck, said stairway having branches delivering to opposite sides of the upper deck.

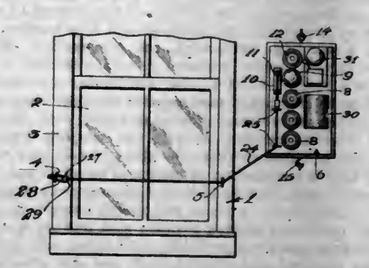
3. A car having an upper and a lower deck, transversely extending barriers in the lower deck portion forming an entryway, means to form a side door for the entryway, a conductor's station opposite said side door, and a stairway leading from the interior of the lower deck portion to the upper deck.

4. A car having an upper and a lower deck transversely extending barriers in the lower deck portion forming an entry way, said entryway having a floor level within a single stepping distance from the street level, and a dividing stairway leading from the interior of the lower deck portion to the upper deck on both sides thereof.

5. A car having an upper and a lower deck, the roof of the lower deck being transversely arched for a portion of its width to form a seat space for the upper deck, and having a portion extending horizontally from the lower edge of the arched portion to form a foot space flooring for the upper deck and a step interposed between the foot space flooring and said seat space.

[Claim 6 not printed in the Gazette.]

1,217,175. BURGLAR-ALARM. ALBERT O. HILLEY, Waco, Tex. Filed Oct. 15, 1915. Serial No. 56,039. (Cl. 177—314.)



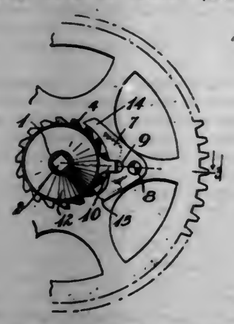
1. A signal of the character described comprising a base, a plurality of distributing sockets on said base, a feed socket on the base, wires connecting one of the distributing sockets with the feed socket, means to close a

circuit through the distributing sockets upon the entrance of an unauthorized person into the building, and signals connected to the other distributing sockets and operated upon the closing of the circuit.

2. A burglar alarm comprising a base, a plurality of distributing sockets on the base, signals connected with the distributing sockets, a feed socket on the base, a source of electric current connected to the feed socket, a switch between the feed socket and one of the distributing sockets and means connected to the switch to close the same upon the entrance of a person into the building to operate the signals.

3. A burglar alarm comprising a base, a plurality of distributing sockets mounted on the base, a feed socket on the base, a power source connected to the feed socket, wires connecting the feed socket with the distributing sockets, a switch controlling the flow of current through the distributing sockets, signals connected to the distributing sockets, a flexible member connected to the switch and passing in front of the doors and windows of a building in which the device is used and means to hold the flexible member in place whereby upon the entrance of an unauthorized person into the building the switch will be closed and the signals operated.

1,217,176. WINDING-STOP. ALBERT P. HODGE, Winsted, Conn., assignor to Wm. L. Gilbert Clock Company, Winsted, Conn., a Corporation of Connecticut. Filed Mar. 9, 1916. Serial No. 83,063. (Cl. 74—60.)



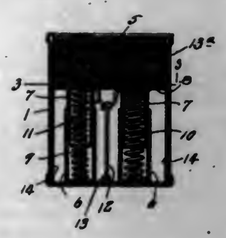
1. In a winding mechanism, the combination of an arbor, a driven member mounted to rotate thereon, a rotating part secured to said arbor and having a periphery adapted to be engaged, a stop member pivotally connected to said driven member and adapted to engage said rotating part, a friction member engaging said stop member at a point eccentric to said pivot, and means carried by said arbor for producing friction between said friction member and a surface positively moved by said arbor, said periphery being provided with ratchet teeth and said stop being provided with a nose adapted to engage the ratchet teeth, said stop member having a surface engaging the crowns of said ratchet teeth during the winding movement of said arbor so as to limit the movement of said stop member.

2. In a winding mechanism, the combination of an arbor, a driven member mounted to rotate thereon, a rotating part secured to said arbor and having a periphery adapted to be engaged, a stop member pivotally connected to said driven member and adapted to engage said rotating part, a friction member, said friction member lying in a plane out of alinement with the plane of said stop member and having a projection extending at an angle and into the plane of said stop member and engaging the same at a point eccentric to its pivot, and means carried by said arbor for producing friction between said friction member and a surface positively moved by said arbor, said periphery being provided with ratchet teeth and said stop being provided with a nose adapted to engage the ratchet teeth, said stop member having a surface engaging the crowns of said ratchet teeth during the winding movement of said arbor so as to limit the movement of said stop member.

3. In a winding mechanism, the combination of an arbor, a driven member mounted to rotate thereon, a rotating part secured to said arbor and having a periphery adapted to be engaged, a stop member pivotally connected to said driven member and adapted to engage said rotating part, a friction member in engagement with said stop member at a point eccentric to said pivot, said stop member and said friction members having their body portions in different planes and one of said members having a portion projecting at an angle thereto into the plane of the other to produce said engagement, and a spring washer carried by said arbor and engaging said friction member at points remote from said arbor for producing friction between said friction member and a surface positively moved by said arbor, said periphery being provided with ratchet teeth and said stop being provided with a nose adapted to engage the ratchet teeth, said stop member having a surface engaging the crowns of said ratchet teeth during the winding movement of said arbor so as to limit the movement of said stop member.

4. In a winding machine, the combination of an arbor, a driven member mounted to rotate thereon, a rotating part secured to said arbor and having teeth upon its periphery adapted to be engaged, a stop member pivotally connected to said pivot member and adapted to engage teeth upon said rotating member, a friction member engaging said stop member at a point eccentric to said pivot, the body of said friction member being in disk form and having its periphery adjacent to said teeth, and a spring washer carried by said arbor for producing friction between said friction member and a surface positively moved by said arbor and engaging said friction member at points adjacent to its periphery and remote from said arbor, said stop being provided with a nose adapted to engage said ratchet teeth and said stop member having a surface engaging the crown of said ratchet teeth during the winding movement of said arbor so as to limit the movement of said stop member.

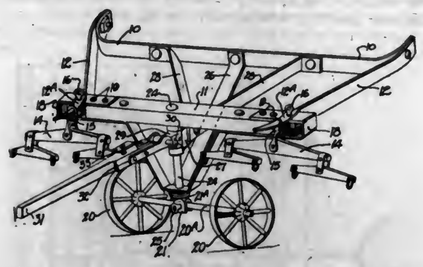
1,217,177. TICKET-HOLDER. NICHOLAS R. HOMYER, Jr., Granite City, Ill. Filed Apr. 1, 1916. Serial No. 88,415. (Cl. 211—39.)



1. An improved ticket-holder for conductors' use, comprising a box or closure, a lid for same, suitable fastenings for said lid, there being a ticket delivery-opening in said box having a stop to permit the passage of but one ticket at a time therefrom, two parallel spring-holders fixed at their lower ends on the bottom of said box, a ticket-follower, two parallel spring-guides having their upper ends fixed to the said ticket-follower and their lower ends telescopically engaging within said spring-holders, springs mounted in said spring-guides and spring-holders, for moving said follower, one of said springs being nearer to said delivery-opening and made heavier than the remaining spring, and means for holding said follower in a retracted position in opposition to the power of said springs in filling the ticket-holder with tickets.

2. A ticket-holder having a ticket-follower, two parallel spring-guides on said follower, springs in said spring-guides, a handle on said follower in the space between said spring-guides, and a hook for engaging said handle, to retain said follower retracted while filling the holder with tickets.

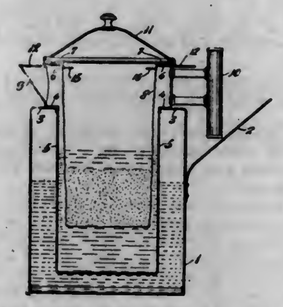
1,217,178. DRAFT ATTACHMENT. FRANK HORAK, Kulm, N. D. Filed Jan. 12, 1916. Serial No. 71,639. (Cl. 21—204.)



1. In a draft attachment, the combination of a tongue, a rigid stationary cross bar, a pair of pivotally mounted braces extending from the ends of said cross bar, a sheave mounted on each end of said cross bar, a pair of supporting wheels mounted on an axle, a vertical rotatable pin mounted within said cross bar, said axle and tongue having a rigid connection with said pin, a pair of two-horse swingle bars, and a flexible connection between said swingle bars passing over said sheaves.

2. In a draft attachment, the combination of a tongue, a rigid stationary cross bar, a pair of two-horse swingle bars, steel housings in the ends of said cross bar, a sheave in each housing, a flexible connection between said swingle bars passing over said sheaves, a pair of pivoted side braces extending from said housings and projecting to support said swingle bars, an axle, a pair of supporting wheels, and a vertical rotatable pin mounted in the center of said cross bar, said tongue and axle having rigid connection with said pin.

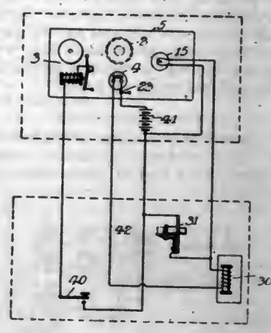
1,217,179. COFFEE-POT. JOSEPH B. HORSLEY, Cincinnati, Ohio. Filed Jan. 15, 1915. Serial No. 2,473. (Cl. 53—3.)



In combination with an outer vessel for boiling water, a second vessel arranged to rest in said outer vessel and to extend into the water therein, said second vessel being adapted to contain a liquid of which a beverage is to be made, a spout on said second vessel, a percolating vessel arranged to rest in said second vessel and to extend into the liquid therein, a lid to cover said second vessel and said percolating vessel, a lip on said lid adapted to cover said spout, and means on said second vessel adapted to engage said lip when the same is removed from said spout to prevent said lid from falling from said vessel during the tilting thereof.

1,217,180. DOOR-CONTROLLING AND SIGNALING SYSTEM. MARCUS M. HUEBSCH, Chicago, Ill. Filed June 13, 1914. Serial No. 844,856. (Cl. 177—333.)

1. In a door unlocking system, a release magnet at the door, a push button at a point remote from said door and a circuit including a source of current, said circuit connected to said push button and said release magnet, a signal in series with said magnet and means controlled by opening of the door for displaying said signal.



2. In a door controlling system, the combination with an audible alarm operable from a remote point, an electromagnetically controlled lock, a source of energy, a circuit closer to release said lock, of a visual signal arranged in series with the lock electromagnet and a shunting circuit closer to short circuit said visual signal when the door is opened to indicate such movement of the door.

3. The combination with a door lock operable by an electromagnet and a circuit in which said magnet is interposed, of a source of electrical energy, a circuit closer, an audible alarm operable from a point remote thereto, a visual signal arranged in series with the electromagnet, a shunt circuit interposed between the source of energy and said electromagnet, a circuit closer interposed in said shunt circuit and operable by the door, whereby when the door is open said shunt circuit will be closed and said visual signal short circuited.

4. In a door lock control, the combination with a door lock, an electromagnet to control the lock, a circuit in which said magnet is interposed, and a source of energy, of a circuit closer to admit current to the electromagnet to unlock the door, a visual signal in series with the electromagnet, an audible alarm receiving current from said source and operable from a remote point, a shunt circuit bridging the visual signal, and a circuit closer interposed in said circuit and operable by the door to short circuit said signal when the door is opened.

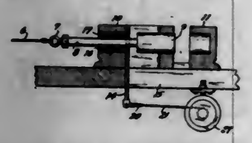
5. In a door lock control, the combination with a lock, an electromagnet operatively associated therewith, and a source of electric energy, of a main having a circuit closer therein controlling energization of said electromagnet, a visual signal interposed in series with the electromagnet, a branch conductor having an audible alarm therein, a shunt conductor between the electromagnet and the visual signal and connected to the source of supply to furnish a current return of less resistance than the audible signal, and a circuit closer in said shunt conductor to close the latter when the door is in closed position and thereby short circuit the visual signal.

1,217,181. FILLING COMPOUND FOR TREE-CAVITIES. JAMES F. ILLINGWORTH, Ithaca, N. Y. Filed Sept. 5, 1912. Serial No. 718,670. (Cl. 106—31.)

1. A filling compound for tree cavities consisting of an elastic and waterproof binder material and a proportionately large quantity of a body material inherently possessing expansive and contractile qualities similar to those of the wood of a tree and reduced to the form of particles, the binder being coated on the particles of body material to leave the compound in the form of granules and small particles and to cause coherence of the particles while at the same time not materially effecting the expansive and contractile qualities of the material of the body.

2. A filling compound for tree cavities consisting of substantially seven parts of a body material having inherent expansive and contractile qualities similar to those of the wood of a living tree and the body material reduced to the form of particles, and substantially one part of an elastic and waterproof binder material mixed with the body material to coat the particles and to leave the same in a granular form while at the same time waterproofing the particles and causing the same to cohere when placed and packed within the cavity of a tree.

1,217,182. MULTIPLE-HORSE HOLDER AND RELEASER. GUSTAV JOHAN THEODOR IWERSEN, Point Roberts, Wash. Filed June 21, 1916. Serial No. 104,887. (Cl. 119—110.)



1. In a multiple horse holder and releaser, a plurality of slotted bolt casings and alined keepers, bars carried by said bolts and movably arranged in the slotted portions of said bolt casings, expansion springs within said bolt casings and abutting said bars, means for moving said bolts and bars longitudinally of said bolt casings against the tension of said expansion springs to withdraw said bolts from engagement with said keepers, halter rings carried by said bolts; rotary sleeves operatively arranged adjacent said bars, a tape connecting said bars and the said rotary sleeves, coil springs operatively connected to said sleeves for yieldingly retaining said tape wound thereupon, abrasive disks made fast to said rotary sleeves and metallic posts frictionally engaging said abrasive disks.

2. In a multiple horse holder and releaser, a plurality of slotted bolt casings and alined keepers, bars carried by said bolts and movably arranged in the slotted portions of said bolt casings, expansion springs within said bolt casings and abutting said bars, means for moving said bolts and bars longitudinally of said bolt casings against the tension of said expansion springs to withdraw said bolts from engagement with said keepers, halter rings releasably carried by said bolts, and abrasive spark-producing elements operatively connected to said bars.

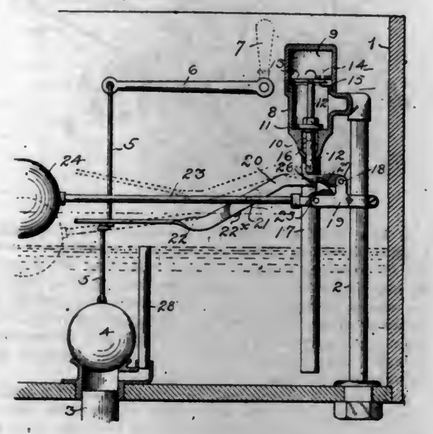
1,217,183. FLUSH-VALVE FOR WATER-CLOSETS. ALBERT C. JACKSON, Dayton, Ohio, assignor to L. Ray Lenich, Union City, Ind. Filed June 21, 1915. Serial No. 35,403. (Cl. 4—5.)

1. In an apparatus of the character described, a reservoir, an inlet valve therefor, a reciprocatory piston controlling the movement of said valve, a gravity controlled lock for maintaining the piston in an inoperative position, and a float adapted to release said piston when the fluid within the reservoir has reached a predetermined level, whereby said piston will be permitted to govern the subsequent movement of the valve.

2. In an apparatus of the character described, a reservoir, an inlet valve therefor, manually operated valve opening means, a fluid pressure controlled piston governing the movement of said valve, a gravity operated lock for maintaining the piston inoperative, and a float adapted to release the piston when the fluid within the reservoir reaches a predetermined level.

3. In an apparatus of the charatcer described, a reservoir, an inlet valve therefor, an oscillatory lever adapted by its oscillatory movement to unseat the valve, means for locking the lever in its operated position, and means for unlocking the lever when the water within the tank reaches a predetermined level.

4. In an apparatus of the character described, a reservoir, an inlet valve therefor, a weighted arm, a manually operated lever normally engaged with the weighted arm and holding the arm in elevated position, means for manually disengaging the lever and arm, said lever being adapted to unseat the valve in its disengaging movement, the weighted arm being adapted to hold the lever in operated position, substantially as specified.



5. In an apparatus of the character described, a reservoir, an inlet valve therefor, a valve operating lever, a weighted arm normally engaged by the lever to hold said arm in an elevated position, said lever being adapted to simultaneously unseat the valve and release the arm, and a lock for said lever actuated by the movement of the arm.

[Claims 6 to 9 not printed in the Gazette.]

1,217,184. COMPOSITION OF CAST-IRON. JOSEPH E. JOHNSON, Jr., New York, N. Y. Original application filed Aug. 13, 1913, Serial No. 785,492. Divided and this application filed July 31, 1914. Serial No. 854,265. (Cl. 75—1.)

1. The improved cast iron, consisting of coke iron containing controlled quantities of oxygen, carbon and silicon.

2. The improved cast iron, consisting of coke iron containing the usual characteristic elements of cast iron, such as silicon and carbon, together with oxygen in controlled quantity.

3. The improved composition of cast iron, consisting of coke iron containing controlled quantities of oxygen, carbon and silicon, so combined as to impart strength, density of grain and chilling properties to the composition.

4. The improved composition of cast iron, consisting of coke iron containing silicon, carbon and oxygen in controlled and proper proportions to give to said composition the qualities of strength, density of grain, and chilling properties.

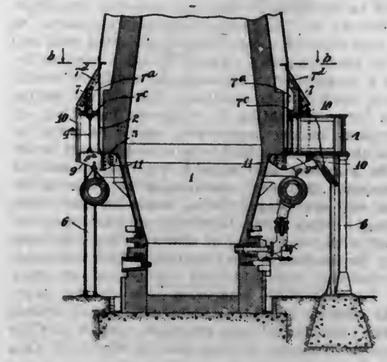
5. The improved composition of cast iron, consisting of coke iron, containing carbon, silicon and oxygen in controlled quantities and in substantially the proportions mentioned.

[Claim 6 not printed in the Gazette.]

1,217,185. FURNACE CONSTRUCTION. JOSEPH E. JOHNSON, Jr., New York, N. Y. Filed Aug. 27, 1914. Serial No. 858,826. (Cl. 266—25.)

1. In a furnace, the combination with an external shell and a mantle plate supported thereby, of a supporting frame exterior of the mantle plate, means whereby the shell is supported by said frame at points radially outside the mantle plate and independently thereof, and columns supporting the frame.

2. In combination with a furnace having an external shell through which its weight is supported, a supporting frame exterior of the same, outwardly projecting supporting members fixedly attached to the furnace inwardly of the supporting frame, said members being sustained from beneath by said shell, and columns supporting the frame.



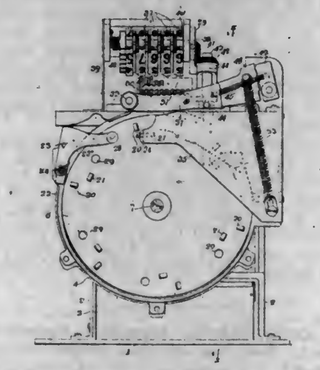
3. In combination with a furnace having an external shell through which its weight is supported, a supporting frame exterior of the same, supporting members connected fixedly with said shell inward of the supporting frame at intervals therearound and sustained from beneath by the supporting frame, and columns supporting the frame.

4. In combination with a furnace having an external shell through which its weight is supported, a supporting frame exterior of the same, supporting members connected fixedly with the shell inwardly of the supporting frame and sustained from beneath by the frame, and columns giving support to the frame.

5. In combination with a furnace having an external shell through which its weight is supported, a supporting frame exterior of the same, outwardly extending supporting brackets secured to said shell and sustained from beneath by the frame, and columns supporting the frame.

[Claims 6 to 18 not printed in the Gazette.]

1,217,186. FARE-BOX. FRANK B. KENNEDY, New Haven, Conn., assignor to The Recording Register & Fare Box Company, New Haven, Conn., a Corporation of Connecticut. Filed Apr. 27, 1913. Serial No. 762,506. (Cl. 235—32.)



1. In a coin registering mechanism, a register adapted to register coins of several different denominations, a hopper adapted to hold coins of the several denominations indiscriminately mixed, a movable member arranged within said hopper and provided with a device to lift the coins in said hopper to a discharging point, said device being adapted to lift coins of all denominations registrable, means to dislodge from said movable member all coins except that properly located in said device, and a single differentially movable part located in the path of said device, operatively connected to said register and adapted to be engaged successively by each coin lifted by the said device as it is moved past and moved different distances according to the size of the coin and irrespective of the denomination thereof, and a discharging point for the coins beyond said part.

2. In a coin registering mechanism, a hopper arranged to hold coins of different sizes, a rotatable disk mounted in said hopper having devices thereon to move coins of different sizes from said hopper to a discharging point, means in engagement with said disk to dislodge surplus coins therefrom to insure proper registration, a register, an actuating device therefor comprising a differentially movable part arranged to engage each coin on said disk as it is carried past, and a discharging point through which said coins are discharged after their disengagement from said differentially movable part, said discharging point being located beyond said differentially movable part.

3. In a coin registering mechanism, a hopper arranged to hold coins of different sizes, an inclined rotatable disk mounted in said hopper and having pockets each adapted to receive coins of different denominations and to lift the same from said hopper to a discharging point, a register, an actuating mechanism for said register having a differentially movable part arranged at the edge of said disk in advance of the point at which said coins are to be discharged and adapted to be engaged by the edges of the coins in said pockets and moved different distances according to the denominations of the coins as the latter are moved past the same by said disk.

4. In a coin registering mechanism, a hopper arranged to hold coins of different sizes, an inclined rotatable disk mounted in said hopper and having pockets each adapted to receive coins of different denominations and to lift the same from said hopper to a discharging point, means in engagement with said disk to dislodge surplus coins therefrom to insure proper registration, a register, an actuating device therefor comprising a differentially movable part arranged at one side of said disk to engage the edges of the coins in said pockets and move different distances according to the denominations of the coins as the latter are moved past the same by said disk.

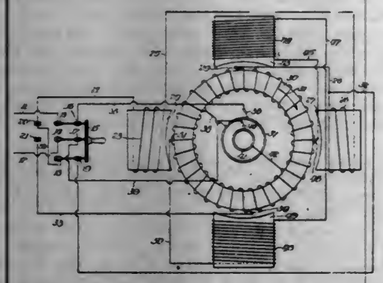
5. In a coin registering mechanism, a hopper comprising a movable member having a lug arranged near one edge thereof, a second lug arranged at one side and slightly in advance of the first-mentioned lug, said lugs coöperating to form a pocket, said hopper also having a flange arranged along the edge of said movable member and cooperating with said lugs to retain a coin in engagement therewith, a register, a mechanism actuated by said coin while it is in engagement with one of said lugs for controlling the operation of said register, and a fixed member to move said coin out of engagement with the other of said lugs and support the same while it is in operative engagement with said operating mechanism.

[Claims 6 to 43 not printed in the Gazette.]

1,217,187. SYNCHRONOUS MOTOR. AUSTIN KIMBLE, Chicago, and JOHN D. NIES, St. Charles, Ill., assignors to Kimble Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1914. Serial No. 809,862. (Cl. 172—279.)

1. In a synchronous motor, the combination with a source of alternating current, of an armature having a commutator and slip rings thereon, a starting field magnet having a winding thereon for producing magnetic flux through said armature during the starting condition, means for connecting said winding and said armature, through its commutator, in series with said source, means for connecting said armature, through its slip rings, with said source, an operating field magnet displaced in space substantially ninety electrical degrees from said start-

ing field magnet and having a winding thereon for producing magnetic flux through said armature during the running condition, means connecting the winding of said operating field magnet in circuit with said armature through the commutator of the latter, and means for short-circuiting the winding of said starting magnet when said winding is not connected with said source, whereby, during the connection of said source with the winding of said starting magnet and said armature through its commutator, the winding of said operating magnet will be short-circuited on itself and during the connection of said source with said armature through said slip rings, the winding of said operating magnet will be supplied with direct current from said armature, substantially as described.

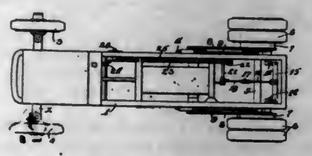


2. In a synchronous motor, the combination with a source of alternating current, of an armature having a winding, a commutator and slip rings thereon, a starting field magnet having a winding thereon for producing a magnetic flux through said armature during the starting condition, a set of starting brushes engaging the commutator of said armature and adapted to be connected with the winding of said starting magnet, means for connecting the windings of said starting magnet and said armature through said starting brushes and said commutator in series with said source, an operating field magnet having a winding thereon for producing a magnetic flux through said armature during the running condition and displaced in space substantially ninety electrical degrees from said starting field magnet, a set of direct-current brushes engaging the commutator of said armature and connected with the winding of said operating magnet, said brushes being displaced in space at an angle from said starting brushes, means for connecting said armature windings with said source through said slip rings, and means for short-circuiting on itself the winding of said starting magnet, whereby, when the windings of said starting magnet and armature are connected through said commutator and starting brushes with said source, said armature will be rotated and the winding of said operating magnet will be short-circuited on itself through said armature winding, and when said armature winding is connected with said source through said slip rings and the winding of said starting magnet is short-circuited on itself, said operating magnet will be energized to produce a magnetism of a fixed polarity, and direct current of a plurality of voltages will appear at said starting and operating brushes, substantially as described.

3. In a synchronous dynamo electric machine, the combination of an armature, a winding carried by the armature, connectors for conducting alternating current to and from said winding, a commutator connected with said winding, an operating field magnet having a winding for producing a magnetic flux through the armature during the running condition, an auxiliary field magnet having a winding for compensating for armature induction, operating brushes on the commutator connected with the winding of the operating field magnet and located in the field of the auxiliary field magnet, starting brushes on said commutator displaced substantially 90 electrical degrees from said operating brushes, and means for connecting said starting brushes with alternating current main conductors and with the winding of said auxiliary field magnet during the starting of the armature and for interrupting the connection with said main conductors and establishing a low resistance connection between the terminals of the winding of said auxiliary field magnet during the running condition of said armature.

4. In a synchronous dynamo electric machine, the combination of an armature, a winding carried by the armature, connectors for conducting alternating current to and from said winding, a commutator connected with said winding, an operating field magnet having a winding for producing a magnetic flux through the armature during the running condition, an auxiliary field magnet having a winding for compensating for armature induction, operating brushes on the commutator connected with the winding of the operating field magnet and located in the field of the auxiliary field magnet, starting brushes on said commutator displaced substantially 90 electrical degrees from said operating brushes, means for connecting said starting brushes with alternating current main conductors and with the winding of said auxiliary field magnet during the starting of the armature and for interrupting the connection with said main conductors and establishing a low resistance connection between the terminals of the winding of said auxiliary field magnet during the running condition of said armature, and devices for connecting the armature winding directly with said main conductors during the running condition of the armature.

1,217,188. BRAKING DEVICE. EMIL R. KLEMM, Chicago, Ill. Filed Jan. 27, 1916. Serial No. 74,555. (Cl. 21—8.)



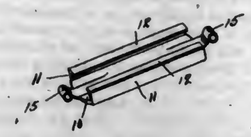
1. In a device of the class described, the combination with an axle and reach rod, of a frame journaled on the axle and rigidly secured to the reach rod, a cam journaled on said frame, an expansible brake band slightly rotatable about said frame, resilient means resisting movement of said brake band with respect to said frame, and springs acting to resist expanding movements of the band by said cam.

2. In a device of the class described, the combination with an axle and a reach rod, of a frame journaled on the axle, a bolt affording rigid connection between said frame and reach rod, an expansible brake band disposed about said frame and unconnected therewith, co-acting retaining means affording connection between said band and said bolt to permit movement of said band, means for expanding said band and serving to assist in supporting the same in proper position, and means resisting expansion of said band.

3. The combination of an axle and reach rod journaled thereon, of a frame journaled on said axle, means rigidly connecting the frame to the reach rod, an expansible brake band disposed about said frame and unconnected therewith, shoes on said brake band co-acting with the means of connection between said frame and reach rod to position the band and permit slight movement thereof, and mechanism acting on the ends of the band to expand the band.

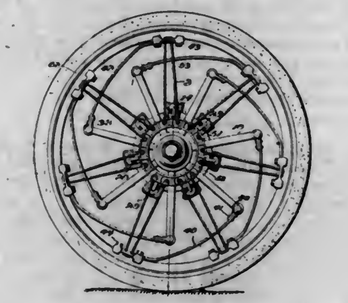
1,217,189. COIN-HOLDER. RICHARD D. KNIGHT, Providence, R. I. Filed July 12, 1916. Serial No. 108,815. (Cl. 133—6.)

1. A pocket coin holder comprising a sheet metal body bent into trough shape and having its sides provided with inturned flanges overhanging the bottom portion of the body, said bottom portion being slit longitudinally at one end to provide a spring tongue having its faces lying flush with the faces of the main portion of the bottom, the free end of said tongue being bent toward and extending approximately to the plane of said flanges to form a closure.



2. A pocket coin holder comprising a sheet metal body bent into trough shape and having its sides provided with inturned flanges overhanging the bottom portion of the body, said bottom portion being slit longitudinally at both ends to provide spring tongues, the free ends of said tongues being bent toward and extending approximately to the plane of said flanges, the extremities of said tongues being rolled backward on themselves.

1,217,190. RESILIENT WHEEL. ARTTURI JUTILA, Duluth, Minn. Filed Apr. 3, 1914. Serial No. 829,331. (Cl. 152—28.)

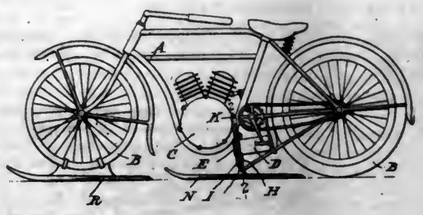


1. A resilient wheel including a hub, a felly, resilient means suspending the hub within the felly and including leaf springs, plates bearing against the felly and formed with flanges engaging the sides of the felly and with flanges between which the leaf springs seat, fastening means passed through the springs and plates and into the felly whereby the springs are secured to the felly and held against twisting movement, a stop ring operatively disposed with respect to the hub, flanges projecting laterally from the plates, and stop ring supporting members secured to the lateral flanges and the stop ring.

2. A resilient wheel including a hub, a felly, resilient spokes, portions of which are circumferentially movable with respect to the hub, connecting the hub and felly, a brake drum supporting flange carried by the hub and formed with radial ears projecting beyond the drum, and stops projecting laterally from the ears between the spokes to be engaged by the circumferentially movable portions of the spokes whereby turning of the hub with respect to the felly will be limited.

3. A resilient wheel including a hub, a felly, resilient spokes, portions of which are circumferentially movable with respect to the hub, connecting the hub and felly, a brake drum supporting flange carried by the hub and formed with radial ears projecting beyond the drum, stops projecting laterally from the ears between the spokes to be engaged by the circumferentially movable portions of the spokes to limit independent turning movement of the hub with respect to the felly, and laterally directed reinforcing wings formed upon the spokes in position to provide in connection with the spokes enlarged bearing surfaces for engagement with the stops.

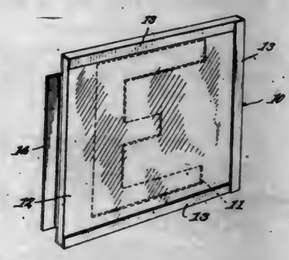
1,217,191. SLEIGH-RUNNER FOR MOTOR-CYCLES. WALENTIN LAKSO, Chester Depot, Vt. Filed Nov. 2, 1916. Serial No. 129,142. (Cl. 208—162.)



1. Sleigh runners for motorcycles comprising, in combination with the motor casing, a yoke fastened thereto, a runner, and a member to which the same is pivoted, said member being fastened to the yoke, and a cushion intermediate the latter and said member.

2. Sleigh runners for motorcycles comprising, in combination with the motor casing, a clevis-shaped yoke having arms which are apertured, a rod passing through said arms and motor casing, a T-shaped member, and a runner to which the same is pivoted, a cushion intermediate said member and yoke, and links connecting said yoke and member.

1,217,192. SIGN. JOHN W. LARSON, Omaha, and KNUD C. KNUDSON, Fullerton, Nebr. Filed Mar. 13, 1916. Serial No. 83,919. (Cl. 40—140.)



1. In an illuminated sign, a unit or section comprising an opaque sheet metal plate having a perforation outlining a character, and a transparent sheet mounted on the plate over the perforation, said plate having means for holding the sheet, said holding means being edge folds which overlap corresponding edges of the sheet, and one of the edges of the plate having a connecting member adapted to engage an adjacent unit.

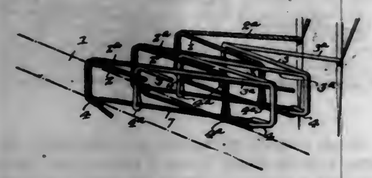
2. In an illuminated sign, a unit or section comprising an opaque sheet metal plate having a perforation outlining a character, and a transparent sheet mounted on the plate over the perforation, said plate having edge folds which overlap corresponding edges of the sheet, and one of the edges of the plate having a connecting member adapted to engage an adjacent unit, the plate at the edge having the connecting member being provided with folds which overlap the adjacent edge of the sheet.

3. In an illuminated sign, a unit or section comprising an opaque plate having a perforation outling a character, and a transparent sheet mounted on the plate over the perforation, said plate having edge folds overlapping corresponding edges of the sheet, and one of the edges of the plate having a channel, and the opposite edge having a hook, the hook of one unit interlocking with the channel of an adjacent unit, and folds in the plate at the ends of the channel and the hook, said folds overlapping adjacent edges of the sheet.

4. In an illuminated sign, a unit or section comprising an opaque plate having a perforation outlining a char-

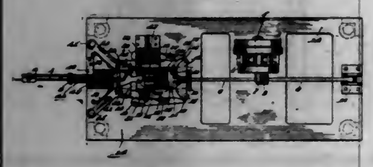
acter, and a transparent sheet mounted on the plate over the perforation, said plate having edge folds overlapping corresponding edges of the sheet, said edge folds having return bends forming channels and outstanding flanges.

1,217,193. PROCESS OF EMBROIDERING. RUDOLF LOEB, Camden, N. J. Filed Mar. 15, 1912. Serial No. 683,953. (Cl. 112—34.)



The process of embroidering, which consists in stretching a section of fabric in a tambour frame, oscillating, with respect to the fabric and in a fixed path, a pair of spaced needles carrying the usual threads, and manually moving the fabric in any desired direction independently of the means effecting the stitch formation whereby instantaneous changes in the position of the fabric with respect to the stitches laid by the oscillating needles may be effected, said needles forming a plurality of plural sets of stitches upon the face of the fabric, each plural set of stitches being formed of a separate thread and the stitches of the respective sets substantially paralleling each other; and each of said sets of stitches having a plurality of loops on the under side of the fabric connected by a single thread wholly disposed on the under side of the fabric.

1,217,194. NAIL-MAKING MACHINE. DAVID H. MCCLELLAND, Chicago, Ill. Filed May 27, 1912. Serial No. 700,060. (Cl. 10—49.)



1. In a nail-making machine, a bed, feeding means for advancing the stock over said bed, a heading die mounted for movement toward and from the end of the stock, a driver for said die mounted for reciprocation upon the bed, rocker arms pivoted one at either side of the path of reciprocation of said driver, gripping jaws mounted for movement transversely of the path of advance of the stock, one on either side of said path, said rocker arms being each adapted at one end to engage said gripper jaws, the driver and the other ends of said rocker arms being provided with coöperating cam surfaces whereby the advance of the driver toward the stock actuates the rockers to cause the gripper jaws to engage said stock, and cutters carried rigidly with the respective gripper jaws for severing the stock simultaneously with its engagement by the grippers.

2. In a nail-making machine, a bed, means for advancing stock over said bed, a heading die and means for driving it against the end of the stock, a pair of gripping jaws and arms upon which they are carried, said arms being pivotally mounted for swinging the jaws transversely of the path of advance of the stock, a line connecting the pivot axis of one of said arms with the center of the jaw carried by that arm making an angle of about 45 degrees with said path of the stock, and the pivots of said arms being located at the opposite side of the gripper jaws from the heading die.

3. In a nail-making machine, a bed, means for advancing stock over said bed, a heading die and means for driving it against the end of the stock, a pair of gripping jaws and arms upon which they are carried, said arms being pivotally mounted for swinging the jaws transversely of the path of advance of the stock, a line connecting the pivot axis of one of said arms with the center of the jaw carried by that arm making an angle of about 45 degrees with said path of the stock, the pivots of said arms being located at the opposite side of the gripper jaws from the heading die, and means for causing initial engagement of the gripper jaws with the stock during the advance of the heading die toward the end of the stock.

4. In a nail-making machine, a heading die having a heading chamber and a cylindrical bore leading to said chamber dimensioned to accommodate the stock used for nails, means for forcibly entering the end of the stock into the heading chamber of the die through the said bore thereof for forming a head on said end of the stock, said die being made in two parts adapted to be separated for releasing the headed stock.

5. In a nail-making machine, a heading die having a heading chamber and a bore leading to said chamber of cross section substantially equal to that of the stock used for the nails, gripping devices for holding the stock, means adapted for causing relative movement of such gripping devices and the heading die for forcibly entering the end of the stock into the heading chamber through the bore of said die to form a head on said end of the stock, said relative movement being sufficient for swaging said stock into a second head immediately outside the heading die, and said die being made in two parts adapted to separate for releasing the headed stock.

[Claims 6 to 10 not printed in the Gazette.]

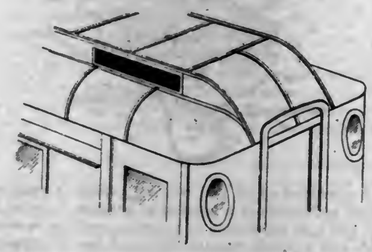
1,217,195. DOUBLE-ACTION PUMP. WILLIAM S. MCFERREN, Chambersburg, Pa., assignor of one-third to Harry A. Bergner, Chambersburg, Pa. Filed June 13, 1916. Serial No. 103,485. (Cl. 103—83.)



A double acting pump comprising two eccentrically mounted pump cylinders having a common head, the heads of the two cylinders having eccentrically formed openings for the reception of piston rods, pistons mounted one in each cylinder, piston rods eccentrically connected to each piston and movable through said apertures, brace rods within said cylinders, one being connected to each piston rod and to a piston, and means for actuating the piston rods.

1,217,196. ROOFING. LEO F. MCNALLY, Brooklyn, N. Y., assignor to Transportation Utilities Company, New York, N. Y., a Corporation of West Virginia. Filed Sept. 30, 1916. Serial No. 122,953. (Cl. 108—5.1.)

1. A roofing comprising a plurality of sections each formed with a steel body, the front extremity of each section provided with an anchoring extension, means extending therethrough for rigidly holding each section in place, each section provided with a double return flange adjacent said anchoring extension, and at its remote extremity with a single flange interlocking with the double return flange of the adjacent section, each section provided with protective coatings on said steel body, the said protective coatings extending throughout the said interlocking joints and forming a cushion therein.

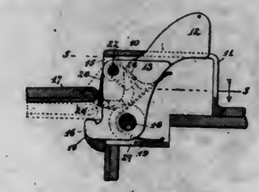


2. A car roof formed of steel sections, one extremity of each section anchored in place and provided with a double return flange in front of said anchorage, the remote extremity of each section provided with a flange interlocking with the double return flange of adjacent sections, each section provided upon its exterior surface with a fabric coating, and upon its lower surface with an asbestos coating, the fabric coating projecting beyond the edges of the sections and secured to the under sides thereof, the said asbestos and fabric coatings extending throughout the said interlocking joints and forming a cushion therefor.

3. A car roof comprising sections extending transversely of the upper deck of the car, said sections provided with protective coatings and with interlocking joints, the end sections of the upper deck of the car roof provided with longitudinally extending joints meeting and secured to the edge of the adjacent transverse sections.

4. In a car roof, the combination of steel sections with protective coatings thereon, the protective coating upon the upper surface of each section projecting around the edges thereof and secured to the under surface of the section, said sections extending the entire width of the upper deck of the car roof and secured together by transversely extending joints, the end sections curved in conformity to the curve of the end of the upper deck of the car roof and provided with longitudinally extending central joints, the said joints lying above and secured to the center carline at the ends of the upper deck of the car roof.

1,217,197. TRAP-DOOR LOCK. LEO F. MCNALLY, Brooklyn, N. Y., assignor to David W. Pye, Red Bank, N. J. Filed Dec. 21, 1916. Serial No. 138,147. (Cl. 105—84.)



1. A trap door lock comprising a pivotally mounted locking and opening mechanism adapted to move about said pivotal mounting as a unitary structure, said locking and opening mechanism including a striking arm and a latch, and means whereby said latch may move rearwardly independent of said locking and opening mechanism.

2. A trap door lock comprising a pivotally mounted locking and opening mechanism, said mechanism adapted to move about said pivotal mounting as a unitary structure, said locking and opening mechanism including a forwardly projecting striking arm adapted to raise the trap door, and a pivotally mounted latch arranged in the path of motion of the trap door.

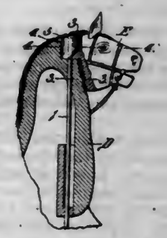
3. A trap door lock and opener comprising a casing, a member pivotally mounted therein and provided with a foot-engageable portion projecting therefrom, a striking arm carried by said member adapted to raise the trap door, and a latch carried by said member extending into the path of motion of the trap door and pivotally secured at its upper extremity to said member.

4. A trap door lock and opener comprising a casing, a locking and opening mechanism pivotally mounted therein and including a main member, a foot-engageable portion carried by said main member and extending through an opening in said casing, a striking arm carried by said main member and adapted to raise a trap door, a latch pivotally secured at its upper extremity to said main member, said main member, latch, striking arm and foot-engageable portion, adapted to oscillate about the pivotal mounting of the main member as a unitary structure.

5. A trap door lock and opener comprising a casing, a locking and opening mechanism pivotally mounted therein and including a main member, a foot-engageable portion carried by said main member and extending through an opening in said casing, a striking arm carried by said main member and adapted to raise a trap door, a latch pivotally secured at its upper extremity to said main member, said main member, latch, striking arm and foot-engageable portion, adapted to oscillate about the pivotal mounting of the main member as a unitary structure, and resilient means engaging said main member and said casing, adapted to hold said locking mechanism in upright operative position.

[Claims 6 to 10 not printed in the Gazette.]

1,217,198. VELOCIPEDE-HORSE. DANIEL H. MARKMANN, St. Louis, Mo. Filed Aug. 2, 1916. Serial No. 112,748. (Cl. 208—42.)



1. A velocipede horse, comprising a body portion provided with a neck, a head arranged in front of the upper portion of the neck and separated from same by a substantially vertically-disposed joint so as to enable the head to be turned without changing the position of the neck, and a guiding device for the velocipede connected to the head in such a manner that the direction of travel of the velocipede will change when the head of the horse is turned.

2. A velocipede horse, comprising a body portion provided with a complete immovable neck, a head arranged in front of the upper portion of the neck and projecting forwardly therefrom, said head being adapted to be turned sidewise without effecting a change in the position of any portion of the neck, and a guiding means for the velocipede connected to the head so as to cause the direction of travel of the velocipede to change when the head is turned.

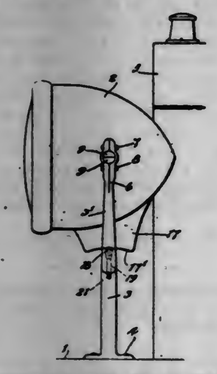
3. A velocipede horse, comprising a body portion, an immovable neck on said body portion, a movable head having its lower portion arranged in front of the upper portion of the neck and spaced away therefrom so that the head can be turned sidewise without disturbing the neck, and a guiding device for the velocipede connected to the head.

4. A velocipede horse, comprising a body portion, an immovable neck on said body portion, a movable head provided at its upper end with a part that laps over the neck and having its lower portion spaced away from the neck, and a steering device for the velocipede rigidly connected to the part of the head that laps over the neck.

5. A velocipede horse, comprising a body portion, an immovable neck on said body portion, a steering device projecting upwardly through the neck, and a head having its lower portion separated from the neck by a substantially vertically-disposed joint and its top merged into the upper end of the neck, said head being connected to said steering device and combined with the neck in such a manner that the head can be turned sidewise without effecting a change in position of any portion of the neck.

[Claims 6 to 10 not printed in the Gazette.]

1,217,199. ATTACHMENT TO AUTOMOBILE-HEADLIGHTS. GILBERT ROBERT MATHESON and JOSEPH BERTRAM SHAW, Winnipeg, Manitoba, Canada. Filed Apr. 27, 1915. Serial No. 24,303. (Cl. 240—62.)



1. The combination with the headlight bracket of an automobile, of a headlight pivotally mounted in the bracket on a horizontal axis, a balancing weight attached to the headlight and means for retarding the swing of the headlight around the horizontal axis, as and for the purpose specified.

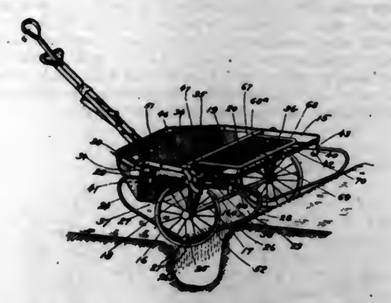
2. In an automobile the combination with a headlight bracket permanently secured to the automobile body, of a headlight pivotally mounted on a horizontal axis in the bracket, a balancing weight secured to the under side of the headlight and retarding means carried by the bracket and engaging with the weight, as and for the purpose specified.

3. In an automobile the combination with a headlight bracket permanently secured to the automobile body, of a headlight, horizontally disposed alined stub axles secured to the opposite sides of the headlight and pivotally mounted in the bracket, a balancing weight attached to the under side of the headlight and provided on the under side with rack teeth and a pinion carried by the bracket and engaging with the teeth of the rack, as and for the purpose specified.

4. In an automobile the combination with a headlight bracket permanently secured to the automobile body, of a headlight, horizontally disposed alined stub axles secured to the opposite sides of the headlight and pivotally mounted in the bracket, a balancing weight attached to the under side of the headlight and provided on the under side with a concave rack and a spring pressed pinion carried by the bracket and engaging continuously with the teeth of the rack, as and for the purpose specified.

1,217,200. COMBINED SLED AND WHEELED VEHICLE. CHARLES Z. MILLER and RUDOLPH H. KLICKMAN, Chicago, Ill. Filed Jan. 19, 1916. Serial No. 73,072. (Cl. 21—96.)

1. In a combined sleigh and wheeled vehicle, a supporting element adjustable to a horizontal position to serve as a runner, and also adjustable to a sloping position to serve as a skid.



2. In a combined sleigh and wheeled vehicle, a supporting element adjustable to a horizontal position to serve as a runner, and also adjustable to a sloping position to serve as a skid, and a wheel movable into and out of supporting position.

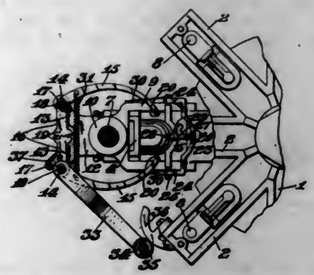
3. In a combined sleigh and wheeled vehicle, a supporting element adjustable to a horizontal position to serve as a runner, and also adjustable to a sloping position to serve as a skid, and a wheel movable into and out of supporting position, either said wheel or said runner being movable into supporting position at the will of the operator.

4. In a combined sleigh and wheeled vehicle, a supporting element adjustable to a horizontal position to serve as a runner, and also adjustable to a sloping position to serve as a skid, and a wheel movable into and out of supporting position, said runner and said wheel being simultaneously movable, one being moved into supporting position while the other is moved out of said position.

5. In a combined sleigh and wheeled vehicle, a supporting element adjustable to a horizontal position to serve as a runner, and also adjustable to a sloping position to serve as a skid, a wheel movable into and out of supporting position, said runner and said wheel being simultaneously movable, one being moved into supporting position while the other is moved out of said position, a frame, and means attached to said frame for thus moving said runner and said wheel.

[Claims 6 to 25 not printed in the Gazette.]

1,217,201. LIFT-CENTERING MECHANISM FOR HEEL-BUILDING MACHINES. JOHN E. MITCHELL, St. Louis, Mo. Filed July 22, 1915. Serial No. 41,215. (Cl. 12—42.)



1. Lift-centering mechanism for heel-building machines comprising, in combination with a holder and means for depositing lifts therein in superposed relation, a pair of members mounted on a fixed part of the machine, operatively connected to move in unison and yieldably held against separation, said members having lift-engaging heads located in the path of movement of the lifts to be deposited in said holder.

2. Lift-centering mechanism for heel-building machines comprising, in combination with a holder and means for depositing lifts therein in superposed relation, a pair of members mounted on a fixed part of the machine, operatively connected to move in unison and yieldably held against separation, said members having lift-engaging heads located in the path of movement of the lifts to be deposited in said holder and substantially in the plane occupied by the deposited lift.

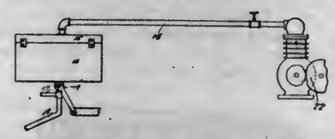
3. Lift-centering mechanism for heel-building machines comprising, in combination with a holder and means for depositing lifts therein in superposed relation, a pair of members mounted on a fixed part of the machine, operatively connected to move in unison, yieldably held against separation, and having lift-engaging heads, and means for automatically adjusting the position of said heads to cause them to be engaged by successive lifts deposited in said holder.

4. Lift-centering mechanism for heel-building machines comprising, in combination with a holder and means for depositing lifts therein in superposed relation, a pair of members mounted on a fixed part of the machine, operatively connected to move in unison, yieldably held against separation, and having lift-engaging heads, and means for automatically adjusting the position of said heads to cause them to be engaged by successive lifts of gradually decreased width deposited in said holder.

5. Lift-centering mechanism for heel-building machines comprising, in combination with a holder and means for depositing lifts therein in superposed relation, a pair of members mounted on a fixed part of the machine, operatively connected to move in unison and yieldably held against separation, said members having lift-engaging heads located in the path of movement of the lifts to be deposited and provided with oppositely-inclined lift-engaging faces.

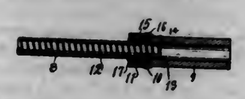
[Claims 6 to 14 not printed in the Gazette.]

1,217,202. SANDER FOR VEHICLES. ARTHUR R. MORRISSEY, Seattle, Wash., assignor of one-third to Edward R. Gerber, King county, Wash. Filed May 25, 1915. Serial No. 30,288. (Cl. 105—263.)



The combination with a motor driven vehicle having an air compressor of an air tight hoppered sand receptacle removably attachable to said vehicle and having pipes positioned to discharge the contents of the said receptacle in the path of the said wheels and having valves in the said pipes, a pipe joining the said compressor and the top of the said receptacle, whereby air under pressure is admitted above the surface of the sand in the receptacle for the purpose of forcing the sand from the said receptacle, independent sand valve controlling means between the said valves and the driver's cab of the vehicle, whereby the operation of opening the sand valves is independent of all other operations of the vehicle.

1,217,203. TUBE-COUPLING. KARL O. MUEHLBERG, Manitowoc, Wis. Filed Mar. 17, 1915. Serial No. 14,936. (Cl. 137—28.)



1. A tube coupling for connecting a yielding tube to a spirally formed flexible metal tube, comprising an inner coupling member insertible within the yielding tube and having a threaded means for connecting it to the spiral portion of the metal tube, and an outer coupling member surrounding the last mentioned tube and having a threaded engagement with the outer surface of the end portion of the yielding tube into which the inner coupling member has been inserted to clamp said tubes together.

2. A tube coupling for connecting a yielding tube to a spirally formed flexible metal tube, comprising an inner coupling member insertible within the yielding tube and having a threaded connection with the spiral portion of the metal tube, and an outer coupling member surrounding the metal tube and having a threaded engagement with the outer surface of the end portion of the yielding tube into which the inner coupling member has been inserted to clamp said tubes together.

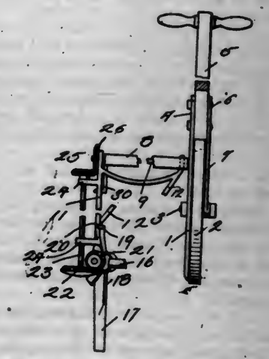
3. A tube coupling for connecting a yielding tube to a spirally formed flexible metal tube, comprising an inner coupling member surrounding and threaded on the spiral portion of the metal tube, said coupling and tube end being insertible within the yielding tube to a point where the yielding tube end will overlap and engage the spiral portion of the tube at the rear of the coupling, and an outer coupling member having a threaded engagement with the outer surface of the overlapped portion of the yielding tube to clamp said tubes together.

4. A tube coupling for connecting a yielding tube to a spirally formed flexible metal tube, comprising an inner coupling member having an outer rounded peripheral edge portion and a threaded connection with the tube, said coupling and tube end being insertible within the yielding tube to a point when the yielding tube end will overlap and engage the metal tube at the rear of the coupling, and an outer coupling member having a threaded engagement with the outer surface of the overlapped portion of the yielding tube to clamp and seal said tubes together, the outer coupling member forming a thread on the overlapped yielding tube end when turned thereon.

5. A tube coupling for connecting a rubber connector tube to a metal flexible tube having an outer spirally trending groove, comprising an inner coupling member having an outer rounded peripheral edge portion and a threaded connection with the metal tube, said coupling and said tube end being insertible within the rubber tube to a point where the rubber tube end will overlap and engage the metal tube at the rear of the coupling, and an outer coupling member having a threaded engagement with the overlapped portion of the rubber tube, said outer coupling member having a rear flanged portion for forcing portions of the rubber into the spirally trending groove of the metal tube.

[Claims 6 to 9 not printed in the Gazette.]

1,217,204. LAWN-TRIMMER. FRED C. MYER, Port Jervis, N. Y. Filed June 9, 1916. Serial No. 102,683. (Cl. 56—19.)

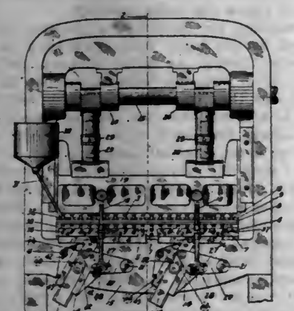


1. In a lawn trimmer, the combination with a frame, of a drive wheel mounted thereon, the said wheel having

an internal gear, a shaft mounted on the frame and having a gear meshing with the said internal gear, a bar pivotally mounted on the shaft, cutting mechanism mounted on the bar and means for transmitting motion from the shaft to the cutting mechanism.

2. In a lawn trimmer, the combination with a shaft and a support therefor, of a bar pivotally mounted on the shaft, a stub shaft mounted on said bar, a cutting knife secured to the stub shaft, a cutting blade loosely mounted on the stub shaft adjacent the cutting knife in such a manner that the shaft may rotate with relation to the blade, means for varying the distance between the cutting blade and knife, a gear on the first mentioned shaft, a gear on the stub shaft, a shaft having gears on the ends thereof meshing with the last mentioned gears, and means for actuating the first mentioned shaft.

1,217,205. APPARATUS FOR PRODUCING SPHERICAL OBJECTS. ELMER E. NEAL, Springfield, Mass., assignor, by mesne assignments, to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Apr. 17, 1913. Serial No. 761,795. (Cl. 90—33.)



1. In a device of the character indicated, the combination with a bank of dies and pusher means for forcing the articles operated upon through said dies, of means for transferring the articles that have been forced through said dies from the rear of said dies to the front thereof into position to be again pushed through the dies by said pusher means; substantially as described.

2. In a device of the character indicated, the combination with a bank of dies and pusher means for forcing the articles operated upon through said dies, of means for transferring each article that has been forced through a die from the rear of such die to the front of another die and into position to be pushed through such other die by said pusher means; substantially as described.

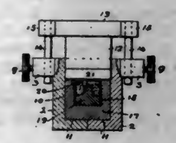
3. In a device of the character indicated, the combination with a bank of dies arranged side by side and pusher means for forcing the articles operated upon through said dies, of means for transferring each article that has been forced through a die from the rear of such die to the front of the next die and into position to be pushed through such next die by the said pusher means; substantially as described.

4. In a device of the character indicated, the combination with a bank of circular dies all of substantially the same diameter and pusher means for forcing the articles operated upon through said dies, of means for transferring the articles that have been forced through said dies from the rear thereof to the front thereof into position to be again pushed through said dies by said pusher means; substantially as described.

5. In a device of the character indicated, the combination with a bank of circular dies all of substantially the same diameter and pusher means for forcing the articles operated upon through said dies, of means for transferring each article that has been forced through a die from the rear of such die to the front of another die and into position to be pushed through such other die by said pusher means; substantially as described.

[Claims 6 to 43 not printed in the Gazette.]

1,217,206. DENTAL-MOLD UNIT. CLINTON A. NIXON, Valparaiso, Ind. Filed May 8, 1916. Serial No. 96,190. (Cl. 18—42.)



1. In unit dental molds, a sectional open ended chamber, a plunger movable therein, and means carried by the sectional chamber adapted to temporarily hold the plunger against displacement.

2. In unit dental molds, a mold chamber adapted to be opened to release its contents, an independent part of said unit adapted to confine the contents within the mold under pressure, and retaining means carried by said mold parts whereby said independent part may be temporarily rigidly held against displacement.

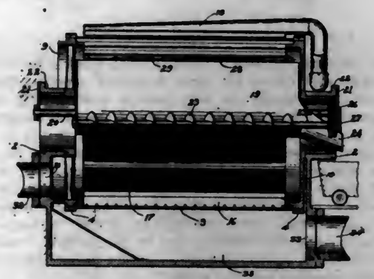
3. A hinged two-part unit mold, means for holding the same closed, a plunger movable therein constituting a pressure retaining device complete for each unit carried by the mold, and means adapted to rigidly hold the same against displacement sufficiently long to complete the treatment of the contents of the mold.

4. A suitable sectional unit mold comprising inclosed sides and bottom, a structurally coöperative closure therefor adapted to engage the contents of the mold, and means for temporarily holding the closure against displacement such means forming a part of the unit mold.

5. A two-part mold, a threaded exterior, a plunger operable therein, and a sleeve adapted to hold the plunger at predetermined positions in the mold.

[Claims 6 and 7 not printed in the Gazette.]

1,217,207. SEWERAGE-SCREEN. MAY ADNA NORTH, Green Bay, Wis. Filed May 17, 1915. Serial No. 28,642. (Cl. 210—14.)



1. In a machine of the class described a supporting frame, a rotatably mounted drum carried by said frame, said drum being provided with a plurality of longitudinal strips of wire screening mounted around its periphery, means carried by said revolving drum for elevating solid matter, a stationary hopper depending within said drum and adapted to receive said solid matter, said hopper having a horizontal, foraminous bottom, and means provided within said hopper coaxial with said drum but independent thereof for conveying solid matter to the exterior of said drum.

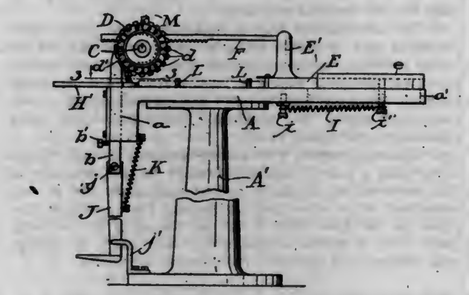
2. In a machine of the class described a supporting frame, a rotatably mounted drum carried by said frame, said drum being provided with a plurality of longitudinal strips of wire screening mounted around its periphery, means carried by said revolving drum for elevating solid matter, a stationary hopper depending within said drum and adapted to receive said solid matter, said hopper having a horizontal, foraminous bottom, and means within said drum for directing a jet of water tangentially against the inner surface of said wire screening and a screw conveyer arranged within said hopper coaxially with said drum but independently thereof for conveying solid material to the exterior of said drum.

3. In a machine of the class described a supporting frame, a rotatably mounted drum carried by said frame, said drum being provided with a plurality of longitudinal strips of wire screening mounted around its periphery, means carried by said revolving drum for elevating solid matter, a stationary hopper depending within said drum and adapted to receive said solid matter, said hopper having a horizontal, foraminous bottom, a screw conveyer arranged within said hopper coaxially with said drum but independently thereof for conveying solid matter to the exterior of said drum, and means for rotating said conveyer at a different speed than said drum.

4. In a machine of the class described a supporting frame, a rotatably mounted drum carried by said frame, said drum being provided with a plurality of longitudinal strips of wire screening mounted around its periphery, means carried by said revolving drum for elevating solid matter, a stationary hopper depending within said drum and adapted to receive said solid matter, a screw conveyer arranged within said hopper coaxially with said drum but independently thereof for conveying said solid matter, an internal gear secured to said drum, an end plate, an idler gear carried by said plate and meshing with said internal gear, and a gear mounted upon said conveyer and meshing with said idler gear, substantially as described.

5. In a machine of the class described a supporting frame, a rotatably mounted drum carried by said frame, said drum being provided with a plurality of longitudinal strips of wire screening mounted around its periphery, means carried by said revolving drum for elevating solid matter, a stationary hopper depending within said drum and adapted to receive said solid matter, a compressed air pipe superimposed over the drum and adapted to direct a jet of air against said wire screening, a pipe extending longitudinally on the outside of said drum and adapted to direct streams of water against the outer surface of said drum, and means within said drum for directing a jet of water tangentially against the inner surface of said wire screening.

1,217,208. MACHINE FOR MEASURING AND MARKING SHOE-SOLES. THOMAS O'BRIEN, Brooklyn, N. Y. Filed Mar. 31, 1913. Serial No. 757,770. (Cl. 101—83.)



1. In a sole marking machine, the combination with sole-supporting means, of a rotatable marking head mounted for reciprocating movement relatively to said sole-supporting means, said marking head being provided with a series of characters for impressing upon different soles markings for denoting the lineal dimentions of said soles, a measuring device positioned for contact with the sole, said measuring device embodying two members one of which is movable freely with respect to the other member, means connecting said freely movable member with the marking head for imparting variable rotative movement to the latter, and means independent of the head-rotating means for imparting reciprocating movement to the marking head with respect to he sole supporting devices.

2. In a sole marking machine, the combination with a sole support, of a rotary marking head mounted for reciprocating movement relatively to the sole support, said marking head being provided with a series of characters for impressing upon different soles markings denoting the lineal dimensions thereof, a measuring device the operation of which is dependent upon the length of the sole adapted to be positioned upon the sole support, means controllable by the movement of the measuring device whereby variable rotative movement is imparted to the marking head, and means operable at will for imparting to the marking head a reciprocating movement with respect to said sole support, said head-reciprocating means being independent of the operation of the head-rotating means.

3. In a sole marking machine, the combination with a sole support, of a measuring device embodying a slidable member and a manually controlled gage between which the sole to be measured is adapted to be positioned, said gage being shiftable at will for presenting different portions of its working face in the path of said slidable member, a marking head, means operable by the movement of the slidable member for shifting the marking head into different positions for marking shoe soles according to their sizes, and means for imparting reciprocating movement to said marking head relatively to the sole support.

4. In a sole marking machine, the combination with a sole support, of a sole measuring device embodying a slidable member and a relatively fixed gage positioned in the path of the slidable member and coöperating therewith in determining the length of a sole adapted to be positioned upon the sole support, a marking head, means operated by the movement of the slidable member for shifting the position of said marking head, and means for effecting a relative movement between the sole support and the marking head, said relatively fixed gage being provided with a cam-shaped face and said gage being shiftable at will to vary the position of said cam-shaped face with respect to the slidable member.

5. In a sole marking machine, a sole measuring device embodying a slide and a gage member separate from the slide and positioned in the path of said slide for measuring the length of a sole, said gage member being shiftable at will to different operative positions with respect to the slide, in combination with a rotatable marking head, means controlled by the movement of the slide for imparting rotative movement to the marking head, a sole support, and means for effecting a relative movement between the sole support and the marking head.

[Claims 6 to 8 not printed in the Gazette.]

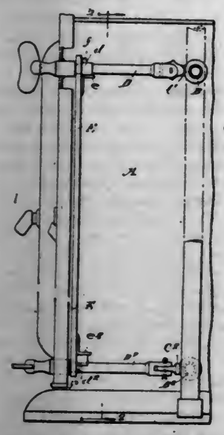
1,217,209. LOCKING DEVICE FOR GAS-STOVES. FREDERICK C. OELKERS, East Port Chester, N. Y., assignor to General Gas Appliance Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 8, 1914. Serial No. 876,018. (Cl. 126—42.)

1. The combination with a gas range having two burners of a valve for each burner and means whereby only one valve can be turned on at one time.

2. The combination with a gas range having an upper and a lower burner, of a valve controlling the flow of gas to each burner and provided with valve stems, a projecting lug on each of the valve stems, and a vertically movable member provided with projections adapted to make contact with said lugs when the valves are opened whereby when one valve is opened the other valve is prevented from being opened.

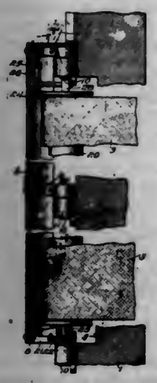
3. In a gas range having upper and lower burners, the combination of valves for controlling the flow of gas to the burners, means for opening and closing the valves, a member adapted to be moved by the movement of the

valve opening mechanism and means actuated by the movement of said member to hold one of the valves closed while the other valve is open.



4. In a safety attachment for gas ranges, the combination with a main supply pipe, a pair of spaced branch supply pipes thereon, valves in said branch pipes, of parallel operating handles having bifurcated ends adapted for engagement with said valves, bearings in which the opposite ends of said handles are mounted, lugs projecting from the sides of said handles at opposite points and disposed in parallel relation when the valves are closed, and a locking strip slidably mounted between said handles having out-turned shoulders adapted for engagement with the lugs to prevent both valves being open at the same time.

1,217,210. FIXTURE FOR CAR-VESTIBULE CURTAINS. EBEN RAY PACKER, Chicago, Ill., assignor, by mesne assignments, to The Q & C Company, a Corporation of Maine. Filed Apr. 5, 1912. Serial No. 688,653. (Cl. 156—36.)



1. In combination, a post, a housing hinged at one side to the post and forming therewith a curtain-receiving chamber, and a curtain-supporting device mounted on said housing at one side of the axis of the hinge so as to be movable with the housing into and out of said chamber.

2. In combination, a post, a housing hinged to the post and forming therewith a curtain-receiving chamber, and a curtain roller revolubly supported by the housing at one side of the axis of the hinge so as to be movable into and out of the chamber upon swinging the housing about its hinge.

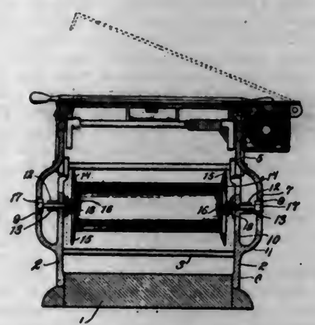
3. In combination, a post, a housing hinged at one side to the post and forming therewith a curtain-receiving chamber, a curtain-supporting device mounted on said housing at one side of the axis of the hinge so as to be movable with the housing into and out of said chamber, and means for detachably locking said housing against movement relative to the post.

4. In combination, a post, a housing hinged to the post and forming therewith a curtain-receiving chamber, supports projecting from said housing into said chamber, and means on said supports at one side of the axis of said hinge for supporting a curtain roller so as to permit the roller to be swung into and out of said chamber when the housing is swung upon its hinge.

5. In combination, a post having a longitudinal groove therein, a housing hinged to the post at one side of the groove and forming therewith a curtain-receiving chamber, and curtain supports projecting from said housing into the middle of said chamber.

[Claims 6 to 10 not printed in the Gazette.]

1,217,211. ROLL-HOLDER. ALBERT P. F. PICO, Kansas City, Mo. Filed Oct. 3, 1914. Serial No. 864,891. (Cl. 211—31.)



1. In a roll holder, a slidably mounted supporting shaft, a disk at one end of said shaft, a knob on the face of said disk adapted for projecting into a roll core, means for limiting the inward movement of said shaft, and means for urging the same toward its inward limit.

2. The combination with paired bearings, of a roll clamp comprising a pair of shafts journaled in said bearings, a disk mounted on the inner end of each shaft and having a retaining knob centrally disposed on its inner face, a nut on the outer end of each shaft, and a helical spring wound about said shaft to engage said bearing and disk, for the purpose set forth.

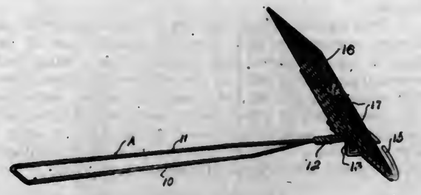
3. The combination with a frame, of a roll clamp comprising a pair of shafts slidably journaled in the frame, a disk mounted on the inner end of each shaft and having an outturned outer edge and a central rounded retaining knob on its inner face adapted for seating within a roll core, and means for yieldingly tensioning said disks against an interposed roll.

4. The combination with paired bearings, of a roll clamp comprising a pair of shafts journaled in said bearings, a disk mounted on the inner end of each shaft and having outturned outer edges and a retaining knob centrally disposed on its inner face, a nut on the outer end of each shaft, and a spring wound about said shaft to engage said bearing and disk, for the purpose set forth.

1,217,212. FLY-SWATTER. ELMER O. PITTS, Colbran, Colo. Filed Aug. 13, 1915. Serial No. 45,360. (Cl. 43—22.)

1. A fly swatter comprising a handle having an offset portion resulting in a shoulder, and a striking element hinged to and limited in movement in one direction by the offset portion and in the opposite direction by the shoulder.

2. A fly swatter comprising a handle formed from a single length of wire bent upon itself to produce resultant arms, said arms being twisted and having their outer terminal portions offset and bent laterally in opposite directions and then curved inwardly, and a striking element hingedly mounted on the laterally bent portions of the arms.



3. A fly swatter comprising a handle, laterally directed arms at one end of the handle, said arms being terminally rebent toward each other in spaced relation to the lateral portion, and a striking element hinged to the lateral portions of the arms, and limited in movement in one direction by the rebent portions thereof.

4. A fly swatter comprising a handle having an offset portion at one end resulting in a shoulder, said offset portion including a spaced member, and a striking element hinged to one member of the offset portion and engageable alternately with the other member thereof and with the shoulder whereby it will be limited in movement in opposite directions.

1,217,213. PROCESS FOR MAKING A SHOE-FILLER. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 10, 1915. Serial No. 33,265. (Cl. 106—3.)

The method of making a filling material for shoes which consists in dissolving a given amount of rubber in approximately four times its amount of a solvent, adding to the resulting solution a vulcanizing agent and comminuted filling material of an amount slightly greater than that of the rubber and a small amount of carbon tetrachlorid, and thoroughly mixing these ingredients.

1,217,214. SHOE-FILLER COMPOSITION. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 10, 1915. Serial No. 33,264. (Cl. 106—3.)

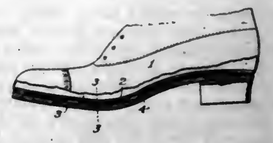
1. A filling material for shoes comprising a solution of rubber in a solvent, a comminuted solid, carbon tetrachlorid, and sulfur, the proportions being such that the resulting mixture is plastic and adapted to vulcanize quickly when spread on the bottom of the insole of a shoe.

2. A filling material for shoes comprising a solution of rubber in a solvent, comminuted cork, carbon tetrachlorid, and sulfur, the proportions being such that the resulting mixture is plastic and adapted to vulcanize quickly when spread on the bottom of the insole of a shoe.

1,217,215. SHOE. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 15, 1915. Serial No. 34,277. (Cl. 36—30.)

1. A shoe having an inner sole and an outer sole, and a composition layer in the cavity of the inner sole between the soles and firmly united thereto, said layer comprising a rubber solution, a filling material, and a vulcanizing material.

2. A shoe having an inner sole and an outer sole, and a composition layer in the cavity of the inner sole between the soles and firmly united thereto, said layer comprising a rubber solution, a large proportion of filling material, a vulcanizing material, and carbon tetrachlorid.



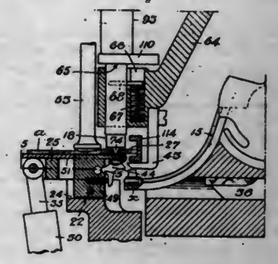
3. A shoe having an inner sole and an outer sole, and a composition layer in the cavity of the inner sole between the soles and firmly united thereto, said layer comprising a rubber solution, a large proportion of comminuted cork filler, a vulcanizing material, gutta percha, and carbon tetrachlorid.

4. A shoe having an inner sole and an outer sole, and a composition layer in the cavity of the inner sole between the soles, said layer consisting of a rubber solution, a filling material, and a vulcanizing material, the layer of the material being united with and adhering to the surface of the inner sole.

5. A shoe having an inner sole and an outer sole, and a composition layer in the cavity of the inner sole between the soles, said layer consisting of a rubber solution, a filling material, and a vulcanizing material, a layer of material being united with and adhering to the surface of the inner sole, the under surface of said layer being firmly connected to the outer sole.

[Claims 6 to 9 not printed in the Gazette.]

1,217,216. MACHINE FOR SETTING LACING-HOOKS. ANDREW RAICHE, Fairhaven, Mass., assignor to Atlas Tack Company, Fairhaven, Mass., a Corporation of New Jersey. Filed May 15, 1912. Serial No. 697,462. (Cl. 218—17.)



1. In a machine for setting lacing hooks, a hook support, means for coöperating therewith to set a hook, a work support having an edge arranged to occupy the throat of a lacing hook, said hook support being movable to and from the plane of the work support, and means for moving the hook laterally along said hook support and work support to feed the work.

2. In a machine for setting lacing hooks, a carrier, means for reciprocating the same to feed the work, an anvil mounted on said carrier so as to be movable relatively thereto in a direction transverse to the feeding movement of the carrier, said anvil having a feeding point, hook-carrying means for moving a lacing hook against said anvil to flare the same, and means for holding said anvil in position to coöperate with said hook-carrying means, said holding means being stationary during feeding movement of said carrier, and having provision for holding said feeding point in the lacing hook during such movement.

3. In a machine for setting lacing hooks, a support for a lacing hook, and an anvil, one of which is movable toward the other for flaring the lacing hook, said anvil having a feeding point, an abutment for causing said anvil to coöperate with the hook support, and means for moving the anvil laterally with relation to said abutment to feed

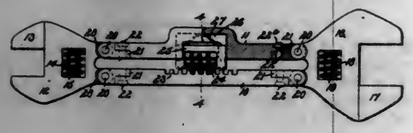
the work, said abutment being adapted to hold said feeding point in the lacing hook during feeding movement of the anvil.

4. In a machine for setting lacing hooks, a support for a lacing hook, an anvil movable toward and from the same, a movable abutment for moving said anvil toward said support, said anvil having a feeding point, and an anvil carrier movable relatively to said abutment for feeding the work, said anvil being movable relatively to its carrier for coöperating with said hook support, and said abutment being stationary and adapted to hold said feeding point in the lacing hook during the feeding operation.

5. In a machine for setting lacing hooks, a support for a lacing hook, and an abutment, one of which is movable toward and from the other, an anvil disposed between said support and abutment and adapted to flare a lacing hook upon the support, said anvil having a feeding point, and means for supporting the anvil against said abutment, said means being movable relatively to said abutment for feeding the work, and said abutment having provision for holding the feeding point in the lacing hook to enable the feeding point to feed the work.

[Claims 6 to 21 not printed in the Gazette.]

1,217,217. WRENCH. WILLIAM HENRY REAGAN, Jr., Miami, Ariz. Filed June 28, 1916. Serial No. 106,342. (Cl. 81—177.)



1. A wrench including handle sections, means to give relative longitudinal movement to said sections, and a wrench head at each end of the handle sections and pivotally connected with both sections to swing in their own planes in opposite directions in response to the movements of the handle sections.

2. A wrench including handle sections, means to give relative longitudinal movement to said sections, and a wrench head at each end of the handle sections and pivotally connected with both sections to swing in their own planes in opposite directions in response to the movements of the handle sections, the said wrench heads being pivotally mounted also to swing through an angle at right angles to their own planes.

3. A wrench comprising separate handle sections, a rack on one section, a worm meshing with said rack, a spring-pressed block in which said worm is mounted, said block being movable transversely in the opposite handle section, and a wrench head at each end of the handle and pivotally connected to the adjacent ends of the handle sections.

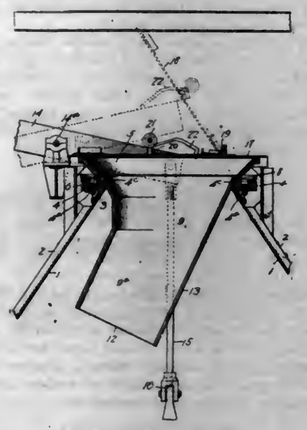
1,217,218. METHOD OF MANUFACTURING OXALIC ACID. HERBERT C. REED, Stamford, Conn. Filed Sept. 23, 1915. Serial No. 52,225. (Cl. 23—24.)

1. The method of treating the waste liquor of chemical paper pulp manufacture which consists in reducing such liquor to an approximately dry residue, then subjecting the same to the action of strong nitric acid in an amount considerably more than 100% by weight of such residue and maintaining an elevated temperature, but below the boiling point of the mixture at the pressure employed, in order to oxidize the mixture, and then heating the mixture sufficiently high to evaporate the surplus nitric acid and water, and then recovering oxalic acid from the residual liquor.

2. The method of treating the waste liquor of chemical paper pulp manufacture which consists in reducing such liquor to approximately dry residue, then subjecting the same to the action of strong nitric acid in an amount equal to several times the weight of such residue and maintaining an elevated temperature, but below the boiling point of the mixture at the pressure employed, in order to oxidize the mixture, and then heating the mixture sufficiently high to evaporate the surplus nitric acid and water, and then recovering oxalic acid from the residual liquor.

3. The method, which consists in evaporating the waste liquor produced in the chemical manufacture of paper pulp to approximately dry residue, then adding thereto concentrated nitric acid in the substantial proportions of 300 pounds of acid to 100 pounds of residue maintaining the temperature at about 95° C. until the oxidizing action is completed, and then heating the mixture to expel the excess of acid and water until the point of crystallization of the oxalic acid thereby produced is reached.

1,217,219. CHARGING DEVICE. JOHN NICHOLAS REESE, Youngstown, Ohio. Filed Nov. 29, 1915. Serial No. 64,054. (Cl. 214—23.)



1. In a blast furnace charging device having a hopper and a coöperating bell, the combination with the bell and hopper thereof, of a chute rotatably mounted above said bell and hopper and arranged to discharge thereon, said chute having an enlarged mouth located centrally of said bell and hopper, and a smaller, eccentrically arranged V-shaped discharge end, the sides of said chute converging to said smaller end and the bottom wall of said chute making an angle of approximately sixty-three degrees with a horizontal.

2. In a blast furnace charging device having a hopper and its coöperating bell, the combination with the bell and hopper thereof; of a chute having a mouth arranged centrally with respect to said bell and hopper and having a prolongation rigid therewith and extending eccentrically therefrom and having a V-shaped discharge end discharging onto said bell.

3. The combination with a blast furnace, the cover and the charging bell; of a rotatable chute mounted above said bell having a centrally arranged mouth and a downwardly projecting discharging portion rigid therewith and tapering to a V-shaped contracted end eccentric to said cover.

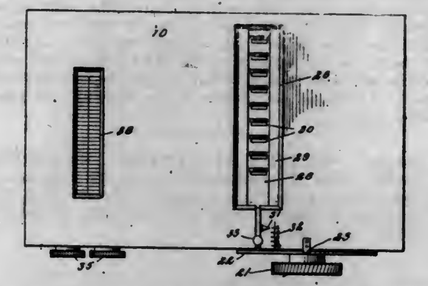
4. In a blast furnace charging device, the combination with a cover, a hinged charging door on the cover; of bell beams, and means to permit the automatic opening and closing of said door by the action of said beams on a part of the door.

5. In a blast furnace charging device, the combination with a rotatable charge directing chute; of a stationary

cover therefor, a hinged door on the cover, bell beams, cams on said beams, and rollers on said door arranged for engagement by said cams when the beams are operated.

[Claims 6 to 12 not printed in the Gazette.]

1,217,220. INTEREST-INDICATOR. WILLIAM L. RENO, Owensboro, Ky. Filed Feb. 24, 1915. Serial No. 10,232. (Cl. 235—86.)



1. In an interest indicator, a single member having an endless surface provided with a plurality of rows of products, the products being the computed interests for each day in the year, the interests in each row being arranged in separate corresponding groups for certain basic amounts, a slide movable over said member and having basic numbers thereon, and openings adjacent the basic numbers, means for moving said member to bring the desired row under said slide, and means for adjusting the slide over the member to disclose in said openings the corresponding computed interests of the groups adjacent the respective basic numbers so that the interest for any basic number and fraction thereof at the desired rate may be indicated by one adjustment of the slide.

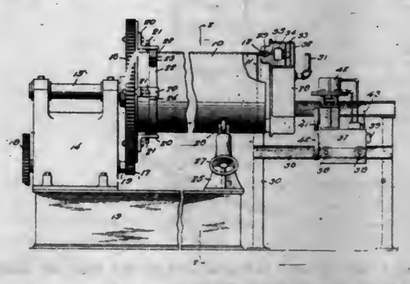
2. In a device as specified, a casing having an opening in its top, a single member in the casing having an endless surface provided with a plurality of rows of computed products across the face thereof, each row being arranged in separate corresponding series according to predetermined multipliers for certain basic amounts, a slide mounted in the opening in the top of the casing and movable transversely of said member, said slide having an opening therein for each series of products and having a basic number adjacent each opening, an interest scale on the top of said casing, a pointer carried by the slide and adapted to move over said scale, means for adjusting the slide to register the pointer with the desired interest mark on the scale and to expose the desired product of each series in the respective openings in the slide, and means for adjusting said single member to bring the desired row of products beneath the slide and thereby simultaneously bring the desired series of products into coöperative relation with the basic numbers on the slide.

1,217,221. METAL-WORKING APPARATUS. CHARLES L. ROWLAND, Carbondale, Pa., assignor to American Welding Company, Carbondale, Pa., a Corporation of Pennsylvania. Filed May 18, 1914. Serial No. 839,440. (Cl. 78—89.)

1. In combination, a furnace having a mouth curved to conform to the arc of a given circle, a metal working roll having its working surface positioned upon the same circle, and a rotating workholder having its axis concentric with the furnace mouth.

2. In combination, a furnace having a mouth curved to the arc of a circle, a metal working roll having its working surface positioned upon the same circle and a rotatable workholder adapted to hold a cylinder to be operated upon having its axis concentric with the furnace mouth.

3. In combination, a furnace having a mouth curved to conform to the arc of a given circle, metal working rolls having opposed working surfaces positioned upon the same circle, and a rotatable workholder having its axis concentric with the furnace mouth.

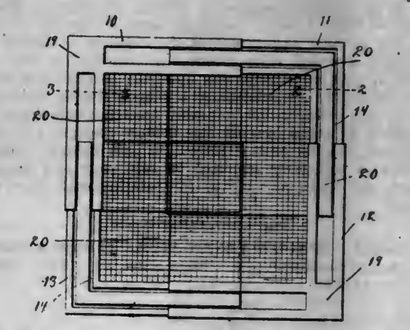


4. In combination, a furnace having a mouth curved to conform to the arc of a given circle, a metal working roll having its working surface adapted to be positioned upon the same circle, a rotatable workholder having its axis concentric with the furnace mouth, and means to move the roll to an inoperative position and away from close proximity to the furnace mouth.

5. In combination, a furnace having a mouth curved to conform to the arc of a given circle, metal working rolls having opposed working surfaces adapted to be positioned upon the same circle, means to vary the pressure exerted by the rolls, and a rotatable workholder adapted to hold a cylinder whose end is to be heated and having its axis concentric with the furnace mouth.

[Claims 6 to 16 not printed in the Gazette.]

1,217,222. ADJUSTABLE WINDOW-SCREEN. JACOB C. RUBEL, Emmetsburg, Iowa. Filed Dec. 23, 1914, Serial No. 878,655. Renewed July 26, 1916. Serial No. 111,333. (Cl. 156—38.)

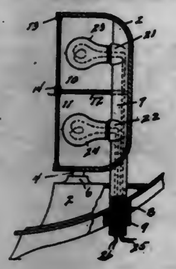


A collapsible screen comprising four rectangular sheets of screen fabric, an L-shaped section connected to the outer edges of each sheet, a pair of said sections being rectangular in cross section and having grooves formed upon opposite sides thereof, the other pair of sections being also rectangular in cross section and having inwardly directed tongues for slidably engaging the grooves of the other section.

1,217,223. AUTOMOBILE-SIGNAL. STEPHEN F. SAXTON, Detroit, Mich., assignor of one-half to James A. Miller, Toledo, Ohio. Filed Feb. 8, 1915. Serial No. 6,891. (Cl. 40—132.)

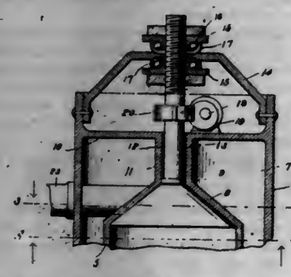
In a device of the character described, a casing having separate compartments, a tube extending into the casing through every compartment and having a threaded portion projecting exteriorly of the casing, said casing having a lug, a base member formed to fit the fender of the ve-

hicle provided with a socket for the said lug, the base being apertured to receive the projecting end of the tube,



and a nut on said threaded end of the tube for holding the parts in assembled relation.

1,217,224. INTERNAL-COMBUSTION ENGINE. ARTHUR P. SCHIELE, Durant, Iowa. Filed Mar. 28, 1916. Serial No. 87,220. (Cl. 123—80.)



In an explosive engine, a cylinder including a frusto-conical head, a water jacket arranged in spaced relation to the cylinder and connected therewith by a tubular extension, a conical valve mounted in said head, a stem carried by said valve projecting upwardly through said tubular extension, a substantially U-shaped bracket connected with said cylinder and rotatably receiving said stem, oppositely arranged bearing ball holders engaged with said bracket, bearing balls arranged in said holders, bearing members adjustably mounted on said stem and engaged with said balls, and means for rotating said valve and stem.

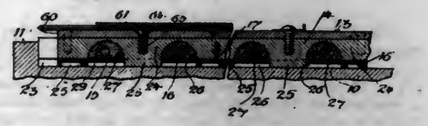
1,217,225. WINDOW-VENTILATOR. FREDERICK SCHUBERT, Bloomington, Ill. Filed June 24, 1914. Serial No. 847,088. (Cl. 98—31.)



1. In a ventilator, the combination with end members, alternate stationary and pivoted slats mounted upon said end members, a guide plate mounted upon said stationary members, a bar frictionally mounted in said guide plate and capable of sliding movement therein, means connecting the pivotally mounted slats to said bar so arranged that upon the sliding of said bar in said guide plate the pivotally mounted slats will be operated.

2. In a ventilator, the combination with end members, alternate stationary and pivoted extensible slats mounted upon said end members, a guide bar connecting the inner edges of the stationary extensible slats, a bar slidably mounted in said guide plate having holes, curved arms, one end of each being connected to a pivotally mounted extensible slat, the other ends being adapted to loosely enter the holes in said bar, whereby upon the actuation of the bar in the guide plate the pivoted extensible slats will be positively rotated to any position desired, and held there by frictional engagement of the bar with said guide plate.

1,217,226. ELECTRICALLY-HEATED EMBOSSING-BASE. JOHN H. SCHUSSLER, Chicago, Ill., assignor to Acme Printing Appliance Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 15, 1915. Serial No. 8,307. (Cl. 219—37.)



1. In an electrically heated embossing device, a base plate having a chamber, insulating material in said chamber, and an electrical heating member embedded in said insulating material.

2. In an electrically heated embossing device, a base plate having a chamber, a plurality of electrical heating members spaced apart and held in insulated condition in said chamber, and a switch included in an electrical circuit with said heating members and arranged to vary the number of heating members in operation, said switch and circuit being arranged to provide uniform heating of said embossing device when a part of the heating members only are in operation.

3. The combination in an electrically heated embossing device of a base plate having a chamber, a plurality of interconnected electrical heating coils held in insulated condition in said chamber, and a switch in circuit with said heating coils, said switch being arranged to vary the number of said coils in an operative circuit.

4. In an electrically heated embossing device, a base plate having a chamber, an electrical conductor held in an insulated condition in said chamber, a cover for said chamber, and lugs in said chamber formed integrally with said base plate for transmitting pressure through said plate.

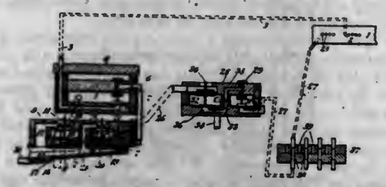
5. In an electrically heated embossing device, a base plate having a chamber, an electrical conductor held in an insulated condition in said chamber, a cover for said chamber, and rectangular lugs formed integrally with said base plate and extending downwardly into said chamber for transmitting pressure through said plate, the spaces between said lugs being substantially semi-circular in cross section.

[Claims 6 to 11 not printed in the Gazette.]

1,217,227. MECHANICAL MUSICAL INSTRUMENT. JUSTIN O. SCHWARZ and GUSTAF BJORKLUND, New York, N. Y., assignors to Hardman Peck & Co., a Corporation of New York. Filed July 14, 1915. Serial No. 39,737. (Cl. 84—160.)

1. In pneumatic actions the combination, with an independently operable striker-bellows, of an auxiliary bellows carrying an arm which contacts loosely with the movable leaf of the striker-bellows, and means for operating both bellows in unison.

2. In pneumatic actions the combination, with a series of independently operable striker-bellows, of a series of auxiliary bellows each disposed alongside of its companion striker-bellows and having an arm which contacts loosely with the movable leaf thereof, and means for selectively operating any of the auxiliary bellows conjunctly with its companion striker-bellows.



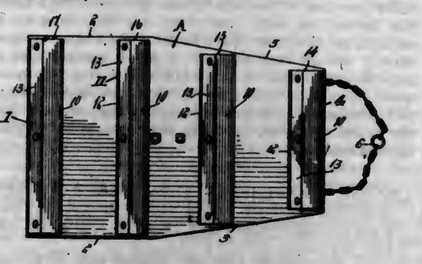
3. In pneumatic actions the combination, with a tracker having a note aperture and an accent aperture, a striker bellows, and means communicating with the note aperture for controlling the striker bellows, of an auxiliary bellows having a member which contacts loosely with the movable leaf of the striker-bellows, and means communicating with both the note and the accent apertures for controlling the auxiliary bellows, said means operating to actuate the auxiliary bellows when air is admitted to both apertures simultaneously.

4. In pneumatic actions the combination of a tracker having a note aperture and an accent aperture, a striker-bellows, an auxiliary bellows arranged alongside the striker-bellows and carrying an arm which contacts loosely with the movable leaf thereof, and means communicating with both apertures for controlling said bellows, said means operating to independently actuate the striker-bellows when air is admitted to the note aperture alone and to actuate both bellows conjunctly when air is admitted to both apertures simultaneously.

5. In pneumatic actions the combination of, a tracker having a series of note-apertures and an accent aperture, a series of striker-bellows; an auxiliary bellows associated with each striker-bellows, pneumatics communicating with each note-aperture and its corresponding striker-bellows for controlling the operation of the latter upon admission of air into the note-aperture, and other pneumatics communicating with the accent-aperture and the auxiliary bellows for selectively governing the auxiliary bellows to co-act with their companion striker-bellows upon admission of air into the accent aperture and one or more of the note-apertures simultaneously.

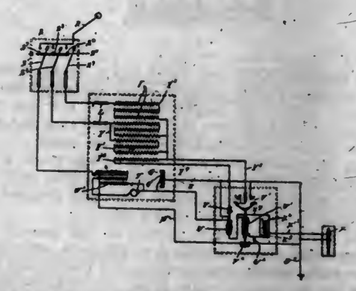
[Claims 6 to 8 not printed in the Gazette.]

1,217,228. CLOD-CRUSHER. FLOYD R. SMIDLEY, New Holland, Ohio. Filed Aug. 18, 1915. Serial No. 46,119. (Cl. 55—22.)



A device of the class described comprising a flat baseboard having a relatively wide transverse rear edge portion, parallel side edge portions extending forward from the rear edge portions to a point adjacent the central transverse line of the board, forwardly extending converging side edge portions extending from the parallel side edge portions, and a front transverse edge portion parallel to, but of less width than the rear edge portion, said parallel sided and converging sided portions lying in the same plane and being immovable with respect to each other, a series of spaced parallel transversely extending ground engaging bars fastened to the underside of the base-board, said bars being located one at the rear of the parallel sided portion of the base board, another at the front of the parallel sided portion, and a third at the front of the converging sided portion, the first two bars being of equal lengths, and a seat mounted on the central portion of the base-board, and a draft appliance connected with the forward portion of the base-board.

1,217,229. ELECTRIC AIR-HEATING SYSTEM. ELMER J. SMITH, Detroit, Mich., assignor to The Peter Smith Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 3, 1915. Serial No. 64,811. (Cl. 219—20.)



1. In an electric heating system, the combination with a heating circuit, of a circuit of higher resistance, manually-operable switches for respectively controlling said circuits, a second switch for the heating circuit automatically operated by the closing of the high-resistance circuit, and means for preventing operation of the manually-operable switch for the heating circuit when the high-resistance circuit is closed.

2. In an electric air heating system, the combination with a heating circuit, of a motor circuit of higher resistance, manually-operable switches for controlling the respective circuits, a second switch for controlling the heating circuit, automatically closed by the closing of said high-resistance circuit, and means for preventing the operation of said manually-operable switch for the heating circuit when said motor circuit switch is closed.

3. In an electric heating system, the combination with an electric motor-propelled fan and an air conduit connected therewith, of an electric heating unit in said conduit, a circuit for said unit, an electric circuit for said motor of higher resistance than said heating circuit, manually-operable switches for respectively controlling said heating and motor circuits, a second switch for said motor circuit automatically closed upon the closing of said motor circuit, and means operable on the closing of said motor circuit for locking the manually-operable switch of the heater circuit from operation.

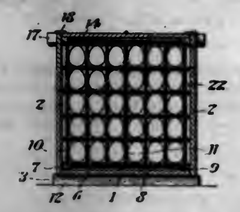
4. In an electric air heating system, the combination with an electric air heater and a motor-driven fan for propelling air to said heater, of electric circuits for said heater and motor, and manually-operable switches for respectively controlling said heater and motor circuits, an electro-magnetic operating device in said motor circuit for automatically closing a second switch in said heater circuit, a shunt about said electro-magnetic device, and a thermostatic switch for closing said shunt.

5. In an electric air heating system, the combination with an electric heating unit for heating the air and a motor-driven fan for propelling air to said heater, of electric circuits for said heating unit and fan, manually-operable switches for respectively controlling said heating and motor circuits, a second switch for controlling said heating circuit automatically closed upon the closing of said motor circuit, thermostatic means for opening said

second switch, and a high-resistance circuit for said heater operable when said second switch is opened by said thermostat.

[Claims 6 to 23 not printed in the Gazette.]

1,217,230. EGG-CASE. WILLIAM E. SMITH, South Plainfield, N. J. Filed Jan. 4, 1916. Serial No. 70,144. (Cl. 217—35.)

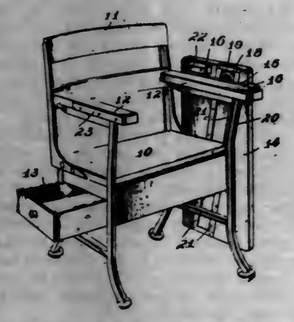


1. A case including end walls and a cover, strips secured to the end walls with the upper surfaces flush with the cover, said strips projecting beyond the side walls, and means carried between said strips and case and adapted to be turned to overlie and engage the cover.

2. An egg case formed to provide an egg space, a cushion supporting frame arranged loosely within said space and formed of strips of unequal thickness disposed with their upper surfaces in the same plane.

3. An egg case formed to provide an egg space, a cushion supporting frame arranged within said space and a cushion plate loosely supported on said frame, said frame supporting the cushion plate above the adjacent wall of the egg space to provide an air chamber, and being in part cut away to provide air inlets to such air chamber.

1,217,231. CHAIR. RAYMOND H. SOPER, Muskegon, Mich., assignor to Superior Seating Company, Muskegon, Mich., a Corporation of Michigan. Filed Sept. 12, 1914. Serial No. 861,333. (Cl. 45—82.)



1. The combination of a chair having two arms, a rod extending longitudinally of one of said arms and at the outer side of said arm, a table having a guideway in its lower side, a device slidable in said guideway and rotatable with reference to the table, said device being mounted to slide along said rod and to turn on said rod, said table being adapted to rest upon both of said arms and to slide back and forth upon said arms and to turn while lying upon said arms, said guideway being diagonal so as to extend nearer the front edge of the table at one end of the table than at the other end, and a stop member on the first mentioned end of the table adapted to slidably engage one side of the arm opposite to the arm that is provided with the rod.

2. The combination of a chair, a table having diagonally positioned guide means thereon, and means pivotally mounted on the chair and slidably engaging said diagonal guide means, the latter causing the table to move edgewise forward and back in its sliding movement.

3. The combination of a chair having arms, a table adapted to be supported by said arms, a rod mounted on one of said arms longitudinally thereof, a sleeve slidably mounted on said rod, elongated guide means on the lower side of said table, and means attached to said sleeve and slidably engaging said guide means, said table being slidable back and forth on both of said arms.

4. The combination of a chair having two arms, a rod extending longitudinally of one of said arms and at the outer side of said arm, a table having an elongated guide upon its lower side, a device slidable along said guide and rotatable with reference to the table, said device being mounted to slide along said rod and to turn on said rod, said table being adapted to rest upon both of said arms and to slide back and forth upon said arms, and a stop member on the table adapted to slidably engage one side of the arm opposite to the arm that is provided with the rod.

5. The combination of a chair having two arms, a rod extending longitudinally of one of said arms and at the outer side of said arm, a table having an elongated guide upon its lower side, a device slidable along said guide and rotatable with reference to the table, said device being mounted to slide along said rod and to turn on said rod said table being adapted to rest upon both of said arms and to slide back and forth upon said arms and to turn while lying upon said arms, said guide being diagonal so as to extend nearer the front edge of the table at one end of the table than at the other end.

[Claim 6 not printed in the Gazette.]

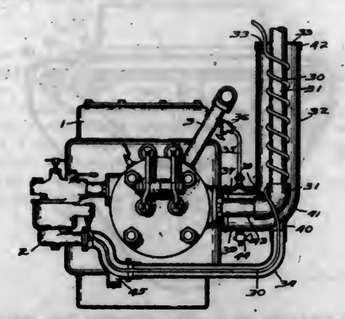
1,217,232. TIRE. NATT SQUIER, Clifton Springs, N. Y., assignor of one-half to John N. Mead, Ithaca, N. Y. Filed Dec. 20, 1915. Serial No. 67,698. (Cl. 152—5.)



A flexible tire comprising a hollow body having a series of spaced reinforcing members therein extending transversely of the body and resilient arms carried upon the outer portions of the reinforcing members, said arms being thicker at their inner base portions than at their outer ends, the inner faces of the arms being inclined inwardly toward each other to a point beneath and adjacent the inner face of the tread wall of the tire whereby when the tread is compressed the extremities of the arms will yieldingly approach each other and serve to return the tread to normal position when the pressure thereon is released.

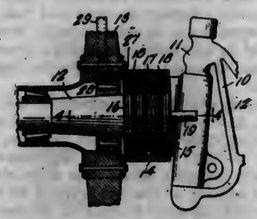
1,217,233. CARBURETER ATTACHMENT FOR INTERNAL-COMBUSTION ENGINES. GEORGE A. SQUIRE, Rudolph, Ohio. Filed Mar. 13, 1916. Serial No. 83,867. (Cl. 261—12.)

1. In combination with the exhaust pipe of an engine, an attachment for carbureters surrounding the exhaust pipe and having an air inlet, a pipe connecting the attachment to the carbureter for conducting air heated by the exhaust pipe to the carbureter, a source of water supply, a nozzle located above the exhaust pipe and connected to the source of water supply and located within the attachment, the carbureter having a fuel supply pipe also located in the said attachment and heated by the exhaust pipe, a damper located in the pipe connecting the attachment with the carbureter and in proximity to the carbureter for admitting the cool air of the atmosphere and controlling the heated air.



2. In combination with the exhaust pipe of an engine, an attachment for carbureters surrounding the exhaust pipe and having an air inlet, a pipe connecting the attachment with the carbureter, a source of water supply, a nozzle located above the exhaust pipe and connected to the source of water supply and located within the attachment, the carbureter having a fuel supply pipe also located in the said attachment and spirally surrounding the exhaust pipe and extending through the pipe connecting the attachment with the carbureter and heated by the exhaust pipe, a damper located in the pipe connecting the attachment with the carbureter and in proximity to the carbureter for admitting the cool air of the atmosphere and controlling the heated air and the steam and to minimize cooling of the fuel in the fuel pipe.

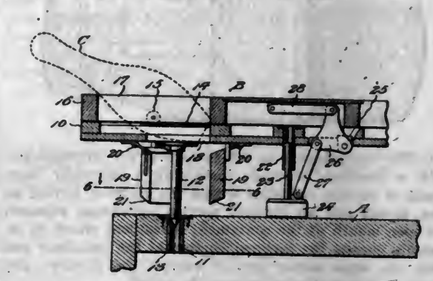
1,217,234. INFLATING SYSTEM. BENJAMIN O. STARK, Stotesbury, Mo. Filed Mar. 22, 1916. Serial No. 86,019. (Cl. 152—11.)



1. In a pneumatic tire inflating means, the combination with a steering knuckle including a post and a stub axle having a wheel with a pneumatic tire mounted thereon, said wheel having a hub provided interiorly with a laterally opening air passage and a radial passage leading therefrom, said stub axle formed with a circular flange having an annular air passage formed circumferentially thereof, a compressed air supply pipe connected to the circular flange and communicating with the said air passage, an annular hub flange carried by the wheel and circumscribing the said circular flange, the hub flange being formed with a laterally extending air passage communicating with the said annular air passage and registering with the lateral air passage of the hub, and a conduit connecting the inflating valve of the tire with the radial air passage of the wheel hub and lying wholly within the space circumscribed by the wheel rim.

2. In a pneumatic tire inflating means, the combination with a steering knuckle including a post and a stub axle having a wheel with a pneumatic tire mounted thereon, said stub axle formed with a circular flange having an annular air passage formed circumferentially thereof, a compressed air supply pipe connected to the circular flange and communicating with the air passage therein, packing rings carried by the circular flange, said circular flange having oil grooves arranged alternately of the packing rings, a supply pipe communicating with the said oil grooves, an annular hub flange carried by the wheel and circumscribing the said circular flange and provided with an air passage communicating with the annular air passage, said packing rings acting as a seal for the annular air passage, a conduit carried by the wheel hub communicating with the passage in the hub flange thereof, and a conduit connecting the inflating valve of the tire with the hub conduit.

1,217,235. BOWLING-PIN SETTER. WILL T. STATES and HERBERT F. LAPP, Cleveland, Ohio. Filed Nov. 14, 1916. Serial No. 131,285. (Cl. 46—54.)



1. In a pin setting apparatus for a bowling alley, the combination of a vertically movable lower frame having pin discharging openings therein, a shifting frame slidable thereon in a horizontal plane and having corresponding openings, bell cranks pivoted in said vertically movable frame a corresponding number of shoes vertically movable in said lower frame, a link connecting each shoe with one of said bell cranks, and a link connecting each bell crank with said shifting frame, said shoes operating to rotate said bell crank to move said shifting frame horizontally over said lower frame, when said lower frame is lowered to engage said shoes with the floor of said alley.

2. In a pin setting apparatus for a bowling alley, the combination of a vertically movable lower frame having pin discharging openings therein, a shifting frame slidable thereon in a horizontal plane and having corresponding openings, bell cranks pivoted in said vertically movable frame a corresponding number of shoes vertically movable in said lower frame, a link connecting each bell crank with said shifting frame, said shoes operating to rotate said bell crank to move said shifting frame horizontally oved said lower frame when said lower frame is lowered to engage said shoes with the floor of said alley, positioning means for said lower frame, and a separate positioning means for each pin, substantially as described.

3. In a pin setting device, in combination, a vertically movable lower frame, a shifting frame, a horizontal track upon the lower frame upon which said shifting frame is reciprocable in a horizontal plane, shoes having stems vertically movable in said lower frame, a bell crank pivoted in said lower frame for each shoe, links connecting said bell cranks and shoes and links connecting said bell cranks and shifting frame, whereby when said frames are lowered said shoes will engage the alley floor and operate said bell cranks to move said shifting frame, said shifting frame automatically returning to the starting position when said frames are raised.

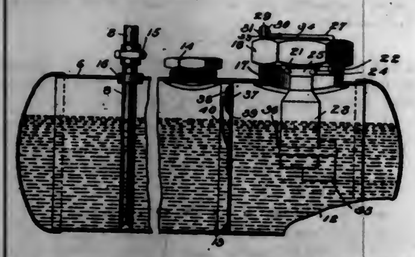
4. A bowling alley pin setter comprising a vertically movable frame, means for guiding the frame into vertical movement, a pin rack slidable upon the frame for uprighting bowling pins placed therein, and means for automatically shifting the pin rack on the raising and lowering of the frame.

5. A bowling alley pin setter comprising a vertically movable frame, means for guiding the frame into vertical movement, a pin rack slidable upon the frame for uprighting bowling pins placed therein, means for automati-

cally shifting the pin rack on the raising and lowering of the frame, and means carried by the frame for bringing the pins to vertical and spotting positions.

[Claims 6 to 15 not printed in the Gazette.]

1,217,236. FIRE-EXTINGUISHER. GEORGE F. STEPHENSON, Luzerne, Pa. Filed May 26, 1916. Serial No. 100,047. (Cl. 169—24.)



1. The combination in an automatic fire extinguisher, with a pressure chamber containing a normally inert liquid, of an acid container within the chamber, having an open mouth and an inclined portion; a closure adjacent the open mouth of the container; a resilient clamp to releasably engage the inclined portion of the container and press the open mouth thereof against the closure; and means to automatically release the clamp.

2. The combination in an automatic fire extinguisher; of an acid container having a flaring portion, and an open mouth; a closure adjacent the open mouth; a rigid inclined bracket engaged by the flaring portion; a resilient clamp in contact with the flaring portion at a point substantially opposite the bracket to coöperate with the latter in supporting the container, and to press the open mouth of the container against the closure; and means to automatically disable the clamp, to enable the container to free itself from the bracket.

3. The combination in an automatic fire extinguisher; of a container having a flaring portion, and an open mouth; a bracket engaged by one side of the container, the bracket alone being inefficient to support the container; a clamp to contact with the flaring portion substantially opposite the bracket to coact therewith in supporting the container; and means to automatically disable the clamp.

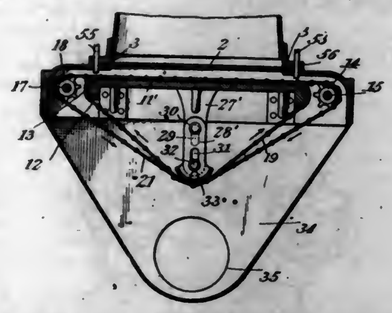
4. The combination in an automatic fire extinguisher; of a container; a shiftable clamp to releasably retain the container in normal position, the clamp including an arm having a hook; means tending to shift the clamp in one direction to effect the release of the container; posts between which the arm projects; and a fusible bolt interposed between the posts and the hooked portion of the arm to lock the clamp in effective position.

5. The combination in an automatic fire extinguisher; of a container; a shiftable clamp to releasably retain the container in normal position, the clamp including an arm having a hook; means tending to shift the clamp in one direction to effect the release of the container; posts between which the arm projects; and a fusible bolt interposed between the posts and the hooked portion of the arm to lock the clamp in effective position, the posts being hooked to prevent accidental displacement of the bolt.

[Claims 6 to 16 not printed in the Gazette.]

1,217,237. PULVERIZED-FUEL FEEDER. EDWIN FERGUSON STEWART, Woodcliff, N. J., assignor of one-half to The Barrett Company, New York, N. Y., a Corporation. Filed June 16, 1916. Serial No. 104,130. (Cl. 193—10.)

1. An apparatus for feeding pulverized fuel, comprising a bin with an adjustable gate regulating the exit therefrom, two series of endless conveyers moving in opposite directions underneath the exit end of the bin, a vacuum chamber into which the material is fed by the conveyers, suction means connected to said chamber, and means for regulating the suction power.



2. An apparatus for feeding pulverized fuel, comprising a bin with an adjustable gate regulating the exit therefrom, two series of endless conveyers moving in opposite directions underneath the exit end of the bin, slides having adjustable movements above the conveyer chains and relative thereto, a vacuum chamber into which the material is fed by the conveyers, suction means connected to the said chamber, and means for regulating the suction power.

3. An apparatus for feeding pulverized fuel, comprising a bin with an adjustable gate regulating the exit therefrom, two series of endless conveyers moving in opposite directions underneath the exit end of the bin, a table upon which said conveyers move, means for guiding the conveyers, a vacuum chamber into which the material is fed by the conveyers, suction means connected to the vacuum chamber, and means for regulating the suction power.

4. An apparatus for feeding pulverized fuel, comprising a bin with an adjustable gate regulating the exit therefrom, two series of endless conveyers moving in opposite directions underneath the exit end of the bin, a table upon which said conveyers move, the opposite ends of said table having alternate recesses and lugs adapted to guide said conveyers, a vacuum chamber into which the material is fed by the conveyers, suction means connected to the vacuum chamber, and means for regulating the suction power.

5. An apparatus for feeding pulverized fuel, comprising an adjustable gate and horizontal guideways in which the same is mounted, a table underneath the gate, endless conveyer chains movable in opposite directions upon said table, vertically movable slides, one upon either side of said gate and having movements relative to the conveyer chains, a vacuum chamber into which the material is fed by the chains, suction means connected to the vacuum chamber, and means for regulating the suction power.

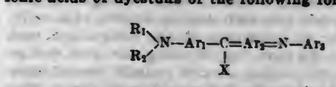
[Claims 6 and 7 not printed in the Gazette.]

1,217,238. DYES OF THE TRIPHENYLMETHANE SERIES AND PROCESS OF MAKING SAME. AUGUST STOCK and OTTO NICODEMUS, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed June 22, 1915. Serial No. 35,616. (Cl. 8—1.)

1. The process of making violet to blue dyestuffs of the diarylindylmethane series, which consists in heating with an aromatic base the dyestuffs produced by condensing 4-halogen-4¹-aminobenzophenones with an indol derivative substituted in α-position, and sulfonating those products of the reaction which do not yet contain any sulfo group.

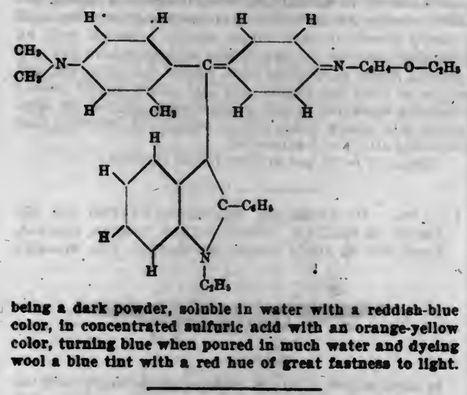
2. The process of making a new blue dyestuff of the diaryl-indylmethane series, which consists in heating with p-phenetidin the dyestuff obtained by condensing 4-chloro-2¹-methyl-4¹-dimethylaminobenzophenone with N-ethyl-α-phenylindol, and sulfonating the coloring matter thus obtained.

3. The hereinbefore described new dyestuffs, being sulfonic acids of dyestuffs of the following formula:



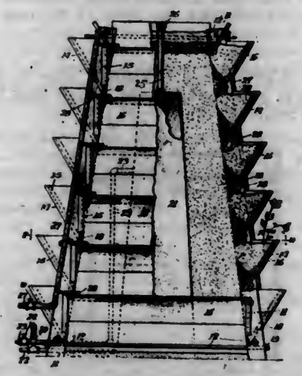
wherein R_1 and R_2, stand for a hydrocarbon residue; Ar_1 Ar_2 Ar_3 for aryl residues and X for an indol derivative substituted in α-position, being dark powders soluble in water with a violet to blue color, in concentrated sulfuric acid with an orange-yellow color, turning violet to blue when poured in much water, and dyeing wool violet to blue tints of excellent fastness to light.

4. The hereinbefore described dyestuff, being a sulfonic acid of the dyestuff of the following formula:



being a dark powder, soluble in water with a reddish-blue color, in concentrated sulfuric acid with an orange-yellow color, turning blue when poured in much water and dyeing wool a blue tint with a red hue of great fastness to light.

1,217,239. VEGETATIVE DEVICE. JAMES SWARTZ, Thompson Falls, Mont. Filed Jan. 5, 1916. Serial No. 70,872. (Cl. 47—27.)



1. In a device for promoting the rapid growth of plant life, the combination of a frame, comprising a plurality of uprights, means for securing said uprights together, inner and outer vanes removably secured between said uprights, and a heating and irrigating system for said device.

2. In a device for causing the rapid germination of plant life comprising a plurality of uprights having slots therein, removable vanes secured in said slots between two adjacent uprights forming a frame whereby the soil may be changed and conditioned, means for securing the uprights together and a heating and irrigating system located in said frame.

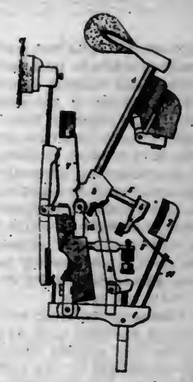
3. A vegetative device, comprising a plurality of corner posts, inner vanes removably secured between each pair of said posts, tie rods for securing said posts together, outer vanes secured on the exterior faces of said posts and resting on said inner vanes, means for securing said inner vanes against displacement and a heating element located in the space inclosed by said vanes and posts.

4. A vegetative device, a plurality of posts, vanes secured to said posts, means for securing said posts together to form a space adapted to receive soil, a tank located in said space, an inlet and a plurality of outlets for said tank, one of said outlets being located near the top of the device and a watering device located at opposite corners of the device.

5. A vegetative device, a plurality of posts, vanes secured to said posts, means for securing said posts together to form a space adapted to receive soil, a tank located in said space, an inlet and a plurality of outlets for said tank, one of said outlets being located near the top of the device, a watering device located at opposite corners of the device and means for causing water to circulate through and around said soil.

[Claims 6 to 8 not printed in the Gazette.]

1,217,240. UPRIGHT-PIANO ACTION. MERTON S. THOMAS, New Rochelle, N. Y. Filed Nov. 23, 1916. Serial No. 132,921. (Cl. 84—26.)



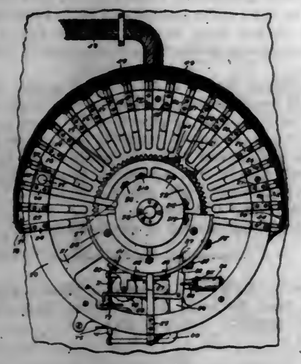
1. An upright piano action comprising a hammer butt, a bumper shank projecting therefrom, a bumper head carried by the bumper shank, and a bridle strap having a longitudinal slit near its upper end, said slit encompassing the bumper shank and being adapted to be passed over the bumper head.

2. An upright piano action comprising a hammer butt, a bumper shank projecting therefrom, a bumper head carried by the bumper shank, and a bridle strap having a slitted upper end that encompasses the bumper shank and engages the rear face of the bumper head, said slitted upper end being adapted to be passed over said head.

1,217,241. ALARM SIGNALING APPARATUS. OLIVER H. TRACY, Minneapolis, Minn., assignor to The Volunteer Fireman Signal Company, a Corporation of Minneapolis, Minn. Filed Nov. 11, 1915. Serial No. 60,845. (Cl. 170—5.)

1. An automatic telephone signaling machine comprising a plurality of contact members, each member being composed of three sets of contact springs, one set being connected in a line circuit and a second set in a ringing circuit of the telephone system, and a third set being movable contacts connected in the line circuit of the telephone system and normally held so as to close said line circuit, a device mounted for rotation in proximity to parts of said movable contacts, means on and movable with said device to engage said contacts and move them to break the

line circuits and close the ringing circuits, means to rotate the device, an operating line for controlling the line and ringing circuits, and means controlled by the operator for switching from the ringing to the telephone line while said device is being rotated, to enable the operator to talk through all of said line circuits.



2. An automatic telephone signaling machine comprising a plurality of contact members each having respective connection with the line and ringing circuits of a corresponding number of telephones of the system and each having movable contacts for breaking the line connection and closing the ringing circuits, a single contact member, an operating line for said ringing circuits, a relay normally breaking said operating line, a circuit for operating said relay to close said operating line and render the same effective said last-named circuit being connected with said single contact member, a movable contact in said single member for closing said last-named circuit, a rotatable device having means thereon successively to operate said single contact member and said plurality of contact members, and means to rotate the device.

3. An automatic telephone signaling machine comprising a plurality of contact members each having respective connection with the line and ringing circuits of a corresponding number of telephones of the system and each having movable contacts for breaking the line connection and closing the ringing circuits, a single contact member, an operating line for said ringing circuits, a relay normally breaking said operating line, a circuit for operating said relay to close said operating line and rendering the same effective, said last-named circuit being connected with said single contact member, a movable contact in said single member, a rotatable device having means thereon successively to operate said single contact member and said plurality of contact members, means to rotate the device, and an operator's switch for throwing the operating line from the ringing circuit and into the talking circuit.

4. An automatic telephone signaling machine comprising a plurality of contact members each having respective connection with the line and ringing circuits of a corresponding number of telephones of the system and each having movable contacts for breaking the line connection and closing the ringing circuits, a single contact member, an operating line for said ringing circuits, a relay normally breaking said operating line, a circuit for operating said relay to close said operating line and render the same effective, said last-named circuit being connected with said single contact member, a movable contact in said single member for closing the last-named circuit, a rotatable device having means thereon successively to operate said single contact member and said plurality of contact members, means to rotate the device, a general alarm mechanism, a normally open circuit for operating the same, and means for closing said circuit when the single contact member is operated.

5. An automatic telephone signal apparatus comprising a plurality of contact members each having respective connection with the line and ringing circuits of a corresponding number of telephones of the system and each having movable contacts for breaking the line connection and closing the ringing circuits, a single contact member, an operating line for said ringing circuits, a relay normally breaking said operating line, a circuit for operating said relay to close said operating line and actuate a ringing set, said last-named circuit being connected with and closed by said single contact member, a rotatable device having means thereon successively to operate said single contact member and said plurality of contact members, a motor to rotate said device, a catch to release said motor, an electromagnet to operate said catch, a circuit and a switch to actuate said electromagnet, a talking circuit, a relay for switching said operating line from said ringing circuit to said talking circuit, a circuit with an operator's switch for controlling said switching relay, a general alarm a normally-open circuit for actuating said alarm, a relay for closing said last-named circuit, means rendered operative by said single contact member for operating said alarm relay, and a switch for restoring and releasing all of said apparatus.

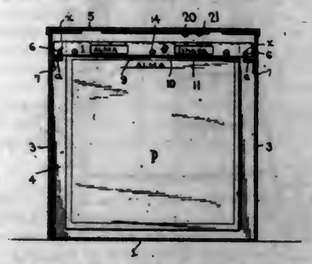
[Claims 6 to 11 not printed in the Gazette.]

1,217,242. PICTURE OR REPRESENTATION OF OBJECTS IN RELIEF. GUSTAVE TUCK, London, England. Filed Nov. 9, 1915. Serial No. 60,624. (Cl. 41—24.)



In combination, a base to conform substantially with the outline of a representation, a carrier for said base with the edges of said base attached to the carrier in a continued flatwise direction, the intervening space between the base and carrier filled with padding material to give the required relief, and a beaded lining reinforced at the outline edge for attaching the edges of the base to the carrier.

1,217,243. PLAT-FILING CABINET. BIRD J. TUCKER and JACOB L. POTTS, Ithaca, Mich. Filed Sept. 8, 1914. Serial No. 860,706. (Cl. 129—16.)

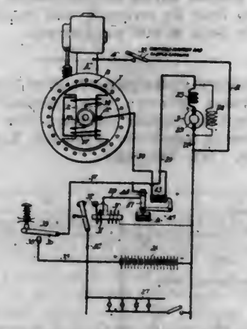


1. A plat filing device of the character described, including in combination, a rectangular cabinet, a rail secured to each end of said cabinet, each rail having an upstanding flange, a holding member made of sheet metal bent U-shaped and having apertures intermediate of its ends, said U-shaped member having an edge-entering opening near each end, said openings being arranged in sets of two opposite one another for engagement with said flanges, whereby said U-shaped member is held approximately at a right angle to said flanges, and securing members passing through said apertures, as, and for the purpose set forth.

2. A plat filing device of the character described, including in combination, a rectangular cabinet, a rail secured to each end of said cabinet, each rail having an upstanding flange, and a holding member made of sheet metal bent U-shaped having an edge-entering opening near each end, said openings being arranged in sets of two opposite one another for engagement with said flanges, whereby said U-shaped member is held approximately at a right angle to said flanges.

3. A plat filing device of the character described, including in combination, a rectangular cabinet, a rail secured to each end of said cabinet, each rail having an upstanding flange, a holding member made of sheet metal bent U-shaped and having apertures intermediate of its ends, said U-shaped member having an edge-entering opening near each end, said openings being arranged in sets of two opposite one another for engagement with said flanges, whereby said U-shaped member is held approximately at a right angle to said flanges, and securing members passing through said apertures, as, and for the purpose set forth.

1,217,244. AUTOMATIC STARTER AND LIGHTER FOR AUTOMOBILES. WILLIAM A. TURBAYNE, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Dec. 2, 1912. Serial No. 734,510. (Cl. 171—315.)



1. In combination, an internal combustion engine having an engine shaft, a member freely rotatable with respect to said shaft, means for rapidly rotating said member, and means for simultaneously placing said engine in condition for operation and coupling said rotatable member to said shaft.

2. A self starter for automobiles comprising a fly wheel for the automobile engine, a freely rotatable member adjacent thereto, means for rapidly rotating said member, and independently controlled means whereby said rapidly rotating member may be coupled to the fly wheel.

3. A self starter for automobiles comprising a fly wheel for the automobile engine, a freely rotatable member, a dynamo electric machine mechanically connected thereto to rapidly rotate the same, and independently controlled means whereby said rapidly rotating member may be coupled to the fly wheel.

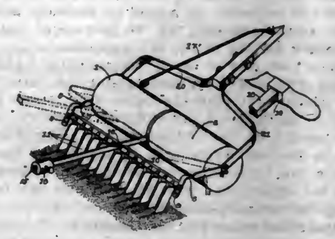
4. A self starter for automobiles comprising a fly wheel for the automobile engine, a freely rotatable member adjacent thereto, a dynamo electric machine mechanically connected thereto for rapidly rotating the same, and independently controlled electrical means for coupling the rapidly rotating member to the fly wheel.

5. A self starter for automobiles comprising a freely rotatable member, electrical means for rapidly rotating said member, and additional electrical means independently controlled for coupling said rapidly rotating member to the engine shaft.

[Claims 6 to 19 not printed in the Gazette.]

1,217,245. TURF-VENTILATOR. ALFRED TYSON, Evanston, Ill. Filed May 1, 1916. Serial No. 94,522. (Cl. 55—12.)

1. In combination a cross-bar and a plurality of knives attached to said cross-bar, said knives comprising flat metal bars having their edges sharpened, each bar having a portion thereof twisted at right angles to another portion of said bar, said latter portion being axially in line with said first portion, a roller, a shaft for said roller, said knives being connected to swing about said shaft and a weight acting on said bar to force said knives into the soil.

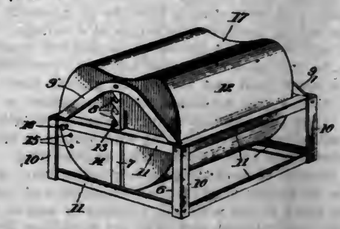


2. In a machine of the class described, an angle bar, a plurality of knives attached to said angle bar, said knives comprising flat top portions and flat lower portions, said lower portions being twisted at right angles with respect to said top portions, the lower ends of said knives being rounded and being adapted to enter the ground, said flat top portion being axially in line with the flat lower portion.

3. In combination a roller, a shaft for said roller, bracket arms secured to said shaft, a crossbar secured to said bracket arms, a plurality of knives rigidly secured to said bracket arms, and a weighted bar acting on said cross-bar for holding said knives with their ends below the surface of the ground.

4. In combination, a roller, a crossbar connected with said roller, a plurality of knives rigidly attached to said crossbar, said knives having their edges presented in a fore and aft direction with respect to said crossbar, means for moving said roller, said means comprising a handle pivoted with respect to said crossbar, and means for holding said knives with their ends below the surface of the ground, said latter means being pivoted with respect to said handle.

1,217,246. FOOT-REST. EDWARD MOORE WALLACE, Washington, D. C., assignor of one-half to John D. Wheelihan, Baltimore, Md. Filed Apr. 18, 1916. Serial No. 91,952. (Cl. 155—9.)



1. In a device of the character set forth, a frame having standards provided with a plurality of inclined slots, a roll having pintles for engagement with the standards the pintles being spaced concentric with the major portion of the surface of the roll, the roll having a longitudinal portion thereof concave.

2. In a foot rest or stool, a frame, a roll mounted for oscillation upon the frame said roll having a longitudinal concavity in its surface the major portion of the surface of the roll beyond the concavity being concentric with the axis of oscillation.

3. In a device of the character set forth, a base having at its ends standards with vertical series of recesses, a roll mounted for oscillation upon the standards the axis of oscillation being concentric with a portion of the roll, a plurality of apertures formed in one of the ends of the

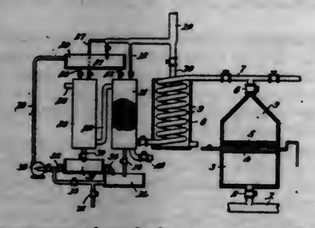
roll said apertures being spaced to accord with the spacing of the vertical recesses in the standards, and a pin carried by the base for holding the roll against oscillation.

4. In a foot rest or stool, a base or frame, a roll provided with a longitudinal concavity, means attached to the ends of the roll for pivotally associating the same with the base or frame so that the center of gravity of the roll will be below the means for pivotally associating the roll with the frame; for the purpose of maintaining the concave portion of the roll uppermost.

5. In a foot rest or stool, a supporting frame, a roll provided with means for maintaining the same in oscillatory engagement with the frame such means being attached to the ends of the roll and concentric with the major portion of its circumference, a longitudinal concavity in the roll which with its supporting means will maintain the concave portion of the roll uppermost and means for engagement with the roll and the frame for holding the roll against oscillation.

[Claim 6 not printed in the Gazette.]

1,217,247. PROCESS OF MAKING AMMONIUM NITRATE AND OTHER PRODUCTS. FRANK S. WASHBURN, New York, N. Y. Original application filed Feb. 7, 1916, Serial No. 76,647. Divided and this application filed May 6, 1916. Serial No. 95,897. (Cl. 23—13.)



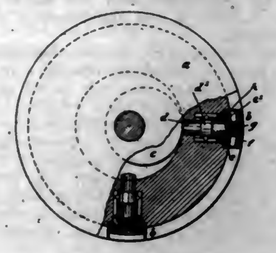
1. The process of producing ammonium nitrate, which consists in subjecting a mixture of ammonia and oxygen containing gases to the action of a catalyzer and at such a rate as to cause nitrous gases and free ammonia to appear in the products of the reaction; producing a solution of nitric acid and ammonium nitrate from said products; and adding free ammonia to said solution to convert said nitric acid into ammonium nitrate, substantially as described.

2. The process of producing a concentrated nitric acid, which consists in subjecting a mixture of ammonia and oxygen containing gases to the action of a catalyzer and at such a rate as to cause nitrose gases and free ammonia to appear in the products of the reaction; producing a solution of nitric acid and ammonium nitrate from said products; adding free ammonia to said solution to convert said nitric acid into ammonium nitrate; suitably recovering said nitrate; and treating said nitrate to form a concentrated nitric acid, substantially as described.

3. The process of producing ammonium nitrate, which consists in subjecting a mixture of ammonia and oxygen containing gases to the action of a catalyzer and at such a rate as to cause nitrous gases and not exceeding 20% of free ammonia to appear in the products of the reaction; producing a solution of nitric acid and ammonium nitrate from said products; and adding free ammonia to said solution to convert said nitric acid into ammonium nitrate, substantially as described.

4. The process of producing a concentrated nitric acid and which consists in subjecting a mixture of ammonia and oxygen containing gases to the action of a catalyzer and at such a rate as to cause nitrose gases and not exceeding 20% of free ammonia to appear in the products of the reaction; producing a solution of nitric acid and ammonium nitrate from said products; adding free ammonia from an outside source to said solution to convert all of said nitric acid into ammonium nitrate; suitably recovering said nitrate; and treating said nitrate to form a concentrated nitric acid, substantially as described.

1,217,248. SPINDLE FOR THE EJECTORS OF LINOLEUM-MACHINES. LOUIS T. WEISS, Brooklyn, N. Y. Filed July 8, 1916. Serial No. 108,117. (Cl. 74—85.)

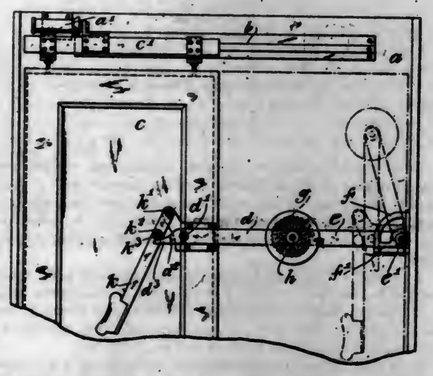


1. As an article of manufacture a guide member having integral lugs struck up from its periphery and extending beyond and within its body.

2. As an article of manufacture a guide member having an enlargement and lugs extending beyond and within the body of said enlargement.

3. A guide member having an enlargement and integral lugs struck up from its periphery and extending beyond and within the body of said enlargement.

1,217,249. DEVICE FOR OPERATING SLIDING DOORS. LOUIS T. WEISS, Brooklyn, N. Y., assignor to Reliance Ball Bearing Door Hanger Company, New York, N. Y., a Corporation of New York. Filed Oct. 5, 1916. Serial No. 123,904. (Cl. 70—102.)



1. An operating device for sliding doors comprising a toggle having one member pivoted upon a fixed point and the other member pivoted upon the door, one of said members being formed with a cam surface, and an operating handle coöperating with the cam surface on the toggle first to break the toggle and then by continued pressure to flex the toggle further and open the door.

2. An operating device for sliding doors comprising a toggle having one member pivoted upon a fixed point and the other member pivoted upon the door, one of said members being formed with a cam surface and extended beyond the pivot on the door, and an operating handle coöperating with said cam surface first to break the toggle and then by continued pressure to flex the toggle further and open the door.

3. An operating device for sliding doors comprising a toggle having one member pivoted upon a fixed point and the other member pivoted upon the door, one of said members being formed with a cam surface, an operating handle coöperating with the cam surface on the toggle first to break the toggle and then by continued pressure to flex the toggle further and open the door, and a spring applied to the toggle to straighten the same.

4. An operating device for sliding doors comprising a toggle having one member pivoted upon a fixed point and the other member pivoted upon the door, one of said members being formed with a cam surface, and extended beyond the pivot on the door, an operating handle coöperating with said cam surface first to break the toggle and then by continued pressure to flex the toggle further and open the door, and a spring applied to the toggle to straighten the same.

1,217,250. PROCESS OF PRODUCING ILLUSTRATIONS. THEODOR WENSEL, Joliet, Ill. Filed June 24, 1912. Serial No. 705,678. (Cl. 101—426.)



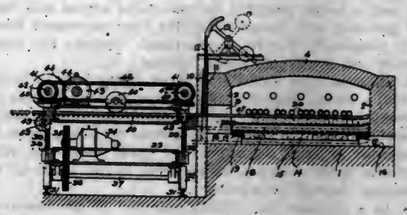
1. A process of producing illustrations which consists in inking a commercial printing picture plate, pressing an undulatory yielding surfaced transfer plate of predetermined form against said inked plate and retracting it therefrom, with ink adhering to the undulatory plate in different amounts at the different portions according to the predetermined form thereof, and subsequently pressing paper against said inked undulatory plate by means of a yielding undulatory plate of predetermined form thereby forming an inked picture on the paper different from that on the undulatory transfer plate.

2. A process of producing illustrations which consists in uniformly inking a printing plate, pressing a yielding undulatory plate against said printing plate and retracting it therefrom, whereby ink in different amounts is caused to adhere to the various areas of the undulatory plate, and subsequently pressing paper against said inked undulatory plate by means of a yielding undulatory plate, whereby an inked picture is formed on the paper which is different from that which was formed on the undulatory plate by engagement with said printing plate.

3. A process of producing illustrations which consists in inking a commercial printing plate, pressing an undulatory surface transfer plate of predetermined form against the inked plate and retracting it therefrom with ink adhering to the undulatory plate in different amounts at the different portions according to the predetermined form thereof and subsequently pressing paper against said inked undulatory plate by means of an undulatory plate of certain predetermined form thereby forming an inked picture upon the paper different from that upon the undulatory transfer plate.

4. A process of producing illustrations which consists in uniformly inking a printing plate, pressing an undulatory plate against said printing plate and retracting it therefrom whereby ink in different amounts is caused to adhere to the various areas of the undulatory plate, and subsequently pressing paper against said inked undulatory plate by means of another undulatory plate whereby an inked picture is formed on the paper which is different from that which was formed upon the undulatory plate by engagement with said printing plate.

1,217,251. FURNACE. MALCOLM U. WIKSTROM, Charlerol, Pa., assignor to Pittsburgh Steel Products Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 16, 1914. Serial No. 825,131. (Cl. 214—28.)



1. The combination of a furnace, a longitudinally movable support for the metal adapted to move into and out of said furnace, and means introduced from the side of said furnace for receiving the metal from said support while within the furnace.

2. The combination of a furnace, a longitudinally movable support for the metal adapted to be moved into and out of said furnace, and lifting means introduced in the side of the furnace, and adapted to pass under the metal on said support.

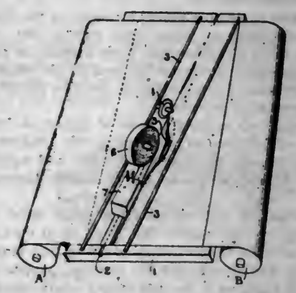
3. The combination of a furnace, a hearth, a longitudinally movable support for the metal adapted to be moved into and out of said furnace and lifting means introduced in the side of said furnace for lifting the metal from said hearth.

4. The combination of the furnace, a movable-support for the metal adapted to be moved into and out of said furnace, a frame at the side of said furnace, lifting-bars carried by said frame, said furnace having apertures for the entrance of said lifting-bars, and means carried by said frame for raising and lowering said bars.

5. The combination of the furnace, a movable-support for the metal adapted to be moved into and out of said furnace, a frame at the side of said furnace, lifting-bars carried by said frame, said furnace having openings for the entrance of said lifting-bars, means for raising and lowering said frame, and means for reciprocating said bars.

[Claims 6 to 11 not printed in the Gazette.]

1,217,252. MECHANISM FOR UNITING PRINTING-PRESS WEBS AND THE LIKE. GLENN S. WILLIAMSON, New York, N. Y. Filed Apr. 4, 1914. Serial No. 829,571. (Cl. 154—42.)



1. In a machine for uniting material of the character described, in combination, a supporting table for the material and a unitary cutting and sealing device for the material movable across said table.

2. In a machine for uniting material of the character set forth, in combination, a table for supporting the adjacent ends of the material to be united, and a device

movable across said table and provided with means for automatically cutting and sealing the material as it is so moved.

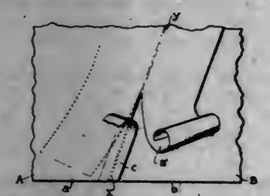
3. In a machine for uniting material of the character set forth, in combination, a table for supporting the material and a device mounted for movement across said table and provided with means operating upon movement thereof to progressively trim the material, displace the waste thereof and secure the parts together.

4. In a machine for uniting paper or the like, in combination, a work supporting table and a device mounted for movement across said table, said device carrying a supply of sealing material and having means operating upon its movement to trim the paper and other means to automatically apply said sealing material to the paper as the trimming thereof progresses.

5. In a machine for cutting material of the character set forth, in combination, a table for supporting the ends of a plurality of pieces of material in an overlapped relation, a cutting device movable across said table for severing the overlapping portions of the material and means fixed to said device for displacing the severed end of the upper piece of material.

[Claims 6 to 18 not printed in the Gazette.]

1,217,253. METHOD OF UNITING PRINTING-PRESS WEBS. GLENN S. WILLIAMSON, New York, N. Y. Filed Nov. 14, 1914. Serial No. 872,114. (Cl. 154—42.)



1. The method of uniting pieces of sheet material consisting in arranging the pieces to be united in alinement and with their extremities overlapped in an opposed relation, then severing the overlapped extremities of the pieces on a common line and then removing the severed extremity of one piece and sealing the pieces together with their cut edges in a parallel relation.

2. The method of uniting pieces of sheet material consisting in arranging the pieces to be united in alinement and with their ends overlapped in an opposed relation, then severing the overlapped ends of the pieces on a common bias line and then removing the severed portion of the upper piece and sealing the pieces together with their cut edges in a parallel relation.

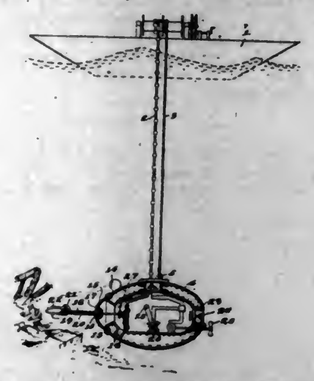
3. The method of uniting pieces of paper or the like, consisting in overlapping the same, then cutting the overlapping portions on a common line, then displacing the severed end of one piece to expose the end of the other piece and then applying a uniting strip to the two pieces across the line of severance thereof.

4. The method of uniting pieces of paper or the like, consisting in simultaneously trimming the adjacent ends of the two pieces on corresponding lines and applying a uniting strip to the pieces as the trimming thereof progresses.

5. The method of uniting printing press webs or the like, consisting in overlapping the webs, then cutting the overlapping portions thereof on a common line from margin to margin, and displacing the severed portion of the upper web and applying a uniting strip to both webs along the aforesaid line as the cutting progresses.

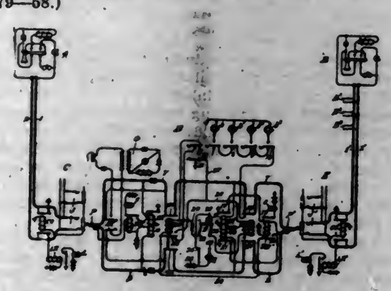
1,217,254. DEEP-SEA-SALVAGE-RECOVERING APPARATUS. GEORGE W. WINSLOW, Chicago, Ill. Filed Dec. 23, 1913. Serial No. 808,465. (Cl. 137—75.)

The combination of a casing adapted to withstand high external deep-sea pressure and having therein electrical apparatus and an air chamber, a tubular cable comprising rigid external-pressure-resisting sections movably jointed together and having means for preventing leakage at the



joints, an air pipe located within the tubular cable and connected with the said air chamber in the casing, and electric conductor wires also located within the cable and connected with the said electrical apparatus in the casing.

1,217,255. TELEPHONE SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed June 28, 1913. Serial No. 776,256. (Cl. 179—58.)



1. A switchboard having telephone lines, an operator's link circuit, a relay therefor controlling application of ringing current to subscribers' lines and included in circuit connections arranged for automatic or manual control thereof, and a switch for disabling the automatic control of said relay while leaving said manual control operative, said switch also being adapted to disable the said manual control.

2. A switchboard having telephone lines, an operator's link circuit and a ringing key therefor, apparatus responsive to actuation of said key to manually ring subscribers' lines, apparatus responsive to actuation of said key to automatically ring subscribers' lines, and means to disable said last mentioned apparatus, while said first apparatus is operative.

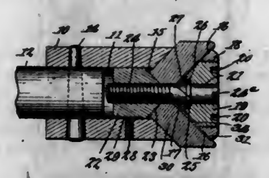
3. A telephone system including a telephone line, a source of ringing current and an operator's ringing key having two operating positions, means whereby said source is applied to said line while the operator manually holds said key in one of said operating positions, means for maintaining said key in the other operating position when actuated and released by the operator, circuit devices thereon responsive to automatically apply said source to said line apparatus, whereby the response of the called subscriber disconnects said source from the line, a switch for disabling said devices and rendering them unresponsive to said key.

4. A telephone system including a ringing relay controlling a contact through which ringing current is supplied to the called line, a manual operator's switch adapted to energize said relay at the will of the operator, a locking relay and a circuit for said ringing relay controllable thereby, means whereby the response of the subscriber unlocks said locking relay to discontinue the application of ringing current to his line, a circuit controllable by the operator for energizing said locking relay, a switch for rendering said circuit unresponsive to the operator.

5. A telephone system, including a relay having a contact directly controlling the application of ringing current to the called line, automatic means for intermittently actuating said relay, means controllable by the called subscriber for preventing further actuation of said relay to disconnect said current from his line, a switch for rendering both said means ineffective and a manual operator's switch for operating said relay for applying said ringing current while said means are ineffective.

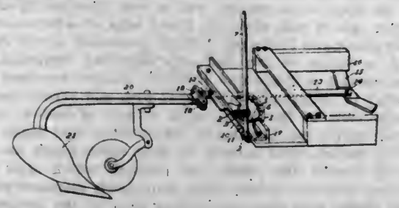
[Claims 6 to 12 not printed in the Gazette.]

1,217,256. REAMER. JOHN WITANOWSKI, Chicago, Ill. Filed Sept. 21, 1916. Serial No. 121,413. (Cl. 77—76.)



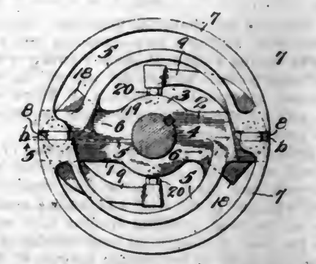
A reamer comprising a stock having an axial bore, and recesses extending forwardly and sidewise therefrom through the side of the stock, a nut slidably and non-rotatably mounted in said bore and having a conical end, a non-traveling screw extending axially into the stock from the outer end thereof and threaded into the nut, cutters slidably and non-rotatably mounted in the aforesaid recesses and abutting at their inner ends against the conical end of the nut, and a plug threaded into the outer end of the stock and having a conical rear end engaging the cutters on the side to lock the same in the recesses, the sides of the cutters having longitudinal grooves which are spanned by the conical surface of the plug.

1,217,257. IMPLEMENT-SHIFTING MEANS FOR TRACTORS. LOUIS W. WITRY, Waterloo, Iowa, assignor to Waterloo Gasoline Engine Company, Waterloo, Iowa. Filed May 24, 1916. Serial No. 99,563. (Cl. 21—114.)



Implement shifting means, comprising a laterally-swinging draft-connection pivoted to the frame of a tractor or the like, a radially-notched rack-segment mounted on said frame, a lever pivoted on said segment and adapted to enter any of said notches, a semi-circular boss on said segment, concentric with said notches, and below the pivotal connection of the lever to serve as a support for the lever to slide over, and a coiled compression-spring mounted upon the segment to exercise a yielding pressure upon the lever to hold the upper part thereof in any notch of the rack-segment.

1,217,258. EXPANDING FRICTION-CLUTCH. CHARLES O. WOOD, Chambersburg, Pa. Filed Apr. 28, 1916. Serial No. 94,155. (Cl. 192—13.)



1. In a friction clutch, an integral expansion element comprising a hub, radial arms on the hub and arcuate expanding members off-set from said arms to permit the hub of a pulley to pass within said members at their center.

2. In a friction clutch, an integral expansion element comprising a hub, radial arms on the hub, expanding members on the arms and off-set therefrom, each comprising a pair of substantially concentric arcuate parts connected together at one end, the other end of the inner part connected to an arm, said members separated from the ends of the arms by a cut parallel to the arms and members and separated from one another by a cut perpendicular to the aforesaid cut.

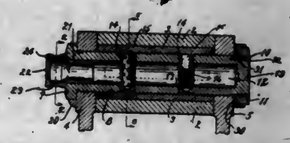
3. In a friction clutch, an integral expansion element comprising a hub, radial arms on the hub and expanding members on each arm, each expanding member comprising an inner and an outer arcuate part, one end of the inner part connected to one end of the outer part, the other end of the inner part being connected to an arm at a point beyond the hub and both members being off-set from said arms and hub.

4. In a friction clutch, an integral expanding element comprising a hub, radial arms on the hub and a substantially semi-circular expanding member on each arm, each member comprising two concentric parts, the inner part of each member being connected at one end to an arm at a point beyond the hub and the other end connected to the outer part.

5. In a friction clutch, an integral expanding element comprising a hub, radial arms on the hub, an expanding member on each arm, each member consisting of two substantially concentric arcuate parts, one of said parts connected at one end to an arm and at its other end to the other part, spreaders between said members and actuating levers for said spreaders, and a load for each lever to compensate for centrifugal action.

[Claims 6 to 11 not printed in the Gazette.]

1,217,259. SELF-LUBRICATING BOLT. OSCAR ZERK, Cleveland, Ohio, assignor, by mesne assignments, to George W. Bowen, Auburn, N. Y. Filed May 27, 1913. Serial No. 770,160. (Cl. 64—27.)



1. A self-lubricating bolt comprising a one piece body portion having a lengthwise passage opening through one end of the bolt and a lateral passage leading from the lengthwise passage through the periphery of the body, and a hollow plug extending into the lengthwise passage at the its open end, and having a filling opening, substantially as and for the purpose set forth.

2. A self-lubricating bolt comprising a one piece body portion having an opening through the head of the bolt, a

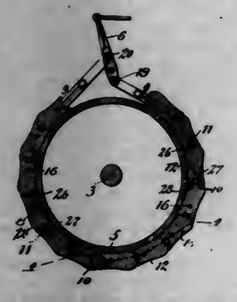
hollow plug occupying said opening and having a filling opening exterior to the bolt body, and a closure for the filling opening carried by said hollow plug on the periphery thereof.

3. In a device of the character described, the combination of a bolt body having a bore extending into one end, a hollow plug having a reduced portion snugly occupying the bore, a head portion beyond the head of the bolt, an annular groove in said head portion, a filling opening through it, and a closing spring occupying the groove and adapted to cover the opening.

4. In a self-lubricating bolt, the combination of a body having a head at one end and having a central bore extending through such head, a hollow plug snugly occupying the bore adjacent to the head and bearing against the outer edge of the head, a filling opening into said plug exterior to the head, a closure for said opening, a lateral opening from the bore to the bearing surface of the bolt, a tube in said lateral opening extending crosswise of the bore and having passageways through it, and a fibrous material within the tube.

5. In the self-lubricating bolt, the combination of a body having a head at one end, and a central bore extending through the head, a hollow plug fitting in the bore and abutting against the end of the head and having a filling opening extending through the periphery thereof and a closure for said opening.

1,217,260. BRAKE. CONRAD W. ZIMMER, Buffalo, N. Y. Filed May 18, 1915. Serial No. 28,849. (Cl. 74—37.)



1. A brake comprising a drum, a plurality of shoes surrounding the drum, operating chains connected with opposite sides of the shoes, and springs interposed between the opposing ends of adjacent shoes and operating to yieldingly hold adjacent shoes apart from each other.

2. A brake comprising a drum, a plurality of shoes arranged in a row around said drum and provided on their opposing ends with pockets, springs arranged in said pockets and each bearing against the bottom of a pair of opposing pockets, and operating to yieldingly hold adjacent shoes apart from each other and operating chains connecting with opposite sides of said shoes.

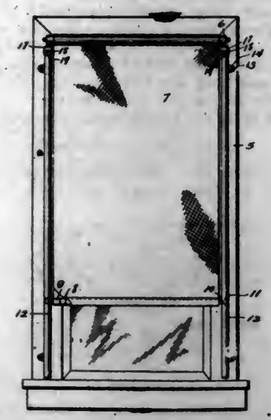
3. A brake comprising a drum, a plurality of shoes arranged around the drum, and means for drawing the shoes against the periphery of the drum comprising two chains connected with opposite longitudinal edges of the shoes, each of said shoes having convex and concave faces at its opposite transverse ends, and engaging its transverse convex face with the transverse concave face of an adjacent shoe.

4. A brake comprising a drum, a plurality of shoes arranged around the drum, and means for drawing the shoes against the periphery of the drum comprising two chains connected with opposite longitudinal edges of the shoes and each of said shoes having its inner and outer sides provided with concave faces either of which may be engaged with the periphery of the drum.

5. A brake comprising a drum, a plurality of shoes arranged around the drum, and means for drawing the shoes against the periphery of the drum comprising two chains connected with opposite longitudinal edges of the shoes and each of said shoes having its inner and outer sides provided with concave faces either of which may be engaged with the periphery of the drum upon reversing the shoes on said chains.

[Claims 6 and 7 not printed in the Gazette.]

1,217,261. GUIDE FOR WINDOW-SHADES. ALEXANDER ZORBA, Herrick, S. D. Original application filed Mar. 2, 1915, Serial No. 11,640. Divided and this application filed Sept. 9, 1915. Serial No. 49,677. (Cl. 156—26.)



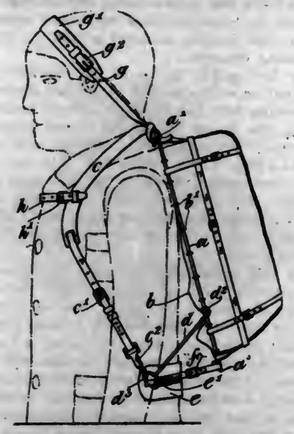
1. A guide for window shades comprising a hollow, cylindrical, elongated shell having a slot formed in one of its sides which opens at the top of said shell but terminates short of the bottom thereof, a guide member comprising a shank which passes through said slot and an enlarged head which lies and travels within said shell, means for securing said member to a shade stick and a cap screwed upon the upper end of the shell the lower edge of which overlies and prevents said shank from passing out of said slot until said cap is removed.

2. A device of the character described comprising in combination a shade and its stick, a member embracing the end of the shade stick, a shank carried by said member, an enlarged head carried by said shank, a slotted, cylindrical shell having a slot formed in its wall through which said shank passes and which slot terminates short of the bottom of said shell a sufficient distance to prevent the lower edge of the shade from coming into contact with the window sill when the shade is drawn down to its limit of movement and a cap threaded upon the upper end of said shell the lower edge of which overlies said shank and limits the upward movement of said shade.

3. A device of the character described comprising in combination a shade and its stick, headed members projecting in longitudinal alinement with and beyond the opposite ends of the shade stick, a pair of hollow, cylindrical shells one disposed at each side of said shade said shells having slots formed in their sides which are disposed toward the shade and through which slots said headed members extend with their heads disposed within said shells, said slots terminating short of the bottoms of said shells and thereby limiting the downward movement of the shades and caps upon the upper ends of said shells and closing the upper ends of said slots and by which the upward movement of the shade is limited.

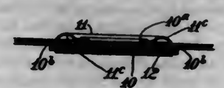
1,217,262. PACK-CARRIER. DAVID T. ABERCROMBIE, Newark, N. J., assignor to David T. Abercrombie Company, New York, N. Y., a Corporation of New York. Filed Jan. 4, 1916. Serial No. 70,108. (Cl. 224—5.)

1. A pack-carrier comprising a rigid back frame, means to hold the upper end thereof to the shoulders of the user, a saddle-web to bear across the hips of the user, and thrust rods hingedly secured to the back frame near its lower end and hingedly connected to the saddle-web.



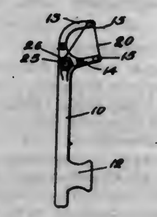
2. A pack-carrier comprising a rigid back frame, means to hold the upper end thereof to the shoulders of the user, a saddle-web to bear across the hips of the user, thrust rods hingedly secured to the back frame near its lower end and connected hingedly to the saddle-web, and means to limit the swinging movement of the thrust rods.

1,217,263. MEANS FOR SECURING NAME-PLATES. FREDERICK HOWARD AULD, Columbus, Ohio. Filed Oct. 5, 1914. Serial No. 865,000. (Cl. 40—20.)



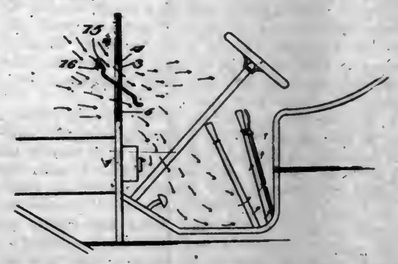
Means for securing a member to another structure, consisting in the combination with such member, of a plate constituting a securing member attached to the first named member, said securing plate being concaved and adapted to be spread edgewise into tensioned engagement with a face of the structure to which the first named member is to be secured.

1,217,264. TOOTHPICK. FRANK L. BAXTER, Boston, Mass. Filed June 15, 1912. Serial No. 703,774. (Cl. 132—13.)



As a new article of manufacture, a toothpick comprising a shank of approximately uniform dimension throughout its length, an arm projecting from the edge of the shank adjacent one end and disposed at an angle other than a right angle with respect to the shank, the shank being extended beyond said arm and reduced in thickness, the extension being projected laterally to form a second arm in parallelism with the first mentioned arm, the respective ends of the arms being formed to receive and support a thread, and thread gripping means carried by the shank at the juncture of the shank and first mentioned arm, said thread gripping means being arranged wholly within the outline plane of the surface of the shank, whereby to avoid projection.

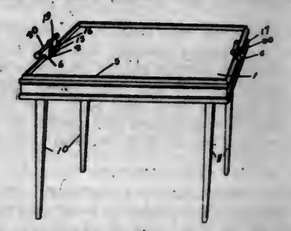
1,217,265. VEHICLE WIND-SHIELD. JESSE H. BERRY, Boston, Mass. Filed Sept. 10, 1914. Serial No. 861,051. (Cl. 21—148.)



1. The combination with a windshield having spaced frame members defining an air space, of a ventilator plate mounted for angular adjustment between the said members and arranged when in closed position to have its edge portions engage against the said frame members, the said edge portions of the plate being channeled to partly embrace the said frame members.

2. The combination with a wind shield having spaced frame members defining an air space, of a ventilator plate mounted for angular adjustment between the said members and having its longitudinal edge portions channeled whereby to partly embrace the said frame members when the plate is in closed position, and facing strips arranged within the channels.

1,217,266. SERVICE-TRAY. GEORGE EDWIN BILTON, Toronto, Ontario, Canada. Filed Oct. 26, 1915. Serial No. 58,015. (Cl. 45—11.)



1. In a service tray, a base having its ends slotted adjacent to the centers thereof, a molding encircling said base and extending therebelow and having slots therein coinciding with the slots in said base, handles on said molding adjacent to said slots, base strips secured to the under side of said base adjacent to the ends thereof, transverse bars hingedly secured to said base strips, legs rigidly secured to the ends of one of said bars, legs rigidly secured a short distance from the ends of the other of said bars so that when folded the legs from one bar will rest between the legs of the other bar, brackets on the under side of said base adjacent to said base strips, springs rigidly secured to said brackets and extending outwardly adjacent to said molding and means between said springs and said transverse bars coacting with said springs for holding said legs in their collapsed and extended positions.

2. In a service tray, a base having its ends slotted adjacent to the centers thereof, a molding encircling said base and extending therebelow and having slots therein coinciding with the slots in said base, handles on said molding adjacent to said slots, base strips secured to the under side of said base adjacent to the ends thereof, transverse bars hingedly secured to said base strips, legs rigidly secured

to the ends of one of said bars, legs rigidly secured a short distance from the ends of the other of said bars so that when folded the legs from one bar will rest between the legs of the other bar, brackets on the under side of said base adjacent to said base strips, flat metal springs secured on said brackets and having their outer ends curved in substantially inverted arch-shape and terminating adjacent to said molding, flat metal bars mounted on said transverse bars and having their outer ends bent upwardly at right angles, said bars being adapted to rest within the recess at the ends of said tray when the said legs are extended and to abut the outer ends of said springs to lock said legs to their extended positions and means for releasing said bars from engagement with said springs to collapse said legs.

3. In a service tray, a base having its ends slotted adjacent to the centers thereof, a molding encircling said base and extending therebelow and having slots therein coinciding with the slots in said base, handles on said molding adjacent to said slots, base strips secured to the under side of said base adjacent to the ends thereof, transverse bars hingedly secured to said base strips, legs rigidly secured to the ends of one of said bars, legs rigidly secured a short distance from the ends of the other of said bars so that when folded the legs from one bar will rest between the legs of the other bar, brackets on the under side of said base adjacent to said base strips, flat metal springs secured on said brackets and having their outer ends curved in substantially inverted arch-shape and terminating adjacent to said molding, flat slotted metal bars mounted on said transverse bars and having their outer ends bent upwardly at right angles, said bars being adapted to rest in the recesses at the ends of said tray when the said legs are extended and to abut the outer ends of said springs to lock said legs to their extended positions, levers slidably mounted in said slotted bars and having their inner ends bent at right angles and abutting the inner sides of said transverse bars when the legs are collapsed, said levers, in the extended positions of the legs, taking a vertical position between said bars and said transverse bars and having their angle ends resting on the upper side of said springs and adapted to receive pressure for releasing said springs from engagement with said bars.

4. In a device of the class described, a tray, legs rigidly connected by bars, hinges securing said bars beneath said tray, arc-shaped flat springs rigidly secured beneath said tray and adapted to hold said legs closed and serve as latch bars in holding said legs open, and trip levers adapted to traverse and depress said springs in operation, and thereby release the latch mechanism and the legs.

1,217,267. FUEL-SAVING DEVICE. WILLIAM C. BLASKE, Chicago, Ill., assignor to Wolff Fuel Saver Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 28, 1915. Serial No. 24,552. (Cl. 110—58.)



1. In a fuel saving device of the character described, the combination with a casing one wall of which has a portion thereof cut away to form an opening therein, said cutaway portion being bent inwardly and extending downwardly to form a baffle plate for said opening whereby the incoming air will be directed downwardly toward the center of the casing, a funnel-shaped air preheating chamber arranged at one side of the casing and having the smaller end thereof in communication with said opening, and a valve-controlled opening mounted within the larger end of air preheating chamber.

2. In a fuel saving device of the character described, the combination with a casing, an air pre-heating chamber communicating with the casing, a damper mounted within the casing, the upper end of the casing having an over draft opening formed therein, a door for said opening and adapted to swing within the casing, said door being concaved in cross section whereby the said door when in an open position will direct the gases to descend to the lower end of the casing so that the same will again come in contact with the air coming into the casing from the air pre-heating chamber.

3. In a fuel saving device of the character described, the combination with a casing of the same diameter throughout, the casing having an opening formed therein adjacent to the lower end thereof, a baffle plate for said opening and projecting within the casing, a funnel-shaped air pre-heating chamber arranged at one side of the casing, one end of the chamber being in communication with said opening, a valve controlled opening mounted within the opposite end of the chamber, a damper pivotally mounted within the casing and adapted to rest above and adjacent to said opening when in a closed position, the upper end of the casing having an overdraft opening formed therein, a door for said over-draft opening and adapted to swing within the casing substantially as and for the purpose specified.

4. In a fuel saving device of the character described, the combination with a casing, an elongated half cone shaped air pre-heating chamber secured to the outer periphery of the casing, the concave wall of the casing extending within and closing one side of the air pre-heating chamber, whereby the air within the chamber may be thoroughly preheated by the hot gases arising within the casing, means of communication between the smaller end of the chamber and the casing for discharging air within the casing in an opposite direction to the gases and means for controlling the inlet of air to the chamber.

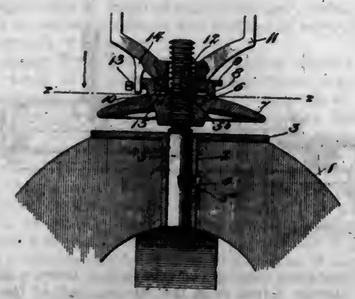
5. In a fuel saving device of the character described, the combination with a casing, an air preheating chamber secured to the casing, a pivotally mounted damper arranged within the casing, means of communication between the air preheating chamber and the casing for directing the incoming preheated air downwardly toward the center of the casing, said damper extending below said communication means and arranged to divide the interior of the casing to form a mixing chamber at one side of the damper and to leave the interior of the casing on the opposite side of the damper open to permit the free passage of gases up the casing.

[Claims 6 to 9 not printed in the Gazette.]

1,217,268. ADJUSTMENT FOR TILTING-CHAIRS. HARRY W. BOLENS, Port Washington, Wis., assignor to Gilson Manufacturing Company, Port Washington, Wis., a Corporation of Wisconsin. Filed June 16, 1915, Serial No. 34,412. Renewed Jan. 22, 1917. Serial No. 143,844. (Cl. 155—41.)

1. In a tilting-chair, the combination of a base, a fixed adjusting-post rising therefrom and rigid therewith and provided above the base with threads and a longitudinal groove, a hand-wheel threaded on the post, a washer encircling the post above the wheel and having a lug engaging the groove in the post, and a stretcher-yoke having an opening receiving the post and rotatable and adjustable thereon, and seated on the washer.

2. In a tilting-chair, the combination of a base, a fixed adjusting-post rising therefrom and rigid therewith and provided above the base with threads and a longitudinal groove, a hand-wheel threaded on the post, a washer encircling the post above the wheel, means for temporarily locking the two together in a detachable manner, said washer having an internal lug engaging slidably with the groove in the post, and a stretcher-yoke having an opening receiving the post and rotatable and adjustable thereon, and seated on the washer.



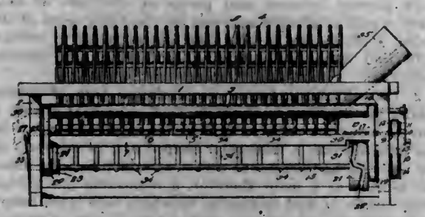
3. In a tilting-chair, the combination of a base, a fixed adjusting-post rising therefrom and rigid therewith and provided above the base with threads and a longitudinal groove, a hand-wheel threaded on the post, a washer encircling the post above the wheel, means for temporarily locking the two together in a detachable manner, said washer having an internal lug engaging slidably with the groove in the post, a stretcher-yoke having an opening receiving the post and rotatable and adjustable thereon, and seated on the washer, and means for locking the stretcher-yoke and the hand-wheel together whereby to permit of independent rotation yet prevent longitudinal separation.

4. In a tilting-chair, the combination of a base, an adjusting-post rising therefrom and provided with threads and a longitudinal groove, a hand-wheel threaded on the post, a washer encircling the post and having a lug engaging the groove of the post, means for temporarily and detachably locking the washer and hand-wheel together, and a stretcher swiveled on the post and vertically adjustable by the hand-wheel.

5. In a tilting-chair, the combination of a base, an adjusting-post rising therefrom and provided with threads and a longitudinal groove, a hand-wheel threaded on the post, a washer encircling the post and having a lug engaging the groove of the post, removably interlocking lugs and grooves formed on the meeting faces of the hand-wheel and washer, and a stretcher swiveled on the post and vertically adjustable by the hand-wheel.

[Claims 6 to 9 not printed in the Gazette.]

1,217,269. ONION-TOPPING MACHINE. EPHRAIM BURDICK, Cleveland, Ohio. Filed June 12, 1915, Serial No. 33,710. Renewed Jan. 24, 1917. Serial No. 144,809. (Cl. 146—11.)



1. An onion topping machine comprising a supporting frame; opposite rollers; a crank for turning one of the rollers; a drum formed of spirally wound wire and having one or more longitudinally-disposed interior ribs the drum being freely revoluble on the rollers and operated by gravity from the driven roller; a cam and cam shaft operatively connected with and driven by the driven roller; a revolving topping finger having sets of spaced fingers adapted to project between the spirals of the drum to press the onion tops into pendent position; a pivoted cam-guided member operatively connected with the finger roller to move same longitudinally synchronously with the travel of the drum spirals; a spring to return the roller to its position at the head end of the machine; a fixed cutting blade positioned to engage the pendent onion tops; a superposed reciprocally moving cutter blade; and means for reciprocating the cutter blade, the aforesaid means being operatively connected with driving means actuated from the cam shaft, substantially as set forth.

2. In an onion topping machine, a drum formed of spirally wound wire and having one or more longitudinal ribs secured to its interior portion, a driven roller supporting and causing the drum to revolve, a revoluble and reciprocally slidable roller having series of spaced fingers adapted to project intermittently between the spirals of the drum to press the onion tops into pendent position; cam guided means for reciprocally moving the finger roller; means operatively connected with the roller driving the drum to drive the topping-finger roller; means positioned exterior to and in proximity with the spiral drum to cut the pendent tops of onions as the drum is revolved; and means operatively connecting the aforesaid cutting means with the driven roller, whereby circular is transformed into reciprocating motion for the purposes set forth.

3. In an onion topping machine, a longitudinally ribbed revolving drum adapted to receive the onions, cutting means positioned exterior to and in proximity with the drum to engage the pendent tops of onions, means adapted to intermittently project between spirals of the drum and press onion tops into a pendent position and means for driving the aforesaid mechanism.

4. In an onion topping machine, a spiral-wire drum, means moving synchronously with the spirals and positioned to project therebetween to press the tops of onions to a pendent position; means for revolving the drum; means for synchronously actuating the means for pressing tops to pendent position through the drum spirals; cam-governed means for reciprocating the aforesaid means to engage between spirals of the drum at each revolution; and means for cutting the tops from the onions as the drum revolves.

5. In an onion topping machine, a freely revoluble spiral wire drum having one or more longitudinal ribs, means for causing the drum to revolve; means adapted to project between spirals of the drum at predetermined intervals to press onion tops into pendent position; means operatively connected with the drum-actuating means to operate the onion-top engaging means; cutting blade mechanism positioned exterior to and in proximity with the spiral drum to cut the pendent tops of onions; and means for reciprocating the aforesaid cutting mechanism.

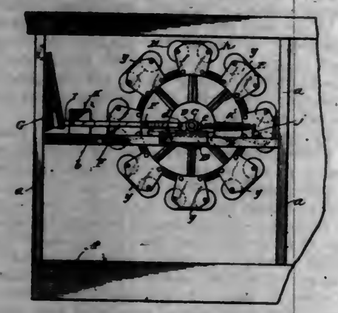
[Claim 6 not printed in the Gazette.]

1,217,270. NON-SLIPPING COVER FOR PULLEYS. THOMAS J. CAHILL, San Francisco, Cal. Filed Mar. 22, 1916. Serial No. 85,866. (Cl. 64—45.)



In combination with a pulley having a cylindrical periphery, an endless elastic band stretched over the pulley periphery, said band being thickest in its center and gradually tapering toward its side edges, and said pulley being wider than and extending beyond the edges of the band whereby to afford a base over which said band may laterally yield when subjected to external pressure.

1,217,271. AUTOMATIC MUSICAL INSTRUMENT WITH MAGAZINE. KARL O. CARLSON, Grand Rapids, Mich., assignor to National Piano Manufacturing Company, Grand Rapids, Mich., a Corporation of Illinois. Filed July 18, 1913. Serial No. 779,735. (Cl. 84—161.)



1. In a player piano, a stationary horizontal tracker-board, a drum having means for supporting a plurality of music rolls and mounted at one side of the tracker-board, said drum being revoluble and also movable bodily horizontally toward or from the tracker-board, means for horizontally moving said drum in one direction, and spring means for automatically returning said drum.

2. In a player piano, a stationary horizontal tracker-board, a drum having means for supporting a plurality of music-rolls and mounted at one side of the tracker-board, said drum being revoluble and also movable bodily horizontally toward or from the tracker-board, a central shaft for said drum, a horizontal supporting bar upon which said tracker-board is mounted in a fixed position, bearing-blocks in which said drum-shaft is journaled slidably mounted upon the bar, and means for sliding said blocks on said bar.

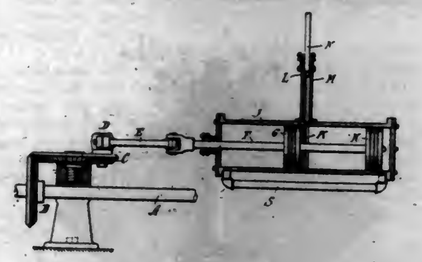
3. In a player piano, a stationary horizontal tracker-board, a drum having means for supporting a plurality of music-rolls and mounted at one side of the tracker-board, said drum being revoluble and also movable bodily horizontally toward or from the tracker-board, a central shaft for said drum, a horizontal supporting bar upon which said tracker-board is mounted in a fixed position, bearing-blocks in which said drum-shaft is journaled slidably mounted upon the bar, means for sliding said blocks upon said bar and thereby moving said drum in a horizontal direction toward the tracker-board, and spring means for automatically sliding said blocks in the reverse direction and returning said drum.

4. In a player piano, a stationary horizontal tracker-board, a drum having means for supporting a plurality of music rolls and mounted at one side of the tracker-board, said drum being revoluble and also movable bodily horizontally toward or from the tracker-board, a central shaft for said drum, a horizontal supporting bar upon which said tracker-board is mounted in a fixed position, bearing-blocks in which said drum-shaft is journaled slidably mounted upon the bar, means for sliding said blocks upon said bar and thereby moving said drum in a horizontal direction toward the tracker-board, spring means for automatically sliding said blocks in the reverse direction and returning said drum, and a stop attached to the bar for limiting said return movement.

5. In a player piano, a suitable frame, horizontal supporting bars extending between parts of said frame, a bellows located at one end of said bars, a tracker-board mounted upon the bars in the vicinity of the bellows, a drum having means for supporting a plurality of music-rolls, said drum being revoluble, bearing-blocks in which said drum is journaled slidably mounted on the horizontal supporting bars, connections between the bearing-blocks and the bellows and adapted to move the drum toward the tracker-board when the bellows are collapsed, and means for returning said drum to its former position.

[Claims 6 and 7 not printed in the Gazette.]

1,217,272. VEHICLE-BRAKE. DONALD CARSE, Riverdale-on-Hudson, N. Y. Filed July 26, 1916. Serial No. 111,520. (Cl. 188—5.)

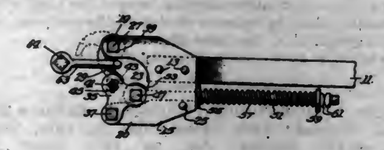


1. A brake for vehicles comprising a cylinder, a pair of pistons therein driven from the driving shaft of the vehicle and having a supply of practically incompressible liquid between them and a valve adapted to be introduced into the space between the pistons to restrict the flow of such liquid.

2. A brake for vehicles comprising a cylinder, a pair of pistons therein driven from the driving shaft of the vehicle and having a supply of practically incompressible liquid between them and a valve adapted to be introduced into the space between the pistons to restrict the flow of such liquid, said cylinder having its ends closed and in communication with each other so as to keep out dust while avoiding back pressure on the pistons.

3. A brake for vehicles comprising a cylinder, a pair of pistons therein driven from the driving shaft of the vehicle and having a supply of practically incompressible liquid between them and a valve adapted to be introduced into the space between the pistons to restrict the flow of such liquid, and a drainage tank communicating with the opposite ends of the cylinder to collect any liquid leaking from between the pistons.

1,217,273. TRACTOR-HITCH. ROBERT C. CAUGHEY, Dixon, Ill., assignor to Grand Detour Plow Company, Dixon, Ill., a Corporation of Illinois. Filed Sept. 25, 1916. Serial No. 121,995. (Cl. 21—75.)



1. In a hitch, a pair of plates having arms thereon, a latch pivoted between said plates on one arm of each plate, a pair of pivoted members on the other arms of the plates, a pin in said pivoted members normally in contact with said latch, and a spring controlling said pivoted members.

2. In a hitch, a frame comprising a pair of plates, means for securing said plates to a source of power, a pair of arms for each of said plates, a pivoted latch on one of said arms, a triangular shaped pair of members on the other of said arms, one corner of said triangular member serving as a pivot therefor, a removable pin for another corner of said triangular members, said latch adapted to normally rest against said removable pin, a rod connected to the third corner of said triangular casting, loose washers on said rod, and a spring interposed between said washers, said spring normally tending to hold said removable pin in contact with said latch.

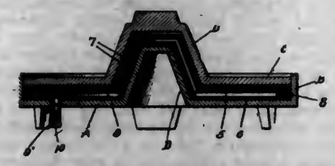
3. A spring break hitch for transmitting tractive pull between a pair of members secured respectively to a tractor and a plow or an analogous device comprising a trigger pivotally mounted on one of said members and having its free end normally directed inwardly, an arm also pivoted on said member and having its free end projecting toward the trigger, a removable pin carried by said arm and forming an abutment to prevent pivotal movement of said trigger and a longitudinally arranged spring also mounted on the same member and tending to prevent pivotal movement of said arm.

4. A spring break hitch for transmitting tractive pull between a pair of members secured respectively to a tractor and a plow or analogous device, comprising an arm pivotally mounted on one of said members and engaged by the other member, the arrangement being such that the pull tends to swing said arm out of engagement thereby to disconnect said members, a second arm pivotally mounted on the same member as the first arm and adapted to swing on an axis parallel with the pivot axis of the first arm, one of said arms being bifurcated to admit the other arm, and being provided with a removable member extending between said bifurcations and normally engaged by the end of the other arm; and a spring for normally preventing movement of said arms.

5. A spring break hitch for transmitting pull between a pair of members secured respectively between a tractor and a plow or analogous device, comprising an arm pivotally mounted on one of said members and engaged by the other member, the arrangement being such that the pull tends to swing said arm out of engagement thereby to disconnect said members, a second arm pivotally mounted on the same member as the first arm, said arms being adapted to swing on spaced apart parallel axes, with their free ends extending toward each other, one of said arms being bifurcated to admit the other arm and provided with a removable pin normally engaged by the other arm; whereby the pin normally tends to resist disengaging swinging movement of said first arm, and a coil spring carried by said same member for normally resisting the movement of said arms, having its axis substantially parallel with the direction of the pull.

[Claim 6 not printed in the Gazette.]

1,217,274. HYDRAULIC JACKET FOR HAT-STAMPING PRESSES. GEORGE W. CHAMBERLAIN, Atlanta, Ga. Filed Jan. 5, 1916, Serial No. 70,516. Renewed Jan. 24, 1917. Serial No. 144,313. (Cl. 223—31.)



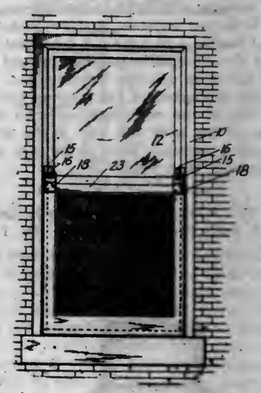
1. In a hydraulic jacket of the class described, a hollow body comprising upper and lower elastic sections having hollow truncated cone centers, and a reinforcing ring arranged between the sections marginally thereof and united to the same.

2. In a hydraulic jacket of the class described, a hollow body comprising upper and lower elastic sections having hollow truncated cone centers, a reinforcing ring arranged between the sections marginally thereof and united to the same, and means for admitting fluid into the hollow body for displacement therein to equalize the pressure of the body throughout the area thereof.

3. In a hydraulic jacket of the class described, a hollow body comprising upper and lower elastic sections having raised centers, a reinforcing band arranged between the sections marginally thereof and united to the same, and means for admitting fluid into the hollow body for displacement therein to equalize the pressure of the body throughout the area thereof.

1,217,275. SCREEN-HANGER. CHRIST CHRISTENSEN, Denver, Colo. Filed Oct. 19, 1916. Serial No. 126,542. (Cl. 16—48.)

1. In a device of the class described, a horizontally slotted socket member adapted to be secured to the upper edge of a screen, in combination with a shank member secured against the outer face of the blind strip of a window casing, said shank member carrying a tongue projecting therefrom in an outward and upward direction, the distance which said tongue projects from the blind strip being substantially the same as the distance between the end of the socket member and the slot therein.

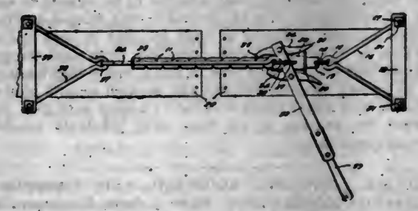


2. In a device of the class described, a slotted socket member adapted to be secured to the upper edge of a screen, in combination with a right angled shank member adapted to fit in the angle between the face of a window casing and the blind strip of the window casing, said shank member carrying a tongue projecting from its blind strip engaging surface and adapted to engage the slot in said socket member, the distance which said tongue projects from the blind strip being substantially the same as the distance between the end of the socket member and the slot therein.

3. In a device of the class described, a slotted socket member adapted to be secured to the upper edge of a screen, in combination with a right angled shank member adapted to fit in the angle between the face of a window casing and the blind strip of the window casing, said shank member carrying a shouldered tongue projecting from its blind strip engaging surface and adapted to engage the slot in said socket member.

4. A screen hanger comprising coöperating shank and socket members, said socket member being adapted to be secured to the upper edge of a screen and having an elongated horizontal slot therein, and said shank member being right angled in horizontal section to adapt it to fit in the angle between the face of a window casing and the blind strip thereof and having a tongue projecting outwardly and upwardly from its blind strip engaging surface, said tongue being adapted to engage said slot in said socket member.

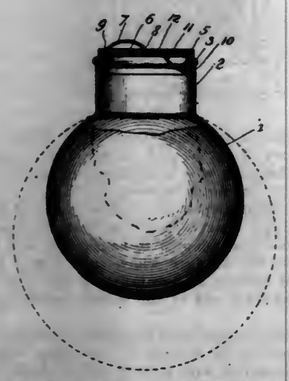
1,217,276. BELT STRETCHING AND LACING DEVICE. PETER O. CHRISTIANSON, Story City, Iowa. Filed Feb. 11, 1916. Serial No. 77,592. (Cl. 254—56.)



A belt stretcher and lacing device comprising pairs of bars having registering openings near opposite ends, substantially V-shaped members having terminals bent at

right angles thereto and threaded for detachably engaging in the registering openings in said pairs of bars, nuts engaged with the threaded terminals for acting upon the bars to bring the same in clamping engagement with the ends of a belt, each member at its bight being formed with an eye, a rack bar having a guide ear at one end, a rod slidable through the guide ear and having hook terminals, one of said terminals being detachably engaged with one eye of one V-shaped member, a sleeve slidable upon the rack bar and having a ball for the detachable engagement therewith of the other hook terminal of said rod, fulcrum pins on the sleeve on opposite sides thereof, an operating lever pivotally supported on the fulcrum pins, a link connecting the eye of the other member with the end adjacent thereto of the rack bar, and pawls pivoted to the operating lever at opposite sides of the rack bar and alternately engageable therewith.

1,217,277. TOY BALLOON. CHARLES H. COHN, Chicago, Ill. Filed July 31, 1916. Serial No. 112,239. (Cl. 46—37.)



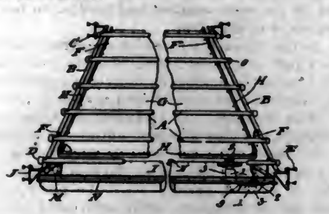
1. A device of the character described comprising a rubber member adapted to be inflated by compressed air blown or forced thereinto, a cap secured in the neck of said rubber member and encircled thereby, a tongue forming part of said cap, and a check-valve or disk secured in said cap and adapted to be unseated by said tongue, thereby to permit the escape of air from said inflatable member.

2. A device of the character described comprising the combination of an inflatable resilient member, a cap adapted to be encircled and grasped by the neck of said inflatable member, said cap being slotted, a tongue formed upon said cap and adapted to project through said slot, a valve-like disk adapted normally to close said slot but to be unseated therefrom by said tongue, and means upon said cap adapted to hold said disk in engagement with said cap and normally close said slot.

3. A device of the character described comprising an inflatable member made of resilient material, a cap embodying a slotted portion, and a grooved flange portion, said inflatable material being adapted to be secured to said cap by coöperating with the groove in said flanged portion, a disk adapted normally to close the slot in said slotted portion, a finger projecting upwardly from said flanged portion and holding said disk in place, and a finger adapted to project through the slot and secured to said slotted portion, said finger being adapted to unseat said disk and permit the passage of air from said inflatable member through said slot.

1,217,278. POULTRY ROOSTING AND DROPPING-BOARD COMBINATION. FRED A. COOK, Longview, Ill. Filed Mar. 31, 1916. Serial No. 88,159. (Cl. 119—22.)

1. The combination, in roosts and dropping boards of pipe roosts covered with asbestos building felt, with caps at the ends, attached to a metal frame to which is attached the dropping board and a metallic dropping retaining vessel, with an opening at the bottom thereof for the removal of droppings, the combination held in place by two brackets at the top and resting upon two brackets at the bottom of such frame.



2. A combined poultry roost and dropping board consisting of roosting poles, angle iron beams supporting them, brackets supporting the beams, a dropping board and retaining vessel attached to the beams, the roosting poles being composed of metal pipes capped at both ends by metal caps making a dead air chamber therein and wrapped with asbestos felt, two of the brackets supporting the beams at the bottom.

3. In a combination of poultry roost and dropping board with a retaining vessel attached thereto, having beams of angle irons to support the roosting poles and caps on each end of said roosting poles to form a dead air chamber therein, said roosting poles fastened substantially to the angle iron beams and the beams fastened to brackets attached to any wall, post or fixture.

1,217,279. COLLAPSIBLE LADDER. ARTHUR J. COUGHTRY, Brooklyn, N. Y. Filed Aug. 10, 1914. Serial No. 856,021. (Cl. 228—24.)



1. A collapsible ladder comprising longitudinal telescoping units, and means for supporting an intermediate unit from collapsing when occupying a position between its fully collapsed and extreme extended positions whereby the distance between the ladder steps in effective position is uniform, substantially as and for the purpose described.

2. A collapsible ladder comprising longitudinally telescoping units, and means for supporting an intermediate unit from collapsing when occupying a position between its fully collapsed and extreme extended positions whereby the distance between the ladder steps in effective position is uniform, said means being secured to one unit of the ladder, and movable into interlocking engagement with the partly collapsed lower unit, substantially as and for the purpose specified.

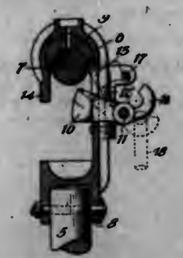
3. A collapsible ladder comprising side rails each composed of telescoping sections paired with the sections of the other rail, steps supported by the rails, spacing means secured to one pair of sections and movable into interlocking engagement with another pair spaced apart from the former pair when the ladder is extended, substantially as and for the purpose described.

4. A collapsible ladder comprising longitudinal telescoping units, and a member common to all the units secured to one unit and having means for interlocking with other units when the ladder is collapsed and holding the ladder in collapsed position, substantially as and for the purpose specified.

5. A collapsible ladder comprising longitudinal telescoping units, and a spacing member secured to one unit and having means for interlocking with the second lower unit when the unit to which said member is secured is collapsed, and the first lower unit is partly collapsed into said second lower unit, substantially as and for the purpose set forth.

[Claims 6 to 13 not printed in the Gazette.]

1,217,280. SEAT-HANGER FOR CAROUSELS. GEORGE H. CRAMER, North Tonawanda, N. Y., assignor to Herschell-Spillman Company, North Tonawanda, N. Y., a Corporation of New York. Filed Oct. 23, 1916. Serial No. 127,052. (Cl. 46—27.)



1. A seat-support for a carousel, comprising a suspension-rod provided with a hook-shaped hanger adapted to engage a shaft, the hanger-body being provided with a vertical slot arranged opposite the bill of the hanger, and a vertically-swinging safety-pawl pivoted to the hanger-body and extending through said slot, said pawl being provided on the outer side of the hanger with a releasing member.

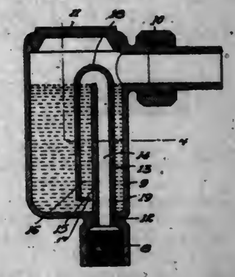
2. A seat support for a carousel, comprising a suspension-rod provided with a hook-shaped hanger adapted to engage a shaft, the hanger being provided opposite its bill with a vertical slot, a horizontal pivot-pin supported on the outer side of the hanger opposite said slot, and a vertically-swinging safety-pawl mounted on said pin and extending through said slot, the pawl being provided on the outer side of said pivot pin with a releasing hook.

3. A seat-support for a carousel, comprising a suspension-rod provided with a hook-shaped hanger adapted to engage a shaft, the hanger being provided in its shank opposite its bill with a vertical slot, brackets projecting from the outer side of the hanger on opposite sides of said slot, a horizontal pivot-pin carried by said brackets, a safety-pawl mounted on said pin and extending through said slot, and a stop-pin for the pawl arranged on said brackets above said pivot-pin.

1,217,281. AIR-EXHAUST FOR HEATING SYSTEMS. ARTHUR P. CROSBY, Minneapolis, Minn. Filed Jan. 20, 1916. Serial No. 73,143. (Cl. 182—15.)

1. A return seal for a vapor heating system having ports in communication with a radiator and with a return pipe and provided with a siphon leading to said return pipe, said siphon having a restricted passage with its inlet in communication with said radiator port and above the level of the liquid when siphonic action begins, and through which passage air from the radiator is sucked as the siphon is formed.

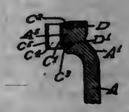
2. A return seal for a vapor system comprising a casing having ports in communication with a radiator and with a return pipe, a siphon mounted in said casing and communicating with said return pipe and having a restricted passage in the upper wall of the arch of the siphon above the level of the liquid when siphonic action begins and through which passage air is sucked from the radiator intermittently to break the siphon.



3. A return seal for a vapor system comprising a casing having ports in communication with a radiator and with a return pipe, a siphon mounted in said casing and communicating with said return pipe and having a restricted passage above the normal level of the water when siphonic action begins and communicating with said return pipe, said siphon having a second restricted passage communicating with said return pipe and located near the bottom of said casing.

4. An air exhaust for a vapor or steam heating system comprising a trap having a siphonic discharge and a port for communication with a heat radiating means and a restricted passage in communication with the arch of the siphon and above the normal level of the liquid when siphonic action begins, the water of condensation in said trap normally forming a seal for said heat radiating means and the accumulation of an abnormal volume of condensation in said trap, as when said means is cold, setting up siphonic action intermittently to suck the air from said radiating means through said passage, the excess water in said trap coöperating with said passage to alternately make and break the siphon until the air is removed from said heat radiating means.

1,217,282. TURBINE. CHARLES W. DAKE and JOHN E. KILKER, Chicago, Ill., assignors to Pyle-National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Original application filed Aug. 4, 1913, Serial No. 782,960. Divided and this application filed July 24, 1914. Serial No. 852,784. (Cl. 253—77.)



1. A bucket wheel for steam turbines comprising a rotor with a series of thin metallic buckets separately secured thereon and shaped so that the lip of each closely approaches the outside of the back of the next, said lips and backs connected together by a heat process so as to make an integral ring of buckets.

2. A bucket wheel for steam turbines comprising a rotor with a series or thin metallic buckets separately secured thereon and shaped so that the lip of each closely approaches the outside of the back of the next, said lips and backs connected together by a heat process, including means for bridging the gap, so as to form an integral ring of buckets.

1,217,283. RECEPTACLE FOR CRAYONS AND THE LIKE. CHARLES E. DANIEL and CAREY W. HORD, Sandusky, Ohio, assignors to The American Crayon Company, Sandusky, Ohio, a Corporation of Ohio. Filed Mar. 11, 1915. Serial No. 13,628. (Cl. 229—15.)

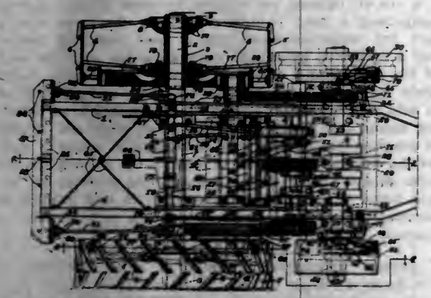
1. In a receptacle for crayons, the combination of a box, two strips of undulating corrugated cardboard in

the bottom and the cover of said box, and having the corrugations alined, the width and depth of the corrugations and the depth of the box being such that the strips do not contact when the box is closed, and provide a series of compartments; whose greatest diameter runs from the top to the bottom of the box, and is substantially greater than the diameter at right angles thereto.



2. In a receptacle for crayons, the combination of a box, two strips of flexible undulating corrugated material mounted in the bottom and the cover of said box, and having the undulations extending transversely of said box and alined with each other, the width and depth of the corrugations and the depth of the box being such that the strips do not contact when the box is closed, and provides a series of compartments; whose greatest diameter runs from the top to the bottom of the box, and is substantially greater than the diameter at right angles thereto.

1,217,284. DRIVE MECHANISM FOR TRACTION-ENGINES. DAVID P. DAVIES, Racine, Wis., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed May 25, 1912. Serial No. 699,779. (Cl. 74—59.)



1. In drive mechanism of the class described, the combination with a driven member, of a drive shaft, a parallel reversing shaft permanently geared to said driven member, a clutch member loosely mounted on said drive shaft and permanently geared to said driven member, a companion clutch member slidably mounted on and rotating with said drive shaft, and coöperating gears on said reversing shaft and on said sliding clutch member arranged to be engaged when said clutch members are disengaged, substantially as described.

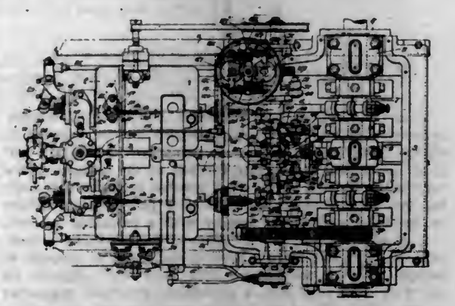
2. In drive mechanism of the class described, the combination with a driven member, and a motor shaft, of a counter shaft and a reversing shaft both parallel to said motor shaft, clutch controlled gearing for connecting said motor shaft to said counter shaft, a loose clutch member on said counter shaft, a coöperating clutch member slidably mounted on and rotating with said counter shaft, gearing permanently connecting said loose clutch member and said reversing shaft to said driven member, coöperating gears on said reversing shaft and on said sliding clutch member, and means for shifting the latter in opposite direction from idle position to operatively connect said counter shaft to said loose clutch member or to said reversing shaft, substantially as described.

3. In drive mechanism of the class described, the combination with a driven shaft having a gear thereon, of a drive shaft and a reversing shaft both parallel to said driven shaft, loose and tight pinions respectively mounted on said drive shaft and on said reversing shaft and permanently meshing with said gear on said driven shaft, and a sliding clutch member on said drive shaft having means for operatively connecting the latter to said loose pinion or to said reversing shaft, substantially as described.

4. In drive mechanism of the class described, the combination with a frame of a transverse shaft having a driven gear thereon, a transverse motor shaft, intermediate, parallel counter and reversing shafts, loose and tight pinions respectively mounted on said counter shaft and on said reversing shaft and permanently meshing with said driven gear, clutch controlled gearing for connecting said motor shaft and said counter shaft, a clutch member slidably mounted on and rotating with said counter shaft, coöperating gears on said sliding clutch member and said reversing shaft and means for shifting said clutch member from idle position to connect said coöperating gears or to connect said loose pinion to said counter shaft, substantially as described.

5. In drive mechanism of the class described, the combination with the frame of a transverse engine shaft journaled on said frame, a drive pinion and a belt pulley loosely mounted on opposite ends of said shaft, separate friction clutches for connecting said pulley and said pinion to said shaft, a driven member and clutch controlled gearing for connecting said pinion to said driven member, substantially as described.

1,217,285. INTERNAL-COMBUSTION ENGINE. DAVID P. DAVIES, Racine, Wis., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed May 25, 1912. Serial No. 699,780. (Cl. 123—87.)



1. In a horizontal, internal combustion engine, the combination with side frame bars, of a crank casing fitted between said bars and having flanges overlapping and secured to said bars, a cross-support extending between said bars, cylinders mounted in one end of said crank casing and loosely resting on said cross support, pistons in said cylinders, and a crank shaft journaled in said casing and connected to said pistons, substantially as described.

2. In a four-cycle, internal combustion engine, the combination of a crank casing, a cylinder mounted at one end of said crank casing, a crank shaft and a separate parallel cam shaft journaled in said casing, two-to-one gearing connecting said shafts, a piston in said cylinder, a connecting rod coupled to said piston and to said crank shaft, said cylinder having inlet and exhaust valves at its head end, rocker arms pivotally mounted intermediate their ends, cams on said cam shaft engaging the ends of said rocker arms, and valve actuating rods connected to the opposite ends of said rocker arms and said gearing, the cams and rocker arms being arranged within said casing, substantially as described.

3. In a horizontal, internal combustion engine, the combination of a crank casing, a motor cylinder at one end of said casing, a crank shaft journaled in said casing, a piston in said cylinder, a connecting rod coupled to said piston and to said crank shaft, said cylinder having inlet and exhaust valves, a cam shaft journaled in said casing and arranged between said crank shaft and said cylinder and above said connecting rod, rocker arms pivotally mounted intermediate their ends in said casing and arranged on opposite sides of said connecting rod, cams on said cam shaft for operatively engaging the ends of said rocker arms, valve actuating rods connected to the opposite ends of said rocker arms, and gearing arranged in said casing and connecting said crank shaft to said cam shaft.

4. In a horizontal internal combustion engine, the combination of a crank casing having a central longitudinal rib, an engine shaft journaled on the sides and central rib of said crank casing and having cranks on opposite sides of said central rib, horizontal cylinders mounted at the rear end of said crank casing, pistons in said cylinders, connecting rods coupled to said pistons and to the cranks of said shaft, a cam shaft journaled in the upper rear portion of said crank casing above the paths of movement of said connecting rods, rocker arms pivotally mounted intermediate their ends upon the sides and central rib of said crank casing, said arms being arranged in pairs on opposite sides of said connecting rods, cams on said cam shaft operatively engaging the upper ends of said rocker arms, said cylinders having inlet and exhaust valves and operating rods for said valves connected to the lower ends of said rocker arms.

1,217,286. COMBINED LEVELING, PLUMBING, AND GAGING IMPLEMENT. BENJAMIN F. DEWEES, Logan, W. Va., assignor of one-half to Peter C. Minotti, Logan, W. Va. Filed Dec. 18, 1915. Serial No. 67,643. (Cl. 33—93.)



1. A device of the class described comprising a blade having one straight edge, a head connected to the blade and enlarged laterally with one edge in longitudinal alinement with the straight edge of the blade and another edge at right angles to the blade, a gage member swingingly connected to the right angled portion of the head, a holding member slidable upon the head and movably connected to the gage member, and clamping means carried by the head and engaging the holding member.

2. A device of the class described comprising a blade having one straight edge, a head connected to the blade and enlarged laterally with one edge in longitudinal alinement with the straight edge of the blade and another edge at right angles to the blade, a gage member swingingly connected to the right angled portion of the head and having longitudinal guide devices, a holding member slidable upon the head and having lugs extending into said guide devices, and clamping means carried by the head and engaging the holding member.

3. A device of the class described comprising a blade having one straight edge, a head connected to the blade and enlarged laterally with one edge in longitudinal alinement with the straight edge of the blade, a gage member swingingly connected to the head, a holding member slidable relative to the head and movably connected to the gage member, said holding member having a longitudinally directed slot, and a clamp member carried by said head and extending through said slot.

4. A device of the class described comprising a blade having one straight edge, a head connected to the blade and enlarged laterally with one edge in longitudinal alinement with the straight edge of the blade, a gage member swinging from the head, a plate carried by the head, a holding member having guide devices engaging said plate and movably coupled to said gage member, and clamping means operating to retain said holding member in position relative to said plate.

1,217,287. HANDLE. CUTHBERT LE ROY DILLINGER, Titusville, Pa. Filed Oct. 26, 1916. Serial No. 127,869. (Cl. 16—169.)



A wooden handle comprising a pair of wooden sections formed with alined central grooves and adjoining flat faces, a pair of angularly disposed kerfs in each section having openings registering with those in the opposite section, and a V-shaped angle plate retained in each pair of registering kerfs.

1,217,288. SAFETY-RAZOR BLADE AND HOLDER. WILLIAM J. DONNELLY, Marysville, Mont. Filed July 20, 1915. Serial No. 40,971. (Cl. 30—12.)



1. A safety razor comprising a handle, an extension on the handle provided with a longitudinal lip near the base thereof, a lug formed between the lip and extension, a razor blade having notches in its opposite ends, one end of said blade being disposed between the lip and extension with the notch receiving the said lug, the outer end of the extension having an inwardly inclined recess, and a guard having a notch in one end receiving the said lug and a resilient tongue on the opposite end thereof for engagement in said recess.

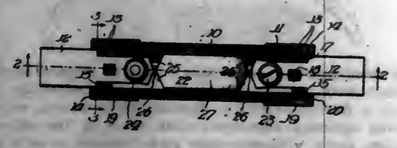
2. A safety razor comprising a stem having a flat face, a longitudinal lip formed on the inner end thereof and spaced from the flat face, a lug between the lip and flat face, a razor blade disposed against the flat face with one end between the lip and flat face, a guard disposed against the blade with one end between the lip and flat face, said ends of the guard and blade being formed with registering notches receiving said lug, the other end of the stem having a recess in its other face, the inner wall of said recess inclining inward longitudinally and a resilient tongue carried by the outer end of the guard for embracing the outer end of the blade and stem and engaging in said recess.

3. A safety razor comprising a stem having a flat face, a longitudinal lip formed on the inner end thereof and spaced from and overhanging the flat face, a lug between the lip and flat face, a razor blade disposed against the flat face with one end between the lip and flat face, a guard disposed against the blade with one end between the lip and flat face, said ends of the guard and blade being formed with registering notches receiving said lug, the remaining end of the stem being provided with a notch registering with the notches in the guard and blade and having a recess extending inwardly from the notch, said recess having its inner wall inclined downwardly from the notch toward the body of the stem, and a resilient tongue carried by the outer end of the guard and having its end inclined downwardly, said tongue being adapted to engage the outer end of the blade and to lie in said recess.

1,217,289. CARTRIDGE-FUSE. ALFRED L. EUSTICE, Chicago, Ill., assignor to Economy Fuse & Manufacturing Company, Chicago, Ill., a Corporation of New York. Filed June 22, 1914. Serial No. 846,474. (Cl. 175—273.)

1. In an inclosed fuse, the combination of an inclosing casing, terminals carried by said casing, and a fusible

link extending through said casing and between said terminals, said link being provided along its length with a plurality of portions of substantially less current-carrying capacity than that of an intermediate portion between said first-mentioned portions, whereby on the blowing of said fuse said link will melt at said portions of less current-carrying capacity and said intermediate portion will be separated from the rest of the link without melting said intermediate portion.



2. In an inclosed fuse, the combination of an inclosing casing, the interior of which has restricted communication with the outer atmosphere, a pair of terminals carried by said casing, and a fusible link extending through said casing and between said terminals, said link being provided along its length with an intermediate portion of substantially greater carrying capacity than that of the portions of said link at the ends of said intermediate portion, whereby on blowing of said fuse said link will melt at the portions located at the ends of said intermediate portion and said intermediate portion will be separated from the rest of the link without melting said intermediate portion.

3. In an inclosed fuse, the combination of a casing, a pair of terminals carried by said casing, and a fusible link extending through said casing and having its ends electrically connected with said terminals, said link having along its length a plurality of restricted portions of substantially less cross-sectional area than that of an intermediate portion of said link between said restricted portions, whereby on blowing of said fuse said link will melt at said restricted portions and the intermediate portion of said link will be separated from the rest of the link without melting said intermediate portion.

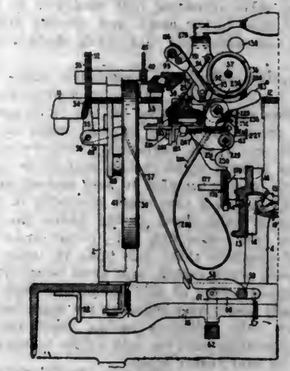
4. In a cartridge fuse, the combination of a casing, terminals at the ends of said casing, and a flat fusible link extending through said casing and having its ends electrically connected with said terminals, said link being provided along its length with an intermediate portion of substantially greater cross-sectional area than the portions of said link at the ends of said intermediate portion, whereby on blowing said fuse said link will melt at the portions located at the ends of said intermediate portion and said intermediate portion will be separated from the rest of said link without melting said intermediate portion.

5. In a cartridge fuse, the combination of a cylindrical casing, terminals at the ends of said casing, and a flat fusible link extending through said casing and between said terminals, said link having along its length a pair of portions of substantially less current-carrying capacity than that of an intermediate portion between said first-mentioned portions, said intermediate portion being of a width only slightly less than the interior diameter of said casing.

[Claim 6 not printed in the Gazette.]

1,217,290. TYPE-WRITING MACHINE. STEPHEN H. FARNHAM, Brooklyn, and ARTHUR W. SMITH, New York, N. Y., and JOSEPH PHELPS, Belleville, N. J., assignors to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Original application filed Jan. 18, 1913, Serial No. 742,786. Divided and this application filed May 12, 1913. Serial No. 767,203. (Cl. 197—114.)

1. In a typewriting machine, the combination of a platen, a line spacing wheel connected thereto, a line spacing pawl, an arm on which said pawl is movably mounted, a shaft on which said arm is loosely pivoted, said shaft being arranged at an angle to the platen axis, an actuator fixed to said shaft, hand actuated means for turning said shaft, and automatic means for turning said shaft.



2. In a typewriting machine, the combination of a platen, a line spacing wheel connected thereto, a line spacing pawl, an arm on which said pawl is movably mounted, a shaft on which said arm is loosely pivoted, an actuator fixed to said shaft, means for turning said shaft, a restoring spring for said shaft, a restoring spring for said arm, and a stop on said arm for said actuator.

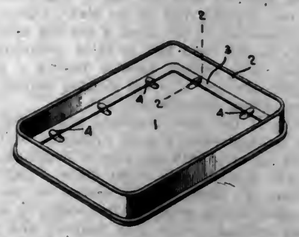
3. In a typewriting machine, the combination of a platen, a line spacing wheel connected thereto, a line spacing pawl, an arm on which said pawl is movably mounted, a shaft on which said arm is loosely pivoted, said shaft being arranged at an angle to the platen axis, a second arm fixed to said shaft, said second arm engaging loosely with said pawl, manual means at one end of said shaft for turning the same at will, and automatic means co-active with said shaft for turning the same.

4. In a typewriting machine, the combination of a platen carriage, a platen, a line spacing ratchet wheel, a line spacing pawl, a carrier to which said pawl is pivoted, a vertical shaft on said carriage on which said carrier is loosely mounted, a pawl actuator fast on said shaft, a line space handle connected to the upper end of said platen, a crank arm provided with a roller connected to the lower end of said shaft, and a stationary cam with which said roller coöperates during endwise movements of the carriage.

5. In a typewriting machine, the combination of a carriage, a platen, a line spacing wheel, a line spacing pawl, an arm to which said pawl is pivoted, a shaft on which said arm is loosely mounted, a pawl actuator fast on said shaft, and a stationary cam operative to turn said shaft during endwise movements of the carriage.

[Claims 6 to 22 not printed in the Gazette.]

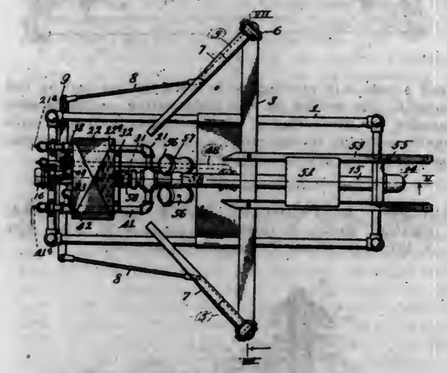
1,217,291. JEWELRY-BOX. HARRY J. FARRINGTON, Boston, Mass., assignor to Farrington Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed Mar. 1, 1916. Serial No. 81,532. (Cl. 220—5.)



1. In a box the combination of a base; a side forming strip projecting from, and presenting a flange positioned upon, said base; and a plurality of tabs extending from the base around the edge, and down upon the upper surface, of the flange and acting to clamp and secure the said flange and base together.

2. In a box the combination of a metallic base; a side forming strip projecting from, and presenting a flange positioned upon, said base; and a plurality of tabs partially cut from and integral with the base and extending therefrom around the edge, and down upon the upper surface, of the flange and acting to clamp and secure said flange and base together.

1,217,292. ROWING-MACHINE. WILLIAM C. FIRTH, Kansas City, Mo. Filed Apr. 17, 1916. Serial No. 91,651. (Cl. 46—69.)



1. In an apparatus of the character described, tubular means containing a fluid, a plunger reciprocably-mounted in said means and resisted in its action by the fluid, oars operably-connected to said plunger to actuate the same, and indicating means actuated by the fluid to determine the distance rowed by the oarsman.

2. In an apparatus of the character described, tubular means containing a fluid, a plunger reciprocably-mounted in said means and resisted in its action by the fluid, oars operably-connected to said plunger to actuate the same, indicating means actuated by the fluid to determine the distance rowed by the oarsman, and a signal actuated by said means.

3. In an apparatus of the character described, tubular means containing a fluid, a plunger reciprocably-mounted in said means and resisted in its action by the fluid, oars operably-connected to said plunger to actuate the same, and a meter actuated by the fluid to determine the distance rowed by the oarsman.

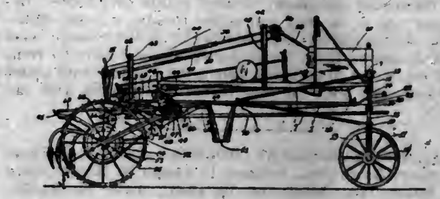
4. In an apparatus of the character described, tubular means containing a fluid, a plunger reciprocably-mounted in said means and resisted in its action by the fluid, oars operably-connected to said plunger to actuate the same, a meter actuated by the fluid to determine the distance rowed by the oarsman, and a gong controlled by said meter.

5. In an apparatus of the character described, tubular means containing a fluid, a plunger reciprocally-mounted in said means and resisted in its action by the fluid, oars operably connected to said plunger to actuate the same, indicating means communicating with the fluid containing means to determine the resistance offered by the fluid to the plunger, and a retardant in advance of said indicating means, for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

1,217,293. TRACTOR. JOSEPH W. FREEMAN, Columbus, Ohio, assignor of forty-nine one-hundredths to Allen Cuthbertson, Jr., Columbus, Ohio. Filed Nov. 4, 1915. Serial No. 59,671. (Cl. 21—114.)

1. A tractor comprising a supporting bed, a pair of front wheels pivotally carried by the front portion of said bed, means whereby a farm implement may be attached to the rear portion of said bed, a wheelless automobile suitably supported upon said bed, and means for taking power from said automobile to propel the tractor as a whole.



2. A tractor comprising a supporting bed, a pair of front wheels pivotally carried by the front portion of said bed, means whereby a farm implement may be attached to the rear portion of said bed, a wheelless automobile including the power unit and steering gear suitably supported upon said bed, means for operatively connecting the automobile steering gear with said front wheels, and means for taking power from the automobile power unit to propel the tractor as a whole.

3. A tractor comprising a supporting bed, a pair of front wheels, a pair of upstanding spindles carrying lower forked extensions for pivotal connection with said wheels, means whereby a farm implement may be attached to the rear portion of said bed, a wheelless automobile suitably supported upon said bed, means for attaching the front axle of said automobile to said spindles, and means for taking power from said automobile to propel the tractor as a whole.

4. A tractor comprising a supporting bed, a pair of front wheels, a pair of upstanding spindles carrying lower forked extensions for pivotal connection with said wheels, means whereby a farm implement may be attached to the rear portion of said bed, a wheelless automobile suitably supported upon said bed, means for attaching the front axle of said automobile to said spindles, means for taking power from said automobile to propel the tractor as a whole, means for connecting the steering mechanism of said automobile with said front wheels, a steering extension from said mechanism to the rear of the tractor, and a throttle control extension leading to the rear of the tractor.

5. A tractor comprising a supporting bed, a pair of front wheels pivotally carried by the front portion of said bed, a wheelless automobile including a rear axle suitably supported upon said bed, a sprocket on each end of said axle, a countershaft structure carried by said bed, sprockets on said countershaft, driving chains between said sets of sprockets, means whereby a farm implement may be attached to the rear portion of said bed, and means for driving the tractor as a whole by power taken from said countershaft.

[Claim 6 not printed in the Gazette.]

1,217,294. DIAPHRAGM FOR SOUND-REPRODUCERS. BERNHARD FRITZSCH, Cincinnati, Ohio. Filed May 15, 1916. Serial No. 97,492. (Cl. 181—32.)



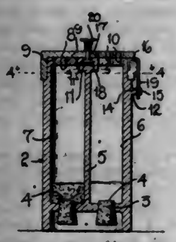
1. A diaphragm for a sound reproducing and recording device comprising a thin wooden disk having a centrally projecting conical boss upon one side with the base of the cone joining with the disk.

2. A diaphragm for a sound reproducing and recording device comprising a disk having a conical boss axially pro-

jecting from one side with the base of the boss joining with said disk.

3. A sound reproducing and recording device comprising a diaphragm holder, having a central sound passage, a diaphragm marginally secured within said holder, the inner side of the disk and holder forming a sound chamber communicating with said holder sound passage, said diaphragm having a conical boss projecting centrally from its inner face to extend axially toward or into said sound passage and with the base of the cone joining with the disk.

1,217,295. CONDIMENT-HOLDER. THOMAS E. FRYE, Terre Haute, Ind., assignor to Joseph H. Hauck, Terre Haute, Ind. Filed Apr. 19, 1916. Serial No. 92,251. (Cl. 65—45.)



1. In a condiment holder of the character described, a body having a longitudinally extending partition wall dividing it into chambers, and the body having a lug formed on the outer face having notches, a cap rotatably mounted upon the upper end of the body and a resilient finger mounted on the cap and extending over and bearing against the face of the lug, the upper end of the body being formed with a plurality of sets of perforations one for each condiment, and the cap being also formed with a plurality of sets of perforations.

2. In a condiment holder of the character described, a body having its upper end formed with perforations and with a central slot, a perforated cap disposed over the upper end of the body, a depending T-shaped stud engaged with the cap and engaged in said slot whereby to support the cap for rotation upon the body, and means for detachably holding the stud with its arms approximately at right angles to the length of the slot.

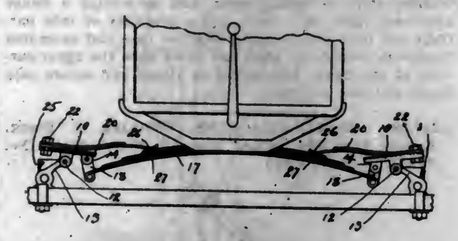
3. In a condiment holder of the character described, a body having its upper end formed with perforations and with a central slot, a perforated cap, a T-shaped pin passing through the cap and having its T-shaped head engaging in said slot and normally disposed at right angles thereto, a head on the pin, and a coil spring disposed between the head and the cap and bearing against the latter.

4. In a condiment holder of the character described, a body having its upper end formed with perforations and with a central slot, a perforated cap, an inverted T-shaped pin passing through the cap and having its T-shaped head engaging in said slot and normally disposed at right angles thereto, the under face of the upper end of the body on each side of the slot being formed with a countersink in which said T-shaped head is adapted to engage, a head on the pin, and a coiled spring disposed between the head and the cap and yieldably urging upward on the pin.

1,217,296. SHOCK-ABSORBER. EUGENE FULLER, Providence, R. I., assignor of one-half to Lewis A. Peckham, Cranston, R. I. Filed Mar. 27, 1916, Serial No. 86,883. Renewed Jan. 11, 1917. Serial No. 141,914. (Cl. 267—27.)

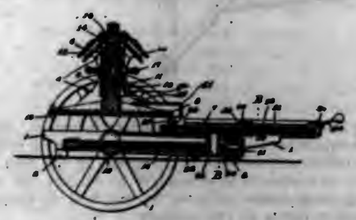
1. A compound spring for vehicles comprising a member pivoted on a vehicle element intermediate its ends, a main spring having its end supported by said member on the inner side of its pivoting point and an auxiliary leaf spring fixed to said member on the outer side of its pivoting point, and positioned to extend across said pivoting point with its opposite end supported on said main spring.

2. A compound spring for vehicles comprising a member pivoted on a vehicle element, a main spring having its end supported by said member on the inner side of its pivoting point, an auxiliary spring fixed to said member on the outer side of its pivoting point and positioned to ex-



tend across said pivoting point with its free end on the opposite side resting on said main spring, means in said member for preventing a relative lateral motion of said auxiliary spring therein, and an abutment for limiting the rocking motion of said member in one direction.

1,217,297. ELECTROTYPE-BLOCK-TRIMMING MACHINE. EDWIN N. GREEN, Syracuse, N. Y. Filed July 8, 1912. Serial No. 708,222. (Cl. 90—25.)



1. In a machine for trimming the blocks of printing plates, the combination with a bed for supporting the blocks, planing means having relative feeding movement, of means for holding the block on the bed, said means being operable to reposition the block after having been operated on and removed, in the exact position previously occupied, comprising opposing sets or points, members for holding said points, one member being adjustable bodily toward and from the other, and the points being adjustable individually relatively to said members, and means for holding the adjustable member in its adjusted position, substantially as and for the purpose set forth.

2. In a machine for trimming the blocks of printing plates, the combination with a bed for suporting the blocks and planing means having relative feeding movement, of means for holding the blocks on the bed, comprising supporting elements mounted on the bed, one element being shiftable lengthwise of the bed, a plurality of pairs of opposing centers carried by said elements for engaging opposite edges of the blocks, and means for clamping the shiftable element on the face of the bed, substantially as and for the purpose described.

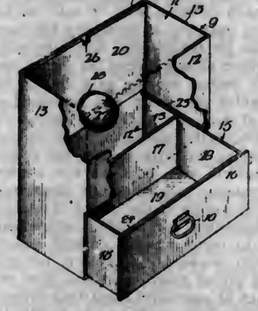
3. In a machine for trimming the blocks of printing plates, the combination with a bed for supporting the blocks and planing means having relative feeding movement, of means for holding the blocks on the bed comprising supporting elements mounted on the bed, one element being shiftable lengthwise of the bed, a plurality of pairs of opposing centers carried by said elements for engaging the opposite edges of the block, and means for clamping the shiftable element to the face of the bed, the clamping means comprising members located at opposite sides of the bed for coacting with opposite ends of the members, and a single operating part located at one end of the bed for said members, substantially as and for the purpose specified.

4. A machine for trimming the blocks of printing plates, the combination with a bed for supporting the blocks and planing means having relative feeding movement, of means for holding the block in the bed comprising supporting elements mounted on the bed, one element being shiftable lengthwise of the bed, a plurality of pairs of opposing centers for engaging the opposite edges of the block carried by the elements, and means for clamping the shiftable element to the face of the bed, the clamping means comprising members coacting with opposite ends of said element and having cam slots at intervals, and being movable lengthwise of the bed, fixed pins extending through the slots and into the side edges of the bed, and means for moving said members lengthwise comprising a rotary part located at one end of the bed and having eccentric pins at its opposite ends coacting with said members, substantially as and for the purpose set forth.

5. In a machine for trimming the blocks of printing plates, the combination with a bed for supporting the blocks and planing means having relative feeding movement, of means for holding the block in the bed, comprising supporting elements mounted on the bed, one element being movable lengthwise of the bed, a plurality of pairs of opposing centers carried by said elements for engaging opposite edges of the block, the shiftable element having shoulders projecting from its ends, clamping members located on opposite sides of the bed and having overhanging shoulders for coacting with the shoulders of said element, the clamping members being formed with cam slots, fixed pins extending through the cam slots into the edges of the bed and an operating part for the clamping members, said part being located at one end of the bed and being movable about an axis and having eccentrics at its opposite ends for coacting with said members to move the same endwise, substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

1,217,298. TRUNK. GEORGE F. GRUEB, Evanston, Ill. Filed Sept. 18, 1916. Serial No. 120,694. (Cl. 190—3.)



1. In a trunk, a convertible compartment drawer arranged to be moved into and out of one section of the trunk, said compartment drawer comprising a main rectangular box-like member open at the top and having a rectangular opening in its front wall at the lower end thereof, a movable partition in said member, adapted to be supported therein to form a false bottom therefor above said opening in the front wall, and a drawer supported at the bottom of said box-like portion and movable in and out through said opening, said partition being capable of being moved to a vertical position, to provide a single, deep compartment.

2. In a trunk, a convertible compartment drawer arranged to be moved into and out of one trunk section, said compartment drawer comprising a main rectangular box-like member, open at the top and at the front near its lower end, a partition in said member, movable from a vertical position to a horizontal position, dividing the main compartment member into two parts, and a drawer movable into said member through said opening near the bottom of the front wall, and forming with said member, when the partition is in horizontal position, two separate compartments, and when said partition is in vertical position, forming with said member a single, deep compartment.

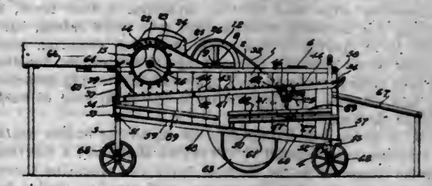
3. In a trunk, a convertible compartment drawer, movable into and out of said trunk and comprising a main box-like portion, open at the top and having an opening in its front wall at the bottom thereof, a partition hingedly secured in said main portion and capable of being swung from an upright position to a horizontal position dividing said main portion into two independent sections, and forming a false bottom for one section, means for securing said partition in its upright position, and a drawer slidably supported below said partition and movable in and out through said opening in the lower end of the front wall.

4. In a trunk, a convertible compartment drawer slidable into and out of said trunk, and comprising a main rectangular box-like member open at the top and having an opening in its front wall at the bottom thereof, a partition hingedly secured in said member and capable of being moved from a vertical position to a horizontal position dividing said member into two parts, and forming a false bottom for said member, means for securing said partition in its vertical and horizontal positions and a drawer slidable through said opening at the lower end of said front wall of the main member.

5. In a trunk, a compartment drawer slidable into and out of said trunk and comprising a main box-like compartment member open at the top and having a rectangular opening in its front wall at the bottom thereof, a partition hingedly secured in said member above said opening in its front wall, and being capable of extending across the member to provide a false bottom above said opening in the front wall, and capable of extending in an upright position within said compartment member, a securing plate fastened to the upright wall of said member to which said partition is hinged, a coacting securing member having a part adapted to extend through a hole in said partition and connectively engage said securing plate to thereby hold the partition in an upright position, and a drawer slidably contained in the lower part of said box-like member and movable through said opening in the lower wall thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,217,299. GRAIN-SEPARATOR. JOHN GUNN, Winnipeg, Manitoba, Canada. Filed Apr. 6, 1914. Serial No. 829,914. (Cl. 130—26.)

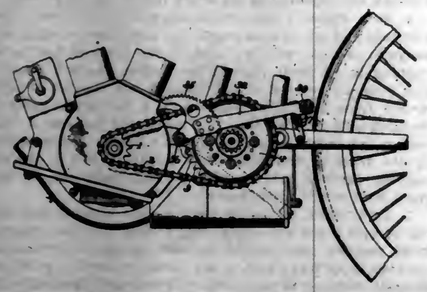


1. In a grain separator, the combination with a box like body and a plurality of similar oscillating shakers suspended within the body and passing lengthwise thereof, of a shoe suspended beneath the shakers and having a downwardly inclined rear pan, a downwardly inclined forward perforated plate continuous with the pan, a screen disposed beneath the plate, and an elevated rearwardly and downwardly inclined front pan located above the perforated plate and having the lowermost end thereof terminating directly above the lowermost portion of the rear pan.

2. In a grain separator, the combination with a box like body and a plurality of similar oscillating shakers suspended within the body and passing lengthwise thereof, of a shoe suspended beneath the shakers and presenting a downwardly inclined rear pan continuous with a down-

wardly inclined forward perforated plate having the perforations in the forward part thereof larger than in the rear part, a screen disposed beneath the rear part of the perforated plate, and an elevated rearwardly and downwardly inclined front pan located above the perforated plate and having the lowermost end thereof terminating directly above the lowermost portion of the rear pan.

1,217,300. STARTING DEVICE FOR MOTOR-CYCLES. CARL JOHAN GUSTAFSON, Springfield, Mass., assignor to Hendee Manufacturing Company, Springfield, Mass., a Corporation of Massachusetts. Filed Dec. 5, 1914. Serial No. 875,629. (Cl. 123—185.)



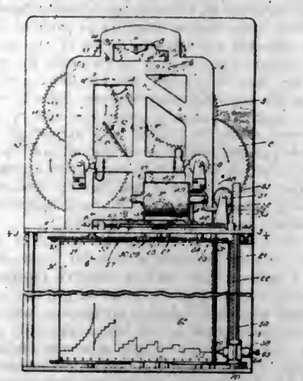
1. A motor vehicle including an engine, an engine shaft, a friction member, a connection between the friction member and the engine shaft, a second friction member engaging said first named friction member, springs for holding said friction members in engagement, a pinion having a ratchet connection with said second friction member, a segmental gear adapted to engage said pinion for rotating the same, and means for operating said segmental gear, the tension of said springs being such as to permit the friction member connected to the engine to slip on the other friction member in case of back fire of the engine.

2. A motor vehicle including an engine, an engine shaft, a countershaft parallel with said engine shaft, a driving sprocket on said countershaft connected to said engine shaft, a driven sprocket on said countershaft, friction members for connecting said driving sprocket to said driven sprocket, springs for normally holding said friction members in engagement, a pinion having a ratchet connection with said friction members, a foot lever, a spring for normally holding said foot lever raised, said foot lever having a segmental gear for engaging said pinion when depressed for starting the engine, the tension of said springs being such as to permit the driving sprocket to slip relative to said friction members in case of back fire of the engine.

3. A motor vehicle including an engine, an engine shaft, a friction clutch driven by the engine shaft, and a starting device connected to the friction clutch and operating therethrough for starting the engine, said starting device including a starting lever, a pinion adapted to be operated thereby, ratchet teeth on the inner face of said pinion, and ratchet teeth on the outer face of the friction clutch normally engaged thereby.

4. A motor vehicle including an engine, an engine shaft, a friction clutch driven thereby and including an outer plate, teeth carried by said outer plate, and a starting device including a starting lever, a pinion operated by said lever, said pinion having teeth on its inner face normally engaging the teeth from the outer plate of the friction clutch, thereby in back-firing the outer plate of the clutch may be held from rotation by the foot of the operator on the starting lever and the shock absorbed by the clutch, said teeth being so constructed that when the engine picks up the teeth will slip by each other, said starting lever in normal position being out of engagement with the pinion.

1,217,301. MAXIMUM-DEMAND RECORDER. CHESTER I. HALL, Chicago, Ill., assignor to Chicago Electric Meter Company, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1913. Serial No. 774,291. (Cl. 284—5.5.)



1. In an electricity measuring and recording mechanism, the combination of devices for driving a record sheet at a uniform rate, a marker for tracing a record upon the record sheet, an element extending vertically from the marker, mechanism for moving the element and marker vertically proportionally to the electricity measured, and devices for freeing said element from its actuating mechanism at the end of each of regularly recurring significant intervals, the motion of the record sheet during each interval being sufficient to indicate upon the record the distribution of electricity measured during each interval.

2. In an electricity measuring and recording instrument the combination with devices for driving a record sheet at a uniform rate, of a marker, means for advancing said marker in steps transversely of the direction of motion of the record sheet and in contact therewith, mechanism for causing each advance step of said marker to occur when a definite quantity of electricity has been measured, and mechanism for periodically returning said marker to its initial position at one side of the record sheet, the line traced by said marker serving as a graphic indication of the rate at which electricity was consumed during component parts of each of a plurality of successive intervals.

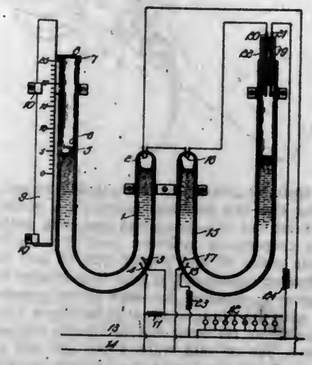
3. In an electricity measuring and recording instrument, the combination with devices for driving a record sheet at a uniform rate, of a marker, electromechanical means for advancing said marker in steps transversely of the direction of motion of the record sheet and in contact therewith, mechanism for causing each advance step of said element to occur when a definite quantity of electricity has been measured, mechanism for returning said marker to its initial position at one edge of the record sheet after each of successive equal time intervals, the line traced by said marker serving as a graphic indication of the quantity of electricity used in successive equal time intervals and the rate at which the electricity was used during component parts of each time interval.

4. In an electricity measuring and recording mechanism, the combination of devices for moving a record sheet at a uniform rate, a marker mounted to move transversely of the motion of the record sheet in contact therewith to make a record thereon, a rack extending from said marker, a gear for actuating said rack, a solenoid for actuating said gear, and a movable carriage for supporting said solenoid and gear, motion of said carriage serving to move the gear from engagement with said rack, said carriage being operated at regular recurring significant intervals.

5. In an electricity measuring and recording mechanism, the combination of devices for moving a record sheet at a uniform rate, a marker mounted to move transversely of the motion of the record sheet to make a continuous record thereon, a rack extending from said marker, a gear for actuating said rack, a solenoid for actuating said gear, a movable carriage for supporting said solenoid and gear, motion of said carriage serving to move the gear from engagement with said rack, and devices for moving said carriage at significant intervals to release the gear from said rack.

[Claims 6 to 9 not printed in the Gazette.]

1,217,302. ELECTRICITY-MEASURING INSTRUMENT AND TIMING DEVICE THEREFOR. CHESTER I. HALL, Chicago, Ill., assignor to Chicago Electric Meter Company, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1913. Serial No. 774,292. (Cl. 171—266.)



1. In an instrument for determining the maximum electrical demand of a circuit, the combination of a first electrolytic device actuated proportionally to current flow, an indicator the operation of which is effected by the aforesaid electrolytic device, a second electrolytic device actuated substantially proportionally to time, and connections between said electrolytic devices by which the operation of the second device restores the first device to its initial condition.

2. In an instrument for determining the maximum electrical demand of a circuit, the combination of a first electrolytic device actuated proportionally to current flow, an indicator operated by said first electrolytic device, a second electrolytic device actuated substantially proportionally to time, and connections between said electrolytic devices by which the operation of the second device restores both of said devices to their initial conditions at regular time intervals.

3. In an instrument for determining the maximum electrical demand of a circuit, the combination of a first device actuated proportionally to current flow, an indicating device for registering the operation of said first device, a second device actuated substantially proportionally to time adapted to determine intervals of time by successive interrupted operations, and circuit connections controlled by the second device extending between said first and second devices whereby said first device is periodically returned to its initial condition.

4. In an instrument of the class described, the combination of a first device actuated proportionally to current flow, an indicating device for registering the operation of said first device, a second device actuated by a practically constant voltage for determining intervals of time, and circuit connections controlled by one of said devices extending between said first and second devices whereby both of said devices are periodically returned to their initial condition.

5. In an instrument for determining the maximum electrical demand of a circuit, the combination of a first device actuated proportionally to current flow, an indicating device for registering the maximum operation of said first device, a second device actuated by a practically constant voltage for determining intervals of time, and circuit connections controlled by one of said devices extending between said first and second devices whereby both of said devices are periodically returned to their initial condition without moving said indicator from the position of maximum registration to which it has been moved.

[Claims 6 to 26 not printed in the Gazette.]

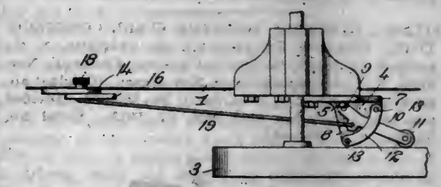
1,217,303. CONTAINER. CYRUS M. HALL, Houston, Tex. Filed Mar. 8, 1915. Serial No. 12,781. (Cl. 217—27.)



1. A container formed of a bottom, side and end walls, a horizontal partition therein, a covering therefor whose sides are turned downwardly and fit within the sides of the container and extend to said partition, lengthwise and transverse partitions fixed to and depending from the covering and forming compartments, said horizontal partition having resilient seats alined under the respective compartments.

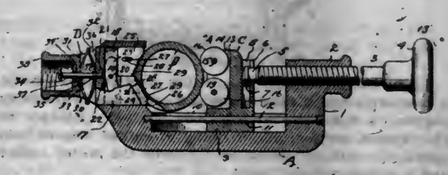
2. A container formed of a bottom, side and end walls, a horizontal partition therein, a covering therefor whose sides are turned downwardly and fit within the sides of the container and extend to said partition, lengthwise and transverse partitions fixed to and depending from the covering and forming compartments, said horizontal partition having resilient seats alined under the respective compartments, said seats comprising tongues formed by cutting cross slits through the partition under each compartment.

1,217,304. BELT THROWER AND GUIDE. HALLDOR K. HALLDORSON, Edinburg, N. D. Filed May 17, 1916. Serial No. 98,130. (Cl. 64—4.)



The combination with a belt and pulley, of a support, a bracket adjustably mounted on said support and movable in a plane parallel to the plane of the pulley, said bracket having a plate extending therefrom in angular relation, a shifting arm pivotally mounted on the plate remote from the edge thereof and resting upon the plate, a guide for the arm disposed on the plate and above the arm, a roller on the end of the arm and means for moving the arm pivotally to and away from the pulley.

1,217,305. PIPE-CUTTER. HENRY HARBECKES, Portland, Oreg. Filed Oct. 21, 1914. Serial No. 867,854. (Cl. 81—192.)



1. In a pipe cutter, the combination with a cutter holder, of a pair of cutting blades mounted to follow one another in a cutting operation on the same side of the object to be cut, said blades being independently mov-

able into the line of cut so that the following cutter blade may advance beyond the leading cutter blade and a common resiliently operative means for holding the cutter blades in their cutting positions.

2. In a pipe cutter, the combination with a cutter holder, of upper and lower cutting blades mounted in the holder and having independent longitudinal movements, and means bearing upon the backs of the cutting blades with a yielding pressure, whereby the following blade may advance into the cut beyond the lead of the leading blade.

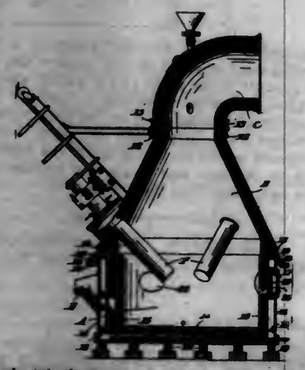
3. In a pipe cutter of the class described, the combination with a cutter holder, of a pair of flat cutting blades loosely mounted in the holder and operable in a common plane, and means for simultaneously presenting one of said blades to make the cut and the other to make a deeper cut.

4. In a device of the class described, a frame including a shank portion and a head portion, a feeding member movable in the shank portion of the frame, a carriage connected with the feeding member and sliding on the frame, a bearing element on the carriage adapted to bear against the pipe to be cut, and a plurality of cutting blades mounted in a common plane and having independent longitudinal movements in the head of the frame, said blades being adapted to be brought into cutting relation with the same side of the pipe by the pressure of the bearing element against the opposite side of the pipe.

5. In a pipe cutter, a frame including a shank portion and a head portion, a feed screw mounted in the shank portion of the frame, a carriage adapted to be shifted along said frame by the feed screw, a pair of relatively flat contiguous cutters loosely and independently mounted in the head of the frame and shiftable bodily relative to each other and to the frame, said cutter formed with slots, pins arranged in the head of the frame and disposed in said slots, a rocking lever bearing at its ends against the adjacent edges of the cutter, and a tension device normally tending to thrust the cutters forward into contact with the pipe to be cut.

[Claims 6 to 8 not printed in the Gazette.]

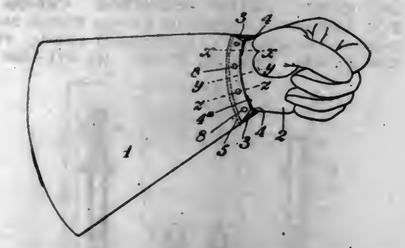
1,217,306. ELECTRIC-FURNACE-WALL CONSTRUCTION. INGENUIN HECHENBLEIKNER, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y., a Corporation of New Jersey. Original application filed Nov. 2, 1914, Serial No. 869,830. Divided and this application filed Sept. 27, 1915. Serial No. 52,863. (Cl. 204—64.)



1. An electric furnace comprising a water cooled body, a non-water cooled tapered portion connected to the body portion, a non-water cooled elbow section connected to the tapered portion, and a lining of chilled slag of substantially uniform thickness for both the water cooled and non-water cooled parts.

2. An electric furnace comprising a water cooled body portion, a lining of chilled slag extending completely around the sides and over the bottom of the body portion, a tapered portion fitting on the body portion, a detachable connection between the tapered portion and body portion formed by channel steel sections bolted together, and an elbow section connected to the tapered section, a pair of channel steel sections forming the connection between the tapered section and the elbow section.

1,217,307. DETACHABLE-GAUNTLET GLOVE. THOMAS K. HEISE, Columbus, Ohio. Filed Aug. 9, 1915. Serial No. 44,473. (Cl. 2—9.)



1. In a gauntlet glove a gauntlet having a band secured at its wrist end and forming therewith a pocket to receive the wrist end of a glove, and fastening devices each comprising coöperating members secured respectively to the opposite walls of said pocket, one of said fastening members having a penetrating head to penetrate the wrist end of a glove in securing the same to the gauntlet.

2. In a gauntlet glove, a gauntlet having a two walled annular pocket at its wrist end to receive the wrist end of the glove, one of said walls being slit and provided with a loose flap to lie across the opening formed by the slit, and fastening means to secure the wrist end of the glove within the pocket.

1,217,308. FISHING-SIGNAL. JOHN HOLEK and WILHELM KUCSERIK, Milwaukee, Wis. Filed June 24, 1916. Serial No. 105,585. (Cl. 43—31.)



1. A signal device comprising an attaching member, a spring strip connected at one end with the attaching member, a finger connected with the attaching member, a shoulder on the finger and a spherical slotted bell member carried at the other end of the spring strip and having one end of its slot adapted for abutting engagement with the shoulder.

2. A signal device comprising a plate having one end bent to form a sleeve, an attaching spike fixedly secured in said sleeve, a shoulder at the other end of the plate, a spring strip secured to the plate adjacent said sleeve and means carried by the other end of the spring strip for abutting engagement with said shoulder.

1,217,309. SWINGING TOY. FRED C. HOWE, New Haven, Conn. Filed Aug. 1, 1916. Serial No. 112,540. (Cl. 46—40.)

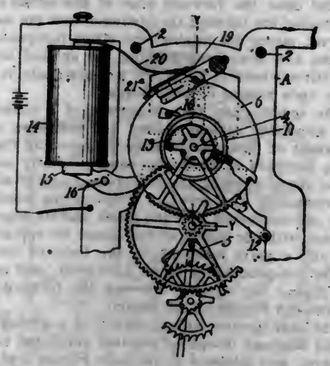
1. A swinging toy comprising a suspended ring, a figure pivoted on the ring and adapted to somersault backward and forward through the ring.

2. A swinging toy comprising a suspended ring, a figure pivoted on the ring and adapted to somersault backward and forward through the ring, and detachable



weights adapted to engage the figure whereby the balance of the figure on the ring may be changed and changes in the movements of the figure produced.

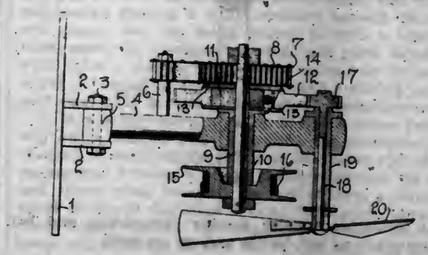
1,217,310. ELECTRIC SELF-WINDING CLOCK. ERNEST A. HUMMEL, St. Paul, Minn., assignor to Albert L. Haman, St. Paul, Minn. Filed Apr. 16, 1908. Serial No. 427,361. (Cl. 58—41.)



In an electric clock, the combination with a rotary spring winding element, of an electro-magnet, an armature in said magnet, a fixed contact in circuit with said electro-magnet, a movable contact also in said circuit with said magnet and pivoted upon said spring winding element, said movable contact being spring pressed into normal position, means for causing said movable contact to snap into engagement with said fixed contact, means on said armature for imparting a rotative impulse to said spring winding element, said rotative impulse acting to pull said contacts out of circuit closing engagement.

1,217,311. AUTOMATIC FLY-CHASER AND DOOR-CLOSER. JOEL J. HURT, South Omaha, Nebr. Filed Aug. 18, 1915. Serial No. 46,192. (Cl. 230—7.)

1. In a device of the character described, a support, a driving shaft rotatably mounted in the support, a pulley operatively mounted upon the driving shaft and having means whereby it may be operatively connected to a door to be revolved in one direction thereby, a spring operatively mounted upon the support having one end fixedly connected and the other end operatively connected to the driving shaft whereby it may be tensioned upon a rotation of the driving shaft in one direction and will tend to rotate the driving shaft in the opposite direction to thereby close the door, an annular gear wheel loosely mounted upon the driving shaft, a member mounted upon the driving shaft and disposed within said annular gear wheel and having a clutch connecting with the gear wheel for movement in one direction only, a fan shaft mounted upon said support, a pinion engaging the fan shaft and engaged by said gear wheel, and a fan mounted upon the fan shaft.



2. In a device of the character described, a bracket, a supporting arm pivotally mounted upon the bracket and having an upwardly extending post, a sleeve mounted in the bracket, a driving shaft passing through the sleeve, a pulley mounted upon the lower end of the driving shaft, a nut holding the pulley in place, a coil spring having one end operatively connected to the post on the bracket and the other end operatively connected to the upper end of the driving shaft, an annular gear wheel through which the driving shaft passes, a clutch mounted upon the driving shaft and adapted to engage with the gear wheel upon a rotation of the driving shaft in one direction but disengage therefrom upon a rotation in the opposite direction, a sleeve mounted in the outer end of the bracket, a driven shaft passing through said sleeve, a pinion on the driven shaft engaging said gear wheel, and a fan on the lower end of the driven shaft.

3. A device of the character described including a supporting bracket having an upwardly extending post, a sleeve loosely disposed in the bracket and extending below it, a driving shaft rotatably mounted in the sleeve and extending above it, a pulley carried upon the lower end of the driving shaft and abutting against the sleeve, a member on the driving shaft detachably holding the pulley in place, a spring coiled around the upper end of the driving shaft and operatively connected thereto at one end, the other end of the spring being detachably connected to the post, an annular gear wheel loosely surrounding the driving shaft, a clutch member mounted on the driving shaft for rotation therewith and having operative engagement with the gear wheel upon a rotation of the driving shaft in one direction but releasing said gear wheel upon a rotation in the opposite direction, disks loosely surrounding the driving shaft and disposed on each side of the gear wheel and the clutch member and holding the clutch member and the gear wheel in alinement, a driven shaft mounted upon the end of the bracket, a pinion carried by said driven shaft and engaged by the gear wheel, and a fan mounted upon the driven shaft.

1,217,312. ACCURATE MEASURING-GAGE. CARL EDVARD JOHANSSON, Eskilstuna, Sweden. Filed Oct. 21, 1914. Serial No. 867,780. (Cl. 33—168.)

1. The combination with a gage, of heat insulating means secured at each side thereof and having recesses which, at the side of said insulating means facing the gage, form air spaces and narrow edges bearing against the gage, means for securing said insulating means to the gage, and heat insulating means surrounding said securing means, substantially as and for the purpose set forth.

2. The combination with a gage, of heat insulating plates secured to the gage at each side thereof and having recesses which, at the side of said plates facing the

gage, form air spaces and narrow edges bearing against the gage, a bar securing said plates to the gage, and a



heat insulating annular member surrounding said bar, substantially as and for the purpose set forth.

1,217,313. GAGE FOR MEASURING HOLES. CARL EDVARD JOHANSSON, Eskilstuna, Sweden. Filed Dec. 17, 1914. Serial No. 877,651. (Cl. 33—178.)



1. A gage for measuring holes consisting of a plug of approximately symmetrical shape in relation to a central plane perpendicular to its axis and provided at both ends with recesses of approximately equal depth, leaving a central disk-like portion, said disk-like portion being provided with means for receiving a handle from either side, substantially as and for the purpose set forth.

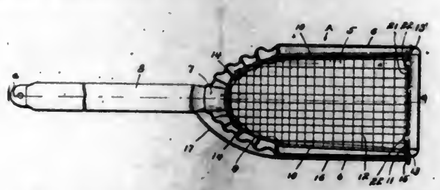
2. A gage for measuring holes consisting of a plug of approximately symmetrical shape in relation to a central plane perpendicular to its axis and provided at both ends with recesses of approximately equal depth, leaving a central disk-like portion, said disk-like portion being provided with means for receiving a handle from either side, in combination with a handle for said gage, said handle provided with a shoulder bearing against the plug, substantially as and for the purpose set forth.

3. A gage for measuring holes consisting of a plug of approximately symmetrical shape in relation to a central plane perpendicular to its axis and provided at both ends with recesses of approximately equal depth, leaving a central disk-like portion, said disk-like portion being provided with means for receiving a handle from either side, in combination with a handle for said gage, said handle provided with a shoulder bearing against the end surface of the plug, substantially as and for the purpose set forth.

4. A gage for measuring holes consisting of a plug of approximately symmetrical shape in relation to a central plane perpendicular to its axis and provided at both ends with recesses of approximately equal depth, leaving a central disk-like portion, said disk-like portion being provided with means for receiving a handle from either side, in combination with a handle for said gage, said handle provided with a shoulder bearing against the central disk-like portion of the plug, substantially as and for the purpose set forth.

1,217,314. ASH-SIFTER. ROBERT R. JOHNSON, Atlanta, Ga. Filed Oct. 2, 1915, Serial No. 53,800. Renewed Jan. 17, 1917. Serial No. 142,966. (Cl. 83—60.)

1. The combination with a shovel comprising a bottom and side walls, a sifter screen spaced above the bottom and pivotally mounted between the side walls adjacent the forward ends thereof, lugs projecting inwardly from the side walls adjacent the opposite ends thereof and adapted to support the free end of said sifter in spaced relation to the bottom of the shovel, a swingingly mounted plate normally closing the opening between the forward edge of the sifter and said bottom, and a reciprocating element connected with said sifter for operating the latter.



2. The combination with a shovel comprising a handle, a bottom and side walls, of a sifter screen spaced above the bottom and pivotally mounted between said side walls adjacent the forward ends thereof, a reciprocating element disposed at one side of the shovel and having one end connected with the pivot of the sifter, said element having a portion disposed within the handle, and its free end projecting therefrom through an elongated slot therein, and formed to provide a manipulating loop, said loop being adapted to engage one end wall of said slot to limit the movement of said element in one direction, and a swingingly mounted plate at the forward end of the shovel for normally closing the opening between said sifter and the bottom of the shovel.

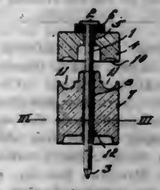
3. The combination with a shovel, of a sifting screen spaced above the bottom thereof and pivotally associated therewith adjacent its forward end, a plate swingingly supported upon the forward edge of the sifter and normally closing the opening therebetween and the bottom of the shovel, means for raising said sifter independently of the plate, and means for limiting the upward movement of the sifter whereby the latter will gravitate to normal position upon release of said means.

4. The combination with a shovel, of a sifter screen spaced above the bottom thereof and including a frame, and a sheet of foraminated material covering the latter, the side members of the frame being pivotally associated with the shovel adjacent its forward end, one of said members terminating in a crank, a reciprocating element having one end connected with the crank and its opposite end associated with the handle of the shovel for operating said sifter, and a plate mounted on the forward end of the sifter for independent swinging movement, said plate normally closing the opening between the forward edge of the sifter and bottom of the shovel.

5. The combination with a shovel, of a sifting element normally disposed in spaced relation above the bottom of the shovel, and adapted to initially receive and support thereon the unsifted material, said element being pivotally connected with the forward end of the shovel, and means for tilting said element subsequent to the sifting operation to discharge the larger particles of said material therefrom.

[Claims 6 to 8 not printed in the Gazette.]

1,217,315. INSULATOR. JULIAN H. KENDIG, Pittsburgh, Pa. Filed Apr. 27, 1916. Serial No. 98,895. (Cl. 173—314.)

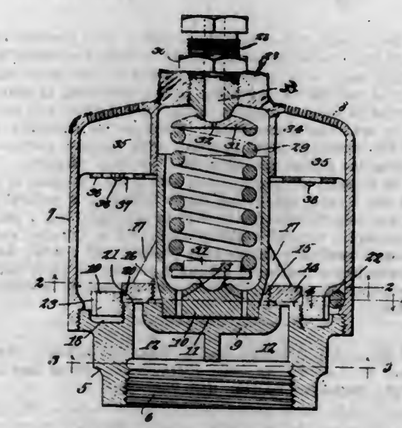


1. An insulator for wires comprising a cap and base portion having perforations therethrough, and a fastening member extending through the perforations, provided at the end carrying the cap with an integral head that will not pass through the perforation and at the other end with a point, the said fastening member having means thereon intermediate the point and the head adapted to coöperate with the perforation in the base for holding the base and fastening member in temporary fixed relation, but which is adapted to be loosened when the fastening member is driven into a support.

2. An insulator for wires comprising a cap and base portion having perforations therethrough, and a fastening member extending through the perforations, provided at the end carrying the cap with an integral head that will not pass through the perforation and at the other end with a point, the said fastening member having adhesive means thereon intermediate the point and the head adapted to coöperate with the perforation in the base for holding the base and fastening member in temporary fixed relation, but which is adapted to be loosened when the fastening member is driven into a support.

3. An insulator for wires comprising a cap and base portion having perforations therethrough, and a fastening member extending through the perforations, provided at the end carrying the cap with an integral head that will not pass through the perforation and at the other end with a point, the said fastening member having adhesive means thereon intermediate the point and the head adapted to coöperate with the base for holding the base and fastening member in temporary fixed relation, but which is adapted to be loosened when the fastening member is driven into a support.

1,217,316. SAFETY-VALVE. CHARLES F. KRAUT, Baltimore, Md. Filed June 26, 1916. Serial No. 105,833. (Cl. 137—137.)



1. In a safety valve, a casing having a steam passageway, and a muffling dome into which the passageway opens, the outlet end of the passageway being of restricted area, and a valve having a removable external encircling ring at its lower end which seats over and closes said outlet end of the passageway, the body of said valve adjacent said encircling ring being reduced in diameter to form steam passageways.

2. In a safety valve, a casing having a steam passageway, and a muffling dome into which the passageway opens, the outlet end of the passageway being of restricted area, and a valve having a removable external encircling ring at its lower end which seats over and closes said outlet end of the passageway, the body of said valve adjacent said encircling ring being reduced in diameter to form a series of lugs to which the encircling ring is secured and steam passageways between said lugs.

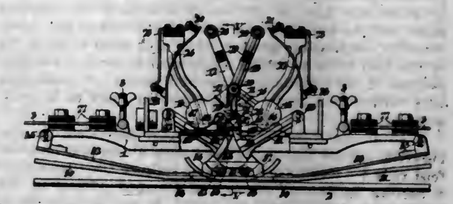
3. In a safety valve, a casing having a steam passageway, and a muffling dome into which the passageway opens, the outlet end of the passageway being of restricted area, and a valve having a removable external encircling ring at its lower end which seats over and closes said outlet end of the passageway, the body of said valve adjacent said encircling ring being reduced in diameter to form a series of lugs having screw-threaded outer faces and to which the encircling ring is secured and steam passageways between said lugs.

4. In a safety valve, a casing having a steam passageway and a muffling dome into which the passageway discharges, a relatively flat guide in the upper end of said passageway forming a steam chamber beneath the same and spaced from the walls thereof to form a relatively short restricted discharge opening, said guide being provided with a shallow top recess, a valve body having its lower end engaging on said recess, and a closing part on said valve body to close said restricted discharge opening.

5. In a safety valve, a casing having a steam passageway and a muffling dome into which the passageway discharges, a relatively flat guide in the upper end of said passageway forming a steam chamber beneath the same and spaced from the walls thereof to form a relatively short restricted discharge opening, said guide being provided with a shallow top recess, a valve body having its lower end engaging on said recess, and a closing part on said valve body to close said restricted discharge opening, that portion of the valve body which engages said shallow recess being provided with steam escape openings.

[Claims 6 to 9 not printed in the Gazette.]

1,217,317. TROLLEY-SWITCH. FREDERICK W. KULICKE, Philadelphia, Pa. Filed Mar. 23, 1916. Serial No. 86,069. (Cl. 246—54.)



1. Switch mechanism including a circuit closer; an actuating strip adapted to operate said closer; a second actuating strip adapted to lock said closer in its contact-forming position, said strips having overlapping shoulders whereby the operation of the first mentioned strip partially operates the second.

2. Switch mechanism including a circuit closer; an actuating strip adapted to operate said closer; a second actuating strip adapted to lock said closer in its contact-forming position, said strips being arranged to overlap so that the operation of the first mentioned strip partially operates the second and neither can return to its normal position until released by the other.

3. Switch mechanism including a pair of contacts; respective means for closing each of said contacts, said closing means being adapted to also operate to lock the opposite contact when it has been first closed by its closing means; and means whereby the operation of one closing means partially operates the other as a locking means.

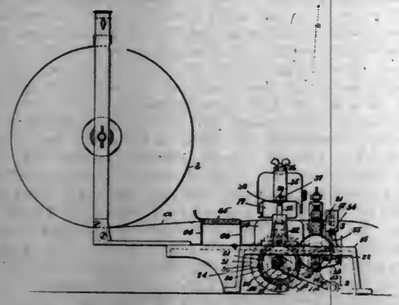
4. Switch mechanism including a pair of contacts; means adapted to close either contact, said means being only effective to do so when the opposing contact is open; the same means being adapted to lock either contact when the opposing contact is first closed by its respective closing means; and means whereby when one of said means has been operated to close its contact, the other of said means is partially operated to lock the same contact.

5. Switch mechanism including a pair of contacts; a pair of actuating strips adapted respectively to close each of said contacts when the opposing contact is open, said strips being also effective to lock each of said contacts when the opposing contact is closed by operation of its

respective strip, and having overlapping parts, whereby the operation of one strip to close its contact partially operates the other strip to lock the same contact.

[Claims 6 to 16 not printed in the Gazette.]

1,217,318. MACHINE FOR MARKING CONTINUOUS STRIPS OF PAPER OR LIKE MATERIAL. RUDOLPH KUNDERT, Roslindale, Mass. Filed Nov. 1, 1915. Serial No. 58,991. (Cl. 101—288.)



1. In an apparatus of the character described, in combination, a time stamp provided with a movable member, feed rolls for feeding a continuous strip to the time stamp, a rotatable shaft, mechanism for connecting the feed rolls with said shaft, mechanism for connecting said shaft with the movable member of the time stamp to cause the latter to print the time on the continuous strip at intervals apart and to hold the said member stationary and away from its coöperating member while said strip is being fed by the feed rolls, a cutting mechanism to sever a stamped portion of the continuous strip, and means for connecting said cutting mechanism with said main shaft to be operated thereby.

2. In an apparatus of the character described, in combination, a time stamp provided with a movable member, feed rolls for feeding a continuous strip to the time stamp, a cutting mechanism to sever a stamped portion of the continuous strip, a rotatable shaft, a cam on said shaft, means for connecting said cam with the movable member of the time stamp to effect movement of the said member toward and from a coöperating member and to hold the movable member stationary in a position away from said coöperating member, mutilated gearing connecting said shaft with said feed rolls, a second cam on said shaft, and means for connecting said second cam with said cutting mechanism.

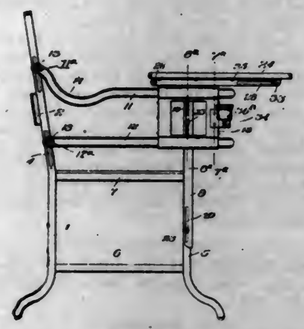
3. In an apparatus of the character described, in combination, a time stamp provided with a movable member, a rotatable shaft, a cam on said shaft, means for operatively connecting the movable member of said time stamp with said cam, feed rolls for feeding a continuous strip to said time stamp, and mutilated gearing for connecting said shaft with said feed rolls to effect an intermittent feed of the paper.

4. In an apparatus of the character described, in combination, a time stamp provided with a movable member, a rotatable shaft, a cam on said shaft, means for connecting said cam with the movable member of the time stamp to effect movement of the said member toward and from a coöperating member and to hold the movable member stationary in a position away from said coöperating member, feed rolls for feeding a continuous strip to the time stamp, and mutilated gearing connecting said feed rolls with said cam shaft to effect rotation of the feed rolls by said shaft while the movable member of the time stamp is stationary and to prevent rotation of the feed rolls while the movable member of the time stamp is engaged with said strip.

5. In an apparatus of the character described, in combination, mechanism for marking a continuous strip provided with a member movable toward and from said strip, a rotatable shaft, mechanism for operatively connecting the movable member of the marking mechanism with said shaft to move the said member into and out of engagement with said strip during a portion of a revolution of said shaft and to hold said member stationary during another portion of said revolution, feed rolls to feed the continuous strip to said marking mechanism, mutilated gearing connecting said feed rolls with said shaft to effect an intermittent feed of the continuous strip, and means for rotating said shaft.

[Claim 6 not printed in the Gazette.]

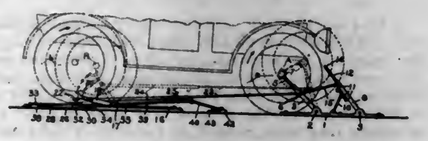
1,217,319. SCHOOL-CHAIR. CHARLES I. LATTIG, Rochester, N. Y., assignor to Harry R. Langslow, Rochester, N. Y. Filed Feb. 17, 1915. Serial No. 8,739. (Cl. 45—82.)



1. In a chair, the combination with a back portion, of a front leg, a table supporting frame including a vertically arranged angle iron adjustably attached to said front leg, a pair of rearwardly extending guides consisting of channel irons adjustably secured to the back portion and carried by said angle iron, and a table carrier including a vertically arranged plate provided with recessed portions engaging the guides and adjustable laterally thereon.

2. In a chair, the combination with a back portion, of a front leg, a table supporting frame including a vertically arranged arm adjustably attached to said front leg, a pair of rearwardly extending guides connected to the arm and adjustable vertically on the back portion, and a table carrier including a vertically arranged member or plate having engagement with said guides and adjustable laterally thereon.

1,217,320. AUTOMATIC JACK FOR VEHICLES. BERND W. LEFFERDINK, near Firth, Nebr. Filed May 7, 1915. Serial No. 26,649. (Cl. 254—89.)



1. In a mechanism of the class described, rocking jack-members adapted to engage the front and rear axles of a motor vehicle to raise the wheels thereof out of engagement with a floor during forward movement of the vehicle, and movable blocks adapted to be inserted between the wheels and floor to form a tractive connection whereby the vehicle may be moved rearwardly under its own power to disengage the axles from the jack-members.

2. The combination with jack mechanism for sustaining a motor vehicle with the wheels thereof near but out of engagement with a floor, of demounting-blocks having a plurality of rollers journaled thereon and adapted to be disposed between the floor and the traction-wheels of the vehicle to form an operative connection between said wheels and the floor, whereby the traction of the wheels may pull the vehicle off the jack mechanism.

3. The combination with jack mechanism for sustaining a motor vehicle with the wheels thereof near but out of contact with a floor, of demounting-blocks each having a series of rollers of graduated diameter mounted therein, the blocks being insertible beneath the traction-wheels of the vehicle with the smaller rollers engaging the floor and the wheel-tires, and means for limiting longitudinal movement of the blocks.

4. In a mechanism of the class described, rocking jack-members adapted to engage the front and rear axles of a motor vehicle to raise the vehicle-wheels out of contact with a floor by and during forward movement of the vehicle, movable demounting-blocks having rollers adapted to enter between the floor and the vehicle-wheels to form a tractive connection between the same, means for holding the demounting-blocks at a fixed position during movement of the vehicle onto the jack-members, and means actuated by the vehicle for resetting the demounting-blocks to said position during movement of the vehicle away from the jack-members.

1,217,321. ELECTRIC-BATH APPARATUS. JAMES D. LOWE, Fort Worth, Tex. Filed June 29, 1915. Serial No. 37,050. (Cl. 174—87.)

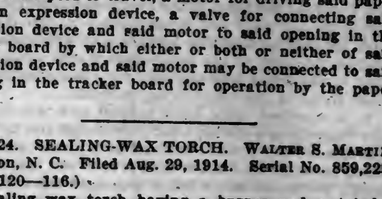
1. In an electric bath appliance, an electrode comprising spaced perforated insulating plates of a construction affording when assembled a handle, insulating strips provided between the plates at the edges thereof and forming a connection between the plates, a plate interposed between the insulating plates and a conductor extending from said interposed plate through the handle for connection to a source of current.

2. In an electric bath appliance, an electrode comprising flat spaced connected insulating cover plates having exposure openings formed therein, a relatively flat plate interposed between said cover plates, burs struck out from said interposed plate to engage said cover plate, each cover plate being extended at one end, said extension jointly forming a handle for the electrode, and a source of current supply for said interposed plate.

1,217,322. RAKE. WILLIAM LUTZE, Holyoke, Colo. Filed Oct. 27, 1915. Serial No. 58,186. (Cl. 55—146.)

In combination with a rake, a cleaner therefor including a bar pivotally and detachably carried by the rake, a plurality of cleaning fingers arranged upon said bar and to clean the teeth of said rake, a right angularly extending operating arm carried by said bar, said operating arm adapted for engagement with the ground when the rake in inverted, and a coiled spring element connecting said arm with said rake to maintain the fingers normally in inoperative position.

1,217,323. TEMPO-CONTROLLER FOR PIANO-PLAYERS. ALEXANDER G. MARQUIS, Rochester, N. Y., assignor of one-third to Frank Keiper and one-third to George W. Rogers, Rochester, N. Y. Filed Dec. 2, 1915. Serial No. 64,606. (Cl. 84—168.)



1. In a piano the combination of a tracker board and a paper web, a pneumatic motor for driving said web over said board, an intake pipe for admitting air into said motor for varying the vacuum in said motor and thereby change the speed at which it will drive the paper over said board.

2. In a piano player the combination of a tracker board and a paper web having perforations therein, a pneumatic motor for driving said web over said board, a valve for admitting air into said motor, means operated by the passage of said web over said tracker board for lifting said valve to admit air into said motor and reduce the speed of said motor and said web.

3. In a piano player the combination of a tracker board and a paper web having perforations therein, a pneumatic motor for driving said web over said tracker board, a valve for admitting air into said motor for the purpose of changing the speed thereof, a diaphragm for operating said valve, a casing surrounding said diaphragm, means for partially exhausting the air from said casing on both sides of said diaphragm, means for admitting air to one side of said diaphragm and causing it to move to lift said valve, said means being controlled by the passing of said perforations over said tracker board.

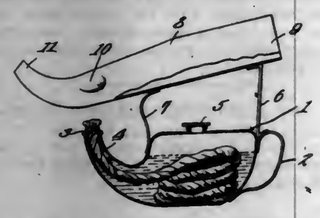
4. In a piano player the combination of a trackerboard and a paper web having perforations therein, said trackerboard having an opening therein, a motor for driving said paper web over said trackerboard, said perforations in said paper web being moved over said tracker board to uncover said opening in said trackerboard to admit or shut off the atmosphere from the inside of said motor to increase or decrease the force with which said motor is driven and vary the speed thereof.

5. In a piano player the combination of a tracker board and a paper web having perforations therein, said tracker board having an opening therein over which said perforations are adapted to travel, a motor for driving said paper web, an expression device, a valve for connecting said expression device and said motor to said opening in the tracker board by which either or both or neither of said expression device and said motor may be connected to said opening in the tracker board for operation by the paper web.

1,217,324. SEALING-WAX TORCH. WALTER S. MARTIN, Canton, N. C. Filed Aug. 29, 1914. Serial No. 859,225. (Cl. 120—116.)

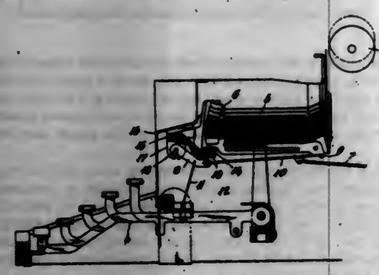
A sealing wax torch having a burner and a tubular wax container carried by the torch, said container being inclined downwardly toward the vertical plane of the torch burner, provided above said burner with a laterally enlarged and flattened chamber, and thence reduced and

inclined upwardly to an outlet above the upper wall of said chamber, whereby a tilting movement of the torch



and container is necessary to discharge the contents of said chamber through the outlet.

1,217,325. COMBINED FRONT-LEVER AND TYPE-BAR SUPPORT. FRANKLYN L. MATHIES, Rochester, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Nov. 27, 1915. Serial No. 63,750. (Cl. 197—41.)



1. An integral front lever support and type bar head rest, comprising a straight bar provided at the front with bearings for the front levers and with an arcuate rest bed for the heads of the type bars extending rearwardly from said front lever support and removable bodily with said support from the machine frame.

2. An integral front lever support and type bar head rest, comprising a straight bar having its upper surface inclined forwardly and provided at the front with bearings for the front levers and with an arcuate rest bed for the heads of the type bars formed integrally with said support and extending rearwardly from a downwardly arranged portion of the central part of said front levers support.

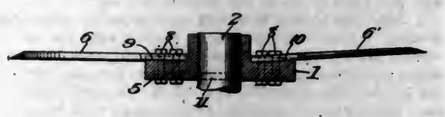
3. In a typewriting machine, a combined front lever support and type bar head rest, comprising a straight bar provided at the front with bearings for the front levers and a rest for the heads of the type bars integrally formed, said type bar head rest being curved in two directions with its ends terminating between and within planes including the ends of the lever support.

4. In a typewriting machine, a combined front levers support and type bar head rest, comprising a straight bar provided at the front with bearings for the front levers and a rest for the heads of the type bars integrally formed, said type bar head rest being curved in two directions with its ends terminating between and within planes including the ends of the lever support and means at the ends of the front lever support for connection with the main frame of the typewriting machine.

5. A combined front lever support and type bar head rest comprising a straight bar provided at the front with bearings for the front levers and at the rear with an integral arcuate rest bed for the heads of the type bars the middle portion of which bed is depressed below the upper face of said bar and the opposite end portions of which are supported by integral webs extending upwardly from the rear portion of the bar.

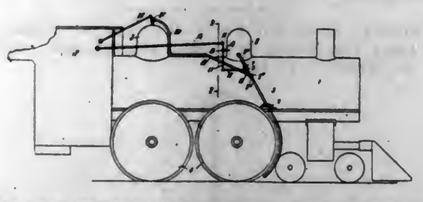
[Claim 6 not printed in the Gazette.]

1,217,326. ROTARY CUTTER FOR SUGAR-CANE AND THE LIKE. JOSEPH MEINECKE, Paia, Maui, Hawaii. Filed May 13, 1916. Serial No. 97,819. (Cl. 146—27.)



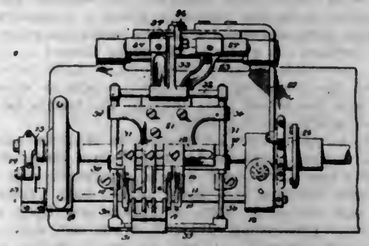
A rotary cutter comprising a hub having a pair of cheeks, each provided with a pair of knife-blade seats, and a knife-blade mounted on each of said seats, one of the seats of each pair being in a plane at right angles to the hub axis and the other seat of each pair being in a plane which is inclined with respect to the hub axis to bring the extremities of the blades into spaced relation longitudinally of the hub axis.

1,217,327. SAND-PIPE CLEANER. FRED MEYER, Malad City, Idaho. Filed July 6, 1916. Serial No. 107,846. (Cl. 105—263.)



In track sanding means, the combination of a sand box, sand pipes communicating with said box, gate valves mounted in each of said pipes exterior of the sand box, and downwardly directed steam pipes communicating with each of said pipes below said gate valves and remote from the sand box.

1,217,328. FEEDING MECHANISM FOR SEWING-MACHINES. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 26, 1912. Serial No. 679,980. (Cl. 112—8.)



1. The combination of stitch forming mechanism and feeding mechanism, said mechanism including a main feed bar, feed supporting bars carried thereby and projecting forwardly therefrom, one on each side of the needle of the stitch forming mechanism, a cross support carried by said supporting bars and located wholly in front of the needle, a feed dog detachably connected to said cross support and means for moving the feed supporting bars independently of said main feed bar.

2. The combination of stitching mechanism including a needle and feeding mechanism including feed-supporting bars one on each side of the needle and extending in front thereof, a cross support carried by said bars, a feed dog, means for attaching said feed dog to said cross support, whereby said feed dog may be adjusted vertically and also longitudinally of said cross bar.

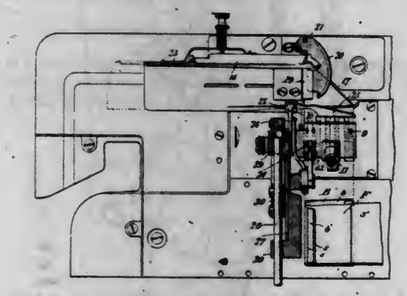
3. The combination of stitching mechanism including a needle and a feeding mechanism including a main feed bar, a bracket secured to said feed bar and projecting laterally therefrom at opposite sides of the feed bar, auxiliary feed supporting bars mounted in said projecting portions of the bracket and located on opposite sides of the needle and extending in front thereof, an auxiliary feed dog adjustably carried by said feed supporting bars and projecting rearwardly toward the needle, said auxiliary feed dog being located wholly in front of the needle.

4. The combination of stitching mechanism including a needle and a feeding mechanism including a main feed bar, feed dogs carried thereby, auxiliary feed-supporting bars carried by the main feed bar, located one on each side of the needle and extending in front thereof, an auxiliary feed dog carried by said auxiliary feed bar, and means for imparting a differential movement to said auxiliary feed-supporting bars.

5. The combination of a main feed bar, a feed dog supported thereby, auxiliary feed bars located one on each side of the main feed dog and extending in front thereof, and an auxiliary feed dog carried by said auxiliary feed bars.

[Claims 6 to 20 not printed in the Gazette.]

1,217,329. SEWING AND BINDING MACHINE. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 26, 1912. Serial No. 679,981. (Cl. 112—8.)



1. In a sewing machine, the combination of a presser foot, a main feeding device, an upper feed dog coöperating with said main feeding device, a feed foot in front of said presser foot, means for giving said feed foot a differential movement relative to the main feeding device, and means for simultaneously lifting the upper feed dog and said feed foot.

2. In a sewing machine, the combination of a presser foot, a main feeding device, an upper feed dog coöperating with said main feeding device, a feed foot in front of said presser foot, means for giving said feed foot a differential movement relative to the main feeding device, and means for simultaneously lifting the presser foot, the upper feed dog and said feed foot.

3. In a sewing machine, the combination of a presser foot, a main feeding device, an upper feed dog coöperating with said main feeding device, a feed foot in front of said presser foot, means for giving said feed foot a differential movement relative to the main feeding device, means for raising said presser foot, means carried by said upper feed dog, whereby said presser foot engages said feed dog and raises the same, and means operated by the lifting of the feed dog for raising said feed foot.

4. In a sewing machine, the combination of a feed dog, a feed foot, means for reciprocating said feed dog and feed foot in unison, and means for rendering a portion of the of the feeding movement of said feed dog ineffective.

5. In a sewing machine, the combination of a main feeding device, an upper feed dog, a feed foot, means for giving said feed foot a differential movement relative to the main feeding device, and means for moving the upper feed dog in unison with the feed foot.

[Claims 6 to 16 not printed in the Gazette.]

1,217,330. BEET-TOPPING MACHINE. SUMNER A. MOON, Butte, Mont. Filed Mar. 31, 1916. Serial No. 88,079. (Cl. 55—107.)



1. A beet topping machine comprising a rigidly supported frame, a standard vertically movable therein, a runner on the lower end of said standard, a pair of coöperating disk cutters mounted to rotate on the lower ends of upwardly and inwardly converging shanks attached to said standard, and resilient means for holding the runner in contact with the ground.

2. A beet topping machine comprising a rigid frame, a standard vertically movable in said frame, a runner adjustably mounted on the lower end of said standard, a cutter adjustably mounted on the standard on each side of said runner, and a resilient means for holding said runner against the ground.

3. A beet topping machine comprising a rigid frame, a standard mounted in bearings in said frame and slidable vertically through said bearings, a runner attached to the lower end of the standard and vertically adjustable thereon, a collar vertically adjustable on the standard and provided with depending angular shanks, a cutter disk rotatable on each of said shanks and adapted to operate together for cutting the tops of plants, and a resilient means surrounding the standard within the frame for maintaining the runner against the ground.

4. In a beet topping machine, a rigid framework, a bearing at the upper and lower ends thereof, a standard mounted to slide longitudinally in said bearings, a runner on the lower end of said standard, and means for vertically adjusting the runner thereon, a collar adjustable on said standard above the runner, said collar having a shank extending downwardly at an angle on opposite sides of the standard, a cutter disk mounted on the lower end of each shank with their edges substantially tangential in rear of the runner, and a spring surrounding the standard within the frame for holding the runner in contact with the ground.

5. A beet topping machine comprising a runner adjustably mounted on a vertical movable support and a pair of cutters at the sides of said runner, their coöperating edges being vertically adjustable relatively to the bearing surface of the runner.

[Claims 6 to 8 not printed in the Gazette.]

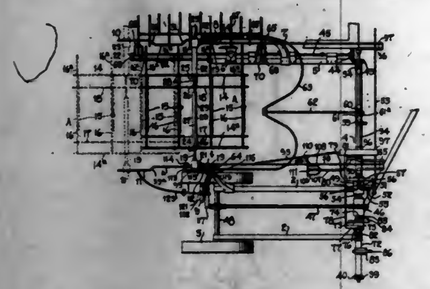
1,217,331. WALL-COATING COMPOSITION. MILO W. MOORE, Boise, Idaho. Filed June 19, 1916. Serial No. 104,514. (Cl. 134—46.)

1. The herein-described wall coating composition consisting of Portland cement, hydrous aluminum silicate, whiting, and an adhesive.

2. The herein described wall coating composition consisting of the following ingredients mixed together in

substantially the proportions specified: Portland cement, 100 parts; the commercial compound Muresco, containing whiting, hydrous aluminum silicate and powdered glue, 25 parts; and powdered glue, 6¼ parts.

1,217,332. GRAIN-SHOCKER. HANS MUMM, Lidgerwood, N. D. Filed Dec. 6, 1915. Serial No. 65,841. (Cl. 56—121.)



1. In a shock forming machine, two laterally disposed opposite sets of arms bowed in opposite directions, the upper ends of the arms being free and extending upward and toward each other, the arms of one set being disposed in staggered relation to the arms of the other set and the arms crossing each other adjacent their upper ends, the sets of arms being relatively bodily movable toward or from each other and one set of arms extending below the lower ends of the other set in spaced relation thereto and extending laterally beyond the lower ends of said other set to form means for supporting and receiving a shock, and means for relatively shifting the sets of arms bodily toward or from each other in a horizontal plane to expand and contract the former.

2. In a shock forming machine, a pair of supporting rails, a frame formed of two laterally disposed sections, each mounted upon one of said rails, the sections being movable toward or from each other, and oppositely disposed sets of curved arms, each mounted upon one of said sections, and movable with said sections, one set of arms being extended beneath and laterally beyond the other set of arms and in spaced relation thereto to provide means for supporting and receiving the shocks, and means for shifting said frame sections toward or from each other to carry the shock former arms toward or from each other.

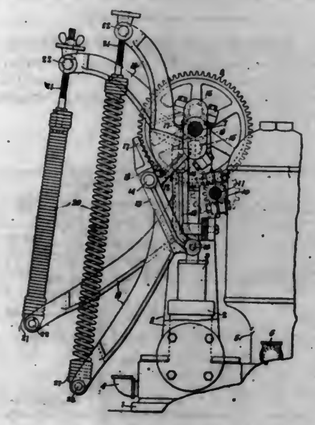
3. In a shock former, oppositely disposed parallel rails, sliding members movable along the rails, longitudinally extending bars operatively supported upon said sliding members, oppositely disposed sets of curved resilient arms mounted upon said bars intermediate their ends, the arms intersecting each other at their upper ends, the rails being formed to cause contraction and expansion of the arms as the sliding members move along the rails, vertically disposed standards attached to said bars, bell cranks mounted upon the upper ends of the standards, and flexible connections extending from the upper ends of each standard to the opposite bell crank, a flexible connection from the said bell crank to the corresponding set of arms.

4. In a shock former, a supporting frame, oppositely disposed rails pivoted at their forward ends to said frame, a former slidingly and rotatably mounted on the rails, positively operating means for sliding the former toward the free ends of the rails and then tipping the former to a discharging position and returning the former to a receiving position after it has been discharged, and positively operating means for tilting the rails downward when the former nears the free end of the rails and then lifting the rails to their initial position after the former has been discharged.

5. In a shock former, a supporting frame, rails pivoted at their forward ends to said frame, a former proper comprising a frame formed of oppositely disposed sections, each section being slidingly and rotatably mounted upon one of said rails, the sections being mounted for bodily movement toward or from each other, oppositely disposed sets of curved members, each set being mounted upon one of said sections, and movable with the sections toward or from each other, means for sliding the former toward the free ends of the rails, means for forcing the oppositely disposed sections of the former frame toward each other as they move toward the free ends of the rails, and then moving them away from each other, and means for simultaneously tipping the rails and former to discharge the shock.

[Claims 6 to 15 not printed in the Gazette.]

1,217,333. PRESSURE-CONTROLLING DEVICE. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, a Copartnership consisting of Francis E. Myers and Philip A. Myers, Ashland, Ohio. Original application filed Sept. 18, 1915, Serial No. 51,298. Divided and this application filed June 5, 1916. Serial No. 101,812. (Cl. 103—85.)



1. In a pump, the combination, with a piston and a crank shaft, of a two part connecting rod interposed between said piston and said shaft, the two part rod having its ends pivotally connected respectively with said shaft and said piston and having its two members pivotally connected one with the other, and a spring secured at its ends to the parts of said rod and adapted to travel with said rod and to act thereon to hold the two members thereof against relative movement during the normal operation of said pump and to permit said members to have relative movement when abnormal resistance is offered to the movement of said piston.

2. In a pump, the combination, with a piston and a crank shaft, of a two part connecting rod interposed between said piston and said shaft, the two part rod having its ends pivotally connected respectively with said shaft and said piston and having its two members pivotally connected one with the other on an axis arranged between but out of alinement with the axes of the first-mentioned connections, and an expansion spring secured to both members of said connecting rod and acting thereon to hold said members against relative movement during the normal operation of said pump and to permit said members to have relative movement when abnormal resistance is offered to the movement of said piston.

3. In a pump, the combination, with a piston and a crank shaft, of a two part connecting rod interposed between said piston and said shaft, the two part rod having its ends pivotally connected respectively with said shaft and said piston and having its two members pivotally connected one with the other on an axis arranged between

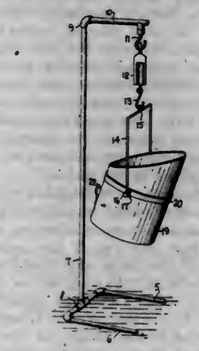
but out of alinement with the axes of the first-mentioned connections, one member of said rod having a part extending beyond said intermediate axis and arranged to engage a part carried by the other member of said rod to limit the movement of said intermediate axis toward a line extending through the two first-mentioned axes, and a spring secured at each end to the two members of said rod and tending to move said intermediate axis toward said line.

4. In a pump, the combination, with a piston and a crank shaft, of a two part connecting rod interposed between said piston and said shaft, the two part rod having its ends connected respectively with said shaft and said piston and having its two members connected one with the other on an axis arranged between but out of alinement with the axis of the first-mentioned connections, the two members of said rod having parts adapted for connection with the respective ends of a spring and arranged to be moved toward or away from each other when said members are moved about said intermediate axis, and an expansion spring connected to said parts of said members.

5. In a device of the character described, the combination, with a driving member and a driven member, of a two part connecting rod having its two parts pivotally connected one to the other and its ends pivotally connected respectively with said driving member and said driven member, means to hold the axis on which the two parts of said rod are connected one to the other out of alinement with the axes of the ends of said rod, and a spring having its ends secured to the two parts of said rod and tending to resist the movement of the two parts of said rod about the axis on which they are connected one to the other.

[Claims 6 to 9 not printed in the Gazette.]

1,217,334. WEIGHER AND SACKER. CARL FREDRICK NELSON, Council Bluffs, Iowa. Filed June 26, 1916. Serial No. 105,989. (Cl. 73—46.)



A stand including a base, and a horizontally positioned arm, a spring balance carried by the arm, a detachable receptacle having an angularly formed open end, a plurality of pivots oppositely disposed on the receptacle so that the weight is disposed below the pivots, a hook member extending from the side of the receptacle adjacent the open end thereof and a U-shaped bail connecting the pivots on the receptacle with the spring balance, the bail and pivots operating to permit a tilting movement of the receptacle.

1,217,335. PLASTIC WATERPROOF COMPOSITION. ROBERT NESBITT, Burlington, Kans. Filed Aug. 21, 1916. Serial No. 116,172. (Cl. 106—24.)

The herein described composition of matter for use as a roofing or the like, consisting of cement, one part, sand, one part, ocher, one part, and an amount of white lead equal in bulk to approximately one-fifteenth of the amount of the other ingredients, all of said parts being mixed with water to form a mortar.

1,217,336. CLOTHES-LINE SUPPORT. CHARLES E. NILES, Fargo, N. D. Filed Dec. 11, 1915. Serial No. 66,333. (Cl. 68—3.)



1. A device of the character described including a standard, a supporting member adjustable longitudinally of the standard, and coacting opposed locking members free with respect to the supporting member and loosely connected thereto with the said locking members shiftable to engage the standard for holding the supporting member at adjustment.

2. A device of the character described including a hollow standard, a supporting member adjustable longitudinally thereof, and a locking member loosely connected to the supporting member and shiftable to engage the inner and outer faces of the standard for holding the supporting member at adjustment.

3. A device of the character described including a hollow standard, a supporting member adjustable longitudinally thereof, and a locking member loosely mounted upon the supporting member, said locking member being provided with shoulders confronting the inner and outer faces of the standard for retaining the locking member in operative position upon the supporting member and being movable to engage said shoulders with the standard for holding the supporting member at adjustment.

4. A device of the character described including a standard, a supporting member adjustable longitudinally thereof and provided with an opening, and a locking member loosely fitted in said opening and abutting a wall thereof to be pivotally supported by the said wall to engage the standard for holding the supporting member at adjustment.

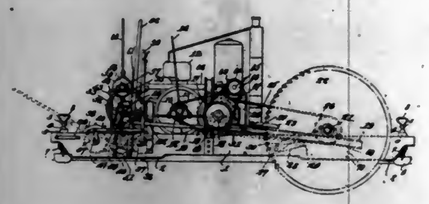
5. A device of the character described including a standard, a supporting member adjustable longitudinally thereof and provided with an opening, and a locking member free with respect to the supporting member and extending loosely through said opening to rock therein, the locking member being movable within said opening to coact with the standard for holding the supporting member at adjustment.

[Claims 6 to 14 not printed in the Gazette.]

1,217,337. ICE-CUTTING MACHINE. FRED OEHLER, GUSTAVE OEHLER, and JOHN F. OEHLER, Shelby, Wis. Filed Mar. 31, 1916. Serial No. 88,075. (Cl. 125—14.)

1. An ice cutting machine embodying a frame, an ice cutting saw carried thereby, a block carried by the frame and having an upstanding tubular standard provided with a relatively long slot, a vertical shank slidable and rotatable through said block and standard and having a guide blade at its lower end to work within a cut previously formed in the ice, a spring for depressing the blade, and a rigid pin projecting from the shank working in said slot

to hold the blade in longitudinal position when it is lowered, said pin being seatable upon the standard when the shank is raised and turned to support the blade in raised position.



2. An ice cutting machine embodying a frame, an ice cutting saw carried thereby, eccentrics carried by the frame, a shaft secured to said eccentrics, propelling means rotatable upon said shaft, a slidably mounted counter shaft carried by the frame and operatively connected with the propelling means, means for rotating the counter shaft, and means connecting sad shafts for holding them properly spaced at the various positions of the first mentioned shaft.

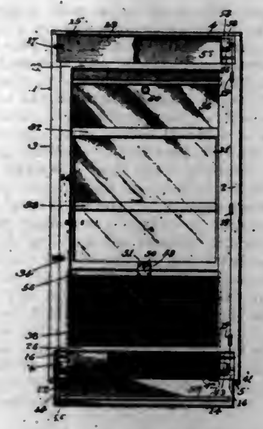
3. An ice cutting machine embodying a frame, rotatable eccentrics carried thereby, a shaft having its terminals secured to said eccentrics, means for rotating said eccentrics and shaft, a tubular shaft rotatable upon the aforesaid shaft, propelling wheels carried by the tubular shaft, slidable bearings carried by the frame, a counter shaft journaled in said bearings and operatively connected with the tubular shaft, means for rotating the counter shaft, and means connecting the tubular and counter shafts for holding them properly spaced at the various positions of the first mentioned shaft.

4. An ice cutting machine embodying a frame having side beams, pairs of rotatable eccentrics carried by said beams, a pair of shafts terminally secured to said eccentrics and disposed transversely of the frame, manually-operable means for rotating said eccentrics and shafts, tubular shafts rotatable upon the aforesaid shafts, ice-engaging propelling wheels mounted upon the tubular shafts, slidable bearings carried by said beams between the aforesaid shafts, a counter shaft journaled in said bearings between the aforesaid shafts and operatively connected with the tubular shafts, means connecting one of the tubular shafts and counter shaft for holding them properly spaced relative to one another at the various positions of the first mentioned shafts, and a driving mechanism carried by the frame and operatively connected with the counter shaft.

1,217,338. WINDOW CONSTRUCTION. SUGIMATSU OKAMURO, Los Angeles, Cal. Filed Mar. 6, 1916. Serial No. 82,354. (Cl. 156—39.)

1. In window construction, a rectangular window casing, a rectangular frame hinged along one end vertical to and adapted to rest within the casing, sashes slidable vertically within the frame, rollers mounted at the upper and lower ends of the casing transversely thereof, screens mounted on the rollers, spaced members secured to the casing transversely and at the ends thereof, said screens being extended between said members, strips secured to the free edges of the screens adapted to rest normally in engagement with said spaced members and means to detachably secure said strips to the sashes whereby the screens will be pulled into the sash openings when the sashes are opened.

2. In window construction, a rectangular window casing, a rectangular frame hinged along one vertical edge to and adapted to rest within the casing, sashes slidable vertically within the frame, rollers mounted at the upper and lower ends of the casing transversely thereof, screens mounted on the rollers, spaced members secured to the casing transversely and at the ends thereof, said screens being extended between said members, strips secured to the free edges of the screens adapted to rest normally in engagement with said spaced members and means to detachably secure said strips to the sashes whereby the screens will be pulled into the sash openings when the sashes are opened one of said spaced members being removable to facilitate the positioning of the screens.

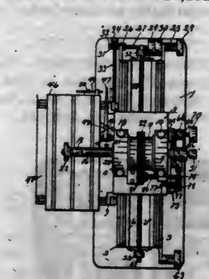


3. In window construction, a rectangular window casing, a rectangular window frame hinged along one vertical edge to and resting within the said casing, said frame adapted to be swung into and out of the casing, sashes slidable vertically within the frame said frame being open at its ends, rollers mounted at the ends of the casing parallel to the ends thereof, screens mounted upon the rollers, strips secured to the free edges of the screens spaced parallel members secured to the casing at the ends and transversely thereof said screens being extended between said spaced members, said strips being located in engagement with said spaced members between the ends of the frame and members, the innermost of said spaced parallel members being removable and means to detachably secure the strips to the sashes.

4. In window construction, a rectangular window casing, a rectangular window frame hinged along one vertical edge to and resting within the said casing, said frame adapted to be swung into and out of the casing, sashes slidable vertically within the frame said frame being open at its ends, rollers mounted at the ends of the casing parallel to the ends thereof, screens mounted upon the rollers, strips secured to the free edges of the screens, spaced parallel members secured to the casing at the ends and transversely thereof, said screens being extended between said spaced members, said strips being located in engagement with said spaced members between the ends of the frame and members, the innermost of said spaced parallel members being removable and means to detachably secure the strips to the sashes.

5. In window construction, a rectangular window casing, a rectangular window frame hinged along one vertical edge to and resting within said casing, said frame adapted to be swung into and out of the casing, sashes slidable vertically within the frame, said frame being open at its ends, rollers mounted at the ends of the casing parallel with said ends, screens mounted upon the rollers, strips secured to the free edges of the screens, spaced parallel members secured to the casing at the ends and transversely thereof, said screens being extended between said spaced members, said strips being located in engagement with said spaced members between the ends of the frame and members, and means to detachably secure the strips to the sashes.

1,217,339. CYLINDER-GRINDING MACHINE. THOMAS C. OLSON, Madison, Wis., assignor to The Thomas C. Olson Machine Company, Madison, Wis., a Copartnership composed of Thos. C. Olson and E. J. McEachron. Filed Dec. 1, 1916. Serial No. 134,492. (Cl. 51—4.)

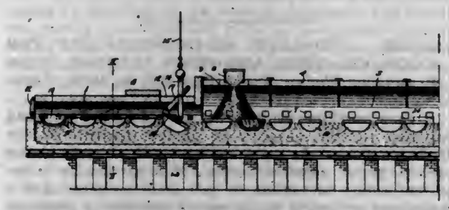


1. In a device of the described class, a revoluble casing, a carriage supporting the same, a spindle disposed eccentric of said frame, a spindle supporting member eccentric with said frame and through which said spindle is disposed, abrasive means mounted on said spindle, a collar disposed near one end of said spindle, alternate absorbent and metallic rings adjacent said collar, caps on said supporting member adapted to hold said rings and collar in contact with bearings disposed in said supporting bracket.

2. In a device of the described class, a revoluble casing, a carriage supporting the same, said carriage mounted on V-ways on a bed plate or frame, an apron secured to the back of the carriage, said apron adapted to carry a plurality of suitably mounted pulleys, a yoke pivotally disposed on said carriage carrying driving pulleys and idlers, a link connecting said yoke and spindle supporting member, a counter weight disposed on said yoke counterbalancing said link.

3. In a device of the described class, a revoluble casing, a carriage supporting the same, a spindle disposed eccentric of said frame, a yoke pivotally disposed on said carriage carrying driving pulleys and idlers, a pulley disposed on a spindle disposed eccentric of the frame, a means connecting said pulley with the driving pulley on said yoke, a means connecting said driving pulley with pulleys on a drive shaft mounted on said bed plate by means of idlers in a manner that retains the same tension on the driving means regardless of the position of the carriage.

1,217,340. MANUFACTURE OF PLATE-GLASS. ROGER S. PEASE, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 5, 1915. Serial No. 32,365. (Cl. 49—87.)



1. The process of making plate glass which consists in floating a pot containing glass along the surface of a body of molten glass, exposing the pot and its contents to a refining heat during its passage through the body of glass, and then removing the pot with its contents from the body of glass and pouring the glass from the pot.

2. The process of making plate glass which consists in floating a pot containing glass along the surface of a body of molten glass, exposing the pot and its contents to a refining heat and then to a decreasing heat during its passage through the body of glass, and then removing the pot with its contents from the body of glass and pouring the glass from the pot.

3. The process of making plate glass which consists in floating a pot upon the surface of a body of molten glass, dipping up into the pot from the body of molten glass a quantity of the glass, floating the pot along the surface of the body of molten glass and exposing it and its contents to heat during such movement, and then removing the pot with its contents from the body of glass and pouring the glass from the pot.

4. The process of making plate glass which consists in floating a pot upon the surface of a body of molten glass, dipping into the pot from the body of molten glass a quantity of unrefined glass, floating the pot along the surface of the body of molten glass and exposing it and its contents to a refining heat to refine the glass and then to decreasing heat, and then removing the pot with its contents from the body of glass and pouring the glass from the pot.

5. The process of making plate glass which consists in floating a pot in a body of molten glass until the pot attains a desired temperature, dipping up into the pot a quantity of unrefined glass, floating the pot along the body of glass and exposing it and its contents to a refining heat to refine the glass and then to a decreasing heat, and then removing the pot with its contents from the body of glass and pouring the glass from the pot.

[Claims 6 to 9 not printed in the Gazette.]

1,217,341. DEVICE FOR CUTTING SPAGHETTI. DONATO PICIULO, New York, N. Y. Filed Apr. 14, 1915. Serial No. 21,228. (Cl. 107—20.)

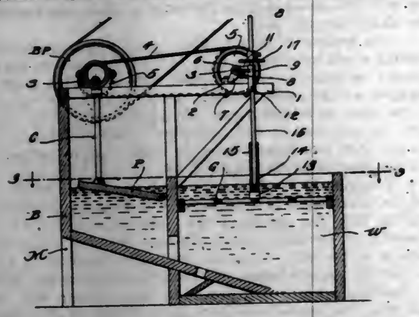


A device for cutting spaghetti comprising a frame having a pair of longitudinally extending parallel bars; a pair of intersecting beams rigidly connected to said bars; oppositely located mortises provided near the respective ends of said parallel bars; cross rods extending between the parallel bars and into said oppositely located mortises, one of said cross rods being adapted to slide in its mortises transversely of said parallel bars; a screw and nut mechanism carried by said parallel bars and connected to said sliding cross rod for sliding the cross rod transversely of said parallel bars; a continuous wire strand secured upon said cross rods and passing around said cross rods and back and forth from one to the other thereof, said strand being supported upon the parallel cross beams.

1,217,342. GRATE-CLEANER. CHARLES F. PIERCE, Webb City, and SAMUEL C. BYRD, Carterville, Mo. Filed June 12, 1916. Serial No. 103,316. (Cl. 83—56.)

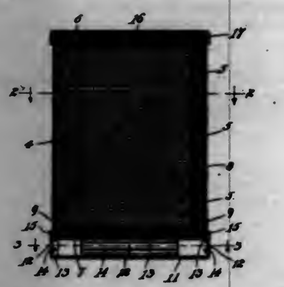
The combination with the grate of an ore handling machine; of a rotary line shaft extending horizontally above said grate, a plurality of tappets having sleeves secured at spaced intervals on said shaft, guide brackets including bearing sleeves loosely surrounding said shaft and vertical guide sleeves carried by said bearing sleeves, the latter

being interposed between the aforesaid tappets and held against longitudinal movement thereby, and rods slidably



mounted in said guide sleeves whereby a vibratory movement will be produced when said tappets engage and disengage said rods.

1,217,343. INSECT-TRAP. CHARLES A. PIPENHAGEN, Chicago, Ill. Filed Jan. 22, 1915. Serial No. 3,684. (Cl. 43—22.)

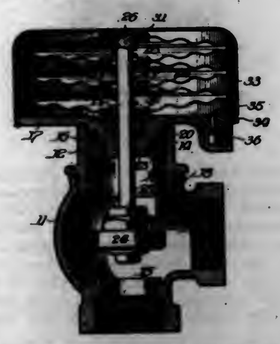


1. An insect trap comprising a bait receiving base in the form of a shallow sheet metal pan, there being entry openings formed in the sides of said pan by striking flanges therefrom and bending said flanges inwardly along their upper edges to constitute supports; and a body of foraminated material having means on the bottom thereof for the entry of insects thereto, said body being adapted to enter said pan and rest upon said supports, substantially as described.

2. An insect trap comprising a bait receiving base in the form of a shallow sheet metal pan, there being entry openings formed in the sides of said pan by striking flanges therefrom and bending said flanges inwardly along their upper edges to form shallow channels to constitute supports; and a body of foraminated material having means on the bottom thereof for the entry of insects thereto, said body being adapted to enter said pan and rest upon said supports, substantially as described.

3. An insect trap comprising a tubular body substantially square in cross section made of a sheet of wire cloth having its ends overlapped and secured together, the top and bottom edges of said body being folded inwardly to reinforce the same; a bottom for said body formed of a strip of wire cloth of a width substantially equal to the width of the body and bent centrally on a straight line into inverted V-form, the ends of said strip being secured to the bottom portions of the sides of said body, and there being entry openings formed in said strip at the apex thereof for the entry of insects; a removable bait-receiving base for said body in the form of a shallow sheet metal pan provided in each of said sides with a horizontal elongated entry opening formed by striking a flange therefrom and bending said flange inwardly and upwardly along its upper edge to constitute supports in the form of a shallow channel for the lower edge of said body, the approaches to the openings thus formed being inwardly and upwardly inclined to facilitate the entry of insects to said base; and a removable cover for said body in the form of a shallow sheet metal pan fitting over the upper edges thereof, substantially as described.

1,217,344. TEMPERATURE-CONTROL VALVE. FRED W. POWERS, Chicago, Ill., assignor to The Powers Regulator Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 29, 1914. Serial No. 859,151. (Cl. 137—4.)



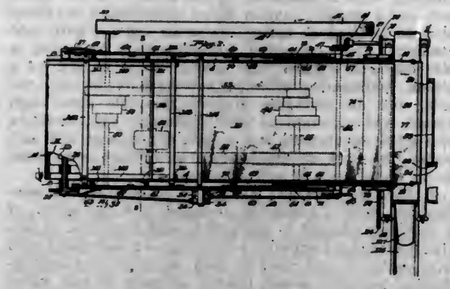
1. A temperature control valve comprising a valve casing having an apertured wall, a valve within the casing having its stem extending through the aperture and provided with a terminal head, a valve constraining spring disposed between the head and casing, a washer loosely encircling the stem, an accordion diaphragm inclosing the stem and having its extremities attached respectively to the head and casing and an intermediate fold attached to the washer, a housing about the diaphragm, and a pressure fluid inlet to the housing exterior to the diaphragm, provision being made for communication between the interiors of the valve casing and the diaphragm.

2. A temperature control valve comprising a valve casing having an apertured wall, a bushing seated therein, a valve within the casing having its stem loosely guided within the bushing and provided with a terminal head, a valve constraining spring disposed about the stem between the head and bushing, a plurality of washers loosely encircling the stem, an accordion diaphragm inclosing the stem and having its extremities attached respectively to the head and bushing and its intermediate folds attached to the washers, a housing about the diaphragm, and a pressure fluid inlet to the housing exterior to the diaphragm, the loose fit of the stem within the bushing providing for communication between the interiors of the valve casing and the diaphragm.

1,217,345. AUTOMATIC STACKING-MACHINE FOR CAKES, CRACKERS, AND OTHER ARTICLES. PETER RASMUSSEN, Denver, Colo. Filed Jan. 6, 1916. Serial No. 70,627. (Cl. 107—45.)

1. In a machine of the character described, a main receiving endless conveyer, an endless conveyer at the discharge end of the main conveyer and at right angles thereto, power operated means for imparting an intermittent rotary movement to said main conveyer, and a continuous movement to the second conveyer, a receiving plate beneath the discharge end of the main conveyer, means connected with the operating means for moving said receiving plate forward over the second conveyer, means for quickly retracting said receiving plate, a stacking conveyer in line with the second conveyer, and means for receiving articles from the second conveyer and delivering them in stack form to the stacking conveyer.

2. In a machine of the character described, a main receiving endless conveyer, a second endless conveyer at the discharge end of the first conveyer and at right angles thereto, a pawl and ratchet operating mechanism for imparting an intermittent movement to the main conveyer, and means connected with the operating mechanism of the main conveyer for imparting a continuous movement to the second conveyer, a receiving plate extending beneath the discharge end of the main conveyer, means operated by the main conveyer operating means for moving said receiving plate forward over the second conveyer, means for releasing said receiving plate at the limit of its forward movement, and means for quickly retracting said plate.



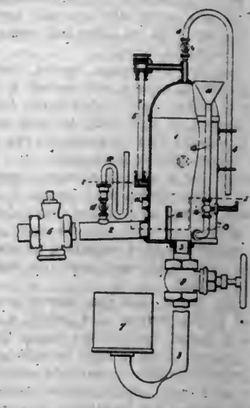
3. In a machine of the character described, a table, a drum mounted at the receiving end of said table, an endless conveyer which passes over and under said table and around said drum, pawl and ratchet operating mechanism for imparting an intermittent rotation to said drum, a second endless conveyer at the discharge end of the first conveyer, operating means connecting the second conveyer with operating means of the first conveyer, a receiving plate extending transversely beneath the discharge end of the first conveyer, reciprocating means connected with the conveyer operating means for moving said plate forward over the second conveyer, means for releasing said plate from its forwardly moving means, at the limit of its forward movement, and means for quickly retracting said plate.

4. In a machine of the character described, a frame, a table mounted thereon, a drum mounted on the forward end of said frame, a ratchet wheel connected to said drum, a lever having a pawl to engage said ratchet wheel and means for imparting an oscillating movement to said lever, whereby an intermittent movement is imparted to said drum, an endless conveyer extending around said drum and over said table and around the forward end of said table, a plate supported beneath the forward end of said table, means connected with the drum operating means for moving said plate forward beyond the forward end of said table simultaneously with the movement of said conveyer, means for releasing said plate moving means at the limit of its forward movement, and means for quickly retracting said plate, a continuously moving conveyer at the forward end of said table above which said plate moves, a continuously moving conveyer in line with the second conveyer, a chute connecting said conveyer, and parallel laterally adjustable guides supported a slight distance above the last mentioned conveyer.

5. In a machine of the character described, a frame, a table mounted thereon, a drum mounted on the forward end of said frame, its highest point being on a level with said table, a ratchet wheel carried by said drum, levers supported at opposite ends of said drums, one of which carries a pawl to engage said ratchet wheel, means for imparting an oscillating movement to said levers, an endless conveyer which passes around said drum and over said table and around its forward end, reciprocating bars connected with said oscillating levers, a plate normally positioned beneath the forward end of said table, means operated by said reciprocating bars for imparting a forward movement to said plate, means for releasing said plate at the limit of its forward movement, and means for quickly retracting said plate, a continuously moving conveyer at the forward end of said table and at right angles thereto over which said plate moves, a continuously moving conveyer in line with the aforesaid conveyer, laterally adjustable parallel guides supported above and adjacent to said last mentioned conveyer, and a variable choke chute connecting the two alined conveyers.

[Claims 6 to 21 not printed in the Gazette.]

1,217,346. APPARATUS FOR THE DETECTION OF LEAKAGES IN THE WATER-JACKETS OF BLAST-FURNACES. ENRIQUE RETUERTO Y RIZO, Portugalete, Spain. Filed July 11, 1916. Serial No. 108,666. (Cl. 137—77.)



1. An apparatus for detecting leakages in the water jackets of blast furnaces comprising a receiver closed at top and bottom, a connection near the bottom of such receiver with the outlet of the water jacket to be tested, an oulet from the bottom of the receiver, means for the escape of gases from the upper extremity of the closed receiver, and means for indicating the level of liquid therein, substantially as specified.

2. An apparatus for detecting leakages in the water jacket of a blast furnace comprising a receiver, means for connecting the lower part of said receiver with a water jacket to be tested, a pressure gage on said connecting means, an outlet from the lower part of said receiver, and means for the escape of gases from the upper part thereof.

3. An apparatus for detecting leakages in the water jacket of a blast furnace comprising a receiver provided in its lower part with an inlet, with an outlet and with an upward partition between said inlet and outlet, a pipe for connecting said inlet with the water jacket to be tested, and means for the escape of gases from the upper part of said receiver.

4. An apparatus for detecting leakages in the water jacket of a blast furnace comprising a receiver, means for connecting the lower part of said receiver with a water jacket to be tested, a water gage connected with said receiver to indicate the level of liquid therein, means for connecting the lower part of said receiver with a water jacket to be tested, and means for the escape of gases from the upper part of said receiver.

5. An apparatus for detecting leakages in the water jacket of a blast furnace comprising a receiver, means for connecting the lower part of said receiver with a water jacket to be tested, an outlet from the lower part of said receiver, and means connected with the top of said receiver for the escape of gases therefrom.

[Claims 6 to 10 not printed in the Gazette.]

1,217,347. TRANSFORMER FOR SHOTGUNS. MITCHELL G. ROSENGARTEN, Philadelphia, Pa. Filed Aug. 14, 1912. Serial No. 714,970. (Cl. 42—77.)



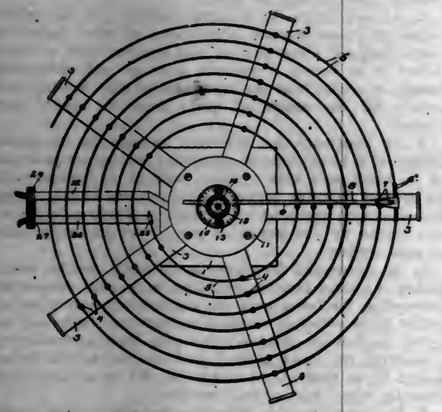
1. The combination with a shot gun including a barrel, said barrel being counterbored at its rear end to form a cartridge receiving seat, and a shoulder spaced from the outer end of said counterbore, of a jacket fitting in said seat and retained against outward movement by said shoulder, a rifle barrel extending through said jacket from end to end thereof and outwardly into said barrel of the shot gun, said rifle barrel at its outer end being free from contact with said shot gun barrel.

2. A transformer for a shot-gun barrel, comprising a jacket capable of fitting within said barrel, a rifle-barrel seated within said jacket, said jacket being formed with circumferential groove, a split ring in said groove, and means adapted to expand said ring against the gun barrel to lock the rifle barrel against movement.

3. A transformer for a shot gun barrel, comprising a jacket capable of fitting within said barrel, a rifle-barrel seated within said jacket, said jacket being formed with circumferential groove, a split ring in said groove and a longitudinally movable means operating in said jacket to expand said ring against the gun barrel to lock the rifle barrel against movement.

4. A transformer for a shot-gun barrel, comprising a jacket capable of fitting within said barrel, a rifle-barrel seated within said jacket, said jacket being formed with circumferential groove, a split ring in said groove and formed in its periphery with a washer-receiving seat, a split washer in said seat, and a screw mounted longitudinally in said jacket for engaging the ends of said ring to expand the latter and cause the washer to engage the gun barrel to lock the rifle barrel against movement.

1,217,348. VARIABLE ELECTRICAL APPARATUS. OSCAR F. ROTHEN, Weehawken, N. J., assignor to Fritz Lowenstein, Brooklyn, N. Y. Filed Feb. 25, 1915. Serial No. 10,582. (Cl. 171—242.)



1. Variable electrical apparatus comprising the combination, with a spirally coiled conductor, and a movable contactor device adapted to make continuous contact with said conductor, of controlling means located centrally of said coil and provided with rack and pinion connection of said contactor device, whereby said controlling means is operable to compel combined angular and radial movement of said contactor device, such operation of said controlling means being effected without the aid of said coil.

2. Variable electrical apparatus comprising the combination, with a conductor in the form of a flat spiral coil and a movable contactor device adapted to make continuous contact with said conductor, of a controlling member provided with a transverse passage slidably accommodating a part of said contactor device and revoluble to effect angular movement of said device, provision being also made to compel substantially radial movement of said device in conjunction with such angular movement.

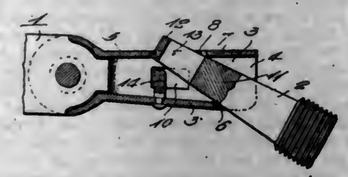
3. Variable electrical apparatus comprising the combination, with a conductor in the form of a flat spiral coil, and a movable contact device comprising a contactor element adapted to make continuous contact with said conductor and a directing arm operatively connected to said contactor element and provided with a rack, of a pinion stationarily mounted substantially in the coil axis, and an actuating member revoluble about said pinion, and arranged to slidably engage said directing arm while maintaining said rack in engagement with said pinion, the pitch circumference of said pinion being equal to the radial pitch of said spiral coil.

4. Variable electrical apparatus comprising the combination, with a conductor arranged in a flat spiral, of a contactor adapted to move along said conductor in continuous contact therewith, a directing arm associated with said contactor and movable both angularly and longitudinally, revoluble means located centrally of said spiral and operable to produce angular movement of said arm, and means for producing longitudinal movement of said arm in conjunction with such angular movement.

5. Variable electrical apparatus comprising the combination, with a spirally coiled conductor and a contactor movable therealong, of a directing arm movable to shift the contactor along said conductor, means slidably engaging said directing arm and revoluble to move the same angularly, and mechanism arranged to move said directing arm longitudinally in conjunction with the angular movement.

[Claims 6 to 12 not printed in the Gazette.]

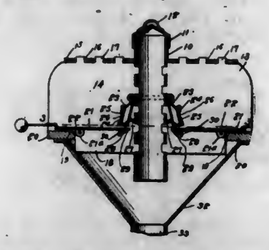
1,217,349. DRILLING-BIT SOCKET. WILLIAM BUNYAN, Clinton, Ind. Filed June 26, 1916. Serial No. 105,968. (Cl. 255—30.)



The combination with a drill having a rectangular shaped socket in its rear end, one side of said socket being cut away a predetermined distance from the open end, the opposite side of the socket having an opening therein extending from opposite the inner edge of said cut away portion to a point adjacent the inner end of the socket, a lug projecting laterally and inwardly of the first mentioned side of the socket opposite the last mentioned opening and adjacent its inner edge, a stock, and a pin projecting therefrom at one end, said pin having an elongated longitudinally extending slot adjacent its extremity, and the pin adapted to engage said socket to interlock the drill and stock, the lug being positioned in said slot to lock the same and to allow limited endwise movement of said members.

1,217,350. ANIMAL-TRAP. AUGUSTUS DAVIS SAXON and JAMES EWARD LUNDY, Springfield, S. C. Filed June 10, 1916. Serial No. 103,000. (Cl. 43—24.)

1. In a trap, a central tubular standard open at both ends, a plurality of partitions radiating from the standard and defining compartments, the standard extending up above the top of the compartments, a plurality of trap doors forming each the floor of one compartment and counterbalanced to normally remain in a horizontal position but depressible under the weight of an animal, and a receptacle upon which said trap is disposed and into which said trap doors discharge, the central tubular standard forming the means whereby a lethal agent may be conducted into said receptacle.



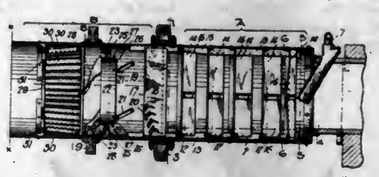
2. An animal trap of the character described comprising a tubular standard, a plurality of radial partitions extending from the standard and defining a plurality of compartments, a roof plate extending entirely over the compartments and attached to the standard, a plurality of trap doors forming the floors of the several compartments, each of said trap doors being pivotally mounted upon the partitions of the compartment and normally supported in a horizontal position, and a bait receptacle mounted upon the standard in each compartment and having a latch member connected thereto normally engaging the free edge of the corresponding trap door to prevent its depression but releasing said trap door when the bait is tampered with, and a receptacle into which said trap discharges.

3. A trap of the character described including a central standard, partitions radiating therefrom and defining a plurality of compartments, an annular member to which the outer ends of each of the partitions is connected, a roof plate extending over all of the compartments and attached to the upper edges of the partitions, trap doors forming the floors of the several compartments, each trap door being pivotally connected to the partitions, the trap doors being counterbalanced to remain normally in a horizontal position, bait boxes hingedly supported upon the central standard and disposed one in each compartment, each bait box at its lower end having a hook engaging with the free edge of the corresponding trap door, and a spring normally urging the lower end of the bait box outward and into operative position.

4. In a trap of the character described, a central standard, radiating partitions mounted upon the standard, a roof plate mounted upon the upper end of the partitions and extending over all the compartments defined by the partitions, trap doors forming the bottom of each compartment and having ears formed thereon, and a pintle member extending through all of the compartments and through said ears forming the means of pivotally supporting the trap doors and for holding the partitions in proper position relative to each other and the central standard.

1,217,351. BREAKER AND DRIER. HENRY G. SCHWARZ, Denver, Colo. Filed May 12, 1915. Serial No. 27,549. (Cl. 83—9.)

1. In apparatus of the character described, a rotary drum, means for subjecting material passing therethrough to the exsiccative influence of heat, and means for feeding material into an end of said drum, the said drum having interiorly, elements which during rotation of the drum, disintegrate material passing through the same, and elements which expose the material to the influence of the heat, the said elements being successively arranged to include commencing at the feed end of the drum, an exsiccation element, a series of breaking elements which progressively disintegrate the material, a second exsiccation element, a final breaking element, a pulverizing element, and a final exsiccation element.



2. In apparatus of the character described, a rotary drum, means for subjecting material passing therethrough to the exsiccative influence of heat, and means for feeding material into an end of said drum, the said drum having interiorly, elements which during rotation of the drum, disintegrate material passing through the same, and elements which expose the material to the influence of the heat, the said elements being successively arranged to include commencing at the feed end of the drum, an exsiccation element, a breaking element, a second exsiccation element, a final breaking element, a pulverizing element and a final exsiccation element.

3. In apparatus of the character described, a rotary drum, means for subjecting material passing therethrough to the exsiccative influence of heat, and means for feeding material into an end of said drum, the said drum having interiorly, elements which during rotation of the drum, disintegrate material passing through the same, and elements which expose the material to the influence of the heat, the said elements being successively arranged to include commencing at the feed end of the drum, an exsiccation element, a breaking element, a second exsiccation element and a final breaking element.

4. In apparatus of the character described, a rotary drum, means for subjecting material passing therethrough to the exsiccative influence of heat, and means for feeding material into an end of said drum, the said drum having interiorly, elements which during rotation of the drum, disintegrate material passing through the same, and elements which expose the material to the influence of the heat, the said elements being successively arranged to include commencing at the feed end of the drum, a breaking element, an exsiccation element and a final breaking element.

5. In apparatus of the character described, a rotary drum, means for subjecting material passing therethrough to the exsiccative influence of heat, and means for feeding material into an end of said drum, the said drum having interiorly, elements which during rotation of the drum, disintegrate material passing through the same, and elements which expose the material to the influence of the heat, the said elements being successively arranged to include commencing at the feed end of the drum, an exsiccation element, a breaking element, a second exsiccation element, a final breaking element and a pulverizing element.

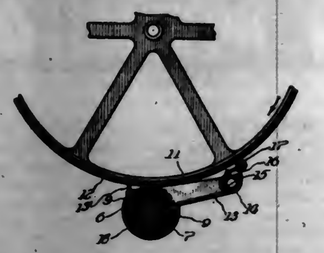
[Claims 6 to 20 not printed in the Gazette.]

1,217,352. CLEANING DEVICE. PASCAL J. SHAMPAY, Chicago, Ill., assignor to Shampay Brothers, Chicago, Ill., a Corporation of Illinois. Filed June 19, 1914. Serial No. 846,060. (Cl. 15—8.)

1. In a carpet cleaning device, a rotary brush having spiral rows of bristles extending in opposite directions from the ends and meeting at points intermediate the ends, and means to feed cleaning fluid to the brush for the width only of the carpet to be cleaned, whereby the brush in rotating tends to confine the cleansing fluid only to the width of the carpet to be cleaned.

2. In a carpet cleaning device, a rotary brush having spiral rows of bristles extending from the ends, a close fitting receptacle for the brush having an inclined extension at one side, means to feed liquid cleansing fluid down

the inclined extension directly to the brush in accordance with the width of a carpet to be cleaned, the carpet to be cleaned being centered with respect to the brush so that when the brush is rotated in one direction it will tend to sweep the cleansing fluid toward the center of the brush and to confine the cleansing fluid to the width of the carpet to be cleaned.



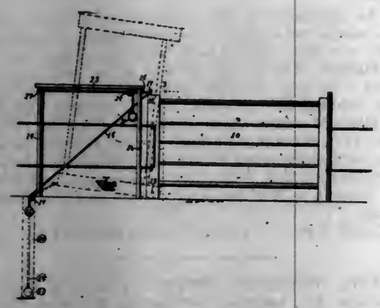
3. In a cleaning device, a rotatable brush having extending bristles, a close fitting receptacle for the brush in which it is rotatable with a lateral inclined extension at one side thereof, and valve means for discharging cleansing fluid down the said inclined extension directly to the brush in accordance with the width of the carpet to be cleaned.

4. In a cleaning device, a rotatable brush having oppositely disposed spiral rows of bristles meeting intermediate the ends, a close-fitting receptacle for the brush in which it is rotatable, and means to direct streams of cleaning fluid to the receptacle at intervals of its length.

5. In a cleaning device, a rotatable brush having oppositely disposed spiral rows of bristles meeting intermediate the ends, a close-fitting receptacle for the brush in which it is rotatable, and means for discharging fluid into the receptacle, comprising a tube having valved apertures at spaced distances.

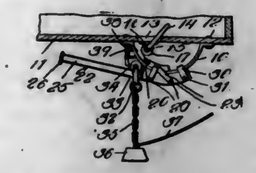
[Claims 6 and 7 not printed in the Gazette.]

1,217,353. GATE-OPERATING MEANS. ALBERT SMITH, Fonda, Iowa. Filed Dec. 29, 1913. Serial No. 809,420. (Cl. 39—60.)



Gate-operating means, comprising spaced hinge posts, a gate between and hinged at its lower rear corner to said posts, a post at the rear of said hinge posts, operating posts on opposite sides of and spaced from said hinge posts, beams connecting upper end portions of said operating and rearmost post, an eye in the upper rear corner of the gate, a cable fixed to said eye and extending rearwardly and downwardly to the base of the rearmost post, a pulley located at the base of the rearmost post in substantially the same horizontal plane as the pivot of the gate, over which pulley said cable passes, a weight on said cable counterbalancing said gate, pulleys supported by said beams adjacent the operating posts, operating ropes separately fixed to said eye on opposite sides of and adjacent to the cable, said operating ropes passing rearwardly around the first pulleys, and thence laterally in opposite directions over said latter pulleys, and handles on depending end portions of said operating ropes.

1,217,354. HITCHING-WEIGHT LIFTER. CORNELIUS T. SMITH, Grandin, Alberta, Canada. Filed June 10, 1914, Serial No. 844,343. Renewed Sept. 18, 1916. Serial No. 120,885. (Cl. 21—135.)



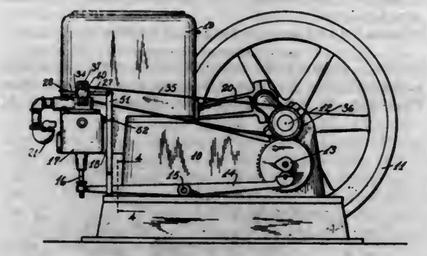
1. A weight lifter consisting of an arcuate track, a member consisting of an arcuate end portion and an elongated rectilinear portion, a wheel adapted to roll on said elongated rectilinear portion, means coacting with the wheel for supporting a weight, means for securing the arcuate end portion in slidable engagement with the arcuate track, and means for moving said member along said arcuate track.

2. A hitching attachment consisting of an arcuate track adapted to be secured to the underside of a vehicle body and to curve downwardly, a shaft having a pulley thereon and adapted to be rotatably mounted between the extremities of the arcuate member, a weight-lifting member comprising an arcuate element and a rectilinear element, a weight, means supported by the weight-lifting member and coacting therewith for supporting the weight and adapted to move longitudinally of the weight-lifting member, means for securing the arcuate element in slidable engagement with the arcuate track, a flexible element connected with the last said means and with said pulley for moving the arcuate element along the arcuate track, and a hitching rein connected to the weight.

3. A hitching device adapted to be attached to the under surface of a vehicle body and comprising an arcuate track, a lifter member having an arcuate surface in slidable engagement with the arcuate track and having a tangential arm extending from said arcuate elemept, a segmental block having its convexed surface in sliding engagement with the concaved surface of the arcuate track, straps extending across the track and connecting the arcuate element with said block, a pulley, a flexible member connecting the pulley with the block, means for rotating the pulley, a wheel mounted to roll on the tangential element, a weight, a hitching rein connected to the weight, means connected to the wheel for supporting the weight, and a pawl supported over the tangential element and adapted to contact with the wheel for preventing its untimely travel in one direction.

4. The combination with a vehicle having an apertured and slotted floor, a downwardly convexed and upwardly concaved track having apertured ends, bolts extending through the apertures of the floor and of the track for securing the latter to the floor, bearings adjacent to the slot of the floor and between the apertures thereof, an axle supported by the bearings and carrying a lever and a pulley, a traveler mounted for movement on the concaved surface of the track, means connecting the traveler with the pulley and coacting with the latter for moving the traveler, a lifter member supported by the traveler and comprising an arm which extends substantially tangentially from the track, a weight, a hitching strap connected to the weight, and means connecting the weight with the arm and adapted to move along said arm for carrying the weight forwardly and rearwardly of the vehicle.

1,217,355. INTERNAL-COMBUSTION-ENGINE CONTROL. GEORGE W. SNYDER, Indianapolis, Ind., assignor to Swartz Electric Co., Indianapolis, Ind., a Corporation. Filed Aug. 3, 1914, Serial No. 854,861. Renewed June 19, 1916. Serial No. 104,579. (Cl. 123—99.)



1. In an internal combustion engine, a throttle valve for controlling the supply of fuel, means for controlling the exhaust valve of the engine, and governor controlled means releasably connected with said throttle valve adapted to regulate the throttle valve while it is connected therewith and adapted when it is not connected with said throttle valve to regulate the action of the means for controlling the exhaust.

2. In an internal combustion engine, a throttle valve for controlling the supply of fuel, means for controlling the exhaust valve of the engine, a lever mechanism releasably connected with said throttle valve and adapted when in extreme positions to stop the means for controlling the exhaust, and a governor actuated by the engine for operating said lever mechanism.

3. In an internal combustion engine, a throttle valve for controlling the supply of fuel, means for controlling the exhaust valve of the engine, a lever mechanism releasably connected with said throttle valve and adapted when in extreme positions to stop the means for controlling the exhaust, a governor driven by the engine for actuating said lever mechanism in one direction, and a spring for actuating it in the opposite direction.

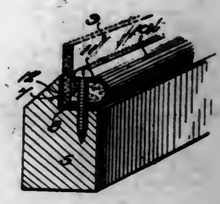
4. In an internal combustion engine, a throttle valve for controlling the supply of fuel, means for controlling the exhaust valve of the engine, a lever mechanism releasably connected with said throttle valve and adapted when in extreme positions to stop the means for controlling the exhaust, a governor driven by the engine for actuating the lever so as to tend to close the throttle valve when it is connected with said lever mechanism, and a spring tending to move said lever mechanism in an opposite direction.

5. In an internal combustion engine, a throttle valve for controlling the supply of fuel, a cam actuated lever for controlling the exhaust valve of the engine, a governor lever fulcrumed between its ends and at one end releasably connected with said throttle valve, another lever fulcrumed between its ends operatively connected at one end with said first-mentioned lever and at the other end bifurcated and adapted to fit astride the cam lever and having inward projections to engage and hold said cam lever from operation when said bifurcated lever is actuated to either extreme position, a governor driven by the engine for actuating said governor lever in one direction, and a spring for moving it in the opposite direction.

[Claims 6 to 18 not printed in the Gazette.]

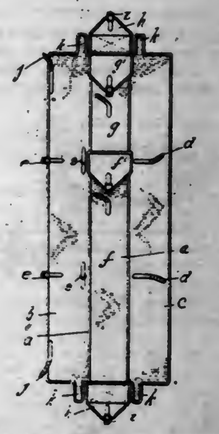
1,217,356. GLAZING. CHARLES J. SOLI, Racine, Wis., assignor of one-half to Charles A. Soli, Racine, Wis. Filed Mar. 6, 1916. Serial No. 82,388. (Cl. 20—56.4.)

The combination with a sash member provided with a glass receiving recess, of an angularly bent plate disposed in the recess with its sides lying against the sides thereof, a glass seated on the bent plate and bearing against its inner side, a second plate bent laterally to provide a U-shaped cross section and disposed against the outer side of the first named plate with its side edges adjacent the glass, a filler means disposed between the sides of the



second plate and bearing against the glass and securing means passed through the sides of the second plate and the adjacent side of the first plate and engaged in the sash member.

1,217,357. PAPER-HANGER'S TOOL-BAG. HILL SPARROW, New York, N. Y. Filed Nov. 24, 1913. Serial No. 802,721. (Cl. 150—52.)

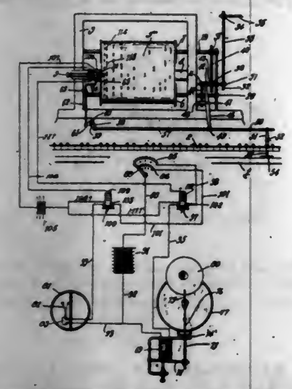


A paperhanger's tool-bag comprising a single piece of substantially flat foldable material having a central portion and a wing portion on each side thereof and of a length substantially equal therewith; said wing portions being formed at their ends and adjacent to said central portion with endwise-projecting weather-flaps adapted and arranged to be folded inwardly over the end parts of the contents of the bag and said central portion being formed at its ends with endwise-projecting end-cover flaps which lie between said weather-flaps and are adapted and arranged to be turned inwardly toward each other and over the latter in the folded position thereof; pockets formed on one of the faces of said central portion; means for fastening the end of each of said end-cover flaps to one of said wing-portions; and means for fastening the opposed longitudinal edges of said wing-portions together to secure the articles within the bag formed by folding the material.

1,217,358. ELECTRICAL ATTACHMENT FOR SELF-PLAYING MUSICAL INSTRUMENTS. ALBERT M. STEINERT, Providence, R. I. Filed Dec. 12, 1914. Serial No. 876,769. (Cl. 84—193.)

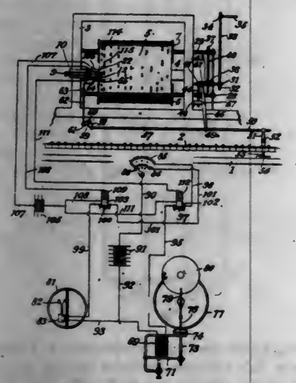
In combination with a conductive tracker-bar of a self-playing instrument, an auxiliary percussive musical instrument, a pivotally mounted contact for engagement with the conductive portion of the trackerbar through a

perforation in a note sheet, wholly electrical connections between said auxiliary instrument and said contact and



a wedge-shaped member movable to raise said contact out of engagement with the note sheet.

1,217,359. AUXILIARY-PERCUSSIVE-INSTRUMENT ATTACHMENT FOR SELF-PLAYING MUSICAL INSTRUMENTS. ALBERT M. STEINERT, Providence, R. I. Filed Feb. 19, 1916. Serial No. 79,310. (Cl. 84—193.)



1. A self-playing instrument, auxiliary percussive musical instruments, electrically actuated from the first-named instrument, a double rheostat having two coils in different circuits and a single controlling member movable thereover for varying the intensity of sound of the auxiliary instruments.

2. A self-playing musical instrument, auxiliary percussive musical instruments, electrical connections between the two, and a double rheostat having two sets of coils in different circuits with said auxiliary instruments, and a lever common to all of said coils and movable thereover simultaneously for varying the power of the auxiliary instruments and for silencing the latter.

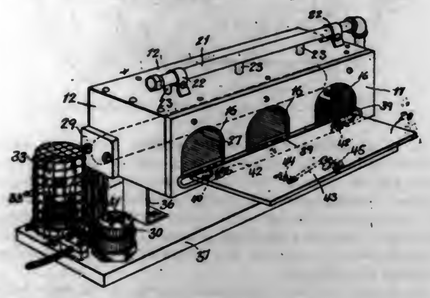
3. A self-playing musical instrument, a plurality of percussive musical instruments, electrical connections controlled by part of said self-playing instrument whereby said auxiliary instruments are operated, and a pair of rheostat coils and a lever common thereto for varying the power of the auxiliary instruments.

4. A self-playing musical instrument, a plurality of independent auxiliary percussive instruments, electric circuits controlled by part of said self-playing instrument, a pair of rheostat coils included therein, and means common to both rheostat coils for controlling the intensity of sound of said auxiliary instruments.

5. A self-playing musical instrument, a plurality of auxiliary percussive instruments, a pair of rheostat coils, electrical circuits controlled by part of said self-playing instrument and including said rheostat coils and auxiliary instruments, and means movable with relation to said rheostat coils for coöperation therewith for silencing said auxiliary instruments and for controlling the volume of sound thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,217,360. SHOE-TOE MOISTENING AND HEATING APPARATUS. LAWRENCE E. STOCKER, Saugus, Mass. Filed Feb. 17, 1916. Serial No. 78,900. (Cl. 12—1.)



1. An apparatus of the character described, comprising a box having a toe-receiving aperture, means for supplying vapor to the box, a radiator located within the box, and an electrical heating unit within said radiator, the said vapor supplying means being arranged to direct vapor against a toe inserted in said aperture, and the radiator being arranged to mingle an induced current of dry warm air with the vapor in the region occupied by said toe.

2. An apparatus of the character described, comprising a box having a toe-receiving aperture, and an exhaust steam conduit supported above the box and having a downwardly directed nipple extending through the top of the box, said nipple being provided with a vapor filter of yielding material located above the space occupied by a toe inserted in said opening.

3. An apparatus of the character described, comprising a box having a toe-receiving aperture, an exhaust steam conduit supported above the box and having a downwardly directed vapor discharging nipple located above the space occupied by a toe inserted in said opening, and a dry heat radiator located in the box at one side of said space and arranged to induce a current of dry warm air in a direction to mingle with the vapor in the region occupied by said toe.

4. An apparatus of the character described, comprising a box having a plurality of metal sides and a non-metallic front side, said side having a toe-receiving opening, means for supplying the box with hot vapor, and a dry heat radiator located in the box out of the direct path of the vapor.

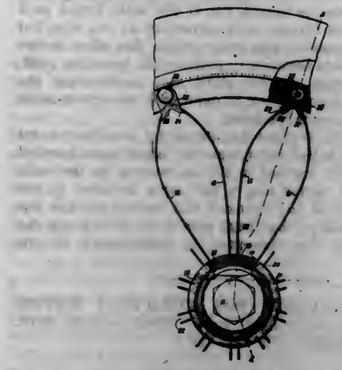
5. An apparatus of the character described, comprising a box having a toe-receiving aperture, an exhaust steam conduit supported above the box, and having a downwardly directed nipple extending through the top of the box, a dry heat radiator located in the box out of the direct path of the vapor, and a deflector arranged to direct an air current induced by said radiator toward the path of the vapor.

[Claims 6 to 9 not printed in the Gazette.]

1,217,361. TAPER-PIN SPOKE-FASTENING. JOHN E. STRIETELMEIER, Cincinnati, Ohio, assignor to The Ideal Wheel Company, Cincinnati, Ohio, a Corporation of Ohio. Filed May 31, 1913, Serial No. 770,952. Renewed Apr. 10, 1916. Serial No. 90,277. (Cl. 152—50.)

1. A resilient wheel of the nature disclosed combining a hub; a rim providing at its inner periphery an equi

spaced series of shallow recesses extending transversely to the plane of the wheel; a series of petal-shaped spokes extending radially from the hub and terminating in overlapping extremities arranged in said recesses; each spoke consisting of two symmetrically related flat leaf-springs, the outer one having its rim-end turned reversely in conformity with said recess and snugly seated therein, and the inner one having its rim-end similarly turned and interfitting within the other, the ends of each of said springs terminating a short distance inwardly from the inner periphery of the rim; a clamping-plate extending transversely to the plane of the wheel within the inturned ends of said springs and having its contacting face conformed to the adjacent spring and having both its ends bent outwardly in parallelism with the sides of the rim and each end portion providing a beveled face, and a pair of members having coöperating beveled faces and supported from the rim and adapted to be moved relatively to one another in a direction transverse to the plane of the wheel to move said clamping plate in a radial direction to clamp said spring ends.

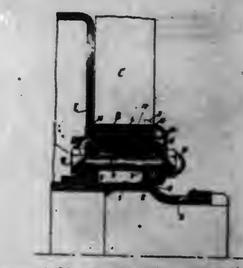


2. A resilient wheel of the nature disclosed combining a hub; a rim providing at its inner periphery an equispaced series of shallow recesses extending transversely to the plane of the wheel; a series of petal-shaped spokes extending radially from the hub and terminating in overlapping extremities arranged in said recesses; each spoke consisting of two symmetrically related flat leaf-springs, the outer one having its rim-end turned reversely in conformity with said recess and snugly seated therein, and the inner one having its rim-end similarly turned and interfitting within the other, the end of each of said springs terminating a short distance inwardly from the inner periphery of the rim; a clamping-plate extending transversely to the plane of the wheel within the inturned ends of said springs and having its contacting face conformed to the adjacent spring and having both its ends bent outwardly in parallelism and apertured, a member extending transversely through the rim and having a wedging relation with said rim, and engaging the edges of said apertures, and means for moving said member transversely to the wheel to draw said clamping plate radially upward.

3. A resilient wheel of the nature disclosed combining a hub; a rim providing at its inner periphery an equispaced series of shallow recesses extending transversely to the plane of the wheel; a series of petal-shaped spokes extending radially from the hub and terminating in overlapping extremities arranged in said recesses; each spoke consisting of two symmetrically related flat leaf-springs, the outer one having its rim-end turned reversely in conformity with said recess and snugly seated therein, and the inner one having its rim-end similarly turned and interfitting within the other, the ends of each of said springs terminating a short distance inwardly from the inner periphery of the rim; a clamping-plate extending transversely to the plane of the wheel within the inturned ends of said springs and having its contacting face conformed

to the adjacent spring and having both its ends terminating at the sides of the rim, and means movable in a direction transverse to the plane of the wheel and coöperating with said clamping plate to draw the same radially outward.

1,217,362. DEMOUNTABLE SUBSTITUTION-HUB. JOHN E. STRIETELMEIER, Cincinnati, Ohio, assignor to The Ideal Wheel Company, Cincinnati, Ohio, a Corporation of Ohio. Filed May 31, 1913. Serial No. 770,953. (Cl. 21—31.)



1. A demountable wheel structure combining a hub having an outwardly extending annular flange provided with an aperture, an annular member of L-shaped section seated on said hub at the inner side of said flange, an annular spoke-mounting element circumscribing said member and said flange and having an apertured portion extending at the outer side of said flange and providing an aperture registering with the aperture of the latter, and means for drawing said parts together in clamping relation.

2. A demountable wheel structure combining a hub having an outwardly extending annular flange, an annular member seated on said hub and located at the inner side of said flange and having its periphery diverging to form a tapered seat having its smaller end adjacent the periphery of said flange, an annular spoke-mounting element circumscribing said member and having a taper fit therewith, and means for clamping said parts together.

3. A demountable wheel structure combining a hub having an outwardly extending annular flange, an annular member seated on said hub and located at the inner side of said flange and having its periphery diverging to form a tapered seat having its smaller end adjacent the periphery of said flange, an annular spoke-mounting element circumscribing said member and having a part extending at the outer face of said flange, and means engaging said part adapted to draw the same toward said flange to force said element in tight fitting relation with said member.

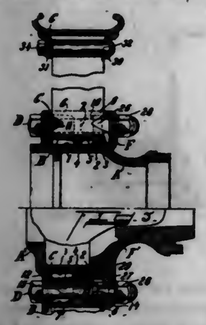
4. A demountable wheel structure combining a hub having an outwardly extending annular flange provided with an aperture and having a peripheral seat at the inner side of said flange, an annular member of L-shaped section having the edge of one of its legs resting on said seat at a distance from said flange and having its other leg resting endwise against the inner periphery of said flange, the periphery of said last-mentioned leg being tapered, an annular spoke-mounting element circumscribing said member and having a taper fit therewith and having an apertured portion extending inwardly at the outer side of said flange, and means coacting with said portion for drawing said parts together in clamping relation.

5. A demountable wheel structure combining a hub having an outwardly extending annular flange provided with an aperture and having a peripheral seat at the inner side of said flange, an annular member of L-shaped section having the edge of one of its legs resting on said seat at a distance from said flange and having its other leg resting endwise against the inner periphery of said flange, the periphery of said last-mentioned leg being tapered, an annular spoke-mounting element circumscribing said member and having a taper fit therewith and having an apertured portion extending inwardly at the outer side of said

flange, and a draw-bolt having one end restrained against movement by said member and having its other end extending through said apertures and terminating in a nut engaging said portion to draw said parts together.

[Claims 6 to 12 not printed in the Gazette.]

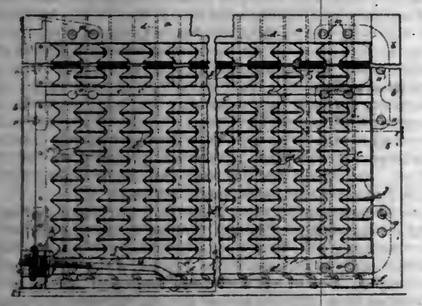
1,217,363. SPRING-WHEEL MECHANISM. JOHN E. STRIETELMEIER, Cincinnati, Ohio, assignor to The Idea Wheel Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 4, 1913. Serial No. 804,606. (Cl. 152—50.)



1. A resilient wheel of the nature disclosed combining a hub-member provided with an annular flange having a series of radial slots, an annular-member having a series of teeth laterally projecting therefrom into said slots, a resilient flat-metal spoke-element configurated edgewise to engage one of said teeth, means coacting with said annular-member and with said hub-member for retaining said spoke-element against radial movement, a rim, and means securing said spoke-element thereto.

2. A resilient wheel of the nature disclosed combining a two-part hub comprising two hub-members adapted to telescope endwise, one of said hub-members provided with an annular flange having a series of slots extending radially, a series of teeth entering said slots, a spacer having a series of slots registering with said first series of slots, a series of sheet-metal resilient spoke-elements in said slots and having notches in one edge engaged by said teeth, means engaging the other edge of said spoke-elements, means urging said parts into tight fitting relation, a rim and means securing said spoke-elements thereto.

1,217,364. GRAIN-SCREEN FOR THRESHING-MACHINES. FRANK C. STUCKEL, Racine, Wis., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed Dec. 3, 1914. Serial No. 875,214. (Cl. 130—19.)



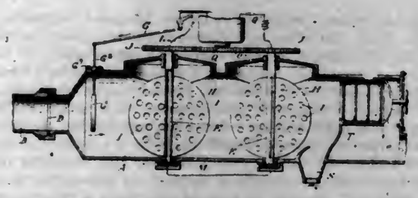
1. For threshing machines, an adjustable grain screen made up of multiple rows of plane slats strung in sets along parallel rock rods pivotally carried for unison tilt on the main frame, each slat having a straight edge at front and a reëntrant or serrated edge at rear with upright ribs or fins extended at the distal points from edge to edge between but offset for successive slats which latter besides, are mounted in overlap relation to define the mesh while channel ways for kernels and finer refuse extend offset across the screen from front to rear between successive ribs thus disparting the fine stuff below from the coarse above, afloat upon the rib tops, substantially as described.

2. For threshing machines, an adjustable grain screen made up of multiple rows of plane slats strung in sets along parallel rock rods pivotally carried for unison tilt on the main frame, each slat having a straight edge at front and a reëntrant or serrated edge at rear with upright ribs or fins abruptly sloped to the straight edge, said ribs extending at the distal points from edge to edge between but offset for successive slats which latter besides, are mounted in overlap relation to define the mesh while channel ways for kernels and finer refuse extend offset across the screen from front to rear between successive ribs thus separating the fine stuff below from the coarse above, afloat upon the rib tops, substantially as described.

3. For threshing machines, an adjustable screen made up of separate slats symmetrically mounted upon parallel rock rods pivoting for unison tilt at the main frame each slat being flat and formed with serrations at one edge but straight at the opposite and with upright fins offset across at the distal points between to dispart the traveling stuff, the reëntrant edge of any given slat overlapping the straight edge of its neighbor to determine the screen mesh and thereby to govern the blast.

4. In adjustable screens for threshing machines a set of separate slats suited for symmetric mount upon parallel rock rods pivotally carried to tilt in common on the main frame, each slat comprising a flat strip serrated at one edge but straight at the opposite and having upright fins extended crosswise at the distal points but with front end abruptly sloping for clearance in adjustment of the neighbor slat.

1,217,365. APPARATUS FOR PURIFYING WATER. EDWIN R. TALLEY, Grinnell, Iowa. Filed Sept. 28, 1916. Serial No. 122,653. (Cl. 204—25.)

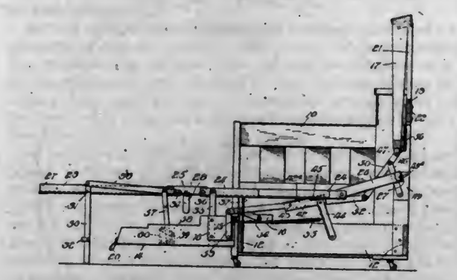


1. An apparatus for softening and purifying water comprising a casing adapted to be connected to a water supply pipe, rotatable shafts mounted in suitable bearings in the casing, perforated wings upon said shaft, means for rotating the latter, filter screens within the casing, and electrical connections with said shafts.

2. An apparatus for softening and purifying water comprising a casing adapted to be connected to a water supply pipe, rotatable shafts mounted in suitable bearings in the casing, perforated wings upon said shaft, means for rotating the latter, filter screens within the casing, electrical connections with said shafts, a diaphragm within the casing, and electrical connections therewith.

1,217,366. FOLDING DAVENPORT OR COUCH. MAURICE TAUBER, Chicago, Ill. Filed June 30, 1915. Serial No. 37,144. (Cl. 5—51.)

1. In a folding couch, the combination of a framework, a seat pivotally connected at its forward edge to said framework, two long bed sections, a short section connecting said two long sections, a pair of brackets fixed on the seat in which the inner long section is pivotally supported, additional means positioned inwardly from said brackets for engaging said inner long section, a pair of links each having one end operatively connected to the outer bed section, a pair of guides on the seat through which the opposite ends of said links pass, stop means on the seat against which said links are arranged to abut so as to assist in supporting the bed structure, and means on each link to prevent its withdrawal from the guide.



2. In a folding couch, the combination of a framework, a seat pivotally connected at its forward edge thereto, two long bed sections, a short section connecting said two long sections, another short section pivotally connected to the inner end of the inner long section and pivotally supported in said frame work, said inner long section being pivotally supported from the seat, a back section mounted for movement up and down in the framework, link means connecting the seat and back for operating the latter, and stop means connected to and operable by said link means and arranged to limit the upward movement of the inner portion of said inner long bed section.

3. In a folding couch, the combination of a framework, a seat pivotally mounted therein, a back mounted for movement up and down in said framework, a sectional bed structure arranged to be folded and unfolded by the seat, link means connecting the seat and back for operating the latter, and stop means connected to and operated by said link means and arranged to engage the inner portion of the bed structure for securing the latter.

4. In a folding couch, the combination of a framework, a seat pivotally mounted therein, a back mounted for movement up and down in the framework, a sectional bed structure arranged to be folded and unfolded by the seat, link means connecting the seat and back for operating the latter, arms pivoted to said link means and arranged to engage the inner portion of said bed structure to secure the latter, and links attached to said arms and pivoted in the framework.

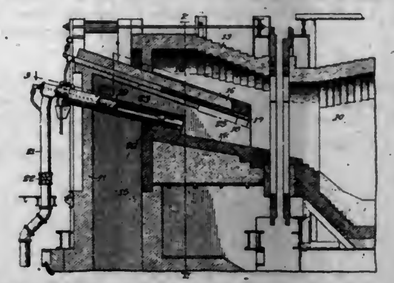
5. In a folding couch the combination of a framework, a seat pivotally mounted therein, a back mounted for movement up and down in the framework, a sectional bed structure arranged to be folded and unfolded by the seat, link means connecting the seat and back for operating the latter, arms pivoted to said link means and each having a stop portion, stops on the bed structure for coöperating with the said stop arms to secure the bed structure, and links pivoted to said arms and to the framework.

[Claims 6 to 11 not printed in the Gazette.]

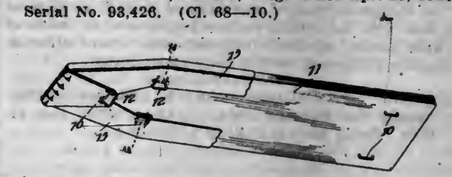
1,217,367. OPEN-HEARTH FURNACE. NELSON THOMAS and ANSON W. ALLEN, Birmingham, Ala. Original application filed July 10, 1914, Serial No. 850,131. Divided and this application filed Dec. 16, 1915. Serial No. 67,151. (Cl. 158—109.)

1. In an open hearth furnace, the combination of walls providing a plurality of vertical flues which are turned at an acute angle in order to extend in a downward direction toward the hearth of the furnace and a pipe projected through the furnace end wall across one of said vertical flues and extending in a line substantially parallel to the downwardly extending portion of said flues, said pipe terminating short of the outlet from the flue in which it is mounted, substantially as described.

2. In an open hearth furnace, the combination of furnace walls providing a plurality of uptake flues, said flues being turned at their upper ends to project downwardly toward the furnace hearth, said flues having a common inlet port to the furnace, and a pipe projected through the furnace end wall across an intermediate vertical flue and in line with the downwardly extending portion of said flue, said pipe being arranged to deliver fluid in line with the travel of the fluid within the flue and thereby avoid whirls and cross currents, substantially as described.



1,217,368. COVER-HOLDER FOR IRONING-BOARDS. THOMAS E. THORN, Bandon, Oreg. Filed Apr. 25, 1916. Serial No. 93,426. (Cl. 68—10.)



1. A fabric holding device comprising an arching member adapted to be connected to a supporting body, and a holding member including pointed sides spaced apart and a laterally directed loop, the terminals of the loop portion extending beyond the side portions, said side portions adapted to be thrust through the fabric and beneath the arching member.

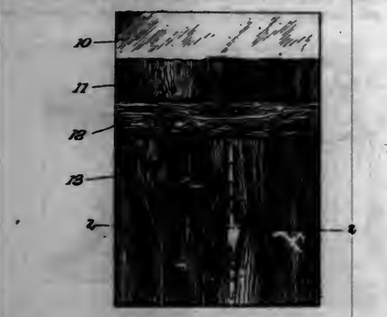
2. A fabric holding device comprising an arching member adapted to be connected to a supporting body, and a holding member including pointed sides spaced apart and a laterally directed loop, the terminals of the loop portion extending beyond the side portions with inwardly directed depressions at the juncture of the side and loop portions, said side portions adapted to be thrust through the fabric and beneath the arching member, and said depressions yieldably engaging the arching member.

1,217,369. COMPOSITE LUMBER AND METHOD OF MANUFACTURING THE SAME. GUSTAV TÜSCHEL, New York, N. Y. Filed Oct. 11, 1913, Serial No. 794,647. Renewed Jan. 23, 1917. Serial No. 144,049. (Cl. 144—309.)

1. The method of manufacturing veneering which comprises forming a compound of white glue, asbestos, and magnesia, in the manner described, covering a sheet of glass therewith, pressing a sheet of veneer upon the glass surface, covering the next sheet of veneer with the compound, pressing another sheet of veneer thereon, covering the second sheet of veneer with said compound, and pressing a third sheet of veneer thereon, and allowing a considerable period of time to elapse for adhesion and curing between the steps required for adding the successive sheets of veneer, all substantially as set forth.

2. The method of forming composite lumber which consists in covering a sheet of glass with an adhesive substance composed of glue, asbestos, and magnesia, compounded substantially as herein described, covering the

glass therewith, pressing a sheet of veneer thereon, and adding successive sheets in the same manner, allowing a sufficient period for curing to elapse between said successive steps, substantially as set forth.



3. The method of manufacturing composite lumber consisting of adding sheets of wood veneer to a base consisting of a sheet of glass by securing said sheets of veneer to the glass and to each other successively by an adhesive compound, and allowing a sufficient time to elapse between the addition of successive veneers to permit of thorough adhesion and curing, substantially as set forth.

4. Composite lumber consisting of a sheet of glass as a base with its outside surface having several sheets of veneer secured successively thereto and to each other by adhesive compound, substantially as set forth.

1,217,370. PEN-CLAMP FOR RULING-MACHINES. GEORGE VAN WORMER, Hamilton, Ohio. Filed Aug. 21, 1916. Serial No. 115,970. (Cl. 33—45.)



1. A pen clamp for ruling machines comprising two clamp sections, means normally separating the sections, eye-plates extending from one of said sections, an oscillating element engaging through said eye-plates in operative contact with the second section, and means for rocking the oscillating element to move the sections toward each other in a clamping operation.

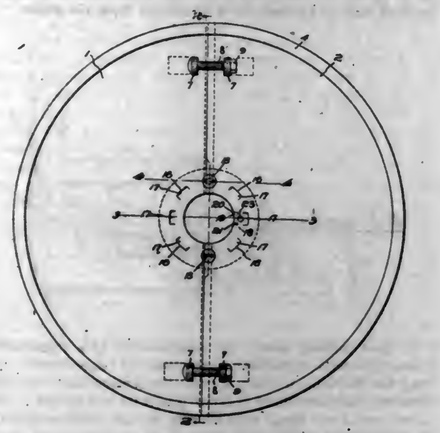
2. A pen clamp for ruling machines comprising two clamp sections, one of said sections having transverse projections, an oscillating element intermediate the transverse projections of the one section, and an outer surface of the second section, and means for rocking said element to force the two sections together.

3. A clamp for ruling machines comprising two clamp sections, eye-plates extending transversely from one of the sections, an operating rod extending through the eye-plates, and having a flat side normally engaging the outer surface of the second section, and means for oscillating the rod to force the sections together.

4. A clamp for ruling machines comprising an apertured section and a second section having transverse eye-plates in registry with the apertures of the first-named section, an operating shaft positioned adjacent an outer surface of the apertured section and engaging through the eye-plates of the second section, and means for oscillating the shaft to force the two sections together.

1,217,371. PULLEY. ANDREW O. VESTINE, Worcester, Mass. Filed Mar. 9, 1915. Serial No. 13,270. (Cl. 64—18.)

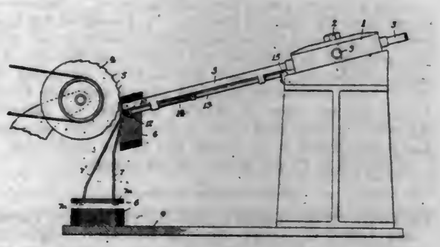
1. A pulley comprising a plurality of side members fashioned from sheet material and engaging each other along their curvilinear edges, one side member comprising a plurality of segmental members, a hub comprising a plurality of arcuate members, the hub members respectively secured together along their adjoining edges.



2. A pulley comprising a plurality of side members fashioned from sheet material, a hub therefor comprising a plurality of arcuate members having interlocking edges, a tapered locking member inserted through and drawing said arcuate members tightly together, and means for locking the hub to the shaft comprising a key having a shaft-biting edge, and means, comprising a pin adapted to be driven through the hub adjacent the key to lock the key therein, and to lock the hub to the shaft.

3. A hollow dust tight pulley comprising a plurality of side members fashioned from sheet material and secured together at their peripheral edges, the edges being relatively offset, each side member comprising a plurality of segmental members having their adjoining edges relatively offset, the offset edges providing shoulders for the edges of the abutting member, and means for drawing said segmental members and side members together.

1,217,372. WASHER-COUNTER. JOSEPH E. VINCENT, Cambridge, Mass., assignor of one-half to Missak Movsesian, Cambridge, Mass. Filed Aug. 9, 1915. Serial No. 44,465. (Cl. 193—1.)



1. A counter for washers, comprising an arm designed to support a quantity of annular devices, means for withdrawing said devices from an end of said arm, and an accumulating instrumentality suspended from said end of the arm, said instrumentality being composed of a plurality of members each having at its lower end a stop for temporarily supporting said annular devices until a proper number has accumulated thereon, said stops being adapted for disengagement from said devices, to permit the accumulated number to drop to a support beneath.

2. A counter for washers, comprising an arm designed to receive and support a quantity of annular washers, means for withdrawing said washers from an end of the arm, and an accumulating device comprising a plurality of legs suspended at their upper ends from said end of the arm, and stops at the lower ends of said legs for temporarily supporting said washers, the upper ends of said legs being near together and their lower ends being separated to distances nearly equal to the inner diameters of said washers.

3. The combination with an arm designed to support a quantity of annular washers, and means for withdrawing the washers one by one from the end of the arm, of a device suspended from the end of the arm and having resilient legs each having an outwardly extended toe at its lower end, upon which the washers accumulate as they leave the arm.

4. An arm pivoted at one end to swing in an inclined plane, a detent pivoted in one end thereof, said detent having an elbow, a slender rod engaging the elbow and slidable parallel with said arm, a helical spring acting on the slender rod to normally retain the detent elevated above the surface of the arm, and a fixed cam projection disposed to meet an end of said rod when the arm is in its lowermost position and to depress the detent, in combination with a toothed wheel positioned at said lowermost point.

1,217,373. ATTACHMENT FOR COOKING UTENSILS. PETER WAGNER, Elyria, Ohio. Filed Mar. 17, 1914. Serial No. 825,282. (Cl. 65—65.)



1. An attachment of the class described, formed of a single piece of wire, comprising inner and outer jaws arranged to engage the inner and outer faces of the wall of a receptacle, and a transverse connecting member for the jaws arranged to rest upon the upper edge of the receptacle, and provided with a looped portion arranged below the inner upper edge of the receptacle and extending inwardly a short distance to engage beneath the peripheral edge of the cover of said receptacle thereby forming a rest for said cover when it is in place upon the receptacle.

2. An attachment of the class described, including an approximately U-shaped inner jaw arranged to engage the inner face of the wall of a receptacle, an outer jaw, and transverse members connected at their outer terminals with the outer jaw and having their inner terminals bent laterally and forming horizontally disposed loops connected with the sides of the inner jaw and arranged to support a lid or cover.

3. An attachment of the class described including inner and outer jaws to engage the inner and outer faces of the wall of a receptacle, and spaced transverse members connecting the said jaws and provided with approximately horizontal loops projecting inwardly from the rim of the receptacle and extending below the upper inner edge of the receptacle forming rests arranged to support a lid or cover, and a spoon holder formed on the outer jaw and arranged between and supported above said horizontal loops, whereby the spoon is caused to lie between said loops and rest upon the cover.

4. An attachment for cooking utensils, comprising inner and outer jaws adapted to engage a rim of a vessel, the outer jaw being provided with vertical jaws to engage the blade of a knife, and a support formed by bending the lower ends of the jaws at an angle to said vertical jaws and at one side of the same for holding the knife handle.

5. An attachment for cooking utensils, comprising jaws adapted to engage the rim of a vessel, one of the jaws being provided with an extension having means formed therein for supporting a spoon, an arm extending from said extension and bent to form vertical jaws, and a horizontal support formed by bending the lower terminals of the vertical jaws, said vertical jaws and horizontal support being adapted to hold a knife.

[Claims 6 to 10 not printed in the Gazette.]

1,217,374. ORTHODONTIA. WILLIAM ERNEST WALKER, New Orleans, La.; J. Mort Walker, New Orleans, La., administrator of said Wm. E. Walker, deceased. Filed Oct. 14, 1911, Serial No. 654,769. Renewed July 21, 1916. Serial No. 110,610. (Cl. 32—19.)



1. An appliance in the improved art of orthodontia involving extrusion, said appliance comprising a carrying member anchored to the teeth, bearing members detachably mounted on said carrying member; said bearing members having projecting fingers constructed to impose with their free ends upon opposite sides of a tooth, over the knuckles thereof, and in the direction of extrusion, two relatively light, independent forces.

2. An appliance in the improved art of orthodontia involving intrusion, said appliance comprising a carrying member anchored to the teeth, a bearing member detachably mounted on said carrying member, said bearing member having projecting fingers constructed to be introduced into the path of the tooth to be intruded, acting as a resilient obstacle.

3. An orthodontia appliance comprising a carrying member substantially conforming to but offset, toward the gums beyond the crown of the teeth, from the dental arch, and carrying bearing members extending to and bearing upon the teeth.

4. An orthodontia appliance comprising a carrying member substantially conforming to but offset, toward the gums beyond the crown of the teeth, from the dental arch, and carrying bearing members extending to and bearing upon the teeth; portions of said bearing members overlying the teeth being substantially parallel to the interdental spaces.

5. An orthodontia appliance comprising a carrying member substantially conforming to but offset, toward the gums beyond the crown of the teeth, from the dental arch, and carrying bearing members extending to and bearing upon the teeth; portions of said bearing members overlying the teeth being substantially parallel to the interdental spaces; said bearing members being resilient in directions perpendicular to the teeth and in the direction of the dental arch.

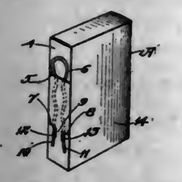
[Claims 6 to 23 not printed in the Gazette.]

1,217,375. BOX. PETER R. WARREN, Boston, Mass. Filed Apr. 13, 1915. Serial No. 21,148. (Cl. 211—40.)

1. The improved cardboard display box for hair pins or the like consisting of a plurality of face panels, a holding band on one of said panels, said holding band being formed by a slit transversely of said panel at one edge of said band and by a pair of L-shaped slits transversely of said panel at the other edge of said band, said L-shaped slits having an unslit portion between them whereby a neck portion is formed at that edge of said holding band.

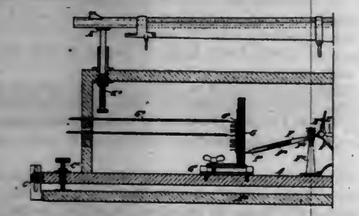
2. The improved cardboard display box for hair pins or the like consisting of a plurality of panels, a holding

band on one of said panels, said holding band being formed by a slit transversely of said panel at the upper edge of said band and by transverse legs of L-shaped slits in said panel at the lower edge of said band, said transverse legs being separated by an unslit portion forming a neck portion at that edge of said holding band and having longitudinal slits extending away from the transverse slits in a direction lengthwise of the panel.



3. The improved display box for hair pins or the like consisting of a single sheet of cardboard died to form box panels, a holding band on one of said panels, said holding band being formed by a slit transversely of the panel at the upper edge of the band and by the transverse legs of a pair of L-shaped slits at the lower edge of the band, the transverse legs of said L-shaped slits being in alinement and having an unslit portion between them forming a neck portion and having longitudinal legs consisting of slits connecting with said transverse slits and extending downwardly in said panel to form the sides of said neck portion.

1,217,376. INDICATING APPARATUS TO ASSIST IN TEACHING ACCURATE SHOOTING AT A TARGET. CLEMENT WILLIAM WEDGWOOD, Roseville, New South Wales, Australia. Filed Jan. 24, 1916. Serial No. 73,817. (Cl. 124—15.5.)

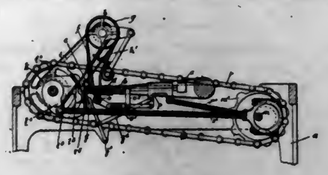


1. In apparatus for teaching rifle shooting at a target, in combination, a fixed base plate, a movable base plate, secured to the rear end of the fixed base plate, such movable plate being adapted to be moved, to a limited extent, in horizontal and vertical planes, a pillar rising from the movable base plate, such pillar having a ball socket at its upper end, a ball in the socket, a stem rising vertically from the ball to support the rifle, a stem projecting from the front and the rear of the ball, such stem being counterbalanced, and a system of levers connected with the forwardly projecting stem, such system of levers terminating in a telescopic spring pointer that is in a metallic contact with the concave face of a miniature target.

2. In apparatus for teaching rifle shooting at a target, in combination, a base plate adapted to be moved to a limited extent in horizontal and in vertical planes, a pillar rising therefrom, such pillar terminating at its upper end in a ball socket, a ball in the socket, a stem rising from the ball to support the rifle, a stem projecting from the front of and counterbalanced at the rear of the ball, a second pillar terminating in a ball socket, a lever arm working with a ball in the socket, a counterweight projecting from the ball engaging with the forward end of the stem behind it, while the forward end is engaged with a dished disk on the rear end of a telescopic spring pointer, and a miniature target with a concave face divided into sections, the telescopic pointer being in metallic contact with the concave face of the target, and electrical means for connecting the sections of the miniature target with corresponding sections of a recording target, whereby the section of the miniature target with which the pointer is in contact at the moment when the trigger is pulled shall be indicated on the face of the recording target.

3. In apparatus for teaching rifle shooting, at a target, in combination, a dummy cartridge consisting of a metallic shell, an axially situated spring firing pin laterally insulated from the shell and so arranged that electric contact shall only be made between the firing pin and the forward end of the metallic cartridge when the pin is struck by the hammer of the rifle, and electric means for connecting the metallic cartridge with the miniature target and with the recording target, the electric current passing through the pin, the cartridge, the barrel of the rifle, the stem that supports the rifle, the pillars carrying the system of levers connecting the rifle with the pointer, through the pointer to a section on the concave face of the miniature target and thence to a recording target.

1,217,377. UNHAIRING-MACHINE. LOUIS T. WEISS, Brooklyn, and ANTONIN CHAPAL, Central Park, N. Y. Filed Oct. 2, 1916. Serial No. 123,270. (Cl. 38—12.)



1. In an unhairing machine, the combination of a fixed stretcher bar over which the pelt may be drawn, a brush disposed above the stretcher bar to brush down the fur while allowing the hair to stand, a brushing device below the stretcher bar for separating the fur from the hair, a guard comb to retain the fur, and oppositely moving knives, each of which has a movement through the arc of a circle for cutting the hair.

2. In an unhairing machine, the combination of a fixed stretcher bar over which the pelt may be drawn, a brush disposed above the stretcher bar to brush down the fur while allowing the hair to stand, a brushing device below the stretcher bar for separating the fur from the hair, a guard comb to retain the fur, a rotary knife and a swinging knife movable through the arc of a circle coöperating therewith to cut the hair.

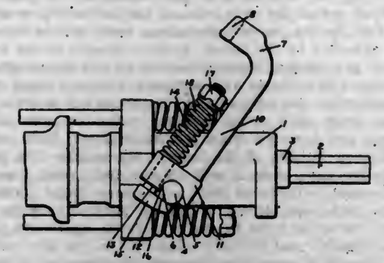
3. In an unhairing machine, the combination of a fixed stretcher bar over which the pelt may be drawn, a brush disposed above the stretcher bar to brush down the fur while allowing the hair to stand, a brushing device below the stretcher bar for separating the fur from the hair, a guard comb to retain the fur, a rotary knife and an oscillating knife mounted concentrically with the rotary knife and coöperating therewith to cut the hair.

4. In an unhairing machine, the combination of a fixed stretcher bar over which the pelt may be drawn, a brush disposed above the stretcher bar to brush down the fur while allowing the hair to stand, a brushing device below the stretcher bar for separating the fur from the hair, a guard comb to retain the fur, a rotary knife, an oscillating knife mounted concentrically with the rotary knife and coöperating therewith to cut the hair, and a common rotative shaft on which said knives are mounted, said shaft having the rotary knives fixed thereon.

5. In an unhairing machine, the combination of a fixed stretcher bar over which the pelt may be drawn, a brush disposed above the stretcher bar to brush down the fur while allowing the hair to stand, a brushing device below the stretcher bar for separating the fur from the hair, a guard comb to retain the fur, a rotary knife, an oscillating knife mounted concentrically with the rotary knife and coöperating therewith to cut the hair, a common rotative shaft on which said knives are mounted, said shaft having the rotary knives fixed thereon, a main drive shaft operatively connected to said first named shaft, an eccentric carried on the drive shaft, and a pitman connection between said eccentric and the oscillating knife to swing the same in proper phase relation to the rotating knife.

[Claims 6 to 9 not printed in the Gazette.]

1,217,378. STEEL-RETAINER FOR HAMMER-DRILLS. RUSSELL H. WILHELM, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 21, 1916. Serial No. 110,461. (Cl. 121—20.)



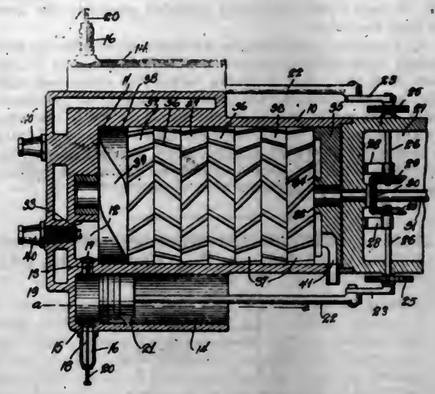
1. In combination with a drilling tool having a front head and a collared drill steel, operatively mounted in said front head, lugs on opposite sides of said front head, and a steel retaining mechanism trunnioned on said lugs, said steel retaining mechanism comprising a yoke having a steel engaging slot and side arms contacting with and bearing on the forward sides of said lugs, retaining bolts slidably mounted in said side arms and having portions engaging the rear sides of said lugs, and means for resiliently drawing said yoke and retaining bolts together.

2. In combination with a drilling tool having a front head and a collared drill steel operatively mounted in said front head, lugs on opposite sides of said front head, and a steel retaining mechanism trunnioned on said lugs, said steel retaining mechanism comprising a yoke having a steel engaging slot and side arms contacting with and bearing on the forward sides of said lugs, retaining bolts slidably mounted in said side arms and having portions engaging the rear sides of said lugs, means for resiliently drawing said yoke and retaining bolts together and means for holding said yoke in operative position.

3. In combination with a drilling tool having a front head and a collared drill steel operatively mounted in said front head, lugs on opposite sides of said front head, and a steel retaining mechanism trunnioned on said lugs, said steel retaining mechanism comprising a yoke having a steel engaging slot and side arms contacting with and bearing on the forward sides of said lugs, retaining bolts slidably mounted in said side arms and having portions engaging the rear sides of said lugs, means for resiliently drawing said yoke and retaining bolts together and means for holding said yoke in operative position comprising flattened surfaces on said lugs arranged to contact with surfaces on said steel retaining mechanism when said yoke is in operative position.

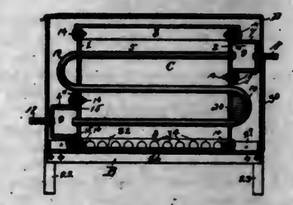
1,217,379. INTERNAL-COMBUSTION ENGINE. CHARLES S. WILLIAMS, Denver, Ill. Filed Mar. 25, 1916. Serial No. 86,746. (Cl. 123—9.)

1. An internal combustion engine comprising a casing, an engine shaft rotatably mounted in the casing and extending beyond one end thereof, said casing being provided with combustion chambers and with an outlet port, a housing at the end of said casing extending about the outer end portion of said shaft, a gear carried by said shaft, stub-shafts extending transversely through said housing and provided at their inner ends with gears meshing with the gear of said engine shaft and having gears mounted upon their outer end portions, cylinders positioned along said casing and having valve controlled communication with said combustion chambers, pistons slidably mounted in said cylinders and having their piston rods pivotally connected with said crank arms, rotors mounted upon said engine shaft within said casing, and means for guiding the passage of gases through said casing.



2. An internal combustion engine including a casing provided with combustion chambers and with an outlet port, an engine shaft rotatably mounted in the casing and extending beyond one end thereof, a gear carried by said shaft, stub shafts extending transversely of the engine shaft and provided at their inner ends with gears meshing with the gear of the engine shaft, cylinders positioned along said casing and having valve controlled communication with the combustion chambers, pistons slidably mounted in said cylinders and having their piston rods extending in operative relation to the stub shafts, means for transmitting movement from the stub shafts to the piston rods, and rotors mounted upon said engine shaft within said casing.

1,217,380. ELECTRIC WATER-HEATER. WILLIAM CHARLES WILLIAMS, Winnipeg, Manitoba, Canada. Filed Aug. 16, 1915. Serial No. 45,721. (Cl. 219—39.)



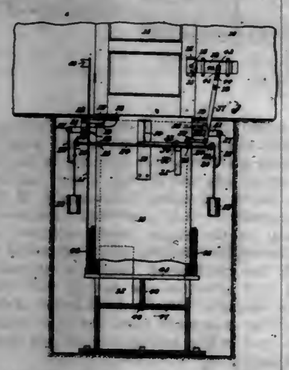
1. A heater comprising in combination, a stationary water-tube boiler having outlet connection with a house service by which the flow of water through the boiler is controlled, a removable base normally in contact with the under side of the boiler, a casing inclosing the boiler and detachably connected with the base, and electrically operated means in the base to heat the boiler.

2. A heater comprising in combination, a water tube boiler, a base, means normally supporting the base in contact with the boiler, a casing surmounting the base and detachably connected therewith to form with the base a chamber in which the boiler is contained, a plurality of resistance coils in the base, and electro-magnetically operated means by which the coils may be energized to heat the chamber.

3. A heater comprising in combination a water-tube boiler having inlet and outlet pipes connected therewith and by which it is supported; a base normally in contact with the boiler and having legs adapted to be turned up to remove the base from contact with the boiler; a casing surmounting the base and detachably connected therewith to form with the base a chamber in which the boiler is contained, said casing having slots in the ends thereof to receive the inlet and outlet pipes and members pivoted to the casing to cover the slots when the casing is in position on the base; and electrically operated means in the base to heat the boiler.

4. A heater comprising in combination, a suitably supported water-tube boiler, a removable base normally in contact with the boiler, a casing detachably connected with the base and inclosing the boiler, a plurality of resistance coils arranged in the base, electro-magnetically operated switch means by which the coils may be connected with a source of electrical energy, and electrical means cooperative with the switch means to indicate at various points when the apparatus is in operation.

1,217,381. BURGLAR-CATCHING DEVICE. ANTONI ZUBRYD, Castle Shannon, Pa. Filed June 10, 1915. Serial No. 33,410. (Cl. 43—19.)



1. A device of the class described comprising in combination with a house door, a normally horizontally positioned trap door adjacent the same, shiftable supporting bolts for the trap door, a turn knob for the house door, and automatic trip releasing means for the said bolts operatively associated with the knob.

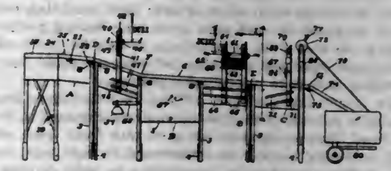
2. A device of the class described comprising in combination with a house door, a turn knob for the door, a casing cage positioned forwardly beneath the door, a swinging lid for said cage normally positioned horizontally forwardly of said door, slidable retaining bolts carried by the cage and normally positioned beneath said lid, retracting levers for the bolts, a bar journaled to said cage and having curved projecting ends, chains operatively attached to said levers, weights secured to the free ends of the chains, hooks attached to the intermediate portions of said chains, and normally arranged upon the said bar ends when the device is in its normal set portion, and tripping means for the bar operatively associated with said knob.

3. A device of the class described comprising in combination with a house door, a turn knob for the door, a casing cage positioned forwardly beneath said door, a swinging lid for the cage normally positioned horizontally forwardly of the door, slidable retaining bolts carried by the cage and normally positioned beneath the lid, retracting levers for said bolts, a bar journaled on said cage and having curved projecting ends, chains operatively attached to said levers, weights secured to the free ends of the chains, hooks attached to the intermediate portions of the chains and normally arranged upon the bar ends when the device is in its normal set position, a bracket upon said cage, the said bar being longitudinally shiftable and having a finger portion normally flatly positioned upon the top of said bracket, an angular trip pivoted to the upper side of said bracket and having a path of movement in the same plane as said finger portion, resilient return means for the trip lever, and disengageable operative connections between the said trip lever and actuating means.

4. A device of the class described comprising in combination with a house door, a turn knob for the door, a casing cage positioned forwardly beneath said door, a swinging lid for the cage normally positioned horizontally forwardly of the door, slidable retaining bolts carried by the cage and normally positioned beneath said lid, retracting levers for said bolts, a bar journaled on said cage and having curved projecting ends, chains operatively attached to the levers, weights secured to the free ends of the chains, hooks attached to the intermediate portions of the chains and normally arranged upon the bar ends when the device is in its normal set position, a bracket upon said cage, said bar being longitudinally shiftable and having a finger portion normally flatly positioned upon the top of the bracket, an angular trip pivoted to the upper side of said bracket and having a path of movement in the same plane as the same finger portion, a slide plate operatively associated with said knob, a pivoted operating lever having a shiftable upper end portion detachably and pivotally connected to the said plate, and pivotal link connections between the lower end of said operating lever and said trip lever.

5. A device of the class described comprising in combination with an outside door having operating turn knobs, a casing cage positioned beneath and outwardly of said door, a hinged lid for the said cage, a resiliently suspended false bottom within the cage, a signal flag mounted upon the false bottom and positioned adjacent said door, shiftable supporting bolts for said lid, and tripping releasing operating means for said bolts operatively associated with said knobs.

1,217,382. ADJUSTABLE LABELING-MACHINE. ARTHUR B. AINSWORTH, Leavenworth, Kans., assignor to R. M. Hughes, Nevada, Mo. Filed Apr. 19, 1918. Serial No. 762,443. (Cl. 216—44.)



1. The combination of, an inclined track-way, angle shaped standards supporting said track-way, adjustable sections forming part of said standards, slots in said standards, slots in said section, and bolts in said slots whereby the elevation and the horizontal angle of said track-way may be changed and adjusted, and means supported by said standards whereby labels may be applied to parcels as said parcels descend said track-way.

2. The combination of, an inclined track-way, a frame supporting said track-way, said trackway constructed to guide parcels, a table connected to the upper end of said track-way, a right angle shaped bar with one flange thereof lying flat upon said table and the remaining flange projecting upward and lying along the outer edge of said table and forming a continuous side board on three sides of and a part of the fourth side of said table, and means supported by said frame whereby labels are applied to said parcels as said parcels descend said track-way.

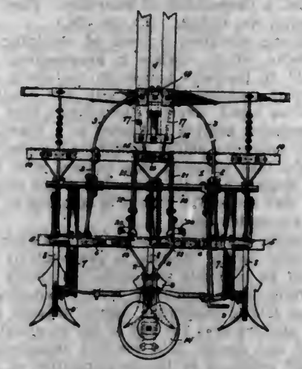
3. The combination of, rails forming an inclined track-way for parcels, arms pivoted in said track-way near the upper end thereof, said arms normally lying within and parallel with the rails of said track-way, angle lugs projecting upward on the upper end of said arms, whereby the lower end of said arms are raised by said parcels as said parcels pass over said lugs and said lugs gain their normal position as said parcels pass to the lower end of said arms thereby checking the speed of said parcels spacing said parcels and preventing contact one with the other, and means to apply labels to said parcels as said parcels descend said track-way.

4. The combination of, rails forming an inclined track-way, arms pivoted in said track-way near the upper end thereof, said arms normally lying parallel with the rails of and within said track-way, lugs on the upper end of said arms whereby said arms are oscillated by parcels descending said track-way and said parcels are separated and spaced, and means spaced along said track-way to apply labels to parcels as said parcels descend said track-way.

5. The combination of, an inclined track-way, a table at the upper end of said track-way, a movable rail on said track-way, an angle shaped bar lying along the outer edge of said table, the end of said movable rail bent to overlap said angle shaped bar and completely surround the upper side of said table excepting the opening to said track-way, and means to apply labels to parcels as they descend said track-way.

[Claims 6 to 18 not printed in the Gazette.]

1,217,383. CULTIVATOR. RUDOLPH J. ALTGELT, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Original application filed Feb. 26, 1915, Serial No. 10,787. Divided and this application filed June 8, 1916. Serial No. 102,486. (Cl. 97—35.)



1. The combination with a wheeled frame, soil engaging parts carried thereby, and a tongue, of a cross head pivoted to the frame, connections between said cross head and the tongue, pivoted foot levers, and connections between said foot levers and the cross head.

2. The combination with a wheeled frame, soil engaging parts carried thereby and a tongue, of a cross head pivoted to the frame, bars secured to said cross head at respective sides of its pivot and also secured to said tongue, foot levers, and connections between said cross head and said foot levers.

3. The combination with a wheeled frame having a curved forward end, soil-engaging parts connected with the frame, and a tongue, of a guide connecting said tongue with the curved forward end of the frame, foot levers, a cross head pivoted to the frame, rigid connections between said tongue and cross head, and connections between said cross head and foot levers.

4. The combination with a main horizontal frame, wheels, and axle members, of forward and rear cross beams rigid with the main frame, soil engaging parts connected with the forward cross bar, a tongue movably connected with the main frame forwardly of its rear end, a cross head pivoted to the forward cross beam, rigid connections between said cross head and the rear end of the tongue, and foot operated operating means for said cross head.

5. The combination with a wheeled frame having a curved forward end, soil-engaging members, and a tongue, of a guide connecting said tongue with the curved forward end of the frame, foot levers, and connections between said foot levers and the tongue for causing the frame to be shifted relatively to the tongue when said foot levers are operated.

1,217,384. UTILITY-BOX. DANIEL S. AMSTUTZ, Orrville, Ohio. Filed Jan. 22, 1915. Serial No. 3,815. (Cl. 45—90.)



1. In combination with a desk top having an opening therein, a suitable box provided with lateral flanges, a track frame having flanges formed thereon fastened to the box so as to form channels between the flanges, an independent frame attached to the desk top and having lateral flanges projecting into the channels, a partition in the box defining an ink well space, and means for fixing the registering position of the ink well and the opening as the box is moved on the supporting flanges of the seat frame.

2. In combination with a desk top having an opening therein, a box slidable thereunder, and stops limiting the extent of movement of the box in either direction said box comprising an ink well compartment, a shavings compartment, a removable tray, and means for removably holding a pencil sharpener so that it projects into the shavings compartment, one of the stops, the desk top opening and ink well space being coördinated to define the position when the ink well and the opening are in register and the other stop preventing the accidental removal of the box.

3. A suitable supporting main frame having lateral flanges beneath the same, a suitable box having companion flanges beneath those of the supporting frame, an independent frame attached thereto to form a box unit, extensions therefrom extending above the supporting frame flanges forming a channel into which the main frame flanges project, and suitable automatic means adapted to prevent the extreme accidental removal of the box unit from the supporting frame.

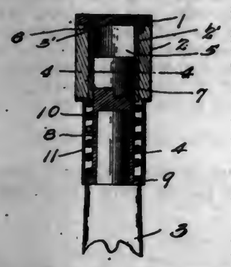
4. In combination with a desk top having an opening therein, a lineally extending guide thereunder adjacent the opening, a box slidably mounted on the guide, said box comprising an ink well compartment provided with an ink well, and means for limiting the movement of the box on the guide so as to bring the ink well and the desk top opening in register with each other.

5. A utility box comprising in combination a drawer, means for removably holding a pencil sharpener thereon, a shavings compartment into which the pencil sharpener projects, and a tray above the said compartment adapted to confine the shavings to their compartment and also provide a receptacle for pens, pencils, etc.

1,217,385. RESILIENT WHEEL. CALVIN MCDOWELL ANKENY, Somerset, Pa. Filed May 31, 1916. Serial No. 100,851. (Cl. 152—53.)

The combination with a felly having a socket and a bushing seated therein and a tire on the felly to retain the bushing, of a spoke with a reduced end, a flanged fer-

rule fitted over said end and projecting in the bushing, a spring between the flanged end of the ferrule and the



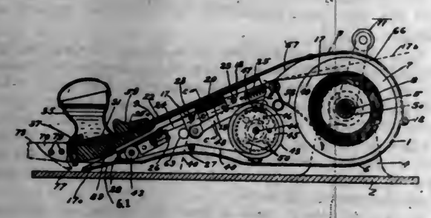
inner end of the bushing, and a sleeve on the ferrule inclosing said spring.

1,217,386. BLADING CONSTRUCTION FOR TURBO-COMPRESSOR IMPELLERS. OTTO BANNER, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 23, 1912. Serial No. 721,937. (Cl. 230—11.)



An impeller for turbo compressors comprising a disk, a cover, blades having flanges riveted to said disk and cover, and reinforcing pieces extending across only the outer ends of said blades, said reinforcing pieces being riveted to said blades and having flanges riveted to said disk and cover and having their central portions thinner than their edges.

1,217,387. STAMP-AFFIXER. JOHN HERBERT BARROW, Chicago, Ill. Filed Jan. 19, 1914. Serial No. 813,043. (Cl. 216—32.)



1. A stamp affixer comprising a housing frame, means carried by said frame for supplying a continuous strip of stamps, a step feed member adapted to advance the strip a definite amount for each operation thereof, means for severing the stamps successively after the strip is advanced, means for sliding the severed stamp forward onto a receiving surface, and moistener means carried by the said feed mechanism for moistening the receiving surface in advance of the stamp.

2. A stamp affixer comprising a housing frame, means therein adapted for mounting a strip of stamps arranged in a roll together with a backing ribbon, step-by-step feed mechanism adapted for operation by the thumb for advancing the stamp strip and ribbon the exact length of a stamp for each operative movement of the thumb, severing means adapted to remove the foremost stamp from the strip at the beginning of and by each operative movement of the thumb, means actuated by each operative movement of the thumb for moistening a receiving surface, means also actuated by each operative movement of the thumb for slicing the detached stamp into place upon the moistened surface, and automatic means for collective winding of the used portion of the ribbon.

3. A stamp affixer comprising a stationary supporting frame in combination with a housing frame oscillatively supported thereon, said housing frame being formed and adapted to receive a strip of stamps in the form of a roll and having feed mechanism adapted to advance the strip successively the exact length of a stamp, means operatively connected to the feed mechanism for severing the stamps, for moistening a receiving surface and for advancing the several stamps thereupon, the forward end of the stamp affixer being vertically movable with respect to the frame to receive objects of variable height upon which the stamps are to be affixed.

4. A stamp affixer comprising a frame, means carried by said frame for supporting a strip of stamps, a reciprocating carriage for advancing the strip at each operation thereof, a moistening device carried by said carriage and traveling in advance of said strip of stamps, and means for affixing the stamps.

5. A stamp affixer comprising a housing frame, means for supplying a strip of stamps, feed mechanism carried by said frame for advancing the strip, means carried by said feed mechanism for moistening a receiving surface, means for severing the stamps successively as the strip is advanced, and means for affixing the severed stamps to the moistened receiving surface.

[Claims 6 to 17 not printed in the Gazette.]

1,217,388. PROCESS OF PRODUCING A SOLUBLE POTASSIUM COMPOUND. HARRY P. BASSETT, Catonsville, Md., assignor to The Spar Chemical Company, Baltimore, Md., a Corporation of Maryland. Filed Mar. 8, 1915. Serial No. 12,932. (Cl. 23—22.)

1. The herein described process of obtaining soluble potassium salts, which consists in progressively heating a mixture of an insoluble potassium containing silicate, an acid sulfate decomposable by heat, and a sulfur trioxid absorption agent, whereby the mixture near the end of the progressive heating is heated to a reaction temperature for producing sulfur trioxid, and conducting the sulfur trioxid thus produced into contact with the portion of the mixture near the beginning of the progressive heating, so that the sulfur trioxid is absorbed by the sulfur trioxid absorption agent.

2. The herein described process of obtaining soluble potassium salts, which consists in progressively heating a mixture of an insoluble potassium containing silicate, an acid sulfate decomposable by heat, a reducing agent, and a sulfur trioxid absorption agent, whereby the portion of the mixture near the end of the progressive heating is dried and heated to a reaction temperature and sulfur trioxid produced by the decomposition of the acid sulfate, and conducting the sulfur trioxid thus produced into contact with the portion of the mixture near the beginning of the progressive heating and which contains the sulfur trioxid absorption agent, so that the sulfur trioxid is absorbed by such agent.

3. The herein described process of obtaining soluble potassium salts, which consists in progressively heating a mixture of an insoluble potassium containing silicate, an acid sulfate decomposable by heat, and water, whereby the portion of the mixture near the end of the progressive heating is dried and heated to a reaction temperature for producing sulfur trioxid by the decomposition of the acid sulfate, and conducting the sulfur trioxid thus produced into contact with the portion of the mixture near the beginning of the progressive heating and which contains the water, so that the sulfur trioxid is absorbed by the water.

4. The herein described process of obtaining soluble potassium salts, which consists in progressively heating a mixture containing an insoluble potassium containing silicate, an alkali metal acid sulfate, and a sulfur trioxid absorption agent, whereby the portion of the mixture near the end of the progressive heating is heated to a reaction temperature and sulfur trioxid produced by the decomposition of the alkali metal acid sulfate, and conducting the sulfur trioxid thus produced into contact with the portion of the mixture near the beginning of the progressive heating and which contains the sulfur trioxid absorption agent, so that the sulfur trioxid is absorbed by such agent.

5. The herein described process of obtaining soluble potassium salts, which consists in progressively heating an insoluble potassium silicate and an alkali metal sulfate, in the presence of a sulfur trioxid absorption agent and a reducing agent, whereby the portion of the mass near the end of the progressive heating is heated to a reaction temperature and sulfur trioxid produced by the decomposition of the alkali metal acid sulfate, and conducting the sulfur trioxid thus produced into contact with the portion of the mass near the beginning of the progressive heating and which contains the sulfur trioxid absorption agent, so that the sulfur trioxid is absorbed by the sulfur trioxid absorption agent.

[Claims 6 to 8 not printed in the Gazette.]

1,217,389. PROCESS OF TREATING POTASSIUM CONTAINING SILICATES AND PHOSPHATE-ROCK AND THE PRODUCT OF SUCH PROCESS. HARRY P. BASSETT, Catonsville, Md., assignor to The Spar Chemical Company, Baltimore, Md., a Corporation of Maryland. Filed July 15, 1915. Serial No. 40,030. (Cl. 23—22.)

1. The herein described process of obtaining soluble potassium salts which consists in heating an insoluble potassium containing silicate and phosphate rock to a reacting temperature in the presence of a mineral acid adapted to decompose phosphate rock and a reducing agent.

2. The herein described process of obtaining soluble potassium salts, which consists in subjecting a mixture comprising insoluble potassium containing silicate, phosphate rock, water, and sulfuric acid to the action of heat at a reacting temperature, in the presence of a carbonaceous reducing agent.

3. The herein described process of obtaining soluble potassium salts which consists in heating an insoluble potassium containing silicate, phosphate rock, sulfuric acid, water and carbon to a temperature of approximately from 900° to 1200° F.

4. The herein described process which consists in heating to a reacting temperature an insoluble potassium containing silicate, phosphate rock, sulfuric acid, water and carbon in the following approximate proportions by weight: silicate 10 parts, phosphate rock 1 to 2 parts, sulfuric acid 6 to 8 parts, water 6 to 8 parts, carbon .5.

5. The herein described process of obtaining soluble potassium salts, which consists in subjecting a mixture comprising insoluble potassium containing silicate, a tricalcium phosphate, water, and sulfuric acid, to the action of heat at a reacting temperature, in the presence of a reducing agent.

1,217,390. PROCESS OF PRODUCING POTASSIUM SALTS. HARRY P. BASSETT, Catonsville, Md., assignor to The Spar Chemical Company, Baltimore, Md., a Corporation of Maryland. Filed July 15, 1915. Serial No. 40,031. (Cl. 23—22.)

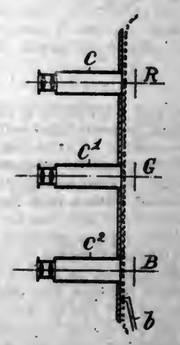
1. The herein described process of producing soluble potassium salts which consists in heating to a reacting temperature an insoluble potassium containing silicate, an alkaline earth metal sulfate, a reducing agent and sulfuric acid.

2. The herein described process of producing soluble potassium salts which consists in heating to a reacting temperature an insoluble potassium containing silicate, an alkaline earth metal sulfate, sulfuric acid, a reducing agent and water.

3. The herein described process of producing soluble potassium salts which consists in heating to a reacting temperature an insoluble potassium containing silicate, calcium sulfate, sulfuric acid, water, and a reducing agent.

4. The herein described process of producing soluble potassium salts which consists in heating to a reacting temperature green sand marl or similar naturally occurring insoluble potassium containing silicate, calcium sulfate, sulfuric acid, water, and carbon in approximately the following proportions by weight: green sand marl 10 parts, calcium sulfate 1 to 2 parts, sulfuric acid 4 parts, water 6 to 8 parts, and carbon .5 parts.

1,217,391. COLOR CINEMATOGRAPHY. COLIN NOEL BENNETT, Penzance, England. Filed Apr. 29, 1913. Serial No. 764,306. (Cl. 88—16.4.)



1. Process of color cinematography wherein the color sensation records are taken lengthwise of the film in sets each consisting of a plurality of color sensation records taken simultaneously through color filters, said process comprising taking the different color sensation records of each set simultaneously but not in consecutive order on the film, the spaces between appertaining color sensation records of each set being occupied by color sensation records of other sets of the same picture, and moving the film forward at each shift a predetermined multiple of the distance of one sensation record.

2. Process of three color cinematography wherein the color sensation records are taken lengthwise of the film in sets each consisting of three color sensation records taken simultaneously through color filters, said process comprising taking the three different color sensation records of the respective sets simultaneously on the film in the following order lengthwise of the film, (calling the picture spaces 1, 2, 3—*n*), set on spaces, 1, 5, 9; set on spaces 4, 8, 12; set on spaces 7, 11, 15; set on spaces 10, 14, 18; set on spaces 13, 17, 21, and so on substantially as described.

3. As a new article of manufacture, a cinematographic film bearing the color sensation records in sets, each consisting of a plurality of different color sensation records of the same movement phase, the records of each set being spaced apart on the film, the spaces between appertaining records of each set being occupied by records of other sets of the same picture, substantially as described.

4. As a new article of manufacture, a positive cinematographic film bearing the color sensation records in sets, each consisting of a plurality of different color sensation records of the same movement phase, the records of each set being spaced apart on the film, and the spaces between appertaining records of each set being occupied by records of other sets of the same picture, substantially as described.

5. As a new article of manufacture cinematographic films bearing color sensation records in sets each consisting of three color sensation records of the same movement phase spaced apart and arranged in sets in the following order lengthwise of the film (calling the picture spaces 1, 2, 3—*n*) 1, 5, 9; 4, 8, 12; 7, 11, 15; 10, 14, 18; 13, 17, 21 and so on substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,217,892. PERMUTATION-LOCK. OSCAR BERCHTOLD, East Pittsburgh, Pa. Filed July 10, 1914. Serial No. 850,184. (Cl. 70—112.)

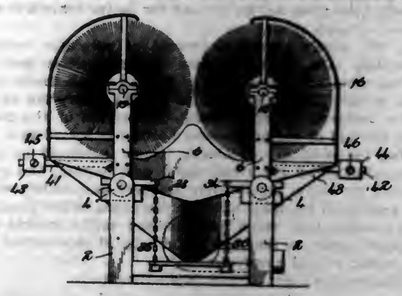


1. A permutation lock comprising a casing, a shackle having one end beveled connected therewith and its other end shouldered and capable of extending therein, guide pins secured to the inner wall of and projecting within said casing, an irregular shaped locking plate arranged in said casing and provided with a stop lug capable of engaging the shouldered end of said shackle for locking the latter, said locking plate further provided with oppositely disposed cut out portions extending from the periphery thereof inwardly and adapted to receive said guide pins and provide a clearance therefor, said plate having a cut away portion at the bottom thereof providing a key engaging shoulder, a lug projecting from said plate, a permutation device coöperating with said plate comprising an inner disk having a shaft projecting therefrom, an outer disk having a hub revolubly mounted upon the said shaft, hands upon the ends of said shaft and hub, each of said disks being provided with a notch adapted to provide a clearance for the said lug only when the said notches are positioned in alinement with the said lug, a dial positioned adjacent the said hands and a double armed spring bearing against the beveled end of said shackle and the adjacent side of said plate adapted to normally hold the shackle and plate in their locked positions.

2. A padlock comprising a casing having a rear wall and a front dial, inwardly projecting pins carried by said rear wall, an irregular shaped plate shiftably mounted upon the said wall and arranged with substantially opposite notches guidingly positioned over the said pins, a keeper lug carried by the said plate, a shackle hinged to the said casing and having a locking end positioned beneath the said keeper lug when in its locked arrangement, a two armed positioning spring tensioned between the said shackle and plate, circular disks in flat engagement with each other revolubly seated upon the forward face of the said plate spaced between the said pins and provided with peripheral notches of equal dimensions, a projecting stop lug upon the outer face of said plate and having a path of movement inwardly of the said notches when said disks are in their released positions during the shifting of the plate, peripheral portions of the said disks being in the path of movement of the said stop lug when the disks are in their normal locked positions, and separate operating hands for the said disks arranged outwardly of the said dial.

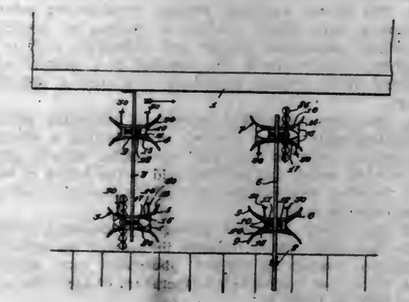
1,217,893. FEATHER-REMOVING DEVICE. EMIL G. BUSO, Faribault, Minn. Filed July 30, 1913. Serial No. 782,018. (Cl. 17—30.)

In a machine of the character described, a supporting frame, parallel shafts journaled in said frame, pairs of upright bearing members mounted on said shaft and movable thereon, other shafts journaled in said bearing members, brushes carried by said last mentioned shafts, means to rotate said last mentioned shafts and said brushes, arms projecting outwardly from and disposed at right angles with respect to said bearing members, weights adjustably mounted on said arms normally tending to retain said brushes out of engagement with each other, other arms projecting inwardly from said bearing members disposed in a plane below the plane of said first mentioned arms, a



weighted treadle carried by said supporting frame, and means connecting said treadle and the inner ends of said last mentioned arms, substantially as described.

1,217,894. MAIL-TRANSFERRING APPARATUS. CHRISTIAN BERNHARD, Anthon, Iowa. Filed Feb. 15, 1916. Serial No. 78,496. (Cl. 258—15.)

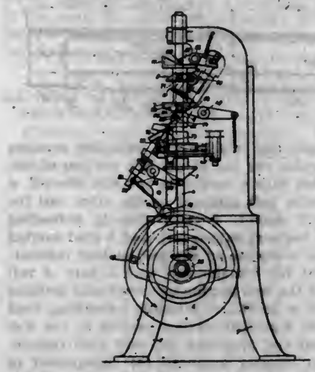


In a mail transferring apparatus, delivery and receiving elements of duplicate construction, each comprising parallel spaced guide arms having their terminals spaced in diverging relation, whereby mail may be received in either end of the element, or delivered therefrom, a reciprocable cushioning element between the arms, and yieldable upon engagement at either end thereof to cushion impact of mail upon the elements, spring pressed retaining members at the arm terminals to retain mail within the arms, and means for supporting mail to be delivered upon the delivering element.

1,217,895. THREAD-STITCHING MACHINE FOR BOOK-BINDING. ULRICH BISCHOF, Winterthur, Switzerland, assignor to Gebr. Stäubli, Horgen, Switzerland. Filed June 3, 1915. Serial No. 31,962. (Cl. 112—41.)

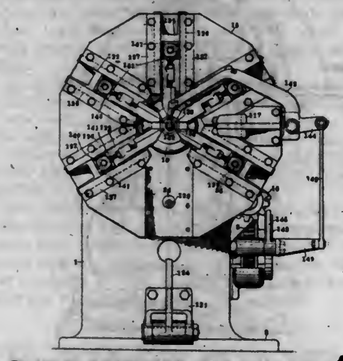
1. The combination in a thread-stitching-machine for book-binding, a movable table, working elements comprising an eyed needle, a hooked needle, a thread layer moving to and fro between these needles, a prick-punch, a thread-clamp, a take-up, a vertical shaft, carriers for said elements, cams secured to the vertical shaft near the carriers of the said working elements and at approximately the same height as the said carriers, small levers to transmit the movement of the cams to the carriers of the working members, means to drive the vertical shaft and means to bring the table in and out of the operative position.

2. The combination in a thread-stitching-machine for book-binding, a swinging table, two arms carrying the table and fixed upon a horizontal shaft, two cam-disks fixed upon another horizontal shaft and actuating two levers fixed upon the first named horizontal shaft to bring the table in and out of the operative position, working elements comprising an eyed needle, a hooked needle, a thread layer moving to and fro between these needles, a prick-punch, a thread-clamp, a take-up, a vertical shaft, carriers for said elements, cams secured to the vertical



shaft near the carriers of the said working elements and at approximately the same height as the said carriers, small levers to transmit the movement of the cams to the carriers of the working elements and means to drive the vertical shaft.

1,217,896. NUT-CASTELLATING MACHINE. EMILE C. BOERNER, Port Chester, N. Y., assignor to Russell, Burdsall & Ward Bolt and Nut Co., Port Chester, N. Y., a Corporation of New York. Filed Apr. 2, 1914. Serial No. 828,976. (Cl. 10—72.)



1. In an apparatus of the character described, in combination, means adapted to hold a nut-blank whereby a portion thereof may be exposed, means adapted to feed a nut-blank to said holding means, and means adapted to cut simultaneously a plurality of recesses at angles to each other in said blank.

2. In an apparatus of the character described, in combination, means adapted to hold a nut-blank whereby a portion thereof may be exposed, means adapted to feed a nut-blank to said holding means, planing means, and means adapted to cause relative movement between said planing means and said holding means to plane slots between a plurality of exterior faces of said nut-blank and a bolt-hole thereof, respectively.

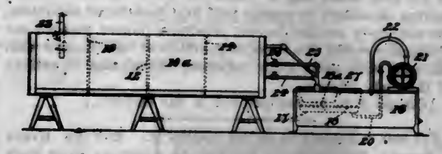
3. In an apparatus of the character described, in combination, means adapted to hold a nut-blank whereby a portion thereof may be exposed, means adapted to feed a nut-blank to said holding means, a pair of cutters, and means adapted to move said cutters toward each other to shape said nut-blank.

4. In an apparatus of the character described, in combination, means adapted to hold a nut-blank whereby a portion thereof may be exposed, means adapted to feed a nut-blank to said holding means, and a pair of oppositely disposed cutters adapted to cut a recess in said nut-blank from opposite faces thereof to a common bolt-hole.

5. In an apparatus of the character described, in combination, means adapted to hold a nut-blank whereby a portion thereof may be exposed, means adapted to feed a nut-blank to said holding means, a plurality of cutters, and means adapted to actuate said cutters to cut recesses simultaneously in said nut-blanks between exterior faces thereof and a bolt-hole thereof, respectively.

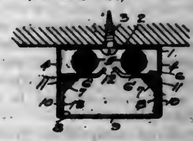
[Claims 6 to 56 not printed in the Gazette.]

1,217,897. PROCESS AND MEANS FOR FILTERING WATER. FRANCIS P. BOLAND, Providence, R. I. Filed Nov. 23, 1915. Serial No. 63,082. (Cl. 210—5.)



The method of collecting non-liquid particles of precious metals from waste wash water from jewelers' manufacturing establishments, which consists in producing a slow overflow of a body of the wash water through a restricted passage into the top of a second body of said waste wash water to collect sediment not readily burned in the bottom of the first body of said water and permit the carrying off of the suspended non-liquid particles of precious metals through the restricted passage into the second body of water, then slowly discharging the second body of waste wash water through a second restricted passage above the bottom and considerably below the surface level of the second body of said water to collect additional sediment not easily burned in the bottom thereof and insure the carrying off of the suspended non-liquid particles of precious metals, filtering the discharged non-sediment carrying waste wash water from the said second body through a combustible filtering material to collect therefrom the suspended non-liquid particles of precious metals, and finally burning the filtering material to recover the particles of precious metals.

1,217,898. METAL CONDUIT-MOLDING. WILLIAM A. BONNELL, Brooklyn, N. Y. Filed Dec. 5, 1912. Serial No. 735,116. (Cl. 247—8.)



1. A conduit for electric conductors comprising a channeled body portion having longitudinal locking shoulders in its side walls and a channeled cover member having locking shoulders to engage said first mentioned shoulders, the side walls of one of said members having conductor retaining fingers fixed thereto and adapted to extend from the point of attachment to the side walls across the conduit and above the bottom thereof.

2. A conduit for electric conductors comprising a channeled body portion having longitudinal locking shoulders in its side walls and a channeled cover member having locking shoulders to engage said first mentioned shoulders, one of said members having conductor retaining fingers sheared out of its side walls and adapted to extend from the point of attachment with the side walls across the conduit and above the bottom thereof.

3. A conduit for electric conductors comprising a channeled body portion having longitudinal locking shoulders

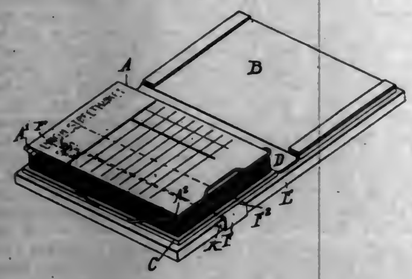
in its side walls and a channeled cover member having locking shoulders to engage said first mentioned shoulders, one of said members having retaining fingers sheared out of its side walls and having openings at the outer extremities of said retaining fingers for the insertion of a tool to bend said fingers to retaining position.

4. A conduit for electric conductors comprising a channeled body portion having longitudinal locking shoulders in its side walls and a channeled cover member having locking shoulders to engage said first mentioned shoulders, said body portion having retaining fingers sheared out of its side walls and the side walls of the cover member being so formed as to completely cover the openings in the body portion left by said retaining fingers when bent to retaining position.

5. A conduit for electric conductors comprising a channeled body portion having longitudinal locking shoulders in its side walls and a channeled cover member having locking shoulders to engage said first mentioned shoulders, the side body portion having retaining fingers sheared out of its side walls, the lines of junction of said fingers with the said side walls lying adjacent the locking shoulders of the body portion.

[Claims 6 to 10 not printed in the Gazette.]

1,217,399. MANIFOLDING DEVICE. EDWARD KIRBY BOTTLE, Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Ontario, Canada, a Corporation of Ontario. Filed Mar. 1, 1915. Serial No. 11,173. (Cl. 11—11.)



1. A manifolding device comprising, in combination, a cover, a manifolding pad removably mounted on one face of said cover, a non-absorbent guard on which said cover rests, and means adapted to removably attach said cover to said guard, whereby said cover and guard are transportable together.

2. A manifolding device comprising, in combination, a cover having opposite faces of non-absorbent material, a manifolding pad removably mounted on one of said faces of said cover, a non-absorbent guard adjacent the other face of said cover, and means adapted to removably attach said cover to said guard.

3. A manifolding device comprising, in combination, a cover having opposite faces of non-absorbent material, a manifolding pad removably mounted on one of said faces of said cover, a non-absorbent guard adjacent the other face of said cover, and means joined to said cover to removably retain said cover on said guard.

4. A manifolding device comprising, in combination, a cover having an outer face of non-absorbent material, a manifolding pad removably mounted on its opposite face, a non-absorbent portable support, and means joined to said cover in a plane below said pad for retaining said cover on said support.

5. A manifolding device comprising, in combination, a cover having an outer face of non-absorbent material, a manifolding pad removably mounted on its opposite face, and a guide of non-absorbent material attached to said cover below said pad, said guide comprising a passageway open at each end.

[Claims 6 to 8 not printed in the Gazette.]

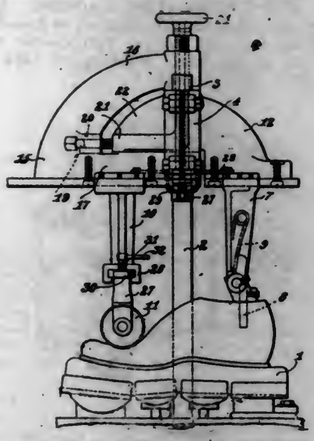
1,217,400. RAIL-JOINT. HORACE W. BOUCH, Sidney, Pa. Filed Aug. 9, 1916. Serial No. 113,985. (Cl. 239—8.)



1. In a rail joint, the combination with the meeting ends of a pair of rails, the end of the web portion of one of which is provided with a socket on one side thereof, a longitudinally slidable bolt mounted on the other rail for engagement in said socket, a longitudinally extending slotted member on the last named rail, and a stud carried by the first rail for reception in the said slotted member.

2. In a rail joint the combination with a pair of rail sections, the end of the web portion of one of said sections being formed with a socket, a laterally extending stud carried by said web, a slotted member carried by the web of the other section and receiving the said stud therein, and a slidable bolt member arranged for engagement in the said socket.

1,217,401. SHOE-SUPPORTING JACK. MATTHIAS BROCK, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 5, 1915. Serial No. 19,239. (Cl. 12—127.)



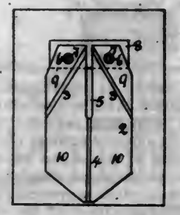
1. A shoe supporting jack, comprising a crosshead, extensions projecting from opposite sides of the crosshead, coöperating heel and toe posts, one of the posts being slidingly supported upon one of the extensions, a head fulcrumed upon the crosshead and carrying the coöperating post, and operative connections for locking the head to the second extension.

2. A shoe supporting jack, comprising a crosshead, a heel post supported upon the crosshead, a toe post, a head fulcrumed upon the crosshead and carrying the toe post to permit a lateral adjustment thereof, an extension projecting from the crosshead and having a face curved to approximate the path of movement of the toe post when adjusted laterally, and means arranged to engage with the curved face of the extension to retain the head against movement relative thereto.

3. A shoe supporting jack comprising a crosshead, an extension formed upon the crosshead, a heel post slidingly supported upon the extension, a head fulcrumed upon the crosshead, a toe post slidingly supported upon the head, and mechanism for relatively adjusting the toe and heel posts.

4. A shoe supporting jack, comprising a crosshead, extensions projecting from opposite sides of the crosshead, a heel post slidingly supported upon one extension, a head fulcrumed upon the crosshead, a toe post slidingly supported upon the head, and a retaining member threaded in the head and arranged to engage with the second extension to retain the head against movement relative to the extension.

1,217,402. SUPPORTING-STRUT FOR SHOW-CARDS, PHOTOGRAPH-FRAMES, AND OTHER ARTICLES. WILLIAM JOHN BROOKS, Westholm, Letchworth, England. Filed Oct. 17, 1913. Serial No. 795,733. (Cl. 40—150.)



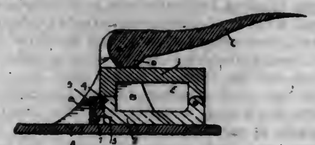
1. In a supporting strut for show cards and the like, the combination with the article to be supported of two members each pivotally attached to the back of the said article so as to permit partial rotation in a plane parallel to that of the back of the said article and of two other members hingedly connected to each other and hingedly connected to the first named members.

2. In a supporting strut for show cards and the like, the combination with the article to be supported of two members; an eyelet pivotally attaching each of the said members to the said article; and two other members hingedly connected to each other and to the first named members.

3. In a supporting strut for show cards and the like, the combination with the article to be supported of two members each pivotally attached to a part of the said article, and of two other members hingedly connected to each other and hingedly connected to the first named members along lines which are inclined to their line of connection with each other.

4. In a supporting strut for show cards and the like, the combination with the article to be supported of two members each pivotally attached thereto and of two other members hingedly connected to each other and to the first named members, all four members being fashioned from a single piece of leatherboard.

1,217,403. DENTAL TOOL. JOHN H. BROWN, Midvale, Utah. Filed Nov. 12, 1915. Serial No. 61,171. (Cl. 113—39.)



1. In a dental tool the combination with a press having a guide way formed in its upper face, of hingedly connected members having their opposing free ends cut as coacting tooth dies, with holes formed in the face of one of said free ends; a die stock pivoted to the member having said holes therein; a die adapted to be held in said holes; and a counter die carried in said die stock.

2. A dental tool consisting of a hingedly connected pair of coacting dies having holes bored in the outer face of one; a die stock pivoted thereto adjacent said holes; a die carried in said holes; a counter die carried in said die stock; and means to force the first mentioned dies toward each other and the said counter die toward the die carried in said holes.

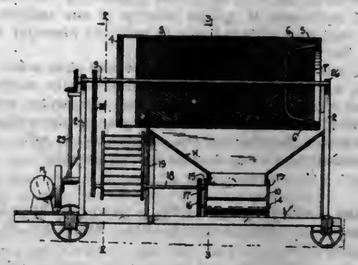
3. A dental tool consisting of coacting dies having holes bored in the side of one of them; a die carried in said holes; a die stock pivoted adjacent said holes; and a press to force said coacting dies toward each other and move said die stock on its pivot toward the die carried in said holes.

4. A dental tool consisting of hingedly connected coacting dies; a die stock pivoted to one of said dies; and means to force said dies toward each other and move said die stock on its pivot toward the side of one of said dies.

5. A dental tool consisting of a pair of dies; means to hold them in alinement; a die stock pivoted to one of said dies; and means to force said dies toward each other and said die stock toward the side of one of said dies.

[Claims 6 and 7 not printed in the Gazette.]

1,217,404. SEPARATOR. JOHN P. BUCHAN, Marcus, Iowa. Filed June 23, 1915. Serial No. 35,817. (Cl. 83—56.)



1. In a separator, a shaft, annular spiders carried on the shaft, a cylindrical screen detachably mounted on the spiders and comprising two substantially duplicate longitudinally extending semi-cylindrical sections having their adjacent longitudinal margins on one side hingedly connected, and coacting clamping means on the opposite longitudinal edges of the sections.

2. In a separator, a shaft, annular spiders carried on the shaft, and a cylindrical screen detachably mounted on the spiders and comprising two substantially duplicate longitudinally extending sections of screening material, rigid semi-circular reinforcing strips disposed at the ends of said sections, and longitudinally extending strips disposed on the marginal edges of the sections, the longitudinal strips on one side being hingedly connected, coacting clamping means attached to the longitudinal strips on the opposite edges including angularly projecting lugs, and bolts detachably engaging said lugs with each other.

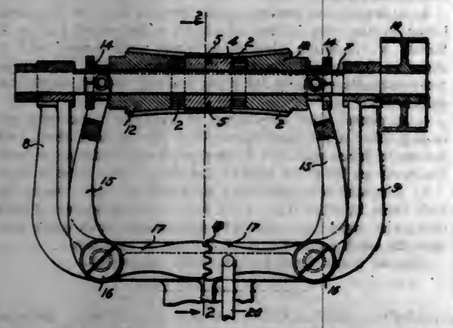
1,217,405. ROLL FOR OPERATING UPON BOOTS AND SHOES. WILLIAM H. BURKE, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 10, 1915. Serial No. 33,380. (Cl. 12—34.)

1. A roll for operating upon boot and shoe soles, comprising a series of sole engaging ribs each extending continuously from end to end of the roll, and means engaging with the ribs for varying the longitudinal contour of the roll.

2. A roll for operating upon boot and shoe soles, comprising a series of ribs extending continuously from end to end of the roll, means for supporting the ribs in spaced relation to one another between their ends, and means for spreading the ends of the ribs apart to vary the longitudinal contour of the roll.

3. A roll for operating upon boot and shoe soles, comprising a shaft, a plurality of ribs supported upon the shaft in spaced relation to one another to present a substantially cylindrical surface to the shoe sole, and means

for separating the ends of the ribs in a radial direction to vary the longitudinal contour of the roll.



4. A leveling roll comprising a series of ribs extending lengthwise of the roll, means for supporting the ribs midway of their ends in spaced relation to one another, and means engaging with the ribs to vary the diameter of the roll at the ends.

5. A roll for operating upon boot and shoe soles, comprising, a rotary hub, a series of flexible ribs secured to the hub midway of their ends, and a spreader member projecting within the ends of the ribs to determine the separation of the ribs and the contour of the roll.

[Claims 6 to 12 not printed in the Gazette.]

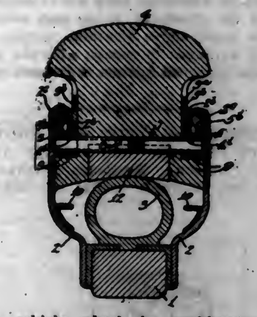
1,217,406. LOCKING-VALVE. GUSTAVE BURKHARDT, Chicago, Ill. Filed Dec. 18, 1914. Serial No. 877,865. (Cl. 137—7.)



A locking valve comprising a tubular casing, a valve secured to one end of said casing including a valve seat tapering toward said casing and a tapered plug in said seat provided with a stem projecting into said casing, a flange on said stem, a spring surrounding said stem within said casing between said flange and a shoulder formed at the juncture of said casing and valve, a rotatable cylinder secured to the opposite end of said casing, key controlled means to normally prevent rotation of said cylinder, and an operative connection between said cylinder and the stem of said valve.

1,217,407. VEHICLE-WHEEL TIRE. CHARLES S. BURTON, Oak Park, Ill. Filed Sept. 21, 1914. Serial No. 862,634. (Cl. 152—10.)

1. In a vehicle wheel, in combination with lateral guards forming between them a tire retaining channel, a tread member of cushioning material lodged in such channel and constructed for movement therein of its entire thickness toward and from the wheel axis under changes of load and draft links pivoted at one end to the guards and at the other end to the tread member and having their pivotal movement relatively to the tread member in planes parallel to the wheel, and extending from the first mentioned pivots approximately tangentially with respect to the circle in which said pivots are situated about the wheel axis.



2. In a vehicle wheel, in combination with lateral guards, forming between them a tire-retaining channel; a tread member of cushioning material lodged in such channel; draft links at opposite sides of the tread member, each pivoted at one end to the lateral guard at that side, and at the other end to the tread member, and extending from the first mentioned pivot approximately tangentially with respect to the circumference of the circle about the wheel axis in which said pivot is situated; the corresponding links at opposite sides of the tread member having their pivots extending into said tread member and connected together, said draft links having means for engaging the lateral guards at their respective sides; whereby said links and their pivots constitute means for tying together the opposite lateral guards.

3. In a vehicle wheel, in combination with lateral guards at opposite sides of the tread, and forming between them a tire-retaining channel; a tread member of cushioning material lodged in such channel having embedded in it and extending transversely through it, a multiplicity of metal tubes or sleeves and draft links pivoted at one end to the lateral guards and having at the other end pivot spindles extending into and obtaining bearing in said sleeves.

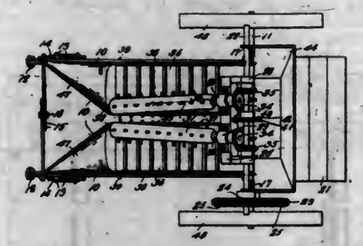
4. In a vehicle wheel, in combination with lateral metal guards forming between them a tire-retaining channel, and having peripheral laterally in-turned flanges with radially in-turned lips forming circumferential grooves facing the axis of the wheel; a tread member of cushioning material lodged in said channel between the lateral guards; two series of draft links located between the guards at opposite sides of the tread member pivoted at one end therein, the respectively opposite draft links having their pivots in the tread member connected together therein, the other ends of said links being pivoted to the lateral guards respectively, said links having at the outer side lugs projecting radially outward adapted for engaging said inwardly-opening grooves of the lateral guards.

5. In a vehicle wheel, in combination with opposite lateral guards forming between them a tire-retaining channel, a tread member of cushioning material lodged in such channel and constructed for movement therein of its entire thickness toward and from the wheel axis under changes of load; an endless chain of links lodged laterally with respect to the tread member; the pivots which connect consecutive links being engaged with the tread member independently of any such engagement effected by means of the links, and draft means connecting the links with the lateral guards at the sides of the tread at which the links respectively are located.

[Claims 6 to 11 not printed in the Gazette.]

1,217,408. COTTON-HARVESTING MACHINE. CHARLES R. CASHION, Purcell, Okla. Filed Sept. 18, 1916. Serial No. 120,838. (Cl. 56—6.)

1. A cotton harvesting machine comprising a frame including a super-structure and longitudinally extending bars, an axle constituting a driving shaft, the longitudinally extending bars being slidably mounted upon the axle, means connecting the forward end portions of the longitudinally extending bars to provide sets of longitudinally extending bars, a driven shaft rotatably carried by said super-structure, a conveyer actuating shaft rotatably carried by said super-structure, conveyer troughs carried by said frame between the longitudinally extending bars and super-structure, conveyer belts passing around said conveyer actuating shaft, rotatably mounted gathering means mounted in operative relation to the conveyer belts, means for transmitting rotary movement from said driven shaft to the conveyer actuating shaft, means for transmitting rotary movement from the driven shaft to the gathering means, and means for transmitting rotary movement from said driving shaft to said driven shaft.

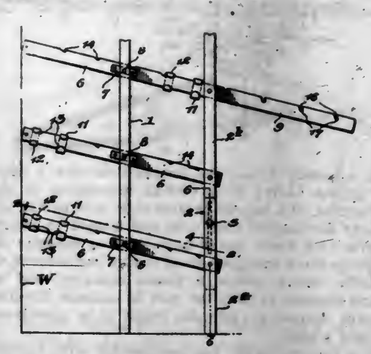


2. A cotton harvesting machine comprising a frame including a super-structure and longitudinally extending bars, an axle constituting a driving shaft carried by the super-structure, the longitudinally extending bars being slidably mounted upon said axle, means connecting the forward end portions of said longitudinally extending bars to provide sets of bars positioned in spaced relation, hoods carried by the forward end portions of the sets of bars, a driven shaft rotatably carried by said super-structure, a conveyer actuating shaft rotatably carried by said super-structure, inner and outer side plates connected with the longitudinally extending bars, and having their upper end portions mounted upon said conveyer actuating shaft, conveyer belts passing between the inner and outer plates above said hoods and passing about said conveyer actuating shafts, rotatably mounted gathering rollers extending above said conveyer belts, means for transmitting rotary movement from said driven shaft to said conveyer actuating shaft, means for transmitting rotary movement from said driven shaft to said gathering rollers, and means for transmitting rotary movement from said driving shaft to said driven shaft.

3. A cotton harvesting machine comprising a frame including longitudinally extending bars having their outer end portions connected in pairs, a super-structure forming part of said frame, a conveyer actuating shaft rotatably carried by said super-structure, conveyer troughs including side walls having their lower end portions connected with the longitudinally extending bars, conveyer belts extending between the side walls and passing about said conveyer actuating shaft, means for releasably holding the pairs of side bars in relative transverse adjustment, a driven shaft carried by said super-structure, gathering rollers extending longitudinally of said conveyers and having transverse adjustment when the longitudinally extending bars are adjusted, means for transmitting rotary movement from said driven shaft to said rollers, and means for transmitting rotary movement from the driven shaft to the conveyer actuating shaft.

4. A cotton harvesting machine comprising a frame including a super-structure and supporting bars, an axle carried by said supporting bars and constituting a driving shaft, ground engaging supports connected with the forward end portions of the supporting bars for vertical adjustment, conveyer troughs carried by said frame between the supporting bars and super-structure, a conveyer actuating shaft carried by said super-structure, conveyers extending through said troughs about said conveyer actuating shaft, a receptacle carried by said super-structure, gathering means mounted in operative relation to said conveyers, and means for transmitting rotary movement from said axle to said gathering means and conveyer actuating shaft.

1,217,409. DISPLAY-RACK. CARL W. CARLSON, Galva, Ill. Filed May 15, 1916. Serial No. 97,690. (Cl. 211—14.)



1. In a display rack of the class described, a guide bar having a plurality of seats in its upper edge, a slide movable on said bar, a U-shaped yoke embracing said slide and bar, said yoke being secured to said slide and movable on said bar, and a rib on the yoke engaging any one of said seats to hold the slide in adjusted position.

2. In a display rack of the class described, an upright support, a guide bar attached thereto, a spacing block interposed between said bar and support, an additional upright support having said bar attached thereto, a slide movable on said bar, a yoke secured to said slide and embracing said bar, said yoke and the last mentioned support coacting to limit the outward movement of said slide, and means for holding said slide in adjusted position.

3. In a display rack of the class described, an upright support, a guide bar having a plurality of seats therein, a spacing block carried by the bar, a pivot extending from said support into said spacing block, an additional upright support having said bar pivoted thereto, means for vertically adjusting said last mentioned support, a slide in engagement with the guide bar, a yoke secured to said slide and embracing said bar, and a rib on the yoke to engage any one of said seats to hold the slide in adjusted position.

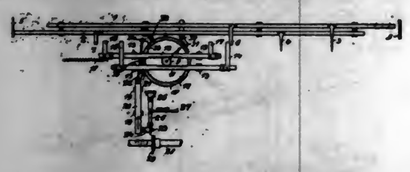
4. In a display rack of the class described, a pair of guide bars, each having seats therein, means for supporting the same, a substantially U-shaped slide having its arms engaging said bars, yokes secured to the arms of said slide and embracing said bars, ribs on the yokes to engage any of said seats, and a plurality of material supports having trunnions extending from their ends, the arms of said slide having bearing sockets to receive said trunnions.

1,217,410. HOSIERY-FRAME. FRANZ CECKA, Chemnitz, Germany, assignor to Firm of Schubert & Salzer Maschinenfabrik, Aktiengesellschaft, Chemnitz, Germany. Filed July 22, 1914. Serial No. 852,417. (Cl. 66—12.)

1. In a hosiery frame, the combination with a pair of thread guides having reciprocating movements in opposite directions, of a pair of stop members each adapted to arrest either one of said thread guides and formed on adjacent sides with rack teeth, a pinion between said stop members and engaging in the teeth thereof, and means operative while the frame is in operation to impart rotary movement to said pinion.

2. In a hosiery frame, the combination with a pair of thread guides having reciprocating movements in opposite directions, of a pair of parallel rods each having stops

at both ends and formed on adjacent sides with rack teeth, the stops located at opposite sides of the rack being arranged for arresting engagement with one of the thread guides, a pinion engaging said rack teeth and adapted to shift the rods in opposite directions, and means operative while the frame is in operation to rotate said pinion.

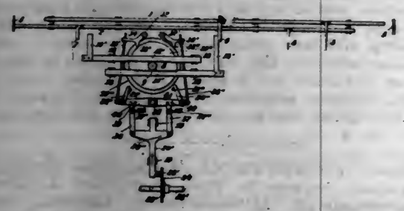


3. In a hosiery frame, the combination with a pair of thread guides having reciprocating movements in opposite directions, of a pair of parallel rods each having stops adjustably mounted at both ends and formed on adjacent sides with rack teeth, the stops located at opposite sides of the racks being arranged for arresting engagement with one of the thread guides, a pinion engaging said rack teeth and adapted to shift the rods in opposite directions, and means operative while the frame is in operation to rotate said pinion.

4. In a hosiery frame, the combination with a pair of thread guides having reciprocating movements in opposite directions, of a pair of parallel rods each having stops at both ends and formed on adjacent sides with rack teeth, the stops located at opposite ends of the racks being arranged for arresting engagement with one of the thread guides, a pinion engaging said rack teeth and adapted to shift the rods in opposite directions, and means operative while the frame is in operation to rotate said pinion, said means comprising a pawl and ratchet mechanism, a rotary cam, and means to throw said pawl and ratchet mechanism and cam into position for coöperation with each other.

5. A knitting frame, at least one thread guide in addition to the main knitting mechanism, a pair of parallel racks, stops arranged on said racks for stopping the thread guide and controlling its stroke, a pinion engaging said racks for movement in opposite directions, and selectively controlled operating means for the pinion.

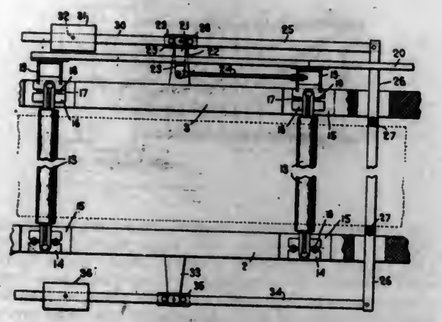
1,217,411. HOSIERY-FRAME. FRANZ CECKA, Chemnitz, Germany, assignor to the Firm of Schubert & Salzer Maschinenfabrik, Aktiengesellschaft, Chemnitz, Germany. Original application filed July 22, 1914, Serial No. 852,417. Divided and this application filed Oct. 16, 1915. Serial No. 56,247. (Cl. 66—12.)



1. In a hosiery frame, the combination with a pair of thread guides having reciprocating movements in opposite directions, of a pair of parallel rods each having a stop arranged for coöperation with one of the thread guides and formed on adjacent sides with rack teeth, a pinion engaging said rack teeth and adapted to shift the rods in opposite directions, pawl and ratchet mechanisms, adapted to rotate said pinion in opposite directions, operating means moving in one direction, and means to connect said operating means with either one of the pawl and ratchet mechanisms.

2. In a hosiery frame, the combination with a pair of thread guides having reciprocating movements in opposite directions, of a pair of parallel rods each having a stop arranged for coöperation with one of the thread guides and formed on adjacent sides with rack teeth, a pinion engaging said rack teeth and adapted to shift the rods in opposite directions, pawl and ratchet mechanisms adapted to rotate said pinion in opposite directions, operating means moving in one direction, a rocking lever carrying said pawls at opposite sides of its fulcrum, and means to throw said operating means into position for rocking engagement with said rocking lever at either one of its ends.

1,217,412. CONVEYER-CONTROLLER. MERLE P. CHAPLIN, Fairfield, Me., assignor to Keyes Fibre Company, Waterville, Me., a Corporation of Maine. Filed Oct. 28, 1913. Serial No. 797,860. (Cl. 193—23.)



1. In an apparatus of the class described comprising a pair of rolls, an endless conveyer of reticulated material passing over said rolls and means for driving one of said rolls, means for controlling the lateral shifting of said conveyer comprising a group of guiding rollers located beneath and supporting the moving lead of said conveyer in advance of said driven roll, said guiding rollers being spaced apart to support a relatively large area of said conveyer and means actuated by the lateral shifting of the conveyer for simultaneously changing the angular position of said guiding rollers to cause the conveyer to shift in the opposite direction.

2. In an apparatus of the class described comprising a pair of rolls, an endless conveyer of reticulated metallic material passing over said rolls, and means for driving one of said rolls, means for controlling the lateral shifting of said conveyer comprising a group of guiding rollers located beneath and supporting the moving lead of said conveyer in advance of said driven roll, said guiding rollers being spaced apart to support a relatively large area of said conveyer, a fixed idle roll having its axis parallel with that of the driven roller located intermediate of said group of movable guiding rollers and a driven roll and means actuated by the lateral shifting of the conveyer for simultaneously changing the angular position of said guiding rollers to cause the conveyer to shift in the opposite direction.

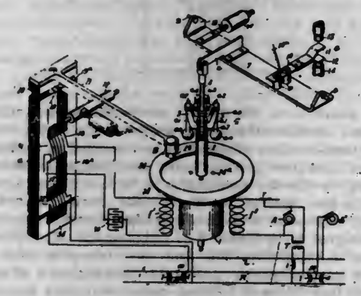
3. In an apparatus of the class described, a pair of parallel end rolls, means for driving the same, an endless conveyer mounted upon said rolls, a guiding roller mounted in proximity to and in advance of one of said rolls, means for adjusting the angular position of the axis of said guiding roller, relative to the direction of movement of the conveyer comprising a slidable bearing for one end of said roller, a bell crank lever having one arm adjustably connected with said bearing, and means connected to the other arm of said lever adapted to engage the edges of said conveyer, whereby any lateral shifting of the conveyer in one direction will cause an angular adjustment of the guiding roller, and thereby cause the conveyer to shift in an opposite direction and means for counterbalancing the weight of the lever actuating means.

4. In an apparatus of the class described, a pair of parallel end rolls, means for driving the same, an endless conveyer mounted upon said rolls, a group of parallel guiding rollers each of which is provided with a movable bearing, mounted in advance of one of said rolls, means rigidly connecting the movable bearings, means for adjusting the angular position of the axes of said guiding rollers, relative to the axes of the parallel rolls, comprising a bell crank lever having one arm connected with the movable bearings of the supporting rollers, and means connected to the other arm of said lever adapted to engage the edges of said conveyer, whereby any lateral shifting of the conveyer in one direction would cause the angular adjustment of the guiding rollers, and a consequent shifting of the conveyer in the opposite direction.

5. In an apparatus of the class described, a conveyer and means for driving the same, means for controlling the lateral shifting of said conveyer comprising a guiding roller having a movable bearing, a lever connected to said bearing, a guide connected to said lever adapted to engage the edges of said conveyer and counter balancing means for said lever and guide.

[Claim 6 not printed in the Gazette.]

1,217,413. APPARATUS FOR THE CONTROL OF ELECTRIC MOTORS. ELMER R. COE, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Sept. 25, 1915. Serial No. 52,691. (Cl. 172—120.)



1. In combination, an alternating current motor, and means controlled by the frequency of the current supplied to said motor for braking the motor.

2. In combination, an alternating current motor comprising a member adapted to rotate, and means controlled by the frequency of the current supplied to said motor for braking said member.

3. In combination, an alternating current motor, braking means for said motor, and means responsive to a predetermined frequency of current supplied said motor for controlling said braking means.

4. In combination, an alternating current motor, braking means for said motor, and means responsive to the frequency of current supplied said motor for controlling said braking means.

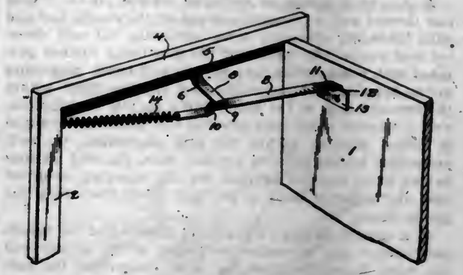
5. In combination, an alternating current motor, braking means for said motor adapted normally to oppose the motor, and means responsive to the frequency of the current supplied to said motor for rendering said braking means ineffective to oppose the motor.

[Claims 6 to 13 not printed in the Gazette.]

1,217,414. DOOR-CLOSING DEVICE. EDWARD H. COLLINS, Sioux Falls, S. D. Filed June 20, 1916. Serial No. 104,758. (Cl. 16—46.)

1. In a door closing device, the combination of an arm, and a link pivotally connected to the arm intermediate its ends, said arm being provided with means adapted to frictionally engage the link for checking the movement of the same as it moves into parallelism with the arm.

2. In a door closing device, the combination of an arm, a link pivotally connected to the arm intermediate its ends, said arm being provided with means adapted to engage the link for checking the movement of the same as it moves into parallelism with the arm, and means for moving said arm and link into parallelism.



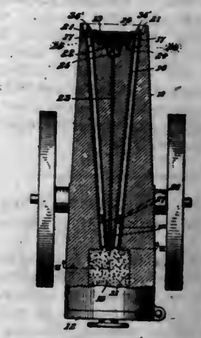
3. In a door closing device, the combination of a link, an arm pivotally connected at one end to the link intermediate its ends, said arm having an intermediate thickened portion adapted to frictionally engage the link, and means carried by the link for exerting tension thereon.

4. In a door closing device, the combination of a link, an arm pivotally connected at one end to the link intermediate its ends, said arm having an intermediate thickened portion adapted to frictionally engage said link, the said thickened portion being beveled upward and outward on its outer side, and a coil spring secured to the outer end of the link.

5. The combination of a door frame, a door hingedly mounted thereon, an arm pivoted to the top beam of the door frame, a link pivoted to the arm intermediate its ends and to the door at one end, and means for exerting tension on said link connected thereto and to the door frame.

[Claims 6 and 7 not printed in the Gazette.]

1,217,415. ORDNANCE. NICLA COLOMYJCZUK, South Porcupine, Ontario, Canada. Filed Sept. 5, 1916. Serial No. 118,560. (Cl. 89—1.)



1. A cannon having divergent bores, an explosive discharging chamber at the converging ends of the said bores, missiles operatively arranged within the said bores; a foldable elongated connector secured to the said missiles, a disk upon which the said connector is positioned, the said gun having an auxiliary explosion chamber beneath the said disk and provided with an auxiliary bore connecting the said chambers whereby the explosive within the said chambers is fired substantially simultaneously upon the operation of the device.

2. A cannon having an explosive chamber at the breech end thereof and a transverse recess at its muzzle end, and with forwardly diverging bores connecting the said chamber and recess, the muzzle of the gun being further provided with a depression between the said bores, projectiles in the rear ends of the said bores, missiles fitted within the forward ends of the bores, and a flexible metallic connector secured to the said missiles and normally arranged in folded position within the said depression.

3. A cannon having an explosive chamber at the breech end thereof and a transverse recess at its muzzle end and with forwardly diverging bores connecting the said chamber and recess, the muzzle of the gun being further provided with a depression between the said bores, projectiles in the rear ends of the said bores, missiles fitted within the forward ends of the bores, and a flexible metallic connector secured to the said missiles and normally arranged in folded position within the said depression, the said projectiles having reduced forward ends, the said missiles having axial recesses adapted for the engaging reception with the adjacent ends of the said projectiles when the gun is fired.

4. A cannon having an explosive chamber at the breech end thereof and a transverse recess at its muzzle end and with forwardly diverging bores connecting the said chamber and recess, the muzzle of the gun being further provided with a depression between the said bores, projectiles in the rear ends of the said bores, missiles fitted within the forward ends of the bores, a flexible metallic connector secured to the said missiles and normally arranged in folded position within the said depression, the said gun being provided with an auxiliary chamber having explosive opening into the said depression and having an axial bore connecting the said auxiliary chamber and the breech chamber, and a disk between the said auxiliary chamber and flexible connector whereby a forward impulse is exerted upon the said missiles and its connector substantially simultaneously during the firing of the gun.

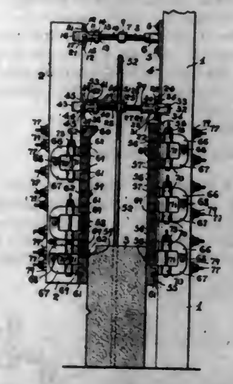
5. A cannon having an explosive chamber at the breech end thereof and a transverse recess at its muzzle end and with forwardly diverging bores connecting the said chamber and recess, the muzzle of the gun being further provided with a depression between the said bores, projectiles in the rear ends of the said bores, missiles fitted within the forward ends of the bores, and a flexible metallic connector secured to the said missiles and normally arranged in folded position within the said depression, the said projectiles having reduced forward ends, the said missiles having axial recesses adapted for the engaging reception with the adjacent ends of the said projectiles when the gun is fired, the said gun being provided with an auxiliary chamber having explosive opening into the said depression and having an axial bore connecting the said auxiliary chamber and the breech chamber, and a disk between the said auxiliary chamber and flexible connector whereby a forward impulse is exerted upon the said missiles and its connector substantially simultaneously during the firing of the gun.

1,217,416. MOLDING APPARATUS. SAMUEL S. COLT, Orange, N. J. Filed July 29, 1916. Serial No. 112,004. (Cl. 25—131.)

1. A knock-down cribbing for use in the erection of concrete and similar structures, comprising a series of uprights, form-sections adapted to be arranged against said uprights, clamping devices for securing said form-sections edge to edge in vertically stacked relation, and tying devices adapted to be connected with said clamped form-sections and attached to said uprights.

2. A knock-down cribbing for use in the erection of concrete and similar structures, comprising a series of uprights, form-sections and interdisposed joint-strips adapted to be arranged against said uprights, clamping devices for securing said form-sections edge to edge and said joint-strips in vertically stacked relation, and tying devices adapted to be connected with said clamped form-sections and joint-strips and attached to said uprights.

3. A knock-down cribbing for use in the erection of concrete and similar structures, comprising a series of uprights, form-sections adapted to be arranged against said uprights, said form-sections being provided with channels, clamping devices for securing said form-sections in vertically stacked relation, each clamping device comprising pivotally connected arms, and gripping elements upon said arms adapted to be inserted in the channels of said form-sections, a tightening bolt and nut connected with the arms of each clamping device for forcing said gripping elements into clamped holding engagement with the channeled portions of said form-sections, and tying devices adapted to be connected with said clamped form-sections and attached to said uprights.

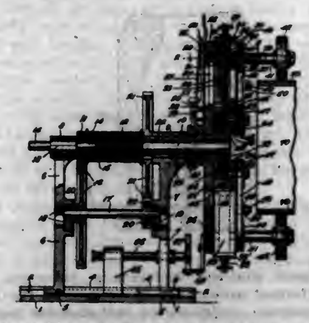


4. A knock-down cribbing for use in the erection of concrete and similar structures, comprising a series of uprights, form-sections adapted to be arranged against said uprights, said form-sections being provided with channels clamping devices for securing said form-sections in vertically stacked relation, each clamping device comprising pivotally connected arms, and gripping elements upon said arms adapted to be inserted in the channels of said form-sections, a tightening bolt and nut connected with the arms of each clamping device for forcing said gripping elements into clamped holding engagement with the channeled portions of said form-sections, and tying devices adapted to be connected with said clamped form-sections and attached to said uprights, each tying device comprising a rod-like element having a screw-threaded shank-portion at one end and biting fingers at the opposite end thereof adapted to be forced into biting holding engagement with the channeled portions of said form sections, a retaining element loosely mounted upon said rod like element having a biting teat and guide-members adapted to be placed in contact with an upright, and a nut upon said screw-threaded shank-portion for forcing said retaining element and its biting teat into holding engagement with the upright.

5. A knock-down cribbing for use in the erection of concrete and similar structures, comprising a series of uprights, form-sections and interdisposed joint-strips adapted to be arranged against said uprights, said form-sections and said joint strips being provided with channels, clamping devices for securing said form-sections and said joint-strips in vertically stacked relation, each clamping device comprising pivotally connected arms, and gripping elements upon said arms adapted to be inserted in the channels of said form-sections and said joint-strips, a tightening bolt and nut connected with the arms of each clamping device for forcing said gripping elements in clamped holding engagement with the channeled portions of said form-sections and said joint-strips, and tying devices adapted to be connected with said clamped form-sections and joint-strips and attached to said uprights.

[Claims 6 to 31 not printed in the Gazette.]

1,217,417. MULTIPLE GRINDING-MACHINE. JOHN W. W. CUMMING, U. S. Navy. Filed Oct. 25, 1916. Serial No. 127,620. (Cl. 51—4.)



1. In a machine of the class described the combination of a power shaft; a rotatable head; connections between said shaft and head for rotating the latter; an abrading wheel; slidably adjustable connections comprising a radially movable block between said head and wheel; and means comprising a belt and a pair of pulleys for rotating said wheel on its axis independently of said head, substantially as described.

2. In a machine of the class described the combination of a power shaft; a rotatable head; connections between said shaft and head for rotating the latter; an abrading wheel; slidably adjustable connections comprising a screw controlled radially movable block between said head and wheel; means comprising a belt and a pair of pulleys for rotating said wheel on its axis independently of said head; and means for revolving around a fixed axis said last named means together with said wheel while the latter is rotating, substantially as described.

3. In a grinding machine the combination of a grinding wheel; a rotatable head; adjustable connections between said wheel and head by which said wheel may be radially moved toward and from a fixed axis; additional means by which said wheel may be moved toward and from said axis; means for rotating said wheel on its axis; and means for rotating said head and thereby revolving said wheel around said fixed axis, substantially as described.

4. In a grinding machine the combination of a rotatable shaft; a rotatable sleeve carried by said shaft; a power transmitting means carried by said sleeve and adapted to revolve around the axis of said shaft; a rotatable head mounted on and revolubie around said sleeve; an abrading wheel carried by said head; a radially movable block mounted in said head for adjusting said wheel; and connections between said power transmitting means and said wheel for rotating the latter on its axis, substantially as described.

5. In a grinding machine the combination of a rotatable shaft; a rotatable sleeve carried by said shaft; connections between said shaft and sleeve by which the latter is rotated from the former; a power transmitting means carried by said sleeve and adapted to revolve around the axis of said shaft; a rotatable head loosely mounted on said sleeve; means adapted to readily connect and disconnect said sleeve and head; an abrading wheel carried by said head; and connections between said power transmitting means and said wheel for rotating the latter on its axis, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

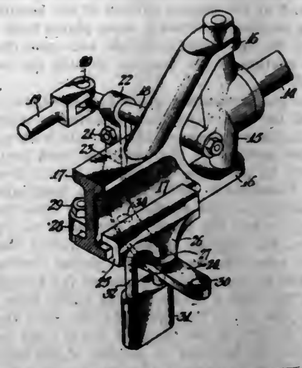
1,217,418. EXTRACTOR-COVER. MICHAEL DALY, Cincinnati, Ohio, assignor to American Laundry Machinery Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 24, 1914. Serial No. 873,817. (Cl. 220—91.)

A cover including a circular body portion terminating in an inwardly directed flange, a transparent disk of flexible material supported on said flange, a rigid disk located adjacent the transparent disk, securing means passing through the disks and flange and holding said parts together, and centrally arranged means holding the two



disks together, the rigid disk having a plurality of openings therein located between its center and its periphery and exposing the transparent disk.

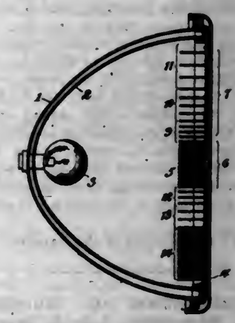
1,217,419. AUTO-LOCK. JAMES L. DAVIDSON, Alhambra, Cal. Filed Nov. 13, 1916. Serial No. 131,172. (Cl. 70—90.)



1. In an automobile; a steering knuckle; a stub axle on said knuckle; a front wheel on said stub axle; a fixed axle in which said steering knuckle is pivoted; a segment secured rigidly to said steering knuckle; and means for locking said segment to said fixed axle.

2. In an automobile; a steering knuckle; a stub axle on said knuckle; a front wheel on said stub axle; a fixed axle in which said steering knuckle is pivoted; a segment secured rigidly to said steering knuckle and having a hole therein; a plate secured to said fixed axle and having a hole therein; and locking means adapted to pass through said holes and lock said plate and segment together.

1,217,420. ANTIGLARE MEANS FOR HEADLIGHTS. ALLAN CONRADT DAVIS and DONALD LLOYD PRIMROSE, Baltimore, Md. Filed Oct. 9, 1916. Serial No. 124,568. (Cl. 240—48.4.)



1. Anti-glare means for headlights of vehicles and the like, comprising a series of thin plates arranged horizontally in the light emitting end of the headlight with respect to the installed position of the headlight, the plates being spaced apart in the direction of the height of the head-

light with those plates opposite the light giving element of the headlight and at the lower portion of the light emitting opening relatively close together, and the remainder of the plates on both sides of the plates in line with the light giving element increasing in spacing in a direction away from the horizontal central zone of the headlight.

2. Means for preventing glare in headlights of automobiles and the like, comprising a series of substantially parallel thin plates arranged horizontally with respect to the installed position of the headlight, said plates being spaced apart by distances to prevent direct view of any brilliantly illuminated portion of the headlight by an observer having the line of vision higher than the top of the headlight when the latter is directing the light rays horizontally, the spacing between the plates being least in a central zone opposite the light giving element of the headlight and at the bottom portion of the headlight, and the spacing increasing between those plates from the central zone to the top of the headlight and from the central zone for a portion of the distance toward the bottom of the headlight.

3. Means for preventing glare in headlights of automobiles and the like, comprising a series of substantially parallel thin plates arranged horizontally with respect to the installed position of the headlight, said plates being spaced apart by distances to prevent direct view of any brilliantly illuminated portion of the headlight by an observer having the line of vision higher than the top of the headlight when the latter is directing the light rays horizontally, the spacing between the plates being least in a central zone opposite the light giving element of the headlight and at the bottom portion of the headlight, and the spacing increasing between those plates from the central zone to the top of the headlight and from the central zone for a portion of the distance toward the bottom of the headlight, the increase in spacing of the plates being approximately in accordance with the increase in angle to the horizontal of the rays ordinarily directed toward the eye of the observer from the source of illumination and from the reflector within the headlight.

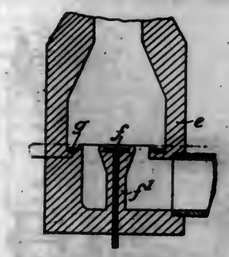
4. Means for preventing glare in automobile and other headlights comprising a ring-like member adapted to the light emitting end of the headlight, and a series of substantially parallel plates carried by the ring, said plates varying in spacing and being of a width to prevent direct vision of the source of light or of glare producing portions of the headlight reflector by an observer having the eyes higher than the headlight with the latter substantially horizontal, the plates being spaced apart in the direction of the height of the installed headlight to different extents progressively increasing above the central portion of the headlight toward the top thereof.

5. Means for preventing glare in automobile and other headlights comprising a ring-like member adapted to the light emitting end of the headlight, and a series of substantially parallel plates carried by the ring, said plates varying in spacing and being of a width to prevent direct vision of the source of light or of glare producing portions of the headlight reflector by an observer having the eyes higher than the headlight with the latter substantially horizontal, the plates being spaced apart in the direction of the height of the installed headlight to different extents progressively increasing above the central portion of the headlight toward the top thereof, the spacing of the plates also increasing from the central portion of the headlight for a part of the distance toward the bottom thereof.

[Claims 6 and 7 not printed in the Gazette.]

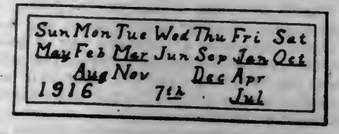
1,217,421. STERILIZATION OF LIQUIDS. PHILIP HENRY DAWE, Westminster, London, England. Filed Apr. 17, 1915. Serial No. 22,162. (Cl. 204—25.)

1. A liquid sterilizer, including a tube, an annular shoulder, formed around the inner face of the tube, an annular electrode positioned on said shoulder, and around the inner face of the tube, and a pedestal, positioned within the tube, said pedestal being in spaced relation to the walls of the tube, and carrying a second electrode.



2. A liquid sterilizer including a tube, an annular shoulder, formed around the inner face of the tube, an annular electrode, positioned on said shoulder and around the inner face of the tube, a pedestal, positioned within the tube and being in spaced relation to the walls thereof, carrying a second electrode upon its upper end, the liquid being adapted to flow between the pedestal and the walls of the tube.

1,217,422. CALENDAR. THOMAS DE LOOF, Detroit, Mich. Filed May 27, 1916. Serial No. 100,429. (Cl. 40—123.)



1. A calendar having a month-day, seven week-days arranged in regular order and several months, each month being placed adjacent to the particular week-day on which said month-day of each month falls.

2. A calendar having the seven week-days arranged in regular order and the months of the year, each month placed adjacent to a particular week-day as determined by a common month-day, substantially as described.

1,217,423. BEARING FOR DISK FURROW-OPENERS. CLINTON W. DICKINSON, La Crosse, Wis. Original application filed Feb. 19, 1909, Serial No. 478,957. Divided and this application filed June 9, 1915. Serial No. 33,005. (Cl. 64—10.)



1. A journal bearing including, in combination, a supporting bracket having a forwardly and downwardly disposed surface surrounding an axially arranged recess formed in said surface, a bearing block having a circular base member rotatably received by said recess, and a circular reduced portion projecting laterally and axially from said base member, a bearing plate secured to the side of said bracket and engaging with the outer face of said base-member in a manner to retain said bearing block in rotative relation with said bracket, said plate having a central opening that receives the reduced portion of said bearing block, said reduced portion terminating in a short angular portion, a rotatable element provided with an axial angular opening adapted to receive the angular portion of said bearing-block, and means for securing said rotatable element to said bearing block.

2. A journal bearing including in combination a support, and bracket having a forwardly and downwardly disposed surface surrounding an axially arranged recess formed in said surface, a bearing-block having a circular base-member rotatably received by said recess and a circular reduced portion projecting laterally and axially from said base-member, a bearing-plate secured to the side of said bracket and engaging with the outer face of said base-member in a manner to retain said bearing block in rotative relation with said bracket, said plate having a central opening that receives the reduced portion of said bearing block, said reduced portion terminating in a short angular portion, a rotatable element secured on said angular portion of the bearing block, means for securing said rotatable element to said bearing-block, and a washer mounted upon the reduced portion of the bearing-block in a manner to rotate therewith and disposed between said plate and the rotatable element.

3. A journal bearing including in combination a support and bracket having a forwardly and downwardly disposed surface surrounding an axially arranged recess formed in said surface, a bearing-block having a circular base-member rotatably received by said recess and a circular reduced portion projecting laterally and axially from said base-member, a bearing-plate secured to the side of said bracket and engaging with the outer face of said base-member in a manner to retain said bearing-block in rotative relation with said bracket, said plate having a central opening that receives the reduced portion of said bearing-block, said reduced portion terminating in a short angular portion, a rotatable element secured on said angular portion of the bearing-block, means for securing said rotatable element to said bearing-block and a dust cap held on the block and disposed between said plate and the rotatable element and having an inturned flange around said plate.

1,217,424. GRAIN-BIN. ALBERT N. EATON, Omaha, Nebr. Filed Aug. 7, 1916. Serial No. 113,420. (Cl. 189—3.)

1. The combination with the wall of a grain bin having a doorway and provided with a frame having an upright angular part projecting inwardly of the doorway, of an upright fender provided with a frame having an outwardly projecting angular flange and provided with a port at its bottom, said fender being adapted to be moved on the bottom of the bin for making a closure of a part of the doorway, the flange of its hood being disposed in the vertical plane of the inwardly projecting upright, angular part of said doorway, its port communicating with the doorway and said bin.

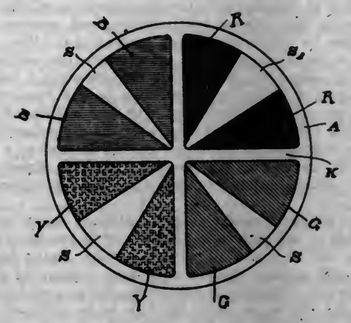
2. The combination with the wall of a grain bin having a doorway and provided with inwardly projecting flanges at the top and sides of said doorway, a fender consisting of an upright, angular frame having outwardly projecting flanges, a barrier plate mounted on the upper part of the frame opposite to said outwardly projecting flanges and having an inclined part terminating near the base of the frame to provide a port, said frame being movable within the bin for disposing its outwardly projecting flanges upon the outer sides of the inwardly projecting flanges of said wall, its port communicating with the bin and said doorway.

3. In combination with the wall of a grain bin having a doorway and provided with an inwardly projecting, angular flange, a fender consisting of an upright, angular frame having an outwardly projecting flange at its top and sides and provided at its upper part opposite to said outwardly projecting angular flange with a barrier plate, and provided at its lower part opposite to said outwardly projecting flange with a downwardly inclined ledge with side plates, said ledge terminating in a plane above the



lower end of said upright frame to provide a port in combination with the side plates, said upright fender being adapted to be moved upon the bottom of the bin and to be disposed with its outwardly projecting angular flange disposed outwardly of the inwardly projecting angular flange of said wall, its port being in communication with said doorway.

1,217,425. PRODUCING COLORED PHOTOGRAPHIC PICTURES. CHARLES RALEIGH and WILLIAM V. D. KELLEY, Brooklyn, N. Y., assignors, by mesne assignments, to Prizma Incorporated, a Corporation of Virginia. Filed Oct. 7, 1914. Serial No. 865,431. (Cl. 88—16.4.)



1. The method of recording color values which consists in exposing the same panchromatic emulsion to both colored and substantially white light.

2. The method of recording color values which consists in exposing a panchromatic emulsion to both colored and substantially white light in succession.

3. The method of recording color values which consists in exposing a panchromatic emulsion to light of a predetermined color, then to substantially white light, and then again to light of said predetermined color.

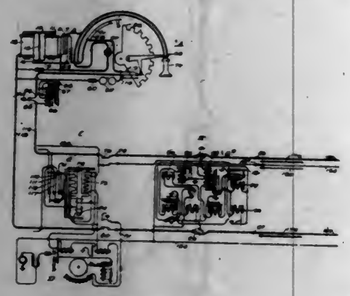
4. The method of recording color values which consists in exposing the same panchromatic emulsion to both col-

ored light and white light modified to compensate for abnormal effect of a constituent thereof.

5. The method of recording color values which consists in exposing the same panchromatic emulsion to both colored light, and white light modified to compensate for excessive blue violet contained therein.

[Claims 6 to 20 not printed in the Gazette.]

1,217,426. MEASURED-SERVICE TELEPHONE SYSTEM. JOHN ERICKSON, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 29, 1912. Serial No. 687,102. (Cl. 179—6.5.)



1. In a telephone system, a subscriber's line, a coin-collecting device on said line, a signal, a circuit including said line for operating said signal to indicate the denomination of a coin deposited in said device, and common battery means for supplying talking current to the line.

2. In a telephone system, a subscriber's line extending to the central office, a coin-collecting device on said line, a buzzer, a circuit including said line for operating said buzzer to indicate the denomination of a coin deposited in said device, and means for establishing a talking circuit over said line.

3. In a telephone system, a plurality of subscribers' lines, means including an operator's cord circuit for extending a connection between two of said lines, a coin-collecting device on one of said subscribers' lines, a signal, means for operating said signal over a line circuit in order to indicate to the operator the denomination of the coin deposited in said coin-collecting device, and common battery means for supplying talking current to the line.

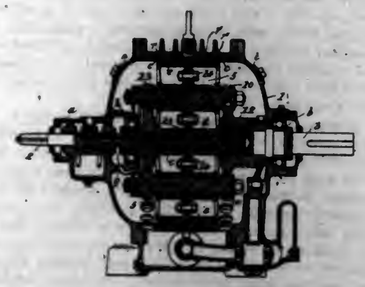
4. In a telephone system, a subscriber's line, means including an operator's cord circuit for extending a connection from said subscriber's line to a second subscriber's line, a coin-collecting device on said first-mentioned line, a signal for indicating to the operator the denomination of the coin deposited in said coin-collecting device, a line signal for controlling the operation of said signal and common battery means for supplying talking current to the line.

5. In a telephone system, a coin-collecting device having a plurality of coin chutes, a plurality of levers for closing said coin chutes, a pair of contact springs, means for operating said contact springs a certain number of times when a coin is deposited in one of the chutes, and for then opening the chutes to allow the coin to be collected, and a signal controlled by the operation of said contact springs.

[Claims 6 to 24 not printed in the Gazette.]

1,217,427. GEARING. GUSTAVE FAST, Baltimore, Md. Filed May 18, 1915. Serial No. 28,822. (Cl. 74—34.)

1. In apparatus for the purpose described a fixed casing, shafts in alinement, and gearing for driving one shaft from the other consisting of a central gear on one shaft, planetary gears supported from the other shaft, and meshing with the first mentioned gear and a stationary internal gear on the fixed casing with which the planetary gears engage, said planetary gears and the central gear, together with the internal gear all having helical teeth in right and left hand sections, said stationary internal gear with its right and left-hand teeth serving to hold the planetary gears and central gear against endwise movement while causing the rolling of said planetary gears, substantially as described.



2. In apparatus for the purpose described, a casing, an annulus within and supported on the casing having internal helical teeth, two shafts in alinement, a central gear on one shaft having helical teeth, planetary helical gears carried by the other shaft and meshing with the internal gear teeth of the annulus and with the central gear, the helical teeth on the several gears being disposed in right and left hand relation and one member of the helical gearing being formed in parts divided from each other between the right and left hand helical teeth to permit assembly with the other members by an axial and circumferential movement in respect thereto, and means for holding the divided parts in place, substantially as described.

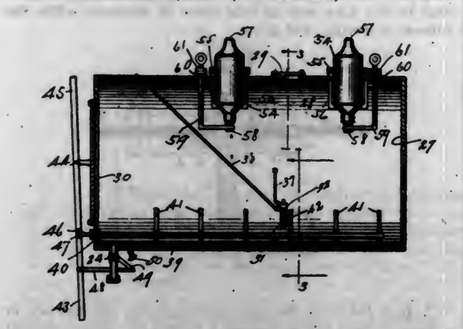
3. In combination a casing, an internal gear having right and left hand helical teeth, said gear being supported on the casing, shafts within the casing in alinement, one of said shafts having planetary gears carried thereby, each having helical teeth in right and left hand relation and a gear on the other shaft with its right and left hand helical teeth to mesh with those of the planetary gears, said internal gear being formed in two parts divided from each other at a point between the right and left hand helical teeth to permit assembly with the planetary gears by an axial and circumferential movement in respect thereto, and means for holding the parts of the internal gear in place, substantially as described.

4. In combination a casing, an internal gear therein having right and left hand helical teeth, shafts within the casing in alinement, one of said shafts having planetary gears carried thereby, each having helical teeth in right and left hand relation and a gear on the other shaft having helical teeth to mesh with those of the planetary gears, said internal gear being formed in two parts divided from each other at a point between the right and left hand helical teeth, said casing having a removable head serving to hold the two parts in place.

5. In combination a casing, an annulus having right and left internal helical teeth, shafts in alinement, planetary gears having right and left hand helical teeth meshing with the internal gear, a central gear having right and left hand helical teeth meshing with the planetary gears, a head on one of the shafts, spindles supported at one end in said head and on which the planetary gears are mounted, a second head supporting the other ends of said spindles, and removably connecting thereto, a removable bearing on the casing for the said head, and through which bearing and head the other shaft extends, one of the gear members, annulus or planetary, being formed in parts, of which one part carries the right hand helical teeth and the other part carries the left hand helical teeth, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,217,428. FIRE-EXTINGUISHER. MELVIN FELLOWS, Cheney, Wash., assignor of one-fourth to George A. Fellows, one-fourth to John H. Winter, and one-fourth to John M. Benidict, Cheney, Wash. Filed Jan. 20, 1915. Serial No. 3,340. (Cl. 169—24.)



1. In combination, a machine provided with a housing and means for intermittently treating the air in said housing during operation of said machine, substantially as described.

2. In combination, a machine provided with a housing, a source of supply of fire preventing or extinguishing medium, and a constantly operated valve means opening and closing for causing an intermittent discharge of such medium onto said housing, substantially as described.

3. In combination, a machine comprising a housing, a tank carried by said housing for the generating a supply of fire extinguishing medium, a supply pipe leading from said tank, spray pipes leading from said supply pipe and extending interiorly of said housing, an emergency valve in said supply pipe, a service valve in said supply pipe, means for connecting said service valve with an operating portion of said machine to constantly operate said service valve, and agitator means operatively connected with said emergency valve for effecting an emergency generation of said medium, substantially as described.

4. In combination, a machine comprising a housing, a tank carried by said housing for the generation of a supply of fire extinguishing medium, a supply pipe leading from said tank, spray pipes leading from said supply pipe, means for causing a constant but limited generation of said medium in said tank, and a constantly opening and closing valve in said supply pipe for controlling discharge of said medium from said spray pipes, substantially as described.

5. In combination, a machine comprising a housing, a tank carried by said housing for the generation of a supply of fire extinguishing medium, a supply pipe leading from said tank, spray pipes leading from said supply pipe and extending interiorly of said housing, an emergency valve in said supply pipe, a service valve in said supply pipe remote from said emergency valve with respect to said tank, means connecting said service valve with a portion of said machine to constantly operate said valve, means for causing a constant but limited generation of said medium in said tank, and agitator means operatively connected with said emergency valve for causing an emergency generation of such medium in said tank, substantially as described.

[Claim 6 not printed in the Gazette.]

1,217,429. BOBBIN. RAYMOND FISHER, Philadelphia, Pa. Filed Dec. 4, 1915. Serial No. 65,121. (Cl. 242—118.)

1. In a thread carrier, the combination with a conical wooden body having an axial opening for a driving spindle; of a metallic bearing member at the apex of said body, having radial openings; an annular plate at the base of said body, having radial openings, diametrically opposite notches to receive a projection from said driving spindle, and openings for attaching means, extending longitudinally with respect to said body; screws extending through said longitudinal openings in said plate, rigidly connecting it with said body; a circumferential series of resilient metallic rods, each extending longitudinally with respect to said body and having its ends fitted in the radial openings, respectively in said bearing member and said plate; said rods normally extending in spaced relation with the outer surface of said body but adapted to be constricted toward the latter by the tension of the thread encircling said carrier; and set screws in said ring detachably holding the respective ends of said rods in said ring.



2. In a thread carrier, the combination with a tubular axial body having an axial opening for a removable driving spindle; of a metallic bearing member at the apex of said body, having radial openings; an annular plate at the base of said body, having radial openings, diametrically opposite notches to receive a projection from said driving spindle, and attaching means, rigidly connecting said plate with said body; a circumferential series of resilient metallic rods, each extending longitudinally with respect to said body and having its ends fitted in the radial openings, respectively in said bearing member and said plate; said rods normally extending in spaced relation with the outer surface of said body but adapted to be constricted toward the latter by the tension of the thread encircling said carrier; the intermediate portion of said body serving as a stop support for said rods; and means detachably holding the ends of said rods in said ring.

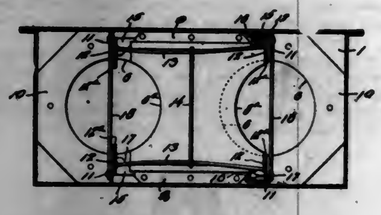
3. In a thread carrier, the combination with a body of circular cross section; of a metallic bearing member at one end of said body, having openings; a plate at the other end of said body, having openings; a circumferential series of resilient metallic rods, each extending longitudinally with respect to said body and having its ends stationarily fitted in the openings, respectively in said bearing member and said plate; said rods normally extending in spaced relation with the outer surface of said body but adapted to be constricted toward the latter by the tension of the thread encircling said carrier, without movement of the ends of said rods.

4. In a thread carrier, the combination with a body; of a circumferential series of resilient metallic rods, each extending longitudinally with respect to said body and having its ends rigidly connected thereto; said rods normally extending in spaced relation with the outer surface of said body but adapted to be constricted toward the latter by the tension of the thread encircling said carrier, without movement of the ends of said rods.

5. In a thread carrier, a rotary body having a circumferential series of rods extending longitudinally thereon, adapted to be resiliently constricted and thereby automatically radially moved intermediate of their ends by the thread encircling said carrier; and means rigidly holding both ends of said rods in stationary relation to the axis of said carrier during such movement.

[Claims 6 to 10 not printed in the Gazette.]

1,217,430. BOTTLE-SAFE. WILLIAM F. FOCHA, Richmond, Cal., assignor of one-half to Patrick W. McDonough, Richmond, Cal. Filed Sept. 14, 1916. Serial No. 120,126. (Cl. 232—41.)



1. The combination of a casing having spaced openings, a plate slidable in the casing and adapted when in operative position to extend beyond the edge of one of said openings, and means for locking the plate in operative position, said locking means being releasable only by the insertion of a bottle through the other opening.

2. The combination of a casing having a pair of spaced openings through its bottom, a plate slidably mounted in the casing between the openings of greater length than the distance between the openings, said plate having limited movement in either direction longitudinally of the casing and having each end recessed to correspond to the inner portion of the adjacent opening, and means carried by the casing and engaging with the plate for locking the plate against movement.

3. The combination of a casing having a pair of spaced openings through its bottom, a plate slidably mounted in the casing between the openings, and pivotally mounted latches adapted to engage the ends of the plate so as to lock it in operative position extending beyond the edge of one of said openings, said latches being so positioned as to be moved into inoperative position so as to release the plate when a bottle is inserted through one of the openings.

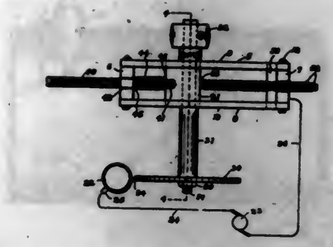
4. The combination of a base plate having two central openings, a cover secured on the base plate, a locking plate slidable on the base plate between the openings of greater length than the distance apart of the openings and provided in each end with an arcuate recess struck on an arc of the same radius as the radius of the openings, and spring-pressed latch members mounted on the base plate at each end of the locking plate and adapted to engage the ends thereof so as to prevent movement of the locking plate, when said plate is moved into its extreme position in either direction, said latch members extending above the openings when in locking engagement with the locking plate.

5. The combination of a base plate having two circular openings, a cover secured on the base plate, a locking plate slidable on the base plate between the openings of greater length than the distance apart of the openings and provided at each end with an arcuate recess, a pair of diametrically opposite latches adjacent each opening, the two pairs of latches coöperating to engage the ends of the locking plate so as to prevent movement thereof when the plate is moved into its extreme position in either direction with the latches at one end of the plate extending beyond the adjacent opening, and means for forcing the latches of each of said pairs of latches toward each other.

[Claims 6 and 7 not printed in the Gazette.]

1,217,431. METHOD AND APPARATUS FOR ELECTRICALLY HEATING METAL. WILLIAM E. FOLEY, Cleveland, Ohio, assignor to The Dollar Saving and Trust Company, Youngstown, Ohio, a Corporation of Ohio. Filed July 1, 1915. Serial No. 37,547. (Cl. 219—8.)

1. In a device of the class described, the combination of a piece of material to be heated, a source of electric current, means to connect said source to said piece of material, a movable terminal associated with said piece of material with a gap between said terminal and said piece of material across which electric current may arc, means to connect said terminal to said source, and mechanism to keep said terminal in unidirectional motion in a plane parallel to the long axis of said piece of material while the current is arcing said gap.



2. In a device of the class described, the combination of a piece of metal to be heated, a source of electric current connected to said piece of metal, a rotatable terminal having a short axis associated with said piece of metal with a gap between said terminal and said piece of metal across which electric current may arc and means to connect said terminal to said source of current and mechanism to keep said terminal in rotation about its short axis while the current is arcing said gap.

3. In a device of the class described, the combination of a piece of metal adapted to be heated, a source of electric current, a conductor connecting said source to said piece of metal, a rotatable terminal associated with said piece of metal with a gap between said terminal and said piece of metal across which electric current may arc, means to connect said terminal to said source of current and mechanism to rotate said terminal in a plane parallel to the long axis of said piece of metal.

4. In a device of the class described, the combination of a source of electric current, a rotatable thin disk connected to said source of current, a piece of metal to be heated associated with said disk with a gap between said piece of metal and the periphery of said disk, means to connect said piece of metal to said source of current and mechanism to rotate said disk while the current is arcing said gap.

5. In a device of the class described, the combination of a piece of metal to be heated, a source of electric current, a conductor connecting said source to said piece of metal, a rotatable thin carbon disk forming an electric terminal associated with said piece of metal with a gap between the periphery of said disk and said piece of metal across which electric current may arc, means to connect said disk to said source and mechanism to keep said disk in rotation while the current is arcing said gap.

[Claims 6 to 33 not printed in the Gazette.]

1,217,432. PROCESS FOR EXTRACTING POTASH AND ALUMINA FROM ALUNITE. PAUL J. FOX, Washington, D. C. Filed May 5, 1916. Serial No. 95,575. (Cl. 204—20.) (Dedicated to the public.)

1. A process for the extraction of potash and alumina from alunite, consisting in mixing alunite and a fluorid, subjecting the mixture to heat, leaching out the potash from the resulting mass with water and treating and electrolyzing the residue for the recovery of aluminum, substantially as described.

2. A process for the extraction of potash and alumina from alunite, consisting in mixing alunite and a fluorid together by grinding said materials until they are reduced to finely powdered form, subjecting the finely ground mixture to heat until the aluminum contained therein is converted into aluminum fluorid, leaching out the potash contained in the resulting mass with water, and treating the residue with the aid of fluxing agents and electrolysis for the recovery of the aluminum, substantially as described.

1,217,433. SHEET-METAL COMPRESSION-CLAMP FOR TUBING AND THE LIKE. AUGUST J. FREY, Brooklyn, N. Y., assignor to Brass Goods M'f'g. Co., Brooklyn, N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,772. (Cl. 137—6.)

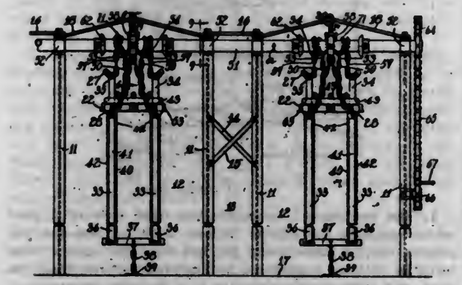


1. In a compression clamp of the character described, the combination of a base adapted to support the object to be clamped and provided at one end with a clamping jaw, an upper clamping jaw carried by an arm extending from the opposite end of the base over the object to be clamped, an actuating cam adapted to engage said arm and provided with horizontally extending pintles and a pair of cam supporting brackets rising from the base at opposite sides of the object to be clamped and having the pintles of the cam mounted therein at their upper ends, said brackets being formed to yield under the vertical strain of the cam when actuated to apply the clamping pressure.

2. In a compression clamp of the character described, the combination of a base, a pair of pivot carrying brackets rising from said base, each said bracket having a bend near its bottom, a pair of clamping jaws and a pivoted actuating cam mounted above the upper jaw by horizontally extending pintles engaging in said brackets.

3. In a compression clamp for tubing, the combination of a pair of clamping jaws formed from bent metal, one of said jaws being carried by a base and the other by an arm extending horizontally of the base over the object to be clamped, a pair of brackets rising from the base to either side of the object respectively and each having a bend to permit it to yield under vertical strain and a cam provided with a pair of horizontally extending pintles pivoted in said brackets and adapted to bear upon the arm carrying the upper jaw as and for the purpose described.

1,217,434. CATTLE-STANCHION. AXEL FRITZ, Everett, Mass. Filed Apr. 3, 1916. Serial No. 88,463. (Cl. 119—148.)



1. A cattle stanchion having, in combination, a horizontally disposed channel bar constituting a head piece, the flanges of said bar extending upwardly, a pair of links pivoted upon said head piece between said flanges, a pair of side bars pivotally suspended from said links adapted to be moved laterally with respect to each other to separate or contract said side bars, means to lock said side bars to said head piece in their contracted positions, a rotatable member mounted above said head piece, and means operatively connecting said locking means with said rotatable member adapted to operate said locking means to release said side bars.

2. A cattle stanchion having, in combination, a head piece, a pair of side bars, links adapted to suspend said side bars from said head piece either in contracted or separated relation, a rotary member, means for operatively connecting the upper ends of said side bars with said rotary member and adapted to be operated by said rotary member to contract said side bars, means for locking said side bars contracted, and means detachably connected with said rotary member adapted to be operated thereby to move said locking means and release said side bars.

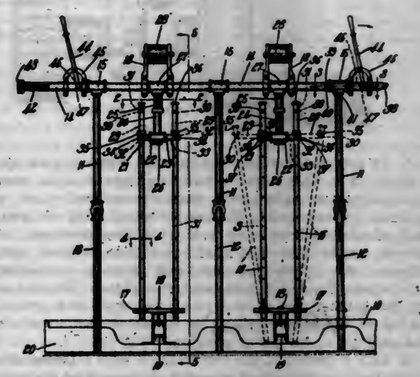
3. A cattle stanchion having, in combination, a head piece, a pair of links pivoted respectively at their lower ends adjacent to opposite ends of said head piece, a pair of side bars pivoted respectively to the upper ends of said links, a separator for the lower ends of said side bars, a locking member on said head piece adapted to lock said side bars in contracted relation, and means for operating said locking means to simultaneously release said side bars.

4. A cattle stanchion having, in combination, a head piece, a pair of links pivoted respectively adjacent to opposite ends of said head piece, a pair of side bars pivoted respectively to the outer ends of said links, a separator for the lower ends of said side bars, a locking bar superimposed on said head piece, means on opposite ends of said bar adapted to interlock with said side bars and retain the same contracted, and means constructed and arranged to operate said locking bar to release said side bars.

5. A cattle stanchion having, in combination, a head piece, a pair of links pivoted respectively adjacent to opposite ends of said head piece, a pair of side bars pivoted respectively to the outer ends of said links, a separator for the lower ends of said side bars, a rotary member, flexible means operatively connecting said rotary member with the outer ends of said links with respect to said head piece adapted to be wound upon said rotary member during the rotation thereof in one direction and to contract said side bars, means for locking said side bars in their contracted relation, and flexible instrumentalities operatively connecting said locking means with said rotary member, adapted to be operated by said rotary member during the rotation thereof in the opposite direction to release said side bars.

[Claims 6 to 12 not printed in the Gazette.]

1,217,435. CATTLE-STANCHION. AXEL FRITZ, Everett, Mass. Filed Aug. 10, 1914, Serial No. 856,127. Renewed Dec. 14, 1916. Serial No. 137,057. (Cl. 119—148.)



1. A cattle stanchion having, in combination, a carrier frame, a pair of side bars pivotally suspended from said carrier frame, so as to permit the lower ends thereof to be swung forwardly and upwardly and also away from each other, a spacer for said side bars, and means adapted to move said carrier frame to withdraw said side bars from said spacer.

2. A cattle stanchion having, in combination, a carrier frame, a pair of side bars suspended from said carrier frame and pivoted thereon to rock about both horizontal and vertical axes, a spacer for said side bars, and means to move said carrier frame to disengage said side bars from said spacer.

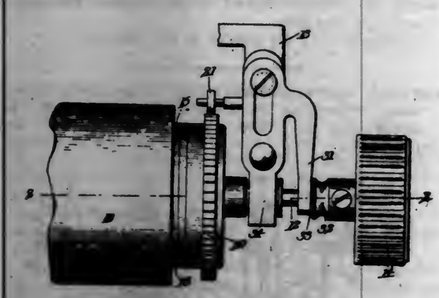
3. A cattle stanchion having, in combination, a carrier frame pivotally arranged to swing about a horizontal axis, a headpiece pivotally mounted adjacent one end of said carrier frame, a pair of side bars pivotally suspended from said headpiece, a weight secured to the opposite end of said carrier frame and adapted to substantially counterbalance said side bars and said headpiece, a spacer for said side bars, and means adapted to swing said carrier frame about its axis to withdraw said side bars from said spacer.

4. A cattle stanchion having, in combination, a carrier frame pivotally arranged to swing about a horizontal axis, a pair of side bars pivotally suspended from said carrier frame, each of said side bars being adapted to be swung about a horizontal pivot disposed substantially at right angles to the horizontal axis of said carrier frame, a spacer for said side bars, and means to swing said carrier frame about its axis to disengage said side bars from said spacer.

5. A cattle stanchion having, in combination, a carrier frame pivotally arranged to swing about a horizontal axis, a pair of side bars pivotally suspended from said carrier frame, a spacer for said side bars, means adapted to lock said carrier frame in a position with said side bars engaging said spacer, and means adapted to be operated to unlock said carrier frame and to swing the same to disengage said side bars from said spacer.

[Claims 6 to 12 not printed in the Gazette.]

1,217,436. TYPE-WRITER PLATEN-RELEASE MECHANISM. CARL GABRIELSON, Syracuse, N. Y., assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed July 15, 1915. Serial No. 40,055. (Cl. 197—123.)



1. In a typewriter, the combination with a platen shaft, a platen, a ratchet wheel mounted on the end of the platen, a holding pawl coöperating with the ratchet wheel, and a clutch for connecting the ratchet wheel with the platen, said shaft being movable axially to two positions, of a detent for holding said shaft in either position, means whereby the rotation of said shaft, when in one position will release the clutch and rotate the platen independently of the ratchet wheel, and means whereby the platen is locked to the ratchet wheel by means of the clutch when the shaft is in the other position.

2 In a typewriter, the combination with a platen shaft, a platen, a ratchet wheel mounted on the end of the platen, a holding pawl coöperating with the ratchet wheel, and a clutch for connecting the ratchet wheel with the platen, said clutch comprising a series of rollers within the ratchet wheel, and a radially arranged wedge for expanding the rollers against the ratchet wheel, of means for withdrawing the wedge upon the rotation of the shaft in either direction, whereby the platen is freed from the ratchet wheel, and means for connecting the shaft with the platen to rotate the latter when released from the ratchet wheel.

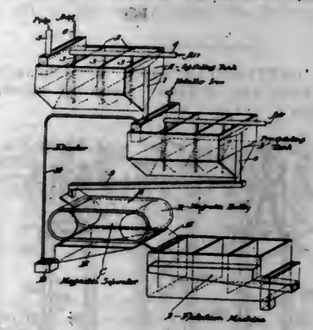
3. In a typewriting machine, the combination with a platen, of a platen head secured thereto, and a shaft extending through the platen head into the platen, said shaft being movable longitudinally, means whereby the shaft is connected to the platen to turn the same when in one position and movable relatively to the platen when in another position, and means whereby said shaft is held yielding in either of said two positions.

4. In a typewriting machine, the combination with a platen, of a platen head secured thereto, and a shaft extending through the platen head into the platen, said shaft being movable longitudinally, and means whereby the shaft is connected to the platen to turn the same when in one position and movable relatively to the platen when in another position, said means comprising a pin extending radially from the platen shaft and operating in a wedge-shaped opening in a part connected with the platen, said pin being incapable of movement relatively to the platen when in the smaller end of the opening and movable slightly in either direction relatively to the platen when in the larger end of the opening.

5. In a typewriting machine, the combination with a platen, of a platen head secured thereto, and a shaft extending through the platen head into the platen, said shaft being movable longitudinally, means whereby the shaft is connected to the platen to turn the same when in one position and movable relatively to the platen when in another position, said means comprising a pin extending radially from the platen shaft and operating in a wedge-shaped opening in a part connected with the platen, said pin being incapable of movement relatively to the platen when in the smaller end of the opening and movable slightly in either direction relatively to the platen when in the larger end of the opening, and a spring detent for holding the platen shaft with the pin in either end of the opening, as desired.

[Claims 6 to 11 not printed in the Gazette.]

1,217,437. PROCESS OF CONCENTRATING OXID ORES OF COPPER. RUDOLF GAHL, Miami, Ariz. Filed Dec. 27, 1916. Serial No. 139,148. (Cl. 75—18.)



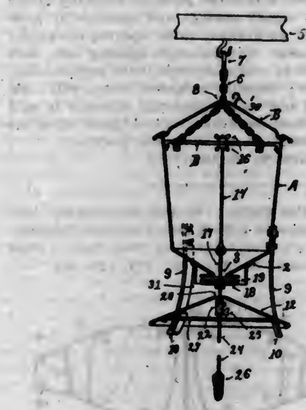
1. The process of concentrating oxid ores of copper which consists in adding thereto acid to dissolve the soluble copper ingredients, precipitating the copper from solution by iron, separating the undissolved iron from the pulp, and subjecting the residue to a flotation operation.

2. The process of concentrating oxid ores of copper which consists in adding thereto acid to dissolve the soluble copper ingredients, precipitating the copper from solution by iron, magnetically separating the undissolved iron from the pulp, and subjecting the residue to a flotation operation.

3. The process of concentrating oxid ores of copper which consists in adding thereto acid to dissolve the soluble copper ingredients, precipitating the copper from solution by iron, separating the undissolved iron from the pulp, re-using the recovered iron for further precipitation, and subjecting the residue to a flotation operation.

4. The continuous process of concentrating oxid ores of copper which consists in agitating the pulp in the presence of acid, precipitating the copper from the pulp by metallic iron, magnetically separating the undissolved iron, re-using the thus recovered metallic iron for further precipitation, and subjecting the pulp containing the cement-copper to flotation.

1,217,438. POULTRY-FEEDER. WALTER J. GALLAGHER, Anderson township, Hamilton county, Ohio. Filed Feb. 8, 1913. Serial No. 745,839. (Cl. 119—70.)



1. A poultry feeder comprising a feed container having a feeding orifice, means to suspend said container from above in operative position, feet to support said container in an upright position to be charged with feed, mechanism above said feet to release the feed, and a detachable baited member extending below said feet to actuate the feed releasing mechanism.

2. A poultry feeder comprising a feed container having a feeding orifice, means to suspend said container in operative position, downwardly projecting feet to support said container in an upright position to be charged with feed, a feed deflector carried rigidly beneath said container by said feet, mechanism above said feet to release the feed having a depending actuating rod limited in its movements by said deflector, and a baited member extending below said feet and deflector and detachably connected to said rod.

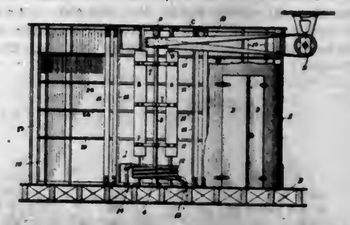
3. A poultry feeder comprising a container having a feeding orifice in its bottom, feeding mechanism to be actuated by the fowls located below said orifice to receive and intermittently distribute the feed, a flexible supporting member attached at a plurality of points to the upper and inner wall of said container to suspend said container in position for use, and a lid for said container fitted thereto and through an orifice in which said flexible supporting member passes.

4. A poultry feeder comprising a container having a feeding orifice in its bottom, feeding mechanism to be actuated by the fowls located below said orifice to receive and intermittently distribute the feed, a flexible supporting member attached at a plurality of points to the upper and inner wall of said container to suspend said container in position for use, and a lid for said container fitted thereto and through an orifice in which said flexible supporting member passes, said flexible supporting member also serving as a handle for said container to transport it from place to place.

5. A poultry feeder comprising a container to be normally held in a suspended position and having a feeding orifice through its bottom, means to support said container from below when not suspended from above, mechanism intermediate of said container and its lower support to intermittently discharge feed through said orifice, and a detachable baited rod extending below the lower end of said lower supporting means to actuate said discharge mechanism.

[Claims 6 to 8 not printed in the Gazette.]

1,217,439. MACARONI-DRYING APPARATUS. ALEXANDER GALLERANI, Brooklyn, N. Y. Filed May 13, 1916. Serial No. 97,239. (Cl. 34—19.)



1. An apparatus for drying macaroni or the like, comprising a cylindrical housing, an inner supporting frame, an outer supporting frame concentric with said inner frame, the inner supporting frame inclosing an inner zone while the two frames together define an outer zone, the frames forming means for supporting macaroni or the like, heating means disposed at the bottom of the inner zone, and distributing means disposed in said inner zone for distributing and circulating the air heated by said heating means throughout and between the macaroni supported on said frames.

2. An apparatus for drying macaroni or the like, comprising a housing, an inner supporting frame, an outer supporting frame concentric to said inner frame, the inner supporting frame inclosing an inner zone while the two frames together define an outer zone, rods for supporting macaroni, the frames forming means for supporting the macaroni carrying rods across the outer zone, there being a doorway in said housing and there being interruptions in the said supporting frames in alinement with one another and the doorway to permit a free passage to the inner zone from the said doorway.

3. An apparatus for drying macaroni or the like, comprising a housing, an inner supporting frame, an outer supporting frame concentric to said inner frame, the inner supporting frame inclosing an inner zone while the two frames together define an outer zone, rods for supporting macaroni, the frames forming means for supporting the macaroni carrying rods across the outer zone, a vertical shaft disposed in said inner zone, and fan wings mounted on the same and extending substantially the full height of said housing to facilitate producing the greatest circulation possible.

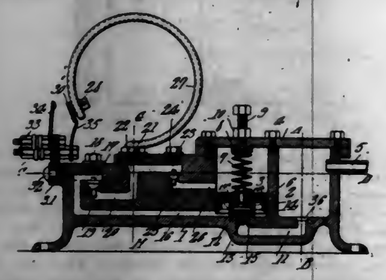
4. An apparatus for drying macaroni or the like, comprising a housing, an inner supporting frame, an outer supporting frame concentric to said inner frame, the inner supporting frame inclosing an inner zone while the two frames together define an outer zone, rods for supporting macaroni, the frames forming means for supporting the macaroni carrying rods across the outer zone, a vertical shaft disposed in said inner zone, fan wings mounted on the same and extending substantially the full height of said housing to facilitate producing the greatest circulation possible, and heating means surrounding the lower end of said shaft whereby as the surrounding air is heated and rises, the fan wings will receive the same and distribute and circulate the same throughout and between the macaroni.

5. An apparatus for drying macaroni or the like, comprising a housing, an inner open supporting frame, an outer supporting frame concentric to said inner frame, the inner supporting frame inclosing an inner zone while the two frames together define an outer zone, the frames forming means for supporting macaroni or the like, heating means in said inner zone, and distributing means disposed in said inner zone for distributing and circulating

the air heated by said heating means through the open inner frame into contact with and between the macaroni supported on said frames.

[Claims 6 to 11 not printed in the Gazette.]

1,217,440. ELECTRIC SWITCH. GARDNER B. GRAY, Pittsburgh, Pa., assignor, by mesne assignments, to Automatic Train Control & Signal Company, Pittsburgh, Pa., a Corporation of Delaware. Original application filed Aug. 30, 1909, Serial No. 515,259. Divided and this application filed Nov. 1, 1911, Serial No. 658,054. Renewed Aug. 16, 1916. Serial No. 115,333. (Cl. 175—308.)



1. In combination, a pressure-responsive circuit controller, a conduit for the supply of fluid under pressure thereto, branch passages leading from the supply conduit to the circuit controller, a pressure-actuated device between said conduit and one of said branch passages and to be actuated by pressure from the conduit, means in said last-mentioned branch passage for checking flow from the controller to the conduit but permitting flow to the controller, and means in the other branch passage for checking flow from the conduit to the controller but permitting flow from the controller back to the supply conduit.

2. In combination, a pressure-responsive circuit controller, a conduit for the supply of fluid under pressure thereto, a supply passage extending from the conduit to the controller, means between said conduit and passage for controlling communication between the conduit and said passage, a return passage extending from the controller to the conduit and leading around the controlling means between said supply passage and conduit, means in said supply passage to prevent a reverse flow back through the passage to the conduit, and means in said return passage to prevent direct flow therethrough from the conduit to the controller.

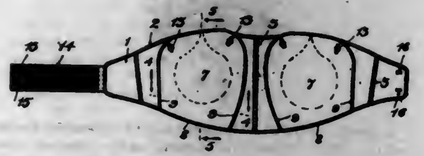
3. In combination, a pressure-responsive circuit controller, a conduit for the supply of fluid under pressure, two passages for communication between the conduit and the controller, a pressure-actuated device controlling communication between the conduit and one of said passages to be operated by fluid of different pressures, two oppositely working valves, one in each passage, whereby fluid under pressure from the conduit will hold one valve closed and will operate the pressure actuated device and hold the other valve open so as to cause the fluid under pressure to flow to the circuit controller through one of said passages, and whereby upon insufficiency of fluid under pressure in the conduit the pressure-actuated device will cut off communication between the conduit and one of said passages and the first of said valves will open while the second will close to cause return of the fluid from the controller to flow around pressure actuated device through the other of said passages to the conduit.

4. A pressure-actuated switch comprising a body member having a chamber formed therein, a pressure-responsive circuit controller mounted upon the body, a supply conduit communicating with the chamber, said body having a passage therein connecting said chamber and circuit controller, a pressure-actuated device normally cutting off fluid between the passage and chamber and determining the pressure at which fluid shall enter said passage, said body having a second passage therein providing a return by-pass around said pressure-actuated device for the fluid from the controller to the conduit, means in said second passage to prevent direct flow from the conduit to the controller, and means in the first passage to prevent back flow from the passage to the chamber.

5. In combination, a pressure responsive circuit controller, a conduit for the supply of fluid under pressure, a supply passage leading from said conduit to said controller, an exhaust passage leading from said controller to said supply conduit, a resilient pressure actuated device for controlling said supply passage and operable by pressure in said conduit, an exhaust valve opening outwardly in said exhaust passage, said passages opening into each other near the point of communication with said conduit, whereby the resilient pressure actuated device will close said supply passage and tend to maintain pressure in said exhaust passage to hold the exhaust valve closed when the pressure actuated device is not in normal position.

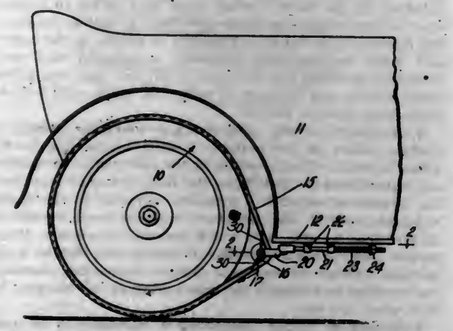
[Claim 6 not printed in the Gazette.]

1,217,441. NURSING-VEST. VICTOR GUINZBURG, New York, N. Y., assignor to I. B. Kleinert Rubber Company, New York, N. Y., a Corporation of New York. Filed July 26, 1916. Serial No. 111,374. (Cl. 128—3.)



A nursing vest provided with breast openings and with flaps, forming closures for, and overlying said breast-openings upon the outer side thereof, and means for effecting connection therebetween and said vest, said flaps being continuously attached along their bottom edges to the vest below the breast openings, and along their lateral edges to points approximately on a level with the bottom of the breast openings whereby are formed by the vest and the flaps conjointly, pockets for holding an absorbent or filler.

1,217,442. NON-SKID DEVICE FOR MOTOR-VEHICLES. GEORGE GUNTHER and WILLIAM P. MILLER, Los Angeles, Cal., assignors, by direct and mesne assignments, to said George Gunther. Filed Dec. 27, 1915. Serial No. 68,862. (Cl. 21—150.)



1. In combination with an automobile and a driving wheel thereof, an endless belt passing peripherally around the wheel, being of greater length than the wheel circumference, an idler pulley inside said belt on an axis transverse to the plane of the automobile wheel; and a mounting

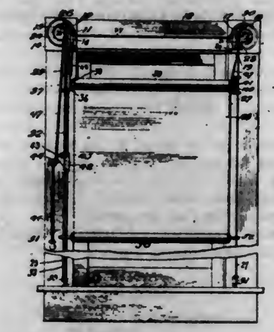
for said axis and pulley embodying an axis mounted upon the automobile in the plane of the wheel and at right angles to the axis of the pulley, about which mounting axis the pulley may turn.

2. In combination with an automobile and a driving wheel thereof, an endless belt passing peripherally around the wheel being of greater length than the wheel circumference, a longitudinally movable and rotatable shaft mounted upon the automobile in the central vertical plane of the wheel, and an idler pulley carried by said shaft on an axis transverse to the shaft, said pulley being inside said belt.

3. In combination with an automobile and a driving wheel thereof, an endless belt passing peripherally around the wheel being of greater length than the wheel circumference, a longitudinally movable and rotatable shaft mounted upon the automobile in the central vertical plane of the wheel, a yoke on the end of said shaft nearest the wheel, a transverse shaft carried in said yoke, a pulley on said transverse shaft, over which pulley the belt runs, and a spring on the other end of the first mentioned shaft to resiliently move the shaft and the pulley away from the wheel to hold the belt under uniform tension.

4. In combination with an automobile and a driving wheel thereof, an endless belt passing peripherally around the wheel being of greater length than the wheel circumference, a longitudinally movable and rotatable shaft horizontally mounted upon the automobile in the central vertical plane of the wheel, a yoke carried on the end of the shaft nearest the wheel, a transverse stationary shaft carried in said yoke, a convex faced pulley rotatable on said transverse shaft, over which pulley the belt runs, a compression spring surrounding the other end of the first mentioned shaft, and a nut adjustable on that end of said shaft to adjust the normal compression of said spring.

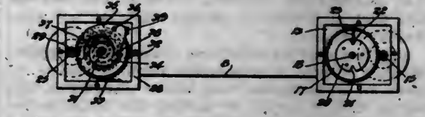
1,217,443. WINDOW-SHADE ATTACHMENT. SAMUEL W. HALES, Pittsburgh, Pa. Filed Aug. 5, 1915. Serial No. 43,900. (Cl. 156—27.)



1. In a shade roller support, bracket devices adapted to be attached to a window and having cord guides, a strain applying device carried by one of said bracket devices, an evener member adapted to be pivotally connected intermediate its ends to said window, a guide member connected at one end with said evener member at one end thereof and at the other end to said straining appliance, a locking member guide connected respectively with the evener member at the other end and to one of the bracket devices, a shade roller slidably supported relative to said guide, pull members connected to said roller and bearing over said cord guides, and a locking device carried by said pull members and adapted to be engaged by said locking member guide.

2. In a shade roller support, bracket devices adapted to be attached to a window and having guide pulleys, a strain applying device carried by each of said bracket devices, an evener member adapted to be pivotally connected intermediate its ends to said window, a guide member adapted to be connected at one end to said window and at the other end to the straining appliance of one of said brackets, a coacting guide member connected at one end to said evener member at one end thereof and at the other end to the straining appliance of the other bracket device, a locking member guide connected respectively to the evener member at the other end and to the last mentioned bracket device, a shade roller slidably supported relative to said coacting guides, pull members connected to said roller and leading over said guide pulleys, and a locking device carried by said pull members and adapted to be engaged with said locking member guide.

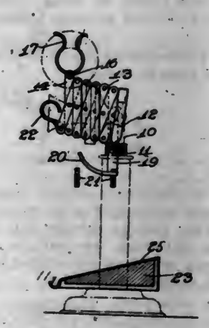
1,217,444. SPOOL-WINDING DEVICE FOR CAMERAS. ARTHUR HARDY, Winnipeg, Manitoba, Canada. Filed Mar. 3, 1915. Serial No. 11,824. (Cl. 242—71.



1. In a film camera the combination with a pair of rotatably mounted film spools, a film connected to the spools and designed to be wound from off one spool onto the other and means for winding the receiving spool, of a spring associated with the unwinding spool and arranged to be wound in the unwinding movement of the latter spool and a dog and an engaging catch associated with the latter spool and designed to prevent retrograde movement of said spool under the action of the spring and adapted when released to rewind a predetermined length of film.

2. In a film camera the combination with a pair of rotatably mounted film spools, a film connected to the spools and designed to be wound from off one spool onto the other and means for winding the receiving spool, of a spring associated with the unwinding spool and arranged to be wound in the unwinding of the film from the latter spool onto the receiving spool and a dog and a releasable engaging catch associated with the spring and arranged to allow of the winding of the spring and prevent, unless released, the unwinding thereof and designed, further, when released, to effect a step by step rotary movement of the latter spool under the action of the spring.

1,217,445. TELEPHONE ATTACHMENT. FANNIE HEIN, New York, N. Y. Filed Dec. 9, 1915. Serial No. 65,920. (Cl. 179—150.)



1. An attachment for telephones comprising a movable support for holding the telephone receiver, said support being movable to an operative position wherein the mouth of the receiver is adjacent to the ear of a person talking into the telephone transmitter, means associated with said attachment whereby the receiver hook is depressed

when the support is returned to its normal or inoperative position, and means attachable to the base of the telephone instrument on the side opposite to the receiver for counterbalancing the weight of the receiver when the support is moved into operative position.

2. An attachment for telephones comprising a supporting member adapted to be attached to the telephone instrument, an extensible lazy tong bracket mounted on said supporting arm, a socket for holding the telephone receiver mounted on said bracket, and means actuated by the bracket during its contraction to lock the receiver hook in inoperative position.

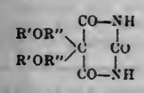
3. An attachment for telephones comprising a supporting member adapted to be attached to the telephone instrument, an extensible lazy tong bracket pivoted on said supporting member, a cam arm connected with the lazy tong bracket and located above the telephone receiver, and means for holding the telephone receiver on the bracket, said cam arm operating to depress and lock the receiver hook in inoperative position when the lazy tong bracket is contracted.

4. An attachment for telephones comprising a supporting member adapted to be attached to the telephone instrument, an extensible lazy tong bracket mounted on said supporting arm, a socket for holding the telephone receiver swiveled on said bracket, and means actuated by the bracket during its contraction to lock the receiver hook in inoperative position.

5. An attachment for telephones comprising a supporting member adapted to be attached to the telephone instrument, an extensible lazy tong bracket mounted on said supporting arm, a socket for holding the telephone mounted on said bracket, means actuated by the bracket during its contraction to lock the receiver hook in inoperative position, and a hook at the forward portion of the bracket for readily grasping the same to extend the bracket.

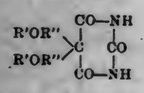
1,217,446. SUBSTITUTED BARBITURIC ACIDS. WILHELM HIEMENZ and LUDWIG TAUB, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Mar. 23, 1915. Serial No. 16,421. (Cl. 23—24.)

1. The herein described substituted barbituric acids of the following general formula:



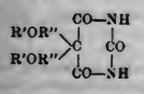
wherein R' stands for a hydrocarbon substituent and R'' for an alkylene radical, the new substances being white crystals scarcely soluble in water, forming soluble salts with alkalis; and being valuable hypnotics, substantially as described.

2. The herein described substituted barbituric acids of the following general formula:



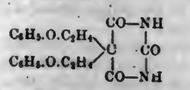
wherein R' represents aryl and R'' stands for an alkylene radical, the new substances being white crystals scarcely soluble in water, forming soluble salts with alkalis; and being valuable hypnotics, substantially as described.

3. The herein described substituted barbituric acids of the following general formula:



wherein R' represents aryl and R'' stands for an ethylene radical, the new substances being white crystals scarcely soluble in water, forming soluble salts with alkalis; and being valuable hypnotics, substantially as described.

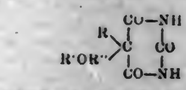
4. The herein described diphenoxyethyl-barbituric acid of the following general formula:



being white crystals melting at 209° C., scarcely soluble in water, forming soluble salts with alkalis, and being a valuable hypnotic, substantially as described.

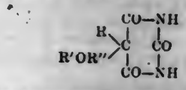
1,217,447. SUBSTITUTED BARBITURIC ACIDS. WILHELM HIEMENZ and LUDWIG TAUB, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Mar. 23, 1915. Serial No. 16,422. (Cl. 23—24.)

1. The herein described substituted barbituric acids of the following general formula:



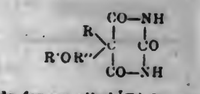
wherein R stands for an alkyl, R' for a hydrocarbon radical, and R'' for an alkylene radical, the new substances being white crystals scarcely soluble in water, forming soluble salts with alkalis; and being valuable hypnotics, substantially as described.

2. The herein described substituted barbituric acids of the following general formula:



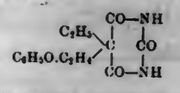
wherein R stands for an alkyl, R' for an aryl and R'' for an alkylene radical, the new substances being white crystals scarcely soluble in water, forming soluble salts with alkalis; and being valuable hypnotics, substantially as described.

3. The herein described substituted barbituric acids of the following general formula:



wherein R stands for an alkyl, R' for an aryl of the benzene series and R'' for an ethylene radical, the new substances being white crystals scarcely soluble in water, forming soluble salts with alkalis; and being valuable hypnotics, substantially as described.

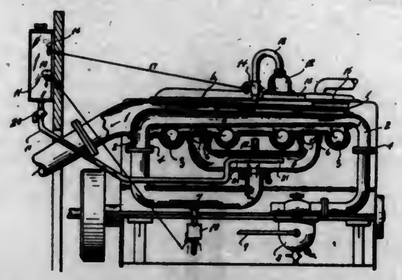
4. The herein described ethylphenoxy-ethylbarbituric acid of the following general formula:



being white crystals melting at 185° C., scarcely soluble in water, forming soluble salts with alkalis, and being a valuable hypnotic, substantially as described.

1,217,448. CARBURETING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. JOHN W. HOOSER, Dallas, Tex. Filed Jan. 16, 1917. Serial No. 142,678. (Cl. 123—52.)

1. In a thermal carbureting device for internal combustion motors, the combination of an exhaust manifold comprising a substantially long tube of tapering design increasing in size from one extremity to the other, of a carbureting manifold carried in and arranged longitudinally within the said exhaust manifold, said carbureting manifold tapering from a substantially small sized tube to a larger sized tube to best accommodate the increasingly expanding gases, connection had with the intake manifold of the motor, and means employed to supply the carbureting manifold with fuel oil.



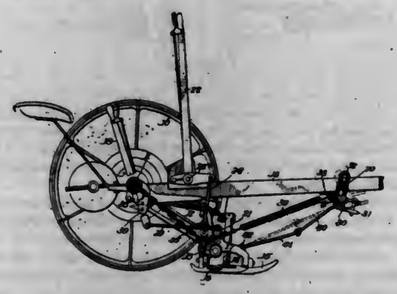
2. In a carbureting system for automobile engines, a manifold for conducting the intake and exhaust gases to and from the engine comprising a duplex form of manifold, which manifold consists of a tube or duct extending longitudinally through its companion tube or duct, the inner tube connecting with a fuel supply and connecting with the engine intake, and the duplex manifold increasing in size in cross section from end to end.

3. In a thermal carbureting device for internal combustion motors, the combination of an exhaust manifold comprising a substantially long tube of tapering design increasing in size from one extremity to the other, of a carbureting manifold carried in and arranged longitudinally within the said exhaust manifold, said carbureting manifold tapering from a substantially small sized tube to a larger sized tube to best accommodate the increasingly expanding gases, connection had with the intake manifold of the motor, and means employed to supply the carbureting manifold with fuel oil, and an air intake valve located in the carbureting manifold.

4. A method of producing combustible mixture from kerosene, consisting of the following steps: first, mixing kerosene and air; second, vaporizing said kerosene by heat; third, mixing air therewith; and, finally, injecting steam therewith.

5. In an internal combustion engine a carbureter for mixing kerosene and air, a heater through which the mixture of kerosene and air passes, an auxiliary air inlet valve between the heater and engine, and means for introducing steam between the auxiliary air inlet valve and the engine.

1,217,449. MOWING-MACHINE. HARVEY L. HOPKINS, Chicago, Ill., assignor of one-half to Arloa B. Glade, Chicago, Ill. Filed Feb. 25, 1914. Serial No. 820,799. (Cl. 56—74.)



1. In a mowing machine, the combination with the driving wheels, of a frame, a tongue, a finger bar pivoted to the frame at its inner shoe, a gag lever coöperating with the finger bar, a roller carried by the gag lever, draft connections supported from the tongue to the finger bar, a chain attached at one end to the frame and extending beneath the roller, and a spring connecting the other end of the chain with the draft connections at the tongue.

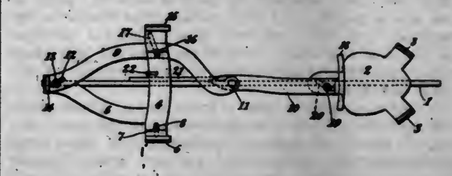
2. In a mowing machine, the combination with the driving wheels, of a frame, a tongue, finger bar pivoted to the frame at its inner shoe, a gag lever coöperating with the finger bar, a roller carried by the gag lever, a clevis yoke pivoted on the tongue, a chain attached at one end to the frame and extending beneath the roller, a spring connecting the other end of the chain with the clevis yoke, and links connecting the clevis yoke and the shoe, and taking the draft when the spring is stretched sufficiently.

3. In a mowing machine, the combination with the driving wheels, of a frame, a tongue, a finger bar pivoted to the frame at its inner shoe, draft connections supported from the tongue to the finger bar, a sagging chain connected at one end to the frame beneath the axle, a clevis yoke on the tongue, connections between the other end of the chain and the clevis yoke so that as the chain is straightened it tends to lift the outer end of the finger bar by turning it on its pivot, and means for varying the distance from the axle to the point of attachment of said chain to vary its lift on the finger bar.

4. In a mowing machine, the combination with the driving wheels, of a frame, a tongue, a finger bar pivoted to the frame at its inner shoe, draft connections supported from the tongue to the finger bar, a sagging chain connected at one end to the frame beneath the axle, a clevis yoke on the tongue, a spring connecting the other end of the chain and the clevis yoke, connections between the chain and finger bar so that as the chain is straightened it tends to lift the outer end of the finger bar, and means for varying the distance from the axle to the point of attachment of said chain to vary its lift on the finger bar.

5. In a mowing machine, the combination with the driving wheels, of a frame carried thereby, a tongue secured to the frame, a coupling frame, a yoke pivoted on the end of the coupling frame, a finger bar pivoted to the yoke, a gag lever pivoted on the yoke, a lifting lever pivoted on the tongue, connections between the lifting lever and the outer end of the gag lever, a clevis yoke pivoted on the tongue, pivot links connecting the clevis yoke and the first-mentioned yoke, a pulley mounted on the gag lever, a helically-coiled contractile spring connected at one end to the clevis yoke, and a chain connecting the other end of the spring and the main frame beneath the axle and passing beneath the pulley, substantially as and for the purpose described.

1,217,450. SKATE. CARL JOHN HOVEN, New York, N. Y. Filed Feb. 29, 1916. Serial No. 81,082. (Cl. 46—50.)



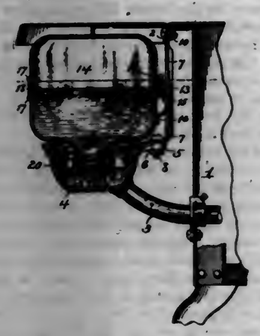
1. In combination with a skate having a sole plate and a heel plate, a toggle extending longitudinally of the skate and mounted thereon by means of pins working in guide slots formed in said plates, a jaw at each end of the toggle for engaging the toe and the heel of a shoe respectively, jaws fixed to the rear of the heel plate, and laterally adjustable jaws carried on the sole plate.

2. In combination with a skate having sole and heel plates, a toggle supported by said plates, a jaw at each end of the toggle and movable therewith so as to press respectively against the toe and the heel of a shoe, a lateral jaw secured to one member of the toggle and movable therewith, said movable jaws coöperating with relatively fixed jaws carried on the sole and heel plates to clamp the skate to a shoe.

3. In combination with a skate having a sole plate and a heel plate, a toggle supported on the sole and the heel

plate for longitudinal movement thereon, said toggle having one of its members extending beyond the pivotal connection to form an actuating lever, means for locking the lever in closed position, a jaw at each end of the toggle for engaging the toe and the heel of a shoe respectively, jaws fixed to the rear of the heel plate and a pair of lateral jaws one of which is carried by the toggle and is movable therewith.

1,217,451. OIL-STOVE. WALTER E. HUENEFELD, Cincinnati, Ohio, assignor to The Huenefeld Company, Cincinnati, Ohio. Filed Apr. 29, 1916. Serial No. 94,429. (Cl. 158—41.)



1. The combination with a stove frame, and a bowl, of a plate secured to the stove frame, an oil reservoir, and a single loop-and-hook connection between the reservoir and said plate and constituting the supporting means for the reservoir over the bowl.

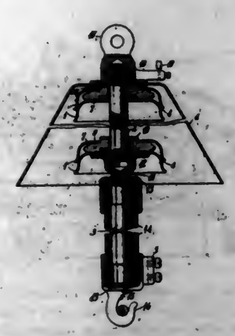
2. The combination with a stove frame and a bowl, of a plate secured to the stove frame and provided with an upwardly projecting arm disposed substantially parallel with the plane of the face of said plate, an oil reservoir, a loop on said oil reservoir engaging said upwardly projecting arm on the plate, said arm and loop forming a loop-and-hook connection between the reservoir and said plate and constituting the supporting means for the reservoir over the bowl.

3. The combination with a stove frame, a bowl, and an oil reservoir over the bowl, of a bracket secured to the stove, said bracket having an upwardly projecting arm offset from and substantially parallel with the plane of one face of said bracket so as to be disposed between the reservoir and the stove, said arm forming a shoulder at its lower end, and a loop on the reservoir removably engaging said arm and resting on the shoulder at the lower end thereof.

4. The combination with a stove frame, and a reservoir over the bowl, of a bracket secured to the stove, said bracket having an upwardly projecting arm offset from and substantially parallel with one face of said bracket so as to be disposed between the reservoir and the stove, said arm forming a shoulder at its lower end, a loop offset from the reservoir removably engaging said arm and resting on the shoulder at the lower end thereof, and a guard projecting from said bracket and engaging the reservoir below its connection with said arm.

1,217,452. LIGHTNING-ARRESTER. RAY P. JACKSON, Edgewood, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 28, 1913. Serial No. 757,360. (Cl. 175—30.)

1. A lightning arrester comprising a plurality of superposed and spaced electrodes, insulating washers interposed between adjacent electrodes, resilient cushions disposed between opposite surfaces of adjacent insulating washers, and a centrally disposed rod extending through said electrodes, insulating washers and resilient cushions in order to hold all of them in fixed relationship to one another.

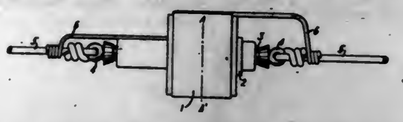


2. A lightning arrester comprising a plurality of spaced, annular, downwardly and outwardly flared electrodes, insulating washers interposed between adjacent electrodes and provided with shoulders upon which said electrodes are seated, a centrally disposed rod projecting through openings in the electrodes and the washers, and a rain shield for the electrodes.

3. A lightning arrester comprising a plurality of spaced, annular, downwardly and outwardly flared electrodes, insulating washers interposed between adjacent electrodes, means disposed between adjacent insulating washers to absorb mechanical stresses between them, and a centrally disposed support projecting through openings in the electrodes and the insulating washers in order to hold them in fixed relationship to one another.

4. A lightning arrester, adapted to be connected between a line conductor and ground comprising a plurality of superposed, downwardly and outwardly flared electrodes which are spaced to form spark gaps, insulating washers interposed between adjacent electrodes, a supporting rod extending through openings in the electrodes and the insulating washers in order to hold them in fixed relationship to one another, and a resistor connected in series relationship with said spark gaps.

1,217,453. STATIC PROTECTIVE DEVICE. RAY P. JACKSON, Edgewood, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 10, 1916. Serial No. 71,191. (Cl. 175—30.)



1. A protective device comprising a current-carrying coil, a resistor having its elements disposed between adjacent convolutions of the coil, and insulating layers of high specific inductive capacity for insulating the convolutions from one another.

2. A protective device comprising a current-carrying coil having a plurality of convolutions, resistance elements of low specific electrical conductivity disposed between the coil convolutions, and insulating layers of high specific inductive capacity for insulating the coil convolutions from one another.

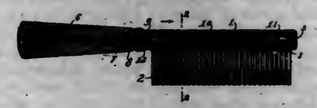
3. A protective device comprising a current-carrying coil having a plurality of convolutions, means for establishing a high electrostatic capacity between adjacent convolutions thereof, and layers of resistance material of low specific conductivity disposed between adjacent convolutions.

4. A protective device comprising a spirally-wound, current-carrying coil having a plurality of convolutions each providing a conducting layer of relatively large area, means for establishing high electrostatic capacity between adjacent convolutions thereof and layers of resistance material of low specific conductivity disposed between adjacent convolutions of the coil.

5. A protective device comprising a current-carrying coil having a plurality of convolutions each providing a conducting layer of relatively large width, insulating layers of high specific inductive capacity disposed between adjacent convolutions thereof, and layers of resistance material also disposed between adjacent convolutions.

[Claims 6 to 12 not printed in the Gazette.]

1,217,454. HAIR DRYING AND STRAIGHTENING COMB. HANNAH JACOBS and HARRY JACOBS, Brooklyn, N. Y. Filed Mar. 23, 1916. Serial No. 86,198. (Cl. 34—26.)



In a hair drying and straightening comb, a hollow metallic head having comb-teeth formed thereon, a handle formed of heat insulating material and adapted to be detachably connected to the said head, a heating element adapted to engage within the said head, a lifting pin formed upon one end of said heating element and a recess formed in aforesaid handle and adapted to engage the said pin to lift same.

1,217,455. INSOLE-FITTING MACHINE. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 16, 1916. Serial No. 84,564. (Cl. 12—30.)



1. An insole-fitting machine having, in combination, a feather-molding roll, and lip-setting and channel flap turning rolls opposite the molding roll, the lip-setting roll having a feather feeding and compressing face, and a lip-setting face constructed and arranged to turn down upon and compress the lip against the between-substance.

2. An insole fitting machine having, in combination; a feather-molding roll having a molding face to engage the unlipped side of an insole opposite the feather to offset the edge of the sole; a lip-setting roll opposite the feather-molding roll and having a feather engaging face, a lip-setting face and a shoulder forming face, a channel flap lifting roll opposite the feather-molding roll having a face for turning back the channel flap; and means for pressing the feather-molding and channel flap lifting rolls toward the lip-setting roll; the faces of said lip-setting roll being so arranged with relation to the face of the feather-molding roll that the feather, between-substance and lip of the sole will be compressed between them, and the faces of the lip-setting roll being so arranged with relation to the face of the channel flap lifting roll that the between-substance will be compressed between them.

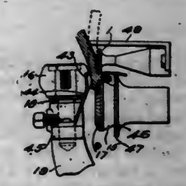
3. An insole-fitting machine having, in combination, a feather-molding roll, lip-setting and channel flap turning rolls opposite the molding roll, a channel opening plow in front of the channel flap turning roll, a feather guide in front of the lip-setting roll, and a sole edge engaging guide in front of the molding roll.

4. An insole-fitting machine having, in combination, a feather-molding roll, lip-setting and channel flap turning rolls opposite the molding roll, and a sole edge guide for maintaining the sole against the pressure of the channel flap turning roll to keep the channel flap turning roll in the bottom of the channel of the insole.

5. An insole fitting machine having, in combination; a feather-molding roll having a convex surface for engaging the unlipped surface of an insole; a channel flap lifting roll opposite the feather-molding roll and having a face to ride in the channel and turn back the channel flap; a lip-setting roll opposite the feather-molding roll having a feeding face for engaging the feather, a shoulder forming face arranged substantially normal to the surface of the sole opposite the between-substance while it is supported in the rolls, and a lip-setting face arranged substantially parallel with said sole surface; and means for pressing the feather-molding and channel flap lifting rolls toward the lip-setting roll.

[Claim 6 not printed in the Gazette.]

1,217,456. FORMING-IN MACHINE. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 5, 1913. Serial No. 752,146. (Cl. 12—20.)



1. A machine for forming-in reinforcing fabric at the inside angle of a sole, having a marginal lip or rib, to which the fabric has been roughly applied, having, in combination, means for supporting and feeding the sole, a forming-in tool at the inside of the lip having an operating portion adapted to apply pressure on the fabric at the vertex of the angle at the inside of the lip, and means for continuously engaging and advancing the free marginal portion of the fabric with the sole, substantially as described.

2. A machine for forming-in reinforcing fabric at the inside angle of a sole, having a marginal lip or rib, to which the fabric has been roughly applied, having, in combination, means for supporting and feeding the sole, a forming-in tool at the inside of the lip having an operating portion adapted to apply pressure on the fabric at the vertex of the angle at the inside of the lip, and means for holding the fabric away from the inner side of the lip whereby the forming-in tool is enabled to draw the free marginal portion of the fabric into the angle, substantially as described.

3. A machine for forming-in reinforcing fabric at the inside angle of a sole, having a marginal lip or rib, to which the fabric has been roughly applied, having, in combination, means for supporting and feeding the sole, and a rotary forming-in tool at the inside of the lip, having an operating portion provided with teeth extending in an opposite direction to the rotation of the tool, constructed and arranged to apply pressure on the fabric at the vertex of the angle at the inside of the lip, substantially as described.

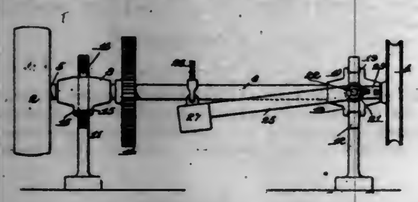
4. A machine for forming-in reinforcing fabric at the inside angle of a sole, having a marginal lip or rib, to which the fabric has been roughly applied, having, in combination, a rotary forming-in tool at the inside of the lip, having an operating portion provided with teeth extending in an opposite direction to the rotation of the tool, constructed and arranged to apply pressure on the fabric at the vertex of the angle at the inside of the lip, means for relatively actuating the tool and sole to transfer the point of operation of the tool around the sole, and means for automatically swinging the sole about the point of

operation of the tool as its point of operation is transferred around the sole, substantially as described.

5. A machine for operating upon partially reinforced soles having a marginal lip or rib, having, in combination, a reinforcing fabric pressing tool for operating at the inside of the lip, a toothed feed roll for operating upon the feather of the sole, and a guard for the teeth of the feed roll constructed and arranged to limit the surface area of the feather engaged by the feed roll, substantially as described.

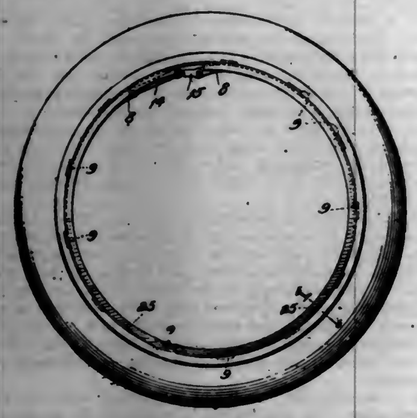
[Claims 6 to 20 not printed in the Gazette.]

1,217,457. HOIST. GEORGE A. JORDAN, Brooklyn, N. Y., assignor of one-third to William H. Jordan and one-third to Christopher C. Jordan, Brooklyn, N. Y. Filed Feb. 18, 1914. Serial No. 819,324. (Cl. 74—21.)



A hoist which comprises two parallel shafts, grooved pulleys at one end of said shafts adapted to grip a rope between them, bearing boxes for said shafts, two yokes supporting the boxes, the boxes on the yoke adjacent to the pulleys being slidably mounted in the yoke, the boxes farther from the pulleys each having ears at its bottom straddling the yoke, a lug at the top adapted to engage the yoke and prevent raising of the box to such an extent as to raise the ears clear of the yoke, and ears at its sides to prevent sidewise movement of the boxes within the yokes.

1,217,458. WHEEL-RIM. RUBIC W. JORDAN, Holderness, N. H., assignor to Jordan Demountable Rim Company, Boston, Mass., a Corporation of Massachusetts. Filed May 6, 1916. Serial No. 95,755. (Cl. 152—21.)



1. In a wheel rim, the combination with a flanged and slotted rim, of a detachable ring, and an expansible ring on the inside of the rim and having offset teeth entering the slots therein and engaging the detachable ring.

2. In a wheel rim, the combination with a rim proper having an integral lateral flange, and having also a circumferential series of slots, of a detachable ring adapted to be placed upon the rim contiguous to the said slots and opposite to the flange of said rim, said ring having an inner groove, and an expansible ring having a series of teeth with offset ends, said teeth passing through the slots and engaging the groove in the ring and adapted to have their offset ends engage the rim contiguous to the slots when the air pressure shifts the ring laterally.

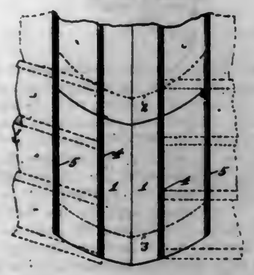
3. In a wheel rim, the combination with a rim proper having an integral lateral flange, and having also a circumferential series of slots, of a detachable ring adapted to be placed upon the rim contiguous to the said slots and opposite to the flange of said rim, said ring having an inner groove, and an expansible ring on the inside of the rim, said ring having a series of teeth having offset ends whose outer portions are inclined and form with shoulders adapted to engage the body of the rim, said teeth passing through the slots and engaging the groove in the ring and having the shoulders engaging the rim to prevent removal of the detachable ring while the tire is inflated.

4. In a wheel rim, the combination with a rim proper having an integral lateral flange, and having also a circumferential series of slots, of a detachable ring adapted to be placed upon the rim contiguous to the said slots and opposite to the flange of said rim, said ring having an inner groove, and an expansible ring whose ends are connected by toggles, said ring being provided with teeth having inclined sides and offset ends, which ends are shouldered, said teeth being adapted to pass through the slots in the rim and engage the groove in the ring and hold the latter in position on the rim.

5. The combination with a wheel, of a flanged rim thereon, said rim being provided with a circumferential series of apertures, and a removable ring shaped to correspond to the flange opposite thereto on the rim and having an inner circumferential groove, and an expansible ring within the rim having teeth passing through the apertures in the rim and engaging the groove in the detachable ring, said teeth being offset, and all arranged so that when the air pressure in the tire is applied to the parts, the detachable ring will be laterally shifted to cause the expansible ring to be likewise slightly shifted so that it may lock the ring against removal.

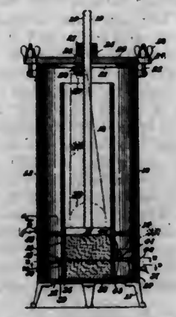
[Claim 6 not printed in the Gazette.]

1,217,459. VALLEY-TILE. HERMAN JUENGLING, Detroit, Mich. Filed Oct. 21, 1916. Serial No. 126,839. (Cl. 108—25.)



A valley tile V-shaped in cross section and having the walls thereof provided with longitudinal grooves, intermediate the bottom center line of the tile and the side edges thereof, each wall of said tile at the upper end thereof being cut away on the upper face to form a seat and provide relative thin end portion, the lower end of each wall having the lower face thereof cut away to provide a relative thin portion adapted for overlapped registration with the relative thin portion of an adjoining tile, said tile having the end portions thereof described on an arc to afford a large bearing for adjoining tiles, and the grooves of the tile extending from the seats at the upper end of the tile to the edge of the lower thin portion of the tile.

1,217,460. BUTTER PRESSING AND MOLDING MACHINE. JOHN KAROLLE, Flint, Mich. Filed Mar. 13, 1916. Serial No. 83,840. (Cl. 31—25.)



A butter packing machine comprising a casing, a removable lid therefor, a butter-receiving tube axially mounted in the said casing and providing a refrigerating chamber between the said tube and casing, a packing plunger operatively arranged within said tube and a removable butter-receiving mold arranged within the casing beneath said tube, parallel upstanding guides at opposite sides of the mold in frictional contact therewith, a U-shaped cutter frame having the legs thereof slidably mounted upon said guides, a cutting wire carried by the frame and having a path of movement transversely of the plane of said tube and mold and intermediate thereof, rack teeth on the upper sides of said frame legs, a transverse shaft journaled through the casing, operating pinions upon the said shaft in mesh with said racks, and an operating crank upon the shaft exteriorly of said casing.

1,217,461. AUTOMOBILE-TIRE. WILLIAM E. KEMMERICH, New York, N. Y. Filed Jan. 10, 1916. Serial No. 71,222. (Cl. 152—8.)



1. A resilient tire comprising a metallic fabric with a weft of spring steel strips of approximately horseshoe-like shape, the warp of the road-contacting portion of the tire consisting of bandiron, the warp of the sides of the tire consisting of wire and the interior being filled with a light bulky material.

2. A resilient tire comprising spring steel strips of horseshoe-like shape interwoven with wire on the sides and with bandiron at the road-contacting portion and attached near their ends to annular members so shaped as to fit the rim of an ordinary automobile wheel.

1,217,462. SULFONATING COAL-TAR DYES. EDWARD D. KENDALL, Elizabeth, N. J., assignor of one-half to Louis T. Haggin, Closter, N. J., and Margaret V. Haggin and Allan McCulloh, New York, N. Y., and H. Esk Moller, Montclair, N. J., executors of James B. Haggin, deceased. Filed July 13, 1916. Serial No. 109,040. (Cl. 23—24.)

1. The herein described process of sulfonating coal-tar dyes, which consists in converting hydrogen sodium sulfate into sodium disulfate and then persulfating this with one chemical equivalent of monohydrated sulfuric acid and then adding to this persulfated body, when in a state of fusion, the pulverized and dehydrated coal-tar dye to be sulfonated, with thorough admixture until sulfonation of the dye is effected, substantially as herein described.

2. The herein described process of sulfonating coal-tar dyes, which consists in persulfating an alkali-metal disulfate by incorporating therewith one chemical equivalent of monohydrated sulfuric acid and adding to this persulfated body, when in a state of fusion, the pulverized and dehydrated coal-tar dye to be sulfonated, substantially as herein described.

3. The herein described process of sulfonating coal-tar dyes, which consists in persulfating an alkali-metal disulfate by incorporating therewith one chemical equivalent of monohydrated sulfuric acid and adding to this persulfated body, when in a state of fusion, the pulverized and dehydrated coal-tar dye to be sulfonated, afterward dissolving the entire mass in water and removing excess of sulfuric acid with an equivalent amount of calcium hydroxid; then filtering the solution and evaporating the filtrate to dryness, substantially as herein described.

1,217,463. SHOE. GUSTAVE KRIEGER and EMIL KRIEGER, Brooklyn, N. Y. Filed May 13, 1916. Serial No. 97,261. (Cl. 36—46.)



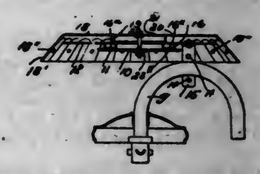
1. A shoe comprising an upper, a welt secured thereto, a looped wire engaging the welt and a draw string engaging the looped wire to position said upper and welt.

2. A shoe comprising an upper, a slitted and apertured welt secured thereto, a wire having a plurality of loops that engage the welt-apertures, and a string engaging the loops to position said upper and welt.

3. A shoe comprising an upper, a welt secured to the outer side of the upper along the lower edge thereof, said upper and welt being apertured, a wire having a plurality of inwardly turned loops that engage the upper and welt, and a string engaging the loops to position said upper and welt.

4. The method of making a shoe which consists in securing a welt to an upper, forming perforations in the welt, passing looped portions of a wire through said perforations, and drawing a string through the looped portions to turn said looped portions inwardly to strain the upper over the last.

1,217,464. HEATING ATTACHMENT FOR BURNERS. FRANK LEACH, Detroit, Mich. Filed Sept. 13, 1916. Serial No. 119,959. (Cl. 126—248.)



A heating attachment for gas burners comprising a distributing plate having a series of perforations, a baffle in superposed relation thereto, a spacer between said distributing plate and the baffle and having perforations registering with the perforations of the distributing plate, a crown plate having a depending flange provided with perforations below said baffle, means for holding the several parts together, and means carried by said baffle for holding the device on a gas burner.

1,217,465. SHAFT-COUPLING. EVERETT C. LEWIS, Cranston, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 3, 1916. Serial No. 81,933. (Cl. 64—13.)

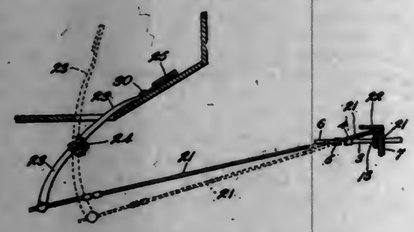


1. In a shaft-coupling, the combination of a two-part sleeve comprising opposite members formed at their ends with circumferentially-spaced radially-projecting jaws adapted to bind against the peripheries of two alining shafts, and a bolt extending through the center of the sleeves between the ends of the shafts to clamp the jaws of the two members against the shafts in frictional engagement therewith.

2. In a shaft-coupling, the combination of a two-part sleeve comprising opposite members having their central portions chambered out on the interior and formed with circumferentially-spaced inwardly-projecting jaw-sections at their ends fitted to receive the peripheries of two alining shafts, and a bolt extending through the centers of the members between the ends of the shafts to draw the parts of the sleeve together to clamp the jaws against the shafts with a wedging action to cause a frictional grip thereon.

3. An improved shaft-coupling comprising a two-part sleeve consisting of opposite halves enlarged at the center and tapered toward the ends, with their central portions hollowed out on the interior of the sleeve and provided with opposite diametrically-arranged holes, and a bolt extending through the holes to clamp the parts of the sleeve together, said sleeve having jaws at its ends for receiving the ends of two alining shafts to connect them to rotate together.

1,217,466. MECHANICAL STARTER FOR AUTOMOBILE-ENGINES. HARRY W. LIGON, Atlanta, Ga. Filed Oct. 30, 1916. Serial No. 128,482. (Cl. 74—81.)



1. In a starting device for automobile engines the combination of a pair of clutch members; a crank member carrying one of said clutch members; a single means normally under tension adapted to simultaneously rotate and to slidably move said crank member; and means normally preventing said last named means from acting, substantially as described.

2. In a starting device for automobile engines the combination of a pair of clutch members; a crank member carrying one of said clutch members; a member normally under tension adapted to rotate and to slidably move said crank member; and means comprising a dog, a lever and a holding catch for said lever normally preventing said last named member from acting, substantially as described.

3. In a starting device for automobile engines the combination of a pair of clutch members; a slidable crank member carrying one of said clutch members; a rotatable plate rigid with said crank member; a member normally under tension adapted to slidably move said crank member to cause an engagement between said clutch members; a lever connected to said plate and adapted to rotate the same; a catch to hold said lever; and a dog to prevent a sliding movement of said clutch member until said plate and crank member are rotated, substantially as described.

4. In a starting device for automobile engines the combination of a pair of clutch members; a slidable crank member carrying one of said clutch members; a rotatable plate rigid with and detachably secured to said crank member; a member comprising a coiled spring normally under tension adapted to slidably move said crank member to cause an engagement between said clutch members; a lever connected to said plate and adapted to rotate the same; a catch to hold said lever; and a dog provided with a curved portion adapted to hold said spring and to prevent a sliding movement of said clutch member until said plate and crank member are rotated, substantially as described.

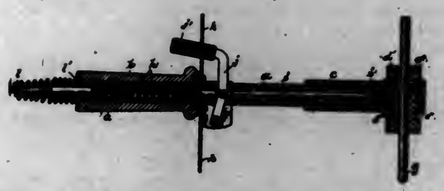
1,217,467. VALVE MEANS FOR OIL-WELL SWIVELS. HUGH B. LINCOLN, Electra, Tex. Filed Dec. 27, 1916. Serial No. 139,224. (Cl. 255—25.)



1. In combination; a string of drill pipe; swivel means for supporting the upper end of said pipe; a flexible hose for supplying mud laden fluid under pressure to the upper end of said pipe; means for connecting said flexible hose to said pipe; and a check valve in the upper portion of said means, said check valve being so arranged that it will open to admit air to said pipe only when the pressure in said pipe falls below atmospheric pressure.

2. In a swivel; a goose-neck having one limb formed to connect to pipe members which are in open connection with a string of drill pipe, and having its other limb formed to connect through a flexible hose with a mud pump; and a check valve in said goose-neck so arranged as to aidmit air to the interior of said goose-neck only when a partial vacuum is formed in said goose-neck.

1,217,468. ELECTRODE-HOLDER. JOHN C. LINCOLN, Cleveland, Ohio. Filed July 22, 1916. Serial No. 110,644. (Cl. 219—15.)



1. In an electrode holder, the combination with a handle member, of a socket supported thereby, a renewable lining of conductive material therein, an electrode or terminal and means for adjustably holding said electrode within the lined socket, substantially as set forth.

2. In an electrode holder, the combination with a handle member, of an electrode receptacle carried thereby, a conductive body within said receptacle and engaging the electrode, a suitable electrode, and means for gripping the electrode and removable holding it within said conductive body, substantially as set forth.

3. In an electrode holder, the combination with a metal socket, of a subdivided carbon facing for the interior of the socket, a carbon electrode positioned interiorly of the facing and gripping means acting upon the carbon members, adapted to hold them in electrical contact within the socket, substantially as set forth.

4. In an electrode holder, the combination with a tubular handle, of a socket-member carried by the handle and adapted to receive the electrode, a movable part adapted to grip the electrode within the socket, a spring positioned interiorly of the handle and acting upon said part, and a trigger associated with the handle and adapted to relax the tension of the spring against the movable part for releasing the electrode, substantially as set forth.

5. In an electrode holder, the combination with a tubular metal socket, the same having semi-cylindrical sections of different radius forming its tubular bore, of semi-spool-shaped carbon members loosely fitting within the bore, and spring-acting means for gripping the carbon members within the socket, and holding the electrode therebetween, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,217,469. TIME-ELEMENT RELAY. ALEXANDER J. LOGUIN, Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Mar. 23, 1912. Serial No. 685,685. (Cl. 175—270.)



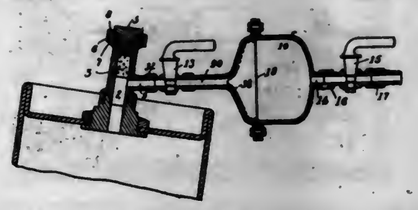
1. In combination, an electro-magnet provided with an armature movable on the occurrence of a desired condition in the energizing circuit of said electro-magnet, an element adjustably supported in position, a part associated with said armature and coöperative with one portion of said element to variably determine the retractile position of said armature, and a dash-pot device associated with said armature for retarding the movement thereof to attracted position, said dash-pot device comprising relatively fixed and movable coöperative parts, the fixed part of said dash-pot device being mounted on another portion of said element and the movable part of said dash-pot device being operatively connected to said armature and movable therewith.

2. In a retarded circuit breaker, an electromagnet provided with an armature movable in response to a predetermined condition in the energizing circuit of said electromagnet, an element adjustable supported in position and provided with spaced portions, a part associated with said armature and coöperative with one of said portions to determine the normal position of said armature, and a dash-pot device comprising a receptacle and a piston element, one of the parts of said dash-pot device being adjustably supported by the other of said spaced portions, and the second part of said dash-pot device being associated with said armature and coöperative with the first part of said dash-pot device to retard the movement of said armature on the occurrence of the predetermined condition in the circuit of said electromagnet.

3. In combination, an electromagnet provided with a movable armature, adjustable means for varying the retractile position of said armature, said means comprising an element adjustably supported in position and having a portion coöperative with a part associated with said armature, and means for retarding the movement of said armature to attracted position, said retarding means comprising coöperative relatively movable parts, one of said parts being supported in operative position by a second portion of said element and the other of said parts being movable with said armature, said first means being adjustable at all times without danger of affecting the operative relation between the relatively movable parts of the retarding means.

4. In combination, an electromagnet comprising a fixed part and an armature coöperative therewith and movable on the occurrence of a predetermined condition in the energizing circuit of the electromagnet, an element comprising spaced portions, means associated with the fixed portion of said electromagnet and operative to adjustably support said element in operative position, a part associated with said armature and coöperative with one of said spaced portions to variably determine the retractile position of said armature, and means for variably retarding the movement of said armature to attracted position, said means comprising a dash-pot device including a receptacle adapted to contain fluid and a piston element coöperative with said receptacle, one of said dash-pot elements being adjustably mounted on the second one of said spaced portions, and the other one of said dash-pot elements being movable with said armature.

1,217,470. PASTEURIZING APPARATUS. EMANUEL M. LUNDGREN, Stapenhill, Burton-upon-Trent, England. Filed Feb. 19, 1916. Serial No. 79,805. (Cl. 99—2.)



1. A pasteurizing apparatus consisting of a chamber provided with an inlet passage having a shut-off cock; a stopper-guide communicating with said chamber; a second shut-off cock between said chamber and said guide; means for connecting one end of said stopper guide to the bung hole of a cask; and means for closing the other end thereof.

2. A pasteurizing apparatus consisting of a chamber provided with an inlet passage having a shut-off cock; means for attachment to a source of carbonic acid gas under pressure; a stopper guide consisting of a tube adapted to be connected with the bung hole of a cask and also adapted to contain a stopper in line with the bung hole; a lateral tube leading from said stopper guide and adapted to be coupled to said chamber; and a tapered plug detachably secured to the open end of said stopper guide.

3. A pasteurizing apparatus consisting of a chamber provided with a communicating passage; a stop cock in said passage; a tubular cork guide open at both ends and adapted to contain a cork, said cork guide being in communication with said passage; and means for excluding the air from said chamber.

1,217,471. MANUFACTURE OF ALUMINUM CHLORID. ALMER MCDUFFIE MCAFEE, Port Arthur, Tex., assignor to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Sept. 29, 1916. Serial No. 122,869. (Cl. 23—13.)

1. In the manufacture of aluminum chlorid the process which comprises intimately incorporating finely divided hydrated alumina and coking coal, coking the mixture and treating with chlorin.

2. In the manufacture of aluminum chlorid the process which comprises intimately incorporating finely divided undehydrated bauxite and coking coal, coking the mixture and treating with chlorin.

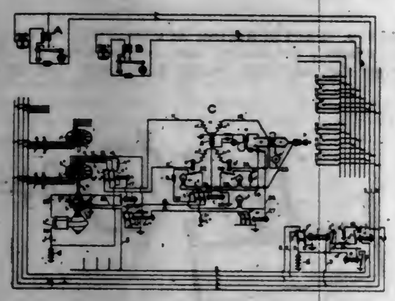
3. In the manufacture of aluminum chlorid the process which comprises intimately incorporating finely divided hydrated alumina, coking coal and a temporary binder, coking the mixture and treating with chlorin.

4. In the manufacture of aluminum chlorid the process which comprises intimately incorporating finely divided undehydrated bauxite, coking coal and a temporary binder, coking the mixture and treating with chlorin.

5. In the manufacture of aluminum chlorid the process which comprises intimately incorporating finely divided hydrated alumina and coking coal, coking the mixture and treating with gas comprising chlorin.

[Claims 6 to 8 not printed in the Gazette.]

1,217,472. TELEPHONE-EXCHANGE SYSTEM. JAMES L. MCQUARRIE, Oak Park, and FREDERICK H. LOVERIDGE, Chicago, Ill., assignors, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Apr. 19, 1906. Serial No. 312,673. (Cl. 179—27.)



1. In a telephone call distributing system, the combination with a finder switch and a telephone line extending to stationary terminals thereof, of electrically operated mechanism for causing the movement of the movable member of said switch, an actuating circuit for said mechanism having an undivided portion and a divided portion, a manually operated switch and an automatically operated switch in the undivided portion of said circuit both of said switches being normally closed and the automatic switch beng controlled from a distant point through the medium of a telephone line, a normally open switch under the control of the mechanism itself in one of the branches of said circuit, and an automatic switch controlled by said telephone line in the other branch thereof.

2. In a telephone call distributing system, the combination with a finder switch having stationary and movable terminals, of a connecting circuit associated with the movable terminals of the switches, a plurality of telephone lines connected with the stationary terminals thereof, mechanism for causing said movable terminals to traverse the stationary terminals, means associated with each line and made operative in initiating a call therein for establishing an electrical potential on one of the stationary finder switch terminals associated with said line, a controlling relay associated with said finder switch, said relay having a high resistance winding and a low resistance winding, said high resistance winding being included in a conductor extending to a movable terminal of said switch adapted to coöperate with the stationary terminal upon which the electrical potential is established, and a branch of said conductor including the low resistance winding of said relay, said branch being normally open in contacts of said relay, and being adapted to be connected in shunt of the high resistance winding upon the operation of said relay to maintain the relay in its actuated position and reduce the potential of the aforesaid stationary terminal.

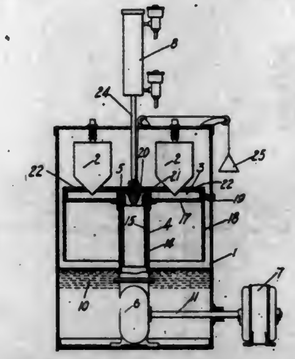
3. In a telephone call distributing system, the combination with groups of finder switches having stationary and movable terminals, of a plurality of telephone lines connected with the stationary terminals of each switch, a connecting circuit associated with the movable terminals of each switch, means associated with each line and made operative in initiating a call therein to establish a potential upon one of the stationary switch terminals associated with such line, mechanism adapted to cause the movable terminals of each switch to traverse the stationary terminals thereof, an electrically actuated device associated with each switch and adapted to arrest the movement of the movable terminals thereof, an actuating circuit for each of said devices extending to a movable terminal of the associated switch adapted to engage the stationary terminal having the potential thereon, an electro magnetic switch adapted to control said actuating circuits and to maintain the same normally closed, an operator's telephone key associated with each connecting circuit, and an actuating circuit for said electro-magnetic switch adapted to be closed when any of the telephone keys at said position is operated, whereby said switches are rendered incapable of completing connection with a calling line while a telephone key is in its operated position.

4. In a telephone call distributing system, the combination with groups of finder switches having stationary and movable terminals, of a plurality of telephone lines connected with the stationary terminals of each switch, a connecting circuit associated with the movable terminals of each switch, means associated with each line and made operative in initiating a call therein to establish a potential upon one of the stationary switch terminals associated with such line, mechanism adapted to cause the movable terminals of each switch to traverse the stationary terminals thereof, an electrically actuated device associated with each switch and adapted to arrest the movement of the movable terminals thereof, an actuating circuit for each of said devices extending to a movable terminal of the associated switch adapted to engage the stationary terminal having the potential thereon, an electro-magnetic switch adapted to control said actuating circuits and to maintain the same normally closed, and a calling signal circuit associated with each connecting circuit and adapted to be energized as long as a calling line connected with said circuit remains unanswered, the winding of the electro-magnetic switch being included in all the calling circuits of said position, whereby said switches are rendered incapable of completing connection with a calling line as long as a call on any of the connecting circuits of said position remains unanswered.

5. In a telephone call distributing system, the combination with a plurality of telephone lines extending to connection terminals at a central office, of a group of connecting circuits adapted to make connection with said lines at the connection terminals thereof, each of said connecting circuits being provided with a signal circuit actuated while a call upon the associated connecting circuit remains unanswered, means associated with each of said connecting circuits for extending the connection of any of said lines thereto, electrically actuated mechanism adapted to prevent the operation of said connecting means, and an actuating circuit for said preventing mechanism made operative in the actuation of any of the aforesaid signal circuits.

[Claims 6 to 31 not printed in the Gazette.]

1,217,473. CONTROL APPARATUS. DONALD H. MACE, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 3, 1915, Serial No. 5,890. Renewed Aug. 29, 1916. Serial No. 117,562. (Cl. 219—57.)



1. In a liquid rheostat, the combination with a tank, a body of electrolyte contained therein, and stationary electrodes for said tank, of means for gradually raising the electrolyte in contact with said electrodes and continuously supplying electrolyte at substantially the surface of the body of raised electrolyte.

2. In a liquid rheostat, the combination with a tank, a body of electrolyte contained therein, and stationary electrodes for said tank, of means for gradually immersing said electrodes in electrolyte and causing the hot surface electrolyte to be rapidly carried away in a radial and outward direction.

3. In a liquid rheostat, the combination with a tank, a body of electrolyte contained therein, and stationary electrodes for said tank, of centrally disposed means for raising the electrolyte to immerse said electrodes and for continuously supplying the electrolyte at the surface of the raised electrolyte to effect a rapid radial flow of the hot surface electrolyte.

4. In a liquid rheostat, the combination with a tank, a body of electrolyte contained therein, and stationary electrodes for said tank, of means embodying a centrally disposed movable pipe and a plurality of radially disposed nozzles associated with its upper end for discharging electrolyte outwardly between said electrodes.

5. In a liquid rheostat, the combination with a tank, a body of electrolyte contained therein, and stationary electrodes for said tank, of a centrally located movable set of radially disposed nozzles adapted to be raised and lowered in position throughout the height of said electrodes and to discharge electrolyte between said electrodes.

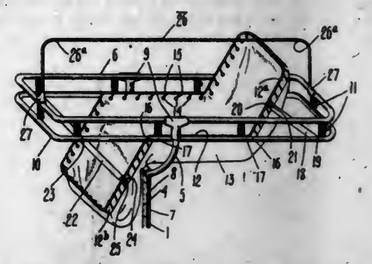
[Claims 6 to 17 not printed in the Gazette.]

1,217,474. BABY-CARRIER FOR AUTOMOBILES. GEORGE P. MACGOWAN, New York, N. Y. Filed Mar. 15, 1915. Serial No. 14,592. (Cl. 5—58.)

1. A baby carrying attachment for vehicles, including a main frame, supporting means therefor, a second frame yieldably connected to the main frame, a basket carrying frame applied to the second frame and formed with adjustable sections, and a flexible basket applied to the basket carrying frame.

2. A baby carrying attachment for vehicles, including a main frame, supporting means therefor, a second frame yieldably supported by the main frame, a basket carrying frame applied to the second frame and formed with swinging head and foot sections, means for holding the swinging head and foot sections in adjusted positions, and a flexible basket member attached to the basket carrying frame.

3. A baby carrying attachment for vehicles, including a main frame, a second frame arranged under the main frame, springs yieldably connecting the main frame and the second frame, supporting means for the main frame, a blanket supporting arch connecting opposite ends of the main frame and extending over the second frame, a basket carrying frame applied to the second frame and formed with adjustable sections, and a flexible basket member secured to the basket carrying frame.



4. A baby carrying attachment for vehicles, including a main frame formed with substantially parallel sides, a supporting yoke, guide members upon the arms of the supporting yoke slidably engaging the sides of the main frame so that the latter can be adjusted with respect to the supporting yoke, a second frame yieldably connected to the main frame, and a basket carried by the second frame.

5. A baby carrying attachment for vehicles, including a standard, a rod rotatable upon the standard and slidable thereon, a supporting yoke carried by the rod, a main frame carried by the said yoke, a second frame yieldably connected to the main frame, and a basket carried by the second frame.

[Claims 6 and 7 not printed in the Gazette.]

1,217,475. ROAD-DRAG. FRANK P. MARTIN, Williamsburg, Kans. Filed Feb. 19, 1914. Serial No. 819,799. (Cl. 37—5.)

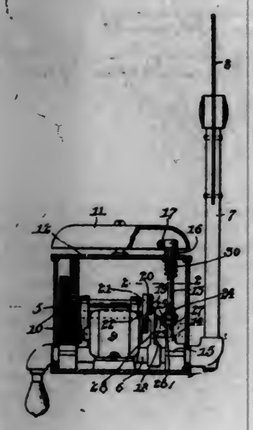


A drag comprising a frame embodying parallel arches and a cross plate secured upon their upper portions, said arches being formed from bars and having their upper portions disposed in a horizontal plane, the bends of the arches being twisted so that the limbs are disposed in vertical planes longitudinal of the arches, front and rear scraper blades in front of the respective sets of the limbs of the arches and having rearwardly projecting portions pivoted to said limbs whereby the lower portions of the blades can swing rearwardly, the upper portions of the blades being adapted to swing against the limbs when the blades are brought into vertical planes, each blade being provided between its ends with an upwardly projecting arm, chains attached to the upper ends of said arms, notched take up members carried by said plate for the engagement of the links of the chains, and a rearwardly projecting bracket carried by the frame and having a guide at its free end over which the chain of the rear blade is passed, said guide being disposed in rear of the rear blade.

1,217,476. GONG MECHANISM FOR AUTOMATIC SIGNALS. GEORGE C. MARTIN, Los Angeles, Cal., assignor to John M. Carson, Los Angeles, Cal. Filed May 5, 1913. Serial No. 765,446. (Cl. 116—33.)

1. A gong mechanism for signaling devices comprising a gong, a hammer, a shaft carrying said hammer, a spring

for rotating said shaft normally holding the hammer adjacent the gong, a means for rotating the shaft against the action of said spring whereby upon release of the shaft the hammer will be returned by the spring with sufficient force to carry it past its normal position for striking the gong, said means comprising a driving member acting alternately in two directions and a spring device acted upon by said driving member and turning the shaft when the driving member acts in one direction but not when it acts in the other.



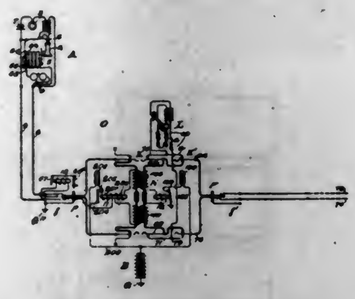
2. The combination with the signaling mechanism having a motor driven shaft of a sounding mechanism having a gong, a vertical rock shaft journaled adjacent to the motor driven shaft, and extending to a point adjacent to said gong, a hammer, carried by the said shaft and arranged to strike said gong, a spring controlling the said shaft to normally hold the hammer yieldingly in position near the gong, means journaled upon the said vertical shaft and adapted to be operated in conjunction with the movement of the said motor driven shaft, an abutment means upon said vertical shaft adapted to be struck by said latter means whereby the hammer will be operated for sounding the gong.

3. In combination with a signaling device having a motor driven rock shaft and gong actuating means projecting therefrom, of a sounding mechanism comprising a gong, a rock shaft, a spring held hammer for sounding the gong, a shaft carrying the hammer, a member journaled upon said shaft for turning the same and extending in the path of said gong actuating means, and an abutment member fixed to the hammer shaft and engaging said journaled member whereby the hammer is caused to sound the gong.

4. A gong mechanism for a signaling device, comprising a rock shaft, a gong hammer carried thereby, an actuating member loosely mounted on said shaft and yieldingly connected therewith, said member having an arm projecting into the path of a moving part of the signaling device whereby it will be swung about the said shaft, a collar secured to the said shaft and a pin projecting from the movable member and engaging said collar, the structure being such that the collar will be caused to actuate the shaft carrying the gong hammer when the movable member is moved in one direction, and not in the other.

5. In a signaling device, a sounding mechanism comprising a gong, a hammer, a shaft carrying the same, a spring controlled arm upon said shaft, means for imparting movement from said arm to said shaft, a crank-disk having projections thereon adapted to engage said spring controlled arm and mechanism in the signaling device for actuating said crank-disk and causing the movement of the hammer carrying shaft in sounding the gong.

1,217,477. TELEPHONE-EXCHANGE SUPERVISORY SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 3, 1910, Serial No. 536,131. Renewed July 20, 1916. Serial No. 110,414. (Cl. 179—27.)



1. In a telephone system, a connector provided with a side switch having three positions, an operator's supervisory relay, a supervisory signal, means for energizing said relay to render said signal operative, and means operative after the arrival of the side switch at third position for deënergizing said relay to render said signal inoperative.

2. In a telephone system, a cord circuit, a trunk line, a supervisory apparatus at the cord circuit, a called line, means for extending connection to said line, a third conductor intermediate the trunk line and the called line, and relays whereby the control of such supervisory apparatus by the called subscriber includes circuits that are partly over said third conductor and partly over the two sides of said trunk line.

3. In a telephone system, means for extending connection to a called line, said means including a cord circuit, a supervisory apparatus therefor, a trunk line, a relay individual to said trunk line, a circuit for shunting or short-circuiting said relay, a resistance and means for introducing it in said circuit when the called subscriber answers to energize said relay, and means controlled by said relay for placing resistance in series with the trunk line to control the said supervisory apparatus.

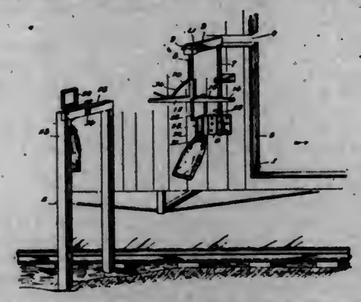
4. In a telephone system, a cord circuit, a supervisory apparatus therefor, means including an automatic switch for extending a connection from said cord to a called subscriber's line, a trunk line comprising three parallel conductors extending to said switch, and means for controlling said supervisory apparatus over the third conductor to the exclusion of the other two of said trunk line when the called subscriber answers.

5. In a telephone system, a cord circuit, a supervisory relay therefor, a trunk line having a third conductor, a circuit for energizing said relay, which circuit includes said third conductor, a circuit for shunting or short-circuiting said relay to prevent the same from energizing, a resistance and means for introducing it in said short-circuit when the called subscriber answers, and a supervisory signal controlled by said relay.

[Claims 6 to 20 not printed in the Gazette.]

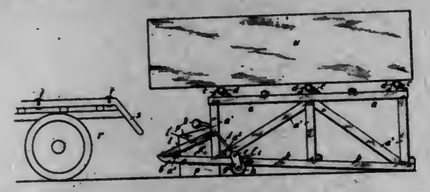
1,217,478. MAIL CATCHING AND DELIVERING APPARATUS. FRANK MATHEWS, Winnipeg, Manitoba, Canada. Filed Feb. 12, 1914. Serial No. 818,328. (Cl. 258—26.)

Support means for a mail bag consisting of a band directly engageable with the mail bag to be transferred, means detachably fastening the bag to the band, strips integral with the band at substantially diametrically opposite points, and a pair of substantially rectangular rings integral with the strips and disposed one above the other, one of the said rings serving as a support for the mail bag before transfer and the other of the said rings



serving as a support for the mail bag subsequent to transfer, as and for the purpose set forth.

1,217,479. YARD-TRUCK. RALPH S. MAXWELL, Portland, Oreg., assignor of one-half to Julia M. Parker, Portland, Oreg. Filed Aug. 2, 1915. Serial No. 43,327. (Cl. 214—1.)



1. A loading device, comprising a rigid frame, the top and bottom longitudinal members of said frame being non-parallel, rolls mounted on the top members of said frame, and adapted to carry the load, means for elevating the forward end of the frame, said means including a crank shaft, means for limiting the degree of throw of the crank-shaft, and said elevating means being also adaptable for lowering the forward end of the frame to initial position.

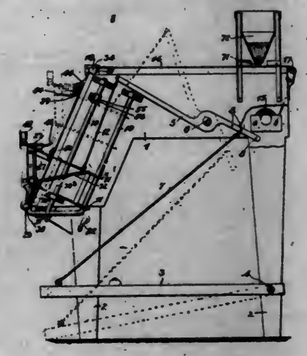
2. A loading device comprising a rigid frame, the top and bottom longitudinal members of said frame being non-parallel, load carrying rolls mounted on the top members of said frame, a crank-shaft provided with wheels and an operating lever for elevating the forward end of the truck, said operating lever projecting beyond the frame when the forward end of the truck frame is elevated.

3. A loading device comprising a rigid frame, the top and bottom longitudinal members of said frame being non-parallel, load carrying rolls mounted on the top members of said frame, a crank-shaft provided with wheels and an operating lever for elevating the forward end of the truck, stop members against which the crank-shaft abuts for limiting the degree of throw of the crank-shaft, said operating lever projecting beyond the frame when the forward end of the truck frame is elevated.

1,217,480. DUPLICATING-MACHINE. LEWIS H. MAYNARD, Rye, N. Y. Filed June 2, 1915. Serial No. 31,670. (Cl. 101—172.)

1. In a duplicating machine, a frame, a bed-plate, a gelatin sheet overstanding the latter, a slidable carriage guided by the frame and arranged to traverse said sheet, a presser bar carried by said carriage, with means for causing said bar to yieldingly press toward said gelatin sheet with a substantially uniform pressure, a paper support adjacent to said presser bar and means for automatically shifting said sheet on said plate by the movement of said carriage.

2. In a duplicating machine, a frame, a bed-plate, a gelatin sheet overstanding the latter, a slidable carriage guided by the frame and arranged to traverse said sheet, a presser bar carried by said carriage, with means for causing said bar to yieldingly press toward said gelatin sheet with a substantially uniform pressure, a paper support adjacent to said presser bar, said paper support being movable, with means for shifting the same out of the paper supporting position as the carriage ascends and means for automatically shifting said sheet on said plate by the movement of said carriage.



3. In a duplicating machine, a frame, a bed-plate, a gelatin sheet overstanding the latter, a slidable carriage guided by the frame and arranged to traverse said sheet, a presser bar carried by said carriage, with means for causing said bar to yieldingly press toward said gelatin sheet with a substantially uniform pressure, a paper support adjacent to said presser bar with means for shifting the presser bar outwardly slightly when said presser bar is in its lowermost position and means for automatically shifting said sheet on said plate by the movement of said carriage.

4. In a duplicating machine, a frame, a bed-plate, a gelatin sheet overstanding the latter, a slidable carriage guided by the frame and arranged to traverse said sheet, a presser bar carried by said carriage, with means for causing said bar to yieldingly press toward said gelatin sheet, a paper support adjacent to said presser bar with means for automatically shifting said gelatin sheet relatively to the bed-plate by the movement of the carriage.

5. In a duplicating machine, a frame, a bed-plate, a gelatin sheet overstanding the latter, a slidable carriage guided by the frame and arranged to traverse said sheet, a presser bar carried by said carriage, with means for causing said bar to yieldingly press toward said gelatin sheet, a paper support adjacent to said presser bar with means for automatically shifting said gelatin sheet relatively to the bed-plate by the movement of the carriage, including mechanically operated clamps carried by the carriage.

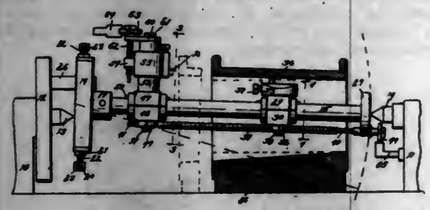
[Claims 6 to 15 not printed in the Gazette.]

1,217,481. BORING-BAR. RICHARD W. MEWES, Des Moines, Iowa. Filed Jan. 11, 1916. Serial No. 71,446. (Cl. 77—57.)

1. In a boring bar, a boring bar rod, means for mounting one end thereof on a lathe, means for mounting the other end thereof on a lathe, said means comprising a face plate designed to be mounted on the lathe, a centering pin extending away from said face plate, a bar mounted on said rod, a bar slidably mounted in said first bar, screws supported with relation to said first bar and bearing against the ends of the second bar.

2. In a boring bar, a boring bar rod, means for mounting one end thereof on a lathe, means for mounting the other end thereof on a lathe, said means comprising a face plate designed to be mounted on the lathe, a centering

pin extending away from said face plate, an arm on the face plate parallel with said centering pin, a bar mounted on said rod, a bar slidably mounted in said first bar, screws suitably supported with relation to said first bar and bearing against the ends of the second bar, said second bar having a plurality of openings for receiving the end of said centering pin.



3. In a boring bar, a boring bar rod, means for adjustably mounting one end of said bar on the lathe, means for mounting the other end of said bar on the lathe, said means including a centering pin designed to be mounted on the lathe, and a disk mounted on the adjacent end of the boring bar rod having a convex face curved on the arc of a circle having its center at the opposite end of the boring bar rod, and provided with a plurality of openings to receive said centering pin arranged at a variety of distances from the center of the curved face of said disk.

4. In a boring bar, a boring bar rod, means for mounting one end thereof on a lathe, said means comprising a face plate designed to be mounted on the lathe, a centering pin extending away from said face plate, an arm on the face plate parallel with said centering pin, a bar mounted on said rod, a bar slidably mounted in said first bar, screws suitably supported with relation to said first bar and bearing against the ends of the second bar, said second bar having a plurality of openings for receiving the end of said centering pin, means for mounting the other end of the bar on a lathe comprising a centering pin on the lathe, and a disk mounted on the adjacent end of the boring bar rod having a convex face provided with a plurality of openings receiving said centering pin arranged at a variety of distances from the center of the curved face of said disk and arranged out of alinement with each other.

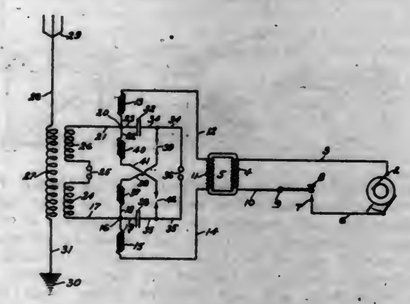
1,217,482. SELF-REGULATING DYNAMO-ELECTRIC MACHINE. ALBERT HENRY MIDGLEY and CHARLES ANTHONY VANDERVELL, Acton Vale, England. Filed Oct. 30, 1911. Serial No. 657,635. (Cl. 171—223.)



1. A self-regulating variable speed continuous current machine comprising in combination an armature, armature conductors, main and supplementary poles, main and supplementary brushes arranged between the main and supplementary poles and windings on the main and supplementary poles, these windings being cyclically connected together and wound on the main poles in one sense and on the auxiliary poles in the opposite sense with respect to the main brushes and the main and auxiliary brushes spanning the armature conductors under a main pole being connected to the ends of the winding on a main pole, and the main and auxiliary brushes spanning the armature conductors under a supplementary pole being connected to the ends of the winding on a supplementary pole, as set forth.

2. A reversible and self-regulating variable speed continuous current machine comprising in combination an armature, armature conductors, one set of poles, another set of poles, main and supplementary brushes arranged between the main and supplementary poles, windings on the poles belonging to the one set and on those belonging to the other set, the windings on all poles being cyclically connected together and being wound on the poles belonging to one set in one sense and on the poles belonging to the other set in the opposite sense with respect to the main brushes and the main and auxiliary brushes spanning the armature conductors under a main pole being connected to the ends of the winding on a main pole and the main and auxiliary brushes spanning the armature conductors under a supplementary pole being connected to the ends of the winding on a supplementary pole, whereby when the machine is rotated in the one direction the poles belonging to one set are excited and act as the main poles, while the other poles act as auxiliary poles, while the functions of these poles are reversed when the machine is rotated in the opposite direction, as set forth.

1,217,483. TRANSMITTING APPARATUS FOR WIRELESS-TELEGRAPH STATIONS. THOMAS B. MILLER, Seattle, Wash., assignor to Wireless Instrument Company, Seattle, Wash., a Corporation. Filed Aug. 22, 1914. Serial No. 858,159. (Cl. 250—17.)

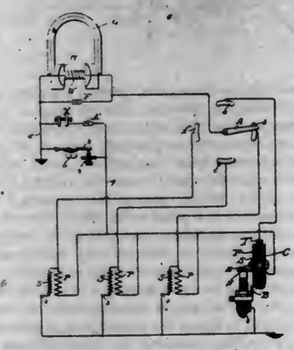


1. Signal transmitting apparatus of a wireless telegraph station embodying an antenna, an air core transformer comprising a secondary coil and two primary coils, said secondary coil being connected to said antenna at one of its terminals while its other terminal is connected to the earth, a spark-gap connected with the inner terminals of said two primary coils in series therewith, two condensers each having one of its terminals connected to the outer terminal of a different one of said two primary coils, another spark-gap having its terminals each connected to the other terminal of a different one of said two condensers, two choke coils each having one of its terminals connected to the other terminal of a different one of said primary coils, and a source of alternating current of electricity whose two terminals are each connected with the other terminal of a different one of said two choke coils.

2. Signal transmitting apparatus of a wireless telegraph station embodying an antenna, an air core transformer comprising a secondary coil and two primary coils, said secondary coil being connected to said antenna at one of its terminals while its other terminal is connected to the earth, a spark-gap connected with the inner terminals of said two primary coils in series therewith, two condensers each having one of its terminals connected to the outer terminal of a different one of said two primary coils, another spark-gap having its terminals each connected to the other terminal of a different one of said two condensers, two choke coils each having one of its terminals connected to the other terminal of a different one of said primary coils, a source of alternating current of electricity whose two terminals are each connected with the other terminal of a different one of said two choke coils, two other spark-gaps, two other choke coils, and two circuits which are parallel with each other and parallel with each of the two first named spark-gaps, one of said circuits containing one of said other spark-gaps together with one of said other choke coils, while the other of said circuits contains the other of such other choke coils and the other one of said other spark-gaps, whereby with respect to the terminals of said source of alternating current of electricity said two condensers shall be connected in circuits parallel with each other and whereby with respect to said two primary coils and said two first named spark-gaps said two condensers shall be connected in series with each other.

3. Signal transmitting apparatus of a wireless telegraph station embodying an antenna, an air core transformer comprising a secondary coil and two primary coils, said secondary coil being connected to said antenna at one of its terminals while its other terminal is connected to the earth, a spark-gap connected with the inner terminals of said two primary coils in series therewith, two condensers each having one of its terminals connected to the outer terminal of a different one of said two primary coils, another spark-gap having its terminals each connected to the other terminal of a different one of said two condensers, and means comprising associated circuits and apparatus included therein, whereby said two condensers may be charged in multiple with respect to the source of charging energy and whereby they may be discharged in series with respect to said two primary coils.

1,217,484. MAGNETO IGNITION SYSTEM FOR INTERNAL-COMBUSTION ENGINES. JOHN LEWIS MILTON, Tiffin, Ohio, assignor to Motor Ignition & Devices Company, a Corporation of West Virginia. Filed Mar. 18, 1911. Serial No. 615,184. (Cl. 123—148.)



1. In combination in an ignition system, a source of current, a spark plug, a primary coil, a secondary coil, a condenser connected to the source, a fixed spark gap, said condenser, spark gap and primary coil being in a circuit of low impedance, and said secondary and spark plug being in a circuit and having a connection with the source.

2. In combination in an ignition system, a source of current, a spark plug, a primary coil, a secondary coil, a condenser connected to the source, a fixed spark gap, said condenser, spark gap and primary coil being in a circuit through which the condenser may discharge, said secondary coil and spark plug being in a circuit and having a connection with the source, and a circuit breaker connected to the source and adapted to open and close a circuit including the latter.

3. In combination in an ignition system, a source of current, a spark plug, a primary coil, a secondary coil, a condenser connected to the source, a fixed spark gap, said condenser, spark gap and primary coil being in a circuit through which the condenser may discharge, said secondary coil and spark plug being in a circuit and having a connection with the source, and a circuit breaker adapted to open and close a circuit including the source, said spark gap and condenser being in shunt to the circuit breaker.

4. In combination in an ignition system, a source of current, a spark plug, a primary coil, a secondary coil, a condenser connected to the source, a fixed spark gap, said condenser, spark gap and primary coil being in a circuit of low impedance, said secondary coil and spark plug being in a circuit and having a connection with the source, and a second condenser connected between the terminals of the source.

5. In combination in an ignition system, a source of current, a spark plug, a primary coil, a secondary coil, a condenser connected to the source, a fixed spark gap, said condenser, spark gap and primary coil being in a circuit through which the condenser may discharge, said secondary coil and spark plug being in a circuit and having a connection with the source, a circuit breaker adapted to open and close a circuit including the source, said spark gap and condenser being in shunt to the circuit breaker, and a second condenser connected between the terminals of the source.

[Claims 6 to 10 not printed in the Gazette.]

1,217,485. CAR-ROOF SHEET. JOHN L. MOHUN, Brooklyn, N. Y. Filed Jan. 25, 1913. Serial No. 744,072. (Cl. 108—5.4.)



1. In a car roof, a metal roofing sheet extending transversely from eaves to eaves and having down-turned end flanges spaced from the sides of the car and free to move relative thereto, and fastening means for pivotally mounting said sheet at its middle point at the ridge.

2. In a car roof, a metal roofing sheet extending transversely from eaves to eaves and having down-turned end flanges spaced from the sides of the car and free to move relative thereto, said sheet having a swivel connection at its middle portion to the ridge pole.

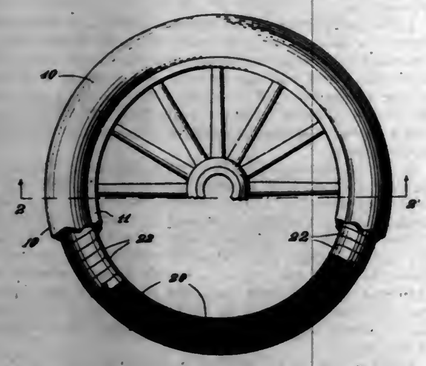
3. In a car roof, a metal roofing sheet extending transversely from eaves to eaves and having down-turned end flanges spaced from the side of the car, said sheet also provided with a raised hollow boss at the ridge, and a ridge pole having a projection extending into said boss and forming a swivel for said sheet.

4. In a car roof, a metal roofing sheet extending from eaves to eaves at the end of the car and having down-turned end flanges spaced clear from the supporting structure and free to move relative thereto, and a down-turned side flange at the end of the car, and means for rigidly fastening said side flange to the end plate of the car.

5. In a car roof, a roofing sheet having a down-turned flange, and a horizontal bolt passing through said flange for fastening the same to the car frame, said sheet having a hollow raised boss at the point through which the bolt passes, to form a clear space around the bolt beneath the flange.

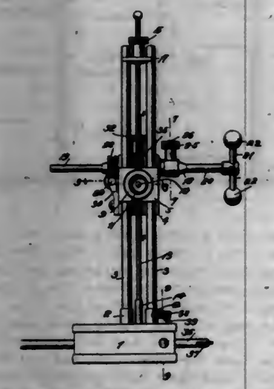
[Claim 6 not printed in the Gazette.]

1,217,486. EXPANDED TIRE. RUDOLPH MOSKOWITZ, New York, N. Y., assignor of one-half to Jonas Gewirtz, New York, N. Y. Filed Nov. 12, 1915. Serial No. 61,065. (Cl. 152—8.)



In a tire the combination, with a body portion and a support therefor, of a plurality of wires bent to form resilient, looped, flat strands, said strands being interwoven and formed into an endless tube, and a covering for said tube.

1,217,487. HOLDER FOR SINE-BARS AND SIMILAR IMPLEMENTS. FREDERICK MULLER, Elizabeth, N. J. Filed Aug. 4, 1916. Serial No. 113,188. (Cl. 33—170.)



1. A holder of the character described, comprising a base, a pair of rods extending upwardly therefrom, a slide movable along the rods, a clamp carried by the slide and adapted to lock the same to said rods, a bar intermediate the rods, means for moving said bar vertically, means for locking the slide to said bar, and an implement holding member carried by the slide.

2. A holder of the character described, comprising a base, a pair of rods extending upwardly therefrom, a slide and a coacting clamp engaging the rods, a vertically movable bar having an upper threaded end, means for locking the slide to said bar, a set screw engaging the bar, a cross piece carried by the rods and engaged by the set screw, and an implement holding member carried by the slide.

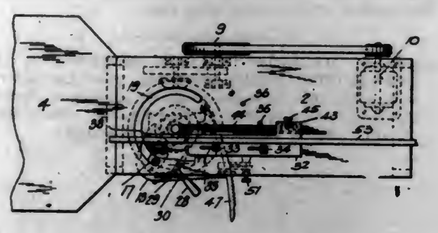
3. A holder of the character described, comprising a base, a pair of rods extending upwardly therefrom, a slide and a coacting clamp engaging the rods, a threaded tubular barrel carried by the slide, a nut threaded on said barrel and adapted to engage the clamp, a threaded spindle within the barrel, a nut threaded on said spindle and adapted to engage the barrel, a jaw carried by the spindle, a bar engaged by the jaw, means for moving said bar vertically, and an implement holding member carried by the slide.

4. A holder of the character described, comprising a base, a pair of rods extending upwardly therefrom, a slide and a coacting clamp engaging the rods, a threaded tubular barrel carried by the slide, a nut threaded on said barrel and adapted to engage the clamp, a threaded spindle within the barrel, a nut threaded on said spindle and adapted to engage the barrel, a jaw carried by the spindle, a vertically movable bar having an upper threaded end and engaged by the jaw, a set screw engaging the bar, a cross piece carried by the rods and engaged by the set screw, and an implement holding member carried by the slide.

5. A holder of the character described, comprising a base, a member projecting upwardly therefrom, a slide engaging said member, a tubular sleeve rotatably mounted within the slide, a worm wheel on the sleeve, a worm carried by the slide and engaging the worm wheel, a rotatable and axially movable spindle within the sleeve, and means for locking said spindle to said sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,217,488. ROD-BENDING MACHINE. WALKER B. MYERS, Denver, Colo. Filed Aug. 24, 1915. Serial No. 47,034. (Cl. 153—16.)



1. A rod-bending machine comprising a support, a bending-shoulder thereon, a pivoted arm having a bending-member to engage a portion of a rod extending beyond the shoulder, a rotary ratchet wheel, a pawl pivoted on the arm for engagement with the ratchet-wheel, and a trip adapted to disengage the pawl from the ratchet-wheel at a determinate point in the movement imparted to the arm by engagement of the pawl with the ratchet-wheel.

2. A rod-bending machine comprising a support, a bending-shoulder thereon, a pivoted arm having a bending-member to engage a portion of a rod extending beyond the shoulder, a driving element having a continuous rotary movement in one direction, a transmission-member adjustable on the arm, to drive the same by engagement with the said element, a trip adapted to automatically disengage the transmission member from the driving-element at a determinate point in the movement of the arm with the element, and resilient means for returning the arm and the transmission-member to their original positions.

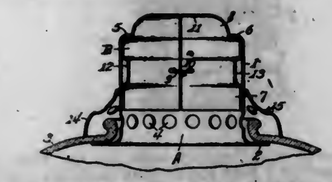
3. A rod-bending machine comprising a support, a bending-shoulder thereon, a pivoted arm having a bending member to engage a portion of a rod extending beyond the shoulder, a driving element having a continuous rotary movement in one direction, a transmission-member adjustable on the arm, to drive the same by engagement with the said element, a trip adjustable to a selected position in a path concentric with the course of travel of the arm, and adapted to automatically disengage the transmission member from the driving-element, and means for securing the trip in its adjusted positions.

4. A rod-bending machine comprising a support, a bending-shoulder thereon, a pivoted arm having a bending-member to engage a portion of a rod extending beyond the shoulder, a rotary driving element, a transmission-member adjustable on the arm, to drive the same by engagement with the said element, a trip adjustable to a selected position in a path concentric with the course of travel of the arm, and adapted to disengage the transmission member from the driving-element, a toothed bar connected with the trip, and an adjustable detent engaging the bar for securing the trip in its adjusted positions.

5. A rod-bending machine comprising a support, a bending-shoulder thereon, an upright shaft, mechanism for the transmission of power to the shaft, a toothed-wheel on the shaft, an arm pivoted on the shaft and having a bending member to engage the portion of a rod extending beyond the shoulder, a pawl pivoted on the arm to engage said toothed wheel, and a trip for disengaging the pawl from the wheel at a determinate point in the movement of the arm with the wheel.

[Claims 6 to 9 not printed in the Gazette.]

1,217,489. SOCKET-COVER. HARRY NORTHWOOD, Wheeling, W. Va. Filed Sept. 19, 1916. Serial No. 120,945. (Cl. 240—114.)



1. A combined socket cover and shade support comprising an outer shell having its lower end adapted for assuming supporting relation to a shade and having an inturned flange at its upper end, and a second shell adapted for introduction in telescoped relation to said outer shell, said second shell comprising a body portion and an apertured dome portion with an intermediate shoulder, said shoulder being designed to assume underlying relation to said flange, said second shell being composed of two similar complemental connected sections adapted for axial opening and closing movement with respect to each other.

2. A combined socket cover and shade support comprising a tubular supporting shell, and a second shell telescoped within said supporting shell and having an apertured dome portion projected upward from the latter, said shells having interengaging means for limiting the extent of upward telescopic movement of said second shell, said second shell being composed of two connected complemental sections adapted for axial opening and closing movement with respect to each other.

3. A combined socket cover and shade support comprising a tubular supporting shell, and a second shell telescoped within said supporting shell and having an apertured dome portion projected upward from the latter, said shells having interengaging means for limiting the extent of upward telescopic movement of said second shell, said second shell being composed of two complemental sections having a hinged connection which permits axial opening and closing movement of said sections with respect to each other.

4. A combined socket cover and shade support comprising a tubular supporting shell, a second shell telescoped within said supporting shell and having an apertured dome portion projected upward from the latter, said shells having interengaging means for limiting the extent of upward telescopic movement of said second shell, said second shell being composed of two complemental sections, and means hingedly connecting said sections at one side only so as to permit axial opening and closing of said sections with respect to each other.

5. A combined socket cover and shade support comprising a tubular supporting shell, a second shell telescoped within said supporting shell and having an apertured dome portion projected upward from the latter, said shells having interengaging means for limiting the extent of upward telescopic movement of said second shell, said second shell being composed of two complemental sections, and means hingedly connecting said sections at one side only so as to permit lateral separation of said sections at the opposite side for the introduction of a socket suspension member, said sections having means provided therein for receiving said connecting means in non-engaging relation with the tubular shell and for preventing the abutting free edges of said sections from assuming overlapped relation.

[Claims 6 and 7 not printed in the Gazette.]

1,217,490. PROCESS OF PRODUCING DECORATIVE COLOR EFFECTS ON GLASSWARE. HARRY NORTHWOOD, Wheeling, W. Va. Filed Sept. 28, 1916. Serial No. 122,774. (Cl. 91—72.)

1. The method of producing decorative coloring effects on glassware, which consists in staining the ware with a copper sulfate solution, firing the ware to fix the stain, then applying to said ware a coating or partial coating of a silver salt solution, and finally refiring the ware.

2. The method of producing decorative coloring effects on glassware, which consists in applying to an article of translucent ware a coating or partial coating of a copper sulfate solution, firing the ware to fix the sulfate stain thereon, then applying over the surface or parts thereof a coating of a silver salt solution, and finally firing the ware.

3. The method of producing decorative coloring effects on glassware, which consists in applying to an article of translucent ware a coating or partial coating of a staining solution of copper sulfate mixed with a suitable binder, firing the coated ware to fix the sulfate stain thereon, then cleaning the ware to remove the binder, then coating or partially coating the ware with a solution of a silver salt mixed with a suitable binder, and finally firing the coated ware a second time.

4. The method of producing decorative coloring effects on glassware, which consists in applying to an article of translucent ware a coating or partial coating of a staining solution of copper sulfate mixed with a suitable binder, heating the coated ware gradually to a temperature approximating 900° F., then gradually cooling said ware, then removing the binder, then coating or partially coating said ware with a solution of a silver salt mixed with a suitable binder, then heating the ware gradually to a temperature approximating 900° F., and finally gradually cooling said ware.

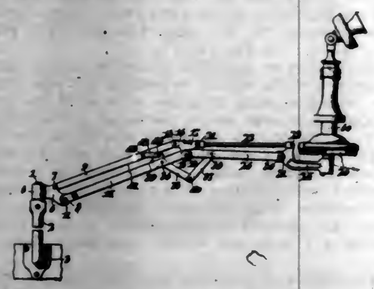
5. The method of producing decorative coloring effects on glassware, which consists in applying to an article of translucent ware a coating or partial coating of a staining solution of copper sulfate mixed with a ferruginous clay binder, heating the coated ware gradually to a temperature approximating 900° F., then gradually cooling said ware, then removing the binder, then immersing said ware in a solution of a silver salt mixed with a binder, then brushing parts of said ware with a relatively stronger silver salt solution, then heating the ware gradually to a temperature of 900° F., and finally gradually cooling said ware.

1,217,491. EXTENSIBLE SUPPORT. WILLIAM B. OLIVER, Collingswood, N. J. Filed Apr. 12, 1916. Serial No. 90,557. (Cl. 248—1.)

1. In an extension support, the combination of a base piece; a central hinge piece; an end piece; a pair of bars pivotally connecting the base piece and the hinge piece, to form a primary parallel motion device; a pair of bars pivotally connecting the hinge piece and the end piece, to form a secondary parallel motion device, arranged in converse relation to the first one; a pair of arms pivotally connected to one another, one of said arms being pivoted to a bar of one parallel motion device, the other arm being pivotally connected to a corresponding bar of the other parallel motion device; and a link pivotally connected to one of said arms at a distance from its pivotal connection to said bar, said link being also pivotally connected to the other bar of that parallel motion device.

2. In an extension support, the combination of a base piece; a central hinge piece; an end piece; a pair of bars

pivotally connecting the base piece and the hinge piece to form a primary parallel motion device; a second pair of bars pivotally connecting the hinge piece and the end piece to form a secondary parallel motion device, arranged in converse relation to the first one; a pair of arms pivotally connected to one another and to corresponding bars of the respective parallel motion devices, one of said arms being extended beyond its pivotal point in said bar; and a link, pivotally connected to the other bar of that parallel motion device, and to the extension of said arm, substantially as set forth.



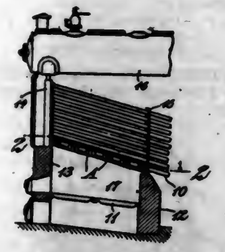
3. In an extension support, the combination of a base piece; a central hinge piece; an end piece; a pair of bars pivotally connecting the base piece and the hinge piece to form a primary parallel motion device; a second pair of bars pivotally connecting the hinge piece and the end piece to form a secondary parallel motion device, arranged in converse relation to the first one; a pair of arms pivotally connected to one another and to corresponding bars of the respective parallel motion devices, one of said arms being extended beyond its pivotal point in said bar; and a link, pivotally connected to the other bar of that parallel motion device and to the extension of said arm, the extended portion of said arm having a curved periphery, arranged in close proximity to said bar, the radius of said periphery varying in correspondence with the distance of said bar from the pivotal point of the arm, in the different positions of range of movement of the bar, substantially as set forth.

4. In an extension support, the combination of a base piece; a central hinge piece; an end piece; a bar pivotally connecting the base piece and the hinge piece to form one element of a parallel motion device; a pair of bars pivotally connecting said base piece and said hinge piece to form the other element of a parallel motion device; a bar pivotally connecting the hinge piece and the end piece; a pair of bars pivotally connecting the hinge piece and the end piece to form a second parallel motion device; a pair of bars constituting one element of each of said parallel motion devices having a common pivotal axis at the central hinge piece; a pair of arms pivotally connected to one another and to corresponding members of said parallel motion devices, one of said arms being arranged to constitute a lever; and a link connecting said lever to the other member of the parallel motion device, substantially as set forth.

5. In an extension support, the combination of two pairs of elongated members, said pairs respectively forming the long sides of separate parallel motion devices, a base piece forming the short side of one of said parallel motion devices, an end piece forming the remote short side of the other parallel motion device, a central hook piece forming adjacent short sides of said parallel motion devices and common to both of them, a pair of arms, pivotally connected to one another and to corresponding bars of the respective parallel motion devices, one of said arms extending beyond its pivotal point in said bar, and a link pivotally connecting to the other bar of that parallel motion device and to the extension of said arm, whereby any movement of one parallel motion device in the plane of its pivotal points of support will produce a corresponding movement of the other parallel motion device and in the opposite direction, projecting the end supporting piece outward in a substantially direct line at right angles with the mean of the movement of the two parallel motion devices.

[Claim 6 not printed in the Gazette.]

1,217,492. STEAM-BOILER FURNACE. ORLAND D. ORVIS, New York, N. Y., assignor to Annie D. Orvis, New York, N. Y. Filed July 20, 1915. Serial No. 40,931. (Cl. 110—08.)



1. A substantially T-shaped baffle tile for water tube boilers comprising a head and a shank composed of refractory material, the under surface of said head being curved to fit said tubes and said curved under surface being inclined to the vertical axis of the tile whereby the shank is positioned vertically between the tubes when the head rests upon said tubes, said tiles being supported by the heads thereof resting upon the boiler tubes and the shanks of said tiles depending below said boiler tubes.

2. A substantially T-shaped baffle tile for water tube boilers comprising a head and a shank composed of refractory material, the transverse dimensions of the head and shank in one direction being less than the space intervening adjacent water tubes so that the tile is adapted to be inserted for the head to pass between said adjacent tubes and thereafter the tile may be turned for the head to rest upon said tubes, said tiles being supported by the heads thereof resting upon the boiler tubes and the shanks of said tiles depending below said boiler tubes.

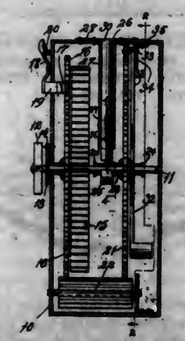
3. The combination with the water tubes of a boiler, of substantially T-shaped baffle tiles each comprising a head and a shank composed of refractory material, the cross sectional dimensions of said tile in one direction being less than the space intervening adjacent water tubes, said baffle tiles being insertible individually in an upward direction between the lowermost tubes and thereafter each tile is turned to a position for its head to lie crosswise of said lower tubes and to rest thereon, said tiles being supported by the heads thereof resting upon the boiler tubes and the shanks of said tiles depending below said boiler tubes.

4. The combination with inclined water tubes of a boiler, of substantially T-shaped baffle tiles each comprising a head and a shank composed of refractory material, the under surface of said head being curved and being inclined and said tiles being individually insertible in an upward direction through the space intervening adjacent tubes, each tile subsequent to the initial upward movement being turned for the head to span the space intervening the adjacent tubes so that the curved and inclined under surface of the head will contact with adjacent tubes and the shank of said tile is adapted to hang vertically between said tubes.

5. A baffle tile for water tube boilers, substantially T-shaped and comprising a head and a shank composed of a single piece of refractory material, the cross sectional dimensions of the tile in one direction being less than the width of the space intervening adjacent parallel tubes whereby the tile is adapted to be inserted by passing it upwardly between the tubes and thereafter the tile is turned for the head thereof to lie crosswise and to rest thereon, the shanks of said T-shaped tiles depending below the boiler tubes.

[Claims 6 to 8 not printed in the Gazette.]

1,217,493. TIME-RELEASE FOR PHOTOGRAPHIC CAMERAS. HOUSTON H. PARSONS, Sidney, Mont. Filed Feb. 2, 1916. Serial No. 75,792. (Cl. 161—26.)



1. In a device of the character described, a casing having an opening, a plunger slidably mounted in the casing and adapted to be projected through said opening, a shaft extending through the casing, a spring operatively connected at one end to the shaft, a gear wheel to which the other end of the spring is connected, means for winding up the spring and holding it from unwinding, a latch mounted upon the exterior of the casing and having a stop normally engaged with the gear wheel to prevent the rotation thereof under the action of the spring, a cam operatively supported beneath the plunger and engageable with said plunger upon a rotation of the cam, means for transmitting the motion of the gear wheel to said cam, means for controlling the rate of rotation of the shaft, and means mounted upon the exterior of the casing for holding a camera tripping member in alinement with the plunger.

2. In a releasing device of the character described, a plunger, a rotatable cam having its highest portion initially out of engagement with the plunger but positively engaging with the plunger to shift it outward at one part of its rotation, time controlled means for rotating the cam, and manually operable means for starting the time controlled means and automatically stopping the time controlled means after the cam has made a complete rotation and the plunger has been fully projected by the cam and the highest portion of the cam has passed the plunger.

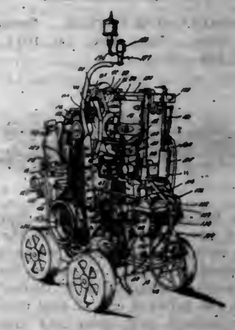
3. In a releasing revice for photographic cameras, a casing, a shaft passing through the casing and having a key at one end, a gear wheel loosely mounted upon the shaft, a spring operatively connected to the gear wheel and to the shaft, means for winding up said spring, means normally preventing rotation of the gear wheel but manually actuatable to permit said rotation, a plunger mounted in the casing and projectable therefrom, a cam adapted to engage with and positively operate the plunger, a gear wheel mounted in connection with the cam, means for transmitting the motion of the first-named gear wheel to the second-named gear wheel, and means for governing the rate of rotation of the second-named gear wheel.

4. In a shutter releasing device for comeras, a movable release operating member, a rotatable actuating means therefor initially out of operative engagement therewith but movable into such operative engagement and past the point of said engagement, a spring actuated gear train operatively connected to the actuating member to rotate it into and past its operative position and into its initial position, manually actuatable means for holding the gear train from actuation and releasing the gear train, said means acting to automatically stop the movement of the gear train after the release operating member has been fully operated and said actuating means has been shifted out of operative engagement with the operating member and to its initial position.

5. In a device of the character described, a casing having an opening in one end, a guide tube disposed in said opening, a plunger slidably mounted in the guide tube, a shaft extending through the casing in alinement with the end of the plunger, a winding key on the exterior end of the shaft, a ratchet wheel on the shaft, a pawl engaging the ratchet wheel, a gear wheel rotatably mounted upon the shaft, a spring operatively connected at one end to the shaft and at the other end to said gear wheel, the gear wheel being provided with a stop, a latch mounted upon the exterior of the casing and having a stop normally engaged with said stop on the gear wheel to prevent the rotation thereof under the action of the spring, a sleeve mounted upon the shaft and independently rotatable thereof, a gear wheel carried by the sleeve, a cam carried by the sleeve and disposed in alinement with the plunger, means for transmitting the motion of the first-named gear wheel to the second-named gear wheel, escapement mechanism for controlling the rate of rotation of the second-named gear wheel, and means mounted upon the exterior of the casing for holding a camera tripping member in alinement with the plunger, said means being longitudinally adjustable toward or from the plunger.

[Claims 6 and 7 not printed in the Gazette.]

1,217,494. GLASS-WORKING MACHINE. FRANCIS W. PAWLING, Terre Haute, Ind., assignor of one-half to Turner Brothers Company, Terre Haute, Ind., a Corporation of Indiana. Filed Aug. 7, 1913. Serial No. 783,502. (Cl. 49—5.)



1. In a glass working machine, the combination, with a carrier having a cylinder formed therein and invertible about an axis at right angles to the axis of the cylinder, of an invertible mold mounted on said carrier and comprising a movable member pivoted on an axis substantially parallel with the mold axis and at right angles to the cylinder axis, a piston in said cylinder movable toward and from the mold axis, and connections between the piston and the movable mold member.

2. In a glass working machine, the combination, with an invertible carrier having a cylinder formed therein, of a mold mounted on said carrier and comprising a movable member, a piston in said cylinder, connections between the piston and the movable mold member, a horizontal pivotal mounting for said carrier at right angles to the axes of the cylinder and mold, and means for swinging said carrier on its mounting to invert and revert the mold.

3. In a glass working machine, the combination, with an invertible carrier having a cylinder formed therein, of a mold mounted on said carrier and comprising a movable member, a piston in said cylinder, connections between the piston and the movable mold member, a horizontal pivotal mounting for said carrier at right angles to the axes of the cylinder and mold, and means for swinging

said carrier on its mounting to invert and revert the mold, said means comprising a cylinder and piston.

4. In a glass working machine, the combination, with a carrier having a cylinder formed therein, of a mold mountned on said carrier and comprising a movable member, a piston in said cylinder, connections between the piston and the movable mold member, an electrically-controlled valve for controlling the flow of motive fluid to and from said cylinder, a horizontal pivotal mounting for said carrier, and means for swinging said carrier on its mounting, said means comprising a cylinder and piston, an electrically-controlled valve for controlling the flow of motive fluid to said last-mentioned cylinder, and a cam operating to shift said valve to exhaust position upon movement of the cylinder.

5. In a glass working machine, the combination, with a carrier having a substantially horizontal pivotal mounting, of a mold carried by said carrier, means on the carrier for opening and closing the mold, an electrically-controlled member for controlling the operation for said means, a second mold, means for opening and closing said mold, an electrically-controlled member for controlling said last-mentioned mold-operating means, means for moving the second mold toward and from registry with the first mold in one of its positions, an electrically-controlled member for controlling said last-mentioned means, a controller successivly controlling actuation of the several driving mechanisms, said controller comprising a plurality of electric terminals and a contact arm arranged for relative movement and successive coaction and circuits connecting the same with the several electrically controlled members, and a motor for causing said relative movement.

[Claims 6 to 14 not printed in the Gazette.]

1,217,495. TOBACCO-HARVESTER. PETER M. PENCE, New Paris, Ohio. Filed Nov. 24, 1915. Serial No. 63,330. (Cl. 131—21.)

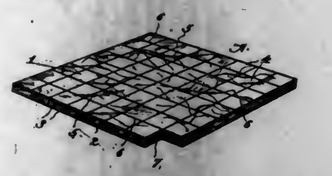


1. A tobacco harvester comprising a frame having a tapered forward end adapted to ride on the ground and to be projected under the leaves and on each side of the stalks of the standing tobacco, a throat formed in said frame and extending longitudinally thereof, a floating spear carried in the forward end of said throat, a pair of pins projecting through said spear and extending above and below the same, spring clamps spacedly mounted in the throat of said frame and in engagement with said pins, a cavity formed in the rear end of said spear, a removable slat extending longitudinally of said throat and in engagement with the cavity of said spear, a plurality of hook members mounted above and below said slat, and means for the reciprocatory operation of said hook members.

2. A tobacco harvester comprising a frame, a knife mounted in the forward part of said frame, a floating spear positioned above said knife, a removable slat extending rearward of said spear, an elongated bar mounted above said slat and extending longitudinally of said frame, an elongated bar mounted below said slat, means for connecting said bars, a lever mounted at the rear of said frame, a rod connecting said lever with the upper of said bars, and a plurality of hook members mounted on each of said bars.

3. A tobacco harvester comprising a frame, a knife mounted in the forward part of said frame, a floating spear positioned above said knife, a removable slat extending rearward of said spear, an elongated bar mounted at one side of said slat and parallel therewith, a lever pivoted on said frame and attached to one end of said bar, a pin depending from said bar, a D-shaped recess formed in the upper part of said frame, a cam member mounted in said recess, a straight working face formed on the side of said cam adjacent said slat, a convex working face formed on the other side of said cam, a deflecting extension formed at the junction of said working faces adapted to guide said pin on to said convex face of the cam and to give said bar a lateral movement upon its inoperative stroke, means for the reciprocatory operation of said bar, and a plurality of hook members carried by said bar.

1,217,496. PLUG-TOBACCO. JONATHAN PETERSON, Brooklyn, N. Y., assignor to Combination Machine Company, a Corporation of Delaware. Filed Sept. 9, 1916. Serial No. 119,205. (Cl. 131—15.)



1. A plug of tobacco having spaced cuts in opposite sides thereof partially sub-dividing said plug into a series of sections, said cuts leaving web sections at substantially the central portion of the plug, so that each section, or multiple thereof, may be readily broken off to provide a chew or quid.

2. A plug of tobacco having spaced cuts in opposite sides thereof partially sub-dividing said plug into a series of sections, the cuts at one side of the plug substantially alining with corresponding cuts at the opposite side thereof, said alining cuts leaving web sections at substantially the center of the plug, and which web sections unite the plug sections for ready separation, so that each section, or a multiple thereof, may be readily broken off to provide a chew or quid.

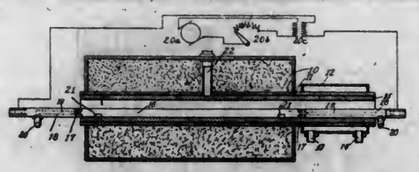
3. A plug of tobacco having spaced intersecting cuts in opposite sides thereof partially sub-dividing said plug into a series of sections, the intersecting cuts in one side of the plug substantially alining with the corresponding intersecting cuts in the opposite side of the plug whereby web sections are formed at substantially the center of the plug, and which web sections unite the plug sections for ready separation, so that each section, or a multiple thereof, may be readily broken off to provide a chew or quid.

4. As a new article of manufacture, a plug of tobacco composed of a plurality of unit sections partially disconnected from one another by lines of separation extending inward from opposite faces of the plug, said sections being integrally united by a relatively thin connecting web of the tobacco located in substantially the central plane of the plug, each of said sections or a multiple thereof constituting a quid or chew and being readily separable from one another.

1,217,497. ELECTRIC FURNACE. CARL A. PFANSTIEHL, Waukegan, Ill., assignor to Pfanstiehl Company, a Corporation of Delaware. Filed July 11, 1914. Serial No. 850,349. (Cl. 219—36.)

1. An electric furnace comprising a tube of refractory porous material, a shell around said tube forming an annular chamber, means for supplying said annular chamber with hydrogen, a carbon heating element of semi-circular cross-section disposed within the said tube, and conducting means connecting the opposite ends of said heating element with a source of current whereby it is heated by the current passing through it.

2. An electric furnace comprising, in combination, a tube of refractory, porous, heat-resisting material, a shell around said tube forming an annular space between the tube and shell, means for supplying said annular space with hydrogen, a heating element disposed within the tube arranged to support articles to be treated, and conducting means connecting the ends of said heating element with a source of current for heating it and the articles supported thereon.



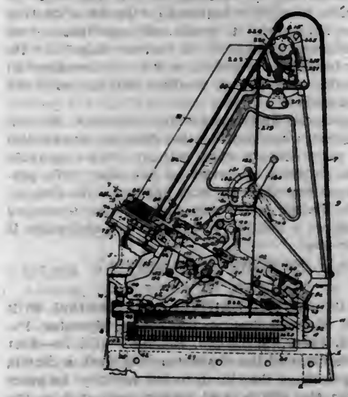
3. An electric furnace comprising, in combination, an alundum tube, a steel shell surrounding said alundum tube, means for admitting hydrogen to the space between the tube and shell, a carbon resistance element of semi-circular cross-section disposed within the alundum tube, terminals associated with the ends of said heating element, channels in said terminals arranged to have cooling water passed therethrough, and conducting means connecting said terminals with a source of current whereby the carbon resistance element is heated.

4. An electric furnace comprising, in combination, a tube of refractory porous material forming a heating chamber, a shell forming an annular space around said tube, means for supplying hydrogen to said space whereby the hydrogen may percolate through the tube into the heating chamber, a resistance element of substantially semi-circular cross-section disposed within the heating chamber and arranged to support articles to be treated in the heating chamber, and means connecting the ends of said resistance element with a source of current whereby it and the articles supported thereon are heated.

5. An electric furnace comprising a receptacle arranged to contain heat-insulating material, a shell disposed in said receptacle and embedded in the heat-insulating material, a tube of refractory porous material disposed in said shell and spaced therefrom, means for supplying hydrogen to the space between the tube and shell, and a resistance element within said tube for heating it.

[Claims 6 to 10 not printed in the Gazette.]

1,217,498. PAYING AND RECORDING MACHINE. JOSEPH RABER, Detroit, Mich., assignor to Payograph Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 17, 1914. Serial No. 872,589. (Cl. 133—4.)



1. In a machine of the class described, the combination of a coin holder, an ejector bar and means for effecting reciprocation thereof below said holder, a pivot pin, said bar having a longitudinal slot at its rear end to receive the pivot pin, a cam ridge on said bar above the slot therein, cam mechanism for coöperating with said cam ridge as said ridge passes past said pivot pin during reciprocation of the bar for effecting bodily upward swing of the bar when it moves to its rear position and for effecting bodily downward swing of the bar when it reaches its forward position, said bar when in its raised position being adapted to eject a coin from the holder during forward travel thereof but said bar when depressed being free of the coins during its rearward travel.

2. In a machine of the class described, the combination of a coin holder, an ejector bar and means for effecting reciprocation thereof below said holder, a pivot pin, said bar having a longitudinal slot at its rear end to receive the pivot pin, a cam ridge on said bar above the slot therein, cam mechanism for coöperating with said cam ridge as said ridge passes past said pivot pin during reciprocation of the bar for effecting bodily upward swing of the bar when it moves to its rear position and for effecting bodily downward swing of the bar when it reaches its forward position, and a guide plate coöperating with the front end of the bar to hold the bar in raised position during forward travel thereof and to hold the bar in depressed position during rearward travel thereof, said bar during its forward movement being enabled to engage with and eject coins but during rearward travel being prevented from engaging with coins.

3. In a machine of the class described, the combination of a plurality of coin holders, an ejector bar associated with each holder and adapted for longitudinal reciprocation to eject coins, a common actuating mechanism for said ejector bars, a locking plate associated with each ejector bar and held from locking engagement with the ejector bar by coins within the holder, means associated with each locking plate for shifting the same into locking position with reference to the associated ejector bar when the associated coin holder is deficient in coins whereby further movement of the ejector bar is checked by the locking plate, and a main locking mechanism associated with the common actuating mechanism and controlled by the shifting of any locking plate into locking position.

4. In a machine of the class described, the combination of a plurality of coin holders, an ejector bar associated with each coin holder, an actuating train connected with each ejector bar, means for selecting actuating trains for operation, a main operating lever for actuating selected trains to effect simultaneous ejecting movement of the connected ejector bars, a plate associated with each coin holder and held in normal position when there are coins in the holder, a bar connected to be shifted upon operation of the main operating lever, a detent associated with said bar, and a train connecting said detent with said plates and controlled upon shifting of any plate when its associated coin holder lacks coins to effect operation of said detent to prevent shifting of said bar whereby actuation of the main operating lever is prevented.

5. In a machine of the class described, the combination of a plurality of coin holders, an ejector bar associated with each holder and means for reciprocating the bar to effect ejection of coins from the holder if there are coins in the holder, a locking plate associated with each ejector bar and normally held out of locking engagement with the bar by abutting against coins in the associated holder, means associated with each locking plate to effect shifting thereof into locking engagement with its associated ejector bar as soon as all coins have left the holder and the locking plate is no longer held, and resetting mechanism controlled by a lever for simultaneously resetting the locking plates to normal position to allow refilling of empty holders.

[Claims 6 to 17 not printed in the Gazette.]

1,217,499. BOOT-TREE. NELSON E. RABER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Dec. 6, 1916. Serial No. 135,381. (Cl. 12—118.)

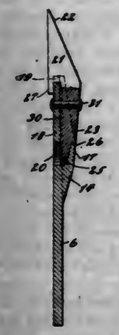
1. A sectional boot tree divided along vertical and lateral planes into fore and body parts which are provided

with complemental under-cut members vertically slidable on each other for interlocking said parts as to sidewise and fore-and-aft separating movements, and a spring catch, adapted for automatic engagement and disengagement by means of relative vertical movements of the fore and body parts of the tree, said catch being arranged to yieldingly press the tree parts together at a point adjacent to the lower part of the vertical meeting plane in order to maintain a tight vertical joint between the two.



2. A sectional boot tree comprising fore and body parts engaging and separating by relative vertical movements and having a vertical tongue-and-groove connection, a transverse catch-pin on said fore-part adjacent to its lower rear portion, and a vertical leaf-spring catch-member located intermediate of the vertical joint-face on said body part and secured thereto at its upper end, said spring catch-member residing in front of the catch-pin so as to press rearwardly thereon in the locked position of the parts, and having a rounded toe in the path of said pin adapted to be displaced thereby during the said relative vertical engaging and separating movements of the parts.

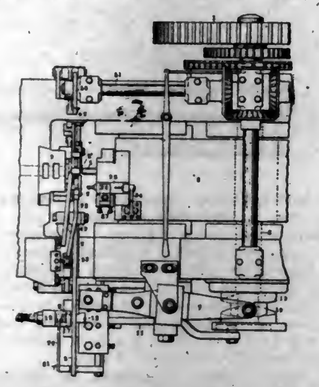
1,217,500. DIGGING-BUCKET. JOHN J. REHALLY, New York, N. Y. Filed May 26, 1915. Serial No. 30,495. (Cl. 37—16.)



1. A metallic digging bucket having the metal of its upper surface thickened at spaced points to form bosses extending longitudinally of the bucket from the front edge thereof, each boss being formed with an open channel merging into a socket having a top wall common with the boss, and a tooth located in each channel and having its end seated in said socket.

2. A digging bucket having a bottom wall provided with flanges extending longitudinally thereof inward from an edge of said wall, said flanges being joined at their inner portions by a bridge-piece, and a tooth located between said flanges and having a part held by said bridge-piece, and a shoulder engaging said bridge-piece.

1,217,501. MACHINE FOR MAKING NUT-BLANKS. HERBERT D. REMSEN, Port Chester, N. Y., assignor to Russell, Burdsall & Ward Bolt and Nut Company, Port Chester, N. Y., a Corporation of New York. Filed Apr. 21, 1915. Serial No. 22,772. (Cl. 164—12.)



1. In an apparatus of the character described, in combination, punching mechanism, bar-feeding mechanism, said apparatus having an opening for the discharge of scrap, a movable member adapted to support a floating end of the bar and guide it across said opening, and means adapted to move said member out of bar-supporting position.

2. In an apparatus of the character described, in combination, punching mechanism, bar-feeding mechanism, said apparatus having an opening for the discharge of scrap, a movable member adapted to support a floating end of the bar and guide it across said opening, and a stop to limit the advance movement of the bar under the influence of the feeding mechanism.

3. In an apparatus of the character described, in combination, punching mechanism, bar-feeding mechanism, said apparatus having an opening for the discharge of scrap, a movable member adapted to support a floating end of the bar and guide it across said opening, and a member adapted to coöperate with said support to aline said bar with the punching mechanism.

4. In an apparatus of the character described, in combination, punching mechanism, bar-feeding mechanism, said apparatus having an opening for the discharge of scrap, a movable member adapted to support a floating end of the bar and guide it across said opening, a stop to limit the advance movement of the bar under the influence of the feeding mechanism, and a member adapted to coöperate with said support to aline said bar with the punching mechanism.

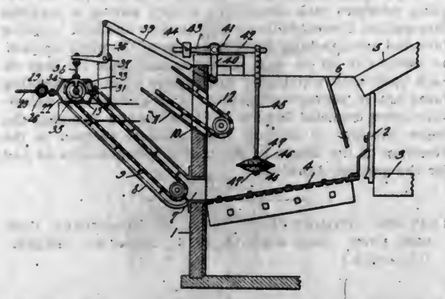
5. In an apparatus of the character described, in combination, punching mechanism, bar-feeding mechanism comprising a reciprocatory vise, manual means operable to cut out the gripping operation of the vise while permitting reciprocation thereof, said apparatus having an opening for the discharge of scrap, and a movable member adapted to support a floating end of the bar and guide it across said opening.

[Claims 6 to 27 not printed in the Gazette.]

1,217,502. AUTOMATIC CLUTCH MECHANISM FOR COAL-JIGS. GEORGE EDMOND REYNOLDS, Wyoming, Pa. Filed June 2, 1916. Serial No. 101,395. (Cl. 74—46.)

1. In a mechanism of the character described, a clutch, means tending to move the clutch to one position, an operating worm for the clutch, and means connected to the clutch and controllable to be moved into and out of engagement with the worm for moving the clutch to its other position when engaged with the worm.

2. In a mechanism of the character described, a clutch member, spring means for moving said clutch member to one position, a rotatable worm, a member connected to the clutch member and movable into and out of engagement with the worm, said member when engaged with the worm being moved to move the clutch member to its other position, and means controlling the last mentioned member.



3. In a mechanism of the character described, a controlling member, and controlled device, a driving element, said device having a clutch portion, a clutch member rotated by said driving element and movable into and out of engagement with said clutch portion, means tending to move said clutch member to one position, a worm operated by the driving element, and a latch connected with the clutch member and operatively connected with the first mentioned member to be moved into and out of engagement with the worm by the change in position of the first mentioned member.

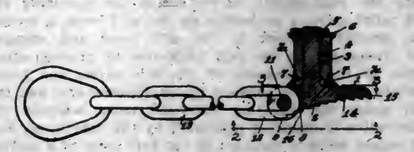
4. In a mechanism of the character described, a controlling member, and controlled device, a driving shaft, said device having a member mounted loosely upon said shaft and provided with a clutch portion, a clutch member slidable upon said shaft and movable into and out of engagement with said clutch portion, a worm carried by said shaft, means tending to move the clutch member into engagement with said clutch portion, and a latch connected to the clutch member and operatively connected with the first mentioned member to be moved thereby into and out of engagement with the worm as the first mentioned member moves to different positions.

5. In a mechanism of the character described, a controlling member, and controlled device, a driving shaft, said device having a member rotatable loosely upon said shaft and provided with a clutch portion, a clutch member slidable upon and rotatable with said shaft and movable into and out of engagement with said clutch portion, a loose collar upon the clutch member, a lever engaged with said collar, a member mounted for movement into and out of coöperation with said lever, a spring carried by the third mentioned member to bear against said lever for moving the clutch member into engagement with the clutch portion, a worm mounted upon said shaft, a latch pivotally connected with said collar and having a portion to move into and out of engagement with said worm, and an operative connection between said latch and first mentioned member whereby the latch is moved into and out of engagement with the worm when the first mentioned member is moved.

1,217,503. ROLLER-CHAIN PIPE-GRIP. JAMES J. RHINELANDER, Pittsburgh, Pa. Filed Aug. 18, 1916. Serial No. 115,627. (Cl. 81—66.)

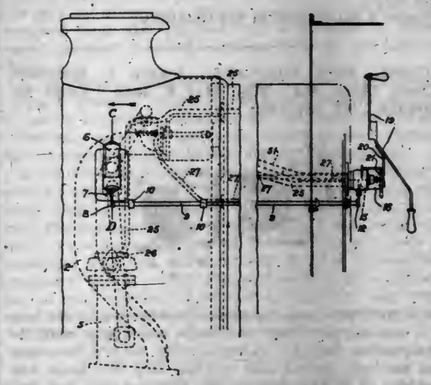
1. A gripping jaw comprising a jaw body having a curved toothed surface, one end of said jaw body having a greater thickness than the opposite end thereof, a wrist pin formed integral with the jaw body, a ball-bearing roller rotatably mounted on the wrist pin, means for securing the roller on the said wrist pin, a slot in the jaw body adapted to receive a link of a chain, and means for securing the said chain link to the end of the jaw body, said chain designed to encircle a pipe and be brought into coöperative relation with said roller.

2. A roller chain pipe grip comprising a gripping jaw having an arc-shaped jaw body with teeth thereon, a wrist pin on said jaw body, a ball-bearing roller mounted on the wrist pin, means for securing the said roller on the wrist pin, a chain attached to the gripping jaw,



adapted to encircle a pipe, pass over the roller and return against the surface of the pipe, said chain adapted to receive a lever inserted in the free end thereof, the whole device being designed to permit instantaneous gripping action in rotating the aforesaid pipe about its axis.

1,217,504. RELIEF-VALVE FOR STEAM-SUPERHEATERS. JOHN GEORGE ROBINSON, Manchester, England. Filed Aug. 9, 1915. Serial No. 44,587. (Cl. 122—462.)



1. A superheater, a steam supply valve and a relief valve connected with the saturated and superheated steam spaces of the superheater respectively, means for operating the said supply valve, and automatically disengageable connecting mechanism arranged between the said means and the relief valve and operating the relief valve positively when connected, but otherwise permitting the supply valve to be operated to a limited extent without actuating the relief valve.

2. A superheater, a steam supply valve and a relief valve connected with the saturated and superheated steam spaces of the superheater respectively, means for opening and closing the said supply valve, and disengageable connecting mechanism arranged between the said means and the relief valve and operating positively to close the relief valve at the initial movement of the said means to open the supply valve, and also operating positively to open the relief valve at the final movement of the said means to close the supply valve, but otherwise disengaging automatically and thereby permitting the supply valve to be operated by the said means to a limited extent without actuating the relief valve.

3. A superheater, a steam supply valve and a relief valve connected with the saturated and superheated steam spaces of the superheater respectively, a lever for operating the said supply valve, means for operating the said relief valve, and articulated connections between the said lever and the said means, which connections disengage automatically during portions of the movements of the said lever, whereby the relief valve is operated positively by the said lever, and

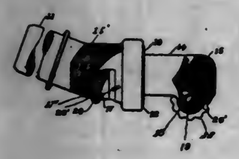
the supply valve is operated by the said lever to a limited extent without actuating the relief valve.

4. A superheater, a steam supply valve and a relief valve connected with the saturated and superheated steam spaces of the superheater respectively, a lever for operating the said supply valve, means for operating the said relief valve, a projection on the said lever, a rocker-arm pivoted adjacent to the said lever and engaged and disengaged by the said projection at predetermined points of the movements of the said lever, and intermediate connections between the said rocker-arm and the said means for operating the relief valve, whereby the relief valve is operated positively by the said lever, and the supply valve is operated by the said lever to a limited extent without actuating the relief valve.

5. A superheater, a steam supply valve and a relief valve connected with the saturated and superheated steam spaces of the superheater respectively, said relief valve being a partially balanced double-beat valve which is normally held closed with a predetermined light pressure so that it opens freely, means for operating the said supply valve, and automatically disengageable connecting mechanism arranged between the said means and the relief valve and operating the relief valve positively when connected, but otherwise permitting the supply valve to be operated to a limited extent without actuating the relief valve.

[Claim 6 not printed in the Gazette.]

1,217,505. PIPE-COUPLING. JOSEPH V. ROBINSON, Chevy Chase, Md. Filed May 8, 1913. Serial No. 766,418. (Cl. 137—89.)



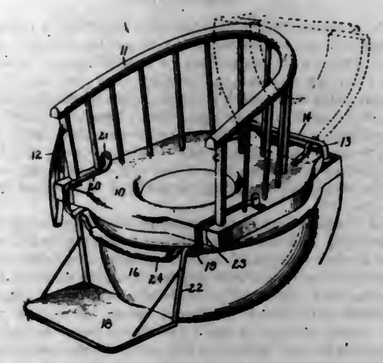
1. A train pipe coupling member comprising a body having a coupling face adapted to make a butt joint with the corresponding face of a mating member, an arm extending from the body beyond said coupling face in a plane substantially at right angles to the plane of said face and provided on its inner surface with an under cut lip, an under cut lug on the body in rear of the coupling face adapted to be engaged by the under cut lip of a mating member, and a manually adjustable locking member having threaded engagement with said arm and adapted to exert pressure directly in the direction of the length of the body upon the lug of a mating member, substantially as and for the purpose described.

2. A train pipe coupling member comprising a body having a coupling face adapted to make a butt joint with the corresponding face of a mating member, an arm extending from the body beyond said coupling face in a plane substantially at right angles to the plane of said face and provided on its inner surface with an under cut lip, an under cut lug on the body in rear of the coupling face, adapted to be engaged by the under cut lip of a mating member, and provided with an auxiliary cam surface, and a manually adjustable locking member having a threaded engagement in said arm and adapted to exert pressure directly against the auxiliary cam surface of the lug of a mating member to maintain contact between the coupling faces of the mating members.

3. A train pipe coupling member comprising a body having a coupling face adapted to make a butt joint with the corresponding face of a mating member, an arm arranged in a plane substantially at right angles to the plane of said coupling face and projecting beyond said face, an under cut lip on said arm, an under cut lug on the body in rear of the coupling face adapted to be engaged by the under cut lip of a mating member, said lug having a notch or socket formed therein, and a locking screw mounted on the arm and adapted to enter the socket in the lug of a mating member and contact with the wall thereof adjacent the coupling face to maintain contact between the coupling faces of two mating members.

4. In a pipe coupling, the combination of a pair of coupling members each comprising a body having a coupling face and an arm extending from the body and said coupling face and substantially at right angles to the plane thereof, an under cut lip on each of said arms, under cut lugs on each body with which said lips engage when the coupling faces are in contacting relation, and a manually adjustable screw mounted in each of the arms and engaging the under cut lugs to directly exert pressure thereon in the direction of the length of the bodies, substantially as and for the purpose described.

1,217,506. TOILET-SEAT. CARL W. RIIHIKOSKI, Portland, Oreg. Filed Sept. 15, 1916. Serial No. 120,288. (Cl. 4—18.)



1. An auxiliary bowl engaging toilet seat, having a platform provided with rear means for engaging under and in rear of an element mounted on the bowl, a movable bowl rim engaging element to lock the front end of the platform against elevation, and a foot rest for holding the rim-engaging element in operative position.

2. An auxiliary bowl engaging toilet seat, having a platform provided at its rear with an upturned hooked element for engaging a bowl cover hinge, a movable bowl rim-engaging element to lock the front end of the platform against elevation, and a foot rest for holding the rim-engaging element in operative position.

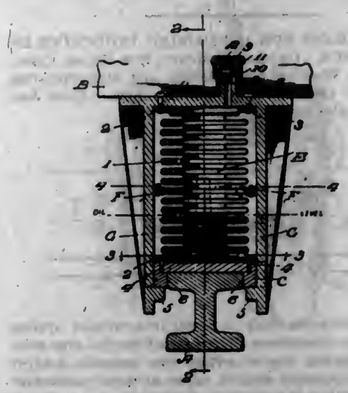
3. An auxiliary bowl engaging toilet seat, having a platform provided with rear means for engaging under and in rear of an element mounted on the bowl, a movable bowl rim-engaging element to lock the front end of the platform against elevation and consisting of a swinging frame having a detent for disposition under a bowl rim, and a foot rest suspended from said frame.

4. An auxiliary bowl engaging toilet seat, having a platform provided with rear means for engaging under and in rear of an element mounted on the bowl, a movable bowl rim-engaging element to lock the front end of the platform against elevation, and consisting of a swinging detent for engagement under a bowl rim, and a foot rest suspended from said detent.

5. An auxiliary bowl engaging toilet seat, having a platform provided with rear means for engaging under and in rear of an element mounted on the bowl, a movable bowl rim-engaging element to lock the front end of the platform against elevation, and consisting of a swinging detent for engagement under a bowl rim, and a foot rest suspended from said detent, and having bearing fingers for engagement with the under surface of the platform.

[Claim 6 not printed in the Gazette.]

1,217,507. SPRING. HUGH W. SANFORD, Knoxville, Tenn. Filed May 12, 1914, Serial No. 838,004. Renewed Jan. 15, 1917. Serial No. 142,558. (Cl. 267—49.)



1. In a mechanism of the nature described, the combination of two end plates, a sheet-metal tube transversely convoluted and elastic lengthwise and substantially non-elastic transversely and having its ends secured to said end plates, one of said members being provided with a valved inlet, and means for relatively limiting said plates for movement only parallel to the length of said tube, substantially as described.

2. A spring comprising a vessel having rigid end walls and transversely convoluted metallic side walls yieldable only along the lines of the vessel's collapse, said vessel containing a charge of initially compressed gas of a density to materially resist initial compression, and a valved charging port in one wall of the vessel.

3. A spring comprising a vessel having rigid end walls and transversely convoluted elastic metallic side walls yieldable only along the lines of the vessel's collapse, said vessel containing a charge of initially compressed gas of a density to materially resist initial compression, a filling body within the vessel, and a valved charging port in one wall of the vessel.

4. In a mechanism of the nature described, the combination of two end plates, an upright sheet-metal tube transversely convoluted and elastic lengthwise and substantially non-elastic transversely and having its ends secured to said end plates, the upper of said end plates being provided with a valved inlet, and means for relatively limiting said plates for upright movement only, substantially as described.

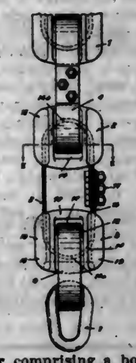
5. In a mechanism of the nature described, the combination of two end plates, a flexible sheet-metal tube transversely convoluted and having its ends secured to said plates, one of said three members being provided with a valved inlet, a guide member on said tube, and means for relatively limiting said guide member and said plates for movement parallel to the length of said tube, substantially as described.

[Claims 6 to 27 not printed in the Gazette.]

1,217,508. INSULATOR. WILLIAM SCHAAKE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 19, 1914. Serial No. 819,827. (Cl. 173—366.)

1. A strain insulator comprising a body of insulating material having a plurality of sets of oppositely disposed flat side surfaces, laterally elongated openings having inner curved walls between the respective sets of flat surfaces, and unconnected recesses disposed between the said flat surfaces.

2. The combination with a plurality of insulators having oppositely disposed flat side surfaces, laterally elongated openings between said surfaces, and unconnected recesses disposed between the said flat surfaces, of flexible flat straps disposed in corresponding openings for joining said insulators together.



3. An insulator comprising a body of insulating material having a plurality of sets of oppositely disposed side recesses and openings joining the recesses of the respective sets for receiving a flexible supporting member, said insulator being also provided with a plurality of unconnected recesses severally disposed between the side recesses.

4. An insulator comprising a body of insulating material having a plurality of sets of oppositely disposed recesses to receive supporting members, and intermediate recesses of curved contour for providing relatively long creepage distances between the adjacent supporting members.

5. An insulator comprising a body of insulating material having a plurality of sets of oppositely disposed and relatively deep recesses, adapted to receive supporting members, the recesses composing each of said sets being connected by a passage extending through the said body of insulating material, and relatively shallow intermediate recesses of curved contour disposed between each adjacent pair of said recesses for providing relatively long creepage distances between the adjacent supporting members.

[Claims 6 to 8 not printed in the Gazette.]

1,217,509. ANTIREFILLABLE BOTTLE. ALY I. SCHALL, Yonkers, N. Y. Filed Apr. 30, 1912. Serial No. 694,229. (Cl. 215—8.)

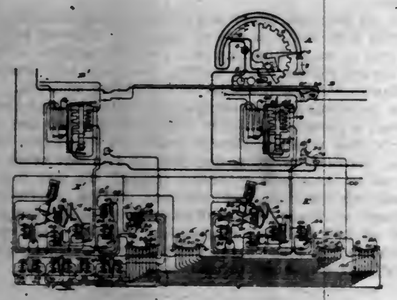


1. In a device of the character described, a bottle having a neck provided with a bridge near the base thereof, said bridge having apertures therein, said neck having a passage-way therethrough, a bottle cap on the end of said neck, said cap having an aperture registering with said passage-way, a depending stem connected to said cap and having a passage-way extending therethrough, a stud having threads screwed into said bridge, a hollow connecting member internally threaded at each end, one end

adapted to engage the threads on one end of said stud and the other end adapted to engage screw threads on the end of said depending stem, one set of threads being right-handed and the other left-handed, and means in said connecting member adapted to receive a special tool passed through said stem whereby the cap and connecting member may be taken from the bottle.

2. In a device of the character described, a bottle having a neck provided with a bridge near the base thereof, said bridge having apertures therein, said neck having a passage-way therethrough, a bottle cap on the end of said neck, said cap having an aperture registering with said passage way, a depending stem connected to said cap and having a passage-way extending therethrough, a stud having threads screwed into said bridge, a hollow connecting member internally threaded at each end, one end adapted to engage the threads on one end of said stud and the other end adapted to engage screw threads on the end of said depending stem, one set of threads being right-handed and the other left-handed, means in said connecting member adapted to receive a special tool passed through said slot whereby the cap and connecting member may be taken from the bottle.

1,217,510. TELEPHONE TRUNKING SYSTEM. MICHAEL SCHWARTZ, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 3, 1913. Serial No. 751,882. (Cl. 179—18.)



1. In a telephone system, a plurality of groups of trunk lines, means including master switches operating over said trunk lines to automatically select an idle one of said trunks, and means whereby a plurality of said master switches may be operated in synchronism.

2. In a telephone system, groups of subscribers' lines, trunk lines individual to said groups of subscribers' lines, other trunk lines common to a plurality of groups of subscribers' lines, means associated with each group of lines for automatically selecing idle trunks, and means for causing a plurality of said selecting means to operate in synchronism.

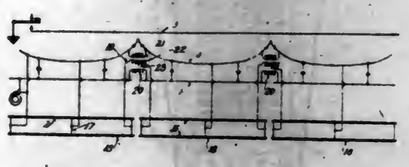
3. In a telephone system, groups of subscribers' lines, a plurality of trunk lines, certain of said trunk lines being individual to each of said groups of subscribers' lines, while other of said trunks are common to a plurality of groups, means for selecting an idle trunk, and means for preventing one of said trunks individual to a group being selected until all of the common trunks for this group are in use.

4. In a telephone system, a plurality of groups of subscribers' lines, trunking switches individual to said lines for selecting idle trunk lines, trunk lines common to all of said groups, trunk lines individual to each of said groups, and means for preventing the selection of an individual trunk whenever one of the common trunks is idle.

5. In a telephone system, two groups of subscribers' lines, a master switch and a group of trunking switches for each group of lines, a bank of contacts and a wiper for each master switch, a relay adapted when deenergized to close the starting circuit of one of the master switches, and an energizing circuit for said relay including corresponding contacts of both banks.

[Claims 6 to 21 not printed in the Gazette.]

1,217,511. MEANS FOR MINIMIZING INDUCTIVE INTERFERENCE. CHARLES F. SCOTT, New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 2, 1915. Serial No. 169. (Cl. 171—97.)



1. The combination with a power-transmission system comprising two conductors and a circuit for the transmission of intelligence located within the magnetic field of the power-transmission system, of an auxiliary conductor also located within the magnetic field of the power-transmission system, said auxiliary conductor being insulated from, and serving to mechanically support, one of said transmission conductors, and means whereby the current tending to flow through the other transmission conductor will be conducted to, and forced to flow through, said auxiliary conductor.

2. The combination with a power-transmission system and a circuit for the transmission of intelligence located within the magnetic field of the power-transmission system, of an auxiliary low-impedance conductor also located within the magnetic field of the power transmission system, said auxiliary conductor being electrically insulated from, and serving to mechanically support, one conductor of the power transmission system, an electrical connection between said auxiliary conductor and the second conductor of the power transmission system, and means to force substantially all the current, tending to flow through said second conductor, through said auxiliary conductor.

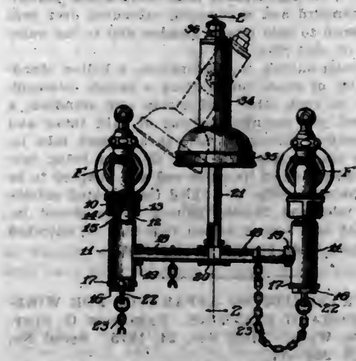
3. The combination with a power-transmission system and a circuit for the transmission of intelligence located within the magnetic field of the power-transmission system, of an auxiliary low-impedance conductor also located within the magnetic field of the power-transmission system, said auxiliary conductor being electrically insulated from, and serving to mechanically support, one conductor of the power transmission system, a plurality of spaced electrical connections between said auxiliary conductor and the second conductor of the power-transmission system, and means whereby the return current will flow through said auxiliary conductor in preference to the said second conductor of the power system.

4. The combination with a railway system comprising a trolley conductor and a track conductor, and a circuit for the transmission of intelligence located within the magnetic field of the railway system, of an auxiliary conductor electrically insulated from, and serving to mechanically support, the trolley conductor, and electrical connections between the auxiliary conductor and the track which, together, constitute paths for the return flow of the trolley current.

5. The combination with a railway system comprising a trolley conductor and a track conductor, and a circuit for the transmission of intelligence located within the magnetic field of the railway system, of an auxiliary conductor located within the magnetic field of the trolley conductor, said auxiliary conductor being electrically insulated from, and serving to mechanically support, the trolley conductor, and electrical connections between the auxiliary conductor and the track which, together, provide parallel paths for the return flow of the trolley current.

[Claims 6 to 11 not printed in the Gazette.]

1,217,512. FAUCET ATTACHMENT OR FIXTURE. PHILIP F. SILBERMAN, Chicago, Ill. Filed July 1, 1915. Serial No. 37,422. (Cl. 4—26.)



1. The combination with a vertical pipe, of a transverse pipe connecting with the lower end thereof, an extension connected with each end of said transverse pipe and extending on each side thereof, means for removably securing the upper ends of said extensions to faucets, and removable closures for the lower ends of said extensions.

2. The combination with a vertical standpipe, of a container terminating in a shower head, a connection between said container and said standpipe whereby the former always rests in a plane parallel to the latter and may swing in a horizontal and a vertical plane about the latter, a transverse pipe communicating with the opposite end of said vertical standpipe, and extensions at the ends of said transverse pipe.

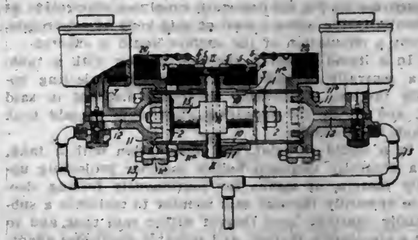
3. The combination with a vertical standpipe, of a container terminating in a shower head, a connection between said container and said standpipe whereby the former always rests in a plane parallel to the latter and may swing in a horizontal and a vertical plane about the latter, a transverse pipe communicating with the opposite end of said vertical standpipe, a vertical extension at each end of said transverse pipe, means at the upper ends of said extensions for removably securing the same to faucets, and removable closures for the lower ends of said extensions.

4. The combination with a container terminating in a large shower head, of means for supplying fluid to said container comprising a vertical standpipe resting approximately parallel to said container, a connection between said standpipe and said container whereby the container may swing in a vertical as well as horizontal plane, a transverse supply pipe communicating with the lower end of said standpipe, and a transverse extension at the terminals of said supply pipe adapted to removably engage faucets.

5. The combination with a vertical pipe, of a transverse pipe connected with the lower end thereof, an extension connected with each end of said transverse pipe and extending on each side thereof, means for removably securing the upper ends of said extensions to faucets, and removable closures for the lower ends of said extensions whereby when in their operative position, the flow of fluid from the faucet may be directed into the transverse and vertical pipes aforesaid.

1,217,513. SWITCHING APPARATUS. KARL A. SIMMON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 19, 1914. Serial No. 819,760. (Cl. 175—308.)

1. The combination with a fluid-operated device comprising a cylinder and a piston movable therein, of a plurality of stationary contact terminals, a plurality of cooperating contact terminals, a supporting member for said coöperating terminals slidably mounted upon and surrounding said cylinder, and means for coupling said piston to said supporting member.



2. The combination with a fluid-operated device comprising a cylinder and a piston movable therein, of a member slidably mounted upon and surrounding said cylinder, and means projecting through said cylinder for coupling said piston to said movable member.

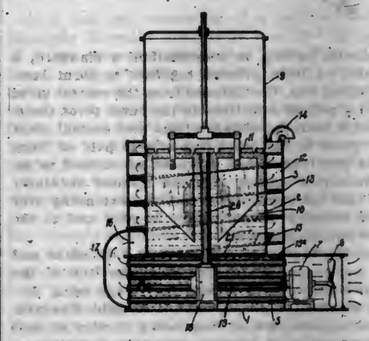
3. The combination with a fluid-containing device comprising a cylinder and a piston movable therein, of a contact-carrying device surrounding said cylinder and having a bearing thereon, and means for mechanically coupling said contact-carrying device to said piston.

4. The combination with a cylinder, a contact-carrying device surrounding said cylinder, and a shaft having oppositely-acting pistons mounted thereon and disposed within said cylinder, of means for mechanically connecting said pistons to said contact-carrying device for longitudinal movement relative to said cylinder.

5. The combination with a fluid-operated device, a plurality of stationary contact terminals, a plurality of cooperating contact terminals, and a movable supporting member for said coöperating terminals surrounding said fluid-operated device, of means for mechanically connecting said fluid-operated device to said supporting member for effecting movements thereof.

[Claims 6 to 9 not printed in the Gazette.]

1,217,514. CONTROL APPARATUS. KARL A. SIMMON, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 6, 1914. Serial No. 870,612. (Cl. 219—57.)



1. In a liquid rheostat, the combination with a tank, electrodes for said tank, and a body of electrolyte normally contained therein, of centrally disposed means for supplying electrolyte to said tank at substantially the surface level of said electrolyte.

2. In a liquid rheostat, the combination with a tank, electrodes for said tank, and a body of electrolyte normally contained therein, of means for supplying electrolyte to said tank and for effecting a substantially radial flow of the surface liquid of said body of electrolyte.

3. In a liquid rheostat, the combination with a tank containing electrodes, a body of electrolyte contained

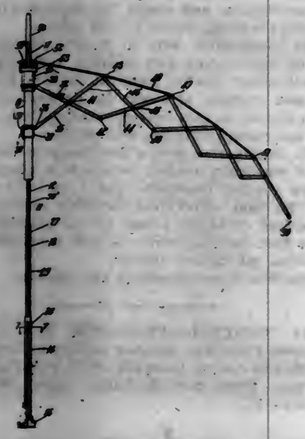
therein, and means for discharging electrolyte when the level thereof exceeds a predetermined height, of centrally disposed means for continuously supplying electrolyte at substantially the normal level of said body of electrolyte, whereby a circulation of the surface liquid is effected.

4. In a liquid rheostat, the combination with a tank, and a centrally disposed hollow member projecting upwardly therein, of movable electrodes disposed in said tank, and means for supplying electrolyte to said tank through said member.

5. In a liquid rheostat, the combination with a tank, and a centrally disposed hollow member projecting upwardly therein, of means for continuously forcing electrolyte upwardly through said member to maintain a substantially constant level thereof within said tank and to effect a circulation thereof, and movable electrodes adapted to be immersed in said electrolyte.

[Claims 6 to 15 not printed in the Gazette.]

1,217,515. UMBRELLA. GEORGE A. SIMON, Boston, Mass. Filed Sept. 28, 1916. Serial No. 122,584. (Cl. 135—20.)



1. An umbrella having, in combination, a standard, a series of pairs of links pivoted together to form lazy-tongs constituting ribs, the distance from the central pivot of one link of a pair of said links to the outer pivot thereof being greater than the distance from said central pivot to the outer pivot of the other link of said pair of links, whereby said lazy-tongs when extended are caused to incline downwardly, a spring actuated member rotatably mounted on said standard and a covering extending over said ribs and fastened to said rotary member and to the outer end portion of said ribs.

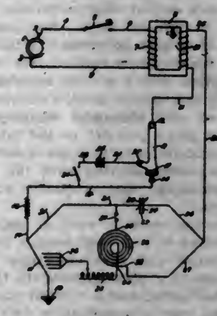
2. An umbrella having, in combination, a standard and a series of lazy-tongs constituting ribs, one link of the inner pair of links of each of said lazy-tongs being pivoted to said standard, a sleeve slidable on said standard, the other link of said pair of links being pivoted to said slide, a spring actuated member rotatably mounted on said standard and a covering extending over said ribs and fastened to said rotary member and to the outer end portion of said ribs.

3. An umbrella having, in combination, a standard, a series of lazy-tongs constituting ribs, one link of the inner pair of links of each of said lazy-tongs being pivoted to said standard, a sleeve slidable on said standard, the other link of said pair of links being pivoted to said sleeve, means to lock said sleeve to said standard, a spring actuated member rotatably mounted on said standard and a covering extending over said ribs and fastened to said rotary member and to the outer end portion of said ribs.

4. An umbrella having, in combination, a standard, a series of lazy-tongs pivotally mounted thereon and constituting ribs, a spring-actuated member rotatably mounted on said standard and a covering extending over said ribs and fastened to said rotary member and to the outer end portions of said ribs.

5. An umbrella having, in combination, a hollow standard, a plurality of tubes constituting a handle telescopically slidable on each other and within said standard, a spring-actuated pin mounted on one of said tubes and adapted to project through a hole in a second tube located outside said first-named tube, said pin being beveled on the under side of its outer end and adapted to be engaged by the upper edge of a third tube located outside said second tube and thereby caused to be moved inwardly so that said second named tube may be unlocked from said pin by being pushed thereagainst.

1,217,516. TRANSMITTING APPARATUS FOR WIRELESS-TELEGRAPH STATIONS. FREDERICK G. SIMPSON, Seattle, Wash. Filed Nov. 24, 1915. Serial No. 63,310. (Cl. 250—17.)



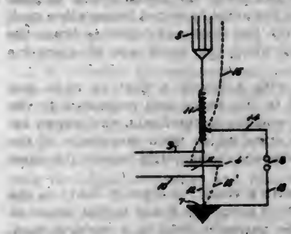
1. In a transmitting apparatus for wireless telegraph stations, the combination with a charging circuit which includes the secondary coil of an alternating current transformer, a rectifying valve, a resistance coil and a condenser, of a trigger circuit which includes a portion of a spiral conductor, a spark-gap and a part of said charging circuit within which is included said condenser; and an oscillating circuit which includes all of said spiral conductor, a variable inductance, an antenna, an earth connection and that part of each of said charging and trigger circuits which includes said condenser.

2. In a transmitting apparatus for wireless telegraph stations, the combination with a charging circuit which includes the secondary coil of an alternating current transformer, a rectifying valve, and a condenser, of a trigger circuit which includes a portion of a spiral conductor, a spark-gap and a part of said charging circuit within which is included said condenser; and an oscillating circuit which includes all of said spiral conductor, a variable inductance, an antenna, an earth connection and that part of each of said charging and trigger circuits which includes said condenser.

1,217,517. RADIO TELEGRAPH AND TELEPHONE SYSTEM. FREDERICK G. SIMPSON, Seattle, Wash. Filed May 25, 1916. Serial No. 99,914. (Cl. 250—37.)

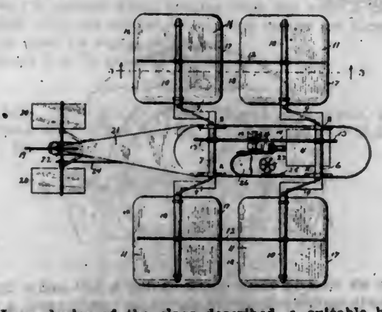
1. In transmitting apparatus of an electrical system of radio communication, the combination with an oscillating circuit which includes an earth connection, an antenna, an inductance and a condenser; of a charging circuit, and a spark-plug whose terminals are connected with said oscillating circuit at nodal points of potential therein.

2. A radio system of communication having electric circuits which include an oscillating circuit and a spark-gap whose terminals are connected with said oscillating circuit at points near the nodal points of potential there-



in, whereby oscillating currents in said oscillating circuit shall have little tendency to jump across said spark-gap.

1,217,518. AIRSHIP. MAX SINGELMANN, Chicago, Ill. Filed Jan. 2, 1914. Serial No. 810,087. (Cl. 244—11.)

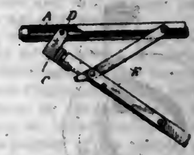


1. In a device of the class described, a suitable body portion, suitable uprights, on each side of the body at the front, suitable uprights on each side of the body near the back, a shaft journaled in the upper ends of said first named uprights, a shaft journaled in the upper ends of said second named uprights, means for rotating said shafts in unison, integral cranks formed on the extremities of both of said shafts, a separate pocket formed plane pivotally mounted on each of said cranks and a rigid brace connecting each fore and aft pair of planes to retain the planes parallel to the body portion.

2. In a device of the class described, a suitable body portion comprising a boat provided with wheels to support the same when upon the ground, a motor in said body, suitable uprights on each side of the body at the front, suitable uprights on each side of the body at the rear, a shaft journaled in the upper ends of said first named uprights, a shaft journaled in the upper ends of said second named uprights, suitable gearing connecting said shafts with said motor for rotating the shafts in unison, integral cranks formed on the extremities of both of said shafts, a separate pocket formed plane pivotally mounted on each of said cranks and a rigid brace connecting each fore and aft pair of planes to retain the planes parallel to the body portion.

1,217,519. FOLDING HAMMOCK-STAND. GEORGE F. SISBOWER, East Orange, N. J., and LOUIS EDWARD PITTONI, New York, N. Y., assignors to New York Couch Bed Company, New York, N. Y., a Corporation of New York. Filed Nov. 19, 1912. Serial No. 732,867. (Cl. 5—32.)

1. A folding hammock stand comprising a ridge rod formed of a single continuous member, connecting pieces located at the ends of the ridge rod and each having a single arm pivotally attached thereto and a lateral extension, each connecting piece having a lower angularly arranged section attached to said extension, legs pivotally attached to the lower angularly arranged sections of said connecting pieces in pairs, and collapsible braces extending inwardly from the legs to the ridge pole and having permanent pivotal connection with both.



2. A folding hammock stand comprising a tubular ridge rod, connecting pieces located at the ends of the ridge rod and each having a single arm pivotally connected to the ridge rod within the same, said arm being positioned to abut against the wall of said ridge rod and to lie parallel therewith when in open position, legs pivotally attached in pairs to the respective connecting pieces, and collapsible braces extending inwardly from the legs to the ridge rod and having permanent pivotal connection with both.

3. A folding hammock stand comprising a tubular ridge rod, connecting pieces located at the ends of the ridge rod and each having a single arm pivoted within the ridge rod and also having a lateral extension, each connecting piece also having a lower angularly arranged section attached to said extension, legs pivotally attached in pairs to the lower angularly arranged sections of the connecting pieces, and collapsible braces extending inwardly from the braces to the ridge rod and having permanent pivotal connection with both.

1,217,520. LOCK-NUT. OTIS H. SLEEPER, Exeter, N. H., assignor to Boston Lock-Nut Company, Boston, Mass., a Corporation of Massachusetts. Filed July 7, 1916. Serial No. 107,893. (Cl. 151—21.)



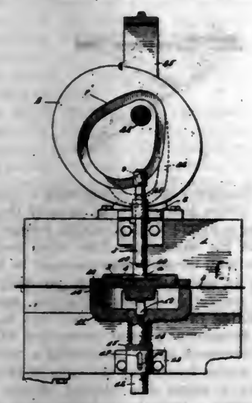
1. A lock nut consisting of a member having a continuously threaded cylindrical bore and having one side of a face thereof disposed in a plane above the plane of the side diametrically opposite thereto, said higher side being set in at its center to alter the diameter of said bore and to thereby dispose the threads of that portion of the bore included in said higher side in position to bind upon the threads of the bolt with an increased thread engaging friction as the nut is run down upon the bolt.

2. A lock nut consisting of a member having a continuously threaded bore and having a semi-circular portion on one side of said bore forced inwardly to project the threads included in said constricted area into said bore in position to bind on the bolt threads as the nut is run down on the bolt.

3. A lock nut consisting of a continuously threaded member having one side removed to the depth of one or more threads and having its opposite side forced inwardly to project the threads included in said constricted area into said bore in position to bind on the bolt threads as the nut is run down on the bolt.

4. A lock nut consisting of a member having a continuously threaded cylindrical bore, the material on one side of said bore and disposed about one half of said bore extending beyond the top plane of the opposite side, said extended side being set in at the center thereof to shorten the central diameter thereof and lengthen the diameter of said bore at the ends of said extended portion to give to the center portion an increased thread engaging friction and to clear the cut ends of the threads against any cutting tendency.

1,217,521. PUCKER-REMOVING MECHANISM. GEORGE C. SNYDER, New York, N. Y. Filed Sept. 11, 1914, Serial No. 861,263. Renewed June 29, 1916. Serial No. 106,733. (Cl. 218—5.)



1. A machine for removing the pucker from fabric at the base of threadless fastening devices, comprising means to grip the fabric in the vicinity of the fastening device, and means to move the gripping means relative to the fastening device to exert tension on the fabric.

2. A machine for removing the pucker from fabric at the base of threadless fastening devices, comprising means to engage the set fastening device, means to grip opposite sides of the fabric in the vicinity of the fastening device, and means to produce relative movement between the gripping means and the first-named means while the latter is in engagement with the set fastening device.

3. A machine for removing the pucker from fabric at the base of threadless fastening devices, comprising means to engage a set fastening device, means to engage the fabric in the vicinity of the fastening device, and means operable after the set fastening device is engaged by said first-named means to produce relative movement between both of said means to exert tension on the fabric.

4. The combination with button-setting mechanism, of means operative subsequent thereto for removing the pucker from the material to which the button is applied.

5. In a machine of the kind described, means for setting a fastening device, and means operative subsequent to said first-named means for removing the pucker from the material to which the fastening device is applied.

[Claims 6 to 8 not printed in the Gazette.]

1,217,522. VESSEL. FRANK R. STAFFORD, Providence, R. I. Filed July 26, 1915. Serial No. 42,022. (Cl. 114—128.)



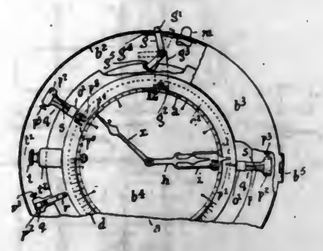
1. In combination with a vessel, a float arranged on each side thereof, arms pivoted at their inner ends to the vessel and at their outer ends being connected to the float, a sprocket connected to the pivot of the arms, a driving sprocket, an endless chain connecting said sprockets, latches to engage the arms to hold the latter in up position, shoulders on the arms between their ends and stops on the sides of the vessel beneath which the shoulders engage.

2. In combination with a vessel, a float on each side thereof, arms pivoted to the vessel and connected to the floats, means to raise and lower the floats, means to positively engage and lock the arms in raised inoperative position, and means between the arms and vessel to brace the arms from the vessel when the floats are in operative position.

3. In combination with a vessel, a float on each side thereof, arms pivoted to the vessel and connected to the floats, means to raise and lower the floats, and means between the vessel and arms which upon movement of the arms to operative position automatically braces the arms from the vessel.

4. In combination with a vessel, emergency floats on the sides thereof, means to connect the floats to the vessel so that the floats may be normally held in a vertical position extending above the deck of the vessel and lowered at will for use in sustaining the vessel afloat.

1,217,523. ALARM-CLOCK AND ATTACHMENT THEREFOR. JACKSON STEWART, North Geelong, Victoria, Australia. Filed Oct. 21, 1914. Serial No. 867,887. (Cl. 161—5.)



In an electric alarm clock having a bell and a rim to indicate matter relative to alarms, in combination, a clock hand with a tip to move over said rim, time divisions on said rim, an insulated conducting ring, a member forming a support for alarm attachments, a plurality of said attachments, a pointer for each of said attachments projecting over the rim in the path of a clock hand tip, a conducting member on said attachments extending to said conducting ring, said pointer normally touching said conducting member from which pressure of the clock hand tip will separate the pointer, and means for returning the pointer into its normal position after the passage of the clock hand tip, substantially as described.

1,217,524. CYLINDER FOR PRINTING-MACHINES. WARD B. STORY, Brooklyn, N. Y., assignor to Ward B. Story Company, Inc., New York, N. Y., a Corporation of New York. Filed Oct. 1, 1912. Serial No. 723,319. (Cl. 272.)



1. In a cylinder for printing machines, a blanket carried by the cylinder, means for imparting tension to the blanket, means for preventing rotation of the tension imparting means, and means for bodily moving the tension imparting means after the blanket is in position.

2. In a cylinder for printing machines, a blanket carried by the cylinder, means for imparting tension to the blanket, a device hinged to the cylinder; means for engaging the tension means with the said device; and means for bodily moving the device and, with it, the tension imparting device after the blanket is in position.

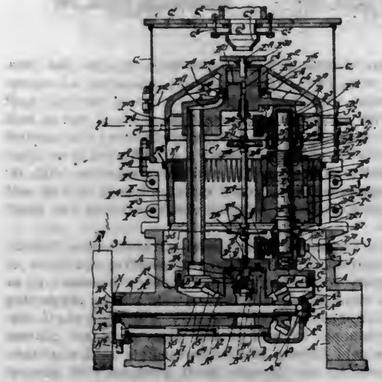
3. A cylinder for printing machines, having a blanket secured at one end to the cylinder, a reel for holding the free end of the blanket; a support for the reel hinged to the cylinder; means for preventing rotation of the reel; means carried by the support for engaging with the blanket on the reel; and means for moving the support upon its supporting hinge and thereby bodily moving the reel.

4. A cylinder for printing machines, having a blanket secured at one end to the cylinder, a reel for holding the free end of the blanket; a bar hinged to the cylinder; fingers carried by the bar for engaging with the roll carried by the reel; and means for moving the bar upon its supporting hinge.

5. A cylinder for printing machines, having a blanket, a reel for engagement with the blanket; a bar hinged to the cylinder; arms, carried by the bar, for engaging with the reel; a ratchet wheel turning with the reel; a pawl engaging with the ratchet wheel; and means for turning the bar upon its supporting hinge.

[Claims 6 to 21 not printed in the Gazette.]

1,217,525. RING-ROLL MILL. EDGAR B. SYMONS, Milwaukee, Wis. Filed Apr. 30, 1913. Serial No. 764,489. (Cl. 83—45.)



1. In a crushing machine a roller cage containing crushing rollers, a support bearing at the bottom of said cage upon and about which it rotates, means for rotating it and a guide bearing normally out of contact with the cage at the top.

2. In a crushing machine the combination with a rotatable shaft of a core mounted thereon, said core having a pair of upwardly diminishing truncated conical surfaces, an annular member supported on the lower larger surface, a wedge collar having truncated conical surfaces in engagement with one of the surfaces on said core and in engagement with the member and means for forcing said wedge into said member to lock it in position on the core.

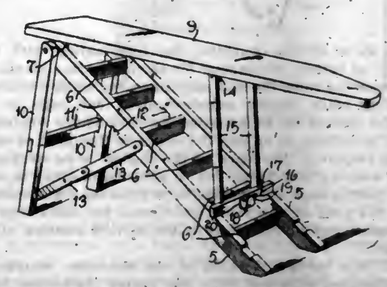
3. A rotary member comprising a cylindrical annular member having at either end truncated conical surfaces, a core upon which said annular member is mounted, said core having one truncated conical surface in engagement with one surface on the annular member and a second truncated conical surface of lesser diameter than the remaining surface on the interior of the annular member and means for locking said core and said member together.

4. A rotary member comprising a cylindrical annular member having at either end truncated conical surfaces, a core upon which said annular member is mounted, said core having one truncated conical surface in engagement with one surface on the roller and a second truncated conical surface of lesser diameter than the remaining surface on the interior of the annular member and means for locking said core and said member together, said means comprising an annular wedge.

5. A rotary member comprising a cylindrical annular member having at either end truncated conical surfaces, a core upon which said annular member is mounted, said core having one truncated conical surface in engagement with one surface on the roller and a second truncated conical surface of lesser diameter than the remaining surface on the interior of the annular member, means for locking said core and said member together, said means comprising an annular wedge and means for forcing said wedge into the space between the core and jacket.

[Claims 6 to 40 not printed in the Gazette.]

1,217,526. COMBINATION FOLDING IRONING-BOARD AND STEP-LADDER. JOHN MONROE TANNER, Carriers Mills, Ill. Filed Mar. 22, 1916. Serial No. 85,919. (Cl. 228—32.)



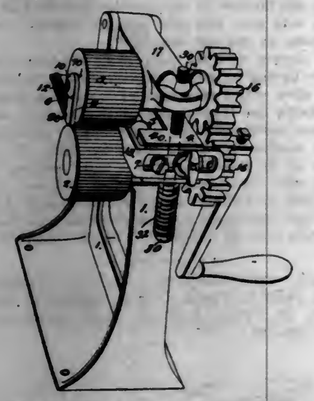
1. A device of the character described including an ironing board, a ladder pivotally connected to one end of said ironing board, supporting means operatively connected to the latter end of the ironing board, a bracket member fixed to the under side of the ironing board, parallel brace bars pivotally connected to the opposite ends of said bracket member, a cross bar connecting the free ends of said brace bars and projecting beyond the same to operatively engage the rails of the ladder in the use of the ironing board, said cross bar being centrally provided with a recess in one edge thereof, and a spring clip fixed centrally to the cross bar and projecting from said recessed edge of the bar to engage over the end of the ironing board and hold the brace bars against swinging movement with respect thereto when the ladder is in use, the projecting ends of said cross bar being adapted for engagement on the ground to support the ironing board in a vertical position against pivotal movement with respect to the ladder.

2. A device of the character described including an ironing board, a ladder pivotally connected to one end of said ironing board, supporting means operatively connected to the said end of the ironing board, parallel brace bars pivotally connected at one of their ends to the under side of the ironing board, a cross bar connecting the free ends of said brace bars and projecting beyond the same to operatively engage with the rails of the ladder in the use of the ironing board, and a spring fastening clip on said cross bar for engagement with the end of the ironing board to hold the brace bars against swinging movement with respect thereto, the projecting ends of the cross bar being adapted for engagement with the ground in the use of the ladder to support the ironing board in a vertical position against pivotal movement with respect to the ladder.

1,217,527. LEATHER-SKIVING MACHINE. GEORGE ORVILL TERRY, Minneapolis, Minn. Filed May 13, 1916. Serial No. 97,300. (Cl. 69—13.)

1. In a skiving machine, a hingedly mounted holder, said holder being longitudinally adjustable, a blade fas-

tened along one of its edges to the said holder, and means for supporting the opposite edge of the blade in the desired working position of the blade.



2. In a skiving machine, the combination with feed rolls; of cutting mechanism for skiving leather blanks fed between the rolls, the said mechanism including a holder, a skiving blade rigidly attached along one edge to the holder, means for so mounting the said holder whereby it can be rocked to adjust the blade to the desired angle with respect to the plane of the leather to be worked on and whereby said holder can be adjusted in order to move the cutting edge of the blade to or from the plane containing the axes of the rolls, and means for sustaining the opposite edge of the blade in the desired position of the blade.

3. In a skiving machine of the character stated, the combination with feed rolls that convey the leather blank edgewise to the skiver blade; of a means for beveling the leather blank, said means including a skiving blade and means longitudinally movable with reference to the line of feed of the leather blank for hingedly supporting one edge of the blade, said means also including devices for positioning the cutting edge of the blade at an angle with respect to the front edge of the blank to be worked on.

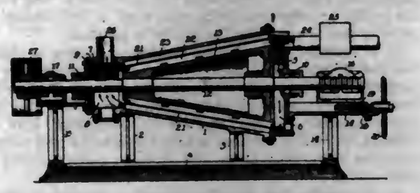
4. In a skiving machine, a pair of opposing feed rolls, one of which is vertically movable with respect to the other, a skiver blade, a holder for the blade positioned at right angles to the rolls, said skiver blade being attached at one edge to the holder, the said holder being hingedly mounted whereby to swing the skiver blade in line with the wiping faces of the two rolls, means for effecting longitudinal movement of the holder and other means for supporting the opposite edge of the blade, the said means being attached to and shiftable with the movable roll.

5. A skiving machine comprising a frame, a pair of opposing feed rolls, one of the said rolls being resiliently supported relatively to the opposing roll, a blade holder rockably mounted on the frame and longitudinally adjustable, a skiver blade rigidly attached at the inner edge to the holder, and a connection that joins the outer edge of the blade to the resiliently supported roll, whereby the inclination of the blade is automatically varied for different thicknesses of work.

[Claim 6 not printed in the Gazette.]

1,217,528. MEANS AND PROCESS FOR REFINING PAPER-STOCK. PETER R. THOM, Appleton, Wis. Filed Feb. 4, 1915. Serial No. 6,035. (Cl. 92—27.)

In a machine for refining pulp stock for making bond or analogous papers, the combination of a conical casing, a conical core rotatable in said casing and slightly spaced therefrom to form a passage annular in cross-section, means for feeding unrefined stock under pressure directly to the large end of said passage, means for effecting relative rotation of said core and casing and thereby causing the centrifugal action to exert a counter pressure on said stock effective throughout the length of the passage, and a discharge conduit communicating with the small end of



said conical passage for receiving and delivering the treated stock, the first-mentioned or feeding pressure being sufficient to cause the stock to travel from the large to the small end of said passage.

1,217,529. ELECTRIC POWER TRANSMISSION. JOHN GODFREY PARRY THOMAS, Chiswick, London, England, assignor to Thomas Foreign Patents Limited, London, England, a Corporation of Great Britain. Filed June 26, 1913. Serial No. 775,949. (Cl. 172—239.)



1. In an electric power transmission system the combination with two dynamo electric machines of means rigidly connecting their stationary parts, a driving shaft coaxial with and passing through the shaft of one of said machines, pairs of planet pinions of different size carried by said driving shaft, sun wheels of different size intermeshing with said planet wheels and connected with respective dynamo shafts, and a clutch adapted to join said driving shaft with the dynamo shaft carrying the small sun wheel.

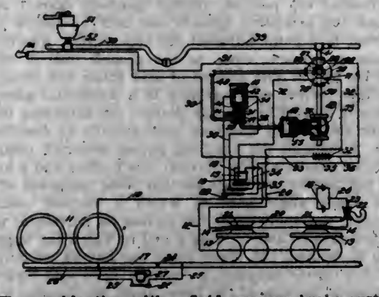
2. In an electromechanical power transmission system, the combination with two dynamo electric machines of means rigidly connecting their stationary members so as to form a rigid casing, bearings in said casing supporting the shaft of said machines coaxially, a driving shaft contained within one of said shafts, pairs of planet pinions carried by said driving shaft intermediate said machines, a sun pinion on one dynamo shaft meshing with one set of planet pinions, a sun pinion meshing with the other set of planet pinions, a fourth stub shaft carrying said latter sun pinion, a clutch member upon said stub shaft and a co-action clutch member upon the remaining dynamo shaft also intermediate said dynamos.

3. In an electromechanical power transmission system the combination with two dynamo electric machines of a rigid casing formed from their stationary members supporting their shafts co-axially, a driving shaft, a balance gear adapted to interconnect said driving shaft with said dynamos, a clutch for rendering said balance gear inoperative, a clutch for separating one of said dynamo shafts from said gearing, and a clutch operating member adapted to hold both of said clutches out of engagement.

4. In an electromechanical power transmission system the combination with two dynamo electric machines of a driving shaft, a balance gear interconnecting said shaft with the shafts of said dynamos, a clutch rendering said balance gear inoperative, a second clutch for separating one of said dynamo shafts from said gear, a single clutch operating member adapted to hold both of said clutches out of operation, a controller for said dynamo electric machines, and means on said controller for preventing each of said clutches coming into operation in particular positions of the controller.

5. In an electromechanical power transmission system the combination with two dynamo electric machines of a driving shaft, a balance gear interconnecting said shaft with the shafts of said dynamos, a clutch rendering said balance gear inoperative, a second clutch for separating one of said dynamo shafts from said gear, a single clutch operating member adapted to hold both of said clutches out of operation, a controller for said dynamo electric machines, means on said controller for preventing each of said clutches coming into operation in particular positions of the controller, and further means on said controller for operating electrically the clutch which renders the balance gear inoperative.

1,217,530. AUTOMATIC TRAIN-CONTROLLING SYSTEM. GUY P. THURBER, Pittsburgh, Pa. Filed Nov. 1, 1912, Serial No. 729,086. Renewed July 26, 1916. Serial No. 111,542. (Cl. 246—58.)



1. The combination with a fluid pressure brake system, of a valve connected therewith for controlling the automatic operation of the brakes, a normally closed electric circuit having means therein for controlling the valve to maintain the brakes inoperative so long as the electric circuit is complete, means for rupturing the circuit to cause application of the brakes, means for restoring the circuit to cause release of the brakes, and means for cutting off the valve from the brake system when the circuit is being restored.

2. The combination with a fluid pressure brake system, of a valve connected therewith for controlling the automatic operation of the brakes, a normally closed electric circuit, a magnet energized by said circuit to control the valve aforesaid to maintain the brakes inoperative so long as the circuit is complete, means for rupturing the circuit to cause application of the brakes, means for completing an energizing circuit through the magnet to cause release of the brakes, and means for disconnecting the valve from the brake system when the magnet is being reënergized.

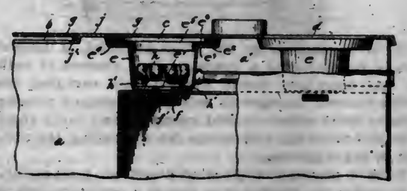
3. The combination with a fluid pressure brake system, of a magnet valve having communication with the brake system and arranged when deënergized to cause application of the brakes, a normally closed electric circuit for normally energizing the magnet valve, means for rupturing said circuit, means for completing a circuit through the magnet valve to reënergize the same, and means for cutting off communication between the brake system and the magnet valve when reënergizing the latter.

4. The combination with a fluid pressure brake system, of electrically controlled means connected with the fluid pressure circuit of the brake system and arranged when energized to maintain the brakes inoperative, a circuit for normally energizing the said controlling means, an electric circuit including a signal for indicating the existence of the fluid pressure connection between the automatic controlling means and the brake system, means for disconnecting the automatic controlling means from the brake system, means operated by such disconnecting means for establishing an energizing circuit through the controlling means, and means also operated by the disconnecting means when the same is operated to disconnect the automatic controlling means from the brake system, to rupture the circuit through the signal.

5. The combination with a fluid pressure brake system, of electrically controlled means connected with the fluid pressure circuit of said system controlling automatic operation of the same and arranged when energized to maintain the brakes inoperative, a circuit for normally energizing the said automatic controlling means, and a combination cut-out valve and circuit closer adapted to simultaneously disconnect the automatic controlling means from the brake system and to close an energizing circuit through the train controlling means.

[Claims 6 to 25 not printed in the Gazette.]

1,217,531. COMBINED GAS AND SOLID-FUEL RANGE. GEORGE A. TINNERMAN, Cleveland, Ohio. Filed Apr. 7, 1913. Serial No. 759,282. (Cl. 126—36.)



1. In a convertible range, the combination with an annularly flanged cooking hole thereof, of a bowl comprising an open bottom construction and a horizontally flanged rim provided with two upstanding annular ribs fitting beneath said flanged cooking hole, and a gas-burner positioned within said bowl, substantially as set forth.

2. In a convertible range, the combination with a cooking hole thereof, of a bowl insertible therein comprising a partially open bottom, flaring sides and a horizontal flange provided with annular vents adjacent to the top of said bowl, and a gas-burner positioned within the bowl, substantially as set forth.

3. The combination with a solid fuel range, having a grate at one end thereof, and a connecting upper flue, of a bowl positioned beneath one of the front cooking holes, and within said flue; said bowl having a bottom opening, and a peripheral flange provided with controllable vents connecting with the upper flue, an air-draft disposed beneath said upper flue and connecting with the bowl, a gas burner within said bowl, and a gas connection extending from the end of the range opposite the grate to said gas burner within the bowl, substantially as set forth.

4. The combination with a solid fuel range, of a bowl disposed beneath a cooking hole thereof; the same having a channeled rim and a horizontally flanged top provided with vents, an air-draft connecting with the bottom of the bowl, a gas burner within the bowl, and a gas supply pipe connected to the burner, substantially as set forth.

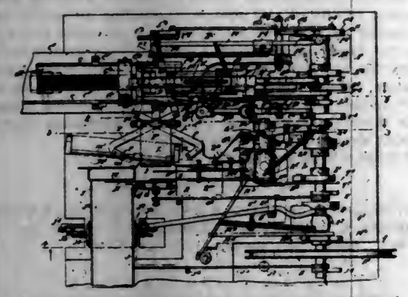
5. The combination with a solid fuel range, of a bowl having a bottom draft opening and upper vents annularly provided in a plane parallel with the bottom, positioned in a cooking hole thereof and extending within the top flue, an individual air-draft connected with the bottom of the bowl and positioned beneath said top flue, a gas burner within said bowl and a connection extending to the burner for supplying a mixture of gas and air thereto, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,217,532. MACHINE FOR PACKAGING RINGS. AMOS A. TOTMAN, Fitchburg, Mass., assignor, by mesne assignments, to Quabaug Rubber Company, North Brookfield, Mass., a Corporation of Massachusetts. Filed Nov. 21, 1913. Serial No. 802,302. (Cl. 93—6.)

1. In a machine of the kind described, a magazine, an arm, means for causing it to engage a predetermined number of articles in said magazine, means for lifting said arm whereby said articles will be separated from others

in said magazine, and means for moving said arm away from said magazine whereby said articles will be carried to a place of deposit.



2. In a machine of the kind described, a magazine, means for engaging a predetermined number of articles in said magazine, means whereby said engaging means will be moved to separate said predetermined number of articles from others in said magazine and carry them to a place of deposit, and means for controlling the articles left in the magazine.

3. In a machine of the kind described, a magazine, an arm, means for causing it to engage a predetermined number of articles in said magazine, means for lifting said arm whereby said articles will be separated from others in said magazine, means for moving said arm away from said magazine whereby said articles will be carried to a place of deposit, and means to remove said articles from said arm.

4. In a machine of the kind described, a magazine, an arm, means for causing it to engage a predetermined number of articles in said magazine, means for lifting said arm whereby said articles will be separated from others in said magazine, means for moving said arm away from said magazine whereby said articles will be carried to a place of deposit, and means to remove said articles from said arm and deposit said articles at a predetermined point.

5. In a machine of the kind described, a magazine, an arm, means for causing it to engage a predetermined number of articles in said magazine, means for holding said articles on said arm, means for moving said arm whereby said articles will be conveyed to a place of deposit, and means for releasing said articles from said arm.

[Claims 6 to 34 not printed in the Gazette.]

1,217,533. MACHINE FOR HANDLING PAVING MATERIAL. WALTER A. TRINLER, Rutherford, N. J. Filed Apr. 19, 1916. Serial No. 92,162. (Cl. 193—2.)



1. A machine for handling paving material, comprising a frame consisting of a side portion and a top portion, a conveyer carried by the side portion and lying intermediate the top and bottom thereof and traveling in a horizontal plane, oppositely-disposed tractor members secured to the frame and extending into the plane in which the conveyer is traveling, whereby said conveyer is brought close to the ground line, a motor on the top section, a driving connection from the motor to the tractors, a shiftable clutch member for enabling said tractors to be driven in unison, and one independent of the other, whereby a steering operation can be effected, lever members on said top section for actuating said clutch mechanism, and a connection from said motor for driving said conveyer, substantially as described.

2. A machine for handling paving material, comprising a frame consisting of a vertical side portion and a horizontal top portion, an endless conveyer upon said side portion and located intermediate the top and bottom edges thereof, said conveyer comprising a link belt, overlapping plates pivoted to the upper side of said belt at one inner corner of each plate, each of said plates forming a receptacle to receive a paving block, said conveyer traveling in a horizontal plane, tractor members carried by said frame and extending into the plane in which the conveyer is moving, whereby the conveyer is brought close to the ground line, and a motor for actuating the tractors and conveyer carried by the top portion, substantially as described.

3. A machine for handling paving material, comprising a hollow frame consisting of a vertical side portion and a horizontal top portion, tractor members carried by said frame and extending upward and into the hollow portion thereof to a point adjacent the top portion, whereby said frame is brought close to the ground line, a conveyer carried by the side portion of said frame and lying intermediate thereof and traveling in a horizontal plane, and a motor carried by the top portion for actuating the conveyer and tractor members, substantially as described.

4. A machine for handling paving material, comprising a frame consisting of a vertical side portion and a horizontal top portion, said side portion being composed of upper and lower angle bars to which a vertical section is secured, the upper angle bar having its horizontal portion turned inward and forming a rail to which the upper portion is secured, the lower angle bar having its horizontal portion turned outward, a conveyer upon said frame, said horizontal portion of the lower angle bar forming a trackway for said conveyer, said conveyer traveling in a horizontal plane, tractor members carried by the frame and extending into the plane in which the conveyer is traveling, whereby the conveyer is brought close to the ground line, and a motor carried by the top section for driving the conveyer and tractor members, substantially as described.

5. In a machine for handling paving material, the combination of a rectangular frame comprising a vertical side portion and a horizontal top portion, an endless conveyer carried by the side portion and lying intermediate the top and bottom edges thereof and traveling in a horizontal plane, driving members for said conveyer, said members being mounted at each corner of the side portion and extending partially within and partially without said side portion with the outwardly extending portions in operative relation to the conveyer, tractor members carried by the frame and extending into the plane in which the conveyer is traveling, whereby the conveyer is brought close to the ground line, and a motor on the top section for actuating the conveyer and tractor members, substantially as described.

1,217,534. CONNECTOR FOR ELECTRICAL APPARATUS. SAMUEL TROOD, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 28, 1913. Serial No. 744,679. (Cl. 173—324.)



1. A terminal plug for electrical devices comprising an outer shell, a plurality of conductors longitudinally extending therethrough, tube terminals disposed on said conductors, means disposed within the ends of said shell for holding said tube terminals rigidly in position, and material having inherent elastic and non-hygroscopic properties disposed intermediate said ends and in intimate contact therewith for forming a waterproof barrier within said shell.

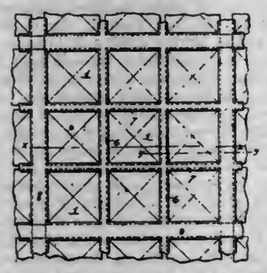
2. A terminal-plug for electrical devices comprising an outer tubular shell, a plurality of conductors longitudinally extending therethrough, tube terminals disposed on said conductors, mechanical means disposed within the ends of said shell for holding said tube terminals rigidly in position, and an internal body of inherently elastic and non-hygroscopic material disposed in intimate contact with the terminals for forming a water-proof barrier within said shell.

3. A terminal-plug for electrical devices comprising an outer tubular shell, a plurality of conductors longitudinally extending therethrough, mechanical means disposed within the ends of the shell for holding the conductors rigidly in position, an internal body of inherently elastic and non-hygroscopic material disposed in intimate contact with the conductors and between the positioning means for forming a water-proof barrier within the shell, and adjustable means for exerting pressure on the said material to thereby prevent creepage of moisture along the conductors.

4. In an electrical connector, the combination with a plurality of electrical conductors, of an incasing member therefor, a relatively hard insulating member disposed at each end of the casing for positioning the conductors, a relatively soft non-hygroscopic insulating material disposed between the positioning members and in intimate contact with the conductors for preventing moisture from creeping along the conductors, and means for exerting a pressure on the relatively soft material.

5. In an electrical connector, the combination with a plurality of electrical conductors, of an incasing member therefor, a relatively hard insulating member disposed at each end of the casing for positioning the conductors, an inherent elastic non-hygroscopic insulating material disposed between the positioning members and in such intimate contact with the conductors that the creepage of moisture along the conductors is precluded.

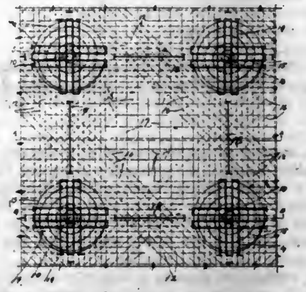
1,217,535. REINFORCED CONCRETE STRUCTURE. ROBERT B. TUFTS, Norfolk, Va. Filed Apr. 28, 1914. Serial No. 834,995. (Cl. 72—66.)



A concrete structure comprising a plurality of concrete girders arranged in rectangular formation, transverse concrete beams dividing the space bounded by said girders into smaller spaces, said girders and beams forming a monolithic structure, and comparatively thin precast groined arch panel units, each having less thickness than that of the girders and beams, said groined arch panel units closing said smaller spaces and having their edge portions embedded in the walls of the monolithic structure intermediate the upper and lower faces of the same, and supported by said monolithic structure.

1,217,536. FLAT-SLAB FLOOR. CLAUDE A. P. TURNER, Minneapolis, Minn., assignor to C. A. P. Turner Company, a Corporation of South Dakota. Filed Apr. 20, 1915. Serial No. 22,623. (Cl. 72—15.)

1. A column-supported slab of concrete, having at the columns circumferential cantaliver elements and having slab reinforcement that includes obliquely extending belts that cross each other at points between the columns, and extended across several adjacent panels crossing from one panel to another at points substantially at mid-span of the panel on direct lines between columns in lines at an angle to each other.



2. A column-supported slab of concrete, having at the columns circumferential cantaliver elements and having slab reinforcement that includes obliquely extending belts that cross each other at points between the columns, and extended across several adjacent panels crossing from one panel to another at points substantially at mid-span of the panel on direct lines between columns in lines at an angle to each other, and circumscribing areas about the columns and between them, said areas being crossed by other reinforcement.

3. A column-supported slab of concrete, having at the columns circumferential cantaliver elements and having slab reinforcement that includes obliquely extending belts that cross each other at points between the columns, and extended across several adjacent panels crossing from one panel to another at points substantially at mid-span of the panel on direct lines between columns in lines at an angle to each other, and belts that extend from column to column.

4. A column-supported slab of concrete, having slab reinforcement that includes obliquely extending belts that cross each other at points between the columns, and extended across several adjacent panels crossing from one panel to another at points substantially at mid-span of the panel on direct lines between columns in lines at an angle to each other, belts of rods that extend from column to column and cross each other thereat, and belts of rods that extend at right angles thereto and to each other that extend between points between the columns, the reinforcement at the columns being in the tension zone, and forming thereat with the concrete a circumferential cantaliver.

5. A column-supported slab of concrete, having slab reinforcement that includes obliquely extending belts that cross each other at points between the columns, and extended across several adjacent panels crossing from one panel to another at points substantially at mid-span of the panel on direct lines between columns in lines at an angle to each other, and belts that extend from column to column, and spiral rods at the columns, the reinforcement at the columns being in the tension zone, and forming thereat with the concrete a circumferential cantaliver.

[Claim 6 not printed in the Gazette.]

1,217,537. METHOD OF MAKING RADIATOR-TUBES. GEORGE W. TURNEY, Rome, N. Y., assignor to Rome-Turney Radiator Co., Rome, N. Y., a Corporation of New York. Filed Dec. 6, 1915. Serial No. 65,265. (Cl. 29—148.)

1. The method of making radiator tubes comprising coiling a metal ribbon edgewise to form a helical body, distending said body longitudinally along the tube to separate the convolutions of the body, and finally attaching said convolutions to said tube.

2. The method of making a helically-flanged radiator-tube, which consists in separately forming the helical flange in the shape of a metallic ribbon coiled edgewise, distending and spacing the convolutions thereof on the tube together with a thread of solder, and then heating the tube to cause the solder to melt and secure the helical flange to the tube.



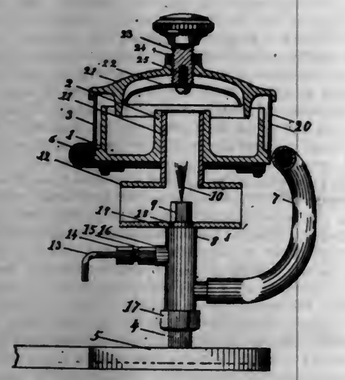
3. The method of making a helically-flanged radiator-tube, which consists in separately forming the helical flange as a metallic ribbon closely coiled edgewise, distending and spacing the convolutions thereof along the outside of the tube with a thread of solder underlying it, and heating the tube to fuse the solder and secure the flange to the tube in its distended condition.

4. The method of making a helically-flanged radiator-tube, which consists in separately forming the helical flange as a normally closed helix of resilient metal ribbon coiled edgewise, distending and spacing the convolutions thereof along the outside of the tube and securing it in that position by attaching it to the tube.

5. The method of making a helically-flanged radiator-tube, which consists in separately forming the flange in the shape of a metallic ribbon coiled edgewise and having a solder-recess on its inner edge, distending and spacing the convolutions thereof along the outside of the pipe with a thread of solder extending through said recess, and heating the tube to fuse said solder and thereby secure the flange to the tube.

[Claims 6 to 8 not printed in the Gazette.]

1,217,538. REGULATOR FOR OIL-BURNERS. RICHARD A. UHLIN, Seattle, Wash. Filed Nov. 13, 1916. Serial No. 131,115. (Cl. 158—69.)



1. In a regulator for oil burners, a mixing chamber comprising a floor, an intake tube rising in the center thereof, a perforated outer wall at the outer edge of the floor, an inner wall rising from the floor near the outer wall; an internally concave cap fitting closely upon the said outer wall and having a ring portion depending between the inner wall and the intake tube; a regulator concave in the under side and loosely fitting the inner face of the cap, and a connection passing up through the cap for adjusting the regulator.

2. In a regulator for oil burners, a mixing chamber comprising a floor, a perforated outer wall, an inner wall and an intake tube rising from the floor; an internally concave cap resting upon the outer wall; an internally concave regulator loosely fitting the interior of the cap, and a screw suspending the regulator from the said cap.

1,217,539. CLAMP. ALBERT B. UNDERWOOD, Cincinnati, Ohio, assignor to Bohumila Underwood, Cincinnati, Ohio. Filed Mar. 30, 1915. Serial No. 18,184. (Cl. 254—41.)



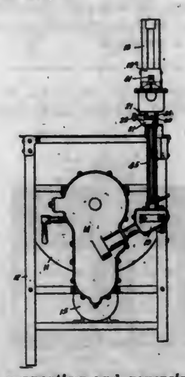
1. A quoin or clamping device comprising a tubular body-portion having elongated slots in due succession along one face thereof, clamping blocks or wedges adapted to slide within said tubular body-portion and having sloping or beveled opposite ends, intermediate fillers or pusher-extensions between the wedges, lateral lugs provided at the opposite inner ends or corners of said clamping blocks or wedges and adapted to retain the latter within said tubing, lateral notches made in each of said slots at one end thereof and adapted to the ready insertion of the lugged-ends of said clamping-blocks, a plug secured in the outer end of the tubing, a plug having a threaded-bore longitudinally made therein and held within the opposite end of said tubing, a traveler nut or block within the tubing between said last-named plug and the next-adjacent clamping-block and having a longitudinal bore therein that is oppositely threaded to that of the said last-named plug, and a double-acting screw having reverse threads provided thereon and made of two diameters the larger of which engages the said last-named plug and the smaller of which engages the said traveler-nut, whereby the forward-movement of the said double-acting screw propels the said clamping-blocks and the said fillers forwardly and extends said clamping-blocks outwardly into pressing clamping-engagement with the parts to be locked or firmly held into position for use.

2. In a quoin, the combination of a tubular body-portion having one or more elongated openings or T-shape slots made in one face thereof, one or more clamping blocks or wedges having sloping or tapered opposite ends and adapted to be projected through said T-shape slots, fillers or pusher-extensions arranged between pairs of said wedges, plugs in the opposite ends of the tubing provided initially with notches or dents in one or more of the longitudinal edges thereof and adapted to receive or seat dents or impressions made in the tubing so as to register therewith and to hold or secure the plugs in the tubing against removal or displacement, and means adapted to engage one of said plugs for advancing or propelling the said clamping-members and the fillers in effecting the outward-movement of said wedges into clamping-position.

3. In a printer's quoin, an elongated clamping wedge-block having parallel, plane front and rear faces and with its opposite plane ends tapered or sloping rearwardly and toward each other so that said front face is longer than the rear one and, also, having stop-lugs projecting laterally from its four rear corners but on the sides only of the wedge.

4. In a printer's quoin, a clamp-propelling device comprising a rigid block having a longitudinally screw-threaded bore, a movable-block or traveler-nut having a bore of lesser diameter than that of the first-named block and oppositely screw-threaded, and a double-acting screw having one part thereof of large diameter adapted to engage a large threaded-bore of the first-named block and with a portion of lesser diameter having an oppositely-threaded screw-formation thereon adapted to engage the internal thread of said traveler-nut, whereby the said traveler-nut can be propelled forwardly by both parts of the screw in an accelerated manner and likewise retreated to and from engagement with a clamping-device.

1,217,540. WRINGER ATTACHMENT FOR WASHING-MACHINES. FRED W. WAPPAT, Pittsburgh, Pa., assignor to Pittsburgh Gage and Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Original application filed Feb. 5, 1915, Serial No. 6,331. Divided and this application filed Feb. 5, 1915. Serial No. 6,330. (Cl. 74—59.)



1. A wringer supporting and reversing mechanism provided with a support adapted to be attached to a washing machine, a frame pivoted to said support and arranged to be removable therefrom without detaching any of the parts of the mechanism, a wringer rigidly fixed to said frame, and reversing mechanism carried by said frame and fixedly connected to the wringer mechanism, said reversing mechanism being arranged so that it may be detachably connected to a driving shaft on the washing machine, whereby the frame, wringer and reversing mechanism may be swung about the support to any desired position and readily removed as a unit.

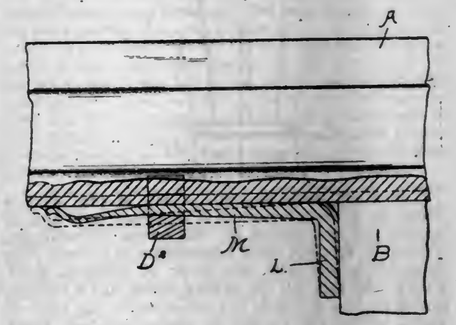
2. A wringer supporting and reversing mechanism provided with a support adapted to be attached to a washing machine, a frame pivoted to said support so as to swing about a vertical axis and arranged to be removable from said support without detaching any of the parts of the mechanism, a wringer rigidly fixed to said frame, and a reversing mechanism carried by said frame and attached by a universal joint to the wringer mechanism, said reversing mechanism being also arranged so that it may be detachably connected to a driving shaft on the washing machine, whereby the frame, wringer and reversing mechanism may be moved about the support to any desired position and readily removed as a unit from said support, and means on the support for locking the mechanism in any one of several positions.

3. In combination, a washing machine, a driving shaft carried thereby, a support attached to the washing machine, a frame pivoted to said support and arranged to be removed therefrom without detaching any fixed parts, a wringer fixed to said frame, and a reversing mechanism carried by the frame and fixedly connected to the wringer mechanism, said reversing mechanism being arranged to be detachably connected to the driving shaft and to reverse the direction of the wringer independently of the direction of rotation of the driving shaft, whereby the frame, wringer and reversing mechanism may be moved about the support and readily removed as a unit therefrom.

4. A wringer supporting and reversing mechanism comprising a support adapted to be attached to a washing machine, a frame pivoted to said support and arranged to be removable therefrom without detaching any fixed parts, a wringer fixed to said frame, and a reversing mechanism carried by said frame and connected to the wringer mechanism, said reversing mechanism being arranged so that the direction of rotation of the wringer may be reversed without affecting the connection between said mechanism and the wringer mechanism and also without changing the direction of rotation of the driving shaft of said reversing mechanism, whereby the frame, wringer and reversing mechanism may be moved about the support to any position and operated and reversed in said position or be readily removed as a unit from the support.

5. In combination, a wringer, a frame rigidly attached to said wringer, a shaft carried by said frame and attached to the wringer mechanism by a universal joint, a second shaft carried by said frame at an angle to the first, said latter shaft being arranged to be detachably connected to a driving shaft carried by a washing machine, means between said shafts for reversing the rotation of the shaft connected to the wringer mechanism independently of the direction of rotation of the other shaft, a support adapted to be attached to a washing machine, said support being arranged to receive the frame so that it may be swung on a vertical axis and the entire frame with the reversing mechanism and wringer readily removed as a unit from said support, and means on the support for positively locking the frame in different positions.

1,217,541. RAIL-ANCHOR. HAROLD G. WARE, Chicago, Ill., assignor to The P. & M. Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 24, 1914. Serial No. 858,230. (Cl. 238—4.)



1. A rail anchor comprising two co-engaging rail clamping elements, one of which is adapted to bear against a tie and the other to be free therefrom; said elements being constructed so that they have a positive wedging action one upon the other when the free member moves toward the tie, one of said elements being resilient and strained by application of the device to the rail so that a retrograde movement of the free member is checked.

2. A rail anchor comprising two co-engaging rail clamping elements, one of which is adapted to bear against a tie and the other to be free therefrom; said elements being constructed so that they have a positive wedging action one upon the other when the free member moves toward the tie, the element bearing against the tie being resilient and strained by application of the device to the rail so that it checks the tendency of the free member to move away from the tie.

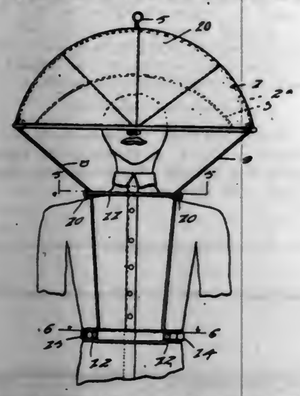
3. A rail anchor comprising two co-engaging rail clamping elements, one of which is adapted to bear against a tie and the other to be free therefrom; said elements being constructed so that they have a positive wedging action one upon the other with a relative movement of one element with respect to the other in one direction, one of said elements being resilient and strained by application of the device to the rail so as to check a relative movement of said one element with respect to said other element in the other direction.

4. A rail anchor comprising a rail embracing element extending around the base of the rail, and a resilient member having a wedge-shaped portion tapering in thickness lengthwise of the rail which, when said member is unbent, stands away from the rail, but is adapted to be bent by the rail embracing element into contact with the rail to provide a substantially rigid wedge with which said rail embracing element engages.

5. A rail anchor comprising a rail embracing element extending around the base of the rail, and a resilient member having a tie abutting plate and a wedge-shaped portion tapering in thickness lengthwise of the rail which, when said member is unbent, stands away from the rail, but is adapted to be bent by the rail embracing element into contact with the rail to provide a substantially rigid wedge with which said rail embracing element engages.

[Claims 6 to 17 not printed in the Gazette.]

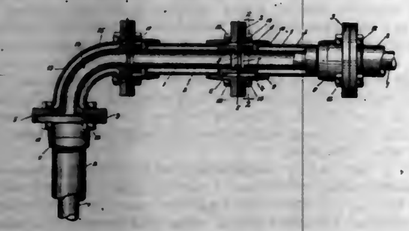
1,217,542. SUNSHADE. BEN WASHINGTON, Seville, Fla. Filed Aug. 16, 1916. Serial No. 115,223. (Cl. 135—12.)



1. In a sun shade structure, a pair of edge stays, a center rib, a cover connected to said edge stays and extending over said central rib, said central rib being constructed of wire and coiled intermediate of its ends, links connected to said coils, said center rib extending downwardly from said coil for forming braces, and a body engaging portion, a flexible belt connected to said body engaging portion and adapted for binding the body engaging portion about the body of a wearer.

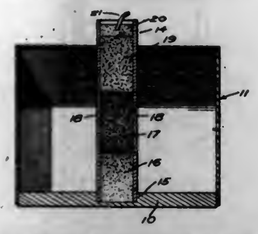
2. In a sun shade structure, a pair of edge stays, a center rib, a cover connected to said edge stays and extending over said central rib, said central rib being constructed of wire and coiled intermediate of its ends, links connected to said coils, said center rib extending downwardly from said coil for forming braces, and a body engaging portion, a flexible belt connected to said body engaging portion and adapted for binding the body engaging portion about the body of a wearer, said central rib being coiled upwardly of said body engaging portion, and a shoulder engaging bar connected to said last named coiled portions and adapted for resting upon the shoulders of a wearer.

1,217,543. PIPE-JOINT FOR DOUBLE PIPES. WILLIAM M. WHITE, Hoboken, N. J. Filed Jan. 14, 1914. Serial No. 812,018. (Cl. 137—28.)



In a pipe joint for double pipes, the combination with an inner pipe and a concentric outer pipe of a joint member consisting of a flange and an integral annular boss, the face of the member opposite said boss being in a plane at right angles to the axis of said boss, said member being provided with a hole axially through said boss, the boss being counterbored at two different diameters, the smaller counterbore being adapted to fit the inner tube, while the larger counterbore is internally threaded and adapted to receive the threaded end of the outer pipe, said member being provided with an annular recess to facilitate expanding the end of said inner pipe whereby a tight joint between the two is produced.

1,217,544. FIREWORKS. WILLIAM H. WILLSON, Los Angeles, Cal. Filed Aug. 30, 1916. Serial No. 117,727. (Cl. 102—20.)



1. A piece of fireworks, comprising, a box-like structure having openings through the side walls thereof, a powder receiving tube disposed to extend vertically from said structure, said tube having an aperture intermediate its ends, and combustible means adapted to be ignited within said tube whereby a flame will be produced passing upwardly from the end of the tube and thereafter smoke and flame will be emitted from the end of the tube and through the walls of the structure.

2. A piece of fireworks comprising a box-like structure having a series of openings through the side walls thereof, a powder-receiving tube adapted to rest on the floor of the box and extend through the top thereof, a series of powder strata having different pyrotechnic properties within said tube arranged to be successively ignited, said tube having means whereby the products of combustion produced by the ignition of the powder within the tube will first pass out of the upper end of said tube and thereafter also pass out through the openings in the side walls of the box structure.

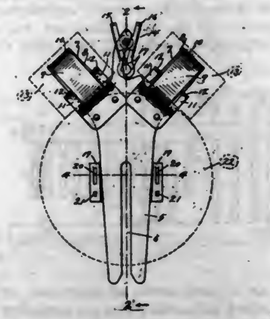
3. A piece of fireworks, comprising, a box like structure formed of inflammable material and having openings through the side walls thereof, a powder receiving tube disposed to rest upon the floor of said structure and extend vertically through the top of the box and having openings through its walls and mid-way its length, a heat powder stratum within the bottom of said tube, a smoke powder stratum positioned thereupon, a red glow powder stratum disposed upon said smoke stratum, and means whereby the upper red glow stratum will emit its light through the upper end of the tube and will thereafter ignite the remaining strata so they will produce fire and smoke which will pass from the end of the tube and through the openings in the walls of the tube and the structure.

1,217,545. CHALK-HOLDER. ADOLPH YELIN, Buffalo, N. Y. Filed Feb. 24, 1914. Serial No. 820,727. (Cl. 24—3.)

1. A chalk holder comprising a base, outwardly extending clip members provided on said base, and button engaging means provided on said base.

2. A chalk holder comprising a base, outwardly extending chalk clips provided on said base, fastening means provided on said base, and slotted button engaging means provided on said base.

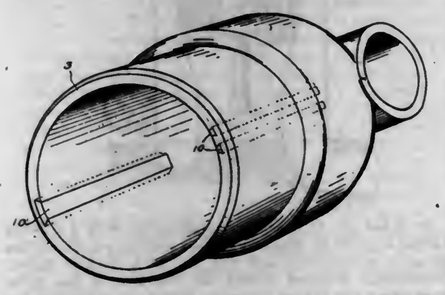
3. A chalk holder comprising a base, outwardly extending chalk clips provided on said base, a button engaging member provided on said base, said member being formed to provide an aperture and a slot extending therefrom, and the lower end of said base being formed to provide a longitudinal slot whereby the holder may be engaged with two buttons on the garment of the wearer.



4. A chalk holder comprising a base, outwardly extending chalk clips provided on said base, a button engaging member provided on said base, said member being formed to provide an aperture and a slot extending therefrom, a latch extending across said aperture and over said slot, said base being provided with a longitudinal slot, whereby the holder may be engaged with two buttons on the garment of the wearer.

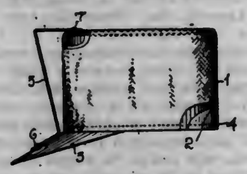
5. A chalk holder formed from a single piece of material, comprising a base, outwardly extending chalk clips provided on said base, and oppositely arranged button engaging means provided on said base.

1,217,546. SCORED-CYLINDER REPAIR. HORACE J. YOUNT, Indianapolis, Ind. Filed May 22, 1916. Serial No. 99,192. (Cl. 74—85.)



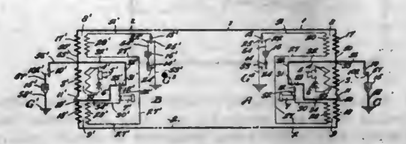
The combination with a reciprocating piston of a cylinder in which the piston reciprocates, said cylinder having channels with undercut sides in its inner wall surface and metal filling said channels, said metal having greater relative expansibility than the metal of the cylinder, and said metal conforming in outside shape with the bore of the cylinder.

1,217,547. MINE-CAP. GEORGE ADAMS, Dartmoor, W. Va. Filed Aug. 2, 1916. Serial No. 112,780. (Cl. 240—60.)



As a new article of manufacture, a cap, a rubber lining for said cap, a vizor of non-conducting material secured to the cap, and a lamp holder of non-conducting material secured to the vizor and to the cap, the connection between the holder and the cap being at the crown of the cap and independent of the lining, said lining closely conforming to the configuration of the cap and extending to the free edges of the cap, said lining and cap being secured one to the other adjacent the free edges of the cap, the remaining portions of the lining being free.

1,217,548. TELEPHONE SYSTEM. CHARLES ADAMS-RANDALL, Boston, Mass. Filed Dec. 6, 1915. Serial No. 65,354. (Cl. 179—1.)



1. In a telephone circuit the combination of a transmitter and local circuit at the sending station; a secondary coil inductively connected with said local circuit; a metallic main line circuit provided with means to break the same leading to a receiving station; a compound coil joined to said main line at the receiving station; a receiver at said last-named station having one end of its coil connected to one end of one of the members of said compound coil, the other end of the receiver coil, and the other end of the said compound coil member being open to the atmosphere; and a ground connection located at said receiving station to which said open end of the receiver coil may be joined at will, substantially as described.

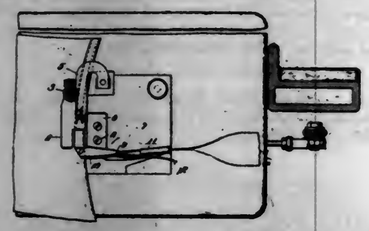
2. In a telephone circuit the combination of a transmitter and local circuit at the sending station; a secondary coil inductively connected with said local circuit; a metallic main line circuit provided with means to break the same, leading to a receiving station; a plurality of compound coils joined to said main line at the receiving station; a receiver provided with a coil located at said receiving station; a local receiving circuit connecting one end of said receiver coil with one member of each of said compound coils, the other end of said receiver coil being open to the atmosphere; and means for grounding said open end at will, substantially as described.

3. In a telephone circuit the combination of a transmitter and local circuit at the sending station; a secondary coil inductively connected with said local circuit; a metallic main line circuit provided with means for breaking the same at will leading to a receiving station; a plurality of compound coils at said receiving station, each having one of its windings joined in said main line circuit in series; a local receiving circuit having both its ends normally open to the atmosphere; a receiver connected in said local receiving circuit in series with the other windings of said compound coils; and means for grounding either and both ends of said local receiving circuit at will, substantially as described.

4. In a system of telephonic transmission the combination of a main line circuit; a local transmitting circuit, including a transmitter and battery, inductively connected with said main line circuit; a local receiving circuit including a telephone receiver; means in said local receiving circuit for connecting one of the terminals of said receiver to said main line at different points; a ground connection; and means for joining the other terminal of said receiver to said ground connection at will, substantially as described.

5. In a system of telephonic transmission the combination of a main line circuit; a local transmitting circuit, inductively connected to said main line circuit; a local receiving circuit including a receiver; means for joining one terminal of said receiver to said main line circuit; a ground connection; means for connecting said main line and receiver terminal to said ground connection; a second ground connection; and means for joining the other terminal of said receiver to said second ground connection at will, substantially as described.

1,217,549. FOLDER. EDWARD THOMAS ALLAN, Cincinnati, Ohio, assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 18, 1910. Serial No. 562,054. (Cl. 270—36.)



1. A folder including in combination, means for folding a binding strip, and means for inverting said folded binding strip, said folder being composed of spaced parallel walls, one of which is yielding, and means for manually operating said yielding wall.

2. A folder including in combination, means for folding a binding strip, means for inverting said folded binding strip, said folder being composed of spaced parallel walls, one being yieldingly supported in relation to the other so as to yield in a horizontal plane and means for manually operating said yielding wall.

3. A folder including in combination, means for folding a binding strip, and means for inverting said folded binding strip, said folder being composed of spaced parallel walls, one being formed of spring metal attached at one end to the other, and means for separating it from the other at the throat to allow the fabric to be folded to be threaded through the folder.

4. A folder including in combination, a guiding member, a second guiding member spaced from the first guiding member and yieldable relative thereto, the guiding walls of said members being shaped so as to fold a strip outwardly and backwardly upon itself into a binding strip, and the delivering end of the guiding members being inclined to the longitudinal axis of the folder, whereby said binding strip may be inverted and led from the folder in a direction substantially at right angles to the longitudinal axis of the folder, and a hand piece for moving one of said guiding members relative to the other to allow for the free threading of the binding material through said folder.

5. A folder including in combination, a guiding member bent so as to form in cross section a U-shaped passage, the delivery end of said guiding member being cut away centrally to form a delivering opening, whereby a binding strip folded around said guiding member may be inverted and delivered through said opening, a U-shaped resilient member yieldingly coöperating with said first named member for guiding the material, the delivery end of said U-shaped member being inclined to the longitudinal axis of the folder.

[Claims 6 to 8 not printed in the Gazette.]

1,217,550. GUARD FOR WOOD-SHAPING MACHINES. CHARLES ALWINE, Elkhart, Ind. Filed June 29, 1916. Serial No. 106,559. (Cl. 144—251.)

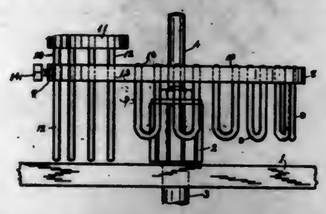
1. In a device of the character described, the combination of a standard; a ring mounted upon the standard; and a series of spaced guard fingers depending from the ring, a portion of said fingers being adjustably supported by said ring.

2. In a device of the character described, the combination of a standard; a ring mounted upon the standard; a plurality of fixed guard fingers depending from said ring; and a guard member depending from said ring on one side thereof and vertically adjustable thereon.

3. In a device of the character described, the combination of a standard; a ring mounted upon the standard; and a series of spaced guard fingers depending from the ring, a portion of said fingers being adjustably supported by said ring and the rest rigidly carried thereby.

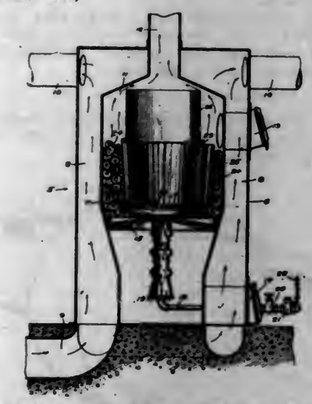
4. In a device of the character described, the combination of a standard; a ring mounted upon the standard; a plurality of fixed guard fingers of U formation depending from said ring; and a guard member depending from said ring on one side thereof and vertically adjustable thereon.

5. In a device of the character described, the combination with an adjustably supported ring, said ring being



provided with an arcuate series of apertures, of a guard finger carrier poised above said ring; a plurality of arcuately arranged guard fingers depending from said carrier and slidably arranged within said ring apertures; and means for positively confining said fingers against movement in said ring apertures.

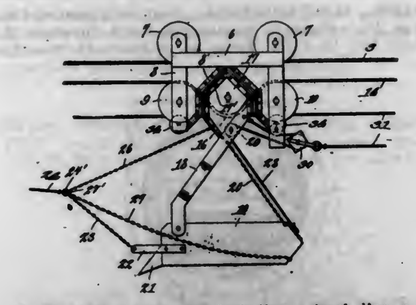
1,217,551. HOT-AIR FURNACE. ROBERT R. ARMOR, Los Angeles, Cal. Filed June 12, 1916. Serial No. 103,302. (Cl. 126—99.)



In a hot air furnace, the combination with a furnace having a centrally disposed fire box and an air circulating chamber surrounding said fire box, of a circular burner horizontally disposed within the fire box, a gas mixer with which the burner connects, means for regulating the control of gas to said burner, means for causing the gas and flame to pass from the burner in a horizontal plane, flame obstructing and heat absorbing elements through which the flame passes in its upward travel, means for preventing the circulation of air through the center of the fire box and over the burner, and means whereby the burner may be ignited while concealed by the flame obstructing elements.

1,217,552. EXCAVATING APPARATUS. JOSEPH W. BAILEY, Augusta, Ga. Filed May 13, 1916. Serial No. 97,351. (Cl. 214—13.)

1. Excavating apparatus including a track line, a carriage mounted for travel thereon, a hoist cable having a loop depending from the carriage, said hoist cable being fixedly secured at one end, a structure supported by the depending loop, a bucket pivotally connected to said structure, a haul cable connected to the bucket, a dump line connecting the back end of the bucket to said structure, a back haul line movably connected to the dump line, and separate means for taking up or paying out the hoist cable, haul cable and back haul line respectively.



2. Excavating apparatus including a track line, a carriage mounted for travel thereon, a hoist cable supported between its ends by the carriage and having a loop depending from the carriage, a structure movably supported by the depending loop, a bucket pivotally connected to said structure, flexible means connecting said structure to the bucket for normally holding the bucket in load retaining position, a dump line connected to said structure and to the back end of the bucket, a back haul line movably connected to the dump line and having a portion thereof extending along the path of travel of the carriage, means on the carriage for engaging the back haul line to support the slack therein, a haul cable connected to the bucket and its supporting structure, and separate means connected to the hoist cable, haul cable and back haul line respectively for taking up or paying out said cables and line.

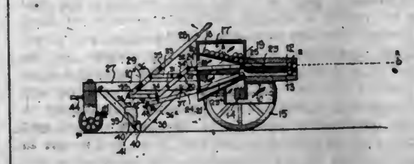
3. Excavating apparatus including a track line, a hoist cable anchored at one end, a carriage movable along the track line and movably engaging the hoist cable, said hoist cable having a loop depending from the carriage, a sheave block supported by said loop, a yoke depending from and fixed relative to the sheave block, a bucket having an open end and pivotally mounted adjacent said end to the yoke, the other end of the bucket being closed, a flexible connection between the upper portion of the yoke and the closed end of the bucket, said connection and the yoke coöperating to hold the bucket normally in load retaining position, a dump line secured at one end to the upper portion of the yoke and at its other end to the closed end of the bucket, a back haul line movably connected to an intermediate portion of the dump line and a portion of said back haul line being extended along the path of the carriage, means upon the carriage for engaging the adjacent portion of the back haul line to support it, a haul cable connected to the bucket and to the sheave block connected thereto, and independently operated drums connected to the haul cable, back haul line and hoist cable respectively for paying out or taking up said cables and line.

4. In excavating apparatus, the combination with a track line and a carriage mounted for travel therealong, said carriage having a recess extending upwardly thereinto from its bottom, the walls of the recess converging upwardly to form a centering angle, of a hoist cable having a loop depending from the carriage, a structure supported by the depending loop and having an angular extension conforming in size and contour with the recess in the carriage, a bucket carried by said structure, and a haul cable connected to the bucket, said loop, when taken up, constituting means for elevating the angular extension on the supported structure into the recess of the carriage, thus to hold said structure rigid with the carriage.

5. In excavating apparatus, a track line, a carriage mounted to travel thereon, a hoisting cable having a loop depending from the carriage, a structure supported by the depending loop, a yoke fixedly connected to and depending from said structure, a bucket pivotally connected to the yoke, said bucket being open at one end, a haul cable connected to the open end of the bucket, and a back haul line connected to the other end of the bucket.

[Claims 6 to 8 not printed in the Gazette.]

1,217,553. RAPID-FIRE TOY GUN. NORMAN L. BEATTY, Punxsutawney, Pa. Filed May 10, 1916. Serial No. 96,659. (Cl. 124—8.)



1. A toy cannon including a pair of barrels, plungers, each reciprocatable through a barrel, and a manually operable actuating lever pivoted intermediate its ends and operatively connected on each side of its pivotal point to one of the plungers whereby an oscillation of the lever will cause the alternate retraction and projection of the plungers.

2. A toy cannon including a barrel, a plunger reciprocatable through the barrel, a manually operable actuating lever, a lever operatively connected to the plunger, and a link connecting said lever with the manually operable lever.

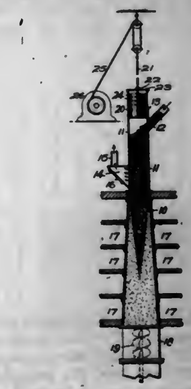
3. A toy cannon including a barrel, a frame supporting the barrel, a plunger reciprocatable through the barrel, a lever pivoted to the frame, a link operatively connecting the free extremity of said lever to the plunger, and a manually operable actuating lever and a link connecting the first-named lever with the actuating lever.

4. A toy cannon including a supporting frame, a pair of barrels mounted thereon, plungers disposed in the barrels, means for alternately projecting and retracting the plungers, and means for discharging projectiles one by one alternately into a position in alinement with one or the other of said barrels while the plungers thereof are retracted.

5. A toy cannon including a supporting frame, upper and lower barrels thereon, a magazine disposed above the rear end of the uppermost barrel, plungers disposed in the barrels, and means operatively connected to said plungers to cause the simultaneous projection of one plunger and the retraction of the other plunger.

[Claims 6 to 11 not printed in the Gazette.]

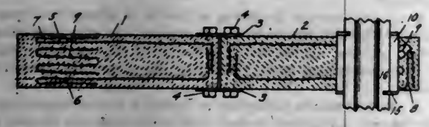
1,217,554. APPARATUS FOR THE MANUFACTURE OF GAS. HEINRICH BEGEMANN, Portland, Me., assignor to William J. Gindele, Pawtucket, R. I. Filed June 25, 1914. Serial No. 847,311. (Cl. 480—86.)



In an apparatus for the manufacture of gas, in combination, an externally heated retort for the distillation of coal having a cylindrical upper portion, a lateral coal inlet in the side of said cylindrical portion and spaced from

its upper end, a gas outlet also in said cylindrical portion but below the coal inlet, means for heating said retort, a plunger closely fitting said cylindrical portion and movable downwardly past said coal inlet to force the coal through the retort, a straight vertically movable rod fixed to the plunger effective to position said plunger and direct its vertical movement, a cap forming a closure for the upper end of said cylindrical extension and having a close fitting bearing for said rod, means to raise said rod and plunger vertically upward thereby moving said plunger to its normal inoperative position at the upper end of said cylindrical portion and above the coal inlet, and means to prevent discharge of coal from said coal inlet when the plunger is below the inlet.

1,217,555. CONCRETE RAILROAD-TIE. HERMAN BESSER, Alpena, Mich. Filed Oct. 9, 1914. Serial No. 865,825. (Cl. 238—3.)



1. In a concrete railway tie, a reinforcing device comprising a strip of metal fabric folded repeatedly back and forth upon itself, with layers arranged vertically and spaced apart and embedded in the concrete beneath the rail-supporting part of the tie.

2. In a concrete railway tie, a reinforcing device comprising strips of metal fabric embedded in the concrete beneath the rail-supporting part of the tie, said strips folded repeatedly back and forth upon themselves, with the layers arranged vertically and spaced apart, a rail-fastening and tie-clamping plate carried by said tie above said reinforcing strips, and bolts extending through the plate, tie and reinforcing strips, and means for tightening said bolts to clamp said plate to said tie, for the purposes set forth.

1,217,556. HAND-GRENADE. LOUIS LÉON BILLANT, Paris, France. Filed Apr. 18, 1916. Serial No. 91,962. (Cl. 102—29.)



A hand grenade of the character described comprising in combination with a pear-shaped casing containing the explosive, and a percussion system, a safety system comprising a safety cam adapted to hold the percussion system inactive when the grenade is not to be used, means connected to said cam for launching the grenade, a tail or empennage, a seal for maintaining said tail in its inoperative position, and a spring for raising said tail upon the rupture of said seal, substantially as described.

1,217,557. ELECTRIC CLOCK. JOHN G. BLESSING, Chicago, Ill., assignor to Alexander E. Keith, Hinsdale, Ill. Filed July 19, 1915. Serial No. 40,590. (Cl. 58—41.)



1. In an instrument of the class described, a ratchet for operating said instrument, a device to actuate said ratchet, an electro-magnet provided with an armature to reset said ratchet after each operation thereof, and a circuit for said magnet, said ratchet having a spring-pressed pawl connected with said armature and means coöperating therewith to control said circuit, said means including a switch arranged to prevent opening of said circuit before said pawl arrives in position to enter the next notch on said ratchet, one element of said switch sliding on the other during movement of the pawl by said magnet, said pawl by its spring-pressed action serving to open said switch after reaching the next notch, and said other element of the switch being controlled by said ratchet to close the circuit after each actuation of the pawl by said device.

2. In an instrument of the class described, a train of gears and an escapement therefor, mechanism for driving said gears, including a magnet having an armature connected with said mechanism, a spring connected to yieldingly hold said armature in retracted position, whereby energizing of said magnet serves to tension said spring for the operation of said mechanism, a circuit for said magnet, and means operated by said mechanism to close said circuit when said armature is retracted and open the same when the armature is attracted, said means including two contacts arranged for sliding engagement with each other to separate them and thereby open the circuit after the armature is attracted sufficiently to enable said spring to cause the operation of said mechanism.

3. In an instrument of the class described, an electromagnet, an armature for said magnet, mechanism for permitting a quick attraction of said armature and causing a slow return thereof to normal position, a circuit for said magnet, and means operated by said mechanism to control said circuit, said mechanism including a ratchet wheel and pawl, and said means including a spring arranged to press said pawl against said wheel, to open said circuit each time the pawl drops behind another ratchet tooth, thereby to keep the circuit closed until after said armature has reached an attracted position where a reverse motion thereof will then cause the operation of said mechanism.

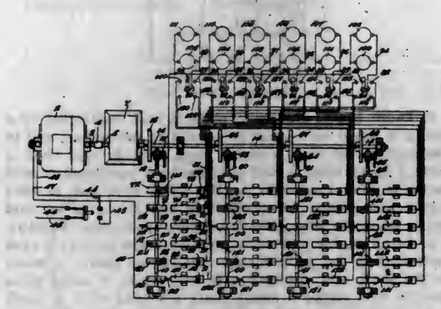
4. In an instrument of the class described, movable switch contacts mounted to slide one upon the other for controlling an electric circuit, having a relative rubbing action caused by the same sliding movement which finally separates one contact from the other, a ratchet wheel and pawl mechanism for operating said contacts, so constructed and arranged that said rubbing action occurs each time said pawl enters another notch on said wheel, before the contacts are separated to open the circuit, and devices for actuating said pawl back and forth to operate said wheel.

5. In an instrument of the class described, switch contacts which are both movable for controlling an electric circuit, and mechanism for operating said contacts, one contact being mounted for back-and-forth motion into and out of the path of the other contact and serving to open the circuit by its lateral movement out of said path, and

said other contact being arranged to move back and forth in a direction substantially at right angles to the path of movement of said one contact.

[Claims 6 to 16 not printed in the Gazette.]

1,217,558. SIGNAL SYSTEM AND CONTROL THEREFOR. FRANK E. BOARDMAN, Memphis, Tenn. Filed June 22, 1916. Serial No. 105,233. (Cl. 177—336.)



1. In a signal system the combination of a plurality of schedule shafts; means to rotate said shafts at different speeds; a plurality of signal circuits, one for each shaft; a plurality of contact buttons, one for each circuit, arranged in a group; and a single means associated with said group for successively cutting in and cutting out each circuit at will, substantially as described.

2. In a signal system the combination of a plurality of schedule shafts; means to rotate said shafts at different speeds; a plurality of signal circuits associated with each shaft provided with contact buttons arranged in a plurality of groups, each group containing one button pertaining to a circuit of each shaft; and a single means for successively cutting in and cutting out each circuit of a group at will, substantially as described.

3. In a signal system the combination of a plurality of schedule shafts; means to rotate said shafts at different speeds; a plurality of circuits adapted to control signals associated with each shaft; a pair of contacts in each circuit controlled by its respective shaft; a contact button associated with each circuit, said buttons being arranged in a plurality of groups, each group comprising one button pertaining to a circuit controlled by a different shaft; and a single means for cutting in and cutting out at will each circuit of a group, substantially as described.

4. In a signal system the combination of a source of power; a friction disk driven from said source; a second friction disk contacting with said first named disk; a schedule shaft; means associated with said second named disk for varying the speed of said shaft; a plurality of angularly disposed pins carried by said shaft; a series of circuit controllers successively actuated by said pins; a circuit associated with each of said controllers adapted to actuate a signal; a contact button associated with each circuit, said buttons being arranged in a plurality of groups, each group comprising buttons pertaining to circuits controlled by different shafts; and a single means for cutting in and cutting out at will each circuit of a group, substantially as described.

5. In a signal system the combination of a source of power; a plurality of schedule shafts adapted to be driven at different speeds from said source; a plurality of angularly displaced members carried by each of said shafts; a plurality of circuit controllers associated with each shaft comprising pivoted levers located in the path of and adapted to be actuated by said members; a circuit adapted to operate a signal associated with each of said controllers; a contact button associated with each circuit, said buttons being arranged in a plurality of groups, each group comprising buttons pertaining to circuits controlled by different shafts; and a single means for cutting in and cutting out at will each circuit of a group, substantially as described.

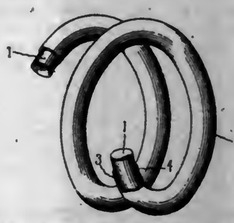
[Claims 6 and 7 not printed in the Gazette.]

1,217,559. PROCESS OF TREATING WOOD. HARRY W. BROADY, Bayside, N. Y. Filed Apr. 14, 1916. Serial No. 91,109. (Cl. 99—12.)

1. The process of treating wood to coat or line its cell walls or cavities, which consists in treating it to penetration by and in a bath of wax-like material heated to fluidity, cooling said bath with the wood therein, heating the wood and the material therein to fluidity of the latter and cooling the wood and said material therein.

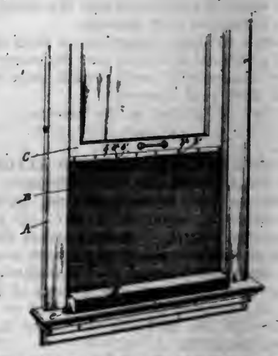
2. The process of treating wood to coat or line its cell walls or cavities, which consists in treating it to penetration by and in a bath of wax-like material heated to fluidity, cooling the wood and the material deposited therein, reheating the wood and the material therein to fluidity of the material and again cooling the wood and said material therein.

1,217,560. METHOD OF MAKING INNER TUBES FOR PNEUMATIC TIRES. JOHN H. BROWN, West Hoboken, N. J., assignor to C. E. Bonner, Champaign, Ill. Filed Nov. 26, 1915. Serial No. 63,543. (Cl. 154—15.)



The method of making an inner tube for pneumatic tires, consisting in vulcanizing the built up tube in the form of a curve having a sharper pitch than the curve of the completed tube, turning the vulcanized tube inside out to place its tread under lateral compression and finally opening out the vulcanized and turned tube and connecting its ends to place the tread portion under longitudinal compression when the tube is inflated.

1,217,561. ROLLING WINDOW-SCREEN. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed July 8, 1911, Serial No. 637,542. Renewed Aug. 19, 1916. Serial No. 115,919. (Cl. 156—39.)



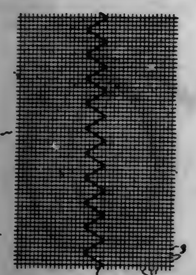
1. A rolling screen having its side edges reinforced by flat strips of flexible sheet metal, and guides for said strips, each strip being of a width to prevent edgewise flexibility thereof, and said guides depending on the edge-

wise stiffness of said strips to hold the edges of the screen against displacement when the window is open.

2. A rolling screen having its side edges reinforced by flat strips of flexible sheet metal, and guides for said strips, each strip being of a width to prevent edgewise flexibility thereof, and said guides depending on the edgewise stiffness of said strips to hold the edges of the screen against displacement when the window is open, each guide engaging the opposite surfaces of the strip to prevent flexing of the latter.

3. A rolling screen having its side edges reinforced by flat strips of flexible sheet metal, and guides for said strips, each strip being of a width to prevent edgewise flexibility thereof, and said guides depending on the edgewise stiffness of said strips to hold the edges of the screen against displacement when the window is open, and an attaching strip for the upper edge of said screen, the ends of said attaching strip being disposed in said guides.

1,217,562. SURGICAL BANDAGE. JAMES A. CAMERON and GUSTAF BIRGER BIRCH, Brooklyn, N. Y., assignors to Cameron Machine Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 3, 1916. Serial No. 81,810. (Cl. 128—3.)



1. A surgeon's bandage comprising: a strip of material the edges of which are scalloped and formed by weft threads of unequal length recurring at regular intervals and devoid of continuous warp threads.

2. A surgeon's bandage comprising: a strip of material the edges of which are scalloped and formed by weft threads of unequal length recurring at regular intervals and devoid of warp threads of appreciable length.

3. A surgeon's bandage comprising: a strip of material the edges of which are scalloped and formed by weft threads of unequal length recurring at regular intervals and devoid of warp threads.

4. A surgeon's bandage comprising: a strip of material the edges of which are scalloped and the convex portions of which are formed of weft threads.

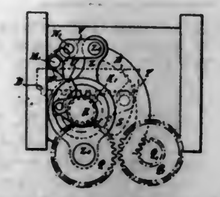
5. A surgeon's bandage comprising: a strip of material the edges of which are scalloped and the convex portions of which are composed of weft threads from which the warp threads have been removed.

[Claims 6 to 8 not printed in the Gazette.]

1,217,563. AUTOMATIC DEVICE FOR STARTING EXPLOSION OR OTHER ENGINES. EUGENIO CANTONO, Rome, Italy, assignor to Enrico Garda, Paris, France. Filed Mar. 28, 1913. Serial No. 757,397. (Cl. 123—187.)

1. In an engine starter, a spring; means for limiting its movement in opposite directions; a rack controlled by the spring; abutments on said rack a distance apart; a plate between each abutment and an end of the spring and having play relative to the rack; and an operative connection between the rack and the engine for loading and unloading the spring.

2. In an engine starter, a helical spring; a housing therefor having shoulders at opposite ends; a plate between each end of the spring and the adjacent shoulder of the housing and each having an opening therein; a rack passing through the spring and said openings; abutments on the rack each adapted to engage an outside face of each of said plates; and an operative connection between the engine and the rack for loading and unloading the spring.



3. In an engine starter, a plate, a rack controlled by a spring, a wheel on a shaft connected to the engine, and in mesh with said rack, a metal piece fixed to said rack, a shaft, a tooth fixed to said shaft, a lever connected to said shaft, a pawl connected to the shaft attached to said engine and means for preventing the reloading of said spring when the lever attains a higher speed than the pawl.

4. In an engine starter, a plate; a main spring; a rack controlled by the main spring; the engine shaft; a wheel on the shaft and meshing with said rack; a metal piece fixed to said rack; a small shaft provided with a tooth and a lever arm; and a spring attached to the lever arm; said metal piece striking said tooth and moving the small shaft and the lever arm until the traction of the main spring is reduced to zero.

1,217,564. SANITARY MILK-PAIL. THOMAS S. CATLIN, Guion, Ind., assignor of one-half to Hardy W. Robbins, Gwynneville, Ind. Filed Feb. 21, 1916. Serial No. 79,675. (Cl. 31—14.)



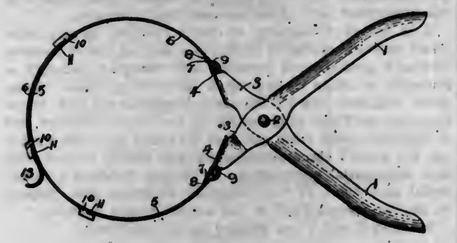
1. In a device of the class described, the combination with a container closure having an apertured valve seat and a valve arranged below the seat and tapering downward away from the seat, the upper end of the valve being flat and adapted to engage the valve seat and close the aperture thereof, and a casing for normally sustaining the valve spaced from its seat, the casing being formed with a wall engaging the inclined wall of the valve in position for causing the valve to slide toward its seat when the container closure is tilted.

2. In a device of the class described, the combination with a container closure having an apertured valve seat, and a valve for closing said aperture, the said valve being located normally below the aperture and being formed substantially conical with the base of the cone presented toward the valve seat for closing the same when the valve is in engagement with its seat, and a casing confining the valve and directing the same to its seat when the inclined wall of the valve engages the casing incident to tilting of the closure.

3. In a device of the class described, the combination with a container closure having an apertured valve seat, of a slidingly mounted valve disposed to engage said seat for preventing discharge of liquid outwardly through the closure when the closure is tilted, the said valve having its valve-seat-engaging face formed heavier than other portions of the valve, and the valve being formed with inclined walls located to tend to throw the valve toward its seat when the container closure is tilted.

4. In a device of the class described, the combination with a container closure having an apertured valve seat and a valve having a face adapted to close said aperture when the container closure is tilted, and means for sustaining the valve in position with its face spaced from the valve seat when the container closure is not tilted, the face of the valve being formed heavier than the other portions of the valve.

1,217,565. JAR-HOLDER. THOMAS S. CATLIN, Guion, Ind., assignor of one-half to Hardy W. Robbins, Gwynneville, Ind. Filed Feb. 21, 1916. Serial No. 79,676. (Cl. 65—26.)



1. The combination, with hand operating levers, of band sections adapted to form a clamping band and each having one end portion engaging the operating levers, one of said sections being formed with a tab and the other with a coöperating shoulder to permit interlocking of the sections while being clamped about a jar, the section having a shoulder being also formed with a slot adapted to accommodate the tab for locking the sections together with the tab spaced from the shoulder.

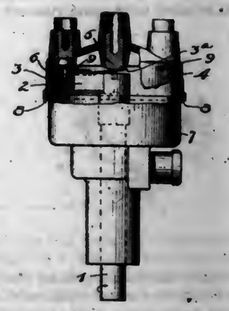
2. The combination, with hand operating levers, of band sections adapted to form a clamping band and each having one end portion engaging the operating levers, one of said sections being formed with a pair of tabs, and the other with a coöperating pair of shoulders to permit interlocking of the sections while being clamped about a jar, the shouldered section being also formed with a pair of slots spaced from the shoulders for accommodating the pair of tabs and enabling locking of the sections together with the tabs spaced from the shoulders.

3. The combination, with a pair of operating levers, of band sections adapted to form a clamping band, and each having one end portion engaging the operating levers, one of said sections being formed with outstanding tabs spaced apart lengthwise of the section, and the other section being formed with a shoulder adapted to coöperate with any one of said tabs for connecting the sections together to permit clamping thereof about a jar, the shoulder section being also formed with a tab receiving slot spaced from the shoulder and adapted to engage any of said tabs for locking the sections together.

1,217,566. DISTRIBUTER FOR ELECTRIC IGNITION SYSTEMS. JOHN F. CAVANAGH, Meriden, Conn., assignor to The Connecticut Telephone & Electric Company, Inc., Meriden, Conn., a Corporation of Connecticut. Filed June 14, 1916. Serial No. 103,660. (Cl. 123—167.)

1. A distributer housing comprising housing members joined in edge to edge relation, one of said members having a passage formed in the edge thereof in communication with the interior of the housing.

2. A distributer housing comprising housing members joined in edge to edge relation, one of said members having a dependent rim portion overhanging the edge of the other member and said overhanging dependent rim having a notch therein extending from the lower edge portion of said rim upwardly and inwardly to the interior of said members.

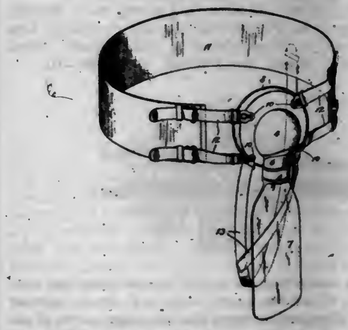


3. A distributer housing comprising housing members joined in edge to edge relation, one of said members having a passage formed in the edge thereof in communication with the interior of the housing, and a protecting lip overhanging the entrance to said passage.

4. A distributer housing comprising housing members joined in edge to edge relation, one of said members having a passage formed in the edge thereof in communication with the interior of the housing, and one of said members having another passage whereby circulation of air through the housing is provided for by said passages.

5. A vertically disposed distributer unit comprising cooperating housing members separable on a substantially horizontal line, the upper one of said housing members having upwardly and inwardly extending passages formed in the lower edge thereof at the line of separation between the two members.

1,217,567. ARTIFICIAL-ANUS APPARATUS. CHARLES E. CLARE, Glenellyn, Ill., assignor to Sharp & Smith, Chicago, Ill., a Corporation of Illinois. Filed Apr. 5, 1916. Serial No. 89,040. (Cl. 128—28.)

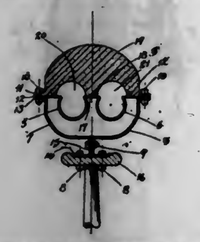


A device of the class described comprising a cup having a relatively broad outwardly extending peripheral flange at one side and a depending tube at the other, a container carried by said tube, an annular pneumatic cushion behind and resting against said flange, an elastice flap secured to said cushion and stretched over the front of the cup and removably secured thereto, a strap and attaching means therefor substantially integral and directly attached to said cup whereby the device may be secured in place and hold the cushion against the body.

1,217,568. CUSHION-TIRE. EDWARD P. CONWAY, Waterbury, Conn. Filed Sept. 26, 1916. Serial No. 122,259. (Cl. 152—8.)

1. A tire for vehicle wheels comprising two rim members adapted to be secured to a wheel felly, a spring plate rest-

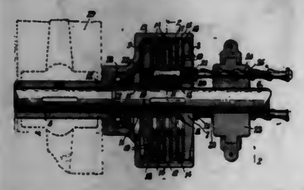
ing upon the edges of the rim members, said plate formed with inwardly projecting rounded ribs and transversely slotted, combined with a tread member resting upon said plate and with it secured to the said rim.



2. A tire for vehicle wheels comprising two rim members adapted to be secured to a wheel felly, said rim members formed upon their outer edges with outwardly projecting flanges, a spring plate resting on said flanges, said spring plate formed with two parallel inwardly projecting rounded ribs, combined with a tread member formed with two parallel grooves, said tread member also formed with flanges resting upon the said spring plate and with it secured to the flanges of the rim members.

3. A tire for vehicle wheels comprising two rim members each formed with flanges adapted to be secured to a wheel felly, with outwardly projecting webs adapted to be connected together, said rim members being outwardly bowed and formed at their outer edges with flanges, a spring plate resting upon said flanges, said spring plate formed on opposite sides of the center with inwardly projecting rounded ribs, the said plate formed at intervals with slots cutting through the ribs and central portion of the plate, combined with a tread formed on opposite sides of the center with grooves, the central portion of the tread resting upon the central portion of the plate, said tread also formed on opposite sides with outwardly projecting flanges resting upon said plate and secured to the flanges of the rim members.

1,217,569. CLUTCH. ELISHA H. COOPER, New Britain, Conn., assignor to The Fafnir Bearing Company, New Britain, Conn., a Corporation of Connecticut. Filed July 13, 1916. Serial No. 109,045. (Cl. 192—10.)



1. A clutch comprising a clutch member having relatively movable clamping parts, a second clutch member having a part disposed between the clamping parts of the first clutch member, a clamping screw having differential screw threads engaging the respective clamping parts of the first clutch member whereby to produce a differential clamping action of said parts on the interposed part of the second clutch member and means for rotating said clamping screw.

2. A clutch comprising a clutch member having relatively movable clamping parts, a second clutch member having a part disposed between the clamping parts of the first member, a plurality of clamping screws having differential screw threads engaging the respective clamping parts to thereby produce a differential movement of said clamping parts with respect to the interposed part of the second clutch member and means for rotating the differential clamping screws.

3. A clutch comprising a clutch member having relatively movable clamping parts, a second clutch member having a part disposed between the clamping parts of the first clutch member, a clamping screw having differential screw threads engaging the respective clamping parts to produce a differential movement of said clamping parts with respect to the interposed part of the second clutch member, said clamping screw having spiral ribs on the outer end portion thereof and means engaging said spiral ribs for rotating the clamping screw.

4. A clutch comprising a clutch member having relatively movable clamping elements, a second clutch member having a part entered between said clamping elements, a differential clamping bolt having a threaded portion of one pitch engaging one of the clamping elements and a second threaded portion progressing in the same direction but of a different pitch from the first threaded portion, engaging the other of the clamping elements and means for rotating said clamping bolt whereby to produce a differential movement of the clamping elements with respect to the interposed part of the second clutch member.

5. A clutch comprising a clutch member having relatively movable clamping elements, a second clutch member having a part entered between said clamping elements, a plurality of studs having screw threaded portions of one pitch engaging one of the clamping elements and screw threaded portions progressing in the same direction but of different pitch from the first threaded portions, engaging the second clamping element, and means for rotating said differential screw studs to thereby produce a differential movement of the clamping elements with respect to the interposed part of the second clutch member.

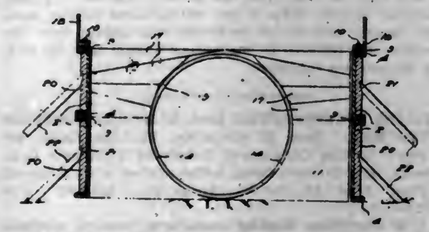
[Claims 6 and 7 not printed in the Gazette.]

1,217,570. COMBINATION SAFETY-RAZOR AND HAIR-CLIPPER. JOHN H. COX, Hot Springs, Ark. Filed Oct. 9, 1916. Serial No. 124,612. (Cl. 30—12.)



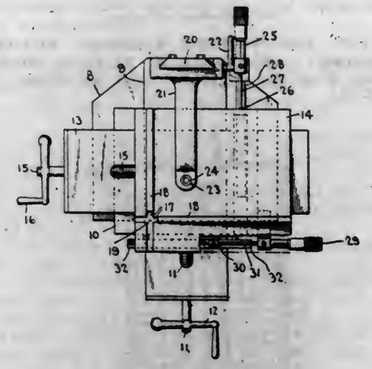
A device for holding blades in holders comprising, in combination with a holder having recesses with blades mounted therein, means upon the holder for engaging the outer edge of one blade, the other blade being provided with an aperture in a projecting portion in the free end thereof, a cam lever pivotally mounted upon the end of the holder and having a hook at one end adapted to engage said aperture, a cam portion of the lever being adapted to bear frictionally against the edge of the other blade.

1,217,571. ADJUSTABLE SECTIONAL METALLIC FORM FOR CONCRETE HEAD-WALLS FOR CULVERT-PIPES. MICHAEL F. CRAHAN, Irvington, Ky. Filed Aug. 27, 1915. Serial No. 47,663. (Cl. 25—127.)



A device of the character set forth comprising a plurality of front and side sections, horizontal flanges formed on the front sections and extending outwardly therefrom, longitudinal flanges formed on the upper and lower edges of the side sections, means for securing the flanges of the side and front sections together, vertical flanges formed on the side sections and bolted to the front sections, a rear section, flanges formed on the outer ends of the rear section and bolted to the side sections, said rear section having its upper edge cut away to receive one end of a pipe, and packing strips carried by the side sections and disposed above the upper edge of the rear section to engage a portion of the pipe to retain it in the cut away portion of the rear section.

1,217,572. METAL-WORKING APPARATUS. CLARENCE C. CRALEY, Parkesburg, Pa. Filed Mar. 31, 1916. Serial No. 88,085. (Cl. 77—62.)



1. In apparatus of the character set forth, the combination with relatively movable supporting and work carrying members, of coacting gage elements carried respectively thereby, a spacing element adapted to be detachably interposed between the gage elements, and supporting means for the spacing element mounted wholly on one of the members and permitting the gage elements to be brought into intimate coacting relation.

2. In apparatus of the character set forth, the combination with relatively movable supporting and work carrying members, of coacting gage elements carried respectively thereby, a spacing element adapted to be detachably interposed between the gage elements, and fixedly mounted supporting means for the spacing element that permits the gage elements to be brought into intimate coacting relation.

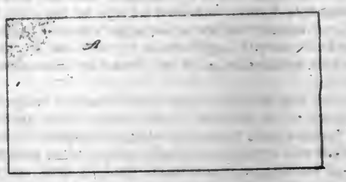
3. In apparatus of the character set forth, the combination with relatively movable supporting and work carrying members, of coacting gage elements carried respectively thereby, a spacing element adapted to be detachably interposed between the gage elements, and supporting means for the spacing element mounted on one of the relatively movable members and arranged out of the path of movement of the gage element carried by the other member.

4. In apparatus of the character set forth, the combination with relatively movable supporting and work carrying members, of coacting gage elements carried respectively thereby, a spacing element adapted to be detachably interposed between the gage elements, and a support for the spacing element mounted on one of the relatively movable members and having a seat to receive the same, said support being arranged out of the path of movement of the gage element carried by the other member.

5. In apparatus of the character set forth, the combination with relatively movable supporting and work carrying members, of co-acting gage elements carried respectively thereby, a spacing element adapted to be detachably interposed between the gage elements, and a supporting trough for the spacing element located on one of the members out of the path of the gage elements.

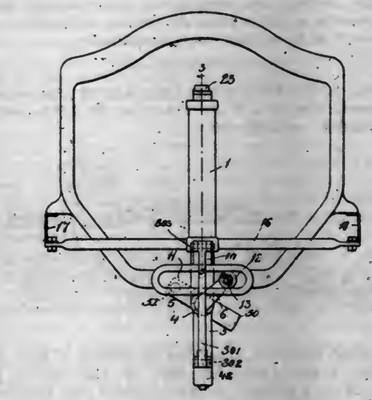
[Claims 6 to 10 not printed in the Gazette.]

1,217,573. SEPARATOR FOR STORAGE-BATTERY COUPLES. WALTER A. CROWDUS, Chicago, Ill., assignor to John P. Mentzer, Chicago, Ill. Filed Jan. 11, 1916. Serial No. 71,477. (Cl. 204—29.)



A separator for the metallic elements in a storage battery, consisting of a flexible, absorbent sheet formed of finely pulverized lignin, from which the carbonizing constituents of the wood have been practically all removed.

1,217,574. STARTING DEVICE FOR EXPLOSIVE-MOTORS. ISAAC H. DAVIS, Boston, Mass., assignor, by mesne assignments, of one-half to Henry W. Taylor, Berkeley, Cal. Filed Dec. 19, 1906, Serial No. 348,574. Renewed July 29, 1915. Serial No. 42,645. (Cl. 123—179.)



1. An automatic device for starting internal combustion motors comprising a pressure driven member adapted to travel in a rectilinear path, a crank adapted to be connected with the shaft of the motor and moving in a curved path, and transmission means between said pressure driven member and the end of said crank, the said pressure driven member being located to move in a path within the circumference of the path traversed by said crank end and having a range of movement substantially twice the length of said crank.

2. An automatic starting device for internal combustion motors comprising in combination with the shaft of the motor, a crank adapted to be secured to said shaft and movable about the axis thereof, a pressure driven member guided to travel rectilinearly being constructed and arranged to apply pressure to said crank, the line of movement of said member intersecting the curved path in which that part of the crank whereon pressure is applied by the member travels, whereby said part may be placed close to the said line at the initiation of a starting operation, and the said member is enabled to act with increasing leverage to rotate the motor shaft.

3. A motor starting device comprising a frame having a bearing, a shaft section journaled in said bearing, a crank on said shaft section having a pin, a cylinder secured to said frame, a piston reciprocatively mounted in

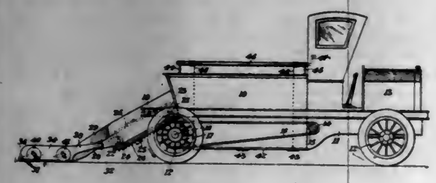
said cylinder, a connecting member between said piston and crank head for transmitting motion from the former to the latter, and a bar forming a member of said frame extending in front of said crank, the crank having an extension adapted to receive a handle, and the said frame bar being detachably connected at one of its ends to the frame and hinged at its other end, whereby it may be displaced to permit application to the crank pin of a handle and manipulation of the crank by the aid of said handle.

4. A starting device for automobile motors comprising a bar adapted to be secured to the frame of an automobile at the forward end thereof, a hanger adjustably mounted on said bar and a frame adjustably mounted on said hanger having a bearing, a crank shaft held in said bearing, a crank on said shaft, a cylinder attached to said frame, and a piston mounted to reciprocate in said cylinder and having a driving connection with said crank, the frame being adjustable on the hanger in a direction transverse to that in which the hanger is adjustable on the bar, whereby to enable said shaft to be brought into line with the shaft of the automobile motor.

5. An automatic starter for internal combustion motors, comprising an upright cylinder vertically and horizontally adjustable with respect to the motor, a piston therein, a shaft, a crank on said shaft, a clutch member secured to said shaft adapted to connect with a complemental clutch member on the motor shaft, a slotted head engaging the crank adapted to transmit rotary motion thereto from the piston, and provisions for introducing fluid under pressure to the cylinder for driving the piston.

[Claims 6 to 11 not printed in the Gazette.]

1,217,575. SNOW-REMOVING APPARATUS. SALVATORE D'IGNOTI, New York, N. Y. Filed July 29, 1916. Serial No. 112,023. (Cl. 37—25.)

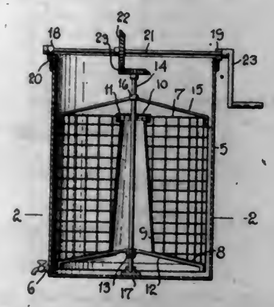


1. A snow removing apparatus comprising a cart, inclined side members extending from the rear thereof, an endless conveyer between the said inclined side members, means for driving the conveyer from an axle of the cart, a diverging chute adjustably mounted at the lower ends of the said inclined side members for directing the snow onto the conveyer, a plow member having converging side members, and a plurality of blades fixed in the plow member adjacent the wide forward end thereof to loosen the under portions of the snow and to direct the initial movement thereof in order to assist the side members of the plow in forming a pile of snow and directing the same into the path of the said diverging chute.

2. A snow removing apparatus comprising a cart, inclined side members extending from the rear thereof, an endless conveyer between the said inclined side members, means for driving the conveyer from an axle of the cart, a diverging chute adjustably mounted at the lower ends of the said inclined side members for directing the snow onto the conveyer, a plow member having converging side members, a plurality of blades fixed in the plow member adjacent the wide forward end thereof to loosen the under portions of the snow and to direct the initial movement thereof in order to assist the side members of the plow in forming a pile of snow and directing the same into the path of the said diverging chute, and means for detachably connecting the said plow to the said inclined side members of the cart.

3. A snow removing apparatus comprising a cart, inclined side members extending from the rear thereof, an endless conveyer between the said inclined side members, means for driving the endless conveyer from an axle of the cart, a diverging chute pivotally mounted at the lower ends of the said inclined side members for directing the snow onto the conveyer, a plow having converging sides, a cross piece mounted in the forward end of the plow, a series of blades mounted in the said cross piece and fixed in oppositely inclined positions on the opposite sides of the longitudinal center of the plow in order to loosen the under portion of the snow and direct the initial movement thereof so as to assist the side members of the plow in piling the snow in the path of the said diverging chute, and means for detachably connecting the plow to the side members of the cart.

1,217,576. DISH-WASHING MACHINE. WILLIAM S. DOUGHERTY and WILLIAM H. FRANKLIN, Montrose, Colo. Filed Mar. 6, 1916. Serial No. 82,480. (Cl. 141—9.)

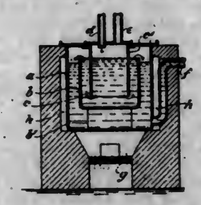


1. In a dish washing machine, a water receiving tank, a dish container having a perforate vertical wall and an imperforate, shallow, conical bottom wall provided with an opening in its apex, a hollow tapering standard rising from said opening and closed at its upper end, said standard having a plurality of perforations in its wall at the upper end thereof, a shaft rotatably mounted upon the base of the tank extending axially through said standard and above the same, radially disposed supports for said container fixed upon said shaft adjacent its upper and lower ends, and an operating means geared to the upper end of said shaft to rotate said container.

2. In a dish washing machine, a water receiving tank, a dish container having a vertical wire mesh wall and an imperforate shallow conical bottom wall, said bottom wall having a central opening therein, a hollow tapering standard rising from said opening extending through the container, said standard being provided upon its upper end with a head having a perforated annular wall; a vertical shaft extending through said standard, a spider secured to the under side of said bottom wall and fixed upon said shaft, upwardly and inwardly inclined braces fixed at their outer ends to the upper edge of the container wall and connected by a bearing collar through which the shaft is disposed, a step bearing for the lower end of said shaft fixed to the bottom wall of the tank, and an operating shaft geared to the vertical shaft to rotate said dish container.

1,217,577. APPARATUS FOR EFFECTING THE CONTINUOUS CONCENTRATION OF SULFURIC ACID. SYLVAIN DREYFUS, Denton, near Manchester, Lancaster, England. Filed Jan. 10, 1917. Serial No. 141,724. (Cl. 23—1.)

Apparatus for the continuous concentration of sulfuric acid to 95% and upward, comprising a cast-iron vessel, means for heating said vessel, a plurality of cylindrical divisions in said vessel communicating with each other at the top and bottom alternately and forming a circuitous path leading to the bottom of said vessel, means for introducing weak acid to the interior of the innermost of said divisions, an outlet for the concentrated acid leading



from the bottom of said vessel, and means for venting the products of evaporation.

1,217,578. MATERIAL FOR ELECTRICAL RESISTANCES AND THE LIKE. WILBUR B. DRIVER, Newark, N. J. Filed Apr. 29, 1911. Serial No. 624,132. (Cl. 75—1.)

1. An electrical-resistance element consisting of an alloy containing copper and manganese, and having about five per cent (5%) of tin.

2. An electrical-resistance element consisting of an alloy containing copper and some other ingredient, and having about five per cent. (5%) of tin.

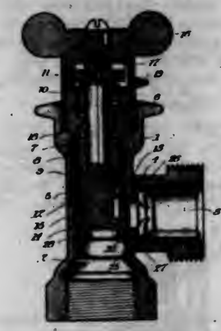
3. An electrical-resistance element consisting of an alloy containing about five per cent. (5%) of tin.

4. An electrical-resistance element consisting of an alloy containing copper and at least five per cent. (5%) of manganese and about five per cent. (5%) of tin.

5. An electrical-resistance element consisting of an alloy containing copper and at least five per cent. (5%) of manganese and over four per cent. (4%) of tin.

[Claims 6 to 8 not printed in the Gazette.]

1,217,579. VALVE. CHARLES J. DUDLEY, North Tonawanda, N. Y., assignor to American District Steam Company, North Tonawanda, N. Y., a Corporation of New York. Filed Apr. 25, 1914. Serial No. 834,512. (Cl. 137—4.)



1. A valve structure comprising in combination, a casing provided with an inlet and outlet port, and having a chamber with which said ports communicate; said casing also having a head portion including a collar provided with an internally threaded opening; a partition extending across the inlet port and provided with an opening arranged to form a valve seat; a sleeve threaded into the opening in the head of the casing and having its inner portion disposed within the chamber, said sleeve being also threaded internally at its inner and outer extremities; a valve stem having at one end a head adapted to rest on the valve seat and at its other end an operating instrumentality, said stem being threaded intermediate its ends into the threaded interior of the sleeve; a bearing surrounding the valve stem and threaded into the outer end of the sleeve; a partition extending across the outlet port, said partition being provided with an opening, and with a recess formed around said opening; and a closure restricting member comprising a disk portion disposed in the recess, and having portions projecting through said opening and bearing against the valve-head.

2. A valve structure comprising in combination, a casing provided with an inlet and outlet port, and having a chamber with which said ports communicate; said casing also having a head portion including a collar provided with an internally threaded opening; a partition extending across the inlet port and provided with an opening arranged to form a valve seat; a sleeve threaded into the opening in the head of the casing and having its inner portion disposed within the chamber, said sleeve being also threaded internally at its inner and outer extremities; a valve stem having at one end a head adapted to rest on the valve seat and at its other end an operating instrumentality, said stem being threaded intermediate its end into the threaded interior of the sleeve; a partition extending across the outlet port, said partition being provided with an opening, with a recess formed around said opening, and with a groove disposed back of said recess; an outlet restricting member comprising a disk portion disposed in the recess and projecting members having curved edges passing through the opening in the partition and bearing against the valve head; and a retaining instrumentality seated in the groove and bearing against the disk-portion of the outlet restricting member.

3. A valve structure including in combination a casing having a tubular portion comprising an outlet port and communicating with the interior of the casing through an opening, said casing having also an inlet port and an upper surface, a stem rotatably mounted in said casing and carrying a pointer associated with said upper surface and bearing a definite relation thereto, a head carried by said stem and having a to-and-fro movement in the casing, and an insert-member provided with an opening of a predetermined size to act as a reducer, said member being disposed within said tubular portion of the casing, and occupying a position in said opening so as to be slidably engaged by a peripheral portion of the head in its to-and-fro movement.

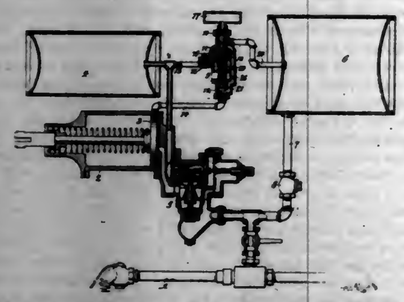
4. A valve structure including in combination a casing having a tubular portion comprising an outlet port and communicating with the interior of the casing through an opening, said casing having also an inlet port and an upper surface, a stem rotatably mounted in said casing and carrying a pointer associated with said upper surface and bearing a definite relation thereto, a head carried by said stem and having a to-and-fro movement in the casing, an insert-member provided with an opening of a predetermined size to act as a reducer, said member being disposed within said tubular portion of the casing, and occupying a position in said opening so as to be slidably engaged by a peripheral portion of the head in its to-and-fro movement, and an annular element disposed in engagement with said member to retain it in position and in operative engagement with said head.

5. As an article of manufacture for use in restricting ports of valve structures, a disk member adapted to seat in a recess formed around an opening in a valve casing, said disk being provided with an opening; and members secured at their inner ends to the face of the disk, the outer ends of said members being arcuately curved to correspond with the periphery of a valve head, said members being adapted to pass through the opening in the casing and bear, at their arcuately curved portions against a periphery of the valve head when the disk is seated in the recess.

1,217,580. AIR-BRAKE SYSTEM. FRANK H. DUKESMITH, Buffalo, N. Y., assignor to The United States Air Brake Corporation, Buffalo, N. Y., a Corporation of New York. Filed June 18, 1913, Serial No. 774,281. Renewed Sept. 15, 1916. Serial No. 120,415. (Cl. 188—1.)

1. In an air brake system, the combination of a train pipe, a supply reservoir which is charged with fluid pres-

sure from said train pipe, a brake cylinder, an auxiliary reservoir, a triple valve associated with the train pipe, brake cylinder and auxiliary reservoir, a non-return check valve arranged in the conduit connecting the train pipe and the supply reservoir, and a regulating valve mechanism associated with said supply reservoir, auxiliary reservoir and brake cylinder and adapted to permit the passage of fluid pressure from the supply reservoir to the brake cylinder when the pressure in the auxiliary reservoir drops below its initial pressure.



2. In an air brake system, the combination of means for supplying fluid pressure, a brake cylinder, an auxiliary reservoir, a triple valve associated with said fluid pressure supplying means, auxiliary reservoir and brake cylinder, and a pressure maintaining valve mechanism, comprising an auxiliary reservoir chamber connected with the auxiliary reservoir, an initial pressure chamber connected with the auxiliary reservoir chamber, means for cutting off communication between said auxiliary reservoir chamber and said initial pressure chamber, a large area piston movably arranged between said initial pressure chamber and said auxiliary reservoir chamber, a spring tending to move said large area piston toward said initial pressure chamber, a brake cylinder chamber connected with the brake cylinder and adapted to be put into communication with said fluid pressure supplying means, a small area piston arranged in said brake cylinder chamber and operatively associated with said large area piston, and means operatively connected with said large area piston for controlling the passage of fluid pressure from said fluid pressure supplying means to said brake cylinder chamber and said brake cylinder.

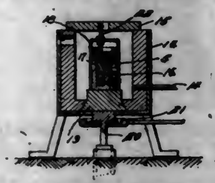
3. In an air brake system, the combination of means for supplying fluid pressure, a brake cylinder, an auxiliary reservoir, a triple valve associated with said fluid pressure supplying means, auxiliary reservoir and brake cylinder, and a pressure maintaining valve mechanism comprising an auxiliary reservoir chamber connected with the auxiliary reservoir, an initial pressure chamber connected with the auxiliary reservoir chamber, means for cutting off communication between said auxiliary reservoir chamber and said initial pressure chamber, a large area piston movably arranged between said initial pressure chamber and said auxiliary reservoir chamber, a spring tending to move said large area piston toward said initial pressure chamber, a brake cylinder chamber connected with the brake cylinder and adapted to be connected with said fluid pressure supplying means, a small area piston movably arranged in said brake cylinder chamber and operatively associated with said large area piston, and means operatively connected with said large area piston for controlling the passage of fluid pressure from said fluid pressure supplying means to said brake cylinder chamber and said brake cylinder and also controlling an exhaust port leading from the initial pressure chamber.

4. In an air brake system, the combination of means for supplying fluid pressure, a brake cylinder, an auxiliary reservoir, a triple valve associated with said fluid pressure supplying means, auxiliary reservoir and brake cylinder, and a pressure maintaining valve mechanism, comprising an auxiliary reservoir chamber connected with the auxiliary reservoir, an initial pressure chamber connected with the auxiliary reservoir chamber, means for cutting off communication between said auxiliary reservoir chamber and said initial pressure chamber, a large area piston movably arranged between said initial pressure chamber and said auxiliary reservoir chamber, a spring tending to move said large area piston toward said initial pressure chamber, a brake cylinder chamber connected with the brake cylinder and adapted to be connected with said fluid pressure supplying means, a small area piston movably arranged in said brake cylinder chamber and operatively associated with said large area piston, and means operatively connected with said large area piston for controlling the passage of fluid pressure from said fluid pressure supplying means to said brake cylinder chamber and said brake cylinder and also controlling an exhaust port leading from the initial pressure chamber to the atmosphere.

5. In an air brake system, the combination of a train pipe, a brake cylinder, an auxiliary reservoir, a triple valve operatively connected with said train pipe, brake cylinder, and auxiliary reservoir, a fluid pressure supply reservoir connected with the train pipe, a non-return check valve arranged in the conduit connecting the train pipe and supply reservoir and opening toward the latter, and a regulating valve mechanism independent of the triple valve for supplying and maintaining the fluid pressure in the brake cylinder while the brakes are applied, said regulating mechanism comprising an auxiliary reservoir chamber connected with the auxiliary reservoir, an initial pressure chamber connected with the auxiliary reservoir chamber, a non-return check valve arranged in the conduit connecting the auxiliary reservoir chamber and initial pressure chamber and opening toward the latter, a piston of large area exposed on its opposite sides to the fluid pressure in said initial pressure chamber and said auxiliary reservoir chamber, a spring operating to move said large area piston from said auxiliary reservoir chamber toward said initial pressure chamber, a brake cylinder chamber connected with said brake cylinder and adapted to be connected with said supply reservoir, a piston of small area movably arranged in said brake cylinder chamber and operatively connected with the large area piston, and a valve member movable with said large area piston, and controlling ports for opening and closing the conduit connecting the supply reservoir with the brake cylinder and brake cylinder chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,217,581. PROCESS OF MAKING CLAD METALS. BYRON E. ELDRED, New York, N. Y., assignor to The Commercial Research Company, a Corporation of New York. Filed Jan. 21, 1910. Serial No. 539,245. Renewed Feb. 10, 1916. Serial No. 77,526. (Cl. 22—204.)



1. The process of making clad metals which comprises placing a body of a high-melting ironlike metal in a mold, placing a body of an unlike, non-ferrous high melting metal of somewhat lower melting point in contact therewith, raising the temperature until the second-named metal melts and cooling the mold and contents from below upward by abstraction of heat from the bottom thereof while still supplying heat to the residue of the mold so that the topmost layer of molten metal shall be the last to solidify.

2. The process of making clad metals which comprises placing a body of a high-melting ferrous metal in a mold, placing a body of an unlike non-ferrous high melting metal of somewhat lower melting point in contact therewith, raising the temperature until the second-named metal melts and cooling the mold and contents from below upward by abstraction of heat from the bottom thereof while still supplying heat to the residue of the mold so that the topmost layer of molten metal shall be the last to solidify.

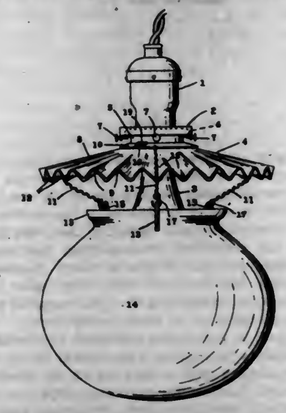
3. The process of making clad metals which comprises placing a body of steel in a mold, placing a body of an unlike, non-ferrous high melting metal of somewhat lower melting point in contact therewith, raising the temperature until the second-named metal melts and cooling the mold and contents from below upward by abstraction of heat from the bottom thereof while still supplying heat to the residue of the mold so that the topmost layer of molten metal shall be the last to solidify.

4. The process of making clad metals which comprises placing a body of steel in a mold, placing a body of copper in contact therewith, raising the temperature until such copper melts and cooling the mold and contents from below upward by abstraction of heat from the bottom thereof while still supplying heat to the residue of the mold so that the topmost layer of molten metal shall be the last to solidify.

5. The process of producing a sound body of copper which comprises placing a body of copper in a mold, raising the temperature until such copper melts and cooling the mold from below upward by the abstraction of heat from the bottom thereof while still supplying heat to the residue of the mold so that the topmost layer of molten metal shall be the last to solidify.

[Claims 6 to 17 not printed in the Gazette.]

1,217,582. ELECTRIC-LIGHT SHADE. GEORGE ELIAS, Irvington, and WILLIAM MENDEL, Newark, N. J. Filed Apr. 3, 1916. Serial No. 88,441. (Cl. 240—115.)



1. An electric light shade comprising in combination a reflector with a neck adapted to receive a lamp socket and be attached thereto, a globe below said reflector, and means extending from adjacent said neck radially of the reflector above the same beyond its edge to the globe for supporting said globe.

2. An electric light shade comprising in combination a reflector with a neck adapted to receive a lamp socket and be attached thereto, a globe below said reflector, a ring or band around the neck of the reflector, and connecting means extending from said ring over the edge of the reflector for supporting said globe.

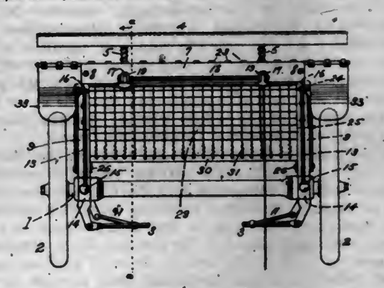
3. An electric light shade comprising in combination a reflector with a neck adapted to receive a lamp socket and be attached thereto, a ring or band around said neck, connecting members extending from said band radially of the reflector beyond its periphery, and a globe supported by said connecting members beneath the reflector.

4. An electric light shade comprising in combination a reflector with a neck adapted to receive a lamp socket and be attached thereto, a ring or band around said neck, flexible connecting members extending from said band radially of the reflector beyond its periphery, and a globe supported by said connecting members beneath the reflector.

5. An electric light shade comprising in combination a reflector with a neck adapted to receive a lamp socket and be attached thereto, a globe below said reflector, and means extending from adjacent said neck radially of the reflector and supporting said globe, said means being positioned circumferentially of the reflector by peripheral recesses therein.

[Claims 6 to 8 not printed in the Gazette.]

1,217,583. VEHICLE-FENDER. FRANCIS J. FARRELL, Cincinnati, Ohio. Filed Nov. 21, 1916. Serial No. 132,696. (Cl. 105—130.)



1. In a safety-fender device for vehicles, the combination of a resilient buffer having plunger stems or rods, a transverse rock-shaft mounted on the fender-frame, a pair of pendent hook-arms operatively-connected to said plunger-stems and both fixedly-carried by said rock-shaft so that they both act simultaneously and in unison, a hinged fender-mat having a transverse bar or plate along its fore edge and normally held in elevated-position by the said hook-arms when the latter are in closed-engagement with said transverse-bar and adapted to pivotally-drop into using or scooping position on contact of the buffer with objects in its path ahead, and spring-actuated means for positively hinging or dropping said fender-mat into said using-position when released.

2. In a safety-fender device for vehicles, the combination of a resilient buffer having plunger-stems or rods, hook-arms operatively-connected to said plunger-stems, a hinged fender-mat having a transverse fore bar or plate, a series of rollers along the fore scooping-edge of said transverse plate, said fender-mat being normally held in elevated-position by said hook-arms and adapted to pivotally-drop into using-position on contact of the buffer with objects in its path ahead, and positive actuating-means for the dropping of said hinged fender into using-position.

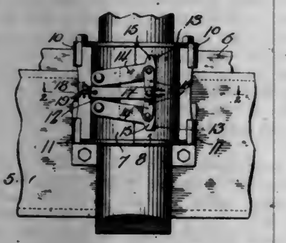
3. In a safety-fender device for vehicles, the combination of a resilient or spring buffer having rearwardly-extending plunger stems or rods, a transverse rock-shaft, hook-arms fixed to said rock-shaft and operatively-connected to said plunger-stems, a transverse fender-mat hinged at its rear portion and having a fore scooping or picking-up edge adapted to be normally held elevated above the roadway by means of said hook-arms whose release permits the instant dropping of said fore-edge of the fender into using or picking-up position when the said buffer contacts with any object in its pathway ahead, side-fenders extending between the ends of the transverse fore-portion of the fender-mat and pivotal-connections provided at the pivotal parts of the fore-axle of the vehicle, and rear-extensions of said side-fenders whose inner ends engage a transverse coupling-bar at the rear of said fore-axle whereby the said side-fenders and the main

fender-mat may be swung laterally in conjunction with the steering-gear and held in alinement with the front-wheels of the vehicle when turning from and to a straight path ahead.

4. In a safety-fender device for vehicles, the combination of a resilient or spring buffer having rearwardly-extending plunger-stems, a transverse rock-shaft mounted on the buffer supporting-frame, hook-arms carried by the rock-shaft and operatively-connected to said plunger-stems, rear-extensions provided on said buffer supporting-frame and pivotally-connected to the fore-axle of the vehicle, a transverse coupling-bar disposed between the said rear-extensions of the buffer-frame and adapted to be operated to swing said buffer-frame laterally, a fender-mat having a transverse picking-up or scooping fore-plate, lateral auxiliary safety-fenders extending upwardly from the opposite ends of said fore-plate in line with the fore-wheels of the vehicle, and side-fenders pivotally-connected at their fore-ends to said auxiliary lateral fenders and extending rearwardly for pivotal-connection with the said rear-extensions of the buffer-frame, whereby the said buffer-frame, fender-mat, auxiliary lateral-fenders and side-fenders are all pivotally-connected together so that they shall act together in being swung laterally with the steering-gear of the vehicle and thereby maintain proper alinement with said fore-wheels and fore-axle at all times in the running of the vehicle whether straight ahead, or on curves, or in irregular advancement thereof.

5. In a safety-fender device for vehicles, the combination of a resilient buffer having rearwardly-extending plunger-stems, a transverse rock-shaft, hook-arms extending in opposite directions vertically from said rock-shaft and operatively-connected to said plunger-stems, a transverse fender-mat hinged to the fore-end of the vehicle and adapted to be normally held in elevated position by the lower members of said hook-arms until released by contact of said buffer with an obstruction ahead and at which instant it drops into picking-up position at its fore-edge for the relief of said obstruction, a vertically-collapsible guard mat or netting adapted to be supported by the buffer-frame above the line of the buffer and held normally closed by the engagement of the upper members of said hook-arms with its upper movable or expansible member that forms the guard mat or netting when the hooks are released by the depression of the buffer on contact with obstructing objects ahead and to save said objects from injurious contact with the upper fore-part of the vehicle.

1,217,584. BOLSTER-STAKE HOLDER. CASPER FAUST, Oshkosh, Wis. Filed Dec. 18, 1916. Serial No. 137,565. (Cl. 105—173.)



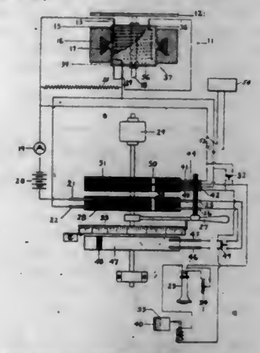
1. A bolster stake holder comprising a socket member including a hinged portion, a locking arm pivoted to the socket member and adapted for detachable interlocking engagement with the hinged portion, a link pivoted to the locking arm, a latch bar connected with the link and means for locking said latch bar against movement.

2. A bolster stake holder comprising a socket member comprising a pair of hinged portions, a locking arm pivoted to one of the hinged portions and adapted for detachable interlocking engagement with the other hinge portion and means operable upon movement in the direction of hinge movement of the hinge portions for moving said locking arm out of interlocking engagement.

3. A bolster stake holder comprising a socket member including a hinged portion provided with recesses a pair of arms hinged to the socket member, lateral projections on said arms adapted for interlocking engagement in the recesses, pivotally connected links pivoted to the locking arms, a latch bar connected with the links and means for locking said latch bar against movement.

4. A bolster stake holder comprising a socket member including a hinged portion, a locking arm pivoted to the socket member and adapted for detachable interlocking engagement with the hinged portion, a link pivoted to the locking arm, a latch bar connected with the link and means for locking said latch bar against movement, and said locking arm and hinged socket portions including inclined portions adapted to procure a cam action upon movement of the locking arm to operative position for drawing the hinged socket portion to closed position.

1,217,585. METHOD FOR MEASURING DISTANCE. REGINALD A. FESSENDEN, Brookline, Mass., assignor to Submarine Signal Company, Waterville, Me., a Corporation of Maine. Filed Apr. 2, 1914. Serial No. 828,972. (Cl. 181—.5.)



1. The method of measuring distance by sound inflection which consists in varying the current in an electric circuit at the sending end, setting up at the sending end sound vibrations identical in time with the current variations in said electric circuit, directing said sound vibrations against an objective, transforming the sound vibrations inflected by said objective when received into electric impulses identical in time with said received sound vibrations and measuring the time elapsing between the beginning of each set of electric impulses.

2. The method of measuring distance by sound inflection which consists in varying the current in an electric circuit at the sending end, setting up at the sending end sound vibrations identical in character with the current variations in said electric circuit, directing said sound vibrations against an objective, transforming the sound vibrations inflected by said objective when received into electric impulses identical in character with said received sound vibrations and measuring the time elapsing between the beginning of each set of electric impulses.

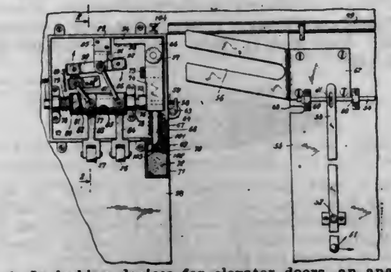
3. The method of measuring distance by sound inflection which consists in varying the current in an electric circuit at the sending end, setting up at the sending end sound vibrations identical in frequency with the current variations in said electric circuit, directing said sound vibrations against an objective, transforming the sound vibrations inflected by said objective when received into electric impulses identical in frequency with said received sound vibrations and measuring the time elapsing between the beginning of each set of electric impulses.

4. The method of measuring distance by sound inflection which consists in varying the current in an electric circuit at the sending end, setting up at the sending end sound vibrations identical in time, character and frequency with the current variations in said electric circuit, directing said sound vibrations against an objective, transforming the sound vibrations inflected by said objective when received into electric impulses identical in time, character and frequency with said received sound vibrations and measuring the time elapsing between the beginning of each set of electric impulses.

5. That method of measuring distance by sound inflection which consists in transforming electrical impulses into sound vibrations for a predetermined period, which sound vibrations are directed against the objective, transforming the sound vibrations which are inflected by said objective into electrical impulses and measuring the time between the commencement of said predetermined period and the first receipt of said inflected impulses.

[Claims 6 to 21 not printed in the Gazette.]

1,217,586. DOOR-LOCKING DEVICE. PATRICK F. FOLEY, Brooklyn, N. Y. Filed Dec. 11, 1916. Serial No. 136,140. (Cl. 187—61.)



1. In locking devices for elevator doors, an angularly arranged door catch provided with a slot and adapted to be mounted on an elevator door, a coöperating locking bolt having a roll locking member adapted to coöperate with said stop, a lock casing in which said locking bolt is mounted and which is adapted to be supported adjacent a door opening, a ratchet formed on said locking bolt, a stem and cushioning plunger connected to said locking bolt, a cushioning cylinder charged with oily cushioning fluid in which said plunger operates, a return spring tending to restore said locking bolt to receiving position, an alining device to adjust the receiving position of said bolt with respect to said catch, a toothed detent coöperating with said ratchet to hold said bolt in locking position, a detent spring normally forcing said detent against said ratchet, a detent extension projecting from said lock casing, a release device mounted on said door and comprising a release bolt to coöperate with said detent extension and a release lever to release said detent and to simultaneously open said door.

2. In locking devices for doors, an angularly arranged catch provided with a slot, a coöperating locking bolt having a roll locking member adapted to coöperate with said slot, a lock casing in which said locking bolt is mounted, a ratchet formed on said locking bolt, a stem and cushioning plunger connected to said locking bolt, a cushioning cylinder charged with oily cushioning fluid in which said plunger operates, a return spring tending to restore said locking bolt to receiving position, an alining device to adjust the receiving position of said bolt with respect to said catch, a toothed detent coöperating with said ratchet to hold said bolt in locking position, a detent spring normally forcing said detent against said ratchet, and a release device to release said detent and to simultaneously open said door.

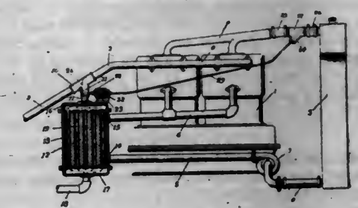
3. In locking devices for doors, an angularly arranged catch provided with a slot, a coöperating locking bolt having a locking member adapted to coöperate with said slot, a lock casing in which said locking bolt is mounted, a stem and cushioning plunger connected to said locking bolt, a cushioning cylinder charged with cushioning fluid in which said plunger operates, a return spring tending to restore said locking bolt to receiving position, an alining device to adjust the receiving position of said bolt with respect to said catch, a detent to hold said bolt in locking position, a detent spring normally forcing said detent against said bolt, and a release device to release said detent and to simultaneously open said door.

4. In locking devices for doors, an angularly arranged catch provided with a slot, a coöperating locking bolt having a locking member adapted to coöperate with said slot, a cushioning device connected to said locking bolt, a return spring tending to restore said locking bolt to receiving position, and a detent to hold said bolt in locking position.

5. In locking devices for elevator doors, an angularly arranged door catch provided with a slot and adapted to be mounted on an elevator door, a coöperating locking bolt having a locking member adapted to coöperate with said slot and which is adapted to be supported adjacent a door opening, a ratchet formed on said locking bolt, a cushioning device connected to said locking bolt, a return spring tending to restore said locking bolt to receiving position, and a detent coöperating with said ratchet to hold said bolt in locking position and prevent opening movement of said door from an approximately closed position.

[Claims 6 to 11 not printed in the Gazette.]

1,217,587. COOLING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Aug. 18, 1916. Serial No. 115,710. (Cl. 123—174.)



1. A cooling system for internal combustion engines comprising, in combination with the engine jacket and the conduits for circulating cooling medium therethrough, a heater in communication with said conduits, and means for diverting the exhaust gases of the engine through said heater.

2. A cooling system for internal combustion engines comprising, in combination with the engine jacket and the conduits for circulating cooling medium therethrough, a heater in communication with said conduits, means for diverting the exhaust gases of the engine through said heater, and thermosensitive means for operating said last-named means.

3. A cooling system for internal combustion engines comprising, in combination with the engine jacket and the conduits for circulating cooling medium therethrough, a heater in communication with said conduits, means for diverting the exhaust gases of the engine through said heater, and means automatically controlled by the temperature of the cooling medium for operating said last-named means.

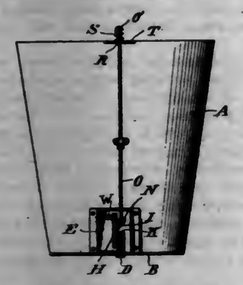
4. A cooling system for internal combustion engines comprising, in combination with the engine jacket and the conduits for circulating a cooling means therethrough, a heater in communication with said conduits and in the path of the cooling medium as it flows to the engine jacket, means for diverting the exhaust gases of the engine through said heater, and thermosensitive means operating said last-named means and controlled by the temperature of the cooling medium after leaving said jacket.

5. A cooling system for internal combustion engines provided with a conduit for the exhaust gases of the engine, comprising in combination with the engine jacket and the conduits for circulating a cooling medium there-

through, a heater in communication with said conduits, a by-pass from the exhaust conduit communicating with said heater, and means regulating the passage of the exhaust gases through said by-pass.

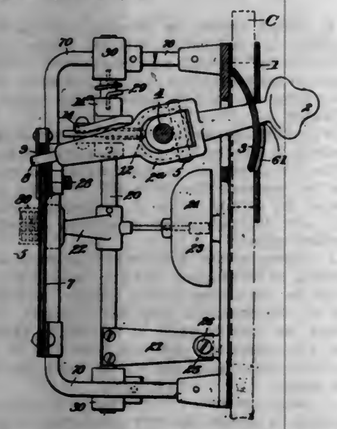
[Claims 6 to 27 not printed in the Gazette.]

1,217,588. HINGED BOTTOM FOR DRY MEASURES. CHARLES P. GARTEN, Ashland, Ky. Filed July 11, 1916. Serial No. 108,599. (Cl. 73—62.)



In combination with a receptacle, a boxing with an apertured top and slot in the bottom through which slot a hook is adapted to be passed, a latch pivoted to said boxing to the wall of the receptacle and having its lower free end hook and its upper end shouldered above its pivotal point and at one side of its longitudinal center, a spring interposed between the upper portion of the latch and the wall of the boxing, said receptacle having an apertured projection near the top thereof, a spring-pressed rod mounted in said projection and an aperture in the top of the boxing, the lower end of the rod bearing against the shouldered portion of the latch in alinement with the edge of the hook beneath.

1,217,589. WORKMAN'S TIME-RECORDER. WILLIAM T. GELTZ, Cleveland, Ohio. Filed Nov. 18, 1915. Serial No. 62,220. (Cl. 234—43.)



1. In a time recorder, the combination of a shifting card receiver, a printing device, a guide rod, a pivoted and sliding sleeve on said rod and adapted to operate said device, and a single operating lever operatively connected to said receiver and to said sleeve and adapted to both shift said receiver and actuate said device.

2. In a time recorder, the combination of a shifting card receiver, a printing device, a card cutting device, and a single lever operatively connected to each of said devices and the receiver, for operating the former and shifting the latter.

3. In a time recorder, the combination of a shifting card receiver, a printing device, a card cutter device, an alarm device, a single operating lever, the means operatively connecting said lever to each of said devices, whereby they may be operated by said lever.

4. In a time recorder, the combination of a shifting card receiver, a card cutting device, a lever connected to said receiver for shifting the same, and means connecting said lever and said card cutting device in one position of the lever, for operating said device by said lever when the latter is in said position.

5. In a time recorder, the combination of a printing mechanism including a pivoted hammer, a spring connected thereto, a pawl connected to the hammer, a lever, and a sliding member connected to the lever and movable in one direction to engage the pawl and retract the hammer against the tension of the spring, and to release the pawl on further movement, in said direction, whereby the spring will advance the hammer, said pawl being yieldable in one direction, to permit back slip of the said member.

[Claims 6 to 14 not printed in the Gazette.]

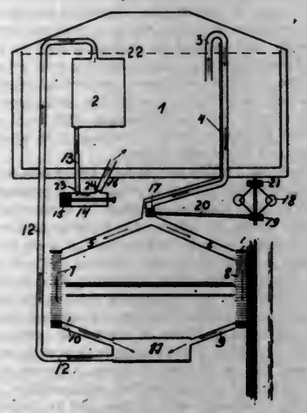
1,217,590. CIGAR-TIP. VICTOR GOLDBERGER, Cleveland, Ohio. Filed Mar. 21, 1916. Serial No. 85,560. (Cl. 131—52.)



1. In a cigar, the combination with a cigar tip, of a cigar tip reinforcing tube formed of a goose-quill having one end turned outwardly into a reinforcing flattened tip beading, the raw edge of the latter extending inwardly and being covered and protected by the cigar tip.

2. In a cigar, the combination with the tip portion thereof; of a reinforced goose quill stem mounted therein and having an outwardly curled marginal tip beading extending flush therewith and having the raw edge of the tip beading covered by said tip portion of the cigar.

1,217,591. WATER-COOLED BRAKE FOR VEHICLES. LEON GOLDMERSTEIN, New York, N. Y. Filed Sept. 21, 1916. Serial No. 121,476. (Cl. 21—8.)



1. In a fluid cooling system for motor vehicle brakes having mechanical circulating means, the combination of siphonage means to continue the fluid flow upon the cessation of activity of said mechanical circulating means.

2. In a fluid cooling system for the brakes of motor vehicles, having mechanical circulating means, operated by the motor, the combination of siphonage means to continue the fluid flow, means for changing from the mechanical to the siphonage system, and means actuated by the motor, in stopping, to control said changing means.

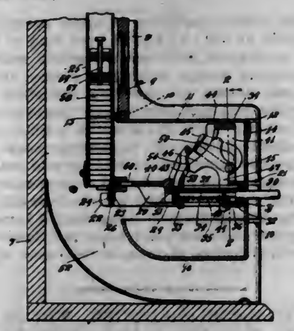
3. In a fluid brake cooling system for motor vehicles, having a radiator, motor operated means for circulating fluid through a path including the radiator and brake, a fluid controlling valve in said path between the radiator and brake, means actuated by the motor to hold said valve open while the motor is in operation and to close it with the stopping of the motor, and a siphonage system also controlled by said valve, to remove remaining fluid from the brake by the movement of said valve in its operation of closing said circulating path.

4. The combination, in a motor vehicle, having a radiator and a brake, of a fluid cooling system whose path includes said radiator and brake, a fluid container in said radiator, and mechanical means, operated by the motor, to pump fluid from said radiator, to said brake, and thence, through said container, back to said radiator.

5. The combination, in a motor vehicle, having a radiator and a brake, of a fluid cooling system whose path includes said radiator and brake, a fluid container in said radiator, and mechanical means, operated by the motor, to pump fluid from said radiator, to said brake, and thence, through said container, back to said radiator, together with means for siphoning fluid from said brake to said container when the motor is idle.

[Claims 6 to 10 not printed in the Gazette.]

1,217,592. VENDING-MACHINE. HARRY H. GOLDSTEIN, Hartford, Conn. Filed Nov. 4, 1915. Serial No. 59,564. (Cl. 194—80.)



1. A vending machine including a case having a coin slot, a vending slide having its lower portion spaced from the coin slot, side parts rising from said lower portion and of a width to provide an open sided box, said side parts having a slideway extending downwardly in a diagonal direction at the front edge of the opening to said box to guide the movements of a coin from said coin slot, a goods receptacle mounted in the case, a pusher mounted on the slide to remove goods from said receptacle, and means arranged to be connected with the slide to operate it by the interposition of a coin.

2. A vending machine including a case having a coin slot, a vending slide spaced from said coin slot and having an open sided box rising therefrom with an opening extending in the direction of depth therethrough, and a slideway formed in the side walls of said box at the edge of an opening therein and extending in a diagonal direction across said opening to guide the movements of a coin from said coin slot, a stop projecting upwardly within said opening, a goods receptacle mounted in the case, a pusher mounted on the slide to remove goods from said receptacle, and means arranged to be connected with the slide to operate it by the interposition of a coin.

3. A vending machine including a case having a coin slot, a supporting plate located within the case and having depending flanges forming a groove for a vending slide, a stop projecting upwardly between said flanges forming grooves, a vending slide comprising side parts with their lower edges located in said grooves, said side parts rising from the slide and having a slideway extending in a diagonal direction along the upper edge of the slide to guide the movements of a coin from the coin slot, a goods receptacle mounted in the case, a pusher mounted on the slide to remove goods from said receptacle, and means arranged to be connected with the slide to operate it by the interposition of a coin.

4. A vending machine including a case having a coin slot, a supporting plate located within the case and having depending flanges forming a slide opening of uniform width from bottom to top to receive a vending slide inserted therein from the top, a vending slide located within said opening and including side parts with a slideway to guide a coin from said coin slot, and means for operating the vending slide.

5. A vending machine including a case having a coin slot, a supporting plate located within the case and having depending flanges forming a slide opening of uniform width from the bottom to the top, supporting lips located at the lower edges of said flanges, a vending slide located in said opening and having side parts with grooves forming a slideway to conduct a coin from said coin slot, and means for operating the vending slide.

[Claims 6 to 26 not printed in the Gazette.]

1,217,593. ABRASIVE-COATED MATERIAL. JOHN C. GRAFT, East Orange, N. J. Filed Mar. 27, 1912. Serial No. 686,514. (Cl. 51—1.)

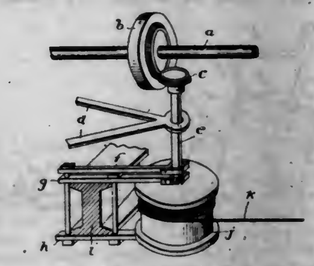


1. A flexible dental attrition device comprising two moisture-proof layers intimately united to form a substantially homogeneous piece, the base layer being continuous and unbroken to impart strength to the device, and grit embedded solely in the second layer.

2. A dental attrition device comprising a moisture-proof flexible body layer having a grit-carrying coating of moisture-proof flexible material intimately combined therewith to form a substantially homogeneous piece, the grit being embedded solely in said coating, whereby the original strength of the body layer is not affected by the grit and the device is capable of continued use wet or dry until the grit is worn away.

3. A flexible dental attrition device comprising a moisture-proof base layer having one of its surfaces provided with grit united thereto by a cement which is a partial solvent of the surface of the material of the base layer.

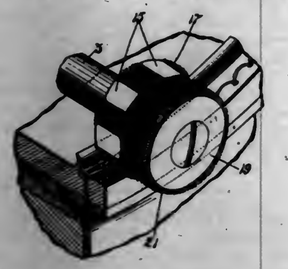
1,217,594. APPLIANCE TO BE ATTACHED TO AUTOMOBILES. WILLIAM BURKET GRAHAM, Sapulpa, Okla. Filed June 30, 1914. Serial No. 848,318. (Cl. 254—166.)



In combination, an automobile including a front axle and a crank shaft, of a pair of forwardly projecting arms secured to the axle, clamps formed on said arms, a vertical squared shaft journaled in said clamps, a substantially V-shaped brace secured to the automobile and extending forwardly therefrom, a bearing formed on the

apex portion of said bracket and receiving the shaft, a gear secured to the shaft, a cogged clutch secured to the crank shaft and in mesh with the gear for rotating the shaft, a drum secured to the shaft, a cable secured to a permanent object and to the drum and adapted to wind theeron upon rotation of the shaft, and a clasp pivoted to one of said arms and adapted to engage the shaft to lock said shaft against rotation when desired.

1,217,595. STITCH-RUBBING AND CHANNEL-ROUGHENING MACHINE. JOHN B. HADAWAY, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 17, 1916. Serial No. 109,686. (Cl. 12—17.)



1. A combined stitch rubbing and channel roughening tool comprising alternately arranged rubbing and roughening portions, and means for rotating said tool.

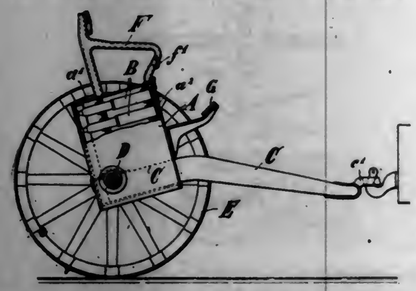
2. A combined stitch rubbing and channel roughening tool comprising rubbing and roughening portions, and means for causing said portions to act successively.

3. A combined stitch rubbing and channel roughening tool comprising a hub having spaced rigid radial projections alternated with bunches of wire bristles.

4. A combined stitch rubbing and channel roughening tool comprising a hub having at one end a gage and an uninterrupted row of bristles and at the other end a plurality of spaced projections alternated with bunches of bristles.

5. A machine of the class described, having, in combination, a rotary shaft, and a tool fast thereto, there being a free and unobstructed space beneath said tool to permit manual presentation of a shoe, said tool comprising a hub having a plurality of spaced stitch rubbing members, and roughening members located in the spaces between said rubbing members.

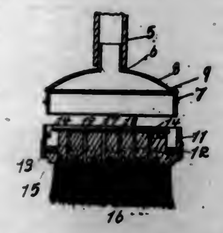
1,217,596. AMMUNITION-WAGON. GEORG HAGELLOCH, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Apr. 15,. 1914. Serial No. 831,998. (Cl. 89—40.)



1. An ammunition wagon having a thill and an ammunition chest, opening toward the thill side of the wagon; a door for said chest constructed to be raised to form a shield and means for securing it in open position; said door being provided with a foot-rest and said thill being bent downwardly forming a prop for the wagon when unlimbered.

2. An ammunition wagon having an ammunition chest and a thill constructed to be limbered and unlimbered; the thill having a downward inclination relatively to the ammunition chest which causes the ammunition chest to incline rearwardly when the thill is limbered up, but which sustains the ammunition chest in a substantially vertical position when the thill is unlimbered and rests directly upon the ground.

1,217,597. FOUNTAIN-BRUSH. JOSEF HECHT and CHARLES CIZENFELD, Baltimore, Md.; said Cizenfeld assignor, by mesne assignments, to said Hecht. Filed Nov. 12, 1915, Serial No. 61,041. Renewed Jan. 12, 1917. Serial No. 142,115. (Cl. 15—51.)



A fountain brush comprising an upper shower portion having an inlet at one end and an open ring at its opposite end, a perforated plate secured within said ring, a central connecting portion detachably secured around the said ring and having an inwardly extending annular flange, a cylindrical perforated lower portion revolubly and longitudinally movably mounted within the said flange, detachable spring clip supporting means for the said lower portion outwardly carried by said central portion, and a retaining perforated head piece upon said lower portion within the said central portion inwardly of said flange, a soap sudsing chamber being formed between said perforated plate and head piece when said lower portion is in its lowered position disengaged from said supporting means.

1,217,598. FILM-REELING DEVICE. WILLIAM HEINZE, Darby, Pa. Filed Mar. 7, 1916. Serial No. 82,554. (Cl. 242—70.)

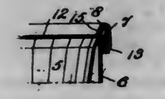


1. In a device of the class described, a casing, a door hingedly connected to said casing, a pair of shafts mounted in spaced relation within said casing, a bracket upon the inner face of said door, a bearing block, a screw connecting said bearing block and said bracket, the said bearing block being adapted to engage and support one of said shafts when said door is in closed position, and means for rotating said shafts, substantially as described.

2. In a device of the class described, a casing, a door for said casing, a pair of shafts mounted in spaced relation within said casing, a bracket on said door, a bearing block, a screw member connecting said bearing block and said bracket whereby the former may be adjusted, the said bearing block being adapted to engage and support one end of one of said shafts when said door is closed, a spring member secured to said bearing block and extending adjacent said shaft, and means for rotating said shafts, substantially as described.

3. In a device of the class described, a casing, a door hingedly connected to said casing and adapted to close one side thereof, a pair of shafts mounted in spaced parallel relation within said casing, a reel fixed to rotate with one of said shafts, a reel mounted for rotation upon said shaft, a bearing block upon said door adapted to engage the end of said shaft when said door is closed, a spring member secured to said bearing block and adapted to engage said loose reel when said door is closed, a reel fixed to the other of said shafts and in alinement with said loose reel, a cap for engagement over the end of said second shaft, and means for rotating said shaft, substantially as described.

1,217,599. PAPER RECEPTACLE. HARRIET HILL, New York, N. Y. Filed Jan. 26, 1916. Serial No. 74,320. (Cl. 229—3.)



1. A container comprising a receptacle formed of flexible water proofed paper and having at its upper end a downwardly extending flange spaced from the adjacent wall of the receptacle, an open ended casing of relatively rigid material surrounding the receptacle and having its upper edge portion disposed in the space between the flange and the body of the receptacle, and a closure arranged in the upper end of the receptacle and having a channeled portion receiving the upper edge of the receptacle and constructed so as to cause the flange and the body portion of the receptacle to clamp the upper end portion of the casing therebetween.

2. A container comprising a receptacle formed of flexible water proofed paper and having at its upper end a downwardly extending flange spaced from the adjacent wall of the receptacle, an open ended casing of relatively rigid material surrounding the receptacle and having its upper edge portion disposed in the space between the flange and the body of the receptacle, and a closure disposed in the upper end of the receptacle and having a channeled portion in which the upper edge of the receptacle is disposed and one side of which extends downwardly beyond the edge of the flange and contacts with the lower edge thereof.

3. A container comprising a receptacle having its upper end open and provided with an outwardly and downwardly extending flange, a casing surrounding the receptacle and having its upper end inserted between the receptacle and the flange thereof, and a closure having a dished body portion arranged in the open end of the receptacle and a channel portion bearing on the flange and operating to hold the flange and the casing in contact one with the other, and further having on one side of the channel portion a series of projections which bear on the lower end of the flange.

4. A container comprising a receptacle of water proofed paper having its upper end open and provided with an outwardly and downwardly extending flange, a casing of relatively stout material surrounding the receptacle and having its upper end disposed between the receptacle and the flange, said casing being appreciably greater in length and in diameter than the corresponding dimensions of the receptacle and including in its construction lapped edges extending for the full length of the casing and connected together at a point remote from the lower end thereof whereby the casing will yield under pressure applied at a point beyond the point of connection of the lapped edges, and a closure arranged in the open end of the receptacle.

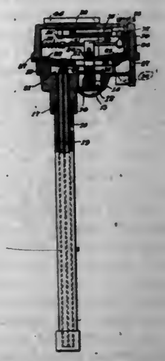
5. A container comprising a receptacle, a casing and a closure, the said receptacle being disposed within the casing and having its upper end open and provided with an outwardly and downwardly extending flange which connects with the upper edge of the casing whereby the latter wholly supports the receptacle when the container is in an upright position, the said closure having a portion adapted to fit snugly in the open end of the receptacle and another portion adapted to embrace the flange and arranged to coöperate with the first named portion to hold the flange and the casing in binding contact one with the other.

1,217,600. WRENCH-SUPPORT. GEORGE M. HOOD, Steele, Ala. Filed Apr. 5, 1916. Serial No. 89,231. (Cl. 248—20.)



A wrench support comprising a base, a substantially U-shaped member secured to one end of the base to receive one end of a wrench, and a leaf spring secured to the other end of the base and bent adjacent its securing end to provide an off set portion for receiving and supporting the other end of the wrench, the free end of the leaf spring adapted to overlie and bear upon the wrench adjacent the first mentioned end of the wrench to prevent said wrench from moving upon the base.

1,217,601. TEMPERATURE REGULATING AND INDICATING DEVICE. WILLIAM C. HOUSHOLDER, Youngwood, Pa. Filed Mar. 14, 1916. Serial No. 84,250. (Cl. 236—5.)



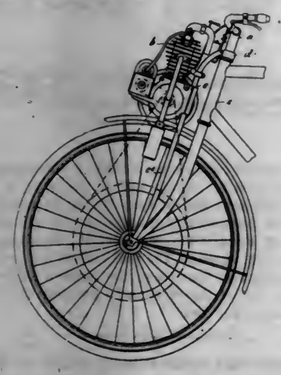
1. A temperature regulating and indicating device comprising a support, a fuel valve associated with said support, a lever pivotally associated with said support, a second lever pivotally connected with said first named lever and coöperating with said valve, a heat-responsive element coöperating with said first named lever, a spring-pressed rockable spindle, an arm on said spindle disposed for engagement with said valve, and an indicating device operated by said spindles.

2. A temperature regulating and indicating device comprising a support, a fuel valve associated with said support, a heat-responsive member, means, controlled by said heat-responsive member, for operating said valve at pre-

determined temperatures, a spring pressed rockable spindle, an arm on said spindle disposed for engagement with said valve, and a temperature indicating device operated by said spindle.

3. A temperature regulating and indicating device comprising a support, a fuel valve associated with said support, a lever pivotally associated with said support, a second lever pivotally connected with said first-named lever and coöperating with said valve, a heat-responsive element coöperating with said first-named lever, a spring pressed rockable spindle, an arm on said spindle disposed for engagement with said valve, a pivoted toothed segment, connection means between said segment and said spindle, and a temperature indicating band actuated by said segment.

1,217,602. SUPPORT FOR THE MOTOR ON MOTOR-DRIVEN VEHICLES OR THE LIKE. EMIL ALFRED JERN, Gävle, Sweden. Filed Oct. 27, 1915. Serial No. 58,258. (Cl. 21—90.)



1. The combination with a motor-driven vehicle, of a motor, a frame carrying said motor detachably fastened to the steering frame of the vehicle, links connecting the lower end of said frame with the lower end of said steering frame, a shell in said steering frame, a spring in said shell against which the upper end of said motor carrying frame is resting, and means for disengagingly connecting said motor and steering frame, substantially as described.

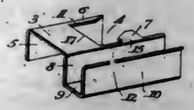
2. The combination with a motor driven vehicle, of a motor, a frame carrying said motor detachably fastened to the steering frame of the vehicle, links connecting the lower end of said frame with the lower end of said steering-frame, a shell in said steering frame, a spring in said shell against which the upper end of said motor carrying frame is resting, and a shiftable friction-wheel on the motor shaft adapted to engage the chain-wheel of the transmission between motor and steering wheel for engaging and disengaging said motor and steering frame, substantially as described.

3. The combination with a motor driven vehicle, of a motor, a frame carrying said motor, and yieldingly mounted in front of the steering frame of the vehicle, links connecting the lower end of said frame with the lower end of said steering frame, said links being mounted on the front wheel shaft.

4. The combination with a motor driven vehicle, of a motor, a frame carrying said motor, and yieldingly mounted in front of the steering frame of the vehicle, said motor carrying frame being fork-shaped, the fork grasping over the front wheel, links connecting the shanks of said motor carrying frame with the shanks of the steering frame fork, said link being mounted on the front wheel shaft.

5. In a motor driven vehicle, the combination of a frame mounted in front of the steering frame of the vehicle, a motor rigidly mounted on the front side of the first said frame, links connecting the lower end of the steering frame with the lower end of the motor carrying frame, a spring inserted between a part of the motor carrying frame, and a part of the steering frame.

1,217,603. PLASTER-BOARD-SUPPORTING METAL CLIP. MARVIN H. JESTER, Denver, Colo. Filed Mar. 16, 1915. Serial No. 14,778. (Cl. 72—118.)



1. A clip comprising a metal plate member provided with an open ended body portion arranged to surround a metal stud and provided with a channel groove extension portion on one side of its body portion and parallel to said side, said channel groove portion being arranged to receive and secure the corner ends and side edges of plaster boards to one side of metal studs.

2. A clip comprising a rust proof metallic plate provided with a body portion having an open end portion recessed to fit around a metal stud and having one side provided with a channel groove parallel to said side and adapted to receive the edges of plaster boards and secure them to one side of said stud.

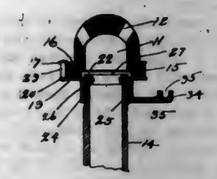
3. A stud wall or partition construction clip comprising a thin metal plate having a central portion apertured to be placed partially around and locked to said metal stud against lateral or longitudinal movements, and provided with a plaster-board-receiving channeled portion at one side of and parallel to its body portion.

4. In means for securing plaster boards to channel bar studding in partition construction, the combination with a stud, of a clip comprising a recessed body portion instantly attachable to any portion of the length of a stud and having a laterally projecting channel member at one side of said body and channel bar inclosing portion for the reception of the edges of the plaster boards, the channel of said channel member lying parallel to said side.

5. In a device of the character described, a clip comprising a body portion having a stud inclosing slot in one end thereof, and an integral portion extending from said body portion and bent to form a vertically disposed channel member on one side of said stud inclosing slot for the reception of the edge portions of plaster boards, and a stop lug on said body portion arranged to lock said clip to said stud against lateral and longitudinal displacement movements of said clip when properly placed on said stud.

[Claims 6 to 12 not printed in the Gazette.]

1,217,604. TERMINAL FOR ELECTRIC CONDUITS. FREDERICK I. JOHNSON, Warren, R. I. Filed Feb. 14, 1916. Serial No. 78,101. (Cl. 247—12.)



1. An electric conduit terminal comprising a head having openings therethrough to receive the electric wires, a collar plate loosely connected to the said head whereby one may freely rotate independent of the other and a conduit receiving sleeve having an inwardly turned flange to which said plate is connected to receive a relative rotation thereon, whereby said sleeve may be screwed onto the threaded end of a conduit without rotating said head.

2. An electric conduit terminal comprising a head having openings therethrough to receive the electric wires, a collar plate loosely connected to the said head whereby one may freely rotate independent of the other, and a conduit receiving-sleeve having a rigid laterally extending flange to which said plate is loosely connected to receive a relative rotation thereon, whereby said sleeve may be screwed onto the threaded end of a conduit without rotating said head.

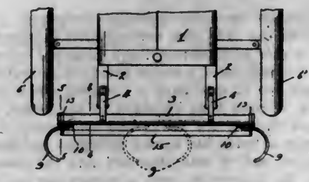
3. An electric conduit terminal comprising a head having holes to receive the electric wires, a collar member connected to said head, a sleeve having a laterally extending flange and a ferrule turned over the edge of the collar and also that of the flange to loosely connect the two together.

4. An electric conduit terminal comprising a head having holes to receive the electric wires, a collar member connected to said head, said collar being provided with a central opening, a sleeve having an inwardly extending flange and a ferrule turned over both the inner edge of said collar and that of said inturned sleeve flange to loosely connect them together, said sleeve being threaded to engage a corresponding portion on the conduit whereby it may be screwed thereon without rotating the cap.

5. An electric conduit terminal comprising an insulating head having openings for the passage of electric wires and a flange about its lower edge, a collar member fitting over said flange, a second collar on the bottom of said head, means for connecting said collars together, said bottom collar being provided with a central opening, and a threaded sleeve loosely connected to said collar whereby said sleeve may be screwed onto the threaded end of a conduit without rotating said head.

[Claims 6 to 9 not printed in the Gazette.]

1,217,605. FENDER. EDWARD EMANUEL JONES, Berkeley, Cal. Filed Jan. 19, 1915, Serial No. 3,032. Renewed Nov. 8, 1916. Serial No. 130,183. (Cl. 105—268.)

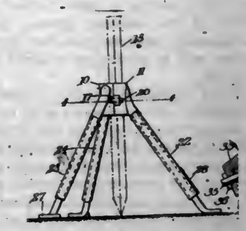


1. A fender comprising a casing, curved arms slidable in said casing and projecting in front thereof, spring means for urging said arms toward the center of said casing, latch means for holding said arms spaced apart and a contact member adapted to withdraw said latch means when said fender strikes a body.

2. A fender comprising an outer casing, inner members slidable in said casing, curved arms attached to said inner members adjacent one end and extending through slots in said outer casing, springs tending to move said inner members in a direction to carry said curved arms toward the center of said casing, latch means for holding said arms spaced apart and a contact member adapted to withdraw said latch means when said fender strikes a body.

3. A fender comprising an outer cylindrical tubular casing, inner semi-cylindrical members slidable in said outer casing, curved arms attached to said inner members and extending through slots in said outer casing, spring means tending to move said inner members in a direction to carry said curved arms toward the center of said casing, latches extending into the path of said arms and adapted to hold them spaced apart and a forwardly extending contact member adapted to withdraw said latches when the fender strikes a body.

1,217,606. CONCRETE-DRILL HOLDER. HERBERT W. KANE, New Orleans, La. Filed Apr. 8, 1916. Serial No. 89,814. (Cl. 255—36.)



1. A drill holder comprising a pair of jaws hinged to each other and adapted to receive a drill between them, and legs connected to the outer sides of said jaws and adapted to support said jaws above the concrete or pavement operated upon.

2. A drill holder comprising a pair of jaws in the form of two elongated semi-annular plates hinged together along corresponding longitudinal edges, means for automatically locking the jaws together at their other longitudinal edges, and legs integrally connected to said jaws for supporting them.

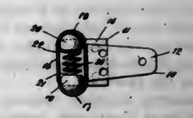
3. A concrete drill holder comprising a pair of hinged jaws adapted to receive a drill between them, one of said jaws having a recess and the other jaw having a tongue fitting said recess, means for automatically and releasably locking said jaws together, and legs secured to said jaws for supporting said jaws above the concrete or pavement.

4. A drill holder comprising jaws hinged to each other and adapted to receive a drill in the space between them, means in said space to hold the drill upright and steady the drill, and legs secured to said jaws for supporting said jaws above the concrete or pavement.

5. A drill holder comprising a pair of jaws hinged to each other along corresponding edges thereof and adapted to receive a drill between them, and supporting legs for said jaws connected directly to said jaws whereby when either jaw is swung on its hinge the leg or legs connected therewith will move said jaw.

[Claims 6 to 9 not printed in the Gazette.]

1,217,607. HINGE. JOSEPH M. KARL, Roslyn Heights, N. Y., assignor, by direct and mesne assignments, to Roslyn Specialty Company, Inc., Roslyn, N. Y., a Corporation of New York. Filed Nov. 9, 1915. Serial No. 60,485. (Cl. 16—106.)



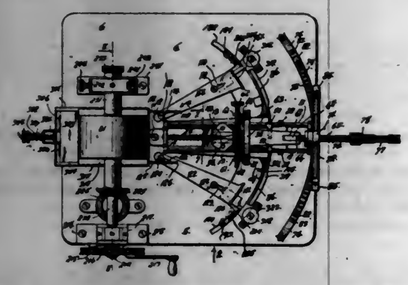
1. A hinge comprising two complemental members, a tubular knuckle on one of said members, and two spaced concave plates on the other of said members, said plates being so disposed that the concavities therein are in opposed relation and adapted to accommodate the tubular knuckle therebetween; together with a pivoting element mounted in said tubular knuckle and having parts protruding therefrom into and engaging the concaved plates for yieldingly retaining said complemental members in coöperative relation to each other, substantially as described.

2. A hinge of the character described, comprising two complemental members, one having an arm to permit the member to be secured to a door, and the second complemental member also having an arm whereby the member may be secured to the frame of the door, a tubular knuckle on the arm of one of the complemental members, two concaved plates on the arm of the second complemental member, disposed so that the concavities thereof are in opposed

relation, and the said concaved plates being spaced apart to accommodate the tubular knuckle so as to be rotatable therebetween, and two spherical pivoting elements in the tubular knuckle, each having a part thereof protruding in the concavities of the concaved plates, and the said pivoting elements being cushioned so that their parts in the concaved plates will be yieldingly retained therein, for the purpose specified.

3. A hinge of the character described, comprising two complemental members, one having an arm to permit the member to be secured to a door, and the second complemental member also having an arm whereby the member may be secured to the frame of the door, a tubular knuckle on the arm of one of the complemental members, two concaved plates on the arm of the second complemental member, disposed so that the concavities thereof are in opposed relation, and the said concaved plates being spaced apart to accommodate the tubular knuckle so as to be rotatable therebetween, two substantially ball-shaped pivoting elements rotatable in the tubular knuckle, each having a part thereof protruding in the concavities of the concaved plates, and a spiral spring in the tubular knuckle between the pivoting elements so that their parts in the concaved plates will be yieldingly retained therein, for the purpose specified.

1,217,608. RAZOR-HONING MACHINE. JOHN KAYETAN, New York, N. Y., and HENRY EVENSON, Wheat Ridge, Colo., assignors to Kayetan-Rues Company, Inc., a Corporation of New York. Filed Mar. 1, 1915. Serial No. 11,162. (Cl. 51—16.)



1. In a razor honing machine, having a main drive shaft the combination of an oscillatory carriage, adapted to be intermittently driven thereby, a razor-holder mounted thereon, a gear connected with the holder and movable with the carriage, a stationary rack engaging the gear for turning the razor-holder, and means operated by the main shaft for moving the razor-holder back and forth on the carriage, said means operating independently of the oscillatory travel of the carriage.

2. In a razor honing machine, having a main drive shaft, the combination of a carriage, a razor-holder mounted thereon, means coupled to the main drive shaft for imparting an oscillatory movement to the carriage, means for turning the razor-holder as the carriage oscillates, and separate means coupled with the main drive shaft for moving said razor-holder longitudinally of the carriage said means operating independently of the oscillatory travel of the carriage.

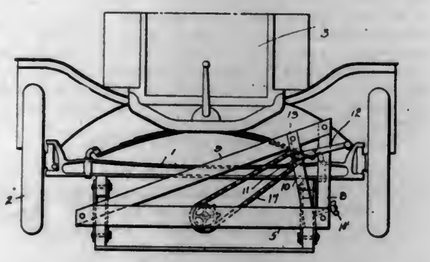
3. In a razor honing machine, having a main drive shaft, the combination of a carriage, a razor-holder mounted thereon, means coupled with the driving shaft adapted to move said carriage through the arc of a circle in one direction and automatically stop the carriage, means for turning the razor-holder on its axis during the arcuate movement of the carriage, and means operating automatically through said main drive shaft for imparting a longitudinal movement to the razor-holder when the carriage is stopped at the end of its arcuate travel.

4. In a razor honing machine, the combination of an oscillatory carriage, a razor-holder rotatably mounted thereon, means engaging the said holder for automatically imparting rotary movement thereto as the carriage oscillates in either direction, and means for moving the holder longitudinally of the carriage, said last mentioned means operating independently of the oscillatory travel of the carriage and only when the carriage is stationary at either end of its path of travel.

5. In a razor honing machine, the combination of an oscillatory carriage, a razor holder rotatably mounted thereon, means engaging the said holder for automatically imparting rotary movement thereto as the carriage oscillates in either direction, said means including a gear and a coöperating rack, one of said elements being fast on the razor-holder and the other being stationary, and means for reciprocating the razor-holder on the carriage, said last mentioned means operating independently of the carriage oscillating means and only when the latter is in inoperative or disconnected position.

[Claims 6 to 24 not printed in the Gazette.]

1,217,609. AUTOMOBILE-JACK. JOHN LAMPRECHT, Sumner, Iowa. Filed Sept. 10, 1915. Serial No. 50,018. (Cl. 254—91.)



1. A jack of the character described comprising a base, links pivoted to the base, side bars pivoted to upper ends of the links, a pair of transverse bars arranged across the forward ends of said base, a screw rotatably mounted centrally through one of said bars, a sprocket wheel carried by said screw, a cross head threaded on the screw, a vertical standard having its lower end connected to said transverse bars, a brace bar having its upper end connected to the upper end of said standard and its lower end connected to the transverse bars, a supporting bar pivotally secured to the brace bar, a shaft rotatably mounted in said supporting bar, sprocket wheel carried by said shaft, a chain mounted over said sprocket wheels of the shaft and screw, and means on the lower end of said supporting bar coöperating with the standard for varying the adjustment of said bar for tensioning said chain.

2. A jack of the character described comprising a base, a pair of spaced transverse bars arranged across and connected to the forward end of said base, a screw rotatably mounted centrally through one of said bars, a sprocket on the end of the screw, a standard connected to and rising vertically from one end of said bars, a diagonal brace bar connected to the upper end of the standard, its opposite end connected to the free ends of said transverse bars, a supporting bar pivotally secured to the brace bar and depending downwardly therefrom and located between the spaced transverse bars, a shaft journaled in said supporting bar, a sprocket carried by said shaft, a chain passing over the sprockets, a crank for manually rotating the shaft, links pivoted to the sides of the base, side bars pivoted to the upper ends of the links, a cross head threaded on the screw whereby upon turning said screw, the said cross head will be moved longitudinally of the base, rods connecting the cross heads with the side bars for raising the same upon rotation of the crank shaft, and means in the lower end of the supporting bar coöperating with the standard for adjusting the tension of said chain.

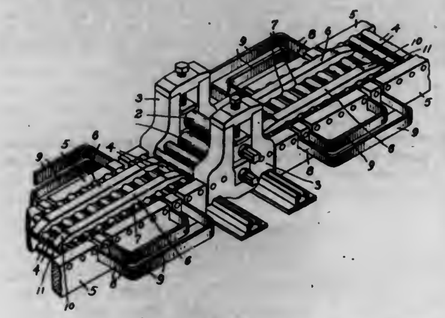
1,217,610. MARCEL WAVER. CHARLES LAVIE, New York, N. Y. Filed Aug. 11, 1916. Serial No. 114,349. (Cl. 132—19.)



1. In an implement of the class described, the combination with a handle having its side and rear edges formed concavely, of a thin sinuous web having an elliptical cross section formed with said handle, and a plurality of inverted conical projections extending from said web upon opposite sides, uniformly spaced and so disposed that the projections on one side are directly opposite the spaces between the projections on the other side.

2. In an implement of the class described, the combination with a flat handle having a concavely formed rear end, a thin sinuous web extending from said handle, inverted conical projections extending oppositely from said web alternating with the spaces between said projections, and a projection of lesser length formed directly opposite the outermost projection on the rib, said short projection having an enlarged head slotted longitudinally and adapted to have hair strands secured therein.

1,217,611. GUIDE FOR ROLLING-MILLS. WALTER WALLACE LECK, Steelton, Pa. Filed Sept. 26, 1916. Serial No. 122,225. (Cl. 80—51.)



1. In combination with reducing rolls, a pair of laterally adjustable guide bars adapted for adjustment with relation to the pass of the rolls each having a downwardly sloping terminal.

2. In combination with reducing rolls, a pair of laterally adjustable guide bars adapted for adjustment with relation to the pass of the rolls each having a downwardly sloping terminal and a retaining lip.

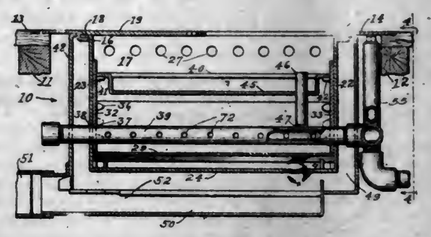
3. In combination with reducing rolls and a series of feed rollers therefor, a pair of laterally adjustable guide bars laid across the feed rollers each having its terminal adjacent the reducing rolls sloped downwardly for clearance of the article being rolled.

4. In combination with reducing rolls and a series of feed rollers therefor, a pair of laterally adjustable guide bars laid across the feed rollers each having its opposite terminals sloped downwardly for clearance of the article being rolled.

5. In combination with reducing rolls and a series of feed rollers therefor, a pair of laterally adjustable guide bars laid across the feed rollers each having its terminal adjacent the reducing rolls sloped downwardly for clearance of the article being rolled and provided with a downwardly extending retaining lip engaging over one of the feed rollers.

[Claim 6 not printed in the Gazette.]

1,217,612. FLOOR-HEATER. HERMAN W. LEONARD, Los Angeles, Cal. Filed May 27, 1916. Serial No. 100,338. (Cl. 126—116.)



1. A floor heater, comprising a heat chamber, air inlet openings disposed upon the opposite sides of said chamber, baffle partition members disposed within said chamber and adjacent said openings, a false bottom member mounted with its outwardly extending edges beneath said baffle partitions, a fuel burner disposed above said false bottom, said false bottom being provided with openings for supplying air of combustion to said burner, heat diffusing means mounted over the burner, means for conducting fresh air to and delivering it for circulation within the heat chamber, and means whereby said floor heater may be supported by and dependent beneath a floor.

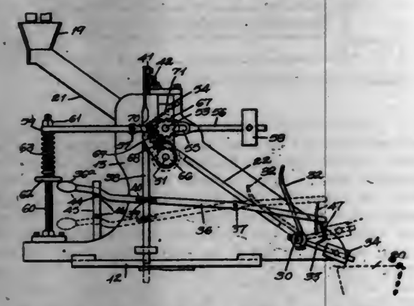
2. A floor heater, comprising an outer casing, an air conduit connected therewith, means for supporting said casing beneath a floor, a heat chamber disposed within said casing, a burner mounted within and adapted to extend the length of said heat chamber, baffle partitions mounted vertically either side of said burner, a false bottom provided in said chamber upon which the baffle partitions are adapted to rest, means for allowing the passage of air through said false bottom, a compound baffle plate mounted over the burner, a suitable grate disposed over and in communication with the heat chamber, and means whereby a circulation of air may be maintained from the conduit through the outer casing into the heat chamber and outwardly through the grate member.

3. A floor heater, comprising a floor plate, a grate disposed over an opening in said plate, means for supporting a heat chamber formed integral with said plate, a heat chamber dependent from said supporting means, a series of false lining members of a heat absorbing and retaining substance positioned within the heat chamber, a false bottom wall mounted within said heat chamber, means formed integral with said bottom wall whereby a circulation of air may be maintained beneath it and through it, a pair of vertically disposed parallel baffle partitions, a longitudinally extending fuel burner positioned between said baffle partitions and over the false bottom member, means for diffusing the heat radiated from said burner, and means whereby a circulation of air may be had through the heat chamber and upwardly through the grate.

4. A floor heater, comprising a rectangular floor plate, a rectangular opening formed through said floor plate, a heat chamber suspended from the floor plate and through the rectangular opening, a grate member mounted over said rectangular opening, a pair of oppositely disposed end lining members positioned within the heat chamber and against the end walls thereof, a false bottom member adapted to rest upon the floor of the heat chamber and between the end walls, means whereby a circulation of air may be maintained beneath the false bottom and therethrough, a pair of baffle partitions adapted to rest upon the opposite outer edges of said false bottom, baffle partition engaging lugs formed upon the end lining members and adapted to detachably secure the partition members in a vertical position, ventilating openings formed through the side walls of the heat chamber adjacent the baffle partitions, a fuel burner extending the longitudinal length of the heat chamber and between the baffle partitions, a demountable heat-diffusing member mounted over said fuel burner, said heat diffusing member comprising a centrally

disposed plate and a pair of plates disposed above said central plate and spaced apart, means for mounting said diffusing member upon the end finings, an outer casing inclosing said heat chamber, and an adjustable air inlet conduit in connection with said outer casing whereby air will be supplied to the heat chamber.

1,217,613. AUTOMATIC MAGNETIC SEPARATOR FOR MILLS. HENRY O. LITTLE, Bridgewater, Mass. Filed Nov. 4, 1916. Serial No. 129,489. (Cl. 83—71.)



1. In combination, a chute having an inclined bottom provided with an outlet port near its lower end and a magnetizable section above said port, means for magnetizing and demagnetizing said section, a movable deflector adapted when in one position to form a portion of said bottom, and when in another position to direct magnetizable bodies through said port, yielding means normally holding the deflector in its deflecting position, and deflector-restraining means including an adjustable member and a detent therefor, and adapted under one adjustment of said member to prevent the action of said yielding means, and positively hold the deflector in its port-closing position, said member when under another adjustment permitting the action of said yielding means.

2. In combination, a chute having an inclined bottom provided with an outlet port near its lower end and a magnetizable section above said port, means for demagnetizing and demagnetizing said section, a movable deflector adapted when in one position to form a portion of said bottom, and when in another position to direct magnetizable bodies through said port, yielding means normally holding the deflector in its deflecting position, and deflector-restraining means including a lever, a flexible connection between said lever and said yielding means, the lever being movable to a position preventing the action of the yielding means, and a detent for releasably securing the lever in said position, the release of said lever and its movement from said position permitting the action of said yielding means.

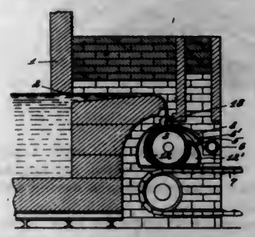
3. In combination, a chute having an inclined bottom provided with an outlet port near its lower end and a magnetizable section above said port, means for magnetizing and demagnetizing said section, a movable deflector adapted when in one position to form a portion of said bottom, and when in another position to direct magnetizable bodies through said port, yielding means normally holding the deflector in its deflecting position, deflector-restraining means including a lever, a flexible connection between said lever and said yielding means, the lever being movable to a position preventing the action of the yielding means, and a detent for releasably securing said lever in said position, the release of said lever and its movement from said position permitting the action of said yielding means, a gate adapted to close the chute at a point above said magnetizable section, and gate opening and closing connections between said lever and the gate, adapted to close the gate when the lever is moved from said position.

4. In combination, a chute having an inclined bottom provided with an outlet port near its lower end and a magnetizable section above said port, means for magnetizing and demagnetizing said section, a movable deflector adapted when in one position to form a portion of said bottom, and when in another position to direct magnetizable bodies through said port, yielding means normally holding the deflector in its deflecting position, deflector-restraining means including a lever, a flexible connection between said lever and said yielding means, the lever being movable to a position preventing the action of the yielding means, and a detent for releasably securing said lever in said position, the release of said lever and its movement from said position permitting the action of said yielding means, a gate adapted to close the chute at a point above said magnetizable section, gate opening and closing connections between said lever and the gate, adapted to close the gate when the lever is moved from said position, and an armature having a rigid mechanical connection with the deflector and adapted to be temporarily held by the magnetizable section after the closing of the gate with the deflector in its port-closing position to permit the delivery of material remaining on the chute below the gate, before the movement of the deflector to its deflecting position.

5. In combination, a chute having an inclined bottom provided with an outlet port near its lower end and a magnetizable section located above said port and projecting laterally from one side of the chute, means for magnetizing and demagnetizing said section, a movable deflector adapted when in one position to close said port and form a portion of said bottom and when in another position to direct magnetizable bodies through said port, a rock shaft carrying said deflector, an armature on said rock shaft located outside the chute and adapted to be held by the laterally projecting portion of said section with the deflector in its port-closing position when the section is magnetized, and yielding means acting on said rock shaft to turn the latter and move the deflector to its deflecting position when the section is demagnetized.

[Claims 6 to 9 not printed in the Gazette.]

1,217,614. GLASS MANUFACTURE. THOMAS J. MCCOY, Kane, Pa. Filed Nov. 13, 1913. Serial No. 800,750. (Cl. 49—32.)



1. An apparatus of the character described, comprising a receptacle for containing molten glass means for receiving and conveying the glass as it flows from said receptacle comprising a rotary conveyer, means for introducing a wire trellis into the glass at a point between the receptacle and the rotating conveyer, means for maintaining a lateral tension to the trellis during the glass coating operation, means for applying a configured surface to the glass by its contact with said rotary conveyer means for supporting and conveying the glass in a horizontal plane during the congealing period, and means for applying a configured surface to the glass by its contact with said horizontal supporting and conveying means.

2. An apparatus of the character described, comprising a receptacle for containing molten glass, means for receiving and conveying the glass as it flows from said receptacle comprising a rotary conveyer, means for applying a cooling agent to said rotary conveyer, means for introducing a wire trellis into the glass at a point between the receptacle and the rotary conveyer, means for maintaining a lateral tension to the trellis during the glass coating operation, means for applying a configured surface to the glass by its contact with said rotary conveyer, means for supporting and conveying the glass in a horizontal position during the congealing period, and means for applying a configured surface to the glass by its contact with said horizontal supporting and conveying means.

3. An apparatus of the character described, comprising a receptacle for containing molten glass, means for receiving and conveying the glass as it flows from said receptacle comprising a rotary conveyer, means for introducing a wire trellis into the glass at a point between the receptacle and the rotary conveyer, means for compensating for the natural sag of the wire trellis by feeding it between two curved surfaces, normally elevating the medial line of the trellis at a point prior to its contact with the glass during the coating operation, means for applying a configured surface to the glass by its contact with said rotary conveyer, means for supporting and conveying the glass in a horizontal position during the congealing period, and means for applying a configured surface to the glass by its contact with said horizontal supporting and conveying means.

4. An apparatus of the character described, comprising a receptacle for containing molten glass having a horizontal discharge opening therein, means for supporting a roll of wire trellis adjacent to said opening, means for applying a positive movement to the trellis, means for introducing the trellis into the glass in a convex concave formation, means for applying plastic glass to said trellis, and means for conveying the glass coated trellis in a horizontal plane during its congealing period.

5. An apparatus of the character described, comprising a receptacle for containing molten glass having a horizontal discharge opening therein, means for supporting a roll of wire trellis in close proximity to said discharge opening, means for applying positive movement to the wire trellis, means for introducing the trellis into the glass flow with its medial line elevated above the outer edges, means for applying molten glass to said trellis with its medial line in said elevated position, means for reducing the medial line of the trellis into plane formation with the edges as the glass is applied thereto, and means for conveying the glass coated trellis in a horizontal plane during its congealing period.

[Claims 6 to 8 not printed in the Gazette.]

1,217,615. EXHAUST DEVICE FOR INTERNAL-COMBUSTION ENGINES. JAMES MCDOWELL, Brooklyn, N. Y. Filed Sept. 2, 1916. Serial No. 118,291. (Cl. 123—194.)



1. In an internal combustion engine, in combination, a muffler, an exhaust pipe extending rearwardly therefrom, a hood surrounding but spaced from said pipe said hood having a bell shaped mouth extending nearly to the muffler and a rearwardly extending contracted stem, the exhaust pipe being perforated near the inner end of the bell shaped mouth.

2. In an internal combustion engine, in combination, a muffler, an exhaust pipe extending rearwardly therefrom, a hood surrounding but spaced from said pipe said hood having a bell shaped mouth extending nearly to the muffler and a contracted stem extending rearwardly beyond the exhaust pipe, the exhaust pipe being perforated near the inner end of the bell-shaped mouth.

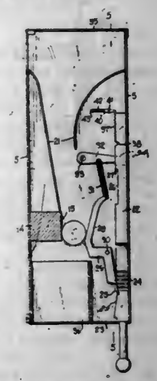
3. In an internal combustion engine, in combination, a muffler, an exhaust pipe extending rearwardly therefrom, and a conical hood embracing said pipe with its larger end toward the muffler and its end of smaller diameter spaced from the pipe said hood being adjustable longitudinally upon the pipe.

4. In an internal combustion engine, in combination, a muffler, an exhaust pipe extending rearwardly therefrom, a clamp locked upon said pipe, a conical hood surrounding said pipe with its larger end toward the muffler, and a plurality of wires having one set of ends fixed to the clamp and their other ends fixed to the conical hood the wires serving to both position the hood longitudinally and to space the hood from the pipe.

5. In an internal combustion engine, in combination, a muffler, an exhaust pipe extending rearwardly therefrom, a hood surrounding said pipe the hood having a bell shaped mouth directed toward the muffler and a contracted stem spaced uniformly over a substantial part of its length from the pipe, and a plurality of wires lying between stem and pipe and serving as spacing members one set of ends of the wires being attached to the hood and the other set of ends being attached to the pipe.

[Claim 6 not printed in the Gazette.]

1,217,616. VENDING-MACHINE. JAMES HERVEY MANN, Jr., Pine Bluff, Ark. Filed Aug. 26, 1916. Serial No. 117,083. (Cl. 194—93.)



1. In a coin controlled vending machine, a rectilinearly movable actuator bar, a pivoted arm actuated by said bar, and an operating connection between said arm and the locking element to move the latter to its effective position and lock the actuator bar against an operative movement, said element being held against such movement by a deposited coin, the connection between said element and the arm permitting of a continued operating movement of the actuator bar.

2. In a coin controlled vending machine, a rectilinearly movable actuator bar, a movable locking element, and means connected to said element and at all times operatively engaged with the actuator bar, whereby the element is moved to its effective locking position to prevent the operative movement of the actuator bar, said element being engaged by a deposited coin and held against movement to its effective position and said connecting means permitting of the operative movement of the actuator bar.

3. In a coin controlled vending machine, a rectilinearly movable actuator bar, a pivoted locking bar, an arm pivotally mounted at one end of its ends and operatively engaged at its other end with the actuator bar, and a coil spring connecting said arm to the locking bar to move said locking bar to its effective position and hold the actuator bar against an operating movement, said locking bar being engaged and held against movement to its locking position by a deposited coin.

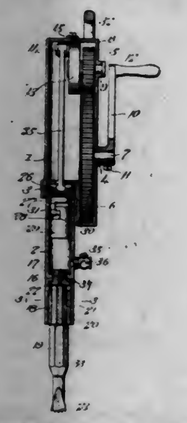
4. In a coin controlled vending machine, a movable actuator bar, a locking bar pivoted intermediate of its ends, means operatively connecting one end of the locking bar to the actuator bar, whereby the locking bar is actuated in the initial movement of the actuator bar to en-

gage the actuator bar and hold the latter against further movement, said locking bar being adapted for engagement by a deposited coin on one side of its pivot and held thereby in its normal position to permit of a complete operative movement of the actuator bar, said bar co-acting with the locking bar on the relatively opposite side of its pivot to move the locking bar and release the coin.

5. In a coin controlled vending machine, a movable actuator bar, a pivoted locking bar, yieldable means operatively connecting the locking bar to the actuator bar, whereby the locking bar is moved in the initial movement of the actuator bar into locking engagement with the latter bar to hold the same against a complete operating movement, said locking bar being engaged by a deposited coin and held against movement from its normal position to permit of a complete operative movement of the actuator bar, and means for moving the locking bar to release the coin.

[Claims 6 to 8 not printed in the Gazette.]

1,217,617. DRILLING-MACHINE. FRANK MAROVITCH, Nelson, British Columbia, Canada. Filed Dec. 13, 1915. Serial No. 66,663. (Cl. 255—42.)

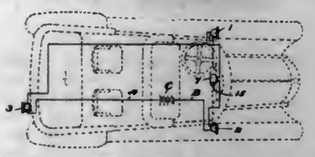


1. A drilling machine comprising a cylinder, a bushing mounted in said cylinder at one end thereof and provided with an opening to receive and hold a cutting tool to permit endwise movement thereof, a hammer mounted in said cylinder to be capable of reciprocatory movement to thus direct driving blows against the tool and said hammer recessed at the end away from the head thereof and provided with a dentil disposed to extend transversely, a piston mounted in the cylinder recessed at the end adjacent to the hammer to receive the dentil thereof in a loose fit and provided with a dentil to be received in the recess of the hammer, and means to actuate said piston to have reciprocatory movement in the cylinder and to thus impart this movement to the hammer.

2. A drilling machine comprising a cylinder, a bushing mounted in one end of said cylinder and provided with an opening to receive and hold a cutting tool to permit endwise sliding movement thereof, a hammer block mounted in the cylinder in bearing engagement with the inner end of the tool and arranged to be capable of limited reciprocatory movement, a hammer mounted in the cylinder to be capable of reciprocatory movement into and out of engagement with the hammer block to thus direct driving blows against the tool and recessed at its end to provide a laterally extending dentil, a piston mounted in the cylinder recessed at that end adjacent to the hammer and provided with a laterally disposed dentil, said piston and hammer so formed that the dentil of the one may be fitted in the recess of the other and the hammer will thus be mounted in conjunction with the piston to be positively carried therewith but to have a certain degree of lost movement, said tool and hammer block provided with registering passages extending into the cylinder, the piston being arranged in a manner that on its down stroke to bring the hammer against the hammer block it will compress air within the cylinder to be forced through the registering and alined passages to blow the cuttings from the working end of the tool, and a valved inlet passage to supply air to the cylinder.

4. A drilling machine comprising a cylinder, a bushing mounted in one end of said cylinder and provided with an opening to receive and hold a cutting tool to permit endwise sliding movement thereof, a hammer block mounted in the cylinder in bearing engagement with the inner end of the tool and arranged to be capable of limited reciprocatory movement, a hammer mounted in the cylinder to be capable of reciprocatory movement into and out of engagement with the hammer block to thus direct driving blows against the tool and recessed at its end to provide a laterally extending dentil, a piston mounted in the cylinder recessed at that end adjacent to the hammer and provided with a laterally disposed dentil, said piston and hammer so formed that the dentil of the one may be fitted in the recess of the other and the hammer will thus be mounted in conjunction with the piston to be positively carried therewith but to have a certain degree of lost movement, a casing connected with that end of the cylinder within which the piston works, an eccentric mounted in said casing, a connecting rod extending from the eccentric to the piston, and manually actuatable means to turn said eccentric to cause reciprocatory movement of the piston and to thus accomplish the driving blows against the tool.

1,217,618. TIME-CONTROLLED ELECTRIC SWITCH. FREDERICK A. MECHAU, Washington, D. C., assignor to John M. Biddle, Washington, D. C., and William C. Marrow, Narragansett Pier, R. I. Filed June 27, 1916. Serial No. 106,158. (Cl. 161—27.)

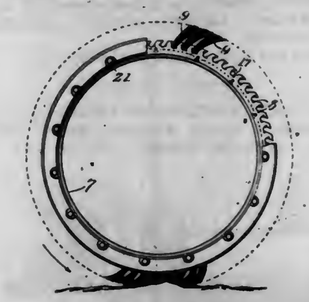


1. A clock controlled electric switch, comprising a plate carried on the frame of a clock, a fixed contact carried thereon and insulated therefrom, bracket members attached to said clock frame having slots therein, a spring-pressed switch member slidably carried in said slotted brackets, a detent on said member, a trip mechanism adapted to be operated at a predetermined time, a laterally extending arm carried on said switch member adapted to be contacted with said fixed contact, a spring-arm actuated by the trip mechanism for engaging said detent on the sliding switch member to hold same out of contact with the fixed contact and for releasing same at a predetermined time, and means for moving said sliding member into engagement with said spring arm and holding it against release when desired, substantially as described.

2. A clock controlled electric switch, comprising a fixed contact, a spring-pressed slidable switch member having a detent thereon, an arm for engaging the detent on said switch member to hold same out of contact with said fixed contact, a trip mechanism for releasing said arm at a predetermined time, and means for holding said sliding switch member against release when desired.

3. A clock controlled electric switch, comprising a plate carried on the frame of a clock, a fixed contact carried thereon and insulated therefrom, bracket members attached to said clock frame having slots therein, a spring-pressed switch member slidably carried in said slotted brackets, a detent on said member, a trip mechanism adapted to be operated at a predetermined time, a laterally extending arm carried on said switch member adapted to be contacted with said fixed contact, and a spring-arm actuated by the trip mechanism for engaging said detent on the sliding switch member to hold same out of contact with the fixed contact and for releasing same at a predetermined time, substantially as described.

1,217,619. RESILIENT TIRE. ARTHUR EMIL MOLIN, Rockford, Ill. Filed May 12, 1916. Serial No. 97,009. (Cl. 152—8.)



1. A resilient tire comprising a tire member having a plurality of spaced grooves in its periphery extending crosswise of the same, a bolt disposed lengthwise in each groove and projecting beyond the ends thereof, a plurality of closely associated wire strips turned beneath said bolts in the grooves and extending outwardly therefrom forming the tread of the tire, side rings shaped to coöperate with the said projecting ends of the bolts to hold the same and the wire strips in connection with the tire member, and means for securing the said rings to the tire member.

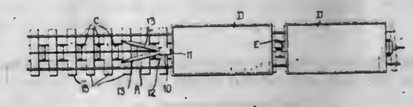
2. A resilient tire comprising a tire member having on its periphery a plurality of spaced grooves extending crosswise and obliquely of the same, a bolt disposed in each groove, a plurality of U-shaped wire strips secured beneath each bolt and extending outwardly therefrom so as to collectively form a wire brush like tread, and rings at each side of the tire member coöperating with the ends of the bolts to hold the same against radial displacement and thereby secure the wire strips in connection with the tire member.

3. A resilient tire comprising a tire member, the periphery of which is formed with a plurality of relatively closely arranged transverse grooves, a plurality of U-shaped wire strips positioned side by side in each groove with their bent portions within the grooves and their arms extending outwardly forming a brush like tread, and a member engaged between the arms and against the bends of the wire strips in each groove and secured to the tire member for holding the wire strips against outward displacement from the grooves.

4. A resilient tire comprising a tire member, the periphery of which is formed with a plurality of relatively closely arranged transverse and obliquely extending grooves, and spring wire strips closely packed in each groove and extending outwardly therefrom in a tangential direction so as to collectively form a continuous brush like tread.

5. A resilient tire comprising a tire member provided on its periphery with a plurality of transverse grooves, a plurality of unitary brush like packs of spring wire strips, and means for detachably securing a pack in each groove, the packs being shaped to collectively form a continuous flexible tread and being independently removable from the tire member.

1,217,620. SAFETY-STOP FOR MINE-CARS. WILLIAM D. MOON, Blocton, Ala., assignor of one-half to Clyde W. Lowrey, Blocton, Ala. Filed Dec. 2, 1916. Serial No. 134,644. (Cl. 188—76.)



1. A safety attachment for mining cars comprising a casing adapted to receive and engage with the rear end of a draw bar, and a drag bar pivotally mounted in the rear end of the casing.

2. A safety attachment for mining cars comprising a socket member adapted to fit over the end of a draw bar and be detachably connected therewith, and rearwardly divergent drag bars pivotally mounted for vertical movement in the other end of the socket member.

3. A safety attachment for mining cars comprising a socket member adapted to fit over the end of a draw bar and be detachably connected therewith, and rearwardly divergent drag bars pivotally mounted for vertical movement in the other end of the socket member, the under side of the socket member being cut away at its rear end to permit the drag bars to extend downward and rearward, the top of the socket member preventing too great upward movement of the drag bars.

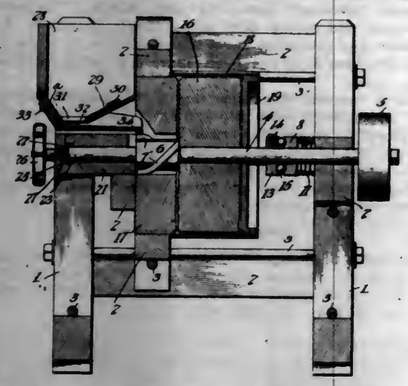
4. A safety attachment for mining cars comprising a socket member adapted to be disposed over the end of a draw bar and detachably connected therewith, and rearwardly divergent drag bars pivotally mounted in the rear end of the socket member for independent vertical movement.

5. A safety attachment for mining cars comprising a socket member rectangular in cross section and relatively shallow and adapted to be disposed over and engaged with the rear end of a draw bar, the socket member having perforations in its upper and lower walls for the reception of an attaching pin to the draw bar, the bottom of the socket member at its rear end being cut away so as to be shorter than the top and the side walls of the socket member at its rear end being perforated, a pivot pin passing through the last named perforations, and divergently disposed drag bars pivoted upon said pin and having limited vertical movement within the socket member.

1,217,621. FEED-REGULATOR. MELTON MORRIS, Dutton, Ala. Filed July 10, 1913. Serial No. 778,320. (Cl. 83—44.)

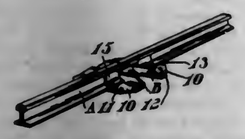
A feed regulator for a grinding mill comprising in combination, a frame, a shaft horizontally supported by said frame, an enlarged collar formed upon said shaft having spirally formed spaced feeding ribs said collar serving as a stop limiting the movement of said shaft in one direction, a hopper having a discharge opening located forward of said collar said hopper ending in an oblique front bottom portion, a tray having an oblique front portion arranged for coaction with said oblique hopper bottom portion and ending in a lip at its inner end arranged to

alternately ride upon said collar and ribs, and a pivot passing through said oblique tray portion to said oblique



hopper portion, whereby said tray is pivotally supported at its forward end, as, and in the manner set forth.

1,217,622. RAIL-JOINT. FRANZ NEUDORF, Horndean, Manitoba, Canada. Filed Jan. 24, 1916. Serial No. 73,993. (Cl. 239—6.)



In a rail joint of the class described, a pair of chairs of substantially angle section each provided with an inverted T-shaped recess in the vertical member thereof adapted to engage the web and lower flange of a rail, lugs on the horizontal member of each chair adapted to embrace the lower flange of the rail, and cover straps located in the T-shaped recess and engaging with the said lugs.

1,217,623. EXPANDING AND CONTRACTING GAS-RECEIVER. FRANK NORMAN, Des Moines, Iowa, assignor of eight thirty-seconds to Douglas J. Landers, seven thirty-seconds to William A. McAtee, four thirty-seconds to Alphonso B. Lovan, two thirty-seconds to George W. Young, and one thirty-second to William T. Shores, Springfield, Mo., and two thirty-seconds to Clarence H. Nichols, New York, N. Y. Filed June 24, 1916. Serial No. 105,608. (Cl. 48—178.)



1. A gas receiver of the character described, comprising a series of expansible chambers communicating with each other alternately at alternately opposite ends, and arranged so that the walls of the adjacent chambers will be pressed into contact by the pressure of the gas within the chambers, and inlet and outlet passages for admitting and withdrawing gas from the receiver.

2. A gas receiver of the character described, comprising a series of expansible chambers communicating with each other alternately at alternately opposite ends, and arranged so that the walls of the adjacent chambers will be pressed into contact by the pressure of the gas within the chambers, inlet and outlet passages for admitting and withdrawing gas from the receiver, and means for preventing displacement of any of the compartments or chambers of the series.

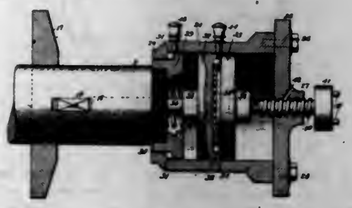
3. A gas receiver of the character described, comprising a series of chambers having expansible side walls arranged to be pressed into contact with each other by the pressure of the gas within the chambers, means preventing movement of the chambers away from each other, passages connecting adjacent chambers of the series at alternately opposite ends, and supply and withdrawal pipes communicating with the side chambers, respectively, of the series.

4. A gas receiver of the character described, comprising a support, a series of gas receiving chambers mounted on said support and having expansible sides arranged to be pressed into contact with each other by the pressure of the gas within the chamber and to contract out of contact by the inherent resiliency thereof, passages connecting adjacent chambers of the series at alternately opposite ends, whereby the gas is passed through the series of chambers in a tortuous course, and inlet and outlet passages communicating with the side chambers of the series respectively.

5. A gas receiver of the character described, comprising a series of expansible chambers arranged to be expanded by the pressure of the gas and to contract automatically to force the gas therefrom, passages connecting adjacent chambers of the series at alternately opposite ends, elements preventing lateral movement of the chambers at the sides of the series, and inlet and outlet pipes for said chambers.

[Claims 6 and 7 not printed in the Gazette.]

1,217,624. CLUTCH-ACTUATING MEANS. CLAUDE NULI and ERNEST A. BAKER, Rochester, Wash. Filed Apr. 28, 1914. Serial No. 834,928. (Cl. 192—8.)



1. In a device of the character described, the combination with a cylindrical casing having a contracted opening at one end, a collar revolubly mounted within said casing and projecting into said contracted opening, a revoluble shaft adjustably connected to said collar, a ball bearing between said collar and the contracted portion of the casing, a disk revolubly and slidably supported within and by said casing and adjacent said collar, means mounted for longitudinal movement within the shaft and connected at one end to said disk, expansible means between said disk and shaft, a second disk revolubly and slidably supported in said casing, a ball bearing interposed between the said disks permitting their independent rotation, means longitudinally shiftable on the shaft and subject to end thrust in operation to move the means mounted within the shaft, and means for adjusting said disks relatively to the said collar.

2. A device of the character described comprising a cylindrical casing, a casing head closing one end thereof, a revoluble collar in the opposite end of the casing, a revoluble shaft connected to said collar for rotating the same, a pin axially carried in one end of the shaft, and mounted for longitudinal movement therein, a disk revolubly mounted in said casing having a recessed central boss loosely engaging the free end of the pin, a spring encircling said boss and engaging at its ends the shaft and one face of said disk respectively, the opposite face of said disk having a ball raceway, a second disk revolubly carried in the casing and having the face opposing the said first disk provided with a ball race-way, bearing balls located in said raceways, means longitudinally shiftable on the shaft and subject to end thrust to move the aforesaid pin, and movable means interposed between the opposite face of the said disk and the head of the casing for adjusting said second disk toward the first disk, whereby end thrust on the second disk reacts on the casing.

3. A device of the character described comprising a casing of substantially cylindrical form, a casing head closing one end of said casing, a feed screw extending through said casing head, a revoluble collar constituting a partial closure for the opposite end of the casing, a revoluble shaft adjustably connected to said collar, an axial pin loosely mounted in one end of said shaft, means longitudinally shiftable on said shaft and subject to end thrust to move said axial pin, a disk revolubly mounted in said casing and having a centrally recessed boss on its face toward the shaft, said axial pin slidably engaging said boss, a spring encircling said boss and engaging at its ends, said disk and shaft, a second disk revolubly mounted in the casing toward the casing head, a circular series of balls interposed between said disks and engaging the opposing faces thereof, and means for rotating the feed screw, whereby end thrusts are counterbalanced and taken by the casing.

1,217,625. TEMPORARY-LEAF HOLDER FOR BOOKS. ALBERT WESLEY OSTERHOUT, Bethany, Nebr. Filed June 20, 1916. Serial No. 104,745. (Cl. 129—39.)



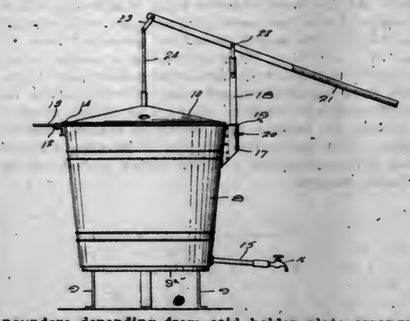
1. A book including a cover having a back and permanent leaves bound within the cover and having the binding spaced from the back, in combination with temporary leaf holding means, and means permanently located in the space between the cover back and leaf binding to secure said leaf holding means in place.

2. A book including a cover having a back and permnent leaves bound within the cover, leaving a space between the cover back and binding, a socket member permanently located in the space between the cover back and said leaf binding, and temporary leaf holding devices having portions that detachably engage in the socket member.

3. A book comprising covers, a back and permanent leaves bound therein, in combination with pocket elements located in the ends of the book between the back and leaf binding and comprising flexible doubled strips having their free ends outwardly extended, said pocket elements having sockets provided with open mouths and temporary leaf holding devices comprising elastic straps having terminal tongues that detachably engage in the sockets.

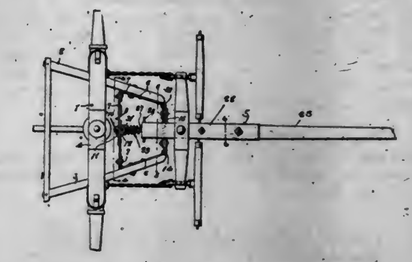
1,217,626. WASHING-MACHINE. THOMAS A. PATTERSON, Sabinal, Tex., assignor of one-fortieth to Leff S. Carter, Sabinal, Tex. Filed Oct. 26, 1915. Serial No. 57,985. (Cl. 68—19.)

A washing machine including a tub, a dished holder plate movable vertically within said tub having the concave surface disposed downwardly and constituting an auxiliary pounder, and a plurality of frusto-conical



pounders depending from said holder plate arranged inwardly and extending a distance below the outer edge of the latter.

1,217,627. WAGON-TONGUE. ROBERT B. PEARCY, Thalia, Tex. Filed Oct. 3, 1916. Serial No. 123,589. (Cl. 21—36.)



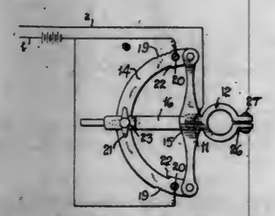
1. In a vehicle tongue structure, the combination, with an attaching structure including a pair of adjustably connected bracing plates, attaching plates connected to said bracing plates, plates hingedly connected to the forward ends of said attaching plates, of a substantially U-shaped member connected to said hinged plates, a tongue slidably supported by said U-shaped member, a bolt connected to said bracing plates and said hinged plates, a substantially U-shaped member connected to said tongue and having its bight portion slidably connected to said bolt, and springs coiled about said bolt and engaging said bight portion.

2. In a vehicle tongue structure, the combination with an attaching structure, of a substantially U-shaped member connected to said attaching structure, a tongue slidably connected to said U-shaped member, a second substantially U-shaped member attached to said tongue, a bolt carried by said attaching structure and extending slidably through the bight portion of said second U-shaped member, springs coiled about said bolt and engaging said bight portion for yieldably holding said tongue against longitudinal movement.

1,217,628. SIGNALING DEVICE. JAMES FRANK PERETI, Trenton, N. J. Filed July 22, 1916. Serial No. 110,776. (Cl. 175—282.)

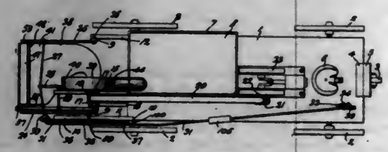
1. A circuit closer comprising two relatively movable members, one of said members being provided with spaced contacts and the second member being interposed between said contacts, said members being provided with coacting means whereby the second member is prevented from engaging the contacts of the first member, and a contact member pivotally engaged with the second named member and adapted to be extended beyond either side thereof for engagement with the contacts of the first named member.

2. A circuit closer comprising two relatively movable members, one of said members being provided with spaced contacts and the second member being interposed between said contacts, said members being provided with coacting means whereby the second member is prevented from engaging the contacts of the first member, a contact member pivotally engaged with the second named member and adapted to be extended beyond either side thereof for engagement with the contacts of the first named member, and means for holding said members against relative movement when the contact member of the second named member is in engagement with one of the contacts of the first named member.



3. A circuit closer comprising two relatively movable members, one of said members being provided with spaced contacts and a shoulder positioned inwardly of each of said contacts, the second named member being provided with means adapted to contact with said shoulders to prevent said member from engaging the contacts, and a movable contact member carried by the second named member adapted to extend beyond either side thereof to engage a contact of the first named member.

1,217,629. HARVESTER. DAVID JACKSON PITTS, Bowman, Ga. Filed Nov. 1, 1916. Serial No. 128,948. (Cl. 56—2.)



1. In a clover seed harvester, a vehicle; a receptacle carried by the vehicle; a frame mounted to swing vertically on the rear end of the vehicle; a suction and blower mechanism on the vehicle and discharging into the receptacle; a movable inlet member discharging into said mechanism and mounted at its rear end to move with the frame; a rotary beater journaled on the frame and cooperating with the rear end portion of the inlet member; a motor on the vehicle; means for operatively connecting the motor with the suction and blower mechanism; means for operatively connecting the suction and blower mechanism with the rotary beater; and means under the control of an operator and mounted on the vehicle, for raising and lowering the frame.

2. In a clover seed harvester, a vehicle; a receptacle carried by the vehicle; a frame mounted to swing vertically on the rear end of the vehicle; a suction and blower mechanism on the vehicle and discharging into said mechanism; a movable inlet member discharging into the receptacle and mounted at its rear end to move with the frame; a rotary beater journaled on the frame and cooperating with the rear end portion of the inlet member; a motor carried by the vehicle; means for connecting the motor with the suction and blower mechanism; means for connecting the suction and blower mechanism with the beater; means carried on the vehicle and under the control of an operator for raising and lowering the frame; and spring means operatively connected with the frame for supporting the frame yieldingly.

3. In a clover seed harvester, a vehicle; a receptacle carried by the vehicle; a frame mounted to swing vertically on the rear end of the vehicle; a suction and blower mechanism on the vehicle and discharging into the receptacle; a movable inlet member discharging into said mechanism and mounted at its rear end to move with the frame; a rotary beater journaled on the frame and cooperating with the rear end portion of the inlet member; means for operating the suction and blower mechanism; means for operating the beater; a rock shaft journaled on the vehicle; arms carried by the rock shaft; a yoke connecting one arm with the frame; an operating member mounted on the vehicle; a connection between the other arm and the operating member; an extension spring; means for connecting one end of the extension spring to the last specified arm; and means for connecting the other end of the extension spring with the vehicle.

4. In a clover seed harvester, a vehicle; a receptacle carried thereby; a frame mounted to swing vertically on the rear end of the vehicle; a suction and blower mechanism on the vehicle and discharging into the receptacle, the suction and blower mechanism including a shaft; a motor mounted on the vehicle; a belt forming an operative connection between the motor and the shaft of the suction and blower mechanism; a movable inlet member discharging into said mechanism and mounted at its rear end to move with the frame; a rotary beater journaled on the frame and coöperating with the rear end portion of the inlet member; a belt forming an operative connection between the rotary beater and the shaft of the suction and blower mechanism; a rock shaft mounted to swing on the vehicle and comprising arms; means for connecting one of said arms with the frame; an operating member carried by the vehicle; a yieldable connection between the operating member and the other of said arms; a retractile spring; means for connecting one end of the retractile spring with one of said arms; and means for connecting the other end of the retractile spring with the vehicle.

5. In a clover seed harvester, a vehicle; a receptacle carried by the vehicle; a frame mounted to swing vertically on the rear end of the vehicle; a suction and blower mechanism on the vehicle and discharging into the receptacle; a movable inlet member discharging into said mechanism and mounted at its rear end to move with the frame; a rotary beater journaled on the frame and cooperating with the rear end portion of the inlet member; means for operating the beater; means for operating the suction and blower mechanism; and means under the control of an operator and mounted on the vehicle, for raising and lowering the frame.

1,217,630. HYPODERMIC NEEDLE. GEORGE G. POWERS, Los Angeles, Cal. Filed Nov. 22, 1916. Serial No. 132,781. (Cl. 128—25.)



1. In a device of the character described, a barrel, a hollow piston therein, and a hollow needle mounted on the end of the barrel and projecting inwardly into the barrel and into the hollow piston.

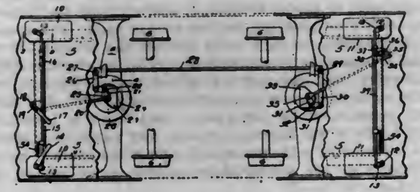
2. In a device of the character described, a barrel, a hollow piston therein, a hollow needle having a mounting collar on its middle portion, and means at the end of the barrel for holding the needle by clamping its collar, one end of the needle projecting into the barrel and into the hollow piston.

3. In a device of the character described, a hollow needle, and a mounting collar therefor embodying an exterior ring of relatively hard metal and a core of relatively soft metal surrounding the needle and within the ring.

4. Mounting means for a hypodermic needle or the like, embodying a mounting collar on the needle comprising an exterior ring of relatively hard metal and a core of relatively soft metal around the needle within the ring, and a needle holder embodying two members screw-threadedly engaging each other and adapted to press oppositely against the ends of the soft metal of the needle collar.

5. In a device of the character described, a barrel, a hollow piston therein, a needle holder on the end of the barrel comprising a member forming a barrel head and a cap screw-threaded on said member, a needle extending longitudinally through the said member and said cap and projecting into the barrel and into the hollow piston, a mounting collar on the needle held between the said member and cap, said collar embodying an outer ring of relatively hard metal and an inner filling of relatively soft metal, the soft metal filling being held and compressed longitudinally between said member and said cap.

1,217,631. SANDING DEVICE FOR STORAGE-BATTERY LOCOMOTIVES. CHARLES A. PRATT, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Original application filed Jan. 22, 1916, Serial No. 73,568. Divided and this application filed July 10, 1916. Serial No. 108,397. (Cl. 105—60.)



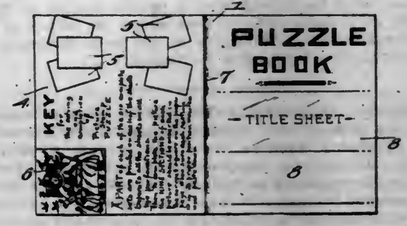
1. A locomotive comprising three sections, a central section and two end sections, pivotally connected together, driving wheels on one of said end sections, a sanding device for discharging sand upon the track in proximity to said driving wheels, means for actuating said sanding devices from one of said end sections, and a compensating connection extending from one end section to the other to compensate for the variation in the relative positions of the two end sections when passing around curves.

2. A locomotive comprising three sections, a central section and two end sections, pivots connecting the end sections with the central section, driving wheels on each of said end sections, a sand receptacle located on the rear end section and adapted to discharge sand in proximity to a driving wheel of said section, controlling mechanism for controlling the discharge of sand from said sand receptacle from the front of the locomotive, comprising a series of connecting pieces extending from the front of the locomotive to the rear thereof and including two bell crank levers pivotally connected with the central section near the pivots which connect it with the end sections and parts pivotally connected with each of said bell crank levers at points directly over the pivots which pivot the central section to the end sections, whereby the movement of the end sections in traveling around curves, will not cause a movement of the bell crank levers.

3. A locomotive comprising three sections, a central section and two end sections pivotally connected together, driving wheels on each of said end sections, a sanding device for discharging sand upon the track in proximity to said driving wheels, a controlling mechanism therefor, extending from said end section to the other end section, and means for controlling said controlling mechanism from said latter end section when the several sections are in all their various positions.

4. A locomotive comprising a central section and two end sections pivotally connected together, driving wheels on each of said end sections, sand boxes associated with the driving wheels of one end section, for discharging sand upon the track in proximity to said driving wheels, valves for said sand boxes, an actuating device on the other end section, a connection between said actuating device and said valves comprising a rod connected with said actuating device, a pivoted lever to which said rod is pivoted, the pivotal connection between the lever and the rod being in line with the pivotal connection between the central section and the end section carrying said actuating device, a connection leading from said pivoted lever to a second pivoted lever associated with the end section carrying the sand boxes, a rod pivotally connected with said second pivoted lever at a point in line with the pivotal connection between the central section and the last mentioned end section, and a connection between said pivoted lever and said valves whereby the valves of said sand boxes of one section are actuated by the actuating device on the other section in all the various positions of the section.

1,217,632. PICTURE-PUZZLE. CLARENCE F. PRITCHARD, New York, N. Y. Filed Feb. 14, 1916. Serial No. 78,302. (Cl. 46—41.)



1. A device of the character described, comprising a book with a detachable leaf insertion comprising sections separable one from another by perforated lines, each section having designated thereon a picture part or a verse part or both, the parts being fortuitously arranged, and a plurality of pages with spaces whereon to assemble said parts in proper association.

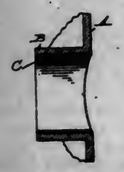
2. A device of the character described, comprising the combination of a book having pages divided into spaces and bearing the titles of pictures or themes, and a mixed collection of picture parts such as to form a plurality of pictures when properly assembled, said picture parts being in sheet form, perforated and gummed like stamps, so that the unrelated parts may be separated from each other and affixed in proper association in the spaces of the pages of the book to form the pictures.

3. A device of the character described, comprising a book including a permanent part and a leaf or leaves comprising a mixed collection of picture or verse parts or both fortuitously associated in the sheet and separable from each other so that they may be assembled in proper association upon the permanent part of the book.

4. A picture puzzle comprising a sheet or sheets subdivided into a multiplicity of rectangular sections, each bearing a picture part, the parts being fortuitously arranged for the purpose of being separated and recombined.

5. In a picture puzzle, a pane or sheet of stamp-like picture parts, gummed and perforated and fortuitously arranged, for the purpose of being torn apart and recombined upon a suitable surface.

1,217,633. COMPOSITE BEARING FOR WROUGHT-METAL STRUCTURES AND METHOD OF FORMING THE SAME. ALDEN L. PUTNAM, Detroit, Mich., assignor to Detroit Pressed Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 31, 1916. Serial No. 87,952. (Cl. 64—10.)



1. The combination with a wrought metal structure having a portion thereof forming a working bearing, of a facing for said bearing of relatively high-fusing cast metal molecularly integrated therewith.

2. The combination with a wrought metal structure having a portion thereof forming a working bearing, of a facing for said bearing formed of cast iron fused thereon and molecularly integrated therewith.

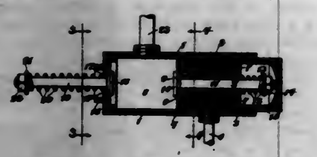
3. The combination with a pressed sheet-metal structure having a portion thereof forming a working bearing, of a facing for said bearing formed of cast iron fused thereon and molecularly integrated therewith.

4. The method of forming composite bearings comprising the pressing of sheet iron or steel to the form required, machining the surface and coacting the machined surface with a facing of cast iron fused thereon and heated to a point where it will molecularly unite with the sheet steel.

5. The method of re-facing wrough metal structures comprising the flowing over a portion thereof of fused cast metal under sufficient heat to fuse the surface of the wrought metal and integrate the cast metal therewith.

[Claim 6 not printed in the Gazette.]

1,217,634. ACETYLENE-GAS MIXER. FRANK NORMAN, Des Moines, Iowa, assignor of eight thirty-seconds to Douglas J. Landers, seven thirty-seconds to William A. McAtee, four thirty-seconds to Alphonso B. Lovan, one thirty-second to William T. Shores, and two thirty-seconds to George W. Young, Springfield, Mo., and two thirty-seconds to Clarence H. Nichols, New York, N. Y. Filed June 24, 1916. Serial No. 105,606. (Cl. 48—180.)



1. An acetylene gas mixer, comprising a casing, an inner wall secured within the casing intermediate of the ends thereof, an outer wall secured within the casing intermediate of the ends thereof, a gas receiving chamber within the casing whose walls are the casing and said inner and outer walls, an end wall secured to the casing, a mixing chamber within the casing between the end wall and the inner wall, passages from the receiving chamber through the inner wall into the mixing chamber, a puppet valve controlling said passages, a stem in connection with said valve extending through said inner and outer walls, a spring normally retaining said puppet valve in position to close said passages and arranged to yield under the pressure of the gas against said valve to enable the gas to enter the mixing chamber, passages through said end wall for admitting air into said mixing chamber, a puppet valve controlling the air passages, and a spring normally retaining the last-named puppet valve in position to close the air passages and arranged to yield under pressure of the air against said valve to enable the air to enter the mixing chamber.

2. An acetylene gas mixer, comprising a casing, two walls removably mounted transversely within said casing and having their edges in connection therewith, an axial connection between said walls, a gas receiving chamber in said casing between said walls and around said connection, a mixing chamber in said casing, passages from said receiving chamber through one of said walls to said mixing chamber, a puppet valve controlling said passages, a stem in connection with said valve extending through both of said walls, a spring encircling said valve stem outside said outer wall normally retaining said puppet valve in position to close said passages and arranged to yield under the pressure of the gas against said valve to enable the gas to enter the mixing chamber, an adjustable abutment for said spring on said valve stem for varying the tension of said spring and thereby the resistance of said valve against the pressure of the gas, passages for admitting air into said mixing chamber, a puppet valve controlling said air passages, and a spring normally retaining said last-named puppet valve in position to close said air passages and arranged to yield under the pressure of the air against said valve to enable the air to enter the mixing chamber.

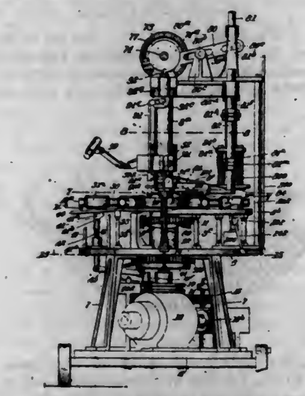
3. An acetylene gas mixer, comprising a casing, a gas receiving chamber in said casing, an outer transverse wall removably mounted in said casing, an inner transverse wall within said casing spaced from and integrally connected to said outer wall, an end wall in connection with the casing, a mixing chamber in said casing formed by said inner and end walls and the wall of the casing, passages from said receiving chamber through said inner wall to said mixing chamber, a puppet valve controlling said passages, a valve stem in connection with said valve extending through said walls, a spring encircling said stem bearing against said outer wall and normally retaining said puppet valve in position to close said passages and arranged to yield under the pressure of the gas against said valve to enable the gas to enter the mixing chamber, means for varying the tension of said spring and thereby the resistance of said valve against the pressure of the gas, a puppet valve controlling said air passages, a spring normally retaining said last-named puppet valve in position to close said air passages and arranged to yield under the pressure of the air against said valve to enable the air to enter the mixing chamber, and means for varying the tension of said last-named spring and thereby the resistance of the second-named puppet valve against the pressure of the air.

4. An acetylene gas mixer, comprising a casing; an element, removably mounted in said casing, comprising an inner wall, an outer wall and an axial connection uniting said walls; a gas receiving chamber formed between said inner and outer walls within the casing around said connection; a passage for admitting gas into said chamber; a mixing chamber within said casing; a series of passages from said receiving chamber into said mixing chamber; a valve controlling said series of passages; a valve stem in connection with said valve extending through said inner and outer walls and through said connection; a spring encircling said valve stem and arranged to hold said valve in position to close said series of passages and to yield to the pressure of the gas; a device for varying the tension of said spring to vary the resistance of the valve against the pressure of the gas, air inlet passages opening into said mixing chamber, and means for controlling the passage of air through said passages.

5. An acetylene gas mixer, comprising a casing; an element, removably mounted in said casing, comprising an inner wall, an outer wall and an axial connection uniting said walls; a gas receiving chamber formed between said inner and outer walls within the casing around said connection; a passage for admitting gas into said chamber; a mixing chamber within said casing; a series of passages from said receiving chamber into said mixing chamber; a valve controlling said series of passages; a valve stem in connection with said valve extending through said inner and outer walls and through said connection; a spring encircling said valve stem and arranged to hold said valve in position to close said series of passages and to yield to the pressure of the gas; a device for varying the tension of said spring to vary the resistance of the valve against the pressure of the gas; and passages for admitting air into said mixing chamber.

[Claims 6 to 9 not printed in the Gazette.]

1,217,635. GLASS-MOLDING MACHINE. CARL RANKIN, Wellsburg, W. Va., assignor to Jefferson Glass Company, Follansbee, W. Va., a Corporation. Filed Feb. 11, 1916. Serial No. 77,566. (Cl. 49—37.)



1. In a molding machine, the combination of a revolving multiple mold carrier movable step by step to different positions, a pressing plunger coöperating with the molds successively in pressing position, means to operate the carrier and the plunger including a clutch, means to disengage the clutch with the plunger in pressing position, means to reëngage the clutch after such disengagement, means to disengage the clutch again before the carrier movement is started, and a manually operated device controlling the last mentioned means, said device being operable in advance of the disengagement of the clutch by the last mentioned means, whereby such disengagement is avoided.

2. In a molding machine of the type having a rotary mold carrier and a pressing plunger, the combination of a driving mechanism for the carrier and plunger including a clutch, means to intermittently stop the carrier with the molds in pressing position, a stop device coöperating with the clutch to disengage the same with the plunger in pressing position, timing mechanism operating on said stop device to reëngage the clutch, another stop device coöperating with the clutch to prevent starting of said carrier, and a manually operated trip connected to the last mentioned stop device and adapted to release the same and prevent the stopping action thereof, and means operated by said driving mechanism to reset the last mentioned stop device after its release.

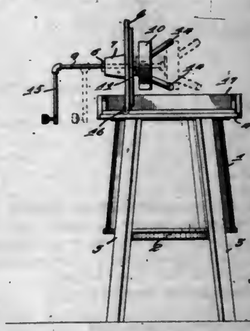
3. In a starting mechanism for a molding machine of the type having a mold carrier movable step by step to charging and other positions, the combination of a clutch controlling said movement, a knock-out rod controlling said clutch, a spring-pressed trip rod connected to said rod and adapted when set to hold the same in position to disengage said clutch, and a trip lever engaging said trip rod and located in a position adjacent the mold being charged and adapted when released to permit the spring to operate said trip rod and allow the clutch to reëngage.

4. In a molding machine of the type having a multiple mold carrier movable step by step to charging and other positions, the combination of a clutch adapted to operate said carrier, a knock-out rod controlling the clutch, a trip rod connected to the knock-out rod, a spring engaging the trip rod and tending to shift the same and withdraw the knock-out rod to permit engagement of the clutch, means automatically actuated to shift the trip rod against the pressure of the spring and advance the knock-out rod into position to disengage the clutch, and a trip lever adapted to engage the trip rod when so shifted, the trip lever being positioned adjacent the mold in charging position and adapted for release by a charging tool.

5. In a molding machine of the type having a revolving multiple mold carrier movable step by step to register molds with pressing and discharging positions, the combination of means to invert a mold at discharging position, a reciprocating plunger, mechanism to operate said plunger on a mold in pressing position, and means operated by said mechanism to tap the inverted mold in discharging position.

[Claims 6 to 17 not printed in the Gazette.]

1,217,636. WASHING-MACHINE. WILLIAM N. RETTINGER, Bourbon, Ind. Filed May 18, 1916. Serial No. 98,367. (Cl. 68—15.)



A washing machine of the class described comprising a body, said body provided with a corrugated lining, the corrugations extending vertically in said lining, a bottom positioned within said body and formed of a plurality of interlocking and compactly arranged segments, each segment provided with an upwardly inclined rib at its outer edge and terminating in a depending lip extending longitudinally throughout its length for producing a blunt scrubbing rib at each side edge of each segment, and said blunt scrubbing rib radiating from the center of said body.

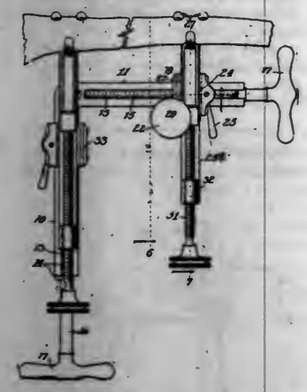
1,217,637. BONE-SETTING DEVICE. LOUIS G. RINK, Wilmette, Ill., assignor to Sharp & Smith, Chicago, Ill., a Corporation of Illinois. Filed Mar. 30, 1916. Serial No. 87,665. (Cl. 128—52.)

1. A bone setting device comprising an angular member, a bone gripping clamp removably mounted on each part thereof and capable of being locked in initially adjusted position, and means to adjust both of said clamps relatively in two directions in the same plane to aline the bone sections and move them longitudinally into engagement after the initial adjustment.

2. A bone setting device comprising an angular member, a bone gripping clamp mounted on each part of said angular member, means whereby said clamps may be locked in initially adjusted position, means for subsequently adjusting the clamps relatively in two directions in the same plane and a third adjusting means operable in a direction transversely to the plane of the first adjustment whereby the bone sections may be alined and moved longitudinally into engagement.

3. A bone setting device comprising a channeled angular member, blocks on each part of said angular member, bone gripping clamps removably mounted in said blocks, means for locking the clamps in initially adjusted position in said blocks, and means adapted to move the blocks relatively in two directions in the same plane to aline the bone sections and then move the bones longitudinally into engagement.

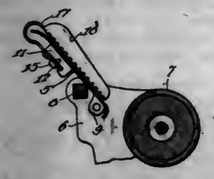
4. A bone setting clamp comprising an L-shaped channeled member, a block mounted upon each part of said member, bone setting clamps adapted to be initially adjusted with said blocks and locked therein, auxiliary means to adjust the clamps relatively in two directions in the same plane, and a third adjusting means carried by one of said blocks adapted to permit adjustment of one of the clamps in a plane transverse to the first mentioned plane.



5. A bone-setting device comprising an angular frame, clamp-holders on the frame, means to adjust one clamp-holder in one direction and the second in a direction at right-angles thereto, and bone-engaging clamps adjustably and removably mounted in the clamp-holders.

[Claim 6 not printed in the Gazette.]

1,217,638. PAPER-EDGE GUIDE. ALVAH C. ROEBUCK and ADOLPH J. PRUSZYNSKI, Woodstock, Ill., assignors to Woodstock Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Aug. 30, 1915. Serial No. 47,915. (Cl. 197—142.)



1. A paper edge guide comprising a slotted guide, a member slidable therein having a bent portion at one end to prevent it sliding from the support, and a removable stop at the other end to prevent the member sliding from the support and a spring to hold the member yieldingly in place.

2. A paper edge guide comprising a paper table, a bracket secured to the table and ends bent therefrom with recessed slots therein, and a member having an arm slidable in the slots with an extension thereof bent over the top of the table to the opposite side thereof.

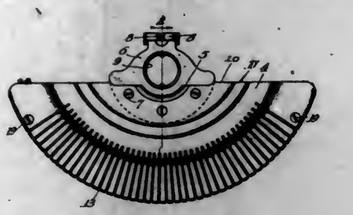
3. A paper edge guide comprising a member with a portion adapted to engage the edge of paper and an arm extending therefrom having a strengthening rib extending longitudinally thereof, and a single support with opposite ends formed with recessed slots in which the said arm is slidable.

4. A paper edge guide comprising a paper table, a support at the rear thereof having outstanding parts with recessed slots therein in alinement longitudinally of the table, a member having an arm slidable in the said slots with a guide portion extending over the edge of the table to the opposite face thereof, and a spring tending to press the member outwardly in the slots to hold it yieldingly in place and to hold the portion on the opposite side of the table adjacent the face thereof.

5. A paper edge guide comprising a paper table, a support at the rear thereof comprising projecting slotted portions, a member having an arm with a groove slidable in the said slots with a paper guiding portion extending to the opposite side of the table, and a spring disposed between the paper table and the arm having projections to engage in the groove of the said arm for holding the arm in place.

[Claims 6 and 7 not printed in the Gazette.]

1,217,639. TYPE-BAR SEGMENT. ALVAH C. ROEBUCK, Woodstock, Ill., assignor to Woodstock Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Jan. 17, 1914. Serial No. 812,617. (Cl. 197—40.)



1. An upright type bar segment for only front strike typewriters having inclined deflecting surfaces at the front of the segment graduated in width and disposed one below the other.

2. An upright type bar segment for a front strike typewriter with three deflecting surfaces at the front of the segment arranged one in advance of the other.

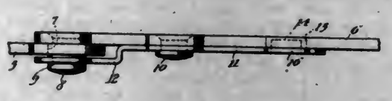
3. An upright type bar segment with one beveled and two curved front deflecting surfaces at the front side of the segment.

4. In a type bar segment for front strike typewriters, an inclined deflecting surface adjacent the top of the segment, a type bar abutment, and a curved deflecting surface at the upper edge of the abutment and below the inclined surface, all disposed on the front side of the segment.

5. An upright type bar segment for front-strike typewriters, formed at the outer edge with a slotted reinforcement in which the type bars are pivoted, the slots being open at the top, the top reinforcement curving outwardly from the front face of the segment to form a dirt deflecting surface, and an abutment above the reinforcement against which the type bars strike, the abutment being formed integral with the segment and with a dirt-deflecting surface at the upper side of the abutment.

[Claims 6 and 7 not printed in the Gazette.]

1,217,640. LINK CONNECTION. ALVAH C. ROEBUCK, Woodstock, Ill., assignor to Woodstock Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Mar. 13, 1914. Serial No. 824,582. (Cl. 24—211.)



1. The combination, with a member provided at one end with a stud, of another member provided at one end with a perforation to fit the stud closely, and a locking lever pivoted intermediate its ends to the studded member and of substantially the same width as the studded member, with a hook at one end to engage over the stud and with a finger-graspable portion at the other end which extends beyond the member to which it is attached on either side when the hook is in engagement with the stud.

2. The combination with a pair of members, one having a stud at its end and the other having a perforation to fit over the stud, of a locking member pivoted intermediate its ends adjacent the end of the studded member, the studded member being formed with a recess at a distance from its end, the said lever being formed at one end to engage the end of the stud and at the other end with a locking tongue to engage the said recess of the studded member.

3. The combination with a pair of links, one provided with a stud at one end and the other provided with a perforation to fit the stud, and a locking lever pivoted intermediate its ends to the studded member having a hook at one end to engage the outer end of the stud, the said studded member being formed with a recess, the locking lever being formed with a coöperating tongue at the end opposite the hook to engage the recess, the locking lever being of substantially the same width as the studded member to which it is pivoted, except at the end adjacent the tongue, where it has lateral projections to constitute a lifting means on each side of the studded member for disengaging the tongue from the recess in order to disengage the hook of the lever from the stud.

4. The combination with a pair of link members to be connected, one formed at one end with a stud having a notch at its outer end, the other formed with a perforation to fit over the stud, and a locking lever of substantially the same width as the studded member pivoted intermediate its ends adjacent the stud of the said studded member, the locking lever having an offset hooked portion to engage the notch of the stud and having at the other end an engaging tongue and lateral extensions on both sides, the said studded member having a recess for engaging the tongue which may be disengaged by raising its end of the lever by means of the laterally extending portions.

5. In combination, a pair of links one being provided with a perforation at its end, a stud connected to the end of the other link adapted to project through and fit the perforation of the other member and having a groove in the projecting end, a resilient lever pivotally connected intermediate its ends to and substantially as wide as the studded link, formed at one end with an offset portion in which is a hook adapted to engage with the groove of the stud, and at the other end, with a portion of greater width than the studded member, to form a finger-hold on both sides of the member when the hook is in engagement with the stud, and a tongue and slot connection between the studded member and that end of the lever opposite the hook for locking the lever releasably in connection with the link, from which it may be disengaged by raising the finger-hold portion.

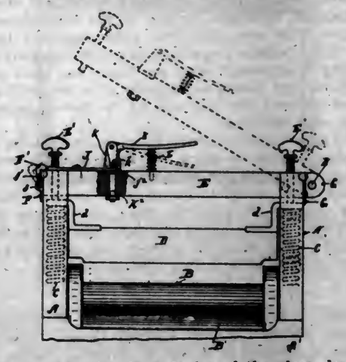
1,217,641. COMPOUNDS FOR PRESERVING BEER. GEORGE ROTTENKOLBER, Cornwall, Ontario, Canada. Filed July 21, 1916. Serial No. 110,513. (Cl. 99—1.)

1. The herein described composition of matter consisting of potassium pyrosulfite, tartaric acid and sodium bicarbonate substantially as and for the purpose specified.

2. The herein described composition of matter for preserving beer, and preparing it for the market consisting of potassium pyrosulfite 13 oz. tartaric acid 2 oz. sodium bicarbonate 1 oz. substantially as described.

1,217,642. PRESSURE-RELEASING MECHANISM. PAUL H. SCHENDLER, Erie, Pa. Filed Nov. 16, 1916. Serial No. 131,734. (Cl. 68—32.)

1. The combination in a device of the class described, of a transverse bar adapted to be placed between the upper bifurcated ends of the end posts of a clothes wringer, pressure regulating screws in said bar, a plate secured upon the upper end of one of the end posts of the wringer, a spring pressed hook pivoted in said plate adapted to engage the upper side of the end of said bar adjacent to said hook, ears on said hook overlapping and engaging said plate, a sliding plate secured on said transverse bar, one end of which engages said hook, and a vertically movable spring pressed lever mounted on said transverse bar engaging said slidable plate, substantially as set forth.



2. The combination in a device of the class described, of a transverse bar adapted to be placed between the upper bifurcated ends of the end posts of a clothes wringer, a plate secured on one of said wringer end posts having ears thereon, a pivot pin passing through said ears and one end of said transverse bar, a spring pressed hook secured on the other of said wringer end posts adapted to engage the upper side of the opposite end of said transverse bar, a lever and slide mechanism adapted to disengage said hook from said bar, substantially as described.

1,217,643. ELECTRICAL WATER-PURIFYING APPARATUS. GEORGE J. SCHNEIDER, Detroit, Mich. Filed Aug. 23, 1915. Serial No. 46,978. (Cl. 204—25.)



1. An apparatus for purifying water, comprising spaced electrodes, a head associated with said electrodes at one end of the same, binding screws passing through the terminal head and engaging the respective electrodes securing the latter to the head, conductors engaging said binding screws, and a cap detachably engaging the head and inclosing said binding screws, said cap being apertured to give passage to said conductors.

2. An apparatus for purifying water, comprising a pair of spaced electrodes, an insulator head secured to said electrodes at one end of the same, conductors attached to said electrodes upon said head, a perforated metallic casing inclosing said electrodes, having screw-threaded engagement with said insulator head, and a cap secured to said insulator head sealing the connection between said electrodes and conductors.

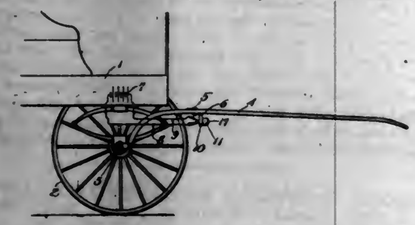
3. An apparatus for purifying water, comprising spaced non-corrodible electrodes, a head to which said electrodes are attached, conductors connected with said electrodes upon said head, a flexible waterproof tubing surrounding

said conductors, and a cap surrounding the connections between said conductors and electrodes and forming a sealing joint with said tube.

4. An apparatus for purifying water, comprising spaced non-corrodible electrodes, a head to which said electrodes are attached, terminals carried by the head respectively connected with said electrodes, a fin upon the head between the terminals, a cap inclosing said terminals having a sealing engagement with the head, and tube passing through the cap having an annular collar within the head, clamped between the cap and fin by the engagement of the cap with the head.

5. An apparatus for purifying water, comprising spaced electrodes, a head to which said electrodes are attached, terminals carried by the head respectively connected with said electrodes, a cap inclosing said terminals having a sealing engagement with the head, and a tube passing through said cap having an annular collar within the cap, said collar being clamped between the cap and head to seal the passage of said tube through the cap.

1,217,644. VEHICLE-LIGHT. ELIAS W. SCHURMAN, Central Bedeque, Prince Edward Island, Canada, assignor of one-half to Alford M. Graham, Boston, Mass. Filed Aug. 28, 1914. Serial No. 859,136. (Cl. 240—7.)



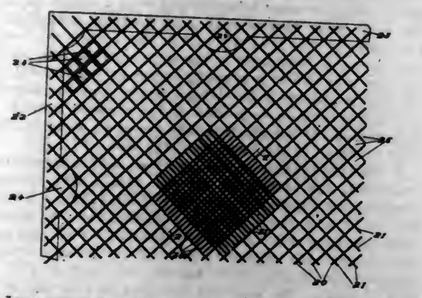
1. In combination, an electric light on the shaft of a horse-drawn vehicle, said light being arranged to be secured under and shadowed by a shaft of the vehicle, means to attach the light under said shaft, said attaching means cooperating with the light and shaft to enable the light to illuminate the roadway for both horse and driver, while said shaft shields the vision of both from the glare of the light, said light comprising a relatively small electric searchlight having an inclosing casing, a lens, and a reflector held by yielding means in said casing, the attaching means uniting the lamp and vehicle shaft consisting in a bracket clamp, detachably secured to the shaft.

2. In combination, an electric light having an inclosing casing with its forward portion flanged inwardly, a lens adapted to be held in said casing against the flange, a reflector also held within said casing by yielding means and adapted to retain the lens in contact with the inturned flange of the casing, yielding means between the lens and reflector to prevent noise and rattling, a relatively small electric light within the reflector and means to supply current thereto, together with a vehicle shaft carrying said light, in position under the shaft to constitute said shaft as a shield of the light from the driver.

1,217,645. CONCRETE BUILDING. KARL R. SCHUSTER, New York, N. Y., assignor to Francis M. Barton, Chicago, Ill. Filed Feb. 9, 1911. Serial No. 607,620. (Cl. 72—15.)

1. In a concrete building the combination with a floor slab and supporting column therefor of main reinforcing rods for the floor slab and an auxiliary reinforcement incorporated in the floor and disposed over the column, said auxiliary reinforcement being formed of two sets of intersecting rods, the end portions of these latter being inclined downwardly to cross or intersect the horizontal plane of the main reinforcing rods and said downwardly inclined portions of the auxiliary rods being bent back so as to form loops through which the main reinforcing rods extend.

2. In a concrete building, the combination with a floor slab, a supporting column therefor, and main reinforcing rods to take care of the positive bending moment of said slab, of an auxiliary reinforcement embedded in the floor slab near the top surface thereof and positioned in substantially the vertical plane of said supporting column for taking care of the negative bending moment of said floor slab, said auxiliary reinforcement being separate from said main reinforcing rods and being composed of rods the end portions of which are extended downwardly from the horizontal plane of the body of said auxiliary reinforcement, said downwardly extended end portions of the rods composing said auxiliary reinforcement having loops which receive the main rods and said downwardly extending end portions constituting shear members for the floor slab supporting column.



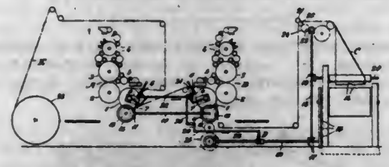
3. In a concrete building, the combination with a floor slab, a supporting column therefor, and main reinforcing rods to take care of the positive bending moment of said slab, of an auxiliary reinforcement embedded in the floor slab near the top surface thereof and positioned substantially in the vertical plane of said supporting column for taking care of the negative bending moment of said floor slab, said auxiliary reinforcement being separate from said main reinforcing rods and comprising rods each of which has a portion thereof disposed horizontally in the same plane as all the other rods and the end portions of which rods are inclined downwardly from the horizontal plane of the body forming said horizontal portions of the rods composing said auxiliary reinforcement, said downwardly inclined portions of the auxiliary rods being locked with the main reinforcing rods and constituting shear members for the floor slab capital of said supporting column.

4. In a concrete building, the combination with a floor slab, a supporting column therefor, and main reinforcing rods embedded in the floor slab near the under surface thereof for taking care of the positive bending moment, of an auxiliary reinforcement embedded in the floor slab near the top surface thereof and positioned in vertical alinement with the column and the capital thereof for taking care of the negative bending moment of said slab, said auxiliary reinforcement consisting of rods separate and disconnected from the main reinforcing rods, said auxiliary rods each having a certain part thereof horizontally disposed over the column and the end portions of said auxiliary rods being inclined downwardly from the horizontal plane of the body of said auxiliary reinforcement formed by the horizontal portions of said rods, said downwardly inclined end portions of the auxiliary rods having locking engagement with said main reinforcing rods and constituting shear members for the floor slab of the supporting column.

5. In a concrete building, the combination with a floor slab, a supporting column therefor, and main reinforcing rods embedded in said slab near the under surface thereof, of auxiliary reinforcing rods embedded horizontally in said slab near the upper surface thereof and positioned over the supporting column, said auxiliary rods having their end portions extended downwardly from the plane of the horizontal portions thereof and said downwardly extended rods crossing the horizontal plane of the main reinforcing rods so as to serve as shear members for the floor slab where it joins with the column, said downwardly extended ends of the auxiliary rods being looped and said main rods extending through the loops of said extended ends of the auxiliary rods.

[Claims 6 to 15 not printed in the Gazette.]

1,217,646. WEB-PRINTING MACHINE. DAVID J. SCOTT, Plainfield, N. J., assignor to Isabella Scott and David J. Scott, executors of Walter Scott, deceased, Plainfield, N. J. Original application filed Apr. 10, 1915, Serial No. 20,402. Divided and this application filed Apr. 19, 1916. Serial No. 92,098. (Cl. 101—100.)



1. A web printing machine comprising: web printing and delivery means through which a web is threaded, means for driving said printing and delivery means to print and deliver the threaded web, means permitting the driving of the printing means without printing the web, and means for stopping the delivery means so that the threaded web remains stationary.

2. A web printing machine comprising: web printing means and delivery means through which a web is threaded, means for driving said printing and delivery means to print and deliver the threaded web, and means permitting the driving of the printing means independently of the delivery means while the threaded web remains unprinted and stationary.

3. A web printing machine comprising: printing means and delivery means through which a web is threaded, means for driving the printing and delivery means, means for tripping the printing means, and means for stopping the operation of the delivery means, whereby the threaded web remains unprinted and stationary.

4. A web printing machine comprising: printing means, forwarding rollers and delivery means through which a web is threaded, means for driving the printing means, the forwarding rollers and delivery means, thereby printing and delivering the web, and means permitting the driving of the printing means independently of the delivery means without printing or moving the web.

5. A web printing machine comprising: printing means, forwarding rollers and delivery means through which a web is threaded, means for driving the printing means, the forwarding rollers and delivery means, thereby printing and delivering the web, means permitting the printing means to operate without printing the web, and means for stopping the operation of the forwarding rollers and the delivery means.

[Claim 6 not printed in the Gazette.]

1,217,647. TRAVELER'S TRUNK. CHARLES E. SELDERS, Freeport, N. Y. Filed June 2, 1916. Serial No. 101,221. (Cl. 190—40.)

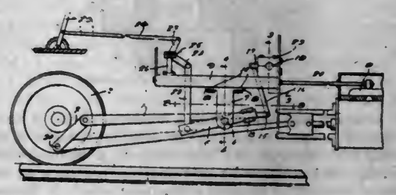
1. A traveler's trunk comprising a rectangular receptacle having sides and ends formed of a double wall or skeleton frame of fine meshed metal webbing superimposed on a sustaining filling of wooden board, said sides and ends being joined at the meeting corners by angle pieces and rivets passing through said double wall of metal web, filling and angle pieces substantially as shown and described.

2. A traveler's trunk comprising a rectangular receptacle having sides and ends composed of metal webbing of fine mesh superimposed on, and retained in place by a central sustaining filling of wood board, the metal webbing of said sides and ends at the meeting corners extending past the wood filling onto the adjacent walls, and secured thereto substantially as shown and described.



3. A traveler's trunk comprising a rectangular receptacle, composed of walls of metal webbing, sustained by a central stiffening filling, said metal webbing extending past the central filling at the joining ends and overlapping the adjacent wall, an exterior covering on the metal webbing, transverse layers of wood "*d*", corner strips "*o*" and means for securing said wood and corner strips to the metal webbing substantially as, and for the purpose shown and described.

1,217,648. STEAM-ENGINE VALVE-GEAR. WILLIAM L. SMITH, Tuscumbia, Ala. Filed June 29, 1915. Serial No. 37,003. (Cl. 121—97.)



1. A valve gear including an adjustable guide, a reciprocatory support slidable along the guide, an auxiliary pitman or eccentric rod pivotally connected at its front portion with and reciprocating the said support, means connected with the rear end of the auxiliary pitman or eccentric rod for actuating the same, mechanism connected with the front end of the auxiliary pitman or eccentric rod for connecting the same with the valve, and a reversing lever connected with the guide for adjusting the same.

2. A valve gear including a pivotally mounted adjustable guide, a reciprocatory support slidable along the guide, an auxiliary pitman or eccentric rod pivoted at its front portion to and reciprocating the support, a driving wheel having an auxiliary crank connected to the rear end of the auxiliary pitman or eccentric rod, means for transmitting motion from the front end of the auxiliary pitman or eccentric rod to a valve, and a reversing lever connected with the pivotally mounted guide for adjusting the same.

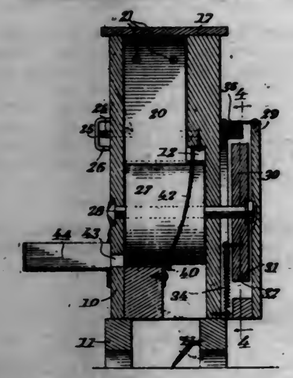
3. A valve gear including a pivotally mounted adjustable guide, a reciprocatory support slidable along the guide, an auxiliary pitman or eccentric rod pivoted at its front portion to the support and reciprocating the same, a driving wheel having an auxiliary crank connected to the rear end of the auxiliary pitman or eccentric rod, a reversing lever, means for connecting the same with the adjustable guide, and mechanism for transmitting motion from the auxiliary pitman or eccentric rod to a valve.

4. A valve gear including a guide, means for pivotally mounting the same, a reciprocating slide mounted on and movable along the guide, an auxiliary piston or eccentric rod pivoted to and supported at one end by the said slide and reciprocating the same, means for actuating the auxiliary pitman or eccentric rod, mechanism for transmitting motion from the same to a valve, and a reversing lever connected with the guide for adjusting the same.

5. A valve gear including a guide bar pivoted intermediate of its ends, a reciprocatory block slidable along the guide bar and provided with a pivot, an auxiliary pitman or eccentric rod connected at one end to the said block, means for actuating the auxiliary pitman or connecting rod, mechanism for transmitting motion from the auxiliary pitman or eccentric rod to a valve, and a reversing lever connected with the guide bar for adjusting the same.

[Claim 6 not printed in the Gazette.]

1,217,649. MATCH-SAFE. ELMER J. SNAPP, Strasburg, Va. Filed Mar. 4, 1916. Serial No. 82,146. (Cl. 206—22.)



1. A match safe comprising a housing having a chamber therein, a shaft extending through the chamber of said housing and through one wall thereof, a drum housing inclosing the outer end of said shaft, a partition in said chamber forming a hopper above said shaft, a delivery cylinder mounted upon said shaft within said chamber and provided with a longitudinally extending groove forming a pocket, a rod in said pocket, a bracket slidably mounted upon said rod, a spring mounted upon said rod and engaging said bracket to yieldably hold the bracket in a normal position, a cam strip extending in said chamber to guide the longitudinal movement of said bracket as said cylinder rotates, a drum mounted upon said shaft within said drum housing, resilient means engaging said drum to yieldably hold the same in a normal position, means for rotating said drum, and a striking surface carried by said housing adjacent an outlet formed therein.

2. A match safe comprising a receptacle having a chamber formed therein, a partition in the chamber providing a hopper in the upper portion thereof, a shaft rotatably carried by said receptacle and extending through said chamber, a delivery cylinder carried by said shaft within said chamber beneath said hopper and provided with a longitudinally extending groove forming a pocket, a cam strip extending through said chamber transversely of said cylinder, a bracket slidably mounted in said pocket and having its outer end portion engaging said cam strip, resilient means yieldably holding said bracket in engagement with said cam strip, and means for rotating said shaft to rotate said cylinder, said bracket moving in said pocket when said cylinder is rotated to move a match out of the pocket through an outlet opening in said receptacle.

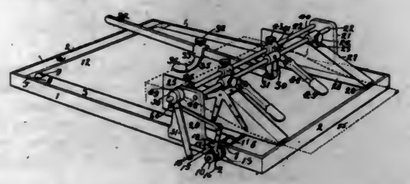
3. A match safe comprising a receptacle, a partition in said receptacle providing a hopper, a delivery cylinder rotatably mounted in said receptacle beneath said hopper and provided with a match receiving pocket, said receptacle being provided with an outlet, and means for moving a match longitudinally in said pocket and out of the outlet opening of said receptacle as the cylinder rotates.

4. A match safe including a receptacle, a delivery cylinder rotatably mounted in said receptacle and provided with a match receiving pocket moving into registry with an outlet opening in the receptacle when said cylinder rotates, and means moving a match in said pocket toward one end of the cylinder and through the outlet opening as said cylinder rotates.

5. A match safe including a receptacle provided with an outlet opening, a scratching element mounted adjacent said outlet opening, delivery means rotatably mounted in said receptacle and provided with a match holding pocket moving into registry with the outlet opening when the delivery means is rotated, and means for moving a match in said pocket into engagement with the striking element and out of said receptacle through the delivery opening as said delivery means rotates.

[Claims 6 and 7 not printed in the Gazette.]

1,217,650. FEEDING MECHANISM. ERLE B. SNYDER, Cleveland, Ohio, assignor of one-half to Frederick J. Ketcher, Akron, Ohio. Filed Oct. 9, 1916. Serial No. 124,536. (Cl. 101—39.)



1. A device of the character described comprising an intermittently traveling conveyer for supporting a stack of superposed sheets of material, supporting bearings on opposite sides of said conveyer, a rotatable shaft in said bearings, a rocking arm on said shaft, a finger loosely held on said arm the free end of which is adapted to engage the top sheet of said stack and move the same forwardly at a greater speed than the speed of travel of said conveyer and means for imparting a lateral movement to said shaft whereby said top sheet is moved simultaneously in two directions.

2. A device of the character described comprising an intermittently traveling conveyer for supporting a stack of superposed sheets of material, a guide along one side of said conveyer, supporting bearings on opposite sides of said conveyer, a rotatable shaft in said bearings, a rocking arm on said shaft, a finger loosely held on said arm the free end of which is adapted to engage the top sheet of said stack and move the same forwardly at a greater speed than the speed of travel of said conveyer and means for imparting a lateral movement to said shaft whereby said top sheet is moved simultaneously in two directions, the lateral movement of said shaft and finger arranged to bring the side edge of the sheet into contact with said guide for alining said sheet.

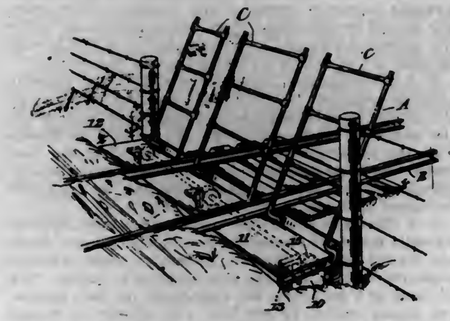
3. A device of the character described comprising an intermittently traveling conveyer for supporting a stack of superposed sheets of material, supporting bearings on opposite sides of said conveyer, a rotatable shaft in said bearings, a rocking arm on said shaft, a finger loosely held on said arm the free end of which is adapted to engage the top sheet of said stack and move the same forwardly at a greater speed than the speed of travel of said conveyer and means for imparting a lateral movement to said shaft whereby said top sheet is moved simultaneously in two directions, and means for holding the next succeeding sheet against movement in unison with said top sheet.

4. A device of the character described comprising an intermittently traveling conveyer for supporting a stack of superposed sheets of material, a guide along one side of said conveyer, supporting bearings on opposite sides of said conveyer, a rotatable shaft in said bearings, a rocking arm on said shaft, a finger loosely held on said arm the free end of which is adapted to engage the top sheet of said stack and move the same forwardly at a greater speed than the speed of travel of said conveyer and means for imparting a lateral movement to said shaft whereby said top sheet is moved simultaneously in two directions, the lateral movement of said shaft and finger arranged to bring the side edge of the sheet into contact with said guide for alining said sheet and means for holding the next succeeding sheet against movement in unison with said top sheet.

5. A device of the character described comprising an intermittently traveling conveyer for supporting a stack of superposed sheets of material, standards positioned on opposite sides of said conveyer and provided with bearings, a shaft mounted in said bearings extending above said conveyer, means to partially rotate the shaft on its axis, means to simultaneously move said shaft longitudinally of its axis, a finger loosely pivoted to said shaft and arranged to rock in unison with the partial rotation thereof the free end of which is arranged to engage the top sheet of said stack and move said sheet simultaneously in two directions.

[Claims 6 to 8 not printed in the Gazette.]

1,217,651. CATTLE-GUARD. ENGWALD JHON SORTLAND, Neutral Valley, Alberta, Canada. Filed Nov. 13, 1916. Serial No. 131,167. (Cl. 39—19.)

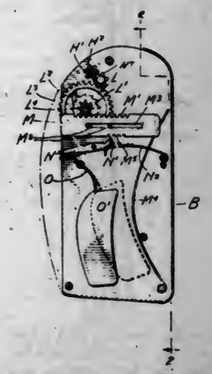


A cattle guard of the class described comprising a casing having a diagonally extending lateral entrance thereto, a transversely extending shaft operatively mounted in the casing, a pinion wheel on the shaft, a plurality of barrier members having offset ends passing through said lateral entrance and operatively connected to the shaft and designed to lie in a normally horizontal plane, a cover normally elevated from said casing, cover plates carried by the cover designed to bridge the space between the said cover and casing when the cover is elevated, vertical racks operatively supported by the cover meshing with the pinion wheels, diagonal braces extending from said racks to said cover, and springs designed to hold the cover in an elevated position, as and for the purpose specified.

1,217,652. HEAD-REST FOR BARBERS' CHAIRS. GEORGE WASHINGTON SPAHR, Sacramento, Cal. Filed Dec. 13, 1915. Serial No. 66,497. (Cl. 211—33.)

1. A head-rest for barbers' chairs including front and rear sections, the former of which is movable with respect to the latter, a paper roll holder, a paper feed roller, and spring actuated means for rotating said feed roller in one direction to feed paper from the roll holder, said spring actuated means being movable in one direction to place the same under tension by movement of the front section toward the rear section, and releasable for actuation upon movement of the front section away from the rear section.

2. A head-rest for barbers' chairs including front and rear sections, the former of which is movable with respect to the latter, a paper roll-holder, a paper feed roller, and spring actuated means for rotating said feed roller in one direction to feed paper from the roll holder, said spring actuated means being movable in one direction to place the same under tension by movement of the front section toward the rear section, and releasable for actuation upon movement of the front section away from the rear section, and means to check release and movement of said spring actuated means when the head-rest is in a rearwardly inclined position.



3. A head-rest for barbers' chairs, including front and rear sections, the former of which is movable with respect to the latter, a paper roll holder, a paper feed roller, and spring actuated means for rotating said feed roller in one direction to feed paper from the roll holder, including an element arranged in the path of movement of said front section toward the rear section, said element having a ratchet connection with the said feed-roller.

4. A head-rest for barbers' chairs including front and rear sections, the former of which is movable with respect to the latter, a paper roll, and automatic means for feeding measured lengths of paper from said roll downwardly over the front section, said means being controlled by movement of said front section with respect to the rear section.

5. A head-rest for barbers' chairs including front and rear sections, the former of which is movable with respect to the latter, a paper roll, and automatic means for feeding measured lengths of paper from said roll over the front section, including an actuating member movable in one direction by movement of the front section toward the rear section, and a spring for moving the said member in the opposite direction when the front section moves away from the rear section.

[Claims 6 and 7 not printed in the Gazette.]

1,217,653. CAMERA-BACK. CHARLES F. SPEIDEL, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 21, 1915. Serial No. 51,759. (Cl. 95—1.1.)

1. The combination with a camera wall having an opening therein for marking the sensitive material and a clamping member for the latter on the inner side of the wall adjacent the opening, of a cover for said opening having a combined sliding and pivotal movement and operatively connected to the clamping member to actuate the latter during its sliding movement.

2. The combination with a camera wall having an opening therein for marking the sensitive material and a retaining device thereon, of a cover plate on the wall, a plate slidable beneath the cover plate and a cover hinged to the plate to close the opening, said cover being adapted to be held closed by the retaining member and to be engaged and released therefrom by the sliding movement of the plate.

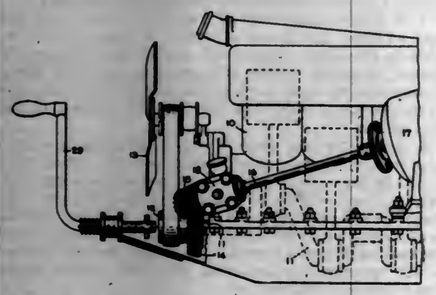
3. The combination with a camera wall having an opening therein for marking the sensitive material and a retaining device thereon and a clamping member for the sensitive material on the inner side of the wall adjacent to the opening, of a projection on the clamping member extending through the camera wall, a sliding plate on the

outer side of the wall having a portion adapted to engage the projection on the clamping member and move the latter toward the sensitive material and a cover hinged



to the plate to close the opening, said cover being adapted to be held closed by the retaining member and to be released therefrom by the said sliding movement of the plate.

1,217,654. GEAR AND PULLEY DEVICE. REGINALD G. STANDERWICK, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 13, 1916. Serial No. 90,859. (Cl. 74—7.)



1. The combination with a shaft end of a gear wheel, a split tapered threaded sleeve forming a hub for the wheel, said sleeve surrounding the shaft, and a pulley having a tapered nut formed integral therewith which threads over the tapered sleeve.

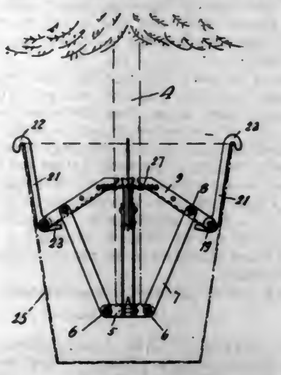
2. The combination with a shaft end of a gear wheel, a split tapered threaded sleeve forming a hub for the wheel, a pin for locking it on the shaft, and a pulley having a tapered nut which threads over the tapered sleeve, the toothed portion of said gear wheel surrounding the sleeve.

3. The combination with an internal combustion engine, a fan, and a dynamo-electric machine, of a combined pulley and gear wheel on the engine shaft for driving the fan and connecting with the dynamo-electric machine respectively, the same comprising a split tapered threaded sleeve having a flange, a gear wheel fixed to the flange, a pulley, and a tapered threaded nut carried thereby and threaded over said sleeve.

4. The combination with a gear wheel and a pulley, of a split tapered threaded sleeve carried by one of them, and a tapered threaded nut carried by the other, said nut being adapted to screw over the sleeve.

5. In an apparatus of the character described the combination with a shaft of a pulley provided with ratchet teeth, and a tapered threaded nut formed integral therewith, and adapted to be fastened on to the end of said shaft.

1,217,655. CHRISTMAS-TREE HOLDER. GEORGE STANTON and JOHN D. WALTERS, Braddock, Pa. Filed June 14, 1916. Serial No. 103,625. (Cl. 248—38.)



1. A Christmas tree holder comprising a base, supports pivotally connected therewith, tree clamping levers pivotally carried by said supports, and suspension hooks pivotally connected with said levers and adapted to engage with the edge of a receptacle for suspending the base therein.

2. A Christmas tree holder comprising a base, supports pivotally connected therewith, tree clamping levers pivotally carried by said supports, and suspension hooks pivotally connected with said levers and adapted to engage with the edge of a receptacle for suspending the base therein, and means carried by the suspension hooks and engaging said clamping levers for arresting the downward movement of the inner end of said levers.

3. A Christmas tree holder comprising a base, supports pivotally connected therewith, tree clamping levers pivotally carried by said supports, suspension hooks pivotally connected with said levers and adapted to engage with the edge of a receptacle for suspending the base therein, and means carried by the base and adapted to engage in the trunk of a tree for connecting the latter to the base.

4. A Christmas tree holder comprising a base, supports pivotally connected therewith, tree clamping levers pivotally carried by said supports, and suspension hooks pivotally connected with said levers and adapted to engage with the edge of a receptacle for suspending the base therein, and said levers provided with means whereby the fulcrum thereof can be adjusted.

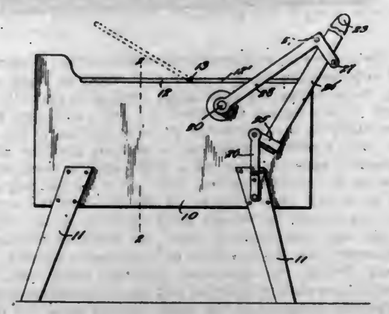
5. A Christmas tree holder comprising a base, gripping levers pivotally supported therefrom, and suspension hooks adapted to engage with a receptacle for suspending the base within the receptacle and for shifting said levers to grip the trunk of a tree to maintain the latter in a vertical position when the trunk is mounted upon said base.

[Claims 6 to 9 not printed in the Gazette.]

1,217,656. WASHING-MACHINE. WILLIAM L. STARK, Hastings, Mich. Filed Oct. 28, 1916. Serial No. 128,319. (Cl. 68—19.)

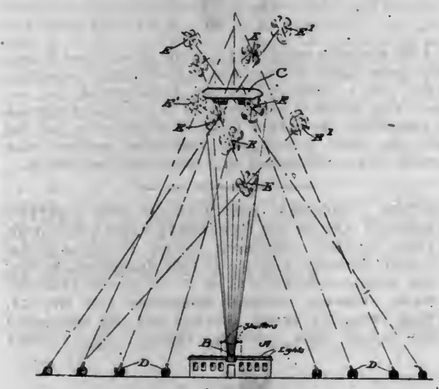
1. A washing machine comprising a receptacle, clothes pounding means in said receptacle, and actuating means for said clothes pounding means comprising a rocker shaft extending through the receptacle, an auxiliary handle including side bars connected with the outer end portions of the rocker shaft and cross rods connecting the side bars, sockets pivotally connected with said receptacle, and a main handle extending between the cross rods of the auxiliary handle and including side bars extending into said sockets and engaging the cross rods of the auxiliary handles whereby rocking of the main handle will swing the auxiliary handles to rotate the rocker shaft and move the auxiliary handle longitudinally upon the main handle.

2. A washing machine comprising a receptacle, clothes pounding means slidably mounted in said receptacle, a rocker shaft extending through the receptacle, arms extending from the rocker shaft, links connecting the arms with the clothes pounding means for imparting sliding movement to the same as the rocker shaft rotates, a main handle including side bars pivotally connected with the receptacle and a cross bar connecting side bars, and an



auxiliary handle including side bars connected with the outer end portions of the rocker shaft, and cross rods connecting side bars of the auxiliary handle, the main handle extending between the cross bars of the auxiliary handle for swinging the auxiliary handle to rotate the rocker shaft and moving the auxiliary handle longitudinally upon the main handle as the main handle is moved.

1,217,657. METHOD OF DESTROYING AIRCRAFT. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Apr. 11, 1916. Serial No. 90,390. (Cl. 89—1.)



1. The method of destroying aircraft which consists in providing lures adapted to draw the attack of bomb-dropping aircraft by simulating importance which they lack, and in arranging anti-aircraft guns for sending projectiles simultaneously over said devices at varying heights.

2. The method of destroying aircraft at night, which consists in providing a structure intended to invite attack by such craft, mounting about such structure suitable guns trained to meet, approximately, at different heights, a vertical line from said structure, and illuminating the structure; whereby aircraft vertically above said structure may be substantially in the line of fire of some of said guns.

3. The method of defending at night against bomb-dropping aircraft which consists in providing a structure inviting attack by the dropping of bombs, illuminating said structure, providing a series of guns located about said structure in position to send projectiles over the same at various heights, and means for at will turning an illuminating beam upon any craft directly above said structure.

4. The method of destroying aircraft which consists in providing devices of small value simulating structures adapted to draw attack from bomb-dropping aircraft, arranging a series of anti-air-craft guns in position for sending projectiles directly over said devices but at various heights, and providing searchlights adapted to be cut off or at will to project a light beam upwardly from substantially the location of said devices.

1,217,658. FOLDING SEAT FOR PERAMBULATORS. WILLIAM J. STOLZ, Milwaukee, Wis. Filed June 24, 1916. Serial No. 105,548. (Cl. 21—12.)



1. An apparatus as characterized comprising a seat member; a plurality of supporting bars therefor; a plurality of bracket bars operatively engaging said supporting bars; a plurality of anchor plates for said bracket bars; means for temporarily mounting said anchor plates in fixed relation to the handle bars of a perambulator; means for adjustably connecting said bracket bars on said anchor plates for supporting said seat and bracket bars connected therewith in horizontal or upright position at will; and means mounted on said seat for locking the seat when lifted to the position parallel with said handle bars.

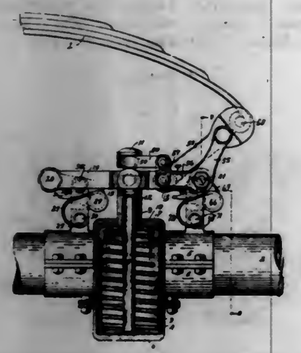
2. An apparatus as characterized comprising a seat member; a plurality of supporting bars therefor; a plurality of bracket bars operatively engaging said supporting bars; a plurality of anchor plates for said bracket bars; means for temporarily mounting said anchor plates in fixed relation to the handle bars of a perambulator; means for adjustably connecting said bracket bars on said anchor plates for supporting said seat and bracket bars connected therewith in horizontal or upright position at will; and a folding back member pivotally mounted on said seat member and adapted to fold forward thereon.

3. An apparatus as characterized comprising a seat member; a plurality of supporting bars therefor; a plurality of bracket bars operatively engaging said supporting bars; a plurality of anchor plates for said bracket bars; means for temporarily mounting said anchor plates in fixed relation to the handle bars of a perambulator; means for adjustably connecting said bracket bars on said anchor plates for supporting said seat and bracket bars connected therewith in horizontal or upright position at will; a folding back member pivotally connected on said seat member and adapted to fold forward thereon; and an adjustable support for said back member for varying the relation thereof to said seat member.

4. An apparatus as characterized comprising a seat member; a plurality of supporting bars therefor; a plurality of bracket bars operatively engaging said supporting bars; a plurality of anchor plates for said bracket bars; means for temporarily mounting said anchor plates in fixed relation to the handle bars of a perambulator; means for adjustably connecting said bracket bars on said anchor plates for supporting said seat member and

said bracket-bars connected therewith in horizontal or upright position at will; a folding back member pivotally connected on said seat member and adapted to fold forward thereon; and an adjustable support for said back member for varying the relation thereof to said seat member, said support embodying a slotted plate having an extended foot rest, a bolt permanently attached to said back, and a nut mounted on said bolt to clamp said plate and back in fixed relation.

1,217,659. SHOCK-ABSORBER. ANTHONY STOWASSER, Milwaukee, Wis. Filed June 10, 1916. Serial No. 102,816. (Cl. 267—19.)



1. The combination with a vehicle axle, of a primary lever, a resiliently yielding fulcrum supporting said lever from the axle, a bell crank having a fulcrum pivotal connection with one arm of the primary lever, a body supporting spring, a secondary lever connecting said spring with one arm of the bell crank, resilient connections between the primary and the secondary levers respectively and the vehicle axle, and connections between one arm of the bell crank and the resiliently yielding fulcrum of the primary lever.

2. The combination with a vehicle axle, of a set of coiled springs supported therefrom, fulcrum heads supported by said springs, a primary lever having its central portion pivotally connected with said fulcrum heads, a resilient connection between one arm of said lever and the vehicle axle, a main body supporting spring, a secondary lever connected with the spring and having a fulcrum supported from the primary lever at the opposite end of the latter from that which is resiliently connected with the axle, and resilient connections between the secondary lever and the axle on the opposite side of the secondary lever fulcrum from that to which the body supporting spring is connected.

3. The combination with a vehicle axle, of a primary lever, a fulcrum therefor resiliently supported from the axle, a resilient connection between the primary lever and the axle adapted to oppose swinging movements of said lever, a main body supporting spring, a lever pivotally connected therewith, a fulcrum for said lever adjacent to its connection with the spring, and a support for said fulcrum carried by the primary lever.

4. The combination with a vehicle axle, of a primary lever, a fulcrum therefor resiliently supported from the axle, a resilient connection between the primary lever and the axle adapted to oppose swinging movements of said lever, a main body supporting spring, a lever pivotally connected therewith, a fulcrum for said lever adjacent to its connection with the spring, and a support for said fulcrum carried by the primary lever, said last mentioned fulcrum support comprising a bell crank pivotally connected with the primary lever and having link connection with the fulcrum head of the primary lever, substantially as described.

1,217,660. DECORATIVE PRODUCT AND METHOD OF MAKING THE SAME. WILLIAM STUHLMILLER, New York, N. Y. Continuation of application Serial No. 826,445, filed Mar. 21, 1914. This application filed Apr. 24, 1916. Serial No. 93,318. (Cl. 41—38.)



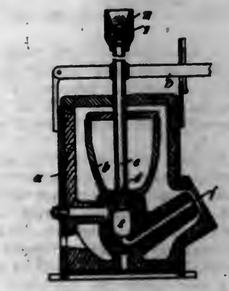
The process of producing a decorative effect, comprising the superposition upon a body of a moist oil color coating; then letting the same stand until it is partially oxidized or has become somewhat dry and sufficiently firm; then applying another moist oil color coating to the first one; and afterward abrading by striping portions of the secondary upper coating while still moist to form ridges, to allow the intervening open portions of the primary coating to become more oxidized by the air, and the covered portions thereof to become more oxidized by the oxygen in the said ridges and to allow the latter to become incorporated into the substance of the primary coating; and finally letting the compound coatings stand until the chemical reaction is sufficient to form a homogeneous mass comprising stripings of the upper coating below the plane of the lower one, and to prevent the said ridges from being removed without also obliterating the lower coating.

1,217,661. LIP-GUARD FOR DRINKING VESSELS. ARTHUR J. STROHMEYER, Altoona, Pa. Filed Feb. 19, 1915. Serial No. 9,374. (Cl. 65—13.)



A lip protector comprising a blank cut and bent to provide spaced apron like sections of substantially segmental shape, and a connecting portion therebetween, the sections being convexed and arranged in converging relation to each other, one section being of considerably less size than the other section, said connecting portion being formed with a corrugation to permit expansion thereof.

1,217,662. PROCESS AND DEVICE FOR CASTING METALS UNDER AN EXPLOSIVE-LIKE PRESSURE INTO MOLDS. HEINRICH TALLA, Heilbronn-on-the-Neckar, Germany, assignor to Präcisionsgusswerke System Schmidt-Reichhardt G. M. B. H., Frankfort-on-the-Main, Germany. Original application filed May 21, 1915, Serial No. 29,604. Divided and this application filed Oct. 10, 1916. Serial No. 124,841. (Cl. 22—209.)

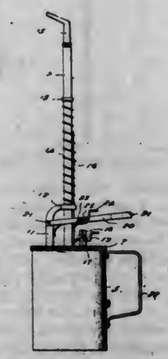


1. A process for casting liquid metal or other melting materials into molds, consisting in filling a quantity of the metal into a loading space and in throwing said quantity

of metal into the mold by the force of the explosion of a solid explosive material said material being ignited in the loading space by the hot metal.

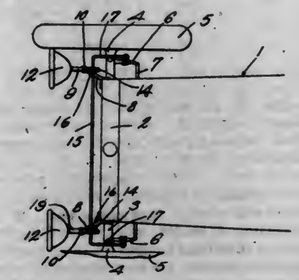
2. In a device for casting liquid metal and other melting materials into molds a melting furnace, a crucible arranged in said furnace, a loading space, a valve, said valve being adapted to shut off said loading space from said crucible and having a hollow spindle, said spindle being adapted to convey explosive material to said loading space, a channel adapted to form an open communication between the loading space and a mold.

1,217,663. LUBRICATOR. CHARLES H. TAYLOR, Siletz, Oreg. Filed Mar. 1, 1915. Serial No. 11,278. (Cl. 221—47.)



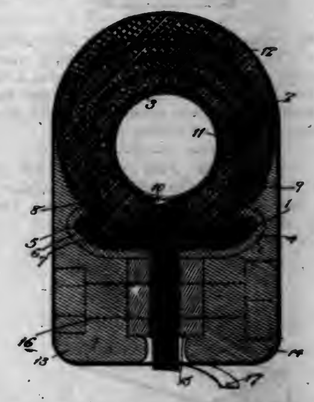
A lubricator comprising a container having one end open, a closure for said open end, a follower slidably mounted in said container, a spout having one end extended through said closure and connected to said follower, said spout having a portion of its cylindrical body provided with teeth, a standard formed integrally with the upper face of the closure, said standard having its upper end curved inwardly and provided with an aperture slidably receiving the spout for guiding and bracing the same and holding the spout against lateral movement, a coil spring surrounding said spout having one end abutting the apertured end of the standard, a lever pivotally secured to said standard, a pawl pivotally secured to said lever and engaging said teeth of the spout for forcing said follower toward the closed end of the container against the tension of the coil spring, and means for holding the follower against upward movement, said coil spring adapted to return the follower to its initial position when said pawl and holding means are released.

1,217,664. AUTO-LAMP. WAID H. THOMAS, Hensler, N. D. Filed Oct. 30, 1916. Serial No. 128,531. (Cl. 240—62.)



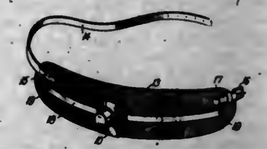
In a device of the class described, a motor vehicle including a body, an axle having movable ends provided with arms, and a steering rod connecting the arms; sockets mounted on the arms; brackets carried by the body and projecting forwardly therefrom; levers fulcrumed intermediate their ends on the brackets; lamps carried by the forward ends of the levers; a rod extended transversely of the body and located in front of the body, the rod having rearwardly projecting arms terminating in rigid depending fingers journaled in the sockets; and a lost motion connection between the rear ends of the levers and the rod.

1,217,665. VEHICLE-TIRE. PETER D. THROPP, Trenton, N. J., assignor to The De Laski and Thropp Circular Woven Tire Company, Trenton, N. J., a Corporation of New Jersey. Filed June 9, 1913. Serial No. 772,611. (Cl. 152—13.)



A closed bellied tire having a base extending from one clencher edge of the tire to the other, the said tire comprising rubber compound and fabric, the compound used in the base portion being relatively hard and the compound in the tread portion being relatively soft, the plies of fabric being embedded in the hard compound of the base and having their edges overlapping in the soft compound of the tread.

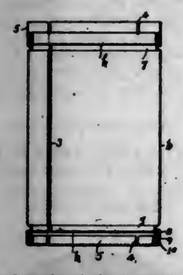
1,217,666. FLASH-LIGHT HOLDER. EDMOND E. THULIN, Northwood, N. D. Filed Jan. 25, 1916. Serial No. 74,125. (Cl. 240—59.)



1. In a flash light holder, the combination of a broad, heavy, flexible band serving as a backer for the lamp and to prevent the tilting thereof, means connected to the ends of the band serving to detachably secure the same to the person's body, and a flexible metal strip on the band at the longitudinal center thereof and having its ends riveted to the end portions of the band, the intermediate portion of the strip being disconnected from the band but lying parallel to and closely adjacent the same upon which a flash light is adapted to be adjustably mounted.

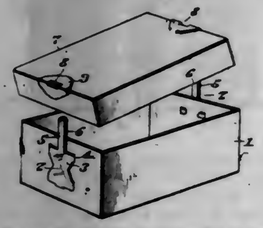
2. In a flash light holder, the combination of a broad, heavy and flexible band having means at its ends for securing it upon a person's body, and provided at its longitudinal center with a flexible metallic strip of a length slightly less than that of the band and having its ends secured to the band, the intermediate portion of the strip being disconnected from the band, and a lamp having on its back a clip slidingly engaging the said strip.

1,217,667. SHEET-METAL CONTAINER. JOHN TOTTERDALE, Warrén, Ohio. Filed June 10, 1916. Serial No. 102,808. (Cl. 220—86.)



A packing vessel made of sheet metal and having chines five layers of the metal in depth, two of said layers being on the outside and two inside and comprising a flange on the head of the vessel and an extension from the outer of said outside layers bent inward over said flange and having transverse slits at regular intervals.

1,217,668. FASTENER FOR COVERS OF BOXES. DAVID S. TRUMBOWER, Coatesville, Pa., assignor of one-half to Paul S. Stansbury, Coatesville, Pa. Filed Oct. 28, 1916. Serial No. 128,292. (Cl. 70—3.)



1. A lid fastener for boxes comprising a single blank of material, tongues formed on the opposite ends of said blank, one of said tongues being relatively longer than the other and bent to underlie the blank and to extend beyond the opposite end of the blank and terminating flush with the free end of the shorter tongue.

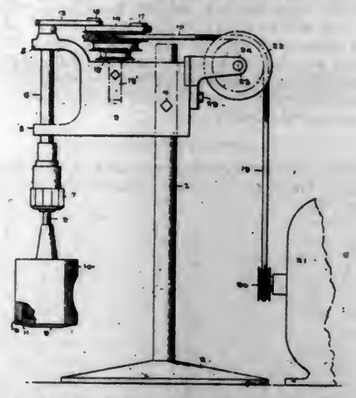
2. A lid fastener for boxes comprising a single blank of material, tongues formed on the opposite ends of said blank, one of said tongues being relatively longer than the other and bent to underlie the blank and to extend beyond the opposite end of the blank and terminating flush with the free end of the shorter tongue, both of said tongues being of a width less than that of the blank.

3. A lid fastener for boxes comprising a rectangular body portion, spurs formed on the corners of said body portion, tongues formed on the upper and lower edges of said body portion, the tongue upon the lower edge being relatively longer than the tongue upon the upper edge and bent to underlie the blank and to extend beyond the upper edge and terminating flush with the free end of the shorter tongue.

1,217,669. VALVE-GRINDER. WILLIAM ELMER TURNER, Toppenish, Wash. Filed June 13, 1916. Serial No. 103,544. (Cl. 51—4.)

1. A valve grinder comprising a vertically disposed shaft, a chuck carried by the lower end of the shaft adapted to support a valve and a valve cage seated loosely upon the valve, means arranged above the shaft to impart a rotary reciprocating movement to said shaft whereby the valve will be caused to rotate back and forth and the cage to move relatively to the valve.

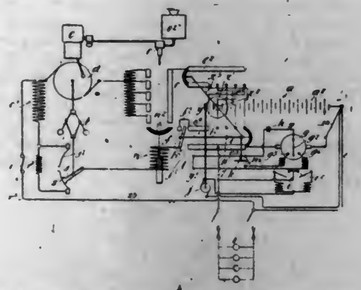
2. A valve grinder comprising a vertically disposed shaft, a chuck carried by the lower end of the shaft and adapted to support a valve and a valve cage seated loosely upon the valve, a lever attached to the upper end of said shaft, and means to swing said lever back and forth whereby the shaft and valve will be oscillated and the cage thereby caused to move relatively to the valve.



3. In a valve grinder, the combination with a shaft, and means to attach a valve and cage to said shaft, of a lever attached to said shaft, a pitman adjustably attached at one end to said lever, a stepped pulley, a wrist pin on said pulley to which the opposite end of said pitman is attached, and means to rotate said pulley whereby the lever will be swung back and forth in the arc of a circle and the shaft and valve attached thereto oscillated and the cage caused to oscillate relative to the valve.

4. In a valve grinding device, a standard, a bracket adjustably mounted upon said standard, a valve carrying shaft mounted in said bracket, a stepped pulley carried by said bracket, a pitman attached to said pulley, a lever attached to said shaft, means to adjustably secure the pitman to the lever, a driving belt coöperating with said pulley, and adjustably mounted idler sheaves adapted to guide the belt on to said pulley.

1,217,670. AUTOMATIC ELECTRIC GENERATING PLANT. CHARLES BELL WALKER, Solihull, England. Filed Mar. 14, 1910. Serial No. 549,195. (Cl. 171—314.)



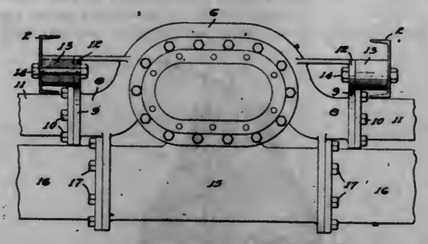
1. An automatic generating electric plant comprising an electromagnetic machine to run as a generator or as a motor, driving means for said machine, a storage battery having a number of regulating cells to be cut in and out of circuit to maintain a constant potential at the discharge terminals, an automatic regulating switch controlling the cutting in and out of said regulating cells, other switch means coöperating with the said regulating switch for automatically connecting the dynamo to the battery when a predetermined number of regulating cells have been automatically cut into circuit on the fall of potential and to disconnect said dynamo from the battery when the predetermined number of regulating cells has been automatically cut out of circuit upon the rise of potential, and means automatically movable with the switch means to automatically turn on and off the fuel supply to the driving means simultaneously with the connection and disconnection of the dynamo from the battery.

2. An automatic electric generating plant comprising an electromagnetic machine operative as a generator or as a motor, driving means for said machine, a storage battery having a number of regulating cells adapted to be cut in and out of circuit to maintain a constant potential at the discharge terminals, an automatic regulating switch controlling the cutting in and out of the said regulating cells, switch means coöperating with said regulating switch for connecting the machine to the battery when a predetermined number of regulating cells has been automatically cut into circuit on the fall of potential and to disconnect said machine from the battery when a predetermined number of regulating cells has been cut out of circuit upon the rise of potential, means automatically movable with the switch means to automatically turn on and off the fuel supply to the driving means simultaneously with the connection and disconnection of the dynamo from the battery, and devices for preventing the running of the machine as a motor in the event that the driving means will not become effective.

3. An automatic electric generating and storage plant comprising a dynamo, means for driving the said dynamo, a storage battery having a number of regulating cells, a regulating switch automatically controlling the cutting in and out of the cells, a switch gear for connecting the dynamo to the battery, and devices for automatically controlling the medium for operating the driving means.

4. An automatic electric generating plant combining an electromagnetic machine to run as a generator or as a motor, driving means for said machine, a storage battery having a number of regulating cells to be cut in and out of circuit and which is connected up to be charged by the machine and to feed said machine as a motor, means for automatically cutting in and out the regulating cells on the fall or rise of battery potential, means for stopping the driving means, and devices for preventing the indefinite running of the machine as a motor in case the driving means will not become effective.

1,217,671. MEANS FOR MOUNTING A FIRE-ENGINE PUMP. CHARLES P. WATEROUS, St. Paul, Minn. Filed Apr. 19, 1916. Serial No. 92,266. (Cl. 169—19.)



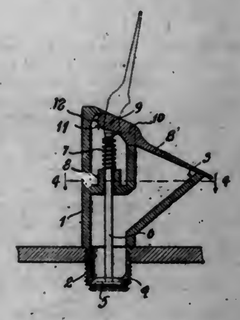
1. The combination, with a fire engine truck having side rails, of a pump arranged between said rails and having hydrant and hose connections beneath said rails, bolts passing horizontally through said rails for securing said pump thereto, said bolts, when removed, allowing the pump and all its connections to drop down upon the ground between said rails.

2. The combination, with a fire engine truck having side rails, of a pump arranged between the rails and having hydrant and hose connections, webs projecting upwardly at each end of the pump and bolts passing through said webs and rails and forming the only supporting means for said pump on said rails.

3. The combination, with a fire engine truck having side rails extending beyond the rear axle and having an unobstructed space between them, of a pump fitting into the space between said rails and having webs provided with faces for seating against corresponding faces provided on said rails, said pump having hose connections on each side beneath said rails and bolts passing through said webs and rails and clamping them together, said bolts, when removed, allowing said pump to drop down with its connections from between said rails.

4. The combination, with a fire engine truck having side rails, of a pump arranged between said rails and having hydrant and hose connections beneath the same, means for securing said pump to said rails, said means, when removed, allowing said pump and its connections to drop downwardly from between said rails.

1,217,672. LUBRICATOR-FILLING VALVE. JOHN H. WATTERS and WILLIAM H. BEAN, Anniston, Ala. Filed Sept. 18, 1916. Serial No. 120,814. (Cl. 184—105.)



1. In a device of the class described, a valve casing, a filling spout communicating with the interior of said casing, a valve in said casing, a stem connected with said valve and extended through said casing, a stop on one end of the stem, a flange extending inwardly from the inner wall of said casing and surrounding said stem, an expansion spring engaging said stop and flange to normally retain said valve closed, and means for opening said valve against the tension of said spring.

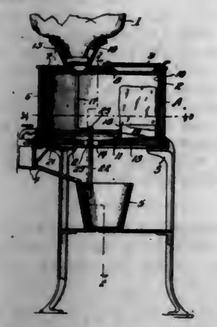
2. In a device of the class described, a filling spout, a normally closed valve therefor, a cover for said spout, and a connection between said cover and valve, whereby the latter is opened when the cover is raised.

3. In a device of the class described, a valve casing, a filling spout communicating with the interior thereof, a valve in said casing, resilient means for holding said valve closed, a cover for said filling spout, and a connection between said cover and said valve, whereby the latter is opened when the cover is raised.

4. In a device of the class described, a valve casing, a filling spout communicating with the interior thereof, a valve in said valve casing, a valve stem connected with said valve and extending into said casing, a spring engaging said valve stem for normally retaining said valve closed, a cover for said filling spout, said cover being pivoted to said casing, and means on the cover for engaging said valve stem to open the valve against the tension of said spring.

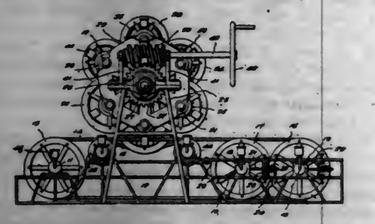
5. In a device of the class described, a valve casing, a filling spout communicating with the interior thereof, a valve in said casing, a valve stem connected to said valve and extending into said casing, a spring carried by the valve stem for normally retaining said valve closed, a cover for said filling spout pivoted adjacent the free end of said valve stem, a finger extending from said cover, said finger having a cam face on one side to engage the free end of said valve stem, whereby the valve is opened when the former is raised, said finger also having a flat face to engage the free end of the valve stem to hold said cover in open position.

1,217,673. WATER-COOLER. HENRY W. WEAVER, Bellview, Fla., assignor of one-half to Harry R. Ford, Jacksonville, Fla. Filed Feb. 20, 1915. Serial No. 9,641. (Cl. 62—143.)



In a device of the class described, in combination a water reservoir, an ice compartment to the top of which said water reservoir is secured, a substantially oblong water cooling compartment extending transversely of one end of said ice compartment, a vertical pipe depending below said reservoir, and extending in the direction of one side of said ice compartment and having a terminal portion connected to one end of said water cooling compartment and a second pipe connected to the opposite end of said water cooling compartment and having an intermediate coil having its outer end passing immediately out of said ice compartment, and a faucet secured to the projecting end of said lastnamed pipe.

1,217,674. TRANSMISSION APPARATUS. JOHN S. WERTIN, Cokedale, Colo. Filed June 17, 1916. Serial No. 104,291. (Cl. 74—21.)



1. The combination with a prime mover, of a transmission apparatus, including a supporting structure, a shaft operably connected to the prime mover, a plurality of pulleys fixedly connected to said shaft, a plurality of spring controlled shafts mounted in the structure, a pulley carried by each, a plurality of cables connecting the pulleys of the first shaft and of the spring controlled shafts, a driven shaft, and a plurality of selective cable engaging members operably connected to the driven shaft for engagement one at a time with one of the cables.

2. The combination with a prime mover, of a transmission apparatus, including a supporting structure, a shaft operably connected to the prime mover, a plurality of pulleys fixedly connected to said shaft, a plurality of spring controlled shafts mounted in the structure, a pulley carried by each, a plurality of cables connecting the pulleys of the first shaft and of the spring controlled shafts, a driven shaft journaled in the upper portion of the supporting structure and above the cables, a cage freely rotatable upon the driven shaft, a plurality of shafts journaled in the cage, a pulley fast to each of said shafts for engagement one at a time with the cables, transmission mechanism between said pulley shafts and the driven shaft, and selective means for rotating the cage to connect one of the pulleys at a time with a cable.

3. The combination with a prime mover, of a transmission apparatus, including a supporting structure, a shaft operably connected to the prime mover, a plurality of pulleys fixedly connected to said shaft, a plurality of spring controlled shafts mounted in the structure, a pulley carried by each, a plurality of cables connecting the pulleys of the first shaft and of the spring controlled shafts, a driven shaft journaled in the upper portion of the supporting structure and above the cables, a cage freely rotatable upon the driven shaft, a plurality of shafts journaled in the cage, a pulley fast to each of said shafts for engagement one at a time with the cables, transmission mechanism between said pulley shafts and the driven shaft, a gear operably connected to the cage, and a manually operated worm, gear mounted in the supporting structure and operably connected to the last gear, whereby the cage may be rotated to selectively engage a pulley with one of the cables.

4. The combination with a prime mover, of a transmission mechanism, including a supporting frame, a shaft journaled therein and operably connected to the prime mover, two pulleys fast to said shaft, two shafts journaled transversely of the frame, two pairs of spring controlled boxings mounted in the frame and operably connected to the latter shafts, a pulley fast to each of the last mentioned shafts, two cables connecting the two pulleys of the first shaft to the remaining pulleys, a driven shaft, and selective transmission means operably connected to the driven shaft and for connection with one of the cables at a time.

5. The combination with a prime mover, of a transmission mechanism, including a supporting frame, a shaft journaled therein and operably connected to the prime mover, two pulleys fast to said shaft, two shafts journaled transversely of the frame, two pairs of spring controlled boxings mounted in the frame and operably connected to the latter shafts, a pulley fast to each of the last mentioned shafts, two cables connecting the two pulleys of the first shaft to the remaining pulleys, a driven shaft journaled above the supporting frame and the cables, a cage rotatably mounted upon the driven shaft, a plurality of shafts journaled in the cage, a pulley fast to each of said shafts for engagement with the cables, cooperative means carried by each of said shafts and the driven shaft for transmitting power to the driven shaft, and selective means for rotating the cage to connect one of the pulleys at a time to a cable.

1,217,675. ORNAMENT FOR CHRISTMAS TREES, DECORATIONS, &c. BERNARD WILMSEN, Philadelphia, Pa. Filed Oct. 21, 1916. Serial No. 126,873. (Cl. 41—10.)



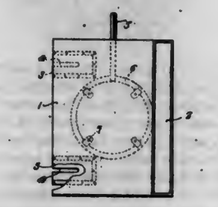
1. An ornament for the purpose stated consisting of a struck-up body of paper simulating a bell, and a granular coating of comparatively hard material on the exterior surface thereof.

2. An ornament for the purpose stated consisting of a struck-up crimped body of paper simulating a bell, and a hard coating on the exterior surface thereof composed of material in granular form, and an adhesive intermixed therewith, said coating also covering the crimps on said surface.

3. An ornament for the purpose stated consisting of a body simulating a bell, a clapper, and means for connecting the latter to said body consisting of a piece of pliable material carrying said clapper, and a ring like member on the exterior member which is connectible with the top wall of said body and has said piece attached thereto and pendant therefrom.

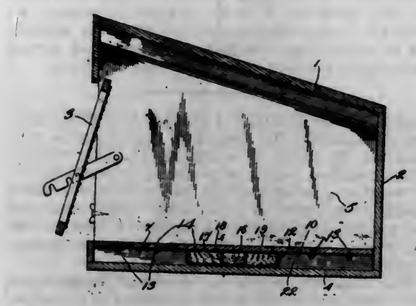
4. An ornament for the purpose stated consisting of a body simulating a bell and having on its exterior a coating of hard material, a clapper, and means for connecting the latter to said body consisting of a piece of pliable material which carries said clapper suspended therefrom, and having its upper end passing through the top wall of said body, and a ring-like member on the exterior of said top wall, said member having legs which engage said wall and are adapted to secure said member thereto, the upper end of said piece being attached to said ring-like member.

1,217,676. TABLE ATTACHMENT FOR BEDS. CECIL R. WILSON, Bablin, W. Va. Filed June 23, 1915. Serial No. 35,868. (Cl. 45—82.)



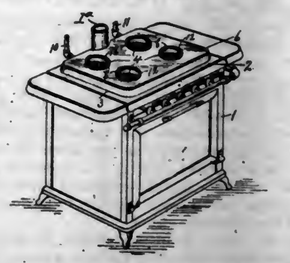
A table attachment comprising a bracket, means for supporting the same, a continuous open center circular ring fixed to the bracket, a top located upon the bracket with its under surface in contact with the upper surface of the ring, and clips pivotally attached to the top at spaced intervals and having end portions which engage under the inner edge portion of the ring, whereby the top may describe a complete rotation on the ring but is held against lateral displacement therefrom.

1,217,677. DISINFECTING-COOP. OLIVER B. ANDREWS, Chattanooga, Tenn. Filed Dec. 4, 1916. Serial No. 134,954. (Cl. 119—19.)



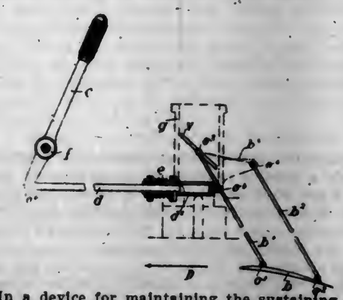
In a disinfecting chicken coop the combination of a main body portion provided with a bottom; a pair of strips secured to said bottom and the sides of said body portion; a false bottom having perforations located above and resting on said strips; a second pair of strips secured to said false bottom fitting inside said first mentioned pair of strips and also provided with perforations, the inner upper edges of said first named strips being cutaway to afford a ready communication between the perforations of said second pair of strips and certain of the perforations in said false bottom; and a disinfectant holding receptacle located between said bottoms, substantially as described.

1,217,678. WATER-HEATER FOR GAS-STOVES. WALLACE S. ANDREWS, Syracuse, N. Y. Filed Apr. 24, 1915. Serial No. 23,640. (Cl. 126—53.)



A water heater for gas stoves having the usual flat top and heat escape pipe projecting upwardly from the top, said heater comprising a one-piece hollow casting composed of flat bottom and top walls having coaxial vertical openings for registration with the gas burners, said walls being held in parallel spaced relation by marginal walls uniting their outer edges and by circular walls uniting the edges around the openings and also by a partition uniting the central portions thereof, the rear marginal wall being curved inwardly to provide a clearance space for the heat escape pipe, and with the partition extending forwardly from the curved portion, said partition extending forwardly from the center of the rear marginal wall between said openings and to a point a short distance from the front marginal wall, and out-flow and return pipes secured to the rear marginal wall at opposite sides of the partition.

1,217,679. ANEMOMETRIC REGULATOR FOR AEROPLANES. RENÉ ARNOUX, Paris, France. Filed July 2, 1913. Serial No. 777,055. (Cl. 244—25.)



1. In a device for maintaining the sustaining force of aeroplanes substantially constant, the combination of anemometric means adapted to be displaced by the effect of the variations of the sustaining force acting thereon, a motor for propelling the aeroplane, and means intermediate said anemometric means and the motor for varying the propulsive force of said motor in an inverse ratio to the sustaining force.

2. In a device for maintaining the sustaining force of aeroplanes substantially constant, the combination of anemometric means adapted to be displaced by the effect of the variations of the sustaining force acting thereon, a motor for propelling the aeroplane, and means intermediate the motor and the anemometric means for modifying the power of the motor as an incident to the effect of the variations of the sustaining force acting upon the anemometric means.

3. In a device for maintaining the sustaining force of aeroplanes substantially constant, the combination of anemometric means adapted to be displaced by the effect of the variations of the sustaining force acting thereon, a motor for propelling the aeroplane, valve means controlling the admission of an explosive medium to the motor, and means intermediate the anemometric means and said

valve means for acting on the latter to effect a variation in the power of the motor in correspondence with the effect of variations of the sustaining force acting upon said anemometric means.

4. In a device for maintainig the sustaining force of aeroplanes substantially constant, the combination of anemometric means adapted to be displaced by the effect of the variations of the sustaining force acting thereon, a motor for propelling the aeroplane, valve means controlling the admission of an explosive medium to the motor, means intermediate the anemometric means and said valve means for acting on the latter to effect a variation in the propulsive force of the motor in an inverse ratio to the variation in the sustaining force of the anemometric means, and a lever common to said valve means and to the anemometric means.

5. In an air craft, propelling means for the air craft, an adjustable power controller therefor whereby the power supplied through said propelling means may be varied, and a pressure responsive device connected to adjust said power controlling means to vary the propelling power in response to variations in wind pressure.

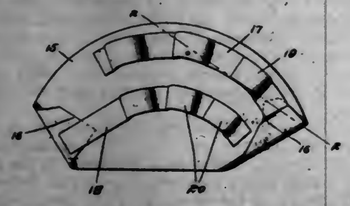
[Claims 6 to 15 not printed in the Gazette.]

1,217,680. PICTURE-HANGER. BROOKE C. BAOBY, Portsmouth, Va. Filed Apr. 22, 1916. Serial No. 92,908. (Cl. 57—110.)



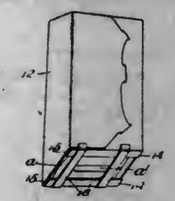
A device of the class described embodying a handle, provided with a head, a resilient clamping member secured to one of the faces of said head, a second non-resilient clamping member secured to the opposite face of said head of greater length than the first mentioned clamping member, the former and latter mentioned clamping members being arranged in spaced vertical relation one to the other, the second mentioned clamping member having an angular offset and inclined portion to receive thereon a picture wire, said offset portion being curved at its juncture with the clamping member to form a wire retaining shoulder, and a curved end of the resilient clamping plate disposed below said shoulder and co-acting therewith to direct a picture hook between said clamping plates.

1,217,681. SWIMMING DEVICE. FRANK G. BALDRIDGE, Escondido, Cal. Filed Aug. 26, 1915. Serial No. 47,441. (Cl. 9—21.)



A swimming device consisting of a semi-circular sheet having end portions folded to produce a thumb stall and a finger stall, and approximately concentric strips secured at intervals on the face of the sheet to form loops or finger stalls, each of said strips overlapping one of the folded end portions, and said folded end portions being securely connected with and between said overlapping strips and the face of the body of the sheet.

1,217,682. COMBINED CARTON AND DISPENSER. EDWARD C. BALDWIN, Boston, Mass. Filed Jan. 8, 1914. Serial No. 811,036. (Cl. 206—57.)



1. A carton for flat paper articles adapted to be shipped with said articles securely held therein, said carton comprising a single blank folded to form four continuous side walls and an end closure composed of interfolded flaps, the other end having lips extending toward each other from two of the side walls, a space or opening being provided between said lips through which the articles may be removed singly by bending them, means being provided for preventing the weight of the articles in the carton, or the act of removing them through said opening, from bending the lips outwardly from their retaining positions.

2. A carton for flat paper articles adapted to be shipped with said articles securely held therein, said carton comprising a single blank folded to form four continuous side walls and an end closure composed of interfolded flaps, the other end having lips extending toward each other from two of the side walls, a space or opening being provided between said lips through which the articles may be removed singly by bending them, said lips being reinforced to prevent them from being bent outwardly by the weight of the articles in the carton or the act of removing them through said opening.

3. A blank for making a carton for flat flexible articles, said blank having interengaging wings and having two lips projecting in the same direction from a mid-width portion and from one wing of the blank to present two parallel and separated retaining lips when the blank is folded to carton form, the portions of the blank having said lips being provided with reinforcing members.

1,217,683. CARBORUNDUM ARTICLE AND THE PROCESS OF MAKING IT. GEORGE A. BALZ, Rahway, N. J. Filed Jan. 28, 1916. Serial No. 74,741. (Cl. 106—9.)

1. The described process of producing carborundum articles, consisting in mixing with powdered or granulated carborundum the hydrate of an alkali earth metal and water, molding or pressing and drying the mixture, and baking it at a temperature sufficient to calcine the hydrate, thus producing a dense coherent body.

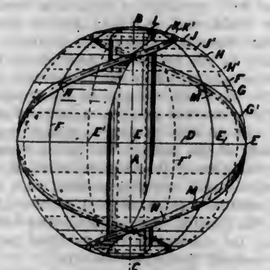
2. The described process of producing carborundum articles, consisting in mixing with powdered or granulated carborundum, calcium hydrate and water, molding or pressing and drying the mixture, and baking it at a temperature sufficient to calcine the hydrate, thus producing a dense coherent body.

3. The described process of producing carborundum articles, consisting in mixing with powdered or granulated carborundum, calcium hydrate and water, molding or pressing and drying the mixture, and baking it at a temperature sufficient to calcine and frit the hydrate, being a temperature materially below that which is required for the original formation of silicon-carbid.

4. The described carborundum articles, consisting of granulated or powdered carborundum and a binder of a small portion of calcined lime.

5. The described carborundum articles, consisting of granulated or powdered carborundum and a binder of calcined lime in fritted or fluxed condition.

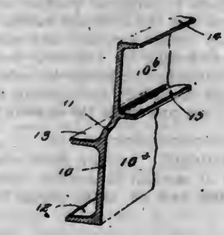
1,217,684. PROPELLER. AURIOL BARKER, Cloncurry, Queensland, Australia. Filed Oct. 20, 1913. Serial No. 796,301. (Cl. 170—159.)



1. A propeller comprising a hub, and a blade spirally arranged on said hub and having its periphery lying in the surface of a sphere, said blade being disposed so as to form with the hub an angle of approximately forty-five degrees at substantially the center thereof and becoming gradually more acute toward the ends of said hub, substantially as described.

2. A propeller comprising a hub, and blades running spirally about said hub with their peripheries lying in the surface of a sphere and their side faces coinciding with radii of the sphere leaving their outer edges relatively thick, said blades being so disposed as to form with the center of the hub an angle of approximately forty-five degrees and becoming progressively more acute toward the ends thereof, substantially as described.

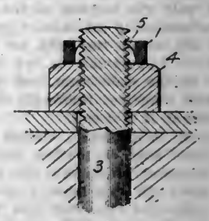
1,217,685. METAL BEAM. FRANK S. BARKS, St. Louis, Mo. Filed May 6, 1916. Serial No. 95,798. (Cl. 105—76.)



1. As a new article of manufacture, a commercially rolled metal draft sill having the same cross sectional area throughout its length and comprising a web which is bent near its transverse center to form offset portions which occupy substantially parallel planes, a marginal flange projecting from the edge of one of the offset portions of said web, and a pair of flanges projecting from the other offset portion of said web, said pair of flanges being arranged on the opposite side of the web from the first mentioned flange with one of the flanges of said pair adjacent to the margin of the web and the other flange adjacent to the central portion of the web, all of which flanges occupy planes substantially at right angles to the planes occupied by the offset portions of the web.

2. As a new article of manufacture, a commercially rolled metal draft sill having the same cross sectional area throughout its length and comprising a web which is bent near its transverse center to form offset portions which occupy substantially parallel planes, a pair of flanges projecting from each offset portion of the web, one flange of each pair being disposed adjacent to the marginal edge of the web and the other flanges being disposed adjacent to the offset portion of the web, the pairs of flanges projecting in opposite directions away from the web and all of which flanges occupy planes substantially at right angles to the planes occupied by the offset portions of the web.

1,217,686. NUT-LOCK. HORATIO BARNETT, Malvern, Ark. Filed Aug. 29, 1916. Serial No. 117,505. (Cl. 151—30.)

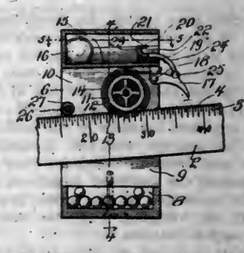


1. A nut lock comprising a split ring having a lesser internal diameter than the bolt it is to engage, and having at the end remote from the nut a plurality of series of inwardly extending teeth adapted to engage the bottom of the groove of the thread, said ring having at each side of the split an external undercut notch for engagement by a placing tool, the series of teeth being at opposite sides of the split and the ring having a clear space free from teeth at the opposite side from the split.

2. A nut lock comprising a split ring having inwardly extending teeth at one end and shaped to engage the bottom of the groove of the thread of the bolt upon which the lock is to be placed, said ring having at each side of the split an external notch for engagement by a tool to open and close the lock, and the tool comprising a pair of levers each having an outwardly extending lug for engaging a notch, and a rounded cam surface adjacent to the lug, said surface coöperating to spread the lugs when the other ends of the levers are moved toward each other, each lever having a transverse notch at the rounded cam portion, an arc-shaped slotted link extending through the slots, and a pivot pin in connection with the levers and engaging the slot of the link.

3. A nut lock comprising a split ring having inwardly extending teeth at one end and shaped to engage the bottom of the groove of the thread of the bolt upon which the lock is to be placed, said ring having at each side of the split an external notch for engagement by a tool to open and close the lock.

1,217,687. SCALE-WEIGHT. ALVIN WENZEL BARTHELD, Beach, N. D. Filed June 2, 1916. Serial No. 101,352. (Cl. 73—56.)



1. A scale weight comprising a body, a spring controlled wheel carried by the body and engageable with a scale beam to move the scale weight along the same, an indicating arm carried by the body and engageable with the scale beam to act in opposition to said spring controlled wheel, and means controlled by the inclination of the scale beam for engaging said arm with the scale beam.

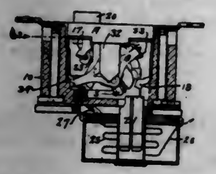
2. A scale weight comprising a body, a spring controlled wheel arranged within the body and having teeth engageable with the notches on the scale beam to move the scale weight along the same, an indicating arm carried by the body and engageable with the scale beam to act in opposition to the spring controlled wheel, and a gravity operated ball for engaging the indicating arm with the scale beam.

3. A scale weight comprising a slotted body, a spring controlled wheel arranged within the body and having teeth engageable with the notches on the scale beam to move the scale weight along the same, a gravity operated ball mounted to roll within the body, an indicating arm carried by the body and having an end for engagement with the notches on the scale beam, and operating mechanism for said arm connected therewith and arranged in the path of movement of said ball.

4. A scale weight comprising a slotted body for connection with a scale beam, a toothed wheel for contact with said beam arranged within said slot and operable to move said body along the scale beam, a spring for operating said wheel connected therewith and with the body, a trough arranged above the wheel, a ball mounted to roll in said trough, an indicating arm carried by the body and engageable with the scale beam to act in opposition to said wheel, and a rod connected with said arm and having a head arranged within said trough and in the path of movement of said ball.

5. A scale weight comprising a body slotted to receive a scale beam said slot being enlarged for a portion of its length, a spring operated wheel arranged within the enlarged portion of the slot to contact with the scale beam to move said body over the same, an inclined trough arranged above said wheel and provided with notches, an indicating arm carried by the body and engageable with the scale beam, a ball mounted to roll in said trough, a bar connected with the indicating arm and extending within said trough, a head connected with the bar, and arms on said head to be received in the notches in the trough.

1,217,688. ELECTRIC SWITCH. CLARENCE A. BATES, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 21, 1913. Serial No. 780,283. (Cl. 175—281.)



1. In an electric snap switch, an insulating body having a plurality of wire terminals, a removable insulating member carrying main and auxiliary switch contacts, said contacts being electrically connected to their appropriate wire terminals in the assembled position of the parts, a bridging conductor carried by said removable member and connecting the auxiliary contacts in one position, and the main contacts in another position, manually operated means to move said bridging conductor into the position in which it connects the auxiliary terminals, and electromagnetic means, operative in the latter position of the switch, to shift the bridging conductor into connection with the main switch contacts.

2. In an electric snap switch, an insulating body having a plurality of wire terminals, a removable insulating member carrying main and auxiliary switch contacts, said contacts being electrically connected to their appropriate wire terminals in the assembled position of the parts, a bridging conductor carried by said removable member and connecting the auxiliary contacts in one position, and the main contacts in another position, manually operated means to move said bridging conductor into the position in which it connects the auxiliary terminals, and electromagnetic means, operative in the latter position of the switch, to shift the bridging conductor into connection with the main switch contacts, said electro-magnetic means comprising a solenoid core operatively connected to the bridging conductor.

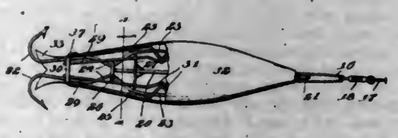
3. In an electric snap switch, an insulating body having a plurality of wire terminals, a removable insulating member carrying main and auxiliary switch contacts, said contacts being electrically connected to their appropriate wire terminals in the assembled position of the parts, a bridging conductor carried by said removable member and connecting the auxiliary contacts in one position, and the main contacts in another position, a solenoid winding connected with one of said auxiliary contacts and arranged below the body of the switch, the latter being apertured in line with the axis of the solenoid winding, a push button for operating said bridging member in a direction to connect the auxiliary contacts, and a solenoid core passing through the bottom of said insulating body and into said winding for operating the bridging member in a direction to connect the main contacts.

4. An electric snap switch having an insulating body with line terminals and a solenoid circuit terminal thereon, in combination with a removable member carrying a pair of main switch terminals adapted to engage and electrically connect with the line terminals on the switch body, a solenoid switch terminal adapted to engage and electrically connect with the solenoid circuit terminal on the switch body, and a second solenoid switch terminal electrically connected to one of said switch terminals on said removable member, together with a switch bar arranged to connect either a pair of main switch terminals or the solenoid switch terminals, manual means for moving said switch bar into position to engage the solenoid switch terminals and a solenoid core subject to the current in the solenoid circuit connected to said bar for moving the latter into engagement with the main switch terminals, substantially as described.

5. In an electric snap switch, an insulating body having a pair of main line terminals, an independent terminal for an auxiliary circuit, a removable member carrying main switch contacts and an auxiliary switch contact, the main switch contacts in adjusted position engaging the main line terminals and the auxiliary switch contact engaging the auxiliary circuit terminal, and manually operated means for establishing the auxiliary circuit through the switch and electromagnetic means for establishing the main circuit through the switch, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,217,689. TRAP-HOOK. AUGUST BERGLUND, Saginaw, Minn., assignor of one-half to Andrew Godenius, Saginaw, Minn. Filed July 21, 1916. Serial No. 110,589. (Cl. 43—30.)



1. A trap hook comprising a conical body member, resilient hook carrying shanks fixed thereon and having angular yokes, a rod slidable longitudinally through the body portion and having an eye embracing the shanks, and notches in the shanks adjacent to the angular yokes adapted to be engaged by the eye, said sliding rod having a disk provided with notches adapted to receive the resilient shanks; in combination with means for moving the slidable rod lengthwise to unseat the eye from the notches in the hook carrying shanks.

2. A trap hook comprising a conical body member, resilient hook carrying shanks fixed thereon and having angular yokes, a rod slidable longitudinally through the body portion and having an eye embracing the shanks, and notches in the shanks adjacent to the angular yokes adapted to be engaged by the eye; in combination with a cage comprising a plurality of longitudinally disposed bars fixed at one end on the body member and having V-shaped yokes adapted to engage the disk on the longitudinally slidable rod to move the latter lengthwise, thereby unseating the eye from the notches in the hook carrying shanks.

3. A trap hook comprising a conical body member, resilient hook carrying shanks fixed thereon and having angular yokes, a rod slidable longitudinally through the body portion and having an eye embracing the shanks, and notches in the shanks adjacent to the angular yokes adapted to be engaged by the eye; in combination with a cage comprising a plurality of longitudinally disposed bars fixed at one end on the body member and having V-shaped yokes adapted to engage the disk on the longitudinally slidable rod to move the latter lengthwise, thereby unseating the eye from the notches in the hook carrying shanks; the resilient bars of the cage being terminally connected with and spaced apart by an elastic band.

4. In a trap hook, a conical body portion having a loop at the apex thereof and provided with an axial bore, a rod slidable therethrough and having a terminal eye, and a disk spaced therefrom, said disk having diametrically opposite notches, resilient hook carrying shanks fixed on the base, embraced by the eye of the slidable rod and adapted to engage the notches in the disk, said shanks having angular yokes and notches adjacent thereto, a cage surrounding the hook carrying shanks and the slidable rod, said cage comprising a plurality of bars fixed on the base of the conical body member and having V-shaped yokes lying in the path of the disk on the slidable rod, an elastic band connected with and spacing apart the forward ends of the cage bars, and a flexible coat surrounding the cage.

5. In a trap hook, a conical body portion having a loop at the apex thereof and provided with an axial bore, a rod slidable therethrough and having a terminal eye, and a disk spaced therefrom, said disk having diametrically opposite notches, resilient hook carrying shanks fixed on the base, embraced by the eye of the slidable rod and adapted to engage the notches in the disk, said shanks having angular yokes and notches adjacent thereto, a cage surrounding the hook carrying shanks and the slidable rod, said cage comprising a plurality of bars fixed on the base of the conical body member and having V-shaped yokes lying in the path of the disk on the slidable rod, an elastic band connected with and spacing apart the forward ends of the cage bars, and a flexible coat surrounding the cage, said coat having longitudinal slits producing flaps, and an elastic band connecting said flaps.

1,217,690. TRAP-HOOK. AUGUST BERGLUND, Saginaw, Minn., assignor of one-half to Andrew Godenius, Saginaw, Minn. Filed July 21, 1916. Serial No. 110,590. (Cl. 43—30.)

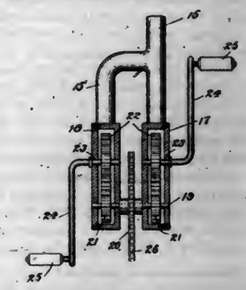


1. In a trap hook, a hollow conical body member, a spring actuated bar slidably guided therethrough, hooks pivotally connected with the faces of the bar, said hooks having slotted shanks, rods projecting from the base of the conical member and having fingers engaging the slotted shanks of the hooks, a disk carried by said rods and having an aperture through which the spring actuated bar is guided, latch members carried by the bar and adapted for engagement with the disk, and means for actuating the latch members to release them from engagement with the disk.

2. In a trap hook, a hollow conical body member, a spring actuated bar slidably guided therethrough, hooks pivotally connected with the faces of the bar, said hooks having slotted shanks, rods projecting from the base of the conical member and having fingers engaging the slotted shanks of the hooks, a disk carried by said rods and having an aperture through which the spring actuated bar is guided, latch members carried by the bar and adapted for engagement with the disk, and means for actuating the latch members to release them from engagement with the disk, said means including a tubular sleeve slidably guided on the spring actuated bar, and means for actuating said sleeve to force the latch members in the direction of the bar.

3. In a trap hook, a hollow conical body member, a spring actuated bar slidably guided therethrough, hooks pivotally connected, with the faces of the bar, said hooks having slotted shanks, rods projecting from the base of the conical member and having fingers engaging the slotted shanks of the hooks, a disk carried by said rods and having an aperture through which the spring actuated bar is guided, latch members carried by the bar and adapted for engagement with the disk, and means for actuating the latch members to release them from engagement with the disk, said means including a sleeve slidably guided on the spring actuated bar, a disk carried by said sleeve and guided on the rods having the hook actuating fingers, and a cage consisting of resilient rods connected with the conical member, said rods having angular indentations forming obliquely disposed limbs adapted to engage the disk carried by the slidable sleeve.

1,217,691. GEARING FOR BICYCLES. ADOLPH M. BONVICN, Ironton, Minn. Filed Oct. 11, 1916. Serial No. 125,016. (Cl. 208—46.)

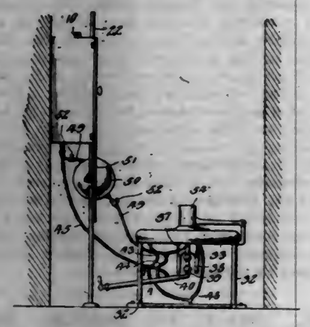


In a bicycle, a frame having convergent bars provided with arms, casings or housings supported by said bars and arms, a main shaft extending through and supported by the housings, a sprocket wheel mounted on said shaft intermediate the housings, pinions on said shaft within the housings, spur wheels within the housings and transmitting motion to the pinions, and means for driving the spur wheels.

1,217,692. INTERNAL-BATH APPARATUS. JOSEPH B. BOOKMAN, Manhattan, Nev. Filed Apr. 25, 1916. Serial No. 93,466. (Cl. 128—47.)

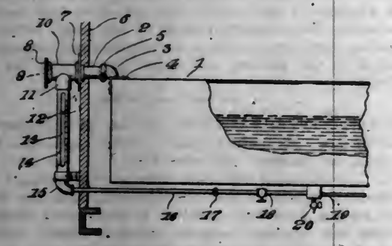
1. In an internal bath apparatus, a stool having a seat frame, an inflatable cushion supported upon the frame and having a central opening, a drain shell arranged within the opening, a spray nozzle working centrally through the shell, guides depending from the shell, a cross head supporting the nozzle and slidable upon the guides, a hanger depending from the frame, a raising and lowering member pivoted in the hanger and having a valve chamber, a knuckle joint connection between the member and the nozzle, a hand operated two-way valve plug within the valve chamber, lead pipes extending from the member to the nozzle and inflatable cushion respectively and controlled by the valve plug, and means for supplying fluid to the valve chamber.

2. In an internal bath apparatus, a stool having a seat frame, an inflatable cushion supported upon the frame and having a central opening, a drain shell arranged within the opening, a spray nozzle working centrally through the shell, guides depending from the shell, a cross head supporting the nozzle and slidable upon the guides, a hanger depending from the frame, a raising and lowering member pivoted in the hanger and having a valve chamber, a knuckle joint connection between the member and the nozzle, a hand operated two-way valve plug within the valve chamber, lead pipes extending from the member to the nozzle and inflatable cushion respectively and controlled by the valve plug, means for supplying fluid to the valve chamber, and a drain pipe leading from the drain shell and having connection with the valve chamber.



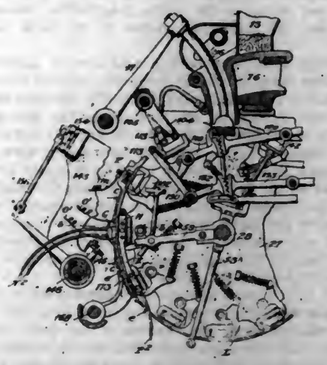
3. In an internal bath apparatus, a stool having a seat frame, an inflatable cushion supported upon the frame and having a central opening, a drain shell arranged within the opening, a spray nozzle working centrally through the shell, guides depending from the shell, a cross head supporting the nozzle and slidable upon the guides, a hanger depending from the frame, a raising and lowering member pivoted in the hanger and having a valve chamber, a knuckle joint connection between the member and the nozzle, a hand operated two-way valve plug within the valve chamber, lead pipes extending from the member to the nozzle and inflatable cushion respectively and controlled by the valve plug, means for supplying fluid to the valve chamber, a drain pipe leading from the drain shell and having connection with the valve chamber, and a force pump having connection with the lead to the nozzle.

1,217,693. GASOLENE-TANK FILLER AND GAGE. LEONORA BOYCE, Yoakum, Tex. Filed Mar. 7, 1916. Serial No. 82,770. (Cl. 73—54.)



The combination with the fuel supply tank of a motor vehicle, of a filling pipe communicating at one end directly with the top of said tank and having its other end portion extended laterally through the vehicle body, a tubular T connected to the receiving end of said pipe and arranged exteriorly of the vehicle body, a sealing cap for the receiving end of said T, a sight gage having its upper end in communication with said T, and a level equalizing pipe of relatively small capacity connecting the lower end of said sight gage with the bottom of the tank.

1,217,694. PACKAGING-MACHINE FOR TOBACCO AND LIKE MATERIALS. EDWARD L. BRACY, Baltimore, Md., assignor to Wright's Automatic Tobacco Packing Machine Company, Durham, N. C., a Corporation of West Virginia. Filed Aug. 30, 1916. Serial No. 117,738. (Cl. 93—7.)



1. In a package wrapping and sealing machine, the combination with means for intermittently feeding a package of goods and its wrapper into successive positions, and means for making the side and end folds of the wrapper respectively while the package is in different positions, a heater element located in position to subject the overlapping side folds to heat during the formation of the end folds, a cooling element located in position to subject the side folds to a cooling action when the package is in a succeeding position, and heating elements located in position to subject the end folds to heat during the time that the side folds are being cooled.

2. In a package wrapping and sealing machine, the combination with means for intermittently feeding a package of goods and its wrapper into successive positions, of means for simultaneously sealing the side folds and forming the end folds, when the package is in one position, and means for simultaneously cooling the side folds and sealing the end folds when the package is in a succeeding position.

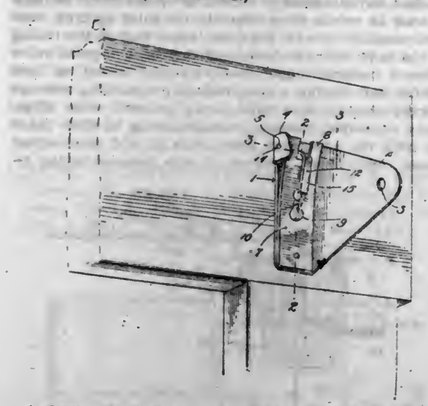
3. In a package wrapping and sealing machine, the combination with means for intermittently feeding a package of goods and its wrapper into successive positions, of means for simultaneously sealing the side folds and forming the end folds of the package when the package is in one position, means for simultaneously cooling the side folds and sealing the end folds, when the package is in a succeeding position, and means for cooling the end folds when the package is in a third position.

4. In a package wrapping and sealing machine, the combination with an intermittently movable mold wheel, having peripheral mold boxes, a curved clamping plate movable toward and from the mold wheel, a heating element carried by said plate in position to coöperate with a package contained in a mold box when in one position, and a cooling element carried by said clamping plate in position to coöperate with the package in said mold box when in a succeeding position, and means for forming side and end folds in the wrapper carried in the mold box.

5. In a package wrapping and sealing machine, the combination with the intermittently movable mold wheel having peripheral mold boxes, a curved clamping plate movable toward and from the mold wheel, and means for forming side and end folds of the wrappers carried in the mold boxes, of a heating element carried by the clamping plate in position to coöperate with the wrapper mounted in a mold box in one position, a cooling element carried by the clamping plate in position to coöperate with the wrapper when in a succeeding position, and plungers movable toward and from the ends of the mold boxes, heating elements carried by said plungers for sealing the ends of the package.

[Claims 6 to 8 not printed in the Gazette.]

1,217,695. WINDOW-SHADE BRACKET. ROBERT R. BRIDGES, Geneva, N. Y. Filed Sept. 27, 1916. Serial No. 122,485. (Cl. 156—24.)



A shade roller bracket comprising a plate, a spring plate having one end fixed to the plate and having its other end provided with furcations, a lever including a head and handle, means for pivotally connecting the lever with the plate, said plate and spring plate having key-hole slots formed therein for engaging a screw, the handle of the lever being operable between the furcations for forcing the head into engagement with the furcations, whereby the spring plate is flexed outwardly into yielding engagement with the head of the screw.

1,217,696. HOG-YOKE. ALFRED HADEN BRIDWELL, Beech Grove, Ky. Filed Dec. 9, 1915. Serial No. 65,903. (Cl. 119—138.)



1. In a device of the class described, the combination of a wire ring having free ends, a longitudinally curved relatively heavy lower plate having eyes formed at its ends through which the ring is passed and looped in such manner that the plate is anchored upon the ring, a downwardly extending hook formed on the plate through which the wire extends, a pair of upper plates suitably connected together and provided one with a longitudinally extending channel, the other plate extending at its ends beyond the ends of the first plate and having openings alining with the ends of the channel and through which the ends of the wire ring are adapted to pass, a bar defined in one of the upper plates by spaced openings provided therein and arranged on one side of the central portion of that plate, the free ends of said wire ring being passed through the channel and through said openings and adapted to be twisted upon said bars, substantially as described.

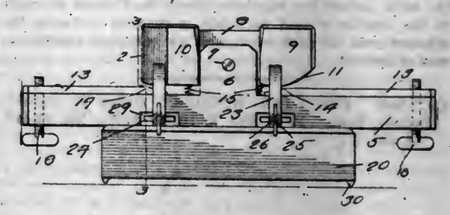
2. In a device of the class described, the combination of a wire ring having free ends, a lower relatively heavy plate secured to the wire ring, said plate being provided with a hook through which the wire extends, a pair of upper plates between which the ends of the ring are adapted to be passed, one of said plates being provided with a pair of spaced openings, a cross bar defined by the openings, the free ends of said ring being adapted to be extended through said openings and twisted upon said cross bar, and an outstanding hook carried by one of said upper plates.

3. In a device of the class described, the combination of a wire ring having free ends, a lower relatively heavy plate secured to the wire ring and provided with a hook, a pair of upper plates provided one with a longitudinally extending channel and with a cross bar defined by spaced openings provided in that plate, the other of the upper plates having its ends extending beyond the first upper plate and provided with openings through which the ends of the wire ring are extended, said ends being extended through the channel and being passed outwardly through the openings provided in the first upper plate and twisted together upon the cross bar, and a hook carried by one of the upper plates and extending outwardly from the ring.

4. In a device of the class described, the combination of a wire ring having free ends, a lower relatively heavy plate carried by the ring and having a hook depending therefrom, a pair of upper plates between which the ends of the wire ring extend, said plates being suitably secured together, and being provided one with a pair of spaced openings through which the ends of the ring extend, a cross bar defined between the openings, the free ends of said ring being twisted upon said cross bar, and a hook carried by one of the upper plates.

5. A neck yoke comprising a pair of oppositely curved diametrically opposed plates having hooks projecting from the convex surfaces thereof, one of said plates being heavier than the other, a flexible band, means securing the plates to the band, and means whereby the band may be adjusted to various diameters.

1,217,697. ADJUSTABLE SAW-SETTING DEVICE. FRANK W. BROWN, Belding, Mich. Filed Aug. 26, 1915. Serial No. 47,443. (Cl. 76—65.)



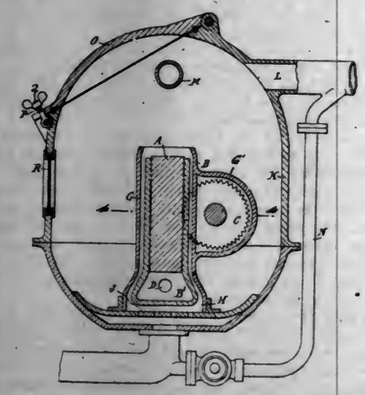
1. In a saw set, a body block, a setting head pivotally mounted over said body block, said block having a setting surface under the head, the body block being provided below the head with a transverse slot and with rectangular recesses in its sides alined with the said slot, guide arms disposed at the side of the body, square bosses on said arms extending into the recesses and a clamping bolt passed through said arms and through the slot.

2. In a saw set, a body block, a setting head pivotally mounted over said body block, said block having a setting surface under the head, guide arms adjustably disposed at the side of the body, means to clamp said arms in adjusted position, and means to prevent rotation of the arms when clamped.

1,217,698. HEATING APPARATUS USING LIQUID FUEL. HENRY BROWN, Putney Hill, London, England. Filed July 5, 1916. Serial No. 107,642. (Cl. 158—4.)

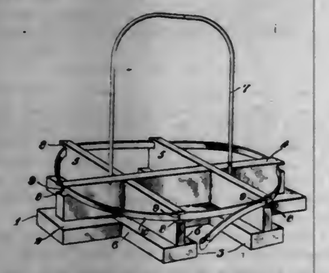
1. A liquid-fuel heating apparatus comprising a wick-tube, a wick in said tube, a casing arranged around said wick-tube and forming an air-passage, said casing extending beyond the exposed end of the wick and being slightly contracted at its outer end, means for supplying air under pressure through said air-passage to the exposed part of the wick, means for supplying liquid fuel under pressure to the interior of said wick-tube, a chamber inclosing the exposed part of said wick, and an eduction conduit to said chamber.

2. A liquid-fuel heating apparatus comprising a wick-tube having channels formed in its inner surface, a wick in said wick-tube, a chamber inclosing the exposed part of said wick, an eduction conduit to said chamber, means for supplying air under pressure to the exposed part of said wick and means for supplying fuel under pressure to the interior of said wick-tube.



3. A liquid-fuel heating apparatus comprising a wick-tube having channels formed in its inner surface, a wick in said tube, a casing arranged around said wick-tube and forming an air-passage, said casing extending beyond the exposed end of the wick and being slightly contracted at its outer end, means for supplying air under pressure through said air-passage to the exposed part of the wick, means for supplying liquid fuel under pressure to the interior of said wick-tube, a chamber inclosing the exposed part of said wick, and an eduction conduit to said chamber.

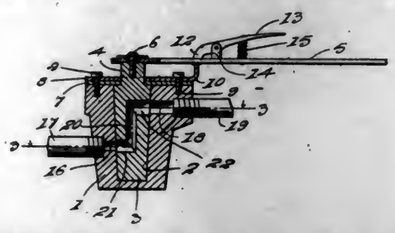
1,217,699. FRUIT-JAR HOLDER. OSCIE E. BROWN, Delmar, Iowa. Filed Apr. 6, 1916. Serial No. 89,417. (Cl. 53—1.)



A fruit jar holder of the class described comprising a tray having walls arranged to form jar receiving compartments each of which is open on one side, said walls being provided with guide openings, and a band attached to one of said walls and extending through said guide openings and adapted to contact with the outer sides of the jars or cans, said band being a spring and tending by its own spring action and by friction between the band and the sides of the guide openings to remain in any position in which it may be arranged.

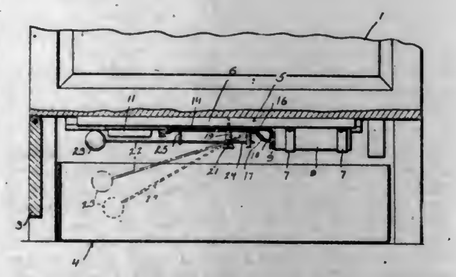
1,217,700. VALVE. WILSON BROWN and JOSEPH B. MEADOR, Mounds, Okla. Filed Mar. 9, 1915. Serial No. 13,274. (Cl. 137—26.)

In a valve structure, a valve casing having a valve chamber provided with a tapering valve seat, said casing having an inlet opening extending transversely through the wall thereof and communicating at its inner end with the chamber, said casing also having a plurality of radially arranged outlet openings extending transversely through the wall at points from opposite the inlet opening, said outlet openings located near the upper end of the casing and the inlet near the lower end thereof, a tapered valve having a reduced upper end rotatably seated in said chamber and having a longitudinally extending passage centrally therein, said valve being provided with transversely extending passages communicating at their inner ends with the upper and lower ends of said longitudinal passage respectively, their outer ends communicating re-



spectively with the inlet opening and any one of the radially arranged outlet openings, a lever secured at one end to the reduced end of said valve for rotating the same, for registering the transverse passages with the inlet and any one of the outlet openings, a disk carried by said casing and surrounding said valve, an upstanding projection formed on said disk and provided with notches in its upper face, a catch lever carried by the first named lever, said catch lever adapted to engage the notches in the projection to hold said valve in any desired position and against accidental rotation.

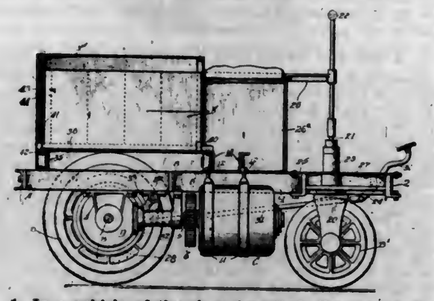
1,217,701. CIRCUIT-CLOSER FOR DRIP-PAN ALARMS. HENRY BRUNELLE and EDWARD BRUNELLE, Turners Falls, Mass. Filed Mar. 21, 1916. Serial No. 85,696. (Cl. 200—34.)



1. In a device of the class described the combination with a drip pan, a base, a pair of spaced depending supports secured to the base, a shaft journaled in the supports, a float arm rigidly secured to the shaft intermediate one end thereof, a float on the longer end of said arm and arranged to seat on the surface of the liquid within the drip pan, contacts carried by the base, the shorter end of said float arm defining a contact lever and arranged to extend between and beyond the contacts, said contacts converging toward the lower terminals, whereby upon the upward movement of the arm, the lever end of the float arm will be moved downwardly toward the converging ends of the contacts.

2. In a device of the class described the combination with a drip pan, a base, a pair of spaced depending supports secured to the base, a shaft journaled in the supports, a float arm rigidly secured to the shaft for rotation therewith, a float on one end of said arm, the opposite end of said arm defining a contact lever said float adapted to engage the upper surface of the liquid within the drip pan, contacts carried by the base, the lever end of the float arm arranged to extend between and beyond the contacts whereby upon the upward movement of the arm, the lever end of the float arm will be moved downwardly toward the converging ends of the contacts, and means depending from the base and adapted to support the float arm when it is raised at above a predetermined point moving its contact lever out from between the converging ends of the contacts as and for the purpose specified.

1,217,702. ELECTRIC TRACTOR. GEORGE W. BULLEY, Chicago, Ill., assignor to Mercury Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 11, 1915. Serial No. 7,496. (Cl. 21—114.)



1. In a vehicle of the class described, the combination of a substantially horizontally disposed flat frame, a pair of driving wheels disposed at the rear of the frame and supporting the rear end of said frame in a position below the tops of the wheels, a single front steering wheel disposed beneath and supporting the forward end of the frame, a motor suspended from and extending below the frame between said rear and forward wheels and connected in driving relation to said rear wheels, and a storage battery mounted on said frame entirely above the rear wheels so as to impose substantially its entire weight upon said rear wheels.

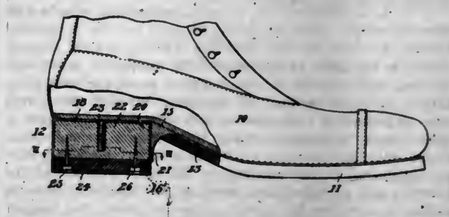
2. In a vehicle of the class described, a horizontally disposed open frame, a pair of driving wheels positioned at the rear of said frame, an axle for said wheels, means supporting the rear end of the frame on the axle in a position considerably below the tops of the wheels, a single steering wheel supporting the forward end of said frame, a steering post connected directly to the single front wheel and rising vertically above said frame, a storage battery housing on the frame above the rear wheels, a storage battery supported within said housing and directly above said rear wheels so as to impose substantially its entire weight upon the rear wheels, and a motor carried by said frame and connected to said rear driving wheels.

3. In a vehicle of the class described, the combination of an open frame embodying side channels; a pair of supporting wheels for the rear end of said frame and extending above the upper side thereof, a cross channel supported on the upper side of said frame, forward and in the rear of the wheels and extending above the tops of the wheels, a storage battery supported by said cross-channels directly above the wheels so as to impose substantially its entire weight on the wheels, and a removable housing covering said battery.

4. In a tractor of the class described, the combination of a flat horizontally disposed open frame comprising side and end beams, a pair of wheels positioned between the side beams of the frame, an axle for said wheels, means supporting the frame on the axle outside of said wheels so that the wheels extend considerably above the top of said frame, a plurality of cross beams arranged to clear the wheels, a storage battery supported on said cross beams directly above the wheels, a single steering wheel disposed beneath and supporting the front end of the frame, a vertically disposed steering fork connected with the wheel and having a vertical bearing in the frame, the axis of which intersects the axis of the steering wheel, and a driving motor supported by the frame but entirely below the frame.

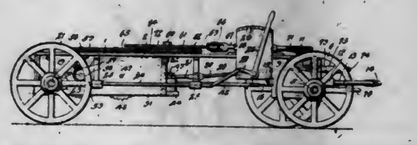
5. The combination of a substantially rectangualr open frame disposed horizontally and comprising end and side beams, a pair of rear wheels adjacent the inner sides of said side beams, an axle for said wheels, bearings for the frame mounted on the outer ends of said axle beyond the wheels and supporting the frame close to said axle and below the tops of the wheels, cross beams on the frame reaching a height slightly greater than the tops of the wheels, a storage battery supported by said cross beams just clear of the top of the wheels and directly above said wheels so as to impose substantially its entire weight upon the wheels, a single steering wheel supporting the front end of the frame and disposed entirely within the confines of the frame, a motor suspended and positioned below the frame intermediate the rear wheels and the front steering wheels, and a seat for the operator mounted on said frame forward of the storage battery.

1,217,703. SHOE CONSTRUCTION. GIUSEPPE CALAMIELLO, Paterson, N. J. Filed Apr. 12, 1916. Serial No. 90,646. (Cl. 36—73.)



A shoe comprising an upper, a sole plate permanently secured thereto, a sole tread connected to the sole plate, the rear end of the sole plate being of increased cross-sectional area and presenting a vertical rear wall and a curved front wall, depending lugs carried by the opposite corners of the lower edge of the rear end of the sole plate, a heel section including a casing having a flat front wall in engagement with the rear wall of the sole plate, means for permanently securing the abutting walls together, a wooden block within the heel casing, a screw carried by the casing for retaining the block therein, the said lugs adapted to be bent rearwardly at right angles to engage said block further to hold the same in position, and a tread lift secured to the wooden block.

1,217,704. MECHANICAL TOY. JAMES CIAFFONE, Long Island City, N. Y. Filed July 19, 1916. Serial No. 110,168. (Cl. 46—48.)



1. In a mechanical toy, propelling wheels and steering wheels, each journaled upon an axle, a motor for actuating the axle of the propelling wheels, a cam wheel also actuated by the motor, a flanged roller engaging the periphery of the cam wheel, spring means for retaining the roller in such engagement, a rack bar connected with the roller, a king pin for the axle of the steering wheels, and a pinion upon the said pin engaging with the rack bar.

2. In a mechanical toy, propelling wheels and steering wheels, and axles for said wheels, slotted brackets receiving the axle of the steering wheels, a motor for actuating the axle of the propelling wheels, a wheel having stepped

peripheral depressions actuated by the motor, a flanged roller engaging the periphery of said wheel to engage with the steps thereof, spring means for retaining the roller in such engagement, a rack bar associated with the roller, a king pin journaled in bearings and secured centrally to the shaft of the steering wheels, and a pinion secured upon said pin and co-engaging with the rack bar.

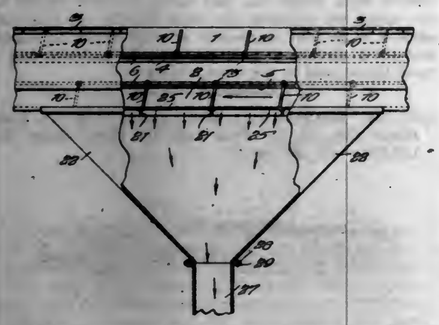
3. In a mechanical toy, a body, propelling wheels, and steering wheels for the body, a motor for actuating the propelling wheels, a bumper, spring means for normally retaining the bumper at a determined point in advance of the body, and means actuated by the bumper, when the said bumper is moved in the direction of the body, for reversing the direction of travel of the body.

4. In a mechanical toy, a body, propelling wheels and steering wheels for the body, an axle for said propelling wheels and an axle for said steering wheels, a motor, means actuated by said motor for turning the axle of the steering wheels to direct the travel of the toy, spaced gears loose on the axle of the propelling wheels, a clutch keyed upon the shaft between the gears, spring means for normally forcing the clutch to engage with one of the gears, a bumper for the body, and means operative by said bumper, when the same is moved in the direction of the body, for operating the clutch to bring the same into interlocking engagement with the second gear upon the axle of the propelling wheels.

5. In a mechanical toy, a body, propelling wheels and steering wheels upon the body, an axle for the propelling wheels, an axle for the steering wheels, spaced pinions loose on the axle of the propelling means, a motor actuating said pinions, a clutch keyed upon the said axle, spring actuated means for normally forcing the clutch into engagement with one of the referred to pinions, a spring pressed bumper for the body, a cam member associated with the bumper, a pivoted arm having a cam surface disposed to be engaged by the cam member of the bumper, and a connection between the said arm and the sliding means for the clutch, whereby when the bumper is moved inwardly of the body to swing the arm and slide the clutch to bring the same into engagement with the other pinion on the propelling axle.

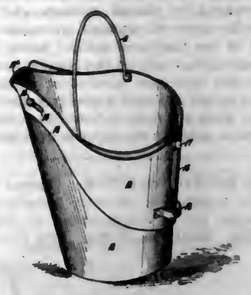
[Claims 6 and 7 not printed in the Gazette.]

1,217,705. SUGAR-SEPARATING MACHINE. LOUIS MARTIN CLAIRAIN and OCTAVE JOSEPH SUARES, New Orleans, La. Filed June 5, 1915. Serial No. 32,361. (Cl. 127—17.)



A sugar separating machine comprising a trough having near one end an opening in its bottom, a screen at the opening and a funnel shaped collector at the said opening, an exhausting device connected with the small end of the collector, an endless carrier supported for movement longitudinally of the trough and having scraper lugs arranged at spaced intervals and extending transversely of the trough, engaging the bottom of the trough to spread the mixture thereon and to carry the mixture over the screen, means for feeding the syrup at the end adjacent to the screen, and means for discharging the sugar at the opposite end.

1,217,706. COAL-HOD. ROBERT L. CLARK, Union, W. Va. Filed Mar. 15, 1916. Serial No. 84,336. (Cl. 220—45.)

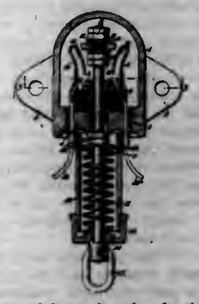


1. A coal hod formed with a spout and provided with a bail, and a guard extending at the back of the hod and curved in cross section to conform to the curvature of the hod, said guard presenting side arms extending forwardly and upwardly and connected with the sides of the spout by slot and pin connections, said arms projecting above the spout, and said guard having a slot and pin connection with the hod at the back and being provided with a handle below the last-mentioned slot and pin connection.

2. The combination with a coal hod having a bail, of a guard extending around the back of the hod and provided with forwardly extending arms, pivotally connected with the hod at the front, the said guard having a handle at the back to rock said guard and coact with the bail in lifting and manipulating the same to discharge its contents, and the said guard having a sliding connection with the hod at the back of the latter.

3. The combination with a coal hod having a bail formed with a discharge spout, of a guard presenting side arms extending forwardly and upwardly and pivotally secured to the said spout at the sides thereof, the upper edge of the said arms projecting above the spout, the said guard extending around the back of the hod and being movable on the said pivotal connections to a position to lie below the hod at the back of the latter or to a raised position projecting to a gradually increasing extent from the front ends of the side arms at the spout around the back of the hod, there being co-acting means on the hod and guard at the back to limit the rocking movement of the guard in both directions.

1,217,707. PULL-SWITCH FOR ELECTRIC MINE-SIGNALS. CARL CLAUSEN, Bisbee, Ariz. Filed Apr. 19, 1916. Serial No. 92,171. (Cl. 200—27.)



1. A switch comprising a housing having an opening, a plug inserted in the opening, a rod extending through the plug, a tubular member fastened to the plug and disposed within the housing, a ring of insulation surrounding the tubular member, a nut screwed on the tubular member for clamping the insulation to the plug, contacts fastened to and insulated from each other by the insulation ring, a bridging contact fastened to and insulated from the rod and adapted to engage the first-mentioned contacts, a spring on the rod normally operating to hold the bridging contact separated from the first-mentioned contacts, a housing disposed outside the first housing inclosing the spring and rod, and means connected with the rod for moving the same against the tension of the spring to close the circuit through the switch.

2. A switch of the class described comprising a housing, a longitudinally movable rod extending into the housing, a contact carried by and insulated from the inner end of the rod, spring contacts mounted in the housing and insulated from it and from each other and arranged to be engaged by the first-mentioned contact, a spring encircling the rod and disposed on a portion outside the housing, a housing having a threaded connection with the first-mentioned housing to inclose, the spring, means within the second-mentioned housing for adjusting the tension of the spring and limiting the movement of the rod, and a device fastened to the rod after the second housing is fastened in place and adapted to connect the rod with an actuating element.

3. A switch of the class described comprising a housing having a threaded opening, a plug screwed into the opening, a tubular member screwed into the plug, an insulation ring surrounding the tubular member, means on the tubular member for clamping the ring in place, contacts fastened to the ring and insulated from each other, a rod extending through the plug and tubular member, a contact carried by and insulated from the rod and arranged to engage the first-mentioned contacts, a tubular element having a threaded connection with the plug and disposed outside the housing and surrounding the portion of the rod disposed exterior to the housing, a spring surrounding the rod and disposed within the tubular element, a cap screwed on the tubular element and having an abutment for one end of the spring, an abutment on the rod for the opposite end of the spring, a nut on the rod for adjusting the position of the last-mentioned abutment to vary the tension of the spring and also forming a stop for limiting the movement of the rod in one direction, and means for permitting an actuator to be attached to the rod.

1,217,708. CANVAS WELT-INSOLE. WILLIAM E. CLAYTON, Portsmouth, Ohio. Filed Jan. 27, 1916. Serial No. 74,628. (Cl. 36—22.)

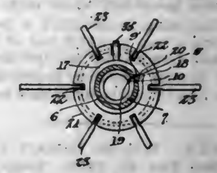


1. A welt insole composed of an intermediate layer, an upper layer of thin material cemented to the upper side of the intermediate layer, a heel-lift arranged on the under side thereof and a cord laid on the intermediate layer and paralleling the edge of the insole, a row of stitching throughout the length of the cord extending through the cord, the intermediate layer, the lower side of the insole and a portion of the heel-lift, and a textile layer pasted on the lower side of the insole.

2. A welt insole composed of an intermediate layer of buckram, an upper layer of thin material cemented to the upper or right side of the buckram, a leather heel-lift arranged on the under side thereof, and a cord laid on the buckram and the inner end of the heel, and paralleling the edge of the insole, and a row of stitching throughout the length of the cord extending through the cord, the buckram, the lower or right side of the insole, and a portion of the heel-lift, and a gummed canvas duck layer pasted on the lower side of the buckram around the cord and upon the inner end of the heel-lift.

1,217,709. FOLDABLE UMBRELLA. JOHN H. COBB, St. Joseph, Mo. Filed Nov. 19, 1915. Serial No. 62,362. (Cl. 135—46.)

An umbrella embodying a stick composed of an upper section, a middle section and a lower section, the said lower section of the stick being threadedly connected with the middle section of the stick, the said top section and middle section having an overlapped portion providing a longitudinally extending V-shaped groove, the overlapped portions of the upper and middle sections also providing ribs, the rib of the middle section engaging in the groove of the upper section for preventing any accidental rotary movement of the latter with respect to the former, means for locking the sections in extended position, a split runner mounted for a sliding adjustment upon the upper and middle sections of the stick, the free longitudinal edges of the runner formed by splitting the same being arranged in an overlapped position for providing the runner with a groove, the groove of the said runner engaging with the rib of the top section for guiding the runner thereon, and spring pressed means pivotally connected with the runner and adapted to engage a slot in the top section of the stick for supporting the umbrella in an unfolded position.



1,217,710. METALLIC COMPOUND. HERBERT B. COHO, Mount Vernon, N. Y., assignor to United Lead Company, a Corporation of New Jersey. Original application filed Sept. 22, 1914, Serial No. 862,960. Divided and this application filed June 7, 1915. Serial No. 32,608. (Cl. 75—1.)

A metallic compound comprising lead, copper and tin with sulfid of antimony, substantially as described.

1,217,711. METALLIC COMPOUND. HERBERT B. COHO, Mount Vernon, N. Y., assignor to United Lead Company, a Corporation of New Jersey. Original application filed June 7, 1915, Serial No. 32,608. Divided and this application filed July 29, 1916. Serial No. 112,006. (Cl. 75—1.)

A metallic compound, comprising lead and copper commingled and fused with sulfid of antimony associated with sodium, substantially as described.

1,217,712. NECKTIE-STRETCHER. NESBITT H. COSS, Cleveland, Ohio. Filed July 5, 1916. Serial No. 107,685. (Cl. 223—19.)



A device of the class described consisting of an expansible frame made of a single piece of wire, said wire being

bent to provide two side portions disposed in an outwardly diverging relation and having an integral medial V-shaped portion projecting between said side portions, said side portions being folded upon themselves to provide medial loops, the said side portions being formed with angular arms having right-angularly disposed terminal eyes which receive the arms for slidable movement thereupon and a wire yoke formed with opposing side portions and a medial V-shaped portion therebetween the ends of which are received in the first mentioned loops, each of said last named side portions being formed with a portion folded over itself providing a loop in which one of said arms is slidably guided and terminating in right-angularly disposed eyes coiled around said first named side portions so that both pairs of said side portions may flex in unison.

1,217,713. LADDER. RICHARD GARRETT COTTER, Sausalito, Cal. Filed July 19, 1915. Serial No. 40,752. (Cl. 228—15.)



1. The combination of a tapering form of ladder with a detachable pole or prop, carrying at one end a tapering screw, the small end of ladder carrying a ring or loop to engage the screw, the ring and screw providing a means of readily and securely attaching the pole to the ladder when desired, or detaching it therefrom, all substantially as set forth.

2. A ladder comprising side bars and rungs, and a closed tapering end in combination with a detachable pole or prop, the ladder being provided with a socket near its tapering end adapted to receive the end of and limit further longitudinal motion of the prop.

1,217,714. AMUSEMENT DEVICE. CHARLES H. COX, Grand Junction, Colo. Filed May 17, 1916. Serial No. 98,181. (Cl. 124—15.)



1. A device of the character described comprising an animal figure having movable portions, a rider normally disposed in riding position with relation to said figure, and means, operative when struck by a projectile, to effect the movement of the rider to a concealed position and actuation of the movable portions of said animal figure.

2. A device of the character described comprising an animal figure having movable portions, a rider normally disposed in riding position with relation to said figure, and means for normally holding the parts from movement and adapted to release the same for movement upon the impact of a projectile, the said rider being operative, by gravity to move to a concealed position and to effect the actuation of the movable portions of the animal figure.

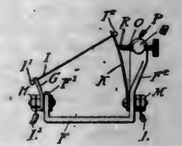
3. A device of the character described comprising an animal figure having movable portions, a rider normally disposed in riding position with relation to said figure, means operative upon the striking of the animal figure by a projectile to release the parts for movement, whereby to cause a disappearing motion of the rider and the actuation of the movable parts of the animal figure, and illusion producing means operative on the actuation of said parts.

4. A device of the character described comprising an animal figure having movable portions, a rider normally disposed in riding position with relation thereto, means operative upon the impact of a projectile to effect a movement of said rider to a disappearing position and the actuation of the movable parts of the animal figure, and sound producing means operative upon the actuation of the said movable parts.

5. A device of the character described comprising an animal figure having movable portions, a rider normally disposed in riding position with relation to said figure, means operative under the impact of a projectile for effecting the movement of said rider to a disappearing position and the actuation of the movable parts of the animal figure, and illuminating means thrown into action upon the actuation of the said movable parts.

[Claims 6 to 10 not printed in the Gazette.]

1,217,715. ELECTRIC SIGN. SAMUEL G. CRANE, Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 17, 1913. Serial No. 748,881. (Cl. 177—347.)



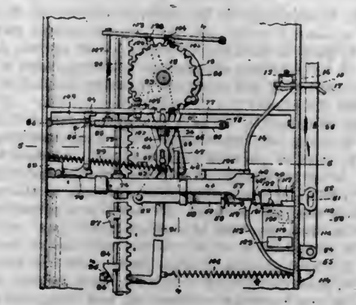
1. In a device of the character described, a support, a post insulated therefrom, connections from said post to a source of electrical energy, a resilient member carried by and insulated from said support, a connection from said resilient member to the source of electrical energy, an expansible electric conductor connecting the resilient member to said post and normally holding the resilient member under tension, a second post carried by and having a contact normally spaced from the resilient member, and an electrical connection from the contact.

2. In a device of the class described, a support, a stationary post and a resilient conducting member carried by and insulated from the support, connections from said post and resilient member to a source of electrical energy, a headed expansible wire connecting the stationary post and resilient member, and normally holding the resilient member under tension, a second post carried by said support and having an adjustable contact thereon normally spaced from the resilient member, and an electrical connection from said adjustable contact.

3. In a device of the class described, a support, a stationary post and a resilient conducting member carried by and insulated from the support, the post and resilient member being perforated adjacent their extremities, connections from said post and resilient member to a source of electrical energy, a headed expansible wire extending through the perforations in the post and resilient member, and normally holding the resilient member under tension, a second post carried by said support and having an adjustable contact thereon normally spaced from the resilient member, and an electrical connection from said adjustable contact.

4. In a device of the class described, a support F having the arms F', F^2, a resilient member carried by and insulated from the arm F^2, a stationary contact carried by the arm F^2, said resilient member being normally separated from and tending to bear upon said contact, a post carried by the arm F', a wire connecting said post and said resilient member and normally restraining the latter from contact with the stationary contact, and connections to said post, resilient member and contact respectively for first passing a current through said wire and member, and when said resilient member is in touch with said stationary contact through said wire, resilient member and contact.

1,217,716. COIN-CONTROLLED MECHANISM. JOHN A. CRIMP, Ellensburg, Wash. Filed Aug. 27, 1915. Serial No. 47,640. (Cl. 194—60.)



1. An apparatus of the class described comprising a casing having coin chutes therein, means for delivering coins of predetermined denominations into said chutes, movable members having coin receivers, means for locking the movable members in position for the reception of coins in the receivers, means for moving either or both of the members only on the deposit of coins in the receivers, and mechanism operative on actuating the movable members.

2. An apparatus of the class described comprising a casing having coin chutes therein, means for delivering coins of predetermined denominations into said chutes, movable members having coin receivers, means for locking the movable members in position for the reception of coins in the receivers, means for moving either or both of the members only on the deposit of coins in the receivers, mechanism operative on actuating the movable members, means for locking the said members and means operated by the said mechanism for releasing the said locking means.

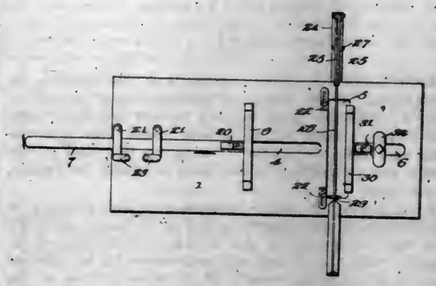
3. An apparatus of the class described comprising a plurality of movable members arranged for operation under predetermined conditions, means for locking the movable members in advanced position, a movable rack, a gear for operating the rack, means for driving the gear, clutch mechanism controlled by the movement of the members either singly or collectively for connecting and disconnecting the driving means for the rack gear, and means operated upon by the rack to release the locking means for the members.

4. An apparatus of the class described comprising a plurality of movable members arranged for operation under predetermined conditions, means for locking the movable members in advanced position, a movable rack, a gear for operating the rack, means for driving the gear, clutch mechanism controlled by the movement of the members either singly or collectively for connecting and disconnecting the driving means for the rack gear, means operated upon by the rack to release the locking means for the members, and means for returning the members to normal position and automatically releasing the clutch mechanism.

5. An apparatus of the class described comprising a plurality of movable members arranged for operation under predetermined conditions, means for locking the movable members in advanced position, a movable rack, a gear for operating the rack, means for driving the gear, clutch mechanism controlled by the movement of the members either singly or collectively for connecting and disconnecting the driving means for the rack gear, means operated upon by the rack to release the locking means for the members, means for returning the members to normal position and automatically releasing the clutch mechanism and reversing ratchet mechanism controlling the direction of rotation of the rack gear and actuated by the rack.

[Claims 6 to 10 not printed in the Gazette.]

1,217,717. BREAD-SLICER. JOHN F. DECKER and FRANK RAIMER, Adams, Mass. Filed Aug. 30, 1916. Serial No. 117,744. (Cl. 146—12.)



1. In a bread slicing machine, the combination with a table whose top has a transverse opening between its ends through which the slices drop, a longitudinal slot in rear of and communicating with said opening, and a longitudinal slot in front of said opening; of a gage standing within said opening, a bar supporting it and longitudinally adjustable within the rear slot, loaf-feeding mechanism, means for moving it forward within the front slot, stops rising from the table just forward from the slice-opening, and slicing mechanism above said opening.

2. In a bread slicing machine, the combination with a table top having a transverse opening through which the slices drop and a longitudinal slot forward of said opening, a gage longitudinally adjustable on the top in rear of such opening, and the slicing mechanism above the opening; of a rack bar slidably mounted in said slot, an upright carrier plate, a bracket securing it to the rack bar and provided with a latch, a strap pivoted at one end to the table top and adapted to swing across said slot, a button for engaging the free end of the strap, the latter adapted to engage said latch when the carrier plate is retracted, and yielding means bearing the rack bar and plate normally toward the slicing mechanism for the purpose set forth.

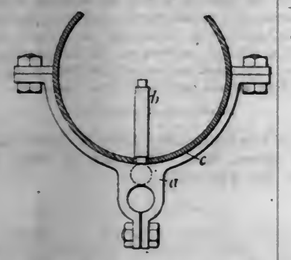
1,217,718. LAMP FOR MOTOR-VEHICLES AND LIKE SERVICES. HENRY JOSEPH DEW, Chorlton-cum-Hardy, Manchester, England. Filed Mar. 15, 1916. Serial No. 84,382. (Cl. 240—52.)

1. In lamps for motor vehicles and like services, the combination with the lamp of a self-container self-supporting burner fitting disposed beneath the lamp, a burner projecting upwardly from said fitting and passing freely into the lamp, and means corresponding in internal form to the external contour of the lower portion of the lamp for supporting the lamp around said burner, as set forth.

2. In lamps for motor vehicles and like services, in combination, a self-contained self-supporting burner fitting disposed beneath the lamp, a gas inlet to and a burner outlet on said fitting, and lamp supporting means upon said fitting corresponding in internal form to the external contour of the lower portion of the lamp, as set forth.

3. In lamps for motor vehicles and like services, in combination, a self-contained self-supporting burner fitting, a gas inlet to and a burner outlet on said fitting,

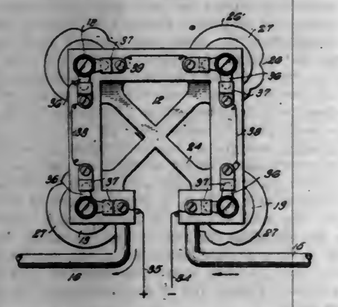
lamp supporting arms upon said fitting corresponding in internal form to the external contour of the lower portion of the lamp, a lamp resting in said supporting arms and having an aperture to pass over said burner, as set forth.



4. In lamps for motor vehicles and like services, in combination, a self-contained self-supporting burner fitting, a cradle-like lamp support formed integrally with said fitting, a lamp resting in said cradle, lugs upon the lamp and upon the cradle for securing the lamp in the cradle, and an aperture in the lamp to receive the burner, as set forth.

5. In lamps for motor vehicles and like services, in combination, a self-supporting burner fitting, a lamp fitting over the burner of said fitting, a cradle formed integrally with the fitting and corresponding in internal form to the external contour of the lower portion of the lamp, and means for securing the lamp in said cradle, as set forth.

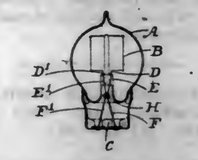
1,217,719. CURRENT-LOCK FOR AUTOMOBILES. WILLIAM JAMES DORGAN, Grantwood, N. J. Filed Nov. 10, 1915. Serial No. 60,685. (Cl. 137—7.)



1. The herein described current lock for an automobile comprising, in combination, a rigid body of substantially rectangular form, a plug rotatably mounted in each corner of the body, a detent coöperating with each plug and indicating to the operator through his sense of touch the relative position of the plug with respect to the body, and means to convey a current through the body when the plugs are all in normal running position, said current being obstructed when any one or more of the plugs are turned out of such normal position.

2. In an automobile lock, the combination of a rigid body, a plurality of rotary members journaled therein, a disk fitted upon each rotary member, the rotary member and said disk being provided with interlocking parts providing for rotary adjustment of the disk around the axis of the rotary member, said disk having a series of peripheral notches on one side and being smooth on the other side, a series of plungers radiating outwardly from the center of the body into coöperation with the respective disks, means to rotate the several rotary members and disks, and means to convey a current through said body and through all of said rotary members when adjusted in normal running position.

1,217,720. CUT-OUT FOR ELECTRIC INSTRUMENTS, GLOW-LAMPS, AND THE LIKE. ALLAN JOHN DOWNES, Croydon, England, assignor of one-half to John Venning, London, England. Filed Oct. 11, 1913. Serial No. 794,720. (Cl. 176—24.)



1. The combination of an electric instrument for use on low pressure circuits, electric leads connected thereto, and a by-pass in parallel therewith, said by-pass being located in an oxidizing atmosphere and comprising a film of oxid connecting the leads but normally insulating one lead from the other.

2. The combination of an electric instrument for use on low pressure circuits, electric leads connected thereto, and a by-pass in parallel therewith, said by-pass being located in an oxidizing atmosphere and comprising an electric conductor connecting the leads, one of the members being oxidized, so that the leads are normally insulated one from another by a film of oxid.

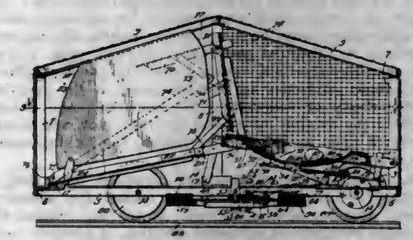
3. The combination of an electric instrument for use on low pressure circuits, electric leads connected thereto, and a by-pass in parallel therewith, said by-pass being located in an oxidizing atmosphere and comprising an oxidized link connecting the two leads to each other, the oxidized film on the link normally insulating one lead from the other.

4. The combination of an incandescent electric lamp for series lighting on low pressure circuits, of a by-pass in parallel therewith, said by-pass being located outside of the exhausted lamp bulb and comprising a film of oxid connecting the two metallic conductors for the lamp but normally insulating one conductor from the other.

5. The combination of an electric instrument for use on low pressure circuits, electric leads connected thereto, and a by-pass in parallel therewith, said by-pass being located in an oxidizing atmosphere and comprising a film of copper oxid connecting two conductors but normally insulating one conductor from the other.

[Claim 6 not printed in the Gazette.]

1,217,721. AUTOMATIC HEN'S NEST. JOSEPH E. DRAKE, Blue Rapids, Kans. Filed Apr. 29, 1916. Serial No. 94,366. (Cl. 119—47.)



1. An automatic nest comprising a main framework, a movable runway platform pivotally supported near its rear end upon said framework and being disposed in one end of the framework, a nest platform pivotally connected near one end to the runway platform, and being pivotally connected at its opposite end to the main framework, an entrance and an exit runway carried by the runway platform, a partition disposed between the runways, a shaft carried by the main frame work above the runway platform, an entrance door and an exit door carried by the shaft substantially at right angles to each other, a bar connecting said doors, and a link pivotally connected at one end to said bar and at its opposite end to said runway platform, one of the runways being open while the other is closed, the exit door being open while the runway is raised.

2. A device of the class described comprising a framework having a nest in one end thereof, a runway platform disposed in the opposite end of the framework and pivotally connected to said framework, said platform being provided with an entrance and exit runway, a pair of doors disposed substantially at right angles to each other and pivotally supported above the platform and adapted to control the runways, and means operable by the platform for rotating the doors whereby to reverse the relative positions of the doors when the platform is raised from the position of the doors when the platform is in lowered position.

3. A device of the class described comprising a main framework, a movable runway framework, links pivotally connected to the main framework, and pivotally supporting the runway framework, a movable nest frame to which the runway framework is pivotally connected, runway platforms disposed in spaced relation upon the runway framework, a stationary partition disposed between said platforms, a shaft disposed above the runway framework, a pair of doors carried by said shaft and secured substantially at right angles to each other, said runway platform adapted to be raised when the nest frame is lowered, one of the runways being open when the runway platform is lowered, and the opposite runway being closed, and means connecting the runway platform and doors for operating the latter whereby the position of the doors is reversed when the runway platform is raised.

4. A device of the class described comprising a main framework, a nest frame pivotally connected with the main framework, a nest supported on the frame and provided with a discharge opening, a guide-way supported by the nest frame, a slide movable on said guide into and out of registration with the discharge opening of the nest, a lever pivotally supported beneath the nest frame and having a link connection with the slide, a runway platform pivotally supported above the main platform, said nest frame being pivotally connected to said runway platform, a standard carried by the runway platform, and a link pivotally connected to the standard and to said lever, said runway platform adapted to be raised when the nest platform is lowered, whereby to move said slide into registration with the discharge opening of the nest, upon the lowering of the latter, and to move said slide out of registration with the discharge opening of the nest upon upward movement of the latter.

5. A device of the class described including a movable nest having a discharge opening, said nest adapted to be actuated upon the movement of a fowl thereupon, a movable slide disposed relatively to the nest and normally out of alinement with the discharge opening of the nest, and operating means for moving said slide into registration with the discharge opening when the nest is actuated.

[Claims 6 to 25 not printed in the Gazette.]

1,217,722. PROCESS OF TREATING CELLULOSE ACETATES TO ALTER THE SOLUBILITIES THEREOF AND PRODUCTS OF SAID PROCESS. HENRY DREYFUS, Basel, Switzerland. Original application filed Oct. 2, 1911, Serial No. 652,442. Divided and this application filed Aug. 1, 1913. Serial No. 782,580. (Cl. 23—24.)

1. A process of treating a cellulose acetate which is insoluble in chloroform and in diluted alcohol, but soluble in acetone, which comprises subjecting such a cellulose acetate, while the same is in solution in the presence of an acid material, to the continued action of such acid material until a product is obtained which is soluble in diluted alcohol of a predetermined concentration, and then stopping the reaction before said solubility disappears.

2. The process of treating a cellulose acetate insoluble in chloroform and in alcohol of a predetermined concentration and in alcohol-benzene, which comprises treating the same with a solution containing acid-forming ions, until a cellulose acetate soluble in a liquid comprising alcohol of said predetermined concentration and soluble in alcohol-benzene, is produced, and then stopping the reaction, before said solubilities disappear.

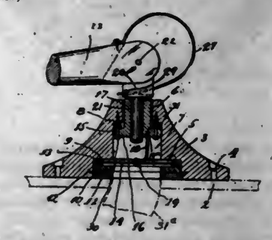
3. The process of treating a cellulose acetate insoluble in chloroform and insoluble in alcohol-benzene, but soluble in acetone which comprises treating the same with a dilute acid until a cellulose acetate soluble in alcohol-benzene is produced and then stopping said reaction before said solubilities disappear.

4. The process of treating a cellulose acetate insoluble in chloroform and in alcohol-benzene, but soluble in acetone, which comprises treating the same with dilute mineral acid until a cellulose acetate soluble in acetone, and in alcohol-benzene, is produced as determined by tests at successive stages of the process, and stopping the reaction before said solubilities disappear.

5. The process of treating cellulose acetates insoluble in chloroform and in diluted alcohol, but soluble in acetone and in alcohol-chloroform, which comprises treating the same with an acid until the cellulose acetates become soluble in diluted acetone, and in diluted alcohol.

[Claims 6 to 18 not printed in the Gazette.]

1,217,723. PHONOGRAPH. ROY A. DUNBAR, Evans City, Pa. Filed Mar. 31, 1916. Serial No. 87,917. (Cl. 274—26.)



1. A phonograph comprising a reciprocatory sleeve, a solid arm transferring vibration from a phonograph needle to said sleeve, means to provide a horizontal and vertical pivotal connection between said arm and said sleeve, a reproducer disk, and an arm connecting the sleeve to said disk.

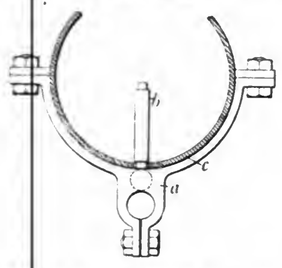
2. A phonograph comprising a reciprocatory sleeve, a solid arm transferring vibration from a phonograph needle to said sleeve, means to provide a horizontal and vertical pivotal connection between said arm and said sleeve, a reproducer disk, an arm connecting the sleeve to said disk, and a spring having one end attached to said connection and its other end to the rear end of said transferring arm.

3. A phonograph comprising a reciprocatory flanged sleeve, a support having said sleeve arranged therein, an arm transferring vibrations from a phonograph needle to said sleeve, means to provide a horizontal and a vertically disposed pivotal connection between said arm and said sleeve, a reproducer disk mounted in said support below the sleeve, an arm connecting said sleeve to said disk, hangers fixed within said support and extending through the flange of the sleeve, and springs loosely mounted on the hangers and engaging the upper face of the flange.

4. A phonograph comprising a reproducer disk, a solid arm for transferring vibrations from the phonograph needle, a connection between said arm and said disk whereby the vibrations transferred by the arm are conducted to said disk to create sound waves, said connection including a flanged sleeve mounted on hangers and springs carried by the hangers and bearing against the upper face of the flange of the sleeve and a bow-shaped spring having one end attached to said connection and its other end secured to the rear end of said arm.

5. A phonograph comprising a reproducer disk, a solid arm for transferring vibrations from the phonograph

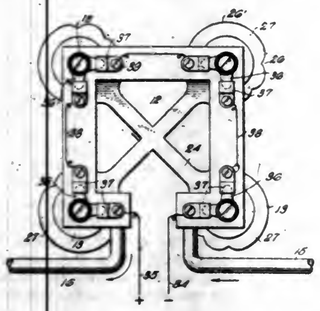
lamp supporting arms upon said fitting corresponding in internal form to the external contour of the lower portion of the lamp, a lamp resting in said supporting arms and having an aperture to pass over said burner, as set forth.



4. In lamps for motor vehicles and like services, in combination, a self-contained self-supporting burner fitting, a cradle-like lamp support formed integrally with said fitting, a lamp resting in said cradle, lugs upon the lamp and upon the cradle for securing the lamp in the cradle, and an aperture in the lamp to receive the burner, as set forth.

5. In lamps for motor vehicles and like services, in combination, a self-supporting burner fitting, a lamp fitting over the burner of said fitting, a cradle formed integrally with the fitting and corresponding in internal form to the external contour of the lower portion of the lamp, and means for securing the lamp in said cradle, as set forth.

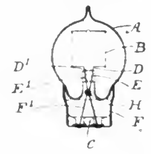
1,217,719. CURRENT-LOCK FOR AUTOMOBILES. WILLIAM JAMES DORGAN, Grantwood, N. J. Filed Nov. 10, 1915. Serial No. 60,685. (Cl. 137—7.)



1. The herein described current lock for an automobile comprising, in combination, a rigid body of substantially rectangular form, a plug rotatably mounted in each corner of the body, a detent coöperating with each plug and indicating to the operator through his sense of touch the relative position of the plug with respect to the body, and means to convey a current through the body when the plugs are all in normal running position, said current being obstructed when any one or more of the plugs are turned out of such normal position.

2. In an automobile lock, the combination of a rigid body, a plurality of rotary members journaled therein, a disk fitted upon each rotary member, the rotary member and said disk being provided with interlocking parts providing for rotary adjustment of the disk around the axis of the rotary member, said disk having a series of peripheral notches on one side and being smooth on the other side, a series of plungers radiating outwardly from the center of the body into coöperation with the respective disks, means to rotate the several rotary members and disks, and means to convey a current through said body and through all of said rotary members when adjusted in normal running position.

1,217,720. CUT-OUT FOR ELECTRIC INSTRUMENTS, GLOW-LAMPS, AND THE LIKE. ALLAN JOHN DOWNES, Croydon, England, assignor of one-half to John Venning, London, England. Filed Oct. 11, 1913. Serial No. 794,720. (Cl. 176—24.)



1. The combination of an electric instrument for use on low pressure circuits, electric leads connected thereto, and a by-pass in parallel therewith, said by-pass being located in an oxidizing atmosphere and comprising a film of oxid connecting the leads but normally insulating one lead from the other.

2. The combination of an electric instrument for use on low pressure circuits, electric leads connected thereto, and a by-pass in parallel therewith, said by-pass being located in an oxidizing atmosphere and comprising an electric conductor connecting the leads, one of the members being oxidized, so that the leads are normally insulated one from another by a film of oxid.

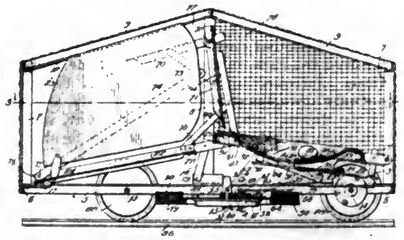
3. The combination of an electric instrument for use on low pressure circuits, electric leads connected thereto, and a by-pass in parallel therewith, said by-pass being located in an oxidizing atmosphere and comprising an oxidized link connecting the two leads to each other, the oxidized film on the link normally insulating one lead from the other.

4. The combination of an incandescent electric lamp for series lighting on low pressure circuits, of a by-pass in parallel therewith, said by-pass being located outside of the exhausted lamp bulb and comprising a film of oxid connecting the two metallic conductors for the lamp but normally insulating one conductor from the other.

5. The combination of an electric instrument for use on low pressure circuits, electric leads connected thereto, and a by-pass in parallel therewith, said by-pass being located in an oxidizing atmosphere and comprising a film of copper oxid connecting two conductors but normally insulating one conductor from the other.

[Claim 6 not printed in the Gazette.]

1,217,721. AUTOMATIC HEN'S NEST. JOSEPH E. DRAKE, Blue Rapids, Kans. Filed Apr. 29, 1916. Serial No. 94,366. (Cl. 119—47.)



1. An automatic nest comprising a main framework, a movable runway platform pivotally supported near its rear end upon said framework and being disposed in one end of the framework, a nest platform pivotally connected near one end to the runway platform, and being pivotally connected at its opposite end to the main framework, an entrance and an exit runway carried by the runway platform, a partition disposed between the runways, a shaft carried by the main frame work above the runway platform, an entrance door and an exit door carried by the shaft substantially at right angles to each other, a bar connecting said doors, and a link pivotally connected at

one end to said bar and at its opposite end to said runway platform, one of the runways being open while the other is closed, the exit door being open while the runway is raised.

2. A device of the class described comprising a framework having a nest in one end thereof, a runway platform disposed in the opposite end of the framework and pivotally connected to said framework, said platform being provided with an entrance and exit runway, a pair of doors disposed substantially at right angles to each other and pivotally supported above the platform and adapted to control the runways, and means operable by the platform for rotating the doors whereby to reverse the relative positions of the doors when the platform is raised from the position of the doors when the platform is in lowered position.

3. A device of the class described comprising a main framework, a movable runway framework, links pivotally connected to the main framework, and pivotally supporting the runway framework, a movable nest frame to which the runway framework is pivotally connected, runway platforms disposed in spaced relation upon the runway framework, a stationary partition disposed between said platforms, a shaft disposed above the runway framework, a pair of doors carried by said shaft and secured substantially at right angles to each other, said runway platform adapted to be raised when the nest frame is lowered, one of the runways being open when the runway platform is lowered, and the opposite runway being closed, and means connecting the runway platform and doors for operating the latter whereby the position of the doors is reversed when the runway platform is raised.

4. A device of the class described comprising a main framework, a nest frame pivotally connected with the main framework, a nest supported on the frame and provided with a discharge opening, a guide-way supported by the nest frame, a slide movable on said guide into and out of registration with the discharge opening of the nest, a lever pivotally supported beneath the nest frame and having a link connection with the slide, a runway platform pivotally supported above the main platform, said nest frame being pivotally connected to said runway platform, a standard carried by the runway platform, and a link pivotally connected to the standard and to said lever, said runway platform adapted to be raised when the nest platform is lowered, whereby to move said slide into registration with the discharge opening of the nest, upon the lowering of the latter, and to move said slide out of registration with the discharge opening of the nest upon upward movement of the latter.

5. A device of the class described including a movable nest having a discharge opening, said nest adapted to be actuated upon the movement of a fowl thereupon, a movable slide disposed relatively to the nest and normally out of alinement with the discharge opening of the nest, and operating means for moving said slide into registration with the discharge opening when the nest is actuated.

[Claims 6 to 25 not printed in the Gazette.]

1,217,722. PROCESS OF TREATING CELLULOSE ACETATES TO ALTER THE SOLUBILITIES THEREOF AND PRODUCTS OF SAID PROCESS. HENRY DREYFUS, Basel, Switzerland. Original application filed Oct. 2, 1911, Serial No. 652,442. Divided and this application filed Aug. 1, 1913. Serial No. 782,530. (Cl. 23—24.)

1. A process of treating a cellulose acetate which is insoluble in chloroform and in diluted alcohol, but soluble in acetone, which comprises subjecting such a cellulose acetate, while the same is in solution in the presence of an acid material, to the continued action of such acid material until a product is obtained which is soluble in diluted alcohol of a predetermined concentration, and then stopping the reaction before said solubility disappears.

2. The process of treating a cellulose acetate insoluble in chloroform and in alcohol of a predetermined concentration and in alcohol-benzene, which comprises treating the same with a solution containing acid-forming ions, until a cellulose acetate soluble in a liquid comprising alcohol of said predetermined concentration and soluble in alcohol-benzene, is produced, and then stopping the reaction, before said solubilities disappear.

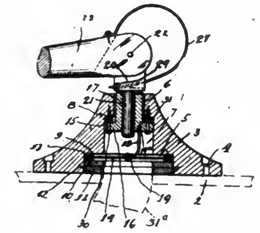
3. The process of treating a cellulose acetate insoluble in chloroform and insoluble in alcohol-benzene, but soluble in acetone which comprises treating the same with a dilute acid until a cellulose acetate soluble in alcohol-benzene is produced and then stopping said reaction before said solubilities disappear.

4. The process of treating a cellulose acetate insoluble in chloroform and in alcohol-benzene, but soluble in acetone, which comprises treating the same with dilute mineral acid until a cellulose acetate soluble in acetone, and in alcohol-benzene, is produced as determined by tests at successive stages of the process, and stopping the reaction before said solubilities disappear.

5. The process of treating cellulose acetates insoluble in chloroform and in diluted alcohol, but soluble in acetone and in alcohol-chloroform, which comprises treating the same with an acid until the cellulose acetates become soluble in diluted acetone, and in diluted alcohol.

[Claims 6 to 18 not printed in the Gazette.]

1,217,723. PHONOGRAPH. ROY A. DUNBAR, Evans City, Pa. Filed Mar. 31, 1916. Serial No. 87,917. (Cl. 274—26.)



1. A phonograph comprising a reciprocatory sleeve, a solid arm transferring vibration from a phonograph needle to said sleeve, means to provide a horizontal and vertical pivotal connection between said arm and said sleeve, a reproducer disk, and an arm connecting the sleeve to said disk.

2. A phonograph comprising a reciprocatory sleeve, a solid arm transferring vibration from a phonograph needle to said sleeve, means to provide a horizontal and vertical pivotal connection between said arm and said sleeve, a reproducer disk, an arm connecting the sleeve to said disk, and a spring having one end attached to said connection and its other end to the rear end of said transferring arm.

3. A phonograph comprising a reciprocatory flanged sleeve, a support having said sleeve arranged therein, an arm transferring vibrations from a phonograph needle to said sleeve, means to provide a horizontal and a vertically disposed pivotal connection between said arm and said sleeve, a reproducer disk mounted in said support below the sleeve, an arm connecting said sleeve to said disk, hangers fixed within said support and extending through the flange of the sleeve, and springs loosely mounted on the hangers and engaging the upper face of the flange.

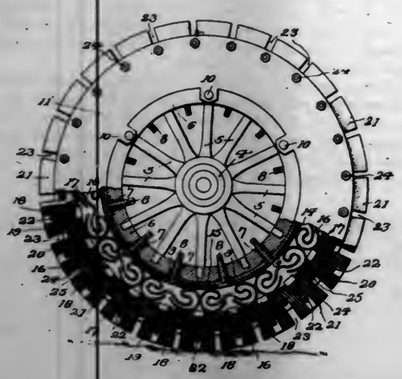
4. A phonograph comprising a reproducer disk, a solid arm for transferring vibrations from the phonograph needle, a connection between said arm and said disk whereby the vibrations transferred by the arm are conducted to said disk to create sound waves, said connection including a flanged sleeve mounted on hangers and springs carried by the hangers and bearing against the upper face of the flange of the sleeve and a bow-shaped spring having one end attached to said connection and its other end secured to the rear end of said arm.

5. A phonograph comprising a reproducer disk, a solid arm for transferring vibrations from the phonograph

needle, a connection between said arm and said disk whereby the vibrations transferred by the arm are conducted to said disk to create sound waves, and a support for said connection and disk, said connection including hangers secured to and depending within the support, a flanged sleeve slidably mounted on said hangers, and springs loosely mounted on the hangers and engaging the upper face of the flange of the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,217,724. VEHICLE-WHEEL. JOSEPH H. DWORK, Newark, N. J. Filed Sept. 6, 1916. Serial No. 118,743. (Cl. 152—8.)

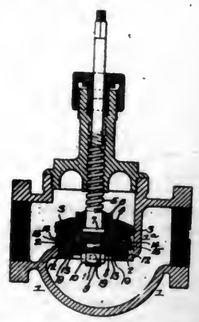


1. A vehicle wheel comprising in combination a felly provided with radial outwardly projecting tension screws, a resilient tire having the continuity of its tread surface interrupted by a circumferential series of transverse radial depressions, a circumferential spring chamber between said felly and tire, an expansible inner load-carrying band surrounding said tension screws, an outer expansible load-carrying band, a series of independent shock absorbing springs interposed between said inner and outer bands, inclosing plates upon opposite sides of the structure, and bolts passing loosely through the transverse radial tire depressions aforesaid for connecting the side plates of the structure rigidly together.

2. A vehicle wheel comprising in combination a felly provided with radial outwardly projecting tension screws, a resilient tire having the continuity of its tread surface interrupted by a circumferential series of transverse radial depressions, a circumferential spring chamber between said felly and tire, an expansible inner load-carrying band surrounding said tension screws, an outer expansible load-carrying band, a series of independent shock absorbing springs interposed between said inner and outer bands, duplicate plates of annular form upon opposite sides of the structure constituting the side walls of said spring chamber, bolts passing loosely through the transverse radial tire depressions aforesaid for connecting said side plates rigidly together, and means for securing the tire to said outer load-carrying band at frequent points throughout the base of the tire.

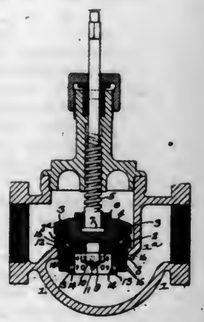
3. A vehicle wheel comprising in combination a felly provided with radial outwardly projecting tension screws, a resilient tire, a circumferential spring chamber between said felly and tire, an expansible inner load-carrying band of spring material surrounding said tension screws within the spring chamber, an outer load-carrying band of convolute form and spring material within said chamber, a circumferential series of independent shock absorbing springs interposed between said inner and outer bands, a series of spaced apart loops each surrounding said outer band, and a corresponding series of screws for securing the tire aforesaid to said loops.

1,217,725. VALVE. PHILIP ECKENROTH, Philadelphia, Pa., assignor of six twenty-fifths to Wilbur F. Hamilton, Cynwyd, Pa., and six twenty-fifths to Frank J. Milon, William Penn, Pa. Filed Jan. 31, 1913. Serial No. 745,419. (Cl. 137—4.)



The combination, in a valve structure, of a casing having a partition, a main valve, a removable seat therefor mounted in said partition, a removable ring forming an auxiliary seat carried by the main seat below the same, inwardly disposed lugs carried by said main seat for supporting said auxiliary seat, a removable disk for peripheral engagement with the vertical portion of said auxiliary seat carried by the main valve below the same, and means for securing said disk to said main valve.

1,217,726. VALVE. PHILIP ECKENROTH, Philadelphia, Pa., assignor of six twenty-fifths to Wilbur F. Hamilton, Cynwyd, Pa., and six twenty-fifths to Frank J. Milon, William Penn, Pa. Filed Jan. 31, 1913. Serial No. 745,420. (Cl. 137—4.)



1. The combination, in a valve structure, of a main valve, a seat therefor, a removable auxiliary seat carried by the main seat and disposed below the latter and constituting one engaging surface, and a detachable perforated sleeve for engagement with said auxiliary seat and constituting a second engaging surface, one of said surfaces being provided with annular grooves.

2. The combination, in a valve structure, of a main valve, a seat therefor, packing carried by said main valve, a removable auxiliary seat carried by the main seat and disposed below the latter and constituting one engaging surface, a detachable perforated sleeve for engagement with said auxiliary seat and constituting a second engaging surface, one of said surfaces being provided with annular grooves, said detachable sleeve engaging the packing ring of the main valve, and means for securing said sleeve in place.

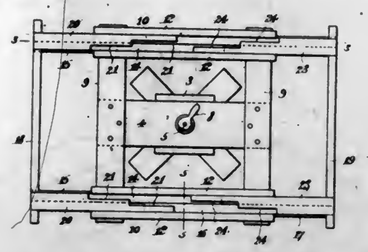
3. The combination, in a valve structure, of a main valve, a packing ring carried thereby, a seat therefor, an auxiliary seat, and a perforated sleeve for peripheral engagement therewith carried by the main valve, said perforated sleeve having annular grooves adjacent the surface of said auxiliary seat.

4. The combination, in a valve structure, of a main valve, a packing ring carried thereby, a seat therefor, a removable auxiliary seat below the main seat, and a renewable perforated sleeve for peripheral engagement therewith carried by and movable with the main valve, said perforated sleeve having annular grooves adjacent the surface of said auxiliary seat.

5. The combination, in a valve structure, of a main valve, a packing ring carried thereby, a seat therefor, an auxiliary seat disposed below the main seat, and an auxiliary valve for peripheral engagement therewith carried by the main valve, one of said auxiliary members having annular grooves in its active meeting face.

[Claims 6 and 7 not printed in the Gazette.]

1,217,727. EXTENSION-TABLE. THOMAS B. EHART, Pittsburg, Kans. Filed May 23, 1916. Serial No. 99,378. (Cl. 45—9.)

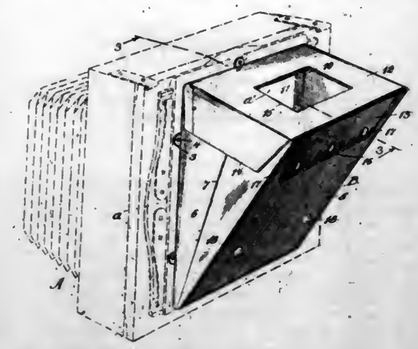


1. An extension table comprising a pedestal, pairs of guide bars mounted upon said pedestal and spaced apart in parallelism, the bars of each pair having the confronting faces thereof formed with alining grooves, slide bars mounted between said pairs of guide bars respectively and ribs formed on the confronting faces of said slide bars and engaging in the adjacent grooves, a second set of slide bars mounted between said guide bars respectively and having the inner edges in edge to edge contact with the outer edges of the first-mentioned slide bars, ribs formed on the outer surfaces of said last-mentioned slide bars respectively and engaging in the adjacent grooves, end bars carried by the outer extremities of the first and second-named slide bars respectively whereby said slide bars may be moved outwardly of said guides in relatively opposite directions, top forming sections connected to said first and second-named slide bars respectively and movable therewith to increase the length of the table top, and guide bars superimposed upon said slide bars respectively and connected to said end bars and movable with said slide bars into and out of the spaces between said first mentioned guide bars, the confronting edges of companion guide bars being formed with interfitting rabbets.

2. An extension table comprising a pedestal, pairs of guide bars mounted upon said pedestal and spaced apart in parallelism, slide bars mounted between said pairs of guide bars respectively, a second set of slide bars mounted between the said guide bars, respectively, and having the inner edges in edge to edge contact with the outer edges of the first mentioned slide bars, end bars carried by the outer extremities of the first and second named slide bars, respectively, whereby said slide bars may be moved outwardly of said guides in relatively opposite directions, top forming sections connected to said first and second named slide bars respectively, and movable therewith to increase the length of the table top, and guide bars superimposed upon said slide bars respectively, and connected to said end bars and movable with said slide bars into and out of the spaces between said first mentioned guide bars.

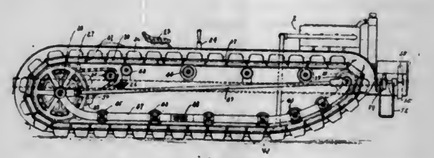
1,217,728. FOCUSING ATTACHMENT FOR CAMERAS. WILLIAM EHRLICH, New York, N. Y. Filed July 21, 1916. Serial No. 110,472. (Cl. 95—47.)

1. A focusing attachment adapted to be secured to the ground glass frame of a camera, said attachment comprising a frame, means thereon for securing the same to the camera, a pocket-like body fastened around two sides and the bottom to the said frame, and the body being open at the top, a cover fastened to the frame and having a view opening, an image reflecting plate in the body positioned to be seen through the said opening in the cover, separate fastening means arranged on the back of the cover at different points, a member on the cover, and complementary fastening means on the member and engaging respectively with one of the first-mentioned fastening means when the attachment is open and with another of the first-mentioned fastening means when the attachment is closed.



2. An attachment of the class described comprising an attaching frame, a pocket-like body having an open front side fastened to the frame and formed with inwardly folding sides, a cover in the form of a flap fastened at its front edge to the said frame and provided with a view opening, lugs on the frame projecting outwardly beyond the frame and the cover and having apertures to receive fasteners, a mirror arranged in the body and fastened to the rear portion thereof, said cover having depending flaps overlapping the sides and back of the body, and coöperating fasteners on the back flap of the cover and on the back of the body for holding the latter in open or closed position.

1,217,729. SNOW-TRACTOR. ORSON C. ERMATINGER, Scales, Cal. Filed Apr. 3, 1916. Serial No. 88,511. (Cl. 21—47.)



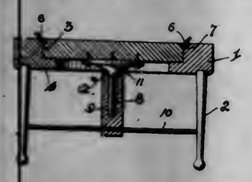
1. A snow tractor comprising a frame carrying motive means, a pair of endless platform wheels operated by the motive means, such platform wheels comprising sections linked together, such sections being hollow in cross section, and means for admitting heat to the hollow sections as described.

2. A snow tractor comprising a frame carrying motive means, a pair of endless platform wheels operated by the motive means, such platform wheels comprising sections linked together, a hood covering the sections, the ends of the sections bearing closely against the sides of the hood, and means admitting heat against the sections, as described.

3. A snow tractor comprising a frame carrying motive means, a pair of endless platform wheels operated by the motive means, such platform wheels comprising sections linked together, such sections being hollow in cross section and having openings at each end, and means admitting heat to the openings, as described.

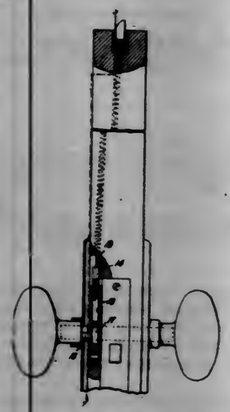
4. A snow tractor comprising a frame carrying motive means, a pair of endless platform wheels operated by the motive means, such platform wheels comprising sections linked together, such sections being hollow in cross section and having openings at each end, a spout disposed adjacent the sections and arranged for communication with the openings into the sections, and means for discharging heat from the spout as described.

1,217,730. TABLE. EARL D. ESREY, Deer Park, N. Y. Filed Feb. 16, 1915. Serial No. 8,505. (Cl. 45—26.)



In a table structure, a rigid top, a plurality of legs supporting said top, said top provided with a centrally disposed opening, and having an inwardly extending annular flange formed upon the lower edge of the wall of the opening constituting a supporting flange, a rotatable top rotatably mounted within said opening and resting upon said flange, the upper surface of said rotatable top lying flush with the upper surface of said rigid top, a vertical sleeve supported by said legs and having its upper end concentrically related with said opening in the rigid top, and provided with an inwardly extending bore having its upper end terminating in a recess having inclined walls, a substantially vertical spindle rotatably mounted in said bore of the sleeve, the upper end of said spindle being frusto-conical and resting within said recess constituting a bearing, said enlarged end of the spindle being secured to the underside of the rotatable top centrally thereof as and for the purpose specified.

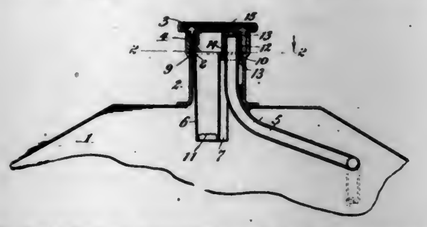
1,217,731. DOOR-CHECK. FRANK P. FAIRBANKS, Point Pleasant, N. J. Filed Feb. 26, 1916. Serial No. 80,675. (Cl. 16—84.)



1. The combination of a swinging door provided with a knob-operated lock and having a recess in one face about the knob spindle, and normally covered by the face plate of the lock, a recess in its upper edge, and a passage connecting the said recesses, a spring pressed latch in the recess in the edge of the door, a plate-like slide in the recess about the spindle and having an opening therein through which the knob spindle passes, a wire or rod in the passage in the door and connecting the slide with the latch, a tumbler on the knob spindle within the said recess and outside of the lock casing, said tumbler lying wholly within the opening of the slide and having oppositely projecting members engaging the bottom wall of the same, and an apertured bracket secured to the door jamb and lying in the path of the said latch.

2. The combination of a swinging door provided with a knob-operated lock, a tumbler on the knob spindle outside of the lock casing and having oppositely projecting members, a guide carried by the door about the knob spindle, a plate-like slide mounted in the guide and having an opening through which the knob spindle passes and within which the tumbler wholly lies so as to engage the bottom wall thereof, a spring latch at the upper edge of the door, a wire connecting the slide with the latch, and an apertured bracket secured to the door jamb and lying in the path of the said latch.

1,217,732. RADIATOR FOR AUTOMOBILES. JOHN M. FEDDERS, Buffalo, N. Y., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y., a Corporation of New York. Filed Sept. 18, 1915. Serial No. 51,374. (Cl. 257—125.)



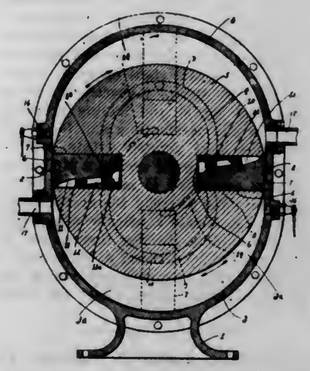
1. A radiator for automobiles and the like comprising a water header or box provided with an upright filling tube having an upwardly facing internal shoulder, a cover for closing said filling tube having a depending flange which is connected by a screw joint with the inner side of said tube and has its lower end facing said shoulder, a vent and overflow pipe arranged within said tube on one side thereof, and a guard for said tube comprising an imperforate tubular body arranged upright within said tube and provided on one side with an external longitudinal groove which receives said pipe, a laterally projecting flange at the upper end of said body which is clamped between said shoulder and the cover and which is provided with an opening for the passage of said pipe and a screen arranged across the lower end of said body.

2. A radiator for automobiles and the like comprising a water header or box provided with an upwardly projecting filling tube, a closure for the upper end of said tube, a vent and overflow pipe projecting upwardly into said filling tube and a guard for said pipe comprising a cap fitting over the upper end of said pipe and constructed to form internal passages leading from the lower end of said cap to the upper end of said pipe.

3. A radiator for automobiles and the like comprising a water header or box provided with an upwardly projecting filling tube, a closure for the upper end of said tube, a vent and overflow pipe projecting upwardly into said filling tube, and a guard for said pipe comprising a cap arranged on said pipe and having its side provided with inwardly bent longitudinal beads which engage with the outer side of said pipe and its top provided with downwardly bent beads which engage with the upper end of said pipe and form passages between said cap and pipe leading from the lower end of the cap to the upper end of said pipe.

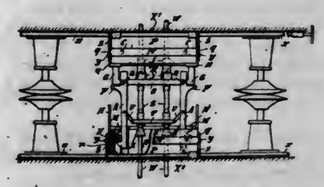
1,217,733. TURBINE EXPLOSIVE-ENGINE. LEON L. FEMONS, Fresno, Cal. Filed Apr. 3, 1916. Serial No. 88,455. (Cl. 123—16.)

1. A turbine engine of the type described comprising a casing having concentric sides enlarging into eccentric sides, a cylinder turnable within the casing and being concentric with the first named sides and bearing thereagainst to form explosion chambers between said cylinder and said eccentric sides, said cylinder being provided with radial recesses, reciprocating impulse vanes movable in the recesses, valve controlled means communicating from the recesses through said vanes to the outside of the cylinder, said casing being provided with intake ports arranged to be in open communication with said radial chambers during the entire travel of the vanes in one direction and out of communication therewith during the entire travel of the vanes in the opposite direction, and exhaust and ignition means.



2. A turbine engine of the type described comprising a casing having concentric sides enlarging into eccentric sides, a cylinder turnable within the casing and being concentric with the first named sides and bearing thereagainst to form explosion chambers between said cylinder and said eccentric sides, said cylinder being provided with radial recesses, reciprocating impulse vanes movable in the recesses, such vanes being provided with compression chambers arranged to openly communicate with the explosion chambers when the vanes are in one position and to be closed by the side walls of said recesses when the vanes are in the opposite position, valve controlled passages communicating from the inner ends of the vanes to said compression chambers, and exhaust and ignition means.

1,217,734. AUTOMATIC RAILWAY-CAR AND COMPRESSED-AIR AND STEAM PIPE COUPLING DEVICE. CESARE FEROCI, Rome, Italy. Filed June 16, 1915. Serial No. 34,460. (Cl. 213—40.)



1. A car coupling comprising a rigid supporting member, a member pivoted to the supporting member to swing in a vertical plane, drawbars carried by the pivoted member, drawbar retaining members carried by the supporting member, means for moving the retaining members, and pipe connections supported from the pivoted member.

2. A car coupling comprising a rigid supporting member, a member pivoted to the supporting member to swing in a vertical plane, drawbars carried by the pivoted member, drawbar retaining means carried by the supporting members, means for retaining the pivoted member in locked position, means for moving the retaining member and pipe connections supported from the pivoted member.

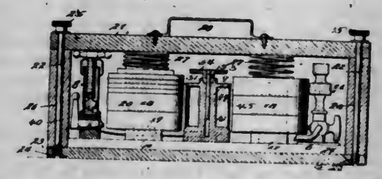
3. A car coupling comprising a rigid supporting member, a member pivoted to the supporting member to swing in a vertical plane, drawbars carried by the pivoted member, drawbar retaining members carried by the supporting member, means for moving the retaining members, pipe retaining members pivoted to the drawbars and pipe connections carried by the pipe retaining members.

4. A car coupling comprising a rigid supporting member, a member pivoted to the supporting member to swing in a vertical plane, and provided with pipe supporting extensions, drawbars carried by the pivoted member, drawbar retaining members carried by the supporting member, means for moving the retaining members, and pipe connections extending from the pipe supporting extensions.

5. A car coupling comprising a rigid supporting member, a frame disposed on the supporting member to slide in a vertical plane and provided with lugs, a drawbar supporting member pivoted to the frame and provided with extensions having notches to engage the lugs, means for moving the frame vertically, drawbars and pipe connections carried by the pivoted frame and drawbar retaining members on the frame.

[Claim 6 not printed in the Gazette.]

1,217,735. DEAD-WEIGHT GAGE-TESTER. JAMES P. FISHER, Bartlesville, Okla. Filed Aug. 12, 1916. Serial No. 114,616. (Cl. 73—51.)



1. In a gage tester of the class specified, the combination of a base, a pressure pump located adjacent to one extremity of the base, a connection for the gage to be tested adjacent to the opposite extremity of the base, an intermediately situated plunger cylinder having a plunger with weight carrying means and a reservoir surrounding the cylinder for the pressure medium, tubular connections between the pressure pump and the said cylinder and reservoir and the connection for the gage, and a plurality of weights removably disposable on the weight carrying means of the plunger.

2. In a gage tester of the class specified, the combination of a pressure cylinder having a plunger therein provided with means for carrying weights at its upper extremity, the pressure cylinder having also a pressure medium reservoir surrounding the same and drain ports between different parts thereof and the said reservoir, a pressure pump connected to the pressure cylinder and reservoir, and a connection for the gage to be tested having pipe communication with the pump and cylinder.

3. In a gage tester of the class specified, a pressure cylinder having a vertical bore and a concentric reservoir for the pressure medium, a plunger mounted in the said bore and having a weight carrying means at the upper end thereof, the cylinder having a port communicating with the bore therein and the reservoir, and pressure generating means and a connection for the gage to be tested having pipe attaching means with relation to the pressure cylinder and reservoir.

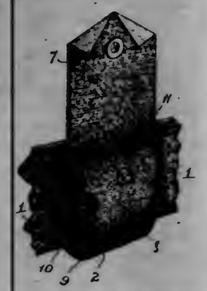
4. In a gage tester of the class specified, a pressure cylinder having a vertical bore and surrounded by a reservoir, the cylinder having a basin at its upper extremity for leakage, a plunger vertically movable in the bore and through the basin and having weight carrying means at its upper extremity, the cylinder having a port communicating with the bore thereof and the reservoir and another part communicating with the basin and the reservoir, and pressure generating and applying means connected to the cylinder and reservoir.

5. In a gage tester of the class specified, a pressure cylinder provided with a weight carrying plunger and having a pressure medium reservoir surrounding the same, pres-

sure generating and applying means connected to the cylinder and reservoir, and means for attaching the gage to be tested.

[Claims 6 to 9 not printed in the Gazette.]

1,217,736. CARTRIDGE-BELT. WILLIAM C. FISHER, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn. Filed Nov. 29, 1916. Serial No. 134,110. (Cl. 224—23.)



1. The combination with a cartridge pocket, of a member inserted therein and having a portion folded over the bottom and extending partially up the front of the pocket, said member also having side edge portions which project forwardly and rearwardly respectively from the back and front of said folded portion and reinforce the ends of the pocket.

2. The combination with a cartridge pocket, of a member fastened in said pocket and having a wide bottom portion lying against the back, front and ends of the bottom portion of the pocket, and forming a reinforcing pocket for the pointed ends of cartridges.

3. The combination with a cartridge pocket, of a combined cover and reinforcing member comprising a portion approximately the same in width as that of the pocket and secured to the back of the latter, and a wider bottom portion providing reinforcement for the back, front, bottom and ends of that portion of the pocket occupied by the pointed ends of cartridges.

1,217,737. STREET OR STATION INDICATOR. MICHAEL FITZGERALD, Medina, N. Y. Filed Mar. 3, 1916. Serial No. 81,940. (Cl. 40—87.)



1. In a street or station indicator, a casing having a sight opening therein, shafts journaled in said casing above and below said sight opening respectively, drums fixed upon said shafts, a web having the names of the stations thereon and having the ends thereof secured to said drums and wrapped about the same and the intermediate portion movable across said sight opening, ratchet wheels on the ends of said shafts respectively, yokes loosely mounted upon said shafts and having stems projecting toward each other and overlapping and formed with elongated slots, spring dogs pivoted within said yokes and adapted to engage said ratchet wheels, a pin passed through said slots, a yoke connected to said pin, a pull cord connected to said last-yoke whereby the first-mentioned yokes may be swung to rotate said ratchet wheels, and means carried by each yoke for holding the dog thereon out of engagement with the ratchet wheel.

2. In a street or station indicator, a casing having a sight opening therein, shafts journaled in said casing above and below said sight opening respectively, drums fixed upon said shafts, a web having the names of the stations thereon and having the ends thereof secured to said drums and wrapped about the same and the intermediate portion movable across said sight opening, ratchet wheels on the ends of said shafts respectively, yokes loosely mounted upon said shafts and having stems projecting toward each other and overlapping and formed with elongated slots, spring dogs pivoted within said yokes and adapted to engage said ratchet wheels, a pin passed through said slots, a yoke connected to said pin, a pull cord connected to said last-yoke whereby the first-mentioned yokes may be swung to rotate said ratchet wheels, means carried by each yoke for holding the dog thereon out of engagement with the ratchet wheel, and a horizontal guide carried by the casing and receiving one end of said pin to guide the latter in its movement under the action of said pull cord.

1,217,738. BATTERY. JOSEPH M. FLANNERY, Pittsburgh, Pa. Filed May 3, 1916. Serial No. 95,129. (Cl. 204—29.)



1. An ionizer for electric batteries, consisting of a sheet of material carrying radioactive material.

2. An ionizer for electric batteries comprising a thin sheet of material insoluble in the electrolyte of the battery and carrying distributed radioactive material.

3. An ionizer for electric batteries comprising a sheet of material insoluble in the electrolyte of the battery and having radioactive material incorporated therein.

4. An ionizer for electric batteries comprising a sheet of celluloid and radio-active material incorporated in the celluloid.

5. An ionizer for electric batteries comprising a sheet of celluloid having radioactive material incorporated therein, said sheet having numerous perforations.

[Claims 6 to 8 not printed in the Gazette.]

1,217,739. BATTERY. JOSEPH M. FLANNERY, Pittsburgh, Pa. Filed May 3, 1916. Serial No. 95,130. (Cl. 204—29.)

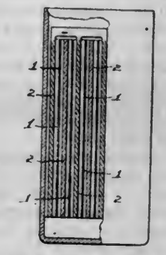
1. An ionizer for electric batteries comprising a body portion provided with a radio-active coating.

2. An ionizer for electric batteries comprising a body portion and a coating consisting of radio-active material and an insoluble vehicle therefor.

3. An ionizer for electric batteries, comprising a perforated sheet having a radio-active coating.

4. An ionizer for electric batteries comprising a perforated sheet, and an insoluble coating containing radio-active material.

5. An ionizer for electric batteries comprising a separator for the plates of the battery, said separator having perforations and provided with a radio-active coating.



[Claims 6 to 8 not printed in the Gazette.]

1,217,740. WIND-SHIELD CLEANER. GLEN D. FLEAK, Muskogee, Okla. Filed Sept. 8, 1916. Serial No. 118,991. (Cl. 15—59.)



1. A wind-shield cleaner comprising a split supporting sleeve for receiving the frame of the wind shield, clamping plates at the opposite sides of the split for engaging the frame and glass and normally spring pressed toward the frame, a slide shoe within the sleeve for engaging the top of the frame, a supporting bracket mounted on the sleeve and arranged transverse to the axis thereof, a shaft journaled in the bracket and provided at its inner end with a crank and at its outer end with a cleaning arm, and cleaning members in connection with the arm, and a spring normally pressing the arm toward the glass, said clamping plates being faced with a flexible material.

2. A wind-shield cleaner comprising a split sleeve for receiving the frame of the shield and having spring controlled clamping means for engaging the said frame and the glass, and mounted to slide on the frame, a crank shaft journaled transversely of the sleeve and provided at the opposite end from the crank with a radial arm having cleaning members, and a spring normally pressing the shaft in a direction to press the cleaning members toward the glass.

1,217,741. FUSE-HOLDER. OSCAR E. FORREST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 26, 1912. Serial No. 738,515. (Cl. 175—278.)

1. A fuse remover comprising a handle of insulating material, and two brackets of flat spring metal secured thereto and extending transversely therefrom, the ends of said brackets being slotted and having lugs inturned toward one another and adapted to detachably engage the ends of a fuse.



2. A fuse remover comprising an insulating handle and brackets with lugs at their adjacent sides extending transversely from said handle, said brackets being resiliently flexible toward and away from one another, so that when the remover is applied to a fuse they will separate and allow the lugs to ride over the ends of the fuse and then return.

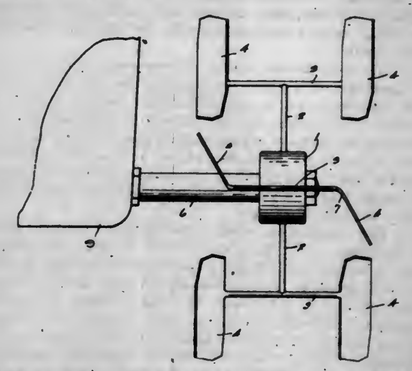
3. A fuse remover comprising an insulating handle and brackets extending transversely therefrom and having on their adjacent sides elements resiliently movable away from and toward one another, so that when the remover is applied to a fuse they will separate and ride over the ends of a fuse and then return.

4. In combination, a fuse base, contact terminals mounted thereon, an inclosed fuse provided with projecting terminals which are adapted to engage said contact terminals, and a handle for removing said fuse comprising an insulated hand-grip and spring brackets projecting therefrom which are adapted to engage said projecting terminals and to releasably secure the handle to the fuse.

5. In combination, a fuse base, stationary contact terminals mounted thereon, an inclosed fuse comprising a shell, perforated caps covering the ends of said shell and terminals projecting from said caps which are adapted to engage said stationary contact terminals, and a handle for removing said fuse comprising an insulated hand-grip, brackets secured thereto which are adapted to straddle said projecting terminals, and means associated with said brackets and coöperating with said ventilated openings for removably securing the handle to said fuse.

[Claims 6 and 7 not printed in the Gazette.]

1,217,742. PROPELLER FOR MOTOR-BOATS, &c. TONY FRANCISCO, Roslyn, Wash. Filed Sept. 3, 1915. Serial No. 48,830. (Cl. 170—165.)



1. A propeller of the class described including radially arranged supporting means provided with outer arms extending longitudinally of the axis of the propeller in projecting relation and front and rear separate sets of blades extending in opposite directions from the said arms at an obtuse angle to the same.

2. A propeller of the class described including a hub, radial spokes, arms arranged in parallelism with the axis of the propeller and having angularly disposed terminals

and connected at points intermediate of its ends to the spokes and substantially oblong blades mounted on the angularly disposed terminals of the arms and arranged in front and rear sets, the front set being located in advance of the blades of the rear set and the blades of each set being disposed at an obtuse angle to the said arms.

1,217,743. SILO-CHUTE. EDWARD A. FRANKLIN, Austin, Tex. Filed May 20, 1916. Serial No. 98,847. (Cl. 193—29.)



1. The combination with a silo having a vertical series of openings, of a chute carried by the silo adjacent to said openings and having a series of side inlets, and means adjustable vertically to the various silo openings for catching ensilage and for directing it through one of said inlets into the chute.

2. The combination with a silo having a vertical series of openings, of a chute carried by the silo adjacent to said openings and having a series of side inlets, and a vertically adjustable hopper adapted to be carried by the silo adjacent the said openings and having a spout insertible through the said inlets of the chute.

3. The combination with a silo having a vertical series of openings, of a chute carried by the silo at one side of the said openings, the chute having inlet openings in that side adjacent the said openings of the silo, flap valves hinged to the chute to normally close the inlet openings thereof, and a hopper arranged to be carried by the silo adjacent the openings thereof and having an obliquely projecting spout insertible through the said inlet openings of the chute.

4. The combination with a silo having a vertical series of openings, of a chute carried by the silo adjacent to said openings and having side inlets, and a hopper insertible from within the silo outwardly through the said openings, the hopper having a spout insertible through one inlet of the chute when the hopper is inserted outwardly through one of the openings of the silo, and having means for supporting it in place when inserted outwardly through one of the said openings.

5. The combination with a silo having a vertical series of openings, of a chute carried by the silo adjacent to said openings, and a hopper insertible outwardly through the said openings from within the silo and having a spout coöperable with the chute when the hopper is inserted outwardly through one of the said openings, the hopper having means engageable upon the sill of the opening through which it is inserted, and having stops engageable with the interior of the silo for holding the hopper against excessive outward movement.

[Claims 6 and 7 not printed in the Gazette.]

1,217,744. PROCESS FOR PRODUCING WHITE WOOLEN GOODS. ALBERT E. GARRETT, Yaverland, St. Albans, England. Filed Aug. 30, 1916. Serial No. 117,676. (Cl. 8—2.)

1. A process of bleaching white woolen goods consisting in immersing such goods in a weak solution of hydrogen peroxid, squeezing out the goods, dipping them in a weak ammonia solution, squeezing out the goods again, and hanging them up for a period during which a reaction of the ammonia with the hydrogen peroxid takes place.

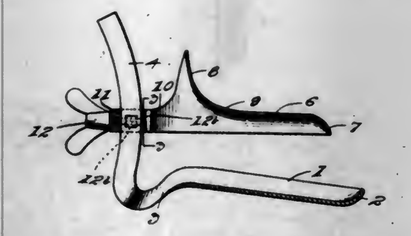
2. A process of bleaching white woolen goods consisting in immersing such goods in a weak solution of hydrogen peroxid not exceeding a strength of 1 per cent., squeezing out the goods, dipping them in a week ammonia solution, squeezing out the goods again, and hanging them up for a period during which a reaction of the ammonia with the hydrogen peroxid takes place.

3. A process of bleaching white woolen goods consisting in immersing such goods in a weak solution of hydrogen peroxid, squeezing out the goods, dipping them in a weak ammonia solution containing approximately 5 cubic centimeters of concentrated ammonia per liter of water and maintained at approximately 50° C., squeezing out the goods again, and hanging them up for a period during which a reaction of the ammonia with the hydrogen peroxid takes place.

4. A process of bleaching white woolen goods consisting in immersing such goods in a weak solution of hydrogen peroxid, squeezing out the goods, dipping them in a weak ammonia solution to which is added approximately 5 grams of pure soap per liter of solution, squeezing out the goods again, and hanging them up for a period during which a reaction of the ammonia with the hydrogen peroxid takes place.

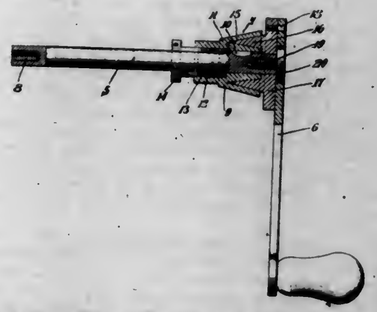
5. A process of bleaching white woolen goods consisting in immersing such goods in a weak solution of hydrogen peroxid, squeezing out the goods, dipping them in a weak ammonia solution containing approximately 5 cubic centimeters of concentrated ammonia per liter of water and approximately 5 grams of pure soap per liter and maintained at approximately 50° C., squeezing out the goods, and hanging them up for a period during which a reaction of the ammonia with the hydrogen peroxid takes place.

1,217,745. SURGICAL INSTRUMENT. LA FAYETTE GRACEY, Jonesboro, Ark. Filed Jan. 16, 1915. Serial No. 2,622. (Cl. 128—24.)



A surgical instrument comprising an elongated relatively stationary concavo convex blade, a downwardly and outwardly inclined arm formed integrally with the proximal end on one side of said blade, said arm having its end bent upwardly to form an arcuate rack bar which is located to one side of the longitudinal center of said blade, a relatively short adjusting concavo-convex blade having its proximal end curved outwardly and upwardly, said blade provided with an elongated opening to permit the positioning of said blades in position, an arm formed integrally with the proximal end of said blade and disposed at one side thereof, an adjusting sleeve formed integrally with the outer end of said arm and slidably mounted on the rack bar of said stationary blade, and an adjusting member rotatably mounted through said sleeve, a tooth wheel formed on the inner end of said adjusting member and located in said sleeve, said tooth wheel engaging said rack bar to permit the expanding of said adjustable blade with relation to said stationary blade, said adjustable blade adapted to force its sleeve into engagement with the rack bar of the stationary blade when pressure is applied thereto, thus holding the blades in their adjusted expanded position.

1,217,746. SAFETY SPRING-WINDING MECHANISM. EMIL GRAF, New York, N. Y., assignor, by mesne assignments, to James Manoll Company, Inc., New York, N. Y., a Corporation of New York. Filed July 26, 1916. Serial No. 111,371. (Cl. 74—33.)

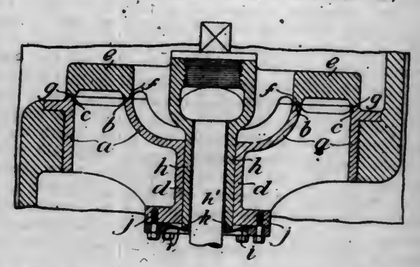


1. In a phonograph, the combination of a main driving spring, a rotatable driven shaft for winding the spring, a rotatable driving member whose axis of rotation is concentric to the shaft, a friction clutch having two relatively rotatable clutch parts with concentric tapering friction engaging surfaces, said clutch parts being concentric to the axis of rotation of the driven shaft and driven member and being non-yieldable laterally, one being carried on the driven shaft to rotate therewith and the other on the driving member to rotate therewith, one of said friction parts being mounted to yield bodily longitudinally of its axis of rotation, and means including a spring for thrusting said longitudinally yielding friction part into engagement with the other friction part, said spring being adjusted to yield to allow longitudinal movement of one of said parts and slipping between them when more than the predetermined amount of torque to be transmitted by the clutch is applied to the driving member and to automatically take up the wear of the friction parts and automatically maintain substantially the desired capacity of the clutch for frictional transmission of power from one part to the other.

2. In spring-winding mechanism for phonographs, the combination of a spring-winding rotatable shaft, a friction clutch comprising two inter-fitting friction members having tapering annular friction engaging surfaces, one of said members being secured to rotate with the shaft but slidable longitudinally on the same, a crank secured rotatably on the shaft and having the other friction member secured to rotate therewith, a spring on the shaft for normally holding the friction engaging surfaces of the clutch members in operative engagement, and adapted to yield to permit relative longitudinal movement and slipping between the friction surfaces to prevent overwinding of the spring driven by the shaft and to automatically compensate for the wear of the friction surfaces and to automatically maintain substantially the desired power transmission capacity of the clutch.

3. In spring-winding mechanism for phonographs, the combination of a spring-winding rotatable shaft, a crank rotatably mounted on the end of said shaft and having an annular friction member with tapering friction engaging surfaces secured to said crank and disposed concentric about said shaft, a second friction clutch member having an annular groove therein V-shape in section to receive the friction surface on the crank, said second friction clutch member being mounted to rotate on the shaft but movable longitudinally thereof with respect to the first friction clutch member, a housing formed within the second friction clutch member for receiving a spring, and means on the shaft against which one end of the spring rests, whereby the friction clutch members are normally held in engagement with one another and are permitted to slip one on the other when said last-mentioned spring yields to prevent overwinding of the spring driven by the shaft.

1,217,747. FLUID-PRESSURE VALVE. JOHN GRAHAM and ARCHIBALD GRAHAM, Glasgow, Scotland. Filed Dec. 15, 1913. Serial No. 806,872. (Cl. 137—4.)



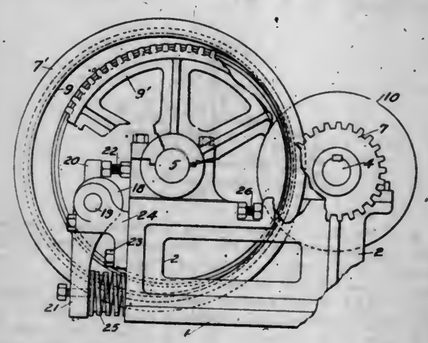
1. The combination of a structure having a valve seat and a tubular guide; a valve formed to coöperate with said seat and having an extension terminating in an annular face; with a flexible annular packing member loosely engaging said annular face and held against the same by pressure in said structure.

2. The combination of a structure having a valve seat and a tubular guide; a valve formed to coöperate with said seat and having a sleeve movable in said guide; a relatively thin flat ring fixed to one of the two parts comprised by the sleeve and the tubular guide and loosely held against the other of said parts by the pressure in said structure.

3. The combination of a structure having a valve seat and a flanged tubular guide; a valve formed to coöperate with said seat and having a sleeve longitudinally movable in said guide, the end of said sleeve adjacent the flange of the guide having an annular bead thereon; with a relatively thin flexible ring fixed to said flange and loosely engaging said bead under the action of fluid under pressure in the structure.

4. The combination of a valve casing; a seat structure mounted therein and having a flanged tubular guide mounted concentrically within it; a valve formed to cooperate with the seat of said structure and having a central extension slidable in the guide; with a relatively thin flexible ring fixed to the flange of said guide and loosely engaging the end of the extension of the valve.

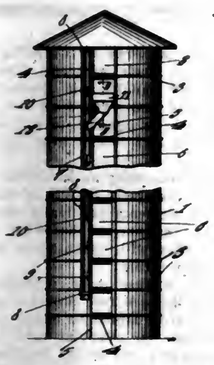
1,217,748. ART OF METAL-WORKING. EDWIN T. GREENFIELD, Kiamesha, N. Y. Filed Nov. 14, 1913. Serial No. 800,992. (Cl. 80—18.)



1. The described method of producing a metal strip, consisting in subjecting a rod to a reducing pressure of forging effect which thins and flattens it and simultaneously subjecting it to a reacting pressure which limits the extension as the pressure action takes place while at the same time permitting the material being reduced to flow laterally in a direction at right angles to the re-

and connected at points intermediate of its ends to the spokes and substantially oblong blades mounted on the angularly disposed terminals of the arms and arranged in front and rear sets, the front set being located in advance of the blades of the rear set and the blades of each set being disposed at an obtuse angle to the said arms.

1,217,743. SILO-CHUTE. EDWARD A. FRANKLIN, Austin, Tex. Filed May 20, 1916. Serial No. 98,847. (Cl. 193—29.)



1. The combination with a silo having a vertical series of openings, of a chute carried by the silo adjacent to said openings and having a series of side inlets, and means adjustable vertically to the various silo openings for catching ensilage and for directing it through one of said inlets into the chute.

2. The combination with a silo having a vertical series of openings, of a chute carried by the silo adjacent to said openings and having a series of side inlets, and a vertically adjustable hopper adapted to be carried by the silo adjacent the said openings and having a spout insertible through the said inlets of the chute.

3. The combination with a silo having a vertical series of openings, of a chute carried by the silo at one side of the said openings, the chute having inlet openings in that side adjacent the said openings of the silo, flap valves hinged to the chute to normally close the inlet openings thereof, and a hopper arranged to be carried by the silo adjacent the openings thereof and having an obliquely projecting spout insertible through the said inlet openings of the chute.

4. The combination with a silo having a vertical series of openings, of a chute carried by the silo adjacent to said openings and having side inlets, and a hopper insertible from within the silo outwardly through the said openings, the hopper having a spout insertible through one inlet of the chute when the hopper is inserted outwardly through one of the openings of the silo, and having means for supporting it in place when inserted outwardly through one of the said openings.

5. The combination with a silo having a vertical series of openings, of a chute carried by the silo adjacent to said openings, and a hopper insertible outwardly through the said openings from within the silo and having a spout coöperable with the chute when the hopper is inserted outwardly through one of the said openings, the hopper having means engageable upon the sill of the opening through which it is inserted, and having stops engageable with the interior of the silo for holding the hopper against excessive outward movement.

[Claims 6 and 7 not printed in the Gazette.]

1,217,744. PROCESS FOR PRODUCING WHITE WOOLEN GOODS. ALBERT E. GARRETT, Yaverland, St. Albans, England. Filed Aug. 30, 1916. Serial No. 117,676. (Cl. 8—2.)

1. A process of bleaching white woolen goods consisting in immersing such goods in a weak solution of hydrogen peroxid, squeezing out the goods, dipping them in a weak ammonia solution, squeezing out the goods again, and hanging them up for a period during which a reaction of the ammonia with the hydrogen peroxid takes place.

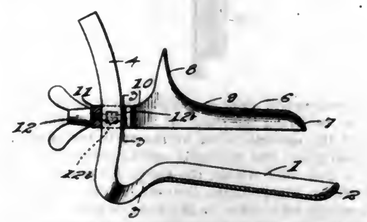
2. A process of bleaching white woolen goods consisting in immersing such goods in a weak solution of hydrogen peroxid not exceeding a strength of 1 per cent., squeezing out the goods, dipping them in a week ammonia solution, squeezing out the goods again, and hanging them up for a period during which a reaction of the ammonia with the hydrogen peroxid takes place.

3. A process of bleaching white woolen goods consisting in immersing such goods in a weak solution of hydrogen peroxid, squeezing out the goods, dipping them in a weak ammonia solution containing approximately 5 cubic centimeters of concentrated ammonia per liter of water and maintained at approximately 50° C., squeezing out the goods again, and hanging them up for a period during which a reaction of the ammonia with the hydrogen peroxid takes place.

4. A process of bleaching white woolen goods consisting in immersing such goods in a weak solution of hydrogen peroxid, squeezing out the goods, dipping them in a weak ammonia solution to which is added approximately 5 grams of pure soap per liter of solution, squeezing out the goods again, and hanging them up for a period during which a reaction of the ammonia with the hydrogen peroxid takes place.

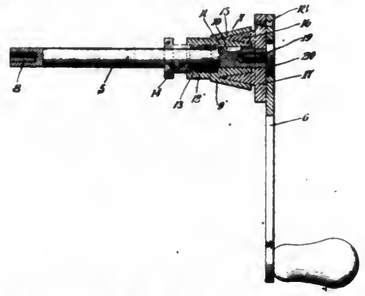
5. A process of bleaching white woolen goods consisting in immersing such goods in a weak solution of hydrogen peroxid, squeezing out the goods, dipping them in a weak ammonia solution containing approximately 5 cubic centimeters of concentrated ammonia per liter of water and approximately 5 grams of pure soap per liter and maintained at approximately 50° C., squeezing out the goods, and hanging them up for a period during which a reaction of the ammonia with the hydrogen peroxid takes place.

1,217,745. SURGICAL INSTRUMENT. LA FAYETTE GRACEY, Jonesboro, Ark. Filed Jan. 16, 1915. Serial No. 2,622. (Cl. 128—24.)



A surgical instrument comprising an elongated relatively stationary concavo convex blade, a downwardly and outwardly inclined arm formed integrally with the proximal end on one side of said blade, said arm having its end bent upwardly to form an arcuate rack bar which is located to one side of the longitudinal center of said blade, a relatively short adjusting concavo-convex blade having its proximal end curved outwardly and upwardly, said blade provided with an elongated opening to permit the positioning of said blades in position, an arm formed integrally with the proximal end of said blade and disposed at one side thereof, an adjusting sleeve formed integrally with the outer end of said arm and slidably mounted on the rack bar of said stationary blade, and an adjusting member rotatably mounted through said sleeve, a tooth wheel formed on the inner end of said adjusting member and located in said sleeve, said tooth wheel engaging said rack bar to permit the expanding of said adjustable blade with relation to said stationary blade, said adjustable blade adapted to force its sleeve into engagement with the rack bar of the stationary blade when pressure is applied thereto, thus holding the blades in their adjusted expanded position.

1,217,746. SAFETY SPRING-WINDING MECHANISM. EMIL GRAF, New York, N. Y., assignor, by mesne assignments, to James Manoil Company, Inc., New York, N. Y., a Corporation of New York. Filed July 26, 1916. Serial No. 111,371. (Cl. 74—33.)

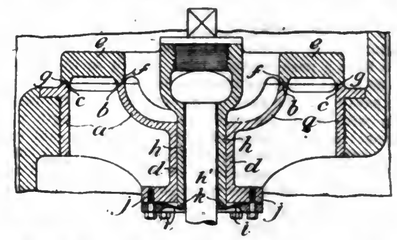


1. In a phonograph, the combination of a main driving spring, a rotatable driven shaft for winding the spring, a rotatable driving member whose axis of rotation is concentric to the shaft, a friction clutch having two relatively rotatable clutch parts with concentric tapering friction engaging surfaces, said clutch parts being concentric to the axis of rotation of the driven shaft and driven member and being non-yieldable laterally, one being carried on the driven shaft to rotate therewith and the other on the driving member to rotate therewith, one of said friction parts being mounted to yield bodily longitudinally of its axis of rotation, and means including a spring for thrusting said longitudinally yielding friction part into engagement with the other friction part, said spring being adjusted to yield to allow longitudinal movement of one of said parts and slipping between them when more than the predetermined amount of torque to be transmitted by the clutch is applied to the driving member and to automatically take up the wear of the friction parts and automatically maintain substantially the desired capacity of the clutch for frictional transmission of power from one part to the other.

2. In spring-winding mechanism for phonographs, the combination of a spring-winding rotatable shaft, a friction clutch comprising two inter-fitting friction members having tapering annular friction engaging surfaces, one of said members being secured to rotate with the shaft but slidable longitudinally on the same, a crank secured rotatably on the shaft and having the other friction member secured to rotate therewith, a spring on the shaft for normally holding the friction engaging surfaces of the clutch members in operative engagement, and adapted to yield to permit relative longitudinal movement and slipping between the friction surfaces to prevent overwinding of the spring driven by the shaft and to automatically compensate for the wear of the friction surfaces and to automatically maintain substantially the desired power transmission capacity of the clutch.

3. In spring-winding mechanism for phonographs, the combination of a spring-winding rotatable shaft, a crank rotatably mounted on the end of said shaft and having an annular friction member with tapering friction engaging surfaces secured to said crank and disposed concentric about said shaft, a second friction clutch member having an annular groove therein V-shape in section to receive the friction surface on the crank, said second friction clutch member being mounted to rotate on the shaft but movable longitudinally thereof with respect to the first friction clutch member, a housing formed within the second friction clutch member for receiving a spring, and means on the shaft against which one end of the spring rests, whereby the friction clutch members are normally held in engagement with one another and are permitted to slip one on the other when said last-mentioned spring yields to prevent overwinding of the spring driven by the shaft.

1,217,747. FLUID-PRESSURE VALVE. JOHN GRAHAM, and ARCHIBALD GRAHAM, Glasgow, Scotland. Filed Dec. 15, 1913. Serial No. 806,872. (Cl. 137—4.)



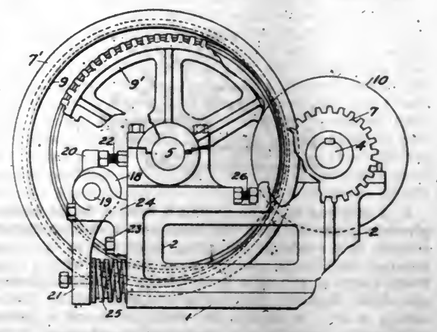
1. The combination of a structure having a valve seat and a tubular guide; a valve formed to coöperate with said seat and having an extension terminating in an annular face; with a flexible annular packing member loosely engaging said annular face and held against the same by pressure in said structure.

2. The combination of a structure having a valve seat and a tubular guide; a valve formed to coöperate with said seat and having a sleeve movable in said guide; a relatively thin flat ring fixed to one of the two parts comprised by the sleeve and the tubular guide and loosely held against the other of said parts by the pressure in said structure.

3. The combination of a structure having a valve seat and a flanged tubular guide; a valve formed to coöperate with said seat and having a sleeve longitudinally movable in said guide, the end of said sleeve adjacent the flange of the guide having an annular bead thereon; with a relatively thin flexible ring fixed to said flange and loosely engaging said bead under the action of fluid under pressure in the structure.

4. The combination of a valve casing; a seat structure mounted therein and having a flanged tubular guide mounted concentrically within it; a valve formed to cooperate with the seat of said structure and having a central extension slidable in the guide; with a relatively thin flexible ring fixed to the flange of said guide and loosely engaging the end of the extension of the valve.

1,217,748. ART OF METAL-WORKING. EDWIN T. GREENFIELD, Kiamesha, N. Y. Filed Nov. 14, 1913. Serial No. 800,992. (Cl. 80—18.)



1. The described method of producing a metal strip, consisting in subjecting a rod to a reducing pressure of forging effect which thins and flattens it and simultaneously subjecting it to a reacting pressure which limits the extension as the pressure action takes place while at the same time permitting the material being reduced to flow laterally in a direction at right angles to the re-

ducing pressure whereby the cross-sectional area of the product after it is substantially rolled is the same as the cross-sectional area of the rod before it was rolled.

2. The described method of producing a metal strip from a rod consisting in first heating the rod to white heat, then subjecting successive portions of it to a roll forging action of rolls which reduce the rod and which rolls have a pass between them shaped so that it allows the material being reduced to spread laterally in a direction parallel to the axes of the rolls whereby the resulting strip will be of substantially the same length as the original rod, and simultaneously subjecting said successive portions to a reacting rolling pressure which substantially limits the longitudinal extension of the rod as the roll forging action takes place so that the cross-sectional area of the product after it is rolled is substantially the same as the cross-sectional area of the rod before it was rolled.

3. The described method of producing a metal strip, consisting in first heating a rod or wire to white heat, then subjecting it to a reducing pressure which flattens and spreads it in a direction at right angles to the line of reducing pressure, and simultaneously subjecting it to a reacting pressure which limits the extension and insures the spreading as the pressure action takes place so that the sectional area of the product or resulting strip after the rolling is the same as the sectional area of the wire or rod before it was rolled.

4. A method of forging a strip of material from a metal rod, which method comprises the subjecting of said rod to an uninterrupted continuous reducing pressure of opposing dies while confining the material that is between said dies so as to prevent a substantial elongation of the metal in the rod and while permitting a transverse flow of metal in a direction at right angles to the line of reducing pressure as the reducing pressure is applied to said rod by means of said dies.

5. The method of forming a strip of material from a rod, which method comprises the subjecting of successive portions to a continuous forging reducing action between opposing dies that are constructed so as to permit a lateral flow of the material along the reducing faces of the dies whereby there will not be a substantial elongation of the portion being operated upon while said forging reducing pressure is applied by said dies to top and bottom portions of the rod being treated.

[Claims 6 to 10 not printed in the Gazette.]

1,217,749. STAPLING-MACHINE. EDWIN T. GREENFIELD, Kiamesha, N. Y. Filed May 14, 1915. Serial No. 27,991. (Cl. 1—48.)



1. A stapling machine having a base, a frame member pivotally mounted upon the base, and a driving plunger slidable in a vertically extending guide-way in the frame member, said frame member being provided with a shear blade which is arranged to coöperate with said plunger, said frame member also having a slotted portion for receiving a strip of staples, the shear blade and a part of said frame constituting a horizontally extending guide-way member for the staple strip when the latter is in the slotted portion of the frame, the guide-way member having secured thereupon a pawl having an end located adjacent to the path of movement of the plunger and in a position to prevent a turning of the staple under the plunger by engagement with a depending leg of said staple, the machine also having a second pawl or stop for engaging the staple which is located next to the staple that is under the plunger, the free ends of each of said pawls being movable laterally outwardly to staple engaging position.

2. A stapling machine embracing a staple supporting guide-way, a staple severing and staple driving plunger, and means for holding the staple blank or strip from movement away from the path of movement of the plunger, said means comprising pawls having the free ends thereof arranged adjacent to the path of movement of the plunger and in a position so as to move laterally outwardly so as to engage or to be engaged by the depending legs of the staple which is in position to be sheared and driven by the plunger; said means also comprising another pawl the free end of which is arranged to move laterally outwardly so as to engage or so as to be engaged by a depending leg of the staple which is next to the staple to be driven.

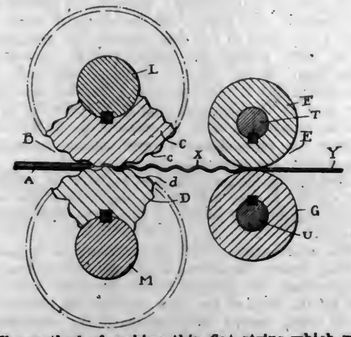
3. A stapling machine embracing an anvil, a staple supporting guideway member which extends horizontally, a staple severing and staple driving plunger, a frame providing a vertically extending guideway for the plunger, and springs secured to the staple supporting guideway member, which springs are so constructed and located that the staples in a strip of staples can pass over the springs toward the path of the plunger but the movement of a staple from its position in the path of the plunger will be prevented by the engagement of the free ends of the springs with the depending legs of said staples, said springs being arranged so that their free ends are movable laterally toward and from the staple guideway member, the frame being cut away adjacent to the staple supporting guideway member so that the last staple of the strip can be positioned by hand in the path of the plunger.

4. A stapling machine embracing therein a frame having a vertically extending guide-way member, a horizontally extending staple supporting guide-way member, and a staple severing and staple driving plunger mounted in the vertically extending guide-way member, said frame also having located upon the opposite sides of the staple supporting guide-way member a pair of horizontally extending springs or pawls the free ends of which are located adjacent to the path of movement of the vertical reciprocating plunger, which free ends are also located so as to prevent the turning of a staple which is in driving position below the plunger by engagement with the depending legs of the said staple, the frame of the machine being cut away adjacent to the delivery end of the vertically extending guide-way in such manner that the last staple of a strip can be inserted in driving position below the plunger by hand; the machine also being constructed so that when lateral pressure is applied to said spring pawls the staple strip which is on the guide-way member can be removed as desired.

5. A stapling machine having a base, a frame member movably mounted upon the base, and a driving plunger, the frame member having a vertically extending guideway, in which guide-way the plunger slides, said frame member being provided with a shear blade which is arranged to coöperate with said plunger, said frame member also having a slotted portion for receiving a strip of staples, the shear blade and a part of said frame together providing a horizontally extending guide-way member for the staple strip when the latter is in the slotted portion of the frame, the guide-way member having secured thereto a pawl having an end located adjacent to the path of movement of the plunger and in a position to prevent a turning of the staple under the plunger by engagement with a depending leg of said staple, the machine also having a second pawl or stop for engaging the staple which is located next to the staple which is under the plunger, the second pawl or stop also being secured to said guide-way member and being so located as to engage between the depending legs of the second staple mentioned above and the staple next succeeding in the staple strip when the latter is in place upon the horizontally extending guide-way member.

[Claims 6 to 9 not printed in the Gazette.]

1,217,750. ROLLING OF FLAT STRIPS. EDWIN T. GREENFIELD, Kiamesha, N. Y. Filed Feb. 28, 1916. Serial No. 80,887. (Cl. 80—1.)



1. The method of making thin flat strips which method comprises heating a rod, passing the same between fluted or scalloped rollers having between them a pass of such shape that the rod can be reduced into a thin wide strip and subsequently flattening the strip.

2. In the rolling of metals the method which comprises subjecting successive portions of a rod to the reducing action of opposing scalloped dies which are constructed so as to restrain the rod against substantial elongation during said reducing operation and so as to allow the material of the rod to flow laterally at right angles to the direction in which the reducing pressure is applied while the rod is being reduced.

3. In the making of flattened strips the method which comprises passing a rod between opposing fluted or scalloped rollers which are arranged so as to simultaneously reduce the rod in thickness and restrain it against substantial elongation while permitting the material being treated to flow laterally at substantially right angles to the line of reducing pressure.

4. The method of forming flattened strips which method comprises passing a round rod between rolls having scalloped faces and which rolls have between them a pass in which the material being treated can flow laterally substantially parallel to the axes of the rolls while being reduced in thickness.

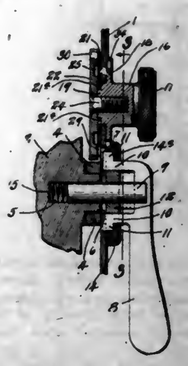
5. In the manufacture of flattened strips the method which comprises passing a round rod between scalloped rolls that are shaped and positioned so as to reduce the rod being treated into a thin strip which is substantially wider than the rod from which it is made.

[Claims 6 and 7 not printed in the Gazette.]

1,217,751. PERMUTATION SWITCH-LOCK. MILFRED L. GREENSTREET and GEORGE C. MOULDER, Lebanon, Mo., assignors of one-third to Alfred G. Hoppock, Lebanon, Mo. Filed Oct. 27, 1916. Serial No. 128,032. (Cl. 70—53.)

1. In a device of the class described, the combination of a rotary operated member, a cover plate for inclosing the same, an operating key rotatably mounted on said cover plate and positioned for operative engagement with the operated member whereby the latter may be rotated, locking means mounted on the cover plate and operable to prevent operative engagement of the key with the operated member, and means operably connecting the key and locking means to maintain them in definite positional relationship upon rotation of the former.

2. In a device of the class described, the combination of a rotary operated member, a plate arranged to cover the same, a key rotatably supported on the plate and movable therethrough into operative engagement with the operated member, locking means mounted on the plate and covered thereby for preventing the movement of the key into operative engagement with the operated member, means for retaining the key against rotation when out of engagement with the operated member, and means extending to the outer face of the plate for operating the locking means.



3. In a device of the class described, the combination of an operated member, a cover plate arranged to prevent access to the same, a key member movably mounted on the face plate, said key member having bit portions movable through the face plate into operative engagement with the operated member, means for retaining the bit portions when out of engagement with the operated member, movable locking members mounted on the face plate and concealed thereby and positioned to engage the key member to prevent operative movement thereof, and means for operating said locking members accessible from the outer side of the face plate.

4. In a device of the class described, the combination of an operated member, a face plate arranged to cover the same to prevent access thereto, a key member mounted on the face plate and operable from the exterior thereof to operably engage the operated member, means cooperating with said key member to normally hold it out of operable engagement with the operated member, means operably mounted on the face plate and concealed thereby in position for engagement with the key member to prevent movement thereof to operative position, and means extending through the face plate for operating said last mentioned means to permit the operative movement of the key member.

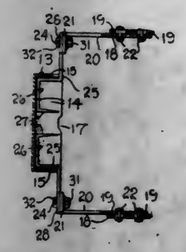
5. In a device of the class described, the combination of a movable operated member, a face plate arranged to cover said operated member and having one side thereof inclosed, a key member operably mounted on the face plate and having bit portions movable therethrough into operative engagement with the operated member, retaining portions carried by said face plate for engagement with the key member to prevent rotation thereof, means cooperating with said key member to hold the same normally in coöperation with said retaining portions, locking means covered by the face plate and arranged to prevent movement of said key member away from the retaining portions, and means extending to the exterior of the face plate for operating the locking means to permit operative movement of the key.

[Claims 6 and 7 not printed in the Gazette.]

1,217,752. EXCAVATOR. GEORGE H. GREIMANN, Garner, Iowa. Filed Nov. 15, 1916. Serial No. 131,480. (Cl. 37—24.)

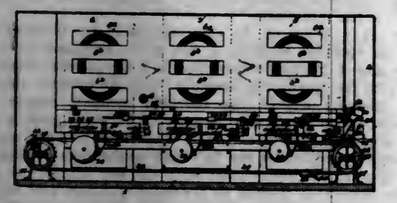
1. The combination with an elevator and a plurality of excavating buckets thereon, of a relatively stationary support, means for adjusting the support longitudinally of the elevator, a scraping blade pivotally mounted at one of its ends upon the support and extending transversely of the elevator, the other end of the blade being angularly bent to extend within the buckets and engage the bottom walls thereof, and means mounted in the sup-

port on opposite sides of the scraping blade to releasably prevent the pivotal movement of the blade.



2. The combination with an endless elevator, and a plurality of spaced excavating buckets thereon, of a relatively stationary, supporting member, means for adjusting the supporting member longitudinally of the elevator, a scraper blade pivotally mounted upon the support for engagement with the bottom wall of the bucket, and breakable pins mounted in the support upon opposite sides of the pivot of said plate and with which the blade co-acts, said pins yielding when the blade is subjected to excessive pressure to permit of the pivotal movement of the blade with respect to the bucket.

1,217,753. AUXILIARY INDICATING DEVICE FOR CASH-REGISTERS. OSCAR E. GROSHELL, Salt Lake City, Utah. Filed May 1, 1916. Serial No. 94,612. (Cl. 235—23.)



1. The combination with a cash register, of an auxiliary indicating device comprising a plurality of plates, means for suspending the plates, electro-magnetic means controlled by the keys of the cash register for dropping any plate at will, and means for automatically restoring the dropped plate to its original position, said last named means comprising a lever having a portion arranged to engage any of the dropped plates, and a traveling arm arranged to engage the lever to operate the latter.

2. The combination with a cash register, of an auxiliary indicating device comprising a plurality of plates, means for suspending the plates, electro-magnetic means controlled by the keys of the cash register for dropping any plate at will, means for automatically restoring the dropped plate to its original position, said last named means comprising a lever having a portion arranged to engage any of the dropped plates, a traveling arm arranged to engage the lever to operate the latter, an endless chain for supporting the arm, and means including an electric motor for operating the endless chain.

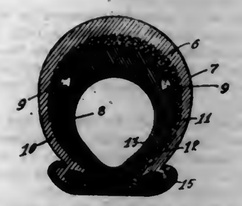
3. The combination with a cash register, of an auxiliary indicating device comprising a plurality of plates, means for suspending the plates, electro-magnetic means controlled by the keys of the cash register for dropping any plate at will, means for automatically restoring the dropped plate to its original position, said last named means comprising a lever having a portion arranged to engage any of the dropped plates, a traveling arm arranged to engage the lever to operate the latter, an endless chain for supporting the arm, means including an electric motor for operating the endless chain, and a switch controlled by the keys of the cash register for closing the circuit of the motor.

4. The combination with a cash register, of an auxiliary indicating device comprising a plurality of plates, means for suspending the plates, electro-magnetic means controlled by the keys of the cash register for dropping any plate at will, means for automatically restoring the dropped plate to its original position, said last named means comprising a lever having a portion arranged to engage any of the dropped plates, a traveling arm arranged to engage the lever to operate the latter, an endless chain for supporting the arm, means including an electric motor for operating the endless chain, a switch controlled by the keys of the cash register for closing the circuit of the motor, and means carried by the endless chain for opening the switch to break the circuit through the motor.

5. The combination with a cash register, of an auxiliary indicating device comprising a plurality of plates, means for suspending the plates, electro-magnetic means controlled by the keys of the cash register for dropping any plate at will, means for automatically restoring the dropped plate to its original position, said last named means comprising a lever having a portion arranged to engage any of the dropped plates, a traveling arm arranged to engage the lever to operate the latter, an endless chain for supporting the arm, means including an electric motor for operating the endless chain, a switch controlled by the keys of the cash register for closing the circuit of the motor, means carried by the endless chain for opening the switch to break the circuit through the motor, and means carried by the cash register for locking the same when the switch of the motor circuit is closed, and for interlocking the cash register when the switch is open.

[Claims 6 to 18 not printed in the Gazette.]

1,217,754. INNER TIRE. JOHN H. GRUBB, Los Angeles Cal. Filed Aug. 31, 1915. Serial No. 48,198. (Cl. 152—10.)



1. An inner tire, comprising an annular tubular member divided circumferentially on its inner periphery and having inwardly converging side walls formed with peripherally spaced depressions at the juncture of the outer wall with the side walls, and annular fabric reinforcing strips on the inner portion of the side walls arranged back of the depressions.

2. An inner tire comprising an annular tubular member divided circumferentially on its inner periphery and having inwardly convergent side walls formed with lateral peripherally spaced depressions at the juncture of the outer wall with the side walls.

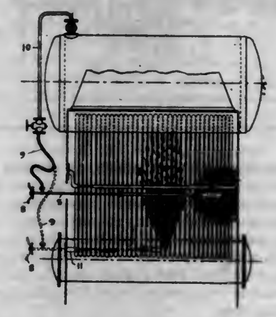
3. An inner tire comprising an annular tubular member divided circumferentially on its inner periphery and having inwardly convergent side walls formed with spaced and staggered lateral depressions at the juncture of the outer wall with the side walls, and annular spaced reinforcing strips on the side walls arranged opposite the depressions.

4. An inner tire comprising an annular tubular member divided circumferentially on its inner periphery and having inwardly convergent side walls formed with circumferentially arranged rows of spaced depressions at the juncture of the outer wall with the side walls, and means for attaching the inner tire to an outer casing.

5. The combination with an outer casing and an inner inflatable tube of an annular tubular member divided circumferentially on its inner periphery interposed between the tube and casing, having inwardly convergent side walls formed with depressions at the juncture of the side walls with the outer wall, annular fabric reinforcing strips on the inner faces of the side walls opposite the depressions and spaced apart, and means for removably attaching the annular member to the outer casing.

[Claim 6 not printed in the Gazette.]

1,217,755. FLUID-JET BLOWER FOR THE CLEANING OF THE TUBES OF WATER-TUBE BOILERS. THEODOR GRUENWALD, Prague, Austria-Hungary. Filed Jan. 8, 1916. Serial No. 71,058. (Cl. 122—390.)



1. Means for cleaning the tubes of water tube boilers comprising a longitudinally movable tube adapted to be inserted through a small opening of the smoke box or fire box wall and to be moved along and in the immediate proximity of the water tubes, a steam supply pipe connecting said tube to the steam space of the boiler, an aspiration head arranged on the front end of said tube and provided with means for causing the steam to draw the hot combustion gases into said head and to project the mixture of steam and hot gases from the head in the immediate proximity of and onto the tubes to be cleaned.

2. Means for cleaning the tubes of water tube boilers comprising a longitudinally movable tube adapted to be inserted through an opening in the wall of a boiler smoke or fire box and to be rotatably moved along and in the immediate proximity of the water tubes, a steam supply pipe connecting said tube to the steam space of the boiler, an aspiration head on the front end of the said tube and provided with means to cause steam flowing through the tube and head to draw hot combustion gases in the head and to project the mixture of steam and gases onto the tubes, and guide means for said pipe comprising a guiding and supporting member secured within the boiler, and a supporting hook carrying said pipe and slidable on said member.

1,217,756. SWIMMING DEVICE OR LIFE-PRESERVER. FELIX GUENTHOFF, Three Rivers, Mich. Filed Oct. 25, 1916. Serial No. 127,652. (Cl. 9—20.)

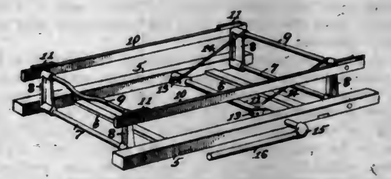
1. A swimming device or life preserver comprising a body adapted to be secured to the person of the wearer, said body consisting of outer and inner plies united by longitudinal and transverse rows of stitching to form rows of air chambers on opposite sides thereof, and central longitudinal air passages communicating with the respective rows of chambers, the outer ply being provided with plaits or folds communicating with the air chambers and adapted to be inflated therefrom, and a valve communicating with said air passages.

2. A swimming device or life preserver comprising a body adapted to be secured to the person of the wearer and consisting of inner and outer plies united to form air chambers and passages communicating therewith, the outer ply being provided with plaits or folds normally lying parallel therewith and forming walls of the air



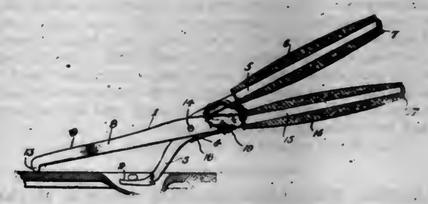
chambers when inflated, and a valve communicating with said passages.

1,217,757. AUTOMOBILE-JACK. ERIK HAAKENSON, Tacoma, Wash. Filed July 6, 1916. Serial No. 107,730. (Cl. 254—91.)



A jack, comprising lower and upper horizontal frames, a transverse rod adjacent each end of each frame, a pair of arms joining each pair of transverse rods, a shaft in the lower frame, crank arms thereon, rods connecting said crank arms with one of said transverse rods in the upper frame, and an operating lever for said shaft resting upon the jack supporting surface in both collapsed and raised jack positions.

1,217,758. STOVE-LID LIFTER. NORMAN H. HAAPANEN, South Range, Mich. Filed Apr. 4, 1916. Serial No. 88,961. (Cl. 126—323.)

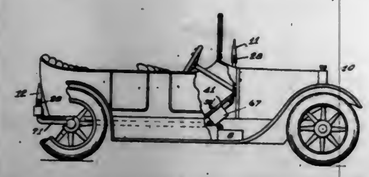


In combination with a lid lifter, a guard having a rearwardly extending arm provided with a handle, said guard being bifurcated and comprising a pair of forwardly diverging arms and a cross bar connecting the front ends of said arms, said lifter being arranged between the arms of the guard and pivotally connected thereto, and a spring to engage the guard with the upper side of a lid when the lifter is in use.

1,217,759. DIRECTION-INDICATOR FOR VEHICLES. CAMERON G. HAMILTON, Seattle, Wash., assignor of one-half to Cullen K. Sturtevant, Seattle, Wash. Filed May 10, 1915. Serial No. 27,108. (Cl. 177—337.)

1. A direction indicator for motor vehicles comprising a pointer formed of a hollow casing, a circular base portion

on said casing, said base portion having a slot, a bracket having an enlarged circular portion that fits within said circular base, said bracket being provided with standards having narrowed portions that project outwardly through said slot in said circular base, a sprocket wheel secured to said pointer, another sprocket wheel journaled on said motor vehicle, a chain connecting said two sprocket wheels, and mechanism operable from the driver's seat for turning said last named sprocket wheel to actuate said pointer.



2. A direction indicator for motor vehicles, comprising a pointer formed of a hollow casing, a bracket articulating said pointer with a motor vehicle, a sprocket wheel secured within said pointer, another sprocket wheel associated with said motor vehicle, a chain connecting said two sprocket wheels, electrically operated mechanism for turning said last named sprocket wheel, and a switch operable from the driver's seat for controlling said electrically operated mechanism.

3. A direction indicator for vehicles, comprising a hollow casing having a transparent portion and a circular base formed with a slot in its circumferential wall, a bracket received within the casing-base to support said casing for swinging movements in a vertical plane transverse to the longitudinal axis of the vehicle, said bracket having standards secured to the vehicle and protruded through said slot, a lamp provided within said casing, and electric circuit wires connected with said lamp to make the same incandescent and extending through said slot between said standards.

4. A direction indicator for vehicles, consisting in a pointer having a base of circular configuration, a bracket having a support for said pointer of corresponding configuration and spaced standards secured to the vehicle, said base being mounted exteriorly of said bracket and formed with a slot through which said standards are protruded.

5. A direction indicator for vehicles, consisting in a pointer having a portion of its casing formed of translucent material, said pointer having a base of circular configuration, a bracket having a support for said pointer of corresponding configuration to said base, and spaced standards secured to the vehicle, said base being mounted exteriorly of said bracket and formed with a slot through which said standards are protruded, a lamp positioned in said pointer, and electric circuit wires connected with said lamp and entering said pointer through said slot whereby they are concealed by said bracket.

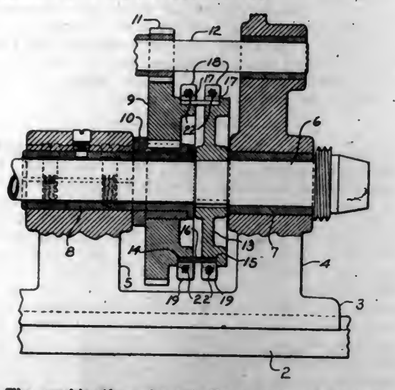
[Claim 6 not printed in the Gazette.]

1,217,760. YIELDABLE GEARING. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Jan. 10, 1916. Serial No. 71,318. (Cl. 74—29.)

1. The combination of a spindle, an element rotative with the spindle, a driver for the spindle rotative with respect thereto, and resilient means for transferring power from the driver to said element to rotate the latter and provided with means for holding the same in rigid and against slipping relation with both said driver and said element.

2. The combination of a spindle, a driver for the spindle rotative with respect thereto, and shock absorbing means for transferring power from the driver to said spindle and provided with means for maintaining said shock absorbing means in rigid and against slipping relation with both the driver and the element.

3. The combination of a spindle, a disk rotative with the spindle, a gear rotative with respect to the spindle, and a resilient shock absorbing band in gripping circumferential engagement with the gear and the disk.

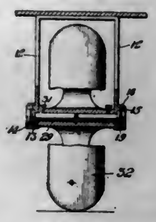


4. The combination of a spindle, an element fastened to said spindle, a driver for the spindle rotative with respect thereto, and a resilient power transferring member in non-slipping engagement with the driver and the element.

5. The combination of a spindle, a disk rotative with said spindle, a rotary gear loose with respect to the spindle and having a toothed and a plain portion, and a resilient band in gripping engagement with the plain portion of the gear and the disk.

[Claims 6 to 9 not printed in the Gazette.]

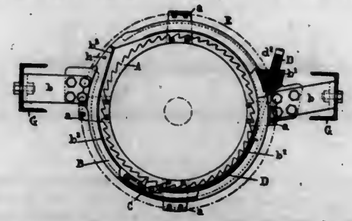
1,217,761. ROLLER-SKATE. JOHN HARTMAN, Bozeman, Mont. Filed May 27, 1916. Serial No. 100,246. (Cl. 46—51.)



1. A roller skate including a foot plate, said plate having depending brackets at the toe and heel portion thereof, each of said brackets having an opening and a groove surrounding the opening, axles for the hubs, each axle comprising two similar members each including a shank and a head and said heads having peripheral channels, the shank of each of the axles adapted to be passed through the opening in one of the brackets and to have its head received in the groove of the bracket, anti-frictional balls in the channels in the heads of the axles and contacting with the side walls of the grooves, and means, between the hubs of the wheels and the axles for sustaining the said axles in said hubs.

2. In a roller skate, a foot plate having depending brackets arranged in spaced pairs at the toe and heel portion thereof, said plate between the brackets being reinforced, wheels, axles for the wheels, each of said axles comprising two similar members journaled in openings one in each of the brackets, said wheel including a flanged rim, a hub and spokes connecting the rim with the hub, said hub adapted to receive the alining axle members, means between the hub and said axles for securing the axles to the hub, a flexible tread for each of the rims of each of the wheels, and means upon the rims coacting with the treads for sustaining the treads on the rims.

1,217,762. APPARATUS FOR STARTING EXPLOSION-ENGINES. NICOLAS HERZMARK, Paris, France. Filed July 28, 1914. Serial No. 853,732. (Cl. 123—185.)



1. A starting device for explosion engines, comprising a ratchet wheel operatively connected to the engine shaft, a stationary guide around the same, a flexible cable manually movable in opposite directions, a hand grip connected to the outer end of said cable for operating the same in both directions in said guide, a carrier attached to the free inner end of said cable, a pawl pivoted to said carrier for engaging the ratchet wheel on the movement of said cable in one direction, and means engaging said pawl at substantially the end of its non-working travel for setting it up in position to engage the ratchet on the driving movement of the cable.

2. A starting device for explosion engines, comprising a ratchet wheel operatively connected to the engine shaft, a stationary guide around the same, a pivoted pawl having a one-way engagement with said ratchet, a carrier for the pawl moving on the guide, said guide having a deflected reach at one end to hold the pawl out of engagement with the ratchet wheel, and means engaging the pawl during its travel in said deflected reach for setting it up into position to engage the ratchet wheel on the driving movement of the cable.

3. In a starting device for explosion engines, a ratchet wheel fast with the engine shaft, a stationary member around the same, guide ribs on said stationary member, and a pawl sliding on said ribs and adapted to engage the ratchet wheel, together with means for moving said pawl while in engagement with said ratchet wheel, and means operative upon the return movement of said pawl for properly positioning the same to again engage the ratchet wheel on the driving movement thereof in the opposite direction.

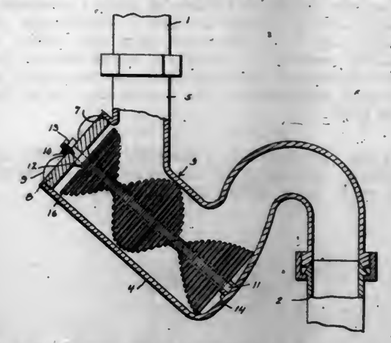
4. In a starting device for explosion engines, a ratchet wheel fast with the engine shaft, a stationary member around the same, guide ribs on said stationary member, and a pawl sliding on said ribs and adapted to engage the ratchet wheel, together with means for moving said pawl while in engagement with said ratchet wheel, and means operative upon the return movement of said pawl for properly positioning the same to again engage the ratchet wheel on the driving movement thereof in the opposite direction, and a detent for holding the pawl in this position.

5. In a starting device for explosion engines, a ratchet wheel operatively connected to the engine shaft, a pawl having a one-way engagement with said ratchet wheel, a cable for operating the pawl, a handle at one end of the cable, and a latch for holding said cable and handle, said latch comprising a pair of double arm levers, a spring between said levers at one end tending to hold said ends together and the other ends apart, said parted ends embracing the cable and gripping the same when the spring-engaged ends are spread by the insertion therebetween of the handle.

[Claim 6 not printed in the Gazette.]

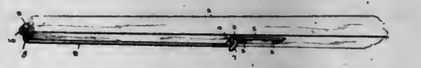
1,217,763. DRAIN-PIPE CLEANER. RICHARD K. HIRRICH, New York, N. Y. Filed June 2, 1916. Serial No. 101,303. (Cl. 182—12.)

1. A drain pipe cleaner comprising a drain trap having an enlarged diagonally extending centrally disposed chamber, one end of said chamber being opened, a removable plug fitted in said opening, a socket carried by the opposite end wall, a rod carried by said plug and adapted to be received in said socket, and a row of spirally arranged straining elements radiating from said rod, the diameter of said spirally arranged straining elements being the same the whole length of the rod.



2. A drain pipe cleaner comprising a central rod and a row of spirally arranged straining elements, said elements each including a loop adapted to be removably positioned on said rod, and an arm extending therefrom, as and for the purpose specified.

1,217,764. VEHICLE-TONGUE SUPPORT. SAMUEL B. HOGSETT, Huntersville, W. Va. Filed Aug. 30, 1916. Serial No. 117,677. (Cl. 21—63.)



1. The combination with a vehicle tongue, of a projection extending from the forward end of said tongue, a supporting rod hinged to the tongue, and a hook formed on the opposite end of the supporting rod and adapted to be engaged over the projection on the end of the tongue to support the supporting rod in an inoperative position, said hook serving as a foot for the supporting rod when arranged in an operative position.

2. The combination with a vehicle tongue, of a projection extending from the forward end of said tongue, a supporting rod hinged to the tongue, and a hook formed on the opposite end of the supporting rod and adapted to be engaged over the projection on the end of the tongue to support the supporting rod in an inoperative position, said hook being formed at right angles to and adapted to extend forwardly of said supporting rod when the supporting rod is arranged in operative position, said hook also serving as a foot when the supporting rod is in an operative position.

1,217,765. AWNING-SUPPORT. ROBERT B. HUGHES, Portland, Oreg., assignor of one-half to Frank Monner, Portland, Oreg. Filed Sept. 28, 1915. Serial No. 53,108. (Cl. 156—42.)

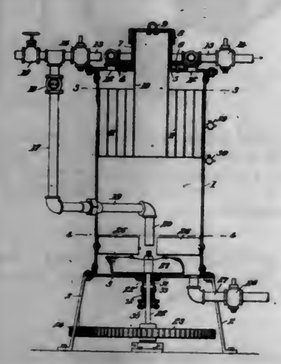


1. An awning arm comprising pivoted sections, one of its sections having its pivot end cut away to receive the pivot end of the other, the material of the last-mentioned end being extended past the pivot whereby to abut with the first-mentioned section when the arm is extended, a catch member adjacent to the pivot engageable with the

extended portion to hold the same against the coacting section for maintaining the arm rigidly extended, and supporting means for said arm.

2. An awning support comprising in combination, a supporting bracket, an adjustable supporting member, a horizontal pivot for connecting said supporting member to the bracket whereby to provide for vertical movement, a swinging arm, a vertically arranged pivot connecting said swinging arm to the adjustable supporting member for horizontal swinging movement, and means separate from the pivots aforesaid and coöperating with the bracket and operable to adjust the arm in a vertical plane on the horizontal pivot.

1,217,766. HYDRAULIC-PRESSURE GROUTING-MACHINE. SHIRLEY C. HULSE, Bedford, Pa. Filed Mar. 17, 1916. Serial No. 84,820. (Cl. 83—73.)



1. The method of making cement mixtures which consists in introducing a charge of cement into a body of clear water in a mixing chamber, stirring the water and cement together to mix them, and then directly applying water under pressure to the cement mixture to force said mixture out of said chamber.

2. The method of making cement mixtures which consists in introducing a charge of cement into a body of clear water in a mixing chamber, mixing the cement with water in the lower part of said chamber, maintaining a body of comparatively still clear water in the upper part of said chamber during the mixing and discharging, and then directly applying water under pressure to the cement mixture to force said mixture out of said chamber.

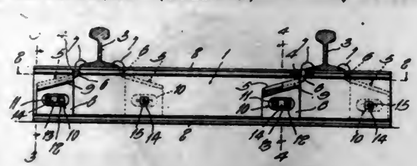
3. A grout-making machine, comprising an upright closed mixing chamber, means for filling said chamber with clear water, means for introducing cement into said chamber, circulating means for mixing the water and cement together in the lower part of said chamber, means for maintaining a body of still clear water in the upper part of said chamber, a discharge pipe in the lower portion of said chamber, and means for subjecting the water in said chamber to pressure to force the grout out of said chamber.

4. A grout-making machine, comprising a closed mixing chamber, means for filling said chamber with clear water, means for introducing cement into said chamber, circulating means for mixing the water and cement together in the lower part of said chamber, and means for maintaining a body of still clear water in the upper part of said chamber.

5. A grout making machine comprising an upright closed mixing chamber, means for filling said chamber with water, a cement pipe in the top of said chamber, means in the bottom of said chamber for circulating the fluid therein, and means in the upper part of said chamber for retarding the circulation in that part of said chamber.

[Claims 6 to 9 not printed in the Gazette.]

1,217,767. RAILWAY-TIE AND FASTENER. FREDERICK P. HUNKLE, McKeesport, Pa. Filed Nov. 6, 1916. Serial No. 129,792. (Cl. 238—5.)



1. A railway tie having an outstanding flange along its upper edge formed with an opening near one end of the tie, a rail clamping lever fulcrumed in said opening, a horizontally movable wedge slidable along one side of the tie for forcing said lever to and holding it in operative position, and means for locking said wedge against movement.

2. A railway tie having an outstanding flange along its upper edge formed with an opening near one end of the tie, a rail clamping lever fulcrumed in said opening, a wedge slidable along one side of the tie and bearing at one edge against the lever for forcing it to and holding it in operative position, a flange on said edge of the wedge between which and the tie the lever is confined, and means for locking said wedge against movement.

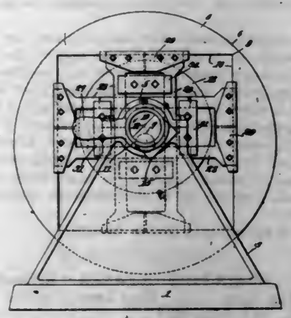
3. A railway tie having outstanding flanges along its upper and lower edges, the upper flange having near one end an opening, a rail clamping lever fulcrumed in said opening and having an inclined body portion disposed between the two flanges, a wedge slidable between said inclined body portion of the lever and one of the aforesaid flanges, and means for locking said wedge against movement.

4. The combination with a railway tie, of a rail clamping lever fulcrumed thereon and having an inclined body portion disposed adjacent one side of the tie, a horizontally movable wedge contacting with said inclined portion of the lever for forcing the latter to and holding it in operative position, and means for locking said wedge against movement.

5. The combination with a railway tie, of a rail clamping lever fulcrumed thereon and having an inclined body portion disposed adjacent one side of said tie, a horizontally movable wedge contacting with said inclined portion of the lever for forcing it to and holding it in operative position, said wedge having a longitudinally extending flange between which and the tie said inclined portion of the lever is confined and means for locking said wedge against movement.

[Claim 6 not printed in the Gazette.]

1,217,768. ROTARY STEAM-ENGINE. JOSEPH H. JACKSON, Birmingham, Ala. Filed Feb. 24, 1916. Serial No. 80,218. (Cl. 121—63.)



A fluid pressure engine comprising a frame having a pair of eccentric bearings, a shaft journaled in one bearing, a wheel adjacent the inner side of said bearing secured to said shaft and having an outstanding rim projecting away from said bearing and providing inwardly facing chordal faces, a tubular member extending through the other bearing and having a pair of passages and openings communicating therewith, a rotor having a central socket receiving said tubular member, said rotor having radial cylinders and ports at the inner ends of said cylinders to register with the aforesaid openings, the inner side of said rotor having a boss bearing against the wheel, pistons working within the cylinders and having outstanding rods, shoes attached to the outer ends of said rods and bearing against said faces, crossed slotted yokes terminally attached to the opposite shoes and located at that side of the rotor opposite said wheel, said tubular member extending through the slots of said yokes, that side of the rotor remote from said wheel having outstanding bosses within the slots of said yokes, and plates secured to the last mentioned bosses and overlapping the yokes to hold them in place adjacent to the rotor.

1,217,769. FISH-HOOK. LEARCUS H. JACOBS, Bunn, Ark. Filed Dec. 2, 1916. Serial No. 134,655. (Cl. 43—31.)



1. A fish hook comprising a pair of hook members mounted for movement toward and from each other and each having an upwardly extending lever arm provided with a notch in its upper end, a pivoting member on which the hook members and lever arms are mounted for angular movement, and a locking and attaching member arranged between and in sliding relation to the lever arms and having a slot through which the pivoting member extends, said locking and attaching member being provided with lugs to engage and disengage the notches of the lever arms.

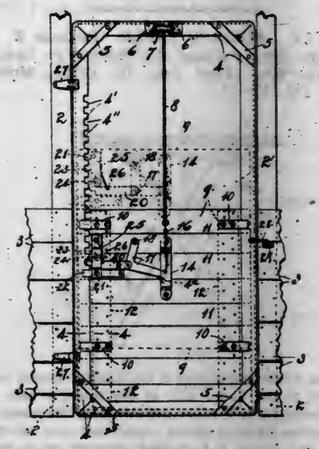
2. A fish hook comprising a pair of hook members mounted for movement toward and from each other and connected together at their upper ends by a spring coil arranged to move the hook members outwardly, a pivoting member extending through said spring coil, lever arms pivotally mounted on said pivoting member, attached respectively to the hook members and each provided in its upper end with a notch, and a locking and attaching member arranged between and in sliding relation to the lever arms, said member being provided with a vertical slot through which the pivoting member extends and being provided with lugs to engage and disengage the notches of the lever arms.

1,217,770. HOG-DOOR AND GATE. PERRY C. JAMES, Sciota, Ill., assignor to George G. Bayne, Bushnell, Ill. Filed Apr. 22, 1916. Serial No. 92,950. (Cl. 39—75.)

1. In a device of the nature described, a door-frame, a gate slidable therein, a latch carried by the gate and adapted to sustain it in selective positions, a roller carried by the gate and bearing on the latch, and means for operating the latch.

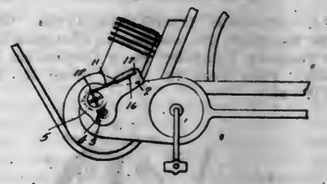
2. In a device of the nature described, a door-frame having notches, a gate slidable in the frame, a latch carried by the gate and adapted to selectively engage said notches, a lever for operating the latch, a pulley, and a cord traversing the pulley, said lever adapted to be operated either by said cord or by the fingers of the operator.

3. In a device of the nature described, a swinging door-frame having notches, a gate slidable in the frame, a latch



carried by the gate and adapted to selectively engage said notches, means for operating the latch, a pulley, and a cord traversing it, said operating means adapted to be operated either by said cord or by the fingers of the operator.

1,217,771. TIRE-PUMP. HARRY BYRON JONES, Clay City, Ind. Filed Feb. 23, 1916. Serial No. 79,985. (Cl. 230—27.)

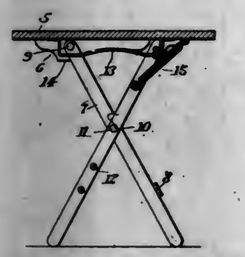


1. In a tire pump structure, the combination with a motor cycle frame and a main drive shaft for the motorcycle, of an elongated flat plate, means pivotally connecting said plate adjacent one end thereof with the frame of the motorcycle, a pump rigidly secured to said plate adjacent said pivotal connection, a gear carried by the opposite end of said plate, a pinion carried by said main drive shaft, means carried by said plate adjacent said gear to swing and hold said plate in adjusted position, a relatively long slot in said plate, a pin slidably mounted in said slot, a connecting rod pivotally secured to the gear and said pin, a guide way secured on said plate, a cross head slidably mounted in said guideway, a bar connecting said cross head and pin, and a rod connecting said cross head and the piston of a pump, as and for the purpose specified.

2. In a tire pump structure, the combination with a motorcycle frame and a main drive shaft for the motorcycle, of an elongated flat plate, means pivotally connecting the plate adjacent one end thereof to the frame of the motorcycle, a pinion carried by said main drive shaft, a gear rotatably carried by the opposite end of said plate and arranged above said pinion, a compressed air pump carried by said plate adjacent said pivot, means operatively connecting said gear with said pump, said plate having a slot therein adjacent said gear, means carried by said motorcycle frame and extending through said slot and engaging the walls thereof to hold said plate in

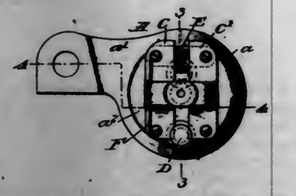
an adjusted position and against relative movement, and means carried by said plate adjacent said gear to swing said plate on said pivotal connection to raise and lower said gear into and out of engagement with said pinion.

1,217,772. FOLDING TABLE. CHARLES F. KADE, Plymouth, Wis., assignor to Charles F. Kade, Jr., Plymouth, Wis. Filed June 15, 1915. Serial No. 34,239. (Cl. 45—11.)



A folding table comprising a top having spaced parallel cleats fixed to the under side of the same, a pair of leg frames pivoted to each other for swinging movement relative to one another, a pivot connecting one of the leg frames to the cleats, a U-shaped resilient guide fixed to the under side of the top between the cleats, a rung in the other leg frame and slidable through the guide, a second rung carried by the last named leg frame and adapted to contact with the guide which serves as a spring for slightly pushing the leg frames away from the top when the leg frames and top are closed together, and resilient means connected to the second named rung and the top for automatically spreading the legs on the raising of the top.

1,217,773. AUDIBLE SPEED-INDICATOR. HENRY B. KEIPER, Lancaster, Pa., assignor to Champion Blower & Forge Company, Lancaster, Pa., a Corporation of Pennsylvania. Filed June 16, 1916. Serial No. 104,041. (Cl. 116—65.)



1. An attachment for centrifugal cream separators comprising a bracket adapted for attachment to a rotating member of the machine, a guideway on said bracket, a hammer adapted to travel along said guideway radially to the axis of rotation of said rotating member, non-sound producing means at or near one end of said guideway adapted to arrest the movement of said hammer in that direction, a sound producing device at or near the other end of said guideway adapted to be struck by said hammer when moving in that direction, and means associated therewith for engaging and throwing the hammer back the instant it strikes said device so as to prevent deadening the sound.

2. An audible speed indicator for centrifugal machines, comprising a rotatable support, a guideway carried by said support, a bell clapper adapted to be slid back and forth along said guideway by the action of centrifugal force in one direction and by the force of gravity in the opposite direction, a gong arranged to be struck by said clapper at the limit of its movement in one direction, and resilient means adapted to engage said clapper just before and throw it back the instant it strikes the gong so as to prevent deadening the sound.

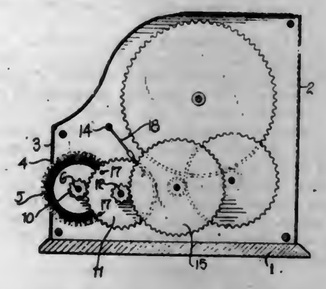
3. An audible speed indicator for centrifugal machines, comprising a support adapted for attachment to a crank handle or other part having a rotary movement, a guideway carried by said support, a bell clapper movable back and forth along said guideway by gravity and centrifugal force respectively, due to the rotation of said support, a gong arranged to be hit by said clapper at the limit of its movement in one direction, non-sound producing means for limiting the movement of said clapper in the opposite direction, and resilient means adapted to engage said clapper just before it strikes said gong and throw it out of contact therewith the instant it is struck, so as to prevent deadening the sound.

4. In combination with a support mounted on a crank handle or other rotatable part of a centrifugal machine, parallel plates secured on said support and spaced apart so as to form a guideway extending substantially in the direction in which centrifugal force is exerted, a hammer movable along said guideway having slightly separated members fitting against opposite sides of said plates and an intermediate connecting portion arranged in the intervening space, a gong adapted to be struck by said hammer at the limit of its movement in one direction, and a spring adapted to engage said hammer as it strikes the gong and throw it out of contact therewith, so as to prevent deadening the sound.

5. The combination, in an audible speed indicator for centrifugal machines, of a fixed support mounted on a crank handle or other rotatable part, parallel plates secured on said support and spaced apart to form a guideway extending substantially in the direction in which centrifugal force is exerted, a slide movable along said guideway having members fitting against opposite sides of said plates and an intermediate portion connecting said members arranged in the space between said plates; said support having an arched portion or bridge spanning said guideway, and a cup-shaped gong fitting over said guideway having its rim in position to be struck by said slide at the limit of its movement in one direction; said gong being centrally apertured and provided with a set screw for securing it to said bridge.

[Claims 6 and 7 not printed in the Gazette.]

1,217,774. STOP MECHANISM. EDWARD F. KENNEDY, Ansonia, Conn. Filed Apr. 29, 1914, Serial No. 835,206. Renewed Nov. 29, 1916. Serial No. 134,210. (Cl. 74—13.)

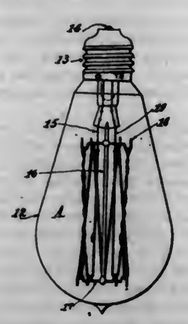


1. A device of the character described including a casing, a shaft operatively supported by the casing, a gear train operatively engaged with the shaft for imparting axial rotation thereto, one of said gears being provided with projections, a shaft disposed transversely of the casing above the gear provided with the projections, a rock arm carried by the last named shaft engageable with the projections, a second rock arm carried by the last named shaft exteriorly of the casing for imparting axial rotation to said last named shaft, and means carried by the casing coacting with the second named rock arm for limiting the movement of the first rock arm relative to the gear with which said first rock arm coacts.

2. A device of the character described including a casing, a shaft operatively supported by the casing, a gear train operatively engaged with the shaft for imparting axial rotation thereto, one of said gears being provided with projections, a shaft disposed transversely of the casing above the gear provided with the projections, a rock arm carried by the last named shaft engageable with the projections, a second rock arm carried by the last named shaft exteriorly of the casing for imparting axial rotation to said last named shaft and terminating in advance of the forward face of the casing, and means carried by the casing coacting with the second named rock arm for limiting the movement of the first rock arm relative to the gear with which said first rock arm coacts, said first named rock arm being adapted to move in the opposite direction by gravity.

3. A device of the character described comprising a casing, a shaft operatively supported by the casing, a gear train operatively engaged with the shaft for imparting axial rotation thereto, one of said gears being provided with projections, a shaft disposed transversely of the casing above the gear provided with the projections, a rock arm carried by the last named shaft engageable with the projections, a second rock arm carried by the last named shaft exteriorly of the casing for imparting axial rotation to said last named shaft, means carried by the casing coacting with the second named rock arm for limiting the movement of the first rock arm relative to the gear with which said first rock arm coacts, and a weighted member carried by the first rock arm for normally maintaining the first rock arm at the limit of its movement toward the gear with which it coacts.

1,217,775. ELECTRIC INCANDESCENT LAMP. HUGO KIEHL, Chicago, Ill. Filed Apr. 5, 1916. Serial No. 89,123. (Cl. 176—40.)



1. In an electric incandescent lamp, filament supports in said lamp, a filament, said filament comprising a series of strands, adjacent strands of said series being in contacting relation to each other at a point remote from said supports.

2. In an electric incandescent lamp, filament supports in said lamp, a filament, said filament comprising a series of strands, said strands comprising a multiplicity of members, adjacent strands being in contacting relationship to each other at a point remote from said supports.

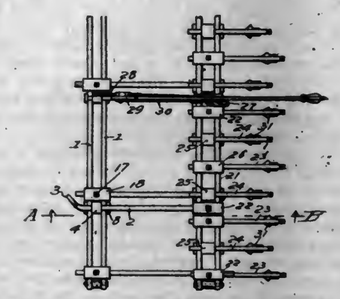
3. In an electric incandescent lamp, filament supports in said lamp, a filament, said filament comprising a series of strands, adjacent strands of said series being intertwined at a point remote from said supports.

4. In an electric incandescent lamp, filament supports in said lamp, a filament, said filament being trained in a zigzag up and down manner over said supports, adjacent members of said filament being in contacting relation to each other at a point remote from said supports.

5. In an electric incandescent lamp, filament supports in said lamp, a filament, said filament being comprised of a plurality of strands, said strands being intertwined, said strands being trained in a zigzag manner over said supports, adjacent members of said strands being intertwined at a point remote from said supports.

[Claim 6 not printed in the Gazette.]

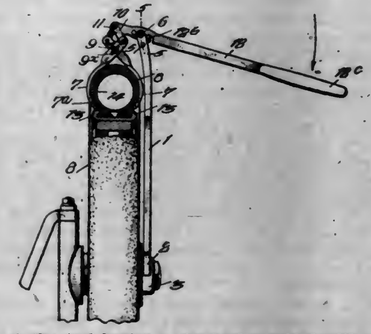
1,217,776. CULTIVATOR. ISHAM S. KIMBRIEL, Somis, Cal. Filed Apr. 17, 1916. Serial No. 91,678. (Cl. 97—31.)



1. In a cultivator, runners, stems projecting forwardly therefrom, connected beams fixedly secured upon the stems, a structure fixedly connected to the beams and extending rearwardly therefrom and above the runners, there being a clear unobstructed space between the runners and said structure and back of the beams, a series of teeth connected together to move in unison and supported by said structure, and means for simultaneously shifting the teeth into or out of position back of the runners.

2. In a cultivator, the combination with parallel beams, and a member extending thereacross for attachment thereto, of a block extending between the beams and having a slot through which said member extends, a stem projecting from one end of the block, there being side recesses in the block at said end, a plate removably mounted on the stem, transverse ribs upon the plate at the ends thereof and adapted to lap and engage the outer sides of the beams, transverse ribs upon the plate at intermediate points and adapted to engage the inner sides of the beams and to project into the recesses in the block, and means adjustably engaging the stem for binding the plate upon the beams and for drawing, through the block, upon the member engaged thereby to bind it upon the beams.

1,217,777. TIRE-TOOL. WALTER A. KINSOLVING, Washington, D. C. Filed Jan. 25, 1915. Serial No. 4,290. (Cl. 157—6.)



1. A tire tool having a standard provided with an arc-shaped base adapted to fit the hub cap of a wheel, a lever pivotally connected to said standard at one end thereof, and a pair of gripping members curved to conform to the

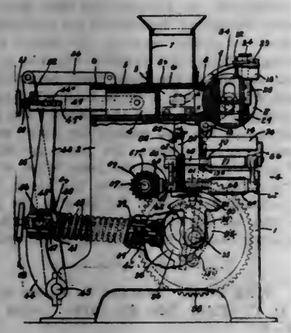
curvature of a pneumatic tire pivotally connected with said lever.

2. In a tire tool, a standard having an arc-shaped base curved to conform to the curvature of the hub cap of a wheel, a lever pivotally connected at one end of said standard, a pair of curved gripping members pivotally connected together, and links connecting said curved gripping members with said lever.

3. A tire tool comprising a standard having a base curved to conform to the curvature of the hub cap of a wheel, a lever pivotally connected to said standard at the upper end thereof, a pair of links pivotally connected to one end of said lever, a curved gripping member provided with a slot pivotally connected to one of said links, a second curved gripping member pivotally connected to the other links, and a pivot pin carried by one of said gripping members and arranged to project through the slot in the other gripping member.

4. A tire tool comprising a standard having a forked end and being provided with a base curved to conform to the curvature of the hub cap of a wheel, a lever having an L-shaped slot provided with laterally extending recesses, a pivot pin carried by the forked end of said standard and arranged to enter said slot and any of said laterally extending recesses, a curved gripping member having a slot, a second curved gripping member provided with a pivot pin arranged to enter the slot in the first-named gripping member, and a link for pivotally connecting each of said gripping members with one end of said lever.

1,217,778. DOUGH-DIVIDER. WILLIAM G. KIRCHHOFF, St. Louis, Mo., assignor to American Bakers Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 26, 1911. Serial No. 667,767. (Cl. 107—15.)



1. In a machine of the class described, an oscillatory head provided with dough receiving chambers, an independently moving plunger in each chamber, a pair of rack bars mounted for sliding movement on the head, means carried by said rack bars for engaging the plungers, a rack bar arranged at right angles to the first mentioned rack bars and pinions forming a connection between the single rack bar and the pair of rack bars.

2. In a machine of the class described, an oscillatory head provided with dough receiving chambers, an independently moving plunger in each chamber, a pair of rack bars mounted for sliding movement on the head, means carried by said rack bars for engaging the plungers, a rack bar arranged at right angles to the first mentioned rack bars, pinions forming a connection between the single rack bar and the pair of rack bars and an adjustable stop on the single rack bar.

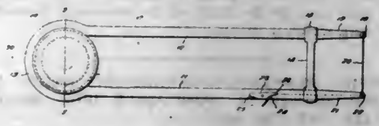
3. In a machine of the class described, an oscillatory head having compressed dough-receiving chambers, plungers in said chambers, a pair of rack bars arranged for movement on the oscillatory head, a rack bar arranged at right angles to the first mentioned rack bars, pinions forming connections between the single rack bar and the pair of rack bars, an adjustable stop on the single rack bar, and independently adjustable members which form stops for limiting the rearward movements of the plungers.

4. In a dough dividing machine, the combination of a hopper, a dough receiving chamber, a mold member having a compartment adapted to receive dough from the said chamber, means for regulating the capacity of said compartment, a plunger adapted to operate in the dough receiving chamber and adapted on its rearward stroke to draw dough from the hopper into said chamber and on its forward stroke to force dough from the chamber into the said compartment, means for actuating said plunger, and means for varying the stroke of said plunger to regulate the amount of dough drawn into the dough receiving chamber from the hopper.

5. In a dough dividing machine, the combination of a feed hopper, a mold member provided with a mold compartment, means for varying the capacity of said mold compartment, a plunger adapted to draw dough from the hopper on its rearward stroke and to force the dough so drawn from said hopper into the mold compartment, on its forward stroke, and means for varying the stroke of said plunger whereby to determine the amount of dough that will be drawn from said hopper so that it may correspond with the capacity of the mold compartment.

[Claims 6 to 12 not printed in the Gazette.]

1,217,779. DENTAL-FLOSS HOLDER. ROY CHARLES KLECKNER, Indianapolis, Ind. Filed June 17, 1916. Serial No. 104,310. (Cl. 132—12.)



1. A dental floss holder, including a member having two spaced terminals provided each with a thread guide, a thread holder carried by said member, and means carried by one of the terminals for securing the free end of the thread with a portion of the thread disposed between the free terminals.

2. A dental floss holder, including a member having two spaced terminals provided each with a thread guide, a thread holder carried by said member, a means carried by one of the terminals for securing the free end of the thread with a portion of the thread disposed between the free terminals, and a retaining member for holding the free ends of the terminals relatively to each other.

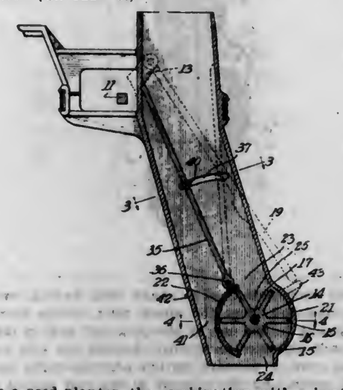
3. A dental floss holder, including a member having two resiliently connected and substantially parallel terminals, one of said terminals being provided throughout its length with a longitudinally disposed thread guide, the free end of the opposite terminal being provided with a slot to receive the free end of the thread, means carried by said terminal for securing the free end of the thread thereto, and a thread holder mounted at the junction of the terminals and frictionally held in place thereby.

4. A dental floss holder, including a member having two resiliently connected and substantially parallel terminals, one of said terminals being provided throughout its length with a longitudinally disposed thread guide, the free end of the opposite terminal being provided with a slot to receive the free end of the thread, means carried by said terminal for securing the free end of the thread thereto, a thread holder mounted at the junction of the terminals and frictionally held in place thereby, and a retaining member slidably mounted upon said terminals.

5. A dental floss holder, including a member having two resiliently connected and substantially parallel terminals, one of said terminals being provided throughout its length with a longitudinally disposed thread guide, the free end of the opposite terminal being provided with a slot to receive the free end of the thread, means carried by said terminal for securing the free end of the thread thereto, a thread holder mounted at the junction of the terminals and frictionally held in place thereby, said thread securing means being provided with a cutter.

[Claims 6 and 7 not printed in the Gazette.]

1,217,780. SEED-PLANTER. GEORGE W. KONE, Rock Island, Ill., assignor of one-half to Stephen R. Spencer, Rock Island, Ill. Filed June 30, 1915. Serial No. 37,157. (Cl. 111—6.)



1. In a seed planter, the combination with a boot and a rocker shaft, of a valve; means operable from said shaft to actuate said valve, a movable partition in said boot to provide a bypass seed path around said valve and means for disabling the valve actuating means when said partition is so moved.

2. In a seed planter, the combination with a boot and a rocker shaft, of a rotary valve providing a circumferential series of seed pockets; means operable from said shaft to intermittently rotate said valve; a movable partition in said boot to provide a bypass seed path around said valve and means for disabling the valve operating means when said partition is so moved.

3. In a seed planter, the combination with a boot and a rocker shaft, of a rotary valve located near the bottom of the boot and having a series of circumferentially extending seed pockets; walls of a peripheral length exceeding the peripheral length of a pocket extending partly around the valve, on each side, leaving opposite openings in a substantially vertical plane and means operated from said shaft to intermittently move the valve to cause diametrically opposite pockets to register with the respective openings.

4. In a seed planter, the combination with a boot and a rocker shaft, of a rotary valve located near the bottom of the boot and having a series of circumferentially extending seed pockets; walls extending partly around the valve, on each side, leaving opposite openings in a substantially vertical plane; means operated from the said shaft to intermittently move the valve to cause opposite pockets to register with the respective openings; a movable partition in the boot, shiftable to bypass the valve and means to prevent operation of the valve when said partition is shifted.

5. In a seed planter, the combination with a boot and a rocker shaft, of a valve, means operable from said shaft to actuate said valve, a movable partition in said boot, to provide a by-pass seed path around said valve, and means actuated by the movement of the said partition for disabling the valve actuating means when the partition is moved into position to by-pass the seeds around the valve.

1,217,781. COMBINED KEROSENE VAPORIZER AND MANIFOLD. JOHN J. LAMB, Detroit, Mich. Filed Feb. 19, 1916. Serial No. 79,271. (Cl. 257—236.)

1. In a device of the character described, a casting having two independent chambers in adjacent relation, one of which is adapted to communicate with the inlet ports of an engine to serve as a manifold, therefor, a plurality of fuel pipes supported in the other chamber of the casting, an inlet conduit secured to one end of the chambered casting for conducting fuel to said pipes, a header secured to the opposite end of the chambered casting and communicating with the manifold chamber of the latter to deliver thereto the gas discharged from said pipes into the header, a plurality of exhaust conduits integral with the chambered casting in adjacent relation with the wall of the manifold chamber and opening into the chamber in which the fuel pipes are lodged, and a conduit for the discharge of the exhaust gases from said last named chamber.



2. In a device of the character described, a casting adapted to be secured directly to the wall of an internal combustion engine having two independent chambers in adjacent relation to each other, one of said chambers serving as a manifold and adapted for direct communication with the inlet ports of an engine, a plurality of conduits integral with said casting and adjacent to the wall of the manifold chamber for connecting the exhaust ports of an engine with the other chamber of said casting, a conduit for the discharge of the exhaust from said last named chamber, a plurality of fuel pipes located within said last named chamber, a header secured to one end of the casting adapted to establish communication between the pipes and the manifold chamber, and a fuel inlet conduit secured to the opposite end of the casting for the delivery of fuel to said pipes.

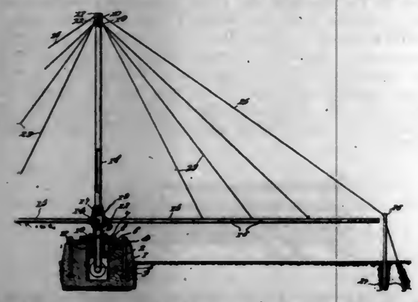
3. In a device of the character described, a casting adapted to be secured directly to the wall of an internal combustion engine having two independent chambers in adjacent relation to each other, one of which serves as a manifold and is adapted for direct communication with the inlet ports of an engine, a plurality of conduits integral with said casting and adjacent to the wall of the manifold chamber to connect the exhaust ports of an engine with the other chamber of said casting, webs spaced from the wall of the chambered casting connecting the walls of said conduits together and perforated for the passage of bolts to secure the chambered casting to the wall of an engine, a plurality of fuel pipes located within said last named chamber, a conduit for the discharge of the exhaust gases from the latter chamber, a header secured to one end of the casting adapted to establish communication between the pipes and the manifold chamber, and a fuel inlet conduit secured to the opposite end of the casting for the delivery of fuel to said pipes.

1,217,782. IRRIGATING APPARATUS. JAMES M. LANGFORD, Mulberry, Fla. Filed Apr. 26, 1916. Serial No. 93,736. (Cl. 137—87.)

1. In an irrigating apparatus, the combination of a foundation, a base plate on said foundation, a stationary pipe projecting through said foundation and in communication with a water supply, a turn-table supported to revolve on said base plate, a stuffing box connected beneath said turn-table and embracing said stationary pipe, a stub pipe connected above said turn-table, a distributing head adjustably connected to said stub pipe, and distributing pipes radiating from said distributing head, substantially as described.

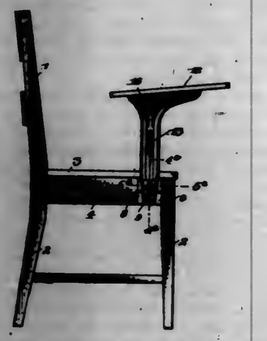
2. In an irrigating apparatus, the combination of a foundation, a base plate on said foundation, a stationary pipe projecting through said foundation and being in communication with a source of water supply, a turn-table supported to rotate on said base plate, ball bearings arranged between said turn-table and base plate, a stuffing box secured to said turn-table and embracing said

stationary pipe, a threaded stub pipe on the upper end of said turn-table, a rotary head adjustably threaded on said stub pipe and in communication therethrough with the water supply from said stationary pipe, perforated distributing pipes extending from said rotary head, a mast



erected on said rotary head, connections extending between said mast and distributing pipes, a journal on the upper end of said mast, a bearing block fitting said journal, posts, and guy wires connected between said bearing block and posts, substantially as described.

1,217,783. SCHOOL-CHAIR. HARRY R. LANGSLOW, Rochester, N. Y. Filed Feb. 17, 1915. Serial No. 8,707. (Cl. 155—26.)



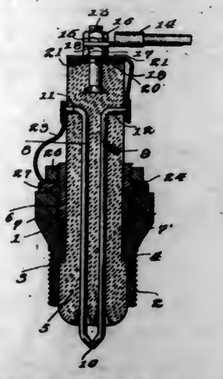
The combination with the frame of a chair, of a sheet metal socket embodying a pair of tapered recesses, a removable desk portion, and a standard on the desk portion including a pair of tapered hollow ribs having engagement with the aforesaid recesses and formed by bending a piece of sheet metal upon itself at its edges.

1,217,784. SPARK-PLUG. FORREST R. LA PLANTE, Gunnison, Colo. Filed Sept. 19, 1916. Serial No. 120,996. (Cl. 123—169.)

1. A spark plug embodying two electrodes insulated from the spark plug casing, and switching means connected with said plug for reversing the direction of flow of an ignition circuit through said electrodes.

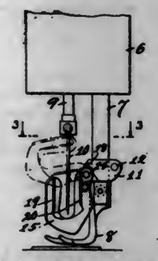
2. A spark plug embodying two electrodes insulated from the spark plug casing and arranged to form a spark gap adjacent to one end of the plug, a primary switch for conducting the current to one electrode, means for shifting said switch from one electrode to the other, and means for grounding the electrode not in contact with said switch.

3. A spark plug embodying two electrodes insulated from the spark plug casing and arranged to form a spark gap adjacent to one end of the plug, a primary switch for conducting the current to one electrode, means for shifting said switch from one electrode to the other, and means for grounding the electrode not in contact with said switch, the last named means consisting of a secondary switch adjustable from contact with one electrode into contact with the other electrode.



4. The combination of a spark plug having two electrodes insulated from the spark plug casing forming a gap adjacent to one end of the plug and having their opposite ends extended outwardly through the side walls of the plug core, a primary switch adjustable for the purpose of conducting the current to the last named end of either electrode, and a secondary switch adjustable for the purpose of receiving the current from the last named end of either electrode.

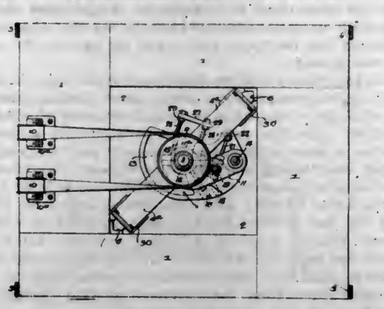
1,217,785. NEEDLE-GUARD FOR SEWING-MACHINES. NORMAN LEDERER, New York, N. Y. Filed Mar. 29, 1916. Serial No. 87,483. (Cl. 112—29.)



A needle guard for sewing machines, comprising a clamp adapted to be secured to the presser-foot rod, a pivot at the end of said clamp nearest the needle, two separate parallel U-shaped members carried by said pivot, and means, consisting of a tubular distance piece between said members adjacent said pivot and a rivet passed through said distance piece and members, for insuring similar movement of said U-shaped members on said pivot whereby said members may be swung upwardly to permit threading said needle and downwardly on opposite sides of the needle to guard the latter.

1,217,786. SIFTER. MAURICE D. LEMASTER, Chambersburg, Pa., assignor to The Wolf Company, Chambersburg, Pa., a Corporation of Pennsylvania. Filed Feb. 18, 1915. Serial No. 9,079. (Cl. 83—38.)

1. The combination of a sieving structure; means for suspending the same; bearings in the structure; a vertical shaft mounted in the bearings; flexible means for driving the shaft; arms secured to the shaft; a weighted governor located between the arms and pivoted thereto some distance from the center of rotation of the shaft; means for limiting the outward movement of the shaft; two coiled springs, one end of each spring being secured to the governor, the other end of one of the springs being secured to one arm and the other being secured to the other arm; and a dash pot having a piston and a piston rod therein, one of the parts being secured to the governor and the other to one of the arms, said dash pot being arranged to regulate the movement of the governor.



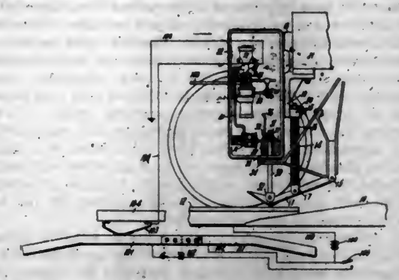
2. The combination of a sieving structure; means for supporting the same; bearings mounted on the structure; a centrally located vertical shaft mounted in the bearings; an arm on the shaft; a weighted governor pivoted to the arm at one side of the shaft and extending to the opposite side thereof; a dash pot on the same side of the shaft as the pivot, said dash pot being pivotally mounted on the arm; a piston in the dash pot; a rod attached to the piston and connected to the governor; and a spring surrounding the pivot, one end of the spring being attached to the governor and the other end being attached to the arm.

3. The combination of a sieving structure; means for supporting the same; bearings mounted on the structure; a centrally located vertical shaft mounted in the bearings; an arm on the shaft; a weighted governor pivotally mounted on the arm on one side of the shaft and extending to the opposite side thereof; adjustable means for limiting the outward movement of the governor; a spring encircling the pivot and attached to the governor and to the arm; a dash pot having a piston and a piston rod, one of the parts of the dash pot structure being secured to the arm and the other to the governor and located between the pivot and the shaft, the piston having a free passage therein and also having a second passage; and a valve mounted in the passage and arranged to control the outward movement of the governor.

4. The combination of a sieving structure; means for suspending the structure; bearings on the structure; a vertical shaft mounted in the bearings; arms secured to the shaft; a weighted governor pivoted to the arms at one side of the center and extending to the opposite side of the shaft, said governor being recessed to receive the shaft; an adjusting screw extending through the governor and bearing upon the shaft, said screw regulating the position of the governor with respect to the shaft; and adjustable means carried by the governor for limiting the outward movement of the governor, said means coming in contact with the shaft when the governor is moved out to its full extent.

1,217,787. RAILWAY-TRAFFIC-CONTROLLING APPARATUS. LLOYD V. LEWIS, Edgewood Borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed June 12, 1914, Serial No. 844,664. Renewed Feb. 12, 1916. Serial No. 78,084. (Cl. 246—58.)

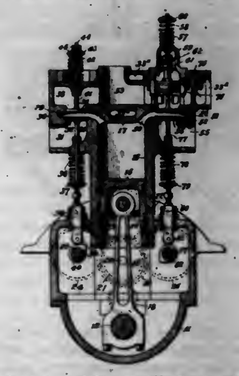
1. In combination, a railway vehicle, vehicle-controlling apparatus thereon comprising two valves connected in series, one of said valves being normally closed and the other normally open, means located in the trackway for opening said normally closed valve, time-controlled means on the vehicle for closing said normally open valve, and means located in the trackway for setting said time-controlled means into operation at a predetermined distance in the rear of the point at which the normally closed valve is opened.



2. In combination, a railway track, a vehicle adapted to travel thereon, a brake controlling pipe on said vehicle, two valves in series in said pipe one of which is normally closed and the other normally open, a trip on the trackway, means on the vehicle adapted to coact with said trip to open the normally closed valve, time controlled means on the vehicle for closing said normally open valve, a ramp rail extending a predetermined distance in the rear of said trip and divided into sections, electrically isolated from each other, means for energizing each section of said conductor, a second device carried by the car or train adapted to coact with the conductor, and means carried by the car or train for setting the time-controlled means into operation when said second device coacts with a section of the conductor which is energized.

3. In combination, a railway track, a vehicle adapted to travel thereon, a brake controlling pipe on said vehicle, two valves in series in said pipe one of which is normally closed and the other normally open, a trip on the trackway, means on the vehicle adapted to coact with said trip to open the normally closed valve, time-controlled means on the vehicle for closing said normally open valve, and means located in the trackway for setting said time-controlled means into operation at a predetermined distance in the rear of said trip.

1,217,788. INTERNAL-COMBUSTION AND STEAM ENGINE. HUGO F. LIEBOTKE, Philadelphia, Pa. Filed Nov. 18, 1912. Serial No. 732,006. (Cl. 123—32.)



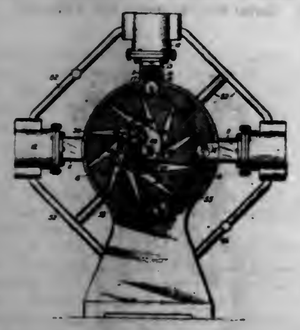
1. An engine comprising a cylinder, a piston reciprocable therein, a valve arranged to admit air to the cylinder during an outward stroke of the engine-piston, the arrangement being such that air in the cylinder is compressed during the next compression stroke of the engine-piston, a charging device comprising a piston and a cylinder within which said charging-piston reciprocates.

there being a passage affording communication between said engine and charging cylinders whereby when air in the engine-cylinder is compressed by the engine-piston it also is compressed in the charging-cylinder, an actuating device arranged to move said charging-piston after initial compression and to a greater degree compress the air in said charging-cylinder, means whereby said passage is closed during compression movement of said charging-piston and opened at the end of such movement, means whereby combustible material is injected into said passage and the engine-piston given a working stroke, a valve opening on the next inward stroke of the engine-piston and permitting the resultant of combustion to exhaust, a valve arranged thereupon to admit steam to said engine-cylinder whereby said engine-piston is given a working stroke, and a steam-exhaust valve opening on the next inward stroke of said engine-piston.

2. An engine comprising a casing, a movable element in the casing arranged to have working forces act thereon to produce motion, a conduit arranged to supply fluid under pressure, a fluid-pressure-admission device, a fluid-pressure-exhaust device, means whereby combustible material is ignited and caused to act in said casing against said element, an exhaust device for the resultant of combustion, and an exhaust conduit for said resultant surrounding said fluid-supply conduit.

3. The combination of an engine comprising a cylinder, a piston reciprocable therein, opening and closing air-admission means so arranged that periodically on one stroke of said piston air will be drawn into said cylinder and on the next stroke compressed therein, there being a charging-passage opening into the compression area of said cylinder, an air-pump comprising a cylinder, a piston reciprocable therein, said charging-passage opening into said pump-cylinder at a point beyond the normal position of the piston therein whereby air compressed in said engine-cylinder is forced into said pump-cylinder, and means whereby said pump-piston is moved to overrun the end of said charging-passage and the charge of air in said pump cylinder further compressed, there being in said pump-piston a passage arranged to receive at one end air compressed in said pump-cylinder and having its other end in position to register with the end of said charging-passage after compression movement of said pump piston.

1,217,789. ROTARY ENGINE. EDGAR M. LONG, Oak City, N. C. Filed Jan. 14, 1916. Serial No. 72,064. (Cl. 123—8.)



1. In a rotary engine, a stator, a piston therein mounted to roll on the periphery of the stator, means forming chambers of variable capacities between said piston and stator, a rotor within the piston, said piston having passages establishing communication between the rotor and said chambers, means for supplying a compressed fuel charge to said passages of the piston, and means for igniting the fuel charge in said passages when said passages establish communication between a chamber at minimum capacity and said rotor.

2. In a rotary engine, a stator, a piston therein mounted to roll on the periphery of the stator, means forming chambers of variable capacities between the piston and stator, a rotor within the piston, said piston having passages establishing communication between the chambers and the rotor, means for supplying the rotor with a compressed fuel mixture, said rotor having means for delivering the compressed fuel charge to the passages about to establish communication between the chamber at minimum capacity and the rotor, and means for igniting the charge in said passages.

3. In a rotary engine, a stator, a piston therein mounted to roll on the periphery of the stator, sliding abutments in said stator engaging the piston whereby chambers of variable capacities are formed between said stator and piston, a rotor within the piston, said piston having passages establishing communication between the rotor and the chambers, means for supplying the rotor with a compressed fuel mixture, said rotor having means for delivering the fuel mixture to the passages about to establish communication between the rotor and the chambers at minimum capacity, means for igniting the charge in the passage, said rotor having means for exhausting the gases of combustion from the chambers as they change from maximum to their minimum capacity.

4. In a rotary engine, a stator, a piston therein mounted to roll on the periphery of the stator, sliding abutments in the stator engaging the piston and forming chambers of variable capacities between said piston and stator, a rotor within the piston, said piston having passages establishing communication between the chambers and the rotor, compressors operable by the abutments for supplying a fuel mixture to the passages at substantially the minimum capacity of a chamber, means for igniting the mixture in the passage, and means for exhausting the products of combustion from the chambers as their capacities decrease.

5. In a rotary engine, a stator having at the periphery thereof symmetrically disposed, radial, tubular extensions, a rotor therein eccentric to the axis of the stator, a piston free to turn on the rotor and mounted to roll on the periphery of the stator, abutments in said tubular extensions of the stator engaging the piston and whereby chambers of varying capacities are formed in the stator, a compressor for each tubular extension in engagement with the corresponding abutment, means for supplying a fuel mixture to said compressors, said compressors adapted to deliver the compressed fuel mixture to said rotor, said piston having passages establishing communication between the rotor and the chambers, said rotor having means for delivering the compressed fuel mixture to the passages about to establish communication between the rotor and a chamber at minimum capacity, means for igniting the compressed fuel charge after it has been delivered to the passages, said rotor having means for exhausting the products of combustion from the passages establishing communication between the rotor and a chamber decreasing in capacity.

[Claims 6 to 24 not printed in the Gazette.]

1,217,790. PROPELLER. EUCLID JEROME LOWE, Balboa, Canal Zone. Filed Nov. 10, 1915. Serial No. 60,708. (Cl. 170—159.)



1. A propeller having a blade without pitch, and flanges extending in the general direction of rotation from the front and the outer edges of the blade.

2. A propeller having a concave blade without pitch, and flanges extending in the general direction of rotation from the front and the outer edges of the blade.

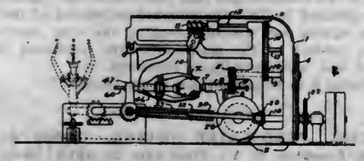
3. In a propeller, a hub having a flattened side, a blade extending from the hub at the said side, a flange extending forwardly of the forward edge of the blade, and a rib on the blade abutting against the said side of the hub.

4. A propeller having a blade without pitch and a flange extending in the general direction of rotation from the front of the blade.

5. A propeller having a concave blade without pitch and a flange extending in the general direction of rotation from the front edge of the blade.

[Claims 6 to 9 not printed in the Gazette.]

1,217,791. PARING-MACHINE FEEDER. WILLIAM M. LUTHER, San Francisco, Cal. Filed Sept. 5, 1914. Serial No. 860,453. (Cl. 146—8.)



1. A feeding mechanism including a carriage; means for moving said carriage forward and back in a substantially straight line; said means causing a dwell interval in the movement of said carriage; a gripper attached to said carriage, means for turning said gripper through approximately 90° in each forward and backward stroke of the carriage, and means for opening said gripper during said dwell interval.

2. A feeding mechanism including a carriage; means for moving said carriage forward and back in a substantially straight line; a shaft in said carriage; a gripper fixed on said shaft; and means for oscillating said shaft, during the movement of said carriage.

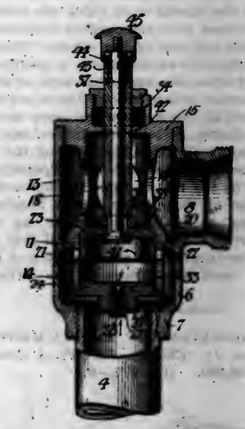
3. A feeding mechanism including a carriage; means for moving said carriage forward and back; a shaft in said carriage; a gripper fixed on said shaft; a gear fixed on said shaft, a rack engaged by said gear in its path; a shoe fixed on said shaft and having a flat side, and a slide fixed in the path of said shoe for contacting with the flat side thereof.

4. A feeding mechanism including a carriage; means for guiding said carriage in an approximately straight line; a connection rod engaging said carriage; means for moving said connecting rod forward and back; a guide for said carriage shorter than the stroke of said connecting rod and adapted to hold the carriage at rest during a portion of the stroke of the rod; a resilient member interposed between said connecting rod and the carriage for permitting the carriage to rest during a part of the stroke of said rod; a gripper mounted on said carriage; means for turning said grippers through 90° during each back stroke and each forward stroke of said carriage, and means for opening said gripper while said carriage is at rest.

5. A feeding mechanism including a carriage; guides for said carriage; a connecting rod slidably engaging said carriage; a crank pin engaging said connecting rod; a resilient member interposed between said connecting rod and the carriage; a shaft in said carriage; a shoe fixed on said shaft having a flat side; a slide on said guide for engaging the flat side of said shoe; a gear fixed on said shaft; a rack fixed on said guide engaging said gear; a stop on said guide adjacent to the end of said rack; a gripper fixed on said shaft and moved to a vertical position by the engagement of said gear and said rack, by the outward movement of said carriage, and held vertical by the compression of said resilient member.

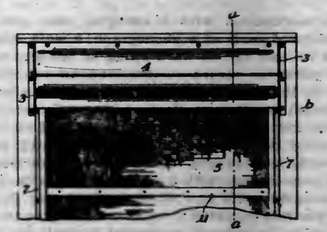
1,217,792. FLUSHING-VALVE. DUNCAN A. MCCONNELL, Arlington, and ROBERT WANDRAS, Kearney, N. J. Filed Feb. 20, 1914. Serial No. 819,952. (Cl. 137—93.)

A valve casing and a main valve coöperating to form a pressure chamber in permanently open but restricted communication with the source of liquid under pressure, said casing having a main port out of communication with said chamber and normally closed by said valve, said valve being held closed by the pressure of liquid in said chamber, a tubular valve stem having an inlet communicating with said chamber and having an outlet on the low pressure side of the valve, a second valve seated at the inlet of said valve stem to normally prevent the



escape of liquid from said chamber through said valve stem, and a second valve stem connected to said second mentioned valve and operating through said tubular valve stem to open said second valve, and a spring within said tubular valve stem for normally holding said second valve closed and means for opening said first valve by a further endwise movement of the second valve stem after the opening of the second valve.

1,217,793. WINDOW-SCREEN. THOMAS C. MCDANIEL and RICHARD M. FRAWLEY, Rochester, N. Y. Filed Apr. 26, 1916. Serial No. 93,786. (Cl. 156—39.)



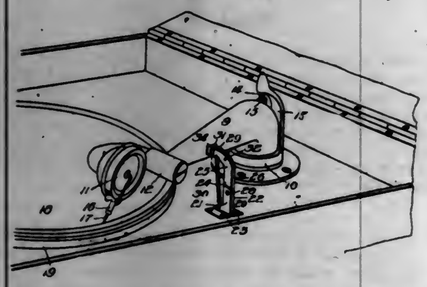
1. In combination with a window frame, a roller mounted at the top of the frame, a closure adapted to be wound on the roller and overlapping the side members of the frame, guides on the front faces of said side members for the side edges of the closure, said guides being spaced at their upper ends from the roller and the upper rail of the frame, a housing for the roller and the closure projecting below the upper rail of the frame, said housing being open at the rear and having a lower yieldingly mounted free edge arranged to permit the free edge of the closure to pass the same in either direction and lying in close proximity to the guide rails so that it acts as a guide to direct the free edge of the closure to the guides when the free edge is withdrawn from the closure.

2. In combination with a window frame, a roller mounted at the top of the frame, a closure adapted to be wound on the roller and overlapping the front faces of the uprights of the frame at its side edges, guides for the side

edges of the closure secured to the front faces of the uprights, said guides being spaced at their upper ends from the top rail of the window frame, a housing for the roller and the closure, the housing being open at the rear below said top rail and having its free lower edge lying in close proximity to the guide rails so that it acts as a guide to direct the free edge of the closure to the guide, and a cross bar secured to the free edge of the closure and lying between the uprights with its ends arranged to coöperate with the uprights to guide the closure to the guides and its upper part arranged to coöperate with the under side of the top rail of the window frame to maintain the free edge of the closure in a position where it may be reached from the open rear side of the housing.

3. In combination with a window frame, a roller mounted at the top of the frame above the lower surface of the top rail of the latter, a closure wound on the roller, said closure overlapping the side members of the frame and having means near its free edge for coöperating with the under face of the top rail to limit the upward movement of the free edge of the closure, and a housing covering said roller, open at its rear below the top rail of the frame, and having a yieldingly mounted free edge below said top rail, overlapping the side members of the window frame to bear upon the closure as the latter is drawn downwardly.

1,217,794. PHONOGRAPHIC ATTACHMENT. EUGENE F. MCDONALD, Jr., Chicago, Ill. Filed June 26, 1916. Serial No. 105,991. (Cl. 274—9.)



1. In combination with a swinging tone arm, needle and associated parts of a phonograph, a main stop device adapted to limit the outward swing of the arm to insure contact with the record surface, and an extension stop pivoted to the main stop device and adapted when moved to projected position to lie in acting relation with the tone arm and adapted to be swung at will on its pivot to retracted position to expose the main stop device to contact with the tone arm, substantially as described.

2. In combination with a swinging tone arm, a needle, and associated parts of a phonograph, a stop device pivoted in position to swing toward and from the record and restricted in its outward movement to limit the outward swing of the arm to insure contact of the needle with the record surface, and a spring for normally holding the stop device in its inward position for inwardly thrusting the tone arm to insure engagement of the needle with the beginning of the record line, substantially as described.

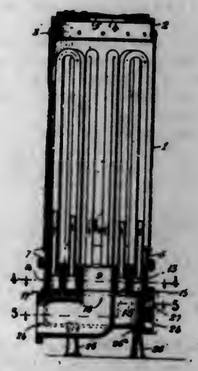
3. In combination with a swinging tone arm, a needle, and associated parts of a phonograph, a stop device pivoted on a horizontal pivot in position to swing toward and from the record and restricted in its outward movement to limit the outward swing of the arm to insure contact of the needle with the record surface, a spring for normally holding the stop device in its inward position for inwardly thrusting the tone arm to insure engagement of the needle with the beginning of the record line, and an extension stop connected to the stop device and movable into projected or retracted positions, and adapting the device for use with records of different sizes, substantially as described.

4. In combination with a swinging tone arm, needle, and associated parts of a phonograph, a pivoted stop device adapted to limit the outward swing of the arm to insure contact of the needle with the record surface, a spring for imparting an inward movement to the stop device for inwardly thrusting the tone arm to insure engagement of the needle with the beginning of the record line, and an extension stop pivoted to the stop device and adapted to be moved at will into projected or retracted position, and adapting the device for use with records of different sizes, substantially as described.

5. In combination with a swinging tone arm, needle, and associated parts of a phonograph, a stop device consisting of a base supporting member, a rocking stop pivoted to the base member and adapted to bear against the tone arm and to limit the outward movement of the arm, and a spring for inwardly rocking the stop member to insure contact of the needle with the beginning of the record line, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,217,795. FEED-WATER HEATER. GEORGE MCDOWELL, Brooklyn, N. Y. Filed Jan. 20, 1916. Serial No. 73,125. (Cl. 257—221.)



1. A feed water heater comprising an upright shell, a tube head forming the bottom thereof, inverted U-tubes secured in the tube head and extending into the shell, said head being provided with suitable recesses on its lower side to form connecting channels between the outlet and inlet ends of adjacent tubes and a plate member covering said recesses.

2. A feed water heater comprising an upright shell secured to a tube head, a plurality of inverted U-tubes secured in said tube head, the tubes being symmetrically arranged annularly of the head and an inclosed settling chamber below said tube head and secured thereto, holes and recesses being provided in and between the tube head and settling chamber whereby feed water may circulate in series through said tubes and the settling chamber.

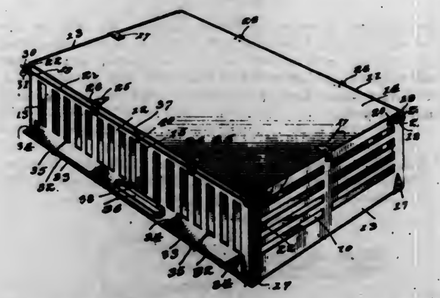
3. A feed water heater comprising an upright shell, a plurality of inverted U-tubes symmetrically arranged annularly within said shell, a tube head forming the bottom of the shell in which said tubes are secured, said head being provided with recesses for connecting the outlet end of one tube with the inlet end of the next and a settling chamber connected in series with said tubes substantially as described.

4. A feed water heater comprising a shell, an annular tube head, a plurality of inverted U-tubes arranged radially around the opening in said head, the upper surface of said head sloping toward the center for drainage, the under surface thereof being provided with recesses connecting the adjacent ends of successive tubes to form a continuous circuit therethrough and a settling chamber provided with a head adapted to cover the recesses in said tube head, suitable connections through said heads being provided for placing the settling chamber in circuit with said tubes substantially as described.

5. In a feed water heater the combination with a shell of a plurality of inverted U-tubes arranged in vertical planes radially of said shell, a central space being left along the inner legs of the tubes for the passage of steam, a tube head provided with a central opening, around which said pipes are concentrically arranged, a settling tank adapted to form a continuous circuit with said tubes and a steam conduit through said tank and the central opening of said tube head whereby the water in the settling tank is heated.

[Claims 6 to 10 not printed in the Gazette.]

1,217,796. CRATE. GUY E. MCFARLAND, Ollie, Mont. Filed July 1, 1916. Serial No. 107,177. (Cl. 220—132.)



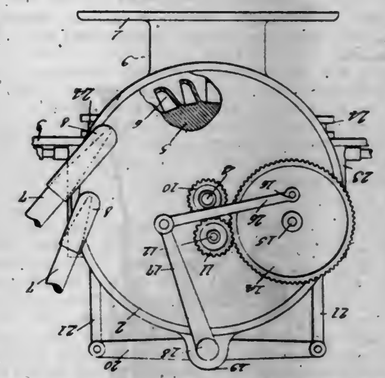
1. A crate comprising a bottom, sides and ends which are hingedly secured to the bottom, and a removable top disposed over the said sides and ends, notched keeper plates projecting from the sides adapted to pass through openings in the ends when the ends are swung against the sides, lock members secured to the ends, each of said locks including a spring arm disposed over the opening in the side and adapted to be contacted by the keeper plates and guided by such contact to within the notches of the said keeper plates, and U-shaped guides for the spring locks.

2. A crate comprising a bottom having sides and ends hingedly secured thereto and foldable thereupon and a removable top, notched keeper plates projecting from the sides disposed to pass through openings in the ends, when the said ends are swung against the sides lock members secured to the ends, each of said locks comprising a spring arm which is adapted to be contacted by the keeper plates and be guided thereby to engage in the slots in the said keeper plates, means for hingedly connecting the top to the sides, and means for locking said top to one of said sides.

3. A crate comprising a bottom, having sides and ends hingedly secured thereto and foldable thereupon, notched keeper plates projecting from the sides and passing through openings in the ends when the ends are folded against the sides, spring lock members carried by the ends to engage in the notches of the keeper plates, the sides upon their outer edges having each a parallel notch and an eye member disposed below the notch, a partition having its ends provided with hooks which engage in the respective notch and eye of each of the sides, a top member for overlying the sides and ends and partitions, tongue members upon the top to engage in grooves in the sides, hinged hasps upon the top, staples upon one of the sides to receive the hasps, staples upon the ends registering with the staples on the sides, and a headed rod having a slotted end passing through the alining staples, and the slotted end of the said rod adapted to receive a lock.

4. A crate comprising a bottom having sides and ends hingedly secured thereto and said sides adapted to be swung over one of the faces of the bottom when the crate is collapsed and the ends adapted to be swung over the other face of said bottom when the crate is collapsed, notched keeper plates projecting from the sides and adapted to be received in openings in the ends when the ends are swung against the sides and the crate set up, spring arms upon the ends contacted by and guided by contact into the notches of the keeper plates, guide members for the spring arms, a top, tongue members upon the top, one of the sides having grooves to receive the said tongues, hinged hasps upon the top adapted to be swung over the other side when the crate is set up, staples upon the last-mentioned side to receive the slotted members of the hasps, staples upon the ends alining with the first mentioned staples, a headed rod having a slotted end adapted to be passed through said alining staples to retain the crate in a set up position, slotted plates upon the ends of the top engaging with the ends when the crate is set up, and said top adapted to be disposed over the sides when the sides and ends are folded upon the bottom to arrange the slotted plates upon the said tops centrally between the keeper plates at the ends and to permit of the rod being passed through the central slots to contact with the folded ends.

1,217,797. PUMP. WILLIAM MACK, MARTIN A. O'TOOLE, and JOHN F. O'TOOLE, Scranton, Pa. Filed Sept. 14, 1914. Serial No. 861,721. (Cl. 230—27.)

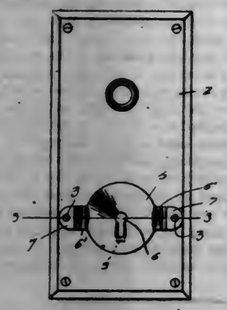


In a device of the class described, a casing provided with a depending neck constituting a support for the casing and an outlet for the casing; a substantially horizontal platform secured to one side of the casing above the bottom of the casing; cylinders supported on the platform; check valves carried by the platform and coacting with the cylinders, the check valves being located below the platform, whereby the platform will constitute a protection for the check valves; pistons working in the cylinders; a walking beam; connections uniting the ends of the walking beam with the pistons, the walking beam and the connections lying immediately above the platform, whereby the platform will constitute a protection for the connections and the walking beam; a rock shaft journaled in the casing, the walking beam being secured to one end of the rock shaft; a crank arm depending from the rock shaft and located upon the opposite side of the casing from the platform; a main shaft journaled in the casing; an impact wheel on the main shaft and located within the casing; a gear train located on the same side of the casing with the crank arm and lying substantially within the perimeter of the casing, the gear train including a wheel fixed to the main shaft and an auxiliary wheel journaled on the casing; and a link connecting the arm with the auxiliary wheel, the arm and the link moving within the perimeter of the casing.

1,217,798. KEYHOLE ATTACHMENT FOR LOCKS. DANIEL P. MAHON, Quincy, Mass. Filed Nov. 14, 1916. Serial No. 131,229. (Cl. 70—16.)

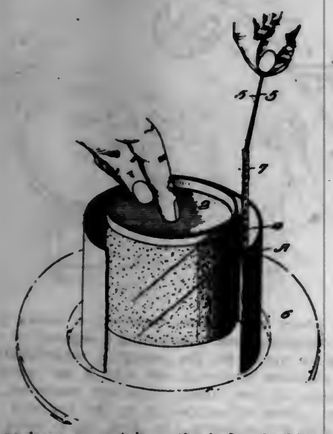
In combination with a lock including a key-hole slot, of a frusto-conical shaped guide plate secured to the

lock and having a central key-hole slot in registration with the key-hole slot of the lock, and a tongue formed on the wall of the key-hole slot of the guide plate and



extending into engagement with the bottom wall of the key-hole slot of the lock for guiding a key over the bottom wall of the key-hole slot of the lock.

1,217,799. CONTAINER. SIDNEY T. MALTBY, Washington, D. C. Filed Apr. 8, 1916. Serial No. 89,750. (Cl. 229—51.)

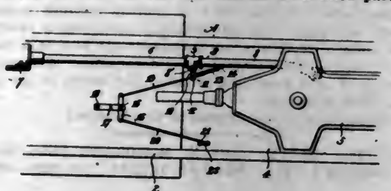


1. A package or container, the body of which is made of material fashioned into shape, and having its ends brought together and fastened with a continuous stitch, the ends of the material forming the stitch being of sufficient length to extend across the package or container, and over which one end of the package is placed, whereby the pulling of the ends will remove one head of the package or container and rip open the stitched end of the body portion of the package.

2. A package or container, the edges of the body portion of which are brought together and stitched as the sole means of holding the edges together and the sole means of ripping the side of the package open when the contents is to be removed, and a lid or cover inserted in the end of the package over the ends of the threads which form the stitching and the initial pull of which removes the lid or cover preliminary to ripping open the stitched edges of the side of the package.

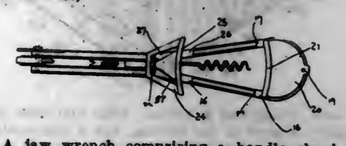
1,217,800. CUT-OUT FOR AUTOMOBILES. PATRICK F. MARA, Danvers, Ill. Filed May 22, 1915. Serial No. 29,876. (Cl. 21—90.)

The combination with a motor car chassis, an engine mounted on the forward end thereof, an exhaust pipe leading rearwardly from said engine, and a muffler associated with said exhaust pipe, of a cut-out for said pipe located adjacent to the engine, an operating arm for opening and closing said cut-out, a spring attached at one end to said operating arm extending forwardly therefrom and attached at its forward end to fixed point, a hanger pivotally mounted at one end thereof on a fixed part of



the machine, a lever fulcrumed between its ends on the free end of said hanger, a link connecting said operating arm and one arm of said lever, a foot pedal, and another link connecting said pedal to the other arm of said lever, the latter being located in rear of both the cut-out arm and foot pedal.

1,217,801. COMBINATION-TOOL. THOMAS MARTIN, Homestead, Pa. Filed Mar. 12, 1915. Serial No. 13,998. (Cl. 65—26.)



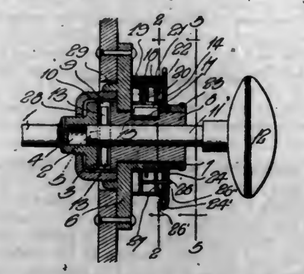
1. A jaw wrench comprising a handle shank, a jaw-carrier projecting therefrom, a gripping member pivotally mounted upon one end of said jaw-carrier and provided with a jaw, a gripping member formed with a pair of triangular-shaped slots mounted upon the other terminus of said jaw-carrier, a yoke connected to the jaw-carrier and having its arm extending through said slots for shiftably connecting said slotted gripping member and the jaw-carrier, and a pin carried by the first mentioned gripping member and capable of engaging the jaw-carrier to arrest the pivotal movement of said member.

2. A jaw wrench comprising a handle shank, a jaw-carrier projecting therefrom, a gripping member pivotally connected to the outer end of said jaw-carrier, provided with a jaw and having means to limit the pivotal movement thereof, a gripping member shiftably mounted upon said carrier and having a jaw opposing the jaw of the first mentioned gripping member, said jaws being segmental in contour, said shiftably mounted gripping member provided with a pair of triangular-shaped slots, and a yoke carried by the jaw member and having its arms extended through said slots and in connection with the sides of these latter setting up a locking action to prevent the shifting of the slotted gripping member when the latter is in engagement with the cap of a jar.

1,217,802. PERMUTATION-LOCK. JOHN HARRISON MATTICE, Clyde, Kans. Filed Jan. 24, 1916. Serial No. 73,941. (Cl. 70—53.)

1. In a permutation lock mechanism, the combination of a fixed sleeve having an aperture leading from its interior to its exterior, a shaft mounted for rotation in said sleeve and having in its periphery a cavity for registration with the aforesaid aperture, a tumbler carried in said aperture and adapted for partial reception in the cavity to lock the shaft against rotation, said tumbler projecting beyond the periphery of said sleeve when removed from the cavity, a plurality of rings rotatably surrounding said fixed sleeve to prevent removal of the tumbler from said cavity, said rings having external shoulders and internal notches, the latter being adapted to be registered with the aforesaid aperture to allow outward movement

of said tumbler, a housing for the rings, and an operating member in and carried by said housing for coöperation with the aforesaid shoulders to set the rings when said housing is properly turned.



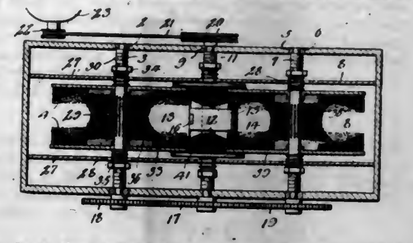
2. In a permutation lock mechanism, the combination of a fixed sleeve having an aperture leading from its interior to its exterior, a shaft mounted for rotation in said sleeve and having in its periphery a cavity for registration with the aforesaid aperture, a tumbler carried in said aperture and adapted for partial reception in the cavity to lock the shaft against rotation, said tumbler projecting beyond the periphery of said sleeve when removed from the cavity, a plurality of rings rotatably surrounding said fixed sleeve to prevent removal of the tumbler from said cavity, said rings having internal notches to be registered with the aforesaid aperture to allow outward movement of said tumbler, an annular flange extending from one of said rings and surrounding the other rings, a plate abutting one edge of said flange and forming with the latter a housing for the tumbler and the last named rings, and coöperating means carried by the housing and rings for setting the latter when the housing is properly turned.

3. In a permutation lock mechanism, the combination of a fixed sleeve having an aperture leading from its interior to its exterior, a shaft mounted for rotation in said sleeve and having in its periphery a cavity for registration with the aforesaid aperture, a tumbler carried in said aperture and adapted for partial reception in the cavity to lock the shaft against rotation, said tumbler projecting beyond the periphery of said sleeve when removed from the cavity, a plurality of rings rotatably surrounding said fixed sleeve to prevent removal of the tumbler from said cavity, said rings having internal notches to be registered with the aforesaid aperture to allow outward movement of said tumbler, an annular flange extending from one of the endmost of said rings and surrounding the other rings, a plate abutting the free edge of said flange and forming with the latter a housing for the tumbler and the last named rings, a rigid pin extending from said endmost ring to the plate, and shoulders on the exterior of the other rings to be engaged by said pin to properly position said rings.

4. In a permutation lock mechanism, the combination of a fixed sleeve, a tubular shaft passing rotatably therethrough and having at one end a notch, permutation locking means coöperating with said shaft and sleeve to lock the former against rotation, a spindle rotatably and slidably mounted in said tubular shaft and having a laterally extending rigid projection for reception in said notch to hold said spindle against rotation when the shaft is locked, and a member to be turned having a head against which the aforesaid projection bears when disposed in said notch, said head also having a notch into which the projection may be moved when rotation of the shaft is allowed by release of the aforesaid locking means.

1,217,803. SHOE-POLISHING MACHINE. WILLIAM G. MEFFORD, Ava, Mo. Filed Oct. 5, 1916. Serial No. 123,963. (Cl. 15—61.)

1. In a shoe polishing machine, a shaft mounted for rotation and comprising a center member and end members detachably connected together, brushes on the center member of the shaft and coupling nuts having threaded engagement with the meeting ends of said shaft members.

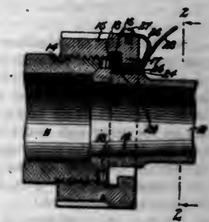


2. In a shoe polishing machine, a shaft mounted for rotation and comprising a center member and end members detachably connected together, brushes on the center member of the shaft and coupling nuts having threaded engagement with the meeting ends of said shaft members, the said brushes being movable on the center shaft member toward and from each other, and springs between the brushes and the nuts and yieldably holding the brushes in place.

3. In a shoe polishing machine, a front shaft, a rear shaft, and an intermediate shaft mounted for rotation, said intermediate shaft being parallel with and arranged between the other shafts, each of said shafts having a pair of spaced brushes provided with bristles on their opposing sides arranged substantially parallel with said shaft and said front shaft and said rear shaft being each also provided with a brush between the spaced brushes and having radial bristles, and means to rotate said shafts so that said front and rear shafts rotate in the same direction.

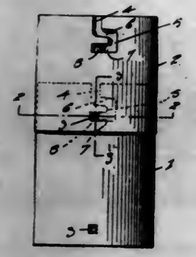
4. In a shoe polishing machine, a front shaft, a rear shaft, and an intermediate shaft mounted for rotation, said intermediate shaft being arranged between the other shafts, brushes on the several shafts, each of said brushes having bristles on its inner side, and a foot rest arranged below the intermediate shaft and provided with a heel support and an arched portion connecting said heel support and foot rest and hingedly connected to the latter, said arched portion extending over the intermediate shaft and said intermediate shaft being removable.

1,217,804. COUPLING. JULES P. METZGER, Carlstadt, N. J., assignor to The Leslie Company, Lyndhurst, N. J. Filed June 19, 1916. Serial No. 104,515. (Cl. 137—28.)



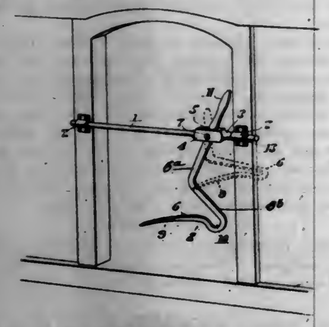
A coupling, comprising a coupling nut provided with an internal groove thereby providing an inwardly extending flange and a shoulder adjacent the screw thread of the nut, a locking ring made in sections, of which one is the key section, the said locking ring engaging the said groove and being narrower than the groove, the said locking ring in one position being seated on the said flange and in another position being seated on the said shoulder, the said locking ring having a sleeve extending in the opening of the nut and slidable lengthwise therein, and a spring attached to the said nut and engaging the outer end of the said sleeve, the said spring exerting an outward and lengthwise pressure on the said ring to hold the ring against the said shoulder at the time the nut is unscrewed.

1,217,805. STOVEPIPE JOINT-LOCK. JOHN A. MEYERS, Forestell, Mo. Filed Apr. 12, 1916. Serial No. 90,625. (Cl. 126—308.)



In a device of the character described consisting of telescopic stove pipe sections, a pair of lugs formed on one end of each of said sections, the other end of said sections being provided with oppositely disposed locking grooves, each of said grooves consisting of relatively off set inner and outer vertical branches, and an inclined branch extending downwardly from the lower end of the outer branch to the upper end of the inner branch and a horizontal locking branch extending from the lower end of the inner branch in the direction of the outer branch and provided with a socket in the bottom wall thereof to hold the lugs against accidental withdrawal.

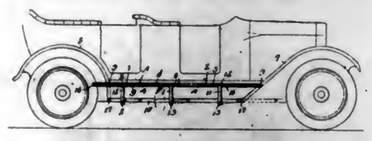
1,217,806. MAIL-BAG CATCHER. JAMES G. MILLER, Princeton, W. Va. Filed May 5, 1916. Serial No. 95,666. (Cl. 258—14.)



1. In a mail bag catcher, the combination of a horizontally arranged shaft mounted for turning movement and a hook comprising a lever for manual operation having a handle in line therewith at its inner end, an arm at the outer end of the lever arranged at an angle thereto, a bill having an extension at its outer end and a bight connecting the inner end of the bill to the inner end of the arm, said lever being pivotally mounted on the shaft for angular movement in a plane parallel with the shaft and arranged in a common plane therewith.

2. In a mail bag catcher, the combination of a horizontally arranged shaft mounted for turning movement and a hook comprising a lever for manual operation and having a handle in line therewith at its inner end, an arm at the outer end of the lever arranged at an angle thereto, a bill having an extension at its outer end and a bight connecting the inner end of the bill to the inner end of the arm, said lever being pivotally mounted on the shaft for annular movement in a plane parallel with the shaft and arranged in a common plane therewith, and the shaft being provided with a widened intermediate portion having an opening through which the lever of the hook extends and also having shoulders at diagonally opposite ends of said openings against which the hook bears when in position to catch a mail bag.

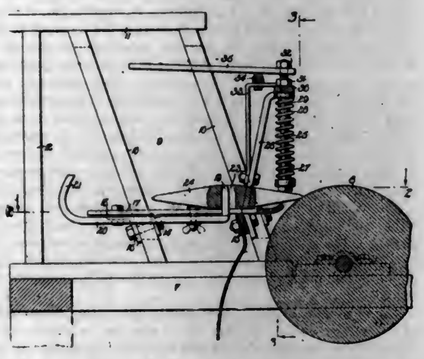
1,217,807. LUGGAGE-RACK FOR AUTOMOBILES. JOHN C. MORRISON, Spokane, Wash. Filed Nov. 28, 1916. Serial No. 133,913. (Cl. 224—29.)



1. The combination with the running board and the front and rear mud guards of an automobile, of a luggage rack comprising a main substantially horizontal bar, pivotal links for supporting said bar at an elevation above the running board, said links having a pivotal connection with said bar and a pivotal relation to the running board and being parallel to each other, and fastening means for securing said rack bar adjacent to its opposite ends to the front and rear mud guards either in an elevated position or in a position along-side the outer edge of the running board.

2. The combination with the running board and the front and rear mud guards of an automobile, of a luggage rack comprising a main substantially horizontal bar, pivotal links for supporting said bar at an elevation above the running board, said links having a pivotal connection with said bar and a pivotal relation to the running board and being parallel to each other, and fastening means for securing said rack bar adjacent to its opposite ends to the front and rear mud guards either in an elevated position or in a position along-side the outer edge of the running board, said main rack bar being longitudinally extensible.

1,217,808. MILL-PICK JIG. ANTONI MROZINSKI, New York, N. Y. Filed Nov. 16, 1916. Serial No. 131,653. (Cl. 51—7.)



1. In combination, a support for a pick, means for adjusting the pick longitudinally of the support, a spring-actuated plunger adapted to move the pick to the support, and adjustable means on said plunger for varying the movement of the plunger toward the support.

2. In combination, a slidable slotted support for picks, means for adjusting the picks on the support in engagement with the slot of the support, a spring-actuated plunger for moving the picks toward the support, and adjustable means on the plunger for varying the movement of the plunger toward the support.

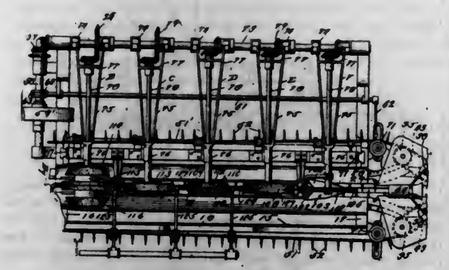
3. In combination, a slotted support for picks, a shifter associated with the slots of the support for engaging the picks and adjusting the same on the support, a spring-actuated plunger for engaging the picks and moving the picks toward the support and adjustable means on said plunger for varying the movement of the plunger toward the support.

4. In combination, a slotted support for picks, means for adjusting the support, a shifter associated with the slot of the support and adapted to engage a pick carried by the support for adjusting the pick on the support, a spring-actuated plunger carried by the support for engaging the pick thereon, and adjustable means on said plunger for varying the movement of the plunger toward the support.

5. The combination in a jig adapted to be used with a grindstone of a frame having standards sloping away from the stone and disposed above the stone, a pick support adjustably mounted in said standards, said support having slots, a shifter associated with each slot of the support for engaging a pick and whereby the pick is adjusted on the support, a spring-actuated plunger carried by the support for engaging a pick thereon, adjustable means on said plunger for varying the movement of the plunger toward the support, and a lever associated with the plunger for raising the same to admit or remove a pick from the support.

[Claims 6 and 7 not printed in the Gazette.]

1,217,809. FISH-CLEANING MACHINE. NIELS C. NICHOLSON, Seattle, Wash., assignor of one-half to T. A. Heckman, Seattle, Wash. Filed Mar. 1, 1916. Serial No. 81,462. (Cl. 17—10.)



1. A fish-cleaning machine comprising a plurality of fish-treating devices, means for moving fish into position to be treated by the different devices successively, means for simultaneously adjusting the devices with respect to the moving means, and means for individually adjusting the devices with respect to the moving means.

2. A fish-cleaning machine comprising a fish-treating device, a fish-carrier arranged to position a fish for treatment by the treating device, means for moving the treating device toward and away from the carrier, said treating-device being movable with respect to the carrier independently of the moving means, and means for adjusting the treating devices with respect to the moving means to vary its position with respect to the carrier.

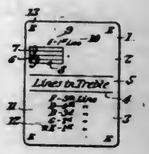
3. A fish-treating machine including a fish-splitting device, means for moving a fish into engagement with the splitting device, a cleaning device, said moving means being arranged to carry a fish from the splitting device to the cleaning device for treatment thereby, means for supporting a fish in position to receive the operation of the cleaning device, a single means for introducing a fish to the splitting device and for spreading the fish, and means for holding a fish spread upon the supporting means, said introducing and spreading means being arranged to position the fish for engagement by the holding means.

4. A fish-treating machine including fish supports, a plurality of fish-treating devices located in position to treat fish upon the supports, said treating devices being movable toward and away from the supports, means for moving the treating devices simultaneously with respect to the support and means for moving the treating devices individually with respect to the supports.

5. A stationary fish-treating machine including fish supporting means, means for moving the fish along the supporting means, a fish-treating device movable toward and away from the supporting means, means for moving the treating device with respect to the supporting means and means for holding moving fish upon the supporting means, said holding means being connected with the moving means for movement therewith.

[Claims 6 to 25 not printed in the Gazette.]

1,217,810. GAME-CARDS FOR TEACHING MUSIC. EUGENE E. NOEL, Indianapolis, Ind., assignor of one-third to Earl E. Crooke and one-third to Warner C. Williams, Indianapolis, Ind. Filed Apr. 6, 1916. Serial No. 89,395. (Cl. 46—25.)



1. A pack of cards comprising a plurality of suit cards, the cards of one suit having thereon musical notations positioned on the lines of a staff, and the cards of another suit having thereon musical notations positioned on the spaces of a staff.

2. A pack of cards comprising a plurality of suit cards, one suit having thereon musical notations positioned on the lines of a treble clef, the cards of another suit having musical notations positioned on the spaces of the treble clef, the cards of one suit having the musical notations thereon positioned upon the lines of the bass clef, and the cards of another suit having the musical notations thereon positioned upon the spaces of said bass clef.

3. A pack of cards comprising a plurality of suit cards, one suit having thereon musical notations positioned on the lines of a treble clef, the cards of another suit having musical notations positioned on the spaces of the treble clef, the cards of one suit having the musical notations thereon positioned upon the lines of the bass clef, the cards of another suit having the musical notations thereon positioned upon the spaces of said bass clef, and all cards of all the suits having indicia thereon indicating the character of the notes in the suit and the name of the suit.

4. A pack of cards comprising a plurality of suit cards, the cards of one suit having thereon musical notations positioned on the lines of a staff, the cards of another suit having thereon musical notations positioned on the spaces of a staff, another suit having thereon musical notations of different values and the corresponding rests positioned upon a staff.

5. A pack of cards comprising a plurality of suit cards, the cards of one suit having thereon musical notations positioned on the lines of a staff, the cards of another suit having thereon musical notations positioned on the spaces of a staff, another suit having thereon musical notations of different values and the corresponding rests positioned upon a staff, and another suit having thereon the signs used in music.

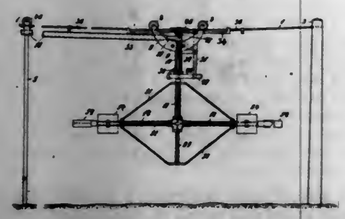
[Claim 6 not printed in the Gazette.]

1,217,811. APPARATUS FOR THE IRRIGATION OF FIELDS, GARDENS, AND THE LIKE. CARL SIGFRID NYBERG, Hasselbacken, Mellösa, Sweden. Filed July 1, 1916. Serial No. 107,182. (Cl. 137—66.)

1. In an irrigating apparatus the combination of a suspended cable, a carriage mounted on and adapted to traverse said cable, a revoluble sprayer adapted to be rotated by the action of the spraying liquid issuing therefrom and carried by said carriage, means for supplying liquid to said sprayer under pressure, a pair of wheels mounted on

said carriage and adapted to engage said cable, and means for rotating either of said wheels alternatively from the rotating sprayer so as to propel the carriage in either direction along the cable.

2. In an irrigating apparatus the combination of a supporting track, a carriage mounted on and adapted to traverse said track, a revoluble sprayer, a shaft journaled in said carriage and secured to said sprayer, a pair of friction wheels each adapted to engage with said track, independent shafts each supporting one of said friction wheels, a gear wheel on each of said latter shafts, and a further gear wheel mounted on the first mentioned shaft and adapted to be engaged alternatively by one or other of the said gear wheels so as to propel the carriage in either direction.



3. In an irrigating apparatus the combination of a supporting track, a carriage mounted on and adapted to traverse said track, a revoluble sprayer, a shaft journaled in said carriage and secured to said sprayer, a pair of friction wheels each adapted to engage with said track, independent shafts each supporting one of said fraction wheels, a gear wheel on each of said latter shafts, a further gear wheel mounted on the first mentioned shaft and adapted to be engaged alternatively by one or other of the said gear wheels so as to propel the carriage in either direction, and means for automatically changing such engagement when the carriage reaches the end of its travel so as to reverse the direction of movement of the carriage.

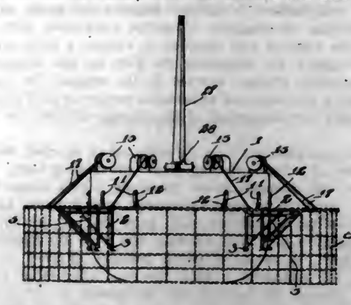
4. In an irrigating apparatus the combination of a supporting track, a carriage mounted on and adapted to traverse said track, a revoluble sprayer, a shaft journaled in said carriage and secured to said sprayer, a pair of friction wheels each adapted to engage with said track, independent shafts each supporting one of said friction wheels, a gear wheel on each of said latter shafts, a further gear wheel mounted on the first mentioned shaft and adapted to be engaged alternatively by one or other of the said gear wheels so as to propel the carriage in either direction, and means for automatically changing such engagement when the carriage reaches the end of its travel in either direction.

5. In an irrigating apparatus the combination of a supporting track, a carriage mounted on and adapted to traverse said track, a revoluble sprayer, a shaft journaled in said carriage and secured to said sprayer, a pair of friction wheels each adapted to engage with said track, shafts supporting said friction wheels, a lever in which said latter shafts are mounted at one of their ends, a gear wheel mounted on each of the three said shafts in the same plane, a secondary lever pivoted on the carriage and adapted to oscillate the first-mentioned lever so as to bring one or other of the gear wheels on the friction wheel shafts into engagement with the third gear wheel, and means mounted on the track for operating said secondary lever when the carriage reaches the end of its travel.

[Claim 6 not printed in the Gazette.]

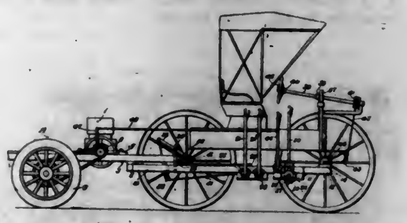
1,217,812. TORPEDO-CATCHER AND MINE-DESTROYER. HARRY O'GRADY, Westbourne, Tenn. Filed Aug. 28, 1916. Serial No. 117,314. (Cl. 114—240.)

A vessel, a supporting bracket pivotally mounted at one side of the vessel for horizontal angular movement to enable said bracket to be swung outwardly from or moved toward the side of the vessel, and a net supporting arm mounted for movement with the bracket and also for ver-



tical pivotal movement, said arm being when lowered carried by said bracket.

1,217,813. MOTOR-VEHICLE. FRANK A. ORVIS, Milford, Mich. Filed Feb. 16, 1916. Serial No. 78,687. (Cl. 21—90.)



1. In combination with a wheeled vehicle, a motor driven vehicle, an extendible frame attached to said motor driven vehicle, means mounted on the extensible frame for controlling the motor of said motor driven vehicle, and means operable from said wheeled vehicle for elevating the rear wheels of the wheeled vehicle.

2. In combination with a wheeled vehicle, a motor driven vehicle having an extensible frame, means mounted on the frame for controlling the motor of the motor driven vehicle, and means mounted on the motor driven vehicle for preventing lateral movement of the rear wheels of said wheeled vehicle.

3. In combination with a wheeled vehicle, a motor driven vehicle, an extensible frame attached to said motor driven vehicle, means mounted on the frame for controlling the motor of the motor driven vehicle, and means mounted on the motor driven vehicle and engageable with the rear axle of said wheeled vehicle for preventing lateral movement of the rear wheels thereof.

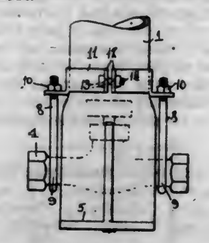
4. In combination with a wheeled vehicle, a motor driven vehicle, an extendible frame attached to said motor driven vehicle, means mounted on the extendible frame for controlling the motor of the motor driven vehicle, and adjustable means for preventing the lateral movement of the rear wheels of said wheeled vehicle.

5. In combination with a wheeled vehicle, a motor driven vehicle, means mounted on said motor driven vehicle and operable from said wheeled vehicle for controlling the motor of said motor driven vehicle, and resilient means for preventing lateral movement of the rear wheels of said wheeled vehicle.

[Claims 6 to 8 not printed in the Gazette.]

1,217,814. VALVE-BOX. JOHN Q. PARKER, Sandusky, Ohio. Filed Apr. 7, 1916. Serial No. 89,592. (Cl. 137—13.)

1. In an attachment for valve boxes the combination of a split collar adapted to be clamped about said box, and clamping means mounted in said collar and adapted to engage the valve to secure the same and the box against relative movement.

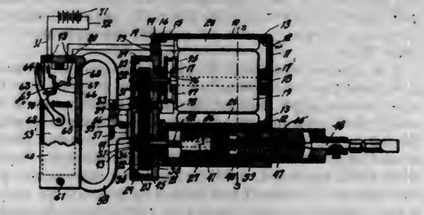


2. In an attachment for valve boxes the combination of a split collar adapted to be adjustably secured to the box, and hooks mounted in said collar and adapted to engage the valve to securely position the box against movement relative to the valve.

3. In an attachment for valve boxes the combination of a split collar adapted to be adjustably secured to the box, and provided with apertured ears, and hooks adjustably mounted in such apertures and adapted to engage the valve to prevent movement of box relative to the valve.

4. In an attachment for valve boxes, the combination of a split collar adapted to be adjustably secured to the box, and provided with apertured ears, hooks having threaded upper portions adjustably mounted in such apertures and adapted to engage the valve, and nuts adapted to be threaded on to such hooks to securely clamp the same to the valve to prevent movement of the box relative to the valve.

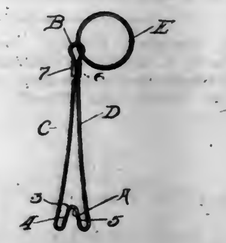
1,217,815. DRILL, HAMMER, AND MOTOR-CASE COMBINED. WALTER S. PAYNE, University Place, Nebr. Filed Oct. 25, 1915. Serial No. 57,800. (Cl. 255—39.)



In apparatus of the character described, a motor casing, an armature extending longitudinally within the motor casing and having an armature shaft, a tube secured to the lower portion of the motor casing and extending longitudinally thereof for substantially its entire length and adapted for the reception of a tool having a movable shaft, a gear casing carried by the rear end of the motor casing and extending downwardly in proximity to the rear end of the tube, a train of gears arranged within the gear casing and connected with the armature shaft and the shaft of the tool, a handle secured to the rear side of the gear casing, and a switch lever carried by a handle to control the operation of the motor.

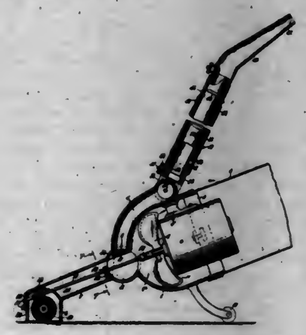
1,217,816. HAIR-CURLER. MAYME JEFFERSON PEPPARD, Minneapolis, Minn. Filed Oct. 26, 1914. Serial No. 868,620. (Cl. 132—18.)

A hair curler comprising a single piece of wire formed with an inwardly projecting crotch on one end having its recess formed by inwardly converging sides producing guide members for directing purposes, the outer end portions of said crotch being bent backwardly and inwardly to form side portions meeting adjacent their ends, one of said portions being longer than the other and bent backwardly to form an eye, the end thereof being adjacent the end of the other portion, a fastener surrounding the meeting portions of said sides for holding them together and an elastic band through which the eye portion of said



wire passes and wherein it is retained by said fastener, said band being adapted for engagement within said crotch when stretched longitudinally over the device.

1,217,817. VACUUM-CLEANER. HOMER L. PETERS, Salem, Ohio. Filed Apr. 5, 1916. Serial No. 89,099. (Cl. 15—60.)



1. A vacuum cleaner comprising a body, a suction-producing means therein, a floor nozzle device connected with the body, a second nozzle device flexibly connected with the body for cleaning walls and the like and forming a handle for moving the vacuum cleaner when the first device is to be used, and a valve for throwing either dust-collecting device into communication with the suction-producing means.

2. A vacuum cleaner comprising a suction-producing means, and a handle connected with the said means for moving the vacuum cleaner back and forth over a floor or other surface, said handle comprising extensibly connected parts forming a suction conduit.

3. A vacuum cleaner comprising a movable body, a suction-producing means therein, a floor nozzle device communicating with the body, a tubular handle connected with the body for moving the same and forming a suction conduit, and a valve for throwing either suction conduit or floor nozzle device into or out of operation, said handle being composed of telescopically connected sections, some of which are flexible.

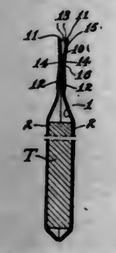
4. A vacuum cleaner comprising a casing, a suction-producing device therein, a motor for driving the said device, a floor nozzle, a brush associated therewith, a motion transmitting means between the motor and brush and adapted to be connected with or disconnected from the brush, a second nozzle connected with the body, and a valve for throwing either nozzle into or out of operation.

5. A vacuum cleaner comprising a body, a suction-producing means therein, a motor for driving the said means, a floor nozzle connected with the body, a rotary brush in

the said floor nozzle, a shaft having a flexible connection with the motor, and means for connecting or disconnecting the shaft and brush.

[Claims 6 to 12 not printed in the Gazette.]

1,217,818. TOBACCO-POUCH. JONATHAN PETERSON, Brooklyn, N. Y., assignor to Combination Machine Company, a Corporation of Delaware. Filed Feb. 7, 1916. Serial No. 76,585. (Cl. 229—87.)



1. A pouch of the class described comprising a composite sheet of foil and a backing sheet therefor, the foil sheet being of less width than the backing sheet to provide exposed portions of the backing sheet at opposite longitudinal edges of the composite sheet throughout the length of the foil sheet, said exposed edges being treated with a normally dry, non-adhesive substance, having cohesive properties, the sheet being folded intermediate its ends to cause one part of the sheet to overlap the other and bring the treated edges into contact when united by pressure, binder strips folded upon and united to such edges, and a rip strip closing the mouth end of the pouch.

2. A pouch formed from a composite sheet consisting of a lining sheet and a relatively wide backing sheet on which the lining sheet is imposed and to which it is intimately united, the side marginal edge portions of the backing sheet extending beyond the side edges of the lining sheet, said blank being folded transversely and having the confronting side edge portions of the lining sheet united to form side joints, and also having the confronting marginal side edge portions of the backing sheet united to form side joints overlying and concealing the side joints of the lining sheet, the said side joints of the lining sheet and the backing sheet constituting the side edge portions of the pouch.

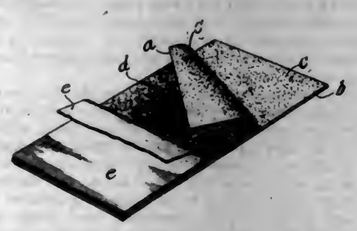
3. A pouch formed from a composite sheet consisting of a relatively narrow foil sheet and of a relatively wide paper sheet on which the foil sheet is imposed and to which it is intimately united by an intermediate film of rubber compound, the side marginal edge portions of the paper sheet extending beyond the side edges of the foil sheet, said blank being folded or doubled transversely and having the confronting side edge portions thereof pasted together to constitute the side edge portions of the pouch, the united side marginal edge portions of the paper sheet overlying the united side edge portions of the foil sheet.

4. A pouch of the character described comprising a flexible composite sheet, having air and moisture proof properties and embodying a lining sheet and a backing sheet intimately united throughout the area of their opposed faces, said sheets each being of uniform width throughout its length, said backing sheet having the longitudinal edges of its exposed face treated with a normally-dry permanently-resilient non-adhesive substance having cohesive properties, the sheet being folded intermediate its ends to cause one part of the sheet to overlap another part with the treated edges extending in the same general direction as the body of the sheet, independent binder-strips similarly treated with such substance and folded upon and overlying said edges and united thereto by pressure, said binder-strips being out of surface contact with the lining sheet, whereby the sheet and seam connection will be unaffected by distortion of the pouch.

5. A pouch having a closed bottom and closed side edge portions and an open mouth portion extending between the side edge portions, and a tearable sealing strip for said mouth portion and adapted to render the pouch substantially air and moisture proof, said strip including an outer multiple-ply grasping section, and an inner section of a less number of plies than the outer section, said inner section of the strip being united to the top of the pouch to close the mouth of the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,217,819. WAXED OR PARAFFINED SHEET OR WEB. JONATHAN PETERSON, Brooklyn, N. Y., assignor to Combination Machine Company, a Corporation of Delaware. Filed July 7, 1916. Serial No. 107,906. (Cl. 154—50.)



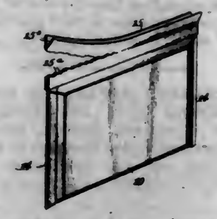
1. A flexible composite sheet having air and moisture-proof qualities and comprising superimposed layers of relatively thin and flexible paper, and means for facially uniting the layers substantially throughout the area of their opposed faces to render the sheet pliant and unaffected by sheet manipulation, such means consisting of a rubber-compound film completed by the layer-uniting operation, whereby intimate engagement of each layer with the film will be had throughout the layer faces, one of said layers being impregnated with paraffin, said film forming a barrier to prevent paraffin-impregnation of the other layer.

2. A flexible composite sheet having air and moisture-proof qualities and comprising a layer of relatively thin and flexible paper having one side treated with a normally dry permanently-resilient non-adhesive substance having cohesive qualities to produce a coating, and a second layer of thin and flexible paper similarly treated with such substance, said layers being superposed with the coatings in contact and united by pressure to produce a film facially uniting the layers throughout the area of their opposed faces, whereby the sheet is given increased strength and pliability and will be unaffected by sheet manipulation, one of said layers being impregnated by paraffin, said film forming a barrier to prevent paraffin-impregnation of the other layer.

3. A paraffin coated sheet comprising a layer of flexible sheet material, a second superimposed layer of sheet material united thereto by a film of cementitious material with the flexibility of the sheets substantially maintained, one of said layers being impregnated with paraffin, said film of cementitious material serving as a barrier to prevent the paraffin from penetrating the non-impregnated layer, and a protecting tissue-sheet attached to and overlying the outer face of the paraffin impregnated layer.

1,217,820. TOBACCO-POUCH. JONATHAN PETERSON, Brooklyn, N. Y. Filed Jan. 2, 1917. Serial No. 140,165. (Cl. 229—87.)

1. A pouch formed from a flexible composite blank consisting of superposed layers in sheet form facially united substantially throughout the area of their opposed faces to render the blank air and moisture-proof and unaffected by pouch manipulation, said blank being of uniform width to produce opposing faces of substantially equal width when the blank is folded on a transverse line, said blank having the side edges of its outer face treated with a normally-dry, permanently-resilient, non-adhesive substance having cohesive qualities to form marginal zones of such substance, said blank when folded having its confronted faces free from connection, and folded binder strips for and closing the disconnected side edges of the blank, said strips being united to said blank along said marginal zones and each having its inner face treated with said substance to produce a coating thereon adapted to render the fold of the strip air and moisture-proof while preserving its flexibility.



2. A pouch formed from a flexible composite blank consisting of superposed layers in sheet form facially united substantially throughout the area of their opposed faces to render the blank air and moisture-proof and unaffected by pouch manipulation, said blank being of uniform width to produce opposing faces of substantially equal width when the blank is folded on a transverse line, the layers of said blank being of equal width, said blank having the side edges of its outer face treated with a normally-dry, permanently-resilient, non-adhesive substance having cohesive qualities to form marginal zones of such substance, said blank, when folded having its confronted faces free from connection, and folded binder strips for and closing the disconnected side edges of the blank, said strips being united to said blank along said marginal zones and each having its inner face treated with said substance to produce a coating thereon adapted to render the fold of the strip air and moisture-proof while preserving its flexibility.

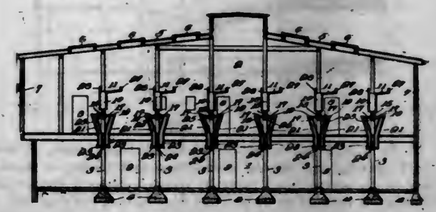
3. A pouch formed from a flexible blank having air and maisture-proof qualities and being unaffected by pouch manipulation, said blank being folded on a transverse line to produce side portions and a closed bottom, the confronting faces being free from marginal connection at the side edges, and folded binder strips overlapping the side edges of the blank and secured externally of and to said edges, each strip extending beyond the closed bottom to produce strip extensions with confronting faces extending inward beyond the side edges of the blank, said strip extension faces having an adhesive coating to permit such confronting faces to be secured together.

4. A pouch formed from a flexible blank having air and moisture-proof qualities and being unaffected by pouch manipulation, said blank being folded on a transverse line to produce side portions and a closed bottom, the confronting faces being free from marginal connection at the side edges, and folded binder strips, each having the entire area of its inner face provided with a coating formed from a normally-dry, permanently-resilient, non-adhesive substance having cohesive qualities, said strips overlapping the side edges of the blank and secured externally of and to said edges, each strip extending beyond the closed bottom to produce strip extensions with confronting faces extending inward beyond the sides edges of the blank, the coating of said strip extension faces permitting such confronting faces to be secured together.

5. A commodity container having air and moisture-proof qualities and comprising a pouch portion formed from a folded flexible blank having such qualities with the confronting side edges free from facial engagement, folded binder strips secured externally to and acting to close said side edges, said strips being treated to render the fold air and moisture-proof and render the pouch unaffected by pouch manipulation, said binder strips having adhesively-united confronting faces beyond the closed bottom of the pouch to protect against leakage at pouch corners, and a sealing strip adhesively connected to the mouth of the pouch, said strip serving to complete the sealed condition of the pouch and capable of being ripped or torn to permit access to the interior of the pouch through the pouch mouth.

[Claim 6 not printed in the Gazette.]

1,217,821. COSTRUCTION OF OYSTER-SHUCKING ESTABLISHMENTS. ALBANUS PHILLIPS, Cambridge, Md. Filed Sept. 29, 1916. Serial No. 122,951. (Cl. 17—10.)



1. An improved oyster shucking establishment comprising a shucking room provided with a shucking bench, a shell chute for each bench extending downwardly therefrom and having a closure at its lower portion, an oyster supply chute above the shucking table whereby oysters are supplied to the shucking table by gravity and the shucked oyster shells conveyed to a point below where they can be individually inspected.

2. An improved shucking establishment comprising a shucking room, having a shucking bench, an oyster shell chute extending from the bench through the floor, and an oyster chute above the shucking bench having a lower open end located directly above one edge of the shucking bench to deliver oysters thereto by gravity whereby the oysters are supplied to the shucker and the shells with their accompanying dirt instantly conveyed from the shucking room.

3. An improved shucking establishment comprising a shucking room having a shucking bench, an oyster shell chute extending from the bench through the floor whereby the oyster shells may be instantly conveyed from the shucking room, an oyster chute above the shucking bench and conveying oysters by gravity thereto, and a liquor and water conveyer communicating with the shucking bench whereby the water and oyster shells are instantly conveyed away from the shucking bench.

4. An oyster shucking establishment comprising a shucking room, a shucking bench therein declining away from the position of the shucker, and a trough or passageway at the lower end of the shucking bench for conveying away the water and liquor from the oysters.

5. An improved shucking establishment comprising a shucking room, a plurality of shucking tables therein declining away from the shuckers, and a liquid conveying trough extending along and common to the shucking benches and receiving the liquid therefrom and conveying it away.

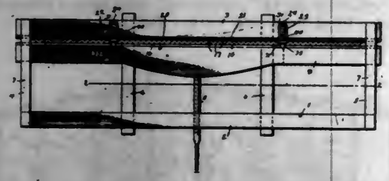
[Claims 6 to 21 not printed in the Gazette.]

1,217,822. SAW-SET. WILLIAM H. POPPENHAGEN, Sumner township, Kankakee county, Ill. Filed Jan. 18, 1916. Serial No. 72,745. (Cl. 76—66.)

1. In a saw set structure, a supporting frame, a pair of substantially L-shaped brackets detachably connected to said supporting frame, the vertical portions of said brackets being composed of a pair of spaced rods, angle bolts extending between said rods, said bolts having vertical portions parallel with said rods, and means for holding said angle bolts in various adjusted positions along the length of said vertical portions.

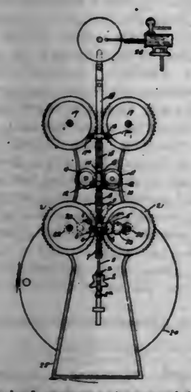
2. In a saw set structure, a supporting frame, a pair of substantially L-shaped brackets detachably connected to

said supporting frame, the vertical portions of said brackets being composed of a pair of spaced rods, angle bolts extending between said rods, said bolts having vertical portions parallel with said rods, and means for holding said angle bolts in various adjusted positions along the length of said vertical portions, said L-shaped brackets being adjustably connected to said supporting frame for horizontal adjustment, and means for holding said bracket in various adjusted positions.



8. In a saw set structure, a supporting frame, a saw tooth setting bar rigidly carried by said frame, a second saw tooth setting bar movaoly carried by said frame for movement toward or from said first named setting bar, a plurality of setting teeth carried by each of said setting bars, the setting teeth of one of said bars being disposed staggeredly with respect to the setting teeth of the other bar, said teeth extending throughout the entire length of the bars for setting all of the teeth of the saw in one operation, brackets carried by said frame for supporting a saw blade, clamps adjustably carried by said brackets for vertical adjustment with respect to said setting teeth for clamping saw blades of different widths in engagement with the brackets and in proper relation to said setting teeth, and means for holding said brackets in adjusted positions with respect to said setting teeth.

1,217,823. MECHANICAL MOVEMENT. ALVAH L. POWELL, Stockton, Cal., assignor of forty-nine fiftieths to The A. L. Powell Power Company, Roundup, Mont., a Corporation of Montana. Filed May 15, 1913, Serial No. 767,864. Renewed May 24, 1916. Serial No. 99,706. (Cl. 74—27.)

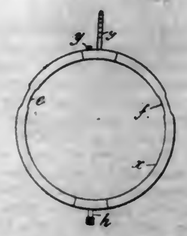


1. A mechanical movement comprising a rack mounted for reciprocatory movement, a gear in mesh with the rack and having a fixed position relative to the rack, a reciprocatory member carrying a slotted cross head, a pin carried by the gear and extending into the slot of the cross head, a second gear of greater diameter than the first-mentioned gear, a slotted cross head carried by the rack, and a pin carried by the second gear and extending into the slot of the last-mentioned cross head.

2. A mechanical movement comprising a gear, means for imparting an alternating rotary movement to said gear, a rack in mesh with the gear, a second gear operatively connected to the rack for receiving an alternating rotary movement therefrom, and of greater diameter than the first-mentioned gear, and a rack in mesh with the second gear and movable independently of the first-mentioned rack.

3. A mechanical movement comprising a gear, means for imparting an alternating rotary movement to said gear, a rack in mesh with the gear, a slotted cross head carried by the rack, a gear of greater diameter than the first-mentioned gear, a pin carried by the second-mentioned gear and extending into the slot of the cross head, and a rack in mesh with the second gear and movable independently of the first-mentioned rack.

1,217,824. INFLATED APPARATUS FOR PREVENTING DROWNING AND ASSISTING SWIMMING. JOHN JAMES PRITCHARD, Moseley, Birmingham, England. Original application filed Oct. 9, 1915, Serial No. 55,044. Divided and this application filed June 19, 1916. Serial No. 104,563. (Cl. 9—17.)



1. A life preserving apparatus of the class described, comprising, when worn two inflated bands formed as one piece from an elastic ring one of said bands to encircle the body under the arms and the other around the neck, said bands being adapted to hold themselves in position on the person by their own elasticity, and auxiliary fastening means applied to the bands and adapted to hold the latter from moving apart relative to each other opposite to where the two bands meet, substantially as described.

2. A life preserving apparatus of the class described, comprising, when worn two inflated bands formed as one piece from a single elastic ring which is single twisted for the purpose of forming said bands and which ring has smaller diameter parts where it is to be twisted, and auxiliary strap and buckle fastenings applied to the bands to hold the latter from moving apart relative to each other opposite to where the two bands meet, substantially as described.

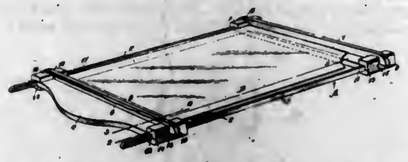
3. A life preserving apparatus of the class described, comprising, a tubular ring adapted to be inflated and to be twisted to form two loops, one to encircle the body under the arms and the other around the neck of the person.

4. A life preserving apparatus of the class described, comprising, a tubular ring adapted to be inflated and to be twisted to form two loops, one to encircle the body under the arms and the other around the neck of the person, and means for connecting said loops together for holding them in their relative positions on the body of the person.

5. A life preserving apparatus of the class described, comprising, a tubular ring adapted to be inflated and having reduced diameter in opposite portions thereof, said reduced portions being adapted to be crossed so that said ring will provide two loops, one of said loops to encircle the body under the arms and the other around the neck of the person.

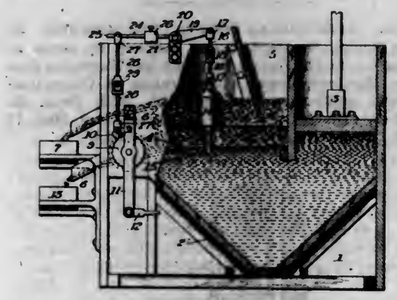
1,217,825. FLY-PAPER HOLDER. CHARLES WESLEY RANDALL, West Hoboken, N. J. Filed Nov. 16, 1916. Serial No. 131,658. (Cl. 43—22.)

1. A holder of the class described comprising side bars, cross bars, blocks fastened to the ends of the cross bars, the side bars being rigidly fastened to one pair of the blocks and slidable in the other pair, means for clamping an article to one of the cross bars, and means for clamping an article to the other cross bar and also clamping the blocks of said cross bar to the side bars.



2. A holder of the class described comprising a frame consisting of side bars, a cross bar having a longitudinal groove, blocks on the ends of the said cross bar and through which the side bars slide, said blocks having recesses disposed in line with the said groove, and the side bars having a plurality of recesses, and a clamping strip adapted to wedge into the groove and to engage in the recesses of the said blocks and side bars.

1,217,826. REGULATOR FOR SEPARATORS. MICHAEL HENRY REAP, Scranton, Pa. Filed Feb. 24, 1915. Serial No. 10,261. (Cl. 83—79.)



1. In a separator, a separating device having an outlet and outlet controlling means; a regulator comprising a float member; and mechanical instrumentality including a lost motion element, directly connecting said float and said controlling means.

2. In a separator, a separating device having an outlet port and means for opening and closing said port; a regulator comprising a float member; and a direct mechanical lost motion connection between said float member and said port opening and closing means.

3. In a separator, a separating device having an outlet and means for controlling said outlet; a regulator comprising a float member; and a lost motion lever mechanism connecting said float member and said controlling means.

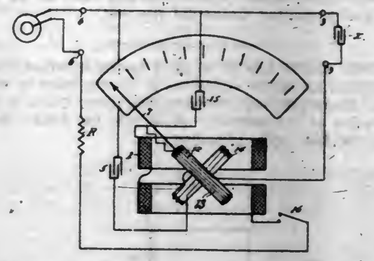
4. In a separator, a separating device having an outlet and outlet controlling means; a regulator comprising a float member; and lever mechanism including a lost motion element, directly connecting said float member and said outlet controlling means.

5. In a separator, a separating device having an outlet and outlet controlling means; a regulator comprising a float member; and a direct mechanical connection between said float and said means, adapted to permit a limited movement of the float without effecting actuation of the outlet controlling means.

[Claims 6 to 30 not printed in the Gazette.]

1,217,827. CAPACITY-METER. BURCHARD P. ROMAIN, South Orange, N. J., assignor to Weston Electrical Instrument Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 2, 1915. Serial No. 49. (Cl. 175—183.)

1. A capacity meter comprising a field coil, a movable element having a substantially free or unimpeded movement in any position thereof, a pair of windings thereon, a fixed or known capacity forming part of the circuit of one winding, and terminals across which a capacity to be measured can be inserted forming part of the circuit of the other winding, said windings having a substantially negligible resistance and inductive reactance in relation to reactance of said capacities.



2. A capacity meter comprising a field coil, a movable element having a substantially free or unimpeded movement in any position thereof, windings thereon having the effect of two separate coils, a fixed or known capacity forming part of the circuit of one such coil, and terminals across which a capacity to be measured can be inserted forming part of the circuit of the other such coil, both such coils having a substantially negligible resistance and inductive reactance in relation to reactance of said capacities.

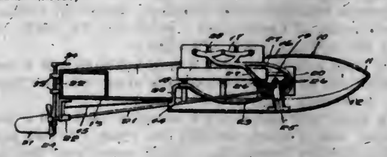
3. A capacity meter comprising a field coil, a movable element, a winding thereon divided into two parts, a fixed or known capacity in the circuit of one of said such parts, and terminals across which a capacity to be measured can be inserted forming part of the circuit of the other such part, both parts having a substantially negligible resistance and inductive reactance in relation to reactance of said capacities.

4. A capacity meter comprising a field coil, a movable element, coils, one with a winding thereon having two parts, a fixed or known capacity forming with the other of said coils a portion of the circuit of one such part, a condenser in multiple with this circuit and terminals across which a capacity to be measured can be inserted in the circuit of the other such part, the movable element winding having a substantially negligible resistance and inductive reactance in relation to reactance of said capacities.

5. A capacity meter comprising a field coil, a movable element having a substantially free or unimpeded movement in any position thereof, a pair of windings thereon having their magnetic axes at an angle to one another, a fixed or known capacity forming part of the circuit of one winding, and terminals across which a capacity to be measured can be inserted forming part of the circuit of the second winding, said windings having a substantially negligible resistance and inductive reactance in relation to reactance of said capacities.

[Claims 6 to 14 not printed in the Gazette.]

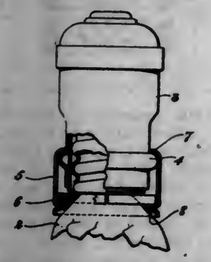
1,217,828. HYDROPLANE. CARLETON RUHE, Olean, N. Y. Filed Mar. 9, 1916. Serial No. 83,141. (Cl. 114—66.5.)



A boat hull, comprising a forward bottom portion formed substantially V-shaped in vertical transverse cross-section and tapering downwardly, the V-shaped bottom portion

being inclined upwardly toward its forward end, a rear bottom portion disposed in a plane above the forward bottom portion and formed curved in vertical cross-section with its concave surface arranged lowermost for providing an air passage, the edges of the curved rear bottom portion extending downwardly toward the rear end of the hull so that the rear end of the air passage is permanently open, means to introduce gas into the air passage, and propelling means for the hull.

1,217,829. LAMP-LOCK. JOSEPH SACHS, Hartford, Conn., assignor, by mesne assignments, to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Feb. 24, 1913. Serial No. 750,136. (Cl. 173—356.)



1. A lock for holding an incandescent lamp in its socket, provided with separate means for engaging the socket and the lamp, said lock also comprising distortible means for maintaining the lock in operative relation, whereby said two engaging means can jointly act to prevent the lamp being pulled from place when the lock is in operative relation.

2. A lock for holding an incandescent lamp in its socket comprising a locking band having a distortible lamp locking portion, and a split ring in the band for insulating the same from a lamp, the band and ring being disconnected to permit the ring to be applied to the lamp independently of the band, the ring when in place encircling the neck of the lamp below the base shell thereof.

3. A lock for holding an incandescent lamp in its socket comprising a locking band having a distortible lamp locking portion, and a split insulating ring held within the band, the two being disconnected to permit the ring to be applied to the lamp independently of the band, the ring when in operative position encircling the neck of a lamp and engaging under the base shell thereof.

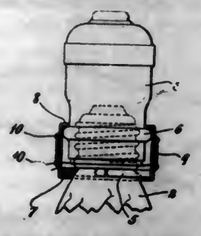
4. A lock for holding an incandescent lamp in its socket comprising a locking band having an inwardly distortible portion and also having means to engage the external bead of the socket, and a split insulating ring supported by said distortible portion in the band, the band and ring being disconnected to permit the ring to be applied to the lamp independently of the band, the ring when in position encircling the neck of the lamp and engaging under the base shell thereof.

1,217,830. LOCK FOR INCANDESCENT-LAMP STRUCTURES AND THE LIKE. JOSEPH SACHS, Hartford, Conn., assignor, by mesne assignments, to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Feb. 24, 1913. Serial No. 750,137. (Cl. 173—356.)

1. A lamp lock comprising a securing band and a locking band, one of which incloses the other, the two bands being distortibly interlocked.

2. A lamp lock comprising a securing band and a locking band, one of which incloses the other, the two parts being distortibly interlocked which constitutes the sole means for holding them in assembled relation.

3. A lamp lock comprising a securing band and a locking band, one of which incloses the other, the two parts being distortibly interlocked, and a split catch ring inclosed by one of the bands to insulate the same from the base shell of an incandescent lamp.

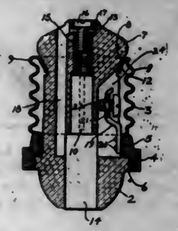


4. A lamp lock comprising a securing band, and a locking band, the securing band being located in the locking band and being split, the two bands being distortibly interlocked.

5. A lamp lock comprising a securing band, and a locking band inclosing the securing band, the two bands being distortibly interlocked, the securing band having a portion to engage a holding part on a lamp socket and also having a split catch ring separate therefrom.

[Claims 6 and 7 not printed in the Gazette.]

1,217,831. ELECTRICAL CONNECTING MEMBER. JOSEPH SACHS, Hartford, Conn., assignor, by mesne assignments, to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Original application filed Aug. 30, 1912, Serial No. 717,942. Divided and this application filed Mar. 18, 1915. Serial No. 14,239. (Cl. 173—359.)



1. An electrical connecting member comprising an insulating core, a contact shell surrounding the core, a connector inclosed by the shell, said connector being mechanically connected to one of said first mentioned parts, the other part having a recess to receive the connector to key together the core and the shell, the connector being also electrically connected with the shell.

2. An electrical connecting member comprising an insulating core, a contact shell surrounding the core, a connector mechanically and electrically connected with the shell, the core having a keyway to receive the connector to thereby prevent relative rotation of the core and the shell.

3. An electrical connecting member comprising an insulating body and a contact shell, one of which surrounds the other, and a connector interposed between the two parts, one of said parts having an opening to provide access to the connector, the contact shell being resilient and the insulating body being provided with means for varying the cross sectional extent of the contact shell.

4. An electrical connecting member comprising an insulating core, an expansible contact shell surrounding the core, and a connector inclosed by the shell, said shell having a lateral opening to provide access to the connector and the core being provided with means for expanding the shell.

5. An electrical connecting member comprising an insulating core, a threaded contact shell surrounding the core, the core being provided with means for expanding said shell, and a connector inclosed by the shell and elctrically connceted therewith, said shell having a lateral opening to provide access to the connector.

[Claims 6 and 7 not printed in the Gazette.]

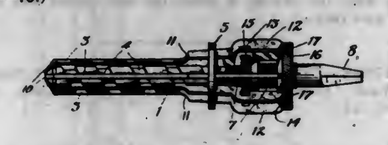
1,217,832. EGG-BEATER. KOHEI SAITO, Baltimore, Md. Filed July 19, 1916. Serial No. 110,185. (Cl. 259—104.)



1. In an egg beater, rotatable elements extending in parallel relation, means for rotating said elements, and a disk forming a fly wheel and a shield and extending at right angles to the axis of rotation of said elements and being adjustable longitudinally upon said elements.

2. In an egg beater, a pair of rotatable elements mounted for rotation in a reverse direction and having portions extending in parallel relation, means for rotating said elements, and disks one for each element, each disk being slotted for the passage of the element and constituting a fly wheel and a shield and extending in a plane at right angles to the axis of rotation of the element and each disk being adjustable longitudinally upon its corresponding element.

1,217,833. EXPANSIBLE REAMER. WASHINGTON L. SANTMYERS, Strasburg, and ROY L. HEPNER, Tomsbrook, Va. Filed Feb. 25, 1916. Serial No. 80,518. (Cl. 77—75.)



1. A device of the character described comprising a spindle having a plurality of grooves therein, blades disposed in said grooves, means operatable on said spindle for adjusting said blades, and means operatable longitudinally on said spindle and engaging the rear end of said blades for forcing the forward ends into position.

2. A reamer comprising a spindle having longitudinal grooves therein, a ring formed on said spindle and having slots therein in alinement with said grooves, cutting blades disposed in said grooves and said slots, means for adjusting said blades, and means for clamping said blades.

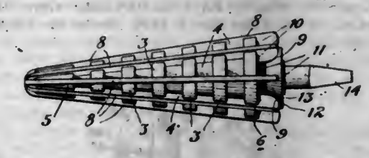
3. A reamer comprising a spindle having longitudinal grooves therein, a ring formed on said spindle and having slots therein in alinement with said grooves, cutting blades having notches adjacent their upper end disposed in said grooves and said slots, a disk threaded on the upper end of said spindle and disposed within the notches formed in said blades, and a second disk threaded on said spindle above said first named disk for clamping said blades in position.

4. An expansible reamer comprising a spindle, langitudinal tapering grooves formed in said spindle, blades having their outer edges tapered on an angle equal to the tapered angle of said grooves, said blades being disposed in said grooves, and means on the rear end of said spindle for adjusting and clamping said blades in position.

5. An expansible reamer comprising a spindle, longitudinal grooves formed in said spindle, blades disposed in said grooves, said blades having their lower ends cut away on an angle to form a counter-sink and adapted to extend below said spindle, means mounted on the rear of said spindle for adjusting said blades and means mounted on the rear end of said spindle and engaging the rear ends of said blades for clamping them in position.

[Claim 6 not printed in the Gazette.]

1,217,834. REAMER. WASHINGTON L. SANTMYERS, Strasburg, and ROY L. HEPNER, Tomsbrook, Va. Filed Feb. 25, 1916. Serial No. 80,519. (Cl. 77—72.)



1. A reamer comprising a spindle, a plurality of reinforcing rings formed on said spindle, a plurality of blades disposed in slots in said spindle and means operatable longitudinally on said spindle and engaging the ends of said blades for clamping them in said slots.

2. In a reamer having removable blades, a spindle, said spindle comprising a body portion, a plurality of reinforcing rings formed on said body portion, said spindle and said rings having a plurality of slots therein for the reception of blades.

3. A reamer comprising a spindle having a plurality of circumferential recesses therein, a shell formed on the rear of said spindle, and a plurality of cutting blades disposed in said shell and in longitudinal slots in said spindle.

4. A reamer comprising a spindle having a plurality of circumferential recesses therein, a shell formed on the rear of said spindle, and a plurality of cutting blades disposed in longitudinal slots in said spindle and pivoted in said shell, and a disk screw-threaded on the rear of said spindle and adapted to contact with said blades for clamping them in position.

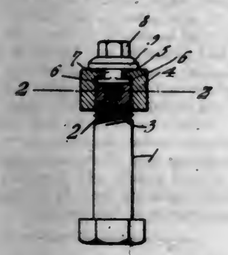
5. In a reamer having removable blades, a spindle, said spindle comprising a tapering body portion, a plurality of reinforcing rings formed on said body portion, said reinforcing rings being tapered on a line with said body portion, said spindle and said rings having a plurality of slots therein for the reception of blades.

[Claims 6 and 7 not printed in the Gazette.]

1,217,835. NUT-LOCK. LOUIS MARTAIN SARTAIN, Altamont, Tenn., assignor of one-tenth to Geo. D. Boyd, one-tenth to E. C. Shelton, one-tenth to S. D. Scott, one-tenth to W. E. Gillen, one-tenth to James Dickerson, one-tenth to John Woodlee, Jr., one-tenth to E. Henson, and one-tenth to D. C. Lasater, Altamont, Tenn. Filed Aug. 28, 1916. Serial No. 117,280. (Cl. 151—27.)

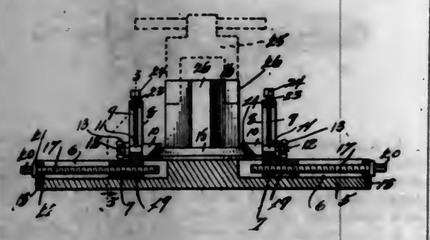
In a nut lock the combination with a bolt exteriorly screw threaded and having a bore in one end with threads pitched oppositely to the exterior threads, of a nut for engaging the exterior threads, said nut having an elongated opening in its outer end, a stem having oppositely extending ears insertible through the opening and revoluble within the nut, said stem having a threaded portion projecting beyond the ears and adapted to screw into the bore, there being a flanged head at the outer end of the

stem for lapping and engaging the nut, said stem and nut being revoluble simultaneously in opposite directions re-



spectively to screw into or unscrew from engagement with the bolt.

1,217,836. VALVE-FACING DEVICE. OTTO SASS, Brooklyn, N. Y. Filed Nov. 9, 1916. Serial No. 130,417. (Cl. 82—1.)



1. A valve-facing tool consisting of a support, carriers slidably secured to said support, each carrier being provided with a guideway, a cutter slidably mounted in each guideway, and a feed screw carried by each carrier to exert a downward pressure upon the cutter in contact therewith.

2. A valve-facing tool consisting of a support provided with radially disposed slots, a carrier slidably mounted in each slot, each carrier being provided with a guideway, a threaded spindle in each slot engaging a corresponding carrier to adjust same longitudinally of its slot, a cutter slidably mounted in the guideway of each carrier, and a feed screw carried by each carrier to exert a downward pressure upon the cutter in contact therewith.

3. A valve-facing tool consisting of a support to rotatably retain a valve face upward, a plurality of radially adjustable cutters carried by said support, and means to adjust each of said cutters relatively to the center of said support and also to the face of the valve retained by the support.

4. A valve-facing tool consisting of a support provided with a plurality of radially disposed slots having angularly disposed side-walls, a guide-block slidably mounted in each slot, a carrier mounted on each guide block and provided with a guide-way, a rotatable threaded spindle located in each slot and engaging a corresponding guide-block, a cutter carried by each carrier and having a square shank to engage the guide-way in a corresponding carrier, a feed-screw carried by each carrier and engaging the square shank of a corresponding cutter, a threaded stud carried by each square shank, and a wing-nut carried by each threaded stud to lock said cutters in adjusted positions.

1,217,837. OIL-CASING-CLOSING APPARATUS. JAMES MCANLIN, Wirt, Okla., assignor of one-half to Paul A. Arnold and G. D. Chastain, Wirt, Okla. Filed Oct. 25, 1916. Serial No. 127,626. (Cl. 169—11.)

1. In an apparatus for compressing the casing of an oil well from the opposite sides thereof to close the bore of the said casing, a headed member disposed to one of the sides of the casing, arms extending from the said headed member, anchoring means for the arms, a movable member between the arms, and means for actuating the movable member to cause the same to contact with and compress the casing to close the bore of the casing.

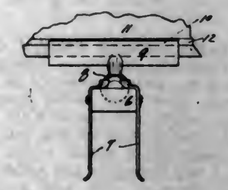


2. In an apparatus for bulging an oil well casing to close the bore thereof, comprising a head member having a sharpened engaging surface disposed to contact with one of the sides of the casing, oppositely disposed arms extending longitudinally from the sides of the head and having their inner faces channeled and the lower walls of the channel provided with teeth, anchor members for the arms to sustain the head in contact with the casing, a plunger member having its ends received in the channels of the arms, bolts upon the plunger engaging with the teeth of the channeled arms, a stem for the plunger, a guide between the arms for the stem, and means, comprising mechanism contacting with the stem for forcing the same toward the head and against the casing, to compress and inwardly bulge the casing to close the bore thereof.

3. In a means for comprising the casing of an oil well for closing the bore thereof, a headed member having a sharpened face disposed to contact with one of the sides of an oil well casing, channeled arms extending from the head, teeth within the channels, anchor members for the arms, a guide member between the arms, a track upon the guide members extending outwardly of the arms, a plunger having a sharpened end disposed between the arms, bolts upon the plunger engaging with the teeth of the channeled arms, a stem for the plunger passing through the guide between the arms, a head for the outer end of the plunger, and means comprising mechanism arranged upon the track and co-acting with the head of the stem for forcing the plunger toward the casing to bulge the said casing inwardly and close the bore thereof.

4. In a device for closing the casing of an oil well, a member engaging one of the sides of the casing, guide arms upon the member, anchoring means for the guide arms, a plunger between the arms, means between the plunger and the said arms for sustaining the same against movement in one direction, and means, comprising mechanism for forcing the plunger toward the head into contact with the casing, to bulge the said casing and close the bore thereof.

1,217,838. EYE-SHIELD. WILLIAM E. SCHMIDT, Seattle, Wash. Filed Oct. 18, 1915. Serial No. 56,646. (Cl. 82—34.)

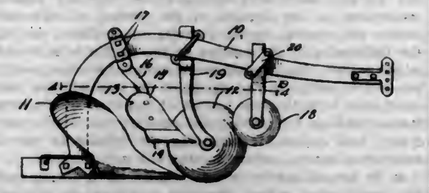


1. In a device of the class described, the combination of a longitudinally grooved transparent eye shield, a spring jawed shield supporting member which frictionally holds said shield by the coöperation of said jaws with the groove in the shield, whereby the said shield may be easily removed.

2. In a device of the class described, the combination of a longitudinally grooved transparent eye shield, a spring jawed shield supporting member which frictionally holds said shield by the coöperation of said jaws with the groove in the shield, whereby the shield may be easily removed, and spring clamp members adjustably attached to said shield supporting member.

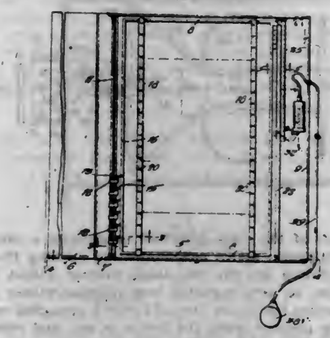
3. In a device of the class described, the combination of a transparent eye shield, a shield supporting member which frictionally grips the said shield, a frictionally held clamp member which is adapted to be removably attachable to the tool post of a lathe or the like, and a joint between the said shield support and the said clamp member, whereby adjustment between the said members may be made.

1,217,839. PLOW. HENRY SCHNEIDER, Alden, Minn. Filed Oct. 28, 1913. Serial No. 797,880. (Cl. 97—21.)



In a quack grass destroyer, the combination with a plow having the usual forwardly projecting draft beam, of a colter secured to said beam in advance of said plow alined with the vertical cutting edge thereof and of a depth equal to that of said plow, a relatively small plow depending from said beam in the rear of said colter and having its land side engaged by the colter, the lower edge of the small plow terminating at a point midway the lower and upper edges of the colter, a second colter depending from said beam in advance of the first named colter being offset from the beam and being alined with the outer portion of the mold board of the said small plow, and the lower edge of the said second colter being disposed in the same horizontal plane with the bottom edge of the small plow, substantially as described.

1,217,840. MUSIC-LEAF HOLDER. JAMES A. SCROGGIN, Little Rock, Ark. Filed Feb. 28, 1916. Serial No. 80,862. (Cl. 40—104.)



1. A music leaf turner comprising a pair of leaves hingedly connected, a rod carried thereby, a plurality of rectangular spring actuated music leaf receiving frames rotatably connected with the rod and normally retained in stacked position upon one of the leaves, bars adjustably mounted on each of the frames and having means for receiving a sheet of music, means for normally retaining the music leaf receiving frames in stacked position, and means for actuating the last said means whereby the frames may be successively released.

2. A music leaf turner comprising a pair of hingedly connected leaves, a rod carried by one of the leaves, a plurality of spring actuated music leaf receiving frames rotatably connected with the rod and normally retained in stacked position upon one of the leaves, lugs carried by the frames and arranged in tiers one below another, said tiers being out of alinement with each other, a guide mounted upon one of the leaves adjacent the stacked frames, a slide carried by the guide and comprising a plurality of sections arranged one below another in stepped relation, each of the sections being engaged by one of the tiers of lugs, means for operating one of the sections step by step, and coöperating means between the sections for successively imparting motion to them as the tiers are released.

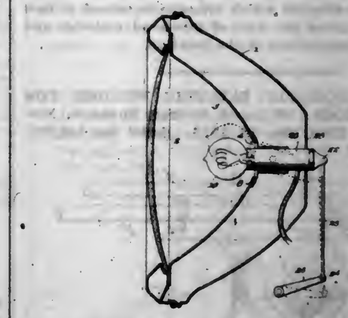
3. A music leaf turner including a pair of hingedly connected leaves, a rod carried thereby, spring actuated music leaf receiving frames rotatably connected with the rod and normally retained in stacked position upon one of the leaves, lugs carried by the frames and arranged in tiers, a sectional slide engaging the tiers of lugs for restraining the frames in stacked position, a guide upon which the slide is mounted, and pneumatic means for operating the slide for successively releasing the frames.

4. In a music leaf turner, a plurality of spring actuated music leaf receiving frames, a sectional slide including a plurality of sections arranged in operable relation with each other, one of the sections being provided with a series of rack teeth, means carried by the frames and engaged by the slide for restraining the frames in a predetermined position, and pneumatic means for operating the sectional slide, including a finger for successively engaging the rack teeth on the said one section.

5. In a music leaf turner, a plurality of spring actuated music leaf receiving frames, lugs carried by the frames, a sectional slide including sections arranged in operable relation with each other and normally engaging the lugs for restraining the frames in predetermined position, and means for actuating the sectional slide for successively releasing the lugs.

[Claims 6 to 8 not printed in the Gazette.]

1,217,841. VEHICLE HEAD-LAMP. OTTO R. SELL, Colorado Springs, Colo. Filed May 26, 1916. Serial No. 100,072. (Cl. 240—44.)



1. The combination with a headlamp casing, and a reflector therein formed with a central opening, of a bracket having a concaved bearing face secured in abutting relation to the rear convex face of the reflector and surrounding the central opening therein, a lamp holder pivotally mounted on said bracket, a lamp socket insertible in and adjustable in relation to said holder, and tensioning means for said holder.

2. The combination with a headlamp casing, and a reflector therein formed with a central opening, of a bracket having a concaved bearing face secured in abutting relation to the rear convex face of the reflector and surrounding the central opening therein, a lamp holder pivotally mounted on said bracket, a lamp socket insertible in and adjustable in relation to said holder, tensioning means for said holder, said tensioning means comprising a friction member interposed between the lamp holder and bracket, a spring adapted to hold the lamp holder with

greater or less pressure against said friction member, and means for adjusting the tension of said spring.

3. The combination with a head lamp casing, and a reflector therein formed with a central opening, of a bracket located in the rear of said reflector, a lamp holder pivotally mounted on said bracket, tensioning means for said holder comprising a friction member interposed between the lamp holder and bracket, and means for increasing and decreasing the frictional resistance between said lamp holder and bracket.

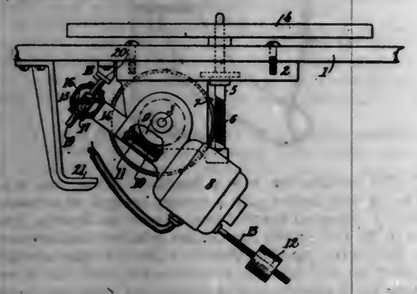
1,217,842. PROCESS FOR CARRYING OUT CHEMICAL REACTIONS. OTTOKAR SERPEK, Paris, France, assignor to Société Generale des Nitrures, Paris, France. Filed Jan. 26, 1914. Serial No. 814,549. (Cl. 204—81.)



1. A process of obtaining aluminium nitrid, by projecting aluminous material and carbon in powdered form through nitrogen in an inclosed space through the walls of which the nitrogen is caused to flow and heated to the temperature of the reaction.

2. A process of obtaining aluminium nitrid by projecting aluminous material and carbon in powdered form through a space through which nitrogen is caused to flow in a direction across the flow of powdered material and heated to the temperature of the reaction.

1,217,843. AUTOMATIC ELECTRIC WINDER FOR SPRING-MOTORS. WILLIAM GENTRY SHELTON, New York, N. Y. Filed Nov. 23, 1916. Serial No. 133,062. (Cl. 185—40.)



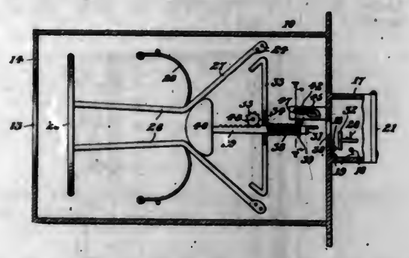
1. In a device of the character specified, the combination with a spring motor having a winding shaft, of an electric motor oscillatably mounted upon such winding shaft, connections between the electric motor shaft and the winding shaft, whereby the rotation of the electric motor rotates the winding shaft, and an electrical switch for opening and closing the circuit of the said electric motor upon the respective excursions or oscillation thereof.

2. In an automatic electric winder for a spring motor, the combination with a pivotally supported electric winding motor, means for connecting the motor shaft with the winding shaft of a spring motor, whereby upon the weakening of the tension of the spring of said spring motor, the winding motor assumes one position, and upon the tightening of the tension of the spring to a predetermined extent, the winding motor assumes another position, an electric switch in the circuit of the said winding motor, and means for actuating the switch at the limit of the respective excursions for closing and opening the circuit respectively.

3. In an automatic electric winder for a spring motor, the combination with a pivotally supported electric winding motor, means for connecting the motor shaft with the winding shaft of a spring motor, whereby upon the weakening of the tension of the spring of said spring motor, the winding motor assumes another position, an electric switch in the circuit of the said winding motor, means for actuating the switch at the limit of the respective excursions for closing and opening the circuit respectively, and means for adjusting the winder to vary the amount of spring tension to which it will respond.

4. In an automatic electric winder for a spring motor, the combination with a pivotally supported electric winding motor, means for connecting the motor shaft with the winding shaft of a spring motor, whereby upon the weakening of the tension of the spring of said spring motor, the winding motor assumes one position, and upon the tightening of the tension of the spring to a predetermined extent, the winding motor assumes another position, an electric switch in the circuit of the said winding motor, means for actuating the switch at the limit of the respective excursions for closing and opening the circuit respectively, and an adjustable weight carried by the winding motor for varying the amount of spring tension to which the winder will respond.

1,217,844. SAFETY FIRE-ALARM BOX. LOVRO SHUBATT, Centerville, Iowa. Filed July 3, 1916. Serial No. 107,400. (Cl. 177—379.)



1. A device of the class described comprising a casing having an extension and a communicating opening therebetween, a switch for the fire alarm system within the said extension, an arm engaging loop member within the casing, operating means for the said switch engaging with the said loop member when the device is set, and releasing means for the said operating means.

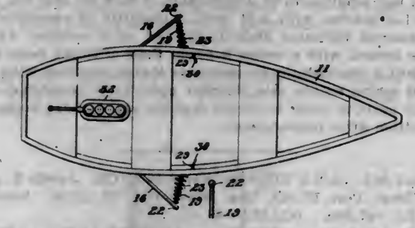
2. A device of the class described comprising a casing having a hand receiving opening therein, a hand cuff member in the form of a loop having leg portions and flaring feet secured within the casing with the said loop arranged inwardly of the said opening thereof, a switch for the alarm system, operating means for the said switch normally engaging the flaring feet of said loop to hold the legs separated and the loop enlarged to a diameter greater than the said casing opening, and retaining means for the said operating means.

3. A device of the class described comprising a casing having a hand receiving opening therein, a hand cuff member in the form of a loop having leg portions and flaring feet secured within the casing with the said loop arranged inwardly of the said opening thereof, a switch for the alarm system, operating means for the said switch normally engaging the flaring feet of said loop to hold the legs separated and the loop enlarged to a diameter greater than the said casing opening, a washer upon the said operating means, a trip plate within the said casing, a trip arm longitudinally and revolubly journaled through the said plate, the said plate having a keeper notch therein, and a projecting toe upon the said trip arm seated within the said notch and arranged within the path of movement of the said washer.

4. A device of the class described comprising a casing having a hand opening in the front wall thereof and an opening in its rear wall, an extension casing overlying the said rear opening, terminal contacts for the fire alarm system within the said extension, a normally released T-shaped switch pivotally arranged within the said extension operatively positioned with respect to the said contacts and having an operating arm arranged rearwardly of the said last-named opening, a hand cuff loop having integral resilient members inwardly flaring and attached to the bottom of the said casing with the said loop arranged inwardly of the forward opening thereof, an operating rack longitudinally movable having a path of movement in the plane of the said switch arm, a projection spring for the said rack, a retaining washer for the said spring upon the said rack, and a trip member arranged rearwardly of the said washer with the spring under compression when the rack is in its set position with the loop in its open position.

5. A device of the class described comprising a casing having a hand opening in the front wall thereof and an opening in its rear wall, an extension casing overlying the said rear opening, terminal contacts for the fire alarm system within the said extension, a normally released T-shaped switch pivotally arranged within the said extension operatively positioned with respect to the said contacts and having an operating arm arranged rearwardly of the said last-named opening, a hand cuff loop having integral resilient members inwardly flaring and attached to the bottom of the said casing with the said loop arranged inwardly of the forward opening thereof, an operating rack longitudinally movable having a path of movement in the plane of the said switch arm, a projection spring for the said rack, a retaining washer for the said spring upon the said rack, a trip member arranged rearwardly of the said washer with the spring under compression when the rack is in its set position with the loop in its open position, a setting gear for the said rack, and manual releasing means for the said trip member.

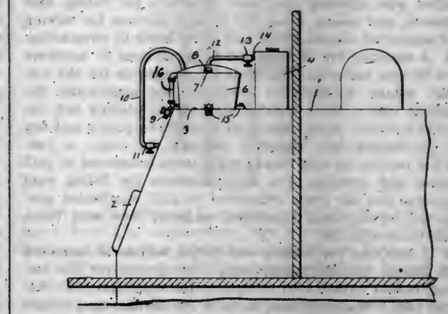
1,217,845. STOPPING DEVICE FOR BOATS. LOVRO SHUBATT, Centerville, Iowa. Filed July 27, 1916. Serial No. 111,620. (Cl. 114—170.)



1. A device of the class described comprising in combination with a boat having a recess in the outer side thereof, a socket being arranged in the forward end of the said recess, a retarding plate hinged within the rear end of the said recess, a stop rod pivoted to the side of the boat substantially centrally of the said socket, a spring surrounding the said rod seated within the said socket with its outer end in seating engagement beneath the said plate, and a retaining hook for the said plate.

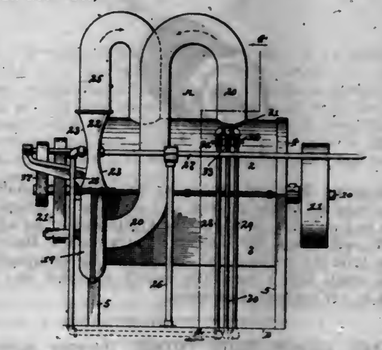
2. A device of the class described comprising in combination with a boat having a recess in the outer side thereof, a socket being arranged in the forward end of the said recess, a retarding plate hinged within the rear end of the said recess, a stop rod pivoted to the side of the boat substantially centrally of the said socket, a spring surrounding the said rod seated within the said socket with its outer end in seating engagement beneath the said plate, the said plate having a longitudinal slot through which the said rod extends, an enlargement upon the free end of the said rod outwardly of the said plate, a retaining hook for the said plate pivotally carried by the side of the boat normally overlying the said plate when the latter is in its inoperative closed position and an operating handle for the said hook positioned inwardly of the boat.

1,217,846. LUBRICATOR-FILLER FOR STEAM-ENGINES. MERLE B. SHUTT, Albuquerque, N. Mex. Filed Sept. 22, 1916. Serial No. 121,587. (Cl. 184—105.)



In a device of the class described the combination with a locomotive having a boiler and a lubricator, of a reservoir provided with a filling opening through which lubricant is adapted to be poured, an outlet pipe leading from the top of reservoir to the lubricator and a pressure inlet pipe extending through the top of the reservoir to a point near the bottom thereof and having its opposite end connected to the boiler below the water line, and valves for opening and closing the passages through the pipes.

1,217,847. FEEDING AND FILLING MACHINE. MONTGOMERY SLEETH, Bellevue, Pa., assignor to Fort Pitt Bedding Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 18, 1916. Serial No. 71,964. (Cl. 100—57.)



1. A machine for feeding and filling devices or members with fibrous material, comprising a receptacle for the material, means within said receptacle for separating the material into a finely divided state, filling tubes for connecting with said members, a circulating fan, intake and return pipes connected to said receptacle and fan for circulating said separated material through the same, and

means for forcing said separated material into said tubes while in circulation.

2. A machine for feeding and filling devices or members with fibrous material, means within said receptacle for separating the material into a finely divided state, a circulating fan, intake and return pipes connected to said receptacle and fan for circulating said material through the same, tubes connected to said return pipe and opening into said members for filling the same, and means connected to said return pipe for forcing said separated material into said tubes while in circulation.

3. A machine for feeding and filling devices or members with fibrous material, comprising a receptacle for the material, means within said receptacle for separating the material into a finely divided state, a circulating fan, intake and return pipes connected to said receptacle and fan for circulating said material through the same, a contracted portion in said return pipe, tubes connected to said portion and opening into said members for filling said members, and means connected to said portion for forcing said separated material into said tubes while in circulation.

4. A machine for feeding and filling devices or members with fibrous material, comprising a receptacle for the material, means within said receptacle for separating the material into a finely divided state, a circulating fan, intake and return pipes connected to said receptacle and fan for circulating said material through the same, a contracted portion in said return pipe, tubes connected to said portion and opening into said members for filling said members, and air pipes connected to said contracted portion for forcing said separated material into said tubes while in circulation.

5. A machine for feeding and filling devices or members with fibrous material, comprising a receptacle for the material, means within said receptacle for separating the material into a finely divided state, a circulating fan, intake and return pipes connected to said receptacle and fan for circulating said material through the same, a contracted portion in said return pipe, tubes connected to said portion and opening into said members for filling said members, air pipes connected to said contracted portion, and nozzles on the ends of said pipes and opening into said contracted portion opposite the openings in said tubes for forcing said separated material into said tubes while in circulation.

[Claims 6 to 11 not printed in the Gazette.]

1,217,848. BUFFING-ROLL. JOSEPH L. SMALL, Elwood, Ind. Filed Apr. 19, 1916. Serial No. 92,233. (Cl. 51—1.)



The herein described process of manufacturing buffing rolls consisting of the placing of a plurality of scraps of fabric in a suitable container, the application of an adhesive to said scrap, the placing of straw-board disks at spaced intervals between the scraps and the compressing of the whole into a mass the density of which may be varied by the amount of pressure.

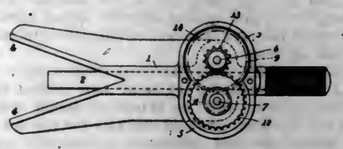
1,217,849. CHECK-BOOK COVER. HERBERT ARTHUR SMITH, St. Paul, Minn. Filed Oct. 11, 1916. Serial No. 125,091. (Cl. 11—18.)

1. A check book embodying a back; an extension connected with one end of the back; an outer cover connected with the other end of the back; checks connected with the back, the extension being adapted to be folded over on top of the checks, the checks at their free ends being adapted to be folded over on top of the extension, and the outer cover being adapted to be folded over onto the folded ends of the checks; and a shaper carried by the free end of the extension and of greater diameter than the thickness of the extension, the shaper being curved and engaging the checks, to prevent a sharp creasing thereof, when the checks are folded across the shaper.



2. A check book embodying a back; an extension hinged to one end of the back; checks connected with the back, the extension being adapted to be folded over on top of the checks, and the checks being adapted to be folded back on top of the extension; and a shaper comprising means for receiving the free end of the extension removably, the shaper including a curved head across which the checks are adapted to be flexed.

1,217,850. MICROMETER-GAGE. WILLIAM JOHN SMITH, New Haven, Conn. Filed Aug. 8, 1912. Serial No. 713,101. (Cl. 33—172.)



1. In a manually operated gage, a measuring bar longitudinally displaceable, a rack on said bar, a pinion gearing with said rack, a plurality of indicator dials arranged on a common axis and interconnecting gearing between said pinion and dials, said gearing and pinion having their axes arranged on opposite sides of the measuring bar, together with a spring tending to return said bar and dials to normal position after displacement.

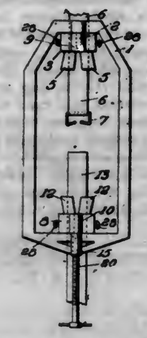
2. In a manually operated micrometer gage, a measuring bar longitudinally displaceable, a rack on said bar, a pinion gearing with said rack, a plurality of indicator dials arranged on a common axis and operatively connected to said pinion, together with a coil spring on said axis and operatively connected between one of the dials at one end and to an element in the operative connection between the bar and dials at the other end and serving to return the bar and dials to normal position after displacement.

3. In a manually operated micrometer gage, a measuring bar longitudinally displaceable, a rack on said bar, a pinion gearing with said rack, a plurality of operatively connected indicator dials juxtaposed on a common axis but formed with a recess between their adjacent faces to afford a chamber for an operating spring, together with a coil spring within said chamber operatively connected to said parts in order to return said bar and dials to normal position after displacement.

1,217,851. BALE-TIE-SECURING DEVICE. JAMES T. A. TODD, Fort Worth, Tex. Filed Oct. 26, 1916. Serial No. 127,890. (Cl. 254—67.)

1. A bale-tie securing device comprising a frame, a stationary gripping-block mounted on one end of said frame, and a movable gripping-block mounted on the other end of said frame, and said blocks having each a groove therein and said grooves converging in opposite directions, clamps in said grooves provided with recesses for gripping the ends of the tie, and means for forcing said movable block toward said stationary block for bringing the ends of the bale-tie together.

2. A bale-tie securing device comprising a frame, converging clamps stationary on one end of said frame and converging clamps movably mounted on the other end of said frame, said clamps having recesses for gripping the ends of a bale-tie, and one side of each recess being curved for permitting the ties to buckle inwardly and not outwardly relative to the clamps, and means for driving said movable clamps toward said stationary clamp for bringing the ends of the bale-tie together.



3. A bale-tie securing device comprising a frame, angular converging clamps stationary on one end of said frame and angular converging clamps movably mounted on the other end of said frame, said clamps having curved recesses to grip and hold the ends of a bale-tie, and means swingingly mounted on said frame for forcing said movable clamps toward said stationary clamps for bringing the ends of the bale-tie toward each other.

4. A bale-tie securing device comprising a frame, a stationary gripping-block mounted on one end of said frame and a movable gripping-block mounted on the other end of said frame, said blocks having oppositely converging grooves therein, clamps in said grooves provided with recesses to receive the ends of the tie, a screw-shaft socket mounted on said frame, and a screw-shaft operating through said socket for driving said movable block toward said stationary block.

5. A bale-tie securing device comprising a frame, a stationary gripping block mounted on one end of said frame, and a movable gripping block mounted on the other end of said frame, said blocks having oppositely extending converging grooves and T-shaped grooves within said converging grooves, clamps mounted in said grooves for engaging the ends of the tie and having T-shaped ribs on the upper side to enter said T-shaped grooves, a screw-shaft socket swingingly mounted on said frame, and a screw-shaft operating through said socket and engaging said movable block for driving said block toward said stationary block for bringing the ends of the tie together.

[Claims 6 and 7 not printed in the Gazette.]

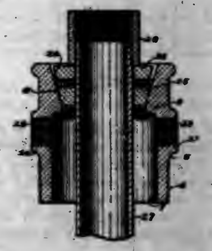
1,217,852. KNOCKDOWN SHIPPING-BOX. GAINES M. WALKER, St. Louis, Mo. Filed Oct. 6, 1914. Serial No. 865,270. (Cl. 217—14.)



1. In a box of the class described, a number of relatively articulable box sections having cleats, whose ends interlock, a box head hinged to one of said cleats, a strip on said head arranged to interlock with another of said cleats, and an auxiliary head arranged to overlie the first mentioned head.

2. In a knockdown shipping box, a number of hinged sections, a cleat at each end of each section, a head hinged adjacent one of the cleats and provided with a strip arranged to interlock with a cleat on an opposing section, an auxiliary head hinged adjacent the cleat on said opposing section, and means for holding said head and said auxiliary head against relative movements.

1,217,853. COMBINATION CASING-HEAD AND SPIDER. WILSON B. WIGLE, Fullerton, Cal. Filed May 13, 1916. Serial No. 97,276. (Cl. 166—14.)



The combination of a casing head, provided at its upper end with a counter-bore, said counter-bore converging downwardly, and a tube anchoring member having a bore for tubing engaged with and supporting the latter, said tube anchoring member having an outer wall complementary in shape to said counter-bore, divided transversely to form a plurality of sections, provided with packing interposed between said sections and held in engagement with said head by the weight of the tubing.

1,217,854. GAS-SAVER FOR GAS-BURNERS. FRANK G. WRIGHT, San Diego, Cal. Filed Aug. 16, 1915. Serial No. 45,804. (Cl. 126—214.)



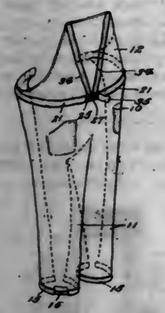
1. The combination with a gas stove, of an appliance resting upon the burner and disposed under the burner arms, comprising a band of heat insulating quality, the ends of said band overlapped, clips up-set from the band adjacent each end thereof and arranged to straddle the overlapped end for slidingly locking the ends to the intermediate portion to form a cylindrical shell and permit expansion and contraction.

2. The combination with a gas stove, of an appliance resting upon the burner and disposed under the burner arms, comprising a band of heat insulating quality, the ends of said band overlapped and bent laterally to form finger holds, clips upset from the band adjacent each end thereof and arranged to straddle the overlapped end for adjustably locking the ends to the intermediate portion to form a cylindrical shell.

1,217,855. APRON. ARTHUR ZIMMERMANN, New York, N. Y., assignor to Wyse & Co., Inc., New York, N. Y., a Corporation of New York. Filed Jan. 4, 1916. Serial No. 70,231. (Cl. 2—140.)

1. In an apron of the class described, a retaining member comprising complemental sections adjustably secured together, bands carried by said apron forming tubular

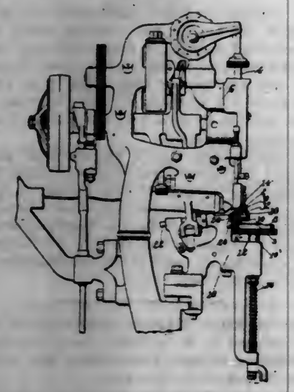
pockets, a series of pockets formed adjacent the ends of the tubular pockets, and said complemental sections being slidable into said tubular pockets in radiating directions from the junction of said complemental sections.



2. In an apron of the class described, a retaining member comprising complemental sections having fluted overlapping ends, said overlapping ends being adjustably secured to each other, said complemental sections being adapted to partly encircle the waist of a wearer and a clamp to receive the overlapping ends of said sections to permit desired adjustment of said sections with respect to each other.

3. In an apron of the class described, a retaining member for the waist of said apron, said retaining member comprising complemental sections adjustably secured to each other, a clamp for holding said sections in locked relation, upwardly diverging retaining members pivotally carried by said clamp, a bib section formed on said apron, said bib section receiving the upwardly diverging retaining members carried by said clamp, and a general outline of said bib section being such as to have the tapering side edges thereof exert a tension on points formed at the upper ends of said retaining members on said bib which points of support for said bib are normally held in spaced relation by the tension of the side edges as to maintain the top edge taut and the lower ends of said diverging retaining members being below the general line of attachment of the lower ends of the diverging sides edges to normally maintain said bib in extended raised position.

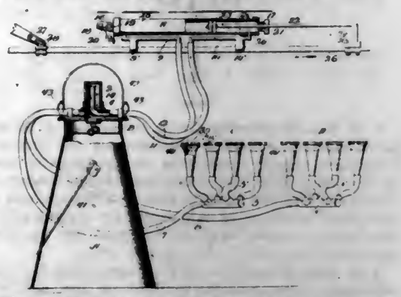
1,217,856. FEEDING AND GUIDING MECHANISM. JOHN HENRY BROWN, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 10, 1913. Serial No. 760,159. (Cl. 12—67.)



1. A machine of the class described comprising an edge gage, work feeding means including a work support, and a feed roll for a rand having a different feeding speed from the feeding speed of the work support, said roll tapering toward the edge gage and being formed with a rib or ribs extending angularly and spirally across the roll and constructed and arranged to exert upon the rand as it is fed a wiping action in a direction to screw the rand at all points successively toward the edge gage.

2. In a machine of the class described, the combination with an edge gage, a work support, and a rand guide adapted to guide a rand to be attached to work upon said work support, of a plate overlying said guide to hold a rand upon the work-engaging face of the rand guide, said face being inclined relatively to the work-engaging face of said plate for so twisting said rand as it is leaving the rand guide that it tends to move toward said edge gage as the work follows a curved path past said edge gage.

1,217,857. MILKING-MACHINE. MARVIN W. COOK and NELSON S. NICHOLS, Cattaraugus, N. Y. Filed Jan. 24, 1916. Serial No. 73,936. (Cl. 31—98.)



1. The combination of a milk vessel, a cover, milk receptacles arranged thereon, teat-cups connected with the milk receptacles, valves controlling ports connecting the milk receptacles and milk vessels, said valves mounted on the under side of the cover and within the milk vessel in such a manner as to open and close the respective ports, said milk receptacles adapted to be connected to a pump.

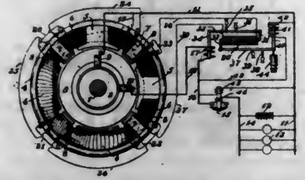
2. The combination of a milk vessel, with receptacles associated therewith, teat cups connected with the milk receptacles, valves controlling ports connecting the milk receptacles and the milk vessels, valve levers supporting said valves which are pivotally mounted upon the valve levers which lie in planes parallel to each other, their outer ends extending in opposite directions and crossing each other and pivotally supported at their intersection, projections extending downwardly from each valve over the valve lever of the opposite valve whereby the valves are simultaneously opened and closed.

3. The combination of a milk vessel, with receptacles associated therewith, teat cups connected with the milk receptacles, valves controlling ports connecting the milk receptacles and the milk vessels, valve levers supporting said valves which are pivotally mounted upon the valve levers which lie in planes parallel to each other their outer ends extending in opposite directions and crossing each other and pivotally supported at their intersection, projections extending downwardly from each valve over the valve lever of the opposite valve whereby the valves are simultaneously opened and closed, and means for alternately causing a partial vacuum in each milk receptacle when its valve is closed and flushing the latter when its valve is opened.

4. The combination of a milk vessel, transparent milk receptacles vertically mounted on the exterior thereof, teat cups, ducts leading therefrom to the base of the transparent receptacles, L shaped tubes leading well up into the exterior of the transparent receptacles and adapted to be connected with a pump whereby when suction is applied the contents drawn from the teats will collect within the transparent milk receptacles.

5. The combination of a milk vessel, transparent milk receptacles vertically mounted on the exterior thereof, teat cups, ducts leading therefrom to the base of the transparent receptacles, L shaped tubes leading well up into the exterior of the transparent receptacles and adapted to be connected to a pump whereby when suction is applied the contents drawn from the teats will collect within the transparent milk receptacles, valves controlling ports connecting the milk receptacles and the milk vessels, said valves so arranged as to open and close upon the actuation of the pump.

1,217,858. ELECTRIC REGULATION. JOHN L. CREVELING, Auburn, N. Y. Filed Oct. 24, 1914. Serial No. 868,402. (Cl. 171—223.)



1. In a dynamo, an armature winding, a shunt field exciting winding, and a commutating winding in series with said field winding.

2. A dynamo, an armature winding, a shunt field exciting winding, a commutating winding in series with said field winding, and means for controlling the current in said windings.

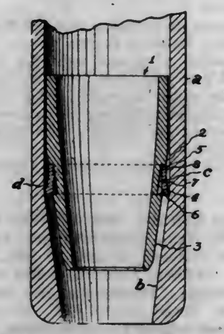
3. The combination with a dynamo comprehending an armature, a shunt field exciting winding, and a commutating winding in series with said field winding, of means for varying the current in said commutating winding.

4. The combination with a dynamo comprehending an armature, a shunt field exciting winding, and a commutating winding in series with said field winding, of means for varying the current in said field winding.

5. The combination with a dynamo comprehending an armature, a shunt field exciting winding, and a commutating winding in series with said field winding, of means for varying the current in said field and commutating windings.

[Claims 6 to 24 not printed in the Gazette.]

1,217,859. APPLIANCE FOR FORMING A NON-LEAK JOINT. CHARLES DRADER and RAPHAEL ROGERS CANDEE, Bakersfield, Cal. Filed Apr. 17, 1915. Serial No. 22,207. (Cl. 103—61.)



1. An appliance for forming a non-leak anchor joint comprising a male member having a taper portion forming an external face to seat in a female member, said male member being provided adjacent said face with an annular groove; and a ring of ductile metal for said annular groove; the orifice through the ring being of such diameter as to slip over said taper face to bring the ring into position to seat in said annular groove; the end of the ring at one side of the groove being of greater thickness than the depth of the groove at such side.

2. An appliance for forming a non-leak anchor joint comprising a male member having a taper portion forming an external face to seat in a female member, said male member being provided adjacent said face with an annular groove; and a ring of compressible ductile metal for said annular groove; the orifice through the ring being of such diameter as to slip over said taper face to bring the ring into position to seat in said annular groove; the end of the ring at that side of the groove next said taper external face being of greater thickness than the depth of the groove at such side.

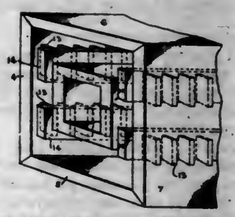
3. An anchor ring formed of compressible ductile metal having two annular external faces, one of which tapers toward the other.

4. A condensable ductile metal ring for the purpose set forth having a taper portion and a cylindrical portion, the cylindrical portion being of less diameter than the taper portion.

5. An anchoring device comprising a male member having a taper portion adapted to insert into a taper seat and provided with an annular groove having annular side walls, the annular wall at one side being of greater diameter than the annular wall at the other side of said groove; and a ring adapted to slip over the taper portion of the male member to position with one end of said ring against said wall of greater diameter, the end of said ring in engagement with said side wall being of about the same thickness as the width of said wall and the other end being of greater thickness than the width of such wall so that when the parts are seated in the taper seat therefor, said taper seat will compress the thicker portion of said ring to a smaller diameter.

[Claims 6 to 8 not printed in the Gazette.]

1,217,860. CEMENT-BLOCK MOLD. EDWARD JAMES DUNN, New York, N. Y. Original application filed May 29, 1913, Serial No. 770,620. Divided and this application filed Oct. 29, 1915. Serial No. 58,532. (Cl. 25—119.)



1. A mold having an outer wall and inner core, longitudinally extending strips spaced between said core and said wall, and transverse strips secured between said first mentioned strips and said wall.

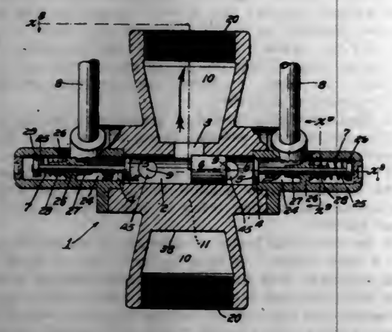
2. A mold having an outer wall and inner core, longitudinally extending strips spaced between said core and said wall, and transverse strips secured between said first mentioned strips and said wall, a bottom for said mold and recesses therein for said longitudinal strips and said core, and recesses in said wall for said transverse strips.

1,217,861. INTERNAL-COMBUSTION POWER APPARATUS. CHARLES H. FOX, Bakersfield, Cal. Filed Oct. 7, 1913. Serial No. 793,968. (Cl. 60—4.)

1. An ejector comprising a body provided with a passage open at both ends, means within said passage to cause explosive action, and means to direct the force of such explosive action toward one end of said passage to operate the ejector.

2. An ejector comprising a body provided with a passage open at both ends, means within said passage to cause successive explosions, and means to direct the force of the explosions toward one end of said passage to operate the ejector.

3. An ejector comprising a body provided with a passage open at both ends, a chamber extending across in the passage, said chamber being provided centrally with a port opening into the passage, and means to cause explosions in the chamber.



4. An ejector body provided with a passage open at both ends, a chamber extending across in the passage, there being a passageway on each side of the chamber and a discharge port between, a free piston element in the chamber to close and open the discharge port, means to admit explosive medium to the ends of the chamber, and electrical means to ignite such medium at the ends of the chamber to drive said element.

5. In an ejector body having a passage open at both ends, a chamber provided centrally with a discharge port, a free piston element moving in the chamber to close and open the port, valves at the ends of the chamber, spring means to normally close the valves, and means to supply compressed expansive fluid to open the valves and move the piston.

[Claims 6 to 28 not printed in the Gazette.]

1,217,862. SALTS OF ACETYLSALICYLIC ACID AND PROCESS OF MANUFACTURE OF SAME. OTTO GERNGROSS, Grunewald, near Berlin, and HERMANN KAST, Charlottenburg, Germany. Filed Dec. 4, 1912. Serial No. 734,912. (Cl. 23—24.)

1. The process of manufacturing salts of acetyl-salicylic acid comprising the combining of acetylsalicylic acid with a base in the presence of water, concentrating the resulting solution at a low temperature and recovering the acetylsalicylate by crystallization, substantially as described.

2. The process of manufacturing salts of acetyl-salicylic acid comprising the combining of acetylsalicylic acid with a base in the presence of water, concentrating the resulting solution at a low temperature under a vacuum and recovering the acetylsalicylate by crystallization, substantially as described.

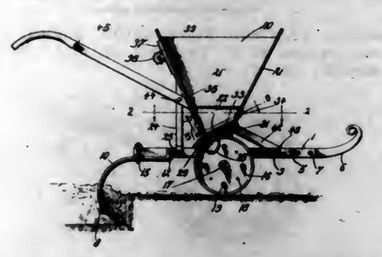
3. The process of manufacturing salts of acetylsalicylic acid comprising the slow addition of a substance containing a base in small portions at a time to water containing the acetylsalicylic acid in suspension and recovering the resulting acetylsalicylate by crystallization, substantially as described.

4. The process of manufacturing salts of acetylsalicylic acid comprising the slow addition of a substance containing a base in small portions at a time to water containing the acetylsalicylic acid in suspension, evaporating the resulting solution at a low temperature and recovering the acetylsalicylate by crystallization, substantially as described.

5. The process of manufacturing salts of acetylsalicylic acid comprising the slow addition of a substance containing a base in small portions at a time to water containing the acetylsalicylic acid in suspension, evaporating the resulting solution at a low temperature under a vacuum and recovering the acetylsalicylate by crystallization, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,217,863. FERTILIZER-DISTRIBUTER. ROBERT B. GOODSON, Lamar, S. C. Filed Mar. 31, 1916. Serial No. 88,147. (Cl. 111—34.)



1. A fertilizer distributer, comprising a wheeled frame, a hopper supported by said frame, a closure plate for said hopper, pivotally supported agitating plates for alternately actuating said closure plate, means arranged upon the wheel of said frame for alternately actuating said agitating plates, and means carried by said frame for mixing the distributed fertilizer with the soil.

2. A fertilizer distributer, comprising a wheeled frame, a hopper supported by said frame, a closure plate associated with the discharge end of said hopper, rigidly supported agitating means for actuating said closure plate, means arranged upon the wheel of said frame for alternately actuating said agitating means, means for regulating discharge of fertilizer from said hopper, and means carried by said frame for mixing the distributed fertilizer with the soil.

3. A distributer, including a frame, a hopper arranged on said frame, a flexible closure plate for said hopper, means for intermittently engaging said plate whereby the same will be opened and closed, and means engageable with said first-mentioned means for successively actuating the same.

4. A distributer, including a wheeled frame, a hopper arranged on said frame, a flexible closure plate for said hopper, a plurality of pivotal agitating members engageable with said plate for intermittently opening and closing the same, and means arranged upon the wheel for successively engaging said agitating members whereby to operate the same.

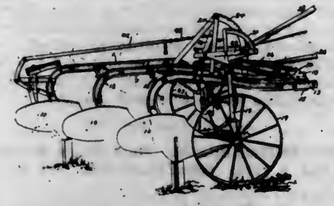
5. A distributer, including a wheeled frame, a hopper arranged on said frame, a flexible closure plate for said hopper, a plurality of pivotal agitating members alternately engaged with said plate for intermittently opening and closing the same, depending arms carried by said agitating members, and tripping means arranged upon the wheels for successively engaging said arms whereby to operate the same.

[Claims 6 and 7 not printed in the Gazette.]

1,217,864. ADJUSTING MECHANISM FOR PLOWS. FREDERICK E. HAND, Evansville, Ind., assignor to The Vulcan Plow Company, Evansville, Ind., a Corporation of Indiana. Original application filed Nov. 17, 1915, Serial No. 62,021. Divided and this application filed July 5, 1916. Serial No. 107,658. (Cl. 97—76.)

1. The combination with a plow frame, of a plurality of bent axles mounted thereon, arms secured to the axles, a segment, segment supporting means connected with one of the arms, and a hand lever engaging the segment and pivoted to said means and fulcrumed on the other of said arms.

2. In a plow, the combination with a frame, of a plurality of bent axles mounted thereon, an arm extending from each axle, a segment, a lever engaging the segment and pivoted on one of the arms, and means connecting said lever with the other arm, said means including a device for supporting said segment, and a bar connected therewith.



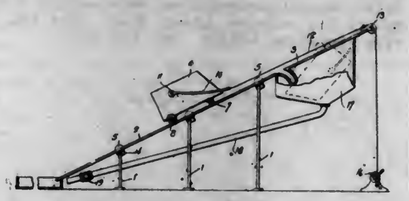
3. The combination with a plow frame, of a plurality of bent axles mounted thereon and arms extending from the axles, a substantially arc shaped segment, a plurality of braces connected at the approximate center from which the arc is struck and connected with the ends of the segment, a lever engaging the segment and fulcrumed on one arm, and means for connecting the braces with the other arm.

4. The combination with a plow frame, of a plurality of bent axles mounted thereon, and arms extending from said axles, of a segment, and means for directly supporting the segment, a bar connecting the supporting means with one of the arms, and a lever engaging the segment and pivoted to the other arm and to the supporting means at substantially the center from which the arc of the segment is struck.

5. In a plow, a frame, a set of crank shafts on said frame with parallel portions, each having crank arms, a lever pivoted on one arm, and a segment having pivotal connection with said lever and the other arm.

[Claims 6 and 7 not printed in the Gazette.]

1,217,865. TOY. ALFRED M. HARRIS, Detroit, Mich. Filed Mar. 23, 1916. Serial No. 86,203. (Cl. 46—37.)



A toy comprising an inclined track, the said track being provided with loops near its upper end, a receptacle suspended from the tracks and having the said loops disposed therein, a car mounted upon the tracks the front wheels of which are adapted to be received by the said loops, the rear wheels of the car being of a diameter greater than the width of the loops whereby the said rear wheels will pass over said loops, for inverting the said car and disposing the same into said receptacle, a tube connected to the receptacle and terminating at the starting point of the car, and means connected to the car for drawing the same up the inclined tracks.

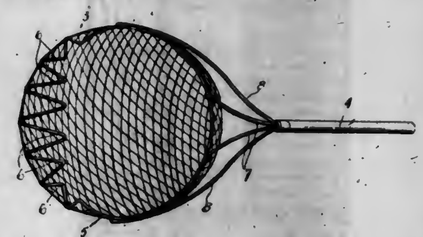
1,217,866. ARTIFICIAL TOOTH. OTTO G. HESS, Los Angeles, Cal. Filed Sept. 2, 1914. Serial No. 859,922. (Cl. 32—9.)

An artificial tooth comprising a metal backing having a seat concave horizontally and vertically, there being a horizontal stop in the upper part of the seat and there being interlocking ribs extending downwardly from the ends of the stop and forming a dovetail groove, and the metal around the seat forming a thin sharp edged rim, and said seat being deep enough from the edge of the rim to receive substantially one-half of a porcelain facing; and a porcelain facing fitting said seat and having a shoulder fitting said stop and having grooves to receive said



interlocking ribs and form a dovetail connection and having extensions fitting against the ends of said ribs, and substantially one-half of the thickness of said porcelain being in said seat beyond the edge of said rim, so that the rim embraces the body of the porcelain all the way around.

1,217,867. FRUIT-PICKER. EMERICH HODALJ, San Diego, Cal. Filed Apr. 12, 1916. Serial No. 90,750. (Cl. 56—15.)



A fruit gatherer, comprising in combination, a continuous wire strand forming a series of teeth which decrease in height toward each end of the series, a substantially semi-circular frame joining the opposite end of the series of teeth, the inner extremities of the teeth forming a substantially straight line across the frame and being bent upwardly out of the plane of the frame in position to engage the fruit stems, a pair of supporting bars extending from the rear of said frame, a pair of braces extending from the sides of said frame and joining said supporting bars, a handle receiving all of said bars and braces and a net suspended from the bases of the teeth and the frame.

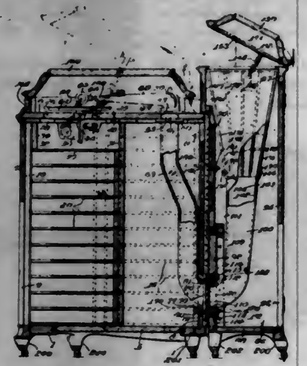
1,217,868. LADDER-RAISER. OWEN R. HUGHES, Bangor, Pa. Filed Nov. 17, 1916. Serial No. 131,915. (Cl. 57—9.)



In a device of the character described, the combination of a central supporting member, an upper pair of super-

posed links pivotally secured thereto at their inner ends, a lower pair of superposed and similar links pivotally secured at their inner ends to said supporting member below the first of said links, supporting arms pivotally secured to the outer ends of said links and having their lower-ends bent to form hooks adapted to receive a ladder rung, and oppositely directed clips mounted on said arms and adjustable longitudinally of the same.

1,217,869. TALKING-MACHINE. ELDRIDGE R. JOHNSON, Merion, and JOHN C. ENGLISH, Philadelphia, Pa., assignors to Victor Talking Machine Company, a Corporation of New Jersey. Filed Apr. 23, 1915. Serial No. 23,299. (Cl. 274—2.)



1. In a talking machine, the combination of a cabinet having front compartments and a rear compartment, a top, a partition separating said front and rear compartments, of actuating means in one of said front compartments below said top, sound-reproducing means above said top, sound-conveying means extending through said top and through the other of said front compartments and through said partition, an upwardly projecting sound-amplifier in said rear compartment, in operative communication with said sound conveying means and having its mouth adjacent the top of said rear compartment, a movable lid above said rear compartment, a movable cover inclosing said sound-reproducing means, and means operative to permit the separation adjacent said partition of that portion of the cabinet comprising the rear compartment from that portion thereof comprising the front compartments.

2. A talking machine comprising a cabinet having a plurality of vertically extending transverse partitions and having a plurality of separate compartments on one side of said partitions and a single compartment on the other side of said partitions, actuating mechanism in one of said first-mentioned compartments, sound-conveying means in another of said first-mentioned compartments and extending into said single compartment through said partitions, sound-amplifying means in said single compartment supported by said sound-conveying means, and means whereby that portion of said cabinet containing said actuating mechanism may be separated from that portion of said cabinet containing said sound-amplifying means on a plane extending between said partitions, and means whereby said sound-conveying means may be similarly separated.

3. In a talking machine, the combination of a cabinet sub-divided by a partition, sound reproducing means and sound amplifying means carried by said cabinet on opposite sides of said partition, and sound conveying means extending on both sides of said partition and connecting said reproducing means and said amplifying means, said cabinet and said conveying means being each formed of separable sections united adjacent said partition.

4. In a talking machine, the combination of two separable units, means to rigidly secure said units together, a sound reproducing mechanism and a motor mechanism within one of said units, a lid on the top of said unit to inclose and give access to said sound reproducing mechanism, an amplifier in the other of said units arranged to discharge sound upwardly, a lid on the top of said last mentioned unit arranged to discharge sound upwardly, a lid on the top of said last mentioned unit arranged when raised to form a deflector to direct the sound from said amplifier over said first mentioned unit, and a sound conveyer extending within said units and connecting said sound reproducing means with said amplifier.

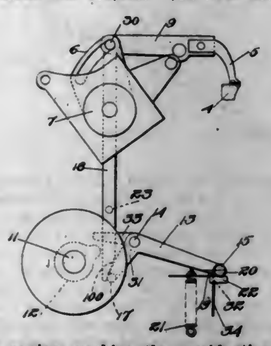
1,217,870. TICKET-PUNCH. JOHN KLABB, Denver, Colo. Filed Nov. 9, 1915. Serial No. 60,588. (Cl. 164—119.)



1. A ticket punch comprising a body, equipped with a rigidly connected ring or band to receive the thumb or a finger of the user's hand; said band being mounted in a plane oblique to a central longitudinal plane of said body.

2. A ticket punch having a body comprising two parts hingedly connected, and a ring or band rigidly connected to one of said parts in a plane oblique to a longitudinal plane of said body, for retaining the implement in working position on the hand of the user.

1,217,871. THREAD PULL-OFF AND LOCKING DEVICE. OSCAR L. LAWSON, Lynn, Mass., assignor of one-half to Carl Anderson, Lowell, Mass. Filed Aug. 27, 1914. Serial No. 858,825. (Cl. 112—20.)



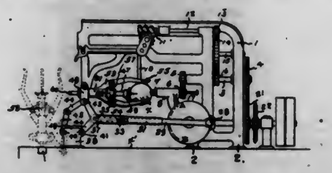
1. In a sewing machine the combination with stitch forming instrumentalities of two members normally in contact with each other, the thread passing entirely around the said combined two members, a rest below said members between which and one of said members the thread passes, and means to move the other of said two members periodically in time with the stitch forming instrumentalities.

2. In a sewing machine having periodically moving stitch forming instrumentalities and a presser foot, the combination of a rest, two pivoted members adjacent each other one of which clamps the thread to the rest, means for normally holding said clamp member in operative position, the other of said pivoted members normally resting

in contact with the said pivoted clamp member, the thread passing between the said rest and the said pivoted clamp member and entirely around the combined two pivoted members, and means to move the other one of said two pivoted members away from and toward the said pivoted clamp member periodically and in time with the stitch forming instrumentalities.

3. In a sewing machine, the combination with stitch forming instrumentalities of two half-round members having their flat sides normally in contact with each other and about which the thread passes, a rest below said members between which and the lower member the thread passes, and means to move one of said members periodically in time with the stitch forming instrumentalities.

1,217,872. PARING-MACHINE FEEDER. WILLIAM M. LUTHER, San Francisco, Cal. Filed Oct. 20, 1914. Serial No. 867,651. (Cl. 146—8.)



1. A feeding mechanism including a bracket; a supporting lever pivoted in said bracket; a gripper pivoted on said supporting lever, a control lever pivoted to said gripper, and pivoted to said bracket on a center spaced from the pivotal center of said supporting lever; and means for swinging said supporting lever.

2. A feeding mechanism including a bracket; a supporting lever pivoted in said bracket; a gripper pivoted on said supporting lever, and having an arm extending outward therefrom; a control link pivoted to said arm and to said bracket; and means for swinging said supporting lever.

3. A feeding mechanism including a bracket; a supporting lever pivoted in said bracket; a gripper pivoted on said supporting lever, and having an arm extending outward therefrom; a control link pivoted to said arm, and pivoted to said bracket on a center spaced from the pivotal center of said supporting lever; and means for swinging said supporting lever.

4. In a feeding mechanism for fruit paring machines, a gripper for the fruit, a pivoted lever attached to and supporting said gripper, a reciprocating mechanism attached to said lever, and control mechanism also attached to said gripper for holding the gripper in a substantially horizontal position during a portion of its movement.

5. In a feeding mechanism for fruit paring machines, a gripper for the fruit, a pivoted lever attached to and supporting said gripper, a reciprocating mechanism attached to said lever, and control mechanism also attached to said gripper, means for causing the gripper to swing into a vertical position, means for opening the gripper while in vertical position and during the dwell of said reciprocating mechanism, and means for holding the gripper in a substantially horizontal position during a portion of its movement.

[Claim 6 not printed in the Gazette.]

1,217,873. ELECTRIC INSULATOR. NORMAN MARSHALL, West Newton, Mass. Filed June 20, 1916. Serial No. 104,783. (Cl. 91—70.)

1. An insulator comprising a dielectric carrier impregnated with a dehydrated soluble silicate and a polymerized oil.

2. An insulator comprising a dielectric heat resisting carrier impregnated with a dehydrated soluble silicate and an oxidized vegetable oil.

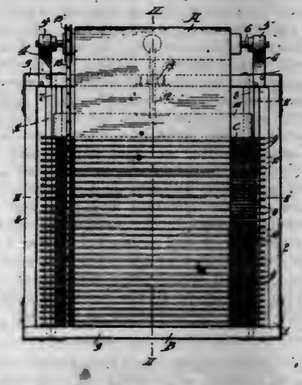
3. An insulator comprising asbestos impregnated with a dehydrated soluble silicate and a polymerized and oxidised vegetable oil.

4. An insulating lining for lamp sockets comprising a tube of sheet asbestos which is impregnated with decomposition and reaction products of an emulsion of sodium silicate and raw linseed oil, which has been oxidised and baked at a comparatively high temperature, and characterized by its heat resisting and dielectric properties.

5. An insulating lining comprising an asbestos tube which is impregnated with decomposition and reaction products of a mixture of from 30% to 70% linseed oil with from 70% to 30% of a soluble silicate which has been oxidized and baked at a high temperature, and characterized by its heat resisting and dielectric properties, said insulator varying in color from brown to black in accordance with the higher degree of temperature employed in baking, the black material being more brittle than the brown.

[Claims 6 to 13 not printed in the Gazette.]

1,217,874. ACCORDION-PLEATING MACHINE. CHARLES D. MATTHEWS, Columbia, Mo., and ADDIS D. MITCHELL, Muskogee, Okla. Filed Sept. 26, 1914. Serial No. 863,649. (Cl. 223—40.)



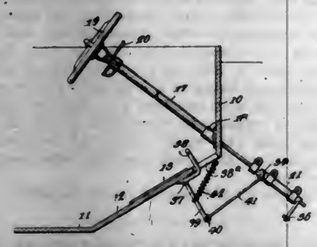
1. In a pleating machine, a series of parallelly arranged members, a series of swingingly mounted members, each of said swingingly mounted members adapted to be engaged between each pair of said parallel members, means whereby said members are clamped together, a roller for feeding material to be pleated to said members, and a measuring device carried by said roller coöperably related to said members for measuring the amount of material pleated.

2. In a pleating machine, a frame, a revolubly mounted shaft secured to said frame, a material to be pleated mounted on said shaft, a pair of guide rods mounted in said frame, a series of parallelly arranged members slidably mounted on said rods, a series of members swingingly mounted at one end to one of said rods, each of said swingingly mounted members adapted to be interposed between each pair of slidably mounted members, said swingingly mounted members adapted to force a flexible material between each pair of said slidably mounted members, means for clamping said members together when said swingingly mounted members are in engagement with said slidably mounted members, and means mounted on said shaft coöperably related to said members for measuring the amount of material forced between said members.

1,217,875. ACCELERATOR. EMERY H. MUTZ and VIRGIL C. MUTZ, Sacred Heart, Minn. Filed Nov. 30, 1914. Serial No. 874,803. (Cl. 74—39.)

1. In an accelerator, a rod capable of being manually turned on its longitudinal axis, a casing loosely mounted for rotation upon said rod, means for connecting the same to a carbureter, a bracket or collar fixed to said rod and spaced a short distance from said casing, a pedal,

direct connections between said pedal and said casing for rotating the casing upon depression of the pedal independently of said rod, and coöperating means on said casing and said bracket to cause the rotation of said casing when said rod is manually turned.



2. In an accelerator, a rod capable of being manually turned about its longitudinal axis, a casing loosely mounted upon said rod and having arms projecting at an angle thereto and to each other, one of said arms adapted to be connected to a carbureter, a hand operating lever, connections therebetween and the casing for rotating the casing, means rigidly mounted on said rod adapted to engage said casing during a portion of its rotation, and means on said rod for manually turning the same.

3. In an accelerator for an automobile, a rod extending downwardly at an inclination to the dash of said automobile, a casing loosely mounted on the lower end of said rod, an arm projecting at right angles from the lower end of said casing, a second arm at the upper end of said casing and projecting at right angles thereto and to the first named arm, an upwardly projecting lug on the top of said casing, a collar rigidly mounted on said rod adjacent the upper end of said casing and having a projection thereon to engage under certain conditions with the lug of said casing, manual means for rotating said rod, and a pedal having connections to the second of said levers for rotating the casing independently of said rod.

1,217,876. LENS-GUARD ATTACHMENT. CHESTER C. NORRIS, Bainbridge, Ga. Filed Mar. 18, 1916. Serial No. 85,194. (Cl. 88—47.)



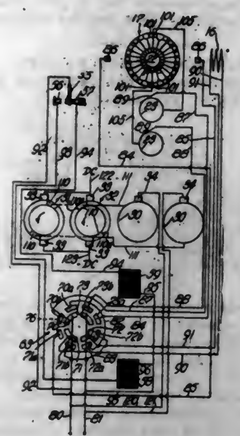
1. A guard attachment for an eye-glass lens consisting of a ring standing in a plane at right angles to that of the lens and of a diameter greater than the thickness of such lens so that it extends beyond both faces of the same, and means for securing the ends of the ring to said lens.

2. A guard attachment for an eye-glass lens comprising metallic fastening devices secured to said lens at its edge, and a split ring standing in a plane at right angles to that of the lens and of such size that it extends beyond both of said devices, its extremities being united with the latter.

1,217,877. RECTIFIER. EDGAR J. PACE, Los Angeles, Cal. Filed July 21, 1915. Serial No. 41,099. (Cl. 172—275.)

1. In a motor of the character described, a field magnet having a plurality of oppositely disposed poles, an armature having a plurality of circumferentially spaced coils, certain of said coils being concentrated at oppositely disposed points on the armature, a commutator with its segments connected to said coils in progression around the armature, and a pair of collector rings connected to said coils at said oppositely disposed points of concentration.

2. In a device of the character described, a motor embodying a field magnet having a plurality of oppositely disposed poles, an armature having a plurality of circumferentially spaced coils, certain of said coils being concentrated at oppositely disposed points on the armature, a commutator with its segments connected to said coils in progression around the armature, and a pair of collector rings connected to said coils at said oppositely disposed points of concentration, winding for the field magnet, and means for establishing either a circuit in which the motor operates as a series wound motor with its commutator in circuit or a circuit in which the collector rings are in circuit.



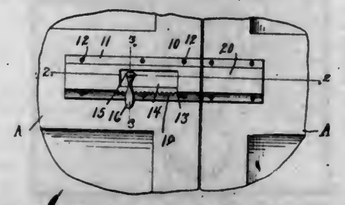
3. In a device of the character described, a motor embodying a field magnet having a plurality of oppositely disposed poles, an armature having a plurality of circumferentially spaced coils, certain of said coils being concentrated at oppositely disposed points on the armature, a commutator with its segments connected to said coils in progression around the armature, and a pair of collector rings connected to said coils at said oppositely disposed points of concentration, winding for the field magnet, and means for establishing either a circuit in which the motor operates as a series wound motor with its commutator in circuit or circuits in which the field winding is short circuited upon itself and the collector rings are in circuit.

4. In a device of the character described, a motor embodying a field magnet having a plurality of oppositely disposed poles, an armature having a plurality of circumferentially spaced coils, certain of said coils being concentrated at oppositely disposed points on the armature, a commutator with its segments connected to said coils in progression around the armature, and a pair of collector rings connected to said coils at said oppositely disposed points of concentration, winding for the field magnet, and mechanism for establishing either a circuit in which the motor operates as a series wound motor with its commutator in circuit or circuits in which the motor operates as an induction motor with the field winding short circuited upon itself and the collector rings in circuit, said mechanism including a speed controlled element operated by the armature.

5. In a device of the character described, a motor embodying a field magnet having a plurality of oppositely disposed poles, an armature having a plurality of circumferentially spaced coils, certain of said coils being concentrated at oppositely disposed points on the armature, a commutator with its segments connected to said coils in progression around the armature, and a pair of collector rings connected to said coils at said oppositely disposed points of concentration, winding for the field magnet, and mechanism for establishing either a circuit in which the motor operates as a series wound motor with its commutator in circuit or circuits in which the motor operates as an induction motor with the field winding short circuited upon itself, and the collector rings in circuit, said mechanism including a speed controlled element operated by the armature and operating to establish the first mentioned circuit when the armature rotation is below a certain predetermined speed and operating to establish the second mentioned circuits when the armature rotation exceeds a certain predetermined speed.

[Claims 6 to 8 not printed in the Gazette.]

1,217,878. LOCKING-BOLT. JOSEPH LOUIS PANCOAST. Trenton, N. J. Filed June 2, 1916. Serial No. 101,359. (Cl. 16—64.)



1. In combination, a casing having a slot formed in its outer side, a bolt slidable in the casing, a handle pivoted to the bolt for vertical swinging movement and projecting through the slot, a series of teeth projecting downwardly from the under side of the casing, and a toothed lug on the handle, extending beneath the casing with its toothed portion engaging the casing teeth upon depression of the handle.

2. In combination, a casing polygonal in cross-section and having a slot formed in its outer side, a bolt slidable in the casing, a handle pivoted to the bolt for vertical swinging movement and projecting through the slot, a series of teeth projecting downwardly from the under side of the casing, and a toothed lug on the handle, extending beneath the casing with its toothed portion engaging the casing teeth upon depression of the handle.

3. In combination, a casing polygonal in cross-section and having a slot formed in its outer side and extending longitudinally of the casing, a polygonal bolt slidably fitted in the casing, a pivot loop fixed to the bolt and projecting through the slot, an operating and locking handle pivoted on the loop and arranged to be positioned horizontally to operate the bolt and vertically to lock the bolt, V-shaped teeth formed on the under side of the casing, and a lug on the handle arranged to project beneath the casing when the handle is in vertical position, said lug being toothed to engage the teeth on the casing.

1,217,879. METHOD FOR MAKING TIRE FABRIC. ERNEST A. PYE, Newark, N. J., assignor to Musselman Cord Fabric Company, Chicago, Ill., a Corporation of South Dakota. Filed Feb. 1, 1916. Serial No. 75,548. (Cl. 154—2.)



1. The herein described method of making tire fabric in which the tire fabric bands incorporate parallel strands crossing the bands diagonally which consists in winding the thread or cord upon the rotating drum with the successive turns in close proximity and parallel to each other, fixing the relative positions of the successive turns and cutting through the winding on a line running spirally along the drum to form bands in which the threads of the winding lie at the desired angle.

2. The herein described method of forming bands of tire fabric in which bands are incorporated parallel threads crossing the band at an angle, which consists in winding upon the drum a thread or cord with its turns parallel and in close proximity, securing the turns together in fixed relative relation and cutting through the winding with parallel cuts running spirally of the drum to form a plurality of bands in which the threads of the winding are diagonally disposed.

3. The herein described method of making fabric, which consists in winding a strand spirally on a drum with the convolutions in close relation, applying rubber cement in such manner as to practically embed the strands in a rubber sheet, and cutting the fabric on lines forming acute angles with the strand, thus forming bands having parallel threads on the bias.

4. The herein described method of making fabric, which consists in winding a strand helically on a drum with the convolutions united in close relation, and cutting the fabric on lines forming acute angles with the strand, thus forming bands having parallel threads on the bias.

1,217,880. STEAM-TABLE. JAMES F. ROBBINS, Lincoln, Ill. Filed May 6, 1916. Serial No. 95,844. (Cl. 126—33.)



1. A steam-table for the purposes set forth comprising a box having compartments and openings in the top above said compartments to receive food receptacles, a steam supply pipe extending along one side of the box, valved feed pipes rotatably connected to the steam supply pipe and discharging into the compartments, respectively; together with a boiler to which the steam supply pipe is connected and circulating pipes from the boiler to a cooking-range.

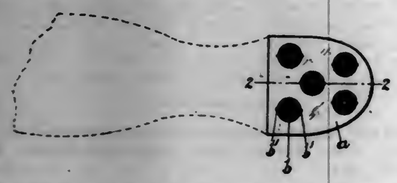
2. A steam table comprising a box having compartments and openings in the top above said compartments to receive food receptacles, a steam supply pipe extending along one side of the box, valved feed pipes rotatably connected to the steam supply pipe and extending into the compartments, respectively, and a nozzle at the inner end of the feed pipe below one of the openings in the top of the compartment, substantially as shown and for the purpose set forth.

3. A steam table comprising a box having compartments and openings in the top above said compartments to receive food receptacles, a steam supply pipe extending along one side of the box, valved feed pipes rotatably connected to the steam supply pipe and extending into the compartments, respectively, nozzles at the inner ends of the feed pipes and disposed at an angle with respect thereto, and deflector-plates at one side of the nozzles, substantially as shown and for the purposes set forth.

4. A steam table comprising a box having openings in the top and walls separating the box into compartments with two or more of the aforesaid openings leading into each compartment, food receptacles supported in the openings in the top, and a short partition depending from the top to confine one of the receptacles between said partition and a transverse wall of the box; together with a steam supply pipe extending along one side of the box, and a valved feed-pipe rotatably connected to said steam supply pipe and extending therefrom into the compartment to a point below the receptacle confined between the partition and transverse wall, substantially as shown and for the purposes set forth.

5. A steam table comprising a box having openings in the top and walls separating the box into compartments with two or more of the aforesaid openings leading into each compartment, food receptacles supported in the openings in the top, a short partition depending from the top to confine one of the receptacles in a compartment between said partition and a transverse wall of the box, and a horizontal deflector-plate at the lower end of the partition; together with a steam supply pipe extending along one side of the box, a valved feed pipe rotatably connected to the steam supply pipe and extending therefrom into the compartment to a point below the receptacle confined between the partition and transverse wall, and a nozzle on the inner end of the feed-pipe at one side of the deflector-plate, substantially as shown and for the purposes set forth.

1,217,881. PLUG FOR RUBBER TREADS. GEORGE E. ROLLINS, Brockton, Mass. Filed May 1, 1916. Serial No. 94,547. (Cl. 36—59.)



1. A heel comprising a rubber body member having seated and vulcanized therein, a plug comprising a cup, a wear-resisting member, a dowel-pin locking said member in said cup, and means for anchoring the cup in the heel.

2. In combination with a rubber heel, a plug vulcanized in said heel, said plug comprising a wear-resisting member, a cup adapted to receive said wear-resisting member, and a dowel pin extending through the lateral portions of the cup and wear-resisting member, to lock the plug in the cup.

3. In combination with a rubber heel, a plug vulcanized therein, said plug comprising a wear-resisting member, a cup adapted to receive said wear-resisting member, and a dowel pin extending through the lateral portions of the cup and wear-resisting member; the end portions of the dowel pin being extended beyond the cup, and terminating at each end within the heel.

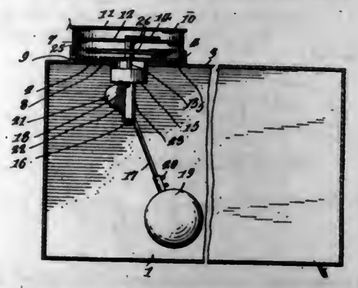
4. In combination, a one piece resilient tread member having two opposite surfaces one of which is a tread surface, a plug embedded in said member, said plug comprising a wear-resisting member having a portion presented at the tread surface, and locking means extending into said tread member and into said wear-resisting member in the same general direction as said surfaces and laterally interlocking with said tread member and with said wear-resisting member intermediate said opposite surfaces.

5. In combination, a resilient tread member having two opposite surfaces one of which is a tread surface, a plug embedded in said member, said plug comprising a wear-resisting member having a portion presented at the tread surface, and anchoring means consisting of a member having a wall interposed between and directly engaging said tread member and said wear-resisting member and having a part projecting laterally from said wall from opposite sides, respectively, thereof into lateral interlocking engagement with both of said members, thereby to lock said wear-resisting member to said anchoring means and to lock said anchoring means to said tread member.

[Claims 6 and 7 not printed in the Gazette.]

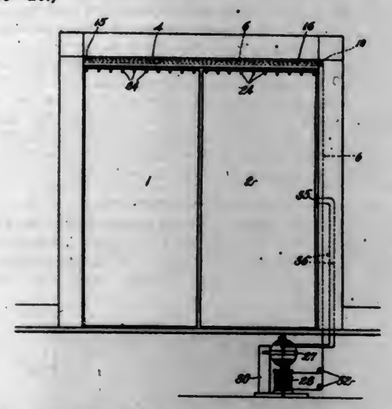
1,217,882. INDICATOR-ALARM. CHARLES ROMA, Memphis, Tenn. Filed July 28, 1915. Serial No. 42,384. (Cl. 200—34.)

1. An indicator alarm, including in combination with a tank having an opening in the top wall thereof, a housing adjacent said opening, a supporting frame depending from said housing, a shaft journaled in said housing and in said supporting frame, a float, means operatively connecting said float with said shaft whereby to rotate the latter upon movement of the former, an indicating hand carried by the shaft, a disk carried by said shaft and rotatable therewith, a circuit closing arm adjustable on said disk throughout the greater part of its circumference, and circuit terminals on the housing and in the path of said circuit closing arm, as and for the purpose set forth.



2. An indicator alarm, including, in combination with a tank having an opening in the top wall thereof, a housing adjacent said opening, a shaft journaled in said housing, means connected with the shaft for rotating the same at times, indicating means carried by the shaft, a disk carried by the shaft and rotatable therewith having a semi-circular slot therein, a circuit closing arm adjustably mounted upon said disk within said slot, and circuit terminals on the housing and arranged in the path of the circuit closing arm, as and for the purpose set forth.

1,217,883. PORTIÈRE-TRAVERSING MECHANISM. FENLEY H. ROOPE, Lynn, and JAMES H. REED, Swampscott, Mass. Filed July 14, 1914. Serial No. 850,910. (Cl. 156—20.)



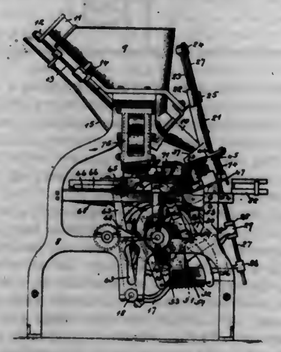
1. A portière traversing mechanism comprising a traverse bar of substantially rectangular cross section, a pair of brackets having openings therein to receive respectively the opposite ends of the bar and pulleys supported thereon above the bar, a traverse cord passing over the pulleys above the bar, a plurality of runners slidably supported upon the bar and having upstanding slotted ribs which receive the traverse cord, anti-friction members interposed between the runners and the traverse bar, a hook depending from each runner for supporting a portière and a pair of moldings secured at opposite ends to the brackets and inclosing the traverse bar, runners and traverse cord.

2. A portière traversing mechanism comprising a traverse bar of substantially rectangular cross section, a pair of brackets having openings therein to receive respectively the opposite ends of the bar and pulleys supported thereon above the bar, a traverse cord passing over the pulleys above the bar, a plurality of runners slidingly supported upon and closely embracing the bar and having upstanding slotted ribs which receive the traverse cord, anti-friction members interposed between the runners and the traverse bar, and a hook depending from each runner for supporting a portière.

3. A device of the class set forth, comprising a traverse bar, a vertical end plate connected to each end thereof and extending above and below the bar, the width of these plates tapering downwardly, moldings fastened to the downwardly-inclined edges of said end plates, the lower edges of the moldings being separated by said end plates to form a longitudinal slot opening downwardly, carriers adapted to travel on said traverse bar and provided with curtain-supporting hooks depending into said slot, pulleys carried by the end plates, and an operating rope running over said pulleys and connected to the carriers, the pulleys and upper end of the carriers and the rope being housed in the space formed by the moldings and the end plates above the traverse bar.

4. A device of the class set forth, comprising a traverse bar of rectangular cross section, a vertical end plate connected to each end thereof and extending above and below the bar, moldings fastened to the side edges of these plates in parallel relation to the bar, the lower edges of the moldings being supported by these plates to form a longitudinal opening below and parallel to the bar, carriers fitting the bar and adapted to travel back and forth thereon, each carrier being provided with a curtain-supporting hook depending into the longitudinal opening between the lower edges of the moldings, and means whereby the carriers are slid back and forth on the bar in substantially the manner set forth.

1,217,884. CAN-FILLING MACHINE. CHARLES H. AYARS, Salem, N. J., assignor to Ayars Machine Company, Salem, N. J., a Corporation of New Jersey. Filed Jan. 30, 1914. Serial No. 815,395. (Cl. 226—9.)



1. In a can filling machine, the combination with a hopper having an outlet, of a plunger for said hopper outlet; an overflow shell at the hopper outlet said shell having an inclined position with two outlets therein one of which outlets is in a plane higher than the other; a swinging support to sustain a can for each of said shell-outlets; means for moving the support to present the cans in an inclined position to said two outlets; means for operating the support and means for feeding cans onto the support.

2. In a can-filling machine, the combination with a hopper having an outlet, of a plunger for said hopper outlet; an overflow shell at the hopper outlet said shell having an inclined position with two outlets therein one of which outlets is in a plane higher than the other; a stationary can-sustaining table; a swinging can-sustaining table; means for moving the cans from the stationary table onto the swinging table; means for moving the swinging table to present one can to the higher shell-outlet and another can to the lower shell-outlet.

3. In a can-filling machine, the combination with a hopper having an outlet, of a plunger for said hopper outlet; an inclined shell at the hopper outlet and said shell having two outlets one of which is in a plane higher than the other; a can sustaining table pivotally supported beneath the shell; means for intermittently feeding cans onto the table; means for swinging the table upwardly to present one can to the higher shell-outlet and to present another can to the lower shell-outlet and to hold the higher can in an inclined position and means for forcing material into the higher can.

4. In a can-filling machine, the combination with a hopper having a plurality of outlets, of a plunger for each hopper-outlet; an inclined overflow shell at each hopper outlet and each shell having two openings therein one of which openings is in a plane higher than the other; means for presenting cans to the higher outlet of each shell and simultaneously presenting other cans to the lower outlet of each shell and means for simultaneously actuating the plunger to each hopper-opening.

5. In a can-filling machine, the combination with a hopper having a plurality of outlets, of a plunger for each hopper-outlet; an inclined overflow shell at each hopper outlet and each shell having two openings therein one of which openings is in a plane higher than the other; a swinging table below all of the shells; means for feeding as many cans onto the table at a time as there are higher shell-openings, means for swinging the table upwardly to present a can to each higher shell-opening and another can to each lower shell-opening and means for actuating the plungers.

[Claims 6 and 7 not printed in the Gazette.]

1,217,885. MECHANICAL TOY. ROY B. BLISS, Otsego, Mich., assignor to Benjamin F. Bain, Pittsburgh, Pa. Filed June 10, 1916. Serial No. 102,869. (Cl. 46—87.)



1. In a toy, the combination of a bucket, a horizontal shaft, a cable operatively connected with said bucket and secured to said shaft to raise and lower the bucket upon rotation of said shaft, means for rotating said shaft to raise said bucket, means for automatically placing a load in said bucket when in a raised position, and a wind wheel rigid with said shaft.

2. In a toy, the combination of a bucket, a shaft, two drums in spaced apart relation on said shaft, a cable operatively connected with said bucket and to one of said drums to be wound thereon in one direction, a second cable connected with the other of said drums to be wound thereon in a direction counter to that of said first cable, a weight carried by said second cable, and means for automatically placing the load in said bucket when in a raised position.

3. A toy comprising in combination, a frame, an upright guide carried thereby, a horizontal shaft carried by said frame and extending above said guide, a drum on said shaft over said guide, a bucket in operative relation to said guide to move up and down in its way, a cable operatively connected with said bucket, and to said drum to be wound thereon in one direction, a second drum on said shaft remote from said first drum, a second cable connected with said second drum to be wound thereon in a direction counter to that of said first cable, a weight carried by said second cable, and means for automatically placing a load in said bucket when in a raised position.

4. In a toy, the combination of a hopper adapted to receive a granular load, said hopper provided with a gravity exit, a valve pivotally carried intermediate its ends having a horizontal axis of oscillation, one portion of said valve to one side of said axis, being relatively heavier than that portion to the other side of said axis, and said last mentioned portion normally closing said exit, a vertically movable bucket, mechanism for raising said bucket when empty, an arm carried by said bucket adapted to engage the under side of the said heavier portion of said valve to open said exit when the bucket is in close proximity to said hopper to receive a portion of the load therefrom, and means for freeing said bucket of its load upon descension.

5. In a toy, the combination of an upright guide, a bucket including a wall engaging said guide, and a portion inclined from said wall to provide a combined bottom and wall, a flexible member for pendantly and movably supporting said bucket, said member operatively connected with said bucket intermediate said wall and upper end of said inclined portion, and a hopper provided with an exit over the said inclined portion of said bucket to deliver granular material thereinto, said granular material accumulating between said wall and inclined portion of said bucket, holding the said wall of the latter in engagement with said guide.

[Claims 6 to 8 not printed in the Gazette.]

1,217,886. PNEUMATIC MASSAGE APPARATUS. HARVEY L. HOPKINS, Chicago, Ill., assignor, by mesne assignments to Loran A. Stillman, Chicago, Ill. Filed Sept. 5, 1908, Serial No. 451,816. Renewed July 5, 1916. Serial No. 107,694. (Cl. 128—16.)



1. In a device of the class described, the combination with a cylinder, of a suitable cup associated therewith, a piston in said cylinder positively moved in both directions, a rod connected to the piston, a handle, and locking means between said piston rod and cylinder for locking said cylinder and rod from relative longitudinal movement, said means being operated by turning one relative to the other.

2. In a device of the class described, the combination with an elongated cylinder having imperforate sides, of a suitable cup associated therewith, a piston in said cylinder, a rod connected to the piston longer than the cylinder, a handle connected to the piston rod, and a valve for the piston adapted to be operated from the handle at any desired relative position of the piston and cylinder so that a high degree of vacuum due to a complete stroke of the piston, or a partial vacuum of any degree, may be obtained at will.

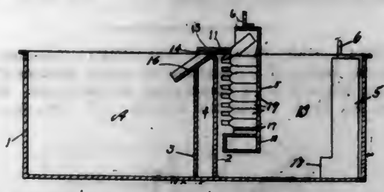
3. In a device of the class described, the combination with an elongated cylinder having imperforate sides, of a suitable cup rigidly connected to one end thereof, a piston adapted to be reciprocated in the cylinder, a hollow piston rod, a handle connected to the piston rod, and a valve in the handle adapted to normally close the hollow through the rod.

4. In a device of the class described, the combination with an elongated cylinder having imperforate sides and having a suitable cup associated therewith, of a piston adapted to be reciprocated in the cylinder, a hollow piston rod, a handle connected to the piston rod, a valve in the handle adapted to normally close the hollow through the rod, said valve consisting of the conical body portion cooperating with a similar seat in the handle, a stem for the valve extending to the exterior of the handle, and a spring coöperating with the valve to hold it close.

5. In a device of the class described, the combination with a cylinder having a suitable cup directly associated with one end, of a piston sliding in said cylinder positively moved in both directions, a piston rod movable freely through the other end and along the axis of the cylinder, and locking means between said piston rod and cylinder for locking the piston rod from longitudinal movement in the cylinder, said means being operated by turning the piston rod.

[Claims 6 to 10 not printed in the Gazette.]

1,217,887. BOTTLE-WASHING APPARATUS. JOSHUA S. MCDANIEL, Wichita Falls, Tex. Filed Apr. 29, 1916. Serial No. 94,311. (Cl. 141—7.)



1. A bottle washing apparatus comprising a tank having a soaking compartment and fresh water compartment, devices for immersing bottles in said soaking compartment, means for elevating the immersing devices, and a shiftable bar coöperating with said immersing devices for tilting the bottles for emptying the same and for dumping the bottles into said fresh water compartment.

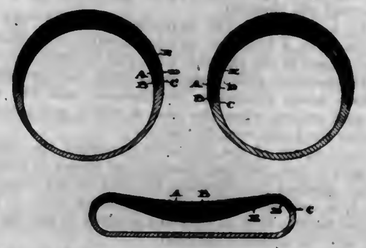
2. A bottle washing apparatus comprising a tank having a fresh water compartment and a solution compartment, a partition between said compartments for preventing heat from passing from one compartment to the other, a carrier having one side open and adapted to receive superposed rows of bottles with their mouth ends projecting from said open side, means for suspending and vertically moving said carrier in the solution compartment, and a bar positioned in the path of said vertical movement to tilt a row of bottles in such movement, and shiftable out of such position to permit the passage of said row above the bar, whereby successive rows of bottles may be first tilted to empty their contents into the solution compartment and then tilted to discharge the bottles into the fresh water compartment.

3. A bottle washing apparatus comprising a tank having a water compartment and a solution compartment, a carrier having provision for holding superposed layers of bottles, means for lowering and raising said carrier into and out of said solution, and a shiftable bar coöperating with the carrier for tilting said bottles for emptying their contents into the solution compartment and for dumping the bottles into said fresh water.

4. A bottle washing apparatus comprising a tank having a water compartment and a solution compartment, a partition inclosing a dead air space for preventing heat from passing from one compartment to the other, a carrier having provision for carrying layers of bottles superposed with their mouth ends projecting from one side thereof and having a float on the bottom part thereof, means for immersing said carrier with bottles therein into said solution, and a shiftable bar coöperating with said carrier for tilting the bottles for emptying their contents into the solution compartments and for dumping the bottles into said fresh water compartment.

5. A bottle washing apparatus comprising a tank having a partition dividing said tank into fresh water and hot caustic solution compartments, a chute leading from said partition into the fresh water compartment, a carrier holding superposed layers of bottles with their mouth ends projecting from one side thereof and said partition cooperating with said carrier to prevent displacement of the bottles, means for lowering and raising said carrier into and out of said solution compartment, and a shifting bar pivotally connected with said tank for coöperating with said carrier to tilt the bottles to be emptied.

1,217,888. PROCESS OF PRODUCING PUNCTURE-SEALING RUBBER TIRES. WILLIAM W. WILDMAN and EDGAR A. TINSMAN, Barberton, Ohio, assignors of one-third to James Christy, Cleveland, Ohio. Filed July 12, 1915. Serial No. 39,255. (Cl. 154—15.)



1. The process of producing a puncture sealing rubber tire consisting, first, in enveloping a straight mandrel with a relatively thin ply of gum stock containing sulfur; then placing a ply of composite rubber stock more or less impregnated with sulfur and of crescent form in cross section on the upper side of the said tube; then drawing a relatively thin tube of pure gum stock containing sulfur over the first two elements and afterward placing a strip of pure gum lengthwise over the said tube and relatively over the crescent shaped composite rubber ply; and then enveloping the whole with a straight tube of sulfurized pure gum and vulcanizing all the elements together and then reversing the completed tube upon itself and uniting the ends thereof to form an endless tire.

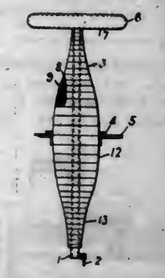
2. The process of producing a puncture-sealing pneumatic tire consisting, first, in collocating separate plies of rubber tubes and strips, respectively, treated with sulfur and a strip of untreated raw rubber inclosed within the outer of said tubes; then vulcanizing said tubes and strips *in situ*, and then reversing said vulcanized tubular product and finally uniting the ends thereof to form an endless tire.

1,217,889. SAW FILING OR GRINDING WHEEL. CHARLES A. BRUST, Memphis, Tenn. Filed Aug. 7, 1916. Serial No. 113,582. (Cl. 76—45.)



A saw filing or grinding wheel of the class described comprising a pair of contacting companion disks of unequal diameters arranged in concentric relation to each other, the edge of the smaller disk being inclined inwardly from its outer to its inner side and having a grinding surface thereon for grinding the clearance edge of a saw tooth, the opposite sides of the larger disk from points spaced inwardly of its periphery to said periphery being disposed in converging relation and having annular grinding surfaces thereon, the annular grinding surface on the inner side of said larger disk having its inner edge disposed inwardly of the adjacent end of the smaller disk for grinding the forward or rake edge of the saw tooth to the extreme point of said tooth, the annular grinding surface on the outer side of the larger disk being adapted to grind the rear edge of the adjacent saw tooth, all of said grinding surfaces being adapted to act upon their respective edges of the saw teeth simultaneously.

1,217,890. HIGH-VOLTAGE INSULATING-BUSHING. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 4, 1915. Serial No. 32,185. (Cl. 173—318.)



1. An insulating bushing comprising a plurality of convolutions of insulating material and conducting strands which are spaced from one another relatively short distances between adjacent convolutions of said insulating material.

2. An insulating bushing comprising a plurality of convolutions of insulating material and conducting strands which are uniformly spaced from one another relatively short distances between adjacent convolutions of said insulating material, each convolution containing a relatively large number of said conducting strands.

3. An insulating bushing comprising a plurality of convolutions of insulating material and longitudinally disposed conducting strands which are uniformly spaced from one another relatively short distances between adjacent convolutions of said insulating material, each convolution containing a relatively large number of said conducting strands.

4. An insulating bushing comprising a plurality of convolutions of insulating material, and interposed convolutions of material having conducting strands which lend electrical conductivity thereto in one direction only.

5. An insulating bushing comprising convolutions of sheet insulating material and interposed convolutions of sheet material having conducting strands which lend electrical conductivity thereto in one direction only, each convolution of said second sheet material containing a plurality of conducting strands.

[Claims 6 to 16 not printed in the Gazette.]

1,217,891. METHOD OF FOLDING NOODLES. SAMUEL MUELLER, Jersey City, N. J. Original application filed Dec. 2, 1909, Serial No. 531,048. Divided and this application filed Oct. 21, 1915. Serial No. 57,110. (Cl. 107—54.)

1. The hereindescribed method which consists in folding a strip of dough to form a zigzag-shaped body, and permitting said body to remain in said shape until dry, substantially as specified.

2. The hereindescribed method which consists in fold-

ing a strip of dough to form a W-shaped body, substantially as specified.

3. The hereindescribed method which consists in folding a strip of dough to form a body having a plurality of diverging portions, and permitting said body to remain in its folded form until dry, substantially as specified.

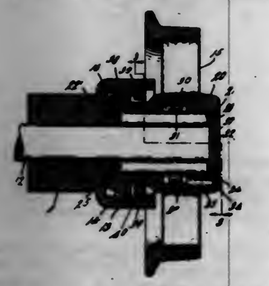


4. The hereindescribed method which consists in folding a strip of dough to form a body having a plurality of diverging portions with the correspondingly disposed portions in parallelism with one another, and permitting said body to remain in its folded form until dry, substantially as specified.

5. The hereindescribed method which consists in first folding a strip of dough across an intermediate portion, then spacing the free ends thereof from one another in the plane of the folded strip, and then folding the folded strip crosswise, substantially as specified.

[Claims 6 to 30 not printed in the Gazette.]

1,217,892. ROLLER-BEARING CAR-WHEEL. HERMAN C. PROX, Terre Haute, Ind., assignor to Frank Prox Co., Terre Haute, Ind., a Corporation of Indiana. Filed Sept. 27, 1915. Serial No. 52,784. (Cl. 105—67.)



1. In combination, a wheel having a hub, a steel tube cast in said hub, and an annular series of rollers located within said steel tube to fit upon an axle, said hub having integral radially inwardly extending flanges beyond the ends of said steel tube and rollers.

2. In combination, a wheel having a hub, a steel tube cast in said hub, and an annular series of rollers located within said steel tube to fit upon an axle, said hub having integral radially inwardly extending flanges beyond the ends of said steel tube and rollers, and said flanges having annular grooves on their inner axial faces and said rollers having projections which extend into said annular grooves.

3. In combination, a wheel having a hub, a steel tube cast in said hub, and an annular series of rollers located within said steel tube to fit upon an axle, said hub having integral radially inwardly extending flanges beyond the ends of said steel tube and rollers, said hub having a lubricant chamber surrounding said steel tube, and said steel tube being provided with openings which connect said lubricant chamber with the roller-containing space within the steel tube.

4. In combination, a wheel having a hub, a steel tube cast in said hub, an annular series of rollers located within said steel tube to fit upon an axle, said hub having integral radially inwardly extending flanges beyond the ends of said steel tube and rollers, said hub having a lubricant chamber surrounding said steel tube and said steel tube being provided with openings which connect said lubricant chamber with the roller-containing space within the steel tube, and a ring loosely mounted in said lubricant chamber and surrounding said tube.

5. In combination, a wheel having a hub, a steel tube cast in said hub, an annular series of rollers located within said steel tube to fit upon an axle, said hub having integral radially inwardly extending flanges beyond the ends of said steel tube and rollers and also having an integral end piece which incloses the end of the axle and is a continuation of one of said flanges.

[Claims 6 to 9 not printed in the Gazette.]

1,217,893. MACHINE FOR COMPRESSING BALED HAY. GEORGE E. WHITNEY, Bridgeport, Conn., assignor to H. A. Paine, Harris county, Tex. Filed June 10, 1915. Serial No. 33,225. (Cl. 100—19.)



1. In a device of the character described, the combination with a chamber wherein bales are formed of means actuated by the bale for varying the dimensions thereof and a compressing means reciprocating in the chamber.

2. In a device of the character described, the combination with a chamber wherein bales are formed of movable side walls, manual means for moving said walls to vary the capacity of the chamber, a compressor arranged to reciprocate in the chamber and compress the bale therein, said walls being also actuated by the friction of the bale to contract the chamber.

3. In a device of the character described, the combination with a chamber having movable side walls, of a door hinged to the chamber wall, and forming a covering for the chamber, rollers mounted upon the free edge of the door, hooks pivoted to the chamber wall and alined with said rollers, when the door is closed and means for engaging the hooks over the rollers.

4. In a device of the character described, the combination with a bale molding chamber, of means actuated by the bale passing therethrough for varying the dimensions thereof, a plunger reciprocating therein and a baling chamber having fixed dimensions secured to and in alinement with the molding chamber.

5. In a device of the character described, the combination with a molding chamber wherein bales are formed, of means actuated by the moving bales for varying the dimensions thereof, a plunger reciprocating therein, a baling chamber having fixed dimensions secured to and in alinement with the molding chamber and a track fixed relative to and continuing from the baling chamber.

[Claims 6 to 18 not printed in the Gazette.]

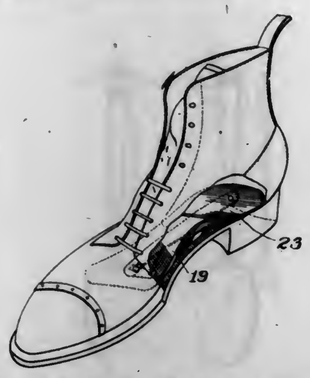
REISSUES.

14,264. ARCH-SUPPORT. ALEXANDER E. BLOCK, St. Louis, Mo. Filed Dec. 20, 1915. Serial No. 67,900. Original No. 1,110,476, dated Sept. 15, 1914, Serial No. 665,857, filed Dec. 14, 1911. (Cl. 36—71.)

1. In an arch support, the combination of a flexible body member; a series of superimposed and overlapping pockets formed on the lower face of the body-member; a tension-bar pivotally secured at one of its ends to the lower face of the body member and extending longitudinally beneath said pockets, means for adjustably locking the free end of said tension-bar at a point upon the lower face of the body member, and an insert slidably secured to and mounted upon said tension-bar.

2. In an arch support, the combination of a flexible body member provided with heel pockets and superimposed and overlapping side pockets; one or more inserts removably seated in said pockets; a tension-bar extending longitudinally beneath said side pockets; means for adjustably securing the tension-bar to the lower face of the body member, and an insert slidably secured to and mounted upon said tension-bar.

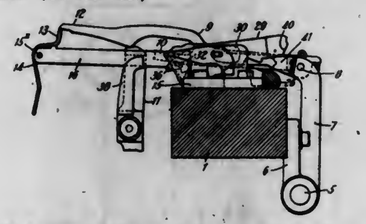
3. In an arch support, the combination of a flexible body member provided with a pocket upon its lower face; an insert adapted to be removably seated in said pocket; a tension-bar adjustably secured to the lower face of the body member and provided with an elongated opening; a secondary insert adapted to fit between the tension-bar and the lower face of said pocket; a pin mounted in said secondary insert; and means for securing said pin in place within said elongated opening.



4. In an arch support, a flexible body member; a tension-bar provided with an elongated opening and mounted upon the lower face of the body member; an insert adapted to be seated between the body member and the tension-bar; and a pin fixed in said insert and extending through said elongated opening to secure the insert to the tension-bar.

5. In an arch support, in combination, a flexible body member; a series of superimposed pockets, formed by superimposed strips one of which strips is detachably secured to said body member and the other strips being detachably secured to said first named strip and to each other in their order, and a tension-bar secured to the lower face of the body member and benath said series of pockets.

14,265. MISTHREADING DEVICE. JONAS NORTHROP, Hopedale, Mass., assignor, by mesne assignments, to Draper Company, a Corporation of Maine. Filed Feb. 2, 1917. Serial No. 146,081. Original No. 987,817, dated Mar. 28, 1911, Serial No. 571,590, filed July 12, 1910. (Cl. 139—85.)



1. In a loom of the character described, the combination of the lay, a transverse shaft and means for actuating it to cause filling replenishment on the occurrence of filling absence during a detecting beat, and means for causing loom stoppage on the occurrence of a double hopper misthread and on the occurrence of a real misthread.

2. In a loom of the character described, the combination of the lay and its shuttle boxes, a detector to detect the presence or absence of filling, means for controlling replenishment of filling on the detection of filling absence, and means to stop the loom on the occurrence of either a double hopper misthread or a real misthread.

3. In a loom of the character described, the combination of the lay and its shuttle boxes, a detector to detect the presence or absence of filling, means for controlling replenishment of filling on detection of filling absence, and means to cause loom stoppage when filling is absent on two alternate detecting beats whether it is absent or not on the intermediate detecting beat.

4. In a loom of the character described, the combination of means for detecting the presence or absence of filling in the shed, filling replenishing controlling means adapted to be actuated when filling is absent on a detecting beat, and means permitting continuation of the loom operation upon the occurrence of a single hopper misthread, and causing loom stoppage on the occurrence of either a double hopper misthread or a real misthread.

5. In a loom of the character described, the combination of means for detecting the presence or absence of filling in the shed, filling replenishing controlling means adapted to be actuated when filling is absent on a detecting beat, and means comprising a rider for permitting the loom to continue in operation on the occurrence of a single hopper misthread and for causing loom stoppage on the occurrence of a double hopper misthread or a real misthread.

6. In a loom of the character described, the combination of means for detecting the presence or absence of filling in the shed, filling replenishing controlling means adapted to be actuated when filling is absent on a detecting beat, and means for stopping the loom when the filling is absent on a detecting beat causing replenishment, present on the next detecting beat, and absent on the next detecting beat.

7. In a loom of the character described, the combination of means for detecting the presence or absence of filling in the shed, filling replenishing controlling means adapted to be actuated when filling is absent on a detecting beat, and means for controlling the loom operation comprising a member and its actuating devices for moving it from normal to a secondary position following the first detection of filling absence, and to a third position on the next detecting movement whether filling be present or absent to locate the parts for causing loom stoppage, and to a fourth position to stop the loom if filling is absent on the third detecting movement.

8. In a loom of the character described, the combination of means for detecting the presence or absence of filling in the shed, filling replenishing controlling means adapted to be actuated when filling is absent on a detecting beat, and means for controlling loom operation, comprising a member and its actuating devices for causing said member to move from normal to a secondary position on the detecting movement when filling is first absent and to a third position on the next detecting movement whether filling be present or not, and to initial position upon presence of filling on the succeeding detecting movement.

9. In a loom of the character described, the combination of means for detecting the presence or absence of filling, filling replenishing controlling means adapted to be actuated upon the detecting of filling absence, a rider, a rider hammer and a finger, means for causing the rider hammer and finger to move the rider from normal to a secondary position on a first absence of filling, to a third position whether filling be present or not on the next detecting movement, and either to a position for effecting loom stoppage should filling be absent on the succeeding detecting movement or back to normal position in case filling is present on such detecting movement.

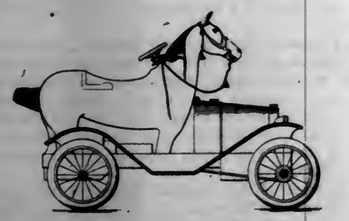
10. In a loom of the character described, the combination of means for detecting the presence or absence of filling, filling replenishing controlling means adapted to be actuated upon the detecting of filling absence, a loosely mounted rider, a rider hammer and a finger, means for causing the rider hammer and finger to move the rider from normal to a secondary position on a first absence of filling, to a third position whether filling be present or not on the next detecting movement, and either to a position for effecting loom stoppage should filling be absent on the succeeding detecting movement or back to normal position in case filling is present on such detecting movement.

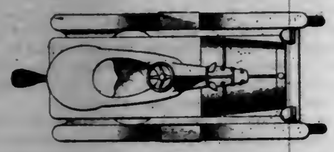
11. In a loom of the character described, the combination of means for detecting the presence or absence of

filling in the shed, filling replenishing controlling means adapted to be actuated when filling is absent on a detecting beat, a rider having a cam portion, a rider lifter having a coöperating portion, and a rider hammer and finger for acting upon the rider to cause it to effect loom stoppage on the occurrence of filling absence on two alternate detecting beats whether it is absent or not on the intermediate beat.

DESIGNS.

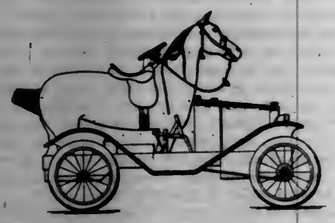
50,373. AUTOMOBILE. FRANK M. ARCHER, Brookline, Mass., assignor to The Moxie Company, Boston, Mass., a Corporation of Maine. Filed Nov. 21, 1916. Serial No. 132,543. Term of patent 14 years.

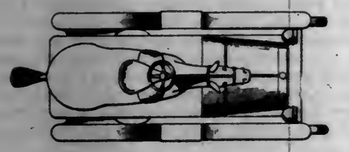




The ornamental design for an automobile, as shown.

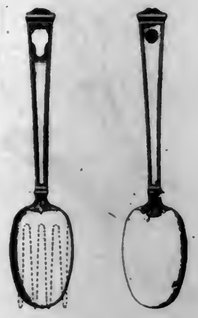
50,374. AUTOMOBILE. FRANK M. ARCHER, Brookline, Mass., assignor to The Moxie Company, Boston, Mass., a Corporation of Maine. Filed Nov. 21, 1916. Serial No. 132,544. Term of patent 14 years.





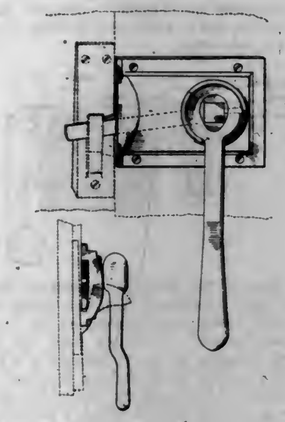
The ornamental design for an automobile, as shown.

50,375. SPOON, FORK, OR SIMILAR ARTICLE. ARTHUR LEROY BARNEY, New York, N. Y., assignor to Tiffany & Co., New York, N. Y., a Corporation of New York. Filed Aug. 24, 1916. Serial No. 116,745. Term of patent 14 years.



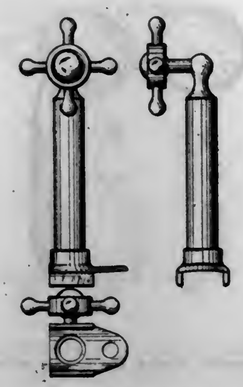
The ornamental design for a spoon, fork or similar article, as shown.

50,376. LOCK-CASING AND HANDLE. ALBERT H. EHRLICH, St. Joseph, Mo. Filed Dec. 9, 1915. Serial No. 66,018. Term of patent 7 years.



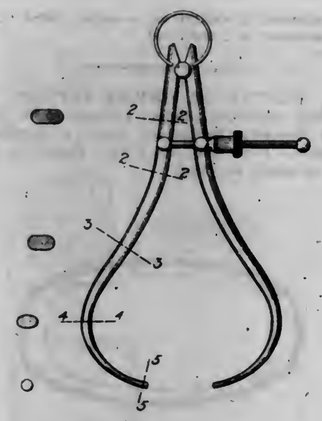
The ornamental design for a lock-casing and handle, as shown.

50,377. ARM AND CLAMP FOR AUTOSCOPES. FREDERICK W. EHRLICH, Newark, N. J. Filed Sept. 27, 1916. Serial No. 122,576. Term of patent 7 years.



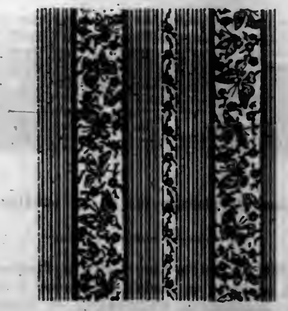
The ornamental design for an arm and clamp for autoscopes as shown.

50,378. CALIPERS. EMORY E. ELLIS, Orange, Mass., assignor to Union Caliper Company, Orange, Mass. Filed Mar. 9, 1914. Serial No. 823,627. Term of patent 14 years.



The ornamental design for calipers as shown.

50,379. TEXTILE FABRIC. EDWARD E. EMMERICH, Park Ridge, Ill., assignor to Chas. Emmerich and Co., Chicago, Ill., a Corporation of Illinois. Filed Nov. 28, 1916. Serial No. 133,081. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

50,380. TIRE-TREAD. WILLIAM D. FREESE, Akron, Ohio. Filed Sept. 12, 1916. Serial No. 119,775. Term of patent 14 years.





The ornamental design for a tire tread, as shown.

50,381. COMBINATION-TOOL. GLENN W. FUNK, Jeromesville, Ohio. Filed Apr. 8, 1916. Serial No. 90,006. Term of patent 14 years.



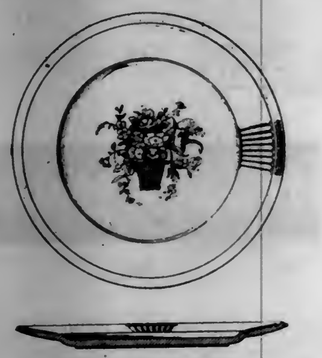
The ornamental design for a combination tool, as shown.

50,382. TOY BANKING-ROOM. CHALMERS LARISE GLENN, Winston-Salem, N. C., assignor to Buck & Glenn, Inc., Winston-Salem, N. C., a Corporation of North Carolina. Filed Nov. 24, 1916. Serial No. 133,262. Term of patent 7 years.



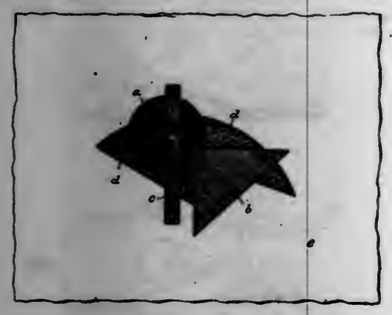
The ornamental design for a toy banking room, as shown.

50,383. DISH. JOHN EDWARD GOODWIN, Stoke-upon-Trent, England, assignor to Josiah Wedgwood & Sons, Lt'd., Etruria, England, a Corporation of Great Britain. Filed Dec. 16, 1916. Serial No. 137,469. Term of patent 7 years.



The ornamental design for a dish, substantially as shown.

50,384. TEXTILE FABRIC. EUGENE IRVING HANSON, New Rochelle, N. Y., assignor to H. B. Mallinson & Co., a Firm composed of Hiram Royal Mallinson and E. Irving Hanson, New York, N. Y. Filed Sept. 28, 1916. Serial No. 121,883. Term of patent 3½ years.



The design for a textile fabric substantially as shown and described.

50,385. PAIR OF EYEGLASSES. REGINALD A. HECKROTH, Delhi, N. Y. Filed Nov. 10, 1916. Serial No. 130,678. Term of patent 14 years.



The ornamental design for a pair of eyeglasses, as shown.

50,386. PAPER SHEET OR SIMILAR ARTICLE. WILLIAM D. HENRY, Manhasset, N. Y. Filed Nov. 5, 1914. Serial No. 870,520. Term of patent 3½ years.



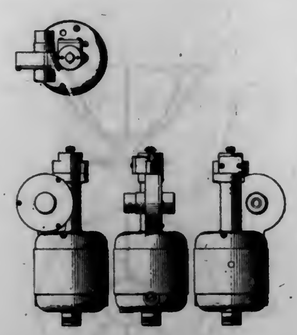
The ornamental design for a paper sheet or similar article as shown and described.

50,387. PLATTER OR SIMILAR ARTICLE. GEORGE P. ITTIG, Bridgeport, Conn., assignor to W. D. Smith Silver Company, Bridgeport, Conn., a Corporation of Delaware. Filed July 10, 1916. Serial No. 108,479. Term of patent 3½ years.



The ornamental design for a platter or similar article, substantially as shown.

50,388. CASING FOR WINDING ATTACHMENTS FOR TALKING-MACHINES. JOSEPH W. JONES, Pelham, N. Y., assignor to Jones Motrola, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 4, 1916. Serial No. 82,257. Term of patent 14 years.



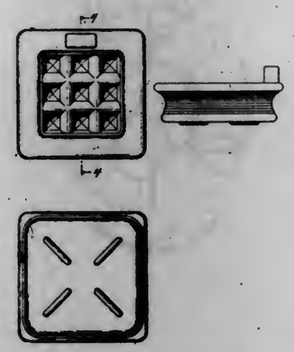
The ornamental design for a casing for winding attachments for talking machines, as shown.

50,389. JAR-RING. CLARENCE W. JOSLIN, Cleveland, Ohio, assignor to Mechanical Rubber Company, a Corporation of New Jersey. Filed July 6, 1915. Serial No. 38,827. Term of patent 14 years.



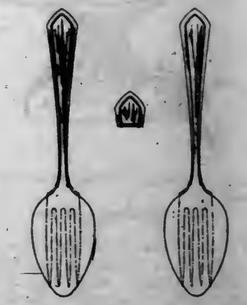
The ornamental design for a jar ring, as shown.

50,390. ASH-TRAY. FREDERICK L. KEPPLER, New York, N. Y. Filed Feb. 10, 1916. Serial No. 77,584. Term of patent 14 years.



An ornamental design for an ash tray as shown.

50,391. SPOON, FORK, OR SIMILAR ARTICLE. ROBERT R. KINTZ, Meriden, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Jan. 6, 1917. Serial No. 141,048. Term of patent 14 years.



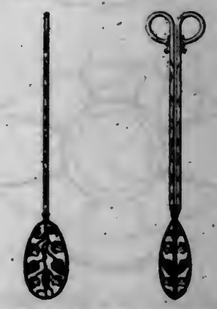
The ornamental design for a spoon, fork or similar article, as shown.

50,392. SIGN-POST. WALTER H. LIENESCH, Chicago, Ill. Filed Dec. 21, 1916. Serial No. 138,266. Term of patent 7 years.



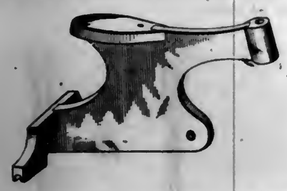
The ornamental design for a sign post, as shown.

50,393. TOASTING-SPOON. NELLIE MADSON, Iriquois, S. D. Filed Dec. 5, 1916. Serial No. 135,279. Term of patent 7 years.



The ornamental design for a toasting spoon as shown.

50,394. FRAME OF A CHILD'S VEHICLE. ALBERT T. MANCHESTER, North Providence, R. I. Filed July 28, 1916. Serial No. 111,950. Term of patent 7 years.



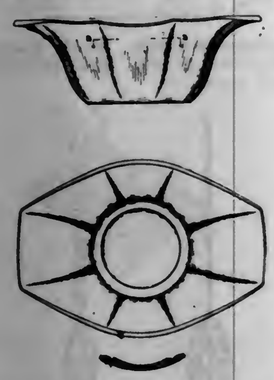
The ornamental design for the frame of a child's vehicle, as shown.

50,395. BOTTLE. CLARENCE M. MCCLURE, Detroit, Mich., assignor to Frederick Stearns & Co., Detroit, Mich., a Corporation of Michigan. Filed Aug. 21, 1916. Serial No. 116,209. Term of patent 14 years.



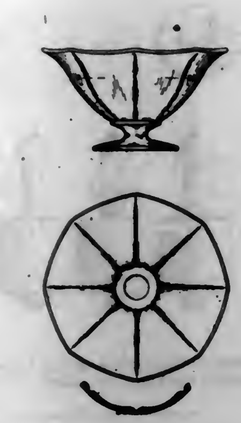
The ornamental design for a bottle, substantially as shown.

50,396. GLASS VESSEL. JOHN E. MILLER, Washington, Pa., assignor to The Duncan & Miller Glass Company, Washington, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1917. Serial No. 142,761. Term of patent 7 years.



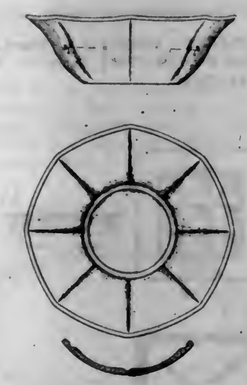
The ornamental design for a glass vessel, substantially as shown.

50,397. GLASS VESSEL. JOHN E. MILLER, Washington, Pa., assignor to The Duncan & Miller Glass Company, Washington, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1917. Serial No. 142,762. Term of patent 7 years.



The ornamental design for a glass vessel, substantially as shown.

50,398. GLASS VESSEL. JOHN E. MILLER, Washington, Pa., assignor to The Duncan & Miller Glass Company, Washington, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1917. Serial No. 142,763. Term of patent 7 years.



The ornamental design for a glass vessel, substantially as shown.

50,399. GLASS VESSEL. JOHN E. MILLER, Washington, Pa., assignor to The Duncan & Miller Glass Company, Washington, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1917. Serial No. 142,764. Term of patent 7 years.



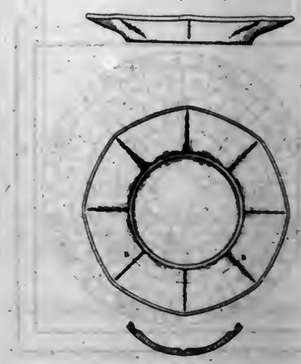
The ornamental design for a glass vessel, substantially as shown.

50,400. GLASS VESSEL. JOHN E. MILLER, Washington, Pa., assignor to The Duncan & Miller Glass Company, Washington, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1917. Serial No. 142,765. Term of patent 7 years.



The ornamental design for a glass vessel, substantially as shown.

50,401. GLASS PLATE. JOHN E. MILLER, Washington, Pa., assignor to The Duncan & Miller Glass Company, Washington, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1917. Serial No. 142,766. Term of patent 7 years.



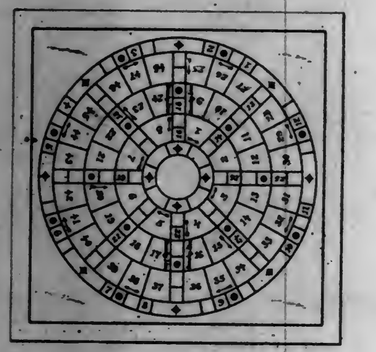
The ornamental design for a glass plate, substantially as shown.

50,402. GOBLET. JOHN E. MILLER, Washington, Pa., assignor to The Duncan & Miller Glass Company, Washington, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1917. Serial No. 142,767. Term of patent 7 years.



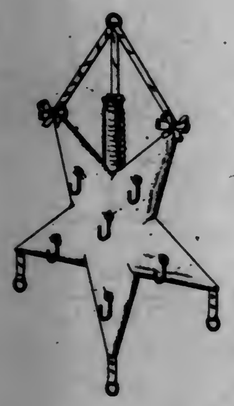
The ornamental design for a goblet, substantially as shown.

50,403. GAME-BOARD. WILLIAM WARREN PLIMPTON, Providence, R. I. Filed Apr. 29, 1916. Serial No. 94,505. Term of patent 7 years.



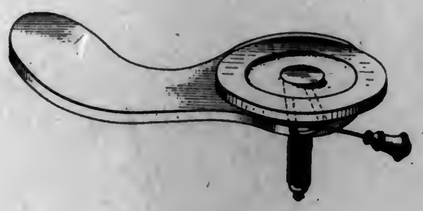
The ornamental design for a game-board as shown.

50,404. ARTICLE-HOLDER. JESSE RAHN, Florence, Kans. Filed Dec. 11, 1916. Serial No. 136,361. Term of patent 14 years.



The ornamental design for an article holder, as shown.

50,405. TOY. ANDREW SÁNDOR, New York, N. Y. Filed Feb. 16, 1916. Serial No. 78,770. Term of patent 3½ years.



The ornamental design for a toy, as shown.

50,406. AUTOMOBILE-RADIATOR. CONOVER THOMAS SILVER, New York, N. Y. Filed Dec. 1, 1916. Serial No. 134,527. Term of patent 14 years.



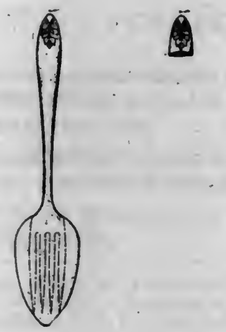
The ornamental design for an automobile radiator as shown.

50,407. HAMMER-HEAD. JOSEPH J. SPRENGER and LUDVIG SORENSEN, Indianapolis, Ind. Filed June 10, 1916. Serial No. 103,037. Term of patent 3½ years.



The ornamental design for a hammer head, as shown.

50,408. SPOON, FORK, OR SIMILAR ARTICLE. SAMUEL STOHR, Meriden, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Jan. 6, 1917. Serial No. 141,050. Term of patent 14 years.



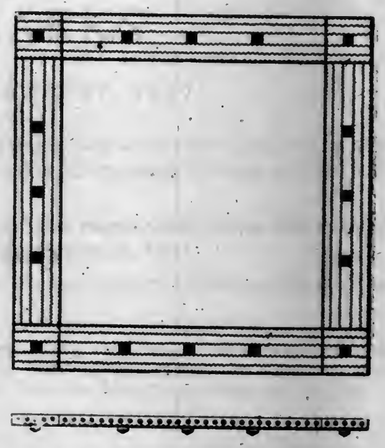
The ornamental design for a spoon, fork or similar article, as shown.

50,409. TOY. ESTHER H. SWETLAND, North Tonawanda, N. Y. Filed Jan. 6, 1917. Serial No. 141,052. Term of patent 7 years.



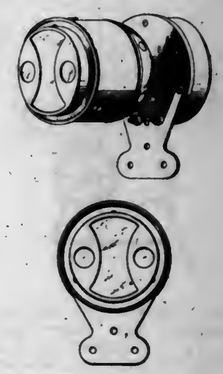
The ornamental design for a toy, as shown.

50,410. PICTURE-FRAME. JOHN TIRPAK, Detroit, Mich. Filed Jan. 5, 1917. Serial No. 140,836. Term of patent 7 years.



The ornamental design for a picture frame, as shown.

50,411. AUTOMOBILE-SIGNAL. DICK B. WILLIAMS, New Orleans, La., assignor to L. Frank & Company, New Orleans, La., a Copartnership composed of Leon Frank and Leonard Hochstein. Filed Dec. 13, 1916. Serial No. 136,798. Term of patent 14 years.



The ornamental design for an automobile signal as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 27, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 76,004. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) LINDENHURST MANUFACTURING CO., Lindenhurst, N. Y. Filed Feb. 18, 1914.



Particular description of goods.—Buttons.
Claims use since Feb. 10, 1902.

Ser. No. 81,438. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) STAR FUSE CO., INC., New York, N. Y. Filed Sept. 24, 1914.



Particular description of goods.—Electric Fuses and Cartridges.
Claims use for the past seven months.

Ser. No. 83,532. (CLASS 33. GLASSWARE.) F. A. HARDY & Co., Chicago, Ill. Filed Dec. 26, 1914.

DALITEGLAS

Particular description of goods.—Manufactured Glass—Namely, Lenses for Lanterns.
Claims use since Nov. 1, 1914.

Ser. No. 86,072. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN T. STANLEY CO., INC., New York, N. Y. Filed Apr. 20, 1915.



STANLEY'S FLYER

Particular description of goods.—Soap.
Claims use since March, 1915.

Ser. No. 87,611. (CLASS 39. CLOTHING.) LINENWEAR HOSIERY COMPANY INC., Clifton Heights, Pa. Filed June 26, 1915.



No claim being made to the exclusive right to the use of the word "Linenwear" as a trade-mark apart from the mark shown in the drawing.
Particular description of goods.—Hosiery.
Claims use since on or about July 1, 1908.

Ser. No. 91,349. (CLASS 32. FURNITURE AND UPHOLSTERY.) LUNDBORG COMPANY, New York, N. Y. Filed Dec. 9, 1915.

Jiffy

The trade-mark "Jiffy."
Particular description of goods.—Display-Stands for Exhibiting Perfumery in Bottles and Other Articles for Sale.
Claims use since the 4th day of December, 1915.

Ser. No. 91,885. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK WILLIAM RICHARDSON, New York, N. Y., assignor to Richelow Mfg. Co., Inc., New York, N. Y., a Corporation of New York. Filed Dec. 10, 1915.

HANDIHEAT

Particular description of goods.—Solidified Alcohol for Fuel Purposes.
Claims use since Dec. 7, 1915.

Ser. No. 91,421. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE GIBSON COMPANY, Indianapolis, Ind. Filed Dec. 18, 1915.

SOLAR

Particular description of goods.—Wheel-Rims, Tire-Holders, Seat-Covers, Bumpers, and Fenders.
Claims use since Aug. 15, 1915.

Ser. No. 91,937. (CLASS 32. FURNITURE AND UPHOLSTERY.) LYON & HEALY, Chicago, Ill. Filed Jan. 5, 1916.

LION HEAD

Particular description of goods.—Piano Benches and Stools and Music-Cabinets.
Claims use since Sept. 24, 1915.

Ser. No. 92,065. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM E. MARTIN, Chicago, Ill. Filed Jan. 11, 1916. Under ten-year proviso.

METALINE



Particular description of goods.—Metal-Polish.
Claims use since the year 1887.

Ser. No. 92,100. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HARRY H. CHANDLER, New York, N. Y. Filed Jan. 13, 1916.

Pulvs

Particular description of goods.—A Valve-Grinding Compound.
Claims use since Apr. 20, 1907.

Ser. No. 92,241. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RAYMOND M. GROFF, Lancaster, Pa. Filed Jan. 19, 1916.

Wheat Meats

Particular description of goods.—A Cereal Breakfast Food.
Claims use since Nov. 4, 1914.

Ser. No. 92,954. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Feb. 18, 1916.

Mr. Jack

Particular description of goods.—A Newspaper-Section.
Claims use since Oct. 4, 1903.

Ser. No. 93,041. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) JOHN C. DEAGAN, Chicago, Ill., assignor to J. C. Deagan Musical Bells, Chicago, Ill., a Corporation of Illinois. Filed Feb. 23, 1916.

UNA-FON

Particular description of goods.—Musical Instruments of the Xylophone Type Having Metal or Wooden Bars.
Claims use since May 1, 1913.

Ser. No. 93,504. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MACHINERY MERCHANTS, INC., New York, N. Y. Filed Mar. 13, 1916.

HERCULES

Particular description of goods.—Lathes.
Claims use since December, 1915.

Ser. No. 94,248. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JAMES G. CLEDON, Dixon, Ill. Filed Apr. 8, 1916.

Limello

Particular description of goods.—Carbonated Soft Drinks.
Claims use since June 1, 1915.

Ser. No. 94,881. (CLASS 39. CLOTHING.) W. M. FINCK & COMPANY, Detroit, Mich. Filed Apr. 18, 1916.

"THEY WEAR LIKE A PIGS NOSE"

Particular description of goods.—Men's Overalls, Jackets, Trousers, Coats, and Work-Shirts.
Claims use since 1902.

Ser. No. 95,759. (CLASS 37. PAPER AND STATIONERY.) THE RAND COMPANY, North Tonawanda, N. Y. Filed June 9, 1916.

Rand

Particular description of goods.—Indicators and Index Devices for Listing Names of Persons, Things, or Other Data and for Listing or Filing Papers, Card-Indexes, Separate Index and Balance Books; Guides for Indexes and Files; Indexed Checked Sorters; and Indexed Files.
Claims use since 1892.

Ser. No. 95,769. (CLASS 37. PAPER AND STATIONERY.) AMERICAN PAPETERIE COMPANY, Albany and New York, N. Y., Chicago, Ill., and San Francisco, Cal. Filed June 10, 1916.

HARMONY

Particular description of goods.—Writing-Paper.
Claims use since Apr. 22, 1911.

Ser. No. 96,002. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GENERAL CHEMICAL COMPANY, New York, N. Y. Filed June 20, 1916.

SOFOS

Particular description of goods.—Effervescent Salt.
Claims use since Sept. 11, 1912.

Ser. No. 96,018. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) E. P. JOHNSON PIANO CO., Ottawa, Ill. Filed June 21, 1916.

Artonisan

Particular description of goods.—Talking-Machines.
Claims use since Mar. 1, 1916.

Ser. No. 96,061. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. PFEIFFER MANUFACTURING COMPANY, St. Louis, Mo. Filed June 22, 1916.

Quinarets

Particular description of goods.—Medicinal Preparation in Tablet Form for the Relief of Colds, Coughs, La Grippe, Headache, and Malaria.
Claims use since about 1900.

Ser. No. 96,092. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE STEEL BASKET COMPANY, Cedar Rapids, Iowa. Filed June 23, 1916.

DUPLEX

Particular description of goods.—Shovels, Spades, Handles for Shovels, Spades, and Agricultural Forks.
Claims use since December, 1915.

Ser. No. 96,196. (CLASS 26. MUSICAL INSTRUMENTS AND SUPPLIES.) C. G. CONN, LTD., Elkhart, Ind. Filed June 26, 1916.

NEW WONDER

Particular description of goods.—Wind Instruments, Stringed Instruments, and Percussion Instruments.
Claims use since August, 1914.

Ser. No. 96,844. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

PIG SKIN

Particular description of goods.—Machinery Packing Made Partly of Rubber and Partly of Asbestos.
Claims use since February, 1910.

Ser. No. 96,862. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed July 26, 1916.



Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Feb. 19, 1913.

Ser. No. 96,863. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed July 26, 1916.



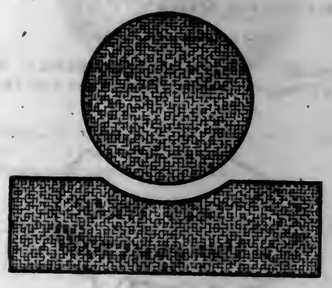
Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Jan. 10, 1898.

Ser. No. 97,227. (CLASS 37. PAPER AND STATIONERY.) MATTHEW TINKER, Baltimore, Md. Filed Aug. 9, 1916. Under ten-year proviso.

"TINKER" DELIVERY SYSTEM

Particular description of goods.—Rubber-Stamp Outfit and Inking-Pad Combined.
Claims use since January, 1894.

Ser. No. 97,671. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio. Filed Aug. 28, 1916.



The disk-shaped and rectangular figures of which trade-mark are colored yellow.
Particular description of goods.—Dry and Ready-Mixed Paints, Driers, Enamels, Stains, Wall-Paints, Lacs, Fillers, and Varnishes.
Claims use since June, 1909.

Ser. No. 97,961. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) C. B. WOODWORTH SONS CORPORATION, Rochester, N. Y. Filed Sept. 12, 1916.

GARDEN FRAGRANCE

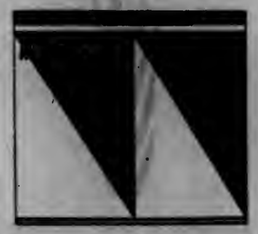
The trade-mark comprising the words "Garden Fragrance."
Particular description of goods.—Perfumes, Toilet Waters, Face-Powder, Talcum Powder, Rouge, Toilet-Cream, Sachet-Powder, Smelling-Salts, Bath-Salts, Nail-Dressing, and Liquid Cuticle and Stain Remover.
Claims use since Jan. 5, 1916.

Ser. No. 98,067. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VIS VITAE COMPANY, INC., Portland, Oreg. Filed Sept. 18, 1916.

VIS VITAE

Particular description of goods.—A Preparation for External Application Indicated in the Treatment of Rheumatism.
Claims use since Feb. 11, 1916.

Ser. No. 98,148. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNIVERSITY CHEMICAL CO., Philadelphia, Pa. Filed Sept. 21, 1916.



The background is made up of sections forming a serrated effect.
Particular description of goods.—Tooth-Powder.
Claims use since July, 1913.

Ser. No. 98,173. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANK WASKOW, Chicago, Ill. Filed Sept. 22, 1916.

GLOVERVALLEY

Particular description of goods.—Butter.
Claims use since the month of December, 1906.

Ser. No. 98,370. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MORRIS AND COMPANY, Chicago, Ill. Filed Oct. 2, 1916.

COLINA

Particular description of goods.—Pork, and Particularly for Pork Cured with Dry Salt and Plain Pickle.
Claims use since about the 1st day of March, 1913.

Ser. No. 98,439. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J., and New York, N. Y. Filed Oct. 5, 1916.

MESCO

Particular description of goods.—Electrically-Operated Therapeutic Apparatus and Appliances and Parts and Attachments Therefor—Namely, Electric Therapeutic Vibrators and Their Massage Implements and Appliances, Static Electro-Therapeutic Generators and Their Electrode Applicators and Parts and Attachments Therefor, Together with Electric Hair-Brushes, Scalp-Treaters, Hand, Arm, Wrist, Chest, Stomach, Back, Spine, Leg, Ankle, Foot, and Other Applicators for Bodily Treatment.
Claims use since November, 1905.

Ser. No. 98,532. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARRY W. SLOAT, Chicago, Ill. Filed Oct. 9, 1916.



Particular description of goods.—Cakes.
Claims use since July 26, 1916.

Ser. No. 98,637. (CLASS 11. INKS AND INKING MATERIALS.) ROKO MANUFACTURING CO., Denver, Colo. Filed Oct. 13, 1916.

ROKO

Particular description of goods.—Compositions for Use with Printers' and Lithographers' Inks.
Claims use since Sept. 25, 1916.

Ser. No. 98,839. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed Oct. 23, 1916.

PHYBUR

Particular description of goods.—A Rubber Composition in Sheet Form.
Claims use since October, 1914.

Ser. No. 98,898. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ROBERT M. CALLAWAY, Atlanta, Ga., assignor to Wunda-lusta Company of America, Atlanta, Ga., a Corporation of Georgia. Filed Oct. 26, 1916.

Wunda-lusta

Particular description of goods.—A Liquid Cleansing Compound.
Claims use since Oct. 18, 1916.

Ser. No. 99,164. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM A. ELLIOTT, Brockton, Mass. Filed Nov. 8, 1916.



Particular description of goods.—Shoe-Polish.
Claims use since July 1, 1916.

Ser. No. 99,362. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE THOMAS ADVERTISING SERVICE, Jacksonville, Fla. Filed Nov. 17, 1916.



Particular description of goods.—Pure Juice of Grape-Fruit or Pomelo.
Claims use since Sept. 15, 1916.

Ser. No. 99,374. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GLENCREST FOOD CO., Chicago, Ill. Filed Nov. 18, 1916.

GLENCREST

Particular description of goods.—Spaghetti, Apple-Butter, Mince-Meat, and Marmalades.
Claims use since Oct. 1, 1911.

Ser. No. 99,560. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE AUTOYER COMPANY, Oakville, Conn. Filed Nov. 27, 1916.



Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since on or about June 1, 1916.

Ser. No. 99,633. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SAVE-O. CO., INC., Hartford, Conn. Filed Nov. 29, 1916.

SAVE-O

Particular description of goods.—Chemical Compound for Preserving Rubber.
Claims use since Oct. 28, 1916.

Ser. No. 99,655. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GIUSEPPE W. GUIDI, New York, N. Y. Filed Dec. 1, 1916.

ITTIOLO

Particular description of goods.—An Oleaginous Extract from Petrified Fish, Which is Used as an Antiseptic.
Claims use since Nov. 1, 1916.

Ser. No. 99,672. (CLASS 38. PRINTS AND PUBLICATIONS.) MISHA APPELBAUM, New York, N. Y. Filed Dec. 2, 1916.



Particular description of goods.—Printed Folders and Magazines Issued Monthly.
Claims use since October, 1916.

Ser. No. 99,748. (CLASS 39. CLOTHING.) JOBBERS OVERALL CO. INC., Lynchburg, Va. Filed Dec. 6, 1916.

BLUE BUCKLE

No claim is made to the exclusive use of a blue buckle on the goods described or to the representation of a buckle apart from the words "Blue Buckle."
Particular description of goods.—Overalls, Overall Coats and Pants.
Claims use since Jan. 1, 1912.

Ser. No. 99,761. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ERNEST HUNOLD, Providence, R. I. Filed Dec. 7, 1916.

HUNCO

The trade-mark consists of the coined word "Hunco."
Particular description of goods.—Ice-Skates and Parts Thereof.
Claims use since about Nov. 5, 1914.

Ser. No. 99,794. (CLASS 5. ADHESIVES.) M. D. KNOWLTON COMPANY, Rochester, N. Y. Filed Dec. 8, 1916.



Particular description of goods.—Staying and Fastening Material—Namely, Adhesively-Coated Strips of Paper and Textile Material.
Claims use since as early as the year 1892.

Ser. No. 99,808. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALICE DE COURCY, Cincinnati, Ohio. Filed Dec. 9, 1916.

De Mulco

Particular description of goods.—A Medicinal Preparation, Being a Remedy for Sore Throat, Pyorrhea, Catarrh, and Hay-Fever; Also a Mouth-Wash.
Claims use since Oct. 15, 1915.

Ser. No. 99,831. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN MANGANESE STEEL COMPANY, Chicago, Ill. Filed Dec. 11, 1916.

AMC

Particular description of goods.—Steel, Steel Castings, and Particularly Manganese-Steel Castings.
Claims use since Nov. 22, 1916.

Ser. No. 99,876. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NÁYA COMPANY, New York, N. Y. Filed Dec. 12, 1916.

157 NÂYA

Particular description of goods.—A Hair-Tonic.
Claims use since Dec. 8, 1916.

Ser. No. 99,937. (CLASS 39. CLOTHING.) HIRSH, WICKWIRE COMPANY, Chicago, Ill. Filed Dec. 14, 1916.

STAYUNG

Particular description of goods.—Men's and Youths' Coats, Waistcoats, Trousers, and Overcoats.
Claims use since about Nov. 15, 1916.

Ser. No. 99,951. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE WARREN MANUFACTURING COMPANY, Warren, Md. Filed Dec. 14, 1916. Under ten-year proviso.

WARREN MILLS

Particular description of goods.—Cotton Duck, Cotton Canvas, and Cotton Yarn Spun or Woven in Textile Fabrics.
Claims use since Jan. 1, 1891.

Ser. No. 100,068. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM J. PEPPETT, Boston, Mass. Filed Dec. 20, 1916.

MUSTEASE

Particular description of goods.—Colds in the Chest, Neuritis, Rheumatism, Neuralgia, Pleurisy, Lumbago, Pains in the Back, Chilblains, Sore Muscles, and Sore Throat.
Claims use since January, 1915.

Ser. No. 100,076. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) STANDARD WOVEN FABRIC COMPANY, Walpole, Mass. Filed Dec. 20, 1916.

STANWAL

Particular description of goods.—Rubber Matting.
Claims use since Dec. 9, 1916.

Ser. No. 100,080. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) KLAUBER BROS. & CO., New York, N. Y. Filed Dec. 21, 1916.

KABECO

The trade-mark consists of the word "Kabeco," and in the use of the mark the body of the letters comprising the word is printed in blue.
Particular description of goods.—Piece Goods of Wool, Cotton, Linen, Silk, and Combinations Thereof.
Claims use since Jan. 1, 1908.

Ser. No. 100,162. (CLASS 39. CLOTHING.) ELDER MANUFACTURING CO., St. Louis, Mo. Filed Dec. 26, 1916.

THE BIG 1

Particular description of goods.—Men's and Boys' Dress, Negligée, and Work Shirts.
Claims use since Oct. 1, 1916.

Ser. No. 100,205. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES A. OWEN, Syracuse, N. Y. Filed Dec. 27, 1916.

EMP-FER-LAC

Particular description of goods.—Dairy-Culture.
Claims use since July 4, 1915.

Ser. No. 100,234. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) DETWILLER & STREET FIREWORKS MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 29, 1916.

"O YOU KID"

Particular description of goods.—Fireworks.
Claims use since on or about the 1st day of October, 1909.

Ser. No. 100,235. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) DETWILLER & STREET FIREWORKS MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 29, 1916.

CORKERS

Particular description of goods.—Fireworks.
Claims use since on or about the 1st day of April, 1883.

Ser. No. 100,236. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) DETWILLER & STREET FIREWORKS MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 29, 1916.

Boomer

Particular description of goods.—Fireworks.
Claims use since on or about the 1st day of October, 1909.

Ser. No. 100,238. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) DETWILLER & STREET FIREWORKS MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 29, 1916.

BABY

Particular description of goods.—Fireworks.
Claims use since on or about the 1st day of April, 1883.

Ser. No. 100,240. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE LOUIS HILFER COMPANY, Chicago, Ill. Filed Dec. 29, 1916.

SECURITY

Particular description of goods.—Matches.
Claims use since on or about the 1st day of March, 1907.

Ser. No. 100,246. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN BARINO, Chicago, Ill. Filed Dec. 30, 1916.

BETO

Particular description of goods.—A Medical Preparation for Internal Use for the Treatment of Diabetes.
Claims use since the early part of June, 1916.

Ser. No. 100,247. (CLASS 10. FERTILIZERS.) CORONET PHOSPHATE COMPANY, New York, N. Y. Filed Dec. 30, 1916.

PARAGON

Particular description of goods.—Pebble Phosphate.
Claims use since June 1, 1915.

Ser. No. 100,299. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBERT E. MCCAIN, Chicago, Ill. Filed Jan. 2, 1917.



The portrait being that of the applicant.
Particular description of goods.—A Cooling, Healing, and Odor-Destroying Compound for the Feet.
Claims use since July 17, 1916.

Ser. No. 100,308. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. RAUH & SONS FERTILIZING COMPANY, Indianapolis, Ind. Filed Jan. 2, 1917.

MEATONE

Particular description of goods.—A Stock and Poultry Food Comprising the Bones and Flesh of Animals, Cooked, Sterilized, and Compressed into a Hard Dry Cake and then Ground Fine for a Stock Food and Coarser for a Poultry Food.
Claims use since Nov. 1, 1916.

Ser. No. 100,374. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE ESTATE OF GEORGE PABST, DEC'D, Philadelphia, Pa. Filed Jan. 5, 1917. Under ten-year Proviso.



Particular description of goods.—Window-Shade Cloths of Sized and Oil-Painted Fabrics.
Claims use since about Jan. 1, 1895.

Ser. No. 100,375. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE ESTATE OF GEORGE PABST, DEC'D, Philadelphia, Pa. Filed Jan. 5, 1917. Under ten-year proviso.

LIBERTY BELL

Particular description of goods.—Window-Shade Cloths of Sized and Oil-Painted Fabrics.
Claims use since about Jan. 1, 1895.

Ser. No. 100,414. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALEXANDER & CALLEN, Los Angeles, Cal. Filed Jan. 8, 1917.

Ri-pola

Particular description of goods.—Stuffed Ripe Olives and Ripe Olives.
Claims use since about December, 1916.

Ser. No. 100,418. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BRUNDAGE BROTHERS COMPANY, Toledo, Ohio. Filed Jan. 8, 1917.



Particular description of goods.—Coffee, Tea, Salted Peanuts, Sugar Peanuts, Peanut-Oil, Peanut-Butter, and Sugar.
Claims use since Oct. 1, 1916.

Ser. No. 100,427. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE R. HARDIE, New York, N. Y. Filed Jan. 8, 1917.



Particular description of goods.—Condensed Milk.
Claims use since Nov. 30, 1916.

Ser. No. 100,469. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOOTH FISHERIES COMPANY, Chicago, Ill. Filed Jan. 9, 1917.



Particular description of goods.—Canned Salmon.
Claims use since May 10, 1909.

Ser. No. 100,470. (CLASS 46, FOODS AND INGREDIENTS OF FOODS.) BOOTH FISHERIES COMPANY, Chicago, Ill. Filed Jan. 9, 1917.



Particular description of goods.—Canned Salmon.
Claims use since May 10, 1909.

Ser. No. 100,473. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

NORTH STAR

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,475. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

GLADE

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,476. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

ROLLNECK

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,477. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

SEMPER IDEM

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,478. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

OPTIMUS

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,479. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

ICE

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,480. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

BABBETH

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,481. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

NO. 15

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,482. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

SATURN

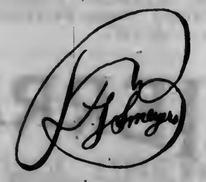
Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,484. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

SPONGE

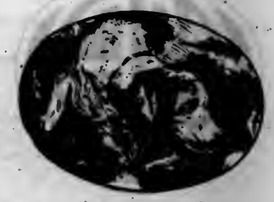
Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,501. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BENJAMIN F. SMEYERS, Troutville, Pa. Filed Jan. 9. 1917.



The trade-mark shown is the facsimile of my signature.
Particular description of goods.—A Preservative for Fruit, Vegetables, and Meats.
Claims use since Nov. 11, 1916.

Ser. No. 100,502. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SPRATT'S PATENT (AMERICA) LIMITED, London, England, and Newark, N. J. Filed Jan. 9, 1917.



Particular description of goods.—Medicines for Dogs, Cats, Rabbits, Fish, Birds, and Poultry.
Claims use since Jan. 1, 1871.

Ser. No. 100,513. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) GEO. L. DEER, New York, N. Y. Filed Jan. 10, 1917.



Particular description of goods.—Moving-Picture Films.
Claims use since Jan. 3, 1917.

Ser. No. 100,514. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) GEO. L. DEER, New York, N. Y. Filed Jan. 10, 1917.



Particular description of goods.—Moving-Picture Films.
Claims use since Jan. 3, 1917.

Ser. No. 100,515. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) GEO. L. DYER, New York, N. Y. Filed Jan. 10, 1917.



Particular description of goods.—Moving-Picture Films.
Claims use since Jan. 3, 1917.

Ser. No. 100,532. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN CHATILLON & SONS, New York, N. Y. Filed Jan. 11, 1917.

THERMOSEAL

Particular description of goods.—Weighing-Scales.
Claims use since Mar. 10, 1915.

Ser. No. 100,533. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE E-ZE PRODUCTS CO., INC., New York, N. Y. Filed Jan. 11, 1917.

Good Night

Particular description of goods.—Cold-Cream.
Claims use since Jan. 6, 1917.

Ser. No. 100,540. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE AMERICAN SUGAR REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 12, 1917.

Par-Pak

Particular description of goods.—Sugar for Use as a Food.
Claims use since Jan. 8, 1917.

Ser. No. 100,566. (CLASS 39. CLOTHING.) THE WARNER BROS. CO., Bridgeport, Conn. Filed Jan. 12, 1917.

Gayety

Particular description of goods.—Corsets.
Claims use since Jan. 6, 1917.

Ser. No. 100,571. (CLASS 39. CLOTHING.) BERLIN FABRIC GLOVE CO. INC., New York, N. Y. Filed Jan. 13, 1917.

"Atlasette"

Particular description of goods.—Fabric Gloves.
Claims use for the past five months.

Ser. No. 100,586. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM A. MOSBY, Marvell, Ark. Filed Jan. 13, 1917.



Particular description of goods.—Candies.
Claims use since Oct. 1, 1916.

Ser. No. 100,601. (CLASS 17. TOBACCO PRODUCTS.) UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y. Filed Jan. 15, 1917.



Particular description of goods.—Cigars.
Claims use since Apr. 4, 1876.

Ser. No. 100,608. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CASTLE BROTHERS, San Francisco, Cal. Filed Jan. 15, 1917.

SIERRA

Particular description of goods.—Dried Apricots, Prunes, Dried Peaches, Dried Pears, Dried Nectarines, Dried Apples, Figs, and Raisins.
Claims use since the year 1904.

Ser. No. 100,610. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CASTLE BROTHERS, San Francisco, Cal. Filed Jan. 15, 1917.

REGREATION

Particular description of goods.—Dried Apricots, Prunes, Dried Peaches, Dried Pears, Dried Nectarines, Dried Pitted Plums, Figs, and Raisins.
Claims use since the year 1904.

Ser. No. 100,613. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CASTLE BROTHERS, San Francisco, Cal. Filed Jan. 15, 1917.

SOUVENIR

Particular description of goods.—Seeded Raisins, Dried Peaches, Pitted Plums, Figs, Dried Nectarines, Prunes, Dried Apricots, and Dried Pears.
Claims use since the year 1905.

Ser. No. 100,618. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FLORIDA FRUIT PRESERVING CO., Jacksonville, Fla. Filed Jan. 15, 1917.

MAR-JEL-ADE

Particular description of goods.—Fruit Jellies, Preserves, and Marmalades.
Claims use since Jan. 5, 1917.

Ser. No. 100,634. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SWEET CANDY CO., Salt Lake City, Utah. Filed Jan. 15, 1917.

Renown

Particular description of goods.—Chocolates.
Claims use since Jan. 5, 1916.

Ser. No. 100,638. (CLASS 39. CLOTHING.) ELMER E. WAGNER, Hazleton, Pa. Filed Jan. 15, 1917.

FULL CREW

Particular description of goods.—Overalls and Jackets.
Claims use since Jan. 1, 1916.

Ser. No. 100,660. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me. Filed Jan. 16, 1917.

NANKEN

Particular description of goods.—Woolen Goods in the Piece.
Claims use since Aug. 23, 1916.

Ser. No. 100,668. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOSEPH FINKELSTEIN & CO., New York, N. Y. Filed Jan. 17, 1917.



Particular description of goods.—Raspberry Brandy.
Claims use since May 1, 1916.

Ser. No. 100,741. (CLASS 17. TOBACCO PRODUCTS.) GEORGE GUND, Cleveland, Ohio. Filed Jan. 19, 1917.

PEP

Particular description of goods.—Smoking-Tobacco.
Claims use since Jan. 6, 1917.

Ser. No. 100,761. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WATERSIDE MILLS, INC., Lowell, Mass. Filed Jan. 19, 1917.

CHAMETTE

Comprising the word "Chamette."
Particular description of goods.—Cotton Piece Goods—viz., Corduroys and Velveteens.
Claims use since Nov. 1, 1916.

Ser. No. 100,785. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TRIPPE, BARKER & CO., New York, N. Y. Filed Jan. 20, 1917.

YOKOMA

Particular description of goods.—Cotton and Linen Piece Goods.
Claims use since about Jan. 9, 1917.

Ser. No. 100,793. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BRUNDAGE BROS. CO., Toledo, Ohio. Filed Jan. 22, 1917.

XRAY

Particular description of goods.—Salted Peanuts, Peanut-Butter, Peanut-Oil, Coffee, Sugar, and Tea.
Claims use since Nov. 1, 1916.

Ser. No. 100,814. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MOUNT VERNON-WOODBERRY MILLS, INCORPORATED, Baltimore, Md. Filed Jan. 22, 1917.



Particular description of goods.—Cotton Duck.
Claims use since 1903.

Ser. No. 100,981. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) E. & Z. VAN RAALTE, New York, N. Y. Filed Jan. 26, 1917.

BO-MALINE

Particular description of goods.—Nettings, Veils, and Veilings in the Piece.
Claims use since the 15th day of October, 1916.

Ser. No. 100,996. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MOUNT VERNON-WOODBERRY MILLS, INCORPORATED, Baltimore, Md. Filed Jan. 27, 1917.

CLIPPER

Particular description of goods.—Cotton Duck.
Claims use since about Jan. 1, 1917.

Ser. No. 100,997. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NIAGARA SILK MILLS, North Tonawanda, N. Y. Filed Jan. 27, 1917.

Shanette

Particular description of goods.—Cotton Goods in the Piece.
Claims use since Jan. 10, 1917.

TRADE-MARK REGISTRATIONS GRANTED

FEBRUARY 27, 1917.

115,569. LEATHER BOOTS AND SHOES. THE ADAMS & FORD COMPANY, Cleveland, Ohio.
Filed November 15, 1916. Serial No. 99,807. PUBLISHED DECEMBER 26, 1916.

115,570. AUTOMOBILE AND BICYCLE TIRES OF RUBBER AND FABRIC. AJAX RUBBER COMPANY, INC., Millbrook, N. Y.
Filed October 24, 1916. Serial No. 98,854. PUBLISHED DECEMBER 26, 1916.

115,571. INVERT-SUGAR FOR USE AS A FOOD. THE AMERICAN SUGAR REFINING COMPANY, Jersey City, N. J., and New York, N. Y.
Filed June 24, 1916. Serial No. 96,101. PUBLISHED DECEMBER 12, 1916.

115,572. GEARS. THE ANDERSON ROLLED GEAR COMPANY, Lakewood, Ohio.
Filed October 20, 1916. Serial No. 98,780. PUBLISHED DECEMBER 26, 1916.

115,573. HATS. ARISTON HAT MFG. CO., Peekskill, N. Y.
Filed December 31, 1915. Serial No. 91,845. PUBLISHED JULY 25, 1916.

115,574. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS. ARMSTRONG BROS. TOOL CO., Chicago, Ill.
Filed November 8, 1916. Serial No. 99,157. PUBLISHED DECEMBER 26, 1916.

115,575. MERCERIZED COTTON FOR LININGS. THE D. H. ARNOLD CO., New York, N. Y.
Filed November 16, 1916. Serial No. 99,318. PUBLISHED DECEMBER 26, 1916.

115,576. UNIVERSAL JOINTS. ARVAC MANUFACTURING COMPANY, Anderson, Ind.
Filed November 6, 1916. Serial No. 99,112. PUBLISHED DECEMBER 26, 1916.

115,577. GRAY IRON METAL CASTINGS. ARVAC MANUFACTURING COMPANY, Anderson, Ind.
Filed November 6, 1916. Serial No. 99,113. PUBLISHED DECEMBER 26, 1916.

115,578. SOAPS. BARCLAY & BARCLAY, New York, N. Y.
Filed July 2, 1913. Serial No. 71,471. PUBLISHED NOVEMBER 18, 1913.

115,579. COMPOSITION FORMED OF SOLID MATERIAL TREATED WITH A COMBUSTIBLE CHEMICAL USED AS FIRE-KINDLER. BARLOW OIL CO., Houston, Tex.
Filed June 6, 1916. Serial No. 95,689. PUBLISHED NOVEMBER 28, 1916.

115,580. INFLAMMATIONS, ERUPTIONS, AND IRRITATIONS OF THE SKIN. LEON BARON, New York, N. Y.
Filed July 29, 1916. Serial No. 96,947. PUBLISHED DECEMBER 26, 1916.

115,581. HORSE, MULE, CATTLE, POULTRY, HOG, AND SHEEP FOOD. THE BIG FOUR MILLING COMPANY, Cleveland, Ohio.
Filed October 26, 1916. Serial No. 98,895. PUBLISHED DECEMBER 12, 1916.

115,582. DISK HARROWS AND LAND-ROLLERS. T. E. BISSELL COMPANY LIMITED, Elora, Ontario, Canada.
Filed July 22, 1916. Serial No. 96,742. PUBLISHED DECEMBER 26, 1916.

115,583. ROTARY PUMPS. BLACKMER ROTARY PUMP CO., Petoskey, Mich.
Filed November 7, 1916. Serial No. 99,145. PUBLISHED DECEMBER 26, 1916.

115,584. PLUSH LAP-ROBES. SIDNEY BLUMENTHAL & CO. INC., New York, N. Y.
Filed November 21, 1916. Serial No. 99,428. PUBLISHED DECEMBER 26, 1916.

115,585. AUTOMOBILE-TIRE PUMPS. BRIDGEPORT BRASS COMPANY, Bridgeport, Conn.
Filed November 10, 1916. Serial No. 99,205. PUBLISHED DECEMBER 26, 1916.

115,586. WEEKLY PUBLICATION. EDGAR W. BRIGGS, San Francisco, Cal.
Filed August 30, 1916. Serial No. 97,701. PUBLISHED DECEMBER 26, 1916.

115,587. SHIRTS. BROWNSTEIN-LOUIS COMPANY, Los Angeles, Cal.
Filed October 14, 1916. Serial No. 98,647. PUBLISHED DECEMBER 26, 1916.

115,588. NERVE MEDICINE. CORDELIA LOUISE CARON-MORIN, Manchester, N. H.
Filed October 7, 1916. Serial No. 98,492. PUBLISHED DECEMBER 26, 1916.

115,589. VAULT-LIGHT PANELS OR SLABS. DAVIS CARPENTER & CO., INC., New York, N. Y.
Filed October 18, 1916. Serial No. 98,745. PUBLISHED DECEMBER 26, 1916.

115,590. SALVES FOR HEALING WOUNDS AND SKIN DISEASES. ARNOLD CARSON, Philadelphia, Pa.
Filed July 10, 1916. Serial No. 96,461. PUBLISHED DECEMBER 26, 1916.

115,591. SMOKING AND CHEWING TOBACCO. CHRISTIAN PEPER TOBACCO CO., St. Louis, Mo.
Filed July 22, 1916. Serial No. 96,760. PUBLISHED DECEMBER 26, 1916.

115,592. STOCK-ALE AND EXTRA PORTER. CONSOLIDATED BOTTLING CO., Newark, N. J.
Filed October 12, 1916. Serial No. 98,590. PUBLISHED DECEMBER 5, 1916.

115,593. NON-ALCOHOLIC CARBONATED TONIC BEVERAGE TO BE SOLD AS A SOFT DRINK. W. B. CRANE & COMPANY, Portland, Oreg.
Filed November 23, 1916. Serial No. 99,498. PUBLISHED DECEMBER 26, 1916.

115,594. PRINTING-MACHINES, AND MORE PARTICULARLY CHECKWRITERS AND CHECK-PROTECTORS. DEFIANCE CHECK WRITER CORPORATION, Rochester, N. Y.
Filed October 30, 1916. Serial No. 98,973. PUBLISHED DECEMBER 26, 1916.

115,595. WRITING-INK AND DRAWING-INK IN BOTH LIQUID AND SOLUBLE TABLET FORM. DE LUXE MFG. CO., Chicago, Ill.
Filed September 8, 1916. Serial No. 97,860. PUBLISHED DECEMBER 26, 1916.

115,596. POLISHING-OILS. HARRISON B. DENTON, Beardstown, Ill.
Filed September 14, 1916. Serial No. 97,984. PUBLISHED DECEMBER 26, 1916.

115,597. CERTAIN NAMED PAINTS AND PAINTERS' SUPPLIES. DURKEE-ATWOOD CO., Minneapolis, Minn.
Filed October 16, 1916. Serial No. 98,684. PUBLISHED DECEMBER 26, 1916.

115,598. TABLETS FOR COUGHS, COLDS, ASTHMATIC AND BRONCHIAL TROUBLES. ECKMAN MANUFACTURING COMPANY, Camden, N. J., and Philadelphia, Pa.
Filed November 6, 1916. Serial No. 99,119. PUBLISHED DECEMBER 26, 1916.

115,599. SALVE USED AS AN EMOLLIENT IN TREATING CERTAIN NAMED AFFECTIONS. FRANK W. S. ELSTROTH, Brooklyn, N. Y.
Filed October 21, 1916. Serial No. 98,804. PUBLISHED DECEMBER 26, 1916.

115,600. WAGONS, BUGGIES, SLEDS, AUTO-TRAILERS, POLE-TRUCKS, TRANSPORTATION-TRUCKS, AND HARROW-CARTS. EMERSON-BRANTINGHAM COMPANY, Rockford, Ill.
Filed September 18, 1916. Serial No. 98,044. PUBLISHED DECEMBER 26, 1916.

115,601. CERTAIN NAMED MEDICAL AND SURGICAL SUPPLIES. THE FAULTLESS RUBBER CO., Ashland, Ohio.
Filed August 19, 1916. Serial No. 97,451. PUBLISHED DECEMBER 26, 1916.

115,602. OLEOMARGARIN. JOHN H. FILBERT, Baltimore, Md.
Filed October 25, 1916. Serial No. 98,878. PUBLISHED DECEMBER 12, 1916.

115,603. CIGARS. EDWARD A. FILENE, Boston, Mass.
Filed October 14, 1916. Serial No. 98,657. PUBLISHED DECEMBER 26, 1916.

115,604. COLORED VARNISH-FINISH. FORT WAYNE DRUG COMPANY, Fort Wayne, Ind.
Filed November 17, 1916. Serial No. 99,346. PUBLISHED DECEMBER 26, 1916.

115,605. RUBBER TIRES OR TIRE-CASINGS WITH SUITABLE STRENGTHENING MATERIAL AND INNER TUBES FOR PNEUMATIC TIRES. THE GENERAL TIRE & RUBBER COMPANY, Akron, Ohio.
Filed November 8, 1916. Serial No. 99,166. PUBLISHED DECEMBER 26, 1916.

115,606. SCOTCH WHISKY. THE GORDON'S DRY GIN CO., LTD., New York, N. Y.
Filed November 23, 1916. Serial No. 99,501. PUBLISHED DECEMBER 26, 1916.

115,607. CERTAIN NAMED FOODS. GUNNS LIMITED, West Toronto, Ontario, Canada.
Filed January 19, 1914. Serial No. 75,285. PUBLISHED NOVEMBER 23, 1915.

115,608. CIGARS. M. A. GUNST & CO., INCORPORATED, Portland, Me., and New York, N. Y.
Filed October 17, 1916. Serial No. 98,718. PUBLISHED DECEMBER 26, 1916.

115,609. COLLARS AND SHIRTS. HALL HARTWELL & CO., Troy, N. Y.
Filed October 18, 1916. Serial No. 98,752. PUBLISHED DECEMBER 26, 1916.

115,610. CLEANING-PASTE FOR REMOVING DIRT AND GREASE AND STAINS FROM CANVAS AND LEATHER SHOES. HART SALES COMPANY, INC., New York, N. Y.
Filed October 9, 1915. Serial No. 89,760. PUBLISHED DECEMBER 26, 1916.

115,611. CERTAIN NAMED ELECTRICAL APPARATUS AND SUPPLIES. THE HAWTHORNE MANUFACTURING COMPANY, INCORPORATED, Bridgeport, Conn.
Filed September 27, 1916. Serial No. 98,254. PUBLISHED DECEMBER 26, 1916.

115,612. CANNED FRUITS AND VEGETABLES. H. C. HEMINGWAY & CO., Syracuse, N. Y.
Filed May 11, 1915. Serial No. 86,541. PUBLISHED SEPTEMBER 14, 1915.

115,613. CERTAIN NAMED RAW FRUITS AND VEGETABLES. WILLIAM HEYSER, Baltimore, Md.
Filed October 9, 1916. Serial No. 98,517. PUBLISHED NOVEMBER 28, 1916.

115,614. SELF-RISING WHEAT-FLOUR. HEZEL MILLING COMPANY, East St. Louis, Ill.
Filed November 4, 1916. Serial No. 99,088. PUBLISHED DECEMBER 12, 1916.

115,615. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. HIKELL MFG. CO., Omaha, Nebr.
Filed April 19, 1916. Serial No. 94,538. PUBLISHED DECEMBER 26, 1916.

115,616. MEN'S, WOMEN'S, AND CHILDREN'S LEATHER BOOTS AND SHOES. ALEXANDER HINCHUK & CO., New York, N. Y.
Filed September 28, 1916. Serial No. 98,292. PUBLISHED DECEMBER 26, 1916.

115,617. BATTERY-JARS. INDIA RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y.
Filed November 17, 1916. Serial No. 99,349. PUBLISHED DECEMBER 26, 1916.

115,618. SCARLET CHROMES IN OIL, BASIC CHROMES IN OIL, WHITE LEAD IN OIL. INTERNATIONAL COLOR & CHEMICAL CO. INC., Detroit, Mich.
Filed November 15, 1915. Serial No. 90,650. PUBLISHED DECEMBER 26, 1916.

115,619. HEATERS AND CAN-DRIERS, BEING ESSENTIALLY PARTS OF DAIRY MACHINES OR EQUIPMENTS. JENSEN CREAMERY MACHINERY COMPANY, New York, N. Y.
Filed October 17, 1916. Serial No. 98,733. PUBLISHED DECEMBER 26, 1916.

115,620. INCLOSED FUSES, INCLOSED-FUSE CUT-OUTS AND CLIPS, CONTACTS, AND BLOCKS. THE JOHNS-PRATT COMPANY, Hartford, Conn.
Filed September 27, 1916. Serial No. 98,260. PUBLISHED NOVEMBER 21, 1916.

115,621. BOOTS AND SHOES OF KID, LEATHER, AND CANVAS. THE KAUT-REITH SHOE COMPANY, Carthage, Mo.
Filed October 30, 1916. Serial No. 98,981. PUBLISHED DECEMBER 26, 1916.

115,622. DRUG SPECIFICALLY DESCRIBED AS SODA MINTS. KELLOGG TOASTED CORN FLAKE COMPANY, Battle Creek, Mich.
Filed November 2, 1916. Serial No. 99,040. PUBLISHED DECEMBER 26, 1916.

115,623. LIME-SOWERS, MANURE-SPREADERS, FERTILIZER-SOWERS. KENTUCKY WAGON MANUFACTURING CO., Louisville, Ky.
Filed November 9, 1916. Serial No. 99,191. PUBLISHED DECEMBER 26, 1916.

115,624. CERTAIN NAMED FURNITURE. THE R. L. KENYON CO., Waukesha, Wis.
Filed October 12, 1916. Serial No. 98,597. PUBLISHED DECEMBER 26, 1916.

115,625. ENAMEL PAINTS. KEYSTONE VARNISH COMPANY, Brooklyn, N. Y.
Filed November 25, 1916. Serial No. 99,551. PUBLISHED DECEMBER 26, 1916.

115,626. ENAMEL PAINTS. KEYSTONE VARNISH COMPANY, Brooklyn, N. Y.
Filed November 25, 1916. Serial No. 99,552. PUBLISHED DECEMBER 26, 1916.

115,627. CANDY, PARTICULARLY CARAMEL CANDY. KIBBE BROS. COMPANY, Springfield, Mass.
Filed October 2, 1916. Serial No. 98,359. PUBLISHED DECEMBER 19, 1916.

115,628. CANDY, PARTICULARLY CARAMEL CANDY. KIBBE BROS. COMPANY, Springfield, Mass.
Filed October 2, 1916. Serial No. 98,360. PUBLISHED DECEMBER 19, 1916.

115,629. CANDY, PARTICULARLY CARAMEL CANDY. KIBBE BROS. COMPANY, Springfield, Mass.
Filed October 2, 1916. Serial No. 98,361. PUBLISHED DECEMBER 19, 1916.

115,630. CANDY, PARTICULARLY CARAMEL CANDY. KIBBE BROS. COMPANY, Springfield, Mass.
Filed October 2, 1916. Serial No. 98,362. PUBLISHED DECEMBER 19, 1916.

115,631. CANDY, PARTICULARLY CARAMEL CANDY. KIBBE BROS. COMPANY, Springfield, Mass.
Filed October 2, 1916. Serial No. 98,363. PUBLISHED DECEMBER 19, 1916.

115,632. CANDY, PARTICULARLY CARAMEL CANDY. KIBBE BROS. COMPANY, Springfield, Mass.
Filed October 2, 1916. Serial No. 98,364. PUBLISHED DECEMBER 19, 1916.

115,633. OVERALLS, JUMPERS, TROUSERS, AND BOYS' OVERALLS. KINGSBERY MANUFACTURING CO., Fort Worth, Tex.
Filed November 17, 1916. Serial No. 99,351. PUBLISHED DECEMBER 26, 1916.

115,634. OVERALLS, JUMPERS, TROUSERS, AND BOYS' OVERALLS. KINGSBERY MANUFACTURING CO., Fort Worth, Tex.
Filed November 17, 1916. Serial No. 99,352. PUBLISHED DECEMBER 26, 1916.

115,635. EXTRACTS DERIVED FROM CHESTNUT WOODS. KINGSPORT EXTRACT CORPORATION, Kingsport, Tenn.
Filed May 24, 1916. Serial No. 95,399. PUBLISHED DECEMBER 26, 1916.

115,636. METAL-POLISH. WILLIAM KORBACH, Hoboken, N. J., assignor to Gem Metal Polish Co., Hoboken, N. J.
Filed April 22, 1916. Serial No. 94,647. PUBLISHED AUGUST 8, 1916.

115,637. BABBITT METAL. ARTHUR H. LEMON, Chicago, Ill.
Filed May 11, 1916. Serial No. 95,080. PUBLISHED DECEMBER 26, 1916.

115,638. PIECE GOODS WITH COTTON WARP AND FILLING OF WOOL, MOHAIR, OR ALPACA. LESHER, WHITMAN & CO., INC., New York, N. Y.
Filed October 21, 1916. Serial No. 98,810. PUBLISHED DECEMBER 26, 1916.

115,639. NON-ALCOHOLIC BEVERAGE, A SOFT DRINK. LEXINGTON BREWING COMPANY, Lexington, Ky.
Filed October 21, 1916. Serial No. 98,811. PUBLISHED DECEMBER 26, 1916.

115,640. CAKES. LOOSE-WILES BISCUIT COMPANY, Chicago, Ill.
Filed October 25, 1916. Serial No. 98,886. PUBLISHED DECEMBER 12, 1916.

115,641. CAKES OF THE KIND KNOWN AS COOKIES. LOOSE-WILES BISCUIT COMPANY, New York, N. Y., and Kansas City, Mo.
Filed November 10, 1916. Serial No. 99,212. PUBLISHED DECEMBER 12, 1916.

115,642. READY-MIXED PAINTS. THE LOWE BROTHERS COMPANY, Dayton, Ohio.
Filed November 4, 1916. Serial No. 99,107. PUBLISHED DECEMBER 26, 1916.

115,643. CORDIALS. LUYTIES BROTHERS, New York, N. Y.
Filed November 7, 1916. Serial No. 99,150. PUBLISHED DECEMBER 26, 1916.

115,644. METAL DERAILS. THE MADDEN COMPANY, Chicago, Ill.
Filed November 22, 1915. Serial No. 90,836. PUBLISHED DECEMBER 26, 1916.

115,645. PETTICOATS. MANHATTAN PETTICOAT CO. INC., New York, N. Y.
Filed November 15, 1916. Serial No. 99,312. PUBLISHED DECEMBER 26, 1916.

115,646. BED AND DOUCHE PANS. MEINECKE & COMPANY, New York, N. Y.
Filed March 6, 1914. Serial No. 76,409. PUBLISHED DECEMBER 26, 1916.

115,647. SELF-RISING WHEAT-FLOUR. MELROSE MILLING COMPANY, Evansville, Ind.
Filed November 4, 1916. Serial No. 99,090. PUBLISHED DECEMBER 12, 1916.

115,648. WATER AND SOFT DRINKS. JESSE SPAULDING MERRILL, Washington, D. C.
Filed November 21, 1916. Serial No. 99,444. PUBLISHED DECEMBER 26, 1916.

115,649. FLUID MEDICINES MADE FROM PLANT DRUGS AND KNOWN AS TINCTURES. THE WILLIAM S. MERRELL CHEMICAL COMPANY, Cincinnati, Ohio.
Filed December 6, 1915. Serial No. 91,229. PUBLISHED DECEMBER 26, 1916.

115,650. CHEWING-GUM, CANDY, SWEETMEATS, AND CONFECTIONS. MINT PRODUCTS COMPANY, INCORPORATED, New York, N. Y..
Filed October 24, 1916. Serial No. 98,862. PUBLISHED DECEMBER 19, 1916.

115,651. FERTILIZER. THE MOLASSINE COMPANY, LTD., Greenwich and London, England.
Filed November 20, 1916. Serial No. 99,414. PUBLISHED DECEMBER 19, 1916.

115,652. TRADING-STAMPS. THE MONEYBACK CORPORATION, New York, N. Y.
Filed November 7, 1916. Serial No. 99,151. PUBLISHED DECEMBER 26, 1916.

115,653. MEN'S CLOTH OUTER GARMENTS—NAMELY, SUITS, OVERCOATS, JACKETS, MACKINAWS, AND ULSTERS. MORRIS, GOLDSCHMIDT AND COMPANY, INCORPORATED, Chicago, Ill.
Filed February 28, 1916. Serial No. 98,146. PUBLISHED DECEMBER 26, 1916.

115,654. PETTICOATS. THE NATIONAL GARMENT COMPANY, Massillon, Ohio.
Filed October 16, 1916. Serial No. 98,703. PUBLISHED DECEMBER 26, 1916.

115,655. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. THE NATIONAL SAFETY APPLIANCE COMPANY, San Francisco, Cal.
Filed September 22, 1915. Serial No. 89,386. PUBLISHED DECEMBER 26, 1916.

115,656. DRY AND READY-MIXED PAINTS, DRIERS, ENAMELS, STAINS, WALL-PAINTS, LACS, FILLERS, AND VARNISHES. THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio.
Filed May 11, 1916. Serial No. 95,083. PUBLISHED DECEMBER 26, 1916.

115,657. COFFEE. NEW ORLEANS COFFEE CO. LTD., New Orleans, La.
Filed June 10, 1916. Serial No. 95,792. PUBLISHED DECEMBER 19, 1916.

115,658. BOOTS AND SHOES OF LEATHER, RUBBER, FELT, OR OTHER FABRIC CONSTRUCTION. THOMAS G. PLANT COMPANY, Boston, Mass.
Filed November 20, 1916. Serial No. 99,425. PUBLISHED DECEMBER 26, 1916.

115,659. PRESERVATIVE DRESSINGS OR COMPOSITIONS FOR WOOD, STONEWORK, BRICKWORK, AND METAL. PLASTIC CEMENTS & FIBRASTIC LTD., Westminster, London, England.
Filed August 17, 1916. Serial No. 97,410. PUBLISHED DECEMBER 26, 1916.

115,660. WHEAT-FLOUR. PRANGE MILLING COMPANY, New Douglas, Ill.
Filed October 26, 1916. Serial No. 98,910. PUBLISHED DECEMBER 12, 1916.

115,661. WHEAT-FLOUR. PRANGE MILLING COMPANY, New Douglas, Ill.
Filed November 4, 1916. Serial No. 99,093. PUBLISHED DECEMBER 19, 1916.

115,662. CIGARS. Y. PENDAS & ALVAREZ, New York, N. Y.
Filed July 27, 1916. Serial No. 96,903. PUBLISHED DECEMBER 19, 1916.

115,663. CANDIES. REED CHOCOLATE CO., INC., Buffalo, N. Y.
Filed August 17, 1916. Serial No. 97,412. PUBLISHED DECEMBER 12, 1916.

115,664. KID, CALF, PATENT, SHEEP, CABRITAS, SPLITS, AND SOLE LEATHER. N. J. REILLY & COMPANY, Boston, Mass.
Filed August 15, 1916. Serial No. 97,355. PUBLISHED DECEMBER 26, 1916.

115,665. BOTTLED SPARKLING WINES. RIPIN & COMPANY, New York, N. Y.
Filed November 21, 1916. Serial No. 99,451. PUBLISHED DECEMBER 26, 1916.

115,666. CALF, ELK, AND SIDE UPPER-LEATHER. L. F. ROBERTSON & SONS, New York, N. Y.
Filed August 15, 1916. Serial No. 97,354. PUBLISHED DECEMBER 26, 1916.

115,667. GROWTH-CONTROLLING SUBSTANCE DERIVED FROM THE ANTERIOR LOBE OF THE PITUITARY GLAND. THORBURN BRAILSFORD ROBERTSON, Berkeley, Cal.
Filed October 21, 1916. Serial No. 98,813. PUBLISHED DECEMBER 26, 1916.

115,668. TOGGLE-BOLTS. RUBLY COMPANY, INC., New York, N. Y.
Filed November 1, 1915. Serial No. 90,285. PUBLISHED DECEMBER 26, 1916.

115,669. CERTAIN NAMED SOFT DRINKS. THE S. & S. WATER COMPANY, Philadelphia, Pa.
Filed November 27, 1916. Serial No. 99,589. PUBLISHED DECEMBER 26, 1916.

115,670. INSTRUCTION-BOOKS AND ADVERTISING-BOOKLETS. SCHOOL OF APPLIED ART, Battle Creek, Mich.
Filed October 30, 1916. Serial No. 98,989. PUBLISHED DECEMBER 26, 1916.

115,671. PLOWS. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed November 6, 1916. Serial No. 99,134. PUBLISHED DECEMBER 26, 1916.

115,672. MEN'S, WOMEN'S, AND CHILDREN'S LEATHER SHOES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed November 10, 1916. Serial No. 99,221. PUBLISHED DECEMBER 26, 1916.

115,673. MEN'S LEATHER SHOES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed November 10, 1916. Serial No. 99,222. PUBLISHED DECEMBER 26, 1916.

115,674. MEN'S LEATHER SHOES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed November 10, 1916. Serial No. 99,223. PUBLISHED DECEMBER 26, 1916.

115,675. MEN'S LEATHER SHOES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed November 10, 1916. Serial No. 99,224. PUBLISHED DECEMBER 26, 1916.

115,676. OIL-ENGINES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed November 10, 1916. Serial No. 99,225. PUBLISHED DECEMBER 26, 1916.

115,677. POULTRY FEED. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed November 10, 1916. Serial No. 99,226. PUBLISHED DECEMBER 12, 1916.

115,678. OVERALLS. SEGAL AND PRANSKY, Philadelphia, Pa.
Filed July 1, 1915. Serial No. 87,695. PUBLISHED DECEMBER 26, 1916.

115,679. SILK PIECE GOODS. R. & H. SIMON COMPANY, Union Hill, N. J., and New York, N. Y.
Filed December 13, 1915. Serial No. 91,461. PUBLISHED DECEMBER 26, 1916.

115,680. MACHINES FOR GRINDING AND PULVERIZING LIMESTONES, OYSTER-SHELLS, AND CLAY FOR MANUFACTURING PORTLAND CEMENT. F. L. SMIDTH & Co., New York, N. Y.
Filed October 5, 1916. Serial No. 98,449. PUBLISHED DECEMBER 26, 1916.

115,681. VEGETABLE OIL USED FOR FOOD PURPOSES. THE SOUTHERN COTTON OIL COMPANY, Jersey City and Bayonne, N. J.; Savannah, Ga.; New Orleans, La.; and New York, N. Y.
Filed August 3, 1916. Serial No. 97,058. PUBLISHED SEPTEMBER 19, 1916.

115,682. WOOD AND COAL BURNING RANGES AND WOOD AND COAL BURNING STOVES. THE STAMFORD FOUNDRY COMPANY, Stamford, Conn.
Filed March 2, 1916. Serial No. 93,243. PUBLISHED DECEMBER 26, 1916.

115,683. BRASS, COPPER, CUPRO-NICKEL, GILDING METAL, AND GERMAN SILVER IN SHEETS AND OTHER FORMS. STAMFORD ROLLING MILLS COMPANY, New York, N. Y.
Filed June 8, 1916. Serial No. 95,730. PUBLISHED DECEMBER 26, 1916.

115,684. COMPOSITION FOR STOPPING LEAKS, ELIMINATING RUST, PREVENTING CORROSION OF METALS AND SCALE IN BOILERS. LOUIS J. STERN, Boston, Mass.
Filed October 24, 1916. Serial No. 98,866. PUBLISHED DECEMBER 26, 1916.

115,685. MONTHLY PUBLICATION. THE STERN & SAALBERG COMPANY, New York, N. Y.
Filed November 6, 1916. Serial No. 99,186. PUBLISHED DECEMBER 26, 1916.

115,686. CANNED FISH, CANNED VEGETABLES, CANNED FRUITS, AND PRESERVED FRUITS. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed October 7, 1916. Serial No. 98,504. PUBLISHED DECEMBER 19, 1916.

115,687. CEREAL FEED FOR HORSES, MULES, CATTLE, AND CHICKENS. WILTON STURGES, Meridian, Miss.
Filed October 19, 1916. Serial No. 98,774. PUBLISHED DECEMBER 19, 1916.

115,688. DRESSING FOR WHITE LEATHER SHOES. THE SUNRISE SHOE POLISH COMPANY, Chicago, Ill.
Filed September 7, 1915. Serial No. 89,088. PUBLISHED DECEMBER 26, 1916.

115,689. ORANGES AND GRAPE-FRUIT. ALEXANDER C. TERWILLIGAR, Mims, Fla.
Filed September 11, 1916. Serial No. 97,935. PUBLISHED DECEMBER 19, 1916.

115,690. CIGARS. THEOBALD AND OPPENHEIMER COMPANY, Philadelphia, Pa., and New York, N. Y.
Filed August 21, 1916. Serial No. 97,472. PUBLISHED DECEMBER 26, 1916.

115,691. CIGARS. THEOBALD AND OPPENHEIMER COMPANY, Philadelphia, Pa., and New York, N. Y.
Filed August 21, 1916. Serial No. 97,473. PUBLISHED DECEMBER 26, 1916.

115,692. GRAND PIANOS, UPRIGHT PIANOS, PLAYER-PIANOS, AND ELECTRIC PLAYER-PIANOS. WILLIAM TONK & BRO., INC., New York, N. Y.
Filed July 31, 1916. Serial No. 97,006. PUBLISHED DECEMBER 26, 1916.

115,693. SYRUP AND MOLASSES. THE TOWLE MAPLE PRODUCTS COMPANY, Wilmington, Del., and St. Paul, Minn.
Filed September 2, 1916. Serial No. 97,776. PUBLISHED DECEMBER 19, 1916.

115,694. WHEAT-FLOUR, MORE SPECIFICALLY SELF-RISING FLOUR. TRENTON MILLING CO., Trenton, Ill.
Filed November 4, 1916. Serial No. 99,098. PUBLISHED DECEMBER 12, 1916.

115,695. WRITING-INKS AND DRAWING-INKS. JACOB ULLRICH, New York, N. Y.
Filed October 12, 1916. Serial No. 98,615. PUBLISHED DECEMBER 12, 1916.

115,696. FOODSTUFFS FOR CATTLE AND OTHER ANIMALS, CONSISTING OF COTTON-SEED MEAL. UNION SEED & FERTILIZER COMPANY, Guttenberg, N. J.
Filed October 25, 1916. Serial No. 98,893. PUBLISHED DECEMBER 12, 1916.

115,697. KNITTED UNDERWEAR, SWEATERS, AND STOCKINGS, AND CORSETS. UNION SPECIAL MACHINE COMPANY, Chicago, Ill.
Filed September 9, 1916. Serial No. 97,883. PUBLISHED DECEMBER 26, 1916.

115,698. CIGARS. UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y.
Filed August 21, 1916. Serial No. 97,479. PUBLISHED DECEMBER 26, 1916.

115,699. CIGARS. UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y.
Filed October 11, 1916. Serial No. 98,580. PUBLISHED DECEMBER 26, 1916.

115,700. CERTAIN NAMED CLOTHING. UNION SPECIAL MACHINE COMPANY, Chicago, Ill.
Filed November 29, 1915. Serial No. 91,027. PUBLISHED DECEMBER 26, 1916.

115,701. BOOTS AND SHOES OF RUBBER, LEATHER, AND CANVAS. UNITED STATES RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y.
Filed June 21, 1916. Serial No. 96,038. PUBLISHED DECEMBER 26, 1916.

115,702. NON-INTOXICATING MALT BEVERAGES. ALONZO G. VAN NOSTRAND, Boston, Mass., assignor to Bunker Hill Breweries Incorporated, Boston, Mass., a Corporation of Massachusetts.
Filed November 27, 1916. Serial No. 99,595. PUBLISHED DECEMBER 26, 1916.

115,703. HOSIERY. A. V. VICTORIUS & Co., New York, N. Y.
Filed November 17, 1916. Serial No. 99,363. PUBLISHED DECEMBER 26, 1916.

115,704. RUBBER TIRES. HARRY B. WALLACE, St. Louis, Mo.
Filed October 5, 1916. Serial No. 98,452. PUBLISHED DECEMBER 26, 1916.

115,705. CERTAIN NAMED KNITTED, NETTED, AND TEXTILE FABRICS. JOHN WANAMAKER, NEW YORK, New York, N. Y.
Filed November 23, 1916. Serial No. 99,512. PUBLISHED DECEMBER 26, 1916.

115,706. BREAD. WARD BAKING COMPANY, New York, N. Y.
Filed September 25, 1916. Serial No. 98,231. PUBLISHED DECEMBER 12, 1916.

115,707. WHEAT-FLOUR. WASHBURN-CROSBY CO., Minneapolis, Minn.
Filed August 10, 1916. Serial No. 97,262. PUBLISHED NOVEMBER 28, 1916.

115,708. WHEAT-FLOUR. WASHBURN-CROSBY CO., Minneapolis, Minn.
Filed August 10, 1916. Serial No. 97,263. PUBLISHED NOVEMBER 28, 1916.

115,709. CLOTH KNOWN AS COTTON DUCK. WELLINGTON, SEARS & COMPANY, Boston, Mass.
Filed November 9, 1916. Serial No. 99,202. PUBLISHED DECEMBER 26, 1916.

115,710. GEAR-SHIFT. WENZELL SPECIALTY COMPANY, Philadelphia, Pa.
Filed November 28, 1916. Serial No. 99,609. PUBLISHED DECEMBER 26, 1916.

115,711. COFFEE AND SUBSTITUTES FOR COFFEE. WHOLE WHEAT COFFEE COMPANY, INC., Jersey City, N. J., and New York, N. Y.
Filed August 3, 1916. Serial No. 97,070. PUBLISHED DECEMBER 19, 1916.

115,712. MAYONNAISE DRESSING. R. C. WILLIAMS & COMPANY, New York, N. Y.
Filed September 11, 1916. Serial No. 97,940. PUBLISHED DECEMBER 19, 1916.

115,713. MACARONI. THE YOUNGSTOWN MACARONI CO., Youngstown, Ohio.
Filed May 11, 1916. Serial No. 95,093. PUBLISHED DECEMBER 12, 1916.

LABELS

REGISTERED FEBRUARY 27, 1917.

19,921.—*Title:* "RAINBOW GAME." (For Rainbow Game.) FRANCIS J. BATCHELDER, New York, N. Y. Filed December 30, 1916.

19,922.—*Title:* "COWBOY." (For Prunes.) CASTLE BROTHERS, San Francisco, Cal. Filed January 22, 1917.

19,923.—*Title:* "A WEATHER PROOF CEMENT VERMONT WHITE CEMENT." (For a Cement for Setting and Repairing Monuments and the Like.) THE L. D. CAULK COMPANY, Milford, Del. Filed January 30, 1917.

19,924.—*Title:* "PERMANENT PIGMENT FOR COLORING VERMONT WHITE CEMENT." (For a Pigment for Coloring Cement.) THE L. D. CAULK COMPANY, Milford, Del. Filed January 30, 1917.

19,925.—*Title:* "O-CEDAR DUST CLOTHS." (For O-Cedar Dust-Cloths.) CHANNELL CHEMICAL COMPANY, Chicago, Ill. Filed March 14, 1916.

19,926.—*Title:* "THE EMBLEM SHIRT." (For Shirts.) DREW & LIPKE, New York, N. Y. Filed July 15, 1916.

19,927.—*Title:* "THE FLEUR DE LIS SHIRT." (For Shirts.) DREW & LIPKE, New York, N. Y. Filed July 15, 1916.

19,928.—*Title:* "ALBERT L. DUNN MINT JULEP GUM." (For Mint-Julep Gum.) ALBERT L. DUNN, Louisville, Ky. Filed October 17, 1916.

19,929.—*Title:* "QUALITY." (For Canned Tuna Fish.) LOWER CALIFORNIA FISHERIES CO., San Diego, Cal. Filed January 2, 1917.

19,930.—*Title:* "ROYAL WINDSOR TABLE SAUCE." (For Table Sauce.) A. D. MACK, San Diego, Cal. Filed October 9, 1916.

19,931.—*Title:* "AMOR Y ARTE." (For Cigars.) THE MOEHLE LITHOGRAPHIC COMPANY, Brooklyn, N. Y. Filed February 10, 1917.

19,932.—*Title:* "BEAUTIES." (For Cigars.) THE MOEHLE LITHOGRAPHIC COMPANY, Brooklyn, N. Y. Filed February 10, 1917.

19,933.—*Title:* "QUEEN'S TASTE." (For Cigars.) THE MOEHLE LITHOGRAPHIC COMPANY, Brooklyn, N. Y. Filed February 10, 1917.

19,934.—*Title:* "LA CULTA." (For Cigars.) THE MOEHLE LITHOGRAPHIC COMPANY, Brooklyn, N. Y. Filed February 10, 1917.

19,935.—*Title:* "SEALSHIPT OYSTERS." (For Oysters.) NORTH ATLANTIC OYSTER FARMS, INC., Boston, Mass. Filed February 7, 1917.

19,936.—*Title:* "LITTLE MEN AND LITTLE WOMEN STERLING SILVER TABLEWARE." (For Babies' and Children's Sterling-Silver Tableware.) ROGERS, LUNT & BOWLEN CO., Greenfield, Mass. Filed January 22, 1917.

19,937.—*Title:* "SANITOL, DEATH TO GERMS." (For a Germicide.) THE SANITOL MANUFACTURING COMPANY, Denver, Colo. Filed February 14, 1916.

19,938.—*Title:* "SLIP-PON." (For Veils.) SILVERBERG IMPORT CO., New York, N. Y. Filed February 8, 1917.

19,939.—*Title:* "GLOSS." (For Furniture and Automobile Polish.) MORRIS SODTER, Chicago, Ill. Filed February 5, 1917.

19,940.—*Title:* "TONY." (For Pickles.) A. D. TEIXEIRA, Boston, Mass. Filed January 22, 1917.

PRINTS

REGISTERED FEBRUARY 27, 1917.

4,629.—*Title:* "RINK-LY." (For Mops and Dust-Cloths.) GEO. H. ALLEN, Clinton, N. Y. Filed January 16, 1917.

4,630.—*Title:* "IT'S TOASTED." (For Cigarettes.) THE AMERICAN TOBACCO COMPANY, New York, N. Y. Filed January 22, 1917.

4,631.—*Title:* "START YOUR DAY THIS WAY—B. V. D." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed February 10, 1917.

4,632.—*Title:* "SAY! I'M IN MY B. V. D.S—BE RIGHT OVER." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed February 10, 1917.

4,633.—*Title:* "NO. 7 CREAM CITY ROASTER DISPLAY." (For Cream City Roasters.) GEUDER PAESCHKE & FREI CO., Milwaukee, Wis. Filed October 23, 1916.

4,634.—*Title:* "NESNAH MADE IN A JIFFY." (For Nesnah.) CHR. HANSEN'S LAB. INC., Hansen Island, Little Falls, N. Y. Filed January 6, 1917.

4,635.—*Title:* "SHADY BROOK FARM." (For Toy Farms.) FRANCIS W. KRAMER, Philadelphia, Pa. Filed February 3, 1917.

4,636.—*Title:* "COOK BY WIRE." (For Electric Ranges.) RATHBONE SARD ELECTRIC COMPANY, INC., Albany, N. Y. Filed February 6, 1917.

4,637.—*Title:* "FOR WORK OR FOR PLAY, THE BEST FOOD IS SHREDDED WHEAT WITH HOT MILK." (For Shredded Wheat.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed February 2, 1917.

4,638.—*Title:* "FOR DADDY, MOTHER, BROTHER AND ME." (For Shredded Wheat.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed February 10, 1917.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE BROWN.

Decided January 29, 1917.

1. PURPOSE OF CLAIMS—POINTING OUT SEVERAL INVENTIONS.

The statute requires that a patent covering several inventions shall not only distinguish them all from the prior art, but also that the claims shall point out and distinguish the several inventions from each other.

2. FORM OF CLAIMS—INTERDEPENDENT CLAIMS APPROVED.

Claims 2 and 3, each of which comprises a reference to the preceding claim, with a statement of the structural features distinguishing it therefrom, *Held* to meet the requirements of the law and in this case to clearly point out the invention.

ON PETITION.

CAR-ROOF.

Mr. Walter M. Fuller for the applicant.

CLAY, *Assistant Commissioner:*

The applicant for a patent petitions for directions to the Primary Examiner to withdraw his objection to the form of claim, the Examiner having ruled that "the claims are deemed allowable in substance," but that in their present form they do not comply with the requirements of section 4888 of the statutes, which specifies that the applicant—

shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention.

The claims in question are worded as follows:

1. In a railway-car, the combination of a car-body, a car-roof including carlines, sheet-metal roof-plates, and carline braces substantially rigidly connected together without capability of substantial bodily movement relatively to one another, and loose connections between said carline braces and car-body permitting movement of the roof relative to the car-body, substantially as described.

2. A structure as specified in claim 1 in combination with carline cap-strips rigidly connected to said braces, substantially as described.

3. A structure as specified in claim 2 in which the braces are slotted in combination with bolts accommodated in said slots and securing the braces to the car-body, such slots and bolts permitting the movement specified between the roof and car-body, substantially as described.

Assuming metal roofs for cars to be well known and that in use they have developed the necessity of some relative movement between them and the body of the car, the applicant first points out that others have sought to supply the necessary flexibility in the roof itself, not in its fastenings, and he thereupon proposes to provide the necessary flexibility in the mode of fastening of the roof to the body. To make his invention clear, he shows the parts of the body and roof which are directly concerned with the fastening. His invention is shown in Figures 5 and 8, wherein there appears a perspective of a certain bracket fixed under the end of the carline, embodied in the attachments of which is the essential invention. Around the top of the car-body wall there runs a Z-bar presenting a flat flange, upon which the roof rests by the flat part 24 of the carline-brace bracket. The specific attachment by which the roof is thus supported so that it may move is a series of bolts passing through oblong slots in the brace-bracket. The dominant invention is the fastening of the rigid roof to the body loosely by way of the carline-braces. This connection is protected by fastening the downwardly-extending flange of the bracket to the end of a cover-strip extending over the roof. There is thus one dominant inventive idea and two subsidiary inventive ideas. Each involves a combination of elements. The patent may cover all three combinations and should cover them separately.

In his rejection of these claims the Examiner states his objection—

that they are not drawn so that each claim is complete in itself,

citing *ex parte Sexton*, (1873, C. D., 66.) The case is remarkable because in making this rejection the Examiner shows that he makes his ruling by force of precedent and against his convictions. The form of claim would meet with his approval except for the general Office practice, which has followed the ruling in *ex parte Sexton* since 1873.

The whole pertinent part of section 4888 of the statute is this: The applicant is to file—

a written description of the (invention) and of the manner * * * of constructing * * * and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art * * * to construct * * * and use (it); and in the case of a machine he shall explain the principle thereof, and the best mode in which he has contemplated applying that principle, *so as to distinguish it from other inventions;* and he shall *particularly point out* and distinctly *claim, the part,* improvement or combination which (he) * * * his invention. * * *

This provision for a distinct claim appeared first in the law in 1836, simultaneously with the provision for examining into novelty, it being, of course, a prerequisite to examination. It will be noted that the provision for distinguishing from other inventions refers more particularly to the specification and that there is a subsequent and separate provision for the pointing out and distinctly claiming. The applicant's duty under this statute is to show by the specification that what he invented was not

the car or the roof, but a device for fastening the roof on a car; but the distinction which he is to make in his claim is quite as much the distinction between his several inventions as the distinction of the improvements over what is old in the art.

The case of *ex parte Sexton* (C. D., 1873, p. 66) was a petition for an extension of Reissue Patent No. 2,476, of February 12, 1867. It was reissued five times, last in 1876. Extension for seven years from 1873 was allowed by the Commissioner on condition of filing a disclaimer to all except the second clause of the claim. On April 18, 1873, Sexton disclaimed—

> everything included in my said claim except the parts and combinations specified in the second clause thereof.

(The second clause alone had been found valid on consideration of the petition to extend.)

The applicant's disclosure was an outstanding self-feeding magazine coal-stove adapted to be set in a fireplace. The first clause of his claim stipulated a suspended fuel-magazine and combustion-chamber having a grate wider in diameter than the magazine, so that the coal in burning would spread out in a conical pile. The second claim was for the subject-matter of claim 1, with the characterization that there were projecting windows in the combustion-chamber. It appears from the Commissioner's opinion in the report of Sexton's later appeal (C. D., Feb. 8, 1876, p. 251) that he had filed his disclaimer under protest and sought another reissue in order to reinstate the subject-matter disclaimed. He attempted to follow the Commissioner's ruling of 1873 and put the claim in five clauses, each of which is presumed to be complete in itself. The extended patent, however, lived a part of its extended life with claim 2 in the original form, depending for its description upon claim 1, and the pertinent part of the decision of 1873, as to the form of the claim, was an *obiter dictum*. It merely stated that the claim as it originally stood was awkward in form; but in the very following sentence the decision itself seems to meet the objection by saying:

> It will of course have to be understood that the first claim itself, as an independent claim, is stricken from the patent, but as connected with and embodied in the second, it remains.

The decision did not hold that the second claim was incomplete. It only said that it would be in better form if it were worded independently of the first claim. This, however, it is the present applicant's contention, is not the case. The applicant contends that the claim in the amended form suggested by the decision does not point out the essential thing intended to be covered by it—*i. e.*, the projecting windows—as well as in the original form, for it is necessary to compare it with other claims in order to find the monopoly intended to be covered. Its real meaning must be deduced by a process of elimination.

It is interesting to notice the fifth claim of this finally-reissued patent of Sexton, No. 6,884, of January 25, 1876:

> 5. In a stove, having a suspended magazine and a free space around and beneath the lower part of such magazine to contain the coal and gases while in process of combustion, I claim a horizontally arranged series of openings through the wall of the stove, opposite the lower end of the magazine, and on different sides of the stove, for the purposes described.

This says, in effect:

> I claim the subject matter of claim 1 with a horizontally arranged series of openings through the wall of the stove;

so that the ruling in *ex parte Sexton*, 1873, was in one instance followed by virtually reinstating claim 1 as a preamble and adding to it a claim in a dependent clause, thus reverting to the form of claim condemned by the decision of 1873.

In the course of a full and clear statement of the philosophy of distinguishing claims the court in *Scaife & Sons Co.* v. *Falls City Co.* (209 Fed. Rep., 210) says:

> Proper construction and effect can be given to each claim only by differentiating it from the other claims. Each claim should be capable of such differentiation, else it has no right to exist. * * * Each claim should be directed at some function, step or advantage to give it individuality; it should have a characterizing thought or point by which it can be identified; and if the court which is to construe the claim can find this dominant thought, its task will be simplified.

The question is whether the much-desired self-differentiation in a set of claims can be secured best by following any set form of statement. On the one hand, no claim can be so "complete" as to avoid all reference to anything else to determine its meaning, and, on the other hand, no claim could be complete or clear if it refers to something else to express its essence. I think form is not as important as distinctness in pointing out the improvement.

Prior to 1836 claims in patents were indifferently of all forms and many patents had no claim at all. Claims have always been written in various forms. The patent of Hug, No. 1,154,314, granted September 21, 1915, has as its first claim simply the one word "polihydrocolchicin." This claim is proper notwithstanding it leaves the reader without any knowledge of the invention patented unless he has read the specification and is able to bear it in mind. There would be no difficulty in pointing out the invention. On the other hand, it is just as easy to bring about obscurity by wording the claim very full as by wording it meagerly. (See claim 9 of Taliaferro, No. 903,620, of November 10, 1908.)

Again, the Patent No. 1,060,550, of April 29, 1913, which was considered in the case of *Victor Talking Machine Company* v. *Thomas A. Edison, Inc.*, (221 O. G., 351,) contains a specification of 158 lines, and the essential inventions thus described are "pointed out" in a series of claims which occupy 400 printed lines! The court makes some severe criticisms of the claims in this patent, apparently indignant at the ingenuity displayed in writing these claims so as to conceal the fact that several of them mean the same thing. The court said:

> Such claims violate the very purpose of any claims at all, which is to define the forbidden field. In such waste of abstract verbiage it is quite impossible to find any guide. It takes the scholastic ingenuity of St. Thomas with the patience of a Yogi to decipher their meaning as they stand.

If these claims had been drawn in the form suggested by the present applicant, it would apparently have been impossible either to write such a number of claims or to make several claims appear to be different when, in fact, they were not.

The difficulties both in examining claims for novelty and in appraising them for purposes of litigation have greatly increased as inventions have become more numerous and more complicated. Our practice permitting one patent to cover several interrelated inventions and numerous subsidiary inventions under each dominant invention, it is becoming more and more important to emphasize the requirement of the statute for that distinction of claim which consists in distinguishing between claims. The courts have for a long time severely criticized both the superfluous claim and the obscure claim, and on various grounds. In *Brush Electric Co.* v. *The Electrical Accumulator Co. et al.* (56 O. G., 1334; 47 Fed. Rep., 48) the court condemns prolix claims and says that making several claims to the same matter is "calculated to embarrass the inventor and mislead the public." In *Carlton* v. *Bokee* (17 Wall., 463–471) the Supreme Court condemns such indistinct claims and intimates that if they were intentionally made obscure they would invalidate the patent. It says:

> Where a specification by ambiguity and a needless multiplication of nebulous claims is calculated to deceive and mislead the public, the patent is void.

In *Benjamin* v. *Dale* (141 Fed. Rep., 981) Judge Holt complains of supernumerary claims, saying they "simply make burdensome the investigation of the claims." In *In re Perlman* (186 O. G., 560; 39 App. D. C., 447) the claims were rejected because they were supernumerary, as well as because they were functional.

In *Green Felt Shoe Co.* v. *Dolgeville Felt Shoe Co.* (210 Fed. Rep., 164) Judge Lacombe intimates that claims which even by construction are duplicates of others "must be struck out as superfluous." The same in *Weber Electric Co.* v. *National Gas & Electric Co.*, (212 Fed. Rep., 950.)

In *Barker* v. *Spalckhaver* (201 O. G., 268; 41 App. D. C., 576) it would appear that a form of claim failing to point out the essence of the invention had been responsible for the erroneous decision of an interference.

It appears to me clear that the crying abuse of superfluous and obscure claims is due to the failure on the part of both the Examiners and the attorneys to see to it that each claim has a definite point in view, is concise, and that the claims of a set are self-distinguishing and self-classifying. It is quite possible that the profession has made a fetish of form. Even the objections to a claim for incompleteness or for aggregation might be better stated as objections for indistinctness. Completeness of wording in very different from completeness in sense.

Something must always be assumed or deduced from the specification. During all the forty odd years of the custom of writing each claim "complete within itself" it has been the almost universal habit for the claim to refer to the specification for further light by the clause "substantially as described." Why a reference to applicant's claim 1 is not sufficient to fix the relation of the cap-strip and brace to the roof and car-body in claim 2 I am unable to see. The claim is not addressed to anybody who has not read the specification nor addressed to any but those skilled in the art.

Attorneys in preparing a patent, Examiners in examining claims, and the court in construing claims always proceed on the principle of concentrating attention on one particular idea, which is the essence of the invention, and subordinating everything else. When a court analyzes and distinguishes a set of claims, I think it must always, either consciously or unconciously, employ the method of analysis of which an example is found in *Loggie* v. *Puget Sound Mills & Timber Co.*, (194 Fed. Rep., 158, p. 162.) If the court there found it convenient to say that claim 2 is the same as claim 1, "with the addition" of some other element which is the essence of claim 2, no reason appears to me why the patentee should not have been allowed to make exactly the same analysis and statement in writing his claim.

The form of claim proposed by the applicant is not such an innovation as might be supposed. It differs from the form of claim used by the Germans only in that it does not employ a preamble which fully sets forth all the essentials of the prior art. It does not greatly differ from the style of claim employed by the English. It is quite possible the proposed form of claim is in line with the now common requirement of the courts that a plaintiff specify precisely the ground of his charge for infringement, pointing out just which claim is infringed and which not. I can see no reason why the courts would not approve a form of claim which itself points out its distinctions from other claims.

It has been suggested that the proposed form of claim would inevitably make a clear distinction between the several inventions covered in one patent; that such a claim would be self-analyzing and self-classifying, and therefore make the examination of the claim easier, render it easier to detect aggregation, and greatly reduce the danger of the Examiner being misled into the supposition that he is dealing with a new combination merely because he finds a new element in the claim. I think it clear that at least it would reduce the number of claims and make division between independent inventions clear and easy.

There are doubtless many cases where claims could not be successfully written in dependent clauses; but it seems to be perfectly logical to allow an applicant who wishes to do so to write his claim in that form in a proper case, as this is. A too strict adherence to form may be responsible for the obscurity and superfluity of claims in many patents. There is nothing in the books to show how the courts may regard a claim in this form; but when the applicant claims that he can by this means make his claims self-analyzing and self-classifying it is worth while making the experiment.

I conclude that the form of claim proposed by the applicant meets the requirements of the law and in this case clearly points out the invention. To this extent the doctrine in *ex parte Sexton* is disapproved. The petition is granted. The Examiner is instructed to withdraw his objection to the form of claims 2 and 3.

ADJUDICATED PATENTS.

(U. S. D. C.) The Double patent, No. 734,833, for an underreamer, *Held* not anticipated. valid, and infringed. *Union Tool Co.* v. *Wilson & Willard Mfg. Co.*, 237 Fed. Rep., 837.

(U. S. C. C. A.) The Eichelberger and Hibner patent, No. 987,450, for a boiler-tube cleaner, *Held* void for lack of invention. *Vulcan Soot Cleaner Co.* v. *Diamond Power Specialty Co.*, 237 Fed. Rep., 818.

(U. S. D. C.) The Frankenburg patent, No. 715,651, relating to machines for stemming tobacco and for improvements on machines of the prior art, construed and *Held* not infringed. *Standard Tobacco Stemmer Co.* v. *Tobacco Stemming Mach. Co.*, 237 Fed. Rep., 822.

(U. S. D. C.) The Guerrant patent, No. 630,344, relating to machines for stemming tobacco and for improvements on machines of the prior art, construed and *Held* not infringed. *Standard Tobacco Stemmer Co.* v. *Tobacco Stemming Mach. Co.*, 237 Fed. Rep., 822.

(U. S. D. C.) The Havens patent. No. 764,845, relating to machines for stemming tobacco and for improvements on machines of the prior art, construed and *Held* not infringed. *Standard Tobacco Stemmer Co.* v. *Tobacco Stemming Mach. Co.*, 237 Fed. Rep., 822.

(U. S. D. C.) The Hutcheson patent, No 713,886, relating to machines for stemming tobacco and for improvements on machines of the prior art, construed and *Held* not infringed. *Standard Tobacco Stemmer Co.* v. *Tobacco Stemming Mach. Co.*, 237 Fed. Rep., 822.

(U. S. D. C.) The Underwood patent, No. 661,199, relating to machines for stemming tobacco and for improvements on machines of the prior art, construed and *Held* not infringed. *Standard Tobacco Stemmer Co.* v. *Tobacco Stemming Mach. Co.*, 237 Fed. Rep., 822.

(U. S. D. C.) The Vose patent, No. 717,641, for a weather-strip, *Held* not infringed. *Davis* v. *Rapp*, 237 Fed. Rep., 856.

(U. S. D. C.) The Wilson patent, No. 827,595, for an underreamer, *Held* not anticipated, valid, and infringed as to claims 9 and 19 and not infringed as to other claims. *Wilson* v. *Union Tool Co.*, 237 Fed. Rep., 847.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 1, 1917.

The Bell Hosiery Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Rice-Stix Dry Goods Company, 1000 Washington avenue, St. Louis, Mo., for registration of a trade-mark and trade-mark registered November 24, 1908, No. 71,425, to The Bell Hosiery Company, 2333-45 North Mascher street, Philadelphia, Pa., and a notice of such declaration sent by registered mail to said The Bell Hosiery Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Bell Hosiery Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Changes in Classification.

(ORDER No. 2,300.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 30, 1916.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 15, Brushing and Scrubbing, (Division XXVII,) establish subclass—

Brush heads and faces—
Rotary brushes—
70. Stippling.

The patents contained in this subclass have been taken from class 201, Metal-Ornamenting, subclass 8, Stippling, Rotary tool, hereinafter abolished.

In class 22, Metal-Founding, (Division III,) abolish the following subclasses, with their definitions:

6. Type-casting apparatus—
7. Combined machines.
8. Molds.

The patents formerly contained in these subclasses have been placed in class 199, Type-Casting, hereinafter established.

In same class abolish the following subclass, with its definition:

8.5. Type or stereotype matrices,

and establish in lieu thereof the following subclass and definition:

Stereotype-casting apparatus—
5.5. Matrices.

5.5. STEREOTYPE-CASTING APPARATUS, MATRICES. Members carrying a counterpart of the design and adapted to be presented to the mold-cavity.

In same class, in the main class definition, abolish the fifth paragraph, and establish in lieu thereof the following paragraph:

The casting of stereotype-plates is included, (even when in combination with finishing mechanism,) but the casting of type-bars and separate type is excluded. (See class 199, Type-Casting.)

In class 26, Cloth-Finishing, (Division XXI,) abolish subclasses—

3. Folding.
13. Rigging.

The patents formerly contained in these subclasses have been placed in class 270, Sheet-Material Associating or Folding, hereinafter established.

In class 41, Ornamentation, (Division XVII,) establish the following subclass and definition:

Apparatus and appliances—
Painters'—
4.5. Shading films or holders.

4.5. APPARATUS AND APPLIANCES, PAINTERS', SHADING FILMS OR HOLDERS. Apparatus employing a thin sheet having one surface covered with small projections, which are adapted to be inked. When a design is to be shaded, the sheet is held over the design and pressed upon the back at the places where the shading is desired.

The patents contained in this subclass have been taken for the most part from old class 101, Printing, subclass 162, Surfaces, Tintographs.

In class 69, Leather Manufactures, (Division XI,) abolish the following subclass, with its definition:

Machines—
5. Folding and rolling.

The patents formerly contained in this subclass have been placed for the most part in class 270, Sheet-Material Associating or Folding, hereinafter established.

In class 78, Metal Forging and Welding, (Division XIII,) establish the following subclass and definition:

Forging—
Power hammers and presses—
13.1. Stippling.

13.1. FORGING, POWER HAMMERS AND PRESSES, STIPPLING. Specialized to strike in rapid succession a series of light blows for the purpose of indenting and roughening metal surfaces.

Note.—Compare class 95, PHOTOGRAPHY, subclass 101, Retouching.

The patents contained in this subclass have been taken from class 201, Metal-Ornamenting, subclass 7, Stippling, Reciprocating tool, hereinafter abolished.

In class 80, Metal-Rolling, (Division XIII,) establish the following subclass and definition:

5.1 Nurling.

5.1. NURLING. Machines and tools having a roll or rolls with roughened or corrugated surfaces adapted to impress a corresponding configuration into the surface of bodies by rolling contact, the roll traveling circumferentially around the body or the body rotating in contact with the roll.

Note.—The typical nurling instrument is so constructed that the work or the tool can be shifted in order to nurl a surface wider than the tool.

The patents contained in this subclass have been taken from class 201, Metal-Ornamenting, subclass 2, Nurling, hereinafter abolished.

In class 112, Sewing-Machines, (Division XXIV,) abolish subclasses—

1. Binders.
10. Hemmers.
12. Tucking-guides.

The patents formerly contained in these subclasses have been placed in class 270, Sheet-Material Associating or Folding, hereinafter established.

In class 144, Woodworking, (Division XXIX,) abolish the following subclasses, with their definitions:

Wood-ornamenting—
272. Embossing—
273. Die-rollers,
274. Heat-applying,
275. Graining,
276. Articles,
277. Processes.

The patents formerly contained in these subclasses have been placed for the most part in new class 101, Printing.

Abolish, in Division XVII, class 198, Matrix-Making, the patents formerly contained therein having been placed for the most part in classes 22, Metal-Founding; 41, Ornamentation; 76, Metal Tools and Implements, Making; 101, Printing; 154, Laminated Fabric and Analogous Manufactures, and 197, Type-Writing Machines. (See also order No. 2,230, November 19, 1915, for changes previously made affecting this class.)

Abolish, in Division XIV, class 201, Metal-Ornamenting, the patents formerly contained therein having been placed in class 15, Brushing and Scrubbing, subclass 70, Brush heads and faces, Rotary brushes, Stippling, hereinbefore established; class 78, Metal Forging and Welding, subclass 13.1, Forging, Power hammers and presses, Stippling, hereinbefore established; class 80, Metal-Rolling, subclass 5.1, Nurling, hereinbefore established, and new class 101, Printing.

In class 211, Store Furniture, (Division VIII,) abolish subclass—

Serving apparatus—
80. Printing attachment.

The patents formerly contained in this subclass have been placed in new class 101, Printing.

In class 223, Apparel Apparatus, (Division XXIV,) abolish subclass—

3. Cloth-pilers.

The patents formerly contained in this subclass have been placed in class 270, Sheet-Material Associating or Folding, hereinafter established.

In class 101, Printing, (Division XVII,) abolish the existing subclasses and establish in lieu thereof the following subclasses and definitions:

101.—PRINTING.
1. Miscellaneous.
2. Printing and sorting.
3. Embossing or penetrating—
4. Special-article machines—
5. Rolling contact—
6. Rotary,
7. Rotating object,
8. Hot die,
9. Hot die—
10. Oscillating,
11. Feeding or delivering.
12. Matrix material—
13. Selective machines—
14. Drum series,
15. Multiple-character bar,
16. Die members,
17. Processes,
18. Selective machines—
19. Piercing—
20. Oscillating,
21. Hot die,
22. Rolling-contact machines—
23. Rotary—
24. Piercing,
25. Hot die,
26. Piercing-machines,
27. Hot-die machines,
28. Die members—
29. Selective,
30. Piercing,
31. Hot,
32. Processes.
33. Transferring preparatory designs—
34. Processes.
35. Special-article machines—
36. Rotary—
37. Feeding or delivering,
38. Rotating object—
39. Traveling—
40. Feeding or delivering,
41. Bed and platen—
42. Selective—
43. Feeding or delivering,
44. Feeding or delivering.
45. Selective or progressive—
46. Type-writer feature,

101.—PRINTING—Continued.
Selective or progressive—
47. Addressing-machines—
48. Stencil—
49. Rotary machines with roller-inker and fountain,
50. Stencil-web,
51. Traveling roller-inker with fountain,
52. Rotary—
53. Feeding or delivering—
54. Plate chain feed,
55. Bed and cylinder—
56. Traveling cylinder,
57. Bed and platen—
58. Article-grouper,
59. Drum series,
60. Interconnected plates—
61. Oscillating machine,
62. Rotary plate-carrier,
63. Shifting chase—
64. Oscillating machine,
65. Oscillating.
66. Ticket-machines—
67. Duplicating—
68. Bed and platen,
69. Bed and platen—
70. Numbering attachment,
71. Mail-box machines,
72. Numbering—
73. Measuring-machines—
74. Rotary—
75. Drum series,
76. Rotary machines—
77. Planetary drum series,
78. Bed-and-platen machines—
79. Drum series—
80. Oscillating machine—
81. Roller and plate inker,
82. Roller and plate inker,
83. Drum series and pad-inkers,

101.—PRINTING—Continued.
Selective or progressive—
Numbering—
84. Printing members—
85. Drum series—
86. Planetary—
87. Adjustable,
88. Contact-actuated—
89. Yielding drums,
90. Duplicating-machines,
91. Rotary machines—
92. Web,
93. Bed-and-platen machines—
94. Oscillating—
95. Drum series—
96. Ribbon-inker,
97. Pad-inker,
98. Pad-inker,
99. Drum series—
100. Ribbon-inker,
101. Pad-inker,
102. Ribbon-inker,
103. Printing members and inkers—
104. Tumbler-bed and pad-inker—
105. Endless type-band,
106. Drum series—
107. Ribbon-inker,
108. Pad-inker,
109. Printing members—
110. Drum series,
111. Endless band,
112. Stencil-plate.
113. Duplicating-machines.
114. Stenciling—
115. Multicolor,
116. Rotary machines—
117. Cutting and feeding or delivering,
118. Feeding or delivering,
119. Internal inker—
120. Contact member,
121. Stencil-web machines—
122. Endless band,
123. Traveling-inker machines,
124. Stationary-inker machines,
125. Stencil and pad-inker,
126. Stencil and work support,

101.—PRINTING—Continued.
Stenciling—
127. Stencil-plates—
128. Settable units,
129. Processes.
130. Planographic—
131. Copying apparatus—
132. Rotary machines,
133. Bed-and-cylinder machines—
134. Multicolor ink-block,
135. Multicolor—
136. Rotary machines—
137. Transfer with interrupter,
138. Web—
139. Interrupter,
140. Interrupter,
141. Rotary machines—
142. Transfer—
143. Web with interrupter,
144. Interrupter,
145. Interrupter,
146. Bed-and-cylinder machines,
147. Dampeners—
148. Roller-fountain,
149. Processes.
150. Intaglio—
151. Multicolor—
152. Rotary machines,
153. Rotary machines—
154. Transfer with scraper-wiper,
155. Wiper—
156. Web,
157. Scraper,
158. Bed-and-cylinder machines—
159. Circulating bed—
100. Roller-inker with web-wiper,
161. Roller-inker with wiper—
162. Web-wiper,
163. Bed and platen—
164. Reciprocating bed with roller-inker and web-wiper,
165. Roller-inker with web-wiper,
166. Web-wiper,
167. Wipers—
168. Web,
169. Scraper,
170. Processes.
171. Multicolor—
172. Yarn,
173. Rotary and bed-and-cylinder machines,
174. Rotary machines—
175. Single impression—
176. Web,
177. Transfer,
178. Web—
179. Perfecting—
180. Multiple couple,
181. Multiple couple,
182. Interrupter,
183. Multiple couple—
184. Interrupter,
185. Interrupter,
186. Bed-and-cylinder machines—
187. Single impression,
188. Lateral shift,
189. Multiple cylinder—
190. Perfecting,
191. Throw-off—
192. Interrupter,
193. Bed-and-platen machines—
194. Single impression—
195. Oscillating machines with roller and plate inker,
196. Web—
197. Oscillating bed,
198. Reciprocating bed—
199. Roller-inker,
200. Oscillating,
201. Rising-and-falling type,
202. Inkers—
203. Roller and plate—
204. Fountain,
205. Roller—
206. Rotary machine—
207. Fountain,
208. Fountain,
209. Interrupter,
210. Fountains,
211. Processes.

101.—PRINTING—Continued.
212. Rolling-contact machines—
218. Rotary printer and web-roll with roller-inker.
214. Rotary and bed and cylinder—
215. Transfer,
216. Rotary—
217. Transfer—
218 Interrupter,
219. Web—
220. Perfecting—
221. Multiple impression—
222. Reversing,
223. Reversing,
224. Cutting and feeding or delivering,
225. Feeding or delivering.
226. Cutting—
227. Feeding or delivering,
228. Feeding or delivering,
229. Perfecting—
230. Reversing,
231. Feeding or delivering,
232. Feeding or delivering—
233. Article-controlled machines—
234. Tripped printing member—
235. Single revolution—
236. Stacking,
237. Stacking,
238. Stacking—
239. Article-timing stop,
240. Stacking.—
241. Article-timing stop,
242. Article-timing stop,
243. Ribbon-inker,
244. Ribbon-inker,
245. Single revolution,
246. Gripper-cylinder,
247. Interrupter,
248. Cylinder-registering mechanisms,
249. Staggered blanket,
250. Bed and cylinder—
251. Transfer—
252. Traveling cylinder,
253. Web—
254. Perfecting—
255. Circulating bed,
256. Traveling cylinder—
257. Reversing,
258. Oscillating cylinder,
259. Circulating bed,
260. Traveling cylinder,
261. Oscillating cylinder,
262. Perfecting—
263. Circulating bed,
264. Traveling cylinder,
265. Stop-cylinder,
266. Oscillating cylinder with feeding or delivering,
267. Feeding or delivering by additional revolution,
268. Circulating bed,
269. Traveling cylinder—
270. Circulating—
271. Feeding or delivering with ribbon-inker,
272. Feeding or delivering—
278. Ribbon-inker,
274. Ribbon-inker,
275. Stop-cylinder—
276. Feeding or delivering,
277. Oscillating cylinder—
278. Feeding or delivering,
279. Feeding or delivering—
280. Additional revolution,
281. Ribbon-inker,
282. Bed and cylinder movements only—
283. Throw-off—
284. Interrupter,
285. Interrupter,
286. Cylinder-registering mechanisms.

101.—PRINTING—Continued.
287. Bed-and-platen machines—
288. Web—
289. Perfecting—
290. Reciprocating bed with roller-inker,
291. Oscillating bed,
292. Reciprocating bed—
293. Roller and plate inker—
294. Circulating roller,
295. Roller-inker,
296. Perfecting,
297. Oscillating—
298. Oscillating bed—
299. Interrupter—
300. Roller and plate inker,
301. Inker—
302. Roller and plate—
303. Traveling plate,
304. Circulating roller,
305. Roller,
306. Interrupter—
307. Roller and plate inker—
308. Circulating roller,
309. Roller-inker,
310. Inker—
311. Roller and plate—
312. Traveling plate,
313. Circulating roller,
314. Roller—
315. Fountain,
316. Reciprocating bed—
317. Interrupter,
318. Inker—
319. Roller and plate,
320. Roller—
321. Fountain,
322. Interrupter—
323. Roller-inker,
324. Inker—
325. Roller and plate,
326. Roller with fountain.
327. Printing members and inkers—
328. Rolling-contact printing member—
329. Roller-inker—
330. Fountain—
331. Roller-fountain,
332. Ribbon-inker,
333. Pad-inker—
334. Tumbler-bed.
335. Inkers—
336. Ribbon,
337. Roller and plate—
338. Bed-and-platen machine—
339. Traveling plate,
340. Fountain—
341. Interrupter,
342. Interrupter,
343. Traveling plate—
344. Fountain—
345. Interrupter,
346. Interrupter,
347. Fountain,
348. Roller—
349. Rotary machine—
350. Fountain—
351. Interrupter,
352. Interrupter,
353. Bed-and-cylinder machine—
354. Traveling roller—
355. Fountain,
356. Fountain—
357. Interrupter,
358. Interrupter,
359. Bed-and-platen machine—
360. Fountain—
361. Interrupter,
362. Interrupter,
363. Fountain,
364. Fountains—
365. Multiple-point control,
366. Force discharge,
367. Roller-fountain.
368. Printing members—
369. Addressing-plates—
370. Type-groove,
371. Mail-canceling stamps,
372. Special-design forms—
373. Arrangeable face,
374. Late insertion,
375. Rolling contact—
376. Yielding surface,
377. Type-groove,
378. Plate-securing means,

101.—PRINTING—Continued.
Printing members—
379. Yielding surface—
380. Type-groove,
381. Type-groove,
382. Plate-mountings—
383. Securing means—
384. Modified plate,
385. Detachable hooks—
386. Groove—
387. Diagonal—
388. Shifting means,
389. Block,
390. Chase-securing means,
391. Chases—
392. Variable-size frame,
393. Adjustable bars,
394. Locking means,
395. Plates,

101.—PRINTING—Continued.
Printing members—
396. Line-bars—
397. Special-design face,
398. Types—
399. Special-design face,
400. Rules and borders,
401. Surfaces,
402. Fillers—
403. Line-spacers,
404. Binding,
405. Stamp-handles—
406. Flexible connection.
407. Work-supporting members—
408. Grippers—
409. Cylinder—
410. Shiftable,
411. Gripper-attached tumbler,
412. No operating mechanism.

101.—PRINTING—Continued.
Work supporting members—
413. Tympan-gages—
414. Automatic movement,
415. Surface-secured.
416. Antismut devices—
417. Absorbent web—
418. Cylinder-carried reels,
419. Absorbent sheet,
420. Contact-preventers—
421. Friskets,
422. Ink-repellent,
423. Cleaners—
424. With cleaning composition.
425. Cleaning attachments.
426. Processes.

The patents formerly contained in class 101, Printing, that have not been placed in class 101, as revised, have been placed for the most part in classes 41, Ornamentation; 76, Metal Tools and Implements, Making; 95, Photography; 154, Laminated Fabric and Analogous Manfactures; 197, Type-Writing Machines; 211, Store Furniture; 272, Flexible-Sheet-Securing Devices, and 273, Continuous-Strip Feeding, and also in classes 199, Type-Casting; 270, Sheet-Material Associating or Folding; 271, Sheet Feeding or Delivering, and 276, Type-Setting, hereinafter established. (See also order No. 2,230, November 19, 1915, for changes previously made affecting this class.)

In class 199, Type-Bar Making, (Division XVII,) abolish the existing title and subclasses and establish in lieu thereof class 199, Type-Casting, with the following subclasses and definitions:

199.—TYPE-CASTING.
1. Integral line—
2. Non-releasing-matrix machines—
3. Wire guide—
4. Matrix-manipulating mechanisms,
5. Rotary matrix-carrier,
6. Slidable matrix-carrier—
7. Matrix-manipulating mechanisms,
8. Multiple-character-bar machines—
9. Assembling, casting, and distributing,
10. Assembling and distributing,
11. Assembling, casting, and distributing—
12. Non-screw-feed distributer-machines,
13. Assembling and casting,
14. Assembling and distributing—
15. Multiple-magazine machines—
16. Movable magazine,
17. Collector mechanism,
18. Assembling—
19. Multiple-magazine machines—
20. Movable magazine,
21. Collector mechanism,
22. Space-band mechanisms,
23. Escapement and collector mechanisms,
24. Multiple-channel automatic-shift mechanisms,
25. Power operating mechanisms,
26. Collector and transfer mechanisms,

199.—TYPE-CASTING—Continued.
Integral line—
Assembling—
27. Collector mechanisms—
28. Chute-springs,
29. Matrix-receivers—
30. Slide attachments,
31. Shifting mechanisms,
32. Transfer mechanisms,
33. Distributing—
34. Special matrix,
35. Non-screw-feed distributer,
36. Transfer mechanisms,
37. Matrix-carriers,
38. Odd-font-detecting mechanisms,
39. To multiple magazines—
40. Font-sorting—
41. Matrix-separator,
42. Matrix-separator,
43. Automatic stops,
44. Magazines—
45. Movable multiple magazine,
46. Removing attachments,
47. Casting mechanisms—
48. Multiple mold,
49. Matrix-holders,
50. Vises,
51. Justifying mechanisms,
52. Automatic stops—
53. Squirt-preventers,
54. Molds and cutters,
55. Molds—
56. Cooling devices,
57. Modified liner,
58. Liners,
59. Cutters,
60. Ejectors,
61. Deliveries,
62. Cleaning attachments,

199.—TYPE-CASTING—Continued.
Integral line—
Casting mechanism—
63. Matrices—
64. Distributer features,
65. Multiple character,
66. Special-design face,
67. Space-bands—
68. Wedge.
69. Separate type—
70. Surplus-type-supply machines,
71. Individually-movable-matrix machines—
72. Releasing matrix,
73. Rotary-matrix-carrier machines—
74. Pattern control,
75. Slidable-matrix-carrier machines—
76. Two-way movement—
77. Pattern control,
78. Keyboard control,
79. Matrix-cases,
80. Casting mechanisms—
81. With finishing mechanisms—
82. Mold-side-ejector mold,
83. Two-part mold,
84. Mold-side-ejector mold—
85. Low quad,
86. Moving mold,
87. Two-part mold—
88. Moving mold,
89. Moving mold,
90. Squirt-preventers,
91. Molds—
92. Mold-side ejector—
93. Low quad,
94. Two-part,
95. Deliveries,
96. Matrices.

The patents formerly contained in class 199, Type-Bar Making, that have not been placed in class 199, Type-Casting, have been placed for the most part in classes 76, Metal Tools and Implements, Making, and 197, Type-Writing Machines. (See also order No. 2,230, November 19, 1915, for changes previously made affecting this class.)

Establish, in Division XVII, class 270, Sheet-Material Associating or Folding, with the following subclasses and definitions, the patents contained therein having been taken from old class 101, Printing, and from the various subclasses in other classes abolished by this order:

270.—SHEET-MATERIAL ASSOCIATING OR FOLDING.
1. With printing—
2. Folding and wrapping,
3. Rolling and wrapping,
4. Associating and folding, with rotary printer—
5. Longitudinal web-folding—
6. Cylinder-collecting, with sheet-folding—
7. Additional-sheet associating,
8. Sheet-folding—
9. Additional-sheet associating,

270.—SHEET-MATERIAL ASSOCIATING OR FOLDING—Cont'd.
With printing—
Associating and folding, with rotary printer—
10. Web-association with cylinder-collecting—
11. Additional-sheet associating,
12. Sheet-associating—
13. Cylinder-collecting—
14. Additional-sheet associating,
15. Additional-sheet associating,

270.—SHEET-MATERIAL ASSOCIATING OR FOLDING—Cont'd.
With printing—
Associating and folding, with rotary printer—
16. Longitudinal sheet-folding,
17. Additional-sheet associating,
18. Associating, with rotary printer—
19. Cylinder-collecting,
20. Folding, with rotary printer—
21. Cutting,
22. Bed and traveling cylinder, web, perfecting.

270.—SHEET-MATERIAL ASSOCIATING OR FOLDING—Cont'd
23. Folding and wrapping—
24. Combined folders,
25. Oscillating folding-blade,
26. Reciprocating folding-blade,
27. Rolling and wrapping—
28. Flattening,
29. Pocket-former,
30. Reciprocating carriage pilers—
31. Traveling supply,
32. Associating and folding—
33. Longitudinal folding, sewing-machine attachments—
34. Lap-seam hemmers,
35. Binders—
36. Angular feed,
37. Stapling or stitching—
38. Cylinder-collecting,
39. Zigzag package—
40. Longitudinal web-folding,
41. Longitudinal web-folding—
42. Cylinder-collecting, with sheet-folding,
43. Web-associating with cylinder-collecting—
44. Additional-sheet associating,
45. Sheet-associating—
46. Stop-sheet,

270.—SHEET-MATERIAL ASSOCIATING OR FOLDING—Cont'd.
Associating and folding—
Sheet-associating—
47. Cylinder-collecting—
48. Additional-sheet associating—
49. Revolving pivotal folding-blade,
50. Revolving pivotal folding-blade,
51. Additional-sheet associating,
52. Associating—
53. Stapling or stitching,
54. Signature-gatherers—
55. Inserting,
56. Interrupter,
57. Inserting,
58. Sheet-associating—
59. Stop-sheet,
Associating—
Sheet associating—
60. Cylinder-collecting,
61. Folders—
62. Combination—
63. With revolving blade—
64. And longitudinal folder—
65. Revolving blade of fold-off-rolls type,
66. With longitudinal folder,

270.—SHEET-MATERIAL ASSOCIATING OR FOLDING—Cont'd.
Folders—
Combination—
67. Oscillating and reciprocating blades,
68. Buckling,
69. Pneumatic,
70. Revolving blade—
71. Registering cylinders—
72. Multiple—
73. Zigzag,
74. Oscillating blade,
75. Oscillating blade,
76. Fold-off-rolls type—
77. Planetary blade,
78. Moving gripper,
79. Oscillating or reciprocating zigzag fold,
80. Oscillating blade—
81. Multiple—
82. Stacking,
83. Reciprocating blade—
84. Multiple—
85. Stacking,
86. Longitudinal—
87. Sewing-machine attachments—
88. Hemmers—
89. Adjustable,
90. Tuckers—
91. Box-plait,
92. Spacing,
93. Edge,
94. Multiple.

Establish, in Division XVII, class 271, Sheet Feeding or Delivering, with the following subclasses and definitions, the patents contained therein having been taken for the most part from old class 101, Printing:

271.—SHEET FEEDING OR DELIVERING.
1. Special article—
2. Envelop.
3. Feeding and delivering—
4. Separators and conveyers—
5. Pneumatic separator,
6. Continuous endless conveyer,
7. Continuous endless conveyers.
8. Feeding—
9. Multiple supply,
10. Separators and conveyers—
11. Pneumatic separator—
12. Endless conveyer—
13. Side gage,
14. Reciprocating conveyer,
15. Side gage,
16. Buckling-separator and endless conveyer—
17. Side gage,
18. Separators—
19. Buckling—
20. Pneumatic,
21. Rotary—
22. Pack-advancer,
23. Bottom feed,
24. Pack-advancer—
25. Feeler control,
26. Pneumatic—
27. Rotary—
28. Pack-advancer,
29. Bottom feed,

271.—SHEET FEEDING OR DELIVERING—Continued.
Feeding—
Separators—
Pneumatic—
30. Pack-advancer—
31. Feeler control,
32. Bottom feed,
33. Adhesive,
34. Endless belt—
35. Bottom feed,
36. Rotary—
37. Preliminary protrusion—
38. Feeler control,
39. Pack-advancer,
40. Feeler control,
41. Bottom feed,
42. Reciprocating—
43. Pack-advancer,
44. Bottom feed,
45. Endless conveyers—
46. Retarder,
47. Interrupter,
48. Side and front gage,
49. Side gage,
50. Front gage,
51. Rotary conveyers—
52. Side gage,
53. Front gage,
54. Reciprocating conveyers—
55. Side gage,
56. Interrupter—
57. Electrical,
58. Side and front gages,
59. Side gages,
60. Front gages,

271.—SHEET FEEDING OR DELIVERING—Continued.
Feeding—
61. Pack-holders—
62. Advancer.
63. Delivering—
64. Multiple discharge,
65. Optional face or back—
66. Endless conveyers to flies,
67. Endless conveyers to curtains,
68. Endless conveyers to depositors,
69. Endless conveyers to other conveyers—
70. To flies,
71. Rotary conveyers to depositors,
72. Rotary conveyers to flies,
73. Curtains,
74. Pneumatic conveyers,
75. Endless conveyers—
76. Multiple—
77. Arrested,
78. Arrested,
79. Suspension-gripper,
80. Rotary conveyers—
81. Traveling,
82. Suspension-gripper,
83. Flies,
84. Reciprocating conveyers—
85. Suspension-gripper,
86. Pack-receivers—
87. Retractor—
88. Lowering,
89. Jogger.

Establish, in Division XVII, class 276, Type-Setting, with the following subclasses and definitions, the patents contained therein having been taken for the most part from old class 101, Printing:

276.—TYPE-SETTING.
1. Miscellaneous.
2. Setting and distributing machines—
3. Registerable magazine and composing channels—
4. Magazine and printing member,
5. Circulating feeler and type-holder distributers,
6. Ward-distributers,
7. Keyboard-distributers.
8. Setting and justifying machines—
9. Measurer-controlled justifier,
10. Compressing-justifier,
11. Indicating-justifier.

276.—TYPE-SETTING—Continued.
12. Setting-machines—
13. Pattern control,
14. Hand-supply,
15. Registerable magazine and composing channels,
16. Conveyer—
17. Endless—
18. Power-ejector,
19. Power-ejector,
20. Converging chutes—
21. Power-ejector.
22. Distributing-machines—
23. Feeler—
24. Circulating type-holder—
25. Circulating feeler,
26. Ward,
27. Keyboard.

276.—TYPE-SETTING—Continued.
28. Justifying-machines—
29. Measurer-controlled—
30. Space-making—
31. Casting,
32. Wedge,
33. Galleys.
34. Lead-handlers.
35. Type-line separators.
36. Type-arrangers.
37. Hand-type channels.
38. Composing-sticks—
39. Positive knee-lock.
40. Galleys—
41. Side and end locking means,
42. Side-locking means,
43. End-locking means.

THOMAS EWING,
Commissioner.

INDEX

TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

FEBRUARY, 1917.

[Decisions of the Court of Appeals of the District of Columbia are indicated by one star (*) and of the Supreme Court of the United States by two stars (**).]

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DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

FEBRUARY, 1917.

[Decisions of the Court of Appeals of the District of Columbia are indicated by one star (*) and of the Supreme Court of the United States by two stars (**).]

ALLEGATIONS.

See Infringement, 1.

BURDEN OF PROOF.

See Priority of Invention; Reduction to Practice.

CLAIMS.

1. PURPOSE OF—POINTING OUT SEVERAL INVENTIONS.
The statute requires that a patent covering several inventions shall not only distinguish them all from the prior art, but also that the claims shall point out and distinguish the several inventions from each other. [*Ex parte* Brown, 1355.

2. FORM OF—INTERDEPENDENT APPROVED.
Claims 2 and 3, each of which comprises a reference to the preceding claim, with a statement of the structural features distinguishing it therefrom, *Held* to meet the requirements of the law and in this case to clearly point out the invention. [Id.

CONCURRENT DECISIONS OF PATENT OFFICE TRIBUNALS.

See Priority of Invention.

CONSTRUCTION OF STATUTES.

See Claims, 1.

EVIDENCE.

See Infringement, 2; Reduction to Practice; Testimony.

FIRST AND ORIGINAL INVENTOR.

See Infringement.

INFRINGEMENT.

1. ORIGINALITY—SIMILARITY IN THE DEVICES.
Where the defendant alleged that he produced the device independently prior to the invention by plaintiff, but it appeared that defendant's device was an exact replica of plaintiff's, including features which plaintiff considered important to the operation, but which defendant claimed were placed there to be used as a talking-point to deceive the public, *Held* that it surpasses belief that the similarity arose by chance.
[**Adamson v. Gilliland, 1056.

2. SAME.
Where there was evidence that one device was copied from the other and plaintiff had made public his device, while defendant had not, and no other channel of information between the two appeared to exist, *Held* that the plaintiff must be regarded as the originator of the device. [**Id.

INVENTION.

See Claims; Infringement.

PRIORITY OF INVENTION.

See Infringement; Reduction to Practice.

CONCURRENT DECISIONS BY OFFICE—BURDEN UPON APPELLANT.
Where the appellant is not only the junior party, but has three concurrent decisions by the Patent Office tribunals against him, he has a heavy burden and must clearly establish his case to prevail. [*Livingston v. Thompson, 1055.

REDUCTION TO PRACTICE.

SUFFICIENCY OF PROOFS.
Where M. proved the construction and test of an apparatus by evidence sufficient to make out a *prima facie* case of reduction to practice, the burden was upon his opponent to overcome that showing in some way, as by calling the witness whose testimony he contended would have shown a different state of facts.
[*Manly v. Janney, 323.

STATE OF THE ART.

See Claims, 1.

TEST.

See Reduction to Practice.

TESTIMONY.

See Reduction to Practice.

CREDIBILITY OF WITNESSES AND CONFLICTING TESTIMONY—TRIAL COURT FOLLOWED.
Where the finding of the master or judge who saw the witness turns upon the credibility of witness or upon conflicting testimony, it must be treated as unassailable so far as there is any testimony consistent therewith. [**Adamson v. Gilliland, 1056.

WITNESSES.

See Reduction to Practice; Testimony.

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF FEBRUARY, 1917.

[Abbreviations: "Gaz."—Official Gazette.]

A. B. Dick Company. (See Hill, Edward W., assignor.)
A. L. Powell Power Company, The. (See Powell, Alvah L., assignor.)
A-Z Company, The. (See De Févre and Woodbridge, assignors.)
Abercrombie, David T., Newark, N. J., assignor to David T. Abercrombie Company, New York, N. Y. Pack-carrier. No. 1,217,262; Feb. 27; v. 235; p. 1104.
Abernethy, Eugene C., Hollis, Okla. Vehicle-spring. No. 1,215,232; Feb. 6; v. 235; p. 261.
Abramson, Samuel, Philadelphia, Pa. Fire-escape. No. 1,216,041; Feb. 13; v. 235; p. 587.
Acetylene Stove Manufacturing Company, The. (See Hopkins, George W., assignor.)
Ackerman, Charles H., Milwaukee, Wis. Respiratory system for smoke-helmets. No. 1,215,327; Feb. 13; v. 235; p. 329.
Ackley, Amos, Camden, N. J. Weather-strip. No. 1,216,042; Feb. 13; v. 235; p. 587.
Acme Paper Curing Co. (See Barnes, Edward M., assignor.)
Acme Printing Appliance Company. (See Schussler, John H., assignor.)
Acme Scale Co. (See Barson, Harry W., assignor.)
Adams Air Brake Company. (See Adams, John A., assignor.)
Adams, George, Dartmoor, W. Va. Mine-cap. No. 1,217,547; Feb. 27; v. 235; p. 1207.
Adams, John A., Nogales, Ariz., assignor to Adams Air Brake Company. Combined automatic and straight air valve mechanism. No. 1,215,895; Feb. 13; v. 235; p. 532.
Adams, John A., Nogales, Ariz., assignor, by mesne assignments, to Adams Air Brake Company. Combined automatic and straight air valve mechanism. No. 1,217,130; Feb. 27; v. 235; p. 1061.
Adams, Porter H., Brookline, Mass. Needle attachment. No. 1,215,328; Feb. 13; v. 235; p. 329.
Adams-Randall, Charles, Boston, Mass. Telephone system. No. 1,217,548; Feb. 27; v. 235; p. 1207.
Addressograph Co. (See Bailey and Kalusowski, assignors.)
Adell, John A. (See Harris and Adell.)
Adsit, Frank W., Minneapolis, Minn. Telephone lockout system. No. 1,217,081; Feb. 20; v. 235; p. 997.
Adsit, Frank W., St. Paul, assignor to Adsit General Electric Company, Minneapolis, Minn. Selective lockout telephone system. No. 1,214,638; Feb. 6; v. 235; p. 54.
Adsit, Frank W., assignor to Adsit General Electric Company, Minneapolis, Minn. Telephone-exchange apparatus. No. 1,217,080; Feb. 20; v. 235; p. 996.
Adsit General Electric Company. (See Adsit, Frank W., assignor.)
Advance-Rumely Company. (See Hawn, Andrew P., assignor.)
Aeolian Company, The. (See Prettie, Richard J., assignor.)
Agee, Howard L. and S. A., Fort Worth, Tex. Guard for doors and the like. No. 1,215,462; Feb. 13; v. 235; p. 375.
Agee, Sidney A. (See Agee, Howard L. and S. A.)
Ahearn, Daniel J., Brooklyn, N. Y. Necktie-holder and collar-support. No. 1,215,092; Feb. 6; v. 235; p. 214.
Ahlberg, Gustav A. F., Pittsburgh, Pa. Carburetor. No. 1,216,043; Feb. 13; v. 235; p. 587.
Ainsworth, Arthur B., Leavenworth, Kans., assignor to R. M. Hughes, Nevada, Mo. Adjustable labeling-machine. No. 1,217,382; Feb. 27; v. 235; p. 1146.
Akron Cultivator Company, The. (See Noaker, Milton, assignor.)
Albee, William H., Marlboro, Mass. Heel-breasting machine. No. 1,214,871; Feb. 6; v. 235; p. 135.
Aldal, Stephen, Donnybrook, N. D. Rural mail-box. No. 1,215,093; Feb. 6; v. 235; p. 214.
Alexander, Joseph, Yeagertown, Pa. Car-axle lubricator. No. 1,216,044; Feb. 13; v. 235; p. 588.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. System of ship propulsion. No. 1,215,094; Feb. 6; v. 235; p. 214.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. System of ship propulsion. No. 1,215,095; Feb. 6; v. 235; p. 215.
Alford, James, Jacksonville, Fla. Cooking stove or range for marine vessels. No. 1,215,233; Feb. 6; v. 235; p. 261.
Allan, Edward T., Cincinnati, Ohio, assignor to Union Special Machine Company, Chicago, Ill. Folder. No. 1,217,549; Feb. 27; v. 235; p. 1208.
Allbright, William B., Chicago, Ill. Beater. No. 1,214,493; Feb. 6; v. 235; p. 3.
Allen, Anson W. (See Thomas and Allen.)
Allen, Harry S., Pontiac, Ill. Liner for ice-cream cans, pails, and other containers. No. 1,216,391; Feb. 20; v. 235; p. 762.
Allen, James, Washington, D. C. Stopper for bottles or the like. No. 1,216,045; Feb. 13; v. 235; p. 588.
Allen, James G., assignor of one-half to H. C. Fittinger, Detroit, Mich. Wire screen. No. 1,214,494; Feb. 6; v. 235; p. 3.
Allen, Samuel J., Atchison, Kans. Cultivator. No. 1,215,096; Feb. 6; v. 235; p. 215.
Allen, William H., assignor to Parker Rust-Proof Company of America, Detroit, Mich. Rust-proofing metal. No. 1,215,463; Feb. 13; v. 235; p. 375.
Allis-Chalmers Manufacturing Company. (See Brown, Arthur J., assignor.)
Allis-Chalmers Manufacturing Company. (See Cheney, Herbert W., assignor.)
Allis-Chalmers Manufacturing Company. (See Greenfield, Roy C., assignor.)
Allis-Chalmers Manufacturing Company. (See Loguin, Alexander J., assignor.)
Allison, Charles H., Glendale, Cal. Explosive-cap protection. No. 1,216,329; Feb. 13; v. 235; p. 329.
Altemus, Jacob K. (See Fisher, Raymond, assignor.)
Altemus, Jacob K., Philadelphia, Pa. Knitting-yarn package. No. 1,214,741; Feb. 6; v. 235; p. 91.
Altemus, Jacob K., Philadelphia, Pa. Yarn-winding machine. No. 1,214,742; Feb. 6; v. 235; p. 91.
Altgelt, Rudolph J., assignor to Oliver Chilled Plow Works, South Bend, Ind. Cultivator. No. 1,217,383; Feb. 27; v. 235; p. 1147.
Aluminum Company of America. (See Blough and McIntosh, assignors.)
Alwine, Charles, Elkhart, Ind. Guard for wood-shaping machine. No. 1,217,550; Feb. 27; v. 235; p. 1208.
Ambler, George B., assignor to F. A. Whitney Carriage Company, Leominster, Mass. Collapsible vehicle. No. 1,216,303; Feb. 6; v. 235; p. 285.
Ambursen, Nils F., Brookline, Mass. Apparatus for constructing concrete floors. No. 1,216,644; Feb. 20; Gaz. vol. 235; p. 851.
American Assembling Machine Company. (See Juengst, Charles A., assignor.)
American Bakers Machinery Company. (See Kirchhoff, William G., assignor.)
American Bank Note Company. (See Eaton, William S., assignor.)
American Brake-Shoe & Foundry Company, The. (See Armbrust, Charles W., assignor.)
American Can Company. (See Schenck, John E., assignor.)
American Can Company. (See Shaffer, Frank, assignor.)
American Chain Company. (See Lashar, Walter B., assignor.)
American Clay Machinery Company. (See Perrott, Ralph O., assignor.)
American Crayon Company, The. (See Daniel and Hord, assignors.)
American District Steam Company. (See Dudley, Charles J., assignor.)
American District Telegraph Company. (See Hopkins, Richard M., assignor.)
American Graphophone Company. (See Bowen, George H., Jr., assignor.)
American Graphophone Company. (See Capps, Frank L., assignor.)
American Gum Products Company. (See Coughlin, Michael F., assignor.)

American Laundry Machinery Co. (See Daly, Michael, assignor.)
American Meter Company, The. (See Harrington, Walter K., assignor.)
American Motors Tire Company. (See McLeod, Nelson W., assignor.)
American Multigraph Company, The. (See Trundle, George T., Jr., assignor.)
American Optical Company. (See Day, George H., assignor.)
American Paper Goods Company, The. (See Cooley, Henry B., assignor.)
American Plate Glass Company. (See Salisbury, Frank W., assignor.)
American Products Company. (See Naylor and Ruggles, assignors.)
American Sales Book Company. (See Bottle, Edward K., assignor.)
American Seeding Machine Company, The. (See Braley, William L., assignor.)
American Smelting & Refining Co. (See Van Amburgh, Charles, assignor.)
American Steel & Wire Company of New Jersey, The. (See Hindmarsh, Percy J., assignor.)
American Telephone and Telegraph Company. (See Bascom, Henry M., assignor.)
American Telephone and Telegraph Company. (See Person, Frans, assignor.)
American Warp-Drawing Machine Company. (See Field, Hathaway, and Lanning, assignors.)
American Welding Company. (See Rowland, Charles L., assignor.)
Ames, Adelbert, Jr., Tewksbury, Mass. Projection apparatus. No. 1,216,910; Feb. 20; v. 235; p. 939.
Ames, Adelbert, Jr., Tewksbury, Mass. Projection apparatus. No. 1,216,911; Feb. 20; v. 235; p. 940.
Ames, Adelbert, Jr., Tewksbury, Mass. Reflector. No. 1,216,912; Feb. 20; v. 235; p. 940.
Ames, Adelbert, Jr., Tewksbury, Mass. Reflector. No. 1,216,913; Feb. 20; v. 235; p. 941.
Ames, Adelbert, Jr., Tewksbury, Mass. Projection apparatus. No. 1,216,914; Feb. 20; v. 235; p. 941.
Ames, Burton C., Toledo, Ohio. Safety means for power-presses. No. 1,216,645; Feb. 20; v. 235; p. 851.
Amos, William, Providence, R. I. Faucet. No. 1,217,132; Feb. 27; v. 235; p. 1062.
Amphion Piano Player Company. (See Doman, Lewis B., assignor.)
Amsden, George A., Littleton, assignor to The Lamson Company, Boston, Mass. Multiple-drop station for cable-carrier apparatus. No. 1,215,234; Feb. 6; v. 235; p. 262.
Amstutz, Daniel S., Orville, Ohio. Utility-box. No. 1,217,384; Feb. 27; v. 235; p. 1147.
Anable, Frederick S., Brookline, assignor to National Binding Machine Company, Boston, Mass. Strip-serving device. No. 1,216,763; Feb. 20; v. 235; p. 891.
Andersen, John, Brooklyn, N. Y. Toy cap-pistol. No. 1,216,258; Feb. 20; v. 235; p. 715.
Andersen, Paul, Freeport, N. Y. Plaster-rasp. No. 1,216,915; Feb. 20; v. 235; p. 942.
Anderson, Andre D. (See Banks, Anderson, and Lovell.)
Anderson Button Attaching Machine Company. (See Poole, Lora E., assignor.)
Anderson, Carl. (See Lawson, Oscar L., assignor.)
Anderson, Carl E., assignor to C. H. Foster, Chicago, Ill. Lamp-bracket. No. 1,216,764; Feb. 20; v. 235; p. 891.
Anderson, Carl J., assignor of one-half to J. G. Sandvall, Muskegon, Mich. Tempering compound. No. 1,215,759; Feb. 13; v. 235; p. 483.
Anderson, Carl M., Havana, N. D. Door-lock. No. 1,216,765; Feb. 20; v. 235; p. 892.
Anderson, Charles A. (See Watson and Anderson.)
Anderson, Charles H., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich. Drawer-stop. No. 1,214,495; Feb. 6; v. 235; p. 3.
Anderson, Emil F., Chicago, Ill., assignor to International Harvester Company of New Jersey. Bag-filling mechanism. No. 1,216,257; Feb. 20; v. 235; p. 715.
Anderson, Gustav, and H. P. Hofstrand, St. Louis Park, Minn. Gathering and loading machine. No. 1,217,131; Feb. 27; v. 235; p. 1061.
Anderson, Henry J., and H. Van Wie, San Francisco, Cal. Motor-cycle support. No. 1,215,606; Feb. 13; v. 235; p. 431.
Anderson, Isaac, Madrid, Iowa. Silo-tamper. No. 1,214,872; Feb. 6; v. 235; p. 135.
Anderson, John R., assignor to Deere & Mansur Company, Moline, Ill. Variable-drop mechanism. No. 1,215,607; Feb. 13; v. 235; p. 431.
Anderson, John W. (See Davison and Anderson.)
Anderson, Peter W., and J. T. Kennelly, Rawlins, Wyo. Detachable tire. No. 1,216,916; Feb. 20; v. 235; p. 942.
Anderson, Sarah, Ridgewood, N. J. Holder. No. 1,215,608; Feb. 13; v. 235; p. 432.
Anderwert, Eugen. (See Wuth, Mayer, Jagerspacher, and Anderwert.)
Andrew, James T., Montgomery, Ala. Boll-weevil destroyer. No. 1,216,917; Feb. 20; v. 235; p. 942.
Andrews, John S., Gary, Ind. Carbon-consumer for boilers and the like. No. 1,216,392; Feb. 20; v. 235; p. 763.
Andrews, Oliver B., Chattanooga, Tenn. Disinfecting-nest. No. 1,216,766; Feb. 20; v. 235; p. 892.
Andrews, Oliver B., Chattanooga, Tenn. Disinfecting-coop. No. 1,217,677; Feb. 27; v. 235; p. 1253.
Andrews, Wallace S., Syracuse, N. Y. Water-heater for gas-stoves. No. 1,217,678; Feb. 27; v. 235; p. 1253.
Anglo-American Mill Company, The. (See Trefz, Julius J., assignor.)
Ankeny, Calvin M., Somerset, Pa. Resilient wheel. No. 1,217,385; Feb. 27; v. 235; p. 1147.
Ansco Company. (See Bornmann and Clark, assignors.)
Anthony, Josephine. (See Cook, Harrison H., assignor.)
Antoni, Friedrich A., assignor to Resopan-Gesellschaft m. b. H., Cologne, Germany. Map-holding and reading apparatus. No. 1,216,393; Feb. 20; v. 235; p. 763.
Apgar, Albert R., Columbia, Pa. Automatic fire-extinguisher. No. 1,215,330; Feb. 13; v. 235; p. 329.
Aplin, Edward W. (See Hons and Aplin.)
Apps, Harley D., and L. S. Low, Dolph, Mich. Firearm. No. 1,214,984; Feb. 6; v. 235; p. 177.
Arcade Manufacturing Company. (See Tschering, Henry, assignor.)
Arch, Abraham L., Harrisburg, Pa. Indicator for vehicles. No. 1,215,097; Feb. 6; v. 235; p. 216.
Archibald, Robert A., Oakland, Cal. Lymph-gland extract and making same. No. 1,216,046; Feb. 13; v. 235; p. 588.
Arco, Georg von, and A. Meissner, assignors to Gesellschaft fur Drahtlose Telegraphie, m. b. H., Berlin, Germany. Means for producing electrical oscillations with the aid of an auxiliary oscillation-circuit. No. 1,214,620; Feb. 6; v. 235; p. 48.
Arco, Georg, and R. H. Rendahl, assignors to Gesellschaft Für Drahtlose Telegraphie m. b. H., Berlin, Germany. Means for producing electrical oscillations. No. 1,216,538; Feb. 20; v. 235; p. 814.
Armbrust, Charles W., Chicago, Ill., assignor, by mesne assignments, to The American Brake-Shoe & Foundry Company, Wilmington, Del. Brake-shoe. No. 1,214,873; Feb. 6; v. 235; p. 135.
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Armor, James C., Ingram, Pa. Producing high-frequency oscillatory currents. No. 1,216,646; Feb. 20; v. 235; p. 851.
Armor, James C., Brooklyn, N. Y. Means for producing high-frequency oscillatory currents. No. 1,216,647; Feb. 20; v. 235; p. 852.
Armor, Robert R., Los Angeles, Cal. Hot-air furnace. No. 1,217,551; Feb. 27; v. 235; p. 1208.
Armstrong-Blum Manufacturing Company. (See Blum, George J., assignor.)
Armstrong Brothers Tool Company. (See Armstrong, James, assignor.)
Armstrong, Frank H., Vulcan, Mich. Valve apparatus. No. 1,214,496; Feb. 6; v. 235; p. 4.
Armstrong, Harry Y., assignor to Package Machinery Company, Springfield, Mass. Package and sealing packages. No. 1,215,404; Feb. 13; v. 235; p. 376.
Armstrong, Harry Y., assignor to Package Machinery Company, Springfield, Mass. Packaging of separately-wrapped articles in a package. No. 1,216,259; Feb. 20; v. 235; p. 715.
Armstrong, James, assignor to Armstrong Brothers Tool Company, Chicago, Ill. Tool-holder. No. 1,214,497; Feb. 6; v. 235; p. 4.
Armstrong, James, assignor to Armstrong Brothers Tool Company, Chicago, Ill. Tool-holder. No. 1,214,498; Feb. 6; v. 235; p. 4.
Arnold, Frank M., Grand Rapids, Ohio. Spring-wheel mounting. No. 1,214,743; Feb. 6; v. 235; p. 91.
Arnold, Harry B., assignor to The National Spring Bed Company, New Britain, Conn. Reclining-couch. No. 1,215,609; Feb. 13; v. 235; p. 432.
Arnold, Lawrence, Deer Plain, Ill. Attachment for hay-racks. No. 1,214,639; Feb. 6; v. 235; p. 55.
Arnold, Lewis E., Honolulu, Hawaii. Vacuum-box for fruit-canning. No. 1,216,260; Feb. 20; v. 235; p. 715.
Arnold, Paul A., *et al.* (See Scanlin, James, assignor.)
Arnoux, René, Paris, France. Anemometric regulator for aeroplanes. No. 1,217,679; Feb. 27; v. 235; p. 1253.
Arvac Manufacturing Co. (See Spade, Henry E., assignor.)
Ashelman, Hervey B., and J. S. Johnson, Fargo, N. D. Safety-valve. No. 1,216,919; Feb. 20; v. 235; p. 943.
Ashley, William G., New Bedford, Mass. Game-exhibiting device. No. 1,216,261; Feb. 20; v. 235; p. 716.
Åslund, Knut, and T. Boberg, London, England. Aromatizing dry coffee extract. No. 1,214,875; Feb. 6; v. 235; p. 136.
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Atkins, Charles H., Springfield, Mass. Hollow-bolt construction. No. 1,216,395; Feb. 20; v. 235; p. 764.
Atlantic Communication Company. (See Reuthe, Gustav, assignor.)
Atlantic Communication Company. (See Seibt, George, assignor.)
Atlas Tack Company. (See Raiche, Andrew, assignor.)

Atwood, William S., Montreal, Quebec, Canada. Tread-plate. No. 1,215,235; Feb. 6; v. 235; p. 262.
Auerbach, Henry, Albany, N. Y. Refrigerator or ice-chest. No. 1,216,767; Feb. 20; v. 235; p. 892.
Auld, Frederick H., Columbus, Ohio. Means for securing name-plates. No. 1,217,263; Feb. 27; v. 235; p. 1105.
Auld, John, Chicago, Ill. Eraser device. No. 1,216,648; Feb. 20; v. 235; p. 852.
Austin, Frederick C. (See Bunnell, Morton G., assignor.)
Austin, Frederick C. (See French, James C., assignor.)
Auto Strop Company. (See Gaisman, Henry J., assignor.)
Automatic Electric Company. (See Erickson, John, assignor.)
Automatic Electric Company. (See Keith, Alexander E., assignor.)
Automatic Electric Company. (See Kimball, George E., assignor.)
Automatic Electric Company. (See Martin, Talbot G., assignor.)
Automatic Electric Company. (See Rogers, Clarence E., assignor.)
Automatic Electric Company. (See Schwartz, Michael, assignor.)
Automatic Electric Company. See Stoip, Samuel S., assignor.)
Automatic Electric Company. (See Yanochowski and Hershey, assignors.)
Automatic Railroad Appliances Co. (See Lawn and Ryan, assignors.)
Automatic Search Light Company. (See Wogenstahl, Leo J., assignor.)
Automatic Train Control & Signal Company. (See Gray, Gardner B., assignor.)
Autosales Gum & Chocolate Company. (See Grover, Albert D., assignor.)
Autosales Gum and Chocolate Company. (See Hofheimer, Maurice, assignor.)
Avery, Henry W., and W. S. Judd, Cleveland, Ohio. Forming bilge-barrels. No. 1,216,396; Feb. 20; v. 235; p. 765.
Axelman, Mayer, Chicago, Ill. Traveling-bag. No. 1,214,876; Feb. 6; v. 235; p. 136.
Ayars, Charles H., assignor to Ayars Machine Company, Salem, N. J. Can-filling machine. No. 1,217,884; Feb. 27; v. 235; p. 1321.
Ayars Machine Company. (See Ayars, Charles H., assignor.)
Ayling, Robert W., West New York, N. J. Wrench. No. 1,215,896; Feb. 13; v. 235; p. 533.
B. F. Goodrich Company, The. (See Gammeter, John R., assignor.)
B. F. Goodrich Company, The. (See Geer, William C., assignor.)
B. F. Goodrich Company, The. (See Kempel, Arthur B., assignor.)
B. F. Goodrich Company, The. (See Raber, Nelson E., assignor.)
Babcock & Wilcox Company, The. (See Bell, John E., assignor.)
Babcock & Wilcox Company, The. (See Hoxie, William D., assignor.)
Bachman, Joseph P., Newark, N. J. Dough-mixing machine. No. 1,217,082; Feb. 20; v. 235; p. 997.
Backmyer, Christopher F., Chicago, Ill. Garment-fastener. No. 1,216,262; Feb. 20; v. 235; p. 716.
Backmyer, Christopher F., Chicago, Ill. Garment-fastener. No. 1,216,263; Feb. 20; v. 235; p. 717.
Backschelder, Frank J., Cincinnati, Ohio. Power-driven tool. No. 1,216,047; Feb. 13; v. 235; p. 589.
Backstrom, Charles A., Crafton, assignor to Pittsburg Water Heater Company, Pittsburgh, Pa. Water-heater. No. 1,217,133; Feb. 27; v. 235; p. 1062.
Bacon, Hugh, Jonesboro, Tenn. Mail-delivering apparatus. No. 1,216,264; Feb. 20; v. 235; p. 717.
Badenhausen, John P., Philadelphia, Pa. Drying-roll. No. 1,215,236; Feb. 6; v. 235; p. 262.
Badische Anilin & Soda Fabrik. (See Bally and Wolff, assignors.)
Badische Anilin & Soda Fabrik. (See Bosch, Carl, assignor.)
Badische Anilin & Soda Fabrik. (See Bosch, Mittasch, and Schneider, assignors.)
Badische Anilin & Soda Fabrik. (See Kardos, Michael, assignor.)
Badische Anilin & Soda Fabrik. (See Mittasch, Schneider, and Morawitz, assignors.)
Badische Anilin & Soda Fabrik. (See Schmidt, Otto, assignor.)
Baekeland, Leo H., Yonkers, assignor to General Bakelite Company, New York, N. Y. Insulating composition. No. 1,216,265; Feb. 20; v. 235; p. 717.
Baekeland, Leo H., Yonkers, assignor to General Bakelite Company, New York, N. Y. Insulating composition. No. 1,216,266; Feb. 20; v. 235; p. 717.
Baekeland, Leo H., Yonkers, and A. H. Gotthelf, Hastings-upon-Hudson, N. Y. Phenolic condensation product and making same. No. 1,217,115; Feb. 20; v. 235; p. 1010.
Bagby, Brooke C., Portsmouth, Va. Picture-hanger. No. 1,217,680; Feb. 27; v. 235; p. 1254.
Bagley, Donald. (See Feilmann, Bagley, and Smith.)
Bailey, Albert. (See Webb, James L. G., assignor.)
Bailey, Benjamin F., Ann Arbor, Mich., J. M. Barr, O. S. More, and L. G. Long, assignors to Fairbanks-Morse Electrical Manufacturing Company, Indianapolis, Ind. Induction-motor. No. 1,216,397; Feb. 20; v. 235; p. 765.
Bailey, James A., and H. E. Kalusowski, Washington, D. C., assignors to Addressograph Co., Chicago, Ill. Stencil-sheet and bath for making same. No. 1,215,098; Feb. 6; v. 235; p. 216.
Bailey, Joseph, Newark, assignor of one-half to H. A. Jaeger, Jersey City, N. J. Mechanical battle. No. 1,214,744; Feb. 6; v. 235; p. 92.
Bailey, Joseph W., Augusta, Ga. Excavating apparatus. No. 1,217,552; Feb. 27; v. 235; p. 1208.
Baln, Benjamin F. (See Bliss, Roy B., assignor.)
Baird, Edward P., Evanston, Ill. Locking device for motor-vehicles. No. 1,215,465; Feb. 13; v. 235; p. 376.
Baker, Charles M., Kansas City, Mo. Traction mechanism. No. 1,216,398; Feb. 20; v. 235; p. 766.
Baker, Ernest A. (See Null and Baker.)
Baker, Wintbrop D., Abington, assignor to Reece Shoe Machinery Company, Boston, Mass. Machine for cementing boots and shoes. No. 1,216,539; Feb. 20; v. 235; p. 814.
Baldridge, Frank G., Escondido, Cal. Swimming device. No. 1,217,681; Feb. 27; v. 235; p. 1254.
Baldwin, Edward C., Boston, Mass. Combined carton and dispenser. No. 1,217,682; Feb. 27; v. 235; p. 1254.
Baldwin Locomotive Works, The. (See Eddowes, Archibald B., assignor.)
Balkwill, Wesley J. (See Richmond, Balkwill, and Schweiger.)
Balkwill, Wesley J., assignor to Multipost Company, Rochester, N. Y. Counter mechanism for stamp-affixers. No. 1,216,267; Feb. 20; v. 235; p. 717.
Ballou, Charles E., assignor to Ballou Safety Rail Joint and Nut Company, Roanoke, Va. Insulated rail-joint. No. 1,215,897; Feb. 13; v. 235; p. 533.
Ballou Safety Rail Joint and Nut Company. (See Ballou, Charles E., assignor.)
Bally, Oscar, and H. Wolff, Mannheim, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Yellowish-brown vat dye. No. 1,216,921; Feb. 20; v. 235; p. 944.
Balz, George A., Rahway, N. J. Carborundum article and making it. No. 1,217,683; Feb. 27; v. 235; p. 1254.
Balzer, Fritz. (See Bartholomew, Broderick, and Balzer.)
Bancroft, Edward H., Brooklyn, N. Y. Book-rest. No. 1,216,048; Feb. 13; v. 235; p. 589.
Banka, John H., and J. Whalen, Battle Creek, Mich. Vehicle-spring. No. 1,216,922; Feb. 20; v. 235; p. 944.
Banks, Louis J., A. D. Anderson, and E. S. L. Lovell, National City, Cal. Fluid-agitator. No. 1,216,540; Feb. 20; v. 235; p. 814.
Banner, Otto, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Blading construction for turbo-compressor impellers. No. 1,217,386; Feb. 27; v. 235; p. 1148.
Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Cutting and folding machine. No. 1,214,877; Feb. 6; v. 235; p. 137.
Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Cutting and folding machine. No. 1,214,878; Feb. 6; v. 235; p. 137.
Barber, John W., Newton, Mass. Coupling or clutch. No. 1,214,985; Feb. 6; v. 235; p. 178.
Barcus, John W., Baltimore, Md. Aeroplane. No. 1,215,466; Feb. 13; v. 235; p. 376.
Barker, Auriol, Cloncurry, Queensland, Australia. Propeller. No. 1,217,684; Feb. 27; v. 235; p. 1255.
Barker, Ernest S., Brookline, assignor to United Drug Company, Boston, Mass. Dispenser for liquids. No. 1,216,199; Feb. 13; v. 235; p. 642.
Barker, George H., Pasadena, assignor to Improved Sanitary Fixture Company, Los Angeles, Cal. Bath-tub and lavatory direct waste. No. 1,215,237; Feb. 6; v. 235; p. 263.
Barks, Frank S., St. Louis, Mo. Metal beam. No. 1,217,685; Feb. 27; v. 235; p. 1255.
Barnes, Edward M., Hastings, assignor to Acme Paper Curing Co., Kalamazoo, Mich. Paper-curing machine. No. 1,215,760; Feb. 13; v. 235; p. 484.
Barnes, Franklin G., Wynnum South, near Brisbane, Queensland, assignor to Barnes Train Stop Company, Limited, Brisbane, Australia. Automatic safety-controller for permanent-way locomotives and the like. No. 1,216,049; Feb. 13; v. 235; p. 589.
Barnes Train Stop Company. (See Barnes, Franklin G., assignor.)
Barnett, Horatio, Malvern, Ark. Nut-lock. No. 1,217,086; Feb. 27; v. 235; p. 1255.
Barnett, Otto R. (See Laas, Edward, assignor.)
Barnett, Otto R. (See Sponenburg, Hiram H., assignor.)
Barney, Edwin E., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,215,761; Feb. 13; v. 235; p. 484.
Baron, Joseph, Rockaway Beach, assignor of one-half to H. Lutrin, Arverne, N. Y. Window-cleaning machine. No. 1,216,399; Feb. 20; v. 235; p. 766.
Barr, John H., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,215,762; Feb. 13; v. 235; p. 485.
Barr, John M. (See Bailey, Barr, More, and Long.)

Barrenpohl, Charles J., New York, N. Y. Lifting device. No. 1,216,541; Feb. 20; v. 235; p. 815.

Barrett Company, The. (See Stewart, Edwin F., assignor.)

Barrow, John H., Chicago, Ill. Envelop-sealer. No. 1,217,083; Feb. 20; v. 235; p. 997.

Barrow, John H., Chicago, Ill. Stamp-affixer. No. 1,217,387; Feb. 27; v. 235; p. 1148.

Barson, Harry W., Chicago, Ill., assignor to Acme Scale Co. Coin-controlled weighing-scale. No. 1,214,499; Feb. 6; v. 235; p. 5.

Barthold, Alvin W., Beach, N. D. Scale-weight. No. 1,217,687; Feb. 27; v. 235; p. 1255.

Bartholomew, William, assignor to Troy Laundry Machinery Company, Ltd., Chicago, Ill. Safety device for centrifugal extractors. No. 1,214,986; Feb. 6; v. 235; p. 178.

Bartholomew, William, and J. F. Broderick, assignors to Troy Laundry Machinery Company, Ltd., Chicago, Ill. Safety device for centrifugal extractors. No. 1,214,987; Feb. 6; v. 235; p. 179.

Bartholomew, William, J. F. Broderick, and F. Balzer, assignors to Troy Laundry Machinery Company, Ltd., Chicago, Ill. Safety-guard for centrifugal extractors. No. 1,214,988; Feb. 6; v. 235; p. 179.

Bartlett, Charles H., Cambridge, Mass. Book-holder. No. 1,215,808; Feb. 13; v. 235; p. 533.

Barton, Bradford T., and W. M. Nolin, Colorado Springs, Colo. Automobile-jack. No. 1,216,923; Feb. 20; v. 235; p. 944.

Barton, Francis M. (See Schuster, Karl R., assignor.)

Baruch Electric Controller Corporation. (See Baruch, Sydney N., assignor.)

Baruch, Sydney N., assignor to Baruch Electric Controller Corporation, San Francisco, Cal. Electric-circuit-protecting fuse. No. 1,214,879; Feb. 6; v. 235; p. 137.

Bascom, Henry M., Brooklyn, N. Y., assignor to American Telephone and Telegraph Company. Telephone toll system. No. 1,215,331; Feb. 13; v. 235; p. 330.

Basenberg, William H., Birmingham, Ala. Journal-polisher. No. 1,215,238; Feb. 6; v. 235; p. 263.

Bass, Fredle E., Newsome, assignor of one-half to K. H. Cooper, Scroggins, Tex. Stock-feeding apparatus. No. 1,216,050; Feb. 13; v. 235; p. 590.

Bassett, Harry P., Catonsville, assignor to The Spar Chemical Company, Baltimore, Md. Producing a soluble potassium compound. No. 1,217,388; Feb. 27; v. 235; p. 1148.

Bassett, Harry P., Catonsville, assignor to The Spar Chemical Company, Baltimore, Md. Process of treating potassium containing silicates and phosphate-rock and the product of such process. No. 1,217,389; Feb. 27; v. 235; p. 1149.

Bassett, Harry P., Catonsville, assignor to The Spar Chemical Company, Baltimore, Md. Producing potassium salts. No. 1,217,390; Feb. 27; v. 235; p. 1149.

Batenburg, Peter J. F., assignor to Four Wheel Drive Auto Company, Clintonville, Wis. Vehicle-spring. No. 1,216,268; Feb. 20; v. 235; p. 718.

Bates, Adelmer M., assignor to Bates Valve Bag Company, Chicago, Ill. Combined wire tie and tag. No. 1,216,269; Feb. 20; v. 235; p. 718.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Making shoes. No. 1,215,304; Feb. 6; v. 235; p. 285.

Bates, Charles F. W., assignor of one-half to C. L. Gebauer, Cleveland, Ohio. Anode for vacuum discharge-tubes. No. 1,214,500; Feb. 6; v. 235; p. 5.

Bates, Clarence A., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric switch. No. 1,217,638; Feb. 27; v. 235; p. 1256.

Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)

Baumann, Clifton K., New York, N. Y. Fabric-bolt board. No. 1,216,924; Feb. 20; v. 235; p. 945.

Baumgardner, Harry D., Frederick, Md. Curing meats. No. 1,217,134; Feb. 27; v. 235; p. 1062.

Baxter, Frank L., Boston, Mass. Toothpick. No. 1,217,264; Feb. 27; v. 235; p. 1105.

Bayer-Stroud Corporation. (See Jackson, Clarence S., assignor.)

Bayless, Patrick A., assignor of one-half to H. Ray, Minneapolis, Minn. Scrubbing and mopping brush. No. 1,215,239; Feb. 6; v. 235; p. 264.

Bayley, William B., Toronto, Ontario, Canada. Fertilizer-distributer. No. 1,216,051; Feb. 13; v. 235; p. 590.

Bayne, George G. (See James, Perry C., assignor.)

Beagle, Andrew C., Berwick, Pa. Gas-engine-valve grinder. No. 1,216,925; Feb. 20; v. 235; p. 945.

Beals, Albert A. (See Bright, Roswell C., assignor.)

Bean, William H. (See Watters and Bean.)

Beard, Clement E., Columbiana, and W. G. Stephan, Cleveland, Ohio. Hoist-block. No. 1,214,745; Feb. 6; v. 235; p. 92.

Beardsley, Edward W., *et al.* (See Koontz, John A., Jr., assignor.)

Bearfield, Thomas N., assignor of one-half to J. W. Elliker, Chicago, Ill. Auxiliary back-rest for chairs. No. 1,215,467; Feb. 13; v. 235; p. 377.

Beatty, Norman L., Punxsutawney, Pa. Rapid-fire toy gun. No. 1,217,553; Feb. 27; v. 235; p. 1209.

Beatty, William G., Fergus, Ontario, Canada. Coupling. No. 1,215,763; Feb. 13; v. 235; p. 485.

Beaver Company, The. (See Lowary, Ralph C., assignor.)

Becher, Eugen, assignor to Blaugas Company of America, New York, N. Y. Gas-torch. No. 1,214,880; Feb. 6; v. 235; p. 138.

Beck, Charles W., Detroit, Mich., assignor to The Beck-Frost Corporation. Fastening-clip for wire-terminals. No. 1,217,135; Feb. 27; v. 235; p. 1062.

Beck-Frost Corp., The. (See Beck, Charles W., assignor.)

Beck, Michael and N. B., Minneapolis, Minn. Fuel-heater for explosive-engines. No. 1,214,501; Feb. 6; v. 235; p. 5.

Beck, Nicholas B. (See Beck, Michael and N. B.)

Becker, Charles C., Indianapolis, Ind. Kitchen-cabinet. No. 1,215,240; Feb. 6; v. 235; p. 264.

Becker, Mathias B., Chicago, Ill. Crate. No. 1,216,270; Feb. 20; v. 235; p. 718.

Becker, Philip A., Brooklyn, N. Y. Box-holder and supplemental display-lid. No. 1,214,502; Feb. 6; v. 235; p. 6.

Beckman, Herman C., and G. E. Dyck, Chicago, Ill. Making artificial cream. No. 1,216,052; Feb. 13; v. 235; p. 591.

Bedard, Thomas A., Escanaba, Mich. Runner attachment. No. 1,217,130; Feb. 27; v. 235; p. 1063.

Beehler, William H., assignor to William Beehler, Inc., Baltimore, Md. Marking umbrellas and the like. No. 1,215,764; Feb. 13; v. 235; p. 485.

Begemann, Heinrich, Portland, Me., assignor to W. J. Gindele, Pawtucket, R. I. Apparatus for the manufacture of gas. No. 1,217,554; Feb. 27; v. 235; p. 1209.

Behl, Bertha M., Rochester, Ill. Curtain-support. No. 1,216,271; Feb. 20; v. 235; p. 719.

Behrens, Frederick F., Springfield, Ohio. Fruit-hamper. No. 1,217,137; Feb. 27; v. 235; p. 1063.

Belanger, Peranius, Nashau, N. H. Picker-stick. No. 1,215,899; Feb. 13; v. 235; p. 534.

Belin, Edouard, Paris, France. Automatic telegraphic or radiotelegraphic transmitter. No. 1,214,989; Feb. 6; v. 235; p. 180.

Bell, Elmer L., Hoxie, Kans. Pitchfork. No. 1,216,926; Feb. 20; v. 235; p. 945.

Bell, Harry A., assignor to Hide, Leather & Belting Company, Indianapolis, Ind. Machine for making leather of uniform thickness. No. 1,216,053; Feb. 13; v. 235; p. 591.

Bell & Howell Company. (See Howell, Albert S., assignor.)

Bell, John E., Brooklyn, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J. Steam-boiler. No. 1,215,765; Feb. 13; v. 235; p. 486.

Bell, Rollo R., Los Banos, Cal. Internal-combustion motor. No. 1,216,400; Feb. 20; v. 235; p. 766.

Bell, Thomas S., Baltimore, Md. Bottle-cap. No. 1,214,746; Feb. 6; v. 235; p. 93.

Bemis, Richard A., San Bernardino, Cal. Wave-motor. No. 1,216,927; Feb. 20; v. 235; p. 946.

Benbenek, Joseph, Du Quoin, Ill. Button-fastening. No. 1,215,100; Feb. 6; v. 235; p. 216.

Benbow, Burtis W., Eureka, Cal. Recording-compass. No. 1,216,200; Feb. 13; v. 235; p. 643.

Benbow, Burtis W., Eureka, Cal. Recording-compass. No. 1,216,201; Feb. 13; v. 235; p. 643.

Benidict, John M., *et al.* (See Fellows, Melvin, assignor.)

Benisch, Gustav, Brooklyn, N. Y. Combined mold and face-plate for concrete. No. 1,216,649; Feb. 20; v. 235; p. 852.

Benjamin, Bert R., Oak Park, Ill. Golf-tee. No. 1,215,316; Feb. 6; v. 235; p. 291.

Benjamin, George R. (See Yorke and Benjamin.)

Benner, Samuel A., Pittsburgh, Pa. Truck-bolster construction. No. 1,215,766; Feb. 13; v. 235; p. 486.

Bennett, Colin N., Penzance, England. Color cinematography. No. 1,217,391; Feb. 27; v. 235; p. 1149.

Bennett, Horatio S., Cleveland, Ohio. Furnace. No. 1,216,928; Feb. 20; v. 235; p. 946.

Bennett, Martin S., Minneapolis, Kans. Lock for egg-crate tops. No. 1,216,401; Feb. 20; v. 235; p. 767.

Benster, Menzo M., Gettysburg, S. D. Sash-cord fastener. No. 1,215,101 Feb. 6; v. 235; p. 216.

Berchtold, Oscar, East Pittsburgh, Pa. Permutation-lock. No. 1,217,392; Feb. 27; v. 235; p. 1150.

Bereiter, Walter E., Zion City, Ill. Hoisting device for ensilage-blowers. No. 1,215,241; Feb. 6; v. 235; p. 264.

Berg, Andrew, assignor to The Coulter & McKenzie Machine Company, Bridgeport, Conn. Eye-forming mechanism. No. 1,215,332; Feb. 13; v. 235; p. 332.

Berg, Emil G., Faribault, Minn. Feather-removing device. No. 1,217,393; Feb. 27; v. 235; p. 1150.

Bergen, Laura A., San Francisco, Cal. Portable stove. No. 1,217,139; Feb. 27; v. 235; p. 1063.

Berger, Dellno, Madison township, Franklin county, Ohio. Lock for use in automobiles. No. 1,216,054; Feb. 13; v. 235; p. 591.

Bergeson, Emil B. (See Reardon and Bergeson.)

Bergin, William, Lewistown, Mont. Gate and operating mechanism for the same. No. 1,216,402; Feb. 20; v. 235; p. 767.

Berglund, August, assignor of one-half to A. Godenius, Saginaw, Minn. Trap-hook. No. 1,217,689; Feb. 27; v. 235; p. 1256.

Berglund, August, assignor of one-half to A. Godenius, Saginaw, Minn. Trap-hook. No. 1,217,690; Feb. 27; v. 235; p. 1257.

Bergner, Harry A. (See McFerren, William S., assignor.)

Berkebile, Robert F., Kantner, Pa. Vacuum-operated brake mechanism. No. 1,216,542; Feb. 20; v. 235; p. 815.

Berliner, Isidor, and L. Weitzman, Toronto, Ontario, Canada. Muff and similar article. No. 1,216,929; Feb. 20; v. 235; p. 946.

Bernhard, Christian, Anthon, Iowa. Mail-transferring apparatus. No. 1,217,394; Feb. 27; v. 235; p. 1150.

Berntzen, Axel C., Eugene, Oreg. Automatic chicken-feeding machine. No. 1,214,881; Feb. 6; v. 235; p. 138.

Berry, Charles W., West Somerville, Mass. Recorder. No. 1,216,272; Feb. 20; v. 235; p. 719.

Berry, Jesse H., Boston, Mass. Vehicle wind-shield. No. 1,217,265; Feb. 27; v. 235; p. 1105.

Berry, William D., Florence, Ala. Mail-carrier. No. 1,216,930; Feb. 20; v. 235; p. 946.

Bertsch, George A., Providence, R. I. Fuel-mixer. No. 1,216,403; Feb. 20; v. 235; p. 767.

Bessant, Frederick R., assignor of one-half to H. J. Peck, Atkinson, Ill. Disk for disk plows. No. 1,214,882; Feb. 6; v. 235; p. 139.

Besser, Herman, Alpena, Mich. Concrete railway-tie. No. 1,217,555; Feb. 27; v. 235; p. 1210.

Betker, Edward T., Kansas City, Mo. Multiway valve. No. 1,214,747; Feb. 6; v. 235; p. 93.

Beuchel, Theodore W. (See Schmidt and Beuchel.)

Biddle, John M., *et al.* (See Mechau, Frederick A., assignor.)

Biliant, Louis L., Paris, France. Hand-grenade. No. 1,217,556; Feb. 27; v. 235; p. 1210.

Billett, Josiah S. G., Teddington, England. Spring-wheel for vehicles. No. 1,216,650; Feb. 20; v. 235; p. 853.

Billinghurst, Charles B., Pierre, S. D. Device for controlling shock. No. 1,216,931; Feb. 20; v. 235; p. 947.

Billings, Clarence E., New Haven, Conn. Sand-blast apparatus. No. 1,214,641; Feb. 6; v. 235; p. 55.

Billiter, Jean, Vienna, Austria-Hungary. Self-igniting electric-arc candle. No. 1,216,404; Feb. 20; v. 235; p. 768.

Bilton, George E., Toronto, Ontario, Canada. Service-tray. No. 1,217,266; Feb. 27; v. 235; p. 1105.

Binder Company, The. (See Tompkins, Robert F., assignor.)

Binns, Edward H., Pittsburgh, Pa. Shoe. No. 1,215,767; Feb. 13; v. 235; p. 486.

Birch, Clarence E., Lawrence, Kans. Writing-chart. No. 1,216,405; Feb. 20; v. 235; p. 768.

Birch, George L., Wilton, Ky. Lubricating-axle. No. 1,216,768; Feb. 20; v. 235; p. 893.

Birch, Gustaf B. (See Cameron and Birch.)

Bird, Charles S., and G. R. Wyman, Walpole, Mass.; said Wyman assignor to said Bird. Making paper-board. No. 1,216,055; Feb. 13; v. 235; p. 592.

Birdsell, William A., Sr., Ravenna, Mich. Harvester. No. 1,214,990; Feb. 6; v. 235; p. 180.

Bischof, Ulrich, Winterthur, assignor to Gebr. Stäubli, Horgen, Switzerland. Thread-stitching machine for bookbinding. No. 1,217,395; Feb. 27; v. 235; p. 1150.

Bissell, Carl H., assignor to Crouse-Hinds Company, Syracuse, N. Y. Electrical receptacle for conduit outlet-boxes. No. 1,216,406; Feb. 20; v. 235; p. 768.

Bittle, Harry L., West Alexandria, Ohio, assignor of one-third to J. F. Plander, one-third to O. V. Fritz, and one-third to H. L. Bittle. Collapsible mail-rack. No. 1,216,250; Feb. 13; v. 235; p. 660.

Bittner, David, Jr., St. Louis, Mo. Dirigible headlight. No. 1,217,140; Feb. 27; v. 235; p. 1063.

Bjorklund, Gustaf. (See Schwarz and Bjorklund.)

Björksten, Karl, Petrograd, Russia. Type-writer. No. 1,215,102; Feb. 6; v. 235; p. 216.

Black, Graham E., and J. W. Wheeler, Huntington, W. Va. Printing implement. No. 1,215,900; Feb. 13; v. 235; p. 534.

Blanarik, Michael, South Norwalk, Conn. Chair-actuated blower. No. 1,215,103; Feb. 6; v. 235; p. 217.

Blanton, John C., and D. J. Sexton, Freeman, W. Va. Mail-bag-delivering apparatus. No. 1,216,056; Feb. 13; v. 235; p. 592.

Blaske, William C., assignor to Wolff Fuel Saver Company, Chicago, Ill. Fuel-saving device. No. 1,217,267; Feb. 27; v. 235; p. 1106.

Blaugas Company of America. (See Becher, Eugen, assignor.)

Blaw Steel Construction Company. (See McArthur, Charles D., assignor.)

Blessing, John G., Chicago, assignor to A. E. Keith, Hinsdale, Ill. Electric clock. No. 1,217,557; Feb. 27; v. 235; p. 1210.

Bliss, Donald M., assignor to Thomas A. Edison, Incorporated, West Orange, N. J. Alternating-current motor. No. 1,214,883; Feb. 6; v. 235; p. 139.

Bliss, Roy B., Otsego, Mich., assignor to B. F. Bain, Pittsburgh, Pa. Mechanical toy. No. 1,217,885; Feb. 27; v. 235; p. 1321.

Block, Alexander E., St. Louis, Mo. Arch-support. (Reissue.) No. 14,264; Feb. 27; v. 235; p. 1324.

Block, Charles H., assignor to Delmar Manufacturing Company, St. Louis, Mo. Hat. No. 1,215,468; Feb. 13; v. 235; p. 377.

Blood, Mary L. (See Blood, Maurice E., assignor.)

Blood, Maurice E., assignor to M. L. Blood, Kalamazoo, Mich. Universal joint. No. 1,216,769; Feb. 20; v. 235; p. 893.

Bloomer, Harvey E., Milwaukee, assignor, by mesne assignments, to The Sun-Ray Mfg. Co., Oshkosh, Wis. Electric heating-pad. No. 1,215,610; Feb. 13; v. 235; p. 432.

Blough, Earl, and T. McIntosh, assignors to Aluminum Company of America, Pittsburgh, Pa. Production of alumina and potassium sulfate from alunite. No. 1,214,991; Feb. 6; v. 235; p. 181.

Blue, Lee A., Lyra, Tex. Post-hole drill. No. 1,216,932; Feb. 20; v. 235; p. 947.

Blum, George J., assignor to Armstrong-Blum Manufacturing Company, Chicago, Ill. Feeding mechanism. No. 1,214,884; Feb. 6; v. 235; p. 139.

Blume, George F., Richmond, Ind. Journal-bearing. No. 1,217,141; Feb. 27; v. 235; p. 1064.

Blumenfeld, Samuel, Chicago, Ill. Fastening for wardrobe-trunks. No. 1,215,469; Feb. 13; v. 235; p. 377.

Boardman, Frank E., Memphis, Tenn. Signal system and control therefor. No. 1,217,558; Feb. 27; v. 235; p. 1211.

Boberg, Teofron. (See Åslund and Boberg.)

Boblett, Kinderman M., Toledo, Ohio. Radiator. No. 1,214,642; Feb. 6; v. 235; p. 56.

Boeckem, Fritz W. O., London, assignor to A. Morris, Reigate, England. Carbureting apparatus. No. 1,214,885; Feb. 6; v. 235; p. 140.

Boerner, Emile C., assignor to Russell, Burdsall & Ward Bolt and Nut Co., Port Chester, N. Y. Nut-castellating machine. No. 1,217,396; Feb. 27; v. 235; p. 1151.

Bogart, John H., *et al.* (See Cox, Eldridge A., assignor.)

Boggess, David L., Liberty, Mo. Spark-plug. No. 1,215,611; Feb. 13; v. 235; p. 432.

Boirault, Louis, Paris, France. Electrical coupling device for railway and other vehicles. No. 1,216,057; Feb. 13; v. 235; p. 592.

Boker, Vitus A., Minneapolis, Minn. Tractor. No. 1,214,643; Feb. 6; v. 235; p. 56.

Boland, Francis P., Providence, R. I. Process and means for filtering water. No. 1,217,397; Feb. 27; v. 235; p. 1151.

Bolens, Harry W., assignor to Gilson Manufacturing Company, Port Washington, Wis. Adjustment for tilting-chairs. No. 1,217,268; Feb. 27; v. 235; p. 1106.

Boleratz, Norine, Detroit, Mich. Culinary boiler. No. 1,214,992; Feb. 6; v. 235; p. 181.

Bolt, Malon C. and S. L., and E. E. Goad, Switchback, W. Va. Spring-wheel. No. 1,215,768; Feb. 13; v. 235; p. 487.

Bolt, Sylvester L. (See Bolt and Goad.)

Bomar, Thomas B., Fort Worth, Tex. Collapsible carrying-crate. No. 1,216,058; Feb. 13; v. 235; p. 593.

Bondurant, Jesse M., Figsboro, Va. Feeding attachment for baling-presses. No. 1,216,407; Feb. 20; v. 235; p. 769.

Bongiovanni, Antonio, Barnesboro, Pa. Holder or caster for condiment-receptacles. No. 1,215,333; Feb. 13; v. 235; p. 331.

Bonham, Frances G., administratrix. (See Bonham, Francis P.)

Bonham, Francis P., deceased, San Francisco; G. Bonham, administratrix, Woodland, Cal. Manifold device for addressing envelops. No. 1,216,770; Feb. 20; v. 235; p. 894.

Bonkemeyer, William H., Randleman, N. C. Plow. No. 1,214,993; Feb. 6; v. 235; p. 181.

Bonnell, William A., Brooklyn, N. Y. Metal conduit-molding. No. 1,217,398; Feb. 27; v. 235; p. 1151.

Bonner, C. E. (See Brown, John H., assignor.)

Bonner, James A., San Diego, Cal. Toilet-seat. No. 1,215,104; Feb. 6; v. 235; p. 217.

Bonney-Floyd Company, The. (See Dorsey, Walter A., assignor.)

Bonney-Floyd Company, The. (See Newdick, Norton A., assignor.)

Bonvicn, Adolph M., Ironton, Minn. Gearing for bicycles. No. 1,217,691; Feb. 27; v. 235; p. 1257.

Bookman, Joseph B., Manhattan, Nev. Internal-bath apparatus. No. 1,217,692; Feb. 27; v. 235; p. 1257.

Booth, Levis M., Plainfield, N. J. Drum-cap. No. 1,216,771; Feb. 20; v. 235; p. 894.

Bopp, Clinton L., Hawkeye, Iowa. Circuit-closer for automatic signaling systems. No. 1,215,242; Feb. 6; v. 235; p. 265.

Borland, Matthew H., Seekonk, Mass. Electrical make-and-break tripping mechanism for two or four cycle gas-engines. No. 1,216,651; Feb. 20; v. 235; p. 853.

Bornmann, Carl, and E. C. Clark, assignors to Ansco Company, Binghamton, N. Y. Camera. No. 1,216,543; Feb. 20; v. 235; p. 815.

Borrás, Antonio, and F. Iriarte, Buenos Aires, Argentina. Aeroplane. No. 1,216,652; Feb. 20; v. 235; p. 853.

Borst, Frederick H., Artesian, S. D. Apparatus for and process of die-casting pure aluminum, its alloys, and other lighter metals. No. 1,215,243; Feb. 6; v. 235; p. 265.

Bosch, Carl, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Absorbing ammonia and apparatus therefor. No. 1,216,059; Feb. 13; v. 235; p. 593.

Bosch, Carl, A. Mittasch, and C. Schneider, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Hydrogenization and dehydrogenization of compounds containing carbon. No. 1,215,334; Feb. 13; v. 235; p. 331.

Bosch, Carl, A. Mittasch, and C. Schneider, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Hydrogenization and dehydrogenization of carbon compounds. No. 1,215,335; Feb. 13; v. 235; p. 331.

Bosch, Carl, A. Mittasch, and C. Schneider, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Hydrogenization and dehydrogenization of carbon compounds. No. 1,216,933; Feb. 20; v. 235; p. 947.

Bosch, Edward M., Winnemucca, Nev. Stem for swinging watchcases. No. 1,214,994; Feb. 6; v. 235; p. 181.

Bosch, Firm of Robert. (See Starker, Heinrich, assignor.)

Boss Manufacturing Company. (See Möller, Johan P., assignor.)

Bosson, August H., Charleroi, assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa. Glass-blocking machine. No. 1,217,142; Feb. 27; v. 235; p. 1064.

Boston Lock-Nut Company. (See Sleeper, Otis H., assignor.)

Boston Rubber Shoe Company. (See Clark, Myron H., assignor.)

Both, Tonjes A. C., Malden, assignor to The Zee Socket & Mfg. Co., Boston, Mass. Electric-light socket. No. 1,214,644; Feb. 6; v. 235; p. 57.

Bottle, Edward K., Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Ontario, Canada. Manifolding device. No. 1,217,399; Feb. 27; v. 235; p. 1157.

Botto, Charles F., Philadelphia, Pa. Tube cutting and threading tool. No. 1,216,772; Feb. 20; v. 235; p. 894.

Bouch, Horace W., Sidney, Pa. Rail-joint. No. 1,217,400; Feb. 27; v. 235; p. 1152.

Bouchery, August, Brooklyn, N. Y. Lock. No. 1,215,470; Feb. 13; v. 235; p. 377.

Bouchery, August, Brooklyn, N. Y. Connecting-plug. No. 1,217,143; Feb. 27; v. 235; p. 1064.

Boughton, Fred W., Boston, Mass. Slide-up turnover door. No. 1,216,202; Feb. 13; v. 235; p. 643.

Bourn, Stephen W., Providence, R. I. Sole for rubber shoes. No. 1,214,889; Feb. 6; v. 235; p. 142.

Bowe, David W., Toledo, Ohio. Molding apparatus for fence-posts. No. 1,216,934; Feb. 20; v. 235; p. 948.

Bowen, George H., Jr., Toronto, Ontario, Canada, assignor to American Graphophone Company, Bridgeport, Conn. Self-releasing lid-support. No. 1,214,890; Feb. 6; v. 235; p. 142.

Bowen, George W. (See Zerk, Oscar, assignor.)

Bowen, Leslie G., Kansas City, Mo. Oil-saver. No. 1,215,244; Feb. 6; v. 235; p. 266.

Bower, John F., Williamsport, Pa. Poultry-feeder. No. 1,216,203; Feb. 13; v. 235; p. 644.

Bowers, John, Jr. (See Turner, George W., assignor.)

Bowman, Charles M., Lebanon, Pa. Composition for producing artificial rust. No. 1,215,471; Feb. 13; v. 235; p. 378.

Bowman, Levi M., Tulsa, assignor of one-half to W. A. Smith, Bartlesville, Okla. Direction-indicator. No. 1,215,901; Feb. 13; v. 235; p. 534.

Bowman, Newton K., North Lawrence, Ohio. Switch-operating mechanism. No. 1,216,935; Feb. 20; v. 235; p. 948.

Boyce, Leonora, Yoakum, Tex. Gasolene-tank filler and gage. No. 1,217,093; Feb. 27; v. 235; p. 1258.

Boyd, Geo. D., *et al.* (See Sartain, Louis M., assignor.)

Boyden, Nathaniel N., assignor of one-half to W. S. Murrian, Knoxville, Tenn. Blow-off valve. No. 1,214,645; Feb. 6; v. 235; p. 57.

Boye, James H., assignor to The Boye Needle Company, Chicago, Ill. Curtain-rod. No. 1,214,995; Feb. 6; v. 235; p. 182.

Boye, James H., assignor to The Boye Needle Company, Chicago, Ill. Pencil-sharpener. No. 1,214,996; Feb. 6; v. 235; p. 182.

Boye Needle Company, The. (See Boye, James H., assignor.)

Boyter, Robert L., Lakeview, Tex. Tie-wire for insulators. No. 1,215,245; Feb. 6; v. 235; p. 266.

Brach, Emil J., Chicago, Ill. Confectionery-machine. No. 1,216,936; Feb. 20; v. 235; p. 948.

Bracy, Edward L., Baltimore, Md., assignor to Wright's Automatic Tobacco Packing Machine Company, Durham, N. C. Packaging-machine for tobacco and like materials. No. 1,217,094; Feb. 27; v. 235; p. 1258.

Bradburn, Charles F., Delmer, Ontario, Canada. Valve. No. 1,215,769; Feb. 13; v. 235; p. 487.

Bradshaw, A. R. (See Young, Edward B., assignor.)

Bradshaw, Richard, Montreal, Quebec, Canada. Bedstead construction. No. 1,214,503; Feb. 6; v. 235; p. 6.

Bradt, Harold J., Royal Oak, Mich. Demountable rim. No. 1,217,144; Feb. 27; v. 235; p. 1065.

Brady, Glen D., Detroit, Mich. Moving-picture machine. No. 1,215,770; Feb. 13; v. 235; p. 487.

Braecklein, Alfred H., assignor to The Sanitary Seal Manufacturing Company, Baltimore, Md. Machine for making bottle-seals. No. 1,214,504; Feb. 6; v. 235; p. 6.

Braley, William L., assignor to The American Seeding Machine Company, Springfield, Ohio. Seeding-machine. No. 1,215,472; Feb. 13; v. 235; p. 378.

Bramhall Deane Company. (See May, William H., assignor.)

Brand, Morrie, assignor of one-half to J. Hughes, San Francisco, Cal. Door closer-hinge. No. 1,214,748; Feb. 6; v. 235; p. 93.

Brandt, Andrew G., Scranton, Pa. Button-fastener. No. 1,214,505; Feb. 6; v. 235; p. 7.

Brasack, William, Fairmont, W. Va., assignor to Fairmont Mining Machinery Company. Shaker-screen. No. 1,214,506; Feb. 6; v. 235; p. 7.

Brass Goods M'f'g. Co. (See Frey, August J., assignor.)

Bratton, Edna V., Luray, Kans. Poultry-fumigator. No. 1,215,336; Feb. 13; v. 235; p. 331.

Braun, William P., Brooklyn, N. Y. Treating fur. No. 1,215,246; Feb. 6; v. 235; p. 266.

Breeden, Francis V., Birmingham, England. Screw-cutting lathe. No. 1,216,060; Feb. 13; v. 235; p. 593.

Breitinger, Eduard, Albisrieden, Switzerland. Damping device for measuring instruments and the like. No. 1,214,507; Feb. 6; v. 235; p. 8.

Brekke, Gilbert O., Plaza, N. D. Plate-rack. No. 1,216,061; Feb. 13; v. 235; p. 594.

Breland, Charles J. W., Spiro, Okla. Combination pencil sharpener and holder. No. 1,215,473; Feb. 13; v. 235; p. 379.

Brenne, Carl F., E. G. Jurgens, and D. C. Dudley, Portland, Oreg. Loose-leaf holder. No. 1,216,062; Feb. 13; v. 235; p. 594.

Brenner, Peter K., New York, N. Y. Race-game apparatus. No. 1,217,145; Feb. 27; v. 235; p. 1065.

Brewster Film Corporation. (See Miller, Hoyt, assignor.)

Bridges, Robert R., Geneva, N. Y. Window-shade bracket. No. 1,217,695; Feb. 27; v. 235; p. 1259.

Bridges, Walter S., Chicago, Ill. Auxiliary inner fire-tube for steam-boilers. No. 1,216,408; Feb. 20; v. 235; p. 769.

Bridwell, Alfred H., Beech Grove, Ky. Hog-yoke. No. 1,217,696; Feb. 27; v. 235; p. 1259.

Brigel, Leo A., Cheviot, Ohio. Vehicle-saddle. No. 1,216,273; Feb. 20; v. 235; p. 720.

Briggs, Arthur J., Syracuse, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,214,891; Feb. 6; v. 235; p. 142.

Briggs, Arthur J., Syracuse, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,215,105; Feb. 6; v. 235; p. 217.

Briggs, Arthur J., Syracuse, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,215,612; Feb. 13; v. 235; p. 432.

Brigham, Harry L., assignor to Tolman Print Incorporated, Brockton, Mass. Sheet-feeding means. No. 1,215,247; Feb. 6; v. 235; p. 266.

Bright, Fred E., Philadelphia, Pa., assignor to The Hess-Bright Manufacturing Company. Antifriction-bearing. No. 1,215,474; Feb. 13; v. 235; p. 379.

Bright, Roswell C., assignor of one-half to A. A. Beals, Clarence, Mo. Antiskid-rudder for autos. No. 1,215,902; Feb. 13; v. 235; p. 535.

Briscoe Motor Co. (See Guthrie, James, assignor.)

British Patent Surbrite Company, The. (See Meadway, Ernest G., assignor.)

Broadfield Poultry Farm. (See Warren, John B., assignor.)

Broady, Harry W., Bayside, N. Y. Treating wood. No. 1,217,559; Feb. 27; v. 235; p. 1211.

Brock, Matthias, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-supporting jack. No. 1,217,401; Feb. 27; v. 235; p. 1152.

Broderick, James F. (See Bartholomew and Broderick.)

Broderick, James F. (See Bartholomew, Broderick, and Balzer.)

Broderick, Patrick F., and J. H. Harter, Bridgeport, Conn. Vehicle-wheel. No. 1,216,937; Feb. 20; v. 235; p. 949.

Brokaw, William G., Paris, France. Apparatus for nasal douches, injections, and other like purposes. No. 1,215,475; Feb. 13; v. 235; p. 379.

Brooks, Alfred A., West Medford, Mass., assignor to General Electric Company. Valve-gear. No. 1,216,204; Feb. 13; v. 235; p. 644.

Brooks, Benjamin T. (See Hibbert, Essex, and Brooks.)

Brooks, Benjamin T., and I. Humphrey, assignors to Gulf Refining Company, Pittsburgh, Pa. Manufacture of glycols. No. 1,215,903; Feb. 13; v. 235; p. 535.

Brooks, William J., Westholm, Letchworth, England. Supporting-strut for show-cards, photograph-frames, and other articles. No. 1,217,402; Feb. 27; v. 235; p. 1153.

Brosius, Edgar E., Pittsburgh, Pa. Grab-bucket. No. 1,214,997; Feb. 6; v. 235; p. 182.

Brosnan, John, Jr. (See Donner, John L., assignor.)

Brotherston, Alexander M., Moncton, assignor of one-half to H. A. Frank, Millarton, New Brunswick, Canada. Machine-gun. No. 1,216,938; Feb. 20; v. 235; p. 949.

Brotherston, Alexander M., Moncton, assignor of one-half to H. A. Frank, Millarton, New Brunswick, Canada. Method of and apparatus for cooling gun-barrels. No. 1,216,939; Feb. 20; v. 235; p. 950.

Brouillet, Viletta A., San Luis Obispo, Cal. Spool-holder. No. 1,215,476; Feb. 13; v. 235; p. 380.

Brown, Alfred, Denton, near Manchester, England. Machine for making hat-brim wires. No. 1,216,409; Feb. 20; v. 235; p. 769.

Brown, Arthur J., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Gage. No. 1,216,544; Feb. 20; v. 235; p. 816.

Brown, Barney R., Heber Springs, Ark. Railway-joint. No. 1,216,205; Feb. 13; v. 235; p. 645.

Brown Brothers Limited. (See Joseph, Simon, assignor.)

Brown, Charles S., Syracuse, N. Y. Transmission-gearing. No. 1,216,410; Feb. 20; v. 235; p. 769.

Brown, Clarence H., Chicago, Ill., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Type-writing machine. No. 1,216,251; Feb. 13; v. 235; p. 660.

Brown Daisy Products Company. (See Harlow, Louis, assignor.)

Brown, Frank W., Belding, Mich. Adjustable saw-setting device. No. 1,217,097; Feb. 27; v. 235; p. 1259.

Brown, George R., assignor of one-third to B. Clayton and one-third to W. L. Clayton, Oklahoma, Okla. Baling-press. No. 1,215,618; Feb. 13; v. 235; p. 433.

Brown, Henry, Wimbledon, England. Manufacture of envelops, postal wrappers, and the like. No. 1,215,248; Feb. 6; v. 235; p. 267.

Brown, Henry, Putney Hill, London, England. Heating apparatus using liquid fuel. No. 1,217,098; Feb. 27; v. 235; p. 1259.

Brown, John H., Midvale, Utah. Dental tool. No. 1,217,403; Feb. 27; v. 235; p. 1153.

Brown, John H., West Hoboken, N. J., assignor to C. E. Bonner, Champaign, Ill. Making inner tubes for pneumatic tires. No. 1,217,560; Feb. 27; v. 235; p. 1211.

Brown, John H., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Feeding and guiding mechanism. No. 1,217,856; Feb. 27; v. 235; p. 1312.

Brown, Lewis F., Hammond, Nebr. Loading apparatus. No. 1,216,206; Feb. 13; v. 235; p. 645.

Brown, Oscie E., Delmar, Iowa. Fruit-jar holder. No. 1,217,099; Feb. 27; v. 235; p. 1260.

Brown, Reinhardt H., Laporte, Ind. Child's sulky. No. 1,215,771; Feb. 13; v. 235; p. 488.

Brown, Theophilus, Worcester, Mass., assignor, by mesne assignments, to Marseilles Company, East Moline, Ill. Manure-spreader. No. 1,215,614; Feb. 13; v. 235; p. 433.

Brown, Theophilus, Worcester, Mass., assignor, by mesne assignments, to Marseilles Company, East Moline, Ill. Manure-spreader. No. 1,215,615; Feb. 13; v. 235; p. 434.

Brown, Theophilus, Worcester, Mass., assignor, by mesne assignments, to Marseilles Company, East Moline, Ill. Manure-spreader. No. 1,215,616; Feb. 13; v. 235; p. 434.

Brown, Thomas E., New York, N. Y. Centrifugal machine. No. 1,215,337; Feb. 13; v. 235; p. 332.

Brown, William H., Cleveland, Ohio. Spring-lubricator. No. 1,215,904; Feb. 13; v. 235; p. 535.

Brown, William H., Cleveland, Ohio. Lubricator. No. 1,216,411; Feb. 20; v. 235; p. 770.

Brown, William H., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y. Carrying-over and clearing mechanism for calculating-machines. No. 1,214,886; Feb. 6; v. 235; p. 140.

Brown, William L., Lansdowne, Pa. Meter. No. 1,216,412; Feb. 20; v. 235; p. 770.

Brown, Wilson and J. B. Meador, Mounds, Okla. Valve. No. 1,217,700; Feb. 27; v. 235; p. 1260.

Bruckman, Frederick A. (See Dieterich, Albert E., assignor.)

Bruckman, Frederick A., Portland, Oreg. Pastry-making machine. No. 1,216,274; Feb. 20; v. 235; p. 720.

Bruckman, Frederick A., Portland, Oreg. Pastry-making machine. No. 1,216,275; Feb. 20; v. 235; p. 720.

Brueck, Theodor. (See Klein and Brueck.)

Bruederly, Joseph F., assignor of one-half to J. H. Hook, Lancaster, Pa. Curtain-pole and shade-roller support. No. 1,216,276; Feb. 20; v. 235; p. 721.

Bruflat, Anton, Barneveld, Wis. Wire-securing clip. No. 1,214,749; Feb. 6; v. 235; p. 94.

Brune, Louis J., Algiers, La. Clasp-holder for irons. No. 1,216,653; Feb. 20; v. 235; p. 854.

Brunelle, Edward. (See Brunelle, Henry and E.)

Brunelle, Henry and E., Turners Falls, Mass. Circuit-closer for drip-pan alarms. No. 1,217,701; Feb. 27; v. 235; p. 1260.

Brunner, Matthew J., assignor of one-half to J. E. Hunter, Buffalo, N. Y. Window shade and curtain support. No. 1,216,277; Feb. 20; v. 235; p. 721.

Brust, Charles A., Memphis, Tenn. Saw filing or grinding wheel. No. 1,217,889; Feb. 27; v. 235; p. 1323.

Bryant Electric Company, The. (See Bates, Clarence A., assignor.)

Bryant Electric Company, The. (See Goodridge, Gilbert W., assignor.)

Bryant Electric Company, The. (See Thomas, George B., assignor.)

Bryant, Richard S., assignor to The Standard Welding Company, Cleveland, Ohio. Rim for vehicle-wheels. No. 1,216,278; Feb. 20; v. 235; p. 721.

Bryant, Richard S., assignor to The Standard Welding Company, Cleveland, Ohio. Rim for vehicle-wheels. No. 1,216,279; Feb. 20; v. 235; p. 722.

Bryngelson, Biom O., Dunbar, Iowa. Washing-machine. No. 1,215,338; Feb. 13; v. 235; p. 332.

Buchan, John P., Marcus, Iowa. Separator. No. 1,217,404; Feb. 27; v. 235; p. 1153.

Buchanan, Frank, Syracuse, N. Y. Headlight. No. 1,215,772; Feb. 13; v. 235; p. 488.

Buckingham, William H., San Francisco, and H. S. Johnson, Mill Valley, assignors to Hercules Motor Patents, San Francisco, Cal. Railway-truck and drive therefor. No. 1,216,063; Feb. 13; v. 235; p. 594.

Buckingham, William H., Mount Tamalpias, and H. S. Johnson, Mill Valley, assignors to Hercules Motor Patents, San Francisco, Cal. Worm-drive for railway-car trucks. No. 1,216,064; Feb. 13; v. 235; p. 595.

Budd, Edward G., assignor to Edward G. Budd Manufacturing Company, Philadelphia, Pa. Metallic door and lock mechanism therefor. No. 1,214,892; Feb. 6; v. 235; p. 142.

Budd, Harry, Independence, Kans. Clothes-wringer. No. 1,215,339; Feb. 13; v. 235; p. 332.

Budd, Harry, Independence, Kans. Washbench. No. 1,215,340; Feb. 13; v. 235; p. 333.

Buhl, Cay, Paterson, assignor to National Textile Machine Company, North Paterson, N. J. Cloth folding and winding machine. No. 1,216,280; Feb. 20; v. 235; p. 722.

Buhl, G. Arthur. (See Stutzke, Richard W. G., assignor.)

Buitrago, Rafael D., New York, N. Y. Bubble-blower. No. 1,215,617; Feb. 13; v. 235; p. 435.

Bulley, George W., assignor to Mercury Manufacturing Company, Chicago, Ill. Electric tractor. No. 1,217,702; Feb. 27; v. 235; p. 1261.

Bullock, Arthur R., Cleveland, Ohio. Current-converting device. No. 1,216,413; Feb. 20; v. 235; p. 770.

Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Rolling window-screen. No. 1,217,561; Feb. 27; v. 235; p. 1211.

Burch, Charles B. (See Marchant and Burch.)

Burch, Frederick W., Pueblo, Colo. Water-bag receptacle. No. 1,215,477; Feb. 13; v. 235; p. 380.

Burchartz, Ferdinand, New York, N. Y., assignor to Burchartz Fireproofing Company, Inc. Hollow block for building purposes. No. 1,215,106; Feb. 6; v. 235; p. 218.

Burchartz Fireproofing Company. (See Burchartz, Ferdinand, assignor.)

Burchfiel, Otha P. (See Stapleton and Burchfiel.)

Burda, Matthew, Chicago, Ill. Trunk-lock. No. 1,217,146; Feb. 27; v. 235; p. 1066.

Burdick, Ephraim, Cleveland, Ohio. Onion-topping machine. No. 1,217,269; Feb. 27; v. 235; p. 1107.

Burger, Jacob D., Chicago, Ill. Smoking-pipe. No. 1,214,887; Feb. 6; v. 235; p. 141.

Burgess, Edward W., Chicago, Ill., assignor to International Harvester Corporation. Clutch mechanism for corn-planters. No. 1,215,478; Feb. 13; v. 235; p. 381.

Burgess, Edward W., Chicago, Ill., assignor to International Harvester Corporation. Clutch mechanism for corn-planters. No. 1,216,281; Feb. 20; v. 235; p. 723.

Burgess, Garrett, Detroit, Mich. Signaling device for vehicles. No. 1,216,207; Feb. 13; v. 235; p. 645.

Burgess, Joseph E., assignor to United Railways Company of St. Louis, St. Louis, Mo. Wire-connector. No. 1,216,545; Feb. 20; v. 235; p. 816.

Burke Process Company, The. (See Burke, Wilbur B., assignor.)

Burke, Thomas E., and J. R. A. Lindholm, Chicago, Ill. Submarine life-saving and observation device. No. 1,215,905; Feb. 13; v. 235; p. 536.

Burke, Wilbur B., assignor to The Burke Process Company, Cleveland, Ohio. Vulcanizing rubber. No. 1,216,654; Feb. 20; v. 235; p. 854.

Burke, William H., Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Roll for operating upon boots and shoes. No. 1,217,405; Feb. 27; v. 235; p. 1153.

Burkhardt, Gustave, Chicago, Ill. Locking-valve. No. 1,217,406; Feb. 27; v. 235; p. 1154.

Burnes, Worley W. (See Burress and Burnes.)

Burnett, Richard W., Montreal, Quebec, Canada. Ventilator. No. 1,215,341; Feb. 13; v. 235; p. 333.

Burney, Arthur W., Lewiston, Idaho. Water-cock. No. 1,216,940; Feb. 20; v. 235; p. 950.

Burns, James F., Philadelphia, Pa. Electric switch-box. No. 1,215,249; Feb. 6; v. 235; p. 267.

Burress, John R., and W. W. Burnes, Wills Point, Tex. Railway-gate. No. 1,216,065; Feb. 13; v. 235; p. 595.

Burritt, William H., St. Louis, Mo. Tire-casing mold. No. 1,214,888; Feb. 6; v. 235; p. 141.

Burrowes, Frank M., Portland, Me. Folding table. No. 1,215,479; Feb. 13; v. 235; p. 381.

Burtis, Alvin G., Huntington Park, assignor of one-half to S. L. Weaver, Los Angeles, Cal. Container-core for rolls of paper and the like. No. 1,214,750; Feb. 6; v. 235; p. 94.

Burton, Charles S., Oak Park, Ill. Vehicle-wheel tire. No. 1,217,407; Feb. 27; v. 235; p. 1154.

Burwell, Fred W., East Cleveland, Ohio. Bath-tub attachment. No. 1,217,147; Feb. 27; v. 235; p. 1066.

Buser, William E., Chillicothe, Ohio. Tufting mechanism. No. 1,215,618; Feb. 13; v. 235; p. 435.

Bush, Arthur D., Olivet, Mich. Dish-washer. No. 1,215,107; Feb. 6; v. 235; p. 218.

Bussey, Allan C., Minneapolis, Minn. Egg-box. No. 1,216,208; Feb. 13; v. 235; p. 646.

Butcher, Harry E., assignor to The Standard Welding Company, Cleveland, Ohio. Method of and apparatus for removing interior burs from tubes. No. 1,215,773; Feb. 13; v. 235; p. 489.

Butler, Fergus A., Danvers, Mass. Overcoat. No. 1,214,893; Feb. 6; v. 235; p. 143.

Butler, Samuel, Sharples, W. Va. Coal-handling machinery. No. 1,214,646; Feb. 6; v. 235; p. 58.
Butter Serving Machine Company. (See Straight, Bennett D., assignor.)
Buttress, Joseph A., Los Angeles, Cal. Curve-scriber. No. 1,216,066; Feb. 13; v. 235; p. 595.
Byrd, Britton E., Durham, assignor, by mesne assignments, to Mill Devices Company, Lyon Park, near Durham, N. C. Yarn-sizing machine. No. 1,214,998; Feb. 6; v. 235; p. 183.
Byrd, Britton E., Durham, assignor, by mesne assignments, to Mill Devices Company, Lyon Park, near Durham, N. C. Tension device for yarn-sizing machines. No. 1,214,999; Feb. 6; v. 235; p. 183.
Byrd, Samuel C. (See Pierce and Byrd.)
C. Mattison Machine Works. (See Mattison, Carl L., assignor.)
C. A. P. Turner Company. (See Turner, Claude A. P., assignor.)
C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)
Cable Company, The. (See Klugh, Paul B., assignor.)
Cahill, Thomas J., San Francisco, Cal. Non-slipping cover for pulleys. No. 1,217,270; Feb. 27; v. 235; p. 1107.
Calamiello, Giuseppe, Paterson, N. J. Shoe construction. No. 1,217,703; Feb. 27; v. 235; p. 1261.
Calcote, William S., Wellington, Tex. Door-operating mechanism for mail-boxes. No. 1,216,067; Feb. 13; v. 235; p. 595.
Caldwell, Eugene W., New York, N. Y. X-ray apparatus. No. 1,217,148; Feb. 27; v. 235; p. 1066.
Caldwell, Eugene W., New York, N. Y. X-ray apparatus. No. 1,217,149; Feb. 27; v. 235; p. 1067.
Caldwell, Loyd J., Wilson, Idaho. Water-balanced elevator. No. 1,216,546; Feb. 20; v. 235; p. 817.
Caldwell, Roy A., Los Angeles, Cal. Angle-cock valve. No. 1,216,068; Feb. 13; v. 235; p. 596.
Caley, Garfield H., assignor of one-third to H. J. Hembrook, Waterford, Wis. Turn-table structure for corn-stacking machines. No. 1,215,108; Feb. 6; v. 235; p. 218.
Calkins, Edward P., St. Paul, Minn. Sliding-door fastener. No. 1,216,414; Feb. 20; v. 235; p. 771.
Callahan, Francis H., New Haven, Conn. Magnifying attachment for scissors. No. 1,216,209; Feb. 13; v. 235; p. 646.
Callender, Edwin F., assignor of one-half to L. B. Callender, Galesburg, Ill. Primary battery. No. 1,215,774; Feb. 13; v. 235; p. 489.
Callender, L. Belle. (See Callender, Edwin F., assignor.)
Calm, Maxmilian. (See Leu, Frederick, assignor.)
Camber, Richard, Hesperia, Mich. Potato-harvester. No. 1,215,480; Feb. 13; v. 235; p. 381.
Cambridge Novelty Company. (See Lightbody, Frank J., assignor.)
Cameron, Colin D., Amesbury, Mass. Involute case. No. 1,214,751; Feb. 6; v. 235; p. 94.
Cameron, James A., and G. B. Birch, assignors to Cameron Machine Company, Brooklyn, N. Y. Surgical bandage. No. 1,217,562; Feb. 27; v. 235; p. 1212.
Cameron, Lewis, Elora, Ontario, Canada. Babbitt-retaining composition. No. 1,215,109; Feb. 6; v. 235; p. 219.
Cameron Machine Company. (See Cameron and Birch, assignors.)
Camillieri, Giuseppe, Chelsea, Mass. Envelop-opener. No. 1,214,894; Feb. 6; v. 235; p. 143.
Cammack, Horace D., assignor of one-half to F. S. Cannon, Crossett, Ark. Minnow-holder. No. 1,216,069; Feb. 13; v. 235; p. 596.
Camp, William W., Stratford, Ontario, Canada. Bag-holder. No. 1,216,941; Feb. 20; v. 235; p. 950.
Campbell, Alexander H., White Plains, N. Y. Crowbar. No. 1,216,655; Feb. 20; v. 235; p. 854.
Campbell, Argyle, assignor to Enterprise Railway Equipment Company, Chicago, Ill. Hopper-car. No. 1,214,508; Feb. 6; v. 235; p. 8.
Campbell Bosworth Machinery Company. (See Wilson, William, assignor.)
Campbell, Earl T., Elwood, Ind. Sheet-feeding machine. No. 1,216,773; Feb. 20; v. 235; p. 895.
Campbell, Edmund D., St. Louis, Mo. Power-transmission system. No. 1,217,150; Feb. 27; v. 235; p. 1067.
Campbell, Hall C., Mifflinburg, Pa. Folding crate. No. 1,216,210; Feb. 13; v. 235; p. 646.
Campbell, James, assignor to St. Louis Felling Machine Company, St. Louis, Mo. Making cylinder-rings. No. 1,215,775; Feb. 13; v. 235; p. 489.
Campbell, Lawrence S. (See Campbell, Robert M. and L. S.)
Campbell, Robert M. and L. S., Los Angeles, Cal. Automatically-controlled gate. No. 1,215,906; Feb. 13; v. 235; p. 536.
Candee, Raphael R. (See Drader and Candee.)
Canfield, Harry R., assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Electric switch. No. 1,214,752; Feb. 6; v. 235; p. 94.
Canfield, Lewis T., Chicago, Ill., assignor to Union Draft Gear Co. Draft-arm for railway-cars. No. 1,214,510; Feb. 6; v. 235; p. 9.
Canhac, Georges E., assignor to Societe Anonyme Des Etablissements Delaunay Belleville, St.-Denis, France. Arrangement for improving the working of eight-cylinder two-cycle internal-combustion engines. No. 1,217,151; Feb. 27; v. 235; p. 1068.
Cannon, Frank S. (See Cammack, Horace D., assignor.)
Cantin, Philias, Somersworth, N. H. Automatic train-pipe coupling. No. 1,215,481; Feb. 13; v. 235; p. 382.
Cantono, Eugenio, Rome, Italy, assignor to E. Garda, Paris, France. Automatic device for starting explosion or other engines. No. 1,217,563; Feb. 27; v. 235; p. 1212.
Capital Electric Company. (See Myrick, George H., assignor.)
Capps, Frank L., assignor to American Graphophone Company, Bridgeport, Conn. Talking-machine. No. 1,216,656; Feb. 20; v. 235; p. 854.
Carcristi, Virginius Z., Albany, N. Y., assignor to Locomotive Pulverized Fuel Company. System for feeding pulverized fuel. No. 1,214,753; Feb. 6; v. 235; p. 95.
Carbo-Hydrogen Company of America. (See Harris, John, assignor.)
Cardell, Olof V., Eskilstuna, Sweden. Apparatus for producing ribbed pipes, tubes, or the like. No. 1,216,657; Feb. 20; v. 235; p. 855.
Carey, John E., El Reno, Okla. Pleasure-swing. No. 1,215,110; Feb. 6; v. 235; p. 219.
Carlsen, Eugene, Chicago, Ill. Cascade or fountain for internal baths. No. 1,215,111; Feb. 6; v. 235; p. 219.
Carlson, Axel S., Los Angeles, Cal. Water-heater. No. 1,216,942; Feb. 20; v. 235; p. 950.
Carlson, Carl W., Galva, Ill. Display-rack. No. 1,217,409; Feb. 27; v. 235; p. 1155.
Carlson, Ernest. (See Juslin, Emil, assignor.)
Carlson, Herman B. (See Rasmusen and Carlson.)
Carlson, Karl O., assignor to National Piano Manufacturing Company, Grand Rapids, Mich. Automatic musical instrument with magazine. No. 1,217,271; Feb. 27; v. 235; p. 1108.
Carlson, Oscar G., assignor of one-half to G. M. Sprague, Mill City, Oreg. Crayon-holder. No. 1,216,070; Feb. 13; v. 235; p. 597.
Carney, James J., Haverhill, Mass. Axle. No. 1,215,619; Feb. 13; v. 235; p. 435.
Carpenter, Campbell C., and R. J. Ellis, assignors to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Battery-cell. No. 1,214,647; Feb. 6; v. 235; p. 58.
Carpenter, Campbell C., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Paste for storage-battery plates. No. 1,215,907; Feb. 13; v. 235; p. 537.
Carr Fastener Company. (See Carr, Fred S., assignor.)
Carr, Fred S., Brookline, assignor to Carr Fastener Company, Cambridge, Mass. Cartridge-carrier. No. 1,214,895; Feb. 6; v. 235; p. 143.
Carrillo, Julian, New York, N. Y. Snow-melter. No. 1,215,620; Feb. 13; v. 235; p. 436.
Carroll, Edward M., Port Tampa City, Fla. Combination rod-bushing for locomotive-engines. No. 1,214,509; Feb. 6; v. 235; p. 8.
Carroll, George P. (See Roehrich, Frank N., assignor.)
Carroll, George P., Hartford, Conn. Refrigerating-machine. No. 1,217,084; Feb. 20; v. 235; p. 998.
Carscadden, Dean F., Flint, Mich. Counterboring-tool and holder. No. 1,214,754; Feb. 6; v. 235; p. 95.
Carse, Donald, Riverdale-on-Hudson, N. Y. Vehicle-brake. No. 1,217,272; Feb. 27; v. 235; p. 1108.
Carson, John M. (See Martin, George C., assignor.)
Carstensen, Alfred H., Milwaukee, Wis. Hat-box. No. 1,216,071; Feb. 13; v. 235; p. 597.
Carter, Leff S. (See Patterson, Thomas A., assignor.)
Carter, Lewis A., and L. J. Rector, Hayden, Ariz. Marker-buoy. No. 1,215,908; Feb. 13; v. 235; p. 537.
Cartmell, Robert J., Soap Lake, assignor of one-half to J. W. Kahle, Seattle, Wash. Pumping device. No. 1,216,415; Feb. 20; v. 235; p. 771.
Carver, Fred S., Newark, N. J., and W. H. Harman, Lansdowne, Pa. Working copper. No. 1,216,282; Feb. 20; v. 235; p. 723.
Case, Wallace W., Peru, Ind. Wheel. No. 1,216,283; Feb. 20; v. 235; p. 724.
Cash, Arthur W., assignor to H. Mueller Mfg. Co., Decatur, Ill. Tapping-machine. No. 1,216,284; Feb. 20; v. 235; p. 724.
Cash, Arthur W., assignor to H. Mueller Manufacturing Co., Decatur, Ill. Regulator for anesthetic apparatus. No. 1,216,285; Feb. 20; v. 235; p. 724.
Cashion, Charles R., Purcell, Okla. Cotton-harvesting machine. No. 1,217,408; Feb. 27; v. 235; p. 1154.
Cassidy, Frederick H., Randolph, Mass. Curb-cock. No. 1,215,250; Feb. 6; v. 235; p. 268.
Caswell, William A., Chicago, Ill. Truck. No. 1,215,842; Feb. 13; v. 235; p. 333.
Catlin, Thomas S., Guion, assignor of one-half to H. W. Robbins, Gwynneville, Ind. Sanitary milk-pail. No. 1,217,564; Feb. 27; v. 235; p. 1212.
Catlin, Thomas S., Guion, assignor of one-half to H. W. Robbins, Gwynneville, Ind. Jar-holder. No. 1,217,565; Feb. 27; v. 235; p. 1213.
Caughey, Robert C., assignor to Grand Detour Plow Company, Dixon, Ill. Tractor-hitch. No. 1,217,273; Feb. 27; v. 235; p. 1108.
Cavanagh, John F., assignor to The Connecticut Telephone & Electric Company, Inc., Meriden, Conn. Distributer for electric ignition systems. No. 1,217,566; Feb. 27; v. 235; p. 1213.
Cavanaugh, Dennie, assignor of one-half to E. Halseth, Portland, Oreg. Hook. No. 1,214,755; Feb. 6; v. 235; p. 95.

Cawl, John F., Buffalo, N. Y. Sliding-door fastener. No. 1,216,286; Feb. 20; v. 235; p. 725.
Cecka, Franz, assignor to Schubert & Salzer Maschinenfabrik Aktiengesellschaft, Chemnitz, Germany. Hosiery-frame. No. 1,217,410; Feb. 27; v. 235; p. 1155.
Cecka, Franz, assignor to Schubert & Salzer Maschinenfabrik Aktiengesellschaft, Chemnitz, Germany. Hosiery-frame. No. 1,217,411; Feb. 27; v. 235; p. 1156.
Cederborg, Victor A., Drumright, Okla. Reel. No. 1,216,255; Feb. 13; v. 235; p. 662.
Celluloid Company, The. (See Lindsay, William G., assignor.)
Chabot, Joseph, assignor to Geo. L. Paine Company, North Attleboro, Mass. Bracelet. No. 1,215,776; Feb. 13; v. 235; p. 490.
Chabre, Theodore, Alameda, Cal. Distance-meter. No. 1,215,317; Feb. 6; v. 235; p. 291.
Chaffee, Edward F., assignor to The O. M. Edwards Company, Inc., Syracuse, N. Y. Trap-door for railway-car platforms. No. 1,214,756; Feb. 6; v. 235; p. 96.
Chalmers, Harry B., Schenectady, N. Y. Hand starting device for internal-combustion engines. No. 1,216,416; Feb. 20; v. 235; p. 772.
Chamberlain, George W., Atlanta, Ga. Hydraulic jacket for hat-stamping presses. No. 1,217,274; Feb. 27; v. 235; p. 1109.
Chamberlain, Valentine B., assignor to The Stanley Works, New Britain, Conn. Cleaning-machine. No. 1,215,482; Feb. 13; v. 235; p. 382.
Chambers Valve Company. (See Coffey, Joseph M., assignor.)
Champie, James A., Eden, Tex. Pipe or rod grip. No. 1,216,943; Feb. 20; v. 235; p. 951.
Champion Blower & Forge Company. (See Keiper, Henry B., assignor.)
Champion Shoe Machinery Company. (See Dobyne, Stephen A., assignor.)
Chandler, Leonard D., North Abington, Mass. Signal for fire-sprinkler systems. No. 1,215,909; Feb. 13; v. 235; p. 537.
Chapal, Antonin. (See Weiss and Chapal.)
Chaplin, Merle P., Fairfield, assignor to Keyes Fibre Company, Waterville, Me. Conveyer-controller. No. 1,217,412; Feb. 27; v. 235; p. 1156.
Charles Cory & Son. (See Wood, Frank W., assignor.)
Charles, Samuel W., Palo Alto, Cal. Safety-razor. No. 1,216,944; Feb. 20; v. 235; p. 951.
Charles, Sylvester, San Jose, Cal. Two-cycle internal-combustion engine. No. 1,215,483; Feb. 13; v. 235; p. 382.
Chastain, G. D., *et al.* (See Scanlin, James, assignor.)
Chateauneuf, Frank, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating on shoe-soles. No. 1,216,072; Feb. 13; v. 235; p. 597.
Chateauneuf, Frank, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Turn-shoe sole. No. 1,216,073; Feb. 13; v. 235; p. 598.
Chausse Manufacturing Company, The. (See Chausse, Wilfrid G., assignor.)
Chausse, Wilfrid G., assignor to The Chausse Manufacturing Company, Detroit, Mich. Portable heater. No. 1,215,343; Feb. 13; v. 235; p. 334.
Chauvin, Albert, Paris, France. Apparatus for splitting slate blocks. No. 1,217,152; Feb. 27; v. 235; p. 1068.
Cheney, Herbert W., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Pneumatic governor. No. 1,215,621; Feb. 13; v. 235; p. 436.
Chesney, William E., Halifax, Nova Scotia, Canada. Railway-tie. No. 1,215,112; Feb. 6; v. 235; p. 220.
Chicago Electric Meter Company. (See Hall, Chester I., assignor.)
Chivvis, Mark E., Manton, Mich. Valve-port packing. No. 1,215,484; Feb. 13; v. 235; p. 383.
Choralcelo Company. (See Martin, Harry S., assignor.)
Choteau, Henry H., assignor of one-fourth to F. R. Wilson, one-fourth to L. Wilson, and one-fourth to O. Smith, Topeka, Kans. Protector for light-globes. No. 1,216,074; Feb. 13; v. 235; p. 598.
Christensen, Christ, Denver, Colo. Screen-hanger. No. 1,217,275; Feb. 27; v. 235; p. 1109.
Christianson, Peter O., Story City, Iowa. Belt stretching and lacing device. No. 1,217,276; Feb. 27; v. 235; p. 1109.
Christie, Lissa E., Oskaloosa, Iowa. Sewing-machine folding drop-pocket. No. 1,216,945; Feb. 20; v. 235; p. 951.
Christy, James. (See Wildman and Tinsman, assignors.)
Church, Albert B. (See Hunter and Church.)
Church, Albert T., Highland Park, assignor to Crystal Machine Company, Detroit, Mich. Operating mechanism for washing-machines. No. 1,214,648; Feb. 6; v. 235; p. 58.
Claffone, James, Long Island City, N. Y. Mechanical toy. No. 1,217,704; Feb. 27; v. 235; p. 1261.
Cid, Cesar J., Quebec, Quebec, Canada. Thermostatic fire-alarm. No. 1,215,485; Feb. 13; v. 235; p. 383.
Cincinnati Pulley Machinery Company. (See Hey, John G., assignor.)
Cinq-Mars, Legendre, assignor to Conservative Heating Company, San Francisco, Cal. Electromagnetic valve. No. 1,216,658; Feb. 20; v. 235; p. 855.
Cinq-Mars, Legendre, assignor to Conservative Heating Company, San Francisco, Cal. Water-heater. No. 1,216,659; Feb. 20; v. 235; p. 855.
Cisco, George W., and J. E. Hall, Fremont township, Butler county, Iowa. Ensilage-tamping device for silos. No. 1,214,896; Feb. 6; v. 235; p. 144.
City of New York, The. (See Grant, Taylor B., assignor.)
Cizenfeld, Charles. (See Hecht and Cizenfeld.)
Clairain, Louis M., and O. J. Suares, New Orleans, La. Sugar-separating machine. No. 1,217,705; Feb. 27; v. 235; p. 1262.
Clare, Charles E., Glenellyn, assignor to Sharp & Smith, Chicago, Ill. Artificial-anus apparatus. No. 1,217,567. Feb. 27; v. 235; p. 1213.
Clark, Charles T. (See Huston, Roy L., assignor.)
Clark, Dudley B., Bemus Point, N. Y. Electric water-heater and automatic control. No. 1,214,757; Feb. 6; v. 235; p. 96.
Clark, Edward L. C., Taunton, Mass., assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill. Blanket-clamp for offset-presses. No. 1,215,344; Feb. 13; v. 235; p. 334.
Clark, Ezra C. (See Bornmann and Clark.)
Clark, Melville, Chicago, Ill. Vehicle-wheel tire. No. 1,215,486; Feb. 13; v. 235; p. 384.
Clark, Myron H., Hastings-upon-Hudson, N. Y., assignor to Boston Rubber Shoe Company. Vulcanizing apparatus. No. 1,215,910; Feb. 13; v. 235; p. 538.
Clark, Robert L., Union, W. Va. Coal-hod. No. 1,217,706; Feb. 27; v. 235; p. 1262.
Clark, Vivian V., Tucson, Ariz. Placer-mining machine. No. 1,215,345; Feb. 13; v. 235; p. 335.
Clarke, Harry D., assignor to Efficiency Motor Corporation, Omaha, Nebr. Racing-vehicle. No. 1,214,897; Feb. 6; v. 235; p. 144.
Classen, Henry. (See Leicht, Louis, assignor.)
Clausen, Carl, Bisbee, Ariz. Pull-switch for electric mine-signals. No. 1,217,707; Feb. 27; v. 235; p. 1262.
Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone switching system. No. 1,214,511; Feb. 6; v. 235; p. 9.
Clausen, Henry P., Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone switching system. No. 1,214,512; Feb. 6; v. 235; p. 10.
Clausen, Henry P., Mount Vernon, assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone system. No. 1,215,487; Feb. 13; v. 235; p. 384.
Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Call-distributing system. No. 1,215,911; Feb. 13; v. 235; p. 538.
Clauser, Milton, Salt Lake City, Utah. Hatchet-sheath. No. 1,215,251; Feb. 6; v. 235; p. 268.
Clayton, Benjamin, *et al.* (See Brown, George R., assignor.)
Clayton, William E., Portsmouth, Ohio. Welt-insole for shoes. No. 1,217,153; Feb. 27; v. 235; p. 1069.
Clayton, William E., Portsmouth, Ohio. Canvas welt-insole. No. 1,217,708; Feb. 27; v. 235; p. 1263.
Clayton, William L., *et al.* (See Brown, George R., assignor.)
Clayton, William R. (See Smith, George Q., assignor.)
Clayton, William R., Evanston, Ill. Desiccating apparatus. No. 1,215,346; Feb. 13; v. 235; p. 335.
Clearwater, James H. (See Leighton and Clearwater.)
Cleary, Frank P. (See Paschall, James H., assignor.)
Clement, Edward E., Washington, D. C. Acoustic multiplier. No. 1,216,946; Feb. 20; v. 235; p. 952.
Cleveland Metal Products Company, The. (See Harrison, George L., assignor.)
Clifton Manufacturing Company. (See Raymond, Nelson H., assignor.)
Climax Container Company. (See Shevlin, Charles W., assignor.)
Clinton, Michael, assignor of one-fourth to Penn Printing House, one-fourth to H. Miller, Delaware county, and one-fourth to W. E. Cunningham, Philadelphia, Pa. Discharging sheets from a printing-press substantially free from electricity. No. 1,216,211; Feb. 13; v. 235; p. 647.
Clinton Wire Cloth Company. (See Southwick, William S., assignor.)
Clough, Alfred N. (See Clough and Spring.)
Clough, Charles W. and A. N., and W. O. Spring, Los Angeles, Cal. Combination folding cot and seat. No. 1,217,085; Feb. 20; v. 235; p. 998.
Clover, Benton L., Chicago, Ill. Steam-trap. No. 1,215,912; Feb. 13; v. 235; p. 539.
Clugstone, John F., Williamsport, Pa. Folding rule. No. 1,216,075; Feb. 13; v. 235; p. 598.
Coates, Joseph S., Goshen, assignor to W. T. Stevens, New York, N. Y. Driving-stirrup. No. 1,214,758; Feb. 6; v. 235; p. 97.
Coats, Henry B., Veedersburg, Ind. Vehicle-wheel. No. 1,216,076; Feb. 13; v. 235; p. 599.
Cobel, John H., St. Joseph, Mo. Foldable umbrella. No. 1,217,709; Feb. 27; v. 235; p. 1263.
Cochran, Andrew, Trenton, N. J. Siphon water-closet. No. 1,215,113; Feb. 6; v. 235; p. 220.
Coe, Elmer R., Wilkinsburg, assignor to The Union Switch & Signal Company, Swissvale, Pa. Apparatus for the control of electric motors. No. 1,217,413; Feb. 27; v. 235; p. 1157.

Coffey, Joseph M., assignor to Chambers Valve Company, New York, N. Y. Throttle-valve. No. 1,215,488; Feb. 13; v. 235; p. 385.
Coffin, Charles L., Parks, Ga., assignor to Electric Metal Working Company, Detroit, Mich. Method of electric-arc welding, heating, and metal-working and apparatus therefor. No. 1,216,947; Feb. 20; v. 235; p. 952.
Coffin, James G., trustee. (See Cornwall, George R., assignor.)
Cogsdill, Stuart A., assignor to Detroit Reamer Salvage Co., Detroit, Mich. Reamer. No. 1,214,649; Feb. 6; v. 235; p. 59.
Cohen, Emanuel A., and C. C. Colyer, Pittsburgh, Pa. Automobile-mat. No. 1,216,077; Feb. 13; v. 235; p. 599.
Cohen, Maurice H., Philadelphia, Pa. Label-holding cap or cover of a can, jar, or other body. No. 1,215,114; Feb. 6; v. 235; p. 220.
Cohen, Meyer G., New York, N. Y. Wrapping and baling fabric. No. 1,215,777; Feb. 13; v. 235; p. 490.
Coho, Herbert B., Mount Vernon, N. Y., assignor to United Lead Company. Metallic compound. No. 1,217,710; Feb. 27; v. 235; p. 1263.
Coho, Herbert B., Mount Vernon, N. Y., assignor to United Lead Company. Metallic compound. No. 1,217,711; Feb. 27; v. 235; p. 1263.
Cohn, Charles H., Chicago, Ill. Toy balloon. No. 1,217,277; Feb. 27; v. 235; p. 1110.
Coin Machine Manufacturing Company. (See Potter, Thomas I., assignor.)
Colardeau, Louis J. E., and J. Richard, Paris, France. Stereoscopic device or the like. No. 1,216,948; Feb. 20; v. 235; p. 953.
Cole, Henry W. N., Brooklyn, N. Y. Rotary-cylinder internal-combustion engine. No. 1,215,778; Feb. 13; v. 235; p. 490.
Coleman, Edward W., London, England. Percussion mechanism for explosive projectiles. No. 1,216,078; Feb. 13; v. 235; p. 599.
Collier, Thomas M., Shawnee, Okla. Incubator. No. 1,216,949; Feb. 20; v. 235; p. 953.
Collin, George W., Bridgeport, Conn. Self-cleaning strainer for liquids. No. 1,216,547; Feb. 20; v. 235; p. 817.
Collins, Edward H., Sioux Falls, S. D. Door-closing device. No. 1,217,414; Feb. 27; v. 235; p. 1157.
Colomyjczuk, Nicia, South Porcupine, Ontario, Canada. Ordnance. No. 1,217,415; Feb. 27; v. 235; p. 1157.
Colonial Trust Company, The, trustee. (See Mensforth, Holberry, assignor.)
Colt, Samuel S., Orange, N. J. Molding apparatus. No. 1,217,416; Feb. 27; v. 235; p. 1158.
Colvin, Orlando L., Zanesville, Ohio. Corn-knife. No. 1,217,154; Feb. 27; v. 235; p. 1069.
Colyer, Cyrus C. (See Cohen and Colyer.)
Combination Machine Company. (See Peterson, Jonathan, assignor.)
Commercial Camera Company. (See Greene, John S., assignor.)
Commercial Research Company, The. (See Eldred, Byron E., assignor.)
Commonwealth Steel Company. (See Frede, Charles F., assignor.)
Compton, Joseph B., Buchanan, assignor of one-half to F. T. D. Wallace, Jr., Louisa, Ky. Steering mechanism for motor-vehicles. No. 1,217,155; Feb. 27; v. 235; p. 1069.
Comstock Automatic Pump Co. (See Deal, Lincoln S., assignor.)
Comstock Automatic Pump Co. (See Veley, Carl J., assignor.)
Conces, Vincent J., Sr., East Chicago, Ind. Castings shaking and jolting machine. No. 1,216,212; Feb. 13; v. 235; p. 647.
Conces, Vincent J., Sr., and V. J., Jr., East Chicago, Ind. Car-wheel. No. 1,215,252; Feb. 6; v. 235; p. 209.
Concrete Mixing and Conveying Co. (See Leake, Thomas S., assignor.)
Cone, Frank L., Windsor, Vt., assignor, by mesne assignments, to The National-Acme Company, Cleveland, Ohio. Metal-working machine. No. 1,215,000; Feb. 6; v. 235; p. 184.
Confectioners and Bakers Supply Co. (See Dickson, George F., assignor.)
Conger, Frank W., Hogan, Mont. Trap-nest. No. 1,216,213; Feb. 13; v. 235; p. 647.
Conklin, William F., Tarentum, Pa. Clutch. No. 1,215,779; Feb. 13; v. 235; p. 491.
Conn, Robert W. (See McPherson, Amelia, assignor.)
Connecticut Telephone & Electric Company, The. (See Cavanagh, John F., assignor.)
Connell, Walter J., Dorchester, Mass. Step-ladder attachment. No. 1,216,214; Feb. 13; v. 235; p. 648.
Connelley, Edward, and C. C. Crew, Houston, Tex. Forming walls. No. 1,215,115; Feb. 6; v. 235; p. 221.
Conner, Clarence D., Tupelo, Miss. Attachment for paper cutters or knives. No. 1,216,950; Feb. 20; v. 235; p. 953.
Conover, James F., Chicago, Ill. Grand-piano action. No. 1,215,489; Feb. 13; v. 235; p. 385.
Conrad, Frank, Swissvale, and J. P. Nikonow, Pittsburgh, Pa., assignors to Westinghouse Electric and Manufacturing Company. Starting mechanism for automobiles. No. 1,215,490; Feb. 13; v. 235; p. 386.
Conrad, Jesse T., Winston-Salem, N. C. Mail-box support. No. 1,216,951; Feb. 20; v. 235; p. 954.
Conrad, Nicholas J. (See Schweitzer and Conrad.)
Conrad, Nicholas J., Chicago, Ill., assignor to Schweitzer & Conrad. Fuse or like device. No. 1,215,491; Feb. 13; v. 235; p. 386.
Conradson, Conrad M., Madison, Wis. Variable-speed gearing. No. 1,216,775; Feb. 20; v. 235; p. 895.
Conron-McNeal Company. (See Conron, William, assignor.) (Reissue.)
Conron, William, Danville, Ill., assignor to Conron-McNeal Company, of Kokomo, Skate. (Reissue.) No. 14,259; Feb. 13; v. 235; p. 664.
Conservative Heating Company. (See Cinq-Mars, Legendre, assignor.)
Consolidated Car-Heating Company. (See Farmer, Thomas, Jr., assignor.)
Consolidated Car-Heating Company. (See McElroy, James F., assignor.)
Convery, John J., New York, N. Y. Telephone attachment. No. 1,216,776; Feb. 20; v. 235; p. 896.
Conway, Edward P., Waterbury, Conn. Cushion-tire. No. 1,217,568; Feb. 27; v. 235; p. 1213.
Conway, Louis P., Sawtelle, Cal. Bicycle-lock. No. 1,216,660; Feb. 20; v. 235; p. 856.
Cook, Elmer E., Chicago, Ill. Switch. No. 1,215,492; Feb. 13; v. 235; p. 386.
Cook, Fred A., Longview, Ill. Concrete house and cave building form. No. 1,215,318; Feb. 6; v. 235; p. 291.
Cook, Fred A., Longview, Ill. Poultry roosting and dropping-board combination. No. 1,217,278; Feb. 27; v. 235; p. 1110.
Cook, Harrison H., assignor of one-half to J. Anthony, Kansas City, Kans. Heat-radiator. No. 1,214,759; Feb. 6; v. 235; p. 97.
Cook, Herbert C., Springfield, Mass. Knockdown table. No. 1,216,079; Feb. 13; v. 235; p. 600.
Cook, J. W., *et al.* (See Megathlin, Jesse L., assignor.)
Cook, Marvin W., and N. S. Nichols, Cattaraugus, N. Y. Milking-machine. No. 1,217,857; Feb. 27; v. 235; p. 1312.
Cook, Stanley W., trustee. (See Wood, William H., assignor.)
Cooke, Clarence C., Howard, Pa. Current-motor. No. 1,216,080; Feb. 13; v. 235; p. 600.
Cooley, Henry B., Kensington, Conn., assignor to The American Paper Goods Company, Montclair, N. J. Apparatus for regulating the delivery of drinking-cups. No. 1,216,417; Feb. 20; v. 235; p. 772.
Cooley, Henry B., Kensington, Conn., assignor to The American Paper Goods Company, Montclair, N. J. Apparatus for regulating the delivery of drinking-cups. No. 1,217,109; Feb. 20; v. 235; p. 1008.
Coolidge, William D., Schenectady, N. Y., assignor to General Electric Company. X-ray apparatus. No. 1,215,116; Feb. 6; v. 235; p. 221.
Coombs, Frank E., Au Sable Forks, N. Y. Mutual treatment of liquids and gases. No. 1,217,156; Feb. 27; v. 235; p. 1069.
Cooper, Elisha H., assignor to The Fafnir Bearing Company, New Britain, Conn. Clutch. No. 1,217,569; Feb. 27; v. 235; p. 1214.
Cooper, George S., Salem, Ohio. Engine. No. 1,216,777; Feb. 20; v. 235; p. 896.
Cooper Hewitt Electric Company. (See Thomas, Percy H., assignor.)
Cooper, K. H. (See Bass, Fredie E., assignor.)
Cooper, Sutton, assignor of one-half to F. Offermann, Evansville, Ind. Apparatus for filtering air. No. 1,214,760; Feb. 6; v. 235; p. 97.
Cooper, Thomas C. (See Husk and Cooper.)
Corbin, Edmund, Chicago, Ill. Chair attachment. No. 1,216,287; Feb. 20; v. 235; p. 725.
Corkell, Thomas W., Chicago, Ill. Collapsible barrel. No. 1,214,650; Feb. 6; v. 235; p. 59.
Cornels, C. F., *et al.* (See James, Bertie R., assignor.)
Cornish, Lorenzo D., Cincinnati, Ohio. Wrinkle-remover. No. 1,215,117; Feb. 6; v. 235; p. 221.
Cornwall, George R., Rye, N. Y., assignor, by mesne assignments, to J. G. Coffin, trustee. Producing printing-plates. No. 1,215,493; Feb. 13; v. 235; p. 387.
Cornwall, George R., Rye, N. Y., assignor, by mesne assignments, to J. R. Coffin, trustee. Printing-plate. No. 1,215,494; Feb. 13; v. 235; p. 387.
Corona Typewriter Company. (See Petermann, Otto, assignor.).
Cortland Carriage Goods Co. (See Higgins, George H., assignor.)
Coseo, Frederick C., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Locomotive-bumper. No. 1,215,822; Feb. 13; v. 235; p. 437.
Coss, Nesbitt H., Cleveland, Ohio. Necktie-stretcher. No. 1,217,712; Feb. 27; v. 235; p. 1263.
Cott, Charles M., Columbus, Ohio. Index. No. 1,216,215; Feb. 13; v. 235; p. 648.
Cottard, Edouard, assignor to Société E. Cottard & Cie., Nezel, France. Machine for the production of iron turnings. No. 1,216,548; Feb. 20; v. 235; p. 818.
Cotter, Richard G., Sausalito, Cal. Ladder. No. 1,217,713; Feb. 27; v. 235; p. 1264.
Coughlin, Michael F., Boston, Mass., assignor to American Gum Products Company, Covington, Va. Rubber composition and making the same. No. 1,217,157; Feb. 27; v. 235; p. 1070.
Coughtry, Arthur J., Brooklyn, N. Y. Collapsible ladder. No. 1,217,279; Feb. 27; v. 235; p. 1110.

Coulston, Harry. (See Palen and Coulston.)
Coulter, Leonard P., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Welding-controller. No. 1,215,913; Feb. 13; v. 235; p. 539.
Coulter, Leonard P., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Welding-controller. No. 1,215,914; Feb. 13; v. 235; p. 539.
Coulter & McKenzie Machine Company, The. (See Berg, Andrew, assignor.)
Coupal, Frank J., Buffalo, N. Y. Driving attachment for field-coils. No. 1,215,001; Feb. 6; v. 235; p. 184.
Cox, Albert D., Winterville, N. C. Electric lamp. No. 1,215,118; Feb. 6; v. 235; p. 222.
Cox, Charles A., assignor to Moorman Manufacturing Company, Quincy, Ill. Hog-oiler. No. 1,216,081; Feb. 13; v. 235; p. 601.
Cox, Charles H., Grand Junction, Colo. Amusement device. No. 1,217,714; Feb. 27; v. 235; p. 1264.
Cox, Charles N., Brockman, Cal. Dirigible headlight. No. 1,216,216; Feb. 13; v. 235; p. 648.
Cox, Eldridge A., assignor of one-fourth to C. W. Thatcher, one-fourth to J. H. Bogart, and one-fourth to B. F. Westlake, Dayton, Ohio. Telephone apparatus. No. 1,215,002; Feb. 6; v. 235; p. 185.
Cox, John H., Hot Springs, Ark. Combination safety-razor and hair-clipper. No. 1,217,570; Feb. 27; v. 235; p. 1214.
Coyle, Henry J. (See Russey and Coyle.)
Coyle, James R. (See Russey and Coyle.)
Cracraft, Leich Electric Company. (See Leich, Oscar M., assignor.)
Crahan, Michael F., Irvington, Ky. Adjustable sectional metallic form for concrete head-walls for culvert-pipes. No. 1,217,571; Feb. 27; v. 235; p. 1214.
Craig, Albert P., Drayton, N. D. Bag-holder. No. 1,214,761; Feb. 6; v. 235; p. 98.
Craig, Clyde L., Washington Court-House, Ohio. Nut-lock. No. 1,216,952; Feb. 20; v. 235; p. 954.
Craig, David, Peabody, Mass. Pipe-union. No. 1,215,347; Feb. 13; v. 235; p. 335.
Craley, Clarence C., Parkesburg, Pa. Metal-working apparatus. No. 1,217,572; Feb. 27; v. 235; p. 1215.
Cramer, George H., assignor to Herschell-Spillman Company, North Tonawanda, N. Y. Seat-hanger for carousels. No. 1,217,280; Feb. 27; v. 235; p. 1111.
Cramer, Morris, Cleveland, Ohio. Handle for cutting-tools, die-stocks, &c. No. 1,215,119; Feb. 6; v. 235; p. 222.
Cramer, Morris, Cleveland, Ohio. Pipe-cutter. No. 1,215,120; Feb. 6; v. 235; p. 222.
Cramer, Morris, Cleveland, Ohio. Pipe-cutter. No. 1,215,121; Feb. 6; v. 235; p. 223.
Crane Company. (See Doolittle, William W., assignor.)
Crane, Samuel G., Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Newark, N. J. Electric sign. No. 1,217,715; Feb. 27; v. 235; p. 1264.
Crapser, Morris H., assignor to E. J. Stewart, New York, N. Y. Floor-scrubbing machine. No. 1,214,513; Feb. 6; v. 235; p. 10.
Craven, James F. (See Mason and Craven.)
Crawford, William E., Devils Lake, N. D. Spring-wheel. No. 1,216,082; Feb. 13; v. 235; p. 601.
Crawfordsville Seed Company. (See Herr, Shirl, assignor.)
Creagh-Osborne, Frank O., Horsell, Woking, and A. J. Hughes, London, England. Magnetic compass. No. 1,216,953; Feb. 20; v. 235; p. 954.
Creamer, Robert E., Worcester, Mass. Pipe-cutting wrench. No. 1,215,623; Feb. 13; v. 235; p. 437.
Creswell, John H., Perote, Ala. Mail-box support. No. 1,215,915; Feb. 13; v. 235; p. 540.
Creveling, John L., Auburn, N. Y. Electric regulation. No. 1,217,858; Feb. 27; v. 235; p. 1313.
Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,216,083; Feb. 13; v. 235; p. 601.
Crew, Charles C. (See Connelley and Crew.)
Crimp, John A., Ellensburg, Wash. Coin-controlled mechanism. No. 1,217,716; Feb. 27; v. 235; p. 1265.
Criterion Advertising Company. (See Taylor and Melville, assignors.)
Crittall Manufacturing Company, The. (See Walker, Frederick P., assignor.)
Crogan, Charles W., Bangor, Me. Tape-measure. No. 1,216,418; Feb. 20; v. 235; p. 772.
Crook, William A., Brewton, Ala. Shock-absorber. No. 1,215,122; Feb. 6; v. 235; p. 223.
Crooke, Earl E., *et al.* (See Noel, Eugene E., assignor.)
Cropley, Oscar W., Juniata, Nebr. Pan and jar lifter. No. 1,215,253; Feb. 6; v. 235; p. 269.
Crosby, Arthur P., Minneapolis, Minn. Air-exhaust for heating systems. No. 1,217,281; Feb. 27; v. 235; p. 1111.
Crosby, James E. (See Nutt, Daniel J., assignor.)
Crosley, Powel, Jr., Cincinnati, Ohio. Steering attachment. No. 1,214,651; Feb. 6; v. 235; p. 60.
Crouse-Hinds Company. (See Bissell, Carl H., assignor.)
Crow, Jesse M. (See Potts and Crow.)
Crowdus, Walter A., assignor to J. P. Mentzer, Chicago, Ill. Separator for storage-battery couples. No. 1,217,573; Feb. 27; v. 235; p. 1215.
Crowell, Charles R., Greensburg, Pa. Door-hanger. No. 1,214,762; Feb. 6; v. 235; p. 98.
Crowley, George E., assignor of one-half to M. W. Perry, Bath, S. C. Lock-nut. No. 1,216,954; Feb. 20; v. 235; p. 955.
Crown Cork and Seal Company of Baltimore City, The. (See Kryzanowsky, Constant J., assignor.)
Crum, Charles W., Olney, Ill. Bottle-bracket. No. 1,215,495; Feb. 13; v. 235; p. 387.
Crystal Machine Company. (See Church, Albert T., assignor.)
Cullen, George M., Milwaukee, Wis. Canceling-machine. No. 1,214,898; Feb. 6; v. 235; p. 145.
Cumming, John W. W., U. S. Navy. Multiple grinding-machine. No. 1,217,417; Feb. 27; v. 235; p. 1159.
Cummings, Burton E., Ridgefield Park, N. J., assignor to L. Day, New York, N. Y. Loose-leaf binder. No. 1,215,496; Feb. 13; v. 235; p. 388.
Cummings, Edwin B., Indianapolis, Ind. Voting-machine. No. 1,216,778; Feb. 20; v. 235; p. 896.
Cunningham, John F., Springfield, Mo. Boiler-furnace. No. 1,216,661; Feb. 20; v. 235; p. 856.
Cunningham, William E., *et al.* (See Clinton, Michael, assignor.)
Cuntz, John H., Hoboken, N. J. Telephone and telegraph relay or repeater. No. 1,215,348; Feb. 13; v. 235; p. 336.
Curran, Samuel H., Brooklyn, N. Y., assignor to Royal Baking Powder Company, Jersey City, N. J. Slip-cover can. No. 1,214,899; Feb. 6; v. 235; p. 145.
Currier, Andrew E. (See Wyman and Currier.)
Curti, John E., Omaha, Nebr. Lightning-rod structure. No. 1,214,652; Feb. 6; v. 235; p. 60.
Curtis, Augustus D., assignor to National X-Ray Reflector Company, Chicago, Ill. Lamp-fixture. No. 1,214,514; Feb. 6; v. 235; p. 11.
Curtis & Co. Mfg. Co. (See Steedman, George F., assignor.)
Curtis, William H., Portland, Oreg. Fluid-actuated means for controlling an engine. No. 1,217,117; Feb. 20; v. 235; p. 1011.
Cuthbert, John, Chicago, Ill. Socket for electric lamps. No. 1,214,900; Feb. 6; v. 235; p. 146.
Cuthbertson, Allen, Jr. (See Freeman, Joseph W., assignor.)
Cutler-Hammer Mfg. Co., The. (See Coulter, Leonard P., assignor.)
Cutler-Hammer Mfg. Co., The. (See Evans, Clarence T., assignor.)
Cutler-Hammer Mfg. Co., The. (See Sessions, Edson O., assignor.)
Czárán, Otto, Glendale, N. Y. Harvester. No. 1,215,916; Feb. 13; v. 235; p. 540.
D. R. C. Water Heater Company, The. (See Parsons, William C., assignor.)
D. M. Sechler Implement & Carriage Company. (See England, Ernst E., assignor.)
D & W Fuse Company. (See Downes and Patton, assignors.)
D'Ignoti, Salvatore, New York, N. Y. Snow-removing apparatus. No. 1,217,575; Feb. 27; v. 235; p. 1216.
Daggett, George W., North Girard, Pa. Piston. No. 1,216,955; Feb. 20; v. 235; p. 955.
Dahlberg, John A., Brooklyn, N. Y. Tension-regulator. No. 1,216,084; Feb. 13; v. 235; p. 602.
Dake, Charles W. (See Rice and Dake.)
Dake, Charles W., and J. E. Kilker, assignors to Pyle-National Electric Headlight Company, Chicago, Ill. Turbine. No. 1,217,282; Feb. 27; v. 235; p. 1111.
Dalbey, Joel B., assignor of one-half to J. A. King, Nevada, Iowa. Lighting system. No. 1,216,662; Feb. 20; v. 235; p. 856.
Dale, Joseph S., Jr., New York, N. Y. Stabilizer for flying-machines. No. 1,214,901; Feb. 6; v. 235; p. 146.
Dallas, Granvil F., Corryton, Tenn. Cam mechanism. No. 1,216,956; Feb. 20; v. 235; p. 955.
Dallmeyer, Thomas D., Pittsburgh, Pa. Rail-anchor. No. 1,215,780; Feb. 13; v. 235; p. 491.
Dalton, Wilfred A., and O. J. Rainville, Pawtucket, R. I. Match-box. No. 1,215,123; Feb. 6; v. 235; p. 223.
Daly, Michael, assignor to American Laundry Machinery Co., Cincinnati, Ohio. Extractor-cover. No. 1,217,418; Feb. 27; v. 235; p. 1159.
Damboise, Arthur, Millinocket, Me. Bolt and nut lock. No. 1,216,957; Feb. 20; v. 235; p. 955.
Danat, Wilmer E., Buffalo, assignor to The Rail Joint Company, New York, N. Y. Rail-joint. No. 1,215,003; Feb. 6; v. 235; p. 185.
Daniel, Charles E., and C. W. Hord, assignors to The American Crayon Company, Sandusky, Ohio. Receptacle for crayons and the like. No. 1,217,283; Feb. 27; v. 235; p. 1111.
Daniel, W. C., *et al.* (See James, Bertie R., assignor.)
Danielson, Oscar A., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Switch-selector. No. 1,214,515; Feb. 6; v. 235; p. 11.
Danielson, Oscar A., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selecting mechanism. No. 1,215,917; Feb. 13; v. 235; p. 540.
Dankel, William J., Villa Grove, and C. E. Van Pelt, Salem, Ill. Grader or excavating-machine. No. 1,216,779; Feb. 20; v. 235; p. 897.
Darden, Newton J., Memphis, Tenn. Preserving. No. 1,215,254; Feb. 6; v. 235; p. 269.
Darnall, John C., Staunton, Va. Sterilizer. No. 1,217,113; Feb. 20; v. 235; p. 1010.

Daughenbaugh, Lawrence W., assignor to W. P. Murphy, Chicago, Ill. Fastener for car-doors. No. 1,217,158; Feb. 27; v. 235; p. 1070.

Dauley, Isaac S., Oneonta, N. Y. Memorial burial-vault. No. 1,216,085; Feb. 13; v. 235; p. 602.

Dauphinais, Henry C., Fargo, N. D. Vehicle-wheel. No. 1,215,124; Feb. 6; v. 235; p. 223.

David T. Abercrombie Company. (See Abercrombie, David T., assignor.)

Davidson, James L., Alhambra, Cal. Auto-lock. No. 1,217,419; Feb. 27; v. 235; p. 1159.

Davies, David P., assignor to J. I. Case Threshing Machine Company, Racine, Wis. Drive mechanism for traction-engines. No. 1,217,284; Feb. 27; v. 235; p. 1112.

Davies, David P., assignor to J. I. Case Threshing Machine Company, Racine, Wis. Internal-combustion engine. No. 1,217,285; Feb. 27; v. 235; p. 1112.

Davis, Allan C., and D. L. Primrose, Baltimore, Md. Anti-glare means for headlights. No. 1,217,420; Feb. 27; v. 235; p. 1159.

Davis, Arthur, Duquesne, Pa. Railway-tie and rail-fastener. No. 1,216,217; Feb. 13; v. 235; p. 649.

Davis, David C., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Liquid-sealed valve. No. 1,215,497; Feb. 13; v. 235; p. 388.

Davis, Frank H., Eugene, Oreg. Fish-stop. No. 1,215,781; Feb. 13; v. 235; p. 491.

Davis, George W. (See Furgerson, Davis, and Furgerson.)

Davis, Hopeton A., Chicago, Ill. Sock-supporter. No. 1,216,288; Feb. 20; v. 235; p. 725.

Davis, Isaac H., Boston, Mass., assignor, by mesne assignments, of one-half to H. W. Taylor, Berkeley, Cal. Starting device for explosive-motors. No. 1,217,574; Feb. 27; v. 235; p. 1215.

Davis, Matthews E., New York, N. Y. Ship-propeller. No. 1,216,549; Feb. 20; v. 235; p. 818.

Davis, Samuel T., Philadelphia, Pa. Plant-setting machine. No. 1,215,125; Feb. 6; v. 235; p. 224.

Davis, William D., Nashville, Ark. Fire-starter. No. 1,216,780; Feb. 20; v. 235; p. 897.

Davis, William Y. E., Norfolk, Va. Pea picker or harvester. No. 1,214,653; Feb. 6; v. 235; p. 60.

Davison, Gregory C., Groton, Conn. Field and siege artillery. No. 1,215,255; Feb. 6; v. 235; p. 270.

Davison, Gregory C., and J. W. Anderson, New London, Conn., assignors to Electric Boat Company, New York, N. Y. Internal-combustion engine. No. 1,214,516; Feb. 6; v. 235; p. 11.

Dawe, Philip H., Westminster, London, England. Sterilization of liquids. No. 1,217,421; Feb. 27; v. 235; p. 1160.

Dawson, Mills M., Montgomery, Ala. Cane or crutch attachment. No. 1,215,256; Feb. 6; v. 235; p. 270.

Day, Alfred L. (See Fasnacht, Howard H., assignor.)

Day, George H., assignor to American Optical Company, Southbridge, Mass. Eye-protector. No. 1,216,958; Feb. 20; v. 235; p. 956.

Day, Leonard. (See Cummings, Burton E., assignor.)

Dayton, Frances, Watford, and E. A. Whitfield, Berkhamsted, assignors to The Whitfield Manufacturing Company, Limited, London, England. Shield for the use of soldiers and others. No. 1,214,517; Feb. 6; v. 235; p. 12.

De Bats, Jean H. L., assignor of one-third to A. G. Zehner, Zellenople, and one-third to T. De Wolf, Pittsburgh, Pa. Treating metals and other materials by heat. No. 1,216,086; Feb. 13; v. 235; p. 603.

De Camp, Lewis E., Kane, Pa. Belt-clamp. No. 1,216,959; Feb. 20; v. 235; p. 956.

De Ciciliani, Anton, New York, N. Y. Building-block. No. 1,216,550; Feb. 20; v. 235; p. 818.

De Février, George, and J. E. Woodbridge, New York, N. Y., assignors to The A-Z Company. Radiator. No. 1,214,654; Feb. 6; v. 235; p. 61.

De Laski and Thropp Circular Woven Tire Company, The. (See Thropp, Peter D., assignor.)

De Laval Separator Company, The. (See Turner, Mahlon C., assignor.)

De Loof, Thomas, Detroit, Mich. Calendar. No. 1,217,422; Feb. 27; v. 235; p. 1160.

De Lyle, William H., Albuquerque, N. Mex. Operating device for windmills. No. 1,216,087; Feb. 13; v. 235; p. 603.

De Masters, Ben B., Kansas City, Mo. Hand-tool. No. 1,216,663; Feb. 20; v. 235; p. 857.

De Noyelles, Judson R., Detroit, Mich. Tracker mechanism for player-pianos. No. 1,215,005; Feb. 6; v. 235; p. 186.

De Rusha, Lena. (See Hansen, Hans M., assignor.)

De Saulles, Charles A. H., New York, N. Y. Treating zinc-bearing materials. No. 1,215,006; Feb. 6; v. 235; p. 186.

De Saulles, Charles A. H., New York, N. Y. Apparatus for treating zinc-bearing material. No. 1,215,007; Feb. 6; v. 235; p. 187.

De Vingo, Sabino, Mount Vernon, N. Y. Hair-cut bib. No. 1,216,088; Feb. 13; v. 235; p. 603.

De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Thread-unwinder. No. 1,216,289; Feb. 20; v. 235; p. 725.

De Wolf, Ernest A., Mansfield, assignor, by mesne assignments, to Universal Winding Company, Boston, Mass. Adjustable supply-holder. No. 1,216,782; Feb. 20; v. 235; p. 898.

De Wolf, Tensard, *et al.* (See De Bats, Jean H. L., assignor.)

Deal, Lincoln S., Kalamazoo, assignor to Comstock Automatic Pump Co., Comstock, Mich. Air and water separator. No. 1,214,902; Feb. 6; v. 235; p. 146.

Dearborn, John F. H. (See Gooch, Bert, assignor.)

Debelack, Alexander and G., Sheboygan, Wis. Game attachment for pocket-billiard tables. No. 1,215,624; Feb. 13; v. 235; p. 437.

Debelack, George. (See Debelack, Alexander and G.)

Decker, John F., and F. Raimer, Adams, Mass. Bread-slicer. No. 1,217,717; Feb. 27; v. 235; p. 1265.

Decker, Spencer M., Malden, assignor of one-fourth to C. L. Ridgway, Boston, Mass. Battery-connector. No. 1,215,004; Feb. 6; v. 235; p. 186.

Deere and Company. (See Hartsough, D. Maurice, assignor.)

Deere & Company. (See Selleck, Theodore G., assignor.)

Deere & Mansur Company. (See Anderson, John R., assignor.)

Deere & Mansur Company. (See Dooley, Delmar D., assignor.)

Deere & Mansur Company. (See Friberg, Charles P. A., assignor.)

Deere & Mansur Company. (See White, Charles E., assignor.)

Defren, George, Newton, Mass. Preparing beverages. No. 1,214,518; Feb. 6; v. 235; p. 12.

Deitz, Burr V., Slingerlands, N. Y. Wireless-telephone apparatus. No. 1,214,655; Feb. 6; v. 235; p. 61.

Delmar Manufacturing Company. (See Block, Charles H., assignor.)

Delmez, Célestin, Antwerp, Belgium. System of suspension for tramway and railway cars. No. 1,216,960; Feb. 20; v. 235; p. 956.

Demuth, Jean, Le Muy, France. Machine for sorting corks. No. 1,214,519; Feb. 6; v. 235; p. 13.

Demuth, Max A., Sopkane, Wash. Roller-truck. No. 1,217,159; Feb. 27; v. 235; p. 1070.

Dental Manikin Head Co. (See Weiss, Faneuil D., assignor.)

Denton, George W., Laporte, Ind. Journal-bearing. No. 1,216,781; Feb. 20; v. 235; p. 897.

Denver Rock Drill Manufacturing Company, The. (See Emerson, Fred L., assignor.)

Denver Rock Drill Manufacturing Company, The. (See Smith, William A., assignor.)

Derrickson, Carey W. (See Williams, Ira C. and C. F., assignors.)

Desmarais, Reginald J., Faribault, Minn. Propulsion device for motor-sleds. No. 1,216,962; Feb. 20; v. 235; p. 957.

Detroit Pressed Steel Company. (See Putnam, Alden L., assignor.)

Detroit Reamer Salvage Co. (See Cogsdill, Stuart A., assignor.)

Detroit Reamer Salvage Company. (See Glenzer, John C., assignor.)

Devolld, Laurence B., Emmett, Kans. Wire-stretcher. No. 1,216,089; Feb. 13; v. 235; p. 604.

Dew, Henry J., Chorlton-cum-Hardy, England. Lamp for motor-vehicles and like services. No. 1,217,718; Feb. 27; v. 235; p. 1265.

Dewees, Benjamin F., assignor of one-half to P. C. Minotti, Logan, W. Va. Combined leveling, plumbing, and gaging implement. No. 1,217,286; Feb. 27; v. 235; p. 1113.

Dial, Robert E., assignor of one-half to J. C. Stark, Atherton, Ind. Combined planter and fertilizer-distributer. No. 1,216,419; Feb. 20; v. 235; p. 773.

Diamond, George F., and E. T. Richards, Kingston, N. Y. Auto-tire signal pressure-gage. No. 1,215,782; Feb. 13; v. 235; p. 492.

Dickerson, James, *et al.* (See Sartain, Louis M., assignor.)

Dickinson, Clinton W., La Crosse, Wis. Bearing for disk furrow-openers. No. 1,217,423; Feb. 27; v. 235; p. 1160.

Dickson, George F., assignor to Confectioners and Bakers Supply Co., Chicago, Ill. Coating-machine. No. 1,215,305; Feb. 6; v. 235; p. 286.

Dickson, Norman M., Chicago, Ill. Excavator-tooth. No. 1,216,290; Feb. 20; v. 235; p. 726.

Dierig, Conrad Lawrence, Mass. Tool for repairing tires. No. 1,215,349; Feb. 13; v. 235; p. 336.

Diescher, August P., Pittsburgh, Pa. Lifting mechanism for annealing-boxes. No. 1,216,291; Feb. 20; v. 235; p. 726.

Dieterich, Albert E., Washington, D. C., assignor to F. A. Bruckman, Portland, Oreg. Trimming mechanism for pastry-making machines. No. 1,216,292; Feb. 20; v. 235; p. 726.

Dietrich, August, Columbus, Nebr. Plate-glass carrier. No. 1,215,350; Feb. 13; v. 235; p. 336.

Dietrich, Charles W., Chicago, Ill. Suspension-clamp. (Reissue.) No. 14,260; Feb. 20; v. 235; p. 1016.

Dietz, Fred, Irvington, N. J. Spiral spring for the closing of doors. No. 1,215,498; Feb. 13; v. 235; p. 388.

Dietz, John A., New York, N. Y. Rifle-sight. No. 1,216,783; Feb. 20; v. 235; p. 898.

Dillin, Obie J., Chicago, Ill. Automatically-controlled water-heater. No. 1,214,656; Feb. 6; v. 235; p. 61.

Dillinger, Cuthbert L., Titusville, Pa. Handle. No. 1,217,287; Feb. 27; v. 235; p. 1113.

Dillon, William A., Marling, Mo. Safety engine-cranking device. No. 1,215,257; Feb. 6; v. 235; p. 270.

Dimitroff, Alexander S., Glasgow, Mont. Rail-joint. No. 1,215,499; Feb. 13; v. 235; p. 389.

Dixon, Amos F., Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selecting apparatus and system. No. 1,215,918; Feb. 13; v. 235; p. 541.

Dixon, Joseph L., Detroit, Mich. Electrically-heated steel-furnace. No. 1,214,763; Feb. 6; v. 235; p. 98.

Dixon, Joseph L., Detroit, Mich. Electric steel-furnace. No. 1,214,764; Feb. 6; v. 235; p. 98.

Dobyne, Stephen A., assignor to Champion Shoe Machinery Company, St. Louis, Mo. Horn for fastener-inserting machines. No. 1,216,784; Feb. 20; v. 235; p. 898.

Dodd, Arthur B., Camden, N. J. Water-faucet. No. 1,216,963; Feb. 20; v. 235; p. 958.

Dodd, Frank W., Brooklyn, N. Y. Driving mechanism for self-propelled bodies. No. 1,216,664; Feb. 20; v. 235; p. 857.

Dodds, Ethan I. (See Stafford and Dodds.)

Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt for boilers. No. 1,216,551; Feb. 20; v. 235; p. 819.

Dodge Brothers. (See Dodge, John F. and H. E., assignors.)

Dodge, Horace E. (See Dodge, John F. and H. E.)

Dodge, John F., Detroit, and H. E. Dodge, Grosse Pointe, assignors to Dodge Brothers, Detroit, Mich. Truck or stand used in assembling motors. No. 1,216,552; Feb. 20; v. 235; p. 819.

Dodge Manufacturing Company. (See Kenyon, Bertram C., assignor.)

Dodge, Milo C., assignor to Plymouth Cordage Company, Plymouth, Mass. Marking device for ropes. No. 1,216,964; Feb. 20; v. 235; p. 958.

Dodge, Otis W., Spokane, Wash., assignor of one-half to W. H. Bowes Company, Port Chester, N. Y. Means for removing water of condensation from drying-cylinders. No. 1,215,258; Feb. 6; v. 235; p. 271.

Dodge, Parker, Washington, D. C. Mounting diaphragms in sound-boxes. No. 1,215,500; Feb. 13; v. 235; p. 389.

Dodgson, Frank L., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Relay. No. 1,216,420; Feb. 20; v. 235; p. 773.

Doehler Die Casting Company. (See Doehler, Herman H., assignor.)

Doehler, Herman H., assignor to Doehler Die Casting Company, Brooklyn, N. Y. Art of and apparatus for casting fluid metal. No. 1,214,904; Feb. 6; v. 235; p. 147.

Doerr, George W. (See Simonds and Doerr.)

Doherty, Henry L., New York, N. Y. Operating gas-fired furnaces. No. 1,214,520; Feb. 6; v. 235; p. 13.

Dolan, Halley C., assignor of one-half to M. J. McLeod, Detroit, Mich. Push-button. No. 1,216,553; Feb. 20; v. 235; p. 819.

Dollar Saving and Trust Company, The. (See Foley, William E., assignor.)

Doman, Lewis B., East Syracuse, assignor to Amphion Piano Player Company, Syracuse, N. Y. Pedal-action for self-playing musical instruments. No. 1,215,625; Feb. 13; v. 235; p. 437.

Domek, Michael M., Ivanhoe, Minn. Snow-plow. No. 1,215,008; Feb. 6; v. 235; p. 187.

Donnelly, John A., New York, N. Y. Traverse-cord fastener. No. 1,215,126; Feb. 6; v. 235; p. 224.

Donnelly, John R., assignor to Wayne Process Company, Fort Wayne, Ind. Gas-producer. No. 1,214,657; Feb. 6; v. 235; p. 62.

Donnelly, William J., Marysville, Mont. Safety-razor blade and holder. No. 1,217,288; Feb. 27; v. 235; p. 1113.

Donner, John L., Oregon City, Oreg., assignor to J. Brosnan, Jr., Washington, D. C. Explosive powder. No. 1,214,765; Feb. 6; v. 235; p. 99.

Donner, John L., Oregon City, Oreg., assignor to J. Brosnan, Jr., Washington, D. C. Explosive powder. No. 1,214,766; Feb. 6; v. 235; p. 99.

Donner, Percy E. (See Snyder, Jacob R., assignor.)

Donofrio, Patsy, assignor to Perfection Cone Mfg. Co., Portland, Oreg. Depositor. No. 1,216,665; Feb. 20; v. 235; p. 857.

Dooley, Clarence H., Rock Island, Ill. Planter. No. 1,215,626; Feb. 13; v. 235; p. 438.

Dooley, Delmar D., Rock Island, assignor to Deere & Mansur Company, Moline, Ill. Seed-plate and agitator mechanism for planters. No. 1,215,627; Feb. 13; v. 235; p. 438.

Dooley, Delmar D., Rock Island, assignor to Deere & Mansur Company, Moline, Ill. Valve mechanism for planters. No. 1,215,628; Feb. 13; v. 235; p. 438.

Doolittle, William W., assignor to Crane Company, Chicago, Ill. Furnace apparatus. No. 1,216,090; Feb. 13; v. 235; p. 604.

Dorau, John P., Jefferson, Wis. Washing-machine. No. 1,215,501; Feb. 13; v. 235; p. 390.

Dorau, John P., Jefferson, Wis. Driving mechanism. No. 1,215,502; Feb. 13; v. 235; p. 390.

Dorau, John P., Jefferson, Wis. Driving mechanism for washing-machines. No. 1,215,503; Feb. 13; v. 235; p. 390.

Dorber, Henry, Brooklyn, N. Y. Game. No. 1,216,091; Feb. 13; v. 235; p. 604.

Doré, Wilfrid, St. Stanislas des Deux Rivières, Champlain, Quebec, Canada. Rifle. No. 1,216,785; Feb. 20; v. 235; p. 899.

Doremus, Charles A., New York, N. Y., assignor of one-half to J. S. Hoyt, Darien, Conn. Reducing aluminium hydrate. No. 1,215,351; Feb. 13; v. 235; p. 337.

Dorgan, William J., Grantwood, N. J. Current-lock for automobiles. No. 1,217,719; Feb. 27; v. 235; p. 1266.

Dormandy, Garry J., Troy, N. Y. Folding-machine. No. 1,216,293; Feb. 20; v. 235; p. 727.

Dorr Company, The. (See Russell, William, assignor.)

Dorsch, Otto H., Brooklyn, N. Y. Brush. No. 1,216,666; Feb. 20; v. 235; p. 858.

Dorsey, Walter A., assignor to The Bonney-Floyd Company, Columbus, Ohio. Mounting for wheels and axles of mine-cars. No. 1,215,629; Feb. 13; v. 235; p. 439.

Dorsey, Walter A., assignor to The Bonney-Floyd Company, Columbus, Ohio. Mounting for wheels and axles of mine-cars. No. 1,215,630; Feb. 13; v. 235; p. 439.

Dorsey, Walter A., assignor to The Bonney-Floyd Company, Columbus, Ohio. Mounting for wheels and axles of mine-cars. No. 1,215,631; Feb. 13; v. 235; p. 440.

Dorsey, Walter A., assignor to The Bonney-Floyd Company, Columbus, Ohio. Wheel-mounting for mine-cars. No. 1,215,632; Feb. 13; v. 235; p. 440.

Dorsey, Walter A., assignor to The Bonney-Floyd Company, Columbus, Ohio. Two-wheeled truck. No. 1,215,633; Feb. 13; v. 235; p. 440.

Dorsey, Walter A., assignor to The Bonney-Floyd Company, Columbus, Ohio. Car-mover. No. 1,215,634; Feb. 13; v. 235; p. 441.

Dortch, Henry A., Des Moines, Iowa. Spark-plug. No. 1,216,092; Feb. 13; v. 235; p. 605.

Dosch, Charles R. (See Dosch, Peter and C. R.)

Dosch, Peter and C. R., Stratford, Conn. Clamping appliance. No. 1,214,521; Feb. 6; v. 235; p. 13.

Doty, John W., Brooklyn, N. Y., assignor to The Foundation Company. Joining caissons. No. 1,215,504; Feb. 13; v. 235; p. 391.

Doud, E. H., *et al.* (See Leary, James I., assignor.)

Dougan, Kennedy, Minneapolis, Minn. Internal-combustion engine. No. 1,216,965; Feb. 20; v. 235; p. 958.

Dougherty, William S., and W. H. Franklin, Montrose, Colo. Dish-washing machine. No. 1,217,576; Feb. 27; v. 235; p. 1216.

Downes, Allan J., Croydon, assignor of one-half to J. Venning, London, England. Cut-out for electric instruments, glow-lamps, and the like. No. 1,217,720; Feb. 27; v. 235; p. 1266.

Downes, Louis W., and R. C. Patton, assignors to D & W Fuse Company, Providence, R. I. Fuse. No. 1,214,903; Feb. 6; v. 235; p. 147.

Downing, Arthur A., Toronto, Ontario, Canada. Floor-waxing device. No. 1,215,505; Feb. 13; v. 235; p. 391.

Downs, George F., Buffalo, N. Y. Treating ores. No. 1,216,667; Feb. 20; v. 235; p. 858.

Doyle, James S. (See Hedley and Doyle.)

Doyle, James S., Mount Vernon, and F. Hedley, Yonkers, N. Y., assignors to The Westinghouse Air Brake Company, Pittsburgh, Pa. Combined car, train-pipe, and electric coupling. No. 1,216,294; Feb. 20; v. 235; p. 727.

Doyle, James S., Mount Vernon, and F. Hedley, Yonkers, N. Y., assignors to The Westinghouse Air Brake Company, Wilmerding, Pa. Combined car and train-pipe coupling. No. 1,216,295; Feb. 20; v. 235; p. 728.

Doyle, Phillip, Somerville, Mass. Removable drive-calk for horseshoes. No. 1,216,093; Feb. 13; v. 235; p. 605.

Drader, Charles, and R. R. Candee, Bakersfield, Cal. Appliance for forming a non-leak joint. No. 1,217,859; Feb. 27; v. 235; p. 1313.

Drägerwerk, Heinr. and Bernh. Dräger. (See Morris and Luchs, assignors.)

Drake, Joseph E., Blue Rapids, Kans. Automatic hen's nest. No. 1,217,721; Feb. 27; v. 235; p. 1266.

Draper Company. (See Northrop, Jonas, assignor.) (Reissue.)

Draper Corporation. (See Nutting, Charles E., assignor.)

Draper Corporation. (See Rhoades, Alonzo E., assignor.)

Draper Corporation. (See Youngquist, Henry, assignor.)

Draper, William, Waverly township, Cheboygan county, and C. Johnson, Onaway, Mich. Railway-spike. No. 1,215,259; Feb. 6; v. 235; p. 271.

Draver, Emil R., Richmond, Ind. Variable-speed mechanism. No. 1,215,506; Feb. 13; v. 235; p. 391.

Draver, Emil R., Richmond, Ind. Shock-absorber for cantaliver-springs. No. 1,216,421; Feb. 20; v. 235; p. 774.

Dressler, John L., New York, N. Y. Carbureter. No. 1,214,767; Feb. 6; v. 235; p. 99.

Drew, Arthur, Buffalo, Wyo. Combined halter and bridle. No. 1,216,966; Feb. 20; v. 235; p. 959.

Drew, Stephen C. (See Lanning and Drew.)

Drey Automatic Glass Machine Company. (See Drey, Leo A., assignor.)

Drey, Leo A., assignor to Drey Automatic Glass Machine Company, St. Louis, Mo. Drop-feeding device for glass-machines. No. 1,215,507; Feb. 13; v. 235; p. 392.

'Dreyfus, Henry, Basel, Switzerland. Process of treating cellulose acetates to alter the solubilities thereof and products of said process. No. 1,217,722; Feb. 27; v. 235; p. 1267.

Dreyfus, Sylvain, Denton, near Manchester, Lancaster, England. Apparatus for effecting the continuous concentration of sulfuric acid. No. 1,217,577; Feb. 27; v. 235; p. 1216.

Driesbach, Frank K. (See Lanier and Driesbach.)

Driver, Wilbur B., Newark, N. J. Material for electrical resistance and the like. No. 1,217,578; Feb. 27; v. 235; p. 1217.

Droitcour, Michael A., Delphos, Ohio. Shoo-fly for printing-presses. No. 1,216,668; Feb. 20; v. 235; p. 858.

Drumheller, William P., Springfield, assignor to The William Carter Company, Needham Heights, Mass. Border-forming mechanism for fabrics. No. 1,215,919; Feb. 13; v. 235; p. 541.

Dudley, Charles J., assignor to American District Steam Company, North Tonawanda, N. Y. Valve. No. 1,217,579; Feb. 27; v. 235; p. 1217.

Dudley, Denver C. (See Brenne, Jurgens, and Dudley.)

Dudley, Job, Hamilton, Ontario, Canada. Hacksaw-machine. No. 1,216,660; Feb. 20; v. 235; p. 859.

Duff, Auburn W. (See Young, Edward, assignor.)

Duganne, Charles G., Denver, Colo. Golf-tee. No. 1,216,094; Feb. 13; v. 235; p. 605.

Dukesmith, Frank H., assignor to The United States Air Brake Corporation, Buffalo, N. Y. Air-brake system. No. 1,217,580; Feb. 27; v. 235; p. 1217.

Dula, Robert B., Tarrytown, N. Y. Apparatus for dispensing packages. No. 1,216,005; Feb. 13; v. 235; p. 605.

Dulaney, Joe F., *et al.* (See Ellenburg, Joe N., assignor.)

Dun Lany, William P., assignor to Sears, Roebuck and Company, Chicago, Ill. Apparatus for producing ornamental roofing. No. 1,214,658; Feb. 6; v. 235; p. 62.

Dun Lany, William P., assignor to Sears, Roebuck and Company, Chicago, Ill. Apparatus for producing ornamental roofing. No. 1,214,659; Feb. 6; v. 235; p. 63.

Dunavant, John R., Jet, Okla. Film-clasp. No. 1,216,967; Feb. 20; v. 235; p. 959.

Dunbar, Howard W. (See Wilcox, Turner, and Dunbar.)

Dunbar, Roy A., Evans City, Pa. Phonograph. No. 1,217,723; Feb. 27; v. 235; p. 1267.

Duncan, William W. (See Simpson, Edmund, assignor.)

Dungey, Hugh P., Middletons, Cranbrook, England. Agricultural motor-tractor. No. 1,215,127; Feb. 6; v. 235; p. 225.

Dunham, Bert G., Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Automatic telephone-line-finder system. No. 1,217,160; Feb. 27; v. 235; p. 1070

Dunham, Carl E., Baker, N. D. Device for holding flexible spouts. No. 1,216,296; Feb. 20; v. 235; p. 728.

Dunham, Charles W., assignor to The Union Switch & Signal Company, Swissvale, Pa. Electromagnetic device. No. 1,215,508; Feb. 13; v. 235; p. 393.

Dunham, William P., Los Angeles, Cal. Portable electric lamp. No. 1,216,422; Feb. 20; v. 235; p. 774.

Dunlap, Samuel H., Bryan, Tex. Cotton-treating apparatus and process. No. 1,215,260; Feb. 6; v. 235; p. 271.

Dunn, Edward J., New York, N. Y. Cement-block mold. No. 1,217,860; Feb. 27; v. 235; p. 1313.

Dunn Manufacturing Company. (See Dunn, William L., assignor.)

Dunn, William L., Piru, assignor to Dunn Manufacturing Company, Oxnard, Cal. Underreamer. No. 1,217,086; Feb. 20; v. 235; p. 909.

Dunningham, Alfred C. (See Hutchins, Hargreaves, and Dunningham.)

Dunscomb, Leander S. (See Fretwell, Phillip N., assignor.)

Duplex Shock-Absorber Co. (See Robinson and Person, assignors.)

Durocher, Thomas L., Sault Ste. Marie, Mich. Rock-grab. No. 1,216,423; Feb. 20; v. 235; p. 774.

Duvall, James, Camas, Wash. Pneumatic press-feeding means. No. 1,217,161; Feb. 27; v. 235; p. 1071.

Duvinage, Pierre, Brooklyn, N. Y. Step for spiral stairways. No. 1,215,352; Feb. 13; v. 235; p. 337.

Dwiggins, John W., Muncie, assignor to J. E. Fredrick, Kokomo, Ind. Wire-fence machine. No. 1,215,353; Feb. 13; v. 235; p. 337.

Dwight, Arthur S., New York, N. Y. Sintering and smelting ore. No. 1,215,635; Feb. 13; v. 235; p. 441.

Dwight, Arthur S., assignor to Dwight-Lloyd Sintering Company, New York, N. Y. Treating ores. No. 1,215,636; Feb. 13; v. 235; p. 441.

Dwight, Arthur S., assignor to Dwight and Lloyd Sintering Company, Inc., New York, N. Y. Apparatus for roasting and sintering ores. No. 1,215,637; Feb. 13; v. 235; p. 442.

Dwight & Lloyd Metallurgical Company. (See Lloyd, Henry J., assignor.)

Dwight-Lloyd Sintering Company. (See Dwight, Arthur S., assignor.)

Dwight & Lloyd Metallurgical Company. (See Lloyd, Richard L., assignor.)

Dwork, Joseph H., Newark, N. J. Vehicle-wheel. No. 1,217,724; Feb. 27; v. 235; p. 1268.

Dyck, George E. (See Beckman and Dyck.)

Dyke, Darrell F., assignor to The Seng Company, Chicago, Ill. Kitchen-cabinet. No. 1,215,261; Feb. 6; v. 235; p. 272.

Dysart, Arthur S., Norfolk, Va. Weighing-scale. No. 1,215,638; Feb. 13; v. 235; p. 442.

Dysart, Arthur S., U. S. Navy. Steering-wheel. No. 1,216,670; Feb. 20; v. 235; p. 859.

Eagle Pencil Company. (See Reed, James M., assignor.)

Eaken, Dwight A., assignor of one-half to H. M. Myers, Lodi, Ohio. Liquid filling and gaging device. No. 1,216,786; Feb. 20; v. 235; p. 899.

Eastman Kodak Company. (See Marks, Paul J., assignor.)

Eastman Kodak Company. (See Riddell, William A., assignor.)

Eastman Kodak Company. (See Speidel, Charles F., assignor.)

Eaton, Albert N., Omaha, Nebr. Grain-bin. No. 1,217,424; Feb. 27; v. 235; p. 1161.

Eaton, George E. (See Schiefer, Lawrence R., assignor.)

Eaton, William S., Sag Harbor, assignor to American Bank Note Company, New York, N. Y. Intaglio printing-plate and making same. No. 1,215,354; Feb. 13; v. 235; p. 338.

Eberley, George W., Whitesboro, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Collaret-strip. No. 1,215,128; Feb. 6; v. 235; p. 225.

Eberly, Austin D., Spokane, Wash. Starting and stopping mechanism for engines. No. 1,215,639; Feb. 13; v. 235; p. 443.

Ebert, Harry, Frederick, Md. Shutter-bower. No. 1,216,968; Feb. 20; v. 235; p. 960.

Eble, Frank J., New York, N. Y. Wrench. No. 1,215,640; Feb. 13; v. 235; p. 443.

Eckenrod, Anna M., Altoona, Pa. Dust-bag. No. 1,216,787; Feb. 20; v. 235; p. 900.

Eckenroth, Philip, Philadelphia, assignor of six twenty-fifths to W. F. Hamilton, Cynwyd, and six twenty-fifths to F. J. Milon, William Penn, Pa. Valve. No. 1,217,725; Feb. 27; v. 235; p. 1268.

Eckenroth, Philip, Philadelphia, assignor of six twenty-fifths to W. F. Hamilton, Cynwyd, and six twenty-fifths to Frank J. Milon, William Penn, Pa. Valve. No. 1,217,726; Feb. 27; v. 235; p. 1268.

Eckert, Frank, Chicago, Ill. Cake-turner. No. 1,214,522; Feb. 6; v. 235; p. 14.

Economy Fuse & Manufacturing Company. (See Eustice, Alfred L., assignor.)

Eddowes, Archibald B., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Piston. No. 1,216,218; Feb. 13; v. 235; p. 649.

Eden, Francis R., Montclair, N. J. Treating coffee. No. 1,216,671; Feb. 20; v. 235; p. 860.

Edison, Thomas A. (See Bliss, Donald M., assignor.)

Edlich, Paul, Passaic, N. J. Flow-indicating valve. No. 1,215,129; Feb. 6; v. 235; p. 225.

Educational Motion Picture Machine & Film Co. (See Hill, Harry M., assignor.)

Edward G. Budd Manufacturing Co. (See Budd, Edward G., assignor.)

Edward G. Budd Manufacturing Co. (See Ledwinka, Joseph, assignor.)

Edward Steam Specialty Co., The. (See Oleson, Olaf E., assignor.)

Edwards, Alonzo L., assignor to Wheeling Stamping Company, Wheeling, W. Va. Metal top for bottles and like receptacles. No. 1,214,523; Feb. 6; v. 235; p. 14.

Edwards & Company. (See Smith, William J., assignor.)

Edwards, Daniel G., Atlanta, Ga. Cable-hanger. No. 1,215,009; Feb. 6; v. 235; p. 187.

Edwards, Evan J., Cleveland, Ohio, assignor to General Electric Company. Vehicle-lamp. No. 1,214,524; Feb. 6; v. 235; p. 15.

Edwards, Marmaduke, Halesite, N. Y. Street-sweeper. No. 1,216,969; Feb. 20; v. 235; p. 960.

Edwards, William E., Lestershire, N. Y. Machine-brake. No. 1,216,424; Feb. 20; v. 235; p. 774.

Edwards, William T., San Diego, Cal. Hair-pin. No. 1,216,970; Feb. 20; v. 235; p. 960.

Edwin Harrington, Son & Co. (See Harrington and Scott, assignors.)

Efficiency Motor Corporation. (See Clarke, Harry D., assignor.)

Egan, William P., *et al.* (See Woodward, Erastus, assignor.)

Egbers, Guy F., Pasco, Wash. Subcaliber-barrel. No. 1,217,162; Feb. 27; v. 235; p. 1072.

Eggart, Karl, assignor to Firm of A. Saurer, Arbon, Switzerland. Embroidering-machine. No. 1,214,525; Feb. 6; v. 235; p. 15.

Egry Register Company, The. (See Rauh, Leopold, assignor.)

Ehart, Thomas B., Pittsburg, Kans. Extension-table. No. 1,217,727; Feb. 27; v. 235; p. 1269.

Ehrlich, William, New York, N. Y. Focusing attachment for cameras. No. 1,217,728; Feb. 27; v. 235; p. 1269.

Eiseman, Moses H., Chicago, Ill. Inflatable toy. No. 1,216,425; Feb. 20; v. 235; p. 775.

Eisen, Jacob, assignor to Goldsmith, Stern & Co., New York, N. Y. Finger-measuring device for rings. No. 1,216,672; Feb. 20; v. 235; p. 860.

Eisenstadt Manufacturing Company. (See Terry, John M., assignor.)

Ekama, Cornelius. (See Hay and Ekama.)

Eklund, Alexander, Attleboro, Mass., assignor, by mesne assignments, to J. F. Sturdy's Sons Co. Bracelet-link. No. 1,215,920; Feb. 13; v. 235; p. 542.

Eldred, Byron E., New York, N. Y., assignor to The Commercial Research Company. Making clad metals. No. 1,217,581; Feb. 27; v. 235; p. 1218.

Electric Boat Company. (See Davison and Anderson, assignors.)

Electric Controller and Manufacturing Company, The. (See Canfield, Harry R., assignor.)

Electric Controller and Manufacturing Company, The. (See Hall, Jay H., assignor.)

Electric Metal Working Company. (See Coffin, Charles L., assignor.)

Elektro-Osmose Aktiengesellschaft (Graf Schwerin Gesellschaft). (See Schwerin, Botho, assignor.)

Elias, George, Irvington, and W. Mendel, Newark, N. J. Electric-light shade. No. 1,217,582; Feb. 27; v. 235; p. 1219.

Eliker, James W. (See Bearfield, Thomas N., assignor.)

Ellard, Hugh F., Missoula, Mont. Cable-grip. No. 1,217,163; Feb. 27; v. 235; p. 1072.

Ellenburg, Joe N., assignor of one-fifth to J. F. Dulaney, one-fifth to J. Thompson, one-fifth to G. Thompson, and one-fifth to W. T. Hartman, McKinney, Tex. Separator for seed-cotton. No. 1,216,673; Feb. 20; v. 235; p. 860.

Ellerman, Jan. (See Van Calcar, Ellerman, and Martijn.)

Ellett, Frederick S., Elmira, N. Y. Motor-cycle. No. 1,215,783; Feb. 13; v. 235; p. 492.

Ellinger, Julian O., assignor to W. T. Romaine, New York, N. Y. Barrel. No. 1,215,355; Feb. 13; v. 235; p. 338.

Ellingham, Robert W. (See Gustafson and Ellingham.)

Elliott, William, Langlois, Oreg. Oil-can. No. 1,215,130; Feb. 6; v. 235; p. 226.

Ellis, Carleton, Montclair, N. J. Treating oils, &c. No. 1,216,971; Feb. 20; v. 235; p. 961.

Ellis, Carleton, Montclair, N. J. Hydrogenation. No. 1,217,118; Feb. 20; v. 235; p. 1012.

Ellis, Carleton, Montclair, N. J., assignor to Radiant Heating Limited, Armley, Leeds, England. Apparatus for burning liquid fuel. No. 1,216,096; Feb. 13; v. 235; p. 606.

Ellis, Hartley, Cleveland, Ohio. Barrel-head. No. 1,216,972; Feb. 20; v. 235; p. 961.

Ellis, Ira C., East St. Louis, Ill. Locking device for gear-shifting levers of automobiles. No. 1,215,509; Feb. 13; v. 235; p. 393.

Ellis, Roy J. (See Carpenter and Ellis.)

Ellis, Wynn E., Chicago, Ill. Bleaching grain. No. 1,214,526; Feb. 6; v. 235; p. 15.

Elster, Albert D., Meriden, Conn. Gasolene-water separator. No. 1,216,219; Feb. 13; v. 235; p. 649.

Elster, Albert D., Meriden, Conn. Fishing-float. No. 1,216,220; Feb. 13; v. 235; p. 650.

Embossing Company, The. (See Ramsey, Huntington, and Hyatt, assignors.)

Emerick, Frederick A., Oswego, N. Y. Post-and-bar fence. No. 1,215,356; Feb. 13; v. 235; p. 338.

Emerson-Brantingham Company. (See Hurxthal, Frederick K., assignor.)

Emerson-Brantingham Company. (See Waterman, Lewis E., assignor.)

Emerson, Fred L., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Drill-mounting. No. 1,214,527; Feb. 6; v. 235; p. 16.

Engel, Godfrey, Brooklyn, N. Y. Granulating and drying sugar. No. 1,216,554; Feb. 20; v. 235; p. 820.

Engel, Godfrey, Brooklyn, N. Y. Apparatus for granulating and drying sugar. No. 1,216,555; Feb. 20; v. 235; p. 820.

English, John C. (See Johnson and English.)

Englund, Ernst E., assignor to D. M. Sechler Implement & Carriage Company, Moline, Ill. Corn-planter. No. 1,216,788; Feb. 20; v. 235; p. 900.

Emmet, William L. R., Schenectady, N. Y., assignor to General Electric Company. Electric ship propulsion. No. 1,214,528; Feb. 6; v. 235; p. 16.

Engstrom, Carl O., Sacramento, Cal. Coupling. No. 1,215,510; Feb. 13; v. 235; p. 393.

Engstrom, Isack G., Minneapolis, Minn. Column-clamp. No. 1,214,905; Feb. 6; v. 235; p. 148.

Enley, John T., Philadelphia, Pa. Die-casting machine. No. 1,215,784; Feb. 13; v. 235; p. 492.

Ensign, Daniel J., North Adams, Mass. Hemming attachment for sewing-machines. No. 1,216,298; Feb. 20; v. 235; p. 729.

Enterprise Railway Equipment Company. (See Campbell, Argyle, assignor.)

Epprecht, Gottlieb, Allentown, Pa. Frying-pan. No. 1,216,973; Feb. 20; v. 235; p. 962.

Erickson, Axel G., and E. B. Henry, Bandon, Oreg. Shock-absorber for vehicles. No. 1,216,221; Feb. 13; v. 235; p. 650.

Erickson, Charles A., Cashton, Wis. Window-ventilator. No. 1,215,131; Feb. 6; v. 235; p. 226.

Erickson, Frederic W., New York, N. Y. Pipe-cutter. No. 1,216,426; Feb. 20; v. 235; p. 775.

Erickson, John, assignor to Automatic Electric Company, Chicago, Ill. Measured-service telephone system. No. 1,217,426; Feb. 27; v. 235; p. 1162.

Erikson, David, Drayton, N. D. Pencil-holder and envelop-opener. No. 1,215,010; Feb. 6; v. 235; p. 188.

Ermatinger, Orson C., Scales, Cal. Snow-tractor. No. 1,217,729; Feb. 27; v. 235; p. 1269.

Erslev, Knud, Nijmegen, Netherlands. Manufacture of margarin. No. 1,216,674; Feb. 20; v. 235; p. 860.

Erslev, Knud, Nijmegen, Netherlands. Manufacture of margarin. No. 1,216,675; Feb. 20; v. 235; p. 860.

Erwin, Benjamin F., Fairfax, Mo. Whip-socket. No. 1,216,297; Feb. 20; v. 235; p. 729.

Erwin, James B. and O. R., Milwaukee, Wis. Apparatus for and process of generating foam. No. 1,214,660; Feb. 6; v. 235; p. 63.

Erwin, James B. and O. R., Milwaukee, Wis. Foam-generating apparatus. No. 1,214,661; Feb. 6; v. 235; p. 63.

Erwin, James B. and O. R., Milwaukee, Wis. Apparatus for extinguishing fires. No. 1,216,789; Feb. 20; v. 235; p. 900.

Erwin, Orlando R. (See Erwin, James B. and O. R.)

Escher, Joseph, Pittsburgh, and J. Nagy, West View, assignors to James H. Matthews & Company, Pittsburgh, Pa. Die-holder. No. 1,214,662; Feb. 6; v. 235; p. 64.

Esrey, Earl D., Deer Park, N. Y. Table. No. 1,217,730; Feb. 27; v. 235; p. 1270.

Essex, Harry. (See Hibbert, Essex, and Brooks.)

Estes, Samuel E., Ruby, Ky. Bridle. No. 1,215,357; Feb. 13; v. 235; p. 339.

Eunson, Joseph W., Brunswick, Victoria, assignor to Woods-Gilbert Rail Planer Company, Limited, Melbourne, Australia. Machine for dressing rails. No. 1,216,097; Feb. 13; v. 235; p. 607.

Eustice, Alfred L., assignor to Economy Fuse & Manufacturing Company, Chicago, Ill. Cartridge-fuse. No. 1,217,289; Feb. 27; v. 235; p. 1113.

Evans, Arthur B., assignor to George Mann and Company Limited, Leeds, England. Printing machinery. No. 1,215,132; Feb. 6; v. 235; p. 226.

Evans, Clarence T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,214,663; Feb. 6; v. 235; p. 64.

Evans, Clarence T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Welding-controller. No. 1,215,921; Feb. 13; v. 235; p. 542.

Evenson, Henry. (See Kayetan and Evenson.)

Everett, James D., Crown Point, Ind. Boltless rail-joint. No. 1,214,529; Feb. 6; v. 235; p. 17.

Everett, Russell M. (See Howard, William S., assignor.)

Everoad, Lennious P., assignor to Reeves Pulley Company, Columbus, Ind. Chucking device for rollers. No. 1,215,785; Feb. 13; v. 235; p. 493.

Ewald, William F., Java, S. D. Resilient wheel. No. 1,215,511; Feb. 13; v. 235; p. 394.

Ewell, Ocie D., Bellevue, Tex. Folding washstand. No. 1,216,098; Feb. 13; v. 235; p. 607.

F. A. Whitney Carriage Company. (See Ambler, George B., assignor.)

Fafnir Bearing Company, The. (See Cooper, Elisha H., assignor.)

Fahrmbacher, Alois, Charlottenburg, assignor to Siemens-Schuckert Werke, G. m. b. H., Berlin, Germany. Means for preventing sparking in direct-current machines. No. 1,215,786; Feb. 13; v. 235; p. 493.

Fahrmbacher, Alois, Berlin-Charlottenburg, assignor to Siemens-Schuckertwerke G. m. b. H., Siemensstadt, near Berlin, Germany. Means for preventing sparking in direct-current machines. No. 1,215,787; Feb. 13; v. 235; p. 493.

Faiella, Andrew E., Jersey City, N. J. Dial for watches and the like. No. 1,216,556; Feb. 20; v. 235; p. 820.

Fairbanks, Frank P., Point Pleasant, N. J. Door-check. No. 1,217,731; Feb. 27; v. 235; p. 1270.

Fairbanks-Morse Electrical Manufacturing Company. (See Bailey, Barr, More, and Long, assignors.)

Fairmont Mining Machinery Company. (See Brasack, William, assignor.)

Faist, Charles, Spring Valley, N. Y. Music-leaf turner. No. 1,215,262; Feb. 6; v. 235; p. 272.

Falck, James S., Washington, D. C. Surgical device. No. 1,216,099; Feb. 13; v. 235; p. 607.

Falconer, George, Fremont, Nebr., assignor to Universal Glas-Solvo Company, Chamberlain, S. D. Composition of matter. No. 1,215,358; Feb. 13; v. 235; p. 339.

Fales, Elisha N., Buffalo, N. Y. Hand-stamp. No. 1,215,788; Feb. 13; v. 235; p. 494.

Falls, Jesse G., Memphis, Tenn. Gin-saw gummer. No. 1,216,299; Feb. 20; v. 235; p. 729.

Farbwerke vorm. Meister Lucius & Brüning. (See Karrer, Paul, assignor.)

Farbwerke Vorm. Meister Lucius & Brüning. (See Stock and Nicodemus, assignors.)

Farmer, Herbert J., Richmond, Ind. Lawn-mower. No. 1,216,676; Feb. 20; v. 235; p. 861.

Farmer, Luke W., Somerville, Mass. Holder for paper finger-bowls. No. 1,214,906; Feb. 6; v. 235; p. 148.

Farmer, Thomas, Jr., New York, N. Y., assignor to Consolidated Car-Heating Company. Car-door control. No. 1,216,300; Feb. 20; v. 235; p. 730.

Farnham, Stephen H., Brooklyn, A. W. Smith, New York, N. Y., and J. Phelps, Belleville, N. J., assignors to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,217,290; Feb. 27; v. 235; p. 1114.

Farnsworth, Frederick C., Brooklyn, N. Y. Combined receiving-tank and pump-governor. No. 1,216,427; Feb. 20; v. 235; p. 775.

Farrell, Francis J., Cincinnati, Ohio. Vehicle-fender. No. 1,217,583; Feb. 27; v. 235; p. 1219.

Farrington, Harry J., assignor to Farrington Manufacturing Company, Boston, Mass. Jewelry-box. No. 1,217,291; Feb. 27; v. 235; p. 1114.
Farrington Manufacturing Company. (See Farrington, Harry J., assignor.)
Fasnacht, Howard H., assignor of one-half to A. L. Day, Chicago, Ill. Internal-combustion engine. No. 1,215,922; Feb. 13; v. 235; p. 542.
Fast, Gustave, Baltimore, Md. Gearing. No. 1,217,427; Feb. 27; v. 235; p. 1162.
Faultless Rubber Co., The. (See Miller, Thomas W., assignor.)
Faunce, Vernon C., Bondsville, Mass. Lap-rod retainer for pickers, carding-engines, &c. No. 1,216,790; Feb. 20; v. 235; p. 901.
Faust, Casper, Oshkosh, Wis. Bolster-stake holder. No. 1,217,584; Feb. 27; v. 235; p. 1220.
Fechtenburg, Jürgen F. H., Philadelphia, Pa. Speed-regulating device for talking-machines. No. 1,216,222; Feb. 13; v. 235; p. 650.
Fedders, John M., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y. Radiator for automobiles. No. 1,217,732; Feb. 27; v. 235; p. 1270.
Fedders Manufacturing Company. (See Fedders, John M., assignor.)
Federman, Marie S., New York, N. Y. Snap-fastener. No. 1,217,164; Feb. 27; v. 235; p. 1072.
Fee, Asa. (See Le Vene and Fee.)
Felicke, Karl, Indianapolis, Ind. Wind-shield. No. 1,215,133; Feb. 6; v. 235; p. 226.
Feilmann, Martin E., D. Bagley, and A. H. Smith, London, England. Apparatus for purifying blast-furnace gases. No. 1,216,677; Feb. 20; v. 235; p. 861.
Feleki, Alexander, New York, N. Y. Flushing-valve. No. 1,214,664; Feb. 6; v. 235; p. 64.
Fellows, George A., *et al.* (See Fellows, Melvin, assignor.)
Fellows, Melvin, assignor of one-fourth to G. A. Fellows, one-fourth to J. H. Winter, and one-fourth to J. M. Benidict, Cheney, Wash. Fire-extinguisher. No. 1,217,428; Feb. 27; v. 235; p. 1163.
Felts, Thomas R., Berlin, Ala. Resilient tire-casing expander. No. 1,214,768; Feb. 6; v. 235; p. 99.
Femoso, Leon L., Fresno, Cal. Turbine explosive-engine. No. 1,217,733; Feb. 27; v. 235; p. 1270.
Ferguson, Edward E., Portsmouth, assignor of one-half to C. Van Fleming, Norfolk, Va. Combined fire-alarm box and hydrant. No. 1,215,263; Feb. 6; v. 235; p. 272.
Ferguson, John A., Denver, Colo. Concrete-block-making machine. No. 1,214,530; Feb. 6; v. 234; p. 17.
Ferguson, Peter L., Ogden, Utah. Condiment-holder. No. 1,216,252; Feb. 13; v. 235; p. 661.
Ferguson, Seymour, Ocotlan, Mexico. Rock-drill. No. 1,214,665; Feb. 6; v. 235; p. 65.
Feroci, Cesare, Rome, Italy. Automatic railway-car and compressed-air and steam pipe coupling device. No. 1,217,734; Feb. 27; v. 235; p. 1271.
Ferry, John M., Baltimore, Md., assignor to James Ferry & Sons, Incorporated. Apparatus for removing water from water-bearing sand. No. 1,215,134; Feb. 6; v. 235; p. 227.
Fessenden, Reginald A., Brookline, Mass. Power generation. No. 1,214,531; Feb. 6; v. 235; p. 17.
Fessenden, Reginald A., Brant Rock, Mass. Power plant. No. 1,217,165; Feb. 27; v. 235; p. 1072.
Fessenden, Reginald A., Brookline, Mass., assignor to Submarine Signal Company, Waterville, Me. Measuring distance. No. 1,217,585; Feb. 27; v. 235; p. 1220.
Fetzer, David H., Dormont borough, Allegheny county, Pa. Trocar. No. 1,215,512; Feb. 13; v. 235; p. 394.
Feuchter, Leo A., Ironton, Ohio. Headlight-dimmer. No. 1,216,100; Feb. 13; v. 235; p. 608.
Fichter, Paul, Randolph, Iowa. Clutch. No. 1,215,513; Feb. 13; v. 235; p. 394.
Field, Millard F., Winthrop, E. F. Hathaway and C. D. Lanning, assignors to American Warp-Drawing Machine Company, Boston, Mass. Warp-drawing machine and mechanism for manipulating detached heddles therein. No. 1,215,789; Feb. 13; v. 235; p. 494.
Fiero, George M., Pittsburgh, Pa. Lamp. No. 1,215,264; Feb. 6; v. 235; p. 273.
Fillion, Salome, Lake Linden, Mich. Bed elevating and transporting device. No. 1,214,769; Feb. 6; v. 235; p. 100.
Findley, William, Emmett, Idaho. Road-drag. No. 1,215,011; Feb. 6; v. 235; p. 188.
Fingerle, August C., Modesto, Cal. Electric house-heating furnace. No. 1,216,101; Feb. 13; v. 235; p. 608.
Finkelstein, Moress S., New York, N. Y. Antirefilling bottle-stopper. No. 1,216,428; Feb. 20; v. 235; p. 776.
Finlay, Robert S., Melbourne, Victoria, Australia. Side car. No. 1,215,265; Feb. 6; v. 235; p. 273.
Finney, Curtiss W., Spokane, Wash. Cleft nail or like extractor. No. 1,215,012; Feb. 6; v. 235; p. 188.
Firth, William C., Kansas City, Mo. Rowing-machine. No. 1,217,292; Feb. 27; v. 235; p. 1115.
Fischer, George B., assignor of one-half to E. A. Muha, East Chicago, Ind. Tumbler-lock. No. 1,215,013; Feb. 6; v. 235; p. 188.
Fisher, Edgar C., Dayton, Ohio. Manifolding sales-book. No. 1,217,166; Feb. 27; v. 235; p. 1073.
Fisher, Emanuel, Providence, R. I. Valve. No. 1,216,974; Feb. 20; v. 235; p. 962.
Fisher, Ernest F., Pittsburgh, Pa., assignor to General Electric Company. Fluid-flow-indicating mechanism. No. 1,215,135; Feb. 6; v. 235; p. 227.
Fisher, James P., Bartlesville, Okla. Dead-weight gage-tester. No. 1,217,735; Feb. 27; v. 235; p. 1271.
Fisher, Raymond, Philadelphia, Pa. Bobbin. No. 1,217,429; Feb. 27; v. 235; p. 1163.
Fisher, Raymond, assignor to J. K. Altemus, Philadelphia, Pa. Automatic stop for winding-machines. No. 1,216,557; Feb. 20; v. 235; p. 821.
Fisher, William C., assignor to The Russell Manufacturing Company, Middletown, Conn. Cartridge-belt. No. 1,217,736; Feb. 27; v. 235; p. 1272.
Fisk, Roy A., Amboy, Minn. Heating device for water-jacketed carbureters. No. 1,216,301; Feb. 20; v. 235; p. 730.
Fiske, George W., Akron, Ohio. Refillable indicating-fuse. No. 1,216,429; Feb. 20; v. 235; p. 776.
Fiske, William G., assignor to Thames Paper Company Limited, Purfleet, England. Manufacture of boxes and similar receptacles. No. 1,216,791; Feb. 20; v. 235; p. 901.
Fitch, Florence H. (See Morrison and Fitch.)
Fitch, Mary E., Brookline, Mass. Lining, marking, copying, or other indicating guide. No. 1,215,136; Feb. 6; v. 235; p. 227.
Fittinger, Herbert C. (See Allen, James G., assignor.)
Fitzgerald, Frank M., and R. S. Hatch, assignors of one-third to F. M. Hatch, Chicago, Ill. Means for controlling elevators. No. 1,214,907; Feb. 6; v. 235; p. 148.
Fitzgerald, Harrison R., *et al.* (See Hogg, William T., assignor.)
Fitzgerald, Michael, Medina, N. Y. Street or station indicator. No. 1,217,737; Feb. 27; v. 235; p. 1272.
Fjelstad, Lewis, Wallace, S. D. Agricultural machine. No. 1,214,532; Feb. 6; v. 235; p. 18.
Flachslaender, Joseph, and P. G. List, Leverkusen, near Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Dyes and dyeing. No. 1,215,359; Feb. 13; v. 235; p. 339.
Flannery Bolt Company. (See Dodds, Ethan I., assignor.)
Flannery Bolt Company. (See Stafford and Dodds, assignors.)
Flannery, Joseph M., Pittsburgh, Pa. Battery. No. 1,217,738; Feb. 27; v. 235; p. 1272.
Flannery, Joseph M., Pittsburgh, Pa. Battery. No. 1,217,739; Feb. 27; v. 235; p. 1272.
Fleak, Glen D., Muskogee, Okla. Wind-shield cleaner. No. 1,217,740; Feb. 27; v. 235; p. 1273.
Fleming, Burton S. (See Fleming and Ladwig.)
Fleming, Clifford A. and B. S., and C. F. Ladwig, Huntsville, Mo. Baling-press. No. 1,215,014; Feb. 6; v. 235; p. 189.
Fletcher, Fred S., *et al.* (See Winter, William E., assignor.)
Fletcher-Terry Company, *et al.*, The. (See Winter, William E., assignor.)
Floating Wedge Lock Nut Co. (See Wood, Frank W., assignor.)
Flocker, Maud I. R., Pittsburgh, Pa. Hat-pin protector. No. 1,215,015; Feb. 6; v. 235; p. 189.
Flowers-Lynch Gin Saw Cleaner Co. (See Robertson, Osborn B., assignor.)
Flynn, Francis P. (See Shorey and Flynn.)
Focha, William F., assignor of one-half to Patrick W. McDonough, Richmond, Cal. Bottle-safe. No. 1,217,430; Feb. 27; v. 235; p. 1164.
Fodrea, William L., Arkadelphia, Ark. Motor-vehicle. No. 1,216,975; Feb. 20; v. 235; p. 962.
Foersterling, Hans, and H. Philipp, Perth Amboy, N. J., assignors to The Roessler & Hasslacher Chemical Co., New York, N. Y. Making cyanogen compounds. No. 1,214,770; Feb. 6; v. 235; p. 100.
Folding Utilities Corporation. (See Smith, Carleton W., assignor.)
Foley, Patrick F., Brooklyn, N. Y. Door-locking device. No. 1,217,586; Feb. 27; v. 235; p. 1221.
Foley, William E., Cleveland, assignor to The Dollar Saving and Trust Company, Youngstown, Ohio. Method and apparatus for electrically heating metal. No. 1,217,431; Feb. 27; v. 235; p. 1164.
Forbes, Percy L., West Middlesex, Pa. Hay-distributing apparatus. No. 1,216,558; Feb. 20; v. 235; p. 821.
Ford, Charles R., Paducah, Ky. Bilge-water alarm. No. 1,216,678; Feb. 20; v. 235; p. 861.
Ford, Harry R. (See Weaver, Henry W., assignor.)
Ford, James A., Jamaica Plain, assignor to Plymouth Rubber Company, Canton, Mass. Boot and shoe sole. No. 1,214,666; Feb. 6; v. 235; p. 65.
Ford, Julius C., Summit, Miss. Fence-wire fastener. No. 1,215,641; Feb. 13; v. 235; p. 443.
Ford, Thomas B., Brooklyn, N. Y. Combined stop-valve, automatic limited-pressure valve, and full-pressure supply-valve. No. 1,216,976; Feb. 20; v. 235; p. 963.
Forniraseo, Domenico, Klamath Falls, Oreg. Dirigible automobile-headlight. No. 1,215,016; Feb. 6; v. 235; p. 189.
Forquer, Wiley. (See Smith and Forquer.)
Forrest, Oscar E., Schenectady, N. Y., assignor to General Electric Company. Fuse-holder. No. 1,217,741; Feb. 27; v. 235; p. 1273.
Forsyth, William D., Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y. Draw-bar yoke. No. 1,216,430; Feb. 20; v. 235; p. 776.
Fort Pitt Bedding Company. (See Sleeth, Montgomery, assignor.)

Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. High-voltage insulating-bushing. No. 1,217,890; Feb. 27; v. 235; p. 1323.
Fortier, Ulysses D., Tulsa, Okla. Time-switch. No. 1,214,771; Feb. 6; v. 235; p. 100.
Forward, Roscoe F. (See Gotobed and Forward.)
Foss, Leland L., assignor of one-half to M. Leader, Vidalia, Ga. Cotton-gin of the double-roller type. No. 1,215,137; Feb. 6; v. 235; p. 227.
Foster, Annie, Venice, Cal. Comb-cleaner. No. 1,216,977; Feb. 20; v. 235; p. 963.
Foster Brothers Manufacturing Company. (See Foster, William B., assignor.)
Foster, Charles H. (See Anderson, Carl E., assignor.)
Foster, George A., Chicago, Ill. Device for preventing snoring. No. 1,216,679; Feb. 20; v. 235; p. 862.
Foster, William B., assignor to Foster Brothers Manufacturing Company, Utica, N. Y. Spring chair-seat. No. 1,215,790; Feb. 13; v. 235; p. 494.
Foundation Company, The. (See Doty, John W., assignor.)
Four Wheel Drive Auto Company. (See Batenburg, Peter J. F., assignor.)
Fouts, John A., Osborne, Kans. Wire carrier and stretcher. No. 1,214,772; Feb. 6; v. 235; p. 101.
Fox, Charles H., Bakersfield, Cal. Internal-combustion power apparatus. No. 1,217,861; Feb. 27; v. 235; p. 1313.
Fox, Paul J., Washington, D. C. Extracting potash and alumina from alunite. No. 1,217,432; Feb. 27; v. 235; p. 1164.
Framburg, Henry A., Berwyn, assignor to H. A. Framburg & Company, Chicago, Ill. Supporting means for electric-light fixtures. No. 1,214,667; Feb. 6; v. 235; p. 65.
Francis, Omar J., Reading, Pa. Damper. No. 1,216,102; Feb. 13; v. 235; p. 608.
Francisco, Tony, Roslyn, Wash. Propeller for motor-boats, &c. No. 1,217,742; Feb. 27; v. 235; p. 1273.
Franck, Emil J., Philadelphia, Pa. Knitting-machine. No. 1,216,302; Feb. 20; v. 235; p. 730.
Frank, Gustav, assignor of one-half to M. J. Whelan, Jefferson, Tex. Switch-lock for motor-vehicles. No. 1,216,559; Feb. 20; v. 235; p. 821.
Frank, Holmes A. (See Brotherston, Alexander M., assignor.)
Frank Prox Co. (See Prox, Herman C., assignor.)
Frank, Simon M., St. Louis, Mo. Neckwear and making the same. No. 1,215,319; Feb. 6; v. 235; p. 292.
Franklin, Edward A., Austin, Tex. Silo-chute. No. 1,217,743; Feb. 27; v. 235; p. 1274.
Franklin, Emlen A., Fort Morgan, Colo. Match-box. No. 1,216,978; Feb. 20; v. 235; p. 964.
Franklin, William H. (See Dougherty and Franklin.)
Fransosi, Antonio, assignor of one-half to G. A. Sheltra, Providence, R. I. Micrometer-caliper. No. 1,216,680; Feb. 20; v. 235; p. 862.
Franzen, Gustave E. (See Johnson and Franzen.)
Frawley, Richard M. (See McDaniel and Frawley.).
Frazier, Walter W., Philipp, Miss. Nut-lock. No. 1,216,431; Feb. 20; v. 235; p. 777.
Frede, Charles F., assignor to Commonwealth Steel Company, St. Louis, Mo. Metal-planing machine. No. 1,215,514; Feb. 13; v. 235; p. 395.
Frederick Osann Company. (See Plumley, Raymond L., assignor.)
Fredrick, John E. (See Dwiggins, John W., assignor.)
Fredriksson, Nils, Svedala, Sweden. Apparatus for cutting bricks and the like from continually-fed material. No. 1,214,668; Feb. 6; v. 235; p. 66.
Freed, Adolph, Highwood, Mont. Combined flash-light and toilet article. No. 1,216,979; Feb. 20; v. 235; p. 964.
Freeman, Allan A., New York, N. Y. Testing and indicating paper and making same. No. 1,216,303; Feb. 20; v. 235; p. 731.
Freeman, Charles F., trustee. (See Freeman, Louis G., assignor.)
Freeman, Joseph W., assignor of forty-nine one-hundredths to A. Cuthbertson, Jr., Columbus, Ohio. Tractor. No. 1,217,203; Feb. 27; v. 235; p. 1115.
Freeman, Louis G., assignor to himself and C. F. Freeman, trustees, Cincinnati, Ohio. Tack pulling and redriving machine. No. 1,214,908; Feb. 6; v. 235; p. 149.
French, James C., Kenosha, Wis., assignor to F. C. Austin, Chicago, Ill. Wheel-excavator. No. 1,215,791; Feb. 13; v. 235; p. 495.
Fretwell, Phillip N., Memphis, Tenn., assignor of one-half to L. S. Dunscomb, Little Rock, Ark. Retaining device for milk-bottle caps. No. 1,215,923; Feb. 13; v. 235; p. 543.
Frey, August J., assignor to Brass Goods M'f'g Co., Brooklyn, N. Y. Sheet-metal compression-clamp for tubing and the like. No. 1,217,433; Feb. 27; v. 235; p. 1165.
Friberg, Charles P. A., assignor to Deere & Mansur Company, Moline, Ill. Cultivator. No. 1,215,642; Feb. 13; v. 235; p. 443.
Friberg, Gustaf F., Chicago, Ill. Hour-striking time mechanism. No. 1,216,103; Feb. 13; v. 235; p. 609.
Fried. Krupp Aktiengesellschaft. (See Hagelloch, Georg, assignor.)
Friedrich, Ludwig, New York, N. Y. Antiskidding attachment for wheels. No. 1,216,104; Feb. 13; v. 235; p. 609.
Fritz, Axel, Everett, Mass. Catfle-stanchion. No. 1,217,434; Feb. 27; v. 235; p. 1165.
Fritz, Axel, Everett, Mass. Cattle-stanchion. No. 1,217,435; Feb. 27; v. 235; p. 1165.
Fritz, Orange V., *et al.* (See Bittle, Harry L., assignor.)
Fritzsch, Bernhard, Cincinnati, Ohio. Diaphragm for sound-reproducers. No. 1,217,294; Feb. 27; v. 235; p. 1115.
Frye, Thomas E., assignor to J. H. Hauck, Terre Haute, Ind. Condiment-holder. No. 1,217,295; Feb. 27; v. 235; p. 1116.
Fuller, Archibald S., Newton, Mass. Combing-machine. No. 1,214,533; Feb. 6; v. 235; p. 18.
Fuller, Eugene, Providence, assignor of one-half to L. A. Peckham, Cranston, R. I. Shock-absorber. No. 1,217,290; Feb. 27; v. 235; p. 1116.
Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Pad-holder. No. 1,215,643; Feb. 13; v. 235; p. 444.
Fuller, Truman S., Schenectady, N. Y., assignor to General Electric Company. Brazing material. No. 1,215,138; Feb. 6; v. 235; p. 228.
Fulton Company, The. (See Fulton, Weston M., assignor.)
Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Cooling system for internal-combustion engines. No. 1,217,587; Feb. 27; v. 235; p. 1221.
Fulton, William B., Middletown, Ohio. Chimney-building accessory. No. 1,216,223; Feb. 13; v. 235; p. 650.
Funcheon, Daniel C., Denver, and A. V. Nutt, Edgewater, Colo. Self-loading wheeler. No. 1,215,792; Feb. 13; v. 235; p. 495.
Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Blacking-machine. No. 1,216,304; Feb. 20; v. 235; p. 731.
Furgal, Frank T., Warren, Mass. Picker-stick connection. No. 1,215,266; Feb. 6; v. 235; p. 273.
Furgerson, Jesse S., G. W. Davis, and W. W. Furgerson, Deport, Tex. Wrench. No. 1,216,224; Feb. 13; v. 235; p. 651.
Furgerson, William W. (See Furgerson, Davis, and Furgerson.)
Fuss, Max, Berlin, Germany. Automatic pressure-regulator for electric machines. No. 1,215,360; Feb. 13; v. 235; p. 339.
Fuss, Max, Berlin, Germany. Electrical potential-regulator. No. 1,215,361; Feb. 13; v. 235; p. 340.
Fynn, Valère A., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Ignition system. No. 1,216,792; Feb. 20; v. 235; p. 902.
Fynn, Valère A., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Ignition-controlling apparatus. No. 1,216,793; Feb. 20; v. 235; p. 902.
G. E. Prentice Manufacturing Company, The. (See Prentice, George E., assignor.)
Gabrielson, Carl, assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y. Card-holder for type-writing machines. No. 1,216,432; Feb. 20; v. 235; p. 777.
Gabrielson, Carl, assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y. Type-writer platen-release mechanism. No. 1,217,436; Feb. 27; v. 235; p. 1166.
Gabrielson, John B., Jamestown, N. Y. Radiator. No. 1,215,793; Feb. 13; v. 235; p. 495.
Gaffney, Richard M., St. Louis, Mo. Advertising device and the like. No. 1,214,534; Feb. 6; v. 235; p. 18.
Gagnon, Joseph E., Philadelphia, and J. A. Hawthorne, Jr., Chester, assignors of one-third to A. S. Orchard, Philadelphia, Pa. Plumb, level, and square. No. 1,216,105; Feb. 13; v. 235; p. 609.
Gahl, Rudolf, Miami, Ariz. Concentrating oxid ores of copper. No. 1,217,437; Feb. 27; v. 235; p. 1166.
Gail, George W., Jr., Baltimore, Md. Combination shelter outfit. No. 1,215,139; Feb. 6; v. 235; p. 228.
Gair, Blair W., Chicago, Ill. Door-controlling mechanism. No. 1,214,535; Feb. 6; v. 235; p. 19.
Gairing, Emil, Cleveland, Ohio. Boring-tool. No. 1,214,773; Feb. 6; v. 235; p. 101.
Gaisman, Henry J., assignor to Auto Strop Company, New York, N. Y. Shaving-brush. No. 1,216,433; Feb. 20; v. 235; p. 777.
Gallagher, Charles H. G., executor. (See Rites, Francis M.)
Gallagher, George S., and G. Schadee, New York, N. Y. Vehicle-wheel. No. 1,215,924; Feb. 13; v. 235; p. 543.
Gallagher, Richard D., Jr., New York, N. Y. Draft-rigging for railway-cars. No. 1,215,044; Feb. 13; v. 235; p. 444.
Gallagher, Walter J., Anderson township, Hamilton county, Ohio. Poultry-feeder. No. 1,217,438; Feb. 27; v. 235; p. 1167.
Gallaudet, Edson F., Norwich, Conn. Aeroplane. No. 1,214,536; Feb. 6; v. 235; p. 20.
Gallerani, Alexander, Brooklyn, N. Y. Macaroni-drying apparatus. No. 1,217,439; Feb. 27; v. 235; p. 1167.
Gallinant, Raphael C., Ridgefield Park, N. J. Safety appliance for railway-platforms. No. 1,216,560; Feb. 20; v. 235; p. 822.
Gamble, Charles B., and F. C. Shepard, Minneapolis, Minn. Headlight-dimmer. No. 1,214,909; Feb. 6; v. 235; p. 149.
Gamewell Fire Alarm Telegraph Company. (See Gaskill, Robert J., assignor.)

Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Metal-studded tire. No. 1,214,537; Feb. 6; v. 235; p. 20.

Gannon, John W., Broadway, Mangaweka, New Zealand. Golosh. No. 1,217,167; Feb. 27; v. 235; p. 1073.

Ganshorn, Charles S. (See Ganzhorn, Philip and C. S.)

Ganshorn, Philip, Chicago, and C. S. Ganzhorn, Glenellyn, Ill. Meat-chopper. No. 1,215,362; Feb. 13; v. 235; p. 340.

Garda, Enrico. (See Cantono, Eugenio, assignor.)

Gardella, Lawrence. (See Hill and Gardella.)

Gardner, Henry A., Washington, D. C. Pigment and preparing the same. No. 1,216,980; Feb. 20; v. 235; p. 964.

Gardner, Henry A., Washington, D. C. Pigment and preparing the same. No. 1,216,981; Feb. 20; v. 235; p. 964.

Garford Manufacturing Company, The. (See Manson, Ray H., assignor.)

Garman, Adrian S., Philadelphia, Pa. Window-screen. No. 1,216,794; Feb. 20; v. 235; p. 902.

Garner Regin Machinery Company. (See Stephens, Louis K., assignor.)

Garrett, Albert E., Yaverland, St. Albans, England. Producing white woolen goods. No. 1,217,744; Feb. 27; v. 235; p. 1274.

Garst, Stephen H., Moline, Ill. Manure-distributer. No. 1,215,794; Feb. 13; v. 235; p. 496.

Garten, Charles P., Ashland, Ky. Hinged bottom for dry measures. No. 1,217,588; Feb. 27; v. 235; p. 1222.

Garwood Company. (See Paull, Carl, assignor.)

Gas-Zünder Gesellschaft m. b. H. (See Kleinschmidt, Halpern, and Pospischil, assignors.)

Gaskill, Robert J., Fort Wayne, Ind., assignor to Gamewell Fire Alarm Telegraph Company, Newton Upper Falls, Mass. Non-interference successive signal-box. No. 1,215,515; Feb. 13; v. 235; p. 395.

Gatke, William, Portland, Oreg. Wood-pulp-forming machine. No. 1,215,516; Feb. 13; v. 235; p. 395.

Gause, Benjamin, Cincinnati, Ohio. Ventilating device. No. 1,216,795; Feb. 20; v. 235; p. 903.

Gause, Julius M., assignor to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Battery-cell. No. 1,214,669; Feb. 6; v. 235; p. 66.

Gauthier, Albert E., Bay City, Mich. Railway-signal. No. 1,216,982; Feb. 20; v. 235; p. 965.

Gavette, Ralph U., Grand Junction, Colo. Fruit-picker's sack. No. 1,216,561; Feb. 20; v. 235; p. 822.

Gaylord, Robert H., Pasadena, assignor to R. H. Gaylord Company, Los Angeles, Cal. Elevator-signal. No. 1,215,795; Feb. 13; v. 235; p. 496.

Gebauer, Charles L. (See Bates, Charles F. W., assignor.)

Geer, William C., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Pneumatic tire. No. 1,214,670; Feb. 6; v. 235; p. 67.

Geiger, Charles G., St. Joseph, Mo. Orthopedic and fracture extension device. No. 1,216,484; Feb. 20; v. 235; p. 778.

Geltz, William T., Cleveland, Ohio. Workman's time-recorder. No. 1,217,589; Feb. 27; v. 235; p. 1222.

General Bakelite Company. (See Baekeland, Leo H., assignor.)

General Electric Company. (See Alexanderson, Ernst F. W., assignor.)

General Electric Company. (See Brooks, Alfred A., assignor.)

General Electric Company. (See Coolidge, William D., assignor.)

General Electric Company. (See Edwards, Evan J., assignor.)

General Electric Company. (See Emmet, William L. R., assignor.)

General Electric Company. (See Fisher, Ernest F., assignor.)

General Electric Company. (See Forrest, Oscar E., assignor.)

General Electric Company. (See Fuller, Truman S., assignor.)

General Electric Company. (See Halvorson and Harraden, assignors.)

General Electric Company. (See Hendricks, Allan B., Jr., assignor.)

General Electric Company. (See Jackson, William P., assignor.)

General Electric Company. (See Kieser and Pagel, assignors.)

General Electric Company. (See Krämer, Bernhard, assignor.)

General Electric Company. (See Laycock, Harry A., assignor.)

General Electric Company. (See Lemp, Hermann, assignor.)

General Electric Company. (See Pauly, Karl A., assignor.)

General Electric Company. (See Riefstahl, Ludwig, assignor.)

General Electric Company. (See Samuelson, Frederick, assignor.)

General Electric Company. (See Standerwick, Reginald G., assignor.)

General Electric Company. (See Steinmetz, Charles P., assignor.)

General Electric Company. (See Story, William E., Jr., assignor.)

General Electric Company. (See Whitney, Francis M., assignor.)

General Electric Company. (See Winkler and Urtel, assignors.)

General Gas Appliance Company. (See Oelkers, Frederick C., assignor.)

General Railway Signal Company. (See Dodgson, Frank L., assignor.)

Geo. L. Paine Company. (See Chabot, Joseph, assignor.)

George, Edmund G., Springfield, assignor of one-half to L. H. Simpson, Glenarm, Ill. Bottle-holder. No. 1,217,087; Feb. 20; v. 235; p. 999.

George Mann and Company Limited. (See Evans, Arthur B., assignor.)

Geoghegan, Edward A., New York, N. Y., W. B. Mayo, Hamilton, Ohio, and C. S. Turner, Highland Park, Mich. Steam-superheater. No. 1,216,253; Feb. 13; v. 235; p. 661.

Gerber, Edward R. (See Morrissey, Arthur R., assignor.)

Gere, William B., assignor to Merrell-Soule Company, Syracuse, N. Y. Food product. No. 1,215,363; Feb. 13; v. 235; p. 341.

Gerngross, Otto, Grunewald, near Berlin, and H. Kast, Charlottenburg, Germany. Salts of acetylsalicylic acid and manufacture of same. No. 1,217,862; Feb. 27; v. 235; p. 1314.

Gershnoirtz, William, Boston, Mass. Corset. No. 1,216,796; Feb. 20; v. 235; p. 903.

Gerstenschlager, Fredrick W., Harbor Beach, Mich. Attachment for automobiles. No. 1,215,017; Feb. 6; v. 235; p. 190.

Gesellschaft fur Drahtlose Telegraphie m. b. H. (See Arco and Meissner, assignors.)

Gesellschaft Für Drahtlose Telegraphie m. b. H. (See Arco and Rendahl, assignors.)

Gewirtz, Jonas. (See Moskowitz, Rudolph, assignor.)

Gibbs, Henry, assignor to W. D. Allen Manufacturing Company, Chicago, Ill. Hose-nozzle. No. 1,215,796; Feb. 13; v. 235; p. 497.

Gibson, Willis E., Oakland, Cal. Copy-holder for type-writing machines. No. 1,217,112; Feb. 20; v. 235; p. 1009.

Gifford, Ruth C., North East, Md. Fruit-gatherer. No. 1,216,106; Feb. 13; v. 235; p. 609.

Gilbert, Jesse W., Delavan, Kans. Feeder for threshing-machines. No. 1,215,645; Feb. 13; v. 235; p. 445.

Gill, Lewis A., Jewett City, Conn. Fabric-printing machine. No. 1,214,538; Feb. 6; v. 235; p. 20.

Gillen, Frederick C., assignor to W. A. Krasselt, Milwaukee, Wis. Obtaining potash from potash-rocks. No. 1,215,517; Feb. 13; v. 235; p. 396.

Gillen, W. E., *et al.* (See Sartain, Louis M., assignor.)

Gillen, William H., Milwaukee, Wis. Decomposing feldspar and other potash-bearing silicious minerals. No. 1,215,518; Feb. 13; v. 235; p. 396.

Gillet, Walter J., Warsaw, Ill. Evaporator. No. 1,215,140; Feb. 6; v. 235; p. 229.

Gillies, John M., and A. Moynihan, Salem, N. Y. Traffic-indicator for automobiles. No. 1,216,435; Feb. 20; v. 235; p. 778.

Gillingham, George H., Kentville, Nova Scotia, Canada. Car-door. No. 1,216,436; Feb. 20; v. 235; p. 779.

Gilmer, George W., Jr., assignor to L. H. Gilmer Company, Philadelphia, Pa. Belt. No. 1,216,437; Feb. 20; v. 235; p. 779.

Gilmore, John F., New York, N. Y. Rewinding device for moving-picture machines. No. 1,215,364; Feb. 13; v. 235; p. 341.

Gilson, Henry R., Baden, assignor to National Metal Molding Company, Pittsburgh, Pa. Cable-armor. No. 1,215,365; Feb. 13; v. 235; p. 341.

Gilson, Henry R., Baden, assignor to National Metal Molding Company, Pittsburgh, Pa. Armored-cable connector. No. 1,215,366; Feb. 13; v. 235; p. 341.

Gilson Manufacturing Company. (See Bolens, Harry W., assignor.)

Gindele, William J. (See Begemann, Heinrich, assignor.)

Ginn, Katrina V., Del Mar, Cal. Device for the care of infants. No. 1,216,438; Feb. 20; v. 235; p. 779.

Gisholt Machine Company. (See McCabe, Horace B., assignor.)

Glade, Arloa B. (See Hopkins, Harvey L., assignor.)

Glenham Embroidery Company. (See Herzog, Louis, assignor.)

Glenn, Thomas F., Ardmore, Pa., assignor to The S. S. White Dental Manufacturing Company. Artificial tooth. No. 1,216,107; Feb. 13; v. 235; p. 610.

Glenzer, John C., Highland Park, assignor to Detroit Reamer Salvage Company, Detroit, Mich. Regrinding reamers. No. 1,214,671; Feb. 6; v. 235; p. 67.

Glossbrenner, Alfred M., assignor to Levey Bros. & Company, Indianapolis, Ind. Savings-bank record. No. 1,216,562; Feb. 20; v. 235; p. 822.

Glover, Charles P., assignor of one-half to T. P. Ledbetter, Atlanta, Ga. Tobacco-user's appliance. No. 1,215,519; Feb. 13; v. 235; p. 396.

Goad, Edward E. (See Bolt and Goad.)

Gobiet, Jules, Valentigney, France. Motor-vehicle. No. 1,216,681; Feb. 20; v. 235; p. 862.

Goddard, Fred, Parma, Mo. Track for land-dredges. No. 1,216,108; Feb. 13; v. 235; p. 610.

Goddard, Joseph F., Holloway, London, England. Manufacture of cement. No. 1,214,910; Feb. 6; v. 235; p. 150.

Goddu, George, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for setting fasteners. No. 1,217,088; Feb. 20; v. 235; p. 999.

Goddu, George, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for inserting fasteners. No. 1,217,089; Feb. 20; v. 235; p. 1000.

Godenius, Andrew. (See Berglund, August, assignor.)

Goldberg, Julius, Chicago, Ill. Curtain-rod. No. 1,216,983; Feb. 20; v. 235; p. 965.

Goldberger, Victor, Cleveland, Ohio. Cigar-tip. No. 1,217,590; Feb. 27; v. 235; p. 1222.

Goldmerstein, Leon, New York, N. Y. Water-cooled brake for vehicles. No. 1,217,591; Feb. 27; v. 235; p. 1222.

Goldner, Herman, New York, N. Y. Knitting-machine. No. 1,216,682; Feb. 20; v. 235; p. 863.

Goldsborough, John B., Croton, N. Y. Horizontal sheeting. No. 1,216,225; Feb. 13; v. 235; p. 651.

Goldschmidt, Hans, and O. Weil, Essen-on-the-Ruhr, Germany, assignors to Goldschmidt Thermit Company, New York, N. Y. Improving the alloying qualities of manganese with brass and bronze. No. 1,214,539; Feb. 6; v. 235; p. 21.

Goldschmidt Thermit Company. (See Goldschmidt and Weil, assignors.)

Goldsmith, Stern & Co. (See Eisen, Jacob, assignor.)

Goldstein, Harry H., Hartford, Conn. Vending-machine. No. 1,217,592; Feb. 27; v. 235; p. 1223.

Goltra, Edward F., St. Louis, Mo. Treating iron ores. No. 1,216,109; Feb. 13; v. 235; p. 610.

Gooch, Bert, assignor of one-half to J. F. H. Dearborn, Johnston City, Ill. Door. No. 1,216,984; Feb. 20; v. 235; p. 965.

Goodman Manufacturing Company. (See Pratt, Charles A., assignor.)

Goodnow, William V., Washington, D. C. Car-door seal. No. 1,215,520; Feb. 13; v. 235; p. 396.

Goodridge, Gilbert W., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric-lamp socket. No. 1,215,141; Feb. 6; v. 235; p. 229.

Goodrow, Paul, Olympia, Wash. Securing device for milk-bottles. No. 1,216,110; Feb. 13; v. 235; p. 611.

Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,215,925; Feb. 13; v. 235; p. 544.

Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Automatic telephone system. No. 1,216,305; Feb. 20; v. 235; p. 731.

Goodrum, Charles L., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,217,168; Feb. 27; v. 235; p. 1073.

Goodson, Robert B., Lamar, S. C. Fertilizer-distributer. No. 1,217,863; Feb. 27; v. 235; p. 1314.

Gordon, John W., St. Catharines, Ontario, Canada. Toy gun. No. 1,215,926; Feb. 13; v. 235; p. 544.

Gordon, John W., St. Catharines, Ontario, Canada. Toy target. No. 1,215,927; Feb. 13; v. 235; p. 544.

Gorman, Daniel J. (See Wenyon, John T., assignor.)

Gorsuch, Luther J., East Pleasant Plains, Iowa. Switch mechanism for telephone systems. No. 1,216,111; Feb. 13; v. 235; p. 611.

Gosselin, Alphonse J. (See Ingle and Gosselin.)

Gotobed, Joseph W., and R. F. Forward, Villisca, Iowa. Door-operating mechanism. No. 1,216,439; Feb. 20; v. 235; p. 780.

Gottfried, Albert A., Detroit, Mich. Operating device for signals. No. 1,215,521; Feb. 13; v. 235; p. 397.

Gotthelf, August H. (See Baekeland and Gotthelf.)

Gove, Henry H., Biddeford, Me. Flushing device. No. 1,216,797; Feb. 20; v. 235; p. 903.

Government of the United States and the people of the United States. (See Prince, Robert E., assignor.)

Gowlland, Henry O., Montreal, Quebec, Canada, assignor to National Trust Company Limited, (in trust.) Lens-grinding machine. No. 1,217,090; Feb. 20; v. 235; p. 1000.

Gracey, La Fayette, Jonesboro, Ark. Surgical instrument. No. 1,217,745; Feb. 27; v. 235; p. 1274.

Graf, Emil, assignor, by mesne assignments, to J. Manoil, New York, N. Y. Safety spring-winding mechanism. No. 1,217,746; Feb. 27; v. 235; p. 1275.

Graft, John C., East Orange, N. J. Abrasive-coated material. No. 1,217,593; Feb. 27; v. 235; p. 1223.

Graham, Alford M. (See Schurman, Elias W., assignor.)

Graham, Archibald. (See Graham, John and A.)

Graham, Claud E. (See Hodge, Graham, and Woodard.)

Graham, John and A., Glasgow, Scotland. Fluid-pressure valve. No. 1,217,747; Feb. 27; v. 235; p. 1275.

Graham, Robert S., St. Joseph, Mo. Internal-combustion engine. No. 1,214,672; Feb. 6; v. 235; p. 67.

Graham, William B., Sapulpa, Okla. Appliance to be attached to automobiles. No. 1,217,594; Feb. 27; v. 235; p. 1223.

Grand Detour Plow Company. (See Caughey, Robert C., assignor.)

Grand Rapids Show Case Company. (See Anderson, Charles H., assignor.)

Granger, Joseph P. C., assignor of one-third to G. Schielke, Milwaukee, Wis. Film-winding device for cameras. No. 1,215,142; Feb. 6; v. 235; p. 229.

Grant, James E. (See Price and Grant.)

Grant, Taylor B., Brooklyn, N. Y., assignor to the City of New York. Aerial ladder for fire service. No. 1,214,774; Feb. 6; v. 235; p. 101.

Granz, Josef, Plauen, Germany. Elastic driving-belt. No. 1,214,911; Feb. 6; v. 235; p. 150.

Graubeding, Oskar, Dusseldorf, assignor to Rheinische Metallwaaren-und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Telescope-sight for airships and flying-machines. No. 1,217,169; Feb. 27; v. 235; p. 1074.

Graves, John, Milwaukee, Wis. Mixing-valve. No. 1,215,928; Feb. 13; v. 235; p. 545.

Gray, Gardner B., assignor, by mesne assignments, to Automatic Train Control & Signal Company, Pittsburgh, Pa. Electric switch. No. 1,217,440; Feb. 27; v. 235; p. 1168.

Gray, Earl C., St. Charles, Mo. Shock-absorber. No. 1,216,226; Feb. 13; v. 235; p. 652.

Gray, John J., Jr., Rockdale, Tenn. Producing ferrophosphorus from nelsonite. No. 1,216,306; Feb. 20; v. 235; p. 732.

Great Western Cutting and Welding Company. (See Stettner, Ludwig, assignor.)

Green, Douglas B., Anna, Ill., assignor of one-third to E. Sanders and one-third to L. Sanders, San Diego, Cal. Reducing-valve. No. 1,216,985; Feb. 20; v. 235; p. 966.

Green, Edwin N., Syracuse, N. Y. Electrotype-block-trimming machine. No. 1,217,297; Feb. 27; v. 235; p. 1116.

Green, Joseph B., Seattle, Wash., assignor to G. A. Henkel, Arlington, Oreg. Concentrator. No. 1,216,798; Feb. 20; v. 235; p. 904.

Green, Margaret E. (See Teves, Frederick W., assignor.)

Green, Roy E., Peacham, Vt. Index-card drawer for filing-cabinets. No. 1,215,646; Feb. 13; v. 235; p. 446.

Green, Roy E., Peacham, Vt. Range-finder for cameras. No. 1,215,647; Feb. 13; v. 235; p. 446.

Green, William M., New Haven, Wyo. Fore-wheel drive for motor-vehicles. No. 1,215,143; Feb. 6; v. 235; p. 230.

Greenawalt, William E., Denver, Colo. Electrolytic apparatus. No. 1,214,775; Feb. 6; v. 235; p. 101.

Greene, Christian A. E. A., London, England. Electrically-operated tabulating and like machine. No. 1,214,540; Feb. 6; v. 235; p. 21.

Greene, John S., assignor to Commercial Camera Company, Rochester, N. Y. Photographic developing apparatus. No. 1,216,440; Feb. 20; v. 235; p. 780.

Greenfield, Edwin J., Wichita, Kans. Implanting artificial denture-roots. No. 1,216,683; Feb. 20; v. 235; p. 863.

Greenfield, Edwin T., Kiamesha, N. Y. Metal-working. No. 1,217,748; Feb. 27; v. 235; p. 1275.

Greenfield, Edwin T., Kiamesha, N. Y. Stapling-machine. No. 1,217,749; Feb. 27; v. 235; p. 1276.

Greenfield, Edwin T., Kiamesha, N. Y. Rolling of flat strips. No. 1,217,750; Feb. 27; v. 235; p. 1277.

Greenfield, Roy C., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Feeder. No. 1,214,776; Feb. 6; v. 235; p. 102.

Greenleaf, Clayborne G., West Richfield, Ohio. Antiskid device for wheels. No. 1,214,777; Feb. 6; v. 235; p. 102.

Greenstreet, Milfred L., and G. C. Moulder, assignors of one-third to A. G. Hoppock, Lebanon, Mo. Permutation switch-lock. No. 1,217,751; Feb. 27; v. 235; p. 1277.

Gregg, Norris B., *et al.* (See Sabin, William W., assignor.)

Greimann, George H., Garner, Iowa. Excavator. No. 1,217,752; Feb. 27; v. 235; p. 1277.

Greiner, Emil C., Globe, Ariz. Oven. No. 1,215,144; Feb. 6; v. 235; p. 230.

Greven, Derk, Henning, Minn. Strainer for liquids. No. 1,216,112; Feb. 13; v. 235; p. 612.

Griffin, Henry W., New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,215,522; Feb. 13; v. 235; p. 397.

Griffith, Richard T., assignor to The Miller Rubber Company, Akron, Ohio. Tire-forming apparatus. No. 1,215,648; Feb. 13; v. 235; p. 446.

Grinden Art Metal Company. (See Parish, Harold F., assignor.)

Grip Nut Company. (See Sharp, William E., assignor.)

Groetzinger, Albert G., Pocatello, Idaho. Envelop. No. 1,216,113; Feb. 13; v. 235; p. 612.

Groshell, Oscar E., Salt Lake City, Utah. Auxiliary indicating device for cash-registers. No. 1,217,753; Feb. 27; v. 235; p. 1278.

Gross, Jacob, Brooklyn, N. Y. Making button-shoe uppers. No. 1,216,441; Feb. 20; v. 235; p. 781.

Grossman, Joseph, New York, N. Y. Combined salt and pepper shaker. No. 1,215,018; Feb. 6; v. 235; p. 190.

Grover, Albert D., New York, N. Y., assignor to Autosales Gum & Chocolate Company. Coin-testing attachment for coin-controlled mechanisms. No. 1,217,170; Feb. 27; v. 235; p. 1074.

Grover, Fred L. (See Jones and Grover.)

Grover, Fred L. (See Jones, Grover, and Silsbee.)

Grover, Fred L. (See Pennock, Jones, and Grover.)

Grube, George F., Evanston, Ill. Trunk. No. 1,217,298; Feb. 27; v. 235; p. 1117.

Grube, John H., Los Angeles, Cal. Inner tire. No. 1,217,754; Feb. 27; v. 235; p. 1278.

Gruber, Archibald B., San Bernardino, Cal. Latch. No. 1,215,649; Feb. 13; v. 235; p. 446.

Gruenewald, Eugene, Moline, Ill., assignor to Moline Automobile Co. Lubricator. No. 1,215,650; Feb. 13; v. 235; p. 447.
Gruenwald, Teodor, Prague, Austria-Hungary. Fluid-jet blower for the cleaning of the tubes of water-tube boilers. No. 1,217,755; Feb. 27; v. 235; p. 1279.
Grundy, John R., Philadelphia, Pa. Flexible coupling. No. 1,216,227; Feb. 13; v. 235; p. 652.
Grushus, Edwin A., Midas, Nev. Cinch-grip. No. 1,216,228; Feb. 13; v. 235; p. 652.
Gruss, Lucien R., assignor to Pneumatic Cushion Co., San Francisco, Cal. Air-spring. No. 1,216,254; Feb. 13; v. 235; p. 661.
Guetthoff, Felix, Three Rivers, Mich. Swimming device or life-preserver. No. 1,217,756; Feb. 27; v. 235; p. 1279.
Guhrauer, Ferdinand. (See Hay and Guhrauer.)
Guide Motor Lamp Manufacturing Company, The. (See Persons, William F., assignor.)
Guilford, Edwin W., Jr., Washington, D. C. Score-keeping apparatus. No. 1,214,541; Feb. 6; v. 235; p. 21.
Guillery, René, assignor to Societe Des Etablissements Malicet & Blin, Aubervilliers, France. Compensating device for vehicle suspension. No. 1,214,912; Feb. 6; v. 235; p. 150.
Guinzburg, Victor, assignor to I. B. Kleinert Rubber Company, New York, N. Y. Nursing-vest. No. 1,217,441; Feb. 27; v. 235; p. 1168.
Gulf Refining Company. (See Brooks and Humphrey, assignors.)
Gulf Refining Company. (See Hibbert, Essex, and Brooks, assignors.)
Gulf Renning Company. (See McAfee, Almer M., assignor.)
Gumber, Joseph and P., and J. Harder, East Moline, Ill. Rolling screen. No. 1,215,651; Feb. 13; v. 235; p. 447.
Gumber, Paul. (See Gumber and Harder.)
Gunn, John, Winnipeg, Manitoba, Canada. Grain-separator. No. 1,217,299; Feb. 27; v. 235; p. 1117.
Gunst, Lauritz A., Omar, W. Va. Strainer or separator. No. 1,215,267; Feb. 6; v. 235; p. 274.
Gunther, George, and W. P. Miller, Los Angeles, Cal., assignors to said George Gunther. Non-skid device for motor-vehicles. No. 1,217,442; Feb. 27; v. 235; p. 1168.
Gustafson, Carl J., assignor to Hendee Manufacturing Company, Springfield, Mass. Starting device for motor-cycles. No. 1,217,300; Feb. 27; v. 235; p. 1118.
Gustafson, Carl J., and R. W. Ellingham, assignors to Hendee Manufacturing Company, Springfield, Mass. Handle-bar clamp for motor-cycles. No. 1,215,145; Feb. 6; v. 235; p. 230.
Gutenkunst, William, Milwaukee, Wis. Litter-carrier. No. 1,215,523; Feb. 13; v. 235; p. 398.
Guth, George J., Denver Mills, Colo. Lid. No. 1,215,929; Feb. 13; v. 235; p. 545.
Guthrie, James, assignor to Briscoe Motor Co., Inc., Jackson, Mich. Transmission mechanism. No. 1,216,307; Feb. 20; v. 235; p. 732.
Gutteridge, Frank, Sarnia, Ontario, Canada. Multiple mold for tile-making machines. No. 1,215,797; Feb. 13; v. 235; p. 497.
H. Herrmann Furniture Company. (See Herrmann, Oscar, assignor.)
H. Mueller Mfg. Co. (See Cash, Arthur W., assignor.)
H. A. Framburg & Company. (See Framburg, Henry A., assignor.)
H. D. Smith & Company, The. (See Thomson, William S., assignor.)
H. H. Franklin Manufacturing Company. (See Brown, William H., assignor.)
H. L. F. Trebert Rotary Motor Co. (See Trebert, Henry L. F., assignor.)
Haakenson, Erik, Tacoma, Wash. Automobile-jack. No. 1,217,757; Feb. 27; v. 235; p. 1279.
Haapanen, Norman H., South Range, Mich. Stove-lid lifter. No. 1,217,758; Feb. 27; v. 235; p. 1279.
Habig, Edward H., Indianapolis, Ind. Trailer-camp. No. 1,216,986; Feb. 20; v. 235; p. 966.
Hachmann, Frederick, assignor of one-fourth to J. B. Hollis and one-fourth to F. C. Schoenthaler, St. Louis, Mo. Furniture-tip. No. 1,217,091; Feb. 20; v. 235; p. 1001.
Hadaway, John B., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Stitch-rubbing and channel-roughening machine. No. 1,217,595; Feb. 27; v. 235; p. 1224.
Hadert, Albert J., New Rochelle, N. Y. Wrapping-machine. No. 1,215,930; Feb. 13; v. 235; p. 546.
Hadley, Dana G., West Newbury, Mass. Invalid's chair. No. 1,216,987; Feb. 20; v. 235; p. 966.
Haen, William T., Mantador, N. D. Band-brake. No. 1,214,778; Feb. 6; v. 235; p. 103.
Haeseler, Charles H., Philadelphia, Pa. Rock-drill. No. 1,214,542; Feb. 6; v. 235; p. 21.
Haeseler, Charles H., Chicago, Ill. Two-stage throttle-valve for percussive tools. No. 1,215,146; Feb. 6; v. 235; p. 231.
Haft, Albert C., Jr., assignor of one-half to D. C. and M. W. Larcomb, Columbus, Ohio. Shirt. No. 1,215,931; Feb. 13; v. 235; p. 546.
Hage, Robert R., Great Falls, Mont. Gate-actuating mechanism. No. 1,214,913; Feb. 6; v. 235; p. 150.
Hagelloch, Georg, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Ammunition-wagon. No. 1,217,596; Feb. 27; v. 235; p. 1224.
Hager, George E., Brooklyn, N. Y. Non-refillable bottle. No. 1,215,798; Feb. 13; v. 235; p. 497.
Hagerty, Peter F. (See Munson and Hagerty.)
Hagey, Justus T., Hatfield, Pa. Artificial limb. No. 1,215,268; Feb. 6; v. 235; p. 274.
Haggin, Louis T., *et al.*, executors. (See Kendall, Edward D., assignor.)
Haggin, Margaret V., *et al.*, executors. (See Kendall, Edward D., assignor.)
Haines, Elizabeth, Johnstown, Pa. Attachment for ladies' purses. No. 1,217,171; Feb. 27; v. 235; p. 1074.
Halbleib, Edward A. (See Williams and Halbleib.)
Hale and Kilburn Company. (See Thompson, Clarence L., assignor.)
Hale, Edward T., San Diego, Cal. Baby-holding attachment for vehicles. No. 1,215,652; Feb. 13; v. 235; p. 448.
Hale, Stephen H., Kansas City, Mo. Gas mixer and burner. No. 1,215,653; Feb. 13; v. 235; p. 448.
Hales, Samuel W., Pittsburgh, Pa. Window-shade attachment. No. 1,217,443; Feb. 27; v. 235; p. 1169.
Haley, Bertha E., Wellston, Okla. Fruit-drier. No. 1,216,442; Feb. 20; v. 235; p. 781.
Hall, Alfred, Painesville, Ohio. Stamp-vending machine. No. 1,216,799; Feb. 20; v. 235; p. 904.
Hall, Benjamin K., Merrimac, Mass. Shock-absorber. No. 1,215,269; Feb. 6; v. 235; p. 274.
Hall, Bertie R., Outlook, Saskatchewan, Canada. Vacuum-cleaner. No. 1,216,229; Feb. 13; v. 235; p. 653.
Hall, Chester I., assignor to Chicago Electric Meter Company, Chicago, Ill. Maximum-demand recorder. No. 1,217,301; Feb. 27; v. 235; p. 1118.
Hall, Chester I., assignor to Chicago Electric Meter Company, Chicago, Ill. Electricity-measuring instrument and timing device therefor. No. 1,217,302; Feb. 27; v. 235; p. 1119.
Hall, Cyrus M., Houston, Tex. Container. No. 1,217,303; Feb. 27; v. 235; p. 1119.
Hall, Jay H., assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Electric switch. No. 1,214,779; Feb. 6; v. 235; p. 103.
Hall, John E. (See Cisco and Hall.)
Halldorson, Halldor K., Edinburg, N. D. Belt thrower and guide. No. 1,217,304; Feb. 27; v. 235; p. 1119.
Hallock, Richard A., Kansas City, Mo. Game-board. No. 1,215,799; Feb. 13; v. 235; p. 498.
Halpern, Adolf. (See Kleinschmidt, Halpern, and Pospischil.)
Halseth, Ed. (See Cavanaugh, Dennie, assignor.)
Halvorson, Cromwell A. B., Jr., Saugus, and W. L. Harraden, Lynn, Mass., assignors to General Electric Company. Arc-lamp. No. 1,215,147; Feb. 6; v. 235; p. 231.
Haman, Albert L. (See Hummel, Ernest A., assignor.)
Hamilton, Cameron G., assignor of one-half to C. K. Sturtevant, Seattle, Wash. Direction-indicator for vehicles. No. 1,217,759; Feb. 27; v. 235; p. 1279.
Hamilton, Wilbur F., *et al.* (See Eckenroth, Philip, assignor.)
Hamlett, James W., Port Lavaca, Tex. Wrench. No. 1,216,308; Feb. 20; v. 235; p. 733.
Hammond, Myron B., assignor to The Thomas P. Taylor Co., Bridgeport, Conn. Making hose-supporting garters. No. 1,214,543; Feb. 6; v. 235; p. 22.
Hammond, Robert O., assignor to Hammond Safety Auto Lock Co., Paterson, N. J. Combination electric lock-switch. No. 1,215,800; Feb. 13; v. 235; p. 498.
Hammond Safety Auto Lock Co. (See Hammond, Robert O., assignor.)
Hancock, John, Minneapolis, Minn. Oil-dispensing apparatus. No. 1,215,801; Feb. 13; v. 235; p. 498.
Hancock, William H., Excel, Ala. Resilient tire. No. 1,216,988; Feb. 20; v. 235; p. 967.
Hand, Frederick E., assignor to The Vulcan Plow Company, Evansville, Ind. Adjusting mechanism for plows. No. 1,217,864; Feb. 27; v. 235; p. 1314.
Handy Manufacturing Company. (See Harter, Marion H., assignor.)
Hanff, Edward A., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Safety device for elevators. No. 1,215,524; Feb. 13; v. 235; p. 398.
Hankovich, Ivan and W., East Chicago, Ind. Rail tie and fastener. No. 1,216,989; Feb. 20; v. 235; p. 967.
Hankovich, Ivan and W., East Chicago, Ind. Rail-joint. No. 1,216,990; Feb. 20; v. 235; p. 967.
Hankovich, Winko. (See Hankovich, Ivan and W.)
Hanley, Patrick F., New York, N. Y. Combined reversible collar and necktie. No. 1,216,563; Feb. 20; v. 235; p. 823.
Hann, William E., assignor to Pullman Couch Company, Chicago, Ill. Convertible furniture. No. 1,216,443; Feb. 20; v. 235; p. 781.
Hannold, Frank J., Syracuse, N. Y. Hall-rack. No. 1,216,444; Feb. 20; v. 235; p. 781.
Hans, Thomas, assignor to Mid-West Box Company, Anderson, Ind. Garment-protector. No. 1,216,684; Feb. 20; v. 235; p. 863.
Hansen, Augie L., Evanston, assignor to Justrite Manufacturing Company, Chicago, Ill. Tatting-shuttle. No. 1,215,525; Feb. 13; v. 235; p. 398.
Hansen, Gustav A., Christiania, Norway. Opener for hermetic cans or the like. No. 1,215,019; Feb. 6; v. 235; p. 190.
Hansen, Hans M., Quincy, assignor to L. De Rusha, Boston, Mass. Shoe. No. 1,215,020; Feb. 6; v. 235; p. 191.

Hansen, Julius, Coffeyville, Kans. Agitator for treating mineral oils. No. 1,215,526; Feb. 13; v. 235; p. 399.
Hanson, Bengt M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Yieldable gearing. No. 1,217,760; Feb. 27; v. 235; p. 1280.
Hanson, Oscar B., Hartford, S. D. Toe-calk. No. 1,215,367; Feb. 13; v. 235; p. 342.
Hanson, Oscar B., Hartford, S. D. Heel-calk. No. 1,215,368; Feb. 13; v. 235; p. 342.
Harbeckes, Henry, Portland, Oreg. Pipe-cutter. No. 1,217,305; Feb. 27; v. 235; p. 1119.
Harbison, Joseph C., assignor of one-sixth to W. E. Stinson and one-sixth to R. E. Stinson, Eldorado, Ill. Pump. No. 1,215,148; Feb. 6; v. 235; p. 232.
Harder, John. (See Gumber and Harder.)
Harding, Joseph W., Brooklyn, N. Y. Ventilating apparatus. No. 1,216,685; Feb. 20; v. 235; p. 863.
Harding, Wilbert H., Fort Wayne, Ind. Circular-saw machine. No. 1,215,527; Feb. 13; v. 235; p. 399.
Hardman, George H., Fall River, Mass. Railway-tie. No. 1,214,914; Feb. 6; v. 235; p. 151.
Hardman Peck & Co. (See Schwarz and Bjorklund, assignors.)
Hardy, Arthur, Winnipeg, Manitoba, Canada. Spool-winding device for cameras. No. 1,217,444; Feb. 27; v. 235; p. 1169.
Hargreaves, Luke. (See Hutchins, Hargreaves, and Dunningham.)
Harley-Davidson Motor Co., The. (See Harley, William S., assignor.)
Harley, William S., assignor to The Harley-Davidson Motor Co., Milwaukee, Wis. Shock-absorber. No. 1,216,686; Feb. 20; v. 235; p. 864.
Harlow, Louis, East Milton, assignor to Brown Daisy Products Company, Boston, Mass. Mop. No. 1,215,270; Feb. 6; v. 235; p. 275.
Harman, William H. (See Carver and Harman.)
Harmon, Henry M., Webster, Mass., and R. O. Libbey, Norwich, Conn. Picker-stick. No. 1,215,271; Feb. 6; v. 235; p. 275.
Harp, Charles A., Buffalo, Tex. Chicken-coop. No. 1,214,780; Feb. 6; v. 235; p. 103.
Harraden, Walter L. (See Halvorson and Harraden.)
Harrah, Hillis A., Pomona, Kans. Tractor. No. 1,214,673; Feb. 6; v. 235; p. 67.
Harralson, J. C., *et al.* (See Sabin, William W., assignor.)
Harrington, Arthur M., and R. F. Scott, assignors to Edwin Harrington, Son & Co., Inc., Philadelphia, Pa. Universal joint. No. 1,216,445; Feb. 20; v. 235; p. 782.
Harrington, Clinton O., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Electromagnetic apparatus. No. 1,216,446; Feb. 20; v. 235; p. 782.
Harrington, Walter K., Andover, N. J., assignor to The American Meter Company, New York, N. Y. Recording-calorimeter. No. 1,216,114; Feb. 13; v. 235; p. 612.
Harris, Alfred M., Detroit, Mich. Toy. No. 1,217,865; Feb. 27; v. 235; p. 1315.
Harris, Carl C., and J. A. Adell, assignors to Rivets Manufacturing Company, Orange, Mass. Hand-tool. No. 1,215,932; Feb. 13; v. 235; p. 547.
Harris, George C., Peabody, and W. F. Muff, Newton, Kans. Ballast-screening machine. No. 1,214,674; Feb. 6; v. 235; p. 68.
Harris, Henry A., Attoyac, Tex. Cultivator. No. 1,217,172; Feb. 27; v. 235; p. 1075.
Harris, John, Cleveland, Ohio, assignor to Carbo-Hydrogen Company of America, Pittsburgh, Pa. Cutting-torch. No. 1,217,119; Feb. 20; v. 235; p. 1012.
Harris, Leo W., Burke, Idaho. Garment-hanger. No. 1,216,447; Feb. 20; v. 235; p. 782.
Harrison, Charles, and K. Lamond, assignors to Vancouver Motor Supplies Limited, Vancouver, British Columbia, Canada. Pneumatic-tire-pressure gage. No. 1,214,781; Feb. 6; v. 235; p. 104.
Harrison, Clark W., Summit, N. J. Valve of internal-combustion engines. No. 1,214,544; Feb. 6; v. 235; p. 22.
Harrison, George L., East Cleveland, assignor to The Cleveland Metal Products Company, Cleveland, Ohio. Handle. No. 1,216,309; Feb. 20; v. 235; p. 733.
Harsh, Paul R., Toledo, Ohio. Signal apparatus for motor-vehicles. No. 1,215,272; Feb. 6; v. 235; p. 275.
Hart, Charles A., Findlay, Ohio. Folding umbrella. No. 1,215,369; Feb. 13; v. 235; p. 342.
Hart, Frederick A., Newark, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,215,806; Feb. 6; v. 235; p. 286.
Hart, Frederick A., Jersey City, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Type-writing machine. No. 1,215,370; Feb. 13; v. 235; p. 343.
Hart & Hegeman Manufacturing Company, The. (See Sachs, Joseph, assignor.)
Hart, Hubert C., Unionville, Conn. Lock-washer. No. 1,216,310; Feb. 20; v. 235; p. 733.
Hart, William H., Jr., Philadelphia, Pa. Mailing-envelop. No. 1,216,800; Feb. 20; v. 235; p. 904.
Harter, Jacob H. (See Broderick and Harter.)
Harter, Marion H., Canby, assignor to Handy Manufacturing Company, Minneapolis, Minn. Portable extension lamp-cord adjuster. No. 1,216,801; Feb. 20; v. 235; p. 905.
Hartford Lock Ring Company, The. (See Merritt and Sawyer, assignors.)
Hartman Electrical Manufacturing Company. (See Hartman, Frank O., assignor.)
Hartman, Frank O., assignor to The Hartman Electrical Manufacturing Company, Mansfield, Ohio. Rail-bond. No. 1,215,933; Feb. 13; v. 235; p. 547.
Hartman, Henry T., New York, N. Y. Dental brush. No. 1,216,311; Feb. 20; v. 235; p. 733.
Hartman, John, Bozeman, Mont. Roller-skate. No. 1,217,761; Feb. 27; v. 235; p. 1280.
Hartman, William T., *et al.* (See Ellenburg, Joe N., assignor.)
Harton, Mary J., executrix. (See Harton, Pembroke D.)
Harton, Pembroke D., deceased, Philadelphia, Pa.; M. J. Harton, executrix. Feeding device for cake-coating machines. No. 1,216,230; Feb. 13; v. 235; v. 653.
Hartridge, Clifford W. (See Vail, Robert W., assignor.)
Hartsough, D. Maurice, Minneapolis, Minn., assignor to Deere and Company, Moline, Ill. Gang-plow. No. 1,215,654; Feb. 13; v. 235; p. 448.
Hassam Paving Company. (See Hassam, Walter E., assignor.)
Hassam, Walter E., Worcester, Mass., assignor to Hassam Paving Company. Making roads, pavements, and the like. No. 1,215,273; Feb. 6; v. 235; p. 276.
Hastings, Ray C., Wichita, Kans. General-purpose farm-tractor. No. 1,214,545; Feb. 6; v. 235; p. 22.
Hatch, Frank M. (See Fitzgerald and Hatch, assignors.)
Hatch, Ralph S. (See Fitzgerald and Hatch.)
Hathaway, Edgar F. (See Field, Hathaway, and Lanning.)
Hauck, Arthur E., Brooklyn, N. Y. Kerosene-torch. No. 1,216,115; Feb. 13; v. 235; p. 612.
Hauck, Joseph H. (See Frye, Thomas E., assignor.)
Hausen, Charles J., New York, N. Y. Hose-supporter. No. 1,216,991; Feb. 20; v. 235; p. 968.
Haven, John N., Walla Walla, Wash. Soldering appliance. No. 1,215,802; Feb. 13; v. 235; p. 499.
Havens, Morton, Jr., and F. R. Meginniss, Albany, N. Y. Service-box and switch. No. 1,214,915; Feb. 6; v. 235; p. 151.
Haviland, Wilbur J., Marlboro, N. Y. Car-step. No. 1,214,782; Feb. 6; v. 235; p. 104.
Hawkins, George W. (See Hawkins, Zachariah, assignor.)
Hawkins, Ross, Chicago, Ill. Loose-leaf holder. No. 1,215,371; Feb. 13; v. 235; p. 343.
Hawkins, Wilford J., Montclair, N. J. Projectile-fuse. No. 1,216,802; Feb. 20; v. 235; p. 905.
Hawkins, Zachariah, assignor of one-half to G. W. Hawkins, Canton, Ohio. Nut-lock. No. 1,214,783; Feb. 6; v. 235; p. 104.
Hawks, Moses L., New York, N. Y. Combined tie-guard and collar-button. No. 1,217,173; Feb. 27; v. 235; p. 1075.
Hawley, Edgar R., Salt Lake City, Utah. Vacuum-operated liquid-fuel-feeding device. No. 1,216,992; Feb. 20; v. 235; p. 968.
Hawley, William D. (See Hitchcock and Hawley.)
Hawn, Andrew P., Goodland, assignor, by mesne assignments, to Advance-Rumely Company, Laporte, Ind. Tractor. No. 1,215,372; Feb. 13; v. 235; p. 343.
Hawthorne, Ellsworth A., Bridgeport, Conn. Lamp. No. 1,214,916; Feb. 6; v. 235; p. 152.
Hawthorne, Ellsworth A., Bridgeport, Conn. Door and glazing retainer. No. 1,215,274; Feb. 6; v. 235; p. 276.
Hawthorne, John A., Jr. (See Gagnon and Hawthorne.)
Hay, Marley F., and C. Ekama, The Hague, Netherlands. Apparatus for moving diving-rudders of submarines. No. 1,216,564; Feb. 20; v. 235; p. 823.
Hay, Marley F., and F. Guhrauer, The Hague, Netherlands. Silencer for combustion-engines of submarines. No. 1,216,565; Feb. 20; v. 235; p. 823.
Hayes, John, Amsterdam, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 1,216,687; Feb. 20; v. 235; p. 864.
Haynes, Charles R. (See Kinsley, Morron, and Haynes.)
Hays, Frank T. (See Rumsey, James W., assignor.)
Hayward, Harold A., New York, N. Y. Fluid-pressure governor. No. 1,216,116; Feb. 13; v. 235; p. 613.
Haywood, Claude F. (See Winfield and Haywood.)
Heath, Frederick, Tacoma, Wash. Hollow-wall construction. No. 1,215,149; Feb. 6; v. 235; p. 232.
Heath, Wilfrid P., St. Paul, Minn. Revolution-counter. No. 1,216,117; Feb. 13; v. 235; p. 613.
Heath, William E., Baltimore, Md. Sealing-closure for bottles, jars, and other receptacles. No. 1,214,675; Feb. 6; v. 235; p. 68.
Heatley, James. (See Pendlebury and Heatley.)
Hebbeler, George J., Cincinnati, Ohio. Vehicle. No. 1,215,528; Feb. 13; v. 235; p. 400.
Hechenbleikner, Ingenuin, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y. Electric-furnace-wall construction. No. 1,217,306; Feb. 27; v. 235; p. 1120.
Hecht, Josef, and C. Cizenfeld, Baltimore, Md.; said Cizenfeld assignor, by mesne assignments, to said Hecht. Fountain-brush. No. 1,217,597; Feb. 27; v. 235; p. 1224.
Heckman, Ora E., Akron, Ohio. Cross-wrapping machine. No. 1,215,934; Feb. 13; v. 235; p. 547.
Heckman, Ora E., Akron, Ohio. Trimming device for rubber-cloth and the like. No. 1,216,315; Feb. 20; v. 235; p. 735.
Heckman, T. A. (See Nicholson, Niels C., assignor.)
Hedley, Frank. (See Doyle and Hedley.)

Hedley, Frank, Yonkers, and J. S. Doyle, Mount Vernon, N. Y. Double-deck car. No. 1,217,174; Feb. 27; v. 235; p. 1075.
Heeley, Joseph, Wigan, England. Tire-inflating pump. No. 1,216,688; Feb. 20; v. 235; p. 865.
Hein, Fannie, New York, N. Y. Telephone attachment. No. 1,217,445; Feb. 27; v. 235; p. 1169.
Heine, Friedrich, White Plains, N. Y. Lawn-trimmer. No. 1,216,566; Feb. 20; v. 235; p. 824.
Heinen, Fred E., *et al.* (See Laurents, Louis V., assignor.)
Heinen, William C., *et al.* (See Laurents, Louis V., assignor.)
Heinze, William, Darby, Pa. Film-reeling device. No. 1,217,598; Feb. 27; v. 235; p. 1224.
Heise, Thomas K., Columbus, Ohio. Detachable-gauntlet glove. No. 1,217,307; Feb. 27; v. 235; p. 1120.
Heldrich, Andrew, Philadelphia, Pa., assignor to Multiplex Sales Register Company, Louisville, Ky. Autographic register. No. 1,216,812; Feb. 20; v. 235; p. 734.
Heller, Leo, Teplitz, Austria-Hungary. Electric heater. No. 1,216,813; Feb. 20; v. 235; p. 734.
Helm, Virgil L. (See Rosenfield, Helm, and Key.)
Helmer, Milton J., assignor of one-half to S. L. Stone, Chicago, Ill. Spring-support and shock-absorber for vehicle-bodies. No. 1,216,993; Feb. 20; v. 235; p. 969.
Hembrook, Herman J. (See Caley, Garfield H., assignor.)
Hendee Manufacturing Company. (See Gustafson, Carl J., assignor.)
Hendee Manufacturing Company. (See Gustafson and Ellingham, assignors.)
Henderson, Albert H., assignor to The Henderson Rubber Company, Baltimore, Md. Article of manufacture. No. 1,215,275; Feb. 6; v. 235; p. 276.
Henderson Rubber Company, The. (See Henderson, Albert H., assignor.)
Henderson, William C., Paso Robles, Cal. Starting device. No. 1,214,917; Feb. 6; v. 235; p. 152.
Hendricks, Allan B., Jr., Pittsfield, Mass., assignor to General Electric Company. Electrical testing apparatus. No. 1,215,150; Feb. 6; v. 235; p. 232.
Hendry, William, Tacoma, Wash. Shuttle-winder. No. 1,216,994; Feb. 20; v. 235; p. 969.
Henkel, G. A. (See Green, Joseph B., assignor.)
Henkle, Williard G., Garrison, Iowa. Gate-latch. No. 1,216,314; Feb. 20; v. 235; p. 734.
Hennig, Gustav K., assignor to Ludwig Hupfeld, A.-G., Böhlitz Ehrenberg, near Leipzig, Germany. Plural-note-sheet mechanism. No. 1,216,448; Feb. 20; v. 235; p. 782.
Henry, Edward B. (See Erickson and Henry.)
Henry, John W., Crawfordsville, Ind. Weather-strip. No. 1,215,021; Feb. 6; v. 235; p. 191.
Henry, William C. A., Columbus, Ohio. Stoker mechanism. No. 1,215,529; Feb. 13; v. 235; p. 400.
Hepner, Roy L. (See Santmyers and Hepner.)
Hercules Motor Patents. (See Buckingham and Johnson, assignors.)
Hering, George, Larchmont, N. Y. Ore-separator. No. 1,216,118; Feb. 13; v. 235; p. 614.
Herman, Reinhold, Pittsburgh, Pa. Fluid-charging valve. No. 1,215,151; Feb. 6; v. 235; p. 233.
Herr, Edward A., Philadelphia, Pa. Clothes-pressing apparatus. No. 1,215,655; Feb. 13; v. 235; p. 449.
Herr, Shirl, assignor to Crawfordsville Seed Company, Crawfordsville, Ind. Seed-cleaning machine. No. 1,216,803; Feb. 20; v. 235; p. 905.
Herrmann, George E., Morristown, and B. W. Tucker, South Orange, N. J.; said Tucker assignor to said Herrmann. Barrel. No. 1,216,804; Feb. 20; v. 235; p. 906.
Herrmann, George E., Morristown, and B. W. Tucker, South Orange, N. J. Barrel. No. 1,216,805; Feb. 20; v. 235; p. 906.
Herrmann, George E., Morristown, and B. W. Tucker, South Orange, N. J. Barrel. No. 1,216,806; Feb. 20; v. 235; p. 906.
Herrmann, George E., Morristown, and B. W. Tucker, South Orange, N. J. Barrel. No. 1,216,807; Feb. 20; v. 235; p. 907.
Herrmann, George E., Morristown, and B. W. Tucker, South Orange, N. J. Barrel. No. 1,216,808; Feb. 20; v. 235; p. 907.
Herrmann, Oscar, assignor to H. Herrmann Furniture Company, New York, N. Y. Combined lock and opener for extension-tables. No. 1,215,656; Feb. 13; v. 235; p. 449.
Herschell-Spillman Company. (See Cramer, George H., assignor.)
Hershey, Harry E. (See Yanochowski and Hershey.)
Herzmark, Nicolas, Paris, France. Apparatus for starting explosion-engines. No. 1,217,762; Feb. 27; v. 235; p. 1281.
Herzog, John, Saginaw, Mich. Cabinet. No. 1,214,676; Feb. 6; v. 235; p. 69.
Herzog, John, Saginaw, Mich. Cabinet. No. 1,214,677; Feb. 6; v. 235; p. 69.
Herzog, Louis, Beacon, N. Y., assignor to Glenham Embroidery Company. Jacquard. No. 1,214,918; Feb. 6; v. 235; p. 153.
Hess-Bright Manufacturing Company, The. (See Bright, Fred E., assignor.)
Hess, Edward B., Brooklyn, assignor to Royal Typewriter Company, New York, N. Y. Line-gage for typewriting machines. No. 1,216,567; Feb. 20; v. 235; p. 824.
Hess, Otto G., Los Angeles, Cal. Artificial tooth. No. 1,217,866; Feb. 27; v. 235; p. 1315.
Hewett, Robert J., Westfield, N. J. Signaling system. No. 1,216,231; Feb. 13; v. 235; p. 654.
Hewson, E., *et al.* (See Sartain, Louis M., assignor.)
Hey, John G., assignor to Cincinnati Pulley Machinery Company, Cincinnati, Ohio. Feed mechanism for drilling-machines. No. 1,216,689; Feb. 20; v. 235; p. 865.
Heylman, Edward M., assignor to Oliver Chilled Plow Works, South Bend, Ind. Cultivator. No. 1,216,568; Feb. 20; v. 235; p. 825.
Hi-Po Waterproof Battery Corporation. (See Smith, John, assignor.)
Hiatt, Homer C., Bliss, Okla. Engine-intake heater. No. 1,214,784; Feb. 6; v. 235; p. 105.
Hibbert, Harold, H. Essex, and B. T. Brooks, assignors to Gulf Refining Company, Pittsburgh, Pa. Manufacture of fusel-oil or similar products from petroleum. No. 1,214,919; Feb. 6; v. 235; p. 153.
Hiatt, Homer C., Bliss, Okla. Engine-intake heater. No. 1,215,935; Feb. 13; v. 235; p. 548.
Hicks, George C., Chicago, Ill. Paint composition. No. 1,215,022; Feb. 6; v. 235; p. 191.
Hicks, Rufus L., Columbia, Mo. Playing-cards. No. 1,215,657; Feb. 13; v. 235; p. 449.
Hide Leather & Belting Company. (See Bell, Harry A., assignor.)
Hiemenz, Wilhelm, and L. Taub, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Substituted barbituric acids. No. 1,217,446; Feb. 27; v. 235; p. 1170.
Hiemenz, Wilhelm, and L. Taub, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Substituted barbituric acids. No. 1,217,447; Feb. 27; v. 235; p. 1170.
Higgins, George H., assignor to Cortland Carriage Goods Co., Cortland, N. Y. One-man top. No. 1,217,120; Feb. 20; v. 235; p. 1012.
Highhouse, Lewis A., Honesdale, Pa. Wire-stretcher. No. 1,216,809; Feb. 20; v. 235; p. 907.
Hightower, Charles G., Eureka, Cal. Repair patch or plug for metallic structures. No. 1,215,530; Feb. 13; v. 235; p. 401.
Hildebrand, David F., and J. E. Johnson, Zillah, Wash. Loading and dumping mechanism for scrapers. No. 1,216,569; Feb. 20; v. 235; p. 825.
Hill, Edward W., assignor to A. B. Dick Company, Chicago, Ill. Device for preparing stencil-sheets. No. 1,214,785; Feb. 6; v. 235; p. 105.
Hill, Frederick W., Boston, Mass. Roller-skate. No. 1,216,690; Feb. 20; v. 235; p. 865.
Hill, George S., Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J. Buttonhole-sewing machine. No. 1,216,316; Feb. 20; v. 235; p. 735.
Hill, Harriet, New York, N. Y. Paper-receptacle. No. 1,217,599; Feb. 27; v. 235; p. 1225.
Hill, Harry M., St. Louis, Mo., assignor to Educational Motion Picture Machine & Film Co. Intermittent worm-gearing. No. 1,214,786; Feb. 6; v. 235; p. 105.
Hill, John F., Griffin, Ga. Rail-joint and chair therefor. No. 1,215,373; Feb. 13; v. 235; p. 344.
Hill, William, San Francisco, and L. Gardella, Oroville, Cal. Dispensing apparatus. No. 1,215,531; Feb. 13; v. 235; p. 401.
Hilley, Albert O., Waco, Tex. Burglar-alarm. No. 1,217,175; Feb. 27; v. 235; p. 1075.
Hilliard, William M., Haverhill, Mass. Talking-machine attachment. No. 1,216,691; Feb. 20; v. 235; p. 866.
Hills, Sidney C., assignor to The Turner and Seymour Manufacturing Co., Torrington, Conn. Curtain-rod. No. 1,214,673; Feb. 6; v. 235; p. 69.
Hindmarsh, Percy J., Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Anchor for fence-posts. No. 1,214,679; Feb. 6; v. 235; p. 69.
Hinz, Adolf, assignor to Pokorny & Wittekind Maschinenbau-Aktiengesellschaft, Frankfort-on-the-Main, Germany. Rotary compressor and operating it. No. 1,216,119; Feb. 13; v. 235; p. 614.
Hirrich, Richard K., New York, N. Y. Drain-pipe cleaner. No. 1,217,763; Feb. 27; v. 235; p. 1281.
Hirsh, Allan M., Montclair, and T. L. McLenon, East Orange; said McLenon assignor of one-half of the whole right to Lock Joint Pipe Company, Ampere, N. J. Joint for concrete pipes. No. 1,216,317; Feb. 20; v. 235; p. 735.
Hitchcock, Andrew J., Nashville, Tenn. Non-refillable and self-closing bottle. No. 1,215,023; Feb. 6; v. 235; p. 191.
Hitchcock, William F., Rochester, and W. D. Hawley, Syracuse, N. Y. Time-recorder. No. 1,215,532; Feb. 13; v. 235; p. 401.
Hochriem, Gustav F. and L. E., Chicago, Ill. Motor-drill. No. 1,214,680; Feb. 6; v. 235; p. 70.
Hochriem, Ludwig E. (See Hochriem, Gustav F. and L. E.)
Hodall, Emerich, San Diego, Cal. Fruit-picker. No. 1,217,867; Feb. 27; v. 235; p. 1315.
Hodge, Albert P., assignor to Wm. L. Gilbert Clock Company, Winsted, Conn. Winding-stop. No. 1,217,176; Feb. 27; v. 235; p. 1076.
Hodge, Charlie R., C. E. Graham, and R. C. Woodard, Taft, Tenn. Planter. No. 1,216,449; Feb. 20; v. 235; p. 783.

Hodges, Jesse G., Osceola, Mo. Cultivator. No. 1,216,810; Feb. 20; v. 235; p. 907.
Hodges, Ludia H., Silverton, Tex. Tire-tool. No. 1,216,995; Feb. 20; v. 235; p. 970.
Hoe, Robert, Battle Creek, Mich., assignor to R. Hoe and Co., New York, N. Y. Inking mechanism. No. 1,214,787; Feb. 6; v. 235; p. 105.
Hoffa, William, Crawfordsville, Ind. Automatic water-supplying apparatus. No. 1,215,152; Feb. 6; v. 235; p. 233.
Hoffmeyer, Richard J., Lowell, Ariz. Automatic drawer-cover. No. 1,215,276; Feb. 6; v. 235; p. 277.
Hofheimer, Maurice, Baltimore, Md., assignor, by mesne assignments, to Autosales Gum and Chocolate Company, New York, N. Y. Coin-operated vending-machine. No. 1,215,659; Feb. 13; v. 235; p. 450.
Hofstad, Nels, Chicago, Ill. Pressure-responsive device for thermostats. No. 1,215,803; Feb. 13; v. 235; p. 499.
Hofstrand, Henry P. (See Anderson and Hofstrand.)
Hogan, George L., *et al.* (See Leary, James I., assignor.)
Hogg, William T., assignor of one-fourth to H. R. Fitzgerald and one-fourth to G. W. Robertson, Danville, Va. Automatic damper-regulator. No. 1,216,996; Feb. 20; v. 235; p. 970.
Hogsett, Samuel R., Huntersville, W. Va. Vehicle-tongue support. No. 1,217,764; Feb. 27; v. 235; p. 1281.
Hohberger, John T., Chicago, Ill. Automatic cream-machine. No. 1,215,024; Feb. 6; v. 235; p. 192.
Höhn, Karl, Zurich, Switzerland. Electromagnetic time-retarding relay. No. 1,216,570; Feb. 20; v. 235; p. 825.
Hoke, Harry A., Altoona, Pa. Railway-vehicle coupling. No. 1,216,692; Feb. 20; v. 235; p. 866.
Holcom, Jarret C., Sulphur Springs, Tex. Bellows for pneumatic leaf-turners. No. 1,216,693; Feb. 20; v. 235; p. 866.
Holcomb, James I., Indianapolis, Ind. Feeding device. No. 1,216,120; Feb. 13; v. 235; p. 614.
Holden, Arthur P., and P. Morgan, Toronto, Ontario, Canada. Thread-milling machine. No. 1,215,804; Feb. 13; v. 235; p. 499.
Holecek, Jerry J., New York, N. Y. Necktie-stretcher. No. 1,215,277; Feb. 6; v. 235; p. 277.
Holek, John, and W. Kucserik, Milwaukee, Wis. Fishing-signal. No. 1,217,308; Feb. 27; v. 235; p. 1120.
Holland, Newman H., assignor to New Jersey Patent Company, West Orange, N. J. Electric switch. No. 1,214,920; Feb. 6; v. 235; p. 154.
Hollis, James B., *et al.* (See Hachmann, Frederick, assignor.)
Holmes, Major E., Lakewood, assignor to National Carbon Company, Cleveland, Ohio. Electric battery. No. 1,216,450; Feb. 20; v. 235; p. 783.
Holmes, Major E., Lakewood, assignor to National Carbon Company, Cleveland, Ohio. Battery-depolarizer. No. 1,216,451; Feb. 20; v. 235; p. 783.
Holmgren, Per F., Brooklyn, N. Y. Bearing. No. 1,215,374; Feb. 13; v. 235; p. 344.
Holt, Frank A., Rochdale, and G. Kershaw, Whitworth, England. Winding-machine. No. 1,215,025; Feb. 6; v. 235; p. 192.
Holtzclaw, Ambros W. (See Holtzclaw, John S. and A. W.)
Holtzclaw, John S. and A. W., Stanford, Ky. Hempbrake. No. 1,215,936; Feb. 13; v. 235; p. 548.
Holzem, Joseph P. and V. J., Elk River, Minn. Storm-window. No. 1,216,121; Feb. 13; v. 235; p. 615.
Holzem, Vincent J. (See Holzem, Joseph P. and V. J.)
Homyer, Nicholas R., Jr., Granite City, Ill. Ticket-holder. No. 1,217,177; Feb. 27; v. 235; p. 1076.
Hons, James M., and E. W. Aplin, assignors to G. A. Rees, Chicago, Ill. Oil-indicator. No. 1,214,788; Feb. 6; v. 235; p. 106.
Hood, George M., Steele, Ala. Wrench-support. No. 1,217,600; Feb. 27; v. 235; p. 1225.
Hook, John H. (See Bruederly, Joseph F., assignor.)
Hooper, William B., Winifred, Kans. Hay-loader. No. 1,215,375; Feb. 13; v. 235; p. 345.
Hooser, John W., Dallas, Tex. Carbureting system for internal-combustion engines. No. 1,217,448; Feb. 27; v. 235; p. 1170.
Hopes, Charles W., Glens Falls, N. Y. Heater. No. 1,216,122; Feb. 13; v. 235; p. 615.
Hopkins, George W., assignor to The Acetylene Stove Manufacturing Company, Cleveland, Ohio. Burner. No. 1,215,153; Feb. 6; v. 235; p. 233.
Hopkins, Harvey L., assignor to J. H. McElroy, Chicago, Ill. Pitman-joint for mowing-machines. No. 1,215,805; Feb. 13; v. 235; p. 500.
Hopkins, Harvey L., assignor of one-half to A. B. Glade, Chicago, Ill. Mowing-machine. No. 1,217,449; Feb. 27; v. 235; p. 1171.
Hopkins, Harvey L., assignor, by mesne assignments, to L. A. Stillman, Chicago, Ill. Pneumatic massage apparatus. No. 1,217,886; Feb. 27; v. 235; p. 1322.
Hopkins, Richard M., New York, N. Y., assignor to American District Telegraph Company, Jersey City, N. J. Signaling system. No. 1,215,658; Feb. 13; v. 235; p. 450.
Hopkins, Robert, and A. G. Weidensee, Sheffield, Ala. Card-display device. No. 1,214,732; Feb. 6; v. 235; p. 88.
Hopp, Emil G., Seattle, Wash. Mail-sorting, postmarking, and stamp-canceling device. No. 1,217,092; Feb. 20; v. 235; p. 1001.
Hoppes, John J., assignor to The Hoppes Manufacturing Company, Springfield, Ohio. Device for measuring the flow of liquids. No. 1,215,533; Feb. 13; v. 235; p. 402.
Hoppes Manufacturing Company, The. (See Hoppes, John J., assignor.)
Hoppock, Alfred G. (See Greenstreet and Moulder, assignors.)
Horak, Frank, Kulm, N. D. Draft attachment. No. 1,217,178; Feb. 27; v. 235; p. 1077.
Hord, Carey W. (See Daniel and Hord.)
Horsley, Joseph B., Cincinnati, Ohio. Coffee-pot. No. 1,217,179; Feb. 27; v. 235; p. 1077.
Horvitz, David, Detroit, Mich. Game apparatus. No. 1,215,154; Feb. 6; v. 235; p. 234.
Hosch, Walter E., St. Louis, Mo. Combined yard-stick and computing device. No. 1,214,789; Feb. 6; v. 235; p. 106.
Hosford, Charles M., Brooklyn, N. Y. Automobile-signal. No. 1,215,155; Feb. 6; v. 235; p. 234.
Hotaling, George P., executor. (See Knierlem, Edward A.)
Hough, Thomas C., Minneapolis, Minn. Automobile-heater. No. 1,214,921; Feb. 6; v. 235; p. 154.
Hough, William B., Chicago, Ill., assignor, by mesne assignments, to Patented Devices Company, Portland, Me. Conbination tie and gage member for reinforced-concrete floor construction. No. 1,214,790; Feb. 6; v. 235; p. 106.
Housholder, William C., Youngwood, Pa. Temperature regulating and indicating device. No. 1,217,601; Feb. 27; v. 235; p. 1225.
Hoven, Carl J., New York, N. Y. Skate. No. 1,217,450; Feb. 27; v. 235; p. 1171.
Howard, Frank L., Fuqua, Tex. Gate-latch. No. 1,215,376; Feb. 13; v. 235; p. 345.
Howard, William S., Belleville, assignor, by mesne assignments, to R. M. Everett, Bloomfield, N. J. Internal-combustion engine. No. 1,214,922; Feb. 6; v. 235; p. 154.
Howe, Fred C., New Haven, Conn. Swinging toy. No. 1,217,309; Feb. 27; v. 235; p. 1120.
Howe, George E., Salt Lake City, Utah. Weeding-machine. No. 1,216,123; Feb. 13; v. 235; p. 616.
Howe, Nicholas F., Round Mountain, Nev. Vehicle-spring. No. 1,215,156; Feb. 6; v. 235; p. 234.
Howell, Albert S., assignor to Bell & Howell Company, Chicago, Ill. Film-magazine for cinematograph or motion-picture cameras. No. 1,215,534; Feb. 13; v. 235; p. 402.
Howlett, James M., Denver, Colo. Automatic bottle-stopper. No. 1,217,093; Feb. 20; v. 235; p. 1001.
Hoxie, William D., Brooklyn, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J. Water-tube boiler. No. 1,215,806; Feb. 13; v. 235; p. 500.
Hoyt, Avery E., Chicago, Ill. Gas-engine. No. 1,215,535; Feb. 13; v. 235; p. 402.
Hoyt, Francis R., assignor to The Simms Magneto Company, East Orange, N. J. Self-contained high-tension battery ignition-unit system. No. 1,216,124; Feb. 13; v. 235; p. 617.
Hoyt, Francis R., assignor to The Simms Magneto Compayn, East Orange, N. J. Self-contained high-tension battery ignition unit. No. 1,216,125; Feb. 13; v. 235; p. 617.
Hoyt, John S. (See Doremus, Charles A., assignor.)
Hudowicz, Paul, New York, N. Y. Separable fastener. No. 1,216,571; Feb. 20; v. 235; p. 826.
Huebner-Bleistein Patents Company. (See Huebner, William C., assignor.)
Huebner, William C., assignor to Huebner-Bleistein Patents Company, Buffalo, N. Y. Photographic-printing apparatus. No. 1,216,318; Feb. 20; v. 235; p. 736.
Huebsch, Marcus M., Chicago, Ill. Door-controlling and signaling system. No. 1,217,180; Feb. 27; v. 235; p. 1077.
Huenefeld Company, The. (See Huenefeld, Walter E., assignor.)
Huenefeld, Walter E., assignor to The Huenefeld Company, Cincinnati, Ohio. Oil-stove. No. 1,217,451; Feb. 27; v. 235; p. 1172.
Huff, Edward S., Detroit, Mich., assignor to The Simms Magneto Company, East Orange, N. J. Electric switch. No. 1,215,807; Feb. 13; v. 235; p. 501.
Hughes, Arthur J. (See Creagh-Osborne and Hughes.)
Hughes, Joseph. (See Brand, Morrie, assignor.)
Hughes, Owen R., Bangor, Pa. Ladder-raiser. No. 1,217,868; Feb. 27; v. 235; p. 1315.
Hughes, Robert B., assignor of one-half to F. Monner, Portland, Oreg. Awning-support. No. 1,217,765; Feb. 27; v. 235; p. 1281.
Hughes, R. M. (See Ainsworth, Arthur B., assignor.)
Huling, Harry R., Schuylkill Haven, Pa. Reel for electric conductors. No. 1,216,319; Feb. 20; v. 235; p. 736.
Hull, Will B., Buffalo, N. Y. Garbage-receptacle. No. 1,215,026; Feb. 6; v. 235; p. 192.
Hulse, Shirley C., Bedford, Pa. Hydraulic-pressure grouting-machine. No. 1,217,766; Feb. 27; v. 235; p. 1282.
Hult, Carl A. and O. W., Stockholm, Sweden. Motor-driven cream-separator. No. 1,216,572; Feb. 20; v. 235; p. 826.
Hult, Oscar W. (See Hult, Carl A. and O. W.)

Hummel, Ernest A., assignor to A. L. Haman, St. Paul, Minn. Electric self-winding clock. No. 1,217,310; Feb. 27; v. 235; p. 1121.

Humphrey Gas Pump Company. (See Humphrey, Herbert A., assignor.)

Humphrey, Herbert A., London, England, assignor to Humphrey Gas Pump Company. Raising or forcing liquid. No. 1,214,791; Feb. 6; v. 235; p. 107.

Humphrey, Herbert A., London, England, assignor to Humphrey Gas Pump Company. Apparatus for raising or forcing liquid. No. 1,214,792; Feb. 6; v. 235; p. 107.

Humphrey, Irwin. (See Brooks and Humphrey.)

Hunkle, Frederick P., McKeesport, Pa. Railway-tie and fastener. No. 1,217,767; Feb. 27; v. 235; p. 1282.

Hunter, John E. (See Brunner, Matthew J., assignor.)

Hunter, Martha L., and A. B. Church, San Francisco, Cal. Annotator for commercial phonographs. No. 1,216,232; Feb. 13; v. 235; p. 654.

Huntington, Robert, South Medford, Mass. Compass. No. 1,215,808; Feb. 13; v. 235; p. 501.

Huntington, Victor C. (See Ramsey, Huntington, and Hyatt.)

Huot, Joseph G., Montreal, Quebec, Canada. Casement-window adjuster. No. 1,216,320; Feb. 20; v. 235; p. 736.

Hupfeld A.-G., Ludwig. (See Hennig, Gustav K., assignor.)

Hurst, John A., New Philadelphia, Ohio. Collapsible egg-case. No. 1,215,278; Feb. 6; v. 235; p. 277.

Hurt, Joel J., South Omaha, Nebr. Automatic fly-chaser and door-closer. No. 1,217,311; Feb. 27; v. 235; p. 1121.

Hurxthal, Frederick K., assignor to Emerson-Brantingham Company, Rockford, Ill. Grain-distributer. No. 1,215,809; Feb. 13; v. 235; p. 501.

Hurxthal, Frederick K., assignor to Emerson-Brantingham Company, Rockford, Ill. Alining bearing for gearing. No. 1,215,810; Feb. 13; v. 235; p. 502.

Hurxthal, Frederick K., assignor to Emerson-Brantingham Company, Rockford, Ill. Bearing for grain-drills and the like. No. 1,215,811; Feb. 13; v. 235; p. 502.

Husk, Dayton E., Easton, Pa., and T. C. Cooper, Newark, N. J. Railway-gate operator. No. 1,215,157; Feb. 6; v. 235; p. 235.

Huston, Roy L., assignor of one-half to C. T. Clark, Carterville, Mo. Car-fender. No. 1,216,997; Feb. 20; v. 235; p. 970.

Hutchins, Thomas W. S., L. Hargreaves, and A. C. Dunningham, Middlewich, England. Production of sodium bisulfite. No. 1,216,452; Feb. 20; v. 235; p. 783.

Hutchinson, Joseph, New York, N. Y. Mechanical restaurant-service. No. 1,215,536; Feb. 13; v. 235; p. 403.

Hyatt, Charles M. (See Ramsey, Huntington, and Hyatt.)

Hyatt, James D., Wadesboro, N. C. Bridge construction. No. 1,215,537; Feb. 13; v. 235; p. 403.

Hyers, Samuel A. (See Jenkins and Hyers.)

I. B. Kleinert Rubber Company. (See Guinzburg, Victor, assignor.)

Iconochrome Company of America. (See John, Robert, assignor.)

Ideal Wheel Company, The. (See Strietelmeier, John E., assignor.)

Idle, Walter W., Urbana, Ohio. Wire-stretcher. No. 1,216,233; Feb. 13; v. 235; p. 654.

Ihne, Walter W., Chicago, Ill. Eraser for fountain-pen caps. No. 1,215,538; Feb. 13; v. 235; p. 403.

Ihrke, Walter F., Rockford, Ill. Sieve. No. 1,216,453; Feb. 20; v. 235; p. 784.

Illian, Jacob J., Milwaukee, Wis. Bottle-capper. No. 1,215,812; Feb. 13; v. 235; p. 503.

Illingworth, James F., Ithaca, N. Y. Filling compound for tree-cavities. No. 1,217,181; Feb. 27; v. 235; p. 1077.

Improved Sanitary Fixture Company. (See Barker, George H., assignor.)

Inami, William O., Los Angeles, Cal. Adjustable rack. No. 1,216,321; Feb. 20; v. 235; p. 737.

Indestructible Paint Company, The. (See Terrisse, Henri, assignor.)

Indiana Air Pump Company. (See Pruitt, Oran M., assignor.)

Industrial Controller Company. (See Van Valkenburg, Herman L., assignor.)

Ingersoll-Rand Company. (See Banner, Otto, assignor.)

Ingersoll-Rand Company. (See Wilhelm, Russell H., assignor.)

Ingle, Arthur H., and A. J. Gosselin, Rochester, assignors, by mesne assignments, to Ingle Corporation, Monroe county, N. Y. Gear-tooth-rounding machine. No. 1,216,454; Feb. 20; v. 235; p. 784.

Ingle Corporation. (See Ingle and Gosselin, assignors.)

Ingles, Edward I., Indianapolis, Ind. Liquid-heating attachment for furnaces. No. 1,216,811; Feb. 20; v. 235; p. 906.

Ingram, William C., Grand Rapids, Mich. Street-flushing machine. No. 1,216,455; Feb. 20; v. 235; p. 784.

International Harvester Company of New Jersey. (See Anderson, Emil F., assignor.)

International Harvester Company of New Jersey. (See Merwin, George M., assignor.)

International Harvester Company of New Jersey. (See Raney, Clemma R., assignor.)

International Harvester Company of New Jersey. (See Raney and Livesay, assignors.)

International Harvester Company of New Jersey. (See Rice, George L., assignor.)

International Harvester Company of New Jersey. (See Ryther, Frank A., assignor.)

International Harvester Company of New Jersey. (See Sharp, Charles S., assignor.)

International Harvester Corporation. (See Burgess, Edward W., assignor.)

International Harvester Corporation. (See Sperry, Leonard B., assignor.)

Ireland, Ward S., Owensboro, Ky. Shorthand-machine. No. 1,216,998; Feb. 20; v. 235; p. 970.

Iriarte, Fernando. (See Borrás and Iriarte.)

Irvine, Richard S., San Francisco, Cal. Combination piano and organ player mechanism. No. 1,215,813; Feb. 13; v. 235; p. 503.

Isaacs, Joseph A., Westfield, N. J. Glove-form. No. 1,215,158; Feb. 6; v. 235; p. 235.

Isaacson, John E., Kimball, Minn. Trap. No. 1,215,279; Feb. 6; v. 235; p. 278.

Isaacson, Morris, Brooklyn, N. Y. Die and press for attaching wood heels. No. 1,216,999; Feb. 20; v. 235; p. 971.

Ischer, Fritz, assignor to Schroeder Brothers Manufacturing Company, Torrington, Conn. Antislipping device. No. 1,215,539; Feb. 13; v. 235; p. 404.

Isserson, Abraham S., New York, N. Y. Stationary electric-iron heater. No. 1,217,000; Feb. 20; v. 235; p. 971.

Iwersen, Gustav J. T., Point Roberts, Wash. Multiple-horse holder and releaser. No. 1,217,182; Feb. 27; v. 235; p. 1078.

J. C. Deagan Musical Bells. (See Little, Frederick B., assignor.)

J. E. Mergott Company, The. (See Fuller, Franz A., assignor.)

J. F. Sturdy's Sons Co. (See Eklund, Alexander, assignor.)

J. I. Case Threshing Machine Company. (See Davies, David P., assignor.)

J. I. Case Threshing Machine Company. (See Stuckel, Frank C., assignor.)

Jackline, Morley P., Atchison, Kans. Vehicle lifting-jack. No. 1,217,001; Feb. 20; v. 235; p. 972.

Jackson, Albert C., Dayton, Ohio, assignor to L. R. Lenich, Union City, Ind. Flush-valve for water-closets. No. 1,217,183; Feb. 27; v. 235; p. 1078.

Jackson, Clarence S., Brooklyn, assignor to Bayer-Stroud Corporation, New York, N. Y. Window-display. No. 1,214,546; Feb. 6; v. 235; p. 22.

Jackson, Joseph H., Birmingham, Ala. Rotary steam-engine. No. 1,217,768; Feb. 27; v. 235; p. 1282.

Jackson, Ray P., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Lightning-arrester. No. 1,215,540; Feb. 13; v. 235; p. 404.

Jackson, Ray P., Edgewood, Pa., assignor to Westinghouse Electric and Manufacturing Company. Lightning-arrester. No. 1,217,452; Feb. 27; v. 235; p. 1172.

Jackson, Ray P., Edgewood, Pa., assignor to Westinghouse Electric and Manufacturing Company. Static protective device. No. 1,217,453; Feb. 27; v. 235; p. 1172.

Jackson, William P., Oakland, Cal., assignor to General Electric Company. Motor-control system. No. 1,216,126; Feb. 13; v. 235; p. 618.

Jacobs, George, Roswell, N. Mex., assignor to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,214,681; Feb. 6; v. 235; p. 70.

Jacobs, Hannah and H., Brooklyn, N. Y. Hair drying and straightening comb. No. 1,217,454; Feb. 27; v. 235; p. 1173.

Jacobs, Harry. (See Jacobs, Hannah and H.)

Jacobs, Henry W., Topeka, Kans. Removable fire-box. No. 1,216,127; Feb. 13; v. 235; p. 618.

Jacobs, Learcus H., Bunn, Ark. Fish-hook. No. 1,217,769; Feb. 27; v. 235; p. 1283.

Jacobucci, Raphael, Fall River, Mass. Can-opener. No. 1,214,682; Feb. 6; v. 235; p. 71.

Jacquart, Bernard, South River, N. J. Manufacturing enameled bricks. No. 1,214,793; Feb. 6; v. 235; p. 108.

Jacquemin, Henri. (See Leduc and Jacquemin.)

Jacques, Lester E., McCook, Nebr. Horse-detacher. No. 1,215,541; Feb. 13; v. 235; p. 404.

Jaeger, Henry A. (See Bailey, Joseph, assignor.)

Jaegge, Otto, Glendale, assignor to Peerless Silk Mills Inc., New York, N. Y. Binding for shoe-tops. No. 1,217,002; Feb. 20; v. 235; p. 972.

Jagerspacher, Carl. (See Wuth, Mayer, Jagerspacher, and Anderwert.)

Jagerspacher, Carl, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Metal compounds of othooxyazo dyestuffs and making same. No. 1,216,813; Feb. 20; v. 235; p. 908.

Jagerspacher, Carl, and B. Wuth, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Copper compounds of orthooxyazo dyestuffs and making same. No. 1,216,812; Feb. 20; v. 235; p. 908.

James, Bertie R., assignor of one-fourth to W. C. Daniel, one-fourth to G. F. Watson, Carter, and one-fourth to C. F. Cornels, Sayre, Okla. Fuel-vaporizer for internal-combustion engines. No. 1,215,027; Feb. 6; v. 235; p. 193.

James Ferry & Sons. (See Ferry, John M., assignor.)

James H. Matthews & Company. (See Escher and Nagy, assignors.)

James, Merrill L., San Francisco, Cal. Indicator. No. 1,216,456; Feb. 20; v. 235; p. 785.

James, Perry C., Sciota, assignor to G. C. Bayne, Bushnell, Ill. Hinge. No. 1,216,573; Feb. 20; v. 235; p. 827.

James, Perry C., Sciota, assignor to G. G. Bayne, Bushnell, Ill. Hog-door and gate. No. 1,217,770; Feb. 27; v. 235; p. 1283.

Jandron, Wilfred J., St. Paul, Minn. Soda-straw holder. No. 1,215,937; Feb. 13; v. 235; p. 548.

Janesville Machine Company, The. (See Krotz, Alvaro S., assignor.)

Janisch, John L., Chicago, Ill. Concrete-form. No. 1,217,003; Feb. 20; v. 235; p. 972.

Jarvis, Herbert C., Renton, assignor to Seattle Car & Foundry Co., Seattle, Wash. Logging-car and bunk. No. 1,215,159; Feb. 6; v. 235; p. 235.

Jay, James W., Philadelphia, Pa. Weedless fish-hook. No. 1,215,938; Feb. 13; v. 235; p. 549.

Jeavons, William R., and A. R. Whittaker, Cleveland, Ohio. Oil-stove. No. 1,214,547; Feb. 6; v. 235; p. 23.

Jefferson Glass Company. (See Rankin, Carl, assignor.)

Jeffrey Manufacturing Company, The. (See Coseo, Frederick C., assignor.)

Jeffrey Manufacturing Company, The. (See Kittle, Gilbert R., assignor.)

Jeffrey Manufacturing Company, The. (See Liggett, William K., assignor.)

Jeffrey Manufacturing Company, The. (See Norris, George B., assignor.)

Jeffrey Manufacturing Company, The. (See Wescott, Otis B., assignor.)

Jelalian, Martin, Cranston, R. I. Swimming device. No. 1,216,457; Feb. 20; v. 235; p. 785.

Jenkins, Charles F., Washington, D. C. Gravity-railway device. No. 1,216,694; Feb. 20; v. 235; p. 867.

Jenkins, Ed M., Italy, Tex. Sanitary telephone-mouthpiece. No. 1,215,377; Feb. 13; v. 235; p. 345.

Jenkins, Elmer H., Cambridge, Ohio. Shade and curtain bracket. No. 1,216,128; Feb. 13; v. 235; p. 619.

Jenkins, George H., Oak Park, Ill. Bookbinding appliance. No. 1,215,160; Feb. 6; v. 235; p. 236.

Jenkins, George H., Oak Park, and S. A. Hyers, Chicago, Ill. Binder. No. 1,215,161; Feb. 6; v. 235; p. 236.

Jenkins, Howard O., Los Angeles, Cal. Guide-card. No. 1,215,542; Feb. 13; v. 235; p. 405.

Jenkins, Thomas B., Sumter, S. C. Adjustable hanger for springs. No. 1,216,458; Feb. 20; v. 235; p. 786.

Jenning, Gustav A., East St. Louis, Ill. Leveling instrument. No. 1,216,129; Feb. 13; v. 235; p. 619.

Jensen, Roscoe, Sprague, Wash. Radiator foot-rest. No. 1,215,280; Feb. 6; v. 235; p. 278.

Jermin and Stevens. (See Stevens, Levi, assignor.)

Jern, Emil A., Gävle, Sweden. Support for the motor on motor-driven vehicles or the like. No. 1,217,602; Feb. 27; v. 235; p. 1226.

Jester, Marvin H., Denver, Colo. Plaster-board-supporting metal clip. No. 1,217,603; Feb. 27; v. 235; p. 1226.

Jochum, Alvis, assignor of one-half to F. West, Crab Orchard, Ill. Cattle-guard. No. 1,216,814; Feb. 20; v. 235; p. 908.

Johansson, Carl E., Eskilstuna, Sweden. Accurate measuring-gage. No. 1,217,312; Feb. 27; v. 235; p. 1121.

Johansson, Carl E., Eskilstuna, Sweden. Gage for measuring holes. No. 1,217,313; Feb. 27; v. 235; p. 1122.

John Thomson Press Company. (See Thomson, John, assignor.)

John, Robert, New York, N. Y. Taking moving pictures. No. 1,216,695; Feb. 20; v. 235; p. 867.

John, Robert, New York, N. Y., assignor, by mesne assignments, to Iconochrome Company of America, Inc. Photographic lighting. No. 1,216,696; Feb. 20; v. 235; p. 867.

Johnson, Abraham S., and W. N. Waide, Trent, Wash. Train-order holder. No. 1,215,939; Feb. 13; v. 235; p. 549.

Johnson, Adam D., Garrett, Pa. Saw-clamp. No. 1,217,004; Feb. 20; v. 235; p. 972.

Johnson, Agnar, Rockford, Ill. Splitting-machine. No. 1,214,683; Feb. 6; v. 235; p. 71.

Johnson, Albert E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for preparing insoles for reinforcing. No. 1,216,130; Feb. 13; v. 235; p. 619.

Johnson, Albert E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Insole-fitting machine. No. 1,217,455; Feb. 27; v. 235; p. 1173.

Johnson, Albert E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Forming-in machine. No. 1,217,456; Feb. 27; v. 235; p. 1173.

Johnson, Andrew E., and G. E. Franzen, Des Moines, Iowa. Adjustable shade-holder. No. 1,214,548; Feb. 6; v. 235; p. 23.

Johnson, Arthur A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,215,307; Feb. 6; v. 235; p. 287.

Johnson, Billie, Temple, Tex. Cotton-picker. No. 1,215,660; Feb. 13; v. 235; p. 451.

Johnson, Charles E., Muskegon, assignor to The Piston Ring Company, Muskegon Heights, Mich. Manufacturing piston-rings. No. 1,214,549; Feb. 6; v. 235; p. 23.

Johnson, Christian. (See Draper and Johnson.)

Johnson, Eldredge R., Merion, and J. C. English, Philadelphia, Pa., assignors to Victor Talking Machine Company. Talking-machine. No. 1,217,869; Feb. 27; v. 235; p. 1316.

Johnson, Emil, assignor of one-half to J. D. McCarthy, Chicago, Ill. Photographic-printing frame. No. 1,217,005; Feb. 20; v. 235; p. 973.

Johnson, Frank N., Holly Grove, Ark. Telemeter. No. 1,215,162; Feb. 6; v. 235; p. 236.

Johnson, Frederick I., Warren, R. I. Terminal for electric conduits. No. 1,217,604; Feb. 27; v. 235; p. 1226.

Johnson, Harold S. (See Buckingham and Johnson.)

Johnson, John E. (See Hildebrand and Johnson.)

Johnson, John E., assignor to Crescent Tool Company, Jamestown, N. Y. Combination-tool. No. 1,216,308; Feb. 6; v. 235; p. 287.

Johnson, John S. (See Ashelman and Johnson.)

Johnson, Joseph E., Jr., New York, N. Y. Composition of cast-iron. No. 1,217,184; Feb. 27; v. 235; p. 1078.

Johnson, Joseph E., Jr., New York, N. Y. Furnace construction. No. 1,217,185; Feb. 27; v. 235; p. 1078.

Johnson, Lewis H., Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,215,378; Feb. 13; v. 235; p. 346.

Johnson, Mary, New York, N. Y. Hand-protector. No. 1,215,163; Feb. 6; v. 235; p. 237.

Johnson, Robert R., Atlanta, Ga. Ash-sifter. No. 1,217,314; Feb. 27; v. 235; p. 1122.

Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Combined box-magazine and finger-guard for bolt-action firearms. No. 1,214,923; Feb. 6; v. 235; p. 155.

Johnston, Greenhow, Richmond, Va. Collapsible pontoon. No. 1,215,164; Feb. 6; v. 235; p. 237.

Johnston, Walter R., and J. A. Schlotterbeck, Hillsdale, N. J. Meat-grinding attachment. No. 1,217,006; Feb. 20; v. 235; p. 973.

Johnston, William A., assignor of one-half to W. Queenan, Aurora, Ill. Pipe-coupling. No. 1,216,459; Feb. 20; v. 235; p. 786.

Jones, Alfred M., Des Moines, Iowa, assignor to H. R. Jones, Columbus, Ohio. Surgical appliance. No. 1,215,028; Feb. 6; v. 235; p. 193.

Jones, Benjamin, and P. J. Rees, Gwann-Cae-Gurwen, Wales. Means for preventing the raising of dust by motor-vehicles. No. 1,216,131; Feb. 13; v. 235; p. 620.

Jones, Edward E., Berkeley, Cal. Fender. No. 1,217,605; Feb. 27; v. 235; p. 1227.

Jones, Harry B., Clay City, Ind. Tire-pump. No. 1,217,771; Feb. 27; v. 235; p. 1283.

Jones, Hobert R. (See Jones, Alfred M., assignor.)

Jones, John D., Walla Walla, Wash. Threshing-cylinder. No. 1,215,940; Feb. 13; v. 235; p. 550.

Jones, Joseph S., New York, N. Y. Electric switch. No. 1,217,114; Feb. 20; v. 235; p. 1010.

Jones, Llewellyn J., and G. R. Monro, Toledo, Ohio. Shutter means for lamps. No. 1,215,029; Feb. 6; v. 235; p. 193.

Jones, Louis Co. (See Pennock, Jones, and Grover.)

Jones, Louis C., and F. L. Grover, Syracuse, assignors to The Solvay Process Company, Solvay, N. Y. Recovering constituents of value from alkaline deposits. No. 1,215,543; Feb. 13; v. 235; p. 405.

Jones, Louis C., and F. L. Grover, Syracuse, assignors to The Solvay Process Company, Solvay, N. Y. Recovering potassium chlorid from alkaline deposits. No. 1,215,544; Feb. 13; v. 235; p. 406.

Jones, Louis C., and F. L. Grover, Syracuse, assignors to The Solvay Process Company, Solvay, N. Y. Recovering borax from alkaline deposits. No. 1,215,545; Feb. 13; v. 235; p. 406.

Jones, Louis C., F. L. Grover, and J. L. Silsbee, Syracuse, assignors to The Solvay Process Company, Solvay, N. Y. Recovering potassum and magnesium chlorids from natural deposits. No. 1,215,546; Feb. 13; v. 235; p. 406.

Jones, Marcellus W., Carthage, Mo. Safety-hook. No. 1,215,281; Feb. 6; v. 235; p. 278.

Jones, Martin A., McGregor, Tex. Cotton-chopper. No. 1,214,684; Feb. 6; v. 235; p. 71.

Jones, Nestor L. (See Wilson and Jones.)

Jordan, Christopher C., *et al.* (See Jordan, George A., assignor.)

Jordan Demountable Rim Company. (See Jordan, Rurie W., assignor.)

Jordan, George A., assignor of one-third to W. H. Jordan and one-third to C. C. Jordan, Brooklyn, N. Y. Hoist. No. 1,217,457; Feb. 27; v. 235; p. 1174.

Jordan, Joseph C., Granton, Wis. Stock-watering apparatus. No. 1,215,030; Feb. 6; v. 235; p. 194.

Jordan, Rurie W., Holderness, N. H., assignor to Jordan Demountable Rim Company, Boston, Mass. Wheel-rim. No. 1,217,458; Feb. 27; v. 235; p. 1174.

Jordan, William H., *et al.* (See Jordan, George A., assignor.)

Jorgensen, Lars R., South Berkeley, Cal. Dam construction. No. 1,216,234; Feb. 13; v. 235; p. 655.

Jory, George W., Marysville, Cal. Caterpillar-tread for vehicles. No. 1,217,007; Feb. 20; v. 235; p. 974.

Joseph, Simon, assignor to Brown Brothers Limited, London, England. Casing for vehicle-springs. No. 1,215,379; Feb. 13; v. 235; p. 346.

Joyce, James J., Annapolis, Md. Device for the recovery of torpedoes. No. 1,216,132; Feb. 13; v. 235; p. 620.

Judd Laundry Machine Company. (See Pletsch, Henry, assignor.)

Judd, Wallace S. (See Avery and Judd.)

Juengling, Herman, Detroit, Mich. Valley-tile. No. 1,217,459; Feb. 27; v. 235; p. 1174.
Juengst, Charles A., Croton Falls, N. Y., assignor, by mesne assignments, to American Assembling Machine Company. Conveyer. No. 1,215,547; Feb. 13; v. 235; p. 407.
Jurgens, Emil G. (See Brenne, Jurgens, and Dudley.)
Juslin, Emil, assignor of one-third to E. Carlson, Philadelphia, Pa. Stopping apparatus for railways. No. 1,215,380; Feb. 13; v. 235; p. 347.
Justrite Manufacturing Company. (See Hansen, Augie L., assignor.)
Jutila, Artturi, Duluth, Minn. Resilient wheel. No. 1,217,190; Feb. 27; v. 235; p. 1081.
Kade, Charles F., assignor to C. F. Kade, Jr., Plymouth, Wis. Folding table. No. 1,217,772; Feb. 27; v. 235; p. 1284.
Kahle, John W. (See Cartmell, Robert J., assignor.)
Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Switch for automatic telephone systems. No. 1,215,814; Feb. 13; v. 235; p. 503.
Kales, William R., Detroit, Mich. Wrist-watch bracelet. No. 1,216,322; Feb. 20; v. 235; p. 737.
Kalusowski, Henry E. (See Bailey and Kalusowski.)
Kamlanczyn, Wasyl, Duquesne, and I. Wasylow, Wendel, Pa. Lock. No. 1,216,697; Feb. 20; v. 235; p. 868.
Kaminski, Paul, Spandau, and O. Schneider, Schöneberg, near Berlin, assignors to Siemens & Halske, A. G., Berlin, Germany. Electric signaling system. No. 1,215,815; Feb. 13; v. 235; p. 504.
Kammerer, Gustav, Vienna, Austria-Hungary. Apparatus for determining points in space by means of perspective views. No. 1,216,132; Feb. 13; v. 235; p. 621.
Kammers, Adam, Roxboro, Wash. Force-feed for harvester-headers. No. 1,217,008; Feb. 20; v. 235; p. 974.
Kane, Herbert W., New Orleans, La. Concrete-drill holder. No. 1,217,606; Feb. 27; v. 235; p. 1227.
Kane, William, Philadelphia, Pa. Boiler or heater. No. 1,215,031; Feb. 6; v. 235; p. 194.
Kardos, Michael, Charlottenburg, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Green vat dyes and making them. No. 1,216,134; Feb. 13; v. 235; p. 621.
Karl, Joseph M., Roslyn Heights, assignor to Roslyn Specialty Company, Inc., Roslyn, N. Y. Hinge. No. 1,217,607; Feb. 27; v. 235; p. 1227.
Karle, John D., Roselle Park, N. J. Bottle-stopper. No. 1,214,550; Feb. 6; v. 235; p. 24.
Karolie, John, Flint, Mich. Butter pressing and molding machine. No. 1,217,460; Feb. 27; v. 235; p. 1175.
Karpouich, John, Boston, Mass. Machine for bending rods. No. 1,214,551; Feb. 6; v. 235; p. 24.
Karr, John R., Tracy, Cal. Automatic flue-cleaner. No. 1,215,165; Feb. 6; v. 235; p. 238.
Karrer, Paul, Frankfort-on-the-Main, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Complex arseno compounds and making same. No. 1,214,924; Feb. 6; v. 235; p. 155.
Kast, Hermann. (See Gerngross and Kast.)
Kausch, Louis W., North Milwaukee, Wis. Sleigh-runner attachment for wheeled vehicles. No. 1,214,685; Feb. 6; v. 235; p. 72.
Kavanagh, George L., Montreal, Quebec, Canada. Tire removing and applying device. No. 1,217,009; Feb. 20; v. 235; p. 974.
Kayetan, John, New York, N. Y., and H. Evenson, Wheat Ridge, Colo., assignors to Kayetan-Rues Company, Inc. Razor-honing machine. No. 1,217,608; Feb. 27; v. 235; p. 1228.
Kayetan-Rues Company. (See Kayetan and Evenson, assignors.)
Keeler Automatic Headgate Company. (See Keeler, Karl F., assignor.)
Keeler, Karl F., assignor to Keeler Automatic Headgate Company, Provo, Utah. Automatic head-gate. No. 1,216,608; Feb. 20; v. 235; p. 868.
Keim, Melville I., Chicago, Ill. Tobacco-box. No. 1,216,135; Feb. 13; v. 235; p. 621.
Keiner, Henry A., New York, N. Y. Sheet-metal container. No. 1,214,925; Feb. 6; v. 235; p. 155.
Keiper, Frank, *et al.* (See Marquis, Alexander G., assignor.)
Keiper, Henry B., assignor to Champion Blower & Forge Company, Lancaster, Pa. Audible speed-indicator. No. 1,217,773; Feb. 27; v. 235; p. 1284.
Keith, Alexander E. (See Blessing, John G., assignor.)
Keith, Alexander E., assignor, by mesne assignments, to Automatic Electric Company, Chicago, Ill. Supervisory system. No. 1,214,686; Feb. 6; v. 235; p. 72.
Keith, Alexander E., Hinsdale, Ill., assignor, by mesne assignments, to Automatic Electric Company. Telephone-subscriber's calling mechanism. No. 1,216,323; Feb. 20; v. 235; p. 737.
Keith, Alexander E., assignor, by mesne assignments, to Automatic Electric Company, Chicago, Ill. Telephone-exchange system. No. 1,217,121; Feb. 20; v. 235; p. 1013.
Keller-Dorian, Albert, Lyon, France. Film for photographic projections in colors. No. 1,214,552; Feb. 6; v. 235; p. 24.
Keller, Joseph M., Jr., Cleveland, Ohio. Timing mechanism and apparatus involving the same. No. 1,215,166; Feb. 6; v. 235; p. 238.
Kelley, William V. D. (See Raleigh and Kelley.)
Kellogg Switchboard and Supply Company. (See Kaisling, William, assignor.)
Kellogg Switchboard and Supply Company. (See Winston, Charles S., assignor.)
Kelly, John A., Philadelphia, Pa. Presser-foot for shoe-sewing machines. No. 1,216,324; Feb. 20; v. 235; p. 738.
Kelly, John A., Braintree, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Making shoes. (Reissue.) No. 14,261; Feb. 20; v. 235; p. 1017.
Kelly, Martin J., New Britain, Conn. Water-closet device. No. 1,215,816; Feb. 13; v. 235; p. 504.
Kelly-Springfield Tire Company. (See Mallaby, George F., assignor.)
Kelly, William, assignor of forty-nine one-hundredths to C. M. Warner, Memphis, Tenn. Drain for water systems. No. 1,216,815; Feb. 20; v. 235; p. 908.
Kelso, Ralph S. (See Moffatt and Kelso.)
Kemmerich, William E., New York, N. Y. Automobile-tire. No. 1,217,461; Feb. 27; v. 235; p. 1175.
Kemp, Albert H., Pasadena, Cal. Pod-opener. No. 1,215,167; Feb. 6; v. 235; p. 238.
Kemp, William, Altoona, Pa. Drifting-valve for explosion-engines. No. 1,215,381; Feb. 13; v. 235; p. 347.
Kempel, Arthur B., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Making mottled rubber flooring. No. 1,215,382; Feb. 13; v. 235; p. 348.
Kendall, Burton W., assignor to Western Electric Company, Incorporated. New York, N. Y. Transmission-circuit. No. 1,216,136; Feb. 13; v. 235; p. 621.
Kendall, Edward D., Elizabeth, assignor of one-half to L. T. Haggin, Closter, N. J., and M. V. Haggin and A. McCulloh, New York, N. Y., and H. E. Moller, Montclair, N. J., executors. Sulfonating coal-tar dyes. No. 1,217,462; Feb. 27; v. 235; p. 1175.
Kendig, Julian H., Pittsburgh, Pa. Insulator. No. 1,217,315; Feb. 27; v. 235; p. 1122.
Kennedy, Edward, New York, N. Y. Testing device for water systems. No. 1,216,699; Feb. 20; v. 235; p. 868.
Kennedy, Edward F., Ansonia, Conn. Stop mechanism. No. 1,217,774; Feb. 27; v. 235; p. 1284.
Kennedy, Frank B., assignor to The Recording Register & Fare Box Company, New Haven, Conn. Fare-box. No. 1,217,186; Feb. 27; v. 235; p. 1079.
Kennedy, Lewis T., Hannibal, Mo. Steering-gear attachment. No. 1,215,168; Feb. 6; v. 235; p. 239.
Kennedy, William B., Warm River, Idaho. Detachable handle for cooking utensils. No. 1,217,010; Feb. 20; v. 235; p. 975.
Kennelly, Joseph T. (See Anderson and Kennelly.)
Kenney, Myron E., Sauk, Wash. Saw-filing machine. No. 1,216,137; Feb. 13; v. 235; p. 622.
Kenyon, Bertram C., assignor of one-half to Dodge Manufacturing Company, Mishawaka, Ind. Two-cycle internal-combustion engine. No. 1,215,383; Feb. 13; v. 235; p. 348.
Keppel, Jesse E., St. Louis, Mo., assignor to Vulcan Valve Company. Valve. No. 1,214,553; Feb. 6; v. 235; p. 25.
Kerr, Daniel E., Portland, Me. Curtain-shade and roller connector. No. 1,215,032; Feb. 6; v. 235; p. 194.
Kershaw, Grindrod. (See Holt and Kershaw.)
Kessler, Charles H., Harrisonville, Mo. Corn-planter. No. 1,217,011; Feb. 20; v. 235; p. 975.
Ketcher, Frederick J. (See Snyder, Erle B., assignor.)
Key, Emmett. (See Rosenfield, Helm, and Key.)
Key, Texal A. (See Miller and Key.)
Keyes Fibre Company. (See Chaplin, Merle P., assignor.)
Kieckhefer Box Company. (See Simpson, Frost V., assignor.)
Kiefer, Karl, Cincinnati, Ohio. Filling apparatus. No. 1,216,574; Feb. 20; v. 235; p. 827.
Kiehl, Hugo, Chicago, Ill. Electric incandescent lamp. No. 1,217,775; Feb. 27; v. 235; p. 1285.
Kies, Eugene, Chicago, Ill. Lock. No. 1,217,012; Feb. 20; v. 235; p. 975.
Kieser, Walter, and G. Pagel, Charlottenburg, Germany, assignors to General Electric Company. Pump. No. 1,215,282; Feb. 6; v. 235; p. 278.
Kilbourn Manufacturing Corporation. (See Smith, William E., assignor.)
Kilgore, Frederick O., Somerville, assignor to Spray Primer Company, Boston, Mass. Priming apparatus. No. 1,216,460; Feb. 20; v. 235; p. 786.
Kilkenny, Thomas R., North Providence, assignor to H. N. Pervear Co., Providence, R. I. Clasp. No. 1,214,794; Feb. 6; v. 235; p. 108.
Kilkenny, William F., assignor to Strathmore Company, Providence, R. I. Tea-ball tree. No. 1,216,700; Feb. 20; v. 235; p. 869.
Kilker, John E. (See Dake and Kilker.)
Killingsworth, Troy, Ash Grove, Mo. Display device. No. 1,217,013; Feb. 20; v. 235; p. 976.
Kimball, George E., Rochester, Pa., assignor to Automatic Electric Company, Chicago, Ill. Telephone ring-back or reverting-call system. No. 1,216,461; Feb. 20; v. 235; p. 787.
Kimball, Grace A., Adamsville, R. I. Coat-hanger. No. 1,214,926; Feb. 6; v. 235; p. 156.
Kimble, Austin, Chicago, and J. D. Nies, St. Charles, assignors to Kimble Electric Company, Chicago, Ill. Synchronous motor. No. 1,217,187; Feb. 27; v. 235; p. 1879.

Kimble Electric Company. (See Kimble and Nies, assignors.)
Kimbriel, Isham S., Somes, Cal. Cultivator. No. 1,217,776; Feb. 27; v. 235; p. 1285.
Kimmerling, Adam, Schleisingerville, Wis. Fish-guard. No. 1,215,817; Feb. 13; v. 235; p. 505.
Kincaid, Clara A. B., Indianapolis, Ind. Chemical heater. No. 1,216,816; Feb. 20; v. 235; p. 909.
King, Edward B., Irvington, N. J. Match-box holder. No. 1,216,325; Feb. 20; v. 235; p. 738.
King, James, Leicester, England. Game apparatus. No. 1,215,033; Feb. 6; v. 235; p. 195.
King, Jay A. (See Dalbey, Joel B., assignor.)
Kinkelaar, August R., Cleveland, Ohio. Article-holder. No. 1,214,795; Feb. 6; v. 235; p. 108.
Kinnear Manufacturing Company, The. (See McCloud, Edward H., assignor.)
Kinscella, Sara, Bridgeport, Conn. Straight-back corset. No. 1,216,326; Feb. 20; v. 235; p. 738.
Kinsley, Richard F., East Cleveland, J. D. Morron, Lakewood, and C. R. Haynes, Cleveland, Ohio, assignors to Mechanical Rubber Company. Recovering rubber waste. No. 1,215,941; Feb. 13; v. 235; p. 550.
Kinsolving, Walter A., Washington, D. C. Tire-tool. No. 1,217,777; Feb. 27; v. 235; p. 1285.
Kirby, James B., Cleveland, Ohio. Suction-cleaner. No. 1,214,796; Feb. 6; v. 235; p. 108.
Kirchhoff, William G., assignor to American Bakers Machinery Company, St. Louis, Mo. Dough-divider. No. 1,217,778; Feb. 27; v. 235; p. 1286.
Kirkland, William L., Birmingham, Ala. Key-ring holder. No. 1,215,283; Feb. 6; v. 235; p. 279.
Kitaoka, Toraki, Pasadena, Cal. Signal apparatus for autovehicles. No. 1,215,661; Feb. 13; v. 235; p. 451.
Kittle, Gilbert R., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Hollow-cast ball. No. 1,216,662; Feb. 13; v. 235; p. 451.
Klaes, John, Denver, Colo. Ticket-punch. No. 1,217,870; Feb. 27; v. 235; p. 1316.
Klages, Edward A., Crafton, Pa. Combination clock and home savings-bank. No. 1,216,138; Feb. 13; v. 235; p. 622.
Kleckner, Roy C., Indianapolis, Ind. Dental-floss holder. No. 1,217,779; Feb. 27; v. 235; p. 1286.
Klein, Adolph S., Cleveland, Ohio. Refrigerator. No. 1,216,576; Feb. 20; v. 235; p. 828.
Klein, Rudolph, and T. Brueck, Rochester, N. Y. Photographic shutter. No. 1,215,284; Feb. 6; v. 235; p. 279.
Klein, Stanley, and J. Luttmann, Cincinnati, assignors to The Mendel-Drucker Company, Norwood, Ohio. Trunk-lock. No. 1,214,687; Feb. 6; v. 235; p. 72.
Kleine, Frank M., Duluth, Minn. Wire-clamp. No. 1,216,575; Feb. 20; v. 235; p. 828.
Kleinfeldt, Arthur, Hoboken, N. J. Pop-gun. No. 1,214,797; Feb. 6; v. 235; p. 108.
Kleinschmidt, Hans, Wilmersdorf, Germany, A. Halpern and E. Pospischil, Vienna, Austria-Hungary, assignors to Firm of Gas-Zünder Gesellschaft m. b. H., Berlin, Germany. Automatic lighter for gas-burners. No. 1,216,817; Feb. 20; v. 235; p. 909.
Klemm, Emil R., Chicago, Ill. Braking device. No. 1,217,188; Feb. 27; v. 235; p. 1080.
Klickman, Rudolph H. (See Miller and Klickman.)
Kline, Charles F., assignor of one-half to W. C. Kline, Cleveland, Ohio. Guard for door-latches. No. 1,215,384; Feb. 13; v. 235; p. 348.
Kline, W. C. (See Kline, Charles F., assignor.)
Kling, Fred E., Youngstown, Ohio, assignor of one-half to L. B. Weidlein. Filtering medium for cleaning furnace-gases. No. 1,215,385; Feb. 13; v. 235; p. 349.
Kloepfer, Carl F. (See Kloepfer, George J. and C. F.)
Kloepfer, George J. and C. F., Springfield, Ohio. Signaling device. No. 1,215,169; Feb. 6; v. 235; p. 239.
Klugh, Paul B., assignor to The Cable Company, Chicago, Ill. Mechanical musical instrument. No. 1,215,548; Feb. 13; v. 235; p. 407.
Klugh, Paul B., assignor to The Cable Company, Chicago, Ill. Perforated sheet. No. 1,217,094; Feb. 20; v. 235; p. 1002.
Knieriem, Edward A., deceased, New York, N. Y.; G. P. Hotaling, executor. Sanitary bandage. No. 1,217,014; Feb. 20; v. 235; p. 976.
Kniffler, Bruno, Winchester, and W. A. Oppen, Stoneham, Mass. Apparatus for preparing resin size for paper manufacture. No. 1,215,034; Feb. 6; v. 235; p. 195.
Knight American Patents Company. (See Porter, Finley R., assignor.)
Knight, Richard D., Providence, R. I. Coin-holder. No. 1,217,189; Feb. 27; v. 235; p. 1080.
Knittel, Frank E., Mooreland, Okla. Weaning device. No. 1,214,927; Feb. 6; v. 235; p. 156.
Knoch, Carl, New York, N. Y. Grand-piano action. No. 1,216,701; Feb. 20; v. 235; p. 869.
Knott, Eustace R., Sharon, Mass. Wrapping-machine. No. 1,216,702; Feb. 20; v. 235; p. 869.
Knower, Earl A., Packwaukee, Wis. Priming device. No. 1,217,015; Feb. 20; v. 235; p. 976.
Knudson, Knud C. (See Larson and Knudson.)
Knutson, Alfred W., assignor to Rowe Manufacturing Co., Galesburg, Ill. Locking-head for stanchions. No. 1,216,327; Feb. 20; v. 235; p. 739.
Kociako, Michael, Angus, Minn., assignor to O. Myhran, Barton, N. D. Adjustable level. No. 1,215,035; Feb. 6; v. 235; p. 195.
Koehler, Henry L., Louisville, Ky. Delivery attachment for printing-presses. No. 1,215,285; Feb. 6; v. 235; p. 279.
Koetschet, Joseph, Lyon, and M. Theumann, St. Fons, assignors to Societe Chimique Des Usines Du Rhone (anciennement Gilliard, P. Monnet et Cartier,) Paris, France. Manufacture of cellulose derivatives. No. 1,216,462; Feb. 20; v. 235; p. 787.
Koller, Joseph P., Chicago, Ill. Photograph-case. No. 1,215,036; Feb. 6; v. 235; p. 196.
Kollmeyer, Henry, Concordia, Mo. Door-lock. No. 1,215,286; Feb. 6; v. 235; p. 280.
Kone, George W., assignor of one-half to S. R. Spencer, Rock Island, Ill. Seed-planter. No. 1,217,780; Feb. 27; v. 235; p. 1287.
Koontz, John A., Jr., Palo Alto, assignor of one-half to E. W. Beardsley, San Francisco, and one-fourth to R. W. Shoemaker, Alameda, Cal. Electric-conductor-insulating support. No. 1,215,549; Feb. 13; v. 235; p. 408.
Koontz, Victor R., Waynesboro, Pa. Chaser and mounting therefor. No. 1,216,328; Feb. 20; v. 235; p. 739.
Kopf, Melrose G., assignor to McCormick Manufacturing Company, Dayton, Ohio. Spark-plug for internal-combustion engines. No. 1,216,139; Feb. 13; v. 235; p. 622.
Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,215,287; Feb. 6; v. 235; p 280.
Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,215,550; Feb. 13; v. 235; p. 408.
Kossmann, Max, Brooklyn, N. Y. Lamp-shade holder. No. 1,216,818; Feb. 20; v. 235; p. 910.
Krämer, Bernhard, Charlottenburg, Germany, assignor to General Electric Company. Scavenging-pump for internal-combustion engines. No. 1,216,235; Feb. 13; v. 235; p. 655.
Krasselt, William A. (See Gillen, Frederick C., assignor.)
Kraushaar, George J., Cleveland, Ohio. Baker's peel. No. 1,216,703; Feb. 20; v. 235; p. 870.
Kraut, Charles F., Baltimore, Md. Safety-valve. No. 1,217,316; Feb. 27; v. 235; p. 1123.
Kreczkowski, Michael, New York, N. Y. Extension-table. No. 1,215,551; Feb. 13; v. 235; p. 408.
Kremer, Franklin W., Carlstadt, N. J. Tire-shoe-making machine. No. 1,216,329; Feb. 20; v. 235; p. 739.
Krieger, Emil. (See Krieger, Gustave and E.)
Krieger, Gustave and E., Brooklyn, N. Y. Shoe. No. 1,217,463; Feb. 27; v. 235; p. 1175.
Krivohlany, Louis J., Mason City, Iowa. Torpedo. No. 1,217,016; Feb. 20; v. 235; p. 976.
Kroehler, Peter E., Naperville, Ill. Table-bed. No. 1,216,704; Feb. 20; v. 235; p. 870.
Krogh, Bernhard J., Cambridge, Wis. Water-motor. No. 1,215,386; Feb. 13; v. 235; p. 349.
Kroll, Nathan J., Brooklyn, N. Y. Combination sleeper-carriage and go-cart. No. 1,217,017; Feb. 20; v. 235; p. 976.
Kroseng, Axel E., Brooklyn, N. Y. Receptacle. No. 1,216,330; Feb. 20; v. 235; p. 739.
Krotz, Alvaro S., assignor to The Janesville Machine Company, Janesville, Wis. Wheeled implement. No. 1,215,818; Feb. 13; v. 235; p. 505.
Krueger, Ferdinand C., Milwaukee, Wis. Lighting-fixture. No. 1,216,819; Feb. 20; v. 235; p. 910.
Krueger, Lewis A., Mason City, Iowa. Indicator-card scaling-rule. No. 1,215,663; Feb. 13; v. 235; p. 452.
Krump, Nic, Chicago, Ill. Band-saw reclaimer. No. 1,217,095; Feb. 20; v. 235; p. 1002.
Krupp, Smith F., Atlanta, Ga. Spacing device for gin-saws. No. 1,217,018; Feb. 20; v. 235; p. 977.
Kryzanowsky, Constant J., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md. Capping apparatus. No. 1,216,705; Feb. 20; v. 235; p. 870.
Kucserik, Wilhelm. (See Holek and Kucserik.)
Kuehn, Louis, assignor to Milwaukee Corrugating Company, Milwaukee, Wis. Conductor cut-off. No. 1,215,819; Feb. 13; v. 235; p. 505.
Kuen, Rhinehart V., near Amana, Iowa. Gang-plow. No. 1,215,942; Feb. 13; v. 235; p. 550.
Kujirai, Tsunetaro, Hongo, Tokyo, Japan. Frequency-conversion system for electrical oscillations. No. 1,215,820; Feb. 13; v. 235; p. 506.
Kulicke, Frederick W., Philadelphia, Pa. Trolley-switch. No. 1,217,317; Feb. 27; v. 235; p. 1123.
Kundert, Rudolph, Roslindale, Mass. Machine for marking continuous strips of paper or like material. No. 1,217,318; Feb. 27; v. 235; p. 1124.
Kurowski, Alfred G. F., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,214,688; Feb. 6; v. 235; p. 73.
Kurtz, Alfred, Brooklyn, N. Y. Lining for hats. No. 1,216,140; Feb. 13; v. 235; p. 623.
Kværnö, Bernhard C., Haugesund, Norway. Changeable vault structure for electric melting-furnaces. No. 1,216,331; Feb. 20; v. 235; p. 740.
L. C. Smith & Bros. Typewriter Company. (See Gabrielson, Carl, assignor.)
L. H. Gilmer Company. (See Gilmer, George W., Jr., assignor.)
La Chapelle, Fred N., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating on shoe-soles. No. 1,217,122; Feb. 20; v. 235; p. 1013.
La Plante, Forest R., Gunnison, Colo. Spark-plug. No. 1,217,784; Feb. 27; v. 235; p. 1288.

Laas, Edward, assignor, by mesne assignments, to O. R. Barnett, Chicago, Ill. Anticreeper. No. 1,214,689; Feb. 6; v. 235; p. 73.

Lacambra, François, Bayonne, France. Spring-link. No. 1,216,463; Feb. 20; v. 235; p. 787.

Lachman, Maurice, New York, assignor to Universal Electric Welding Company, Long Island City, N. Y. Window sash or frame. No. 1,214,928; Feb. 6; v. 235; p. 156.

Lachman, Maurice, assignor to Structural Pressed Steel Wheel Company, Inc., New York, N. Y. Metal wheel. No. 1,215,552; Feb. 13; v. 235; p. 409.

Lachman, Maurice, assignor to Structural Pressed Steel Wheel Company, Inc., New York, N. Y. Metal wheel. No. 1,215,553; Feb. 13; v. 235; p. 409.

Lachman, Maurice, assignor to Structural Pressed Steel Wheel Company, Inc., New York, N. Y. Vehicle-wheel. No. 1,215,554; Feb. 13; v. 235; p. 410.

Ladwig, Charles F. (See Fleming and Ladwig.)

Lake, Archibald, Parkland, Alberta, Canada. Spark-arrester. No. 1,215,288; Feb. 6; v. 235; p. 280.

Lake, Simon, Milford, assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn. Torpedo-launching apparatus for submarine boats. No. 1,215,387; Feb. 13; v. 235; p. 349.

Lake Torpedo Boat Company, The. (See Lake, Simon, assignor.)

Lakso, Walentin, Chester Depot, Vt. Sleigh-runner for motor-cycles. No. 1,217,191; Feb. 27; v. 235; p. 1081.

Lamb, John J., Detroit, Mich. Combined kerosene vaporizer and manifold. No. 1,217,781; Feb. 27; v. 235; p. 1287.

Lamond, Kenneth. (See Harrison and Lamond.)

Lampman, Robert M., Ancaster, Ontario, Canada. Forward and reverse gearing mechanism. No. 1,215,664; Feb. 13; v. 235; p. 452.

Lamprecht, John, Sumner Iowa. Automobile-jack. No. 1,217,609; Feb. 27; v. 235; p. 1228.

Lamson Company, The. (See Amsden, George A., assignor.)

Lancaster, Theodore P., Boston, and J. L. Struthers, Lynn, Mass. Electric signal. No. 1,216,820; Feb. 20; v. 235; p. 910.

Landers, Douglas J., *et al.* (See Norman, Frank, assignor.)

Landers, Frary & Clark. (See Walker, George, assignor.)

Landis, Heinrich, Zug, Switzerland. Spring arrangement especially for contact devices. No. 1,215,665; Feb. 13; v. 235; p. 452.

Lanehart, David J., Baltimore, Md. Signal for automobiles. No. 1,215,037; Feb. 6; v. 235; p. 196.

Laney, Andrew T., Clinton, Mo. Tire-protector. No. 1,216,141; Feb. 13; v. 235; p. 623.

Lanford, David L., Coleman, Tex. Cutting mechanism for display-racks. No. 1,215,388; Feb. 13; v. 235; p. 350.

Lang, James S., Boston, Mass. Flying-machine. No. 1,216,577; Feb. 20; v. 235; p. 828.

Langevin, Albert, Montreal, Quebec, Canada. Heater. No. 1,215,555; Feb. 13; v. 235; p. 410.

Langford, James M., Mulberry, Fla. Irrigating apparatus. No. 1,217,782; Feb. 27; v. 235; p. 1287.

Langley, Sam G., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Means for charging storage batteries. No. 1,215,309; Feb. 6; v. 235; p. 287.

Langslow, Harry R. (See Lattig, Charles I., assignor.)

Langslow, Harry R., Rochester, N. Y. School-chair. No. 1,217,783; Feb. 27; v. 235; p. 1288.

Lanier, Edward H., and F. K. Driesbach, Cincinnati, Ohio. Machine for forming and baking hollow pastry forms. No. 1,215,556; Feb. 13; v. 235; p. 410.

Lanning, Charles D. (See Field, Hathaway, and Lanning.)

Lanning, Charles D., Boston, and S. C. Drew, Brookline, assignors to C. D. Lanning, Boston, Mass. Telephone-circuit arrangements. No. 1,215,038; Feb. 6; v. 235; p. 196.

Lanphear, Walter H., Worcester, Mass. Journal-lubricating device. No. 1,214,554; Feb. 6; v. 235; p. 25.

Lantzer, Harvey O., Aurora, Nebr. Gang-plow hitch. No. 1,216,142; Feb. 13; v. 235; p. 623.

Lapp, Herbert F. (See States and Lapp.)

Larcomb, D. C., *et al.* (See Haft, Albert C., Jr., assignor.)

Larcomb, M. W., *et al.* (See Haft, Albert C., Jr., assignor.)

Larger, Joseph, Youngstown, Ohio. Condensed-milk-can opener. No. 1,215,821; Feb. 13; v. 235; p. 506.

Larkin, Mathew T., Spokane, Wash. Rerailing-frog holder. No. 1,216,706; Feb. 20; v. 235; p. 871.

Larson, Anton, assignor of one-half to F. L. Olson, Denham, Minn. Cattle-killing device. No. 1,214,929; Feb. 6; v. 235; p. 156.

Larson, Edward A., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Rotation-meter. No. 1,214,690; Feb. 6; v. 235; p. 74.

Larson, John W., Omaha, and K. C. Knudson, Fullerton, Nebr. Sign. No. 1,217,192; Feb. 27; v. 235; p. 1081.

Lasater, D. C., *et al.* (See Sartain, Louis M., assignor.)

Lashar, Walter B., assignor to American Chain Company, Incorporated, Bridgeport, Conn. Dual-tire grip. No. 1,216,464; Feb. 20; v. 235; p. 788.

Latshaw, Benjamin J., Burkburnett, Tex. Oil-burner. No. 1,217,019; Feb. 20; v. 235; p. 978.

Lattig, Charles I., assignor to H. R. Langslow, Rochester, N. Y. School-chair. No. 1,217,319; Feb. 27; v. 235; p. 1124.

Laugen, Edward O., and S. S. Vathing, Houston, Minn. Corn-planter attachment. No. 1,215,943; Feb. 13; v. 235; p. 551.

Lauray, Francis E., Detroit, Mich. Signal-gauntlet. No. 1,215,389; Feb. 13; v. 235; p. 350.

Laurell, Charles W., assignor of one-half to J. C. Strauss, St. Louis, Mo. Mounting photographs. No. 1,215,170; Feb. 6; v. 235; p. 239.

Laurents, Louis V., Lake Arthur, La., assignor of one-fourth to F. E. Heinen, Kansas City, Mo., and one-fourth to W. C. Heinen, Lake Arthur, La. Internal-combustion engine. No. 1,217,020; Feb. 20; v. 235; p. 978.

Lavie, Charles, New York, N. Y. Marcel waver. No. 1,217,610; Feb. 27; v. 235; p. 1229.

Lawn, William E., and J. A. Ryan, assignors to Automatic Railroad Appliances Co., Inc., Rochester, N. Y. Automatic train-stop mechanism. No. 1,215,390; Feb. 13; v. 235; p. 350.

Lawson, Claude N., Celoron, N. Y. Combination canoe back-rest and life-preserver. No. 1,216,707; Feb. 20; v. 235; p. 871.

Lawson, Oscar L., Lynn, assignor of one-half to C. Anderson, Lowell, Mass. Thread pull-off and locking device. No. 1,217,871; Feb. 27; v. 238; p. 1316.

Lawson, Oscar L., and J. H. Reed, Lynn, Mass. Shuttle-drive. No. 1,215,557; Feb. 13; v. 235; p. 411.

Lawton, Ernest C., Mohawk, N. Y. Knockdown bookcase. No. 1,216,465; Feb. 20; v. 235; p. 788.

Laycock, Harry A., Schenectady, N. Y., assignor to General Electric Company. Regulator. No. 1,216,236; Feb. 13; v. 235; p. 655.

Layman, Arthur R., Dover, N. H. Mule stop-motion. No. 1,215,039; Feb. 6; v. 235; p. 197.

Layman, Ralph E., assignor to Lowy Patent Corporation, New York, N. Y. Spring suspension. No. 1,217,096; Feb. 20; v. 235; p. 1003.

Le Vene, Nate, San Francisco, Cal., and A. Fee, Chicago, Ill. Sanitary tooth-brush. No. 1,214,556; Feb. 6; v. 235; p. 26.

Le Vino, Monroe, New York, N. Y. Book-holder. No. 1,217,024; Feb. 20; v. 235; p. 979.

Lea, Charles, assignor to The Lea-Irving Manufacturing Co., Boston, Mass. Machine for making and applying staples. No. 1,214,930; Feb. 6; v. 235; p. 157.

Lea-Irving Manufacturing Co., The. (See Lea, Charles, assignor.)

Leach, Frank, Detroit, Mich. Heating attachment for burners. No. 1,217,464; Feb. 27; v. 235; p. 1175.

Leader, Moses. (See Foss, Leland L., assignor.)

Leake, Thomas S., St. Louis, Mo., assignor, by mesne assignments, to Concrete Mixing and Conveying Co., Chicago, Ill. Concrete mixing and distributing system. No. 1,215,558; Feb. 13; v. 235; p. 411.

Leake, Thomas S., assignor, by mesne assignments, to Concrete Mixing and Conveying Co., Chicago, Ill. Apparatus for preparing and handling concrete. No. 1,215,559; Feb. 13; v. 235; p. 412.

Leake, Thomas S., assignor, by mesne assignments, to Concrete Mixing and Conveying Co., Chicago, Ill. Apparatus for preparing and handling concrete. No. 1,215,560; Feb. 13; v. 235; p. 412.

Leal, Joseph H., San Francisco, Cal. Means for arousing sleepers. No. 1,215,666; Feb. 13; v. 235; p. 453.

Leary, James I., assignor of one-third to E. H. Doud and one-third to G. L. Hogan, Chicago, Ill. Apparatus for generating and burning hydrocarbon vapors. No. 1,216,578; Feb. 20; v. 235; p. 829.

Leavitt, Albert H., Cloverdale, Cal. Draft-equalizer. No. 1,214,691; Feb. 6; v. 235; p. 74.

Lebedeff, Alexis, Petrograd, Russia. Silencer for internal-combustion engines. No. 1,217,021; Feb. 20; v. 235; p. 978.

Leblanc, Maurice, Val-sur Seine, Croissy, assignor to Societe Anonyme Pour L'Exploitation Des Procedes Westinghouse-Leblanc, Paris, France. Ejector. No. 1,215,321; Feb. 6; v. 235; p. 292.

Leck, Walter W., Steelton, Pa. Guide for rolling-mills. No. 1,217,611; Feb. 27; v. 235; p. 1229.

Ledbetter, Thomas P. (See Glover, Charles P., assignor.)

Lederer, Friedrich, Milwaukee, Wis., assignor of one-half to B. D. Zimmermann, Chicago, Ill. Automobile-bumper. No. 1,216,332; Feb. 20; v. 235; p. 740.

Lederer, Norman, New York, N. Y. Needle-guard for sewing-machines. No. 1,217,785; Feb. 27; v. 235; p. 1288.

Leduc, Léon, Couture St. Germain, and H. Jacquemin, Maransart, Belgium. Obtaining threads of artificial silk, films, and other objects. No. 1,214,931; Feb. 6; v. 235; p. 158.

Ledwinka, Joseph, assignor to Edward G. Budd Manufacturing Company, Philadelphia, Pa. Vehicle-top-iron support. No. 1,214,932; Feb. 6; v. 235; p. 158.

Ledwinka, Joseph, assignor to Edward G. Budd Manufacturing Co., Philadelphia, Pa. Assembling-machine. No. 1,216,466; Feb. 20; v. 235; p. 788.

Ledwinka, Joseph, assignor to Edward G. Budd Manufacturing Co., Philadelphia, Pa. Assembling-machine. No. 1,216,467; Feb. 20; v. 235; p. 789.

Lee, John A., Oelwein, Iowa. Book-marker clip. No. 1,216,468; Feb. 20; v. 235; p. 789.

Lee, Ulysses G., Chattanooga, Tenn., assignor to Montague Mailing Machinery Co. Automatic office-addresser. No. 1,215,040; Feb. 6; v. 235; p. 197.

Leece, Bennett M., assignor to The Leece-Neville Company, Cleveland, Ohio. Starting and ignition apparatus. No. 1,214,555; Feb. 6; v. 235; p. 25.

Leece-Neville Company, The. (See Leece, Bennett M., assignor.)

Lees, John, Indianapolis, Ind. Safety tank-lock. No. 1,215,668; Feb. 13; v. 235; p. 453.

Lefferdink, Berend W., near Firth, Nebr. Automatic jack for vehicles. No. 1,217,320; Feb. 27; v. 235; p. 1124.

Legge, Alfred G., Brockton, Mass. Cement-can. No. 1,215,667; Feb. 13; v. 235; p. 453.

Lehmann, Jacob G., Merrill, Iowa. Combination-evener. No. 1,217,022; Feb. 20; v. 235; p. 979.

Lehmann, Johannes, assignor to Firm of C. Zeiss, Jena, Germany. Cinematographic apparatus. No. 1,214,798; Feb. 6; v. 235; p. 109.

Lehr, Louis, Bayonne, N. J., assignor to Meyerowitz Manufacturing Company, Inc., New York, N. Y. Automatic prong-cutting machine. No. 1,216,469; Feb. 20; v. 235; p. 789.

Lehr, Louis, Bayonne, N. J., assignor to Meyerowitz Manufacturing Company, Inc., New York, N. Y. Setting-gage for prong-cutting machines. No. 1,216,470; Feb. 20; v. 235; p. 790.

Lehr, Louis, Bayonne, N. J., assignor to Meyerowitz Manufacturing Company, Inc., New York, N. Y. Fingering with interchangeable signet-top. No. 1,216,471; Feb. 20; v. 235; p. 790.

Leich, Oscar M., assignor to Cracraft, Leich Electric Company, Genoa, Ill. Annunciator. No. 1,215,289; Feb. 6; v. 235; p. 280.

Leicht, Louis, Yonkers, assignor of one-half to H. Classen, New York, N. Y. Globe or shade holder for lighting-fixtures. No. 1,214,933; Feb. 6; v. 235; p. 158.

Leighton Machine Company. (See Rice, John H., assignor.)

Leighton, Robert E., Kingston, N. Y., assignor to Universal Road Machinery Co. Crusher. No. 1,214,693; Feb. 6; v. 235; p. 74.

Leighton, Robert E., and J. H. Clearwater, Kingston, N. Y., assignors to Universal Road Machinery Co. Portable road machinery. No. 1,214,692; Feb. 6; v. 235; p. 74.

Lemaster, Maurice D., assignor to The Wolf Company, Chambersburg, Pa. Sifter. No. 1,217,786; Feb. 27; v. 235; p. 1288.

Lemieux, Joseph, Montreal, Quebec, Canada. Boot or shoe. No. 1,216,579; Feb. 20; v. 235; p. 829.

Lemons, George G., London, England. Apparatus for actuating a rolling projectile. No. 1,216,472; Feb. 20; v. 235; p. 791.

Lemp, Hermann, Erie, Pa., assignor to General Electric Company. Controlling means for engine-generator-driven vehicles. No. 1,216,237; Feb. 13; v. 235; p. 656.

Lencki, Joseph S., Chicago, Ill. Metallic tie and rail-fastener. No. 1,216,473; Feb. 20; v. 235; p. 791.

Lenich, L. Ray. (See Jackson, Albert C, assignor.)

Leonard, Herman W., Los Angeles, Cal. Floor-heater. No. 1,217,612; Feb. 27; v. 235; p. 1229.

Leonnig, Ernest M. (See Troy and Leonnig.)

Lepley, Daniel F., Connellsville, Pa. Stop mechanism for mine-hoists. No. 1,216,143; Feb. 13; v. 235; p. 623.

Lepley, Daniel F., Connellsville, Pa. Valve-seat for mine-pumping conduits. No. 1,216,144; Feb. 13; v. 235; p. 624.

Lesler, Albert F., New York, N. Y. Coin-controlled lock. No. 1,216,145; Feb. 13; v. 235; p. 624.

Leslie Company, The. (See Metzger, Jules P., assignor.)

Letart, Henry P., Alburg, Vt. Drifting-valve mechanism. No. 1,217,023; Feb. 20; v. 235; p. 979.

Leu, Frederick, Carmel, assignor to M. Calm, New York, N. Y. Truing device. No. 1,215,822; Feb. 13; v. 235; p. 506.

Levett, Julius I., New York, N. Y. Washtub-cover. No. 1,217,025; Feb. 20; v. 235; p. 980.

Levey Bros. & Company. (See Glossbrenner, Alfred M., assignor.)

Levi, Daniel, New York, N. Y. Christmas-tree ornament. No. 1,216,580; Feb. 20; v. 235; p. 829.

Levin, Isaac H., New York, N. Y. Electrolytic gas-generator. No. 1,214,034; Feb. 6; v. 235; p. 158.

Levin, Milton, assignor to Lion Safety Pin Clutch Company, Inc., New York, N. Y. Finger-ring guard. No. 1,217,097; Feb. 20; v. 235; p. 1003.

Levitt, Philip, Chicago, Ill. Joint. No. 1,215,944; Feb. 13; v. 235; p. 551.

Lewis, Alfred M., Minter, Tex. Fastener. No. 1,214,799; Feb. 6; v. 235; p. 109.

Lewis, Clifford A., Portland, Oreg. Sight-light for fire-arms. No. 1,215,171; Feb. 6; v. 235; p. 239.

Lewis, Edward Z. (See Murphy, Lewis, and Wilson.)

Lewis, Edward Z., Chicago, Ill. Attachment for type-writers. No. 1,214,557; Feb. 6; v. 235; p. 26.

Lewis, Everett C., Cranston, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass. Shaft-coupling. No. 1,217,465; Feb. 27; v. 235; p. 1176.

Lewis, Isabel M., Washington, D. C. Medicine-administering device. No. 1,215,823; Feb. 13; v. 235; p. 507.

Lewis, Lloyd V., Edgewood Borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-traffic-controlling apparatus. No. 1,217,787; Feb. 27; v. 235; p. 1289.

Ley, George A., Chicago, Ill. Testing apparatus for flash-lights. No. 1,217,026; Feb. 20; v. 235; p. 980.

Libbey, Richard O. (See Harmon and Libbey.)

Libby, Albion D. T., Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Telephone system. No. 1,214,694; Feb. 6; v. 235; p. 75.

Liedtke, Hugo F., Philadelphia, Pa. Internal-combustion and steam engine. No. 1,217,788; Feb. 27; v. 235; p. 1289.

Liese, Hendrik M., Hamburg, Germany. Apparatus for controlling the velocity of a fluid flowing through a passage. No. 1,215,669; Feb. 13; v. 235; p. 453.

Liggett, William K., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Pulverizer. No. 1,214,558; Feb. 6; v. 235; p. 26.

Lightbody, Frank J., Watertown, assignor to Cambridge Novelty Company, Cambridge, Mass. Holder for rotary balls or bobbins. No. 1,215,824; Feb. 13; v. 235; p. 507.

Lightbody, Frank J., Watertown, assignor to Cambridge Novelty Company, Cambridge, Mass. Holder for rotary balls or bobbins. No. 1,215,825; Feb. 13; v. 235; p. 507.

Lightell, Adam, Port Allen, assignor of one-half to J. Murray, New Orleans, La. Track-laying machine. No. 1,215,172; Feb. 6; v. 235; p. 239.

Ligon, Harry W., Atlanta, Ga. Mechanical starter for automobile-engines. No. 1,217,466; Feb. 27; v. 235; p. 1176.

Lilienfeld, Leon, Vienna, Austria-Hungary. Film and producing same. No. 1,217,027; Feb. 20; v. 235; p. 980.

Lilienfeld, Leon, Vienna, Austria-Hungary. Manufacture of artificial textile material and producing same. No. 1,217,028; Feb. 20; v. 235; p. 980.

Lilienfeld, Leon, Vienna, Austria-Hungary. Artificial leather and composition used in the manufacture thereof. No. 1,217,123; Feb. 20; v. 235; p. 1014.

Lincoln, Hugh B., Electra, Tex. Valve means for oil-well swivels. No. 1,217,467; Feb. 27; v. 235; p. 1176.

Lincoln, John C., Cleveland, Ohio. Electrode-holder. No. 1,217,468; Feb. 27; v. 235; p. 1176.

Lindemann, Albert J., Milwaukee, Wis. Combination solid and liquid fuel range. No. 1,217,098; Feb. 20; v. 235; p. 1003.

Lindholm, Joel R. A. (See Burke and Lindholm.)

Lindsay, Thomas J., Indianapolis, Ind. Twin wheel. No. 1,216,474; Feb. 20; v. 235; p. 791.

Lindsay, William G., Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y. Making acetyl-cellulose plastics. No. 1,216,581; Feb. 20; v. 235; p. 830.

Lindsay, William H., Johnstone, Scotland. Self-lubricating bearing for shafts. No. 1,216,821; Feb. 20; v. 235; p. 911.

Link, Ernest G., assignor to C. Nostrand, College Point, N. Y. Adjustable pot-strainer. No. 1,214,800; Feb. 6; v. 235; p. 109.

Linke, Carl, assignor to P. Wittkopf, New York, N. Y. Mustard-dispenser. No. 1,214,801; Feb. 6; v. 235; p. 110.

Linker, Jay B., Charlotte, N. C. Automatic railway-crossing danger-signal. No. 1,215,670; Feb. 13; v. 235; p. 454.

Linotype and Machinery Limited. (See Pearce and Parker, assignor.)

Lion, John C., St. Marys, Pa. Shade-roller mounting. No. 1,215,671; Feb. 13; v. 235; p. 454.

Lion Safety Pin Clutch Company. (See Levin, Milton, assignor.)

Lipps, Emory J., Fountain Hill borough, Pa. Means for wrapping strands around each other. No. 1,216,147; Feb. 13; v. 235; p. 625.

Lissauer, Adolph W., New York, N. Y. Nozzle. No. 1,216,146; Feb. 13; v. 235; p. 625.

List, Paul G. (See Flachslaender and List.)

Little, Frederick B., assignor, by mesne assignments, to J. C. Deagan Musical Bells, Chicago, Ill. Switching mechanism. No. 1,216,238; Feb. 13; v. 235; p. 656.

Little, Henry O., Bridgewater, Mass. Automatic feeder for mills. No. 1,215,826; Feb. 13; v. 235; p. 508.

Little, Henry O., Bridgewater, Mass. Automatic magnetic separator for mills. No. 1,217,613; Feb. 27; v. 235; p. 1230.

Litwin, Simon, Chicago, Ill. Pocket-lock. No. 1,216,582; Feb. 20; v. 235; p. 830.

Livesay, Robert C. (See Raney and Livesay.)

Lloyd, Richard L., assignor to Dwight & Lloyd Metallurgical Company, New York, N. Y. Treating metalliferous ores. No. 1,215,672; Feb. 13; v. 235; p. 455.

Lock Joint Pipe Company. (See Hirsh and McLenon, assignors.)

"Locomobile" Company of America, The. (See Riker, Andrew L., assignor.)

"Locomobile" Company of America, The. (See Rosner, Adolph, assignor.)

Locomotive Pulverized Fuel Company. (See Caracristi, Virginius Z., assignor.)

Locomotive Superheater Company. (See McKee, Neal T., assignor.)

Loeb, Rudolf, Camden, N. J. Embroidering. No. 1,217,193; Feb. 27; v. 235; p. 1082.

Loew, Charles H., Lakewood, Ohio. Pasteurizer. No. 1,215,561; Feb. 13; v. 235; p. 413.
Lofquist, Olof J., Grand Rapids, Mich. Line appliance. No. 1,215,391; Feb. 13; v. 235; p. 351.
Loguin, Alexander J., Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Time-element relay. No. 1,217,469; Feb. 27; v. 235; p. 1177.
Lohrens, Louis F., Chicago, Ill. Burglar-alarm lock. No. 1,214,695; Feb. 6; v. 235; p. 75.
London, James A., Elvins, Mo. Photographic camera. No. 1,215,290; Feb. 6; v. 235; p. 281.
Long, C. Clarence. (See Spangler, Charles H., assignor.)
Long, Charles H., assignor of two-fifths to W. L. Maupin, Oklahoma, Okla. Berry-box. No. 1,217,029; Feb. 20; v. 235; p. 981.
Long, Edgar M., Oak City, N. C. Rotary engine. No. 1,217,789; Feb. 27; v. 235; p. 1290.
Long, Herbert J., New Brunswick, N. J. Water-heater. No. 1,214,559; Feb. 6; v. 235; p. 27.
Long, L. Guy. (See Bailey, Barr, More, and Long.)
Long, Sarah B., Burley, Idaho. Basket-carrier. No. 1,217,030; Feb. 20; v. 235; p. 981.
Longwell, Ira G., Woodburn, Oreg. Stump-puller. No. 1,216,148; Feb. 13; v. 235; p. 625.
Loomis, Charles A., Cincinnati, Ohio, assignor to Union Special Machine Company, Chicago, Ill. Folder. No. 1,216,475; Feb. 20; v. 235; p. 792.
Lord, Edward R., Reading, Mass. Landing-steps. No. 1,215,827; Feb. 13; v. 235; p. 508.
Lord, George W., Excelsior Springs, Mo. Foot-control accelerator for motor-cars. No. 1,216,708; Feb. 20; v. 235; p. 871.
Lord, Richard, Cedar Rapids, Iowa. Tank-heater. No. 1,216,583; Feb. 20; v. 235; p. 830.
Lorillard, Pierre, Tuxedo Park, N. Y. Conveyer. No. 1,215,945; Feb. 13; v. 235; p. 551.
Loughridge, Matthew H., New York, N. Y. Railway signal system and apparatus. No. 1,215,173; Feb. 6; v. 235; p. 240.
Lovan, Alphonso B., *et al.* (See Norman, Frank, assignor.)
Lovece, Nicola, San Antonio, Tex. Sanitary cuspidor. No. 1,215,673; Feb. 13; v. 235; p. 455.
Lovell, Carl, Osceola, Iowa. Shoe-shining apparatus. No. 1,216,239; Feb. 13; v. 235; p. 657.
Lovell, Edwin S. L. (See Banks, Anderson, and Lovell.)
Loveridge, Frederick H. (See McQuarrie and Loveridge.)
Low, Lewis S. (See Apps and Low.)
Low, Theodore H., New Haven, Conn. Bottle-opener. No. 1,214,802; Feb. 6; v. 235; p. 110.
Lowary, Ralph C., assignor to The Beaver Company, Buffalo, N. Y. Wall-board. No. 1,214,803; Feb. 6; v. 235; p. 110.
Lowe, Euclid J., Balboa, Canal Zone. Propeller. No. 1,217,790; Feb. 27; v. 235; p. 1290.
Lowe, Eugene F., Delevan, N. Y. Rail chair and joint. No. 1,215,946; Feb. 13; v. 235; p. 552.
Lowe, Frederick, Cambridge, Mass. Demountable rim. No. 1,216,240; Feb. 13; v. 235; p. 657.
Lowe, James D., Fort Worth, Tex. Electric bath apparatus. No. 1,217,321; Feb. 27; v. 235; p. 1125.
Lowe, William A. J., assignor of one-half to G. W. Overstreet, Bristol, Tenn. Laundry-container. No. 1,217,031; Feb. 20; v. 235; p. 981.
Lowe, William T., Sr., Nashville, Tenn. Lever-actuated power-transmission gearing. No. 1,214,804; Feb. 6; v. 235; p. 110.
Lowenstein, Fritz. (See Rothen, Oscar F., assignor.)
Lowrey, Clyde W. (See Moon, William D., assignor.)
Lowther, Walter C., East Molesey, England. Apparatus for playing games. No. 1,216,333; Feb. 20; v. 235; p. 740.
Lowy, Morris, New York, N. Y. Bed-spring. No. 1,214,560; Feb. 6; v. 235; p. 27.
Lowy, Morris, New York, N. Y. Bed-spring. No. 1,214,805; Feb. 6; v. 235; p. 111.
Lowy, Morris, New York, N. Y. Folding crib or bed. No. 1,216,709; Feb. 20; v. 235; p. 872.
Lowy Patent Corporation. (See Layman, Ralph E., assignor.)
Lucas, Louis, Jamestown, N. Y. Pine-incense and making same. No. 1,216,710; Feb. 20; v. 235; p. 873.
Luchs, Frederick M. (See Morris and Luchs.)
Lucker, William A., St. Paul, Minn. Stopping mechanism for phonographs. No. 1,214,806; Feb. 6; v. 235; p. 111.
Ludlow, Margery E. N., Haverford, Pa. Wind-shield attachment. No. 1,215,174; Feb. 6; v. 235; p. 240.
Ludowici-Celadon Company. (See Nelson, Lewis C., assignor.)
Luitwieler, Samuel W., Rochester, N. Y. Pump-piston. No. 1,214,696; Feb. 6; v. 235; p. 76.
Lummus, Walter E., Lynn, Mass. Method of and apparatus for fractional distillation. No. 1,216,334; Feb. 20; v. 235; p. 741.
Lundberg, Carl E., Spokane, Wash. Calendar. No. 1,214,935; Feb. 6; v. 235; p. 159.
Lundberg, Gustave E., Kewanee, Ill. Rim-tool for automobile-rims. No. 1,214,807; Feb. 6; v. 235; p. 111.
Lundberg, Jacob O. Torp Brug, pr. Fredrikstad, Norway. Apparatus for heating liquid. No. 1,215,041; Feb. 6; v. 235; p. 198.
Lundgren, Emanuel M., Stapenhill, Burton-upon-Trent, England. Pasteurizing apparatus. No. 1,217,470; Feb. 27; v. 235; p. 1177.
Lundy, James E. (See Saxon and Lundy.)
Luther, William M., San Francisco, Cal. Paring-machine feeder. No. 1,217,791; Feb. 27; v. 235; p. 1291.
Luther, William M., San Francisco, Cal. Paring-machine feeder. No. 1,217,872; Feb. 27; v. 235; p. 1317.
Lutrin, Harry. (See Baron, Joseph, assignor.)
Luttmann, Joseph. (See Klein and Lutmann.)
Lutz, Harry J. (See Modlin and Lutz.)
Lutz, William D., Allendale, N. J., and B. W. Smith, Yonkers, N. Y. Window-lock. No. 1,214,697; Feb. 6; v. 235; p. 76.
Lutze, William, Holyoke, Colo. Rake. No. 1,217,322; Feb. 27; v. 235; p. 1125.
Lyman, Ray J., Twin Falls, Idaho. Water-meter. No. 1,215,674; Feb. 13; v. 235; p. 456.
Lynn, Frederic C., *et al.* (See Roworth, Edward S., assignor.)
Lynch, George E., assignor to Royal Packing Company, Los Angeles, Cal. Chilli-roaster. No. 1,217,099; Feb. 20; v. 235; p. 1004.
Lynch, Joseph L., Chicago, Ill. Making buttons. No. 1,215,675; Feb. 13; v. 235; p. 456.
Lynn, Sidney O. (See Macleary and Lynn.)
Lyon, Cody, Emmett, Idaho. Insulator for electric wires. No. 1,217,032; Feb. 20; v. 235; p. 982.
Mabley, Thomas G., Menomonee Falls, Wis. Motor-driving attachment for binders. No. 1,214,564; Feb. 6; v. 235; p. 28.
MacDonald, Frank J., Warnerville, N. Y. Stacker. No. 1,214,565; Feb. 6; v. 235; p. 28.
MacGowan, George P., New York, N. Y. Baby-carrier for automobiles. No. 1,217,474; Feb. 27; v. 235; p. 1179.
MacGregor, John, Roslindale, Mass. Thermometer-case. No. 1,216,827; Feb. 20; v. 235; p. 912.
MacKay, Donald, Thetford Center, Vt. Aeroplane. No. 1,215,295; Feb. 6; v. 235; p. 282.
MacSween, Sidney. (See Wild, Joseph L., assignor.)
Macallen Company, The. (See McCarthy, Louis, assignor.)
Macbeth-Evans Glass Company (See Bosson, August H., assignor.)
Macdonald, William A., Reading, Mass. Mop-holder. No. 1,215,294; Feb. 6; v. 235; p. 282.
Macdonald, William R., London, England. Electric motor. No. 1,216,242; Feb. 13; v. 235; p. 658.
Mace, Donald H., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control apparatus. No. 1,217,473; Feb. 27; v. 235; p. 1179.
Mack, William, M. A., and J. F. O'Toole, Scranton, Pa. Pump. No. 1,217,707; Feb. 27; v. 235; p. 1293.
Mackenzie, Hugh W., Leeds, England. Apparatus for use in baking wafers and the like. No. 1,215,829; Feb. 13; v. 235; p. 509.
Macklind, William R., Cleveland, Ohio. Mechanism for removing treated materials from driers and the like. No. 1,216,711; Feb. 20; v. 235; p. 873.
Macleary, Joseph H., and S. O. Lynn, Suffolk, Va. Peanut-picker. No. 1,216,149; Feb. 13; v. 235; p. 626.
Magniphone Company, The. (See Rhodus, Thomas, assignor.)
Magruder, Willett C. (See Maury and Magruder.)
Mahon, Daniel P, Quincy, Mass. Keyhole attachment for locks. No. 1,217,798; Feb. 27; v. 235; p. 1293.
Main, Fred F., Chicago, Ill., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,216,712; Feb. 20; v. 235; p. 873.
Maker, John A., Duluth, Minn. Film-spool-holding mechanism for photographic apparatus. No. 1,214,936; Feb. 6; v. 235; p. 159.
Mallaby, George F., East Cleveland, Ohio, assignor to Kelly-Springfield Tire Company. Resilient tire. No. 1,214,566; Feb. 6; v. 235; p. 29.
Malm, John L., Denver, Colo. Barrel. No. 1,215,565; Feb. 13; v. 235; p. 415.
Malm, John L., Denver, Colo., assignor to The Midwest Metals Company. Appliance for sealing the feed and discharge openings of rotary containers. No. 1,214,809; Feb. 6; v. 235; p. 112.
Malsbury, Fred F., Cincinnati, Ohio. Sash-lock. No. 1,216,241; Feb. 13; v. 235; p. 657.
Maltby, George B., Cleveland, Ohio. Car construction. No. 1,214,567; Feb. 6; v. 235; p. 29.
Maltby, Sidney T., Washington, D. C. Container. No. 1,217,799; Feb. 27; v. 235; p. 1294.
Mankos, John, Palmerton, Pa. Whirling toy. No. 1,217,037; Feb. 20; v. 235; p. 983.
Mann, James H. Jr., Pine Bluff, Ark. Vending-machine. No. 1,217,616; Feb. 27; v. 235; p. 1231.
Manoll, James. (See Graf, Emil, assignor.)
Manson, Ray H., Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Circuit-controller. No. 1,215,566; Feb. 13; v. 235; p. 415.
Manson, Ray H., assignor to The Garford Manufacturing Company, Elyria, Ohio. Electric system for vehicles. No. 1,215,676; Feb. 13; v. 235; p. 456.
Manson, Ray H., assignor to The Garford Manufacturing Company, Elyria, Ohio. Automobile-horn. No. 1,216,828; Feb. 20; v. 235; p. 912.
Mara, Patrick F., Danvers, Ill. Cut-out for automobiles. No. 1,217,800; Feb. 27; v. 235; p. 1294.

Marchant, George W., and C. B. Burch, Marion, Iowa. Automobile-wheel anchor. No. 1,215,395; Feb. 13; v. 235; p. 352.
Marcuse, Moses M., assignor to West Disinfecting Company, New York, N. Y. Sheet-delivery receptacle. No. 1,216,713; Feb. 20; v. 235; p. 874.
Margolis, Louis, New York, N. Y. Sad-iron. No. 1,215,176; Feb. 6; v. 235; p. 241.
Mark, John G., New York, N. Y. Printing-machine. No. 1,216,150; Feb. 13; v. 235; p. 626.
Markmann, Daniel H., St. Louis, Mo. Velocipede-horse No. 1,217,198; Feb. 27; v. 235; p. 1083.
Marks, Mose, Berkeley, Cal. Fruit-stand. No. 1,217,038; Feb. 20; v. 235; p. 983.
Marks, Paul J., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic shutter. No. 1,214,699; Feb. 6; v. 235; p. 77.
Marks, Paul J., assignor to Eastman Kodak Company, Rochester, N. Y. Shutter-operating device. No. 1,214,700; Feb. 6; v. 235; p. 77.
Marlatt, George E., Pasadena, Cal. Pig-feeding apparatus for linotype-machines. No. 1,215,677; Feb. 13; v. 235; p. 456.
Marley, Homer P. (See Richards and Marley.)
Marouke, Missak, assignor to H. F. Reitz, Louisville, Ky. Filling material for teeth. No. 1,215,678; Feb. 13; v. 235; p. 457.
Marovitch, Frank, Nelson, British Columbia, Canada. Drilling-machine. No. 1,217,617; Feb. 27; v. 235; p. 1232.
Marquis, Alexander G., assignor of one-third to F. Keiper and one-third to G. W. Roges, Rochester, N. Y. Tempo-controller for piano-players. No. 1,217,323; Feb. 27; v. 235; p. 1125.
Marrow, William C., *et al.* (See Mechau, Frederick A., assignor.)
Marseilles Company. (See Brown, Theophilus, assignor.)
Marsh, Lucien A., San Francisco, Cal. Multiple-control valve. No. 1,216,243; Feb. 13; v. 235; p. 658.
Marshall, Edward E., Philadelphia, Pa. Preheating of air for hot-blast stoves of blast-furnaces. No. 1,217,039; Feb. 20; v. 235; p. 984.
Marshall, John W., Connellsville, Pa., assignor to The Marshall Methods Corporation, New York, N. Y. Pay-roll, ledger, account or time book sheet. No. 1,215,831; Feb. 13; v. 235; p. 510.
Marshall, Joseph W., Kansas City, Mo. Refrigerator construction. No. 1,215,948; Feb. 13; v. 235; p. 552.
Marshall Methods Corporation, The. (See Marshall, John W., assignor.)
Marshall, Norman, West Newton, Mass. Electric insulator. No. 1,217,873; Feb. 27; v. 235; p. 1317.
Marsolais, Joseph F., Framingham, assignor to Worcester Flexible Tubing Company, Worcester, Mass. Tool-holder. No. 1,215,830; Feb. 13; v. 235; p. 510.
Martijn, Hendrikus. (See Van Calcar, Ellerman, and Martijn.)
Martin, Albert J., New Orleans, La. Meat-clamp. No. 1,215,950; Feb. 13; v. 235; p. 553.
Martin, Frank P., Williamsburg, Kans. Road-drag. No. 1,217,475; Feb. 27; v. 235; p. 1179.
Martin, George C., assignor to J. M. Carson, Los Angeles, Cal. Automatic signal device. No. 1,215,042; Feb. 6; v. 235; p. 198.
Martin, George C., assignor to J. M. Carson, Los Angeles, Cal. Gong mechanism for automatic signals. No. 1,217,476; Feb. 27; v. 235; p. 1179.
Martin, Haakon A., assignor to The National Cash Register Company, Dayton, Ohio. Multiple-total-printing cash-register. No. 1,214,568; Feb. 6; v. 235; p. 29.
Martin, Haakon A., assignor to The National Cash Register Company, Dayton, Ohio. Locking mechanism for cash-registers. No. 1,215,567; Feb. 13; v. 235; p. 416.
Martin, Harry S., Boston, Mass., assignor to Choralcelo Company. Electric musical instrument. No. 1,216,829; Feb. 20; v. 235; p. 913.
Martin, James L., Crowell, Tex. Window-operating device. No. 1,217,040; Feb. 20; v. 235; p. 984.
Martin, John W., Pittsburgh, Pa. Pneumatic wheel. No. 1,216,714; Feb. 20; v. 235; p. 874.
Martin, Talbot G., assignor to Automatic Electric Company, Chicago, Ill. Telephone-exchange supervisory system. No. 1,217,477; Feb. 27; v. 235; p. 1180.
Martin, Thomas, Homestead, Pa. Combination-tool. No. 1,217,801; Feb. 27; v. 235; p. 1294.
Martin, Walter S., Canton, N. C. Sealing-wax torch. No. 1,217,324; Feb. 27; v. 235; p. 1125.
Martini, Edonard J. M., Paris, France. Drying apparatus. No. 1,215,951; Feb. 13; v. 235; p. 553.
Martoccio, Sebastiano, New York, N. Y. Gas-burning range. No. 1,215,679; Feb. 13; v. 235; p. 457.
Martz, Randolph N., Frederick, Md. Coupling for hose and pipes. No. 1,217,041; Feb. 20; v. 235; p. 985.
Marx, Andrew, Mount Pleasant, Utah. Wheel-runner for wagons, buggies, and automobiles. No. 1,215,832; Feb. 13; v. 235; p. 510.
Marx, Frank J., and B. A. Steinke, Botkins, Ohio; said Steinke assignor to said Marx. Concrete-block mold. No. 1,214,810; Feb. 6; v. 235; p. 112.
Mason, Alfred N., Paducah, Ky. Tire remover and replacer. No. 1,215,680; Feb. 13; v. 235; p. 457.
Mason, Charles T., Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J. Interrupter mechanism for ignition-dynamos. No. 1,216,151; Feb. 13; v. 235; p. 626.
Mason, Frank N., Pittsburgh, and J. F. Craven, Crafton Heights, Pa.; said Craven assignor to said Mason. Rod-packing. No. 1,215,833; Feb. 13; v. 235; p. 511.
Mass, Adolph, Newark, N. J. Motor-power transmission. No. 1,215,177; Feb. 6; v. 235; p. 241.
Masson, Louis M., Romainville, France. Brake device. No. 1,215,949; Feb. 13; v. 235; p. 553.
Mast, William L., Arthur, Ill. Attachment for door-latches. No. 1,216,584; Feb. 20; v. 235; p. 831.
Mateer, Walter, Mansfield, Ohio. Suspenders. No. 1,214,569; Feb. 6; v. 235; p. 80.
Matheson, Gilbert R., and J. B. Shaw, Winnipeg, Manitoba, Canada. Attachment to automobile-headlights. No. 1,217,199; Feb. 27; v. 235; p. 1084.
Mathews, Frank, Winnipeg, Manitoba, Canada. Mail catching and delivering apparatus. No. 1,217,478; Feb. 27; v. 235; p. 1180.
Mathies, Franklyn L., Rochester, assignor to Royal Typewriter Company, Inc., New York, N. Y. Combined front-lever and type-bar support. No. 1,217,325; Feb. 27; v. 235; p. 1126.
Matthews, Charles D., Columbia, Mo., and A. D. Mitchell, Muskogee, Okla. Accordion-pleating machine. No. 1,217,874; Feb. 27; v. 235; p. 1317.
Matthews, George S., Brotherton, Tenn. Vegetable-slicer. No. 1,215,296; Feb. 6; v. 235; p. 283.
Mattice, John H., Clyde, Kans. Permutation-lock. No. 1,217,802; Feb. 27; v. 235; p. 1294.
Mattison, Carl L., assignor to C. Mattison Machine Works, Beloit, Wis. Portable veneer-trimmer. No. 1,216,340; Feb. 20; v. 235; p. 743.
Matz, Michael, Mineola, N. Y. Search-light. No. 1,215,043; Feb. 6; v. 235; p. 199.
Maulsby, Edwin S., Ridgewood, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,214,570; Feb. 6; v. 235; p. 30.
Maupin, William L. (See Long, Charles H., assignor.)
Maury, Mason, and W. C. Magruder, Louisville, Ky. Shower-bath. No. 1,215,681; Feb. 13; v. 235; p. 458.
Maxwell, John S., assignor to The Starr Piano Company, Richmond, Ind. Automatic tracker attachment. No. 1,215,297; Feb. 6; v. 235; p. 283.
Maxwell, Ralph S., assignor of one-half to J. M. Parker, Portland, Oreg. Yard-truck. No. 1,217,479; Feb. 27; v. 235; p. 1181.
May, Frank T., Avis, Pa. Plate-holder. No. 1,215,834; Feb. 13; v. 235; p. 511.
May, Frank W., Seattle, Wash. Movable filling-bridge. No. 1,216,830; Feb. 20; v. 235; p. 913.
May, William H., Yonkers, assignor to Bramhall Deane Company, New York, N. Y. Sterilizer. No. 1,215,682; Feb. 13; v. 235; p. 458.
Mayer, Bertram. (See Wuth, Mayer, Jagerspacher, and Anderwert.)
Maynard, Lewis H., Rye, N. Y. Duplicating-machine. No. 1,217,480; Feb. 27; v. 235; p. 1181.
Mayo, William B. (See Geoghegan, Mayo, and Turner.)
Mayolino, Luis, assignor to Ruedas y Neumaticos Mayolino, Habana, Cuba. Pneumatic vehicle-wheel. No. 1,214,811; Feb. 6; v. 235; p. 113.
McAfee, Almer M., Port Arthur, Tex., assignor to Gulf Refining Company, Pittsburgh, Pa. Manufacture of aluminum chlorid. No. 1,217,471; Feb. 27; v. 235; p. 1178.
McAfee, Jane K., Brooklyn, N. Y. Clothes-rack. No. 1,215,175; Feb. 6; v. 235; p. 241.
McArthur, Charles D., Pittsburgh, Pa., assignor to Blaw Steel Construction Company. Wall-form. No. 1,216,335; Feb. 20; v. 235; p. 741.
McAtee, William A., *et al.* (See Norman, Frank, assignor.)
McBride, John, Chillicothe, Mo. Steam-cooker. No. 1,216,336; Feb. 20; v. 235; p. 742.
McCabe, Horace B., assignor to Gisholt Machine Company, Madison, Wis. Time-recording register. No. 1,215,683; Feb. 13; v. 235; p. 459.
McCabe, Thomas P., Maywood, Ill. Beet-harvester. No. 1,216,715; Feb. 20; v. 235; p. 874.
McCall, Elvin C. (See McCall, O'Sullivan, and McCall.)
McCall, William, M. O'Sullivan, and E. C. McCall, San Francisco, Cal. Puncture-proof spring-tire. No. 1,217,124; Feb. 20; v. 235; p. 1014.
McCarthy, Judson D. (See Johnson, Emil, assignor.)
McCarthy, Louis, assignor to The Macallen Company, Boston, Mass. Hickey. No. 1,215,562; Feb. 13; v. 235; p. 414.
McCaskey, John A., Hagerhill, Ky. Combined cigar and match case. No. 1,215,291; Feb. 6; v. 235; p. 281.
McCaskey Register Company, The. (See Jacobs, George, assignor.)
McCauley, John C. F., Fowler, Kans. Header. No. 1,216,585; Feb. 20; v. 235; p. 831.
McCauley, John C. F., Fowler, Kans. Buffer. No. 1,217,033; Feb. 20; v. 235; p. 982.
McClelland, David H., Chicago, Ill. Nail-making machine. No. 1,217,194; Feb. 27; v. 235; p. 1082.
McCloud, Edward H., assignor to The Kinnear Manufacturing Company, Columbus, Ohio. Locking and releasing device for fire-shutters. No. 1,216,822; Feb. 20; v. 235; p. 911.
McClure, Roderick, Gilman, Mont. Demountable rim. No. 1,216,823; Feb. 20; v. 235; p. 911.
McCollum, Harry H., Crystal Lake, Ill. Gas-lighting apparatus. No. 1,216,824; Feb. 20; v. 235; p. 911.

McConnell, Duncan A., Arlington, and R. Wandras, Kearney, N. J. Flushing-valve. No. 1,217,792; Feb. 27; v. 235; p. 1291.
McCooe, Patrick H., Indiana Harbor, Ind. Anticreeper for railway-rails. No. 1,215,392; Feb. 13; v. 235; p. 351.
McCormick Manufacturing Company. (See Kopf, Melrose G., assignor.)
McCoy, John F., deceased, Brooklyn, N. Y.; M. McCoy, administratrix. Automatic safety signaling and braking device for trains. No. 1,215,952; Feb. 13; v. 235; p. 554.
McCoy, Mary, administratrix. (See McCoy, John F.)
McCoy, Thomas J., Kane, Pa. Glass manufacture. No. 1,217,614; Feb. 27; v. 235; p. 1230.
McCrea, William G., Bronxville, N. Y. Fruit-juice-dispensing device. No. 1,215,310; Feb. 6; v. 235; p. 288.
McCulloch, Alfred H. and C. D., Boston, Mass. Electric conductor. No. 1,216,337; Feb. 20; v. 235; p. 742.
McCulloch, Caroline D. (See McCulloch, Alfred H. and C. D.)
McCulloh, Allan, *et al.*, executors. (See Kendall, Edward D., assignor.)
McDaniel, Joshua S., Wichita Falls, Tex. Bottle-washing apparatus. No. 1,217,887; Feb. 27; v. 235; p. 1322.
McDaniel, Thomas C., and R. M. Frawley, Rochester, N. Y. Window-screen. No. 1,217,793; Feb. 27; v. 235; p. 1291.
McDaniels, Frank, Harlem, Mont. Restraining device. No. 1,217,034; Feb. 20; v. 235; p. 982.
McDonald, Augustine. (See McNeil and McDonald.)
McDonald, Duncan B. (See McNeil and McDonald.)
McDonald, Eugene F., Jr., Chicago, Ill. Phonographic attachment. No. 1,217,794; Feb. 27; v. 235; p. 1292.
McDonald, Hans P., River Falls, Wis. Miter-box. No. 1,214,561; Feb. 6; v. 235; p. 27.
McDonough, Patrick W. (See Focha, William F., assignor.)
McDowell, Alexander, deceased; I. R. McDowell, administratrix, assignor to V. H. McDowell, Lynn, Mass. Polishing-roll. No. 1,216,244; Feb. 13; v. 235; p. 658.
McDowell, Ernest L., Arkansas City, Kans. Device for fitting eyeglass-lenses. No. 1,217,035; Feb. 20; v. 235; p. 982.
McDowell, George, Brooklyn, N. Y. Feed-water heater. No. 1,217,795; Feb. 27; v. 235; p. 1292.
McDowell, Ida R., administratrix. (See McDowell, Alexander.)
McDowell, James, Brooklyn, N. Y. Exhaust device for internal-combustion engines. No. 1,217,615; Feb. 27; v. 235; p. 1231.
McDowell, Valentine H. (See McDowell, Alexander, assignor.)
McElroy, James F., deceased, Albany, N. Y.; S. H. McElroy, executrix, assignor to Consolidated Car-Heating Company. Trolley-controlled apparatus. No. 1,215,393; Feb. 13; v. 235; p. 351.
McElroy, John H. (See Hopkins, Harvey L., assignor.)
McElroy, Susie H., executrix. (See McElroy, James F.)
McEwen, Willard M., Chicago, Ill. Electric fan. No. 1,214,698; Feb. 6; v. 235; p. 76.
McFarland, Guy E., Olile, Mont. Crate. No. 1,217,796; Feb. 27; v. 235; p. 1293.
McFarland, Harvey P. (See Moir and McFarland.)
McFerren, William S., assignor of one-third to H. A. Bergner, Chambersburg, Pa. Double-action pump. No. 1,217,195; Feb. 27; v. 235; p. 1082.
McGahan, Frederick L., Los Angeles, Cal. Condensing and vacuum draft mechanism for furnaces. No. 1,217,100; Feb. 20; v. 235; p. 1004.
McGrath, Patrick J., Elizabeth, N. J. Lawn-mower shears. No. 1,214,562; Feb. 6; v. 235; p. 27.
McGregor, Alexander G., Warren, Ariz. Automobile-hood. No. 1,215,684; Feb. 13; v. 235; p. 459.
McGuire, Michael L., Syracuse, N. Y. Sewer-vent cap. No. 1,215,685; Feb. 13; v. 235; p. 460.
McIntosh, Thomas. (See Blough and McIntosh.)
McIntyre, John C., Hoopeston, assignor to Sprague Canning Machinery Company, Chicago, Ill. Corn-cutting machine. No. 1,215,563; Feb. 13; v. 235; p. 414.
McKay, Daniel, Arnprior, Ontario, Canada. Door-lock. No. 1,215,686; Feb. 13; v. 235; p. 460.
McKay, James J., Dossville, Miss. Crate. No. 1,215,292; Feb. 6; v. 235; p. 281.
McKee, Neal T., Yonkers, assignor to Locomotive Superheater Company, New York, N. Y. Water-supplying device for locomotive-tenders. No. 1,215,953; Feb. 13; v. 235; p. 554.
McKee, Ralph H., Orono, Me. Preparation of dull-finish coating materials. No. 1,216,338; Feb. 20; v. 235; p. 742.
McKevitt, Frank B. (See Wood, William G., assignor.)
McKinney, James P., Jr. (See Painter and McKinney.)
McKnight, James A., Jeffersonville, Ind. Telephone-carrier. No. 1,216,153; Feb. 13; v. 235; p. 627.
McLachlan, John C., Toronto, Ontario, Canada. Mold for casting shells. No. 1,215,564; Feb. 13; v. 235; p. 414.
McLenon, Thomas L. (See Hirsh and McLenon.)
McLeod, Kenneth, Seattle, Wash. Nut-lock. No. 1,216,586; Feb. 20; v. 235; p. 831.
McLeod, Malcolm J. (See Dolan, Halley C., assignor.)
McLeod, Nelson W., St. Louis, Mo., assignor to American Motors Tire Company, Detroit, Mich. Mold for making pneumatic tires. No. 1,215,828; Feb. 13; v. 235; p. 509.
McManus, Edwin J., assignor of one-half to E. T. Walters, Cazenovia, N. Y. Rain-signal. No. 1,217,036; Feb. 20; v. 235; p. 982.
McMillan, Frank G. and H. O., Minneapolis, Minn. Clamp for concrete-forms. No. 1,216,825; Feb. 20; v. 235; p. 912.
McMillan, Howard O. (See McMillan, Frank G. and H. O.)
McMullen, John, Buffalo, N. Y. Car-roof. No. 1,215,954; Feb. 13; v. 235; p. 555.
McMurray, Samuel M., Smyrna, and J. R. Parrish, Nashville, Tenn. Pigment-powder and making the same. No. 1,215,293; Feb. 6; v. 235; p. 282.
McNally, Leo F., Brooklyn, assignor to Transportation Utilities Company, New York, N. Y. Roofing. No. 1,217,196; Feb. 27; v. 235; p. 1082.
McNally, Leo F., Brooklyn, N. Y., assignor to D. W. Pye, Red Bank, N. J. Trap-door lock. No. 1,217,197; Feb. 27; v. 235; p. 1083.
McNeil, Chester, assignor to Union Special Machine Company, Chicago, Ill. Seam for sewed articles. No. 1,214,563; Feb. 6; v. 235; p. 28.
McNeil, John L., D. B. and A. McDonald, Birch Grove, Nova Scotia, Canada. Rail brace or clamp. No. 1,216,339; Feb. 20; v. 235; p. 742.
McNitt, Robert J., Niagara Falls, assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y. Reducing metals. No. 1,214,808; Feb. 6; v. 235; p. 112.
McPherson, Amelia, assignor of one-half to R. W. Conn, Edmonton, Alberta, Canada. Swing. No. 1,215,394; Feb. 13; v. 235; p. 352.
McQuarrie, James L., Oak Park, and F. H. Loveridge, Chicago, Ill., assignors, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,217,472; Feb. 27; v. 235; p. 1178.
McQuay-Norris Manufacturing Company. (See Mummert, Arden J., assignor.)
McTaggart, John A., Philadelphia, Pa. Tire. No. 1,216,826; Feb. 20; v. 235; p. 912.
McVoy, Vincen P., assignor of one-half to J. M. Walsh, Mobile, Ala. Automatic drifting-valve for locomotives. No. 1,215,947; Feb. 13; v. 235; p. 552.
Mead, John N. (See Squier, Natt, assignor.)
Meador, Joseph B. (See Brown and Meador.)
Meadway, Ernest G., assignor to The British Patent Surbrite Company Limited, London, England. Screen for moving and other projected pictures. No. 1,216,154; Feb. 13; v. 235; p. 627.
Mechanical Rubber Company. (See Kinsley, Morren, and Haynes, assignors.)
Mechau, Frederick A., assignor to J. M. Biddle, Washington, D. C., and W. C. Marrow, Narragansett Pier, R. I. Time-controlled electric switch. No. 1,217,618; Feb. 27; v. 235; p. 1232.
Meek, Sturges F., Brooklyn, N. Y. Hatch-opening mechanism. No. 1,216,155; Feb. 13; v. 235; p. 627.
Mefford, William G., Ava, Mo. Shoe-polishing machine. No. 1,217,803; Feb. 27; v. 235; p. 1295.
Megathlin, Jesse L., Miami, Fla., assignor of one-fourth to J. W. Cook, one-fourth to J. A. Pegg, and one-fourth to J. A. Waldeck. Rotary cutter. No. 1,217,108; Feb. 20; v. 235; p. 1007.
Meginniss, Francis R. (See Havens and Meginniss.)
Megow, Charles F., Detroit, Mich. Attachment for tractors. No. 1,215,687; Feb. 13; v. 235; p. 460.
Mehlberger, Louis, Easton, Pa. Fertilizer-distributer and planter. No. 1,215,955; Feb. 13; v. 235; p. 555.
Meier, Albert J., Glendale, and W. L. Swift, assignors to The Temco Manufacturing Company, St. Louis, Mo. Automatic operating means for ticket vending and registering machines. No. 1,215,178; Feb. 6; v. 235; p. 242.
Meinecke, Joseph, Paia, Maui, Hawaii. Rotary cutter for sugar-cane and the like. No. 1,217,326; Feb. 27; v. 235; p. 1126.
Meissner, Alexander. (See Arco and Meissner.)
Melas, William, Ridley Park, assignor to D. Townsend, Philadelphia, Pa. Gage. No. 1,216,831; Feb. 20; v. 235; p. 914.
Melde, Friedrich W., Norfolk, Va. Cement-block mold. No. 1,214,571; Feb. 6; v. 235; p. 31.
Meldrim, Charles R., Cincinnatus, and J. J. Meldrim, Truxton, N. Y. Round box. No. 1,215,956; Feb. 13; v. 235; p. 556.
Meldrim, Josiah J. (See Meldrim, Charles R. and J. J.)
Meldrum, Charles. (See Wall and Meldrum.)
Mellen, Grenville, East Orange, N. J. Casting-pot. No. 1,216,341; Feb. 20; v. 235; p. 744.
Melown, George E., McKeesport, Pa. Apparatus for conveying and piling metal sheets. No. 1,216,832; Feb. 20; v. 235; p. 914.
Melson, John, Windsor, Cal. Box construction. No. 1,216,587; Feb. 20; v. 235; p. 832.
Melville, Charles F. (See Taylor and Melville.)
Melvin, Mark G., Scranton, Pa. Liquid-soap dispenser. No. 1,215,298; Feb. 6; v. 235; p. 283.
Menco-Elma Syndicate Limited. (See Pollard, George, assignor.)
Mendel-Drucker Company, The. (See Klein and Luttmann, assignors.)
Mendel, William. (See Elias and Mendel.)
Mensching, Carl, Birkenhead, assignor to W. E. Mounsey, Liverpool, England. Monoazo dye. No. 1,217,042; Feb. 20; v. 235; p. 985.

Mensforth, Holberry, Manchester, England, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Internal-combustion engine. No. 1,214,937; Feb. 6; v. 235; p. 159.
Mentzer, John P. (See Crowdus, Walter A., assignor.)
Mercury Manufacturing Company. (See Bulley, George W., assignor.)
Meredith-Jones, Hubert, New York, N. Y., assignor to The Rotor Vacuum Cleaner Company, Inc. Rotary fan. No. 1,214,812; Feb. 6; v. 235; p. 113.
Mernyk, Maurice, Detroit, Mich. Combination easy-chair. No. 1,214,701; Feb. 6; v. 235; p. 78.
Merrell-Soule Company. (See Gere, William B., assignor.)
Merritt, Joseph, Hartford, and W. A. Sawyer, West Hartford, assignors to The Hartford Lock Ring Company, Hartford, Conn. Bending tubing. No. 1,217,101; Feb. 20; v. 235; p. 1004.
Mertz, Frank A., New York, N. Y. Non-refillable bottle. No. 1,216,343; Feb. 20; v. 235; p. 744.
Mertz, Herman B., Beach View, Pa. Valve-spring lifter. No. 1,214,572; Feb. 6; v. 235; p. 31.
Merwin, George M., Berwyn, Ill., assignor to International Harvester Company of New Jersey. Ensilage-cutter distributer. No. 1,216,342; Feb. 20; v. 235; p. 744.
Metcalfe, Hugh, Almonte, Ontario, Canada. Poison-bottle guard. No. 1,214,938; Feb. 6; v. 235; p. 160.
Methot, Magloire, Ottawa, Ontario, Canada. Switch. No. 1,217,043; Feb. 20; v. 235; p. 985.
Metrewitz, Charlis, Chicago, Ill. Washing-machine. No. 1,214,574; Feb. 6; v. 235; p. 31.
Metzger, Jules P., Carlstadt, assignor to The Leslie Company, Lyndhurst, N. J. Coupling. No. 1,217,804; Feb. 27; v. 235; p. 1295.
Mewes, Richard W., Des Moines, Iowa. Boring-bar. No. 1,217,481; Feb. 27; v. 235; p. 1181.
Mewes, Rudolf, Berlin, Germany. Apparatus for liquefying and separating gases. No. 1,215,957; Feb. 13; v. 235; p. 556.
Meyberg, Eugene J., Los Angeles, Cal. Lighting-fixture. No. 1,215,299; Feb. 6; v. 235; p. 284.
Meyer, Fred, Malad City, Idaho. Sand-pipe cleaner. No. 1,217,327; Feb. 27; v. 235; p. 1126.
Meyer, Frederick B., assignor of one-half to J. F. Ritterpusch, Baltimore, Md. Article-holder. No. 1,216,716; Feb. 20; v. 235; p. 875.
Meyerowitz Manufacturing Company. (See Lehr, Louis, assignor.)
Meyers, John A., Forestell, Mo. Stovepipe-joint lock. No. 1,217,805; Feb. 27; v. 235; p. 1296.
Meyers, Samuel L., Oceanpark, assignor to Sam Meyers & Company, Los Angeles, Cal. Coffee-maker. No. 1,217,044; Feb. 20; v. 235; p. 985.
Meyers, Willard F., Long Island City, and M. Simons, New York, N. Y. Shaping mechanism for planing-machines. No. 1,216,588; Feb. 20; v. 235; p. 832.
Meyner, Walter, New York, N. Y. Toy. No. 1,216,589; Feb. 20; v. 235; p. 833.
Meyner, Walter, New York, N. Y. Toy. No. 1,216,590; Feb. 20; v. 235; p. 833.
Michaelsen, Harold N. (See Thomson and Michaelsen.)
Michajlov, Mita, New York, N. Y. Artificial limb. No. 1,215,835; Feb. 13; v. 235; p. 511.
Mid-West Box Company. (See Hans, Thomas, assignor.)
Midgley, Albert H., and C. A. Vandervell, Acton Vale, England. Self-regulating dynamo-electric machine. No. 1,217,482; Feb. 27; v. 235; p. 1182.
Midwest Metals Company, The. (See Maim, John L., assignor.)
Miehle Printing Press & Manufacturing Company, The. (See Clark, Edward L. C., assignor.)
Mill Devices Company. (See Byrd, Britton E., assignor.)
Miller, Charles R. and T. A. Key, Whitesboro, Tex. Meat-slicer. No. 1,214,939; Feb. 6; v. 235; p. 160.
Miller, Charles Z., and R. H. Klickman, Chicago, Ill. Combined sled and wheeled vehicle. No. 1,217,200; Feb. 27; v. 235; p. 1084.
Miller, D D, Canton, Ohio. Track for sliding doors. No. 1,216,591; Feb. 20; v. 235; p. 833.
Miller, Earnest H., Ladysmith, Wis. Window-shade trimmer and roller-cutter. No. 1,214,575; Feb. 6; v. 235; p. 32.
Miller, Emmett S., Peoria, Ill. Elevator system. No. 1,216,476; Feb. 20; v. 235; p. 792.
Miller, Frank J., Fostoria, Ohio. Valve-lock. No. 1,215,958; Feb. 13; v. 235; p. 556.
Miller, Guy H., Monticello, Me. Derrick. No. 1,215,959; Feb. 13; v. 235; p. 557.
Miller, Harry, *et al.* (See Clinton, Michael, assignor.)
Miller, Henry C., Waterford, N. Y., assignor to Victor Talking Machine Company, Camden, N. J. Automatic stopping device for sound-reproducing machines. (Reissue.) No. 14,257; Feb. 6; v. 235; p. 296.
Miller, Hoyt, New York, N. Y., assignor to Brewster Film Corporation, Newark, N. J. Coloring or dyeing photographic images. No. 1,214,940; Feb. 6; v. 235; p. 160.
Miller, James A. (See Saxton, Stephen F., assignor.)
Miller, James G., Princeton, W. Va. Mail-bag catcher. No. 1,217,806; Feb. 27; v. 235; p. 1296.
Miller, Joseph H., Sterlington, N. Y. Rail-fastening. No. 1,216,344; Feb. 20; v. 235; p. 744.
Miller, Julius J., St. Joseph, Mich., assignor, by mesne assignments, to Wirebounds Patents Company, Kittery, Me. Wire-bound-box-blank machine. No. 1,214,702; Feb. 6; v. 235; p. 78.
Miller Rubber Company, The. (See Griffith, Richard T., assignor.)
Miller, Thomas B., assignor to Wireless Instrument Company, Seattle, Wash. Transmitting apparatus for wireless-telegraph stations. No. 1,217,483; Feb. 27; v. 235; p. 1182.
Miller, Thomas W., assignor to The Faultless Rubber Co., Ashland, Ohio. Bathing-cap. No. 1,215,311; Feb. 6; v. 235; p. 288.
Miller Vehicle Heater Company. (See Miller, William H., assignor.)
Miller, Walter R., Bellville, Ohio. Riveting-tool. No. 1,216,717; Feb. 20; v. 235; p. 875.
Miller, William H., assignor to Miller Vehicle Heater Company, Crawfordsville, Ind. Vehicle-heater. No. 1,217,110; Feb. 20; v. 235; p. 1008.
Miller, William M., Azusa, Cal. Condiment-holder. No. 1,217,045; Feb. 20; v. 235; p. 986.
Miller, William P. (See Gunther and Miller.)
Milliken, John T. (See Snelling, Walter O., assignor.)
Milliken, Lloyd A., Lansing, Mich. Detachable agitator for washing-machines. No. 1,216,477; Feb. 20; v. 235; p. 792.
Mills, Chester B., East McKeesport, Pa., assignor to Westinghouse Electric and Manufacturing Company. Starting device for automobiles. No. 1,215,568; Feb. 13; v. 235; p. 416.
Milon, Frank J., *et al.* (See Eckenroth, Philip, assignor.)
Milton, John L., Tiffin, Ohio, assignor to Motor Ignition & Devices Company. Magneto ignition system for internal-combustion engines. No. 1,217,484; Feb. 27; v. 235; p. 1183.
Milwaukee Corrugating Company. (See Kuehn, Louis, assignor.)
Minotti, Peter C. (See Dewees, Benjamin F., assignor.)
Mintern, Richard A., Horsham, Victoria, Australia. Cultivating implement. No. 1,215,322; Feb. 6; v. 235; p. 292.
Mirau, Joseph M., Crosby, Minn. Vehicle-controlled door-operating mechanism. No. 1,216,345; Feb. 20; v. 235; p. 745.
Mitchell, Addie D. (See Matthews and Mitchell.)
Mitchell, John E., St. Louis, Mo. Lift-centering mechanism for heel-building machines. No. 1,217,201; Feb. 27; v. 235; p. 1084.
Mitchell, Lena B., New Orleans, La. Bodkin. No. 1,217,046; Feb. 20; v. 235; p. 986.
Mitchell, Luther W., Abanda, Ala. Nut-lock. No. 1,216,833; Feb. 20; v. 235; p. 915.
Mitchell, William, Milwaukee, Wis. Guard for stalls. No. 1,215,569; Feb. 13; v. 235; p. 417.
Mittasch, Alwin. (See Bosch, Mittasch, and Schneider.)
Mittasch, Alwin, C. Schneider, and H. Morawitz, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Catalytic agent. No. 1,215,396; Feb. 13; v. 235; p. 352.
Mittinger, George E., Youngstown, Ohio, assignor of fifteen-sixteenths to Pressed Steel Products Company, Sharon, Pa. Removable head for barrels. No. 1,216,718; Feb. 20; v. 235; p. 875.
Mix, Melville W., Mishawaka, Ind. Reinforced veneer. No. 1,215,570; Feb. 13; v. 235; p. 417.
Modlin, Charles W., and H. J. Lutz, Monongahela, Pa. Pot for window-glass machines. No. 1,215,571; Feb. 13; v. 235; p. 417.
Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Feeding mechanism for sewing-machines. No. 1,217,328; Feb. 27; v. 235; p. 1126.
Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Sewing and binding machine. No. 1,217,329; Feb. 27; v. 235; p. 1127.
Moffatt, James R., and R. S. Kelso, assignors to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 1,214,576; Feb. 6; v. 235; p. 32.
Mohun, John L., Brooklyn, N. Y. Car-roof sheet. No. 1,217,485; Feb. 27; v. 235; p. 1183.
Moir, James, and H. P. McFarland, Burlington, Iowa. Corn-planter attachment. No. 1,215,960; Feb. 13; v. 235; p. 557.
Molin, Arthur E., Rockford, Ill. Resilient tire. No. 1,217,619; Feb. 27; v. 235; p. 1233.
Moline Automobile Co. (See Gruenewald, Eugene, assignor.)
Moll, Clinton, Olathe, Kans. Corn-planter. No. 1,214,577; Feb. 6; v. 235; p. 33.
Moller, H. Esk, *et al.*, executors. (See Kendall, Edward D., assignor.)
Möller, Johan P., assignor to Boss Manufacturing Company, Kewanee, Ill. Glove and mitten. No. 1,215,688; Feb. 13; v. 235; p. 460.
Monner, Frank. (See Hughes, Robert B., assignor.)
Monro, Gibson R. (See Jones and Monro.)
Monroe Calculating Machine Company. (See Phinney, Edgar E., assignor.)
Monroe, Nathaniel S., Arthur, Ill. Road-leveling machine. No. 1,215,044; Feb. 6; v. 235; p. 199.
Monroe, Nathaniel S., Arthur, Ill. Road-machine. No. 1,215,045; Feb. 6; v. 235; p. 199.
Montague Mailing Machinery Co. (See Lee, Ulysses G., assignor.)
Montanari, Angelo, Pensacola, Fla. Antiskidding attachment. No. 1,215,179; Feb. 6; v. 235; p. 242.
Montgomery, George B., Rupert, Idaho. Trip device for hay-carriers. No. 1,215,046; Feb. 6; v. 235; p. 200.

Moon, Sumner A., Butte, Mont. Beet-topping machine. No. 1,217,330; Feb. 27; v. 235; p. 1127.
Moon, William D., assignor of one-half to C. W. Lowrey, Blocton, Ala. Safety-stop for mine-cars. No. 1,217,620; Feb. 27; v. 235; p. 1233.
Mooney, Ben S. (See Quattlebaum and Mooney.)
Mooney, William T., Bottineau, N. D. Buggy-axle brace. No. 1,216,346; Feb. 20; v. 235; p. 745.
Moore, George W., Tulsa, Okla. Reversing-gear mechanism. No. 1,214,703; Feb. 6; v. 235; p. 79.
Moore, Lewis L., Massillon, Ohio. Garment-fastener. No. 1,214,704; Feb. 6; v. 235; p. 79.
Moore, Milo W., Boise, Idaho. Wall-coating composition. No. 1,217,331; Feb. 27; v. 235; p. 1127.
Moore, Philip W., Evanston, assignor to The P. & M. Co., Chicago, Ill. Anticreeper. No. 1,216,156; Feb. 13; v. 235; p. 628.
Moore, Quintin, Riddrie, Glasgow, Scotland. Treatment and recovery of tar and ammonia liquor from producer or other gas. No. 1,215,300; Feb. 6; v. 235; p. 284.
Moore, Walter F., Livingston, Mont. Barrel-cover. No. 1,214,813; Feb. 6; v. 235; p. 114.
Moore, William D., Creston, Iowa. Mold for casting poured-concrete blocks. No. 1,215,961; Feb. 13; v. 235; p. 557.
Moorman Manufacturing Company. (See Cox, Charles A., assignor.)
Morawitz, Hugo. (See Mittasch, Schneider, and Morawitz.)
More, Orlo S. (See Bailey, Barr, More, and Long.)
Morén, Karl H., Bofors, Sweden. Shell-fuse. No. 1,216,834; Feb. 20; v. 235; p. 915.
Morgan, Philip. (See Holden and Morgan.)
Morgridge, Lyman H., San Diego, Cal. Box-making machine. No. 1,214,814; Feb. 6; v. 235; p. 114.
Morrill, Margaret M., Santa Barbara, Cal. Detaining attachment for beds. No. 1,216,719; Feb. 20; v. 235; p. 876.
Morris, Arthur. (See Boeckem, Fritz W. O., assignor.)
Morris, Charles D., Norfolk, Va. Brake-beam. No. 1,215,397; Feb. 13; v. 235; p. 352.
Morris, Frank F., Pittsburgh, and F. M. Luchs, Wilkinsburg, Pa., assignors to Drägerwerk, Heinr. and Bernh. Dräger, Lübeck, Germany. Resuscitating device. No. 1,214,941; Feb. 6; v. 235; p. 161.
Morris, Isaac J., New York, N. Y. Crate. No. 1,214,815; Feb. 6; v. 235; p. 115.
Morris, John D., Waynesboro, Va. Snow-plow. No. 1,214,942; Feb. 6; v. 235; p. 161.
Morris, Lewis G., Newport, R. I. Projection apparatus. No. 1,216,835; Feb. 20; v. 235; p. 915.
Morris, Melton, Dutton, Ala. Feed-regulator. No. 1,217,621; Feb. 27; v. 235; p. 1233.
Morris, Thomas L., Huntington, W. Va. Barrel-hoist. No. 1,217,047; Feb. 20; v. 235; p. 986.
Morrison, John C., Spokane, Wash. Luggage-rack for automobiles. No. 1,217,807; Feb. 27; v. 235; p. 1296.
Morrison, Seymour, and F. H. Fitch, Indianapolis, Ind. Art-stage. No. 1,215,962; Feb. 13; v. 235; p. 558.
Morrissey, Arthur R., Seattle, assignor of one-third to E. R. Gerber, King county, Wash. Sander for vehicles. No. 1,217,202; Feb. 27; v. 235; p. 1085.
Morron, John D. (See Kinsley, Morron, and Haynes.)
Morrow, Alfred J., Vancouver, British Columbia, Canada. Stevedore's peavy. No. 1,215,180; Feb. 6; v. 235; p. 242.
Mors, Frank E., Detroit, Mich. Nailless combination window shade and curtain hanger. No. 1,216,592; Feb. 20; v. 235; p. 834.
Mortimer, Harry G., New York, N. Y. Engine. No. 1,215,963; Feb. 13; v. 235; p. 558.
Mortimer, Leonard, Boston, Mass. Lifting-jack. No. 1,216,157; Feb. 13; v. 235; p. 628.
Moskovics, Fredrick E., assignor to The New Departure Manufacturing Company, Bristol, Conn. Gearing. No. 1,215,047; Feb. 6; v. 235; p. 200.
Moskowitz, Rudolph, assignor of one-half to J. Gewirtz, New York, N. Y. Expanded tire. No. 1,217,486; Feb. 27; v. 235; p. 1184.
Motor Ignition & Devices Company. (See Milton, John L., assignor.)
Moulder, George C. (See Greenstreet and Moulder.)
Mounsey, William E. (See Mensching, Carl, assignor.)
Movsessian, Missak. (See Vincent, Joseph E., assignor.)
Moyer, Malcolm B., Montevideo, Minn. Sure-stop attachment for stanchions. No. 1,215,898; Feb. 18; v. 235; p. 352.
Moyle, William J., Houghton, Mich. Bird-trap. No. 1,215,048; Feb. 6; v. 235; p. 200.
Moynihan, Andrew. (See Gillies and Moynihan.)
Mrozinski, Antoni, New York, N. Y. Mill-pick jig. No. 1,217,808; Feb. 27; v. 235; p. 1296.
Muckenhirn, Charles H., Detroit, Mich., assignor to Standard Sanitary Manufacturing Co., Pittsburgh, Pa. Water-closet bowl. No. 1,215,049; Feb. 6; v. 235; p. 201.
Muehlberg, Karl O., Manitowoc, Wis. Tube-coupling. No. 1,217,203; Feb. 27; v. 235; p. 1085.
Mueller, Samuel, Jersey City, N. J. Folding noodles. No. 1,217,891; Feb. 27; v. 235; p. 1323.
Muff, William F. (See Harris and Muff.)
Muha, Edward A. (See Fischer, George B., assignor.)
Müller, Frank X., assignor to Republic Hose Coupler Corporation, Buffalo, N. Y. Hose-coupling. No. 1,215,050; Feb. 6; v. 235; p. 201.
Muller, Frederick, Elizabeth, N. J. Holder for sine-bars and similar implements. No. 1,217,487; Feb. 27; v. 235; p. 1184.
Mulrony, Marion A., Randwick, near Sydney, New South Wales, Australia. Wireless-telegraph transmitter of the portable type. No. 1,216,720; Feb. 20; v. 235; p. 876.
Multiplex Sales Register Company. (See Heldrich, Andrew, assignor.)
Multipost Company. (See Balkwill, Wesley J., assignor.)
Multipost Company. (See Richmond, Balkwill, and Schweiger, assignors.)
Mumm, Hans, Lidgerwood, N. D. Grain-shocker. No. 1,217,332; Feb. 27; v. 235; p. 1128.
Mummert, Arden J., assignor to McQuay-Norris Manufacturing Company, St. Louis, Mo. Spark-plug. No. 1,215,836; Feb. 13; v. 235; p. 512.
Munsey, Frank, Persia, Tenn. Plow. No. 1,216,836; Feb. 20; v. 235; p. 915.
Munson, John B., and P. F. Hagerty, Phillipsburg, N. J. Portable track and tire-protector. No. 1,215,301; Feb. 6; v. 235; p. 284.
Murphy, Edward H., Chicago, Ill. Steam valve and fitting for heating systems. No. 1,216,348; Feb. 20; v. 235; p. 746.
Murphy, Eugene A., E. Z. Lewis, and W. V. Wilson, Chicago, Ill. Return-envelop. No. 1,216,347; Feb. 20; v. 235; p. 746.
Murphy, Peter F., New Orleans, La. Cyanid-gas fumigating apparatus. No. 1,216,593; Feb. 20; v. 235; p. 834.
Murphy, Walter P. (See Daughenbaugh, Lawrence W., assignor.)
Murray, James. (See Lightell, Adam, assignor.)
Murray, John A., and C. N. Wilt, Pontiac, Mich. Non-skid device. No. 1,215,302; Feb. 6; v. 235; p. 284.
Murray, Thomas E., New York, N. Y. Electric welding-machine. No. 1,215,964; Feb. 13; v. 235; p. 558.
Murray, Thomas E., New York, N. Y. Flanging the end of a metal tube. No. 1,215,965; Feb. 13; v. 235; p. 559.
Murray, Thomas E., New York, N. Y. Means for electrically welding tubes in sleeves. No. 1,215,966; Feb. 13; v. 235; p. 559.
Murray, Thomas E., New York, N. Y. Electrically-welded tube and flange-plate. No. 1,215,967; Feb. 13; v. 235; p. 559.
Murray, Thomas E., New York, N. Y. Making sheet-metal wheels. No. 1,215,968; Feb. 13; v. 235; p. 559.
Murray, Thomas E., New York, N. Y. Sheet-metal piston. No. 1,215,969; Feb. 13; v. 235; p. 560.
Murray, William M., Canajoharie, N. Y. Window-shade guide. No. 1,216,594; Feb. 20; v. 235; p. 834.
Murrian, William S. (See Boyden, Nathaniel N., assignor.)
Musselman Cord Fabric Company. (See Pye, Ernest A., assignor.)
Musso, Giuseppe, Vado, Italy. Transmission of electrical impulses over circuits of high electrostatic capacity. No. 1,216,595; Feb. 20; v. 235; p. 834.
Mutz, Emery H. and V. C., Sacred Heart, Minn. Accelerator. No. 1,217,875; Feb. 27; v. 235; p. 1317.
Mutz, Vergil C. (See Mutz, Emery H. and V. C.)
Myer, Fred C., Port Jervis, N. Y. Lawn-trimmer. No. 1,217,204; Feb. 27; v. 235; p. 1085.
Myers and Brother, F. E. (See Myers, Philip A., assignor.)
Myers, H. M. (See Eaken, Dwight A., assignor.)
Myers, Philip A., assignor to F. E. Myers and Brother, Ashland, Ohio. Pressure-controlling device. No. 1,217,333; Feb. 27; v. 235; p. 1128.
Myers, Walker B., Denver, Colo. Rod-bending machine. No. 1,217,488; Feb. 27; v. 235; p. 1184.
Myhran, Oscar. (See Kosciako, Michael, assignor.)
Myrick, George H., assignor to Capital Electric Company, Chicago, Ill. Driving mechanism for washing-machine wringers. No. 1,216,478; Feb. 20; v. 235; p. 793.
Nagel, Gustav J., New York, N. Y., assignor to G. H. Smith, Upper Montclair, N. J. Cigar-band. No. 1,215,051; Feb. 6; v. 235; p. 201.
Nagel, John F. (See Newton, Charles, assignor.)
Nagy, John. (See Escher and Nagy.)
Nairn Linoleum Company, The. (See Sturrock, James F., assignor.)
Narunsky, Solomon, Baltimore, Md. Non-refillable bottle. No. 1,216,837; Feb. 20; v. 235; p. 916.
National-Acme Company, The. (See Cone, Frank L., assignor.)
National-Acme Company, The. (See Rindfleisch, Benjamin F., assignor.)
National Binding Machine Company. (See Anable, Frederick S., assignor.)
National Carbon Company. (See Holmes, Major E., assignor.)
National Cash Register Company, The. (See Martin, Haakon A., assignor.)
National Cash Register Company, The. (See Skerl, Francesco, assignor.)
National Malleable Castings Company, The. (See Willison, John, assignor.)
National Metal Molding Company. (See Gilson, Henry R., assignor.)
National Piano Manufacturing Company. (See Carlson, Karl O., assignor.)
National Spring Bed Company, The. (See Arnold, Harry B., assignor.)
National Textile Machine Company. (See Buhl, Cay, assignor.)

National Trust Company Limited. (See Gowland, Henry O., assignor.)
National X-Ray Reflector Company. (See Curtis, Augustus D., assignor.)
Naylor, Isaac, and H. B. Ruggles, Chicago, Ill., assignors to American Products Company, Portland, Me. Reinforced drum or barrel. No. 1,215,970; Feb. 13; v. 235; p. 560.
Neabr, Jacob E., New York, N. Y. Match-igniting device. No. 1,216,349; Feb. 20; v. 235; p. 746.
Neal, Elmer E., Springfield, Mass., assignor, by mesne assignments, to The New Departure Manufacturing Company, Bristol, Conn. Apparatus for producing spherical objects. No. 1,217,205; Feb. 27; v. 235; p. 1086.
Nebeling, Edmund R., New York, N. Y. Bracelet-lock. No. 1,217,048; Feb. 20; v. 235; p. 986.
Needham, Edmund T., San Antonio, Tex. Automobile-lock. No. 1,215,837; Feb. 13; v. 235; p. 512.
Neely, Robert C., Waynesboro, Ga. Fence. No. 1,214,705; Feb. 6; v. 235; p. 79.
Neff Company, The. (See Neff, Douglas M., assignor.)
Neff, Douglas M., East Cleveland, assignor to The Neff Company, Cleveland, Ohio. Folding stool. No. 1,215,689; Feb. 13; v. 235; p. 461.
Negus, Horatio V. S., Boundbrook borough, N. J. Lighting-fixture. No. 1,215,838; Feb. 13; v. 235; p. 512.
Nelson, Benjamin H., St. Thomas, Minn. Traveling shock-gatherer. No. 1,216,350; Feb. 20; v. 235; p. 747.
Nelson, Carl F., Council Bluffs, Iowa. Weigher and sacker. No. 1,217,334; Feb. 27; v. 235; p. 1129.
Nelson, Harvey H., Roselawn, Ind. Support for grain-binder engines. No. 1,214,944; Feb. 6; v. 235; p. 162.
Nelson, James M. (See Smith, James H., assignor.)
Nelson, Lewis C., Coffeyville, Kans., assignor to Ludowici-Celadon Company, Chicago, Ill. Tile-forming apparatus. No. 1,214,706; Feb. 6; v. 235; p. 79.
Nelson, Malvin M., Victorville, Cal. Paint-brush holder. No. 1,215,052; Feb. 6; v. 235; p. 201.
Nero, John J., West Hartford, Conn. Box-corner. No. 1,215,839; Feb. 13; v. 235; p. 513.
Nesbitt, Robert, Burlington, Kans. Plastic waterproof composition. No. 1,217,335; Feb. 27; v. 235; p. 1129.
Nettleton, George R., assignor to The W. & E. T. Fitch Co., New Haven, Conn. Separable fastener. No. 1,214,945; Feb. 6; v. 235; p. 162.
Neudorf, Franz, Horndean, Manitoba, Canada. Rail-joint. No. 1,217,622; Feb. 27; v. 235; p. 1234.
Neumann, John, Chicago, Ill. Sealing-washer for jars. No. 1,215,399; Feb. 13; v. 235; p. 353.
Neumann, John, Chicago, Ill. Article of jewelry. No. 1,216,479; Feb. 20; v. 235; p. 793.
Neumann, Mahlon J., Wymore, Nebr. Embroidered trimming. No. 1,215,400; Feb. 13; v. 235; p. 353.
Neuroth, Fritz, Bruckhausen, Hamborn, Germany. Declination-recorder for bore-holes. No. 1,215,840; Feb. 13; v. 235; p. 514.
New Departure Manufacturing Company, The. (See Moskovics, Fredrick E., assignor.)
New Departure Manufacturing Company, The. (See Neal, Elmer E., assignor.)
New Jersey Patent Company. (See Holland, Newman H., assignor.)
New Jersey Patent Company. (See Langley, Sam G., assignor.)
New York Couch Bed Company. (See Sisbower and Pittoni, assignors.)
Newdick, Norton A., assignor to The Bonney-Floyd Company, Columbus, Ohio. Car-wheel construction. No. 1,215,690; Feb. 13; v. 235; p. 461.
Newhouse, Milford J., Sherrill, assignor to Oneida Community, Limited, Oneida, N. Y. Fur-stretcher. No. 1,214,707; Feb. 6; v. 235; p. 80.
Newton, Charles, assignor of one-half to J. F. Nagel, Buffalo, N. Y. Trigger mechanism for firearms. No. 1,215,181; Feb. 6; v. 235; p. 243.
Nias, Henry, and W. Poster, assignors to Public Service Cup Company, Brooklyn, N. Y. Check-controlled mechanism. No. 1,214,946; Feb. 6; v. 235; p. 162.
Nichols, Clarence H., *et al.* (See Norman, Frank, assignor.)
Nichols, Katherine, Cincinnati, Ohio. Telephone. No. 1,216,480; Feb. 20; v. 235; p. 793.
Nichols, Nelson S. (See Cook and Nichols.)
Nicholson, Niels C., assignor of one-half to T. A. Heckman, Seattle, Wash. Fish-cleaning machine. No. 1,217,809; Feb. 27; v. 235; p. 1297.
Nicodemus, Otto. (See Stock and Nicodemus.)
Nies, John D. (See Kimble and Nies.)
Nikonow, John P. (See Conrad and Nikonow.)
Niles-Bement-Pond Company. (See Sears, Willard T., assignor.) (Reissue.)
Niles, Charles E., Fargo, N. D. Clothes-line support. No. 1,217,336; Feb. 27; v. 235; p. 1129.
Nishi, Chotoku, San Francisco, Cal. Paralleling instrument. No. 1,216,596; Feb. 20; v. 235; p. 835.
Nixon, Clinton A., Valparaiso, Ind. Dental-mold unit. No. 1,217,206; Feb. 27; v. 235; p. 1086.
Noaker, Milton, assignor to The Akron Cultivator Company, Akron, Ohio. Wheel or sulky cultivator. No. 1,215,691; Feb. 13; v. 235; p. 461.
Noble, Harvey P., Philadelphia, Pa. Signaling device for automobiles. No. 1,216,481; Feb. 20; v. 235; p. 794.
Noel, Eugene E., assignor of one-third to E. E. Crooke and one-third to W. C. Williams, Indianapolis, Ind. Game-card for teaching music. No. 1,217,810; Feb. 27; v. 235; p. 1297.
Nolan, John, Moline, Ill. Nut-lock. No. 1,215,971; Feb. 13; v. 235; p. 560.
Nolde & Horst Company. (See Robinson, Frank W., assignor.)
Nolin, William M. (See Barton and Nolin.)
Nolly, Hector de, St. Chamond, assignor to Société Electro-Métallurgique De St. Béron, Lyon, France. Electric furnace. No. 1,216,961; Feb. 20; v. 235; p. 957.
Norman, Frank, Des Moines, Iowa, assignor of eight thirty-seconds to D. J. Landers, seven thirty-seconds to W. A. McAtee, four thirty-seconds to A. B. Lovan, two thirty-seconds to G. W. Young, and one thirty-second to W. T. Shores, Springfield, Mo., and two thirty-seconds to C. H. Nichols, New York, N. Y. Expanding and contracting gas-receiver. No. 1,217,623; Feb. 27; v. 235; p. 1234.
Norman, Frank, Des Moines, Iowa, assignor of eight thirty-seconds to D. J. Landers, seven thirty-seconds to W. A. McAtee, four thirty-seconds to A. B. Lovan, one thirty-second to W. T. Shores, and two thirty-seconds to G. W. Young, Springfield, Mo., and two thirty-seconds to C. H. Nichols, New York, N. Y. Acetylene-gas mixer. No. 1,217,634; Feb. 27; v. 235; p. 1238.
Norman, Helgi, Winslow, Wash., assignor of one-half to H. C. Nugent. Egg-separator. No. 1,216,245; Feb. 13; v. 235; p. 658.
Norman, Richard C., Jr., Grayton, Md. Carbureter. No. 1,216,158; Feb. 13; v. 235; p. 628.
Norris, Chester C., Bainbridge, Ga. Lens-guard attachment. No. 1,217,876; Feb. 27; v. 235; p. 1318.
Norris, George B., Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company. Mining-machine. No. 1,215,692; Feb. 13; v. 235; p. 462.
North East Electric Company. (See Williams and Halbleib, assignors.)
North, Ray A., Green Bay, Wis. Sewerage-screen. No. 1,217,207; Feb. 27; v. 235; p. 1086.
Northrop, Jonas, Hopedale, Mass., assignor, by mesne assignments, to Draper Company. Mistheading device. (Reissue.) No. 14,265; Feb. 27; v. 235; p. 1325.
Northwood, Harry, Wheeling, W. Va. Socket-cover. No. 1,217,489; Feb. 27; v. 235; p. 1185.
Northwood, Harry, Wheeling, W. Va. Producing decorative color effects on glassware. No. 1,217,490; Feb. 27; v. 235; p. 1185.
Norton Grinding Company. (See Wilcox, Turner, and Dunbar, assignors.)
Nostrand, Charles. (See Link, Ernest G., assignor.)
Nuberg, Matthys, and J. Van den Boogaard, Grand Rapids, Mich. Safety device for power punch-presses. No. 1,215,972; Feb. 13; v. 235; p. 560.
Nugent, Harvey C. (See Norman, Helgi, assignor.)
Null, Claude, and E. A. Baker, Rochester, Wash. Clutch-actuating means. No. 1,217,624; Feb. 27; v. 235; p. 1234.
Nutt, Alva V. (See Funcheon and Nutt.)
Nutt, Daniel J., assignor of one-half to J. E. Crosby, Kansas City, Mo. Lock for motor-vehicles. No. 1,216,351; Feb. 20; v. 235; p. 747.
Nutting, Charles E., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Filling-fork grid for looms. No. 1,214,947; Feb. 6; v. 235; p. 163.
Nyberg, Carl S., Hasselbacken, Mellösa, Sweden. Apparatus for the irrigation of fields, gardens, and the like. No. 1,217,811; Feb. 27; v. 235; p. 1297.
O. M. Edwards Company, The. (See Chaffee, Edward F., assignor.)
O'Brien, Cornelius P., Omaha, Nebr. Indicating attachment for vehicles. No. 1,216,482; Feb. 20; v. 235; p. 794.
O'Brien, Thomas, Brooklyn, N. Y. Machine for measuring and marking shoe-soles. No. 1,217,208; Feb. 27; v. 235; p. 1087.
O'Bryan, David W., Mount Auburn, Ill. Rail-spike. No. 1,214,578; Feb. 6; v. 235; p. 33.
O'Connor, James, New York, N. Y. Accenting device for mechanical musical instruments. No. 1,214,943; Feb. 6; v. 235; p. 161.
O'Dowd, Thomas, Warren, Ohio. Antiskidding and braking device for automobiles. No. 1,216,597; Feb. 20; v. 235; p. 835.
O'Grady, Harry, Westbourne, Tenn. Torpedo-catcher and mine-destroyer. No. 1,217,812; Feb. 27; v. 235; p. 1298.
O'Keeffe, Elbert R., assignor of one one-hundredth to A. H. Sturges, Omaha, Nebr. Magnetic reciprocator for electric generators. No. 1,215,401; Feb. 13; v. 235; p. 353.
O'Neall, Hugh D., Canal Dover, Ohio. Thermostatic controller for heating apparatus. No. 1,217,049; Feb. 20; v. 235; p. 987.
O'Neill, Frank, Toledo, Ohio. Glass-forming machine. No. 1,217,102; Feb. 20; v. 235; p. 1005.
O'Sullivan, Michael. (See McCall, O'Sullivan, and McCall.)
O'Toole, John F. (See Mack and O'Toole.)
O'Toole, Martin. (See Mack and O'Toole.)
Oehler, Fred, G., and J. F., Shelby, Wis. Ice-cutting machine. No. 1,217,337; Feb. 27; v. 235; p. 1129.
Oehler, Gustave. (See Oehler, Fred, G., and J. F.)
Oehler, John F. (See Oehler, Fred, G., and J. F.)

Oelkers, Frederick C., East Port Chester, assignor to General Gas Appliance Company, New York, N. Y. Locking device for gas-stoves. No. 1,217,209; Feb. 27; v. 235; p. 1087.
Offermann, Fred. (See Cooper, Sutton, assignor.)
Ogden, Richard L., Rahway, N. J. Apparatus for extracting values from bodies. No. 1,215,182; Feb. 6; v. 235; p. 243.
Ohmes, Frederick J., Newark, N. J. Trunk-lock. No. 1,215,841; Feb. 13; v. 235; p. 514.
Ojerholm, Arthur W., Worcester, Mass. Reed. No. 1,214,948; Feb. 6; v. 235; p. 163.
Okamuro, Sugimatsu, Los Angeles, Cal. Window construction. No. 1,217,338; Feb. 27; v. 235; p. 1130.
Okhuizen, Dirk, The Hague, Netherlands, assignor of one-half to R. Welcker, Springfield, Mass. Extensometer. No. 1,214,708; Feb. 6; v. 235; p. 80.
Okun, Moses S., New York, N. Y., assignor of one-third to G. E. Smith, Chicago, Ill. Electric lamp. No. 1,214,816; Feb. 6; v. 235; p. 115.
Oldham, Raleigh R., Laurel, Wash. Knockdown toothbrush. No. 1,216,159; Feb. 13; v. 235; p. 629.
Oleson, Olaf E., assignor to The Edward Steam Specialty Co., Chicago, Ill. Stop and check valve. No. 1,216,352; Feb. 20; v. 235; p. 747.
Oliver Chilled Plow Works. (See Altgelt, Rudolph J., assignor.)
Oliver Chilled Plow Works. (See Heylman, Edward M., assignor.)
Oliver, William B., Collingswood, N. J. Extensible support. No. 1,217,491; Feb. 27; v. 235; p. 1185.
Olmedo, Rafael. San Francisco, Cal. Violin-mute operator. No. 1,215,973; Feb. 13; v. 235; p. 561.
Olney, Charles J., assignor to Waltham Watch Company, Waltham, Mass. Holder for bracelet-watches. No. 1,215,053; Feb. 6; v. 235; p. 202.
Olney, Charles J., assignor to Waltham Watch Company, Waltham, Mass. Carrier for bracelet-watches. No. 1,215,054; Feb. 6; v. 235; p. 202.
Olson, Fred L. (See Larson, Anton, assignor.)
Olson Machine Company, Thomas C., The. (See Olson, Thomas C., assignor.)
Olson, Thomas C., assignor to The Thomas C. Olson Machine Company, Madison, Wis. Cylinder-grinding machine. No. 1,217,339; Feb. 27; v. 235; p. 1131.
Olsson, Axel H. (See Pleijel and Olsson.)
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Duplex flat joining and covering seam. No. 1,214,579; Feb. 6; v. 235; p. 33.
Onderdonk, Wesley N., Syracuse, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,216,838; Feb. 20; v. 235; p. 916.
Oneida Community. (See Newhouse, Milford J., assignor.)
Oppen, William A. (See Kniffler and Oppen.)
Orchard, Alfred S. (See Gagnon and Hawthorne, assignors.)
Orem, Frederick S., Baltimore, Md. Attachment for internal-combustion engines. No. 1,215,974; Feb. 13; v. 235; p. 561.
Orme, Harry A., Washington, D. C. Electric soldering-iron. No. 1,215,693; Feb. 13; v. 235; p. 462.
Orr, Arthur, St. Charles, Ill. Means for and method of fastening cable ends. No. 1,214,709; Feb. 6; v. 235; p. 80.
Orr, Samuel B., Circleville, Ohio. Weighing-machine for grain. No. 1,217,050; Feb. 20; v. 235; p. 987.
Orrall, John A., Winthrop, Mass. Day-by-day box. No. 1,215,572; Feb. 13; v. 235; p. 417.
Orvis, Annie D. (See Orvis, Orland D., assignor.)
Orvis, Frank A., Milford, Mich. Motor-vehicle. No. 1,217,813; Feb. 27; v. 235; p.1298.
Orvis, Orland D., assignor to A. D. Orvis, New York, N. Y. Steam-boiler furnace. No. 1,217,492; Feb. 27; v. 235; p. 1186.
Osborn, Alden E., New York, N. Y. Internal-combustion engine. No. 1,216,721; Feb. 20; v. 235; p. 876.
Osborn, Charles, Everett, Wash. Toy flier. No. 1,215,842; Feb. 13; v. 235; p. 514.
Osborne, James M., Fort Worth, Tex. Picture-display machine. No. 1,215,694; Feb. 13; v. 235; p. 462.
Osgood, Samuel W., Chicago, Ill. Means for effecting magnetic or inductive separation of substances. No. 1,214,817; Feb. 6; v. 235; p. 115.
Osius, Frederick J., Racine, Wis. Cutting-mill. No. 1,215,055; Feb. 6; v. 235; p. 202.
Osmun, Charles E., San Francisco, Cal. Vending-machine. No. 1,217,103; Feb. 20; v. 235; p. 1005.
Osterhout, Albert W., Bethany, Nebr. Temporary-leaf holder for books. No. 1,217,625; Feb. 27; v. 235; p. 1235.
Otis, Arthur H., Cleveland, Ohio. Door-operating device. No. 1,215,573; Feb. 13; v. 235; p. 418.
Overbey, Drewry P. (See Parker, William A., assignor.)
Overstreet, George W. (See Lowe, William A. J., assignor.)
Owens, Harvey M., Leominster, Mass., assignor to Viscoloid Company. Card for mounting hair-pins and the like. No. 1,215,402; Feb. 13; v. 235; p. 354.
P. & M. Co., The. (See Moore, Philip W., assignor.)
P. & M. Company, The. (See Preston, Frederick A., assignor.)
P. & M. Company, The. (See Warr, Harold G., assignor.)
P. B. Yates Machine Company. (See Thurlow, Ira M., assignor.)
Pace, Edgar J., Los Angeles, Cal. Rectifier. No. 1,217,877; Feb. 27; v. 235; p. 1318.
Pacific Canning Machinery Company. (See Privett, Henry C., assignor.)
Package Machinery Company. (See Armstrong, Harry Y., assignor.)
Packer, Eben R., Chicago, Ill., assignor, by mesne assignments, to The Q & C Company. Fixture for car-vestibule curtains. No. 1,217,210; Feb. 27; v. 235; p. 1088.
Paff, Frederik J., Utrecht, Netherlands. Flushing apparatus with air-chamber. No. 1,215,695; Feb. 13; v. 235; p. 462.
Page, Alwin, Jr., Bellevue borough, Pa. Side bearing. No. 1,214,580; Feb. 6; v. 235; p. 34.
Page, William F., Youngstown, Ohio. Drier. No. 1,217,051; Feb. 20; v. 235; p. 988.
Pagel, Gustav. (See Kieser and Pagel.)
Pagliarul, Joseph, assignor to J. E. Smyth, Chicago, Ill. Wire-stitching machine. No. 1,215,312; Feb. 6; v. 235; p. 289.
Paige, Arthur J., Indianapolis, Ind. Internal-combustion engine. No. 1,216,160; Feb. 13; v. 235; p. 629.
Paine, H. A. (See Whitney, George E., assignor.)
Painter, Charles A., Jr., and J. P. McKinney, Jr., Pittsburgh, Pa. Door-lock. No. 1,215,843; Feb. 13; v. 235; p. 515.
Palen, William D., and H. Coulston, assignors to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Spiked feed-apron. No. 1,215,183; Feb. 6; v. 235; p. 244.
Palmer, Charles G., Cleveland, Ohio. Hoist. No. 1,214,818; Feb. 6; v. 235; p. 116.
Palmer, George L. W., Roxbury, Mass. Projecting apparatus. No. 1,215,975; Feb. 13; v. 235; p. 561.
Palmer, Irvin G. (See Preston, Palmer, and Winesburg.)
Palter, Elias, Providence, R. I. Lingerie-clasp. No. 1,217,125; Feb. 20; v. 235; p. 1014.
Pancoast, Joseph L., Trenton, N. J. Locking-bolt. No. 1,217,878; Feb. 27; v. 235; p. 1319.
Pannebaker, John G., Penbrook, Pa. Automobile-indicator. No. 1,217,052; Feb. 20; v. 235; p. 988.
Pape, Herman G., assignor to R. A. Schoenberg, New York, N. Y. Mechanical movement. No. 1,216,483; Feb. 20; v. 235; p. 794.
Pape, Herman G., assignor to R. A. Schoenberg, New York, N. Y. Holding means for housings. No. 1,216,598; Feb. 20; v. 235; p. 835.
Parish, Harold F., assignor to Grinden Art Metal Company, Brooklyn, N. Y. Safety mechanism for power-operated doors. No. 1,217,053; Feb. 20; v. 235; p. 988.
Parker, Frederick G., Portland, Me. Spare-tire carrier. No. 1,215,976; Feb. 13; v. 235; p. 562.
Parker, John Q., Sandusky Ohio. Valve-box. No. 1,217,814; Feb. 27; v. 235; p. 1298.
Parker, Joel D., Lagrange, Tex. Bedstead attachment. No. 1,215,403; Feb. 13; v. 235; p. 354.
Parker, Julia M. (See Maxwell, Ralph S., assignor.)
Parker, Orrel A., Cleveland, Ohio. Vehicle-wheel. No. 1,216,161; Feb. 13; v. 235; p. 630.
Parker Rust-Proof Company of America. (See Allen, William H., assignor.)
Parker, Thomas R. G. (See Pearce and Parker.)
Parker, Virgil W., Laddonia, Mo. Transmission-gearing-control mechanism. No. 1,216,599; Feb. 20; v. 235; p. 835.
Parker, William, East Cleveland, Ohio. Holder for threading-tools. No. 1,216,484; Feb. 20; v. 235; p. 795.
Parker, William A., assignor of one-fourth to D. P. Overbey, Lyles, Tenn. Mail-sorting device. No. 1,215,977; Feb. 13; v. 235; p. 563.
Parks, William B., Fort Worth, Tex. Air-filtering gas-burner. No. 1,214,819; Feb. 6; v. 235; p. 116.
Parnell, Charles L. (See Parnell, John C. and C. L.)
Parnell, John C. and C. L., Montpelier, Ohio. Power bond-drilling machine. No. 1,215,978; Feb. 13; v. 235; p. 563.
Parrish, James R. (See McMurray and Parrish.)
Parson, Walter M., Antigo, Wis. Latch. No. 1,215,696; Feb. 13; v. 235; p. 463.
Parsons, Houston H., Sidney, Mont. Time-release for photographic cameras. No. 1,217,493; Feb. 27; v. 235; p. 1187.
Parsons, William C., assignor, by mesne assignments, to The D. R. C. Water Heater Company, Cleveland, Ohio. Water-heater. No. 1,215,844; Feb. 13; v. 235; p. 515.
Paschall, James H., assignor of one-half to F. P. Cleary, Long Beach, Cal. Milling attachment for lathes. No. 1,216,600; Feb. 20; v. 235; p. 836.
Patented Devices Company. (See Hough, William B., assignor.)
Paterno, Same, Milford, Mass. Mechanical toy. No. 1,216,353; Feb. 20; v. 235; p. 748.
Patten, Harrison E., Silver Spring, Md. Apparatus for impregnating liquids with gas. No. 1,216,722; Feb. 20; v. 235; p. 877.
Patterson, Thomas A., assignor of one-fortieth to L. S. Carter, Sabinal, Tex. Washing-machine. No. 1,217,626; Feb. 27; v. 235; p. 1235.
Patton, Ralph C. (See Downes and Patton.)
Paull, Carl, Reselle Park, assignor to Garwood Company, Garwood, N. J. Mechanical movement. No. 1,215,056; Feb. 6; v. 235; p. 203.

Paulsen, George E., Chicago, Ill. Fish-hook. No. 1,215,697; Feb. 13; v. 235; p. 463.
Pauly, George J., Frackville, Pa. Signal. No. 1,215,979; Feb. 13; v. 235; p. 563.
Pauly, Karl A., Schenectady, N. Y., assignor to General Electric Company. Induction-motor control. No. 1,215,184; Feb. 6; v. 235; p. 244.
Pawling, Francis W., assignor of one-half to Turner Brothers Company, Terre Haute, Ind. Glass-working machine. No. 1,217,494; Feb. 27; v. 235; p. 1187.
Payne, James K., Santa Barbara, Cal. Automobile-signal. No. 1,215,845; Feb. 13; v. 235; p. 515.
Payne, Walter S., University Place, Nebr. Drill, hammer, and motor-case combined. No. 1,217,815; Feb. 27; v. 235; p. 1299.
Payograph Company. (See Raber, Joseph, assignor.)
Pearce, Herbert, and T. R. G. Parker, Broadheath, assignors to Linotype and Machinery Limited, London, England. Rotary offset-printing press. No. 1,215,404; Feb. 13; v. 235; p. 354.
Pearce, William W., Birmingham, Ala. Air-tester for air-brake systems. No. 1,216,723; Feb. 20; v. 235; p. 877.
Pearcy, Robert B., Thalia, Tex. Wagon-tongue. No. 1,217,627; Feb. 27; v. 235; p. 1235.
Pearman, John H., Lisbon, N. H. Cleaning device. No. 1,217,054; Feb. 20; v. 235; p. 988.
Pearsons, George T., New York, N. Y. Fire-extinguisher. No. 1,214,581; Feb. 6; v. 235; p. 34.
Pearsons, George T., New York, N. Y. Fire-extinguisher. No. 1,215,698; Feb. 13; v. 235; p. 463.
Pease, Roger S., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Manufacture of plate-glass. No. 1,217,340; Feb. 27; v. 235; p. 1131.
Peck, Harley J. (See Bessant, Frederick R., assignor.)
Peckham, Lewis A. (See Fuller, Eugene, assignor.)
Peerless Motor Car Company, The. (See Wadsworth, George R., assignor.)
Peerless Silk Mills Inc. (See Jaegge, Otto, assignor.)
Pegg, J. A., *et al.* (See Megathlin, Jesse L., assignor.)
Peickert, Emil E. (See Peickert, Otto J. and E. E.)
Peickert, Otto J. and E. E., Stevens Point, Wis. Harness-trace. No. 1,217,055; Feb. 20; v. 235; p. 989.
Pembroke, Charles J., Rochester, N. Y. Compressed-gas controlling and igniting mechanism for automobiles. No. 1,216,485; Feb. 20; v. 235; p. 795.
Pembroke, Charles J., Rochester, N. Y. Vehicle. No. 1,216,486; Feb. 20; v. 235; p. 795.
Pence, Peter M., New Paris, Ohio. Tobacco-harvester. No. 1,217,495; Feb. 27; v. 235; p. 1188.
Pendergast, John E., Jackson, Mont. Hammer. No. 1,215,980; Feb. 13; v. 235; p. 563.
Pendlebury, James, and J. Heatley, Blackfoot, Idaho. Potato-grader. No. 1,215,846; Feb. 13; v. 235; p. 515.
Penn Printing House *et al.* (See Clinton, Michael, assignor.)
Pennell, Joseph D., Boston, Mass. Tension device for winding yarn. No. 1,214,820; Feb. 6; v. 235; p. 116.
Pennock, John D., L. C. Jones, and F. L. Grover, Syracuse, assignors to The Solvay Process Company, Solvay, N. Y. Recovering constituents of value from natural alkaline deposits. No. 1,215,574; Feb. 13; v. 235; p. 418.
Pennock, John D., L. C. Jones, and F. L. Grover, Syracuse, assignors to The Solvay Process Company, Solvay, N. Y. Recovering constituents of value from natural alkaline deposits. No. 1,215,575; Feb. 13; v. 235; p. 419.
Pennock, John D., L. C. Jones, and F. L. Grover, Syracuse, assignors to The Solvay Process Company, Solvay, N. Y. Separating mixed potassium chlorid and borax. No. 1,215,576; Feb. 13; v. 235; p. 419.
Pense, Irl L., Bonesteel, S. D. Horse-detacher. No. 1,216,601; Feb. 20; v. 235; p. 836.
Pentz, Mathias B., Rockton, Pa. Railway-tie. No. 1,215,981; Feb. 13; v. 235; p. 564.
Peppard, Mayme J., Minneapolis, Minn. Hair-curler. No. 1,217,816; Feb. 27; v. 235; p. 1299.
Pereti, James F., Trenton, N. J. Signaling device. No. 1,217,628; Feb. 27; v. 235; p. 1235.
Perfect Window Regulator Company. (See Ternstedt, Alvar K., assignor.)
Perfection Cone Mfg. Co. (See Donofrio, Patsy, assignor.)
Perin, Donald W., Newton, Mass. Regenerative electric-motor system and controller therefor. No. 1,215,847; Feb. 13; v. 235; p. 516.
Perkins, Allen J., Lake Charles, La. Frost-protection system. No. 1,215,057; Feb. 6; v. 235; p. 203.
Perkins, Ernest E., Council Bluffs, Iowa. Square. No. 1,215,848; Feb. 13; v. 235; p. 516.
Perkins, George W. W., Chicago, Ill. Pump-valve. No. 1,216,354; Feb. 20; v. 235; p. 748.
Perrott, Ralph O., Bucyrus, Ohio, assignor to American Clay Machinery Company, Chicago, Ill. Apparatus for drying wares made from tender clay. No. 1,215,849; Feb. 13; v. 235; p. 517.
Perry, Eugene O., Detroit, Mich. Brooder. No. 1,215,982; Feb. 13; v. 235; p. 564.
Perry, Ira D., Chicago, Ill. Locking device for automobiles. No. 1,215,323; Feb. 6; v. 235; p. 293.
Perry, Ira D., Chicago, Ill. Motor-vehicle steering-gearing. No. 1,217,104; Feb. 20; v. 235; p. 1006.
Perry, M. W. (See Crowley, George E., assignor.)
Perry, Robert J. S., Belton, Tex. Clothes-washing machine. No. 1,215,405; Feb. 13; v. 235; p. 355.
Perry, William J., Bridgeport, Conn. Machine for hardening articles. No. 1,214,949; Feb. 6; v. 235; p. 164.
Person, Herman. (See Robinson and Person.)
Persons, William F., Lakewood, assignor to The Guide Motor Lamp Manufacturing Company, Cleveland, Ohio. Automobile-lamp. No. 1,214,582; Feb. 6; v. 235; p. 35.
Persons, William F., Lakewood, assignor to The Guide Motor Lamp Manufacturing Company, Cleveland, Ohio. Automobile-lamp. No. 1,214,583; Feb. 6; v. 235; p. 35.
Persson, Frans, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company. Cutting-tool. No. 1,215,406; Feb. 13; v. 235; p. 355.
Persyn, Andrew L., Newport, Wash. Game-board and accessories. No. 1,216,355; Feb. 20; v. 235; p. 748.
Peteler, Adolph, New York, N. Y. Automobile lifting-jack. No. 1,214,710; Feb. 6; v. 235; p. 81.
Peter Smith Heater Company, The. (See Smith, Elmer J., assignor.)
Petermann, Otto, Groton, N. Y., assignor to Corona Typewriter Company, Incorporated. Card and label holder for type-writing machines. No. 1,215,324; Feb. 6; v. 235; p. 293.
Petermann, Otto, Groton, N. Y., assignor to Corona Typewriter Company, Inc. Label-holder for type-writing machines. No. 1,215,325; Feb. 6; v. 235; p. 294.
Petermann, Otto, Groton, N. Y., assignor to Corona Typewriter Company, Incorporated. Type-writing machine. No. 1,215,699; Feb. 13; v. 235; p. 464.
Peters, Homer L., Salem, Ohio. Vacuum-cleaner. No. 1,217,817; Feb. 27; v. 235; p. 1299.
Peterson, Emil A., Appleton, Wis. Knife-bar for beating-engines. No. 1,216,487; Feb. 20; v. 235; p. 796.
Peterson, Henry E., Seattle, Wash. Machine for grading fruit. No. 1,214,821; Feb. 6; v. 235; p. 117.
Peterson, Jonathan, Brooklyn, N. Y. Tobacco-pouch. No. 1,217,820; Feb. 27; v. 235; p. 1300.
Peterson, Jonathan, Brooklyn, N. Y., assignor to Combination Machine Company. Plug-tobacco. No. 1,217,406; Feb. 27; v. 235; p. 1188.
Peterson, Jonathan, Brooklyn, N. Y., assignor to Combination Machine Company. Tobacco-pouch. No. 1,217,818; Feb. 27; v. 235; p. 1300.
Peterson, Jonathan, Brooklyn, N. Y., assignor to Combination Machine Company. Waxed or paraffined sheet or web. No. 1,217,819; Feb. 27; v. 235; p. 1300.
Peterson, Lewis M., Grove City, Minn. Silo. No. 1,215,983; Feb. 13; v. 235; p. 564.
Petrie, John A., New Haven, Conn. Electric hand-mirror. No. 1,216,724; Feb. 20; v. 235; p. 877.
Petrusha, Frank J., Ironwood, Mich. Device for holding carpets. No. 1,216,602; Feb. 20; v. 235; p. 837.
Petry, Nicholas A., Philadelphia, Pa. Muffler cut-out for motor-cars. No. 1,215,185; Feb. 6; v. 235; p. 245.
Pettibone, James. (See Welkert and Pettibone.)
Pfanstiehl, Carl A., Waukegan, Ill., assignor to Pfanstiehl Company. Electric furnace. No. 1,217,497; Feb. 27; v. 235; p. 1188.
Pfanstiehl Company. (See Pfanstiehl, Carl A., assignor.)
Pfeffer, Frank, Chicago, Ill. Adjustable-support. No. 1,214,584; Feb. 6; v. 235; p. 35.
Pfeiffer, Allen E., Norwood, Mass. Polishing pad or device. No. 1,216,488; Feb. 20; v. 235; p. 796.
Pfeiffer, Allen E., Norwood, Mass. Manufacturing polishing pads or devices. No. 1,216,489; Feb. 20; v. 235; p. 796.
Phelps, Joseph. (See Farnham, Smith, and Phelps.)
Philadelphia Textile Machinery Company, The. (See Palen and Coulston, assignors.)
Philipp, Herbert. (See Foerstering and Philipp.)
Phillips, Albanus, Cambridge, Md. Construction of oyster-shucking establishments. No. 1,217,821; Feb. 27; v. 235; p. 1301.
Phillips, Andrew, Conemaugh, Pa. Reversible rotary steam-engine. No. 1,215,984; Feb. 13; v. 235; p. 565.
Phillips, James B., Portland, Me. Coal handling and storing apparatus. No. 1,216,603; Feb. 20; v. 235; p. 837.
Phillips, James B., Portland, Me. Hoisting mechanism. No. 1,216,604; Feb. 20; v. 235; p. 838.
Phillips, Marcus, Chicago, Ill. Curtain-stretcher. No. 1,216,725; Feb. 20; v. 235; p. 878.
Phinney, Edgar E., assignor to Monroe Calculating Machine Company, New York, N. Y. Carrying mechanism for calculating-machines. No. 1,215,186; Feb. 6; v. 235; p. 245.
Phinney, Edgar E., assignor to Monroe Calculating Machine Company, New York, N. Y. Means to prevent reverse movement in calculating-machines. No. 1,215,187; Feb. 6; v. 235; p. 246.
Piciulo, Donato, New York, N. Y. Device for cutting spaghetti. No. 1,217,341; Feb. 27; v. 235; p. 1131.
Pick, Paul, Chicago, Ill. Protector of fabrics against moths and the like and making the same. No. 1,216,356; Feb. 20; v. 235; p. 748.
Pickering, Byron, Kissimmee, Fla. Trap. No. 1,217,056; Feb. 20; v. 235; p. 989.
Pickering, Byron, Kissimmee, Fla. Vehicle-brake. No. 1,217,057; Feb. 20; v. 235; p. 989.
Pico, Albert P. F., Kansas City, Mo. Roll-holder. No. 1,217,211; Feb. 27; v. 235; p. 1088.
Pierce, Charles F., Webb City, and S. C. Byrd, Carterville, Mo. Grate-cleaner. No. 1,217,342; Feb. 27; v. 235; p. 1131.
Pike, Robert D., San Francisco, Cal. Carbon electrode and manufacturing same. No. 1,215,700; Feb. 13; v. 235; p. 464.

Pine, Wilber J., Oshkosh, Wis. Wire-interlacing machine. No. 1,214,711; Feb. 6; v. 235; p. 81.
Pippenhagen, Charles A., Chicago, Ill. Insect-trap. No. 1,217,343; Feb. 27; v. 235; p. 1132.
Pirups-Hvarre, Peder J., Copenhagen, Denmark. Combined milking and separating machine and operating means therefor. No. 1,216,726; Feb. 20; v. 235; p. 878.
Piston Ring Company, The. (See Johnson, Charles E., assignor.)
Pittoni, Louis E. (See Sisbower and Pittoni.)
Pitts, David J., Bowman, Ga. Harvester. No. 1,217,629; Feb. 27; v. 235; p. 1236.
Pitts, Elmer O., Colbran, Colo. Fly-swatter. No. 1,217,212; Feb. 27; v. 235; p. 1088.
Pitts, George B., trustee. (See Richardson, Charles F., assignor.)
Pittsburgh Gage and Supply Company. (See Wappat, Fred W., assignor.)
Pittsburgh Plate Glass Company. (See Pease, Roger S., assignor.)
Pittsburgh Steel Products Company. (See Wikstrom, Malcolm U., assignor.)
Pittsburg Water Heater Company. (See Backstrom, Charles A., assignor.)
Pixler, John A., Benkelman, Nebr. Self-leveling clock. No. 1,216,727; Feb. 20; v. 235; p. 878.
Plander, John F., *et al.* (See Bittle, Harry L., assignor.)
Plate, John, Chicago, Ill. Venetian blind. No. 1,215,985; Feb. 13; v. 235; p. 565.
Platt, Clarence D., Bridgeport, Conn. Fuse-plug. No. 1,215,701; Feb. 13; v. 235; p. 465.
Pleijel, Henning B. M., and A. H. Olsson, Stockholm, Sweden. Loading duplex or multiple telephone-lines. No. 1,215,702; Feb. 13; v. 235; p. 465.
Pletsch, Henry, assignor to Judd Laundry Machine Company, Chicago, Ill. Clothes-wringer. No. 1,216,490; Feb. 20; v. 235; p. 797.
Plumley, Raymond L., Wilmington, Del., assignor to Frederick Osann Company, New York, N. Y. Work feeding and guiding mechanism. No. 1,214,950; Feb. 6; v. 235; p. 164.
Plymouth Cordage Company. (See Dodge, Milo C., assignor.)
Plymouth Motor Castings Company. (See Sherwood, Nathan E., assignor.)
Plymouth Rubber Company. (See Ford, James A., assignor.)
Pneumatic Cushion Co. (See Gruss, Lucien R., assignor.)
Podzeamski, Mike J., Milwaukee, Wis. Dough-mixing machine. No. 1,214,585; Feb. 6; v. 235; p. 36.
Pohl, Ernest A., Georgetown, Ohio. Electric-lamp connector. No. 1,217,058; Feb. 20; v. 235; p. 990.
Pohlman, Arthur E., Watertown, Wis. Combination flower-pot and reflector. No. 1,215,986; Feb. 13; v. 235; p. 565.
Pokorny & Wittekind, Maschinenbau-Aktiengesellschaft. (See Hinz, Adolf, assignor.)
Pollak, Fritz, Berlin, Germany. Producing insoluble condensation products and product thereof. No. 1,216,728; Feb. 20; v. 235; p. 879.
Pollard, George, Piccadilly, assignor to Menco-Elma Syndicate Limited, London, England. Variable-speed gearing. No. 1,217,059; Feb. 20; v. 235; p. 990.
Polson, William F., Buffalo, N. Y. Wind-shield. No. 1,215,407; Feb. 13; v. 235; p. 355.
Pomeroy, James W. (See Todd and Pomeroy.)
Poole, Fred, Jewell, Kans. Liquid-heater. No. 1,215,703; Feb. 13; v. 235; p. 465.
Poole, Lora E., assignor to Anderson Button Attaching Machine Company, Anderson, Ind. Button-attaching machine. No. 1,215,987; Feb. 13; v. 235; p. 565.
Pope, Charles E., Holyoke, Mass. Paper-machine. No. 1,214,712; Feb. 6; v. 235; p. 82.
Poppenhagen, William H., Sumner township, Kankakee county, Ill. Saw-set. No. 1,217,822; Feb. 27; v. 235; p. 1301.
Porter, Finley R., Port Jefferson, N. Y., assignor to Knight American Patents Company, Chicago, Ill. Sleeve-valve engine. No. 1,214,822; Feb. 6; v. 235; p. 117.
Porzel, Joseph, Buffalo, N. Y. Electric heater. No. 1,216,605; Feb. 20; v. 235; p. 838.
Pospischil, Emil. (See Kleinschmidt, Halpern, and Pospischil.)
Poster, William. (See Nias and Poster.)
Pott, Frank B., Leadville, Colo. Ore-sampler. No. 1,215,988; Feb. 13; v. 235; p. 566.
Potter, Morgan, Beacon, N. Y. Vehicle-brake. No. 1,214,713; Feb. 6; v. 235; p. 82.
Potter, Thomas I., assignor to Coin Machine Manufacturing Company, Portland, Oreg. Change-delivering machine. No. 1,215,408; Feb. 13; v. 235; p. 356.
Potter, Thomas I., assignor to Coin Machine Manufacturing Company, Portland, Oreg. Coin-ejecting machine. No. 1,216,606; Feb. 20; v. 235; p. 838.
Potts, Anna R., and J. M. Crow, San Diego, Cal. Invalid's bed attachment. No. 1,215,850; Feb. 13; v. 235; p. 517.
Potts, Jacob L. (See Tucker and Potts.)
Potts, Joseph, Harrisburg, Ill. Acetylene-lamp. No. 1,217,060; Feb. 20; v. 235; p. 990.
Pound, Guy A., Wasco, Oreg. Securing-clasp. No. 1,215,058; Feb. 6; v. 235; p. 203.
Powell, Alvah L., Stockton, Cal., assignor of forty-nine fiftieths to The A. L. Powell Power Company, Roundup, Mont. Mechanical movement. No. 1,217,823; Feb. 27; v. 235; p. 1302.
Powell, Harry H., London, England, assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Automatic electric regulator with stop-charge relay. No. 1,215,704; Feb. 13; v. 235; p. 466.
Powell, Montleville, South Lebanon, Ohio. Needle-threader. No. 1,217,061; Feb. 20; v. 235; p. 991.
Powers, Fred W., assignor to The Powers Regulator Company, Chicago, Ill. Temperature-control valve. No. 1,217,344; Feb. 27; v. 235; p. 1132.
Powers, George G., Los Angeles, Cal. Hypodermic needle. No. 1,217,630; Feb. 27; v. 235; p. 1236.
Powers Regulator Company, The. (See Powers, Fred W., assignor.)
Powers, Richard C., Aiktow, Saskatchewan, Canada. Post-hole auger. No. 1,217,062; Feb. 20; v. 235; p. 991.
Pozzi, Romeo, Oakland, Cal. Hot-air furnace. No. 1,217,126; Feb. 20; v. 235; p. 1014.
Präcisionsgusswerke System Schmidt-Reichhardt G. m. b. H. (See Talla, Heinrich, assignor.)
Prahl, Hugo, Duesseldorf, assignor to Rheinische Metall-Waaren-und Maschinenfabrik, Duesseldorf-Derendorf, Germany. Fuse for shells. No. 1,214,586; Feb. 6; v. 235; p. 36.
Pratt, Charles A., assignor to Goodman Manufacturing Company, Chicago, Ill. Sanding device for storage-battery locomotives. No. 1,217,631; Feb. 27; v. 235; p. 1237.
Pratt, Charles E., Chicago, Ill. Telephone pay-station. No. 1,216,357; Feb. 20; v. 235; p. 749.
Pratt, George W., Oakland, Cal. Handcuff. No. 1,216,491; Feb. 20; v. 235; p. 797.
Pratt, John L., Detroit, Tex. Foot-rest for school-desks. No. 1,216,492; Feb. 20; v. 235; p. 797.
Pratt, Milford A., Lebanon, Ind. Turbine-engine. No. 1,216,162; Feb. 13; v. 235; p. 630.
Pratt & Whitney Company. (See Hanson, Bengt M. W., assignor.)
Pratton, John A., Trent, Oreg. Walking-cultivator. No. 1,215,188; Feb. 6; v. 235; p. 246.
Prendergast, Edward, St. Louis, Mo. Rail-fastener. No. 1,214,587; Feb. 6; v. 235; p. 37.
Prentice, George E., assignor to The G. E. Prentice Manufacturing Company, New Britain, Conn. Cast-off. No. 1,216,163; Feb. 13; v. 235; p. 630.
Prentice, George E., assignor to The G. E. Prentice Manufacturing Company, New Britain, Conn. Binder for cord ends. No. 1,217,107; Feb. 20; v. 235; p. 1007.
Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe. No. 1,216,358; Feb. 20; v. 235; p. 749.
Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Making a shoe-filler. No. 1,217,213; Feb. 27; v. 235; p. 1089.
Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-filler composition. No. 1,217,214; Feb. 27; v. 235; p. 1089.
Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe. No. 1,217,215; Feb. 27; v. 235; p. 1089.
Pressed Steel Products Company. (See Mittinger, George E., assignor.)
Preston, Frederick A., Highland Park, assignor to The P. & M. Co., Chicago, Ill. Two-way anticreeper. No. 1,217,127; Feb. 20; v. 235; p. 1015.
Preston, George E., I. G. Palmer, and O. S. Winesburg, Elkhart, Ind. Paper-drying machinery. No. 1,216,359; Feb. 20; v. 235; p. 749.
Prettie, Richard J., Jamaica, N. Y., assignor to The Aeolian Company. Convertible sound-box. No. 1,216,839; Feb. 20; v. 235; p. 916.
Price, Arthur L., Toronto, Kans. Comb-cleaner. No. 1,215,851; Feb. 13; v. 235; p. 517.
Price, Henry A., and J. E. Grant, Terrell, Tex. Automatic alarm for railway-crossings. No. 1,215,989; Feb. 13; v. 235; p. 566.
Price, Judson, Poplar Bluff, Mo. Sewer-cleaning means. No. 1,215,189; Feb. 6; v. 235; p. 246.
Price, Judson, Poplar Bluff, Mo. Waste-pipe-cleaning means. No. 1,215,190; Feb. 6; v. 235; p. 247.
Price, William H., Butte, Mont. Device for holding mine-cages. No. 1,215,409; Feb. 13; v. 235; p. 356.
Primm, James I., Tampa, Fla. Elevator-guide lubricator. No. 1,216,607; Feb. 20; v. 235; p. 839.
Primrose, Donald L. (See Davis and Primrose.)
Prince, Robert E., Madison, Wis., dedicated, by mesne assignments, to Government of the United States and to the people of the United States. Fireproofing fibrous materials. No. 1,216,729; Feb. 20; v. 235; p. 879.
Pritchard, Clarence F., New York, N. Y. Picture-puzzle. No. 1,217,632; Feb. 27; v. 235; p. 1237.
Pritchard, John J., Moseley, Birmingham, England. Inflated apparatus for preventing drowning and assisting swimming. No. 1,217,824; Feb. 27; v. 235; p. 1302.
Privett, Henry C., Long Beach, Cal., assignor to Pacific Canning Machinery Company. Can-opener. No. 1,214,823; Feb. 6; v. 235; p. 118.
Prizma Incorporated. (See Raleigh and Kelley, assignors.)
Prox, Herman C., assignor to Frank Prox Co., Terre Haute, Ind. Roller-bearing car-wheel. No. 1,217,892; Feb. 27; v. 235; p. 1324.

Pruitt, Oran M., assignor to Indiana Air Pump Company, Indianapolis, Ind. Air-lift separator-pump. No. 1,214,951; Feb. 6; v. 235; p. 164.
Pruitt, Oran M., assignor to Indiana Air Pump Company, Indianapolis, Ind. Air-lift pump. No. 1,214,952; Feb. 6; v. 235; p. 165.
Pruszynski, Adolph J. (See Roebuck and Pruszynski.)
Public Service Cup Company. (See Nias and Poster, assignors.)
Pullman Couch Company. (See Hann, William E., assignor.)
Putnam, Alden L., assignor to Detroit Pressed Steel Company, Detroit, Mich. Composite bearing for wrought-metal structures and forming the same. No. 1,217,633; Feb. 27; v. 235; p. 1238.
Putnam, George H., Boston, Mass. Wrench. No. 1,214,588; Feb. 6; v. 235; p. 37.
Pye, David W. (See McNally, Leo F., assignor.)
Pye, Ernest A., Newark, N. J., assignor to Musselman Cord Fabric Company, Chicago, Ill. Making tire fabric. No. 1,217,879; Feb. 27; v. 235; p. 1319.
Pyle-National Electric Headlight Company. (See Dake and Kilker, assignors.)
Q & C Company, The. (See Packer, Eben R., assignor.)
Quabaug Rubber Company. (See Totman, Amos A., assignor.)
Quattlebaum, Albert W., and B. S. Mooney, Statesboro, Ga. Apparatus for distilling wood. No. 1,215,990; Feb. 13; v. 235; p. 567.
Queenan, William. (See Johnston, William A., assignor.)
Quiggle, Walter P., Baker, Minn. Grain-tank seat. No. 1,216,730; Feb. 20; v. 235; p. 879.
Quillen, Wilbert J. (See Reeder, Lester R., assignor.)
R. Hoe and Co. (See Hoe, Robert, assignor.)
R. Hoe and Co. (See White, Bruce C., assignor.)
R. Thomas and Sons Company, The. (See Sandford, Joseph A., Jr., assignor.)
R. H. Gaylord Company. (See Gaylord, Robert H., assignor.)
Raber, Joseph, assignor to Payograph Company, Detroit, Mich. Paying and recording machine. No. 1,217,498; Feb. 27; v. 235; p. 1189.
Raber, Nelson E., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Boot-tree. No. 1,217,499; Feb. 27; v. 235; p. 1189.
Radiant Heating Limited. (See Ellis, Carleton, assignor.)
Raiche, Andrew, assignor to Atlas Tack Company, Fairhaven, Mass. Machine for setting lacing-hooks. No. 1,217,216; Feb. 27; v. 235; p. 1089.
Rail Joint Company, The. (See Danat, Wilmer E., assignor.)
Railway Products Corporation. (See Forsyth, William D., assignor.)
Raimer, Frank. (See Decker and Raimer.)
Rainville, Omer J. (See Dalton and Rainville.)
Raleigh, Charles, Jersey City, N. J., and W. V. D. Kelley, Brooklyn, N. Y., assignors to Prizma Incorporated. Film or the like for color photography. No. 1,216,493; Feb. 20; v. 235; p. 798.
Raleigh, Charles, and W. V. D. Kelley, Brooklyn, N. Y., assignors, by mesne assignments, to Prizma Incorporated. Producing colored photographic pictures. No. 1,217,425; Feb. 27; v. 235; p. 1161.
Rambo, Frank B. (See Weldon and Rambo.)
Ramsey, Joseph H., V. C. Huntington, and C. M. Hyatt, assignors to The Embossing Company, Albany, N. Y. Toy building-block. No. 1,216,840; Feb. 20; v. 235; p. 916.
Rand Company, The. (See Woodruff, William W., assignor.)
Randall, Charles W., West Hoboken, N. J. Fly-paper holder. No. 1,217,825; Feb. 27; v. 235; p. 1302.
Rands Manufacturing Company. (See Van Dresser, William C., assignor.)
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Grain-shocking machine. No. 1,215,191; Feb. 6; v. 235; p. 247.
Raney, Clemma R., Chicago, and R. C. Livesay, Moline, Ill., assignors to International Harvester Company of New Jersey. Truck for wheeled vehicles. No. 1,216,860; Feb. 20; v. 235; p. 750.
Rankin, Carl, Wellsburg, assignor to Jefferson Glass Company, Follansbee, W. Va. Glass-molding machine. No. 1,217,635; Feb. 27; v. 235; p. 1239.
Rasmusen, Lorence S., Rock Island, Ill., and H. B. Carlson, Davenport, Iowa. Internal metal lap. No. 1,215,059; Feb. 6; v. 235; p. 204.
Rasmussen, Andrew, Racine Junction, Wis. Hacksaw-blade for metal-sawing machines. No. 1,214,589; Feb. 6; v. 235; p. 37.
Rasmussen, Peter, Denver, Colo. Automatic stacking-machine for cakes, crackers, and other articles. No. 1,217,345; Feb. 27; v. 235; p. 1132.
Rassman, Ernest F., Charlottesville, Va. Can-washing machinery. No. 1,216,494; Feb. 20; v. 235; p. 798.
Ratner, Samuel M., Kansas City, Mo. Account-register. No. 1,216,731; Feb. 20; v. 235; p. 880.
Rauchbach-Goldsmith Co. (See Rauchbach, Joseph, assignor.)
Rauchbach, Joseph, Newark, N. J., assignor to Rauchbach-Goldsmith Co. Wardrobe-trunk. No. 1,215,991; Feb. 13; v. 235; p. 567.
Rauh, Leopold, assignor to The Egry Register Company, Dayton, Ohio. Manifold attachment for type-writers. No. 1,214,824; Feb. 6; v. 235; p. 118.
Rawlings, Joe B., Memphis, Tenn. Electromechanical telautograph. No. 1,215,852; Feb. 13; v. 235; p. 517.
Rawlings, Samuel V., Calumet, Mich. Power-hammer mechanism. No. 1,216,608; Feb. 20; v. 235; p. 839.
Ray, Frank O., Nashua, N. H. Trap. No. 1,215,853; Feb. 13; v. 235; p. 518.
Ray, Frank O., Nashua, N. H. Trap. No. 1,215,854; Feb. 13; v. 235; p. 518.
Ray, Homer. (See Bayless, Patrick A., assignor.)
Raydure, Charles F., West Philadelphia, Pa. Contact-shoe for third-rail electric cars. No. 1,215,855; Feb. 13; v. 235; p. 518.
Raymond, Austin W. (See Waltermire, Amos J., assignor.)
Raymond, Nelson H., Buffalo, N. Y., assignor to Clifton Manufacturing Company, Jamaica Plain, Mass. Apparatus for electroplating tubes. No. 1,215,856; Feb. 13; v. 235; p. 519.
Reagan, William H., Jr., Miami, Ariz. Wrench. No. 1,217,217; Feb. 27; v. 235; p. 1090.
Reagen, Dominick A., Altoona, Pa. Steam-driven air-compressor. No. 1,215,192; Feb. 6; v. 235; p. 247.
Reap, Michael H., Scranton, Pa. Regulator for separators. No. 1,217,826; Feb. 27; v. 235; p. 1303.
Reardon, John M., Chico, Cal., and E. B. Bergeson, Everett, Wash. Calligraphic device. No. 1,217,063; Feb. 20; v. 235; p. 991.
Rebert, Michael A., York, Pa. Producing metallic alloys. No. 1,215,857; Feb. 13; v. 235; p. 519.
Recording Register & Fare Box Company, The. (See Kennedy, Frank B., assignor.)
Rector, Lancelot J. (See Carter and Rector.)
Reddin, Harriet, Attleboro, Mass. Oven-shelf. No. 1,216,164; Feb. 13; v. 235; p. 631.
Redkey, John J., Pueblo, Colo. Automobile-heater. No. 1,217,064; Feb. 20; v. 235; p. 991.
Reece Button Hole Machine Company, The. (See Zaleski, Frank, assignor.)
Reece Shoe Machinery Company. (See Baker, Winthrop D., assignor.)
Reece Shoe Machinery Company, The. (See Schoenky, August R., assignor.)
Reed, Charles E., Warrensburg, Mo. Tailor's measuring instrument. No. 1,215,193; Feb. 6; v. 235; p. 247.
Reed, Herbert C., Stamford, Conn. Manufacturing oxalic acid. No. 1,217,218; Feb. 27; v. 235; p. 1090.
Reed, James H. (See Lawson and Reed.)
Reed, James H. (See Roope and Reed.)
Reed, James M., Brooklyn, assignor to Eagle Pencil Company, New York, N. Y. Fountain-pen. No. 1,216,732; Feb. 20; v. 235; p. 880.
Reeder, Lester R., assignor of one-half to W. J. Quillen, Akron, Ohio. Elastic vehicle-tire. No. 1,215,577; Feb. 13; v. 235; p. 420.
Rees, George A. (See Hons and Aplin, assignors.)
Rees, Phillip J. (See Jones and Rees.)
Reese, Frank, assignor to Reese Manufacturing Company, Minneapolis, Minn. Window-screen. No. 1,216,495; Feb. 20; v. 235; p. 798.
Reese, John N., Youngstown, Ohio. Charging device. No. 1,217,219; Feb. 27; v. 235; p. 1090.
Reese Manufacturing Company. (See Reese, Frank, assignor.)
Reeves, Alfred N., Nashua, N. H. Loom. No. 1,214,953; Feb. 6; v. 235; p. 165.
Reeves, Milton O., assignor to Reeves Pulley Company, Columbus, Ind. Split-pulley clamp. No. 1,215,858; Feb. 13; v. 235; p. 519.
Reeves Pulley Company. (See Everoad, Lennious P., assignor.)
Reeves Pulley Company. (See Reeves, Milton O., assignor.)
Regout, Jules, Jr., Maastricht, Netherlands. Machine for raising nap on fabrics. No. 1,217,129; Feb. 20; v. 235; p. 1015.
Rehally, John J., New York, N. Y. Digging-bucket. No. 1,217,500; Feb. 27; v. 235; p. 1190.
Reifsnyder, James D., Philadelphia, assignor to Stokes & Smith Company, Summerdale, Pa. Strip-covering machine. No. 1,215,195; Feb. 6; v. 235; p. 248.
Reifsnyder, James D., and H. G. Schwerdtle, Philadelphia, Pa., assignors to Stokes & Smith Company. Adhesive-applying means for stenciling-machines. No. 1,215,194; Feb. 6; v. 235; p. 248.
Rein, Herman, New York, N. Y. Door-lock. No. 1,215,992; Feb. 13; v. 235; p. 568.
Reitz, Henry F. (See Marouke, Missak, assignor.)
Reliance Ball Bearing Door Hanger Company. (See Weiss, Louis T., assignor.)
Remington Typewriter Company. (See Barr, John H., assignor.)
Remington Typewriter Company. (See Barney, Edwin E., assignor.)
Remington Typewriter Company. (See Briggs, Arthur J., assignor.)
Remington Typewriter Company. (See Farnham, Smith, and Phelps, assignors.)
Remington Typewriter Company. (See Onderdonk, Wesley N., assignor.)
Remington Typewriter Company. (See Selb, George A., assignor.)
Remington Typewriter Company. (See Strother, Robert H., assignor.)

Remsen, Herbert D., assignor to Russell, Burdsall & Ward Bolt and Nut Company, Port Chester, N. Y. Machine for making nut-blanks. No. 1,217,501; Feb. 27; v. 235; p. 1190.
Rendahl, Ragnar H. (See Arco and Rendahl.)
Reno, William L., Owensboro, Ky. Interest-indicator. No. 1,217,220; Feb. 27; v. 235; p. 1091.
Renshaw, William C., Mannington, W. Va. Air-brake-operating mechanism. No. 1,216,841; Feb. 20; v. 235; p. 917.
Repp, Clinton B., Plainfield, N. J. Phonograph. No. 1,215,410; Feb. 13; v. 235; p. 357.
Republic Hose Coupler Corporation. (See Müller, Frank X., assignor.)
Resopan-Gesellschaft m. b. H. (See Antoni, Friedrich A., assignor.)
Rettinger, William N., Bourbon, Ind. Tire. No. 1,214,590; Feb. 6; v. 235; p. 37.
Rettinger, William N., Bourbon, Ind. Washing-machine. No. 1,217,636; Feb. 27; v. 235; p. 1239.
Retuerto y Rizo, Enrique, Portugalete, Spain. Apparatus for the detection of leakages in the water-jackets of blast-furnaces. No. 1,217,346; Feb. 27; v. 235; p. 1133.
Reuthe, Gustav, Sayville, assignor to Atlantic Communication Company, New York, N. Y. Antenna for radio-telegraph-stations. No. 1,214,591; Feb. 6; v. 235; p. 38.
Reynolds, George E., Wyoming, Pa. Automatic clutch mechanism for coal-jigs. No. 1,217,502; Feb. 27; v. 235; p. 1190.
Reynolds, John N., Greenwich, Conn., assignor to Western Electric Company, Incorporated, New York, N. Y. Switch mechanism. No. 1,215,859; Feb. 13; v. 235; p. 520.
Reynolds, John N., Greenwich, Conn., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone switch mechanism. No. 1,215,860; Feb. 13; v. 235; p. 520.
Reynolds, Perry A. (See Wattles and Reynolds.)
Reynolds, Mortimore S., Yates Center, Kans. Medicine-injecting apparatus. No. 1,216,361; Feb. 20; v. 235; p. 750.
Rheinische Metallwaaren- und Maschinenfabrik. (See Grauheding, Oskar, assignor.)
Rheinische Metall-Waaren- und Maschinenfabrik. (See Prahl, Hugo, assignor.)
Rheubottom, Allen J., New Albany, Ind. Composition of matter for sealing pneumatic tubes. No. 1,215,861; Feb. 13; v. 235; p. 521.
Rhinelander, James J., Pittsburgh, Pa. Roller-chain pipe-grip. No. 1,217,503; Feb. 27; v. 235; p. 1191.
Rhoades, Alonzo E., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Loom-shuttle. No. 1,215,578; Feb. 13; v. 235; p. 420.
Rhodes, Hampton P., Shreveport, La. Mining sulfur and other minerals. No. 1,217,065; Feb. 20; v. 235; p. 992.
Rhodes, Hampton P., Shreveport, La. Mining apparatus. No. 1,217,066; Feb. 20; v. 235; p. 992.
Rhodes, Irvin M. (See Wolf, Lewis W., assignor.)
Rhodes, James G., Chicago, Ill. Receptacle for sandwiches or the like. No. 1,216,842; Feb. 20; v. 235; p. 917.
Rhodus, Thomas, Chicago, Ill., assignor to The Magniphone Company. Telephone head-gear. No. 1,215,060; Feb. 6; v. 235; p. 204.
Rice & Adams. (See Rice, Albert J., assignor.)
Rice, Albert J., assignor to Rice & Adams, Buffalo, N. Y. Bottle-washing machine. No. 1,216,496; Feb. 20; v. 235; p. 799.
Rice, Charles D., Hartford, Conn. Multiple-spindle milling-machine and the like. No. 1,215,705; Feb. 13; v. 235; p. 466.
Rice, Cyrus W., and C. W. Dake, Grand Rapids, Mich. Forming expanded reticulated constructions. No. 1,215,061; Feb. 6; v. 235; p. 204.
Rice, George L., Chicago, Ill., assignor to International Harvester Company of New Jersey, Spinning-machine. No. 1,217,067; Feb. 20; v. 235; p. 992.
Rice, John H., assignor to Leighton Machine Company, Manchester, N. H. Knitting-machine. No. 1,215,411; Feb. 13; v. 235; p. 357.
Rich, George R., Oak Park, Ill. Tappet. No. 1,215,062; Feb. 6; v. 235; p. 204.
Richard, Eugene C., Flint, Mich. Carbureter. No. 1,216,843; Feb. 20; v. 235; p. 918.
Richard, Jules. (See Colardeau and Richard.)
Richards, Edward T. (See Diamond and Richards.)
Richards, Richard, and H. P. Marley, New Castle, Pa. Carrying-hook. No. 1,216,362; Feb. 20; v. 235; p. 750.
Richardson, Charles F., Woonsocket, R. I., assignor, by mesne assignments, to G. B. Pitts, trustee, Cleveland, Ohio. Vending-machine. No. 1,215,862; Feb. 13; v. 235; p. 521.
Richardson, Edward J. and J. R., assignors of one-third to G. R. Warner, Chamberlain, S. D. Self-adjusting driving-belt. No. 1,215,196; Feb. 6; v. 235; p. 249.
Richardson, James F., Jamestown, N. Y. Ball-bearing. No. 1,214,825; Feb. 6; v. 235; p. 118.
Richardson, James R. (See Richardson, Edward J. and J. R.)
Richardson, Willard D., Columbus, Ohio. Wall structure. No. 1,214,826; Feb. 6; v. 235; p. 119.
Richens, John M., Jacksonville, Fla. Shipping-receptacle. No. 1,216,165; Feb. 13; v. 235; p. 631.
Richmond, John E., W. J. Balkwill, and W. F. Schweiger, assignors to Multipost Company, Rochester, N. Y. Stamp-affixer. No. 1,216,363; Feb. 20; v. 235; p. 751.
Riddell, William A., assignor to Eastman Kodak Company, Rochester, N. Y. Folding-camera bed. No. 1,215,412; Feb. 13; v. 235; p. 358.
Ridgway, Charles L. (See Decker, Spencer M., assignor.)
Ridgway, Nelson P., Tacoma, Wash. Rotary hammer. No. 1,216,166; Feb. 13; v. 235; p. 631.
Riebsame, Edward C., assignor of one-half to L. C. Smith, Williamsport, Pa. Water-plug. No. 1,216,167; Feb. 13; v. 235; p. 632.
Riefstahl, Ludwig, Vienna, Austria-Hungary, assignor to General Electric Company. Safety device for hoists. No. 1,216,168; Feb. 13; v. 235; p. 632.
Riihikoski, Carl W., Portland, Oreg. Toilet-seat. No. 1,217,506; Feb. 27; v. 235; p. 1192.
Riker, Andrew L., Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y. Internal-combustion engine. No. 1,215,863; Feb. 13; v. 235; p. 521.
Rimbach, Harry J., Hammond, Ind. Explosive-engine. No. 1,215,993; Feb. 13; v. 235; p. 568.
Rindelhardt, Otto P., London, Ontario, Canada. Apparatus for carbonating beer, ale, and the like. No. 1,215,864; Feb. 13; v. 235; p. 521.
Rindfleisch, Benjamin F., assignor, by mesne assignments, to The National-Acme Company, Cleveland, Ohio. Collapsible tap. No. 1,214,954; Feb. 6; v. 235; p. 165.
Ringenbach, Theobald, Rosedale, Ky. Machine for trimming the canvas of reinforced insoles. No. 1,216,497; Feb. 20; v. 235; p. 799.
Rink, Louis G., Wilmette, assignor to Sharp & Smith, Chicago, Ill. Bone-setting device. No. 1,217,637; Feb. 27; v. 235; p. 1239.
Rishel, Julia B., administratrix. (See Rishel, Philip E.)
Rishel, Philip E., deceased, Washington, D. C., assignor of two-fifths to S. E. Rose, U. S. Navy; J. B. Rishel, administratrix. Internal-combustion engine. No. 1,215,865; Feb. 13; v. 235; p. 522.
Rites, Francis M., deceased; C. H. G. Gallagher, executor, assignor to P. C. Rites, Ithaca, N. Y., guardian. Valve for internal-combustion engines. No. 1,214,714; Feb. 6; v. 235; p. 83.
Rites, Perle C., guardian. (See Rites, Francis M., assignor.)
Ritterpusch, John F. (See Meyer, Frederick B., assignor.)
Rivets Manufacturing Company. (See Harris and Adell, assignors.)
Rivers, Julian H., Trenton, N. J., assignor, by mesne assignments, to Universal Fibre Company, New York, N. Y. Machine for molding and drying pulp. (Reissue.) No. 14,262; Feb. 20; v. 235; p. 1018.
Rives, George H., New York, N. Y. Pedal-pad. No. 1,216,498; Feb. 20; v. 235; p. 799.
Roa, Armando, New York, N. Y. Kite. No. 1,214,592; Feb. 6; v. 235; p. 38.
Roach, David F., Kansas City, Mo. Combination nest-protector and trap-nest. No. 1,214,827; Feb. 6; v. 235; p. 119.
Robbins, Hardy W. (See Catlin, Thomas S., assignor.)
Robbins, James F., Lincoln, Ill. Steam-table. No. 1,217,880; Feb. 27; v. 235; p. 1319.
Roberts, John G., Dobbs Ferry, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Electrical controlling system. No. 1,216,844; Feb. 20; v. 235; p. 918.
Roberts, William H., Newburyport, Mass. Swimming appliance. No. 1,215,063; Feb. 6; v. 235; p. 205.
Robertson, George W., *et al.* (See Hogg, William T., assignor.)
Robertson, Osborn B., assignor to Flowers-Lynch Gin Saw Cleaner Co., Gonzales, Tex. Gearing for gin-saw cleaners. No. 1,215,413; Feb. 13; v. 235; p. 358.
Robinson, Clark, and H. Person, Hillyard, assignors to Duplex Shock-Absorber Co., Spokane, Wash. Spring suspension. No. 1,217,111; Feb. 20; v. 235; p. 1009.
Robinson, Frank W., assignor to Nolde & Horst Company, Reading, Pa. High-splicing mechanism for circular-knitting machines. No. 1,214,828; Feb. 6; v. 235; p. 119.
Robinson, John G., Manchester, England. Relief-valve for steam-superheaters. No. 1,217,504; Feb. 27; v. 235; p. 1191.
Robinson, Joseph V., Chevy Chase, Md. Pipe-coupling. No. 1,216,609; Feb. 20; v. 235; p. 840.
Robinson, Joseph V., Chevy Chase, Md. Pipe-coupling. No. 1,217,505; Feb. 27; v. 235; p. 1192.
Robinson, William C., Grinnell, Iowa. Aeroplane-rib. No. 1,214,955; Feb. 6; v. 235; p. 166.
Roche, Wesley C., Beverly, assignor to The Turner Tanning Machinery Company, Peabody, Mass. Leather-working machine. No. 1,215,866; Feb. 13; v. 235; p. 522.
Rochester, James K., Renfrew, Ontario, Canada. Swing-gate-hinge. No. 1,216,169; Feb. 13; v. 235; p. 633.
Rodd, George S., Houghton, Mich. Steering-wheel indicator. No. 1,217,105; Feb. 20; v. 235; p. 1006.
Roebuck, Alvah C., assignor to Woodstock Typewriter Company, Woodstock, Ill. Type-bar segment. No. 1,217,639; Feb. 27; v. 235; p. 1240.
Roebuck, Alvah C., assignor to Woodstock Typewriter Company, Woodstock, Ill. Link connection. No. 1,217,640; Feb. 27; v. 235; p. 1240.

Roebuck, Alvah C., and A. J. Pruszynski, assignors to Woodstock Typewriter Company, Woodstock, Ill. Typewriter back-spacing mechanism. No. 1,214,715; Feb. 6; v. 235; p. 83.
Roebuck, Alvah C., and A. J. Steinke, assignors to Woodstock Typewriter Company, Woodstock, Ill. Type-bar-rebound spring. No. 1,215,706; Feb. 13; v. 235; p. 467.
Roebuck, Alvah C. and A. J. Pruszynski, assignors to Woodstock Typewriter Company, Woodstock, Ill. Paper-edge guide. No. 1,217,638; Feb. 27; v. 235; p. 1240.
Roelfs, Anton J., assignor to U. S. Wind Engine & Pump Co., Batavia, Ill. Drip connection for fire-cocks, hydrants, and the like. No. 1,216,499; Feb. 20; v. 235; p. 800.
Roehrich, Frank N., Jersey City, N. J., assignor to G. P. Carroll, Bridgeport, Conn. Check-valve mechanism. No. 1,217,106; Feb. 20; v. 235; p. 1006.
Roessler & Hasslacher Chemical Co., The. (See Foerster-ling and Philipp, assignors.)
Roessler & Hasslacher Chemical Co., The. (See McNitt, Robert J., assignor.)
Roever, Julius, assignor to Roever Patent Company, New York, N. Y. Multiple-horn phonograph. No. 1,216,500; Feb. 20; v. 235; p. 800.
Roever, Julius, assignor to Roever Patent Company, New York, N. Y. Divided-horn phonograph. No. 1,216,501; Feb. 20; v. 235; p. 801.
Roever Patent Company. (See Roever, Julius, assignor.)
Roger, Peter, Milford, Mass. Cumulative artillery-projectile. No. 1,216,364; Feb. 20; v. 235; p. 751.
Rogers, Charles W., Exeter, N. H. Insulator. No. 1,214,956; Feb. 6; v. 235; p. 166.
Rogers, Clarence E., Oakland, Cal., assignor to Automatic Electric Company, Chicago, Ill. Automatic telephone system. No. 1,216,365; Feb. 20; v. 235; p. 752.
Rogers, George W., *et al.* (See Marquis, Alexander G., assignor.)
Roggasch, Auguste, administratrix. (See Roggasch, Charles.)
Roggasch, Charles, deceased, Ainsworth, Nebr.; A. Roggasch, administratrix. Vehicle. No. 1,216,246; Feb. 13; v. 235; p. 659.
Rollins, George E., Brockton, Mass. Plug for rubber treads. No. 1,217,881; Feb. 27; v. 235; p. 1320.
Roma, Charles, Memphis, Tenn. Indicator-alarm. No. 1,217,882; Feb. 27; v. 235; p. 1320.
Romain, Burchard P., South Orange, assignor to Weston Electrical Instrument Company, Newark, N. J. Ohmmeter. No. 1,215,867; Feb. 13; v. 235; p. 523.
Romain, Burchard P., South Orange, assignor to Weston Electrical Instrument Company, Newark, N. J. Capacity-meter. No. 1,217,827; Feb. 27; v. 235; p. 1303.
Romaine, W. Tyson. (See Ellinger, Julian O., assignor.)
Rome-Turney Radiator Co. (See Turney, George W., assignor.)
Roope, Fenley H., Lynn, and J. H. Reed, Swampscott, Mass. Portière-traversing mechanism. No. 1,217,883; Feb. 27; v. 235; p. 1320.
Root, Frank C., Detroit, Mich. Combined food-cooking utensil and tea-kettle. No. 1,214,716; Feb. 6; v. 235; p. 84.
Rose, Edward E., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Liquid-sealed valve. No. 1,215,579; Feb. 13; v. 235; p. 420.
Rose, Edward E., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Valve. No. 1,215,580; Feb. 13; v. 235; p. 421.
Rose Label Machine Co., The. (See Rosenthal, Arthur and M., assignors.)
Rose, Solon E. (See Rishel, Philip E., assignor.)
Rosen, Max, Philadelphia, Pa. Sanitary water-closet seat. No. 1,215,197; Feb. 6; v. 235; p. 249.
Rosenbaum, Harry, New York, N. Y. Portable work-bench. No. 1,216,610; Feb. 20; v. 235; p. 840.
Rosenfeld, Leo, Philadelphia, Pa. Clothes-bag. No. 1,215,868; Feb. 13; v. 235; p. 523.
Rosenfield, Clarence, V. L. Helm, and E. Key, Fort Worth, Tex., assignors to The Safety Key Tag Company. Hotel-key tag. No. 1,214,957; Feb. 6; v. 235; p. 166.
Rosengarten, Mitchell G., Philadelphia, Pa. Transformer for shotguns. No. 1,217,347; Feb. 27; v. 235; p. 1134.
Rosenthal, Arthur and M., assignors to The Rose Label Machine Co., Grand Rapids, Mich. Label cutting and folding machine. No. 1,215,707; Feb. 13; v. 235; p. 467.
Rosenthal, Martin. (See Rosenthal, Arthur and M.)
Rosenwasser, Morris, Astoria, N. Y. Hook for shoelaces and the like. No. 1,215,708; Feb. 13; v. 235; p. 468.
Roslyn Specialty Company. (See Karl, Joseph M., assignor.)
Rosner, Adolph, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y. Internal-combustion engine. No. 1,215,869; Feb. 13; v. 235; p. 523.
Rosner, Adolph, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y. Internal-combustion engine. No. 1,215,870; Feb. 13; v. 235; p. 524.
Ross, Frederick M., Cincinnati, Ohio. Vehicle-wheel. No. 1,215,709; Feb. 13; v. 235; p. 468.
Ross, Joseph F., Ipswich, Mass. Mold for concrete. No. 1,214,829; Feb. 6; v. 235; p. 120.
Ross, Margaret N., Auburndale, Mass. Receptacle. No. 1,216,502; Feb. 20; v. 235; p. 801.
Roth, August A., assignor to Safety-First Appliances Company, Baltimore, Md. Automatic fender for motor-vehicles. No. 1,216,845; Feb. 20; v. 235; p. 918.
Roth, Peter, New Salem, N. D. Automatic safety device for elevators. No. 1,217,068; Feb. 20; v. 235; p. 992.
Rothen, Oscar F., Weehawken, N. J., assignor to F. Lowenstein, Brooklyn, N. Y. Variable electrical apparatus. No. 1,217,848; Feb. 27; v. 235; p. 1134.
Rothford, Louis P., San Jose, Cal. Signal. No. 1,215,710; Feb. 13; v. 235; p. 468.
Rothstein, Joseph, Brooklyn, N. Y. Cushion instep-raiser. No. 1,215,198; Feb. 6; v. 235; p. 250.
Rotor Vacuum Cleaner Company, The. (See Meredith-Jones, Hubert, assignor.)
Rottenburg, Henry, Cambridge, England. Puttee. No. 1,216,366; Feb. 20; v. 235; p. 752.
Rottenkolber, George, Cornwall, Ontario, Canada. Compound for preserving beer. No. 1,217,641; Feb. 27; v. 235; p. 1241.
Rottl, Frederick, Elizabethport, N. J. Window-scaffold. No. 1,215,094; Feb. 13; v. 235; p. 568.
Rounds, Herbert G., Bay City, Mich. Leveling device. No. 1,215,711; Feb. 13; v. 235; p. 469.
Rowe Manufacturing Co. (See Knutson, Alfred W., assignor.)
Rowekamp, George L., Winona, Minn. Vapor-generating burner. No. 1,215,712; Feb. 13; v. 235; p. 469.
Rowland, Charles L., assignor to American Welding Company, Carbondale, Pa. Making metal containers. No. 1,216,733; Feb. 20; v. 235; p. 881.
Rowland, Charles L., assignor to American Welding Company, Carbondale, Pa., Metal-working apparatus. No. 1,217,221; Feb. 27; v. 235; p. 1091.
Rowley, James F., Chicago, Ill. Artificial leg. No. 1,216,367; Feb. 20; v. 235; p. 753.
Rowntree, Harold, Kenilworth, Ill. Interlocking control system for elevators. No. 1,216,846; Feb. 20; v. 235; p. 919.
Roworth, Edward S., assignor of one-third to G. Roworth, Matlock Bath, and one-third to F. C. Lymn, Matlock, England. Manufacture and composition of bread or the like. No. 1,215,995; Feb. 13; v. 235; p. 569.
Roworth, George, *et al.* (See Roworth, Edward S., assignor.)
Royal Baking Powder Company. (See Curran, Samuel H., assignor.)
Royal Baking Powder Company. (See Vaygouny, Mooshegh, assignor.)
Royal Equipment Company, The. (See Ryan, Louis L., assignor.)
Royal Packing Company. (See Lynch, George E., assignor.)
Royal Typewriter Company. (See Hess, Edward B., assignor.)
Royal Typewriter Company. (See Mathies, Franklyn L., assignor.)
Royal Typewriter Company. (See Rupf, Frank E., assignor.)
Royer, Henry H., assignor of one-half to R. P. Royer, Roanoke, Va. Metallic packing. No. 1,216,503; Feb. 20; v. 235; p. 801.
Royer, Richard P. (See Royer, Henry H., assignor.)
Royle, Vernon, Paterson, N. J. Cop. No. 1,214,958; Feb. 6; v. 235; p. 167.
Rubel, Jacob C., Emmetsburg, Iowa. Adjustable window-screen. No. 1,217,222; Feb. 27; v. 235; p. 1091.
Ruedas y Neumaticos Mayolino. (See Mayolino, Luis, assignor.)
Rugel, Michael, Milwaukee, Wis. Safety and signal apparatus for fire-alarm boxes. No. 1,217,069; Feb. 20; v. 235; p. 993.
Ruggles, Henry B. (See Naylor and Ruggles.)
Ruggles, Henry B., Chicago, Ill. Knockdown box. No. 1,215,713; Feb. 13; v. 235; p. 469.
Ruhe, Carleton, Olean, N. Y. Hydroplane. No. 1,217,828; Feb. 27; v. 235; p. 1303.
Rumsey, James W., West Berkeley, Cal., assignor of one-half to F. T. Hays, Chicago, Ill. Car-door. No. 1,215,714; Feb. 13; v. 235; p. 469.
Rumsey, James W., West Berkeley, Cal., assignor of one-half to F. T. Hays, Chicago, Ill. Door structure for cars. No. 1,215,715; Feb. 13; v. 235; p. 470.
Rumsey, James W., West Berkeley, Cal., assignor of one-half to F. T. Hays, Chicago, Ill. Box-car-door structure. No. 1,215,716; Feb. 13; v. 235; p. 470.
Runyan, William, Clinton, Ind. Drilling-bit socket. No. 1,217,349; Feb. 27; v. 235; p. 1134.
Runyen, David. (See Runyen, James and D.)
Runyen, James and D., Grand Rapids, Mich. Grease-cabinet. No. 1,215,313; Feb. 6; v. 235; p. 289.
Runzel-Lenz Electric M'f'g. Co. (See Runzel, William L., assignor.)
Runzel, William L., assignor to Runzel-Lenz Electric M'f'g. Co., Chicago, Ill. Moisture-proof switchboard-cord. No. 1,214,830; Feb. 6; v. 235; p. 120.
Rupf, Frank E., Hartford, Conn., assignor to Royal Typewriter Company, Inc., New York, N. Y. Machine for testing the adjustment of type of type-writing machines. No. 1,216,611; Feb. 20; v. 235; p. 840.
Russell, Arthur E., Hyde Park, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting. No. 1,217,070; Feb. 20; v. 235; p. 993.
Russell, Burdsall & Ward Bolt and Nut Co. (See Boerner, Emile C., assignor.)

Russell, Burdsall & Ward Bolt and Nut Company. (See Rensen, Herbert D., assignor.)
Russell, Leroy E., Deposit, N. Y. Heating-furnace. No. 1,215,199; Feb. 6; v. 235; p. 250.
Russell Manufacturing Company, The. (See Fisher, William C., assignor.)
Russell, William, London, England, assignor to The Dorr Company, Denver, Colo. Apparatus for separating solids from liquids. No. 1,214,593; Feb. 6; v. 235; p. 38.
Russell, William F., Bourbon, Ind. Lightning-rod connector. No. 1,216,170; Feb. 13; v. 235; p. 633.
Russey, Edward W., Seymour, Tex., H. J. and J. R. Coyle, Huntsville, Ala.; said H. J. Coyle and J. R. Coyle assignors of one-sixth of the entire right to said Russey. Vehicle-tire. No. 1,215,414; Feb. 13; v. 235; p. 358.
Rust, Charles, Yonkers, N. Y. Painting apparatus. No. 1,217,071; Feb. 20; v. 235; p. 994.
Rutherford, John A., Great Falls, Mont. Explosion-engine tractor. No. 1,215,581; Feb. 13; v. 235; p. 421.
Ruthven, Albert F., Kansas City, Mo. Pneumatic tire. No. 1,215,717; Feb. 13; v. 235; p. 470.
Ryan, James A. (See Lawn and Ryan.)
Ryan, Louis L., assignor to The Royal Equipment Company, Bridgeport, Conn. Semimetallic fiber sheet. No. 1,215,064; Feb. 6; v. 235; p. 205.
Ryther, Frank A., Chicago, Ill., assignor to International Harvester Company of New Jersey. Grain-binder. No. 1,216,368; Feb. 20; v. 235; p. 753.
S. S. White Dental Manufacturing Company, The. (See Glenn, Thomas F., assignor.)
Sabin, William W., assignor to N. B. Gregg and J. C. Harralson, Portland, Oreg. Locking device for motor-vehicles. No. 1,215,871; Feb. 13; v. 235; p. 524.
Sachs, Joseph, assignor, by mesne assignments, to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Lamp-lock. No. 1,217,829; Feb. 27; v. 235; p. 1304.
Sachs, Joseph, assignor, by mesne assignments, to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Lock for incandescent-lamp structures and the like. No. 1,217,830; Feb. 27; v. 235; p. 1304.
Sachs, Joseph, assignor, by mesne assignments, to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Electrical connecting member. No. 1,217,831; Feb. 27; v. 235; p. 1304.
Safety Car Heating and Lighting Company. (See Crevelling, John L., assignor.)
Safety Car Heating & Lighting Company, The. (See Thompson, Harrison G., assignor.)
Safety Car Heating & Lighting Company, The. (See Vullleumier, Rudolph, assignor.)
Safety-First Appliances Company. (See Roth, August A., assignor.)
Safety Key Tag Company, The. (See Rosenfield, Helm, and Key, assignors.)
Saito, Kohei, Baltimore, Md. Egg-beater. No. 1,217,832; Feb. 27; v. 235; p. 1305.
Sak, Wladyslaw, Chicago, Ill. Bell-operating device. No. 1,214,831; Feb. 6; v. 235; p. 120.
Salisbury, Frank W., James City, assignor to American Plate Glass Company, Kane, Pa. Portable collecting-box. No. 1,215,718; Feb. 13; v. 235; p. 470.
Salmina, Paul. (See Troy and Leonnig, assignors.)
Saltors, Reuben H., Ensley, Ala. Self-turning light for rolling stock. No. 1,217,072; Feb. 20; v. 235; p. 994.
Salvatierra-Iriarte, Cipriano, Madrid, Spain. Skeleton frame for armored concrete posts or masts. No. 1,215,872; Feb. 13; v. 235; p. 525.
Sam Meyers & Company. (See Meyers, Samuel L., assignor.)
Sampson, Charles A., Radcliffe, Iowa. Wire-base mousetrap. No. 1,217,073; Feb. 20; v. 235; p. 994.
Sampson, Robert W., Melba, Whitestone, N. Y., assignor of one-half to L. Schwab, East Orange, N. J. Tire-plug. No. 1,215,582; Feb. 13; v. 235; p. 421.
Sampson, Robert W., Melba, Whitestone, N. Y., assignor of one-half to L. Schwab, East Orange, N. J. Tire-plug. No. 1,215,719; Feb. 13; v. 235; p. 471.
Samson Electric Company. (See Thomson and Michaelsen, assignors.)
Samuelson, Frederick, Rugby, England, assignor to General Electric Company. Power-generating plant. No. 1,215,200; Feb. 6; v. 235; p. 250.
Sand, Oscar S., Goodridge, Minn. Gate-actuating mechanism. No. 1,214,594; Feb. 6; v. 235; p. 39.
Sanders, Edward, *et al.* (See Green, Douglas B., assignor.)
Sanders, Leo, *et al.* (See Green, Douglas B., assignor.)
Sanford, Hugh W., Knoxville, Tenn. Spring. No. 1,217,507; Feb. 27; v. 235; p. 1193.
Sandford, Joseph A., Jr., assignor to The R. Thomas and Sons Company, East Liverpool, Ohio. Electric-cable attachment. No. 1,215,201; Feb. 6; v. 235; p. 251.
Sands, Nathan B., Baltimore, Ohio. Relief-valve. No. 1,214,595; Feb. 6; v. 235; p. 39.
Sandvall, John G. (See Anderson, Carl J., assignor.)
Sanford, Ace, Dadeville, Ala. Seed-planter. No. 1,216,171; Feb. 13; v. 235; p. 633.
Sanitary Seal Manufacturing Company, The. (See Braecklein, Alfred H., assignor.)
Santmyers, Washington L., Strasburg, and R. L. Hepner, Tomsbrook, Va. Expansible reamer. No. 1,217,833; Feb. 27; v. 235; p. 1305.
Santmyers, Washington L., Strasburg, and R. L. Hepner, Tomsbrook, Va. Reamer. No. 1,217,834; Feb. 27; v. 235; p. 1305.
Sargent & Company. (See Shaw, John H., assignor.)
Sargent & Company. (See Voight, Henry G., assignor.)
Sartain, Louis M., assignor of one-tenth to G. D. Boyd, one-tenth to E. C. Shelton, one-tenth to S. D. Scott, one-tenth to W. E. Gillen, one-tenth to J. Dickerson, one-tenth to J. Woodlee, Jr., one-tenth to E. Hewson, and one-tenth to D. C. Lasater, Altamont, Tenn. Nut-lock. No. 1,217,835; Feb. 27; v. 235; p. 1305.
Sass, Otto, Brooklyn, N. Y. Valve-facing device. No. 1,217,836; Feb. 27; v. 235; p. 1306.
Saunders, John E., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,216,869; Feb. 20; v. 235; p. 754.
Saurer, Firm of Adolph. (See Eggart, Karl, assignor.)
Sawyer, Hollis H., Newton, Mass. Positioning means for vertically-arranged articles. No. 1,215,720; Feb. 13; v. 235; p. 471.
Sawyer, William A. (See Merritt and Sawyer.)
Saxon, Augustus D., and J. E. Lundy, Springfield, S. C. Animal-trap. No. 1,217,350; Feb. 27; v. 235; p. 1134.
Saxton, Stephen F., Detroit, Mich., assignor of one-half to J. A. Miller, Toledo, Ohio. Automobile-signal. No. 1,217,228; Feb. 27; v. 235; p. 1091.
Sayers, Edward W., Bogue, Kans. Four-horse evener. No. 1,216,734; Feb. 20; v. 235; p. 881.
Scandlyn, Samuel H., Park City, Tenn. Massage apparatus. No. 1,215,996; Feb. 13; v. 235; p. 569.
Scanes, Arthur E. L., Manchester, England. Gage for indicating the efficiency of a steam-condenser. No. 1,217,074; Feb. 20; v. 235; p. 995.
Scanlin, James, assignor of one-half to P. A. Arnold and G. D. Chastain, Wirt, Okla. Oil-casing-closing apparatus. No. 1,217,837; Feb. 27; v. 235; p. 1306.
Schaake, William, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Insulator. No. 1,217,508; Feb. 27; v. 235; p. 1193.
Schadee, Gustav. (See Gallagher and Schadee.)
Schaefer, Francis M., Chicago, Ill. Drier. No. 1,216,504; Feb. 20; v. 235; p. 801.
Schaffer, Edmund O., Derby, Conn. Illuminated fountain-pen. No. 1,214,959; Feb. 6; v. 235; p. 167.
Shaffner, Samuel E., St. Louis, Mo. Pineapple product. No. 1,214,598; Feb. 6; v. 235; p. 40.
Schall, Aly I., Yonkers, N. Y. Antirefillable bottle. No. 1,217,509; Feb. 27; v. 235; p. 1193.
Schalow, Frank J., Evergreen, N. Y. Knob-lock for doors. No. 1,214,596; Feb. 6; v. 235; p. 39.
Scheffer, Carl F., and J. Zimmerman, Dayton, Ohio. Button-protector. No. 1,216,735; Feb. 20; v. 235; p. 881.
Scheiter, George G., Rochester, N. Y. Automatic sprinkler. No. 1,215,202; Feb. 6; v. 235; p. 251.
Schenck, John E., Chicago, Ill., assignor to American Can Company, New York, N. Y. Pouring-nozzle closure for cans. No. 1,215,997; Feb. 13; v. 235; p. 569.
Schendler, Paul H., Erie, Pa. Pressure-releasing mechanism. No. 1,217,642; Feb. 27; v. 235; p. 1241.
Schepis, Nicholas J., Columbia, La. Store-counter. No. 1,215,873; Feb. 13; v. 235; p. 525.
Scherrer, Charles J., Council Bluffs, Iowa. Combined hoist and conveyer. No. 1,215,874; Feb. 13; v. 235; p. 525.
Schey, Robert, New York, N. Y. Fabric sample or swatch. No. 1,214,832; Feb. 6; v. 235; p. 121.
Schiefer, Lawrence R., Fort Wayne, Ind., assignor of one-half to G. E. Eaton, Chicago, Ill. Closure for fluid-receptacles. No. 1,214,833; Feb. 6; v. 235; p. 121.
Schiele, Arthur F., Durant, Iowa. Internal-combustion engine. No. 1,217,224; Feb. 27; v. 235; p. 1092.
Schielke, Gustav. (See Granger, Joseph P. C., assignor.)
Schimmelfeng, Jean L., Warren, Pa. Assembling commutators. No. 1,214,960; Feb. 6; v. 235; p. 167.
Schlaeger, Joseph J., Jr., St. Paul, Minn. Directional signal. No. 1,217,075; Feb. 20; v. 235; p. 995.
Schlotterbeck, John A. (See Johnston and Schlotterbeck.)
Schmid, Peter, Basel, Switzerland. Fixing iron mordants on textile fibers. No. 1,216,847; Feb. 20; v. 235; p. 919.
Schmidt, Albert C., Melvin, Iowa. Safety-hook. No. 1,214,717; Feb. 6; v. 235; p. 84.
Schmidt, Ernest E., Covington, Ky. Safety-paper. No. 1,217,076; Feb. 20; v. 235; p. 995.
Schmidt, Gustave F., Chicago, Ill. Heater. No. 1,216,848; Feb. 20; v. 235; p. 919.
Schmidt, Leonard L., and T. W. Beuchel, Belleville, Ill. Signal device for automobiles. No. 1,215,203; Feb. 6; v. 235; p. 251.
Schmidt, Otto, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing soluble tanning agents. No. 1,216,612; Feb. 20; v. 235; p. 841.
Schmidt, William E., Seattle, Wash. Eye-shield. No. 1,217,838; Feb. 27; v. 235; p. 1306.
Schmidtke, John A. (See Turner, Clarence C., assignor.)
Schmitz, Pamphilus, San Francisco, Cal. Car-seal. No. 1,217,077; Feb. 20; v. 235; p. 995.
Schneider, Christian. (See Bosch, Mittasch, and Schneider.)
Schneider, Christian. (See Mittasch, Schneider, and Morawitz.)
Schneider, Christian L., Davenport, Iowa. Lawn-edger. No. 1,214,597; Feb. 6; v. 235; p. 40.
Schneider, Ernest A. (See Walker and Schneider.)

Schneider, George J., Detroit, Mich. Electrical water-purifying apparatus. No. 1,217,643; Feb. 27; v. 235; p. 1241.
Schneider, Henry, Alden, Minn. Plow. No. 1,217,839; Feb. 27; v. 235; p. 1307.
Schneider, Otto. (See Kaminski and Schneider.)
Schoenberg, Ralph A. (See Pape, Herman G., assignor.)
Schoenky, August R., Somerville, assignor to The Reece Shoe Machinery Company, Boston, Mass. Sewing-machine. No. 1,215,415; Feb. 13; v. 235; p. 359.
Schoenthaler, Fred C., *et al.* (See Hachmann, Frederick, assignor.)
Schofield, Robert C., Freeport, Ill. Adjustable tongue-hound for wagons. No. 1,215,416; Feb. 13; v. 235; p. 359.
Scholl, William M., Chicago, Ill. Arch-support. No. 1,216,849; Feb. 20; v. 235; p. 920.
Schrader, Albert A., Cape Girardeau, Mo. Game apparatus. No. 1,216,850; Feb. 20; v. 235; p. 920.
Schreidt, Frank, Mansfield, Ohio. Sugar-bowl or the like. No. 1,217,078; Feb. 20; v. 235; p. 996.
Schroeder Brothers Manufacturing Company. (See Ischer, Fritz, assignor.)
Schubert & Salzer Maschinenfabrik Aktiengesellschaft. (See Cecka, Franz, assignor.)
Schueler, Frederick, Bloomington, Ill. Window-ventilator. No. 1,217,225; Feb. 27; v. 235; p. 1092.
Schuler, John G. (See Terry, Neri, assignor.)
Schultz, Fredrick H., Dayton, Ohio. Shear holding and operating device. No. 1,215,998; Feb. 13; v. 235; p. 569.
Schulz, Carl F., Brooklyn, N. Y. Thermo-electric carbureter. No. 1,216,613; Feb. 20; v. 235; p. 841.
Schulz, Lajos O., Harrison, N. Y. Convertible chair. No. 1,216,172; Feb. 13; v. 235; p. 633.
Schurman, Elias W., Central Bedeque, Prince Edward Island, Canada, assignor of one-half to A. M. Graham, Boston, Mass. Vehicle-light. No. 1,217,644; Feb. 27; v. 235; p. 1242.
Schussler, John H., assignor to Acme Printing Appliance Company, Chicago, Ill. Electrically-heated embossing-base. No. 1,217,226; Feb. 27; v. 235; p. 1092.
Schuster, Karl R., New York, N. Y., assignor to F. M. Barton, Chicago, Ill. Concrete building. No. 1,217,645; Feb. 27; v. 235; p. 1242.
Schutz, Otto, New York, N. Y. Pneumatic tire. No. 1,216,851; Feb. 20; v. 235; p. 920.
Schuyler, Russell P., Chicago, Ill. Lubricating device. No. 1,216,505; Feb. 20; v. 235; p. 802.
Schuyler, Wilton S., Savannah, Mo. Running-board support for use on automobiles. No. 1,215,721; Feb. 13; v. 235; p. 471.
Schwab, John J., New York, N. Y. Transposer. No. 1,216,852; Feb. 20; v. 235; p. 921.
Schwab, Louis. (See Sampson, Robert W., assignor.)
Schwartz, Edward H., Chicago, Ill. Deoxidizing and refining ferrous metals. No. 1,215,065; Feb. 6; v. 235; p. 205.
Schwartz, Frank, Winthrop, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Stiffening parts of boots and shoes. No. 1,215,875; Feb. 13; v. 235; p. 526.
Schwartz, Frank, Winthrop, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Toe or heel stiffener. No. 1,215,876; Feb. 13; v. 235; p. 526.
Schwartz, Gardner E., Waldoboro, Me. Hat-pin guard. No. 1,215,204; Feb. 6; v. 235; p. 251.
Schwartz, Michael, assignor to Automatic Electric Company, Chicago, Ill. Telephone trunking system. No. 1,217,510; Feb. 27; v. 235; p. 1194.
Schwarz, Henry G., Denver, Colo. Breaker and drier. No. 1,217,351; Feb. 27; v. 235; p. 1135.
Schwarz, Justin O., and G. Bjorklund, New York, N. Y., assignors to Hardman Peck & Co. Mechanical musical instrument. No. 1,217,227; Feb. 27; v. 235; p. 1092.
Schweiger, William F. (See Richmond, Balkwill, and Schweiger.)
Schweinert, Maximilian C., West Hoboken, and J. Volckhausen, Weehawken, N. J. Tire-valve. No. 1,216,853; Feb. 20; v. 235; p. 921.
Schweitzer & Conrad. (See Conrad, Nicholas J., assignor.)
Schweitzer & Conrad. (See Schweitzer and Conrad, assignors.)
Schweitzer, Edmund O., Chicago, Ill. Overload circuit-opener. No. 1,214,718; Feb. 6; v. 235; p. 84.
Schweitzer, Edmund O., Chicago, Ill. Fuse device. No. 1,215,999; Feb. 13; v. 235; p. 570.
Schweitzer, Edmund O., and N. J. Conrad, Chicago, Ill., assignors to Schweitzer & Conrad. Circuit-protecting device. No. 1,215,722; Feb. 13; v. 235; p. 471.
Schwerdtle, Henry G. (See Reifsnyder and Schwerdtle.)
Schwerin, Botho, assignor to Elektro-Osmose Aktiengesellschaft (Graf Schwerin Gesellschaft), Frankfort-on-the-Main, Germany. Manufacture of hydroxid of aluminium. No. 1,216,371; Feb. 20; v. 235; p. 755.
Schwinn, Frank W., Chicago, Ill. Starter for internal-combustion engines. No. 1,215,877; Feb. 13; v. 235; p. 526.
Scotford, Louis K., Chicago, Ill. Tone-arm support for talking-machines. No. 1,216,614; Feb. 20; v. 235; p. 841.
Scott, Charles F., Memphis, Tex. Watering-trough. No. 1,216,854; Feb. 20; v. 235; p. 921.
Scott, Charles F., New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company. Means for minimizing inductive interference. No. 1,217,511; Feb. 27; v. 235; p. 1194.
Scott, David J., Plainfield, N. J., assignor to I. and D. J. Scott, executors. Web-printing machine. No. 1,217,646; Feb. 27; v. 235; p. 1243.
Scott, Harry, Hamill, S. D. Poultry-fountain for chicken-coops. No. 1,215,417; Feb. 13; v. 235; p. 359.
Scott, Isabella, executor. (See Scott, David J., assignor.)
Scott, James, Cleveland, Ohio. Trolley-hanger. No. 1,216,372; Feb. 20; v. 235; p. 755.
Scott, John F., Indianapolis, Ind. Eye-shield diffuser. No. 1,216,855; Feb. 20; v. 235; p. 922.
Scott, Robert F. (See Harrington and Scott.)
Scott Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Knit fabric and knitting the same. No. 1,216,506; Feb. 20; v. 235; p. 802.
Scott, S. D., *et al.* (See Sartain, Louis D., assignor.)
Scott, Walter F. A., Doylestown, Pa. Cushioning means. No. 1,215,205; Feb. 6; v. 235; p. 252.
Scott & Williams. (See Scott, Robert W., assignor.)
Scroggin, James A., Little Rock, Ark. Music-leaf holder. No. 1,217,840; Feb. 27; v. 235; p. 1307.
Scubelek, Piotr, Wilmington, Del. Sword and guard attachment for pistols. No. 1,214,834; Feb. 6; v. 235; p. 121.
Scully, Thomas, New York, N. Y. Electrical insulator. No. 1,216,000; Feb. 13; v. 235; p. 570.
Sears, Roebuck and Company. (See Dun Lany, William P., assignor.)
Sears, Willard T., Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Clamping mechanism. (Reissue.) No. 14,263; Feb. 20; v. 235; p. 1020.
Seattle Car & Foundry Co. (See Jarvis, Herbert C., assignor.)
Secord, John M., Buffalo, N. Y. Tray. No. 1,216,856; Feb. 20; v. 235; p. 922.
Sedgley, Reginald F., Philadelphia, Pa. Combined rebounding, main, and trigger spring for firearms. No. 1,216,001; Feb. 13; v. 235; p. 571.
Seely, Thomas H., Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Wax-thread sewing-machine. No. 1,216,736; Feb. 20; v. 235; p. 881.
Seib, George A., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,215,723; Feb. 13; v. 235; p. 472.
Seibt, George, New York, N. Y., assignor, by mesne assignments, to Atlantic Communication Company. Apparatus for producing powerful electrical oscillations. No. 1,216,615; Feb. 20; v. 235; p. 842.
Selders, Charles E., Freeport, N. Y. Traveler's trunk. No. 1,217,647; Feb. 27; v. 235; p. 1243.
Sell, Otto R., Colorado Springs, Colo. Vehicle head-lamp. No. 1,217,841; Feb. 27; v. 235; p. 1307.
Selleck, Theodore G., Chicago, assignor to Deere & Company, Moline, Ill. Furnace-door-operating means. No. 1,215,418; Feb. 13; v. 235; p. 360.
Seng Company, The. (See Dyke, Darrell F., assignor.)
Seng, Wendelin P., Chicago, Ill. Telltale and switch for rear signal-lights for automobiles. No. 1,216,370; Feb. 20; v. 235; p. 754.
Serpek, Ottokar, assignor to Société Generale des Nitrures, Paris, France. Carrying out chemical reactions. No. 1,217,842; Feb. 27; v. 235; p. 1308.
Sessions, Albert L., Bristol, Conn. Dish-washing machine. No. 1,215,583; Feb. 13; v. 235; p. 422.
Sessions, Albert L., Bristol, Conn. Vehicle-body support. No. 1,215,878; Feb. 13; v. 235; p. 527.
Sessions, Albert L., Bristol, Conn. Ceiling-plate. No. 1,216,737; Feb. 20; v. 235; p. 882.
Sessions, Edson O., Chicago, Ill., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Vaporizer. No. 1,215,879; Feb. 13; v. 235; p. 527.
Sexton, Douglas J. (See Blanton and Sexton.)
Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Ill. Looper-thread controller. No. 1,216,738; Feb. 20; v. 235; p. 882.
Shadall, Charles E., Milwaukee, assignor to Shadall Manufacturing Company, Wauwatosa, Wis. Ventilating apparatus. No. 1,216,247; Feb. 13; v. 235; p. 659.
Shadall Manufacturing Company. (See Shadall, Charles E., assignor.)
Shaen, Michael, Washington, D. C. Process and apparatus for removing electrotype-wax. No. 1,215,880; Feb. 13; v. 235; p. 528.
Shaffer, Frank, Everett, Wash., assignor to American Can Company. Metal receptacle. No. 1,215,724; Feb. 13; v. 235; p. 472.
Shammo, Byron A., New York, N. Y. Paper-fender for type-writing machines. No. 1,216,857; Feb. 20; v. 235; p. 922.
Shampay Brothers. (See Shampay, Pascal J., assignor.)
Shampay, Pascal J., assignor to Shampay Brothers, Chicago, Ill. Cleaning device. No. 1,217,352; Feb. 27; v. 235; p. 1135.
Shannon, John, Stonington, Conn. Transmission-control device for motor-vehicles. No. 1,215,206; Feb. 6; v. 235; p. 252.
Sharp, Charles S., Auburn, N. Y., assignor to International Harvester Company of New Jersey. Harrow. No. 1,214,961; Feb. 6; v. 235; p. 167.
Sharp & Smith. (See Clare, Charles E., assignor.)

Sharp & Smith. (See Rink, Louis G., assignor.)
Sharp, William E., assignor to Grip Nut Company, Chicago, Ill. Nut-lock. No. 1,216,858; Feb. 20; v. 235; p. 923.
Sharrer, Jacob M., New York, N. Y. Folding top for vehicles. No. 1,215,207; Feb. 6; v. 235; p. 252.
Shaw, Edward W., Kalgoorlie, Western Australia, Australia. Swivel head-lamp for motor-cars. No. 1,216,173; Feb. 13; v. 235; p. 634.
Shaw, John H., assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,216,859; Feb. 20; v. 235; p. 923.
Shaw, Joseph B. (See Matheson and Shaw.)
Shea, Christopher A., Boston, Mass. Electric motor. No. 1,216,002; Feb. 13; v. 235; p. 571.
Shearer, Oscar, Colfax, Wash. Trace-hook. No. 1,216,860; Feb. 20; v. 235; p. 923.
Sheehan, John J., *et al.* (See Woodward, Erastus, assignor.)
Shelley, James T., Louisville, Ky. Slow-feeding sanitary tub for stock. No. 1,215,725; Feb. 13; v. 235; p. 472.
Shelton, E. C., *et al.* (See Sartain, Louis M., assignor.)
Shelton, William G., New York, N. Y. Automatic electric winder for spring-motors. No. 1,217,843; Feb. 27; v. 235; p. 1308.
Sheltra, George A. (See Framsosi, Antonio, assignor.)
Shepard, Frederick C. (See Gamble and Shepard.)
Sherman, John A., Worcester, Mass. Hook-support. No. 1,216,616; Feb. 20; v. 235; p. 842.
Shevlin, Charles W., assignor to Climax Container Company, Chicago, Ill. Container. No. 1,216,617; Feb. 20; v. 235; p. 842.
Sherwood, Nathan E., Highland Park, assignor to Plymouth Motor Castings Company, Plymouth, Mich. Rope-making machine. No. 1,215,584; Feb. 13; v. 235; p. 422.
Shew, Grover C., West Brownsville, Pa. Tool. No. 1,215,726; Feb. 13; v. 235; p. 472.
Shields, Harry A., Grand Rapids, Mich. Adjustable spreader for tubular fabrics. No. 1,215,419; Feb. 13; v. 235; p. 360.
Shipman, Ralph, Sunbury, Pa. Picture-film-rewinding device. No. 1,215,066; Feb. 6; v. 235; p. 205.
Shoaf, Jacob T., Eureka, Cal. Motor-vehicle-wheel hub. No. 1,215,208; Feb. 6; v. 235; p. 253.
Shoemaker, Richard W., *et al.* (See Koontz, John A., Jr., assignor.)
Shores, William T., *et al.* (See Norman, Frank, assignor.)
Shorey, Napoleon, and F. P. Flynn, Woodland, Me. Suction-box. No. 1,216,861; Feb. 20; v. 235; p. 924.
Shubatt, Lovro, Centerville, Iowa. Safety fire-alarm box. No. 1,217,844; Feb. 27; v. 235; p. 1308.
Shubatt, Lovro, Centerville, Iowa. Stopping device for boats. No. 1,217,845; Feb. 27; v. 235; p. 1309.
Shutt, Merle B., Albuquerque, N. Mex. Lubricator-filler for steam-engines. No. 1,217,846; Feb. 27; v. 235; p. 1309.
Sickles, Amada E., Coyle, Okla. Electric pencil. No. 1,216,862; Feb. 20; v. 235; p. 924.
Sidio Company of America. (See Trautmann, Otto C., assignor.)
Sieber, Gottwalt, assignor to Vogtländische Maschinenfabrik, Plauen, Germany. Embroidering-machine. No. 1,214,599; Feb. 6; v. 235; p. 41.
Siegfried, Robert, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Thrust-bearing. No. 1,216,314; Feb. 6; v. 235; p. 290.
Siemen, Otto, Nonnendamm, near Berlin, assignor to Siemens-Schuckertwerke, G. m. b. H., Berlin, Germany. Rotary pump. No. 1,215,881; Feb. 13; v. 235; p. 528.
Siemens & Halske, A. G. (See Kaminski and Schneider, assignors.)
Siemens-Schuckert Werke, G. m. b. H. (See Fahrmbacher, Alois, assignor.)
Siemens-Schuckertwerke, G. m. b. H. (See Siemen, Otto, assignor.)
Sifton, Winfield B., Westminster, London, England. Production of toluene. No. 1,216,174; Feb. 13; v. 235; p. 634.
Silberman, Philip F., Chicago, Ill. Faucet attachment or fixture. No. 1,217,512; Feb. 27; v. 235; p. 1195.
Silsbee, Joseph L. (See Jones, Grover, and Silsbee.)
Silverthorne, William E., New York, N. Y. Pour-out. No. 1,214,600; Feb. 6; v. 235; p. 41.
Simmon, Karl A., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Switching apparatus. No. 1,217,513; Feb. 27; v. 235; p. 1195.
Simmon, Karl A., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control apparatus. No. 1,217,514; Feb. 27; v. 235; p. 1195.
Simmons, William H., Annandale, N. Y. Flow-pipe holder for fountain-syringes. No. 1,216,739; Feb. 20; v. 235; p. 883.
Simms Magneto Company, The. (See Hoyt, Francis R., assignor.)
Simms Magneto Company, The. (See Huff, Edward S., assignor.)
Simon, George A., Boston, Mass. Umbrella. No. 1,217,515; Feb. 27; v. 235; p. 1196.
Simonds, Almor O., St. Louis, Mo. Crochet-thread holder. No. 1,216,863; Feb. 20; v. 235; p. 924.
Simonds, Charles G., Milwaukee, Wis., and G. W. Doerr, Chicago, Ill. Corner-fastener. No. 1,215,882; Feb. 13; v. 235; p. 528.
Simonds, Herbert R., Dayton, Ohio. Apparatus and process for baking emery-wheels and the like. No. 1,215,067; Feb. 6; v. 235; p. 206.
Simonds, Samuel W., Boston, Mass. Fire-box. No. 1,215,068; Feb. 6; v. 235; p. 206.
Simons, Morris. (See Meyers and Simons.)
Simpson, Charles H., Louisville, Ky. Automatic gate-opener. No. 1,216,740; Feb. 20; v. 235; p. 883.
Simpson, Edmund, New York, N. Y., assignor of one-half to W. W. Duncan, Ridgewood, N. J. Signal device for automobiles. No. 1,215,209; Feb. 6; v. 235; p. 253.
Simpson, Frederick G., Seattle, Wash. Transmitting apparatus for wireless-telegraph station. No. 1,217,516; Feb. 27; v. 235; p. 1196.
Simpson, Frederick G., Seattle, Wash. Radiotelegraph and telephone system. No. 1,217,517; Feb. 27; v. 235; p. 1196.
Simpson, Frost V., assignor to Kieckhefer Box Company, Milwaukee, Wis. Press. No. 1,216,175; Feb. 13; v. 235; p. 634.
Simpson, John S., Ingomar, Miss. Crosstree for telegraph-poles. No. 1,215,883; Feb. 13; v. 235; p. 529.
Simpson, John T., Newark, N. J. Flying-machine. No. 1,214,835; Feb. 6; v. 235; p. 121.
Simpson, Leslie H. (See George, Edmund G., assignor.)
Singelmann, Max, Chicago, Ill. Airship. No. 1,217,518; Feb. 27; v. 235; p. 1197.
Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)
Sirotta, Bernard, New York, N. Y. Woman's dress. No. 1,214,601; Feb. 6; v. 235; p. 42.
Sisbower, George F., East Orange, N. J., and L. E. Pittoni, assignors to New York Couch Bed Company, New York, N. Y. Folding hammock stand. No. 1,217,519; Feb. 27; v. 235; p. 1197.
Skeri, Francesco, assignor to The National Cash Register Company, Dayton, Ohio. Ticket-printing machine. No. 1,215,585; Feb. 13; v. 235; p. 423.
Skreta, Maximilian, Vienna, Austria-Hungary. Advertisement-displaying apparatus. No. 1,214,902; Feb. 6; v. 235; p. 168.
Slater, Aldred W., Youngstown, Ohio. Rail-joint. No. 1,216,373; Feb. 20; v. 235; p. 755.
Slattery, Charles H., Cuyahoga Falls, Ohio. Dash-pot for shock-absorbers. No. 1,214,719; Feb. 6; v. 235; p. 84.
Slattery, John, Chrome, N. J. Heat-resisting structural material and making same. No. 1,215,727; Feb. 13; v. 235; p. 473.
Slauson, Stephen A., Cedar Rapids, Iowa. Gate. No. 1,215,728; Feb. 13; v. 235; p. 473.
Sleeper, Otis H., Exeter, N. H., assignor to Boston Lock-Nut Company, Boston, Mass. Lock-nut. No. 1,217,520; Feb. 27; v. 235; p. 1197.
Sleeth, Montgomery, Bellevue, assignor to Fort Pitt Bedding Company, Pittsburgh, Pa. Feeding and filling machine. No. 1,217,847; Feb. 27; v. 235; p. 1309.
Sliemers, John W., St. Joseph, Tenn. Stovepipe-holder. No. 1,216,618; Feb. 20; v. 235; p. 843.
Sloan, Harry M., Chicago, Ill. Street-car. No. 1,216,003; Feb. 13; v. 235; p. 571.
Sloan, William H., Winston-Salem, N. C. Chimney-holding attachment for lamps. No. 1,216,864; Feb. 20; v. 235; p. 924.
Small, George E., Richmond Hill, N. Y. Reinforced hollow-wall construction. No. 1,214,963; Feb. 6; v. 235; p. 168.
Small, George E., Richmond Hill, N. Y. Block or slab for reinforced hollow-wall construction. No. 1,214,964; Feb. 6; v. 235; p. 169.
Small, Joseph L., Elwood, Ind. Buffing-roll. No. 1,217,848; Feb. 27; v. 235; p. 1310.
Smathers, James F., Kansas City, Mo. Line-lock for typewriting machines. No. 1,215,586; Feb. 13; v. 235; p. 423.
Smidley, Floyd R., New Holland, Ohio. Clod-crusher. No. 1,217,228; Feb. 27; v. 235; p. 1093.
Smith, Albert, Birmingham, England. Shuttle for continuous weft-looms. No. 1,215,729; Feb. 13; v. 235; p. 473.
Smith, Albert, Fonda, Iowa. Gate-operating means. No. 1,217,353; Feb. 27; v. 235; p. 1136.
Smith, Albert C. and F. H., Hinckley, England. Collar ironing and shaping machine. No. 1,216,507; Feb. 20; v. 235; p. 803.
Smith, Alice F., New York, N. Y. Copy-holder. No. 1,216,004; Feb. 13; v. 235; p. 572.
Smith, Archie, and W. Forquer, Juanita, N. D. Muzzle for horses. No. 1,215,884; Feb. 13; v. 235; p. 529.
Smith, Arthur H. (See Fellmann, Bagley, and Smith.)
Smith, Arthur W. (See Farnham, Smith, and Phelps.)
Smith, Beverly W. (See Lutz and Smith.)
Smith, Carleton W., assignor, by mesne assignments, to Folding Utilities Corporation, New York, N. Y. Folding stand. No. 1,215,420; Feb. 13; v. 235; p. 360.
Smith, Cicero G., Palisade, Colo., assignor to The Smith Spring Wheel Company, Albuquerque, N. Mex. Spring-wheel. No. 1,215,730; Feb. 13; v. 235; p. 474.
Smith, Cornelius T., Grandin, Alberta, Canada. Hitching-weight lifter. No. 1,217,354; Feb. 27; v. 235; p. 1136.
Smith, Covert R., Freeport, Ohio. Combined ironing-table and step-ladder. No. 1,216,176; Feb. 13; v. 235; p. 634.
Smith, Durward M., Clarendon, Va. Gas-burner deflector. No. 1,216,741; Feb. 20; v. 235; p. 883.

Smith, Elmer J., assignor to The Peter Smith Heater Company, Detroit, Mich. Electric air-heating system. No. 1,217,229; Feb. 27; v. 235; p. 1093.
Smith, Ernest C., assignor to Walter A. Wood Mowing & Reaping Machine Co., Hoosick Falls, N. Y. Fore-truck for harvesters and the like. No. 1,217,110; Feb. 20; v. 235; p. 1011.
Smith, Ernest L., Salt Lake City, Utah. Annual or term pass, frank, or form holder and writing-frame. (Reissue.) No. 14,258; Feb. 13; v. 235; p. 663.
Smith, Francis H. (See Smith, Albert C. and F. H.)
Smith, Frank W. (See Watties, Luther H., assignor.)
Smith, Franklin D., Deadwood, S. D. Mechanism for transmitting power. No. 1,216,865; Feb. 20; v. 235; p. 925.
Smith, Garrett H. (See Nagel, Gustav J., assignor.)
Smith, George Q., assignor to W. R. Clayton, Chicago, Ill. Embalming fluid. No. 1,215,210; Feb. 6; v. 235; p. 254.
Smith, Glen E. (See Okun, Moses S., assignor.)
Smith, Herbert A., St. Paul, Minn. Check-book cover. No. 1,217,849; Feb. 27; v. 235; p. 1310.
Smith, James E., Baltimore, Md. Puzzle. No. 1,215,069; Feb. 6; v. 235; p. 206.
Smith, James H., Boston, assignor of one-half to J. M. Nelson, East Boston, Mass. Threading attachment for sewing-machines. No. 1,216,866; Feb. 20; v. 235; p. 925.
Smith, John, Brooklyn, N. Y., assignor, by mesne assignments, to Hi-Po Waterproof Battery Corporation. Battery-package. No. 1,214,836; Feb. 6; v. 235; p. 122.
Smith, John C., Louisville, Ky. Control of current to large inductances. No. 1,216,867; Feb. 20; v. 235; p. 926.
Smith, John R., London, England. Vehicle-wheel. No. 1,215,885; Feb. 13; v. 235; p. 529.
Smith, John W., Chicago, Ill. Internal-combustion engine. No. 1,214,837; Feb. 6; v. 235; p. 122.
Smith, Kirk, Columbus Grove, Ohio. Vegetable-slicer. No. 1,215,731; Feb. 13; v. 235; p. 474.
Smith, Lewis C. (See Riebsame, Edward C., assignor.)
Smith, Norman H., Babylon, N. Y. Automatic sash-holder. No. 1,214,602; Feb. 6; v. 235; p. 42.
Smith, Ogeal, *et al.* (See Choteau, Henry H., assignor.)
Smith Spring Wheel Company, The. (See Smith, Cicero G., assignor.)
Smith, Sydney, Detroit, Mich. Machine for making castellated nuts. No. 1,216,742; Feb. 20; v. 235; p. 883.
Smith, William A. (See Bowman, Levi M., assignor.)
Smith, William A., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Rock-drilling apparatus. No. 1,214,603; Feb. 6; v. 235; p. 42.
Smith, William A., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Drill-sharpening apparatus. No. 1,214,604; Feb. 6; v. 235; p. 43.
Smith, William E., South Plainfield, N. J. Egg-case. No. 1,217,230; Feb. 27; v. 235; p. 1094.
Smith, William E., Milltown, assignor to Kilbourn Manufacturing Corporation, New Brunswick, N. J. Seamless-fashioned stocking and knitting and fashioning the same. No. 1,216,374; Feb. 20; v. 235; p. 756.
Smith, William J., New Haven, Conn. Micrometer-gage. No. 1,217,850; Feb. 27; v. 235; p. 1310.
Smith, William J., New York, N. Y., assignor to Edwards & Company. Electric bell. No. 1,216,743; Feb. 20; v. 235; p. 884.
Smith, William L., Tuscumbia, Ala. Steam-engine valve-gear. No. 1,217,648; Feb. 27; v. 235; p. 1243.
Smith, William T., Bolton, England. Machine for drawing and spinning short fibers. No. 1,215,211; Feb. 6; v. 235; p. 254.
Smyth, Joseph E. (See Pagliarul, Joseph, assignor.)
Snapp, Elmer J., Strasburg, Va. Match-safe. No. 1,217,649; Feb. 27; v. 235; p. 1244.
Snelling, John C., Wandsworth, London, England. Launching of boats from ships. No. 1,216,868; Feb. 20; v. 235; p. 926.
Snelling, Walter O., Pittsburgh, Pa., assignor of fifty-one one-hundredths to J. T. Milliken, St. Louis, Mo. Purifying oils. No. 1,215,732; Feb. 13; v. 235; p. 474.
Snigo, James J., Pittsburgh, Pa. Receptacle. No. 1,216,860; Feb. 20; v. 235; p. 926.
Snigo, James J., Pittsburgh, Pa. Antiskidding device for pneumatic tires. No. 1,216,870; Feb. 20; v. 235; p. 927.
Snyder, Erle B., Cleveland, assignor of one-half to F. J. Ketcher, Akron, Ohio. Feeding mechanism. No. 1,217,650; Feb. 27; v. 235; p. 1244.
Snyder, George C., New York, N. Y. Pucker-removing mechanism. No. 1,217,521; Feb. 27; v. 235; p. 1198.
Snyder, George W., assignor to Swartz Electric Co., Indianapolis, Ind. Internal-combustion-engine control. No. 1,217,355; Feb. 27; v. 235; p. 1137.
Snyder, Jacob R., assignor to P. E. Donner, Pittsburgh, Pa. Steam-engine reversing-gear. No. 1,214,965; Feb. 6; v. 235; p. 169.
Snyder, Perry E., Angola, Ind. Locking device for steering-wheels. No. 1,216,871; Feb. 20; v. 235; p. 927.
Sobeck, August, Chicago, Ill. Device for separating the whites and yolks of eggs. No. 1,214,720; Feb. 6; v. 235; p. 84.
Societe Anonyme Des Etablissements Delaunay Belleville. (See Canbac, Georges E., assignor.)
Societe Anonyme Pour L'Exploitation Des Procedes Westinghouse-Leblanc. (See Leblanc, Maurice, assignor.)
Societe Chimique Des Usines Du Rhone Anciennement Gilliard P. Monnet et Cartier. (See Koetschet and Theumann, assignors.)
Societe Des Etablissements Malicet & Blin. (See Guillery, René, assignor.)
Société E. Cottard & Cie. (See Cottard, Edouard, assignor.)
Société Electro-Metallurgique De St. Béron. (See Nolly, Hector de, assignor.)
Société Generale des Nitrures. (See Serpek, Ottokar, assignor.)
Society of Chemical Industry in Basle. (See Jagerspacher, Carl, assignor.)
Society of Chemical Industry in Basle. (See Jagerspacher and Wuth, assignors.)
Society of Chemical Industry in Basle. (See Wuth, Mayer, Jagerspacher, and Anderwert, assignors.)
Soens, Mathew, Streator, Ill. Sole-stitching machine. No. 1,215,733; Feb. 13; v. 235; p. 474.
Sohn, Charles E., assignor of one-half to Usher-Walker, Limited, London, England. Resilient composition for printers' rollers. No. 1,215,886; Feb. 13; v. 235; p. 529.
Soli, Charles A. (See Soli, Charles J., assignor.)
Soli, Charles J., assignor of one-half to C. A. Soli, Racine, Wis. Glazing. No. 1,217,356; Feb. 27; v. 235; p. 1137.
Solvay Process Company, The. (See Jones and Grover, assignors.)
Solvay Process Company, The. (See Jones, Grover, and Silsbee, assignors.)
Solvay Process Company, The. (See Pennock, Jones, and Grover, assignors.)
Solvay Process Company, The. (See Trump, Edward N., assignor.)
Soper, Raymond H., assignor to Superior Seating Company, Muskegon, Mich. Chair. No. 1,217,231; Feb. 27; v. 235; p. 1094.
Sortland, Engwald J., Neutral Valley, Alberta, Canada. Cattle-guard. No. 1,217,651; Feb. 27; v. 235; p. 1245.
Souder, Frank P., Bridgeton, N. J. Continuous-process cooker. No. 1,215,212; Feb. 6; v. 235; p. 254.
Souder, Howell W. (See Souder, Robert H. and H. W.)
Souder, Jacob J., Washington, D. C. Metallic roof for railway-cars. No. 1,215,213; Feb. 6; v. 235; p. 255.
Souder, Robert H. and H. W., Tamaqua, Pa. Block-signal system. No. 1,215,421; Feb. 13; v. 235; p. 361.
Southern Electro-Chemical Company. (See Hechenbleikner, Ingenuin, assignor.)
Southwick, William S., Clinton, assignor to Clinton Wire Cloth Company, Boston, Mass. Loom. No. 1,214,966; Feb. 6; v. 235; p. 170.
Sowden, Charles N., Toronto, Ontario, Canada. Reducing-valve. No. 1,216,872; Feb. 20; v. 235; p. 927.
Spade, Henry E., Richmond, Mich., assignor, by mesne assignments, to Arvac Manufacturing Co., Chicago, Ill. Universal joint. No. 1,216,508; Feb. 20; v. 235; p. 803.
Spahr, George W., Sacramento, Cal. Head-rest for barbers' chairs. No. 1,217,652; Feb. 27; v. 235; p. 1245.
Spangler, Charles H., assignor of one-half to C. C. Long, Reading, Pa. Current-limiter. No. 1,215,422; Feb. 13; v. 235; p. 361.
Spangler, Charles H., assignor of one-half to C. C. Long, Reading, Pa. Current-limiter. No. 1,215,423; Feb. 13; v. 235; p. 361.
Spar Chemical Company, The. (See Bassett, Harry P., assignor.)
Sparks, William, Jackson, Mich., assignor to The Sparks-Withington Company, Cleveland, Ohio. Signal. No. 1,214,721; Feb. 6; v. 235; p. 85.
Sparks, William, Jackson, Mich., assignor to The Sparks-Withington Company, Cleveland, Ohio. Signal. No. 1,214,722; Feb. 6; v. 235; p. 85.
Sparks-Withington Company, The. (See Sparks, William, assignor.)
Sparrow, Hill, New York, N. Y. Paper-hanger's tool-bag. No. 1,217,357; Feb. 27; v. 235; p. 1137.
Speidel, Charles F., assignor to Eastman Kodak Company, Rochester, N. Y. Camera-back. No. 1,217,653; Feb. 27; v. 235; p. 1245.
Spelling, Thomas C., New York, N. Y. Bottle-stopper. No. 1,216,005; Feb. 13; v. 235; p. 572.
Spelling, Thomas C., New York, N. Y. Stopper. No. 1,216,177; Feb. 13; v. 235; p. 635.
Spencer, Stephen R. (See Kone, George W., assignor.)
Spensley, Jacob W., Manchester, England. Rotary disintegrating, pulverizing, or mixing apparatus. No. 1,215,424; Feb. 13; v. 235; p. 361.
Sperry, Elmer A., Brooklyn, assignor to The Sperry Gyroscope Company, New York, N. Y. Plotting-indicator. No. 1,215,425; Feb. 13; v. 235; p. 362.
Sperry Gyroscope Company, The. (See Sperry, Elmer A., assignor.)
Sperry, Leonard B., Wauwatosa, Wis., assignor to International Harvester Corporation. Internal-combustion engine. No. 1,214,967; Feb. 6; v. 235; p. 170.
Spery, Charles F., Chicago, Ill. Radiator. No. 1,216,509; Feb. 20; v. 235; p. 804.
Spirella Company, The. (See Winter, Frederick W., assignor.)
Spiro, Charles, New York, N. Y. Telegraph-call. No. 1,215,734; Feb. 13; v. 235; p. 475.
Splitdorf Electrical Company. (See Mason, Charles T., assignor.)

Sponenburg, Hiram H., Gurnee, assignor, by mesne assignments, to O. R. Barnett, Chicago, Ill. Rail-stay. No. 1,214,723; Feb. 6; v. 235; p. 85.

Sponenburg, Hiram H., Gurnee, assignor, by mesne assignments, to O. R. Barnett, Chicago, Ill. Anticreeper. No. 1,215,426; Feb. 13; v. 235; p. 362.

Sprague Canning Machinery Company. (See McIntyre, John C., assignor.)

Sprague, Gilbert M. (See Carlson, Oscar G., assignor.)

Spray Primer Company. (See Kilgore, Frederick O., assignor.)

Spring, William O. (See Clough and Spring.)

Springer, Edward R., Princeton, Ill. Gear-shift. No. 1,216,178; Feb. 13; v. 235; p. 635.

Spurrier, William A., Newton, Mass. Holder for calendar-pads and the like. No. 1,214,605; Feb. 6; v. 235; p. 43.

Squier, Natt, Clifton Springs, assignor of one-half to J. N. Mead, Ithaca, N. Y. Tire. No. 1,217,232; Feb. 27; v. 235; p. 1094.

Squire, George A., Rudolph, Ohio. Carburetèr attachment for internal-combustion engines. No. 1,217,233; Feb. 27; v. 235; p. 1094.

Squires, Pembroke N., Tekamah, Nebr. Headlight-adjuster for vehicles. No. 1,216,619; Feb. 20; v. 235; p. 843.

St. Louis Felting Machine Company. (See Campbell, James, assignor.)

Stacey, Charles S., Dover, Ohio. Holding-form for buffing articles. No. 1,215,735; Feb. 13; v. 235; p. 475.

Stacy, Ernest H., Atlanta, Ga. Street car and railway indicator. No. 1,215,070; Feb. 6; v. 235; p. 206.

Stafford, Benjamin E. D., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Lock-washer for nuts. No. 1,216,620; Feb. 20; v. 235; p. 843.

Stafford, Benjamin E. D., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,216,621; Feb. 20; v. 235; p. 844.

Stafford, Benjamin E. D., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,216,622; Feb. 20; v. 235; p. 844.

Stafford, Frank R., Providence, R. I. Vessel. No. 1,217,522; Feb. 27; v. 235; p. 1198.

Stafford, George A., Sour Lake, Tex. Shock-absorber. No. 1,215,736; Feb. 13; v. 235; p. 475.

Stahl, George E., Jersey City, N. J. Closure for bottles, jars, and other receptacles. No. 1,215,737; Feb. 13; v. 235; p. 476.

Stallings, James K., Pigeon Creek, Ala. Boll-weevil exterminator. No. 1,216,006; Feb. 13; v. 235; p. 573.

Standard Car Truck Company. (See Webb and Walton, assignors.)

Standard Sanitary Manufacturing Co. (See Muckenhirn, Charles H., assignor.)

Standard Welding Company, The. (See Bryant, Richard S., assignor.)

Standard Welding Company, The. (See Butcher, Harry E., assignor.)

Standeford, Archie D., Kansas City, Mo. Shutter for moving-picture machines. No. 1,215,887; Feb. 13; v. 235; p. 530.

Standerwick, Reginald G., Lynn, Mass., assignor to General Electric Company. Gear and pulley device. No. 1,217,654; Feb. 27; v. 235; p. 1246.

Stanley Works, The. (See Chamberlain, Valentine B., assignor.)

Stansbury, Paul S. (See Trumbower, David S., assignor.)

Stanton, George, and J. D. Walters, Braddock, Pa. Christmas-tree holder. No. 1,217,655; Feb. 27; v. 235; p. 1246.

Stanton, John P., Detroit, Mich. Suspension device. No. 1,215,738; Feb. 13; v. 235; p. 476.

Stapleton, Charles A., and O. P. Burchfiel, Anthony, Kans. Oil-gage. No. 1,216,744; Feb. 20; v. 235; p. 884.

Stark, Andrew, Chicago, Ill. Reinforced railway-tie. No. 1,216,873; Feb. 20; v. 235; p. 928.

Stark, Benjamin O., Stotesbury, Mo. Inflating system. No. 1,217,234; Feb. 27; v. 235; p. 1095.

Stark, Joseph C. (See Dial, Robert E., assignor.)

Stark, William L., Hastings, Mich. Washing-machine. No. 1,217,656; Feb. 27; v. 235; p. 1246.

Starker, Heinrich, assignor to Firm of R. Bosch, Stuttgart, Germany. Adjusting mechanism. No. 1,216,745; Feb. 20; v. 235; p. 885.

Starr Piano Company, The. (See Maxwell, John S., assignor.)

States, Will T., and H. F. Lapp, Cleveland, Ohio. Bowling-pin setter. No. 1,217,235; Feb. 27; v. 235; p. 1095.

Stäubli, Gebr. (See Bischof, Ulrich, assignor.)

Staude, Edwin G., Minneapolis, Minn. Vaporizer. No. 1,214,838; Feb. 6; v. 235; p. 122.

Stearns, Lowell H., Fitchburg, Mass. Passenger-stile for railways. No. 1,216,179; Feb. 13; v. 235; p. 636.

Steedman, George F., St. Louis, assignor to Curtis & Co. Mfg. Co., Wellston, Mo. Unloading-valve for compressors. No. 1,215,071; Feb. 6; v. 235; p. 207.

Steel Utilities. (See Wurts, Edward V., assignor.)

Steele, Charles B., New York, N. Y. Motor-vehicle. No. 1,214,968; Feb. 6; v. 235; p. 170.

Stehli, Henry J., Montclair, N. J., assignor to Dwight & Lloyd Metallurgical Company. Feeding mechanism. No. 1,215,739; Feb. 13; v. 235; p. 476.

Steig, Anna L., Churchs Ferry, N. D. Clothes-hanger. No. 1,214,606; Feb. 6; v. 235; p. 44.

Steiner, Moses, Bluffton, Ohio. House. No. 1,215,740; Feb. 13; v. 235; p. 477.

Steinert, Albert M., Providence, R. I. Electrical attachment for self-playing musical instruments. No. 1,217,358; Feb. 27; v. 235; p. 1137.

Steinert, Albert M., Providence, R. I. Auxiliary-percussive-instrument attachment for self-playing musical instruments. No. 1,217,359; Feb. 27; v. 235; p. 1138.

Steinke, Arthur J. (See Roebuck and Steinke.)

Steinke, Bernard A. (See Marx and Steinke.)

Steinmetz, Charles P., Schenectady, N. Y., assignor to General Electric Company. Condensation product. No. 1,215,072; Feb. 6; v. 235; p. 208.

Steinmetz, Joseph A., Philadelphia, Pa. Destroying aircraft. No. 1,217,657; Feb. 27; v. 235; p. 1247.

Stening, Ernst N., Söderköping, Sweden. Portable table. No. 1,214,724; Feb. 6; v. 235; p. 86.

Stephan, Walter G. (See Beard and Stephan.)

Stephens, Louis K., Dallas, assignor, by mesne assignments, to Garner Regin Machinery Company, Houston, Tex. Cotton-reginning machine. No. 1,215,741; Feb. 13; v. 235; p. 477.

Stephens, William, East Liverpool, Ohio. Motion-figure. No. 1,216,874; Feb. 20; v. 235; p. 928.

Stephens, William A. (See Woeste, Louis B., assignor.)

Stephens, William C., Cornwall, England. Rock-drilling machine. No. 1,214,607; Feb. 6; v. 235; p. 44.

Stephenson, George F., Luzerne, Pa. Fire-extinguisher. No. 1,217,230; Feb. 27; v. 235; p. 1096.

Stephenson, Walter E., Roosevelt, N. Y. Power-actuated engraving-tool. No. 1,216,007; Feb. 13; v. 235; p. 573.

Stern, Louis, New York, N. Y. Lock. No. 1,215,888; Feb. 13; v. 235; p. 530.

Stettner, Ludwig, Oakland, assignor to Great Western Cutting and Welding Company, San Francisco, Cal. Torch. No. 1,216,875; Feb. 20; v. 235; p. 929.

Stevens, Arthur L., Roseville, Cal. Indicator. No. 1,216,876; Feb. 20; v. 235; p. 929.

Stevens, James C., Bedford, Ind. Fish-hook releaser. No. 1,215,073; Feb. 6; v. 235; p. 208.

Stevens, Levi, assignor to Jermin and Stevens, Alpena, Mich. Recovery of material in the form of dust from rotary-cement-kiln gases. No. 1,214,725; Feb. 6; v. 235; p. 86.

Stevens, Robert H., Newark, N. J. Guard for cuff-buttons. No. 1,216,510; Feb. 20; v. 235; p. 804.

Stevens, Walter T. (See Coates, Joseph S., assignor.)

Stewart, Archibald J. and H. N., Los Angeles, Cal. Mitten. No. 1,216,877; Feb. 20; v. 235; p. 929.

Stewart, Burton, St. Joseph, Mo. Metallic-crown wick. No. 1,216,511; Feb. 20; v. 235; p. 805.

Stewart, Charles A., Worcester, Mass. Dasher. No. 1,215,214; Feb. 6; v. 235; p. 255.

Stewart, Edwin F., Woodcliff, N. J., assignor of one-half to The Barrett Company, New York, N. Y. Pulverized-fuel feeder. No. 1,217,237; Feb. 27; v. 235; p. 1096.

Stewart, Emmor J. (See Crapser, Morris H., assignor.)

Stewart, Harry N. (See Stewart, Archibald J. and H. N.)

Stewart, Jackson, North Geelong, Victoria, Australia. Alarm-clock and attachment therefor. No. 1,217,523; Feb. 27; v. 235; p. 1198.

Stewart, Richard F., Briarcliff, N. Y. Snow-plow for road-vehicles. No. 1,215,587; Feb. 13; v. 235; p. 424.

Stewart, Roy N., Dorchester, Mass. Spraying apparatus. No. 1,216,746; Feb. 20; v. 235; p. 885.

Stewart-Warner Speedometer Corporation. (See Larson, Edward A., assignor.)

Stickney, Burnham C., Elizabeth, N. J., assignor, by mesne assignments, to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,216,623; Feb. 20; v. 235; p. 844.

Stickney, Charles A., Chicago, Ill. Valve-control mechanism for internal-combustion engines. No. 1,214,839; Feb. 6; v. 235; p. 123.

Stillman, Loran A. (See Hopkins, Harvey L., assignor.)

Stinson, Robert E., *et al.* (See Harbison, Joseph C., assignor.)

Stinson, Willis E., *et al.* (See Harbison, Joseph C., assignor.)

Stock, August, and O. Nicodemus, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Dyes of the triphenylmethane series and making same. No. 1,217,238; Feb. 27; v. 235; p. 1096.

Stocker, Lawrence E., Lynn, Mass. Electrical heater. No. 1,215,427; Feb. 13; v. 235; p. 362.

Stocker, Lawrence E., Saugus, Mass. Shoe-toe moistening and heating apparatus. No. 1,217,360; Feb. 27; v. 235; p. 1138.

Stokes & Smith Company. (See Reifsnyder, James D., assignor.)

Stokes & Smith Company. (See Reifsnyder and Schwerdtle, assignors.)

Stolp, Samuel S., assignor to Automatic Electric Company, Chicago, Ill. Measured-service telephone system. No. 1,214,969; Feb. 6; v. 235; p. 171.

Stolz, William J., Milwaukee, Wis. Folding seat for perambulators. No. 1,217,658; Feb. 27; v. 235; p. 1247.

Stone, Sam L. (See Helmer, Milton J., assignor.)

Stonebridge, Charles H., New York, N. Y. Cooking device. No. 1,216,008; Feb. 13; v. 235; p. 573.

Stormo, Josephine, Garretson, S. D. Invalid's swing. No. 1,216,878; Feb. 20; v. 235; p. 930.

Stortz Gear Shift Company. (See Stortz, John H., assignor.)

Stortz, John H., Philadelphia, Pa., assignor to Stortz Gear Shift Company, Wilmington, Del. Gear-selecting controller. No. 1,215,742; Feb. 13; v. 235; p. 478.

Story, Ward B., Brooklyn, assignor to Ward B. Story Company, Inc., New York, N. Y. Cylinder for printing-machines. No. 1,217,524; Feb. 27; v. 235; p. 1198.

Story, William E., Jr., Schenectady, N. Y., assignor to General Electric Company. Insulating gas-tight seal. No. 1,215,074; Feb. 6; v. 235; p. 208.

Stowasser, Anthony, Milwaukee, Wis. Shock-absorber. No. 1,217,659; Feb. 27; v. 235; p. 1248.

Straight, Bennett D., assignor, by mesne assignments, to Butter Serving Machine Company, Inc., Rochester, N. Y. Apparatus for dispensing butter patties. No. 1,216,624; Feb. 20; v. 235; p. 845.

Strathmore Company. (See Kilkenny, William F., assignor.)

Strauss, Edward E., Chicago, Ill. Display-stand for swatch-books. No. 1,215,588; Feb. 13; v. 235; p. 424.

Strauss, Julius C. (See Laurell, Charles W., assignor.)

Streich, Frank, assignor to The Union Wrapping Machine Company, Joliet, Ill. Dough-molding machine. No. 1,216,512; Feb. 20; v. 235; p. 805.

Strickland, David, New York, N. Y. Brickmaking-machine. No. 1,215,215; Feb. 6; v. 235; p. 255.

Strietelmeier, John E., assignor to The Ideal Wheel Company, Cincinnati, Ohio. Taper-pin spoke-fastening. No. 1,217,361; Feb. 27; v. 235; p. 1138.

Strietelmeier, John E., assignor to The Ideal Wheel Company, Cincinnati, Ohio. Demountable substitution-hub. No. 1,217,362; Feb. 27; v. 235; p. 1139.

Strietelmeier, John E., assignor to The Ideal Wheel Company, Cincinnati, Ohio. Spring-wheel mechanism. No. 1,217,363; Feb. 27; v. 235; p. 1140.

Strohm, Samuel D., Philadelphia, Pa. Controller-support for dental chairs. No. 1,216,625; Feb. 20; v. 235; p. 845.

Strohmeyer, Arthur J., Altoona, Pa. Lip-guard for drinking vessels. No. 1,217,661; Feb. 27; v. 235; p. 1248.

Stromberg-Carlson Telephone Manufacturing Company. (See Libby, Albion D. T., assignor.)

Stromberg-Carlson Telephone Manufacturing Company. (See Manson, Ray H., assignor.)

Strother, Robert H., Montclair, N. J., assignor to Remington Typewriter Company, Ilion, N. Y. Computing-machine. No. 1,214,608; Feb. 6; v. 235; p. 44.

Structural Pressed Steel Wheel Company. (See Lachman, Maurice, assignor.)

Struthers, James L. (See Lancaster and Struthers.)

Stubblefield, John A., and R. R. Thompson, Thermopolis, Wyo. Razor-handle. No. 1,214,609; Feb. 6; v. 235; p. 45.

Stuckel, Frank C., assignor to J. I. Case Threshing Machine Company, Racine, Wis. Grain-screen for threshing-machines. No. 1,217,364; Feb. 27; v. 235; p. 1140.

Stuewe, Max H., Los Angeles, Cal. Milk-pitcher. No. 1,216,180; Feb. 13; v. 235; p. 636.

Stuhlmiller, William, New York, N. Y. Decorative product and making the same. No. 1,217,660; Feb. 27; v. 235; p. 1248.

Stuppillo, Francesco, Watertown, N. Y. Gage. No. 1,216,879; Feb. 20; v. 235; p. 930.

Sturges, Arthur H. (See O'Keeffe, Elbert R., assignor.)

Sturrock, James F., Newark, assignor to The Nairn Linoleum Company, Kearney, N. J. Machine for printing oil-cloth and the like. No. 1,216,181; Feb. 13; v. 235; p. 636.

Sturtevant, Cullen K. (See Hamilton, Cameron G., assignor.)

Sturtevant Mill Company. (See Sturtevant, Thomas J., assignor.)

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Rotary-beater mill. No. 1,215,075; Feb. 6; v. 235; p. 208.

Stutzke, Richard W. G., assignor, by mesne assignments, to G. A. Buhl, Chicago, Ill. Process and apparatus for desiccating fluid substances. No. 1,215,889; Feb. 13; v. 235; p. 530.

Suares, Octave J. (See Clairain and Suares.)

Submarine Signal Company. (See Fessenden, Reginald A., assignor.)

Sullenberger, John F., Columbus, Ga. Drying-machine. No. 1,216,880; Feb. 20; v. 235; p. 930.

Sullivan, James F., assignor to Sullivan Manufacturing Co., Camden, N. J. Cleaning-powder. No. 1,216,182; Feb. 13; v. 235; p. 637.

Sullivan Manufacturing Co. (See Sullivan, James F., assignor.)

Summers, Edgar W., Pittsburgh, Pa. Journal-box. No. 1,215,743; Feb. 13; v. 235; p. 478.

Sun-Ray Mfg. Co., The. (See Bloomer, Harvey E., assignor.)

Superior Seating Company. (See Soper, Raymond H., assignor.)

Sutherland, Alexander K., assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn. Knife-blade switch. No. 1,216,513; Feb. 20; v. 235; p. 805.

Sved, Alexander, New York, N. Y. Attachment to dental engines. No. 1,216,875; Feb. 20; v. 235; p. 756.

Swartz Electric Co. (See Snyder, George W., assignor.)

Swartz, James, Thompson Falls, Mont. Vegetative device. No. 1,217,239; Feb. 27; v. 235; p. 1097.

Swartz, John L., Akron, Ohio. Non-skid tire. No. 1,215,216; Feb. 6; v. 235; p. 256.

Swem, Lawrence W., assignor to E. L. Webb & Co., West Liberty, Iowa. Hydrocarbon-burner. No. 1,216,248; Feb. 13; v. 235; p. 660.

Swift, William L. (See Meier and Swift.)

Swingle, Charles M., Cleveland, Ohio. Electrotherapeutic rejuvenator. No. 1,216,183; Feb. 13; v. 235; p. 637.

Symmons, Samuel J., Oakland, Cal. Dental pliers. No. 1,216,514; Feb. 20; v. 235; p. 805.

Symons, Edgar B., Milwaukee, Wis. Ring-roll mill. No. 1,217,525; Feb. 27; v. 235; p. 1199.

Synthetic Patents Co. (See Flachslaender and List, assignors.)

Synthetic Patents Co. (See Hiemenz and Taub, assignors.)

Tabler, John H., Lanham, Md. Buckle. No. 1,216,881; Feb. 20; v. 235; p. 931.

Tabor, Jacob W., near Eddy, Okla. Friction transmission-gear for autovehicles. No. 1,215,076; Feb. 6; v. 235; p. 209.

Taggart, James M., Port Washington, N. Y. Feed-water heater. No. 1,216,747; Feb. 20; v. 235; p. 885.

Takemi, Karn, New York, N. Y. Bob-sled. No. 1,216,009; Feb. 13; v. 235; p. 574.

Talla, Heinrich, Heilbronn-on-the-Neckar, assignor to Prücisionsgusswerke System Schmidt-Reichhardt G. m. b. H., Frankfort-on-the-Main, Germany. Process and device for casting metals under an explosive-like pressure into molds. No. 1,217,662; Feb. 27; v. 235; p. 1248.

Tallakson, Hans, Sisseton, S. D. Marker-gage and square. No. 1,216,010; Feb. 13; v. 235; p. 574.

Talley, Edwin R., Grinnell, Iowa. Apparatus for purifying water. No. 1,217,365; Feb. 27; v. 235; p. 1140.

Tannaka, Naho, New York, N. Y. Telephone-receiver. No. 1,214,610; Feb. 6; v. 235; p. 45.

Tanner, John M., Carriers Mills, Ill. Combination folding ironing-board and step-ladder. No. 1,217,526; Feb. 27; v. 235; p. 1199.

Tanner, William J., Bridgeport, Conn. Vibration-governing device for sound-reproducing machines. No. 1,215,744; Feb. 13; v. 235; p. 479.

Tarassoff, Konstantin, Moscow, Russia. Manufacturing condensation products from phenol formaldehyde and the like. No. 1,216,515; Feb. 20; v. 235; p. 806.

Tarassoff, Konstantin, Moscow, Russia. Manufacture of hard composition of matter from aldehydes and phenols. No. 1,216,516; Feb. 20; v. 235; p. 806.

Tarrisse, Mathurin, Suresnes, France. Automatic change-speed device. No. 1,216,626; Feb. 20; v. 235; p. 845.

Tate, Alfred O., Montreal, Quebec, Canada, assignor to Tate Electrolytic Waterproofing Company, Incorporated, New York, N. Y. Machine for waterproofing fibrous materials. No. 1,215,077; Feb. 6; v. 235; p. 209.

Tate Electrolytic Waterproofing Company. (See Tate, Alfred O., assignor.)

Taub, Ludwig. (See Hiemenz and Taub.)

Tauber, Maurice, Chicago, Ill. Folding davenport or couch. No. 1,216,011; Feb. 13; v. 235; p. 575.

Tauber, Maurice, Chicago, Ill. Folding davenport or couch. No. 1,216,027; Feb. 20; v. 235; p. 846.

Tauber, Maurice, Chicago, Ill. Folding davenport or couch. No. 1,216,882; Feb. 20; v. 235; p. 931.

Tauber, Maurice, Chicago, Ill. Folding davenport or couch. No. 1,217,366; Feb. 27; v. 235; p. 1140.

Taylor, Charles H., Siletz, Oreg. Lubricator. No. 1,217,663; Feb. 27; v. 235; p. 1249.

Taylor, Charles H., and C. F. Melville, New York, N. Y., assignors to Criterion Advertising Company, Inc. Billboard and the like. No. 1,216,012; Feb. 13; v. 235; p. 575.

Taylor, Henry W. (See Davis, Isaac H., assignor.)

Taylor, James M., Burley, Idaho. Guard for wheel-hubs. No. 1,214,840; Feb. 6; v. 235; p. 123.

Taylor, Paul M., Norfolk, Va. Photographic-print-toning apparatus. No. 1,216,748; Feb. 20; v. 235; p. 886.

Teasck, Joseph J., Virginia, Minn. Bit. No. 1,216,628; Feb. 20; v. 235; p. 846.

Temco Manufacturing Company, The. (See Meier and Swift, assignors.)

Ternstedt, Alvar K., assignor to Perfect Window Regulator Company, New York, N. Y. Tension-adjusting device for counterbalance-springs. No. 1,215,589; Feb. 13; v. 235; p. 424.

Terrisse, Henri, Geneva, Switzerland, assignor to The Indestructible Paint Company, Limited, London, England. Manufacture of varnishes, paints, and other protective or coating preparations. No. 1,214,611; Feb. 6; v. 235; p. 45.

Terry, George O., Minneapolis, Minn. Leather-skiving machine. No. 1,217,527; Feb. 27; v. 235; p. 1199.

Terry, John M., El Dorado, Ark., assignor to Eisenstadt Manufacturing Company, St. Louis, Mo. Article of jewelry. No. 1,215,428; Feb. 13; v. 235; p. 363.

Terry, Neri, Hardisty, Alberta, Canada. Aeroplane stabilizer or control. No. 1,214,612; Feb. 6; v. 235; p. 45.

Terry, Neri, assignor of one-half to J. G. Schuler, Hardisty, Alberta, Canada. Grain-car door. No. 1,216,013; Feb. 13; v. 235; p. 576.

Teska, Emil, Racine, Wis. Button. No. 1,215,217; Feb. 6; v. 235; p. 256.

Teves, Frederick W., assignor of one-half to M. E. Green, New York, N. Y. Starting mechanism for internal-combustion engines. No. 1,216,376; Feb. 20; v. 235; p. 757.

Thames Paper Company Limited. (See Fiske, William G., assignor.)

Thatcher, Carl W., *et al.* (See Cox, Eldridge A., assignor.)

Thayer, Garrison C., Bartlesville, Okla. Beet digging and lifting machine. No. 1,215,745; Feb. 13; v. 235; p. 479.

Theumann, Max. (See Koetschet and Theumann.)

Thiesfeld, Fred G., Lorton, Nebr. Street-sweeper. No. 1,215,078; Feb. 6; v. 235; p. 209.

Thom, Peter R., Appleton, Wis. Means and process for refining paper-stock. No. 1,217,528; Feb. 27; v. 235; p. 1200.

Thomas, Alta L., Weiser, Idaho. Combined planter and cultivator. No. 1,216,377; Feb. 20; v. 235; p. 757.

Thomas Foreign Patents Limited. (See Thomas, John G. P., assignor.)

Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Candelabrum-socket. No. 1,215,079; Feb. 6; v. 235; p. 210.

Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Detachable attachment-plug. No. 1,216,883; Feb. 20; v. 235; p. 932.

Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Lamp-grip. No. 1,216,884; Feb. 20; v. 235; p. 932.

Thomas, John G. P., Chiswick, assignor to Thomas Foreign Patents Limited, London, England. Electric power transmission. No. 1,217,529; Feb. 27; v. 235; p. 1200.

Thomas, Leo B., Port Chester, N. Y. Rotary engine. No. 1,216,378; Feb. 20; v. 235; p. 757.

Thomas, Merton S., New Rochelle, N. Y. Upright-piano action. No. 1,217,240; Feb. 27; v. 235; p. 1097.

Thomas, Nelson, and A. W. Allen, Birmingham, Ala. Open-hearth furnace. No. 1,217,367; Feb. 27; v. 235; p. 1141.

Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Company, Hoboken, N. J. Vapor electric apparatus. No. 1,214,613; Feb. 6; v. 235; p. 46.

Thomas P. Taylor Co., The. (See Hammond, Myron B., assignor.)

Thomas, Waid H., Hensler, N. D. Auto-lamp. No. 1,217,664; Feb. 27; v. 235; p. 1249.

Thompson, Belle D., Fort Gay, W. Va. Mattress and spring. No. 1,214,970; Feb. 6; v. 235; p. 171.

Thompson, Clarence L., Port Washington, N. Y., assignor to Hale and Kilburn Company, Philadelphia, Pa. Car-seat. No. 1,216,885; Feb. 20; v. 235; p. 932.

Thompson, George, *et al.* (See Ellenburg, Joe N., assignor.)

Thompson, Harrison G., Glen Ridge, N. J., assignor to The Safety Car Heating & Lighting Company. Electric switch. No. 1,215,590; Feb. 13; v. 235; p. 425.

Thompson, Jim, *et al.* (See Ellenburg, Joe N., assignor.)

Thompson, Rose R. (See Stubblefield and Thompson.)

Thomson, Frederick M., Atlanta, Ga. Detachable shoe-heel. No. 1,215,080; Feb. 6; v. 235; p. 210.

Thomson, Henry C., Boston, and H. N. Michaelsen, Canton, Mass., assignors, by mesne assignments, to Samson Electric Company. Vibrator for induction-coils. No. 1,216,379; Feb. 20; v. 235; p. 758.

Thomson, John, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J. Electric furnace for fusing metals. No. 1,214,841; Feb. 6; v. 235; p. 123.

Thomson, John, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J. Electric zinc-distilling furnace and condenser for producing blue powder. No. 1,214,842; Feb. 6; v. 235; p. 123.

Thomson, William S., assignor to The H. D. Smith & Company, Plantsville, Conn. Gas-pliers. No. 1,216,886; Feb. 20; v. 235; p. 933.

Thordarson, Chester H., Chicago, Ill. Coil structure for electromagnetic devices. No. 1,215,429; Feb. 13; v. 235; p. 363.

Thordarson, Chester H., Chicago, Ill. Insulated terminal for transformers and the like. No. 1,215,430; Feb. 13; v. 235; p. 363.

Thorn, Thomas E., Bandon, Oreg. Cover-holder for ironing-boards. No. 1,217,368; Feb. 27; v. 235; p. 1141.

Thörnblad, Thor G., K. H. Warfvinge, and V. G. Werner, Stockholm, Sweden. Inductive wireless-telephone system for railways and the like. No. 1,216,887; Feb. 20; v. 235; p. 933.

Throop, Damon R., Davis, Cal. Screen for fruit-grading machines. No. 1,216,629; Feb. 20; v. 235; p. 846.

Thropp, Peter D., assignor to The De Laski and Thropp Circular Woven Tire Company, Trenton, N. J. Vehicle-tire. No. 1,217,665; Feb. 27; v. 235; p. 1249.

Thrune, Lloyd E., Coon Valley, Wis. Milking-stool. No. 1,216,014; Feb. 13; v. 235; p. 576.

Thulin, Edmond E., Northwood, N. D. Flash-light holder. No. 1,217,666; Feb. 27; v. 235; p. 1249.

Thuneman, Harry A., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo. Dust-separator. No. 1,215,890; Feb. 13; v. 235; p. 531.

Thurber, Guy P., Pittsburgh, Pa. Automatic train-controlling system. No. 1,217,530; Feb. 27; v. 235; p. 1201.

Thurlow, Ira M., assignor to P. B. Yates Machine Company, Beloit, Wis. Lever set-works. No. 1,216,517; Feb. 20; v. 235; p. 806.

Thurlow, Ira M., assignor to P. B. Yates Machine Company, Beloit, Wis. Variable-speed drive. No. 1,216,749; Feb. 20; v. 235; p. 886.

Tibbals, Walter H., Syracuse, N. Y. Fire-extinguisher. No. 1,214,971; Feb. 6; v. 235; p. 172.

Tibbals, Walter H., Syracuse, N. Y. Disinfecting apparatus. No. 1,215,218; Feb. 6; v. 235; p. 256.

Tichenor, Nimrod B., Indianapolis, Ind. Laundry-bag. No. 1,216,015; Feb. 13; v. 235; p. 576.

Tierney, Shelby P., Metcalf, Ariz. Rotary internal-combustion engine. No. 1,216,184; Feb. 13; v. 235; p. 637.

Tillery, David H. and T. H., Newark, N. J. Tripping attachment for clocks. No. 1,214,843; Feb. 6; v. 235; p. 124.

Tillery, Thomas H. (See Tillery, David H. and T. H.)

Tin Decorating Company of Baltimore, The. (See Wilcox, Josiah T., assignor.)

Tinnerman, George A., Cleveland, Ohio. Combined gas and solid-fuel range. No. 1,217,531; Feb. 27; v. 235; p. 1201.

Tinsman, Edgar A. (See Wildman and Tinsman.)

Tirrill, Allen A., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical regulator. No. 1,216,518; Feb. 20; v. 235; p. 806.

Tirrill, Allen A., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electrical regulator. No. 1,216,888; Feb. 20; v. 235; p. 933.

Tobener, Hart H., San Francisco, Cal. Quartz-mill. No. 1,216,185; Feb. 13; v. 235; p. 637.

Tobin, Edward C., Stockton, Cal. Knife-sharpener. No. 1,215,591; Feb. 13; v. 235; p. 425.

Todd, Floyd F., Forest City, Pa. Envelop-opener. No. 1,216,889; Feb. 20; v. 235; p. 933.

Todd, James T. A., Fort Worth, Tex. Bale-tie-securing device. No. 1,217,851; Feb. 27; v. 235; p. 1310.

Todd, William C., and J. W. Pomeroy, Victoria, British Columbia, Canada. Traveling lawn-sprinkler. No. 1,215,081; Feb. 6; v. 235; p. 210.

Toledo Scale Company. (See Crane, Samuel G., assignor.)

Tolman Print Incorporated. (See Brigham, Harry L., assignor.)

Tompkins, Edward D., New York, N. Y. Sawing apparatus. No. 1,215,431; Feb. 13; v. 235; p. 364.

Tompkins, Robert F., New York, N. Y., assignor to The Binder Company. Cohering or binding composition for roads or other purposes and roads or paths comprising the same. No. 1,214,972; Feb. 6; v. 235; p. 172.

Tompkins, Robert F., New York, N. Y., assignor to The Binder Company. Road or roadway. No. 1,216,186; Feb. 13; v. 235; p. 638.

Totman, Amos A., Fitchburg, assignor, by mesne assignments, to Quabaug Rubber Company, North Brookfield, Mass. Machine for packaging rings. No. 1,217,532; Feb. 27; v. 235; p. 1201.

Totterdale, John, Warren, Ohio. Sheet-metal container. No. 1,217,067; Feb. 27; v. 235; p. 1250.

Tower, Willie J., Seattle, Wash. Rotary valve. No. 1,215,746; Feb. 13; v. 235; p. 479.

Townsend, David. (See Melas, William, assignor.)

Townsend, Louis, Evansville, Ind. Automobile-jack. No. 1,215,082; Feb. 6; v. 235; p. 211.

Tracy, Harmon N., Los Angeles, Cal. Apparatus for reducing and metallizing ores. No. 1,214,844; Feb. 6; v. 235; p. 124.

Tracy, James J., Cleveland, Ohio. Manufacture of hats. No. 1,214,845; Feb. 6; v. 235; p. 125.

Tracy, James J., Cleveland, Ohio. Manufacture of hats. No. 1,214,846; Feb. 6; v. 235; p. 125.

Tracy, Oliver H., assignor to The Volunteer Fireman Signal Company, a Corporation, Minneapolis, Minn. Alarm signaling apparatus. No. 1,217,241; Feb. 27; v. 235; p. 1097.

Transportation Utilities Company. (See McNally, Leo F., assignor.)

Trautmann, Otto C., assignor to Sidlo Company of America, Inc., New York, N. Y. Producing articles of quartz glass. No. 1,215,432; Feb. 13; v. 235; p. 364.

Trautmann, Otto C., assignor to Sidlo Company of America, Inc., New York, N. Y. Producing articles of quartz glass. No. 1,215,433; Feb. 13; v. 235; p. 364.

Travis, Frank L., Brighton, Mich. Saw-clamp. No. 1,216,890; Feb. 20; v. 235; p. 934.

Trebert, Henry L. F., assignor to H. L. F. Trebert Rotary Motor Co., Inc., Rochester, N. Y. Internal-combustion engine. No. 1,215,434; Feb. 13; v. 235; p. 365.

Trefz, Julius J., assignor to The Anglo-American Mill Company, Owensboro, Ky. Beater-blade for centrifugal dressers. No. 1,216,891; Feb. 20; v. 235; p. 934.

Tregoning, Charles, New York, N. Y. Electric display device. No. 1,216,016; Feb. 13; v. 235; p. 577.

Trinks, Franz, Brunswick, Germany. Calculating-machine. No. 1,215,219; Feb. 6; v. 235; p. 257.

Trinler, Walter A., Rutherford, N. J. Machine for handling paving material. No. 1,217,533; Feb. 27; v. 235; p. 1202.

Troeger, John F. R., Brooklyn, N. Y. Exhibition-screen for projecting-machines. No. 1,216,880; Feb. 20; v. 235; p. 758.

Trood, Samuel, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Connector for electrical apparatus. No. 1,217,534; Feb. 27; v. 235; p. 1202.

Trout, Silas E., Philadelphia, Pa. Filing device. No. 1,216,017; Feb. 13; v. 235; p. 577.

Troy, Albert, and E. M. Leonnig; said Leonnig assignor of one-fourth to P. Salmina, Kellogg, Idaho. Clothes-pounder. No. 1,216,519; Feb. 20; v. 235; p. 806.

Troy Laundry Machinery Company. (See Bartholomew, William, assignor.)

Troy Laundry Machinery Company. (See Bartholomew and Broderick, assignors.)

Troy Laundry Machinery Company. (See Bartholomew, Broderick, and Balzer, assignors.)

Trumbower, David S., assignor of one-half to P. S. Stansbury, Coatesville, Pa. Fastener for covers of boxes. No. 1,217,668; Feb. 27; v. 235; p. 1250.

Trumbull Electric Manufacturing Company, The. (See Sutherland, Alexander K., assignor.)

Trump, Edward N., Syracuse, assignor to The Solvay Process Company, Solvay, N. Y. Recovering salts from admixtures thereof in solution. No. 1,216,187; Feb. 13; v. 235; p. 638.

Trundle, George T., Jr., assignor to The American Multigraph Company, Cleveland, Ohio. Milling-machine. No. 1,216,018; Feb. 13; v. 235; p. 578.

Trundle, George T., Jr., assignor to The American Multigraph Company, Cleveland, Ohio. Thread-milling machine. No. 1,216,019; Feb. 13; v. 235; p. 578.

Tscherning, Henry, assignor to Arcade Manufacturing Company, Freeport, Ill. Sand-molding apparatus. No. 1,216,750; Feb. 20; v. 235; p. 887.

Tuck, Gustave, London, England. Picture or representation of objects in relief. No. 1,217,242; Feb. 27; v. 235; p. 1098.

Tucker, Benjamin W. (See Herrmann and Tucker.)

Tucker, Bird J., and J. L. Potts, Ithaca, Mich. Flat-filing cabinet. No. 1,217,243; Feb. 27; v. 235; p. 1098.

Tucker, Olivia W., Brooklyn, N. Y. Lamp-shade. No. 1,214,847; Feb. 6; v. 235; p. 125.

Tufts, Robert B., Norfolk, Va. Reinforced concrete structure. No. 1,217,535; Feb. 27; v. 235; p. 1203.

Tully, Henry C., Toledo, Ohio. Railway motor-car. No. 1,215,083; Feb. 6; v. 235; p. 211.

Tully, Thomas D., Brooklyn, N. Y. Egg-container. No. 1,215,220; Feb. 6; v. 235; p. 257.

Turbayne, William A., Niagara Falls, N. Y., assignor, by mesne assignments, to The U. S. Light & Heat Corporation, Niagara Falls, N. Y. Automatic starter and lighter for automobiles. No. 1,217,244; Feb. 27; v. 235; p. 1099.

Turner, Albert. (See Wilcox, Turner, and Dunbar.)

Turner Brothers Company. (See Pawling, Francis W., assignor.)

Turner, Charles S. (See Geoghegan, Mayo, and Turner.)

Turner, Clarence C., assignor to J. A. Schmidtke, Portland, Oreg. Tire-filling composition. No. 1,216,249; Feb. 13; v. 235; p. 660.

Turner, Claude A. P., Minneapolis, Minn., assignor to C. A. P. Turner Company. Flat-slab floor. No. 1,217,536; Feb. 27; v. 235; p. 1203.

Turner, George W., assignor of one-half to J. Bowers, Jr., Argenta, Ark. Spring-motor for fans. No. 1,214,848; Feb. 6; v. 235; p. 126.

Turney, George W., assignor to Rome-Turney Radiator Co., Rome, N. Y. Making radiator-tubes. No. 1,217,537; Feb. 27; v. 235; p. 1203.

Turner, Mahlon C., Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Adjustable crank. No. 1,215,747; Feb. 13; v. 235; p. 479.

Turner and Seymour Manufacturing Co., The. (See Hills, Sidney C., assignor.)

Turner Tanning Machinery Company, The. (See Roche, Wesley C., assignor.)

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Fluid-pressure brake apparatus. No. 1,214,614; Feb. 6; v. 235; p. 46.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electrically-controlled brake. No. 1,214,615; Feb. 6; v. 235; p. 46.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electro-pneumatic brake. No. 1,214,616; Feb. 6; v. 235; p. 47.

Turner, William E., Toppemish, Wash. Valve-grinder. No. 1,217,669; Feb. 27; v. 235; p. 1250.

Tüschel, Gustav, New York, N. Y. Composite lumber and manufacturing the same. No. 1,217,309; Feb. 27; v. 235; p. 1141.

Tuthill, James A., Los Angeles, Cal. Lawn-sprinkler. No. 1,216,630; Feb. 20; v. 235; p. 847.

Tuttle, Ralph P., New York, N. Y. Semaphore-signal device. No. 1,216,020; Feb. 13; v. 235; p. 578.

Twinting, George T., Pasadena, Cal. Camera-operating device. No. 1,216,021; Feb. 13; v. 235; p. 579.

Tyson, Alfred, Evanston, Ill. Turf-ventilator. No. 1,217,245; Feb. 27; v. 235; p. 1099.

U. S. Light & Heat Corporation. (See Carpenter, Campbell C., assignor.)

U. S. Light & Heat Corporation. (See Carpenter and Ellis, assignors.)

U. S. Light & Heat Corporation. (See Gauss, Julius M., assignor.)

U. S. Light & Heat Corporation. (See Powell, Harry H., assignor.)

U. S. Light & Heat Corporation, The. (See Turbayne, William A., assignor.)

U. S. Wind Engine & Pump Co. (See Roeffs, Anton J., assignor.)

Uhlin, Richard A., Seattle, Wash. Regulator for oil-burners. No. 1,217,538; Feb. 27; v. 235; p. 1204.

Ulvig, Robert, Logan township, Minnehaha county, S. D. Barrel-support. No. 1,214,617; Feb. 6; v. 235; p. 47.

Umholtz, Frederick H., Oklahoma, Okla. Apparatus for raising water. No. 1,215,221; Feb. 6; v. 235; p. 258.

Underwood, Albert B., assignor to B. Underwood, Cincinnati, Ohio. Clamp. No. 1,217,539; Feb. 27; v. 235; p. 1204.

Underwood, Bohumila. (See Underwood, Albert B., assignor.)

Underwood Computing Machine Company. (See Brown, Clarence H., assignor.)

Underwood Computing Machine Company. (See Hart, Frederick A., assignor.)

Underwood Computing Machine Company. (See Main, Fred F., assignor.)

Underwood Computing Machine Company. (See Wright, Walter, assignor.)

Underwood Typewriter Company. (See Hart, Frederick A., assignor.)

Underwood Typewriter Company. (See Johnson, Arthur A., assignor.)

Underwood Typewriting Company. (See Kurowski, Alfred G. T., assignor.)

Underwood Typewriter Company. (See Maulsby, Edwin S., assignor.)

Underwood Typewriter Company. (See Stickney, Burnham C., assignor.)

Underwood Typewriter Company. (See Wernery, Lester A., assignor.)

Underwood, Weeden B., assignor to Wilmot Castle Company, Rochester, N. Y. Electric heater. No. 1,215,748; Feb. 13; v. 235; p. 480.

Union Draft Gear Co. (See Canfield, Lewis T., assignor.)

Union Special Machine Company. (See Allan, Edward T., assignor.)

Union Special Machine Company. (See Eberley, George W., assignor.)

Union Special Machine Company. (See Hayes, John, assignor.)

Union Special Machine Company. (See Loomis, Charles A., assignor.)

Union Special Machine Company. (See McNeil, Chester, assignor.)

Union Special Machine Company. (See Moffatt, James R., assignor.)

Union Special Machine Company. (See Moffatt and Kelso, assignors.)

Union Special Machine Company. (See Onderdonk, Lansing, assignor.)

Union Special Machine Company. (See Seymour, Dudley S., assignor.)

Union Switch & Signal Company, The. (See Coe, Elmer R., assignor.)

Union Switch & Signal Company, The. (See Dunham, Charles W., assignor.)

Union Switch & Signal Company, The. (See Griffin, Henry W., assignor.)

Union Switch & Signal Company, The. (See Harrington, Clinton O., assignor.)

Union Switch & Signal Co., The. (See Lewis, Lloyd V., assignor.)

Union Switch & Signal Company, The. (See Saunders, John E., assignor.)

Union Wrapping Machine Company, The. (See Streich, Frank, assignor.)

United Drug Company. (See Barker, Ernest S., assignor.)

United Lead Company. (See Coho, Herbert B., assignor.)

United Railways Company of St. Louis. (See Burgess, Joseph E., assignor.)

United Shoe Machinery Company. (See Bates, Arthur, assignor.)

United Shoe Machinery Company. (See Brock, Matthias, assignor.)

United Shoe Machinery Company. (See Brown, John H., assignor.)

United Shoe Machinery Company. (See Burke, William H., assignor.)

United Shoe Machinery Company. (See Chateauneuf, Frank, assignor.)

United Shoe Machinery Company. (See Furber, Frederick M., assignor.)

United Shoe Machinery Company. (See Goddu, George, assignor.)

United Shoe Machinery Company. (See Hadaway, John B., assignor.)

United Shoe Machinery Company. (See Hill, George S., assignor.)

United Shoe Machinery Company. (See Johnson, Albert E., assignor.)

United Shoe Machinery Company. (See Kelly, John A., assignor.) (Reissue.)

United Shoe Machinery Company. (See La Chapelle, Fred N., assignor.)

United Shoe Machinery Company. (See Prenzel, Adam H., assignor.)

United Shoe Machinery Company. (See Russell, Arthur L., assignor.)

United Shoe Machinery Company. (See Schwartz, Frank, assignor.)

United Shoe Machinery Company. (See Seely, Thomas H., assignor.)

United Shoe Machinery Company. (See Waite, Arthur J., assignor.)

United Shoe Machinery Company. (See White, Melbourne W., assignor.)

United States Air Brake Corporation, The. (See Dukesmith, Frank H., assignor.)

Universal Electric Welding Company. (See Lachman, Maurice, assignor.)

Universal Fibre Company. (See Rivers, Julian H., assignor.) (Reissue.)

Universal Glas-Solvo Company. (See Falconer, George, assignor.)
Universal Road Machinery Co. (See Leighton and Clearwater, assignors.)
Universal Road Machinery Co. (See Leighton, Robert E., assignor.)
Universal Winding Company. (See De Wolf, Ernest A., assignor.)
Universal Winding Company. (See Lewis, Everett C., assignor.)
Upson, Wilbur S., Mansfield, Ohio. Combined nut and pipe wrench. No. 1,214,973; Feb. 6; v. 235; p. 172.
Urban, William A. F., Yoakum, Tex. Cultivator-standard. No. 1,214,974; Feb. 6; v. 235; p. 173.
Urtel, Rudolf. (See Winkler and Urtel.)
Usher, Frederick S., Indiana Harbor, Ind. Egg and cream whipper. No. 1,214,975; Feb. 6; v. 235; p. 173.
Usher-Walker. (See Sohn, Charles E., assignor.)
Vail, Robert W., New York, N. Y. Cover-fastening means for a garbage-receptacle. No. 1,216,023; Feb. 13; v. 235; p. 580.
Vail, Robert W., assignor of one-half to C. W. Hartridge, New York, N. Y. Ash and garbage collecting and conveying cart. No. 1,214,976; Feb. 6; v. 235; p. 173.
Vail, Robert W., assignor of one-half to C. W. Hartridge, New York, N. Y. Ash and garbage, dustless, and odorless barrel. No. 1,216,022; Feb. 13; v. 235; p. 579.
Van den Boogaard, John. (See Nüberg and Van den Boogaard.)
Van Amburgh, Charles, Tacoma, Wash., assignor to American Smelting & Refining Co. Greasing-machine. No. 1,214,618; Feb. 6; v. 235; p. 47.
Van Calcar, Reinder P., Oegstgeest, J. Ellerman and H. J. Martijn, The Hague, Netherlands. Treating and simultaneously sterilizing air. No. 1,215,222; Feb. 6; v. 235; p. 258.
Van Derbeck-Sayers-Murdock Co. (See Van Derbeck, Stephen G., assignor.)
Van Derbeck, Stephen G., Hackensack, N. J., assignor to Van Derbeck-Sayers-Murdock Co., Inc. Adjustable-step pedal attachment. No. 1,214,619; Feb. 6; v. 235; p. 48.
Van Doren, Horatio E., South Bend, Ind. Mounting-block for embossing-dies. No. 1,215,436; Feb. 13; v. 235; p. 366.
Van Dresser, William C., assignor to Rands Manufacturing Company, Detroit, Mich. Pivot construction. No. 1,216,520; Feb. 20; v. 235; p. 807.
Van Dventer, George F., Aurora, Ill. Hooded trolley-track and bracket. No. 1,215,084; Feb. 6; v. 235; p. 211.
Van Fleming, C. (See Ferguson, Edward E., assignor.)
Van Guilder, Will H., New Rochelle, N. Y. Molding-machine. No. 1,215,436; Feb. 13; v. 235; p. 366.
Van Hoesen, Benjamin, Mart, Tex. Cotton-chopper. No. 1,214,977; Feb. 6; v. 235; p. 174.
Van Kannel Revolving Door Company. (See Van Kannel, Theophilus, assignor.) (Reissue.)
Van Kannel, Theophilus, Yardville, N. J., assignor, by mesne assignments, to Van Kannel Revolving Door Company. Collapsible revolving door. (Reissue.) No. 14,255; Feb. 6; v. 235; p. 294.
Van Luven, Christopher W., New York Mills, N. Y. Can-opener. No. 1,216,024; Feb. 13; v. 235; p. 580.
Van Pelt, Clarence E. (See Dankel and Van Pelt.)
Van Valkenburg, Herman L., assignor to Industrial Controller Company, Milwaukee, Wis. Starting device. No. 1,215,224; Feb. 6; v. 235; p. 258.
Van Wie, Henry. (See Anderson and Van Wie.)
Van Wormer, George, Hamilton, Ohio. Pen-clamp for ruling-machines. No. 1,217,370; Feb. 27; v. 235; p. 1142.
Vancouver Motor Supplies Limited. (See Harrison and Lamond, assignors.)
Vandegrift, James N., Syracuse, N. Y. Antifriction-bearing for axles. No. 1,215,749; Feb. 13; v. 235; p. 480.
Vanderpoel, William H., Newark, N. J. Asbestos mat. No. 1,215,223; Feb. 6; v. 235; p. 258.
Vandervell, Charles A. (See Midgley and Vandervell.)
Varney, Theodore, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric-circuit controller. No. 1,215,437; Feb. 13; v. 235; p. 367.
Vasica, Charles, Long Island City, N. Y. Type-casting apparatus. No. 1,216,892; Feb. 20; v. 235; p. 934.
Vathing, Solvie S. (See Laugen and Vathing.)
Vaughan, David F., Riverton, N. J. Anticreeper for railway-rails. No. 1,216,266; Feb. 13; v. 235; p. 663.
Vaygouny, Mooshegh, Berkeley, Cal., assignor to Royal Baking Powder Company. Baking-powder. No. 1,214,726; Feb. 6; v. 235; p. 87.
Veley, Carl J., Kalamazoo, assignor to Comstock Automatic Pump Co., Comstock, Mich. Pressure-regulator. No. 1,214,978; Feb. 6; v. 235; p. 174.
Venning, John. (See Downes, Allan J., assignor.)
Vera, Manuel, Brooklyn, N. Y. Scrubbing and drying machine. No. 1,214,849; Feb. 6; v. 235; p. 126.
Vest, Clarence D., assignor of one-half to F. A. Young, Martines, Cal. Electric controller. No. 1,215,592; Feb. 13; v. 235; p. 425.
Vestine, Andrew O., Worcester, Mass. Pulley. No. 1,217,371; Feb. 27; v. 235; p. 1142.
Victor Electric Company. (See Wantz, Julius B., assignor.)
Victor Talking Machine Company. (See Johnson and English, assignors.)
Victor Talking Machine Company. (See Miller, Henry C., assignor.) (Reissue.)
Vierengel, Matthew, Brooklyn, N. Y. Vehicle-tire. No. 1,216,893; Feb. 20; v. 235; p. 935.
Vincent, Joseph E., assignor of one-half to M. Movsessian, Cambridge, Mass. Washer-counter. No. 1,217,372; Feb. 27; v. 235; p. 1142.
Viscoloid Company. (See Owens, Harvey M., assignor.)
Vivinus, Edouard A., Tonbridge, England. Piston or like packing. No. 1,216,521; Feb. 20; v. 235; p. 807.
Vogel, Joseph J., Springfield, Minn. Stone-picker. No. 1,216,751; Feb. 20; v. 235; p. 887.
Vogtländische Maschinenfabrik. (See Sieber, Gottwalt, assignor.)
Voigt, Charles, Sheboyan, Wis. Indicator for cameras. No. 1,216,631; Feb. 20; v. 235; p. 847.
Voight, Henry G., New Britain, assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,216,752; Feb. 20; v. 235; p. 887.
Volckhausen, Julius. (See Schweinert and Volckhausen.)
Volkmann, Charles, Chicago, Ill. Derrick-car. No. 1,216,188; Feb. 13; v. 235; p. 638.
Völler, Karl, Dusseldorf, Germany. Running-out telescopic spring of guns with recoiling barrels. No. 1,215,438; Feb. 13; v. 235; p. 367.
Volimer, Frederick D., Moline, Ill. Sad-iron. No. 1,216,522; Feb. 20; v. 235; p. 807.
Volunteer Fireman Signal Company, The. (See Tracy, Oliver H., assignor.)
Von Ahnen, Paul F., Caspar, Cal. Collapsible tent-pole. No. 1,214,979; Feb. 6; v. 235; p. 175.
Voss, Carl W., Minneapolis, Minn. Silo-door hinge. No. 1,215,593; Feb. 13; v. 235; p. 426.
Vrooman, George A., Irvington, N. Y. Foot-support. No. 1,215,891; Feb. 13; v. 235; p. 531.
Vuilleumier, Rudolph, New Rochelle, N. Y., assignor to The Safety Car Heating & Lighting Company. Welding-torch. No. 1,214,727; Feb. 6; v. 235; p. 87.
Vulcan Plow Company, The. (See Hand, Frederick E., assignor.)
Vulcan Valve Company. (See Keppel, Jesse E., assignor.)
W. & E. T. Fitch Co., The. (See Nettleton, George R., assignor.)
W. D. Allen Manufacturing Company. (See Gibbs, Henry, assignor.)
Waddell, Fred P., Maddock, N. D. Five-horse evener. No. 1,214,728; Feb. 6; v. 235; p. 87.
Wadden, Thomas H., Keokuk, Iowa. Vehicle display device. No. 1,214,621; Feb. 6; v. 235; p. 49.
Wade, Harold F., Opportunity, Wash. Underscoring attachment for type-writers. No. 1,216,189; Feb. 13; v. 235; p. 639.
Wadsworth, George R., assignor to The Peerless Motor Car Company, Cleveland, Ohio. Lubricating system. No. 1,214,850; Feb. 6; v. 235; p. 126.
Wagner Electric Manufacturing Company. (See Fynn, Valère A., assignor.)
Wagner Electric Manufacturing Company. (See Weichsel, Hans, assignor.)
Wagner, Hubert, Gauting, near Munich, Germany. Power-driven tool. No. 1,215,439; Feb. 13; v. 235; p. 367.
Wagner, Peter, Elyria, Ohio. Attachment for cooking utensils. No. 1,217,373; Feb. 27; v. 235; p. 1143.
Waide, William N. (See Johnson and Waide.)
Waite, Arthur J., Binghamton, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J. Making shoes. No. 1,215,440; Feb. 13; v. 235; p. 368.
Waldeck, J. A., *et al.* (See Megathlin, Jesse L., assignor.)
Waldron, Ronayne M., 2d, Washington, D. C. Automobile cone-clutch brake. No. 1,215,750; Feb. 13; v. 235; p. 481.
Walker, Charles B., Solihull, England. Automatic electric generating plant. No. 1,217,670; Feb. 27; v. 235; p. 1250.
Walker, Clayton A., and E. A. Schneider, Fairhaven, Conn. Figure toy or amusement device. No. 1,216,632; Feb. 20; v. 235; p. 847.
Walker, Frederick P., assignor to The Crittall Manufacturing Company, Limited, Manor Works, Braintree, England. Window. No. 1,216,753; Feb. 20; v. 235; p. 888.
Walker, Gaines M., St. Louis, Mo. Knockdown shipping-box. No. 1,217,852; Feb. 27; v. 235; p. 1311.
Walker, George, assignor to Landers, Frary & Clark, New Britain, Conn. Scale. No. 1,215,594; Feb. 13; v. 235; p. 426.
Walker, Henry B., Lancaster, Ohio. Means for removing and disengaging well-packers. No. 1,214,622; Feb. 6; v. 235; p. 49.
Walker, J. Mort, administrator. (See Walker, William E.)
Walker, Martha S., Westwood, Mass. Locating-rule for type-writers. No. 1,215,441; Feb. 13; v. 235; p. 368.
Walker, Wiley P., San Antonio, Tex. Vehicle attachment. No. 1,215,225; Feb. 6; v. 235; p. 259.
Walker, William E., deceased; J. M. Walker, New Orleans, La., administrator. Orthodontia appliance. No. 1,215,442; Feb. 13; v. 235; p. 368.
Walker, William E., deceased; J. Mort Walker, New Orleans, La., administrator. Orthodontia. No. 1,217,874; Feb. 27; v. 235; p. 1143.
Wall, John M., and C. Meldrum, Syracuse, N. Y. Taper and angle measuring device. No. 1,215,448; Feb. 13; v. 235; p. 369.

Wallace, Edward M., Washington, D. C., assignor of one-half to J. D. Wheelihan, Baltimore, Md. Foot-rest. No. 1,217,246; Feb. 27; v. 235; p. 1099.
Wallace, F. T. D., Jr. (See Compton, Joseph B., assignor.)
Wallace, John H., Gloversville, N. Y. Slipper-sole. No. 1,215,751; Feb. 13; v. 235; p. 481.
Wallace, Nick, Magnolia, Minn. Trap. No. 1,216,894; Feb. 20; v. 235; p. 935.
Wallace, Sidney C., Chicago, Ill. Hose-supporter. No. 1,215,444; Feb. 13; v. 235; p. 369.
Wallen, Leo T., Newark, N. J. Internal-combustion engine. No. 1,216,895; Feb. 20; v. 235; p. 935.
Waller, Perry J., Los Angeles, Cal. Pump-plunger. No. 1,215,445; Feb. 13; v. 235; p. 369.
Wallerstein, Leo. (See Wallerstein, Max and L.)
Wallerstein, Max and L., New York, N. Y. Producing beverages. No. 1,214,729; Feb. 6; v. 235; p. 87.
Wallerstein, Max and L., New York, N. Y. Extract having the flavor and aroma of malt and producing the same. No. 1,214,730; Feb. 6; v. 235; p. 87.
Walraven, Charles E., Woodbury, N. J. Fastening device for doors. No. 1,215,752; Feb. 13; v. 235; p. 481.
Walsh, Joseph M. (See McVoy, Vincen P., assignor.)
Walter A. Wood Mowing & Reaping Machine Co. (See Smith, Ernest C., assignor.)
Walter H. Bowes Company. (See Dodge, Otis W., assignor.)
Waltermire, Amos J., assignor of one-third to A. W. Raymond, Omaha, Nebr. Mail-box. No. 1,215,753; Feb. 13; v. 235; p. 481.
Walters, Edward T. (See McManus, Edwin J., assignor.)
Walters, John D. (See Stanton and Walters.)
Waltham Watch Company. (See Olney, Charles J., assignor.)
Walton, Charles S. (See Webb and Walton.)
Wandras, Robert. (See McConnell and Wandras.)
Wanee, George M., Oakland, Cal. Flying-machine. No. 1,215,226; Feb. 6; v. 235; p. 259.
Wang, Theodore, Ormond, Fla. Nut-lock. No. 1,216,190; Feb. 13; v. 235; p. 639.
Wannenwetsch, Andrew T., Buffalo, N. Y. Folding child's carriage. No. 1,215,085; Feb. 6; v. 235; p. 212.
Wantz, Julius B., assignor to Victor Electric Company, Chicago, Ill. X-ray table. No. 1,216,633; Feb. 20; v. 235; p. 848.
Wappat, Fred W., assignor to Pittsburgh Gage and Supply Company, Pittsburgh, Pa. Wringer attachment for washing-machines. No. 1,217,540; Feb. 27; v. 235; p. 1205.
Ward B. Story Company. (See Story, Ward B., assignor.)
Ward, William S., Charlottesville, Va. Stop for talking-machines. No. 1,215,446; Feb. 13; v. 235; p. 370.
Warfvinge, Karl H. (See Thörnblad, Warfvinge, and Werner.)
Warman, John E., Riverside, Cal. Direction-indicator for automobiles. No. 1,216,025; Feb. 13; v. 235; p. 580.
Warner, Arthur E., Vermillion, Kans. Shock-forming machine. No. 1,216,528; Feb. 20; v. 235; p. 808.
Warner, Charles M. (See Kelly, William, assignor.)
Warner, George R. (See Richardson, Edward J. and J. R., assignors.)
Warr, Harold G., assignor to The P. & M. Company, Chicago, Ill. Rail-anchor. No. 1,217,541; Feb. 27; v. 235; p. 1205.
Warren, John B., assignor to Broadfield Poultry Farm, Inc., Bolton, Mass. Egg-tester. No. 1,216,634; Feb. 20; v. 235; p. 848.
Warren, Peter R., Boston, Mass. Box. No. 1,217,375; Feb. 27; v. 235; p. 1148.
Washburn, Frank S., New York, N. Y. Making ammonium nitrate and other products. No. 1,217,247; Feb. 27; v. 235; p. 1100.
Washington, Ben, Seville, Fla. Sunshade. No. 1,217,542; Feb. 27; v. 235; p. 1206.
Washington, Earnest, Faribault, Minn. Cap. No. 1,216,635; Feb. 20; v. 235; p. 848.
Wass, Andrew G., Minneapolis, Minn. Casement-window lock and joint-strip. No. 1,216,524; Feb. 20; v. 235; p. 808.
Wasylow, Iiko. (See Kamianczyn and Wasylow.)
Waterbury Clock Co. (See Wehinger, Frederick, assignor.)
Waterloo Gasoline Engine Company. (See Witry, Louis W., assignor.)
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Plow. No. 1,215,754; Feb. 13; v. 235; p. 482.
Waterous, Charles P., St. Paul, Minn. Means for mounting a fire-engine pump. No. 1,217,671; Feb. 27; v. 235; p. 1251.
Watkins, Robert L., New York, N. Y. Photomicrographic apparatus. No. 1,214,851; Feb. 6; v. 235; p. 126.
Watson, George F., *et al.* (See James, Bertie R., assignor.)
Watson Manufacturing Company. (See Watson and Anderson, assignors.)
Watson, Thomas, Kilmarnock, Scotland. Razor. No. 1,216,381; Feb. 20; v. 235; p. 759.
Watson, William W., and C. A. Anderson, Jamestown, N. Y., assignors to Watson Manufacturing Company. Sheet-metal-case construction. No. 1,215,447; Feb. 13; v. 235; p. 370.
Watters, John H., and W. H. Bean, Anniston, Ala. Lubricator-filling valve. No. 1,217,672; Feb. 27; v. 235; p. 1251.
Watties, Luther H., Providence, assignor, by mesne assignments, to F. W. Smith, Warren, R. I. Pumping apparatus. No. 1,216,754; Feb. 20; v. 235; p. 888.
Wattles, Victory H., and P. A. Reynolds, Battle Creek, Mich. Lock for sheet-metal boxes. No. 1,214,731; Feb. 6; v. 235; p. 88.
Watts, Joseph F., Jackson, Miss. Swinging gate and partition. No. 1,215,892; Feb. 13; v. 235; p. 531.
Waugh, Edward H., Seattle, Wash. Jointing and matching cutter. No. 1,215,755; Feb. 13; v. 235; p. 482.
Wayland, Francis, Salem, Mass. Skin, hide, and leather working machine. No. 1,214,852; Feb. 6; v. 235; p. 127.
Wayne Process Company. (See Donnelly, John R., assignor.)
Weaver, Cyrenius O., Rockford, Ill. Toaster. No. 1,216,525; Feb. 20; v. 235; p. 809.
Weaver, Henry W., Belleview, assignor of one-half to H. R. Ford, Jacksonville, Fla. Water-cooler. No. 1,217,673; Feb. 27; v. 235; p. 1252.
Weaver, Sylvester L. (See Burtis, Alvin G., assignor.)
Webb & Co., E. L. (See Swem, Lawrence W., assignor.)
Webb, Edwin W., and C. S. Walton, assignors to Standard Car Truck Company, Chicago, Ill. Car-truck. No. 1,215,086; Feb. 6; v. 235; p. 212.
Webb, Hartwell W., Cresskill, N. J. Producing kinetographic films. No. 1,216,026; Feb. 13; v. 235; p. 581.
Webb, James L. G., assignor of one-half to A. Bailey, Goodells, Mich. Metal shoe. No. 1,216,896; Feb. 20; v. 235; p. 935.
Weber, Michael, Kiel, Wis. Device for preventing sagging of gate-posts. No. 1,214,623; Feb. 6; v. 235; p. 49.
Wedgwood, Clement W., Roseville, New South Wales, Australia. Indicating apparatus to assist in teaching accurate shooting at a target. No. 1,217,376; Feb. 27; v. 235; p. 1144.
Weed, Robert L., Stamford, Conn. Music-leaf turner. No. 1,216,897; Feb. 20; v. 235; p. 936.
Weedon, John F., Wilmette, Ill. Paper-feeding attachment for accounting and recording machines. No. 1,216,526; Feb. 20; v. 235; p. 809.
Wehinger, Frederick, assignor to Waterbury Clock Co., Waterbury, Conn. Watch-crystal. No. 1,216,636; Feb. 20; v. 235; p. 849.
Weichsel, Hans, assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Alternating-current motor. No. 1,214,980; Feb. 6; v. 235; p. 176.
Weidensee, Albert G. (See Hopkins and Weidensee.)
Weidlein, Luther B. (See Kling, Fred E., assignor.)
Weikert, Alvin W., and J. Pettibone, Washington, D. C. Self-locking junction-box coupling. No. 1,215,595; Feb. 13; v. 235; p. 426.
Weil, Charles L., St. Clair, Mich. Apparatus for indicating the rate of flow of fluids in pipes. No. 1,214,853; Feb. 6; v. 235; p. 127.
Weil, Henry, New York, N. Y. Producing lace effects. No. 1,216,637; Feb. 20; v. 235; p. 849.
Weil, John, Mansfield, Ohio. Swing. No. 1,214,854; Feb. 6; v. 235; p. 128.
Weil, Otto. (See Goldschmidt and Weil.)
Weiland, Charles, New York, N. Y. Shock-absorber. No. 1,216,191; Feb. 13; v. 235; p. 640.
Weinandt, Joseph J., Ayr, N. D. Pressure-gage automobile-wheel. No. 1,216,192; Feb. 13; v. 235; p. 640.
Weiss, Louis T., Brooklyn, N. Y. Spindle for the ejectors of linoleum-machines. No. 1,217,248; Feb. 27; v. 235; p. 1100.
Weiss, Louis T., Brooklyn, and A. Chapal, Central Park, N. Y. Unhairing-machine. No. 1,217,377; Feb. 27; v. 235; p. 1144.
Weiss, Louis T., Brooklyn, assignor to Reliance Ball Bearing Door Hanger Company, New York, N. Y. Device for operating sliding doors. No. 1,217,249; Feb. 27; v. 235; p. 1100.
Weisse, Faneuil D., New York, N. Y., assignor to Dental Manikin Head Co. Inc. Attachment of dental manikin-heads to the patient's head-rest of dental chairs. No. 1,215,087; Feb. 6; v. 235; p. 213.
Weitzman, Louis. (See Berliner and Weitzman.)
Welch, Frank H., Altus, Okla. Horse-collar protector. No. 1,216,898; Feb. 20; v. 235; p. 936.
Welch, John M., Albany, N. Y. Razor-blade sharpener. No. 1,215,893; Feb. 13; v. 235; p. 532.
Welcker, Rudolph. (See Okhuizen, Dirk, assignor.)
Weldon, George B., and F. B. Rambo, Pittsburgh, Pa. Pliers. No. 1,216,527; Feb. 20; v. 235; p. 809.
Well, Hugo C., New York, N. Y. Carbureter. No. 1,216,027; Feb. 13; v. 235; p. 581.
Weller, William R., Millstone, Md. Wrench. No. 1,215,227; Feb. 6; v. 235; p. 260.
Wells, Arthur C., Amityville, N. Y. Transmission-gear. No. 1,214,855; Feb. 6; v. 235; p. 128.
Wells, Harvey H., Chicago, Ill. Package. No. 1,216,638; Feb. 20; v. 235; p. 849.
Welsh, Jackson H., Hazelton, W. Va. Clutch-pedal. No. 1,216,028; Feb. 13; v. 235; p. 582.
Wemp, Ernest E., Pontiac, Mich. Removable spring-abutment. No. 1,215,756; Feb. 13; v. 235; p. 482.
Wenrich, Christopher E., Harrisburg, Pa. Railway appliance. No. 1,216,639; Feb. 20; v. 235; p. 849.
Wensel, Theodor, Joliet, Ill. Producing illustrations. No. 1,217,250; Feb. 27; v. 235; p. 1101.

Wenyon, John T., assignor of one-half to D. J. Gorman, Philadelphia, Pa. Game. No. 1,216,382; Feb. 20; v. 235; p. 759.
Werner, Victor G. (See Thörnblad, Warfvinge, and Werner.)
Wernery, Lester A., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,214,733; Feb. 6; v. 235; p. 88.
Wertin, John S., Cokedale, Colo. Transmission apparatus. No. 1,217,674; Feb. 27; v. 235; p. 1252.
Wescott, Otis B., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Fruit-washer. No. 1,215,596; Feb. 13; v. 235; p. 427.
Wescott, Otis B., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Stock food and producing the same. No. 1,215,597; Feb. 13; v. 235; p. 427.
West Disinfecting Company. (See Marcuse, Moses M., assignor.)
West, Fred. (See Jochum, Alvis, assignor.)
West, Walter A., Elkhorn, Wis. Gum solution for use in ice-cream and making the same. No. 1,216,383; Feb. 20; v. 235; p. 759.
Western Electric Company. (See Clausen, Henry P., assignor.)
Western Electric Company. (See Danielson, Oscar A., assignor.)
Western Electric Company. (See Dixon, Amos F., assignor.)
Western Electric Company. (See Dunham, Bert G., assignor.)
Western Electric Company. (See Goodrum, Charles L., assignor.)
Western Electric Company. (See Johnson, Lewis H., assignor.)
Western Electric Company. (See Kendall, Burton W., assignor.)
Western Electric Company. (See McQuarrie and Loveridge, assignors.)
Western Electric Company. (See Reynolds, John N., assignor.)
Western Electric Company. (See Roberts, John G., assignor.)
Western Union Telegraph Company, The. (See Yorke and Benjamin, assignors.)
Western Union Telegraph Company, The. (See Yorke, George M., assignor.)
Westinghouse Air Brake Company, The. (See Doyle and Hedley, assignors.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)
Westinghouse Electric and Manufacturing Company. (See Conrad and Nikonow, assignors.)
Westinghouse Electric and Manufacturing Company. (See Davis, David C., assignor.)
Westinghouse Electric and Manufacturing Company. (See Fortescue, Charles L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Hanff, Edward A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Jackson, Ray P., assignor.)
Westinghouse Electric and Manufacturing Company. (See Mace, Donald H., assignor.)
Westinghouse Electric and Manufacturing Company. (See Mills, Chester B., assignor.)
Westinghouse Electric and Manufacturing Company. (See Rose, Edward E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Schaake, William, assignor.)
Westinghouse Electric and Manufacturing Company. (See Scott, Charles F., assignor.)
Westinghouse Electric and Manufacturing Company. (See Siegfried, Robert, assignor.)
Westinghouse Electric and Manufacturing Company. (See Simmon, Karl A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Tirrill, Allen A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Trood, Samuel, assignor.)
Westinghouse Electric and Manufacturing Company. (See Varney, Theodore, assignor.)
Westinghouse Electric and Manufacturing Company. (See Wilson, Charles E., assignor.)
Westlake, Burr F., *et al.* (See Cox, Eldridge A., assignor.)
Weston Electrical Instrument Company. (See Romain, Burchard P., assignor.)
Weyer, Nick, Lewiston, Minn. Indicating door-lock. No. 1,216,899; Feb. 20; v. 235; p. 936.
Weymann, Harry W., Philadelphia, Pa. Stringed musical instrument. No. 1,215,598; Feb. 13; v. 235; p. 427.
Whalen, John. (See Banks and Whalen.)
Wheary, George H., Racine, Wis. Garment-hanger fixture. No. 1,216,384; Feb. 20; v. 235; p. 759.
Wheary, George H., Racine, Wis. Shoe-box-retaining means. No. 1,216,385; Feb. 20; v. 235; p. 760.
Wheeler, James W. (See Black and Wheeler.)
Wheelihan, John D. (See Wallace, Edward M., assignor.)
Wheeling Stamping Company. (See Edwards, Alonzo L., assignor.)
Whelan, Martin J. (See Frank, Gustav, assignor.)
Whitaker, Herbert C., Philadelphia, Pa. Convertible seat and back-rest. No. 1,216,029; Feb. 13; v. 235; p. 582.
Whitcomb, Beecher D., Shawomet, R. I. Alarm for railway-crossings. No. 1,214,624; Feb. 6; v. 235; p. 50.
White, Bruce C., assignor to R. Hoe and Co., New York, N. Y. Inking mechanism. No. 1,214,856; Feb. 6; v. 235; p. 128.
White, Charles D., Norwich, Conn. Machine for dyeing yarn. No. 1,215,448; Feb. 13; v. 235; p. 371.
White, Charles E., Moline, Ill., assignor to Deere & Mansur Company. Disk marker for corn-planters. No. 1,215,599; Feb. 13; v. 235; p. 428.
White, Charles N., Bisbee, Ariz. Plow-colter. No. 1,216,193; Feb. 13; v. 235; p. 641.
White, Henderson N., Cleveland, Ohio. Cornet. No. 1,214,625; Feb. 6; v. 235; p. 50.
White, Lazarus, New York, N. Y. Providing substructures for structures. No. 1,217,128; Feb. 20; v. 235; p. 1015.
White, Melbourne W., Cliftondale, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Rubber-soled shoe. No. 1,215,449; Feb. 13; v. 235; p. 371.
White, Melbourne W., Cliftondale, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Rubber-sole shoe. No. 1,215,450; Feb. 13; v. 235; p. 371.
White, Roy, Lamar, Colo. Irrigating device for plants. No. 1,216,642; Feb. 20; v. 235; p. 850.
White, Walter C., Los Angeles, Cal. Train-coupling for electrical conductors. No. 1,214,857; Feb. 6; v. 235; p. 129.
White, William L., Birmingham, Ala. Flash-light. No. 1,215,757; Feb. 13; v. 235; p. 483.
White, William M., Milwaukee, Wis. Hydraulic equalizer. No. 1,215,451; Feb. 13; v. 235; p. 372.
White, William M., Hoboken, N. J. Pipe-joint for double pipes. No. 1,217,543; Feb. 27; v. 235; p. 1206.
Whitfield, Ernest A. (See Dayton and Whitfield.)
Whitfield Manufacturing Company, The. (See Dayton and Whitfield, assignors.)
Whitnell, Charles O., Kingsley, Iowa. Skylight and ventilating means for hog-houses. No. 1,216,194; Feb. 13; v. 235; p. 641.
Whitney, Francis M., San Diego, Cal., assignor to General Electric Company. End ring for squirrel-cage windings. No. 1,215,088; Feb. 6; v. 235; p. 213.
Whitney, George E., Bridgeport, Conn., assignor to H. A. Paine, Harris county, Tex. Machine for compressing baled hay. No. 1,217,893; Feb. 27; v. 235; p. 1324.
Whittaker, Arnold R. (See Jeavons and Whittaker.)
Whitten, Oscar C., Star City, Ark. Seat-board for vehicles. No. 1,216,755; Feb. 20; v. 235; p. 889.
Whittier, Colan F. and M. H., Los Angeles, Cal. Safety rotary well-boring tool. No. 1,217,079; Feb. 20; v. 235; p. 996.
Whittier, Mericos H. (See Whittier, Colan F. and M. H.)
Wickert, William, Jr., Chicago, Ill. Valve. No. 1,216,528; Feb. 20; v. 235; p. 810.
Wiggins, Loran A., Milwaukee, Wis. Convertible cooking-cabinet. No. 1,216,030; Feb. 13; v. 235; p. 583.
Wigle, Wilson B., Fullerton, Cal. Combination casing-head and spider. No. 1,217,853; Feb. 27; v. 235; p. 1311.
Wikander, Charles N., Meskill, Wash. Rotary engine. No. 1,214,981; Feb. 6; v. 235; p. 176.
Wikstrom, Adolph B., Strandquist, Minn. Trap. No. 1,214,626; Feb. 6; v. 235; p. 50.
Wikstrom, Malcolm U., Charleroi, assignor to Pittsburgh Steel Products Company, Pittsburgh, Pa. Furnace. No. 1,217,251; Feb. 27; v. 235; p. 1101.
Wilcox, Joseph S., Jr., A. Turner, and H. W. Dunbar, assignors to Norton Grinding Company, Worcester, Mass. Steady-rest. No. 1,214,629; Feb. 6; v. 235; p. 51.
Wilcox, Josiah T., Westfield, N. J., assignor to The Tin Decorating Company of Baltimore, Baltimore, Md. Cigar-package. No. 1,216,031; Feb. 13; v. 235; p. 583.
Wilcox, Lewis T., Peekskill, N. Y. Gas-burner. No. 1,216,529; Feb. 20; v. 235; p. 810.
Wilcoxson, Isham F., Dryden, Okla. Ironing-board. No. 1,215,452; Feb. 13; v. 235; p. 372.
Wild, Joseph L., assignor of one-half to S. MacSween, Tacoma, Wash. Cooking hams. No. 1,214,627; Feb. 6; v. 235; p. 51.
Wilde, Emil W., Warsaw, Ill. Whip-socket. No. 1,215,228; Feb. 6; v. 235; p. 260.
Wildman, Frank B., Norristown, Pa. Circular-knitting machine. No. 1,216,900; Feb. 20; v. 235; p. 936.
Wildman, William W., and E. A. Tinsman, Barberton, assignors of one-third to J. Christy, Cleveland, Ohio. Producing puncture-sealing rubber tires. No. 1,217,888; Feb. 27; v. 235; p. 1323.
Wiley, Roy R., Buffalo, N. Y. Illuminated sign. No. 1,215,600; Feb. 13; v. 235; p. 428.
Wilhelm, Russell H., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Steel retainer for hammer-drills. No. 1,217,378; Feb. 27; v. 235; p. 1145.
Wilkin, William M., Erie, Pa. Steam-engine. No. 1,214,858; Feb. 6; v. 235; p. 129.
Wilkin, William M., Erie, Pa. Steam-engine. No. 1,214,859; Feb. 6; v. 235; p. 130.
Wilkin, William M., Erie, Pa. Valve-gear for steam-engines. No. 1,216,032; Feb. 13; v. 235; p. 583.
Wilkins, Leslie T., Laurel, Mont. Chopping-wheel. No. 1,216,033; Feb. 13; v. 235; p. 584.
William Beehler, Inc. (See Beehler, William H., assignor.)
William Carter Company, The. (See Drumheller, William P., assignor.)

Williams, Alfonzo L., Los Angeles, Cal. Trolley-head. No. 1,216,901; Feb. 20; v. 235; p. 937.
Williams, Anthony F., and E. A. Halbleib, assignors to North East Electric Company, Rochester, N. Y. Electric switch. No. 1,216,386; Feb. 20; v. 235; p. 760.
Williams, Charles A., Seattle, Wash. Purse-net-hauling machine. No. 1,216,530; Feb. 20; v. 235; p. 811.
Williams, Charles F. (See Williams, Ira C. and C. F.)
Williams, Charles S., Denver, Ill. Internal-combustion engine. No. 1,217,379; Feb. 27; v. 235; p. 1145.
Williams, Cora B., Malvern, Iowa. Corset. No. 1,215,601; Feb. 13; v. 235; p. 429.
Williams, Cora B., Malvern, Iowa. Binder. No. 1,215,602; Feb. 13; v. 235; p. 429.
Williams, George A., assignor to The Williams Sealing Corporation, Waterbury, Conn. Bottle and cap. No. 1,214,734; Feb. 6; v. 235; p. 89.
Williams, Ira C. and C. F., Albany; said Ira C. Williams assignor to C. W. Derrickson, Indianapolis, Ind. Dimmer for electric lamps. No. 1,216,756; Feb. 20; v. 235; p. 889.
Williams Patent Crusher and Pulverizer Company. (See Thuneman, Harry A., assignor.)
Williams, Reuben M., Malad City, Idaho. Gate-latch. No. 1,216,034; Feb. 13; v. 235; p. 584.
Williams Sealing Corporation, The. (See Williams, George A., assignor.)
Williams, Warner C., *et al.* (See Noel, Eugene E., assignor.)
Williams, William, Smith, Nev. Manure-loader. No. 1,216,902; Feb. 20; v. 235; p. 937.
Williams, William C., Winnipeg, Manitoba, Canada. Electric water-heater. No. 1,217,380; Feb. 27; v. 235; p. 1145.
Williams, William E., Chicago, Ill. Valve mechanism for explosive-engines. No. 1,216,757; Feb. 20; v. 235; p. 889.
Williams, William H., Carey, Ohio. Insulator. (Reissue.) No. 14,256; Feb. 6; v. 235; p. 296.
Williamson, George H., Jersey City, N. J. Toy. No. 1,216,195; Feb. 13; v. 235; p. 641.
Williamson, Glenn S., New York, N. Y. Mechanism for uniting printing-press webs and the like. No. 1,217,252; Feb. 27; v. 235; p. 1101.
Williamson, Glenn S., New York, N. Y. Uniting printing-press webs. No. 1,217,253; Feb. 27; v. 235; p. 1102.
Williamson, William P., Ludlow, Mass. Dispenser. No. 1,216,640; Feb. 20; v. 235; p. 849.
Willison, John, Derby, England, assignor to The National Malleable Castings Company, Cleveland, Ohio. Draft-rigging. No. 1,215,315; Feb. 6; v. 235; p. 290.
Willsea, Louis P., Rochester, N. Y. Bag-shaking machine. No. 1,214,628; Feb. 6; v. 235; p. 51.
Willson, Samuel T., Brooklyn, N. Y. Fluid-fuel burner. No. 1,215,229; Feb. 6; v. 235; p. 260.
Willson, William H., Los Angeles, Cal. Fireworks. No. 1,217,544; Feb. 27; v. 235; p. 1206.
Wilmot Castle Company. (See Underwood, Weeden B., assignor.)
Wilmsen, Bernard, Philadelphia, Pa. Ornament for Christmas-trees, decorations, &c. No. 1,217,675; Feb. 27; v. 235; p. 1252.
Wilson, Cecil R., Bablin, W. Va. Table attachment for beds. No. 1,217,676; Feb. 27; v. 235; p. 1253.
Wilson, Charles E., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Starting mechanism for automobiles. No. 1,215,453; Feb. 13; v. 235; p. 372.
Wilson, Frank R., *et al.* (See Choteau, Henry H., assignor.)
Wilson, George, Mankato, Minn. Reversing mechanism for internal-combustion engines. No. 1,214,860; Feb. 6; v. 235; p. 130.
Wilson, George, Mankato, Minn. Reversing mechanism for internal-combustion engines. No. 1,214,861; Feb. 6; v. 235; p. 131.
Wilson, Laura, *et al.* (See Choteau, Henry H., assignor.)
Wilson, Odelon D., Greenville, S. C. Miter-box. No. 1,214,862; Feb. 6; v. 235; p. 131.
Wilson, Walter V. (See Murphy, Lewis, and Wilson.)
Wilson, William, Boston, Mass., assignor to Campbell Bosworth Machinery Company, Portland, Me. Lock-stitch sewing-machine. No. 1,216,035; Feb. 13; v. 235; p. 584.
Wilson, William G., West New Brighton, and N. L. Jones, Mariners Harbor, N. Y. Anti-rail-spreader. No. 1,216,903; Feb. 20; v. 235; p. 938.
Wilt, Charles N. (See Murray and Wilt.)
Winchell, Richard W., White River, S. D. Reel device for barb fence-wire and the like. No. 1,215,454; Feb. 13; v. 235; p. 372.
Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)
Windsor, Samuel T., Normangee, Tex. Auxiliary transmission-case hanger. No. 1,215,603; Feb. 13; v. 235; p. 429.
Wine, William E., Toledo, Ohio. Car-ladder. No. 1,215,455; Feb. 13; v. 235; p. 373.
Wine, William E., Toledo, Ohio. Car buffing device. No. 1,215,456; Feb. 13; v. 235; p. 373.
Wine, William E., Toledo, Ohio. Friction buffing device for railway-cars. No. 1,215,457; Feb. 13; v. 235; p. 373.
Wine, William E., Toledo, Ohio. Uncoupling device. No. 1,215,458; Feb. 13; v. 235; p. 374.
Wine, William E., Toledo, Ohio. Car buffing device. No. 1,215,459; Feb. 13; v. 235; p. 374.
Winesburg, Oscar S. (See Preston, Palmer, and Winesburg.)
Winfield, Olli C., and C. F. Haywood, Boone, Iowa. Safety-throttle for pneumatic tools. No. 1,216,904; Feb. 20; v. 235; p. 938.
Wingett, John N., Denver, Colo. Ore classifier or separator. No. 1,215,230; Feb. 6; v. 235; p. 260.
Winkley, Erastus E., Lynn, Mass. Bottle filling and capping machine. No. 1,216,036; Feb. 13; v. 235; p. 584.
Winkler, Otto, Cöpenick, and R. Urtel, Nieder-Schöneweide, Germany, assignors to General Electric Company. Valve-gear for internal-combustion engines. No. 1,216,196; Feb. 13; v. 235; p. 641.
Winslow, George W., Chicago, Ill. Deep-sea-salvage-recovering apparatus. No. 1,217,254; Feb. 27; v. 235; p. 1102.
Winslow Safety High-Pressure Boiler Co. (See Winslow, William H., assignor.)
Winslow, William H., assignor to Winslow Safety High-Pressure Boiler Co., Chicago, Ill. Burner. No. 1,214,735; Feb. 6; v. 235; p. 89.
Winston, Charles S., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Automatic telephone system. No. 1,214,982; Feb. 6; v. 235; p. 176.
Winston, Charles S., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Automatic telephone system. No. 1,216,641; Feb. 20; v. 235; p. 850.
Winston, Charles S., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone system. No. 1,217,255; Feb. 27; v. 235; p. 1102.
Winter, Frederick W., Pittsburgh, assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,216,037; Feb. 13; v. 235; p. 585.
Winter, John H., *et al.* (See Fellows, Melvin, assignor.)
Winter, William E., New Britain, assignor of one-fourth to F. S. Fletcher and one-half to The Fletcher-Terry Company, Forestville, Conn. Edge-tool sharpener. No. 1,216,387; Feb. 20; v. 235; p. 761.
Wirebounds Patents Company. (See Miller, Julius J., assignor.)
Wireless Instrument Company. (See Miller, Thomas B., assignor.)
Wise Acetylene Gas Machine Company. (See Wise, Harry M., assignor.)
Wise, Harry M., Richmond, Va., assignor to Wise Acetylene Gas Machine Company, Incorporated. Acetylene-gas generator. No. 1,216,197; Feb. 13; v. 235; p. 642.
Witanowski, John, Chicago, Ill. Reamer. No. 1,217,256; Feb. 27; v. 235; p. 1103.
Witry, Louis W., assignor to Waterloo Gasoline Engine Company, Waterloo, Iowa. Implement-shifting means for tractors. No. 1,217,257; Feb. 27; v. 235; p. 1103.
Wittkopf, Paul. (See Lüake, Carl, assignor.)
Wm. L. Gilbert Clock Company. (See Hodge, Albert P., assignor.)
Woeste, Louis B., Newport, Ky., assignor of one-half to W. A. Stephens, Cincinnati, Ohio. Myriad reflector. No. 1,214,863; Feb. 6; v. 235; p. 131.
Wogenstahl, Leo J., San Antonio, Tex., assignor to Automatic Search Light Company, Phoenix, Ariz. Dirigible headlight. No. 1,214,736; Feb. 6; v. 235; p. 89.
Wolcott, Cornelius R., McLouth, Kans. Lamp-flame-regulating burner. No. 1,214,737; Feb. 6; v. 235; p. 89.
Wolf, Aaron, New York, N. Y. Corner-post fastening. No. 1,214,738; Feb. 6; v. 235; p. 90.
Wolf, Aaron H., Myerstown, Pa. Watch-holder for automobiles. No. 1,216,531; Feb. 20; v. 235; p. 811.
Wolf Company, The. (See Lemaster, Maurice D., assignor.)
Wolf, Isaac, Millwall, London, England. Loose-leaf binder. No. 1,216,532; Feb. 20; v. 235; p. 811.
Wolf, Lewis W., assignor of one-half to I. M. Rhodes, Racine, Ohio. Brick-pointer. No. 1,216,389; Feb. 20; v. 235; p. 761.
Wolf, Robert B., Berlin, N. H. Making tight castings. No. 1,214,630; Feb. 6; v. 235; p. 52.
Wolff Fuel Saver Company. (See Blaske, William C., assignor.)
Wolff, Hugo. (See Bally and Wolff.)
Wolford, David B., Echo, Oreg. Kitchen utensil. No. 1,214,631; Feb. 6; v. 235; p. 52.
Wood, Charles O., Chambersburg, Pa. Expanding-friction-clutch. No. 1,217,258; Feb. 27; v. 235; p. 1103.
Wood, Frank W., New York, N. Y., assignor to Floating Wedge Lock Nut Co., Inc. Nut-lock. No. 1,215,460; Feb. 13; v. 235; p. 374.
Wood, Frank W., Brooklyn, assignor to Charles Cory & Son, Inc., New York, N. Y. Electrical telegraph and indicator system. No. 1,216,533; Feb. 20; v. 235; p. 811.
Wood, Henry A. W., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y. Identifying pasted products. No. 1,216,198; Feb. 13; v. 235; p. 642.
Wood, Henry A. W., assignor to Wood Newspaper Machinery Corporation, New York, N. Y. Shaving stereotype printing-plates. No. 1,216,388; Feb. 20; v. 235; p. 761.
Wood, James, Binghamton, N. Y. Hat-pin guard. No. 1,216,905; Feb. 20; v. 235; p. 938.
Wood Newspaper Machinery Corporation. (See Wood, Henry A. W., assignor.)

Wood, William G., assignor of one-half to F. B. McKevitt, Sacramento, Cal. Steam-shovel dipper. No. 1,215,089; Feb. 6; v. 235; p. 213.
Wood, William H., Cleveland, Ohio, assignor to S. W. Cook, trustee, Chicago, Ill. Arch-support. No. 1,215,090; Feb. 6; v. 235; p. 213.
Woodard, Robert C. (See Hodge, Graham, and Woodard.)
Woodbridge, James E. (See De Févre and Woodbridge.)
Wooding, Benjamin F., Montclair, N. J., assignor to Wooding Railway Warning Device Company, Denver, Colo. Railway-traffic-control apparatus. No. 1,216,038; Feb. 13; v. 235; p. 585.
Wooding Railway Warning Device Company. (See Wooding, Benjamin F., assignor.)
Woodlee, John, Jr., *et al.* (See Sartain, Louis M., assignor.)
Woodruff, William W., Ardmore, Pa., assignor to The Rand Company, North Tonawanda, N. Y. Tag. No. 1,214,864; Feb. 6; v. 235; p. 132.
Woods-Gilbert Rail Planer Company. (See Eunson, Joseph W., assignor.)
Woods, Wilson R., Los Angeles, Cal. Meat-cutter. No. 1,214,739; Feb. 6; v. 235; p. 90.
Woodstock Typewriter Company. (See Roebuck, Alvah C., assignor.)
Woodstock Typewriter Company. (See Roebuck and Pruszynski, assignors.)
Woodstock Typewriter Company. (See Roebuck and Steinke, assignors.)
Woodward, Erastus, Somerville, assignor, by mesne assignments, of one-half to J. J. Sheehan and one-half to W. P. Egan, Lynn, Mass. Printing and marking machine. No. 1,214,632; Feb. 6; v. 235; p. 52.
Woolhiser, Jay H., Elmhurst, N. Y. Implement for cleaning drains. No. 1,215,461; Feb. 13; v. 235; p. 375.
Woolson, Thomas D., Buffalo, N. Y. Ambulatory toy. No. 1,216,906; Feb. 20; v. 235; p. 938.
Worcester Flexible Tubing Company. (See Marsolais, Joseph F., assignor.)
Worden, Enoch W., Flint, Mich. Match-box. No. 1,216,907; Feb. 20; v. 235; p. 939.
Wright, Arthur, New York, N. Y. Safety-pin. No. 1,214,633; Feb. 6; v. 235; p. 53.
Wright, Frank G., San Diego, Cal. Gas-saver for gas-burners. No. 1,217,854; Feb. 27; v. 235; p. 1311.
Wright, Hartwell S., Van Duzar, Ark. Railway-spike. No. 1,214,634; Feb. 6; v. 235; p. 53.
Wright, Morris S., Worcester, Mass. Pneumatic action for musical instruments. No. 1,214,865; Feb. 6; v. 235; p. 132.
Wright, Walter, assignor to Underwood Computing Machine Company, New York, N. Y. Computing-machine. No. 1,216,758; Feb. 20; v. 235; p. 889.
Wright, Walter, assignor to Underwood Computing Machine Company, New York, N. Y. Computing-machine. No. 1,216,759; Feb. 20; v. 235; p. 890.
Wright's Automatic Tobacco Packing Machine Company. (See Bracy, Edward L., assignor.)
Wurts, Edward V., Pittsburgh, Pa., assignor to Steel Utilities, Incorporated. Metal-working machine. No. 1,214,983; Feb. 6; v. 235; p. 177.
Wuth, Berthold. (See Jagerspacher and Wuth.)
Wuth, Berthold, B. Mayer, C. Jagerspacher, and E. Anderwert, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Copper compound of ortho-oxyazo dyestuffs and making same. No. 1,216,760; Feb. 20; v. 235; p. 890.
Wyman, George R. (See Bird and Wyman.)
Wyman, George R., and A. E. Currier, East Walpole, Mass. Machine for coating tubes. No. 1,216,039; Feb. 13; v. 235; p. 586.
Wyse & Co. (See Zimmermann, Arthur, assignor.)
Yanochowski, George A., Chicago, Ill., and H. E. Hershey, Whitewater, Kans., assignors to Automatic Electric Company, Chicago, Ill. Automatic telephone system. No. 1,216,534; Feb. 20; v. 235; p. 812.
Yarwood, William A., La Salle, N. Y. Frame for supporting grinding-stones. No. 1,215,758; Feb. 13; v. 235; p. 493.
Yasuda, Matsichi, Koishigawa, Tokio, Japan. Composition for polishing iron. No. 1,216,643; Feb. 20; v. 235; p. 851.
Yelin, Adolph, Buffalo, N. Y. Chalk-holder. No. 1,217,545; Feb. 27; v. 235; p. 1206.
York, Howard H., Logansport, Ind. Water-submerged air-chamber for water-pipes. No. 1,216,761; Feb. 20; v. 235; p. 890.
York, Levi D., Portsmouth, Ohio. Shoe-last. No. 1,216,908; Feb. 20; v. 235; p. 939.
Yorke, George M., assignor to The Western Union Telegraph Company, New York, N. Y. Automatic printer. No. 1,215,604; Feb. 13; v. 235; p. 480.
Yorke, George M., New York, N. Y., and G. R. Benjamin, Jersey City, N. J., assignors to The Western Union Telegraph Company, New York, N. Y. Means for synchronizing rotary devices. No. 1,215,605; Feb. 13; v. 235; p. 430.
Young, Edward, Jeffersonville, assignor of one-half to A. W. Duff, Washington Court-House, Ohio. Oil-can. No. 1,214,740; Feb. 6; v. 235; p. 91.
Young, Edward B., assignor to A. R. Bradshaw, Okmulgee, Okla. Window-pulley. No. 1,215,231; Feb. 6; v. 235; p. 261.
Young, Frederick A. (See Vest, Clarence D., assignor.)
Young, George W., *et al.* (See Norman, Frank, assignor.)
Young, Jacob H., Chicago, Ill. Accelerator-controlling mechanism. No. 1,214,866; Feb. 6; v. 235; p. 132.
Young, Samuel W., New York, N. Y. Mailing-card. No. 1,214,867; Feb. 6; v. 235; p. 133.
Youngquist, Henry, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Shuttle-threading mechanism for automatic filling-replenishing looms. No. 1,214,868; Feb. 6; v. 235; p. 133.
Yount, Horace J., Indianapolis, Ind. Scored-cylinder repair. No. 1,217,546; Feb. 27; v. 235; p. 1207.
Yuyama, Shigezo, Brooklyn, N. Y. Incandescent electric lamp. No. 1,215,894; Feb. 13; v. 235; p. 532.
Zak, John F., Chicago, Ill. Button. No. 1,216,535; Feb. 20; v. 235; p. 812.
Zaleski, Frank, Somerville, assignor to The Reece Button Hole Machine Company, Boston, Mass. Sewing-machine. No. 1,214,869; Feb. 6; v. 235; p. 134.
Zaleski, Frank, Somerville, assignor to The Reece Button Hole Machine Company, Boston, Mass. Sewing-machine. No. 1,216,536; Feb. 20; v. 235; p. 813.
Zaleski, Frank, Somerville, assignor to The Reece Button Hole Machine Company, Boston, Mass. Thread cutter and clamp for sewing-machines. No. 1,216,537; Feb. 20; v. 235; p. 813.
Zarth, Charles E., Aurora, Ill. Wheel-hub. No. 1,216,040; Feb. 13; v. 235; p. 586.
Zee Socket & Mfg. Co., The. (See Both, Tonjes A. C., assignor.)
Zehner, Alfred G., *et al.* (See De Bats, Jean H. L., assignor.)
Zeiger, Lee, Melbourne, Iowa. Broom-brace. No. 1,216,909; Feb. 20; v. 235; p. 939.
Zeiser, John R., Berwick, Pa. Mold for making concrete curbs. No. 1,214,870; Feb. 6; v. 235; p. 134.
Zeiss, Firm of Carl. (See Lehmann, Johannes, assignor.)
Zemke, Henry W., Milwaukee, Wis. Combined safety letter-sheet and envelop. No. 1,216,762; Feb. 20; v. 235; p. 891.
Zerk, Oscar, Cleveland, Ohio, assignor, by mesne assignments, to G. W. Bowen, Auburn, N. Y. Self-lubricating bolt. No. 1,217,259; Feb. 27; v. 235; p. 1103.
Zimmer, Conrad W., Buffalo, N. Y. Brake. No. 1,217,260; Feb. 27; v. 235; p. 1104.
Zimmerman, Arthur R., Shamokin, Pa. Sled-runner for wheeled vehicles. No. 1,215,091; Feb. 6; v. 235; p. 214.
Zimmerman, Charles F., Jersey City, N. J. Shears. No. 1,214,635; Feb. 6; v. 235; p. 53.
Zimmerman, Joseph. (See Scheffer and Zimmerman.)
Zimmermann, Arthur, assignor to Wyse & Co., Inc., New York, N. Y. Apron. No. 1,217,855; Feb. 27; v. 235; p. 1311.
Zimmermann, Benjamin D. (See Lederer, Friedrich, assignor.)
Zinn, William H., Anniston, Ala. Knockdown stroboscope. No. 1,214,636; Feb. 6; v. 235; p. 54.
Zistel, Oscar, Sandusky, Ohio. Aerating device. No. 1,214,637; Feb. 6; v. 235; p. 54.
Zorba, Alexander, Herrick, S. D. Guide for window-shades. No. 1,217,261; Feb. 27; v. 235; p. 1104.
Zubryd, Antoni, Castle Shannon, Pa. Burglar-catching device. No. 1,217,381; Feb. 27; v. 235; p. 1146.
Zwermann, Carl H., Kalamazoo, Mich. Kiln construction. No. 1,216,390; Feb. 20; v. 235; p. 762.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Ainsworth, George R., Great Neck, N. Y. Electric-light fixture. Nos. 50,331–3; Feb. 20; v. 235; pp. 1021–2.
Allen, Grosvenor N., Oneida, N. Y. Handle for a spoon or analogous utensil. No. 50,288; Feb. 13; v. 235; p. 664.
Allen, Grosvenor N., assignor to Oneida Community, Limited, Oneida, N. Y. Handle for spoons or analogous utensils. Nos. 50,256–62; Feb. 6; v. 235; pp. 298–9.
Andrews, Fred L., Beaver, assignor to H. C. Fry Glass Company, Rochester, Pa. Glass article. No. 50,334; Feb. 20; v. 235; p. 1022.
Archer, Frank M., Brookline, assignor to The Moxie Company, Boston, Mass. Automobile. Nos. 50,373–4; Feb. 27; v. 235; p. 1326.
Autoplano Company, The. (See La Joie, Herbert J., assignor.)
Bailey, Joseph T., Philadelphia, Pa. Badge or insignia. Nos. 50,289–90; Feb. 13; v. 235; p. 664.
Baker, Stephen D., New York, N. Y. Wall-receptacle for soap and other toilet articles. No. 50,291; Feb. 13; v. 235; p. 664.
Ball, George E., Stratford, Conn., assignor to Whiting Manufacturing Company, New York, N. Y. Handle for a spoon, fork, or similar article. No. 50,292; Feb. 13; v. 235; p. 665.
Barney, Arthur L., assignor to Tiffany & Co., New York, N. Y. Spoon, fork, or similar article. No. 50,375; Feb. 27; v. 235; p. 1326.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Lighting-fixture. No. 50,263; Feb. 6; v. 235; p. 299.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Wall-plate for lighting-fixtures. No. 50,264; Feb. 6; v. 235; p. 300.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Lighting-fixture. No. 50,335; Feb. 20; v. 235; p. 1022.
Bickford, Charles A., Chicago, Ill. Ring. No. 50,293; Feb. 13; v. 235; p. 665.
Borton, Charles E., *et al.* (See Fisk, Willard C., assignor.)
Bottome, Edgar M., assignor to Fostoria Glass Company, Moundsville, W. Va. Glass article. No. 50,336; Feb. 20; v. 235; p. 1022.
Breitenstein, Arthur L., Akron, Ohio, assignor to The Lancaster Tire & Rubber Company, Lancaster, Ohio. Tire-tread. No. 50,265; Feb. 6; v. 235; p. 300.
Brown, Harold H., Indianapolis, Ind., assignor to University of Chicago, Chicago, Ill. Plate or similar article. No. 50,337; Feb. 20; v. 235; p. 1022.
Bryant Brothers Company, The. (See Clausen, Alfred B. L., assignor.)
Bryant Electric Company, The. (See Thomas, George B., assignor.)
Buck & Glenn. (See Glenn, Chalmers L., assignor.)
Burglar Proof Lock and Hardware Corporation. (See Segal, Samuel, assignor.)
Butterfield, William H., Stechford, Birmingham, England. Magneto-bracket. No. 50,338; Feb. 20; v. 235; p. 1022.
Cassidy, Alice, Hubbard, Oreg. Doll. No. 50,294; Feb. 13; v. 235; p. 665.
Chas. Emmerich and Co. (See Emmerich, Edward E., assignor.)
Chase, Theron P., Detroit, Mich. Radiator for an automobile. No. 50,266; Feb. 6; v. 235; p. 300.
Clark, Maud G., New York, N. Y. Game-board. No. 50,339; Feb. 20; v. 235; p. 1023.
Clausen, Alfred B. L., assignor to The Bryant Brothers Company, Columbus, Ohio. Light-diffusing reflector. No. 50,267; Feb. 6; v. 235; p. 300.
Converse, Atherton D., Winchendon, Mass. Toy. No. 50,340; Feb. 20; v. 235; p. 1023.
Cutler-Hammer Mfg. Co., The. (See Klein, Charles J., assignor.)
Daisy Manufacturing Company. (See Lefever, Charles F., assignor.)
Darley, John W., Jr., Baltimore, Md., assignor to The Universal Steel Package Co. Metallic barrel. No. 50,295; Feb. 13; v. 235; p. 665.
Dawson, Rupert G., Overdale, Dunblane, Scotland. Glass bottle. No. 50,296–300; Feb. 13; v. 235; pp. 665–6.
De Mattia, Barthold. (See De Mattia, Peter and B.)
De Mattia, Peter and B., Clifton, N. J. Automobile-tire. No. 50,269; Feb. 6; v. 235; p. 301.
Domestic Talking Machine Corporation. (See Sheble, Horace, assignor.)
Duncan & Miller Glass Company, The. (See Miller, John E., assignor.)
Ehrlich, Albert H., St. Joseph, Mo. Lock-casing and handle. No. 50,376; Feb. 27; v. 235; p. 1326.
Ehrlich, Frederick W., Newark, N. J. Arm and clamp for autoscopes. No. 50,377; Feb. 27; v. 235; p. 1327.
Ehrmann, Hilmar. (See Epstein, Edward, assignor.)
Ellis, Emory E., assignor to Union Caliper Company, Orange, Mass. Caliper. No. 50,378; Feb. 27; v. 235; p. 1327.
Emmerich, Edward E., Park Ridge, assignor to Chas. Emmerich and Co., Chicago, Ill. Textile fabric. No. 50,379; Feb. 27; v. 235; p. 1327.
Epstein, Edward, assignor to H. Ehrmann, Louisville, Ky. Bottle. No. 50,341; Feb. 20; v. 235; p. 1023.
Erlebach, Robert, Brooklyn, assignor to The Palm Brothers Company, New York, N. Y. Plate or similar article. No. 50,342; Feb. 20; v. 235; p. 1023.
Fageol, Frank R., Piedmont, Cal. Automobile-radiator. No. 50,270; Feb. 6; v. 235; p. 301.
Fisk, Willard C., Seattle, assignor to C. E. Borton and E. L. Perkins, King county, Wash. Clasp for watch-fobs. No. 50,343; Feb. 20; v. 235; p. 1023.
Fostoria Glass Company. (See Bottome, Edgar M., assignor.)
Fostoria Glass Company. (See Sullivan, Charles L., assignor.)
Frank & Company, L. (See Williams, Dick B., assignor.)
Frederick Stearns & Co. (See McClure, Clarence M., assignor.)
Freese, William D., Akron, Ohio. Tire-tread. No. 50,380; Feb. 27; v. 235; p. 1327.
Funk, Glenn W., Jeromesville, Ohio. Combination-tool. No. 50,381; Feb. 27; v. 235; p. 1327.
Gilmore, Chace D., Highland Park, Mich. Combination salt and pepper cellar. No. 50,344; Feb. 20; v. 235; p. 1023.
Glenn, Chalmers L., assignor to Buck & Glenn, Inc., Winston-Salem, N. C. Toy banking-room. No. 50,382; Feb. 27; v. 235; p. 1328.
Goodwin, John E., Stoke-upon-Trent, assignor to Josiah Wedgwood & Sons, Ltd., Etruria, England. Dish. No. 50,383; Feb. 27; v. 235; p. 1328.
Green, Walter R., Chicago, Ill. Curved drop-side mud-guard and splasher attachment. No. 50,345; Feb. 20; v. 235; p. 1024.
Green, Walter R., Chicago, Ill. Drop-side mud-guard and splasher attachment. No. 50,346; Feb. 20; v. 235; p. 1024.
Grode, Frank P., Kansas City, Mo. Billiard-table leg. No. 50,347; Feb. 20; v. 235; p. 1024.
H. C. Fry Glass Company. (See Andrews, Fred L., assignor.)
H. C. Fry Glass Company. (See Provance, David F., assignor.)
Haley, Reuben, Beaver, assignor to The United States Glass Company, Pittsburgh, Pa. Glass article. Nos. 50,348–50; Feb. 20; v. 235; pp. 1024–5.
Hamilton, Charles W., Milwaukee, Wis. Lace paper. No. 50,301; Feb. 13; v. 235; p. 666.
Hanson, Eugene L., New Rochelle, assignor to H. R. Mallinson & Co., New York, N. Y. Textile fabric. Nos. 50,302–7; Feb. 13; v. 235; pp. 666–7.
Hanson, Eugene L., New Rochelle, assignor to H. R. Mallinson & Co., New York, N. Y. Textile fabric. No. 50,384; Feb. 27; v. 235; p. 1328.
Heckroth, Reginald A., Delhi, N. Y. Pair of eyeglasses. No. 50,385; Feb. 27; v. 235; p. 1328.
Heisey & Co., A. H. (See Heisey, Thomas C., assignor.)
Heisey, Thomas C., assignor to A. H. Heisey & Co., Newark, Ohio. Glass vessel. No. 50,351; Feb. 20; v. 235; p. 1025.
Henry, William D., Manhasset, N. Y. Paper sheet or similar article. No. 50,386; Feb. 27; v. 235; p. 1328.
Hunter, William E., Chicago, Ill. Nut-bowl. No. 50,271; Feb. 6; v. 235; p. 301.
Inflexible Co. (See Schwarber, Henry, assignor.)
International Silver Co. (See Kintz, Robert R., assignor.)
International Silver Co. (See Stohr, Samuel, assignor.)
Ittig, George P., assignor to W. D. Smith Silver Company, Bridgeport, Conn. Platter or similar article. No. 50,387; Feb. 27; v. 235; p. 1328.
Jansen, Alfred W., Brooklyn, N. Y. Washstand. No. 50,272; Feb. 6; v. 235; p. 301.
Jansen, Alfred W., Brooklyn, N. Y. Nursery-crib. No. 50,273; Feb. 6; v. 235; p. 302.
Jansen, Alfred W., Brooklyn, N. Y. Nursery play-yard. No. 50,274; Feb. 6; v. 235; p. 302.
Jansen, Alfred W., Brooklyn, N. Y. Nursery-wardrobe. No. 50,275; Feb. 6; v. 235; p. 302.
Jenkins, Ida M., Prineville, Oreg. Broom attachment. No. 50,308; Feb. 13; v. 235; p. 667.
Jones, Joseph W., Pelham, assignor to Jones Motrola, Inc., New York, N. Y. Casing for winding attachments for talking-machines. No. 50,388; Feb. 27; v. 235; p. 1329.

Jones Motrola, Inc. (See Jones, Joseph W., assignor.)
Joseph Fahys & Company. (See O'Brien, Harry B., assignor.)
Josiah Wedgwood & Sons. (See Goodwin, John E., assignor.)
Joslin, Clarence W., Cleveland, Ohio, assignor to Mechanical Rubber Company. Jar-ring. No. 50,389; Feb. 27; v. 235; p. 1329.
Keaton, Robert H., San Francisco, Cal. Automobile-tire. No. 50,352; Feb. 20; v. 235; p. 1025.
Kelley, Edward E., West Falmouth, Mass. Ice-cream-cone holder. No. 50,276; Feb. 6; v. 235; p. 302.
Keppler, Fredrick L., New York, N. Y. Ash-tray. No. 50,390; Feb. 27; v. 235; p. 1329.
Kimpton, Charles F., assignor to R. H. Kimpton, Brooklyn, N. Y. Moistener for envelops and other articles. No. 50,309; Feb. 13; v. 235; p. 668.
Kimpton, Ruth H. (See Kimpton, Charles F., assignor.)
Kintz, Robert R., assignor to International Silver Co., Meriden, Conn. Spoon, fork, or similar article. No. 50,391; Feb. 27; v. 235; p. 1329.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Feed-through switch. No. 50,353; Feb. 20; v. 235; p. 1025.
Krantz, Edward, Chicago, Ill. Casing for a carpet-cleaner. No. 50,310; Feb. 13; v. 235; p. 668.
La Joie, Herbert J., Orange, N. J., assignor to The Autopiano Company. Piano-case. No. 50,277; Feb. 6; v. 235; p. 302.
Lamson & Goodnow Manufacturing Company. (See Rowland, Arthur J., assignor.)
Lancaster Tire & Rubber Company, The. (See Breitenstein, Arthur L., assignor.)
Lawton, Frederick T., North Easton, Mass. Register-cord hanger. No. 50,311; Feb. 13; v. 235; p. 668.
Lefever, Charles F., assignor to Daisy Manufacturing Company, Plymouth, Mich. Pistol. No. 50,354; Feb. 20; v. 235; p. 1026.
Lienesch, Walter H., Chicago, Ill. Sign-post. No. 50,392; Feb. 27; v. 235; p. 1329.
Madson, Nellie, Iroquois, S. D. Toasting-spoon. No. 50,393; Feb. 27; v. 235; p. 1329.
Mallinson & Co., H. R. (See Hanson, Eugene I., assignor.)
Manchester, Albert T., North Providence, R. I. Frame of a child's vehicle. No. 50,394; Feb. 27; v. 235; p. 1330.
McAdow, Charles E., Jersey City, N. J. Casing for combined vending and weighing machines. No. 50,312; Feb. 13; v. 235; p. 668.
McClure, Clarence M., assignor to Frederick Stearns & Co., Detroit, Mich. Bottle. No. 50,395; Feb. 27; v. 235; p. 1330.
McConnell, Mary E. D., New York, N. Y. Doll. No. 50,313; Feb. 13; v. 235; p. 668.
Mechanical Rubber Company. (See Joslin, Clarence W., assignor.)
Mendenhall, John J., Clearwater, Fla. Grape-fruit, paring, and coring knife. No. 50,278; Feb. 6; v. 235; p. 302.
Merrill, Elizabeth E., Los Angeles, Cal. Hawaiian doll. No. 50,330; Feb. 13; v. 235; p. 672.
Miller, John E., assignor to The Duncan & Miller Glass Company, Washington, Pa. Glass vessel. Nos. 50,396–400; Feb. 27; v. 235; pp. 1330–1.
Miller, John E., assignor to The Duncan & Miller Glass Company, Washington, Pa. Glass plate. No. 50,401; Feb. 27; v. 235; p. 1331.
Miller, John E., assignor to The Duncan & Miller Glass Company, Washington, Pa. Goblet. No. 50,402; Feb. 27; v. 235; p. 1331.
Mitchell Vance Company, The. (See Barrows and Strahan, assignors.)
Mohr, William H., Reading, Pa. Cemetery flower-vase. No. 50,279; Feb. 6; v. 235; p. 303.
Moore, William G., Miami, Fla. Two-wheeled autovehicle. No. 50,280; Feb. 6; v. 235; p. 303.
Morse, Amelia, New York, N. Y. Girl doll. No. 50,314; Feb. 13; v. 235; p. 669.
Morse, Amelia, New York, N. Y. Boy doll. No. 50,315; Feb. 13; v. 235; p. 669.
Morse, Amelia, New York, N. Y. Figure toy. No. 50,316–20; Feb. 13; v. 235; pp. 669–70.
Moxie Company, The. (See Archer, Frank M., assignor.)
Neubert, Friedrich M. A., Dresden, Germany. Automatic salesman for cigarettes. No. 50,355; Feb. 20; v. 235; p. 1026.
Norcross, Orlando W., Worcester, Mass. Shelter-shed. No. 50,281; Feb. 6; v. 235; p. 303.
Norden, Joseph. (See Norden, Mortimer, assignor.)
Norden, Mortimer, assignor to J. Norden, New York, N. Y. Electric sign. No. 50,356; Feb. 20; v. 235; p. 1026.
O'Brien, Harry B., Sag Harbor, assignor to Joseph Fahys & Company, New York, N. Y. Spoon, fork, and the like. No. 50,321; Feb. 13; v. 235; p. 670.
Odell, George W., South Bend, Ind. Tire-casing. No. 50,282; Feb. 6; v. 235; p. 303.
Oneida Community. (See Allen, Grosvenor N., assignor.)
Palm Brothers Company, The. (See Erlebach, Robert, assignor.)
Peet, Walter F., Philadelphia, Pa. Paper-clip. No. 50,283; Feb. 6; v. 235; p. 303.
Perkins, Edward L., *et al.* (See Fisk, Willard C., assignor.)
Plimpton, William W., Providence, R. I. Game-board. No. 50,403; Feb. 27; v. 235; p. 1332.
Provance, David F., New Castle, assignor to H. C. Fry Glass Company, Rochester, Pa. Glass article. Nos. 50,357–9; Feb. 20; v. 235; p. 1026.
Rahn, Jesse, Florence, Kans. Article-holder. No. 50,404; Feb. 27; v. 235; p. 1332.
Reliance Metal Spinning & Stamping Co. (See Shapiro, Solomon, assignor.)
Reynolds, Charles B., Sawtelle, Cal. Automobile-tire. No. 50,360; Feb. 20; v. 235; p. 1027.
Robbins, William A., Glen Ridge, N. J. Automobile-tire. No. 50,361; Feb. 20; v. 235; p. 1027.
Rowland, Arthur J., assignor to Lamson & Goodnow Manufacturing Company, Shelburne Falls, Mass. Fork. No. 50,284; Feb. 6; v. 235; p. 304.
Samstag, Henry F., New York, N. Y. Bathing-cap. Nos. 50,322–3; Feb. 13; v. 235; pp. 670–1.
Sándor, Andrew, New York, N. Y. Toy. No. 50,405; Feb. 27; v. 235; p. 1332.
Schramm, Jacob N., Buffalo, N. Y. Cord holder and cutter. No. 50,362; Feb. 20; v. 235; p. 1027.
Schupp, George L., Dennison, Ohio. Plate. No. 50,324; Feb. 13; v. 235; p. 671.
Schwarber, Henry, Weehawken, assignor to Inflexible Co., West New York, N. J. Embroidered lace. Nos. 50,325–6; Feb. 13; v. 235; p. 671.
Schwartzberg, Alter L., Shreveport, La. Cake of soap. No. 50,285; Feb. 6; v. 235; p. 304.
Segal, Samuel, assignor to Burglar Proof Lock and Hardware Corporation, New York, N. Y. Lock-casing. No. 50,286; Feb. 6; v. 235; p. 304.
Shapiro, Solomon, assignor to Reliance Metal Spinning & Stamping Co., Inc., New York, N. Y. Shower-plate for gas and electric fixtures. No. 50,287; Feb. 6; v. 235; p. 304.
Sheble, Horace, assignor to Domestic Talking Machine Corporation, Philadelphia, Pa. Phonograph-cabinet. Nos. 50,363–4; Feb. 20; v. 235; p. 1027.
Silver, Conover T., New York, N. Y. Automobile-radiator. No. 50,406; Feb. 27; v. 235; p. 1332.
Skall, Max A., New York, N. Y. Display-case with mirror. No. 50,288; Feb. 6; v. 235; p. 301.
Sorensen, Ludvig. (See Sprenger and Sorensen.)
Sprenger, Joseph J., and L. Sorensen, Indianapolis, Ind. Hammer-head. No. 50,407; Feb. 27; v. 235; p. 1332.
Stivers, James J., New York, N. Y. Bank. No. 50,327; Feb. 13; v. 235; p. 671.
Stohr, Samuel, assignor to International Silver Co., Meriden, Conn. Spoon, fork, or similar article. No. 50,408; Feb. 27; v. 235; p. 1333.
Strahan, George V. (See Barrows and Strahan.)
Sullivan, Charles L., assignor to Fostoria Glass Company, Moundsville, W. Va. Glass article. No. 50,365; Feb. 20; v. 235; p. 1028.
Swetland, Esther H., North Tonawanda, N. Y. Toy. No. 50,409; Feb. 27; v. 235; p. 1333.
Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Fuse-plug cap. No. 50,366; Feb. 20; v. 235; p. 1028.
Tiffany & Co. (See Barney, Arthur L., assignor.)
Tirpak, John, Detroit, Mich. Picture-frame. No. 50,410; Feb. 27; v. 235; p. 1333.
Toliver, Nannie S., Columbus, Tex. Toy rabbit. No. 50,367; Feb. 20; v. 235; p. 1028.
Union Caliper Company. (See Ellis, Emory E., assignor.)
United States Glass Company. (See Haley, Reuben, assignor.)
Universal Steel Package Co., The. (See Darley, John W., Jr., assignor.)
University of Chicago. (See Brown, Harold H., assignor.)
W. D. Smith Silver Company. (See Ittig, George P., assignor.)
Walrath, Merton, Little Falls, N. Y. Cabinet. No. 50,328; Feb. 13; v. 235; p. 671.
Watling, John B., Chicago, Ill. Scale-cabinet. No. 50,368; Feb. 20; v. 235; p. 1028.
White, Samuel T., Davenport, Iowa. Hanging vase. No. 50,329; Feb. 13; v. 235; p. 672.
Whiting Manufacturing Company. (See Ball, George E., assignor.)
Wiczian, Andrew, Chicago, Ill. Glass receptacle. No. 50,369; Feb. 20; v. 235; p. 1028.
Williams, Dick B., assignor to L. Frank & Company, New Orleans, La. Automobile-signal. No. 50,411; Feb. 27; v. 235; p. 1336.
Williams, Lacey Y., Toledo, Ohio. Toy cannon. No. 50,370; Feb. 20; v. 235; p. 1028.
Wilson, Annie M., Aldan, Pa. Poison-marker. No. 50,371; Feb. 20; v. 235; p. 1029.
Worthington, Josiah P., Steamboat Springs, Colo. Wrench. No. 50,372; Feb. 20; v. 235; p. 1029.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Bourjois & Co., Inc., New York, N. Y. Toilet powder and rouge or solid face-powder. No. 115,287; Feb. 6; v. 235; p. 317.
A. Bourjois & Co. Inc., New York, N. Y. Face-powder and rouge. Nos. 115,434–5; Feb. 13; v. 235; p. 691.
A. M. Castle & Co., Chicago, Ill. Structural angles, beams, bars, columns, pressed steel, &c. No. 115,299; Feb. 9; v. 235; p. 318.
A. S. Rosenthal Company, New York, N. Y. Scarfs for personal wear. No. 115,466; Feb. 13; v. 235; p. 692.
A. V. Victorius & Co., New York, N. Y. Hosiery. No. 115,703; Feb. 27; v. 235; p. 1353.
Acorn Silk Co. Inc., New York, N. Y. Silk and velvet piece goods. Nos. 115,267–8; Feb. 6; v. 235; p. 317.
Adams & Ford Company, The, Cleveland, Ohio. Leather boots and shoes. No. 115,569; Feb. 27; v. 235; p. 1349.
Ajax Rubber Company, Inc., Millbrook, N. Y. Automobile and bicycle tires of rubber and fabric. No. 115,570; Feb. 27; v. 235; p. 1349.
Allen, Simeon C., Rochester, N. Y. Non-alcoholic beverages sold as soft drinks and syrups used in the making thereof. No. 115,472; Feb. 20; v. 235; p. 1049.
Aluminox Co., The, Kansas City, Mo. Metal-polishes. No. 115,473; Feb. 20; v. 235; p. 1049.
American Manufacturing Company, Boston, Mass., and New York, N. Y. Rope, cord, lines, and twine of vegetable fiber. No. 115,269; Feb. 6; v. 235; p. 317.
American Sugar Company, Ltd., Honolulu, Hawaii. Beeswax. No. 115,429; Feb. 13; v. 235; p. 691.
American Sugar Refining Company, The, Jersey City, N. J., and New York, N. Y. Sugar. Nos. 115,270–1; Feb. 6; v. 235; p. 317.
American Sugar Refining Company, The, Jersey City, N. J., and New York, N. Y. Invert-sugar for use as a food. No. 115,571; Feb. 27; v. 235; p. 1349.
Amoskeag Manufacturing Company, Manchester, N. H. Cotton piece goods. No. 115,430; Feb. 13; v. 235; p. 691.
Ampoule Drug Company, Inc., New York, N. Y. Certain named chemicals, medicines, and pharmaceutical preparations. No. 115,272; Feb. 6; v. 235; p. 317.
Anderson Rolled Gear Company, The, Lakewood, Ohio. Gears. No. 115,572; Feb. 27; v. 235; p. 1349.
Angell, Harry C., Grand Rapids, Mich. Lumber and shingles. No. 115,273; Feb. 6; v. 235; p. 317.
Ariston Hat Mfg. Co., Peekskill, N. Y. Hats. No. 115,573; Feb. 27; v. 235; p. 1349.
Armand Company, The, Des Moines, Iowa. Face-powder, cold-cream, hair-wash, rouge, &c. No. 115,274; Feb. 6; v. 235; p. 317.
Armstrong Bros. Tool Co., Chicago, Ill. Certain named cutlery, machinery, and tools. No. 115,574; Feb. 27; v. 235; p. 1349.
Armstrong Cork Company, Pittsburgh, Pa. Cork composition for gaskets and washers. No. 115,474; Feb. 20; v. 235; p. 1049.
Arnold Co., D. H., The, New York, N. Y. Mercerized cotton for linings. No. 115,575; Feb. 27; v. 235; p. 1349.
Arvac Manufacturing Company, Anderson, Ind. Universal joints. No. 115,576; Feb. 27; v. 235; p. 1349.
Arvac Manufacturing Company, Anderson, Ind. Gray iron metal castings. No. 115,577; Feb. 27; v. 235; p. 1349.
Aseptic Products Company, Long Island City, N. Y. Certain named chemical and pharmaceutical preparations. No. 115,475; Feb. 20; v. 235; p. 1049.
Ashburn, Columbus P., Bristol, Va. Remedy for diphtheria and sore throat. No. 115,476; Feb. 20; v. 235; p. 1049.
Atlas Crucible Steel Company, Dunkirk, N. Y. Tool-steels. Nos. 115,275–6; Feb. 6; v. 235; p. 317.
August Buermann Manufacturing Company, Newark, N. J. Bits, spurs, stirrups, and saddlery hardware. No. 115,295; Feb. 6; v. 235; p. 318.
Auto Vacuum Freezer Company, Inc., New York, N. Y. Liquid-freezers. No. 115,277; Feb. 6; v. 235; p. 317.
B. D. G. Liniment Co., New Haven, Conn. Remedy (in liquid form) for certain named diseases. No. 115,478; Feb. 20; v. 235; p. 1049.
Bacchus Marsh Concentrated Milk Co. Ltd., The, Melbourne, Victoria, Australia. Milk food for infants and invalids. No. 115,365; Feb. 6; v. 235; p. 320.
Ballard, Thomas S., Grand Island, Nebr. Preparation for cleaning windows. No. 115,477; Feb. 20; v. 235; p. 1049.
Baltimore Pearl Hominy Company, Baltimore, Md. Certain named foods and ingredients. No. 115,278; Feb. 6; v. 235; p. 317.
Baltimore Roofing and Asbestos Mfg. Co., Wilmington, Del., and Asbestos, Md. Prepared asphalt roofing. No. 115,279; Feb. 6; v. 235; p. 317.
Barclay & Barclay, New York, N. Y. Soaps. No. 115,578; Feb. 27; v. 235; p. 1349.
Barlow Oil Co., Houston, Tex. Composition formed of solid material treated with a combustible chemical. No. 115,579; Feb. 27; v. 235; p. 1349.
Baron, Leon, New York, N. Y. Cleansing the hair of all nits, vermin, dandruff, germs, and dirt. No. 115,280; Feb. 6; v. 235; p. 317.
Baron, Leon, New York, N. Y. Inflammations, eruptions, and irritations of the skin. No. 115,580; Feb. 27; v. 235; p. 1349.
Bass, Shepard C., Fort Meyers, Fla. Citrus fruits. No. 115,281; Feb. 6; v. 235; p. 317.
Beacon Falls Rubber Shoe Company, The, Beacon Falls, Conn. Rubber boots and shoes. No. 115,431; Feb. 13; v. 235; p. 691.
Beauchamp, Roscoe F., Philadelphia, Pa. Salves to be applied externally for certain named skin diseases. No. 115,282; Feb. 6; v. 235; p. 317.
Beaver Board Companies, The, Buffalo, N. Y. Wall-board. No. 115,479; Feb 20; v. 235; p. 1049.
Benjamin-Sellar Mfg. Co., Chicago, Ill. Building and construction toys. No. 115,284; Feb. 6; v. 235; p. 317.
Benziger Brothers, New York, N. Y. Books and circulars. No. 115,432; Feb. 13; v. 235; p. 691.
Berger Manufacturing Company, The, Canton, Ohio. Expanded metal. No. 115,480; Feb. 20; v. 235; p. 1049.
Bess, William, Memphis, Tenn. Hair-oil. No. 115,433; Feb. 13; v. 235; p. 691.
Best Electric Company, The, Pittsburgh, Pa. Attachment-plugs, lamp-sockets, and outlet-box receptacles. No. 115,283; Feb. 6; v. 235; p. 317.
Beyer Bros. Commission Co., New York, N. Y. Butter, eggs, and cheese. No. 115,285; Feb. 6; v. 235; p. 317.
Big Four Milling Company, The, Cleveland, Ohio. Horse, mule, cattle, poultry, hog, and sheep food. No. 115,581; Feb. 27; v. 235; p. 1349.
Blackmer Rotary Pump Co., Petoskey, Mich. Rotary pumps. No. 115,583; Feb. 27; v. 235; p. 1349.
Blake, William E., Toronto, Ontario, Canada. Writing or letter paper. No. 115,286; Feb. 6; v. 235; p. 317.
Block, Alexander E., St. Louis, Mo. Shoe-stretchers. No. 115,481; Feb. 20; v. 235; p. 1049.
Bowers Bros., Inc., Richmond, Va. Coffee. No. 115,288; Feb. 6; v. 235; p. 317.
Boyertown Burial Casket Co., Boyertown and Philadelphia, Pa. Caskets. No. 115,289; Feb. 6; v. 235; p. 317.
Bridgeport Brass Company, Bridgeport, Conn. Automobile-tire pumps. No. 115,585; Feb. 27; v. 235; p. 1349.
Briggs, Edgar W., San Francisco, Cal. Weekly publication. No. 115,586; Feb. 27; v. 235; p. 1349.
Brokaw Brothers, New York, N. Y. Shoes made of certain named materials. No. 115,290; Feb. 6; v. 235; p. 317.
Brookman Manufacturing Company, Chicago, Ill. Powdered lye. No. 115,436; Feb. 13; v. 235; p. 691.
Brown, Julius E., Peekskill, N. Y. Certain named toy. No. 115,291; Feb. 6; v. 235; p. 317.
Brown, Julius E., Peekskill, N. Y. Game played with a ball and cue, as in billiards. No. 115,292; Feb. 6; v. 235; p. 317.
Brown, Julius E., Peekskill, N. Y. Toy consisting of a bouncing horse on wheels. No. 115,293; Feb. 6; v. 235; p. 317.
Brown, Wm. W., Worcester, Mass. Jackets and vests. No. 115,437; Feb. 13; v. 235; p. 691.
Brownstein-Louis Company, Los Angeles, Cal. Shirts, pajamas, nightgowns, and underwear. No. 115,294; Feb. 6; v. 235; p. 318.
Brownstein-Louis Company, Los Angeles, Cal. Shirts. No. 115,587; Feb. 27; v. 235; p. 1349.
Bunker Hill Breweries Incorporated. (See Van Nostrand, Alonzo G., assignor.)
Bunte Brothers, Chicago, Ill. Candy. No. 115,296; Feb. 6; v. 235; p. 318.
Burton & Davis Co., New York, N. Y. Canned vegetables. No. 115,297; Feb. 6; v. 235; p. 318.
C. L. Cotton Perfume & Extract Co., The, Earlville, N. Y. Perfumes, toilet water, smelling-salts, &c. No. 115,309; Feb. 6; v. 235; p. 318.
Cadillac Auto Truck Company, Cadillac, Mich. Auto or motor trucks. No. 115,298; Feb. 6; v. 235; p. 318.
Cameron, Donald J., Syracuse, N. Y. Boots and shoes. Nos. 115,484–5; Feb. 20; v. 235; p. 1049.
Capital Paper Company, Indianapolis, Ind. Paper bags. No. 115,486; Feb. 20; v. 235; p. 1049.
Carbo-Hydrogen Company of America, Pittsburgh, Pa. Certain instruments and parts thereof used for cutting and welding purposes. No. 115,487; Feb. 20; v. 235; p. 1049.

Caron-Morin, Cordelia L., Manchester, N. H. Nerve medicine. No. 115,588; Feb. 27; v. 235; p. 1349.
Carson, Arnold, Philadelphia, Pa. Salves for healing wounds and skin diseases. No. 115,590; Feb. 27; v. 235; p. 1349.
Central-Topeka Paper Co., The, Topeka, Kans. Wrapping, writing, printing, and toilet paper. No. 115,489; Feb. 20; v. 235; p. 1049.
Charles McAdam Co., Chicago, Ill. Bleaching and cleaning compounds. No. 115,525; Feb. 20; v. 235; p. 1050.
Chejlavá, Magdalena, Chicago, Ill. Salve for cuts, bruises, lacerations, and skin and muscular injuries. No. 115,490; Feb. 20; v. 235; p. 1049.
Chemical Lime & Sand Company, Huntington, W. Va., and Lawton, Ky. Ground lime. No. 115,491; Feb. 20; v. 235; p. 1049.
Chope-Stevens Paper Co., Detroit, Mich. Bond-paper. No. 115,300; Feb. 6; v. 235; p. 318.
Chovánecz, Paul, Johnstown, Pa. Remedy for gonorrhea. No. 115,301; Feb. 6; v. 235; p. 318.
Christian Peper Tobacco Co., St. Louis, Mo. Smoking and chewing tobacco. No. 115,591; Feb. 27; v. 235; p. 1349.
Cincinnati Rubber Manufacturing Company, Norwood, Ohio. Rubber and duck beltings and hose and rubber and asbestos machinery packings. Nos. 115,302–3; Feb. 6; v. 235; p. 318.
Clark, Adelaide, New York, N. Y. Puzzles. No. 115,304; Feb. 6; v. 235; p. 318.
Cleveland Dental Manufacturing Company, The, Cleveland, Ohio. Certain named dental tools and supplies. No. 115,305; Feb. 6; v. 235; p. 318.
Coffetone Manufacturing Company, Minneapolis, Minn. Substitute for coffee. No. 115,306; Feb. 6; v. 235; p. 318.
Collins, George, Pittsburgh, Pa. Medicinal salve for treatment of certain named affections and for skin eruptions. No. 115,307; Feb. 6; v. 235; p. 318.
Compressed Metal Company, New York, N. Y. Attachments for phonographs and like articles. No. 115,492; Feb. 20; v. 235; p. 1049.
Consolidated Bottling Co., Newark, N. J. Stock-ale and extra porter. No. 115,592; Feb. 27; v. 235; p. 1349.
Continental Varnish Company Inc., New York, N. Y. Varnish, enamel, furniture-polish, and varnish-remover. No. 115,308; Feb. 6; v. 235; p. 318.
Coriell, Louis D., Baltimore, Md. Shaving-brushes. No. 115,568; Feb. 20; v. 235; p. 1052.
Cowan, William U., Chicago, Ill. Vulcanizable fabric tire-repair material. No. 115,310; Feb. 6; v. 235; p. 318.
Crane & Company, W. B., Portland, Oreg. Non-alcoholic carbonated tonic beverage to be sold as a soft drink. No. 115,593; Feb. 27; v. 235; p. 1349.
Cream of Rice Co., Chicago, Ill. Breakfast cereal. No. 115,311; Feb. 6; v. 235; p. 318.
Crew Levick Company, Philadelphia, Pa. Polishing-cloths. No. 115,357; Feb. 6; v. 235; p. 319.
Crown Cork and Seal Co. of Baltimore City, The, Baltimore, Md. Bottle-openers. No. 115,312; Feb. 6; v. 235; p. 318.
Crown Suspender Co., New York, N. Y. Children's garment and hose supporters. No. 115,493; Feb. 20; v. 235; p. 1049.
Cudahy Packing Company, The, Chicago, Ill. Canned pork and beans. No. 115,313; Feb. 6; v. 235; p. 318.
Davis Carpenter & Co., Inc., New York, N. Y. Vault-light panels or slabs. No. 115,589; Feb. 27; v. 235; p. 1349.
Davis, Warren J., Camden, N. J. Remedy for rheumatism and kidney diseases. No. 115,314; Feb. 6; v. 235; p. 318.
De Luxe Mfg. Co., Chicago, Ill. Writing and drawing inks in both liquid and soluble tablet form. No. 115,595; Feb. 27; v. 235; p. 1349.
Decatur Extract Co., Decatur, Ill. Certain named foods and ingredients of foods. No. 115,315; Feb. 6; v. 235; p. 318.
Defiance Check Writer Corporation, Rochester, N. Y. Printing-machines, and more particularly checkwriters and check-protectors. No. 115,594; Feb. 27; v. 235; p. 1349.
Del Castillo & Company, Rafael, New York, N. Y. Cotton piece goods. No. 115,488; Feb. 20; v. 235; p. 1049.
Delgado Mills, Wilmington, N. C. Ginghams. No. 115,438; Feb. 13; v. 235; p. 691.
Deltox Grass Rug Company, Oshkosh, Wis. Certain named furniture. No. 115,494; Feb. 20; v. 235; p. 1049.
Denton, Harrison B., Beardstown, Ill. Polishing-oils. No. 115,596; Feb. 27; v. 235; p. 1349.
Detmer Woolen Co., New York, N. Y. Woolen goods in the piece. No. 115,439; Feb. 13; v. 235; p. 691.
Diamond Individual Towel System Co., Spokane, Wash. Towel-racks, follower-boards, and lugs. No. 115,316; Feb. 6; v. 235; p. 318.
Diamond & Sons, John, Philadelphia, Pa. Stove-polish. No. 115,495; Feb. 20; v. 235; p. 1049.
Dorros Bros., New York, N. Y. Artificial flowers, bridal wreaths, bouquets, and flower trimmings. No. 115,440; Feb. 13; v. 235; p. 691.
Dr. J. H. McLean Medicine Co., The, St. Louis, Mo. Remedies for certain named complaints and disorders. No. 115,456; Feb. 13; v. 235; p. 691.
Driver Harris Wire Company, Harrison, N. J. Wire and metallic strips highly resistant to heat and of low electrical conductivity. No. 115,496; Feb. 20; v. 235; p. 1049.
Duofold Health Underwear Company, Mohawk, N. Y. Knitted underwear. No. 115,317; Feb. 6; v. 235; p. 318.
Duplicator Manufacturing Company, Chicago, Ill. Duplicating or multicopying machines. No. 115,497; Feb. 20; v. 235; p. 1049.
Durkee-Atwood Co., Minneapolis, Minn. Certain named paints and painters' supplies. No. 115,597; Feb. 27; v. 235; p. 1350.
E. W. Hayden Co., The, Toledo, Ohio. Polish for furniture, automobiles, woodwork of all kinds, and all varnished surfaces. No. 115,510; Feb. 20; v. 235; p. 1050.
Eckman Manufacturing Company, Camden, N. J., and Philadelphia, Pa. Tablets for coughs, colds, asthmatic and bronchial troubles. No. 115,598; Feb. 27; v. 235; p. 1350.
Edson Moore & Company, Detroit, Mich. Work, negligée, and under shirts, overalls, jumpers, rompers. No. 115,441; Feb. 13; v. 235; p. 691.
Edward Katzinger Company, The, Chicago, Ill. Certain named heating, lighting, and ventilating apparatus, not including electrical apparatus. No. 115,516; Feb. 20; v. 235; p. 1050.
Elgin Motor Car Corporation, Wilmington, Del., and Chicago, Ill. Automobiles. No. 115,318; Feb. 6; v. 235; p. 318.
Elstroth, Frank W. S., Brooklyn, N. Y. Salve used as an emollient in treating certain named affections. No. 115,599; Feb. 27; v. 235; p. 1350.
Emerson-Brantingham Company, Rockford, Ill. Wagons, buggies, sleds, auto-trailers, &c. No. 115,600; Feb. 27; v. 235; p. 1350.
Everett Mills, Lawrence and Boston, Mass. Cotton shirtings in the piece. No. 115,319; Feb. 6; v. 235; p. 318.
Excelsior Manufacturing Co. Ltd., Pittsburgh, Pa. Furniture cleaner and polish. No. 115,320; Feb. 6; v. 235; p. 318.
Extirpo Specialty Co., The, Barre, Vt. Hair-tonic. No. 115,442; Feb. 13; v. 235; p. 691.
F. L. Smidth & Co., New York, N. Y. Machines for grinding and pulverizing limestones, oyster-shells, and clay for the manufacture of Portland cement. No. 115,680; Feb. 27; v. 235; p. 1352.
Faerber, William, Chicago, Ill. Shampooing apparatus. No. 115,321; Feb. 6; v. 235; p. 318.
Faultless Rubber Co., The, Ashland, Ohio. Household rubber gloves. No. 115,322; Feb. 6; v. 235; p. 318.
Faultless Rubber Co., The, Ashland, Ohio. Certain named medical and surgical supplies. No. 115,601; Feb. 27; v. 235; p. 1350.
Feil Manufacturing Company, The, Cleveland, Ohio. Polishing materials for automobiles, furniture, pianos, &c. No. 115,498; Feb. 20; v. 235; p. 1049.
Fenn, Libbie R., Los Angeles, Cal. Candies, chocolates, bonbons, &c. No. 115,323; Feb. 6; v. 235; p. 318.
Filbert, John H., Baltimore, Md. Oleomargarin. No. 115,602; Feb. 27; v. 235; p. 1350.
Filene, Edward A., Boston, Mass. Cigars. No. 115,603; Feb. 27; v. 235; p. 1350.
Fletcher, Terry Company, The, Bristol, Conn. Glass, tube, oval, and circle cutters. No. 115,324; Feb. 6; v. 235; p. 318.
Floor-Shine Manufacturing Company, St. Louis, Mo. Varnish. No. 115,325; Feb. 6; v. 235; p. 319.
Ford Motor Company, Highland Park, Mich. Certain named electrical apparatus, machines, and supplies, magnetos, generators, spark-coils, &c. No. 115,500; Feb. 20; v. 235; p. 1050.
Fort Wayne Drug Company, Fort Wayne, Ind. Colored varnish-finish. No. 115,604; Feb. 27; v. 235; p. 1350.
Fries & Fries, Cincinnati, Ohio. Benzaldehyde. No. 115,501; Feb. 20; v. 235; p. 1050.
Fruitone Company, Inc., New York, N. Y. Compound mixture of fruit forming a paste having laxative properties. No. 115,448; Feb. 13; v. 235; p. 691.
Fryer, Derrick F., Santa Rosa, Cal. Certain named medicines and pharmaceutical preparations. No. 115,502; Feb. 20; v. 235; p. 1050.
Fulton Shoe Polish Co. Inc., assignor to W. R. Grace & Company, New York, N. Y. Shoe-polishes. No. 115,503; Feb. 20; v. 235; p. 1050.
Gardner, Joseph A., Memphis, Tenn. Tablets for use by dentists in the treatment of teeth. No. 115,444; Feb. 13; v. 235; p. 691.
Gem Metal Polish Co. (See Korbach, William, assignor.)
General Electric Company, Schenectady, N. Y. Certain named glassware. No. 115,504; Feb. 20; v. 235; p. 1050.
General Fireproofing Company, The, Youngstown, Ohio. Monthly house-organ periodicals. No. 115,505; Feb. 20; v. 235; p. 1050.
General Tire & Rubber Company, The, Akron, Ohio. Rubber tires or tire-casings with suitable strengthening material and inner tubes for pneumatic tires. No. 115,605; Feb. 27; v. 235; p. 1350.
George Borgfeldt & Co., New York, N. Y. Certain named pharmaceutical preparations for toilet purposes. No. 115,482; Feb. 20; v. 235; p. 1049.
Gluckauf Company Inc., The, New York, N. Y. Suspenders. Nos. 115,445–6; Feb. 13; v. 235; p. 691.

Gold Seal Battery & Electric Co. Inc., New York, N. Y. Dry battery. No. 115,326; Feb. 6; v. 235; p. 319.
Goodyear's Metallic Rubber Shoe Co., The, Naugatuck, Conn. Shoe-leather substitute. No. 115,507; Feb. 20; v. 235; p. 1050.
Gordon's Dry Gin Co., The, Ltd., New York, N. Y. Scotch whisky. No. 115,606; Feb. 27; v. 235; p. 1350.
Grasso, Giuseppe, New York, N. Y. Sparkling wines. No. 115,506; Feb. 20; v. 235; p. 1050.
Green, Charles, New York, N. Y. Hair-tonic. No. 115,447; Feb. 13; v. 235; p. 691.
Griffith-Durney Company, San Francisco, Cal. Canned fruits. No. 115,327; Feb. 6; v. 235; p. 319.
Grinnell Washing Machine Company, Grinnell, Iowa. Laundry-washing machine. No. 115,328; Feb. 6; v. 235; p. 319.
Grinnell Washing Machine Company, Grinnell, Iowa. Laundry-washing machine. No. 115,508; Feb. 20; v. 235; p. 1050.
Gulfport Grocery Co., Gulfport, Miss. Cotton-seed meal. No. 115,329; Feb. 6; v. 235; p. 319.
Gunns Limited, West Toronto, Ontario, Canada. Certain named foods. No. 115,607; Feb. 27; v. 235; p. 1350.
H. & D. Company, The, Goodland, Ind. Shock-absorbers. No. 115,330; Feb. 6; v. 235; p. 319.
H. & D. Company, The, Goodland, Ind. Shock-absorbers. No. 115,509; Feb. 20; v. 235; p. 1050.
H. Kuhn & Sons (Inc.), assignor to Ferdinand Kuhn & Co. Inc., New York, N. Y. Men's, youths', boys', and children's outer suits and overcoats. No. 115,451; Feb. 13; v. 235; p. 691.
H. C. Hemingway & Co., Syracuse, N. Y. Canned fruits and vegetables. No. 115,612; Feb. 27; v. 235; p. 1350.
H. C. White Co., North Benington, Vt. Children's vehicles. No. 115,422; Feb. 6; v. 235; p. 321.
H. D. Lee Mercantile Co., The, Salina, Kans. Canned fruits and vegetables. No. 115,854; Feb. 6; v. 235; p. 319.
Hall Hartwell & Co., Troy, N. Y. Collars and shirts. No. 115,609; Feb. 27; v. 235; p. 1350.
Hambleton, Solomon R., Memphis, Tenn. Antiseptic lotion for use after shaving and for chapped skin, burns, and headache. No. 115,331; Feb. 6; v. 235; p. 319.
Hampton Guano Company, Norfolk, Va. Fertilizers. No. 115,332; Feb. 6; v. 235; p. 319.
Harrison & Littrell, Woodward, Okla. Certain named clothing for men and boys. No. 115,333; Feb. 6; v. 235; p. 319.
Hart Sales Company, Inc., New York, N. Y. Cleaning-paste for removing dirt and grease and stains from canvas and leather shoes. No. 115,610; Feb. 27; v. 235; p. 1350.
Hawthorne Manufacturing Company, Incorporated, The, Bridgeport, Conn. Electric lamps. No. 115,334; Feb. 6; v. 235; p. 319.
Hawthorne Manufacturing Company, Incorporated, The, Bridgeport, Conn. Certain named electrical apparatus and supplies. No. 115,611; Feb. 27; v. 235; p. 1350.
Haydenville Company, The, Haydenville, Mass. Bibs and cocks or faucets. No. 115,448; Feb. 13; v. 235; p. 691.
Heath, Albert, Escanaba, Mich. Coffin-box. No. 115,335; Feb. 6; v. 235; p. 319.
Henry Sonneborn & Co. Inc., Baltimore, Md. Certain named men's, boys', and children's clothing. No. 115,547; Feb. 20; v. 235; p. 1051.
Herman, Max, New York, N. Y. Pompons. No. 115,449; Feb. 13; v. 235; p. 691.
Hermann-Sanford Saddlery Company, Springfield, Mo. Horse-collars. Nos. 115,336–7; Feb. 6; v. 235; p. 319.
Heyser, William, Baltimore, Md. Canned raw oysters. No. 115,338; Feb. 6; v. 235; p. 319.
Heyser, William, Baltimore, Md. Certain named raw fruits and vegetables. No. 115,613; Feb. 27; v. 235; p. 1350.
Hezel Milling Company, East St. Louis, Ill. Self-rising wheat-flour. No. 115,614; Feb. 27; v. 235; p. 1350.
Hikell Mfg. Co., Omaha, Nebr. Certain named pharmaceutical preparations for toilet purposes. No. 115,615; Feb. 27; v. 235; p. 1350.
Hill Pump Valve Company, The, Chicago, Ill. Pumps and wrenches. No. 115,511; Feb. 20; v. 235; p. 1050.
Hinchuk & Co., Alexander, New York, N. Y. Men's, women's, and children's leather boots and shoes. No. 115,616; Feb. 27; v. 235; p. 1350.
Hiscox & Co., Patchogue, N. Y. Preparation for polishing auto-bodies, pianos, furniture, hardwood floors, and all varnished surfaces. No. 115,339; Feb. 6; v. 235; p. 319.
Hobo Manufacturing Co., Voth, Tex. Fire-kindlers. No. 115,513; Feb. 20; v. 235; p. 1050.
Holt Manufacturing Company, The, Stockton, Cal. Monthly periodicals. No. 115,514; Feb. 20; v. 235; p. 1050.
Holzhauer, Charles W., Newark, N. J. Remedy for la grippe and colds, neuralgia, headache, and rheumatic pains. No. 115,340; Feb. 6; v. 235; p. 319.
Hudson Mfg. Co., Chicago, Ill. Compound of vanilla and tonka. No. 115,341; Feb. 6; v. 235; p. 319.
India Rubber Company, New Brunswick, N. J., and New York, N. Y. Battery-jars. No. 115,617; Feb. 27; v. 235; p. 1350.
International Color & Chemical Co., Inc., Detroit, Mich. Scarlet and basic chromes and white lead in oil. No. 115,618; Feb. 27; v. 235; p. 1350.
Iten Biscuit Co., Omaha, Nebr. Cakes and cookies. Nos. 115,342–3; Feb. 6; v. 235; p. 319.
J. & J. Sales Company, St. Louis, Mo. Clocks and watches. No. 115,515; Feb. 20; v. 235; p. 1050.
J. B. Williams Company, The, Glastonbury, Conn. Face-lotions. No. 115,470; Feb. 13; v. 235; p. 692.
Jaffe, Jacob, Far Rockaway, N. Y. Chemical coal-saving compound. No. 115,344; Feb. 6; v. 235; p. 319.
James Manoil Company, Inc., New York, N. Y. Phonographs. No. 115,528; Feb. 20; v. 235; p. 1050.
Jensen Creamery Machinery Company, New York, N. Y. Heaters and can-driers, being essentially parts of dairy machines or equipments. No. 115,619; Feb. 27; v. 235; p. 1350.
John Hoberg Co., The, Green Bay, Wis. Toilet-paper. No. 115,512; Feb. 20; v. 235; p. 1050.
John Thompson & Sons, L'd., Belfast, Ireland. Cereal of oats, corn, or wheat and dried and desiccated vegetables. No. 115,414; Feb. 6; v. 235; p. 321.
John Wanamaker, New York, New York, N. Y. Certain named knitted, netted, and textile fabrics. No. 115,705; Feb. 27; v. 235; p. 1353.
Johns-Pratt Company, The, Hartford, Conn. Inclosed fuses, inclosed-fuse cut-outs and clips, contacts, and blocks. No. 115,620; Feb. 27; v. 235; p. 1350.
Johnson & Murray, Incorporated, Utica, N. Y. Teas and spices. No. 115,345; Feb. 6; v. 235; p. 319.
Jos. Loudenslager Estate, Tiffin, Ohio. Wheat-flour. No. 115,363; Feb. 6; v. 235; p. 320.
Joseph Feis Company, Chicago, Ill. Shirts and men's athletic underwear of textile material. No. 115,499; Feb. 20; v. 235; p. 1050.
Kaplan, Martin, New York, N. Y. Shampoos and corn remedies. No. 115,346; Feb. 6; v. 235; p. 319.
Kaufmann Bros. & Bondy, New York, N. Y. Pipes, cigar and cigarette holders. No. 115,347; Feb. 6; v. 235; p. 319.
Kaut-Reith Shoe Company, The, Carthage, Mo. Boots and shoes of kid, leather, and canvas. No. 115,621; Feb. 27; v. 235; p. 1350.
Kellogg Toasted Corn Flake Co., Battle Creek, Mich. Candies and confections. No. 115,348; Feb. 6; v. 235; p. 319.
Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Drug specifically described as soda mints. No. 115,622; Feb. 27; v. 235; p. 1350.
Kemoshyne Manufacturing Company, Inc., Rochester, N. Y. Piano and furniture and automobile-body polishes. No. 115,517; Feb. 20; v. 235; p. 1050.
Kemper, Ethel V., Chicago, Ill. Newspaper-section. No. 115,349; Feb. 6; v. 235; p. 319.
Kentucky Wagon Manufacturing Co., Louisville, Ky. Lime and fertilizer sowers, manure-spreaders. No. 115,623; Feb. 27; v. 235; p. 1350.
Keystone Varnish Company, Brooklyn, N. Y. Enamel paints. Nos. 115,625–6; Feb. 27; v. 235; p. 1350.
Keystone Watch Case Company, The, Philadelphia, Pa. Watches, watchcases, watch-movements, and parts thereof. Nos. 115,518–20; Feb. 20; v. 235; p. 1050.
Kibbe Bros. Company, Springfield, Mass. Candy, particularly chocolates. No. 115,350; Feb. 6; v. 235; p. 319.
Kibbe Bros. Company, Springfield, Mass. Candy, particularly caramel candy. Nos. 115,627–32; Feb. 27; v. 235; pp. 1350–1.
Kil-Grece Company, St. Paul, Minn. Paste for cleansing the hands, fabrics, pots and pans, and for the laundry and bathing. No. 115,521; Feb. 20; v. 235; p. 1050.
Kingsbery Manufacturing Co., Fort Worth, Tex. Overalls, jumpers, trousers, and boys' overalls. Nos. 115,633–4; Feb. 27; v. 235; p. 1351.
Kingsport Extract Corporation, Kingsport, Tenn. Extracts derived from chestnut woods. No. 115,635; Feb. 27; v. 235; p. 1351.
Kirtley, George G., Van Horn, Tex. Crushed granitized stone used as an aggregate and as a finish in concrete and cement construction. No. 115,522; Feb. 20; v. 235; p. 1050.
Knoll, William A., Berwick, N. D. Stomach, liver, and bowel remedy. No. 115,351; Feb. 6; v. 235; p. 319.
Korbach, William, Hoboken, N. J., assignor to Gem Metal Polish Co. Metal-polish. No. 115,636; Feb. 27; v. 235; p. 1351.
L. F. Robertson & Sons, New York, N. Y. Calf, elk, and side upper-leather. No. 115,666; Feb. 27; v. 235; p. 1352.
Landgren, Ellis, Grand Rapids, Mich. Automobiles. No. 115,352; Feb. 6; v. 235; p. 319.
Lange & Janke Mfg. Co., Milwaukee, Wis. Leather shoes. No. 115,452; Feb. 13; v. 235; p. 691.
Lee Tire & Rubber Co., Whitemarsh township, Montgomery county, Pa. Inner tubes. No. 115,355; Feb. 6; v. 235; p. 319.
Lemohn, Bernhard, New York, N. Y. Powder for dandruff. No. 115,356; Feb. 6; v. 235; p. 319.
Lemon, Arthur H., Chicago, Ill. Babbitt metal. No. 115,637; Feb. 27; v. 235; p. 1351.
Lesher, Whitman & Co., Inc., New York, N. Y. Piece goods with cotton warp and filling of wool, mohair, or alpaca. No. 115,638; Feb. 27; v. 235; p. 1351.
Lexington Brewing Company, Lexington, Ky. Non-alcoholic beverage, a soft drink. No. 115,639; Feb. 27; v. 235; p. 1351.
Libby, Arthur A., Boston, Mass. Tooth-cleaning preparations. No. 115,453; Feb. 13; v. 235; p. 691.
Lily of France Corset Co., New York, N. Y. Corsets. No. 115,858; Feb. 6; v. 235; p. 319.

Lincoln, Janie, Toledo, Ohio. Complexion-powder. No. 115,359; Feb. 6; v. 235; p. 320.
Lingo, William B., Atlanta, Ga. Remedy for hereditary and acquired syphilis and all conditions arising from same. No. 115,454; Feb. 13; v. 235; p. 691.
Lippincott, George A., Philadelphia, Pa. Food and tonic for plants, flowers, &c. No. 115,360; Feb. 6; v. 235; p. 320.
Long, Howard E., Cleveland, Ohio. Internal treatment for any inflamed condition of throat or mouth. No. 115,455; Feb. 13; v. 235; p. 691.
Loose-Wiles Biscuit Company, New York, N. Y., and Kansas City, Mo. Cookies. No. 115,361; Feb. 6; v. 235; p. 320.
Loose-Wiles Biscuit Company, Chicago, Ill. Cakes. No. 115,640; Feb. 27; v. 235; p. 1351.
Loose-Wiles Biscuit Company, New York, N. Y., and Kansas City, Mo. Cookies. No. 115,641; Feb. 27; v. 235; p. 1351.
Lorimore, Alec, New York, N. Y. Motion-picture films. No. 115,362; Feb. 6; v. 235; p. 320.
Lowe Brothers Company, The, Dayton, Ohio. Ready-mixed paints. No. 115,642; Feb. 27; v. 235; p. 1351.
Lund-Mauldin Company, St. Louis, Mo. Leather boots and shoes. No. 115,523; Feb. 20; v. 235; p. 1050.
Luyties Brothers, New York, N. Y. Cordials. No. 115,643; Feb. 27; v. 235; p. 1351.
Lyon & Healy, Chicago, Ill. Cornets, trombones, altos, tenors, melophones, &c. No. 115,524; Feb. 20; v. 235; p. 1050.
M. O'Connor and Company, Indianapolis, Ind. Canned fruits and vegetables, salmon, hominy, pork and beans, catsup. No. 115,377; Feb. 6; v. 235; p. 320.
M. A. Gunst & Co., Incorporated, Portland, Me., and New York, N. Y. Cigars. No. 115,608; Feb. 27; v. 235; p. 1350.
Madden Company, The, Chicago, Ill. Metal derails. No. 115,644; Feb. 27; v. 235; p. 1351.
Manhattan Electrical Supply Company, Jersey City, N. J., and New York, N. Y. Certain receptacles having electric attachments. No. 115,527; Feb. 20; v. 235; p. 1050.
Manhattan Petticoat Co. Inc., New York, N. Y. Petticoats. No. 115,645; Feb. 27; v. 235; p. 1351.
Marshall, Chauncey, Jr., Brooklyn, N. Y. Self-closing tobacco-pouches. No. 115,366; Feb. 6; v. 235; p. 320.
Mattson Rubber Company, Lodi, N. J. Rubber pedal-covers. No. 115,529; Feb. 20; v. 235; p. 1050.
McDowell, Pyle & Co., Inc., Baltimore, Md. Candy cough-drops. No. 115,526; Feb. 20; v. 235; p. 1050.
McKnight-Keaton Grocery Co., Cairo, Ill. Canned fruits, vegetables, salmon, hominy, and pork and beans. No. 115,364; Feb. 6; v. 235; p. 320.
Meinecke & Company, New York, N. Y. Bed and douche pans. No. 115,646; Feb. 27; v. 235; p. 1351.
Melrose Milling Company, Evansville, Ind. Self-rising wheat-flour. No. 115,647; Feb. 27; v. 235; p. 1351.
Merrill, Jesse S., Washington, D. C. Water and soft drinks. No. 115,648; Feb. 27; v. 235; p. 1351.
Meyer & Degerdon, New York, N. Y. Apples, coffee, oleomargarin, and jelly. No. 115,367; Feb. 6; v. 235; p. 320.
Miller-Elmer Manufacturing Co., Ltd., New Orleans, La. Candy. No. 115,368; Feb. 6; v. 235; p. 320.
Milton Bradley Co., Springfield, Mass. Games. No. 115,483; Feb. 20; v. 235; p. 1049.
Minick, William A., Glasgow, Ky. Remedy for certain named ailments and all skin diseases. No. 115,467; Feb. 13; v. 235; p. 692.
Mint Products Company, Incorporated, New York, N. Y. Chewing-gum, candy, sweetmeats, and confections. No. 115,650; Feb. 27; v. 235; p. 1351.
Molassine Company, Ltd., The, Greenwich and London, England. Fertilizer. No. 115,651; Feb. 27; v. 235; p. 1351.
Moneyback Corporation, The, New York, N. Y. Trading-stamps. No. 115,652; Feb. 27; v. 235; p. 1351.
Molo Medicine Co., Chattanooga, Tenn. Chill-tonic. No. 115,458; Feb. 13; v. 235; p. 692.
Morris, Goldschmidt and Company Incorporated, Chicago, Ill. Men's suits, overcoats, jackets, mackinaws, and ulsters. No. 115,653; Feb. 27; v. 235; p. 1351.
Morris & Morris, Baltimore, Md. Soft drink. No. 115,369; Feb. 6; v. 235; p. 320.
Motor World Publishing Co., The, New York, N. Y. Weekly publications. No. 115,370; Feb. 6; v. 235; p. 320.
Mueller, Curt B., Cleveland, Ohio. Tennis-rackets. No. 115,371; Feb. 6; v. 235; p. 320.
Mutual Coffee Co., Montgomery, Ala. Coffee and tea. No. 115,372; Feb. 6; v. 235; p. 320.
National Blank Book Co., Holyoke, Mass. Blank books and writing-paper. No. 115,530; Feb. 20; v. 235; p. 1051.
National Garment Company, The, Massillon, Ohio. Petticoats. No. 115,654; Feb. 27; v. 235; p. 1351.
National Safety Appliance Company, The, San Francisco, Cal. Certain named cutlery, machinery, and tools, and parts thereof. No. 115,655; Feb. 27; v. 235; p. 1351.
National Tire & Rubber Company, The, East Palestine, Ohio. Automobile tire casings and tire tubes composed of rubber. No. 115,531; Feb. 20; v. 235; p. 1051.
Neal, John N., Coldwater, Mich. Puncture-proof solution. No. 115,532; Feb. 20; v. 235; p. 1051.
New Orleans Coffee Co. Ltd., New Orleans, La. Coffee. No. 115,657; Feb. 27; v. 235; p. 1351.
New York Mackintosh Clothing Company, New York, N. Y. Waterproof clothing. No. 115,469; Feb. 13; v. 235; p. 692.
Newman, Solomon, New York, N. Y. Trousers and raincoats. No. 115,373; Feb. 6; v. 235; p. 320.
Nikolow, George, New York, N. Y. Remedy for rheumatism. No. 115,460; Feb. 13; v. 235; p. 692.
Noe & Sons, Wm. R., New York, N. Y. Watchmen's whistles. No. 115,533; Feb. 20; v. 235; p. 1051.
Norfolk Woolen Co., Franklin, Mass. Harness and saddle pads. No. 115,374; Feb. 6; v. 235; p. 320.
Northern Insulating Company, St. Paul, Minn. Felted-vegetable-fiber heat-insulating material. No. 115,375; Feb. 6; v. 235; p. 320.
Northern Paper Mills, Green Bay, Wis. Certain named paper and stationery. No. 115,376; Feb. 6; v. 235; p. 320.
O'Riely, Cornelius J., Los Angeles, Cal. Certain named games, toys, and sporting goods. No. 115,534; Feb. 20; v. 235; p. 1051.
Old-Wil Publishing Co., Milwaukee, Wis. Language-teaching publications, and particularly for such publications in card form. No. 115,378; Feb. 6; v. 235; p. 320.
Oriental Candy Company, Chicago, Ill. Candy-corn and marshmallow-biscuit. No. 115,461; Feb. 13; v. 235; p. 692.
Orrs Zinc White Limited, London and Widnes, England. Pigments for use in the rubber and lineoleum industries. No. 115,379; Feb. 6; v. 235; p. 320.
Oxford-Print, Boston, Mass. Cardboard cut-out toys. No. 115,380; Feb. 6; v. 235; p. 320.
Paden, Charles E., Denver, Colo. Compound for use as a lubricant in internal-combustion-engine cylinders and as a carbon-forming preventive. No. 115,462; Feb. 13; v. 235; p. 692.
Palmer, Vance C., Sioux City, Iowa. Child's dressing-chair. No. 115,535; Feb. 20; v. 235; p. 1051.
Passow & Sons, Chicago, Ill. Certain named glassware. No. 115,536; Feb. 20; v. 235; p. 1051.
Patten & Co., C. B., Tacoma, Ohio. Supporting devices for babies, known as baby-jumpers. No. 115,381; Feb. 6; v. 235; p. 320.
Patterson-Sargent Company, The, Cleveland, Ohio. Paints, driers, enamels, stains, &c. No. 115,656; Feb. 27; v. 235; p. 1351.
Perrault, Joseph E., Springfield, Mass. Polish for furniture, automobile bodies, pianos, and woodwork generally. No. 115,382; Feb. 6; v. 235; p. 320.
Perry, William C., Duchesne, Utah. Cotton-waste, especially adapted for use in cleaning and polishing automobiles. No. 115,383; Feb. 6; v. 235; p. 320.
Phillips, Fred., New York, N. Y. Medicine for rheumatic pains. No. 115,384; Feb. 6; v. 235; p. 320.
Plastic Cements & Fibrastic Ltd., Westminster, London, England. Preservative dressings or compositions for wood, stonework, brickwork, and metal. No. 115,659; Feb. 27; v. 235; p. 1351.
Plough, Abe, Memphis, Tenn. Talcum powder. No. 115,463; Feb. 13; v. 235; p. 692.
Polack Tyre & Rubber Co., New York, N. Y. Certain named hose, machinery packing, and non-metallic tires. No. 115,385; Feb. 6; v. 235; p. 320.
Pompeian Co., The Baltimore, Md. Macaroni, cheese, and olive-oil emulsion. No. 115,386; Feb. 6; v. 235; p. 320.
Porter Chemical Company, The, Hagerstown, Md. Chemical apparatus used as a game or toy. No. 115,537; Feb. 20; v. 235; p. 1051.
Prange Milling Company, New Douglas, Ill. Wheat-flour. Nos. 115,660–1; Feb. 27; v. 235; pp. 1351–2.
Protexwel Manufacturing Corporation, Chicago, Ill. Certain named clothing for men, women, and children. No. 115,387; Feb. 6; v. 235; p. 320.
Quigley Furnace Specialties Co., Incorporated, New York, N. Y. Fire-brick cement. No. 115,538; Feb. 20; v. 235; p. 1051.
R. & H. Simon Company, Union Hill, N. J., and New York, N. Y. Silk piece goods. No. 115,679; Feb. 27; v. 235; p. 1352.
R. L. Kenyon Co., The, Waukesha, Wis. Certain named furniture. No. 115,624; Feb. 27; v. 235; p. 1350.
Reed Chocolate Co., Inc., Buffalo, N. Y. Candies. No. 115,663; Feb. 27; v. 235; p. 1352.
Reese Company, The, Chicago, Ill. Breath-tablets. No. 115,464; Feb. 13; v. 235; p. 692.
Reilly & Company, N. J., Boston, Mass. Kid, calf, patent, sheep, cabritas, split, and sole leather. No. 115,664; Feb. 27; v. 235; p. 1352.
Remington Arms Union Metallic Cartridge Company, New York, N. Y., and Bridgeport, Conn. Shotgun-cartridges, loaded and empty. No. 115,388; Feb. 6; v. 235; p. 320.
Remy, Schmidt and Pleissner, New York, N. Y. Towelings and towels. No. 115,389; Feb. 6; v. 235; p. 320.
Renaker, Leon, Winchester, Ky. Turkeys. No. 115,390; Feb. 6; v. 235; p. 320.
Replogle, Clare C., Shenandoah, Iowa. Wheat, Graham, and pancake flour. No. 115,391; Feb. 6; v. 235; p. 321.
Rice Bros., Philadelphia, Pa. Tea. No. 115,392; Feb. 6; v. 235; p. 321.
Richard Hudnut, New York, N. Y. Certain named pharmaceutical preparations for toilet purposes. No. 115,450; Feb. 13; v. 235; p. 691.
Richman, Joseph T., New York, N. Y. Cotton piece goods. No. 115,393; Feb. 6; v. 235; p. 321.

Ridley's, The Old Chambers St. Candy Manufactory, New York, N. Y. Candy. No. 115,394; Feb. 6; v. 235; p. 321.
Ripin & Company, New York, N. Y. Bottled sparkling wines. No. 115,665; Feb. 27; v. 235; p. 1352.
Riverside Boiler Works, Inc., Cambridgeport, Mass. Tanks and stand or range boilers. No. 115,539; Feb. 20; v. 235; p. 1051.
Robertson, Thorburn B., Berkeley, Cal. Growth-controlling substance derived from the anterior lobe of the pituitary gland. No. 115,667; Feb. 27; v. 235; p. 1352.
Rochester Heel Company, Rochester, N. Y. Heels for shoes. No. 115,465; Feb. 13; v. 235; p. 692.
Wm. A. Rogers, Limited, New York, N. Y. Silver-plated flat and hollow ware and cutlery. No. 115,395; Feb. 6; v. 235; p. 321.
Rosenthal Manufacturing Company, West Allis and Milwaukee, Wis. Cleansers for the removal of carbon. No. 115,540; Feb. 20; v. 235; p. 1051.
Royal Remedies Company, Waukegan, Ill. Pharmaceutical preparation for checking excessive secretions of the skin and preventing the odor. No. 115,396; Feb. 6; v. 235; p. 321.
Royal Valley Coffee Co., Detroit, Mich. Coffee. No. 115,397; Feb. 6; v. 235; p. 321.
Rubly Company, Inc., New York, N. Y. Toggle-bolts. No. 115,668; Feb. 27; v. 235; p. 1352.
Russia Cement Company, Gloucester, Mass. Cod-liver oil. No. 115,398; Feb. 6; v. 235; p. 321.
Rust-Parker Company, Duluth, Minn. Canned foods. No. 115,399; Feb 6; v. 235; p. 321.
S. & S. Water Company, The, Philadelphia, Pa. Certain named soft drinks. No. 115,669; Feb. 27; v. 235; p. 1352.
Sanger, Sarah J., Lima, N. Y. Ring-buffs—viz., buff-sticks. No. 115,400; Feb. 6; v. 235; p. 321.
Sauquoit Toilet Paper Co., Inc., New Hartford, N. Y. Toilet-paper. No. 115,541; Feb. 20; v. 235; p. 1051.
School of Applied Art, Battle Creek, Mich. Instruction-books and advertising-booklets. No. 115,670; Feb. 27; v. 235; p. 1352.
Scoble, Andrew H., New York, N. Y. Cereal breakfast food and wheat-flour. No. 115,401; Feb. 6; v. 235; p. 321.
Sears, Roebuck and Co., Chicago, Ill. Plows. No. 115,671; Feb. 27; v. 235; p. 1352.
Sears, Roebuck and Co., Chicago, Ill. Men's, women's, and children's leather shoes. No. 115,672; Feb. 27; v. 235; p. 1352.
Sears, Roebuck and Co., Chicago, Ill. Men's leather shoes. Nos. 115,673–5; Feb. 27; v. 235; p. 1352.
Sears, Roebuck and Co., Chicago, Ill. Oil-engines. No. 115,676; Feb. 27; v. 235; p. 1352.
Sears, Roebuck and Co., Chicago, Ill. Poultry feed. No. 115,677; Feb. 27; v. 235; p. 1352.
Segal and Pransky, Philadelphia, Pa. Overalls. No. 115,678; Feb. 27; v. 235; p. 1352.
Shapiro & Co., Louis, New York, N. Y. Men's and children's coats, vests, and trousers. No. 115,402; Feb. 6; v. 235; p. 321.
Sherer-Gillett Company, Chicago, Ill. Bluing, ammonia, baking-powder, soda or saleratus, &c. No. 115,403; Feb. 6; v. 235; p. 321.
Sidney Blumenthal & Co. Inc., New York, N. Y. Plush lap-robes. No. 115,584; Feb. 27; v. 235; p. 1349.
Silk Guide, Inc., The, New York, N. Y. Technical compendium of the silk industry compiled, collated, and edited twice a year. No. 115,542; Feb. 20; v. 235; p. 1051.
Silver & Co., Brooklyn, N. Y. Burning-lamps. No. 115,543; Feb. 20; v. 235; p. 1051.
Simonds, George L., Chicago, Ill., assignor to Vulcan Fuel Economy Company. Waterproofing composition for wood, concrete, brick, &c., surfaces. No. 115,544; Feb. 20; v. 235; p. 1051.
Slazengers, Limited, London, England. Certain named games, toys, and sporting goods. No. 115,404; Feb. 6; v. 235; p. 321.
Snyder Brothers, Boston, Mass. Hosiery. No. 115,405; Feb. 6; v. 235; p. 321.
Snyder, Theodore J., Chicago, Ill. Combined bottle-stoppers and droppers. No. 115,545; Feb. 20; v. 235; p. 1051.
Snyder, Winfield P., Great Falls, Mont. Preparation for the treatment of cholera in hogs and chickens. No. 115,471; Feb. 13; v. 235; p. 692.
Society of Chemical Industry in Basle, Basel, Switzerland. Certain named pharmaceutical product. No. 115,546; Feb. 20; v. 235; p. 1051.
Southern Cotton Oil Company, The, Jersey City and Bayonne, N. J.; Savannah, Ga.; New Orleans, La.; and New York, N. Y. Vegetable oil used for food purposes. No. 115,681; Feb. 27; v. 235; p. 1352.
Southern Fertilizer & Chemical Company, Savannah, Ga. Complete fertilizers and acid phosphate. No. 115,406; Feb. 6; v. 235; p. 321.
Speakman Supply & Pipe Company, Wilmington, Del. Shower-heads. No. 115,407; Feb. 6; v. 235; p. 321.
Splitdorf Electrical Company, Newark, N. J. Electric spark-plugs. No. 115,548; Feb. 20; v. 235; p. 1051.
Squire Dingee Company, Chicago, Ill. Salad-dressing, peanut-butter, mustard, pepper sauce, vinegar. No. 115,408; Feb. 6; v. 235; p. 321.
Stamford Foundry Company, The, Stamford, Conn. Wood and coal burning ranges and stoves. No. 115,682; Feb. 27; v. 235; p. 1352.
Stamford Rolling Mills Company, New York, N. Y. Brass, copper, cupro-nickel, gilding metal, and German silver in sheets and other forms. No. 115,683; Feb. 27; v. 235; p. 1352.
Standard Polish Company, Rapid City, S. D. Soap. No. 115,409; Feb. 6; v. 235; p. 321.
Star Company, New York, N. Y. Newspaper-sections. No. 115,410; Feb. 6; v. 235; p. 321.
Stark Bro's Nurseries & Orchards Co., Louisiana, Mo. Fruit trees and plants and hardy ornamentals. No. 115,549; Feb. 20; v. 235; p. 1051.
Stenopaic Optical Co., The, New York, N. Y. Spectacles. No. 115,550; Feb. 20; v. 235; p. 1051.
Stephen F. Whitman & Son, Incorporated, Philadelphia, Pa. Drinking-chocolate. No. 115,423; Feb. 6; v. 235; p. 321.
Stern, Louis J., Boston, Mass. Composition for stopping leaks, eliminating rust, preventing corrosion of metals and scale in boilers. No. 115,684; Feb. 27; v. 235; p. 1352.
Stern & Saalberg Company, The, New York, N. Y. Monthly publication. No. 115,685; Feb. 27; v. 235; p. 1352.
Strahlke, Gustav A., Alton, Ill. Hair growers and tonics. No. 115,551; Feb. 20; v. 235; p. 1051.
Strohmeyer & Arpe Company, New York, N. Y. Canned fish, vegetables, and fruits and preserved fruits. No. 115,686; Feb. 27; v. 235; p. 1352.
Strzyczkowski, Julian, New York, N. Y. Waterproofing preparation for incorporating in cement, plaster, bricks, and stucco. No. 115,411; Feb. 6; v. 235; p. 321.
Sturges, Wilton, Meridian, Miss. Cereal feed for horses, mules, cattle, and chickens. No. 115,687; Feb. 27; v. 235; p. 1352.
Sunrise Shoe Polish Company, The, Chicago, Ill. Dressing for white leather shoes. No. 115,688; Feb. 27; v. 235; p. 1352.
Swan & Finch Co., New York, N. Y. Transmission and gear-case grease. No. 115,412; Feb. 6; v. 235; p. 321.
Swan Shoe Company, The, Baltimore, Md. Baby or infant shoes made of soft leather or cloth. No. 115,467; Feb. 13; v. 235; p. 692.
Sweet, Alvin H., Los Angeles, Cal. Parts simulating parts of animals for use as educational toys. No. 115,552; Feb. 20; v. 235; p. 1051.
T. E. Bissell Company Limited, Elora, Ontario, Canada. Disk harrows and land-rollers. No. 115,582; Feb. 27; v. 235; p. 1349.
Taylor, Ronald V., New York, N. Y. Furniture-polish. No. 115,553; Feb. 20; v. 235; p. 1051.
Teplow, Nathan, New York, N. Y. Remedies, ointments, and liniments for certain named diseases and affections. No. 115,413; Feb. 6; v. 235; p. 321.
Terwilligar, Alexander C., Mims, Fla. Oranges and grapefruit. No. 115,689; Feb. 27; v. 235; p. 1352.
Theobald and Oppenheimer Company, Philadelphia, Pa., and New York, N. Y. Cigars. Nos. 115,690–1; Feb. 27; v. 235; p. 1352.
Thomas G. Plant Company, Boston, Mass. Boots and shoes of leather, rubber, felt, &c. No. 115,658; Feb. 27; v. 235; p. 1351.
Thomas, Samuel, Lebanon, Oreg. Preparation for the kidneys. No. 115,554; Feb. 20; v. 235; p. 1051.
Tireold Company, The, Chicago, Ill. Composition for healing punctures in pneumatic tires. No. 115,415; Feb. 6; v. 235; p. 321.
Tivoli Mercantile Co., The, Cheyenne, Wyo. Whisky. No. 115,555; Feb. 20; v. 235; p. 1051.
Tomkins Brothers, Newark, N. J. Fiber used for plastering purposes. No. 115,416; Feb. 6; v. 235; p. 321.
Towle Maple Products Company, The, Wilmington, Del., and St. Paul, Minn. Syrup and molasses. No. 115,693; Feb. 27; v. 235; p. 1353.
Traub Manufacturing Company, Detroit, Mich. Finger-rings. No. 115,556; Feb. 20; v. 235; p. 1051.
Trenton Milling Co., Trenton, Ill. Wheat-flour, more specifically self-rising flour. No. 115,694; Feb. 27; v. 235; p. 1353.
Tropical Pharmacal Co., The, New York, N. Y. Certain named medicines and pharmaceutical preparations. No. 115,417; Feb. 6; v. 235; p. 321.
Typolith Company, The, Battle Creek, Mich. Overlays, sheet-rubber, and rubber fabric. No. 115,557; Feb. 20; v. 235; p. 1051.
Ulrich, Jacob, New York, N. Y. Writing and drawing inks. No. 115,695; Feb. 27; v. 235; p. 1353.
Union Seed & Fertilizer Company, Guttenberg, N. J. Foodstuffs for cattle and other animals consisting of cotton-seed meal. No. 115,696; Feb. 27; v. 235; p. 1353.
Union Special Machine Company, Chicago, Ill. Knitted underwear, sweaters, and stockings, corsets. No. 115,697; Feb. 27; v. 235; p. 1353.
Union Special Machine Company, Chicago, Ill. Certain named clothing. No. 115,700; Feb. 27; v. 235; p. 1353.
Union Switch & Signal Company, The, Swissvale, Pa. Apparatus and machinery with railway signaling and interlocking systems. No. 115,558; Feb. 20; v. 235; p. 1051.
United Cigar Manufacturers Company, New York, N. Y. Cigars. Nos. 115,698–9; Feb. 27; v. 235; p. 1353.
United Drug Company, Boston, Mass. Certain named rubber goods. No. 115,418; Feb. 6; v. 235; p. 321.
United Dyestuff and Photochemical Co., Inc., Brooklyn, N. Y. Photographic developers. No. 115,559; Feb. 20; v. 235; p. 1051.

United States Rubber Company, New Brunswick, N. J., and New York, N. Y. Boots and shoes of rubber, leather, and canvas. No. 115,701; Feb. 27; v. 235; p. 1353.
Universal Portland Cement Company, Chicago, Ill. Portland cement. No. 115,560; Feb. 20; v. 235; p. 1051.
Valecia Evaporated Milk Company, Madison, Wis. Evaporated milk. No. 115,468; Feb. 13; v. 235; p. 692.
Valk & Bro., S. J., New York, N. Y. Olives. No. 115,419; Feb. 6; v. 235; p. 321.
Van Nostrand, Alonzo G., assignor to Bunker Hill Breweries Incorporated, Boston, Mass. Non-intoxicating malt beverages. No. 115,702; Feb. 27; v. 235; p. 1353.
Vermont Marble Company, Proctor, Vt. Marble-dust, hydrated lime, and other lime. No. 115,561; Feb. 20; v. 235; p. 1052.
Vulcan Fuel Economy Company. (See Simonds, George L., assignor.)
W. R. Grace & Company. (See Fulton Shoe Polish Co., assignor.)
W. W. Lawrence & Company, Pittsburgh, Pa. Ready-mixed paint. No. 115,353; Feb. 6; v. 235; p. 319.
Wald, Armin, New York, N. Y. Dental paste, almond and cold creams. No. 115,562; Feb. 20; v. 235; p. 1052.
Waldes & Co., Prague-Wrschowitz, Austria-Hungary. Snap-fasteners of all kinds. No. 115,469; Feb. 13; v. 235; p. 692.
Waldes & Co., Prague-Wrschowitz, Austria-Hungary. Cigarette-papers. No. 115,563; Feb. 20; v. 235; p. 1052.
Waldo, E. M. & F., New York, N. Y. Dry colors for painters' use. No. 115,564; Feb. 20; v. 235; p. 1052.
Wallace, Harry B., St. Louis, Mo. Rubber tires. No. 115,704; Feb. 27; v. 235; p. 1353.
Ward Baking Company, New York, N. Y. Bread. No. 115,706; Feb. 27; v. 235; p. 1353.
Washburn-Crosby Co., Minneapolis, Minn. Wheat-flour. Nos. 115,707–8; Feb. 27; v. 235; p. 1353.
Waukesha Pure Food Company, Waukesha, Wis. Jelly and ice-cream powders and gelatins. No. 115,420; Feb. 6; v. 235; p. 321.
Weaver Manufacturing Company, Springfield, Ill. Vehicles for use in towing automobiles and the like. No. 115,565; Feb. 20; v. 235; p. 1052.
Weil, Sam, St. Louis, Mo. Straw hats. No. 115,421; Feb. 6; v. 235; p. 321.
Wellington, Sears & Company, Boston, Mass. Cloth known as cotton duck. No. 115,709; Feb. 27; v. 235; p. 1353.
Wenzell Specialty Company, Philadelphia, Pa. Gear-shift for machine parts. No. 115,566; Feb. 20; v. 235; p. 1052.
Wenzell Specialty Company, Philadelphia, Pa. Gear-shift. No. 115,710; Feb. 27; v. 235; p. 1353.
Whole Wheat Coffee Company, Inc., Jersey City, N. J., and New York, N. Y. Coffee and substitutes for coffee. No. 115,711; Feb. 27; v. 235; p. 1353.
Wilkinson Manufacturing Co., The, Binghamton, N. Y. Child's vehicle. No. 115,424; Feb. 6; v. 235; p. 321.
William S. Merrell Chemical Company, The, Cincinnati, Ohio. Fluid medicines made from plant drugs and known as tinctures. No. 115,649; Feb. 27; v. 235; p. 1351.
William Tonk & Bro., Inc., New York, N. Y. Grand, upright, player, and electric player pianos. No. 115,692; Feb. 27; v. 235; p. 1352.
Williams & Company, R. C., New York, N. Y. Mayonnaise dressing. No. 115,712; Feb. 27; v. 235; p. 1353.
Willite Road Construction Company of America, New York, N. Y. Bituminous paving and paving materials. No. 115,425; Feb. 6; v. 235; p. 322.
Wilson, O. G., Centralia, Mo. Medicine for the treatment of certain named diseases of horses. No. 115,426; Feb. 6; v. 235; p. 322.
Wirebounds Corporation, Portland, Me., and Chicago, Ill. Boxes and packing-cases. No. 115,427; Feb. 6; v. 235; p. 322.
Wiser, Louis E., Philadelphia, Pa. Certain named household, store, and office furniture. No. 115,428; Feb. 6; v. 235; p. 322.
Wortendyke Manufacturing Company, Richmond, Va. Toilet-paper. No. 115,567; Feb. 20; v. 235; p. 1052.
Y. Pendas & Alvarez, New York, N. Y. Cigars. No. 115,662; Feb. 27; v. 235; p. 1352.
Youngstown Macaroni Co., The, Youngstown, Ohio. Macaroni. No. 115,713; Feb. 27; v. 235; p. 1353.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Adams & Elting Company, Chicago, Ill. "Ad-El-Ite Double Lustre Paint." (For Paint.) No. 19,866; Feb. 13; v. 235; p. 693.
Adams & Elting Company, Chicago, Ill. "Ad-El-Ite Motor Carbon Remover." (For a Carbon-Remover.) No. 19,867; Feb. 13; v. 235; p. 693.
Alpino Cigar Co., New York, N. Y. "Sigari Italiani." (For Cigars.) No. 19,868; Feb. 13; v. 235; p. 693.
American Pure Food Company, Catlettsburg, Ky. "Two Quart Brand." (For Whisky.) No. 19,869; Feb. 13; v. 235; p. 693.
American Safety Razor Co. Inc., Brooklyn, N. Y. "Ever-Ready Safety Razor." (For Safety-Razors.) No. 19,901; Feb. 20; v. 235; p. 1053.
Anderson, Alfred F. R., New York, N. Y. "The Cleanest Hand In Town." (For Hand Soap Powder.) No. 19,870; Feb. 13; v. 235; p. 693.
Anderson, Alfred F. R., New York, N. Y. "Uzit Hand Soap Powder." (For Hand Soap Powder.) No. 19,871; Feb. 13; v. 235; p. 693.
B. Frankel Company, The, New York, N. Y. "Sister Susie." (For Human-Hair Nets.) No. 19,882; Feb. 13; v. 235; p. 693.
Barley Foods Co., Morgantown, W. Va. "Breakfast Barley." (For Specially-Prepared Barley.) No. 19,872; Feb. 13; v. 235; p. 693.
Barley Foods Co., Morgantown, W. Va. "Pearl Barley." (For Pearl-Barley.) No. 19,873; Feb. 13; v. 235; p. 693.
Batchelder, Francis J., New York, N. Y. "Rainbow Game." (For Rainbow Game.) No. 19,921; Feb. 27; v. 235; p. 1354.
Berry, N. E., Buffalo, N. Y. "Nebline." (For a Cuticle-Salve.) No. 19,902; Feb. 20; v. 235; p. 1053.
Caskel, Ira M., San Francisco, Cal. "Excello Brand, Grand Prize Guatemala Coffee." (For Coffee.) No. 19,875; Feb. 13; v. 235; p. 693.
Castle Brothers, San Francisco, Cal. "Cowboy." (For Prunes.) No. 19,922; Feb. 27; v. 235; p. 1354.
Channell Chemical Company, Chicago, Ill. "O-Cedar Dust Cloths." (For O-Cedar Dust-Cloths.) No. 19,925; Feb. 27; v. 235; p. 1354.
Clapham, August J., New York, N. Y. "Dentola." (For a Dentifrice.) No. 19,903; Feb. 20; v. 235; p. 1053.
Cleveland Home Brewing Co., The, Cleveland, Ohio. "Yako." (For Beer.) No. 19,876; Feb. 13; v. 235; p. 693.
Copps Co., The, Stevens Point, Wis. "Birchwood." (For Coffee.) No. 19,904; Feb. 20; v. 235; p. 1053.
Cordo-Hyde Company, Brockton, Mass. "The Cordo-Hyde Lace." (For Shoe-Laces.) No. 19,877; Feb. 13; v. 235; p. 693.
Deehan, M. F., assignor to M. F. Deehan, Boston, Mass. "Autotox Tablets." (For a Medicinal Preparation.) No. 19,878; Feb. 13; v. 235; p. 693.
Drew & Lipke, New York, N. Y. "The Emblem Shirt." (For Shirts.) No. 19,926; Feb. 27; v. 235; p. 1354.
Drew & Lipke, New York, N. Y. "The Fleur de Lis Shirt." (For Shirts.) No. 19,927; Feb. 27; v. 235; p. 1354.
Dunn, Albert L., Louisville, Ky. "Albert L. Dunn Mint Julep Gum." (For Mint-Julep Gum.) No. 19,928; Feb. 27; v. 235; p. 1354.
Eddy and Fisher Co., The, Providence, R. I. "Clicquot Dry Gin." (For Dry Gin.) No. 19,905; Feb. 20; v. 235; p. 1053.
Elcholtz, John A., Gettysburg, Pa. "No Spot." (For a Cleaning Fluid.) No. 19,879; Feb. 13; v. 235; p. 693.
Emerson Phonograph Company, Inc., New York, N. Y. "Emerson Record." (For Phonograph-Record Disks.) Nos. 19,880–1; Feb. 13; v. 235; p. 693.
Garnier, Charles, Livingston, Mont. "Montana Sport." (For Cigars.) No. 19,906; Feb. 20; v. 235; p. 1053.
George Frost Company, Boston, Mass. "Baby Midget Hose Supporter." (For Hose-Supporters.) No. 19,883; Feb. 13; v. 235; p. 693.
Gund, George, Cleveland, Ohio. "Pep." (For Smoking-Tobacco.) No. 19,884; Feb. 13; v. 235; p. 693.
Hazeloch Medicine Company, Providence, R. I. "Hazeloch." (For Liquid Herb Remedy.) No. 19,907; Feb. 20; v. 235; p. 1053.
Helmet Company, The, Cincinnati, Ohio. "Sweet Spearmint." (For Chewing-Gum.) No. 19,908; Feb. 20; v. 235; p. 1053.
Hood Rubber Co., Watertown, Mass. "Hiker." (For Canvas Rubber-Sole Shoes.) No. 19,909; Feb. 20; v. 235; p. 1053.
Howard-Vaughan Co., The, Niagara Falls, N. Y. "Garage Vitagas." (For a Chemical Compound for Use in Gasolene.) No. 19,885; Feb. 13; v. 235; p. 693.
Hunyadi Spilt Corporation, Wilmington, Del., and New York, N. Y. "American Hunyadi Spilt." (For a Cathartic Water.) No. 19,886; Feb. 13; v. 235; p. 693.
I. Michelson & Brothers, Cincinnati, Ohio. "Old Curtis Whiskey." (For Whisky.) No. 19,913; Feb. 20; v. 235; p. 1053.
J. A. Bokel Company, Baltimore, Md. "Old String Whiskey." (For Whisky.) No. 19,874; Feb. 13; v. 235; p. 693.
L. D. Caulk Company, The, Milford, Del. "A Weather Proof Cement Vermont White Cement." (For a Cement for Setting and Repairing Monuments and the Like.) No. 19,923; Feb. 27; v. 235; p. 1354.
L. D. Caulk Company, The, Milford, Del. "Permanent Pigment For Coloring Vermont White Cement." (For a Pigment for Coloring Cement.) No. 19,924; Feb. 27; v. 235; p. 1354.
Lawrence & Harrison Co., Baltimore, Md. "Golden Glow Orange Marmalade." (For Marmalade.) No. 19,910; Feb. 20; v. 235; p. 1053.
Lortie, Chesser, Brooklyn, N. Y. "Phonograph Stove Polish, It Talks For Itself." (For a Powder Stove-Polish.) No. 19,887; Feb. 13; v. 235; p. 693.
Lower California Fisheries Co., San Diego, Cal. "Quality." (For Canned Tuna Fish.) No. 19,929; Feb. 27; v. 235; p. 1354.
Mack, A. D., San Diego, Cal. "Royal Windsor Table Sauce." (For Table Sauce.) No. 19,930; Feb. 27; v. 235; p. 1354.
Manila Commercial Company, Manila, Philippine Islands, and New York, N. Y. "Aguinaldo." (For Cigars.) No. 19,911; Feb. 20; v. 235; p. 1053.
McQuay-Norris Mfg. Co., St. Louis, Mo. "Leak-Proof Piston Ring." (For Piston-Rings.) No. 19,912; Feb. 20; v. 235; p. 1053.
Moehle Lithographic Company, The, Brooklyn, N. Y. "Amor y Arte." (For Cigars.) No. 19,931; Feb. 27; v. 235; p. 1354.
Moehle Lithographic Company, The, Brooklyn, N. Y. "Beauties." (For Cigars.) No. 19,932; Feb. 27; v. 235; p. 1354.
Moehle Lithographic Company, The, Brooklyn, N. Y. "Queen's Taste." (For Cigars.) No. 19,933; Feb. 27; v. 235; p. 1354.
Moehle Lithographic Company, The, Brooklyn, N. Y. "La Culta." (For Cigars.) No. 19,934; Feb. 27; v. 235; p. 1354.
Murphy Oil Company, Whittier, Cal. "Murphy Ranch One Star." (For Lemons.) No. 19,888; Feb. 13; v. 235; p. 693.
North Atlantic Oyster Farms, Inc., Boston, Mass. "Sealshipt Oysters." (For Oysters.) No. 19,935; Feb. 27; v. 235; p. 1354.
Philo Hay Specialties Co., Newark, N. J. "Hay's Eau De Quinine Tonic." (For a Hair-Tonic.) No. 19,914; Feb. 20; v. 235; p. 1053.
Philo Hay Specialties Co., Newark, N. J. "Sulpho-Sage." (For a Compound for Coloring Gray and Faded Hair, to Assist in Removing Dandruff, as a Corrective of Itching Scalp, and as a Dressing for the Hair.) No. 19,915; Feb. 20; v. 235; p. 1053.
Philo Hay Specialties Co., Newark, N. J. "Hay's Cocoanut Oil Shampoo." (For a Hair-Shampoo.) No. 19,916; Feb. 20; v. 235; p. 1053.
Pohland, Lydia, Milwaukee, Wis. "Nature's Blood and Cell-Food." (For a Medicinal Preparation.) No. 19,917; Feb. 20; v. 235; p. 1053.
Qualite Products Company, Inc., New York, N. Y. "Peppermint Pepsogum, Pure Rings Of Pepsin Gum." (For Chewing-Gum.) No. 19,889; Feb. 13; v. 235; p. 693.
Ridgways Incorporated, New York, N. Y., and Chicago, Ill. "Ridgeways Tea." (For Packages of Ridgeways Tea.) Nos. 19,890–1; Feb. 13; v. 235; p. 693.
Rogers, Lunt & Bowler Co., Greenfield, Mass. "Little Men and Little Women Sterling Silver Tableware." (For Babies' and Children's Sterling-Silver Tableware.) No. 19,936; Feb. 27; v. 235; p. 1354.
Sanitol Manufacturing Company, The, Denver, Colo. "Sanitol, Death To Germs." (For a Germicide.) No. 19,937; Feb. 27; v. 235; p. 1354.
Schoeneman, Firm of J., Baltimore, Md. "King Kuhl Klothes." (For Clothing.) No. 19,892; Feb. 13; v. 235; p. 693.
Shredded Wheat Company, The, Niagara Falls, N. Y. "Shredded Whole Wheat." (For Shredded Whole Wheat.) No. 19,918; Feb. 20; v. 235; p. 1053.
Silverberg Import Co., New York, N. Y. "Slip-pon." (For Veils.) No. 19,938; Feb. 27; v. 235; p. 1354.

Snell Mill and Grain Co., The, Clay Center, Kans. "Snell's Imperial Flour." (For Flour.) No. 19,893; Feb. 13; v. 235; p. 693.
Sodter, Morris, Chicago, Ill. "Gloss." (For Furniture and Automobile Polish.) No. 19,939; Feb. 27; v. 235; p. 1354.
Stadeker, Leonard J., Chicago, Ill. "Collier's." (For Cigars.) No. 19,919; Feb. 20; v. 235; p. 1053.
Tarpley, E. J., Dublin, Ga. "Tarpley's White Mixture." (For Tarpley's White Mixture.) No. 19,894; Feb. 13; v. 235; p. 693.
Taylor, John W., Jr., Nashville, Tenn. "Ku-Rall." (For an Ointment.) No. 19,895; Feb. 13; v. 235; p. 693.
Teixeira, A. D., Boston, Mass. "Tony." (For Pickles.) No. 19,940; Feb. 27; v. 235; p. 1354.
Tree, D. M., Kansas City, Mo. "Cream-O-Lasses." (For Candy-Boxes.) No. 19,896; Feb. 13; v. 235; p. 693.
United Hat Stores, Inc., Philadelphia, Pa. "The Oak Brand." (For Hats.) No. 19,897; Feb. 13; v. 235; p. 693.
United States Apothecaries Association, Newark, N. J. "Lecithinol." (For a Medicinal Preparation.) No. 19,898; Feb. 13; v. 235; p. 693.
United States Apothecaries Association, Newark, N. J. "Thymo-Boraline." (For a Medicinal Preparation.) No. 19,899; Feb. 13; v. 235; p. 693.
Wadsworth, Howland & Co., Incorporated, Boston, Mass. "Agate Floor." (For Varnishes.) No. 19,920; Feb. 20; v. 235; p. 1053.
Worcester Baking Company, Worcester, Mass. "Swanson's SWheat Bread." (For Bread.) No. 19,900; Feb. 13; v. 235; p. 693.

PRINTS.

Allen, Geo. H., Clinton, N. Y. "Rink-ly." (For Mops and Dust-Cloths.) No. 4,629; Feb. 27; v. 235; p 1354.
American Tobacco Company, The, New York, N. Y. "It's Toasted." (For Cigarettes.) No. 4,630; Feb. 27; v. 235; p. 1354.
B. V. D. Company, The, New York, N. Y. "B. V. D. 1917 Men's Union Suit." (For Athletic Underwear.) No. 4,621; Feb. 20; v. 235; p. 1053.
B. V. D. Company, The, New York, N. Y. "B. V. D. 1917 Men's Two Piece Suit." (For Athletic Underwear.) No. 4,622; Feb. 20; v. 235; p. 1053.
B. V. D. Company, The, New York, N. Y. "B. V. D. 1917 Men's Union Suit." (For Athletic Underwear.) No. 4,623; Feb. 20; v. 235; p. 1053.
B. V. D. Company, The, New York, N. Y. "B. V. D. 1917 Men's Two Piece Suit." (For Athletic Underwear.) No. 4,624; Feb. 20; v. 235; p. 1053.
B. V. D. Company, The, New York, N. Y. "Start Your Day This Way—B. V. D." (For Athletic Underwear.) No. 4,631; Feb. 27; v. 235; p. 1354.
B. V. D. Company, The, New York, N. Y. "Say! I'm In My B. V. D.s—Be Right Over." (For Athletic Underwear.) No. 4,632; Feb. 27; v. 235; p. 1354.
Chr. Hansen's Lab. Inc., Hansen Island, Little Falls, N. Y. "Nesnah Made In A Jiffy." (For Nesnah.) No. 4,634; Feb. 27; v. 235; p. 1354.
Cragg, Samuel H., New York, N. Y. "The Fleur de Lys." (For a Decorative Shoe-Emblem.) No. 4,617; Feb. 13; v. 235; p. 694.
Cream of Wheat Co., Minneapolis, Minn. "Cooking Mama's Breakfast." (For Wheat Breakfast Food.) No. 4,625; Feb. 20; v. 235; p. 1053.
Eclipse Interchangeable Counterbore Co., Inc., Detroit, Mich. "The Eclipse Interchangeable Counterbore Co., Inc." (For Boring-Tools.) No. 4,618; Feb. 13; v. 235; p. 694.
Gender, Paeschke & Frey Co., Milwaukee, Wis. "No. 7 Cream City Roaster Display." (For Cream City Roasters.) No. 4,633; Feb. 27; v. 235; p. 1354.
King Motor Car Company, Detroit, Mich. "Foursome." (For Automobiles.) No. 4,626; Feb. 20; v. 235; p. 1053.
Kramer, Francis W., Philadelphia, Pa. "Shady Brook Farm." (For Toy Farms.) No. 4,635; Feb. 27; v. 235; p. 1354.
Marston, Howard F., Dayton, Ohio. "Nite Lite." (For an Apparatus for Illumination.) No. 4,616; Feb. 6; v. 235; p. 322.
New Orleans Coffee Co. Ltd., New Orleans, La. "New South Pure Sugar Cane Syrup." (For Cane-Syrup.) No. 4,619; Feb. 13; v. 235; p. 694.
New Orleans Coffee Co. Ltd., New Orleans, La. "Hickory Maple Syrup." (For Maple-Syrup.) No. 4,620; Feb. 13; v. 235; p. 694.
Rathbone Sard Electric Company, Inc., Albany, N. Y. "Cook by wire." (For Electric Ranges.) No. 4,636; Feb. 27; v. 235; p. 1354.
Shredded Wheat Company, The, Niagara Falls, N. Y. "For Work Or For Play, the Best Food is Shredded Wheat With Hot Milk." (For Shredded Wheat.) No. 4,637; Feb. 27; v. 235; p. 1354.
Shredded Wheat Company, The, Niagara Falls, N. Y. "For Daddy, Mother, Brother and Me." (For Shredded Wheat.) No. 4,638; Feb. 27; v. 235; p. 1354.
Smolowitz, Meyer, New York, N. Y. "Family Cambric." (For Cambric.) No. 4,627; Feb. 20; v. 235; p. 1053.
Tulloss School Company, The, Springfield, Ohio. "The New Way." (For Type-Writing Instruction-Manuals, Shorthand Instruction-Manuals, Business-Letter-Writing Manuals, Bookkeeping Instruction-Manuals, and Commercial-Law Books.) No. 4,628; Feb. 20; v. 235; p. 1053.

DISCLAIMERS.

Bubles, William C., Alameda, Cal.; disclaimer filed by assignee, The Aluminum Seal Company. Closing-machine. No. 1,150,992; disclaimer filed Feb. 7, 1917; v. 235; p. 713.
Murray, Thomas E., New York, N. Y.; disclaimer filed by patentee. Protective switch-box. No. 1,135,130; disclaimer filed Feb. 12, 1917; v. 235; p. 713.
Weber, August, Sr., A., Jr., and J., Schenectady, N. Y.; disclaimer filed by assignee, Weber Electric Company. Electric-lamp socket. No. 916,812; disclaimer filed Feb. 19, 1917; v. 235; p. 1059.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF FEBRUARY, 1917.

[Abbreviations: "Gaz."—Official Gazette.]

Abrasive-coated material. J. C. Graft. No. 1,217,593; Feb. 27; v. 235; p. 1223.
Accelerator. E. H. and V. C. Mutz. No. 1,217,875; Feb. 27; v. 235; p. 1317.
Accelerator-controlling mechanism. J. H. Young No. 1,214,866; Feb. 6; v. 235; p. 132.
Accordion-pleating machine. C. D. Matthews and A. D. Mitchell. No. 1,217,874; Feb. 27; v. 235; p. 1317.
Account-register. S. M. Ratner. No. 1,216,731; Feb. 20; v. 235; p. 880.
Accounting and recording machines, Paper-feeding attachment for. J. F. Weedon. No. 1,216,526; Feb. 20; v. 235; p. 809.
Acetyl-cellulose plastics, Making. W. G. Lindsay. No. 1,216,581; Feb. 20; v. 235; p. 880.
Acid, Apparatus for effecting the continuous concentration of sulfuric. S. Dreyfus. No. 1,217,577; Feb. 27; v. 235; p. 1216.
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Acids, Substituted barbituric. W. Hiemenz and L. Taub. No. 1,217,447; Feb. 27; v. 235; p. 1170.
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Egg-box.
Fare-box.
Fire-alarm box.
Fire-box.
Hat-box.
Jewelry-box.
Journal-box.
Knockdown box.
Mail-box.
Match-box.
Miter-box.
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Lamp-bracket.
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Band-brake.
Electrically-controlled brake.
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Capping apparatus. C. J. Kryzanowsky. No. 1,216,705; Feb. 20; v. 235; p. 870.
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Car and compressed-air and steam pipe coupling device, Automatic railway-. C. Feroci. No. 1,217,734; Feb. 27; v. 235; p. 1271.
Car and railway indicator, Street. E. H. Stacy. No. 1,215,070; Feb. 6; v. 235; p. 206.
Car and train-pipe coupling, Combined. J. S. Doyle and F. Hedley. No. 1,216,295; Feb. 20; v. 235; p. 728.
Car buffing device. W. E. Wine. No. 1,215,450; Feb. 13; v. 235; p. 373.
Car buffing device. W. E. Wine. No. 1,215,459; Feb. 13; v. 235; p. 374.
Car construction. G. B. Maltby. No. 1,214,567; Feb. 6; v. 235; p. 29.
Car, Derrick-. C. Volkmann. No. 1,216,188; Feb. 13; v. 235; p. 638.
Car-door. G. H. Gillingham. No. 1,216,436; Feb. 20; v. 235; p. 779.
Car-door. J. W. Rumsey. No. 1,215,714; Feb. 13; v. 235; p. 469.
Car-door control. T. Farmer, Jr. No. 1,216,300; Feb. 20; v. 235; p. 730.
Car-door fastener. L. W. Daughenbaugh. No. 1,217,158; Feb. 27; v. 235; p. 1070.
Car door, Grain-. N. Terry. No. 1,216,013; Feb. 13; v. 235; p. 576.
Car-door structure. J. W. Rumsey. No. 1,215,715; Feb. 13; v. 235; p. 470.
Car-door structure, Box-. J. W. Rumsey. No. 1,215,716; Feb. 13; v. 235; p. 470.
Car, Double-deck. F. Hedley and J. S. Doyle. No. 1,217,174; Feb. 27; v. 235; p. 1075.
Car-fender. R. L. Huston. No. 1,216,997; Feb. 20; v. 235; p. 970.
Car, Hopper-. A. Campbell. No. 1,214,508; Feb. 6; v. 235; p. 8.
Car-mover. W. A. Dorsey. No. 1,215,634; Feb. 13; v. 235; p. 441.
Car platforms, Trap-door for railway-. E. F. Chaffee. No. 1,214,750; Feb. 6; v. 235; p. 96.
Car, Railway motor-. H. C. Tully. No. 1,215,083; Feb. 6; v. 235; p. 211.
Car-roof. J. McMullen. No. 1,215,954; Feb. 13; v. 235; p. 555.
Car-roof sheet. J. L. Mohun. No. 1,217,485; Feb. 27; v. 235; p. 1183.
Car-seat. C. L. Thompson. No. 1,216,885; Feb. 20; v. 235; p. 932.
Car, Side. R. S. Finlay. No. 1,215,265; Feb. 6; v. 235; p. 273.
Car-step. W. J. Haviland. No. 1,214,782; Feb. 6; v. 235; p. 104.
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Car, train-pipe, and electric coupling, Combined. J. S. Doyle and F. Hedley. No. 1,216,294; Feb. 20; v. 235; p. 727.
Car-vestibule curtains, Fixture for. E. R. Packer. No. 1,217,210; Feb. 27; v. 235; p. 1088.
Car-wheel. V. J., Sr., and V. J. Conces, Jr. No. 1,215,252; Feb. 6; v. 235; p. 269.

Car-wheel construction. N. A. Newdick. No. 1,215,690; Feb. 13; v. 235; p. 461.
Car-wheel, Roller-bearing. H. C. Prox. No. 1,217,892; Feb. 27; v. 235; p. 1324.
Cars, Contact-shoe for third-rail electric. C. F. Raydure. No. 1,215,855; Feb. 13; v. 235; p. 518.
Cars, Draft-arm for railway-. L. T. Canfield. No. 1,214,510; Feb. 6; v. 235; p. 9.
Cars, Foot-control accelerator for motor-. G. W. Lord. No. 1,216,708; Feb. 20; v. 235; p. 871.
Cars, Friction buffing device for railway-. W. E. Wine. No. 1,215,457; Feb. 13; v. 235; p. 373.
Cars, Metallic roof for railway-. J. J. Souder. No. 1,215,213; Feb. 6; v. 235; p. 255.
Cars, Mounting for wheels and axles of mine-. W. A. Dorsey. No. 1,215,629; Feb. 13; v. 235; p. 439.
Cars, Mounting for wheels and axles of mine-. W. A. Dorsey. No. 1,215,630; Feb. 13; v. 235; p. 439.
Cars, Mounting for wheels and axles of mine-. W. A. Dorsey. No. 1,215,631; Feb. 13; v. 235; p. 440.
Cars, Muffler cut-out for motor-. N. A. Petry. No. 1,215,185; Feb. 6; v. 235; p. 245.
Cars, Safety-stop for mine-. W. D. Moon. No. 1,217,620; Feb. 27; v. 235; p. 1233.
Cars, System of suspension for tramway and railway. C. Delmez. No. 1,216,960; Feb. 20; v. 235; p. 956.
Cars, Wheel-mounting for mine-. W. A. Dorsey. No. 1,215,632; Feb. 13; v. 235; p. 440.
Carbon compounds, Hydrogenization and dehydrogenization of. C. Bosch, A. Mittasch, and C. Schneider. No. 1,216,933; Feb. 20; v. 235; p. 947.
Carborundum article and making it. G. A. Balz. No. 1,217,683; Feb. 27; v. 235; p. 1254.
Carbureter. G. A. F. Ahlberg. No. 1,216,043; Feb. 13; v. 235; p. 587.
Carbureter. J. L. Dressler. No. 1,214,767; Feb. 6; v. 235; p. 99.
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Carbureter. E. C. Richard. No. 1,216,843; Feb. 20; v. 235; p. 918.
Carbureter. H. C. Well. No. 1,216,027; Feb. 13; v. 235; p. 581.
Carbureter attachment for internal-combustion engines. G. A. Squire. No. 1,217,233; Feb. 27; v. 235; p. 1094.
Carbureter, Thermo-electric. C. F. Schulz. No. 1,216,613; Feb. 20; v. 235; p. 841.
Carbureters, Heating device for water-jacketed. R. A. Fisk. No. 1,216,301; Feb. 20; v. 235; p. 730.
Carbureting apparatus. F. W. O. Boeckem. No. 1,214,885; Feb. 6; v. 235; p. 140.
Card for mounting hair-pins and the like. H. M. Owens. No. 1,215,402; Feb. 13; v. 235; p. 354.
Card, Guide-. H. O. Jenkins. No. 1,215,542; Feb. 13; v. 235; p. 405.
Cards, photograph-frames, and other articles, Supporting-strut for show-. W. J. Brooks. No. 1,217,402; Feb. 27; v. 235; p. 1153.
Cards, Playing-. R. L. Hicks. No. 1,215,657; Feb. 13; v. 235; p. 449.
Carousels, Seat-hanger for. G. H. Cramer. No. 1,217,280; Feb. 27; v. 235; p. 1111.
Carpet-holding device. F. J. Petrusha. No. 1,216,602; Feb. 20; v. 235; p. 837.
Carriage and go-cart, Combination sleeper-. N. J. Kroll. No. 1,217,017; Feb. 20; v. 235; p. 976.
Carriage, Folding child's. A. T. Wannenwetsch. No. 1,215,085; Feb. 6; v. 235; p. 212.
Carrier: *See*—
Basket-carrier.
Cartridge-carrier.
Litter-carrier.
Mail-carrier.
Pack-carrier.
Plate-carrier.
Telephone-carrier.
Tire-carrier.
Watch-carrier.
Wire-carrier.
Carrying-hook. R. Richards and H. P. Marley. No. 1,216,362; Feb. 20; v. 235; p. 750.
Cart, Ash and garbage collecting and conveying. R. W. Vail. No. 1,214,976; Feb. 6; v. 235; p. 173.
Carton and dispenser, Combined. E. C. Baldwin. No. 1,217,682; Feb. 27; v. 235; p. 1254.
Cartridge-belt. W. C. Fisher. No. 1,217,736; Feb. 27; v. 235; p. 1272.
Cartridge-carrier. F. S. Carr. No. 1,214,895; Feb. 6; v. 235; p. 143.
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Cigar and match case.
Egg-case.
Involute case.
Photograph-case.
Thermometer-case.
Cash-register-locking mechanism. H. A. Martin. No. 1,215,567; Feb. 13; v. 235; p. 416.
Cash-register, Multiple-total-printing. H. A. Martin. No. 1,214,568; Feb. 6; v. 235; p. 29.
Cash-registers, Auxiliary indicating device for. O. E. Groshell. No. 1,217,753; Feb. 27; v. 235; p. 1278.
Casing-head and spider, Combination. W. B. Wigle. No. 1,217,853; Feb. 27; v. 235; p. 1311.
Cast-off. G. E. Prentice. No. 1,216,163; Feb. 13; v. 235; p. 630.
Casting fluid metals, Art of and apparatus for. H. H. Doehler. No. 1,214,904; Feb. 6; v. 235; p. 147.
Casting metals under an explosive-like pressure into molds, Process and device for. H. Talla. No. 1,217,662; Feb. 27; v. 235; p. 1248.
Casting-pot. G. Mellen. No. 1,216,341; Feb. 20; v. 235; p. 744.
Castings, Making tight. R. B. Wolf. No. 1,214,630; Feb. 6; v. 235; p. 52.
Castings shaking and jolting machine. V. J. Conces, Sr. No. 1,216,212; Feb. 13; v. 235; p. 647.
Catalytic agent. A. Mittasch, C. Schneider, and H. Morawitz. No. 1,215,396; Feb. 13; v. 235; p. 352.
Cattle-guard. A. Jochum. No. 1,216,814; Feb. 20; v. 235; p. 908.
Cattle-guard. E. J. Sortland. No. 1,217,651; Feb. 27; v. 235; p. 1245.
Cattle-killing device. A. Larson. No. 1,214,929; Feb. 6; v. 235; p. 156.
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Cellulose acetates to alter the solubilities thereof and product of said process, Process of treating. H. Dreyfus. No. 1,217,722; Feb. 27; v. 235; p. 1287.
Cellulose derivatives, Manufacture of. J. Koetschet and M. Theumann. No. 1,216,462; Feb. 20; v. 235; p. 787.
Cement-block mold. E. J. Dunn. No. 1,217,860; Feb. 27; v. 235; p. 1313.
Cement-can. A. G. Legge. No. 1,215,667; Feb. 13; v. 235; p. 453.
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Centrifugal extractors, Safety device for. W. Bartholomew and J. F. Broderick. No. 1,214,987; Feb. 6; v. 235; p. 179.
Centrifugal extractors, Safety-guard for. W. Bartholomew, J. F. Broderick, and F. Balzer. No. 1,214,988; Feb. 6; v. 235; p. 179.
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Easy-chair.
Invalid-chair.
Rail-chair.
School-chair.
Chair. R. H. Soper. No. 1,217,231; Feb. 27; v. 235; p. 1094.
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Chair attachment. E. Corbin. No. 1,216,287; Feb. 20; v. 235; p. 725.
Chair-seat, Spring. W. B. Foster. No. 1,215,790; Feb. 13; v. 235; p. 494.
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Chalk-holder. A. Yelin. No. 1,217,545; Feb. 27; v. 235; p. 1206.
Change-delivering machine. T. I. Potter. No. 1,215,408; Feb. 13; v. 235; p. 356.
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Chart, Writing-. C. E. Birch. No. 1,216,405; Feb. 20; v. 235; p. 768.
Chaser and mounting therefor. V. R. Koontz. No. 1,216,328; Feb. 20; v. 235; p. 739.
Check-controlled mechanism. H. Nias and W. Poster. No. 1,214,946; Feb. 6; v. 235; p. 162.
Chemical heater. C. A. B. Kincaid. No. 1,216,816; Feb. 20; v. 235; p. 909.
Chemical reactions, Carrying out. O. Serpek. No. 1,217,842; Feb. 27; v. 235; p. 1308.
Chilli-roaster. G. E. Lynch. No. 1,217,099; Feb. 20; v. 235; p. 1004.
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Meat-chopper.
Chopping-wheel. L. T. Wilkins. No. 1,216,033; Feb. 13; v. 235; p. 584.
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Christmas trees, decorations, &c., Ornament for. B. Wilmsen. No. 1,217,675; Feb. 27; v. 235; p. 1252.
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Cinch-grip. E. A. Grushus. No. 1,216,228; Feb. 13; v. 235; p. 652.
Cinematographic apparatus. J. Lehmann. No. 1,214,798; Feb. 6; v. 235; p. 109.
Cinematography, Color. C. N. Bennett. No. 1,217,391; Feb. 27; v. 235; p. 1149.
Circuit-controller. R. H. Manson. No. 1,215,566; Feb. 13; v. 235; p. 415.
Circuit-opener, Overload. E. O. Schweitzer. No. 1,214,718; Feb. 6; v. 235; p. 84.
Circuit-protecting device. E. O. Schweitzer and N. J. Conrad. No. 1,215,722; Feb. 13; v. 235; p. 471.

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Belt-clamp.
Concrete-form clamp.
Column-clamp.
Meat-clamp.
Pulley-clamp.
Saw-clamp.
Suspension-clamp.
Wire-clamp.
Clamp. A. B. Underwood. No. 1,217,539; Feb. 27; v. 235; p. 1204.
Clamping appliance. P. and C. R. Dosch. No. 1,214,521; Feb. 6; v. 235; p. 13.
Clamping mechanism. W. T. Sears. (Reissue.) No. 14,203; Feb. 20; v. 235; p. 1020.
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Lingerie-clasp.
Securing-clasp.
Clasp. T. R. Kilkenny. No. 1,214,794; Feb. 6; v. 235; p. 108.
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Flue-cleaner.
Grate-cleaner.
Pipe-cleaner.
Suction-cleaner.
Vacuum-cleaner.
Wind-shield cleaner.
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Plaster-board-supporting metal clip.
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Clock and attachment therefor, Alarm-. J. Stewart. No. 1,217,523; Feb. 27; v. 235; p. 1198.
Clock and home savings-bank, Combination. E. A. Klages. No. 1,216,138; Feb. 13; v. 235; p. 622.
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Clock, Self-leveling. J. A. Pixler. No. 1,216,727; Feb. 20; v. 235; p. 878.
Clocks, Tripping attachment for. D. H. and T. H. Tillery. No. 1,214,843; Feb. 6; v. 235; p. 124.
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Cloth folding and winding machine. C. Buhl. No. 1,216,280; Feb. 20; v. 235; p. 722.
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Coal handling and storing apparatus. J. B. Phillips. No. 1,216,603; Feb. 20; v. 235; p. 837.
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Coat-hanger. G. A. Kimball. No. 1,214,926; Feb. 6; v. 235; p. 156.
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Coffee extract, Aromatizing dry. K. Åslund and T. Boberg. No. 1,214,875; Feb. 6; v. 235; p. 136.
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Comb-cleaner. A. Foster. No. 1,216,977; Feb. 20; v. 235; p. 963.
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Compass, Recording-. B. W. Benbow. No 1,216,201; Feb. 13; v. 235; p. 643.
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Compound, Metallic. H. B. Coho. No. 1,217,711; Feb. 27; v. 235; p. 1263.
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Concentrator. J. B. Green. No. 1,216,798; Feb. 20; v. 330; p. 904.
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Concrete, Combined mold and face-plate for. G. Benisch. No. 1,216,649; Feb. 20; v. 235; p. 852.
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Concrete floor construction, Combination tie and gage member for reinforced-. W. B. Hough. No. 1,214,790; Feb. 6; v. 235; p. 106.
Concrete floors, Apparatus for constructing. N. F. Amburgen. No. 1,216,644; Feb. 20; v. 235; p. 851.
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Car, train-pipe, and electric coupling.
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Hose and pipe coupling.
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Feeding and filling machine. M. Sleeth. No. 1,217,847; Feb. 27; v. 235; p. 1309.
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Feeding apparatus, Stock-. F. E. Bass. No. 1,216,050; Feb. 13; v. 235; p. 590.
Feeding device. J. I. Holcomb. No. 1,216,120; Feb. 13; v. 235; p. 614.
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Insulating composition. L. H. Backeland. No. 1,216,266; Feb. 20; v. 235; p. 717.
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Crate-top lock.
Door-lock.
Knob-lock.
Lamp-lock.
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Margarin, Manufacture of. K. Erslev. No. 1,216,675; Feb. 20; v. 235; p. 860.
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Pedal-pad.
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Pastry-making machine. F. A. Bruckman. No. 1,216,275; Feb. 20; v. 235; p. 720.
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Roofing. L. F. McNally. No. 1,217,196; Feb. 27; v. 235; p. 1082.
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Rope-making machine. N. E. Sherwood. No. 1,215,584; Feb. 13; v. 235; p. 422.
Ropes, Marking device for. M. C. Dodge. No. 1,216,964; Feb. 20; v. 235; p. 958.
Rotary cutter. J. L. Megathlin. No. 1,217,108; Feb. 20; v. 235; p. 1007.
Rotary cutter for sugar-cane and the like. J. Meinecke. No. 1,217,326; Feb. 27; v. 235; p. 1126.
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Rotary engine. E. M. Long. No. 1,217,789; Feb. 27; v. 235; p. 1290.
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Round box. C. R. and J. J. Meldrim. No. 1,215,956; Feb. 13; v. 235; p. 556.
Rowing-machine. W. C. Firth. No. 1,217,292; Feb. 27; v. 235; p. 1115.
Rubber-cloth and the like, Trimming device for. O. E. Heckman. No. 1,216,315; Feb. 20; v. 235; p. 735.
Rubber composition and making the same. M. F. Coughlin. No. 1,217,157; Feb. 27; v. 235; p. 1070.
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Rubber treads, Plug for. G. E. Rollins. No. 1,217,881; Feb. 27; v. 235; p. 1320.
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Salts of acetylsalicylic acid and manufacture of same. O. Gerngross and H. Kast. No. 1,217,862; Feb. 27; v. 235; p. 1314.
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Sewerage-screen. Wire screen.
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Skylight and ventilating means for hog-houses. C. O. Whitnell. No. 1,216,194; Feb. 13; v. 235; p. 641.
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Sparking in direct-current machines, Means for preventing. A. Fahrmbacher. No. 1,215,787; Feb. 13; v. 235; p. 493.
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Cord holder and cutter. J. N. Schramm. No. 50,362; Feb. 20; v. 235; p. 1027.
Crib, Nursery-. A. W. Jansen. No. 50,273; Feb. 6; v. 235; p. 302.
Dish. J. E. Goodwin. No. 50,383; Feb. 27; v. 235; p. 1328.
Display-case with mirror. M. A. Skall. No. 50,268; Feb. 6; v. 235; p. 301.
Doll. A. Cassidy. No. 50,294; Feb. 13; v. 235; p. 665.
Doll. M. E. D. McConnell. No. 50,313; Feb. 13; v. 235; p. 668.
Doll, Boy. A. Morse. No. 50,315; Feb. 13; v. 235; p. 669.
Doll, Girl. A. Morse. No. 50,314; Feb. 13; v. 235; p. 669.
Doll, Hawaiian. E. E. Merrill. No. 50,330; Feb. 13; v. 235; p. 672.
Electric-light fixture. G. R. Ainsworth. Nos. 50,331–3; Feb. 20; v. 235; pp. 1021–2.
Eyeglasses, Pair of. R. A. Heckroth. No. 50,385; Feb. 27; v. 235; p. 1328.
Fabric, Textile. E. E. Emmerich. No. 50,379; Feb. 27; v. 235; p. 1327.
Fabric, Textile. E. I. Hanson. Nos. 50,302–7; Feb. 13; v. 235; pp. 666–7.
Fabric, Textile. E. I. Hanson. No. 50,384; Feb. 27; v. 235; p. 1328.
Feed-trough switch. C. J. Klein. No. 50,353; Feb. 20; v. 235; p. 1025.
Fork. A. J. Rowland. No. 50,284; Feb. 6; v. 235; p. 304.
Fuse-plug cap. G. B. Thomas. No. 50,366; Feb. 20; v. 235; p. 1028.
Game-board. M. G. Clark. No. 50,339; Feb. 20; v. 235; p. 1023.
Game-board. W. W. Plimpton. No. 50,403; Feb. 27; v. 235; p. 1332.
Gas and electric fixtures, Shower-plate for. S. Shapiro. No. 50,287; Feb. 6; v. 235; p. 304.
Glass article. F. L. Andrews. No. 50,334; Feb. 20; v. 235; p. 1022.
Glass article. E. M. Bottome. No. 50,336; Feb. 20; v. 235; p. 1022.
Glass article. R. Haley. Nos. 50,348–50; Feb. 20; v. 235; pp. 1024–5.
Glass article. D. F. Provance. Nos. 50,357–9; Feb. 20; v. 235; p. 1026.
Glass article. C. L. Sullivan. No. 50,365; Feb. 20; v. 235; p. 1028.
Glass plate. J. E. Miller. No. 50,401; Feb. 27; v. 235; p. 1331.
Glass receptacle. A. Wiczlan. No. 50,369; Feb. 20; v. 235; p. 1028.
Glass vessel. T. C. Heisey. No. 50,351; Feb. 20; v. 235; p. 1025.
Glass vessel. J. E. Miller. Nos. 50,396–400; Feb. 27; v. 235; pp. 1330–1.
Goblet. J. E. Miller. No. 50,402; Feb. 27; v. 235; p. 1331.
Hammer-head. J. J. Sprenger and L. Sorensen. No. 50,407; Feb. 27; v. 235; p. 1332.
Ice-cream-cone holder. E. E. Kelley. No. 50,276; Feb. 6; v. 235; p. 302.
Jar-ring. C. W. Joslin. No. 50,389; Feb. 27; v. 235; p. 1329.
Lace, Embroidered. H. Schwarber. Nos. 50,325–6; Feb. 13; v. 235; p. 671.
Lace paper. C. W. Hamilton. No. 50,301; Feb. 13; v. 235; p. 666.
Lighting-fixture. R. Y. Barrows and G. V. Strahan. No. 50,263; Feb. 6; v. 235; p. 299.
Lighting-fixture. R. Y. Barrows and G. V. Strahan. No. 50,335; Feb. 20; v. 235; p. 1022.
Lighting-fixtures, Wall-plate for. R. Y. Barrows and G. V. Strahan. No. 50,264; Feb. 6; v. 235; p. 300.
Lock-casing. S. Segal. No. 50,286; Feb. 6; v. 235; p. 304.
Lock-casing and handle. A. H. Ehrlich. No. 50,376; Feb. 27; v. 235; p. 1326.
Magneto-bracket. W. H. Butterfield. No. 50,338; Feb. 20; v. 235; p. 1022.
Moisteper for envelops and other articles. C. F. Kimpton. No. 50,309; Feb. 13; v. 235; p. 668.
Mud-guard and splasher attachment, Curved drop-side. W. R. Green. No. 50,345; Feb. 20; v. 235; p. 1024.
Mud-guard and splasher attachment, Drop-side. W. R. Green. No. 50,346; Feb. 20; v. 235; p. 1024.
Paper-clip. W. F. Peet. No. 50,283; Feb. 6; v. 235; p. 303.
Paper sheet or similar article. W. D. Henry. No. 50,386; Feb. 27; v. 235; p. 1328.
Paring, and coring knife, Grape-fruit. J. J. Mendenhall. No. 50,278; Feb. 6; v. 235; p. 302.
Phonograph-cabinet. H. Sheble. Nos. 50,363–4; Feb. 20; v. 235; p. 1027.
Piano-case. H. J. La Joie. No. 50,277; Feb. 6; v. 235; p. 302.
Picture-frame. J. Tirpak. No. 50,410; Feb. 27; v. 235; p. 1333.
Pistol. C. F. Lefever. No. 50,354; Feb. 20; v. 235; p. 1025.
Plate. G. L. Schupp. No. 50,324; Feb. 13; v. 235; p. 671.
Plate or similar article. H. H. Brown. No. 50,337; Feb. 20; v. 235; p. 1022.
Plate or similar article. R. Erlebach. No. 50,342; Feb. 20; v. 235; p. 1023.
Platter or similar article. G. P. Ittig. No. 50,387; Feb. 27; v. 235; p. 1328.
Play-yard, Nursery. A. W. Jansen. No. 50,274; Feb. 6; v. 235; p. 302.
Poison-marker. A. M. Wilson. No. 50,371; Feb. 20; v. 235; p. 1029.
Reflector, Light-diffusing. A. B. L. Clausen. No. 50,267; Feb. 6; v. 235; p. 300.
Register-cord hanger. F. T. Lawton. No. 50,311; Feb. 13; v. 235; p. 668.
Ring. C. A. Bickford. No. 50,293; Feb. 13; v. 235; p. 665.
Salt and pepper cellar, Combination. C. D. Gilmore. No. 50,344; Feb. 20; v. 235; p. 1023.
Shed, Shelter-. O. W. Norcross. No. 50,281; Feb. 6; v. 235; p. 303.
Sign, Electric. M. Norden. No. 50,356; Feb. 20; v. 235; p. 1026.
Sign-post. W. H. Lienesch. No. 50,392; Feb. 27; v. 235; p. 1329.
Soap and other toilet articles, Wall-receptacle for. S. D. Baker. No. 50,291; Feb. 13; v. 235; p. 664.
Soap, Cake of. A. L. Schwartzberg. No. 50,285; Feb. 6; v. 235; p. 304.
Spoon, fork, and the like. H. B. O'Brien. No. 50,321; Feb. 13; v. 235; p. 670.
Spoon, fork, or similar article. A. L. Barney. No. 50,375; Feb. 27; v. 235; p. 1326.
Spoon, fork, or similar article. R. R. Kintz. No. 50,391; Feb. 27; v. 235; p. 1329.
Spoon, fork, or similar article. S. Stohr. No. 50,408; Feb. 27; v. 235; p. 1333.

Spoon, fork, or similar article, Handle for a. G. E. Ball. No. 50,292; Feb. 13; v. 235; p. 665.
Spoon or analogous utensil, Handle for a. G. N. Allen. No. 50,288; Feb. 13; v. 235; p. 664.
Spoon, Toasting-. N. Madson. No. 50,393; Feb. 27; v. 235; p. 1329.
Spoons, forks, or analogous utensils, Handle for. G. N. Allen. Nos. 50,256–62; Feb. 6; v. 235; pp. 298–9.
Talking-machines, Casing for winding attachments for. J. W. Jones. No. 50,388; Feb. 27; v. 235; p. 1329.
Tire, Automobile-. R. H. Keaton. No. 50,352; Feb. 20; v. 235; p. 1025.
Tire, Automobile-. P. and B. De Mattia. No. 50,269; Feb. 6; v. 235; p. 301.
Tire, Automobile-. C. B. Reynolds. No. 50,360; Feb. 20; v. 235; p. 1027.
Tire, Automobile-. W. A. Robbins. No. 50,361; Feb. 20; v. 235; p. 1027.
Tire-casing. G. W. Odell. No. 50,282; Feb. 6; v. 235; p. 303.
Tire-tread. A. L. Breitenstein. No. 50,265; Feb. 6; v. 235; p. 300.
Tire-tread. W. D. Freese. No. 50,380; Feb. 27; v. 235; p. 1327.
Tool, Combination-. G. W. Funk. No. 50,381; Feb. 27; v. 235; p. 1327.
Toy. A. D. Converse. No. 50,340; Feb. 20; v. 235; p. 1023.
Toy. A. Sander. No. 50,405; Feb. 27; v. 235; p. 1332.
Toy. E. H. Swetland. No. 50,409; Feb. 27; v. 235; p. 1333.
Toy banking-room. C. L. Glenn. No. 50,382; Feb. 27; v. 235; p. 1328.
Toy cannon. L. Y. Williams. No. 50,370; Feb. 20; v. 235; p. 1028.
Toy Figure. A. Morse. Nos. 50,316–20; Feb. 13; v. 235; pp. 669–70.
Toy rabbit., N. S. Toliver. No. 50,367; Feb. 20; v. 235; p. 1028.
Vase, Cemetery flower-. W. H. Mohr. No. 50,279; Feb. 6; v. 235; p. 303.
Vase, Hanging. S. T. White. No. 50,329; Feb. 13; v. 235; p. 672.
Vehicle, Frame of a child's. A. T. Manchester. No. 50,394; Feb. 27; v. 235; p. 1330.
Vending and weighing machines, Casing for combined. C. E. McAdow. No. 50,312; Feb. 13; v. 235; p. 668.
Wardrobe, Nursery-. A. W. Jansen. No. 50,275; Feb. 6; v. 235; p. 302.
Washstand. A. W. Jansen. No. 50,272; Feb. 6; v. 235; p. 301.
Watch-fob clasp. W. C. Fisk. No. 50,343; Feb. 20; v. 235; p. 1023.
Wrench. J. P. Worthington. No. 50,372; Feb. 20; v. 235; p. 1029.

ALPHABETICAL LIST OF TRADE-MARKS.

Ale and extra porter, Stock-. Consolidated Bottling Co. No. 115,592; Feb. 27; v. 235; p. 1349.
Angles, beams, bars, columns, &c., Structural. A. M. Castle & Co. No. 115,299; Feb. 6; v. 235; p. 318.
Apples, coffee, oleomargarin, jelly. Meyer & Degerdon. No. 115,367; Feb. 6; v. 235; p. 320.
Attachment-plugs, lamp-sockets, and outlet-box receptacles. The Best Electric Company. No. 115,283; Feb. 6; v. 235; p. 317.
Automobile, furniture, piano, &c., polishing materials. The Fell Manufacturing Company. No. 115,498; Feb. 20; v. 235; p. 1049.
Automobiles. Elgin Motor Car Corporation. No. 115,318; Feb. 6; v. 235; p. 318.
Automobiles. E. Landgren. No. 115,352; Feb. 6; v. 235; p. 319.
Baby-jumpers. C. R. Patten & Co. No. 115,381; Feb. 6; v. 235; p. 320.
Battery, Dry. Gold Seal Battery & Electric Co. No. 115,326; Feb. 6; v. 235; p. 319.
Battery-jars. India Rubber Company. No. 115,617; Feb. 27; v. 235; p. 1350.
Bed and douche pans. Meinecke & Company. No. 115,640; Feb. 27; v. 235; p. 1351.
Beeswax. American Sugar Company. No. 115,429; Feb. 13; v. 235; p. 691.
Benzaldehyde. Fries & Fries. No. 115,501; Feb. 20; v. 235; p. 1050.
Beverage, a soft drink, Non-alcoholic. Lexington Brewing Company. No. 115,639; Feb. 27; v. 235; p. 1351.
Beverage to be sold as a soft drink, Non-alcoholic carbonated. W. B. Crane & Company. No. 115,593; Feb. 27; v. 235; p. 1349.
Beverages and syrups used in the making thereof, Non-alcoholic. S. C. Allen. No. 115,472; Feb. 20; v. 235; p. 1049.
Beverages, Non-intoxicating malt. A. G. Van Nostrand. No. 115,702; Feb. 27; v. 235; p. 1353.
Bibs and cocks or faucets. The Haydenville Company. No. 115,448; Feb. 13; v. 235; p. 691.
Bits, spurs, stirrups, and saddlery hardware. August Buermann Manufacturing Company. No. 115,295; Feb. 6; v. 235; p. 318.
Bleaching and cleaning compounds. Charles McAdam Co. No. 115,525; Feb. 20; v. 235; p. 1050.
Bluing, ammonia, baking-powder, &c. Sherer-Gillett Company. No. 115,403; Feb. 6; v. 235; p. 321.
Board, Wall-. The Beaver Board Companies. No. 115,479; Feb. 20; v. 235; p. 1049.
Bolts, Toggle-. Rubly Company. No. 115,668; Feb. 27; v. 235; p. 1352.
Books and advertising-booklets, Instruction-. School of Applied Art. No. 115,670; Feb. 27; v. 235; p. 1352.
Books and circulars. Benziger Brothers. No. 115,432; Feb. 13; v. 235; p. 691.
Books and writing-paper, Blank. National Blank Book Co. No. 115,530; Feb. 20; v. 235; p. 1051.
Boots and shoes. D. J. Cameron. Nos. 115,484–5; Feb. 20; v. 235; p. 1049.
Boots and shoes, Leather. The Adams & Ford Company. No. 115,569; Feb. 27; v. 235; p. 1349.
Boots and shoes, Leather. Lund-Mauldin Company. No. 115,523; Feb. 20; v. 235; p. 1050.
Boots and shoes, Men's, women's, and children's leather. A. Hinchuk & Co. No. 115,616; Feb. 27; v. 235; p. 1350.
Boots and shoes of leather, rubber, felt, &c. Thomas G. Plant Company. No. 115,658; Feb. 27; v. 235; p. 1351.
Boots and shoes of kid, leather, and canvas. The Kaut-Reith Shoe Company. No. 115,621; Feb. 27; v. 235; p. 1350.
Boots and shoes of rubber, leather, and canvas. United States Rubber Company. No. 115,701; Feb. 27; v. 235; p. 1353.
Bottle-openers. The Crown Cork and Seal Co. of Baltimore City. No. 115,312; Feb. 6; v. 235; p. 318.
Bottle-stoppers and droppers, Combined. T. J. Snyder. No. 115,545; Feb. 20; v. 235; p. 1051.
Boxes and packing-cases. Wirebounds Corporation. No. 115,427; Feb. 6; v. 235; p. 322.
Brass, copper, cupro-nickel, gilding metal, and German silver in sheets, &c. Stamford Rolling Mills Company. No. 115,683; Feb. 27; v. 235; p. 1352.
Bread. Ward Baking Company. No. 115,706; Feb. 27; v. 235; p. 1353.
Breath-tablets. The Reese Company. No. 115,464; Feb. 13; v. 235; p. 692.
Brushes, Shaving-. L. D. Coriell. No. 115,568; Feb. 20; v. 235; p. 1052.
Butter, eggs, and cheese. Beyer Bros. No. 115,285; Feb. 6; v. 235; p. 317.
Cakes. Loose-Wiles Biscuit Company. No. 115,640; Feb. 27; v. 235; p. 1351.
Cakes and cookies. Iten Biscuit Co. Nos. 115,342–3; Feb. 6; v. 235; p. 319.
Candies. Reed Chocolate Co. No. 115,663; Feb. 27; v. 235; p. 1352.
Candies and confections. Kellogg Toasted Corn Flake Co. No. 115,348; Feb. 6; v. 235; p. 319.
Candies, chocolates, bonbons, &c. L. R. Fenn. No. 115,323; Feb. 6; v. 235; p. 318.
Candy. Bunte Brothers. No. 115,296; Feb. 6; v. 235; p. 318.
Candy. Miller-Elmer Manufacturing Co. No. 115,368; Feb. 6; v. 235; p. 320.
Candy. Ridley's, The Old Chambers St. Candy Manufactory. No. 115,394; Feb. 6; v. 235; p. 321.
Candy-corn and marshmallow-biscuit. Oriental Candy Company. No. 115,461; Feb. 13; v. 235; p. 692.
Candy, particularly caramel candy. Kibbe Bros. Company. Nos. 115,627–32; Feb. 27; v. 235; pp. 1350–1.
Candy, particularly chocolates. Kibbe Bros. Company. No. 115,350; Feb. 6; v. 235; p. 319.
Canned fish, vegetables, and fruits, preserved fruits. Strohmeyer & Arpe Company. No. 115,686; Feb. 27; v. 235; p. 1352.
Canned fruits. Griffith-Durney Company. No. 115,327; Feb. 6; v. 235; p. 319.
Canned fruits and vegetables. H. C. Hemingway & Co. No. 115,612; Feb. 27; v. 235; p. 1350.
Canned fruits and vegetables. The H. D. Lee Mercantile Co. No. 115,354; Feb. 6; v. 235; p. 319.
Canned fruits and vegetables, salmon, hominy, &c. M. O'Connor and Company. No. 115,377; Feb. 6; v. 235; p. 320.
Canned fruits, vegetables, salmon, hominy, &c. McKnight-Keaton Grocery Co. No. 115,364; Feb. 6; v. 235; p. 320.
Canned pork and beans. The Cudahy Packing Company. No. 115,313; Feb. 6; v. 235; p. 318.
Canned raw oysters. W. Heyser. No. 115,338; Feb. 6; v. 235; p. 319.
Canned vegetables. Burton & Davis Co. No. 115,297; Feb. 6; v. 235; p. 318.
Carbon, Cleansers for the removal of. Rosenthal Manufacturing Company. No. 115,540; Feb. 20; v. 235; p. 1051.
Cartridges, loaded and empty, Shotgun-. The Remington Arms Union Metallic Cartridge Company. No. 115,388; Feb. 6; v. 235; p. 320.
Caskets. Boyertown Burial Casket Co. No. 115,289; Feb. 6; v. 235; p. 317.
Castings, Gray iron metal. Arvac Manufacturing Company. No. 115,677; Feb. 27; v. 235; p. 1349.
Cement, Fire-brick. Quigley Furnace Specialties Co. No. 115,538; Feb. 20; v. 235; p. 1051.
Cement, Portland. Universal Portland Cement Company. No. 115,560; Feb. 20; v. 235; p. 1051.
Cereal, Breakfast. Cream of Rice Co. No. 115,311; Feb. 6; v. 235; p. 318.
Cereal of oats, corn, or wheat and dried and desiccated vegetables. John Thompson & Sons. No. 115,414; Feb. 6; v. 235; p. 321.
Chair, Child's dressing-. V. C. Palmer. No. 115,535; Feb. 20; v. 235; p. 1051.
Chemical and pharmaceutical preparations, Certain named. Aseptic Products Company. No. 115,475; Feb. 20; v. 235; p. 1049.
Chemical apparatus used as a game or toy. The Porter Chemical Company. No. 115,537; Feb. 20; v. 235; p. 1051.
Chemicals, medicines, and pharmaceutical preparations, Certain named. Ampoule Drug Company. No. 115,272; Feb. 6; v. 235; p. 317.
Chocolate, Drinking-. Stephen F. Whitman & Son. No. 115,423; Feb. 6; v. 235; p. 321.
Chromes and white lead in oil, Scarlet and basic. International Color & Chemical Co. No. 115,618; Feb. 27; v. 235; p. 1350.
Cigarette-papers. Waldes & Co. No. 115,563; Feb. 20; v. 235; p. 1052.
Cigars. E. A. Filene. No. 115,603; Feb. 27; v. 235; p. 1350.
Cigars. M. A. Gunst & Co. No. 115,608; Feb. 27; v. 235; p. 1350.
Cigars. Y. Pendas & Alvarez. No. 115,662; Feb. 27; v. 235; p. 1352.
Cigars. Theobald and Oppenheimer Company. Nos. 115,690–91; Feb. 27; v. 235; p. 1352.
Cigars. United Cigar Manufacturers Company. Nos. 115,698–9; Feb. 27; v. 235; p. 1353.

Cleansing-paste for the hands, fabrics, pots and pans, laundry, and bathing. Kil-Grece Company. No. 115,521; Feb. 20; v. 235; p. 1050.
Clocks and watches. J. & J. Sales Company. No. 115,515; Feb. 20; v. 235; p. 1050.
Clothing, Certain named. Henry Sonneborn & Co. No. 115,547; Feb. 20; v. 235; p. 1051.
Clothing, Certain named. Union Special Machine Company. No. 115,700; Feb. 27; v. 235; p. 1353.
Coal-saving compound, Chemical. J. Jaffe. No. 115,344; Feb. 6; v. 235; p. 319.
Coats, vests, and trousers, Men's and children's. L. Shapiro & Co. No. 115,402; Feb. 6; v. 235; p. 321.
Coffee. Bowers Bros. No. 115,288; Feb. 6; v. 235; p. 317.
Coffee. New Orleans Coffee Co. No. 115,657; Feb. 27; v. 235; p. 1351.
Coffee. Royal Valley Coffee Co. No. 115,397; Feb. 6; v. 235; p. 321.
Coffee and substitutes for coffee. Whole Wheat Coffee Company. No. 115,711; Feb. 27; v. 235; p. 1353.
Coffee and tea. Mutual Coffee Co. No. 115,372; Feb. 6; v. 235; p. 320.
Coffee substitute. Coffetone Manufacturing Company. No. 115,306; Feb. 6; v. 235; p. 315.
Coin-box. A. Heath. No. 115,335; Feb. 6; v. 235; p. 319.
Collars and shirts. Hall, Hartwell & Co. No. 115,609; Feb. 27; v. 235; p. 1350.
Colors for painters' use, Dry. E. M. & F. Waldo. No. 115,564; Feb. 20; v. 235; p. 1052.
Compendium of the silk industry, Technical. The Silk Guide, Inc. No. 115,542; Feb. 20; v. 235; p. 1051.
Composition for stopping leaks, eliminating rust, &c. H. J. Stern. No. 115,684; Feb. 27; v. 235; p. 1352.
Composition formed of solid material treated with a combustible chemical. Barlow Oil Co. No. 115,579; Feb. 27; v. 235; p. 1349.
Cookies. Loose-Wiles Biscuit Company. No. 115,361; Feb. 6; v. 235; p. 320.
Cookies. Loose-Wiles Biscuit Company. No. 115,641; Feb. 27; v. 235; p. 1351.
Cordials. Luyties Brothers. No. 115,643; Feb. 27; v. 235; p. 1351.
Cork composition for gaskets and washers. Armstrong Cork Company. No. 115,474; Feb. 20; v. 235; p. 1049.
Cornets, trombones, altos, tenors, &c. Lyon & Healy. No. 115,524; Feb. 20; v. 235; p. 1050.
Corsets. Lily of France Corset Co. No. 115,358; Feb. 6; v. 235; p. 319.
Corsets, pantaloons for men, women, and children, skirt-protectors, &c. Protexwel Manufacturing Corporation. No. 115,387; Feb. 6; v. 235; p. 320.
Cotton for linings, Mercerized. The D. H. Arnold Co. No. 115,575; Feb. 27; v. 235; p. 1349.
Cotton piece goods. Amoskeag Manufacturing Company. No. 115,430; Feb. 13; v. 235; p. 691.
Cotton piece goods. R. del Castillo & Company. No. 115,488; Feb. 20; v. 235; p. 1049.
Cotton piece goods. J. T. Richman. No. 115,393; Feb. 6; v. 235; p. 321.
Cotton-waste especially adapted for cleaning and polishing automobiles. W. C. Perry. No. 115,383; Feb. 6; v. 235; p. 320.
Cough-drops, Candy. McDowell, Pyle & Co. No. 115,526; Feb. 20; v. 235; p. 1050.
Cutlery, machinery, and tools and parts thereof, Certain named. The National Safety Appliance Company. No. 115,655; Feb. 27; v. 235; p. 1351.
Cutlery, machinery, and tools, Certain named. Armstrong Bros. Tool Co. No. 115,574; Feb. 27; v. 235; p. 1349.
Cutters, Glass, tube, oval, and circle. The Fletcher, Terry Company. No. 115,324; Feb. 6; v. 235; p. 318.
Cutting and welding, Certain instruments and parts used for. Carbo-Hydrogen Company of America. No. 115,487; Feb. 20; v. 235; p. 1049.
Dental paste, almond and cold creams. A. Wald. No. 115,562; Feb. 20; v. 235; p. 1052.
Dental tools and supplies. The Cleveland Dental Manufacturing Company. No. 115,305; Feb. 6; v. 235; p. 318.
Dentists' tablets for use in the treatment of teeth. J. A. Gardner. No. 115,444; Feb. 13; v. 235; p. 691.
Derails, Metal. The Madden Company. No. 115,644; Feb. 27; v. 235; p. 1351.
Display stands, cases, and supports for electric-light outfits, &c. The Hawthorne Manufacturing Company Incorporated. No. 115,611; Feb. 27; v. 235; p. 1350.
Drink, Soft. Morris & Morris. No. 115,369; Feb. 6; v. 235; p. 320.
Drinks, Certain named soft. The S. & S. Water Company. No. 115,669; Feb. 27; v. 235; p. 1352.
Drinks, Water and soft. J. S. Merrill. No. 115,648; Feb. 27; v. 235; p. 1351.
Duck, Cotton. Wellington, Sears & Company. No. 115,709; Feb. 27; v. 235; p. 1353.
Duplicating or multicopying machines. Duplicator Manufacturing Company. No. 115,497; Feb. 20; v. 235; p. 1049.
Electrical apparatus, machines, and supplies, Certain named. Ford Motor Company. No. 115,500; Feb. 20; v. 235; p. 1050.
Engines, Oil-. Sears, Roebuck and Co. No. 115,676; Feb. 27; v. 235; p. 1352.
Extracts derived from chestnut woods. Kingsport Extract Corporation. No. 115,635; Feb. 27; v. 235; p. 1351.
Fasteners of all kinds, Snap-. Waldes & Co. No. 115,469; Feb. 13; v. 235; p. 692.
Feed for horses, mules, cattle, and chickens, Cereal. W. Sturges. No. 115,687; Feb. 27; v. 235; p. 1352.
Feed, Poultry. Sears, Roebuck and Co. No. 115,677; Feb. 27; v. 235; p. 1352.
Fertilizer. The Molassine Company. No. 115,651; Feb. 27; v. 235; p. 1351.
Fertilizers. Hampton Guano Company. No. 115,332; Feb. 6; v. 235; p. 319.
Fertilizers and acid phosphate, Complete. Southern Fertilizer & Chemical Company. No. 115,406; Feb. 6; v. 235; p. 321.
Fiber used for plastering purposes. Tomkins Brothers. No. 115,416; Feb. 6; v. 235; p. 321.
Fire-kindlers. Hobo Manufacturing Co. No. 115,513; Feb. 20; v. 235; p. 1050.
Flour, more specifically self-rising flour, Wheat-. Trenton Milling Co. No. 115,694; Feb. 27; v. 235; p. 1353.
Flour, Self-rising wheat-. Hezel Milling Company. No. 115,614; Feb. 27; v. 235; p. 1350.
Flour, Self-rising wheat-. Melrose Milling Company. No. 115,647; Feb. 27; v. 235; p. 1351.
Flour, Wheat-. Jos. Loudenslager Estate. No. 115,368; Feb. 6; v. 235; p. 320.
Flour, Wheat-. Prange Milling Company. Nos. 115,660–1; Feb. 27; v. 235; pp. 1351–2.
Flour, Wheat-. Washburn-Crosby Co. Nos. 115,707–8; Feb. 27; v. 235; p. 1353.
Flours, Wheat, Graham, and pancake. C. C. Replogle. No. 115,391; Feb. 6; v. 235; p. 321.
Flowers, bridal wreaths, bouquets, &c., Artificial. Dorros Bros. No. 115,440; Feb. 13; v. 235; p. 691.
Food and wheat-flour, Cereal breakfast. A. H. Scoble. No. 115,401; Feb. 6; v. 235; p. 321.
Food for infants, Milk. The Bacchus Marsh Concentrated Milk Co. No. 115,365; Feb. 6; v. 235; p. 320.
Food, Horse, mule, cattle, poultry, hog, and sheep. The Big Four Milling Company. No. 115,581; Feb. 27; v. 235; p. 1349.
Foods and ingredients of foods, Certain named. Baltimore Pearl Hominy Company. No. 115,278; Feb. 6; v. 235; p. 317.
Foods and ingredients of foods, Certain named. Decatur Extract Co. No. 115,315; Feb. 6; v. 235; p. 318.
Foods and ingredients of foods, Certain named. Rust-Parker Company. No. 115,399; Feb. 6; v. 235; p. 321.
Foods, Certain named. Gunns Limited. No. 115,607; Feb. 27; v. 235; p. 1350.
Foodstuffs for cattle and other animals consisting of cotton-seed meal. Union Seed & Fertilizer Company. No. 115,696; Feb. 27; v. 235; p. 1353.
Freezers, Liquid-. Auto Vacuum Freezer Company. No. 115,277; Feb. 6; v. 235; p. 317.
Fruit paste having laxative properties. Fruitone Company. No. 115,443; Feb. 13; v. 235; p. 691.
Fruits and vegetables, Raw. W. Heyser. No. 115,618; Feb. 27; v. 235; p. 1350.
Fruits, Citrus. S. C. Bass. No. 115,281; Feb. 6; v. 235; p. 317.
Furniture, automobile, &c., polish. The E. W. Hayden Co. No. 115,510; Feb. 20; v. 235; p. 1050.
Furniture, Certain named. Deltox Grass Rug Company. No. 115,494; Feb. 20; v. 235; p. 1049.
Furniture cleaner and polish. Excelsior Manufacturing Co. No. 115,320; Feb. 6; v. 235; p. 318.
Furniture, Household, store, and office. L. E. Wiser. No. 115,428; Feb. 6; v. 235; p. 322.
Furniture-polish. R. V. Taylor. No. 115,553; Feb. 20; v. 235; p. 1051.
Fuses, Inclosed-fuse cut-outs and clips, contacts, and blocks, Inclosed. The Johns-Pratt Company. No. 115,620; Feb. 27; v. 235; p. 1350.
Game played with a ball and cue, as in billiards. J. E. Brown. No. 115,292; Feb. 6; v. 235; p. 317.
Games. Milton Bradley Co. No. 115,483; Feb. 20; v. 235; p. 1049.
Games, toys, and sporting goods, Certain named. Slazengers, Limited. No. 115,404; Feb. 6; v. 235; p. 321.
Garment and hose supporters, Children's. Crown Suspender Company. No. 115,493; Feb. 20; v. 235; p. 1049.
Gear-shift. Wenzell Specialty Company. No. 115,710; Feb. 27; v. 235; p. 1353.
Gear-shift for machine parts. Wenzell Specialty Company. No. 115,566; Feb. 20; v. 235; p. 1052.
Gears. The Anderson Rolled Gear Company. No. 115,572; Feb. 27; v. 235; p. 1349.
Ginghams. Delgado Mills. No. 115,438; Feb. 13; v. 235; p. 691.
Glassware, Certain named. General Electric Company. No. 115,504; Feb. 20; v. 235; p. 1050.
Glassware, Certain named. Passow & Sons. No. 115,536; Feb. 20; v. 235; p. 1051.
Grease, Transmission and gear-case. Swan & Finch Co. No. 115,412; Feb. 6; v. 235; p. 321.
Grinding and pulverizing machines for the manufacture of Portland cement. F. L. Smidth & Co. No. 115,680; Feb. 27; v. 235; p. 1352.
Growth-controlling substance derived from the anterior lobe of the pituitary gland. T. B. Robertson. No. 115,667; Feb. 27; v. 235; p. 1352.

Gum, candy, sweetmeats, and confections, Chewing-. Mint Products Company. No. 115,650; Feb. 27; v. 235; p. 1351.
Hair cleansing of all nits, vermin, dandruff, germs, and dirt. L. Baron. No. 115,280; Feb. 6; v. 235; p. 317.
Hair growers and tonics. G. A. Strahlke. No. 115,651; Feb. 20; v. 235; p. 1051.
Hair-tonic. The Extirpo Specialty Co. No. 115,442; Feb. 13; v. 235; p. 691.
Hair-tonic. C. Green. No. 115,447; Feb. 13; v. 235; p. 691.
Harness and saddle pads. Norfolk Woolen Co. No. 115,374; Feb. 6; v. 235; p. 320.
Harrows and land-rollers, Disk. T. E. Bissell Company. No. 115,582; Feb. 27; v. 235; p. 1349.
Hats. Ariston Hat Mfg. Co. No. 115,573; Feb. 27; v. 235; p. 1349.
Hats, Straw. S. Well. No. 115,421; Feb. 6; v. 235; p. 321.
Heaters and can-driers, being essentially parts of dairy machines or equipments. Jensen Creamery Machinery Company. No. 115,619; Feb. 27; v. 235; p. 1350.
Heating, lighting, and ventilating apparatus, Certain named. The Edward Katzinger Company. No. 115,516; Feb. 20; v. 235; p. 1050.
Hog and chicken cholera, Preparation for treatment of. W. P. Snyder. No. 115,471; Feb. 13; v. 235; p. 692.
Horse-collars. Hermann-Sanford Saddlery Company. Nos. 115,336–7; Feb. 6; v. 235; p. 319.
Hosiery. Snyder Brothers. No. 115,405; Feb. 6; v. 235; p. 321.
Hosiery. A. V. Victorius & Co. No. 115,703; Feb. 27; v. 235; p. 1353.
Inflammations, eruptions, and irritations of the skin. L. Baron. No. 115,580; Feb. 27; v. 235; p. 1349.
Inks in both liquid and soluble tablet form. De Luxe Mfg. Co. No. 115,595; Feb. 27; v. 235; p. 1349.
Inks, Writing and drawing. J. Ullrich. No. 115,695; Feb. 27; v. 235; p. 1353.
Insulating material, Felted-vegetable-fiber heat-. Northern Insulating Company. No. 115,375; Feb. 6; v. 235; p. 320.
Jackets and vests. W. W. Brown. No. 115,437; Feb. 13; v. 235; p. 691.
Jelly and ice-cream powders, gelatins. Waukesha Pure Food Company. No. 115,420; Feb. 6; v. 235; p. 321.
Joints, Universal. Arvac Manufacturing Company. No. 115,576; Feb. 27; v. 235; p. 1349.
Knitted, netted, and textile fabrics, Certain named. John Wanamaker. No. 115,705; Feb. 27; v. 235; p. 1353.
Knitted underwear. Duofold Health Underwear Company. No. 115,317; Feb. 6; v. 235; p. 318.
Knitted underwear, sweaters, and stockings, corsets. Union Special Machine Company. No. 115,697; Feb. 27; v. 235; p. 1353.
Lamps, Burning-. Silver & Co. No. 115,543; Feb. 20; v. 235; p. 1051.
Lamps, Electric. The Hawthorne Manufacturing Company. No. 115,384; Feb. 6; v. 235; p. 319.
Lap-robes, Plush. Sidney Blumenthal & Co. No. 115,584; Feb. 27; v. 235; p. 1349.
Leather, Calf, elk, and side upper-. L. F. Robertson & Sons. No. 115,666; Feb. 27; v. 235; p. 1352.
Leather, Kid, calf, patent, sheep, cabrites, splits, and sole. N. J. Reilly & Company. No. 115,664; Feb. 27; v. 235; p. 1352.
Leather substitute, Shoe-. The Goodyear's Metallic Rubber Shoe Co. No. 115,507; Feb. 20; v. 235; p. 1050.
Lime, Ground. Chemical Lime & Sand Company. No. 115,491; Feb. 20; v. 235; p. 1049.
Lotion for use after shaving and for chapped skin, burns, and headache, Antiseptic. S. R. Hambleton. No. 115,331; Feb. 6; v. 235; p. 319.
Lotions, Face-. The J. B. Williams Company. No. 115,470; Feb. 13; v. 235; p. 692.
Lubricant for internal-combustion-engine cylinders and carbon-forming preventive. C. E. Paden. No. 115,462; Feb. 13; v. 235; p. 692.
Lumber and shingles. H. C. Angell. No. 115,273; Feb. 6; v. 235; p. 317.
Lye, Powdered. Brookman Manufacturing Company. No. 115,436; Feb. 13; v. 235; p. 691.
Macaroni. The Pompeian Co. No. 115,386; Feb. 6; v. 235; p. 320.
Macaroni. The Youngstown Macaroni Co. No. 115,713; Feb. 27; v. 235; p. 1353.
Marble-dust, hydrated and other limes. Vermont Marble Company. No. 115,561; Feb. 20; v. 235; p. 1052.
Mayonnaise dressing. R. C. Williams & Company. No. 115,712; Feb. 27; v. 235; p. 1353.
Meal, Cotton-seed. Gulfport Grocery Co. No. 115,329; Feb. 6; v. 235; p. 319.
Medical and surgical supplies, Certain named. The Faultless Rubber Co. No. 115,601; Feb. 27; v. 235; p. 1350.
Medicine for influenza, and distemper among horses, Liquid. O. G. Wilson. No. 115,426; Feb. 6; v. 235; p. 322.
Medicine for rheumatic pains. F. Phillips. No. 115,384, Feb. 6; v. 235; p. 320.
Medicine, Nerve. C. L. Caron-Morin. No. 115,588; Feb. 27; v. 235; p. 1349.
Medicines and pharmaceutical preparations, Certain named. D. F. Fryer. No. 115,502; Feb. 20; v. 235; p. 1050.
Medicines and pharmaceutical preparations, Certain named. The Tropical Pharmacal Co. No. 115,417; Feb. 6; v. 235; p. 321.
Metal, Babbitt. A. H. Lemon. No. 115,687; Feb. 27; v. 235; p. 1351.
Metal, Expanded. The Berger Manufacturing Company. No. 115,480; Feb. 20; v. 235; p. 1049.
Metal-polish. W. Korbach. No. 115,636; Feb. 27; v. 235; p. 1351.
Metal-polishes. The Aluminox Co. No. 115,473; Feb. 20; v. 235; p. 1049.
Milk, Evaporated. Valecia Evaporated Milk Company. No. 115,408; Feb. 13; v. 235; p. 692.
Newspaper-section. E. V. Kemper. No. 115,349; Feb. 6; v. 235; p. 319.
Newspaper-sections. Star Company. No. 115,440; Feb. 6; v. 235; p. 321.
Oil, Cod-liver. Russia Cement Company. No. 115,398; Feb. 6; v. 235; p. 321.
Oil, Hair-. W. Bess. No. 115,433; Feb. 13; v. 235; p. 691.
Oil used for food purposes, Vegetable. The Southern Cotton Oil Company. No. 115,681; Feb. 27; v. 235; p. 1352.
Oils, Polishing-. H. B. Denton. No. 115,696; Feb. 27; v. 235; p. 1349.
Oleomargarin. J. H. Filbert. No. 115,602; Feb. 27; v. 235; p. 1350.
Olives. S. J. Valk & Bro. No. 115,419; Feb. 6; v. 235; p. 321.
Oranges and grape-fruit. A. C. Terwilligar. No. 115,689; Feb. 27; v. 235; p. 1352.
Overalls. Segal and Pransky. No. 115,678; Feb. 27; v. 235; p. 1352.
Overalls, jumpers, trousers, and boys' overalls. Kingsbery Manufacturing Co. Nos. 115,633–4; Feb. 27; v. 235; p. 1351.
Overcoats, outer suits, hats, shirts, &c., Men's and boys'. Harrison & Littrell. No. 115,333; Feb. 6; v. 235; p. 319.
Overlays, sheet-rubber, and rubber fabric. The Typolith Company. No. 115,557; Feb. 20; v. 235; p. 1051.
Packing, hose, tubes, and tires. Polack Tyre & Rubber Co. No. 115,385; Feb. 6; v. 235; p. 320.
Paint, Ready-mixed. W. W. Lawrence Company. No. 115,353; Feb. 6; v. 235; p. 319.
Paints and painters' supplies, Certain named. Durkee-Atwood Co. No. 115,597; Feb. 27; v. 235; p. 1350.
Paints, driers, enamels, stains, &c. The Patterson-Sargent Company. No. 115,656; Feb. 27; v. 235; p. 1351.
Paints, Enamel. Keystone Varnish Company. Nos. 115,625–6; Feb. 27; v. 235; p. 1350.
Paints, Ready-mixed. The Lowe Brothers Company. No. 115,642; Feb. 27; v. 235; p. 1351.
Paper and stationery, Certain named. Northern Paper Mills. No. 115,376; Feb. 6; v. 235; p. 320.
Paper bags. Capital Paper Company. No. 115,486; Feb. 20; v. 235; p. 1049.
Paper, Bond-. Chope-Stevens Paper Co. No. 115,300; Feb. 6; v. 235; p. 318.
Paper, Toilet-. The John Hoberg Co. No. 115,512; Feb. 20; v. 235; p. 1050.
Paper, Toilet-. Sauquoit Toilet Paper Co. No. 115,541; Feb. 20; v. 235; p. 1051.
Paper, Toilet-. Wortendyke Manufacturing Company. No. 115,567; Feb. 20; v. 235; p. 1052.
Paper, Wrapping, writing, printing, and toilet. The Central-Topeka Paper Co. No. 115,489; Feb. 20; v. 235; p. 1049.
Paper, Writing or letter. W. E. Blake. No. 115,286; Feb. 6; v. 235; p. 317.
Paving and paving materials, Bituminous. Willite Road Construction Company of America. No. 115,425; Feb. 6; v. 235; p. 322.
Perfumes, toilet water, smelling-salts, &c. The C. L. Cotton Perfume & Extract Co. No. 115,300; Feb. 6; v. 235; p. 318.
Periodicals, Monthly. The Holt Manufacturing Company. No. 115,514; Feb. 20; v. 235; p. 1050.
Periodicals, Monthly house-organ. The General Fireproofing Company. No. 115,505; Feb. 20; v. 235; p. 1050.
Petticoats. The National Garment Company. No. 115,654; Feb. 27; v. 235; p. 1351.
Petticoats. Manhattan Petticoat Co. No. 115,645; Feb. 27; v. 235; p. 1351.
Pharmaceutical preparations for toilet use, Certain named. George Borgfeldt & Co. No. 115,482; Feb. 20; v. 235; p. 1049.
Pharmaceutical preparations for toilet purposes, Certain named. Hikell Mfg. Co. No. 115,615; Feb. 27; v. 235; p. 1350.
Pharmaceutical preparations for toilet purposes, Certain named. Richard Hudnut. No. 115,450; Feb. 13; v. 235; p. 691.
Pharmaceutical product, Certain named. Society of Chemical Industry in Basle. No. 115,546; Feb. 20; v. 235; p. 1051.
Phonographs and like articles, Attachments for. Compressed Metal Company. No. 115,492; Feb. 20; v. 235; p. 1049.
Phonographs. James Manoil Company. No. 115,528; Feb. 20; v. 235; p. 1050.
Photographic developers. United Dyestuff and Photochemical Co. No. 115,559; Feb. 20; v. 235; p. 1051.

Piano and furniture and automobile-body polishes. Kemo-shyne Manufacturing Company. No. 115,517; Feb. 20; v. 235; p. 1050.
Pianos, Grand, upright, player, and electric player. William Tonk & Bro. No. 115,692; Feb. 27; v. 235; p. 1352.
Picture films, Motion-. A. Lorimore. No. 115,362; Feb. 6; v. 235; p. 320.
Piece goods with cotton warp and filling of wool, mohair, or alpaca. Lesher, Whitman & Co. No. 115,638; Feb. 27; v. 235; p. 1351.
Pigments for use in the rubber and linoleum industries. Orrs Zinc White Limited. No. 115,379; Feb. 6; v. 235; p. 320.
Pipes, cigar and cigarette holders. Kaufmann Bros. & Bondy. No. 115,347; Feb. 6; v. 235; p. 319.
Plants, flowers, &c., Food and tonic for. G. A. Lippencott. No. 115,360; Feb. 6; v. 235; p. 320.
Plows. Sears, Roebuck and Co. No. 115,671; Feb. 27; v. 235; p. 1352.
Polish for furniture, automobile-bodies, pianos, &c. J. E. Perrault. No. 115,382; Feb. 6; v. 235; p. 320.
Polishing-cloths. Crew Levick Company. No. 115,857; Feb. 6; v. 235; p. 319.
Polishing preparation for auto-bodies, pianos, &c. Hiscox & Co. No. 115,339; Feb. 6; v. 235; p. 319.
Pompons. M. Herman. No. 115,449; Feb. 13; v. 235; p. 691.
Powder and rouge, Face-. A. Bourjois & Co. Nos. 115,434–5; Feb. 13; v. 235; p. 691.
Powder and rouge or solid face-powder, Toilet. A. Bourjois & Co. No. 115,287; Feb. 6; v. 235; p. 317.
Powder, cold-cream, hair-wash, rouge, &c., Face-. The Armand Company. No. 115,274; Feb. 6; v. 235; p. 317.
Powder, Complexion-. J. Lincoln. No. 115,359; Feb. 6; v. 235; p. 320.
Powder for dandruff. B. Lemohn. No. 115,356; Feb. 6; v. 235; p. 320.
Powder, Talcum. A. Plough. No. 115,463; Feb. 13; v. 235; p. 692.
Preparation for checking excessive secretions of the skin and preventing the odor, Pharmaceutical. Royal Remedies Company. No. 115,396; Feb. 6; v. 235; p. 321.
Preparation for the kidneys. S. Thomas. No. 115,564; Feb. 20; v. 235; p. 1051.
Preservative dressings or compositions for wood, stone, and brick work, and metal. Plastic Cements & Fibrastic. No. 115,659; Feb. 27; v. 235; p. 1351.
Printing-machines, and more particularly check-writers and check-protectors. Defiance Check Writer Corporation. No. 115,594; Feb. 27; v. 235; p. 1349.
Publication, Monthly. The Stern & Saalberg Company. No. 115,685; Feb. 27; v. 235; p. 1352.
Publication, Weekly. E. W. Briggs. No. 115,586; Feb. 27; v. 235; p. 1349.
Publications, Weekly. The Motor World Publishing Co. No. 115,370; Feb. 6; v. 235; p. 320.
Publications, and particularly such publications in card form, Language-teaching. Old-Will Publishing Co. No. 115,378; Feb. 6; v. 235; p. 320.
Pumps and wrenches. The Hill Pump Valve Company. No. 115,511; Feb. 20; v. 235; p. 1050.
Pumps, Automobile-tire. Bridgeport Brass Company. No. 115,585; Feb. 27; v. 235; p. 1349.
Pumps, Rotary. Blackmer Rotary Pump Co. No. 115,583; Feb. 27; v. 235; p. 1349.
Puncture-proof solution. J. N. Neal. No. 115,532; Feb. 20; v. 235; p. 1051.
Puzzles. A. Clark. No. 115,304; Feb. 6; v. 235; p. 318.
Railway signaling and interlocking systems, Apparatus and machinery for. The Union Switch & Signal Company. No. 115,558; Feb. 20; v. 235; p. 1051.
Ranges and stoves, Wood and coal burning. The Stamford Foundry Company. No. 115,682; Feb. 27; v. 235; p. 1352.
Receptacles having electric attachments, Certain. Manhattan Electrical Supply Company. No. 115,527; Feb. 20; v. 235; p. 1050.
Remedies for certain complaints and disorders. The Dr. J. H. McLean Medicine Co. No. 115,456; Feb. 13; v. 235; p. 691.
Remedies, ointments, and liniments for certain named diseases and affections. N. Teplow. No. 115,413; Feb. 6; v. 235; p. 321.
Remedy for certain named ailments and all skin diseases. W. A. Minick. No. 115,457; Feb. 13; v. 235; p. 692.
Remedy for certain named diseases and affections. B. D. G. Liniment Co. No. 115,478; Feb. 20; v. 235; p. 1049.
Remedy for diphtheria and sore throat. C. P. Ashburn. No. 115,476; Feb. 20; v. 235; p. 1049.
Remedy for gonorrhea. P. Chovanecz. No. 115,301; Feb. 6; v. 235; p. 318.
Remedy for hereditary and acquired syphilis and all conditions arising from same. W. B. Lingo. No. 115,454; Feb. 13; v. 235; p. 691.
Remedy for la grippe, colds, neuralgia, &c. C. W. Holzhauer. No. 115,340; Feb. 6; v. 235; p. 319.
Remedy for rheumatism. G. Nikolow. No. 115,460; Feb. 13; v. 235; p. 962.
Remedy for rheumatism and kidney diseases. W. J. Davis. No. 115,314; Feb. 6; v. 235; p. 318.
Remedy, Stomach, liver, and bowel. W. A. Knoll. No. 115,351; Feb. 6; v. 235; p. 319.
Ring-buffs—viz., buff-sticks. S. J. Sanger. No. 115,400; Feb. 6; v. 235; p. 321.
Rings, Finger-. The Traub Manufacturing Company. No. 115,556; Feb. 20; v. 235; p. 1051.
Roofing, Prepared asphalt. Baltimore Roofing and Asbestos Mfg. Co. No. 115,279; Feb. 6; v. 235; p. 317.
Rope, cord, lines, and twine, Vegetable-fiber. American Manufacturing Company. No. 115,269; Feb. 6; v. 235; p. 317.
Rubber belting and hose, duck belting and hose, rubber and asbestos machinery packing, &c. The Cincinnati Rubber Manufacturing Co. Nos. 115,302–3; Feb. 6; v. 235; p. 318.
Rubber boots and shoes. The Beacon Falls Rubber Shoe Company. No. 115,431; Feb. 13; v. 235; p. 691.
Rubber gloves, Household. The Faultless Rubber Co. No. 115,322; Feb. 6; v. 235; p. 318.
Rubber goods. United Drug Company. No. 115,418; Feb. 6; v. 235; p. 321.
Rubber pedal-covers. Mattson Rubber Company. No. 115,529; Feb. 20; v. 235; p. 1050.
Salad-dressing, peanut-butter, mustard, pepper sauce, vinegar. Squire Dingee Company. No. 115,408; Feb. 6; v. 235; p. 321.
Salve for cuts, bruises, lacerations, and skin and muscular injuries. M. Chejlavá. No. 115,490; Feb. 20; v. 235; p. 1049.
Salve for piles, boils, abscesses, cuts, &c. G. Collins. No. 115,307; Feb. 6; v. 235; p. 318.
Salve used as an emollient in treating certain named affections. F. W. S. Elstroth. No. 115,599; Feb. 27; v. 235; p. 1350.
Salves for certain named skin diseases. R. F. Beauchamp. No. 115,282; Feb. 6; v. 235; p. 317.
Salves for healing wounds and skin diseases. A. Carson. No. 115,590; Feb. 27; v. 235; p. 1349.
Scarfs for personal wear. A. S. Rosenthal Company. No. 115,466; Feb. 13; v. 235; p. 692.
Shampooing apparatus. W. Faerber. No. 115,321; Feb. 6; v. 235; p. 318.
Shampoos and corn remedies. M. Kaplan. No. 115,346; Feb. 6; v. 235; p. 319.
Shirtings in the piece, Cotton. Everett Mills. No. 115,319; Feb. 6; v. 235; p. 318.
Shirts. Brownstein-Louis Company. No. 115,587; Feb. 27; v. 235; p. 1349.
Shirts and men's athletic underwear of textile material. Joseph Fels Company. No. 115,499; Feb. 20; v. 235; p. 1050.
Shirts, overalls, jumpers, rompers, work, negligée, and under. Edson Moore & Company. No. 115,441; Feb. 13; v. 235; p. 691.
Shirts, pajamas, nightgowns, underwear. Brownstein-Louis Company. No. 115,294; Feb. 6; v. 235; p. 318.
Shock-absorbers. The H. & D. Company. No. 115,330; Feb. 6; v. 235; p. 319.
Shock-absorbers. The H. & D. Company. No. 115,509; Feb. 20; v. 235; p. 1050.
Shoe cleaning paste, Canvas and leather. Hart Sales Company. No. 115,610; Feb. 27; v. 235; p. 1350.
Shoe dressing, White-leather-. The Sunrise Shoe Polish Company. No. 115,688; Feb. 27; v. 235; p. 1352.
Shoe-heels. Rochester Heal Company. No. 115,465; Feb. 13; v. 235; p. 692.
Shoe-polishes. Fulton Shoe Polish Co. No. 114,503; Feb. 20; v. 236; p. 1050.
Shoe-stretchers. A. E. Block. No. 115,481; Feb. 20; v. 235; p. 1049.
Shoes, Baby or infant. The Swan Shoe Company. No. 115,467; Feb. 13; v. 235; p. 692.
Shoes, Leather. Lange & Janke Mfg. Co. No. 115,452; Feb. 13; v. 235; p. 691.
Shoes made of certain named materials. Brokaw Brothers. No. 115,290; Feb. 6; v. 235; p. 317.
Shoes, Men's leather. Sears, Roebuck and Co. Nos. 115,673–5; Feb. 27; v. 235; p. 1352.
Shoes, Men's, women's, and children's leather. Sears, Roebuck and Co. No. 115,672; Feb. 27; v. 235; p. 1352.
Shower-heads. Speakman Supply & Pipe Company. No. 115,407; Feb. 6; v. 235; p. 321.
Silk and velvet piece goods. Acorn Silk Co. Nos. 115,267–8; Feb. 6; v. 235; p. 317.
Silk piece goods. R. & H. Simon Company. No. 115,679; Feb. 27; v. 235; p. 1352.
Silver-plated flat and hollow ware and cutlery. Wm. A. Rogers, Limited. No. 115,395; Feb. 6; v. 235; p. 321.
Soap. Standard Polish Company. No. 115,409; Feb. 6; v. 235; p. 321.
Soaps. Barclay & Barclay. No. 115,578; Feb. 27; v. 235; p. 1349.
Soda mints. Kellogg Toasted Corn Flake Company. No. 115,622; Feb. 27; v. 235; p. 1350.
Sowers and manure-spreaders, Lime and fertilizer. Kentucky Wagon Manufacturing Co. No. 115,623; Feb. 27; v. 235; p. 1350.
Spark-plugs, Electric. Splitdorf Electrical Company. No. 115,548; Feb. 20; v. 235; p. 1051.
Spectacles. The Stenopaic Optical Co. No. 115,550; Feb. 20; v. 235; p. 1051.
Stamps, Trading-. The Moneyback Corporation. No. 115,652; Feb. 27; v. 235; p. 1351.
Steels, Tool-. Atlas Crucible Steel Company. Nos. 115,275–6; Feb. 6; v. 235; p. 317.
Stone, Crushed granitized. G. G. Kirtley. No. 115,522; Feb. 20; v. 235; p. 1050.
Stove-polish. J. Diamond & Sons. No. 115,495; Feb. 20; v. 235; p. 1049.

Sugar. The American Sugar Refining Company. Nos. 115,270–1; Feb. 6; v. 235; p. 317.
Sugar for use as a food, Invert-. The American Sugar Refining Company. No. 115,571; Feb. 27; v. 235; p. 1349.
Suits and overcoats, Men's, youths', boys', and children's outer. H. Kuhn & Sons. No. 115,451; Feb. 13; v. 235; p. 691.
Suits, overcoats, jackets, &c., Men's cloth. Morris, Goldschmidt and Company. No. 115,653; Feb. 27; v. 235; p. 1351.
Suspenders. The Gluckauf Company. Nos. 115,445–6; Feb. 13; v. 235; p. 691.
Syrup and molasses. The Towle Maple Products Company. No. 115,693; Feb. 27; v. 235; p. 1353.
Tables, chairs, beds, &c., Fiber. The R. L. Kenyon Co. No. 115,624; Feb. 27; v. 235; p. 1350.
Tablets for coughs, colds, asthmatic and bronchial troubles. Eckman Manufacturing Company. No. 115,598; Feb. 27; v. 235; p. 1350.
Tanks and stand or range boilers. Riverside Boiler Works, No. 115,539; Feb. 20; v. 235; p. 1051.
Tea. Rice Bros. No. 115,392; Feb. 6; v. 235; p. 321.
Teas and spices. Johnson & Murray. No. 115,345; Feb. 6; v. 235; p. 319.
Tennis-rackets. C. B. Mueller. No. 115,371; Feb. 6; v. 235; p. 320.
Tennis rackets and balls, base and golf balls, &c. C. J. O. Riely. No. 115,534; Feb. 20; v. 235; p. 1051.
Tinctures. The William S. Merrell Chemical Company. No. 115,649; Feb. 27; v. 235; p. 1351.
Tire casings and tubes of rubber, Automobile. The National Tire & Rubber Company. No. 115,531; Feb. 20; v. 235; p. 1051.
Tire-repair material, Vulcanizable fabric. W. U. Cowan. No. 115,310; Feb. 6; v. 235; p. 318.
Tires, Composition for healing punctures in pneumatic. The Tireold Company. No. 115,415; Feb. 6; v. 235; p. 321.
Tires of rubber and fabric, Automobile and bicycle. Ajax Rubber Company. No. 115,570; Feb. 27; v. 235; p. 1349.
Tires or tire-casings and inner tubes for pneumatic tires, Rubber. The General Tire & Rubber Company. No. 115,605; Feb. 27; v. 235; p. 1350.
Tires, Rubber. H. B. Wallace. No. 115,704; Feb. 27; v. 235; p. 1353.
Tobacco-pouches, Self-closing. C. Marshall, Jr. No. 115,366; Feb. 6; v. 235; p. 320.
Tobacco, Smoking and chewing. Christian Peper Tobacco Co. No. 115,591; Feb. 27; v. 235; p. 1349.
Tonic, Chill-. Molo Medicine Co. No. 115,458; Feb. 13; v. 235; p. 692.
Tooth-cleaning preparations. A. A. Libby. No. 115,453; Feb. 13; v. 235; p. 691.
Towel-racks, follower-boards, and lugs. Diamond Individual Towel System Co. No. 115,316; Feb. 6; v. 235; p. 318.
Towelings and towels. Remy, Schmidt and Pleissner. No. 115,389; Feb. 6; v. 235; p. 320.
Toy. J. E. Brown. No. 115,293; Feb. 6; v. 235; p. 317.
Toy, Certain named. J. E. Brown. No. 115,291; Feb. 6; v. 235; p. 317.
Toys, Building and construction. Benjamin-Sellar Mfg. Co. No. 115,284; Feb. 6; v. 235; p. 317.
Toys, Cardboard cut-out. Oxford-Print. No. 115,380; Feb. 6; v. 235; p. 320.
Toys simulating parts of animals, Educational. A. H. Sweet. No. 115,552; Feb. 20; v. 235; p. 1051.
Treatment for sore throat, hoarseness, tonsillitis, &c., Internal. H. E. Long. No. 115,455; Feb. 13; v. 235; p. 691.
Trees and plants and hardy ornamentals, Fruit-. Stark Bro's Nurseries & Orchards Co. No. 115,549; Feb. 20; v. 235; p. 1051.
Trousers and rain-coats. S. Newman. No. 115,373; Feb. 6; v. 235; p. 320.
Trucks, Auto or motor. Cadillac Auto Truck Company. No. 115,298; Feb. 6; v. 235; p. 318.
Tubes, Inner. Lee Tire & Rubber Co. No. 115,355; Feb. 6; v. 235; p. 319.
Turkeys. L. Renaker. No. 115,390; Feb. 6; v. 235; p. 320.
Vanilla and tonka compound. The Hudson Mfg. Co. No. 115,341; Feb. 6; v. 235; p. 319.
Varnish. Floor-Shine Manufacturing Company. No. 115,325; Feb. 6; v. 235; p. 319.
Varnish, enamel, furniture-polish, and varnish-remover. Continental Varnish Company. No. 115,308; Feb. 6; v. 235; p. 318.
Varnish-finish, Colored. Fort Wayne Drug Company. No. 115,604; Feb. 27; v. 235; p. 1350.
Vault-light panels or slabs. Davis Carpenter & Co. No. 115,589; Feb. 27; v. 235; p. 1349.
Vehicle, Child's. The Wilkinson Manufacturing Co. No. 115,424; Feb. 6; v. 235; p. 321.
Vehicles, Children's. H. C. White Co. No. 115,422; Feb. 6; v. 235; p. 321.
Vehicles for towing automobiles, &c. Weaver Manufacturing Company. No. 115,565; Feb. 20; v. 235; p. 1052.
Wagons, buggies, sleds, auto-trailers, &c. Emerson-Brantingham Company. No. 115,600; Feb. 27; v. 235; p. 1350.
Washing machine, Laundry-. Grinnell Washing Machine Company. No. 115,328; Feb. 6; v. 235; p. 319.
Washing machine, Laundry-. Grinnell Washing Machine Company. No. 115,508; Feb. 20; v. 235; p. 1050.
Watches, watchcases, watch-movements, and parts thereof. The Keystone Watch Case Company. Nos. 115,518–20; Feb. 20; v. 235; p. 1050.
Waterproof clothing. New York Mackintosh Clothing Company. No. 115,459; Feb. 13; v. 235; p. 692.
Waterproofing composition for wood, concrete, brick, &c., surfaces. G. L. Simonds. No. 115,544; Feb. 20; v. 235; p. 1051.
Waterproofing preparation for incorporating in cement, plaster, bricks, and stucco. J. Strzyczkowski. No. 115,411; Feb. 6; v. 235; p. 321.
Whisky. The Tivoli Mercantile Co. No. 115,555; Feb. 20; v. 235; p. 1051.
Whisky, Scotch. The Gordon's Dry Gin Co. No. 115,606; Feb. 27; v. 235; p. 1350.
Whistles, Watchmen's. W. R. Noe & Sons. No. 115,533; Feb. 20; v. 235; p. 1051.
Window-cleaning preparation. T. S. Ballard. No. 115,477; Feb. 20; v. 235; p. 1049.
Wines, Bottled sparkling. Ripin & Company. No. 115,665; Feb. 27; v. 235; p. 1352.
Wines, Sparkling. G. Grasso. No. 115,506; Feb. 20; v. 235; p. 1050.
Wire and metallic strips highly resistant to heat and of low electrical conductivity. Driver Harris Wire Company. No. 115,496; Feb. 20; v. 235; p. 1049.
Woolen goods in the piece. Detmer Woolen Co. No. 115,439; Feb. 13; v. 235; p. 691.

ALPHABETICAL LIST OF LABELS.

"A Weather Proof Cement Vermont White Cement." (For a Cement for Setting and Repairing Monuments and the Like.) The L. D. Caulk Company. No. 19,923; Feb. 27; v. 235; p. 1354.

"Ad-El-Ite Double Lustre Paint." (For Paint.) Adams & Elting Company. No. 19,866; Feb. 13; v. 235; p. 693.

"Ad-El-Ite Motor Carbon Remover." (For a Carbon-Remover.) Adams & Elting Company. No. 19,867; Feb. 13; v. 235; p. 693.

"Agate Floor." (For Varnishes.) Wadsworth Howland & Co. No. 19,920; Feb. 20; v. 235; p. 1053.

"Aguinaldo." (For Cigars.) Manila Commercial Company. No. 19,911; Feb. 20; v. 235; p. 1053.

"Albert L. Dunn Mint Julep Gum. (For Mint-Julep Gum.) A. L. Dunn. No. 19,928; Feb. 27; v. 235; p. 1354.

"American Hunyadi Split." (For a Cathartic Water.) Hunyadi Split Corporation. No. 19,886; Feb. 13; v. 235; p. 693.

"Amor y Arte." (For Cigars.) The Moehle Lithographic Company. No. 19,931; Feb. 27; v. 235; p. 1354.

"Autotox Tablets." (For a Medicinal Preparation.) M. F. Deehan. No. 19,878; Feb. 13; v. 235; p. 693.

"Baby Midget Hose Supporter." (For Hose-Supporters.) George Frost Company. No. 19,883; Feb. 13; v. 235; p. 693.

"Beauties." (For Cigars.) The Moehle Lithographic Company. No. 19,932; Feb. 27; v. 235; p. 1354.

"Birchwood." (For Coffee.) The Copps Co. No. 19,904; Feb. 20; v. 235; p. 1053.

"Breakfast Barley." (For Specially-Prepared Barley.) Barley Foods Co. No. 19,872; Feb. 13; v. 235; p. 693.

"Clicquot Dry Gin." (For Dry Gin.) The Eddy and Fisher Co. No. 19,905; Feb. 20; v. 235; p. 1053.

"Colliers." (For Cigars.) L. J. Stadeker. No. 19,919; Feb. 20; v. 235; p. 1053.

"Cowboy." (For Prunes.) Castle Brothers. No. 19,922; Feb. 27; v. 235; p. 1354.

"Cream-O-Lasses." (For Candy-Boxes.) D. M. Tree. No. 19,896; Feb. 13; v. 235; p. 693.

"Dentola." (For a Dentifrice.) A. J. Clapham. No. 19,903; Feb. 20; v. 235; p. 1053.

"Emerson Record." (For Phonograph-Record Disks.) Emerson Phonograph Company. Nos. 19,880–1; Feb. 13; v. 235; p. 693.

"Ever-Ready Safety Razor." (For Safety-Razors.) American Safety Razor Co. No. 19,901; Feb. 20; v. 235; p. 1053.

"Excello Brand, Grand Prize Guatemala Coffee." (For Coffee.) I. M. Caskel. No. 19,875; Feb. 13; v. 235; p. 693.

"Garage Vitagas." (For a Chemical Compound for Use in Gasolene.) The Howard-Vaughan Co. No. 19,885; Feb. 13; v. 235; p. 693.

"Gloss." (For Furniture and Automobile Polish.) M. Sodter. No. 19,939; Feb. 27; v. 235; p. 1354.

"Golden Glow Orange Marmalade." (For Marmalade.) Lawrence & Harrison Co. No. 19,910; Feb. 20; v. 235; p. 1053.

"Hay's Cocoanut Oil Shampoo." (For a Hair-Shampoo.) Philo Hay Specialties Co. No. 19,916; Feb. 20; v. 235; p. 1053.

"Hay's Eau De Quinine Tonic." (For a Hair-Tonic.) Philo Hay Specialties Co. No. 19,914; Feb. 20; v. 235; p. 1053.

"Hazeloch." (For a Liquid Herb Remedy.) Hazeloch Medicine Company. No. 19,907; Feb. 20; v. 235; p. 1053.

"Hiker." (For Canvas Rubber-Sole Shoes.) Hood Rubber Co. No. 19,909; Feb. 20; v. 235; p. 1053.

"King Kuhl Klothes." (For Clothing.) Firm of J. Schoeneman. No. 19,892; Feb. 13; v. 235; p. 693.

"Ku-Rall." (For an Ointment.) J. W. Taylor, Jr. No. 19,895; Feb. 13; v. 235; p. 693.

"La Culta." (For Cigars.) The Moehle Lithographic Company. No. 19,934; Feb. 27; v. 235; p. 1354.

"Leak-Proof Piston Ring." (For Piston-Rings.) McQuay-Norris Mfg. Co. No. 19,912; Feb. 20; v. 235; p. 1053.

"Lecithinol." (For a Medicinal Preparation.) United States Apothecaries Association. No. 19,898; Feb. 13; v. 235; p. 693.

"Little Men and Little Women Sterling Silver Tableware." (For Babies' and Children's Sterling Silver Tableware.) Rogers, Lunt & Bowlen Co. No. 19,936; Feb. 27; v. 235; p. 1354.

"Montana Sport." (For Cigars.) C. Garnier. No. 19,906; Feb. 20; v. 235; p. 1053.

"Murphy Ranch One Star." (For Lemons.) Murphy Oil Company. No. 19,888; Feb. 13; v. 235; p. 693.

"Nature's Blood and Cell-Food." (For a Medicinal Preparation.) L. Pohland. No. 19,917; Feb. 20; v. 235; p. 1053.

"Nebline." (For a Cuticle-Salve.) N. E. Berry. No. 19,902; Feb. 20; v. 235; p. 1053.

"No Spot." (For a Cleaning Fluid.) J. A. Eicholtz. No. 19,879; Feb. 13; v. 235; p. 693.

"O-Cedar Dust Cloths." (For O-Cedar Dust-Cloths.) Channell Chemical Company. No. 19,925; Feb. 27; v. 235; p. 1354.

"Old Curtis Whiskey." (For Whisky.) I. Michelson & Brothers. No. 19,913; Feb. 20; v. 235; p. 1053.

"Old String Whiskey." (For Whisky.) J. A. Bokel Company. No. 19,874; Feb. 13; v. 235; p. 693.

"Pearl Barley." (For Pearl-Barley.) Barley Foods Co. No. 19,873; Feb. 13; v. 235; p. 693.

"Pep." (For Smoking-Tobacco.) G. Gund. No. 19,884; Feb. 13; v. 235; p. 693.

"Peppermint Pepsogum, Pure Rings Of Pepsin Gum." (For Chewing-Gum.) Qualite Products Company. No. 19,889; Feb. 13; v. 235; p. 693.

"Permanent Pigment for Coloring Vermont White Cement." (For a Pigment for Coloring Cement.) The L. D. Caulk Company. No. 19,924; Feb. 27; v. 235; p. 1354.

"Phonograph Stove Polish, It Talks for Itself." (For a Powder Stove-Polish.) C. Lortie. No. 19,887; Feb. 13; v. 235; p. 693.

"Quality." (For Canned Tuna Fish.) Lower California Fisheries Co. No. 19,929; Feb. 27; v. 235; p. 1354.

"Queen's Taste." (For Cigars.) The Moehle Lithographic Company. No. 19,933; Feb. 27; v. 235; p. 1354.

"Rainbow Game." (For Rainbow Game.) F. J. Batchelder. No. 19,921; Feb. 27; v. 235; p. 1354.

"Ridgways Tea." (For Packages of Ridgways Tea.) Ridgways Incorporated. Nos. 19,890–1; Feb. 13; v. 235; p. 693.

"Royal Windsor Table Sauce." (For Table Sauce.) A. D. Mack. No. 19,930; Feb. 27; v. 235; p. 1354.

"Sanitol, Death to Germs." (For a Germicide.) The Sanitol Manufacturing Company. No. 19,937; Feb. 27; v. 235; p. 1354.

"Sealshipt Oysters." (For Oysters.) North Atlantic Oyster Farms. No. 19,935; Feb. 27; v. 235; p. 1354.

"Shredded Whole Wheat." (For Shredded Whole Wheat.) The Shredded Wheat Company. No. 19,918; Feb. 20; v. 235; p. 1053.

"Sigari Italiani." (For Cigars.) Alpino Cigar Co. No. 19,868; Feb. 13; v. 235; p. 693.

"Sister Susie." (For Human-Hair Nets.) The B. Frankel Company. No. 19,882; Feb. 13; v. 235; p. 693.

"Slip-pon." (For Veils.) Silverberg Import Co. No. 19,938; Feb. 27; v. 235; p. 1354.

"Snell's Imperial Flour." (For Flour.) The Snell Mill and Grain Co. No. 19,893; Feb. 13; v. 235; p. 693.

"Sulpho-Sage." (For a Compound for Coloring Gray and Faded Hair, to Assist in Removing Dandruff, as a Corrective of Itching Scalp, and as a Dressing for the Hair.) Philo Hay Specialties Co. No. 19,915; Feb. 20; v. 235; p. 1053.

"Swanson's SWheat Bread." (For Bread.) Worcester Baking Company. No. 19,900; Feb. 13; v. 235; p. 693.

"Sweet Spearmint." (For Chewing-Gum.) The Helmet Company. No. 19,908; Feb. 20; v. 235; p. 1053.

"Tarpley's White Mixture." (For Tarpley's White Mixture.) E. J. Tarpley. No. 19,894; Feb. 13; v. 235; p. 693.

"The Cleanest Hand In Town." (For Hand Soap Powder.) A. F. R. Anderson. No. 19,870; Feb. 13; v. 235; p. 693.

"The Cordo-Hyde Lace." (For Shoe-Laces.) Cordo-Hyde Company. No. 19,877; Feb. 13; v. 235; p. 693.

"The Emblem Shirt." (For Shirts.) Drew & Lipke. No. 19,926; Feb. 27; v. 235; p. 1354.

"The Fleur de Lis Shirt." (For Shirts.) Drew & Lipke. No. 19,927; Feb. 27; v. 235; p. 1354.

"The Oak Brand." (For Hats.) United Hat Stores. No. 19,897; Feb. 13; v. 235; p. 693.

"Thymo-Boraline." (For a Medicinal Preparation.) United States Apothecaries Association. No. 19,899; Feb. 13; v. 235; p. 693.

"Tony." (For Pickles.) A. D. Teixeira. No. 19,940; Feb. 27; v. 235; p. 1354.

"Two Quart Brand." (For Whisky.) American Pure Food Company. No. 19,869; Feb. 13; v. 235; p. 693.

"Uzit Hand Soap Powder." (For Hand Soap Powder.) A. F. R. Anderson. No. 19,871; Feb. 13; v. 235; p. 693.

"Yako." (For Beer.) The Cleveland Home Brewing Co. No. 19,876; Feb. 13; v. 235; p. 693.

PRINTS.

"B. V. D. 1917 Men's Two Piece Suit." (For Athletic Underwear.) The B. V. D. Company. No. 4,624; Feb. 20; v. 235; p. 1053.

"B. V. D. 1917 Men's Two Piece Suit." (For Athletic Underwear.) The B. V. D. Company. No. 4,622; Feb. 20; v. 235; p. 1053.

"B. V. D. 1917 Men's Union Suit." (For Athletic Underwear.) The B. V. D. Company. No. 4,621; Feb. 20; v. 235; p. 1053.

"B. V. D. 1917 Men's Union Suit." (For Athletic Underwear.) The B. V. D. Company. No. 4,623; Feb. 20; v. 235; p. 1053.

"Cook by wire." (For Electric Ranges.) Rathbone Sard Electric Company. No. 4,636; Feb. 27; v. 235; p. 1354.

"Cooking Mama's Breakfast." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,625; Feb. 20; v. 235; p. 1053.

"Family Cambric." (For Cambric.) M. Smolowitz. No. 4,627; Feb. 20; v. 235; p. 1053.

"For Work Or For Play, the Best Food is Shredded Wheat With Hot Milk." (For Shredded Wheat.) The Shredded Wheat Company. No. 4,637; Feb. 27; v. 235; p. 1354.

"For Daddy, Mother, Brother and Me." (For Shredded Wheat.) The Shredded Wheat Company. No. 4,638; Feb. 27; v. 235; p. 1354.

"Foursome." (For Automobiles.) King Motor Car Company. No. 4,626; Feb. 20; v. 235; p. 1053.

"Hickory Maple Syrup." (For Maple-Syrup.) New Orleans Coffee Co. No. 4,620; Feb. 13; v. 235; p. 694.

"It's Toasted." (For Cigarettes.) The American Tobacco Company. No. 4,630; Feb. 27; v. 235; p. 1354.

"Nesmah Made In a Jiffy." (For Nesmah.) Chr. Hansen's Lab. No. 4,634; Feb. 27; v. 235; p. 1354.

"New South Pure Sugar Cane Syrup." (For Cane-Syrup.) New Orleans Coffee Co. No. 4,619; Feb. 13; v. 235; p. 694.

"Nite Lite." (For an Apparatus for Illumination.) H. F. Marston. No. 4,616; Feb. 6; v. 235; p. 322.

"No. 7 Cream City Roaster Display." (For Cream City Roasters.) Geuder Paeschke & Frey Co. No. 4,633; Feb. 27; v. 235; p. 1354.

"Rink-ly." (For Mops and Dust-Cloths.) G. H. Allen. No. 4,629; Feb. 27; v. 235; p. 1354.

"Say! I'm In My B. V. D.s—Be Right Over." (For Athletic Underwear.) The B. V. D. Company. No. 4,632; Feb. 27; v. 235; p. 1354.

"Shady Brook Farm." (For Toy Farms.) F. W. Kramer. No. 4,635; Feb. 27; v. 235; p. 1354.

"Start Your Day This Way—B. V. D." (For Athletic Underwear.) The B. V. D. Company. No. 4,631; Feb. 27; v. 235; p. 1354.

"The Eclipse Interchangeable Counterbore Co., Inc." (For Boring-Tools.) Eclipse Interchangeable Counterbore Co. No. 4,618; Feb. 13; v. 235; p. 694.

"The Fleur de Lys." (For a Decorative Shoe-Emblem.) S. H. Cragg. No. 4,617; Feb. 13; v. 235; p. 694.

"The New Way." (For Type-Writing Instruction-Manuals, Shorthand Instruction-Manuals, Business-Letter-Writing Manuals, Bookkeeping Instruction-Manuals, and Commercial-Law Books.) The Tulloss School Company. No. 4,628; Feb. 20; v. 235; p. 1053.

DISCLAIMERS.

Closing-machine. W. C. Bubles. No. 1,150,992; date of patent Aug. 24, 1915; disclaimer filed Feb. 7, 1917; v. 235; p. 713.

Electric-lamp socket. A., Sr., A., Jr., and J. Weber. No. 916,812; date of patent Mar. 30, 1909; disclaimer filed Feb. 19, 1917; v. 235; p. 1059.

Switch-box, Protective. T. E. Murray. No. 1,135,130; date of patent Apr. 13, 1915; disclaimer filed Feb. 12, 1917; v. 235; p. 713.

CLASSIFICATION OF PATENTS

FEBRUARY, 1917.

NOTE.—First number—class, second number—subclass, third number—patent number.

1— 2: 1,214,930
7: 1,215,312
15: 1,214,702
1,214,814
41: 1,216,784
48: 1,217,749
2— 9: 1,215,688
1,217,307
11: 1,215,319
54: 1,216,088
60: 1,215,139
66: 1,215,128
70: 1,216,583
73: 1,215,257
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1,215,602
1,216,326
1,216,796
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86: 1,214,893
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28: 1,215,816
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31: 1,216,304
34: 1,217,405
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67: 1,217,856
118: 1,217,499
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